ANALYSIS OF CAPITAL EXPENDITURE FOR DEVELOPMENT OF NAVI MUMBAI INTERNATIONAL AIRPORT (GREENFIELD) AT NAVI MUMBAI

EVALUATION REPORT

JANUARY-2026

Engineering Projects (India) Ltd.
(A MINI-RATNA Central PSU under Ministry of Heavy Industry, Govt. of India)

Corporate Office:
Core-3, SCOPE Complex,
Lodhi Road, New Delhi - 110003

TABLE OF CONTENTS

LIST OF TABLES

LISTS OF ANNEXURES

S. No.	Annexure	Description
1	Annexure-I	Copy of revised CAPEX Proposal submitted by NMIAL
2	Annexure-1 A	List of Contracts greater than 25 Crores
3	Annexure-1 B	List of Contracts greater than 5 Crores & less than 25 Crores
4	Annexure-1 C	List of Contracts less than 5 Crores
5	Annexure-II	For EPC–1: (1) Copy of Change Order (2) Copy of Price Adjustment
6	Annexure-III	For EPC–1: (1) Copy of Change Order (2) Copy of Price Adjustment (3) List of Provisional Sum Works
7	Annexure-IV	Copy of CIDCO letter dated 08.05.2018
8	Annexure-V	Copy of CIDCO letter dated 19.06.2019
9	Annexure-VI	Copy of statement showing revised completion cost of Pre-Development Works
10	Annexure-VII	(1) Copy of CIDCO letter dated 02.04.2019 as forwarded by CIDCO/NMIAL (2) Copy of Maharashtra Govt. Order dated 27.04.2016 (3) Copy of signed old payment statement upto March 2025 submitted by CIDCO
11	Annexure-VIII	Cost analysis of Airside Pavement Work by EPIL
12	Annexure-IX	Copy of cost of PTB worked out considering exclusions of items not part of normative cost by EPIL
13	Annexure-X	Analysis of cost of one (1) Fuel Tank by EPIL
14	Annexure-XI	Copy of break-up of Project Office Works
15	Annexure-XII	Copy of Change Order (CO) for Rs. 59 Cr against idling of

		work issued to M/s L&T by NMIAL
16	Annexure-XIII	(1) Copy of list of Technical Services submitted by NMIAL (2) Copy of statement showing disallowed Technical Services by EPIL
17	Annexure-XIV	(1) Copy of statement showing Pre-Operative Cost incurred by NMIAL upto Sept 2025 (2) Copy of CA Certificate for cost incurred against Pre-Operative Cost by NMIAL upto Mar 2025 dated 02.06.2025 and Sept 2025 dated 28.10.2025
18	Annexure-XV	List of Preliminaries Works
19	Annexure-XVI	List of Insurance & Permits
20	Annexure-XVII	Copy of CIDCO letter dated 01.11.2022 pertaining to allotment of land to AAI
21	Annexure-XVIII	Payment to CIDCO as per Clause 25.2 and Clause 26.1 of the Concession Agreement
22	Annexure-XIX	Copy of Building Approvals related documents
23	Annexure-XX	List of unawarded work during MYTP & revised list dated 25.09.2025 with EPIL recommendations
24	Annexure-XXI	Copy of statement showing asset-wise calculation of GST Input Credit sheet
25	Annexure-XXII	(1) Detailed list of Sustainable / Minor CAPEX (2) Statement showing asset-wise recommendation by EPIL

ABBREVIATIONS

AERA	:	Airports Economic Regulatory Authority of India
NMIAL	:	Navi Mumbai International Airport Limited
NMIA	:	Navi Mumbai International Airport
ADRM	:	Airport Development Reference Manual
AOCC	:	Airport Operations Control Centre
AODB	:	Airport Operational Data Base
ATRS	:	Automatic Tray Return Systems
BC	:	Bituminous Concrete
BHS	:	Baggage Handling System
BMS	:	Building Maintenance System
BT	:	Bituminous
CA	:	Concession Agreement
CAGR	:	Compounded Annual Growth Rate
CBR	:	California Bearing Ratio
CFR	:	Code of Federal Regulations
COD	:	Commercial Operations Date
CUSS	:	Common Use Self Service
CUTE	:	Common User Terminal Equipment
DBFOT	:	Design, Build, Finance, Operate and Transfer
DSRA	:	Debt Service Reserve Account
E&M	:	Engineering and Maintenance
EPC	:	Engineering, Procurement and Construction
GoG	:	Government of Goa
ICAO	:	International Civil Aviation Organization
IMG	:	Inter-Ministerial Group
LoS	:	Level of Services
MARS	:	Multiple Aircraft Ramp System
IDC	::	Interest During Construction
MoRTH	:	Ministry of Road Transport and Highways
MPPA	:	Million Passengers Per Annum
MRSS	:	Main Receiving Sub-Station
MSA	:	Million Standard Axle
MSL	:	Mean Sea Level
FA	:	Financing Allowance
MYTP	:	Multi Year Tariff Proposal
NCAP	:	National Civil Aviation Policy, 2016
NMIA	:	Navi Mumbai International Airport

