एम एम आर डी ए
MMRDA

No. MMRDA/MTHL-PIU/JICA/QPR-19/0930 /2022 Date: 2nd February 2022

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

Kind Attn: Mr. Katsuo Matsumoto,

Sub : Mumbai Trans Harbour Link Project (I) (ID-P255)
- **Quarterly Progress Report (QPR) No. 19 for October 2021 to December 2021.**

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. 19 for the Mumbai Trans Harbour Link Project (I) for the period of October 2021 to December 2021 is enclosed herewith for information please.

Thanking you.

Yours faithfully,

Wandhekar.

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

Encl.: QPR-19 (October 2021 to December 2021)

एम एम आर डी ए
MMRDA

Mumbai Metropolitan Region Development Authority

Mumbai Trans Harbour Link Project

Quarterly Progress Report - No.19

(From 1st October 2021 to 31st December 2021)

Mumbai Trans Harbour Link Project
Quarterly Progress Report No. 19
1st October 2021 to 31st December 2021
Loan Agreement No. ID-P255 (Tranche–I)

ORGANIZATION INFORMATION

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

Details of JICA Loan

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

DOCUMENT VERIFICATION AND REVISION RECORD

PROJECT NAME		Mumbai Trans Harbour Link Project			
DOC NO.		19	DATE OF ISSUE		17/01/2022
DOC TITLE		Quarterly Progress Report No. 19			
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

Contents

1.0 PROJECT DESCRIPTION

1.1 Project Objective

Original:

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

Actual *(P/R, PCR)*

There is no change in the Project Objective.

1.2 Necessity of the Project

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

Benefits from MTHL Project

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

Necessity of the Project

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

an urgent requirement for broad development in Mumbai Metropolitan Region.

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

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

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

Actual *(P/R, PCR)*

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

1.3 Rationale of the Project Design

- Timing, Scale, Technology of the Project:

Demand Analysis

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

Table 1.3.1 Demand Projections Over the Period

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

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

2. 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.

3. 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

4. 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.

5. 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.

6. 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).

7. 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.

8. 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-Classifier (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)*

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)	• 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)	• 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)	• 2 Interchanges (State Highway-54, National Highway-4B) • Viaduct superstructure (Marine Portion: PC Box Girder & Steel Box Girder with Steel Slab Land Portion: PC Box Girder & PC-I Girder & Steel Truss Girder for Rail-over-Bridges (ROB) • Viaduct Substructure (RC Concrete Structure) • Viaduct Foundation (Bored piles) • Cutting Section (6-lane with Slope Protection) • Road Furniture and roadside facilities (Traffic Signs and Pavement Marking, Traffic Safety Devices, Crash Barrier, Drainage Structures, Noise Barriers, View Barriers)	*(P/R and PCR)* Actual: *No* Noise Barriers & *View Barriers*

Items	Original	Actual
Package-4 ITS (Intelligent Transport System)	• 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-Classifier (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	• 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 31st December 2021
1) Completion of Land Acquisition and Resettlement	March 2019	March 2022
2) Consulting Services		
a) Selection of Consultant	May – December 2016	May – December 2016
b) Consultancy Works	December 2016 – September 2024	December 2016 – September 2024
3) Selection of Contractor		
Package-1, Package-2 & Package-3 (Civil)		
a) Pre-Qualification Process	May – December 2016	May – December 2016
b) Main Bidding	January – December 2017	January – December 2017
c) JICA's Concurrence of Contract	February-2018	February-2018
Package-4 (ITS)		
a) Pre-Qualification Process	January 2019 – May 2019	January 2020 – May 2020
b) Main Bidding	June 2019 – September 2020	June 2020 – December 2021
4) Civil Construction		
Package-1 and Package-2	March 2018 – September 2022	March 2018–September 2023 (Extended)
Package-3	March 2018 – September 2021	March 2018 – March 2023 (Extended)
Package-4	October 2020 – September 2022	February 2022 – May 2023
5) Defect Liability Period		
Package-1, Package-2 and Package-4	October 2022 – September 2024	October 2022 – September 2025
Package-3	October 2021 – September 2023	April 2023 – March 2025
6) Commencement of Toll Collection	September -2022	September -2023
7) Selection of O&M Organization	October 2020 – September 2021	October 2022 – September 2023

Attachment 6, 7 & 8: Package wise construction schedules (progress) updated at the end of 3rd Quarter (October- November- December 2021).

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

(P/R and PCR)
No change in the Implementation Schedule except the selection of O&M Organization timeline.

2.3 Project Cost

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

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

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

(Note) 1. Exchange Rate: US$1=Rs. 71.9, US$1=JPY 113.0, Rs.1 = JPY 1.57
2. Price Escalation (a) Foreign Currency Portion: 1.83% p.a.
(b) Local Currency Portion: 4.13% p.a.
3. Physical Contingency: 10%
4. Base Year for Cost Estimation: December 2018
* Base Cost for Land Acquisition considered in the year 2016 was INR 9,062,669,696. The base cost has been revised to INR 11,293 million considering Price Escalation and 10% Physical Contingency.

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

Cost Breakdown	Foreign Currency Portion			Local Currency Portion			Total		
	Total (JPY mil)	JICA Portion (JPY mil)	Others (JPY mil)	Total (Rs. mil)	JICA Portion (Rs. mil)	Others (Rs. mil)	Total (JPY mil)	JICA Portion (JPY mil)	Others (JPY mil)
Package-1	18,880	18,880	-	31,020	31,020		64,975	64,975	
Package-2	19,923	19,923	-	20,151	20,151		50,714	50,714	
Package-3	623	623	-	5,862	5,862		9,256	9,256	
Package-4 (ITS)	-		-	-			-		
Package-5 (Geotechnical Investigation)	-			196		196	308		308
Dispute Boards (Package-1, 2, 3 & 4)	-			-			-		-
Price Escalation	-			4	4		6	6	-
Physical Contingency	-			-			-		-
Consulting Services	253	253		362	362		1,108	1,108	
Land Acquisition*	-			6,712		6,712	10,538		10,538
Administration Cost	-			3,980		3,980	6,248		6,248
GST	-			11,183		11,183	17,557		17,557
Import Tax	-			-			-		-
Interest during construction	-			-			-		-
Front End Fee	-			-			-		-
Total	**39,679**	**39,680**	**-**	**79,470**	**57,398**	**22,071**	**160,710**	**126,059**	**34,651**

(Note) 1. Exchange Rate: Rs.1 = JPY 1.57 for MMRDA Portion only
2. Price Escalation (a) Foreign Currency Portion: 1.83% p.a.
(b) Local Currency Portion: 4.13% p.a.
3. Physical Contingency: 10%
4. Base Year for Cost Estimation: December 2018
* Base Cost for Land Acquisition considered in the year 2016 was INR 9,062,669,696. The base cost has been revised to INR 11,293 million considering Price Escalation and 10% Physical Contingency.

2.3.1.bComparison of Originally Planned and Actually Incurred Cost BY YEAR

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

(All Figures are in JPY mil)

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

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

(All Figures are in JPY mil)

Cost Breakdown	Total	JICA Portion				Others (MMRDA Portion)
		Tranche I	Tranche II	Tranche III	Sub Total	
FY 2017	13,738	9,232	-	-	9,232	4,506
FY 2018	26,813	21,695	-	-	21,695	5,118
FY 2019	40,410	31,014	-	-	31,014	9,396
FY 2020	31,859	23,922	-	-	23,922	7,937
FY 2021	47,890	40,196	-	-	40,196	7,694
FY 2022						
FY 2023						
FY 2024						
Total	**160,710**	**126,059**	**-**	**-**	**126,059**	**34,651**

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

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

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

(P/R and PCR)

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

2.4 Organization for Implementation

2.4.1 Executing Agency

Original:

Executing Agency

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

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

Organization's Role

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

Project Implementation Unit (PIU)

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

Procurement

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

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

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

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

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

2.4.2.1 Procurement & Consultant

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

Contract Package	Selection Method		
	Original: *(P/M)*		**Actual:** *(P/R and PCR)*
Construction Works			
1	Package-1: 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	Package-2: 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	Package-3: 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	Package-4: 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	Package-5: To conduct the geotechnical investigation	Local Competitive Bidding Process	No Change
Consulting Services			
1	Consulting Service for Supervision	Short List Method (QCBS)	No Change

2.4.2.2 Performance

Consultant's Progress:

October 2021:

1 GC scrutinized & certified the following invoices claimed by the Contractors:

i) Package-1: IPC-44 20% Detailed Verification and IPC-45 80% Ad-hoc.

ii) Package-2: IPC-38 20% Detailed Verification and IPC-39 & IPC-40 80% Ad-hoc.

iii) Package-3: IPC-37 20% Detailed Verification.

2 GC has prepared and submitted a total reimbursement claim of 5278.25 million JPY to MMRDA / JICA in October 2021.

November 2021:

1 GC scrutinized & certified the following invoices claimed by the Contractors:

i) Package-1: IPC-45 20% Detailed Verification and IPC-46 80% Ad-hoc.

ii) Package-2: IPC-40 20% Detailed Verification and IPC-42 80% Ad-hoc.

iii) Package-3: IPC-37 20% Detailed Verification and IPC-38 & IPC-39 80% Ad-hoc.

2 GC has prepared and submitted a total reimbursement claim of 5084.42 million JPY to MMRDA / JICA in November 2021.

December 2021:

1 GC scrutinized & certified the following invoices claimed by the Contractors:

i) Package-1: IPC-46 20% Detailed Verification and IPC-47 80% Ad-hoc.

ii) Package-2: IPC-42 20% Detailed Verification and IPC-43 80% Ad-hoc.

iii) Package-3: IPC-38 & 39 20% Detailed Verification and IPC-40 80% Ad-hoc.

2 GC has prepared and submitted a total reimbursement claim of 3819.32 million JPY to MMRDA / JICA in December 2021.

3 100% of the Technical Design Modules across all the 3 Packages have been given "NONO" by the GC.

4 Approximately 97% 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 – 90%, Package-3 -100%

5 GC helped in evaluating the Package-4's Pre-Qualification and Technical bid proposal and the analysis has been sent to the Employer for further approval.

Contractor's Progress:

Package-1 Physical Progress till 31st December 2021

S. No	Activity	Total Scope	Unit	Cumulative Achieved Works	% of Work done Against the Total Scope	Remarks
1	**Temporary Access Bridge**					
1.1	Bridge Deck	2953	Rmt	2953	100%	
2	**Test Pile**					
2.1	Test Piles	5	No.	5	100%	
3	**Permanent Bridge Works - Land/ Interchange Zone**					
3.1	Piles	523	No.	456	87.2%	
3.2	Pile Caps	158	No.	82	51.9%	
3.3	Piers	228	No.	148	64.9%	
3.4	Pier Caps	215	No.	141	65.6%	
4	**Permanent Bridge Works - Intertidal Zone**					
4.1	Piles	312	No.	312	100%	
4.2	Pile Caps	66	No.	75	100%	
4.3	Piers	114	No.	126	86.3%	
4.4	Pier Caps	110	No.	124	84.9%	
5	**Permanent Bridge Works - Marine Zone**					
5.1	Piles	403	No.	403	100.0%	
5.2	Pile Caps	79	No.	72	90.0%	
5.3	Piers	160	No.	95	58.6%	
5.4	Pier Caps	160	No.	86	53.1%	
6	**Permanent Bridge Works - Total**					
6.1	**Piles**	**1238**	**No.**	**1171**	**94.6%**	
6.2	**Pile Caps**	**313**	**No.**	**229**	**73.2%**	
6.3	**Piers**	**536**	**No.**	**369**	**68.8%**	
6.4	**Pier Caps**	**523**	**No.**	**351**	**67.1%**	
7	**Precast Segments**					
7.1	**Segment Casting**	**6713**	**No.**	**3364**	**50.1%**	
7.2	**Span Erection+ Cast-in-Situ Slab**	**478**	**No.**	**154**	**32.2%**	
8	**OSD Structural Steel**					
8.1	**Fabrication**	**52726**	**MT**	**48590**	**92.16%**	
8.2	**Erection**	**52726**	**MT**	**0**	**0%**	

Package-2 Physical Progress till 31st December 2021

S. No	Activity	Total Scope	Unit	Cumulative Achieved Works	% of Work done Against the Total Scope	Remarks
1	**Temporary Access Bridge**					
1.1	Bridge Deck	2682	Rmt	2682	100%	
2	**Test Pile**					
2.1	Test Piles	2	No.	2	100%	
3	**Permanent Bridge Works - Land/ Interchange Zone**					
3.1	Open Foundation	113	No.	113	100%	
3.3	Piers	119	No.	119	100%	
3.3	Pier Caps	105	No.	78	74.28 %	
3.4	Portal Beams- Land	6	No.	6	100%	
3.5	Pier Head Segments -Land	42	No.	34	80.95%	
4	**Permanent Bridge Works - Intertidal & CRZ Zone**					
4.1	Piles	280	No.	280	100%	
4.2	Pile Caps	72	No.	72	100%	
4.3	Piers	72	No.	72	100%	
4.4	Pier Caps	18	No.	18	100%	
4.5	Pier Head Segments	54	No.	53	98.14%	
5	**Permanent Bridge Works - Marine Zone**					
5.1	Piles	512	No.	481	93.94%	
5.2	Pile Caps	120	No.	96	80%	
5.3	Piers	120	No.	63	52.50%	
5.4	Pier Caps	48	No.	9	18.75%	
5.5	Pier Head Segments	72	No.	2	3.85%	
6	**Permanent Bridge Works - Total**					
6.1	**Open Foundation**	**113**	**No.**	**113**	**100%**	
6.2	**Piles**	**792**	**No.**	**761**	**96.08%**	
6.3	**Pile Caps**	**192**	**No.**	**168**	**87.50%**	
6.4	**Piers**	**305**	**No.**	**254.3**	**81.76%**	
6.5	**Pier Caps/ Portal Beams**	**177**	**No.**	**111**	**62.71%**	
6.6	**Pier Head Segments**	**168**	**No.**	**89**	**52.97%**	
7	**Precast Segments**					
7.1	**Segment Casting**	**3142**	**No.**	**1382**	**43.98%**	
7.2	**Span Erection**	**272**	**No.**	**72**	**26.47%**	
8	**OSD Structural Steel**					
8.1	**Fabrication**	**34726**	**MT**	**34726**	**100%**	
8.2	**Erection**	**34726**	**MT**	**0**	**0%**	

Package-3 Physical Progress till 31st December 2021

S. No	Activity	Total Scope	Unit	Cumulative Achieved Works	% of Work done Against the Total Scope	Remarks
1	**Permanent Bridge Works**					
1.1	Open Foundations	219	No.	213	97.26%	
1.2	Pile Foundations	6	No.	4	66.67%	
1.3	Piers	242	No.	200	82.64%	
1.4	Pier Caps	189	No.	152	80.42%	
1.5	Segment Casting	810	No.	768	94.81%	
1.6	Segment/ Span Erection	53	No.	24	45.28%	
1.7	Cast in-situ Slab	114	No.	47	41.22%	

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

1. Preparation of Bid Documents for the Package-4 - ITS (Intelligent Transport System) is in progress.
2. As recommended by the GC, JICA accorded concurrence for Single Stage Bidding (without Pre-Qualification) on 9th October 2020 and asked to submit draft Bid Document for review and approval.
3. The GC submitted first draft Bid Document to the Employer on 2nd November 2020 for review.
4. After reviewing the draft, MMRDA issued the observations on 29th December 2020 for further correction & amendments, etc. The GC is in the process of preparing the revised draft Bid Document.
5. The GC submitted the revised draft Bid Document to the Employer on 14th June 2021 for a review and further concurrence with JICA.
6. The Employer received JICA concurrence for the revised Bid Documents on 24th August 2021.
7. The Tender has been floated (published) on 3rd September 2021. A Pre-bid Meeting was arranged on 27th September 2021. The GC is resolving the queries raised by the prospective bidders.
8. The GC has resolved the queries raised by the prospective bidders. The Pre-Bid Responses and Addendum-1 were uploaded on 20th Oct. and 2nd Nov. 2021.
9. The revised date for Bid Submission is 13th Dec. 2021 and the bid opening date is 20th Dec 2021. The Bid evaluation is under progress.

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

Health & Safety and Environment (HSE)

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

Package-1 Safety Report

Sr. No	Description	From October to December 2021	Cumulative
1	Total Man Hours Since Inception	4,241,988	39,231,458
2	Number of Man-Hours (Accident-Free Man-Hours)	3,789,504	2,229,360
3	Number of Man-Days	530,249	4,903,932
4	Number of Reportable Fatal Accidents	1	6
5	Number of Non-Fatal Accidents	0	3
6	Number of Near Miss Incidents	9	102
7	Number of First Aid Cases	22	243
8	Number of Dangerous Occurrences	0	1
9	Number of Reportable Sick Cases	0	0
10	Number of Man-Hours Lost	49,440	290,712
11	Number of Man-Days Lost	6,180	36,339
12	Number of Reportable Accidents per 100,000 Man-Hours Worked	1	0.23
13	Number of Inspections done for Offices & Sites	457	3,632
14	Number of Training/ Induction done for Offices & Sites	343	1,925
15	Daily Average Manpower (Including all Workmen & Staff) for the Month	12,750	7,065
16	Details of Safety Committee meetings	3	38
17	No. of toolbox talks	14,633	99,090
18	No. of critical excavations.	14	68
19	Pre-employment Medical check-up	3,329	35,251
20	No. of Safety Walk down	20	236
21	No. of Safety Inductions completed	3,329	35,251

Package-2 Safety Report

Sr. No	Description	From October to December 2021	Cumulative
1	Total Man Hours Since Inception	2,895,101	19,880,377
2	Number of Man-Hours (Accident-Free Man-Hours)	1,435,841	165,924
3	Number of Man-Days	271,646	1,817,109
4	Number of Reportable Fatal Accidents	0	0
5	Number of Non-Fatal Accidents	2	7
6	Number of Near Miss Incidents	32	226
7	Number of First Aid Cases	14	146
8	Number of Dangerous Occurrences	1	10
9	Number of Reportable Sick Cases	1	2
10	Number of Man-Hours Lost	928	2,268
11	Number of Man-Days Lost	116	265
12	Number of Reportable Accidents per 100,000 Man-Hours Worked	2	0.35
13	Number of Inspections done for Offices & Sites	75	1,077
14	Number of Training/ Induction done for Offices & Sites	86	810
15	Daily Average Manpower (Including all Workmen & Staff) for the Month	10,152	5,635
16	Details of Safety Committee meetings	3	42
17	No. of toolbox talks	1,134	8,806
18	No. of critical excavations.	0	0
19	Pre-employment Medical check-up	1,155	14,132
20	No. of Safety Walk down	11	141
21	No. of Safety Inductions completed	1,166	14,430

Package-3 Safety Report

Sr. No	Description	From October to December 2021	Cumulative
1	Total Man Hours Since Inception	733,821	4,497,018
2	Number of Man-Hours (Accident-Free Man-Hours)	733,821	2,396,669
3	Number of Man-Days	91,727	562,126
4	Number of Reportable Fatal Accidents	0	0
5	Number of Non-Fatal Accidents	0	2
6	Number of Near Miss Incidents	3	22
7	Number of First Aid Cases	13	98
8	Number of Dangerous Occurrences	0	1
9	Number of Reportable Sick Cases	0	0
10	Number of Man-Hours Lost	0	2320
11	Number of Man-Days Lost	0	290
12	Number of Reportable Accidents per 100,000 Man-Hours Worked	0	0.44
13	Number of Inspections done for Offices & Sites	51	453
14	Number of Training/ Induction done for Offices & Sites	16	232
15	Daily Average Manpower (Including all Workmen & Staff) for the Month	2,196	1,144
16	Details of Safety Committee meetings	3	38
17	No. of toolbox talks	616	6,203
18	No. of critical excavations.	0	3
19	Pre-employment Medical check-up	1,132	8229
20	No. of Safety Walk down	12	145
21	No. of Safety Inductions completed	1,132	8229

3.0 BENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS)

3.1 Operational and Physical Condition

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

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

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

Original Issues and Countermeasure(s)	Actual Issues and Countermeasure(s)
3.2.1 General Issues **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. **2. Operation and Maintenance** MMRDA proposes to appoint separate agencies for Operation & Maintenance of the bridge and for Toll Management System. Both the agencies for O & M and Toll Management System may be appointed through open tendering process. Overall monitoring of the two agencies would be done by MMRDA in house through a separate cell which could be constituted for the purpose. MMRDA has confirmed to allocate adequate budget for engaging the Contractors.	*(P/R and PCR)* Appropriate Tolling Policy/ Rates will be finalized by December 2021. Single Operation and Maintenance Contractor will be appointed by December 2021.
3.2.2 Environmental and Social Consideration **a. CRZ Clearance** i. Supplemental EIA has been approved by MMRDA and disclosed on the website of JICA. Supplemental EIA report has been disclosed also on the website of MMRDA. ii. Furthermore, renewed CRZ Clearance has been obtained in January 2016. iii. In accordance with the conditions for	*(P/R and PCR)* • MMRDA has disclosed Supplemental EIA & SIA on MMRDA website. • The renewed CRZ clearance was granted on 25/1/2016 from MoEF&CC and the approval conditions have been imposed on the Contractors as the Employer's requirements. MMRDA has actively monitored the compliances of the approval conditions and maintains throughout the construction phase. • MMRDA appointed Mangroves & Marine

CRZ Clearance, appropriate measures shall be taken, and necessary budget shall be secured by MMRDA.	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. • 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.

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 28th November 2016	Mangrove cutting operation was completed with full compliance and as of now, no further follow up work is required.
Tree Cutting /Transplantation	Respective Tree Authorities	Contractor for respective Packages	-	**Pkg-1:** Tree Cutting/ Transplantation permission from the Garden Dept., MCGM obtained on 24th December 2020. **Pkg-2:** Tree Cutting/ Transplantation permission obtained & completed. **Pkg-3:** Forest Department has issued a concurrence on 19/05/2019. CIDCO's permission for Tree Cutting/ Transplantation obtained on 25th November 2019.
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)
1. Establishment of Effective Environmental and Social Cell in PIU MMRDA confirmed that Social Development Cell (2 Officers), Land Cell (3 Officers), and Environmental Cell (2 Officers) had been set up.	Cell is established by MMRDA (Annexure III, Organization chart)
2. Rehabilitation and Land Acquisition Issues **a. Affected Area and Population** Due to the Project, 1282 non-titleholders will be involuntary resettled, and 108.09 ha of land will be handed over by CIDCO.	**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: • 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 **Navi Mumbai:** CIDCO has been finalizing the land acquisition closely monitored by Land Cell of MMRDA. Except private land and forest, CIDCO has possessed all required land of 108.09 ha. Out of the 108.09 ha, 106.345 ha has been handed over by CIDCO to MMRDA. CIDCO is going to acquire the balance 1.745 ha with the help of Collector, Raigad.
b. Entitlement Policy 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)	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.

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
("Guidelines") **(Attachment 2-5)**.	
c. Compensation to Project affected Fishermen 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.	Updated **Attachments 2-8 and 2-10** are enclosed in the report.
d. Implementation Schedule The Implementation schedule for land acquisition, resettlement and rehabilitation is attached as per **Attachment 2-10.**	Updated **Attachment 2-10** is enclosed in the report.
e. Grievance Redressal Mechanism 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.	**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. **Fishermen:** GRC for resolving grievances of the fisherfolk was set up as per the compensation policy and is in operation.
f. Internal Monitoring Internal Monitoring of the Resettlement Action Plan (RAP) implementation will be conducted by MMRDA in accordance with the RAP with necessary assistance of the consultant. RAP Internal Monitoring Form **(Attachment 2-8)** will be submitted to JICA on a quarterly basis as a part of PSR during the RAP implementation.	Internal Monitoring updates are mentioned in **Attachment 2-8.**

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
g. Qualitative Independent Evaluation 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.	Updated **Attachment 2-10** is enclosed in the report.
h. RAP Implementation Budget 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.	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.
i. Environmental Management Plan ("EMP") 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.	EMP will be updated, if required, in due course of construction activities/progress.
j. Environmental Monitoring Plan ("EMoP") 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	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**.

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
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.	
k. Long Term Bird Monitoring 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.	• MMRDA has entrusted the work of bird monitoring and implementation of Flamingos and birds related mitigation measures & bird monitoring program to Mangrove and Marine Biodiversity Foundation. • Rs. 31.92 Crore deposited to Mangrove foundation, Mumbai for periodical disbursement to BNHS.

3.4 Qualitative and Quantitative Data of Monitoring Indicators

Operation and Effect Indicator EIRR and/ or FIRR

Supporting data for Computing EIRR and/ or FIRR

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

*1 Section on Sewri – Chirle
*2 Assumptions: average passengers of car and taxi (2.6 persons), bus (37.2 persons) based on JICA study. Number of passengers of LCV, HCV and MAV is assumed as 1 person each.
*3 Assumptions: the maximum capacity of respective vehicle (LCV: 1 ton, HCV and MAV: 15 tons) is used for estimation.

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

3.5 Monitoring Plan for the indicators

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

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. 19 is submitted for the period of 1st October to 31st December 2021.

3.6 Achievement of the Project Objective

(PCR)

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

4.1 O&M and Management

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

Original: *(P/M)*

Operation & Maintenance, Toll Management and ITS

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

Actual: *(PCR)*

4.2 O&M Cost and Budget

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

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

5.0 EVALUATION

5.1 JICA and Borrower / Executing Agency performance

JICA:

(PCR)

Borrower/ Executing Agency:

(PCR)

5.2 Overall Evaluation

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

(PCR)

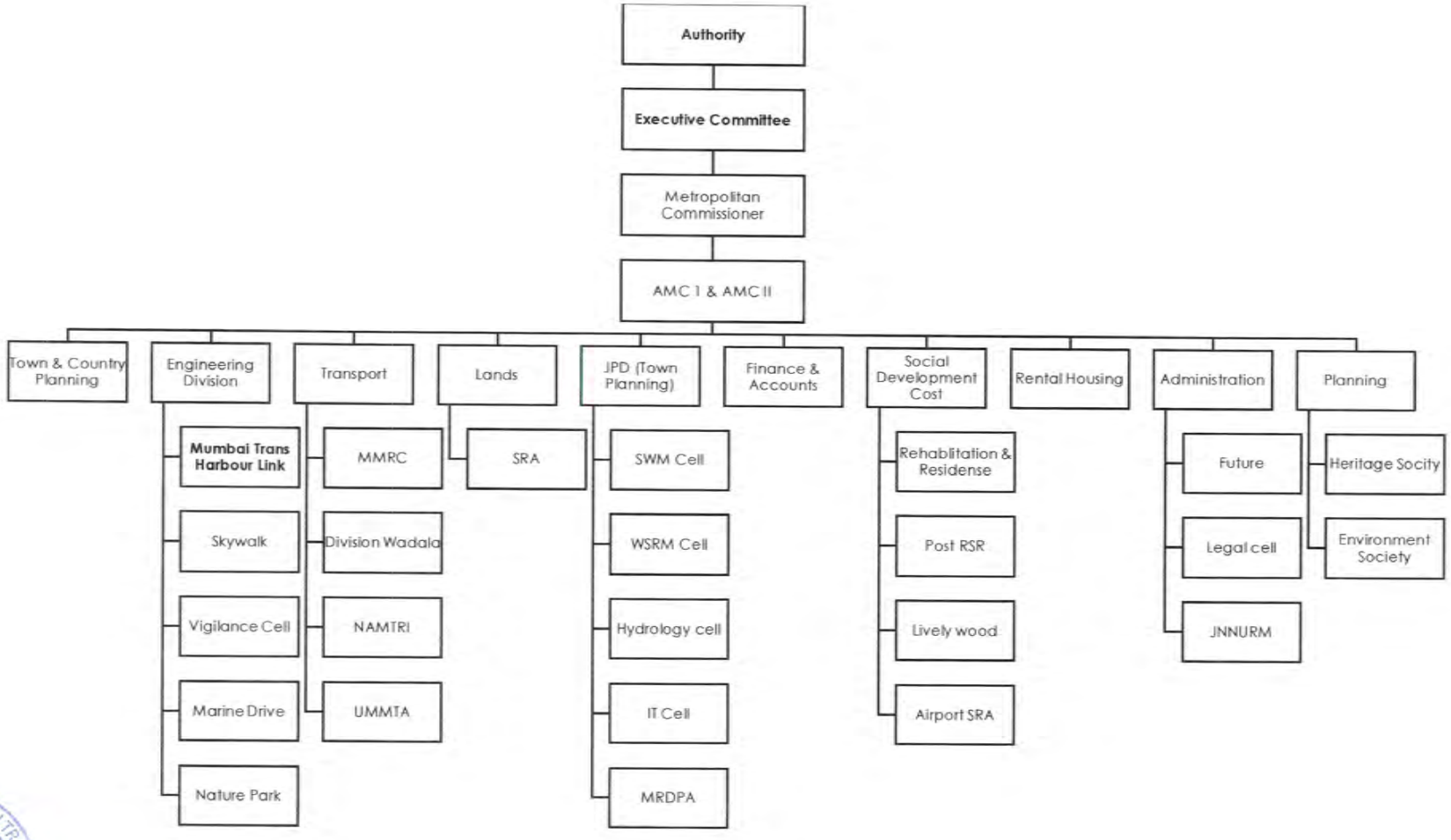
5.3 Lessons Learnt and Recommendations

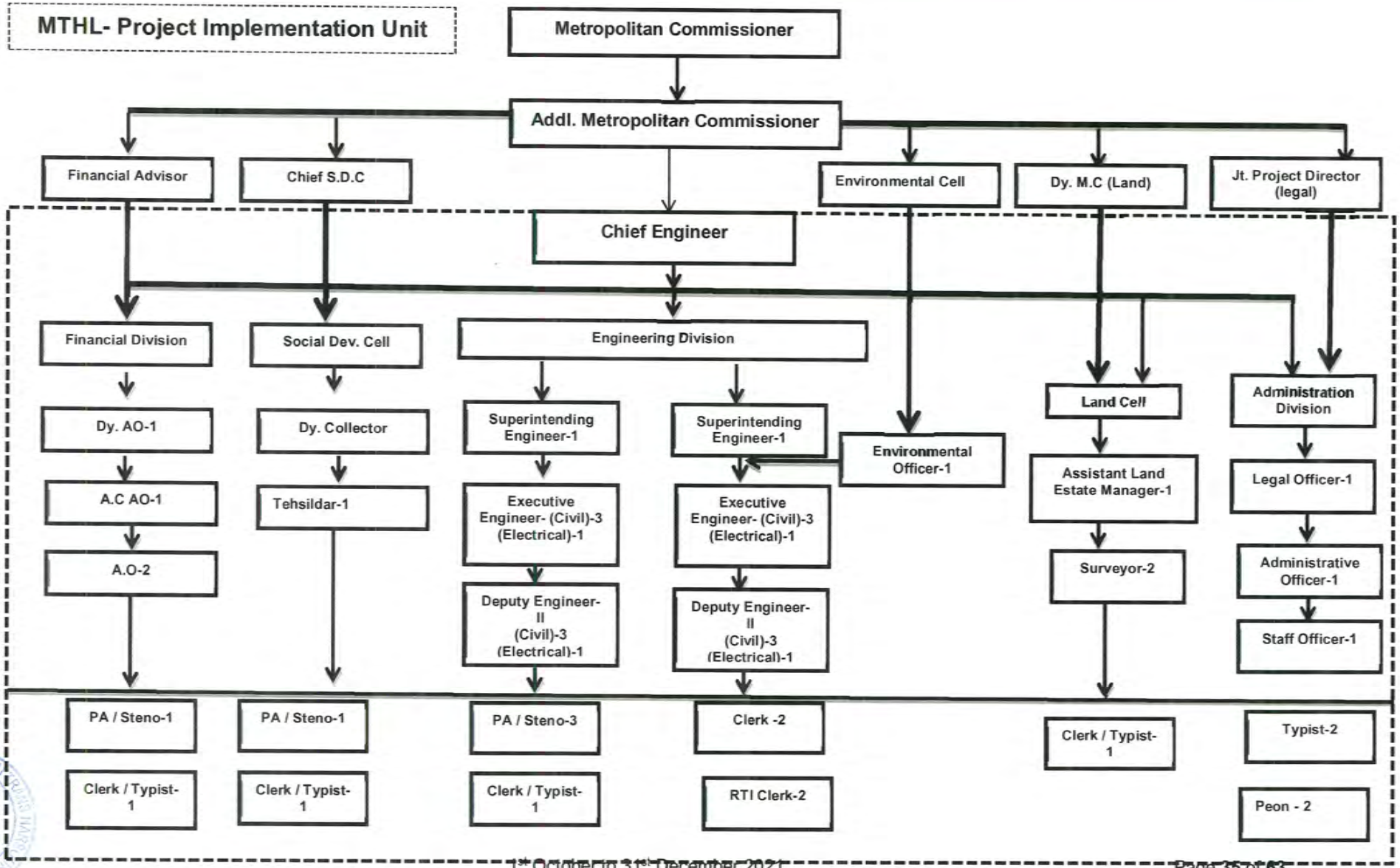
Please raise any lessons learned from the project experience, which might be valuable for the future JICA assistance or similar type of projects, as well as any recommendations, which might be beneficial for better realization of the project effect, impact and assurance of sustainability.

