

No. MMRDA/MTHL-PIU/JICA/QPR-23/ 1827 /2023

Date: 8th February 2022

To,
Chief Representative, JICA,
Mumbai Trans Harbour Link Project (I)
16th Floor, Hindustan Times House,
18-20, Kasturba Gandhi Marge, New Delhi-110-001

Kind Attn: Mr. SAITO Mitsunori,

Sub : Mumbai Trans Harbour Link Project (I) (ID-P255)
- Quarterly Progress Report (QPR) No. 23 for Oct. 2022 to
December 2022.

Sir,


The loan agreement for the Official Development Assistance (ODA) loan for the Mumbai Trans Harbour Link Project (I) is signed between Mumbai Trans Harbour Link Project (I) and Mumbai Metropolitan Region Development Authority (MMRDA) on 31st March 2017 & 29th March 2020 with MMRDA as a direct borrower of the loan.

The Quarterly Progress Report (QPR) No. 23 for the Mumbai Trans Harbour Link Project (I) for the period of October 2022 to December 2022 is enclosed herewith for information please.

Thanking you.

Yours faithfully,

Encl.: QPR-23 (October 2022 to December 2022)


(S. A. Wandhekar)
Engineer- In- Chief



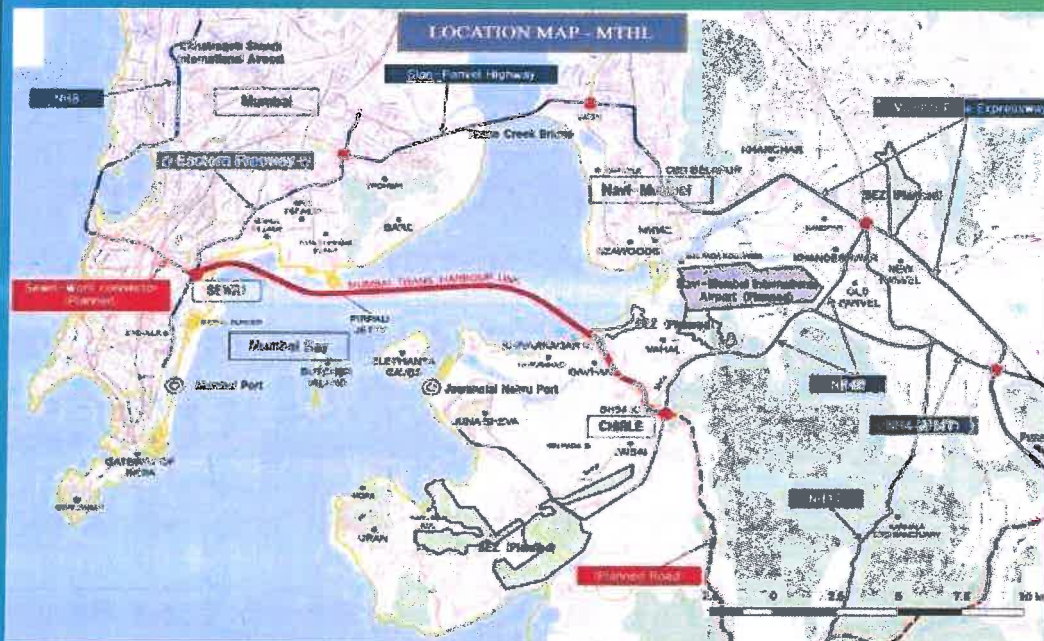
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MMRDA

Mumbai Metropolitan Region Development Authority

Mumbai Trans Harbour Link Project

Quarterly Progress Report - No. 23

(From 1st Oct 2022 to 31st Dec 2022)



Mumbai Trans Harbour Link Project
Quarterly Progress Report No. 23
1st Oct 2022 to 31st Dec 2022
Loan Agreement No. ID-P255 (Tranche-I) & ID-P283 (Tranche-II)

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:	Engineer-In-Chief 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 Mar 2017)
	Tranche-II:	66,909 million Japanese YEN (JPY) (Loan Agreement signed on 27 th Mar 2020)
Terms and Conditions of JICA ODA Loan (Tranche-1)	Repayment Period:	30 years, including 10 years of the grace period.



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DOCUMENT VERIFICATION AND REVISION RECORD

PROJECT NAME		Mumbai Trans Harbour Link Project			
DOC NO.	23	DATE OF ISSUE	16/01/2023		
DOC TITLE	Quarterly Progress Report No. 23				
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
R0	30/07/2021	Quarterly Progress Report No.17 (Apr-Jun 21)	Prashant B	Mr. Som Ghosh	Dr Robin Sham
R0	11/11/2021	Quarterly Progress Report No.18 (Jul - Sep 21)	Prashant B	Mr. Som Ghosh	Dr Robin Sham
R0	17/01/2022	Quarterly Progress Report No.19 (Oct-Dec 21)	Prashant B	Mr. Som Ghosh	Dr Robin Sham
R0	22/04/2022	Quarterly Progress Report No.20 (Jan - Mar 22)	Prashant B	Mr. Som Ghosh	Dr Robin Sham
R0	12/07/2022	Quarterly Progress Report No.21 (Apr-Jun 22)	Prashant B	Mr. Som Ghosh	Dr Robin Sham
R0	18/10/2022	Quarterly Progress Report No.22 (Jul-Sep 22)	Prashant B	Mrs. Mayil. K	Dr Robin Sham
R0	10/01/2023	Quarterly Progress Report No.23 (Oct-Dec 22)	Mrs. Mayil.	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 Action 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



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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:

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) 	(P/R and PCR) Actual: No Noise Barriers & View Barriers



Items	Original	Actual
	<ul style="list-style-type: none"> Road Furniture and roadside facilities (Traffic Signs and Pavement Marking, Traffic Safety Devices, Crash Barrier, Drainage Structures, Noise Barriers, View Barriers) 	
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/R and PCR)
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/R and PCR)



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 Dec 2022
1) Completion of Land Acquisition and Resettlement	Mar 2019	Dec 2022
2) Consulting Services		
a) Selection of Consultant	May – Dec 2016	May – Dec 2016
b) Consultancy Works	Dec 2016 – Sep 2024	Dec 2016 – Sep 2024
3) Selection of Contractor		
Package-1, Package-2 & Package-3 (Civil)		
a) Pre-Qualification Process	May – Dec 2016	May – Dec 2016
b) Main Bidding	Jan– Dec 2017	Jan – Dec 2017
c) JICA's Concurrence of Contract	Feb-2018	Feb-2018
Package-4 (ITS)		
a) Pre-Qualification Process	Single Stage Bidding as concurred by JICA	
b) Main Bidding	June 2019 – Sep 2020	Jan 2021 – Dec 2021
4) Civil Construction		
Package-1 and Package-2	Mar 2018 – Sep 2022	Mar 2018–Sep 2023 (Extended)
Package-3	Mar 2018 – Sep 2021	Mar 2018 – Mar 2023 (Extended)
Package-4	Oct 2020 – Sep 2022	June 2022 – Aug 2023
5) Defect Liability Period		
Package-1 and Package-2	Oct 2022 – Sep 2024	Oct 2023 – Sep 2025
Package-3	Oct 2021 – Sep 2023	Apr 2023 – Mar 2025
Package-4	Oct 2022 – Sep 2024	Sep 2023 – Aug 2025
6) Commencement of Toll Collection	Sep 2022	Oct 2023
7) Selection of O&M Organization	Oct 2020 – Sep 2021	Oct 2022 – Sep 2023

Attachment 6, 7 & 8: Package wise construction schedules (progress) updated at the end of 3rd Quarter (Oct – Nov - Dec 2022).



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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.

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	37,249	37,249	0	43,708	43,708	0	112,426	112,426	0
Package-2	29,247	29,247	0	33,283	33,283	0	86,494	86,494	0
Package-3	804	804	0	8,360	8,360	0	15,184	15,184	0
Package-4 (ITS)	0	0	0	3,770	3,770	0	6,484	6,484	0
Package-5 (Geotechnical Investigation)	0	0	0	147	0	147	253	0	253
Dispute Boards (Package-1, 2, 3 & 4)	0	0	0	58	58	0	99	99	0
Price Escalation	390	390	0	403	403	0	1,082	1,082	0
Physical Contingency	5,077	5,077	0	6,730	6,719	11	16,652	16,633	19
Consulting Services	1,611	1,611	0	1,423	1,423	0	4,058	4,058	0
Land Acquisition*	0	0	0	10,495	0	10,495	18,052	0	18,052
Administration Cost	0	0	0	4,548	0	4,548	7,823	0	7,823
GST	0	0	0	16,935	0	16,935	29,128	0	29,128
Import Tax	0	0	0	12,691	0	12,691	21,830	0	21,830
Interest during construction	3,349	0	3,349	0	0	0	3,349	0	3,349
Front End Fee	485	0	485	0	0	0	485	0	485
Total	78,211	74,377	3,833	142,550	97,723	44,828	323,396	242,459	80,938



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	37,249	37,249	0	43,708	43,708	0	112,426	112,426	0
Package-2	29,247	29,247	0	33,283	33,283	0	86,494	86,494	0
Package-3	804	804	0	8,360	8,360	0	15,184	15,184	0
Package-4 (ITS)	0	0	0	3,770	3,770	0	6,484	6,484	0
Package-5 (Geotechnical Investigation)	0	0	0	147	0	147	253	0	253
Dispute Boards (Package-1, 2, 3 & 4)	0	0	0	58	58	0	99	99	0
Price Escalation	390	390	0	403	403	0	1,082	1,082	0
Physical Contingency	5,077	5,077	0	6,730	6,719	11	16,652	16,633	19
Consulting Services	1,611	1,611	0	1,423	1,423	0	4,058	4,058	0
Land Acquisition*	0	0	0	10,495	0	10,495	18,052	0	18,052
Administration Cost	0	0	0	4,548	0	4,548	7,823	0	7,823
GST	0	0	0	16,935	0	16,935	29,128	0	29,128
Import Tax	0	0	0	12,691	0	12,691	21,830	0	21,830
Interest during construction	3,349	0	3,349	0	0	0	3,349	0	3,349
Front End Fee	485	0	485	0	0	0	485	0	485
Total	78,211	74,377	3,833	142,550	97,723	44,828	323,396	242,459	80,938

Note - 1. Exchange Rate: US\$1=Rs. 78.1, US\$1=JPY 134.0, Rs.1 = JPY 1.72

2. Price Escalation (a) Foreign Currency Portion: 2.06% p.a.

(b) Local Currency Portion: 4.50% p.a.

3. Physical Contingency: 7.5%

4. Base Year for Cost Estimation: July 2022



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	33,964	33,964	-	42,148	42,148		97,137	97,137	
Package-2	25,282	25,282	-	29,309	29,309		71,059	71,059	
Package-3	672	672	-	7,803	7,803		12,840	12,840	
Package-4 (ITS)	-		-	-			-		
Package-5 (Geotechnical Investigation)	-			196		196	337		337
Dispute Boards (Package-1, 2, 3 & 4)	-			-			-		-
Price Escalation	-			-			-	-	-
Physical Contingency	-			-			-		-
Consulting Services	1,539	1,539		653	653		1,539	1,539	
Land Acquisition*	-			7,601		7,601	13,073		13,073
Administration Cost	-			3,630		3,630	6,244		6,244
GST	-			16,592		16,592	28,538		28,538
Import Tax	-			-			-		-
Interest during construction	339		339				339		339
Front End Fee	-			1,869		1,869	3,215		3,215
Total	61,796	61,457	339	109,801	79,914	29,888	234,321	182,576	51,746

- Note -**
- Exchange Rate: Rs.1 = JPY 1.72 for MMRDA Portion only
 - Price Escalation (a) Foreign Currency Portion: 2.06% p.a.
(b) Local Currency Portion: 4.50% p.a.
 - Physical Contingency: 7.5%
 - Base Year for Cost Estimation: July 2022



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 2015	82	0	0	0	0	82
FY 2016	247	0	0	0	0	247
FY 2017	22,806	10,041	0	0	10,041	12,765
FY 2018	39,813	23,631	0	0	23,631	16,182
FY 2019	41,797	33,549	0	0	33,549	8,248
FY 2020	35,348	26,354	0	0	26,354	8,994
FY 2021	63,583	48,460	0	0	48,460	15,123
FY 2022	50,198	2,759	39,911	0	42,670	7,528
FY 2023	46,007	0	26,998	11,247	38,245	7,762
FY 2024	15,494	0	0	12,907	12,907	2,587
FY 2025	8,022	0	0	6,601	6,601	1,421
Total	323,396	144,794	66,909	30,755	242,458	80,938

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	53,977	43,204	-	-	43,204	10,773
FY 2022	67,562	13,222	40,324	-	53,546	14,016
FY 2023						
FY 2024						
Total	234,322	142,252	40,324	-	182,576	51,746

(Note) 1. Exchange Rate used: Rs.1 = JPY 1.72 for MMRDA Portion only

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



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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 Jan 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 Feb 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 Apr 2012. Employment of consultants should be implemented in accordance with "Guidelines of Employment of Consultant under Japanese ODA Loans", dated in Apr 2012. "Principles of Procurement under the Project" is attached for a brief explanation of the above Guidelines.

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

There is no change made in the 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



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2.4.2.2 Performance

Consultant's Progress:

October 2022:

- i) GC scrutinized & certified the following invoices claimed by the Contractors:
- ii) Package-1: IPC-59 -20% and IPC-60 -80% Ad-hoc under certification
- iii) Package-2: IPC-55 20% is under certification.
- iv) Package-3: IPC-50 20% is under certification.
- v) Package-4: GC certified 5% of mobilization advance.

November 2022:

- vi) GC scrutinized & certified the following invoices claimed by the Contractors:
- vii) Package-1: IPC-59 100% certified and IPC-60 80% Ad-hoc certified by GC.
- viii) Package-2: IPC-55 80% Ad-hoc Certified & IPC-55-20% is under certification.
- ix) Package-3: IPC-50 20% is under certification.

December 2022:

- x) GC scrutinized & certified the following invoices claimed by the Contractors:
- xi) Package-1: IPC-60 100% certified & IPC-61 80% Ad-hoc is certified.
- xii) Package-2: IPC-55 100% certified and IPC-56 80% Ad-hoc is certified.
- xiii) Package-3: IPC-50 100% certified and IPC-51 80% Ad-hoc is certified.
- xiv) Package-4: GC certified 5% of mobilization advance. Total 10% of mobilization certified by GC.

GC has prepared and submitted a total reimbursement claim of 182,575.85 million JPY to MMRDA / JICA in Dec 2022. (Please refer Annexure-2)

100% of the Technical Design Modules across all the 3 Packages have been given "NONO" by the GC & Package design submission is in progress.

100% of the Construction (GFC – Good for Construction) Design Modules across all the 3 Packages have been given "NONO" by the GC.

Package-1 – 100%, Package-2 – 100%, Package-3 -100%

Contractor's Progress:

Package-1 Physical Progress till 31st December 2022

S. No	Activity	Total Scope	Unit	Cumulative Achieved Works	% of Work done Against the Total Scope	Remarks
1	Permanent Bridge Works - Land/ Interchange Zone					
1.1	Piles	523	No.	523	100.00%	
1.2	Pile Caps	158	No.	157	99.37%	
1.3	Piers	228	No.	224	98.35%	
1.4	Pier Caps	228	No.	207	90.79%	
2	Permanent Bridge Works - Intertidal Zone					
2.1	Piles	312	No.	312	100.00%	
2.2	Pile Caps	75	No.	75	100.00%	
2.3	Piers	146	No.	146	100.00%	
2.4	Pier Caps	146	No.	146	100.00%	
3	Permanent Bridge Works - Marine Zone					
3.1	Piles	403	No.	403	100.00%	
3.2	Pile Caps	80	No.	80	100.00%	
3.3	Piers	162	No.	153	94.44%	
3.4	Pier Caps	162	No.	146	90.12%	
4	Permanent Bridge Works - Total					
4.1	Piles	1238	No.	1238	100.00%	
4.2	Pile Caps	313	No.	312	99.68%	
4.3	Piers	536	No.	523	97.57%	
4.4	Pier Caps	536	No.	499	93.10%	
5	Precast Segments					
5.1	Segment Casting	6713	No.	6184	92.12%	
5.2	Segment (Span) Erection+ Cast-in-Situ Slab	478	No.	368	76.99%	
6	OSD Structural Steel					
6.1	Fabrication	53703	MT	53703	100.00%	
6.2	Assembly (Large Blocks)	53703	MT	32629	60.76%	
6.3	OSD Span Erection	38	No.	19	50.00%	
7	Crash Barrier					
7.1	Crash Barrier - Median	20405	Rmt	5153	24.87%	
7.2	Crash Barrier - Outer	31077	Rmt	3981	12.80%	



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Package-2 Physical Progress till 31st Dec 2022

S. No	Activity	Total Scope	Unit	Cumulative Achieved Works	% of Work done Against the Total Scope	Remarks
1 Permanent Bridge Works - Land/ Interchange Zone						
1.1	Open Foundation	113	No.	113	100.00%	
1.2	Piers	119	No.	119	100.00%	
1.3	Pier Caps	105	No.	105	100.00%	
1.4	Portal Beams- Land	6	No.	6	100.00%	
1.5	Pier Head Segments -Land	42	No.	42	100.00%	
2 Permanent Bridge Works - Intertidal & CRZ Zone						
2.1	Piles	280	No.	280	100.00%	
2.2	Pile Caps	72	No.	72	100.00%	
2.3	Piers	72	No.	72	100.00%	
2.4	Pier Caps	18	No.	18	100.00%	
2.5	Pier Head Segments	54	No.	54	100.00%	
3 Permanent Bridge Works - Marine Zone						
3.1	Piles	504	No.	504	100.00%	
3.2	Pile Caps	120	No.	120	100.00%	
3.3	Piers	120	No.	120	100.00%	
3.4	Pier Caps	48	No.	44	91.67%	
3.5	Pier Head Segments	74	No.	56	75.68%	
4 Permanent Bridge Works - Total						
4.1	Open Foundation	113	No.	113	100.00%	
4.2	Piles	784	No.	784	100.00%	
4.3	Pile Caps	192	No.	192	100.00%	
4.4	Piers	311	No.	311	100.00%	
4.5	Pier Caps/ Portal Beams	177	No.	173	97.74%	
4.6	Pier Head Segments	170	No.	152	89.41%	
5 Precast Segments						
5.1	Segment Casting	3142	No.	2929	93.22%	
5.2	Segment (Span) Erection + Cast-in-Situ Slabs	272	No.	203	74.63%	
6 OSD Structural Steel						
6.1	Fabrication	34726	MT	34,726	100%	
6.2	Assembly (for Large Block)	34726	MT	9863	28.40%	
6.3	OSD Span Erection	32	No.	14	43.75%	
7 Crash Barrier						
7.1	Crash Barrier - Median	15614	Rmt	3498	22.40%	
7.2	Crash Barrier - Outer	20945	Rmt	2536	12.11%	



Package-3 Physical Progress till 31st Dec 2022

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	221	No.	221	100.00%	
1.2	Piles	24	No.	24	100.00%	
1.3	Pile Caps	4	No.	4	100.00%	
1.4	Piers	242	No.	242	100.00%	
1.5	Pier Caps	189	No.	187	98.94%	
1.6	Segment Casting	834	No.	834	100.00%	
1.7	Segment (Span) Erection	59	No.	53	89.83%	
1.8	Cast in-situ Slab	108	No.	97	89.83%	
1.9	Rail Overbridge (ROB) Span	20	No.	12	60.00%	
1.10	Crash Barrier – Median	5500	Rmt	1603	29.15%	
1.11	Crash Barrier - Outer	9000	Rmt	5354	41.68%	

Package-4 (ITS) Progress till 31st Dec 2022

1. The Date of Commencement - 27/06/2022.
2. STRABAG Infrastructure & Safety Solution GmbH and STRABAG AG JV has mobilized their resources and commenced with the design & construction activities.
3. Design & Drawings submission is in progress.
4. Geotechnical Investigation for Sub admin building & Service Road is completed.
5. Gahavan main admin building foundation & Column is in progress.

