

Mumbai Metropolitan Region Development Authority

Mumbai Trans Harbour Link Project

Quarterly Progress Report - No.16

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



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

ORGANIZATION INFORMATION

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Details of JICA Loan

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

DOCUMENT VERIFICATION AND REVISION RECORD

PROJ	ECT NAME	Mumbai Trans Harbour Link Project				
DOC	NO.	16	DATE OF	ISSUE	06/0	5/2021
DOC	TITLE	Quarterly Progress Report No. 16				
REV No.	DATE OF ISSUE	DESCRIPTION	PREPARED BY	CHECKED	ВҮ	APPROVED BY
R0	05/07/2017	Quarterly Progress Report No. 1 (Apr-Jun 17)	J Senthil	Dr T K Sund	laram	Dr Robin Sham
R0	05/10/2017	Quarterly Progress Report No. 2 (Jul-Sep 17)	J Senthil	Dr T K Sund	laram	Dr Robin Sham
R0	05/01/2018	Quarterly Progress Report No. 3 (Oct-Dec 17)	J Senthil	Dr T K Sund	laram	Dr Robin Sham
R0	05/04/2018	Quarterly Progress Report No. 4 (Jan-Mar 18)	J Senthil	Dr T K Sund	laram	Dr Robin Sham
R0	24/07/2018	Quarterly Progress Report No. 5 (Apr-Jun 18)	Prashant B	Dr T K Sund	laram	Dr Robin Sham
R0	10/10/2018	Quarterly Progress Report No. 6 (Jul-Sep 18)	Prashant B	Dr T K Sund	laram	Dr Robin Sham
R1	08/02/2019	Quarterly Progress Report No. 7 (Oct-Dec 18)	Prashant B	J Senthil/ Dr T K Sundaram		Dr Robin Sham
R0	05/04/2019	Quarterly Progress Report No. 8 (Jan-Mar 19)	Prashant B	J Senthil		V. D. Sharma/ Dr Robin Sham
R0	18/09/2019	Quarterly Progress Report No. 9 (Apr-Jun 19)	Prashant B	Mr. Som Gl	Mr. Som Ghosh	
R0	13/11/2019	Quarterly Progress Report No. 10 (Jul-Sep 19)	Prashant B	Mr. Som G	hosh	Dr Robin Sham
R0	11/02/2020	Quarterly Progress Report No.11 (Oct-Dec 19)	Prashant B	Mr. Som G	hosh	Dr Robin Sham
R0	25/11/2020	Quarterly Progress Report No.12 (Jan-Mar 20)	Prashant B	Mr. Som Gl	hosh	Dr Robin Sham
R0	15/12/2020	Quarterly Progress Report No.13 (Apr-Jun 20)	Prashant B	Mr. Som Gl	hosh	Dr Robin Sham
R0	06/01/2021	Quarterly Progress Report No.14 (Jul-Sept 20)	Prashant B	Mr. Som Gl	hosh	Dr Robin Sham
R0	12/02/2021	Quarterly Progress Report No.15 (Oct-Dec 20)	Prashant B	Mr. Som G	Mr. Som Ghosh	
R0	06/05/2021	Quarterly Progress Report No.16 (Jan-Mar 21)	Prashant B	Mr. Som Gl	hosh	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:

Vehicle Type		Sewri Intercarrent	hange and	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

Table 1.3.1 Demand Projections Over the Period

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

- At the opening year in 2022, the traffic flow on MTHL represents a diversion of 10% on the traffic across Thane creek which will increase up to 16% in 2032. If only Thane Creek Bridge is considered, then the diverted traffic from the bridge will be 21% in 2022 which will rise up to 35% in 2032.
- 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

	Original: (P/M)	
Location	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

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

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

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

(P/R and PCR)

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

2.3 Project Cost

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

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

	Foreign	Currency	Portion	Local Currency Portion			Total			
Cost Breakdown	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

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

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

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

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

^{3.} Physical Contingency: 10%

^{4.} Base Year for Cost Estimation: December 2018

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

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

- 2. Fiscal Year starting from 1st April and ending on 31st March.
- **2.3.2** Reason(s) for the wide gap between the original and actual, if there have been any, the remedies you have taken, and their results.

(P/R and PCR)

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

2.4 Organization for Implementation

2.4.1 Executing Agency

Original:

Executing Agency

Mumbai Metropolitan Region Development Authority (MMRDA) was established on 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	Selection Method					
Package	Original: (P/M)		Actual: (P/R and PCR)			
Construction	on Works					
1 From CH 0+000 - To		International Competitive Bidding Process (With PQ, Single stage with two envelopes)	No Change			
2	<u>Package-2:</u> From CH 10+380 - To CH 18+187 (7.80 km)	International Competitive Bidding Process (With PQ, Single stage with two envelopes)	No Change			
3	<u>Package-3:</u> From CH 18+187 - To CH 21+800 (3.61 km)	International Competitive Bidding Process (With PQ, Single stage with two envelopes)	No Change			
4	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			
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:

January 2021:

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

February 2021:

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

March 2021:

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

Contractor's Progress:

Package-1 Physical Progress till 31st March 2021

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

Package-2 Physical Progress till 31st March 2021

S. No	Activity	Total Scope	Unit	Cumulative Achieved Works	% of Work done Against the Total Scope	Remarks
1	Temporary Access Bridge					
1.1	Bridge Deck	2682	Rmt	2682	100%	
2	Test Pile					
2.1	Test Piles	2	No.	2	100%	
3	Permanent Bridge Works -	Land/ Int	erchange	Zone		
3.1	Open Foundation	113	No.	102	90.2%	
3.3	Piers	119	No.	72	60.5%	
3.3	Pier Caps	104	No.	27	25.9%	
3.4	Portal Beams- Land	6	No.	4	66.7%	
3.5	Pier Head Segments -Land	42	No.	10	23.8%	
4	Permanent Bridge Works -	Intertidal	& CRZ Z	one		
4.1	Piles	290	No.	288	99.3%	
4.2	Pile Caps	72	No.	72	100%	
4.3	Piers	72	No.	72	100%	
4.4	Pier Caps	18	No.	12	66.7%	
4.5	Pier Head Segments	54	No.	18	33.3%	
5	Permanent Bridge Works -	Marine Z	one			
5.1	Piles	514	No.	402	78.2%	
5.2	Pile Caps	120	No.	67	55.8%	
5.3	Piers	120	No.	13	10.8%	
5.4	Pier Caps	48	No.	0	0%	
5.5	Pier Head Segments	72	No.	0	0%	
6	Permanent Bridge Works -	Total				
6.1	Open Foundation	113	No.	102	90.2%	
6.2	Piles	804	No.	690	85.8%	
6.3	Pile Caps	192	No.	139	72.4%	
6.4	Piers	311	No.	157	50.4%	
6.5	Pier Caps	170	No.	39	22.9%	
6.6	Portal Beams	6	No.	4	66.7%	
6.7	Pier Head Segments	168	No.	28	16.6%	
	Precast Segments					
7				F70	40 220/	
7.1	Segment Casting	3142	No.	576	18.33%	
	Segment Casting Segment Erection	3142 208	No. Spans	6	2.88%	
7.1						
7.1 7.2	Segment Erection					

Package-3 Physical Progress till 31st March 2021

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

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

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

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

Health & Safety and Environment (HSE)

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

Package-1 Safety Report

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

Package-2 Safety Report

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

Package-3 Safety Report

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

3.0 BENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS)

3.1 Operational and Physical Condition

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

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

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

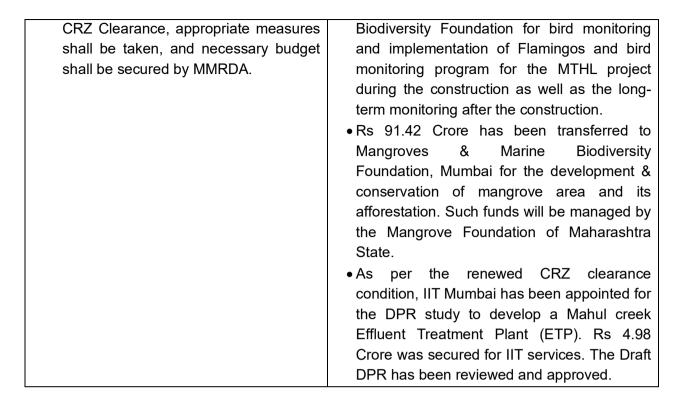
Original Issues and Countermeasure(s) **Actual Issues and Countermeasure(s)** 3.2.1 General Issues (P/R and PCR) 1. Toll Arrangement/ Toll Rate Fixed toll rate as per the type of vehicle Appropriate Tolling Policy/ Rates will be finalized will be levied for the road users after the by December 2021. 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 Single Operation and Maintenance Contractor the bridge and for Toll Management will be appointed by December 2021. System. Both the agencies for O & M and Toll Management System may be open tendering appointed through 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. 3.2.2 Environmental and Social (P/R and PCR)

3.2.2 Environmental and Social Consideration

a. CRZ Clearance

- 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

- 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



b. Required Permits

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

Table 3.2.2 Present Status of some Important Permits

Clearance Required	Approving Authority	Responsible Organization	Obtained by when	Remark /Status
Mangrove Cutting	Hon. Bombay High Court	MMRDA/ Contractor	Approval received from Hon. Bombay High Court on 28 th November 2016	Mangrove cutting operation was completed with full compliance and as of now, no further follow up work is required.
Tree Cutting /Transplantati on	Respective Tree Authorities	Contractor for respective Packages	-	Pkg-1: Tree Cutting/ Transplantation permission from the Garden Dept., MCGM obtained on 24 th 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 25 th 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
4	Establishment of Effective	remaining problem(s) Cell is established by MMRDA
1.	Environmental and Social Cell in PIU	(Annexure III, Organization chart)
	MMRDA confirmed that Social Development Cell (2 Officers), Land Cell (3 Officers), and Environmental Cell (2 Officers) had been set up.	
2.	Rehabilitation and Land Acquisition Issues	Sewri: Involuntary resettlement in Sewri section has been further validated by Social Development
a.	Affected Area and Population Due to the Project, 1282 non-	Cell of MMRDA. Out of 297 Project Affected Households (PAHs) have given consents as follows:
	titleholders will be involuntary resettled, and 108.09 ha of land will be handed	164 PAHs Kanjurmarg for residential
	over by CIDCO.	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	Updated Attachments 2-8 and 2-10 are enclosed	
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.	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		
	issue(s)	remaining problem(s)		
a	Qualitative Independent Evaluation	Tomaning prosioni(o)		
3.	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 mud-flats with the assistance of hired bird expert. During the long-term monitoring, MMRDA will share information and receive advices from external experts including the one from NGOs and civil society.	 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.

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

3.5 Monitoring Plan for the indicators

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

Original: (P/M and PCR)

Monitoring Organization

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

Submission of QPR and PCR

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

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

Actual: (P/R and PCR)

Monitoring Organization

PIU for MTHL has been established for monitoring the Project.

Submission of QPR and PCR

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

3.6 Achievement of the Project Objective

(PCR)		

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

4.1 O&M and Management

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

Original: (P/M)

Operation & Maintenance, Toll Management and ITS

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

Actual: (PCR)

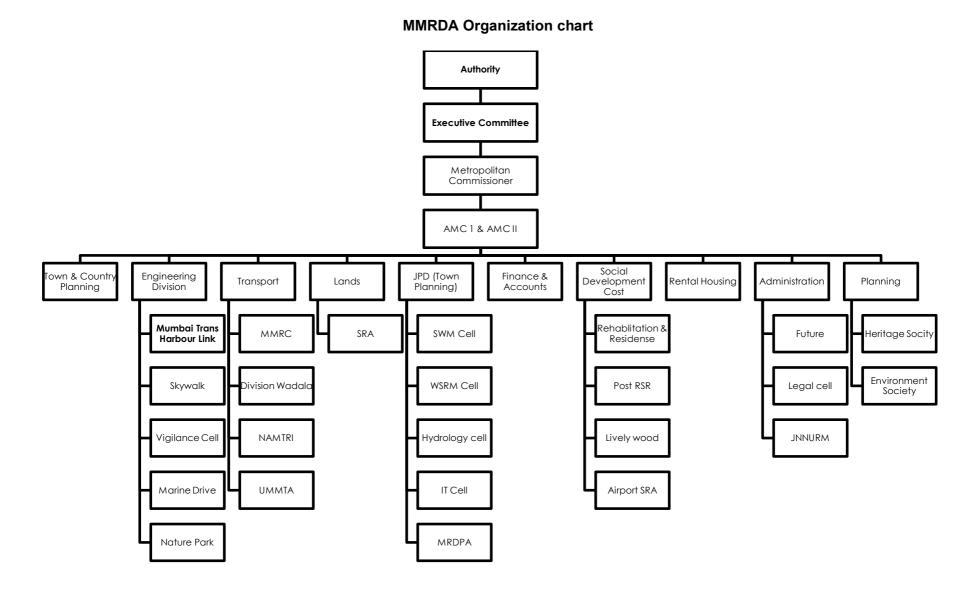
4.2 O&M Cost and Budget

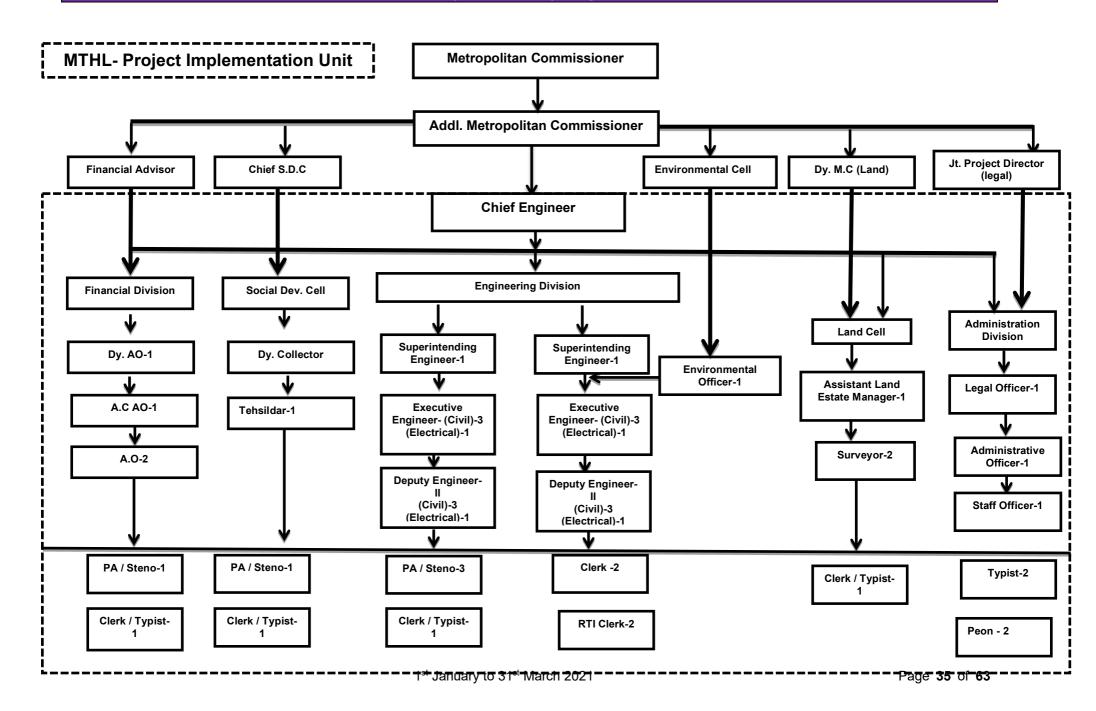
- The actual annual O&M cost for the duration of the project, as well as the annual O&M budget.

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

5.0 E	VALUATION
5.1	JICA and Borrower / Executing Agency performance
JICA:	
(PCR))
Borro	ower/ Executing Agency:
(PCR)	
5.2	Overall Evaluation
Pleas	e describe your evaluation on the overall outcome of the project.
(PCR)	
5.3	Lessons Learnt and Recommendations
the fu which	te raise any lessons learned from the project experience, which might be valuable for ature JICA assistance or similar type of projects, as well as any recommendations, a might be beneficial for better realization of the project effect, impact and assurance stainability.
(PCR	R)

Mumbai	Trans	Harbour	^r Link Proje	ct - Quarte	rly Progress	Report N	No.16 (Jan	-Mar 2021)
Att	achi	ment	1- MMF	RDA &	PIU Org	ganiza	ation C	Chart





Mumbai Trans Harbour	Link Project - Quarterly Pro	gress Report No.16 (Jan-Mar 2021)
Millingal Hans Harbour	TINK Project - Guarienv Pro	oress report no to Gall-Ivial Zuz Li

Attachment 2- Environmental & Social Impacts Attachments

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

Environmental Monitoring Plan with Packagewise Estimated Cost

Category	No.	Impacted Item on JICA Guidelines	Parameter	Method	Location	Frequency a year	Cost (INR)	Cost Pkg.1 (INR)	Cost Pkg.2 (INR)	Cost Pkg.3 (INR)	Total Cost (INR)	Standard Central Pollution Control Board (CPCB) – Ministry of Environment & Forest (MoEF)	Remarks
Ü	1	Air pollution	SO ₂ , NO ₂ , PM ₁₀ , PM _{2.5} , O ₃ , CO, (6 Items)	National Ambient Air Quality Standards, 2009	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
						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.
												 PM₁₀: 100 / 100µg/m³ PM_{2.5}: 60 / 60µg/m³ O₃: 180 / 180µg/m³ 	
	2	Water pollution	pH, BOD, DO,	IS / AWWA	1. Sewri & Sewri bay area	Quarterly	810,000	2,400,000	810,000	0	3,210,000	CO: 0.4 / 0.4mg/m³ Marine water quality Standards – Class SW-IV Harbour Waters (MDCD)	Water Pollution not
			Turbidity and 0&G		for package I 2. Nhava temporary bridge & casting yard in Gavhan for package II							Waters (MPCB) - pH : 6.5-9	applicable for Pkg. 3
g					3. Gavhan & Chirle for package III	Not applicable						 D0: 3 mg/l Turbidity: 30 NTU B0D: 5 mg/l 0 & G: 10 mg/l 	
Pollution	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							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	P2 contractor has considered only Domestic garbage with respect to CIDCO. Other wastes are not considered.
					3. Gavhan & Chirle for package III	Once site clearing work/execution part of work start.						"Teen Taki Junction" along the Amar Marg.	
	4 and 8	Soil Contamination/ sedimentation	Heavy Metals & Oil & Grease	IS / Methods Manual Soil Testing in India by	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)	
			(5-10 items shall be selected from Soil pollution standards)	Department of Agriculture and Cooperation, January 2011	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						· Lead: 0.01mg/l	
						from chemical, fuel storage area.						Chromium (VI): 0.05mg/l Arsenic: 0.01mg/l	-
						*One time grab sample to be collected during						· T-Mercury: 0.0005mg/l]
						Bridge Construction *Pre & Post Monsoon						Copper: 125mg/kg (some items shall be selected from totally 25 standards)	-
	5	Noise and	Ambient and road	IS Standard	1. Sewri & Sewri bay area	at Storage area only Fortnightly	150,000	54,000	150,000	369,000	573,000	items) -Construction Noise; 85dB(A)	
	3		side noise (dB(A)L _{Aeq})	13 Standard	for package I		130,000	34,000	130,000	309,000	373,000		
					Nhava temporary bridge casting yard in Gavhan for package II							-Ambient Noise Standards in India (dB (A) _{Leq})	
					3. Gavhan & Chirle for package III	Fortnightly						1.Industrial Area	-
					package III							Day Time: 75 (6-22hr)]
												Night Time: 70 (22-6hr)]
												2.Commercial Area: Day Time: 65 (6-22hr)	-
												Night Time: 55 (22-6hr)	1
												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	Not applicable for Pkg. 1
												-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)	<u> </u>
	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)	
		I		<u> </u>]		I	1 1			J

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 3-1: Mangrove survey in the replanted area								Standard for Soil; Supplemental EIA Table 6.1.15 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/m³ 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								
	12	Topography and Geology	Conditions in embankment area	Stability of	Not applicable for Package I Interchange in Shivaji Nagar for Package II	4 Times / Year	115,000	0	115,000	0	115,000	Embankment shall be stabilized without any landslide and cracks	Not applicable for Pkg. 1 & 3
	13	Local acanamii			Not applicable for Package		As per Actuals						
		Local economy such as employment and livelihood			Affected area		•						
ıment	14	Local conflict of interests	Construction worker's township	Confirmation of workers list from	2 Locations (camp site in Sewri and Shivaji Nagar) for	2 Times / Year	125,000	0	125,000	0	125,000	Employment opportunity shall be provided fairly	
Social environme	15	Infectious diseases such as	Number of infected patient	contractor Confirmation of health check list	Package II 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	
cial e	16	HIV/AIDS Labour	Construction	from contractor Confirmation of	2 Location (camp site in	2 times / year	500,000	0	500,000	0	500,000	"Building And Other Construction Workers (Regulation	
So		Environment	worker's condition	safety devices and conditions via interviews	Sewri and Shivaji Nagar) for Package II		·					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		Package II	4 Times / Year	400,000	0	400,000	0	400,000	Any accidents are not caused by construction	
				Total	<u> </u> 	l	8140500	325,354,000	12,000,000	2,211,500	339,565,500		

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

Monitoring Period - January to March 2021

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.

