



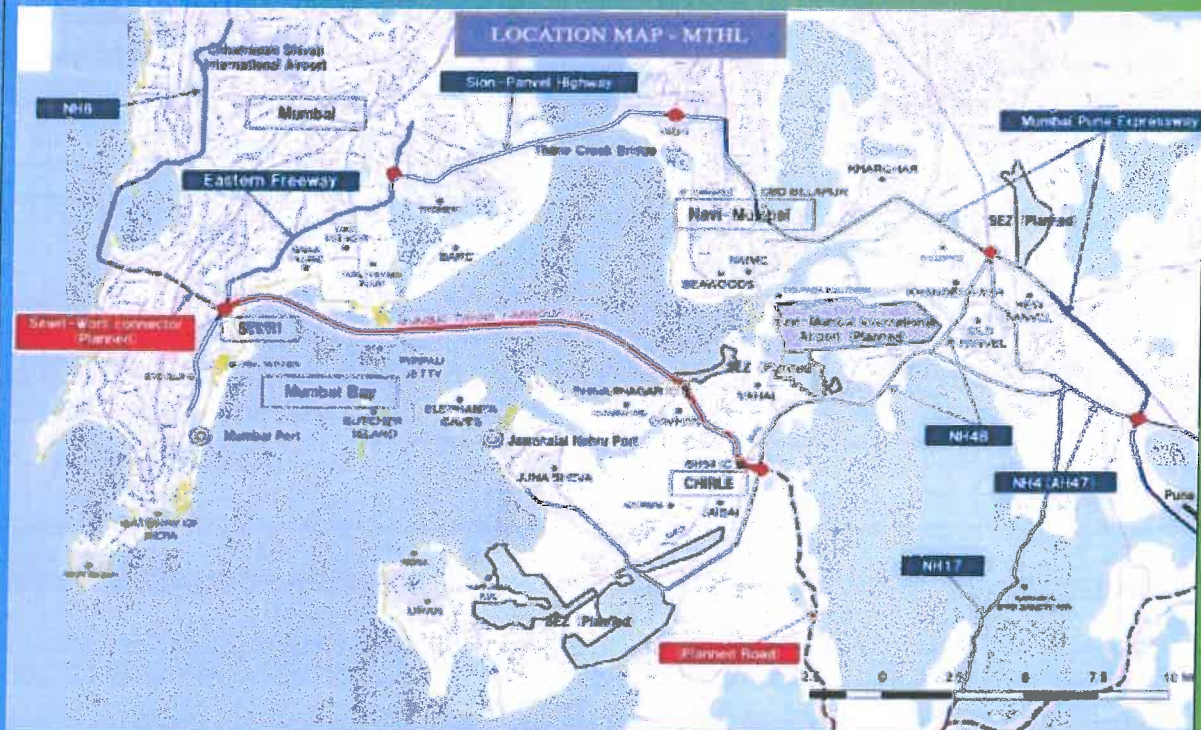
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MMRDA

Mumbai Metropolitan Region Development Authority

Mumbai Trans Harbour Link Project

Quarterly Progress Report - No. 22

(From 1st July 2022 to 30th Sep 2022)



Mumbai Trans Harbour Link Project**Quarterly Progress Report No. 22****1st July 2022 to 30th Sep 2022****Loan Agreement No. ID-P255 (Tranche-I) & ID-P283 (Tranche-II)****ORGANIZATION INFORMATION**

Borrower	Mumbai Metropolitan Region Development Authority	
	Person in Charge	Metropolitan Commissioner, MMRDA
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Executing Agency	Mumbai Trans Harbour Link Project Implementation Unit	
	Headed by:	Engineer-In-Chief Mumbai Trans Harbour Link Project Implementation Unit
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Details of JICA Loan

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



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R0	12/02/2021	Quarterly Progress Report No.15 (Oct-Dec 20)	Prashant B	Mr. Som Ghosh	Dr Robin Sham
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R0	11/11/2021	Quarterly Progress Report No.18 (Jul - Sep 21)	Prashant B	Mr. Som Ghosh	Dr Robin Sham
R0	17/01/2022	Quarterly Progress Report No.19 (Oct-Dec 21)	Prashant B	Mr. Som Ghosh	Dr Robin Sham
R0	22/04/2022	Quarterly Progress Report No.20 (Jan - Mar 22)	Prashant B	Mr. Som Ghosh	Dr Robin Sham
R0	12/07/2022	Quarterly Progress Report No.21 (Apr-Jun 22)	Prashant B	Mr. Som Ghosh	Dr Robin Sham
R0	18/10/2022	Quarterly Progress Report No.22 (Jul-Sep 22)	Prashant B	Mrs. Mayil. K	Dr Robin Sham



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1.0 PROJECT DESCRIPTION

1.1 Project Objective

Original:

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

Actual (P/R, PCR)

There is no change in the Project Objective.

1.2 Necessity of the Project

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

Benefits from MTHL Project

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



Necessity of the Project

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

an urgent requirement for broad development in Mumbai Metropolitan Region.

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

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

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

Actual (P/R, PCR)

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



1.3 Rationale of the Project Design

- Timing, Scale, Technology of the Project:

Demand Analysis

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

Table 1.3.1 Demand Projections Over the Period

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

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

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

Design Parameters / Overall Design

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

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

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

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

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

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

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

Traffic management System

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

Actual (P/R, PCR)

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



2.0 PROJECT IMPLEMENTATION

2.1 Project Scope

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

Table 2.1.1 Comparison of Original and Actual location

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

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



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



2.2 Implementation Schedule

2.2.1 The Original Implementation Schedule

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

Items	Original	Status (P/R and PCR) as on 30 th Sep 2022
1) Completion of Land Acquisition and Resettlement	Mar 2019	Dec 2022
2) Consulting Services		
a) Selection of Consultant	May – Dec 2016	May – Dec 2016
b) Consultancy Works	Dec 2016 – Sep 2024	Dec 2016 – Sep 2024
3) Selection of Contractor		
Package-1, Package-2 & Package-3 (Civil)		
a) Pre-Qualification Process	May – Dec 2016	May – Dec 2016
b) Main Bidding	Jan– Dec 2017	Jan – Dec 2017
c) JICA's Concurrence of Contract	Feb-2018	Feb-2018
Package-4 (ITS)		
a) Pre-Qualification Process	Single Stage Bidding as concurred by JICA	
b) Main Bidding	June 2019 – Sep 2020	Jan 2021 – Dec 2021
4) Civil Construction		
Package-1 and Package-2	Mar 2018 – Sep 2022	Mar 2018–Sep 2023 (Extended)
Package-3	Mar 2018 – Sep 2021	Mar 2018 – Mar 2023 (Extended)
Package-4	Oct 2020 – Sep 2022	June 2022 – Aug 2023
5) Defect Liability Period		
Package-1 and Package-2	Oct 2022 – Sep 2024	Oct 2023 – Sep 2025
Package-3	Oct 2021 – Sep 2023	Apr 2023 – Mar 2025
Package-4	Oct 2022 – Sep 2024	Sep 2023 – Aug 2025
6) Commencement of Toll Collection	Sep 2022	Oct 2023
7) Selection of O&M Organization	Oct 2020 – Sep 2021	Oct 2022 – Sep 2023

Attachment 6, 7 & 8: Package wise construction schedules (progress) updated at the end of 2nd Quarter (July – Aug - Sep 2022).

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

(P/R and PCR)

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

2.3 Project Cost

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

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

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

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

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

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

3. Physical Contingency: 10%

4. Base Year for Cost Estimation: Dec 2018

* Base Cost for Land Acquisition considered in the year 2016 was INR 9,062,669,696.

The base cost has been revised to INR 11,293 million considering Price Escalation and 10% Physical Contingency.



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

Cost Breakdown	Foreign Currency Portion			Local Currency Portion			Total		
	Total (JPY mil)	JICA Portion (JPY mil)	Others (JPY mil)	Total (Rs. mil)	JICA Portion (Rs. mil)	Others (Rs. mil)	Total (JPY mil)	JICA Portion (JPY mil)	Others (JPY mil)
Package-1	30,848	30,848	-	37,634	37,634		89,000	89,000	
Package-2	23,624	23,624	-	23,422	23,422		59,801	59,801	
Package-3	633	633	-	6,601	6,601		10,664	10,664	
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		1,262	1,262	
Land Acquisition*	-			7,601		7,601	11,933		11,933
Administration Cost	-			3,112		3,112	4,886		4,886
GST	-			15,495		15,495	24,328		24,328
Import Tax	-			-			-		-
Interest during construction	-			154		155	242		242
Front End Fee	-			1,869		1,869	2,935		2,935
Total	55,358	55,358	-	96,451	68,022	28,428	205,365	160,733	44,632

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

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

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

3. Physical Contingency: 10%

4. Base Year for Cost Estimation: Dec 2018

* Base Cost for Land Acquisition considered in the year 2016 was INR 9,062,669,696.

The base cost has been revised to INR 11,293 million considering Price Escalation and 10% Physical Contingency.



2.3.1.b Comparison of Originally Planned and Actually Incurred Cost by YEAR**Table 2.3.1.b.(i) Originally Planned Cost by YEAR (All Figures are in JPY mil)**

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

Table 2.3.1.b.(ii) Actually Incurred Cost by YEAR (All Figures are in JPY mil)

Cost Breakdown	Total	JICA Portion				Others (MMRDA Portion)
		Tranche I	Tranche II	Tranche III	Sub Total	
FY 2017	13,738	9,232	-	-	9,232	4,506
FY 2018	26,813	21,695	-	-	21,695	5,118
FY 2019	40,410	31,014	-	-	31,014	9,396
FY 2020	31,822	23,885	-	-	23,885	7,937
FY 2021	54,057	43,284	-	-	43,284	10,773
FY 2022	38524	12,864	18758		31,622	6,902
FY 2023						
FY 2024						
Total	205,364	141,974	18,758	-	160,732	44,632

(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 Mar.

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

(P/R and PCR)

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



2.4 Organization for Implementation

2.4.1 Executing Agency

Original:

Executing Agency

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

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

Organization's Role

To construct, execute, carryout, improve, work, develop, administer, manage, control or maintain in MMR all types of roads, highways, express routes, paths, streets, bridges, sideways, tunnels and other infrastructure, works and conveniences, approach road, etc.

Under the Project, MMRDA is responsible for all the tendering process including employment of consultants, as well as for the construction process.

Project Implementation Unit (PIU)

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

Procurement

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

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

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

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



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

2.4.2.1 Procurement & Consultant

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

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



2.4.2.2 Performance

Consultant's Progress:

July 2022:

- 1) GC scrutinized & certified the following invoices claimed by the Contractors:
 - i) Package-1: IPC-52 and 53 20% Detailed Verification and IPC-55 80% Ad-hoc.
 - ii) Package-2: IPC-50 20% Detailed Verification and IPC-51 80% Ad-hoc.
 - iii) Package-3: IPC-46 20% Detailed Verification and IPC-47 80% Ad-hoc.
 - iv) Package-4: The Contractor started the Geotechnical Survey Works at the Gavhan location, and the design/ drawings phase has been begun since June 2022.
- 2) GC/Employer didn't submit any reimbursement claim in July 2022.

August 2022:

- 1) GC scrutinized & certified the following invoices claimed by the Contractors:
 - i) Package-1: IPC-54 & 55 20% Detailed Verification and IPC-56 & 57 80% Ad-hoc.
 - ii) Package-2: IPC-51 20% Detailed Verification and IPC-52 80% Ad-hoc.
 - iii) Package-3: IPC-47 20% Detailed Verification and IPC-48 80% Ad-hoc.
 - iv) Package-4: Contract was signed on 4th Aug 2022.
- 2) GC has prepared and submitted a total reimbursement claim of 10717.45 million JPY to MMRDA / JICA in Aug 2022.(Please refer Annexure-1)

September 2022:

- 1) GC scrutinized & certified the following invoices claimed by the Contractors:
 - i) Package-1: IPC-56 & 57 20% Detailed Verification and IPC-58 80% Ad-hoc.
 - ii) Package-2: IPC-52 & 53 20% Detailed Verification and IPC-53 80% Ad-hoc.
 - iii) Package-3: IPC-48 20% Detailed Verification.
- 2) GC has prepared and submitted a total reimbursement claim of 8194.45 million JPY to MMRDA / JICA in Sep 2022. (Please refer Annexure-2)
- 3) 100% of the Technical Design Modules across all the 3 Packages have been given "NONO" by the GC.
- 4) Approximately 99.95% of the Construction (GFC – Good For Construction) Design Modules across all the 3 Packages have been given "NONO" by the GC.

Package-1 – 100%, Package-2 – 99.95%, Package-3 -100%



Contractor's Progress:**Package-1 Physical Progress till 30th Sep 2022**

S. No	Activity	Total Scope	Unit	Cumulative Achieved Works	% of Work done Against the Total Scope	Remarks
1	Permanent Bridge Works - Land/ Interchange Zone					
1.1	Piles	523	No.	523	100.00%	
1.2	Pile Caps	158	No.	142	89.87%	
1.3	Piers	228	No.	207	90.79%	
1.4	Pier Caps	228	No.	199	87.28%	
2	Permanent Bridge Works - Intertidal Zone					
2.1	Piles	312	No.	312	100%	
2.2	Pile Caps	75	No.	75	100.00%	
2.3	Piers	146	No.	146	100.00%	
2.4	Pier Caps	146	No.	146	100.00%	
3	Permanent Bridge Works - Marine Zone					
3.1	Piles	403	No.	403	100%	
3.2	Pile Caps	80	No.	80	100.00%	
3.3	Piers	162	No.	140	86.42%	
3.4	Pier Caps	162	No.	144	88.89%	
4	Permanent Bridge Works - Total					
4.1	Piles	1238	No.	1238	100%	
4.2	Pile Caps	313	No.	297	94.89%	
4.3	Piers	536	No.	493	91.98%	
4.4	Pier Caps	536	No.	489	91.23%	
5	Precast Segments					
5.1	Segment Casting	6713	No.	5536	82.47%	
5.2	Segment (Span) Erection+ Cast-in-Situ Slab	478	No.	321	67.15%	
6	OSD Structural Steel					
6.1	Fabrication	53703	MT	53703	100%	
6.2	Assembly (Large Blocks)	53703	MT	23330	43.44%	
6.3	OSD Span Erection	38	No.	10	26.32%	
7	Crash Barrier					
7.1	Crash Barrier - Median	20405	Rmt	2340	11.47%	
7.2	Crash Barrier - Outer	31077	Rmt	501	1.61%	

Package-2 Physical Progress till 30th Sep 2022

S. No	Activity	Total Scope	Unit	Cumulative Achieved Works	% of Work done Against the Total Scope	Remarks
1	Permanent Bridge Works - Land/ Interchange Zone					
1.1	Open Foundation	113	No.	113	100%	
1.2	Piers	119	No.	119	100%	
1.3	Pier Caps	105	No.	105	100%	
1.4	Portal Beams- Land	6	No.	6	100%	
1.5	Pier Head Segments -Land	42	No.	42	100%	
2	Permanent Bridge Works - Intertidal & CRZ Zone					
2.1	Piles	280	No.	280	100%	
2.2	Pile Caps	72	No.	72	100%	
2.3	Piers	72	No.	72	100%	
2.4	Pier Caps	18	No.	18	100%	
2.5	Pier Head Segments	54	No.	54	100%	
3	Permanent Bridge Works - Marine Zone					
3.1	Piles	504	No.	504	100%	
3.2	Pile Caps	120	No.	118	98%	
3.3	Piers	120	No.	112.62	94%	
3.4	Pier Caps	48	No.	34	71%	
3.5	Pier Head Segments	74	No.	39	53%	
4	Permanent Bridge Works - Total					
4.1	Open Foundation	113	No.	113	100%	
4.2	Piles	784	No.	784	100%	
4.3	Pile Caps	192	No.	190	99%	
4.4	Piers	311	No.	303.62	98%	
4.5	Pier Caps/ Portal Beams	177	No.	163	92%	
4.6	Pier Head Segments	170	No.	135	79%	
5	Precast Segments					
5.1	Segment Casting	3142	No.	2576	82%	
5.2	Segment (Span) Erection + Cast-in-Situ Slabs	272	No.	171	63%	
6	OSD Structural Steel					
6.1	Fabrication	34726	MT	34,726	100%	
6.2	Assembly (for Large Block)	34726	MT	9863	28.40%	
6.3	OSD Span Erection	32	No.	7	22%	
7	Crash Barrier					
7.1	Crash Barrier - Median	15614	Rmt	720	4.61%	
7.2	Crash Barrier - Outer	20945	Rmt	30	0.14%	



Package-3 Physical Progress till 30th Sep 2022

S. No	Activity	Total Scope	Unit	Cumulative Achieved Works	% of Work done Against the Total Scope	Remarks
1	Permanent Bridge Works					
1.1	Open Foundations	221	No.	221	100.00%	
1.2	Piles	24	No.	24	100.00%	
1.3	Pile Caps	4	No.	4	100.00%	
1.4	Piers	242	No.	237	97.93%	
1.5	Pier Caps	189	No.	181	95.77%	
1.6	Segment Casting	834	No.	834	100.00%	
1.7	Segment (Span) Erection	59	No.	48	81.36%	
1.8	Cast in-situ Slab	108	No.	88	81.48%	
1.9	Rail Overbridge (ROB) Span	20	No.	7	35.00%	
1.10	Crash Barrier – Median	5500	Rmt	596	10.84%	
1.11	Crash Barrier - Outer	9000	Rmt	0	0%	

Package-4 (ITS) Progress till 30th Sep 2022

1. Letter of Acceptance (LOA) was issued to Strabag GmbH and Strabag AG JV on 5th May 2022. The Package-4 Contract was signed on 4th Aug 2022.
2. Preliminary design and drawings are submitted for Civil works, ITS & Electrical works for review and approval.
3. Safety, Quality, and Detailed works programme submitted for review and approval.
4. Request for Mobilization advance submitted.
5. The Contractor has commenced the Geotechnical Survey Works at Gavhan location.

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

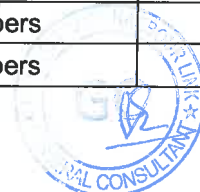


Health & Safety and Environment (HSE)

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

S No.	Description	Unit	Jul-Aug-Sep 2022	Cumulative
1	Average Daily Manpower (all Workmen & Staff)	Numbers	3,454	2,759
2	Man-Days Worked	Days	4,82,452	61,24,635
3	Man-Hours Worked	Hours	38,59,620	5,24,52,099
4	Accident-Free Man Hours	Hours	33,02,136	18,10,908
5	Fatal Accidents (Reportable)	Incidents (Nos.)	0	5
6	Fatality Cases.	Fatalities (FAT)	0	6
7	Lost Time Injury Incidents (Reportable)	Incidents (Nos.)	1	8
8	Lost Time Injury Cases (Persons Injured)	# Injured Persons	1	10
9	Restricted Work Medical Case	RWMC (#Incidents)	0	0
10	Medical Treatment Cases	MTC (#Incidents)	0	1
11	First Aid Cases.	FAC (#Cases)	22	301
12	Near Miss Incidents.	NMI (#Incidents)	7	123
13	Dangerous Occurrences.	DO (#Numbers)	1	5
14	Reportable Sick Cases (Succumbed due Covid)	Sick (#Persons)	0	2
15	Man-Hours Lost	Hours	1,048	2,96,576
16	Man-Days Lost	Days	131	37,081
17	Reportable Incident Frequency Rate / Million Man Hours	# (FAT+ Injuries)/MMH	0.74	0.31
18	Reportable Incident Severity Rate / Million Man Hours	Days Lost/MMHr	106.91	706.95
19	Total Injury Incident Frequency Rate / 1M Man Hours	TIFR	0.74	0.32
20	Toolbox Talks	Sessions	14,173	1,37,573
21	Safety Walk down Inspections (Joint & CFT)	Numbers	20	227
22	Routine Safety Inspections (Safety Team with Reports)	Numbers	96	4,034
23	Total Observations Raised (Safety)	Numbers	8,060	83,423
24	Health & Hygiene Inspections	Numbers	12	52
25	Total Observations Raised (Health & Hygiene)	Numbers	73	520
26	Training Sessions done for Offices & Sites	Sessions	451	3,077
27	Personnel Attended Training Sessions (Classroom & Site)	Persons	6,415	37,793
28	Contractor Safety Committee Meetings	Numbers	3	36
29	Critical Excavations	Numbers	6	86
30	Pre-employment Medical check-ups	Persons	2,716	40,370
31	Safety Inductions completed	Persons	2,716	42,257
32	Mock drills Conducted	Numbers	2	32
33	Contractor's Internal Audits Conducted	Numbers	4	49



Package-2 Safety Report

S No.	Description	Unit	Jul-Aug-Sep 2022	Cumulative
1	Average Daily Manpower (all Workmen & Staff)	Numbers	2,792	2,075
2	Man-Days Worked	Days	2,12,157	2,547,113
3	Man-Hours Worked	Hours	23,33,727	28,509,625
4	Accident-Free Man Hours	Hours	16,04,405	929,005
5	Fatal Accidents (Reportable)	Incidents (Nos.)	0	0
6	Fatality Cases.	Fatalities (FAT)	0	0
7	Lost Time Injury Incidents (Reportable)	Incidents (Nos.)	2	11
8	Lost Time Injury Cases (Persons Injured)	# Injured Persons	2	11
9	Restricted Work Medical Case	RWMC (#Incidents)	0	6
10	Medical Treatment Cases	MTC (#Incidents)	0	12
11	First Aid Cases.	FAC (#Cases)	4	175
12	Near Miss Incidents.	NMI (#Incidents)	50	350
13	Dangerous Occurrences.	DO (#Numbers)	0	15
14	Reportable Sick Cases (Succumbed due Covid)	Sick (#Persons)	0	3
15	Man-Hours Lost	Hours	616	5,648
16	Man-Days Lost	Days	77	706
17	Reportable Incident Frequency Rate / Million Man Hours	# (FAT+ Injuries)/MMH	2.51	0.386
18	Reportable Incident Severity Rate / Million Man Hours	Days Lost/MMHr	92	25
19	Total Injury Incident Frequency Rate / 1M Man Hours	TIFR	2.51	1.017
20	Toolbox Talks	Sessions	1,182	11,894
21	Safety Walk down Inspections (Joint & CFT)	Numbers	11	172
22	Routine Safety Inspections (Safety Team with Reports)	Numbers	324	1,596
23	Total Observations Raised (Safety)	Numbers	1,800	22,109
24	Health & Hygiene Inspections	Numbers	0	4
25	Total Observations Raised (Health & Hygiene)	Numbers	0	16
26	Training Sessions done for Offices & Sites	Sessions	145	1,187
27	Personnel Attended Training Sessions (Classroom & Site)	Persons	3,023	22,846
28	Contractor Safety Committee Meetings	Numbers	3	51
29	Critical Excavations	Numbers	0	0
30	Pre-employment Medical check-ups	Persons	886	16,917
31	Safety Inductions completed	Persons	918	17,252
32	Mock drills Conducted	Numbers	3	42
33	Contractor's Internal Audits Conducted	Numbers	0	0



