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MMRDA

Mumbai Metropolitan Region Development Authority

Mumbai Trans Harbour Link Project

Quarterly Progress Report - No.17

(From 1st April 2021 to 30th June 2021)

Mumbai Trans Harbour Link Project
Quarterly Progress Report No. 17
1st April 2021 to 30th June 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

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DOC NO.	17	DATE OF ISSUE	30/07/2021
DOC TITLE	Quarterly Progress Report No. 17		

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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
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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

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1.0 PROJECT DESCRIPTION

1.1 Project Objective

Original:

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

Actual *(P/R, PCR)*

There is no change in the Project Objective.

1.2 Necessity of the Project

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

Benefits from MTHL Project

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

Necessity of the Project

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

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

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

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

Actual *(P/R, PCR)*

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

1.3 Rationale of the Project Design

- Timing, Scale, Technology of the Project:

Demand Analysis

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 30th June 2021
1) Completion of Land Acquisition and Resettlement	March 2019	September 2021
2) Consulting Services		
a) Selection of Consultant	May – December 2016	May – December 2016
b) Consultancy Works	December 2016 – September 2024	December 2016 – September 2024
3) Selection of Contractor		
Package-1, Package-2 & Package-3 (Civil)		
a) Pre-Qualification Process	May – December 2016	May – December 2016
b) Main Bidding	January – December 2017	January – December 2017
c) JICA's Concurrence of Contract	February-2018	February-2018
Package-4 (ITS)		
a) Pre-Qualification Process	January 2019 – May 2019	January 2020 – May 2020
b) Main Bidding	June 2019 – September 2020	June 2020 – September 2021
4) Civil Construction		
Package-1 and Package-2	March 2018 – September 2022	March 2018 – September 2022
Package-3	March 2018 – September 2021	March 2018 – September 2021
Package-4	October 2020 – September 2022	November 2021 – July 2023
5) Defect Liability Period		
Package-1, Package-2 and Package-4	October 2022 – September 2024	October 2022 – September 2024
Package-3	October 2021 – September 2023	October 2021 – September 2023
6) Commencement of Toll Collection	September -2022	September -2022
7) Selection of O&M Organization	October 2020 – September 2021	October 2021 – September 2022

Attachment 6, 7 & 8: Package wise construction schedules (progress) updated at the end of 1st Quarter (April-May-June 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	13,039	13,039	-	25,180	25,180		49,670	49,670	
Package-2	13,214	13,214	-	17,261	17,261		38,849	38,849	
Package-3	623	623	-	4,690	4,690		7,265	7,265	
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*	-			6,709		6,709	10,532		10,532
Administration Cost	-			3,909		3,909	6,138		6,138
GST	-			8,724		8,724	13,697		13,697
Import Tax	-			-			-		-
Interest during construction	-			-			-		-
Front End Fee	-			-			-		-
Total	**27,129**	**27,129**	**-**	**67,035**	**47,497**	**19,538**	**1,27,573**	**96,898**	**30,675**

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

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

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

(All Figures are in JPY mil)

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

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

(All Figures are in JPY mil)

Cost Breakdown	Total	JICA Portion				Others (MMRDA Portion)
		Tranche I	Tranche II	Tranche III	Sub Total	
FY 2017	13,738	9,232	-	-	9,232	4,506
FY 2018	26,813	21,695	-	-	21,695	5,118
FY 2019	40,410	31,014	-	-	31,014	9,396
FY 2020	35,540	23,885	-	-	23,885	11,655
FY 2021	11,072	11,072	-	-	11,072	
FY 2022						
FY 2023						
FY 2024						
Total	**1,27,573**	**96,898**	**-**	**-**	**96,898**	**30,675**

(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:

April 2021:

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

i) Package-1: IPC-39 80% Ad-hoc.

ii) Package-2: IPC-32 20% Detailed Verification and IPC-33 80% Ad-hoc.

iii) Package-3: IPC-29 20% Detailed Verification and IPC-31 & IPC-32 80% Ad-hoc.

2 GC has prepared and submitted a total reimbursement claim of 8695.5 million JPY to MMRDA / JICA in April 2021.

May 2021:

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

i) Package-1: IPC-38 20% Detailed Verification and IPC-40 80% Ad-hoc.

ii) Package-2: IPC-34 80% Ad-hoc.

iii) Package-3: IPC-30 20% Detailed Verification and IPC-33 80% Ad-hoc.

2 GC has prepared and submitted a total reimbursement claim of 659.72 million JPY to MMRDA / JICA in May 2021.

June 2021:

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

i) Package-1: IPC-39 20% Detailed Verification and IPC-40 & IPC-41 80% Ad-hoc.

ii) Package-2: IPC-33 & IPC-34 20% Detailed Verification and IPC-35 80% Ad-hoc.

iii) Package-3: IPC-31 20% Detailed Verification and IPC-34 80% Ad-hoc.

2 GC has prepared and submitted a total reimbursement claim of 3444.09 million JPY to MMRDA / JICA in June 2021.

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

Contractor's Progress:

Package-1 Physical Progress till 30th June 2021

S. No	Activity	Total Scope	Unit	Cumulative Achieved Works	% of Work done Against the Total Scope	Remarks
1	**Temporary Access Bridge**					
1.1	Bridge Deck	2953	Rmt	2953	100%	
2	**Test Pile**					
2.1	Test Piles	5	No.	5	100%	
3	**Permanent Bridge Works - Land/ Interchange Zone**					
3.1	Piles	524	No.	354	67.6%	
3.2	Pile Caps	158	No.	63	39.9%	
3.3	Piers	228	No.	114	50.0%	
3.4	Pier Caps	215	No.	112	52.1%	
4	**Permanent Bridge Works - Intertidal Zone**					
4.1	Piles	312	No.	286	91.7%	
4.2	Pile Caps	76	No.	59	77.6%	
4.3	Piers	148	No.	111	75.0%	
4.4	Pier Caps	148	No.	106	71.6%	
5	**Permanent Bridge Works - Marine Zone**					
5.1	Piles	403	No.	403	100.0%	
5.2	Pile Caps	79	No.	63	79.7%	
5.3	Piers	160	No.	68	42.5%	
5.4	Pier Caps	160	No.	63	39.4%	
6	**Permanent Bridge Works - Total**					
6.1	**Piles**	**1239**	**No.**	**1043**	**84.2%**	
6.2	**Pile Caps**	**313**	**No.**	**185**	**59.1%**	
6.3	**Piers**	**536**	**No.**	**293**	**54.7%**	
6.4	**Pier Caps**	**523**	**No.**	**281**	**53.7%**	
7	**Precast Segments**					
7.1	**Segment Casting**	**6713**	**No.**	**2302**	**34.3%**	
7.2	**Segment Erection**	**446**	**Spans**	**76**	**17.0%**	
8	**OSD Structural Steel**					
8.1	**Fabrication**	**4666**	**Rmt**	**3142**	**67.3%**	
8.2	**Erection**	**4666**	**Rmt**	**0**	**0%**	

Package-2 Physical Progress till 30th June 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	113	No.	98	86.72%	
3.3	Pier Caps	104	No.	42	40.38%	
3.4	Portal Beams- Land	6	No.	5	83.33%	
3.5	Pier Head Segments -Land	42	No.	18	42.85%	
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.	12	66.67%	
4.5	Pier Head Segments	54	No.	28	51.85%	
5	**Permanent Bridge Works - Marine Zone**					
5.1	Piles	512	No.	430	83.98%	
5.2	Pile Caps	120	No.	82	68.33%	
5.3	Piers	120	No.	29	24.16%	
5.4	Pier Caps	48	No.	1	2.08%	
5.5	Pier Head Segments	72	No.	0	0%	
6	**Permanent Bridge Works - Total**					
6.1	**Open Foundation**	**113**	**No.**	**113**	**100%**	
6.2	**Piles**	**792**	**No.**	**710**	**89.64%**	
6.3	**Pile Caps**	**192**	**No.**	**154**	**80.20%**	
6.4	**Piers**	**305**	**No.**	**199**	**65.24%**	
6.5	**Pier Caps/ Portal Beams**	**176**	**No.**	**60**	**34.09%**	
6.6	**Pier Head Segments**	**168**	**No.**	**46**	**27.46%**	
7	**Precast Segments**					
7.1	**Segment Casting**	**3142**	**No.**	**724**	**23.04%**	
7.2	**Segment Erection**	**208**	**Spans**	**14**	**6.73%**	
8	**OSD Structural Steel**					
8.1	**Fabrication**	**34726**	**MT**	**33680.5**	**96.99%**	
8.2	**Erection**	**34726**	**MT**	**0**	**0%**	

Package-3 Physical Progress till 30th June 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.	186	84.93%	
1.2	Pile Foundations	6	No.	4	66.67%	
1.3	Piers	238	No.	158	66.38%	
1.4	Pier Caps	187	No.	121	64.70%	
1.5	Segment Casting	750	No.	525	70%	
1.6	Segment Erection	53	Span	8	15.09%	
1.7	Cast in-situ Slab	114	Span	23	20.17%	

Package-4 (ITS) Progress till 30th June 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.

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 April to June 2021	Cumulative
1	Total Man Hours Since Inception	4027380	30278654
2	Number of Man-Hours (Accident-Free Man-Hours)	3411156	828636
3	Number of Man-Days	503423	3784829
4	Number of Reportable Fatal Accidents	3	5
5	Number of Non-Fatal Accidents	0	2
6	Number of Near Miss Incidents	6	88
7	Number of First Aid Cases	20	200
8	Number of Dangerous Occurrences	0	1
9	Number of Reportable Sick Cases	0	0
10	Number of Man-Hours Lost	144000	240576
11	Number of Man-Days Lost	18000	30072
12	Number of Reportable Accidents per 100,000 Man-Hours Worked	3	7
13	Number of Inspections done for Offices & Sites	479	2669
14	Number of Training/ Induction done for Offices & Sites	361	1237
15	Daily Average Manpower (Including all Workmen & Staff) for the Month	10495	29850
16	Details of Safety Committee meetings	3	32
17	No. of toolbox talks	11447	75589
18	No. of critical excavations.	8	43
19	Pre-employment Medical check-up	3089	27825
20	No. of Safety Walk down	24	196
21	No. of Safety Inductions completed	3089	27825

Package-2 Safety Report

Sr. No	Description	From April to June 2021	Cumulative
1	Total Man Hours Since Inception	15,53,024	1,45,70,092
2	Number of Man-Hours (Accident-Free Man-Hours)	12,07,019	4,08,375
3	Number of Man-Days	2,02,395	13,25,901
4	Number of Reportable Fatal Accidents	0	0
5	Number of Non-Fatal Accidents	1	4
6	Number of Near Miss Incidents	44	161
7	Number of First Aid Cases	8	117
8	Number of Dangerous Occurrences	0	9
9	Number of Reportable Sick Cases	0	1
10	Number of Man-Hours Lost	120	1,044
11	Number of Man-Days Lost	15	112
12	Number of Reportable Accidents per 100,000 Man-Hours Worked	1	4
13	Number of Inspections done for Offices & Sites	76	924
14	Number of Training/ Induction done for Offices & Sites	62	642
15	Daily Average Manpower (Including all Workmen & Staff) for the Month	7,995	1167
16	Details of Safety Committee meetings	3	36
17	No. of toolbox talks	1,016	6,540
18	No. of critical excavations.	0	0
19	Pre-employment Medical check-up	796	11,518
20	No. of Safety Walk down	11	118
21	No. of Safety Inductions completed	784	11,795

Package-3 Safety Report

Sr. No	Description	From April to June 2021	Cumulative
1	Total Man Hours Since Inception	4,36,546	3115583
2	Number of Man-Hours (Accident-Free Man-Hours)	4,36,546	1015234
3	Number of Man-Days	54,568	389448
4	Number of Reportable Fatal Accidents	0	0
5	Number of Non-Fatal Accidents	0	2
6	Number of Near Miss Incidents	3	15
7	Number of First Aid Cases	8	77
8	Number of Dangerous Occurrences	0	0
9	Number of Reportable Sick Cases	0	0
10	Number of Man-Hours Lost	688	2320
11	Number of Man-Days Lost	86	290
12	Number of Reportable Accidents per 100,000 Man-Hours Worked	0	0.064
13	Number of Inspections done for Offices & Sites	46	351
14	Number of Training/ Induction done for Offices & Sites	24	198
15	Daily Average Manpower (Including all Workmen & Staff) for the Month	1,292	9423
16	Details of Safety Committee meetings	3	32
17	No. of toolbox talks	602	4964
18	No. of critical excavations.	0	3
19	Pre-employment Medical check-up	532	5656
20	No. of Safety Walk down	12	121
21	No. of Safety Inductions completed	532	5656

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	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)
as a part of Progress Status Report (PSR) by filling in the Reporting Form of Environmental Monitoring Result. **(Attachment 2-4).** After completion of the construction, EMoP shall be implemented by MMRDA, and the results shall be submitted to the JICA India Office semi-annually until two years after complementation of construction. The required amount of estimated environmental monitoring budget is borne by MMRDA.	
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. 17 is submitted for the period of 1st April to 30th June 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)

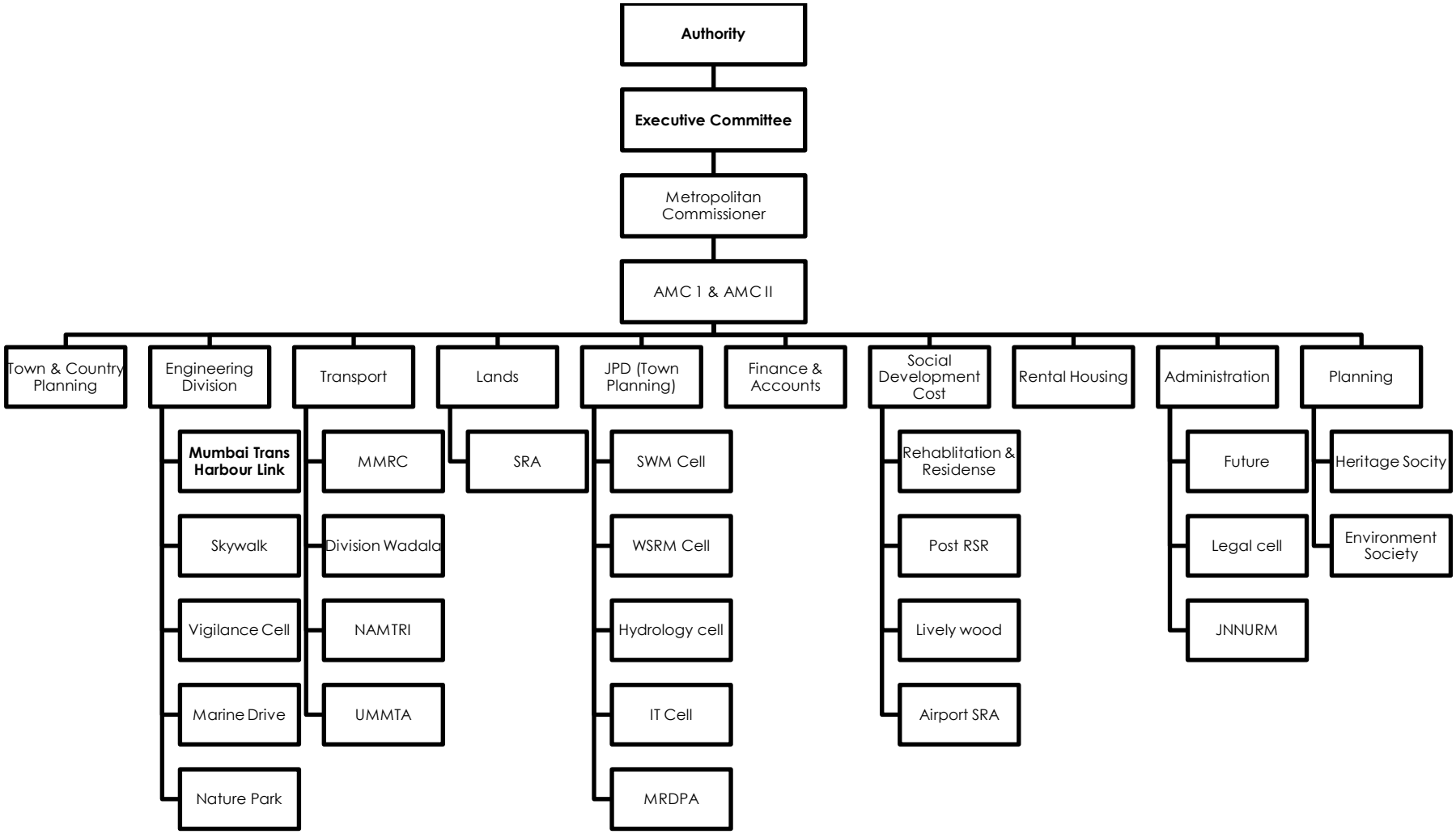
5.3 Lessons Learnt and Recommendations

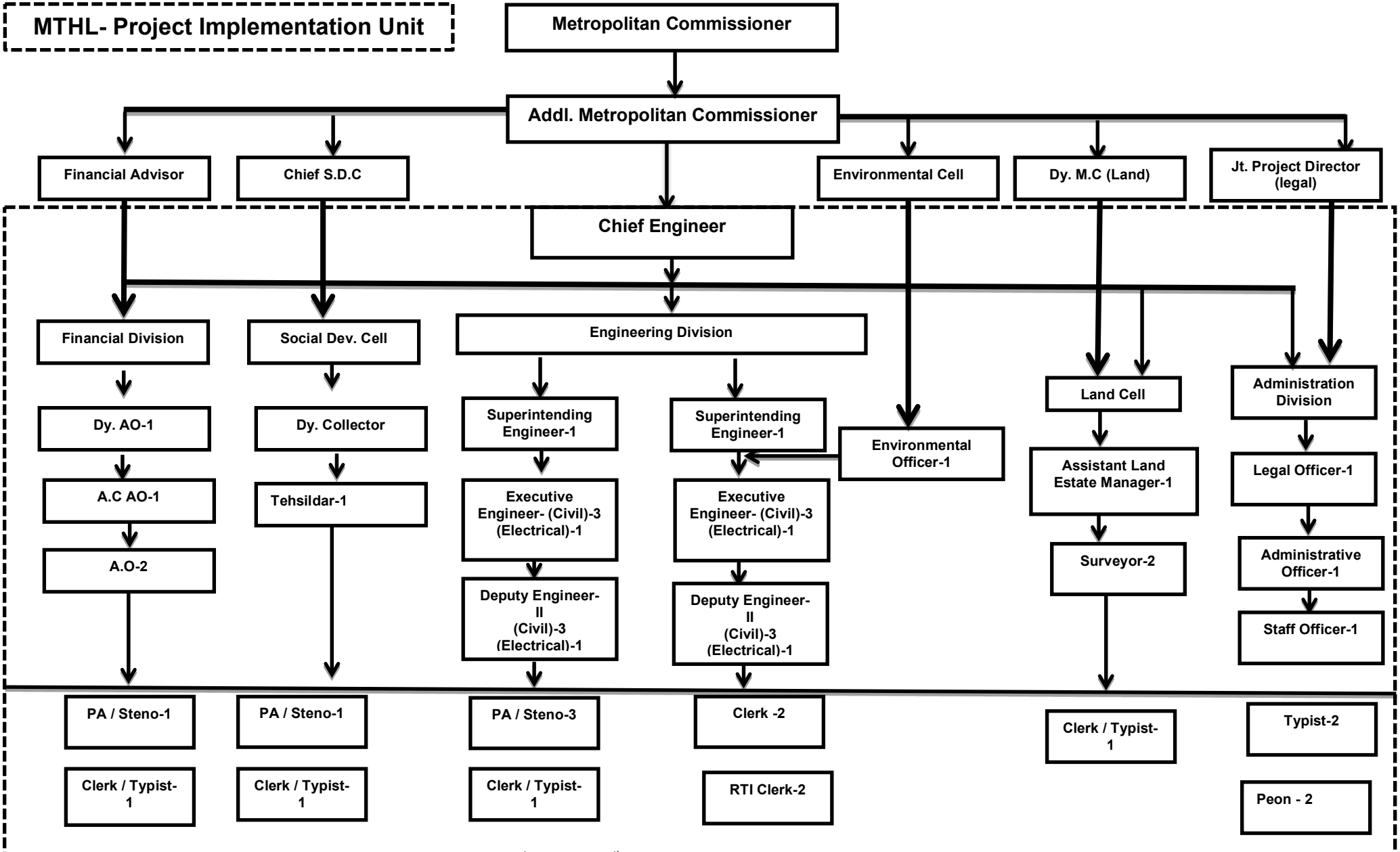
Please raise any lessons learned from the project experience, which might be valuable for the future JICA assistance or similar type of projects, as well as any recommendations, which might be beneficial for better realization of the project effect, impact and assurance of sustainability.

(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
A.C AO-1
A.O-2
Dy. Collector
Tehsildar-1
Superintending Engineer-1
Executive Engineer- (Civil)-3 (Electrical)-1
Deputy Engineer-II (Civil)-3 (Electrical)-1
Superintending Engineer-1
Executive Engineer- (Civil)-3 (Electrical)-1
Deputy Engineer-II (Civil)-3 (Electrical)-1
Environmental Officer-1
Assistant Land Estate Manager-1
Surveyor-2
Legal Officer-1
Administrative Officer-1
Staff Officer-1
PA / Steno-1
Clerk / Typist-1
PA / Steno-1
Clerk / Typist-1
PA / Steno-3
Clerk / Typist-1
Clerk -2
RTI Clerk-2
Clerk / Typist-1
Typist-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	1. Muck: 1 Time / Year 2. Sediments: 4 Times / Year	150,000	1,500,000	150,000	100,000	1,750,000	Soil Pollution Standard in India (MOEF)	
					2. Nhava temporary bridge & casting yard in Gavhan for package II							· Cd: 0.01mg/l	
					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						· 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	Fortnightly	150,000	54,000	150,000	369,000	573,000	**-Construction Noise; 85dB(A)**	
					2. Nhava temporary bridge & casting yard in Gavhan for package II	2 Times / Year						**-Ambient Noise Standards in India (dB (A) $_{Leq}$)**	
					3. Gavhan & Chirle for package III	Fortnightly						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

1. Environmental Monitoring during Construction for 4.5 years

Monitoring Period - April to June 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	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	6	BDL	10		
						2. NO_2: 80μg/m^3	37	27	23		
						3. PM_{10}: 100μg/m^3	145	92	61		
						4. $PM_{2.5}$: 60μg/m^3	43	34	29		
						5.CO:02mg/m3	1.4	1.4	0.61		
						6.VOCs	1.40		3.35		
	2	Water pollution	pH, BOD, DO, Turbidity and O&G	1. Sewri & Sewri bay area for package I	Quarterly	**Marine water quality Standards – Class SW-IV Harbour Waters (MPCB)**	**Zone I**	**Zone II**	**Zone III**		
				2. Nhava temporary bridge & casting yard in Gavhan for package II	4 Times / Year	1. pH : 6.5-9	7.3	7.4	Not applicable		
				3. Gavhan & Chirle for package III	Not applicable	2. DO: 3 mg/l	5	6.3	Not applicable		
						3. Turbidity: 30 NTU	12.4	14.8	Not applicable		
						4. BOD: 5 mg/l	2.9	BDL	Not applicable		
						5. O & G: 10 mg/l	BDL		Not applicable		
						6.COD	18.3	12	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	6909.7 m3	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 treel (ha) total	192 Tons weight of cut wood		In April-June 2021 - 4 Trees are cut		Both of forest and CIDCO area (234+75)= 309
						Generated domestic waste (t/month) total	6.35 T for the quarter	3.5 T/quarter. It is disposed through CIDCO daily.	1.74 T for the quarter		
						Confirmation of adequate disposal (visualt survey)					
	4	Soil Contamination/sedimentation	Heavy Metals & Oil & Grease	1. Sewri & Sewri bay area for package I	1. Muck: 1 Time / Year 2. Sediments: 4 Times / Year	**Soil Pollution Standard in India (MOEF)**	Sediment sample at Sewri	Muck Testing Done on March 2021 and Reports submitted to GC	**NA**		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			
				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 phosphorus: not detected		10.5			
						4. lead: 0.01mg/l		0.13	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
						5. chromium (VI): 0.05mg/l		BDL			
						6. arsenic: 0.01mg/l or 15mg/kg (agri-land soil)		BDL			
						7. total mercury: 0.005mg/l		BDL			
						8. alkyl mercury: not detected					
						9. PCBs: not detected		BDL			
						10. copper: 125mg/kg (only paddy field soil)					
						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			

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 - April to June 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.