1. Environmental Monitoring during Construction for 4.5 years

								Monitoring Result			Remark
Area	No.	Item	Parameter	Location	Frequency a year	Item and Stanadard	Location 1- Pkg 1	Location 2- Pkg 2	Location 3- Pkg 3	Location 4	- reasons why the data is exceeding standard - counter measures when the data is exceeding
				1. Sewri & Sewri bay area for package I	Quarterly monitoring ia conducted at all locations.	National Ambient Air Quality Standards (NAAQS)					
	1	Air pollution	SO ₂ , NO ₂ , PM ₁₀ , PM _{2.5}	2. Nhava temporary bridge & casting yard in Gavhan for package II	4 Times / Year	(Standard for 24hrs: Industrial and Residential)	Sewri	Shivaji Nagar	Chirle		
				3. Gavhan & Chirle for package III	From march -2019 onwards monitoring is conducted quarterly as	1. SO ₂ : 80μg/m ³	7	BDL	13		BDL- Below Detectable Limit
					per MOEF and CPCB	2. NO ₂ : 80μg/m ³	35	27	26		
					norms	3. PM ₁₀ : 100µg/m ³	173	69	81		
						4. PM _{2.5} : 60μg/m ³	56	31	40		
						5.CO:02mg/m3	1.4	1.3	0.72		
						6.VOCs	1.30	1.5	3.6		
				1. Sewri & Sewri bay area for package I	Quarterly	Marine water quality Standards – Class SW-IV Harbour Waters (MPCB)	Zone I	Zone II	Zone III/ Package-03		
	2	Water pollution	pH, BOD, DO, Turbidity	2. Nhava temporary bridge & casting yard in Gayhan for package II	4 Times / Year	1. pH : 6.5-9	7.5	7.2	Not applicable		
	~	Politicoli	and O&G	3. Gavhan & Chirle for	Not applicable	2. DO: 3 mg/l	5	6.2	Not applicable		
				package III		3. Turbidity: 30 NTU	11.5	13.6	Not applicable		
						4. BOD: 5 mg/l	3.7	BDL	Not applicable Not applicable		
						5. O & G: 10 mg/l	BDL	-	Not applicable		
						6.COD	20	16	Not applicable		
		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	16745 m3	App. 4000 CuM Collected in jumbo bags and Disposed off in EBB Location	NA		
	3			utting tree and domestic package I	3. Gavhan & Chirle for once site clearing work/execution part of work start.		Generated cutting treel (ha) total	192 Tons weight of cut wood		In Jan-2021 3 Trees are cut (total 309 trees are cut till dated)	
								3.5 T/quarter. It is disposed through			
						Generated domestic waste (t/month) total	5.1 T for the quarter	CIDCO daily.	1.743 T for the quarter		2.018 M3
				1.0 1.0 0 11	4.14 1.4 mi. /17	Confirmation of adequate disposal (visualt survey)					
				Sewri & Sewri bay area for package I	1. Muck: 1 Time / Year 2. Sediments: 4 Times / Year	Soil Pollution Standard in India (MOEF)	Sediment sample at Sewri	Muck Testing Done on september 2020 and Reports submitted to GC	Not applicable		Package-III (Kindly check the letter No.Ref No. Mthl/ P3/L&T/GC/LT/HSE-2226/2020 dated on 12.12.2020)
				2. Nhava temporary bridge & casting yard in		1. Cadmium: 0.01mg/l	0.15	BDL			
				3. Gavhan & Chirle for	*If any spillage/ leakage	2. total cyanide : not detected		< 0.005			
				package III	take place from chemical, fuel storage area.	3. organic phosphorus: not detected		10.5			D 1 HIGH 1 G
Pollution					*One time grab sample to be collected during Bridge Construction *Pre & Post Monsoon at	4. lead: 0.01mg/l	0.77	0.13	Not applicable for package-3		Package-III (Hazardous Storeage is situated in low laying area at Gavan area. Due to this reason complete ground area is covered by boulders to avoid further water logging in rainy season. Therefore soil sample is impossible to taken out from in and around the Oil & chemical storage area.
Po					Storage area only	5. chromium (VI): 0.05mg/l	0.4	BDL	·		and the off of entitled storage and.
						6. arsenic: 0.01mg/l or 15mg/kg (agri-land soil)	<0.01	BDL			
						7. total mercury: 0.005mg/l		BDL			
1		g 7				8. alkyl mercury: not detected					ntation, some items shall be selected from the total
	4	Soil Contamination/sedim	Heavy Metals & Oil &			9. PCBs: not detected	142	BDL			Design. Only the selected items shall be reported to
1		entation	Grease			10. copper: 125mg/kg (only paddy field soil)	142	bbi	JICA, and th	ne rest of items shall be dele	etea from this form.
						11. dichloromethane: 0.02mg/l 12. carbon tetrachloride: 0.002mg/l		BDL BDL			
						12. carbon tetrachloride: 0.002mg/l 13. 1,2-dichloroethane: 0.004mg/l		BDL			
						13. 1,2-dichloroethane: 0.004mg/l 14. 1,1-dichloroethylene: 0.02mg/l		BDL			
						15. cis-1,2-dichloroethylene: 0.04mg/l		BDL			
						16. 1,1,1-trichloroethane: 1mg/l		BDL			
						17. 1,1,2-trichloroethane: 0.006 mg/l		BDL			
						18. trichloroethylene: 0.03mg/l		BDL			

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

replantation/transplation

Monitoring Period - January to March 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.

1. Environmental Monitoring during Construction for 4.5 years 9. tetrachloroethylene: 0.01mg/l BDI 20. 1,3-dichloropropene: 0.002mg/l BDL 21. thiuram: 0.006mg/l BDL BDL 22. simazine: 0.003mg/l 23. thiobencarb: 0.02mg/l BDL 24. benzene: 0.01mg/1 BDL < 0.01 BDL 25. selenium: 0.01mg/l 1. Sewri & Sewri bay Fortnightly Construction area Standard 85 dB(A) daytime Sea Section (ST5000-5500) area for package I Japan standard) Sewri (ST 200-500) Shivaji Nagar Migratory Bird Area Not constuction area: Ambient Noise Standard in (Industrial area) (Commercial area) (no standard on sea section) India (dB(A) Laeq) 2. Nhava temporary 2 Times / Year bridge & casting yard in Day time: 6-22 hr (continious) dB(A) 70 66.8 72.6 Gavhan for package II 3. Gavhan & Chirle for Fortnightly Night time: 22-6 hr (continious) dB(A) 64 64.7 65.3 package III only sea section) Ambient and road side Day time: 6-22 hr (10 min during 9-17 hrs) noise (dB(A)LAeq) Night time: 22-6 hr (10 min 22-24 hr) Note (standard values in Not construction area) l.Industrial Area Day Time: 75 (6-22hr) Night Time: 70 (22-6hr) Noise and vibration 2.Commercial Area: Day Time: 65 (6-22hr) Night Time: 55 (22-6hr) Half yearly Construction area Standard 75 dB daytime (Japan 1 Location Gavan area standard) Sewri (ST 200-500) Shivaji Nagar for package III Chirle (Commercial area) Not constuction area: Vibration Standard (Japan (Industrial area) Standard along the road) Vibration Day time: 6-22 hr (continious) Not Applicable Not applicable shall be converted from Night time: 22-6 hr (continious) nm/s to dB Note (standard values in Not construction area) Regarding protected area (CRZ and Important Bird Area) and ecosystem, detailed long-. Commercial /Industrial Area term monitoring plan will be extablished during baseline survay of birds. This tentative Day Time: 70 (7-20hr) monitoring form shall be updated based on the detailed long-term monitoring plan. Night Time: 65 (20-7hr) Along MTHL alignment Quarterly Mangorove Replantation Standard is not existing, but quantity and quality Shivaji Nagar side (app. ST16000-19000) Sewri side and mangrove replant during the Sea Section area appointed by State Government hould not be worsen (ST500-5500) (ST5500-16000) area for Package I construction Along MTHI alignment 4 Times / Year -1. Fauna-Flora (number of species and quantity N/A mangrove replant area for package II (1) Number of species of bird 1.Monitoring of mudflat 2) Number of species of fish conditions including fauna-3) Estimated number of Flamingo 2. Monitoring of Cutting Tree and 1-2: Mangrove density and community survey

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

Monitoring Period - January to March 2021

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

1. Enviror	ımental N	Aonitoring during	Construction for 4.5	years			g Terror variatify to Martin 2021		•	
			3.Monitoring of Mangrove			(1) Number of species of mangorve				
			Plantation area appointed by MoEF			(2) Density of mangrove (xx trees/10m x 10m)				
	6	Protected Area	4. Monitoring of			1-3: Benthos Survey				
			sedimentation soil and			(1) Number of species and quantity by species	533 Species and 314 No/m2			
Environment			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,			2-1: Cutting tree confirmation	Total 309 trees have been til March 21.	All the tree cutting and mangrove cutting had been carried Out as per approval received from GC and MMRDA and job was completed in 2018 itself and after that no trees and mangroves have been cut till date	Approved By Both CIDCO and Forest forest Dept (both Alibaug and Uran(regional office))	
ral]			5)Nitrite, 6)Particulate			(1) Number of cutting tree and species				
Natural Env			Organic Carbon, 7) SiO2)			3-1: Mangrove survey in the replant area			Nil	
_						(1) Number of species of mangorve				
						(2) Density of mangrove (xx trees/10m x 10m)				
						4. Ecologial Parameter				
						(1) Net primary Productivity : <1,500 mgC/m3/day at surface	880			
						(2) Chlorophyll-a: <4mg/m3	4.7			
						(3) Phosphate: 0.1-90μg/l	283			
						(4) Nitrate: 1.0-500μg/l	765			
						(5) Nitrite: <125μg/l				
		Eastern				(6) Particulate Organic Carbon: 10-100mg/m ³	4001			
1		Ecosystem		Not applicable for		(7) SiO2: 10-5,000µg/l Criteria for evaluation	4801		 	
	7	Hydrology	Flooding situation	Package I		Project activities and structures does not cause flooding and impacts on tidal conditions	Sewri	Shivaji Nagar		
	,	11,410106,	Trooting station	2 Locations (CRZ at Sewri and Shivaji Nagar) for Package II	4 Times / Year	Monitoring of flooding situation	No Flooding	No flooding	No Flooding	
				Not applicable for						
1				Package III					1	
		Tanaganaha	Conditions in embankment	2 Locations (1. Embankment of Inter		Criteria for evaluation Embankment shall be stabilized without any landslide and cracks	Shivaji Nagar	Shivaji Nagar Camp Site	Chirle	
	8	Topography and Geology	area	Change in Shivaji Nagar and 2 Cutting area at toll gate in Chirle)		Monitoring of embankment	done			
	9	Local conflict of	Construction worker's	2 Locations (major camp site in Sewri and Shivaji	4 times / year x 4.5 years	Criteria for evaluation Employment opportunity shall be provided fairly	Sewri Camp Site	Shivaji Nagar Camp Site	Chirle	
		interests	township	Nagar)	, ,	Number of hired workers by community	418 in Jan 21, 443 in Feb 21 and 434 in March 21	125-150		
						Criteria for evaluation Infection disease rate shall not be caused by the project	Sewri Camp Site	Shivaji Nagar Camp Site		
	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	Confirmation of health check record and inspect project site	During this quarter 124 no. , COVID 19 positive cases reported who have been treated and discharged in this quarter	Health Checks carried out but HIV/AIDS parameter is not there.	Regular Health check up is carried out by site Doctor. HIV-AIDS awareness program has conducted for workman by an NGO called	
						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	
	11	Labour Environment	Construction worker's cond	Nagar)	2 times / year x 4.5 years	Site Visual Inspection Criteria for evaluation	All provisions as per BOCW have been provided. *2350 nos. of Food meals (lunch & Dinner) provided to workmen from BOCW, * Face mask provided to workmen, * Calcium & Vitamins tablets provided to workmen to boost up the immunity of workmen, * Sanitizers & Liquids soaps also provides to different location for workmen. *Daily temperature Check of workmen at site and colony is conducted. Daily sanitisation at work site, of working equipment and the buses used for communiting is conducted.	Conforming with BOCW Act 1996	Conforming with BOCW Act 1996	
Other	12	Accident	Number of accidents	2 Locations (major camp site in Sewri and Shivaji	4 times / year x 4.5 years	Any accidents are not caused by construction	Sewri Camp Site	Shivaji Nagar Camp Site	Chirle/Other area	
Ō				Nagar)	, , , , , , , , , , , , , , , , , , , ,	Number of recorded accident	NIL	NIL	Nil	

MTHL Land Acquisition Status (Attachment 2-6):

Total land required on Navi Mumbai side- 108.09 ha Land in possession in MMRDA – 106.5 ha Balance land acquisition- 1.59 ha

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

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

*Portions of Private Land

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

Attachment 2-8

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

1. General Information

a. RAP Implementation Monitoring Results:

b. Date of Preparing This form

c. Person Preparing This form

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	Titleholders: 0 persons
	(194 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	Identifi	ed Number	Total	Remarks
	Mumbai side	Navi Mumbai side		
C1: Fishing stakes and nets in	178	54	232	Funds for 230 nos C1
RoW (250 m.)				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
C2: Fishing Stakes and Nets	296	567	863	Fisheries. 1. Funds for 496 nos C2
within 500 m. of RoW (Southern side)				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
C4: Commercial and Artisanal	Will be observed	Will be observed		Fisheries.
Fisher-folks	during	during construction		1411
(Loss of Time and Increased	construction	period		
Operating Costs)	period			
C5: Fisher-folks with Loss due to	Will be observed	Will be observed		Nil
Turbidity	during	during construction		
	construction period	period		
C6: Fisher-folks with Damages	Will be observed	Will be observed		Nil
due to Accidents	during	during construction		
	construction	period		
	period			

2.4 Land Acquisition / Transfer

Location	Land Red	-	Land Acquired in Ha.		Balance Land to be acquired in Ha	Remarks
	Govt.	Private	Govt.	Private		
Sewri	10.089	0	10.089	0	0	
Navi Mumbai	98.75	9.34	98.75 7.595		1.745	
Total	118.	179	108.839 7.595		1.745	

3. Monitoring Results

3.1 Sewri Section

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

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

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

SUN	SUMMARY OF FISHER FOLKS OF MTHL PROJECT (Influence Zone of 23 villages) Up to 31-03-2021										
Sr.		Total number	Total	approved un	l eligible its	family					
No.	Village Name	of forms Received	C1	C2	С3	Total					
1	Bamandongri	273	1	1	28	30					
2	Belapur	110	0	5	15	20					
3	Belpada	1185	0	7	478	485					
4	Diwale	455	12	201	52	265					
5	Ganeshpuri	276	0	37	35	72					
6	Gavhan	2162	0	14	1317	1331					
7	Jasai	926	0	0	18	18					
8	Jawale	51	0	1	0	1					
9	Kombadbhuja	413	1	23	134	158					
10	Kopar	994	2	5	228	235					
11	Karave	178	0	44	67	111					
12	Mahul	1062	129	76	604	809					
13	Moha	475	22	24	135	181					
14	Mora	818	0	102	375	477					
15	Morave	539	14	21	88	123					
16	Nhava	1646	0	32	307	339					
17	Sarsole	266	0	30	83	113					
18	Sewri	305	0	1	72	73					
19	Shelghar	241	0	0	15	15					
20	Shivajinagar	202	1	4	61	66					
21	Trombay	1207	49	219	822	1090					
22	Ulwe	218	1	3	14	18					
23	Uran & Hanuman Koliwada	683	0	11	600	611					
24	Vahal	411	0	2	1	3					
	Total	15096	232	863	5549	6644					
						T-					
	Total applications		15096								
	Duplicate/Repeated Applicat	ion				1651					
	Net Applications					13445					
	Approved applications					6644					

Grievance Redressal Committee (GRC) for Fisher-folk Compensation

No. of Cases referred to GRC	No	o. 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	Fisher-folks Compensation	08-10-2015	23-12-2015
	Policy	Committee (FCC)		
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	Detailed list of Fisher-folk PAP	23-12-2015	Up to 31.03.2021
		up to list 1 (1165 Nos) & 2 (1399		Total up to date applications scrutinized = 13445 Nos.
		Nos) are finalized by the		2. Eligible = 6644 Nos.
		Fisheries Department.		3. Rejected = 6801 Nos.
		2. From 2018, FEVC committee		
		is the approval authority of PAF		
		and approved C1- 232 Nos.		
		C2 - 367 Nos and C3- 3481 Nos		
		are approved.		
	Validation of compensation plan	Fisher-folks Compensation	23-12-2015	Approval to the Fisher-folk PAP list obtained from Fisheries
		Committee (FCC)		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	 Approval to the Fisher-folk PAP list obtained from Fisheries Department for Fisherfolk of Navi Mumbai of C2 & C3 on 25th April 2018. 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.		Land Acquired in Ha. Balance Land to be acquired in Ha Anticipated date for Land Acquisition		Payment status (Payment made to Landowners by CIDCO)	Remarks	
Govt.	Private	Govt.	Private	Private				
98.75	9.34	98.75	7.595	1.745	30-06-2021		1. CIDCO is the land acquisition authority for land acquisition for Navi Mumbai 2. MMRDA has paid an amount of INR 59.16 Cr to CIDCO as per their demand. 3. The payment status to the landowners is awaited from CIDCO. The same would be communicated to JICA on receipt of the same.	
Total	108.09	106.345		1.745				