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



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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

S No.	Description	Unit	Oct-Nov-Dec 2022	Cumulative
1	Average Daily Manpower (all Workmen & Staff)	Numbers	4,111	2,759
2	Man-Days Worked	Days	474,824	6,599,459
3	Man-Hours Worked	Hours	3,798,591	56,250,690
4	Accident-Free Man Hours	Hours	4,175,838	4,175,838
5	Fatal Accidents (Reportable)	Incidents (Nos.)	1	6
6	Fatality Cases.	Fatalities (FAT)	1	7
7	Lost Time Injury Incidents (Reportable)	Incidents (Nos.)	0	8
8	Lost Time Injury Cases (Persons Injured)	# Injured Persons	0	10
9	Restricted Work Medical Case	RWMC (#Incidents)	0	0
10	Medical Treatment Cases	MTC (#Incidents)	1	2
11	First Aid Cases.	FAC (#Cases)	18	319
12	Near Miss Incidents.	NMI (#Incidents)	7	130
13	Dangerous Occurrences.	DO (#Numbers)	1	6
14	Reportable Sick Cases (Succumbed due Covid)	Sick (#Persons)	0	2
15	Man-Hours Lost	Hours	48,720	345,296
16	Man-Days Lost	Days	6,090	43,171
17	Reportable Incident Frequency Rate / Million Man Hours	# (FAT+ Injuries)/MMH	1	0.302
18	Reportable Incident Severity Rate / Million Man Hours	Days Lost/MMHr	5,345	767
19	Total Injury Incident Frequency Rate / 1M Man Hours	TIFR	2	0.338
20	Toolbox Talks	Sessions	13,697	1,51,270
21	Safety Walk down Inspections (Joint & CFT)	Numbers	18	245
22	Routine Safety Inspections (Safety Team with Reports)	Numbers	108	4,142
23	Total Observations Raised (Safety)	Numbers	7,119	90,452
24	Health & Hygiene Inspections	Numbers	15	67
25	Total Observations Raised (Health & Hygiene)	Numbers	95	615
26	Training Sessions done for Offices & Sites	Sessions	502	3,579
27	Personnel Attended Training Sessions (Classroom & Site)	Persons	8,821	46,614
28	Contractor Safety Committee Meetings	Numbers	3	39
29	Critical Excavations	Numbers	0	86
30	Pre-employment Medical check-ups	Persons	3,630	40,370
31	Safety Inductions completed	Persons	3,630	45,887
32	Mock drills Conducted	Numbers	3	35
33	Contractor's Internal Audits Conducted	Numbers	3	52



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Package-2 Safety Report

S No.	Description	Unit	Oct-Nov-Dec 2022	Cumulative
1	Average Daily Manpower (all Workmen & Staff)	Numbers	3,537	2,104
2	Man-Days Worked	Days	2,72,497	2,819,610
3	Man-Hours Worked	Hours	2,997,467	31,507,092
4	Accident-Free Man Hours	Hours	2,294,699	2,061,653
5	Fatal Accidents (Reportable)	Incidents (Nos.)	0	0
6	Fatality Cases.	Fatalities (FAT)	0	0
7	Lost Time Injury Incidents (Reportable)	Incidents (Nos.)	2	13
8	Lost Time Injury Cases (Persons Injured)	# Injured Persons	2	13
9	Restricted Work Medical Case	RWMC (#Incidents)	0	6
10	Medical Treatment Cases	MTC (#Incidents)	2	14
11	First Aid Cases.	FAC (#Cases)	16	191
12	Near Miss Incidents.	NMI (#Incidents)	44	394
13	Dangerous Occurrences.	DO (#Numbers)	2	17
14	Reportable Sick Cases (Succumbed due Covid)	Sick (#Persons)	0	3
15	Man-Hours Lost	Hours	1,032	6,680
16	Man-Days Lost	Days	129	835
17	Reportable Incident Frequency Rate / Million Man Hours	# (FAT+ Injuries)/MMH	2	0.413
18	Reportable Incident Severity Rate / Million Man Hours	Days Lost/MMHr	127	27
19	Total Injury Incident Frequency Rate / 1M Man Hours	TIFR	4	1.047
20	Toolbox Talks	Sessions	1,182	13,076
21	Safety Walk down Inspections (Joint & CFT)	Numbers	11	183
22	Routine Safety Inspections (Safety Team with Reports)	Numbers	336	1,932
23	Total Observations Raised (Safety)	Numbers	2,967	25,076
24	Health & Hygiene Inspections	Numbers	0	4
25	Total Observations Raised (Health & Hygiene)	Numbers	0	16
26	Training Sessions done for Offices & Sites	Sessions	209	1,396
27	Personnel Attended Training Sessions (Classroom & Site)	Persons	3,810	26,656
28	Contractor Safety Committee Meetings	Numbers	3	54
29	Critical Excavations	Numbers	0	0
30	Pre-employment Medical check-ups	Persons	1,013	17,930
31	Safety Inductions completed	Persons	1,119	18,371
32	Mock drills Conducted	Numbers	3	45
33	Contractor's Internal Audits Conducted	Numbers	0	0



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Package-3 Safety Report

S No.	Description	Unit	Oct-Nov-Dec 2022	Cumulative
1	Average Daily Manpower (all Workmen & Staff)	Numbers	607	432
2	Man-Days Worked	Days	75,977	869,027
3	Man-Hours Worked	Hours	607,816	6,952,306
4	Accident-Free Man Hours	Hours	607,816	1,144,847
5	Fatal Accidents (Reportable)	Incidents (Nos.)	0	0
6	Fatality Cases.	Fatalities (FAT)	0	0
7	Lost Time Injury Incidents (Reportable)	Incidents (Nos.)	0	3
8	Lost Time Injury Cases (Persons Injured)	# Injured Persons	0	3
9	Restricted Work Medical Case	RWMC (#Incidents)	0	0
10	Medical Treatment Cases	MTC (#Incidents)	0	0
11	First Aid Cases.	FAC (#Cases)	6	130
12	Near Miss Incidents.	NMI (#Incidents)	10	47
13	Dangerous Occurrences.	DO (#Numbers)	0	1
14	Reportable Sick Cases (Succumbed due Covid)	Sick (#Persons)	0	0
15	Man-Hours Lost	Hours	0	2,216
16	Man-Days Lost	Days	0	277
17	Reportable Incident Frequency Rate / Million Man Hours	# (FAT+ Injuries)/MMH	0	0.432
18	Reportable Incident Severity Rate / Million Man Hours	Days Lost/MMHr	0	40
19	Total Injury Incident Frequency Rate / 1M Man Hours	TIFR	0	0
20	Toolbox Talks	Sessions	483	8,673
21	Safety Walk down Inspections (Joint & CFT)	Numbers	12	193
22	Routine Safety Inspections (Safety Team with Reports)	Numbers	60	665
23	Total Observations Raised (Safety)	Numbers	657	1,428
24	Health & Hygiene Inspections	Numbers	6	14
25	Total Observations Raised (Health & Hygiene)	Numbers	26	69
26	Training Sessions done for Offices & Sites	Sessions	66	383
27	Personnel Attended Training Sessions (Classroom & Site)	Persons	1,746	2,754
28	Contractor Safety Committee Meetings	Numbers	3	50
29	Critical Excavations	Numbers	0	9
30	Pre-employment Medical check-ups	Persons	662	11,190
31	Safety Inductions completed	Persons	662	11,247
32	Mock drills Conducted	Numbers	3	44
33	Contractor's Internal Audits Conducted	Numbers	1	13



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Package-4 Safety Report

S No.	Description	Unit	Oct-Nov-Dec 2022	Cumulative
1	Average Daily Manpower (all Workmen & Staff)	Numbers	33	30
2	Man-Days Worked	Days	565	2,593
3	Man-Hours Worked	Hours	20,536	20,744
4	Accident-Free Man Hours	Hours	20,536	20,744
5	Fatal Accidents (Reportable)	Incidents (Nos.)	0	0
6	Fatality Cases.	Fatalities (FAT)	0	0
7	Lost Time Injury Incidents (Reportable)	Incidents (Nos.)	0	0
8	Lost Time Injury Cases (Persons Injured)	# Injured Persons	0	0
9	Restricted Work Medical Case	RWMC (#Incidents)	0	0
10	Medical Treatment Cases	MTC (#Incidents)	0	0
11	First Aid Cases.	FAC (#Cases)	0	0
12	Near Miss Incidents.	NMI (#Incidents)	0	1
13	Dangerous Occurrences.	DO (#Numbers)	0	0
14	Reportable Sick Cases (Succumbed due Covid)	Sick (#Persons)	0	0
15	Man-Hours Lost	Hours	0	0
16	Man-Days Lost	Days	0	0
17	Reportable Incident Frequency Rate / Million Man Hours	# (FAT+ Injuries)/MMH	0	0
18	Reportable Incident Severity Rate / Million Man Hours	Days Lost/MMHr	0	0
19	Total Injury Incident Frequency Rate / 1M Man Hours	TIFR	0	0
20	Toolbox Talks	Sessions	92	144
21	Safety Walk down Inspections (Joint & CFT)	Numbers	0	0
22	Routine Safety Inspections (Safety Team with Reports)	Numbers	0	0
23	Total Observations Raised (Safety)	Numbers	61	70
24	Health & Hygiene Inspections	Numbers	0	0
25	Total Observations Raised (Health & Hygiene)	Numbers	0	0
26	Training Sessions done for Offices & Sites	Sessions	10	8
27	Personnel Attended Training Sessions (Classroom & Site)	Persons	122	140
28	Contractor Safety Committee Meetings	Numbers	2	3
29	Critical Excavations	Numbers	1	0
30	Pre-employment Medical check-ups	Persons	0	0
31	Safety Inductions completed	Persons	42	45
32	Mock drills Conducted	Numbers	0	1
33	Contractor's Internal Audits Conducted	Numbers	0	1



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3.0 BENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS)

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 an adequate budget for engaging the Contractors.</p>	<p>(P/R and PCR)</p> <p>Appropriate Tolling Policy/ Rates finalization is in progress.</p> <p>A single Operation and Maintenance Contractor finalization is in progress.</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. A 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 CRZ Clearance, appropriate measures shall be taken, and necessary budget</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 maintained them throughout the construction phase. • MMRDA appointed Mangroves & Marine



<p>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. • Proposal of extension for CRZ clearance submitted vide reference no MCZMA 2022/08/CR-246/3719 dated 4th Aug-2022. (Please refer Annexure-3)
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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 Nov 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 Dec 2020.</p> <p>Pkg-2: Tree Cutting/ Transplantation permission obtained & completed.</p> <p>Pkg-3: Forest Department issued a concurrence on 19/05/2019. CIDCO's permission for Tree Cutting/ Transplantation obtained on 25th Nov 2019.</p>



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Clearance Required	Approving Authority	Responsible Organization	Obtained by when	Remark /Status
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 108.4379 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.</p> <p>CIDCO has possessed 106.3542 ha of land and handed over to MMRDA, except private land of 2.0837 ha.</p> <p>0.3937 ha land is under acquisition out of balance 2.0837 ha land. CIDCO is planning to acquire the balance ROW land of with the help of Collector, Raigad.</p>

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
<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) ("Guidelines") (Attachment 2-5).</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>
<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</p>	



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Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
<p>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>
<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>	

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Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
<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 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>Environmental Monitoring Plan with the package wise budgeted cost is reported in Attachment 2-3. Environmental Monitoring Results during the construction phase are reported in Attachment 2-4.</p>
<p>k. Long Term Bird Monitoring</p> <p>MMRDA committed to conduct the long-term monitoring of birds and its habitat in Sewri mudflats with the assistance of hired bird expert. During the long-term monitoring, MMRDA will share information and receive advice 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



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Indicators	Original (Year 2015)	Target (Year 2024) 2 Years After Commercial Operation
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:

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. 22 is submitted for the period of 1st July to 30th Sep 2022.

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.



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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)



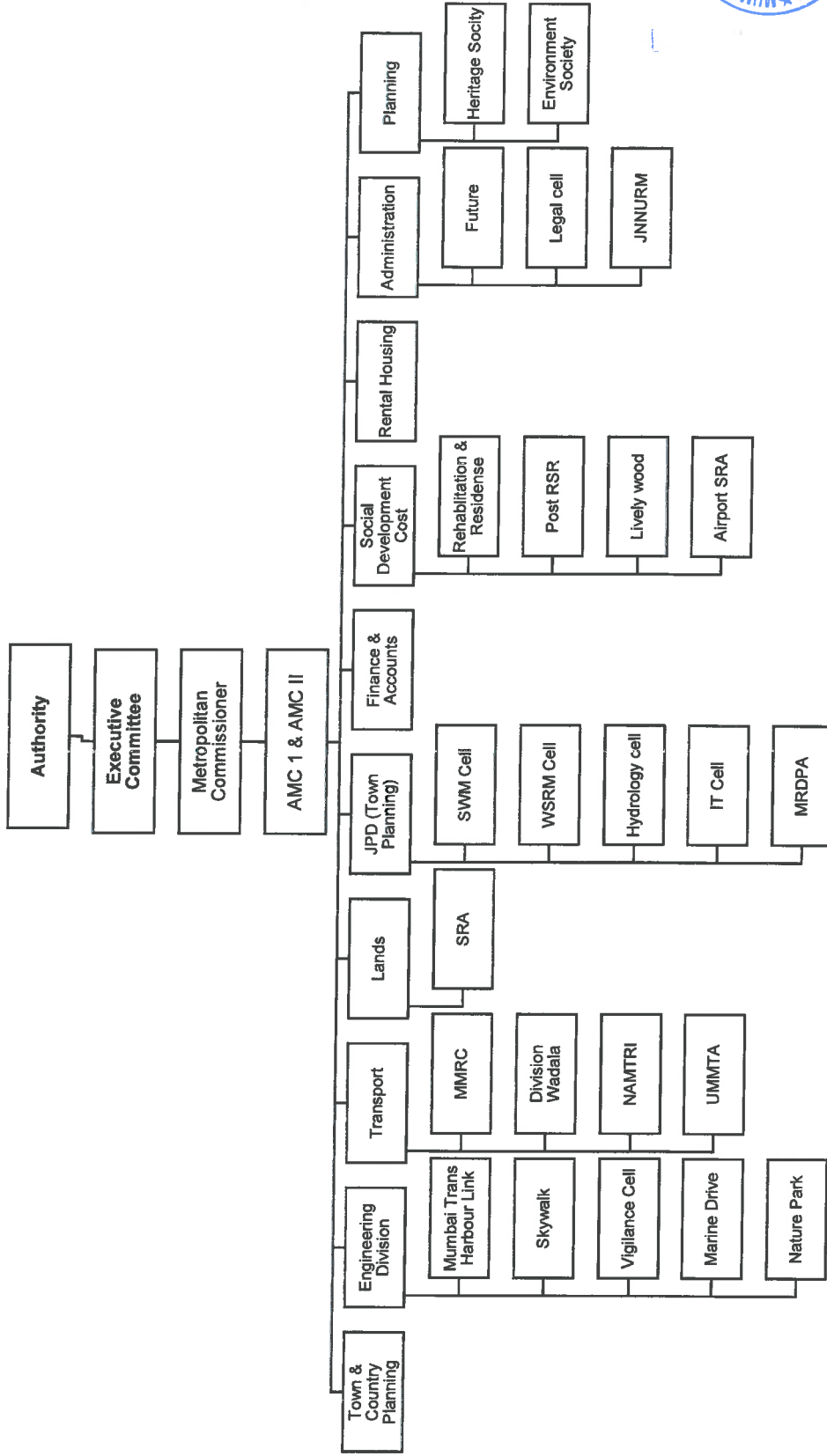
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Attachment 1- MMRDA & PIU Organization Chart



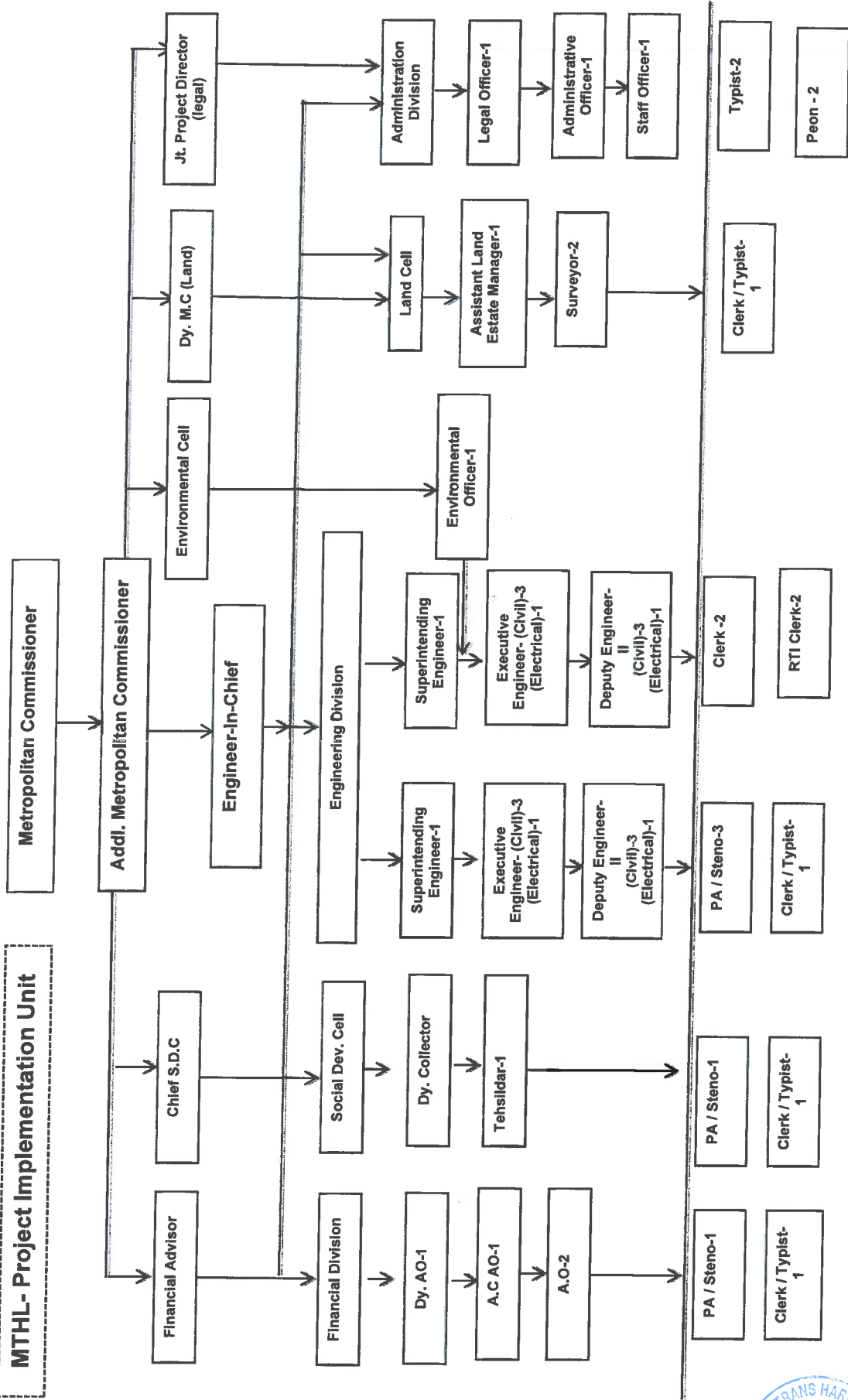
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MMRDA Organization chart



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MTHL- Project Implementation Unit



1st Oct to 31st Dec 2022



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Attachment 2- Environmental & Social Impacts

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



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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)	P2 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	P1 received Consents CTE & CTO from MPCB and they are following MPCB frequency in addition to frequency set by Environment Expert from CC. 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 CS 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 obtained 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.
												PM ₁₀ : 100 / 100µg/m ³	
												PM _{2.5} : 60 / 60µg/m ³	
												O ₃ : 180 / 180µg/m ³	
												CO: 0.4 / 0.4mg/m ³	
	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, intertidal, intertidal and marine. The disposal location is at MCGM approved location Bhayandarpada, Thane.