						17. 1,1,2-trichloroethane: 0.006 mg/l		BDL			
						18. trichloroethylene: 0.03mg/l		BDL			
						19. tetrachloroethylene: 0.01mg/l		BDL			
						20. 1,3-dichloropropene: 0.002mg/l		BDL			
						21. thiuram: 0.006mg/l		BDL			
						22. simazine: 0.003mg/l		BDL			
						23. thiobencarb: 0.02mg/l		BDL			
						24. benzene: 0.01mg/l		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)**	**Chirle (pacakge-III) Commercial area**	
				2. Nhava temporary bridge & casting yard in Gavhan for package II	2 Times / Year	Day time : 6-22 hr (continious) dB(A)	70	70.7	66.8	54.4	
				3. Gavhan & Chirle for package III	Fortnightly	Night time: 22-6 hr (continious) dB(A)	63	66	65.3	49.6	
						(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)					Kindly check the letter No.Ref No. Mthl/ P3/L&T/GC/LT/HSE-2226/2020 dated on 12.12.2020
						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			There is no reference standard in India for Vibration monitoring in marine area. GC has confirmed that vibration monitoring is not required for the project.
						Night time: 22-6 hr (continious)					
						Note (standard values in Not construction area)					
						1. Commercial /Industrial Area					
						Day Time: 70 (7-20hr)					
						Night Time: 65 (20-7hr)					
			1.Monitoring of mudflat conditions including fauna-flora 2. Monitoring of Cutting Tree and replantation/transplation	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			N/A	N/A	
						(1) Number of species of bird					
						(2) Number of species of fish					
						(3) Estimated number of Flamingo					
						1-2: Mangrove density and community survey		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

1. Environmental Monitoring during Construction for 4.5 years

Monitoring Period - April to June 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.

Natural Environment	6	Protected Area	Replantation/transplation area 3.Monitoring of Mangrove Plantation area appointed by MoEF 4. Monitoring of sedimentation soil and ecological parameter (25 items on EIA main text Table 6.1.15 for soil and 7 items such as 1)Net primary productivity, 2)Chlorophyll-a, 3)Phosphate, 4)Nitrate, 5)Nitrite, 6)Particulate Organic Carbon, 7) SiO2)			(1) Number of species of mangorve		not required			
						(2) Density of mangrove (xx trees/10m x 10m)		not required			
						1-3: Benthos Survey		not required			
						(1) Number of species and quantity by species	146 Species and 127 No/m2	not required			
						2-1: Cutting tree confirmation	Total 307 trees have been cut. 102 trees have transplanted	All the tree cutting and mangrove cutting had been carried Out as per approval received from GC and MMRDA and job was completed in 2018 itself and after that no trees and mangroves have been cut till date	Approved By Both CIDCO and Forest forest Dept (both Alibaug and Uran(regional office))		
						(1) Number of cutting tree and species		not required			
						3-1: Mangrove survey in the replant area		not required			
						(1) Number of species of mangorve		not required	Nil		
						(2) Density of mangrove (xx trees/10m x 10m)		not required			
						4. Ecologial Parameter		not required			
						(1) Net primary Productivity : <1,500 mgC/m3/day at surface					
						(2) Chlorophyll-a: <4mg/m3	4.2				
						(3) Phosphate: 0.1-90µg/l	278				
						(4) Nitrate: 1.0-500µg/l	751				
						(5) Nitrite: <125µg/l					
						(6) Particulate Organic Carbon: 10-100mg/m^3					
		Ecosystem				(7) SiO2: 10-5,000µg/l	4862				
	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**			
				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**	**Chilre**	**Chirle**		
						Monitoring of embankment	done		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**		
						Number of hired workers by community	477 in April 21, 466 in May 21 and 475 in June 21	125-150	65 (jasai Camp)		
	10	Infectious diseases such as HIV/AIDS	Number of infected patient	2 Locations (major camp site in Sewri and Shivaji Nagar)	4 times / year x 4.5 years	**Criteria for evaluation** **Infection disease rate shall not be caused by the project**	**Sewri Camp Site**	**Shivaji Nagar Camp Site**			
						Confirmation of health check record and inspect project site	During this quarter 108 no. , COVID 19 positive cases reported who have been treated and discharged and 2 deaths of one staff and one wokman in this quarter	Health Checks carried out but HIV/AIDS parameter is not there.	Regular Health check up is carried out by site Doctor.		
	11	Labour Environment	Construction worker's cond	2 Locations (major camp site in Sewri and Shivaji Nagar)	2 times / year x 4.5 years	**Criteria for evaluation** **"Building And Other Construction Workers (Regulation of Employment and Conditions of Service) Act,1996", "The building and other construction worker's welfare cess Act, 1996" and international standards such as "IFC Performance Standard 2 Labor and Working Conditions"**	**Sewri Camp Site**	**Shivaji Nagar Camp Site**	**Gavan Camp site**		
						Site Visual Inspection	All provisions as per BOCW have been provided. *2200 nos. of Food meals (lunch & Dinner) provided to workmen from BOCW, * Face mask provided to workmen, * Calcium & Vitamins tablets provided to workmen to boost up the immunity of workmen, * Sanitizers & Liquids soaps also provides to different location for workmen. *Daily temperature Check of workmen at site and colony is conducted. Daily sanitisation at work site, of working equipment and the buses used for communiting is conducted	Conforming with BOCW Act 1996	Conforming with BOCW Act 1996		

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 - April to June 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.

Other	12	Accident	Number of accidents	2 Locations (major camp site in Sewri and Shivaji Nagar)	4 times / year x 4.5 years	**Criteria for evaluation** **Any accidents are not caused by construction**	**Sewri Camp Site**	**Shivaji Nagar Camp Site**	**Other area**		
						Number of recorded accident	3	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 September 2021.

Land Required in ha		Land Acquired in ha		Balance Land to be acquired in ha	Anticipated date for Land Acquisition	Payment status (Payment made to Land Owners by CIDCO)	Remarks
Govt.	**Private**	**Govt.**	**Private**	**Private***			
98.75	9.34	98.75	7.595	1.745	30-09-2021	--	The payment status to the land owners are awaited from CIDCO. The same would be communicated to JICA on receipt of the same.
Total		**98.75**	**7.595**	**1.745**			
108.09							

***Portions of Private Land**

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

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 2st quarter of 2021
b.	Date of Preparing This form	30-06-2021
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	141	56	197	85%	
	No. of Residential PAHs given possession of Alternate Tenements	231	139	0	139	60%	
	No. of Commercial/R+C PAPs provided with Allotment Letters of Alternate Shops/Tenements	66	21	2	23	34%	
	No. of Commercial R+C PAPs given possession of Alternate Shops/Tenements	66	20	0	20	26%	
	No. of Occupants of MbPT Leased Plots provided Compensation	6	5	0	5	84%	
	No. of Religious properties Relocated / Removed	6	1	0	1	17%	Jivdani Mandir allotment letter given
	No. of Other Community properties Relocated / Removed	4	0	0	0	0%	
	No. of Structures in possession of MbPT Dismantled / Cleared	9	0	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)						

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

SUMMARY OF FISHER FOLKS OF MTHL PROJECT (Influence Zone of 23 villages) Up to 30-06-2021						
Sr. No.	**Village Name**	**Total number of forms Received**	**Total approved eligible family units**			
			C1	**C2**	**C3**	**Total**
1	Bamandongri	273	1	1	28	**30**
2	Belapur	110	0	5	15	**20**
3	Belpada	1185	0	7	478	**485**
4	Diwale	455	12	201	52	**265**
5	Ganeshpuri	276	0	37	35	**72**
6	Gavhan	2162	0	14	1317	**1331**
7	Jasai	926	0	0	18	**18**
8	Jawale	51	0	1	0	**1**
9	Kombadbhuja	413	1	23	134	**158**
10	Kopar	994	2	5	228	**235**
11	Karave	178	0	44	67	**111**
12	Mahul	1062	129	76	604	**809**
13	Moha	475	22	24	135	**181**
14	Mora	818	0	102	375	**477**
15	Morave	539	14	21	88	**123**
16	Nhava	1646	0	32	307	**339**
17	Sarsole	266	0	30	83	**113**
18	Sewri	305	0	1	72	**73**
19	Shelghar	241	0	0	15	**15**
20	Shivajinagar	202	1	4	61	**66**
21	Trombay	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**	**863**	**5550**	**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 - 367 Nos and C3- 3482 Nos are approved.	23-12-2015	**Up to 30.06.2021** 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	30-09-2021	--	1. CIDCO is the land acquisition authority for land acquisition for Navi Mumbai 2. MMRDA has paid an amount of INR 59.16 Cr to CIDCO as per their demand. 3. The payment status to the landowners is awaited from CIDCO. The same would be communicated to JICA on receipt of the same.
Total	**108.09**	**106.345**		**1.745**			

Implementation Schedule for SIA (Sewri Section)

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

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

Attachment 3- JICA's Concurrence Status

Status of JICA'S Concurrence

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

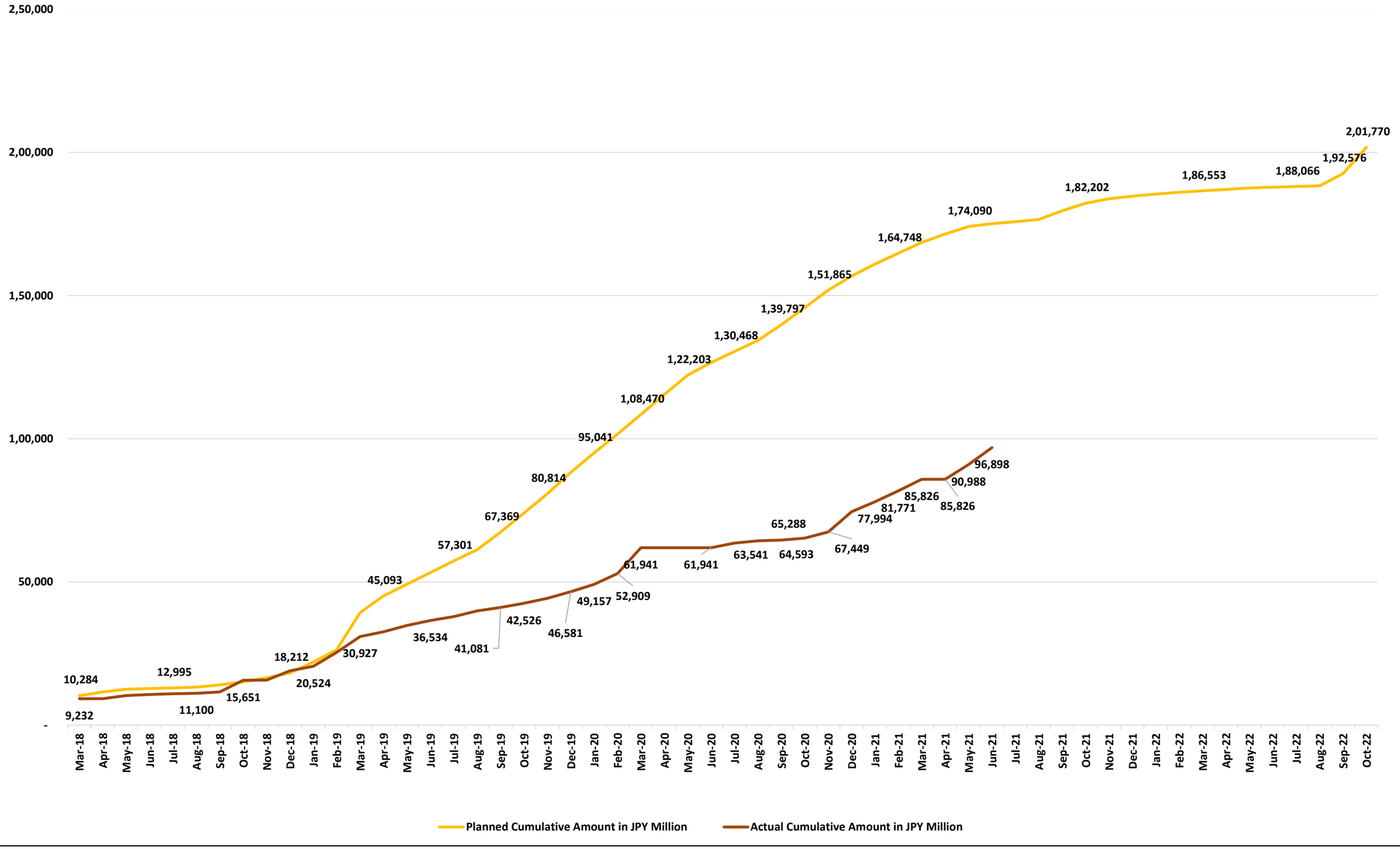
Attachment 4- Project Procurement and Financial Status till 30th June 2021

PROJECT PROCUREMENT AND FINANCIAL STATUS TILL 30th JUNE 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 June 2021	% of Overall Financial Progress (Including Mobilization Advance) till 30th June 2021
CIVIL	Package-1 (CH 0+000 km to CH 10+380 km)	7637.30	Awarded	L&T-IHI Consortium	March 2018	Sep 2022	53.47%	57.34%
	Package-2 (CH 10+380 km to CH18+187 km)	5612.61	Awarded	DAEWOO-TPL JV	March 2018	Sep 2022	47.04%	59.48%
	Package-3 (CH18+187 to CH21+800)	1013.79	Awarded	L&T	March 2018	Sep 2021	58.20%	68.24%
ITS	Package-4 Intelligent Transport System (ITS)	181.49 (Estimated)	Design Stage	--	June 2021 (Estimated)	Sep 2022	NA	NA

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

Attachement 5 - S-Curve for Planned Vs Actual Cumulative Amount till 30th June 2021 in JPY Millions



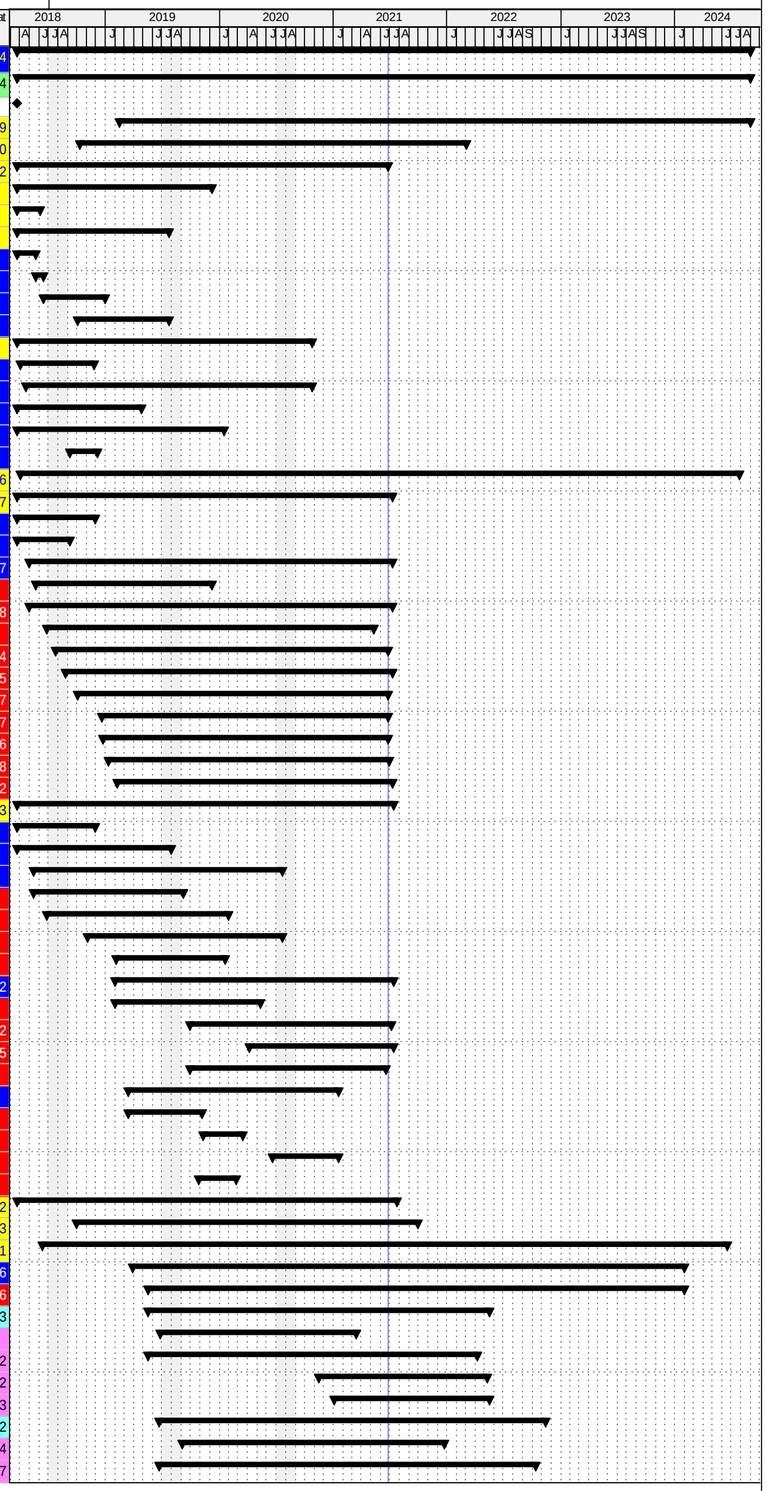
Attachment 6- Package-1's Construction Programme Updated as on 25th June 2021

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

L&T - 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 - BL Project Start Date	Variance - BL Project Finish Date	Total Float
MPR39	MTHL P1 -June'21 Month Progress	1062	23-Mar-18	22-Sep-22	1655	23-Mar-18 A	31-Aug-24	87.24%	53.47%	0	-593	-594
MPR39.1	Mumbai Trans Harbour Link - Package 1	1062	23-Mar-18	22-Sep-22	1655	23-Mar-18 A	31-Aug-24	87.24%	53.47%	0	-593	-594
M10000	Commencement Date	0	23-Mar-18		0	23-Mar-18 A		100%	100%	0	0	
MPR39.1.1	Key Milestones	1464	19-Sep-18	22-Sep-22	1987	15-Feb-19 A	31-Aug-24	0%	0%	-148	-708	-709
MPR39.1.2	Contractual Interface	1243	09-Oct-18	05-Mar-22	1243	09-Oct-18 A	05-Mar-22	0%	0%	0	0	200
MPR39.1.3	Access to Site	165	23-Mar-18	03-Sep-18	165	23-Mar-18 A	26-Jun-21	0%	0%	0	-1027	-572
MPR39.1.4	Document Submittals	180	23-Mar-18	18-Sep-18	180	23-Mar-18 A	09-Dec-19 A	0%	0%	0	-446	
MPR39.1.5	Survey	73	23-Mar-18	03-Jun-18	73	23-Mar-18 A	03-Jun-18 A	0%	0%	0	0	
MPR39.1.6	Geotechnical Investigation	165	23-Mar-18	03-Sep-18	165	23-Mar-18 A	23-Jul-19 A	0%	0%	0	-322	
MPR39.1.6.1	Phase 1	60	23-Mar-18	21-May-18	60	23-Mar-18 A	21-May-18 A	0%	0%	0	0	
MPR39.1.6.2	Phase 2	25	22-May-18	15-Jun-18	25	22-May-18 A	15-Jun-18 A	0%	0%	0	0	
MPR39.1.6.3	Phase 3	50	16-Jun-18	04-Aug-18	50	16-Jun-18 A	30-Dec-18 A	0%	0%	0	-147	
MPR39.1.6.4	Phase 4	45	21-Jul-18	03-Sep-18	45	05-Oct-18 A	23-Jul-19 A	0%	0%	-76	-322	
MPR39.1.7	Infrastucture Facilties	188	23-Mar-18	05-Feb-19	376	23-Mar-18 A	26-Oct-20 A	0%	0%	0	-369	
MPR39.1.7.1	Project Site Office Construction (Contractor + Employer + GC)	120	04-Apr-18	27-Nov-18	120	04-Apr-18 A	25-Nov-18 A	0%	0%	0	2	
MPR39.1.7.2	Casting Yard	164	20-Apr-18	05-Feb-19	355	20-Apr-18 A	26-Oct-20 A	0%	0%	0	-369	
MPR39.1.7.3	Fabrication Yard	133	23-Mar-18	30-Nov-18	133	23-Mar-18 A	26-Apr-19 A	0%	0%	0	-122	
MPR39.1.7.4	Rebar Yard	133	23-Mar-18	30-Nov-18	376	23-Mar-18 A	16-Jan-20 A	0%	0%	0	-265	
MPR39.1.7.5	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	
MPR39.1.8	Procurement Plan	1618	04-Apr-18	07-Sep-22	2186	04-Apr-18 A	29-Jul-24	0%	0%	0	-690	-676
MPR39.1.9	Design & Engineering (Civil)	302	23-Mar-18	21-Sep-19	673	23-Mar-18 A	10-Jul-21	0%	0%	0	-449	-267
MPR39.1.9.1	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	
MPR39.1.9.2	Finalization of Alignment	88	23-Mar-18	18-Jun-18	88	23-Mar-18 A	10-Sep-18 A	0%	0%	0	-83	
MPR39.1.9.3	Detailed Design and Construction Design	269	01-May-18	21-Sep-19	673	01-May-18 A	10-Jul-21	0%	0%	0	-449	-267
MPR39.1.9.3.1	GIR	133	22-May-18	01-Oct-18	193	22-May-18 A	09-Dec-19 A	0%	0%	0	-433	
MPR39.1.9.3.2	Test Pile	113	01-May-18	15-Dec-18	568	01-May-18 A	09-Jul-21	0%	0%	0	-605	-448
MPR39.1.9.3.3	Design Phase -1 (Accelerated Design of Initial Items)	137	19-Jun-18	02-Nov-18	137	27-Jun-18 A	12-May-21 A	0%	0%	-8	-921	
MPR39.1.9.3.4	Design Phase -2 (Accelerated Design of Initial Items)	163	04-Jul-18	13-Dec-18	163	26-Jul-18 A	25-Jun-21	0%	0%	-22	-924	-534
MPR39.1.9.3.5	Design Phase -3	221	19-Jun-18	25-Jan-19	144	25-Aug-18 A	10-Jul-21	0%	0%	-67	-896	-655
MPR39.1.9.3.6	Design Phase -4	220	07-Jul-18	11-Feb-19	220	05-Oct-18 A	25-Jun-21	0%	0%	-90	-865	-717
MPR39.1.9.3.7	Design Phase -5	242	07-Jul-18	05-Mar-19	579	19-Dec-18 A	26-Jun-21	0%	0%	-165	-843	-577
MPR39.1.9.3.8	Design Phase -6	221	26-Aug-18	03-Apr-19	799	24-Dec-18 A	26-Jun-21	0%	0%	-120	-815	-666
MPR39.1.9.3.9	Design Phase -7	272	26-Aug-18	24-May-19	850	11-Jan-19 A	28-Jun-21	0%	0%	-138	-766	-428
MPR39.1.9.3.10	Design Phase -8	355	02-Oct-18	21-Sep-19	585	08-Feb-19 A	10-Jul-21	0%	0%	-129	-658	-572
MPR39.1.10	Design, Engineering & Material Procurement (OSD)	697	23-Mar-18	17-Feb-20	1211	23-Mar-18 A	15-Jul-21	0%	0%	0	-514	-113
MPR39.1.10.1	Initial Design	53	23-Mar-18	14-May-18	53	23-Mar-18 A	29-Nov-18 A	0%	0%	0	-198	
MPR39.1.10.3	Aerodynamic Analysis	145	23-Mar-18	14-Aug-18	145	23-Mar-18 A	30-Jul-19 A	0%	0%	0	-349	
MPR39.1.10.4	Technical Design	311	15-May-18	21-Mar-19	813	15-May-18 A	22-Jul-20 A	0%	0%	0	-488	
MPR39.1.10.4.1	OS01NS/SS	150	15-May-18	11-Oct-18	150	15-May-18 A	09-Sep-19 A	0%	0%	0	-332	
MPR39.1.10.4.2	OS02NS/SS	164	26-Jun-18	06-Dec-18	530	26-Jun-18 A	30-Jan-20 A	0%	0%	0	-419	
MPR39.1.10.4.3	OS03NS/SS	164	14-Aug-18	24-Jan-19	722	04-Nov-18 A	22-Jul-20 A	0%	0%	-82	-544	
MPR39.1.10.4.4	OS04NS/SS	164	09-Oct-18	21-Mar-19	425	06-Feb-19 A	20-Jan-20 A	0%	0%	-120	-304	
MPR39.1.10.5	Construction Design	344	12-Oct-18	20-Sep-19	1124	02-Feb-19 A	15-Jul-21	0%	0%	-113	-664	-272
MPR39.1.10.5.1	OS01NS/SS	201	12-Oct-18	30-Apr-19	731	02-Feb-19 A	14-May-20 A	0%	0%	-113	-379	
MPR39.1.10.5.2	OS02NS/SS	231	07-Dec-18	25-Jul-19	478	01-Oct-19 A	05-Jul-21	0%	0%	-298	-711	-262
MPR39.1.10.5.3	OS03NS/SS	183	25-Jan-19	26-Jul-19	360	06-Apr-20 A	15-Jul-21	0%	0%	-437	-720	-345
MPR39.1.10.5.4	OS04NS/SS	183	22-Mar-19	20-Sep-19	376	01-Oct-19 A	19-Jun-21 A	0%	0%	-193	-637	
MPR39.1.10.6	Material Procurement (1st Lot)	353	02-Mar-19	17-Feb-20	577	15-Mar-19 A	19-Jan-21 A	0%	0%	-13	-336	
MPR39.1.10.6.1	OS01NS/SS	210	02-Mar-19	27-Sep-19	287	15-Mar-19 A	08-Nov-19 A	0%	0%	-13	-41	
MPR39.1.10.6.2	OS02NS/SS	210	27-May-19	22-Dec-19	227	11-Nov-19 A	17-Mar-20 A	0%	0%	-168	-85	
MPR39.1.10.6.3	OS03NS/SS	210	28-May-19	23-Dec-19	242	19-Jun-20 A	19-Jan-21 A	0%	0%	-388	-392	
MPR39.1.10.6.4	OS04NS/SS	210	23-Jul-19	17-Feb-20	175	28-Oct-19 A	25-Feb-20 A	0%	0%	-97	-7	
MPR39.1.11	Tree Cutting and Transplantation	225	23-Mar-18	02-Nov-18	1121	23-Mar-18 A	23-Jul-21	0%	0%	0	-993	-792
MPR39.1.12	Utility Diversion	210	19-Jun-18	14-Jan-19	1287	01-Oct-18 A	30-Sep-21	0%	0%	-104	-989	-673
MPR39.1.13	Construction	919	11-Jun-18	22-Jun-22	1592	11-Jun-18 A	18-Jun-24	89.23%	47.03%	0	-606	-531
MPR39.1.13.1	Sewri Interchange Section	779	03-Nov-18	28-Feb-22	1406	29-Mar-19 A	01-Feb-24	90.75%	29.14%	-121	-588	-416
MPR39.1.13.1.1	Sewri Interchnage - Work Front - 1	779	03-Nov-18	28-Feb-22	1406	16-May-19 A	01-Feb-24	90.37%	24.04%	-161	-588	-416
MPR39.1.13.1.1.1	Sewri Interchange - Work Front - 1 - Piling	490	03-Nov-18	15-Dec-20	886	16-May-19 A	17-May-22	100%	60.7%	-161	-354	-203
MPR39.1.13.1.1.1.1	Piling - Land Viaduct	54	13-Apr-19	16-Sep-19	298	25-Jun-19 A	16-Mar-21 A	100%	100%	-53	-376	
MPR39.1.13.1.1.1.2	Piling - Ramp A	442	03-Nov-18	17-Oct-20	849	16-May-19 A	07-Apr-22	100%	59.28%	-161	-368	-212
MPR39.1.13.1.1.1.3	Piling - Ramp E	36	20-Oct-20	01-Dec-20	53	16-Nov-20 A	12-May-22	100%	16.67%	-22	-362	-212
MPR39.1.13.1.1.1.4	Piling - Ramp F	12	02-Dec-20	15-Dec-20	12	05-Jan-21 A	17-May-22	100%	66%	-28	-354	-203
MPR39.1.13.1.1.2	Sewri Interchange - Work Front - 1 -Pile Cap	560	19-Nov-18	24-Mar-21	965	21-Jun-19 A	14-Nov-22	100%	32.86%	-175	-422	-282
MPR39.1.13.1.1.2.1	Pile Cap - Land Viaduct	68	25-Apr-19	15-Oct-19	130	06-Sep-19 A	23-Dec-21	100%	88.89%	-43	-512	-454
MPR39.1.13.1.1.2.2	Pile Cap - Ramp A	504	19-Nov-18	15-Jan-21	941	21-Jun-19 A	14-Oct-22	100%	24.92%	-175	-454	-367



