

HALF YEARLY REPORT FOR MUMBAI TRANS HARBOUR LINK

JAN TO JUNE
2021



Submitted to
Maharashtra Pollution Control Board (MPCB)

Submitted by



**एम एम आर डी ए
MMRDA**

Information of Project officer and Nodal officer

1.	<p>Name of Project officer</p> <p>Email</p> <p>Phone /Fax Number</p>	<p>Executive Engineer, MTHL- Project Implementation Unit</p> <p>2nd floor, New Administrative building, MMRDA, Engineering Division, Mumbai Metropolitan Region Development Authority (MMRDA), E-Block, Bandra Kurla Complex, Bandra East, Mumbai, Maharashtra 400051</p> <p>Phone No.: 022-26594034</p>
2.	<p>Name of Nodal officers</p> <p>Email</p> <p>Phone /Fax Number</p>	<p>Chief Engineer, MTHL Project Implementation Unit</p> <p>2nd floor, New Administrative building, MMRDA, Engineering Division, Mumbai Metropolitan Region Development Authority (MMRDA), E-Block, BKC, Bandra Kurla Complex, Bandra East, Mumbai, Maharashtra 400051</p> <p>Email: chiefengineer1@mailmmrda.maharashtra.gov.in Phone No.: 022-26594034</p>

Photographs showing present progress of work

Please refer to the Quarterly Progress Report No. 15 and 16 for the photographs of the progress

Monitoring the Implementation of Environmental Safeguards

**Ministry of environmental & Forest
Western Region, Regional Office, Bhopal**

Monitoring Report

PART - I DATA SHEET

No.	Particular	Information
1.	Project type: River Valley / Mining / Industry / Thermal / Nuclear / Others (specify)	: Infrastructure
2.	Name of the Project	: Mumbai Trans Harbour Link Project
3.	Clearance letter (s) / OM No. and date	: F. No. 11-65/2012-IA.III on 25 th January, 2016
4.	Location	Start point: Sewri in Mumbai City
	a) District (s)	: End Point: Chirle in Raigad District
	b) State (s)	: Maharashtra
	c) Location latitude / longitude	: Start: Latitude: 18°59'48.57"N Longitude: 72°51'20.67"E End: Latitude: 18°56'18.33"N Longitude: 73° 1'52.92"E
5.	Address for Correspondence	: Chief Engineer,
	a) Address of the Concerned Project Chief Engineer (with Pin code & Telephone / Telex / Fax Numbers)	MTHL Project Implementation Unit 2 nd floor, New Administrative building, MMRDA, Engineering Division, Mumbai Metropolitan Region Development Authority (MMRDA), E-Block, BKC, Bandra Kurla Complex, Bandra East, Mumbai, Maharashtra 400051
	b) Address of the Concerned Project Chief Engineer (with Pin code & Telephone / Telex / Fax Numbers)	Phone No.: 022-26594034
6.	Salient features	: The proposed Mumbai Trans Harbour Link ('MTHL') is proposed to facilitate decongestion of the island city by improving connectivity between Island city and main land (Navi Mumbai) and development of Navi Mumbai Region.
	a) of the Project	

No.	Particular	Information
		<p>Mumbai Trans Harbour Link Project is 22 km long 6-lane bridge across the Mumbai Bay connecting Sewri on Mumbai side to Chirle on Navi Mumbai side.</p> <p>Benefits:</p> <ul style="list-style-type: none"> • Saving in travel time, Vehicle Operating Cost and Fuel Savings • Accelerated growth of Navi Mumbai • Decongestion of island city of Mumbai • Connectivity to MbPT and JNPT Ports • Faster access to Navi Mumbai International Airport • Connectivity to Pune Expressway and to South India
	b) of the Environmental Management Plans	Various measures stipulated in the Environmental Management Plan mentioned in the CRZ clearance are being complied.
7.	<p>Breakup of the Project Area :</p> <p>a) Submergence area: forest & non forest</p>	<p>Total Area of Right of Way: 120.228 Ha</p> <p>Forest area: 47.417 Ha</p> <p>Non-Forest area: 72.811 Ha</p>
	b) Others	--
8.	<p>Breakup of the project affected population with the enumeration of those losing Houses / Dwelling units only, Agricultural Land & Landless Laborers / Artisans:</p> <p>a) SC, ST / Adivasi</p> <p>b) Others</p> <p>(Please indicate whether these figures are based on any scientific and systematic survey carried out or only provisional figures, if a survey is carried out give details & year of survey)</p>	<p>Project affected population:</p> <p>Please refer to the Quarterly Progress Report No. 15 and 16 for the project affected population attached as Annexure-VI</p> <p>MMRDA has approved eligibility of 6645 fisher folks as project affected so far. Accordingly, fisheries department, Gov. of Maharashtra has paid compensation to eligible fisher-folk as per approved Fisherman Compensation Policy</p>
9	<p>Financial Details: Project cost as originally planned and subsequent revised estimates and the year of price reference</p>	<p>The total cost of the project is Rs. 17,843 Crore</p> <p>Year of reference: 2016</p>
	b) Allocation made for	Allocation of Rs. 335 Crore has been made for the

No.	Particular		Information
	environmental management plans with item wise and year wise breakup		implementation of Environment Management Plan for the MTHL project. The item-wise cost breakup of the EMP is attached as Annexure-II.
c)	Benefit cost ratio/Internal rate of Return and the year of assessment	:	-
d)	Whether (c) includes the cost of environmental management as shown in the above	:	-
e)	Actual expenditure incurred on the project so far	:	Rs. 9059.40 Crore
f)	Actual expenditure incurred on the environmental management plans so far	:	Please refer Annexure-VII for actual expenditure incurred on the environmental management plans so far.
10	Forest Land Requirement		
a)	The status of approval for diversion of forest land for non-forestry use	:	Stage - I clearance approval for diversion of forest land for non-forestry use has been received from MoEF & CC on 22 nd January 2016 vide letter F.No.8-89/2013-FC.
b)	The status of clearing felling	:	NOC from Hon. High Court for cutting of mangroves is received on 28 th November 2016. Working Permission from Forest Department received on 22 May 2017.
c)	The status of compensatory afforestation, if any Comments on the viability & sustainability of compensatory afforestation program in the light of actual field experience so far	:	Rs. 91.42 crores have been transferred to Mangrove cell of Mangroves & Marine Biodiversity Foundation, setup under Maharashtra State Forest Department for Compensatory Afforestation (CA). Mangrove cell, Mumbai submitted updated status report of plantation (Attached as Annexure-VIII)
11	The status of clear felling in non-forest areas (such as submergence area or reservoir, approach roads.), if any with quantitative information required.	:	Commencement Letters have been issued to the Contractors of Package-1, Package-2 and Package-3 on 23 March 2018. Permission for cutting/transplantation in non-forest area of Navi Mumbai side has been granted by CIDCO. Copy of permission letter is attached herewith as

No.	Particular	Information
		Annexure-IX. However, felling in non-forest area has not started yet
12	Status of construction (Actual&/or planned)	Commencement Letters have been issued to the Contractors of Package-1, Package-2 and Package-3 on 23 March 2018. Please refer to the Quarterly Progress Report No. 15 and 16 attached with this report as Annexure-VI.
a)	Date of commencement (Actual & / or planned)	: Commencement Letters have been issued to the Contractors of Package-1, Package-2 and Package-3 on 23 March 2018.
b)	Date of completion (Actual&/or planned)	: --
13	Reasons for the delay if the project is yet to start	: Not Applicable.
14	Dates of Site Visits	: --
a)	The dates on which the project was monitored by the Regional Office on previous occasions, if any	: --
b)	Date of site visits for this monitoring report	: --

Name: - **Shri. S. A. Wandhekar**

Engineer - in - Chief, MTHL Project Implementation Unit

New Administrative building, MMRDA, 2nd floor, Engineering Department, Mumbai Metropolitan Region Development Authority (MMRDA), E-Block, BKC, Bandra Kurla Complex, Bandra East, Mumbai, Maharashtra 400051
Phone No.: 022-26594034

Signature:



Stamp:

**ENGINEER-IN-CHIEF
ENGINEERING DIVISION
M.M.R.D.A.**

HALF YEARLY COMPLIANCE REPORT

1.	Project Type	:	Infrastructure
2.	Name of the Project	:	Mumbai Trans Harbour Link (MTHL) Project
3.	Clearance letter and date	:	F. No. 11-65/2012-IA.III on 25 th January, 2016
4.	Location	:	
	a. District	:	Start point: Sewri in Mumbai City End Point: Chirle in Raigad District
	b. State	:	Maharashtra
	c. Latitude/Longitude	:	Start: Latitude: 18°59'48.57"N Longitude: 72°51'20.67"E End: Latitude: 18°56'18.33"N Longitude: 73° 1'52.92"E
5.	Address of correspondence		
6.	a. Address of concerned project Head	:	Chief Engineer, MTHL Project Implementation Unit 2 nd floor, New Administrative building, MMRDA, Engineering Division, Mumbai Metropolitan Region Development Authority (MMRDA), E-Block, Bandra Kurla Complex, Bandra East, Mumbai, Maharashtra 400051 Phone No.: 022-26594034

Compliance to the Conditions Recommended in CRZ Clearance-2013

S. No.	Condition of 2013 clearance	Compliance
7. Specific Conditions		
(i)	As per the CRZ Notification 2011, at least five times the number of mangroves destroyed/cut during the construction process shall be replanted. Mangrove plantation in an area of 30 ha shall be carried out as committed against loss of 0.1776 ha mudflats/mangroves. Permission from the High Court of Bombay shall be obtained with respect to mangrove cutting.	Noted, about 25 Crores have been contributed by MMRDA to Mangroves Fund, as an initiative by Govt. of Maharashtra for Conservation and Protection of Mangroves in Coastal areas. The amount is used for Survey & Demarcation of Notified areas. Purchase of vehicles and equipment for anti-Encroachment drives, etc. Permission copy of High court for mangrove cutting attached as Annexure-I
(ii)	Proponent shall provide lighting in consulting with the Bombay Natural History Society (BNHS) so as to minimize the likely impacts to the migratory birds.	Noted and being complied (embedded lighting, to be finalized in consultation by BNHS)
(iii)	All the construction equipment's shall be provided with exhaust silencers as committed.	Noted, all the construction equipment used by contractors are provided with exhaust silencers to reduce noise. Photographic evidences of same attached as Annexure-III
(iv)	Noise containment barriers shall be provided on both sides of the bridge in mudflat areas (CRZ-IA) so as to minimize the likely impacts to the migratory birds as committed	Noise containment barriers have to be provided by the Package-I and Package-II on both sides of the bridges to minimize the likely impact to the migratory birds. Till date 1.13 crore have been spent by packages on the temporary barriers.
(v)	There shall be no dredging and reclamation for the project	The proposed project is for the construction of 6 lane road bridge across the Mumbai Harbour between Sewari in MbPT area and Chirle in Navi Mumbai to improve connectivity and facilitate traffic decongestion and hence does not involve dredging and reclamation works
(vi)	Pre-stressed super structure shall be used in the mud flat area for construction as committed	Noted and is being proposed in the mudflat area
(vii)	The muck materials shall be analyses	Noted and is being complied. Muck

S. No.	Condition of 2013 clearance	Compliance
	prior to dumping/disposal in the identified locations with the approval of the competent authority to ensure that it do not cause any impact to the environment.	materials are collected and analyzed prior to dumping/disposal at identified locations. Muck analysis report from Package-I and Package-II attached as Annexure-IV
(viii)	Proponent informed that there is no fishing activity in the area since it is a navigation channel for the nearby ports. However, navigational channel is provided with 25 m from ships and 9.1 m from fishing boats.	Noted and being complied
(ix)	All the recommendations of the MCZMA shall be strictly complied with.	Noted and being scrupulously complied
(x)	There shall be no building construction beyond 20,000 sqm.	The proposed project is for the construction of 6 lane road bridge across the Mumbai harbour between Sewari in MbPT area and Chirle in Navi Mumbai to improve connectivity and does not involve construction of buildings. However, during construction phase of the project temporary site offices and work camps will be constructed which will be well within 20,000 sqm area
(xi)	There shall be no water drawal in CRZ area.	The proposed project does not involve abstraction of the ground water in CRZ area. The water demand for the proposed project is being met through tanker water
(xii)	There shall be no disposal of solid or liquid waste on coastal area. Solid waste management shall be as per Municipal Solid (Management and Handling) Rules, 2000.	The project strictly complies with the new SWM rules 2016 and subsequent amendments and the solid and liquid waste and segregated at source, collected and disposed as per the abovesaid rules. Biodegradable waste is being used for composting at site and non-biodegradable waste will be handed over to authorized agencies for disposal.
(xiii)	Sewage shall be treated and Treatment Facility shall be provided in accordance with the Coastal Regulation Zone	Noted and will be complied

S. No.	Condition of 2013 clearance	Compliance
	Notifications 2011, The disposal of treated water shall conform to the regulation of the State Pollution Control Board.	
(xiv)	The project proponent shall set up a separate environmental management cell for effective implementation of the stipulated environmental safeguards under the supervision of senior executive	<p>Noted and complied,</p> <p>An Environmental Management Cell has been set up and the structure of the committee comprise experts from National Institute of Oceanography; Representative of BNHS; renowned expert in Ornithology; Director, Fisheries Institute, Versova, Andheri; Head of Coastal Engineering, IIT, Mumbai and Representative of Environment Department and Maharashtra Pollution Control Board. The officer of MMRDA is acting as a Member Secretary to coordinate the quarterly meetings of the committee.</p> <p>Six meetings with the members have already commenced till date.</p>
(xv)	The funds earmarked for environment management plan shall be included in the budget and this shall not be diverted for any other purpose.	<p>Noted,</p> <p>Total fund allocated for the environmental management is 335 crores and till date 248.0781 Cr has been spent as a part of environmental management out of which 222.9 Cr has been contributed by the MMRDA.</p> <p>EMP expenditure details attached as Annexure-V.</p>
8. General Conditions		
(i)	Full support shall be extended to the officers of the Ministry/Regional Office of Bhopal by the project proponent during inspection of the project for monitoring purpose by furnishing full details and action plan including action taken reports in respect of mitigation measures and other environmental protection activities	Noted and being complied

S. No.	Condition of 2013 clearance	Compliance
(ii)	A six-monthly monitoring report shall need to be submitted by the project proponent to the regional office of this ministry at Bhopal regarding the implementation of the stipulated conditions	Noted and is being complied
(iii)	Ministry of Environment and Forest or any other competent authority may stipulate any additional conditions or modify the existing ones, if necessary, in the interest of environment and same shall be complied with	Noted and will be adhered
(iv)	The Ministry reserve the right to revoke this clearance if any of the conditions stipulated are not complied with to the satisfaction of the Ministry	Noted and will be adhered
(v)	In the event of a change in project profile or change in the implementation agency, afresh reference shall be made to the Ministry of Environment and Forests	Noted and will be adhered
(vi)	The project proponents shall inform to the Regional office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of land development work	Noted and will be adhered
(vii)	A copy of the clearance letter shall be marked to concerned Panchayat/local NGO if any, from whom any suggestions/representations has been made a received while processing the proposal	Noted and complied. Annexure-X
(viii)	State Pollution Control Board shall display a copy of the clearance letter at the Regional Office, District Industries Centre and Collector's office/Tehsildar's office for 30 days.	-----
9.	The above stipulations would be enforced among others under the provisions of Water (Prevention and	Noted and complied

S. No.	Condition of 2013 clearance	Compliance
	Control of Pollution) Act 1974, the Air (Prevention and Control of Pollution) Act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance Act), 1991 and EIA notification 1994 including the amendments and rules made thereafter	
10.	All other statutory clearances such as approvals for storage of diesel from Chief Controller of Explosive, Fire Department, Civil Aviation Department and clearances under the Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities	<p>Noted and complied.</p> <p>Clearances under Forest Conservation Act, 1980 has been taken by MMRDA from MoEF & CC on 22nd January 2016 vide letter F.No.8-89/2013-FC.</p> <p>The project proponent had allotted the construction work to L&T and JV of Daewoo and Tata through contract and the statutory clearances such as approvals for storage of diesel from Chief Controller of Explosive, Fire Department, Civil Aviation Department has been taken by them.</p> <p>After completion of the project MMRDA will ensure compliance.</p>
11.	The project proponent shall advertise in at least two local newspapers widely circulate in the region, one of which shall be in a vernacular language informing that the project has been accorded CRZ Clearance and copies of the clearance letter are available with the State Pollution Control Board and may also be seen on the website of the Ministry of Environment and Forest at http://www.envfor.nic.in . The advertisement should be made within 10 days from the date of the receipt of the clearance letter and a copy of the same should be forwarded to the Regional office of this ministry at Bhopal	<p>Noted and complied.</p> <p>The advertisement for accord of the CRZ clearance was published in the (Lok Satta and Indian Express on 30.01. 2016)</p> <p>Annexure-X</p>
12	The clearance is subject to final order of the Hon'ble Supreme Court of India in	Noted

S. No.	Condition of 2013 clearance	Compliance
	the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) No. 460 of 2004 as may be applicable to this project.	
13	Any appeal against this clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under section 16 of the National Green Tribunal Act, 2010	Noted
14	Status of compliance to the various stipulated environmental conditions and environmental safeguards will be uploaded by the project proponent on its website.	Noted and Complied The status of the compliance of stipulated EC conditions are uploaded on the website of MMRDA
15	A copy of the clearance letter shall be sent by the proponent to be concerned Panchayat, Zilla parishad/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The Clearance letter shall also be put on the website of the company by the proponent.	Noted and Complied
16	The proponent shall upload the status of the compliance of stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MoEF, the respective Zonal Office of CPCB and the SPCB	Noted and complied The status of the compliance of stipulated EC conditions, including results of monitored data are uploaded on the website of MMRDA and also submitted to Regional Office of the MoEF&CC, the respective Zonal Office of CPCB and the SPCB
17	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated EC conditions including results of monitoring data (both in hard copies as well as by e-mail) to the respective Zonal Office of CPCB and the SPCB	Noted and complied
18	The environmental statement for each	Noted and Complied

S. No.	Condition of 2013 clearance	Compliance
	financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rule 1986 as amended subsequently, shall also be put on the website of the company along with the status of the compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.	

Compliance to the Conditions Recommended in CRZ Clearance-2016

Sr. No.	SPECIFIC CONDITIONS	COMPLIANCE STATUS
i.	All the terms and conditions stipulated by the MCZMA in their letter No. CRZ 2015/CR236/TC 4 dated 26 th November 2015 shall be strictly complied with.	Noted. MMRDA is following the conditions stipulated in the CRZ Clearance.
ii.	All the terms and conditions as mentioned in the earlier CRZ Clearance dated 19 th July 2013, shall also be complied with in letter and spirit,	Noted. MMRDA is following the conditions stipulated in the CRZ Clearance dated 19 th July 2013.
iii.	The Environment Management Plan as presented during the meeting shall be implemented in consultation with all the stakeholders.	MMRDA is implementing the Environment Management plan as stipulated in CRZ clearance. The implementation plan with detailed EMP is attached as an Annexure V
iv.	The project/activity shall be carried out strictly be in accordance with the provisions of CRZ Notification, 2011, and shall not affect the coastal ecology of the area including flora and fauna.	Noted and is being complied
v.	The project proponent shall obtain all permissions from concerned authorities prior to commencement of the project and shall observe all safety requirements onshore and offshore.	Noted and will be complied
vi.	The project proponent shall not undertake any blasting/construction activities during	This condition has been revised by MoEF& CC vide letter dated 28 th August, 2017 having file no F. No. 11-65/2012-

Sr. No.	SPECIFIC CONDITIONS	COMPLIANCE STATUS
	night hours.	IA. III. Refer Annexure-VI (QPR)
vii.	The proposal indicates the diversion of 47.417 ha forest land for which the proponent shall obtain the requisite Forest Clearance. The project may be executed in the entire stretch in non-forest land, and while making application to get the Forest Clearance, the execution of work on non-forest land shall not be cited as a reason for grant of FC and in case FC is declined, the forest land shall be maintained at its existing condition. The PP shall submit an undertaking to this effect at the earliest to the concerned Regional Office to this Ministry.	Stage - I clearance approval for diversion of forest land for non-forestry use has been received from MoEF & CC on 22nd January 2016 vide letter F.No.8-89/2013-FC. Stage - II application is submitted to Deputy Conservator of Forest vide MMRDA letter 6-3-2017 and latest compliance submitted on 10-09-2018.
viii.	All the wildlife mitigation measures as proposed by BNHS in their report dated 23.09.2015 for original alignment shall be implemented with the following modification	Noted and shall be complied
	a) Construction of jetty on both the ends passing through mud flats and mangroves must not exceed 30 months and construction of actual spans must not exceed more that further 12 months.	Noted
	b) The distance between the supporting pillars shall remain 50 m as currently proposed by the MMRDA.	The distance between the piers is maintained more than 50 m.
	c) MMRDA will partly bear the cost of setting of effluent treatment plant in the region as suggested by BNHS.	Noted and being complied
ix.	The project proponent shall not undertake any blasting/construction activities during night hours.	This condition has been revised by MoEF&CC vide letter dated 28 th August 2017 having file no F. No. 11-65/2012-IA. III. Refer Annexure-VI (QPR)

Sr.No.	GENERAL CONDITIONS	COMPLIANCE STATUS
1	Adequate provision for infrastructure facilities including water supply, fuel and sanitation must be ensured for construction workers during the	Noted and is being complied.

Sr.No.	GENERAL CONDITIONS	COMPLIANCE STATUS
	construction phase of the project to avoid any damage to the environment.	
2	Full support shall be extended to the officers of this Ministry/Regional Office at Nagpur by the project proponent during inspection of the project for monitoring purposes by furnishing full details and action plan including action taken reports in respect of mitigation measures and other environmental protection activities.	Noted and shall be complied.
3	A Six-Monthly monitoring report shall need to be submitted by the project proponents to the Regional Office of this Ministry at Nagpur regarding the implementation of the stipulated conditions.	Noted and is being complied. List of Six-monthly compliance report uploaded are: <ol style="list-style-type: none"> 1. January to June 2016. 2. July to December 2016. 3. January to June 2017. 4. July to December 2017. 5. January to June 2018. 6. July to December 2018. 7. January to June 2019. 8. July to December 2019 9. January to June 2020 10. July to December 2020
4	MoEF&CC or any other competent authority may stipulate any additional conditions or modify the existing ones, if necessary, in the interest of environment and the same shall be complied with.	Noted and shall be complied
5	The Ministry reserves the right to revoke this clearance if any of the conditions stipulated are not complied with to the satisfaction of the Ministry.	Noted.
6	In the event of a change in project profile or change in the implementation agency, a fresh reference shall be made to the MoEF & CC.	Noted.
7	The project proponents shall inform to the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of land development work.	Noted.
8	A copy of the clearance letter shall be marked to concerned Panchayat/ local NGO, if any, from whom any suggestion/ representation has been	Noted and complied

Sr.No.	GENERAL CONDITIONS	COMPLIANCE STATUS
	made received while processing the proposal	
9	A copy of the CRZ Clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The Clearance letter shall also be displayed at the Regional Office, District Industries centre and Collector's Office/Tehsildar's Office for 30 days.	Noted and complied.
10	The above stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act 1974, the Air (Prevention and Control of Pollution) Act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification 1994, including the amendments and rules made thereafter.	Noted and will be complied.
11	All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, and clearances under the Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.	Noted and are being complied.
12	The project proponent shall advertise in at least two local newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded CRZ Clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen on the website of the Ministry of Environment, Forest & Climate Change at. The advertisement should be made within Seven days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the regional office of this Ministry at Nagpur.	Complied.
13	This Clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs Union of India in Writ Petition (Civil) No.460 of 2004 as may be applicable to this project.	Noted.

Sr.No.	GENERAL CONDITIONS	COMPLIANCE STATUS
14	Any appeal against this clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Noted.
15	Status of compliance to the various stipulated environmental conditions and environmental safeguards will be uploaded by the project proponent on its website.	Stipulated environmental conditions as mentioned in CRZ are complied in six monthly compliance reports. Environmental Safeguards are incorporated in Environmental Management Plan which is being implemented as per the budgetary provisions mentioned in CRZ. Reports & Publications: Half Yearly Report (https://mmrda.maharashtra.gov.in)
16	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.	Complied.
17	The proponent Shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.	Noted. Six monthly reports on compliance & monitoring results of conditions stipulated in CRZ clearance is being submitted to MPCB Regional, sub regional office, Nagpur MPCB office, MCZMA & SEIAA.
18	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF & CC, the respective Zonal Office of CPCB and the SPCB.	Noted. Six monthly reports on compliance & monitoring results of conditions stipulated in CRZ clearance is being submitted to MPCB Regional, sub regional office, Nagpur MPCB office, MCZMA & SEIAA.
19	The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution	Noted. Individual construction packages have obtained CTE for batching plant and casting yards and the stipulations

Sr.No.	GENERAL CONDITIONS	COMPLIANCE STATUS
	Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF & CC by e-mail.	are being adhered to and are uploaded on the website of MMRDA

Annexures

Annexure I	Permission copy of High court for Mangrove Cutting
Annexure II	Item wise cost breakup of the Environmental Management Plan
Annexure III	Photographic evidence of construction equipment used by contractors are provided with exhaust silencers to reduce noise
Annexure IV	Muck analysis report from Package-I and Package-II
Annexure V	Actual expenditure incurred on the environmental management plans for (January-June 2021)
Annexure VI	Quarterly Progress Reports 15 (Oct to Dec 2020) & 16 (Jan to March 2021)
Annexure VII	Project expenditure incurred
Annexure VIII	Status report on Mangrove plantation
Annexure IX	Permission letter for Tree cutting by CIDCO
Annexure X	Clearance letter marked to concerned Panchayat /local NGO
Annexure XI	Permission for Tree Cutting & Transplantation for package 1

BDPPS

**IN THE HIGH COURT OF JUDICATURE AT BOMBAY
ORDINARY ORIGINAL CIVIL JURISDICITON
NOTICE OF MOTION NO.307 OF 2016
IN
PUBLIC INTEREST LITIGATION NO.87 OF 2006**

Mumbai Metropolitan Region
Development Authority

..... Applicant.

In the matter between

Bombay Environment Action Group
and Another

.....Petitioners.

V/s

State of Maharashtra and Others.

.... Respondents.

Mr. Saket Mone a/w Mr. Subit Chakrabarti i/b Vidhi Partners for
applicant in Notice of Motion No. 307 of 2016 in PIL No.87 of 2016.

Mr. Navroz Seeryai, Senior Counsel a/w Ms. Shreya Parikh for the
Petitioner in PIL No.87 of 2006.

Mrs. P.H. Kantharia, AGP for Respondent/State in PIL No.87 of 2006.

Ms. Trupti Puranik for Respondent/BMC.

Ms. Sharmila Deshmukh for CRZ.

**CORAM: V. M. KANADE &
MS. NUTAN D. SARDESSAI, JJ.**

DATE: 28th November, 2016

P.C.:-

1. This Notice of Motion is taken out by the Applicant for carrying out construction of the proposed Mumbai Trans Harbour Link (a proposed 22 km freeway grade road bridge connecting the island city of Mumbai with Navi Mumbai).
2. The learned Counsel appearing on behalf of the Applicant submits that Applicant has obtained clearance from all the concerned authorities. He submitted that Ministry of Environment and Forest, Government of India has granted approval on 22/01/2016 and CRZ clearance has been granted on 25/01/2016. Applicant has given an undertaking in paras 12 and 27 of the affidavit in support of the Notice of Motion. The said undertaking is accepted. Applicant shall comply with all the conditions which are imposed in the said letters of sanction granted by both the authorities.
3. We are satisfied that the said project is public utility project and we grant leave in terms of prayer clause (a) of the Notice of Motion subject to conditions imposed by both the authorities.
4. Notice of Motion is accordingly allowed in terms of prayer clause (a) and disposed of.

(MS. NUTAN D. SARDESSAI, J.)**(V.M. KANADE, J.)**

Annexure-II Environment Management Plan stipulated in CRZ clearance

Sr. No	Environmental attribute	Cost in Crores
1.	Environmental Monitoring- Air Act, Water Act, Noise levels	8
2.	Compensatory Restoration Plan (Mangroves)	25
3.	Implementation of the suggestions given by BNHS	25
4.	Noise barriers	45
5.	Mitigation of marine water pollution caused due to the surrounding industries and Sewage from Urban Bodies, by providing Funding and Capacity Building for Enabling Effluent Treatment	40
6.	<ul style="list-style-type: none"> • Contribution to Mangroves Fund, an initiative by Govt. of Maharashtra for Conservation and Protection of Mangroves in Coastal areas by depositing Seed Money. • This can be used for Survey & Demarcation of Notified areas • Purchase of vehicles and equipment for anti-Encroachment drives, etc. 	25
7.	Oil Spill Mitigation Plan	10
8.	Habitat quality assessment and monitoring Surveillance management and monitoring team for migratory birds, marine flora, turbidity in sea floor, etc Corpus fund for mudflat restoration program	20
9.	Appointment of Bird Monitor and his assistant till Restoration of Baseline data	4
10.	DMP, Firefighting, Risk Analysis	15
11.	Sustainable development including establishing Nature Interpretation Centre	10
12.	Safety and Security	15
13.	Energy conservation	10
14.	Landscaping-Plantation of trees, flower in plants etc.	8
15.	Compensation and Capacity Building of Fisher folks due to Temporary and Permanent Loss of Fishing round	75
		335 crores

Photographic evidences of construction equipment used by contractors are provided with exhaust silencers to reduce noise

Attachment III



Photographic evidences of construction equipment used by contractors are provided with exhaust silencers to reduce noise

Attachment III



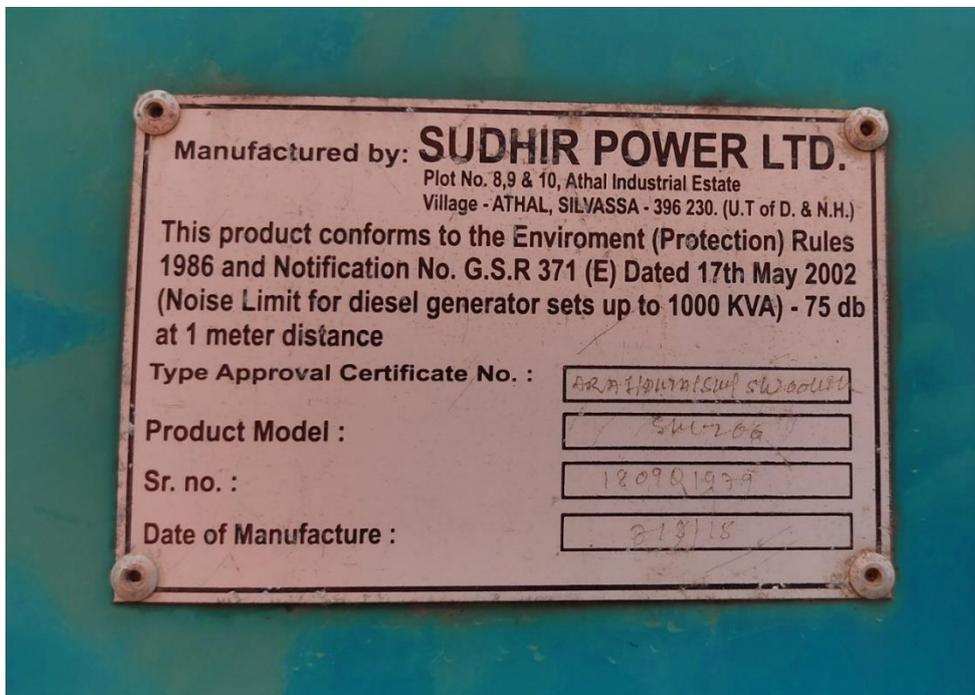
Photographic evidences of construction equipment used by contractors are provided with exhaust silencers to reduce noise

Attachment III



Photographic evidences of construction equipment used by contractors are provided with exhaust silencers to reduce noise

Attachment III





Netel (India) Limited

TEST REPORT

Name of Organization : M/s. L & T Constructions				
Address : Gate No. 1 Sewri Timber Pond, Near Gadi Adda, Sewri(East), Mumbai.				
Sample Code : NIL/SO/03/21/001		Sample Location : MP-56		
Sample Source : Piling activity		Sample Qty.& Packing : 1 Kg Zip Lock Bag		
Sample Type : Muck Sample		Sample Drawn By : Netel (India) Limited.		
Sampling Date		Sample Received Date		Date of Analysis
05.03.2021		05.03.2021		06.03.2021-15.03.2021
Report Date				
16.03.2021				
Sr. No.	Test Parameter	Method	Unit	Result
NIL/SO/03/21/001				
General Analyzed Parameters				
1	Cadmium (Cd)	Lab SOP No:NIL/SOP/15 dt 01/07/14	mg/kg	<5
2	Lead (Pb)	Lab SOP No:NIL/SOP/15 dt 01/07/14	mg/kg	23.92
3	Chromium (as Cr ⁶⁺)	APHA 3500-Cr-B	mg/kg	<0.05
4	Arsenic (As)	EPA 3050B & By FIAS	mg/kg	<0.01
5	Total Mercury (Hg)	EPA 3050B & By FIAS	mg/kg	<0.01
6	Copper (Cu)	Lab SOP No:NIL/SOP/15 dt 01/07/14	mg/kg	57.3
7	Dichloromethane	By GC-FID	mg/kg	<1
8	Carbon Tetrachloride	By GC-FID	mg/kg	<1
9	Benzene	APHA 6200-C	mg/kg	<1
10	Selenium (Se)	EPA 3050B & By FIAS	mg/kg	<0.01

Note :-

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- ❖ The testing results reported reflects the quality of sample at the time of testing.
- ❖ The Complaint register is available with the Laboratory as per Environment Protection Act 1986.

Verified by:

Surokha Jamdar
Dy. Technical Manager

Issued by:

Shraddha Kere
Technical Manager

End of Report

A Neterwala Group Company

W-408, Rabale MIDC,
TTC Industrial Area,
NAVI MUMBAI - 400 701.
INDIA.

Tel. : 72080976 92 / 93 / 94 / 95

E-mail : sales@netel-india.com
Website : www.netel-india.com

CIN : U74999MH2003PLC142228



Regd. office : Liberty Building, 3rd Floor, Sir Vithaldas Thackersey Marg, (New Marine Lines), Mumbai - 400 020. Tel. : 22066231 / 61





Netel (India) Limited

TEST REPORT

Name of Organization : M/s. L & T Constructions				
Address : Gate No. 1 Sewri Timber Pond, Near Gadi Adda, Sewri(East), Mumbai.				
Sample Code : NIL/SO/03/21/001		Sample Location : MP-56		
Sample Source : Piling activity		Sample Qty.& Packing : 1 Kg Zip Lock Bag		
Sample Type : Muck Sample		Sample Drawn By : Netel (India) Limited.		
Sampling Date		Sample Received Date		Report Date
05.03.2021		05.03.2021		16.03.2021
Sr. No.	Test Parameter	Method	Unit	Result
TCLP Analyzed Parameters				
				NIL/SO/03/21/001
1	Cadmium (Cd)	EPA Method 1311	mg/lit	0.02
2	Lead (Pb)	EPA Method 1311	mg/lit	0.21
3	Chromium (as Cr ⁶⁺)	EPA Method 1311	mg/lit	<0.05
4	Arsenic (As)	EPA Method 1311	mg/lit	<0.01
5	Total Mercury (Hg)	EPA Method 1311	mg/lit	<0.01
6	Copper (Cu)	EPA Method 1311	mg/lit	0.2
7	Dichloromethane	EPA Method 1311 & By GC-FID	mg/lit	<1
8	Silver (Ag)	EPA Method 1311	mg/lit	0.02
9	Zinc (Zn)	EPA Method 1311	mg/lit	0.28
10	Selenium (Se)	EPA Method 1311	mg/lit	<0.01
11	Antimony	EPA Method 1311	mg/lit	<1
12	Barium (as Ba)	EPA Method 1311	mg/lit	<1
13	Beryllium	EPA Method 1311	mg/lit	<1
14	Fluoride (F ⁻)	EPA Method 1311	mg/lit	1.22
15	Nitrate (NO ₃ ⁻)	EPA Method 1311	mg/lit	0.51
16	Ammonium Compound	EPA Method 1311	mg/lit	<1
17	Chlorobenzene	EPA Method 1311 & By GC-FID	mg/lit	<1
18	Methyl Ethyl Ketone	EPA Method 1311 & By GC-FID	mg/lit	<1
19	Naphthalene	EPA Method 1311 & By HPLC	mg/lit	<1
20	Benzo (a) Pyrene	EPA Method 1311 & By HPLC	mg/lit	<1
21	Aldrin	EPA Method 1311	mg/lit	<0.01
22	Dieldrin	EPA Method 1311	mg/lit	<0.01
23	Chlordane	EPA Method 1311	mg/lit	<0.01
24	Dichlorodiphenyltrichloroethane (DDT)	EPA Method 1311	mg/lit	<0.01
25	Methoxychlor Dichlorodipenyldichloroethylene (DDE)	EPA Method 1311	mg/lit	<0.01
26	Dichlorodipenyldichloroethane (DDD)	EPA Method 1311	mg/lit	<0.01
27	2,4-Dichlorophenoxyacetic Acid (2,4-D)	EPA Method 1311	mg/lit	<0.01
28	Endrin	EPA Method 1311	mg/lit	<0.01
29	Heptachlor	EPA Method 1311	mg/lit	<0.01

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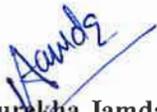
Netel (India) Limited

Sr. No.	Test Parameter	Method	Unit	Result
				NIL/SO/03/21/001
30	Lindance	EPA Method 1311	mg/lit	<0.01

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Verified by:


Surekha Jamdar
Dy. Technical Manager

Issued by:


Shraddha Kere
Technical Manager

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DAEWOO-TPL JV

C/O TATA Projects Limited, 11th Floor, Hiranandani Knowledge Park, Technology Street, Powai, Mumbai-400 076, India

Ref: MTHL/DW-TPL/GC/LT/ENV/2021-2716

Date: 06 Apr 2021

To, : **The Engineer**
General Consultant for MTHL Project
6th Floor, A Wing, MMRDA Old Building, Bandra-Kurla Complex
Bandra (E), Mumbai 400 051

Kind Attn. : Dr. Sham, Siu hung Robin

Project : Procurement of Mumbai Trans Harbour Link Project (Package 2) Construction of 7.807km long bridge section (CH 10+380-CH 18+187) across Mumbai Bay including Shivaji Nagar Interchange

Subject : Submission of Muck Test Report (March 2021)

Ref. : 1. Letter of Acceptance (LOA) No. MMRDA/MTHL/PKG-2/LOA/11-17 issued by MMRDA dated 17-11-2017
2. Contract Agreement dated 19-01-2018

Dear Sir,

The Contractor has conducted muck testing and the reports of the same are attached herewith for your information & records.

We assure you of our best attention of all times.

Yours truly,

For Daewoo-TPL JV



Min Geun KIM / Project Director

Encl: 1) Muck Testing report for the month March 2021

CC: 1) Dr. D T Thube, Chief Engineer, MMRDA
2) Mr. Yatin Sakhalkar, Superintendent Engineer, MMRDA
3) Mr. Vishal Jambhale, Executive Engineer, MMRDA
4) Mr. Hohsing Lee, PE, SE, Resident Engineer, General Consultant (MTHL)



Netel (India) Limited

TEST REPORT

Name of Organization : M/s. Daewoo-TPL-JV					
Customer Address : MTHL Pkg-2, Daewoo – TPL JV, Shivaji Nagar Post Khar Kopar, Sector 8, Ulwe, Navi Mumbai - 410206					
Sample Type : Muck			Sampling Done By : Netel (India) Limited		
Sample Packing : Plastic Bag			Sample Quantity : 2 Kgs		
Date of Sampling : 16.03.2021			Analysis Date : 18.03.2021 — 30.03.2021		
Sample Received : 18.03.2021			Date of Reporting : 31.03.2021		
Sampling Location : MP-149			Sample Code : NIL/SO/03/21/002		
Sr. No.	Test Parameter	Method	Unit	MDL*	Result
1	Organic Phosphorus	Leachate - Lab SOP* NIL/IHM/01 Analysis - APHA 4500-P-C	mg/kg	0.5	10.5
2	Cynide	APHA 4500-CN	mg/kg	0.005	<0.005
3	Lead	Lab SOP* NIL/SOP/15	mg/kg	0.1	0.13
4	Cadmium	Lab SOP* NIL/SOP/15	mg/kg	0.1	BDL
5	Hexavalent Chromium	EPA 3050B	mg/kg	0.1	BDL
6	Copper	Lab SOP* NIL/SOP/15	mg/kg	0.1	2
7	Mercury	EPA 3050B / By FIAS	mg/kg	0.1	BDL
9	Selenium	EPA 3050B / By FIAS	mg/kg	0.1	BDL
10	Arsenic	EPA 3050B / By FIAS	mg/kg	0.1	BDL
11	Polychlorinated Biphenyls	GC ECD	mg/kg	0.01	BDL
12	Dichloromethane	GC FID	mg/kg	0.1	BDL
13	Carbon Tetrachloride	GC FID	mg/kg	0.1	BDL
14	1,2-Dichloroethane	EPA-8260 B	mg/kg	0.1	BDL
15	1,1-Dichloroethylene	EPA-8260 B	mg/kg	0.1	BDL
16	cis-1,2-Dichloroethylene	EPA-8260 B	mg/kg	0.1	BDL
17	1,1,1-Trichloroethane	EPA-8260 B	mg/kg	0.1	BDL
18	1,1,2-Trichloroethane	EPA-8260 B	mg/kg	0.1	BDL
19	Trichloroethylene	EPA-8260 B	mg/kg	0.1	BDL
20	Tetrachloroethylene	EPA-8260 B	mg/kg	0.1	BDL
21	1,3-Dichloropropane	EPA-8260 B	mg/kg	0.1	BDL
22	Thiuram	GC-MS	mg/kg	0.1	BDL
23	Simazine	GC-MS	mg/kg	0.1	BDL
24	Thiobencarb	GC-MS	mg/kg	0.1	BDL
25	Benzene	GC FID	mg/kg	0.1	BDL
26	Oil & Grease	EPA Method 9071 B	mg/kg	1	BDL

- Note : 1. MDL – Method Detectible Limit.
2. BDL – Below Detectible Limit.
3. * Based on Manual of Soil testing in India, Ministry of Agriculture, GOI, 2011
4. This Test Report shall not be reproduced except in full, without written approval of the Laboratory.
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6. The complaint register is available with the Laboratory as per Environment Protection Act, 1986.