GC


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	
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	2. Nhava temporary bridge & casting yard in Gavhan for package II	4 Times / Year	150,000	1,500,000	150,000	100,000	1,750,000	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.								
					1. Sewri & Sewri bay area for package I	1. Muck: 1 Time / Year 2. Sediments: 4 Times / Year								
					2. Nhava temporary bridge & casting yard in Gavhan for package II									
5	Noise and vibration	Ambient and road side noise (dB(A) _{L_{eq}})	IS Standard	1. Sewri & Sewri bay area for package I	Fortnightly	150,000	54,000	150,000	369,000	573,000	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)			
				2. Nhava temporary bridge & casting yard in Gavhan for package II	2 Times / Year									
				3. Gavhan & Chirle for package III	*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									
5	Noise and vibration	Ambient and road side noise (dB(A) _{L_{eq}})	IS Standard	1. Sewri & Sewri bay area for package I	Fortnightly	150,000	54,000	150,000	369,000	573,000	-Construction Noise; 85dB(A) -Ambient Noise Standards in India (dB (A) _{L_{eq}}) 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)			
				2. Nhava temporary bridge & casting yard in Gavhan for package II	2 Times / Year									
5	Noise and vibration	Vibration (dB L10 or mm/sec)	IS Standard	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		
				2. Nhava temporary bridge & casting yard in Gavhan for package II	2 Times / Year									
9 and 10		Protected Area /Ecosystem	1. Monitoring of mudflat conditions including fauna-flora	Ocular inspection and quantitative survey	Along MTHL alignment and mangrove replant area for Package I	Quarterly during the construction Period	6,500,000	7,200,000	6,500,000	0	13,700,000		Not applicable for Pkg. 3	
9 and 10		Protected Area /Ecosystem	2. Monitoring of Cutting Tree and replantation/ transplating area	1-1. Fauna-Flora	Along MTHL alignment and mangrove replant area for package II	4 Times / Year						Significant impacts are not caused by the project		
			3. Monitoring of Mangrove Plantation area appointed by MoEF	Line-Point census and record number and appeared species	Not applicable for Package III								Note)	



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									
Social environment	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							
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	
Total							8140500	325,354,000	12,000,000	2,211,500	339,565,500		



Monitoring Period -Oct-Dec 2022

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					
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.	Quarterly	National Ambient Air Quality Standards (NAAQS)	Sewri	Shivaji Nagar	Chirle						
			2. Nhava temporary bridge & casting yard in Gavhan for package II	4 Times / Year		(Standard for 24hrs: Industrial and Residential)									
			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 2. NO ₂ : 80µg/m ³ 3. PM ₁₀ : 100µg/m ³ 4. PM _{2.5} : 60µg/m ³ 5.CO:02mg/m ³ 6.VOCs						10.00 28.00 236.58 48.50 1.4 56.30	BDL 31 82 34 1.5 1.2	15 29 75 36 0.73 0.95	BDL- Below Detectable Limit
			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	1. pH : 6.5-9	7.5						7.5	Not applicable		
			3. Gavhan & Chirle for package III	Not applicable	2. DO: 3 mg/l	4.8						5.9	Not applicable		
					3. Turbidity: 30 NTU	11.3						21.5	Not applicable		
					4. BOD: 5 mg/l	2.8						BDL	Not applicable		
					5. O & G: 10 mg/l	BDL[DL=2]							Not applicable		
					6.COD	21						16	Not applicable		
2	Water pollution	pH, BOD, DO, Turbidity and O&G	7. Nitrate			1003									
			8 Phosphat			600									
			9. Silica			8662									
			1. Sewri & Sewri bay area for package I	Daily	Municipal Solid Waste Management Rules, 2013	51100	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	1898 cu.m.	App. 2000 CuM. Collected in jumbo bags and Disposed off in EBB Location.	NA							
			3. Gavhan & Chirle for package III	Once site clearing work/execution part of work start.	Generated cutting tree (ha) total	1. Tree Cutting: 419 trees (Till Dec 2022) 2. Transplanting: 500 Trees (Till Dec 2022)		Tree cutting work completed and Half yearly report submitted to Client (April, 2022)	Both of forest and CIDCO area (234+75)= 309						
					Generated domestic waste (t/month) total		3.5 T/quarter. It is disposed through CIDCO daily.	3.0 T for the quarter	1.875 M3						
					Confirmation of adequate disposal (visual survey)	Schedule Audited by EMS									
			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 2021 and Reports submitted to GC	Not applicable	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		1. Cadmium: 0.01mg/l	BDL[DL=2]	BDL								
		2. total cyanide : not detected	BDL	<0.005											
		3. organic phosphorus: not detected	1.38	8.5											



Monitoring Period -Oct-Dec 2022

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

Pollutants	No.	Description	Parameters	Frequency	Monitoring Location	Monitoring Method	Monitoring Results		Remarks					
							Actual Value	Standard Value						
Soil Contamination/sedimentation	4	Heavy Metals & Oil & Grease	4. lead: 0.01mg/l	7	0.17	Not applicable for package-3			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 witnessed by GC during Febuary-2020 monitoring.					
			5. chromium (VI): 0.05mg/l	BDL	BDL									
			6. arsenic: 0.01mg/l or 15mg/kg (agri-land soil)	BDL	BDL									
			7. total mercury: 0.005mg/l	BDL	BDL									
			8. alkyl mercury: not detected											
			9. PCBs: not detected											
			10. copper: 125mg/kg (only paddy field soil)											
			11. dichloromethane: 0.02mg/l	Not detected	BDL									
			12. carbon tetrachloride: 0.002mg/l	Not detected	BDL									
			13. 1,2-dichloroethane: 0.004mg/l	Not detected	BDL									
			14. 1,1-dichloroethylene: 0.02mg/l	Not detected	BDL									
			15. cis-1,2-dichloroethylene: 0.04mg/l	Not detected	BDL									
			16. 1,1,1-trichloroethane: 1mg/l	Not detected	BDL									
			17. 1,1,2-trichloroethane: 0.006 mg/l	Not detected	BDL									
			18. trichloroethylene: 0.03mg/l	Not detected	BDL									
			19. tetrachloroethylene: 0.01mg/l	Not detected	BDL									
			20. 1,3-dichloropropene: 0.002mg/l	Not detected	BDL									
			21. thiuram: 0.006mg/l	Not detected	BDL									
			22. simazine: 0.003mg/l	Not detected	BDL									
			23. thiobencarb: 0.02mg/l	Not detected	BDL									
			24. benzene: 0.01mg/l	Not detected	BDL									
			25. selenium: 0.01mg/l	Not detected	BDL									
			Noise and vibration	5	Ambient and road side noise (dB(A) LAeq)	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 (package-III) Commercial area	
						2. Nhava temporary bridge & casting yard in Gavhan for package II	2 Times / Year	Day time : 6-22 hr (continuous) dB(A)		68.95	66.9	63.35		
						3. Gavhan & Chirle for package III	Fortnightly	Night time: 22-6 hr (continuous) dB(A) (only sea section) 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)		62.50	57.5	52.69		
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) Day time : 6-22 hr (continuous) Night time: 22-6 hr (continuous) Note (standard values in Not construction area) 1. Commercial /Industrial Area Day Time: 70 (7-20hr) Night Time: 65 (20-7hr)				Sewri (ST 200-500) (Industrial area)	Shivaji Nagar (Commercial area)	Chirle						
						NA	Not Applicable	Not applicable						
						NA								
Kindly check the letter No. Ref No. Mth/ P3/L&T/GC/LT/HSE-2226/2020 dated on 12.12.2020														

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 -Oct-Dec 2022

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

Natural Environment	6	Protected Area	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)	Flora/Fauna list maintained for Referral	N/A	N/A	
		1. Monitoring of mudflat conditions including fauna-flora 2. Monitoring of Cutting Tree and replantation/transplantation 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 bird	52	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		
			(2) Number of species of fish	23					
			(3) Estimated number of Flamingo						
			1-2: Mangrove density and community survey	Avicennia marina	not required				
			(1) Number of species of mangrove	Dominant - Avicennia sp.	not required				
			(2) Density of mangrove (xx trees/10m x 10m)	CRZ Letter No. 6005 , Dated 25-07-2022	not required				
			1-3: Benthos Survey	3 areas studied in Benthos - Results in CEMP	not required				
			(1) Number of species and quantity by species		not required				
			2-1: Cutting tree confirmation	1. Tree Cutting: 419 trees (Till Dec 2022) 2. Transplanting : 500 Trees (Till Dec 2022)	not required			Approved By Both CIDCO and Forest forest Dept (both Ailbaug and Uran(regional office))	
			(1) Number of cutting tree and species	CRZ Letter No. 6005 , Dated 25-07-2022	not required				
			3-1: Mangrove survey in the replant area	CRZ Letter No. 6005 , Dated 25-07-2022	not required			Nil	
			(1) Number of species of mangrove	Dominant - Avicennia sp.	not required				
			(2) Density of mangrove (xx trees/10m x 10m)	CRZ Letter No. 6005 , Dated 25-07-2022	not required				
			4. Ecological Parameter						
			(1) Net primary Productivity : <1,500 mgC/m3/day at surface	500					
		(2) Chlorophyll-a: <4mg/m3	4.5						
		(3) Phosphate: 0.1-80µg/l	4						
		(4) Nitrate: 1.0-500µg/l	6						
		(5) Nitrite: <125µg/l	1						
		(6) Particulate Organic Carbon: 10-100mg/m ³	1.38						
		(7) SiO2: 10-5,000µg/l	30.02						
		Ecosystem							
	7	Hydrology	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		
			Not applicable for Package III						



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1. Environmental Monitoring during Construction for 4.5 years

Monitoring Period -Oct-Dec 2022	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.
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	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 Monitoring of embankment	Shivaji Nagar In progress	Chirle	Chirle		
	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 Number of hired workers by community	Sewri Camp Site 960 Local Workmen	Shivaji Nagar Camp Site 125-150	Chirle 65		
	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 Confirmation of health check record and inspect project site	Sewri Camp Site Doctor on call checks site specific infections., minor and major incidents . 24x7 ambulance service, ERT team with trained first aiders available. Worker awareness program conducted on AIDS. Medical camp was organised for	Shivaji Nagar Camp Site Health Checks carried out but HIV/AIDS parameter is not there.	Chirle Regular Health check up is carried out by site Doctor.		
	11	Labour Environment	Construction worker's c	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" Site Visual Inspection	2200 workers One mid- day meal introduced as per BOCW Act and by Maharashtra State. Weekly Inspection	Shivaji Nagar Camp Site Conforming with BOCW Act 1996	Gavan Camp site 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 Number of recorded accident	0 (No fatality) 0 (No fatality)	Shivaji Nagar Camp Site Nil	Chirle/Other area Nil		



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MTHL - ROW Land Acquisition Status (Attachment 2-6):

The total land required on the Navi Mumbai side is 108.4379 ha

Land acquired by MMRDA – 108.4379 ha

Land in possession of MMRDA – 106.3542 ha

Balance land under acquisition – 0.3937 ha

Note: The acquisition of 0.3937 ha of ROW land is in progress and likely to complete by the end of January 2023.

ROW Land Required in ha (for Package-3)	ROW land acquired by MMRDA In ha	ROW Land in possession of MMRDA in ha	Balance ROW to be handed over (Possession to be taken + Under acquisition)	Anticipated date for 100% ROW Land Acquisition	Remarks
108.4379	108.0442	108.0442	2.0837 (1.6900+0.3937)	31-1-2023	The payment status to the land owners is awaited from CIDCO. The same would be communicated to JICA on receipt of the same.



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Attachment2-8

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

1. General Information

a. RAP Implementation Monitoring Progress Status Report (PSR) for the 4 th Results:	30-12-2022
b. Date of Preparing This form	30-12-2022
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)	231Hhs	Titleholders: 0 Hhs
		Non-titleholders: 231Hhs
Total PAPs	1,282 persons*	Titleholders: 0 persons
		Non-titleholders: 1,282 persons*
PAHs who need relocation (as residents)	231Hhs	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. ~



Structures

Structures	Residential:231 Commercial:65 Residential + Commercial: 1 (counted in Commercial) Community:9 (Religious Properties 6, Public Toilets3) Government:16 (MbPT Structures 9, Occupants of Leased Plots 6 & Police Chowki 1) Total: 322
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2.2 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 232 nos C1 category fishermen are transferred to Commissioner of Fisheries in 2017-22.
C2: Fishing Stakes and Nets within 500 m. of RoW (Southern side)	268	493	761	1. Funds for 704 nos C2 category fishermen are transferred to Commissioner of Fisheries in 2017-22. 2. 57 nos C2 category fishermen are verified and disbursement in process.
C3: Hand Pickers	1492	4040	5532	Funds for 5229 nos of C3 category fishermen are already transferred to the Commissioner of Fisheries and the balance of 302 Nos. of C3 category fishermen are in process of fund transfer to the Commissioner of Fisheries.
C4: Commercial and Artisanal Fisher-folks (Loss of Time and Increased	Will be observed during the construction period	Will be observed during the construction period	---	Nil



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QPR No. 23 (Oct to Dec 2022) Attachment 2-8

Operating Costs)				
C5: Fisher-folks with Loss due to Turbidity	Will be observed during the construction period	Will be observed during the construction period	---	Nil
C6: Fisher-folks with Damages due to Accidents	Will be observed during the construction period	Will be observed during the construction period	---	Nil

2.3 Land Acquisition / Transfer

Location	Land Required in Ha.	Land Acquired in Ha.	Balance ROW to be Handed over in Ha	Remarks
Sewri	10.089	10.089	0	
Navi Mumbai	108.4379	108.0442	2.0837	1.69 Ha yet to over to the Contractor & 0.3937 Ha is under acquisition
Total	118.179	118.1332	2.0837	

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	226	0	227	98%	
	No. of Residential PAHs given possession of Alternate Tenements	231	226	0	227	98%	



GC *GC*

QPR No. 23 (Oct to Dec 2022) 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 Commercial/R+C PAPs provided with Allotment Letters of Alternate Shops/Tenements	66	62	0	62	94%	
	No. of Commercial R+C PAPs given possession of Alternate Shops/Tenements	66	62	0	62	94%	
	No. of Occupants of MbPT Leased Plots provided Compensation	6	6	0	6	100%	
	No. of Religious properties Relocated / Removed	6	6	0	6	100%	
	No. of Other Community properties Relocated / Removed	4	4	0	4	100%	
	No. of Structures in possession of MbPT Dismantled / Cleared	9	9	0	9	100%	
	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						



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QPR No. 23 (Oct to Dec 2022) 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 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						
Grievance Redress	No. of Grievances Received by FLGRC	4					
	No. of Grievances Disposed by FLGRC	3	1	0	1	100%	
	No. of Grievances Received by SLGRC	1	0	0	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						



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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 CHSs' Office Bearers provided training						

SUMMARY OF FISHER FOLKS OF MTHL PROJECT (Influence Zone of 24 villages)

Up to 31-12-2022

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	77	604	809
13	Moha	475	22	25	134	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	1208	49	219	823	1091
22	Ulwe	218	1	3	14	18
23	Uran & Hanuman Koliwada	683	0	11	600	611
24	Vahal	411	0	2	1	3
Total		15097	232	865	5548	6645



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QPR No. 23 (Oct to Dec 2022) Attachment 2-8

Total applications		15097
Duplicate/Repeated Application		2428
Net Applications		12669
Approved applications		6645

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 fisherfolk's 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	A 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 - 761 Nos and C3- 5532 Nos are approved.	23-12-2015	Up to 30-12-2022 1. Total up to date applications scrutinized = 12669 Nos. 2. Eligible = 6645 Nos. 3. Rejected = 6024 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.



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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 :-

ROW Land Required in Ha.	ROW Land Acquired by MMRDA in Ha.	ROW Land in Possession of MMRDA in Ha	Balance Land to be acquired in Ha	Anticipated date for 100% ROW Land Acquisition	Remarks
108.4379	108.0442	108.0442	0.3937	31-1-2023	



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	Dec. 2022
2.6	Notice of PAPs for shifting (Sewri Section)	December 2018	Nov. 2021
2.7	Allotment of dwelling units to PAPs	September 2016	Dec. 2022
2.8	Shifting of PAPs to resettlement Colony	December 2018	Nov. 2021
2.9	Transfer of compensation/allowance/ assistance to PAPs	December 2018	Dec. 2022
2.10	Creation of Community Revolving fund (within 3 months post handing over)	April 2019	March 2023
2.11	Assessment of economic rehabilitation needs by individual household (within 6 months after handing over)	September 2019	March 2023
2.12	Registration of Co-operative housing societies transfer of maintenance funds. (6 months period)	December 2019	April 2023
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 End Term	May 2019 November 2019	June 2020 March 2023



Attachment 3- JICA's Concurrence Status



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Status of JICA'S Concurrence

Sl. No.	Brief description	Procurement procedure	Bid Cost		JICA'S Concurrence on				Contract	
			Local Currency (Cr Rs.)	Total (Cr Rs.)	PQ Documents	PQ Evaluation	Bid Documents	Technical Evaluation		Financial Evaluation
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)	427.00	427.00	JICA's Concurrence - 23rd Aug 2019	NA	JICA's Concurrence - 24th Aug 2021	JICA's Concurrence - 15th Feb 2022	JICA's Concurrence - 21st Apr 2022	JICA's Concurrence - 13th Oct 2022



1st Oct to 31st Dec 2022

**Attachment 4- Project Procurement and Financial
Status till 31st Dec 2022**

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PROJECT PROCUREMENT AND FINANCIAL STATUS TILL 31st Dec 2022

Type	Contract	Awarded or Estimated Value (in Rs. Crore)	Current Status	Contractors	Project Commencement Date	Stipulated Project Completion Date	Revised Project Completion Date After granting the Extension of Time (EOT)	% of Overall Works Progress (Design, Material Procurement and Construction) as per the Primavera Baseline Schedule Updated as of 31 st Dec 2022	% of Financial Progress till 31 st Dec 2022 (GC Certified) (Excluding Mobilization Advance, Price Adjustment and Work Variation)
CIVIL	Package-1 (CH 0+000 km to CH 10+380 km)	7637.30	Awarded	L&T-IHI Consortium	Mar 2018	21-Sep-2022	30-Sep-2023	90.42%	88.51%
	Package-2 (CH 10+380 km to CH18+187 km)	5612.61	Awarded	DAEWOO-TPL JV	Mar 2018	21-Sep-2022	27-Sep-2023	89.03%	84.74%
	Package-3 (CH18+187 to CH21+800)	1013.79	Awarded	L&T	Mar 2018	21-Sep-2021	03-Mar-2023	87.28%	88.14%
ITS	Package-4 Intelligent Transport System (ITS)	427.00	Awarded	Strabag GmbH JV	June 2022	Aug 2023	NA	NA	NA

GC
 MUMBAI TRANS HARBOUR LINK
 GENERAL CONSULTANTS

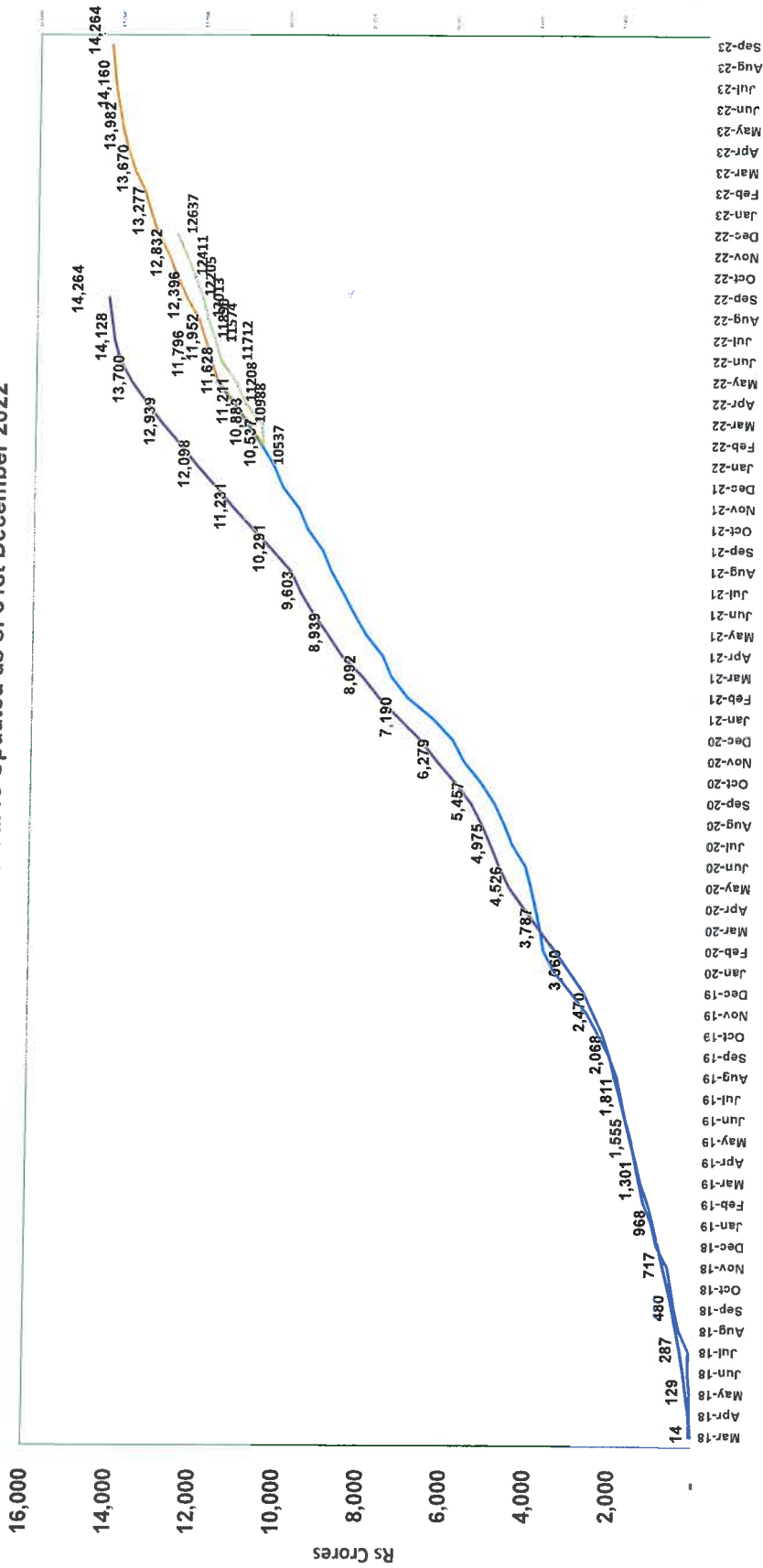
(Handwritten signatures)

1st Oct to 31st Dec 2022

**Attachment 5- Financial S-Curve for Cumulative
Planned Vs Actual Amount in Rs Crores**



MTHL - Combined Financial S-Curve Updated as of 31st December 2022



— Actual Claimed Invoice in Rs Crores
— Actual Claimed Invoice as per the Catch-Up Plan in Rs Crores
— Planned Invoice as per the Catch-Up Plan
— Planned Invoice in Crores



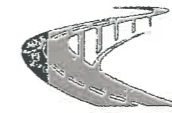
Handwritten initials 'GC' and 'MTHL' in blue ink.

**Attachment 6- Package-1's Construction Programme
Updated as of 31st Dec 2022**





MUMBAI TRANS HARBOUR LINK PACKAGE 1,
UPDATED REVISED WORK PROGRAM FOR DECEMBER 2022



General Consultant for Mumbai Trans Harbour Link Project

Activity ID, Activity Name, BL1 Duration, BL1 Start, BL1 Finish, Original Start, Original Finish, Schedule % Complete, Performance % Complete, Variance - BL1 Start Date, Variance - BL1 Finish Date, Total Float, 2018-2024 monthly progress bars and data.

Legend for work status: Actual Level of Effort, Remaining Work, Actual Work, Critical Remaining Work, Milestone, summary.





MUMBAI TRANS HARBOUR LINK PACKAGE 1,
UPDATED REVISED WORK PROGRAM FOR DECEMBER 2022



General Consultant for Mumbai Trans Harbour Link Project

Table with columns: Activity ID, Activity Name, BL1 Duration, BL1 Start, BL1 Finish, Original Start, Original Finish, Schedule % Complete, Performance % Complete, Variance - BL1 Start Date, Variance - BL1 Finish Date, Total Float. Includes a Gantt chart for activities from 2018 to 2024.