(PCR)

Attachment 1- MMRDA & PIU Organization Chart

MMRDA Organization chart




MTHL- Project Implementation Unit
Metropolitan Commissioner
Addl. Metropolitan Commissioner
Financial Advisor
Chief S.D.C
Environmental Cell
Dy. M.C (Land)
Jt. Project Director (legal)
Chief Engineer
Financial Division
Social Dev. Cell
Engineering Division
Land Cell
Administration Division
Dy. AO-1
Dy. Collector
Superintending Engineer-1
Superintending Engineer-1
Environmental Officer-1
Assistant Land Estate Manager-1
Legal Officer-1
A.C AO-1
Tehsildar-1
Executive Engineer- (Civil)-3 (Electrical)-1
Executive Engineer- (Civil)-3 (Electrical)-1
Surveyor-2
Administrative Officer-1
A.O-2
Deputy Engineer-II (Civil)-3 (Electrical)-1
Deputy Engineer-II (Civil)-3 (Electrical)-1
Staff Officer-1
PA / Steno-1
PA / Steno-1
PA / Steno-3
Clerk -2
Clerk / Typist-1
Typist-2
Clerk / Typist-1
Clerk / Typist-1
Clerk / Typist-1
RTI Clerk-2
Peon - 2

Attachment 2- Environmental & Social Impacts Attachments

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

Attachmemt 2-3

Environmental Monitoring Plan with Packagewise Estimated Cost

Category	No.	Impacted Item on JICA Guidelines	Parameter	Method	Location	Frequency a year	Cost (INR)	Cost Pkg.1 (INR)	Cost Pkg.2 (INR)	Cost Pkg.3 (INR)	Total Cost (INR)	Standard Central Pollution Control Board (CPCB) – Ministry of Environment & Forest (MoEF)	Remarks
Pollution	1	Air pollution	SO_2, NO_2, PM_{10}, $PM_{2.5}$, O_3, CO, (6 Items)	National Ambient Air Quality Standards, 2009	1. Sewri & Sewri bay area for package I	Fortnightly at all locations except 2 locations each near Batching plants	1,800,000	15,000,000	1,800,000	742,500	17,542,500	National Ambient Air Quality Standards (NAAQS) by Central Pollution Control Board (CPCB)	P1 contractor team is conducting Ambient air quality monitoring with reference to National Standards and clause 1.2 of Employer's requirement.
					2. Nhava temporary bridge & casting yard in Gavhan for package II	4 Times / Year						(Standard for 24hrs: Industrial and Residential/ Ecological Sensitive area)	P 2 contractor Monitoring plan has been designed as per EIA of 2015
					3. Gavhan & Chirle for package III	Fortnightly only for 3 months (jan-2019 to Mar-2019). Then quarterly monitoring as per MOEF and CPCB norms						· SO_2: 80 / 80µg/m^3	P3 contractor team is conducting Ambient air quality monitoring with reference to National Standards and clause 1.2 of Employer's requirement.
												· NO_2: 80 / 80µg/m^3	P 1 received Consents CTE & CTO from MPCB and they are following MPCB frequency in addition to frequency set by Environment Expert from GC. The NAAQ standards are showing High rate as that is the usual procedure. The frequency of monitoring is set by us which varies for different parameters as either Statutory requirements or as required by us to ensure we have sufficient data in hands if there are additional claims for Compensation in C5 category. Summary : Although the contract conditions for all packages were same at the time of biding. Later modifications suggested by GC were not accepted by P 2. P1 and P3 accepted the modifications and hence the difference. Second point is P 1 carrying out monitoring as per the obatiend CTE and CTO. Both other packages have applied for CTE but haven't obtained it yet. So we expect the monitoring frequecy 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, interchange, intertidal and marine. The disposal location is at MCGM approved location Bhayandarpada, Thane.

Category	No.	Impacted Item on JICA Guidelines	Parameter	Method	Location	Frequency a year	Cost (INR)	Cost Pkg.1 (INR)	Cost Pkg.2 (INR)	Cost Pkg.3 (INR)	Total Cost (INR)	Standard Central Pollution Control Board (CPCB) – Ministry of Environment & Forest (MoEF)	Remarks
					2. Nhava temporary bridge & casting yard in Gavhan for package II	4 Times / Year						**Municipal Soild 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 nera "Teen Taki Junction" along the Amar Marg.	P2 contractor has considered only Domestic garbage with respect to CIDCO. Other wastes are not considered. Construction wastes will be
					3. Gavhan & Chirle for package III	Once site clearing work/execution part of work start.							
	4 and 8	Soil Contamination/ sedimentation	Heavy Metals & Oil & Grease (5-10 items shall be selected from Soil pollution standards)	IS / Methods Manual Soil Testing in India by Department of Agriculture and Cooperation, January 2011	1. Sewri & Sewri bay area for package I 2. Nhava temporary bridge & casting yard in Gavhan for package II 3. Gavhan & Chirle for package III	1. Muck: 1 Time / Year 2. Sediments: 4 Times / Year *If any spillage/ leakage take place from chemical, fuel storage area *One time grab sample to be collected during Bridge Construction *Pre & Post Monsoon at Storage area only	150,000	1,500,000	150,000	100,000	1,750,000	Soil Pollution Standard in India (MOEF) · Cd: 0.01mg/l · Lead: 0.01mg/l · Chromium (VI): 0.05mg/l · Arsenic: 0.01mg/l · T-Mercury: 0.0005mg/l · Copper: 125mg/kg (some items shall be selected from totally 25 standards items)	
	5	Noise and vibration	Ambient and road side noise ($dB(A)L_{Aeq}$)	IS Standard	1. Sewri & Sewri bay area for package I 2. Nhava temporary bridge & casting yard in Gavhan for package II 3. Gavhan & Chirle for package III	Fortnightly 2 Times / Year Fortnightly	150,000	54,000	150,000	369,000	573,000	**-Construction Noise; 85dB(A)** **-Ambient Noise Standards in India (dB (A) $_{Leq}$)** 1.Industrial Area Day Time: 75 (6-22hr) Night Time: 70 (22-6hr) 2.Commercial Area: Day Time: 65 (6-22hr) Night Time: 55 (22-6hr) 3.Residential Area: Day Time: 55 (6-22hr) Night Time: 45 (22-6hr) 4.Silence Zone Day Time: 50 (6-22hr) Night Time: 40 (22-6hr)	
			Vibration (dB L10 or mm/sec)		1 Location Gavan area for package III	Half yearly	75,000	0	75,000	400,000	475,000	**- Construction vibration 75dB** **-Vibration Standards roadside** 1. Commercial /Industrial Area Day Time: 70 (7-20hr) Night Time: 65 (20-7hr) 2. Residential Area: Day Time: 65 (7-20hr) Night Time: 60 (20-7hr)	Not applicable for Pkg. 1
	9 and 10	Protected Area /Ecosystem	1.Monitoring of mudflat conditions including fauna-flora	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
			2. Monitoring of Cutting Tree and replantation/		Along MTHL alignment and mangrove replant area for package II	4 Times / Year						Significant impacts are not caused by the project	
			transplanting area	1-1. Fauna-Flora	Not applicable for Package III								
			3.Monitoring of Mangrove Plantation area appointed by MoEF	Line-Point census and record number and appeared species								**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 (18items on Supplemental EIA Table 6.1.15 for soil and 7 items such as 1)Netprimary productivitye, 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**	
				1-3: Benthos Survey									
				2-1: Cutting trees confirmation								Standard for Soil; Supplemental EIA Table 6.1.15	
				3-1: Mangrove survey in the replanted area								Standard for Ecological Parameter:	
												· Netprimary Productivity	
												<1,500 mgC/m3/day at surface	
												· Chlorophyll-a	
												<4mg/m3	
												· Phosphate: 0.1-90µg/l	
												· Nitrate: 1.0-500µg/l	
												· Nitrite: <125µg/l	
												· Particulate Organic Carbon: 10-100mg/m^3	
												· SiO2: 10-5,000µg/l	
	11	Hydrology	Flooding situation	Flood level measurement during high precipitation periods	Not applicable for Package I		350,000	0	350,000	0	350,000	Project activities and structures does not cause flooding and impacts on tidal conditions	Not applicable for Pkg. 1 & 3
					2 Locations (CRZ at Sewri and Shivaji Nagar) for Package II	4 Times / Year							
					Not applicable for Package III								
	12	Topography and Geology	Conditions in embankment area	Visual survey about Stability of embankment	Not applicable for Package I		115,000	0	115,000	0	115,000	Embankment shall be stabilized without any landslide and cracks	Not applicable for Pkg. 1 & 3
					Interchange in Shivaji Nagar for Package II	4 Times / Year							
					Not applicable for Package								
Social environment	13	Local economy such as employment and livelihood			Affected area		As per Actuals						
	14	Local conflict of interests	Construction worker's township	Confirmation of workers list from contractor	2 Locations (camp site in Sewri and Shivaji Nagar) for Package II	2 Times / Year	125,000	0	125,000	0	125,000	Employment opportunity shall be provided fairly	
	15	Infectious diseases such as HIV/AIDS	Number of infected patient	Confirmation of health check list from contractor	2 Locations	4 times / year x 4.5 years	525,000	0	525,000	0	525,000	Infection disease rate shall not be caused by the project	
	16	Labour Environment	Construction worker's condition	Confirmation of safety devices and conditions via interviews	2 Location (camp site in Sewri and Shivaji Nagar) for Package II	2 times / year	500,000	0	500,000	0	500,000	"Building And Other Construction Workers (Regulation of Emloyment 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**		

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

Monitoring Period - October 2021 to December 2021

Attachment 2-4
This form is prepared for reporting the monitoring results to JICA India Office. Only minimum required parameters are included in this form, and not all parameters in EMoP are covered.

1. Environmental Monitoring during Construction for 4.5 years

Area	No.	Item	Parameter	Location	Frequency a year	Item and Stanadard	Monitoring Result				Remark - reasons why the data is exceeding standard - counter measures when the data is exceeding
							Location 1- Pkg 1	Location 2- Pkg 2	Location 3- Pkg 3	Location 4	
Pollution	1	Air pollution	SO_2, NO_2, PM_{10}, $PM_{2.5}$	1. Sewri & Sewri bay area for package I	Quarterly monitoring ia conducted at all locations.	**National Ambient Air Quality Standards (NAAQS)**	**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	10.675	BDL	10		
						2. NO_2 80µg/m^3	38	24	27		
						3. PM_{10} 100µg/m^3	191	94	53		
						4. $PM_{2.5}$ 60µg/m^3	49	35	26		
						5.CO:02mg/m3	1.4	1.3	0.58		
						6.VOCs	1.27	2.8	0.3		Benzene is analysed in ambient air
	2	Water pollution	pH, BOD, DO, Turbidity and O&G	1. Sewri & Sewri bay area for package I	Quarterly	**Marine water quality Standards – Class SW-IV Harbour Waters (MPCB)**	**Zone I**	**Zone II**	**Zone III/ Package-03**		
				2. Nhava temporary bridge & casting yard in Gavhan for package II	4 Times / Year	1. pH : 6.5-9	7.1	7.5	Not applicable		Water Sampling not conducted due to monsoon season (Due to cyclone)
				3. Gavhan & Chirle for package III	Not applicable	2. DO: 3 mg/l	5.1	6.1	Not applicable		
						3. Turbidity: 30 NTU	15	8.9	Not applicable		
						4. BOD: 5 mg/l	BDL - 2 mg/l	BDL	Not applicable		
						5. O & G: 10 mg/l	BDL - 2 mg/l		Not applicable		
						6.COD	8-24	16	Not applicable		
	3	Waste	Volume of waste soil, cutting tree and domestic garbage	1. Sewri & Sewri bay area for package I	Daily	**Municipal Soild Waste Management Rules, 2013**	**Sewri Camp Site**	**Shivaji Nagar Camp Site**	**Chirle Camp Site**		
				2. Nhava temporary bridge & casting yard in Gavhan for package II	4 Times / Year	Generated waste soil (t) total -Piling muck	16,651 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. 309 trees (Till March 2020) 2. Transplanting : 330 Trees 3. Root ball preparation : 330 trees		In Oct-Dec 2021 - Nil		Both of forest and CIDCO area (234+75)= 309
						Generated domestic waste (t/month) total	199.17	3.5 T/quarter. It is disposed through CIDCO daily.	2.1 T for the quarter		
						Confirmation of adequate disposal (visualt survey)	BMC authroized daily pick up				
	4	Soil Contamination/sedimentation	Heavy Metals & Oil & Grease	1. Sewri & Sewri bay area for package I	1. Muck: 1 Time / Year 2. Sediments: 4 Times / Year	**Soil Pollution Standard in India (MOEF)**	Sediment sample at Sewri	Muck Testing Done on September 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		1. Cadmium: 0.01mg/l	BDL	BDL			
				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	2. total cyanide : not detected		<0.005			
						3. Organic Carbon	0.86	8.5			
						4. lead: 0.01mg/l	10	0.17	Not applicable for package-3		Hazardous Storeage 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 Febrary-2020 monitoring.
						5. chromium (VI): 0.05mg/l	3	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	BDL				
						9. PCBs: not detected		BDL			
						10. copper: 125mg/kg (only paddy field soil)	116				
						11. dichloromethane: 0.02mg/l		BDL			
						12. carbon tetrachloride: 0.002mg/l		BDL			
						13. 1,2-dichloroethane: 0.004mg/l		BDL			
						14. 1,1-dichloroethylene: 0.02mg/l		BDL			
						15. cis-1,2-dichloroethylene: 0.04mg/l		BDL			
						16. 1,1,1-trichloroethane: 1mg/l		BDL			
						17. 1,1,2-trichloroethane: 0.006 mg/l		BDL			
						18. trichloroethylene: 0.03mg/l		BDL			
						19. tetrachloroethylene: 0.01mg/l		BDL			

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

The Project for Construction of Mumbai Trans Harbour Link

Reporting Form of Environmental Monitoring during Construction

Attachment 2-4

1. Environmental Monitoring during Construction for 4.5 years

Monitoring Period - October 2021 to December 2021

Attachment 2-4

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

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**	
						20. 1,3-dichloropropene: 0.002mg/l		BDL			
						21. thiuram: 0.006mg/l		BDL			
						22. simazine: 0.003mg/l		BDL			
						23. thiobencarb: 0.02mg/l		BDL			
						24. benzene: 0.01mg/l		BDL			
						25. selenium: 0.01mg/l		BDL			
	5	Noise and vibration	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 constuction 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)**		
				2. Nhava temporary bridge & casting yard in Gavhan for package II	2 Times / Year	Day time : 6-22 hr (continious) dB(A)	69.4	69.5	66.8		Noise Monitroing not conducted due to monsoon season.
				3. Gavhan & Chirle for package III	Fortnightly	Night time: 22-6 hr (continious) dB(A)	64.7	61.5	65.3		
						(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)					
			Vibration (dB) shall be converted from mm/s to dB	1 Location Gavan area for package III	Half yearly	**Construction area Standard 75 dB daytime (Japan standard)** **Not constuction area : Vibration Standard (Japan Standard along the road)**	**Sewri (ST 200-500) (Industrial area)**	**Shivaji Nagar (Commercial area)**	**Chirle**		
						Day time : 6-22 hr (continious)		Not Applicable			monitoring in marine area. GC has r the project.
						Night time: 22-6 hr (continious)					
						Note (standard values in Not construction area)					
						1. Commercial /Industrial Area					
						Day Time: 70 (7-20hr)					Kindly check the letter No.Ref No. Mthl/ P3/L&T/GC/LT/HSE-2226/2020 dated on 12.12.2020
						Night Time: 65 (20-7hr)					
				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)**	**Mangorove 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	Lesser flamingo - 12000-15000		N/A	N/A	
			1.Monitoring of mudflat conditions including fauna-flora 2. Monitoring of Cutting Tree and replantation/transplation area 3.Monitoring of Mangrove			(1) Number of species of bird	52				Testing for phytoplankton/ zooplankton density and list of fauna attached in original test records available from Ultratech.
						(2) Number of species of fish	Fishes, Crustaceans, crabs and mudskipper				
						(3) Estimated number of Flamingo	12000-15000				
						1-2: Mangrove density and community survey	Existing Avicennia protected	not required			

Regarding protected area (CRZ and Important Bird Area) and ecosystem, detailed long-term monitoring plan will be extablished during baseline survay of birds. This tentative monitoring form shall be updated based on the detailed long-term monitoring plan.

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

Monitoring Period - October 2021 to December 2021

Attachment 2-4
This form is prepared for reporting the monitoring results to JICA India Office. Only minimum required parameters are included in this form, and not all parameters in EMoP are covered.

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	
Natural Environment	6	Protected Area	Plantation area appointed by MoEF 4. Monitoring of sedimentation soil and ecological parameter (25 items on EIA main text Table 6.1.15 for soil and 7 items such as 1)Net primary productivity, 2)Chlorophyll-a, 3)Phosphate, 4)Nitrate, 5)Nitrite, 6)Particulate Organic Carbon, 7) SiO2)			(1) Number of species of mangorve	Avicennia marina	not required			
						(2) Density of mangrove (xx trees/10m x 10m)		not required			
						1-3: Benthos Survey	500 Numbers /Cu.m	not required			
						(1) Number of species and quantity by species	500 Numbers /Cu.m	not required			
						2-1: Cutting tree confirmation		not required	Approved By Both CIDCO and Forest forest Dept (both Alibaug and Uran(regional office))		
						(1) Number of cutting tree and species		not required	Submitted to authority		
						3-1: Mangrove survey in the replant area		not required	N/A		
						(1) Number of species of mangorve		not required			
						(2) Density of mangrove (xx trees/10m x 10m)		not required			
						4. Ecologial Parameter					
						(1) Net primary Productivity : <1,500 mgC/m3/day at surface	1000				
						(2) Chlorophyll-a: <4mg/m3	4.2				
						(3) Phosphate 0.1-90µg/l	Sediment - 7.0				
						(4) Nitrate 1.0-500µg/l	Sediment - 4				
						(5) Nitrite <125µg/l					
		Ecosystem				(6) Particulate Organic Carbon: 10-100mg/m^3	0.8 - Sediment				
						(7) SiO2 10-5,000µg/l	33.2				
	7	Hydrology	Flooding situation	Not applicable for Package I		**Criteria for evaluation** **Project activities and structures does not cause flooding and impacts on tidal conditions**	**Sewri**	**Shivaji Nagar**			
				2 Locations (CRZ at Sewri and Shivaji Nagar) for Package II	4 Times / Year	Monitoring of flooding situation	No Flooding	**No flooding**	N/A		
				Not applicable for Package III							
	8	Topography and Geology	Conditions in embankment area	2 Locations (1. Embankment of Inter Change in Shivaji Nagar and 2 Cutting area at toll gate in Chirle)	4 times / year x 4.5 years	**Criteria for evaluation** **Embankment shall be stabilized without any landslide and cracks**	**Shivaji Nagar**	**Shivaji Nagar Camp Site**	**Chirle**		
						Monitoring of embankment	In progress		Rock filling activity is carried out as per aggrement.		
	9	Local conflict of interests	Construction worker's township	2 Locations (major camp site in Sewri and Shivaji Nagar)	4 times / year x 4.5 years	**Criteria for evaluation** **Employment opportunity shall be provided fairly**	**Sewri Camp Site**	**Shivaji Nagar Camp Site**	**Chirle/ Gavan camp**		
						Number of hired workers by community		125-150	150		
	10	Infectious diseases such as HIV/AIDS	Number of infected patient	2 Locations (major camp site in Sewri and Shivaji Nagar)	4 times / year x 4.5 years	**Criteria for evaluation** **Infection disease rate shall not be caused by the project**	**Sewri Camp Site**	**Shivaji Nagar Camp Site**			**Functional first aid center within MTHL -1 campus. Induction, medical check up and authroization required to begin work for Labor.**
						Confirmation of health check record and inspect project site . PPE provisions for work, social distancing for covid protocol at work in TBT training. Posters for awarenss at Kitchen and Labor camp. Medical camp : 71 Labor HIV Aids camp : 55 labor Covid Precautions : 1. L&T office and camps : Thermal screening / Sanitation. 2. Fogging : 2 times in a week 3. Pest control : 2 times in a week	Doctor on call checks site specific infections., minor and major incidents . 24x7 ambulance service , ERT team with trained first aiders available	Health Checks carried out but HIV/AIDS parameter is not there.	Regular Health check up is carried out by site Doctor.		
	11	Labour Environment	Construction worker's cond	2 Locations (major camp site in Sewri and Shivaji Nagar)	2 times / year x 4.5 years	**Criteria for evaluation** **"Building And Other Construction Workers (Regulation of Employment and Conditions of Service) Act,1996", "The building and other construction worker's welfare cess Act, 1996" and international standards such as "IFC Performance Standard 2 Labor and Working Conditions"** **1. Local labor : Oct 2021 : 511** **2. Local labor : Nov 2021 : 465** **3. Local Labor : Dec 2021 : 495** **Registeration of Labor** **1. Oct 2021 : 215** **2. Nov 2021 : 330** **3. Dec 2021 : 525**	**4.500 labor for 3 months at 11 functional camps. One mid- day meal introduced as per BOCW act and by Maharashtra state serves more than 1000 free meals.**	**Shivaji Nagar Camp Site**	**Gavan Camp site**		**Biotoilets used for labor camps with biodigestors. A DRDO patented technology used for Sold waste. The bathing and kitchen water was directed to a reed bed for treatment.**
						Site Visual Inspection	IM 26 - for visual inspections- L&T IMS	Conforming with BOCW Act 1996	Conforming with BOCW Act 1996		
Other	12	Accident	Number of accidents	2 Locations (major camp site in Sewri and Shivaji Nagar)	4 times / year x 4.5 years	**Criteria for evaluation** **Any accidents are not caused by construction**	**1**	**Shivaji Nagar Camp Site**	**Chirle/Other area**		**Liner rolldown and trapped the labor causing death**
						Number of recorded accident		NIL	Nil		

MTHL Land Acquisition Status (Attachment 2-6):

Total land required on Navi Mumbai side- 108.09 ha
Land in possession in MMRDA – 106.345 ha
Balance land acquisition- 1.745 ha

Note: The acquisition of 1.745 ha is in progress by CIDCO. The balance acquisition would be likely completed by the end of March 2022.

Land Required in ha		Land Acquired in ha		Balance Land to be acquired in ha	Anticipated date for Land Acquisition	Payment status (Payment made to Land Owners by CIDCO)	Remarks
Govt.	Private	Govt.	Private	Private*			
98.75	9.34	98.75	7.595	1.745	31-03-2022	--	The payment status to the land owners are awaited from CIDCO. The same would be communicated to JICA on receipt of the same.
Total 108.09		98.75	7.595	1.745			

***Portions of Private Land**

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

Attachment 2-8

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

1. General Information

a.	RAP Implementation Monitoring Results:	Progress Status Report (PSR) of 4th quarter of 2021
b.	Date of Preparing This form	31-12-2021
c.	Person Preparing This form	Name: Robin Sham Position: Engineer and Team Leader Department/Organizations: General Consultants

2. Scale of Impact

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

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

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

2.2 Structures

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

2.3 Fishery

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

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

2.4 Land Acquisition / Transfer

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

3. Monitoring Results

3.1 Sewri Section

Activity	Indicator	Total Target	Progress till Last Quarter	Progress during reporting Quarter	Cumulative Progress till Current Quarter	Cumulative Achievement of Total Target (%)	Remarks, If Any
Resettlement	No. of Residential PAHs provided with Allotment Letters of Alternate Tenements	231	197	29	226	97%	
	No. of Residential PAHs given possession of Alternate Tenements	231	197	29	226	97%	
	No. of Commercial/R+C PAPs provided with Allotment Letters of Alternate Shops/Tenements	66	23	38	61	92%	
	No. of Commercial R+C PAPs given possession of Alternate Shops/Tenements	66	23	38	61	92%	
	No. of Occupants of MbPT Leased Plots provided Compensation	6	5	1	6	100%	
	No. of Religious properties Relocated / Removed	6	1	5	6	100%	
	No. of Other Community properties Relocated / Removed	4	0	4	4	100%	
	No. of Structures in possession of MbPT Dismantled / Cleared	9	0	9	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						
	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						

Activity	Indicator	Total Target	Progress till Last Quarter	Progress during reporting Quarter	Cumulative Progress till Current Quarter	Cumulative Achievement of Total Target (%)	Remarks, If Any
Grievance Redress	No. of Grievances Received by FLGRC	4					
	No. of Grievances Disposed by FLGRC	4	0	4	4	100%	
	No. of Grievances Received by SLGRC	1					
	No. of Grievances Disposed by SLGRC	0					
Post Resettlement Assistance	No. of CHSs Registration helped						
	No. of CHSs provided Tenements for Social Amenities						
	No. of CHSs' Maintenance Fund Invested						
	No. of CHSs' Office Bearers provided training						

SUMMARY OF FISHER FOLKS OF MTHL PROJECT (Influence Zone of 23 villages) Up to 31-12-2021						
Sr. No.	**Village Name**	**Total number of forms Received**	**Total approved eligible family units**			
			C1	**C2**	**C3**	**Total**
1	Bamandongri	273	1	1	28	**30**
2	Belapur	110	0	5	15	**20**
3	Belpada	1185	0	7	478	**485**
4	Diwale	455	12	201	52	**265**
5	Ganeshpuri	276	0	37	35	**72**
6	Gavhan	2162	0	14	1317	**1331**
7	Jasai	926	0	0	18	**18**
8	Jawale	51	0	1	0	**1**
9	Kombadbhuja	413	1	23	134	**158**
10	Kopar	994	2	5	228	**235**
11	Karave	178	0	44	67	**111**
12	Mahul	1062	129	76	604	**809**
13	Moha	475	22	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**	**864**	**5549**	**6645**

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 fisher-folks' compensation Policy	Fisher-folks Compensation Committee (FCC)	08-10-2015	23-12-2015
2	Approval by MMRDA	MMRDA	10-12-2015	23-12-2015
3	Submission to JICA	MMRDA	--	04-01-2016
4	Detailed list of PAP and compensation plan	1. Detailed list of Fisher-folk PAP up to list 1 (1165 Nos) & 2 (1399 Nos) are finalized by the Fisheries Department. 2. From 2018, FEVC committee is the approval authority of PAF and approved C1- 232 Nos. C2 - 368 Nos and C3- 3481 Nos are approved.	23-12-2015	**Up to 31-12-2021** 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.