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

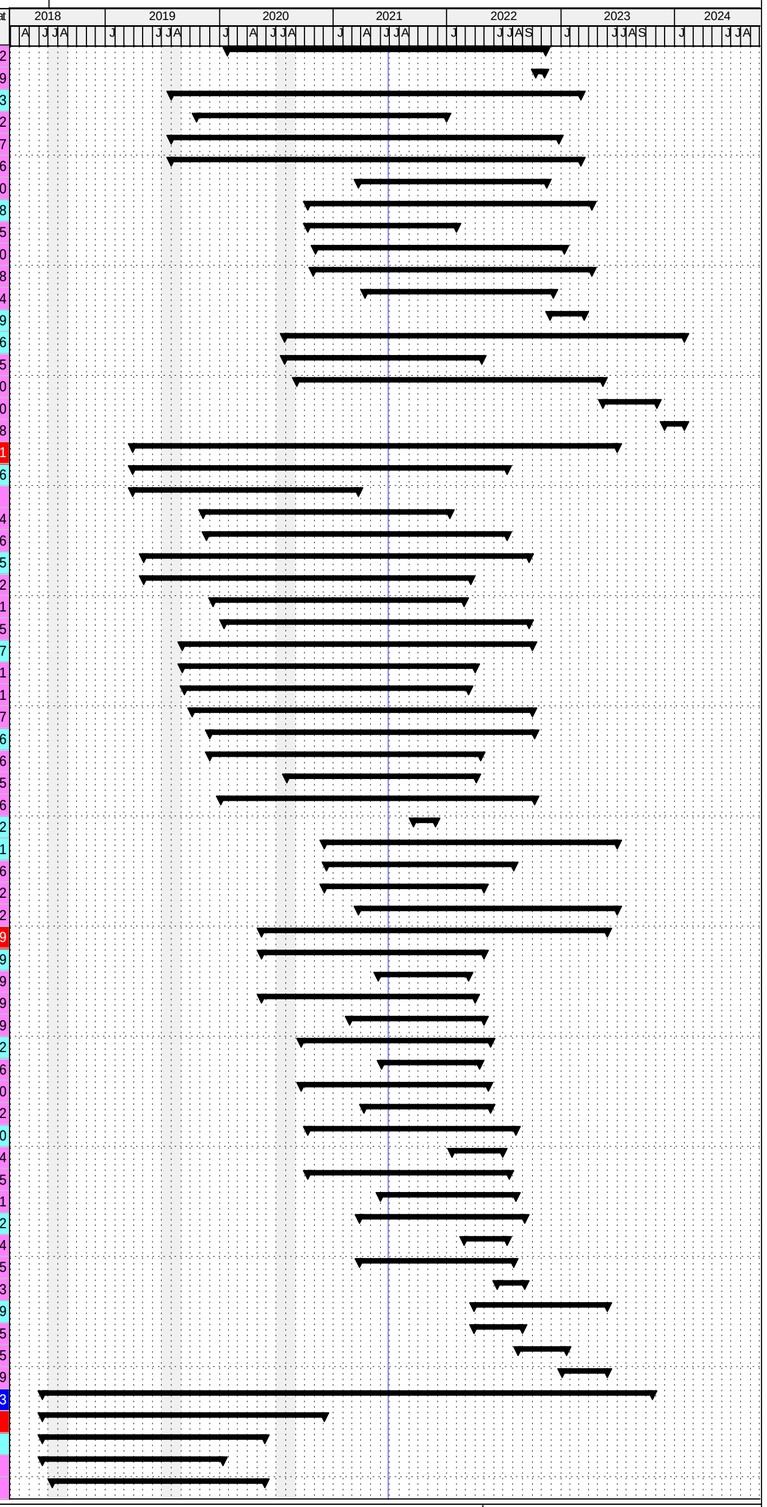
Please note that this Monthly Rolling Plan has been updated based on the actual progress and will not match with impacted schedule submitted with the EOT-04 proposal for the contractor's eligibility for extension of time.

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

L&T - 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 - BL Project Start Date	Variance - BL Project Finish Date	Total Float
MPR39.1.13.1.1.2.3	Pile Cap - Ramp E	44	07-Jan-21	27-Feb-21	194	26-Jan-20 A	14-Nov-22	100%	33.33%	211	-442	-282
MPR39.1.13.1.1.2.4	Pile Cap - Ramp F	20	01-Mar-21	24-Mar-21	20	14-Oct-22	09-Nov-22	100%	0%	-418	-418	-329
MPR39.1.13.1.1.3	Sewri Interchange - Work Front - 1 - Pier	588	12-Dec-18	20-May-21	707	30-Jul-19 A	08-Mar-23	100%	34.53%	-155	-470	-313
MPR39.1.13.1.1.3.1	Pier - Land Viaduct	52	29-May-19	30-Oct-19	97	21-Oct-19 A	30-Dec-21	100%	88.89%	-43	-506	-442
MPR39.1.13.1.1.3.2	Pier - Ramp A	504	12-Dec-18	09-Feb-21	647	30-Jul-19 A	26-Dec-22	100%	25%	-155	-494	-427
MPR39.1.13.1.1.3.3	Pier - Ramp E	96	27-Jan-21	20-May-21	306	31-Jul-19 A	08-Mar-23	100%	45.45%	337	-470	-366
MPR39.1.13.1.1.3.4	Pier - Ramp F	83	23-Dec-20	01-Apr-21	55	24-Mar-21 A	17-Nov-22	100%	23.62%	-75	-418	-220
MPR39.1.13.1.1.4	Sewri Interchange - Work Front - 1 - Pier Cap	587	05-Jan-19	11-Jun-21	538	12-Oct-20 A	11-Apr-23	100%	31.24%	-384	-480	-168
MPR39.1.13.1.1.4.1	Pier Cap - Land Viaduct	49	16-Sep-19	14-Nov-19	88	12-Oct-20 A	01-Feb-22	100%	88.89%	-249	-520	-435
MPR39.1.13.1.1.4.2	Pier Cap - Ramp A	499	05-Jan-19	26-Feb-21	464	04-Nov-20 A	12-Jan-23	100%	20.97%	-403	-494	-430
MPR39.1.13.1.1.4.3	Pier Cap - Ramp E	100	13-Feb-21	11-Jun-21	137	28-Oct-20 A	11-Apr-23	100%	40.91%	90	-480	-168
MPR39.1.13.1.1.4.4	Pier Cap - Ramp F	86	31-Dec-20	13-Apr-21	65	12-Apr-21 A	10-Dec-22	100%	23.73%	-84	-428	-214
MPR39.1.13.1.1.5	Sewri Interchange - Embankment Works - Ramp F	90	14-Apr-21	01-Nov-21	90	29-Nov-22	16-Mar-23	0%	0%	-418	-418	-269
MPR39.1.13.1.1.6	Sewri Interchange - Work Front - 1 - Super Structure Erection	628	04-May-19	28-Feb-22	750	29-Jul-20 A	01-Feb-24	75.77%	0%	-264	-588	-546
MPR39.1.13.1.1.6.1	Erection - Land Viaduct	96	19-Nov-19	11-Mar-20	146	29-Jul-20 A	22-Apr-22	100%	0%	-176	-489	-475
MPR39.1.13.1.1.6.2	Erection - Ramp A	486	04-May-19	09-Apr-21	559	05-Sep-20 A	16-May-23	100%	0%	-306	-590	-550
MPR39.1.13.1.1.6.3	Erection - Ramp E	146	10-Apr-21	02-Dec-21	146	17-May-23	04-Nov-23	46.96%	0%	-590	-590	-550
MPR39.1.13.1.1.6.4	Erection - Ramp F	52	28-Dec-21	28-Feb-22	52	01-Dec-23	01-Feb-24	0%	0%	-590	-590	-548
MPR39.1.13.1.2	Sewri Interchange - Work Front - 2	765	03-Nov-18	11-Feb-22	1227	29-Mar-19 A	30-Jun-23	90.66%	38.73%	-121	-423	-351
MPR39.1.13.1.2.1	Sewri Interchange - Work Front - 2 - Piling	553	03-Nov-18	01-Mar-21	933	29-Mar-19 A	14-Jul-22	100%	52.34%	-121	-341	-266
MPR39.1.13.1.2.1.1	Piling - Ramp C2	325	03-Nov-18	27-Feb-20	586	29-Mar-19 A	24-Mar-21 A	100%	100%	-121	-246	
MPR39.1.13.1.2.1.2	Piling - Ramp C1	140	03-Apr-19	18-Dec-19	347	12-Nov-19 A	11-Jan-22	100%	30%	-108	-474	-324
MPR39.1.13.1.2.1.3	Piling - Ramp B	84	21-Nov-20	01-Mar-21	231	22-Nov-19 A	14-Jul-22	100%	22.54%	227	-341	-266
MPR39.1.13.1.2.2	Sewri Interchange - Work Front - 2 - Pile Cap	591	19-Nov-18	29-Apr-21	988	05-May-19 A	20-Sep-22	100%	32.98%	-140	-347	-285
MPR39.1.13.1.2.2.1	Pile Cap - Ramp C2	361	19-Nov-18	24-Apr-20	835	05-May-19 A	19-Mar-22	100%	94.53%	-140	-422	-252
MPR39.1.13.1.2.2.2	Pile Cap - Ramp C1	172	12-Apr-19	04-Feb-20	377	14-Dec-19 A	25-Feb-22	100%	20%	-128	-472	-311
MPR39.1.13.1.2.2.3	Pile Cap - Ramp B	131	25-Nov-20	29-Apr-21	291	16-Jan-20 A	20-Sep-22	100%	10.71%	184	-347	-285
MPR39.1.13.1.2.3	Sewri Interchange - Work Front - 2 - Pier	589	12-Dec-18	21-May-21	632	04-Sep-19 A	03-Oct-22	100%	48.95%	-155	-340	-157
MPR39.1.13.1.2.3.1	Pier - Ramp C2	353	12-Dec-18	09-May-20	478	04-Sep-19 A	02-Apr-22	100%	94.01%	-155	-422	-251
MPR39.1.13.1.2.3.2	Pier - Ramp C1	194	01-Apr-19	18-Feb-20	421	10-Sep-19 A	12-Mar-22	100%	38.78%	-64	-472	-311
MPR39.1.13.1.2.3.3	Pier - Ramp B	248	25-Apr-20	21-May-21	350	08-Oct-19 A	03-Oct-22	100%	40.91%	168	-340	-157
MPR39.1.13.1.2.4	Sewri Interchange - Work Front - 2 - Pier Cap	583	26-Dec-18	28-May-21	557	02-Dec-19 A	10-Oct-22	100%	49.38%	-206	-340	-156
MPR39.1.13.1.2.4.1	Pier Cap - Ramp C2	356	26-Dec-18	27-May-20	412	02-Dec-19 A	20-Apr-22	100%	93.99%	-206	-422	-266
MPR39.1.13.1.2.4.2	Pier Cap - Ramp C1	198	18-Apr-19	12-Mar-20	270	07-Aug-20 A	04-Apr-22	100%	40.16%	-277	-472	-315
MPR39.1.13.1.2.4.3	Pier Cap - Ramp B	235	19-May-20	28-May-21	197	07-Jan-20 A	10-Oct-22	100%	40.91%	112	-340	-156
MPR39.1.13.1.2.5	Sewri Interchange - Embankment Works - Ramp C2	60	23-May-19	02-Nov-19	60	16-Sep-21	26-Nov-21	0%	0%	-474	-474	82
MPR39.1.13.1.2.6	Sewri Interchange - Work Front - 2 - Super Structure erection	654	18-Mar-19	11-Feb-22	622	05-Dec-20 A	30-Jun-23	74.72%	26.07%	-370	-423	-351
MPR39.1.13.1.2.6.1	Erection - Ramp C2	343	18-Mar-19	02-Nov-20	346	09-Dec-20 A	02-Aug-22	100%	51.18%	-373	-457	-326
MPR39.1.13.1.2.6.2	Erection - Ramp C1	194	08-Oct-19	26-May-20	198	05-Dec-20 A	28-Apr-22	100%	22.22%	-303	-483	-352
MPR39.1.13.1.2.6.3	Erection - Ramp B	316	28-Nov-20	11-Feb-22	257	23-Mar-21 A	30-Jun-23	50%	18.89%	-95	-424	-352
MPR39.1.13.1.3	Sewri Interchange - Work Front - 3 (Cast in situ Spans)	431	28-Feb-20	01-Feb-22	557	16-May-20 A	31-May-23	92.58%	14.66%	-65	-405	-309
MPR39.1.13.1.3.1	Sewri Interchange - Work Front - 3 - Piling	144	28-Feb-20	20-Nov-20	231	16-May-20 A	28-Apr-22	100%	37.5%	-65	-360	-289
MPR39.1.13.1.3.1.1	Piling - Ramp B	54	28-Feb-20	02-May-20	48	27-May-21 A	10-Mar-22	100%	11.11%	-300	-408	-289
MPR39.1.13.1.3.1.2	Piling - Ramp E	54	04-May-20	07-Oct-20	201	16-May-20 A	31-Mar-22	100%	66.67%	-11	-372	-289
MPR39.1.13.1.3.1.3	Piling - Ramp C1	36	08-Oct-20	20-Nov-20	43	23-Feb-21 A	28-Apr-22	100%	33.33%	-114	-360	-289
MPR39.1.13.1.3.2	Sewri Interchange - Work Front - 3 - Pile Cap	159	07-Mar-20	15-Dec-20	177	21-Sep-20 A	19-May-22	100%	17.92%	-87	-357	-142
MPR39.1.13.1.3.2.1	Pile Cap - Ramp B	81	07-Mar-20	10-Jun-20	78	05-Jun-21 A	15-Apr-22	100%	3.33%	-302	-405	-236
MPR39.1.13.1.3.2.2	Pile Cap - Ramp E	81	11-May-20	17-Nov-20	147	21-Sep-20 A	12-May-22	100%	33.33%	-33	-375	-140
MPR39.1.13.1.3.2.3	Pile Cap - Ramp C1	45	23-Oct-20	15-Dec-20	61	09-Apr-21 A	19-May-22	100%	16.67%	-140	-357	-142
MPR39.1.13.1.3.3	Sewri Interchange - Work Front - 3 - Pier	216	18-Mar-20	05-Mar-21	212	10-Oct-20 A	08-Aug-22	100%	12.5%	-95	-360	-200
MPR39.1.13.1.3.3.1	Pier - Ramp B	135	18-Mar-20	27-Nov-20	135	19-Jan-22	28-Jun-22	100%	0%	-405	-405	-284
MPR39.1.13.1.3.3.2	Pier - Ramp E	135	21-May-20	01-Feb-21	182	10-Oct-20 A	21-Jul-22	100%	22.22%	-41	-372	-185
MPR39.1.13.1.3.3.3	Pier - Ramp C1	90	18-Nov-20	05-Mar-21	90	01-Jun-21 A	08-Aug-22	100%	16.67%	-163	-360	-211
MPR39.1.13.1.3.4	Sewri Interchange - Work Front - 3 - Pier Cap	196	24-Apr-20	19-Mar-21	163	27-Mar-21 A	06-Sep-22	100%	12.5%	-202	-372	-212
MPR39.1.13.1.3.4.1	Pier Cap - Ramp B	115	24-Apr-20	11-Dec-20	115	26-Feb-22	12-Jul-22	100%	0%	-405	-405	-284
MPR39.1.13.1.3.4.2	Pier Cap - Ramp E	132	08-Jun-20	15-Feb-21	117	27-Mar-21 A	04-Aug-22	100%	33.33%	-165	-372	-185
MPR39.1.13.1.3.4.3	Pier Cap - Ramp C1	77	17-Dec-20	19-Mar-21	74	11-Jun-22	06-Sep-22	100%	0%	-375	-372	-223
MPR39.1.13.1.3.5	Sewri Interchange - Work Front - 3 - Super Structure	360	23-May-20	01-Feb-22	360	28-Mar-22	31-May-23	69.28%	0%	-405	-405	-309
MPR39.1.13.1.3.5.1	Super Structure - Ramp B	132	23-May-20	30-Jan-21	132	28-Mar-22	30-Aug-22	100%	0%	-405	-405	-295
MPR39.1.13.1.3.5.2	Super Structure - Ramp E	132	16-Jan-21	24-Sep-21	132	16-Aug-22	21-Jan-23	97.08%	0%	-405	-405	-295
MPR39.1.13.1.3.5.3	Super Structure - Ramp C1	120	09-Jun-21	01-Feb-22	120	07-Jan-23	31-May-23	2.38%	0%	-405	-405	-309
MPR39.1.13.2	Intertidal Section	715	11-Jun-18	23-Oct-21	1392	11-Jun-18 A	23-Oct-23	98.9%	86.87%	0	-610	-583
MPR39.1.13.2.1	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	
MPR39.1.13.2.1.1	Access Bridge	457	11-Jun-18	12-Jun-20	528	11-Jun-18 A	27-May-20 A	0%	0%	0	14	
MPR39.1.13.2.1.1.1	Access Bridge - Piling	451	11-Jun-18	05-Jun-20	415	11-Jun-18 A	13-Jan-20 A	0%	0%	0	123	
MPR39.1.13.2.1.1.2	Access Bridge - Decking	437	06-Oct-18	12-Jun-20	528	14-Jul-18 A	27-May-20 A	0%	0%	16	14	



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.

