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dar general-consultant
for infrastructure

TYLIN
GENERAL CONSULTANT

General Consultant for Mumbai Trans Harbour Link Project

Ref No.: MTHL/GC/MMRDA/QPR/2018/443

11th October 2018

To,

The Chief Engineer

Engineering Division

Mumbai Metropolitan Regional Development Authority (MMRDA)

2nd Floor., New MMRDA Building,

Plot No. R-06 & R-12, 'E' Block,

Bandra Kurla Complex, Bandra East,

Mumbai, Maharashtra, India 400051

Project: Mumbai Trans Harbour Link (MTHL) Project

Subject: Quarterly Progress Report (QPR) No.6 for July-September 2018

Dear Sir,

With reference to the above subject, please find enclosed 2 copies of Quarterly Progress Report (QPR) No. 6 for the period of July - September 2018. You may forward the same to JICA at your earliest.

Thanking you.

Yours Faithfully,

M. Sham

Dr. S H Robin Sham, CBE

(BSc, PhD, DIC, FCGI, FRSA, CEng, FICE, FStructE, FHKIE)

The Engineer

MTHL Project

Encl: Quarterly Progress Report No. 6 for the period of July-Sept. 2018 (Two Hard Copies)





MMRDA

Mumbai Metropolitan Region Development Authority

Mumbai Trans Harbour Link Project

Quarterly Progress Report - No.6
From 1st July 2018 to 30th September 2018



**Mumbai Trans Harbour Link Project
Quarterly Progress Report No. 6
1st July 2018 to 30th September 2018
Loan Agreement No. ID-P255**

ORGANIZATION INFORMATION

Borrower	Mumbai Metropolitan Region Development Authority	
	Person in Charge	Metropolitan Commissioner, MMRDA
	Contact Address	M.M.R.D.A. New Office Building, Bandra-Kurla Complex, Plot no. R5,6&12, E Block, Bandra (East), Mumbai - 400051 Phone: +91-22-26594000 Fax No:+91-22-2659 1264
Executing Agency	Mumbai Trans Harbour Link Project Implementation Unit	
	Headed by:	Chief Engineer Mumbai Trans Harbour Link Project Implementation Unit
	Contact Address	M.M.R.D.A. New Office Building, Bandra-Kurla Complex, Plot no. R5,6&12, E Block Bandra (East), Mumbai - 400 051 Phone: +91-22-2659 4034 Fax No: +91-22-2659 1264

Details of JICA Loan

Source of Finance	JICA ODA Loan :	276,333Million Japanese YEN (JPY)
	Tranche-1:	144,795Million Japanese YEN (JPY) (Loan Agreement signed on 31 st March 2017)
	Tranche-2 :	131,538 Million Japanese YEN (JPY)
Terms and Conditions of JICA ODA Loan	Interest Rate:	- 0.10150% (LIBOR- 0.00150%+ SPREAD RATE – 0.1000%) from 20 th September 2017 to 19 th March 2018.
	Repayment Period:	- 30 years, including 10 years of grace period.

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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. It also conforms to the national and state laws.

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. The traffic congestion in the urban areas due to a lack of road network hinders the economic development. Given this situation, the necessity of comprehensive infrastructure development plan was given the importance for the growing economic developments in the 12th Five –Year Plan (April 2012 to Mar 2017).
2. Mumbai Metropolitan Region which includes Mumbai and Navi Mumbai, has about 13.59 million population as of 2011 (census 2011) and population density has reached 17,400 people per square km in the center of Mumbai, it is one of the over populated cities, having highest population density in the world.
3. Mumbai the narrow stretch of land, has traditionally been the epicenter 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), has been facilitating various development plans particularly in Navi Mumbai area. The Navi Mumbai stands at the opposite side of Mumbai across the Mumbai bay and still has spacious area for development such as 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 faster communication and transport infrastructures with in Mumbai has stunned its growth. The GoM has given importance to construct the faster connection of Mumbai with Navi Mumbai International Airport, Jawaharlal Nehru Port, Mumbai- Pune express way and Mainland.
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.
7. The Comprehensive Transportation Study (CTS) for Mumbai Metropolitan Region (MMR), which was conducted by MMRDA and supported by World Bank, was completed in July 2008 over 25 years after the issuance of the last comprehensive transport study. The report provided a vision for Mumbai's future transportation as seamless, 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 in MMR to take care of the varied travel demands of the region for the horizon period up to 2031.
8. Accordingly, whereas the CTS recommended developing the metro and suburban railway network in the Mumbai it also proposed to develop the highway network in the region.
9. The MTHL has been regarded as the priority road for MMR for a long time, considering its function and importance of connecting Greater Mumbai and Navi Mumbai
10. 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.
11. When completed, MTHL will reduce the travel distance between Mumbai and Navi Mumbai and will help save approximately an hour in travel time.
12. 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.
13. Consequently, the Project is envisaged to:
 - improving accessibility between Mumbai and Navi Mumbai,
 - accelerate the growth of Navi Mumbai,
 - improving smooth traffic flow from Navi Mumbai airport to Mumbai,
 - accelerate the economic development of Navi Mumbai and surrounding regions.

- greater economic integration of Mumbai with Navi Mumbai extended regions of Pune, Goa, Panvel and Alibaug and decongestion of Mumbai, and
- dispersal of Population to Navi Mumbai region and Beyond.

14. Thus, 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

Demand Analysis

1. At the opening year 2022, the daily traffic on the main bridge is expected to be 39,300 PCU. The traffic is projected to increase up to 103,900 by 2032 and up to 145,500 by the year 2042. The daily breakdown on the main bridge link, by vehicle class, 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 Nager Interchange			Between Shivaji Nager 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.
- The lane requirement was reviewed based on the forecasted result of future traffic volume. The result of the review shows that 6-lane will be required in 2032 (10 years later after traffic open to Public in 2022).

Design Parameters

- The MTHL which is about 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 meter.
- When the design speed is 100 km/h according to the traffic demand forecast the large vehicle, ratio will be as low as 9.4% (2022).

7. The shoulder width of bridge towards outside of each carriageway is 2.5 meters and towards median side of each carriageway is 0.75 meters.
8. The major portion of MTHL structure is on sea and partly towards ends is on land with different type and with different span, viz., PC box girder with 50 m spans which is typically applied on marine viaduct since, it is economical, easy to construct and maintain.
9. On the land portion, the PC box girder having span of generally 30m is used.
10. As far as the location in which long span (150-180 m) is required to cross significant obstacles, such as navigation channels, pipelines and creeks, the steel box girder bridge with steel deck is proposed with large block erection method to shorten the construction period.
11. The project is coded with three lanes of traffic in each direction. The reference toll is presented in the Table 1.3.2 below for each vehicle class in Year 2015 monetary value.

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 in 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.

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 Traffic 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.

1.4 Project Packages

1. **Package-1** includes the Sewri Interchange on land, Mumbai side and the adjoining 10.380 km (CH 0+000 km to CH 10+380 km) bridge above sea/creek. The typical width of carriageway will be approximately 14 M for each way.
2. **Package-2** includes about 7.8 km long bridge (CH 10+380 km to CH18+187 km) above sea/creek and Shivaji Nagar Interchange on land, Navi Mumbai side. The typical width of carriageway will be approximately 14 M for each way.
3. **Package-3** includes about 3.6 km long bridge and road (CH18+187 – CH21+800) having interchanges at State Highway-54, National Highway-4B near Chirle and Rail-over-Bridges (ROB) at two locations in Navi Mumbai side. The typical width of the carriageway will be approximately 14 M for each way.
4. **Package-4** consisting of Intelligent Transport Systems (ITS) including Operation & Maintenance Facility and Equipment Installation for the Project. Bid for the Package-4 will be issued at a later stage.

Actual (P/R, PCR)

There is no change in the Contract Package

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)	Actual: (P/R and PCR)
	Mumbai Metropolitan Region Development Authority, Mumbai State of Maharashtra	

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) Highway Lighting (Whole Sections. Low-positioned lighting for some sections) Road Furniture and road side 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+190 (7.81 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) High way Lighting (Whole Sections. Low-positioned lighting for some sections) Road Furniture and road side facilities (Traffic Signs and Pavement Marking, Traffic Safety Devices, Crash Barrier, Drainage Structures, Noise Barriers) 	(P/R and PCR)
Package3 Ch 18+190- 21+830 (3.64 Km)	<ul style="list-style-type: none"> 2 Interchanges (State Highway-54, National Highway-4B) Viaduct superstructure (Marine Portion: PC Box Girder & Steel Box Girder with Steel Slab Land Portion: PC Box Girder & PC-I Girder & Steel Truss Girder for Rail-over-Bridges (ROB) Viaduct Substructure (RC Concrete Structure) 	(P/R and PCR) Actual: No Marine Portion in Package-3

Items	Original	Actual
	<ul style="list-style-type: none"> • Viaduct Foundation (Bored piles) • Highway Lighting Whole Sections • Road Furniture and road side facilities (Traffic Signs and Pavement Marking, Traffic Safety Devices, Crash Barrier, Drainage Structures) 	
Package 4 ITS (Intelligent Transport System)	<ul style="list-style-type: none"> • Toll Booths (1 for Main Alignment and one each “on and off” ramps for 3 Interchanges) • Traffic Management System (Traffic Control Centre, Closed Circuit Television (CCTV), Meteorological Data System (MDS), Emergency Call Box (ECB), Automatic traffic Counter-Cum-Classifer (ATCC), Variable Message Sign (VMS)) 	(P/R and PCR)
Consulting Service	<ul style="list-style-type: none"> • Tender Assistance • Construction Supervision • Facilitation of Implementation of Environmental Management Plan (EMP), Environmental Monitoring plan (EMoP) and Resettlement Action Plan (RAP) 	(P/R and PCR)

2.2 Implementation Schedule

2.2.1 The Original Implementation Schedule

The original project implementation schedule for commissioning the project from Sewri Interchange to Chirle Interchange at State Highway-54 by June 2021 and the updated project implementation schedule as on September 2017, is provided in the following Table 2.2.1

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

Items	Original	Updated (June-18)
Appointment of General Consultant	June 2016	December 2016
Completion of land acquisition and Resettlement	November 2016	June 2018
Stage-2 Main Tender for construction of Package-1,2 &3	June 2016	January-2017
Commencement of construction of Package-1,2&3	January 2016	March -2018
Completion of construction of Package-3	June 2020	September 2021
Completion of construction of Package-1&2	June 2021	September 2022
Stage-2 Main Tender for construction of Package-4	September 2018	September 2019
Award and Commencement of ITS Package-4	July 2019	September 2020
Completion of ITS Package-4	June 2021	September 2022
Commercial Operation Date	June 2021	September 2022

Attachment: Project Implementation Program (June-18)

2.2.2 Reasons for any changes of the schedule and their effects in the Project

Actual (P/R and PCR)

Tender Invitation and the date of Bid Submissions were delayed, because of the following reason:

- Enormous number of queries (3224) had to be answered and 15 addenda for all the 3 packages were to be issued.
- A large number of Technical issues had to be discussed with Technical Advisory Committee and incorporated in the addenda.
- A large number of coordination issues especially with environment agency had to be addressed and incorporated in the bid documents.

2.3 Project Cost

2.3.1: Comparison of originally planned and incurred Cost by year is given **Table 2.3.1**

Table 2.3.1 Comparison of Originally Planned and Actually Incurred Cost by year

Breakdown of Cost	Originally Planned			Actually Incurred		
	JICA Portion	MMRDA	Total	JICA Portion	MMRDA	Total
Year	In Rs Cr	In Rs Cr	In Rs Cr	In Rs Cr	In Rs Cr	In Rs Cr
Budget	15,100.16	2743.06	17,843.22			

Breakdown of Cost	Originally Planned			Actually Incurred		
	JICA Portion	MMRDA	Total	JICA Portion	MMRDA	Total
FY2016-2017					176.39	176.39
FY2017-2018				656.20	110.62	766.82
FY2018-2019				420.72	259.98	680.70
Total			17,843.22	1076.92	546.99	1623.91

* Fiscal Year starting in April and ending in March Unit: (All Figures: in Crores INR)

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.

Actual (P/R, PCR)

2.4 Organization for Implementation

2.4.1 Executing Agency:

Executing Agency:

1. Mumbai Metropolitan Region Development Authority (MMRDA) was established on 26th January 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.
2. The GoM appointed the MMRDA as the implementing/ executing agency of MTHL vide Government Resolution dated 4th February 2009 and further the ownership of MTHL would be with MMRDA vid Government Resolution dated 8th June 2011.

Organization's Role:

3. The broad responsibilities of the Mumbai Metropolitan Region Development Authority includes:
 - Preparation of Regional Development Plans
 - Providing financial assistance for significant regional projects
 - Providing help to local authorities and their infrastructure projects
 - Coordinating execution of projects and/or schemes in MMR
 - Restricting any activity that could adversely affect appropriate development of MMR, etc.
4. In particular, as a Special Planning Authority for Mumbai Metropolitan Region (MMR), it plans, conceptualizes, promotes, executes and monitors the key projects for developing new growth centers and brings about improvement in sectors like transport, housing, water supply and environment in the Region.