Implementation Schedule for SIA (Sewri Section)

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

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

Mumbai Trans Harbour Link Project - Quarterly Progress Report No.16 (Jan-Mar 202	21)
Attachment 3- JICA's Concurrence Sta	tuc	
Attachment 3- JICA'S Concurrence Sta	itus	

Status of JICA'S Concurrence

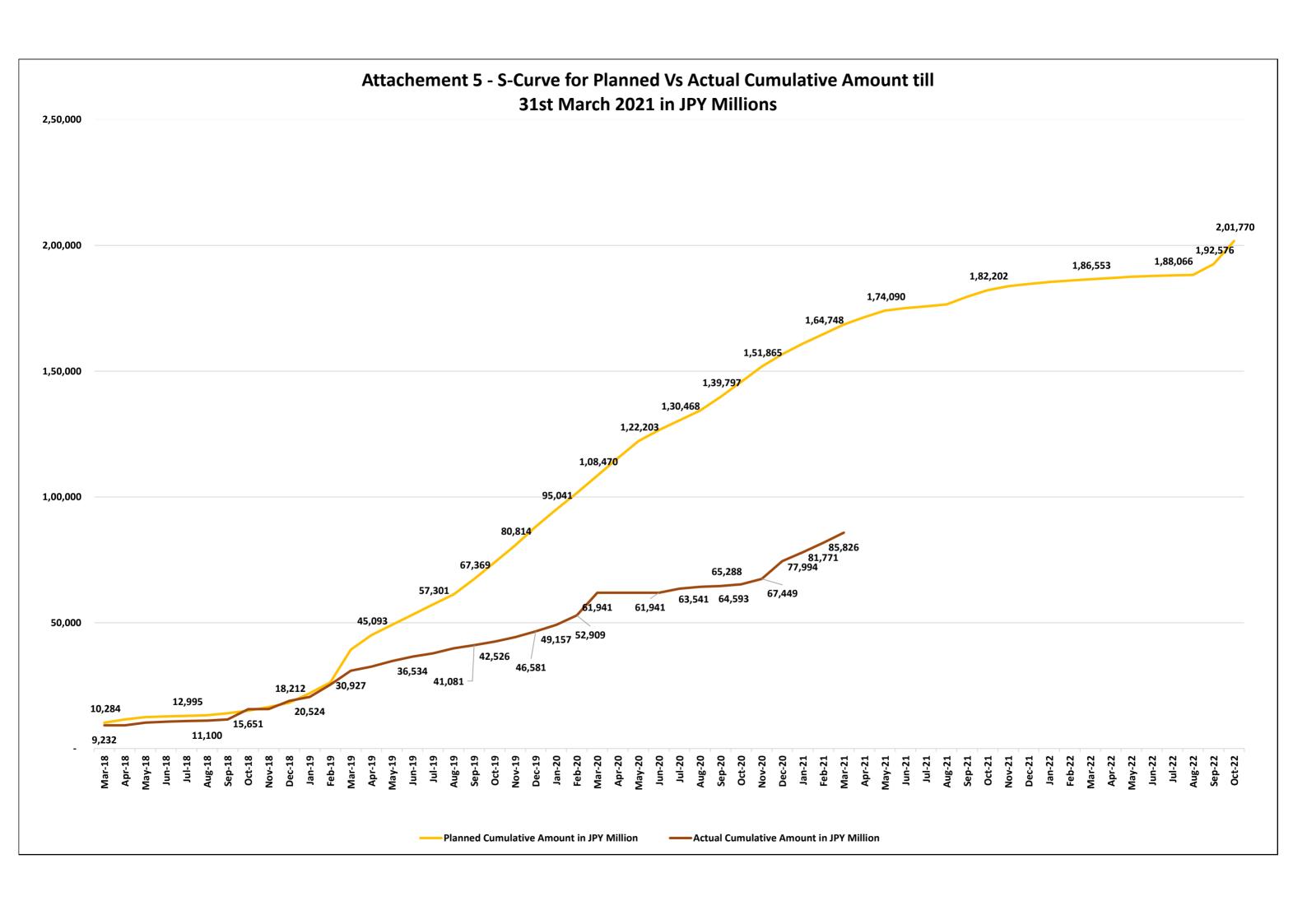
			Bid C	ost			JICA's Cond	currence on		
SI. No		Procurement procedure	Local Currency (Cr Rs.)		PQ Documents	PQ Evaluation	Bid Documents	Technical Evaluation	Financial Evaluation	Contract
1.	Package-1 (CH 0+000 km to CH10+380 km)	ICB with PQ (2P)	7637.30	7637.30	JICA's Concurrence - 9th May 2016	JICA's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

Mumbai	Trans	Harboui	r Link Pro	oject - Q	uarterly	Progress	Report	No.16	(Jan-Mar	2021)
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		9	Status	till 3	R1st M	larch :	2021			
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PROJECT PROCUREMENT AND FINANCIAL STATUS TILL 31st MARCH 2021

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

lumbai	Trans H	larbour L	ink Project	 Quarterly 	Progress	Report No.1	l6 (Jan-Mar	2021)
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		Act	ual Am	ount in	JPY I	Million		



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Mumbai Trans Har	bour Link Project - Quarterly Progress Report No.16 (Jan-Mar 2021)
A 44 . .	
Attachment	: 6- Package-1's Construction Programme
	Updated as on 25 th March 2021
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MUMBAI TRANS HARBOUR LINK PACKAGE 1. **UPDATED BASELINE PROGRAMME FOR MARCH 2021**

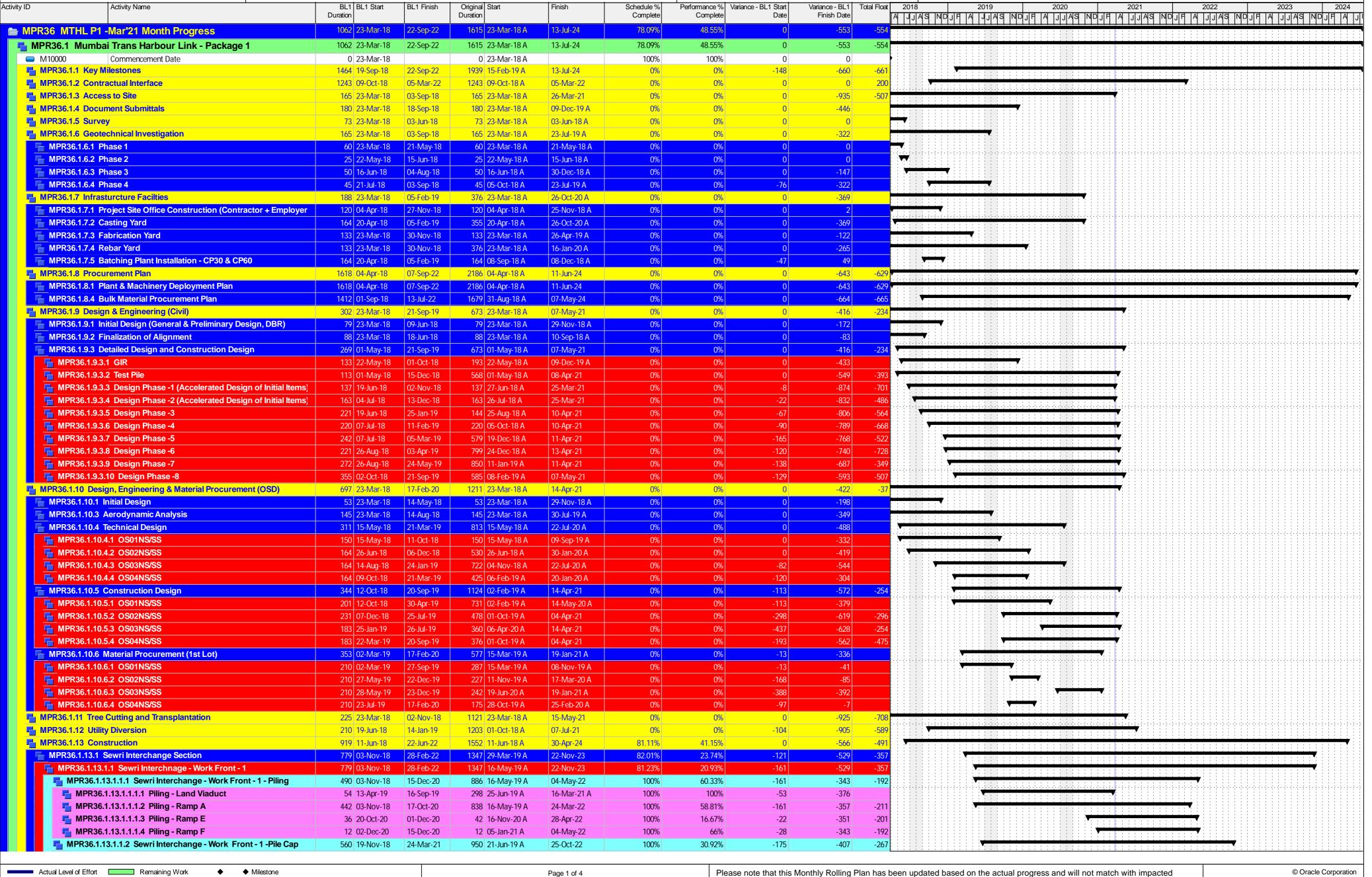




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MUMBAI TRANS HARBOUR LINK PACKAGE 1, **UPDATED BASELINE PROGRAMME FOR MARCH 2021**





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TY-LIN INTERNATIONAL

activity ID	Activity Name	BL1 BL1 Start Duration	BL1 Finish	Original Start Duration	Finish	Schedule % Complete	Performance % Variar	nce - BL1 Start Date	Variance - BL1 T	Total Float 2018 2019 2020 2021 2022 2023 20.
	MPR36.1.13.1.1.2.1 Pile Cap - Land Viaduct	68 25-Apr-19	15-Oct-19	130 06-Sep-19 A	14-Oct-21	100%	88.89%	-43	-453	
	MPR36.1.13.1.1.2.2 Pile Cap - Ramp A	504 19-Nov-18	15-Jan-21	906 21-Jun-19 A	31-Aug-22	100%	22.5%	-175	-419	-347
	MPR36.1.13.1.1.2.3 Pile Cap - Ramp E	44 07-Jan-21	27-Feb-21	159 26-Jan-20 A	30-Sep-22	100%	33.33%	211	-407	-247
	MPR36.1.13.1.1.2.4 Pile Cap - Ramp F	20 01-Mar-21	24-Mar-21	20 01-Oct-22	25-Oct-22	100%	0%	-407	-407	-318
	MPR36.1.13.1.1.3 Sewri Interchange - Work Front - 1 - Pier MPR36.1.13.1.1.3.1 Pier - Land Viaduct	588 12-Dec-18 52 29-May-19	20-May-21 30-Oct-19	648 30-Jul-19 A 97 21-Oct-19 A	27-Dec-22 22-Oct-21	88.61%	25.54% 88.89%	-155 -43	-411 -447	-254 -391
	MPR36.1.13.1.1.3.2 Pier - Ramp A	504 12-Dec-18	09-Feb-21	588 30-Jul-19 A	15-Oct-22	100%	19.35%	-155	-435	-381 ▼ · · · · · · · · · · · · · · · · · ·
	MPR36.1.13.1.1.3.3 Pier - Ramp E	96 27-Jan-21	20-May-21	247 31-Jul-19 A	27-Dec-22	48.48%	31.82%	337	-411	-307
	MPR36.1.13.1.1.3.4 Pier - Ramp F	83 23-Dec-20	01-Apr-21	65 16-Aug-22	02-Nov-22	94.47%	0%	-425	-407	-209 · · · · · · · · · · · · · · · · · · ·
	MPR36.1.13.1.1.4 Sewri Interchange - Work Front - 1 - Pier Cap	587 05-Jan-19	11-Jun-21	479 12-Oct-20 A	31-Jan-23	83.81%	22.72%	-384	-421	-109
	MPR36.1.13.1.1.4.1 Pier Cap - Land Viaduct	49 16-Sep-19	14-Nov-19	88 12-Oct-20 A	22-Nov-21	100%	88.89%	-249	-461	-379
	MPR36.1.13.1.1.4.2 Pier Cap - Ramp A MPR36.1.13.1.1.4.3 Pier Cap - Ramp E	499 05-Jan-19 100 13-Feb-21	26-Feb-21 11-Jun-21	405 04-Nov-20 A 86 28-Oct-20 A	03-Nov-22 31-Jan-23	100% 25.15%	16.13% 27.27%	-403 90	-435 -421	-381
	MPR36.1.13.1.1.4.4 Pier Cap - Ramp F	86 31-Dec-20	13-Apr-21	68 24-Aug-22	15-Nov-22	94.93%	0%	-425	-421	-107 -193
	MPR36.1.13.1.1.5 Sewri Interchange - Embankment Works - Ram	90 14-Apr-21	01-Nov-21	90 16-Nov-22	01-Mar-23	0%	0%	-407	-407	-258
	MPR36.1.13.1.1.6 Sewri Interchange - Work Front - 1 - Super Stru	628 04-May-19	28-Feb-22	691 29-Jul-20 A	22-Nov-23	63.14%	0%	-264	-529	-487
	MPR36.1.13.1.1.6.1 Erection - Land Viaduct	96 19-Nov-19	11-Mar-20	87 29-Jul-20 A	11-Feb-22	100%	0%	-176	-430	-416 ▼
	MPR36.1.13.1.1.6.2 Erection - Ramp A	486 04-May-19	09-Apr-21	500 05-Sep-20 A	07-Mar-23	96.05%	0%	-306	-531	-491 · · · · · · · · · · · · · · · · · · ·
	MPR36.1.13.1.1.6.3 Erection - Ramp E	146 10-Apr-21	02-Dec-21	146 08-Mar-23	26-Aug-23	0%	0%	-531	-531 E21	-491 400
	MPR36.1.13.1.1.6.4 Erection - Ramp F IPR36.1.13.1.2 Sewri Interchange - Work Front - 2	52 28-Dec-21 765 03-Nov-18	28-Feb-22 11-Feb-22	52 22-Sep-23 1261 29-Mar-19 A	22-Nov-23 09-Aug-23	0% 81.26%	31.02%	-531 -121	-531 -457	-489 -385
	MPR36.1.13.1.2.1 Sewri Interchange - Work Front - 2 - Piling	553 03-Nov-18	01-Mar-21	933 29-Mar-19 A	13-Jul-22	100%	49.56%	-121	-341	-266
	MPR36.1.13.1.2.1.1 Piling - Ramp C2	325 03-Nov-18	27-Feb-20	586 29-Mar-19 A	24-Mar-21 A	100%	100%	-121	-246	
	MPR36.1.13.1.2.1.2 Piling - Ramp C1	140 03-Apr-19	18-Dec-19	325 12-Nov-19 A	16-Dec-21	100%	27.6%	-108	-452	-322
	MPR36.1.13.1.2.1.3 Piling - Ramp B	84 21-Nov-20	01-Mar-21	230 22-Nov-19 A	13-Jul-22	100%	16.61%	227	-341	-266 · · · · · · · · · · · · · · · · · ·
	MPR36.1.13.1.2.2 Sewri Interchange - Work Front - 2 - Pile Cap	591 19-Nov-18	29-Apr-21	982 05-May-19 A	12-Sep-22	88.85%	32.58%	-140	-342	-280
	MPR36.1.13.1.2.2.1 Pile Cap - Ramp C2 MPR36.1.13.1.2.2.2 Pile Cap - Ramp C1	361 19-Nov-18 172 12-Apr-19	24-Apr-20 04-Feb-20	811 05-May-19 A 353 14-Dec-19 A	22-Feb-22 29-Jan-22	100%	93.92% 19.33%	-140 -128	-400 -448	-276 346
	MPR36.1.13.1.2.2.3 Pile Cap - Ramp B		29-Apr-21	285 16-Jan-20 A	12-Sep-22	70.36%	10.71%	184	-342	-340 -280
	MPR36.1.13.1.2.3 Sewri Interchange - Work Front - 2 - Pier	589 12-Dec-18	21-May-21	626 04-Sep-19 A	27-Sep-22	88.66%	47.55%	-155	-335	-152
	MPR36.1.13.1.2.3.1 Pier - Ramp C2	353 12-Dec-18	09-May-20	456 04-Sep-19 A	09-Mar-22	100%	94.01%	-155	-400	-288
	MPR36.1.13.1.2.3.2 Pier - Ramp C1	194 01-Apr-19	18-Feb-20	397 10-Sep-19 A	12-Feb-22	100%	35.21%	-64	-448	-346
_	MPR36.1.13.1.2.3.3 Pier - Ramp B	248 25-Apr-20	21-May-21	344 08-Oct-19 A	27-Sep-22	74.24%	40.91%	168	-335	-152
	MPR36.1.13.1.2.4 Sewri Interchange - Work Front - 2 - Pier Cap MPR36.1.13.1.2.4.1 Pier Cap - Ramp C2	583 26-Dec-18 356 26-Dec-18	28-May-21 27-May-20	551 02-Dec-19 A 392 02-Dec-19 A	04-Oct-22 26-Mar-22	83.92% 100%	46.7% 93.99%	-206 -206	-335 -400	-151 -303
	MPR36.1.13.1.2.4.2 Pier Cap - Ramp C1	198 18-Apr-19	12-Mar-20	246 07-Aug-20 A	08-Mar-22	100%	93.99% 35.92%	-206 -277	-400	-303 -350
	MPR36.1.13.1.2.4.3 Pier Cap - Ramp B	235 19-May-20	28-May-21	192 07-Jan-20 A	04-Oct-22	63.18%	38.64%	112	-335	-151
-	MPR36.1.13.1.2.5 Sewri Interchange - Embankment Works - Ram	60 23-May-19	02-Nov-19	60 15-May-21	28-Oct-21	0%	0%	-449	-449	107
	MPR36.1.13.1.2.6 Sewri Interchange - Work Front - 2 - Super Stru	654 18-Mar-19	11-Feb-22	657 05-Dec-20 A	09-Aug-23	65.17%	8.2%	-370	-457	-385
	MPR36.1.13.1.2.6.1 Erection - Ramp C2	343 18-Mar-19	02-Nov-20	321 09-Dec-20 A	04-Jul-22	100%	7.65%	-373	-432	-360
	MPR36.1.13.1.2.6.2 Erection - Ramp C1 MPR36.1.13.1.2.6.3 Erection - Ramp B	194 08-Oct-19 316 28-Nov-20	26-May-20 11-Feb-22	160 05-Dec-20 A 316 28-Jul-22	30-Mar-22	100% 31.11%	22.22%	-303	-458 -458	-386
	IPR36.1.13.1.3 Sewri Interchange - Work Front - 3 (Cast in situ Spa	431 28-Feb-20	01-Feb-22	544 16-May-20 A	09-Aug-23 16-May-23	87.75%	0% 8.65%	-458 -65	-392	-380 -296
	MPR36.1.13.1.3.1 Sewri Interchange - Work Front - 3 - Piling	144 28-Feb-20	20-Nov-20	231 16-May-20 A	22-Apr-22	100%	26.08%	-65	-355	-284 ·
	MPR36.1.13.1.3.1.1 Piling - Ramp B	54 28-Feb-20	02-May-20	54 16-Dec-21	19-Feb-22	100%	0%	-392	-392	-284
	MPR36.1.13.1.3.1.2 Piling - Ramp E	54 04-May-20	07-Oct-20	188 16-May-20 A	16-Mar-22	100%	62.22%	-11	-359	-284
_	MPR36.1.13.1.3.1.3 Piling - Ramp C1	36 08-Oct-20	20-Nov-20	43 23-Feb-21 A	22-Apr-22	100%	11%	-114	-355	-284
	MPR36.1.13.1.3.2 Sewri Interchange - Work Front - 3 - Pile Cap MPR36.1.13.1.3.2.1 Pile Cap - Ramp B	159 07-Mar-20 81 07-Mar-20	15-Dec-20 10-Jun-20	152 21-Sep-20 A 81 23-Dec-21	19-May-22 31-Mar-22	100% 100%	12.5% 0%	-87 -392	-357 -392	-146
	MPR36.1.13.1.3.2.2 Pile Cap - Ramp E	81 11-May-20	17-Nov-20	133 21-Sep-20 A	27-Apr-22	100%	33.33%	-392	-392 -362	-223 -127
	MPR36.1.13.1.3.2.3 Pile Cap - Ramp C1	45 23-Oct-20	15-Dec-20	45 28-Mar-22	19-May-22	100%	0%	-357	-357	-157
	MPR36.1.13.1.3.3 Sewri Interchange - Work Front - 3 - Pier	216 18-Mar-20	05-Mar-21	198 10-Oct-20 A	10-Aug-22	100%	8.33%	-95	-362	-202 ▼ · · · · · · · · · · · · · · · · · ·
	MPR36.1.13.1.3.3.1 Pier - Ramp B	135 18-Mar-20	27-Nov-20	135 04-Jan-22	13-Jun-22	100%	0%	-392	-392	-271 · · · · · · · · · · · · · · · · · · ·
	MPR36.1.13.1.3.3.2 Pier - Ramp E	135 21-May-20	01-Feb-21	168 10-Oct-20 A	06-Jul-22	100%	22.22%	-41 242	-359	-172
_	MPR36.1.13.1.3.3.3 Pier - Ramp C1 MPR36.1.13.1.3.4 Sewri Interchange - Work Front - 3 - Pier Cap	90 18-Nov-20 196 24-Apr-20	05-Mar-21 19-Mar-21	90 27-Apr-22 165 11-Feb-22	10-Aug-22 25-Aug-22	100% 100%	0% 0%	-362 -392	-362 -362	-213 -202
	MPR36.1.13.1.3.4 SewTillterChange - Work Front - 3 - Pier Cap MPR36.1.13.1.3.4.1 Pier Cap - Ramp B	115 24-Apr-20	11-Dec-20	115 11-Feb-22	25-Aug-22 27-Jun-22	100%	0%	-392	-392	-202 -271 ▼▼
	MPR36.1.13.1.3.4.2 Pier Cap - Ramp E	132 08-Jun-20	15-Feb-21	131 19-Feb-22	23-Jul-22	100%	0%	-362	-362	-175
	MPR36.1.13.1.3.4.3 Pier Cap - Ramp C1	77 17-Dec-20	19-Mar-21	77 26-May-22	25-Aug-22	100%	0%	-362	-362	-213 √
	MPR36.1.13.1.3.5 Sewri Interchange - Work Front - 3 - Super Stru	360 23-May-20	01-Feb-22	360 12-Mar-22	16-May-23	49.28%	0%	-392	-392	-296
	MPR36.1.13.1.3.5.1 Super Structure - Ramp B	132 23-May-20	30-Jan-21	132 12-Mar-22	13-Aug-22	100%	0%	-392	-392	-282
	MPR36.1.13.1.3.5.2 Super Structure - Ramp E MPR36.1.13.1.3.5.3 Super Structure - Ramp C1	132 16-Jan-21 120 09-Jun-21	24-Sep-21 01-Feb-22	132 30-Jul-22 120 23-Dec-22	06-Jan-23 16-May-23	41.67% 0%	0% 0%	-392 -392	-392 -392	-282 -206
	R36.1.13.2 Intertidal Section	715 11-Jun-18	23-Oct-21	1352 11-Jun-18 A	02-Sep-23	93.64%	82.39%	-392	-392 -570	-543 • • • • • • • • • • • • • • • • • • •
	IPR36.1.13.2.1 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	
	MPR36.1.13.2.1.1 Access Bridge	457 11-Jun-18	12-Jun-20	528 11-Jun-18 A	27-May-20 A	0%	0%	0	14	
Actual Le	evel of Effort Remaining Work • Milestone				Page 2 of 4		Please	note that this Mor	nthly Rolling Pla	Plan has been updated based on the actual progress and will not match with impacted © Oracle Corpora
Actual Wo	Vork Critical Remaining Work ▼ summary									proposal for the contractor's eligibility for extension of time.