Verified by:

Surekha Jamdar
Dy. Technical Manager

Issued by:

Shradha Kere
Technical Manager

A Neterwala Group Company

End of Report

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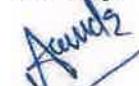
Netel (India) Limited

TEST REPORT

Name of Organization : M/s. Daewoo-TPL-JV					
Customer Address : MTHL Pkg-2, Daewoo – TPL JV, Shivaji Nagar Post Khar Kopar, Sector 8, Ulwe, Navi Mumbai - 410206					
Sample Type : Muck			Sampling Done By : Netel (India) Limited		
Sample Packing : Plastic Bag			Sample Quantity : 2 Kgs		
Date of Sampling : 16.03.2021			Analysis Date : 18.03.2021 — 30.03.2021		
Sample Received : 18.03.2021			Date of Reporting : 31.03.2021		
Sampling Location : Hopper Barge			Sample Code : NIL/SO/03/21/003		
Sr. No.	Test Parameter	Method	Unit	MDL*	Result
1	Organic Phosphorus	Leachate - Lab SOP* NIL/IHM/01 Analysis - APHA 4500-P-C	mg/kg	0.5	38.7
2	Cynide	APHA 4500-CN	mg/kg	0.005	<0.005
3	Lead	Lab SOP* NIL/SOP/15	mg/kg	0.1	0.15
4	Cadmium	Lab SOP* NIL/SOP/15	mg/kg	0.1	BDL
5	Hexavalent Chromium	EPA 3050B / By FIAS	mg/kg	0.1	BDL
6	Copper	Lab SOP* NIL/SOP/15	mg/kg	0.1	14
7	Mercury	EPA 3050B / By FIAS	mg/kg	0.1	BDL
9	Selenium	EPA 3050B / By FIAS	mg/kg	0.1	BDL
10	Arsenic	EPA 3050B / By FIAS	mg/kg	0.1	BDL
11	Polychlorinated Biphenyls	GC ECD	mg/kg	0.01	BDL
12	Dichloromethane	GC FID	mg/kg	0.1	BDL
13	Carbon Tetrachloride	GC FID	mg/kg	0.1	BDL
14	1,2-Dichloroethane	EPA-8260 B	mg/kg	0.1	BDL
15	1,1-Dichloroethylene	EPA-8260 B	mg/kg	0.1	BDL
16	cis-1,2-Dichloroethylene	EPA-8260 B	mg/kg	0.1	BDL
17	1,1,1-Trichloroethane	EPA-8260 B	mg/kg	0.1	BDL
18	1,1,2-Trichloroethane	EPA-8260 B	mg/kg	0.1	BDL
19	Trichloroethylene	EPA-8260 B	mg/kg	0.1	BDL
20	Tetrachloroethylene	EPA-8260 B	mg/kg	0.1	BDL
21	1,3-Dichloropropane	EPA-8260 B	mg/kg	0.1	BDL
22	Thiuram	GC-MS	mg/kg	0.1	BDL
23	Simazine	GC-MS	mg/kg	0.1	BDL
24	Thiobencarb	GC-MS	mg/kg	0.1	BDL
25	Benzene	GC FID	mg/kg	0.1	BDL
26	Oil & Grease	EPA Method 9071 B	mg/kg	1	BDL

- Note :**
1. MDL – Method Detectible Limit.
 2. BDL – Below Detectible Limit.
 3. * Based on Manual of Soil testing in India, Ministry of Agriculture, GOI, 2011
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Verified by:


Suresh Jamdar
Dy. Technical Manager

Issued by:


Shradha Kere
Technical Manager

End of Report

A Neterwala Group Company

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Annexure-V

Sr. No	EMP break up for January to June 2021			Cumulative Expenditure (Rs. In Crore)
	Environmental attribute	Cost in crores (As stipulated in CRZ clearance) (Rs. in Crore)	Expenditure incurred on the environmental management plans (Rs. in Crore)	
1.	Environmental Monitoring- Air Act, Water Act, Noise levels	8	0.06	0.8733
2.	Compensatory Restoration Plan (Mangroves)	25	0	50.82
3.	Implementation of the suggestions given by BNHS	25	0	41.98
4.	Noise barriers	45	0.04	1.1296
5.	Mitigation of marine water pollution caused due to the surrounding industries and Sewage from Urban Bodies, by providing Funding and Capacity Building for Enabling Effluent Treatment	40	0	5.8
6.	Contribution to Mangroves Fund, an initiative by Govt. of Maharashtra for Conservation and Protection of Mangroves in Coastal areas by depositing Seed Money. This can be used for Survey & Demarcation of Notified areas. Purchase of vehicles and equipment for anti-Encroachment drives, etc.	25	0	25
7.	Oil Spill Mitigation Plan	10	0.26	1.4481
8.	Habitat quality assessment and monitoring Surveillance management and monitoring team for migratory birds, marine flora, turbidity in sea floor, etc Corpus fund for mudflat restoration program	20	0	0
9.	Appointment of Bird	4	0	0

Sr. No	EMP break up for January to June 2021			Cumulative Expenditure (Rs. In Crore)
	Environmental attribute	Cost in crores (As stipulated in CRZ clearance) (Rs. in Crore)	Expenditure incurred on the environmental management plans (Rs. in Crore)	
	Monitor and his assistant till Restoration of Baseline data			
10.	DMP, Firefighting, Risk Analysis	15	0.207	2.4073
11.	Sustainable development including establishing Nature Interpretation Centre	10	0	10
12.	Safety and Security	15	2.84	15.09
13.	Energy conservation	10	0.38	3.4608
14.	Landscaping-Plantation of trees, flower in plants etc.	8	0.10	0.769
15.	Compensation and Capacity Building of Fisher folks due to Temporary and Permanent Loss of Fishing round	75	0	89.3
	TOTAL	335 Crores	3.8832	248.0781



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INTERNATIONAL

General Consultant for Mumbai Trans Harbour Link Project

Ref No: MTHL/GC/MMRDA/LT/QPR-1954/2021

1st March 2021

To,
The Chief Engineer
Engineering Division
Mumbai Metropolitan Regional Development Authority (MMRDA)
2nd Floor, New MMRDA Building,
Plot No R-06 & R-12, 'E' Block
Bandra Kurla Complex, Bandra (E),
Mumbai, Maharashtra, India 400051.

Sub: General Consultancy services for Mumbai Trans Harbour Link (MTHL) project -
Submission of Quarterly Progress Report (QPR) No. 15 for October to December 2020

Ref: MTHL/GC/MMRDA/LT/QPR – 1909/ 2021 dated 15th February 2021

Dear Sir,

With reference to the above subject, please find enclosed 1 hard copy of the corrected Quarterly Progress Report (QPR) No. 15 for the period of 1st October to 31st December 2020. In this report, we have incorporated all the corrections after your review of the draft report.

You may forward the same to JICA, India at your earliest convenience.

Thanking you,
Yours faithfully,

1 March 2021

Dr. S H Robin Sham, CBE
(BSc, PhD, DIC, FCGI, FRSA, CEng, FICE, FStructE, FHKIE)
The Engineer
General Consultant (MTHL)

Encl: 1 copy of Quarterly Progress Report No. 15 (October - December 2020)

CC: Superintendent Engineer – MMRDA - Mr. Sakhalkar
Executive Engineer – MMRDA – Mr. Bhisikar
Executive Engineer – MMRDA – Mr. Vishal Jambhale
Executive Engineer – MMRDA – Mr. Ganesh Deshpande } By Email



एम एम आर डी ए
MMRDA

Mumbai Metropolitan Region Development Authority

Mumbai Trans Harbour Link Project

Quarterly Progress Report - No.15

(From 1st October 2020 to 31st December 2020)



**Mumbai Trans Harbour Link Project
Quarterly Progress Report No. 15
1st October 2020 to 31st December 2020
Loan Agreement No. ID-P255 (Tranche-I)**

ORGANIZATION INFORMATION

Borrower	Mumbai Metropolitan Region Development Authority	
	Person in Charge	Metropolitan Commissioner, MMRDA
	Contact Address	M.M.R.D.A. New Office Building, Bandra-Kurla Complex, Plot no. R-5, R-6 & R-12, E Block, Bandra (East), Mumbai - 400051 Phone: +91-22-26594000 Fax No:+91-22-2659 1264
Executing Agency	Mumbai Trans Harbour Link Project Implementation Unit	
	Headed by:	Chief Engineer Mumbai Trans Harbour Link Project Implementation Unit
	Contact Address	M.M.R.D.A. New Office Building, Bandra-Kurla Complex, Plot no. R-5, R-6 & R-12, E Block Bandra (East), Mumbai - 400 051 Phone: +91-22-2659 4034 Fax No: +91-22-2659 4179

Details of JICA Loan

Source of Finance	JICA ODA Loan Portion:	238,572 million Japanese YEN (JPY)
	Tranche-I:	144,795 million Japanese YEN (JPY) (Loan Agreement signed on 31 st March 2017)
	Tranche-II:	66,909 Million Japanese YEN (JPY) (Loan Agreement signed on 27 th March 2020)
Terms and Conditions of JICA ODA Loan (Tranche-1)	Repayment Period:	30 years, including 10 years of grace period.

DOCUMENT VERIFICATION AND REVISION RECORD

PROJECT NAME		Mumbai Trans Harbour Link Project			
DOC NO.		15	DATE OF ISSUE		12/02/2021
DOC TITLE		Quarterly Progress Report No. 15			
REV No.	DATE OF ISSUE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY
R0	05/07/2017	Quarterly Progress Report No. 1 (Apr-Jun 17)	J Senthil	Dr T K Sundaram	Dr Robin Sham
R0	05/10/2017	Quarterly Progress Report No. 2 (Jul-Sep 17)	J Senthil	Dr T K Sundaram	Dr Robin Sham
R0	05/01/2018	Quarterly Progress Report No. 3 (Oct-Dec 17)	J Senthil	Dr T K Sundaram	Dr Robin Sham
R0	05/04/2018	Quarterly Progress Report No. 4 (Jan-Mar 18)	J Senthil	Dr T K Sundaram	Dr Robin Sham
R0	24/07/2018	Quarterly Progress Report No. 5 (Apr-Jun 18)	Prashant B	Dr T K Sundaram	Dr Robin Sham
R0	10/10/2018	Quarterly Progress Report No. 6 (Jul-Sep 18)	Prashant B	Dr T K Sundaram	Dr Robin Sham
R1	08/02/2019	Quarterly Progress Report No. 7 (Oct-Dec 18)	Prashant B	J Senthil/ Dr T K Sundaram	Dr Robin Sham
R0	05/04/2019	Quarterly Progress Report No. 8 (Jan-Mar 19)	Prashant B	J Senthil	V. D. Sharma/ Dr Robin Sham
R0	18/09/2019	Quarterly Progress Report No. 9 (Apr-Jun 19)	Prashant B	Mr. Som Ghosh	Dr Robin Sham
R0	13/11/2019	Quarterly Progress Report No. 10 (Jul-Sep 19)	Prashant B	Mr. Som Ghosh	Dr Robin Sham
R0	11/02/2020	Quarterly Progress Report No.11 (Oct-Dec 19)	Prashant B	Mr. Som Ghosh	Dr Robin Sham
R0	25/11/2020	Quarterly Progress Report No.12 (Jan-Mar 20)	Prashant B	Mr. Som Ghosh	Dr Robin Sham
R0	15/12/2020	Quarterly Progress Report No.13 (Apr-Jun 20)	Prashant B	Mr. Som Ghosh	Dr Robin Sham
R0	06/01/2021	Quarterly Progress Report No.14 (Jul-Sept 20)	Prashant B	Mr. Som Ghosh	Dr Robin Sham
R0	12/02/2021	Quarterly Progress Report No.15 (Oct-Dec 20)	Prashant B	Mr. Som Ghosh	Dr Robin Sham

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1.0 PROJECT DESCRIPTION

1.1 Project Objective

Original:

To improve connectivity in Mumbai Metropolitan region by constructing the Mumbai Trans Harbour Link connecting Mumbai with Navi Mumbai, thereby contributing to mitigation of traffic congestion and promoting regional economic development.

Actual (*P/R, PCR*)

There is no change in the Project Objective.

1.2 Necessity of the Project

The Project is consistent with the development policy, sector plan, national/regional development plans and demand of target group of the recipient country.

Benefits from MTHL Project

- Saving in travel time for commuters from Mumbai to Navi Mumbai.
- Improved comfort and accessibility between the island and the mainland.
- Reduced operating costs of vehicles due to lesser congestion.
- Smooth traffic flow from Navi Mumbai airport to Mumbai Island.
- Accelerated economic development of Navi Mumbai and nearby regions.
- Greater economic integration of Mumbai island with Navi Mumbai and extended regions of Pune, Goa, Panvel and Alibaug.
- Improvement in environment and reduced pollution levels.
- Improved safety due to reduction in accidents.
- Improvement in trade competitiveness through faster and improved logistics.
- Accelerated growth of Navi Mumbai.
- Decongestion of Mumbai Island and dispersal of population to Navi Mumbai region & beyond.

Necessity of the Project

1. Although the urbanization in India has been rapidly progressing, infrastructure development in the urban areas has not caught up its progress. Particularly, the traffic congestion in the urban areas due to a lack of road network hinders the economic development. Thus, Government of India (GOI) places transport and connectivity as one of the “Growth Enablers” and plans to enhance road network in the “Three Year Acton Agenda 2017-2018 to 2019-20 (NITI Aayog)”.
2. Mumbai Metropolitan Region, which includes Mumbai and Navi Mumbai, has about 18.4 million people in population as of 2011 (Census 2011) and the population density reaches 20,694 people per square km in the center of Mumbai, which is one of the most overpopulated and high-density cities in the world.
3. Mumbai, the narrow stretch of land that has traditionally been the epicentre of India’s commerce, has seen a steady increase in population in the last three decades despite obvious spatial constraints. Thus, the development of Navi Mumbai has been identified as an urgent requirement for broad development in Mumbai Metropolitan Region.

4. The Government of Maharashtra (GoM), of which Mumbai Metropolitan Region is under jurisdiction, has been facilitating various development plans particularly in Navi Mumbai area, which stands at the opposite site of Mumbai across the Mumbai Bay and still has spacious area for development, such as a new international airport, Special Economic Zone (SEZ) and expansion of Jawaharlal Nehru Port in order to promote the sustainable economic development in Mumbai Metropolitan Region.
5. Furthermore, a lack of connectivity in Mumbai has stunted its growth. The GoM has given importance to construct the faster connection with Mumbai to Navi Mumbai International Airport, Jawaharlal Nehru Port, Mumbai-Pune expressway and main hinterland.
6. Accordingly, the Mumbai Trans Harbour Link (MTHL) has been identified as the important infrastructure to improve the connectivity between Mumbai and Navi Mumbai and continue economic development in Mumbai Metropolitan Region.

The MTHL is proposed to be developed as an expressway link comprising of a dual three-lane main carriageway bridge connecting Sewri in Mumbai to Chirle in Navi Mumbai. When completed, MTHL will reduce the distance between Mumbai and Navi Mumbai and will help save approximately an hour in travel time. Also, development of Navi Mumbai along with the imminent construction of the Navi Mumbai airport will lead to increased traffic between Mumbai and Navi Mumbai. Consequently, the project is envisaged to; improving accessibility between Mumbai and Navi Mumbai, accelerating growth of Navi Mumbai, smooth traffic flow from Navi Mumbai airport to Mumbai, accelerating economic development of Navi Mumbai and surrounding regions, greater economic integration of Mumbai with Navi Mumbai and extended regions of Pune, Goa, Panvel and Alibaug, and decongestion of Mumbai and dispersal of population to Navi Mumbai region and beyond.

7. The Comprehensive Transportation Study (CTS) for Mumbai Metropolitan Region which was guided by Mumbai Metropolitan Region Development Authority (MMRDA) and supported by World Bank, was completed in July 2008, which was over 25 years after the issuance of the last comprehensive transport study. The report provided a vision for Mumbai's future transportation as seamless and integrated system, in which commuters can make their journeys safely and conveniently by various modes of transport, particularly by public transport, and recommended the development of Multi Modal Corridor to take care of the varied travel demands of the region for the period up to 2031. The CTS proposed to develop the highway network in the region. The MTHL has been regarded as the priority road for Mumbai, considering its function and importance connecting between Mumbai and Navi Mumbai.
8. Necessity of the Project: - To promote economic development in Mumbai Metropolitan Region it is essential to improve the connectivity between Mumbai and Navi Mumbai, by constructing MTHL.

Actual (P/R, PCR)

There is no change in the Necessity of the Project preamble.

1.3 Rationale of the Project Design

- Timing, Scale, Technology of the Project:

Demand Analysis

- At the opening year 2022, the daily traffic on the main bridge is expected to be 39,300 PCU. The traffic is projected to increase up to 103,900 by 2032 and up to 145,500 by the year 2042. The daily breakdown by vehicle class on the main bridge link is presented in the Table 1.3.1 below:

Table 1.3.1 Demand Projections Over the Period

Vehicle Type	Between Sewri Interchange and Shivaji Nagar Interchange			Between Shivaji Nagar Interchange and Chirle Interchange		
	2022	2032	2042	2022	2032	2042
Car	24,100	66,400	94,100	4,900	21,300	43,300
Taxi	2700	14,100	20,200	100	400	2,300
Bus	2,700	3,700	3,700	2,700	3,700	3,700
LCV	2,200	4,100	5,600	700	1,300	1,800
HCV	3,000	6,500	8,100	1,000	2,000	2,200
MAV	4,600	9,100	13,800	400	900	1,700
Total	39,300	103,900	145,500	9,800	29,600	55,000

LCV: Light Commercial Vehicle; HCV: Heavy Commercial Vehicle; MAV: Multi Axle Vehicle

- At the opening year in 2022, the traffic flow on MTHL represents a diversion of 10% on the traffic across Thane creek which will increase up to 16% in 2032. If only Thane Creek Bridge is considered, then the diverted traffic from the bridge will be 21% in 2022 which will rise up to 35% in 2032.
- 6-lane of main carriageway was decided by GoM. It was reviewed based on the forecasted result of future traffic volume by Manual of Specification and Standards for Expressways (IRC: SP:99-2013). The result of the review shows that 6-lane will be required in 2032 (10 years later after traffic open). Although, 8-lane will be required in 2042, it is assumed that the level of service of MTHL would be maintained as additionally metro might be constructed in parallel with MTHL.

Design Parameters / Overall Design

- The MTHL which is 21.8 km long road bridge partly on the land and partly over the creek across the Mumbai Bay between Sewri in Mumbai and Chirle in Navi Mumbai, is to be constructed with the approach sections and interchanges. ITS (Intelligence Transport System) and the other necessary facilities will be provided for full access-controlled bridges.
- As per the provisions of IRC (Indian Road Congress) SP:99-2013, the Width of each lane of the Main Carriageway is 3.5 meters.
- When the design speed is 100 km/h according to the traffic demand forecast the large vehicle, ratio will be as low as 9.4% (2022).
- The shoulder width of bridge towards outside of each carriageway is 2.5 meters and towards median side of each carriageway is 0.75 meters.
- The major portion of MTHL structure is on sea and partly towards ends is on land with

different type and with different span, viz., PC box girder with 50 m spans which is typically applied on marine viaduct since, it is economical, easy to construct and maintain.

9. On the land portion, the PC box girder having span of generally 30m is used.
10. As far as the location in which long span (150-180 m) is required to cross significant obstacles, such as navigation channels, pipelines and creeks, the steel box girder bridge with steel deck is proposed with large block erection method to shorten the construction period.
11. The project is coded with three lanes of traffic in each direction. The reference toll is presented in the Table 1.3.2 below for each vehicle class in Year 2022 (based on 2015 monetary value reflecting price escalation).

Table 1.3.2: Base Toll Rates (Rs) for different class of vehicles between Interchanges

Vehicle Type	Sewri to Shivaji Nagar	Shivaji Nagar to Chirle	Total
Car	180	60	240
Bus	420	130	550
LCV	240	70	310
HCV	420	130	550
MAV	600	180	780

Intelligent Transport Systems (ITS) and Toll Management System (TMS)

12. The Toll Management System will be implemented in MTHL to collect tolls from all road users of MTHL. Two types of toll collection method will be adopted; Electronic Toll Collection (ETC) and Manual (paying by cash).
13. The lanes corresponding to these toll collection methods are dedicated ETC lanes and Manual lanes, and Manual system shall be installed to ETC lanes for backup to be able to cope at the time of the trouble of ETC equipment failure.

Traffic management System

14. Traffic Management System is a support system to Manage the traffic on MTHL safely and efficiently. The System consists of the information collection system including Closed-Circuit Television (CCTV), Emergency Call Box (ECB), Automatic Traffic Counter-Cum-Classifer (ATCC) and Meteorological Data System (MDS), and Information Dissemination System including Variable message Sign (VMS).
15. CCTV Cameras shall be installed at around three places per 1 km, on Both side of main route and the monitoring of the traffic condition of the whole stretch of MTHL will be almost enabled in the Traffic Control Centre and VMS displays the appropriate information for road users on the collated information.
16. The Information collected by these devices shall be transmitted to the Command Control Centre through the medium of an Optical Fiber Cable laid in MTHL.

Actual (P/R, PCR)

There is no change in the Rationale of the Project Design.

2.0 PROJECT IMPLEMENTATION

2.1 Project Scope

Refer Table 2.1.1 and 2.1.2 for details on Scope of the Project.

Table 2.1.1 Comparison of Original and Actual location

Location	Original: (P/M) Mumbai Metropolitan Region Development Authority, Mumbai, State of Maharashtra	Actual: (P/R and PCR)
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Table 2.1.2 Comparison of Original and Actual Scope

Items	Original	Actual
Construction work: 6-lane Marine Bridge Road (21.8 km)		
Package-1 Ch 0+000-10+380 (10.380 km)	<ul style="list-style-type: none"> 1 Interchange (Sewri) Viaduct superstructure (Marine Portion: PC Box Girder & Steel Box Girder with Steel Slab Land Portion: PC Box Girder & PC-I Girder) Viaduct Substructure (RC Concrete Structure) Viaduct Foundation (Bored piles) Road Furniture and roadside facilities (Traffic Signs and Pavement Marking, Traffic Safety Devices, Crash Barrier, Drainage Structures, Noise Barriers, View Barriers) 	(P/R and PCR)
Package-2 Ch 10+380-18+187 (7.80 km)	<ul style="list-style-type: none"> 1 Interchange (Shivaji Nagar) Viaduct superstructure (Marine Portion: PC Box Girder & Steel Box Girder with Steel Slab Land Portion: PC Box Girder & PC-I Girder) Viaduct Substructure (RC Concrete Structure) Viaduct Foundation (Bored piles) Road Furniture and roadside facilities (Traffic Signs and Pavement Marking, Traffic Safety Devices, Crash Barrier, Drainage Structures, Noise Barriers, View Barriers) 	(P/R and PCR) Actual: No View Barriers
Package-3 Ch 18+187-21+800 (3.61 km)	<ul style="list-style-type: none"> 2 Interchanges (State Highway-54, National Highway-4B) Viaduct superstructure (Marine Portion: PC Box Girder & Steel Box Girder with Steel Slab Land Portion: PC Box Girder & PC-I Girder & Steel Truss Girder for Rail-over-Bridges (ROB)) Viaduct Substructure (RC Concrete Structure) Viaduct Foundation (Bored piles) Cutting Section (6-lane with Slope Protection) Road Furniture and roadside facilities (Traffic Signs and Pavement Marking, Traffic Safety Devices, Crash Barrier, Drainage Structures, Noise Barriers, View Barriers) 	(P/R and PCR) Actual: No Noise Barriers & View Barriers

Items	Original	Actual
Package-4 ITS (Intelligent Transport System)	<ul style="list-style-type: none"> • Administrative Buildings • Toll Booths (1 for main alignment and each on and off rumps for 3 interchanges) • Traffic Management System (Traffic Control Centre, Closed Circuit Television (CCTV), Meteorological Observation System (MET), Emergency Call Box (ECB), Automatic traffic Counter-cum-Classifer (ATCC), Variable Message Sign (VMS)) • Highway Lighting (Whole sections Low-positioned lighting for some sections) • Electrical Powering System including HV/ LV Ring Network across the Bridge. 	<p><i>(P/R and PCR)</i></p>
Consulting Services	<ul style="list-style-type: none"> • Tender Assistance • Construction Supervision • Facilitation of Implementation of Environmental Management Plan (EMP), Environmental Monitoring plan (EMoP). 	<p><i>(P/R and PCR)</i></p>

2.2 Implementation Schedule

2.2.1 The Original Implementation Schedule

Table 2-2-1 Comparison of Original and Actual Schedule

Items	Original	Status (P/R and PCR) as on 31 st December 2020
1) Completion of Land Acquisition and Resettlement	March 2019	March 2021
2) Consulting Services		
a) Selection of Consultant	May – December 2016	May – December 2016
b) Consultancy Works	December 2016 – September 2024	December 2016 – September 2024
3) Selection of Contractor		
Package-1, Package-2 & Package-3 (Civil)		
a) Pre-Qualification Process	May – December 2016	May – December 2016
b) Main Bidding	January – December 2017	January – December 2017
c) JICA's Concurrence of Contract	February-2018	February-2018
Package-4 (ITS)		
a) Pre-Qualification Process	January 2019 – May 2019	January 2020 – May 2020
b) Main Bidding	June 2019 – September 2020	June 2020 – May 2021
4) Civil Construction		
Package-1 and Package-2	March 2018 – September 2022	March 2018 – September 2022
Package-3	March 2018 – September 2021	March 2018 – September 2021
Package-4	October 2020 – September 2022	June 2021 – September 2022
5) Defect Liability Period		
Package-1, Package-2 and Package-4	October 2022 – September 2024	October 2022 – September 2024
Package-3	October 2021 – September 2023	October 2021 – September 2023
6) Commencement of Toll Collection	September -2022	September -2022
7) Selection of O&M Organization	October 2020 – September 2021	October 2021 – September 2022

Attachment 6, 7 & 8: Package wise construction schedules (progress) updated at the end of 3rd quarter (October - December 2020).

2.2.2 Reasons for changes of the schedule and their effects to the Project

(P/R and PCR)

No change in the Implementation Schedule except the selection of O&M Organization timeline.

2.3 Project Cost

2.3.1.a Comparison of Originally Planned and Actually Incurred Cost BY ITEM

Table 2.3.1.a.(i) Originally Planned Cost BY ITEM

Cost Breakdown	Foreign Currency Portion			Local Currency Portion			Total		
	Total (JPY mil)	JICA Portion (JPY mil)	Others (JPY mil)	Total (Rs. mil)	JICA Portion (Rs. mil)	Others (Rs. mil)	Total (JPY mil)	JICA Portion (JPY mil)	Others (JPY mil)
Package-1	34,398	34,398	0	45,376	45,376	0	105,713	105,713	0
Package-2	26,513	26,513	0	32,617	32,617	0	77,774	77,774	0
Package-3	759	759	0	8,276	8,276	0	13,766	13,766	0
Package-4 (ITS)	0	0	0	1,444	1,444	0	2,269	2,269	0
Package-5 (Geotechnical Investigation)	0	0	0	166	0	166	260	0	260
Dispute Boards (Package-1, 2, 3 & 4)	63	63	0	45	45	0	134	134	0
Price Escalation	2,251	2,251	0	7,133	7,133	0	13,460	13,460	0
Physical Contingency	6,398	6,398	0	9,506	9,489	17	21,338	21,312	26
Consulting Services	1,650	1,650	0	1,587	1,587	0	4,145	4,145	0
Land Acquisition*	0	0	0	11,293	0	11,293	17,748	0	17,748
Administration Cost	0	0	0	4,898	0	4,898	7,698	0	7,698
GST	0	0	0	18,238	0	18,238	28,663	0	28,663
Import Tax	0	0	0	13,435	0	13,435	21,114	0	21,114
Interest during construction	2,942	0	2,942	0	0	0	2,942	0	2,942
Front End Fee	477	0	477	0	0	0	477	0	477
Total	75,451	72,032	3,419	154,013	105,967	48,046	317,501	238,572	78,929

(Note) 1. Exchange Rate: US\$1=Rs. 71.9, US\$1=JPY 113.0, Rs.1 = JPY 1.57

2. Price Escalation (a) Foreign Currency Portion: 1.83% p.a.

(b) Local Currency Portion: 4.13% p.a.

3. Physical Contingency: 10%

4. Base Year for Cost Estimation: December 2018

* Base Cost for Land Acquisition considered in the year 2016 was INR 9,062,669,696. The base cost has been revised to INR 11,293 million considering Price Escalation and 10% Physical Contingency.

Table 2.3.1.a.(ii) Actually Incurred Cost BY ITEM

Cost Breakdown	Foreign Currency Portion			Local Currency Portion			Total		
	Total (JPY mil)	JICA Portion (JPY mil)	Others (JPY mil)	Total (Rs. mil)	JICA Portion (Rs. mil)	Others (Rs. mil)	Total (JPY mil)	JICA Portion (JPY mil)	Others (JPY mil)
Package-1	7,113	7,113	-	19,925	19,925		37,644	37,644	
Package-2	9,675	9,675	-	13,046	13,046		29,872	29,872	
Package-3	351	351	-	3,963	3,963		5,969	5,969	
Package-4 (ITS)	-		-	-			-		
Package-5 (Geotechnical Investigation)	-			196		196	308		308
Dispute Boards (Package-1, 2, 3 & 4)	-			-			-		-
Price Escalation	-			4	4		6	6	-
Physical Contingency	-			-			-		-
Consulting Services	253	253		362	362		1,000	1,000	
Land Acquisition*	-			6,022		6,022	9,455		9,455
Administration Cost	-			2,635		2,635	4,137		4,137
GST	-			6,242		6,242	9,800		9,800
Import Tax	-			-			-		-
Interest during construction	-			-			-		-
Front End Fee	-			-			-		-
Total	17,392	17,393	-	52,396	37,299	15,096	98,191	74,491	23,700

(Note) 1. Exchange Rate: Rs.1 = JPY 1.57 for MMRDA Portion only

2. Price Escalation (a) Foreign Currency Portion: 1.83% p.a.

(b) Local Currency Portion: 4.13% p.a.

3. Physical Contingency: 10%

4. Base Year for Cost Estimation: December 2018

* Base Cost for Land Acquisition considered in the year 2016 was INR 9,062,669,696. The base cost has been revised to INR 11,293 million considering Price Escalation and 10% Physical Contingency.

2.3.1.b Comparison of Originally Planned and Actually Incurred Cost BY YEAR

Table 2.3.1.b.(i) Originally Planned Cost BY YEAR

(All Figures are in JPY mil)

Cost Breakdown	Total	JICA Portion				Others (MMRDA Portion)
		Tranche I	Tranche II	Tranche III	Sub Total	
FY 2017	12,679	10,134	0	0	10,134	2,545
FY 2018	30,771	22,707	0	0	22,707	8,064
FY 2019	72,379	56,816	0	0	56,816	15,563
FY 2020	92,944	55,138	16,040	0	71,178	21,765
FY 2021	66,397	0	50,869	0	50,869	15,527
FY 2022	27,683	0	0	20,113	20,113	7,570
FY 2023	3,723	0	0	565	565	3,158
FY 2024	10,925	0	0	6,189	6,189	4,735
Total	317,501	144,795	66,909	26,868	238,571	78,929

Table 2.3.1.b.(ii) Actually Incurred Cost BY YEAR

(All Figures are in JPY mil)

Cost Breakdown	Total	JICA Portion				Others (MMRDA Portion)
		Tranche I	Tranche II	Tranche III	Sub Total	
FY 2017	13,738	9,232	-	-	9,232	4,506
FY 2018	26,813	21,695	-	-	21,695	5,118
FY 2019	40,410	31,014	-	-	31,014	9,396
FY 2020	17,230	12,550	-	-	12,550	4,680
FY 2021						
FY 2022						
FY 2023						
FY 2024						
Total	98,191	74,491	-	-	74,491	23,700

(Note) 1. Exchange Rate used: Rs.1 = JPY 1.57 for MMRDA Portion only

2. Fiscal Year starting from 1st April and ending on 31st March.

2.3.2 Reason(s) for the wide gap between the original and actual, if there have been any, the remedies you have taken, and their results.

(P/R and PCR)

There is no major gap between the original and actual cost.

2.4 Organization for Implementation

2.4.1 Executing Agency

Original:

Executing Agency

Mumbai Metropolitan Region Development Authority (MMRDA) was established on 26th January 1975 in accordance with the Mumbai Metropolitan Development Act, 1974 to make Mumbai Metropolitan Region (MMR) a destination for economic activity by promoting infrastructure and regional planning. MMRDA takes all the necessary measures, required from time to time, in an effective manner and be fully responsible for the Project implementation. After completion of the Project, MMRDA continues to be responsible for the efficient operation and maintenance of the Project.

The GoM appointed MMRDA as the implementing/ executing agency of MTHL vide Government Resolution dated 4th February 2009 and further the ownership of MTHL would be with MMRDA vide Government Resolution dated 8th June 2011.

Organization's Role

To construct, execute, carryout, improve, work, develop, administer, manage, control or maintain in MMR all types of roads, highways, express routes, paths, streets, bridges, sideways, tunnels and other infrastructure, works and conveniences, approach road, etc. Under the Project, MMRDA is responsible for all the tendering process including employment of consultants, as well as for the construction process.

Project Implementation Unit (PIU)

The PIU is in charge of the Projects. The PIU is headed by Chief Engineer, comprising of 6 Divisions/Cells (Finance Division, Social Development Cell, Engineering Division, Land Cell, Administrative Division and Environmental Cell), Supervision/ ITS Consultant and supporting staff.

Procurement

MMRDA shall have to adopt the JICA's Standard Bidding Documents of the latest version, as stipulated in Section 4.01 (2) of "Guidelines for Procurement under Japanese ODA Loans.

Procurement of goods and services, except for consulting services, converted by the Japanese ODA Loan should be implemented in accordance with "Guidelines for Procurement under Japanese ODA Loans", dated in April 2012. Employment of consultants should be implemented in accordance with "Guidelines of Employment of Consultant under Japanese ODA Loans", dated in April 2012. "Principles of Procurement under the Project" is attached for brief explanation of the above Guidelines.

Actual, if changed: (P/R and PCR)

There is no change made in original Organisation Set-up & Implementation methods. Refer Annexure III Organisation Chart.

2.4.2 Contractor(s)/ Supplier(s), and Consultant(s) and their Performance:

2.4.2.1 Procurement & Consultant

Table 2.4.2 Procurement of Contractor(s)/ Supplier(s) and Consultant(s)

Contract Package	Selection Method		
	Original: (P/M)	Actual: (P/R and PCR)	
Construction Works			
1	<u>Package-1:</u> From CH 0+000 - To CH 10+380 (10.38 km)	International Competitive Bidding Process (With PQ, Single stage with two envelopes)	No Change
2	<u>Package-2:</u> From CH 10+380 - To CH 18+187 (7.80 km)	International Competitive Bidding Process (With PQ, Single stage with two envelopes)	No Change
3	<u>Package-3:</u> From CH 18+187 - To CH 21+800 (3.61 km)	International Competitive Bidding Process (With PQ, Single stage with two envelopes)	No Change
4	<u>Package-4:</u> To install ITS (Toll Management System and Highway Traffic Management System)	International Competitive Bidding Process (With PQ, Single stage with two envelopes)	International Competitive Direct Bidding Process without Pre-Qualification
5	<u>Package-5:</u> To conduct the geotechnical investigation	Local Competitive Bidding Process	No Change
Consulting Services			
1	Consulting Service for Supervision	Short List Method (QCBS)	No Change

2.4.2.2 Performance

Consultant's Progress:

October 2020:

- 1 GC scrutinized & certified the following invoices claimed by the Contractors:
 - i) Package-1: IPC-32 20% Detailed Verification and IPC-33 80% Ad-hoc.
 - ii) Package-2: IPC-25 & IPC-26 20% Detailed Verification and IPC-27 80% Ad-hoc.
 - iii) Package-3: IPC-021 20% Detailed Verification of and IPC-022 & IPC-023 80% Ad-hoc.
- 2 GC has prepared and submitted a total reimbursement claim of 2075.17 Million JPY to MMRDA / JICA in October 2020.

November 2020:

- 1 GC scrutinized & certified the following invoices claimed by the Contractors:
 - i) Package-1: IPC-33 20% Detailed Verification and IPC-34 80% Ad-hoc.
 - ii) Package-2: IPC-27 20% Detailed Verification and IPC-28 80% Ad-hoc
 - iii) Package-3: IPC-022 & IPC-023 20% Detailed Verification of and IPC-024 80% Ad-hoc.
- 2 GC has prepared and submitted a total reimbursement claim of 3830.20 Million JPY to MMRDA / JICA in November 2020.

December 2020:

- 1 GC scrutinized & certified the following invoices claimed by the Contractors:
 - i) Package-1: IPC-34 20% Detailed Verification and IPC-35 80% Ad-hoc
 - ii) Package-2: IPC-28 20% Detailed Verification and IPC-29 80% Ad-hoc.
 - iii) Package-3: IPC-025 80% Ad-hoc
- 2 GC has prepared and submitted a total reimbursement claim of 3661.21 Million JPY to MMRDA / JICA in December 2020.
- 3 100% of the Technical Design Modules have been submitted by the Contractors across all the 3 Packages; out of which 92% of the modules have been given "NONO" by the GC & the rest of the modules have been reviewed & commented by the GC. Now, those are pending with the Contractor for correction and re-submission to the GC.

Contractor's Progress:

Package-1 Physical Progress till 31st December 2020

S. No	Activity	Total Scope	Unit	Cumulative Achieved Works	% of Work done Against the Total Scope	Remarks
1	Temporary Access Bridge					
1.1	Bridge Deck	2953	Rmt	2953	100%	
2	Test Pile					
2.1	Test Piles	5	No.	5	100%	
3	Permanent Bridge Works - Land/ Interchange Zone					
3.1	Piles	524	No.	272	51.9%	
3.2	Pile Caps	158	No.	49	31.0%	
3.3	Piers	228	No.	90	39.5%	
3.4	Pier Caps	215	No.	50	23.3%	
4	Permanent Bridge Works - Intertidal Zone					
4.1	Piles	318	No.	240	75.5%	
4.2	Pile Caps	76	No.	53	69.7%	
4.3	Piers	148	No.	98	66.2%	
4.4	Pier Caps	148	No.	90	60.8%	
5	Permanent Bridge Works - Marine Zone					
5.1	Piles	399	No.	341	85.5%	
5.2	Pile Caps	79	No.	40	50.6%	
5.3	Piers	160	No.	25	15.6%	
5.4	Pier Caps	160	No.	20	12.5%	
6	Permanent Bridge Works - Total					
6.1	Piles	1241	No.	853	68.7%	
6.2	Pile Caps	313	No.	142	45.4%	
6.3	Piers	536	No.	213	39.7%	
6.4	Pier Caps	523	No.	160	30.6%	
7	Precast Segments					
7.1	Segment Casting	6713	No.	1063	15.8%	
7.2	Segment Erection	446	Spans	18	4.0%	
8	OSD Structural Steel					
8.1	Fabrication	4666	Rmt	1681	36%	
8.2	Erection	4666	Rmt	0	0%	

Package-2 Physical Progress till 31st December 2020

S. No	Activity	Total Scope	Unit	Cumulative Achieved Works	% of Work done Against the Total Scope	Remarks
1	Temporary Access Bridge					
1.1	Bridge Deck	2682	Rmt	2682	100%	
2	Test Pile					
2.1	Test Piles	2	No.	2	100%	
3	Permanent Bridge Works - Land/ Interchange Zone					
3.1	Open Foundation	113	No.	91	80.5%	
3.3	Piers	119	No.	49	41.1%	
3.3	Pier Caps	104	No.	10	9.6%	
3.4	Portal Beams- Land	6	No.	3	50%	
3.5	Pier Head Segments -Land	42	No.	5	12%	
4	Permanent Bridge Works - Intertidal & CRZ Zone					
4.1	Piles	290	No.	288	99%	
4.2	Pile Caps	72	No.	72	100%	
4.3	Piers	72	No.	45	62%	
4.4	Pier Caps	18	No.	5	28%	
4.5	Pier Head Segments	54	No.	6	11%	
5	Permanent Bridge Works - Marine Zone					
5.1	Piles	514	No.	263	51%	
5.2	Pile Caps	120	No.	22	18%	
5.3	Piers	120	No.	0	0%	
5.4	Pier Caps	48	No.	0	0%	
5.5	Pier Head Segments	72	No.	0	0%	
6	Permanent Bridge Works - Total					
6.1	Open Foundation	113	No.	91	80.5%	
6.2	Piles	804	No.	551	68.5%	
6.3	Pile Caps	192	No.	94	48.9%	
6.4	Piers	311	No.	94	30.1%	
6.5	Pier Caps	170	No.	15	8.8%	
6.6	Portal Beams	6	No.	3	50%	
6.7	Pier Head Segments	168	No.	11	6.5%	
7	Precast Segments					
7.1	Segment Casting	3142	No.	348	11.08%	
7.2	Segment Erection	271	Spans	0	0%	
8	OSD Structural Steel					
8.1	Fabrication	74726	MT	22491	30.0%	
8.2	Erection	74726	MT	0	0%	

Package-3 Physical Progress till 31st December 2020

S. No	Activity	Total Scope	Unit	Cumulative Achieved Works	% of Work done Against the Total Scope	Remarks
1	Permanent Bridge Works					
1.1	Open Foundations	195	No.	157	81%	
1.2	Piers	195	No.	121	62%	
1.3	Pier Caps	189	No.	79	42%	
1.4	Segment Casting	750	No.	265	35%	
1.5	Segment Erection	53	Span	2	4%	
1.6	Cast in-situ Slab	114	Span	2	2%	

Package-4 (ITS) Progress till 31st December 2020

1. Preparation of Bid Documents for the Package-4 - ITS (Intelligent Transport System) is in progress.
2. As recommended by the GC, JICA accorded concurrence for Single Stage Bidding (without Pre-Qualification) on 9th October 2020 and asked to submit draft Bid Document for review and approval.
3. The GC submitted first draft Bid Document to the Employer on 2nd November 2020 for review.
4. After reviewing the draft, MMRDA issued the observations on 29th December 2020 for further correction & amendments, etc. The GC is in the process of preparing the revised draft Bid Document.

Please refer **Attachment 9 - Site Progress Photos** showing the development of the project.

Health & Safety and Environment (HSE)

The HSE Plans have been submitted by the respective construction agencies for the Packages which are being monitored by the GC on a regular basis.

Package-1 Safety Report

Sr. No	Description	From October to December 2020	Cumulative
1	Total Man Hours Since Inception	39,85,272	21108398
2	Number of Man-Hours (Accident-Free Man-Hours)	32,70,072	1988184
3	Number of Man-Days	4,98,159	2638548
4	Number of Reportable Fatal Accidents	0	2
5	Number of Non-Fatal Accidents	1	2
6	Number of Near Miss Incidents	4	74
7	Number of First Aid Cases	31	141
8	Number of Dangerous Occurrences	0	1
9	Number of Reportable Sick Cases	0	0
10	Number of Man-Hours Lost	152	96600
11	Number of Man-Days Lost	19	12072
12	Number of Reportable Accidents per 100,000 Man-Hours Worked	1	4
13	Number of Inspections done for Offices & Sites	502	1663
14	Number of Training/ Induction done for Offices & Sites	221	554
15	Daily Average Manpower (Including all Workmen & Staff) for the Month	5,615	11819
16	Details of Safety Committee meetings	3	26
17	No. of toolbox talks	10,110	42078
18	No. of critical excavations.	6	24
19	Pre-employment Medical check-up	3,536	21175
20	No. of Safety Walk down	23	148
21	No. of Safety Inductions completed	3,536	21175

Package-2 Safety Report

Sr. No	Description	From October to December 2020	Cumulative
1	Total Man Hours Since Inception	19,56,988	9945791
2	Number of Man-Hours (Accident-Free Man-Hours)	19,56,988	3478356
3	Number of Man-Days	1,77,908	905500
4	Number of Reportable Fatal Accidents	0	0
5	Number of Non-Fatal Accidents	0	3
6	Number of Near Miss Incidents	43	78
7	Number of First Aid Cases	24	89
8	Number of Dangerous Occurrences	4	9
9	Number of Reportable Sick Cases	0	1
10	Number of Man-Hours Lost	0	924
11	Number of Man-Days Lost	0	97
12	Number of Reportable Accidents per 100,000 Man-Hours Worked	0	3
13	Number of Inspections done for Offices & Sites	76	772
14	Number of Training/ Induction done for Offices & Sites	42	500
15	Daily Average Manpower (Including all Workmen & Staff) for the Month	6,526	941
16	Details of Safety Committee meetings	3	30
17	No. of toolbox talks	482	4442
18	No. of critical excavations.	0	0
19	Pre-employment Medical check-up	1,659	9749
20	No. of Safety Walk down	13	92
21	No. of Safety Inductions completed	1,684	9749

Package-3 Safety Report

Sr. No	Description	From October to December 2020	Cumulative
1	Total Man Hours Since Inception	5,16,274	2093452
2	Number of Man-Hours (Accident-Free Man-Hours)	5,16,194	2093372
3	Number of Man-Days	64,524	261671
4	Number of Reportable Fatal Accidents	0	0
5	Number of Non-Fatal Accidents	0	0
6	Number of Near Miss Incidents	6	12
7	Number of First Aid Cases	11	61
8	Number of Dangerous Occurrences	0	0
9	Number of Reportable Sick Cases	0	0
10	Number of Man-Hours Lost	80	80
11	Number of Man-Days Lost	10	10
12	Number of Reportable Accidents per 100,000 Man-Hours Worked	0	0
13	Number of Inspections done for Offices & Sites	40	270
14	Number of Training/ Induction done for Offices & Sites	16	155
15	Daily Average Manpower (Including all Workmen & Staff) for the Month	1,548	6358
16	Details of Safety Committee meetings	3	26
17	No. of toolbox talks	425	4060
18	No. of critical excavations.	0	3
19	Pre-employment Medical check-up	795	4439
20	No. of Safety Walk down	9	97
21	No. of Safety Inductions completed	795	4439

3.0 BENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS)

3.1 Operational and Physical Condition

(This section will be developed when the operational plan is available)

Facilities	Description of condition	Problems, its Background and Remedial Action Plan
(P/R and PCR)	(P/R and PCR)	(P/R and PCR)

3.2 Precautions (Measures To Be Adopted/ Points Which Require Special Attention)

Original Issues and Countermeasure(s)	Actual Issues and Countermeasure(s)
<p>3.2.1 General Issues</p> <p>1. Toll Arrangement/ Toll Rate Fixed toll rate as per the type of vehicle will be levied for the road users after the completion of the Project. An appropriate tolling policy/ rates will be finalized in consultation with the state government prior to the completion of Civil works.</p> <p>2. Operation and Maintenance MMRDA proposes to appoint separate agencies for Operation & Maintenance of the bridge and for Toll Management System. Both the agencies for O & M and Toll Management System may be appointed through open tendering process. Overall monitoring of the two agencies would be done by MMRDA in house through a separate cell which could be constituted for the purpose. MMRDA has confirmed to allocate adequate budget for engaging the Contractors.</p>	<p>(P/R and PCR)</p> <p>Appropriate Tolling Policy/ Rates will be finalized by December 2021.</p> <p>Single Operation and Maintenance Contractor will be appointed by December 2021.</p>
<p>3.2.2 Environmental and Social Consideration</p> <p>a. CRZ Clearance</p> <p>i. Supplemental EIA has been approved by MMRDA and disclosed on the website of JICA. Supplemental EIA report has been disclosed also on the website of MMRDA.</p> <p>ii. Furthermore, renewed CRZ Clearance has been obtained in January 2016.</p> <p>iii. In accordance with the conditions for</p>	<p>(P/R and PCR)</p> <ul style="list-style-type: none"> • MMRDA has disclosed Supplemental EIA & SIA on MMRDA website. • The renewed CRZ clearance was granted on 25/1/2016 from MoEF&CC and the approval conditions have been imposed on the Contractors as the Employer's requirements. MMRDA has actively monitored the compliances of the approval conditions and maintains throughout the construction phase. • MMRDA appointed Mangroves & Marine

<p>CRZ Clearance, appropriate measures shall be taken, and necessary budget shall be secured by MMRDA.</p>	<p>Biodiversity Foundation for bird monitoring and implementation of Flamingos and bird monitoring program for the MTHL project during the construction as well as the long-term monitoring after the construction.</p> <ul style="list-style-type: none"> • Rs 91.42 Crore has been transferred to Mangroves & Marine Biodiversity Foundation, Mumbai for the development & conservation of mangrove area and its afforestation. Such funds will be managed by the Mangrove Foundation of Maharashtra State. • As per the renewed CRZ clearance condition, IIT Mumbai has been appointed for the DPR study to develop a Mahul creek Effluent Treatment Plant (ETP). Rs 4.98 Crore was secured for IIT services. The Draft DPR has been reviewed and approved.
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b. Required Permits

The Permits to be obtained by MMRDA/ Contractors and the present status is given in the following Table.