Project Implementation Unit (PIU)

5. The PIU is in charge of the Project. The PIU is headed and Coordinated by Chief Engineer. PIU comprises of officials from Engineering Division, Finance Division, Land Cell, Social Development Cell, Administrative Division, Environmental Cell and Support Staff of MMRDA.

Procurement

6. 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.
7. Procurement of goods and services, except for consulting services, converted by the Japanese ODA Loan should be implemented in accordance with "Guidelines for Procurement under Japanese ODA Loans", dated in April 2012. Employment of consultants should be implemented in accordance with "Guidelines of Employment of Consultant under Japanese ODA Loans", dated in April 2012. "Principles of Procurement under the Project" is attached for brief explanation of the above Guidelines.

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

There is no change made in original Organisation Set up & Implementation methods

Annexure III Organizational Chart

2.4.2 Performance of Consultant / Contractor(s):

Consultant's Progress:

July 2018:

- 1 In the month of July, all the 3 package Contractors submitted the various contractual submission (exa. Project Safety plan, Quality plan, Environmental plan etc.) to the GC. GC reviewed the submittals and issued NONO with due comments.
- 2 In the Package 1 & 2, Topography Survey, Bathymetry & Geophysical Survey works are completed.
- 3 GC assisted for enumerating the affected fishermen list by holding a camp in Navi Mumbai Area from 16th July to 28th July 2018. Also, GC assisted in the settlement of compensation for the Project Affected Fishermen.
- 4 The legal issues and the compensation for the structures on MTHL Land are being settled by MMRDA with the assistance from GC.
- 5 GC scrutinized the Package 1 Contractor's (L&T-IHI) request for payment towards the first invoice IPC-002 received in July 2018 & recommended for the payment to MMRDA.

August 2018:

- 1 A high-level meeting with the Package 3 (L&T) Contractor and the Metropolitan Commissioner (MC), MMRDA officials and GC conducted on 2nd August 2018 to resolve land-related issues in the Casting Yard & ROW at New Mumbai Region.
- 2 The first Environment Cell Meeting with the committee members from MMRDA, GC, Forest Department, Maharashtra Pollution Control Board, Environment Dept, GoM and IIT, Powai – SINE conducted at AMC Office on 30th August 2018. The Committee discussed an Action & Monitoring Plan along with the responsibilities of the Cell.
- 3 GC scrutinized & certified IPC-002-R1 for the Package 3 for the payment under Schedule No. 1 - General Items.
- 4 GC reviewed and commented upon the Highway Alignment Report and Temporary Access Bridge (TAB) Design for the Package 2.
- 5 In the first week of August 2018, ProjectWise Training was provided to all the stakeholders to implement effectively from Mid-August onwards.

September 2018:

- 1 The main event of this month is the meeting with JICA on 6th & 7th September 2018 wherein a presentation on the financial progress and Social & Environmental aspects of the MTHL project were made and discussed.
- 2 Additional Metropolitan Commissioner (AMC), MMRDA conducted Project Progress Review meetings with the Package 1 & 2 Contractors on 18th Sept. 2018 at the MMRDA Conference Hall.
- 3 Senior Vice President JICA Tokyo, Mr Junichi Yamada, Dy. Director General South Asia Dept. JICA Tokyo, Mr Teruyuki Ito, Sr. Representative JICA India, Mr Takayoshi Tange & Representative JICA India, Ms Momoko Furuhashi visited the MTHL Project – Package 1 site on 18th September 2018 to view the progress. The Dy. TL-GC, Mr V D Sharma attended the JICA Team and the project progress were briefed at the site.
- 4 GC scrutinized & certified invoice no. MAPC-003 & IPC-003 for the Package 1.
- 5 GC reviewed and approved the Package 1 Contractor's proposed highway alignment at Sewri Interchange and a "NONO" has been issued.

Construction Progress:

Package-1 Physical Progress

S. No	Activity	Total Scope	Unit	Completed till August 2018	Completed in Sept. 2018	Cumulative	% of Workdone Progress	Remarks
1	Geotechnical investigation (Field) Works							
1.1	Marine	194	No.	194	NA	194	100%	
1.2	Intertidal	117	No.	114	0	114	97%	
1.3	Interchange	216	No.	143	0	143	66%	
	Total	527	No.	451	0	451	86%	
2	Survey							
2.1	Geo Physical	700	ha	700	NA	700	100%	
2.2	Bathymetry	9.65	km	9.65	NA	9.65	100%	
2.3	Topography	25	ha	25	NA	25	100%	
3	Tree Survey							
3.1	Tree numbering-Casting yard	15	ha	15	NA	15	100%	
3.2	Tree numbering – ROW	10	ha	10	NA	10	100%	
4	Temporary Access Bridge							
4.1	Bridge Deck Erection	2900	meters	173	103	276	10%	
4.2	No. of Piles	682	Nos.	56	20	76	11%	

Package-2 Physical Progress

S. No	Activity	Total Scope	Unit	Completed till August 2018	Completed in Sept. 2018	Cumulative	% of Workdone Progress	Remarks
1	Geotechnical investigation (Field) Works							
1.1	Marine	154	No.	142	0	142	92%	
1.2	Intertidal	84	No.	84	NA	84	100%	
1.3	Interchange	66	No.	66	NA	66	100%	
	Total	304	No.	292	0	292	96%	
2	Survey							
2.1	Geo Physical	600	ha	600	NA	600	100%	
2.2	Bathymetry	6.80	km	6.80	NA	6.80	100%	
2.3	Topography	16	ha	16	NA	16	100%	
3	Tree Survey							
3	Tree Survey	16	ha	16	NA	16	100%	
4	Temporary Access Bridge							
4.1	Bridge Deck Erection	2100	meters	0	0	0	0%	
4.2	No. of Piles	891	Nos.	0	10	10	1%	

Package-3 Physical Progress

S. No	Activity	Unit	Total Scope	Completed till August 2018	Completed in Sept. 2018	Cumulative	% of Workdone Progress	Remarks
1	Centre Line Fixing (Temp. Marking)	Km	3.61	3.39	0	3.39	94%	
2	Survey Pillars Fixing in the Casting Yard & ROW	No.	108	80	0	80	74%	
3	Traverse Survey	Km	3.61	3.61	NA	3.61	100%	
4	Topography Survey	Km	3.61	3.26	0	3.26	90%	
5	Geotechnical Investigation Works (Field)	No.	216	0	8	8	3.7%	

Package-4

Pre-qualification documents are under preparation.

2.4.3 Health & Safety and Environment (HSE)

The HSE Plan will be prepared by the respective construction agency for the Packages. This will be monitored and implemented by GC.

Package-1

Sr. No	Description	For July to Sep 18	Cumulative
1	Number of Man-Hours (Accident Free Man-Hours)	609348	923328
2	Number of Man-Days	57092	115415
3	Number of Reportable Fatal Accidents	0	0
4	Number of Non-Fatal Accidents	0	0
5	Number of Near Miss Incidents	0	0
6	Number of First Aid Cases	0	0
7	Number of Dangerous Occurrences	0	0
8	Number of Reportable Sick Cases	0	0
9	Number of Man-Hours Lost	0	0
10	Number of Man-Days Lost	0	0
11	Number of Reportable Accidents per 100,000 Man-Hours Worked	0	0
12	Number of Inspections done for Offices & Site	12	0
13	Number of Training/ Induction done for Offices & Sites	16	16
14	Daily Average Manpower (Including all Workmen & Staff) for the Month	628	481

Package-2

Sr. No	Description	For July to Sep 18	Cumulative
1	Number of Man-Hours (Accident Free Man-Hours)	214170	342062
2	Number of Man-Days	19684	34286
3	Number of Reportable Fatal Accidents	0	0
4	Number of Non-Fatal Accidents	0	0
5	Number of Near Miss Incidents	07	07
6	Number of First Aid Cases	05	07
7	Number of Dangerous Occurrences	0	0
8	Number of Reportable Sick Cases	0	0
9	Number of Man-Hours Lost	0	0
10	Number of Man-Days Lost	0	0
11	Number of Reportable Accidents per 100,000 Man-Hours Worked	0	0
12	Number of Inspections done for Offices & Site	61	85
13	Number of Training/ Induction done for Offices & Sites	244	627
14	Daily Average Manpower (Including all Workmen & Staff) for the Month	682	209

Package-3

Sr. No	Description	For July to Sep 18	Cumulative
1	Number of Man-Hours (Accident Free Man-Hours)	23015	71739
2	Number of Man-Days	2877	8967
3	Number of Reportable Fatal Accidents	0	0
4	Number of Non-Fatal Accidents	0	0
5	Number of Near Miss Incidents	0	0
6	Number of First Aid Cases	0	0
7	Number of Dangerous Occurrences	0	0
8	Number of Reportable Sick Cases	0	0
9	Number of Man-Hours Lost	0	0
10	Number of Man-Days Lost	0	0
11	Number of Reportable Accidents per 100,000 Man-Hours Worked	0	0
12	Number of Inspections done for Offices & Site	0	5
13	Number of Training/ Induction done for Offices & Sites	3	9
14	Daily Average Manpower (Including all Workmen & Staff) for the Month	32	204

2.4.4 Procurement Status

The contracts for Package 1, 2 & 3 are awarded to the Contractors as given below:

Table 2.4.4 Present Status of Procurement

Type	Contract	Estimated Value (Rs. Crore)	Award Value (Rs. Crore)	Current Status	Contractor	Award Date as per PIP Sep 2017	Status / Remarks
CIVIL	Package-1 (CH 0+000 km to CH 10+380 km)	7945.30	7637.30	Awarded	L&T-IHI Consortium	Nov 2017	Date of Commencement 23 rd March 2018
	Package-2 (CH 10+380 km to CH18+187 km)	5933.27	5612.61	Awarded	DAEWOO - TPL JV	Nov 2017	Date of Commencement 23 rd March 2018
	Package-3 (CH18+187 km to CH21+800 km)	1610.05	1013.79	Awarded	L&T	Nov 2017	Date of Commencement 23 rd March 2018
ITS	Package-4 Intelligent Transport System	144.30	--	Design Stage	--	Jul 2020	

Financial Report

The following is the Project Cost reimbursable by JICA:

- i. Package-1 – 100% Construction cost excluding the taxes
- ii. Package-2 – 100% Construction cost excluding the taxes
- iii. Package-3 – 100% Construction cost excluding the taxes
- iv. Package-4 – 100% Procurement cost excluding the taxes

3.0 BENEFITS DERIVED FROM THE PROJECT

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

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 by 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 will appoint a toll collection agency during project implementation period. Thereafter, a single operation and maintenance contractor shall be appointed through open tendering process. MMRDA has confirmed to allocate adequate budget for engaging the contractors.</p>	<p>(P/R and PCR)</p> <p>No significant event.</p> <p>No significant event.</p>
<p>3.2.2 Environmental and Social Consideration</p> <p>a. CRZ Clearance</p> <ul style="list-style-type: none"> Supplemental EIA has been approved by MMRDA and disclosed on the website of JICA. Supplemental EIA report will be disclosed also on the website of MMRDA. Renewed CRZ Clearance will be 	<p>(P/R and PCR)</p> <ul style="list-style-type: none"> MMRDA has Uploaded Supplemental EIA & SIA on MMRDA website. The CRZ clearance for MTHL was acquired on 25/1/2016 from MoEF&CC and enclosed in the contractor's bid documents. MMRDA has been actively committing the conditions of the MOEFCC approval condition and will continue during the construction phase. MMRDA appointed Mangroves & Marine

<p>obtained in a timely manner.</p> <ul style="list-style-type: none"> In accordance with the conditions for CRZ Clearance, appropriate measures shall be taken, and necessary budget shall be secured by MMRDA. 	<p>Biodiversity Foundation for bird monitoring and implementation of Flamingos and bird monitoring program for the MTHL project during the construction as well as the long-term monitoring after the construction.</p> <ul style="list-style-type: none"> Rs 91.36 Crore have been deposited to Mangroves & Marine Biodiversity Foundation of State government for the development of a new mangrove area and its afforestation as well as the Birds monitoring by BNHS (on behalf of Mangroves and Marine Biodiversity Foundation). Such funds will be managed by the mangrove foundation of MH state and disbursed periodically to BNHS. As per the new CRZ clearance condition, 4.98Cr has been allocated for the consulting services to develop a Mahul creek Effluent Treatment Plant (ETP). IIT Mumbai is appointed for the DPR study who completed the pre-monsoon season study and will complete post-monsoon study with the draft policy and implementation plan for the ETP. Pre-construction activities like soil testing have begun.
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3.2.3 Permits

The Permits to be obtained by MMRDA and the Present Status are given in **Table 3.2.2**

Table 3.2.2 Present Status of the Permits

Clearance Required	Approved authority	Responsible Organization	Obtained by when	Status
Mangrove cutting	Hon. Bombay High Court	MMRDA	Before start of Construction	Approval received from Hon. Bombay High Court on 28 th Nov 2016
Tree cutting	Respective tree authorities	Contractor for respective Packages	To be obtained before start of Construction	Contractors to submit the proposals to the Tree authorities