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





AECOM PADECO dar al-handasah sharrand partners



TY-LIN INTERNATIONAL

Activity ID	Activity Name	BL1 BL1 Start Duration	BL1 Finish	Original Start Duration	Finish	Schedule % Complete	Performance % Va	ariance - BL1 Start Date	Variance - BL1 Tota Finish Date	Float 2018 2019 2020 2021 2022 2023 2024 2024 2025 2024 2025 2025 2025 2025 2025 2026
	MPR36.1.13.2.1.1.1 Access Bridge - Piling	451 11-Jun-18	05-Jun-20	415 11-Jun-18 A	13-Jan-20 A	0%	0%	0	123	
	MPR36.1.13.2.1.1.2 Access Bridge - Decking	437 06-Oct-18	12-Jun-20	528 14-Jul-18 A	27-May-20 A	0%	0%	16	14	
	MPR36.1.13.2.1.2 Fingers	441 13-Oct-18	26-Sep-20	620 26-Sep-18 A	04-Dec-20 A	0%	0%	16	-56	
	MPR36.1.13.2.1.2.1 Fingers - Piling	437 13-Oct-18	22-Sep-20	614 26-Sep-18 A	01-Dec-20 A	0%	0%	16	-57	
	MPR36.1.13.2.1.2.2 Fingers - Decking MPR36.1.13.2.2 Intertidal - Main Bridge Work	426 01-Nov-18 638 14-Dec-18	26-Sep-20 23-Oct-21	620 06-Oct-18 A 1287 14-Nov-18 A	04-Dec-20 A 02-Sep-23	93.64%	0% 82.39%	22 26	-56 -570	-543 · · · · · · · · · · · · · · · · · · ·
	MPR36.1.13.2.2.1 Intertidal - Main Bridge Work - Piling	531 14-Dec-18	16-Mar-21	686 14-Nov-18 A	21-Sep-21	100%	99.58%	26	-79	-16 · ·
	MPR36.1.13.2.2.2 Intertidal - Main Bridge Work - Pile Cap	536 29-Dec-18	06-Apr-21	953 17-Jan-19 A	18-Oct-21	98.52%	96.49%	-15	-84	-254 · · · · · · · · · · · · · · · · · · ·
	MPR36.1.13.2.2.3 Intertidal - Main Bridge Work - Pier	562 17-Jan-19	25-May-21	960 29-Mar-19 A	23-Nov-21	94.25%	93.45%	-59	-73	-243
	MPR36.1.13.2.2.4 Intertidal - Main Bridge Work - Pier Cap	562 30-Jan-19	05-Jun-21	688 10-Aug-19 A	25-Jul-22	91.86%	85.93%	-115	-270	-243
	MPR36.1.13.2.2.5 Intertidal - Main Bridge Work - Super Structure	534 18-Apr-19	23-Oct-21	889 29-Nov-19 A	02-Sep-23	82.22%	37.59%	-110	-570	-543
	MPR36.1.13.2.3 Intertidal - Finger Removal & Reuse	400 07-Mar-19	29-Dec-20	386 20-Jun-19 A	16-Sep-21	0%	0%	-85	-139	-13 · · · · · · · · · · · · · · · · · · ·
	MPR36.1.13.3 Marine Section	911 18-Sep-18	17-Jun-22	1512 14-Dec-18 A	30-Apr-24	88.61%	47.73%	-73	-570	-549
	MPR36.1.13.3.1 Temporary Access Bridge Work -2 (MP70 to MP51-MPR36.1.13.3.1.1 Loadout Berth -30 M x 6 M at MP 70	911 18-Sep-18 30 18-Sep-18	17-Jun-22 23-Oct-18	91 22-Nov-20 A	30-Apr-24 10-Mar-21 A	0%	0%	-274 -509	-570 -568	-549
	MPR36.1.13.3.1.2 Temporary Access Bridge (MP70 to MP51)	181 24-Oct-18	28-May-19	408 14-Nov-19 A	27-Oct-21	0%	0%	-244	-503	-235 · · · · · · · · · · · · · · · · · · ·
	MPR36.1.13.3.1.3 Removal of Temporary Access Bridge	90 05-Mar-22	17-Jun-22	90 13-Jan-24	30-Apr-24	0%	0%	-570	-570	<u>-549</u>
	MPR36.1.13.3.2 Marine - Main Bridge	775 03-Nov-18	23-Feb-22	1415 14-Dec-18 A	05-Jan-24	88.61%	47.73%	-34	-570	-549
	MPR36.1.13.3.2.1 Marine - Piling	564 03-Nov-18	15-Mar-21	962 14-Dec-18 A	14-Apr-22	100%	88.3%	-34	-253	<u>-135</u>
	MPR36.1.13.3.2.1.1 Piling - Stretch - 1 - OSD-1 MP51 to MP53 (3	104 20-Sep-19	22-Jan-20	77 21-Jul-20 A	03-Dec-21	100%	96.15%	-225	-413	<u>-263</u>
	MPR36.1.13.3.2.1.2 Piling - Stretch - 2 - Marine - MP54 to MP68	344 25-Feb-19	13-Oct-20	285 16-Aug-20 A	14-Apr-22	100%	14.33%	-321	-379	-184
	MPR36.1.13.3.2.1.3 Piling - Stretch - 3 - OSD-2&3 MP69 to MP8(521 10-Dec-18	26-Feb-21 21-Apr-20	313 01-Sep-20 A	11-May-21 22-Feb-20 A	100%	95.94% 100%	-385 -34	-60 50	
	MPR36.1.13.3.2.1.4 Piling - Stretch - 4 - Marine MP81 to MP123 MPR36.1.13.3.2.1.5 Piling - Stretch - 5 - OSD-4 MP124 to MP128	370 03-Nov-18 147 22-Apr-20	21-Apr-20 16-Jan-21	489 14-Dec-18 A 112 04-Feb-20 A	22-Feb-20 A 13-Nov-20 A	100%	100%	-34 66	55	
	MPR36.1.13.3.2.1.6 Piling - Stretch - 6 - Marine MP129 to MP14	395 25-May-19	15-Mar-21	148 06-Dec-19 A	09-Dec-20 A	100%	100%	-85	80	
	MPR36.1.13.3.2.3 Marine - Pile Cap	572 23-Nov-18	12-Apr-21	1030 14-Jan-19 A	17-Oct-22	97.98%	58.52%	-43	-385	-269
	MPR36.1.13.3.2.3.1 Pile Cap - Stretch - 1 - OSD-1 MP51 to MP53	75 25-Dec-19	23-Mar-20	65 10-Dec-20 A	09-Apr-22	100%	46.67%	-215	-468	-344
	MPR36.1.13.3.2.3.2 Pile Cap - Stretch - 2 - Marine - MP54 to MP	400 28-Mar-19	20-Jan-21	363 16-Oct-20 A	17-Oct-22	100%	6.67%	-320	-453	-332 · · · · · · · · · · · · · · · · · ·
	MPR36.1.13.3.2.3.3 Pile Cap - Stretch - 3 - OSD-2&3 MP69 to MI	505 28-Jan-19	27-Mar-21	265 06-Nov-20 A	28-Apr-22	98.96%	8.33%	-387	-253	-175
	MPR36.1.13.3.2.3.4 Pile Cap - Stretch - 4 - Marine MP81 to MP1	444 23-Nov-18	10-Nov-20	656 14-Jan-19 A	24-May-21	100%	96.85%	-43	-163	-111 <u>- 111 - 11 - 11 - 11 - 11 - 11 - </u>
	MPR36.1.13.3.2.3.5 Pile Cap - Stretch - 5 - OSD-4 MP124 to MP1 MPR36.1.13.3.2.3.6 Pile Cap - Stretch - 6 - Marine MP 129 to MF	125 11-Nov-20 407 08-Jun-19	08-Apr-21 12-Apr-21	74 10-Oct-20 A 184 21-Dec-20 A	09-Jun-21 24-Nov-21	89.6% 93.33%	60% 46.5%	-313	-52 -110	31
	MPR36.1.13.3.2.4 Marine - Pier	590 22-Dec-18	02-Jun-21	820 12-Sep-19 A	16-Jan-23	92.4%	32.14%	-146	-418	-331
	MPR36.1.13.3.2.4.1 Pier - Stretch - 1 - OSD-1 MP51 to MP53 (32)	75 24-Jan-20	21-Apr-20	79 21-Jan-21 A	14-Jun-22	100%	33.33%	-225	-499	-364
	MPR36.1.13.3.2.4.2 Pier - Stretch - 2 - Marine - MP54 to MP68 (8	429 26-Apr-19	26-Mar-21	388 01-Dec-20 A	16-Jan-23	99.37%	6.67%	-332	-475	-331
	MPR36.1.13.3.2.4.3 Pier - Stretch - 3 - OSD-2&3 MP69 to MP80 (504 26-Feb-19	24-Apr-21	240 12-May-21	26-May-22	91.67%	0%	-517	-253	<u>-175</u>
	MPR36.1.13.3.2.4.4 Pier - Stretch - 4 - Marine MP81 to MP123 (2	472 22-Dec-18	12-Jan-21	553 12-Sep-19 A	19-Mar-22	100%	60.72%	-146	-281	<u>-180</u>
	MPR36.1.13.3.2.4.5 Pier - Stretch - 5 - OSD-4 MP124 to MP128 (118 13-Jan-21	02-Jun-21	155 15-Nov-20 A	11-Aug-22	47.2%	40%	49	-288	-251
	MPR36.1.13.3.2.4.6 Pier - Stretch - 6 - Marine MP129 to MP148 (MPR36.1.13.3.2.2 Marine - Pier Cap	419 27-Sep-19 576 21-Jan-19	28-Apr-21 14-Jun-21	202 01-Mar-21 A 751 26-Dec-19 A	28-Feb-22 28-Jan-23	81.33% 88.75%	6.5% 26.83%	-369	-189 -418	-62
	MPR36.1.13.3.2.2.1 Pier Cap - Stretch - 1 - OSD-1 MP51 to MP53	87 04-Feb-20	14-Juii-21 16-May-20	61 29-Apr-22	08-Jul-22	100%	20.83%	-206 -525	-410 -499	-294 -275
	MPR36.1.13.3.2.2.2 Pier Cap - Stretch - 2 - Marine - MP54 to MP	414 27-May-19	07-Apr-21	369 18-Jan-21 A	28-Jan-23	93.33%	6.67%	-347	-475	-341 · · · · · · · · · · · · · · · · · · ·
	MPR36.1.13.3.2.2.3 Pier Cap - Stretch - 3 - OSD-2&3 MP69 to M	497 28-Mar-19	17-May-21	234 09-Jun-21	16-Jun-22	86.51%	0%	-516	-253	-175
	MPR36.1.13.3.2.2.4 Pier Cap - Stretch - 4 - Marine MP81 to MP1	458 21-Jan-19	23-Jan-21	489 26-Dec-19 A	31-Mar-22	100%	58.09%	-206	-281	<u>-180</u>
	MPR36.1.13.3.2.2.5 Pier Cap - Stretch - 5 - OSD(4) MP124 to MF	103 12-Feb-21	14-Jun-21	163 24-Feb-21 A	10-Sep-22	32%	10%	-10	-303	<u>-266</u>
	MPR36.1.13.3.2.2.6 Pier Cap - Stretch - 6 - Marine MP129 to MP	403 12-Oct-19	11-May-21	202 12-Apr-21	12-Mar-22	75.6%	0%	-378	-177	-24
	MPR36.1.13.3.2.5 Marine - Super Structure Erection MPR36.1.13.3.2.5.1 Erection - Main Concrete Viaduct	636 19-Apr-19 636 19-Apr-19	23-Feb-22 23-Feb-22	772 23-Jun-20 A 772 23-Jun-20 A	05-Jan-24 05-Jan-24	55.89% 55.13%	0.06%	-276 -276	-570 -570	-549 -540
	MPR36.1.13.3.2.5.2 Rescue Span (MP98 to MP99)	120 07-Mar-20	29-Oct-20	120 22-Nov-21	14-Apr-22	100%	0.00%	-366	-366	-347 -45
	MPR36.1.13.4 Precast Segments	778 06-Feb-19	21-Aug-21	1130 07-Aug-19 A	22-Aug-23	84.58%	25.47%	-154	-614	-284
	MPR36.1.13.4.1 Precast Segement - Sewri Interchange	701 06-Feb-19	24-May-21	922 20-Feb-20 A	16-May-23	94.77%	19.06%	-317	-606	-199
	MPR36.1.13.4.2 Precast Segement - Intertidal	753 28-Feb-19	14-Aug-21	801 18-Oct-19 A	06-Feb-23	87.42%	57.23%	-194	-450	<u>-387</u>
	MPR36.1.13.4.3 Precast Segement - Marine	759 28-Feb-19	21-Aug-21	1130 07-Aug-19 A	22-Aug-23	78.85%	6.03%	-135	-614	-284
	MPR36.1.13.5 Orthotropic Steel Deck (OSD) - Fabrication, Shipping, /	608 11-Jun-19	15-Mar-22	652 23-Sep-19 A	24-Nov-22	40.06%	19.04%	-9	-213	-53
	MPR36.1.13.5.1 OSD - Fabrication MPR36.1.13.5.1.1 Fabrication - Factory A	746 28-Sep-19 720 28-Sep-19	12-Oct-21 16-Sep-21	801 23-Sep-19 A 801 23-Sep-19 A	30-Mar-22 16-Mar-22	0%	0%	5	-169 -181	-92 -158
	MPR36.1.13.5.1.1 OSD 01 - RHS Fabrication - MP50 to MP53 (330 28-Sep-19	22-Aug-20	457 23-Sep-19 A	22-Apr-21	0%	0%	5	-242	-50
	MPR36.1.13.5.1.1.2 OSD 03 - RHS Fabrication - MP75 to MP81 (450 26-Jan-20	19-Apr-21	336 19-Jan-21 A	16-Mar-22	0%	0%	-359	-331	-226 ▼ -
	MPR36.1.13.5.1.1.3 OSD 04 - RHS Fabrication - MP124 to MP12	360 22-Sep-20	16-Sep-21	296 25-Mar-20 A	16-Mar-22	0%	0%	181	-181	-158
	MPR36.1.13.5.1.2 Fabrication - Factory B	720 28-Sep-19	16-Sep-21	639 23-Sep-19 A	30-Dec-21	0%	0%	5	-105	-2
	MPR36.1.13.5.1.2.1 OSD 01 - LHS Fabrication - MP50 to MP53 (22-Aug-20	379 23-Sep-19 A	28-Aug-20 A	0%	0%	5	-5	
	MPR36.1.13.5.1.2.2 OSD 02 - RHS Fabrication - MP69 to MP75 (450 26-Jan-20	19-Apr-21	393 07-Sep-20 A	30-Dec-21	0%	0%	-225	-255	-174
	MPR36.1.13.5.1.2.3 OSD 04 - LHS Fabrication - MP124 to MP12	360 22-Sep-20	16-Sep-21	174 24-Jan-20 A	26-Feb-21 A	0%	0%	242	203	
	MPR36.1.13.5.1.3 Fabrication - Factory C MPR36.1.13.5.1.3.1 OSD 02 - LHS Fabrication - MP69 to MP75 (660 23-Dec-19 420 23-Dec-19	12-Oct-21 14-Feb-21	531 27-Jan-20 A 295 27-Jan-20 A	30-Mar-22 23-Jul-21	0%	0%	-35 -35	-169 -159	-111 -24
	MPR36.1.13.5.1.3.2 OSD 03 - LHS Fabrication - MP69 to MP75 (420 23-Dec-19 420 19-Aug-20	14-Feb-21 12-Oct-21	360 15-Jan-21 A	23-Jul-21 30-Mar-22	0%	0%	-35 -149	-159 -169	-111 · · · · · · · · · · · · · · · · · ·
		.20 17 / lug-20	12 000 21	10 Juli 21 A						
	Actual Level of Effort Remaining Work ♦ Milestone Actual Work Critical Remaining Work summary				Page 3 of 4					has been updated based on the actual progress and will not match with impacted osal for the contractor's eligibility for extension of time. © Oracle Corporation
	Chica Nahahing Work V Suffiffidiy						301160	Laio Gubiriittou Witt	201 00 prope	100 Contractor o ongressity for oxfortation