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

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

Land Required in Ha.		Land Acquired in Ha.		Balance Land to be acquired in Ha	Anticipated date for Land Acquisition	Payment status (Payment made to Landowners by CIDCO)	Remarks
Govt.	Private	Govt.	Private	Private			
98.75	9.34	98.75	7.595	1.745	31-03-2022	--	1. CIDCO is the land acquisition authority for land acquisition for Navi Mumbai 2. MMRDA has paid an amount of INR 59.16 Cr to CIDCO as per their demand. 3. The payment status to the landowners is awaited from CIDCO. The same would be communicated to JICA on receipt of the same.
Total	**108.09**	**106.345**		**1.745**			

Implementation Schedule for SIA (Sewri Section)

Task No.	Task Designation	Start Date	Completion / Forecast Date
1	**Preparation of Final SIA**		
1.1	MMRDA Approval	October 2015	January 2016
1.2	JICA Approval	November 2015	January 2016
1.3	Posting of project Information on MMRDA		
1.4	Translation and disclosure of entitlement policy in local language to all PAP's	December 2015	January 2016
2	**LARP Implementation**		
2.1	Grievance redress mechanism established	August 2016	August 2016
2.2	Staff deployment SIA implementation	June 2016	Dec. 2021
2.3	Staff Deployment Public Relation	June 2016	June 2016
2.4	Hiring of Independent Evaluation Agency	November 2018	November 2020
2.5	Preparation and issue of allotment letters to PAPs	June 2018	Jan. 2022
2.6	Notice of PAPs for shifting (Sewri Section)	December 2018	Nov. 2021
2.7	Allotment of dwelling units to PAP's	September 2016	Jan. 2022
2.8	Shifting of PAPs to resettlement Colony	December 2018	Nov. 2021
2.9	Transfer of compensation / allowance/ assistance to PAPs	December 2018	Jan. 2022
2.10	Creation of Community Revolving fund (within 3 months post handing over)	April 2019	Jan. 2022
2.11	Assessment of economic rehabilitation needs by individual household (within 6 months after handing over	September 2019	Jan. 2022
2.12	Registration of Co-operative housing societies transfer of maintenance funds. (6 months period)	December 2019	Jan. 2022
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 Mar. 2022

Attachment 3- JICA's Concurrence Status

Status of JICA'S Concurrence

Sl. No.	Brief description	Procurement procedure	Bid Cost		JICA's Concurrence on					
			Local Currency (Cr Rs.)	Total (Cr Rs)	PQ Documents	PQ Evaluation	Bid Documents	Technical Evaluation	Financial Evaluation	Contract
1.	Package-1 (CH 0+000 km to CH10+380 km)	ICB with PQ (2P)	7637.30	7637.30	JICA's Concurrence - 9th May 2016	JICA's Concurrence - 22nd Dec 2016	JICA's Concurrence - 4th Jan 2017	JICA's Concurrence - 12th Sep 2017	JICA's Concurrence - 12th Oct 2017	JICA's Concurrence – 15th Feb 2018
2.	Package-2 (CH 10+380 km to CH18+187 km)	ICB with PQ (2P)	5612.61	5612.61	JICA's Concurrence - 9th May 2016	JICA's Concurrence - 22nd Dec 2016	JICA's Concurrence - 4th Jan 2017	JICA's Concurrence - 12th Sep 2017	JICA's Concurrence - 12th Oct 2017	JICA's Concurrence – 15th Feb 2018
3.	Package-3 (CH18+187 to CH21+800)	ICB with PQ (2P)	1013.79	1013.79	JICA's Concurrence - 9th May 2016	JICA's Concurrence - 4th Jan 2017	JICA's Concurrence - 4th Jan 2017	JICA's Concurrence - 15th Sep 2017	JICA's Concurrence - 12th Oct 2017	JICA's Concurrence – 15th Feb 2018
4.	Package-4 Intelligent Transport System	ICB with PQ (2P)	413	413	JICA's Concurrence - 23rd August 2019	-	JICA's Concurrence - 24th Aug 2017	-	-	-

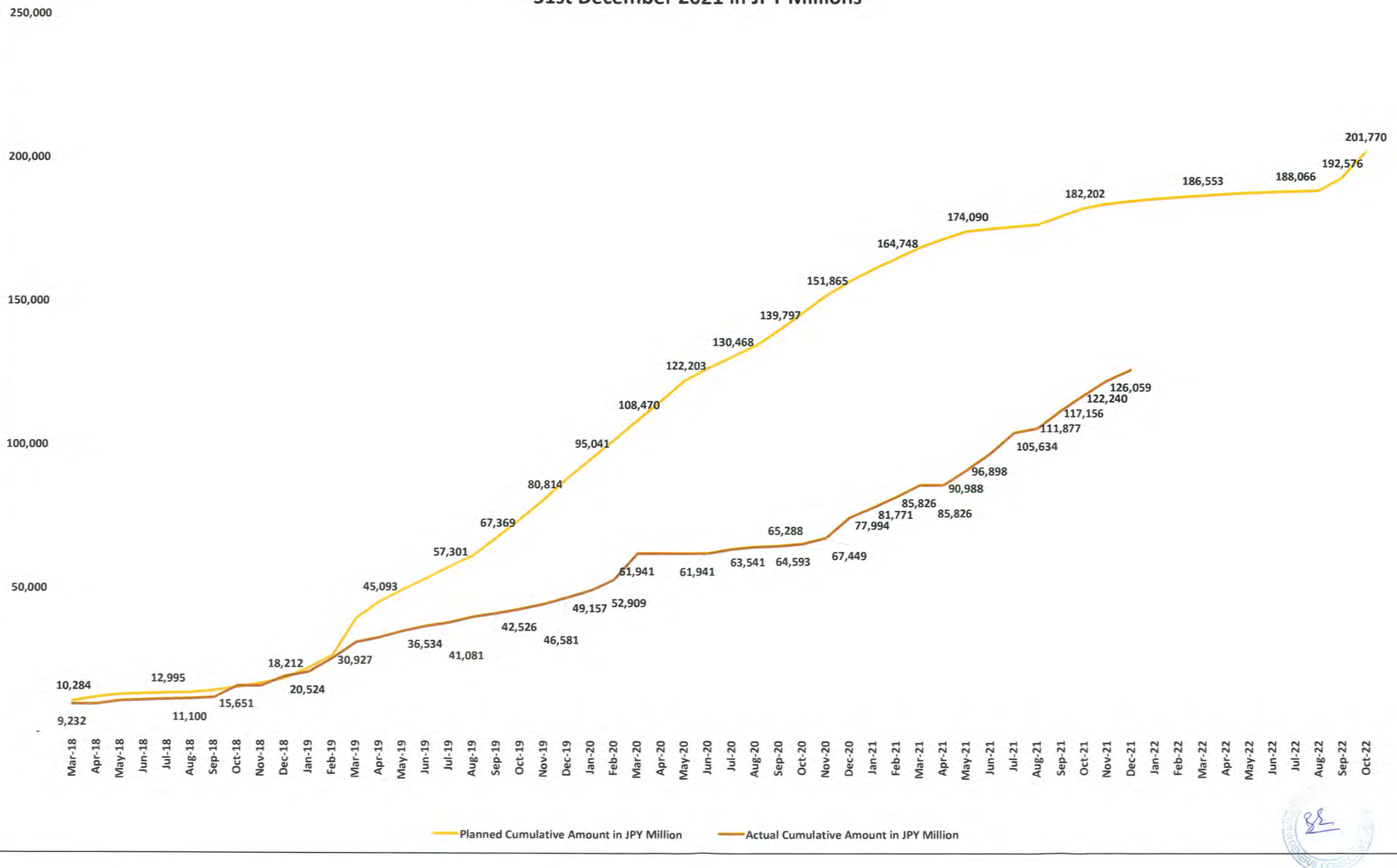
Attachment 4- Project Procurement and Financial Status till 31st December 2021

PROJECT PROCUREMENT AND FINANCIAL STATUS TILL 31st DECEMBER 2021

Type	Contract	Awarded or Estimated Value (in Rs. Crore)	Current Status	Contractors	Project Commencement Date	Stipulated Project Completion Date	% of Overall Project completion (Design/ Procurement/ Construction) till 25th December 2021	% of Overall Financial Progress (Including Mobilization Advance and excluding the Price Adjustment & Work Variation) till 31st December 2021
CIVIL	Package-1 (CH 0+000 km to CH 10+380 km)	7637.30	Awarded	L&T-IHI Consortium	March 2018	Sep 2022	66.21%	70.93%
	Package-2 (CH 10+380 km to CH18+187 km)	5612.61	Awarded	DAEWOO-TPL JV	March 2018	Sep 2022	63.19%	75.04%
	Package-3 (CH18+187 to CH21+800)	1013.79	Awarded	L&T	March 2018	Sep 2021	66.84%	86.94%
ITS	Package-4 Intelligent Transport System (ITS)	413	Tender Stage	NA	February 2022	May 2023	NA	NA

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

Financial S-Curve (Planned Vs Actual JICA Disbursement Amount) till 31st December 2021 in JPY Millions



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

IHI

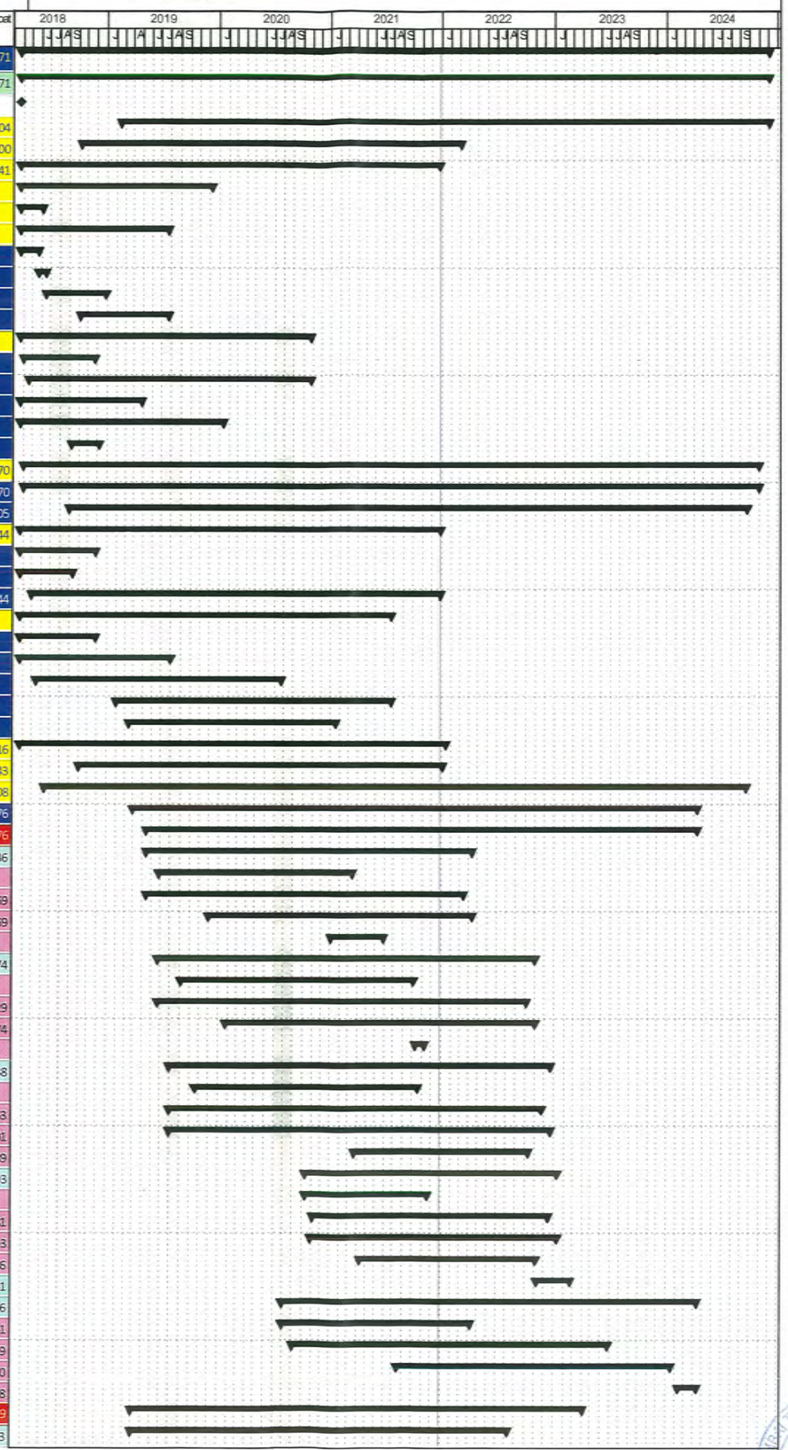
MUMBAI TRANS HARBOUR LINK PACKAGE 1, UPDATED BASELINE PROGRAMME FOR DECEMBER 2021

MMRDA

AECOM PADECO dar al-handasah TYLIN INTERNATIONAL

General Consultant for Mumbai Trans Harbour Link Project

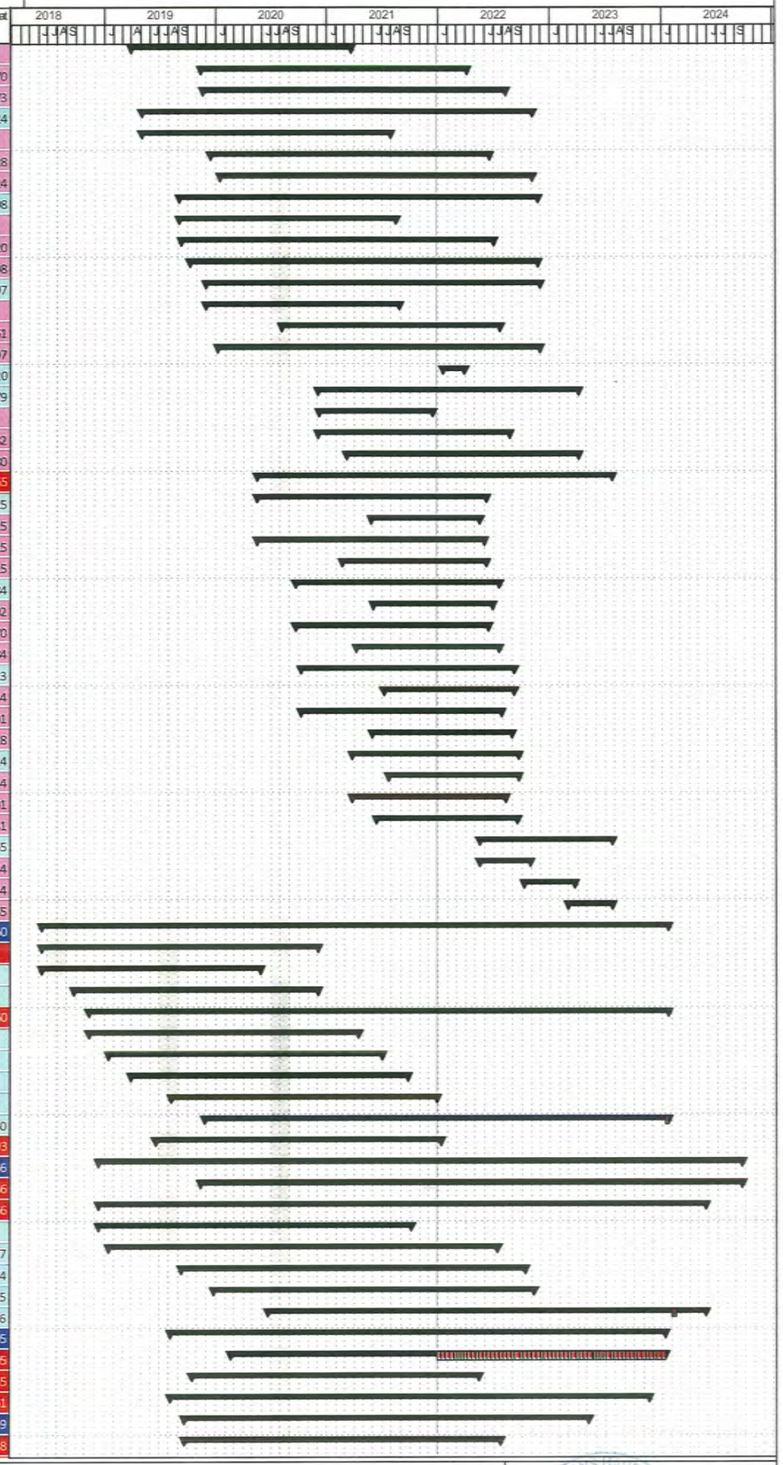
Activity ID	Activity Name	BL1 Duration	BL1 Start	BL1 Finish	Original Duration	Start	Finish	Schedule % Complete	Performance % Complete	Variance - BL1 Start Date	Variance - BL1 Finish Date	Total Float
MPR45	MTHL P1 -Dec'21 Month Progress	1062	23-Mar-18	22-Sep-22	1732	23-Mar-18 A	04-Dec-24	96.64%	66.21%	0	-670	-671
MPR45.1	Mumbai Trans Harbour Link - Package 1	1062	23-Mar-18	22-Sep-22	1732	23-Mar-18 A	04-Dec-24	96.64%	66.21%	0	-670	-671
M10000	Commencement Date	0	23-Mar-18		0	23-Mar-18 A		100%	100%	0	0	
MPR45.1.1	Key Milestones	1464	19-Sep-18	22-Sep-22	2082	15-Feb-19 A	04-Dec-24	0%	0%	-148	-803	-804
MPR45.1.2	Contractual Interface	1243	09-Oct-18	05-Mar-22	1243	09-Oct-18 A	05-Mar-22	0%	0%	0	0	200
MPR45.1.3	Access to Site	165	23-Mar-18	03-Sep-18	165	23-Mar-18 A	26-Dec-21	0%	0%	0	-1210	-741
MPR45.1.4	Document Submittals	180	23-Mar-18	18-Sep-18	180	23-Mar-18 A	09-Dec-19 A	0%	0%	0	-446	
MPR45.1.5	Survey	73	23-Mar-18	03-Jun-18	73	23-Mar-18 A	03-Jun-18 A	0%	0%	0	0	
MPR45.1.6	Geotechnical Investigation	165	23-Mar-18	03-Sep-18	165	23-Mar-18 A	23-Jul-19 A	0%	0%	0	-322	
MPR45.1.6.1	Phase 1	60	23-Mar-18	21-May-18	60	23-Mar-18 A	21-May-18 A	0%	0%	0	0	
MPR45.1.6.2	Phase 2	25	22-May-18	15-Jun-18	25	22-May-18 A	15-Jun-18 A	0%	0%	0	0	
MPR45.1.6.3	Phase 3	50	16-Jun-18	04-Aug-18	50	16-Jun-18 A	30-Dec-18 A	0%	0%	0	-147	
MPR45.1.6.4	Phase 4	45	21-Jul-18	03-Sep-18	45	05-Oct-18 A	23-Jul-19 A	0%	0%	-76	-322	
MPR45.1.7	Infrasturcture Facilties	188	23-Mar-18	05-Feb-19	376	23-Mar-18 A	26-Oct-20 A	0%	0%	0	-369	
MPR45.1.7.1	Project Site Office Construction (Contractor + Employer + C	120	04-Apr-18	27-Nov-18	120	04-Apr-18 A	25-Nov-18 A	0%	0%	0	2	
MPR45.1.7.2	Casting Yard	164	20-Apr-18	05-Feb-19	355	20-Apr-18 A	26-Oct-20 A	0%	0%	0	-369	
MPR45.1.7.3	Fabrication Yard	133	23-Mar-18	30-Nov-18	133	23-Mar-18 A	26-Apr-19 A	0%	0%	0	-122	
MPR45.1.7.4	Rebar Yard	133	23-Mar-18	30-Nov-18	376	23-Mar-18 A	16-Jan-20 A	0%	0%	0	-265	
MPR45.1.7.5	Batching Plant Installation - CP30 & CP60	164	20-Apr-18	05-Feb-19	164	08-Sep-18 A	08-Dec-18 A	0%	0%	-47	49	
MPR45.1.8	Procurement Plan	1618	04-Apr-18	07-Sep-22	2186	04-Apr-18 A	31-Oct-24	0%	0%	0	-784	-770
MPR45.1.8.1	Plant & Machinery Deployment Plan	1618	04-Apr-18	07-Sep-22	2186	04-Apr-18 A	31-Oct-24	0%	0%	0	-784	-770
MPR45.1.8.4	Bulk Material Procurement Plan	1412	01-Sep-18	13-Jul-22	1679	31-Aug-18 A	25-Sep-24	0%	0%	0	-804	-805
MPR45.1.9	Design & Engineering (Civil)	302	23-Mar-18	21-Sep-19	673	23-Mar-18 A	29-Dec-21	0%	0%	0	-536	-344
MPR45.1.9.1	Initial Design (General & Preliminary Design, DBR)	79	23-Mar-18	09-Jun-18	79	23-Mar-18 A	29-Nov-18 A	0%	0%	0	-172	
MPR45.1.9.2	Finalization of Alignment	88	23-Mar-18	18-Jun-18	88	23-Mar-18 A	10-Sep-18 A	0%	0%	0	-83	
MPR45.1.9.3	Detailed Design and Construction Design	269	01-May-18	21-Sep-19	673	01-May-18 A	29-Dec-21	0%	0%	0	-536	-344
MPR45.1.10	Design, Engineering & Material Procurement (OSD)	697	23-Mar-18	17-Feb-20	1211	23-Mar-18 A	22-Jul-21 A	0%	0%	0	-520	
MPR45.1.10.1	Initial Design	53	23-Mar-18	14-May-18	53	23-Mar-18 A	29-Nov-18 A	0%	0%	0	-198	
MPR45.1.10.3	Aerodynamic Analysis	145	23-Mar-18	14-Aug-18	145	23-Mar-18 A	30-Jul-19 A	0%	0%	0	-349	
MPR45.1.10.4	Technical Design	311	15-May-18	21-Mar-19	813	15-May-18 A	22-Jul-20 A	0%	0%	0	-488	
MPR45.1.10.5	Construction Design	344	12-Oct-18	20-Sep-19	1124	02-Feb-19 A	22-Jul-21 A	0%	0%	-113	-670	
MPR45.1.10.6	Material Procurement (1st Lot)	353	02-Mar-19	17-Feb-20	577	15-Mar-19 A	19-Jan-21 A	0%	0%	-13	-336	
MPR45.1.11	Tree Cutting and Transplantation	225	23-Mar-18	02-Nov-18	1121	23-Mar-18 A	16-Jan-22	0%	0%	0	-1170	-816
MPR45.1.12	Utility Diversion	210	19-Jun-18	14-Jan-19	1363	01-Oct-18 A	05-Jan-22	0%	0%	-104	-1087	-743
MPR45.1.13	Construction	919	11-Jun-18	22-Jun-22	1669	11-Jun-18 A	19-Sep-24	96.57%	59.35%	0	-683	-608
MPR45.1.13.1	Sewri Interchange Section	779	03-Nov-18	28-Feb-22	1466	29-Mar-19 A	13-Apr-24	96.43%	42.71%	-121	-648	-476
MPR45.1.13.1.1	Sewri Interchnage - Work Front - 1	779	03-Nov-18	28-Feb-22	1466	16-May-19 A	13-Apr-24	95.03%	37.93%	-161	-648	-476
MPR45.1.13.1.1.1	Sewri Interchange - Work Front - 1 - Piling	490	03-Nov-18	15-Dec-20	889	16-May-19 A	11-Apr-22	100%	83.36%	-161	-324	-136
MPR45.1.13.1.1.1.1	Piling - Land Viaduct	54	13-Apr-19	16-Sep-19	298	25-Jun-19 A	16-Mar-21 A	100%	100%	-53	-376	
MPR45.1.13.1.1.1.2	Piling - Ramp A	442	03-Nov-18	17-Oct-20	880	16-May-19 A	14-Mar-22	100%	85.57%	-161	-348	-169
MPR45.1.13.1.1.1.3	Piling - Ramp E	36	20-Oct-20	01-Dec-20	63	02-Dec-19 A	11-Apr-22	100%	33.33%	192	-336	-169
MPR45.1.13.1.1.1.4	Piling - Ramp F	12	02-Dec-20	15-Dec-20	12	05-Jan-21 A	30-Jun-21 A	100%	100%	-28	-151	
MPR45.1.13.1.1.2	Sewri Interchange - Work Front - 1 -Pile Cap	560	19-Nov-18	24-Mar-21	1010	21-Jun-19 A	03-Nov-22	100%	45.97%	-175	-414	-274
MPR45.1.13.1.1.2.1	Pile Cap - Land Viaduct	58	25-Apr-19	15-Oct-19	130	06-Sep-19 A	06-Oct-21 A	100%	100%	-43	-445	
MPR45.1.13.1.1.2.2	Pile Cap - Ramp A	504	19-Nov-18	15-Jan-21	966	21-Jun-19 A	05-Oct-22	100%	38.95%	-175	-446	-329
MPR45.1.13.1.1.2.3	Pile Cap - Ramp E	44	07-Jan-21	27-Feb-21	186	26-Jan-20 A	03-Nov-22	100%	33.33%	211	-434	-274
MPR45.1.13.1.1.2.4	Pile Cap - Ramp F	20	01-Mar-21	24-Mar-21	20	13-Oct-21 A	08-Nov-21 A	100%	100%	-111	-112	
MPR45.1.13.1.1.3	Sewri Interchange - Work Front - 1 - Pier	588	12-Dec-18	20-May-21	662	30-Jul-19 A	20-Dec-22	100%	56.86%	-155	-405	-238
MPR45.1.13.1.1.3.1	Pier - Land Viaduct	52	29-May-19	30-Oct-19	97	21-Oct-19 A	19-Oct-21 A	100%	100%	-43	-444	
MPR45.1.13.1.1.3.2	Pier - Ramp A	504	12-Dec-18	09-Feb-21	648	30-Jul-19 A	25-Nov-22	100%	36.29%	-155	-468	-363
MPR45.1.13.1.1.3.3	Pier - Ramp E	96	27-Jan-21	20-May-21	261	31-Jul-19 A	20-Dec-22	100%	81.36%	337	-405	-301
MPR45.1.13.1.1.3.4	Pier - Ramp F	83	23-Dec-20	01-Apr-21	56	24-Mar-21 A	13-Oct-22	100%	84.25%	-75	-390	-189
MPR45.1.13.1.1.4	Sewri Interchange - Work Front - 1 - Pier Cap	587	05-Jan-19	11-Jun-21	499	12-Oct-20 A	11-Jan-23	100%	49.12%	-384	-405	-93
MPR45.1.13.1.1.4.1	Pier Cap - Land Viaduct	49	16-Sep-19	14-Nov-19	88	12-Oct-20 A	19-Nov-21 A	100%	100%	-249	-458	
MPR45.1.13.1.1.4.2	Pier Cap - Ramp A	499	05-Jan-19	26-Feb-21	455	04-Nov-20 A	16-Dec-22	100%	29.03%	-403	-471	-381
MPR45.1.13.1.1.4.3	Pier Cap - Ramp E	100	13-Feb-21	11-Jun-21	98	28-Oct-20 A	11-Jan-23	100%	73.86%	90	-405	-93
MPR45.1.13.1.1.4.4	Pier Cap - Ramp F	86	31-Dec-20	13-Apr-21	47	12-Apr-21 A	05-Nov-22	100%	68.36%	-84	-400	-186
MPR45.1.13.1.1.5	Sewri Interchange - Embankment Works - Ramp F	90	14-Apr-21	01-Nov-21	90	08-Nov-22	21-Feb-23	0%	0%	-400	-400	-251
MPR45.1.13.1.1.6	Sewri Interchange - Work Front - 1 - Super Structu	628	04-May-19	28-Feb-22	810	29-Jul-20 A	13-Apr-24	87.5%	5.48%	-264	-648	-606
MPR45.1.13.1.1.6.1	Erection - Land Viaduct	96	19-Nov-19	11-Mar-20	154	29-Jul-20 A	09-Apr-22	100%	50%	-176	-478	-441
MPR45.1.13.1.1.6.2	Erection - Ramp A	486	04-May-19	09-Apr-21	594	05-Sep-20 A	26-Jun-23	100%	0%	-306	-625	-579
MPR45.1.13.1.1.6.3	Erection - Ramp E	146	10-Apr-21	02-Dec-21	215	17-Aug-21 A	17-Jan-24	100%	5.22%	-69	-650	-610
MPR45.1.13.1.1.6.4	Erection - Ramp F	52	28-Dec-21	28-Feb-22	52	12-Feb-24	13-Apr-24	0%	0%	-650	-650	-608
MPR45.1.13.1.2	Sewri Interchange - Work Front - 2	765	03-Nov-18	11-Feb-22	1155	29-Mar-19 A	06-Apr-23	97.37%	50.46%	-121	-351	-279
MPR45.1.13.1.2.1	Sewri Interchange - Work Front - 2 - Piling	553	03-Nov-18	01-Mar-21	958	29-Mar-19 A	11-Aug-22	100%	63.65%	-121	-366	-273



Actual Level of Effort | Actual Work | Critical Remaining Work | summary
Primary Baseline | Remaining Work | Milestone

Please note that this Monthly Rolling Plan has been updated based on the actual progress and will not match with impacted schedule submitted with the EOT-04 proposal for the contractor's eligibility for extension of time.