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)
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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, Land Cell, and Environmental Cell had been set up, which consists of two officers at each cell.</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, 1,272 non-titleholders will be involuntary resettled, and 108.09 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 291 Project Affected Households (PAHs), MMRDA has confirmed the consent of the 156 PAHs for the resettlement site in HDIL buildings at Kurla (E). MMRDA has confirmed the consent of 75 PAHs of Kanjurmarg resettlement site and rest of 1PAH is yet to give its consent.</p> <p>Out of 59 PAH's (included 1 R+C) 30 PAHs had given their consent to shift to Kanjurmarg East for commercial, 23 PAHs had given their consent to shift to HDIL Kurla for residential, 5 PAHs had given their consent to shift to Kanjurmarg East for residential, 1 PAH had given their consent to shift to Bhakti Park Wadala for residential.</p> <p>Navi Mumbai: CIDCO is finalizing the land acquisition in Navi Mumbai side monitored by Land Cell of MMRDA. Out of 108.09 Ha ROW 98.75 Ha has been handed over by CIDCO to MMRDA. CIDCO is in the process of handing over the balance 9.34 Ha land to MMRDA.</p>
<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 are no changes to enforce the entitlement policy. As per the Attachment 2-5, MMRDA has committed to enforce the agreed/ approved policy.</p>
<p>c. Compensation to Project affected</p>	

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
<p>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 grasp the exact impact during construction and operation phase.</p>	<p>A re-survey was conducted for 3060 PAPs of Navi Mumbai from December till January. Of these, 1584 PAPs submitted their documents and 1476 PAPs are yet to submit their documents. Status for the same is shared in Annexure IV.</p> <p>In February 2018, a joint survey was carried out along with Fisheries Department for C1 category fishermen of Mahul & Trombay. All the fishermen who had their Sus and Dol in the alignment were surveyed and the positions on the nets were marked using GPS. The draft list for the village of Trombay was shared with the fisheries society of Trombay. The confirmed list from the fisheries society is awaited. Mahul fisheries society has requested that the C1 fishermen category survey should be carried out again in the presence of the fishermen who own the nets. A resurvey will be carried out for them in accordance to the next highest high tide levels.</p> <p>The list of eligible PAPs from Trombay and Mahul are yet to be confirmed by the fisheries society of the respective villages. The fisheries societies are verifying the list of eligible PAPs and collecting the bank account details and other necessary identity proofs of fishermen. Several meetings have been carried out with the Fishing society of Trombay and Mahul to finalize the list for C1 fishermen.</p>
<p>d. Implementation Schedule</p> <p>The Implementation schedule for land acquisition, resettlement and rehabilitation.</p>	<p>Land cell of MMRDA are managing the land acquisition related to the MTHL.</p> <p>Expected schedule as of 30/09/2018</p> <ul style="list-style-type: none"> a) Sewri: 31st March 2019 b) Navi Mumbai: February 2019 <p>In Navi Mumbai side, out of 108.09 ha land to be handed over to the Contractor, 2.57 ha Govt. land & 9.34 ha CIDCO land has not been handed over to the Contractor yet. MMRDA has sent a letter to CIDCO asking for 11 ha land in Navi Mumbai for the Casting Yard set-up</p>

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
	<p>purpose. Social Development Cell of MMRDA has managed resettlement and rehabilitation in parallel. Sewri: November 2018</p>
<p>e. Grievance Redressal Mechanism Grievance Redressal Committee (“GRC”) set under MMRDA will deal with grievances raised by PAPs in Sewri and fishermen to be affected by the Project. Any grievances raised by PAPs whose land is acquired by CIDCO shall be resolved by CIDCO.</p>	<p>Sewri: The Chief, Social Development Cell, dealing with the grievances raised by PAP’s in Sewri as per the approved RAP. Apart from the GRC, a compensation committee, chaired by a former judge, has been formulated to address the issues/grievances of the plot lessees at MbPT area, Sewri. Marine: GRC to be set up as per fisher folk compensation policy dated 23rd Dec. 2015 Navi Mumbai: CIDCO is the Land Acquiring body for Land on Navi Mumbai side. GRC has already set up by CIDCO and has been functioning.</p>
<p>f. Internal Monitoring Internal Monitoring of the Resettlement Action Plan (RAP) implementation will be conducted by MMRDA in accordance with the RAP with necessary assistance of the consultant. RAP Internal Monitoring Form (Attachment 2-8) will be submitted to JICA on a quarterly basis as a part of PSR during the RAP implementation.</p>	<p>Sewri Area:</p> <ul style="list-style-type: none"> • All the 323 Structures (232 Residential + 58 Commercial + 1 Residential cum commercial + 32 others) are required to be removed to clear the Land portion & thereafter, this land portion can be handed over to Contractor. • 156 PAPs out of 232 PAPs had given their consent to shift to HDIL buildings in Kurla, 75 PAPs have given consent to shift at Kanjurmarg (E) & balance 1 PAP yet to give consent document preparation work is in progress for PAP. • Out of 59 PAH’s (included 1 R+C) 30 PAHs had given their consent to shift to Kanjurmarg East for commercial, 23 PAHs had given their consent to shift to HDIL Kurla for residential, 5 PAHs had given their consent to shift to Kanjurmarg East for residential, 1 PAH had given their consent to shift to Bhakti Park Wadala for residential. • As reported above, the Compensation (Advisory) Committee is formed for finalisation for total 13 Lessees (claims), 6 out of 13 are presently vacant and 7 plots are with structures. The compensation

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
	<p>committee for the lessees shall finalize compensation of 7 plot lessee's structures.</p> <ul style="list-style-type: none"> • MMRDA has done the valuation of the 7 lessee's structures through the Gov. Approved valuer vetted by PWD department. • The meetings of Compensation (Advisory) Committee members with lessees held on 4th & 5th January 2018, 1st, 5th, 15th, 20th, 21st March 2018, 2nd, 3rd, 5th, 6th, 16th, 23rd, 24th & 26th April 2018 and 22nd, 26th, 27th & 29th June 2018, 4th, 5th, 9th, & 19th July 2018, 29th August 2018, 5th, 11th & 18th September 2018. • The meetings of Compensation (Advisory) Committee are likely to be concluded in the month of October 2018.
<p>g. Qualitative Independent Evaluation An Independent Evaluation Agency will be hired by MMRDA for evaluation of RAP implementation. An external evaluation report will be submitted to MMRDA at mid-term and end-term. MMRDA would submit the evaluation report to JICA in a timely manner.</p>	<p>MMRDA will form the independent evaluation before the mid-term and end-term in a timely manner.</p>
<p>h. RAP Implementation Budget The amount of estimated resettlement and compensation budget is Rs. XX. 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>Estimated tentative Budget for the Financial year 2018-2019 -</p> <ul style="list-style-type: none"> • Sewri Side for MbPT Lessees: Rs. 30 Crore • Fishermen Compensation: Rs. 70 Crore • Navi Mumbai Side CIDCO Land: Rs. 21 Crore
<p>i. Environmental Management Plan ("EMP") The mitigation measures against air pollution, waste, noise, and water pollution etc. shall be taken during construction and operation phase. Mitigation measures such as installation of noise barrier, appropriate waste management, etc. have been prepared by MMRDA. The mitigation</p>	<ol style="list-style-type: none"> 1. EMPs were submitted by Package I, II & III of the MTHL alignment. 2. GC reviewed the EMPs and the contractors were asked to resubmit the revised EMPs. 3. The EMP for Package III has been finalized whereas the EMP for Package I & II are to be finalized. 4. The first Environment Committee meeting

Issue(s)	Action or countermeasure(s) taken and remaining problem(s)
<p>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>took place on 30th August 2018 –</p> <ol style="list-style-type: none"> a. The EC meeting was chaired by Hon Sanjay Khandare; Additional Metropolitan Commissioner - II along with distinguished Environment Committee members, officials of MMRDA & GC team. b. The GC presented the project brief along with the role of EC and activities carried out till date. c. The CRZ clearance from Maharashtra Coastal Zone Management Authority (MCZMA) & Ministry of Environment, Forest and Climate Change (MoEF&CC) and the conditions were discussed. d. The general Environmental Management Plan (EMP) for the project was discussed along with the total budget allotted by MMRDA for adhering to the EMP as given by MoEF&CC. e. The individual Environmental Management Plan (EMP) presented by all three packages were discussed in brief. The committee suggested that individual EMPs be shared with all committee members so that the members can go through the EMPs and also give their valuable feedback. f. The CRZ compliance matrix prepared by GC for reviewing progress for all three packages was discussed along with the progress reports. g. The progress reports highlighted the work carried out individually by every package up to 30th August 2018.
<p>j. Environmental Monitoring Plan (“EMoP”)</p>	<p>Environmental monitoring will start during the</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 complementation of construction. The required amount of estimated environmental monitoring budget is borne by MMRDA.</p>	<p>Construction period. (As per the MOM Attachment of 2-4)</p>
<p>k. Long Term Bird Monitoring MMRDA committed to conduct the long-term monitoring of birds and its habitat in Sewri mud-flats with the assistance of hired bird expert. During the long-term monitoring, MMRDA will share information and receive advices from external experts including the one from NGOs and civil society.</p>	<ul style="list-style-type: none"> • MMRDA has appointed Mangrove and Marine Biodiversity Foundation for bird monitoring and implementation of Flamingos and birds related mitigation measures & bird monitoring program • Rs. 31.92 Crore deposited to Mangrove foundation of State government for periodical disbursement to BNHS who is implementing the project.

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 2023) 2 Years After Commercial Operation Date
Average Annual Daily Traffic (PCU/ day)	-	45,700
Daily Average Travel Time (min) (from Sewri to Chirle)	61 min	15.8 Min

EIRR	Original: 13.7% 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:
FIRR	Original: 1.77% Cost: Project Cost, O&M cost, Land Acquisition cost Benefit: Toll Revenue Project Life: 35 Years	Actual: (PCR) _____ %

3.5 Monitoring Plan for the indicators

Monitoring Methods, Section(s)/department(s) in Charge of monitoring, 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 as per annex II: 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 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 Project in the form of Project status Report (PSR) attached as per Annex II

Actual (P/R and PCR)

Monitoring Organization

PIU for MTHL has been established and monitoring the Project

Submission of QPR and PCR

Quarterly Progress Report will be prepared and Submitted to JICA on Quarterly basis
QPR Submitted up to 30th June 2018.

3.6 Achievement of the Project Objective

(Achievement of Project Objective shall be communicated after start of revenue Operation of the Project)

Actual (PCR)

4.0 OPERATION AND MAINTENANCE (O&M) SUSTAINABILITY

4.1 O&M and Management

Original:

Overall MMRDA will be responsible for O&M after the Completion of the Project. O&M Budget will be allocated by MMRDA. O&M and increase in Toll rate will be done in accordance with Toll notification issued by Maharashtra Government.

Operation & Maintenance, Tolling and ITS:

MMRDA will appoint Operation, Maintenance and Tolling Contractor for the road maintenance and Toll collection and allocated adequate budget for engaging the Contractor. The Budget for O&M will be provided by MMRDA.

Actual:

4.2 O&M Cost and Budget

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

It is assumed that O&M cost in Feasibility Study Report, 2012 is one percent of the total project cost, amounts 1,010 million INR at the year of Commercial Operation Date (COD). And it is annually escalated 5% of escalation.

JICA report

5.0 EVALUATION

5.1 JICA and Borrower / Executing Agency performance

JICA:

(PCR)

Borrower/ Executing Agency:

(PCR)

5.2 Overall evaluation

(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.