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





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TY-LIN INTERNATIONAL

ctivity ID		Activity Name	BL1 BL1 Start Duration	BL1 Finish	Original Start Duration	Finish	Schedule % Complete	Performance % Variance Complete	e - BL1 Start Date	Variance - BL1 To	otal Float	2018 2019 2020 2021 2022 2023 2024
-	MPR36.1.13.	5.2 OSD - Shipping	536 24-Jun-20	11-Dec-21	576 09-Jul-20 A	29-May-22	47%	26.36%	-15	-169	9	**************************************
		13.5.2.1 Shipping - Factory A	510 24-Jun-20	15-Nov-21	397 04-Dec-20 A	15-May-22	51.03%	10.3%	-163	-181	22	
		1.13.5.2.1.1 OSD 01 - RHS Shipping - MP50 to MP53 (32	120 24-Jun-20	21-Oct-20	88 04-Dec-20 A	21-Jun-21	100%	53.12%	-163	-242	-86	
		.1.13.5.2.1.2 OSD 03 - RHS Shipping - MP75 to MP81 (77	240 22-Oct-20	18-Jun-21	126 10-Jan-22	15-May-22	67.79%	0%	-445	-331	-170	
		1.13.5.2.1.3 OSD 04 - RHS Shipping - MP124 to MP128 (180 20-May-21	15-Nov-21	198 30-Oct-21	15-May-22	0%	0%	-163	-181	22	
		13.5.2.2 Shipping - Factory B	510 24-Jun-20	15-Nov-21	486 09-Jul-20 A	28-Feb-22	46.09%	44.79%	-15	-105	-41	: : : : : : : : : : : : : : : : : : :
		1.13.5.2.2.1 OSD 01 - LHS Shipping - MP50 to MP53 (32	120 24-Jun-20	21-Oct-20	77 09-Jul-20 A	21-Oct-20 A	100%	100%	-15	1		
		1.13.5.2.2.2 OSD 02 - RHS Shipping - MP69 to MP75 (68	240 21-Nov-20	18-Jul-21	270 03-Jun-21	28-Feb-22	58.61%	0%	-195	-225	-174	y.
		1.13.5.2.2.3 OSD 04 - LHS Shipping - MP124 to MP128 (180 20-May-21	15-Nov-21	137 28-Nov-20 A	02-Aug-21	0%	67.86%	173	106	170	
		13.5.2.3 Shipping - Factory C	450 18-Sep-20	11-Dec-21	515 25-Oct-20 A	29-May-22	43.4%	24.78%	-37	-169	07	
	_	1.13.5.2.3.1 OSD 02 - LHS Shipping - MP69 to MP75 (68	210 18-Sep-20	15-Apr-21	265 25-Oct-20 A	21-Sep-21	92.32%	52.71%	-37	-159	26	
											07	
		1.13.5.2.3.2 OSD 03 - LHS Shipping - MP75 to MP81 (77	210 16-May-21	11-Dec-21	150 30-Dec-21	29-May-22	0%	0%	-229	-169	-87	
		5.3 OSD - Custom Clearance and Inland Transport (La:	482 07-Sep-20	01-Jan-22	597 13-Aug-20 A	19-Jun-22	36.38%	20.36%	25	-169	74	
1		13.5.3.1 OSD 1 - MP50 to MP53 (320m)	75 07-Sep-20	20-Nov-20	269 13-Aug-20 A	21-Jul-21	100%	76.56%	25	-242	/6	
		13.5.3.2 OSD 2 - MP69 to MP75 (683m)	274 17-Nov-20	17-Aug-21	455 07-Nov-20 A	30-Mar-22	46.68%	26.35%	10	-225	- 155	
		13.5.3.3 OSD 3 - MP75 to MP81 (770m)	377 21-Dec-20	01-Jan-22	111 28-Feb-22	19-Jun-22	27.27%	0%	-435	-169	-87	
	_	13.5.3.4 OSD 4 - MP124 to MP128 (560m)	141 19-Jul-21	06-Dec-21	368 19-Jan-21 A	05-Jun-22	0%	8.93%	181	-181	22	
	-	5.4 OSD - Assembly	337 07-Oct-20	16-Feb-22	412 25-Dec-20 A	05-Sep-22	26.86%	2.55%	-66	-170	-9	
5		13.5.4.1 OSD 1 - MP50 to MP53 (320m)	80 07-Oct-20	11-Jan-21	110 27-Mar-21	06-Nov-21	100%	0%	-142	-172	15	
- 5		13.5.4.2 OSD 2 - MP69 to MP75 (683m)	252 17-Dec-20	13-Oct-21	381 25-Dec-20 A	28-Apr-22	30.42%	6.52%	-7	-165	-95	
- 5	H MPR36.1.1	13.5.4.3 OSD 3 - MP75 to MP81 (770m)	329 20-Jan-21	16-Feb-22	136 30-Mar-22	05-Sep-22	12.86%	0%	-364	-170	-122	· · · · · · · · · · · · · · · · · · ·
-	H MPR36.1.1	13.5.4.4 OSD 4 - MP124 to MP128 (560m)	142 18-Aug-21	04-Feb-22	359 06-Mar-21 A	02-Aug-22	0%	2.68%	140	-152	19	
<u> </u>	MPR36.1.13.	5.5 OSD - Erection	608 11-Jun-19	15-Mar-22	307 23-Nov-21	24-Nov-22	15.95%	0%	-514	-213	-53	
-	MPR36.1.1	13.5.5.1 OSD 1 - MP50 to MP53 (320m)	157 21-May-20	26-Feb-21	95 13-Jul-22	04-Nov-22	100%	0%	-499	-437	-268	
4	MPR36.1.1	13.5.5.2 OSD 2 - MP69 to MP75 (683m)	542 11-Jun-19	24-Dec-21	197 23-Nov-21	13-Jul-22	7.63%	0%	-514	-169	-119	
	MPR36.1.1	13.5.5.3 OSD 3 - MP75 to MP81 (770m)	279 07-Jan-21	10-Mar-22	176 01-Apr-22	27-Oct-22	0%	0%	-297	-194	-146	
	MPR36.1.1	13.5.5.4 OSD 4 - MP124 to MP128 (560m)	185 05-May-21	15-Mar-22	141 07-Jun-22	24-Nov-22	0%	0%	-256	-213	-53	
☐ MI	PR36.1.13.6	Post Erection Segmental Stitch Concrete (incl. Bearing	644 24-Apr-19	10-Mar-22	853 06-Feb-20 A	09-Jan-24	0%	0%	-163	-561	-397	: : : : : : : : : : : : : : : : : : :
I I	MPR36.1.13.0	6.1 Stitch Concrete - Sewri Interchange	644 24-Apr-19	10-Mar-22	690 18-Dec-20 A	28-Nov-23	0%	0%	-349	-526	-362	· · · · · · · · · · · · · · · · · · ·
		6.2 Stitch Concrete - Intertidal	475 29-Nov-19	22-Dec-21	777 06-Feb-20 A	09-Oct-23	0%	0%	-58	-549	-543	
	MPR36.1.13.0	6.3 Stitch Concrete - Marine	563 21-Oct-19	26-Feb-22	706 16-Sep-21	09-Jan-24	0%	0%	-427	-570	-397	
		Crash Barrier Works		11-Mar-22	728 29-May-21	18-Jan-24	0%	0%	-424	-568	-405	
	MPR36.1.13.	7.1 Crash Barrier - Sewri Interchange	585 05-Oct-19	11-Mar-22	636 04-Nov-21	02-Dec-23	0%	0%	-478	-529	-366	
		7.2 Crash Barrier - Intertidal		04-Jan-22	654 29-May-21	21-Oct-23	0%	0%	-364	-549	-363	
		7.3 Crash Barrier - Marine	541 26-Nov-19	09-Mar-22	684 23-Oct-21	18-Jan-24	0%	0%	-427	-570	-409	
		7.4 Crash Barrier - Orthotropic Steel Deck	291 23-Dec-20	10-Mar-22	206 16-Jun-22	17-Feb-23	0%	0%	-374	-289	-130	
		Bridge Deck (Superstructure) Water Proofing		16-Mar-22	722 10-Jun-21	23-Jan-24	0%	0%	-426	-568	-409	· · · · · · · · · · · · · · · · · · ·
		8.1 Water Proofing - Sewri Interchange	579 15-Oct-19	14-Mar-22	628 13-Nov-21	02-Dec-23	0%	0%	-478	-527	-366	
_		8.2 Water Proofing - Intertidal		10-Jan-22	649 10-Jun-21	27-Oct-23	0%	0%	-364	-549	-336	
		8.3 Water Proofing - Marine	526 18-Dec-19	14-Mar-22	669 15-Nov-21	23-Jan-24	0%	0%	-427	-570	-400	
		8.4 Water Proofing - Orthotropic Steel Deck	281 11-Jan-21	16-Mar-22	244 23-Jun-22	11-Apr-23	0%	0%	-365	-328	-160	
		Stone Mastic Asphalt Pavement		22-Mar-22	378 04-Nov-22	31-Jan-24	0%	0%	-264	-569	471	
		9.1 Sewri Interchange		21-Mar-22		08-Dec-23	0%	0%	-491	-526	471	
				21-Mar-22 22-Mar-22	105 04-Aug-23		+				-42 <i>1</i>	
		9.2 Main Bridge Bridge Anclilaries and Misc. Works			378 04-Nov-22	31-Jan-24	0%	0%	-264	-569 E44	-329	
			575 31-Jan-20	22-Jun-22	756 15-Oct-21	06-Apr-24	0%	0%	-364	-546	-4/1	
		10.1 Bridge Ancillaries	575 31-Jan-20	22-Jun-22	756 15-Oct-21	06-Apr-24	0%	0%	-364	-546	-4/1	
_		13.10.1.1 Noise Barrier, View Barrier and Safety Fence	552 31-Jan-20	26-May-22	751 15-Oct-21	01-Apr-24	0%	0%	-364	-564	-466	
		13.10.1.2 Traffic Signages and Marking	84 17-Mar-22	22-Jun-22	88 22-Dec-23	06-Apr-24	0%	0%	-542	-546	-471	
	36.1.15 Hand				159 06-Jan-24	13-Jul-24	0%	0%	-542	-553	-554	
		Testing and Handing Over			131 06-Jan-24	11-Jun-24	0%	0%	-542	-553	-554	
		Final Handing Over	28 19-Aug-22	<u> </u>	28 11-Jun-24	13-Jul-24	0%	0%	-553	-553	-554	
MPR	836.1.14 Invo	ice Schedule (Shows the Invoice items which are not c	1062 23-Mar-18	22-Sep-22	1615 23-Mar-18 A	13-Jul-24	75.92%	53.86%	0	-553	-554	

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Mumbai Trans Harbour Lin	nk Project - Quarterly Progress Report No.1	6 (Jan-Mar 2021)
Attackment 7 De	adrawa Na Canatuustian D	
Attachment 7- Pa	ackage-2's Construction P	rogramme
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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