Table 3.2.2 Present Status of some Important Permits

Clearance Required	Approving Authority	Responsible Organization	Obtained by when	Remark /Status
Mangrove Cutting	Hon. Bombay High Court	MMRDA/ Contractor	Approval received from Hon. Bombay High Court on 28 th November 2016	Mangrove cutting operation was completed with full compliance and as of now, no further follow up work is required.
Tree Cutting /Transplantation	Respective Tree Authorities	Contractor for respective Packages	-	<p>Pkg-1: Tree Cutting/ Transplantation permission from the Garden Dept., MCGM obtained on 24th December 2020.</p> <p>Pkg-2: Tree Cutting/ Transplantation permission obtained & completed.</p> <p>Pkg-3: Forest Department has issued a concurrence on 19/05/2019. CIDCO's permission for Tree Cutting/ Transplantation obtained on 25th November 2019.</p>
Consent to Establish	Maharashtra Pollution Control Board	Contractor for respective Packages	Pkg-1-18.07.2018 Pkg-2-16.08.2018 Pkg-3-29.05.2019	

3.3 Environmental and Social Impacts

Major environmental and social impacts have occurred during project implementation (e.g. involuntary resettlement, poverty reduction, impacts on the natural environment).

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
<p>1. Establishment of Effective Environmental and Social Cell in PIU</p> <p>MMRDA confirmed that Social Development Cell (2 Officers), Land Cell (3 Officers), and Environmental Cell (2 Officers) had been set up.</p>	<p>Cell is established by MMRDA (Annexure III, Organization chart)</p>
<p>2. Rehabilitation and Land Acquisition Issues</p> <p>a. Affected Area and Population</p> <p>Due to the Project, 1282 non-titleholders will be involuntary resettled, and 108.09 ha of land will be handed over by CIDCO.</p>	<p>Sewri: Involuntary resettlement in Sewri section has been further validated by Social Development Cell of MMRDA. Out of 297 Project Affected Households (PAHs) have given consents as follows:</p> <ul style="list-style-type: none"> • 164 PAHs Kanjurmarg for residential • 25 PAHs Kanjurmarg for commercial • 7 PAHs (Satsangi Plot) Kanjurmarg for Commercial • 1 PAHs (commercial to residential) for Bhakti Park • 100 PAHs HDIL Kurla for residential <p>Navi Mumbai: CIDCO has been finalizing the land acquisition closely monitored by Land Cell of MMRDA. Except private land and forest, CIDCO has possessed all required land of 108.09 ha. Out of the 108.09 ha, 106.345 ha has been handed over by CIDCO to MMRDA. CIDCO is going to acquire the balance 1.745 ha with the help of Collector, Raigad.</p>
<p>b. Entitlement Policy</p> <p>MMRDA prepared the entitlement matrix for resettlement of non-title holders in Sewri, which meets the Resettlement and Rehabilitation Policy for Mumbai Urban Transportation Project (1997, amended in 2000) and JICA guidelines for Environmental and social considerations (2010)</p>	<p>There have been no changes during the enforcement. As per the Attachment 2-5 of JICA MoD, MMRDA has committed to enforce the agreed/ approved policy.</p>

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
<p>("Guidelines") (Attachment 2-5).</p>	
<p>c. Compensation to Project affected Fishermen</p> <p>Detailed baseline survey will be undertaken by MMRDA in order to identify fishermen who are affected by the Project. Based on the result of the baseline survey, MMRDA will compensate them in accordance with compensation policy prior to the construction. Monitoring will be conducted by MMRDA with assistance of the Consultant to gasp the exact impact during construction and operation phase.</p>	<p>Updated Attachments 2-8 and 2-10 are enclosed in the report.</p>
<p>d. Implementation Schedule</p> <p>The Implementation schedule for land acquisition, resettlement and rehabilitation is attached as per Attachment 2-10.</p>	<p>Updated Attachment 2-10 is enclosed in the report.</p>
<p>e. Grievance Redressal Mechanism</p> <p>Grievance Redressal Committee ("GRC") set under MMRDA will deal with grievances raised by PAPs in Sewri and fishermen to be affected by the Project. Any grievances raised by PAPs whose land is acquired by CIDCO shall be resolved by CIDCO.</p>	<p>Sewri: FLGRC (Field Level Grievance Redressal Committee) and SLGRC (Senior Level Grievance Redressal Committee) were set as per the RAP and in operation. Compensation Committee has been constituted to address the issues of Compensation to Lease Holders at Sewri.</p> <p>Fishermen: GRC for resolving grievances of the fisherfolk was set up as per the compensation policy and is in operation.</p>
<p>f. Internal Monitoring</p> <p>Internal Monitoring of the Resettlement Action Plan (RAP) implementation will be conducted by MMRDA in accordance with the RAP with necessary assistance of the consultant. RAP Internal Monitoring Form (Attachment 2-8) will be submitted to JICA on a quarterly basis as a part of PSR during the RAP implementation.</p>	<p>Internal Monitoring updates are mentioned in Attachment 2-8.</p>

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
<p>g. Qualitative Independent Evaluation</p> <p>An Independent Evaluation Agency will be hired by MMRDA for evaluation of RAP implementation. An external evaluation report will be submitted to MMRDA at mid-term and end-term. MMRDA would submit the evaluation report to JICA in a timely manner.</p>	<p>Updated Attachment 2-10 is enclosed in the report.</p>
<p>h. RAP Implementation Budget</p> <p>The amount of estimated resettlement and compensation budget is Rs.906.26 Cr MMRDA informed to the JICA Mission that RAP implementation cost would be borne by MMRDA and ensured sufficient and timely allocation of funds for smooth implementation.</p>	<p>As updated in MOD dated 03/09/2019 for MTHL-II, the base cost Budget towards RAP Implementation is updated as Rs 1129.3 Cr.</p>
<p>i. Environmental Management Plan (“EMP”)</p> <p>The mitigation measures against air pollution, waste, noise, and water pollution etc. shall be taken during construction and operation phase. Mitigation measures such as installation of noise barrier, appropriate waste management, etc. have been prepared by MMRDA. The mitigation measures are listed in the EMP matrix. (Attachment 2-1). During the detailed design stage, MMRDA, with assistance of the Consultant, will update the EMP, as necessary.</p>	<p>EMP will be updated, if required, in due course of construction activities/progress.</p>
<p>j. Environmental Monitoring Plan (“EMoP”)</p> <p>MMRDA takes overall responsibility for implementation of EMoP. During construction, environmental monitoring will be carried out by contractors under supervision by Construction Supervision consultant. The result shall be reported to the JICA India Office on a quarterly basis</p>	<p>Environmental Monitoring Plan with the package wise budgeted cost is reported in Attachment 2-3.</p> <p>Environmental Monitoring Results during the construction phase are reported in Attachment 2-4.</p>

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
<p>as a part of Progress Status Report (PSR) by filling in the Reporting Form of Environmental Monitoring Result. (Attachment 2-4). After completion of the construction, EMoP shall be implemented by MMRDA, and the results shall be submitted to the JICA India Office semi-annually until two years after complementation of construction. The required amount of estimated environmental monitoring budget is borne by MMRDA.</p>	
<p>k. Long Term Bird Monitoring</p> <p>MMRDA committed to conduct the long-term monitoring of birds and its habitat in Sewri mud-flats with the assistance of hired bird expert. During the long-term monitoring, MMRDA will share information and receive advices from external experts including the one from NGOs and civil society.</p>	<ul style="list-style-type: none"> • MMRDA has entrusted the work of bird monitoring and implementation of Flamingos and birds related mitigation measures & bird monitoring program to Mangrove and Marine Biodiversity Foundation. • Rs. 31.92 Crore deposited to Mangrove foundation, Mumbai for periodical disbursement to BNHS.

3.4 Qualitative and Quantitative Data of Monitoring Indicators

Operation and Effect Indicator EIRR and/ or FIRR

Supporting data for Computing EIRR and/ or FIRR

Indicators	Original (Year 2015)	Target (Year 2024) 2 Years After Commercial Operation
Average Annual Daily Traffic (PCU/ day)	-	47,400
Daily Average Travel Time (min) * 1	61 min	15.8 min
Number of Users (Persons/ year) * 2	-	46,077,504
Cargo Volume (tons/ year) * 3	-	13,511,759

*1 Section on Sewri – Chirle

*2 Assumptions: average passengers of car and taxi (2.6 persons), bus (37.2 persons) based on JICA study. Number of passengers of LCV, HCV and MAV is assumed as 1 person each.

*3 Assumptions: the maximum capacity of respective vehicle (LCV: 1 ton, HCV and MAV: 15 tons) is used for estimation.

EIRR	Original: 15.4% Cost: Project cost (excluding Price Escalation, Tax and Duties and Administration cost) O&M cost, Land Acquisition Benefit: Travel Time cost and Vehicle Operation cost Project Life: 32 Years	Actual: (PCR) _____% Cost: Benefit: Project Life: Attachment(s): Supporting data for computing EIRR
FIRR	Original: 1.5% Cost: Project Cost, O&M cost, Land Acquisition cost Benefit: Toll Revenue Project Life: 32 Years	Actual: (PCR) _____%

3.5 Monitoring Plan for the indicators

Monitoring Methods, Section(s)/ department(s) in charge of monitoring, frequency, the term and so forth are given below:

<p>Original: (P/M and PCR)</p> <p><u>Monitoring Organization</u></p> <p>PIU shall be In-Charge of Monitoring activities for the Project.</p> <p><u>Submission of QPR and PCR</u></p> <p>The timely submission of the following documents is required by MMRDA.</p> <p>a. Quarterly Progress Report (QPR): The progress report for the Project should be submitted by MMRDA to JICA on quarterly basis, not later than 30 days after the concerned quarter, in the form of Project Status Report (PSR) attached hereto as per Annex I; Updated status land Acquisition, milestone achieved with respect to Action Plan with Timetable, the monitoring form for environmental and social consideration should also be appended to the PSR. In addition, MMRDA shall also forward the Monthly & Quarterly Progress Reports (including S-Curve Chart) prepared by the Consultant to JICA India Office on regular basis till project completion.</p> <p>b. Project Completion Report (PCR): A project completion report should be submitted by MMRDA to JICA promptly, but in any event not later than six months after completion of the Project, in the form of Project Status Report (PSR) attached hereto as per Annex I.</p>
<p>Actual: (P/R and PCR)</p> <p>Monitoring Organization</p> <p>PIU for MTHL has been established for monitoring the Project.</p> <p>Submission of QPR and PCR</p> <p>This QPR No. 15 is submitted for the period of 1st October to 31st December 2020.</p>

3.6 Achievement of the Project Objective

(PCR)

4.0 OPERATION AND MAINTENANCE (O&M) (SUSTAINABILITY)

4.1 O&M and Management

- Organization Chart of O&M
- Operational and maintenance system (structure and the number, qualification and skill of staff or other conditions necessary to maintain the outputs and benefits of the project soundly, such as manuals, facilities and equipment for maintenance, and spare part stocks etc.)

Original: (P/M)

Operation & Maintenance, Toll Management and ITS

MMRDA proposes to engage two separate agencies for O&M and Toll Management System. Though MMRDA will not directly carry out O&M, the overall monitoring over the O&M agency will be the responsibility of MMRDA. O&M Budget will be allocated by MMRDA. O&M and increase in toll rate will be done in accordance with the NHAI's manuals such as "NHAI Works manuals".

Actual: (PCR)

4.2 O&M Cost and Budget

- The actual annual O&M cost for the duration of the project, as well as the annual O&M budget.

(PCR) This will be reported when the outcome of the above work study is available.

5.0 EVALUATION

5.1 JICA and Borrower / Executing Agency performance

JICA:

(PCR)

Borrower/ Executing Agency:

(PCR)

5.2 Overall Evaluation

Please describe your evaluation on the overall outcome of the project.

(PCR)

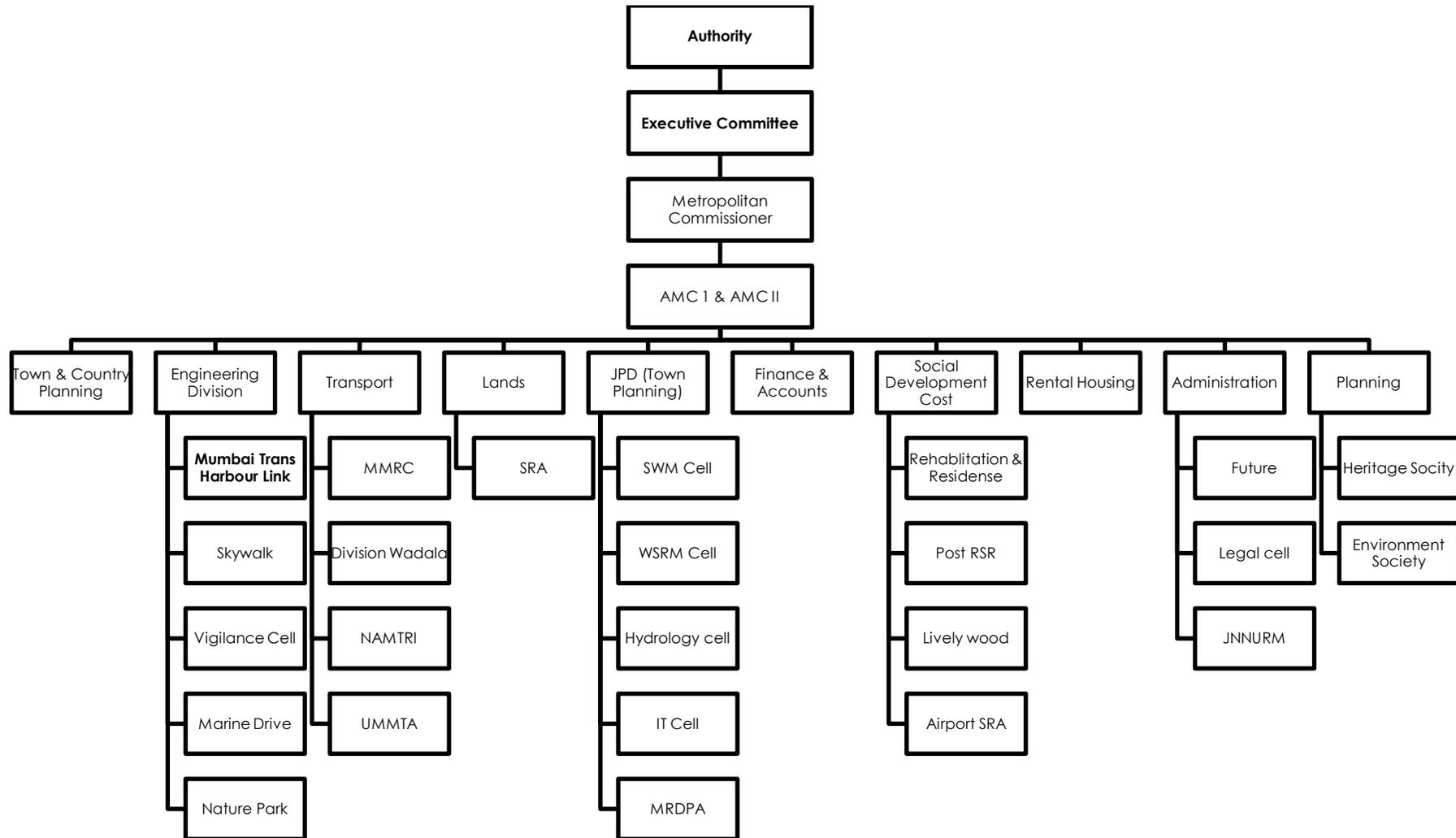
5.3 Lessons Learnt and Recommendations

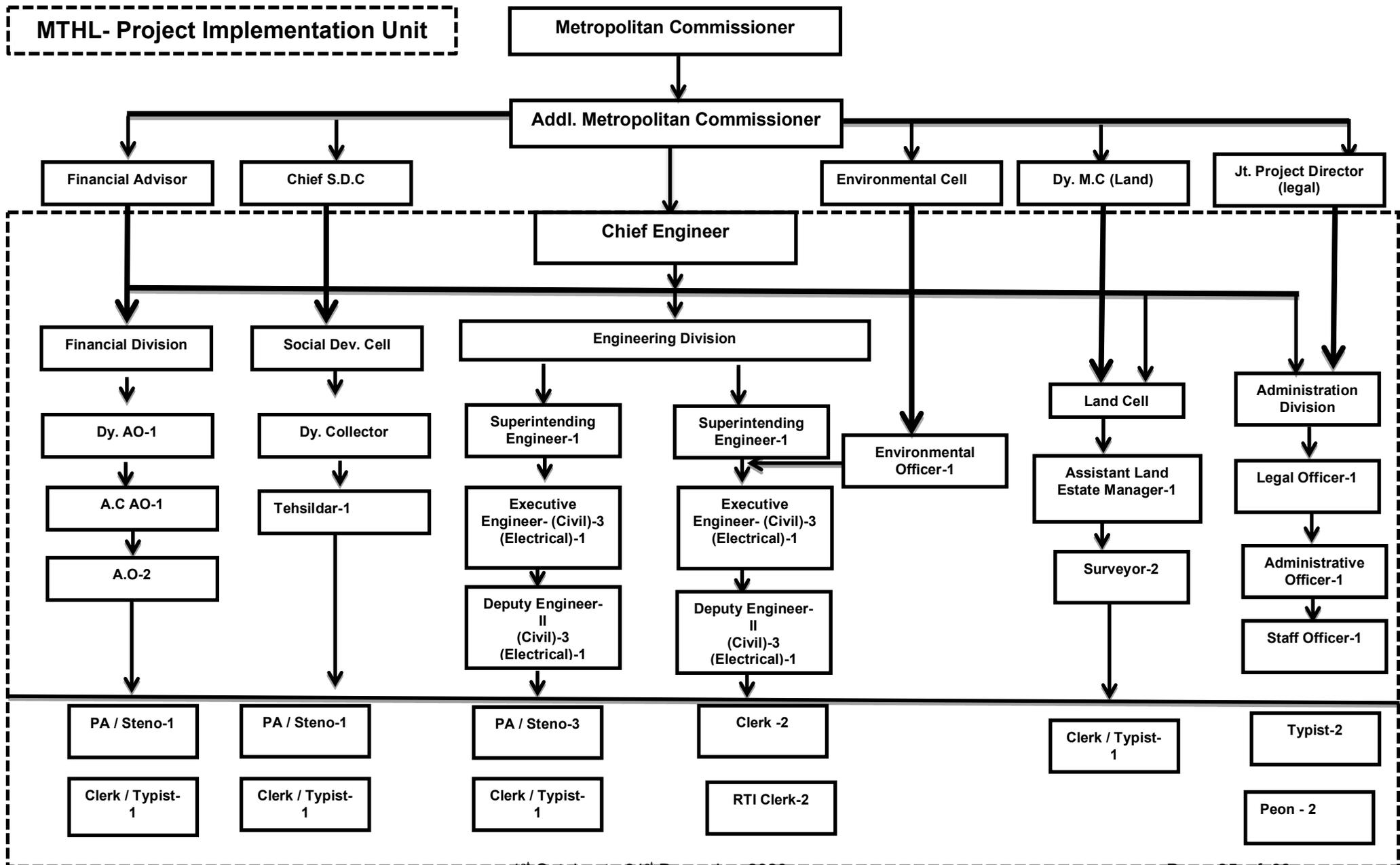
Please raise any lessons learned from the project experience, which might be valuable for the future JICA assistance or similar type of projects, as well as any recommendations, which might be beneficial for better realization of the project effect, impact and assurance of sustainability.

(PCR)

Attachment 1- MMRDA & PIU Organization Chart

MMRDA Organization chart





Attachment 2- Environmental & Social Impacts Attachments

- Attachment 2-3 – Envi. Monitoring Plan with Package wise Estimated Cost**
- Attachment 2-4 – Environmental Monitoring Result Reporting Form**
- Attachment 2-6 – MTHL Land Acquisition Status**
- Attachment 2-8 – RAP Internal Monitoring Form**
- Attachment 2-10 – Schedule of the RAP Implementation**

Environmental Monitoring Plan with Packagewise Estimated Cost

Category	No.	Impacted Item on JICA Guidelines	Parameter	Method	Location	Frequency a year	Cost (INR)	Cost Pkg.1 (INR)	Cost Pkg.2 (INR)	Cost Pkg.3 (INR)	Total Cost (INR)	Standard Central Pollution Control Board (CPCB) - Ministry of Environment & Forest (MoEF)	Remarks
Pollution	1	Air pollution	SO ₂ , NO ₂ , PM ₁₀ , PM _{2.5} , O ₃ , CO, (6 Items)	National Ambient Air Quality Standards, 2009	1. Sewri & Sewri bay area for package I	Fortnightly at all locations except 2 locations each near Batching plants	1,800,000	15,000,000	1,800,000	742,500	17,542,500	National Ambient Air Quality Standards (NAAQS) by Central Pollution Control Board (CPCB)	P1 contractor team is conducting Ambient air quality monitoring with reference to National Standards and clause 1.2 of Employer's requirement.
					2. Nhava temporary bridge & casting yard in Gavhan for package II	4 Times / Year						(Standard for 24hrs: Industrial and Residential/ Ecological Sensitive area)	P 2 contractor Monitoring plan has been designed as per EIA of 2015
					3. Gavhan & Chirle for package III	Fortnightly only for 3 months (jan-2019 to Mar-2019). Then quarterly monitoring as per MOEF and CPCB norms						SO ₂ : 80 / 80µg/m ³	P3 contractor team is conducting Ambient air quality monitoring with reference to National Standards and clause 1.2 of Employer's requirement.
												NO ₂ : 80 / 80µg/m ³	P 1 received Consents CTE & CTO from MPCB and they are following MPCB frequency in addition to frequency set by Environment Expert from GC. The NAAQ standards are showing High rate as that is the usual procedure. The frequency of monitoring is set by us which varies for different parameters as either Statutory requirements or as required by us to ensure we have sufficient data in hands if there are additional claims for Compensation in C5 category. Summary : Although the contract conditions for all packages were same at the time of bidding. Later modifications suggested by GC were not accepted by P 2. P1 and P3 accepted the modifications and hence the difference. Second point is P 1 carrying out monitoring as per the obatiend CTE and CTO. Both other packages have applied for CTE but haven't obtained it yet. So we expect the monitoring frequency would change after obtaining CTE.
	2	Water pollution	pH, BOD, DO, Turbidity and O&G	IS / AWWA	1. Sewri & Sewri bay area for package I	Quarterly	810,000	2,400,000	810,000	0	3,210,000	Marine water quality Standards – Class SW-IV Harbour Waters (MPCB)	Water Pollution not applicable for Pkg. 3
					2. Nhava temporary bridge & casting yard in Gavhan for package II	4 Times / Year						pH : 6.5-9	
					3. Gavhan & Chirle for package III	Not applicable						DO: 3 mg/l Turbidity: 30 NTU BOD: 5 mg/l O & G: 10 mg/l	
	3	Waste	Volume of waste soil, cutting tree and domestic garbage	Volumetric	1. Sewri & Sewri bay area for package I	Daily	500,000	299,200,000	500,000	600,000	300,300,000		The cost of waste disposal for P1 includes C&D waste, Pile muck etc. from all areas like, interchange, intertidal and marine. The disposal location is at MCGM approved location Bhayandarpada, Thane.

Category	No.	Impacted Item on JICA Guidelines	Parameter	Method	Location	Frequency a year	Cost (INR)	Cost Pkg.1 (INR)	Cost Pkg.2 (INR)	Cost Pkg.3 (INR)	Total Cost (INR)	Standard Central Pollution Control Board (CPCB) - Ministry of Environment & Forest (MoEF)	Remarks
					2. Nhava temporary bridge & casting yard in Gavhan for package II	4 Times / Year						Municipal Solid Waste Management Rules, 2013 Generated waste shall be reused or disposed at designated site. Sites have been identified and the location for Pkg. 1 is at Bhayandar Pada in Thane. For Pkg. 2 & 3 is in Navi Mumbai at Pushpak Node near "Teen Taki Junction" along the Amar Marg.	P2 contractor has considered only Domestic garbage with respect to CIDCO. Other wastes are not considered. Construction wastes will be
				3. Gavhan & Chirle for package III	Once site clearing work/execution part of work start.								
4 and 8	Soil Contamination/ sedimentation	Heavy Metals & Oil & Grease (5-10 items shall be selected from Soil pollution standards)	IS / Methods Manual Soil Testing in India by Department of Agriculture and Cooperation, January 2011	1. Sewri & Sewri bay area for package I 2. Nhava temporary bridge & casting yard in Gavhan for package II 3. Gavhan & Chirle for package III	1. Muck: 1 Time / Year 2. Sediments: 4 Times / Year *If any spillage/leakage take place from chemical, fuel storage area. *One time grab sample to be collected during Bridge Construction *Pre & Post Monsoon at Storage area only	150,000	1,500,000	150,000	100,000	1,750,000	Soil Pollution Standard in India (MOEF) Cd: 0.01mg/l Lead: 0.01mg/l Chromium (VI): 0.05mg/l Arsenic: 0.01mg/l T-Mercury: 0.0005mg/l Copper: 125mg/kg (some items shall be selected from totally 25 standards items)		
5	Noise and vibration	Ambient and road side noise (dB(A) _{L_{eq}})	IS Standard	1. Sewri & Sewri bay area for package I 2. Nhava temporary bridge & casting yard in Gavhan for package II 3. Gavhan & Chirle for package III	Fortnightly 2 Times / Year Fortnightly	150,000	54,000	150,000	369,000	573,000	-Construction Noise; 85dB(A) -Ambient Noise Standards in India (dB (A) _{Leq}) 1.Industrial Area Day Time: 75 (6-22hr) Night Time: 70 (22-6hr) 2.Commercial Area: Day Time: 65 (6-22hr) Night Time: 55 (22-6hr) 3.Residential Area: Day Time: 55 (6-22hr) Night Time: 45 (22-6hr) 4.Silence Zone Day Time: 50 (6-22hr) Night Time: 40 (22-6hr)		
			Vibration (dB L10 or mm/sec)		1 Location Gavan area for package III	Half yearly	75,000	0	75,000	400,000	475,000	- Construction vibration 75dB -Vibration Standards roadside 1. Commercial /Industrial Area Day Time: 70 (7-20hr) Night Time: 65 (20-7hr) 2. Residential Area: Day Time: 65 (7-20hr) Night Time: 60 (20-7hr)	Not applicable for Pkg. 1
9 and 10	Protected Area /Ecosystem	1. Monitoring of mudflat conditions including fauna-flora 2. Monitoring of Cutting Tree and replantation/transplanting area 3. Monitoring of Mangrove Plantation area appointed by MoEF	Ocular inspection and quantitative survey 1-1. Fauna-Flora Line-Point census and record number and appeared species	Along MTHL alignment and mangrove replant area for Package I Along MTHL alignment and mangrove replant area for package II Not applicable for Package III	Quarterly during the construction Period 4 Times / Year	6,500,000	7,200,000	6,500,000	0	13,700,000	Significant impacts are not caused by the project Note)	Not applicable for Pkg. 3	

Category	No.	Impacted Item on JICA Guidelines	Parameter	Method	Location	Frequency a year	Cost (INR)	Cost Pkg.1 (INR)	Cost Pkg.2 (INR)	Cost Pkg.3 (INR)	Total Cost (INR)	Standard Central Pollution Control Board (CPCB) - Ministry of Environment & Forest (MoEF)	Remarks
Natural environment			4. Monitoring of sedimentation soil and ecological parameter (18 items on Supplemental EIA Table 6.1.15 for soil and 7 items such as 1) Net primary productivity, 2) Chlorophyll-a, 3) Phosphate, 4) Nitrate, 5) Nitrite, 6) Particulate Organic Carbon, 7) SiO ₂)	1-2: Mangrove density and community survey								Detailed monitoring plan will be setup during basic design stage Standard for Soil; Supplemental EIA Table 6.1.15 Standard for Ecological Parameter: · Net primary Productivity <1,500 mgC/m ³ /day at surface · Chlorophyll-a <4mg/m ³ · Phosphate: 0.1-90µg/l · Nitrate: 1.0-500µg/l · Nitrite: <125µg/l · Particulate Organic Carbon: 10-100mg/m ³ · SiO ₂ : 10-5,000µg/l	
				1-3: Benthos Survey									
				2-1: Cutting trees confirmation									
				3-1: Mangrove survey in the replanted area									
	11	Hydrology	Flooding situation	Flood level measurement during high precipitation periods	Not applicable for Package I		350,000	0	350,000	0	350,000	Project activities and structures does not cause flooding and impacts on tidal conditions	Not applicable for Pkg. 1 & 3
					2 Locations (CRZ at Sewri and Shivaji Nagar) for Package II	4 Times / Year							
					Not applicable for Package III								
	12	Topography and Geology	Conditions in embankment area	Visual survey about Stability of embankment	Not applicable for Package I		115,000	0	115,000	0	115,000	Embankment shall be stabilized without any landslide and cracks	Not applicable for Pkg. 1 & 3
					Interchange in Shivaji Nagar for Package II	4 Times / Year							
					Not applicable for Package								
Social environment	13	Local economy such as employment and livelihood			Affected area		As per Actuals						
	14	Local conflict of interests	Construction worker's township	Confirmation of workers list from contractor	2 Locations (camp site in Sewri and Shivaji Nagar) for Package II	2 Times / Year	125,000	0	125,000	0	125,000	Employment opportunity shall be provided fairly	
	15	Infectious diseases such as HIV/AIDS	Number of infected patient	Confirmation of health check list from contractor	2 Locations	4 times / year x 4.5 years	525,000	0	525,000	0	525,000	Infection disease rate shall not be caused by the project	
	16	Labour Environment	Construction worker's condition	Confirmation of safety devices and conditions via interviews	2 Location (camp site in Sewri and Shivaji Nagar) for Package II	2 times / year	500,000	0	500,000	0	500,000	"Building And Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996", "The building and other construction worker's welfare cess Act, 1996" and international standards such as "IFC Performance Standard 2 Labor and Working Conditions"	
Other	17	Accidents	Number of accidents	Confirmation of accidents list from local government and State Traffic Police Department	2 Locations (camp site in Sewri and Shivaji Nagar) for Package II	4 Times / Year	400,000	0	400,000	0	400,000	Any accidents are not caused by construction	
							8140500	325,354,000	12,000,000	2,211,500	339,565,500		

The Project for Construction of Mumbai Trans Harbour Link
Reporting Form of Environmental Monitoring during Construction
 Attachment 2-4

Attachment 2-4

Monitoring Period - October to December 2020

This form is prepared for reporting the monitoring results to JICA India Office. Only minimum required parameters are included in this form, and not all parameters in EMOp are covered.

1. Environmental Monitoring during Construction for 4.5 years

Area	No.	Item	Parameter	Location	Frequency a year	Item and Standard	Monitoring Result				Remark - reasons why the data is exceeding standard - counter measures when the data is exceeding				
							Location 1- Pkg 1	Location 2	Location 3- Pkg 3	Location 4					
Pollution	1	Air pollution	SO ₂ , NO ₂ , PM ₁₀ , PM _{2.5}	1. Sewri & Sewri bay area for package I	Quarterly monitoring is conducted at all locations.	National Ambient Air Quality Standards (NAAQS) (Standard for 24hrs: Industrial and Residential)	Sewri	Shivaji Nagar	Chirle						
				2. Nhava temporary bridge & casting yard in Gavhan for package II	4 Times / Year										
				3. Gavhan & Chirle for package III	From march -2019 onwards monitoring is conducted quarterly as per MOEF and CPCB norms							1. SO ₂ : 80µg/m ³	6	BDL	23
												2. NO ₂ : 80µg/m ³	32	29	36
												3. PM ₁₀ : 100µg/m ³	111	56	102.8 (Refer Remark)
												4. PM _{2.5} : 60µg/m ³	32	14	54
			5.CO:02mg/m ³	1.4	1.3	0.3									
			6.VOCs	1.30	2.8	2.4									
	2	Water pollution	pH, BOD, DO, Turbidity and O&G	1. Sewri & Sewri bay area for package I	Quarterly	Marine water quality Standards – Class SW-IV Harbour Waters (MPCB)	Zone I	Zone II	Zone III						
				2. Nhava temporary bridge & casting yard in Gavhan for package II	4 Times / Year							1. pH : 6.5-9	7.4	7.5	Not applicable
				3. Gavhan & Chirle for package III	Not applicable							2. DO: 3 mg/l	4.7	6	Not applicable
												3. Turbidity: 30 NTU	13.6	24	Not applicable
												4. BOD: 5 mg/l	3.1	BDL	Not applicable
												5. O & G: 10 mg/l	BDL (DL=2)		Not applicable
			6.COD	19	20	Not applicable									
	3	Waste	Volume of waste soil, cutting tree and domestic garbage	1. Sewri & Sewri bay area for package I	Daily	Municipal Solid Waste Management Rules, 2013	Sewri Camp Site	Shivaji Nagar Camp Site	Chirle Camp Site						
				2. Nhava temporary bridge & casting yard in Gavhan for package II	4 Times / Year							Generated waste soil (t) total	5082 m ³	App. 14000 CuM Collected in jumbo bags and Disposed off in EBB Location and Casting Yard	NA
3. Gavhan & Chirle for package III				Once site clearing work/execution part of work start.	Generated cutting tree (ha) total							Tree cutting proposal has been submitted and approval from MCGM is received in December 2020		306 Trees are cut (Refer Remark)	Both of forest and CIDCO area (231+75)
					Generated domestic waste (t/month) total							4.1 T for the quarter	3.5 T/quarter. It is disposed through CIDCO daily.	2T for the quarter	2.018 M3
4	Soil Contamination/sedimentation	Heavy Metals & Oil & Grease	1. Sewri & Sewri bay area for package I	1. Muck: 1 Time / Year 2. Sediments: 4 Times / Year	Soil Pollution Standard in India (MOEF)	Sediment sample at Sewri	Muck Testing Done on september 2020 and Reports submitted to GC	Not applicable (refer remark)		Kindly check the letter No.Ref No. Mthl/P3/L&T/GC/LT/HSE-2226/2020 dated on 12.12.2020					
			2. Nhava temporary bridge & casting yard in Gavhan for package II	*If any spillage/ leakage take place from chemical, fuel storage area. *One time grab sample to be collected during Bridge Construction *Pre & Post Monsoon at Storage area only							1. Cadmium: 0.01mg/l	BDL (DL=0.03)	BDL		
			3. Gavhan & Chirle for package III								2. total cyanide : not detected		BDL		
											3. organic phosphorus: not detected				
											4. lead: 0.01mg/l	0.12	0.12	Not applicable for package-3 (refer remark)	Hazardous Storage is situated in low laying area at Gavan area. Due to this reason complete ground area is covered by boulders to avoid further water logging in rainy season. Therefore soil sample is impossible to taken out from in and around the Oil & chemical storage area. Same has been witnessed by GC during February-2020 monitoring.
											5. chromium (VI): 0.05mg/l	<0.05		BDL	
											6. arsenic: 0.01 mg/l or 15mg/kg (agri-land soil)	<0.01		BDL	
											7. total mercury: 0.005mg/l			BDL	
											8. alkyl mercury: not detected				
											9. PCBs: not detected			BDL	
											10. copper: 125mg/kg (only paddy field soil)	129		36.3	
											11. dichloromethane: 0.02mg/l			BDL	
											12. carbon tetrachloride: 0.002mg/l			BDL	
											13. 1,2-dichloroethane: 0.004mg/l			BDL	
											14. 1,1-dichloroethylene: 0.02mg/l			BDL	
											15. cis-1,2-dichloroethylene: 0.04mg/l			BDL	
											16. 1,1,1-trichloroethane: 1mg/l			BDL	
	17. 1,1,2-trichloroethane: 0.006 mg/l			BDL											

Regarding soil contamination/sedimentation, some items shall be selected from the total 25 standards items during the Detailed Design. Only the selected items shall be reported to JICA, and the rest of items shall be deleted from this form.

Monitoring Period - October to December 2020
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This form is prepared for reporting the monitoring results to JICA India Office. Only minimum required parameters are included in this form, and not all parameters in EMOF are covered.

1. Environmental Monitoring during Construction for 4.5 years

5	Noise and vibration	Ambient and road side noise (dB(A)LAeq)	18. trichloroethylene: 0.03mg/l			BDL			
			19. tetrachloroethylene: 0.01mg/l			BDL			
			20. 1,3-dichloropropene: 0.002mg/l			BDL			
			21. thiuram: 0.006mg/l			BDL			
			22. simazine: 0.003mg/l			BDL			
			23. thiobencarb: 0.02mg/l			BDL			
			24. benzene: 0.01mg/l			1.4			
			25. selenium: 0.01mg/l			BDL			
			1. Sewri & Sewri bay area for package I	Fortnightly	Construction area Standard 85 dB(A) daytime (Japan standard) Not construction area : Ambient Noise Standard in India (dB(A) Laeq)	Sewri (ST 200-500) (Industrial area)	Sea Section (ST5000-5500). Migratory Bird Area(no standard on sea section)	Shivaji Nagar (Commercial area)	Chirle (pacakge-III) Commercial area
			2. Nhava temporary bridge & casting yard in Gavhan for package II	2 Times / Year	Day time : 6-22 hr (continious) dB(A)	68	72.7	66.8	68.8
			3. Gavhan & Chirle for package III	Fortnightly	Night time: 22-6 hr (continious) dB(A) (only sea section)	63	63.4	65.3	64.9
					Day time : 6-22 hr (10 min during 9-17 hrs)				
					Night time: 22-6 hr (10 min 22-24 hr)				
					Note (standard values in Not construction area)				
					1.Industrial Area Day Time: 75 (6-22hr) Night Time: 70 (22-6hr) 2.Commercial Area: Day Time: 65 (6-22hr) Night Time: 55 (22-6hr)				
Regarding protected area (CRZ and Important Bird Area) and ecosystem, detailed long-term monitoring plan will be established during baseline survey of birds. This tentative monitoring form shall be updated based on the detailed long-term monitoring plan.									
1 Location Gavan area for package III	Half yearly	Construction area Standard 75 dB daytime (Japan standard) Not construction area : Vibration Standard (Japan Standard along the road)	Sewri (ST 200-500) (Industrial area)	Shivaji Nagar (Commercial area)	Chirle				
Vibration (dB) shall be converted from mm/s to dB		Day time : 6-22 hr (continious)	refer remark		Not applicable				
		Night time: 22-6 hr (continious)							
		Note (standard values in Not construction area)			Refer remark				
		1. Commercial /Industrial Area Day Time: 70 (7-20hr) Night Time: 65 (20-7hr)							
					There is no reference standard in India for Vibration monitoring in marine area. GC has confirmed that vibration monitoring is not required for the project.				
					Kindly check the letter No.Ref No. Mthl/ P3/L&T/GC/LT/HSE-2226/2020 dated on 12.12.2020				
1. Monitoring of mudflat conditions including fauna-flora 2. Monitoring of Cutting Tree and replantation/transplation area 3. Monitoring of Mangrove	Along MTHL alignment and mangrove replant area for Package I	Quarterly during the construction Period	Standard is not existing, but quantity and quality should not be worsen	Sewri side (ST500-5500)	Sea Section (ST5500-16000)	Shivaji Nagar side (app. ST16000-19000)	Mangrove Replantation area appointed by State Government		
		Along MTHL alignment and mangrove replant area for package II	4 Times / Year	1-1. Fauna-Flora (number of species and quantity)			N/A	N/A	
				(1) Number of species of bird					
				(2) Number of species of fish					
				(3) Estimated number of Flamingo					
		1-2: Mangrove density and community survey							

The Project for Construction of Mumbai Trans Harbour Link
Reporting Form of Environmental Monitoring during Construction
Attachment 2-4

Attachment 2-4

This form is prepared for reporting the monitoring results to JICA India Office. Only minimum required parameters are included in this form, and not all parameters in EMOp are covered.

Monitoring Period - October to December 2020

1. Environmental Monitoring during Construction for 4.5 years

Natural Environment	6	Protected Area	Plantation area appointed by MoEF 4. Monitoring of sedimentation soil and ecological parameter (25 items on EIA main text Table 6.1.15 for soil and 7 items such as 1)Net primary productivity, 2)Chlorophyll-a, 3)Phosphate, 4)Nitrate, 5)Nitrite, 6)Particulate Organic Carbon, 7) SiO2)			(1) Number of species of mangrove (2) Density of mangrove (xx trees/10m x 10m) 1-3: Benthos Survey (1) Number of species and quantity by species	528 Species and 322 No/m2				
		Ecosystem				2-1: Cutting tree confirmation	Tree cutting proposal has been submitted and approval from MCGM is awaited. Tree Cutting NIL		Approved By Both CIDCO and Forest forest Dept (both Alibaug and Uran(regional office))		
						(1) Number of cutting tree and species 3-1: Mangrove survey in the replant area			Nil		
						(1) Number of species of mangrove (2) Density of mangrove (xx trees/10m x 10m) 4. Ecological Parameter					
						(1) Net primary Productivity : <1,500 mgC/m3/day at surface (2) Chlorophyll-a: <4mg/m3 (3) Phosphate: 0.1-90µg/l (4) Nitrate: 1.0-500µg/l (5) Nitrite: <125µg/l (6) Particulate Organic Carbon: 10-100mg/m3 (7) SiO2: 10-5,000µg/l	433 4.6 330 637 4716				
		7	Hydrology	Flooding situation	Not applicable for Package I		Criteria for evaluation Project activities and structures does not cause flooding and impacts on tidal conditions	Sewri	Shivaji Nagar		
					2 Locations (CRZ at Sewri and Shivaji Nagar) for Package II	4 Times / Year	Monitoring of flooding situation	No Flooding	No flooding	No Flooding	
					Not applicable for Package III						
		8	Topography and Geology	Conditions in embankment area	2 Locations (1. Embankment of Inter Change in Shivaji Nagar and 2 Cutting area at toll gate in Chirle)	4 times / year x 4.5 years	Criteria for evaluation Embankment shall be stabilized without any landslide and cracks	Shivaji Nagar	Chirle	Chirle	
							Monitoring of embankment	done			
Other	9	Local conflict of interests	Construction worker's township	2 Locations (major camp site in Sewri and Shivaji Nagar)	4 times / year x 4.5 years	Criteria for evaluation Employment opportunity shall be provided fairly	Sewri Camp Site	Shivaji Nagar Camp Site	Chirle		
						Number of hired workers by community	341 in October 2020, 383 in November 2020 and 378 in December in 2020	125-150			
	10	Infectious diseases such as HIV/AIDS	Number of infected patient	2 Locations (major camp site in Sewri and Shivaji Nagar)	4 times / year x 4.5 years	Criteria for evaluation Infection disease rate shall not be caused by the project	Sewri Camp Site	Shivaji Nagar Camp Site			
Confirmation of health check record and inspect project site						During this quarter 36 no. , COVID 19 positive cases reported who have been treated and discharged.	Health Checks carried out but HIV/AIDS parameter is not there.	Regular Health check up is carried out by site Doctor			
11	Labour Environment	Construction worker's cond	2 Locations (major camp site in Sewri and Shivaji Nagar)	2 times / year x 4.5 years	Criteria for evaluation "Building And Other Construction Workers (Regulation of Employment and Conditions of Service) Act,1996", "The building and other construction worker's welfare cess Act, 1996" and international standards such as "IFC Performance Standard 2 Labor and Working Conditions"	Sewri Camp Site	Shivaji Nagar Camp Site	Gavan Camp site			
					Site Visual Inspection	All provisions as per BOCW have been provided. *2275 nos. of Food meals (lunch & Dinner) provided to workmen from BOCW, * Face mask provided to workmen, * Calcium & Vitamins tablets provided to workmen to boost up the immunity of workmen, * Sanitizers & Liquids soaps also provides to different location for workmen. *Daily temperature Check of workmen at site and colony is conducted. Daily sanitisation at work site, of working equipment and the buses used for communiting is conducted.	Conforming with BOCW Act 1996	Conforming with BOCW Act 1996			
12	Accident	Number of accidents	2 Locations (major camp site in Sewri and Shivaji Nagar)	4 times / year x 4.5 years	Criteria for evaluation Any accidents are not caused by construction	Sewri Camp Site	Shivaji Nagar Camp Site	Other area			
					Number of recorded accident	NIL	NIL	NIL			

MTHL Land Acquisition Status (Attachment 2-6):

Total land required on Navi Mumbai side- 108.09 ha

Land in possession in MMRDA – 106.5 ha

Balance land acquisition- 1.59 ha

Note: The acquisition of 1.59 ha is in progress by CIDCO. The balance acquisition would be likely completed by the end of March 2021.