Handwritten signatures and a circular stamp reading 'MUMBAI TRANS HARBOUR LINK PROJECT - GENERAL CONSULTANT GC'.

Legend for work status: Actual Level of Effort, Remaining Work, Milestone, Actual Work, Critical Remaining Work, summary.

**Attachment 7- Package-2's Construction Programme
Updated as of 31st Dec 2022**



MUMBAI TRANS HARBOUR LINK PROJECT (PACKAGE 2) CONSTRUCTION OF 7.807KM LONG BRIDGE SECTION
(CH 10 380 - CH 18 187) ACCROSS THE MUMBAI BAY INCL SHIVAJNAGAR INTERCHANGE
UNDER IDENTIFICATION NO MMRDA/ENG/000753

ANNEXURE-5 CONSTRUCTION UPDATED
PROGRAMME_ABSTRACT (PACKAGE 2)

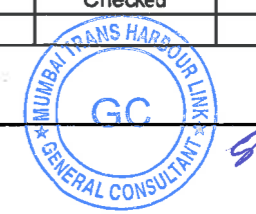
#	Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Actual Start	Actual Finish	Schedule % Complete	Performance % Complete	2018	2019	2020	2021	2022	2023	2024	2025	2026	
1	MTHL-PKG2-DETAILED WORK PROGRAMME_25122022_APPROVED_MPR.57		3128	17-Nov-17	21-Sep-24	17-Nov-17		99.97%	89.03%										
2	PROJECT PRE-COMMENCEMENT ACTIVITY		126	17-Nov-17	22-Mar-18	17-Nov-17	16-Mar-18	0%	0%	15-Mar-18 A; PROJECT PRE-COMMENCEMENT ACTIVITY									
3	PRE-COMMENCEMENT ACTIVITY		55	15-Dec-17	07-Feb-18	15-Dec-17	20-Mar-18	0%	0%	20-Mar-18 A; PRE-COMMENCEMENT ACTIVITY									
4	JV FORMATION AND REGISTRATION		55	15-Dec-17	07-Feb-18	15-Dec-17	20-Mar-18	0%	0%	20-Mar-18 A; JV FORMATION AND REGISTRATION									
5	PROJECT EVENT MILESTONE		2436	23-Mar-18	21-Mar-23	23-Mar-18		0%	0%	21-Nov-24; PROJECT EVENT MILESTONE									
6	PROJECT KEY MILESTONE		2273	23-Mar-18	22-Sep-22	23-Mar-18		0%	0%	11-Jun-24; PROJECT KEY MILESTONE									
7	INTERFACE MILESTONE_ERG19		2408	19-Apr-18	21-Mar-23	03-Apr-18		0%	0%	21-Nov-24; INTERFACE MILESTONE_ERG19									
8	PHYSICAL PROGRESS AND INTERFACE DATE_ADD2-ATTACHMENT 25		2030	18-Sep-18	22-Jun-22	31-Aug-18		0%	0%	08-Apr-24; PHYSICAL PROGRESS AND INTERFACE DATE_ADD2-ATTACHMENT 25									
9	CONSTRUCTION KEY MILESTONES		1308	03-Sep-18	06-Jul-21	25-Oct-18	01-Jan-22	0%	0%	01-Jan-22 A; CONSTRUCTION KEY MILESTONES									
10	MANAGEMENT		613	20-Jan-18	18-Aug-18	12-Jan-18	22-Aug-19	0%	0%	22-Aug-19 A; MANAGEMENT									
11	SITE ORGANISATION		35	20-Jan-18	23-Feb-18	07-Mar-18	07-Mar-18	0%	0%	07-Mar-18 A; SITE ORGANISATION									
12	DEVELOPMENT OF MANAGEMENT SYSTEM		613	20-Jan-18	27-May-18	20-Jan-18	22-Aug-19	0%	0%	22-Aug-19 A; DEVELOPMENT OF MANAGEMENT SYSTEM									
13	DEVELOPMENT OF WORK PROGRAMME		63	23-Mar-18	24-May-18	23-Mar-18	21-Sep-18	0%	0%	21-Sep-18 A; DEVELOPMENT OF WORK PROGRAMME									
14	OTHER CONTRACTUAL SUBMITTALS		28	24-Mar-18	20-Apr-18	24-Mar-18	23-Apr-18	0%	0%	23-Apr-18 A; OTHER CONTRACTUAL SUBMITTALS									
15	PERMIT & APPROVAL		389	20-Jan-18	18-Aug-18	12-Jan-18	03-Aug-19	0%	0%	03-Aug-19 A; PERMIT & APPROVAL									
16	DESIGN		1321	20-Jan-18	04-Sep-19	01-Jan-18	02-Feb-21	100%	100%	02-Feb-21 A; DESIGN									
17	EARLY STAGE DESIGN WORK / INFORMATION COLLECTION		678	20-Jan-18	17-Jul-18	01-Jan-18	12-Nov-19	100%	100%	12-Nov-19 A; EARLY STAGE DESIGN WORK / INFORMATION COLLECTION									
18	TEMPORARY WORK		1037	22-Jan-18	01-Nov-18	20-Jan-18	20-Aug-20	100%	100%	20-Aug-20 A; TEMPORARY WORK									
19	CONCRETE MIX DESIGN		274	23-Mar-18	31-Aug-18	12-May-18	15-Nov-18	0%	0%	15-Nov-18 A; CONCRETE MIX DESIGN									
20	JFE DESIGN PROGRAMME		1220	01-May-18	04-Sep-19	09-Apr-18	02-Feb-21	100%	100%	02-Feb-21 A; JFE DESIGN PROGRAMME									
21	PROCUREMENT, MANUFACTURING AND LOGISTICS		1899	20-Jan-18	23-Aug-20	22-Dec-17		100%	100%	03-Apr-23; PROCUREMENT, MANUFACTURING AND LOGISTICS									
22	SURVEY & INVESTIGATION		72	20-Jan-18	02-Apr-18	22-Dec-17	04-Apr-18	0%	0%	04-Apr-18 A; SURVEY & INVESTIGATION									
23	TEMPORARY WORK		964	20-Jan-18	20-Oct-18	20-Jan-18	11-May-20	0%	0%	11-May-20 A; TEMPORARY WORK									
24	MAIN WORK SUBCONTRACT WORK		1520	23-Mar-18	20-Jul-19	23-Mar-18		0%	0%	28-Jan-23; MAIN WORK SUBCONTRACT WORK									
25	EQUIPMENTS		1097	23-Mar-18	12-Sep-19	23-Mar-18	05-Nov-20	100%	100%	05-Nov-20 A; EQUIPMENTS									
26	PRECAST MOULD AND SYSTEM FORM		715	07-Aug-18	24-Mar-19	04-Sep-18	25-Sep-20	100%	100%	25-Sep-20 A; PRECAST MOULD AND SYSTEM FORM									
27	MATERIAL SUPPLIERS		1766	02-Jun-18	15-Oct-19	20-Apr-18		0%	0%	03-Apr-23; MATERIAL SUPPLIERS									
28	MATERIAL PROCUREMENT		0			08-Aug-18	13-Oct-22	0%	0%	13-Oct-22 A; MATERIAL PROCUREMENT									
29	PROCUREMENT OF STEEL GIRDER		673	07-May-19	23-Aug-20	01-Aug-19	02-Feb-21	0%	0%	02-Feb-21 A; PROCUREMENT OF STEEL GIRDER									
30	STEEL PLATE FOR (RHS STEEL MOUDLE-2_MP177 - MP182)		513	04-Jun-19	13-Jul-20	08-Aug-19	02-Jul-20	0%	0%	02-Jul-20 A; STEEL PLATE FOR (RHS STEEL MOUDLE-2_MP177 - MP182)									
31	STEEL PLATE FOR (LHS STEEL MOUDLE-2_MP177 - MP182)		438	07-May-19	16-Apr-20	01-Aug-19	12-May-20	0%	0%	12-May-20 A; STEEL PLATE FOR (LHS STEEL MOUDLE-2_MP177 - MP182)									
32	STEEL PLATE FOR (RHS STEEL MOUDLE-3_MP183 - MP186)		315	01-Jul-19	10-May-20	01-Nov-19	17-Aug-20	0%	0%	17-Aug-20 A; STEEL PLATE FOR (RHS STEEL MOUDLE-3_MP183 - MP186)									
33	STEEL PLATE FOR (LHS STEEL MOUDLE-3_MP183 - MP186)		315	04-Jun-19	14-Apr-20	01-Oct-19	05-Nov-20	0%	0%	05-Nov-20 A; STEEL PLATE FOR (LHS STEEL MOUDLE-3_MP183 - MP186)									
34	STEEL PLATE FOR (RHS STEEL MOUDLE-1_MP176 - MP171)		286	30-Jul-19	23-Aug-20	01-Apr-20	02-Feb-21	0%	0%	02-Feb-21 A; STEEL PLATE FOR (RHS STEEL MOUDLE-1_MP176 - MP171)									
35	STEEL PLATE FOR (LHS STEEL MOUDLE-1_MP176 - MP171)		327	02-Jul-19	26-Jul-20	29-Mar-20	05-Jan-21	0%	0%	05-Jan-21 A; STEEL PLATE FOR (LHS STEEL MOUDLE-1_MP176 - MP171)									
36	IMPACT OF COVID-19		51			22-Mar-20	25-May-20	0%	0%	25-May-20 A; IMPACT OF COVID-19									
37	CONSTRUCTION		2199	02-Apr-18	21-Jun-22	02-Apr-18		100%	91.14%	09-Apr-24; CONSTRUCTION									
38	TEMPORARY WORK		2199	02-Apr-18	21-Jun-22	02-Apr-18		100%	97.95%	09-Apr-24; TEMPORARY WORK									
39	PREPARATION WORK		368	02-Apr-18	16-Jan-19	02-Apr-18	25-Jul-19	0%	0%	25-Jul-19 A; PREPARATION WORK									
40	ESTABLISHMENT OF EMPLOYER & CONTRACTOR OFFICE		194	20-Jun-18	27-Nov-18	27-Jun-18	18-Jan-19	100%	100%	18-Jan-19 A; ESTABLISHMENT OF EMPLOYER & CONTRACTOR OFFICE									
41	ESTABLISHMENT OF LABOUR CAMP		464	20-Jun-18	05-Apr-19	03-Jul-18	04-Apr-19	0%	0%	04-Apr-19 A; ESTABLISHMENT OF LABOUR CAMP									
42	ESTABLISHMENT OF CONCRETE CASTING YARD		1095	04-May-18	25-Apr-19	14-Jun-18	12-May-21	100%	100%	12-May-21 A; ESTABLISHMENT OF CONCRETE CASTING YARD									
43	ESTABLISHMENT OF STEEL SPAN ASSEMBLY YARD		584	02-Nov-18	06-Mar-20	01-Nov-19	30-Mar-21	0%	0%	30-Mar-21 A; ESTABLISHMENT OF STEEL SPAN ASSEMBLY YARD									
44	TEMPORARY BRIDGE		2147	20-May-18	21-Jun-22	27-Jul-18		100%	96.49%	09-Apr-24; TEMPORARY BRIDGE									
45	PERMANENT WORK		1901	03-Sep-18	24-May-22	08-Dec-18		100%	90.26%	08-Mar-24; PERMANENT WORK									
46	PRE-FABRICATION AND ASSEMBLY		1135	18-Apr-19	19-Feb-22	16-Oct-19		100%	97.38%	06-Mar-23; PRE-FABRICATION AND ASSEMBLY									
47	CONCRETE PRE-FABRICATION AT THE CASTING YARD		673	18-Apr-19	15-Sep-21	06-Nov-19		100%	94.41%	23-Feb-23; CONCRETE PRE-FABRICATION AT THE CASTING YARD									
48	CONCRETE GIRDER PRE-CASTING		673	18-Apr-19	15-Sep-21	06-Nov-19		100%	94.41%	23-Feb-23; CONCRETE GIRDER PRE-CASTING									
49	STEEL SPAN FABRICATION AT THE SUPPLIER'S WORK SHOP INCLUDING LOGISTIC		951	02-Jun-19	24-Jan-22	16-Oct-19	04-Jun-22	100%	100%	04-Jun-22 A; STEEL SPAN FABRICATION AT THE SUPPLIER'S WORK SHOP INCLUDING LOGISTIC									
50	STEEL SPAN FABRICATION AT THE SUPPLIER'S WORK SHOP		952	02-Jun-19	29-Nov-21	16-Oct-19	18-Feb-22	100%	100%	18-Feb-22 A; STEEL SPAN FABRICATION AT THE SUPPLIER'S WORK SHOP									
51	STEEL MODULE-02_MP182 - MP177 (FABRICATION AT JFE)		626	02-Jun-19	29-Jun-21	24-Oct-19	25-Jun-21	100%	100%	25-Jun-21 A; STEEL MODULE-02_MP182 - MP177 (FABRICATION AT JFE)									
52	STEEL MODULE-03_MP186 - MP183 (FABRICATION AT JFE)		734	29-Jun-19	25-Sep-21	16-Oct-19	01-Dec-21	100%	100%	01-Dec-21 A; STEEL MODULE-03_MP186 - MP183 (FABRICATION AT JFE)									
53	STEEL MODULE-01_MP176 - MP171 (FABRICATION AT JFE)		728	26-Jul-19	29-Nov-21	16-Apr-20	18-Feb-22	100%	100%	18-Feb-22 A; STEEL MODULE-01_MP176 - MP171 (FABRICATION AT JFE)									

█ Primary Baseline █ Critical Remaining Work █ summary
█ Actual Work ◆ Milestone
█ Remaining Work █ % Complete

EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY (MMRDA)

CONTRACTOR:
DAEWOO-TPL JV

Date	Revision	Checked	Approved
25-Dec-22	R0		



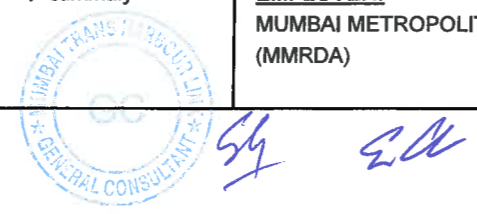
#	Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Actual Start	Actual Finish	Schedule % Complete	Performance % Complete	2018	2019	2020	2021	2022	2023	2024	2025	J28
54		STEEL SPAN MATERIAL OCEAN FREIGHT TO THE MUMBAI PORT INCLUDING CUSTOM CLEARANCE	641	10-Jul-20	09-Jan-22	01-Sep-20	01-Mar-22	100%	100%									
55		STEEL MODULE-01_MP176 - MP171 (OCEAN FREIGHT)	235	23-Nov-20	09-Jan-22	28-Sep-21	01-Mar-22	100%	100%									
56		STEEL MODULE-02_MP182 - MP177 (OCEAN FREIGHT)	417	10-Jul-20	09-Aug-21	01-Sep-20	13-Sep-21	100%	100%									
57		STEEL MODULE-03_MP186 - MP183 (OCEAN FREIGHT)	347	29-Nov-20	05-Nov-21	06-Mar-21	24-Dec-21	100%	100%									
58		LOADING AND DELIVERY TO THE CONTRACTOR'S ASSEMBLY YARD	555	20-Aug-20	24-Jan-22	21-Oct-20	04-Jun-22	100%	100%									
59		STEEL MODULE-01_MP176 - MP171 (DELIVERY TO ASSEMBLY YARD)	156	02-Jan-21	24-Jan-22	26-Oct-21	04-Jun-22	100%	100%									
60		STEEL MODULE-02_MP182 - MP177 (DELIVERY TO ASSEMBLY YARD)	343	20-Aug-20	19-Aug-21	21-Oct-20	13-Oct-21	100%	100%									
61		STEEL MODULE-03_MP186 - MP183 (DELIVERY TO ASSEMBLY YARD)	308	09-Jan-21	20-Nov-21	14-Apr-21	07-Mar-22	100%	100%									
62		STEEL GIRDER ASSEMBLY AT THE CONTRACTOR'S ASSEMBLY YARD	556	05-Sep-20	17-Feb-22	23-Nov-20		100%	50%									
63		STEEL MODULE-01_MP176 - MP171 (ASSEMBLY WORKS)	183	13-Oct-21	17-Feb-22	21-Jun-22		100%	10%									
64		STEEL SPAN ASSEMBLY_MP171 - MP172_G1	35	20-Nov-21	08-Jan-22			100%	0%									
65		STEEL SPAN ASSEMBLY_MP171 - MP172_G2	42	20-Nov-21	08-Jan-22			100%	0%									
66		STEEL SPAN ASSEMBLY_MP172 - MP173_G1	40	28-Dec-21	19-Jan-22			100%	0%									
67		STEEL SPAN ASSEMBLY_MP172 - MP173_G2	36	25-Jan-22	17-Feb-22			100%	0%									
68		STEEL SPAN ASSEMBLY_MP173 - MP174_G1	72	29-Nov-21	21-Dec-21	17-Nov-22		100%	0%									
69		STEEL SPAN ASSEMBLY_MP173 - MP174_G2	60	11-Nov-21	30-Dec-21	13-Dec-22		100%	0%									
70		STEEL SPAN ASSEMBLY_MP174 - MP175_G1	163	23-Oct-21	11-Dec-21	25-Jul-22		100%	0%									
71		STEEL SPAN ASSEMBLY_MP174 - MP175_G2	123	02-Nov-21	11-Dec-21	19-Sep-22		100%	0%									
72		STEEL SPAN ASSEMBLY_MP175 - MP176_G1	74	13-Oct-21	02-Dec-21	17-Oct-22		100%	0%									
73		STEEL SPAN ASSEMBLY_MP175 - MP176_G2	113	23-Oct-21	02-Dec-21	21-Jun-22	24-Nov-22	100%	100%									
74		STEEL MODULE-02_MP182 - MP177 (ASSEMBLY WORKS)	381	05-Sep-20	18-Sep-21	23-Nov-20	25-Jul-22	100%	100%									
75		STEEL SPAN ASSEMBLY_MP176 - MP177_G1	220	03-May-21	28-May-21	03-Jul-21	25-Jul-22	100%	100%									
76		STEEL SPAN ASSEMBLY_MP176 - MP177_G2	120	25-Jun-21	28-Jul-21	02-Nov-21	01-Mar-22	100%	100%									
77		STEEL SPAN ASSEMBLY_MP177 - MP178_G1	68	28-Jun-21	09-Aug-21	05-May-21	28-Oct-21	100%	100%									
78		STEEL SPAN ASSEMBLY_MP177 - MP178_G2	75	20-Aug-21	18-Sep-21	18-Oct-21	04-Jan-22	100%	100%									
79		STEEL SPAN ASSEMBLY_MP178 - MP179_G1	71	05-Mar-21	27-Mar-21	09-Mar-21	29-Jun-21	100%	100%									
80		STEEL SPAN ASSEMBLY_MP178 - MP179_G2	74	26-Apr-21	19-May-21	17-Apr-21	30-Aug-21	100%	100%									
81		STEEL SPAN ASSEMBLY_MP179 - MP180_G1	77	02-Jan-21	25-Jan-21	19-Jan-21	28-May-21	100%	100%									
82		STEEL SPAN ASSEMBLY_MP179 - MP180_G2	184	25-Feb-21	20-Mar-21	08-Feb-21	27-Oct-21	100%	100%									
83		STEEL SPAN ASSEMBLY_MP180 - MP181_G1	73	02-Nov-20	25-Nov-20	15-Jan-21	03-May-21	100%	100%									
84		STEEL SPAN ASSEMBLY_MP180 - MP181_G2	55	19-Dec-20	11-Jan-21	28-Dec-20	04-Jun-21	100%	100%									
85		STEEL SPAN ASSEMBLY_MP181 - MP182_G1	72	05-Sep-20	29-Sep-20	23-Nov-20	23-Mar-21	100%	100%									
86		STEEL SPAN ASSEMBLY_MP181 - MP182_G2	78	22-Oct-20	14-Nov-20	08-Dec-20	31-Mar-21	100%	100%									
87		STEEL MODULE-03_MP186 - MP183 (ASSEMBLY WORKS)	383	06-Jul-21	23-Nov-21	25-May-21		100%	25%									
88		STEEL SPAN ASSEMBLY_MP182 - MP183_G1	153	09-Aug-21	18-Oct-21	28-May-22		100%	0%									
89		STEEL SPAN ASSEMBLY_MP182 - MP183_G2	206	24-Aug-21	28-Oct-21	24-Mar-22		100%	0%									
90		STEEL SPAN ASSEMBLY_MP183 - MP184_G1	153	04-Oct-21	28-Oct-21	24-Jan-22		100%	0%									
91		STEEL SPAN ASSEMBLY_MP183 - MP184_G2	170	01-Nov-21	23-Nov-21	22-Feb-22		100%	0%									
92		STEEL SPAN ASSEMBLY_MP184 - MP185_G1	274	24-Jul-21	08-Oct-21	10-Jul-21		100%	0%									
93		STEEL SPAN ASSEMBLY_MP184 - MP185_G2	198	05-Aug-21	08-Oct-21	02-Dec-21		100%	0%									
94		STEEL SPAN ASSEMBLY_MP185 - MP186_G1	325	06-Jul-21	16-Aug-21	25-May-21	25-Nov-22	100%	100%									
95		STEEL SPAN ASSEMBLY_MP185 - MP186_G2	323	10-Jul-21	28-Sep-21	29-May-21	25-Nov-22	100%	100%									
96		STEEL SPAN LOADING AND TRANSPORTING TO THE ERECTION AREA	213	30-Sep-20	19-Feb-22	30-Dec-21		100%	50%									
97		STEEL MODULE-01_MP176 - MP171 (LOAD OUT AND TRANSPORT)	54	03-Dec-21	19-Feb-22	17-Dec-22		100%	10%									
98		STEEL MODULE-02_MP182 - MP177 (LOAD OUT AND TRANSPORT)	129	30-Sep-20	21-Sep-21	30-Dec-21	13-Dec-22	100%	100%									
99		STEEL MODULE-03_MP186 - MP183 (LOAD OUT AND TRANSPORT)	60	01-Sep-21	25-Nov-21	17-Nov-22		100%	25%									
100		MAIN BRIDGE	1859	03-Sep-18	24-May-22	08-Dec-18		100%	81.89%									
101		MAIN BRIDGE FOUNDATION	1402	03-Sep-18	23-Mar-21	08-Dec-18	13-Oct-22	100%	100%									
102		MAIN BRIDGE PILE FOUNDATION	1198	03-Sep-18	23-Jan-21	08-Dec-18	21-Feb-22	100%	100%									
103		PILE LOAD TEST	259	03-Sep-18	19-Nov-18	08-Dec-18	11-Nov-19	100%	100%									
104		MAIN BRIDGE PILE FOUNDATION_LAND 17+414-18+187 FROM MP250 TO MP266	323	30-Nov-18	15-May-19	17-Jan-19	11-Jun-20	100%	100%									
105		MODULE-21_MP261 - MP257	126	30-Nov-18	05-Mar-19	23-Aug-19	06-Mar-20	100%	100%									
106		MODULE-22_MP266 - MP262	167	06-Mar-19	15-May-19	17-Jan-19	28-Jan-20	100%	100%									
107		MODULE-20_MP256 - MP255	32	05-Dec-18	10-Jan-19	25-Sep-19	19-Mar-20	100%	100%									