PROJECT PRI PRE-COMMEN PROJECT EVI PROJECT KEY M INTERFACE MILL PHYSICAL PROJECT CONSTRUCTION MANAGEMEN SITE ORGANISA DEVELOPMENT COUMMUNICATION QUALITY ASSURA HEALTH, SAFETY INTERFACE MANA RISK MANAGEME DEVELOPMENT OTHER CONTRA PERMIT & APPR SURVEYING & GEN CUTTING OF MANN SETTING UP BATO PC YARD & CAMP CONNECTION FOR CUTTING OF TREE IMPORT PERMITS NOC FOR PLANT & TEMPORARY ACC DESIGN EARLY STAGE D INDEPENDENT DE TOPOGRAPHIC SU ADDITIONAL TIME GEOTECHNICAL II ADDITIONAL WOR TEMPORARY WO PROJECT OFFICE CASTING YARD LO	ESTONE_ERG19 GRESS AND INTERFACE DATE_ADD2-ATTACHMENT 25 IN KEY MILESTONES IT IT ITION OF MANAGEMENT SYSTEM IN/DOCUMENT CONTROL SYSTEM ANCE AND MANAGEMENT SYSTEM AND ENVIRONMENTAL MANAGEMENT SYSTEM AND ENVIRONMENTAL MANAGEMENT SYSTEM INT PLAN OF WORK PROGRAMME ACTUAL SUBMITTALS ROVAL COTECHNICAL INVESTIGATION IGROVES CHING PLANT RELECTRICITY & WATER ES	3146.25 17-Nov-17 126.00 17-Nov-17 55.00 15-Dec-17 2470.63 23-Mar-18 2290.63 23-Mar-18 2442.63 19-Apr-18 2023.50 18-Sep-18 1050.88 03-Sep-18 613.00 20-Jan-18 35.00 20-Jan-18 315.38 20-Jan-18 254.00 23-Mar-18 551.00 23-Mar-18 49.00 23-Mar-18 66.00 23-Mar-18 63.00 23-Mar-18 63.00 23-Mar-18 389.00 20-Jan-18 389.00 20-Jan-18 389.00 20-Jan-18 35.00 20-Jan-18 35.00 20-Jan-18 35.00 20-Jan-18 35.00 20-Jan-18 35.00 20-Jan-18	21-Sep-24 22-Mar-18 07-Feb-18 21-Mar-23 22-Sep-22 21-Mar-23 22-Jun-22 06-Jul-21 18-Aug-18 23-Feb-18 27-May-18 10-May-18 10-May-18 10-May-18 27-May-18 24-May-18 24-May-18 24-May-18 24-May-18 24-May-18 23-Feb-18	17-Nov-17 17-Nov-17 15-Dec-17 23-Mar-18 23-Mar-18 31-Aug-18 25-Oct-18 12-Jan-18 20-Jan-18 20-Jan-18 23-Mar-18 23-Mar-18 23-Mar-18 23-Mar-18 23-Mar-18 23-Mar-18 23-Mar-18	16-Mar-18 20-Mar-18 22-Aug-19 07-Mar-18 22-Aug-19 24-Oct-18 22-Aug-19 24-Oct-18 24-Oct-18 24-Oct-18 24-Oct-18 24-Oct-18	76.13% 40.3 0% 0'	1976 1976
PROJECT PRI PRE-COMMEN PROJECT EVI PROJECT KEY M INTERFACE MILL PHYSICAL PROJECT CONSTRUCTION MANAGEMEN SITE ORGANISA DEVELOPMENT COUMMUNICATION QUALITY ASSURA HEALTH, SAFETY INTERFACE MANA RISK MANAGEME DEVELOPMENT OTHER CONTRA PERMIT & APPR SURVEYING & GEN CUTTING OF MANN SETTING UP BATO PC YARD & CAMP CONNECTION FOR CUTTING OF TREE IMPORT PERMITS NOC FOR PLANT & TEMPORARY ACC DESIGN EARLY STAGE D INDEPENDENT DE TOPOGRAPHIC SU ADDITIONAL TIME GEOTECHNICAL II ADDITIONAL WOR TEMPORARY WO PROJECT OFFICE CASTING YARD LO	E-COMMENCEMENT ACTIVITY NCEMENT ACTIVITY ENT MILESTONE MILESTONE ESTONE_ERG19 GRESS AND INTERFACE DATE_ADD2-ATTACHMENT 25 N KEY MILESTONES IT MITION OF MANAGEMENT SYSTEM NN/DOCUMENT CONTROL SYSTEM ANCE AND MANAGEMENT SYSTEM AGEMENT SYSTEM AGEMENT SYSTEM OF WORK PROGRAMME ACTUAL SUBMITTALS ROVAL EOTECHNICAL INVESTIGATION GROVES CHING PLANT RELECTRICITY & WATER ES	55.00 15-Dec-17 2470.63 23-Mar-18 2290.63 23-Mar-18 2442.63 19-Apr-18 2023.50 18-Sep-18 1050.88 03-Sep-18 613.00 20-Jan-18 613.00 20-Jan-18 613.00 20-Jan-18 315.38 20-Jan-18 254.00 23-Mar-18 551.00 23-Mar-18 49.00 23-Mar-18 66.00 23-Mar-18 63.00 23-Mar-18 63.00 23-Mar-18 28.00 24-Mar-18 389.00 20-Jan-18 35.00 20-Jan-18 70.00 20-Jan-18	07-Feb-18 21-Mar-23 22-Sep-22 21-Mar-23 22-Jun-22 06-Jul-21 18-Aug-18 23-Feb-18 27-May-18 10-May-18 10-May-18 10-May-18 27-May-18 27-May-18 27-May-18 24-May-18 24-May-18 28-Aug-18	15-Dec-17 23-Mar-18 23-Mar-18 03-Apr-18 31-Aug-18 25-Oct-18 12-Jan-18 07-Mar-18 20-Jan-18 23-Mar-18 23-Mar-18 23-Mar-18 23-Mar-18 23-Mar-18	22-Aug-19 07-Mar-18 22-Aug-19 24-Oct-18 24-Oct-18 22-Aug-19 24-Oct-18 24-Oct-18 24-Oct-18 24-Oct-18 24-Oct-18	0% 0' 0% 0'	20-Mai-18A, PRE-COMMENCEMENT ACTIVITY 10% 10% 10% 10% 10% 10% 10% 10
PROJECT EVI PROJECT KEY M INTERFACE MILLI PHYSICAL PROO CONSTRUCTION MANAGEMEN SITE ORGANISA DEVELOPMENT COUMMUNICATION QUALITY ASSURA HEALTH, SAFETY INTERFACE MANA RISK MANAGEME DEVELOPMENT OTHER CONTRA PERMIT & APPR SURVEYING & GE CUTTING OF MANI SETTING UP BATO PC YARD & CAMP CONNECTION FOR CUITING OF TREE MIPORARY ACC DESIGN EARLY STAGE D INDEPENDENT DE TOPOGRAPHIC SI BATHYMETRIC SU ADDITIONAL TIME GEOTECHNICAL II ADDITIONAL WOR TEMPORARY WO PROJECT OFFICE CASTING YARD LO	ENT MILESTONE MILESTONE ESTONE_ERG19 GRESS AND INTERFACE DATE_ADD2-ATTACHMENT 25 N KEY MILESTONES IT KITION OF MANAGEMENT SYSTEM IN/DOCUMENT CONTROL SYSTEM ANCE AND MANAGEMENT SYSTEM AND ENVIRONMENTAL MANAGEMENT SYSTEM ENT PLAN OF WORK PROGRAMME ACTUAL SUBMITTALS ROVAL COTECHNICAL INVESTIGATION IGROVES CHING PLANT OF RELECTRICITY & WATER ES	2470.63 23-Mar-18 2290.63 23-Mar-18 2442.63 19-Apr-18 2023.50 18-Sep-18 1050.88 03-Sep-18 613.00 20-Jan-18 613.00 20-Jan-18 35.00 20-Jan-18 254.00 23-Mar-18 254.00 23-Mar-18 49.00 23-Mar-18 66.00 23-Mar-18 63.00 23-Mar-18 63.00 23-Mar-18 28.00 24-Mar-18 389.00 20-Jan-18 35.00 20-Jan-18 35.00 20-Jan-18 35.00 20-Jan-18	21-Mar-23 22-Sep-22 21-Mar-23 22-Jun-22 06-Jul-21 18-Aug-18 23-Feb-18 27-May-18 10-May-18 10-May-18 10-May-18 27-May-18 27-May-18 27-May-18 27-May-18 28-May-18 28-May-18 28-May-18 28-Aug-18	23-Mar-18 23-Mar-18 03-Apr-18 31-Aug-18 25-Oct-18 12-Jan-18 07-Mar-18 20-Jan-18 23-Mar-18 23-Mar-18 23-Mar-18 23-Mar-18 23-Mar-18	22-Aug-19 07-Mar-18 22-Aug-19 24-Oct-18 24-Oct-18 22-Aug-19 24-Oct-18 24-Oct-18 24-Oct-18 21-Sep-18	0% 0' 0% 0'	0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
PROJECT KEY M INTERFACE MILLI PHYSICAL PROO CONSTRUCTION MANAGEMEN SITE ORGANISA DEVELOPMENT COUMMUNICATION QUALITY ASSURA HEALTH, SAFETY INTERFACE MANA RISK MANAGEME DEVELOPMENT OTHER CONTRA PERMIT & APPR SURVEYING & GE CUTTING OF MANN SETTING UP BATO PC YARD & CAMP CONNECTION FOR CUTTING OF TREE MPORT PERMITS NOC FOR PLANT & TEMPORARY ACC DESIGN EARLY STAGE D INDEPENDENT DE TOPOGRAPHIC SI BATHYMETRIC SU ADDITIONAL TIME GEOTECHNICAL II ADDITIONAL WOR TEMPORARY WO PROJECT OFFICE CASTING YARD LO	MILESTONE ESTONE_ERG19 GRESS AND INTERFACE DATE_ADD2-ATTACHMENT 25 N KEY MILESTONES IT ATTION OF MANAGEMENT SYSTEM NI/DOCUMENT CONTROL SYSTEM ANCE AND MANAGEMENT SYSTEM AND ENVIRONMENTAL MANAGEMENT SYSTEM AGEMENT SYSTEM ENT PLAN OF WORK PROGRAMME ACTUAL SUBMITTALS ROVAL COTECHNICAL INVESTIGATION IGROVES CHING PLANT OF RELECTRICITY & WATER ES	2290.63 23-Mar-18 2442.63 19-Apr-18 2023.50 18-Sep-18 1050.88 03-Sep-18 613.00 20-Jan-18 613.00 20-Jan-18 315.38 20-Jan-18 254.00 23-Mar-18 254.00 23-Mar-18 66.00 23-Mar-18 66.00 23-Mar-18 68.00 23-Mar-18 28.00 24-Mar-18 389.00 20-Jan-18 35.00 20-Jan-18 35.00 20-Jan-18 70.00 20-Jan-18	22-Sep-22 21-Mar-23 22-Jun-22 06-Jul-21 18-Aug-18 23-Feb-18 27-May-18 10-May-18 10-May-18 10-May-18 10-May-18 27-May-18 24-May-18 24-May-18 20-Apr-18 18-Aug-18	23-Mar-18 03-Apr-18 31-Aug-18 25-Oct-18 12-Jan-18 07-Mar-18 20-Jan-18 23-Mar-18 23-Mar-18 23-Mar-18 23-Mar-18 23-Mar-18	07-Mar-18 22-Aug-19 24-Oct-18 24-Oct-18 22-Aug-19 24-Oct-18 24-Oct-18 21-Sep-18	0% 0' 0% 0' 0% 0' 0% 0' 0% 0' 0% 0' 0% 0' 0% 0' 0% 0' 0% 0' 0% 0' 0% 0' 0% 0' 0% 0' 0% 0' 0% 0' 0% 0'	09% 09% 09% 09% 09% 09% 09% 09%
INTERFACE MILLI PHYSICAL PROC CONSTRUCTION MANAGEMEN SITE ORGANISA DEVELOPMENT COUMMUNICATION QUALITY ASSURA HEALTH, SAFETY INTERFACE MANA RISK MANAGEME DEVELOPMENT OTHER CONTRA PERMIT & APPR SURVEYING & GE CUTTING OF MANN SETTING UP BATO PC YARD & CAMP CONNECTION FOR CUTTING OF TREE IMPORT PERMITS. NOC FOR PLANT & TEMPORARY ACC DESIGN EARLY STAGE D INDEPENDENT DE TOPOGRAPHIC SU ADDITIONAL TIME GEOTECHNICAL II ADDITIONAL WOR TEMPORARY WO PROJECT OFFICE CASTING YARD LO	ESTONE_ERG19 GRESS AND INTERFACE DATE_ADD2-ATTACHMENT 25 IN KEY MILESTONES IT IT ITION OF MANAGEMENT SYSTEM IN/DOCUMENT CONTROL SYSTEM ANCE AND MANAGEMENT SYSTEM AND ENVIRONMENTAL MANAGEMENT SYSTEM AND ENVIRONMENTAL MANAGEMENT SYSTEM INT PLAN OF WORK PROGRAMME ACTUAL SUBMITTALS ROVAL COTECHNICAL INVESTIGATION IGROVES CHING PLANT RELECTRICITY & WATER ES	2442.63 19-Apr-18 2023.50 18-Sep-18 1050.88 03-Sep-18 613.00 20-Jan-18 613.00 20-Jan-18 613.00 20-Jan-18 315.38 20-Jan-18 254.00 23-Mar-18 551.00 23-Mar-18 66.00 23-Mar-18 66.00 23-Mar-18 68.00 23-Mar-18 28.00 24-Mar-18 389.00 20-Jan-18 35.00 20-Jan-18 70.00 20-Jan-18 313.00 06-Apr-18	21-Mar-23 22-Jun-22 06-Jul-21 18-Aug-18 23-Feb-18 27-May-18 10-May-18 10-May-18 10-May-18 27-May-18 27-May-18 24-May-18 20-Apr-18 18-Aug-18	03-Apr-18 31-Aug-18 25-Oct-18 12-Jan-18 07-Mar-18 20-Jan-18 23-Mar-18 23-Mar-18 23-Mar-18 23-Mar-18 23-Mar-18	07-Mar-18 22-Aug-19 24-Oct-18 24-Oct-18 22-Aug-19 24-Oct-18 24-Oct-18 21-Sep-18	0% 0' 0% 0' 0% 0' 0% 0' 0% 0' 0% 0' 0% 0' 0% 0' 0% 0' 0% 0' 0% 0' 0% 0' 0% 0' 0% 0' 0% 0' 0% 0' 0% 0'	22-Aug-19A; MANAGEMENT 22-Aug-19A; MANAGEMENT 22-Aug-19A; DEVELOPMENT OF MANAGEMENT SYSTEM 22-Aug-19A; MANAGEMENT OF MANAGEMENT SYSTEM 22-Aug-19A; DEVELOPMENT SYSTEM 23-Aug-19A; DEVELOPMENT SYSTEM 24-Aug-19A; DEVELOPMENT SYSTEM 24-Aug-1
PHYSICAL PROC CONSTRUCTION MANAGEMEN SITE ORGANISA DEVELOPMENT COUMMUNICATION QUALITY ASSURA HEALTH, SAFETY INTERFACE MANA RISK MANAGEME DEVELOPMENT OTHER CONTRA PERMIT & APPR SURVEYING & GE CUTTING OF MANA SETTING UP BATC PC YARD & CAMP CONNECTION FOR CUTTING OF TREE IMPORT PERMITS. NOC FOR PLANT & TEMPORARY ACC DESIGN EARLY STAGE D INDEPENDENT DE TOPOGRAPHIC SU ADDITIONAL TIME GEOTECHNICAL II ADDITIONAL WOR TEMPORARY WO PROJECT OFFICE CASTING YARD LO	GRESS AND INTERFACE DATE_ADD2-ATTACHMENT 25 IN KEY MILESTONES IT INTION OF MANAGEMENT SYSTEM IN/DOCUMENT CONTROL SYSTEM ANCE AND MANAGEMENT SYSTEM ANCE AND MANAGEMENT SYSTEM AGEMENT SYSTEM AGEMENT SYSTEM OF WORK PROGRAMME ACTUAL SUBMITTALS ROVAL ECTECHNICAL INVESTIGATION IGROVES CHING PLANT OF RELECTRICITY & WATER ES	2023.50 18-Sep-18 1050.88 03-Sep-18 613.00 20-Jan-18 35.00 20-Jan-18 613.00 20-Jan-18 315.38 20-Jan-18 254.00 23-Mar-18 551.00 23-Mar-18 66.00 23-Mar-18 63.00 23-Mar-18 28.00 24-Mar-18 389.00 20-Jan-18 35.00 20-Jan-18 70.00 20-Jan-18 313.00 06-Apr-18	22-Jun-22 06-Jul-21 18-Aug-18 23-Feb-18 27-May-18 10-May-18 10-May-18 10-May-18 27-May-18 27-May-18 24-May-18 20-Apr-18 18-Aug-18	31-Aug-18 25-Oct-18 12-Jan-18 07-Mar-18 20-Jan-18 20-Jan-18 23-Mar-18 23-Mar-18 23-Mar-18 23-Mar-18	07-Mar-18 22-Aug-19 24-Oct-18 24-Oct-18 22-Aug-19 24-Oct-18 24-Oct-18 21-Sep-18	0% 0' 0% 0' 0% 0' 0% 0' 0% 0' 0% 0' 0% 0' 0% 0' 0% 0' 0% 0' 0% 0' 0% 0' 0% 0' 0% 0'	22-Aug-19A; MANAGEMENT 22-Aug-19A; MANAGEMENT 22-Aug-19A; DEVELOPMENT OF MANAGEMENT SYSTEM 22-Aug-19A; MANAGEMENT OF MANAGEMENT SYSTEM 22-Aug-19A; DEVELOPMENT SYSTEM 23-Aug-19A; DEVELOPMENT SYSTEM 24-Aug-19A; DEVELOPMENT SYSTEM 24-Aug-1
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CONNECTION FOR CUTTING OF TREE IMPORT PERMITS NOC FOR PLANT A TEMPORARY ACC DESIGN EARLY STAGE D INDEPENDENT DE TOPOGRAPHIC SI BATHYMETRIC SU ADDITIONAL TIME GEOTECHNICAL II ADDITIONAL WOR TEMPORARY WO PROJECT OFFICE CASTING YARD LA	RELECTRICITY & WATER ES	28.00 04-May-18	18-Aug-18	06-Apr-18	28-Nov-18	0% 0	9% 28-Nov-18A, SETTING UP BATCHING PLANT
CUTTING OF TREE IMPORT PERMITS NOC FOR PLANT A TEMPORARY ACC DESIGN EARLY STAGE D INDEPENDENT DE TOPOGRAPHIC SI BATHYMETRIC SU ADDITIONAL TIME GEOTECHNICAL II ADDITIONAL WOR TEMPORARY WO PROJECT OFFICE CASTING YARD LA	ES		01-Jun-18	21-Mar-18	01-Oct-18	0% 0	
IMPORT PERMITS NOC FOR PLANT & TEMPORARY ACC DESIGN EARLY STAGE D INDEPENDENT DE TOPOGRAPHIC SI BATHYMETRIC SU ADDITIONAL TIME GEOTECHNICAL II ADDITIONAL WOR TEMPORARY WO PROJECT OFFICE CASTING YARD LA		63.00 18-May-18 35.00 23-Mar-18	20-Jul-18 26-Apr-18	06-Apr-18 10-May-18	03-Aug-19 02-Aug-18	0% 00	
TEMPORARY ACC DESIGN EARLY STAGE D INDEPENDENT DE TOPOGRAPHIC SI BATHYMETRIC SU ADDITIONAL TIME GEOTECHNICAL II ADDITIONAL WOR TEMPORARY WO PROJECT OFFICE CASTING YARD LA	ALICENCES FOR EQUIPMENTS & GOODS	70.00 23-Mar-18	31-May-18	15-May-18	31-May-18	0% 0	
DESIGN EARLY STAGE D INDEPENDENT DE TOPOGRAPHIC SI BATHYMETRIC SU ADDITIONAL TIME GEOTECHNICAL II ADDITIONAL WOR TEMPORARY WO PROJECT OFFICE CASTING YARD LO	& FACILITIES TO BE USED AT SITE	51.00 23-Mar-18	31-May-18	16-Aug-18	28-Nov-18	0% 0'	
EARLY STAGE D INDEPENDENT DE TOPOGRAPHIC SI BATHYMETRIC SU ADDITIONAL TIME GEOTECHNICAL II ADDITIONAL WOR TEMPORARY WO PROJECT OFFICE CASTING YARD LA	CESS ROAD FOR MAIN BRIDGE & INTERCHANGE	58.00 23-Mar-18 1224.38 20-Jan-18	19-May-18 04-Sep-19	23-Mar-18 01-Jan-18	28-Jul-18	0% 00 100% 1000	<u> </u>
INDEPENDENT DE TOPOGRAPHIC SI BATHYMETRIC SU ADDITIONAL TIME GEOTECHNICAL II ADDITIONAL WOR TEMPORARY WO PROJECT OFFICE CASTING YARD LA	DESIGN WORK / INFORMATION COLLECTION	678.38 20-Jan-18	17-Jul-18	01-Jan-18	12-Nov-19	100% 100	
TOPOGRAPHIC SI BATHYMETRIC SU ADDITIONAL TIME GEOTECHNICAL II ADDITIONAL WOR TEMPORARY WO PROJECT OFFICE CASTING YARD LA	ESIGN CHECKER APPROVAL	35.00 20-Jan-18	23-Feb-18	20-Jan-18	13-Apr-18	0% 0	134Apri-18A, INDEPENDENT DESIGN CHECKER APPROVAL
ADDITIONAL TIME GEOTECHNICAL II ADDITIONAL WOR TEMPORARY WO PROJECT OFFICE CASTING YARD LA		116.33 20-Jan-18	16-May-18	01-Jan-18	20-Apr-18	0% 0	
GEOTECHNICAL II ADDITIONAL WOR TEMPORARY WO PROJECT OFFICE CASTING YARD LA	<u> </u>	75.00 20-Jan-18	04-Apr-18	25-Jan-18	20-Mar-18	0% 0	19% Tale 20-Mai: 18A, BATHYWETRIC SURVEY: 19% Up-18A, BATHYWETRIC SURVEY: 19% Up-18A, BATHYWETRIC SURVEY: 19% Up-18A, BATHYWETRIC SURVEY: 19% Up-18A, BATHYWETRIC SURVEY:
ADDITIONAL WORK TEMPORARY WO PROJECT OFFICE CASTING YARD LA	: FOR ONGC & BPCL PHYSCIAL VERIFICATION INVESTIGATION	309.00 548.08 20-Jan-18	17-Jul-18	21-Mar-18 12-Jan-18	05-Aug-19 25-Jun-19	0% 00 100% 1000	
PROJECT OFFICE CASTING YARD LA	RKS FOR DESIGN INITIATION OF STEEL MODULE 1	63.00	17 501 10	26-Jun-19	12-Nov-19	0% 0	12-Nov-19 A, ADDITIONAL WORKS FOR DESIGN IN MATE
CASTING YARD LA		1037.17 22-Jan-18	01-Nov-18	20-Jan-18	20-Aug-20	100% 100	
<u> </u>		241.13 04-May-18 72.33 22-Jan-18	02-Jun-18 04-Apr-18	04-May-18 20-Jan-18	17-Jul-18 09-Oct-18	0% 00	19% Tr. Juli-18A, PROJECT OFFICE LAYOUT.
TEMPORARY BRID				_		100% 100	10/A 30-Aug-18A, TEMPORARY BRIDGE
CASTING YARD ST		199.38 10-May-18	10-Aug-18	20-Mar-18	20-Nov-18	0% 0'	0% NEELEN 20-Nov-18A, CASTING YARD STRUCTURE
	ABRICATION YARD	365.17 20-Jul-18	01-Nov-18	11-Nov-19	20-Aug-20	0% 0	
JFE DESIGN PRO		274.38 23-Mar-18 1123.04 01-May-18	31-Aug-18 04-Sep-19	12-May-18 09-Apr-18	15-Nov-18	0% 0' 100% 100'	
JFE.DQP.1000	Design Quality Plan	0.00 01-May-18	01-May-18	09-Apr-18	09-Apr-18	100% 100	
JFE.MOB.1000	JFE Design Team Mobilization	0.00 01-May-18	, ,	01-May-18	•	100% 100	
DESIGN BASIS RE	<u></u>	225.13 18-May-18	06-Jul-18	11-May-18	14-Jun-19	0% 0	
ADDITIONAL TIME	FOR DESIGN BASIS REPORT_STEEL	99.00 394.38 01-May-18	03-Sep-18	05-Oct-18 01-May-18	14-Jun-19 12-Aug-19	0% 00	
	SIS ON AERODYNAMIC STABILITY	913.13 01-May-18	23-Jul-18	28-May-18	12-Aug-19 13-Sep-19	0% 0° 100% 100°	
ADDITIONAL TIME	FOR WIND TUNNEL TEST	507.00		07-Jul-18	18-Jun-20	0% 0	0% 18-Jun-20A, ADDITIONAL TIME FOR WIND
TECHNICAL DESIG	<u></u>	886.13 23-Jul-18	23-Mar-19	30-Aug-18	04-Jul-20	100% 100	
	ON BY THE SERVICE RECIPIENT IRKS DESIGN BY SERVICE RECIEPIENT	40.00 23-Jul-18 28.00 07-Nov-18	01-Nov-18 29-Dec-18			0% 00	
CONSTRUCTION		455.00 21-Dec-18	04-Sep-19	06-Nov-19	02-Feb-21	100% 100	<mark></mark>
PROCUREME	NT, MANUFACTURING AND LOGISTICS	1342.38 20-Jan-18	23-Aug-20	22-Dec-17		100% 100	0%
SURVEY & INVE		72.33 20-Jan-18	02-Apr-18	22-Dec-17	04-Apr-18	0%	04-Apr-18A, SURVEY&INVESTIGATION
TOPOGRAPHIC SI	URVEYAGENT	21.00 20-Jan-18	09-Feb-18	01-Jan-18	22-Jan-18	0%	10% 22-Jan-18A, TOPOGRAPHIC SURVEYAGENT
Project Baseline	D. O'T. ID. W. I. T. O. W. I.	PLOYER:				CONTRACTOR:	Date Revision Checked Appro
Actual Work	Bar (Inical Remaining Work Summan)	<u>PLOTER.</u> MBAI METROPOLITAN REG	GION DEVELO	PMENT ALITI	-	<u>CONTRACTOR:</u> DAEWOO - TPL	25 Mar 21 P0
Actual vvorkRemaining Work	, , ,	MRDA)	J. J. T D L V L L O		.~	DARWUU - IPL	