Experience learnt

Annexure I

Land Acquisition

Land Acquisition:

No	Description	Area (Ha)	Status
1	Land acquisition for ROW (Permanent)		
1.1	Sewri side		
a	Land Acquisition on Sewri Side for ROW (permanent)	10.089	<ul style="list-style-type: none"> • Out of 10.089 ha ROW area, 8.1189 ha area has been handed over to the Contractor. • At Sewri Interchange Land area, there are 322 structures (232 residential + 60 commercial + 30 others) located on MbPT land. All the 322 structures are required to be demolished to clear the land area. • The process of compensation to lessees and rehabilitation of (Project Affected Person) PAP by MMRDA is in progress. • Out of 18 Plots at Sewri Gadi Adda, 5 plots are vacant and Notices to remaining 13 plots issued, under MR& TP Act ,1966 Section 126 ,1(a) & (b). • The process of compensation to lessees & rehabilitation of PAPS is in Progress
1.2	Navi Mumbai side		
a	Area handed over by CIDCO to MMRDA	98.750	In possession of MMRDA.
b	Remaining area to be acquired	9.340	Included Private Land and Private Forest Land. Land acquisition process in progress.
	Total Land for ROW	108.090	
2	Land allocation for Casting yards (Temporary)		
2.1	Sewri side		
	Package -1	15.170	Total area is in possession of MMRDA which is handed over to the Package 1 Contractor.
2.2	Navi Mumbai Side		
a	Package -2	15.360	Both casting yard areas are handed over by CIDCO to MMRDA. However, some structures and containers are still to be removed from package3 casting yard. Both casting yard areas have been handed over to the Contractors.
b	Package -3	11.000	
	Total Area for Casting Yards	41.530	

Annexure II

Procurement and Project Financial Status

PROCUREMENT AND PROJECT STATUS

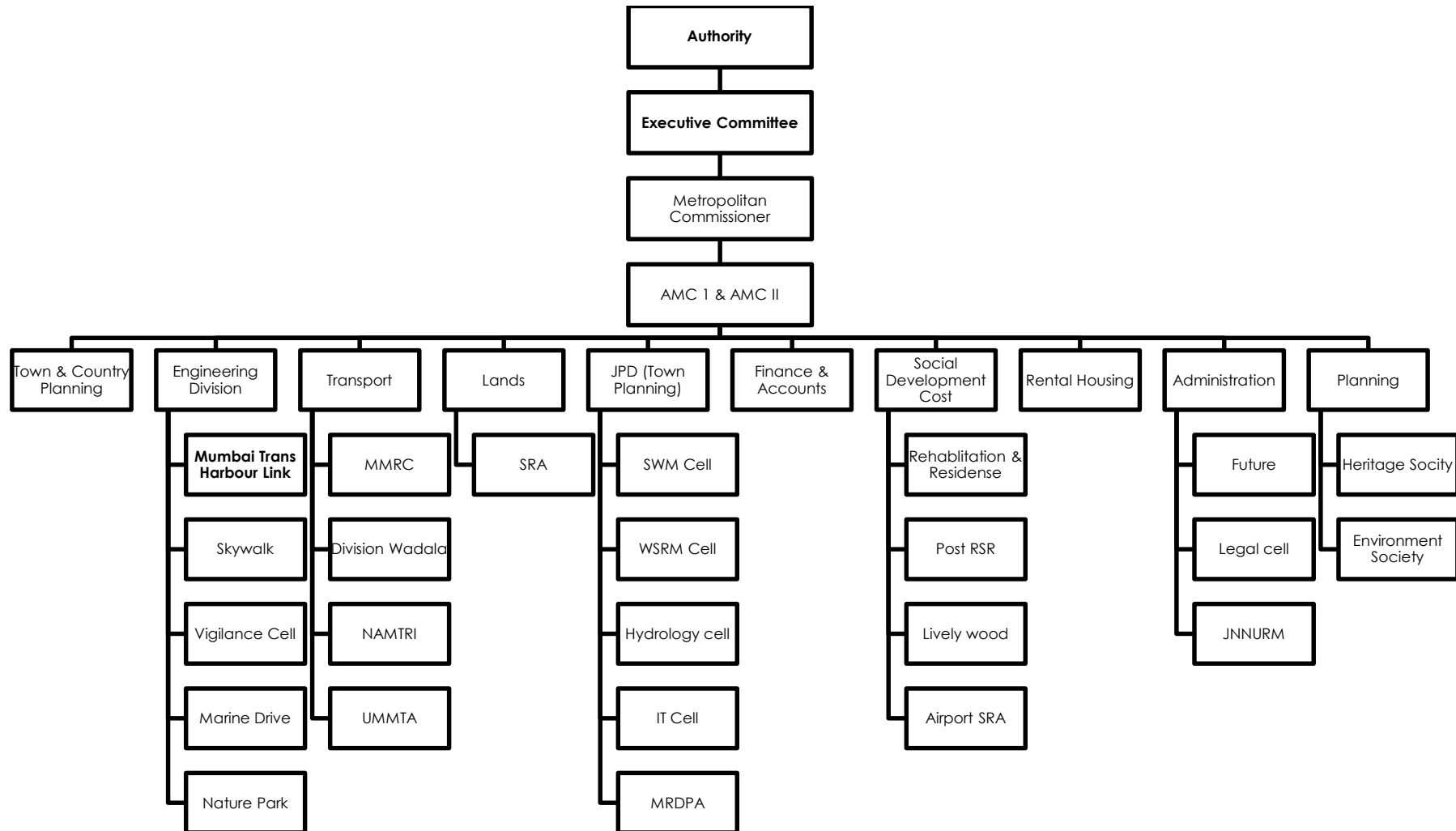
Type	Contract	Awarded or Estimated Value (in Rs. Crore)	Current Status	Contractors	Award Date/ As per PIP Mar- 2018	Actual/ Projected Completion as per PIP Mar-2018	Physical % completion up to Sept. 2018	Present Financial Progress (Till 30 th Sept. 2018) in %
CIVIL	Package-1 (CH 0+000 km to CH 10+380 km)	7637.30	Awarded	L&T-IHI Consortium	Nov 2017	Sep 2022	Nil	12.28%
	Package-2 (CH 10+380 km to CH18+187 km)	5612.61	Awarded	DAEWOO-TPL JV	Nov 2017	Sep 2022	Nil	5.37%
	Package-3 (CH18+187 to CH21+800)	1013.79	Awarded	L&T	Nov 2017	Sep 2021	Nil	5.40%
ITS	Package-4 Intelligent Transport System	144.26 (Estimated)	Design Stage	--	Jul 2020 (Estimated)	Sep 2022	Nil	Nil

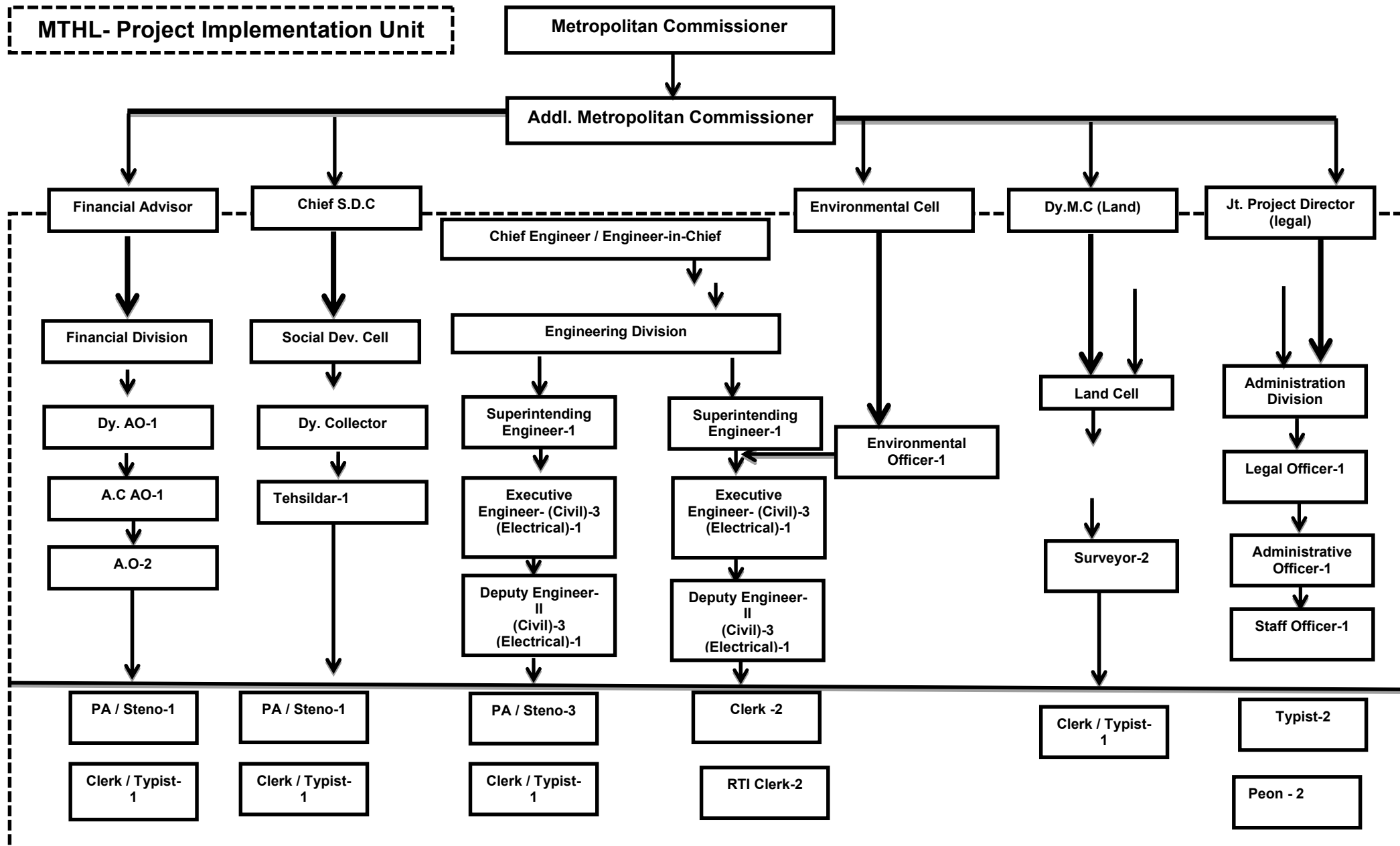
Annexure III

Organization Chart

(MMRDA Organization chart)

MMRDA Organization chart





Annexure IV

JICA's Concurrence Status

Status of JICA'S Concurrence

Sl. No.	Brief description	Procurement procedure	Bid Cost		JICA'S Concurrence on					
			Local Currency (Cr Rs.)	Total (Cr Rs)	PQ Documents	PQ Evaluation	Bid Documents	Technical Evaluation	Financial Evaluation	Contract
1.	Package-1 (CH 0+000 km to CH10+380 km)	ICB with PQ (2P)	7637.30	7637.30	JICA's Concurrence - 9th May 2016	JICA's Concurrence - 22 nd Dec 2016	JICA's Concurrence - 4 th Jan 2017	JICA's Concurrence - 12 th Sep 2017	JICA's Concurrence - 12 th Oct 2017	JICA's Concurrence - 15 th Feb 2018
2.	Package-2 (CH 10+380 km to CH18+187 km)	ICB with PQ (2P)	5612.61	5612.61	JICA's Concurrence - 9 th May 2016	JICA's Concurrence - 22 nd Dec 2016	JICA's Concurrence - 4 th Jan 2017	JICA's Concurrence - 12 th Sep 2017	JICA's Concurrence - 12 th Oct 2017	JICA's Concurrence - 15 th Feb 2018
3.	Package-3 (CH18+187 to CH21+800)	ICB with PQ (2P)	1013.79	1013.79	JICA's Concurrence - 9 th May 2016	JICA's Concurrence - 4 th Jan 2017	JICA's Concurrence - 4 th Jan 2017	JICA's Concurrence - 15 th Sep 2017	JICA's Concurrence - 12 th Oct 2017	JICA's Concurrence - 15 th Feb 2018
4.	Package-4 Intelligent Transport System	ICB with PQ (2P)	144.26	144.26	-	-	-	-	-	-

Annexure V

GC Staff Deployment

1st July 2018 to 30th September 2018

GC's Staff Deployment for July 2018

	Organisation	Experts		Professional Staff	Total
		Home	Field		
PA-1 & PA-2	AECOM	3	3	5	11
	PADECO	1	4	4	9
	Dar Al-Handasah	0	0	1	1
	T.Y.LIN	1	1	0	2
	Sub-total	5	8	10	23
PB-1, PB-2 & PB-3	AECOM	2	0	20	22
	PADECO	0	0	10	10
	Dar Al-Handasah	3	0	2	5
	T.Y.LIN	0	0	0	0
	Sub-total	5	0	32	37
Support Person	AECOM	0	0	7	7
	PADECO	0	0	6	6
	Dar Al-Handasah	0	0	0	0
	T.Y.LIN	0	0	0	0
	Sub-total	0	0	13	13
Total		10	8	55	73

GC's Staff Deployment for August 2018

	Organisation	Experts		Professional Staff	Total
		Home	Field		
PA-1 & PA-2	AECOM	1	3	4	8
	PADECO	2	3	4	9
	Dar Al-Handasah	0	1	1	2
	T.Y.LIN	1	1	0	2
	Sub-total	4	8	9	21
PB-1, PB-2 & PB-3	AECOM	0	0	22	22
	PADECO	0	0	10	10
	Dar Al-Handasah	3	0	2	5
	T.Y.LIN	0	0	0	0
	Sub-total	3	0	34	37
Supporting Staff	AECOM	0	0	7	7
	PADECO	0	0	6	6
	Dar Al-Handasah	0	0	0	0
	T.Y.LIN	0	0	0	0
	Sub-total	0	0	13	13
Total		7	8	56	71

GC's Staff Deployment for September 2018

	Organisation	Home Office	Expert's in India	Indian Personnel	Total
PA-1& PA-2	AECOM	1	3	5	9
	PADECO	0	2	4	6
	Dar Al-Handasah	0	0	2	2
	T.Y.LIN	0	2	0	2
	Sub-total	1	7	11	19
PB-1, PB-2 & PB-3	AECOM	0	0	27	27
	PADECO	0	0	9	9
	Dar Al-Handasah	0	0	6	6
	T.Y.LIN	0	0	0	0
	Sub-total	0	0	42	42
Support Person	AECOM	0	0	8	8
	PADECO	0	0	6	6
	Dar Al-Handasah	0	0	0	0
	T.Y.LIN	0	0	0	0
	Sub-total	0	0	14	14
Total		1	7	67	75