Activity ID	Activity Name	BL1 Duration	BL1 Start	BL1 Finish	Original Duration	Start	Finish	Schedule % Complete	Performance % Complete	Variance - BL1 Start Date	Variance - BL1 Finish Date	Total Float
MPR45.1.13.1.2.1.1	Piling - Ramp C2	325	03-Nov-18	27-Feb-20	586	29-Mar-19 A	24-Mar-21 A	100%	100%	-121	-246	
MPR45.1.13.1.2.1.2	Piling - Ramp C1	140	03-Apr-19	18-Dec-19	417	12-Nov-19 A	05-Apr-22	100%	52.86%	-108	-544	-370
MPR45.1.13.1.2.1.3	Piling - Ramp B	84	21-Nov-20	01-Mar-21	255	22-Nov-19 A	11-Aug-22	100%	35.71%	227	-366	-273
MPR45.1.13.1.2.2	Sewri Interchange - Work Front - 2 - Pile Cap	591	19-Nov-18	29-Apr-21	1027	05-May-19 A	05-Nov-22	100%	34.19%	-140	-386	-324
MPR45.1.13.1.2.2.1	Pile Cap - Ramp C2	361	19-Nov-18	24-Apr-20	885	05-May-19 A	30-Jul-21 A	100%	100%	-140	-268	
MPR45.1.13.1.2.2.2	Pile Cap - Ramp C1	172	12-Apr-19	04-Feb-20	471	14-Dec-19 A	16-Jun-22	100%	20%	-128	-566	-328
MPR45.1.13.1.2.2.3	Pile Cap - Ramp B	131	25-Nov-20	29-Apr-21	330	16-Jan-20 A	05-Nov-22	100%	10.71%	184	-386	-324
MPR45.1.13.1.2.3	Sewri Interchange - Work Front - 2 - Pier	589	12-Dec-18	21-May-21	673	04-Sep-19 A	22-Nov-22	100%	50.95%	-155	-381	-198
MPR45.1.13.1.2.3.1	Pier - Ramp C2	353	12-Dec-18	09-May-20	476	04-Sep-19 A	16-Aug-21 A	100%	100%	-155	-256	
MPR45.1.13.1.2.3.2	Pier - Ramp C1	194	01-Apr-19	18-Feb-20	515	10-Sep-19 A	30-Jun-22	100%	38.78%	-64	-566	-320
MPR45.1.13.1.2.3.3	Pier - Ramp B	248	25-Apr-20	21-May-21	391	08-Oct-19 A	22-Nov-22	100%	43.18%	168	-381	-198
MPR45.1.13.1.2.4	Sewri Interchange - Work Front - 2 - Pier Cap	583	26-Dec-18	28-May-21	598	02-Dec-19 A	29-Nov-22	100%	51.36%	-206	-381	-197
MPR45.1.13.1.2.4.1	Pier Cap - Ramp C2	356	26-Dec-18	27-May-20	413	02-Dec-19 A	26-Aug-21 A	100%	100%	-206	-241	
MPR45.1.13.1.2.4.2	Pier Cap - Ramp C1	198	18-Apr-19	12-Mar-20	364	07-Aug-20 A	22-Jul-22	100%	40.16%	-277	-566	-261
MPR45.1.13.1.2.4.3	Pier Cap - Ramp B	235	19-May-20	28-May-21	238	07-Jan-20 A	29-Nov-22	100%	43.18%	112	-381	-197
MPR45.1.13.1.2.5	Sewri Interchange - Embankment Works - Ramp C	60	23-May-19	02-Nov-19	60	17-Jan-22	29-Mar-22	0%	0%	-576	-576	-20
MPR45.1.13.1.2.6	Sewri Interchange - Work Front - 2 - Super Structu	654	18-Mar-19	11-Feb-22	551	05-Dec-20 A	06-Apr-23	92.88%	50.73%	-370	-351	-279
MPR45.1.13.1.2.6.1	Erection - Ramp C2	343	18-Mar-19	02-Nov-20	389	09-Dec-20 A	15-Dec-21 A	100%	100%	-373	-262	
MPR45.1.13.1.2.6.2	Erection - Ramp C1	194	08-Oct-19	26-May-20	282	05-Dec-20 A	22-Aug-22	100%	48.15%	-303	-581	-282
MPR45.1.13.1.2.6.3	Erection - Ramp B	316	28-Nov-20	11-Feb-22	190	09-Mar-21 A	06-Apr-23	85.93%	38.67%	-83	-352	-280
MPR45.1.13.1.3	Sewri Interchange - Work Front - 3 (Cast in situ Spans	431	28-Feb-20	01-Feb-22	603	16-May-20 A	22-Jul-23	98.46%	33.58%	-65	-451	-355
MPR45.1.13.1.3.1	Sewri Interchange - Work Front - 3 - Piling	144	28-Feb-20	20-Nov-20	261	16-May-20 A	09-Jun-22	100%	61.46%	-65	-396	-325
MPR45.1.13.1.3.1.1	Piling - Ramp B	54	28-Feb-20	02-May-20	108	27-May-21 A	19-May-22	100%	30.56%	-300	-468	-325
MPR45.1.13.1.3.1.2	Piling - Ramp E	54	04-May-20	07-Oct-20	255	16-May-20 A	02-Jun-22	100%	77.78%	-11	-426	-325
MPR45.1.13.1.3.1.3	Piling - Ramp C1	36	08-Oct-20	20-Nov-20	73	23-Feb-21 A	09-Jun-22	100%	83.33%	-114	-396	-325
MPR45.1.13.1.3.2	Sewri Interchange - Work Front - 3 - Pile Cap	159	07-Mar-20	15-Dec-20	206	21-Sep-20 A	21-Jul-22	100%	43.75%	-87	-411	-184
MPR45.1.13.1.3.2.1	Pile Cap - Ramp B	81	07-Mar-20	10-Jun-20	144	05-Jun-21 A	30-Jun-22	100%	11.11%	-302	-471	-302
MPR45.1.13.1.3.2.2	Pile Cap - Ramp E	81	11-May-20	17-Nov-20	187	21-Sep-20 A	16-Jun-22	100%	77.78%	-33	-405	-170
MPR45.1.13.1.3.2.3	Pile Cap - Ramp C1	45	23-Oct-20	15-Dec-20	38	09-Apr-21 A	21-Jul-22	100%	41.67%	-140	-411	-184
MPR45.1.13.1.3.3	Sewri Interchange - Work Front - 3 - Pier	216	18-Mar-20	05-Mar-21	220	10-Oct-20 A	06-Sep-22	100%	37.5%	-95	-384	-223
MPR45.1.13.1.3.3.1	Pier - Ramp B	135	18-Mar-20	27-Nov-20	201	10-Jul-21 A	06-Sep-22	100%	11.11%	-301	-465	-344
MPR45.1.13.1.3.3.2	Pier - Ramp E	135	21-May-20	01-Feb-21	187	10-Oct-20 A	28-Jul-22	100%	66.67%	-41	-378	-191
MPR45.1.13.1.3.3.3	Pier - Ramp C1	90	18-Nov-20	05-Mar-21	60	01-Jun-21 A	31-Aug-22	100%	33.33%	-163	-379	-218
MPR45.1.13.1.3.4	Sewri Interchange - Work Front - 3 - Pier Cap	196	24-Apr-20	19-Mar-21	191	27-Mar-21 A	22-Sep-22	100%	37.5%	-202	-384	-224
MPR45.1.13.1.3.4.1	Pier Cap - Ramp B	115	24-Apr-20	11-Dec-20	191	24-Jul-21 A	22-Sep-22	100%	11.11%	-269	-465	-344
MPR45.1.13.1.3.4.2	Pier Cap - Ramp E	132	08-Jun-20	15-Feb-21	122	27-Mar-21 A	11-Aug-22	100%	66.67%	-165	-378	-191
MPR45.1.13.1.3.4.3	Pier Cap - Ramp C1	77	17-Dec-20	19-Mar-21	48	15-Jun-21 A	16-Sep-22	100%	33.33%	-150	-380	-231
MPR45.1.13.1.3.5	Sewri Interchange - Work Front - 3 - Super Structu	360	23-May-20	01-Feb-22	360	19-May-22	22-Jul-23	93.62%	0%	-451	-451	-355
MPR45.1.13.1.3.5.1	Super Structure - Ramp B	132	23-May-20	30-Jan-21	135	19-May-22	28-Oct-22	100%	0%	-451	-454	-344
MPR45.1.13.1.3.5.2	Super Structure - Ramp E	132	16-Jan-21	24-Sep-21	135	10-Oct-22	21-Mar-23	100%	0%	-451	-454	-344
MPR45.1.13.1.3.5.3	Super Structure - Ramp C1	120	09-Jun-21	01-Feb-22	120	03-Mar-23	22-Jul-23	79.05%	0%	-451	-451	-355
MPR45.1.13.2	Intertidal Section	715	11-Jun-18	23-Oct-21	1469	11-Jun-18 A	23-Jan-24	100%	94.29%	0	-687	-660
MPR45.1.13.2.1	Intertidal - Temporary Access Bridge Work	467	11-Jun-18	26-Sep-20	620	11-Jun-18 A	04-Dec-20 A	0%	0%	0	-56	
MPR45.1.13.2.1.1	Access Bridge	457	11-Jun-18	12-Jun-20	528	11-Jun-18 A	27-May-20 A	0%	0%	0	14	
MPR45.1.13.2.1.2	Fingers	441	13-Oct-18	26-Sep-20	620	26-Sep-18 A	04-Dec-20 A	0%	0%	16	-56	
MPR45.1.13.2.2	Intertidal - Main Bridge Work	638	14-Dec-18	23-Oct-21	1404	14-Nov-18 A	23-Jan-24	100%	94.29%	26	-687	-660
MPR45.1.13.2.2.1	Intertidal - Main Bridge Work - Piling	531	14-Dec-18	16-Mar-21	686	14-Nov-18 A	16-Apr-21 A	100%	100%	26	-26	
MPR45.1.13.2.2.2	Intertidal - Main Bridge Work - Pile Cap	536	29-Dec-18	06-Apr-21	953	17-Jan-19 A	03-Jul-21 A	100%	100%	-15	-58	
MPR45.1.13.2.2.3	Intertidal - Main Bridge Work - Pier	562	17-Jan-19	25-May-21	960	29-Mar-19 A	23-Sep-21 A	100%	100%	-59	-22	
MPR45.1.13.2.2.4	Intertidal - Main Bridge Work - Pier Cap	562	30-Jan-19	05-Jun-21	699	10-Aug-19 A	27-Dec-21 A	100%	100%	-115	-92	
MPR45.1.13.2.2.5	Intertidal - Main Bridge Work - Super Structure Ere	534	18-Apr-19	23-Oct-21	1006	29-Nov-19 A	23-Jan-24	100%	73.98%	-110	-687	-660
MPR45.1.13.2.3	Intertidal - Finger Removal & Reuse	400	07-Mar-19	29-Dec-20	482	20-Jun-19 A	11-Jan-22	0%	0%	-85	-236	-93
MPR45.1.13.3	Marine Section	911	18-Sep-18	17-Jun-22	1629	14-Dec-18 A	19-Sep-24	98.15%	66.24%	-73	-687	-666
MPR45.1.13.3.1	Temporary Access Bridge Work -2 (MP70 to MP51- 21	911	18-Sep-18	17-Jun-22	1268	14-Nov-19 A	19-Sep-24	0%	0%	-274	-687	-666
MPR45.1.13.3.2	Marine - Main Bridge	775	03-Nov-18	23-Feb-22	1532	14-Dec-18 A	25-May-24	98.15%	66.24%	-34	-687	-666
MPR45.1.13.3.2.1	Marine - Piling	564	03-Nov-18	15-Mar-21	962	14-Dec-18 A	05-Oct-21 A	100%	100%	-34	-92	
MPR45.1.13.3.2.3	Marine - Pile Cap	572	23-Nov-18	12-Apr-21	1063	14-Jan-19 A	13-Jul-22	100%	92.9%	-43	-306	-177
MPR45.1.13.3.2.4	Marine - Pier	590	22-Dec-18	02-Jun-21	844	12-Sep-19 A	10-Oct-22	100%	57.2%	-146	-336	-224
MPR45.1.13.3.2.2	Marine - Pier Cap	576	21-Jan-19	14-Jun-21	751	26-Dec-19 A	09-Nov-22	100%	46.61%	-206	-349	-225
MPR45.1.13.3.2.5	Marine - Super Structure Erection	636	19-Apr-19	23-Feb-22	890	23-Jun-20 A	25-May-24	89.89%	5.36%	-276	-687	-666
MPR45.1.13.4	Precast Segments	778	06-Feb-19	21-Aug-21	1251	07-Aug-19 A	11-Jan-24	100%	48%	-154	-735	-405
MPR45.1.13.4.1	Precast Segement - Sewri Interchange	701	06-Feb-19	24-May-21	1128	20-Feb-20 A	11-Jan-24	100%	86.23%	-317	-812	-405
MPR45.1.13.4.2	Precast Segement - Intertidal	753	28-Feb-19	14-Aug-21	785	18-Oct-19 A	14-May-22	100%	90.86%	-194	-228	-165
MPR45.1.13.4.3	Precast Segement - Marine	759	28-Feb-19	21-Aug-21	1217	07-Aug-19 A	20-Nov-23	100%	22.92%	-135	-691	-361
MPR45.1.13.5	Orthotropic Steel Deck (OSD) - Fabrication, Shipping, Ass	608	11-Jun-19	15-Mar-22	790	23-Sep-19 A	08-May-23	96%	41.13%	-9	-351	-259
MPR45.1.13.5.1	OSD - Fabrication	746	28-Sep-19	12-Oct-21	845	23-Sep-19 A	24-Jul-22	0%	0%	5	-285	-138



Actual Level of Effort | Actual Work | Critical Remaining Work | summary
Primary Baseline | Remaining Work | Milestone

Please note that this Monthly Rolling Plan has been updated based on the actual progress and will not match with impacted schedule submitted with the EOT-04 proposal for the contractor's eligibility for extension of time.

MUMBAI TRANS HARBOUR LINK PACKAGE 1,
UPDATED BASELINE PROGRAMME FOR DECEMBER 2021

IHI | MMRDA | AECOM | PADECO | dar al-handasah | TYLIN INTERNATIONAL

General Consultant for Mumbai Trans Harbour Link Project

Activity ID	Activity Name	BL1 Duration	BL1 Start	BL1 Finish	Original Duration	Start	Finish	Schedule % Complete	Performance % Complete	Variance - BL1 Start Date	Variance - BL1 Finish Date	Total Float
MPR45.1.13.5.1.1	Fabrication - Factory A	720	28-Sep-19	16-Sep-21	845	23-Sep-19 A	24-Jul-22	0%	0%	5	-311	-240
MPR45.1.13.5.1.1.1	OSD 01 - RHS Fabrication - MP50 to MP53 (32(	330	28-Sep-19	22-Aug-20	457	23-Sep-19 A	19-Apr-21 A	0%	0%	5	-239	
MPR45.1.13.5.1.1.2	OSD 03 - RHS Fabrication - MP75 to MP81 (77(	450	26-Jan-20	19-Apr-21	376	19-Jan-21 A	24-Jul-22	0%	0%	-359	-461	-356
MPR45.1.13.5.1.1.3	OSD 04 - RHS Fabrication - MP124 to MP128 (5	360	22-Sep-20	16-Sep-21	296	25-Mar-20 A	28-Feb-22	0%	0%	181	-165	-94
MPR45.1.13.5.1.2	Fabrication - Factory B	720	28-Sep-19	16-Sep-21	664	23-Sep-19 A	11-Dec-21 A	0%	0%	5	-85	
MPR45.1.13.5.1.2.1	OSD 01 - LHS Fabrication - MP50 to MP53 (32(	330	28-Sep-19	22-Aug-20	379	23-Sep-19 A	28-Aug-20 A	0%	0%	5	-5	
MPR45.1.13.5.1.2.2	OSD 02 - RHS Fabrication - MP69 to MP75 (68(	450	26-Jan-20	19-Apr-21	418	07-Sep-20 A	11-Dec-21 A	0%	0%	-225	-235	
MPR45.1.13.5.1.2.3	OSD 04 - LHS Fabrication - MP124 to MP128 (5	360	22-Sep-20	16-Sep-21	174	24-Jan-20 A	26-Feb-21 A	0%	0%	242	203	
MPR45.1.13.5.1.3	Fabrication - Factory C	660	23-Dec-19	12-Oct-21	581	27-Jan-20 A	07-May-22	0%	0%	-35	-207	-138
MPR45.1.13.5.1.3.1	OSD 02 - LHS Fabrication - MP69 to MP75 (68(	420	23-Dec-19	14-Feb-21	314	27-Jan-20 A	26-Apr-21 A	0%	0%	-35	-70	
MPR45.1.13.5.1.3.2	OSD 03 - LHS Fabrication - MP75 to MP81 (77(	420	19-Aug-20	12-Oct-21	286	15-Jan-21 A	07-May-22	0%	0%	-149	-207	-138
MPR45.1.13.5.2	OSD - Shipping	536	24-Jun-20	11-Dec-21	692	09-Jul-20 A	22-Sep-22	100%	54.01%	-15	-285	-188
MPR45.1.13.5.2.1	Shipping - Factory A	510	24-Jun-20	15-Nov-21	527	04-Dec-20 A	22-Sep-22	100%	36.25%	-163	-311	-188
MPR45.1.13.5.2.1.1	OSD 01 - RHS Shipping - MP50 to MP53 (320m	120	24-Jun-20	21-Oct-20	88	04-Dec-20 A	20-Apr-21 A	100%	100%	-163	-180	
MPR45.1.13.5.2.1.2	OSD 03 - RHS Shipping - MP75 to MP81 (770m	240	22-Oct-20	18-Jun-21	270	26-Dec-21	22-Sep-22	100%	0%	-431	-461	-300
MPR45.1.13.5.2.1.3	OSD 04 - RHS Shipping - MP124 to MP128 (56(	180	20-May-21	15-Nov-21	185	15-Sep-21 A	29-Apr-22	100%	49.68%	-118	-165	-42
MPR45.1.13.5.2.2	Shipping - Factory B	510	24-Jun-20	15-Nov-21	482	09-Jul-20 A	24-Feb-22	100%	71.66%	-15	-101	12
MPR45.1.13.5.2.2.1	OSD 01 - LHS Shipping - MP50 to MP53 (320m	120	24-Jun-20	21-Oct-20	77	09-Jul-20 A	21-Oct-20 A	100%	100%	-15	1	
MPR45.1.13.5.2.2.2	OSD 02 - RHS Shipping - MP69 to MP75 (683m	240	21-Nov-20	18-Jul-21	118	19-Sep-21 A	24-Feb-22	100%	35.14%	-302	-221	-170
MPR45.1.13.5.2.2.3	OSD 04 - LHS Shipping - MP124 to MP128 (56(	180	20-May-21	15-Nov-21	111	28-Nov-20 A	08-Oct-21 A	100%	100%	173	39	
MPR45.1.13.5.2.3	Shipping - Factory C	450	18-Sep-20	11-Dec-21	554	25-Oct-20 A	24-Jun-22	100%	55.2%	-37	-195	-113
MPR45.1.13.5.2.3.1	OSD 02 - LHS Shipping - MP69 to MP75 (683m	210	18-Sep-20	15-Apr-21	266	25-Oct-20 A	24-Jul-21 A	100%	100%	-37	-99	
MPR45.1.13.5.2.3.2	OSD 03 - LHS Shipping - MP75 to MP81 (770m	210	16-May-21	11-Dec-21	195	15-Oct-21 A	24-Jun-22	100%	15.45%	-152	-195	-113
MPR45.1.13.5.3	OSD - Custom Clearance and Inland Transport (Last M	482	07-Sep-20	01-Jan-22	722	13-Aug-20 A	22-Oct-22	98.61%	45.65%	25	-294	-197
MPR45.1.13.5.3.1	OSD 1 - MP50 to MP53 (320m)	75	07-Sep-20	20-Nov-20	269	13-Aug-20 A	19-May-21 A	100%	100%	25	-179	
MPR45.1.13.5.3.1.1	OSD 1 - LHS	75	07-Sep-20	20-Nov-20	78	13-Aug-20 A	27-Oct-20 A	100%	100%	25	25	
MPR45.1.13.5.3.1.2	OSD 1 - RHS	75	07-Sep-20	20-Nov-20	103	15-Jan-21 A	19-May-21 A	100%	100%	-130	-179	
MPR45.1.13.5.3.2	OSD 2 - MP69 to MP75 (683m)	274	17-Nov-20	17-Aug-21	451	07-Nov-20 A	26-Mar-22	100%	50%	10	-221	-113
MPR45.1.13.5.3.2.1	OSD 2 - LHS	180	17-Nov-20	15-May-21	236	07-Nov-20 A	24-Jul-21 A	100%	100%	10	-69	
MPR45.1.13.5.3.2.2	OSD 2 - RHS	210	20-Jan-21	17-Aug-21	90	26-Dec-21	26-Mar-22	100%	0%	-341	-221	-170
MPR45.1.13.5.3.3	OSD 3 - MP75 to MP81 (770m)	377	21-Dec-20	01-Jan-22	272	10-Nov-21 A	22-Oct-22	95.79%	5.52%	-324	-294	-212
MPR45.1.13.5.3.3.1	OSD 3 - LHS	171	15-Jul-21	01-Jan-22	182	10-Nov-21 A	24-Jul-22	91.59%	11.04%	-118	-204	-122
MPR45.1.13.5.3.3.2	OSD 3 - RHS	210	21-Dec-20	18-Jul-21	240	24-Feb-22	22-Oct-22	100%	0%	-431	-461	-300
MPR45.1.13.5.3.4	OSD 4 - MP124 to MP128 (560m)	141	19-Jul-21	06-Dec-21	319	18-Jan-21 A	20-May-22	100%	64.46%	182	-165	-42
MPR45.1.13.5.3.4.1	OSD 4 - LHS	141	19-Jul-21	06-Dec-21	195	18-Jan-21 A	16-Jan-22	100%	82.14%	182	-41	51
MPR45.1.13.5.3.4.2	OSD 4 - RHS	141	19-Jul-21	06-Dec-21	175	25-Oct-21 A	20-May-22	100%	46.79%	-98	-165	-42
MPR45.1.13.5.4	OSD - Assembly	337	07-Oct-20	16-Feb-22	510	25-Dec-20 A	02-Jan-23	89.37%	13.99%	-66	-268	-175
MPR45.1.13.5.4.1	OSD 1 - MP50 to MP53 (320m)	80	07-Oct-20	11-Jan-21	43	27-Dec-21	16-Feb-22	100%	0%	-294	-257	-70
MPR45.1.13.5.4.1.1	OSD 1 - LHS	80	07-Oct-20	11-Jan-21	43	27-Dec-21	16-Feb-22	100%	0%	-294	-257	-70
MPR45.1.13.5.4.1.2	OSD 1 - RHS	80	07-Oct-20	11-Jan-21	43	27-Dec-21	16-Feb-22	100%	0%	-294	-257	-131
MPR45.1.13.5.4.2	OSD 2 - MP69 to MP75 (683m)	252	17-Dec-20	13-Oct-21	428	25-Dec-20 A	22-Jun-22	100%	15.64%	-7	-212	-142
MPR45.1.13.5.4.2.1	OSD 2 - LHS	172	17-Dec-20	09-Jul-21	337	25-Dec-20 A	08-Mar-22	100%	31.27%	-7	-201	-51
MPR45.1.13.5.4.2.2	OSD 2 - RHS	199	19-Feb-21	13-Oct-21	125	25-Jan-22	22-Jun-22	100%	0%	-286	-212	-173
MPR45.1.13.5.4.3	OSD 3 - MP75 to MP81 (770m)	329	20-Jan-21	16-Feb-22	254	05-Mar-22	02-Jan-23	82.85%	0%	-343	-268	-220
MPR45.1.13.5.4.3.1	OSD 3 - LHS	155	14-Aug-21	16-Feb-22	181	05-Mar-22	05-Oct-22	65.7%	0%	-169	-194	-146
MPR45.1.13.5.4.3.2	OSD 3 - RHS	196	20-Jan-21	08-Sep-21	236	26-Mar-22	02-Jan-23	100%	0%	-361	-401	-291
MPR45.1.13.5.4.4	OSD 4 - MP124 to MP128 (560m)	142	18-Aug-21	04-Feb-22	345	06-Mar-21 A	18-Jul-22	79.29%	39.2%	140	-139	-36
MPR45.1.13.5.4.4.1	OSD 4 - LHS	142	18-Aug-21	04-Feb-22	241	06-Mar-21 A	17-Mar-22	79.29%	70.89%	140	-34	2
MPR45.1.13.5.4.4.2	OSD 4 - RHS	142	18-Aug-21	04-Feb-22	172	05-Nov-21 A	18-Jul-22	79.29%	7.5%	-65	-139	-36
MPR45.1.13.5.5	OSD - Erection	608	11-Jun-19	15-Mar-22	346	21-Mar-22	08-May-23	76.27%	0%	-613	-351	-259
MPR45.1.13.5.5.1	OSD 1 - MP50 to MP53 (320m)	157	21-May-20	26-Feb-21	91	21-Sep-22	07-Jan-23	100%	0%	-557	-491	-322
MPR45.1.13.5.5.1.1	Availability of Workfronts for OSD 1	25	21-May-20	22-Sep-20	21	21-Sep-22	15-Oct-22	0%	0%	-557	-553	-273
MPR45.1.13.5.5.1.2	Span Erection - OSD 1	76	28-Nov-20	26-Feb-21	70	15-Oct-22	07-Jan-23	100%	0%	-497	-491	-322
MPR45.1.13.5.5.2	OSD 2 - MP69 to MP75 (683m)	542	11-Jun-19	24-Dec-21	164	21-Mar-22	01-Oct-22	100%	0%	-613	-235	-185
MPR45.1.13.5.5.2.1	Availability of Workfronts for OSD 2	290	11-Jun-19	26-Nov-20	90	24-Mar-22	07-Jul-22	0%	0%	-615	-415	-192
MPR45.1.13.5.5.2.2	Span Erection - OSD 2	189	10-Feb-21	24-Dec-21	164	21-Mar-22	01-Oct-22	100%	0%	-260	-235	-185
MPR45.1.13.5.5.3	OSD 3 - MP75 to MP81 (770m)	279	07-Jan-21	10-Mar-22	233	01-Aug-22	08-May-23	64.47%	0%	-401	-355	-307
MPR45.1.13.5.5.3.1	Availability of Workfronts for OSD 3	137	07-Jan-21	22-Sep-21	81	01-Aug-22	09-Nov-22	0%	0%	-401	-345	-244
MPR45.1.13.5.5.3.2	Span Erection - OSD 3	208	02-Apr-21	10-Mar-22	179	06-Oct-22	08-May-23	64.47%	0%	-384	-355	-307
MPR45.1.13.5.5.4	OSD 4 - MP124 to MP128 (560m)	185	05-May-21	15-Mar-22	187	05-May-22	14-Dec-22	50%	0%	-228	-230	-138
MPR45.1.13.5.5.4.1	Availability of Workfronts for OSD 4	63	05-May-21	21-Oct-21	145	05-May-22	26-Oct-22	0%	0%	-228	-310	-167
MPR45.1.13.5.5.4.2	Span Erection - OSD 4	124	18-Oct-21	15-Mar-22	187	05-May-22	14-Dec-22	50%	0%	-167	-230	-138
MPR45.1.13.6	Post Erection Segmental Stitch Concrete (incl. Bearing Ins	644	24-Apr-19	10-Mar-22	971	06-Feb-20 A	29-May-24	0%	0%	-163	-678	-514
MPR45.1.13.6.1	Stitch Concrete - Sewri Interchange	644	24-Apr-19	10-Mar-22	787	18-Dec-20 A	19-Apr-24	0%	0%	-349	-645	-481
MPR45.1.13.6.2	Stitch Concrete - Intertidal	475	29-Nov-19	22-Dec-21	895	06-Feb-20 A	28-Feb-24	0%	0%	-58	-666	-660
MPR45.1.13.6.3	Stitch Concrete - Marine	563	21-Oct-19	26-Feb-22	764	25-Jun-21 A	29-May-24	0%	0%	-426	-687	-514

Actual Level of Effort | Actual Work | Critical Remaining Work | summary
Primary Baseline | Remaining Work | Milestone

Please note that this Monthly Rolling Plan has been updated based on the actual progress and will not match with impacted schedule submitted with the EOT-04 proposal for the contractor's eligibility for extension of time.