Land Required in ha		Land Acquired in ha		Balance Land to be acquired in ha	Anticipated date for Land Acquisition	Payment status (Payment made to Land Owners by CIDCO)	Remarks
Govt.	Private	Govt.	Private	Private*			
98.75	9.34	98.75	7.595	1.745	31-03-2021	--	The payment status to the land owners are awaited from CIDCO. The same would be communicated to JICA on receipt of the same.
Total		98.75	7.595	1.745			
108.09							

***Portions of Private Land**

Sr. No.	Name of Village	Area (Hectare)	Acquired	Non-acquired
1	Gavhan	0.15	0.15	0.00
2	Jasai	8.72	7.306	1.414
3	Chirle	0.47	0.139	0.331
Total Area		9.34	7.595	1.745

**RAP Implementation Monitoring Form
For Mumbai Trans Harbour Link Project (MTHL)**

1. General Information

a. RAP Implementation Monitoring Results:	Progress Status Report (PSR) of 4 th quarter of 2020
b. Date of Preparing This form	13-01-2021
c. Person Preparing This form	Name: Robin Sham Position: Engineer and Team Leader Department/Organizations: General Consultants

2. Scale of Impact**2.1 Project Affected Households (PAHs) and Project Affected Persons (PAPs) for Sewri side**

Total Project Affected Households (PAHs)	297 Hhs	Titleholders: 0 Hhs Non-titleholders: 297 Hhs
Total PAPs	1,282 persons*	Titleholders: 0 persons Non-titleholders: 1,282 persons*
PAHs who need relocation (as residents)	231 Hhs	Titleholders: 0 persons Non-titleholders: 231 (1,088 persons) *
PAPs who do not need relocation (as residents)	0 persons	Titleholders: 0 persons Non-titleholders: 0 persons
Commercial PAPs who need relocation	66 (194 persons) *	Titleholders: 0 persons Non-titleholders: 66 (194 persons) *
Commercial PAPs who do not need relocation	0 persons	Titleholders: 0 persons Non-titleholders: 0 persons

* - Figures for number of persons do not include no. of family members of few additional PAPs.

2.2 Structures

Structures	Residential: 231 Commercial: 65 Residential + Commercial: 1 (counted in Commercial) Community: 9 (Religious Properties 6, Public Toilets 3) Government: 16 (MbPT Structures 9, Occupants of Leased Plots 6 & Police Chowky1) Total: 322
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2.3 Fishery

Categories of Fisher-folks	Identified Number		Total	Remarks
	Mumbai side	Navi Mumbai side		
C1: Fishing stakes and nets in RoW (250 m.)	178	52	230	Funds for 230 nos C1 category fishermen are transferred to Commissioner of Fisheries on 17.03.2020 for payment to the beneficiaries.

Attachment 2-8 - MTHL RAP Monitoring Format

C2: Fishing Stakes and Nets within 500 m. of RoW (Southern side)	429	566	995	1. Funds for 496 nos C2 category fishermen are transferred to Commissioner of Fisheries in the 2017-18. 2. The list of balance 499 Nos. of C2 category fishermen are submitted to ACF Raigad, ACF Thane and ACF Mumbai suburban for their verifications.
C3: Hand Pickers	1453	3690	5143	Funds for 4206 nos of C3 category fishermen are already transferred to Commissioner of Fisheries and balance 937 Nos. of C3 category fishermen are in process of transfer to Commissioner of Fisheries.
C4: Commercial and Artisanal Fisher-folks (Loss of Time and Increased Operating Costs)	Will be observed during construction period	Will be observed during construction period	---	Nil
C5: Fisher-folks with Loss due to Turbidity	Will be observed during construction period	Will be observed during construction period	----	Nil
C6: Fisher-folks with Damages due to Accidents	Will be observed during construction period	Will be observed during construction period	----	Nil

2.4 Land Acquisition / Transfer

Location	Land Required in Ha.		Land Acquired in Ha.		Balance Land to be acquired in Ha	Remarks
	Govt.	Private	Govt.	Private		
Sewri	10.089	0	10.089	0	0	
Navi Mumbai	98.75	9.34	98.75	7.595	1.745	
Total	118.179		108.839	7.595	1.745	

Attachment 2-8 - MTHL RAP Monitoring Format

3. Monitoring Results

3.1 Sewri Section

Activity	Indicator	Total Target	Progress till Last Quarter	Progress during reporting Quarter	Cumulative Progress till Current Quarter	Cumulative Achievement of Total Target (%)	Remarks, If Any
Resettlement	No. of Residential PAHs provided with Allotment Letters of Alternate Tenements	231	141	0	141	62%	
	No. of Residential PAHs given possession of Alternate Tenements	231	139	0	139	60%	
	No. of Commercial/R+C PAPs provided with Allotment Letters of Alternate Shops/Tenements	66	21	0	21	30%	
	No. of Commercial R+C PAPs given possession of Alternate Shops/Tenements	66	20	0	20	26%	
	No. of Occupants of MbPT Leased Plots provided Compensation	6	5	0	5	84%	
	No. of Religious properties Relocated / Removed	6	1	0	1	17%	Jivdani Mandir allotment letter given
	No. of Other Community properties Relocated / Removed	4	0	0	0	0%	
	No. of Structures in possession of MbPT Dismantled / Cleared	9	0	0	0	0%	
	No. of PAHs/PAPs provided Shifting Charges / Arrangement	297	0	0	0	0%	
Rehabilitation	No. of PAHs / PAPs identified for Livelihood Support in Post Resettlement Assessment						
	No. of PAHs / PAPs provided Livelihood Support under Program-I (to be identified)						
	No. of PAHs / PAPs provided Livelihood Support under Program-II (to be identified)						
	No. of PAHs / PAPs provided Livelihood Support under Program-III (to be identified)						
	No. of new enterprises started						

Attachment 2-8 - MTHL RAP Monitoring Format

Activity	Indicator	Total Target	Progress till Last Quarter	Progress during reporting Quarter	Cumulative Progress till Current Quarter	Cumulative Achievement of Total Target (%)	Remarks, If Any
Grievance Redress	No. of Grievances Received by FLGRC	4					
	No. of Grievances Disposed by FLGRC	1					
	No. of Grievances Received by SLGRC	0					
	No. of Grievances Disposed by SLGRC	0					
Post Resettlement Assistance	No. of CHSs Registration helped						
	No. of CHSs provided Tenements for Social Amenities						
	No. of CHSs' Maintenance Fund Invested						
	No. of CHSs' Office Bearers provided training						

Attachment 2-8 - MTHL RAP Monitoring Format

SUMMARY OF FISHER FOLKS OF MTHL PROJECT (Influence Zone of 23 villages) Up to 31-12-2020						
Sr. No.	Village Name	Total number of forms Received	Total approved eligible family units			
			C1	C2	C3	Total
1	Bamandongri	273	1	0	25	26
2	Belapur	110	0	5	14	19
3	Belpada	1185	0	7	473	480
4	Diwale	455	10	237	12	259
5	Ganeshpuri	276	0	33	32	65
6	Gavhan	2162	0	14	1304	1318
7	Jasai	926	0	0	18	18
8	Jawale	51	0	1	0	1
9	Kombadbhuja	413	1	24	126	151
10	Kopar	994	2	5	230	237
11	Mahul	1198	129	170	599	898
12	Moha	475	22	35	134	191
13	Mora	471	0	83	213	296
14	Morave	539	14	17	79	110
15	Nhava	1646	0	32	304	336
16	Sarsole	266	0	30	83	113
17	Sewri	305	0	1	70	71
18	Shelghar	241	0	0	15	15
19	Shivajinagar	202	1	4	61	66
20	Trombay	1253	49	258	784	1091
21	Ulwa	218	1	4	12	17
22	Uran & Hanuman Koliwada	683	0	33	554	587
23	Vahal	411	0	2	1	3
Total		14753	230	995	5143	6368
Total applications						14753
Duplicate/Repeated Application						1643
Net Applications						13110
Approved applications						6368

Grievance Redressal Committee (GRC) for Fisher-folk Compensation

No. of Cases referred to GRC	No. of Cases		No. of Cases Rejected	No. of Cases under Consideration
	Allowed	Compensation Paid		
Nil	Nil	Nil	Nil	Nil

Implementation Schedule for Fisher-folks Compensation & Land Acquisition in Navi Mumbai**A. Implementation Schedule for Fisher-folks Compensation: -**

Sr. No.	Task Designation	Approving authority	Start Date	Completion Date
1	Approval of fisher-folks' compensation Policy	Fisher-folks Compensation Committee (FCC)	08-10-2015	23-12-2015
2	Approval by MMRDA	MMRDA	10-12-2015	23-12-2015
3	Submission to JICA	MMRDA	--	04-01-2016
4	Detailed list of PAP and compensation plan	1. Detailed list of Fisher-folk PAP upto list 1 (1165 Nos) & 2 (1399 Nos) are finalized by the Fisheries Department. 2. From 2018, FEVC committee is the approval authority of PAF and approved C1- 230 Nos; C2-440 Nos and C3- 2580 Nos are approved.	23-12-2015	Up to 31.12.2020 1. Total up to date applications scrutinized = 13110 Nos. 2. Eligible = 6368 nos 3. Rejected = 6742 nos
5	Validation of compensation plan	Fisher-folks Compensation Committee (FCC)	23-12-2015	1. Approval to the Fisher-folk PAP list obtained from Fisheries Department for Fisherfolk from Sewri, Mahul & Trombay (Mumbai side) – 12th September 2017 and 20th November 2018 for C-2 & C3 Category only.

Sr. No.	Task Designation	Approving authority	Start Date	Completion Date
			23-12-2015	2. Approval to the Fisher-folk PAP list obtained from Fisheries Department for Fisherfolk of Navi Mumbai of C2 & C3 on 25th April 2018. 3. Validation of compensation is in progress and would be completed in phases.
6	Approval of compensation plan	FCC	23-11-2015	28-12-2017
7	Approval by MMRDA	MMRDA	23-11-2015	09-03-2021

B. Implementation Schedule for Land Acquisition in Navi Mumbai: -

Land Required in Ha.		Land Acquired in Ha.		Balance Land to be acquired in Ha	Anticipated date for Land Acquisition	Payment status (Payment made to Landowners by CIDCO)	Remarks
Govt.	Private	Govt.	Private	Private			
98.75	9.34	98.75	7.595	1.745	31-03-2021	--	1. CIDCO is the land acquisition authority for land acquisition for Navi Mumbai 2. MMRDA has paid an amount of INR 59.16 Cr to CIDCO as per their demand. 3. The payment status to the landowners is awaited from CIDCO. The same would be communicated to JICA on receipt of the same.
Total	108.09	106.345		1.745			

Implementation Schedule for SIA (Sewri Section)

Task No.	Task Designation	Start Date	Completion / Forecast Date
1	Preparation of Final SIA		
1.1	MMRDA Approval	October 2015	January 2016
1.2	JICA Approval	November 2015	January 2016
1.3	Posting of project Information on MMRDA		
1.4	Translation and disclosure of entitlement policy in local language to all PAP's	December 2015	January 2016
2	LARP Implementation		
2.1	Grievance redress mechanism established	August 2016	August 2016
2.2	Staff deployment SIA implementation	June 2016	Mar. 2021
2.3	Staff Deployment Public Relation	June 2016	June 2016
2.4	Hiring of Independent Evaluation Agency	November 2018	November 2020
2.5	Preparation and issue of allotment letters to PAPs	June 2018	Mar. 2021
2.6	Notice of PAPs for shifting (Sewri Section)	December 2018	Mar. 2021
2.7	Allotment of dwelling units to PAP's	September 2016	Mar. 2021
2.8	Shifting of PAPs to resettlement Colony	December 2018	Mar. 2021
2.9	Transfer of compensation / allowance/ assistance to PAPs	December 2018	Mar. 2021
2.10	Creation of Community Revolving fund (within 3 months post handing over)	April 2019	Feb. 2021
2.11	Assessment of economic rehabilitation needs by individual household (within 6 months after handing over)	September 2019	June 2021
2.12	Registration of Co-operative housing societies transfer of maintenance funds. (6 months period)	December 2019	June 2021
2.13	Signing of Civil Contract		January 2018
2.14	Notice of Civil works to proceed		March 2018
3	Monitoring & Evaluation		
3.1	Internal Monitoring- Monthly/ Quarterly	June 2016	January 2020
3.2	Independent Evaluation Mid-term and End term evaluation		
	Mid Term	May 2019	June 2020
	End Term	November 2019	March 2021

*Expected to receive the Occupation Certificate of Kurla Bhandari R&R site from SRA Department by March 2021.

Attachment 3- JICA's Concurrence Status

Status of JICA'S Concurrence

Sl. No.	Brief description	Procurement procedure	Bid Cost		JICA'S Concurrence on					
			Local Currency (Cr Rs.)	Total (Cr Rs)	PQ Documents	PQ Evaluation	Bid Documents	Technical Evaluation	Financial Evaluation	Contract
1.	Package-1 (CH 0+000 km to CH10+380 km)	ICB with PQ (2P)	7637.30	7637.30	JICA's Concurrence - 9th May 2016	JICA's Concurrence - 22nd Dec 2016	JICA's Concurrence - 4th Jan 2017	JICA's Concurrence - 12th Sep 2017	JICA's Concurrence - 12th Oct 2017	JICA's Concurrence - 15th Feb 2018
2.	Package-2 (CH 10+380 km to CH18+187 km)	ICB with PQ (2P)	5612.61	5612.61	JICA's Concurrence - 9th May 2016	JICA's Concurrence - 22nd Dec 2016	JICA's Concurrence - 4th Jan 2017	JICA's Concurrence - 12th Sep 2017	JICA's Concurrence - 12th Oct 2017	JICA's Concurrence - 15th Feb 2018
3.	Package-3 (CH18+187 to CH21+800)	ICB with PQ (2P)	1013.79	1013.79	JICA's Concurrence - 9th May 2016	JICA's Concurrence - 4th Jan 2017	JICA's Concurrence - 4th Jan 2017	JICA's Concurrence - 15th Sep 2017	JICA's Concurrence - 12th Oct 2017	JICA's Concurrence - 15th Feb 2018
4.	Package-4 Intelligent Transport System	ICB with PQ (2P)	181.49	181.49	JICA's Concurrence - 23rd August 2019	-	-	-	-	-

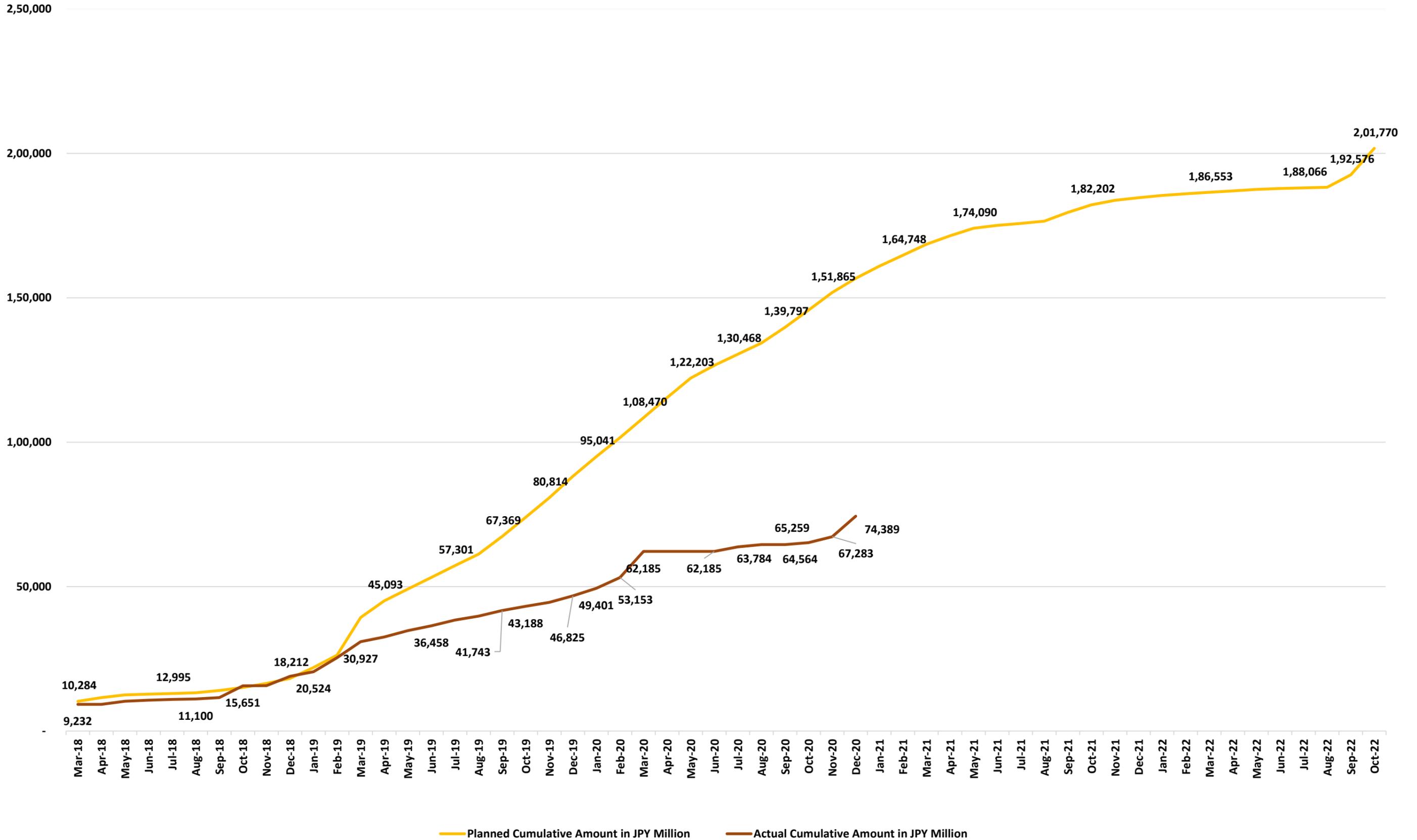
Attachment 4- Project Procurement and Financial Status till 31st December 2020

PROJECT PROCUREMENT AND FINANCIAL STATUS TILL 31st DECEMBER 2020

Type	Contract	Awarded or Estimated Value (in Rs. Crore)	Current Status	Contractors	Project Commencement Date	Stipulated Project Completion Date	% of Overall Project completion (Design/ Procurement/ Construction) till 25 th December 2020	% of Overall Financial Progress (Including Mobilization Advance) till 31 st December 2020
CIVIL	Package-1 (CH 0+000 km to CH 10+380 km)	7637.30	Awarded	L&T-IHI Consortium	March 2018	Sep 2022	35.61%	42.12%
	Package-2 (CH 10+380 km to CH18+187 km)	5612.61	Awarded	DAEWOO-TPL JV	March 2018	Sep 2022	31.62%	48.59%
	Package-3 (CH18+187 to CH21+800)	1013.79	Awarded	L&T	March 2018	Sep 2021	45.66%	55.99%
ITS	Package-4 Intelligent Transport System (ITS)	181.49 (Estimated)	Design Stage	--	June 2021 (Estimated)	Sep 2022	NA	NA

Attachment 5- S-Curve for Cumulative Planned Vs Actual Amount in JPY Million

Attachement 5 - S-Curve for Planned Vs Actual Cumulative Amount till December 2020 in JPY Millions



**Attachment 6- Package-1's Construction Programme
Updated as on 25th December 2020**

**Attachment 7- Package-2's Construction Programme
Updated as on 25th December 2020**

**Attachment 8- Package-3's Construction Programme
Updated as on 25th December 2020**

Activity ID	Activity Name	BL1 Duration	BL1 Start	BL1 Finish	Start	Finish	Activity %	Schedule % Complete	Performance % Complete	Schedule Performance	Cost Performance	Budgeted Total Cost	Planned Value Cost	Earned Value Cost
MTHL Pkg 3_Construction Schedule Dec'20														
	Procurement of Mumbai Trans Harbour Link Project (P	969	23-Mar-18	21-Sep-2	23-Mar-18A	04-Jul-23		94.5%	45.66%	0.48	1.41	Rs10,135,349,233	Rs9,863,501,203	Rs4,766,085,242
t	CommencementDate (CD)	0			23-Mar-18A		100%	0%	100%	0.00	0.00	Rs0	Rs0	Rs0
	Physical Milestones	1099	18-Sep-18	21-Sep-2	25-Dec-20	04-Jul-23		0%	0%	0.00	0.00	Rs0	Rs0	Rs0
	Financial Milestone	1099	18-Sep-18	21-Sep-2	23-Mar-18A	04-Jul-23		0%	0%	0.00	0.00	Rs0	Rs0	Rs0
	Interface Milestone	810	17-Dec-18	06-Mar-21	25-Dec-20	17-Dec-22		0%	0%	0.00	0.00	Rs0	Rs0	Rs0
	Document Submittals	45	23-Mar-18	06-May-1	06-Apr-18A	30-Sep-19A		100%	100%	1.00	1.00	Rs74,992,895	Rs74,992,895	Rs74,992,895
	Employer's Obligation / Land Handover	152	19-Apr-18	18-Sep-1	23-Mar-18A	25-Dec-20		0%	0%	0.00	0.00	Rs0	Rs0	Rs0
	ROW 75 Ha [CD+180 days]	152	19-Apr-18	18-Sep-1	23-Mar-18A	25-Dec-20		0%	0%	0.00	0.00	Rs0	Rs0	Rs0
	Casting Yard 9.16 Ha [CD+120 days]	0	20-Jul-18	20-Jul-18	20-Dec-18A	21-Dec-18A		0%	0%	0.00	0.00	Rs0	Rs0	Rs0
	Employer Office (Sch 01- General Item)	861	20-Aug-18	16-Sep-2	25-Jan-19A	15-Sep-21		94.36%	94.39%	1.00	1.00	Rs142,351,965	Rs134,328,566	Rs134,370,795
	Survey & Geotechnical Investigation Works	130	19-Apr-18	22-Oct-18	19-Apr-18A	30-Sep-19A		100%	100%	1.00	1.00	Rs242,300,773	Rs242,300,945	Rs242,300,945
	Design Works	313	07-May-18	14-Jun-19	25-Apr-18A	30-Jan-21		100%	98.65%	0.99	1.01	Rs159,122,500	Rs159,123,270	Rs156,968,295
	Design Basis Report	48	07-May-18	30-Jun-18	25-Apr-18A	08-Dec-18A		100%	100%	1.00	0.00	Rs0	Rs51	Rs51
	Preliminary Design	23	02-Jul-18	25-Aug-1	26-Jul-18A	25-Nov-20A		100%	100%	1.00	1.00	Rs286,875	Rs286,875	Rs286,875
	Geotechnical Interpretative Report Submission & GC Approval (NONO)	28	11-Sep-18	08-Oct-18	07-Dec-18A	30-Sep-19A		100%	100%	1.00	0.00	Rs0	Rs42	Rs42
	Plan & Profile Alignment	41	06-Jun-18	14-Aug-1	23-Feb-19A	25-Nov-20A		100%	100%	1.00	0.00	Rs0	Rs102	Rs102
	Superstructure Design	155	16-Aug-18	26-Feb-19	20-Aug-18A	30-Jan-21		100%	98.17%	0.98	1.01	Rs85,075,000	Rs85,075,144	Rs83,522,044
	Foundation & Pier	211	05-Oct-18	14-Jun-19	06-Nov-18A	11-Dec-20A		100%	100%	1.00	1.00	Rs28,434,375	Rs28,434,435	Rs28,434,435
	Abutment & Foundation	78	15-Oct-18	16-Jan-19	31-Dec-18A	13-Aug-20A		100%	100%	1.00	0.00	Rs0	Rs81	Rs81
	Pier Cap	166	24-Oct-18	10-May-1	11-Jan-19A	25-Nov-20A		100%	100%	1.00	0.00	Rs0	Rs290	Rs290
	Bearings & Drainage	115	17-Nov-18	03-Apr-19	21-Jan-19A	30-Jan-21		100%	96.66%	0.97	1.00	Rs18,005,625	Rs18,005,625	Rs17,403,750
	Pavement Design	24	01-Jul-18	27-Aug-1	15-Oct-18A	18-Feb-19A		100%	100%	1.00	1.00	Rs27,320,625	Rs27,320,625	Rs27,320,625
	Procurement Works	788	12-Sep-18	08-Jun-21	15-Feb-19A	01-May-23		98.53%	58.59%	0.59	7.18	Rs1,387,160,466	Rs1,660,276,714	Rs987,327,436
	For Main Bridge	788	12-Sep-18	08-Jun-21	15-Feb-19A	01-May-23		97.17%	27.87%	0.29	2.03	Rs877,933,218	Rs853,085,653	Rs244,711,914
	For Road Works	497	04-Apr-19	13-Jan-21	01-Mar-19A	02-Dec-22		96.19%	27.86%	0.29	0.00	Rs0	Rs404	Rs117
	Imported Procurement	170	22-Jan-19	10-Aug-1	04-Dec-19A	13-Jul-21		100%	92%	0.92	44.05	Rs509,227,248	Rs807,190,658	Rs742,615,405
	Co-ordinated Fabrication & Manufacturing Works	394	27-Sep-18	10-Feb-20	21-Feb-19A	01-Apr-22		100%	0%	0.00	0.00	Rs390,605,953	Rs390,606,723	Rs470
	Permanent Works fabrication	364	27-Sep-18	06-Jan-20	21-Feb-19A	25-Feb-22		100%	0%	0.00	0.00	Rs390,605,953	Rs390,606,183	Rs230
	Permanent Works Assembly	374	22-Oct-18	10-Feb-20	25-Feb-19A	01-Apr-22		100%	44.44%	0.44	0.00	Rs0	Rs540	Rs240
	Construction Works	844	20-Jul-18	23-Jul-21	26-Sep-18A	26-May-23		96.16%	44.59%	0.46	1.20	Rs7,060,913,657	Rs6,791,897,563	Rs3,149,371,669
	Preconstruction Activity	271	20-Jul-18	01-Jul-19	26-Sep-18A	25-Aug-21		100%	59.12%	0.59	0.00	Rs0	Rs565	Rs334
	Sub Structures (Open Foundation, Pier ,Pier Cap)	539	08-Dec-18	07-Nov-2	30-Sep-18A	17-Feb-22		100%	65.47%	0.65	1.00	Rs3,390,255,160	Rs3,392,806,949	Rs2,221,163,077
	Super Structures	601	27-Feb-19	12-Apr-21	11-Sep-19A	26-Dec-22		95.24%	9.42%	0.10	1.20	Rs1,408,927,165	Rs1,341,808,066	Rs132,778,459
	Bearings & Expansion Joints	201	03-Aug-20	12-Apr-21	26-Nov-20A	23-Feb-23		52.35%	3.71%	0.07	12.60	Rs10,454,697	Rs5,473,341	Rs387,439
	Bridge Ancillaries & Miscellaneous Item	274	12-Aug-20	23-Jul-21	22-Jan-22	26-May-23		20.74%	0%	0.00	0.00	Rs180,921,987	Rs37,517,177	Rs0
	RE Wall	557	27-Feb-19	18-Feb-21	05-Feb-21	06-Jan-23		99.04%	0%	0.00	0.00	Rs461,687,248	Rs457,271,506	Rs0
	Road Work	587	20-Apr-19	18-May-2	16-Feb-19A	07-Feb-23		96.79%	49.42%	0.51	2.75	Rs1,608,667,400	Rs1,557,019,958	Rs795,042,360
	Completion of Interface Activity	141	19-Sep-20	06-Mar-21	25-Dec-20	17-Dec-22		0%	0%	0.00	0.00	Rs0	Rs0	Rs0
	Provisional Sum	924	23-Apr-18	23-Aug-2	30-Nov-18A	02-Mar-23		60.33%	3.05%	0.05	1.04	Rs677,901,024	Rs409,974,527	Rs20,752,736
	Testing & Commissioning Works	32	26-Jul-21	20-Sep-2	27-May-23	03-Jul-23		0%	0%	0.00	0.00	Rs0	Rs0	Rs0

Attachment 9- Project Progress Photos

Package 1- Site Progress Photos



Photo No. 1: LG -1 & LG-2 - Segment Erections - Intertidal Section in progress



Photo No. 2: MP44S L2 (Final Lift) Pier Concrete Works – Intertidal Location in progress



Photo No. 3: LP 6 N Pier Head Pre-Pour Checking - Interchange Location in progress



Photo No. 4: LG-3 Load Test at the Precast Yard Location in progress



Photo No. 5: MP100 S Pier Head Rebar Inspections at Marine Section in progress

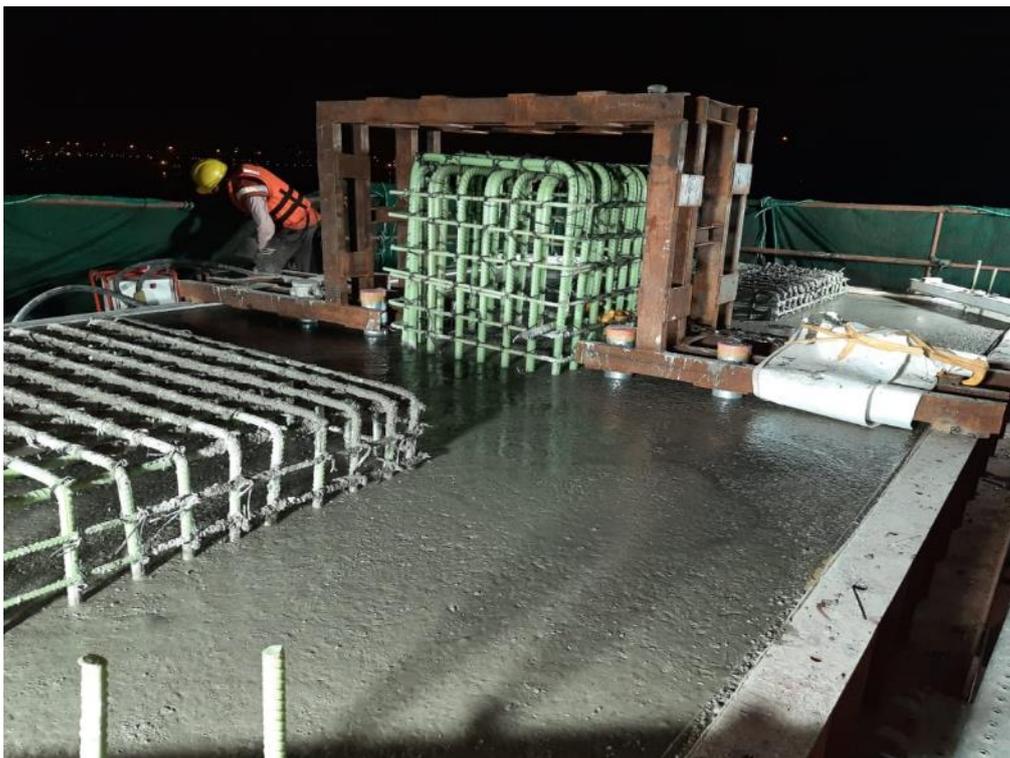


Photo No. 6: MP97 N Pier Cap Concreting Works at Marine Section in progress



Photo No. 7: MP27-28 SS01 Reinforcement Checking Completed



Photo No.8: MP 120 Pile Cap Pre-pour Checking at Marine Section in progress



Photo No. 9: MP 123 Pile Cap Pre-Pour Checking at Marine Section in progress



Photo No. 10: MP69 Pile Cap Pre-Pour Inspections at Marine Location in progress



Photo No. 11: MP 97 S Starter Co-Ordinates Checking at Marine Location in progress



Photo No. 12: Trial Assembly completion for OSD Girder Bridge P1-OS01-SG (Lot5) / Seg. 12~17
Steel Bridge Fabrication Progress: At Ta Chang Tsoo Industrial Co., Ltd. (TCT)-Taiwan

Package 2 – Site Progress Photos



Photo No. 1: Pile cap concreting at MP 189 LHS in progress



Photo No. 2: Pier final lift concreting at MP 263 RHS in progress



Photo No. 3: Segment concreting at Bay-1 in progress



Photo No. 4: OSD small block assembling and welding at Karanja Port in progress



Photo No. 5: Pier head segment reinforcement tying at MP 242 LHS in progress



Photo No. 6: Pier reinforcement tying at MP 212 LHS in progress



Photo No. 7: Electrification works of LG in progress



Photo No. 8: Pile cap reinforcement tying at MP 191 LHS in progress



Photo No. 9: Pier head segment concreting at MP 233 LHS in progress



Photo No. 10: Portal Beam reinforcement tying at MP 249 RHS in progress



Photo No. 11: Preparatory works for LG Load Testing in progress



Photo No. 12: Pier cap concreting at MP 242 LHS in progress

Package 3 – Site Progress Photos



Photo No. 1: LMP A2 Retaining wall concrete pouring in progress



Photo No. 2: Foundation RP-23 RHS (Jasai) concreting done



Photo No. 3: Pier No. RP33 RHS coordinates & formwork checking in progress



Photo No. 4: RP 37 LHS 1st lift (6m) concrete pouring in progress



Photo No. 5: MPP-11 (Chirle) Pier Cap pre-pour inspection in progress



Photo No. 6: LP01 portal cap concrete pouring work in progress



Photo No. 7: LMP 279 Portal Cap Formwork in progress



Photo No. 8: voided slab and cantilever portion reinforcement at Span MJP6 - MJP7 in progress



Photo No. 9: PCY Bay 1, Segment K-55 Span LMP 280-281 Concrete pouring in progress

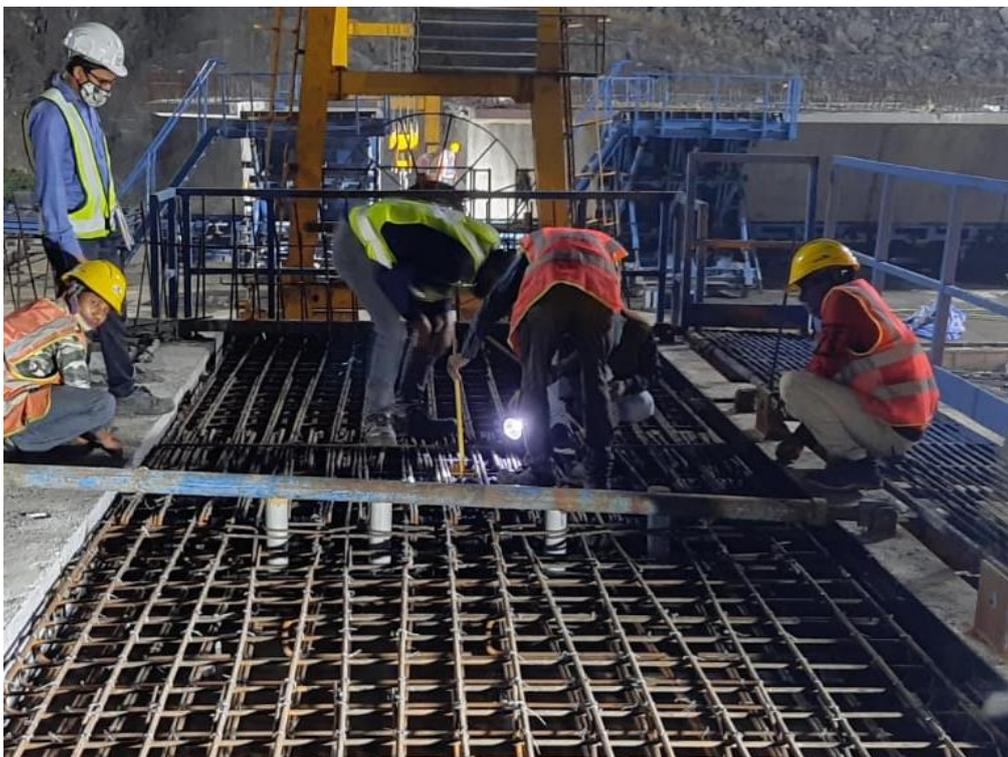


Photo No. 10: Bay 1, Segment L1-58, RMP 281-282, Pre-pour inspection in progress



Photo No. 11: Bay 2, Segment Y-53, Span RMP 280-281 concrete pouring in progress



Photo No. 12: Segment Span RMP 267- 268- 269 erection in progress



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MMRDA

Mumbai Metropolitan Region Development Authority

Mumbai Trans Harbour Link Project

Quarterly Progress Report - No.16

(From 1st January 2021 to 31st March 2021)



**Mumbai Trans Harbour Link Project
Quarterly Progress Report No. 16
1st January 2021 to 31st March 2021
Loan Agreement No. ID-P255 (Tranche-I)**

ORGANIZATION INFORMATION

Borrower	Mumbai Metropolitan Region Development Authority	
	Person in Charge	Metropolitan Commissioner, MMRDA
	Contact Address	M.M.R.D.A. New Office Building, Bandra-Kurla Complex, Plot no. R-5, R-6 & R-12, E Block, Bandra (East), Mumbai - 400051 Phone: +91-22-26594000 Fax No:+91-22-2659 1264
Executing Agency	Mumbai Trans Harbour Link Project Implementation Unit	
	Headed by:	Chief Engineer Mumbai Trans Harbour Link Project Implementation Unit
	Contact Address	M.M.R.D.A. New Office Building, Bandra-Kurla Complex, Plot no. R-5, R-6 & R-12, E Block Bandra (East), Mumbai - 400 051 Phone: +91-22-2659 4034 Fax No: +91-22-2659 4179

Details of JICA Loan

Source of Finance	JICA ODA Loan Portion:	238,572 million Japanese YEN (JPY)
	Tranche-I:	144,795 million Japanese YEN (JPY) (Loan Agreement signed on 31 st March 2017)
	Tranche-II:	66,909 Million Japanese YEN (JPY) (Loan Agreement signed on 27 th March 2020)
Terms and Conditions of JICA ODA Loan (Tranche-1)	Repayment Period:	30 years, including 10 years of grace period.

DOCUMENT VERIFICATION AND REVISION RECORD

PROJECT NAME		Mumbai Trans Harbour Link Project			
DOC NO.		16	DATE OF ISSUE		06/05/2021
DOC TITLE		Quarterly Progress Report No. 16			
REV No.	DATE OF ISSUE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY
R0	05/07/2017	Quarterly Progress Report No. 1 (Apr-Jun 17)	J Senthil	Dr T K Sundaram	Dr Robin Sham
R0	05/10/2017	Quarterly Progress Report No. 2 (Jul-Sep 17)	J Senthil	Dr T K Sundaram	Dr Robin Sham
R0	05/01/2018	Quarterly Progress Report No. 3 (Oct-Dec 17)	J Senthil	Dr T K Sundaram	Dr Robin Sham
R0	05/04/2018	Quarterly Progress Report No. 4 (Jan-Mar 18)	J Senthil	Dr T K Sundaram	Dr Robin Sham
R0	24/07/2018	Quarterly Progress Report No. 5 (Apr-Jun 18)	Prashant B	Dr T K Sundaram	Dr Robin Sham
R0	10/10/2018	Quarterly Progress Report No. 6 (Jul-Sep 18)	Prashant B	Dr T K Sundaram	Dr Robin Sham
R1	08/02/2019	Quarterly Progress Report No. 7 (Oct-Dec 18)	Prashant B	J Senthil/ Dr T K Sundaram	Dr Robin Sham
R0	05/04/2019	Quarterly Progress Report No. 8 (Jan-Mar 19)	Prashant B	J Senthil	V. D. Sharma/ Dr Robin Sham
R0	18/09/2019	Quarterly Progress Report No. 9 (Apr-Jun 19)	Prashant B	Mr. Som Ghosh	Dr Robin Sham
R0	13/11/2019	Quarterly Progress Report No. 10 (Jul-Sep 19)	Prashant B	Mr. Som Ghosh	Dr Robin Sham
R0	11/02/2020	Quarterly Progress Report No.11 (Oct-Dec 19)	Prashant B	Mr. Som Ghosh	Dr Robin Sham
R0	25/11/2020	Quarterly Progress Report No.12 (Jan-Mar 20)	Prashant B	Mr. Som Ghosh	Dr Robin Sham
R0	15/12/2020	Quarterly Progress Report No.13 (Apr-Jun 20)	Prashant B	Mr. Som Ghosh	Dr Robin Sham
R0	06/01/2021	Quarterly Progress Report No.14 (Jul-Sept 20)	Prashant B	Mr. Som Ghosh	Dr Robin Sham
R0	12/02/2021	Quarterly Progress Report No.15 (Oct-Dec 20)	Prashant B	Mr. Som Ghosh	Dr Robin Sham
R0	06/05/2021	Quarterly Progress Report No.16 (Jan-Mar 21)	Prashant B	Mr. Som Ghosh	Dr Robin Sham

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1.0 PROJECT DESCRIPTION

1.1 Project Objective

Original:

To improve connectivity in Mumbai Metropolitan region by constructing the Mumbai Trans Harbour Link connecting Mumbai with Navi Mumbai, thereby contributing to mitigation of traffic congestion and promoting regional economic development.

Actual (*P/R, PCR*)

There is no change in the Project Objective.

1.2 Necessity of the Project

The Project is consistent with the development policy, sector plan, national/regional development plans and demand of target group of the recipient country.

Benefits from MTHL Project

- Saving in travel time for commuters from Mumbai to Navi Mumbai.
- Improved comfort and accessibility between the island and the mainland.
- Reduced operating costs of vehicles due to lesser congestion.
- Smooth traffic flow from Navi Mumbai airport to Mumbai Island.
- Accelerated economic development of Navi Mumbai and nearby regions.
- Greater economic integration of Mumbai island with Navi Mumbai and extended regions of Pune, Goa, Panvel and Alibaug.
- Improvement in environment and reduced pollution levels.
- Improved safety due to reduction in accidents.
- Improvement in trade competitiveness through faster and improved logistics.
- Accelerated growth of Navi Mumbai.
- Decongestion of Mumbai Island and dispersal of population to Navi Mumbai region & beyond.

Necessity of the Project

1. Although the urbanization in India has been rapidly progressing, infrastructure development in the urban areas has not caught up its progress. Particularly, the traffic congestion in the urban areas due to a lack of road network hinders the economic development. Thus, Government of India (GOI) places transport and connectivity as one of the “Growth Enablers” and plans to enhance road network in the “Three Year Acton Agenda 2017-2018 to 2019-20 (NITI Aayog)”.
2. Mumbai Metropolitan Region, which includes Mumbai and Navi Mumbai, has about 18.4 million people in population as of 2011 (Census 2011) and the population density reaches 20,694 people per square km in the center of Mumbai, which is one of the most overpopulated and high-density cities in the world.
3. Mumbai, the narrow stretch of land that has traditionally been the epicentre of India’s commerce, has seen a steady increase in population in the last three decades despite obvious spatial constraints. Thus, the development of Navi Mumbai has been identified as an urgent requirement for broad development in Mumbai Metropolitan Region.