Annexure VI

Project Progress Photos

Meeting Photos



Photo No. 1: Aesthetic Design Presentation & Interface Coordination Meeting with all the 3 Package Contractors held at MMRDA Conference Hall on 30th August 2018



Photo No. 2: JICA Presentation & Meeting held at the Delhi office on 6th & 7th Sept. 2018

Package 1- Site Progress Photos



Photo No. 3: Site visit by JICA Officials, MMRDA & GC dated 18th Sept 2018



Photo No. 4: Site visit by JICA Officials, MMRDA & GC dated 18th Sept 2018



Photo No. 5: Mr V D Sharma, Dy Team Leader – GC explaining the project progress during the JICA Officials site visit dated 18th Sept 2018



Photo No. 6: Temporary Access Bridge (TAB) Erection Works in progress



Photo No. 7: Temporary Access Bridge (TAB) Erection Works in progress



Photo No. 8: Concrete Batching Plant Installation works in progress



Photo No. 9: Site Office Construction Works in progress



Photo No. 10: Labour Colony Construction Works in progress

Package 2 – Site Progress Photos



Photo No. 11: Temporary Access Bridge (TAB) Erection works in progress



Photo No. 12: Temporary Access Bridge (TAB) Erection works in progress



Photo No. 13: Project Site Office Construction Works in progress



Photo No. 14: Labour Colony Construction Works in progress



Photo No. 15: Concrete Batching Plant Erection Works in progress



Photo No. 16: MMRDA & GC Official Site Visit at Belapur Jetty

Package 3 – Site Progress Photos



Photo No. 17: Additional Metropolitan Commissioner (AMC) Site Visit on 26th Sept. 2018



Photo No. 18: GTI work at Chainage 18+230 in progress



Photo No. 19: GTI Core Samples at CH 18+272



Photo No. 20: GTI work at Chainage 18+487 in progress



Photo No. 21: Topographical Survey Works at Chainage 19+700 in progress



Photo No. 22: Survey Works at Chainage 20+200 in progress

Annexure VII

Project Implementation Programme (PIP) Updated Till 30th September 2018

Activity ID	Activity Name	Duration in Days	Start	Finish	Activity % Complete	2017		2018				2019				2020				2021				2022				2023				2024				2025	
						Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2		
Mumbai Trans Harbour Link (MTHL) PIP						[Gantt bar from Q1 2017 to Q2 2025]																															
Milestones						[Gantt bar from Q1 2017 to Q2 2025]																															
MTHL-GC						[Gantt bar from Q1 2017 to Q2 2025]																															
A1000	Commencement of GC Services	0	14-Dec-16 A		100%	[Milestone diamond at Q1 2017]																															
A1020	Completion of GC Services	0		28-Oct-24	0%	[Milestone diamond at Q2 2025]																															
Package of Civil & ITS						[Gantt bar from Q1 2018 to Q4 2022]																															
A2750	Package-3 Completion & Handover to MMRDA	0		25-Jan-22	0%	[Milestone diamond at Q1 2022]																															
A2730	Package-1 Completion & Handover to MMRDA	0		28-Oct-22	0%	[Milestone diamond at Q4 2022]																															
A2740	Package-2 Completion & Handover to MMRDA	0		28-Oct-22	0%	[Milestone diamond at Q4 2022]																															
A2760	Package-4 Completion & Handover to MMRDA	0		29-Oct-22	0%	[Milestone diamond at Q4 2022]																															
A2770	Commercial Operation Date	0		29-Oct-22	0%	[Milestone diamond at Q4 2022]																															
Package - 1 Millstones						[Gantt bar from Q1 2018 to Q4 2022]																															
P1-1170	Project Commencement Date	0	23-Mar-18 A		100%	[Milestone diamond at Q1 2018]																															
P1-1180	KD-1 Construction Programme, completion of Soil Investigation, Submit Final plans	0		22-Oct-18	0%	[Milestone diamond at Q4 2018]																															
P1-1190	KD-2 Technical Design documents & Drawings for Foundation /substructure Superstructure (concrete and Steel)	0		23-Mar-19	0%	[Milestone diamond at Q1 2019]																															
P1-2170	KD-3 GFC for Foundation /Substructure, Superstructure (concrete & Steel)	0		23-Oct-19	0%	[Milestone diamond at Q4 2019]																															
P1-2180	KD-4 Substantial completion of Foundation, Piles, Piers, Abutments, Earthworks and dolphins.	0		21-May-21	0%	[Milestone diamond at Q2 2021]																															
P1-2190	KD-5 Substantial completion of Pile Caps, Piers and Abutments and Pre-Casting Segment Completion.	0		26-Sep-21	0%	[Milestone diamond at Q3 2021]																															
P1-2200	KD-6 Substantial completion of Concrete Superstructure /cast-in-situ concrete structures, & Steel structures	0		02-May-22	0%	[Milestone diamond at Q1 2022]																															
P1-2210	KD-7 Substantial completion of Kerbs /Traffic Signs, Marking & Noise barriers, Removal of jetties, Restoration	0		30-Jul-22	0%	[Milestone diamond at Q3 2022]																															
P1-2220	KD-8 Substantial completion of all works in all respects and Starting the Trail Run operation.	0		28-Dec-22	0%	[Milestone diamond at Q4 2022]																															
Package - 2 Millstones						[Gantt bar from Q1 2018 to Q4 2022]																															
P2-2110	Project Commencement Date	0	23-Mar-18 A		100%	[Milestone diamond at Q1 2018]																															
P2-2120	KD-1 Construction Programme, completion of Soil Investigation, Submit Final plans	0		22-Oct-18	0%	[Milestone diamond at Q4 2018]																															
P2-2130	KD-2 Technical Design documents & Drawings for Foundation /substructure Superstructure (concrete and Steel)	0		23-Mar-19	0%	[Milestone diamond at Q1 2019]																															
P2-2140	KD-3 GFC for Foundation /Substructure, Superstructure (concrete & Steel)	0		23-Oct-19	0%	[Milestone diamond at Q4 2019]																															
P2-2150	KD-4 Substantial completion of Foundation, Piles, Piers, Abutments, Earthworks and dolphins.	0		01-Jul-21	0%	[Milestone diamond at Q2 2021]																															
P2-2160	KD-5 Substantial completion of Pile Caps, Piers and Abutments and Pre-Casting Segment Completion.	0		22-Sep-21	0%	[Milestone diamond at Q3 2021]																															
P2-2170	KD-6 Substantial completion of Concrete Superstructure /cast-in-situ concrete structures, & Steel structures	0		02-May-22	0%	[Milestone diamond at Q1 2022]																															
P2-2180	KD-7 Substantial completion of Kerbs /Traffic Signs, Marking & Noise barriers, Removal of jetties, Restoration	0		30-Jul-22	0%	[Milestone diamond at Q3 2022]																															
P2-2190	KD-8 Substantial completion of all works in all respects and Starting the Trail Run operation.	0		28-Oct-22	0%	[Milestone diamond at Q4 2022]																															
Package - 3 Millstones						[Gantt bar from Q1 2018 to Q4 2022]																															
P3-1860	Project Commencement Date	0	23-Mar-18 A		100%	[Milestone diamond at Q1 2018]																															
P3-1870	KD-1 Construction Programme, completion of Soil Investigation, Submit Final plans	0		28-Jan-19	0%	[Milestone diamond at Q4 2018]																															
P3-1880	KD-2 Technical Design documents & Drawings for Foundation /substructure Superstructure (concrete and Steel)	0		28-Apr-19	0%	[Milestone diamond at Q1 2019]																															
P3-1890	KD-3 GFC for Foundation /Substructure, Superstructure (concrete & Steel)	0		26-Aug-19	0%	[Milestone diamond at Q4 2019]																															
P3-1900	KD-4 Substantial completion of Foundation, Piles, Piers, Abutments, Earthworks and dolphins.	0		20-Jul-20	0%	[Milestone diamond at Q3 2020]																															
P3-1910	KD-5 Substantial completion of Pile Caps, Piers and Abutments and Pre-Casting Segment Completion.	0		18-Jan-21	0%	[Milestone diamond at Q1 2021]																															
P3-1920	KD-6 Substantial completion of Concrete Superstructure /cast-in-situ concrete structures, & Steel structures	0		26-Jul-21	0%	[Milestone diamond at Q3 2021]																															
P3-1930	KD-7 Substantial completion of Kerbs /Traffic Signs, Marking	0		26-Nov-21	0%	[Milestone diamond at Q4 2021]																															

█ Actual Work
█ Remaining Work
█ Critical Remaining Work
◆ Milestone

Project Implementation Programme Progress Updated up to 30th September 2018

Date	Revision	Checked	Approved
30-Sep-18	Progress Updated up to 31 M...	JS	TL

Activity ID	Activity Name	Duration in Days	Start	Finish	Activity % Complete	2017				2018				2019				2020				2021				2022				2023				2024				2025	
						Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2				
P3-1940	KD-8 Substantial completion of all works in all respects and Starting the Trail Run operation.	0		25-Jan-22	0%																																		
GC's Regular Progress Report & Status Reports		1648	25-Jul-17 A	29-Oct-22		Summary																																	
A2790	Monthly Reports	1630	25-Jul-17 A	08-Oct-22	22.76%	Actual Work																																	
A2800	Quarterly Reports	1545	25-Jul-17 A	01-Jul-22	24.01%	Actual Work																																	
A2870	Special occurrence report Monthly, Quarterly & Annual Reports	1545	25-Jul-17 A	01-Jul-22	24.01%	Actual Work																																	
A2810	Annual Reports	1400	01-Jan-18 A	22-Jun-22	16.71%	Actual Work																																	
A2820	Supervision Reports	1407	01-Jan-18 A	30-Jun-22	16.63%	Actual Work																																	
A2830	Engineering Reports	1407	01-Jan-18 A	30-Jun-22	16.63%	Actual Work																																	
A2840	Draft Final Reports	365	08-Mar-21	07-May-22	0%	Actual Work																																	
A2850	Final Reports	365	23-Aug-21	22-Oct-22	0%	Actual Work																																	
A2860	Completion reports	180	02-Apr-22	29-Oct-22	0%	Actual Work																																	
Preparation/ Finalization of O&M Manuals by GC		180	02-Apr-22	29-Oct-22		Actual Work																																	
A2780	Civil Works Manual including offshore and On shore	180	02-Apr-22	29-Oct-22	0%	Actual Work																																	
A2880	Signalling / Traffic Control Manual	180	02-Apr-22	29-Oct-22	0%	Actual Work																																	
A2890	Intelligent Transport Systems (ITS) Manual	180	02-Apr-22	29-Oct-22	0%	Actual Work																																	
A2900	Commercial Manual	180	02-Apr-22	29-Oct-22	0%	Actual Work																																	
A2910	Operating Manual	180	02-Apr-22	29-Oct-22	0%	Actual Work																																	
A2920	Accident and Safety Manual	180	02-Apr-22	29-Oct-22	0%	Actual Work																																	
A2930	Disaster Management Manual	180	02-Apr-22	29-Oct-22	0%	Actual Work																																	
A2940	General Electrical Services and Equipment Manual	180	02-Apr-22	29-Oct-22	0%	Actual Work																																	
A2950	Safety, Health and Environmental Manual	180	02-Apr-22	29-Oct-22	0%	Actual Work																																	
A2960	Quality Assurance Manual	180	02-Apr-22	29-Oct-22	0%	Actual Work																																	
Tender Assistance stage		1080	14-Dec-16 A	26-May-20		Actual Work																																	
Package-1		378	14-Dec-16 A	23-Mar-18 A		Actual Work																																	
A1040	Tender Assistant Leading Team	378	14-Dec-16 A	23-Mar-18 A	100%	Actual Work																																	
Tender Assistant		41	14-Dec-16 A	31-Jan-17 A		Actual Work																																	
A1030	Tender Document Review	40	14-Dec-16 A	29-Jan-17 A	100%	Actual Work																																	
A1050	Pre bid Meeting	1	30-Jan-17 A	31-Jan-17 A	100%	Actual Work																																	
Addendum -1		78	31-Jan-17 A	24-May-17 A		Actual Work																																	
A1060	Preparing the Tender Pre Bid Quarry 1st Set replay	30	31-Jan-17 A	05-Apr-17 A	100%	Actual Work																																	
A1080	Preparing the Tender Addenda -1 Contractual Part	30	31-Jan-17 A	07-Mar-17 A	100%	Actual Work																																	
A1070	Preparing the Tender Addenda -1 Technical Part	30	08-Feb-17 A	07-Mar-17 A	100%	Actual Work																																	
A1090	Tender Addenda -1 Submitting to MTHL-PIU/JICA	24	07-Mar-17 A	29-Apr-17 A	100%	Actual Work																																	
A1100	Reviewing Tender Addenda -1 byMTHL-PIU/JICA	24	29-Apr-17 A	24-May-17 A	100%	Actual Work																																	
Addendum -2		52	07-Apr-17 A	01-Jun-17 A		Actual Work																																	
A1110	Preparing the Tender Pre Bid Quarry 2nd Set replay	21	07-Apr-17 A	25-May-17 A	100%	Actual Work																																	
A1120	Preparing the Tender Addenda -2 Technical Part	21	15-Apr-17 A	10-May-17 A	100%	Actual Work																																	
A1130	Preparing the Tender Addenda -2 Contractual Part	21	15-Apr-17 A	10-May-17 A	100%	Actual Work																																	
A1140	Tender Addenda -2 Submitting to MTHL-PIU/JICA	12	10-May-17 A	01-Jun-17 A	100%	Actual Work																																	
A1150	Reviewing Tender Addenda -2 by MTHL-PIU/JICA	12	24-May-17 A	01-Jun-17 A	100%	Actual Work																																	