▬ Primary Baseline ▬ Critical Remaining Work ▬ summary
▬ Actual Work ◆ Milestone
▬ Remaining Work ▬ % Complete

EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY
(MMRDA)

CONTRACTOR:
DAEWOO-TPL JV

Date	Revision	Checked	Approved
25-Dec-22	R0		



MUMBAI TRANS HARBOUR LINK PROJECT (PACKAGE 2) CONSTRUCTION OF 7.807KM LONG BRIDGE SECTION
(CH 10 380 - CH 18 187) ACCROSS THE MUMBAI BAY INCL SHIVAJNAGAR INTERCHANGE
UNDER IDENTIFICATION NO MMRDA/ENG/000753

ANNEXURE-5 CONSTRUCTION UPDATED
PROGRAMME_ABSTRACT (PACKAGE 2)

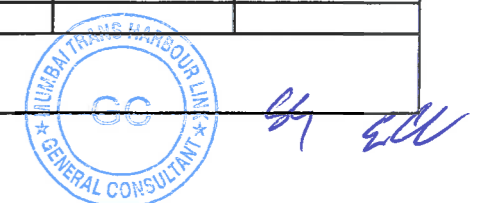
#	Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Actual Start	Actual Finish	Schedule % Complete	Performance % Complete	2018	2019	2020	2021	2022	2023	2024	2025	J2E	
108		MODULE-19_MP254 - MP250	199	11-Jan-19	16-Apr-19	05-Oct-19	11-Jun-20	100%	100%										11-Jun-20 A, MODULE-19, MP254 - MP250
109		MAIN BRIDGE PILE FOUNDATION_CRZ 15+890-17+414 FROM MP226 TO MP250	288	20-Dec-18	27-Nov-19	12-Jun-19	21-Feb-20	100%	100%										21-Feb-20 A, MAIN BRIDGE PILE FOUNDATION, CRZ 15+890-17+414 FROM MP226 TO MP250
110		MODULE-14_MP231 - MP227	48	17-Aug-19	27-Nov-19	08-Nov-19	21-Feb-20	100%	100%										21-Feb-20 A, MODULE-14, MP231 - MP227
111		MODULE-15_MP236 - MP232	77	08-Mar-19	26-Aug-19	08-Aug-19	25-Dec-19	100%	100%										25-Dec-19 A, MODULE-15, MP236 - MP232
112		MODULE-16_MP240 - MP237	113	20-Dec-18	08-Mar-19	12-Jun-19	11-Nov-19	100%	100%										11-Nov-19 A, MODULE-16, MP240 - MP237
113		MODULE-17_MP245 - MP241	94	20-Mar-19	17-Jun-19	09-Oct-19	04-Jan-20	100%	100%										04-Jan-20 A, MODULE-17, MP245 - MP241
114		MODULE-18_MP249 - MP246	74	21-Jan-19	26-Mar-19	15-Oct-19	09-Feb-20	100%	100%										09-Feb-20 A, MODULE-18, MP249 - MP246
115		MAIN BRIDGE PILE FOUNDATION_INTERTIDAL 14+800-15+890 FROM MP206 TO MP225	417	27-Feb-19	06-Jun-20	15-Oct-19	26-Aug-20	100%	100%										26-Aug-20 A, MAIN BRIDGE PILE FOUNDATION, INTERTIDAL 14+800-15+890 FROM MP206 TO MP225
116		MODULE-10_MP211 - MP207	243	12-Mar-20	06-Jun-20	01-Nov-19	18-Feb-20	100%	100%										18-Feb-20 A, MODULE-10, MP211 - MP207
117		MODULE-11_MP216 - MP212	277	27-Feb-19	03-Apr-20	15-Oct-19	24-Feb-20	100%	100%										24-Feb-20 A, MODULE-11, MP216 - MP212
118		MODULE-12_MP221 - MP217	225	06-Apr-19	30-Oct-19	25-Feb-20	26-Aug-20	100%	100%										26-Aug-20 A, MODULE-12, MP221 - MP217
119		MODULE-13_MP226 - MP222	313	30-Oct-19	06-Feb-20	24-Jan-20	16-Jun-20	100%	100%										16-Jun-20 A, MODULE-13, MP226 - MP222
120		MAIN BRIDGE PILE FOUNDATION_MARINE 13+610-14+800 FROM MP187 TO MP205	531	12-Dec-19	28-Nov-20	01-Oct-19	07-Feb-22	100%	100%										07-Feb-22 A, MAIN BRIDGE PILE FOUNDATION, MARINE 13+610-14+800 FROM MP187 TO MP205
121		MODULE-09_MP206 - MP202	340	12-Dec-19	06-Mar-20	01-Oct-19	13-Oct-20	100%	100%										13-Oct-20 A, MODULE-09, MP206 - MP202
122		MODULE-08_MP201 - MP197	262	22-Feb-20	19-May-20	19-Feb-20	25-Dec-20	100%	100%										25-Dec-20 A, MODULE-08, MP201 - MP197
123		MODULE-07_MP196 - MP192	146	02-May-20	08-Sep-20	12-Oct-20	07-Feb-22	100%	100%										07-Feb-22 A, MODULE-07, MP196 - MP192
124		MODULE-06_MP191 - MP187	82	21-Aug-20	28-Nov-20	31-Aug-20	10-Dec-20	100%	100%										10-Dec-20 A, MODULE-06, MP191 - MP187
125		MAIN BRIDGE PILE FOUNDATION_MARINE (STEEL) 11+880-13+610 FROM MP171 TO MP186	678	27-Nov-19	23-Jan-21	17-Mar-20	21-Feb-22	100%	100%										21-Feb-22 A, MAIN BRIDGE PILE FOUNDATION, MARINE (STEEL) 11+880-13+610 FROM MP171 TO MP186
126		STEEL MODULE-03_MP186 - MP183	80	30-May-20	21-Nov-20	08-Oct-20	15-Feb-21	100%	100%										15-Feb-21 A, STEEL MODULE-03, MP186 - MP183
127		STEEL MODULE-02_MP182 - MP177	336	27-Nov-19	10-Sep-20	17-Mar-20	25-Jan-21	100%	100%										25-Jan-21 A, STEEL MODULE-02, MP182 - MP177
128		STEEL MODULE-01_MP176 - MP171	185	30-Jul-20	23-Jan-21	19-Apr-21	21-Feb-22	100%	100%										21-Feb-22 A, STEEL MODULE-01, MP176 - MP171
129		MAIN BRIDGE PILE FOUNDATION_MARINE 10+380-11+880 FROM MP146 TO MP170	723	24-Nov-18	28-Dec-19	19-Feb-19	21-Dec-21	100%	100%										21-Dec-21 A, MAIN BRIDGE PILE FOUNDATION, MARINE 10+380-11+880 FROM MP146 TO MP170
130		MODULE-05_MP171 - MP167	193	19-Jun-19	16-Oct-19	24-Feb-21	21-Dec-21	100%	100%										21-Dec-21 A, MODULE-05, MP171 - MP167
131		MODULE-04_MP166 - MP162	507	24-Nov-18	18-Feb-19	19-Feb-19	20-Feb-21	100%	100%										20-Feb-21 A, MODULE-04, MP166 - MP162
132		MODULE-03_MP161 - MP157	393	22-Jan-19	18-Apr-19	03-Apr-19	25-Mar-21	100%	100%										25-Mar-21 A, MODULE-03, MP161 - MP157
133		MODULE-02_MP156 - MP152	94	16-Apr-19	27-Jul-19	21-Dec-20	27-Mar-21	100%	100%										27-Mar-21 A, MODULE-02, MP156 - MP152
134		MODULE-01_MP151 - MP146	107	04-Oct-19	28-Dec-19	23-Dec-20	03-Apr-21	100%	100%										03-Apr-21 A, MODULE-01, MP151 - MP146
135		MAIN BRIDGE PILE CAP INSTALLATION	1135	22-Dec-18	23-Mar-21	01-May-19	13-Oct-22	100%	100%										13-Oct-22 A, MAIN BRIDGE PILE CAP INSTALLATION
136		MAIN BRIDGE PILE CAP BOTTOM SLAB INSTALLATION	1008	22-Dec-18	17-Feb-21	19-Aug-19	23-Sep-22	0%	0%										23-Sep-22 A, MAIN BRIDGE PILE CAP BOTTOM SLAB INSTALLATION
137		MAIN BRIDGE PILE CAP BOTTOM SLAB_CRZ 15+890-17+414 FROM MP226 TO MP250	356	17-Jan-19	12-Dec-19	19-Aug-19	28-May-20	0%	0%										28-May-20 A, MAIN BRIDGE PILE CAP BOTTOM SLAB, CRZ 15+890-17+414 FROM MP226 TO MP250
138		MODULE-14_MP231 - MP227	168	28-Sep-19	12-Dec-19	24-Dec-19	28-May-20	0%	0%										28-May-20 A, MODULE-14, MP231 - MP227
139		MODULE-15_MP236 - MP232	71	05-Apr-19	11-Sep-19	02-Nov-19	21-Feb-20	0%	0%										21-Feb-20 A, MODULE-15, MP236 - MP232
140		MODULE-16_MP240 - MP237	142	17-Jan-19	20-Mar-19	19-Aug-19	23-Feb-20	0%	0%										23-Feb-20 A, MODULE-16, MP240 - MP237
141		MODULE-17_MP245 - MP241	44	17-Apr-19	03-Jul-19	22-Oct-19	04-Jan-20	0%	0%										04-Jan-20 A, MODULE-17, MP245 - MP241
142		MODULE-18_MP249 - MP246	63	19-Feb-19	12-Apr-19	08-Nov-19	10-Feb-20	0%	0%										10-Feb-20 A, MODULE-18, MP249 - MP246
143		MAIN BRIDGE PILE CAP BOTTOM SLAB_INTERTIDAL 14+800-15+890 FROM MP206 TO MP225	186	06-Apr-19	18-Jul-20	30-Dec-19	30-Nov-20	0%	0%										30-Nov-20 A, MAIN BRIDGE PILE CAP BOTTOM SLAB, INTERTIDAL 14+800-15+890 FROM MP206 TO MP225
144		MODULE-10_MP211 - MP207	95	15-Apr-20	18-Jul-20	30-Dec-19	30-Sep-20	0%	0%										30-Sep-20 A, MODULE-10, MP211 - MP207
145		MODULE-11_MP216 - MP212	128	06-Apr-19	15-Apr-20	09-Mar-20	19-Oct-20	0%	0%										19-Oct-20 A, MODULE-11, MP216 - MP212
146		MODULE-12_MP221 - MP217	74	10-May-19	12-Nov-19	11-Sep-20	30-Nov-20	0%	0%										30-Nov-20 A, MODULE-12, MP221 - MP217
147		MODULE-13_MP226 - MP222	59	03-Dec-19	18-Feb-20	27-Apr-20	26-Oct-20	0%	0%										26-Oct-20 A, MODULE-13, MP226 - MP222
148		MAIN BRIDGE PILE CAP BOTTOM SLAB_MARINE 13+610-14+800 FROM MP187 TO MP205	420	21-Jan-20	10-Dec-20	16-Nov-19	09-May-22	0%	0%										09-May-22 A, MAIN BRIDGE PILE CAP BOTTOM SLAB, MARINE 13+610-14+800 FROM MP187 TO MP205
149		MODULE-09_MP206 - MP202	289	21-Jan-20	20-Mar-20	16-Nov-19	11-Nov-20	0%	0%										11-Nov-20 A, MODULE-09, MP206 - MP202
150		MODULE-08_MP201 - MP197	50	23-Mar-20	30-May-20	11-Nov-20	25-Feb-21	0%	0%										25-Feb-21 A, MODULE-08, MP201 - MP197
151		MODULE-07_MP196 - MP192	153	30-May-20	08-Oct-20	15-Oct-20	09-May-22	0%	0%										09-May-22 A, MODULE-07, MP196 - MP192
152		MODULE-06_MP191 - MP187	77	08-Oct-20	10-Dec-20	20-Nov-20	26-Jan-21	0%	0%										26-Jan-21 A, MODULE-06, MP191 - MP187
153		MAIN BRIDGE PILE CAP PRECAST SHELL_MARINE (STEEL) 11+880-13+610 FROM MP171 TO MP186	422	08-Jan-20	17-Feb-21	11-Oct-20	23-Sep-22	0%	0%										23-Sep-22 A, MAIN BRIDGE PILE CAP PRECAST SHELL, MARINE (STEEL) 11+880-13+610 FROM MP171 TO MP186

— Primary Baseline — Critical Remaining Work — summary
█ Actual Work ◆ Milestone
█ Remaining Work █ % Complete

EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY (MMRDA)

CONTRACTOR:
DAEWOO-TPL JV

Date	Revision	Checked	Approved
25-Dec-22	R0		



MUMBAI TRANS HARBOUR LINK PROJECT (PACKAGE 2) CONSTRUCTION OF 7.807KM LONG BRIDGE SECTION
(CH 10 380 - CH 18 187) ACCROSS THE MUMBAI BAY INCL SHIVAJNAGAR INTERCHANGE
UNDER IDENTIFICATION NO MMRDA/ENG/000753

ANNEXURE-5 CONSTRUCTION UPDATED
PROGRAMME_ABSTRACT (PACKAGE 2)

#	Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Actual Start	Actual Finish	Schedule % Complete	Performance % Complete	2018	2019	2020	2021	2022	2023	2024	2025	2026	
154		STEEL MODULE-01_MP176 - MP171	167	02-Nov-20	17-Feb-21	05-Nov-21	23-Sep-22	0%	0%										
155		STEEL MODULE-02_MP182 - MP177	118	08-Jan-20	26-Sep-20	11-Oct-20	26-Feb-21	0%	0%										
156		STEEL MODULE-03_MP186 - MP183	194	07-Aug-20	03-Dec-20	19-Jan-21	20-May-22	0%	0%										
157		MAIN BRIDGE PILE CAP BOTTOM SLAB_MARINE 10+380-11+880 FROM MP146 TO MP170	300	22-Dec-18	21-Jan-20	28-Jan-21	22-Jan-22	0%	0%										
158		MODULE-05_MP171 - MP167	108	24-Aug-19	28-Oct-19	26-Mar-21	05-Jan-22	0%	0%										
159		MODULE-04_MP166 - MP162	199	22-Dec-18	01-Mar-19	15-Feb-21	22-Jan-22	0%	0%										
160		MODULE-03_MP161 - MP157	111	01-Mar-19	10-May-19	28-Jan-21	20-Oct-21	0%	0%										
161		MODULE-02_MP156 - MP152	53	15-May-19	16-Aug-19	15-Feb-21	17-May-21	0%	0%										
162		MODULE-01_MP151 - MP146	168	01-Nov-19	21-Jan-20	11-Feb-21	24-Oct-21	0%	0%										
163		MAIN BRIDGE PILE CAP INSTALLATION	1119	27-Dec-18	23-Mar-21	01-May-19	13-Oct-22	100%	100%										
164		MAIN BRIDGE PILE CAP_LAND 17+414-18+188 FROM MP251 TO MP266	377	27-Dec-18	13-Jun-19	01-May-19	27-Jun-20	100%	100%										
165		MODULE-21_MP261 - MP257	248	27-Dec-18	30-Mar-19	15-Oct-19	27-Jun-20	100%	100%										
166		MODULE-22_MP266 - MP262	207	02-Apr-19	13-Jun-19	01-May-19	16-May-20	100%	100%										
167		MODULE-20_MP256 - MP255	54	01-Jan-19	06-Feb-19	29-Nov-19	23-May-20	100%	100%										
168		MODULE-19_MP254 - MP250	218	08-Feb-19	13-May-19	23-Nov-19	20-Jun-20	100%	100%										
169		MAIN BRIDGE PILE CAP_CRZ 15+890-17+414 FROM MP226 TO MP250	328	04-Mar-19	08-Jan-20	28-Aug-19	19-Sep-20	100%	100%										
170		MODULE-14_MP231 - MP227	230	24-Oct-19	08-Jan-20	11-Jan-20	19-Sep-20	100%	100%										
171		MODULE-15_MP236 - MP232	201	02-Sep-19	22-Nov-19	16-Nov-19	18-Sep-20	100%	100%										
172		MODULE-16_MP240 - MP237	146	02-Jul-19	26-Sep-19	28-Aug-19	05-Mar-20	100%	100%										
173		MODULE-17_MP245 - MP241	98	29-Apr-19	16-Aug-19	17-Nov-19	24-Jan-20	100%	100%										
174		MODULE-18_MP249 - MP246	84	04-Mar-19	10-May-19	13-Nov-19	14-Feb-20	100%	100%										
175		MAIN BRIDGE PILE CAP_INTERTIDAL 14+800-15+890 FROM MP206 TO MP225	199	18-Apr-19	05-Sep-20	29-Jan-20	07-Dec-20	100%	100%										
176		MODULE-10_MP211 - MP207	96	27-Apr-20	05-Sep-20	29-Jan-20	07-Oct-20	100%	100%										
177		MODULE-11_MP216 - MP212	157	18-Apr-19	13-May-20	31-Aug-20	24-Oct-20	100%	100%										
178		MODULE-12_MP221 - MP217	111	22-May-19	09-Dec-19	17-Sep-20	07-Dec-20	100%	100%										
179		MODULE-13_MP226 - MP222	94	14-Dec-19	17-Mar-20	16-Sep-20	19-Nov-20	100%	100%										
180		MAIN BRIDGE PILE CAP_MARINE 13+610-14+800 FROM MP187 TO MP205	413	01-Feb-20	06-Jan-21	13-Jan-20	23-May-22	100%	100%										
181		MODULE-09_MP206 - MP202	288	01-Feb-20	16-Apr-20	13-Jan-20	20-Nov-20	100%	100%										
182		MODULE-08_MP201 - MP197	63	03-Apr-20	06-Jul-20	23-Nov-20	04-Mar-21	100%	100%										
183		MODULE-07_MP196 - MP192	97	15-Jun-20	11-Nov-20	01-Dec-20	23-May-22	100%	100%										
184		MODULE-06_MP191 - MP187	90	21-Oct-20	06-Jan-21	14-Dec-20	30-Jan-21	100%	100%										
185		MAIN BRIDGE PILE CAP_MARINE (STEEL) 11+880-13+610 FROM MP171 TO MP186	485	20-Jan-20	23-Mar-21	18-Nov-20	13-Oct-22	100%	100%										
186		STEEL MODULE-01_MP176 - MP171	154	21-Nov-20	23-Mar-21	13-Dec-21	13-Oct-22	100%	100%										
187		STEEL MODULE-02_MP182 - MP177	158	20-Jan-20	02-Nov-20	18-Nov-20	08-Mar-21	100%	100%										
188		STEEL MODULE-03_MP186 - MP183	330	27-Aug-20	07-Jan-21	28-Jan-21	28-May-22	100%	100%										
189		MAIN BRIDGE PILE CAP_MARINE 10+380-11+880 FROM MP146 TO MP170	323	03-Jan-19	17-Feb-20	08-Feb-21	23-Mar-22	100%	100%										
190		MODULE-05_MP171 - MP167	119	10-Sep-19	25-Nov-19	13-Apr-21	22-Jan-22	100%	100%										
191		MODULE-04_MP166 - MP162	283	03-Jan-19	29-Mar-19	01-Mar-21	23-Mar-22	100%	100%										
192		MODULE-03_MP161 - MP157	141	14-Mar-19	08-Jun-19	08-Feb-21	28-Oct-21	100%	100%										
193		MODULE-02_MP156 - MP152	54	27-May-19	26-Sep-19	06-Mar-21	27-May-21	100%	100%										
194		MODULE-01_MP151 - MP146	192	14-Nov-19	17-Feb-20	22-Feb-21	03-Nov-21	100%	100%										
195		MAIN BRIDGE SUB-STRUCTURE	1242	09-Jan-19	24-Sep-21	04-Nov-19		100%	96.44%										
196		MAIN BRIDGE PIER INSTALLATION	1242	09-Jan-19	28-Jul-21	04-Nov-19	28-Nov-22	100%	100%										
197		MAIN BRIDGE PIER_LAND 17+414-18+188 FROM MB251 TO MB266	681	09-Jan-19	08-Nov-19	06-Nov-19	27-Aug-21	100%	100%										
198		MODULE-21_MP261 - MP257	301	14-Jan-19	12-Jul-19	27-May-20	03-May-21	100%	100%										
199		MODULE-22_MP266 - MP262	315	04-May-19	08-Nov-19	06-Nov-19	02-Feb-21	100%	100%										