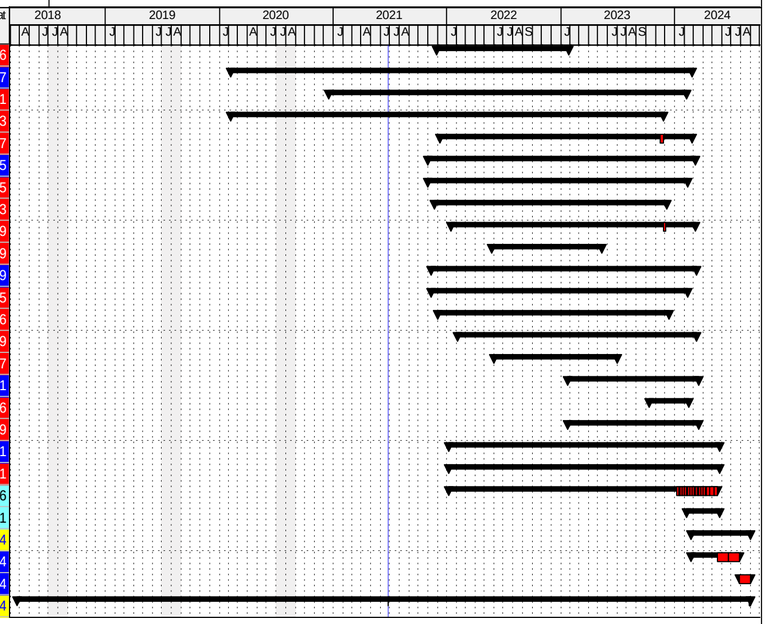
Activity ID	Activity Name	BL1 Duration	BL1 Start	BL1 Finish	Original Duration	Start	Finish	Schedule % Complete	Performance % Complete	Variance - BL Project Start Date	Variance - BL Project Finish Date	Total Float
MPR39.1.13.2.1.2	Fingers	441	13-Oct-18	26-Sep-20	620	26-Sep-18 A	04-Dec-20 A	0%	0%	16	-56	
MPR39.1.13.2.1.2.1	Fingers - Piling	437	13-Oct-18	22-Sep-20	614	26-Sep-18 A	01-Dec-20 A	0%	0%	16	-57	
MPR39.1.13.2.1.2.2	Fingers - Decking	426	01-Nov-18	26-Sep-20	620	06-Oct-18 A	04-Dec-20 A	0%	0%	22	-56	
MPR39.1.13.2.2	Intertidal - Main Bridge Work	638	14-Dec-18	23-Oct-21	1327	14-Nov-18 A	23-Oct-23	98.9%	86.87%	26	-610	-583
MPR39.1.13.2.2.1	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	
MPR39.1.13.2.2.2	Intertidal - Main Bridge Work - Pile Cap	536	29-Dec-18	06-Apr-21	953	17-Jan-19 A	22-Oct-21	100%	98.25%	-15	-88	-254
MPR39.1.13.2.2.3	Intertidal - Main Bridge Work - Pier	562	17-Jan-19	25-May-21	960	29-Mar-19 A	24-Nov-21	100%	97.35%	-59	-75	-243
MPR39.1.13.2.2.4	Intertidal - Main Bridge Work - Pier Cap	562	30-Jan-19	05-Jun-21	688	10-Aug-19 A	26-Jul-22	100%	93.14%	-115	-270	-243
MPR39.1.13.2.2.5	Intertidal - Main Bridge Work - Super Structure Erection	534	18-Apr-19	23-Oct-21	929	29-Nov-19 A	23-Oct-23	95%	48.19%	-110	-610	-583
MPR39.1.13.2.3	Intertidal - Finger Removal & Reuse	400	07-Mar-19	29-Dec-20	402	20-Jun-19 A	06-Oct-21	0%	0%	-85	-156	-30
MPR39.1.13.3	Marine Section	911	18-Sep-18	17-Jun-22	1552	14-Dec-18 A	18-Jun-24	93.43%	53.17%	-73	-610	-589
MPR39.1.13.3.1	Temporary Access Bridge Work -2 (MP70 to MP51- 21 Spans)	911	18-Sep-18	17-Jun-22	1191	14-Nov-19 A	18-Jun-24	0%	0%	-274	-610	-589
MPR39.1.13.3.1.1	Loadout Berth -30 M x 6 M at MP 70	30	18-Sep-18	23-Oct-18	91	22-Nov-20 A	10-Mar-21 A	0%	0%	-509	-568	
MPR39.1.13.3.1.2	Temporary Access Bridge (MP70 to MP51)	181	24-Oct-18	28-May-19	415	14-Nov-19 A	09-Dec-21	0%	0%	-244	-539	-259
MPR39.1.13.3.1.3	Removal of Temporary Access Bridge	90	05-Mar-22	17-Jun-22	90	04-Mar-24	18-Jun-24	0%	0%	-610	-610	-589
MPR39.1.13.3.2	Marine - Main Bridge	775	03-Nov-18	23-Feb-22	1455	14-Dec-18 A	23-Feb-24	93.43%	53.17%	-34	-610	-589
MPR39.1.13.3.2.1	Marine - Piling	564	03-Nov-18	15-Mar-21	962	14-Dec-18 A	16-Mar-22	100%	93.97%	-34	-228	-95
MPR39.1.13.3.2.1.1	Piling - Stretch - 1 - OSD-1 MP51 to MP53 (320m)	104	20-Sep-19	22-Jan-20	77	21-Jul-20 A	08-Apr-21 A	100%	100%	-225	-290	
MPR39.1.13.3.2.1.2	Piling - Stretch - 2 - Marine - MP54 to MP68 (856m)	344	25-Feb-19	13-Oct-20	216	16-Aug-20 A	16-Mar-22	100%	51.67%	-321	-354	-160
MPR39.1.13.3.2.1.3	Piling - Stretch - 3 - OSD-2&3 MP69 to MP80 (1.5 Km)	521	10-Dec-18	26-Feb-21	313	01-Sep-20 A	10-Apr-21 A	100%	100%	-385	-35	
MPR39.1.13.3.2.1.4	Piling - Stretch - 4 - Marine MP81 to MP123 (2.6 Km)	370	03-Nov-18	21-Apr-20	489	14-Dec-18 A	22-Feb-20 A	100%	100%	-34	50	
MPR39.1.13.3.2.1.5	Piling - Stretch - 5 - OSD-4 MP124 to MP128 (600m)	147	22-Apr-20	16-Jan-21	112	04-Feb-20 A	13-Nov-20 A	100%	100%	66	55	
MPR39.1.13.3.2.1.6	Piling - Stretch - 6 - Marine MP129 to MP148 (1.2 Km)	395	25-May-19	15-Mar-21	148	06-Dec-19 A	09-Dec-20 A	100%	100%	-85	80	
MPR39.1.13.3.2.3	Marine - Pile Cap	572	23-Nov-18	12-Apr-21	1063	14-Jan-19 A	12-Dec-22	100%	68.34%	-43	-430	-314
MPR39.1.13.3.2.3.1	Pile Cap - Stretch - 1 - OSD-1 MP51 to MP53 (320m)	75	25-Dec-19	23-Mar-20	92	10-Dec-20 A	02-Jun-22	100%	78.33%	-215	-513	-389
MPR39.1.13.3.2.3.2	Pile Cap - Stretch - 2 - Marine - MP54 to MP68 (856m)	400	28-Mar-19	20-Jan-21	326	16-Oct-20 A	12-Dec-22	100%	6.67%	-320	-498	-377
MPR39.1.13.3.2.3.3	Pile Cap - Stretch - 3 - OSD-2&3 MP69 to MP80 (1.5 Km)	505	28-Jan-19	27-Mar-21	291	06-Nov-20 A	23-Jun-22	100%	10%	-387	-301	-223
MPR39.1.13.3.2.3.4	Pile Cap - Stretch - 4 - Marine MP81 to MP123 (2.6 Km)	444	23-Nov-18	10-Nov-20	656	14-Jan-19 A	18-Apr-21 A	100%	100%	-43	-133	
MPR39.1.13.3.2.3.5	Pile Cap - Stretch - 5 - OSD-4 MP124 to MP128 (600m)	125	11-Nov-20	08-Apr-21	75	10-Oct-20 A	15-Oct-21	100%	80%	25	-81	2
MPR39.1.13.3.2.3.6	Pile Cap - Stretch - 6 - Marine MP 129 to MP 148 (1.2 Km)	407	08-Jun-19	12-Apr-21	206	21-Dec-20 A	09-Nov-21	100%	75.5%	-313	-98	18
MPR39.1.13.3.2.4	Marine - Pier	590	22-Dec-18	02-Jun-21	877	12-Sep-19 A	08-Apr-23	100%	37.26%	-146	-487	-400
MPR39.1.13.3.2.4.1	Pier - Stretch - 1 - OSD-1 MP51 to MP53 (320m)	75	24-Jan-20	21-Apr-20	148	21-Jan-21 A	03-Sep-22	100%	35.83%	-225	-568	-433
MPR39.1.13.3.2.4.2	Pier - Stretch - 2 - Marine - MP54 to MP68 (856m)	429	26-Apr-19	26-Mar-21	384	01-Dec-20 A	08-Apr-23	100%	6.67%	-332	-544	-400
MPR39.1.13.3.2.4.3	Pier - Stretch - 3 - OSD-2&3 MP69 to MP80 (1.5 Km)	504	26-Feb-19	24-Apr-21	240	26-Apr-21 A	22-Jul-22	100%	1.25%	-504	-302	-224
MPR39.1.13.3.2.4.4	Pier - Stretch - 4 - Marine MP81 to MP123 (2.6 Km)	472	22-Dec-18	12-Jan-21	551	12-Sep-19 A	17-Mar-22	100%	68.82%	-146	-279	-140
MPR39.1.13.3.2.4.5	Pier - Stretch - 5 - OSD-4 MP124 to MP128 (600m)	118	13-Jan-21	02-Jun-21	155	15-Nov-20 A	12-Aug-22	100%	52%	49	-288	-251
MPR39.1.13.3.2.4.6	Pier - Stretch - 6 - Marine MP129 to MP148 (1.2 Km)	419	27-Sep-19	28-Apr-21	224	01-Mar-21 A	25-Mar-22	100%	10%	-369	-210	-83
MPR39.1.13.3.2.2	Marine - Pier Cap	576	21-Jan-19	14-Jun-21	813	26-Dec-19 A	20-Apr-23	100%	32.75%	-206	-487	-363
MPR39.1.13.3.2.2.1	Pier Cap - Stretch - 1 - OSD-1 MP51 to MP53 (320m)	87	04-Feb-20	16-May-20	103	10-Apr-21 A	30-Sep-22	100%	16.67%	-282	-568	-344
MPR39.1.13.3.2.2.2	Pier Cap - Stretch - 2 - Marine - MP54 to MP68 (856m)	414	27-May-19	07-Apr-21	369	18-Jan-21 A	20-Apr-23	100%	6.67%	-347	-544	-410
MPR39.1.13.3.2.2.3	Pier Cap - Stretch - 3 - OSD-2&3 MP69 to MP80 (1.5 Km)	497	28-Mar-19	17-May-21	234	09-Nov-21	12-Aug-22	100%	0%	-565	-302	-224
MPR39.1.13.3.2.2.4	Pier Cap - Stretch - 4 - Marine MP81 to MP123 (2.6 Km)	458	21-Jan-19	23-Jan-21	487	26-Dec-19 A	29-Mar-22	100%	67.08%	-206	-279	-150
MPR39.1.13.3.2.2.5	Pier Cap - Stretch - 5 - OSD(4) MP124 to MP128 (600m)	103	12-Feb-21	14-Jun-21	164	02-Feb-21 A	12-Sep-22	100%	20%	9	-303	-266
MPR39.1.13.3.2.2.6	Pier Cap - Stretch - 6 - Marine MP129 to MP148 (1.2 Km)	403	12-Oct-19	11-May-21	169	03-May-21 A	06-Apr-22	100%	4.6%	-395	-198	-45
MPR39.1.13.3.2.5	Marine - Super Structure Erection	636	19-Apr-19	23-Feb-22	813	23-Jun-20 A	23-Feb-24	64.09%	0.32%	-276	-610	-589
MPR39.1.13.3.2.5.1	Erection - Main Concrete Viaduct	636	19-Apr-19	23-Feb-22	813	23-Jun-20 A	23-Feb-24	63.46%	0.32%	-276	-610	-589
MPR39.1.13.3.2.5.2	Rescue Span (MP98 to MP99)	120	07-Mar-20	29-Oct-20	120	08-Feb-22	29-Jun-22	100%	0%	-431	-431	-110
MPR39.1.13.4	Precast Segments	778	06-Feb-19	21-Aug-21	1171	07-Aug-19 A	10-Oct-23	95.32%	33.66%	-154	-655	-325
MPR39.1.13.4.1	Precast Segement - Sewri Interchange	701	06-Feb-19	24-May-21	999	20-Feb-20 A	12-Aug-23	100%	25.56%	-317	-683	-276
MPR39.1.13.4.1.1	Precast Segement - Land Viaduct	276	04-Apr-19	27-Feb-20	293	03-Dec-20 A	29-Dec-21	100%	50.69%	-509	-561	223
MPR39.1.13.4.1.2	Precast Segement - Ramp A	396	30-Mar-19	14-Jul-20	672	20-Feb-20 A	18-Oct-22	100%	1.04%	-273	-691	-504
MPR39.1.13.4.1.3	Precast Segement - Ramp B	297	17-Mar-20	06-Mar-21	218	27-Nov-20 A	10-Nov-22	100%	36.3%	-214	-513	-379
MPR39.1.13.4.1.4	Precast Segement - Ramp C1	290	04-Apr-19	16-Mar-20	496	18-Mar-20 A	22-Feb-22	100%	41.2%	-291	-593	-354
MPR39.1.13.4.1.5	Precast Segement - Ramp C2	143	06-Feb-19	24-Jul-19	378	06-Mar-20 A	05-Aug-21	100%	89.82%	-329	-620	-389
MPR39.1.13.4.1.6	Precast Segement - Ramp E	253	15-Jul-20	14-May-21	253	18-Oct-22	12-Aug-23	100%	0%	-691	-691	-549
MPR39.1.13.4.1.7	Precast Segement - Ramp F	107	16-Jan-21	24-May-21	91	10-Mar-21 A	08-Feb-23	100%	0.79%	-43	-523	-389
MPR39.1.13.4.2	Precast Segement - Intertidal	753	28-Feb-19	14-Aug-21	785	18-Oct-19 A	05-Dec-22	96.04%	74.35%	-194	-398	-335
MPR39.1.13.4.3	Precast Segement - Marine	759	28-Feb-19	21-Aug-21	1171	07-Aug-19 A	10-Oct-23	93.09%	8.7%	-135	-655	-325
MPR39.1.13.4.3.1	Precast Marine - Stretch - 2 - Marine MP53 to MP69 (16 Spans	544	31-Aug-19	12-Jun-21	544	27-Nov-21	04-Sep-23	100%	0%	-684	-684	-294
MPR39.1.13.4.3.2	Precast Marine - Stretch - 4 - Marine MP81 to MP124 (43 Span	657	28-Feb-19	23-Apr-21	1069	07-Aug-19 A	13-Jun-23	100%	15.92%	-135	-655	-598
MPR39.1.13.4.3.3	Precast Marine - Stretch - 6 - Marine MP128 to MP148 (20 Spa	245	04-Nov-20	21-Aug-21	321	26-Sep-22	10-Oct-23	73.24%	0%	-579	-655	-598
MPR39.1.13.5	Orthotropic Steel Deck (OSD) - Fabrication, Shipping, Assembly & Ere	608	11-Jun-19	15-Mar-22	705	23-Sep-19 A	25-Jan-23	59.21%	26.51%	-9	-266	-106
MPR39.1.13.5.1	OSD - Fabrication	746	28-Sep-19	12-Oct-21	801	23-Sep-19 A	31-May-22	0%	0%	5	-231	-119
MPR39.1.13.5.2	OSD - Shipping	536	24-Jun-20	11-Dec-21	638	09-Jul-20 A	30-Jul-22	66.06%	36.52%	-15	-231	-54
MPR39.1.13.5.3	OSD - Custom Clearance and Inland Transport (Last Module)	482	07-Sep-20	01-Jan-22	668	13-Aug-20 A	29-Aug-22	53.62%	32.58%	25	-240	-63
MPR39.1.13.5.4	OSD - Assembly	337	07-Oct-20	16-Feb-22	466	25-Dec-20 A	11-Nov-22	46.96%	3.49%	-66	-224	-63

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 JUNE 2021

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 - BL Project Start Date	Variance - BL Project Finish Date	Total Float
MPR39.1.13.5.5	OSD - Erection	608	11-Jun-19	15-Mar-22	355	29-Nov-21	25-Jan-23	33.77%	0%	-519	-266	-106
MPR39.1.13.6	Post Erection Segmental Stitch Concrete (incl. Bearing Installation an	644	24-Apr-19	10-Mar-22	894	06-Feb-20 A	27-Feb-24	0%	0%	-163	-601	-437
MPR39.1.13.6.1	Stitch Concrete - Sewri Interchange	644	24-Apr-19	10-Mar-22	731	18-Dec-20 A	07-Feb-24	0%	0%	-349	-585	-421
MPR39.1.13.6.2	Stitch Concrete - Intertidal	475	29-Nov-19	22-Dec-21	818	06-Feb-20 A	28-Nov-23	0%	0%	-58	-589	-583
MPR39.1.13.6.3	Stitch Concrete - Marine	563	21-Oct-19	26-Feb-22	678	08-Dec-21	27-Feb-24	0%	0%	-495	-610	-437
MPR39.1.13.7	Crash Barrier Works	585	05-Oct-19	11-Mar-22	718	01-Nov-21	08-Mar-24	0%	0%	-476	-608	-445
MPR39.1.13.7.1	Crash Barrier - Sewri Interchange	585	05-Oct-19	11-Mar-22	698	01-Nov-21	12-Feb-24	0%	0%	-476	-588	-425
MPR39.1.13.7.2	Crash Barrier - Intertidal	470	17-Dec-19	04-Jan-22	626	22-Nov-21	09-Dec-23	0%	0%	-433	-589	-403
MPR39.1.13.7.3	Crash Barrier - Marine	541	26-Nov-19	09-Mar-22	656	13-Jan-22	08-Mar-24	0%	0%	-495	-610	-449
MPR39.1.13.7.4	Crash Barrier - Orthotropic Steel Deck	291	23-Dec-20	10-Mar-22	294	25-May-22	11-May-23	0%	0%	-355	-358	-199
MPR39.1.13.8	Bridge Deck (Superstructure) Water Proofing	581	15-Oct-19	16-Mar-22	714	10-Nov-21	13-Mar-24	0%	0%	-476	-608	-449
MPR39.1.13.8.1	Water Proofing - Sewri Interchange	579	15-Oct-19	14-Mar-22	690	10-Nov-21	12-Feb-24	0%	0%	-476	-586	-425
MPR39.1.13.8.2	Water Proofing - Intertidal	465	28-Dec-19	10-Jan-22	621	03-Dec-21	15-Dec-23	0%	0%	-433	-589	-376
MPR39.1.13.8.3	Water Proofing - Marine	526	18-Dec-19	14-Mar-22	641	05-Feb-22	13-Mar-24	0%	0%	-495	-610	-449
MPR39.1.13.8.4	Water Proofing - Orthotropic Steel Deck	281	11-Jan-21	16-Mar-22	331	01-Jun-22	30-Jun-23	0%	0%	-346	-396	-237
MPR39.1.13.9	Stone Mastic Asphalt Pavement	74	23-Dec-21	22-Mar-22	350	25-Jan-23	20-Mar-24	0%	0%	-333	-609	-511
MPR39.1.13.9.1	Sewri Interchange	70	27-Dec-21	21-Mar-22	106	13-Oct-23	17-Feb-24	0%	0%	-549	-585	-486
MPR39.1.13.9.2	Main Bridge	74	23-Dec-21	22-Mar-22	350	25-Jan-23	20-Mar-24	0%	0%	-333	-609	-569
MPR39.1.13.10	Bridge Anclilaries and Misc. Works	575	31-Jan-20	22-Jun-22	728	06-Jan-22	25-May-24	0%	0%	-433	-586	-511
MPR39.1.13.10.1	Bridge Ancillaries	575	31-Jan-20	22-Jun-22	728	06-Jan-22	25-May-24	0%	0%	-433	-586	-511
MPR39.1.13.10.1.1	Noise Barrier, View Barrier and Safety Fence	552	31-Jan-20	26-May-22	723	06-Jan-22	20-May-24	0%	0%	-433	-604	-506
MPR39.1.13.10.1.2	Traffic Signages and Marking	84	17-Mar-22	22-Jun-22	88	10-Feb-24	25-May-24	0%	0%	-582	-586	-511
MPR39.1.15	Handing Over	148	31-Mar-22	22-Sep-22	159	24-Feb-24	31-Aug-24	0%	0%	-582	-593	-594
MPR39.1.15.1	Testing and Handing Over	120	31-Mar-22	18-Aug-22	131	24-Feb-24	29-Jul-24	0%	0%	-582	-593	-594
MPR39.1.15.2	Final Handing Over	28	19-Aug-22	22-Sep-22	28	29-Jul-24	31-Aug-24	0%	0%	-593	-593	-594
MPR39.1.14	Invoice Schedule (Shows the Invoice items which are not covered in the a	1062	23-Mar-18	22-Sep-22	1655	23-Mar-18 A	31-Aug-24	85.8%	58.09%	0	-593	-594



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

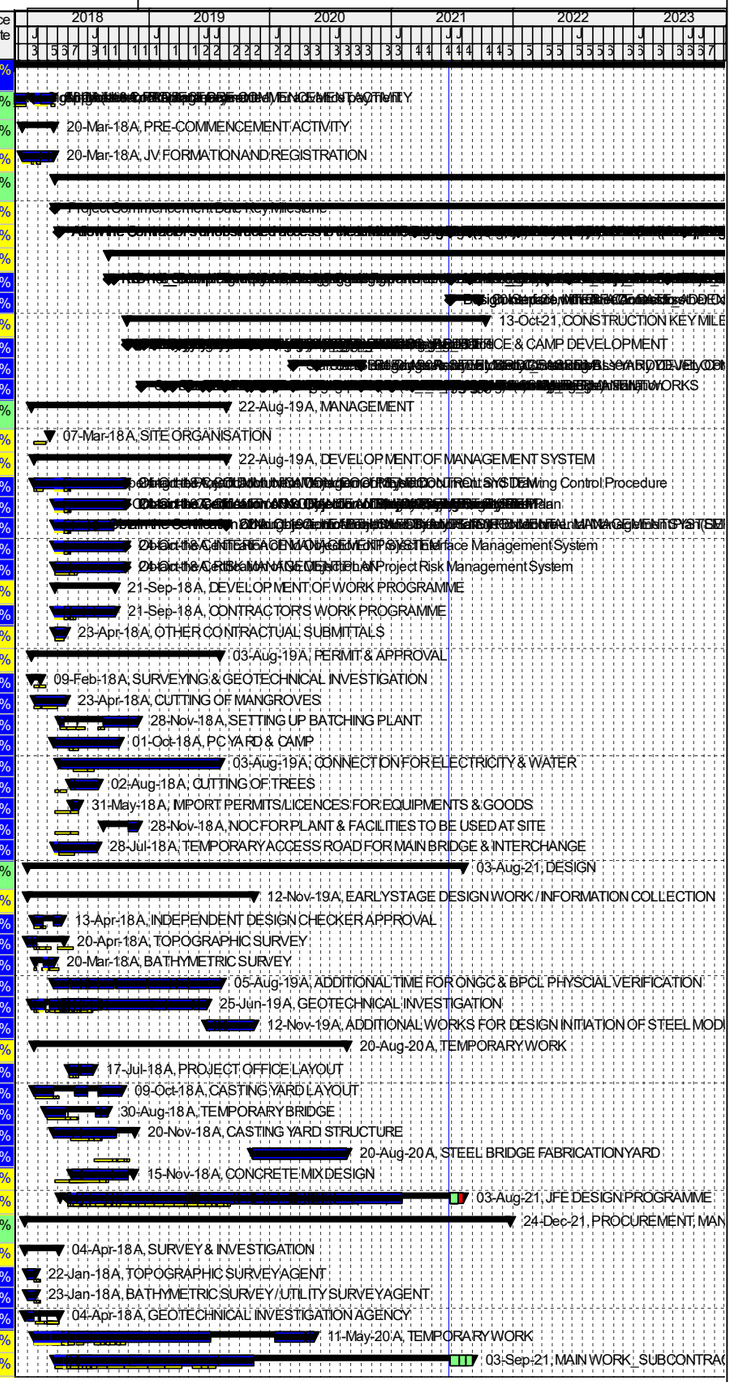
Please note that this Monthly Rolling Plan has been updated based on the actual progress and will not match with impacted schedule submitted with the EOT-04 proposal for the contractor's eligibility for extension of time.