Activity Name

GEOTECHNICAL INVESTIGATION AGENCY

MAIN WORK SUBCONTRACT WORK

PRECAST MOULD AND SYSTEM FORM

PROCUREMENT OF STEEL GIRDER

STEEL PLATE FOR (RHS.STEEL MOUDLE-2 MP177 - MP182

STEEL PLATE FOR (LHS.STEEL MOUDLE-2 MP177 - MP182)

STEEL PLATE FOR (RHS.STEEL MOUDLE-3_MP183 - MP186)

STEEL PLATE FOR (RHS.STEEL MOUDLE-1 MP176 - MP171

STEEL PLATE FOR (LHS.STEEL MOUDLE-1_MP176 - MP171)

ESTABLISHMENT OF EMPOLYER & CONTRACTOR OFFICE

STEEL SPAN FABRICATIONAT THE SUPPLIER'S WORK SHOP

STEEL MODULE-02 MP182 - MP177 (FABRICATION AT JFE)

STEEL MODULE-03_MP186 - MP183 (FABRICATION AT JFE)

STEEL MODULE-01 MP176 - MP171 (FABRICATION AT JFE)

STEEL MODULE-01 MP176 - MP171 (OCEAN FREIGHT)

STEEL MODULE-02_MP182 - MP177 (OCEAN FREIGHT)

STEEL MOUDULE-03 MP186 - MP183 (OCEAN FREIGHT)

STEEL MODULE-01_MP176 - MP171 (ASSEMBLY WORKS

STEEL SPAN ASSEMBLY MP171 - MP172 G1

STEEL SPAN ASSEMBLY_MP171 - MP172_G2

STEEL SPAN ASSEMBLY MP172 - MP173 G1

STEEL SPAN ASSEMBLY_MP172 - MP173_G2

STEEL SPAN ASSEMBLY_MP173 - MP174_G1

STEEL SPAN ASSEMBLY_MP173 - MP174_G2

STEEL SPAN ASSEMBLY_MP174 - MP175_G1

STEEL SPAN ASSEMBLY MP174 - MP175 G2

STEEL SPAN ASSEMBLY_MP175 - MP176_G1

STEEL SPAN ASSEMBLY_MP175 - MP176_G2

LOADING AND DELIVERY TO THE CONTRACTOR'S ASSEMBLY YARD

STEEL MODULE-01_MP176 - MP171 (DELIVERY TO ASSEMBLY YARD)

STEEL MODULE-02_MP182 - MP177 (DELIVERY TO ASSEMBLY YARD)

STEEL MODULE-03_MP186 - MP183 (DELIVERY TO ASSEMBLY YARD)

STEEL SPAN MATERIAL OCEAN FREIGHT TO THE MUMBAI PORT INCLUDING CUSTOM CLEARANCE

ESTABLISHMENT OF STEEL SPAN ASSEMBLY YARD

TEMPORARY WORK

MATERIAL SUPPLIERS

MATERIAL PROCUREMENT

IMPACT OF COVID-19

ESTABLISHMENT OF LABOUR CAMP

PRE-FABRICATION AND ASSEMBLY

CONCRETE GIRDER PRE-CASTING

CONCRETE PRE-FABRICATION AT THE CAS

CONSTRUCTION

TEMPORARY WORK

TEMPORARY BRIDGE

PERMANENT WORK

FOUIPMENTS

Activity ID

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Actual Finish

04-Apr-18

11-May-20

05-Nov-20

25-Sep-20

02-Feb-21

17-Aug-20

05-Jan-21

25-May-20

04-Apr-19

Original BL Project Start Duration

48.00 22-Jan-18

964.33 20-Jan-18

1030 00 23-Mar-18

1097.00 23-Mar-18

714.91 07-Aug-18

1209.38 02-Jun-18

673.00 07-May-19

438.00 07-May-19

315.00 01-Jul-19

286.00 30-Jul-19

327.00 02-Jul-19

2193.21 02-Apr-18

2168.21 02-Apr-18

194.04 20-Jun-18

463.92 20-Jun-18

2115.88 20-May-18

1926.21 03-Sep-18

682.38 18-Apr-19

920.00 02-Jun-19

595.00 02-Jun-19

672.75 29-Jun-19

696 00 26-Jul-19

747.88 10-Jul-20

325.88 23-Nov-20

423.00 10-Jul-20

342.00 29-Nov-20

685.06 20-Aug-20

300.88 02-Jan-21

355.19 20-Aug-20

317.00 09-Jan-21

206.50 13-Oct-21

26.00 20-Nov-21

20.00 20-Nov-21

20.00 28-Dec-21

33.00 25-Jan-22

20.00 29-Nov-21

20.00 11-Nov-21

36.00 23-Oct-21

38.00 02-Nov-21

46.00 13-Oct-21

38.00 23-Oct-21

50.67

0.00

BL Project Finish | Actual Start

20-Oct-18

20-Jul-19

12-Sep-19

24-Mar-19

23-Aug-20

16-Apr-20

26-Jul-20

21-Jun-22

21-Jun-22

05-Apr-19

21-Jun-22

24-May-22

15-Sep-21

29-Nov-21

29-Jun-21

25-Sep-21

29-Nov-21

09-Jan-22

09-Jan-22

09-Aug-21

05-Nov-21

24-Jan-22

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19-Aug-21

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17-Feb-22

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19-Jan-22

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11-Dec-21

02-Dec-21

02-Dec-21

10-May-20

22-Dec-17

20-Jan-18

23-Mar-18

23-Mar-18

04-Sep-18

20-Apr-18

08-Aug-18

01-Aug-19

01-Nov-19

01-Oct-19

29-Mar-20

22-Mar-20

02-Apr-18

02-Apr-18

03-Jul-18

27-Jul-18

08-Dec-18

6-Oct-19

06-Nov-19

16-Oct-19

24-Oct-19

16-Oct-19

16-Apr-20

01-Sep-20

01-Sep-20

06-Mar-21

21-Oct-20

21-Oct-20

112 113 114 115 116	STEEL MODULE-02_MP182 - MP177 (ASSEMBLY WORKS) STEEL SPAN ASSEMBLY_MP176 - MP177_G1 STEEL SPAN ASSEMBLY_MP176 - MP177_G2 STEEL SPAN ASSEMBLY_MP177 - MP178_G1 STEEL SPAN ASSEMBLY_MP177 - MP178_G2	202.13 05-Sep-20 54.00 03-May-21 20.00 25-Jun-21 95.13 28-Jun-21 20.00 20-Aug-21	18-Sep-21 26-May-21 28-Jul-21 09-Aug-21 18-Sep-21	23-Nov-20		56.25% 0% 0% 0% 0%	8.33% 0% 0% 0%					74-Dec-21, STEEL 718-Sep-21, STEEL SPA 707 10-Nov-21, STEEL S 707 17-Nov-21, STEEL 707 14-Dec-21, STEEL
117 118 119	STEEL SPAN ASSEMBLY_MP178 - MP179_G1 STEEL SPAN ASSEMBLY_MP178 - MP179_G2 STEEL SPAN ASSEMBLY_MP179 - MP180_G1	42.00 05-Mar-21 48.00 26-Apr-21 77.00 02-Jan-21	27-Mar-21 19-May-21	09-Mar-21 19-Jan-21		75% 0% 100%	0% 0% 0%					7 02-Sep-21, STEEL SPAN 7 09-Sep-21, STEEL SPAN 12-Aug-21, STEEL SPAN
	Project Baseline Bar Critical Remaining Work Summary Actual Work Milestone Remaining Work % Complete	EMPLOYER: MUMBAI METROPOLITAN REG (MMRDA)	SION DEVELOP	PMENT AUTH	ORITY	CONTRACTOR DAEWOO		7	Date 25-Mar-21	Revision R0	Checked	Approved

Remaining Work

% Complete

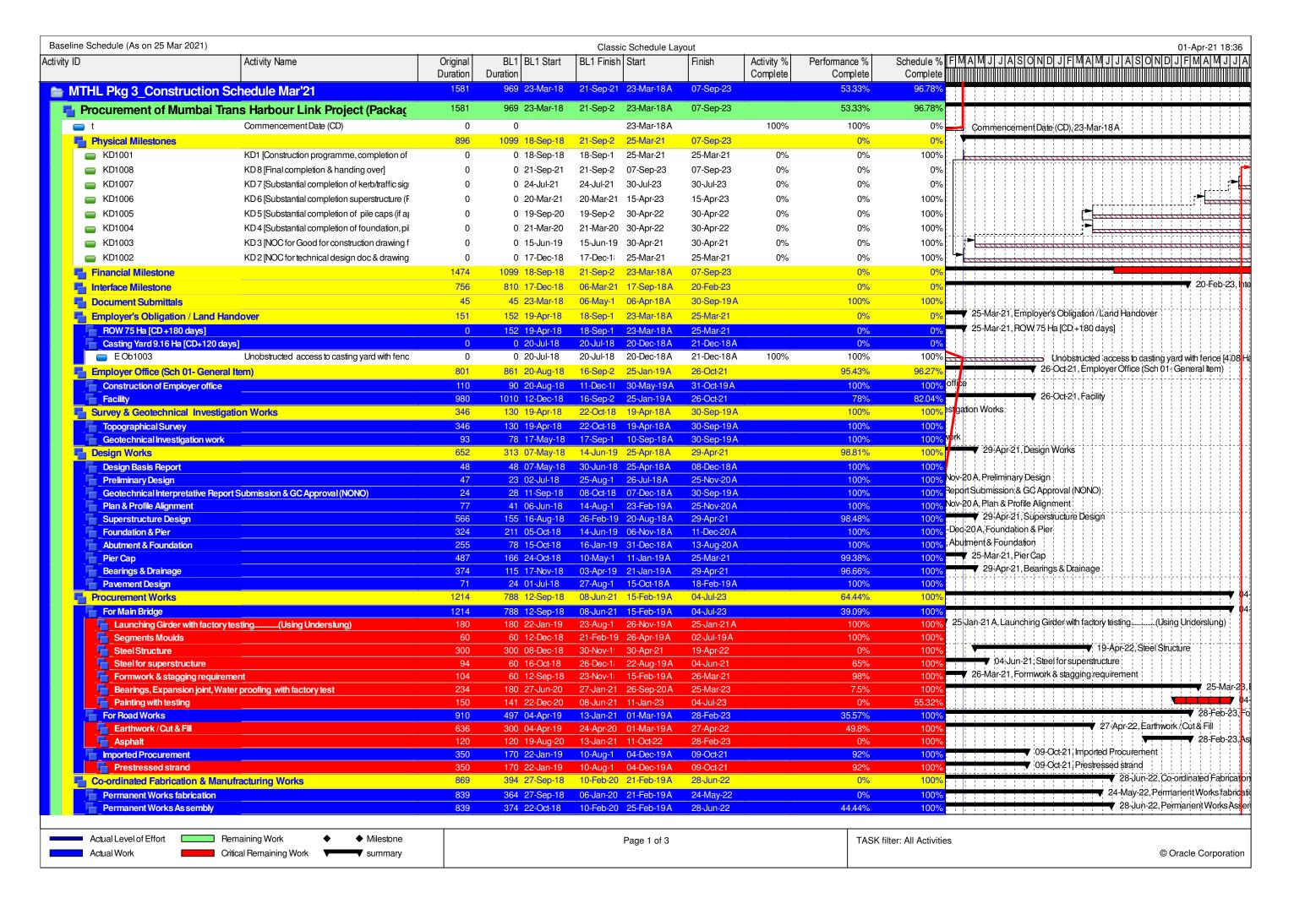
# Acti	vity ID Activity Name	Original BL Project Star	t BL Project Finis	sh Actual Start	Actual Finish	Schedule %	Performance % Complete	2018 2019 2020 2021 2022
						Complete		12 3 4 5 6 7 8 9 1 1 1 1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 2
120	STEEL SPAN ASSEMBLY_MP179 - MP180_G2	52.00 25-Feb-21 73.00 02-Nov-20	20-Mar-21 25-Nov-20	08-Feb-21		100% 100%	0%	D 24-Aug-21, STEEL SPAN
121 122	STEEL SPAN ASSEMBLY_MP180 -MP181_G1 STEEL SPAN ASSEMBLY_MP180 -MP181_G2	73.00 U2-NOV-20 55.00 19-Dec-20	25-NOV-20 11-Jan-21	15-Jan-21 28-Dec-20		100%	0% 0%	D2-Aug-21, STEEL SPANA
123	STEEL SPAN ASSEMBLY_MP181 -MP182_G1	72.00 05-Sep-20	29-Sep-20	23-Nov-20	23-Mar-21	100%	100%	23-Mar-21A;STEEL SPANASSEM
124	STEEL SPAN ASSEMBLY_MP181 - MP182_G2	78.00 22-Oct-20	14-Nov-20	08-Dec-20		100%	0%	# TEELSPANAS
125	STEEL MODULE-03_MP186 - MP183 (ASSEMBLY WORKS)	207.13 06-Jul-21	23-Nov-21			0%	0%	
126 127	STEEL SPAN ASSEMBLY_MP182 - MP183_G1 STEEL SPAN ASSEMBLY_MP182 - MP183_G2	20.00 09-Aug-21 26.00 24-Aug-21	18-Oct-21 28-Oct-21			0% 0%	0% 0%	 w 27-√an-22,\$1
128	STEEL SPAN ASSEMBLY_MP183 - MP184_G1	20.00 24-Aug-21 20.00 04-Oct-21	28-Oct-21			0%	0%	107 :09-Mar;≥2.,
129	STEEL SPAN ASSEMBLY_MP183 - MP184_G2	20.00 01-Nov-21	23-Nov-21			0%	0%	
130	STEEL SPAN ASSEMBLY_MP184 - MP185_G1	118.13 24-Jul-21	08-Oct-21			0%	0%	107 01-Jan-22, STE
131	STEEL SPAN ASSEMBLY_MP184 - MP185_G2	101.00 05-Aug-21	08-Oct-21			0%	0%	
132 133	STEEL SPAN ASSEMBLY_MP185 - MP186_G1 STEEL SPAN ASSEMBLY_MP185 - MP186_G2	89.13 06-Jul-21 118.13 10-Jul-21	16-Aug-21 28-Sep-21			0% 0%	0% 0%	1 3-10-21, STEE
134	STEEL SPAN LOADING AND TRANSPORTING TO THE ERECTION AREA	328.00 30-Sep-20	19-Feb-22			0%	0%	
135	STEEL MODULE-01_MP176 - MP171 (LOAD OUT AND TRANSPORT)	130.00 03-Dec-21	19-Feb-22			0%	0%	inin:,: \\
136	STEEL MODULE-02_MP182 - MP177 (LOAD OUT AND TRANSPORT)	95.00 30-Sep-20	21-Sep-21			0%	0%	16-Dec-21 , STEE
137	STEEL MODULE-03_MP186 - MP183 (LOAD OUT AND TRANSPORT)	120.00 01-Sep-21	25-Nov-21	00 D - 40		0%	0%	V. ii ii 7 V 11-Apr-22
138 139	MAIN BRIDGE MAIN BRIDGE FOUNDATION	1926.21 03-Sep-18 1315.29 03-Sep-18	24-May-22 23-Mar-21	08-Dec-18 08-Dec-18		81.74% 100%	32.61% 72%	11-Mar-22.
140	MAIN BRIDGE PILE FOUNDATION	1177.06 03-Sep-18	23-Jan-21	08-Dec-18		100%	89.72%	▼ 11-Nbv-21, WAIN BF
141	PILE LOAD TEST	259.25 03-Sep-18	19-Nov-18	08-Dec-18	11-Nov-19	100%	100%	11-Nov-19 A, PILE LOADTEST
142	MAIN BRIDGE PILE FOUNDATION_LAND 17+414~18+187 FROM MP250 TO MP266	322.99 30-Nov-18	15-May-19	17-Jan-19	11-Jun-20	100%	100%	V 11-Jun-20 A, MAIN BRIDGE PILE FOUNDATION_LAND
143	MODULE-21_MP261 - MP257	126.00 30-Nov-18	05-Mar-19	23-Aug-19	06-Mar-20	100%	100%	7.06-Mar-20A, MODULE-21_MR261; -MP257 28-Jan-20A, MODULE-22 MP266; -MP262
144 145	MODULE-22_MP266 - MP262 MODULE-20_MP256 - MP255	167.35 06-Mar-19 32.00 05-Dec-18	15-May-19 10-Jan-19	17-Jan-19 25-Sep-19	28-Jan-20 19-Mar-20	100% 100%	100% 100%	20-Jani-20-7, NODULE-22 J. Mr 200 - Nr 202
145	MODULE-19 MP254 - MP250	199.21 11-Jan-19	16-Apr-19	05-Oct-19	11-Jun-20	100%	100%	11-Jun-20 A, MODULE-19 MP254 -MP250
147	MAIN BRIDGE PILE FOUNDATION_CRZ 15+890~17+414 FROM MP226 TO MP250	268.00 20-Dec-18	27-Nov-19	12-Jun-19	21-Feb-20	100%	100%	V 21-Feb-20A; MAIN BRIDGE PILE FOUNDATION_CRZ15+890
148	MODULE-14_MP231 - MP227	48.40 17-Aug-19	27-Nov-19	08-Nov-19	21-Feb-20	100%	100%	21-Feb-20A;MODULE-14_MP231+MP227
149	MODULE-15_MP236 - MP232	77.00 08-Mar-19	26-Aug-19	08-Aug-19	25-Dec-19	100%	100%	25-Deb-19A; MODULE-15_MP236; MP232
150 151	MODULE-16_MP240 - MP237	113.00 20-Dec-18	08-Mar-19	12-Jun-19 09-Oct-19	11-Nov-19	100% 100%	100%	704-Jan-20A, MODULE-10 Wir 240 - NIP 247
152	MODULE-17_MP245 - MP241 MODULE-18_MP249 - MP246	94.00 20-Mar-19 74.00 21-Jan-19	17-Jun-19 26-Mar-19	15-Oct-19	04-Jan-20 09-Feb-20	100%	100% 100%	09-Feb-20 A, MODUL E-18 MP249 - MP246
153	MAIN BRIDGE PILE FOUNDATION_INTERTIDAL 14+800~15+890 FROM MP206 TO MP225	417.08 27-Feb-19	06-Jun-20	15-Oct-19	26-Aug-20	100%	100%	▼ 26-Aug-20A, MAIN BRIDGE PILE:FOUNDATION_I
154	MODULE-10_MP211 - MP207	243.20 12-Mar-20	06-Jun-20	01-Nov-19	18-Feb-20	100%	100%	18-Feb-20A,MODULE+10_MP2111+MP207;
155	MODULE-11_MP216 - MP212	277.00 27-Feb-19	03-Apr-20	15-Oct-19	24-Feb-20	100%	100%	24-Feb-20A MODULE-11 MP216 MP212
156	MODULE-12_MP221 - MP217	225.33 06-Apr-19	30-Oct-19	25-Feb-20	26-Aug-20	100%	100%	
157 158	MODULE-13_MP226 - MP222 MAIN BRIDGE PILE FOUNDATION MARINE 13+610~14+800 FROM MP187 TO MP205	313.08 30-Oct-19 530.98 12-Dec-19	06-Feb-20 28-Nov-20	24-Jan-20 01-Oct-19	16-Jun-20	100%	100% 96.22%	V 05-Jul-21;MAINBRIDGE PIL
159	MODULE-09_MP206 - MP202	340.06 12-Dec-19	06-Mar-20	01-Oct-19	13-Oct-20	100%	100%	13-Oct-20A, MODULE-09_MP206-MP202
160	MODULE-08_MP201 - MP197	262.04 22-Feb-20	19-May-20	19-Feb-20	25-Dec-20	100%	100%	25-Dec-20A, MODULE-08_MP201- MR1
161	MODULE-07_MP196 - MP192	168.00 02-May-20	08-Sep-20	12-Oct-20		100%	86.45%	OD JOHAN AND WEEK ON A PARK A
162	MODULE-06_MP191 - MP187	81.55 21-Aug-20	28-Nov-20	31-Aug-20	10-Dec-20	100%	100%	10-Dec-20A, MODULE-06_MP191 -MP18 11-Nov-21, MAIN BR
163 164	MAIN BRIDGE PILE FOUNDATION_MARINE (STEEL) 11+880~13+610 FROM MP171 TO MP186 STEEL MODULE-03_MP186 - MP183	532.13 27-Nov-19 80.00 30-May-20	23-Jan-21 21-Nov-20	17-Mar-20 08-Oct-20	15-Feb-21	100% 100%	62.52% 100%	15-Feb-21A;STEEL MODULE-03 MF
165	STEEL MODULE-02_MP182 - MP177	336.33 27-Nov-19	10-Sep-20	17-Mar-20	25-Jan-21	100%	100%	25-Jan-21'A, STEEL MODULE-02_MP1
166	STEEL MODULE-01_MP176 - MP171	161.00 30-Jul-20	23-Jan-21			100%	0%	11-Nov-21, STEEL /
167	MAIN BRIDGE PILE FOUNDATION_MARINE 10+380~11+880 FROM MP146 TO MP170	660.88 24-Nov-18	28-Dec-19	19-Feb-19		100%	84.23%	V 21, Jun-21, MAINBRIDGE PIL
168	MODULE-05_MP171 - MP167	60.00 19-Jun-19	16-Oct-19	24-Feb-21	20 5-1-04	100%	23.75%	104-Jun-21, MODULE-05_MP1
169 170	MODULE-04_MP166 - MP162 MODULE-03_MP161 - MP157	506.88 24-Nov-18 392.75 22-Jan-19	18-Feb-19 18-Apr-19	19-Feb-19 03-Apr-19	20-Feb-21 25-Mar-21	100% 100%	100% 100%	20-reb-21A,MODULE-04-MP100-N
170	MODULE-03_MP1561-MP157 MODULE-02_MP156-MP152	94.00 16-Apr-19	27-Jul-19	21-Dec-20	27-Mar-21	100%	100%	27-Mar-21/A, MODULE-02_MP156
172	MODULE-01_MP151 - MP146	124.00 04-Oct-19	28-Dec-19	23-Dec-20		100%	87.5%	1 21 -Jμη-21,ΜΟΣΨΙΕ-01_MP
173	MAIN BRIDGE PILE CAP INSTALLATION	1048.21 22-Dec-18	23-Mar-21	01-May-19		100%	53.5%	7:11-Mar-22, MAINE 0:04-Dec-21 MAINE
174	MAIN BRIDGE PILE CAP BOTTOM SLAB INSTALLATION	1007.21 22-Dec-18	17-Feb-21	19-Aug-19		0%	0%	04-Deci21, MAINE
175 176	MAIN BRIDGE PILE CAP INSTALLATION MAIN BRIDGE PILE CAP LAND 17+414-18+188 FROM MP251 TO MP266	1032.21 27-Dec-18 376.96 27-Dec-18	23-Mar-21 13-Jun-19	01-May-19 01-May-19	27-Jun-20	100% 100%	53.5% 100%	27-Jun-20A, MAIN BRIDGE PILE CAP LAND 17+414
176	MODULE-21 MP261 - MP257	248.02 27-Dec-18	30-Mar-19	15-Oct-19	27-Jun-20 27-Jun-20	100%	100%	
178	MODULE-22_MP266 -MP262	206.75 02-Apr-19	13-Jun-19	01-May-19	16-May-20	100%	100%	16;May-20A;MODULE;22_MP266;MP262;
179	MODULE-20_MP256 - MP255	54.00 01-Jan-19	06-Feb-19		23-May-20	100%	100%	23-May-20A, MODULE-20_MP256-MP255
180	MODULE-19_MP254 - MP250	218.04 08-Feb-19	13-May-19	23-Nov-19	20-Jun-20	100%	100%	
181 182	MAIN BRIDGE PILE CAP_CRZ15+890~17+414 FROM MP226 TO MP250 MODULE:14 MP231 - MP227	328.33 04-Mar-19 230.33 24-Oct-19	08-Jan-20 08-Jan-20	28-Aug-19 11-Jan-20	19-Sep-20 19-Sep-20	100% 100%	100% 100%	19-Sep-20A, MAINBRIDGE PILE CAP_CRZ 15- 19-Sep-20A, MODULE-14_MP231-MP227
102	WODOLE-14_WF251 -WF221	230.33 24-00-19	00-Jan-20	TI-Jan-20	19-Seβ-20	100%	100%	
	Project Baseline Bar Critical Remaining Work Summary	EMPLOYER:				CONTRACTO	R:	Date Revision Checked Approved
	Actual Work ♦ Milestone	MUMBAI METROPOLITAN REG	SION DEVELOR	PMENT AUTH		DAEWOO		V 25-Mar-21 R0
		I			1	D/11 11 00	IIIIJ	, , , , , , , , , , , , , , , , , , , ,