Package-3 Safety Report

S No.	Description	Unit	Jul-Aug-Sep 2022	Cumulative
1	Average Daily Manpower (all Workmen & Staff)	Numbers	529	428
2	Man-Days Worked	Days	67,129	7,93,050
3	Man-Hours Worked	Hours	5,37,031	63,44,490
4	Accident-Free Man Hours	Hours	5,37,031	5,37,031
5	Fatal Accidents (Reportable)	Incidents (Nos.)	0	0
6	Fatality Cases.	Fatalities (FAT)	0	0
7	Lost Time Injury Incidents (Reportable)	Incidents (Nos.)	1	3
8	Lost Time Injury Cases (Persons Injured)	# Injured Persons	1	3
9	Restricted Work Medical Case	RWMC (#Incidents)	0	0
10	Medical Treatment Cases	MTC (#Incidents)	0	0
11	First Aid Cases.	FAC (#Cases)	9	124
12	Near Miss Incidents.	NMI (#Incidents)	9	37
13	Dangerous Occurrences.	DO (#Numbers)	0	1
14	Reportable Sick Cases (Succumbed due Covid)	Sick (#Persons)	0	0
15	Man-Hours Lost	Hours	24	2,216
16	Man-Days Lost	Days	3	277
17	Reportable Incident Frequency Rate / Million Man Hours	# (FAT+ Injuries)/MMH	6	0.473
18	Reportable Incident Severity Rate / Million Man Hours	Days Lost/MMHr	19	44
19	Total Injury Incident Frequency Rate / 1M Man Hours	TIFR	6	0
20	Toolbox Talks	Sessions	552	8,190
21	Safety Walk down Inspections (Joint & CFT)	Numbers	12	181
22	Routine Safety Inspections (Safety Team with Reports)	Numbers	42	605
23	Total Observations Raised (Safety)	Numbers	541	771
24	Health & Hygiene Inspections	Numbers	6	8
25	Total Observations Raised (Health & Hygiene)	Numbers	31	43
26	Training Sessions done for Offices & Sites	Sessions	49	317
27	Personnel Attended Training Sessions (Classroom & Site)	Persons	827	1,008
28	Contractor Safety Committee Meetings	Numbers	3	47
29	Critical Excavations	Numbers	0	9
30	Pre-employment Medical check-ups	Persons	951	10,528
31	Safety Inductions completed	Persons	951	10,585
32	Mock drills Conducted	Numbers	3	41
33	Contractor's Internal Audits Conducted	Numbers	3	12



3.0 BENEFITS DERIVED FROM THE PROJECT (EFFECTIVENESS)

3.1 Operational and Physical Condition

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

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

3.2 Precautions (Measures to be adopted/ Points which require special attention)

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

<p>shall be secured by MMRDA.</p>	<p>and implementation of Flamingos and bird monitoring program for the MTHL project during the construction as well as the long-term monitoring after the construction.</p> <ul style="list-style-type: none"> • Rs 91.42 Crore has been transferred to Mangroves & Marine Biodiversity Foundation, Mumbai for the development & conservation of mangrove area and its afforestation. Such funds will be managed by the Mangrove Foundation of Maharashtra State. • As per the renewed CRZ clearance condition, IIT Mumbai has been appointed for the DPR study to develop a Mahul creek Effluent Treatment Plant (ETP). Rs 4.98 Crore was secured for IIT services. The Draft DPR has been reviewed and approved. • Proposal of extension for CRZ clearance submitted vide reference no MCZMA 2022/08/CR-246/3719 dated 4th Aug-2022. (Please refer Annexure-3)
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b. Required Permits

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

Table 3.2.2 Present Status of some Important Permits

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

Clearance Required	Approving Authority	Responsible Organization	Obtained by when	Remark /Status
Consent to Establish	Maharashtra Pollution Control Board	Contractor for respective Packages	Pkg-1-18.07.2018 Pkg-2-16.08.2018 Pkg-3-29.05.2019	

3.3 Environmental and Social Impacts

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

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
<p>1. Establishment of Effective Environmental and Social Cell in PIU</p> <p>MMRDA confirmed that Social Development Cell (2 Officers), Land Cell (3 Officers), and Environmental Cell (2 Officers) had been set up.</p>	<p>Cell is established by MMRDA (Annexure III, Organization chart)</p>
<p>2. Rehabilitation and Land Acquisition Issues</p> <p>a. Affected Area and Population</p> <p>Due to the Project, 1282 non-titleholders will be involuntary resettled, and 108.4379 ha of land will be handed over by CIDCO.</p>	<p>Sewri: Involuntary resettlement in Sewri section has been further validated by Social Development Cell of MMRDA. Out of 297 Project Affected Households (PAHs) have given consents as follows:</p> <ul style="list-style-type: none"> • 164 PAHs Kanjurmarg for residential • 25 PAHs Kanjurmarg for commercial • 7 PAHs (Satsangi Plot) Kanjurmarg for Commercial • 1 PAHs (commercial to residential) for Bhakti Park • 100 PAHs HDIL Kurla for residential <p>Navi Mumbai: CIDCO has been finalizing the land acquisition closely monitored by Land Cell of MMRDA.</p> <p>CIDCO has possessed 106.3542 ha of land and handed over to MMRDA, except private land of 2.0837 ha.</p> <p>0.3937 ha land is under acquisition out of balance 2.0837 ha land. CIDCO is planning to acquire the balance ROW land of with the help of Collector, Raigad.</p>

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
<p>b. Entitlement Policy</p> <p>MMRDA prepared the entitlement matrix for resettlement of non-title holders in Sewri, which meets the Resettlement and Rehabilitation Policy for Mumbai Urban Transportation Project (1997, amended in 2000) and JICA guidelines for Environmental and social considerations (2010) ("Guidelines") (Attachment 2-5).</p>	<p>There have been no changes during the enforcement. As per the Attachment 2-5 of JICA MoD, MMRDA has committed to enforce the agreed/ approved policy.</p>
<p>c. Compensation to Project affected Fishermen</p> <p>Detailed baseline survey will be undertaken by MMRDA in order to identify fishermen who are affected by the Project. Based on the result of the baseline survey, MMRDA will compensate them in accordance with compensation policy prior to the construction. Monitoring will be conducted by MMRDA with assistance of the Consultant to gasp the exact impact during construction and operation phase.</p>	<p>Updated Attachments 2-8 and 2-10 are enclosed in the report.</p>
<p>d. Implementation Schedule</p> <p>The Implementation schedule for land acquisition, resettlement and rehabilitation is attached as per Attachment 2-10.</p>	<p>Updated Attachment 2-10 is enclosed in the report.</p>
<p>e. Grievance Redressal Mechanism</p> <p>Grievance Redressal Committee ("GRC") set under MMRDA will deal with grievances raised by PAPs in Sewri and fishermen to be affected by the Project. Any grievances raised by PAPs whose land is acquired by CIDCO shall be resolved by CIDCO.</p>	<p>Sewri: FLGRC (Field Level Grievance Redressal Committee) and SLGRC (Senior Level Grievance Redressal Committee) were set as per the RAP and in operation.</p> <p>Compensation Committee has been constituted to address the issues of Compensation to Lease Holders at Sewri.</p> <p>Fishermen: GRC for resolving grievances of the fisherfolk was set up as per the compensation policy and is in operation.</p>
<p>f. Internal Monitoring</p> <p>Internal Monitoring of the Resettlement</p>	

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
<p>Action Plan (RAP) implementation will be conducted by MMRDA in accordance with the RAP with necessary assistance of the consultant. RAP Internal Monitoring Form (Attachment 2-8) will be submitted to JICA on a quarterly basis as a part of PSR during the RAP implementation.</p>	<p>Internal Monitoring updates are mentioned in Attachment 2-8.</p>
<p>g. Qualitative Independent Evaluation</p> <p>An Independent Evaluation Agency will be hired by MMRDA for evaluation of RAP implementation. An external evaluation report will be submitted to MMRDA at mid-term and end-term. MMRDA would submit the evaluation report to JICA in a timely manner.</p>	<p>Updated Attachment 2-10 is enclosed in the report.</p>
<p>h. RAP Implementation Budget</p> <p>The amount of estimated resettlement and compensation budget is Rs.906.26 Cr MMRDA informed to the JICA Mission that RAP implementation cost would be borne by MMRDA and ensured sufficient and timely allocation of funds for smooth implementation.</p>	<p>As updated in MOD dated 03/09/2019 for MTHL- II, the base cost Budget towards RAP Implementation is updated as Rs 1129.3 Cr.</p>
<p>i. Environmental Management Plan (“EMP”)</p> <p>The mitigation measures against air pollution, waste, noise, and water pollution etc. shall be taken during construction and operation phase. Mitigation measures such as installation of noise barrier, appropriate waste management, etc. have been prepared by MMRDA. The mitigation measures are listed in the EMP matrix. (Attachment 2-1). During the detailed design stage, MMRDA, with assistance of the Consultant, will update the EMP, as necessary.</p>	<p>EMP will be updated, if required, in due course of construction activities/progress.</p>
<p>j. Environmental Monitoring Plan (“EMoP”)</p>	

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
<p>MMRDA takes overall responsibility for implementation of EMoP. During construction, environmental monitoring will be carried out by contractors under supervision by Construction Supervision consultant. The result shall be reported to the JICA India Office on a quarterly basis as a part of Progress Status Report (PSR) by filling in the Reporting Form of Environmental Monitoring Result. (Attachment 2-4). After completion of the construction, EMoP shall be implemented by MMRDA, and the results shall be submitted to the JICA India Office semi-annually until two years after completion of construction. The required amount of estimated environmental monitoring budget is borne by MMRDA.</p>	<p>Environmental Monitoring Plan with the package wise budgeted cost is reported in Attachment 2-3. Environmental Monitoring Results during the construction phase are reported in Attachment 2-4.</p>
<p>k. Long Term Bird Monitoring</p> <p>MMRDA committed to conduct the long-term monitoring of birds and its habitat in Sewri mudflats with the assistance of hired bird expert. During the long-term monitoring, MMRDA will share information and receive advice from external experts including the one from NGOs and civil society.</p>	<ul style="list-style-type: none"> • MMRDA has entrusted the work of bird monitoring and implementation of Flamingos and birds related mitigation measures & bird monitoring program to Mangrove and Marine Biodiversity Foundation. • Rs. 31.92 Crore deposited to Mangrove foundation, Mumbai for periodical disbursement to BNHS.

3.4 Qualitative and Quantitative Data of Monitoring Indicators

Operation and Effect Indicator EIRR and/ or FIRR

Supporting data for Computing EIRR and/ or FIRR

Indicators	Original (Year 2015)	Target (Year 2024) 2 Years After Commercial Operation
Average Annual Daily Traffic (PCU/ day)	-	47,400
Daily Average Travel Time (min) * 1	61 min	15.8 min

Indicators	Original (Year 2015)	Target (Year 2024) 2 Years After Commercial Operation
Number of Users (Persons/ year) * 2	-	46,077,504
Cargo Volume (tons/ year) * 3	-	13,511,759

*1 Section on Sewri – Chirle

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

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

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

3.5 Monitoring Plan for the indicators

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

Original: (P/M and PCR)

Monitoring Organization

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

Submission of QPR and PCR

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

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

Project, in the form of Project Status Report (PSR) attached hereto as per **Annex I**.

Actual: (P/R and PCR)

Monitoring Organization

PIU for MTHL has been established for monitoring the Project.

Submission of QPR and PCR

This QPR No. 22 is submitted for the period of 1st July to 30th Sep 2022.

3.6 Achievement of the Project Objective

(PCR)

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

4.1 O&M and Management

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

Original: (P/M)

Operation & Maintenance, Toll Management and ITS

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

Actual: (PCR)

4.2 O&M Cost and Budget

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

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



5.0 EVALUATION

5.1 JICA and Borrower / Executing Agency performance

JICA:

(PCR)

Borrower/ Executing Agency:

(PCR)

5.2 Overall Evaluation

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

(PCR)

5.3 Lessons Learnt and Recommendations

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

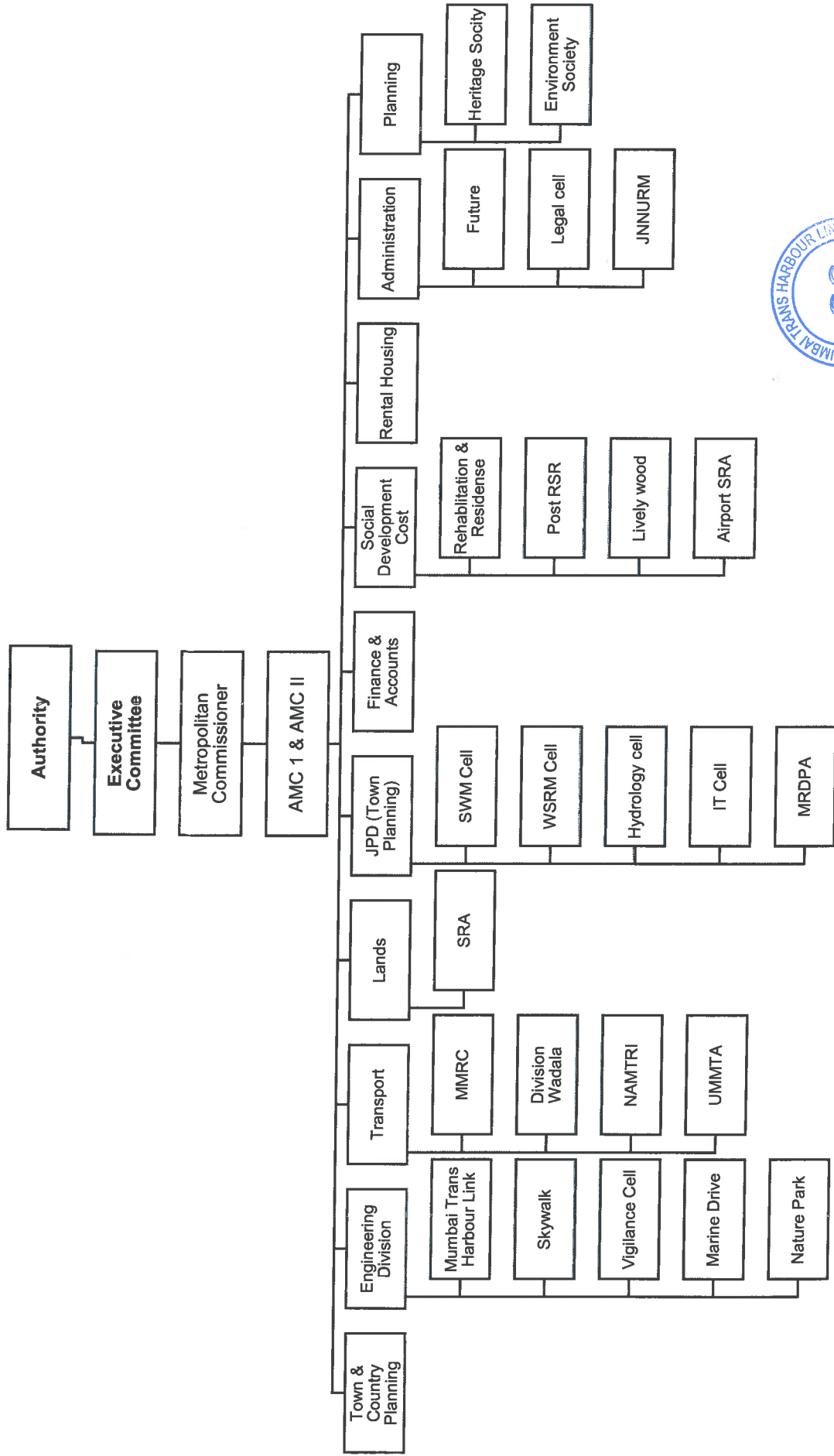
(PCR)



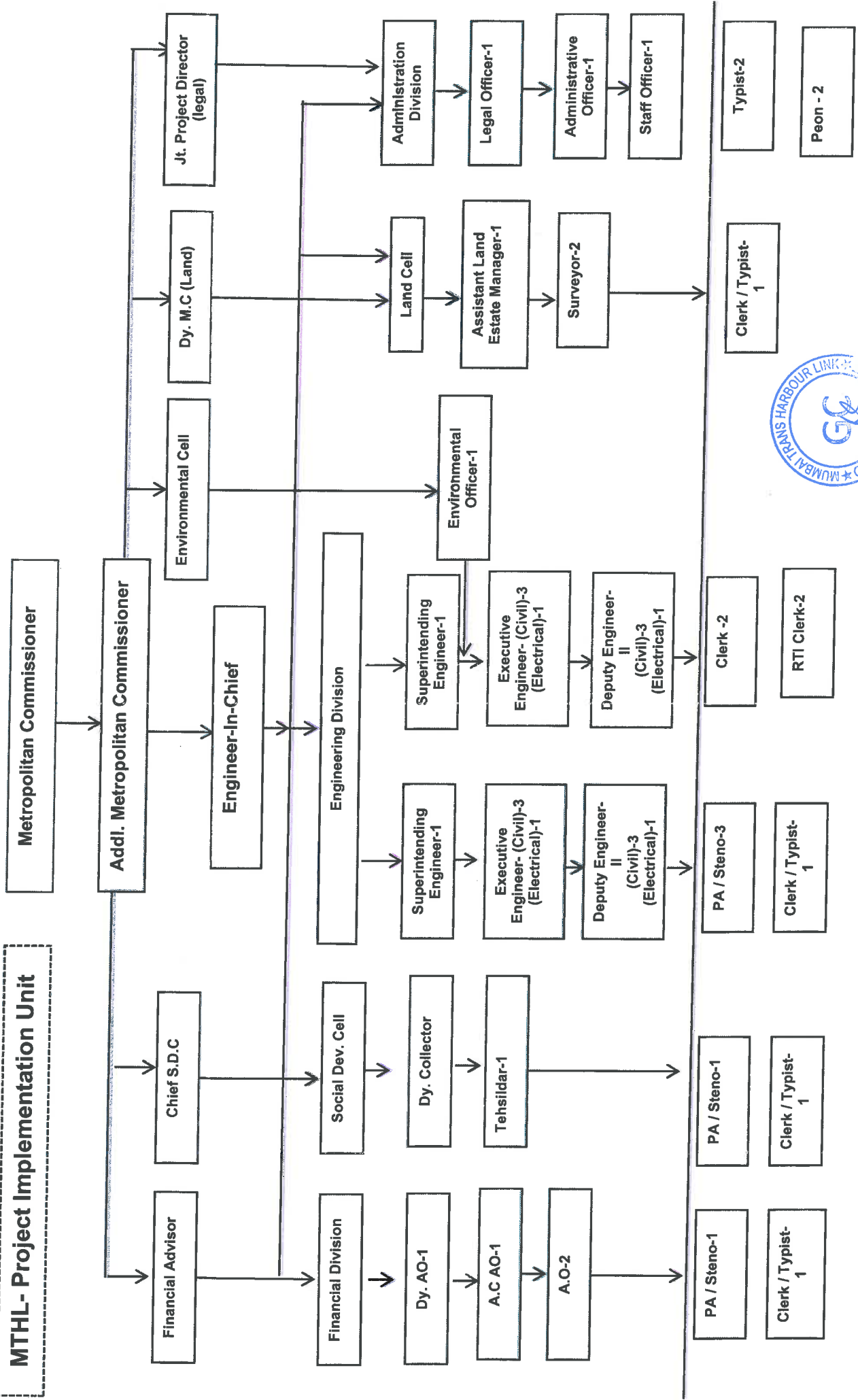
Attachment 1- MMRDA & PIU Organization Chart



MMRDA Organization chart



MTHL- Project Implementation Unit



Attachment 2- Environmental & Social Impacts

Attachment 2-3 – Envi. Monitoring Plan with Package-wise Estimated Cost

Attachment 2-4 – Environmental Monitoring Result Reporting Form

Attachment 2-6 – MTHL Land Acquisition Status

Attachment 2-8 – RAP Internal Monitoring Form

Attachment 2-10 – Schedule of the RAP Implementation



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



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



Monitoring Period -July to Sept 2022

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

1. Environmental Monitoring during Construction for 4.5 years

Area	No.	Item	Parameter	Location	Frequency a year	Item and Stanadard	Monitoring Result			Remark - reasons why the data is exceeding standard - counter measures when the data is exceeding				
							Location 1- Pkg 1	Location 2	Location 3- Pkg 3					
Pollution	1	Air pollution	SO ₂ , NO ₂ , PM ₁₀ , PM _{2.5}	1. Sewri & Sewri bay area for package I	Quarterly monitoring is conducted at all locations.	National Ambient Air Quality Standards (NAAQS) (Standard for 24hrs: Industrial and Residential)	Sewri	Shivaji Nagar	Chirle	Remarks BDL- Below Detectable Limit				
				2. Nhava temporary bridge & casting yard in Gavhan for package II	4 Times / Year									
				3. Gavhan & Chirle for package III	From march -2019 onwards monitoring is conducted quarterly as per MOEF and CPCB norms									
					1. SO ₂ : 80µg/m ³						9.54	BDL	14	
					2. NO ₂ : 80µg/m ³						24.90	24	35	
					3. PM ₁₀ : 100µg/m ³						182.36	79	74	
			4. PM _{2.5} : 60µg/m ³	38.09	34	40								
			5.CO:02mg/m ³	1.20	1.4	0.71								
			6.VOCs	1.38	2.4	1.05								
	2	Water pollution	pH, BOD, DO, Turbidity and O&G	1. Sewri & Sewri bay area for package I	Quarterly	Marine water quality Standards – Class SW-IV Harbour Waters (MPCB)	Zone I	Zone II	Zone III/ Package-03					
				2. Nhava temporary bridge & casting yard in Gavhan for package II	4 Times / Year						1. pH : 6.5-9	7.5	7.5	Not applicable
				3. Gavhan & Chirle for package III	Not applicable						2. DO: 3 mg/l	4.8	6	Not applicable
											3. Turbidity: 30 NTU	11.3	16.3	Not applicable
											4. BOD: 5 mg/l	2.8	BDL	Not applicable
											5. O & G: 10 mg/l	BDL[DL=2]		Not applicable
			6.COD	21	12	Not applicable								
	3	Waste	Volume of waste soil, cutting tree and domestic garbage	1. Sewri & Sewri bay area for package I	Daily	Municipal Solid Waste Management Rules, 2013	37.86 Tonnes for 3 months	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	3103 m3 for 3 months	App. 2000 CuM Collected in jumbo bags and Disposed off in EBB Location	NA
				3. Gavhan & Chirle for package III	Once site clearing work/execution part of work start.						Generated cutting tree (ha) total		Tree cutting work completed and Half yearly report submitted to Client (April, 2022)	Both of forest and CIDCO area (234+75)= 309
											Generated domestic waste (t/month) total		3.5 T/quarter. It is disposed through CIDCO daily.	2.5 T for the quarter
					Confirmation of adequate disposal (visual survey)									
4	Soil Contamination/sedimentation	Heavy Metals & Oil & Grease	1. Sewri & Sewri bay area for package I	1. Muck: 1 Time / Year 2. Sediments: 4 Times / Year	Soil Pollution Standard in India (MOEF)	Sediment sample at Sewri	Muck Testing Done on September 2021 and Reports submitted to GC	Not applicable	Kindly check the letter No.Ref No. Mtlh/ P3/L&T/GC/LT/HSE-2226/2020 dated on 12.12.2020					
			2. Nhava temporary bridge & casting yard in Gavhan for package II							1. Cadmium: 0.01mg/l	BDL[DL=2]	BDL		
			3. Gavhan & Chirle for package III	*If any spillage/ leakage take place from chemical, fuel storage area. *One time grab sample to be collected during Bridge Construction *Pre & Post Monsoon at Storage area only						2. total cyanide : not detected	NA	<0.005		
										3. organic phosphorus: not detected	NA	8.5		
										4. lead: 0.01mg/l	7	0.17	Not applicable for 3 package-	
										5. chromium (VI): 0.05mg/l		BDL		
										6. arsenic: 0.01mg/l or 15mg/kg (agri-land soil)	BDL[DL=1]	BDL		
										7. total mercury: 0.005mg/l	BDL[DL=2]	BDL		
										8. alkyl mercury: not detected	Not detected			
										9. PCBs: not detected	Not detected	BDL		
		10. copper: 125mg/kg (only paddy field soil)	108											