Attachment 7- Package-2's Construction Programme Updated as on 25th June 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_25062021_APPROVED_MPR.39	3159	17-Nov-17	21-Sep-24	17-Nov-17		83.65%	47.04%
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	2484	23-Mar-18	21-Mar-23	23-Mar-18		0%	0%
6		PROJECT KEY MILESTONE	2304	23-Mar-18	22-Sep-22	23-Mar-18		0%	0%
7		INTERFACE MILESTONE_ERG19	2456	19-Apr-18	21-Mar-23	03-Apr-18		0%	0%
8		PHYSICAL PROGRESS AND INTERFACE DATE_ADD2-ATTACHMENT 25	2019	18-Sep-18	22-Jun-22	31-Aug-18		0%	0%
9		KEY DATE_ADDENDUM 2_NO.25_Obtain the Certificate of No Objection	2019	18-Sep-18	22-Jun-22	31-Aug-18		0%	0%
10		INTERFACE DATE_ADDENDUM 2_NO.25	88	17-Dec-18	20-Sep-21			0%	0%
11		CONSTRUCTION KEY MILESTONES	1084	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	985	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		COUMMUNICATION / 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	1291	20-Jan-18	04-Sep-19	01-Jan-18		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	1190	01-May-18	04-Sep-19	09-Apr-18		100%	100%
52		PROCUREMENT, MANUFACTURING AND LOGISTICS	1434	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	1080	23-Mar-18	20-Jul-19	23-Mar-18		0%	0%



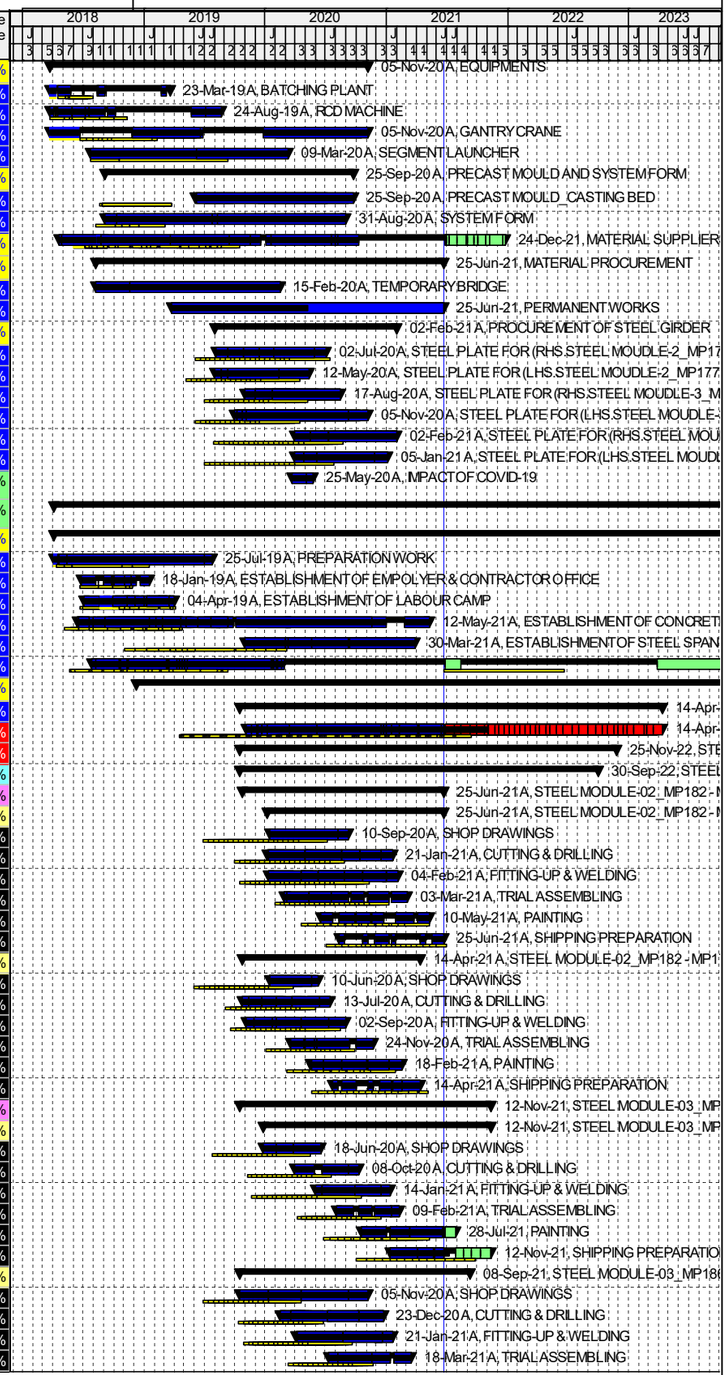
Project Baseline Bar | Actual Work | Remaining Work | Critical Remaining Work | Milestone | % Complete | Summary

EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY (MMRDA)

CONTRACTOR:
DAEWOO - TPL JV

Date	Revision	Checked	Approved
25-Jun-21	R0		

#	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	1301	02-Jun-18	15-Oct-19	20-Apr-18		0%	0%
68		MATERIAL PROCUREMENT	0			08-Aug-18		0%	0%
69		TEMPORARY BRIDGE	0			08-Aug-18	15-Feb-20	0%	0%
70		PERMANENT WORKS	0			25-Mar-19		0%	0%
71		PROCUREMENT OF STEEL GIRDER	673	07-May-19	23-Aug-20	01-Aug-19	02-Feb-21	0%	0%
72		STEEL PLATE FOR (RHS.STEEL MOUDLE-2_MP177 - MP182)	513	04-Jun-19	13-Jul-20	08-Aug-19	02-Jul-20	0%	0%
73		STEEL PLATE FOR (LHS.STEEL MOUDLE-2_MP177 - MP182)	438	07-May-19	16-Apr-20	01-Aug-19	12-May-20	0%	0%
74		STEEL PLATE FOR (RHS.STEEL MOUDLE-3_MP183 - MP186)	315	01-Jul-19	10-May-20	01-Nov-19	17-Aug-20	0%	0%
75		STEEL PLATE FOR (LHS.STEEL MOUDLE-3_MP183 - MP186)	315	04-Jun-19	14-Apr-20	01-Oct-19	05-Nov-20	0%	0%
76		STEEL PLATE FOR (RHS.STEEL MOUDLE-1_MP176 - MP171)	286	30-Jul-19	23-Aug-20	01-Apr-20	02-Feb-21	0%	0%
77		STEEL PLATE FOR (LHS.STEEL MOUDLE-1_MP176 - MP171)	327	02-Jul-19	26-Jul-20	29-Mar-20	05-Jan-21	0%	0%
78		IMPACT OF COVID-19	51			22-Mar-20	25-May-20	0%	0%
79		CONSTRUCTION	2201	02-Apr-18	21-Jun-22	02-Apr-18		83.61%	46.41%
80		TEMPORARY WORK	2187	02-Apr-18	21-Jun-22	02-Apr-18		97.97%	97.95%
81		PREPARATION WORK	368	02-Apr-18	16-Jan-19	02-Apr-18	25-Jul-19	0%	0%
82		ESTABLISHMENT OF EMPOLYER & CONTRACTOR OFFICE	194	20-Jun-18	27-Nov-18	27-Jun-18	18-Jan-19	100%	100%
83		ESTABLISHMENT OF LABOUR CAMP	464	20-Jun-18	05-Apr-19	03-Jul-18	04-Apr-19	0%	0%
84		ESTABLISHMENT OF CONCRETE CASTING YARD	1095	04-May-18	25-Apr-19	14-Jun-18	12-May-21	100%	100%
85		ESTABLISHMENT OF STEEL SPAN ASSEMBLY YARD	584	02-Nov-18	06-Mar-20	01-Nov-19	30-Mar-21	0%	0%
86		TEMPORARY BRIDGE	2135	20-May-18	21-Jun-22	27-Jul-18		96.52%	96.49%
87		PERMANENT WORK	1934	03-Sep-18	24-May-22	08-Dec-18		81.73%	39.67%
88		PRE-FABRICATION AND ASSEMBLY	1155	18-Apr-19	19-Feb-22	16-Oct-19		76.65%	45.89%
89		CONCRETE PRE-FABRICATION AT THE CASTING YARD	689	18-Apr-19	15-Sep-21	06-Nov-19		95.68%	23.45%
90		STEEL SPAN FABRICATION AT THE SUPPLIER'S WORK SHOP INCLUDING LOGISTIC	1015	02-Jun-19	24-Jan-22	16-Oct-19		74.56%	52%
91		STEEL SPAN FABRICATION AT THE SUPPLIER'S WORK SHOP	959	02-Jun-19	29-Nov-21	16-Oct-19		100%	85.41%
92		STEEL MODULE-02_MP182 - MP177 (FABRICATION AT JFE)	626	02-Jun-19	29-Jun-21	24-Oct-19	25-Jun-21	100%	100%
93		STEEL MODULE-02_MP182 - MP177 (RHS)	626	29-Jun-19	29-Jun-21	06-Jan-20	25-Jun-21	100%	100%
94		SHOP DRAWINGS	375	29-Jun-19	08-Jul-20	17-Jan-20	10-Sep-20	0%	0%
95		CUTTING & DRILLING	297	02-Oct-19	27-Aug-20	06-Jan-20	21-Jan-21	0%	0%
96		FITTING-UP & WELDING	357	17-Oct-19	10-Nov-20	12-Jan-20	04-Feb-21	0%	0%
97		TRIAL ASSEMBLING	389	30-Jan-20	09-Jan-21	27-Feb-20	03-Mar-21	100%	100%
98		PAINTING	413	19-Apr-20	09-May-21	16-Jun-20	10-May-21	0%	0%
99		SHIPPING PREPARATION	413	03-Jul-20	29-Jun-21	10-Aug-20	25-Jun-21	0%	0%
100		STEEL MODULE-02_MP182 - MP177 (LHS)	561	02-Jun-19	07-May-21	24-Oct-19	14-Apr-21	100%	100%
101		SHOP DRAWINGS	300	02-Jun-19	27-Mar-20	17-Jan-20	10-Jun-20	0%	0%
102		CUTTING & DRILLING	140	04-Sep-19	31-May-20	24-Oct-19	13-Jul-20	0%	0%
103		FITTING-UP & WELDING	214	19-Sep-19	14-Aug-20	06-Nov-19	02-Sep-20	0%	0%
104		TRIAL ASSEMBLING	228	02-Jan-20	28-Sep-20	20-Mar-20	24-Nov-20	100%	100%
105		PAINTING	300	07-Mar-20	26-Jan-21	15-May-20	18-Feb-21	0%	0%
106		SHIPPING PREPARATION	348	21-May-20	07-May-21	21-Jul-20	14-Apr-21	0%	0%
107		STEEL MODULE-03_MP186 - MP183 (FABRICATION AT JFE)	734	29-Jun-19	25-Sep-21	16-Oct-19		100%	100%
108		STEEL MODULE-03_MP186 - MP183 (RHS)	659	25-Jul-19	25-Sep-21	26-Dec-19		100%	100%
109		SHOP DRAWINGS	295	25-Jul-19	15-May-20	26-Dec-19	18-Jun-20	0%	0%
110		CUTTING & DRILLING	181	07-Nov-19	19-Jul-20	01-Apr-20	08-Oct-20	0%	0%
111		FITTING-UP & WELDING	268	22-Nov-19	17-Oct-20	01-Jun-20	14-Jan-21	0%	0%
112		TRIAL ASSEMBLING	284	05-Apr-20	16-Dec-20	03-Aug-20	09-Feb-21	100%	100%
113		PAINTING	348	24-Jun-20	10-May-21	19-Oct-20		0%	0%
114		SHIPPING PREPARATION	386	02-Oct-20	25-Sep-21	11-Jan-21		0%	0%
115		STEEL MODULE-03_MP186 - MP183 (LHS)	653	29-Jun-19	29-Aug-21	16-Oct-19		100%	100%
116		SHOP DRAWINGS	325	29-Jun-19	19-Apr-20	16-Oct-19	05-Nov-20	0%	0%
117		CUTTING & DRILLING	304	12-Oct-19	23-Jun-20	17-Feb-20	23-Dec-20	0%	0%
118		FITTING-UP & WELDING	329	27-Oct-19	21-Sep-20	03-Apr-20	21-Jan-21	0%	0%
119		TRIAL ASSEMBLING	298	10-Mar-20	20-Nov-20	10-Jul-20	18-Mar-21	100%	100%



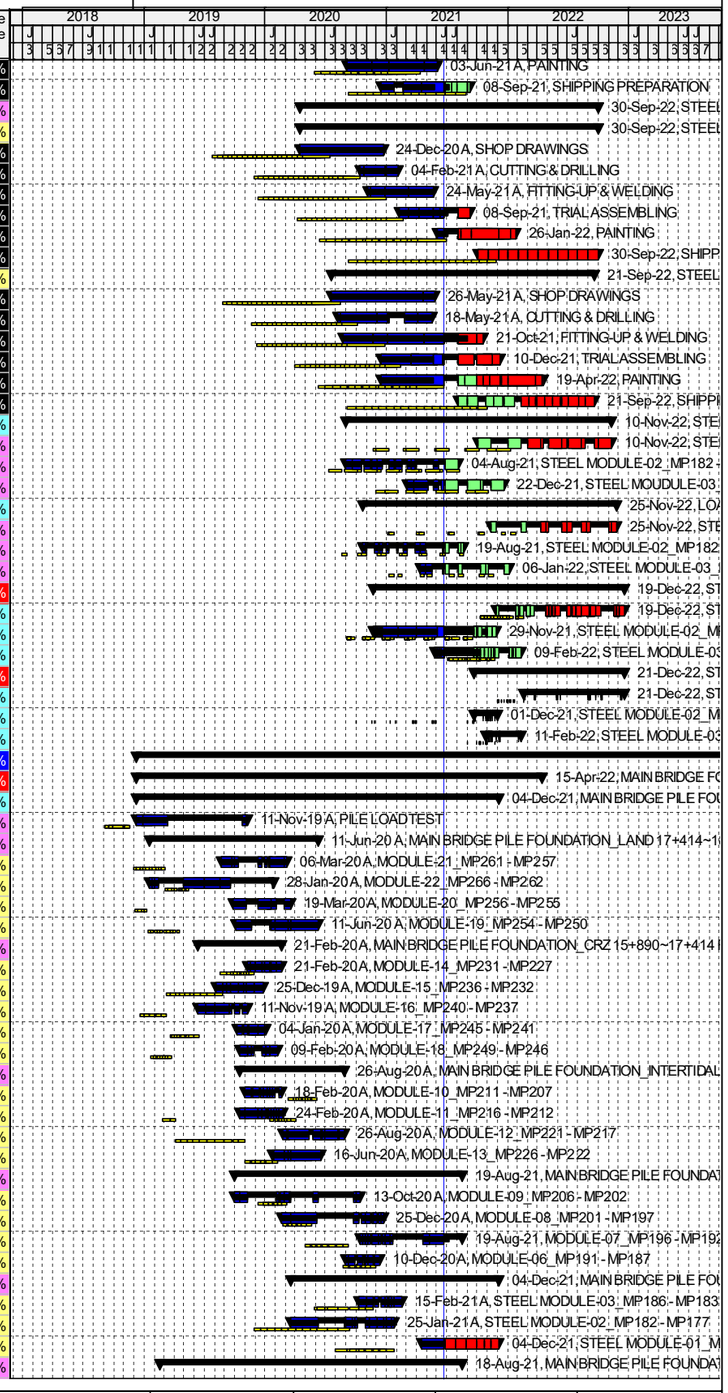
Project Baseline Bar | Actual Work | Remaining Work | Critical Remaining Work | Milestone | % Complete | Summary

EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY (MMRDA)

CONTRACTOR:
DAEWOO - TPL JV

Date	Revision	Checked	Approved
25-Jun-21	R0		

#	Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Actual Start	Actual Finish	Schedule % Complete	Performance % Complete
120		PAINTING	391	29-May-20	14-Apr-21	04-Sep-20	03-Jun-21	0%	0%
121		SHIPPING PREPARATION	366	06-Sep-20	29-Aug-21	14-Dec-20		0%	0%
122		STEEL MODULE-01_MP176 - MP171 (FABRICATION AT JFE)	735	26-Jul-19	29-Nov-21	16-Apr-20		100%	60.84%
123		STEEL MODULE-01_MP176 - MP171 (RHS)	735	26-Jul-19	29-Nov-21	16-Apr-20		100%	84.84%
124		SHOP DRAWINGS	250	26-Jul-19	15-Jul-20	16-Apr-20	24-Dec-20	0%	0%
125		CUTTING & DRILLING	195	27-Nov-19	12-Oct-20	15-Oct-20	04-Feb-21	0%	0%
126		FITTING-UP & WELDING	235	12-Dec-19	31-Dec-20	05-Nov-20	24-May-21	0%	0%
127		TRIAL ASSEMBLING	210	05-Apr-20	19-Feb-21	10-Feb-21		100%	84.84%
128		PAINTING	176	14-Jun-20	29-Jun-21	02-Jun-21		0%	0%
129		SHIPPING PREPARATION	360	07-Sep-20	29-Nov-21			0%	0%
130		STEEL MODULE-01_MP176 - MP171 (LHS)	726	24-Aug-19	01-Nov-21	17-Jul-20		100%	36.84%
131		SHOP DRAWINGS	355	24-Aug-19	13-Aug-20	17-Jul-20	26-May-21	0%	0%
132		CUTTING & DRILLING	199	22-Nov-19	07-Oct-20	06-Aug-20	18-May-21	0%	0%
133		FITTING-UP & WELDING	294	07-Dec-19	26-Dec-20	24-Aug-20		0%	0%
134		TRIAL ASSEMBLING	248	31-Mar-20	14-Feb-21	15-Dec-20		100%	36.84%
135		PAINTING	351	09-Jun-20	24-Jun-21	15-Dec-20		0%	0%
136		SHIPPING PREPARATION	413	02-Sep-20	01-Nov-21			0%	0%
137		STEEL SPAN MATERIAL OCEAN FREIGHT TO THE MUMBAI PORT INCLUDING CUSTOM CLEARANCE	787	10-Jul-20	09-Jan-22	01-Sep-20		70.23%	43.33%
138		STEEL MODULE-01_MP176 - MP171 (OCEAN FREIGHT)	403	23-Nov-20	09-Jan-22			54.15%	0%
139		STEEL MODULE-02_MP182 - MP177 (OCEAN FREIGHT)	325	10-Jul-20	09-Aug-21	01-Sep-20		91.67%	83.33%
140		STEEL MOUDULE-03_MP186 - MP183 (OCEAN FREIGHT)	273	29-Nov-20	05-Nov-21	06-Mar-21		58.16%	37.5%
141		LOADING AND DELIVERY TO THE CONTRACTOR'S ASSEMBLY YARD	724	20-Aug-20	24-Jan-22	21-Oct-20		62.38%	36.67%
142		STEEL MODULE-01_MP176 - MP171 (DELIVERY TO ASSEMBLY YARD)	378	02-Jan-21	24-Jan-22			40%	0%
143		STEEL MODULE-02_MP182 - MP177 (DELIVERY TO ASSEMBLY YARD)	262	20-Aug-20	19-Aug-21	21-Oct-20		89.27%	75%
144		STEEL MODULE-03_MP186 - MP183 (DELIVERY TO ASSEMBLY YARD)	216	09-Jan-21	20-Nov-21	14-Apr-21		50%	25%
145		STEEL GIRDER ASSEMBLY AT THE CONTRACTOR'S ASSEMBLY YARD	492	05-Sep-20	17-Feb-22	23-Nov-20		30%	22.5%
146		STEEL MODULE-01_MP176 - MP171 (ASSEMBLY WORKS)	305	13-Oct-21	17-Feb-22			0%	0%
147		STEEL MODULE-02_MP182 - MP177 (ASSEMBLY WORKS)	189	05-Sep-20	18-Sep-21	23-Nov-20		75%	56.25%
148		STEEL MODULE-03_MP186 - MP183 (ASSEMBLY WORKS)	117	06-Jul-21	23-Nov-21	25-May-21		0%	0%
149		STEEL SPAN LOADING AND TRANSPORTING TO THE ERECTION AREA	328	30-Sep-20	19-Feb-22			30%	0%
150		STEEL MODULE-01_MP176 - MP171 (LOAD OUT AND TRANSPORT)	203	03-Dec-21	19-Feb-22			0%	0%
151		STEEL MODULE-02_MP182 - MP177 (LOAD OUT AND TRANSPORT)	58	30-Sep-20	21-Sep-21			75%	0%
152		STEEL MODULE-03_MP186 - MP183 (LOAD OUT AND TRANSPORT)	91	01-Sep-21	25-Nov-21			0%	0%
153		MAIN BRIDGE	1883	03-Sep-18	24-May-22	08-Dec-18		84.01%	35.86%
154		MAIN BRIDGE FOUNDATION	1315	03-Sep-18	23-Mar-21	08-Dec-18		100%	75.58%
155		MAIN BRIDGE PILE FOUNDATION	1177	03-Sep-18	23-Jan-21	08-Dec-18		100%	92.54%
156		PILE LOAD TEST	259	03-Sep-18	19-Nov-18	08-Dec-18	11-Nov-19	100%	100%
157		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%
158		MODULE-21_MP261 - MP257	126	30-Nov-18	05-Mar-19	23-Aug-19	06-Mar-20	100%	100%
159		MODULE-22_MP266 - MP262	167	06-Mar-19	15-May-19	17-Jan-19	28-Jan-20	100%	100%
160		MODULE-20_MP256 - MP255	32	05-Dec-18	10-Jan-19	25-Sep-19	19-Mar-20	100%	100%
161		MODULE-19_MP254 - MP250	199	11-Jan-19	16-Apr-19	05-Oct-19	11-Jun-20	100%	100%
162		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%
163		MODULE-14_MP231 - MP227	48	17-Aug-19	27-Nov-19	08-Nov-19	21-Feb-20	100%	100%
164		MODULE-15_MP236 - MP232	77	08-Mar-19	26-Aug-19	08-Aug-19	25-Dec-19	100%	100%
165		MODULE-16_MP240 - MP237	113	20-Dec-18	08-Mar-19	12-Jun-19	11-Nov-19	100%	100%
166		MODULE-17_MP245 - MP241	94	20-Mar-19	17-Jun-19	09-Oct-19	04-Jan-20	100%	100%
167		MODULE-18_MP249 - MP246	74	21-Jan-19	26-Mar-19	15-Oct-19	09-Feb-20	100%	100%
168		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%
169		MODULE-10_MP211 - MP207	243	12-Mar-20	06-Jun-20	01-Nov-19	18-Feb-20	100%	100%
170		MODULE-11_MP216 - MP212	277	27-Feb-19	03-Apr-20	15-Oct-19	24-Feb-20	100%	100%
171		MODULE-12_MP221 - MP217	225	06-Apr-19	30-Oct-19	25-Feb-20	26-Aug-20	100%	100%
172		MODULE-13_MP226 - MP222	313	30-Oct-19	06-Feb-20	24-Jan-20	16-Jun-20	100%	100%
173		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%
174		MODULE-09_MP206 - MP202	340	12-Dec-19	06-Mar-20	01-Oct-19	13-Oct-20	100%	100%
175		MODULE-08_MP201 - MP197	262	22-Feb-20	19-May-20	19-Feb-20	25-Dec-20	100%	100%
176		MODULE-07_MP196 - MP192	146	02-May-20	08-Sep-20	12-Oct-20		100%	97.74%
177		MODULE-06_MP191 - MP187	82	21-Aug-20	28-Nov-20	31-Aug-20	10-Dec-20	100%	100%
178		MAIN BRIDGE PILE FOUNDATION_MARINE (STEEL) 11+880~13+610 FROM MP171 TO MP186	555	27-Nov-19	23-Jan-21	17-Mar-20		100%	63.56%
179		STEEL MODULE-03_MP186 - MP183	80	30-May-20	21-Nov-20	08-Oct-20	15-Feb-21	100%	100%
180		STEEL MODULE-02_MP182 - MP177	336	27-Nov-19	10-Sep-20	17-Mar-20	25-Jan-21	100%	100%
181		STEEL MODULE-01_MP176 - MP171	108	30-Jul-20	23-Jan-21	19-Apr-21		100%	2.77%
182		MAIN BRIDGE PILE FOUNDATION_MARINE 10+380~11+880 FROM MP146 TO MP170	661	24-Nov-18	28-Dec-19	19-Feb-19		100%	95.45%