Primary Baseline
 Critical Remaining Work
 ▼ summary
 Actual Work
 ◆ Milestone
 Remaining Work
 ▬ % Complete



EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY (MMRDA)

CONTRACTOR:
DAEWOO-TPL JV

Date	Revision	Checked	Approved
25-Dec-22	R0		

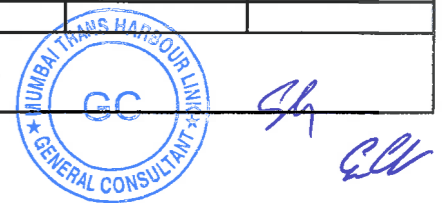
#	Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Actual Start	Actual Finish	Schedule % Complete	Performance % Complete	2018	2019	2020	2021	2022	2023	2024	2025	2026	
200		MODULE-20_MP256 - MP255	225	09-Jan-19	17-May-19	11-May-20	21-Jun-21	100%	100%										
201		MODULE-19_MP254 - MP250	336	28-Feb-19	20-Sep-19	15-Jun-20	27-Aug-21	100%	100%										
202		MAIN BRIDGE PIER_CRZ 15+890-17+414 FROM MB256 TO MB250	393	26-Mar-19	08-Feb-20	04-Nov-19	11-Aug-21	100%	100%										
203		MODULE-14_MP231 - MP227	228	05-Dec-19	06-Feb-20	02-Feb-20	22-Jan-21	100%	100%										
204		MODULE-15_MP236 - MP232	134	16-Oct-19	19-Dec-19	06-Jan-20	06-Nov-20	100%	100%										
205		MODULE-16_MP240 - MP237	85	13-Aug-19	30-Oct-19	04-Nov-19	27-Jun-20	100%	100%										
206		MODULE-17_MP245 - MP241	171	22-May-19	25-Sep-19	24-Dec-19	23-Jun-20	100%	100%										
207		MODULE-18_MP249 - MP246	238	26-Mar-19	06-Jun-19	02-Mar-20	11-Aug-21	100%	100%										
208		MAIN BRIDGE PIER_INTERTIDAL 14+800-15+890 FROM MB206 TO MB225	417	11-May-19	16-Oct-20	10-Feb-20	08-Jun-21	100%	100%										
209		MODULE-10_MP211 - MP207	338	24-Feb-20	16-Oct-20	10-Feb-20	03-Feb-21	100%	100%										
210		MODULE-11_MP216 - MP212	386	11-May-19	17-Jul-20	13-Nov-20	22-Mar-21	100%	100%										
211		MODULE-12_MP221 - MP217	97	17-Jun-19	03-Jan-20	30-Nov-20	08-Jun-21	100%	100%										
212		MODULE-13_MP226 - MP222	235	06-Jan-20	15-May-20	29-Oct-20	20-Feb-21	100%	100%										
213		MAIN BRIDGE PIER_MARINE 13+610-14+800 FROM MB187 TO MB205	316	19-Mar-20	18-Feb-21	04-Jan-21	17-Nov-22	100%	100%										
214		MODULE-06_MP191 - MP187	173	13-Nov-20	18-Feb-21	19-Oct-21	24-Jan-22	100%	100%										
215		MODULE-07_MP196 - MP192	176	17-Jul-20	19-Dec-20	28-Apr-21	17-Nov-22	100%	100%										
216		MODULE-08_MP201 - MP197	162	25-Apr-20	03-Sep-20	04-Jan-21	16-Oct-21	100%	100%										
217		MODULE-09_MP206 - MP202	66	19-Mar-20	23-May-20	18-Jan-21	18-Mar-21	100%	100%										
218		MAIN BRIDGE PIER_MARINE (STEEL) 11+880-13+610 FROM MB171 TO MB186	538	17-Feb-20	28-Jul-21	08-Feb-21	28-Nov-22	100%	100%										
219		STEEL MODULE-01_MP176 - MP171	230	23-Dec-20	28-Jul-21	21-Jan-22	28-Nov-22	100%	100%										
220		STEEL MODULE-02_MP182 - MP177	170	17-Feb-20	15-Jan-21	08-Feb-21	16-Jan-22	100%	100%										
221		STEEL MODULE-03_MP186 - MP183	290	06-Oct-20	03-Apr-21	12-Oct-21	10-Nov-22	100%	100%										
222		MAIN BRIDGE PIER_MARINE 10+380-11+880 FROM MB146 TO MB170	187	07-Feb-19	13-Mar-20	20-Sep-21	17-May-22	100%	100%										
223		MODULE-01_MP151 - MP146	129	10-Dec-19	13-Mar-20	20-Sep-21	07-Jan-22	100%	100%										
224		MODULE-02_MP156 - MP152	77	11-Jul-19	04-Nov-19	25-Oct-21	29-Jan-22	100%	100%										
225		MODULE-03_MP161 - MP157	61	22-Apr-19	01-Aug-19	31-Dec-21	12-Mar-22	100%	100%										
226		MODULE-04_MP166 - MP162	84	07-Feb-19	06-May-19	24-Jan-22	28-Apr-22	100%	100%										
227		MODULE-05_MP171 - MP167	69	10-Oct-19	31-Dec-19	18-Feb-22	17-May-22	100%	100%										
228		MAIN BRIDGE PIER_CAP INSTALLATION	926	08-Feb-19	27-Aug-21	25-Feb-20		100%	91.81%										
229		MAIN BRIDGE PIER_CAP_LAND 17+414-18+188 FROM MB251 TO MB266	313	08-Feb-19	23-Nov-19	13-Nov-20	17-Jan-22	100%	100%										
230		MODULE-21_MP261 - MP257	159	13-Feb-19	05-Aug-19	11-Feb-21	14-Oct-21	100%	100%										
231		MODULE-22_MP266 - MP262	114	03-Jun-19	23-Nov-19	13-Nov-20	13-Mar-21	100%	100%										
232		MODULE-20_MP256 - MP255	182	08-Feb-19	01-Jun-19	07-Jan-21	22-Nov-21	100%	100%										
233		MODULE-19_MP254 - MP250	212	30-Mar-19	09-Oct-19	01-Mar-21	17-Jan-22	100%	100%										
234		MAIN BRIDGE PIER_CAP_CRZ 15+890-17+414 FROM MB226 TO MB250	405	19-Apr-19	25-Feb-20	25-Feb-20	24-Sep-21	100%	100%										
235		MODULE-14_MP231 - MP227	83	30-Dec-19	25-Feb-20	27-Dec-20	28-May-21	100%	100%										
236		MODULE-15_MP236 - MP232	64	11-Nov-19	07-Jan-20	12-Oct-20	22-Feb-21	100%	100%										
237		MODULE-16_MP240 - MP237	132	21-Sep-19	19-Nov-19	14-May-20	23-Dec-20	100%	100%										
238		MODULE-17_MP245 - MP241	163	05-Jul-19	16-Oct-19	25-Feb-20	22-Dec-20	100%	100%										
239		MODULE-18_MP249 - MP246	201	19-Apr-19	02-Jul-19	22-Oct-20	24-Sep-21	100%	100%										
240		MAIN BRIDGE PIER_CAP_INTERTIDAL 14+800-15+890 FROM MB206 TO MB225	277	06-Jun-19	05-Nov-20	04-Feb-21	14-Jan-22	100%	100%										
241		MODULE-10_MP211 - MP207	174	20-Mar-20	05-Nov-20	02-Aug-21	14-Jan-22	100%	100%										
242		MODULE-11_MP216 - MP212	209	06-Jun-19	18-Aug-20	21-Jun-21	26-Nov-21	100%	100%										
243		MODULE-12_MP221 - MP217	100	24-Jul-19	22-Jan-20	01-Mar-21	24-Sep-21	100%	100%										
244		MODULE-13_MP226 - MP222	187	30-Jan-20	04-Feb-20	04-Feb-21	07-Jul-21	100%	100%										
245		MAIN BRIDGE PIER_CAP_MARINE 13+610-14+800 FROM MB187 TO MB205	188	23-Apr-20	10-Mar-21	03-May-21		100%	91.84%										
246		MODULE-06_MP191 - MP187	160	18-Dec-20	10-Mar-21	20-Jan-22		100%	91.5%										
247		MODULE-07_MP196 - MP192	184	10-Sep-20	07-Jan-21	18-Nov-21		100%	81.48%										
248		MODULE-08_MP201 - MP197	114	01-Jun-20	29-Sep-20	03-May-21	08-Mar-22	100%	100%										
249		MODULE-09_MP206 - MP202	46	23-Apr-20	15-Jun-20	09-Dec-21	09-Feb-22	100%	100%										
250		MAIN BRIDGE PIER_CAP_MARINE (STEEL) 11+880-13+610 FROM MB171 TO MB186	384	30-Apr-20	27-Aug-21	23-Aug-21		100%	90.78%										

Primary Baseline
 Critical Remaining Work
 summary
 Actual Work
 ◆ Milestone
 Remaining Work
 % Complete

EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY
(MMRDA)

CONTRACTOR:
DAEWOO-TPL JV

Date	Revision	Checked	Approved
25-Dec-22	R0		



#	Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Actual Start	Actual Finish	Schedule % Complete	Performance % Complete	2018	2019	2020	2021	2022	2023	2024	2025	J26
251		STEEL MODULE-01_MP176 - MP171	229	08-Mar-21	27-Aug-21	17-Mar-22		100%	75.42%									
252		STEEL MODULE-02_MP182 - MP177	148	30-Apr-20	04-Feb-21	23-Aug-21	04-Apr-22	100%	100%									
253		STEEL MODULE-03_MP186 - MP183	198	19-Dec-20	22-Apr-21	24-Feb-22	03-Dec-22	100%	100%									
254		MAIN BRIDGE PIER CAP_MARINE 10+380~11+880 FROM MB146 TO MB170	219	15-Mar-19	01-Apr-20	17-Dec-21		100%	71.67%									
255		MODULE-01_MP151 - MP146	121	14-Jan-20	01-Apr-20	17-Dec-21	26-May-22	100%	100%									
256		MODULE-02_MP156 - MP152	165	05-Sep-19	23-Nov-19	17-Feb-22	12-Nov-22	100%	100%									
257		MODULE-03_MP161 - MP157	167	28-May-19	31-Aug-19	22-Mar-22	21-Dec-22	100%	100%									
258		MODULE-04_MP166 - MP162	187	15-Mar-19	24-May-19	21-Apr-22		100%	44%									
259		MODULE-05_MP171 - MP167	42	15-Nov-19	18-Jan-20			100%	0%									
260		MAIN BRIDGE BEARING PAD AND BEARING INSALLATION	793	22-Feb-19	24-Sep-21	14-Sep-20		100%	94.42%									
261		MAIN BRIDGE BEARING_LAND 17+414~18+188 FROM MB251 TO MB266	393	22-Feb-19	22-Aug-19	11-Feb-21	04-Jun-22	100%	100%									
262		MODULE-19_MP254 - MP250	240	13-Apr-19	21-May-19	23-Jul-21	04-Jun-22	100%	100%									
263		MODULE-20_MP256 - MP255	242	22-Feb-19	02-Apr-19	24-Feb-21	04-Dec-21	100%	100%									
264		MODULE-21_MP261 - MP257	28	29-May-19	08-Jul-19	20-Apr-21	15-Sep-21	100%	100%									
265		MODULE-22_MP266 - MP262	28	22-Jun-19	22-Aug-19	11-Feb-21	03-Apr-21	100%	100%									
266		MAIN BRIDGE BEARING_CRZ 15+890~17+414 FROM MB226 TO MB250	392	08-May-19	20-Feb-20	14-Sep-20	09-Sep-21	100%	100%									
267		MODULE-14_MP231 - MP227	28	16-Jan-20	20-Feb-20	29-Jan-21	24-Feb-21	100%	100%									
268		MODULE-15_MP236 - MP232	28	28-Nov-19	02-Jan-20	29-Jan-21	24-Feb-21	100%	100%									
269		MODULE-16_MP240 - MP237	28	12-Oct-19	16-Nov-19	12-Apr-21	20-May-21	100%	100%									
270		MODULE-17_MP245 - MP241	28	03-Aug-19	13-Sep-19	14-Sep-20	03-Dec-20	100%	100%									
271		MODULE-18_MP249 - MP246	324	08-May-19	12-Jun-19	18-Jan-21	09-Sep-21	100%	100%									
272		MAIN BRIDGE BEARING_INTERTIDAL 14+800~15+890 FROM MB206 TO MB225	28	29-Jun-19	14-Sep-20	01-Oct-21	08-Feb-22	100%	100%									
273		MODULE-10_MP211 - MP207	28	04-Aug-20	14-Sep-20	10-Jan-22	08-Feb-22	100%	100%									
274		MODULE-11_MP216 - MP212	28	29-Jun-19	07-Aug-19	09-Dec-21	04-Jan-22	100%	100%									
275		MODULE-12_MP221 - MP217	28	15-Jan-20	19-Feb-20	09-Nov-21	27-Dec-21	100%	100%									
276		MODULE-13_MP226 - MP222	28	27-May-20	02-Jul-20	01-Oct-21	18-Oct-21	100%	100%									
277		MAIN BRIDGE BEARING_MARINE 13+610~14+800 FROM MB187 TO MB205	278	07-Apr-20	09-Feb-21	22-Feb-22		100%	70%									
278		MODULE-06_MP191 - MP187	89	05-Jan-21	09-Feb-21	18-Nov-22		100%	50%									
279		MODULE-07_MP196 - MP192	239	05-Oct-20	04-Feb-21	26-May-22		100%	50%									
280		MODULE-08_MP201 - MP197	28	24-Jun-20	01-Aug-20	01-Apr-22	30-Apr-22	100%	100%									
281		MODULE-09_MP206 - MP202	28	07-Apr-20	12-May-20	22-Feb-22	18-Mar-22	100%	100%									
282		MAIN BRIDGE BEARING_MARINE (STEEL) 11+880~13+610 FROM MB171 TO MB186	373	19-May-20	24-Sep-21	22-Dec-21		100%	96.4%									
283		STEEL MODULE-01_MP176 - MP171	131	25-Mar-21	24-Sep-21	27-Oct-22		100%	33.33%									
284		STEEL MODULE-02_MP182 - MP177	331	19-May-20	04-Mar-21	22-Dec-21		100%	99.68%									
285		STEEL MODULE-03_MP186 - MP183	89	06-Jan-21	20-May-21	21-Oct-22		100%	63.75%									
286		MAIN BRIDGE BEARING_MARINE 10+380~11+880 FROM MB146 TO MB170	64	25-Apr-19	18-Apr-20	02-Nov-22		100%	25%									
287		MODULE-01_MP151 - MP146	59	31-Jan-20	18-Apr-20	02-Nov-22	01-Dec-22	100%	100%									
288		MODULE-02_MP156 - MP152	28	03-Oct-19	07-Nov-19			100%	0%									
289		MODULE-03_MP161 - MP157	28	03-Jul-19	10-Aug-19			100%	0%									
290		MODULE-04_MP166 - MP162	28	25-Apr-19	31-May-19			100%	0%									
291		MAIN BRIDGE SUPER STRUCTURE BOX GIRDER INSTALLATION	1112	12-Sep-19	01-Mar-22	20-Jul-20		100%	73.35%									
292		MAIN BRIDGE CONCRETE GIRDER INSTALLATION	1061	12-Sep-19	02-Feb-22	20-Jul-20		100%	77.92%									
293		MAIN BRIDGE PC GIRDER_LAND 15+890~17+414 FROM MP251 TO MP266	766	12-Sep-19	27-Feb-20	20-Jul-20	02-Jul-22	100%	100%									
294	CN.LGA.1005	Assembly of Mechanical Parts in Launching Gantry_1	15	17-Oct-19	01-Nov-19	05-Feb-21	06-Mar-21	100%	100%									
295	CN.LGA.1000	Assembly of Structural Parts in Launching Gantry_1	35	12-Sep-19	17-Oct-19	12-Nov-20	17-Feb-21	100%	100%									
296	CN.LGA.1015	Assembly of Mechanical Parts in Launching Gantry_2	15	17-Oct-19	01-Nov-19	28-Sep-20	30-Dec-20	100%	100%									
297	CN.LGA.1010	Assembly of Structural Parts in Launching Gantry_2	35	12-Sep-19	17-Oct-19	20-Jul-20	25-Dec-20	100%	100%									
298	MODULE-22_MP266 - MP262		191	01-Nov-19	25-Dec-19	02-Jul-21	29-Mar-22	100%	100%									
299	MODULE-21_MP261 - MP257		192	02-Dec-19	23-Jan-20	18-Sep-21	25-May-22	100%	100%									
300	MODULE-20_MP256 - MP255		162	31-Dec-19	04-Feb-20	06-Nov-21	15-Jun-22	100%	100%									
301	MODULE-19_MP254 - MP250		161	11-Jan-20	27-Feb-20	26-Nov-21	02-Jul-22	100%	100%									
302		MAIN BRIDGE PRECAST GIRDER_CRZ 15+890~17+414 FROM MP226 TO MP250	214	04-Feb-20	25-Sep-20	30-Dec-20	25-Aug-22	100%	100%									

<p>Primary Baseline █ Critical Remaining Work █ summary █</p> <p>Actual Work █ Milestone ◆</p> <p>Remaining Work █ % Complete █</p>	<p>EMPLOYER: MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY (MMRDA)</p>	<p>CONTRACTOR: DAEWOO-TPL JV</p>	<p>Date 25-Dec-22</p>	<p>Revision R0</p>	<p>Checked</p>	<p>Approved</p>
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Handwritten initials and signatures in blue ink.

MUMBAI TRANS HARBOUR LINK PROJECT (PACKAGE 2) CONSTRUCTION OF 7.807KM LONG BRIDGE SECTION
(CH 10 380 - CH 18 187) ACCROSS THE MUMBAI BAY INCL SHIVAJNAGAR INTERCHANGE
UNDER IDENTIFICATION NO MMRDA/ENG/000753

ANNEXURE-5 CONSTRUCTION UPDATED
PROGRAMME_ABSTRACT (PACKAGE 2)