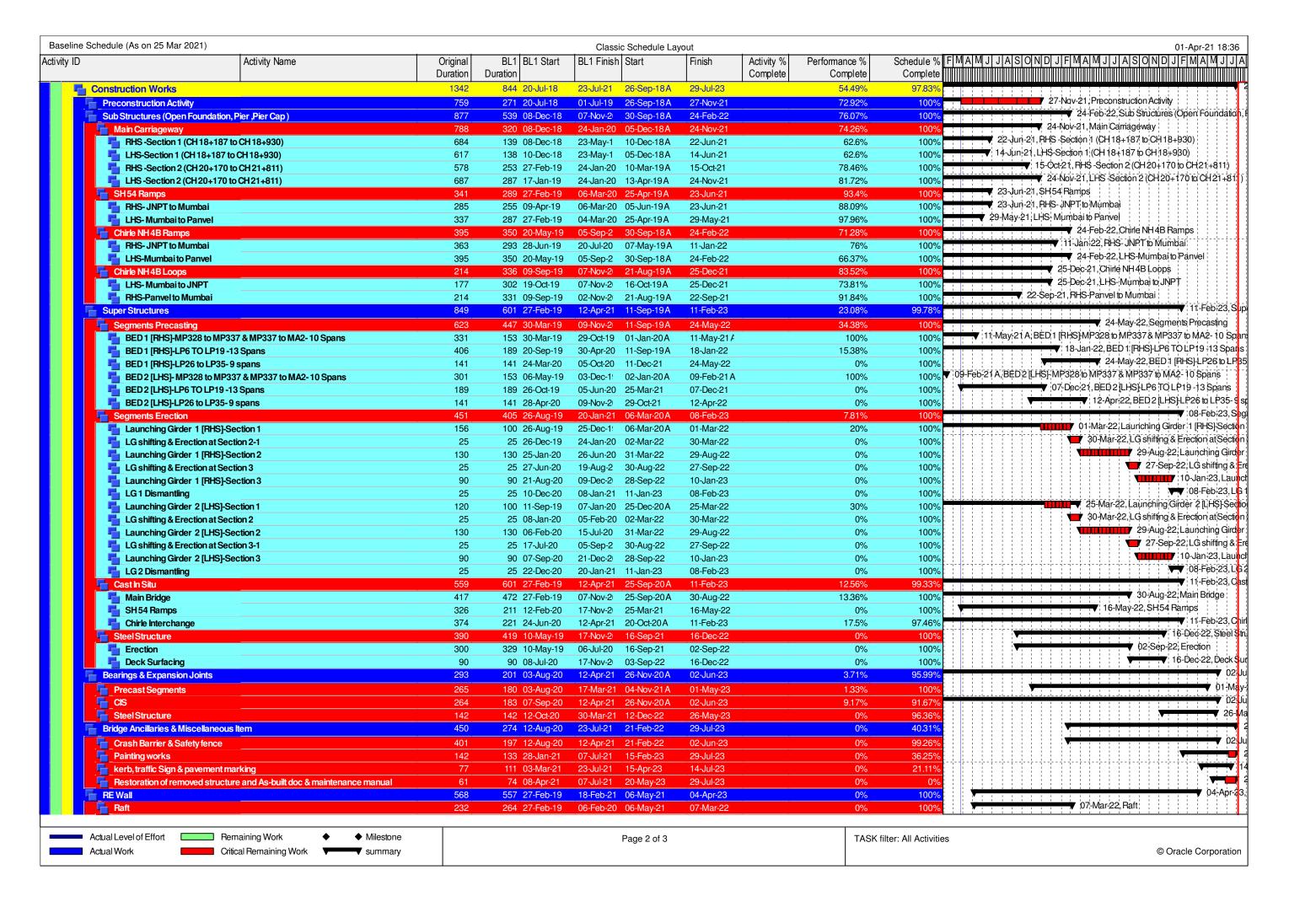
(MMRDA)

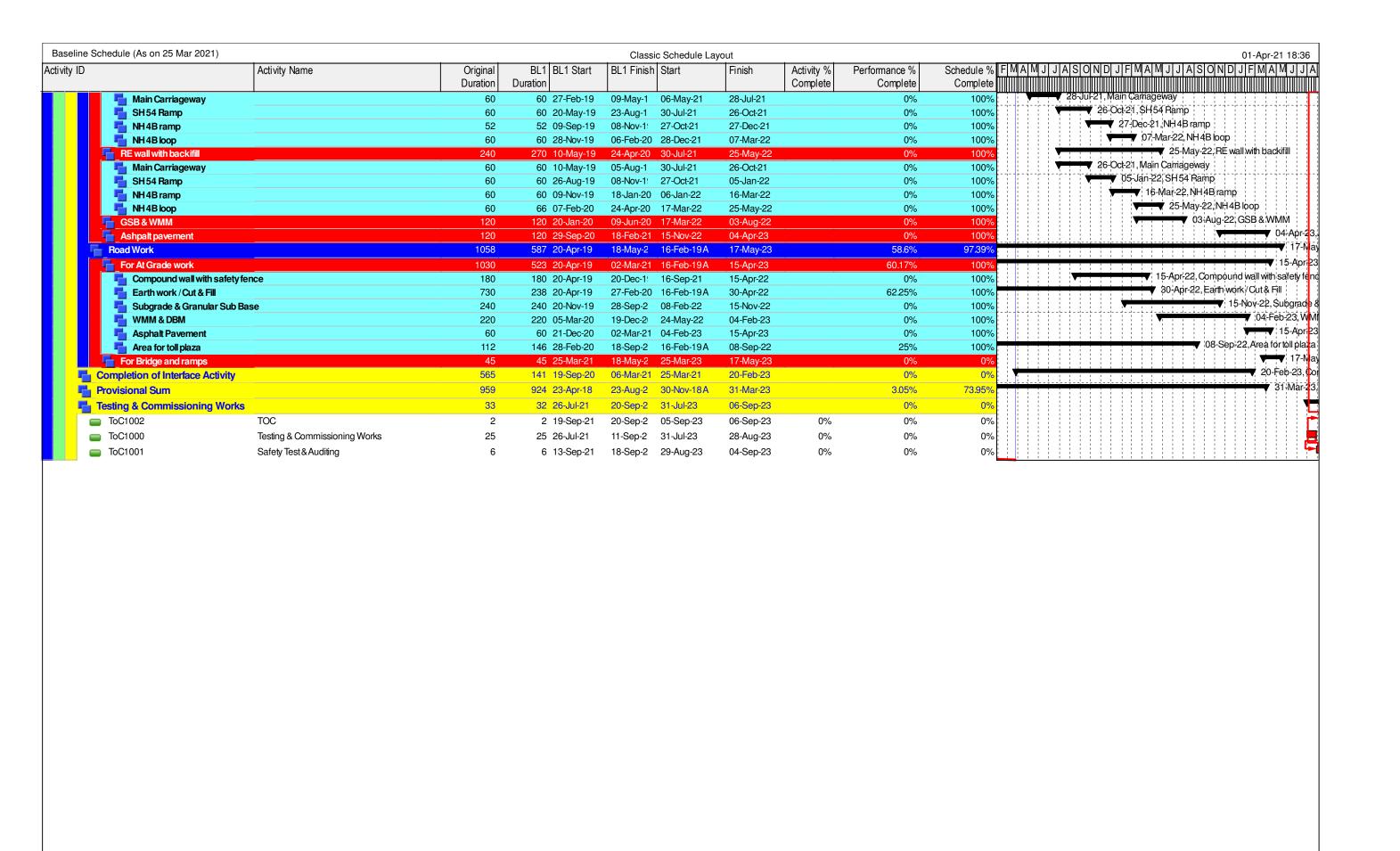
Remaining Work

% Complete

Mumbai Trans Harbour Link Project - Quarterly Progress Report No.16 (Jan-Mar 2021)
Attachment 8- Package-3's Construction Programme
Updated as on 25th March 2021







Mumbai Trans Harbour Link Project - Quarterly Progress Report No.16 (Jan-Mar 2021)
Attachment & Project Progress Photos
Attachment 9- Project Progress Photos





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



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

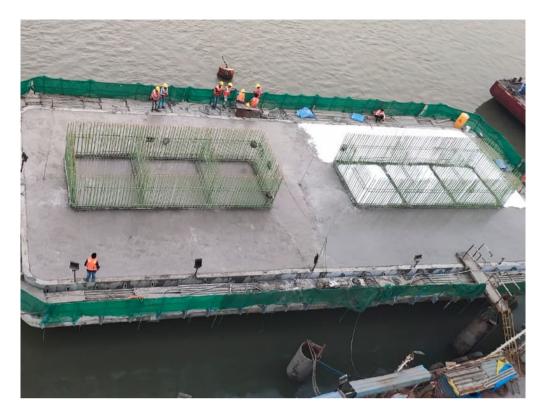


Photo No. 3: Casting of OSD Pile Cap at MP125 - Marine Section in progress

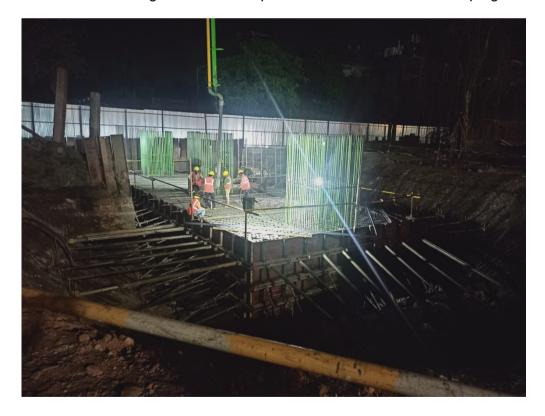


Photo No. 4: Casting of combined Pile cap at Interchange Section in progress



Photo No. 5: C2 Ramp Retaining wall in progress



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



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

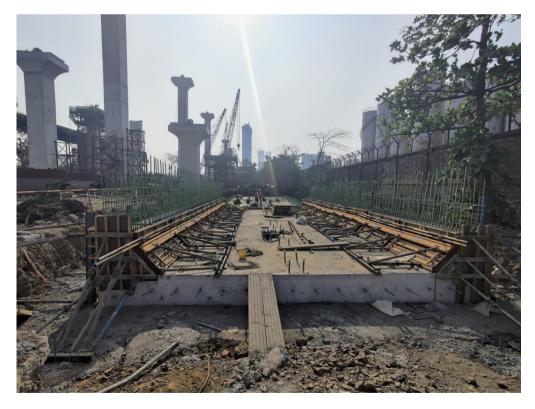


Photo No. 8: F2 Zone 2 Retaining Wall works in progress



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



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



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



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

Package 2 - Site Progress Photos



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



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



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

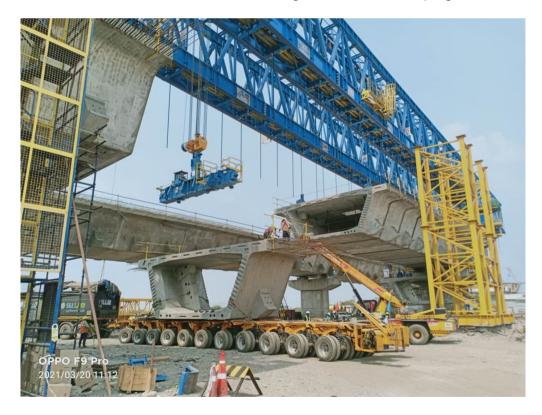


Photo No. 4: LG-2 Segment erection at Span MP 243-244 LHS in progress



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



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



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



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



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

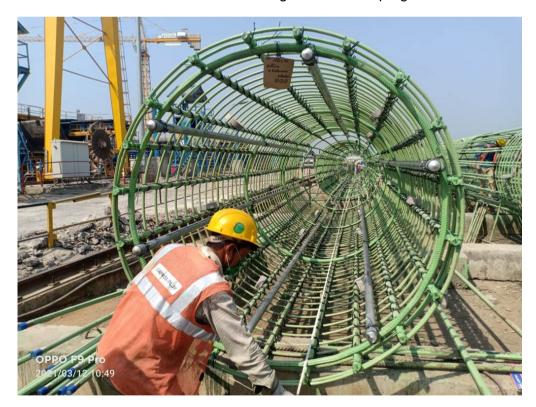


Photo No. 10: Pile reinforcement cage inspection at the Casting Yard in progress



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



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



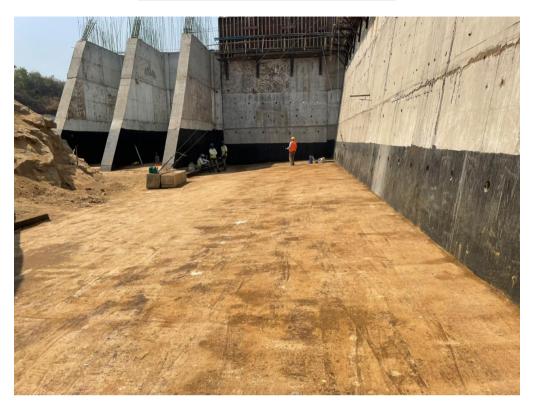


Photo No. 1: LMP & RMP A2 Abutment backfilling work in progress



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



Photo No. 3: LP35 pier shuttering works in progress



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



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



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



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



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



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



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



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



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