NMIAL	:	Navi Mumbai International Airport Limited

THE STUDY TEAM

The following team has been formed by EPIL to undertake the CAPEX Evaluation assignment for Navi Mumbai International Airport.

S.N.	Name	Designation
1.	Mr. Biswajit Biswas	Executive Director (Northern Region)
2.	Mr. Sanjay Goel	Group General Manager / Team Leader
3.	Mr. Kumar Jivesh	Addl. General Manager / Civil
4.	Mr. Sachin Khamkar	Addl. General Manager / Civil
5.	Mr. Eshant Jain	Deputy General Manager / Electrical
6.	Mr. Chandan Maurya	Senior Manager / MEP
7.	Mr. Saurav Chauhan	Senior Manager / Contracts
8.	Mrs. Anushree Gupta	Senior Manager / Instrumentation
9.	Miss Elisha	Architect

1. INTRODUCTION

1.1. Background

India's aviation development is driven by infrastructure expansion, with 163 Airports currently (2025) in operation and Plan to expand 350 Airports by 2047, alongside significant investments in airport modernization and new builds through public-private partnerships. The sector is also benefiting from strong domestic and international passenger traffic growth, increased fleet size, a focus on regional connectivity through the UDAN scheme, and a push for technological integration, including advanced safety measures and sustainability initiatives.

Government of India has formulated a Greenfield Airports Policy, 2008 which provides detailed guidelines, procedures and steps related to construction of Greenfield airports across the country. Under the GFA policy, Government of India has accorded 'In-Principle' approval for setting up of 21 Greenfield Airports including Navi Mumbai.

Mumbai, the capital of Maharashtra and financial capital of India, is presently served by a single commercial airport, the Chhatrapati Shivaji Maharaj International Airport (CSMIA). Since 2002, CSMIA has experienced rapid rise in air traffic growth reflective of the country's booming economy, rise of Low-Cost Carriers (LCC) and growing affordability of India's vast middle-class population. Limited airport capacity of CSMIA due to land constraints and rapidly increasing air passenger demand of Mumbai Metropolitan Region (MMR), have been the primary factors for establishment of Navi Mumbai International Airport (NMIA), as CSMIA to cater for the additional air traffic demand of MMR.

The salient features of the Concessionaire agreement pertaining to this project is detailed below:

1.1.1. Nature of Agreement

In October 2017, after a global bidding process, CIDCO selected Mumbai International Airport Pvt Ltd (MIAL) as Concessionaire for this Public Private Partnership (PPP) project, for concession period of 40 years (30+10 years) from 2018 to 2058. Navi Mumbai International Airport Pvt Ltd (NMIAL), an SPV for the project was formed in which MIAL holds 74% while CIDCO retains 26% stake.

The Concession Agreement (CA) for this project was signed between CIDCO and NMIAL in January 2018. In 2021, Adani Airport Holdings Ltd (AAHL) acquired

majority stake of 74% in Mumbai International Airport Pvt Ltd (MIAL) and thereby retains controlling stake & management of Navi Mumbai International Airport Pvt Ltd (NMIAL).

1.1.2. Scope of Concessionaire:

In accordance with the provisions of the Concession Agreement, the broad scope of the Concessionaire is as follows:

I. Concessionaire shall procure finance for the design, engineering, procurement, construction, operation and maintenance of the Airport.

II. Concessionaire shall, from time to time, undertake expansion or augmentation of the Aeronautical Assets and Non-Aeronautical Assets as per approved Master Plan.

III. Concessionaire procure, as required, the appropriate proprietary rights, licenses. Agreements and permissions for materials, methods, processes, know-bow and systems used or incorporated into the Airport.

IV. Concessionaire perform and fulfil its obligations under the Financing Agreements.

V. Concessionaire shall provide all support and assistance to the Authority or the Designated GOI Agency, as the case may be, for provision and operation of Reserved Services at the Airport.

VI. Transfer the Project Assets to the Authority upon Termination of this Agreement, in accordance with the provisions thereof.