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-Jun-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
183		MODULE-05_MP171 - MP167	79	19-Jun-19	16-Oct-19	24-Feb-21		100%	73.75%
184		MODULE-04_MP166 - MP162	507	24-Nov-18	18-Feb-19	19-Feb-19	20-Feb-21	100%	100%
185		MODULE-03_MP161 - MP157	393	22-Jan-19	18-Apr-19	03-Apr-19	25-Mar-21	100%	100%
186		MODULE-02_MP156 - MP152	94	16-Apr-19	27-Jul-19	21-Dec-20	27-Mar-21	100%	100%
187		MODULE-01_MP151 - MP146	107	04-Oct-19	28-Dec-19	23-Dec-20	03-Apr-21	100%	100%
188		MAIN BRIDGE PILE CAP INSTALLATION	1048	22-Dec-18	23-Mar-21	01-May-19		100%	57.86%
189		MAIN BRIDGE PILE CAP BOTTOM SLAB INSTALLATION	1007	22-Dec-18	17-Feb-21	19-Aug-19		0%	0%
190		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%
191		MODULE-14_MP231 - MP227	168	28-Sep-19	12-Dec-19	24-Dec-19	28-May-20	0%	0%
192		MODULE-15_MP236 - MP232	71	05-Apr-19	11-Sep-19	02-Nov-19	21-Feb-20	0%	0%
193		MODULE-16_MP240 - MP237	142	17-Jan-19	20-Mar-19	19-Aug-19	23-Feb-20	0%	0%
194		MODULE-17_MP245 - MP241	44	17-Apr-19	03-Jul-19	22-Oct-19	04-Jan-20	0%	0%
195		MODULE-18_MP249 - MP246	63	19-Feb-19	12-Apr-19	08-Nov-19	10-Feb-20	0%	0%
196		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%
197		MODULE-10_MP211 - MP207	95	15-Apr-20	18-Jul-20	30-Dec-19	30-Sep-20	0%	0%
198		MODULE-11_MP216 - MP212	128	06-Apr-19	15-Apr-20	09-Mar-20	19-Oct-20	0%	0%
199		MODULE-12_MP221 - MP217	74	10-May-19	12-Nov-19	11-Sep-20	30-Nov-20	0%	0%
200		MODULE-13_MP226 - MP222	59	03-Dec-19	18-Feb-20	27-Apr-20	26-Oct-20	0%	0%
201		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%
202		MODULE-09_MP206 - MP202	289	21-Jan-20	20-Mar-20	16-Nov-19	11-Nov-20	0%	0%
203		MODULE-08_MP201 - MP197	50	23-Mar-20	30-May-20	11-Nov-20	25-Feb-21	0%	0%
204		MODULE-07_MP196 - MP192	153	30-May-20	08-Oct-20	15-Oct-20		0%	0%
205		MODULE-06_MP191 - MP187	77	08-Oct-20	10-Dec-20	20-Nov-20	26-Jan-21	0%	0%
206		MAIN BRIDGE PILE CAP PRECAST SHELL_MARINE (STEEL) 11+880~13+610 FROM MP171 TO MP186	278	08-Jan-20	17-Feb-21	11-Oct-20		0%	0%
207		STEEL MODULE-01_MP176 - MP171	92	02-Nov-20	17-Feb-21			0%	0%
208		STEEL MODULE-02_MP182 - MP177	118	08-Jan-20	26-Sep-20	11-Oct-20	26-Feb-21	0%	0%
209		STEEL MODULE-03_MP186 - MP183	104	07-Aug-20	03-Dec-20	19-Jan-21		0%	0%
210		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%
211		MODULE-05_MP171 - MP167	34	24-Aug-19	28-Oct-19	26-Mar-21		0%	0%
212		MODULE-04_MP166 - MP162	73	22-Dec-18	01-Mar-19	15-Feb-21		0%	0%
213		MODULE-03_MP161 - MP157	48	01-Mar-19	10-May-19	28-Jan-21		0%	0%
214		MODULE-02_MP156 - MP152	53	15-May-19	16-Aug-19	15-Feb-21	17-May-21	0%	0%
215		MODULE-01_MP151 - MP146	102	01-Nov-19	21-Jan-20	11-Feb-21		0%	0%
216		MAIN BRIDGE PILE CAP INSTALLATION	1032	27-Dec-18	23-Mar-21	01-May-19		100%	57.86%
217		MAIN BRIDGE PILE CAP_LAND 17+414~18+188 FROM MP251 TO MP266	377	27-Dec-18	13-Jun-19	01-May-19	27-Jun-20	100%	100%
218		MODULE-21_MP261 - MP257	248	27-Dec-18	30-Mar-19	15-Oct-19	27-Jun-20	100%	100%
219		MODULE-22_MP266 - MP262	207	02-Apr-19	13-Jun-19	01-May-19	16-May-20	100%	100%
220		MODULE-20_MP256 - MP255	54	01-Jan-19	06-Feb-19	29-Nov-19	23-May-20	100%	100%
221		MODULE-19_MP254 - MP250	218	08-Feb-19	13-May-19	23-Nov-19	20-Jun-20	100%	100%
222		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%
223		MODULE-14_MP231 - MP227	230	24-Oct-19	08-Jan-20	11-Jan-20	19-Sep-20	100%	100%
224		MODULE-15_MP236 - MP232	201	02-Sep-19	22-Nov-19	16-Nov-19	18-Sep-20	100%	100%
225		MODULE-16_MP240 - MP237	146	02-Jul-19	26-Sep-19	28-Aug-19	05-Mar-20	100%	100%
226		MODULE-17_MP245 - MP241	98	29-Apr-19	16-Aug-19	17-Nov-19	24-Jan-20	100%	100%
227		MODULE-18_MP249 - MP246	84	04-Mar-19	10-May-19	13-Nov-19	14-Feb-20	100%	100%
228		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%
229		MODULE-10_MP211 - MP207	96	27-Apr-20	05-Sep-20	29-Jan-20	07-Oct-20	100%	100%
230		MODULE-11_MP216 - MP212	157	18-Apr-19	13-May-20	31-Aug-20	24-Oct-20	100%	100%
231		MODULE-12_MP221 - MP217	111	22-May-19	09-Dec-19	17-Sep-20	07-Dec-20	100%	100%
232		MODULE-13_MP226 - MP222	94	14-Dec-19	17-Mar-20	16-Sep-20	19-Nov-20	100%	100%
233		MAIN BRIDGE PILE CAP_MARINE 13+610~14+800 FROM MP187 TO MP205	413	01-Feb-20	06-Jan-21	13-Jan-20		100%	92.86%
234		MODULE-09_MP206 - MP202	288	01-Feb-20	16-Apr-20	13-Jan-20	20-Nov-20	100%	100%
235		MODULE-08_MP201 - MP197	63	03-Apr-20	06-Jul-20	23-Nov-20	04-Mar-21	100%	100%
236		MODULE-07_MP196 - MP192	160	15-Jun-20	11-Nov-20	01-Dec-20		100%	75%
237		MODULE-06_MP191 - MP187	90	21-Oct-20	06-Jan-21	14-Dec-20	30-Jan-21	100%	100%
238		MAIN BRIDGE PILE CAP_MARINE (STEEL) 11+880~13+610 FROM MP171 TO MP186	355	20-Jan-20	23-Mar-21	18-Nov-20		100%	9.8%
239		STEEL MODULE-01_MP176 - MP171	163	21-Nov-20	23-Mar-21			100%	0%
240		STEEL MODULE-02_MP182 - MP177	158	20-Jan-20	02-Nov-20	18-Nov-20	08-Mar-21	100%	100%
241		STEEL MODULE-03_MP186 - MP183	126	27-Aug-20	07-Jan-21	28-Jan-21		100%	1.68%
242		MAIN BRIDGE PILE CAP_MARINE 10+380~11+880 FROM MP146 TO MP170	188	03-Jan-19	17-Feb-20	08-Feb-21		100%	66.67%
243		MODULE-05_MP171 - MP167	44	10-Sep-19	25-Nov-19	13-Apr-21		100%	25%
244		MODULE-04_MP166 - MP162	96	03-Jan-19	29-Mar-19	01-Mar-21		100%	80%
245		MODULE-03_MP161 - MP157	78	14-Mar-19	08-Jun-19	08-Feb-21		100%	60%

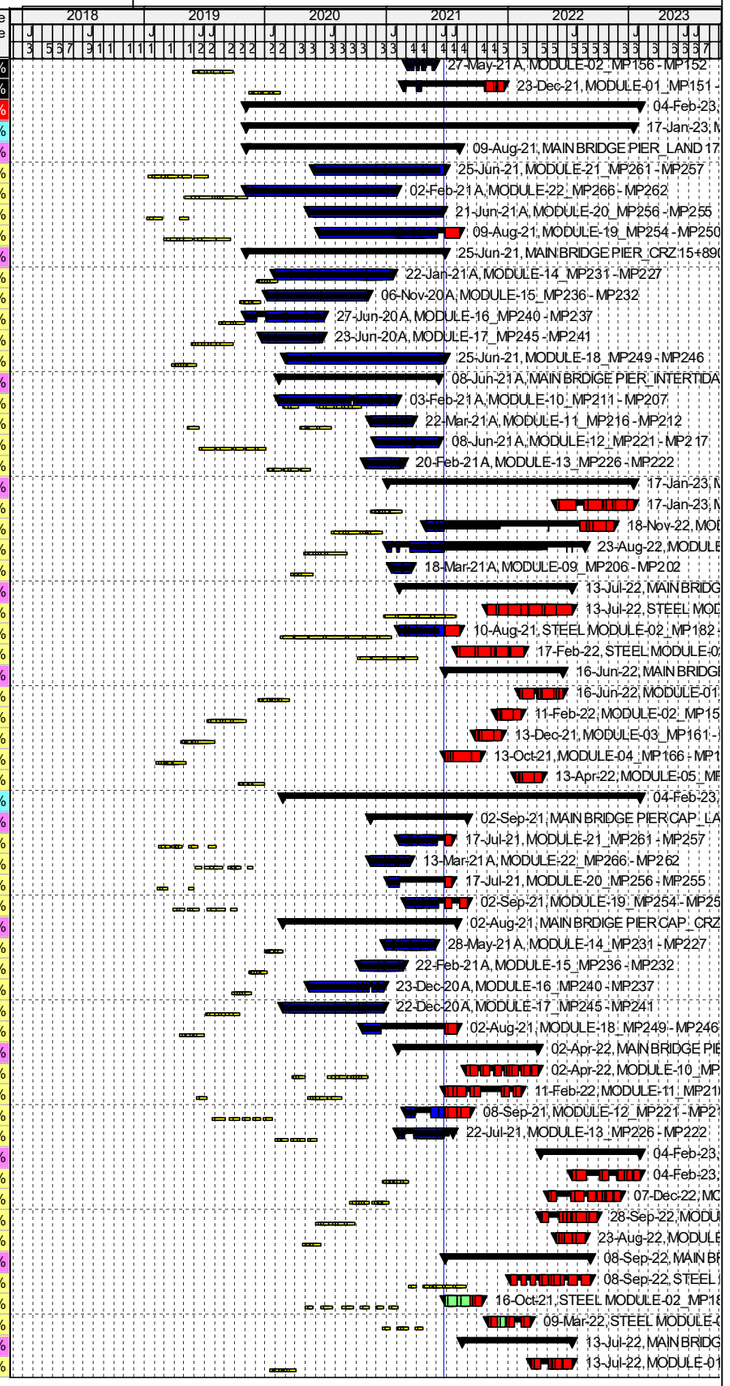
Project Baseline Bar · Actual Work · Remaining Work · Critical Remaining Work · Milestone · % Complete · Summary

EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY (MMRDA)

CONTRACTOR:
DAEWOO - TPL JV

Date	Revision	Checked	Approved
25-Jun-21	R0		

#	Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Actual Start	Actual Finish	Schedule % Complete	Performance % Complete
246		MODULE-02_MP156 - MP152	54	27-May-19	26-Sep-19	06-Mar-21	27-May-21	100%	100%
247		MODULE-01_MP151 - MP146	57	14-Nov-19	17-Feb-20	22-Feb-21		100%	60%
248		MAIN BRIDGE SUB-STRUCTURE	1167	09-Jan-19	24-Sep-21	04-Nov-19		99%	44.7%
249		MAIN BRIDGE PIER INSTALLATION	1149	09-Jan-19	28-Jul-21	04-Nov-19		99.45%	60.21%
250		MAIN BRIDGE PIER_LAND 17+414~18+188 FROM MB251 TO MB266	623	09-Jan-19	08-Nov-19	06-Nov-19		100%	93.7%
251		MODULE-21_MP261 - MP257	301	14-Jan-19	12-Jul-19	27-May-20		100%	99.2%
252		MODULE-22_MP266 - MP262	315	04-May-19	08-Nov-19	06-Nov-19	02-Feb-21	100%	100%
253		MODULE-20_MP256 - MP255	225	09-Jan-19	17-May-19	11-May-20	21-Jun-21	100%	100%
254		MODULE-19_MP254 - MP250	278	28-Feb-19	20-Sep-19	15-Jun-20		100%	77.78%
255		MAIN BRIDGE PIER_CRZ 15+890~17+414 FROM MB226 TO MB250	393	26-Mar-19	06-Feb-20	04-Nov-19		100%	96.49%
256		MODULE-14_MP231 - MP227	228	05-Dec-19	06-Feb-20	02-Feb-20	22-Jan-21	100%	100%
257		MODULE-15_MP236 - MP232	134	16-Oct-19	19-Dec-19	06-Jan-20	06-Nov-20	100%	100%
258		MODULE-16_MP240 - MP237	85	13-Aug-19	30-Oct-19	04-Nov-19	27-Jun-20	100%	100%
259		MODULE-17_MP245 - MP241	171	22-May-19	25-Sep-19	24-Dec-19	23-Jun-20	100%	100%
260		MODULE-18_MP249 - MP246	238	26-Mar-19	06-Jun-19	02-Mar-20		100%	80.25%
261		MAIN BRDIGE 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%
262		MODULE-10_MP211 - MP207	338	24-Feb-20	16-Oct-20	10-Feb-20	03-Feb-21	100%	100%
263		MODULE-11_MP216 - MP212	386	11-May-19	17-Jul-20	13-Nov-20	22-Mar-21	100%	100%
264		MODULE-12_MP221 - MP217	97	17-Jun-19	03-Jan-20	30-Nov-20	08-Jun-21	100%	100%
265		MODULE-13_MP226 - MP222	235	06-Jan-20	15-May-20	29-Oct-20	20-Feb-21	100%	100%
266		MAIN BRIDGE PIER_MARINE 13+610~14+800 FROM MB187 TO MB205	235	19-Mar-20	18-Feb-21	04-Jan-21		100%	45.85%
267		MODULE-06_MP191 - MP187	162	13-Nov-20	18-Feb-21			100%	0%
268		MODULE-07_MP196 - MP192	105	17-Jul-20	19-Dec-20	28-Apr-21		100%	28.54%
269		MODULE-08_MP201 - MP197	162	25-Apr-20	03-Sep-20	04-Jan-21		100%	80.5%
270		MODULE-09_MP206 - MP202	66	19-Mar-20	23-May-20	18-Jan-21	18-Mar-21	100%	100%
271		MAIN BRIDGE PIER_MARINE (STEEL) 11+880~13+610 FROM MB171 TO MB186	356	17-Feb-20	28-Jul-21	08-Feb-21		95.88%	27.47%
272		STEEL MODULE-01_MP176 - MP171	205	23-Dec-20	28-Jul-21			89.01%	0%
273		STEEL MODULE-02_MP182 - MP177	170	17-Feb-20	15-Jan-21	08-Feb-21		100%	73.25%
274		STEEL MODULE-03_MP186 - MP183	150	06-Oct-20	03-Apr-21			100%	0%
275		MAIN BRIDGE PIER_MARINE 10+380~11+880 FROM MB146 TO MB170	268	07-Feb-19	13-Mar-20			100%	0%
276		MODULE-01_MP151 - MP146	105	10-Dec-19	13-Mar-20			100%	0%
277		MODULE-02_MP156 - MP152	64	11-Jul-19	04-Nov-19			100%	0%
278		MODULE-03_MP161 - MP157	64	22-Apr-19	01-Aug-19			100%	0%
279		MODULE-04_MP166 - MP162	64	07-Feb-19	06-May-19			100%	0%
280		MODULE-05_MP171 - MP167	64	10-Oct-19	31-Dec-19			100%	0%
281		MAIN BRIDGE PIER CAP INSTALLATION	898	08-Feb-19	27-Aug-21	25-Feb-20		98.46%	29.01%
282		MAIN BRIDGE PIER CAP_LAND 17+414~18+188 FROM MB251 TO MB266	212	08-Feb-19	23-Nov-19	13-Nov-20		100%	63.64%
283		MODULE-21_MP261 - MP257	86	13-Feb-19	05-Aug-19	11-Feb-21		100%	60%
284		MODULE-22_MP266 - MP262	114	03-Jun-19	23-Nov-19	13-Nov-20	13-Mar-21	100%	100%
285		MODULE-20_MP256 - MP255	109	08-Feb-19	01-Jun-19	07-Jan-21		100%	25%
286		MODULE-19_MP254 - MP250	111	30-Mar-19	09-Oct-19	01-Mar-21		100%	44.44%
287		MAIN BRDIGE PIER CAP_CRZ 15+890~17+414 FROM MB226 TO MB250	347	19-Apr-19	25-Feb-20	25-Feb-20		100%	84.44%
288		MODULE-14_MP231 - MP227	83	30-Dec-19	25-Feb-20	27-Dec-20	28-May-21	100%	100%
289		MODULE-15_MP236 - MP232	64	11-Nov-19	07-Jan-20	12-Oct-20	22-Feb-21	100%	100%
290		MODULE-16_MP240 - MP237	132	21-Sep-19	19-Nov-19	14-May-20	23-Dec-20	100%	100%
291		MODULE-17_MP245 - MP241	163	05-Jul-19	16-Oct-19	25-Feb-20	22-Dec-20	100%	100%
292		MODULE-18_MP249 - MP246	168	19-Apr-19	02-Jul-19	22-Oct-20		100%	12.5%
293		MAIN BRIDGE PIER CAP_INTERTIDAL 14+800~15+890 FROM MB206 TO MB225	245	06-Jun-19	05-Nov-20	04-Feb-21		100%	24.32%
294		MODULE-10_MP211 - MP207	172	20-Mar-20	05-Nov-20			100%	0%
295		MODULE-11_MP216 - MP212	166	06-Jun-19	18-Aug-20			100%	0%
296		MODULE-12_MP221 - MP217	79	24-Jul-19	22-Jan-20	01-Mar-21		100%	20%
297		MODULE-13_MP226 - MP222	187	30-Jan-20	04-Jun-20	04-Feb-21		100%	87%
298		MAIN BRIDGE PIER CAP_MARINE 13+610~14+800 FROM MB187 TO MB205	220	23-Apr-20	10-Mar-21			100%	0%
299		MODULE-06_MP191 - MP187	148	18-Dec-20	10-Mar-21			100%	0%
300		MODULE-07_MP196 - MP192	148	10-Sep-20	07-Jan-21			100%	0%
301		MODULE-08_MP201 - MP197	112	01-Jun-20	29-Sep-20			100%	0%
302		MODULE-09_MP206 - MP202	50	23-Apr-20	15-Jun-20			100%	0%
303		MAIN BRIDGE PIER CAP_MARINE (STEEL) 11+880~13+610 FROM MB171 TO MB186	315	30-Apr-20	27-Aug-21			88.41%	0%
304		STEEL MODULE-01_MP176 - MP171	174	08-Mar-21	27-Aug-21			69.1%	0%
305		STEEL MODULE-02_MP182 - MP177	67	30-Apr-20	04-Feb-21			100%	0%
306		STEEL MODULE-03_MP186 - MP183	104	19-Dec-20	22-Apr-21			100%	0%
307		MAIN BRIDGE PIER CAP_MARINE 10+380~11+880 FROM MB146 TO MB170	254	15-Mar-19	01-Apr-20			100%	0%
308		MODULE-01_MP151 - MP146	91	14-Jan-20	01-Apr-20			100%	0%



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

EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY (MMRDA)