MUMBAI TRANS HARBOUR LINK

L&T - IHI

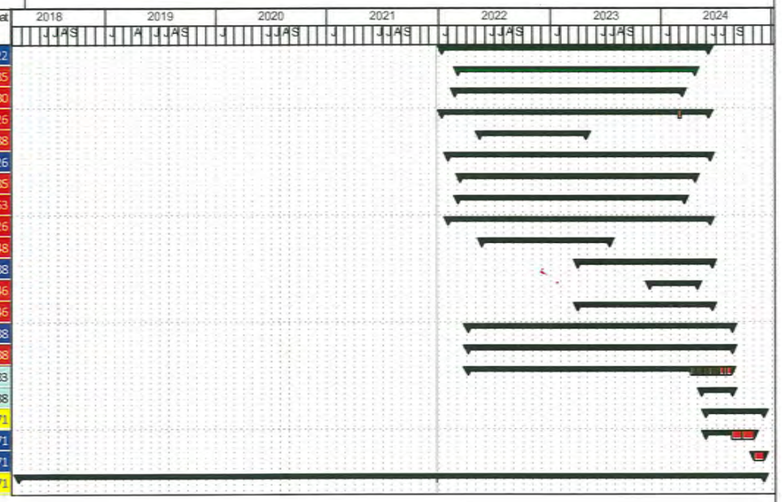
MUMBAI TRANS HARBOUR LINK PACKAGE 1,
UPDATED BASELINE PROGRAMME FOR DECEMBER 2021

MMRDA

AECOM PADECO dar al-handasah TYLIN INTERNATIONAL

General Consultant for Mumbai Trans Harbour Link Project

Activity ID	Activity Name	BL1 Duration	BL1 Start	BL1 Finish	Original Duration	Start	Finish	Schedule % Complete	Performance % Complete	Variance - BL1 Start Date	Variance - BL1 Finish Date	Total Float
	MPR45.1.13.7 Crash Barrier Works	585	05-Oct-19	11-Mar-22	736	10-Jan-22	07-Jun-24	0%	0%	-534	-685	-522
	MPR45.1.13.7.1 Crash Barrier - Sewri Interchange	585	05-Oct-19	11-Mar-22	656	03-Mar-22	24-Apr-24	0%	0%	-578	-648	-485
	MPR45.1.13.7.2 Crash Barrier - Intertidal	470	17-Dec-19	04-Jan-22	627	21-Feb-22	12-Mar-24	0%	0%	-510	-666	-480
	MPR45.1.13.7.3 Crash Barrier - Marine	541	26-Nov-19	09-Mar-22	736	10-Jan-22	07-Jun-24	0%	0%	-492	-687	-526
	MPR45.1.13.7.4 Crash Barrier - Orthotropic Steel Deck	291	23-Dec-20	10-Mar-22	292	13-May-22	27-Apr-23	0%	0%	-345	-347	-188
	MPR45.1.13.8 Bridge Deck (Superstructure) Water Proofing	581	15-Oct-19	16-Mar-22	721	02-Feb-22	12-Jun-24	0%	0%	-545	-685	-526
	MPR45.1.13.8.1 Water Proofing - Sewri Interchange	579	15-Oct-19	14-Mar-22	648	12-Mar-22	24-Apr-24	0%	0%	-578	-646	-485
	MPR45.1.13.8.2 Water Proofing - Intertidal	465	28-Dec-19	10-Jan-22	622	05-Mar-22	18-Mar-24	0%	0%	-510	-666	-453
	MPR45.1.13.8.3 Water Proofing - Marine	526	18-Dec-19	14-Mar-22	721	02-Feb-22	12-Jun-24	0%	0%	-492	-687	-526
	MPR45.1.13.8.4 Water Proofing - Orthotropic Steel Deck	281	11-Jan-21	16-Mar-22	351	20-May-22	13-Jul-23	0%	0%	-336	-407	-248
	MPR45.1.13.9 Stone Mastic Asphalt Pavement	74	23-Dec-21	22-Mar-22	376	28-Mar-23	19-Jun-24	2.26%	0%	-385	-686	-588
	MPR45.1.13.9.1 Sewri Interchange	70	27-Dec-21	21-Mar-22	131	25-Nov-23	30-Apr-24	0%	0%	-584	-645	-546
	MPR45.1.13.9.2 Main Bridge	74	23-Dec-21	22-Mar-22	376	28-Mar-23	19-Jun-24	3.05%	0%	-385	-686	-646
	MPR45.1.13.10 Bridge Anclilaries and Misc. Works	575	31-Jan-20	22-Jun-22	729	07-Apr-22	24-Aug-24	0%	0%	-510	-663	-588
	MPR45.1.13.10.1 Bridge Ancillaries	575	31-Jan-20	22-Jun-22	729	07-Apr-22	24-Aug-24	0%	0%	-510	-663	-588
	MPR45.1.13.10.1.1 Noise Barrier, View Barrier and Safety Fence	552	31-Jan-20	26-May-22	724	07-Apr-22	19-Aug-24	0%	0%	-510	-681	-583
	MPR45.1.13.10.1.2 Traffic Signages and Marking	84	17-Mar-22	22-Jun-22	88	13-May-24	24-Aug-24	0%	0%	-659	-663	-588
	MPR45.1.15 Handing Over	148	31-Mar-22	22-Sep-22	159	27-May-24	04-Dec-24	0%	0%	-659	-670	-671
	MPR45.1.15.1 Testing and Handing Over	120	31-Mar-22	18-Aug-22	131	27-May-24	31-Oct-24	0%	0%	-659	-670	-671
	MPR45.1.15.2 Final Handing Over	28	19-Aug-22	22-Sep-22	28	31-Oct-24	04-Dec-24	0%	0%	-670	-670	-671
	MPR45.1.14 Invoice Schedule (Shows the Invoice items which are not cove	1062	23-Mar-18	22-Sep-22	1732	23-Mar-18 A	04-Dec-24	96.7%	71.13%	0	-670	-671



Actual Level of Effort | Actual Work | Critical Remaining Work | summary
Primary Baseline | Remaining Work | Milestone

Please note that this Monthly Rolling Plan has been updated based on the actual progress and will not match with impacted schedule submitted with the EOT-04 proposal for the contractor's eligibility for extension of time.

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

MUMBAI TRANS HARBOUR LINK PROJECT (PACKAGE 2) CONSTRUCTION OF 7.807 KM LONG BRIDGE SECTION (CH 10+380 - CH 18+187) ACROSS THE MUMBAI BAY INCL SHIVAJI NAGAR 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
1		MTHL-PKG2-DETAILED WORK PROGRAMME_25122021_APPROVED_MPR.45	3250	17-Nov-17	21-Sep-24	17-Nov-17		96.28%	63.19%
2		PROJECT PRE-COMMENCEMENT ACTIVITY	126	17-Nov-17	22-Mar-18	17-Nov-17	16-Mar-18	0%	0%
3		PRE-COMMENCEMENT ACTIVITY	55	15-Dec-17	07-Feb-18	15-Dec-17	20-Mar-18	0%	0%
4		JV FORMATION AND REGISTRATION	55	15-Dec-17	07-Feb-18	15-Dec-17	20-Mar-18	0%	0%
5		PROJECT EVENT MILESTONE	2575	23-Mar-18	21-Mar-23	23-Mar-18		0%	0%
6		PROJECT KEY MILESTONE	2395	23-Mar-18	22-Sep-22	23-Mar-18		0%	0%
7		INTERFACE MILESTONE_ERG19	2547	19-Apr-18	21-Mar-23	03-Apr-18		0%	0%
8		PHYSICAL PROGRESS AND INTERFACE DATE_ADD2-ATTACHMENT 25	2082	18-Sep-18	22-Jun-22	31-Aug-18		0%	0%
9		KEY DATE_ADDENDUM 2_NO.25_Obtain the Certificate of No Objection	2082	18-Sep-18	22-Jun-22	31-Aug-18		0%	0%
10		INTERFACE DATE_ADDENDUM 2_NO.25	0	17-Dec-18	20-Sep-21			0%	0%
11		CONSTRUCTION KEY MILESTONES	1259	03-Sep-18	06-Jul-21	25-Oct-18		0%	0%
12		CASTING YARD-OFFICE & CAMP DEVELOPMENT	516	04-Sep-18	25-Apr-19	25-Oct-18	20-Jan-20	0%	0%
13		STEEL BRIDGE ASSEMBLY YARD DEVELOPMENT	11	02-Nov-18	06-Nov-19	09-Mar-20	01-Oct-20	0%	0%
14		PERMANENT WORKS	1159	03-Sep-18	06-Jul-21	08-Dec-18		0%	0%
15		MANAGEMENT	613	20-Jan-18	18-Aug-18	12-Jan-18	22-Aug-19	0%	0%
16		SITE ORGANISATION	35	20-Jan-18	23-Feb-18	07-Mar-18	07-Mar-18	0%	0%
17		DEVELOPMENT OF MANAGEMENT SYSTEM	613	20-Jan-18	27-May-18	20-Jan-18	22-Aug-19	0%	0%
18		COMMUNICATION / DOCUMENT CONTROL SYSTEM	315	20-Jan-18	10-May-18	20-Jan-18	24-Oct-18	0%	0%
19		QUALITY ASSURANCE AND MANAGEMENT SYSTEM	254	23-Mar-18	10-May-18	23-Mar-18	24-Oct-18	0%	0%
20		HEALTH, SAFETY AND ENVIRONMENTAL MANAGEMENT SYSTEM	551	23-Mar-18	10-May-18	23-Mar-18	22-Aug-19	0%	0%
21		INTERFACE MANAGEMENT SYSTEM	49	23-Mar-18	10-May-18	23-Mar-18	24-Oct-18	0%	0%
22		RISK MANAGEMENT PLAN	66	23-Mar-18	27-May-18	23-Mar-18	24-Oct-18	0%	0%
23		DEVELOPMENT OF WORK PROGRAMME	63	23-Mar-18	24-May-18	23-Mar-18	21-Sep-18	0%	0%
24		CONTRACTOR'S WORK PROGRAMME	63	23-Mar-18	24-May-18	23-Mar-18	21-Sep-18	0%	0%
25		OTHER CONTRACTUAL SUBMITTALS	28	24-Mar-18	20-Apr-18	24-Mar-18	23-Apr-18	0%	0%
26		PERMIT & APPROVAL	389	20-Jan-18	18-Aug-18	12-Jan-18	03-Aug-19	0%	0%
27		SURVEYING & GEOTECHNICAL INVESTIGATION	35	20-Jan-18	23-Feb-18	12-Jan-18	09-Feb-18	0%	0%
28		CUTTING OF MANGROVES	70	20-Jan-18	30-Mar-18	25-Jan-18	23-Apr-18	0%	0%
29		SETTING UP BATCHING PLANT	313	06-Apr-18	18-Aug-18	06-Apr-18	28-Nov-18	0%	0%
30		PC YARD & CAMP	28	04-May-18	01-Jun-18	21-Mar-18	01-Oct-18	0%	0%
31		CONNECTION FOR ELECTRICITY & WATER	63	18-May-18	20-Jul-18	06-Apr-18	03-Aug-19	0%	0%
32		CUTTING OF TREES	35	23-Mar-18	26-Apr-18	10-May-18	02-Aug-18	0%	0%
33		IMPORT PERMITS/LICENCES FOR EQUIPMENTS & GOODS	70	23-Mar-18	31-May-18	15-May-18	31-May-18	0%	0%
34		NOC FOR PLANT & FACILITIES TO BE USED AT SITE	51	23-Mar-18	31-May-18	16-Aug-18	28-Nov-18	0%	0%
35		TEMPORARY ACCESS ROAD FOR MAIN BRIDGE & INTERCHANGE	58	23-Mar-18	19-May-18	23-Mar-18	28-Jul-18	0%	0%
36		DESIGN	1321	20-Jan-18	04-Sep-19	01-Jan-18	02-Feb-21	100%	100%
37		EARLY STAGE DESIGN WORK / INFORMATION COLLECTION	678	20-Jan-18	17-Jul-18	01-Jan-18	12-Nov-19	100%	100%
38		INDEPENDENT DESIGN CHECKER APPROVAL	35	20-Jan-18	23-Feb-18	20-Jan-18	13-Apr-18	0%	0%
39		TOPOGRAPHIC SURVEY	116	20-Jan-18	16-May-18	01-Jan-18	20-Apr-18	0%	0%
40		BATHYMETRIC SURVEY	75	20-Jan-18	04-Apr-18	25-Jan-18	20-Mar-18	0%	0%
41		ADDITIONAL TIME FOR ONGC & BPCL PHYSCIAL VERIFICATION	309			21-Mar-18	05-Aug-19	0%	0%
42		GEOTECHNICAL INVESTIGATION	548	20-Jan-18	17-Jul-18	12-Jan-18	25-Jun-19	100%	100%
43		ADDITIONAL WORKS FOR DESIGN INITIATION OF STEEL MODULE 1	63			26-Jun-19	12-Nov-19	0%	0%
44		TEMPORARY WORK	1037	22-Jan-18	01-Nov-18	20-Jan-18	20-Aug-20	100%	100%
45		PROJECT OFFICE LAYOUT	241	04-May-18	02-Jun-18	04-May-18	17-Jul-18	0%	0%
46		CASTING YARD LAYOUT	72	22-Jan-18	04-Apr-18	20-Jan-18	09-Oct-18	0%	0%
47		TEMPORARY BRIDGE	94	26-Feb-18	31-May-18	24-Feb-18	30-Aug-18	100%	100%
48		CASTING YARD STRUCTURE	199	10-May-18	10-Aug-18	20-Mar-18	20-Nov-18	0%	0%
49		STEEL BRIDGE FABRICATION YARD	365	20-Jul-18	01-Nov-18	11-Nov-19	20-Aug-20	0%	0%
50		CONCRETE MIX DESIGN	274	23-Mar-18	31-Aug-18	12-May-18	15-Nov-18	0%	0%
51		JFE DESIGN PROGRAMME	1220	01-May-18	04-Sep-19	09-Apr-18	02-Feb-21	100%	100%
52		PROCUREMENT, MANUFACTURING AND LOGISTICS	1617	20-Jan-18	23-Aug-20	22-Dec-17		100%	100%
53		SURVEY & INVESTIGATION	72	20-Jan-18	02-Apr-18	22-Dec-17	04-Apr-18	0%	0%
54		TOPOGRAPHIC SURVEY AGENT	21	20-Jan-18	09-Feb-18	01-Jan-18	22-Jan-18	0%	0%
55		BATHYMETRIC SURVEY / UTILITY SURVEY AGENT	21	20-Jan-18	09-Feb-18	01-Jan-18	23-Jan-18	0%	0%
56		GEOTECHNICAL INVESTIGATION AGENCY	48	22-Jan-18	02-Apr-18	22-Dec-17	04-Apr-18	0%	0%
57		TEMPORARY WORK	964	20-Jan-18	20-Oct-18	20-Jan-18	11-May-20	0%	0%
58		MAIN WORK_SUBCONTRACT WORK	1237	23-Mar-18	20-Jul-19	23-Mar-18		0%	0%

Project Baseline Bar · Actual Work · Remaining Work · Critical Remaining Work · Milestone · % Complete · Summary

EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY (MMRDA)

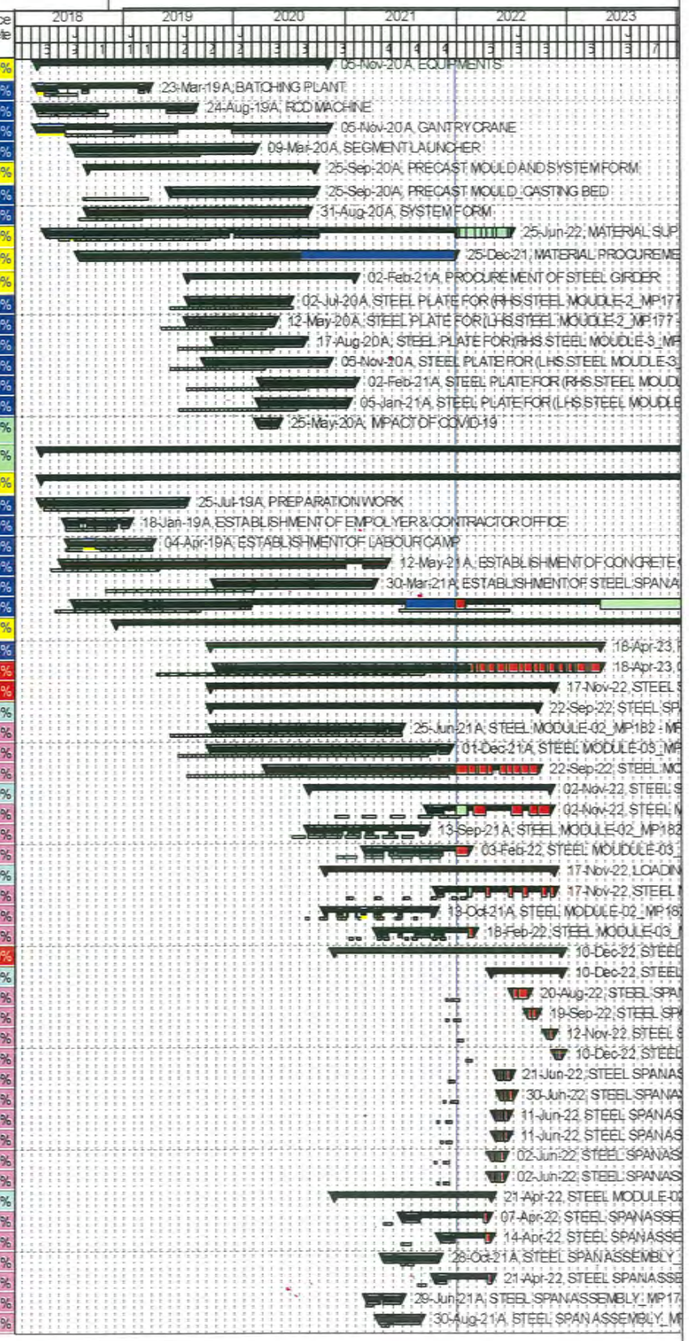
CONTRACTOR:
DAEWOO - TPL JV

Date	Revision	Checked	Approved
25-Dec-21	R0		

MUMBAI TRANS HARBOUR LINK PROJECT (PACKAGE 2) CONSTRUCTION OF 7.807 KM LONG BRIDGE SECTION (CH 10+380 - CH 18+187) ACROSS THE MUMBAI BAY INCL SHIVAJI NAGAR 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
59		EQUIPMENTS	1097	23-Mar-18	12-Sep-19	23-Mar-18	05-Nov-20	100%	100%
60		BATCHING PLANT	437	23-Mar-18	31-Jul-18	23-Mar-18	23-Mar-19	0%	0%
61		RCD MACHINE	514	23-Mar-18	11-Nov-18	23-Mar-18	24-Aug-19	0%	0%
62		GANTRY CRANE	1097	23-Mar-18	08-Feb-19	23-Mar-18	05-Nov-20	100%	100%
63		SEGMENT LAUNCHER	770	24-Jul-18	12-Sep-19	24-Jul-18	09-Mar-20	0%	0%
64		PRECAST MOULD AND SYSTEM FORM	715	07-Aug-18	24-Mar-19	04-Sep-18	25-Sep-20	100%	100%
65		PRECAST MOULD_CASTING BED	332	20-Aug-18	24-Mar-19	03-Jun-19	25-Sep-20	100%	100%
66		SYSTEM FORM	447	07-Aug-18	04-Mar-19	04-Sep-18	31-Aug-20	0%	0%
67		MATERIAL SUPPLIERS	1484	02-Jun-18	15-Oct-19	20-Apr-18		0%	0%
68		MATERIAL PROCUREMENT	0			08-Aug-18		0%	0%
69		PROCUREMENT OF STEEL GIRDER	673	07-May-19	23-Aug-20	01-Aug-19	02-Feb-21	0%	0%
70		STEEL PLATE FOR (RHS.STEEL MOUDLE-2_MP177 - MP182)	513	04-Jun-19	13-Jul-20	08-Aug-19	02-Jul-20	0%	0%
71		STEEL PLATE FOR (LHS.STEEL MOUDLE-2_MP177 - MP182)	438	07-May-19	16-Apr-20	01-Aug-19	12-May-20	0%	0%
72		STEEL PLATE FOR (RHS.STEEL MOUDLE-3_MP183 - MP186)	315	01-Jul-19	10-May-20	01-Nov-19	17-Aug-20	0%	0%
73		STEEL PLATE FOR (LHS.STEEL MOUDLE-3_MP183 - MP186)	315	04-Jun-19	14-Apr-20	01-Oct-19	05-Nov-20	0%	0%
74		STEEL PLATE FOR (RHS.STEEL MOUDLE-1_MP176 - MP171)	286	30-Jul-19	23-Aug-20	01-Apr-20	02-Feb-21	0%	0%
75		STEEL PLATE FOR (LHS.STEEL MOUDLE-1_MP176 - MP171)	327	02-Jul-19	26-Jul-20	29-Mar-20	05-Jan-21	0%	0%
76		IMPACT OF COVID-19	51			22-Mar-20	25-May-20	0%	0%
77		CONSTRUCTION	2264	02-Apr-18	21-Jun-22	02-Apr-18		96.79%	63.61%
78		TEMPORARY WORK	2207	02-Apr-18	21-Jun-22	02-Apr-18		99%	97.95%
79		PREPARATION WORK	368	02-Apr-18	16-Jan-19	02-Apr-18	25-Jul-19	0%	0%
80		ESTABLISHMENT OF EMPOLYER & CONTRACTOR OFFICE	194	20-Jun-18	27-Nov-18	27-Jun-18	18-Jan-19	100%	100%
81		ESTABLISHMENT OF LABOUR CAMP	464	20-Jun-18	05-Apr-19	03-Jul-18	04-Apr-19	0%	0%
82		ESTABLISHMENT OF CONCRETE CASTING YARD	1095	04-May-18	25-Apr-19	14-Jun-18	12-May-21	100%	100%
83		ESTABLISHMENT OF STEEL SPAN ASSEMBLY YARD	584	02-Nov-18	06-Mar-20	01-Nov-19	30-Mar-21	0%	0%
84		TEMPORARY BRIDGE	2155	20-May-18	21-Jun-22	27-Jul-18		98.28%	96.49%
85		PERMANENT WORK	1997	03-Sep-18	24-May-22	08-Dec-18		96.5%	59.12%
86		PRE-FABRICATION AND ASSEMBLY	1159	18-Apr-19	19-Feb-22	16-Oct-19		97.56%	70.84%
87		CONCRETE PRE-FABRICATION AT THE CASTING YARD	692	18-Apr-19	15-Sep-21	06-Nov-19		100%	43.14%
88		STEEL SPAN FABRICATION AT THE SUPPLIER'S WORK SHOP INCLUDING LOGISTIC	1007	02-Jun-19	24-Jan-22	16-Oct-19		97.55%	78.91%
89		STEEL SPAN FABRICATION AT THE SUPPLIER'S WORK SHOP	952	02-Jun-19	29-Nov-21	16-Oct-19		100%	100%
90		STEEL MODULE-02_MP182 - MP177 (FABRICATION AT JFE)	626	02-Jun-19	29-Jun-21	24-Oct-19	25-Jun-21	100%	100%
91		STEEL MODULE-03_MP186 - MP183 (FABRICATION AT JFE)	734	29-Jun-19	25-Sep-21	16-Oct-19	01-Dec-21	100%	100%
92		STEEL MODULE-01_MP176 - MP171 (FABRICATION AT JFE)	728	26-Jul-19	29-Nov-21	16-Apr-20		100%	100%
93		STEEL SPAN MATERIAL OCEAN FREIGHT TO THE MUMBAI PORT INCLUDING CUSTOM CLEARANCE	780	10-Jul-20	09-Jan-22	01-Sep-20		98.71%	70%
94		STEEL MODULE-01_MP176 - MP171 (OCEAN FREIGHT)	374	23-Nov-20	09-Jan-22	28-Sep-21		96.13%	20%
95		STEEL MODULE-02_MP182 - MP177 (OCEAN FREIGHT)	417	10-Jul-20	09-Aug-21	01-Sep-20	13-Sep-21	100%	100%
96		STEEL MOUDULE-03_MP186 - MP183 (OCEAN FREIGHT)	331	29-Nov-20	05-Nov-21	06-Mar-21		100%	87.5%
97		LOADING AND DELIVERY TO THE CONTRACTOR'S ASSEMBLY YARD	717	20-Aug-20	24-Jan-22	21-Oct-20		96.03%	70%
98		STEEL MODULE-01_MP176 - MP171 (DELIVERY TO ASSEMBLY YARD)	318	02-Jan-21	24-Jan-22	26-Oct-21		88.08%	20%
99		STEEL MODULE-02_MP182 - MP177 (DELIVERY TO ASSEMBLY YARD)	343	20-Aug-20	19-Aug-21	21-Oct-20	13-Oct-21	100%	100%
100		STEEL MODULE-03_MP186 - MP183 (DELIVERY TO ASSEMBLY YARD)	304	09-Jan-21	20-Nov-21	14-Apr-21		100%	87.5%
101		STEEL GIRDER ASSEMBLY AT THE CONTRACTOR'S ASSEMBLY YARD	486	05-Sep-20	17-Feb-22	23-Nov-20		86.57%	30%
102		STEEL MODULE-01_MP176 - MP171 (ASSEMBLY WORKS)	176	13-Oct-21	17-Feb-22			59.72%	0%
103		STEEL SPAN ASSEMBLY_MP171 - MP172_G1	26	20-Nov-21	06-Jan-22			38.89%	0%
104		STEEL SPAN ASSEMBLY_MP171 - MP172_G2	20	20-Nov-21	08-Jan-22			0%	0%
105		STEEL SPAN ASSEMBLY_MP172 - MP173_G1	20	28-Dec-21	19-Jan-22			0%	0%
106		STEEL SPAN ASSEMBLY_MP172 - MP173_G2	20	25-Jan-22	17-Feb-22			0%	0%
107		STEEL SPAN ASSEMBLY_MP173 - MP174_G1	36	29-Nov-21	21-Dec-21			100%	0%
108		STEEL SPAN ASSEMBLY_MP173 - MP174_G2	36	11-Nov-21	30-Dec-21			58.33%	0%
109		STEEL SPAN ASSEMBLY_MP174 - MP175_G1	36	23-Oct-21	11-Dec-21			100%	0%
110		STEEL SPAN ASSEMBLY_MP174 - MP175_G2	36	02-Nov-21	11-Dec-21			100%	0%
111		STEEL SPAN ASSEMBLY_MP175 - MP176_G1	36	13-Oct-21	02-Dec-21			100%	0%
112		STEEL SPAN ASSEMBLY_MP175 - MP176_G2	36	23-Oct-21	02-Dec-21			100%	0%
113		STEEL MODULE-02_MP182 - MP177 (ASSEMBLY WORKS)	310	05-Sep-20	18-Sep-21	23-Nov-20		100%	75%
114		STEEL SPAN ASSEMBLY_MP176 - MP177_G1	141	03-May-21	26-May-21	03-Jul-21		100%	0%
115		STEEL SPAN ASSEMBLY_MP176 - MP177_G2	43	25-Jun-21	28-Jul-21	02-Nov-21		100%	0%
116		STEEL SPAN ASSEMBLY_MP177 - MP178_G1	68	28-Jun-21	09-Aug-21	05-May-21	28-Oct-21	100%	100%
117		STEEL SPAN ASSEMBLY_MP177 - MP178_G2	49	20-Aug-21	18-Sep-21	18-Oct-21		100%	0%
118		STEEL SPAN ASSEMBLY_MP178 - MP179_G1	71	05-Mar-21	27-Mar-21	09-Mar-21	29-Jun-21	100%	100%
119		STEEL SPAN ASSEMBLY_MP178 - MP179_G2	74	26-Apr-21	19-May-21	17-Apr-21	30-Aug-21	100%	100%



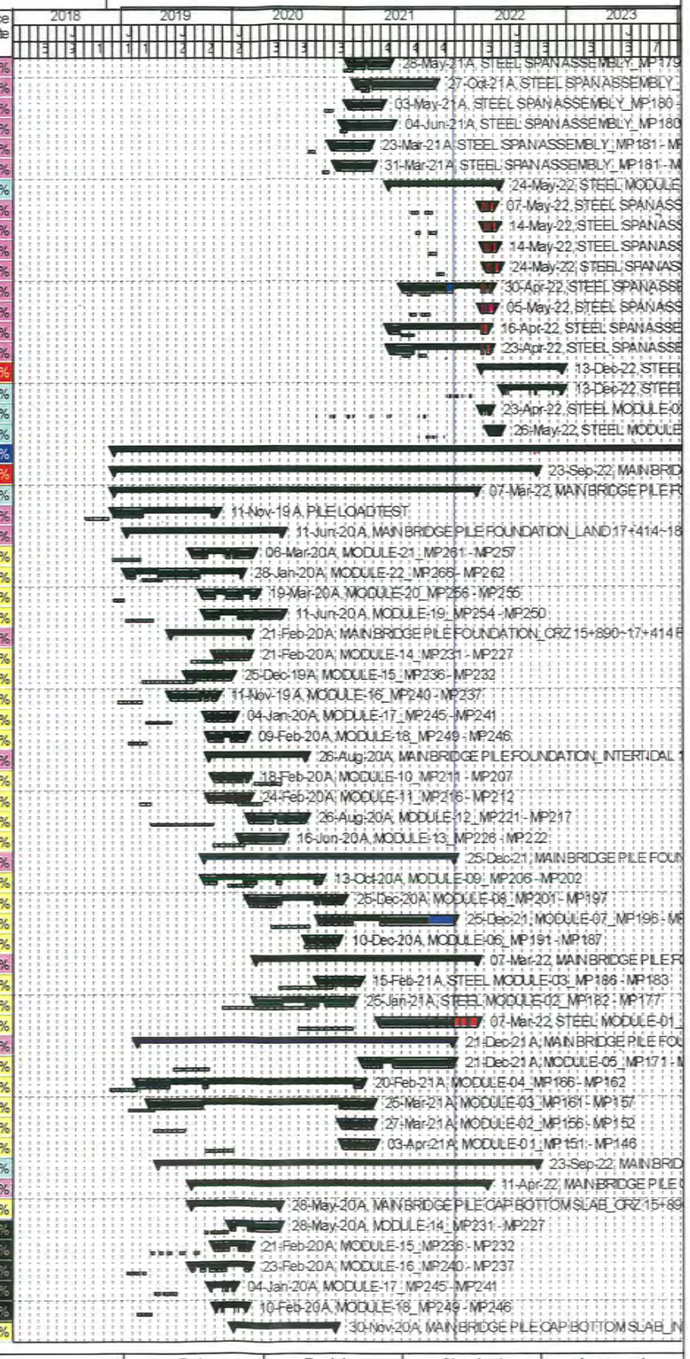
Project Baseline Bar · Actual Work · Remaining Work · Critical Remaining Work · Milestone · % Complete · Summary

EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY (MMRDA)