Project Implementation Programme Progress Updated up to 30th September 2018

Date	Revision	Checked	Approved
30-Sep-18	Progress Updated up to 31 M...	JS	TL

Activity ID	Activity Name	Duration in Days	Start	Finish	Activity % Complete	2017		2018				2019				2020				2021				2022				2023				2024				2025	
						Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2		
Addendum -3,4&5						40	22-May-17 A	05-Jul-17 A																													
A1160	Preparing the Tender Pre Bid Quarry 3rd Set replay	14	22-May-17 A	22-Jun-17 A	100%	[Gantt bar: 22-May-17 A to 22-Jun-17 A]																															
A1170	Preparing the Tender Addenda -3 Technical Part	14	30-May-17 A	15-Jun-17 A	100%	[Gantt bar: 30-May-17 A to 15-Jun-17 A]																															
A1180	Preparing the Tender Addenda -3 Contractual Part	14	30-May-17 A	15-Jun-17 A	100%	[Gantt bar: 30-May-17 A to 15-Jun-17 A]																															
A1190	Tender Addenda -3,4&5 Submitting to MTHL-PIU/JICA	6	15-Jun-17 A	22-Jun-17 A	100%	[Gantt bar: 15-Jun-17 A to 22-Jun-17 A]																															
A1200	Reviewing Tender Addenda -3,4&5 by MTHL-PIU/JICA	12	22-Jun-17 A	28-Jun-17 A	100%	[Gantt bar: 22-Jun-17 A to 28-Jun-17 A]																															
A1210	Addendum-3,4&5 Issued to Bidders (including Addendum & Extension)	1	28-Jun-17 A	05-Jul-17 A	100%	[Gantt bar: 28-Jun-17 A to 05-Jul-17 A]																															
Bid submission to MTHL & Technical Bid Opening						14	30-Jun-17 A	17-Jul-17 A																													
A1220	Bid submission to MTHL & Technical Bid Opening	14	30-Jun-17 A	17-Jul-17 A	100%	[Gantt bar: 30-Jun-17 A to 17-Jul-17 A]																															
Technical Evaluation						42	19-Jul-17 A	12-Sep-17 A																													
A2590	Envelop A for Tender Fee & EMD is opened	2	19-Jul-17 A	21-Jul-17 A	100%	[Gantt bar: 19-Jul-17 A to 21-Jul-17 A]																															
A2990	Stage-1,2 & 3 Evaluation	14	21-Jul-17 A	04-Aug-17 A	100%	[Gantt bar: 21-Jul-17 A to 04-Aug-17 A]																															
A2970	Envelop B Technical Bid are opened	0	25-Jul-17 A	25-Jul-17 A	100%	[Gantt bar: 25-Jul-17 A to 25-Jul-17 A]																															
A2980	Stage-4 Evaluation (Technical)	26	25-Jul-17 A	22-Aug-17 A	100%	[Gantt bar: 25-Jul-17 A to 22-Aug-17 A]																															
A3160	Evaluation Report for Stage-1,2,3 Submitting to MTHL-PIU	7	31-Jul-17 A	19-Aug-17 A	100%	[Gantt bar: 31-Jul-17 A to 19-Aug-17 A]																															
A3000	Evaluation Final Report (Technical) Submitting to MTHL-PIU/JICA	6	18-Aug-17 A	22-Aug-17 A	100%	[Gantt bar: 18-Aug-17 A to 22-Aug-17 A]																															
A1270	Evaluation Reports (Technical) Approved by MTHL-PIU/JICA	10	31-Aug-17 A	12-Sep-17 A	100%	[Gantt bar: 31-Aug-17 A to 12-Sep-17 A]																															
Financial Evaluation						36	12-Sep-17 A	09-Nov-17 A																													
A1250	Envelop C Financial Bid Opening Stage-5	0	12-Sep-17 A	12-Sep-17 A	100%	[Gantt bar: 12-Sep-17 A to 12-Sep-17 A]																															
A1280	Bid Evaluation Report (Financial)	12	12-Sep-17 A	26-Sep-17 A	100%	[Gantt bar: 12-Sep-17 A to 26-Sep-17 A]																															
A1290	Tender Committee approval by MTHL-PIU/JICA	7	26-Sep-17 A	27-Sep-17 A	100%	[Gantt bar: 26-Sep-17 A to 27-Sep-17 A]																															
A1300	Evaluation Reports (Financial) approved by JICA	10	28-Sep-17 A	12-Oct-17 A	100%	[Gantt bar: 28-Sep-17 A to 12-Oct-17 A]																															
A3010	Management Committee approval by MTHL-PIU/JICA	10	30-Sep-17 A	09-Nov-17 A	100%	[Gantt bar: 30-Sep-17 A to 09-Nov-17 A]																															
Tender Award						108	25-Oct-17 A	23-Mar-18 A																													
A1260	GC Preparing LOA for Successful Bidder	6	25-Oct-17 A	01-Nov-17 A	100%	[Gantt bar: 25-Oct-17 A to 01-Nov-17 A]																															
A1310	Finalization and Award of Contract by MMRDA	21	01-Nov-17 A	16-Nov-17 A	100%	[Gantt bar: 01-Nov-17 A to 16-Nov-17 A]																															
A1320	MMRDA Issue LOA to Successful Bidder	0	17-Nov-17 A	17-Nov-17 A	100%	[Gantt bar: 17-Nov-17 A to 17-Nov-17 A]																															
A1530	Contract Agreement	24	17-Nov-17 A	26-Dec-17 A	100%	[Gantt bar: 17-Nov-17 A to 26-Dec-17 A]																															
A1560	Notice to Commencement of Work	0	28-Feb-18 A	23-Mar-18 A	100%	[Gantt bar: 28-Feb-18 A to 23-Mar-18 A]																															
Package-2						378	14-Dec-16 A	23-Mar-18 A																													
Tender Assistant						41	14-Dec-16 A	31-Jan-17 A																													
A1330	Tender Document Review	40	14-Dec-16 A	29-Jan-17 A	100%	[Gantt bar: 14-Dec-16 A to 29-Jan-17 A]																															
A1340	Tender Assistant Leading Team	41	14-Dec-16 A	31-Jan-17 A	100%	[Gantt bar: 14-Dec-16 A to 31-Jan-17 A]																															

█ Actual Work █ Remaining Work █ Critical Remaining Work
◆ Milestone ▬ Summary

Project Implementation Programme Progress Updated up to 30th September 2018

Date	Revision	Checked	Approved
30-Sep-18	Progress Updated up to 31 M...	JS	TL

Activity ID	Activity Name	Duration in Days	Start	Finish	Activity % Complete	2017		2018				2019				2020				2021				2022				2023				2024				2025	
						Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2		
A1350	Pre bid Meeting	1	30-Jan-17 A	31-Jan-17 A	100%	1																															
Addendum -1		78	31-Jan-17 A	24-May-17 A																																	
A1360	Preparing the Tender Pre Bid Quarry 1st Set replay	30	31-Jan-17 A	05-Apr-17 A	100%	1																															
A1370	Preparing the Tender Addenda -1 Technical Part	30	31-Jan-17 A	07-Mar-17 A	100%	1																															
A1380	Preparing the Tender Addenda -1 Contractual Part	30	31-Jan-17 A	07-Mar-17 A	100%	1																															
A1390	Tender Addenda -1 Submitting to MTHL-PIU/JICA	24	07-Mar-17 A	29-Apr-17 A	100%	1																															
A1400	Reviewing Tender Addenda -1 by MTHL-PIU/JICA	24	29-Apr-17 A	24-May-17 A	100%	1																															
Addendum -2		52	07-Apr-17 A	01-Jun-17 A																																	
A1410	Preparing the Tender Pre Bid Quarry 2nd Set replay	21	07-Apr-17 A	25-May-17 A	100%	1																															
A1420	Preparing the Tender Addenda -2 Technical Part	21	15-Apr-17 A	10-May-17 A	100%	1																															
A1430	Preparing the Tender Addenda -2 Contractual Part	21	15-Apr-17 A	10-May-17 A	100%	1																															
A1440	Tender Addenda -2 Submitting to MTHL-PIU/JICA	12	10-May-17 A	01-Jun-17 A	100%	1																															
A1450	Reviewing Tender Addenda -2 by MTHL-PIU/JICA	12	24-May-17 A	01-Jun-17 A	100%	1																															
Addendum -3,4&5		40	22-May-17 A	05-Jul-17 A																																	
A1460	Preparing the Tender Pre Bid Quarry 3rd Set replay	14	22-May-17 A	22-Jun-17 A	100%	1																															
A1470	Preparing the Tender Addenda -3,4&5 Technical Part	14	30-May-17 A	15-Jun-17 A	100%	1																															
A1480	Preparing the Tender Addenda -3,4&5 Contractual Part	14	30-May-17 A	15-Jun-17 A	100%	1																															
A1490	Tender Addenda -3,4&5 Submitting to MTHL-PIU/JICA	6	15-Jun-17 A	22-Jun-17 A	100%	1																															
A1500	Reviewing Tender Addenda -3,4&5 by MTHL-PIU/JICA	12	22-Jun-17 A	28-Jun-17 A	100%	1																															
A1510	Addendum-3,4&5 Issued to Bidders (including Addendum & Extension)	1	28-Jun-17 A	05-Jul-17 A	100%	1																															
Bid submission to MTHL & Technical Bid Opening		14	30-Jun-17 A	17-Jul-17 A																																	
A1520	Bid submission to MTHL & Technical Bid Opening	14	30-Jun-17 A	17-Jul-17 A	100%	1																															
Technical Evaluation		41	19-Jul-17 A	10-Sep-17 A																																	
A3170	Envelop A for Tender Fee & EMD is opened	2	19-Jul-17 A	21-Jul-17 A	100%	1																															
A3180	Stage-1,2 & 3 Evaluation	14	21-Jul-17 A	04-Aug-17 A	100%	1																															
A3190	Envelop B Technical Bid are opened	0	25-Jul-17 A	25-Jul-17 A	100%	1																															
A3200	Stage-4 Evaluation (Technical)	26	28-Jul-17 A	21-Aug-17 A	100%	1																															
A3210	Evaluation Report for Stage-1,2,3 Submitting to MTHL-PIU	7	08-Aug-17 A	19-Aug-17 A	100%	1																															
A3220	Evaluation Final Report (Technical) Submitting to MTHL-PIU/JICA	6	18-Aug-17 A	22-Aug-17 A	100%	1																															
A3230	Evaluation Reports (Technical) Approved by MTHL-PIU/JICA	9	31-Aug-17 A	10-Sep-17 A	100%	1																															
Financial Evaluation		37	11-Sep-17 A	09-Nov-17 A																																	
A1540	Envelop C Financial Bid Opening Stage-5	0	11-Sep-17 A	11-Sep-17 A	100%	1																															
A1570	Bid Evaluation Report (Financial)	12	11-Sep-17 A	24-Sep-17 A	100%	1																															

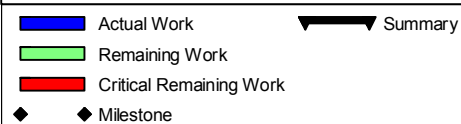
- Actual Work
- Remaining Work
- Critical Remaining Work
- ◆ Milestone

▼ Summary

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Date	Revision	Checked	Approved
30-Sep-18	Progress Updated up to 31 M...	JS	TL