Regarding soil contamination/sedimentation, some items shall be selected from the total



Monitoring Period -July to Sept 2022

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

1. Environmental Monitoring during Construction for 4.5 years

						11. dichloromethane: 0.02mg/l 12. carbon tetrachloride: 0.002mg/l 13. 1,2-dichloroethane: 0.004mg/l 14. 1,1-dichloroethylene: 0.02mg/l 15. cis-1,2-dichloroethylene: 0.04mg/l 16. 1,1,1-trichloroethane: 1mg/l 17. 1,1,2-trichloroethane: 0.006 mg/l 18. trichloroethylene: 0.03mg/l 19. tetrachloroethylene: 0.01mg/l 20. 1,3-dichloropropene: 0.002mg/l 21. thiuram: 0.006mg/l 22. simazine: 0.003mg/l 23. thiobencarb: 0.02mg/l 24. benzene: 0.01mg/l 25. selenium: 0.01mg/l	Not detected Not detected Not detected Not detected Not detected Not detected Not detected Not detected Not detected Not detected Not detected Not detected Not detected Not detected Not detected	BDL BDL BDL BDL BDL BDL BDL BDL BDL BDL BDL BDL BDL BDL BDL BDL	25 standards items during the Detailed Design. Only the selected items shall be reported to JICA, and the rest of items shall be deleted from this form.		
5	Noise and vibration	Ambient and road side noise (dB(A)L _{Aeq})	1. Sewri & Sewri bay area for package I	Fortnightly	Construction area Standard 85 dB(A) daytime (Japan standard) Not construction area : Ambient Noise Standard in India (dB(A) L _{Aeq})	Sewri (ST 200-500) (Industrial area)	Sea Section (ST5000-5500) Migratory Bird Area (no standard on sea section)	Shivaji Nagar (Commercial area)			
			2. Nhava temporary	2 Times / Year	Day time : 6-22 hr (continuous) dB(A)	NA	71.3	63.9	Noise monitoring is not carried out in Monsoon.		
			3. Gavhan & Chirle for package III	Fortnightly	Night time: 22-6 hr (continuous) dB(A) (only sea section)						
					Day time : 6-22 hr (10 min during 9-17 hrs) Night time: 22-6 hr (10 min 22-24 hr)						
					Note (standard values in Not construction area)						
					1. Industrial Area						
					Day Time: 75 (6-22hr) Night Time: 70 (22-6hr)						
					2. Commercial Area:						
					Day Time: 65 (6-22hr) Night Time: 55 (22-6hr)						
					Vibration (dB) shall be converted from mm/s to dB	1 Location Gavan area for package III	Half yearly	Construction area Standard 75 dB daytime (Japan standard) Not construction area : Vibration Standard (Japan Standard along the road)	Sewri (ST 200-500) (Industrial area)	Shivaji Nagar (Commercial area)	Chirle
					Day time : 6-22 hr (continuous)	Not applicable	Not Applicable	Not applicable			
					Night time: 22-6 hr (continuous)						
					Note (standard values in Not construction area)						
					1. Commercial /Industrial Area						
					Day Time: 70 (7-20hr)						
					Night Time: 65 (20-7hr)						
			Along MTHL alignment and mangrove replant area for Package I	Quarterly during the construction Period	Standard is not existing, but quantity and quality should not be worsen	Sewri side (ST500-5500)	Sea Section (ST5500-16000)	Shivaji Nagar side (app. ST16000-19000)			
			Along MTHL alignment and mangrove replant area for package II	4 Times / Year	1-1. Fauna-Flora (number of species and quantity)	Flora/Fauna list maintained for Referal		N/A			
		1. Monitoring of mudflat conditions including fauna-flora 2. Monitoring of Cutting Tree and replantation/translocation			(1) Number of species of bird	28					
					(2) Number of species of fish	21					
					(3) Estimated number of Flamingo						
					1-2: Mangrove density and community survey	Avicennia marina	not required				

Kindly check the letter No. Ref No. Mth/ P3/L&T/GC/LT/HSE-2226/2020 dated on 12.12.2020

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



1. Environmental Monitoring during Construction for 4.5 years

Category	No.	Topic	Description	Frequency	Monitoring Details			Remarks	
					Criteria for evaluation	Observed	Compliance		
Natural Environment	6	Protected Area	3. Monitoring of Mangrove Plantation area appointed by MoEF 4. Monitoring of sedimentation soil and ecological parameter (25 items on EIA main text Table 6.1.15 for soil and 7 items such as 1)Net primary productivity, 2)Chlorophyll-a, 3)Phosphate, 4)Nitrate, 5)Nitrite, 6)Particulate Organic Carbon, 7) SiO2)		(1) Number of species of mangrove	Dominant - Avicennia sp.	not required		
					(2) Density of mangrove (xx trees/10m x 10m)	EIA - Not disturbed.	not required		
					1-3: Benthos Survey	Flora, fauna, phytoplankton, zooplankton, Benthos	not required		
					(1) Number of species and quantity by species		not required		
					2-1: Cutting tree confirmation	1. Tree Cutting: 413 trees (Till September 2022) 2. Transplanting : 483 Trees (Till September 2022)	not required	Approved By Both CIDCO and Forest Dept (both Alibaug and Uran(regional office))	
					(1) Number of cutting tree and species	CRZ- Cost assigned to FD	not required		
					3-1: Mangrove survey in the replant area	GC to integrate FD and environmentalist	not required	Nil	
					(1) Number of species of mangrove	3	not required		
					(2) Density of mangrove (xx trees/10m x 10m)		not required		
					4. Ecological Parameter				
					(1) Net primary Productivity : <1,500 mgC/m3/day at surface	500			
					(2) Chlorophyll-a: <4mg/m3	4.5			
					(3) Phosphate: 0.1-90µg/l	4			
					(4) Nitrate: 1.0-500µg/l	6			
					(5) Nitrite: <125µg/l	1			
(6) Particulate Organic Carbon: 10-100mg/m3	1.38								
(7) SiO2: 10-5,000µg/l	30.02								
7	Hydrology	Flooding situation	Not applicable for Package I 2 Locations (CRZ at Sewri and Shivaji Nagar) for Package II	4 Times / Year	Criteria for evaluation Project activities and structures does not cause flooding and impacts on tidal conditions	Sewri	Shivaji Nagar		
					Monitoring of flooding situation	No Flooding	No flooding		
			Not applicable for Package III						
8	Topography and Geology	Conditions in embankment area	2 Locations (1. Embankment of Inter Change in Shivaji Nagar and 2 Cutting area at toll gate in Chirle)	4 times / year x 4.5 years	Criteria for evaluation Embankment shall be stabilized without any landslide and cracks	Shivaji Nagar	Shivaji Nagar Camp Site	Chirle	
					Monitoring of embankment			Rock filling activity is carried out as per agreement.	
9	Local conflict of interests	Construction worker's township	2 Locations (major camp site in Sewri and Shivaji Nagar)	4 times / year x 4.5 years	Criteria for evaluation Employment opportunity shall be provided fairly	Sewri Camp Site	Shivaji Nagar Camp Site	Chirle	
					Number of hired workers by community	680 workmen	125-150	75	
10	Infectious diseases such as HIV/AIDS	Number of infected patient	2 Locations (major camp site in Sewri and Shivaji Nagar)	4 times / year x 4.5 years	Criteria for evaluation Infection disease rate shall not be caused by the project	Sewri Camp Site	Shivaji Nagar Camp Site		
					Confirmation of health check record and inspect project site	Doctor on call checks site specific infections., minor and major incidents . 24x7 ambulance service , ERT team with trained first aiders available	Health Checks carried out but HIV/AIDS parameter is not there.	Regular Health check up is carried out by site Doctor.	
11	Labour Environment	Construction worker's conditions	2 Locations (major camp site in Sewri and Shivaji Nagar)	2 times / year x 4.5 years	Criteria for evaluation "Building And Other Construction Workers (Regulation of Employment and Conditions of Service) Act,1996", "The building and other construction worker's welfare cess Act, 1996" and international standards such as "IFC Performance Standard 2 Labor and Working Conditions"	Distribution of Safety kits to 225 Workers Medical Camp organised; wherein > 500 workers were consulted. 220 No. of Malaria tests carried out.	Shivaji Nagar Camp Site	Gavan Camp site	
					Site Visual Inspection	Weekly site inspection	Conforming with BOCW Act 1996	Conforming with BOCW Act 1996	
Other	12	Accident	Number of accidents	2 Locations (major camp site in Sewri and Shivaji Nagar)	4 times / year x 4.5 years	Criteria for evaluation Any accidents are not caused by construction	3 RLTI reported	Shivaji Nagar Camp Site	Chirle/Other area
						Number of recorded accident	3	NIL	Nil



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

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

Land acquired by MMRDA – 108.0442 ha

Land in possession of MMRDA – 106.3542 ha

Balance land acquisition – 0.3937 ha

Note: The acquisition of 0.3937 ha of ROW land is in progress and likely to complete by the end of December 2022.

ROW Land Required in ha (for Package- 2 & 3)	ROW land acquired by MMRDA In ha	ROW Land in possession of MMRDA in ha	Balance ROW to be handed over (Possession to be taken + Under acquisition)	Anticipated date for 100% ROW Land Acquisition	Remarks
108.4379	108.0442	106.3542	2.0837 (1.6900+0.3937)	31-12-2022	The payment status to the land owners is awaited from CIDCO. The same would be communicated to JICA on receipt of the same.



				Fisheries.
C4: Commercial and Artisanal Fisher-folks (Loss of Time and Increased Operating Costs)	Will be observed during the construction period	Will be observed during the construction period	---	Nil
C5: Fisher-folks with Loss due to Turbidity	Will be observed during the construction period	Will be observed during the construction period	----	Nil
C6: Fisher-folks with Damages due to Accidents	Will be observed during the construction period	Will be observed during the construction period	----	Nil

2.4 Land Acquisition / Transfer

Location	ROW Land Required in Ha.	ROW Land Acquired in Ha.	Balance ROW to be handed over	Remarks
Sewri (Package-1)	10.089	10.089	0	
Navi Mumbai (Package-2 & 3)	108.4379	108.0442	2.0837 (1.6900+0.3937)	Possession to be taken=1.6900ha Under Acquisition=0.3937ha
Total	118.5269	118.1332	2.0837	

3. Monitoring Results

3.1 Sewri Section

Activity	Indicator	Total Target	Progress till Last Quarter	Progress during reporting Quarter	Cumulative Progress till Current Quarter	Cumulative Achievement of Total Target (%)	Remarks, if Any
Resettlement	No. of Residential PAHs provided with Allotment	231	226	0	226	97%	



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
	Letters of Alternate Tenements						
	No. of Residential PAHs given possession of Alternate Tenements	231	226	0	226	97%	
	No. of Commercial/R+C PAPs provided with Allotment Letters of Alternate Shops/Tenements	66	62	0	62	92%	
	No. of Commercial R+C PAPs given possession of Alternate Shops/Tenements	66	62	0	62	92%	
	No. of Occupants of MbPT Leased Plots provided Compensation	6	6	0	6	100%	
	No. of Religious properties Relocated / Removed	6	6	0	6	100%	
	No. of Other Community properties Relocated / Removed	4	4	0	4	100%	



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 Structures in possession of MbPT Dismantled / Cleared	9	9	0	9	100%	
	No. of PAHs/PAPs provided Shifting Charges / Arrangement	297	0	0	0	0%	
Rehabilitation	No. of PAHs / PAPs identified for Livelihood Support in Post Resettlement Assessment						
	No. of PAHs / PAPs provided Livelihood Support under Program-I (to be identified)						
	No. of PAHs / PAPs provided Livelihood Support under Program-II (to be identified)						
	No. of PAHs / PAPs provided Livelihood Support under Program-III (to be identified)						
	No. of new enterprises started						



Activity	Indicator	Total Target	Progress till Last Quarter	Progress during reporting Quarter	Cumulative Progress till Current Quarter	Cumulative Achievement of Total Target (%)	Remarks, If Any
Grievance Redress	No. of Grievances Received by FLGRC	4					
	No. of Grievances Disposed by FLGRC	3	1	0	1	100%	
	No. of Grievances Received by SLGRC	1	0	0	0		
	No. of Grievances Disposed by SLGRC	0					
Post Resettlement Assistance	No. of CHSs Registration helped						
	No. of CHSs provided Tenements for Social Amenities						
	No. of CHSs' Maintenance Fund Invested						
	No. of CHSs' Office Bearers provided training						



SUMMARY OF FISHER FOLKS OF MTHL PROJECT (Influence Zone of 24 villages) Up to 30-09-2022						
Sr.No.	Village Name	Total number of forms Received	Total approved eligible family units			
			C1	C2	C3	Total
1	Bamandongri	273	1	1	28	30
2	Belapur	110	0	5	15	20
3	Belpada	1185	0	7	478	485
4	Diwale	455	12	201	52	265
5	Ganeshpuri	276	0	37	35	72
6	Gavhan	2162	0	14	1317	1331
7	Jasai	926	0	0	18	18
8	Jawale	51	0	1	0	1
9	Kombadbhuja	413	1	23	134	158
10	Kopar	994	2	5	228	235
11	Karave	178	0	44	67	111
12	Mahul	1062	129	77	604	809
13	Moha	475	22	25	134	181
14	Mora	818	0	102	375	477
15	Morave	539	14	21	88	123
16	Nhava	1646	0	32	307	339
17	Sarsole	266	0	30	83	113
18	Sewri	305	0	1	72	73
19	Shelghar	241	0	0	15	15
20	Shivajinagar	202	1	4	61	66
21	Trombay	1208	49	219	823	1091
22	Ulwe	218	1	3	14	18
23	Uran & Hanuman Koliwada	683	0	11	600	611
24	Vahal	411	0	2	1	3
Total		15097	232	865	5548	6645
Total applications						15097
Duplicate/Repeated Application						2428
Net Applications						12669
Approved applications						6645

Grievance Redressal Committee (GRC) for Fisher-folk Compensation

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



Implementation Schedule for Fisher-folks Compensation & Land Acquisition in Navi Mumbai

A. Implementation Schedule for Fisher-folks Compensation: -

Sr. No.	Task Designation	Approving authority	Start Date	Completion Date
1	Approval of fisherfolk's compensation Policy	Fisher-folks Compensation Committee (FCC)	08-10-2015	23-12-2015
2	Approval by MMRDA	MMRDA	10-12-2015	23-12-2015
3	Submission to JICA	MMRDA	--	04-01-2016
4	A detailed list of PAP and compensation plan	1. Detailed list of Fisher-folk PAP up to list 1 (1165 Nos) & 2 (1399 Nos) are finalized by the Fisheries Department. 2. From 2018, FEVC committee is the approval authority of PAF and approved C1-232 Nos. C2 - 368 Nos and C3-3481 Nos are approved.	23-12-2015	Up to 30-09-2022 1. Total up to date applications scrutinized = 12669 Nos. 2. Eligible = 6645 Nos. 3. Rejected = 6024 Nos.



Sr. No.	Task Designation	Approving authority	Start Date	Completion Date
5	Validation of compensation plan	Fisher-folks Compensation Committee (FCC)	23-12-2015	1. Approval to the Fisher-folk PAP list obtained from Fisheries Department for Fisherfolk from Sewri, Mahul & Trombay (Mumbai side) – 12th September 2017 and 20th November 2018 for C-2 & C3 Category only.
			23-12-2015	2. Approval to the Fisher-folk PAP list obtained from Fisheries Department for Fisherfolk of Navi Mumbai of C2 & C3 on 25th April 2018.
6	Approval of compensation plan	FCC	23-11-2015	28-12-2017
7	Approval by MMRDA	MMRDA	23-11-2015	09-03-2021



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

ROW Land Required in ha (for Package-2 & 3)	ROW Land Acquired by MMRDA in ha	ROW Land in possession of MMRDA in ha	Balance ROW to be handed over (Possession to be taken+ Under acquisition)	Anticipated date for 100% ROW Land Acquisition	Remarks
108.4379	108.0442	106.3542	2.0837 (1.6900+0.3937)	31-12-2022	The payment status to the land owners is awaited from CIDCO. The same would be communicated to JICA on receipt of the same.



Implementation Schedule for SIA (Sewri Section)

Task No.	Task Designation	Start Date	Completion / Forecast Date
1	Preparation of Final SIA		
1.1	MMRDA Approval	Oct 2015	Jan 2016
1.2	JICA Approval	Nov 2015	Jan 2016
1.3	Posting of project Information on MMRDA		
1.4	Translation and disclosure of entitlement policy in local language to all PAP's	Dec 2015	Jan 2016
2	LARP Implementation		
2.1	Grievance redress mechanism established	Aug 2016	Aug 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	Nov 2018	Nov 2020
2.5	Preparation and issue of allotment letters to PAPs	June 2018	Dec. 2022
2.6	Notice of PAPs for shifting (Sewri Section)	Dec 2018	Nov. 2021
2.7	Allotment of dwelling units to PAPs	Sep 2016	Dec. 2022
2.8	Shifting of PAPs to resettlement Colony	Dec 2018	Nov. 2021
2.9	Transfer of compensation/allowance/ assistance to PAPs	Dec 2018	Dec. 2022
2.10	Creation of Community Revolving fund (within 3 months post handing over)	April 2019	Sep 2022
2.11	Assessment of economic rehabilitation needs by individual household (within 6 months after handing over)	Sep 2019	Nov. 2022
2.12	Registration of Co-operative housing societies transfer of maintenance funds. (6 months period)	Dec 2019	Dec 2022
2.13	Signing of Civil Contract		Jan 2018
2.14	Notice of Civil works to proceed		Mar 2018
3	Monitoring & Evaluation		
3.1	Internal Monitoring- Monthly/ Quarterly	June 2016	July 2020
3.2	Independent Evaluation Mid-term and End term evaluation Mid Term End Term	May 2019 Nov 2019	June 2020 Nov 2022



Attachment 3- JICA's Concurrence Status



Status of JICA'S Concurrence

Sl. No.	Brief description	Procurement procedure	Bid Cost		JICA'S Concurrence on						Contract
			Local Currency (Cr Rs.)	Total (Cr Rs)	PQ Documents	PQ Evaluation	Bid Documents	Technical Evaluation	Financial Evaluation		
1.	Package-1 (CH 0+000 km to CH10+380 km)	ICB with PQ (2P)	7637.30	7637.30	JICA's Concurrence - 9th May 2016	JICA's Concurrence - 22nd Dec 2016	JICA's Concurrence - 4th Jan 2017	JICA's Concurrence - 12th Sep 2017	JICA's Concurrence - 12th Oct 2017	JICA's Concurrence - 15th Feb 2018	
2.	Package-2 (CH 10+380 km to CH18+187 km)	ICB with PQ (2P)	5612.61	5612.61	JICA's Concurrence - 9th May 2016	JICA's Concurrence - 22nd Dec 2016	JICA's Concurrence - 4th Jan 2017	JICA's Concurrence - 12th Sep 2017	JICA's Concurrence - 12th Oct 2017	JICA's Concurrence - 15th Feb 2018	
3.	Package-3 (CH18+187 to CH21+800)	ICB with PQ (2P)	1013.79	1013.79	JICA's Concurrence - 9th May 2016	JICA's Concurrence - 4th Jan 2017	JICA's Concurrence - 4th Jan 2017	JICA's Concurrence - 15th Sep 2017	JICA's Concurrence - 12th Oct 2017	JICA's Concurrence - 15th Feb 2018	
4.	Package-4 Intelligent Transport System	ICB with PQ (2P)	427.00	427.00	JICA's Concurrence - 23rd Aug 2019	NA	JICA's Concurrence - 24th Aug 2021	JICA's Concurrence - 15th Feb 2022	JICA's Concurrence - 21st Apr 2022	JICA's Concurrence - 13th Oct 2022	