CONTRACTOR:
DAEWOO - TPL JV

Date	Revision	Checked	Approved
25-Dec-21	R0		

#	Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Actual Start	Actual Finish	Schedule % Complete	Performance % Complete
120		STEEL SPAN ASSEMBLY_MP179 - MP180_G1	77	02-Jan-21	25-Jan-21	19-Jan-21	28-May-21	100%	100%
121		STEEL SPAN ASSEMBLY_MP179 - MP180_G2	184	25-Feb-21	20-Mar-21	08-Feb-21	27-Oct-21	100%	100%
122		STEEL SPAN ASSEMBLY_MP180 - MP181_G1	73	02-Nov-20	25-Nov-20	15-Jan-21	03-May-21	100%	100%
123		STEEL SPAN ASSEMBLY_MP180 - MP181_G2	55	19-Dec-20	11-Jan-21	28-Dec-20	04-Jun-21	100%	100%
124		STEEL SPAN ASSEMBLY_MP181 - MP182_G1	72	05-Sep-20	29-Sep-20	23-Nov-20	23-Mar-21	100%	100%
125		STEEL SPAN ASSEMBLY_MP181 - MP182_G2	78	22-Oct-20	14-Nov-20	08-Dec-20	31-Mar-21	100%	100%
126		STEEL MODULE-03_MP186 - MP183 (ASSEMBLY WORKS)	197	06-Jul-21	23-Nov-21	25-May-21		100%	0%
127		STEEL SPAN ASSEMBLY_MP182 - MP183_G1	38	09-Aug-21	18-Oct-21			100%	0%
128		STEEL SPAN ASSEMBLY_MP182 - MP183_G2	36	24-Aug-21	28-Oct-21			100%	0%
129		STEEL SPAN ASSEMBLY_MP183 - MP184_G1	36	04-Oct-21	28-Oct-21			100%	0%
130		STEEL SPAN ASSEMBLY_MP183 - MP184_G2	36	01-Nov-21	23-Nov-21			100%	0%
131		STEEL SPAN ASSEMBLY_MP184 - MP185_G1	161	24-Jul-21	08-Oct-21	10-Jul-21		100%	0%
132		STEEL SPAN ASSEMBLY_MP184 - MP185_G2	36	05-Aug-21	08-Oct-21			100%	0%
133		STEEL SPAN ASSEMBLY_MP185 - MP186_G1	165	06-Jul-21	16-Aug-21	25-May-21		100%	0%
134		STEEL SPAN ASSEMBLY_MP185 - MP186_G2	163	10-Jul-21	28-Sep-21	29-May-21		100%	0%
135		STEEL SPAN LOADING AND TRANSPORTING TO THE ERECTION AREA	169	30-Sep-20	19-Feb-22			83.33%	0%
136		STEEL MODULE-01_MP176 - MP171 (LOADOUT AND TRANSPORT)	109	03-Dec-21	19-Feb-22			50%	0%
137		STEEL MODULE-02_MP182 - MP177 (LOADOUT AND TRANSPORT)	26	30-Sep-20	21-Sep-21			100%	0%
138		STEEL MODULE-03_MP186 - MP183 (LOADOUT AND TRANSPORT)	34	01-Sep-21	25-Nov-21			100%	0%
139		MAIN BRIDGE	1925	03-Sep-18	24-May-22	08-Dec-18		94.67%	50.46%
140		MAIN BRIDGE FOUNDATION	1368	03-Sep-18	23-Mar-21	08-Dec-18		100%	79.79%
141		MAIN BRIDGE PILE FOUNDATION	1177	03-Sep-18	23-Jan-21	08-Dec-18		100%	96.84%
142		PILE LOAD TEST	259	03-Sep-18	19-Nov-18	08-Dec-18	11-Nov-19	100%	100%
143		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%
144		MODULE-21_MP261 - MP257	126	30-Nov-18	05-Mar-19	23-Aug-19	06-Mar-20	100%	100%
145		MODULE-22_MP266 - MP262	167	06-Mar-19	15-May-19	17-Jan-19	28-Jan-20	100%	100%
146		MODULE-20_MP256 - MP255	32	05-Dec-18	10-Jan-19	25-Sep-19	19-Mar-20	100%	100%
147		MODULE-19_MP254 - MP250	199	11-Jan-19	16-Apr-19	05-Oct-19	11-Jun-20	100%	100%
148		MAIN BRIDGE PILE FOUNDATION_CRZ 15+890~17+414 FROM MP226 TO MP250	268	20-Dec-18	27-Nov-19	12-Jun-19	21-Feb-20	100%	100%
149		MODULE-14_MP231 - MP227	48	17-Aug-19	27-Nov-19	08-Nov-19	21-Feb-20	100%	100%
150		MODULE-15_MP236 - MP232	77	08-Mar-19	26-Aug-19	08-Aug-19	25-Dec-19	100%	100%
151		MODULE-16_MP240 - MP237	113	20-Dec-18	08-Mar-19	12-Jun-19	11-Nov-19	100%	100%
152		MODULE-17_MP245 - MP241	94	20-Mar-19	17-Jun-19	09-Oct-19	04-Jan-20	100%	100%
153		MODULE-18_MP249 - MP246	74	21-Jan-19	26-Mar-19	15-Oct-19	09-Feb-20	100%	100%
154		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%
155		MODULE-10_MP211 - MP207	243	12-Mar-20	06-Jun-20	01-Nov-19	18-Feb-20	100%	100%
156		MODULE-11_MP216 - MP212	277	27-Feb-19	03-Apr-20	15-Oct-19	24-Feb-20	100%	100%
157		MODULE-12_MP221 - MP217	225	06-Apr-19	30-Oct-19	25-Feb-20	26-Aug-20	100%	100%
158		MODULE-13_MP226 - MP222	313	30-Oct-19	06-Feb-20	24-Jan-20	16-Jun-20	100%	100%
159		MAIN BRIDGE PILE FOUNDATION_MARINE 13+610~14+800 FROM MP187 TO MP205	531	12-Dec-19	28-Nov-20	01-Oct-19		100%	99.37%
160		MODULE-09_MP206 - MP202	340	12-Dec-19	06-Mar-20	01-Oct-19	13-Oct-20	100%	100%
161		MODULE-08_MP201 - MP197	262	22-Feb-20	19-May-20	19-Feb-20	25-Dec-20	100%	100%
162		MODULE-07_MP196 - MP192	146	02-May-20	08-Sep-20	12-Oct-20		100%	97.74%
163		MODULE-06_MP191 - MP187	82	21-Aug-20	28-Nov-20	31-Aug-20	10-Dec-20	100%	100%
164		MAIN BRIDGE PILE FOUNDATION_MARINE (STEEL) 11+880~13+610 FROM MP171 TO MP186	652	27-Nov-19	23-Jan-21	17-Mar-20		100%	82.81%
165		STEEL MODULE-03_MP186 - MP183	80	30-May-20	21-Nov-20	08-Oct-20	15-Feb-21	100%	100%
166		STEEL MODULE-02_MP182 - MP177	336	27-Nov-19	10-Sep-20	17-Mar-20	25-Jan-21	100%	100%
167		STEEL MODULE-01_MP176 - MP171	164	30-Jul-20	23-Jan-21	19-Apr-21		100%	54.15%
168		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%
169		MODULE-05_MP171 - MP167	193	19-Jun-19	16-Oct-19	24-Feb-21	21-Dec-21	100%	100%
170		MODULE-04_MP166 - MP162	507	24-Nov-18	18-Feb-19	19-Feb-19	20-Feb-21	100%	100%
171		MODULE-03_MP161 - MP157	393	22-Jan-19	18-Apr-19	03-Apr-19	25-Mar-21	100%	100%
172		MODULE-02_MP156 - MP152	94	16-Apr-19	27-Jul-19	21-Dec-20	27-Mar-21	100%	100%
173		MODULE-01_MP151 - MP146	107	04-Oct-19	28-Dec-19	23-Dec-20	03-Apr-21	100%	100%
174		MAIN BRIDGE PILE CAP INSTALLATION	1101	22-Dec-18	23-Mar-21	01-May-19		100%	61.99%
175		MAIN BRIDGE PILE CAP BOTTOM SLAB INSTALLATION	1007	22-Dec-18	17-Feb-21	19-Aug-19		0%	0%
176		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%
177		MODULE-14_MP231 - MP227	168	28-Sep-19	12-Dec-19	24-Dec-19	28-May-20	0%	0%
178		MODULE-15_MP236 - MP232	71	05-Apr-19	11-Sep-19	02-Nov-19	21-Feb-20	0%	0%
179		MODULE-16_MP240 - MP237	142	17-Jan-19	20-Mar-19	19-Aug-19	23-Feb-20	0%	0%
180		MODULE-17_MP245 - MP241	44	17-Apr-19	03-Jul-19	22-Oct-19	04-Jan-20	0%	0%
181		MODULE-18_MP249 - MP246	63	19-Feb-19	12-Apr-19	06-Nov-19	10-Feb-20	0%	0%
182		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%



Project Baseline Bar — 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-21	R0		

MUMBAI TRANS HARBOUR LINK GENERAL CONSULTANT GC

MUMBAI TRANS HARBOUR LINK PROJECT (PACKAGE 2) CONSTRUCTION OF 7.807 KM LONG BRIDGE SECTION (CH 10+380 - CH 18+187) ACROSS THE MUMBAI BAY INCL SHIVAJI NAGAR 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
183		MODULE-10_MP211 - MP207	95	15-Apr-20	18-Jul-20	30-Dec-19	30-Sep-20	0%	0%
184		MODULE-11_MP216 - MP212	126	06-Apr-19	15-Apr-20	09-Mar-20	19-Oct-20	0%	0%
185		MODULE-12_MP221 - MP217	74	10-May-19	12-Nov-19	11-Sep-20	30-Nov-20	0%	0%
186		MODULE-13_MP226 - MP222	59	03-Dec-19	18-Feb-20	27-Apr-20	26-Oct-20	0%	0%
187		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		0%	0%
188		MODULE-09_MP206 - MP202	289	21-Jan-20	20-Mar-20	16-Nov-19	11-Nov-20	0%	0%
189		MODULE-08_MP201 - MP197	50	23-Mar-20	30-May-20	11-Nov-20	25-Feb-21	0%	0%
190		MODULE-07_MP196 - MP192	153	30-May-20	08-Oct-20	15-Oct-20		0%	0%
191		MODULE-06_MP191 - MP187	77	08-Oct-20	10-Dec-20	20-Nov-20	26-Jan-21	0%	0%
192		MAIN BRIDGE PILE CAP PRECAST SHELL_MARINE (STEEL) 11+880~13+610 FROM MP171 TO MP186	365	08-Jan-20	17-Feb-21	11-Oct-20		0%	0%
193		STEEL MODULE-01_MP176 - MP171	110	02-Nov-20	17-Feb-21	05-Nov-21		0%	0%
194		STEEL MODULE-02_MP182 - MP177	118	08-Jan-20	26-Sep-20	11-Oct-20	26-Feb-21	0%	0%
195		STEEL MODULE-03_MP186 - MP183	194	07-Aug-20	03-Dec-20	19-Jan-21		0%	0%
196		MAIN BRIDGE PILE CAP BOTTOM SLAB_MARINE 10+380~11+880 FROM MP146 TO MP170	220	22-Dec-18	21-Jan-20	28-Jan-21		0%	0%
197		MODULE-05_MP171 - MP167	107	24-Aug-19	28-Oct-19	26-Mar-21		0%	0%
198		MODULE-04_MP166 - MP162	199	22-Dec-18	01-Mar-19	15-Feb-21		0%	0%
199		MODULE-03_MP161 - MP157	111	01-Mar-19	10-May-19	28-Jan-21	20-Oct-21	0%	0%
200		MODULE-02_MP156 - MP152	53	15-May-19	16-Aug-19	15-Feb-21	17-May-21	0%	0%
201		MODULE-01_MP151 - MP146	88	01-Nov-19	21-Jan-20	11-Feb-21		0%	0%
202		MAIN BRIDGE PILE CAP INSTALLATION	1085	27-Dec-18	23-Mar-21	01-May-19		100%	61.99%
203		MAIN BRIDGE PILE CAP_LAND17+414~18+188 FROM MP251 TO MP266	377	27-Dec-18	13-Jun-19	01-May-19	27-Jun-20	100%	100%
204		MODULE-21_MP261 - MP257	248	27-Dec-18	30-Mar-19	15-Oct-19	27-Jun-20	100%	100%
205		MODULE-22_MP266 - MP262	207	02-Apr-19	13-Jun-19	01-May-19	16-May-20	100%	100%
206		MODULE-20_MP256 - MP255	54	01-Jan-19	06-Feb-19	29-Nov-19	23-May-20	100%	100%
207		MODULE-19_MP254 - MP250	218	08-Feb-19	13-May-19	23-Nov-19	20-Jun-20	100%	100%
208		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%
209		MODULE-14_MP231 - MP227	230	24-Oct-19	08-Jan-20	11-Jan-20	19-Sep-20	100%	100%
210		MODULE-15_MP236 - MP232	201	02-Sep-19	22-Nov-19	16-Nov-19	18-Sep-20	100%	100%
211		MODULE-16_MP240 - MP237	146	02-Jul-19	26-Sep-19	28-Aug-19	05-Mar-20	100%	100%
212		MODULE-17_MP245 - MP241	98	29-Apr-19	16-Aug-19	17-Nov-19	24-Jan-20	100%	100%
213		MODULE-18_MP249 - MP246	84	04-Mar-19	10-May-19	13-Nov-19	14-Feb-20	100%	100%
214		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%
215		MODULE-10_MP211 - MP207	96	27-Apr-20	05-Sep-20	29-Jan-20	07-Oct-20	100%	100%
216		MODULE-11_MP216 - MP212	157	18-Apr-19	13-May-20	31-Aug-20	24-Oct-20	100%	100%
217		MODULE-12_MP221 - MP217	111	22-May-19	09-Dec-19	17-Sep-20	07-Dec-20	100%	100%
218		MODULE-13_MP226 - MP222	94	14-Dec-19	17-Mar-20	16-Sep-20	19-Nov-20	100%	100%
219		MAIN BRIDGE PILE CAP_MARINE 13+610~14+800 FROM MP187 TO MP205	413	01-Feb-20	06-Jan-21	13-Jan-20		100%	95.24%
220		MODULE-09_MP206 - MP202	288	01-Feb-20	16-Apr-20	13-Jan-20	20-Nov-20	100%	100%
221		MODULE-08_MP201 - MP197	63	03-Apr-20	06-Jul-20	23-Nov-20	04-Mar-21	100%	100%
222		MODULE-07_MP196 - MP192	90	15-Jun-20	11-Nov-20	01-Dec-20		100%	83.33%
223		MODULE-06_MP191 - MP187	90	21-Oct-20	06-Jan-21	14-Dec-20	30-Jan-21	100%	100%
224		MAIN BRIDGE PILE CAP_MARINE (STEEL) 11+880~13+610 FROM MP171 TO MP186	459	20-Jan-20	23-Mar-21	18-Nov-20		100%	10.15%
225		STEEL MODULE-01_MP176 - MP171	152	21-Nov-20	23-Mar-21	13-Dec-21		100%	4.17%
226		STEEL MODULE-02_MP182 - MP177	158	20-Jan-20	02-Nov-20	18-Nov-20	08-Mar-21	100%	100%
227		STEEL MODULE-03_MP186 - MP183	229	27-Aug-20	07-Jan-21	28-Jan-21		100%	1.68%
228		MAIN BRIDGE PILE CAP_MARINE 10+380~11+880 FROM MP146 TO MP170	253	03-Jan-19	17-Feb-20	08-Feb-21		100%	93.75%
229		MODULE-05_MP171 - MP167	119	10-Sep-19	25-Nov-19	13-Apr-21		100%	75%
230		MODULE-04_MP166 - MP162	222	03-Jan-19	29-Mar-19	01-Mar-21		100%	90%
231		MODULE-03_MP161 - MP157	141	14-Mar-19	08-Jun-19	08-Feb-21	28-Oct-21	100%	100%
232		MODULE-02_MP156 - MP152	54	27-May-19	26-Sep-19	06-Mar-21	27-May-21	100%	100%
233		MODULE-01_MP151 - MP146	122	14-Nov-19	17-Feb-20	22-Feb-21		100%	100%
234		MAIN BRIDGE SUB-STRUCTURE	1242	09-Jan-19	24-Sep-21	04-Nov-19		100%	63.9%
235		MAIN BRIDGE PIER INSTALLATION	1242	09-Jan-19	28-Jul-21	04-Nov-19		100%	76.32%
236		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%
237		MODULE-21_MP261 - MP257	301	14-Jan-19	12-Jul-19	27-May-20	03-May-21	100%	100%
238		MODULE-22_MP266 - MP262	315	04-May-19	08-Nov-19	06-Nov-19	02-Feb-21	100%	100%
239		MODULE-20_MP256 - MP255	225	09-Jan-19	17-May-19	11-May-20	21-Jun-21	100%	100%
240		MODULE-19_MP254 - MP250	336	28-Feb-19	20-Sep-19	15-Jun-20	27-Aug-21	100%	100%
241		MAIN BRIDGE PIER_CRZ 15+890~17+414 FROM MB226 TO MB250	393	26-Mar-19	06-Feb-20	04-Nov-19	11-Aug-21	100%	100%
242		MODULE-14_MP231 - MP227	228	05-Dec-19	06-Feb-20	02-Feb-20	22-Jan-21	100%	100%
243		MODULE-15_MP236 - MP232	134	16-Oct-19	19-Dec-19	06-Jan-20	06-Nov-20	100%	100%
244		MODULE-16_MP240 - MP237	85	13-Aug-19	30-Oct-19	04-Nov-19	27-Jun-20	100%	100%
245		MODULE-17_MP245 - MP241	171	22-May-19	25-Sep-19	24-Dec-19	23-Jun-20	100%	100%

Project Baseline Bar · Actual Work · Remaining Work · Critical Remaining Work · Milestone · % Complete · Summary

EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY (MMRDA)

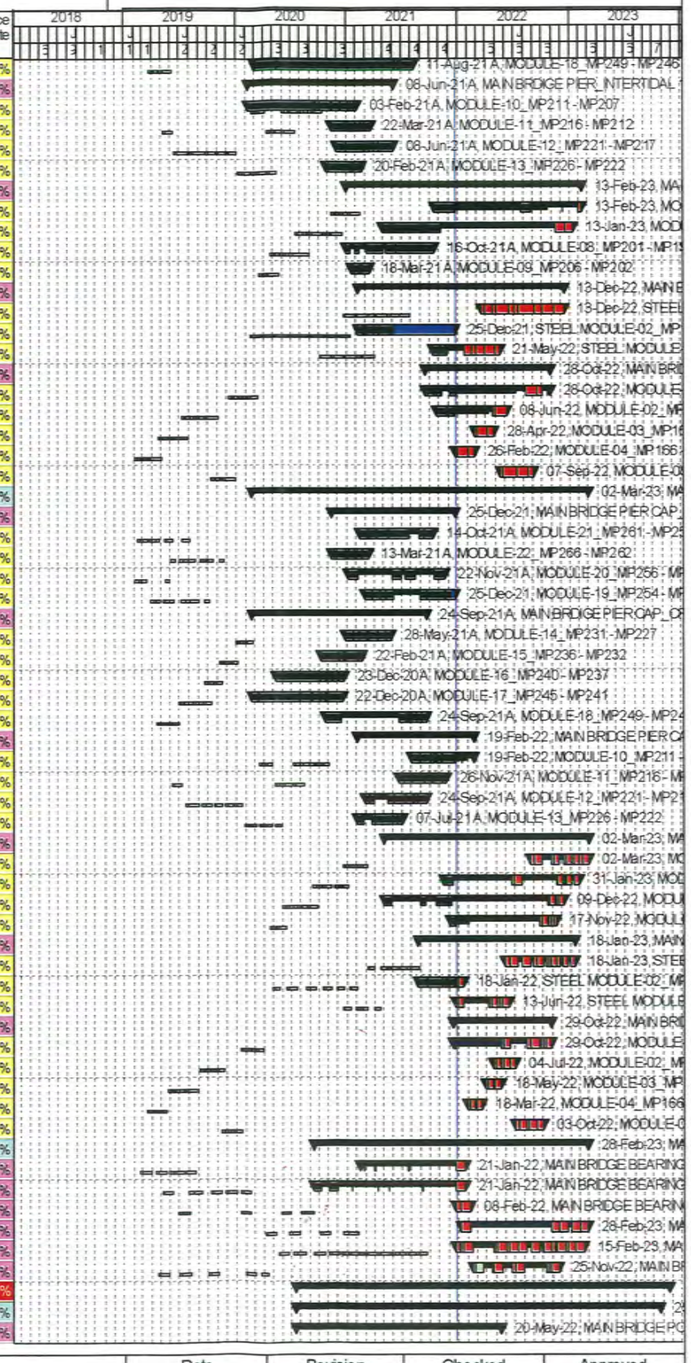
CONTRACTOR:
DAEWOO - TPL JV

Date	Revision	Checked	Approved
25-Dec-21	R0		

MUMBAI TRANS HARBOUR LINK PROJECT (PACKAGE 2) CONSTRUCTION OF 7.807 KM LONG BRIDGE SECTION (CH 10+380 - CH 18+187) ACROSS THE MUMBAI BAY INCL SHIVAJI NAGAR 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
246		MODULE-18_MP249 - MP246	238	26-Mar-19	06-Jun-19	02-Mar-20	11-Aug-21	100%	100%
247		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%
248		MODULE-10_MP211 - MP207	338	24-Feb-20	16-Oct-20	10-Feb-20	03-Feb-21	100%	100%
249		MODULE-11_MP216 - MP212	386	11-May-19	17-Jul-20	13-Nov-20	22-Mar-21	100%	100%
250		MODULE-12_MP221 - MP217	97	17-Jun-19	03-Jan-20	30-Nov-20	08-Jun-21	100%	100%
251		MODULE-13_MP226 - MP222	235	06-Jan-20	15-May-20	29-Oct-20	20-Feb-21	100%	100%
252		MAIN BRIDGE PIER_MARINE 13+610~14+800 FROM MB187 TO MB205	316	19-Mar-20	18-Feb-21	04-Jan-21		100%	87.6%
253		MODULE-06_MP191 - MP187	173	13-Nov-20	18-Feb-21	19-Oct-21		100%	75.5%
254		MODULE-07_MP196 - MP192	153	17-Jul-20	19-Dec-20	28-Apr-21		100%	81.31%
255		MODULE-08_MP201 - MP197	162	25-Apr-20	03-Sep-20	04-Jan-21	16-Oct-21	100%	100%
256		MODULE-09_MP206 - MP202	66	19-Mar-20	23-May-20	18-Jan-21	18-Mar-21	100%	100%
257		MAIN BRIDGE PIER_MARINE (STEEL) 11+880~13+610 FROM MB171 TO MB186	460	17-Feb-20	28-Jul-21	08-Feb-21		100%	35.28%
258		STEEL MODULE-01_MP176 - MP171	194	23-Dec-20	28-Jul-21			100%	0%
259		STEEL MODULE-02_MP182 - MP177	170	17-Feb-20	15-Jan-21	08-Feb-21		100%	77.42%
260		STEEL MODULE-03_MP186 - MP183	156	06-Oct-20	03-Apr-21	12-Oct-21		100%	25%
261		MAIN BRIDGE PIER_MARINE 10+380~11+880 FROM MB146 TO MB170	239	07-Feb-19	13-Mar-20	20-Sep-21		100%	34.5%
262		MODULE-01_MP151 - MP146	129	10-Dec-19	13-Mar-20	20-Sep-21		100%	86.6%
263		MODULE-02_MP156 - MP152	54	11-Jul-19	04-Nov-19	25-Oct-21		100%	79%
264		MODULE-03_MP161 - MP157	54	22-Apr-19	01-Aug-19			100%	0%
265		MODULE-04_MP166 - MP162	54	07-Feb-19	06-May-19			100%	0%
266		MODULE-05_MP171 - MP167	65	10-Oct-19	31-Dec-19			100%	0%
267		MAIN BRIDGE PIER CAP INSTALLATION	924	08-Feb-19	27-Aug-21	25-Feb-20		100%	54.79%
268		MAIN BRIDGE PIER CAP_LAND 17+414~18+188 FROM MB251 TO MB266	313	08-Feb-19	23-Nov-19	13-Nov-20		100%	96.48%
269		MODULE-21_MP261 - MP257	159	13-Feb-19	05-Aug-19	11-Feb-21	14-Oct-21	100%	100%
270		MODULE-22_MP266 - MP262	114	03-Jun-19	23-Nov-19	13-Nov-20	13-Mar-21	100%	100%
271		MODULE-20_MP256 - MP255	182	08-Feb-19	01-Jun-19	07-Jan-21	22-Nov-21	100%	100%
272		MODULE-19_MP254 - MP250	212	30-Mar-19	09-Oct-19	01-Mar-21		100%	94.44%
273		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%
274		MODULE-14_MP231 - MP227	83	30-Dec-19	25-Feb-20	27-Dec-20	28-May-21	100%	100%
275		MODULE-15_MP236 - MP232	64	11-Nov-19	07-Jan-20	12-Oct-20	22-Feb-21	100%	100%
276		MODULE-16_MP240 - MP237	132	21-Sep-19	19-Nov-19	14-May-20	23-Dec-20	100%	100%
277		MODULE-17_MP245 - MP241	163	05-Jul-19	16-Oct-19	25-Feb-20	22-Dec-20	100%	100%
278		MODULE-18_MP249 - MP246	201	19-Apr-19	02-Jul-19	22-Oct-20	24-Sep-21	100%	100%
279		MAIN BRIDGE PIER CAP_INTERTIDAL 14+800~15+890 FROM MB206 TO MB225	277	06-Jun-19	05-Nov-20	04-Feb-21		100%	95.8%
280		MODULE-10_MP211 - MP207	174	20-Mar-20	05-Nov-20	02-Aug-21		100%	86.79%
281		MODULE-11_MP216 - MP212	209	06-Jun-19	18-Aug-20	21-Jun-21	26-Nov-21	100%	100%
282		MODULE-12_MP221 - MP217	100	24-Jul-19	22-Jan-20	01-Mar-21	24-Sep-21	100%	100%
283		MODULE-13_MP226 - MP222	187	30-Jan-20	04-Jun-20	04-Feb-21	07-Jul-21	100%	100%
284		MAIN BRIDGE PIER CAP_MARINE 13+610~14+800 FROM MB187 TO MB205	187	23-Apr-20	10-Mar-21	03-May-21		100%	16.46%
285		MODULE-06_MP191 - MP187	151	18-Dec-20	10-Mar-21			100%	0%
286		MODULE-07_MP196 - MP192	161	10-Sep-20	07-Jan-21	18-Nov-21		100%	16.3%
287		MODULE-08_MP201 - MP197	108	01-Jun-20	29-Sep-20	03-May-21		100%	40%
288		MODULE-09_MP206 - MP202	51	23-Apr-20	15-Jun-20	09-Dec-21		100%	5%
289		MAIN BRIDGE PIER CAP_MARINE (STEEL) 11+880~13+610 FROM MB171 TO MB186	368	30-Apr-20	27-Aug-21	23-Aug-21		100%	16.09%
290		STEEL MODULE-01_MP176 - MP171	163	08-Mar-21	27-Aug-21			100%	0%
291		STEEL MODULE-02_MP182 - MP177	96	30-Apr-20	04-Feb-21	23-Aug-21		100%	42.92%
292		STEEL MODULE-03_MP186 - MP183	140	19-Dec-20	22-Apr-21			100%	0%
293		MAIN BRIDGE PIER CAP_MARINE 10+380~11+880 FROM MB146 TO MB170	195	15-Mar-19	01-Apr-20	17-Dec-21		100%	1.15%
294		MODULE-01_MP151 - MP146	102	14-Jan-20	01-Apr-20	17-Dec-21		100%	5.5%
295		MODULE-02_MP156 - MP152	51	05-Sep-19	23-Nov-19			100%	0%
296		MODULE-03_MP161 - MP157	40	28-May-19	31-Aug-19			100%	0%
297		MODULE-04_MP166 - MP162	40	15-Mar-19	24-May-19			100%	0%
298		MODULE-05_MP171 - MP167	51	15-Nov-19	18-Jan-20			100%	0%
299		MAIN BRIDGE BEARING PAD AND BEARING INSALLATION	764	22-Feb-19	24-Sep-21	14-Sep-20		100%	2.67%
300		MAIN BRIDGE BEARING_LAND 17+414~18+188 FROM MB251 TO MB266	211	22-Feb-19	22-Aug-19	11-Feb-21		100%	50%
301		MAIN BRIDGE BEARING_CRZ 15+890~17+414 FROM MB226 TO MB250	361	08-May-19	20-Feb-20	14-Sep-20		100%	60%
302		MAIN BRIDGE BEARING_INTERTIDAL 14+800~15+890 FROM MB206 TO MB225	46	29-Jun-19	14-Sep-20			100%	0%
303		MAIN BRIDGE BEARING_MARINE 13+610~14+800 FROM MB187 TO MB205	413	07-Apr-20	09-Feb-21			100%	0%
304		MAIN BRIDGE BEARING_MARINE (STEEL) 11+880~13+610 FROM MB171 TO MB186	418	19-May-20	24-Sep-21			100%	0%
305		MAIN BRIDGE BEARING_MARINE 10+380~11+880 FROM MB146 TO MB170	282	25-Apr-19	18-Apr-20			100%	0%
306		MAIN BRIDGE SUPER STRUCTURE BOX GIRDER INSTALLATDN	1177	12-Sep-19	01-Mar-22	20-Jul-20		91.36%	28.91%
307		MAIN BRIDGE CONCRETE GIRDER INSTALLATION	1149	12-Sep-19	02-Feb-22	20-Jul-20		94.31%	33.86%
308		MAIN BRIDGE PC GIRDER_LAND 15+890~17+414 FROM MP251 TO MP266	626	12-Sep-19	27-Feb-20	20-Jul-20		100%	50.31%