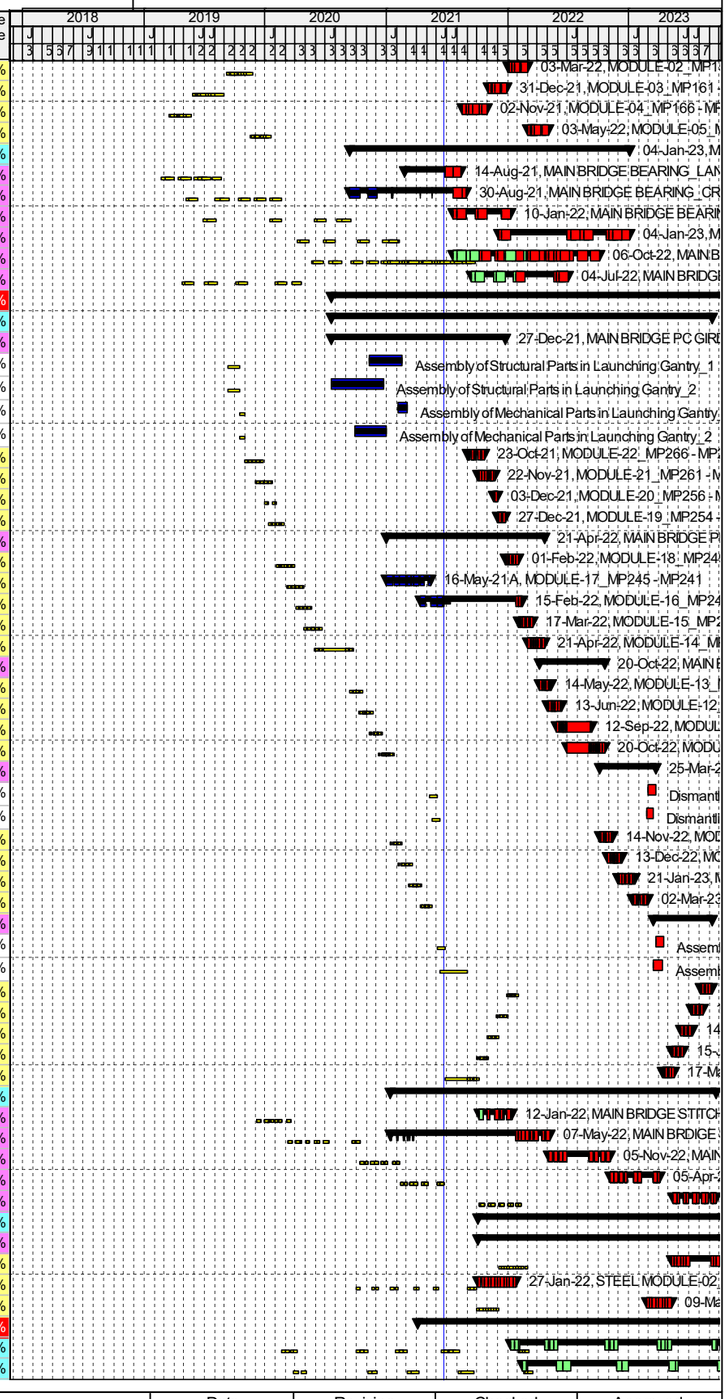
CONTRACTOR:
DAEWOO - TPL JV

Date	Revision	Checked	Approved
25-Jun-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
309		MODULE-02_MP156 - MP152	50	05-Sep-19	23-Nov-19			100%	0%
310		MODULE-03_MP161 - MP157	50	28-May-19	31-Aug-19			100%	0%
311		MODULE-04_MP166 - MP162	50	15-Mar-19	24-May-19			100%	0%
312		MODULE-05_MP171 - MP167	50	15-Nov-19	18-Jan-20			100%	0%
313		MAIN BRIDGE BEARING PAD AND BEARING INSALLATION	708	22-Feb-19	24-Sep-21	14-Sep-20		98.49%	1.6%
314		MAIN BRIDGE BEARING_LAND 17+414~18+188 FROM MB251 TO MB266	51	22-Feb-19	22-Aug-19	24-Feb-21		100%	12.5%
315		MAIN BRIDGE BEARING_CRZ 15+890~17+414 FROM MB226 TO MB250	217	08-May-19	20-Feb-20	14-Sep-20		100%	50%
316		MAIN BRIDGE BEARING_INTERTIDAL 14+800~15+890 FROM MB206 TO MB225	172	29-Jun-19	14-Sep-20			100%	0%
317		MAIN BRIDGE BEARING_MARINE 13+610~14+800 FROM MB187 TO MB205	394	07-Apr-20	09-Feb-21			100%	0%
318		MAIN BRIDGE BEARING_MARINE (STEEL) 11+880~13+610 FROM MB171 TO MB186	442	19-May-20	24-Sep-21			98.29%	0%
319		MAIN BRIDGE BEARING_MARINE 10+380~11+880 FROM MB146 TO MB170	293	25-Apr-19	18-Apr-20			100%	0%
320		MAIN BRIDGE SUPER STRUCTURE BOX GIRDER INSTALLATION	1135	12-Sep-19	01-Mar-22	20-Jul-20		69.51%	5.71%
321		MAIN BRIDGE CONCRETE GIRDER INSTALLATION	1105	12-Sep-19	02-Feb-22	20-Jul-20		76.29%	6.69%
322		MAIN BRIDGE PC GIRDER_LAND 15+890~17+414 FROM MP251 TO MP266	482	12-Sep-19	27-Feb-20	20-Jul-20		100%	0%
323	CN.LGA.1000	Assembly of Structural Parts in Launching Gantry_1	35	12-Sep-19	17-Oct-19	12-Nov-20	17-Feb-21	100%	100%
324	CN.LGA.1010	Assembly of Structural Parts in Launching Gantry_2	35	12-Sep-19	17-Oct-19	20-Jul-20	25-Dec-20	100%	100%
325	CN.LGA.1005	Assembly of Mechanical Parts in Launching Gantry_1	15	17-Oct-19	01-Nov-19	05-Feb-21	06-Mar-21	100%	100%
326	CN.LGA.1015	Assembly of Mechanical Parts in Launching Gantry_2	15	17-Oct-19	01-Nov-19	28-Sep-20	30-Dec-20	100%	100%
327		MODULE-22_MP266 - MP262	42	01-Nov-19	25-Dec-19			100%	0%
328		MODULE-21_MP261 - MP257	42	02-Dec-19	23-Jan-20			100%	0%
329		MODULE-20_MP256 - MP255	12	31-Dec-19	04-Feb-20			100%	0%
330		MODULE-19_MP254 - MP250	22	11-Jan-20	27-Feb-20			100%	0%
331		MAIN BRIDGE PRECAST GIRDER_CRZ 15+890~17+414 FROM MP226 TO MP250	134	04-Feb-20	25-Sep-20	30-Dec-20		100%	28.2%
332		MODULE-18_MP249 - MP246	32	04-Feb-20	28-Mar-20			100%	0%
333		MODULE-17_MP245 - MP241	74	05-Mar-20	27-Apr-20	30-Dec-20	16-May-21	100%	100%
334		MODULE-16_MP240 - MP237	27	03-Apr-20	21-May-20	13-Apr-21		100%	51.25%
335		MODULE-15_MP236 - MP232	37	27-Apr-20	19-Jun-20			100%	0%
336		MODULE-14_MP231 - MP227	42	27-May-20	25-Sep-20			100%	0%
337		MAIN BIDGE PRECAST GIRDER_INTERTIDAL 14+800~15+890 FROM MP206 TO MP225	112	12-Sep-20	23-Jan-21			100%	0%
338		MODULE-13_MP226 - MP222	32	12-Sep-20	21-Oct-20			100%	0%
339		MODULE-12_MP221 - MP217	37	08-Oct-20	20-Nov-20			100%	0%
340		MODULE-11_MP216 - MP212	37	09-Nov-20	19-Dec-20			100%	0%
341		MODULE-10_MP211 - MP207	42	08-Dec-20	23-Jan-21			100%	0%
342		MAIN BRIDGE PRECAST GIRDER_MARINE 13+610~14+800 FROM MP187 TO MP205	144	12-Jan-21	10-Jun-21			100%	0%
343	CN.LGD.1010	Dismantling of Launching Gantry_2	20	12-May-21	03-Jun-21			100%	0%
344	CN.LGD.1000	Dismantling of Launching Gantry_1	20	18-May-21	10-Jun-21			100%	0%
345		MODULE-09_MP206 - MP202	32	12-Jan-21	17-Feb-21			100%	0%
346		MODULE-08_MP201 - MP197	37	05-Feb-21	19-Mar-21			100%	0%
347		MODULE-07_MP196 - MP192	45	08-Mar-21	17-Apr-21			100%	0%
348		MODULE-06_MP191 - MP187	42	12-Apr-21	18-May-21			100%	0%
349		MAIN BRIDGE PRECAST GIRDER_MARINE 10+380~11+880 FROM MP146 TO MP170	151	04-Jun-21	02-Feb-22			0%	0%
350	CN.LGA.1030	Assembling of Launching Gantry_2	20	04-Jun-21	26-Jun-21			90%	0%
351	CN.LGA.1020	Assembling of Launching Gantry_1	20	10-Jun-21	03-Sep-21			60.16%	0%
352		MODULE-05_MP171 - MP167	31	28-Dec-21	02-Feb-22			0%	0%
353		MODULE-04_MP166 - MP162	31	29-Nov-21	03-Jan-22			0%	0%
354		MODULE-03_MP161 - MP157	31	30-Oct-21	04-Dec-21			0%	0%
355		MODULE-02_MP156 - MP152	31	29-Sep-21	05-Nov-21			0%	0%
356		MODULE-01_MP151 - MP146	31	28-Jun-21	06-Oct-21			0%	0%
357		STITCH JOINT CASTING	583	07-Dec-19	12-Feb-22	12-Jan-21		0%	0%
358		MAIN BRIDGE STITCH JOINT CASTING_LAND 15+890~17+414 FROM MP251 TO MP266	81	07-Dec-19	16-Mar-20			0%	0%
359		MAIN BRDIGE STITCH JOINT CASTING_CRZ 15+890~17+414 FROM MP226 TO MP250	93	11-Mar-20	13-Oct-20	12-Jan-21		0%	0%
360		MAIN BRIDGE STITCH JOINT CASTING_INTERTIDAL 14+800~15+890 FROM MP206 TO MP225	134	14-Oct-20	10-Feb-21			0%	0%
361		MAIN BRIDGE STITCH JOINT CASTING_MARINE 13+610~14+800 FROM MP187 TO MP205	128	11-Feb-21	21-Jun-21			0%	0%
362		MAIN BRIDGE STITCH JOINT CASTING_MARINE 10+380~11+880 FROM MP146 TO MP170	110	06-Oct-21	12-Feb-22			0%	0%
363		MAIN BRIDGE STEEL GIRDER INSTALLATION	572	03-Oct-20	01-Mar-22			30%	0%
364		MAN BRIDGE STEEL GIRDER INSTALLATION_MARINE 11+880~13+610 FROM MP171 TOMP186	572	03-Oct-20	01-Mar-22			30%	0%
365		STEEL MODULE-01_MP176 - MP171 (INSTALLATION)	133	07-Dec-21	01-Mar-22			0%	0%
366		STEEL MODULE-02_MP182 - MP177 (INSTALLATION)	97	03-Oct-20	30-Sep-21			75%	0%
367		STEEL MODULE-03_MP186 - MP183 (INSTALLATION)	64	30-Sep-21	07-Dec-21			0%	0%
368		MISCELLANEOUS & FINISHING WORKS	653	16-May-19	24-May-22	05-Apr-21		48.63%	0%
369		CRASH BARRIER & GURARD RAILS	522	20-Feb-20	07-Mar-22			53.13%	0%
370		WATER PROOFING	515	26-Mar-20	17-Mar-22			50%	0%



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

EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY (MMRDA)

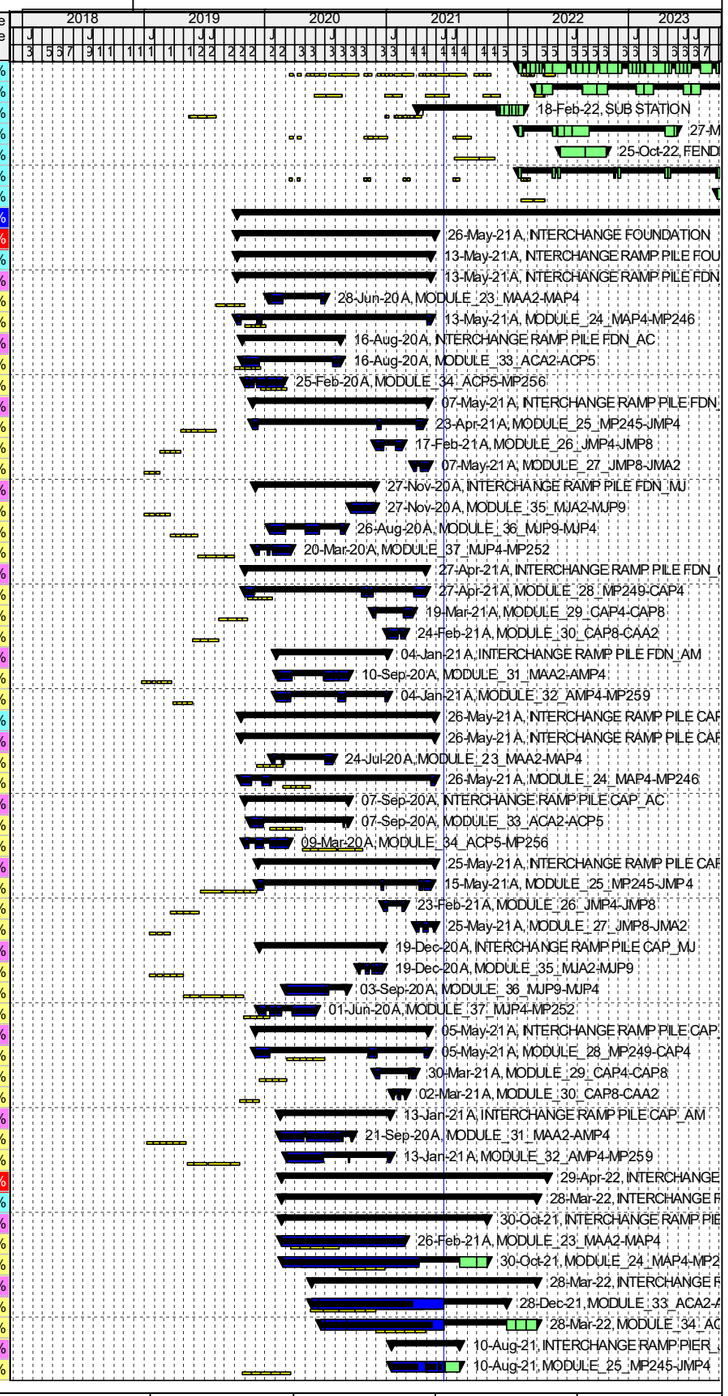
CONTRACTOR:
DAEWOO - TPL JV

Date	Revision	Checked	Approved
25-Jun-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
371	PAVEMENT		595	16-Mar-20	24-May-22			49.33%	0%
372	EXPANSION JOINT		526	27-May-20	21-Apr-22			35.87%	0%
373	SUB STATION		70	16-May-19	15-Apr-21	05-Apr-21		100%	0%
374	NOISE BARRIER		365	16-Mar-20	14-Sep-21			95.76%	0%
375	FENDER INSTALLATION		80	24-Jul-21	24-Nov-21			0%	0%
376	DRAINAGE WORKS		504	16-Mar-20	09-Mar-22			51.85%	0%
377	SIGN BOARDS		60	12-Feb-22	23-Apr-22			0%	0%
378	INTERCHANGE		1447	24-Dec-18	28-Apr-22	09-Oct-19		94.61%	26.85%
379	INTERCHANGE FOUNDATION		590	24-Dec-18	22-Oct-20	09-Oct-19	26-May-21	100%	100%
380	INTERCHANGE RAMP PILE FOUNDATION		475	24-Dec-18	05-Mar-20	09-Oct-19	13-May-21	100%	100%
381	INTERCHANGE RAMP PILE FDN_MA		182	05-Aug-19	03-Jan-20	09-Oct-19	13-May-21	100%	100%
382	MODULE_23_MAA2-MAP4		75	05-Aug-19	02-Nov-19	13-Jan-20	28-Jun-20	100%	100%
383	MODULE_24_MAP4-MP246		137	02-Nov-19	03-Jan-20	09-Oct-19	13-May-21	100%	100%
384	INTERCHANGE RAMP PILE FDN_AC		107	01-Oct-19	05-Mar-20	25-Oct-19	16-Aug-20	100%	100%
385	MODULE_33_ACA2-ACP5		60	01-Oct-19	19-Dec-19	25-Oct-19	16-Aug-20	100%	100%
386	MODULE_34_ACP5-MP256		62	19-Dec-19	05-Mar-20	02-Nov-19	25-Feb-20	100%	100%
387	INTERCHANGE RAMP PILE FDN_JM		178	03-Jan-19	05-Aug-19	26-Nov-19	07-May-21	100%	100%
388	MODULE_25_MP245-JMP4		178	22-Apr-19	05-Aug-19	26-Nov-19	23-Apr-21	100%	100%
389	MODULE_26_JMP4-JMP8		88	19-Feb-19	20-Apr-19	01-Dec-20	17-Feb-21	100%	100%
390	MODULE_27_JMP8-JMA2		64	03-Jan-19	18-Feb-19	23-Mar-21	07-May-21	100%	100%
391	INTERCHANGE RAMP PILE FDN_MJ		79	03-Jan-19	01-Oct-19	04-Dec-19	27-Nov-20	100%	100%
392	MODULE_35_MJA2-MJP9		45	03-Jan-19	21-Mar-19	16-Sep-20	27-Nov-20	100%	100%
393	MODULE_36_MJP9-MJP4		63	22-Mar-19	10-Jun-19	15-Jan-20	26-Aug-20	100%	100%
394	MODULE_37_MJP4-MP252		52	11-Jun-19	01-Oct-19	04-Dec-19	20-Mar-20	100%	100%
395	INTERCHANGE RAMP PILE FDN_CA		100	28-May-19	23-Jan-20	01-Nov-19	27-Apr-21	100%	100%
396	MODULE_28_MP249-CAP4		64	08-Nov-19	23-Jan-20	01-Nov-19	27-Apr-21	100%	100%
397	MODULE_29_CAP4-CAP8		62	14-Aug-19	08-Nov-19	21-Nov-20	19-Mar-21	100%	100%
398	MODULE_30_CAP8-CAA2		49	28-May-19	14-Aug-19	05-Jan-21	24-Feb-21	100%	100%
399	INTERCHANGE RAMP PILE FDN_AM		290	24-Dec-18	27-May-19	06-Feb-20	04-Jan-21	100%	100%
400	MODULE_31_MAA2-AMP4		187	24-Dec-18	26-Mar-19	07-Feb-20	10-Sep-20	100%	100%
401	MODULE_32_AMP4-MP259		237	27-Mar-19	27-May-19	06-Feb-20	04-Jan-21	100%	100%
402	INTERCHANGE RAMP PILE CAP INSTALLATION		525	08-Jan-19	22-Oct-20	22-Oct-19	26-May-21	100%	100%
403	INTERCHANGE RAMP PILE CAP_MA		182	06-Dec-19	15-May-20	22-Oct-19	26-May-21	100%	100%
404	MODULE_23_MAA2-MAP4		95	06-Dec-19	24-Feb-20	22-Jan-20	24-Jul-20	100%	100%
405	MODULE_24_MAP4-MP246		86	24-Feb-20	15-May-20	22-Oct-19	26-May-21	100%	100%
406	INTERCHANGE RAMP PILE CAP_AC		183	15-Jan-20	22-Oct-20	02-Nov-19	07-Sep-20	100%	100%
407	MODULE_33_ACA2-ACP5		132	15-Jan-20	24-Apr-20	18-Nov-19	07-Sep-20	100%	100%
408	MODULE_34_ACP5-MP256		114	24-Apr-20	22-Oct-20	02-Nov-19	09-Mar-20	100%	100%
409	INTERCHANGE RAMP PILE CAP_JM		136	18-Jan-19	06-Dec-19	11-Dec-19	25-May-21	100%	100%
410	MODULE_25_MP245-JMP4		135	18-Jun-19	06-Dec-19	11-Dec-19	15-May-21	100%	100%
411	MODULE_26_JMP4-JMP8		92	21-Mar-19	17-Jun-19	23-Dec-20	23-Feb-21	100%	100%
412	MODULE_27_JMP8-JMA2		40	18-Jan-19	20-Mar-19	02-Apr-21	25-May-21	100%	100%
413	INTERCHANGE RAMP PILE CAP_MJ		145	18-Jan-19	15-Jan-20	16-Dec-19	19-Dec-20	100%	100%
414	MODULE_35_MJA2-MJP9		123	18-Jan-19	29-Apr-19	08-Oct-20	19-Dec-20	100%	100%
415	MODULE_36_MJP9-MJP4		62	30-Apr-19	26-Oct-19	03-Mar-20	03-Sep-20	100%	100%
416	MODULE_37_MJP4-MP252		58	26-Oct-19	15-Jan-20	16-Dec-19	01-Jun-20	100%	100%
417	INTERCHANGE RAMP PILE CAP_CA		158	15-Oct-19	27-Jun-20	02-Dec-19	05-May-21	100%	100%
418	MODULE_28_MP249-CAP4		87	05-Mar-20	27-Jun-20	02-Dec-19	05-May-21	100%	100%
419	MODULE_29_CAP4-CAP8		70	16-Dec-19	05-Mar-20	30-Nov-20	30-Mar-21	100%	100%
420	MODULE_30_CAP8-CAA2		53	15-Oct-19	16-Dec-19	19-Jan-21	02-Mar-21	100%	100%
421	INTERCHANGE RAMP PILE CAP_AM		245	08-Jan-19	15-Oct-19	15-Feb-20	13-Jan-21	100%	100%
422	MODULE_31_MAA2-AMP4		176	08-Jan-19	09-May-19	15-Feb-20	21-Sep-20	100%	100%
423	MODULE_32_AMP4-MP259		89	10-May-19	15-Oct-19	07-Mar-20	13-Jan-21	100%	100%
424	INTERCHANGE SUBSTRUCTURE & BEARING		596	29-Jan-19	31-May-21	19-Feb-20		100%	44.67%
425	INTERCHANGE RAMP PIER INSTALLATION		596	29-Jan-19	27-Apr-21	19-Feb-20		100%	44.67%
426	INTERCHANGE RAMP PIER_MA		185	18-Mar-20	29-Dec-20	19-Feb-20		100%	72.78%
427	MODULE_23_MAA2-MAP4		118	18-Mar-20	10-Aug-20	19-Feb-20	26-Feb-21	100%	100%
428	MODULE_24_MAP4-MP246		167	10-Aug-20	29-Dec-20	24-Feb-20		100%	50%
429	INTERCHANGE RAMP PIER_AC		228	16-May-20	27-Apr-21	19-May-20		100%	57.21%
430	MODULE_33_ACA2-ACP5		96	16-May-20	30-Nov-20	19-May-20		100%	88.5%
431	MODULE_34_ACP5-MP256		228	30-Nov-20	27-Apr-21	17-Jun-20		100%	30%
432	INTERCHANGE RAMP PIER_JM		138	08-Feb-19	18-Mar-20	15-Jan-21		100%	45.59%
433	MODULE_25_MP245-JMP4		138	22-Oct-19	18-Mar-20	15-Jan-21		100%	40%



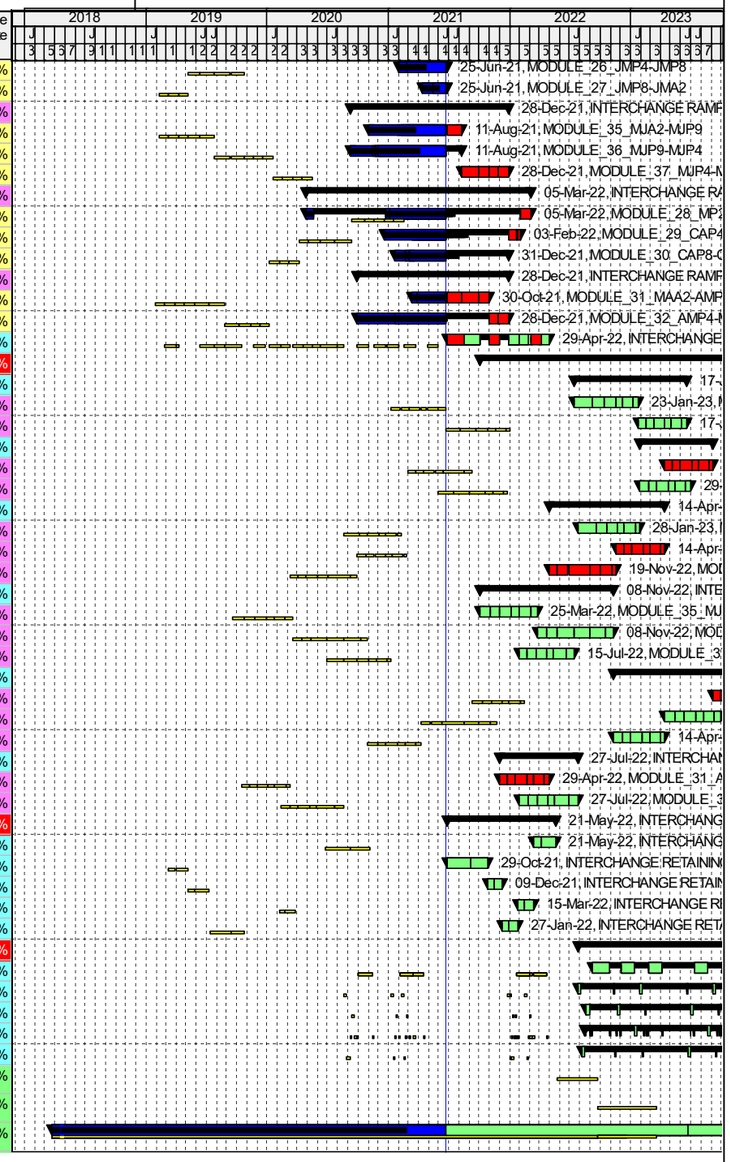
Project Baseline Bar | Critical Remaining Work | Summary
Actual Work | Milestone
Remaining Work | % Complete

EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY (MMRDA)

CONTRACTOR:
DAEWOO - TPL JV

Date	Revision	Checked	Approved
25-Jun-21	R0		

#	Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Actual Start	Actual Finish	Schedule % Complete	Performance % Complete
434		MODULE_26_JMP4-JMP8	100	09-May-19	22-Oct-19	01-Feb-21		100%	50%
435		MODULE_27_JMP8-JMA2	63	08-Feb-19	08-May-19	12-Apr-21		100%	50%
436		INTERCHANGE RAMP PIER_MJ	218	08-Feb-19	16-May-20	07-Sep-20		100%	32.57%
437		MODULE_35_MJA2-MJP9	118	08-Feb-19	26-Jul-19	02-Nov-20		100%	42.49%
438		MODULE_36_MJP9-MJP4	145	27-Jul-19	18-Jan-20	07-Sep-20		100%	50%
439		MODULE_37_MJP4-MP252	100	18-Jan-20	16-May-20			100%	0%
440		INTERCHANGE RAMP PIER_CA	230	08-Jan-20	16-Feb-21	27-Apr-20		100%	51.53%
441		MODULE_28_MP249-CAP4	175	10-Sep-20	16-Feb-21	27-Apr-20		100%	50%
442		MODULE_29_CAP4-CAP8	91	06-Apr-20	10-Sep-20	19-Dec-20		100%	50%
443		MODULE_30_CAP8-CAA2	54	08-Jan-20	06-Apr-20	19-Jan-21		100%	57.39%
444		INTERCHANGE RAMP PIER_AM	250	29-Jan-19	08-Jan-20	26-Sep-20		100%	17.9%
445		MODULE_31_MAA2-AMP4	187	29-Jan-19	27-Aug-19	14-Mar-21		100%	12.6%
446		MODULE_32_AMP4-MP259	171	27-Aug-19	08-Jan-20	26-Sep-20		100%	25%
447		INTERCHANGE BEARING INSTALLATION	228	27-Feb-19	31-May-21			0%	0%
448		INTERCHANGE SUPERSTRUCTURE INSTALLATION	675	20-Sep-19	15-Feb-22			73%	0%
449		INTERCHANGE BOX GIRDER INSTALLATION_MA	255	09-Jan-21	03-Jan-22			42.86%	0%
450		MODULE_23_MAA2-MAP6-MAP5-MAP4	130	09-Jan-21	21-Jun-21			100%	0%
451		MODULE_24_MAP4-MAP3-MAP2-MAP1-MP246	125	21-Jun-21	03-Jan-22			0%	0%
452		INTERCHANGE BOX GIRDER INSTALLATION_AC	190	27-Feb-21	27-Dec-21			40%	0%
453		MODULE_33_ACA2-ACP8-ACP7-ACP6-ACP5	125	27-Feb-21	08-Sep-21			90%	0%
454		MODULE_34_ACP5-ACP4-ACP3-ACP2-ACP1-MP256	130	31-May-21	27-Dec-21			0%	0%
455		INTERCHANGE BOX GIRDER INSTALLATION_JM	250	11-Mar-20	26-Feb-21			100%	0%
456		MODULE_25_MP245-JMP1-JMP2-JMP3-JMP4	130	19-Aug-20	09-Feb-21			100%	0%
457		MODULE_26_JMP4-JMP5-JMP6-JMP7-JMP8	125	29-Sep-20	26-Feb-21			100%	0%
458		MODULE_27_JMP8-JMP9-JMP10-JMA2	125	11-Mar-20	29-Sep-20			100%	0%
459		INTERCHANGE BOX GIRDER INSTALLATION_MJ	290	20-Sep-19	08-Jan-21			100%	0%
460		MODULE_35_MJA2-MJP12-MJP11-MJP10-MJP9	145	20-Sep-19	16-Mar-20			100%	0%
461		MODULE_36_MJP9-MJP8-MJP7-MJP6-MJP5-MJP4	145	16-Mar-20	29-Oct-20			100%	0%
462		MODULE_37_MJP4-MJP3-MJP2-MJP1-MP252	125	30-Jun-20	08-Jan-21			100%	0%
463		INTERCHANGE BOX GIRDER INSTALLATION_CA	385	30-Oct-20	15-Feb-22			38.18%	0%
464		MODULE_28_MP249-CAP1-CAP2-CAP3-CAP4	125	08-Sep-21	15-Feb-22			0%	0%
465		MODULE_29_CAP4-CAP5-CAP6-CAP7-CAP8	145	09-Apr-21	23-Nov-21			30%	0%
466		MODULE_30_CAP8-CAP9-CAP10-CAA2	135	30-Oct-20	08-Apr-21			100%	0%
467		INTERCHANGE BOX GIRDER INSTALLATION_AM	180	14-Oct-19	19-Aug-20			100%	0%
468		MODULE_31_AMA2-AMP8-AMP7-AMP6-AMP5-AMP4	125	14-Oct-19	11-Mar-20			100%	0%
469		MODULE_32_AMP4-AMP3-AMP2-AMP1-MP259	130	10-Feb-20	19-Aug-20			100%	0%
470		INTERCHANGE RETAINING STRUCTURE	223	11-Mar-19	06-Nov-20			100%	0%
471		INTERCHANGE RETAINING STRUCTURE_AC	58	24-Jun-20	06-Nov-20			100%	0%
472		INTERCHANGE RETAINING STRUCTURE_JM	50	11-Mar-19	08-May-19			100%	0%
473		INTERCHANGE RETAINING STRUCTURE_MJ	35	09-May-19	11-Jul-19			100%	0%
474		INTERCHANGE RETAINING STRUCTURE_CA	39	06-Feb-20	24-Mar-20			100%	0%
475		INTERCHANGE RETAINING STRUCTURE_AM	41	12-Jul-19	24-Oct-19			100%	0%
476		MISCELLANEOUS & FINISHING WORKS	510	19-Aug-20	28-Apr-22			50%	0%
477		EXPANSION JOINT	482	01-Oct-20	22-Apr-22			0%	0%
478		CRASH BARRIER & GURARD RAILS	454	19-Aug-20	21-Feb-22			50%	0%
479		WATER PROOFING	454	10-Sep-20	08-Mar-22			50%	0%
480		PAVEMENT	500	07-Sep-20	28-Apr-22			50%	0%
481		DRAINAGE WORKS	454	28-Aug-20	26-Feb-22			50%	0%
482		PROJECT HANDINGOVER	65	24-May-22	22-Sep-22			0%	0%
483		DEFECT LIABILITY PERIOD (DLP)	730	22-Sep-22	21-Sep-24			0%	0%
484		PRICE SCHEDULE	2483	23-Mar-18	21-Mar-23	23-Mar-18		77.12%	34.64%