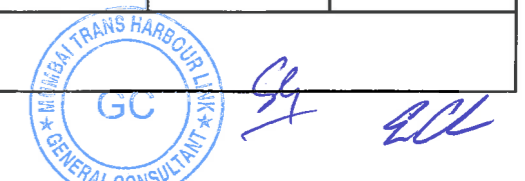
#	Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Actual Start	Actual Finish	Schedule % Complete	Performance % Complete	2018	2019	2020	2021	2022	2023	2024	2025	
303		MODULE-18_MP249 - MP246	104	04-Feb-20	28-Mar-20	20-Dec-21	25-Aug-22	100%	100%									25-Aug-22A; MODULE-18; MP249 - MP246
304		MODULE-17_MP245 - MP241	74	05-Mar-20	27-Apr-20	30-Dec-20	16-May-21	100%	100%									16-May-21A; MODULE-17; MP245 - MP241
305		MODULE-16_MP240 - MP237	37	03-Apr-20	21-May-20	13-Apr-21	03-Aug-21	100%	100%									03-Aug-21A; MODULE-16; MP240 - MP237
306		MODULE-15_MP236 - MP232	31	27-Apr-20	19-Jun-20	06-Jul-21	22-Sep-21	100%	100%									22-Sep-21A; MODULE-15; MP236 - MP232
307		MODULE-14_MP231 - MP227	42	27-May-20	25-Sep-20	27-Aug-21	10-Nov-21	100%	100%									10-Nov-21A; MODULE-14; MP231 - MP227
308		MAIN BRIDGE PRECAST GIRDER_INTERTIDAL 14+800-15+890 FROM MP206 TO MP225	94	12-Sep-20	23-Jan-21	25-Oct-21	11-Apr-22	100%	100%									11-Apr-22A; MAIN BRIDGE PRECAST GIRDER INTERTIDAL 14+800-15+890 FROM MP206 TO MP225
309		MODULE-13_MP226 - MP222	39	12-Sep-20	21-Oct-20	25-Oct-21	10-Dec-21	100%	100%									10-Dec-21A; MODULE-13; MP226 - MP222
310		MODULE-12_MP221 - MP217	65	08-Oct-20	20-Nov-20	20-Nov-21	14-Jan-22	100%	100%									14-Jan-22A; MODULE-12; MP221 - MP217
311		MODULE-11_MP216 - MP212	85	09-Nov-20	19-Dec-20	27-Dec-21	27-Feb-22	100%	100%									27-Feb-22A; MODULE-11; MP216 - MP212
312		MODULE-10_MP211 - MP207	84	08-Dec-20	23-Jan-21	31-Jan-22	11-Apr-22	100%	100%									11-Apr-22A; MODULE-10; MP211 - MP207
313		MAIN BRIDGE PRECAST GIRDER_MARINE 13+610-14+800 FROM MP187 TO MP205	164	12-Jan-21	10-Jun-21	19-Mar-22		100%	89.23%									21-Apr-23; MAIN BRIDGE PRECAST GIRDER MARINE 13+610-14+800 FROM MP187 TO MP205
314	CN.LGD.1010	Dismantling of Launching Gantry_2	20	12-May-21	03-Jun-21	04-Oct-22	07-Oct-22	100%	100%									Dismantling of Launching Gantry_2
315	CN.LGD.1000	Dismantling of Launching Gantry_1	20	18-May-21	10-Jun-21	14-Sep-22	20-Sep-22	100%	100%									Dismantling of Launching Gantry_1
316	MODULE-09_MP206 - MP202		47	12-Jan-21	17-Feb-21	19-Mar-22	12-May-22	100%	100%									12-May-22A; MODULE-09; MP206 - MP202
317	MODULE-08_MP201 - MP197		26	05-Feb-21	19-Mar-21	17-Apr-22	27-Jun-22	100%	100%									27-Jun-22A; MODULE-08; MP201 - MP197
318	MODULE-07_MP196 - MP192		122	08-Mar-21	17-Apr-21	03-Jun-22		100%	64.48%									04-Apr-23; MODULE-07; MP196 - MP192
319	MODULE-06_MP191 - MP187		44	12-Apr-21	18-May-21	30-Nov-22		100%	19%									21-Apr-23; MODULE-06; MP191 - MP187
320		MAIN BRIDGE PRECAST GIRDER_MARINE 10+380-11+880 FROM MP146 TO MP170	114	04-Jun-21	02-Feb-22	21-Sep-22		100%	30.8%									29-Jul-23; MAIN BRIDGE PRECAST GIRDER MARINE 10+380-11+880 FROM MP146 TO MP170
321	CN.LGA.1030	Assembling of Launching Gantry_2	20	04-Jun-21	26-Jun-21	07-Oct-22	16-Oct-22	100%	100%									Assembling of Launching Gantry_2
322	CN.LGA.1020	Assembling of Launching Gantry_1	20	10-Jun-21	03-Sep-21	21-Sep-22	10-Oct-22	100%	100%									Assembling of Launching Gantry_1
323	MODULE-05_MP171 - MP167		44	28-Dec-21	02-Feb-22			100%	0%									29-Jul-23; MODULE-05; MP171 - MP167
324	MODULE-04_MP166 - MP162		44	29-Nov-21	03-Jan-22			100%	0%									30-Jun-23; MODULE-04; MP166 - MP162
325	MODULE-03_MP161 - MP157		44	30-Oct-21	04-Dec-21			100%	0%									01-Jun-23; MODULE-03; MP161 - MP157
326	MODULE-02_MP156 - MP152		43	29-Sep-21	05-Nov-21	04-Dec-22		100%	54%									03-May-23; MODULE-02; MP156 - MP152
327	MODULE-01_MP151 - MP146		47	28-Jun-21	06-Oct-21	17-Oct-22	05-Dec-22	100%	100%									08-Dec-22A; MODULE-01; MP151 - MP146
328		STITCH JOINT CASTING	539	07-Dec-19	12-Feb-22	12-Jan-21		0%	0%									09-Aug-23; STITCH JOINT CASTING
329		MAIN BRIDGE STITCH JOINT CASTING LAND 15+890-17+414 FROM MP251 TO MP266	283	07-Dec-19	16-Mar-20	08-Jul-21	28-Jun-22	0%	0%									28-Jun-22A; MAIN BRIDGE STITCH JOINT CASTING LAND 15+890-17+414 FROM MP251 TO MP266
330		MODULE-19_MP254 - MP250	106	10-Feb-20	16-Mar-20	29-Nov-21	28-Jun-22	0%	0%									28-Jun-22A; MODULE-19; MP254 - MP250
331		MODULE-20_MP256 - MP255	156	17-Jan-20	20-Feb-20	10-Nov-21	13-Jun-22	0%	0%									18-Jun-22A; MODULE-20; MP256 - MP255
332		MODULE-21_MP261 - MP257	209	06-Jan-20	08-Feb-20	23-Sep-21	19-May-22	0%	0%									19-May-22A; MODULE-21; MP261 - MP257
333		MODULE-22_MP266 - MP262	175	07-Dec-19	10-Jan-20	08-Jul-21	25-Mar-22	0%	0%									25-Mar-22A; MODULE-22; MP266 - MP262
334		MAIN BRIDGE STITCH JOINT CASTING_CRZ 15+890-17+414 FROM MP226 TO MP250	206	11-Mar-20	13-Oct-20	12-Jan-21	23-Aug-22	0%	0%									23-Aug-22A; MAIN BRIDGE STITCH JOINT CASTING CRZ 15+890-17+414 FROM MP226 TO MP250
335		MODULE-14_MP231 - MP227	29	19-Sep-20	13-Oct-20	02-Sep-21	08-Nov-21	0%	0%									08-Nov-21A; MODULE-14; MP231 - MP227
336		MODULE-15_MP236 - MP232	19	02-Jun-20	09-Jul-20	10-Jul-21	20-Sep-21	0%	0%									20-Sep-21A; MODULE-15; MP236 - MP232
337		MODULE-16_MP240 - MP237	19	04-May-20	06-Jun-20	23-Apr-21	31-Jul-21	0%	0%									31-Jul-21A; MODULE-16; MP240 - MP237
338		MODULE-17_MP245 - MP241	41	09-Apr-20	14-May-20	12-Jan-21	12-May-21	0%	0%									12-May-21A; MODULE-17; MP245 - MP241
339		MODULE-18_MP249 - MP246	142	11-Mar-20	14-Apr-20	29-Dec-21	23-Aug-22	0%	0%									23-Aug-22A; MODULE-18; MP249 - MP246
340		MAIN BRIDGE STITCH JOINT CASTING_INTERTIDAL 14+800-15+890 FROM MP206 TO MP225	155	14-Oct-20	10-Feb-21	27-Oct-21	07-Apr-22	0%	0%									07-Apr-22A; MAIN BRIDGE STITCH JOINT CASTING INTERTIDAL 14+800-15+890 FROM MP206 TO MP225
341		MODULE-10_MP211 - MP207	43	18-Jan-21	10-Feb-21	03-Feb-22	07-Apr-22	0%	0%									07-Apr-22A; MODULE-10; MP211 - MP207
342		MODULE-11_MP216 - MP212	112	14-Dec-20	05-Jan-21	30-Dec-21	25-Feb-22	0%	0%									25-Feb-22A; MODULE-11; MP216 - MP212
343		MODULE-12_MP221 - MP217	97	14-Nov-20	07-Dec-20	24-Nov-21	12-Jan-22	0%	0%									12-Jan-22A; MODULE-12; MP221 - MP217
344		MODULE-13_MP226 - MP222	28	14-Oct-20	06-Nov-20	27-Oct-21	08-Dec-21	0%	0%									08-Dec-21A; MODULE-13; MP226 - MP222
345		MAIN BRIDGE STITCH JOINT CASTING_MARINE 13+610-14+800 FROM MP187 TO MP205	155	11-Feb-21	21-Jun-21	21-Mar-22		0%	0%									02-May-23; MAIN BRIDGE STITCH JOINT CASTING MARINE 13+610-14+800 FROM MP187 TO MP205
346		MODULE-06_MP191 - MP187	32	04-Jun-21	21-Jun-21	05-Dec-22		0%	0%									05-May-23; MODULE-06; MP191 - MP187
347		MODULE-07_MP196 - MP192	101	17-Apr-21	05-May-21	07-Jun-22		0%	0%									14-Apr-23; MODULE-07; MP196 - MP192
348		MODULE-08_MP201 - MP197	59	13-Mar-21	05-Apr-21	20-Apr-22	25-Jun-22	0%	0%									25-Jun-22A; MODULE-08; MP201 - MP197
349		MODULE-09_MP206 - MP202	34	11-Feb-21	06-Mar-21	21-Mar-22	09-May-22	0%	0%									09-May-22A; MODULE-09; MP206 - MP202
350		MAIN BRIDGE STITCH JOINT CASTING_MARINE 10+380-11+880 FROM MP146 TO MP170	107	06-Oct-21	12-Feb-22	25-Oct-22		0%	0%									03-Dec-22A; MAIN BRIDGE STITCH JOINT CASTING MARINE 10+380-11+880 FROM MP146 TO MP170
351		MODULE-01_MP151 - MP146	50	06-Oct-21	23-Oct-21	25-Oct-22	03-Dec-22	0%	0%									03-Dec-22A; MODULE-01; MP151 - MP146
352		MODULE-02_MP156 - MP152	52	05-Nov-21	22-Nov-21	08-Dec-22		0%	0%									18-May-23; MODULE-02; MP156 - MP152
353		MODULE-03_MP161 - MP157	28	04-Dec-21	21-Dec-21			0%	0%									17-Jun-23; MODULE-03; MP161 - MP157
354		MODULE-04_MP166 - MP162	28	03-Jan-22	19-Jan-22			0%	0%									17-Jul-23; MODULE-04; MP166 - MP162
355		MODULE-05_MP171 - MP167	28	27-Jan-22	12-Feb-22			0%	0%									09-Aug-23; MODULE-05; MP171 - MP167
356		MAIN BRIDGE STEEL GIRDER INSTALLATION	380	03-Oct-20	01-Mar-22	01-Jan-22		100%	46.67%									18-Sep-23; MAIN BRIDGE STEEL GIRDER INSTALLATION

— Primary Baseline █ Critical Remaining Work ▾ summary
█ Actual Work ◆ Milestone
█ Remaining Work ▬ % Complete

EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY (MMRDA)

CONTRACTOR:
DAEWOO-TPL JV

Date	Revision	Checked	Approved
25-Dec-22	R0		



MUMBAI TRANS HARBOUR LINK PROJECT (PACKAGE 2) CONSTRUCTION OF 7.807KM LONG BRIDGE SECTION
(CH 10 380 - CH 18 187) ACCROSS THE MUMBAI BAY INCL SHIVAJNAGAR INTERCHANGE
UNDER IDENTIFICATION NO MMRDA/ENG/000753

ANNEXURE-5 CONSTRUCTION UPDATED
PROGRAMME_ABSTRACT (PACKAGE 2)

#	Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Actual Start	Actual Finish	Schedule % Complete	Performance % Complete	2018	2019	2020	2021	2022	2023	2024	2025	J26
357		MAN BRIDGE STEEL GIRDER INSTALLATION, MARINE 11+880-13+610 FROM MP171 TO MP186	380	03-Oct-20	01-Mar-22	01-Jan-22		100%	46.67%									
358		STEEL MODULE-01_MP176 - MP171 (INSTALLATION)	80	07-Dec-21	01-Mar-22			100%	0%									
359		STEEL MODULE-02_MP182 - MP177 (INSTALLATION)	157	03-Oct-20	30-Sep-21	01-Jan-22	15-Dec-22	100%	100%									
360		STEEL MODULE-03_MP186 - MP183 (INSTALLATION)	77	30-Sep-21	07-Dec-21	22-Nov-22		100%	25%									
361		MISCELLANEOUS & FINISHING WORKS	627	16-May-19	24-May-22	30-Mar-21		100%	7.15%									
362		CRASH BARRIER & GURARD RAILS	351	20-Feb-20	07-Mar-22	25-Jul-22		100%	22.88%									
363		WATER PROOFING	242	26-Mar-20	17-Mar-22			100%	0%									
364		PAVEMENT	322	16-Mar-20	24-May-22			100%	0%									
365		EXPANSION JOINT	188	27-May-20	21-Apr-22			100%	0%									
366		SUB STATION	345	16-May-19	15-Apr-21	30-Mar-21		100%	0%									
367		NOISE BARRIER	135	16-Mar-20	14-Sep-21			100%	0%									
368		FENDER INSTALLATION	80	24-Jul-21	24-Nov-21			100%	0%									
369		DRAINAGE WORKS	231	16-Mar-20	09-Mar-22			100%	0%									
370		SIGN BOARDS	60	12-Feb-22	23-Apr-22			100%	0%									
371		INTERCHANGE	1414	24-Dec-18	28-Apr-22	09-Oct-19		100%	87.27%									
372		INTERCHANGE FOUNDATION	590	24-Dec-18	22-Oct-20	09-Oct-19	26-May-21	100%	100%									
373		INTERCHANGE RAMP PILE FOUNDATION	475	24-Dec-18	05-Mar-20	09-Oct-19	13-May-21	100%	100%									
374		INTERCHANGE RAMP PILE FDN_MA	182	05-Aug-19	03-Jan-20	09-Oct-19	13-May-21	100%	100%									
375		MODULE_23_MAA2-MAP4	75	05-Aug-19	02-Nov-19	13-Jan-20	28-Jun-20	100%	100%									
376		MODULE_24_MAP4-MP246	137	02-Nov-19	03-Jan-20	09-Oct-19	13-May-21	100%	100%									
377		INTERCHANGE RAMP PILE FDN_AC	107	01-Oct-19	05-Mar-20	25-Oct-19	16-Aug-20	100%	100%									
378		MODULE_33_ACA2-ACP5	60	01-Oct-19	19-Dec-19	25-Oct-19	16-Aug-20	100%	100%									
379		MODULE_34_ACP5-MP256	62	19-Dec-19	05-Mar-20	02-Nov-19	25-Feb-20	100%	100%									
380		INTERCHANGE RAMP PILE FDN_JM	178	03-Jan-19	05-Aug-19	26-Nov-19	07-May-21	100%	100%									
381		MODULE_25_MP245-JMP4	178	22-Apr-19	05-Aug-19	26-Nov-19	23-Apr-21	100%	100%									
382		MODULE_26_JMP4-JMP8	88	19-Feb-19	20-Apr-19	01-Dec-20	17-Feb-21	100%	100%									
383		MODULE_27_JMP8-JMA2	64	03-Jan-19	18-Feb-19	23-Mar-21	07-May-21	100%	100%									
384		INTERCHANGE RAMP PILE FDN_MJ	79	03-Jan-19	01-Oct-19	04-Dec-19	27-Nov-20	100%	100%									
385		MODULE_35_MJA2-MJP9	45	03-Jan-19	21-Mar-19	16-Sep-20	27-Nov-20	100%	100%									
386		MODULE_36_MJP9-MJP4	63	22-Mar-19	10-Jun-19	15-Jan-20	26-Aug-20	100%	100%									
387		MODULE_37_MJP4-MP252	52	11-Jun-19	01-Oct-19	04-Dec-19	20-Mar-20	100%	100%									
388		INTERCHANGE RAMP PILE FDN_CA	100	28-May-19	23-Jan-20	01-Nov-19	27-Apr-21	100%	100%									
389		MODULE_28_MP249-CAP4	64	08-Nov-19	23-Jan-20	01-Nov-19	27-Apr-21	100%	100%									
390		MODULE_29_CAP4-CAP8	62	14-Aug-19	08-Nov-19	21-Nov-20	19-Mar-21	100%	100%									
391		MODULE_30_CAP8-CAA2	49	28-May-19	14-Aug-19	05-Jan-21	24-Feb-21	100%	100%									
392		INTERCHANGE RAMP PILE FDN_AM	290	24-Dec-18	27-May-19	06-Feb-20	04-Jan-21	100%	100%									
393		MODULE_31_MAA2-AMP4	187	24-Dec-18	26-Mar-19	07-Feb-20	10-Sep-20	100%	100%									
394		MODULE_32_AMP4-MP259	237	27-Mar-19	27-May-19	06-Feb-20	04-Jan-21	100%	100%									
395		INTERCHANGE RAMP PILE CAP INSTALLATION	525	08-Jan-19	22-Oct-20	22-Oct-19	26-May-21	100%	100%									
396		INTERCHANGE RAMP PILE CAP_MA	182	06-Dec-19	15-May-20	22-Oct-19	26-May-21	100%	100%									
397		MODULE_23_MAA2-MAP4	95	06-Dec-19	24-Feb-20	22-Jan-20	24-Jul-20	100%	100%									
398		MODULE_24_MAP4-MP246	86	24-Feb-20	15-May-20	22-Oct-19	26-May-21	100%	100%									
399		INTERCHANGE RAMP PILE CAP_AC	183	15-Jan-20	22-Oct-20	02-Nov-19	07-Sep-20	100%	100%									
400		MODULE_33_ACA2-ACP5	132	15-Jan-20	24-Apr-20	18-Nov-19	07-Sep-20	100%	100%									
401		MODULE_34_ACP5-MP256	114	24-Apr-20	22-Oct-20	02-Nov-19	09-Mar-20	100%	100%									
402		INTERCHANGE RAMP PILE CAP_JM	136	18-Jan-19	06-Dec-19	11-Dec-19	25-May-21	100%	100%									
403		MODULE_25_MP245-JMP4	135	18-Jun-19	06-Dec-19	11-Dec-19	15-May-21	100%	100%									
404		MODULE_26_JMP4-JMP8	92	21-Mar-19	17-Jun-19	23-Dec-20	23-Feb-21	100%	100%									
405		MODULE_27_JMP8-JMA2	40	18-Jan-19	20-Mar-19	02-Apr-21	25-May-21	100%	100%									

█ Primary Baseline █ Critical Remaining Work █ summary
█ Actual Work ◆ Milestone
█ Remaining Work █ % Complete



EMPLOYER:
 MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY
 (MMRDA)

CONTRACTOR:
 DAEWOO-TPL JV

Date	Revision	Checked	Approved
25-Dec-22	R0		

MUMBAI TRANS HARBOUR LINK PROJECT (PACKAGE 2) CONSTRUCTION OF 7.807KM LONG BRIDGE SECTION
(CH 10 380 - CH 18 187) ACCROSS THE MUMBAI BAY INCL SHIVAJNAGAR INTERCHANGE
UNDER IDENTIFICATION NO MMRDA/ENG/000753

ANNEXURE-5 CONSTRUCTION UPDATED
PROGRAMME_ABSTRACT (PACKAGE 2)