Project Baseline Bar
Actual Work
Remaining Work
Critical Remaining Work
Milestone
% Complete
Summary

EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY (MMRDA)

CONTRACTOR:
DAEWOO - TPL JV

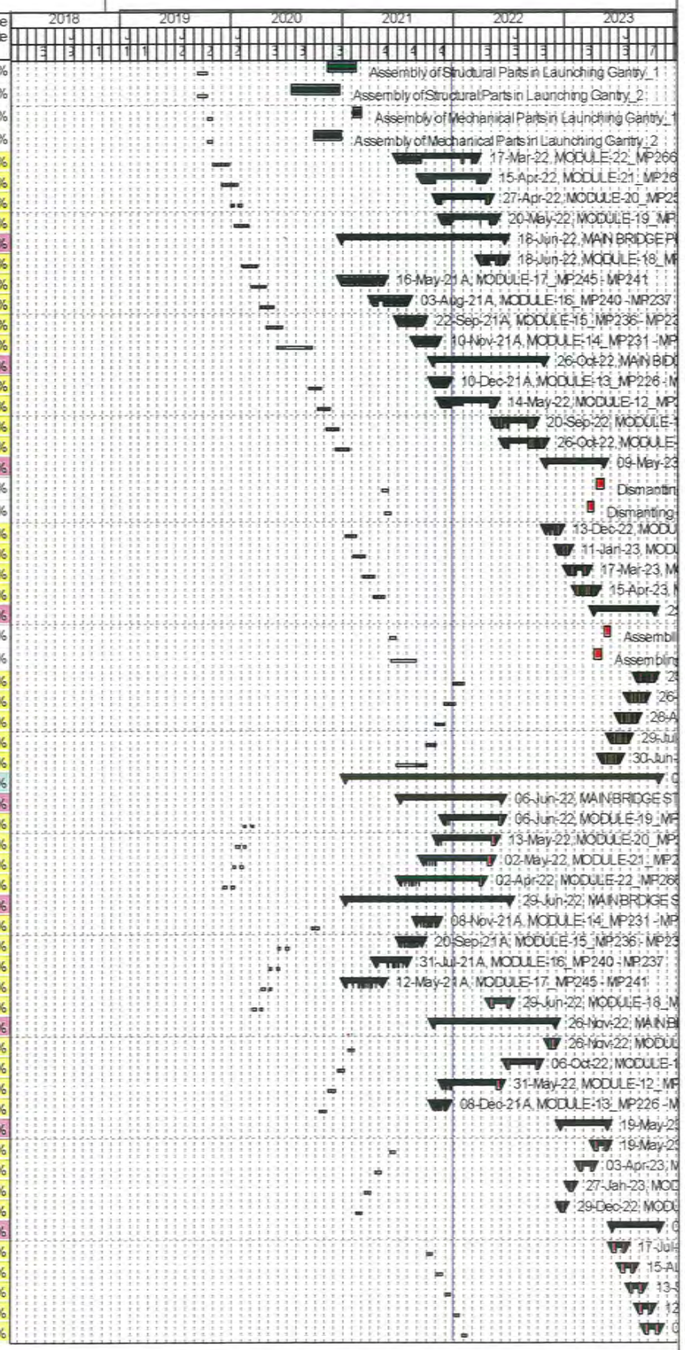
Date	Revision	Checked	Approved
25-Dec-21	R0		

MUMBAI TRANS HARBOUR LINK PROJECT GENERAL CONSULTANT

MUMBAI TRANS HARBOUR LINK PROJECT (PACKAGE 2) CONSTRUCTION OF 7.807 KM LONG BRIDGE SECTION (CH 10+380 - CH 18+187) ACROSS THE MUMBAI BAY INCL SHIVAJI NAGAR 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
309	CNLGA1000	Assembly of Structural Parts in Launching Gantry_1	35	12-Sep-19	17-Oct-19	12-Nov-20	17-Feb-21	100%	100%
310	CNLGA1010	Assembly of Structural Parts in Launching Gantry_2	35	12-Sep-19	17-Oct-19	20-Jul-20	25-Dec-20	100%	100%
311	CNLGA1005	Assembly of Mechanical Parts in Launching Gantry_1	15	17-Oct-19	01-Nov-19	05-Feb-21	06-Mar-21	100%	100%
312	CNLGA1015	Assembly of Mechanical Parts in Launching Gantry_2	15	17-Oct-19	01-Nov-19	28-Sep-20	30-Dec-20	100%	100%
313	MODULE-22_MP266 - MP262		164	01-Nov-19	25-Dec-19	02-Jul-21		100%	60%
314	MODULE-21_MP261 - MP257		137	02-Dec-19	23-Jan-20	18-Sep-21		100%	50%
315	MODULE-20_MP256 - MP255		97	31-Dec-19	04-Feb-20	06-Nov-21		100%	50%
316	MODULE-19_MP254 - MP250		96	11-Jan-20	27-Feb-20	26-Nov-21		100%	38.75%
317	MAIN BRIDGE PRECAST GIRDER_CRZ 15+890~17+414 FROM MP226 TO MP250		184	04-Feb-20	25-Sep-20	30-Dec-20		100%	80%
318	MODULE-18_MP249 - MP246		69	04-Feb-20	28-Mar-20			100%	0%
319	MODULE-17_MP245 - MP241		74	05-Mar-20	27-Apr-20	30-Dec-20	16-May-21	100%	100%
320	MODULE-16_MP240 - MP237		37	03-Apr-20	21-May-20	13-Apr-21	03-Aug-21	100%	100%
321	MODULE-15_MP236 - MP232		31	27-Apr-20	19-Jun-20	06-Jul-21	22-Sep-21	100%	100%
322	MODULE-14_MP231 - MP227		42	27-May-20	25-Sep-20	27-Aug-21	10-Nov-21	100%	100%
323	MAIN BIDGE PRECAST GIRDER_INTERTIDAL 14+800~15+890 FROM MP206 TO MP225		100	12-Sep-20	23-Jan-21	25-Oct-21		100%	38.25%
324	MODULE-13_MP226 - MP222		39	12-Sep-20	21-Oct-20	25-Oct-21	10-Dec-21	100%	100%
325	MODULE-12_MP221 - MP217		60	08-Oct-20	20-Nov-20	20-Nov-21		100%	73%
326	MODULE-11_MP216 - MP212		55	09-Nov-20	19-Dec-20			100%	0%
327	MODULE-10_MP211 - MP207		60	08-Dec-20	23-Jan-21			100%	0%
328	MAIN BRIDGE PRECAST GIRDER_MARINE 13+610~14+800 FROM MP187 TO MP205		163	12-Jan-21	10-Jun-21			100%	0%
329	CNLGD1010	Dismantling of Launching Gantry_2	20	12-May-21	03-Jun-21			100%	0%
330	CNLGD1000	Dismantling of Launching Gantry_1	20	18-May-21	10-Jun-21			100%	0%
331	MODULE-09_MP206 - MP202		36	12-Jan-21	17-Feb-21			100%	0%
332	MODULE-08_MP201 - MP197		27	05-Feb-21	19-Mar-21			100%	0%
333	MODULE-07_MP196 - MP192		58	08-Mar-21	17-Apr-21			100%	0%
334	MODULE-06_MP191 - MP187		56	12-Apr-21	18-May-21			100%	0%
335	MAIN BRIDGE PRECAST GIRDER_MARINE 10+380~11+880 FROM MP146 TO MP170		172	04-Jun-21	02-Feb-22			76.01%	0%
336	CNLGA1030	Assembling of Launching Gantry_2	20	04-Jun-21	26-Jun-21			100%	0%
337	CNLGA1020	Assembling of Launching Gantry_1	20	10-Jun-21	03-Sep-21			100%	0%
338	MODULE-05_MP171 - MP167		52	28-Dec-21	02-Feb-22			0%	0%
339	MODULE-04_MP166 - MP162		52	29-Nov-21	03-Jan-22			80.06%	0%
340	MODULE-03_MP161 - MP157		52	30-Oct-21	04-Dec-21			100%	0%
341	MODULE-02_MP156 - MP152		52	29-Sep-21	05-Nov-21			100%	0%
342	MODULE-01_MP151 - MP146		52	28-Jun-21	06-Oct-21			100%	0%
343	STITCH JOINT CASTING		614	07-Dec-19	12-Feb-22	12-Jan-21		0%	0%
344	MAIN BRIDGE STITCH JOINT CASTING_LAND 15+890~17+414 FROM MP251 TO MP266		196	07-Dec-19	16-Mar-20	08-Jul-21		0%	0%
345	MODULE-19_MP254 - MP250		38	10-Feb-20	16-Mar-20	29-Nov-21		0%	0%
346	MODULE-20_MP256 - MP255		94	17-Jan-20	20-Feb-20	10-Nov-21		0%	0%
347	MODULE-21_MP261 - MP257		111	06-Jan-20	08-Feb-20	23-Sep-21		0%	0%
348	MODULE-22_MP266 - MP262		141	07-Dec-19	10-Jan-20	08-Jul-21		0%	0%
349	MAIN BRIDGE STITCH JOINT CASTING_CRZ 15+890~17+414 FROM MP226 TO MP250		138	11-Mar-20	13-Oct-20	12-Jan-21		0%	0%
350	MODULE-14_MP231 - MP227		29	19-Sep-20	13-Oct-20	02-Sep-21	08-Nov-21	0%	0%
351	MODULE-15_MP236 - MP232		19	02-Jun-20	09-Jul-20	10-Jul-21	20-Sep-21	0%	0%
352	MODULE-16_MP240 - MP237		19	04-May-20	06-Jun-20	23-Apr-21	31-Jul-21	0%	0%
353	MODULE-17_MP245 - MP241		41	09-Apr-20	14-May-20	12-Jan-21	12-May-21	0%	0%
354	MODULE-18_MP249 - MP246		53	11-Mar-20	14-Apr-20			0%	0%
355	MAIN BRIDGE STITCH JOINT CASTING_INTERTIDAL 14+800~15+890 FROM MP206 TO MP225		139	14-Oct-20	10-Feb-21	27-Oct-21		0%	0%
356	MODULE-10_MP211 - MP207		18	18-Jan-21	10-Feb-21			0%	0%
357	MODULE-11_MP216 - MP212		72	14-Dec-20	05-Jan-21			0%	0%
358	MODULE-12_MP221 - MP217		92	14-Nov-20	07-Dec-20	24-Nov-21		0%	0%
359	MODULE-13_MP226 - MP222		28	14-Oct-20	06-Nov-20	27-Oct-21	08-Dec-21	0%	0%
360	MAIN BRIDGE STITCH JOINT CASTING_MARINE 13+610~14+800 FROM MP187 TO MP205		132	11-Feb-21	21-Jun-21			0%	0%
361	MODULE-06_MP191 - MP187		36	04-Jun-21	21-Jun-21			0%	0%
362	MODULE-07_MP196 - MP192		40	17-Apr-21	05-May-21			0%	0%
363	MODULE-08_MP201 - MP197		11	13-Mar-21	05-Apr-21			0%	0%
364	MODULE-09_MP206 - MP202		11	11-Feb-21	06-Mar-21			0%	0%
365	MAIN BRIDGE STITCH JOINT CASTING_MARINE 10+380~11+880 FROM MP146 TO MP170		131	06-Oct-21	12-Feb-22			0%	0%
366	MODULE-01_MP151 - MP146		36	06-Oct-21	23-Oct-21			0%	0%
367	MODULE-02_MP156 - MP152		36	05-Nov-21	22-Nov-21			0%	0%
368	MODULE-03_MP161 - MP157		36	04-Dec-21	21-Dec-21			0%	0%
369	MODULE-04_MP166 - MP162		36	03-Jan-22	19-Jan-22			0%	0%
370	MODULE-05_MP171 - MP167		36	27-Jan-22	12-Feb-22			0%	0%



Project Baseline Bar · Actual Work · Remaining Work · Critical Remaining Work · Milestone · % Complete · Summary

EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY (MMRDA)

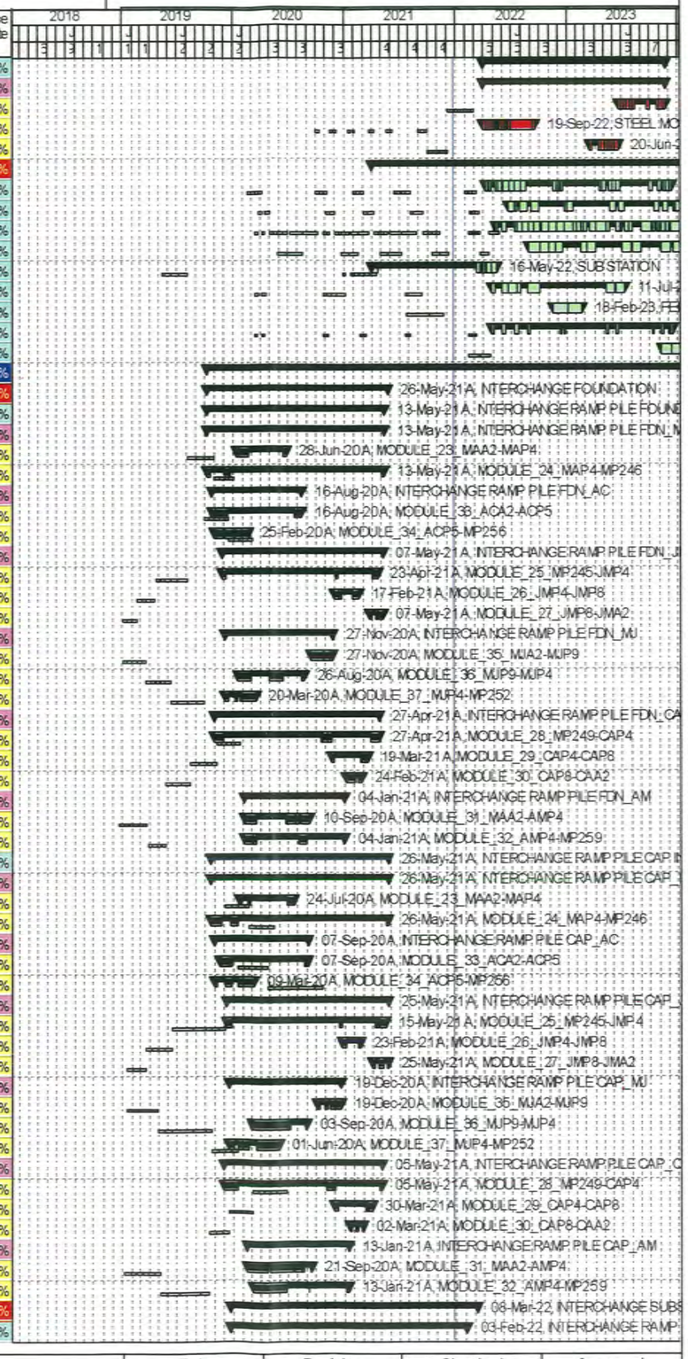
CONTRACTOR:
DAEWOO - TPL JV

Date	Revision	Checked	Approved
25-Dec-21	R0		

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

ANNEXURE-5 CONSTRUCTION UPDATED PROGRAMME_ABSTRACT (PACKAGE-2)

#	Activity ID	Activity Name	Orginal Duration	BL Project Start	BL Project Finish	Actual Start	Actual Finish	Schedule % Complete	Performance % Complete
371		MAIN BRIDGE STEEL GIRDER INSTALLATION	462	03-Oct-20	01-Mar-22			74.17%	0%
372		MAIN BRIDGE STEEL GIRDER INSTALLATION_MARINE 11+880~13+610 FROM MP171 TO MP186	462	03-Oct-20	01-Mar-22			74.17%	0%
373		STEEL MODULE-01_MP176 - MP171 (INSTALLATION)	133	07-Dec-21	01-Mar-22			22.5%	0%
374		STEEL MODULE-02_MP182 - MP177 (INSTALLATION)	96	03-Oct-20	30-Sep-21			100%	0%
375		STEEL MODULE-03_MP186 - MP183 (INSTALLATION)	83	30-Sep-21	07-Dec-21			100%	0%
376		MISCELLANEOUS & FINISHING WORKS	682	16-May-19	24-May-22	30-Mar-21		73.86%	0%
377		CRASH BARRIER & GURARD RAILS	487	20-Feb-20	07-Mar-22			70.83%	0%
378		WATER PROOFING	451	26-Mar-20	17-Mar-22			66.67%	0%
379		PAVEMENT	550	16-Mar-20	24-May-22			65.79%	0%
380		EXPANSION JOINT	459	27-May-20	21-Apr-22			46.67%	0%
381		SUB STATION	136	16-May-19	15-Apr-21	30-Mar-21		100%	0%
382		NOISE BARRIER	332	16-Mar-20	14-Sep-21			100%	0%
383		FENDER INSTALLATION	80	24-Jul-21	24-Nov-21			100%	0%
384		DRAINAGE WORKS	469	16-Mar-20	09-Mar-22			70.37%	0%
385		SIGN BOARDS	60	12-Feb-22	23-Apr-22			0%	0%
386		INTERCHANGE	1510	24-Dec-18	28-Apr-22	09-Oct-19		97.73%	39.36%
387		INTERCHANGE FOUNDATION	590	24-Dec-18	22-Oct-20	09-Oct-19	26-May-21	100%	100%
388		INTERCHANGE RAMP PILE FOUNDATION	475	24-Dec-18	05-Mar-20	09-Oct-19	13-May-21	100%	100%
389		INTERCHANGE RAMP PILE FDN_MA	182	05-Aug-19	03-Jan-20	09-Oct-19	13-May-21	100%	100%
390		MODULE_23_MAA2-MAP4	75	05-Aug-19	02-Nov-19	13-Jan-20	28-Jun-20	100%	100%
391		MODULE_24_MAP4-MP246	137	02-Nov-19	03-Jan-20	09-Oct-19	13-May-21	100%	100%
392		INTERCHANGE RAMP PILE FDN_AC	107	01-Oct-19	05-Mar-20	25-Oct-19	16-Aug-20	100%	100%
393		MODULE_33_ACA2-ACP5	60	01-Oct-19	19-Dec-19	25-Oct-19	16-Aug-20	100%	100%
394		MODULE_34_ACP5-MP256	62	19-Dec-19	05-Mar-20	02-Nov-19	25-Feb-20	100%	100%
395		INTERCHANGE RAMP PILE FDN_JM	178	03-Jan-19	05-Aug-19	26-Nov-19	07-May-21	100%	100%
396		MODULE_25_MP245-JMP4	178	22-Apr-19	05-Aug-19	26-Nov-19	23-Apr-21	100%	100%
397		MODULE_26_JMP4-JMP8	88	19-Feb-19	20-Apr-19	01-Dec-20	17-Feb-21	100%	100%
398		MODULE_27_JMP8-JMA2	64	03-Jan-19	18-Feb-19	23-Mar-21	07-May-21	100%	100%
399		INTERCHANGE RAMP PILE FDN_MJ	79	03-Jan-19	01-Oct-19	04-Dec-19	27-Nov-20	100%	100%
400		MODULE_35_MJA2-MJP9	45	03-Jan-19	21-Mar-19	16-Sep-20	27-Nov-20	100%	100%
401		MODULE_36_MJP9-MJP4	63	22-Mar-19	10-Jun-19	15-Jan-20	26-Aug-20	100%	100%
402		MODULE_37_MJP4-MP252	52	11-Jun-19	01-Oct-19	04-Dec-19	20-Mar-20	100%	100%
403		INTERCHANGE RAMP PILE FDN_CA	100	28-May-19	23-Jan-20	01-Nov-19	27-Apr-21	100%	100%
404		MODULE_28_MP249-CAP4	64	08-Nov-19	23-Jan-20	01-Nov-19	27-Apr-21	100%	100%
405		MODULE_29_CAP4-CAP8	62	14-Aug-19	08-Nov-19	21-Nov-20	19-Mar-21	100%	100%
406		MODULE_30_CAP8-CAA2	49	28-May-19	14-Aug-19	05-Jan-21	24-Feb-21	100%	100%
407		INTERCHANGE RAMP PILE FDN_AM	290	24-Dec-18	27-May-19	06-Feb-20	04-Jan-21	100%	100%
408		MODULE_31_MAA2-AMP4	187	24-Dec-18	26-Mar-19	07-Feb-20	10-Sep-20	100%	100%
409		MODULE_32_AMP4-MP259	237	27-Mar-19	27-May-19	06-Feb-20	04-Jan-21	100%	100%
410		INTERCHANGE RAMP PILE CAP INSTALLATION	525	08-Jan-19	22-Oct-20	22-Oct-19	26-May-21	100%	100%
411		INTERCHANGE RAMP PILE CAP_MA	182	06-Dec-19	15-May-20	22-Oct-19	26-May-21	100%	100%
412		MODULE_23_MAA2-MAP4	95	06-Dec-19	24-Feb-20	22-Jan-20	24-Jul-20	100%	100%
413		MODULE_24_MAP4-MP246	86	24-Feb-20	15-May-20	22-Oct-19	26-May-21	100%	100%
414		INTERCHANGE RAMP PILE CAP_AC	183	15-Jan-20	22-Oct-20	02-Nov-19	07-Sep-20	100%	100%
415		MODULE_33_ACA2-ACP5	132	15-Jan-20	24-Apr-20	18-Nov-19	07-Sep-20	100%	100%
416		MODULE_34_ACP5-MP256	114	24-Apr-20	22-Oct-20	02-Nov-19	09-Mar-20	100%	100%
417		INTERCHANGE RAMP PILE CAP_JM	136	18-Jan-19	06-Dec-19	11-Dec-19	25-May-21	100%	100%
418		MODULE_25_MP245-JMP4	135	18-Jun-19	06-Dec-19	11-Dec-19	15-May-21	100%	100%
419		MODULE_26_JMP4-JMP8	92	21-Mar-19	17-Jun-19	23-Dec-20	23-Feb-21	100%	100%
420		MODULE_27_JMP8-JMA2	40	18-Jan-19	20-Mar-19	02-Apr-21	25-May-21	100%	100%
421		INTERCHANGE RAMP PILE CAP_MJ	145	18-Jan-19	15-Jan-20	16-Dec-19	19-Dec-20	100%	100%
422		MODULE_35_MJA2-MJP9	123	18-Jan-19	29-Apr-19	08-Oct-20	19-Dec-20	100%	100%
423		MODULE_36_MJP9-MJP4	62	30-Apr-19	26-Oct-19	03-Mar-20	03-Sep-20	100%	100%
424		MODULE_37_MJP4-MP252	58	26-Oct-19	15-Jan-20	16-Dec-19	01-Jun-20	100%	100%
425		INTERCHANGE RAMP PILE CAP_CA	158	15-Oct-19	27-Jun-20	02-Dec-19	05-May-21	100%	100%
426		MODULE_28_MP249-CAP4	87	05-Mar-20	27-Jun-20	02-Dec-19	05-May-21	100%	100%
427		MODULE_29_CAP4-CAP8	70	16-Dec-19	05-Mar-20	30-Nov-20	30-Mar-21	100%	100%
428		MODULE_30_CAP8-CAA2	53	15-Oct-19	16-Dec-19	19-Jan-21	02-Mar-21	100%	100%
429		INTERCHANGE RAMP PILE CAP_AM	245	08-Jan-19	15-Oct-19	15-Feb-20	13-Jan-21	100%	100%
430		MODULE_31_MAA2-AMP4	176	08-Jan-19	09-May-19	15-Feb-20	21-Sep-20	100%	100%
431		MODULE_32_AMP4-MP259	89	10-May-19	15-Oct-19	07-Mar-20	13-Jan-21	100%	100%
432		INTERCHANGE SUBSTRUCTURE & BEARING	596	29-Jan-19	31-May-21	24-Dec-19		100%	78.9%
433		INTERCHANGE RAMP PIER INSTALLATION	596	29-Jan-19	27-Apr-21	24-Dec-19		100%	78.9%



Project Baseline Bar | Critical Remaining Work | Summary
Actual Work | Milestone
Remaining Work | % Complete

EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY (MMRDA)

CONTRACTOR:
DAEWOO - TPL JV

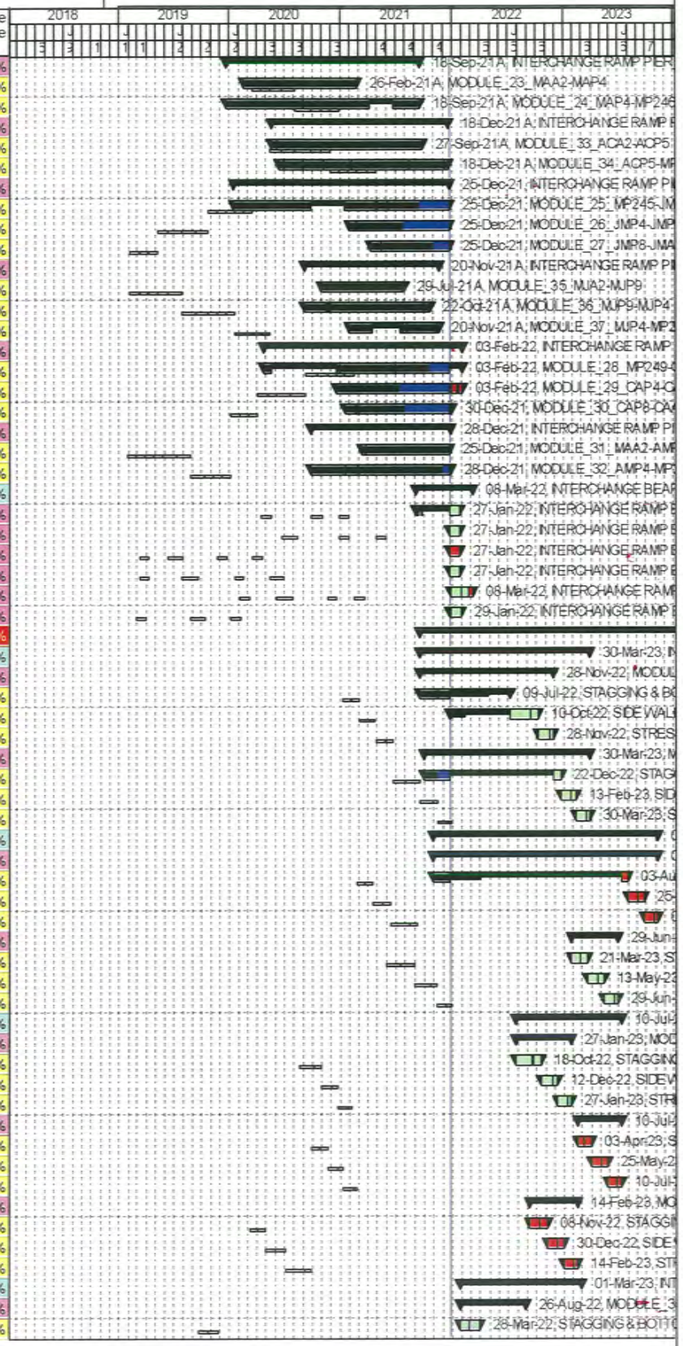
Date	Revision	Checked	Approved
25-Dec-21	R0		