1.1.3. Concession Fee:

In consideration of the grant of Concession, the Concessionaire shall pay to the Authority by way of concession fee ("Concession Fee"), the following amounts to the Authority on annual basis, in accordance to clause 26.2, a premium in the form a manner set forth in clause 26.2 of CA.

The concession fee for the subsequent 20 years beyond initial concession period of 40 years, shall be payable in accordance to clause 3.1.1, provided the concession fee shall not be less than Rs. 2961 crores as present value as on 31st March, 2016 subject to concessionaire intimated the Authority about its interest and request for renewing/standing the term of the concession by another 20 years with confirmation to participate in the International competitive bidding process. The concessionaire shall have a right to match the highest bid within 5%.

Table-1: Concession Fee

Concession Period	Concession Fees (in Rs. Crore)	Concession Period	Concession Fees (in Rs. Crore)
Year 1	5	Year 21	130
Year 2	5	Year 22	135
Year 3	5	Year 23	140
Year 4	5	Year 24	750
Year 5	5	Year 25	790
Year 6	5	Year 26	825
Year 7	5	Year 27	870
Year 8	5	Year 28	910
Year 9	5	Year 29	955
Year 10	10	Year 30	1005
Year 11	10	Year 31	1250
Year 12	10	Year 32	1315
Year 13	10	Year 33	1380
Year 14	10	Year 34	1445
Year 15	10	Year 35	1520
Year 16	100	Year 36	1595
Year 17	105	Year 37	1675
Year 18	110	Year 38	1760
Year 19	115	Year 39	1845
Year 20	120	Year 40	1940

The concession fee shall be considered as a part of the operating expenses for the purpose of the determination of the Aeronautical Charges.

1.1.4. Pre operative expenses (clause 25.2 of CA)

The concessionaire shall pay Rs. 110 crores towards pre operative expenses incurred by the Authority on the project till the execution of the CA. The preoperative expenses shall be paid by the Concessionaire to the Authority as a onetime lumpsum amount within 30 days of the Phase – I COD.

The preoperative expenses paid by the concessionaire shall be capitalized over Project assets which will form part of the RAB for the determination of Aeronautical Charges**.**

1.1.5. Premium (Clause 26.2 of CA)

The concessionaire shall pay to the Authority for each year commencing from the date of execution of CA, a Premium equal to 12.60% of the gross revenue during that year._The premium shall be due and payable in annual instalments.

The premium paid / payable by the concessionaire to the Authority shall not be included as a part of costs for provision of Aeronautical services and no pass through would be available for the same.

1.1.6. Charges:

The Aeronautical charges to Levied, Collected and Appropriated shall be reviewed by AERA Act, extant to AERA guidelines and this Agreement., in accordance with of Article 27.5.1 of the Concession Agreement.

The Designated GOI agency, i.e., AAI, shall be entitled to Levy, Collect and Appropriate the Route Navigation Facilities Charges (RNFC) directly from the Airlines and the Airport company shall incur no liability for such charges as per Clause-7.1 of CNS-ATM Agreement.

Terminal Navigational Landing Charges (TNLC) payable by Airlines shall be paid directly by the Airlines to AAI and the Airport company shall incur no liability for such charges as per Clause-7.2 of CNS-ATM Agreement

1.1.7. Concession Period:

The initial Concession Period for the Concessionaire is 30 Years, which is further extendable by another 10 years. Accordingly, the Master Plan prescribes a Phased Development of the Airport over a period of 40 years from 2018 to 2058 (the Concession period) in a sequential manner based on the design capacity of the airport and the traffic triggers as follows:

Table-2: Design capacity of the airport and the traffic

Phase	I & II	III	IV	V	Total
Design Capacity (MPPA)	20	30	20	20	90
Cumulative Capacity (MPPA)	20	50	70	90	
Year of Completion	2025	2029	As per Traffic triggers as per Clause-2.2.2 of Sch-A of CA.		

1.2. Terms Of Reference/ Scope of Services of EPIL:

AERA vide Agreement No. AERA/20010/04/2024-25/CAPEX STUDY/NAVI MUMBAI AIRPORT/ AERA/22953 dated 02.05.2025 appointed EPIL for the consultancy services for Analysis of Capital Expenditure for the Development of Greenfield Airport at Navi Mumbai with following scope of work:

1.2.1 To Review:

1. Concession Agreement, DPR & Master Plan
2. Analysis of cost estimates, BOQ, SOR from the point of view of reasonability of cost.
3. Capex Plan for the specified control period
4. Review of optimum size, magnitude, numbers for the optimum level of service as prescribed in IMG/ IATA/ ICAO/ DGCA/ADRM etc. norms.