#	Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Actual Start	Actual Finish	Schedule % Complete	Performance % Complete	2018	2019	2020	2021	2022	2023	2024	2025	J26	
406		INTERCHANGE RAMP PILE CAP_MJ	145	18-Jan-19	15-Jan-20	16-Dec-19	19-Dec-20	100%	100%										
407		MODULE_35_MJA2-MJP9	123	18-Jan-19	29-Apr-19	08-Oct-20	19-Dec-20	100%	100%										
408		MODULE_36_MJP9-MJP4	62	30-Apr-19	26-Oct-19	03-Mar-20	03-Sep-20	100%	100%										
409		MODULE_37_MJP4-MP252	58	26-Oct-19	15-Jan-20	16-Dec-19	01-Jun-20	100%	100%										
410		INTERCHANGE RAMP PILE CAP_CA	158	15-Oct-19	27-Jun-20	02-Dec-19	05-May-21	100%	100%										
411		MODULE_28_MP249-CAP4	87	05-Mar-20	27-Jun-20	02-Dec-19	05-May-21	100%	100%										
412		MODULE_29_CAP4-CAP8	70	16-Dec-19	05-Mar-20	30-Nov-20	30-Mar-21	100%	100%										
413		MODULE_30_CAP8-CAA2	53	15-Oct-19	16-Dec-19	19-Jan-21	02-Mar-21	100%	100%										
414		INTERCHANGE RAMP PILE CAP_AM	245	08-Jan-19	15-Oct-19	15-Feb-20	13-Jan-21	100%	100%										
415		MODULE_31_MAA2-AMP4	176	08-Jan-19	09-May-19	15-Feb-20	21-Sep-20	100%	100%										
416		MODULE_32_AMP4-MP259	89	10-May-19	15-Oct-19	07-Mar-20	13-Jan-21	100%	100%										
417		INTERCHANGE SUBSTRUCTURE & BEARING	700	29-Jan-19	31-May-21	24-Dec-19		100%	100%										
418		INTERCHANGE RAMP PIER INSTALLATION	596	29-Jan-19	27-Apr-21	24-Dec-19	12-Sep-22	100%	100%										
419		INTERCHANGE RAMP PIER_MA	189	18-Mar-20	29-Dec-20	24-Dec-19	18-Sep-21	100%	100%										
420		INTERCHANGE RAMP PIER_AC	249	16-May-20	27-Apr-21	19-May-20	18-Dec-21	100%	100%										
421		INTERCHANGE RAMP PIER_JM	138	08-Feb-19	18-Mar-20	15-Jan-20	29-Jul-22	100%	100%										
422		INTERCHANGE RAMP PIER_MJ	234	08-Feb-19	16-May-20	07-Sep-20	20-Nov-21	100%	100%										
423		INTERCHANGE RAMP PIER_CA	230	08-Jan-20	16-Feb-21	27-Apr-20	02-May-22	100%	100%										
424		INTERCHANGE RAMP PIER_AM	268	29-Jan-19	08-Jan-20	26-Sep-20	12-Sep-22	100%	100%										
425		INTERCHANGE BEARING INSTALLATION	370	27-Feb-19	31-May-21	08-Sep-21		0%	0%										
426		INTERCHANGE RAMP BEARING_MA	229	16-Apr-20	01-Feb-21	08-Sep-21	18-Jan-22	0%	0%										
427		INTERCHANGE RAMP BEARING_AC	28	24-Jun-20	31-May-21	04-Mar-22	07-Apr-22	0%	0%										
428		INTERCHANGE RAMP BEARING_JM	150	11-Mar-19	20-Apr-20	14-Jul-22	19-Dec-22	0%	0%										
429		INTERCHANGE RAMP BEARING_MJ	63	11-Mar-19	30-Jun-20	22-Mar-22	02-Sep-22	0%	0%										
430		INTERCHANGE RAMP BEARING_CA	80	06-Feb-20	22-Mar-21	26-Sep-22		0%	0%										
431		INTERCHANGE RAMP BEARING_AM	28	27-Feb-19	10-Feb-20			0%	0%										
432		INTERCHANGE SUPERSTRUCTURE INSTALLATION	514	20-Sep-19	15-Feb-22	18-Sep-21		100%	71.75%										
433		INTERCHANGE BOX GIRDER INSTALLATION_MA	180	09-Jan-21	03-Jan-22	18-Sep-21	22-Apr-22	100%	100%										
434		MODULE_23_MAA2-MAP6-MAP5-MAP4	134	09-Jan-21	21-Jun-21	18-Sep-21	08-Mar-22	100%	100%										
435		MODULE_24_MAP4-MAP3-MAP2-MAP1-MP246	61	21-Jun-21	03-Jan-22	01-Oct-21	22-Apr-22	100%	100%										
436		INTERCHANGE BOX GIRDER INSTALLATION_AC	140	27-Feb-21	27-Dec-21	01-Nov-21	20-Sep-22	100%	100%										
437		MODULE_33_ACA2-ACP8-ACP7-ACP6-ACP5	140	27-Feb-21	08-Sep-21	01-Nov-21	10-Apr-22	100%	100%										
438		MODULE_34_ACP5-ACP4-ACP3-ACP2-ACP1-MP256	122	31-May-21	27-Dec-21	07-Apr-22	20-Sep-22	100%	100%										
439		INTERCHANGE BOX GIRDER INSTALLATION_JM	234	11-Mar-20	26-Feb-21	30-Aug-22		100%	79.18%										
440		MODULE_25_MP245-JMP1-JMP2-JMP3-JMP4	182	19-Aug-20	09-Feb-21	13-Oct-22		100%	46.5%										
441		MODULE_26_JMP4-JMP5-JMP6-JMP7-JMP8	109	29-Sep-20	26-Feb-21	30-Aug-22	14-Dec-22	100%	100%										
442		MODULE_27_JMP8-JMP9-JMP10-JMA2	195	11-Mar-20	29-Sep-20	08-Sep-22		100%	95%										
443		INTERCHANGE BOX GIRDER INSTALLATION_MJ	188	20-Sep-19	08-Jan-21	17-Mar-22	13-Oct-22	100%	100%										
444		MODULE_35_MJA2-MJP12-MJP11-MJP10-MJP9	100	20-Sep-19	16-Mar-20	17-Mar-22	11-Jun-22	100%	100%										
445		MODULE_36_MJP9-MJP8-MJP7-MJP6-MJP5-MJP4	171	16-Mar-20	29-Oct-20	28-Mar-22	23-Aug-22	100%	100%										
446		MODULE_37_MJP4-MJP3-MJP2-MJP1-MP252	128	30-Jun-20	08-Jan-21	16-Jun-22	13-Oct-22	100%	100%										
447		INTERCHANGE BOX GIRDER INSTALLATION_CA	390	30-Oct-20	15-Feb-22	12-Oct-22		100%	48.55%										
448		MODULE_28_MP249-CAP1-CAP2-CAP3-CAP4	154	08-Sep-21	15-Feb-22	10-Dec-22		100%	0%										
449		MODULE_29_CAP4-CAP5-CAP6-CAP7-CAP8	128	09-Apr-21	23-Nov-21	29-Oct-22		100%	58.5%										
450		MODULE_30_CAP8-CAP9-CAP10-CAA2	159	30-Oct-20	08-Apr-21	12-Oct-22	26-Dec-22	100%	100%										
451		INTERCHANGE BOX GIRDER INSTALLATION_AM	130	14-Oct-19	19-Aug-20			100%	0%										
452		MODULE_31_MAA2-AMP8-AMP7-AMP6-AMP5-AMP4	125	14-Oct-19	11-Mar-20			100%	0%										
453		MODULE_32_AMP4-AMP3-AMP2-AMP1-MP259	130	10-Feb-20	19-Aug-20			100%	0%										
454		INTERCHANGE RETAINING STRUCTURE	233	11-Mar-19	06-Nov-20	15-May-21		100%	89.42%										
455		INTERCHANGE RETAINING STRUCTURE_AC	69	24-Jun-20	06-Nov-20	15-May-21	25-Mar-22	100%	100%										

— Primary Baseline ■ Critical Remaining Work ▼ summary
■ Actual Work ◆ Milestone
■ Remaining Work ▬ % Complete

EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY (MMRDA)

CONTRACTOR:
DAEWOO-TPL JV

Date	Revision	Checked	Approved
25-Dec-22	R0		

#	Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Actual Start	Actual Finish	Schedule % Complete	Performance % Complete	2018	2019	2020	2021	2022	2023	2024	2025	D26
456		INTERCHANGE RETAINING STRUCTURE_JM	89	11-Mar-19	08-May-19	24-Feb-22		100%	100%									26-Dec-22; INTERCHANGE RETAINING
457		INTERCHANGE RETAINING STRUCTURE_MJ	101	09-May-19	11-Jul-19	18-Oct-21	06-Aug-22	100%	100%									06-Aug-22 A; INTERCHANGE RETAINING BT
458		INTERCHANGE RETAINING STRUCTURE_CA	39	06-Feb-20	24-Mar-20	28-Dec-21	08-Sep-22	100%	100%									08-Sep-22 A; INTERCHANGE RETAINING S
459		INTERCHANGE RETAINING STRUCTURE_AM	67	12-Jul-19	24-Oct-19	15-Oct-22		100%	47.1%									10-Feb-23; INTERCHANGE RETAINING
460		MISCELLANEOUS & FINISHING WORKS	378	19-Aug-20	28-Apr-22	15-Nov-22		100%	0%									09-Mar-24; MISCELLANEOUS
461		EXPANSION JOINT	350	01-Oct-20	22-Apr-22			0%	0%									04-Mar-24; EXPANSION
462		CRASH BARRIER & GURARD RAILS	322	19-Aug-20	21-Feb-22	15-Nov-22		100%	0%									04-Jan-24; CRASH BARRIE
463		WATER PROOFING	322	10-Sep-20	08-Mar-22			100%	0%									18-Jan-24; WATER PROO
464		PAVEMENT	368	07-Sep-20	28-Apr-22			100%	0%									09-Mar-24; PAVEMENT
465		DRAINAGE WORKS	322	28-Aug-20	26-Feb-22			100%	0%									10-Jan-24; DRAINAGE WC
466		PROJECT HANDINGOVER	65	24-May-22	22-Sep-22			100%	0%									25-May-24; PROJECT
467		CHECKLIST	65	24-May-22	22-Sep-22			100%	0%									25-May-24; CHECKLIST
468		DEFECT LIABILITY PERIOD (DLP)	747	22-Sep-22	21-Sep-24			0%	0%									
469		PRICE SCHEDULE	2452	23-Mar-18	21-Mar-23	23-Mar-18		98.37%	46.98%									14-Dec-24; PR
470		SCHEDULE-1	2452	23-Mar-18	21-Mar-23	23-Mar-18		98.25%	93.26%									14-Dec-24; SC
471		SCHEDULE-2	1644	23-Mar-18	22-Sep-22	23-Mar-18		100%	98.27%									11-Jun-24; SCHEDUL
472		SCHEDULE-3	1644	23-Mar-18	22-Sep-22	23-Mar-18		100%	98%									11-Jun-24; SCHEDUL
473		SCHEDULE-12	1644	23-Mar-18	22-Sep-22	23-Mar-18		100%	94.4%									11-Jun-24; SCHEDUL
474		SCHEDULE-13	1644	23-Mar-18	22-Sep-22	23-Mar-18		100%	0.28%									11-Jun-24; SCHEDUL
475		MTHL-PKG2-RAMBOLL DESIGN PROGRAMME_25122022_APPROVED_MPR.57	1547	15-Jan-18	17-Jun-22	16-Dec-17		100%	90.95%									26-Feb-24; MTHL-PKG2-



Primary Baseline
 Critical Remaining Work
 ▼ summary
 Actual Work
 ◆ Milestone
 Remaining Work
 % Complete

EMPLOYER:
 MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY
 (MMRDA)

CONTRACTOR:
 DAEWOO-TPL JV

Date	Revision	Checked	Approved
25-Dec-22	R0		

**Attachment 8- Package-3's Construction Programme
Updated as of 31st Dec 2022**



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Activity ID	Activity Name	Original Duration	BL1 Start	BL1 Finish	Start	Finish	Activity % Complete	Schedule % Complete	Performance % Complete	Earned Value Cost	Budgeted Total Cost	02-Jan-23 13:20														
												Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May			
MTHL Pkg 3_MPR Schedule Dec'22																										
Procurement of Mumbai Trans Harbour Link Project (P:																										
1	Commencement Date (CD)	0			23-Mar-18 A		100%	0%	100%	Rs0	Rs0															
Milestones (As level of effort)																										
KD1001	KD1 [Construction programme, completion of Soil Investi	0	30-Sep-19	30-Sep-19	30-Sep-19 A	30-Sep-19 A	100%	100%	100%	Rs0	Rs0															
KD1002	KD 2 [NOC for technical design doc & drawing for founde	0	29-Jun-20	29-Jun-20	29-Jun-20 A	29-Jun-20 A	100%	100%	100%	Rs0	Rs0															
KD1003	KD 3 [NOC for Good for construction drawing for foundat	0	17-Aug-20	17-Aug-20	17-Aug-20 A	17-Aug-20 A	100%	100%	100%	Rs0	Rs0															
KD1004	KD 4 [Substantial completion of foundation, piles (if appli	0	27-Nov-20	27-Nov-20	27-Nov-20 A	27-Nov-20 A	100%	100%	100%	Rs0	Rs0															
KD1005	KD 5 [Substantial completion of pile caps (if applicable),	0	25-Dec-21	25-Dec-21	25-Dec-21 A	25-Dec-21 A	100%	100%	100%	Rs0	Rs0															
KD1006	KD 6 [Substantial completion superstructure (PC/CIS/SS	0	06-Dec-22	06-Dec-22	11-Mar-23	11-Mar-23	0%	100%	0%	Rs0	Rs0															
KD1007	KD 7 [Substantial completion of kerb/traffic signs, Markin	0	17-Feb-23	17-Feb-23	05-Aug-23	05-Aug-23	0%	0%	0%	Rs0	Rs0															
KD1008	KD 8 [Final completion & handing over]	0	03-Mar-23	03-Mar-23	31-Aug-23	31-Aug-23	0%	0%	0%	Rs0	Rs0															
Financial Milestone																										
Interface Milestone																										
Delay Events																										
Document Submittals																										
Employer's Obligation / Land Handover																										
Employer Office (Sch 01- General Item)																										
Survey & Geotechnical Investigation Works																										
Design Works																										
Procurement Works																										
Co-ordinated Fabrication & Manufacturing Works																										
Construction Works																										
Preconstruction Activity																										
Sub Structures (Open Foundation, Pier, Pier Cap)																										
Super Structures																										
Bearings Installation																										
Bridge Ancillaries & Miscellaneous Item																										
RE Wall																										
At Grade work																										
Water Proofing																										
Asphalt Pavement, Kerb, traffic sign																										
Compound wall with safety fence																										
Completion of Interface Activity																										
Testing & Commissioning Works																										



Attachment 9- Project Progress Photos for Dec 2022



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Package 1- Site Progress Photos

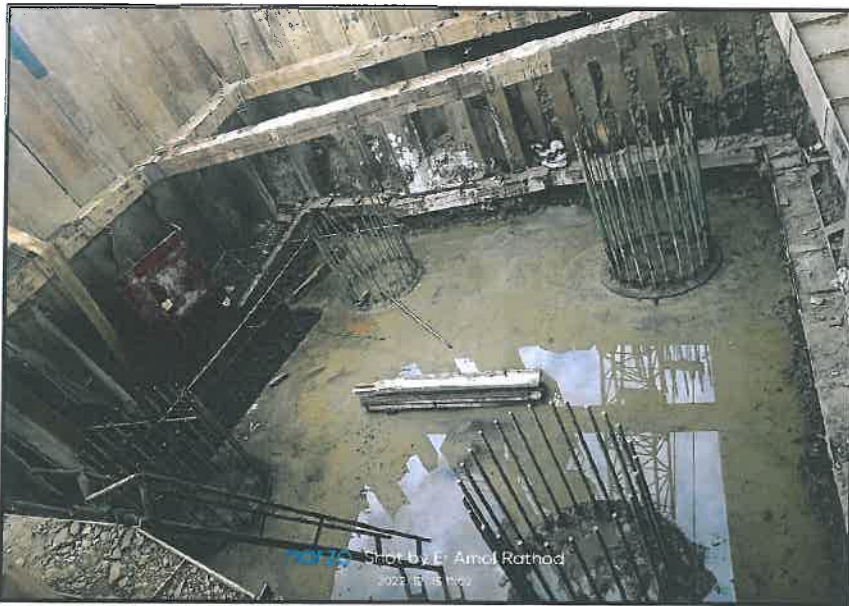


Photo no.1-Interchange Section - AP34 Pile Cap Preparation.



Photo no.2 Interchange Section - AP34 Pile Cap Reinforcement



SH

SL



Photo no.3 Interchange Section - C1P8 Pier Shutter



Photo no.4 Interchange Section - BP31- BP33



Handwritten initials in blue ink, appearing to be 'SM' and 'SLH'.



Photo no.5 Interchange Section - C1P22 Top View.



Photo no.6 Intertidal Section- Ej Fixing Trail Work At MP-20



Photo no.7 Intertidal Section- Surface Preparation Work For Water Proffing Mockup



Photo no.8 Intertidal Section- LG-08





Photo no.9 Marine Section- LG-4 MP 104-105 N



Photo no.10 ODS-4 Location at Marine



SH

Shilpa

Package 2 – Site Progress Photos



Photo no.1-Ramp CA- Top slab side formwork alignment in progress at Span CAP-4 to CAP-5.



Photo no.2-First stage stressing in progress at Span MP 153-154 RHS.



Signature



Photo no.3- Pier final lift concreting in progress at MP 191 RHS Substation.



Photo no.4-15th OSD span for arrived at Marine Parking.



Photo no.5-Pier cap concreting in progress at MP 173 LHS.



Photo no.6-Ramp AC – Soil compaction test in progress.





Photo no.7-Integral Pier Head Segment concrete in progress at MP 160 RHS.



Photo no.8-Crash barrier concrete in progress at Span MP 212-213 LHS.



Photo no.9- Aerial View



Photo no.10- Aerial View



SM *GLK*



Photo no.12- Wet joint formwork in progress at span MP 152-153 RHS and segment lifting in progress at span MP 152-153 LHS.



Package-2 Aerial View



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Package 3 – Site Progress Photos



Photo no.1- Chirle Ramp PMP outer crash barrier shuttering work.

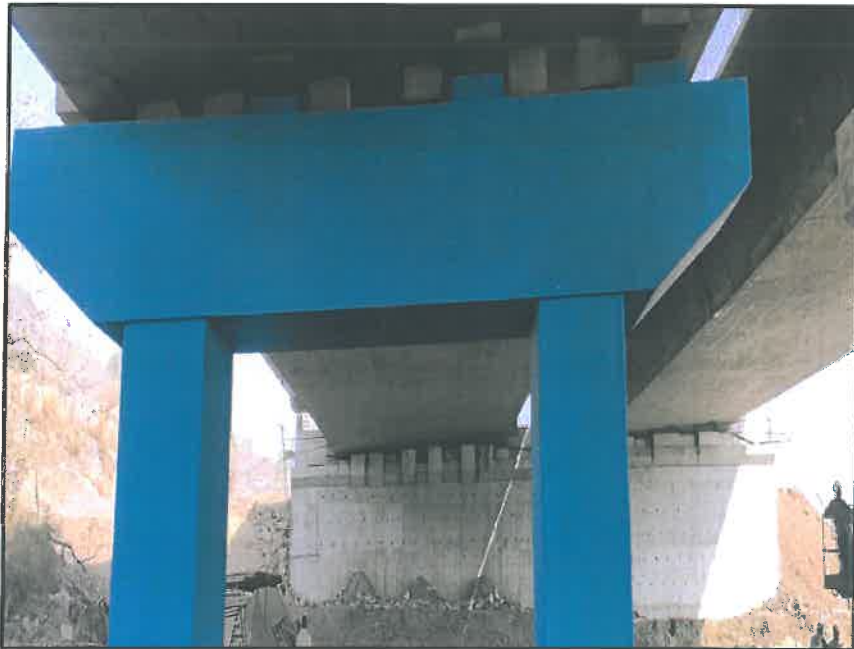


Photo no.2- Anti-Carbonation paint work in progress at Jasai Pier RP01.





Photo no.3- Gavan main Viaduct.



Photo no.4- At-grade location.



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Photo no.5- Jasai Viaduct.



Photo no.6- JMP ramp at Chirle Interchange



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Photo no.7- MPP ramp at Chirle Interchange



Photo no.8- MJP ramp at Chirle Interchange.



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Annexure-1 JICA Reimbursement backup Oct'2022





Reimbursement details for the month of October 2022

Date of disbursement	Amount of Disbursement in JPY
14-Oct-22	JPY 9,302,304
14-Oct-22	JPY 3,024,665
14-Oct-22	JPY 182,545,479
14-Oct-22	JPY 71,552,214
14-Oct-22	JPY 154,698,461
14-Oct-22	JPY 75,386,720
14-Oct-22	JPY 87,499,228
14-Oct-22	JPY 71,984,956
14-Oct-22	JPY 308,083,852
14-Oct-22	JPY 114,405,164
14-Oct-22	JPY 363,977,378
14-Oct-22	JPY 12,420,147
14-Oct-22	JPY 310,939,666
14-Oct-22	JPY 95,248,998
21-Oct-22	JPY 26,670,960
21-Oct-22	JPY 103,334,119
21-Oct-22	JPY 442,050,529
21-Oct-22	JPY 555,611,697



SN

Date of disbursement	Amount of Disbursement in JPY
21-Oct-22	JPY 103,201,375
21-Oct-22	JPY 2,586,667
21-Oct-22	JPY 40,322,953
21-Oct-22	JPY 20,368,423
21-Oct-22	JPY 222,220,095
21-Oct-22	JPY 269,793,768
21-Oct-22	JPY 134,677,577
21-Oct-22	JPY 1,475,267,947
21-Oct-22	JPY 511,442,016
21-Oct-22	JPY 138,758,404
21-Oct-22	JPY 664,278,659
21-Oct-22	JPY 45227,392
21-Oct-22	JPY 1,004,956,323
21-Oct-22	JPY 9,511,780
21-Oct-22	JPY 253,177,487
21-Oct-22	JPY 2,377,982
21-Oct-22	JPY 781,558,519
21-Oct-22	JPY 38,696,521



SH *AK*

Date of disbursement	Amount of Disbursement in JPY
21-Oct-22	JPY 60,988,604
21-Oct-22	JPY 212,951,332
21-Oct-22	JPY 23,174,138
21-Oct-22	JPY 20,996,607
21-Oct-22	JPY 1,226,712,351
21-Oct-22	JPY 42,098,554
21-Oct-22	JPY 36,353,993
21-Oct-22	JPY 148,301,581
21-Oct-22	JPY 608,841,660
21-Oct-22	JPY 213,099,717
21-Oct-22	JPY 5,810,314
21-Oct-22	JPY 384,155,188
21-Oct-22	JPY 926,267,335
21-Oct-22	JPY 40,187,075
21-Oct-22	JPY 569,413,163
21-Oct-22	JPY 91,004,327
25-Oct-22	JPY 307,871,037
25-Oct-22	JPY 10,597,578



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Date of disbursement	Amount of Disbursement in JPY
25-Oct-22	JPY 9,088,499
25-Oct-22	JPY 692,007,747
25-Oct-22	JPY 25,211,197
25-Oct-22	JPY 88,196,688
25-Oct-22	JPY 3,190,829
Total Amount	14,453.67 Million JPY



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Annexure-2 JICA Reimbursement backup Nov'2022



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Reimbursement details for the month of November2022

Date of disbursement	Amount of Disbursement in JPY
01-Nov-22	JPY 115,809,163
25-Nov-22	JPY 871,638,117
25-Nov-22	JPY 245,929,942
25-Nov-22	JPY 66,158,584
25-Nov-22	JPY 268,374,761
25-Nov-22	JPY 20,848,284
29-Nov-22	JPY 90,547,595
Total Amount	1,679.31 million JPY



Annexure-3 JICA Reimbursement backup Dec'2022



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Reimbursement details for the month of December-2022

Date of Disbursement	Amount of Disbursement in JPY
2-Dec-22	JPY 57,113,956
9-Dec-22	JPY 126,574,782
9-Dec-22	JPY 20,947,326
9-Dec-22	JPY 1,849,856,049
9-Dec-22	JPY 578,651,834
9-Dec-22	JPY 72,743,682
9-Dec-22	JPY 21,294,295
9-Dec-22	JPY 157,330,918
9-Dec-22	JPY 6,302,799
9-Dec-22	JPY 702,324,266
9-Dec-22	JPY 27,756,044
9-Dec-22	JPY 175,580,982
9-Dec-22	JPY 6939011
9-Dec-22	JPY 1716153811
9-Dec-22	JPY 24,641,309
9-Dec-22	JPY 36,428,942
28-Dec-22	JPY 62,700,070
28-Dec-22	JPY 24,899,777
28-Dec-22	JPY 41,663,138
Total Amount	5709.90 Million JPY