Activity ID	Activity Name	Duration in Days	Start	Finish	Activity % Complete	2017		2018				2019				2020				2021				2022				2023				2024				2025	
						Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2		
A1580	Tender Committee approval by MTHL-PIU/JICA	7	25-Sep-17 A	28-Sep-17 A	100%																																
A1590	Evaluation Reports (Financial) approved by JICA	10	28-Sep-17 A	12-Oct-17 A	100%																																
A3080	Management Committee approval by MTHL-PIU/JICA	10	30-Sep-17 A	09-Nov-17 A	100%																																
Tender Award			108	25-Oct-17 A	23-Mar-18 A																																
A1550	GC Preparing LOA for Successful Bidder	6	25-Oct-17 A	01-Nov-17 A	100%																																
A1600	Finalization and Award of Contract by MMRDA	21	01-Nov-17 A	16-Nov-17 A	100%																																
A1610	MMRDA Issue LOA to Successful Bidder	0	17-Nov-17 A	17-Nov-17 A	100%																																
A1820	Contract Agreement	24	30-Nov-17 A	19-Jan-18 A	100%																																
A1850	Notice to Commencement of Work	0	28-Feb-18 A	23-Mar-18 A	100%																																
Package-3			378	14-Dec-16 A	23-Mar-18 A																																
Tender Assistant			41	14-Dec-16 A	31-Jan-17 A																																
A1620	Tender Document Review	40	14-Dec-16 A	29-Jan-17 A	100%																																
A1630	Tender Assistant Leading Team	41	14-Dec-16 A	31-Jan-17 A	100%																																
A1640	Pre bid Meeting	1	30-Jan-17 A	31-Jan-17 A	100%																																
Addendum -1			78	31-Jan-17 A	24-May-17 A																																
A1650	Preparing the Tender Pre Bid Quarry 1st Set replay	30	31-Jan-17 A	05-Apr-17 A	100%																																
A1660	Preparing the Tender Addenda -1 Technical Part	30	31-Jan-17 A	07-Mar-17 A	100%																																
A1670	Preparing the Tender Addenda -1 Contractual Part	30	31-Jan-17 A	07-Mar-17 A	100%																																
A1680	Tender Addenda -1 Submitting to MTHL-PIU/JICA	24	07-Mar-17 A	29-Apr-17 A	100%																																
A1690	Reviewing Tender Addenda -1 by MTHL-PIU/JICA	24	04-Apr-17 A	24-May-17 A	100%																																
Addendum -2			52	07-Apr-17 A	01-Jun-17 A																																
A1700	Preparing the Tender Pre Bid Quarry 2nd Set replay	21	07-Apr-17 A	25-May-17 A	100%																																
A1710	Preparing the Tender Addenda -2 Technical Part	21	15-Apr-17 A	10-May-17 A	100%																																
A1720	Preparing the Tender Addenda -2 Contractual Part	21	15-Apr-17 A	10-May-17 A	100%																																
A1730	Tender Addenda -2 Submitting to MTHL-PIU/JICA	12	10-May-17 A	01-Jun-17 A	100%																																
A1740	Reviewing Tender Addenda -2 by MTHL-PIU/JICA	12	24-May-17 A	01-Jun-17 A	100%																																
Addendum -3,4 &5			40	22-May-17 A	05-Jul-17 A																																
A1750	Preparing the Tender Pre Bid Quarry 3rd Set replay	14	22-May-17 A	22-Jun-17 A	100%																																
A1760	Preparing the Tender Addenda -3,4&5 Technical Part	14	30-May-17 A	15-Jun-17 A	100%																																
A1770	Preparing the Tender Addenda -3,4&5 Contractual Part	14	30-May-17 A	15-Jun-17 A	100%																																
A1780	Tender Addenda -3,4&5 Submitting to MTHL-PIU/JICA	6	15-Jun-17 A	22-Jun-17 A	100%																																
A1790	Reviewing Tender Addenda -3,4&5 by MTHL-PIU/JICA	12	22-Jun-17 A	28-Jun-17 A	100%																																
A1800	Addendum-3,4&5 Issued to Bidders (including Addendum & Extension)	1	28-Jun-17 A	05-Jul-17 A	100%																																



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						Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2		
Bid submission to MTHL & Technical Bid Opening						14	01-Jul-17 A	17-Jul-17 A	100%																												
A1810	Bid submission to MTHL & Technical Bid Opening	14	01-Jul-17 A	17-Jul-17 A	100%																																
Technical Evaluation						40	19-Jul-17 A	09-Sep-17 A	100%																												
A3240	Envelop A for Tender Fee & EMD is opened	2	19-Jul-17 A	21-Jul-17 A	100%																																
A3250	Stage-1,2 & 3 Evaluation	14	21-Jul-17 A	09-Aug-17 A	100%																																
A3260	Envelop B Technical Bid are opened	0	25-Jul-17 A	25-Jul-17 A	100%																																
A3270	Stage-4 Evaluation (Technical)	24	01-Aug-17 A	18-Aug-17 A	100%																																
A3280	Evaluation Report for Stage-1,2,3 Submitting to MTHL-PIU	7	10-Aug-17 A	19-Aug-17 A	100%																																
A3290	Evaluation Final Report (Technical) Submitting to MTHL-PIU/JICA	7	17-Aug-17 A	22-Aug-17 A	100%																																
A3300	Evaluation Reports (Technical) Approved by MTHL-PIU/JICA	8	31-Aug-17 A	09-Sep-17 A	100%																																
Financial Evaluation						37	11-Sep-17 A	09-Nov-17 A	100%																												
A1830	Envelop C Financial Bid Opening Stage-5	0	11-Sep-17 A	11-Sep-17 A	100%																																
A1860	Bid Evaluation Report (Financial)	12	11-Sep-17 A	24-Sep-17 A	100%																																
A1870	Tender Committee approval by MTHL-PIU/JICA	7	25-Sep-17 A	28-Sep-17 A	100%																																
A1880	Evaluation Reports (Financial) approved by JICA	10	28-Sep-17 A	12-Oct-17 A	100%																																
A3090	Management Committee approval by MTHL-PIU/JICA	10	30-Sep-17 A	09-Nov-17 A	100%																																
Tender Award						108	25-Oct-17 A	23-Mar-18 A	100%																												
A1840	GC Preparing LOA for Successful Bidder	6	25-Oct-17 A	01-Nov-17 A	100%																																
A1890	Finalization and Award of Contract by MMRDA	21	01-Nov-17 A	16-Nov-17 A	100%																																
A1900	MMRDA Issue LOA to Successful Bidder	0	17-Nov-17 A	17-Nov-17 A	100%																																
A3020	Contract Agreement	24	17-Nov-17 A	26-Dec-17 A	100%																																
A3030	Notice to Commencement of Work	0	28-Feb-18 A	23-Mar-18 A	100%																																
Package-4						810	25-Oct-17 A	26-May-20																													
GC Tender Assistance Activities - Prequalification						460	25-Oct-17 A	14-Apr-19																													
A2580	GC to Prepare PQ Applications Including MMRDA/JICA Approval	90	25-Oct-17 A	16-Oct-18	85%																																
A2550	MMRDA to Invite PQ Applications (including Addendum & Extension)	60	16-Oct-18	15-Dec-18	0%																																
A2560	GC to Evaluate PQ Applications and Prepare PQ Evaluation Report	60	15-Dec-18	13-Feb-19	0%																																
A2570	MMRDA & JICA Approve PQ Evaluation Report	60	13-Feb-19	14-Apr-19	0%																																
GC Tender Assistance Activities - Bidding						528	15-Dec-18	26-May-20																													
P4-010	GC to Prepare Bidding Documents Including MMRDA/JICA Approval	180	15-Dec-18	13-Jun-19	0%																																
P4-1000	MMRDA to Invite Bids	0	13-Jun-19		0%																																
P4-1010	Pre Bid Meeting	0	10-Jul-19		0%																																
P4-1020	Pre Bid Queries submissions final	75	10-Jul-19	23-Sep-19	0%																																
P4-1030	Addendum Preparation	60	02-Aug-19	01-Oct-19	0%																																
P4-1040	Addendum Submission to MTHL-PIU/JICA	60	16-Aug-19	15-Oct-19	0%																																
P4-1050	Addendum Approved by MTHL-PIU/JICA	60	23-Aug-19	22-Oct-19	0%																																
P4-1060	Addendum Issued to Bidders (including Addendum & Extension)	60	30-Aug-19	29-Oct-19	0%																																
P4-1070	Bid submission to MTHL & Technical Bid Opening	0		12-Nov-19	0%																																
P4-1080	Evaluate Bids, Prepare Bid Evaluation Report (Technical)	45	13-Nov-19	28-Dec-19	0%																																
P4-1090	Evaluation Reports (Technical) Approved by MTHL-PIU/JICA	45	13-Dec-19	27-Jan-20	0%																																
P4-1100	Financial Bid Opening	0		27-Jan-20	0%																																
P4-1110	Evaluate Bids, Prepare Bid Evaluation Report (Financial)	30	28-Jan-20	27-Feb-20	0%																																

█ Actual Work ▶ Summary
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						Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2				
P2-2200	Mobilisation	30	23-Mar-18 A	22-Apr-18 A	100%					■																													
P2-2210	Construction Programme, completion of Soil Investigation, Submit Final plans	150	22-Apr-18 A	22-Oct-18	85%					■	■	■	■																										
Schedule No. 1: General Items		1643	23-Mar-18 A	21-Sep-22						■	■	■	■																										
P2-1000	Performance Security (Section VII GC Sub-Clause 4.2)	1	23-Mar-18 A	26-Mar-18 A	100%					■																													
P2-1010	Insurance for Works (Section VII GC Sub-Clause 18.2)	1	23-Mar-18 A	17-Apr-18 A	100%					■																													
P2-1020	Insurance for Contractor's Equipment (Section VII GC Sub-Clause 18.2)	1	23-Mar-18 A	10-Apr-18 A	100%					■																													
P2-1030	Insurance against Injury to Persons and Damage to Property (Section VII GC Sub-Clause 18.3)	2	23-Mar-18 A	17-Apr-18 A	100%					■																													
P2-1040	Insurance for Contractor's Personnel (Section VII GC Sub-Clause 18.4)	2	23-Mar-18 A	16-Apr-18 A	100%					■																													
P2-1050	Insurance for Design Liability (Section VIII, PC Sub-Clause 18.5)	2	23-Mar-18 A	16-Apr-18 A	100%					■																													
P2-1060	Automobile Liability Insurance (Section VIII, PC Sub-Clause 18.6)	2	23-Mar-18 A	19-Apr-18 A	100%					■																													
P2-1080	Provision and maintenance of health and safety measures during the Time for Completion (Section VII GC Sub-Clause 6.7)	1643	31-May-18 A	21-Sep-22	11.6%					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				
P2-1090	Provision (construction) of office facilities with furniture and office equipment	1643	31-May-18 A	21-Sep-22	11.6%					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				
P2-1100	Maintenance of above office facilities for the Employer during the Time for Completion (Section VII GC Sub-Clause 6.6)	1643	31-May-18 A	21-Sep-22	11.6%					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				
P2-1150	Supply of vehicles, boats, etc. for the Employer (Section VII GC Sub-Clause 6.6)	1643	31-May-18 A	21-Sep-22	11.6%					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				
P2-1160	Operation and maintenance of above vehicles, boats, etc. for the Employer during the Time for Completion	1643	31-May-18 A	21-Sep-22	11.6%					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				
P2-1070	Allow for DNP Services (Section VII GC Clause 11)	2	19-Sep-22	21-Sep-22	0%																																		
P2-1110	Removal/clearing of above office facilities for the Employer and for the Engineer (Section VII GC Sub-Clause 6.6)	2	19-Sep-22	21-Sep-22	0%																																		
P2-1120	Provision and removal of diversion roads (Section VII GC Sub-Clause 4.15)	2	19-Sep-22	21-Sep-22	0%																																		
P2-1130	Operation and maintenance of diversion roads during the Time for Completion (Section VII GC Sub-Clause 4.15)	2	19-Sep-22	21-Sep-22	0%																																		
P2-1140	Clearing from Site and Works after Taking-Over (Section VII GC SubClause 4.23)	2	19-Sep-22	21-Sep-22	0%																																		
Schedule No. 2: Contractor's Documents		1553	21-Jun-18 A	21-Sep-22						■	■	■	■																										
P2-1170	Technical Design documents of highway and interchange alignments	90	21-Jun-18 A	18-Oct-18	80%					■	■	■	■																										
P2-1190	Technical Design documents of earthwork	90	21-Jun-18 A	14-Nov-18	50%					■	■	■	■																										
P2-1200	Technical Design documents of foundation	180	21-Jul-18 A	20-Mar-19	5%					■	■	■	■																										
P2-1230	Technical Design documents of superstructure (steel)	365	21-Jul-18 A	24-Aug-19	10%					■	■	■	■	■	■	■	■																						
P2-1210	Technical Design documents of substructure	210	19-Sep-18 A	17-Apr-19	5.24%					■	■	■	■	■	■	■	■																						
P2-1240	Technical Design documents of dolphins	150	19-Sep-18 A	05-Apr-19	5%					■	■	■	■	■	■	■	■																						
P2-1370	Submission of samples (GC Sub-Clause 7.2)	150	19-Sep-18 A	06-Mar-19	7.33%					■	■	■	■	■	■	■	■																						
P2-1270	Construction Design documents of earthwork	150	30-Sep-18	27-Feb-19	0%					■	■	■	■																										
P2-1220	Technical Design documents of superstructure (concrete)	240	19-Oct-18	16-Jun-19	0%					■	■	■	■	■	■	■	■																						
P2-1290	Construction Design documents of substructure	210	18-Nov-18	16-Jun-19	0%					■	■	■	■	■	■	■	■																						
P2-1300	Construction Design documents of superstructure (concrete)	240	18-Dec-18	15-Aug-19	0%					■	■	■	■	■	■	■	■																						
P2-1280	Construction Design documents of foundation	180	20-Dec-18	18-Jun-19	0%					■	■	■	■	■	■	■	■																						
P2-1250	Technical Design documents of pavement	120	16-Feb-19	16-Jun-19	0%					■	■	■	■	■	■	■	■																						
P2-1310	Construction Design documents of superstructure (steel)	240	25-Feb-19	23-Oct-19	0%					■	■	■	■	■	■	■	■																						
P2-1180	Aesthetic Strategy Report and Desktop study for Wind Tunnel Test	1	22-Mar-19	23-Mar-19	0%					■																													
P2-1320	Construction Design documents of dolphins	90	05-Apr-19	04-Jul-19	0%					■	■	■	■	■	■	■	■																						
P2-1260	Technical Design documents of bridge ancillaries	120	26-Apr-19	24-Aug-19	0%					■	■	■	■	■	■	■	■																						