4. The Government of Maharashtra (GoM), of which Mumbai Metropolitan Region is under jurisdiction, has been facilitating various development plans particularly in Navi Mumbai area, which stands at the opposite site of Mumbai across the Mumbai Bay and still has spacious area for development, such as a new international airport, Special Economic Zone (SEZ) and expansion of Jawaharlal Nehru Port in order to promote the sustainable economic development in Mumbai Metropolitan Region.
5. Furthermore, a lack of connectivity in Mumbai has stunted its growth. The GoM has given importance to construct the faster connection with Mumbai to Navi Mumbai International Airport, Jawaharlal Nehru Port, Mumbai-Pune expressway and main hinterland.
6. Accordingly, the Mumbai Trans Harbour Link (MTHL) has been identified as the important infrastructure to improve the connectivity between Mumbai and Navi Mumbai and continue economic development in Mumbai Metropolitan Region.

The MTHL is proposed to be developed as an expressway link comprising of a dual three-lane main carriageway bridge connecting Sewri in Mumbai to Chirle in Navi Mumbai. When completed, MTHL will reduce the distance between Mumbai and Navi Mumbai and will help save approximately an hour in travel time. Also, development of Navi Mumbai along with the imminent construction of the Navi Mumbai airport will lead to increased traffic between Mumbai and Navi Mumbai. Consequently, the project is envisaged to; improving accessibility between Mumbai and Navi Mumbai, accelerating growth of Navi Mumbai, smooth traffic flow from Navi Mumbai airport to Mumbai, accelerating economic development of Navi Mumbai and surrounding regions, greater economic integration of Mumbai with Navi Mumbai and extended regions of Pune, Goa, Panvel and Alibaug, and decongestion of Mumbai and dispersal of population to Navi Mumbai region and beyond.

7. The Comprehensive Transportation Study (CTS) for Mumbai Metropolitan Region which was guided by Mumbai Metropolitan Region Development Authority (MMRDA) and supported by World Bank, was completed in July 2008, which was over 25 years after the issuance of the last comprehensive transport study. The report provided a vision for Mumbai's future transportation as seamless and integrated system, in which commuters can make their journeys safely and conveniently by various modes of transport, particularly by public transport, and recommended the development of Multi Modal Corridor to take care of the varied travel demands of the region for the period up to 2031. The CTS proposed to develop the highway network in the region. The MTHL has been regarded as the priority road for Mumbai, considering its function and importance connecting between Mumbai and Navi Mumbai.
8. Necessity of the Project: - To promote economic development in Mumbai Metropolitan Region it is essential to improve the connectivity between Mumbai and Navi Mumbai, by constructing MTHL.

Actual (P/R, PCR)

There is no change in the Necessity of the Project preamble.

1.3 Rationale of the Project Design

- Timing, Scale, Technology of the Project:

Demand Analysis

- At the opening year 2022, the daily traffic on the main bridge is expected to be 39,300 PCU. The traffic is projected to increase up to 103,900 by 2032 and up to 145,500 by the year 2042. The daily breakdown by vehicle class on the main bridge link is presented in the Table 1.3.1 below:

Table 1.3.1 Demand Projections Over the Period

Vehicle Type	Between Sewri Interchange and Shivaji Nagar Interchange			Between Shivaji Nagar Interchange and Chirle Interchange		
	2022	2032	2042	2022	2032	2042
Car	24,100	66,400	94,100	4,900	21,300	43,300
Taxi	2700	14,100	20,200	100	400	2,300
Bus	2,700	3,700	3,700	2,700	3,700	3,700
LCV	2,200	4,100	5,600	700	1,300	1,800
HCV	3,000	6,500	8,100	1,000	2,000	2,200
MAV	4,600	9,100	13,800	400	900	1,700
Total	39,300	103,900	145,500	9,800	29,600	55,000

LCV: Light Commercial Vehicle; HCV: Heavy Commercial Vehicle; MAV: Multi Axle Vehicle

- At the opening year in 2022, the traffic flow on MTHL represents a diversion of 10% on the traffic across Thane creek which will increase up to 16% in 2032. If only Thane Creek Bridge is considered, then the diverted traffic from the bridge will be 21% in 2022 which will rise up to 35% in 2032.
- 6-lane of main carriageway was decided by GoM. It was reviewed based on the forecasted result of future traffic volume by Manual of Specification and Standards for Expressways (IRC: SP:99-2013). The result of the review shows that 6-lane will be required in 2032 (10 years later after traffic open). Although, 8-lane will be required in 2042, it is assumed that the level of service of MTHL would be maintained as additionally metro might be constructed in parallel with MTHL.

Design Parameters / Overall Design

- The MTHL which is 21.8 km long road bridge partly on the land and partly over the creek across the Mumbai Bay between Sewri in Mumbai and Chirle in Navi Mumbai, is to be constructed with the approach sections and interchanges. ITS (Intelligence Transport System) and the other necessary facilities will be provided for full access-controlled bridges.
- As per the provisions of IRC (Indian Road Congress) SP:99-2013, the Width of each lane of the Main Carriageway is 3.5 meters.
- When the design speed is 100 km/h according to the traffic demand forecast the large vehicle, ratio will be as low as 9.4% (2022).
- The shoulder width of bridge towards outside of each carriageway is 2.5 meters and towards median side of each carriageway is 0.75 meters.
- The major portion of MTHL structure is on sea and partly towards ends is on land with

different type and with different span, viz., PC box girder with 50 m spans which is typically applied on marine viaduct since, it is economical, easy to construct and maintain.

9. On the land portion, the PC box girder having span of generally 30m is used.
10. As far as the location in which long span (150-180 m) is required to cross significant obstacles, such as navigation channels, pipelines and creeks, the steel box girder bridge with steel deck is proposed with large block erection method to shorten the construction period.
11. The project is coded with three lanes of traffic in each direction. The reference toll is presented in the Table 1.3.2 below for each vehicle class in Year 2022 (based on 2015 monetary value reflecting price escalation).

Table 1.3.2: Base Toll Rates (Rs) for different class of vehicles between Interchanges

Vehicle Type	Sewri to Shivaji Nagar	Shivaji Nagar to Chirle	Total
Car	180	60	240
Bus	420	130	550
LCV	240	70	310
HCV	420	130	550
MAV	600	180	780

Intelligent Transport Systems (ITS) and Toll Management System (TMS)

12. The Toll Management System will be implemented in MTHL to collect tolls from all road users of MTHL. Two types of toll collection method will be adopted; Electronic Toll Collection (ETC) and Manual (paying by cash).
13. The lanes corresponding to these toll collection methods are dedicated ETC lanes and Manual lanes, and Manual system shall be installed to ETC lanes for backup to be able to cope at the time of the trouble of ETC equipment failure.

Traffic management System

14. Traffic Management System is a support system to Manage the traffic on MTHL safely and efficiently. The System consists of the information collection system including Closed-Circuit Television (CCTV), Emergency Call Box (ECB), Automatic Traffic Counter-Cum-Classifer (ATCC) and Meteorological Data System (MDS), and Information Dissemination System including Variable message Sign (VMS).
15. CCTV Cameras shall be installed at around three places per 1 km, on Both side of main route and the monitoring of the traffic condition of the whole stretch of MTHL will be almost enabled in the Traffic Control Centre and VMS displays the appropriate information for road users on the collated information.
16. The Information collected by these devices shall be transmitted to the Command Control Centre through the medium of an Optical Fiber Cable laid in MTHL.

Actual (P/R, PCR)

There is no change in the Rationale of the Project Design.

2.0 PROJECT IMPLEMENTATION

2.1 Project Scope

Refer Table 2.1.1 and 2.1.2 for details on Scope of the Project.

Table 2.1.1 Comparison of Original and Actual location

Location	Original: (P/M) Mumbai Metropolitan Region Development Authority, Mumbai, State of Maharashtra	Actual: (P/R and PCR)
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Table 2.1.2 Comparison of Original and Actual Scope

Items	Original	Actual
Construction work: 6-lane Marine Bridge Road (21.8 km)		
Package-1 Ch 0+000-10+380 (10.380 km)	<ul style="list-style-type: none"> 1 Interchange (Sewri) Viaduct superstructure (Marine Portion: PC Box Girder & Steel Box Girder with Steel Slab Land Portion: PC Box Girder & PC-I Girder) Viaduct Substructure (RC Concrete Structure) Viaduct Foundation (Bored piles) Road Furniture and roadside facilities (Traffic Signs and Pavement Marking, Traffic Safety Devices, Crash Barrier, Drainage Structures, Noise Barriers, View Barriers) 	(P/R and PCR)
Package-2 Ch 10+380-18+187 (7.80 km)	<ul style="list-style-type: none"> 1 Interchange (Shivaji Nagar) Viaduct superstructure (Marine Portion: PC Box Girder & Steel Box Girder with Steel Slab Land Portion: PC Box Girder & PC-I Girder) Viaduct Substructure (RC Concrete Structure) Viaduct Foundation (Bored piles) Road Furniture and roadside facilities (Traffic Signs and Pavement Marking, Traffic Safety Devices, Crash Barrier, Drainage Structures, Noise Barriers, View Barriers) 	(P/R and PCR) Actual: No View Barriers
Package-3 Ch 18+187-21+800 (3.61 km)	<ul style="list-style-type: none"> 2 Interchanges (State Highway-54, National Highway-4B) Viaduct superstructure (Marine Portion: PC Box Girder & Steel Box Girder with Steel Slab Land Portion: PC Box Girder & PC-I Girder & Steel Truss Girder for Rail-over-Bridges (ROB)) Viaduct Substructure (RC Concrete Structure) Viaduct Foundation (Bored piles) Cutting Section (6-lane with Slope Protection) Road Furniture and roadside facilities (Traffic Signs and Pavement Marking, Traffic Safety Devices, Crash Barrier, Drainage Structures, Noise Barriers, View Barriers) 	(P/R and PCR) Actual: No Noise Barriers & View Barriers

Items	Original	Actual
Package-4 ITS (Intelligent Transport System)	<ul style="list-style-type: none"> • Administrative Buildings • Toll Booths (1 for main alignment and each on and off rumps for 3 interchanges) • Traffic Management System (Traffic Control Centre, Closed Circuit Television (CCTV), Meteorological Observation System (MET), Emergency Call Box (ECB), Automatic traffic Counter-cum-Classifer (ATCC), Variable Message Sign (VMS)) • Highway Lighting (Whole sections Low-positioned lighting for some sections) • Electrical Powering System including HV/ LV Ring Network across the Bridge. 	<p><i>(P/R and PCR)</i></p>
Consulting Services	<ul style="list-style-type: none"> • Tender Assistance • Construction Supervision • Facilitation of Implementation of Environmental Management Plan (EMP), Environmental Monitoring plan (EMoP). 	<p><i>(P/R and PCR)</i></p>

2.2 Implementation Schedule

2.2.1 The Original Implementation Schedule

Table 2-2-1 Comparison of Original and Actual Schedule

Items	Original	Status (P/R and PCR) as on 31 st March 2021
1) Completion of Land Acquisition and Resettlement	March 2019	March 2021
2) Consulting Services		
a) Selection of Consultant	May – December 2016	May – December 2016
b) Consultancy Works	December 2016 – September 2024	December 2016 – September 2024
3) Selection of Contractor		
Package-1, Package-2 & Package-3 (Civil)		
a) Pre-Qualification Process	May – December 2016	May – December 2016
b) Main Bidding	January – December 2017	January – December 2017
c) JICA's Concurrence of Contract	February-2018	February-2018
Package-4 (ITS)		
a) Pre-Qualification Process	January 2019 – May 2019	January 2020 – May 2020
b) Main Bidding	June 2019 – September 2020	June 2020 – September 2021
4) Civil Construction		
Package-1 and Package-2	March 2018 – September 2022	March 2018 – September 2022
Package-3	March 2018 – September 2021	March 2018 – September 2021
Package-4	October 2020 – September 2022	November 2021 – July 2023
5) Defect Liability Period		
Package-1, Package-2 and Package-4	October 2022 – September 2024	October 2022 – September 2024
Package-3	October 2021 – September 2023	October 2021 – September 2023
6) Commencement of Toll Collection	September -2022	September -2022
7) Selection of O&M Organization	October 2020 – September 2021	October 2021 – September 2022

Attachment 6, 7 & 8: Package wise construction schedules (progress) updated at the end of 4th Quarter (January - March 2021).

2.2.2 Reasons for changes of the schedule and their effects to the Project

(P/R and PCR)

No change in the Implementation Schedule except the selection of O&M Organization timeline.

2.3 Project Cost

2.3.1.a Comparison of Originally Planned and Actually Incurred Cost BY ITEM

Table 2.3.1.a.(i) Originally Planned Cost BY ITEM

Cost Breakdown	Foreign Currency Portion			Local Currency Portion			Total		
	Total (JPY mil)	JICA Portion (JPY mil)	Others (JPY mil)	Total (Rs. mil)	JICA Portion (Rs. mil)	Others (Rs. mil)	Total (JPY mil)	JICA Portion (JPY mil)	Others (JPY mil)
Package-1	34,398	34,398	0	45,376	45,376	0	105,713	105,713	0
Package-2	26,513	26,513	0	32,617	32,617	0	77,774	77,774	0
Package-3	759	759	0	8,276	8,276	0	13,766	13,766	0
Package-4 (ITS)	0	0	0	1,444	1,444	0	2,269	2,269	0
Package-5 (Geotechnical Investigation)	0	0	0	166	0	166	260	0	260
Dispute Boards (Package-1, 2, 3 & 4)	63	63	0	45	45	0	134	134	0
Price Escalation	2,251	2,251	0	7,133	7,133	0	13,460	13,460	0
Physical Contingency	6,398	6,398	0	9,506	9,489	17	21,338	21,312	26
Consulting Services	1,650	1,650	0	1,587	1,587	0	4,145	4,145	0
Land Acquisition*	0	0	0	11,293	0	11,293	17,748	0	17,748
Administration Cost	0	0	0	4,898	0	4,898	7,698	0	7,698
GST	0	0	0	18,238	0	18,238	28,663	0	28,663
Import Tax	0	0	0	13,435	0	13,435	21,114	0	21,114
Interest during construction	2,942	0	2,942	0	0	0	2,942	0	2,942
Front End Fee	477	0	477	0	0	0	477	0	477
Total	75,451	72,032	3,419	154,013	105,967	48,046	317,501	238,572	78,929

(Note) 1. Exchange Rate: US\$1=Rs. 71.9, US\$1=JPY 113.0, Rs.1 = JPY 1.57

2. Price Escalation (a) Foreign Currency Portion: 1.83% p.a.

(b) Local Currency Portion: 4.13% p.a.

3. Physical Contingency: 10%

4. Base Year for Cost Estimation: December 2018

* Base Cost for Land Acquisition considered in the year 2016 was INR 9,062,669,696. The base cost has been revised to INR 11,293 million considering Price Escalation and 10% Physical Contingency.

Table 2.3.1.a.(ii) Actually Incurred Cost BY ITEM

Cost Breakdown	Foreign Currency Portion			Local Currency Portion			Total		
	Total (JPY mil)	JICA Portion (JPY mil)	Others (JPY mil)	Total (Rs. mil)	JICA Portion (Rs. mil)	Others (Rs. mil)	Total (JPY mil)	JICA Portion (JPY mil)	Others (JPY mil)
Package-1	9,629	9,629	-	24,085	24,085		44,234	44,234	
Package-2	10,971	10,971	-	14,628	14,628		33,484	33,484	
Package-3	569	569	-	4,427	4,427		6,996	6,996	
Package-4 (ITS)	-		-	-			-		
Package-5 (Geotechnical Investigation)	-			196		196	308		308
Dispute Boards (Package-1, 2, 3 & 4)	-			-			-		-
Price Escalation	-			4	4		6	6	-
Physical Contingency	-			-			-		-
Consulting Services	253	253		362	362		1,108	1,108	
Land Acquisition*	-			6,022		6,022	9,455		9,455
Administration Cost	-			3,170		3,170	4,977		4,977
GST	-			7,782		7,782	12,217		12,217
Import Tax	-			-			-		-
Interest during construction	-			-			-		-
Front End Fee	-			-			-		-
Total	21,422	21,421	-	60,676	43,506	17,170	1,12,785	85,827	26,957

(Note) 1. Exchange Rate: Rs.1 = JPY 1.57 for MMRDA Portion only

2. Price Escalation (a) Foreign Currency Portion: 1.83% p.a.

(b) Local Currency Portion: 4.13% p.a.

3. Physical Contingency: 10%

4. Base Year for Cost Estimation: December 2018

* Base Cost for Land Acquisition considered in the year 2016 was INR 9,062,669,696. The base cost has been revised to INR 11,293 million considering Price Escalation and 10% Physical Contingency.

2.3.1.b Comparison of Originally Planned and Actually Incurred Cost BY YEAR

Table 2.3.1.b.(i) Originally Planned Cost BY YEAR

(All Figures are in JPY mil)

Cost Breakdown	Total	JICA Portion				Others (MMRDA Portion)
		Tranche I	Tranche II	Tranche III	Sub Total	
FY 2017	12,679	10,134	0	0	10,134	2,545
FY 2018	30,771	22,707	0	0	22,707	8,064
FY 2019	72,379	56,816	0	0	56,816	15,563
FY 2020	92,944	55,138	16,040	0	71,178	21,765
FY 2021	66,397	0	50,869	0	50,869	15,527
FY 2022	27,683	0	0	20,113	20,113	7,570
FY 2023	3,723	0	0	565	565	3,158
FY 2024	10,925	0	0	6,189	6,189	4,735
Total	317,501	144,795	66,909	26,868	238,571	78,929

Table 2.3.1.b.(ii) Actually Incurred Cost BY YEAR

(All Figures are in JPY mil)

Cost Breakdown	Total	JICA Portion				Others (MMRDA Portion)
		Tranche I	Tranche II	Tranche III	Sub Total	
FY 2017	13,738	9,232	-	-	9,232	4,506
FY 2018	26,813	21,695	-	-	21,695	5,118
FY 2019	40,410	31,014	-	-	31,014	9,396
FY 2020	31,822	23,885	-	-	23,885	7,937
FY 2021						
FY 2022						
FY 2023						
FY 2024						
Total	1,12,783	85,826	-	-	85,826	26,957

(Note) 1. Exchange Rate used: Rs.1 = JPY 1.57 for MMRDA Portion only

2. Fiscal Year starting from 1st April and ending on 31st March.

2.3.2 Reason(s) for the wide gap between the original and actual, if there have been any, the remedies you have taken, and their results.

(P/R and PCR)

There is no major gap between the original and actual cost.

2.4 Organization for Implementation

2.4.1 Executing Agency

Original:

Executing Agency

Mumbai Metropolitan Region Development Authority (MMRDA) was established on 26th January 1975 in accordance with the Mumbai Metropolitan Development Act, 1974 to make Mumbai Metropolitan Region (MMR) a destination for economic activity by promoting infrastructure and regional planning. MMRDA takes all the necessary measures, required from time to time, in an effective manner and be fully responsible for the Project implementation. After completion of the Project, MMRDA continues to be responsible for the efficient operation and maintenance of the Project.

The GoM appointed MMRDA as the implementing/ executing agency of MTHL vide Government Resolution dated 4th February 2009 and further the ownership of MTHL would be with MMRDA vide Government Resolution dated 8th June 2011.

Organization's Role

To construct, execute, carryout, improve, work, develop, administer, manage, control or maintain in MMR all types of roads, highways, express routes, paths, streets, bridges, sideways, tunnels and other infrastructure, works and conveniences, approach road, etc. Under the Project, MMRDA is responsible for all the tendering process including employment of consultants, as well as for the construction process.

Project Implementation Unit (PIU)

The PIU is in charge of the Projects. The PIU is headed by Chief Engineer, comprising of 6 Divisions/Cells (Finance Division, Social Development Cell, Engineering Division, Land Cell, Administrative Division and Environmental Cell), Supervision/ ITS Consultant and supporting staff.

Procurement

MMRDA shall have to adopt the JICA's Standard Biding Documents of the latest version, as stipulated in Section 4.01 (2) of "Guidelines for Procurement under Japanese ODA Loans.

Procurement of goods and services, except for consulting services, converted by the Japanese ODA Loan should be implemented in accordance with "Guidelines for Procurement under Japanese ODA Loans", dated in April 2012. Employment of consultants should be implemented in accordance with "Guidelines of Employment of Consultant under Japanese ODA Loans", dated in April 2012. "Principles of Procurement under the Project" is attached for brief explanation of the above Guidelines.

Actual, if changed: (P/R and PCR)

There is no change made in original Organisation Set-up & Implementation methods. Refer Annexure III Organisation Chart.

2.4.2 Contractor(s)/ Supplier(s), and Consultant(s) and their Performance:

2.4.2.1 Procurement & Consultant

Table 2.4.2 Procurement of Contractor(s)/ Supplier(s) and Consultant(s)

Contract Package	Selection Method		
	Original: (P/M)	Actual: (P/R and PCR)	
Construction Works			
1	<u>Package-1:</u> From CH 0+000 - To CH 10+380 (10.38 km)	International Competitive Bidding Process (With PQ, Single stage with two envelopes)	No Change
2	<u>Package-2:</u> From CH 10+380 - To CH 18+187 (7.80 km)	International Competitive Bidding Process (With PQ, Single stage with two envelopes)	No Change
3	<u>Package-3:</u> From CH 18+187 - To CH 21+800 (3.61 km)	International Competitive Bidding Process (With PQ, Single stage with two envelopes)	No Change
4	<u>Package-4:</u> To install ITS (Toll Management System and Highway Traffic Management System)	International Competitive Bidding Process (With PQ, Single stage with two envelopes)	International Competitive Direct Bidding Process without Pre-Qualification
5	<u>Package-5:</u> To conduct the geotechnical investigation	Local Competitive Bidding Process	No Change
Consulting Services			
1	Consulting Service for Supervision	Short List Method (QCBS)	No Change

2.4.2.2 Performance

Consultant's Progress:

January 2021:

- 1 GC scrutinized & certified the following invoices claimed by the Contractors:
 - i) Package-1: IPC-35 20% Detailed Verification and IPC-36 80% Ad-hoc.
 - ii) Package-2: IPC-29 20% Detailed Verification and IPC-30 80% Ad-hoc.
 - iii) Package-3: IPC-24 20% Detailed Verification and IPC-025 & IPC-026 80% Ad-hoc.
- 2 GC has prepared and submitted a total reimbursement claim of 4133.53 Million JPY to MMRDA / JICA in January 2021.

February 2021:

- 1 GC scrutinized & certified the following invoices claimed by the Contractors:
 - i) Package-1: IPC-36 20% Detailed Verification and IPC-37 80% Ad-hoc.
 - ii) Package-2: IPC-30 20% Detailed Verification and IPC-31 80% Ad-hoc.
 - iii) Package-3: IPC-25 & IPC-026 20% Detailed Verification and IPC-028 80% Ad-hoc.
- 2 GC has prepared and submitted a total reimbursement claim of 4289.39 Million JPY to MMRDA / JICA in February 2021.

March 2021:

- 1 GC scrutinized & certified the following invoices claimed by the Contractors:
 - i) Package-1: IPC-37 20% Detailed Verification and IPC-38 80% Ad-hoc.
 - ii) Package-2: IPC-31 20% Detailed Verification and IPC-32 80% Ad-hoc.
 - iii) Package-3: IPC-027 & IPC-028 20% Detailed Verification and IPC-029 & IPC-030 80% Ad-hoc.
- 2 GC has prepared and submitted a total reimbursement claim of 7162.80 Million JPY to MMRDA / JICA in March 2021.
- 3 100% of the Technical Design Modules have been submitted by the Contractors across all the 3 Packages; out of which 95% of the modules have been given "NONO" by the GC & the rest of the modules have been reviewed & commented by the GC. Now, those are pending with the Contractors for further correction and re-submission to the GC.

Contractor's Progress:
Package-1 Physical Progress till 31st March 2021

S. No	Activity	Total Scope	Unit	Cumulative Achieved Works	% of Work done Against the Total Scope	Remarks
1	Temporary Access Bridge					
1.1	Bridge Deck	2953	Rmt	2953	100%	
2	Test Pile					
2.1	Test Piles	5	No.	5	100%	
3	Permanent Bridge Works - Land/ Interchange Zone					
3.1	Piles	524	No.	336	64.1%	
3.2	Pile Caps	158	No.	59	37.3%	
3.3	Piers	228	No.	102	44.7%	
3.4	Pier Caps	215	No.	97	45.1%	
4	Permanent Bridge Works - Intertidal Zone					
4.1	Piles	312	No.	260	83.3%	
4.2	Pile Caps	76	No.	58	76.3%	
4.3	Piers	148	No.	106	71.6%	
4.4	Pier Caps	148	No.	99	66.9%	
5	Permanent Bridge Works - Marine Zone					
5.1	Piles	403	No.	399	99.0%	
5.2	Pile Caps	79	No.	56	70.9%	
5.3	Piers	160	No.	58	36.3%	
5.4	Pier Caps	160	No.	52	32.5%	
6	Permanent Bridge Works - Total					
6.1	Piles	1239	No.	998	80.5%	
6.2	Pile Caps	313	No.	173	55.3%	
6.3	Piers	536	No.	266	49.8%	
6.4	Pier Caps	523	No.	248	47.4%	
7	Precast Segments					
7.1	Segment Casting	6713	No.	1729	25.8%	
7.2	Segment Erection	446	Spans	47	10.5%	
8	OSD Structural Steel					
8.1	Fabrication	4666	Rmt	2289	49.1%	
8.2	Erection	4666	Rmt	0	0%	

Package-2 Physical Progress till 31st March 2021

S. No	Activity	Total Scope	Unit	Cumulative Achieved Works	% of Work done Against the Total Scope	Remarks
1	Temporary Access Bridge					
1.1	Bridge Deck	2682	Rmt	2682	100%	
2	Test Pile					
2.1	Test Piles	2	No.	2	100%	
3	Permanent Bridge Works - Land/ Interchange Zone					
3.1	Open Foundation	113	No.	102	90.2%	
3.3	Piers	119	No.	72	60.5%	
3.3	Pier Caps	104	No.	27	25.9%	
3.4	Portal Beams- Land	6	No.	4	66.7%	
3.5	Pier Head Segments -Land	42	No.	10	23.8%	
4	Permanent Bridge Works - Intertidal & CRZ Zone					
4.1	Piles	290	No.	288	99.3%	
4.2	Pile Caps	72	No.	72	100%	
4.3	Piers	72	No.	72	100%	
4.4	Pier Caps	18	No.	12	66.7%	
4.5	Pier Head Segments	54	No.	18	33.3%	
5	Permanent Bridge Works - Marine Zone					
5.1	Piles	514	No.	402	78.2%	
5.2	Pile Caps	120	No.	67	55.8%	
5.3	Piers	120	No.	13	10.8%	
5.4	Pier Caps	48	No.	0	0%	
5.5	Pier Head Segments	72	No.	0	0%	
6	Permanent Bridge Works - Total					
6.1	Open Foundation	113	No.	102	90.2%	
6.2	Piles	804	No.	690	85.8%	
6.3	Pile Caps	192	No.	139	72.4%	
6.4	Piers	311	No.	157	50.4%	
6.5	Pier Caps	170	No.	39	22.9%	
6.6	Portal Beams	6	No.	4	66.7%	
6.7	Pier Head Segments	168	No.	28	16.6%	
7	Precast Segments					
7.1	Segment Casting	3142	No.	576	18.33%	
7.2	Segment Erection	208	Spans	6	2.88%	
8	OSD Structural Steel					
8.1	Fabrication	34726	MT	26,698	76.88%	
8.2	Erection	34726	MT	0	0%	

Package-3 Physical Progress till 31st March 2021

S. No	Activity	Total Scope	Unit	Cumulative Achieved Works	% of Work done Against the Total Scope	Remarks
1	Permanent Bridge Works					
1.1	Open Foundations	195	No.	173	88.7%	
1.2	Piers	195	No.	155	79.4%	
1.3	Pier Caps	187	No.	115	61.5%	
1.4	Segment Casting	750	No.	410	54.6%	
1.5	Segment Erection	53	Span	4	7.5%	
1.6	Cast in-situ Slab	114	Span	11	9.6%	

Package-4 (ITS) Progress till 31st March 2021

1. Preparation of Bid Documents for the Package-4 - ITS (Intelligent Transport System) is in progress.
2. As recommended by the GC, JICA accorded concurrence for Single Stage Bidding (without Pre-Qualification) on 9th October 2020 and asked to submit draft Bid Document for review and approval.
3. The GC submitted first draft Bid Document to the Employer on 2nd November 2020 for review.
4. After reviewing the draft, MMRDA issued the observations on 29th December 2020 for further correction & amendments, etc. The GC is in the process of preparing the revised draft Bid Document.

Please refer **Attachment 9 - Site Progress Photos** showing the development of the project.

Health & Safety and Environment (HSE)

The HSE Plans have been submitted by the respective construction agencies for the Packages which are being monitored by the GC on a regular basis.

Package-1 Safety Report

Sr. No	Description	From January to March 2021	Cumulative
1	Total Man Hours Since Inception	51,42,876	26251274
2	Number of Man-Hours (Accident-Free Man-Hours)	51,42,876	7131060
3	Number of Man-Days	6,42,859	3281407
4	Number of Reportable Fatal Accidents	0	2
5	Number of Non-Fatal Accidents	0	2
6	Number of Near Miss Incidents	8	82
7	Number of First Aid Cases	39	180
8	Number of Dangerous Occurrences	0	1
9	Number of Reportable Sick Cases	0	0
10	Number of Man-Hours Lost	0	96600
11	Number of Man-Days Lost	0	12072
12	Number of Reportable Accidents per 100,000 Man-Hours Worked	0	4
13	Number of Inspections done for Offices & Sites	527	2190
14	Number of Training/ Induction done for Offices & Sites	322	876
15	Daily Average Manpower (Including all Workmen & Staff) for the Month	7,536	19355
16	Details of Safety Committee meetings	3	29
17	No. of toolbox talks	22,064	64142
18	No. of critical excavations.	11	35
19	Pre-employment Medical check-up	3,561	24736
20	No. of Safety Walk down	24	172
21	No. of Safety Inductions completed	3,561	24736

Package-2 Safety Report

Sr. No	Description	From January to March 2021	Cumulative
1	Total Man Hours Since Inception	23,69,752	12343703
2	Number of Man-Hours (Accident-Free Man-Hours)	23,69,752	5876268
3	Number of Man-Days	2,15,442	1123502
4	Number of Reportable Fatal Accidents	0	0
5	Number of Non-Fatal Accidents	0	3
6	Number of Near Miss Incidents	38	117
7	Number of First Aid Cases	19	109
8	Number of Dangerous Occurrences	0	9
9	Number of Reportable Sick Cases	0	1
10	Number of Man-Hours Lost	0	924
11	Number of Man-Days Lost	0	97
12	Number of Reportable Accidents per 100,000 Man-Hours Worked	0	3
13	Number of Inspections done for Offices & Sites	76	848
14	Number of Training/ Induction done for Offices & Sites	80	580
15	Daily Average Manpower (Including all Workmen & Staff) for the Month	8,518	1074
16	Details of Safety Committee meetings	3	33
17	No. of toolbox talks	1,070	5522
18	No. of critical excavations.	0	0
19	Pre-employment Medical check-up	1,245	10752
20	No. of Safety Walk down	11	107
21	No. of Safety Inductions completed	1,262	11011

Package-3 Safety Report

Sr. No	Description	From January to March 2021	Cumulative
1	Total Man Hours Since Inception	5,85,695	2679147
2	Number of Man-Hours (Accident-Free Man-Hours)	5,78,798	578798
3	Number of Man-Days	73,212	334893
4	Number of Reportable Fatal Accidents	0	0
5	Number of Non-Fatal Accidents	1	2
6	Number of Near Miss Incidents	0	12
7	Number of First Aid Cases	8	69
8	Number of Dangerous Occurrences	0	0
9	Number of Reportable Sick Cases	0	0
10	Number of Man-Hours Lost	1,424	1632
11	Number of Man-Days Lost	178	204
12	Number of Reportable Accidents per 100,000 Man-Hours Worked	1	0.07
13	Number of Inspections done for Offices & Sites	45	315
14	Number of Training/ Induction done for Offices & Sites	16	171
15	Daily Average Manpower (Including all Workmen & Staff) for the Month	1,773	8131
16	Details of Safety Committee meetings	3	29
17	No. of toolbox talks	400	4460
18	No. of critical excavations.	0	3
19	Pre-employment Medical check-up	685	5124
20	No. of Safety Walk down	12	109
21	No. of Safety Inductions completed	685	5124

3.0 BENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS)

3.1 Operational and Physical Condition

(This section will be developed when the operational plan is available)

Facilities	Description of condition	Problems, its Background and Remedial Action Plan
(P/R and PCR)	(P/R and PCR)	(P/R and PCR)

3.2 Precautions (Measures To Be Adopted/ Points Which Require Special Attention)

Original Issues and Countermeasure(s)	Actual Issues and Countermeasure(s)
<p>3.2.1 General Issues</p> <p>1. Toll Arrangement/ Toll Rate Fixed toll rate as per the type of vehicle will be levied for the road users after the completion of the Project. An appropriate tolling policy/ rates will be finalized in consultation with the state government prior to the completion of Civil works.</p> <p>2. Operation and Maintenance MMRDA proposes to appoint separate agencies for Operation & Maintenance of the bridge and for Toll Management System. Both the agencies for O & M and Toll Management System may be appointed through open tendering process. Overall monitoring of the two agencies would be done by MMRDA in house through a separate cell which could be constituted for the purpose. MMRDA has confirmed to allocate adequate budget for engaging the Contractors.</p>	<p>(P/R and PCR)</p> <p>Appropriate Tolling Policy/ Rates will be finalized by December 2021.</p> <p>Single Operation and Maintenance Contractor will be appointed by December 2021.</p>
<p>3.2.2 Environmental and Social Consideration</p> <p>a. CRZ Clearance</p> <p>i. Supplemental EIA has been approved by MMRDA and disclosed on the website of JICA. Supplemental EIA report has been disclosed also on the website of MMRDA.</p> <p>ii. Furthermore, renewed CRZ Clearance has been obtained in January 2016.</p> <p>iii. In accordance with the conditions for</p>	<p>(P/R and PCR)</p> <ul style="list-style-type: none"> • MMRDA has disclosed Supplemental EIA & SIA on MMRDA website. • The renewed CRZ clearance was granted on 25/1/2016 from MoEF&CC and the approval conditions have been imposed on the Contractors as the Employer’s requirements. MMRDA has actively monitored the compliances of the approval conditions and maintains throughout the construction phase. • MMRDA appointed Mangroves & Marine

<p>CRZ Clearance, appropriate measures shall be taken, and necessary budget shall be secured by MMRDA.</p>	<p>Biodiversity Foundation for bird monitoring and implementation of Flamingos and bird monitoring program for the MTHL project during the construction as well as the long-term monitoring after the construction.</p> <ul style="list-style-type: none"> • Rs 91.42 Crore has been transferred to Mangroves & Marine Biodiversity Foundation, Mumbai for the development & conservation of mangrove area and its afforestation. Such funds will be managed by the Mangrove Foundation of Maharashtra State. • As per the renewed CRZ clearance condition, IIT Mumbai has been appointed for the DPR study to develop a Mahul creek Effluent Treatment Plant (ETP). Rs 4.98 Crore was secured for IIT services. The Draft DPR has been reviewed and approved.
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b. Required Permits

The Permits to be obtained by MMRDA/ Contractors and the present status is given in the following Table.

Table 3.2.2 Present Status of some Important Permits

Clearance Required	Approving Authority	Responsible Organization	Obtained by when	Remark /Status
Mangrove Cutting	Hon. Bombay High Court	MMRDA/ Contractor	Approval received from Hon. Bombay High Court on 28 th November 2016	Mangrove cutting operation was completed with full compliance and as of now, no further follow up work is required.
Tree Cutting /Transplantation	Respective Tree Authorities	Contractor for respective Packages	-	<p>Pkg-1: Tree Cutting/ Transplantation permission from the Garden Dept., MCGM obtained on 24th December 2020.</p> <p>Pkg-2: Tree Cutting/ Transplantation permission obtained & completed.</p> <p>Pkg-3: Forest Department has issued a concurrence on 19/05/2019. CIDCO's permission for Tree Cutting/ Transplantation obtained on 25th November 2019.</p>
Consent to Establish	Maharashtra Pollution Control Board	Contractor for respective Packages	Pkg-1-18.07.2018 Pkg-2-16.08.2018 Pkg-3-29.05.2019	

3.3 Environmental and Social Impacts

Major environmental and social impacts have occurred during project implementation (e.g. involuntary resettlement, poverty reduction, impacts on the natural environment).

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
<p>1. Establishment of Effective Environmental and Social Cell in PIU</p> <p>MMRDA confirmed that Social Development Cell (2 Officers), Land Cell (3 Officers), and Environmental Cell (2 Officers) had been set up.</p>	<p>Cell is established by MMRDA (Annexure III, Organization chart)</p>
<p>2. Rehabilitation and Land Acquisition Issues</p> <p>a. Affected Area and Population</p> <p>Due to the Project, 1282 non-titleholders will be involuntary resettled, and 108.09 ha of land will be handed over by CIDCO.</p>	<p>Sewri: Involuntary resettlement in Sewri section has been further validated by Social Development Cell of MMRDA. Out of 297 Project Affected Households (PAHs) have given consents as follows:</p> <ul style="list-style-type: none"> • 164 PAHs Kanjurmarg for residential • 25 PAHs Kanjurmarg for commercial • 7 PAHs (Satsangi Plot) Kanjurmarg for Commercial • 1 PAHs (commercial to residential) for Bhakti Park • 100 PAHs HDIL Kurla for residential <p>Navi Mumbai: CIDCO has been finalizing the land acquisition closely monitored by Land Cell of MMRDA. Except private land and forest, CIDCO has possessed all required land of 108.09 ha. Out of the 108.09 ha, 106.345 ha has been handed over by CIDCO to MMRDA. CIDCO is going to acquire the balance 1.745 ha with the help of Collector, Raigad.</p>
<p>b. Entitlement Policy</p> <p>MMRDA prepared the entitlement matrix for resettlement of non-title holders in Sewri, which meets the Resettlement and Rehabilitation Policy for Mumbai Urban Transportation Project (1997, amended in 2000) and JICA guidelines for Environmental and social considerations (2010)</p>	<p>There have been no changes during the enforcement. As per the Attachment 2-5 of JICA MoD, MMRDA has committed to enforce the agreed/ approved policy.</p>

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
("Guidelines") (Attachment 2-5).	
<p>c. Compensation to Project affected Fishermen</p> <p>Detailed baseline survey will be undertaken by MMRDA in order to identify fishermen who are affected by the Project. Based on the result of the baseline survey, MMRDA will compensate them in accordance with compensation policy prior to the construction. Monitoring will be conducted by MMRDA with assistance of the Consultant to gasp the exact impact during construction and operation phase.</p>	<p>Updated Attachments 2-8 and 2-10 are enclosed in the report.</p>
<p>d. Implementation Schedule</p> <p>The Implementation schedule for land acquisition, resettlement and rehabilitation is attached as per Attachment 2-10.</p>	<p>Updated Attachment 2-10 is enclosed in the report.</p>
<p>e. Grievance Redressal Mechanism</p> <p>Grievance Redressal Committee ("GRC") set under MMRDA will deal with grievances raised by PAPs in Sewri and fishermen to be affected by the Project. Any grievances raised by PAPs whose land is acquired by CIDCO shall be resolved by CIDCO.</p>	<p>Sewri: FLGRC (Field Level Grievance Redressal Committee) and SLGRC (Senior Level Grievance Redressal Committee) were set as per the RAP and in operation. Compensation Committee has been constituted to address the issues of Compensation to Lease Holders at Sewri.</p> <p>Fishermen: GRC for resolving grievances of the fisherfolk was set up as per the compensation policy and is in operation.</p>
<p>f. Internal Monitoring</p> <p>Internal Monitoring of the Resettlement Action Plan (RAP) implementation will be conducted by MMRDA in accordance with the RAP with necessary assistance of the consultant. RAP Internal Monitoring Form (Attachment 2-8) will be submitted to JICA on a quarterly basis as a part of PSR during the RAP implementation.</p>	<p>Internal Monitoring updates are mentioned in Attachment 2-8.</p>

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
<p>g. Qualitative Independent Evaluation</p> <p>An Independent Evaluation Agency will be hired by MMRDA for evaluation of RAP implementation. An external evaluation report will be submitted to MMRDA at mid-term and end-term. MMRDA would submit the evaluation report to JICA in a timely manner.</p>	<p>Updated Attachment 2-10 is enclosed in the report.</p>
<p>h. RAP Implementation Budget</p> <p>The amount of estimated resettlement and compensation budget is Rs.906.26 Cr MMRDA informed to the JICA Mission that RAP implementation cost would be borne by MMRDA and ensured sufficient and timely allocation of funds for smooth implementation.</p>	<p>As updated in MOD dated 03/09/2019 for MTHL-II, the base cost Budget towards RAP Implementation is updated as Rs 1129.3 Cr.</p>
<p>i. Environmental Management Plan (“EMP”)</p> <p>The mitigation measures against air pollution, waste, noise, and water pollution etc. shall be taken during construction and operation phase. Mitigation measures such as installation of noise barrier, appropriate waste management, etc. have been prepared by MMRDA. The mitigation measures are listed in the EMP matrix. (Attachment 2-1). During the detailed design stage, MMRDA, with assistance of the Consultant, will update the EMP, as necessary.</p>	<p>EMP will be updated, if required, in due course of construction activities/progress.</p>
<p>j. Environmental Monitoring Plan (“EMoP”)</p> <p>MMRDA takes overall responsibility for implementation of EMoP. During construction, environmental monitoring will be carried out by contractors under supervision by Construction Supervision consultant. The result shall be reported to the JICA India Office on a quarterly basis</p>	<p>Environmental Monitoring Plan with the package wise budgeted cost is reported in Attachment 2-3.</p> <p>Environmental Monitoring Results during the construction phase are reported in Attachment 2-4.</p>

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
<p>as a part of Progress Status Report (PSR) by filling in the Reporting Form of Environmental Monitoring Result. (Attachment 2-4). After completion of the construction, EMoP shall be implemented by MMRDA, and the results shall be submitted to the JICA India Office semi-annually until two years after complementation of construction. The required amount of estimated environmental monitoring budget is borne by MMRDA.</p>	
<p>k. Long Term Bird Monitoring</p> <p>MMRDA committed to conduct the long-term monitoring of birds and its habitat in Sewri mud-flats with the assistance of hired bird expert. During the long-term monitoring, MMRDA will share information and receive advices from external experts including the one from NGOs and civil society.</p>	<ul style="list-style-type: none"> • MMRDA has entrusted the work of bird monitoring and implementation of Flamingos and birds related mitigation measures & bird monitoring program to Mangrove and Marine Biodiversity Foundation. • Rs. 31.92 Crore deposited to Mangrove foundation, Mumbai for periodical disbursement to BNHS.

3.4 Qualitative and Quantitative Data of Monitoring Indicators

Operation and Effect Indicator EIRR and/ or FIRR

Supporting data for Computing EIRR and/ or FIRR

Indicators	Original (Year 2015)	Target (Year 2024) 2 Years After Commercial Operation
Average Annual Daily Traffic (PCU/ day)	-	47,400
Daily Average Travel Time (min) * 1	61 min	15.8 min
Number of Users (Persons/ year) * 2	-	46,077,504
Cargo Volume (tons/ year) * 3	-	13,511,759

*1 Section on Sewri – Chirle

*2 Assumptions: average passengers of car and taxi (2.6 persons), bus (37.2 persons) based on JICA study. Number of passengers of LCV, HCV and MAV is assumed as 1 person each.

*3 Assumptions: the maximum capacity of respective vehicle (LCV: 1 ton, HCV and MAV: 15 tons) is used for estimation.

EIRR	<p>Original: 15.4% Cost: Project cost (excluding Price Escalation, Tax and Duties and Administration cost) O&M cost, Land Acquisition Benefit: Travel Time cost and Vehicle Operation cost Project Life: 32 Years</p>	<p>Actual: (PCR) _____% Cost: Benefit: Project Life: Attachment(s): Supporting data for computing EIRR</p>
FIRR	<p>Original: 1.5% Cost: Project Cost, O&M cost, Land Acquisition cost Benefit: Toll Revenue Project Life: 32 Years</p>	<p>Actual: (PCR) _____%</p>

3.5 Monitoring Plan for the indicators

Monitoring Methods, Section(s)/ department(s) in charge of monitoring, frequency, the term and so forth are given below:

Original: (P/M and PCR)

Monitoring Organization

PIU shall be In-Charge of Monitoring activities for the Project.

Submission of QPR and PCR

The timely submission of the following documents is required by MMRDA.

- a. **Quarterly Progress Report (QPR):** The progress report for the Project should be submitted by MMRDA to JICA on quarterly basis, not later than 30 days after the concerned quarter, in the form of Project Status Report (PSR) attached hereto as per **Annex I**; Updated status land Acquisition, milestone achieved with respect to Action Plan with Timetable, the monitoring form for environmental and social consideration should also be appended to the PSR. In addition, MMRDA shall also forward the Monthly & Quarterly Progress Reports (including S-Curve Chart) prepared by the Consultant to JICA India Office on regular basis till project completion.
- b. **Project Completion Report (PCR):** A project completion report should be submitted by MMRDA to JICA promptly, but in any event not later than six months after completion of the Project, in the form of Project Status Report (PSR) attached hereto as per **Annex I**.