Attachment 4- Project Procurement and Financial Status till 30th Sep 2022



PROJECT PROCUREMENT AND FINANCIAL STATUS TILL 30th SEP 2022

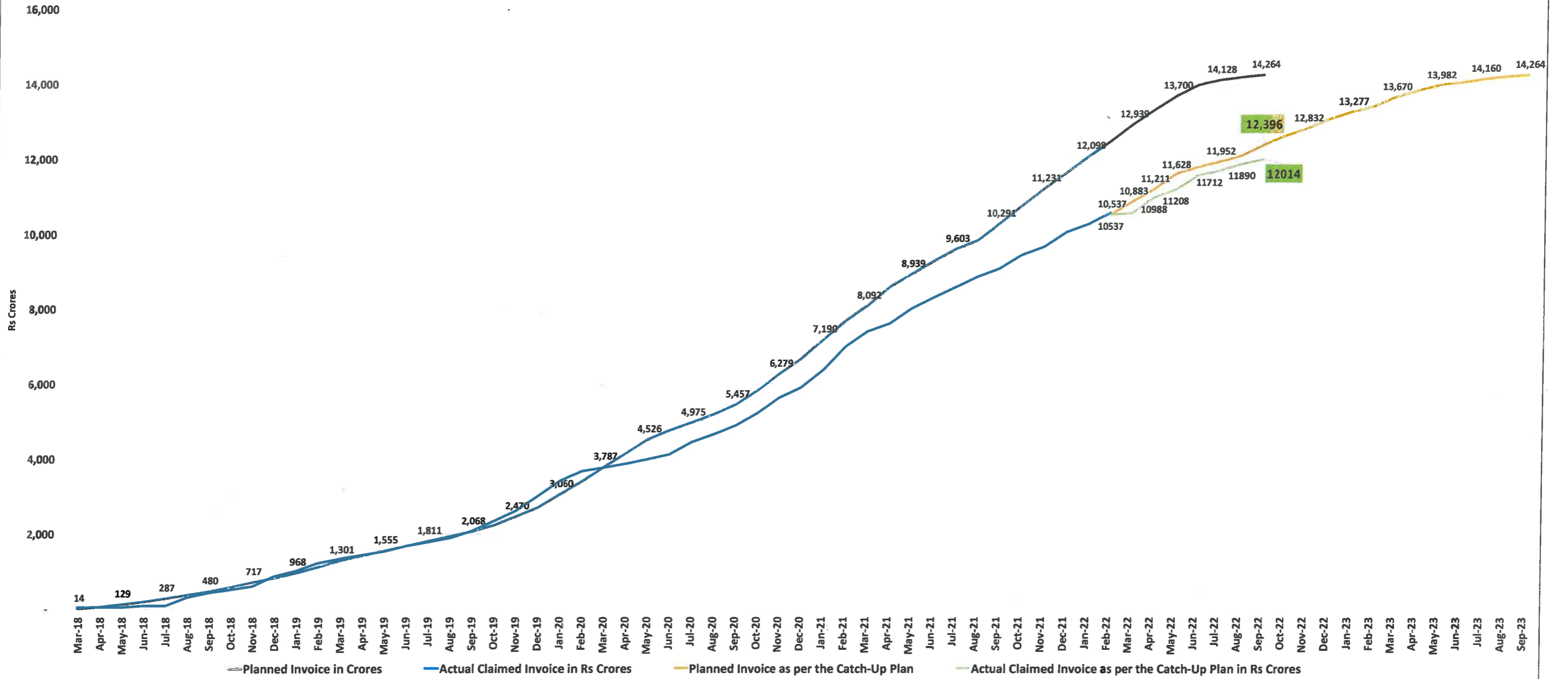
Type	Contract	Awarded or Estimated Value (in Rs. Crore)	Current Status	Contractors	Project Commencement Date	Stipulated Project Completion Date	Revised Project Completion Date After granting the Extension of Time (EOT)	% of Overall Works Progress (Design, Material Procurement and Construction) as per the Primavera Baseline Schedule Updated as of 25 th Sep 2022	% of Financial Progress till 30 th Sep 2022 (GC Certified) (Excluding Mobilization Advance, Price Adjustment and Work Variation)
CIVIL	Package-1 (CH 0+000 km to CH 10+380 km)	7637.30	Awarded	L&T-IHI Consortium	Mar 2018	21-Sep-2022	30-Sep-2023	85.87%	84.12%
	Package-2 (CH 10+380 km to CH18+187 km)	5612.61	Awarded	DAEWOO-TPL JV	Mar 2018	21-Sep-2022	27-Sep-2023	84.48%	82.51%
	Package-3 (CH18+187 to CH21+800)	1013.79	Awarded	L&T	Mar 2018	21-Sep-2021	03-Mar-2023	84.35%	87.74%
ITS	Package-4 Intelligent Transport System (ITS)	427.00	Awarded	Strabag GmbH JV	June 2022	Aug 2023	NA	NA	NA



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



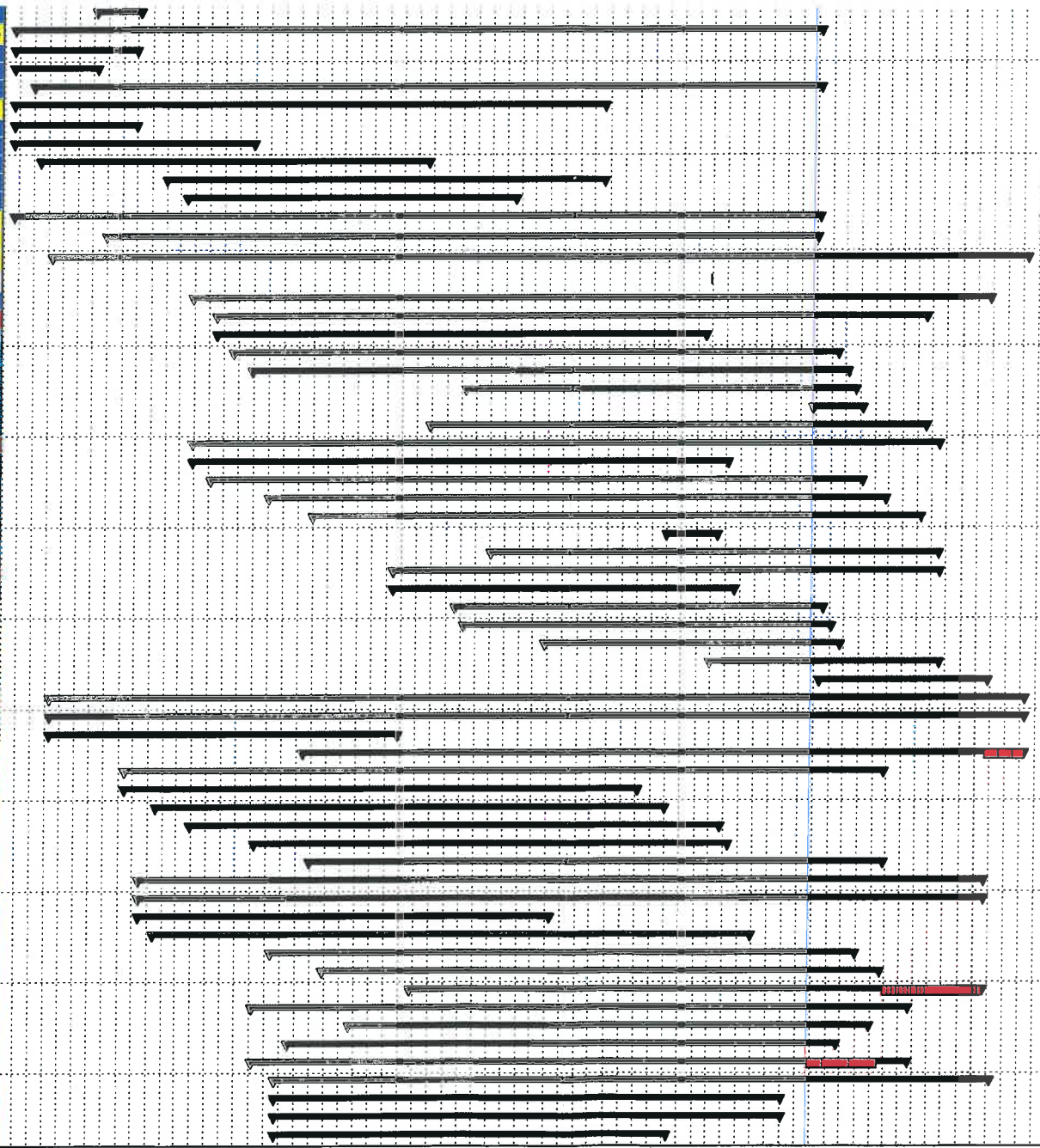
Attachment 5- Financial S-Curve for Cumulative Planned Vs Actual Claimed Amount in Rs Crores till 30th Sept. 2022



**Attachment 6- Package-1's Construction Programme
Updated as of 25th Sep 2022**



05-Dec-18	73	08-Sep-18 A	08-Sep-18	0%	0%	0	1	
08-Feb-22	927	23-Mar-18 A	07-Oct-22	0%	0%	0	-132	235
20-Nov-18	220	23-Mar-18 A	24-Nov-18	0%	0%	0	1	
21-Sep-18	109	23-Mar-18 A	16-Sep-18	0%	0%	0	14	
02-Feb-22	891	01-May-18 A	07-Oct-22	0%	0%	0	-132	235
14-Sep-21	946	23-Mar-18 A	22-Jul-21 A	0%	0%	0	24	
29-Nov-18	229	23-Mar-18 A	29-Nov-18	0%	0%	0	1	
29-Jul-19	422	23-Mar-18 A	15-Jul-19 A	0%	0%	0	0	
20-Jul-20	637	15-May-18 A	22-Jul-20 A	0%	0%	0	0	
14-Sep-21	659	02-Feb-19 A	22-Jul-21 A	0%	0%	0	24	
24-Mar-21	554	15-Mar-15 A	15-Jun-21	0%	0%	0	56	
02-Aug-21	1229	23-Mar-18 A	07-Oct-22	0%	0%	0	-431	-146
23-Aug-21	758	01-Oct-18 A	01-Oct-22	0%	0%	0	-295	-1
29-Sep-23	1285	11-Jun-18 A	11-Dec-23	80.85%	80.79%	0	-64	-63
30-Dec-20	1	28-Feb-22 A	28-Feb-22	100%	100%	-387	-386	
20-Jul-21	1045	20-Mar-19 A	27-Sep-23	57.02%	61.8%	0	-22	3
25-Mar-23	969	16-May-19 A	20-May-23	59.7%	66.96%	0	-50	35
08-Apr-22	658	16-May-19 A	18-Feb-22	0%	0%	0	44	
20-Dec-22	821	21-Jun-19 A	15-Nov-22	67.17%	61.6%	0	31	81
23-Dec-22	950	30-Jul-19 A	07-Dec-22	60.08%	67.86%	0	14	81
09-Jan-23	604	12-Oct-20 A	24-Dec-22	51.75%	80.97%	0	14	183
20-Oct-22	80	25-Sep-22	06-Jan-23	46.14%	0%	-88	-68	-43
25-Mar-23	735	29-Jul-20 A	20-May-23	62.07%	66.82%	0	-50	62
27-Apr-23	1033	20-Mar-19 A	15-Jun-23	55.46%	54.04%	0	-30	25
06-Oct-22	798	20-Mar-19 A	06-Apr-22	100%	100%	0	61	
06-Nov-22	832	08-May-19 A	06-Jun-23	60.59%	61.17%	0	-54	56
10-Jan-23	922	04-Sep-19 A	23-Feb-23	61.61%	52.42%	0	30	38
04-Apr-23	917	02-Dec-19 A	11-May-23	45.16%	47.42%	0	-32	70
06-May-22	60	01-Dec-21 A	15-Mar-22	100%	100%	79	47	
27-Apr-23	862	06-Dec-20 A	15-Jun-23	36.38%	24.04%	0	-34	-9
20-Apr-23	737	16-May-20 A	19-Jun-23	49.54%	61.68%	0	-32	-17
22-Apr-22	427	16-May-20 A	20-Apr-22	100%	100%	0	2	
11-Oct-22	477	21-Sep-20 A	18-Oct-22	82.15%	82.92%	0	-7	87
16-Nov-22	684	10-Oct-20 A	04-Nov-22	46.15%	80%	0	11	92
03-Dec-22	437	27-Mar-21 A	23-Nov-22	63.30%	60.67%	-28	10	62
26-Apr-23	248	01-Mar-22 A	19-Jun-23	32.88%	37.43%	-1	-37	-23
20-Jul-23	256	12-Oct-22	27-Sep-23	0%	0%	-6	-34	-9
29-Sep-23	1285	11-Jun-18 A	11-Dec-23	62.04%	60.07%	0	-64	-63
29-Sep-23	1285	11-Jun-18 A	11-Dec-23	0%	0%	0	-64	-63
27-May-20	471	17-Jun-18 A	27-May-20	0%	0%	0	0	
29-Sep-23	990	14-Nov-19 A	11-Dec-23	0%	0%	0	-64	-63
14-Feb-23	1057	14-Nov-18 A	24-Feb-23	70.28%	67.38%	0	-9	111
24-Sep-21	740	14-Nov-18 A	05-Oct-21	0%	0%	0	-8	
30-Oct-21	713	17-Jan-19 A	01-Dec-21	0%	0%	0	-28	
12-Apr-22	794	29-Mar-19 A	26-Mar-22	100%	100%	0	16	
05-May-22	804	10-Aug-19 A	11-Apr-22	100%	100%	0	23	
14-Feb-23	802	29-Nov-19 A	24-Feb-23	65.64%	62.3%	0	-8	61
19-May-23	1133	14-Dec-18 A	22-Sep-23	39.47%	39.62%	0	-38	-37
10-May-23	1133	14-Dec-18 A	22-Sep-23	39.47%	39.62%	0	-38	-37
31-May-21	599	14-Dec-18 A	10-Apr-21	0%	0%	0	21	
15-Sep-22	828	14-Jun-19 A	30-May-22	100%	100%	0	15	
06-Dec-22	789	12-Sep-19 A	28-Dec-22	79.8%	65%	0	-21	110
10-Jan-23	772	26-Dec-19 A	18-Feb-23	51.74%	50%	0	-35	64
10-May-23	729	29-Jun-20 A	22-Sep-23	24.14%	28.18%	0	-38	-37
23-Feb-23	616	07-Aug-19 A	21-Apr-23	60.58%	64.86%	0	-56	-7
18-Dec-22	866	20-Feb-20 A	30-Jan-23	82.34%	69.92%	0	-38	76
30-Dec-22	960	18-Oct-19 A	22-Nov-22	72.58%	84.73%	0	-35	119
23-Feb-23	916	07-Aug-19 A	21-Apr-23	59.96%	40.47%	0	-50	7
23-May-23	980	23-Sep-15 A	05-Oct-23	62.32%	65.62%	0	-16	-8
17-Oct-22	904	23-Sep-19 A	04-Aug-22	100%	100%	0	40	
17-Oct-22	904	23-Sep-19 A	04-Aug-22	100%	100%	0	40	
11-Dec-21	710	23-Sep-19 A	11-Dec-21	0%	0%	0	1	





05-Sep-23	192	02-Jul-21 A	07-Oct-23	93.69%	93.77%	-2	-7	-7
05-Sep-23	7	04-Dec-23	11-Dec-23	0%	0%	72	-7	-7
05-Sep-23	50	29-Sep-23	04-Dec-23	0%	0%	-46	-46	-46
10-Sep-23	64	29-Sep-23	11-Dec-23	0%	0%	-24	-63	-63
15-Sep-23	207	03-Feb-23	25-Nov-23	0%	0%	-10	-43	-43
14-Sep-23	80	20-May-23	18-Oct-23	0%	0%	-69	-69	-69
12-Sep-23	207	01-Feb-23	22-Nov-23	0%	0%	-42	-69	-69
10-Sep-23	210	01-Feb-23	25-Nov-23	0%	0%	-67	-62	-63
12-Sep-23	254	09-Dec-22	22-Nov-23	0%	0%	-44	-48	-48
15-Sep-23	257	09-Dec-22	25-Nov-23	0%	0%	-41	-62	-62
12-Sep-23	247	09-Dec-22	15-Nov-23	0%	0%	-25	-42	-42
12-Sep-23	100	08-Jun-23	22-Nov-23	0%	0%	-45	-65	-65
10-Sep-23	84	08-Mar-23	26-Jun-23	0%	0%	-45	-45	-45
18-Sep-23	201	26-Jan-23	05-Nov-23	0%	0%	-70	-53	-53
12-Sep-23	217	26-Jan-23	22-Jan-23	0%	0%	-20	-45	-45
15-Sep-23	269	26-Nov-23	15-Nov-23	0%	0%	-69	-65	-65
10-Sep-23	196	05-Jan-23	10-Oct-23	0%	0%	-70	-51	-51
12-Sep-23	269	26-Nov-22	15-Nov-23	0%	0%	-45	-45	-45
18-Sep-23	259	02-May-22 A	19-Aug-23	0%	0%	-78	-32	-32
14-Jun-23	322	24-May-22 A	10-Oct-23	0%	0%	-60	-47	-47
14-Jun-23	322	04-Mar-22 A	10-Oct-23	0%	0%	-45	-79	-79
29-Jun-23	132	31-Mar-23	25-Oct-23	0%	0%	-10	-36	-36
22-Mar-23	162	19-Sep-22 A	24-Mar-23	0%	0%	-28	-12	-12
15-Jun-23	240	01-Jun-22 A	12-Sep-23	0%	0%	-26	-33	-33
29-Jun-23	276	01-Jun-22 A	25-Oct-23	0%	0%	-20	-36	-36
08-Jul-23	159	12-Feb-23	04-Nov-23	0%	0%	-62	-44	-44
03-Mar-23	155	06-Jun-22 A	19-Mar-23	14.42%	21.22%	-11	-3	-3
19-Mar-23	246	09-Sep-22 A	22-Jul-23	14.35%	0.75%	-20	-9	-9
17-Aug-22	119	28-Feb-22 A	17-Dec-22	0%	0%	0	-50	-50
19-Jul-21	298	24-Feb-22 A	04-Nov-23	11.07%	4.26%	0	-47	-47
11-Mar-23	410	07-Jun-21 A	17-Aug-23	0%	0%	0	-50	-50

Attachment 7- Package-2's Construction Programme Updated as of 25th Sep 2022



#	Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Actual Start	Actual Finish	Schedule % Complete	Performance % Complete	2018	2019	2020	2021	2022	2023
1		MTHL-PKG2-DETAILED WORK PROGRAMME_25092022_APPROVED_MPR.54	3155	17-Nov-17	21-Sep-24	17-Nov-17		99.93%	100%						
2		PROJECT PRE-COMMENCEMENT ACTIVITY	126	17-Nov-17	22-Mar-18	17-Nov-17	16-Mar-18	0%	0%						
3		PRE-COMMENCEMENT ACTIVITY	55	15-Dec-17	07-Feb-18	15-Dec-17	20-Mar-18	0%	0%						
4		JV FORMATION AND REGISTRATION	55	15-Dec-17	07-Feb-18	15-Dec-17	20-Mar-18	0%	0%						
5		PROJECT EVENT MILESTONE	2490	23-Mar-18	21-Mar-23	23-Mar-18		0%	0%						
6		PROJECT KEY MILESTONE	2310	23-Mar-18	22-Sep-22	23-Mar-18		0%	0%						
7		INTERFACE MILESTONE_ERG19	2462	19-Apr-18	21-Mar-23	03-Apr-18		0%	0%						
8		PHYSICAL PROGRESS AND INTERFACE DATE_ADD2-ATTACHMENT 25	2023	18-Sep-18	22-Jun-22	31-Aug-18		0%	0%						
9		CONSTRUCTION KEY MILESTONES	1308	03-Sep-18	06-Jul-21	25-Oct-18	01-Jan-22	0%	0%						
10		MANAGEMENT	613	20-Jan-18	18-Aug-18	12-Jan-18	22-Aug-19	0%	0%						
11		SITE ORGANISATION	35	20-Jan-18	23-Feb-18	07-Mar-18	07-Mar-18	0%	0%						
12		DEVELOPMENT OF MANAGEMENT SYSTEM	613	20-Jan-18	27-May-18	20-Jan-18	22-Aug-19	0%	0%						
13		COUMMUNICATION / DOCUMENT CONTROL SYSTEM	315	20-Jan-18	10-May-18	20-Jan-18	24-Oct-18	0%	0%						
14		QUALITY ASSURANCE AND MANAGEMENT SYSTEM	254	23-Mar-18	10-May-18	23-Mar-18	24-Oct-18	0%	0%						
15		HEALTH, SAFETY AND ENVIRONMENTAL MANAGEMENT SYSTEM	551	23-Mar-18	10-May-18	23-Mar-18	22-Aug-19	0%	0%						
16		INTERFACE MANAGEMENT SYSTEM	49	23-Mar-18	10-May-18	23-Mar-18	24-Oct-18	0%	0%						
17		RISK MANAGEMENT PLAN	66	23-Mar-18	27-May-18	23-Mar-18	24-Oct-18	0%	0%						
18		DEVELOPMENT OF WORK PROGRAMME	63	23-Mar-18	24-May-18	23-Mar-18	21-Sep-18	0%	0%						
19		OTHER CONTRACTUAL SUBMITTALS	28	24-Mar-18	20-Apr-18	24-Mar-18	23-Apr-18	0%	0%						
20		PERMIT & APPROVAL	389	20-Jan-18	18-Aug-18	12-Jan-18	03-Aug-19	0%	0%						
21		SURVEYING & GEOTECHNICAL INVESTIGATION	35	20-Jan-18	23-Feb-18	12-Jan-18	09-Feb-18	0%	0%						
22		CUTTING OF MANGROVES	79	20-Jan-18	30-Mar-18	25-Jan-18	23-Apr-18	0%	0%						
23		SETTING UP BATCHING PLANT	313	05-Apr-18	18-Aug-18	06-Apr-18	25-Nov-18	0%	0%						
24		PC YARD & CAMP	28	04-May-18	01-Jun-18	21-Mar-18	01-Oct-18	0%	0%						
25		CONNECTION FOR ELECTRICITY & WATER	63	18-May-18	20-Jul-18	06-Apr-18	03-Aug-19	0%	0%						
26		CUTTING OF TREES	35	23-Mar-18	26-Apr-18	10-May-18	02-Aug-18	0%	0%						
27		IMPORT PERMITS/LICENCES FOR EQUIPMENTS & GOODS	70	23-Mar-18	31-May-18	15-May-18	31-May-18	0%	0%						
28		NOC FOR PLANT & FACILITIES TO BE USED AT SITE	51	23-Mar-18	31-May-18	16-Aug-18	28-Nov-18	0%	0%						
29		TEMPORARY ACCESS ROAD FOR MAIN BRIDGE & INTERCHANGE	59	23-Mar-18	19-May-18	23-Mar-18	28-Jul-18	0%	0%						
30		DESIGN	1321	20-Jan-18	04-Sep-19	01-Jan-18	02-Feb-21	100%	100%						
31		EARLY STAGE DESIGN WORK / INFORMATION COLLECTION	678	20-Jan-18	17-Jul-18	01-Jan-18	12-Nov-19	100%	100%						
32		INDEPENDENT DESIGN CHECKER APPROVAL	35	20-Jan-18	23-Feb-18	20-Jan-18	13-Apr-18	0%	0%						
33		TOPOGRAPHIC SURVEY	116	20-Jan-18	16-May-18	01-Jan-18	20-Apr-18	0%	0%						
34		BATHYMETRIC SURVEY	75	20-Jan-18	04-Apr-18	25-Jan-18	20-Mar-18	0%	0%						
35		ADDITIONAL TIME FOR ONGC & BPCL PHYSICAL VERIFICATION	309			21-Mar-18	05-Aug-19	0%	0%						
36		GEOTECHNICAL INVESTIGATION	548	20-Jan-18	17-Jul-18	12-Jan-18	25-Jun-19	100%	100%						
37		ADDITIONAL WORKS FOR DESIGN INITIATION OF STEEL MODULE 1	63			26-Jun-19	12-Nov-19	0%	0%						
38		TEMPORARY WORK	1037	22-Jan-18	01-Nov-18	20-Jan-18	20-Aug-20	100%	100%						
39		PROJECT OFFICE LAYOUT	241	04-May-18	02-Jun-18	04-May-18	17-Jul-18	0%	0%						
40		CASTING YARD LAYOUT	72	22-Jan-18	04-Apr-18	20-Jan-18	09-Oct-18	0%	0%						
41		TEMPORARY BRIDGE	94	26-Feb-18	31-May-18	24-Feb-18	30-Aug-18	100%	100%						
42		CASTING YARD STRUCTURE	199	10-May-18	10-Aug-18	20-Mar-18	20-Nov-18	0%	0%						
43		STEEL BRIDGE FABRICATION YARD	385	20-Jul-18	01-Nov-18	11-Nov-19	20-Aug-20	0%	0%						
44		CONCRETE MIX DESIGN	274	23-Mar-18	31-Aug-18	12-May-18	15-Nov-18	0%	0%						
45		JFE DESIGN PROGRAMME	1220	01-May-18	04-Sep-19	09-Apr-18	02-Feb-21	100%	100%						
46		PROCUREMENT, MANUFACTURING AND LOGISTICS	1808	20-Jan-18	23-Aug-20	22-Dec-17		100%	100%						
47		SURVEY & INVESTIGATION	72	20-Jan-18	02-Apr-18	22-Dec-17	04-Apr-18	0%	0%						
48		TOPOGRAPHIC SURVEY AGENT	21	20-Jan-18	09-Feb-18	01-Jan-18	22-Jan-18	0%	0%						
49		BATHYMETRIC SURVEY / UTILITY SURVEY AGENT	21	20-Jan-18	09-Feb-18	01-Jan-18	23-Jan-18	0%	0%						
50		GEOTECHNICAL INVESTIGATION AGENCY	48	22-Jan-18	02-Apr-18	22-Dec-17	04-Apr-18	0%	0%						
51		TEMPORARY WORK	964	20-Jan-18	20-Oct-18	20-Jan-18	11-May-20	0%	0%						
52		MAIN WORK_SUBCONTRACT WORK	1442	23-Mar-18	20-Jul-19	23-Mar-18		0%	0%						
53		EQUIPMENTS	1097	23-Mar-18	12-Sep-19	23-Mar-18	05-Nov-20	100%	100%						
54		BATCHING PLANT	437	23-Mar-18	31-Jul-18	23-Mar-18	23-Mar-19	0%	0%						
55		RCD MACHINE	514	23-Mar-18	11-Nov-18	23-Mar-18	24-Aug-19	0%	0%						
56		GANTRY CRANE	1097	23-Mar-18	08-Feb-19	23-Mar-18	05-Nov-20	100%	100%						
57		SEGMENT LAUNCHER	770	24-Jul-18	12-Sep-19	24-Jul-18	09-Mar-20	0%	0%						
58		PRECAST MOULD AND SYSTEM FORM	715	07-Aug-18	24-Mar-19	04-Sep-18	25-Sep-20	100%	100%						