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

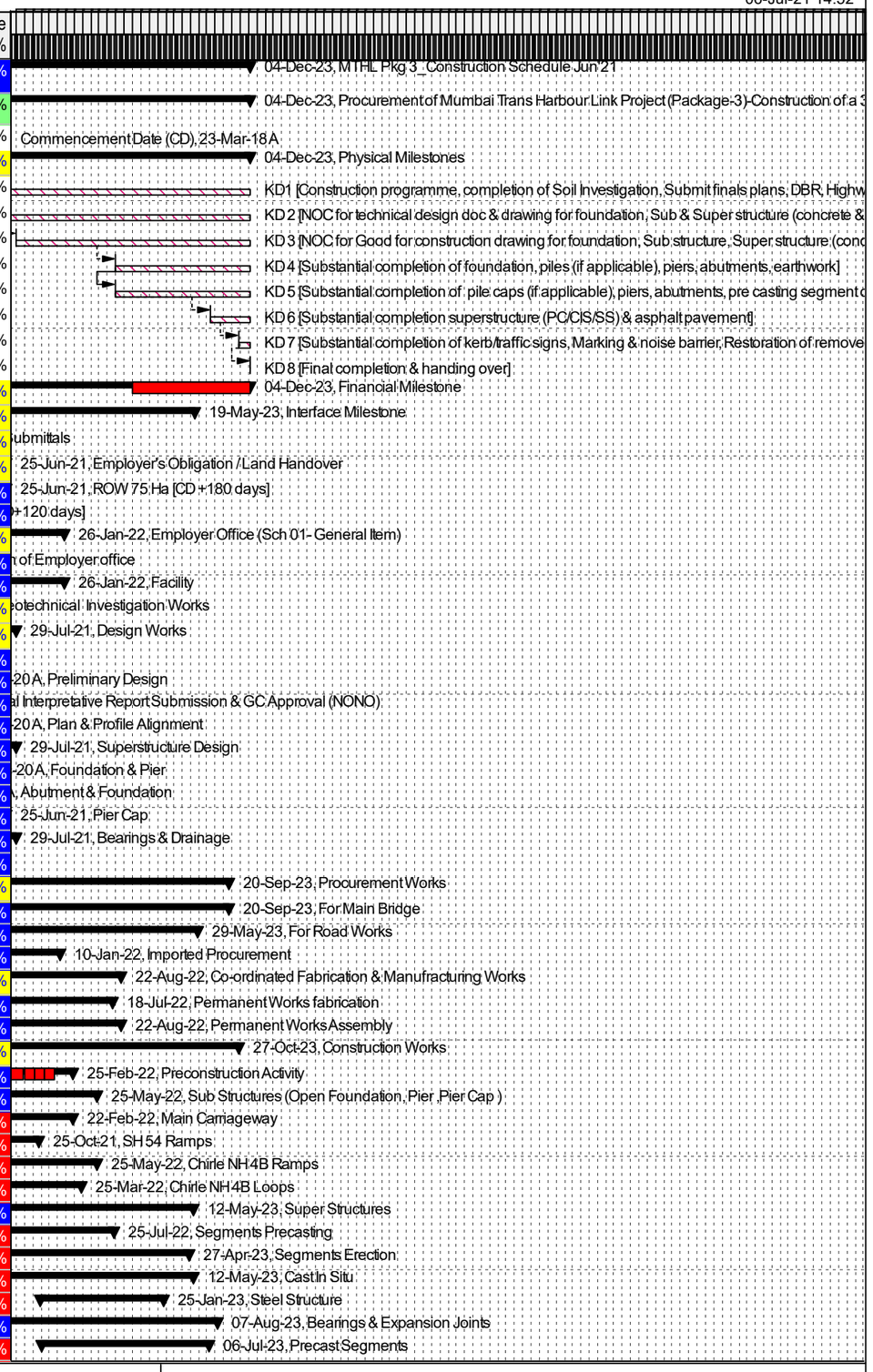
EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY (MMRDA)

CONTRACTOR:
DAEWOO - TPL JV

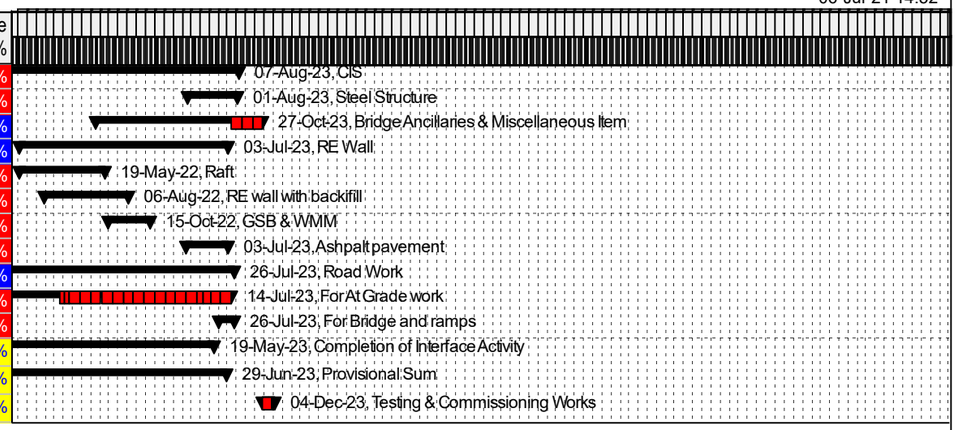
Date	Revision	Checked	Approved
25-Jun-21	R0		

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

Activity ID	Activity Name	Original Duration	BL1 Duration	BL1 Start	BL1 Finish	Start	Finish	Activity %	Schedule %	erformance %
MTHL Pkg 3_Construction Schedule		13251	7752	23-Mar-18	21-Sep-21	23-Mar-18 A	04-Dec-23		99.48%	58.2%
Procurement of Mumbai Trans Harb		13251	7752	23-Mar-18	21-Sep-21	23-Mar-18 A	04-Dec-23		99.48%	58.2%
t	Commencement Date (CD)	0	0			23-Mar-18 A		100%	0%	100%
Physical Milestones		7139	8791	18-Sep-18	21-Sep-21	25-Jun-21	04-Dec-23		0%	0%
KD1001	KD1 [Construction programme, c	0	0	18-Sep-18	18-Sep-18	25-Jun-21	25-Jun-21	0%	100%	0%
KD1002	KD 2 [NOC for technical design d	0	0	17-Dec-18	17-Dec-18	25-Jun-21	25-Jun-21	0%	100%	0%
KD1003	KD 3 [NOC for Good for construct	0	0	15-Jun-19	15-Jun-19	30-Jul-21	30-Jul-21	0%	100%	0%
KD1004	KD 4 [Substantial completion of f	0	0	21-Mar-20	21-Mar-20	29-Jul-22	29-Jul-22	0%	100%	0%
KD1005	KD 5 [Substantial completion of p	0	0	19-Sep-20	19-Sep-20	29-Jul-22	29-Jul-22	0%	100%	0%
KD1006	KD 6 [Substantial completion sup	0	0	20-Mar-21	20-Mar-21	14-Jul-23	14-Jul-23	0%	100%	0%
KD1007	KD 7 [Substantial completion of k	0	0	24-Jul-21	24-Jul-21	27-Oct-23	27-Oct-23	0%	0%	0%
KD1008	KD 8 [Final completion & handing	0	0	21-Sep-21	21-Sep-21	04-Dec-23	04-Dec-23	0%	0%	0%
Financial Milestone		12499	8792	18-Sep-18	21-Sep-21	23-Mar-18 A	04-Dec-23		0%	0%
Interface Milestone		6755	6480	17-Dec-18	06-Mar-21	17-Sep-18 A	19-May-23		0%	0%
Document Submittals		360	360	23-Mar-18	06-May-18	06-Apr-18 A	30-Sep-19 A		100%	100%
Employer's Obligation / Land Handover		1208	1216	19-Apr-18	18-Sep-18	23-Mar-18 A	25-Jun-21		0%	0%
ROW 75 Ha [CD +180 days]		0	1216	19-Apr-18	18-Sep-18	23-Mar-18 A	25-Jun-21		0%	0%
Casting Yard 9.16 Ha [CD+120 days]		0	0	20-Jul-18	20-Jul-18	20-Dec-18 A	21-Dec-18 A		0%	0%
Employer Office (Sch 01- General Item)		6404	6888	20-Aug-18	16-Sep-21	25-Jan-19 A	26-Jan-22		98.22%	95.43%
Construction of Employer office		880	720	20-Aug-18	11-Dec-18	30-May-19 A	31-Oct-19 A		100%	100%
Facility		7840	8080	12-Dec-18	16-Sep-21	25-Jan-19 A	26-Jan-22		91.43%	78%
Survey & Geotechnical Investigation Works		2768	1040	19-Apr-18	22-Oct-18	19-Apr-18 A	30-Sep-19 A		100%	100%
Design Works		5727	2504	07-May-18	14-Jun-19	25-Apr-18 A	29-Jul-21		100%	98.81%
Design Basis Report		384	384	07-May-18	30-Jun-18	25-Apr-18 A	08-Dec-18 A		100%	100%
Preliminary Design		376	184	02-Jul-18	25-Aug-18	26-Jul-18 A	25-Nov-20 A		100%	100%
Geotechnical Interpretative Report Submissior		190	224	11-Sep-18	08-Oct-18	07-Dec-18 A	30-Sep-19 A		100%	100%
Plan & Profile Alignment		613	328	06-Jun-18	14-Aug-18	23-Feb-19 A	25-Nov-20 A		100%	100%
Superstructure Design		5040	1240	16-Aug-18	26-Feb-19	20-Aug-18 A	29-Jul-21		100%	98.48%
Foundation & Pier		2588	1688	05-Oct-18	14-Jun-19	06-Nov-18 A	11-Dec-20 A		100%	100%
Abutment & Foundation		2043	624	15-Oct-18	16-Jan-19	31-Dec-18 A	13-Aug-20 A		100%	100%
Pier Cap		3893	1328	24-Oct-18	10-May-19	11-Jan-19 A	25-Jun-21		100%	99.38%
Bearings & Drainage		2996	920	17-Nov-18	03-Apr-19	21-Jan-19 A	29-Jul-21		100%	96.66%
Pavement Design		571	192	01-Jul-18	27-Aug-18	15-Oct-18 A	18-Feb-19 A		100%	100%
Procurement Works		10248	6304	12-Sep-18	08-Jun-21	15-Feb-19 A	20-Sep-23		100%	70.77%
For Main Bridge		10248	6304	12-Sep-18	08-Jun-21	15-Feb-19 A	20-Sep-23		100%	51.24%
For Road Works		7895	3976	04-Apr-19	13-Jan-21	01-Mar-19 A	29-May-23		100%	35.57%
Imported Procurement		2800	1360	22-Jan-19	10-Aug-19	04-Dec-19 A	10-Jan-22		100%	92%
Co-ordinated Fabrication & Manufracturing I		7328	3152	27-Sep-18	10-Feb-20	21-Feb-19 A	22-Aug-22		100%	50%
Permanent Works fabrication		6872	2912	27-Sep-18	06-Jan-20	21-Feb-19 A	18-Jul-22		100%	50%
Permanent Works Assembly		7088	2992	22-Oct-18	10-Feb-20	25-Feb-19 A	22-Aug-22		100%	44.44%
Construction Works		11347	6752	20-Jul-18	23-Jul-21	26-Sep-18 A	27-Oct-23		99.59%	56.53%
Preconstruction Activity		6688	2168	20-Jul-18	01-Jul-19	26-Sep-18 A	25-Feb-22		100%	72.92%
Sub Structures (Open Foundation, Pier ,Pier Ca		7552	4312	08-Dec-18	07-Nov-20	05-Dec-18 A	25-May-22		100%	78.38%
Main Carriageway		6920	2560	08-Dec-18	24-Jan-20	05-Dec-18 A	22-Feb-22		100%	77.94%
SH 54 Ramps		2726	2312	27-Feb-19	06-Mar-20	25-Apr-19 A	25-Oct-21		100%	93.4%
Chirle NH 4B Ramps		3776	2800	20-May-19	05-Sep-20	07-May-19 A	25-May-22		100%	72.59%
Chirle NH 4B Loops		1832	2688	09-Sep-19	07-Nov-20	21-Aug-19 A	25-Mar-22		100%	83.52%
Super Structures		7407	4808	27-Feb-19	12-Apr-21	11-Sep-19 A	12-May-23		100%	27.66%
Segments Precasting		5411	3576	30-Mar-19	09-Nov-20	11-Sep-19 A	25-Jul-22		100%	42.19%
Segments Erection		4144	3240	26-Aug-19	20-Jan-21	06-Mar-20 A	27-Apr-23		100%	12.5%
Cast In Situ		4468	4808	27-Feb-19	12-Apr-21	25-Sep-20 A	12-May-23		100%	12.95%
Steel Structure		3120	3352	10-May-19	17-Nov-20	27-Oct-21	25-Jan-23		100%	0%
Bearings & Expansion Joints		2747	1608	03-Aug-20	12-Apr-21	11-Nov-20 A	07-Aug-23		100%	11.88%
Precast Segments		2576	1440	03-Aug-20	17-Mar-21	04-Nov-21 A	06-Jul-23		100%	1.33%



Activity ID	Activity Name	Original Duration	BL1 Duration	BL1 Start	BL1 Finish	Start	Finish	Activity %	Schedule %	erformance %
CIS		2376	1464	07-Sep-20	12-Apr-21	11-Nov-20 A	07-Aug-23		100%	32.33%
Steel Structure		1136	1136	12-Oct-20	30-Mar-21	16-Feb-23	01-Aug-23		100%	0%
Bridge Ancillaries & Miscellaneous Item		3834	2192	12-Aug-20	23-Jul-21	16-Apr-22	27-Oct-23		84.05%	0%
RE Wall		4659	4456	27-Feb-19	18-Feb-21	06-Aug-21	03-Jul-23		100%	0%
Raft		1856	2112	27-Feb-19	06-Feb-20	06-Aug-21	19-May-22		100%	0%
RE wall with backifill		1920	2160	10-May-19	24-Apr-20	30-Oct-21	06-Aug-22		100%	0%
GSB & WMM		960	960	20-Jan-20	09-Jun-20	30-May-22	15-Oct-22		100%	0%
Ashpalt pavement		960	960	29-Sep-20	18-Feb-21	13-Feb-23	03-Jul-23		100%	0%
Road Work		8939	4696	20-Apr-19	18-May-21	16-Feb-19 A	26-Jul-23		100%	58.6%
For At Grade work		8859	4184	20-Apr-19	02-Mar-21	16-Feb-19 A	14-Jul-23		100%	60.17%
For Bridge and ramps		381	360	25-Mar-21	18-May-21	31-May-23	26-Jul-23		100%	0%
Completion of Interface Activity		4515	1128	19-Sep-20	06-Mar-21	25-Jun-21	19-May-23		0%	0%
Provisional Sum		8288	7392	23-Apr-18	23-Aug-21	30-Nov-18 A	29-Jun-23		96.7%	12.29%
Testing & Commissioning Works		256	256	26-Jul-21	20-Sep-21	27-Oct-23	04-Dec-23		0%	0%



Attachment 9- Project Progress Photos

Package 1- Site Progress Photos

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

Photo No. 2: LG-06 BP 37-38 Erection Works - Interchange Section in progress

Photo No. 3: LG-05 at Ramp BP, C1 and C2 in progress

Photo No. 4: LG-05 Segments Lifting in progress

Photo No. 5: MP56 N2 RCD Mounted for Pile boring Works in progress

Photo No. 6: MP 60 N1 Pile Cage Lowering – Intertidal Section in progress

Photo No.7: Segment Lifting By Feeding Portal Arrangement - Intertidal Section in progress

Photo No. 8: OSD Material Stacking at Chirle Location

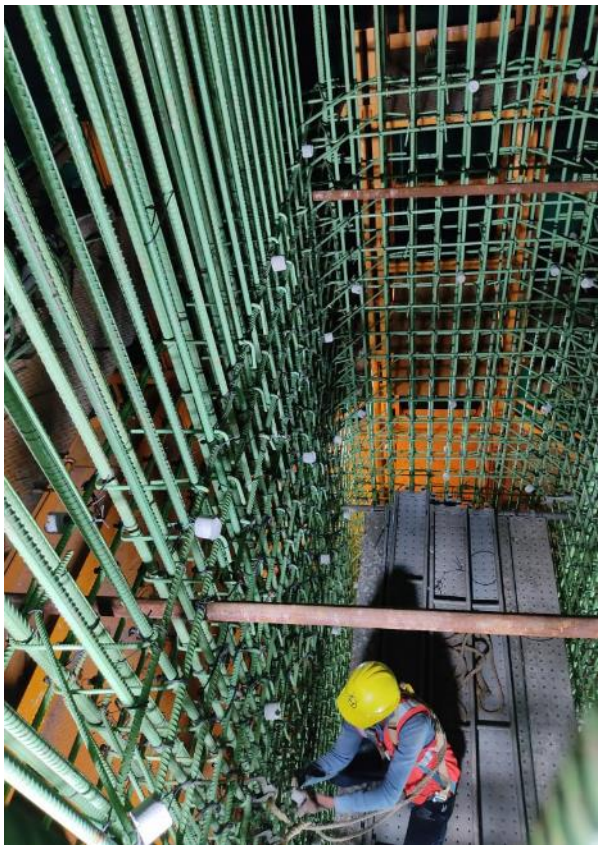


Photo No. 9: MP 118 S 2nd Lift Pier Reinforcement in progress

Photo No. 10: MP 125 3rd Lift Pier Prefab Reinforcement at Marine Section in progress

Photo No. 11: OSD Assembling works at Bay-05 STP Yard in progress

Photo No. 12: BP 49-50 Cast In-situ Rebar Works -Interchange Section in progress

Package 2 – Site Progress Photos

Photo No. 1: EJ Pier cap scaffolding at MP 216 LHS in progress

Photo No. 2: Pier cap reinforcement tying at JMP-10 in progress

Photo No. 3: LG-1 Segment erection at Span MP 237-236 RHS in progress

Photo No. 4: Portal Beam reinforcement tying at MP 259 RHS in progress

Photo No. 5: LG-3 Winch Load test at Span MP 265-264 LHS in progress

Photo No. 6: Integral Pier head segment concreting at MP 222 RHS in progress

Photo No. 7: Retaining wall raft reinforcement tying at Ramp MA in progress

Photo No. 8: Segment concreting at Bay-4 in progress

Photo No. 9: Pier concreting at JMP-1 LHS in progress

Photo No. 10: Large Pier head segment concreting at MP 256 RHS in progress

Photo No. 11: Crane platform erection works at Intertidal Zone in progress

Photo No. 12: PT strands threading works at MP 232 LHS and RHS in progress

Package 3 – Site Progress Photos

Photo No. 1: LMP 274 Foundation Reinforcement in progress

Photo No. 2: Foundation LMP 274 concrete pour completed

Photo No. 3: Foundation LMP 275 concrete pour completed

Photo No. 4: LMP 270 pier 1st lift during concrete pouring in progress

Photo No. 5: LP 33 Portal Pier Cap concrete pouring in progress

Photo No. 6: Voided slab PMP4-PMP5 concrete pour completed

Photo No. 7: Voided slab Span JMP16-17 during bottom soffit reinforcements inspection in progress

Photo No. 8: Cast in situ three cell box girder Span RP02-01(Jasai) bottom soffit slab reinforcement & profile in progress

Photo No. 9: JMP15 bearing Installation inspection done

Photo No. 10: Precast segment reinforcement and profile

Photo No. 11: Span RMP 280 to 281 - segment gluing and temporary stressing work in progress

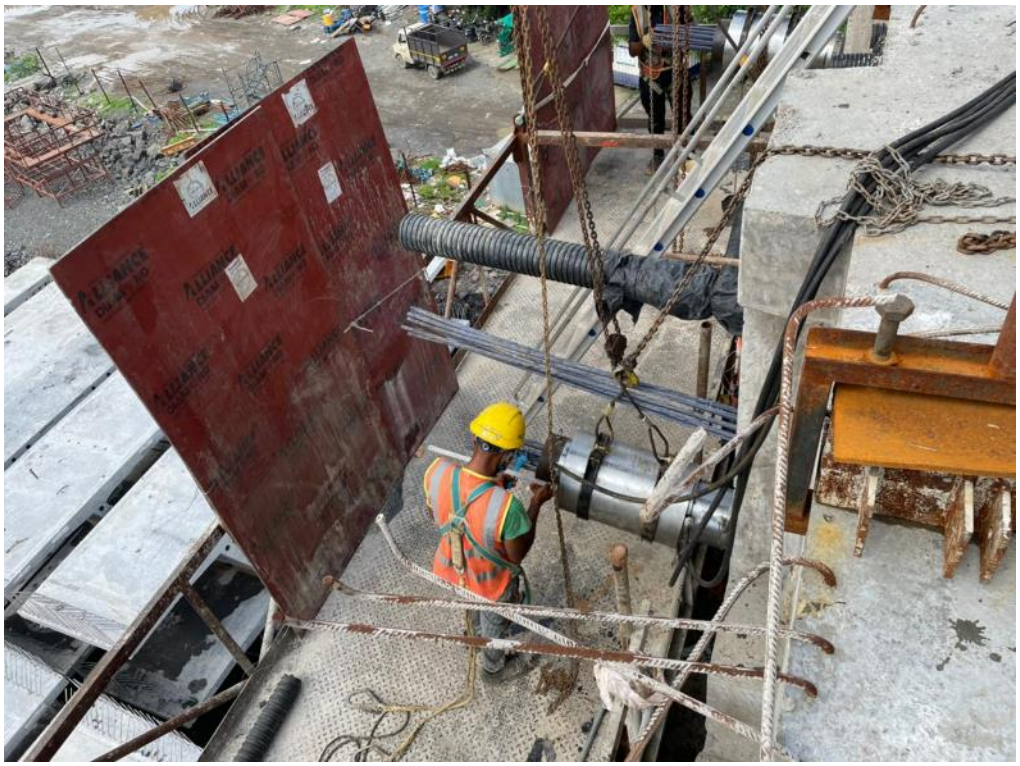


Photo No. 12: Span RMP 280-281 - 1st stage stressing work in progress