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						Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Schedule No. 4: Construction of Piers, Pier caps and Abutments,																																							
P3-1480	Construction of cast-in-situ concrete pier and pier caps	180	28-Jan-19	27-Jul-19	0%	[Gantt bar: 28-Jan-19 to 27-Jul-19]																																	
P3-1490	Construction of cast-in-situ concrete abutment structure including caps	180	28-Jan-19	27-Jul-19	0%	[Gantt bar: 28-Jan-19 to 27-Jul-19]																																	
P3-1500	Construction of earthwork (backfill, compaction, etc.) and other works for abutments	450	28-Jan-19	22-Apr-20	0%	[Gantt bar: 28-Jan-19 to 22-Apr-20]																																	
P3-1430	"Materials on the Site (refer to GC Sub-Clause 14.5 (c) (i)): steel reinforcing bars	600	30-Mar-19	19-Nov-20	0%	[Gantt bar: 30-Mar-19 to 19-Nov-20]																																	
P3-1440	Ditto: structural steel shapes	600	30-Mar-19	19-Nov-20	0%	[Gantt bar: 30-Mar-19 to 19-Nov-20]																																	
P3-1450	Ditto: pre-stressing cables	600	30-Mar-19	19-Nov-20	0%	[Gantt bar: 30-Mar-19 to 19-Nov-20]																																	
P3-1470	Construction of cast-in-situ concrete pile caps for abutment	450	27-Apr-19	20-Jul-20	0%	[Gantt bar: 27-Apr-19 to 20-Jul-20]																																	
P3-1460	Construction of cast-in-situ concrete pile caps for pier	600	29-May-19	18-Jan-21	0%	[Gantt bar: 29-May-19 to 18-Jan-21]																																	
Schedule No. 5: Construction of Concrete Superstructure																																							
P3-1510	Materials on the Site (refer to GC Sub-Clause 14.5 (c) (i)): steel reinforcing bars	600	29-Nov-18	21-Jul-20	0%	[Gantt bar: 29-Nov-18 to 21-Jul-20]																																	
P3-1530	Fabrication of precast concrete structural elements for bridges	600	28-Jan-19	19-Sep-20	0%	[Gantt bar: 28-Jan-19 to 19-Sep-20]																																	
P3-1520	Ditto: pre-stressing cables	600	24-Mar-19	13-Nov-20	0%	[Gantt bar: 24-Mar-19 to 13-Nov-20]																																	
P3-1540	Fabrication of precast concrete structural elements for electrical platforms	600	24-Mar-19	13-Nov-20	0%	[Gantt bar: 24-Mar-19 to 13-Nov-20]																																	
P3-1550	Transportation and erection of precast concrete structural elements for bridges	730	23-May-19	22-May-21	0%	[Gantt bar: 23-May-19 to 22-May-21]																																	
P3-1560	Transportation and erection of precast concrete structural elements for electrical platforms	600	04-Dec-19	26-Jul-21	0%	[Gantt bar: 04-Dec-19 to 26-Jul-21]																																	
P3-1570	Construction of cast-in-situ concrete	450	02-May-20	26-Jul-21	0%	[Gantt bar: 02-May-20 to 26-Jul-21]																																	
Schedule No. 6: Fabrication and Erection of Steel Superstructure																																							
P3-1580	Materials on the Site (refer to GC SubClause 14.5 (c) (i)): structural steel materials	600	24-Nov-18	16-Jul-20	0%	[Gantt bar: 24-Nov-18 to 16-Jul-20]																																	
P3-1590	Fabrication of steel structural elements for bridges superstructure	730	23-Jan-19	22-Jan-21	0%	[Gantt bar: 23-Jan-19 to 22-Jan-21]																																	
P3-1600	Fabrication of steel structural elements for other components	730	23-Jan-19	22-Jan-21	0%	[Gantt bar: 23-Jan-19 to 22-Jan-21]																																	
P3-1610	Transportation to and erection at the Site of fabricated steel structural elements for bridges	540	29-Nov-19	22-May-21	0%	[Gantt bar: 29-Nov-19 to 22-May-21]																																	
P3-1620	Transportation to and erection at the Site of fabricated steel structural elements for other components	540	29-Nov-19	22-May-21	0%	[Gantt bar: 29-Nov-19 to 22-May-21]																																	
P3-1630	Surface anti-corrosion coating of erected steel structure for bridges	210	23-Dec-20	21-Jul-21	0%	[Gantt bar: 23-Dec-20 to 21-Jul-21]																																	
P3-1640	Surface anti-corrosion coating of erected steel structure for other components	210	28-Dec-20	26-Jul-21	0%	[Gantt bar: 28-Dec-20 to 26-Jul-21]																																	
Schedule No. 7: Construction of Earthworks																																							
P3-1650	Materials on the Site (refer to GC SubClause 14.5 (c) (i)): steel reinforcing bars for retaining walls, etc.	300	30-Jul-18 A	10-Sep-19	5%	[Gantt bar: 30-Jul-18 A to 10-Sep-19]																																	
P3-1660	Construction of reinforced concrete retaining/compound walls	600	28-Jan-19	19-Sep-20	0%	[Gantt bar: 28-Jan-19 to 19-Sep-20]																																	
P3-1670	Construction of earthwork (fill, compaction, etc.)	600	28-Jan-19	19-Sep-20	0%	[Gantt bar: 28-Jan-19 to 19-Sep-20]																																	
Schedule No. 8: Fabrication and Installation of Bridge Ancillaries																																							
P3-1710	Installation of expansion joints	60	27-Jan-21	28-Mar-21	0%	[Gantt bar: 27-Jan-21 to 28-Mar-21]																																	
P3-1730	Deck waterproofing including Materials	180	27-Jan-21	26-Jul-21	0%	[Gantt bar: 27-Jan-21 to 26-Jul-21]																																	
P3-1680	"Materials on the Site (refer to GC Sub-Clause 14.5 (c) (i)): Bridge bearings (shoes)	180	26-Feb-21	25-Aug-21	0%	[Gantt bar: 26-Feb-21 to 25-Aug-21]																																	
P3-1690	Ditto: expansion joints	180	26-Feb-21	25-Aug-21	0%	[Gantt bar: 26-Feb-21 to 25-Aug-21]																																	
P3-1720	Crash barriers including Materials	210	26-Feb-21	24-Sep-21	0%	[Gantt bar: 26-Feb-21 to 24-Sep-21]																																	
P3-1700	Installation of bridge bearings (shoes)	180	28-Mar-21	24-Sep-21	0%	[Gantt bar: 28-Mar-21 to 24-Sep-21]																																	
Schedule No. 9: Construction of Asphalt Pavement																																							
P3-1740	Asphalt pavement including Materials	270	01-Mar-21	26-Nov-21	0%	[Gantt bar: 01-Mar-21 to 26-Nov-21]																																	
Schedule No. 10: Fabrication and Installation of Miscellaneous Items																																							
P3-1760	Drainage facility including Materials	450	02-Sep-20	26-Nov-21	0%	[Gantt bar: 02-Sep-20 to 26-Nov-21]																																	
P3-1750	Safety fences including Materials	365	26-Nov-20	26-Nov-21	0%	[Gantt bar: 26-Nov-20 to 26-Nov-21]																																	
P3-1770	Kerbs including Materials	365	26-Nov-20	26-Nov-21	0%	[Gantt bar: 26-Nov-20 to 26-Nov-21]																																	
P3-1780	Road furniture including Materials	270	01-Mar-21	26-Nov-21	0%	[Gantt bar: 01-Mar-21 to 26-Nov-21]																																	
P3-1790	Pavement marking including Materials	180	30-May-21	26-Nov-21	0%	[Gantt bar: 30-May-21 to 26-Nov-21]																																	
P3-1810	Gantry/overhang (cantilever)-type signage support structures including Materials	180	30-May-21	26-Nov-21	0%	[Gantt bar: 30-May-21 to 26-Nov-21]																																	
P3-1800	Road signage including Materials	120	29-Jul-21	26-Nov-21	0%	[Gantt bar: 29-Jul-21 to 26-Nov-21]																																	
P3-1820	Median openings including Materials for movable barrier	120	29-Jul-21	26-Nov-21	0%	[Gantt bar: 29-Jul-21 to 26-Nov-21]																																	
P3-1830	Traffic signals including Materials and testing	60	26-Nov-21	25-Jan-22	0%	[Gantt bar: 26-Nov-21 to 25-Jan-22]																																	
P3-1840	Restoration of removed items	60	26-Nov-21	25-Jan-22	0%	[Gantt bar: 26-Nov-21 to 25-Jan-22]																																	
P3-1850	Other miscellaneous items including Materials and testing as required	60	26-Nov-21	25-Jan-22	0%	[Gantt bar: 26-Nov-21 to 25-Jan-22]																																	
Schedule No. 11: Provisional Sums																																							
P3-1970	Schedule No. 11: Provisional Sums	600	05-Apr-20	26-Nov-21	0%	[Gantt bar: 05-Apr-20 to 26-Nov-21]																																	
Remaining Works & Taking Over Certificate																																							
A2540	Achieve Issuance of Taking Over Certificate	0	25-Jan-22	25-Jan-22	0%	[Gantt bar: 25-Jan-22 to 25-Jan-22]																																	
Package 4: Intelligent Transport System																																							
						[Gantt bar: 26-May-20 to 29-Oct-22]																																	

█ Actual Work
█ Remaining Work
█ Critical Remaining Work
◆ Milestone

Project Implementation Programme Progress Updated up to 30th September 2018

Date	Revision	Checked	Approved
30-Sep-18	Progress Updated up to 31 M...	JS	TL

Activity ID	Activity Name	Duration in Days	Start	Finish	Activity % Complete	2017		2018				2019				2020				2021				2022				2023				2024				2025	
						Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2		
Contractor's Construction and GC Construction Supervision Activities																																					
Contractor's Design, Manufacturing and Delivery of Equipment to Site																																					
A2600	Contractor to Complete Preliminary Design & Detailed Design (As Per Design Submission Programme)	180	26-May-20	22-Nov-20	0%																																
A2610	GC to Review / Proof Check / Approve Contractor's Detailed Design	180	25-Jul-20	21-Jan-21	0%																																
A2620	Manufacturing, Testing and Delivery of ITS Equipment to Site	240	24-Aug-20	21-Apr-21	0%																																
A2630	Manufacturing, Testing and Delivery of O&M Facility & Equipment to Site	240	22-Nov-20	20-Jul-21	0%																																
Installation, Testing and Pre-Commissioning of ITS Equipment																																					
A2640	Installation, Testing and Pre-commissioning of Traffic Management System	420	22-Nov-20	16-Jan-22	0%																																
A2650	Installation, Testing and Pre-commissioning of Toll Management System	420	22-Nov-20	16-Jan-22	0%																																
A2660	Contractor to Achieve Issuance of Completion Certificate	60	16-Jan-22	17-Mar-22	0%																																
Integrated Testing and Commissioning																																					
A2670	Integrated Testing with all External Interfaces and Authority Control Centres and Trial Operation	60	16-Jan-22	17-Mar-22	0%																																
A2680	Commercial Operation Date	1	28-Oct-22	29-Oct-22	0%																																
DLP Stage																																					
A2710	Package 3: 3.6 km long road & bridge(10+187 to 21+800) + interchanges	730	25-Jan-22	25-Jan-24	0%																																
A2690	Package 1 Sewri Interchange and adjoining 10.38 km bridge (0+000 to 10+380)	730	29-Oct-22	28-Oct-24	0%																																
A2700	Package 2: 7.8 km long bridge (10+380 to 18+187) + interchanges	730	29-Oct-22	28-Oct-24	0%																																
A2720	Package 4: Intelligent Transport System	730	29-Oct-22	28-Oct-24	0%																																

- Actual Work
- Remaining Work
- Critical Remaining Work
- ◆ Milestone

➤ Summary

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