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CONTRACTOR:
DAEWOO - TPL JV

Date	Revision	Checked	Approved
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#	Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Actual Start	Actual Finish	Schedule % Complete	Performance % Complete	2018	2019	2020	2021	2022	2023
59		PRECAST MOULD, CASTING BED	332	20-Aug-18	24-Mar-19	03-Jun-19	25-Sep-20	100%	100%						
60		SYSTEM FORM	447	07-Aug-18	04-Mar-19	04-Sep-18	31-Aug-20	0%	0%						
61		MATERIAL SUPPLIERS	1675	02-Jun-18	15-Oct-19	20-Apr-18		0%	0%						
62		MATERIAL PROCUREMENT	0			08-Aug-18		0%	0%						
63		PROCUREMENT OF STEEL GIRDER	673	07-May-19	23-Aug-20	01-Aug-19	02-Feb-21	0%	0%						
64		STEEL PLATE FOR (RHS STEEL MODULE-2_MP177 - MP182)	513	04-Jun-19	13-Jul-20	08-Aug-19	02-Jul-20	0%	0%						
65		STEEL PLATE FOR (LHS STEEL MODULE-2_MP177 - MP182)	438	07-May-19	16-Apr-20	01-Aug-19	12-May-20	0%	0%						
66		STEEL PLATE FOR (RHS STEEL MODULE-3_MP183 - MP186)	315	01-Jul-19	10-May-20	01-Nov-19	17-Aug-20	0%	0%						
67		STEEL PLATE FOR (LHS STEEL MODULE-3_MP183 - MP186)	315	04-Jun-19	14-Apr-20	01-Oct-19	05-Nov-20	0%	0%						
68		STEEL PLATE FOR (RHS STEEL MODULE-1_MP176 - MP171)	286	30-Jul-19	23-Aug-20	01-Apr-20	02-Feb-21	0%	0%						
69		STEEL PLATE FOR (LHS STEEL MODULE-1_MP176 - MP171)	327	02-Jul-19	26-Jul-20	29-Mar-20	05-Jan-21	0%	0%						
70		IMPACT OF COVID-19	51			22-Mar-20	25-May-20	0%	0%						
71		CONSTRUCTION	2205	02-Apr-18	21-Jun-22	02-Apr-18		100%	85.23%						
72		TEMPORARY WORK	2185	02-Apr-18	21-Jun-22	02-Apr-18		100%	97.95%						
73		PREPARATION WORK	368	02-Apr-18	16-Jan-19	02-Apr-18	25-Jul-19	0%	0%						
74		ESTABLISHMENT OF EMPLOYER & CONTRACTOR OFFICE	194	20-Jun-18	27-Nov-18	27-Jun-18	18-Jan-19	100%	100%						
75		ESTABLISHMENT OF LABOUR CAMP	464	20-Jun-18	05-Apr-19	03-Jul-18	04-Apr-19	0%	0%						
76		ESTABLISHMENT OF CONCRETE CASTING YARD	1095	04-May-18	25-Apr-19	14-Jun-18	12-May-21	100%	100%						
77		ESTABLISHMENT OF STEEL SPAN ASSEMBLY YARD	584	02-Nov-18	05-Mar-20	01-Nov-19	30-Mar-21	0%	0%						
78		TEMPORARY BRIDGE	2133	20-May-18	21-Jun-22	27-Jul-18		100%	96.49%						
79		PERMANENT WORK	1938	03-Sep-18	24-May-22	08-Dec-18		100%	84.7%						
80		PRE-FABRICATION AND ASSEMBLY	1134	18-Apr-19	19-Feb-22	15-Oct-19		100%	94.79%						
81		CONCRETE PRE-FABRICATION AT THE CASTING YARD	671	18-Apr-19	15-Sep-21	06-Nov-19		100%	82.33%						
82		CONCRETE GIRDER PRE-CASTING	671	18-Apr-19	15-Sep-21	06-Nov-19		100%	82.33%						
83		STEEL SPAN FABRICATION AT THE SUPPLIER'S WORK SHOP INCLUDING LOGISTIC	951	02-Jun-19	24-Jan-22	16-Oct-19	04-Jun-22	100%	100%						
84		STEEL SPAN FABRICATION AT THE SUPPLIER'S WORK SHOP	952	02-Jun-19	29-Nov-21	16-Oct-19	18-Feb-22	100%	100%						
85		STEEL MODULE-02_MP182 - MP177 (FABRICATION AT JFE)	626	02-Jun-19	29-Jun-21	24-Oct-19	25-Jun-21	100%	100%						
86		STEEL MODULE-02_MP182 - MP177 (RHS)	626	29-Jun-19	29-Jun-21	06-Jan-20	25-Jun-21	100%	100%						
87		SHOP DRAWINGS	375	29-Jun-19	08-Jul-20	17-Jan-20	10-Sep-20	0%	0%						
88		CUTTING & DRILLING	297	02-Oct-19	27-Aug-20	06-Jan-20	21-Jan-21	0%	0%						
89		FITTING-UP & WELDING	357	17-Oct-19	10-Nov-20	12-Jan-20	04-Feb-21	0%	0%						
90		TRIAL ASSEMBLING	389	30-Jan-20	09-Jan-21	27-Feb-20	03-Mar-21	100%	100%						
91		PAINTING	413	19-Apr-20	09-May-21	16-Jun-20	10-May-21	0%	0%						
92		SHIPPING PREPARATION	413	03-Jul-20	29-Jun-21	10-Aug-20	25-Jun-21	0%	0%						
93		STEEL MODULE-02_MP182 - MP177 (LHS)	561	02-Jun-19	07-May-21	24-Oct-19	14-Apr-21	100%	100%						
94		SHOP DRAWINGS	300	02-Jun-19	27-Mar-20	17-Jan-20	10-Jun-20	0%	0%						
95		CUTTING & DRILLING	140	04-Sep-19	31-May-20	24-Oct-19	13-Jul-20	0%	0%						
96		FITTING-UP & WELDING	214	19-Sep-19	14-Aug-20	06-Nov-19	02-Sep-20	0%	0%						
97		TRIAL ASSEMBLING	228	02-Jan-20	28-Sep-20	20-Mar-20	24-Nov-20	100%	100%						
98		PAINTING	300	07-Mar-20	26-Jan-21	15-May-20	18-Feb-21	0%	0%						
99		SHIPPING PREPARATION	348	21-May-20	07-May-21	21-Jul-20	14-Apr-21	0%	0%						
100		STEEL MODULE-03_MP186 - MP183 (FABRICATION AT JFE)	734	29-Jun-19	25-Sep-21	16-Oct-19	01-Dec-21	100%	100%						
101		STEEL MODULE-03_MP186 - MP183 (RHS)	659	25-Jul-19	25-Sep-21	26-Dec-19	01-Dec-21	100%	100%						
102		SHOP DRAWINGS	295	25-Jul-19	15-May-20	26-Dec-19	18-Jun-20	0%	0%						
103		CUTTING & DRILLING	181	07-Nov-19	19-Jul-20	01-Apr-20	08-Oct-20	0%	0%						
104		FITTING-UP & WELDING	268	22-Nov-19	17-Oct-20	01-Jun-20	14-Jan-21	0%	0%						
105		TRIAL ASSEMBLING	284	05-Apr-20	16-Dec-20	03-Aug-20	09-Feb-21	100%	100%						
106		PAINTING	348	24-Jun-20	10-May-21	19-Oct-20	30-Sep-21	0%	0%						
107		SHIPPING PREPARATION	386	02-Oct-20	25-Sep-21	11-Jan-21	01-Dec-21	0%	0%						
108		STEEL MODULE-03_MP186 - MP183 (LHS)	653	29-Jun-19	29-Aug-21	16-Oct-19	23-Oct-21	100%	100%						
109		SHOP DRAWINGS	325	29-Jun-19	19-Apr-20	16-Oct-19	05-Nov-20	0%	0%						
110		CUTTING & DRILLING	304	12-Oct-19	23-Jun-20	17-Feb-20	23-Dec-20	0%	0%						
111		FITTING-UP & WELDING	329	27-Oct-19	21-Sep-20	03-Apr-20	21-Jan-21	0%	0%						
112		TRIAL ASSEMBLING	298	10-Mar-20	20-Nov-20	10-Jul-20	18-Mar-21	100%	100%						
113		PAINTING	391	29-May-20	14-Apr-21	04-Sep-20	03-Jun-21	0%	0%						
114		SHIPPING PREPARATION	366	06-Sep-20	29-Aug-21	14-Dec-20	23-Oct-21	0%	0%						
115		STEEL MODULE-01_MP176 - MP171 (FABRICATION AT JFE)	728	26-Jul-19	29-Nov-21	16-Apr-20	18-Feb-22	100%	100%						
116		STEEL MODULE-01_MP176 - MP171 (RHS)	728	26-Jul-19	29-Nov-21	16-Apr-20	25-Jan-22	100%	100%						
117		SHOP DRAWINGS	250	26-Jul-19	15-Jul-20	16-Apr-20	24-Dec-20	0%	0%						
118		CUTTING & DRILLING	195	27-Nov-19	12-Oct-20	15-Oct-20	04-Feb-21	0%	0%						
119		FITTING-UP & WELDING	235	12-Dec-19	31-Dec-20	05-Nov-20	24-May-21	0%	0%						
120		TRIAL ASSEMBLING	210	05-Apr-20	19-Feb-21	10-Feb-21	14-Jul-21	100%	100%						

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#	Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Actual Start	Actual Finish	Schedule % Complete	Performance % Complete	2018	2019	2020	2021	2022	2023
121		PAINTING	238	14-Jun-20	29-Jun-21	02-Jun-21	23-Dec-21	0%	0%						
122		SHIPPING PREPARATION	394	07-Sep-20	29-Nov-21	10-Aug-21	25-Jan-22	0%	0%						
123		STEEL MODULE-01_MP176 - MP171 (LHS)	699	24-Aug-19	01-Nov-21	17-Jul-20	18-Feb-22	100%	100%						
124		SHOP DRAWINGS	355	24-Aug-19	13-Aug-20	17-Jul-20	26-May-21	0%	0%						
125		CUTTING & DRILLING	199	22-Nov-19	07-Oct-20	06-Aug-20	18-May-21	0%	0%						
126		FITTING-UP & WELDING	294	07-Dec-19	26-Dec-20	24-Aug-20	30-Aug-21	0%	0%						
127		TRIAL ASSEMBLING	240	31-Mar-20	14-Feb-21	15-Dec-20	22-Oct-21	100%	100%						
128		PAINTING	336	09-Jun-20	24-Jun-21	17-May-21	03-Jan-22	0%	0%						
129		SHIPPING PREPARATION	348	02-Sep-20	01-Nov-21	18-Aug-21	18-Feb-22	0%	0%						
130		STEEL SPAN MATERIAL OCEAN FREIGHT TO THE MUMBAI PORT INCLUDING CUSTOM CLEARANCE	641	10-Jul-20	09-Jan-22	01-Sep-20	01-Mar-22	100%	100%						
131		STEEL MODULE-01_MP176 - MP171 (OCEAN FREIGHT)	235	23-Nov-20	09-Jan-22	28-Sep-21	01-Mar-22	100%	100%						
132		STEEL MODULE-02_MP182 - MP177 (OCEAN FREIGHT)	417	10-Jul-20	08-Aug-21	01-Sep-20	13-Sep-21	100%	100%						
133		STEEL MODULE-03_MP186 - MP183 (OCEAN FREIGHT)	347	29-Nov-20	05-Nov-21	06-Mar-21	24-Dec-21	100%	100%						
134		LOADING AND DELIVERY TO THE CONTRACTOR'S ASSEMBLY YARD	555	20-Aug-20	24-Jan-22	21-Oct-20	04-Jun-22	100%	100%						
135		STEEL MODULE-01_MP176 - MP171 (DELIVERY TO ASSEMBLY YARD)	156	02-Jan-21	24-Jan-22	26-Oct-21	04-Jun-22	100%	100%						
136		STEEL MODULE-02_MP182 - MP177 (DELIVERY TO ASSEMBLY YARD)	343	20-Aug-20	19-Aug-21	21-Oct-20	13-Oct-21	100%	100%						
137		STEEL MODULE-03_MP186 - MP183 (DELIVERY TO ASSEMBLY YARD)	308	09-Jan-21	20-Nov-21	14-Apr-21	07-Mar-22	100%	100%						
138		STEEL GIRDER ASSEMBLY AT THE CONTRACTOR'S ASSEMBLY YARD	498	05-Sep-20	17-Feb-22	23-Nov-20		100%	40%						
139		STEEL MODULE-01_MP176 - MP171 (ASSEMBLY WORKS)	125	13-Oct-21	17-Feb-22	21-Jun-22		100%	0%						
140		STEEL SPAN ASSEMBLY_MP171 - MP172_G1	52	20-Nov-21	06-Jan-22			100%	0%						
141		STEEL SPAN ASSEMBLY_MP171 - MP172_G2	44	20-Nov-21	08-Jan-22			100%	0%						
142		STEEL SPAN ASSEMBLY_MP172 - MP173_G1	50	28-Dec-21	19-Jan-22			100%	0%						
143		STEEL SPAN ASSEMBLY_MP172 - MP173_G2	44	25-Jan-22	17-Feb-22			100%	0%						
144		STEEL SPAN ASSEMBLY_MP173 - MP174_G1	54	29-Nov-21	21-Dec-21			100%	0%						
145		STEEL SPAN ASSEMBLY_MP173 - MP174_G2	44	11-Nov-21	30-Dec-21			100%	0%						
146		STEEL SPAN ASSEMBLY_MP174 - MP175_G1	105	23-Oct-21	11-Dec-21	25-Jul-22		100%	0%						
147		STEEL SPAN ASSEMBLY_MP174 - MP175_G2	61	02-Nov-21	11-Dec-21	19-Sep-22		100%	0%						
148		STEEL SPAN ASSEMBLY_MP175 - MP176_G1	50	13-Oct-21	02-Dec-21			100%	0%						
149		STEEL SPAN ASSEMBLY_MP175 - MP176_G2	89	23-Oct-21	02-Dec-21	21-Jun-22		100%	0%						
150		STEEL MODULE-02_MP182 - MP177 (ASSEMBLY WORKS)	381	05-Sep-20	18-Sep-21	23-Nov-20	25-Jul-22	100%	100%						
151		STEEL SPAN ASSEMBLY_MP176 - MP177_G1	220	03-May-21	26-May-21	03-Jul-21	25-Jul-22	100%	100%						
152		STEEL SPAN ASSEMBLY_MP176 - MP177_G2	120	25-Jun-21	28-Jul-21	02-Nov-21	01-Mar-22	100%	100%						
153		STEEL SPAN ASSEMBLY_MP177 - MP178_G1	68	28-Jun-21	09-Aug-21	05-May-21	28-Oct-21	100%	100%						
154		STEEL SPAN ASSEMBLY_MP177 - MP178_G2	75	20-Aug-21	18-Sep-21	18-Oct-21	04-Jan-22	100%	100%						
155		STEEL SPAN ASSEMBLY_MP178 - MP179_G1	71	05-Mar-21	27-Mar-21	08-Mar-21	29-Jun-21	100%	100%						
156		STEEL SPAN ASSEMBLY_MP178 - MP179_G2	74	26-Apr-21	19-May-21	17-Apr-21	30-Aug-21	100%	100%						
157		STEEL SPAN ASSEMBLY_MP179 - MP180_G1	77	02-Jan-21	25-Jan-21	19-Jan-21	28-May-21	100%	100%						
158		STEEL SPAN ASSEMBLY_MP179 - MP180_G2	184	25-Feb-21	20-Mar-21	08-Feb-21	27-Oct-21	100%	100%						
159		STEEL SPAN ASSEMBLY_MP180 - MP181_G1	73	02-Nov-20	25-Nov-20	15-Jan-21	03-May-21	100%	100%						
160		STEEL SPAN ASSEMBLY_MP180 - MP181_G2	55	19-Dec-20	11-Jan-21	28-Dec-20	04-Jun-21	100%	100%						
161		STEEL SPAN ASSEMBLY_MP181 - MP182_G1	72	05-Sep-20	29-Sep-20	23-Nov-20	23-Mar-21	100%	100%						
162		STEEL SPAN ASSEMBLY_MP181 - MP182_G2	78	22-Oct-20	14-Nov-20	08-Dec-20	31-Mar-21	100%	100%						
163		STEEL MODULE-03_MP186 - MP183 (ASSEMBLY WORKS)	325	06-Jul-21	23-Nov-21	25-May-21		100%	0%						
164		STEEL SPAN ASSEMBLY_MP182 - MP183_G1	95	09-Aug-21	18-Oct-21	28-May-22		100%	0%						
165		STEEL SPAN ASSEMBLY_MP182 - MP183_G2	138	24-Aug-21	28-Oct-21	24-Mar-22		100%	0%						
166		STEEL SPAN ASSEMBLY_MP183 - MP184_G1	95	04-Oct-21	28-Oct-21	24-Jan-22		100%	0%						
167		STEEL SPAN ASSEMBLY_MP183 - MP184_G2	102	01-Nov-21	23-Nov-21	22-Feb-22		100%	0%						
168		STEEL SPAN ASSEMBLY_MP184 - MP185_G1	274	24-Jul-21	08-Oct-21	10-Jul-21		100%	0%						
169		STEEL SPAN ASSEMBLY_MP184 - MP185_G2	130	05-Aug-21	08-Oct-21	02-Dec-21		100%	0%						
170		STEEL SPAN ASSEMBLY_MP185 - MP186_G1	301	06-Jul-21	18-Aug-21	25-May-21		100%	0%						
171		STEEL SPAN ASSEMBLY_MP185 - MP186_G2	299	10-Jul-21	28-Sep-21	29-May-21		100%	0%						
172		STEEL SPAN LOADING AND TRANSPORTING TO THE ERECTION AREA	155	30-Sep-20	19-Feb-22	30-Dec-21		100%	23.33%						
173		STEEL MODULE-01_MP176 - MP171 (LOAD OUT AND TRANSPORT)	38	03-Dec-21	19-Feb-22			100%	0%						
174		STEEL MODULE-02_MP182 - MP177 (LOAD OUT AND TRANSPORT)	79	30-Sep-20	21-Sep-21	30-Dec-21		100%	50%						
175		STEEL MODULE-03_MP186 - MP183 (LOAD OUT AND TRANSPORT)	26	01-Sep-21	25-Nov-21			100%	0%						
176		MAIN BRIDGE	1880	03-Sep-18	24-May-22	08-Dec-18		100%	75.35%						
177		MAIN BRIDGE FOUNDATION	1402	03-Sep-18	23-Mar-21	08-Dec-18		100%	59.86%						
178		MAIN BRIDGE PILE FOUNDATION	1198	03-Sep-18	23-Jan-21	08-Dec-18	21-Feb-22	100%	100%						
179		PILE LOAD TEST	259	03-Sep-18	19-Nov-18	08-Dec-18	11-Nov-19	100%	100%						
180		MAIN BRIDGE PILE FOUNDATION LAND 17+414-18+187 FROM MP250 TO MP266	323	30-Nov-18	15-May-19	17-Jan-19	11-Jun-20	100%	100%						
181		MODULE-21_MP261 - MP257	126	30-Nov-18	05-Mar-19	23-Aug-19	06-Mar-20	100%	100%						
182		MODULE-22_MP266 - MP262	167	06-Mar-19	15-May-19	17-Jan-19	28-Jan-20	100%	100%						
183		MODULE-20_MP256 - MP255	32	05-Dec-18	10-Jan-19	25-Sep-19	19-Mar-20	100%	100%						

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

EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY (MMRDA)