Actual: (P/R and PCR)

Monitoring Organization

PIU for MTHL has been established for monitoring the Project.

Submission of QPR and PCR

This QPR No. 16 is submitted for the period of 1st January to 31st March 2021.

3.6 Achievement of the Project Objective

(PCR)

4.0 OPERATION AND MAINTENANCE (O&M) (SUSTAINABILITY)

4.1 O&M and Management

- Organization Chart of O&M
- Operational and maintenance system (structure and the number, qualification and skill of staff or other conditions necessary to maintain the outputs and benefits of the project soundly, such as manuals, facilities and equipment for maintenance, and spare part stocks etc.)

Original: (P/M)

Operation & Maintenance, Toll Management and ITS

MMRDA proposes to engage two separate agencies for O&M and Toll Management System. Though MMRDA will not directly carry out O&M, the overall monitoring over the O&M agency will be the responsibility of MMRDA. O&M Budget will be allocated by MMRDA. O&M and increase in toll rate will be done in accordance with the NHAI's manuals such as "NHAI Works manuals".

Actual: (PCR)

4.2 O&M Cost and Budget

- The actual annual O&M cost for the duration of the project, as well as the annual O&M budget.

(PCR) This will be reported when the outcome of the above work study is available.

5.0 EVALUATION

5.1 JICA and Borrower / Executing Agency performance

JICA:

(PCR)

Borrower/ Executing Agency:

(PCR)

5.2 Overall Evaluation

Please describe your evaluation on the overall outcome of the project.

(PCR)

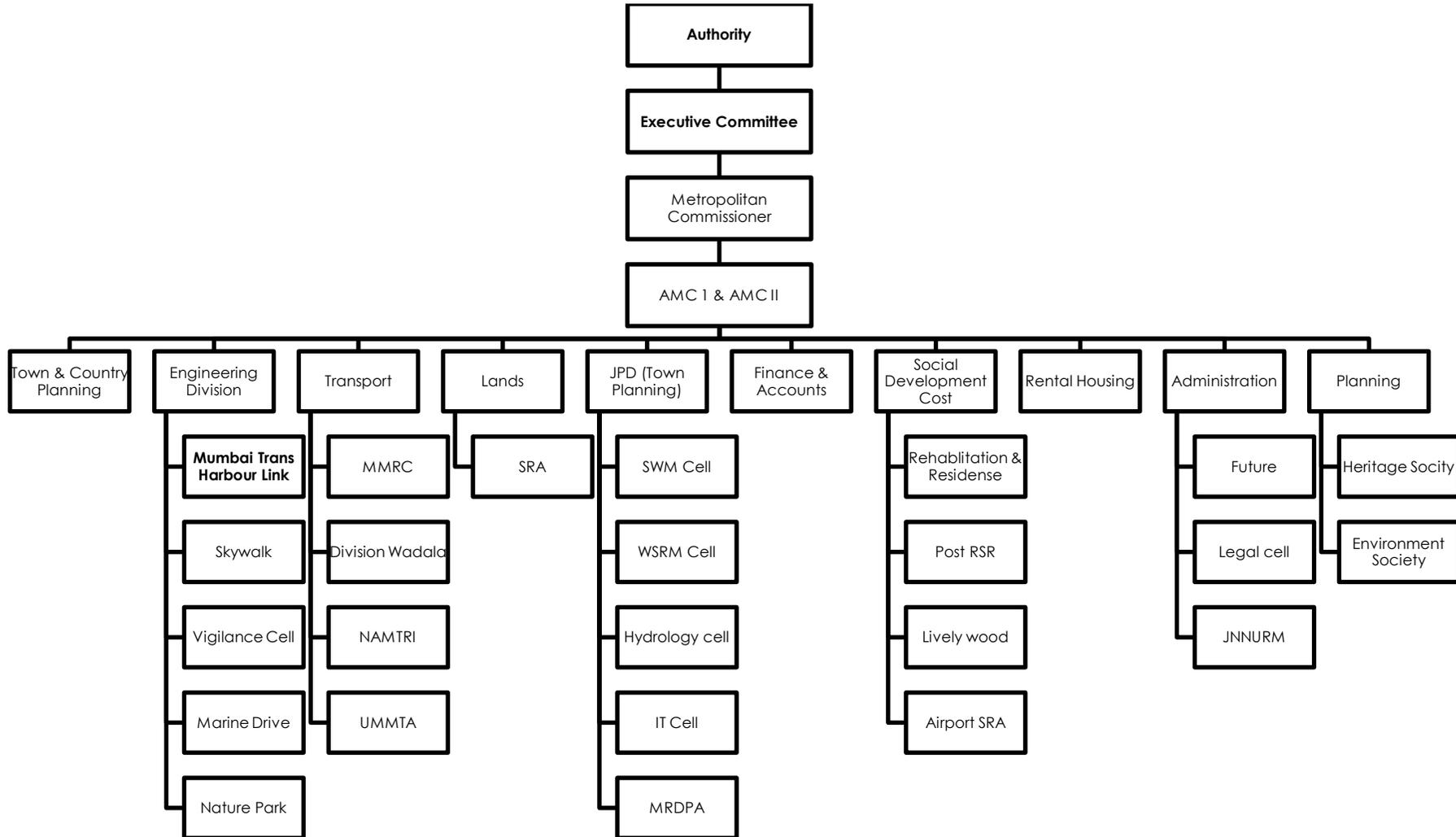
5.3 Lessons Learnt and Recommendations

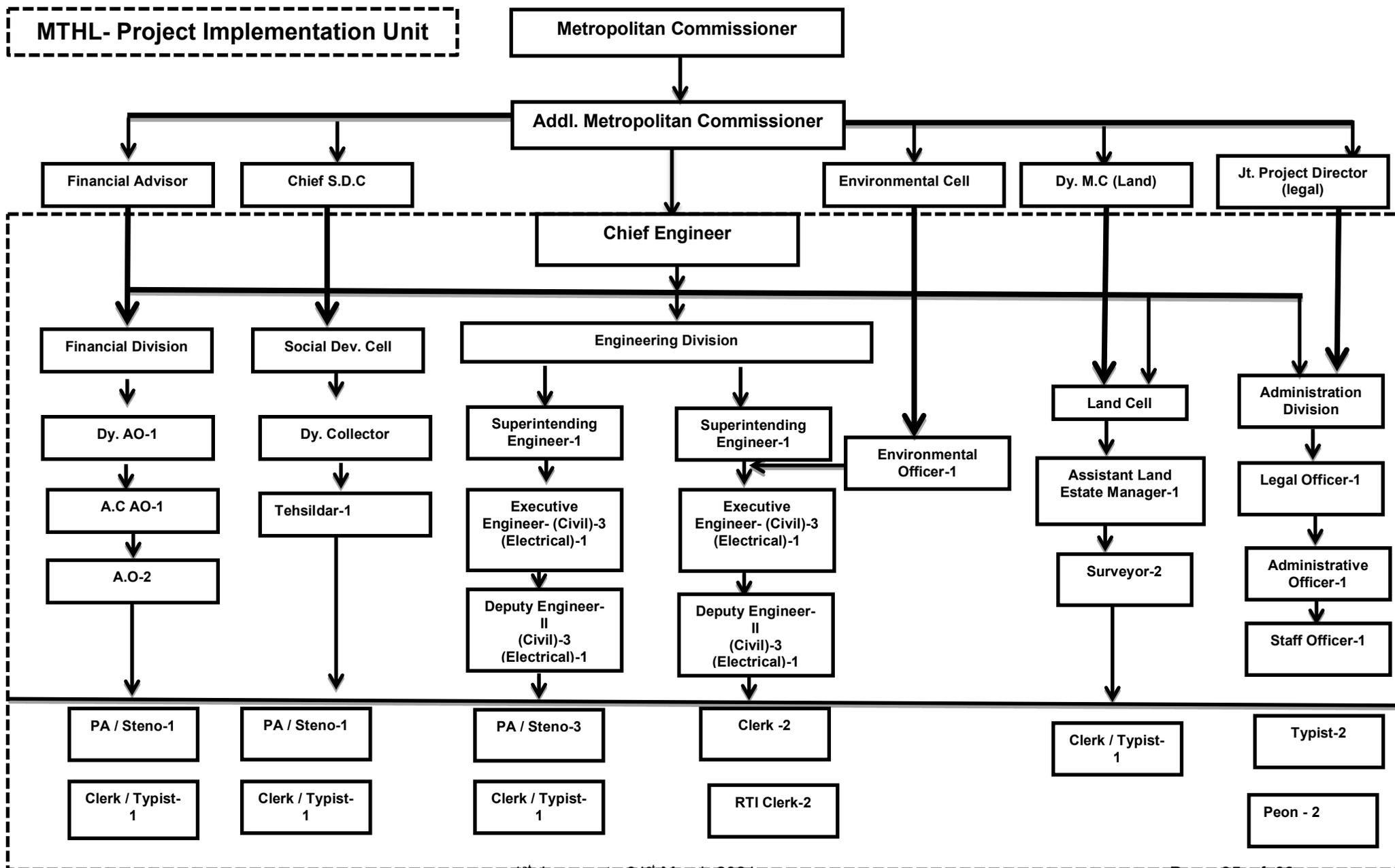
Please raise any lessons learned from the project experience, which might be valuable for the future JICA assistance or similar type of projects, as well as any recommendations, which might be beneficial for better realization of the project effect, impact and assurance of sustainability.

(PCR)

Attachment 1- MMRDA & PIU Organization Chart

MMRDA Organization chart





Attachment 2- Environmental & Social Impacts Attachments

- Attachment 2-3 – Envi. Monitoring Plan with Package wise Estimated Cost**
- Attachment 2-4 – Environmental Monitoring Result Reporting Form**
- Attachment 2-6 – MTHL Land Acquisition Status**
- Attachment 2-8 – RAP Internal Monitoring Form**
- Attachment 2-10 – Schedule of the RAP Implementation**

Environmental Monitoring Plan with Packagewise Estimated Cost

Category	No.	Impacted Item on JICA Guidelines	Parameter	Method	Location	Frequency a year	Cost (INR)	Cost Pkg.1 (INR)	Cost Pkg.2 (INR)	Cost Pkg.3 (INR)	Total Cost (INR)	Standard Central Pollution Control Board (CPCB) - Ministry of Environment & Forest (MoEF)	Remarks
Pollution	1	Air pollution	SO ₂ , NO ₂ , PM ₁₀ , PM _{2.5} , O ₃ , CO, (6 Items)	National Ambient Air Quality Standards, 2009	1. Sewri & Sewri bay area for package I	Fortnightly at all locations except 2 locations each near Batching plants	1,800,000	15,000,000	1,800,000	742,500	17,542,500	National Ambient Air Quality Standards (NAAQS) by Central Pollution Control Board (CPCB)	P1 contractor team is conducting Ambient air quality monitoring with reference to National Standards and clause 1.2 of Employer's requirement.
					2. Nhava temporary bridge & casting yard in Gavhan for package II	4 Times / Year						(Standard for 24hrs: Industrial and Residential/ Ecological Sensitive area)	P 2 contractor Monitoring plan has been designed as per EIA of 2015
					3. Gavhan & Chirle for package III	Fortnightly only for 3 months (jan-2019 to Mar-2019). Then quarterly monitoring as per MOEF and CPCB norms						SO ₂ : 80 / 80µg/m ³	P3 contractor team is conducting Ambient air quality monitoring with reference to National Standards and clause 1.2 of Employer's requirement.
												NO ₂ : 80 / 80µg/m ³	P 1 received Consents CTE & CTO from MPCB and they are following MPCB frequency in addition to frequency set by Environment Expert from GC. The NAAQ standards are showing High rate as that is the usual procedure. The frequency of monitoring is set by us which varies for different parameters as either Statutory requirements or as required by us to ensure we have sufficient data in hands if there are additional claims for Compensation in C5 category. Summary : Although the contract conditions for all packages were same at the time of bidding. Later modifications suggested by GC were not accepted by P 2. P1 and P3 accepted the modifications and hence the difference. Second point is P 1 carrying out monitoring as per the obatiend CTE and CTO. Both other packages have applied for CTE but haven't obtained it yet. So we expect the monitoring frequency would change after obtaining CTE.
	2	Water pollution	pH, BOD, DO, Turbidity and O&G	IS / AWWA	1. Sewri & Sewri bay area for package I	Quarterly	810,000	2,400,000	810,000	0	3,210,000	Marine water quality Standards – Class SW-IV Harbour Waters (MPCB)	Water Pollution not applicable for Pkg. 3
					2. Nhava temporary bridge & casting yard in Gavhan for package II	4 Times / Year						pH : 6.5-9	
					3. Gavhan & Chirle for package III	Not applicable						DO: 3 mg/l Turbidity: 30 NTU BOD: 5 mg/l O & G: 10 mg/l	
	3	Waste	Volume of waste soil, cutting tree and domestic garbage	Volumetric	1. Sewri & Sewri bay area for package I	Daily	500,000	299,200,000	500,000	600,000	300,300,000		The cost of waste disposal for P1 includes C&D waste, Pile muck etc. from all areas like, interchange, intertidal and marine. The disposal location is at MCGM approved location Bhayandarpada, Thane.

Category	No.	Impacted Item on JICA Guidelines	Parameter	Method	Location	Frequency a year	Cost (INR)	Cost Pkg.1 (INR)	Cost Pkg.2 (INR)	Cost Pkg.3 (INR)	Total Cost (INR)	Standard Central Pollution Control Board (CPCB) - Ministry of Environment & Forest (MoEF)	Remarks
					2. Nhava temporary bridge & casting yard in Gavhan for package II	4 Times / Year						Municipal Solid Waste Management Rules, 2013 Generated waste shall be reused or disposed at designated site. Sites have been identified and the location for Pkg. 1 is at Bhayandar Pada in Thane. For Pkg. 2 & 3 is in Navi Mumbai at Pushpak Node near "Teen Taki Junction" along the Amar Marg.	P2 contractor has considered only Domestic garbage with respect to CIDCO. Other wastes are not considered. Construction wastes will be
				3. Gavhan & Chirle for package III	Once site clearing work/execution part of work start.								
	4 and 8	Soil Contamination/ sedimentation	Heavy Metals & Oil & Grease (5-10 items shall be selected from Soil pollution standards)	IS / Methods Manual Soil Testing in India by Department of Agriculture and Cooperation, January 2011	1. Sewri & Sewri bay area for package I 2. Nhava temporary bridge & casting yard in Gavhan for package II 3. Gavhan & Chirle for package III	1. Muck: 1 Time / Year 2. Sediments: 4 Times / Year *If any spillage/leakage take place from chemical, fuel storage area. *One time grab sample to be collected during Bridge Construction *Pre & Post Monsoon at Storage area only	150,000	1,500,000	150,000	100,000	1,750,000	Soil Pollution Standard in India (MOEF) · Cd: 0.01mg/l · Lead: 0.01mg/l · Chromium (VI): 0.05mg/l · Arsenic: 0.01mg/l · T-Mercury: 0.0005mg/l · Copper: 125mg/kg (some items shall be selected from totally 25 standards items)	
	5	Noise and vibration	Ambient and road side noise (dB(A) _{L_{eq}}) Vibration (dB L10 or mm/sec)	IS Standard	1. Sewri & Sewri bay area for package I 2. Nhava temporary bridge & casting yard in Gavhan for package II 3. Gavhan & Chirle for package III 1 Location Gavan area for package III	Fortnightly 2 Times / Year Fortnightly Half yearly	150,000 75,000	54,000 0	150,000 75,000	369,000 400,000	573,000 475,000	-Construction Noise; 85dB(A) -Ambient Noise Standards in India (dB (A) _{Leq}) 1.Industrial Area Day Time: 75 (6-22hr) Night Time: 70 (22-6hr) 2.Commercial Area: Day Time: 65 (6-22hr) Night Time: 55 (22-6hr) 3.Residential Area: Day Time: 55 (6-22hr) Night Time: 45 (22-6hr) 4.Silence Zone Day Time: 50 (6-22hr) Night Time: 40 (22-6hr) - Construction vibration 75dB -Vibration Standards roadside 1. Commercial /Industrial Area Day Time: 70 (7-20hr) Night Time: 65 (20-7hr) 2. Residential Area: Day Time: 65 (7-20hr) Night Time: 60 (20-7hr)	Not applicable for Pkg. 1
	9 and 10	Protected Area /Ecosystem	1. Monitoring of mudflat conditions including fauna-flora 2. Monitoring of Cutting Tree and replantation/ transplanting area 3. Monitoring of Mangrove Plantation area appointed by MoEF	Ocular inspection and quantitative survey Line-Point census and record number and appeared species	Along MTHL alignment and mangrove replant area for Package I Along MTHL alignment and mangrove replant area for package II Not applicable for Package III	Quarterly during the construction Period 4 Times / Year	6,500,000	7,200,000	6,500,000	0	13,700,000	Significant impacts are not caused by the project Note)	Not applicable for Pkg. 3

Category	No.	Impacted Item on JICA Guidelines	Parameter	Method	Location	Frequency a year	Cost (INR)	Cost Pkg.1 (INR)	Cost Pkg.2 (INR)	Cost Pkg.3 (INR)	Total Cost (INR)	Standard Central Pollution Control Board (CPCB) - Ministry of Environment & Forest (MoEF)	Remarks
Natural environment			4. Monitoring of sedimentation soil and ecological parameter (18 items on Supplemental EIA Table 6.1.15 for soil and 7 items such as 1) Net primary productivity, 2) Chlorophyll-a, 3) Phosphate, 4) Nitrate, 5) Nitrite, 6) Particulate Organic Carbon, 7) SiO ₂)	1-2: Mangrove density and community survey								Detailed monitoring plan will be setup during basic design stage Standard for Soil; Supplemental EIA Table 6.1.15 Standard for Ecological Parameter: · Net primary Productivity <1,500 mgC/m ³ /day at surface · Chlorophyll-a <4mg/m ³ · Phosphate: 0.1-90µg/l · Nitrate: 1.0-500µg/l · Nitrite: <125µg/l · Particulate Organic Carbon: 10-100mg/m ³ · SiO ₂ : 10-5,000µg/l	
				1-3: Benthos Survey									
				2-1: Cutting trees confirmation									
				3-1: Mangrove survey in the replanted area									
	11	Hydrology	Flooding situation	Flood level measurement during high precipitation periods	Not applicable for Package I		350,000	0	350,000	0	350,000	Project activities and structures does not cause flooding and impacts on tidal conditions	Not applicable for Pkg. 1 & 3
					2 Locations (CRZ at Sewri and Shivaji Nagar) for Package II	4 Times / Year							
					Not applicable for Package III								
	12	Topography and Geology	Conditions in embankment area	Visual survey about Stability of embankment	Not applicable for Package I		115,000	0	115,000	0	115,000	Embankment shall be stabilized without any landslide and cracks	Not applicable for Pkg. 1 & 3
					Interchange in Shivaji Nagar for Package II	4 Times / Year							
					Not applicable for Package								
Social environment	13	Local economy such as employment and livelihood			Affected area		As per Actuals						
	14	Local conflict of interests	Construction worker's township	Confirmation of workers list from contractor	2 Locations (camp site in Sewri and Shivaji Nagar) for Package II	2 Times / Year	125,000	0	125,000	0	125,000	Employment opportunity shall be provided fairly	
	15	Infectious diseases such as HIV/AIDS	Number of infected patient	Confirmation of health check list from contractor	2 Locations	4 times / year x 4.5 years	525,000	0	525,000	0	525,000	Infection disease rate shall not be caused by the project	
	16	Labour Environment	Construction worker's condition	Confirmation of safety devices and conditions via interviews	2 Location (camp site in Sewri and Shivaji Nagar) for Package II	2 times / year	500,000	0	500,000	0	500,000	"Building And Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996", "The building and other construction worker's welfare cess Act, 1996" and international standards such as "IFC Performance Standard 2 Labor and Working Conditions"	
Other	17	Accidents	Number of accidents	Confirmation of accidents list from local government and State Traffic Police Department	2 Locations (camp site in Sewri and Shivaji Nagar) for Package II	4 Times / Year	400,000	0	400,000	0	400,000	Any accidents are not caused by construction	
							8140500	325,354,000	12,000,000	2,211,500	339,565,500		

The Project for Construction of Mumbai Trans Harbour Link
Reporting Form of Environmental Monitoring during Construction

Attachment 2-4

Monitoring Period - January to March 2021

This form is prepared for reporting the monitoring results to JICA India Office. Only minimum required parameters are included in this form, and not all parameters in EMOp are covered.

1. Environmental Monitoring during Construction for 4.5 years

Area	No.	Item	Parameter	Location	Frequency a year	Item and Stanadard	Monitoring Result				Remark - reasons why the data is exceeding standard - counter measures when the data is exceeding				
							Location 1- Pkg 1	Location 2- Pkg 2	Location 3- Pkg 3	Location 4					
Pollution	1	Air pollution	SO ₂ , NO ₂ , PM ₁₀ , PM _{2.5}	1. Sewri & Sewri bay area for package I	Quarterly monitoring ia conducted at all locations.	National Ambient Air Quality Standards (NAAQS) (Standard for 24hrs: Industrial and Residential)	Sewri	Shivaji Nagar	Chirle						
				2. Nhava temporary bridge & casting yard in Gavhan for package II	4 Times / Year										
				3. Gavhan & Chirle for package III	From march -2019 onwards monitoring is conducted quarterly as per MOEF and CPCB norms										
					1. SO ₂ : 80µg/m ³							7	BDL	13	BDL- Below Detectable Limit
					2. NO ₂ : 80µg/m ³							35	27	26	
					3. PM ₁₀ : 100µg/m ³							173	69	81	
			4. PM _{2.5} : 60µg/m ³	56	31	40									
				5.CO:02mg/m3	1.4	1.3	0.72								
				6.VOCs	1.30		3.6								
	2	Water pollution	pH, BOD, DO, Turbidity and O&G	1. Sewri & Sewri bay area for package I	Quarterly	Marine water quality Standards – Class SW-IV Harbour Waters (MPCB)	Zone I	Zone II	Zone III/ Package-03						
				2. Nhava temporary bridge & casting yard in Gavhan for package II	4 Times / Year										
				3. Gavhan & Chirle for package III	Not applicable										
					1. pH : 6.5-9							7.5	7.2	Not applicable	
					2. DO: 3 mg/l							5	6.2	Not applicable	
					3. Turbidity: 30 NTU							11.5	13.6	Not applicable	
			4. BOD: 5 mg/l	3.7	BDL	Not applicable									
			5. O & G: 10 mg/l	BDL		Not applicable									
				6.COD	20	16	Not applicable								
	3	Waste	Volume of waste soil, cutting tree and domestic garbage	1. Sewri & Sewri bay area for package I	Daily	Municipal Soil Waste Management Rules, 2013	Sewri Camp Site	Shivaji Nagar Camp Site	Chirle Camp Site						
				2. Nhava temporary bridge & casting yard in Gavhan for package II	4 Times / Year										
				3. Gavhan & Chirle for package III	Once site clearing work/execution part of work start.										
					Generated waste soil (t) total							16745 m3	App. 4000 CuM Collected in jumbo bags and Disposed off in EBB Location.	NA	
					Generated cutting treel (ha) total							192 Tons weight of cut wood		In Jan-2021 3 Trees are cut (total 309 trees are cut till dated)	
		Generated domestic waste (t/month) total	5.1 T for the quarter	3.5 T/quarter. It is disposed through CIDCO daily.	1.743 T for the quarter	2.018 M3									
			Confirmation of adequate disposal (visualt survey)												
4	Soil Contamination/sedimentation	Heavy Metals & Oil & Grease	1. Sewri & Sewri bay area for package I	1. Muck: 1 Time / Year 2. Sediments: 4 Times / Year	Soil Pollution Standard in India (MOEF)	Sediment sample at Sewri	Muck Testing Done on september 2020 and Reports submitted to GC	Not applicable		Package-III (Kindly check the letter No.Ref No. Mthl/ P3/L&T/GC/LT/HSE-2226/2020 dated on 12.12.2020)					
			2. Nhava temporary bridge & casting yard in Gavhan for package II	*If any spillage/ leakage take place from chemical, fuel storage area. *One time grab sample to be collected during Bridge Construction *Pre & Post Monsoon at Storage area only											
			3. Gavhan & Chirle for package III												
											1. Cadmium: 0.01mg/l	0.15	BDL		
											2. total cyanide : not detected		<0.005		
											3. organic phosphorus: not detected		10.5		
											4. lead: 0.01mg/l	0.77	0.13	Not applicable for package-3	
											5. chromium (VI): 0.05mg/l	0.4	BDL		
											6. arsenic: 0.01mg/l or 15mg/kg (agri-land soil)	<0.01	BDL		
											7. total mercury: 0.005mg/l		BDL		
											8. alkyl mercury: not detected				
											9. PCBs: not detected		BDL		
											10. copper: 125mg/kg (only paddy field soil)	142			
											11. dichloromethane: 0.02mg/l		BDL		
											12. carbon tetrachloride: 0.002mg/l		BDL		
											13. 1,2-dichloroethane: 0.004mg/l		BDL		
											14. 1,1-dichloroethylene: 0.02mg/l		BDL		
											15. cis-1,2-dichloroethylene: 0.04mg/l		BDL		
	16. 1,1,1-trichloroethane: 1mg/l		BDL												
	17. 1,1,2-trichloroethane: 0.006 mg/l		BDL												
		18. trichloroethylene: 0.03mg/l		BDL											

Regarding soil contamination/sedimentation, some items shall be selected from the total 25 standards items during the Detailed Design. Only the selected items shall be reported to JICA, and the rest of items shall be deleted from this form.

The Project for Construction of Mumbai Trans Harbour Link
Reporting Form of Environmental Monitoring during Construction

Attachment 2-4

Attachment 2-4

This form is prepared for reporting the monitoring results to JICA India Office. Only minimum required parameters are included in this form, and not all parameters in EMOF are covered.

Monitoring Period - January to March 2021

1. Environmental Monitoring during Construction for 4.5 years

Natural Environment	6	Protected Area	3. Monitoring of Mangrove Plantation area appointed by MoEF 4. Monitoring of sedimentation soil and ecological parameter (25 items on EIA main text Table 6.1.15 for soil and 7 items such as 1) Net primary productivity, 2) Chlorophyll-a, 3) Phosphate, 4) Nitrate, 5) Nitrite, 6) Particulate Organic Carbon, 7) SiO2)			(1) Number of species of mangrove					
						(2) Density of mangrove (xx trees/10m x 10m)					
						1-3: Benthos Survey					
						(1) Number of species and quantity by species	533 Species and 314 No/m2				
						2-1: Cutting tree confirmation	Total 309 trees have been till March 21.	All the tree cutting and mangrove cutting had been carried out as per approval received from GC and MMRDA and job was completed in 2018 itself and after that no trees and mangroves have been cut till date	Approved By Both CIDCO and Forest Dept (both Alibaug and Uran (regional office))		
						(1) Number of cutting tree and species					
						3-1: Mangrove survey in the replant area			Nil		
						(1) Number of species of mangrove					
						(2) Density of mangrove (xx trees/10m x 10m)					
						4. Ecological Parameter					
						(1) Net primary Productivity : <1,500 mgC/m3/day at surface	880				
						(2) Chlorophyll-a: <4mg/m3	4.7				
						(3) Phosphate: 0.1-90µg/l	283				
						(4) Nitrate: 1.0-500µg/l	765				
						(5) Nitrite: <125µg/l					
(6) Particulate Organic Carbon: 10-100mg/m ³											
(7) SiO2: 10-5,000µg/l	4801										
7	Hydrology	Flooding situation	Not applicable for Package I	4 Times / Year	Criteria for evaluation Project activities and structures does not cause flooding and impacts on tidal conditions	Sewri	Shivaji Nagar				
					Monitoring of flooding situation	No Flooding	No flooding	No Flooding			
					2 Locations (CRZ at Sewri and Shivaji Nagar) for Package II						
			Not applicable for Package III								
8	Topography and Geology	Conditions in embankment area	2 Locations (1. Embankment of Inter Change in Shivaji Nagar and 2 Cutting area at toll gate in Chirle)	4 times / year x 4.5 years	Criteria for evaluation Embankment shall be stabilized without any landslide and cracks	Shivaji Nagar	Shivaji Nagar Camp Site	Chirle			
					Monitoring of embankment	done					
9	Local conflict of interests	Construction worker's township	2 Locations (major camp site in Sewri and Shivaji Nagar)	4 times / year x 4.5 years	Criteria for evaluation Employment opportunity shall be provided fairly	Sewri Camp Site	Shivaji Nagar Camp Site	Chirle			
					Number of hired workers by community	418 in Jan 21, 443 in Feb 21 and 434 in March 21	125-150				
10	Infectious diseases such as HIV/AIDS	Number of infected patient	2 Locations (major camp site in Sewri and Shivaji Nagar)	4 times / year x 4.5 years	Criteria for evaluation Infection disease rate shall not be caused by the project	Sewri Camp Site	Shivaji Nagar Camp Site				
					Confirmation of health check record and inspect project site	During this quarter 124 no. COVID 19 positive cases reported who have been treated and discharged in this quarter	Health Checks carried out but HIV/AIDS parameter is not there.	Regular Health check up is carried out by site Doctor. HIV-AIDS awareness program has conducted for workman by an NGO called			
11	Labour Environment	Construction worker's cond	2 Locations (major camp site in Sewri and Shivaji Nagar)	2 times / year x 4.5 years	Criteria for evaluation "Building And Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996", "The building and other construction worker's welfare cess Act, 1996" and international standards such as "IFC Performance Standard 2 Labor and Working Conditions"	Sewri Camp Site	Shivaji Nagar Camp Site	Gavan Camp site			
					Site Visual Inspection	All provisions as per BOCW have been provided. *2350 nos. of Food meals (lunch & Dinner) provided to workmen from BOCW, * Face mask provided to workmen, * Calcium & Vitamins tablets provided to workmen to boost up the immunity of workmen, * Sanitizers & Liquids soaps also provides to different location for workmen. *Daily temperature Check of workmen at site and colony is conducted. Daily sanitisation at work site, of working equipment and the buses used for communitine is conducted	Conforming with BOCW Act 1996	Conforming with BOCW Act 1996			
Other	12	Accident	Number of accidents	2 Locations (major camp site in Sewri and Shivaji Nagar)	4 times / year x 4.5 years	Criteria for evaluation Any accidents are not caused by construction	Sewri Camp Site	Shivaji Nagar Camp Site	Chirle/Other area		
						Number of recorded accident	NIL	NIL	Nil		

MTHL Land Acquisition Status (Attachment 2-6):

Total land required on Navi Mumbai side- 108.09 ha

Land in possession in MMRDA – 106.5 ha

Balance land acquisition- 1.59 ha

Note: The acquisition of 1.59 ha is in progress by CIDCO. The balance acquisition would be likely completed by the end of June 2021.

Land Required in ha		Land Acquired in ha		Balance Land to be acquired in ha	Anticipated date for Land Acquisition	Payment status (Payment made to Land Owners by CIDCO)	Remarks
Govt.	Private	Govt.	Private	Private*			
98.75	9.34	98.75	7.595	1.745	30-06-2021	--	The payment status to the land owners are awaited from CIDCO. The same would be communicated to JICA on receipt of the same.
Total		98.75	7.595	1.745			
108.09							

***Portions of Private Land**

Sr. No.	Name of Village	Area (Hectare)	Acquired	Non-acquired
1	Gavhan	0.15	0.15	0.00
2	Jasai	8.72	7.306	1.414
3	Chirle	0.47	0.139	0.331
Total Area		9.34	7.595	1.745

RAP Implementation Monitoring Form For Mumbai Trans Harbour Link Project (MTHL)

1. General Information

a. RAP Implementation Monitoring Results:	Progress Status Report (PSR) of 1 st quarter of 2021
b. Date of Preparing This form	30-03-2021
c. Person Preparing This form	Name: Robin Sham Position: Engineer and Team Leader Department/Organizations: General Consultants

2. Scale of Impact

2.1 Project Affected Households (PAHs) and Project Affected Persons (PAPs) for Sewri side

Total Project Affected Households (PAHs)	297 Hhs	Titleholders: 0 Hhs Non-titleholders: 297 Hhs
Total PAPs	1,282 persons*	Titleholders: 0 persons Non-titleholders: 1,282 persons*
PAHs who need relocation (as residents)	231 Hhs	Titleholders: 0 persons Non-titleholders: 231 (1,088 persons) *
PAPs who do not need relocation (as residents)	0 persons	Titleholders: 0 persons Non-titleholders: 0 persons
Commercial PAPs who need relocation	66 (194 persons) *	Titleholders: 0 persons Non-titleholders: 66 (194 persons) *
Commercial PAPs who do not need relocation	0 persons	Titleholders: 0 persons Non-titleholders: 0 persons

* - Figures for number of persons do not include no. of family members of few additional PAPs.

2.2 Structures

Structures	Residential: 231 Commercial: 65 Residential + Commercial: 1 (counted in Commercial) Community: 9 (Religious Properties 6, Public Toilets 3) Government: 16 (MbPT Structures 9, Occupants of Leased Plots 6 & Police Chowki 1) Total: 322
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2.3 Fishery

Categories of Fisher-folks	Identified Number		Total	Remarks
	Mumbai side	Navi Mumbai side		
C1: Fishing stakes and nets in RoW (250 m.)	178	54	232	Funds for 230 nos C1 category fishermen are transferred to Commissioner of Fisheries on 17.03.2020 for payment to the beneficiaries. 2. The list of balance 2 Nos. of C1 category fishermen are in process of fund transfer to

QPR No. 16 (Jan-Mar 2021) Attachment 2-8

				Commissioner of Fisheries.
C2: Fishing Stakes and Nets within 500 m. of RoW (Southern side)	296	567	863	1. Funds for 496 nos C2 category fishermen are transferred to Commissioner of Fisheries in the 2017-18. 2. The list of balance 367 Nos. of C2 category fishermen are under verification of validity.
C3: Hand Pickers	1498	4051	5549	Funds for 4141 nos of C3 category fishermen are already transferred to Commissioner of Fisheries and balance 1408 Nos. of C3 category fishermen are in process of fund transfer to Commissioner of Fisheries.
C4: Commercial and Artisanal Fisher-folks (Loss of Time and Increased Operating Costs)	Will be observed during construction period	Will be observed during construction period	---	Nil
C5: Fisher-folks with Loss due to Turbidity	Will be observed during construction period	Will be observed during construction period	----	Nil
C6: Fisher-folks with Damages due to Accidents	Will be observed during construction period	Will be observed during construction period	----	Nil

2.4 Land Acquisition / Transfer

Location	Land Required in Ha.		Land Acquired in Ha.		Balance Land to be acquired in Ha	Remarks
	Govt.	Private	Govt.	Private		
Sewri	10.089	0	10.089	0	0	
Navi Mumbai	98.75	9.34	98.75	7.595	1.745	
Total	118.179		108.839	7.595	1.745	

3. Monitoring Results

3.1 Sewri Section

Activity	Indicator	Total Target	Progress till Last Quarter	Progress during reporting Quarter	Cumulative Progress till Current Quarter	Cumulative Achievement of Total Target (%)	Remarks, If Any
Resettlement	No. of Residential PAHs provided with Allotment Letters of Alternate Tenements	231	141	0	141	62%	
	No. of Residential PAHs given possession of Alternate Tenements	231	139	0	139	60%	
	No. of Commercial/R+C PAPs provided with Allotment Letters of Alternate Shops/Tenements	66	21	0	21	30%	
	No. of Commercial R+C PAPs given possession of Alternate Shops/Tenements	66	20	0	20	26%	
	No. of Occupants of MbPT Leased Plots provided Compensation	6	5	0	5	84%	
	No. of Religious properties Relocated / Removed	6	1	0	1	17%	Jivdani Mandir allotment letter given
	No. of Other Community properties Relocated / Removed	4	0	0	0	0%	
	No. of Structures in possession of MbPT Dismantled / Cleared	9	0	0	0	0%	
	No. of PAHs/PAPs provided Shifting Charges / Arrangement	297	0	0	0	0%	
Rehabilitation	No. of PAHs / PAPs identified for Livelihood Support in Post Resettlement Assessment						
	No. of PAHs / PAPs provided Livelihood Support under Program-I (to be identified)						
	No. of PAHs / PAPs provided Livelihood Support under Program-II (to be identified)						
	No. of PAHs / PAPs provided Livelihood Support under Program-III (to be identified)						

QPR No. 16 (Jan-Mar 2021) Attachment 2-8

Activity	Indicator	Total Target	Progress till Last Quarter	Progress during reporting Quarter	Cumulative Progress till Current Quarter	Cumulative Achievement of Total Target (%)	Remarks, If Any
	No. of new enterprises started						
Grievance Redress	No. of Grievances Received by FLGRC	4					
	No. of Grievances Disposed by FLGRC	1					
	No. of Grievances Received by SLGRC	0					
	No. of Grievances Disposed by SLGRC	0					
Post Resettlement Assistance	No. of CHSs Registration helped						
	No. of CHSs provided Tenements for Social Amenities						
	No. of CHSs' Maintenance Fund Invested						
	No. of CHSs' Office Bearers provided training						

SUMMARY OF FISHER FOLKS OF MTHL PROJECT (Influence Zone of 23 villages) Up to 31-03-2021						
Sr. No.	Village Name	Total number of forms Received	Total approved eligible family units			
			C1	C2	C3	Total
1	Bamandongri	273	1	1	28	30
2	Belapur	110	0	5	15	20
3	Belpada	1185	0	7	478	485
4	Diwale	455	12	201	52	265
5	Ganeshpuri	276	0	37	35	72
6	Gavhan	2162	0	14	1317	1331
7	Jasai	926	0	0	18	18
8	Jawale	51	0	1	0	1
9	Kombadbhuja	413	1	23	134	158
10	Kopar	994	2	5	228	235
11	Karave	178	0	44	67	111
12	Mahul	1062	129	76	604	809
13	Moha	475	22	24	135	181
14	Mora	818	0	102	375	477
15	Morave	539	14	21	88	123
16	Nhava	1646	0	32	307	339
17	Sarsole	266	0	30	83	113
18	Sewri	305	0	1	72	73
19	Shelghar	241	0	0	15	15
20	Shivajinagar	202	1	4	61	66
21	Trombay	1207	49	219	822	1090
22	Ulwe	218	1	3	14	18
23	Uran & Hanuman Koliwada	683	0	11	600	611
24	Vahal	411	0	2	1	3
Total		15096	232	863	5549	6644
Total applications						15096
Duplicate/Repeated Application						1651
Net Applications						13445
Approved applications						6644

Grievance Redressal Committee (GRC) for Fisher-folk Compensation

No. of Cases referred to GRC	No. of Cases		No. of Cases Rejected	No. of Cases under Consideration
	Allowed	Compensation Paid		
Nil	Nil	Nil	Nil	Nil

Implementation Schedule for Fisher-folks Compensation & Land Acquisition in Navi Mumbai**A. Implementation Schedule for Fisher-folks Compensation: -**

Sr. No.	Task Designation	Approving authority	Start Date	Completion Date
1	Approval of fisher-folks' compensation Policy	Fisher-folks Compensation Committee (FCC)	08-10-2015	23-12-2015
2	Approval by MMRDA	MMRDA	10-12-2015	23-12-2015
3	Submission to JICA	MMRDA	--	04-01-2016
4	Detailed list of PAP and compensation plan	1. Detailed list of Fisher-folk PAP up to list 1 (1165 Nos) & 2 (1399 Nos) are finalized by the Fisheries Department. 2. From 2018, FEVC committee is the approval authority of PAF and approved C1- 232 Nos. C2 - 367 Nos and C3- 3481 Nos are approved.	23-12-2015	Up to 31.03.2021 1. Total up to date applications scrutinized = 13445 Nos. 2. Eligible = 6644 Nos. 3. Rejected = 6801 Nos.
	Validation of compensation plan	Fisher-folks Compensation Committee (FCC)	23-12-2015	1. Approval to the Fisher-folk PAP list obtained from Fisheries Department for Fisherfolk from Sewri, Mahul & Trombay (Mumbai side) – 12th September 2017 and 20th November 2018 for C-2 & C3 Category only.

Sr. No.	Task Designation	Approving authority	Start Date	Completion Date
			23-12-2015	2. Approval to the Fisher-folk PAP list obtained from Fisheries Department for Fisherfolk of Navi Mumbai of C2 & C3 on 25th April 2018. 3. Validation of compensation is in progress and would be completed in phases.
6	Approval of compensation plan	FCC	23-11-2015	28-12-2017
7	Approval by MMRDA	MMRDA	23-11-2015	09-03-2021

B. Implementation Schedule for Land Acquisition in Navi Mumbai: -

Land Required in Ha.		Land Acquired in Ha.		Balance Land to be acquired in Ha	Anticipated date for Land Acquisition	Payment status (Payment made to Landowners by CIDCO)	Remarks
Govt.	Private	Govt.	Private	Private			
98.75	9.34	98.75	7.595	1.745	30-06-2021	--	1. CIDCO is the land acquisition authority for land acquisition for Navi Mumbai 2. MMRDA has paid an amount of INR 59.16 Cr to CIDCO as per their demand. 3. The payment status to the landowners is awaited from CIDCO. The same would be communicated to JICA on receipt of the same.
Total	108.09	106.345		1.745			

Implementation Schedule for SIA (Sewri Section)

Task No.	Task Designation	Start Date	Completion / Forecast Date
1	Preparation of Final SIA		
1.1	MMRDA Approval	October 2015	January 2016
1.2	JICA Approval	November 2015	January 2016
1.3	Posting of project Information on MMRDA		
1.4	Translation and disclosure of entitlement policy in local language to all PAP's	December 2015	January 2016
2	LARP Implementation		
2.1	Grievance redress mechanism established	August 2016	August 2016
2.2	Staff deployment SIA implementation	June 2016	Dec. 2021
2.3	Staff Deployment Public Relation	June 2016	June 2016
2.4	Hiring of Independent Evaluation Agency	November 2018	November 2020
2.5	Preparation and issue of allotment letters to PAPs	June 2018	May 2021
2.6	Notice of PAPs for shifting (Sewri Section)	December 2018	May 2021
2.7	Allotment of dwelling units to PAP's	September 2016	May 2021
2.8	Shifting of PAPs to resettlement Colony	December 2018	May 2021
2.9	Transfer of compensation / allowance/ assistance to PAPs	December 2018	Dec. 2021
2.10	Creation of Community Revolving fund (within 3 months post handing over)	April 2019	Dec. 2021
2.11	Assessment of economic rehabilitation needs by individual household (within 6 months after handing over)	September 2019	June 2021
2.12	Registration of Co-operative housing societies transfer of maintenance funds. (6 months period)	December 2019	June 2021
2.13	Signing of Civil Contract		January 2018
2.14	Notice of Civil works to proceed		March 2018
3	Monitoring & Evaluation		
3.1	Internal Monitoring- Monthly/ Quarterly	June 2016	July 2020
3.2	Independent Evaluation Mid-term and End term evaluation		
	Mid Term	May 2019	June 2020
	End Term	November 2019	June 2021

*Expected to receive the Occupation Certificate of Kurla Bhandari R&R site from SRA Department by May 2021.