MUMBAI TRANS HARBOUR LINK PROJECT CONSULTANT

MUMBAI TRANS HARBOUR LINK PROJECT (PACKAGE 2) CONSTRUCTION OF 7.807 KM LONG BRIDGE SECTION (CH 10+380 - CH 18+187) ACROSS THE MUMBAI BAY INCL SHIVAJI NAGAR 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
434		INTERCHANGE RAMP PIER_MA	169	18-Mar-20	29-Dec-20	24-Dec-19	18-Sep-21	100%	100%
435		MODULE_23_MAA2-MAP4	118	18-Mar-20	10-Aug-20	19-Feb-20	26-Feb-21	100%	100%
436		MODULE_24_MAP4-MP246	150	10-Aug-20	29-Dec-20	24-Dec-19	18-Sep-21	100%	100%
437		INTERCHANGE RAMP PIER_AC	249	16-May-20	27-Apr-21	19-May-20	18-Dec-21	100%	100%
438		MODULE_33_ACA2-ACP5	96	16-May-20	30-Nov-20	19-May-20	27-Sep-21	100%	100%
439		MODULE_34_ACP5-MP256	249	30-Nov-20	27-Apr-21	17-Jun-20	18-Dec-21	100%	100%
440		INTERCHANGE RAMP PIER_JM	138	08-Feb-19	18-Mar-20	15-Jan-20		100%	60.34%
441		MODULE_25_MP245-JMP4	122	22-Oct-19	18-Mar-20	15-Jan-20		100%	60%
442		MODULE_26_JMP4-JMP8	100	09-May-19	22-Oct-19	01-Feb-21		100%	50%
443		MODULE_27_JMP8-JMA2	63	08-Feb-19	08-May-19	12-Apr-21		100%	78.7%
444		INTERCHANGE RAMP PIER_MJ	234	08-Feb-19	16-May-20	07-Sep-20	20-Nov-21	100%	100%
445		MODULE_35_MJA2-MJP9	134	08-Feb-19	26-Jul-19	02-Nov-20	29-Jul-21	100%	100%
446		MODULE_36_MJP9-MJP4	145	27-Jul-19	18-Jan-20	07-Sep-20	22-Oct-21	100%	100%
447		MODULE_37_MJP4-MP252	100	18-Jan-20	16-May-20	02-Feb-21	20-Nov-21	100%	100%
448		INTERCHANGE RAMP PIER_CA	230	08-Jan-20	16-Feb-21	27-Apr-20		100%	60.34%
449		MODULE_28_MP249-CAP4	159	10-Sep-20	16-Feb-21	27-Apr-20		100%	60%
450		MODULE_29_CAP4-CAP8	91	06-Apr-20	10-Sep-20	19-Dec-20		100%	50%
451		MODULE_30_CAP8-CAA2	54	08-Jan-20	06-Apr-20	19-Jan-21		100%	78.7%
452		INTERCHANGE RAMP PIER_AM	268	29-Jan-19	08-Jan-20	26-Sep-20		100%	56.14%
453		MODULE_31_MAA2-AMP4	177	29-Jan-19	27-Aug-19	14-Mar-21		100%	53.24%
454		MODULE_32_AMP4-MP259	187	27-Aug-19	08-Jan-20	26-Sep-20		100%	60%
455		INTERCHANGE BEARING INSTALLATION	135	27-Feb-19	31-May-21	08-Sep-21		0%	0%
456		INTERCHANGE RAMP BEARING_MA	102	16-Apr-20	01-Feb-21	08-Sep-21		0%	0%
457		INTERCHANGE RAMP BEARING_AC	28	24-Jun-20	31-May-21			0%	0%
458		INTERCHANGE RAMP BEARING_JM	28	11-Mar-19	20-Apr-20			0%	0%
459		INTERCHANGE RAMP BEARING_MJ	28	11-Mar-19	30-Jun-20			0%	0%
460		INTERCHANGE RAMP BEARING_CA	59	06-Feb-20	22-Mar-21			0%	0%
461		INTERCHANGE RAMP BEARING_AM	30	27-Feb-19	10-Feb-20			0%	0%
462		INTERCHANGE SUPERSTRUCTURE INSTALLATION	632	20-Sep-19	15-Feb-22	18-Sep-21		97.82%	1.05%
463		INTERCHANGE BOX GIRDER INSTALLATION_MA	230	09-Jan-21	03-Jan-22	18-Sep-21		96.23%	9%
464		MODULE_23_MAA2-MAP6-MAP5-MAP4	125	09-Jan-21	21-Jun-21	18-Sep-21		100%	21%
465		STAGGING & BOTTOM SLAB	35	09-Jan-21	04-Mar-21	18-Sep-21		100%	70%
466		SIDE WALLS & TOP SLAB	31	05-Mar-21	26-Apr-21	22-Dec-21		100%	0%
467		STRESSING & DESTAGGING	40	27-Apr-21	21-Jun-21			100%	0%
468		MODULE_24_MAP4-MAP3-MAP2-MAP1-MP246	105	21-Jun-21	03-Jan-22	01-Oct-21		93.41%	0%
469		STAGGING & BOTTOM SLAB	39	21-Jun-21	20-Sep-21	01-Oct-21		100%	0%
470		SIDE WALLS & TOP SLAB	45	20-Sep-21	18-Nov-21			100%	0%
471		STRESSING & DESTAGGING	39	18-Nov-21	03-Jan-22			34.09%	0%
472		INTERCHANGE BOX GIRDER INSTALLATION_AC	245	27-Feb-21	27-Dec-21	01-Nov-21		99.52%	0%
473		MODULE_33_ACA2-ACP8-ACP7-ACP6-ACP5	132	27-Feb-21	08-Sep-21	01-Nov-21		100%	0%
474		STAGGING & BOTTOM SLAB	48	27-Feb-21	16-Apr-21	01-Nov-21		100%	0%
475		SIDE WALLS & TOP SLAB	45	17-Apr-21	15-Jun-21			100%	0%
476		STRESSING & DESTAGGING	39	15-Jun-21	08-Sep-21			100%	0%
477		MODULE_34_ACP5-ACP4-ACP3-ACP2-ACP1-MP256	130	31-May-21	27-Dec-21			99.14%	0%
478		STAGGING & BOTTOM SLAB	45	31-May-21	03-Sep-21			100%	0%
479		SIDE WALLS & TOP SLAB	45	03-Sep-21	10-Nov-21			100%	0%
480		STRESSING & DESTAGGING	40	10-Nov-21	27-Dec-21			91.42%	0%
481		INTERCHANGE BOX GIRDER INSTALLATION_JM	270	11-Mar-20	26-Feb-21			100%	0%
482		MODULE_25_MP245-JMP1-JMP2-JMP3-JMP4	130	19-Aug-20	09-Feb-21			100%	0%
483		STAGGING & BOTTOM SLAB	45	19-Aug-20	30-Oct-20			100%	0%
484		SIDE WALLS & TOP SLAB	45	31-Oct-20	23-Dec-20			100%	0%
485		STRESSING & DESTAGGING	40	24-Dec-20	09-Feb-21			100%	0%
486		MODULE_26_JMP4-JMP5-JMP6-JMP7-JMP8	125	29-Sep-20	26-Feb-21			100%	0%
487		STAGGING & BOTTOM SLAB	41	29-Sep-20	19-Nov-20			100%	0%
488		SIDE WALLS & TOP SLAB	45	20-Nov-20	11-Jan-21			100%	0%
489		STRESSING & DESTAGGING	39	12-Jan-21	26-Feb-21			100%	0%
490		MODULE_27_JMP8-JMP9-JMP10-JMA2	125	11-Mar-20	29-Sep-20			100%	0%
491		STAGGING & BOTTOM SLAB	41	11-Mar-20	28-Apr-20			100%	0%
492		SIDE WALLS & TOP SLAB	45	28-Apr-20	04-Jul-20			100%	0%
493		STRESSING & DESTAGGING	39	04-Jul-20	29-Sep-20			100%	0%
494		INTERCHANGE BOX GIRDER INSTALLATION_MJ	290	20-Sep-19	08-Jan-21			100%	0%
495		MODULE_35_MJA2-MJP12-MJP11-MJP10-MJP9	145	20-Sep-19	16-Mar-20			100%	0%
496		STAGGING & BOTTOM SLAB	50	20-Sep-19	25-Nov-19			100%	0%



Project Baseline Bar | Actual Work | Remaining Work | Critical Remaining Work | Milestone | % Complete | Summary

EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY (MMRDA)

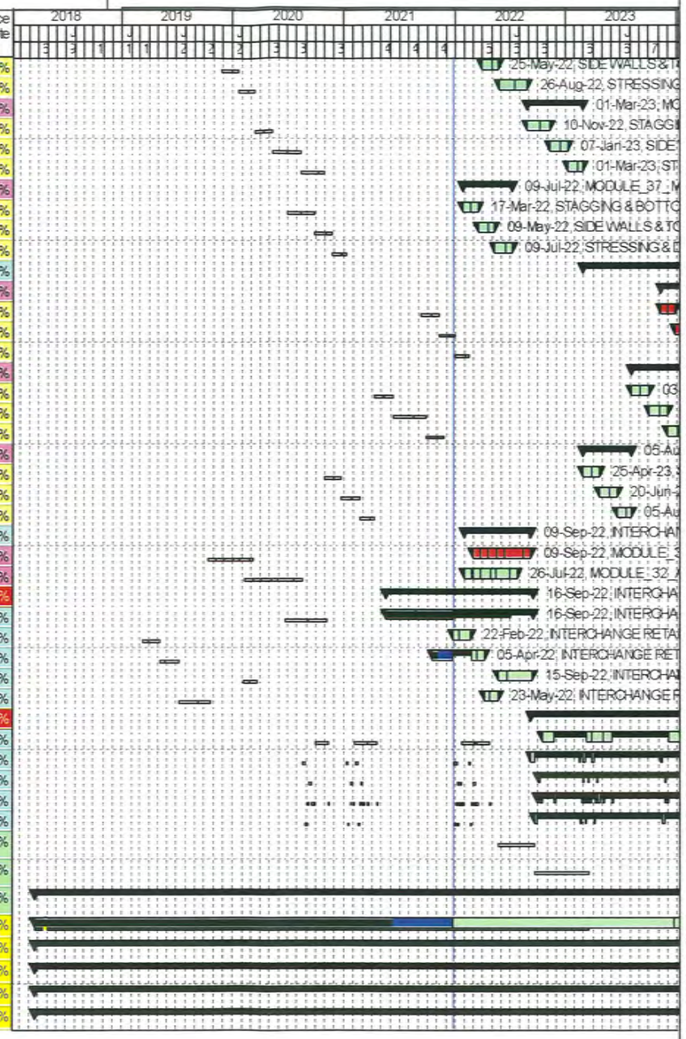
CONTRACTOR:
DAEWOO - TPL JV

Date	Revision	Checked	Approved
25-Dec-21	R0		

MUMBAI TRANS HARBOUR LINK PROJECT (PACKAGE 2) CONSTRUCTION OF 7.807 KM LONG BRIDGE SECTION (CH 10+380 - CH 18+187) ACROSS THE MUMBAI BAY INCL SHIVAJI NAGAR 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
497		SIDE WALLS & TOP SLAB	50	25-Nov-19	22-Jan-20			100%	0%
498		STRESSING & DESTAGGING	45	22-Jan-20	16-Mar-20			100%	0%
499		MODULE_36_MJP9-MJP8-MJP7-MJP6-MJP5-MJP4	145	16-Mar-20	29-Oct-20			100%	0%
500		STAGGING & BOTTOM SLAB	50	16-Mar-20	14-May-20			100%	0%
501		SIDE WALLS & TOP SLAB	50	14-May-20	17-Aug-20			100%	0%
502		STRESSING & DESTAGGING	45	17-Aug-20	29-Oct-20			100%	0%
503		MODULE_37_MJP4-MJP3-MJP2-MJP1-MP252	125	30-Jun-20	08-Jan-21			100%	0%
504		STAGGING & BOTTOM SLAB	41	30-Jun-20	29-Sep-20			100%	0%
505		SIDE WALLS & TOP SLAB	45	29-Sep-20	24-Nov-20			100%	0%
506		STRESSING & DESTAGGING	39	25-Nov-20	08-Jan-21			100%	0%
507		INTERCHANGE BOX GIRDER INSTALLATION_CA	342	30-Oct-20	15-Feb-22			90.91%	0%
508		MODULE_28_MP249-CAP1-CAP2-CAP3-CAP4	125	08-Sep-21	15-Feb-22			75%	0%
509		STAGGING & BOTTOM SLAB	41	08-Sep-21	08-Nov-21			100%	0%
510		SIDE WALLS & TOP SLAB	45	08-Nov-21	30-Dec-21			75%	0%
511		STRESSING & DESTAGGING	39	30-Dec-21	15-Feb-22			0%	0%
512		MODULE_29_CAP4-CAP5-CAP6-CAP7-CAP8	145	09-Apr-21	23-Nov-21			100%	0%
513		STAGGING & BOTTOM SLAB	50	09-Apr-21	11-Jun-21			100%	0%
514		SIDE WALLS & TOP SLAB	50	11-Jun-21	28-Sep-21			100%	0%
515		STRESSING & DESTAGGING	45	28-Sep-21	23-Nov-21			100%	0%
516		MODULE_30_CAP8-CAP9-CAP10-CAA2	135	30-Oct-20	06-Apr-21			100%	0%
517		STAGGING & BOTTOM SLAB	47	30-Oct-20	24-Dec-20			100%	0%
518		SIDE WALLS & TOP SLAB	48	25-Dec-20	19-Feb-21			100%	0%
519		STRESSING & DESTAGGING	40	20-Feb-21	08-Apr-21			100%	0%
520		INTERCHANGE BOX GIRDER INSTALLATION_AM	150	14-Oct-19	19-Aug-20			100%	0%
521		MODULE_31_AMA2-AMP8-AMP7-AMP6-AMP5-AMP4	125	14-Oct-19	11-Mar-20			100%	0%
522		MODULE_32_AMP4-AMP3-AMP2-AMP1-MP259	130	10-Feb-20	19-Aug-20			100%	0%
523		INTERCHANGE RETAINING STRUCTURE	165	11-Mar-19	06-Nov-20	15-May-21		100%	15.66%
524		INTERCHANGE RETAINING STRUCTURE_AC	69	24-Jun-20	06-Nov-20	15-May-21		100%	73.08%
525		INTERCHANGE RETAINING STRUCTURE_JM	50	11-Mar-19	08-May-19			100%	0%
526		INTERCHANGE RETAINING STRUCTURE_MJ	35	09-May-19	11-Jul-19	18-Oct-21		100%	5.23%
527		INTERCHANGE RETAINING STRUCTURE_CA	39	06-Feb-20	24-Mar-20			100%	0%
528		INTERCHANGE RETAINING STRUCTURE_AM	41	12-Jul-19	24-Oct-19			100%	0%
529		MISCELLANEOUS & FINISHING WORKS	541	19-Aug-20	28-Apr-22			50%	0%
530		EXPANSION JOINT	513	01-Oct-20	22-Apr-22			0%	0%
531		CRASH BARRIER & GURARD RAILS	485	19-Aug-20	21-Feb-22			50%	0%
532		WATER PROOFING	485	10-Sep-20	08-Mar-22			50%	0%
533		PAVEMENT	531	07-Sep-20	28-Apr-22			50%	0%
534		DRAINAGE WORKS	485	28-Aug-20	26-Feb-22			50%	0%
535		PROJECT HANDINGOVER	65	24-May-22	22-Sep-22			0%	0%
536		DEFECT LIABILITY PERIOD (DLP)	730	22-Sep-22	21-Sep-24			0%	0%
537		PRICE SCHEDULE	2574	23-Mar-18	21-Mar-23	23-Mar-18		85.79%	39.5%
538		SCHEDULE-1	2574	23-Mar-18	21-Mar-23	23-Mar-18		89.85%	85.03%
539		SCHEDULE-2	1644	23-Mar-18	22-Sep-22	23-Mar-18		83.49%	74%
540		SCHEDULE-3	1644	23-Mar-18	22-Sep-22	23-Mar-18		83.49%	63.17%
541		SCHEDULE-12	1644	23-Mar-18	22-Sep-22	23-Mar-18		83.49%	75.93%
542		SCHEDULE-13	1644	23-Mar-18	22-Sep-22	23-Mar-18		83.49%	0.28%



Project Baseline Bar · Actual Work · Remaining Work · Critical Remaining Work · Milestone · % Complete · Summary

EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY (MMRDA)

CONTRACTOR:
DAEWOO - TPL JV

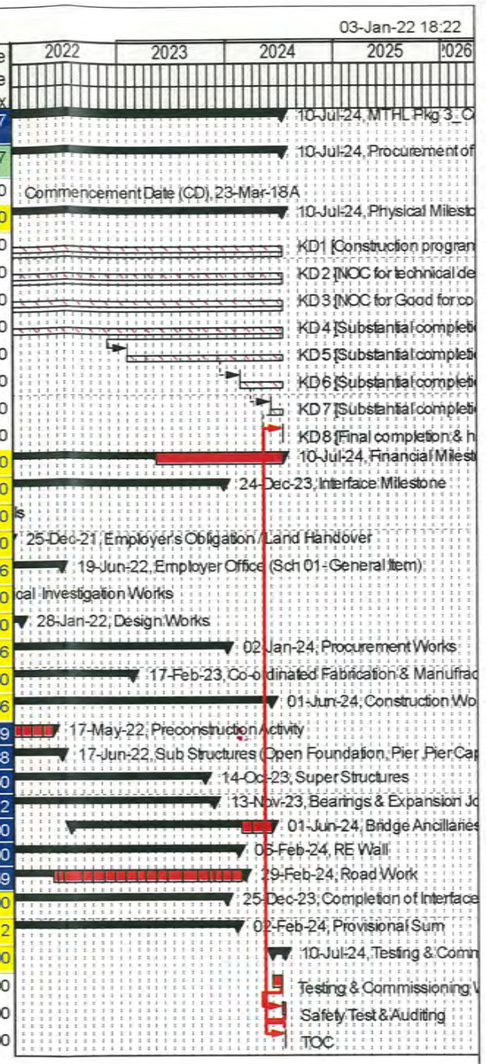
Date	Revision	Checked	Approved
25-Dec-21	R0		

MUMBAI TRANS HARBOUR LINK PROJECT GENERAL COLLATERAL

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

Project : MTHL 3- Baseline Construction Schedule | Classic Schedule Layout | 03-Jan-22 18:22

Activity ID	Activity Name	Original Duration	BL1 Start	BL1 Finish	Start	Finish	Activity % complete	Schedule % Complete	Performance % Complete	Earned Value Cost	Planned Value Cost	Schedule Performance Index
MTHL Pkg 3_Construction Schedule Dec'21		1783	23-Mar-18	21-Sep-21	23-Mar-18A	10-Jul-24		100%	66.84%	Rs6,976,392,543	Rs10,437,570,645	0.67
Procurement of Mumbai Trans Harbour Link Project (		1783	23-Mar-18	21-Sep-21	23-Mar-18A	10-Jul-24		100%	66.84%	Rs6,976,392,543	Rs10,437,570,645	0.67
t	Commencement Date (CD)	0			23-Mar-18A		100%	0%	100%	Rs0	Rs0	0.00
Physical Milestones		958	18-Sep-18	21-Sep-21	31-Jul-19A	10-Jul-24		0%	0%	Rs0	Rs0	0.00
KD1001	KD1 [Construction programme, completion of Soil Investigatic	0	18-Sep-18	18-Sep-18	31-Jul-19A	31-Jul-19A	100%	100%	100%	Rs0	Rs0	0.00
KD1002	KD2 [NOC for technical design doc & drawing for foundation,	0	17-Dec-18	17-Dec-18	31-Jan-20A	31-Jan-20A	100%	100%	100%	Rs0	Rs0	0.00
KD1003	KD3 [NOC for Good for construction drawing for foundation, S	0	15-Jun-19	15-Jun-19	22-Mar-20A	22-Mar-20A	100%	100%	100%	Rs0	Rs0	0.00
KD1004	KD4 [Substantial completion of foundation, piles (if applicable	0	21-Mar-20	21-Mar-20	31-May-20A	31-May-20A	100%	100%	100%	Rs0	Rs0	0.00
KD1005	KD5 [Substantial completion of pile caps (if applicable), piers	0	19-Sep-20	19-Sep-20	01-Feb-23	01-Feb-23	0%	100%	0%	Rs0	Rs0	0.00
KD1006	KD6 [Substantial completion superstructure (PC/CIS/SS) & as	0	20-Mar-21	20-Mar-21	17-Feb-24	17-Feb-24	0%	100%	0%	Rs0	Rs0	0.00
KD1007	KD7 [Substantial completion of kerb/traffic signs, Marking & n	0	24-Jul-21	24-Jul-21	01-Jun-24	01-Jun-24	0%	100%	0%	Rs0	Rs0	0.00
KD1008	KD8 [Final completion & handing over]	0	21-Sep-21	21-Sep-21	10-Jul-24	10-Jul-24	0%	100%	0%	Rs0	Rs0	0.00
Financial Milestone		1781	18-Sep-18	21-Sep-21	23-Mar-18A	10-Jul-24		0%	0%	Rs0	Rs0	0.00
Interface Milestone		1063	17-Dec-18	06-Mar-21	17-Sep-18A	24-Dec-23		0%	0%	Rs0	Rs0	0.00
Document Submittals		45	23-Mar-18	06-May-18	06-Apr-18A	30-Sep-19A		100%	100%	Rs74,992,895	Rs74,992,895	1.00
Employer's Obligation / Land Handover		151	19-Apr-18	18-Sep-18	23-Mar-18A	25-Dec-21		0%	0%	Rs0	Rs0	0.00
Employer Office (Sch 01-General Item)		797	20-Aug-18	16-Sep-21	25-Jan-19A	19-Jun-22		100%	96.26%	Rs137,031,195	Rs142,351,995	0.96
Survey & Geotechnical Investigation Works		346	19-Apr-18	22-Oct-18	19-Apr-18A	30-Sep-19A		100%	100%	Rs242,300,945	Rs242,300,945	1.00
Design Works		729	07-May-18	14-Jun-19	25-Apr-18A	28-Jan-22		100%	99.62%	Rs158,521,395	Rs159,123,270	1.00
Procurement Works		1308	12-Sep-18	08-Jun-21	15-Feb-19A	02-Jan-24		100%	85.9%	Rs1,447,560,584	Rs1,685,124,737	0.86
Co-ordinated Fabrication & Manufacturing Works		1036	27-Sep-18	10-Feb-20	21-Feb-19A	17-Feb-23		100%	50%	Rs195,303,446	Rs390,606,723	0.50
Construction Works		1544	20-Jul-18	23-Jul-21	26-Sep-18A	01-Jun-24		100%	65.65%	Rs4,637,176,610	Rs7,063,471,551	0.66
Preconstruction Activity		962	20-Jul-18	01-Jul-19	26-Sep-18A	17-May-22		100%	79.03%	Rs447	Rs565	0.79
Sub Structures (Open Foundation, Pier ,Pier Cap)		1016	08-Dec-18	07-Nov-20	05-Dec-18A	17-Jun-22		100%	87.87%	Rs2,981,387,376	Rs3,392,806,949	0.88
Super Structures		998	27-Feb-19	12-Apr-21	11-Sep-19A	14-Oct-23		100%	50.46%	Rs710,950,756	Rs1,408,931,773	0.50
Bearings & Expansion Joints		376	03-Aug-20	12-Apr-21	11-Nov-20A	13-Nov-23		100%	11.88%	Rs1,242,264	Rs10,454,697	0.12
Bridge Ancillaries & Miscellaneous Item		537	12-Aug-20	23-Jul-21	18-Jul-22	01-Jun-24		100%	0%	Rs0	Rs180,922,099	0.00
RE Wall		582	27-Feb-19	18-Feb-21	01-Nov-21A	06-Feb-24		100%	0.2%	Rs902,653	Rs461,687,488	0.00
Road Work		1243	20-Apr-19	18-May-21	16-Feb-19A	29-Feb-24		100%	58.6%	Rs942,693,114	Rs1,608,667,980	0.59
Completion of Interface Activity		565	19-Sep-20	06-Mar-21	25-Dec-21	25-Dec-23		0%	0%	Rs0	Rs0	0.00
Provisional Sum		1162	23-Apr-18	23-Aug-21	30-Nov-18A	02-Feb-24		100%	12.29%	Rs83,505,472	Rs679,598,496	0.12
Testing & Commissioning Works		33	26-Jul-21	20-Sep-21	01-Jun-24	10-Jul-24		100%	0%	Rs0	Rs33	0.00
ToC1000	Testing & Commissioning Works	25	26-Jul-21	11-Sep-21	01-Jun-24	01-Jul-24	0%	100%	0%	Rs0	Rs25	0.00
ToC1001	Safety Test & Auditing	6	13-Sep-21	18-Sep-21	01-Jul-24	08-Jul-24	0%	100%	0%	Rs0	Rs6	0.00
ToC1002	TOC	2	19-Sep-21	20-Sep-21	08-Jul-24	10-Jul-24	0%	100%	0%	Rs0	Rs2	0.00



Actual Level of Effort | Actual Work | Remaining Work | Critical Remaining Work | Milestone | summary

Baseline Schedule

Attachment 9- Project Progress Photos for December 2021

Package 1- Site Progress Photos

Photo No. 1: Erection of segment at Span MP47-48 south

Photo No. 2: Erection of segment at MP04-05 south

Photo No. 3: A view of the erected spans at the intertidal area (MP 11 to MP 50) looking towards Navi Mumbai

Photo No. 4: A view of the Erected Spans at the Intertidal area (MP 40 to MP-05) looking towards Navi Mumbai

Photo No. 5: Erection of LG-05 at MP53-54 South in progress

Photo No. 6: FP-03 Pier cap reinforcement activity in progress

Photo No.7: Stressing activity for Interchange LPS Ramp in progress

Photo No. 8: OSD04-N Assembly ready for loadout – Assembly Yard

Photo No. 9: Concreting for Pier MP126 South in progress

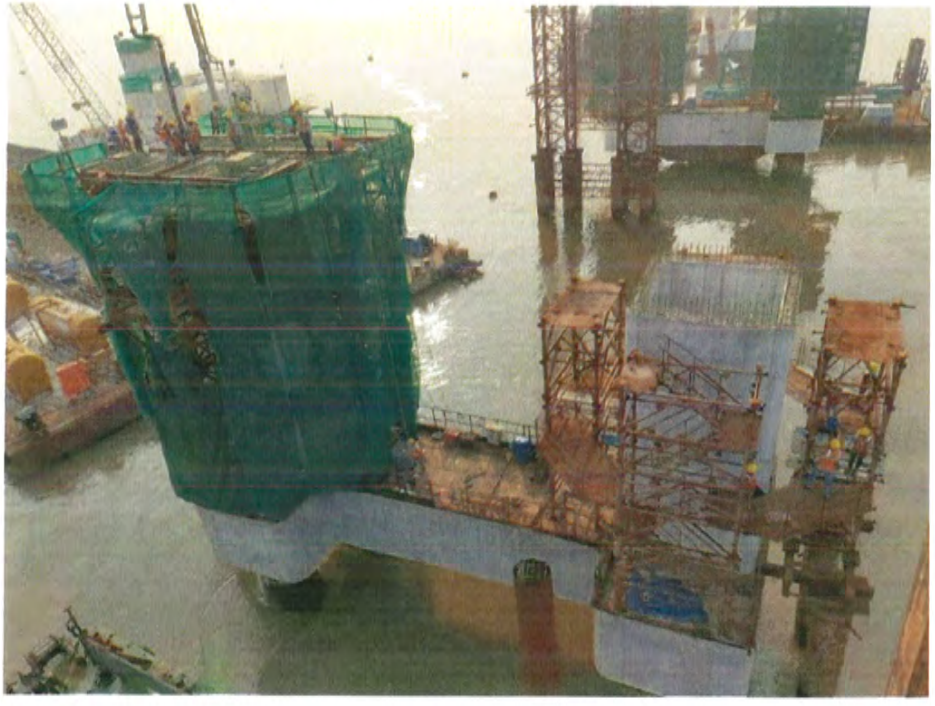


Photo No. 10: Concreting of Pier Cap – MP 148 South in progress

Photo No. 11: View of LG-03 (erection of span MP87-88)

Photo No. 12: OSD barge at MP130 (Trussell erection) in progress

Package 2 – Site Progress Photos

Photo No. 1: LG-1 Segment gluing at Span MP 215-216 RHS in progress

Photo No. 2: Load-out of the 1st OSD Span on the barge

Photo No. 3: OSD lifted by Strand Jack for Load Test at Karanja Port in progress

Photo No. 4: Sonic Tube Testing in progress at MP 170 RHS in progress

Photo No. 5: Pile boring at MP 173 RHS in progress

Photo No. 6: OSD Pier Cap reinforcement tying at MP 180 LHS and RHS in progress

Photo No. 7: Pile cap formwork alignment at MP 176 RHS in progress

Photo No. 8: Cast in situ bottom slab concreting at Ramp MA in progress

Photo No. 9: Pier Head Segment concreting at MP 258 RHS

Photo No. 10: Pile cap concreting at MP 169 LHS in progress

Photo No. 11: PC Shell wall reinforcement tying at MP 185 RHS in progress

Photo No. 12: Pier final lift concreting at MP 187 LHS in progress

Package 3 – Site Progress Photos

Photo No. 1: Voided slab MPP 9-8 concrete pouring in progress

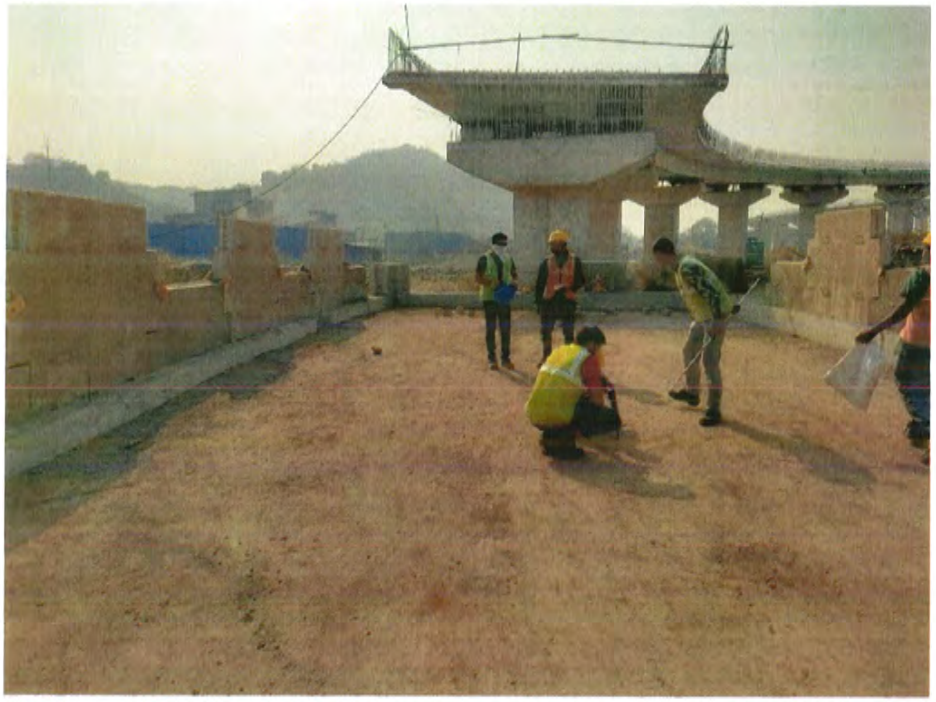


Photo No. 2: MJP Loop Chirle RE wall work in progress

Photo No. 3: LMP 276 Portal Piercap reinforcement in progress

Photo No. 4: RMP 271 Pier 3rd lift Reinforcement work in progress

Photo No. 5: LP-24 foundation concrete pouring work in progress

Photo No. 6: LMP 273 Foundation completed

Photo No. 7: LMP 271 Foundation completed

Photo No. 8: RP 24C pier 1st lift 6.5m concrete pouring work in progress

Photo No. 9: RP 22 Portal concrete pouring work in progress

Photo No. 10: ROB Girder Structure Steel Painting at Global Steel Company in progress

Photo No. 11: Span LP 22-23 Staging work for Cast-in-situ 3 Cell box girder in progress

Photo No. 12: Span LMP 282-283, 1st stage stressing work in progress