CONTRACTOR:
DAEWOO - TPL JV

Date	Revision	Checked	Approved
25-Sep-22	R0		



#	Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Actual Start	Actual Finish	Schedule % Complete	Performance % Complete	2018	2019	2020	2021	2022	2023
184		MODULE-19_MP254 - MP250	199	11-Jan-19	16-Apr-19	05-Oct-19	11-Jun-20	100%	100%						
185		MAIN BRIDGE PILE FOUNDATION_CRZ 15+890-17+414 FROM MP226 TO MP250	268	20-Dec-18	27-Nov-19	12-Jun-19	21-Feb-20	100%	100%						
186		MODULE-14_MP231 - MP227	48	17-Aug-19	27-Nov-19	08-Nov-19	21-Feb-20	100%	100%						
187		MODULE-15_MP236 - MP232	77	08-Mar-19	26-Aug-19	08-Aug-19	25-Dec-19	100%	100%						
188		MODULE-16_MP240 - MP237	113	20-Dec-18	08-Mar-19	12-Jun-19	11-Nov-19	100%	100%						
189		MODULE-17_MP245 - MP241	94	20-Mar-19	17-Jun-19	09-Oct-19	04-Jan-20	100%	100%						
190		MODULE-18_MP249 - MP246	74	21-Jan-19	26-Mar-19	15-Oct-19	09-Feb-20	100%	100%						
191		MAIN BRIDGE PILE FOUNDATION_INTERTIDAL 14+800-15+890 FROM MP206 TO MP225	417	27-Feb-19	06-Jun-20	15-Oct-19	26-Aug-20	100%	100%						
192		MODULE-10_MP211 - MP207	243	12-Mar-20	06-Jun-20	01-Nov-19	18-Feb-20	100%	100%						
193		MODULE-11_MP216 - MP212	277	27-Feb-19	03-Apr-20	15-Oct-19	24-Feb-20	100%	100%						
194		MODULE-12_MP221 - MP217	225	06-Apr-19	30-Oct-19	25-Feb-20	26-Aug-20	100%	100%						
195		MODULE-13_MP226 - MP222	313	30-Oct-19	06-Feb-20	24-Jan-20	16-Jun-20	100%	100%						
196		MAIN BRIDGE PILE FOUNDATION_MARINE 13+610-14+800 FROM MP187 TO MP205	531	12-Dec-19	28-Nov-20	01-Oct-19	07-Feb-22	100%	100%						
197		MODULE-09_MP206 - MP202	340	12-Dec-19	06-Mar-20	01-Oct-19	13-Oct-20	100%	100%						
198		MODULE-08_MP201 - MP197	262	22-Feb-20	19-May-20	19-Feb-20	25-Dec-20	100%	100%						
199		MODULE-07_MP196 - MP192	146	02-May-20	08-Sep-20	12-Oct-20	07-Feb-22	100%	100%						
200		MODULE-06_MP191 - MP187	82	21-Aug-20	28-Nov-20	31-Aug-20	10-Dec-20	100%	100%						
201		MAIN BRIDGE PILE FOUNDATION_MARINE (STEEL) 11+880-13+610 FROM MP171 TO MP186	678	27-Nov-19	23-Jan-21	17-Mar-20	21-Feb-22	100%	100%						
202		STEEL MODULE-03_MP186 - MP183	80	30-May-20	21-Nov-20	08-Oct-20	15-Feb-21	100%	100%						
203		STEEL MODULE-02_MP182 - MP177	336	27-Nov-19	10-Sep-20	17-Mar-20	25-Jan-21	100%	100%						
204		STEEL MODULE-01_MP176 - MP171	185	30-Jul-20	23-Jan-21	19-Apr-21	21-Feb-22	100%	100%						
205		MAIN BRIDGE PILE FOUNDATION_MARINE 10+380-11+880 FROM MP146 TO MP170	723	24-Nov-18	28-Dec-19	19-Feb-19	21-Dec-21	100%	100%						
206		MODULE-05_MP171 - MP167	193	19-Jun-19	16-Oct-19	24-Feb-21	21-Dec-21	100%	100%						
207		MODULE-04_MP166 - MP162	507	24-Nov-18	18-Feb-19	19-Feb-19	20-Feb-21	100%	100%						
208		MODULE-03_MP161 - MP157	393	22-Jan-19	18-Apr-19	03-Apr-19	25-Mar-21	100%	100%						
209		MODULE-02_MP156 - MP152	94	16-Apr-19	27-Jul-19	21-Dec-20	27-Mar-21	100%	100%						
210		MODULE-01_MP151 - MP146	107	04-Oct-19	28-Dec-19	23-Dec-20	03-Apr-21	100%	100%						
211		MAIN BRIDGE PILE CAP INSTALLATION	1136	22-Dec-18	23-Mar-21	01-May-19		100%	99.71%						
212		MAIN BRIDGE PILE CAP BOTTOM SLAB INSTALLATION	1028	22-Dec-18	17-Feb-21	19-Aug-19	23-Sep-22	0%	0%						
213		MAIN BRIDGE PILE CAP BOTTOM SLAB_CRZ 15+890-17+414 FROM MP226 TO MP250	356	17-Jan-19	12-Dec-19	19-Aug-19	28-May-20	0%	0%						
214		MODULE-14_MP231 - MP227	168	28-Sep-19	12-Dec-19	24-Dec-19	28-May-20	0%	0%						
215		MODULE-15_MP236 - MP232	71	05-Apr-19	11-Sep-19	02-Nov-19	21-Feb-20	0%	0%						
216		MODULE-16_MP240 - MP237	142	17-Jan-19	20-Mar-19	19-Aug-19	23-Feb-20	0%	0%						
217		MODULE-17_MP245 - MP241	44	17-Apr-19	03-Jul-19	22-Oct-19	04-Jan-20	0%	0%						
218		MODULE-18_MP249 - MP246	63	19-Feb-19	12-Apr-19	08-Nov-19	10-Feb-20	0%	0%						
219		MAIN BRIDGE PILE CAP BOTTOM SLAB_INTERTIDAL 14+800-15+890 FROM MP206 TO MP225	186	06-Apr-19	18-Jul-20	30-Dec-19	30-Nov-20	0%	0%						
220		MODULE-10_MP211 - MP207	95	15-Apr-20	18-Jul-20	30-Dec-19	30-Sep-20	0%	0%						
221		MODULE-11_MP216 - MP212	128	06-Apr-19	15-Apr-20	09-Mar-20	19-Oct-20	0%	0%						
222		MODULE-12_MP221 - MP217	74	10-May-19	12-Nov-19	11-Sep-20	30-Nov-20	0%	0%						
223		MODULE-13_MP226 - MP222	59	03-Dec-19	18-Feb-20	27-Apr-20	26-Oct-20	0%	0%						
224		MAIN BRIDGE PILE CAP BOTTOM SLAB_MARINE 13+610-14+800 FROM MP187 TO MP205	420	21-Jan-20	10-Dec-20	16-Nov-19	09-May-22	0%	0%						
225		MODULE-09_MP206 - MP202	289	21-Jan-20	20-Mar-20	16-Nov-19	11-Nov-20	0%	0%						
226		MODULE-08_MP201 - MP197	50	23-Mar-20	30-May-20	11-Nov-20	25-Feb-21	0%	0%						
227		MODULE-07_MP196 - MP192	153	30-May-20	08-Oct-20	15-Oct-20	09-May-22	0%	0%						
228		MODULE-06_MP191 - MP187	77	08-Oct-20	10-Dec-20	20-Nov-20	26-Jan-21	0%	0%						
229		MAIN BRIDGE PILE CAP PRECAST SHELL_MARINE (STEEL) 11+880-13+610 FROM MP171 TO MP186	422	08-Jan-20	17-Feb-21	11-Oct-20	23-Sep-22	0%	0%						
230		STEEL MODULE-01_MP176 - MP171	167	02-Nov-20	17-Feb-21	05-Nov-21	23-Sep-22	0%	0%						
231		STEEL MODULE-02_MP182 - MP177	118	08-Jan-20	26-Sep-20	11-Oct-20	26-Feb-21	0%	0%						
232		STEEL MODULE-03_MP186 - MP183	194	07-Aug-20	03-Dec-20	19-Jan-21	20-May-22	0%	0%						
233		MAIN BRIDGE PILE CAP BOTTOM SLAB_MARINE 10+380-11+880 FROM MP146 TO MP170	300	22-Dec-18	21-Jan-20	28-Jan-21	22-Jan-22	0%	0%						
234		MODULE-05_MP171 - MP167	108	24-Aug-19	28-Oct-19	26-Mar-21	05-Jan-22	0%	0%						
235		MODULE-04_MP166 - MP162	199	22-Dec-18	01-Mar-19	15-Feb-21	22-Jan-22	0%	0%						
236		MODULE-03_MP161 - MP157	111	01-Mar-19	10-May-19	28-Jan-21	20-Oct-21	0%	0%						
237		MODULE-02_MP156 - MP152	53	15-May-19	16-Aug-19	15-Feb-21	17-May-21	0%	0%						
238		MODULE-01_MP151 - MP146	168	01-Nov-19	21-Jan-20	11-Feb-21	24-Oct-21	0%	0%						
239		MAIN BRIDGE PILE CAP INSTALLATION	1119	27-Dec-18	23-Mar-21	01-May-19		100%	99.71%						
240		MAIN BRIDGE PILE CAP LAND 17+414-18+188 FROM MP251 TO MP266	377	27-Dec-18	13-Jun-19	01-May-19	27-Jun-20	100%	100%						
241		MODULE-21_MP261 - MP257	248	27-Dec-18	30-Mar-19	15-Oct-19	27-Jun-20	100%	100%						
242		MODULE-22_MP266 - MP262	207	02-Apr-19	13-Jun-19	01-May-19	16-May-20	100%	100%						
243		MODULE-20_MP256 - MP255	54	01-Jan-19	06-Feb-19	29-Nov-19	23-May-20	100%	100%						
244		MODULE-19_MP254 - MP250	218	08-Feb-19	13-May-19	23-Nov-19	20-Jun-20	100%	100%						
245		MAIN BRIDGE PILE CAP_CRZ 15+890-17+414 FROM MP226 TO MP250	328	04-Mar-19	08-Jan-20	28-Aug-19	19-Sep-20	100%	100%						
246		MODULE-14_MP231 - MP227	230	24-Oct-19	08-Jan-20	11-Jan-20	19-Sep-20	100%	100%						

Project Baseline Bar
 Critical Remaining Work
 Summary
 Actual Work
 Milestone
 Remaining Work
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EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY
(MMRDA)

CONTRACTOR:
DAEWOO - TPL JV

Date	Revision	Checked	Approved
25-Sep-22	R0		





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

ANNEXURE-5 CONSTRUCTION UPDATED
PROGRAMME_ABSTRACT (PACKAGE-2)

#	Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Actual Start	Actual Finish	Schedule % Complete	Performance % Complete	2018	2019	2020	2021	2022	2023
310		MAIN BRIDGE PIER CAP_CRZ 15+890-17+414 FROM MB226 TO MB250	405	19-Apr-19	25-Feb-20	25-Feb-20	24-Sep-21	100%	100%						
311		MODULE-14_MP231 - MP227	83	30-Dec-19	25-Feb-20	27-Dec-20	28-May-21	100%	100%						
312		MODULE-15_MP236 - MP232	64	11-Nov-19	07-Jan-20	12-Oct-20	22-Feb-21	100%	100%						
313		MODULE-16_MP240 - MP237	132	21-Sep-19	19-Nov-19	14-May-20	23-Dec-20	100%	100%						
314		MODULE-17_MP245 - MP241	163	05-Jul-19	16-Oct-19	25-Feb-20	22-Dec-20	100%	100%						
315		MODULE-18_MP249 - MP246	201	19-Apr-19	02-Jul-19	22-Oct-20	24-Sep-21	100%	100%						
316		MAIN BRIDGE PIER CAP_INTERTIDAL 14+800-15+890 FROM MB206 TO MB225	277	06-Jun-19	05-Nov-20	04-Feb-21	14-Jan-22	100%	100%						
317		MODULE-10_MP211 - MP207	174	20-Mar-20	05-Nov-20	02-Aug-21	14-Jan-22	100%	100%						
318		MODULE-11_MP216 - MP212	209	06-Jun-19	18-Aug-20	21-Jun-21	26-Nov-21	100%	100%						
319		MODULE-12_MP221 - MP217	100	24-Jul-19	22-Jan-20	01-Mar-21	24-Sep-21	100%	100%						
320		MODULE-13_MP226 - MP222	187	30-Jan-20	04-Jun-20	04-Feb-21	07-Jul-21	100%	100%						
321		MAIN BRIDGE PIER CAP_MARINE 13+610-14+800 FROM MB187 TO MB205	172	23-Apr-20	10-Mar-21	03-May-21		100%	79.43%						
322		MODULE-06_MP191 - MP187	144	18-Dec-20	10-Mar-21	20-Jan-22		100%	44%						
323		MODULE-07_MP196 - MP192	139	10-Sep-20	07-Jan-21	18-Nov-21		100%	81.46%						
324		MODULE-08_MP201 - MP197	114	01-Jun-20	29-Sep-20	03-May-21	08-Mar-22	100%	100%						
325		MODULE-09_MP206 - MP202	46	23-Apr-20	15-Jun-20	09-Dec-21	09-Feb-22	100%	100%						
326		MAIN BRIDGE PIER CAP_MARINE (STEEL) 11+880-13+610 FROM MB171 TO MB186	452	30-Apr-20	27-Aug-21	23-Aug-21		100%	61.09%						
327		STEEL MODULE-01_MP176 - MP171	297	08-Mar-21	27-Aug-21	17-Mar-22		100%	30.42%						
328		STEEL MODULE-02_MP182 - MP177	148	30-Apr-20	04-Feb-21	23-Aug-21	04-Apr-22	100%	100%						
329		STEEL MODULE-03_MP186 - MP183	204	19-Dec-20	22-Apr-21	24-Feb-22		100%	48.75%						
330		MAIN BRIDGE PIER CAP_MARINE 10+380-11+880 FROM MB146 TO MB170	184	15-Mar-19	01-Apr-20	17-Dec-21		100%	42.29%						
331		MODULE-01_MP151 - MP146	121	14-Jan-20	01-Apr-20	17-Dec-21	26-May-22	100%	100%						
332		MODULE-02_MP156 - MP152	165	05-Sep-19	23-Nov-19	17-Feb-22		100%	63%						
333		MODULE-03_MP161 - MP157	144	28-May-19	31-Aug-19	22-Mar-22		100%	20%						
334		MODULE-04_MP166 - MP162	118	15-Mar-19	24-May-19	21-Apr-22		100%	20%						
335		MODULE-05_MP171 - MP167	82	15-Nov-19	18-Jan-20			100%	0%						
336		MAIN BRIDGE BEARING PAD AND BEARING INSTALLATION	848	22-Feb-19	24-Sep-21	14-Sep-20		100%	90.39%						
337		MAIN BRIDGE BEARING_LAND 17+414-18+188 FROM MB251 TO MB266	393	22-Feb-19	22-Aug-19	11-Feb-21	04-Jun-22	100%	100%						
338		MAIN BRIDGE BEARING_CRZ 15+890-17+414 FROM MB226 TO MB250	392	08-May-19	20-Feb-20	03-Sep-21		100%	100%						
339		MAIN BRIDGE BEARING_INTERTIDAL 14+800-15+890 FROM MB206 TO MB225	28	25-Jun-19	14-Sep-20	01-Oct-21	11-Feb-22	100%	100%						
340		MAIN BRIDGE BEARING_MARINE 13+610-14+800 FROM MB187 TO MB205	226	07-Apr-20	09-Feb-21	22-Feb-21		100%	60%						
341		MAIN BRIDGE BEARING_MARINE (STEEL) 11+880-13+610 FROM MB171 TO MB186	453	19-May-20	24-Sep-21	22-Dec-21		100%	92.74%						
342		MAIN BRIDGE BEARING_MARINE 10+380-11+880 FROM MB146 TO MB170	55	25-Apr-19	18-Apr-20			100%	0%						
343		MAIN BRIDGE SUPER STRUCTURE BOX GIRDER INSTALLATION	1133	12-Sep-19	1-Mar-22	20-Jul-20		100%	61.72%						
344		MAIN BRIDGE CONCRETE GIRDER INSTALLATION	1098	12-Sep-19	07-Feb-22	20-Jul-20		100%	68.29%						
345		MAIN BRIDGE PG GIRDER_LAND 15+890-17+414 FROM MP251 TO MP266	766	12-Sep-19	27-Feb-20	20-Jul-20		100%	100%						
346	CNLGA.1000	Assembly of Structural Parts in Launching Gantry_1	35	12-Sep-19	17-Oct-19	12-Nov-20	17-Feb-21	100%	100%						
347	CNLGA.1005	Assembly of Mechanical Parts in Launching Gantry_1	15	17-Oct-19	01-Nov-19	05-Feb-21	06-Mar-21	100%	100%						
348	CNLGA.1010	Assembly of Structural Parts in Launching Gantry_2	35	12-Sep-19	17-Oct-19	20-Jul-20	25-Dec-20	100%	100%						
349	CNLGA.1015	Assembly of Mechanical Parts in Launching Gantry_2	15	17-Oct-19	01-Nov-19	28-Sep-20	30-Dec-20	100%	100%						
350		MODULE-22_MP266 - MP262	191	01-Nov-19	25-Dec-19	02-Jul-21	29-Mar-22	100%	100%						
351		MODULE-21_MP261 - MP257	192	02-Dec-19	23-Jan-20	18-Sep-21	25-May-22	100%	100%						
352		MODULE-20_MP256 - MP255	162	31-Dec-19	04-Feb-20	06-Nov-21	15-Jun-22	100%	100%						
353		MODULE-19_MP264 - MP250	161	11-Jan-20	27-Feb-20	26-Nov-21	02-Jul-22	100%	100%						
354		MAIN BRIDGE PRECAST GIRDER_CRZ 15+890-17+414 FROM MP226 TO MP250	214	04-Feb-20	25-Sep-20	30-Dec-20	25-Aug-22	100%	100%						
355		MODULE-18_MP249 - MP246	104	04-Feb-20	28-Mar-20	20-Dec-21	25-Aug-22	100%	100%						
356		MODULE-17_MP245 - MP241	74	05-Mar-20	27-Apr-20	30-Dec-20	16-May-21	100%	100%						
357		MODULE-16_MP240 - MP237	37	03-Apr-20	21-May-20	13-Apr-21	03-Aug-21	100%	100%						
358		MODULE-15_MP236 - MP232	31	27-Apr-20	19-Jun-20	06-Jul-21	22-Sep-21	100%	100%						
359		MODULE-14_MP231 - MP227	42	27-May-20	25-Sep-20	27-Aug-21	10-Nov-21	100%	100%						
360		MAIN BRIDGE PRECAST GIRDER_INTERTIDAL 14+800-15+890 FROM MP206 TO MP225	94	12-Sep-20	23-Jan-21	25-Oct-21	11-Apr-22	100%	100%						
361		MODULE-13_MP226 - MP222	39	12-Sep-20	21-Oct-20	25-Oct-21	10-Dec-21	100%	100%						
362		MODULE-12_MP221 - MP217	65	08-Oct-20	20-Nov-20	20-Nov-21	14-Jan-22	100%	100%						
363		MODULE-11_MP216 - MP212	85	09-Nov-20	19-Dec-20	27-Dec-21	27-Feb-22	100%	100%						
364		MODULE-10_MP211 - MP207	84	08-Dec-20	23-Jan-21	31-Jan-22	11-Apr-22	100%	100%						
365		MAIN BRIDGE PRECAST GIRDER_MARINE 13+610-14+800 FROM MP187 TO MP205	164	12-Jan-21	10-Jun-21	19-Mar-22		100%	56.62%						
366	CNLGD.1000	Dismantling of Launching Gantry_1	20	18-May-21	10-Jun-21			100%	0%						
367	CNLGD.1010	Dismantling of Launching Gantry_2	20	12-May-21	03-Jun-21	14-Sep-22	20-Sep-22	100%	100%						
368		MODULE-09_MP206 - MP202	47	12-Jan-21	17-Feb-21	19-Mar-22	12-May-22	100%	100%						
369		MODULE-08_MP201 - MP197	26	05-Feb-21	19-Mar-21	17-Apr-22	27-Jun-22	100%	100%						
370		MODULE-07_MP196 - MP192	88	08-Mar-21	17-Apr-21	03-Jun-22		100%	36.85%						
371		MODULE-06_MP191 - MP187	54	12-Apr-21	18-May-21			100%	0%						

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(MMRDA)

CONTRACTOR:
DAEWOO - TPL JV

Date	Revision	Checked	Approved
25-Sep-22	R0		



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

ANNEXURE-5 CONSTRUCTION UPDATED
PROGRAMME_ABSTRACT (PACKAGE-2)