Attachment 3- JICA's Concurrence Status

Status of JICA'S Concurrence

Sl. No.	Brief description	Procurement procedure	Bid Cost		JICA'S Concurrence on					
			Local Currency (Cr Rs.)	Total (Cr Rs)	PQ Documents	PQ Evaluation	Bid Documents	Technical Evaluation	Financial Evaluation	Contract
1.	Package-1 (CH 0+000 km to CH10+380 km)	ICB with PQ (2P)	7637.30	7637.30	JICA's Concurrence - 9th May 2016	JICA's Concurrence - 22nd Dec 2016	JICA's Concurrence - 4th Jan 2017	JICA's Concurrence - 12th Sep 2017	JICA's Concurrence - 12th Oct 2017	JICA's Concurrence - 15th Feb 2018
2.	Package-2 (CH 10+380 km to CH18+187 km)	ICB with PQ (2P)	5612.61	5612.61	JICA's Concurrence - 9th May 2016	JICA's Concurrence - 22nd Dec 2016	JICA's Concurrence - 4th Jan 2017	JICA's Concurrence - 12th Sep 2017	JICA's Concurrence - 12th Oct 2017	JICA's Concurrence - 15th Feb 2018
3.	Package-3 (CH18+187 to CH21+800)	ICB with PQ (2P)	1013.79	1013.79	JICA's Concurrence - 9th May 2016	JICA's Concurrence - 4th Jan 2017	JICA's Concurrence - 4th Jan 2017	JICA's Concurrence - 15th Sep 2017	JICA's Concurrence - 12th Oct 2017	JICA's Concurrence - 15th Feb 2018
4.	Package-4 Intelligent Transport System	ICB with PQ (2P)	181.49	181.49	JICA's Concurrence - 23rd August 2019	-	-	-	-	-

Attachment 4- Project Procurement and Financial Status till 31st March 2021

PROJECT PROCUREMENT AND FINANCIAL STATUS TILL 31st MARCH 2021

Type	Contract	Awarded or Estimated Value (in Rs. Crore)	Current Status	Contractors	Project Commencement Date	Stipulated Project Completion Date	% of Overall Project completion (Design/ Procurement/ Construction) till 25 th March 2021	% of Overall Financial Progress (Including Mobilization Advance) till 31 st March 2020
CIVIL	Package-1 (CH 0+000 km to CH 10+380 km)	7637.30	Awarded	L&T-IHI Consortium	March 2018	Sep 2022	48.55%	50.76%
	Package-2 (CH 10+380 km to CH18+187 km)	5612.61	Awarded	DAEWOO-TPL JV	March 2018	Sep 2022	40.30%	52.18%
	Package-3 (CH18+187 to CH21+800)	1013.79	Awarded	L&T	March 2018	Sep 2021	53.33%	63.80%
ITS	Package-4 Intelligent Transport System (ITS)	181.49 (Estimated)	Design Stage	--	June 2021 (Estimated)	Sep 2022	NA	NA

Attachment 5- S-Curve for Cumulative Planned Vs Actual Amount in JPY Million

**Attachment 6- Package-1's Construction Programme
Updated as on 25th March 2021**

**Attachment 7- Package-2's Construction Programme
Updated as on 25th March 2021**

**Attachment 8- Package-3's Construction Programme
Updated as on 25th March 2021**

Activity ID	Activity Name	Original Duration	BL1 Duration	BL1 Start	BL1 Finish	Start	Finish	Activity % Complete	Performance % Complete	Schedule % Complete	Gantt Chart (F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A)											
MTHL Pkg 3_Construction Schedule Mar'21																						
Procurement of Mumbai Trans Harbour Link Project (Packag																						
t	Commencement Date (CD)	0	0			23-Mar-18A		100%	100%	0%	Commencement Date (CD), 23-Mar-18A											
Physical Milestones																						
KD1001	KD1 [Construction programme, completion of	0	0	18-Sep-18	18-Sep-1	25-Mar-21	25-Mar-21	0%	0%	100%												
KD1008	KD 8 [Final completion & handing over]	0	0	21-Sep-21	21-Sep-2	07-Sep-23	07-Sep-23	0%	0%	0%												
KD1007	KD 7 [Substantial completion of kerb/traffic sig	0	0	24-Jul-21	24-Jul-21	30-Jul-23	30-Jul-23	0%	0%	0%												
KD1006	KD 6 [Substantial completion superstructure (F	0	0	20-Mar-21	20-Mar-21	15-Apr-23	15-Apr-23	0%	0%	100%												
KD1005	KD 5 [Substantial completion of pile caps (if a]	0	0	19-Sep-20	19-Sep-2	30-Apr-22	30-Apr-22	0%	0%	100%												
KD1004	KD 4 [Substantial completion of foundation, pi	0	0	21-Mar-20	21-Mar-20	30-Apr-22	30-Apr-22	0%	0%	100%												
KD1003	KD 3 [NOC for Good for construction drawing f	0	0	15-Jun-19	15-Jun-19	30-Apr-21	30-Apr-21	0%	0%	100%												
KD1002	KD 2 [NOC for technical design doc & drawing	0	0	17-Dec-18	17-Dec-1	25-Mar-21	25-Mar-21	0%	0%	100%												
Financial Milestone																						
Interface Milestone																						
Document Submittals																						
Employer's Obligation / Land Handover																						
ROW 75 Ha [CD+180 days]											25-Mar-21, Employer's Obligation / Land Handover											
Casting Yard 9.16 Ha [CD+120 days]											25-Mar-21, ROW 75 Ha [CD+180 days]											
E Ob1003	Unobstructed access to casting yard with fenc	0	0	20-Jul-18	20-Jul-18	20-Dec-18A	21-Dec-18A	100%	100%	100%	Unobstructed access to casting yard with fence [4.08 Ha]											
Employer Office (Sch 01- General Item)																						
Construction of Employer office											26-Oct-21, Employer Office (Sch 01- General Item)											
Facility											26-Oct-21, Facility											
Survey & Geotechnical Investigation Works																						
Topographical Survey											26-Oct-21, Facility											
Geotechnical Investigation work											Investigation Works											
Design Works																						
Design Basis Report											29-Apr-21, Design Works											
Preliminary Design											Nov-20 A, Preliminary Design											
Geotechnical Interpretative Report Submission & GC Approval (NONO)											Report Submission & GC Approval (NONO)											
Plan & Profile Alignment											Nov-20 A, Plan & Profile Alignment											
Superstructure Design											29-Apr-21, Superstructure Design											
Foundation & Pier											Dec-20 A, Foundation & Pier											
Abutment & Foundation											Abutment & Foundation											
Pier Cap											25-Mar-21, Pier Cap											
Bearings & Drainage											29-Apr-21, Bearings & Drainage											
Pavement Design											29-Apr-21, Bearings & Drainage											
Procurement Works																						
For Main Bridge											25-Jan-21 A, Launching Girder with factory testing.....(Using Underslung)											
Launching Girder with factory testing.....(Using Underslung)											25-Jan-21 A, Launching Girder with factory testing.....(Using Underslung)											
Segments Moulds											19-Apr-22, Steel Structure											
Steel Structure											04-Jun-21, Steel for superstructure											
Steel for superstructure											26-Mar-21, Formwork & staging requirement											
Formwork & staging requirement											25-Mar-23, t											
Bearings, Expansion joint, Water proofing with factory test											28-Feb-23, Fo											
Painting with testing											28-Feb-23, As											
For Road Works																						
Earthwork / Cut & Fill											27-Apr-22, Earthwork / Cut & Fill											
Asphalt											28-Feb-23, As											
Imported Procurement																						
Prestressed strand											09-Oct-21, Imported Procurement											
Prestressed strand											09-Oct-21, Prestressed strand											
Co-ordinated Fabrication & Manufacturing Works																						
Permanent Works fabrication											28-Jun-22, Co-ordinated Fabrication											
Permanent Works Assembly											24-May-22, Permanent Works fabricati											
Permanent Works Assembly											28-Jun-22, Permanent Works Asser											

█ Actual Level of Effort
 █ Remaining Work
 █ Critical Remaining Work
 ◆ Milestone
 ── summary

Activity ID	Activity Name	Original Duration	BL1 Duration	BL1 Start	BL1 Finish	Start	Finish	Activity % Complete	Performance % Complete	Schedule % Complete	Gantt Chart (F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A)											
Construction Works																						
	Preconstruction Activity	759	271	20-Jul-18	01-Jul-19	26-Sep-18A	27-Nov-21	72.92%	100%	97.83%	27-Nov-21, Preconstruction Activity											
	Sub Structures (Open Foundation, Pier, Pier Cap)	877	539	08-Dec-18	07-Nov-21	30-Sep-18A	24-Feb-22	76.07%	100%		24-Feb-22, Sub Structures (Open Foundation, Pier, Pier Cap)											
	Main Carriageway	788	320	08-Dec-18	24-Jan-20	05-Dec-18A	24-Nov-21	74.26%	100%		24-Nov-21, Main Carriageway											
	RHS-Section 1 (CH 18+187 to CH 18+930)	684	139	08-Dec-18	23-May-1	10-Dec-18A	22-Jun-21	62.6%	100%		22-Jun-21, RHS-Section 1 (CH 18+187 to CH 18+930)											
	LHS-Section 1 (CH 18+187 to CH 18+930)	617	138	10-Dec-18	23-May-1	05-Dec-18A	14-Jun-21	62.6%	100%		14-Jun-21, LHS-Section 1 (CH 18+187 to CH 18+930)											
	RHS-Section 2 (CH 20+170 to CH 21+811)	578	253	27-Feb-19	24-Jan-20	10-Mar-19A	15-Oct-21	78.46%	100%		15-Oct-21, RHS-Section 2 (CH 20+170 to CH 21+811)											
	LHS-Section 2 (CH 20+170 to CH 21+811)	687	287	17-Jan-19	24-Jan-20	13-Apr-19A	24-Nov-21	81.72%	100%		24-Nov-21, LHS-Section 2 (CH 20+170 to CH 21+811)											
	SH54 Ramps	341	289	27-Feb-19	06-Mar-20	25-Apr-19A	23-Jun-21	93.4%	100%		23-Jun-21, SH54 Ramps											
	RHS- JNPT to Mumbai	285	255	09-Apr-19	06-Mar-20	05-Jun-19A	23-Jun-21	88.09%	100%		23-Jun-21, RHS- JNPT to Mumbai											
	LHS- Mumbai to Panvel	337	287	27-Feb-19	04-Mar-20	25-Apr-19A	29-May-21	97.96%	100%		29-May-21, LHS- Mumbai to Panvel											
	Chirle NH 4B Ramps	395	350	20-May-19	05-Sep-2	30-Sep-18A	24-Feb-22	71.28%	100%		24-Feb-22, Chirle NH 4B Ramps											
	RHS- JNPT to Mumbai	363	293	28-Jun-19	20-Jul-20	07-May-19A	11-Jan-22	76%	100%		11-Jan-22, RHS- JNPT to Mumbai											
	LHS- Mumbai to Panvel	395	350	20-May-19	05-Sep-2	30-Sep-18A	24-Feb-22	66.37%	100%		24-Feb-22, LHS- Mumbai to Panvel											
	Chirle NH 4B Loops	214	336	09-Sep-19	07-Nov-21	21-Aug-19A	25-Dec-21	83.52%	100%		25-Dec-21, Chirle NH 4B Loops											
	LHS- Mumbai to JNPT	177	302	19-Oct-19	07-Nov-21	16-Oct-19A	25-Dec-21	73.81%	100%		25-Dec-21, LHS- Mumbai to JNPT											
	RHS- Panvel to Mumbai	214	331	09-Sep-19	02-Nov-21	21-Aug-19A	22-Sep-21	91.84%	100%		22-Sep-21, RHS- Panvel to Mumbai											
	Super Structures	849	601	27-Feb-19	12-Apr-21	11-Sep-19A	11-Feb-23	23.08%	99.78%		11-Feb-23, Super Structures											
	Segments Precasting	623	447	30-Mar-19	09-Nov-21	11-Sep-19A	24-May-22	34.38%	100%		24-May-22, Segments Precasting											
	BED 1 [RHS]-MP328 to MP337 & MP337 to MA2- 10 Spans	331	153	30-Mar-19	29-Oct-19	01-Jan-20A	11-May-21 A	100%	100%		11-May-21 A, BED 1 [RHS]-MP328 to MP337 & MP337 to MA2- 10 Spans											
	BED 1 [RHS]-LP6 TO LP19- 13 Spans	406	189	20-Sep-19	30-Apr-20	11-Sep-19A	18-Jan-22	15.38%	100%		18-Jan-22, BED 1 [RHS]-LP6 TO LP19- 13 Spans											
	BED 1 [RHS]-LP26 to LP35- 9 spans	141	141	24-Mar-20	05-Oct-20	11-Dec-21	24-May-22	0%	100%		24-May-22, BED 1 [RHS]-LP26 to LP35- 9 spans											
	BED 2 [LHS]- MP328 to MP337 & MP337 to MA2- 10 Spans	301	153	06-May-19	03-Dec-21	02-Jan-20A	09-Feb-21 A	100%	100%		09-Feb-21 A, BED 2 [LHS]- MP328 to MP337 & MP337 to MA2- 10 Spans											
	BED 2 [LHS]-LP6 TO LP19- 13 Spans	189	189	26-Oct-19	05-Jun-20	25-Mar-21	07-Dec-21	0%	100%		07-Dec-21, BED 2 [LHS]-LP6 TO LP19- 13 Spans											
	BED 2 [LHS]-LP26 to LP35- 9 spans	141	141	28-Apr-20	09-Nov-21	29-Oct-21	12-Apr-22	0%	100%		12-Apr-22, BED 2 [LHS]-LP26 to LP35- 9 spans											
	Segments Erection	451	405	26-Aug-19	20-Jan-21	06-Mar-20A	08-Feb-23	7.81%	100%		08-Feb-23, Segments Erection											
	Launching Girder 1 [RHS]-Section 1	156	100	26-Aug-19	25-Dec-21	06-Mar-20A	01-Mar-22	20%	100%		01-Mar-22, Launching Girder 1 [RHS]-Section 1											
	LG shifting & Erection at Section 2-1	25	25	26-Dec-19	24-Jan-20	02-Mar-22	30-Mar-22	0%	100%		30-Mar-22, LG shifting & Erection at Section 2-1											
	Launching Girder 1 [RHS]-Section 2	130	130	25-Jan-20	26-Jun-20	31-Mar-22	29-Aug-22	0%	100%		29-Aug-22, Launching Girder 1 [RHS]-Section 2											
	LG shifting & Erection at Section 3	25	25	27-Jun-20	19-Aug-2	30-Aug-22	27-Sep-22	0%	100%		27-Sep-22, LG shifting & Erection at Section 3											
	Launching Girder 1 [RHS]-Section 3	90	90	21-Aug-20	09-Dec-21	28-Sep-22	10-Jan-23	0%	100%		10-Jan-23, Launching Girder 1 [RHS]-Section 3											
	LG 1 Dismantling	25	25	10-Dec-20	08-Jan-21	11-Jan-23	08-Feb-23	0%	100%		08-Feb-23, LG 1 Dismantling											
	Launching Girder 2 [LHS]-Section 1	120	100	11-Sep-19	07-Jan-20	25-Dec-20A	25-Mar-22	30%	100%		25-Mar-22, Launching Girder 2 [LHS]-Section 1											
	LG shifting & Erection at Section 2	25	25	08-Jan-20	05-Feb-20	02-Mar-22	30-Mar-22	0%	100%		30-Mar-22, LG shifting & Erection at Section 2											
	Launching Girder 2 [LHS]-Section 2	130	130	06-Feb-20	15-Jul-20	31-Mar-22	29-Aug-22	0%	100%		29-Aug-22, Launching Girder 2 [LHS]-Section 2											
	LG shifting & Erection at Section 3-1	25	25	17-Jul-20	05-Sep-2	30-Aug-22	27-Sep-22	0%	100%		27-Sep-22, LG shifting & Erection at Section 3-1											
	Launching Girder 2 [LHS]-Section 3	90	90	07-Sep-20	21-Dec-21	28-Sep-22	10-Jan-23	0%	100%		10-Jan-23, Launching Girder 2 [LHS]-Section 3											
	LG 2 Dismantling	25	25	22-Dec-20	20-Jan-21	11-Jan-23	08-Feb-23	0%	100%		08-Feb-23, LG 2 Dismantling											
	Cast In Situ	559	601	27-Feb-19	12-Apr-21	25-Sep-20A	11-Feb-23	12.56%	99.33%		11-Feb-23, Cast In Situ											
	Main Bridge	417	472	27-Feb-19	07-Nov-21	25-Sep-20A	30-Aug-22	13.36%	100%		30-Aug-22, Main Bridge											
	SH54 Ramps	326	211	12-Feb-20	17-Nov-21	25-Mar-21	16-May-22	0%	100%		16-May-22, SH54 Ramps											
	Chirle Interchange	374	221	24-Jun-20	12-Apr-21	20-Oct-20A	11-Feb-23	17.5%	97.46%		11-Feb-23, Chirle Interchange											
	Steel Structure	390	419	10-May-19	17-Nov-21	16-Sep-21	16-Dec-22	0%	100%		16-Dec-22, Steel Structure											
	Erection	300	329	10-May-19	06-Jul-20	16-Sep-21	02-Sep-22	0%	100%		02-Sep-22, Erection											
	Deck Surfacing	90	90	08-Jul-20	17-Nov-21	03-Sep-22	16-Dec-22	0%	100%		16-Dec-22, Deck Surfacing											
	Bearings & Expansion Joints	293	201	03-Aug-20	12-Apr-21	26-Nov-20A	02-Jun-23	3.71%	95.99%		02-Jun-23, Bearings & Expansion Joints											
	Precast Segments	265	180	03-Aug-20	17-Mar-21	04-Nov-21 A	01-May-23	1.33%	100%		01-May-23, Precast Segments											
	CIS	264	183	07-Sep-20	12-Apr-21	26-Nov-20A	02-Jun-23	9.17%	91.67%		02-Jun-23, CIS											
	Steel Structure	142	142	12-Oct-20	30-Mar-21	12-Dec-22	26-May-23	0%	96.36%		26-May-23, Steel Structure											
	Bridge Ancillaries & Miscellaneous Item	450	274	12-Aug-20	23-Jul-21	21-Feb-22	29-Jul-23	0%	40.31%		29-Jul-23, Bridge Ancillaries & Miscellaneous Item											
	Crash Barrier & Safety fence	401	197	12-Aug-20	12-Apr-21	21-Feb-22	02-Jun-23	0%	99.26%		02-Jun-23, Crash Barrier & Safety fence											
	Painting works	142	133	28-Jan-21	07-Jul-21	15-Feb-23	29-Jul-23	0%	36.25%		29-Jul-23, Painting works											
	kerb, traffic Sign & pavement marking	77	111	03-Mar-21	23-Jul-21	15-Apr-23	14-Jul-23	0%	21.11%		14-Jul-23, kerb, traffic Sign & pavement marking											
	Restoration of removed structure and As-built doc & maintenance manual	61	74	08-Apr-21	07-Jul-21	20-May-23	29-Jul-23	0%	0%		29-Jul-23, Restoration of removed structure and As-built doc & maintenance manual											
	RE Wall	568	557	27-Feb-19	18-Feb-21	06-May-21	04-Apr-23	0%	100%		04-Apr-23, RE Wall											
	Raft	232	264	27-Feb-19	06-Feb-20	06-May-21	07-Mar-22	0%	100%		07-Mar-22, Raft											

█ Actual Level of Effort
 █ Remaining Work
 █ Critical Remaining Work
 ◆ Milestone
 ── summary

Activity ID	Activity Name	Original Duration	BL1 Duration	BL1 Start	BL1 Finish	Start	Finish	Activity % Complete	Performance % Complete	Schedule % Complete	Gantt Chart (F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A)											
	Main Carriageway	60	60	27-Feb-19	09-May-1	06-May-21	28-Jul-21	0%	0%	100%	28-Jul-21, Main Carriageway											
	SH54 Ramp	60	60	20-May-19	23-Aug-1	30-Jul-21	26-Oct-21	0%	0%	100%	26-Oct-21, SH54 Ramp											
	NH4B ramp	52	52	09-Sep-19	08-Nov-1	27-Oct-21	27-Dec-21	0%	0%	100%	27-Dec-21, NH4B ramp											
	NH4B loop	60	60	28-Nov-19	06-Feb-20	28-Dec-21	07-Mar-22	0%	0%	100%	07-Mar-22, NH4B loop											
	RE wall with backfill	240	270	10-May-19	24-Apr-20	30-Jul-21	25-May-22	0%	0%	100%	25-May-22, RE wall with backfill											
	Main Carriageway	60	60	10-May-19	05-Aug-1	30-Jul-21	26-Oct-21	0%	0%	100%	26-Oct-21, Main Carriageway											
	SH54 Ramp	60	60	26-Aug-19	08-Nov-1	27-Oct-21	05-Jan-22	0%	0%	100%	05-Jan-22, SH54 Ramp											
	NH4B ramp	60	60	09-Nov-19	18-Jan-20	06-Jan-22	16-Mar-22	0%	0%	100%	16-Mar-22, NH4B ramp											
	NH4B loop	60	66	07-Feb-20	24-Apr-20	17-Mar-22	25-May-22	0%	0%	100%	25-May-22, NH4B loop											
	GSB & WMM	120	120	20-Jan-20	09-Jun-20	17-Mar-22	03-Aug-22	0%	0%	100%	03-Aug-22, GSB & WMM											
	Ashpalt pavement	120	120	29-Sep-20	18-Feb-21	15-Nov-22	04-Apr-23	0%	0%	100%	04-Apr-23, Ashpalt pavement											
	Road Work	1058	587	20-Apr-19	18-May-2	16-Feb-19A	17-May-23	58.6%	58.6%	97.39%	17-May-23, Road Work											
	For At Grade work	1030	523	20-Apr-19	02-Mar-21	16-Feb-19A	15-Apr-23	60.17%	60.17%	100%	15-Apr-23, For At Grade work											
	Compound wall with safety fence	180	180	20-Apr-19	20-Dec-1	16-Sep-21	15-Apr-22	0%	0%	100%	15-Apr-22, Compound wall with safety fence											
	Earth work / Cut & Fill	730	238	20-Apr-19	27-Feb-20	16-Feb-19A	30-Apr-22	62.25%	62.25%	100%	30-Apr-22, Earth work / Cut & Fill											
	Subgrade & Granular Sub Base	240	240	20-Nov-19	28-Sep-2	08-Feb-22	15-Nov-22	0%	0%	100%	15-Nov-22, Subgrade &											
	WMM & DBM	220	220	05-Mar-20	19-Dec-2	24-May-22	04-Feb-23	0%	0%	100%	04-Feb-23, WMM											
	Asphalt Pavement	60	60	21-Dec-20	02-Mar-21	04-Feb-23	15-Apr-23	0%	0%	100%	15-Apr-23, Asphalt Pavement											
	Area for toll plaza	112	146	28-Feb-20	18-Sep-2	16-Feb-19A	08-Sep-22	25%	25%	100%	08-Sep-22, Area for toll plaza											
	For Bridge and ramps	45	45	25-Mar-21	18-May-2	25-Mar-23	17-May-23	0%	0%	0%	17-May-23, For Bridge and ramps											
	Completion of Interface Activity	565	141	19-Sep-20	06-Mar-21	25-Mar-21	20-Feb-23	0%	0%	0%	20-Feb-23, Completion of Interface Activity											
	Provisional Sum	959	924	23-Apr-18	23-Aug-2	30-Nov-18A	31-Mar-23	3.05%	3.05%	73.95%	31-Mar-23, Provisional Sum											
	Testing & Commissioning Works	33	32	26-Jul-21	20-Sep-2	31-Jul-23	06-Sep-23	0%	0%	0%	06-Sep-23, Testing & Commissioning Works											
	ToC1002	2	2	19-Sep-21	20-Sep-2	05-Sep-23	06-Sep-23	0%	0%	0%	06-Sep-23, ToC1002											
	ToC1000	25	25	26-Jul-21	11-Sep-2	31-Jul-23	28-Aug-23	0%	0%	0%	28-Aug-23, ToC1000											
	ToC1001	6	6	13-Sep-21	18-Sep-2	29-Aug-23	04-Sep-23	0%	0%	0%	04-Sep-23, ToC1001											

█ Actual Level of Effort
 █ Remaining Work
 ◆ Milestone
█ Actual Work
 █ Critical Remaining Work
 ── summary

Attachment 9- Project Progress Photos

Package 1- Site Progress Photos



Photo No. 1: A view taken from the Interchange Section looking towards the sea



Photo No. 2: MP 52 OSD Pile Cap Works at the Marine Section in progress



Photo No. 3: Casting of OSD Pile Cap at MP125 – Marine Section in progress



Photo No. 4: Casting of combined Pile cap at Interchange Section in progress



Photo No. 5: C2 Ramp Retaining wall in progress



Photo No. 6: OSD-2 Super Structure Assembling Works in progress



Photo No.7: Inward Material received for OSD 4- NG Fabricated Blocks 1st Lot., Segment No. 01 to 17, 203.2 m at Chirle Yard Site



Photo No. 8: F2 Zone 2 Retaining Wall works in progress



Photo No. 9: Erection of Pier segment for LG-03 at MP81 in progress



Photo No. 10: Casting of Pier cap MP01 North in progress



Photo No. 11: Pier Cap Works at the Marine Section in progress



Photo No. 12: F Ramp Retaining Wall Zone-3 Excavation Works in progress

Package 2 – Site Progress Photos



Photo No. 1: The DB Members & MMRDA officials visited the Pkg-2 site on 24th March 2021



Photo No. 2: Pier head segment scaffolding and reinforcement at MP 229 LHS and RHS respectively in progress



Photo No. 3: Pier 2nd lift concreting at MP 181 LHS in progress

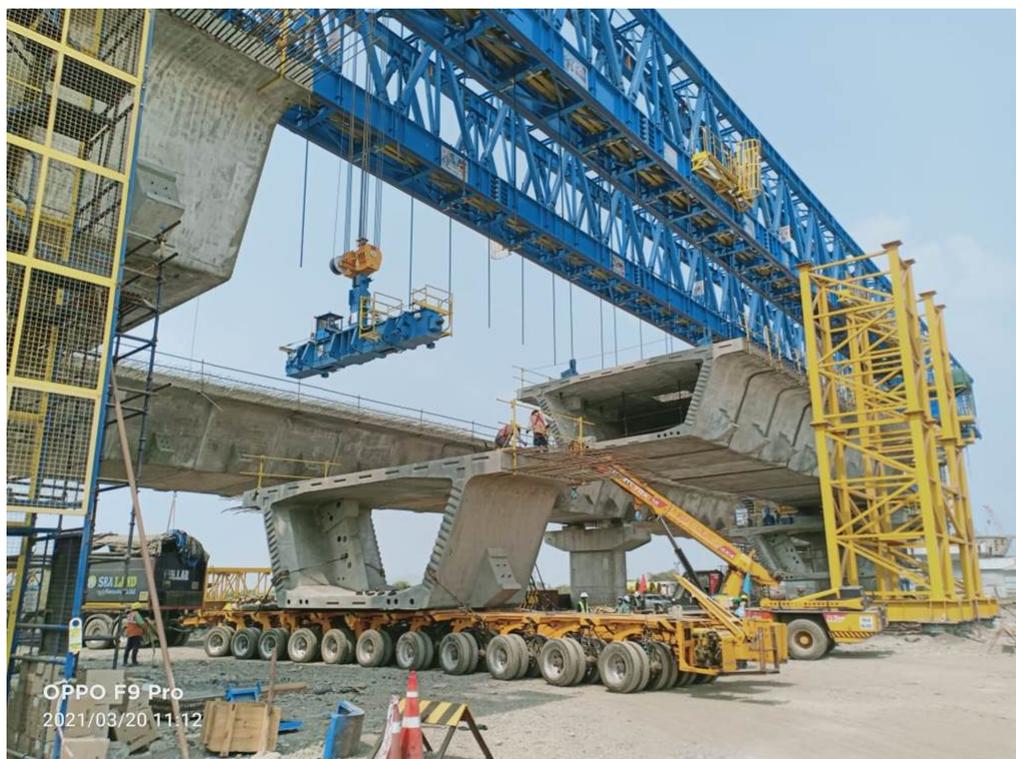


Photo No. 4: LG-2 Segment erection at Span MP 243-244 LHS in progress



Photo No. 5: Pile drilling at MP 151 LHS in progress



Photo No. 6: Pier cap reinforcement works at CAA-1 in progress



Photo No. 7: Portal Beam reinforcement works at MP 252 LHS in progress



Photo No. 8: Segment concreting at Bay-2 in progress



Photo No. 9: Pier concreting at CAP-10 in progress



Photo No. 10: Pile reinforcement cage inspection at the Casting Yard in progress



Photo No. 11: Pile concreting at MP 167 LHS in progress



Photo No. 12: OSD Material inspection at Karanja Port in progress

Package 3 – Site Progress Photos



Photo No. 1: LMP & RMP A2 Abutment backfilling work in progress



Photo No. 2: LP 18 pier reinforcement works in progress



Photo No. 3: LP35 pier shuttering works in progress



Photo No. 4: JMP 4 foundation final checking before concreting



Photo No. 5: RP 36 Pier concrete pouring in progress



Photo No. 6: LP 14 pier cap concrete pouring in progress



Photo No. 7: RP 33 Portal Concrete pouring work in progress



Photo No. 8: PMP11 to PMP12 Voided slab soffit reinforcement in progress



Photo No. 9: RP4-3 Cast in-situ 3 cell box girder Deck slab reinforcement in progress



Photo No. 10: Span LMP 278-279 under slung trestle installation in progress



Photo No. 11: Span LMP 277-278, Segment gluing and temporary pre-stressing work in progress



Photo No. 12: Cross hole sonic logging test at LP35 Chirle location

MMRDA RESIDUAL DEV. FUND

C - 14 / 15, MMRDA Office Bulding
 Bandra Kurla Complex, Bandra (E).
 Mumbai - 400051
 PAN : AAATM7106R

EXPENSES ON MTHL

Group Summary

1-Jan-2021 to 30-Jun-2021

Page 1

Particulars	Opening Balance	Transactions		Closing Balance
		Debit	Credit	
Administrative Charges (MTHL)	1,14,59,668.00 Dr			1,14,59,668.00 Dr
Advertisement & Publicity (MTHL)	35,43,476.00 Dr			35,43,476.00 Dr
Civil Work (MTHL) - Package-I	25,78,29,89,472.28 Dr	12,67,08,87,773.00		38,45,38,77,245.28 Dr
Civil Work (MTHL) - Package-II	21,58,61,12,968.16 Dr	9,21,03,26,898.50		30,79,64,39,866.66 Dr
Civil Work (MTHL) - Package-III	4,92,77,44,299.57 Dr	2,05,83,27,584.00		6,98,60,71,883.57 Dr
Compensation to Fisheries (MTHL)	91,94,02,257.00 Dr	34,63,94,713.00		1,26,57,96,970.00 Dr
Compensation to Leaseholders-MTHL	13,25,28,026.00 Dr			13,25,28,026.00 Dr
Counter Guarantee Fees (MTHL) (MOF)	34,53,83,568.00 Dr	36,98,32,171.00		71,52,15,739.00 Dr
Deposit with CIDCO for MTHL	11,21,00,000.00 Dr			11,21,00,000.00 Dr
Forex Loss/ Gain Against JICA Loan No IDP-255	3,27,17,19,271.61 Dr		2,81,55,60,604.00	45,61,58,667.61 Dr
Front End Fees for JICA Loan (MTHL)	27,22,78,553.00 Dr			27,22,78,553.00 Dr
General Consultants Fees (MTHL)	88,60,07,478.99 Dr	24,41,00,398.00	2,65,212.00	1,12,98,42,664.99 Dr
General Consultants Fees (MTHL) - Taxable	4,68,93,897.00 Dr			4,68,93,897.00 Dr
Geotechnical Investigation (MTHL)	19,60,17,691.00 Dr			19,60,17,691.00 Dr
Interest on JICA Loan (MTHL)	5,99,61,975.68 Dr	2,35,98,367.00		8,35,60,342.68 Dr
Land Acquisition Cost (MTHL)	7,83,60,72,283.00 Dr	68,60,87,454.00		8,52,21,59,737.00 Dr
Land Acquisition Cost (MTHL) Taxable	60,21,19,688.00 Cr			60,21,19,688.00 Cr
Legal Charges (MTHL)	8,50,000.00 Dr			8,50,000.00 Dr
Other Miscellaneous (MTHL)	11,84,89,915.80 Dr	1,27,34,27,692.03		1,39,19,17,607.83 Dr
Professional Charges (MTHL)	11,98,280.00 Dr			11,98,280.00 Dr
Repairs & Maintainance (MTHL)	7,99,549.00 Dr			7,99,549.00 Dr
Security Deposits - Land (MTHL)	11,10,05,078.00 Dr			11,10,05,078.00 Dr
Service Tax on Mobilisation Adv. on MTHL	3,07,32,786.00 Dr			3,07,32,786.00 Dr
Stamp Duty Reimbursement (MTHL)	10,33,760.00 Dr			10,33,760.00 Dr
Surveys & Studies (MTHL)	47,46,95,007.00 Dr			47,46,95,007.00 Dr
Grand Total	66,52,68,99,573.09 Dr	26,88,29,83,050.53	2,81,58,25,816.00	90,59,40,56,807.62 Dr



Mangrove and Marine Biodiversity Conservation Foundation of Maharashtra
(An Autonomous Body under Revenue & Forests Department, Government of Maharashtra)
302, 3rd Floor, Wakefield House, Above Britannia & Co. Restaurant,
Ballard Estate, Fort, Mumbai - 400 001.

Phone: 022 - 22694984 / 22694985, email id : ad.finance.mfn@gmail.com / mangrovefn@gmail.com

MFN/ 2020-21 / 262

Date: 04-12-2020

To,

Executive Engineer

Mumbai Metropolitan Region Development Authority

Bandra Kurla Complex, Bandra (E)

Mumbai - 400051

Subject: Regarding Expenditure status on implementation of Mangrove & Marine Biodiversity Conservation Plan, Nature Interpretation Centre and Corpus Funds referred in MTHL Project

Reference:

1. Letter from this office - Letter no. MFN/Finance/105/2020-21 dated 11-09-2020
2. Letter from your office - Letter no. ED/MTHL/CCF Mangroves/Master Conservation Plan/Status/20/PIU-MTHL dated 07-09-2020

With reference to the above subject and referred letters, the information on expenditure status on implementation of Master Plan by Mangrove Foundation for the FY 2017-18, FY 2018-19 and FY 2019-20 is as follows. The detailed Expenditure Report has been enclosed in Annexure - I.

	Particulars	MMRDA Funds Budget	Expenditure (in Rs. Lakhs)			
			FY 2017-18	FY 2018-19	FY 2019-20	Total
1	Mangrove Protection Framework	2,296	0.06	43.13	300.35	343.55
2	High Resolution Mapping of Mangrove Forests Of MMR	200	-	-	-	-
3	Mangrove Conservation/Removal of Stressors	300	-	-	-	-

4	Community Driven Sustainable Management of Mangrove Forests	-	-	-	-	-
5	Creeklet Drainage Assessment	100	-	-	-	-
6	Mangrove Research and Training Centre	1,675	-	-	-	-
7	Policy Interventions	-	-	-	-	-
8	Generation of Knowledge Base	100	-	-	-	-
9	Mangrove Sanctuary	460	11.86	10.35	-	22.21
10	Mangrove and Marine Ecosystem Interpretation Centre	1,000	-	-	-	-
11	Corpus fund to Mangrove Foundation As per the mandate of the Mangrove Foundation, this Corpus Fund cannot be expended and has been kept in Fixed Deposit. The interest generated on it is utilized for implementation of the objectives of the Mangrove Foundation	2,500	2,500.00	-	-	2,500.00
Total		8,631	2,511.92	53.48	300.35	2,865.75
Total Expenditure (Excluding Corpus Funds)		6,131	11.92	53.48	300.35	365.75

Your office is requested to record these facts and advise this office for further action, if any.



V. Tiwari
Virendra Tiwari
 Executive Director
 Mangrove Foundation

Enclosures:

1. Utilization Certificates
2. Annexure - I - Expenditure Report till FY 2019-20

Annexure - I

			Component / Sub-component	Particulars	Expenditure (in Rs. Lakhs)				
					MMRDA Funds Budget	FY 2017-18	FY 2018-19	FY 2019-20	Total
1	1A	1	Component	Mangrove Protection Framework					
1	1A	1A	Sub-component	Protective Wall Construction At Areas Which Are Likely To Get Encroached	1,225	-	43.13	257.49	300.62
1	1B	1B	Sub-component	Board Walks/ Promenads/ Joggers Path In Selected Critical Areas	500	-	-	-	-
1	1C	1C	Sub-component	Mangrove Stations	260	0.06	-	32.41	32.48
1	1D	1D	Sub-component	Mangrove Watch Towers	185	-	-	10.45	10.45
1	1E	1E	Sub-component	Centralised Wireless Station and Sub-stations and Protection Gear For Field Staff This setup can be integrated with in Mangrove Stations. No infrastructure charges have been calculated here	126	-	-	-	-
1	1F	1F	Sub-component	Mangrove Legal Cell	-	-	-	-	-
1	1G	1G	Sub-component	Mangrove Intelligence And Protection Network	-	-	-	-	-
				Sub Total	2,296	0.06	43.13	300.35	343.55

2	2A	2	Component	High Resolution Mapping Of Mangrove Forests Of MMR					
2	2A	2A	Sub-component	Analysis Of High Resolution Maps Of Mangrove Forests Of MMR	200	-	-	-	-
				Sub Total	200	-	-	-	-

3	3A	3	Component	Mangrove Conservation/Removal Of Stressors					
3	3A	3A	Sub-component	Developing Mangrove Park	100	-	-	-	-
3	3B	3B	Sub-component	Protection Elevation Appropriate IUCN Category Or Other Protection Status	-	-	-	-	-
3	3C	3C	Sub-component	Mangrove Nurseries	-	-	-	-	-
3	3D	3D	Sub-component	Removal Of Non- Mangrove Flora	200	-	-	-	-
3	3E	3E	Sub-component	Removal Of Garbage from Mangrove Forests Collaboration to be Established with BMC	-	-	-	-	-
3	3F	3F	Sub-component	Mangrove Plantation INR 2.5 Lacks Per Hectare For 5 Years	-	-	-	-	-
				Sub Total	300	-	-	-	-

4	4	4	Component	Community Driven Sustainable Management Of Mangrove Forests					
4	4A	4A	Sub-component	Development Of Strategy For Active Participation	-	-	-	-	-
4	4B	4B	Sub-component	Education For Sustainable Development In Schools Collaboration to be Established with Education Department	-	-	-	-	-
4	4C	4C	Sub-component	Electronic Media Campaign and Public Private Community Partnership (PPCP) Collaborations with Print Media, Electronic Media and Digital Networks	-	-	-	-	-
				Sub Total	-	-	-	-	-

5	5A	5	Component	Creeplet Drainage Assessment					
5	5A	5A	Sub-component	Drainage Model Generation This management Intervention will be done in Selected Areas and Later on will be Up-scaled by the Mangrove Cell	100	-	-	-	-
				Sub Total	100	-	-	-	-


Executive Director
Mangrove and Marine Biodiversity
Conservation Foundation of Maharashtra

			Component / Sub-component	Particulars	Expenditure (in Rs. Lakhs)				
					MMRDA Funds Budget	FY 2017-18	FY 2018-19	FY 2019-20	Total
6	6A	6	Component	Mangrove Research And Training Centre					
6	6A	6A	Sub-component	Hardware	1,000	-	-	-	-
6	6B	6B	Sub-component	Software	675	-	-	-	-
				Sub Total	1,675	-	-	-	-

7	7A	7	Component	Policy Interventions	-				
7	7A	7A	Sub-component	Environment Rehabilitation Tax Restricted to Areas where Infrastructure has been Built or is Supposed to be Built	-	-	-	-	-
7	7B	7B	Sub-component	Mangrove and Coastal Zone Crime Control Bureau	-	-	-	-	-
				Sub Total	-	-	-	-	-

8	8A	8	Component	Generation Of Knowledge Base					
8	8A	8A	Sub-component	Permanent Plots For Long Term Ecosystem Monitoring Collaboration to be Established with Mangrove Foundation	-	-	-	-	-
8	8B	8B	Sub-component	Study Of The Pressures On Mangrove Ecosystem In MMR Collaboration to be Established with Mangrove Foundation	100	-	-	-	-
8	8C	8C	Sub-component	Mangrove Field Guide Collaboration to be Established with Mangrove Foundation	-	-	-	-	-
8	8D	8D	Sub-component	Assessment Of Ecosystem Services Provided By Mangrove Collaboration to be Established with Mangrove Foundation	-	-	-	-	-
				Sub Total	100	-	-	-	-

9	9	9	Component	Mangrove Sanctuary	460	11.86	10.35	-	22.21
				Sub Total	460	11.86	10.35	-	22.21

10	10	10	Component	Mangrove And Marine Ecosystem Interpretation Centre	1,000	-	-	-	-
				Sub Total	1,000	-	-	-	-

10	10	10	Component	Corpus fund to Mangrove Foundation As per the mandate of the Mangrove Foundation, this Corpus Fund cannot be expended and has been kept in Fixed Deposit. The interest generated on it is utilized for implementation of the objectives of the Mangrove Foundation	2,500	2,500.00	-	-	2,500.00
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				Grand Total	8,631	2,511.92	53.48	300.35	2,865.75
				Total Expenditure (Excluding Corpus Funds)	6,131	11.92	53.48	300.35	365.75


Executive Director
Mangrove and Marine Biodiversity
Conservation Foundation of Maharashtra

ANNEXURE XVI

FORM GFR 19-A

[See Government of India's Decision (1) under Rule 150]

Utilization Certificate

Mangrove and Marine Biodiversity Conservation Foundation of Maharashtra

Sr. No	Letter No. & Date	Amount	Particulars
1	Executive Director Mangrove and Marine Biodiversity Conservation Foundation of Maharashtra Letter No. MFN/2020-21/ dated	2500 Lakhs	Certified that Rs. 2500 Lakhs received towards Corpus Fund of the Mangrove Foundation from Mumbai Metropolitan Region Development Authority as referred in MTHL Project is utilized and being treated as Corpus Funds of the Mangrove Foundation from FY 2017-18.
	Total	2500 Lakhs	Expenditure / Funds transferred are Rs. 2500 Lakhs and balance is Rs. 0.

Certified that I have satisfied myself that the conditions on which the grants-in aid was sanctioned have been duly fulfilled/are being fulfilled and that I have exercised the due diligent checks to see that the money was actually utilized for the purpose for which it was sanctioned.



[Handwritten Signature]

Executive Director

Mangrove and Marine Biodiversity
Conservation Foundation of Maharashtra
& Additional Principal Chief Conservator of Forest
Mangrove Cell, Mumbai

ANNEXURE XVI

FORM GFR 19-A

[See Government of India's Decision (1) under Rule 150]

Utilization Certificate

Mangrove and Marine Biodiversity Conservation Foundation of Maharashtra

Sr. No	Letter No. & Date	Amount	Particulars
1	Executive Director, Mangrove and Marine Biodiversity Conservation Foundation of Maharashtra Letter No. MFN/2020-21/ dated	6131.00 Lakhs	Certified that out of Rs. 6131.00 Lakhs (Non-Corpus Funds) received from Mumbai Metropolitan Region Development Authority as referred in MTHL Project Rs. 365.75 Lakhs has been expended and till FY 2019-20 and balance is Rs. 5765.25 Lakhs
	Total	6131.00 Lakhs	Expenditure / Funds transferred are 365.75 Lakhs and balance is Rs. 5765.25 Lakhs

Certified that I have satisfied myself that the conditions on which the grants-in aid was sanctioned have been duly fulfilled/are being fulfilled and that I have exercised the due diligent checks to see that the money was actually utilized for the purpose for which it was sanctioned.



[Handwritten Signature]

Executive Director

Mangrove and Marine Biodiversity
Conservation Foundation of Maharashtra
& Additional Principal Chief Conservator of Forest
Mangrove Cell, Mumbai

CITY AND INDUSTRIAL DEVELOPMENT CORPORATION OF MAHARASHTRA LIMITED

(CIN - U99999 MH 1970 SGC - 014574)

REGD. OFFICE:
 "NIRMAL", 2nd Floor, Narlman Point,
 Mumbai - 400 021.

PHONE : 00-91-22-6650 0900

FAX : 00-91-22-2202 2509

HEAD OFFICE:
 CIDCO Bhavan, CBD Belapur,
 Navi Mumbai - 400 614.

PHONE: 00-91-22-6791 8100

FAX : 00-91-22-6791 8166

Ref. No. NO.CIDCO/Hort/2019/19]

Date : 25.11.2019

 To,
 Shri. G.G.Ddeshpande,
 Executive Engineer (MMRDA),
 Mumbai Trans Harbour Link (MTHL),
 Bandra Kurla Complex, Bandra East,
 Mumbai - 400051.

Sub: - Permission for removal of existing trees falling in the alignment of construction of Mumbai Trans Harbour Link (MTHL) Project (CH.18+187-CH.19+607KM and CH.20+087-CH.21+800KM) on Navi Mumbai side.