#	Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Actual Start	Actual Finish	Schedule % Complete	Performance % Complete	2018	2019	2020	2021	2022	2023
247		MODULE-15_MP236 - MP232	201	02-Sep-19	22-Nov-19	16-Nov-19	16-Sep-20	100%	100%						
248		MODULE-16_MP240 - MP237	146	02-Jul-19	26-Sep-19	26-Aug-19	06-Mar-20	100%	100%						
249		MODULE-17_MP245 - MP241	96	29-Apr-19	16-Aug-19	17-Nov-19	24-Jan-20	100%	100%						
250		MODULE-18_MP249 - MP246	84	04-Mar-19	10-May-19	13-Nov-19	14-Feb-20	100%	100%						
251		MAIN BRIDGE PILE CAP_INTERTIDAL 14+800-15+890 FROM MP206 TO MP225	199	18-Apr-19	05-Sep-20	29-Jan-20	07-Dec-20	100%	100%						
252		MODULE-10_MP211 - MP207	96	27-Apr-20	05-Sep-20	29-Jan-20	07-Oct-20	100%	100%						
253		MODULE-11_MP216 - MP212	167	18-Apr-19	13-May-20	31-Aug-20	24-Oct-20	100%	100%						
254		MODULE-12_MP221 - MP217	111	22-May-19	09-Dec-19	17-Sep-20	07-Dec-20	100%	100%						
255		MODULE-13_MP226 - MP222	94	14-Dec-19	17-Mar-20	16-Sep-20	19-Nov-20	100%	100%						
256		MAIN BRIDGE PILE CAP_MARINE 13+610-14+800 FROM MP187 TO MP205	413	01-Feb-20	06-Jan-21	13-Jan-20	23-May-22	100%	100%						
257		MODULE-09_MP206 - MP202	288	01-Feb-20	13-Jan-20	20-Nov-20		100%	100%						
258		MODULE-08_MP201 - MP197	63	03-Apr-20	06-Jul-20	23-Nov-20	04-Mar-21	100%	100%						
259		MODULE-07_MP196 - MP192	97	15-Jun-20	11-Nov-20	01-Dec-20	23-May-22	100%	100%						
260		MODULE-06_MP191 - MP187	90	21-Oct-20	06-Jan-21	14-Dec-20	30-Jan-21	100%	100%						
261		MAIN BRIDGE PILE CAP_MARINE (STEEL) 11+880-13+610 FROM MP171 TO MP186	485	20-Jan-20	23-Mar-21	18-Nov-20		100%	99.3%						
262		STEEL MODULE-01_MP176 - MP171	154	21-Nov-20	23-Mar-21	13-Dec-21		100%	91.67%						
263		STEEL MODULE-02_MP182 - MP177	158	20-Jan-20	02-Nov-20	18-Nov-20	08-Mar-21	100%	100%						
264		STEEL MODULE-03_MP186 - MP183	320	27-Aug-20	07-Jan-21	28-Jan-21	28-May-22	100%	100%						
265		MAIN BRIDGE PILE CAP_MARINE 10+380-11+880 FROM MP146 TO MP170	323	03-Jan-19	17-Feb-20	08-Feb-21	23-Mar-22	100%	100%						
266		MODULE-05_MP171 - MP167	119	10-Sep-19	25-Nov-19	13-Apr-21	22-Jan-22	100%	100%						
267		MODULE-04_MP166 - MP162	283	03-Jan-19	29-Mar-19	01-Mar-21	23-Mar-22	100%	100%						
268		MODULE-03_MP161 - MP157	141	14-Mar-19	08-Jul-19	08-Feb-21	28-Oct-21	100%	100%						
269		MODULE-02_MP156 - MP152	54	27-May-19	26-Sep-19	06-Mar-21	27-May-21	100%	100%						
270		MODULE-01_MP151 - MP146	192	14-Nov-19	17-Feb-20	22-Feb-21	03-Nov-21	100%	100%						
271		MAIN BRIDGE SUB-STRUCTURE	1276	09-Jan-19	24-Sep-21	04-Nov-19		100%	89.74%						
272		MAIN BRIDGE PIER INSTALLATION	1793	09-Jan-19	28-Jul-21	04-Nov-19		100%	96.76%						
273		MAIN BRIDGE PIER_LAND 17+414-18+188 FROM MB251 TO MB266	63	09-Jan-19	08-Nov-19	06-Nov-19	27-Aug-21	100%	100%						
274		MODULE-21_MP261 - MP257	301	14-Jan-19	12-Jul-19	27-May-20	03-May-21	100%	100%						
275		MODULE-22_MP266 - MP262	315	04-May-19	08-Nov-19	06-Nov-19	02-Feb-21	100%	100%						
276		MODULE-20_MP256 - MP255	225	08-Jan-19	17-May-19	11-May-20	21-Jun-21	100%	100%						
277		MODULE-19_MP254 - MP250	336	28-Feb-19	20-Sep-19	15-Jun-20	27-Aug-21	100%	100%						
278		MAIN BRIDGE PIER_CRZ 15+890-17+414 FROM MB226 TO MB250	393	26-Mar-19	06-Feb-20	04-Nov-19	11-Aug-21	100%	100%						
279		MODULE-14_MP231 - MP227	228	05-Dec-19	06-Feb-20	02-Feb-20	22-Jan-21	100%	100%						
280		MODULE-15_MP236 - MP232	134	16-Oct-19	19-Dec-19	06-Jan-20	06-Nov-20	100%	100%						
281		MODULE-16_MP240 - MP237	85	13-Aug-19	30-Oct-19	04-Nov-19	27-Jun-20	100%	100%						
282		MODULE-17_MP245 - MP241	171	22-May-19	25-Sep-19	24-Dec-19	23-Jun-20	100%	100%						
283		MODULE-18_MP249 - MP246	238	26-Mar-19	06-Jun-19	02-Mar-20	11-Aug-21	100%	100%						
284		MAIN BRIDGE PIER_INTERTIDAL 14+800-15+850 FROM MB206 TO MB225	417	11-May-19	16-Oct-20	10-Feb-20	08-Jun-21	100%	100%						
285		MODULE-10_MP211 - MP207	338	24-Feb-20	16-Oct-20	10-Feb-20	03-Feb-21	100%	100%						
286		MODULE-11_MP216 - MP212	386	11-May-19	17-Jul-20	13-Nov-20	22-Mar-21	100%	100%						
287		MODULE-12_MP221 - MP217	97	17-Jun-19	03-Jan-20	30-Nov-20	08-Jun-21	100%	100%						
288		MODULE-13_MP226 - MP222	235	06-Jan-20	15-May-20	29-Oct-20	20-Feb-21	100%	100%						
289		MAIN BRIDGE PIER_MARINE 13+610-14+800 FROM MB187 TO MB205	316	19-Mar-20	18-Feb-21	04-Jan-21		100%	96.07%						
290		MODULE-06_MP191 - MP187	173	13-Nov-20	18-Feb-21	19-Oct-21	24-Jan-22	100%	100%						
291		MODULE-07_MP196 - MP192	176	17-Jul-20	19-Dec-20	28-Apr-21		100%	87.66%						
292		MODULE-08_MP201 - MP197	162	25-Apr-20	03-Sep-20	04-Jan-21	16-Oct-21	100%	100%						
293		MODULE-09_MP206 - MP202	66	19-Mar-20	23-May-20	18-Jan-21	18-Mar-21	100%	100%						
294		MAIN BRIDGE PIER_MARINE (STEEL) 11+880-13+610 FROM MB171 TO MB186	544	17-Feb-20	28-Jul-21	08-Feb-21		100%	80.36%						
295		STEEL MODULE-01_MP176 - MP171	236	23-Dec-20	28-Jul-21	21-Jan-22		100%	67.33%						
296		STEEL MODULE-02_MP182 - MP177	170	17-Feb-20	15-Jan-21	08-Feb-21	18-Jan-22	100%	100%						
297		STEEL MODULE-03_MP186 - MP183	290	06-Oct-20	03-Apr-21	12-Oct-21		100%	70.5%						
298		MAIN BRIDGE PIER_MARINE 10+380-11+880 FROM MB146 TO MB170	187	07-Feb-19	13-Mar-20	20-Sep-21	17-May-22	100%	100%						
299		MODULE-01_MP151 - MP146	129	10-Dec-19	13-Mar-20	20-Sep-21	07-Jan-22	100%	100%						
300		MODULE-02_MP156 - MP152	77	11-Jul-19	04-Nov-19	25-Oct-21	29-Jan-22	100%	100%						
301		MODULE-03_MP161 - MP157	61	22-Apr-19	01-Aug-19	31-Dec-21	12-Mar-22	100%	100%						
302		MODULE-04_MP166 - MP162	84	07-Feb-19	06-May-19	24-Jan-22	28-Apr-22	100%	100%						
303		MODULE-05_MP171 - MP167	69	10-Oct-19	31-Dec-19	18-Feb-22	17-May-22	100%	100%						
304		MAIN BRIDGE PIER CAP INSTALLATION	979	08-Feb-19	27-Aug-21	25-Feb-20		100%	80.01%						
305		MAIN BRIDGE PIER CAP_LAND 17+414-18+188 FROM MB251 TO MB266	313	08-Feb-19	23-Nov-19	13-Nov-20	17-Jan-22	100%	100%						
306		MODULE-21_MP261 - MP257	159	13-Feb-19	05-Aug-19	11-Feb-21	14-Oct-21	100%	100%						
307		MODULE-22_MP266 - MP262	114	03-Jun-19	23-Nov-19	13-Nov-20	13-Mar-21	100%	100%						
308		MODULE-20_MP256 - MP255	182	08-Feb-19	01-Jun-19	07-Jan-21	22-Nov-21	100%	100%						
309		MODULE-19_MP254 - MP250	212	30-Mar-19	09-Oct-19	01-Mar-21	17-Jan-22	100%	100%						

Project Baseline Bar
 Critical Remaining Work
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EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY
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#	Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Actual Start	Actual Finish	Schedule % Complete	Performance % Complete	2018	2019	2020	2021	2022	2023
372		MAIN BRIDGE PRECAST GIRDER, MARINE 10+380-11+880 FROM MP146 TO MP170	148	04-Jun-21	02-Feb-22	21-Sep-22		100%	0%						
373	CNLGA.1020	Assembling of Launching Gantry_1	20	10-Jun-21	03-Sep-21			100%	0%						
374	CNLGA.1030	Assembling of Launching Gantry_2	20	04-Jun-21	26-Jun-21	21-Sep-22		100%	50%						
375		MODULE-05_MP171 - MP167	28	28-Dec-21	02-Feb-22			100%	0%						
376		MODULE-04_MP166 - MP162	28	29-Nov-21	03-Jan-22			100%	0%						
377		MODULE-03_MP161 - MP157	28	30-Oct-21	04-Dec-21			100%	0%						
378		MODULE-02_MP156 - MP152	28	29-Sep-21	05-Nov-21			100%	0%						
379		MODULE-01_MP151 - MP146	28	28-Jun-21	06-Oct-21			100%	0%						
380		STITCH JOINT CASTING	571	07-Dec-19	12-Feb-22	12-Jan-21		0%	0%						
381		MAIN BRIDGE STITCH JOINT CASTING, LAND 15+890-17+414 FROM MP251 TO MP255	263	07-Dec-19	16-Mar-20	08-Jul-21	28-Jun-22	0%	0%						
382		MODULE-19_MP254 - MP250	106	10-Feb-20	16-Mar-20	29-Nov-21	28-Jun-22	0%	0%						
383		MODULE-20_MP256 - MP255	156	17-Jan-20	16-Feb-20	10-Nov-21	13-Jun-22	0%	0%						
384		MODULE-21_MP261 - MP257	209	06-Jan-20	08-Feb-20	23-Sep-21	19-May-22	0%	0%						
385		MODULE-22_MP266 - MP262	175	07-Dec-19	10-Jan-20	08-Jul-21	25-Mar-22	0%	0%						
386		MAIN BRIDGE STITCH JOINT CASTING, CRZ 15+890-17+414 FROM MP226 TO MP250	206	11-Mar-20	13-Oct-20	12-Jan-21	23-Aug-22	0%	0%						
387		MODULE-14_MP231 - MP227	29	19-Sep-20	13-Oct-20	02-Sep-21	08-Nov-21	0%	0%						
388		MODULE-15_MP236 - MP232	19	02-Jun-20	09-Jul-20	10-Jul-21	20-Sep-21	0%	0%						
389		MODULE-16_MP240 - MP237	19	04-May-20	06-Jun-20	23-Apr-21	31-Jul-21	0%	0%						
390		MODULE-17_MP245 - MP241	41	09-Apr-20	14-May-20	12-Jan-21	12-May-21	0%	0%						
391		MODULE-18_MP249 - MP246	142	11-Mar-20	14-Apr-20	29-Dec-21	23-Aug-22	0%	0%						
392		MAIN BRIDGE STITCH JOINT CASTING, INTERTIDAL 14+800-15+890 FROM MP206 TO MP225	155	14-Oct-20	10-Feb-21	27-Oct-21	07-Apr-22	0%	0%						
393		MODULE-10_MP211 - MP207	43	18-Jan-21	10-Feb-21	03-Feb-22	07-Apr-22	0%	0%						
394		MODULE-11_MP216 - MP212	112	14-Dec-20	05-Jan-21	30-Dec-21	25-Feb-22	0%	0%						
395		MODULE-12_MP221 - MP217	97	14-Nov-20	07-Dec-20	24-Nov-21	12-Jan-22	0%	0%						
396		MODULE-13_MP226 - MP222	28	14-Oct-20	06-Nov-20	27-Oct-21	08-Dec-21	0%	0%						
397		MAIN BRIDGE STITCH JOINT CASTING, MARINE 13+610-14+800 FROM MP187 TO MP205	127	11-Feb-21	21-Jun-21	21-Mar-22		0%	0%						
398		MODULE-06_MP191 - MP187	16	04-Jun-21	21-Jun-21			0%	0%						
399		MODULE-07_MP196 - MP192	72	17-Apr-21	05-May-21	07-Jun-22		0%	0%						
400		MODULE-08_MP201 - MP197	59	13-Mar-21	05-Apr-21	20-Apr-22	25-Jun-22	0%	0%						
401		MODULE-09_MP206 - MP202	34	11-Feb-21	06-Mar-21	21-Mar-22	09-May-22	0%	0%						
402		MAIN BRIDGE STITCH JOINT CASTING, MARINE 10+380-11+880 FROM MP146 TO MP170	107	06-Oct-21	12-Feb-22			0%	0%						
403		MODULE-01_MP151 - MP146	12	06-Oct-21	23-Oct-21			0%	0%						
404		MODULE-02_MP156 - MP152	12	05-Nov-21	22-Nov-21			0%	0%						
405		MODULE-03_MP161 - MP157	12	04-Dec-21	21-Dec-21			0%	0%						
406		MODULE-04_MP166 - MP162	12	03-Jan-22	19-Jan-22			0%	0%						
407		MODULE-05_MP171 - MP167	12	27-Jan-22	12-Feb-22			0%	0%						
408		MAIN BRIDGE STEEL GIRDER INSTALLATION	397	03-Oct-20	01-Mar-22	01-Jan-22		100%	23.33%						
409		MAN BRIDGE STEEL GIRDER INSTALLATION, MARINE 11+880-13+610 FROM MP171 TO MP186	391	03-Oct-20	01-Mar-22	01-Jan-22		100%	23.33%						
410		STEEL MODULE-01_MP176 - MP171 (INSTALLATION)	114	07-Dec-21	01-Mar-22			100%	0%						
411		STEEL MODULE-02_MP182 - MP177 (INSTALLATION)	138	03-Oct-20	30-Sep-21	01-Jan-22		100%	58.33%						
412		STEEL MODULE-03_MP186 - MP183 (INSTALLATION)	83	30-Sep-21	07-Dec-21			100%	0%						
413		MISCELLANEOUS & FINISHING WORKS	644	16-May-19	24-May-22	30-Mar-21		100%	0.79%						
414		CRASH BARRIER & GURARD RAILS	365	20-Feb-20	07-Mar-22	25-Jul-22		100%	2.54%						
415		WATER PROOFING	333	26-Mar-20	17-Mar-22			100%	0%						
416		PAVEMENT	413	16-Mar-20	24-May-22			100%	0%						
417		EXPANSION JOINT	283	27-May-20	21-Apr-22			100%	0%						
418		SUB STATION	271	18-May-19	15-Apr-21	30-Mar-21		100%	0%						
419		NOISE BARRIER	154	16-Mar-20	14-Sep-21			100%	0%						
420		FENDER INSTALLATION	80	24-Jul-21	24-Nov-21			100%	0%						
421		DRAINAGE WORKS	322	16-Mar-20	09-Mar-22			100%	0%						
422		SIGN BOARDS	60	12-Feb-22	23-Apr-22			100%	0%						
423		INTERCHANGE	1451	24-Dec-18	28-Apr-22	09-Oct-19		100%	7.15%						
424		INTERCHANGE FOUNDATION	590	24-Dec-18	22-Oct-20	09-Oct-19	26-May-21	100%	100%						
425		INTERCHANGE RAMP PILE FOUNDATION	475	24-Dec-18	05-Mar-20	09-Oct-19	13-May-21	100%	100%						
426		INTERCHANGE RAMP PILE FDN_MA	182	05-Aug-19	03-Jan-20	09-Oct-19	13-May-21	100%	100%						
427		MODULE_23_MAA2-MAP4	75	05-Aug-19	02-Nov-19	13-Jan-20	28-Jun-20	100%	100%						
428		MODULE_24_MAP4-MP246	137	02-Nov-19	03-Jan-20	09-Oct-19	13-May-21	100%	100%						
429		INTERCHANGE RAMP PILE FDN_AC	107	01-Oct-19	05-Mar-20	25-Oct-19	16-Aug-20	100%	100%						
430		MODULE_33_ACA2-ACP5	60	01-Oct-19	19-Dec-19	25-Oct-19	16-Aug-20	100%	100%						
431		MODULE_34_ACP5-MP256	62	19-Dec-19	05-Mar-20	02-Nov-19	25-Feb-20	100%	100%						
432		INTERCHANGE RAMP PILE FDN_JM	178	03-Jan-19	05-Aug-19	26-Nov-19	07-May-21	100%	100%						
433		MODULE_25_MP245-JMP4	178	22-Apr-19	05-Aug-19	26-Nov-19	23-Apr-21	100%	100%						
434		MODULE_26_JMP4-JMP8	88	19-Feb-19	20-Apr-19	01-Dec-20	17-Feb-21	100%	100%						

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										Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
435	MODULE_27_JMP8-JMA2		64	03-Jan-19	18-Feb-19	23-Mar-21	07-May-21	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
436	INTERCHANGE RAMP PILE FDN_MJ		79	03-Jan-19	01-Oct-19	04-Dec-19	27-Nov-20	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
437	MODULE_35_MJA2-MJP9		45	03-Jan-19	21-Mar-19	16-Sep-20	27-Nov-20	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
438	MODULE_36_MJP9-MJP4		63	22-Mar-19	10-Jun-19	15-Jan-20	26-Aug-20	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
439	MODULE_37_MJP4-MP252		52	11-Jun-19	01-Oct-19	04-Dec-19	20-Mar-20	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
440	INTERCHANGE RAMP PILE FDN_CA		100	28-May-19	23-Jan-20	01-Nov-19	27-Apr-21	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
441	MODULE_28_MP249-CAP4		64	08-Nov-19	23-Jan-20	01-Nov-19	27-Apr-21	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
442	MODULE_29_CAP4-CAP8		62	14-Aug-19	08-Nov-19	21-Nov-20	19-Mar-21	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
443	MODULE_30_CAP8-CAA2		49	28-May-19	14-Aug-19	05-Jan-21	24-Feb-21	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
444	INTERCHANGE RAMP PILE FDN_AM		290	24-Dec-18	27-May-19	06-Feb-20	04-Jan-21	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
445	MODULE_31_MAA2-AMP4		187	24-Dec-18	26-Mar-19	07-Feb-20	10-Sep-20	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
446	MODULE_32_AMP4-MP259		237	27-Mar-19	27-May-19	06-Feb-20	04-Jan-21	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
447	INTERCHANGE RAMP PILE CAP INSTALLATION		525	08-Jan-19	22-Oct-20	22-Oct-19	26-May-21	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
448	INTERCHANGE RAMP PILE CAP_MA		182	06-Dec-19	15-May-20	22-Oct-19	26-May-21	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
449	MODULE_23_MAA2-MAP4		95	06-Dec-19	24-Feb-20	22-Jan-20	24-Jul-20	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
450	MODULE_24_MAP4-MP246		86	24-Feb-20	15-May-20	22-Oct-19	26-May-21	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
451	INTERCHANGE RAMP PILE CAP_AC		183	15-Jan-20	22-Oct-20	02-Nov-19	07-Sep-20	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
452	MODULE_33_ACA2-ACP5		132	15-Jan-20	24-Apr-20	18-Nov-19	07-Sep-20	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
453	MODULE_34_ACP5-MP256		114	24-Apr-20	22-Oct-20	02-Nov-19	09-Mar-20	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
454	INTERCHANGE RAMP PILE CAP_JM		136	18-Jan-19	06-Dec-19	11-Dec-19	25-May-21	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
455	MODULE_25_MP245-JMP4		135	18-Jun-19	06-Dec-19	11-Dec-19	15-May-21	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
456	MODULE_26_JMP4-JMP8		92	21-Mar-19	17-Jun-19	23-Dec-20	23-Feb-21	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
457	MODULE_27_JMP8-JMA2		40	18-Jan-19	20-Mar-19	02-Apr-21	25-May-21	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
458	INTERCHANGE RAMP PILE CAP_MJ		145	18-Jan-19	15-Jan-20	16-Dec-19	19-Dec-20	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
459	MODULE_35_MJA2-MJP9		123	18-Jan-19	29-Apr-19	08-Oct-20	19-Dec-20	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
460	MODULE_36_MJP9-MJP4		62	30-Apr-19	26-Oct-19	03-Mar-20	03-Sep-20	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
461	MODULE_37_MJP4-MP252		58	26-Oct-19	15-Jan-20	16-Dec-19	01-Jun-20	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
462	INTERCHANGE RAMP PILE CAP_CA		158	15-Oct-19	27-Jun-20	02-Dec-19	05-May-21	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
463	MODULE_28_MP249-CAP4		87	05-Mar-20	27-Jun-20	02-Dec-19	05-May-21	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
464	MODULE_29_CAP4-CAP8		70	16-Dec-19	05-Mar-20	30-Nov-20	30-Mar-21	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
465	MODULE_30_CAP8-CAA2		53	15-Oct-19	16-Dec-19	19-Jan-21	02-Mar-21	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
466	INTERCHANGE RAMP PILE CAP_AM		245	08-Jan-19	15-Oct-19	15-Feb-20	13-Jan-21	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
467	MODULE_31_MAA2-AMP4		176	08-Jan-19	09-May-19	15-Feb-20	21-Sep-20	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
468	MODULE_32_AMP4-MP259		89	10-May-19	15-Oct-19	07-Mar-20	13-Jan-21	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
469	INTERCHANGE SUBSTRUCTURE & BEARING		613	29-Jan-19	31-May-21	24-Dec-19		100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
470	INTERCHANGE RAMP PIER INSTALLATION		596	29-Jan-19	27-Apr-21	24-Dec-19	12-Sep-22	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
471	INTERCHANGE RAMP PIER_MA		169	18-Mar-20	29-Dec-20	24-Dec-19	18-Sep-21	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
472	MODULE_23_MAA2-MAP4		118	18-Mar-20	10-Aug-20	19-Feb-20	26-Feb-21	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
473	MODULE_24_MAP4-MP246		150	10-Aug-20	29-Dec-20	24-Dec-19	18-Sep-21	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
474	INTERCHANGE RAMP PIER_AC		249	16-May-20	27-Apr-21	19-May-20	18-Dec-21	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
475	MODULE_33_ACA2-ACP5		96	16-May-20	30-Nov-20	19-May-20	27-Sep-21	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
476	MODULE_34_ACP5-MP256		249	30-Nov-20	27-Apr-21	17-Jun-20	18-Dec-21	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
477	INTERCHANGE RAMP PIER_JM		138	08-Feb-19	18-Mar-20	15-Jan-20	29-Jul-22	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
478	MODULE_25_MP245-JMP4		122	22-Oct-19	18-Mar-20	15-Jan-20	29-Jul-22	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
479	MODULE_26_JMP4-JMP8		100	09-May-19	22-Oct-19	01-Feb-21	13-Jun-22	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
480	MODULE_27_JMP8-JMA2		63	08-Feb-19	08-May-19	12-Apr-21	05-Jan-22	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
481	INTERCHANGE RAMP PIER_MJ		234	08-Feb-19	16-May-20	07-Sep-20	20-Nov-21	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
482	MODULE_35_MJA2-MJP9		134	08-Feb-19	26-Jul-19	02-Nov-20	29-Jul-21	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
483	MODULE_36_MJP9-MJP4		145	27-Jul-19	18-Jan-20	07-Sep-20	22-Oct-21	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
484	MODULE_37_MJP4-MP252		100	18-Jan-20	16-May-20	02-Feb-21	20-Nov-21	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
485	INTERCHANGE RAMP PIER_CA		230	08-Jan-20	16-Feb-21	27-Apr-20	02-May-22	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
486	MODULE_28_MP249-CAP4		159	10-Sep-20	16-Feb-21	27-Apr-20	02-May-22	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
487	MODULE_29_CAP4-CAP8		91	06-Apr-20	10-Sep-20	19-Dec-20	28-Feb-22	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
488	MODULE_30_CAP8-CAA2		54	08-Jan-20	06-Apr-20	19-Jan-21	27-Jan-22	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
489	INTERCHANGE RAMP PIER_AM		268	29-Jan-19	08-Jan-20	26-Sep-20	12-Sep-22	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
490	MODULE_31_MAA2-AMP4		177	29-Jan-19	27-Aug-19	14-Mar-21	12-Sep-22	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
491	MODULE_32_AMP4-MP259		187	27-Aug-19	08-Jan-20	26-Sep-20	30-Aug-22	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
492	INTERCHANGE BEARING INSTALLATION		295	27-Feb-19	31-May-21	08-Sep-21		0%	0%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
493	INTERCHANGE SUPERSTRUCTURE INSTALLATION		496	20-Sep-19	15-Feb-22	18-Sep-21		100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
494	INTERCHANGE BOX GIRDER INSTALLATION_MA		180	09-Jan-21	03-Jan-22	18-Sep-21	22-Apr-22	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
495	MODULE_23_MAA2-MAP6-MAP5-MAP4		134	09-Jan-21	21-Jun-21	18-Sep-21	08-Mar-22	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
496	MODULE_24_MAP4-MAP3-MAP2-MAP1-MP246		61	21-Jun-21	03-Jan-22	01-Oct-21	22-Apr-22	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											
497	INTERCHANGE BOX GIRDER INSTALLATION_AC		140	27-Feb-21	27-Dec-21	01-Nov-21	20-Sep-22	100%	100%	Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart												Gantt Chart											

— Project Baseline Bar — Critical Remaining Work ▶ Summary
█ Actual Work ◆ Milestone
█ Remaining Work ▬ % Complete

EMPLOYER:
MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY (MMRDA)

CONTRACTOR:
DAEWOO - TPL JV

Date	Revision	Checked	Approved
25-Sep-22	R0		



#	Activity ID	Activity Name	Original Duration	BL Project Start	BL Project Finish	Actual Start	Actual Finish	Schedule % Complete	Performance % Complete	2018	2019	2020	2021	2022	2023
498	MODULE_33_ACA2-ACP8-ACP7-ACP6-ACP5		140	27-Feb-21	08-Sep-21	01-Nov-21	10-Apr-22	100%	100%						
499	MODULE_34_ACP5-ACP4-ACP3-ACP2-ACP1-MP256		122	31-May-21	27-Dec-21	07-Apr-22	20-Sep-22	100%	100%						
500	INTERCHANGE BOX GIRDER INSTALLATION_JM		211	11-Mar-20	26-Feb-21	30-Aug-22		100%	33%						
501	MODULE_25_MP245-JMP1-JMP2-JMP3-JMP4		130	19-Aug-20	09-Feb-21			100%	0%						
502	MODULE_26_JMP4-JMP5-JMP6-JMP7-JMP8		90	29-Sep-20	26-Feb-21	30-Aug-22		100%	84%						
503	MODULE_27_JMP8-JMP9-JMP10-JMA2		121	11-Mar-20	29-Sep-20	08-Sep-22		100%	5%						
504	INTERCHANGE BOX GIRDER INSTALLATION_MJ		188	20-Sep-19	08-Jan-21	17-Mar-22		100%	92.3%						
505	MODULE_35_MJA2-MJP12-MJP11-MJP10-MJP9		100	20-Sep-19	16-Mar-20	17-Mar-22	11-Jun-22	100%	100%						
506	MODULE_36_MJP9-MJP8-MJP7-MJP6-MJP5-MJP4		171	16-Mar-20	29-Oct-20	28-Mar-22	23-Aug-22	100%	100%						
507	MODULE_37_MJP4-MJP3-MJP2-MJP1-MP252		128	30-Jun-20	09-Jan-21	16-Jun-22		100%	75%						
508	INTERCHANGE BOX GIRDER INSTALLATION_CA		394	30-Oct-20	15-Feb-22			100%	0%						
509	MODULE_28_MP249-CAP1-CAP2-CAP3-CAP4		125	08-Sep-21	15-Feb-22			100%	0%						
510	MODULE_29_CAP4-CAP5-CAP6-CAP7-CAP8		145	09-Apr-21	23-Nov-21			100%	0%						
511	MODULE_30_CAP8-CAP9-CAP10-CAA2		135	30-Oct-20	08-Apr-21			100%	0%						
512	INTERCHANGE BOX GIRDER INSTALLATION_AM		130	14-Oct-19	19-Aug-20			100%	0%						
513	MODULE_31_AMA2-AMP8-AMP7-AMP6-AMP5-AMP4		125	14-Oct-19	11-Mar-20			100%	0%						
514	MODULE_32_AMP4-AMP3-AMP2-AMP1-MP259		130	10-Feb-20	19-Aug-20			100%	0%						
515	INTERCHANGE RETAINING STRUCTURE		174	11-Mar-19	06-Nov-20	15-May-21		100%	65.47%						
516	INTERCHANGE RETAINING STRUCTURE_AC		69	24-Jun-20	06-Nov-20	15-May-21	25-Mar-22	100%	0%						
517	INTERCHANGE RETAINING STRUCTURE_JM		76	11-Mar-19	08-May-19	24-Feb-22		100%	5.85%						
518	INTERCHANGE RETAINING STRUCTURE_MJ		101	09-May-19	11-Jul-19	18-Oct-21	06-Aug-22	100%	100%						
519	INTERCHANGE RETAINING STRUCTURE_CA		39	06-Feb-20	24-Mar-20	28-Dec-21		100%	75.5%						
520	INTERCHANGE RETAINING STRUCTURE_AM		41	12-Jul-19	24-Oct-19			100%	0%						
521	MISCELLANEOUS & FINISHING WORKS		444	19-Aug-20	28-Apr-22			100%	0%						
522	EXPANSION JOINT		416	01-Oct-20	22-Apr-22			0%	0%						
523	CRASH BARRIER & GURARD RAILS		388	19-Aug-20	21-Feb-22			100%	0%						
524	WATER PROOFING		388	10-Sep-20	08-Mar-22			100%	0%						
525	PAVEMENT		434	07-Sep-20	28-Apr-22			100%	0%						
526	DRAINAGE WORKS		388	28-Aug-20	26-Feb-22			100%	0%						
527	PROJECT HANDINGOVER		65	24-May-22	22-Sep-22			100%	0%						
528	DEFECT LIABILITY PERIOD (DLP)		730	22-Sep-22	21-Sep-24			0%	0%						
529	PRICE SCHEDULE		2490	23-Mar-18	21-Mar-23	23-Mar-18		98.67%	46.99%						
530	SCHEDULE-1		2490	23-Mar-18	21-Mar-23	23-Mar-18		96.32%	53.26%						
531	SCHEDULE-2		1644	23-Mar-18	22-Sep-22	23-Mar-18		100%	98.97%						
532	SCHEDULE-3		1644	23-Mar-18	22-Sep-22	23-Mar-18		100%	98%						
533	SCHEDULE-12		1644	23-Mar-18	22-Sep-22	23-Mar-18		100%	56.4%						
534	SCHEDULE-13		1644	23-Mar-18	22-Sep-22	23-Mar-18		100%	33.8%						
535	MTHL-PKG2-RAMBOLL DESIGN PROGRAMME_25092022_APPROVED_MPR.54		1573	15-Jan-18	17-Jun-22	16-Dec-17		100%	85.37%						

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

EMPLOYER:
 MUMBAI METROPOLITAN REGION DEVELOPMENT AUTHORITY
 (MMRDA)

CONTRACTOR:
 DAEWOO - TPL JV

Date	Revision	Checked	Approved
25-Sep-22	R0		



**Attachment 8- Package-3's Construction Programme
Updated as of 25th Sep 2022**



Activity ID	Activity Name	Original Duration	BL1 Start	BL1 Finish	Start	Finish	Activity % Complete	Schedule % Complete	Performance % Complete	Earned Value Cost	Budgeted Total Cost	Qtr 3, 2022				Qtr 4, 2022			Qtr 1, 2023			Qtr 2, 2023																							
												Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr																							
MTHL Pkg 3_MPR Schedule Sep'22																																													
Procurement of Mumbai Trans Harbo																																													
t	Commencement Date (CD)	0	23-Mar-18		23-Mar-18 A		100%	100%	100%	Rs0	Rs0																																		
Milestones (As level of effort)																																													
KD	KD1 [Construction programme, completio	0	30-Sep-19	30-Sep-19	30-Sep-19 A	30-Sep-19	100%	100%	100%	Rs0	Rs0																																		
KD	KD 2 [NOC for technical design doc & dra	0	29-Jun-20	29-Jun-20	29-Jun-20 A	29-Jun-20 A	100%	100%	100%	Rs0	Rs0																																		
KD	KD 3 [NOC for Good for construction draw	0	17-Aug-20	17-Aug-20	17-Aug-20 A	17-Aug-20	100%	100%	100%	Rs0	Rs0																																		
KD	KD 4 [Substantial completion of foundatio	0	27-Nov-20	27-Nov-20	27-Nov-20 A	27-Nov-20	100%	100%	100%	Rs0	Rs0																																		
KD	KD 5 [Substantial completion of pile caps	0	25-Dec-21	25-Dec-21	25-Dec-21 A	25-Dec-21	100%	100%	100%	Rs0	Rs0																																		
KD	KD 6 [Substantial completion superstructu	0	06-Dec-22	06-Dec-22	05-Jan-23	05-Jan-23	0%	0%	0%	Rs0	Rs0																																		
KD	KD 7 [Substantial completion of kerb/traffic	0	17-Feb-23	17-Feb-23	19-Apr-23	19-Apr-23	0%	0%	0%	Rs0	Rs0																																		
KD	KD 8 [Final completion & handing over]	0	03-Mar-23	03-Mar-23	03-May-23	03-May-23	0%	0%	0%	Rs0	Rs0																																		
Financial Milestone																																													
FM	Completion of the works amounting to 7%	0	23-Mar-18	31-Jul-19	23-Mar-18 A	31-Jul-19 A	100%	100%	100%	Rs0	Rs0																																		
FM	Completion of the works amounting to 25%	0	23-Mar-18	31-Jan-20	23-Mar-18 A	31-Jan-20 A	100%	100%	100%	Rs0	Rs0																																		
FM	Completion of the works amounting to 40%	0	23-Mar-18	22-Mar-20	23-Mar-18 A	22-Mar-20	100%	100%	100%	Rs0	Rs0																																		
FM	Final Completion and Handing over.	0	03-Mar-23	03-Mar-23	03-May-23	03-May-23	0%	0%	0%	Rs0	Rs0																																		
FM	Substantial completion of all Works and St	167	03-Sep-22	17-Feb-23	03-Nov-22	19-Apr-23	0%	13.17%	0%	Rs0	Rs0																																		
FM	Completion of the works amounting to 50%	231	23-Mar-18	31-May-20	23-Mar-18 A	31-May-20	100%	100%	100%	Rs0	Rs0																																		
FM	Completion of the works amounting to 85%	276	31-Oct-21	31-Oct-21	31-Oct-21 A	31-Oct-21 A	100%	100%	100%	Rs0	Rs0																																		
Interface Milestone																																													
Delay Events		1193	19-Apr-18	25-Jul-22	19-Apr-18 A	26-Sep-22	0%	0%	0%	Rs0	Rs0																																		
Document Submittals		45	06-Apr-18	30-Sep-19	06-Apr-18 A	30-Sep-19	100%	100%	100%	Rs74,992,895	Rs74,992,895																																		
Employer's Obligation / Land Handover		1153	23-Mar-18	25-Jul-22	23-Mar-18 A	26-Sep-22	0%	0%	0%	Rs0	Rs0																																		
Employer Office (Sch 01- General Item)		797	25-Jan-19	18-Dec-22	25-Jan-19 A	20-Jan-23	98.76%	97.51%	97.51%	Rs138,804,765	Rs142,351,965																																		
Survey & Geotechnical Investigation Works		346	19-Apr-18	30-Sep-19	19-Apr-18 A	30-Sep-19	100%	100%	100%	Rs242,300,773	Rs242,300,773																																		
Design Works		1043	25-Apr-18	25-Jul-22	25-Apr-18 A	26-Sep-22	100%	100%	100%	Rs159,122,500	Rs159,122,500																																		
Procurement Works		1000	15-Feb-19	25-Oct-22	15-Feb-19 A	06-Dec-22	99.52%	94.17%	94.17%	Rs1,306,322,068	Rs1,387,160,466																																		
Co-ordinated Fabrication & Manufacturing V		942	21-Feb-19	04-Sep-22	21-Feb-19 A	31-Oct-22	100%	98%	98%	Rs382,793,834	Rs390,605,953																																		
Construction Works																																													
Preconstruction Activity		1082	26-Sep-18	01-Nov-22	26-Sep-18 A	13-Dec-22	0%	0%	0%	Rs0	Rs0																																		
Sub Structures (Open Foundation, Pier, Pier C		1027	14-Nov-18	10-Oct-22	14-Nov-18 A	18-Nov-22	99.89%	99.35%	99.35%	Rs3,370,606,378	Rs3,392,806,946																																		
Super Structures		571	11-Sep-19	20-Jan-23	11-Sep-19 A	17-Feb-23	85.81%	83.54%	83.54%	Rs1,176,978,682	Rs1,408,927,164																																		
Bearings Installation		157	04-Nov-20	19-Dec-22	04-Nov-20 A	30-Jan-23	50.16%	41.18%	41.18%	Rs4,304,874	Rs10,454,695																																		
Bridge Ancillaries & Miscellaneous Item		185	27-Jul-22	02-Mar-23	05-Jul-22 A	01-May-23	19.08%	1.64%	1.64%	Rs1,277,620	Rs78,136,642																																		
RE Wall		135	22-Dec-21	06-Jan-23	22-Dec-21 A	06-Feb-23	40.7%	41.64%	41.64%	Rs187,455,890	Rs450,167,295																																		
At Grade work		920	16-Feb-19	16-Jan-23	16-Feb-19 A	16-Jan-23	99.81%	99.38%	99.38%	Rs1,504,901,611	Rs1,514,366,401																																		
Water Proofing		120	03-Oct-22	21-Feb-23	05-Dec-22	22-Apr-23	0%	0%	0%	Rs0	Rs6,259,406																																		
Asphalt Pavement, Kerb, traffic sign		79	21-Dec-22	27-Feb-23	27-Jan-23	28-Apr-23	0%	0%	0%	Rs0	Rs154,449,156																																		
Compound wall with safety fence		182	04-Jan-22	03-Feb-23	04-Jan-22 A	16-Mar-23	37.96%	2.92%	2.92%	Rs1,398,726	Rs47,897,735																																		
Completion of Interface Activity																																													
Testing & Commissioning Works		34	24-Jan-23	03-Mar-23	25-Mar-23	03-May-23	0%	0%	0%	Rs0	Rs0																																		

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



Attachment 9- Project Progress Photos for Sep 2022



Package 1- Site Progress Photos

Photo No. 1: LG-07 AP 40-41 installation in progress



Photo No. 2: OSD 2 SPAN 1SOUTH MP 69-70 loading out in progress



Photo No. 3: A view of erected OSD -4 Span





Photo No. 4: MP 113 S Pier Head Shuttering



Photo No. 5: BP 33 Cast in situ Shutter Checking



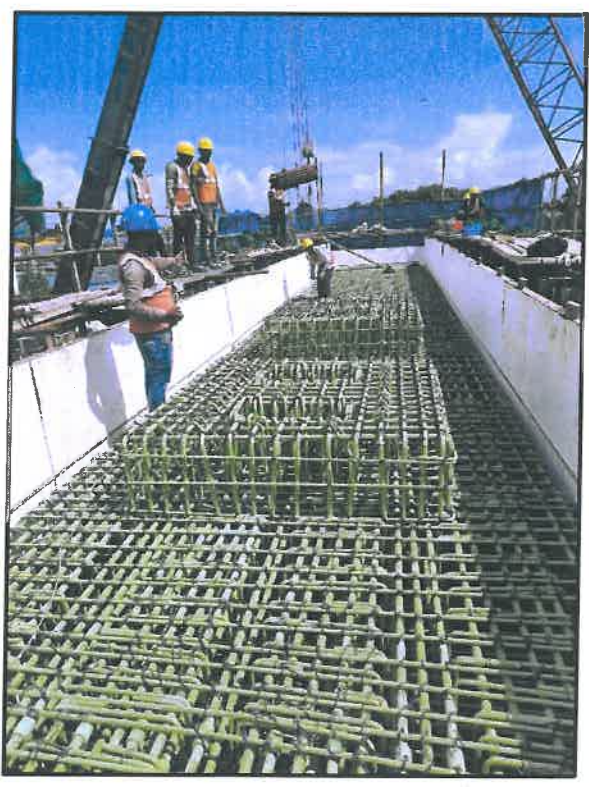


Photo No. 6: BP 33 Portal Pier Cap in progress



Photo No. 7: AP 35 Pier cap casting in progress





Photo No.8: EP 08-09 Top slab Cast in situ reinforcement in progress



Photo No. 9: MP 13 gantry lifting segment in progress





Photo No. 10: SE, MMRDA factory visit to Vada for composite girder



Photo No. 11: BP 33 portal pier cap casting in progress





Photo No. 12: A view of Sewri I/C from LPN 01 looking towards to the sea



Package 2 – Site Progress Photos



Photo No. 1: LG-1 Load Testing at MP 148A- MP 148B LHS in progress



Photo No. 2: Segment concreting at Bay-3 in progress





Photo No. 3: Outer Crash barrier formwork alignment at Span MP 222-223 LHS in progress



Photo No. 4: Pier cap concrete at MP 185 RHS in progress





Photo No. 5: Pile reinforcement cage inspection at MP 240 R Substation in progress



Photo No. 6: Median side crash barrier formwork fixing at Span MP 234-235 LHS in progress





Photo No. 7: Pier 1st lift concrete at MP 174 RHS in progress



Photo No. 8: Pile cap concrete at MP 171 LHS in progress





Photo No. 9: Integral pier head segment concrete at MP 190 LHS in progress



Photo No. 10: 7th OSD span erection at Span MP 178-179 LHS in progress





Photo No. 11: Segment concreting at Bay-1 in progress



Photo No. 12: Web concrete at Ramp JM in progress



Package 3 – Site Progress Photos



Photo No. 1: Gavan ROB structural works in progress



Photo No. 2: Gavan superstructure works in progress





Photo No. 3: Toll-plaza area ground clearance works in progress



Photo No. 4: Jasai viaduct works in progress





Photo No. 5: Chirle Interchange works in progress



Photo No. 6: Gavan ROB span RMP 274-275 deck concrete completed





Photo No. 7: Chirle Pier RP 28 L final lift shuttering works in progress



Photo No. 8: Chirle Pier cap LP 30 pedestal & seismic arrester pre-pour inspection works in progress





Photo No. 9: Chirle MJP Loop FDD inspection works in progress



Photo No. 10: Jasai ROB Span RP26-27 Girder's Erection completed





Photo No. 11: Jasai ROB Span LP25-26 Girder's Erection works in progress



Annexure-1 JICA Reimbursement backup-Aug-22



Reimbursement details for the month of Aug-2022 (Annexure-1)

Date of Disbursement	Amount of Disbursement in JPY
12-Aug-22	JPY 88,65,96,523
12-Aug-22	JPY 72,89,55,950
12-Aug-22	JPY 34,33,99,348
12-Aug-22	JPY 22,97,22,845
12-Aug-22	JPY 1,24,56,66,862
12-Aug-22	JPY 1,38,42,41,854
12-Aug-22	JPY 89,02,76,572
12-Aug-22	JPY 8,02,15,015
12-Aug-22	JPY 30,83,77,793
12-Aug-22	JPY 16,82,91,883
12-Aug-22	JPY 10,72,16,192
12-Aug-22	JPY 1,32,69,881
12-Aug-22	JPY 68,54,60,567
16-Aug-22	JPY 1,51,22,72,162
16-Aug-22	JPY 87,45,60,133
16-Aug-22	JPY 40,42,12,162
16-Aug-22	JPY 1,36,45,436
16-Aug-22	JPY 36,39,65,964
16-Aug-22	JPY 21,86,39,966
16-Aug-22	JPY 10,10,53,041
16-Aug-22	JPY 34,11,254
19-Aug-22	JPY 3,43,89,227
19-Aug-22	JPY 2,26,56,982
19-Aug-22	JPY 5,38,57,469
19-Aug-22	JPY 4,30,99,888
Total Amount	10717.45 Million JPY



Annexure-2 JICA Reimbursement backup-Sept-22



Reimbursement details for the month of Sep-2022

Date of disbursement	Amount of Disbursement in JPY
06-Sep-22	JPY 32,24,88,971
06-Sep-22	JPY 8,70,89,495
06-Sep-22	JPY 3,71,56,813
06-Sep-22	JPY 10,58,102
06-Sep-22	JPY 30,58,21,682
06-Sep-22	JPY 1,24,27,36,098
06-Sep-22	JPY 21,85,06,012
06-Sep-22	JPY 98,91,031
06-Sep-22	JPY 52,08,53,904
06-Sep-22	JPY 1,75,89,24,445
06-Sep-22	JPY 67,71,38,065
06-Sep-22	JPY 2,00,77,169
06-Sep-22	JPY 1,00,85,86,340
06-Sep-22	JPY 35,81,51,885
06-Sep-22	JPY 1,19,57,92,464
06-Sep-22	JPY 43,01,82,140
Total Amount	8194,45 Million JPY



Annexure-3 Extension of Validity for CRZ Clearance



The Member Secretary,
Maharashtra Coastal Zone Management Authority
Environment Department, 15th floor
New Administrative Building,
Mantralaya, Mumbai 400032

Name of work: Mumbai Trans Harbour Link (MTHL) Project.

Sub: Extension of validity of CRZ Clearance

- Ref:**
1. MMRDA letter No. MMRDA/MTHL-PIU/CRZ Extension/1338/2022 dated 04/08/2022.
 2. MMRDA letter No. MMRDA/MTHL-PIU/CRZ Extension/1360/2022 dated 11/08/2022.

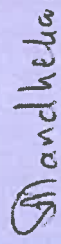
Sir,


Mumbai Metropolitan Region Development Authority has submitted application for Extension of CRZ Clearance vide letter dated 04/08/2022 & online submission having file no. MCZMA 2022/08/CR-246/3719 on Maharashtra Coastal Zone Management Authority official website.

In view of above, it is requested to take this project on agenda during the next scheduled meeting of MCZMA to consider the proposal of extension of CRZ clearance at the earliest please.

Thanking you,

Yours faithfully,


(S. A. Wandhekar)
Engineer in Chief


21-9-22
आचार्य निवास (जी.पी.)
महाराष्ट्र राज्य पर्यावरण विभाग
मंत्रालय, मुंबई - ४०००३२