Ref:- MTHL/CIDCO/Tree Removal Permission/19/012/MTHL dt.14.05.2019

Sir,

With reference to above it is to inform that your request for removal of 348 no of trees falling in the alignment of construction of Mumbai Trans Harbour Link (MTHL) Project (CH.18+187-CH.19+607KM and CH.20+087-CH.21+800KM) on Navi Mumbai side has been considered by the Tree Authority under section 8(3) of the Maharashtra (Urban Areas) Protection and Preservation of Trees Act, 1975 & rules called the Maharashtra (Urban Areas) Protection and Preservation of Tree rules - 2009 & amendment up to 2016 subject to the following conditions.:

- 1) The Tree Authority Committee of CIDCO has granted the permission to cut 266 no of existing trees and to transplant 82 no of existing trees. You should retain 504 no of existing trees. The details are as below;

Sr. No	Description	Tree no.
1	Trees to be cut	1, 3, 4, 5, 6, 7, 8, 9, 12, 13, 15, 16, 17, 18, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 59, 66, 67, 80, 90, 101, 102, 103, 104, 105, 118, 119, 120, 121, 123, 143, 144, 147, 148, 149, 150, 151, 153, 156, 157, 158, 159, 162, 165, 166, 173, 174, 175, 176, 177, 178, 179, 186, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 225, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 277, 278, 279, 289, 325, 327, 330, 336, 346, 350, 355, 356, 363, 367, 382, 384, 385, 386, 387, 389, 390, 391, 401, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436,

In case of any corruption related complaints, please visit :

cidco.maharashtra.gov.in / CIDCO VIGILANCE MODULE NEW / Userlogin.aspx

		437, 438, 439, 440, 441, 444, 445, 447, 449, 450, 451, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 496, 497, 498, 499, 500, 501, 503, 504, 517, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 597, 599, 600, 601, 602, 603, 604, 624, 627, 628, 637, 639, 640, 641, 642, 643, 644, 658, 659, 661, 662, 663, 667, 678, 679, 680, 682, 683, 684, 688, 696, 698, 699, 700, 701, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 715, 730, 731, 744, 745, 754, 756, 758, 760, 761, 762, 773, 775, 776, 778, 779, 780, 783, 784, 785, 786, 787, 789, 790, 792, 793, 794, 795, 797, 824, 825, 826, 827, 831, 832.
2	Trees to be Transplant	2, 14, 19, 20, 21, 58, 65, 68, 79, 91, 122, 152, 154, 155, 160, 161, 163, 164, 274, 275, 276, 324, 326, 328, 329, 331, 332, 333, 334, 335, 347, 348, 349, 354, 357, 364, 365, 366, 383, 388, 413, 448, 452, 598, 638, 647, 660, 664, 665, 666, 668, 669, 670, 671, 672, 675, 676, 677, 681, 685, 686, 687, 689, 690, 691, 692, 693, 694, 695, 697, 702, 714, 732, 743, 755, 757, 759, 777, 781, 788, 791, 796.
3	Trees to be Retain	10, 11, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 51, 52, 53, 54, 55, 56, 57, 60, 61, 62, 63, 64, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 81, 82, 83, 84, 85, 86, 87, 88, 89, 92, 93, 94, 95, 96, 97, 98, 99, 100, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 124, 125, 126, 128, 129, 130, 131, 132, 133, 135, 136, 137, 138, 139, 140, 141, 142, 145, 146, 167, 168, 169, 170, 171, 172, 180, 181, 182, 183, 184, 185, 187, 188, 189, 190, 191, 192, 193, 194, 218, 219, 220, 221, 222, 223, 224, 226, 227, 228, 229, 230, 231, 232, 233, 234, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 280, 281, 282, 283, 284, 285, 286, 287, 288, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 337, 338, 339, 340, 341, 342, 343, 344, 345, 351, 352, 353, 358, 359, 360, 361, 362, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 392, 393, 394, 395, 396, 397, 398, 399, 400, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 442, 443, 446, 453, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 502, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 605, 606, 607, 608, 609, 610, 611, 612, 615, 616, 617, 618, 619, 620, 621, 622, 623, 625, 626, 629, 630, 631, 632, 633, 634, 635, 636, 645, 646, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 673, 674, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 746, 747, 748, 749, 750, 751, 752, 753, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 774, 782, 798, 799, 800, 801, 802, 803, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 828, 829, 830, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858.

2) As per the provision under Section 8(3) (a) of the said Act, you are hereby directed that no tree shall be cut/transplanted until fifteen days (15) after the permission is given by the Tree Authority.

3) It is mandatory on your part to plant 2 no of trees against each tree to be cut. As per the provision of Maharashtra (Urban Areas) Protection and Preservation of Trees (amendment) Act, 2016 the new trees shall be plant within fifteen days from the date of tree (s) is felled.

4) You have to plant 532 no of new trees (against cutting of 266 no of trees) & to transplant 82 no of existing trees at Survey No. 347, Village- Gavhan, Tal-Uran, Dist-Raigad. While planting trees, suitable distance should be kept from the boundary of the plots, so that the newly planted trees will not obstruct the construction of compound wall or any other civil structure in future.

You shall maintain & protect the new tree plantation (532 no of trees) and transplanted trees (82 no of existing trees) for the period of three years & care should be taken so that tree grows properly & give a report to the tree officer about the condition of these trees once in six months for a period of three years as per the form - G under section 9(2).

5) Your attention is kindly drawn to the provisions under section of 21 of the Maharashtra (Urban Areas) Protection & Preservation of Trees Act. 1975, as modified on 9th June, 2004.

21 (1) Whoever fells any tree or causes any tree to be felled in contraventions of the provision of the Act or without reasonable excuse fails to comply with any order issued or condition imposed by the Tree Officer or the Tree Authority or voluntarily obstructs and member of the Tree Authority or the Tree Officer or any officers and Servants subordinate to him in the discharge of their functions under this Act. Shall, on convection, be punished with the fine of not less than one thousand rupees which may extend up to five thousand rupees for every offence and also with imprisonment for a term of not less than one week, which may extent up to one year.

(3) The felling or causing of felling of each tree without the Permission of The Tree Authority shall constitute a separate offence.

6) At the time of transplanting or cutting of trees, if any social problem occurs, you will have to resolve the same at your end.

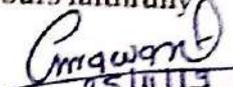
7) You shall submit the report for Cutting and transplantaion of the trees carried out to Tree officer, CIDCO.

8) Tree authority Committee, CIDCO has granted the permission for removal of 348 no of trees (To Cut 266 nos and to transplant 82 nos). At the time of actual execution of work, applicant Executive Engineer, MTHL Project, MMRDA should take care to remove only those trees which are falling in alignment of construction activities.

9) The said permission is valid only up to 90 days from the receipt thereof.

Thanking You.

Yours faithfully


Tree Officer

(Tree Authority Committee, CIDCO)



MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY
मुंबई महानगर प्रदेश विकास प्राधिकरण

No. ED/MTHL/CRZ Clearance/publish/16

Engineering Division
Dt. 29th Jan 2016

To,
Additional Chief Secretary (Environment)
Environment Department,
Govt. of Maharashtra,
Mantralaya, Mumbai - 400 032

Sub: Mumbai Trans Harbour Link (MTHL) project
- CRZ Clearance reg.

Ref : Ministry of Environment, Forest and Climate Change, Govt of India letter No.
F.No.11-65/2012-IA.III Dt. 25th January 2016

Sir,

Ministry of Environment, Forest and Climate Change, vide letter referred above, has accorded CRZ clearance to the Mumbai Trans Harbour Link (MTHL) project. The copy of the clearance is submitted herewith for your information for ready reference.

Thanking you,

Yours faithfully,

P.D. Mamdapure
(P.D. Mamdapure)
Engineer-in-Chief

Encl: Copy of CRZ clearance letter

Copy submitted to

The Member Secretary, Maharashtra Pollution Control Board, Sion (E), Mumbai with a request to publish the CRZ Clearance on your website.

Copy submitted for information to,

1. The Secretary (Forest), Revenue & Forest Dept, Govt. of Maharashtra, Mantralaya, Mumbai

Encl: Copy of CRZ clearance letter

2. The Chairman, Maharashtra Coastal Zone Management Authority, Mumbai

Encl: Copy of CRZ clearance letter

3. The Director, Bombay Natural History Society, Hornbill house, Dr. Salim Ali Chowk, Shaheed Bhagat Singh Road, Mumbai - 400 001

Encl: Copy of CRZ clearance letter

4. The Chief Executive Officer, Raigad Zilla Parishad, Alibaug

Encl: Copy of CRZ clearance letter

5. The Assistant Commissioner (F-South ward), MCGM, 'F/S' ward Office, Jagganath Bhatankar Marg & Dr. B. A. Road Junction, Parel Naka, Mumbai-400 012

Encl: Copy of CRZ clearance letter

6. The Block Development Officer, Uran - Taluka

Encl: Copy of CRZ clearance letter

7. Sarpanch, Jasai Village, Tal: Uran, District Raigad

8. Sarpanch, Gavan Village, Tal: Panvel, District Raigad

9. Sarpanch, Chirle Village, Tal: Uran, District Raigad

10. The Block Development Officer, Panvel-Taluka : Encl: Copy of CRZ clearance letter.
Bandra - Kurla Complex, Bandra (East), Mumbai - 400 051.



MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY
मुंबई महानगर प्रदेश विकास प्राधिकरण

No. ED/MTHL/CRZ Clearance/publish/16

Engineering Division
Dt. 29th Jan 2016

To,
Additional Chief Secretary (Environment)
Environment Department,
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Mantralaya, Mumbai - 400 032

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- CRZ Clearance reg.

Ref : Ministry of Environment, Forest and Climate Change, Govt of India letter No.
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clearance is submitted herewith for your information for ready reference.

Thanking you,

Yours faithfully,

P.D. MAMDAPURE
(P.D. MAMDAPURE)
Engineer-in-Chief

Encl: Copy of CRZ clearance letter

Copy submitted to

The Member Secretary, Maharashtra Pollution Control Board, Sion (E), Mumbai with a request
to publish the CRZ Clearance on your website.

Copy submitted for information to,

The Secretary (Forest), Revenue & Forest Dept, Govt. of Maharashtra, Mantralaya, Mumbai

Encl: Copy of CRZ clearance letter

The Chairman, Maharashtra Coastal Zone Management Authority, Mumbai

Encl: Copy of CRZ clearance letter

3. The Director, Bombay Natural History Society, Hornbill house, Dr. Salim Ali Chowk, Shaheed
Bhagat Singh Road, Mumbai - 400 001

Encl: Copy of CRZ clearance letter

4. The Chief Executive Officer, Raigad Zilla Parishad, Alibaug

Encl: Copy of CRZ clearance letter

5. The Assistant Commissioner (F-South ward), MCGM, 'F/S' ward Office, Jagganath Bhatankar
Marg & Dr. B. A. Road Junction, Parel Naka, Mumbai-400 012

Encl: Copy of CRZ clearance letter

6. The Block Development Officer, Uran - Taluka

Encl: Copy of CRZ clearance letter

7. Sarpanch, Jasai Village, Tal: Uran, District Raigad

8. Sarpanch, Gavan Village, Tal: Parnel, District Raigad

9. Sarpanch, Chirle Village, Tal: Uran, District Raigad

10. The Block Development Officer, Parnel-Taluka : Encl: copy of CRZ clearance letter,
Bandra - Kurla Complex, Bandra (East), Mumbai - 400 051.

25/1/2016
ग्रामसेवक
ग्रा. पं. चिर्ले
21/2/2016
ग्रामसेवक
ग्रा. पं. चिर्ले
21/2/2016
ग्रामसेवक
ग्रा. पं. चिर्ले
21/2/2016
ग्रामसेवक
ग्रा. पं. चिर्ले

SP GOVT COLONY P.O <400051>
 EMB648677671N
 Counter No:1,OP-Code:SGK
 To:THE DIRECTOR,RAJYUVA NATURAL HISTO
 MUMBAI, PIN:400001
 From:MUMBAI METROPOLITAN REGION , DEVELOPM
 Wt:25grams,
 Amt:17.00 ,01/02/2016 ,11:19
 Taxes:Rs.2.00<<Track on www.indiapost.gov.in



SP GOVT COLONY P.O <400051>
 EMB648677981N
 Counter No:1,OP-Code:SGK
 To:DEPUTY SECRETARY,MAHA POLLUTION CONT
 MUMBAI, PIN:400022
 From:MUMBAI METROPOLITAN REGION , DEVELOPM
 Wt:25grams,
 Amt:17.00 ,01/02/2016 ,11:20
 Taxes:Rs.2.00<<Track on www.indiapost.gov.



SP GOVT COLONY P.O <400051>
 EMB648677751N
 Counter No:1,OP-Code:SGK
 To:ASSTY COMMISSIONER,DIGPUB
 MUMBAI, PIN:400012
 From:MUMBAI METROPOLITAN REGION , DEVELOPM
 Wt:25grams,
 Amt:17.00 ,01/02/2016 ,11:19
 Taxes:Rs.2.00<<Track on www.indiapost.gov.in



SP GOVT COLONY P.O <400051>
 EMB648678071N
 Counter No:1,OP-Code:SGK
 To:ADD CHIEF SECRETARY,ENVIRONMENT DEPT
 MUMBAI, PIN:400032
 From:MUMBAI METROPOLITAN REGION , DEVELOPM
 Wt:25grams,
 Amt:17.00 ,01/02/2016 ,11:21
 Taxes:Rs.2.00<<Track on www.indiapost.gov.



SP GOVT COLONY P.O <400051>
 EMB648677841N
 Counter No:1,OP-Code:SGK
 To:SECRETARY,REVENUE & FOREST
 MUMBAI, PIN:400032
 From:MUMBAI METROPOLITAN REGION , DEVELOPM
 Wt:25grams,
 Amt:17.00 ,01/02/2016 ,11:20
 Taxes:Rs.2.00<<Track on www.indiapost.gov.in>>



SP GOVT COLONY P.O <400051>
 EMB648678151N
 Counter No:1,OP-Code:SGK
 To:CHAIRMAN,MAHA COASTAL ZONE
 MUMBAI, PIN:400032
 From:MUMBAI METROPOLITAN REGION , DEVELOPM
 Wt:25grams,
 Amt:17.00 ,01/02/2016 ,11:21
 Taxes:Rs.2.00<<Track on www.indiapost.gov



7570



MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY
मुंबई महानगर प्रदेश विकास प्राधिकरण

No.ED/MTHL/CRZ/2016

Engineering Division
Date: 16/02/2016

To,
Chief Conservator of Forests,
Near Micro Wave Tower,
Bara Banglow Area,
Thane (East) – 400 603.

Sub.: Mumbai Trans Harbour Link Road.

- CRZ Clearance for Mumbai Trans Harbour Sea Link (MTHL) by
M/s. Mumbai Metropolitan Region Development Authority Reg.

Ref.: Letter obtained from Ministry of Environment & Forests (IA.III Division)
No. F.No.11-65/2012-IA-III dated 25/01/2016.

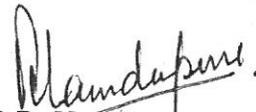
Sir,

Ministry of Environment & Forests (IA.III Division) has accorded Costal Regulation Zone Clearance (CRZ) for Mumbai Trans Harbour Link Project vide above referred letter.

As required under point no. 8 of General Conditions, the project proponent – Mumbai Metropolitan Region Development Authority has published CRZ clearance in two local Newspapers i.e. India Express – English language and Loksatta – Marathi language on 29/01/2016. The copies of same are enclosed herewith for your information and record please. A copy of CRZ clearance is also enclosed herewith for your ready reference.

Thanking you.

Yours faithfully,


(P.D. Mamdapure)
Engineer-In-Chief

- Encl.: 1. Copy of Notice published in Newspapers.
2. Copy of CRZ clearance from MoEF.



SF AUDIT BHAVAN PO (400051)
EM9172056091IN
Counter No:1,OP-Code:SVH
To:ADDL PRINCIPAL CON,CIVIL LINES
NAGPUR, PIN:440001
From:MMRDA , BANDRA E
Wt:30grams,
Amt:40.00 ,17/02/2016,12:02
* Taxes:Rs.5.00<<Track on www.indiapost.gov.in

19/2/16

TENDERS & NOTICES

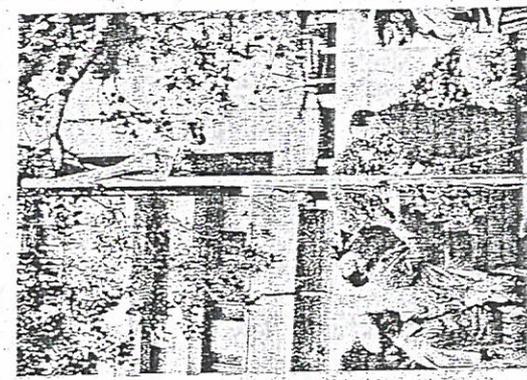
WEEKLY UPDATE ON THE BEACONS IN INDIA'S PROGRESS



ral areas. To keep the expansion momentum going, the bank is planning to take its branch network to 800 by the end of current fiscal and "God willing, we will be having 1000 branches by the end of FY15," he said.

The new business units include: Soimol in Tal area of Pulwama district, Wandevalgam and Ahlan Gadole in Anantnag, Trenz and Fruit Mandi Prichoo in Shopian. "We have a strong commitment to J&K, our core area of operations. In an effort to make the state financially inclusive, the bank has always ensured to make its presence felt in every block of the state, including unbanked and far flung areas," the Chairman said.

Central Bank celebrates Independence Day



Malay Mukherjee and Raj Kumar Goyal, Executive Directors, and Capt. S Kannan, CSO., seen during flag hoisting ceremony

Central Bank Of India celebrated 67th Independence Day on August 15, 2013 at its corporate office in Mumbai. Flag hoisting was carried out by Malay Mukherjee and Raj Kumar Goyal, Executive Directors, and staff members of the bank were also present on the occasion.

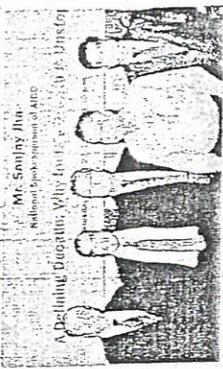
NHB profits rise

National Housing Bank (NHB) announced its annual results for the financial year ended 30th June, 2013. The Bank posted a net profit of 450 crore during the current year as against 38 crore in the previous year, an increase of over 16%. The loans and advances of the Bank increased by 6,113 crore from 28,490 crore to 34,603 crore, an increase of 22%. The Bank's total loan disbursements during the year were 17,63 crore (previous year 14,454 crores), growth of 22% out of which the share in rural housing was about 44%, aggregating to 7,718 crores. Of the total disbursements made during the year, loans up to 15 lakh constituted about 60%. The Bank crossed the cumulative refinancing disbursement of 1,00,000 crore during the year 2012-13.

IDBI Bank hikes rates

IDBI Bank has increased interest rate on foreign currency non-resident (FCN) (B) and non-resident external (NRE) deposits across select maturity buckets, aimed at attracting foreign currency inflows from NRI diaspora. Interest rates on FCNR (B) deposits for the term of 3 years, and above has been increased by 100 basis points (bp) across all nine currencies. In respect of NRE Deposits, the rates have been linked for the tenor of more than years up to 7 years by up to 25 bps (50 bps). The bank is now offering a pre-emptive interest rate of 9.5% on NRE deposits as a result of the above revision. No pre-emptive penalty shall be levied on the NRI deposits. The revised rates, which took effect from August 20, 2013, shall be valid up to November 30, 2013 subject to review.

IMC organises interaction



An interactive meeting was organised by the Indian Merchants' Chamber, Mumbai on August 22, 2013. The topic was, 'A Defining Decade - Why India's Growth is Unstoppable'. Shailesh Vaidya, President, IMC, said, "The Indian economy is currently facing tough times. The critical growth vs inflation conflict is assuming political overtones, with the biggest sufferer being the economy." Sanjay Jha, National Spokesperson, Congress, (I) said, "The problem of the rupee falling drastically is partly global and partly domestic. The recovery of the US economy is the main reason for the rupee's woes. Though the US-Eurozone recovery is bad in the short term, it holds lot of promise over the long term. Unemployment rates are declining and the \$4 trillion that went into the American market is now find-

NORTHERN RAILWAY
CORRIGENDUM
OFFICE OF THE MEDICAL DIRECTOR,
NORTHERN RAILWAY CENTRAL HOSPITAL
BASANT LANE, DELHI-110065
File No. E/Med/SR/74/13
Adv. No. NRCH/SR/2013/002 Dt.: 08.2013
ENGAGEMENT OF SENIOR RESIDENTS
In continuation to previous advertisement published vide Adv. No. NRCH/SR/2013/001 dated 20.07.13 for appointment of Senior Residents, the age limit may be read as: (1) General - 33 Years (2) OBC - 36 Years (3) SC & ST - 38 Years
Instead of: (1) General/UR - 33 Years (2) OBC/SC/ST - 36 Years. 1889/13
Scoring Customers With A Smile

pscl PUNJAB STATE TRANSMISSION CORPORATION LIMITED
(Regd. Office, PSEB, Head Office, The Mall, Patiala-147001)
NOTICE INVITING TENDER
1. Type of Tender: Open Tender
2. Name & complete address of office giving tender: Chief Engineer / TS, 3rd Floor, Shakil Sadan, PSTCL, Patiala
3. Tender Enquiry No.: STQ-1020
4. Scope of Work: Manufacture, fabrication, galvanization & supply of 220 KV tower material as per PSTCL specification STQ-1020 Qty. - 8800 MT
5. Starting date of downloading from website: https://pscl.nprocure.com : Date of Publication
6. Last date of downloading from website: https://pscl.nprocure.com : 23.9.2013 upto 3.00 PM
7. Last date/time for bid submission: 26.9.2013 upto 11.00 AM
8. Date/time for opening of bids: 26.9.2013 at 12.30 PM
9. Cost of specification: Rs. 2500/-
10. Mode of Payment: As per specification
enrification

RAJIV DANDHI JEEVANDAYEE AROGYA YOUNGA SOCIETY
Government of Maharashtra
Jeevandayee Bhavan, E.S.I.S Hospital Compound,
Banpat Jadhav Marg, Mumbai - 400018
Phone and Fax: 022-24912291
Email: hc.off1@jeevandayee.gov.in Website: www.jeevandayee.gov.in
CORRIGENDUM
Ref-Tender Notice- RFP for Printing, Packaging, and Distribution of Health Card Stationery across Maharashtra State dated 3rd August 2013. There have been some modifications in the RFP document. The last date of the submission of the Tender is now extended to 31st August 2013 up to 2 PM. The details of the same, in bidding for this tender can be seen on our website www.jeevandayee.gov.in.
Sd/-
CEO

MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY
(A Government of Maharashtra Undertaking)
Plot Nos. C-14 & 15, Bandra-Kurla Complex, Bandra (E),
Mumbai - 400 051. Tel. 26590001-04, Fax: 26591264.
Website: www.mmrd.maharashtra.gov.in
Name of work: Mumbai Trans Harbour Link Project.
Bids to be invited from Ministry of Environment and Forests dated 19.7.2013. Ministry of Environment and Forests, GOI has accorded Coastal Regulation Zone clearance to the Mumbai Trans Harbour Link Project vide their letter No F.No.11-65/2012-IA-III dated 19.7.2013. Copies of clearance letter are available with the State Pollution Control Board & Forests at http://www.envyfor.mil.in
Date: 26/08/2013
Place: Mumbai
Sd/-
Chief Engineer,
Engineering Division
No.ED/MTHL/MoEF/Clearance/13

pscl PUNJAB STATE TRANSMISSION CORPORATION LIMITED
(Regd. Off., PSEB H.O., The Mall, Patiala-147001)
Office of Chief Engineer/Transmission System, Shakil Sadan, Patiala-147001
Last date and time for sale of Bid documents, receipt and opening of Tender against Enquiry No. STQ-2012 for Tower Package for the construction of following 400KV lines on turnkey basis:
CORRIGENDUM NO.2

www.mmrda.com, <http://www.eprocure.gov.in/eportal>

MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY



MMRDA

(A Govt. of Maharashtra Undertaking)
C-14 & 15, Bandra-Kurla Complex, Bandra (E),
Mumbai - 400 051. Tel. 26594001-04 Fax 26591264
Email: ce.mmrda@gmail.com
Website : <http://www.mmrda.maharashtra.gov.in>

Sub. : Mumbai Trans Harbour Link Project
Ref. : Letter from Ministry of Environment & Forests dated 25/01/2016.

Ministry of Environment & Forests, Govt has granted coastal regulation zone clearance to the Mumbai Trans Harbour Link Project vide their letter no. F.No.11-65/2012-IA-III dated 25/01/2016. Copies of clearance letter can be downloaded from website of Ministry of Environment & Forests at <http://environmentclearance.nic.in>

No.ED/MTHL/MoEF/Clearance/16

Sd/-

Date: 29/01/2016

Place: Mumbai

Engineer-in-Chief
Engineering Division

CENTRAL PUBLIC WORKS DEPARTMENT NOTICE INVITING E-TENDERS

The Indian **EXPRESS** Sat, 30 January 2016
epaper editions epaper.indianexpress.com

☐ ४ कार्ड्स ☐ बॉटल लॅप (दु. २-साचे.५)
 • कोर्स ३ ते ७ फेब्रु. २०१६ • १५ जागा
 अधिक माहितीसाठी संपर्क: 9920592150

CENTRAL PUBLIC WORKS DEPARTMENT
NOTICE INVITING E-TENDERS

The Executive Engineer, Mumbai Central Division No. II, CPWD, Nirman Sadan, 2nd Floor, Kane Nagar, Antop Hill, Mumbai-37 invites on behalf of President of India online item rate tenders for following works :-

- NIT No.58/EE/MCD II/2015-16 [Recall]**
 Name of Work :- Addition/Alteration to CGH at S.M.Plot, Sector-VII, Antop Hill, Mumbai-37 during 2015-16. SH:Upgradation of Bldg.No.51 (Flat 10 Nos.2063, 2064, 2066, 2073, 2074, 2075, 2084, 2085, 2087, 2089), Estimated Cost :- Rs.9,68,484/-, Earnest Money :- Rs.19,370/-, Period of completion:- 05 (Five) Months, Last Date and Time of Submission of Tender :- 15.00 hrs. of 06/02/2016 and opening on 06/02/2016 at 3.30 PM
 - NIT No.97/EE/MCD II/2015-16**
 Name of Work :- A/R & M/O to CGH at SPL, Kane Nagar, Sector-II & III, Mumbai-37, during 2015-16. SH:Repairs to internal rooms by plastering and painting, Estimated Cost - Rs. 2,260/-, Earnest Money :- Rs.15,645/-, Period of completion:- 03 (Three) Months, Last Date and Time of Submission of Tender :- 15.00 hrs. of 06/02/2016 and opening on 06/02/2016 at 3.30 PM
 - NIT No.98/EE/MCD II/2015-16**
 Name of Work :- Urgent internal repairs and painting of 35 Nos. new allotted vacant and dilapidated quarters of building No.53, 54, 55 and 58 Revenue pool (Income Tax Department), Estimated Cost :- Rs.14,66,365/-, Earnest Money :- Rs.29,327/-, Period of completion:- 06 (Six) Months, Last Date and Time of Submission of Tender :- 15.00 hrs. of 06/02/2016 and opening on 06/02/2016 at 3.30 PM
 - NIT No.99/EE/MCD II/2015-16**
 Name of Work :- Structural repairs to distressed building of CGH, SPL, Kane Nagar in Sector-III, Antop Hill, Mumbai-37 during 2015-16. SH:Minor repairs with external painting to building No.31, Estimated Cost :- Rs.7,41,875/-, Earnest Money :- Rs.14,838/-, Period of completion:- 03 (Three) Months, Last Date and Time of Submission of Tender :- 15.00 hrs. of 06/02/2016 and opening on 06/02/2016 at 3.30 PM
 - NIT No.100/EE/MCD II/2015-16**
 Name of Work :- Special Repair to S.M.Plot, Phase-II, Sector-II, Antop Hill, Mumbai-37 during 2015-16 SH:Repairs to anholes, gully traps and sewerlines building No.1 to 51, Estimated Cost :- Rs.17,69,072/-, Earnest Money :- Rs.35,361/-, Period of completion:- 12 (Twelve) Months, Last Date and Time of Submission of Tender :- 15.00 hrs. of 06/02/2016 and opening on 06/02/2016 at 3.30 PM
 - NIT No.102/EE/MCD II/2015-16**
 Name of Work :-Aesthetic improvement of CGS Colony at M.Plot, Phase-II, Sector-VII, Antop Hill, Mumbai-37 during 2015-16. SH:Development of pump house area by surface dressing, cement concrete, repairs to sluice chamber, pump use near building No.25 (Section A), Estimated Cost :- Rs.7,37,019/-, Earnest Money :- Rs.14,740/-, Period of completion:- 02 (Two) Months, Last Date and Time of Submission of Tender :- 15.00 hrs. of 06/02/2016 and opening on 06/02/2016 at 3.30 PM
 - NIT No.103/EE/MCD II/2015-16**
 Name of Work :-Providing concertina coil over existing grill compound wall, north side of the building No.186,188 & 2, around the garden at Sector-VI, Kane Nagar, Mumbai-37, Estimated Cost :- Rs.6,92,458/-, Earnest Money :- Rs.13,849/-, Period of completion:- 01 (One) Month, Last Date and Time of Submission of Tender :- 15.00 hrs. of 06/02/2016 and opening on 06/02/2016 at 3.30 PM
- tender forms and other details can be obtained from website www.tenderwizard.com/CPWD or www.cpwd.gov.in, www.tenderhome.com and www.eprocure.gov.in.

EX-SERVICEMEN CONTRIBUTORY HEALTH SCHEME (ECHS)

- Application invited for appointment of one 'HELPER' each at ECHS Polyclinic Solapur, Osmanabad Latur and Beed for six months (may extended) on contractual basis.
 - Conversant with Hindi and Marathi. min. qualification SSC.
 - Fixed salary - Rs 8000 - pm.
 - Send application with CV by E-mail/ Registered Post or through ECHS Polyclinic by 10 Feb 2016 to undermentioned address.
- Contact 0241-2321233 (working hours) (Excluding Sundays and Gazzated Holidays)
 ECHS Cell, Station Headquarters
 PO : Camp, Jamkhed Road, Ahmednagar-414002
 Contact No: 0241-2323565, 2321233
 E-mail: echscellstnhqnagar@yahoo.com



मुंबई महानगर प्रदेश विकास प्राधिकरण
 (महाराष्ट्र शासन अंगिकृत)

सी-१४ व १५, वाई-कुर्ना संयुक्त, वाई (पूर्व), मुंबई-४०० ०५१
 दूरध्वनी : २६५९४००१-०४ फॅक्स : २६५९५२३४
 ई-मेल : ce.mmirda@gmail.com
 वेबसाईट : <https://www.mmirda.maharashtra.gov.in>

विषय : मुंबई पारबंदर प्रकल्प
 संदर्भ : केंद्रीय पर्यावरण विभागाचे दिनांक २५/०१/२०१६ रोजीचे पत्र
 मुंबई पारबंदर प्रकल्पास केंद्रीय पर्यावरण व वने विभागाने पत्र क्र. F.No.11-65/2012-IA-III दिनांक २५/०१/२०१६ अन्वये सागरी नियंत्रण क्षेत्र विषयक (CRZ) मान्यता दिलेली आहे. सदर पत्राची प्रत केंद्रीय पर्यावरण व वन विभागाच्या <http://environmentclearance.nic.in> या सांकेतिक स्थळावर उपलब्ध आहे.
 क्र.अभि/मुं.प्रा.प्र/के.प.वि/मान्यता/१६
 दिनांक : २९/०१/२०१६
 स्थळ : मुंबई

सहो/-
 प्रमुख
 अभियांत्रिकी विभाग



शुद्धिपत्रक- २

शहर आणि औद्योगिक विकास महामंडळ (महाराष्ट्र) मर्यादित
 सिडको नवी मुंबई प्रकल्पग्रस्तांसाठी UPSC (Civil Services) - २०१७ स्पर्धा परीक्षेच्या तयारी कारता दिल्ली येथील नामवंत कोचिंग इन्स्टिट्यूटमध्ये नि:शुल्क कोचिंग मूळ जाहिरात दिनांक - २२.१२.२०१५, शुद्धिपत्रक-१ - ०९.०१.२०१६ सदरील बदल बाटी. पुणे यांनी कळविला आहे.
 सिडको नवी मुंबई प्रकल्पग्रस्तांसाठी कौशल्यवृद्धी कार्यक्रम सिडकोतारा अंतर्गत पात्र प्रकल्पग्रस्त पदवीधरांसाठी दिल्ली येथील नामवंत कोचिंग इन्स्टिट्यूटमध्ये (बाजीराम एंड रवी, अल्टरनेटिव्ह लर्निंग सिस्टीम प्रा.ली., श्रीराम आय.ए.एस.) UPSC Civil Services-2017 - Preliminary and Mains या दोन्ही स्पर्धा परीक्षा पूर्व तयारीसाठी उमेदवारांना सुरुसकृत (Sponsor) करण्यात येणार आहे. सदर नामवंत कोचिंग इन्स्टिट्यूटमध्ये प्रवेशपरीक्षा COMMON ENTRANCE TEST (CIDCO-DELHI-CET-2017) बाटी, पुणे च्या माध्यमाने देण्यात येईल, तरी त्यासाठी ऑनलाईन अर्ज मागविण्यात येत आहे.
 ऑनलाईनद्वारे अर्ज स्विकारण्याची अंतिम तारीख दि. ११ मार्च, २०१६
 ई- प्रवेश पत्र (Admit Card) मिळण्याची तारीख दि. १९ मार्च, २०१६
 CIDCO-DELHI-CET-2016 परीक्षेची तारीख दि. २७ मार्च, २०१६
 ऑनलाईन अर्ज करण्यासाठी <http://barti.maharashtra.gov.in> > NOTICEBOARD > CIDCO-DELHI-CET-2017 वर क्लिक करा.
 अधिक माहितीसाठी संपर्क - <http://cidcopap.org> कॉलसेंटर ६१०५ ४४५५, ६१०४५८०३, ६१०४५८००
 व्यवस्थापक (पुनर्वसन)
 CIN - U99999 MH 1979 SGC-014574
www.cidco.maharashtra.gov.in

www.Larsentoubro.com

Registered Office: L&T

EXTRACT OF STATE FOR THE QUARTER

Particulars	
1	Total Income from Operations (net)
2	Net Profit after tax, minority interest of associates (before extraordinary items)
3	Net Profit after tax, minority interest of associates (after extraordinary items)
4	Equity share capital
5	Reserves (excluding revaluation Reserve) Balance Sheet of previous year
6	Earnings per share of ₹ 2/- each (not annualised): (a) Basic EPS (₹) (b) Diluted EPS (₹)
7	Earnings per share of ₹ 2/- each (not annualised): (a) Basic EPS (₹) (b) Diluted EPS (₹)

Notes:
 (i) The Company reports consolidated financial results in accordance with Regulation 33 of the SEBI (Listing Regulations) 2015. The results are available on the Company's website (www.nseindia.com) and NSE (www.nseindia.com) for the nine months ended December 31, 2015.

Particulars	
Total Income from Operations (net)	
Profit before tax	
Profit after tax	

(ii) The above is an extract of the Quarterly Financial Results as per Regulation 33 of the SEBI (Listing Regulations) 2015 and on the Company's website (www.nseindia.com) and NSE (www.nseindia.com) for the nine months ended December 31, 2015.

(iii) The above extract is based on results in newspapers with advertisement dated March 31, 2015 added to facilitate comparison.

Mumbai
 January 29, 2016

MUNICIPAL CORPORATION OF GREATER MUMBAI
TREE AUTHORITY

Office of the Supdt. of Gardens
Veer mata Jijabai Bhosale Udyan,
Penguin Building, 2nd Floor
Dr. Ambedkar Road, Byculla (East),
Mumbai-400 027.

- 217

To,
Additional Metropolitan Commissioner (MMRDA)
Bandra - Kurla Complex,
Bandra (E), Mumbai - 400051

Prop
DySG/C/27 /B/Gem/SR/LP/OD/MC
Date 24/12/2020

Sub : Permission for Removal Of Trees Coming In The Porposed Construction
Of Mumbai Line Project (Package - 1) - 10.380 km Long Bridge Section
(CH-0+000-CH-10+380) Across The Mumbai Bay Including Sewri In
'F/South' Ward.

Sir/ Madam,

Please refer to your letter No. MMRDA/MTHL-PIU/L&T-IHI/Tree Proposal-Pkg-1/107/07-2018
dt. 18.06.2018 for Permission for Removal Of Trees Coming In The Porposed Construction Of
Mumbai Line Project (Package - 1) - 10.380 km Long Bridge Section (CH-0+000-CH-10+380)
Across The Mumbai Bay Including Sewri In 'F/South' Ward. Mumbai. has been considered by the Tree
Authority under Section 8(3) of The Maharashtra (Urban Areas) Protection & Preservation of Trees Act
1975, as modified up to January 2018.

Hence, You are hereby directed to plant 840 nos trees in lieu of **Cutting 420** (Four Hundred
Twenty) trees (Tree no.- 19, 22 to 25, 34, 35, 39, 40, 44, 45, 51, 52, 57, 58, 61, 63, 67, 71, 72, 74, 75,
78, 80 to 82, 87, 91, 92, 101, 104, 106, 108, 110 to 112, 113, 118, 121 to 124, 128, 130, 137, 140, 141,
143 to 152, 154 to 159, 161 to 165, 167 to 177, 179 to 186, 188 to 196, 199, 201 to 205, 207 to 230,
232 to 234, 236, 238, 239, 241, 242, 244, 245, 249, 250, 253, 256 to 261, 267, 269, 272, 274 to 290,
292, 293, 295 to 300, 302, 307 to 311, 314, 319, 321, 324, 325, 327, 328, 330 to 333, 336 to 342, 345,
347, 350 to 360, 363 to 367, 370 to 381, 384, 385, 389, 391, 391A, 392, 396, 399, 431, 432, 435, 443,
448, 450, 451, 458, 459, 461, 462, 463, 465, 466, 467, 469 to 472, 477, 478, 484 to 487, 493, 499, 502,
504 to 509, 517, 521, 524 to 538, 541 to 543, 545, 547, 549 to 551, 553, 557, 561, 563 to 565, 568,
570, 575, 579, 580, 584, 591, 595, 609, 618 to 620, 623 to 626, 629, 630, 633, 634, 636, 666, 668, 671,
672, 674 to 676, 678, 679, 683, 699, 704, 705, 709, 710, 713, 716, 719, 766, 768, 779, 781, 784, 785,
787, 790, 793, 833, 842, 913, 916, 918, 920, 921, 928, 929, 934, 936, 941, 942, 947 to 949, 952, 955,
960, 962 to 965, 976, 979, 981, 986, 988, 989, 996, 997, 1001, 1007 to 1009, 1011, 1014, 1023, 1046,
1061 to 1064, 1066, 1072, 1073, 1079, 1082 to 1084, 1090, 1094, 1095, 1097, 1132, 1137 to 1140,
1142 to 1152, 1154, 1158,) within 15 days from the execution of tree cutting, **Transplant 526** (Five
Hundred Twenty Six) trees (Tree no.- 04, 33, 36 to 38, 41 to 43, 46 to 50, 53 to 56, 59, 60, 62, 64 to 66,
68 to 70, 73, 76, 77, 79, 83 to 86, 88 to 90, 93 to 100, 102, 103, 105, 107, 109, 112A, 114 to 117, 119,
120, 125 to 127, 129, 131 to 136, 138, 139, 142, 153, 160, 166, 178, 187, 197, 198, 200, 206, 231, 235,
237, 240, 243, 246 to 248, 251, 252, 254, 255, 262 to 266, 268, 270, 271, 273, 291, 294, 301, 303 to
306, 312, 313, 315 to 318, 320, 322, 323, 326, 329, 334, 335, 343, 344, 346, 348, 349, 361, 362, 368,
369, 382, 383, 386 to 388, 390, 393 to 395, 397, 398, 40 to 402, 481, 482, 491, 492, 494 to 498, 500,
501, 503, 510 to 516, 518 to 520, 522, 523, 539, 540, 544, 546, 548, 552, 554 to 556, 558 to 560m,
562, 566, 567, 569, 571 to 574, 576 to 578, 581 to 583, 585 to 590, 592 to 594, 608, 610 to 612, 614,
615, 621, 622, 627, 628, 631, 632, 635, 663 to 665, 667, 669, 670, 673, 677, 680, 681, 682, 684 to 693,
693A, 694 to 698, 700 to 703, 706 to 708, 711, 712, 714, 715, 716A, 716B, 717, 718, 720 to 765,
765A, 767, 769 to 778, 780, 782, 783, 786, 788, 789, 791, 792, 794 to 800, 800A, 801 to 825, 825A,
826, 826A, 827 to 832, 834 to 841, 843 to 848, 911, 911A, 912, 914, 915, 917, 919, 922 to 927, 930 to
933, 935, 937 to 940, 943 to 946, 950, 951, 953, 954, 956, 957, 958, 959, 961, 966, 967, 968, 969, 970,
971, 972, 973, 974, 975, 977, 978, 980, 982, 983, 984, 985, 987, 990, 991, 992, 993, 994, 995, 998,
999, 1000, 1002, 1003, 1004, 1005, 1005A, 1006, 1010, 1012, 1013, 1015, 1016, 1017, 1018, 1019,
1020, 1021, 1022, 1024, 1025, 1026, 1027, 1028, 1029, 1030, 1031, 1032, 1033, 1034, 1035, 1036,
1037, 1038, 1039, 1040, 1041, 1042, 1043, 1044, 1045, 1047, 1048, 1049, 1050, 1051, 1052, 1053,
1054, 1055, 1056, 1057, 1058, 1059, 1060, 1065, 1067, 1068, 1069, 1070, 1071, 1074, 1075, 1076,
1077, 1078, 1080, 1081, 1085, 1086, 1087, 1088, 1089, 1091, 1092, 1093, 1096, 1098, 1133, 1134,
1135, 1136, 1141, 1153, 1155, 1156, 1157,) is sanctioned by the Tree Authority's vide its **Resolution**
no. 05 dt. 02.12.2020.

As per the provision under Section 8 (3) (a) of the said Act, you are hereby directed that no tree
shall be cut/ transplant until fifteen days (15) after the permission is given by the Tree Authority. And
also you are requested to inform the Jr. Tree officer / Hort. Asstt. of concern ward about the date and
time of cutting of trees as per permission, so that the representative of this office will remain present to
ensure the work carried out properly Jr. Tree office 'F/South' ward whose contact no is 9930354292, &
Hort. Asstt. F/South Ward 9405583650,

You are further requested to execute the work of cutting / Transplanting of trees phase wise / a and when required.

The remaining **226** (Two Hundred Twenty Six) trees (01, 02, 03, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20, 21, 26, 27, 28, 29, 30, 31, 32, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 433, 434, 436, 437, 438, 439, 440, 441, 442, 444, 445, 446, 447, 449, 452, 453, 454, 455, 456, 457, 460, 464, 468, 473, 474, 475, 476, 479, 480, 483, 488, 489, 490, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 613, 616, 617, 637, 638, 638A, 638B, 639 to 662, 849 to 910, 1099; 1101, 1101A, 1100, 1102, 1103, 1104 to 1128, 1129, 1130, 1131) shall be **Retained** as it is , as per plan attached.

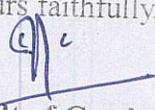
Whoever fells any tree or causes any tree to be felled in contraventions of the provisions of the Act or without reasonable excuse fails to comply with any order issued or condition imposed by the Tree Officer or the Tree Authority or voluntarily obstructs any member of the Tree Authority or the Tree Officer or any Officers and Servants subordinate to him in the discharge of their functions under this Act, shall, on conviction, be punished with the fine of not less than one thousand rupees which may extend up to five thousand rupees for every offense and also with imprisonment for a term of not less than one week. Which may extent up to one year. The felling or causing of felling of each tree without the permission of the Tree Authority shall constitute a separate offense.

As per provision under section 19 (b) you are directed to plant trees in open spaces as well as R.G. Area as per the norms of Tree Authority before getting occupation /completion certificate of the constructed propose work.

As per direction of the Tree Authority, you are hereby directed to submit the photographs taken while transplanting of trees and the C.D. of the transplantation of the trees, you are also requested to plant indigenous variety of trees having circumference of 6" above and height of 10'-12' above. The list of indigenous variety of trees is enclosed herewith for your ready reference and compliance.

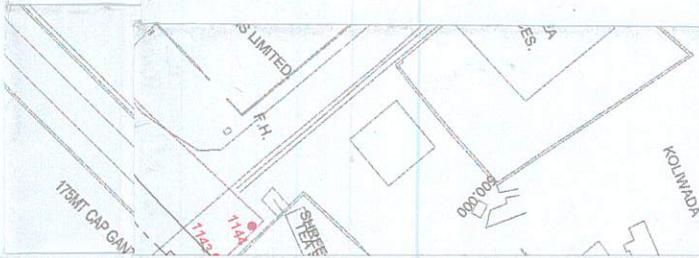
Thanking you.

Yours faithfully,


Supdt. of Gardens
& Tree Officer

The permission for Cutting of 420 trees
 (Tree Sr.no. As per Permission enclosed)
 & Tree Branches trimming of.....trees (Tree Sr.no
 for
 Transplanting of 526 trees (Tree sr.no.
As per Permission enclosed)
 and for Retaining of 226 tree (Tree Sp.no.
As per Permission enclosed)
 is granted vide Tree Authority resolution no.....
dt.....

(Signature)
 Supdt. of Gardens
 & Tree Officer



CT

WRI INTERCHANGE