5. Review of Capital Expenditure incurred or proposed to be incurred for the development of the infrastructures in compliance with the statutory requirements in vogue.

1.2.2 To Evaluate:

1. Traffic Forecast Report
2. Assessment of CAPEX in respect of development, expansion and improvement of operational efficiency and flexibility.
3. Review technical specifications of the capex relating to airside and terminal side.
4. Ascertain cost benchmarks and preliminary cost estimates to ensure efficient costing.
5. Review reasonability of the tentative time schedule of the proposed capex in the backdrop of current and future traffic.
6. To examine whether the airside works (runway/ taxiway/ apron), Building Standards are in line with IMG, ICAO, IATA etc.
7. Analyse reasonableness of the proposed capex with reference to tentative ceiling as per AERA's Normative Benchmarks.
8. Visit to airport by the consultant for carrying out the onsite assessment / analysis.
9. Assist AERA from time to time for determination of tariff for aeronautical services in respect of the concerned airport.
10. Assist AERA post completion of the project till completion of FCP, in case any legal case/appeal is instituted related to the tariff determination exercise.

1.3. Data Collection:

EPIL Team visited the site from 28th to 30th April, 2025 and further from 3rd to 5th July 2025 and also sought various data through email communications & discussions between EPIL & Airport Operator and collected the following documents:

1. Multi Year Tariff Proposal for the First Control Period of Navi Mumbai International Airport (Greenfield).
2. Concession Agreement for Development of Navi Mumbai International Airport (Greenfield).
3. Copy of agreements of the various projects completed / ongoing at site along with Change Orders.
4. Building Drawings
5. Master Plan Report with drawings, DBR, Geotechnical Reports
6. Tender Evaluation Reports
7. Letter of approval for EOT.

8. Contract Mapping with revised CAPEX on 07.07.2025.
9. Report of Auditors towards Preliminary Expenses till March 2025.

1.4. Report

This report sets out the evaluation and analysis by EPIL on the Capital expenditure submitted by NMIAL for the development of Greenfield International Airport at Navi Mumbai Airport at Navi Mumbai. This exercise is undertaken to assist AERA in determining the tariff for the first control period of Navi Mumbai International Airport.

2. PROJECT DETAILS

2.1. Project Location

A Greenfield Airport at Navi Mumbai, located about 35 km from existing Mumbai airport has been proposed by City and Industrial Development Corporation of Maharashtra Ltd. (CIDCO).

Navi Mumbai International Airport (NMIA) is located about 25 km from south Mumbai and 35 km from existing Chhatrapati Shivaji Maharaj International Airport (CSMIA). It is situated across Thane Creek on western edge of Navi Mumbai, in Panvel Taluka, Raigad District of Maharashtra. NMIA site is located in geographical centre of Mumbai Metropolitan Region (MMR), to south of Panvel Creek between Amra Marg (NH 348A) and National Highway 548. Located at aerial distance of approx. 23 km from existing CSMIA, the location of NMIA as the 2nd international airport for Mumbai Metropolitan Region (MMR), is of vital significance.

2.2. Site Description

NMIA site of 1,160 hectares (2866 acres) located south of Panvel Creek, with Thane Creek to its west and Gadhi River on east, is ideal for airport development as these natural water bodies offer clear aircraft approaches. The predominant approach to both airports of Mumbai is/shall continue to be from east, owing to predominant head-wind direction from west.

NMIA site of 1160 hectares was earlier characterized by varied natural topography until 2017, i.e., prior to commencement of Pre-Development Works for NMIA. The site exhibited signification variations in its natural topography as it sloped from south and west towards east and north, owing to multiple natural features like low-lying areas in north, Ulwe Hill with an elevation of 104m on south, and Ulwe River flowing south to north through the center of the site. Two EHVT lines also transversed through the site, one eastern and other on western part of the site. Nine village gaothans existed in western & southern part of the airport site. The natural drainage of the site was towards Panvel Creek in north & Gadhi River in east. The low-lying area in northern parts of NMIA site were prone to flooding during monsoon, and high tides.

The soil type and ground strata varied across NMIA site, with a rocky/firm soil strata in western and southern part. Presence of soft to medium stiff marine clay with variable stratum thickness was identified through geo-technical

studies in sub-soil strata of northern & eastern parts of the site. These site conditions were key consideration in master planning of NMIA, and in deciding phasing of its development.

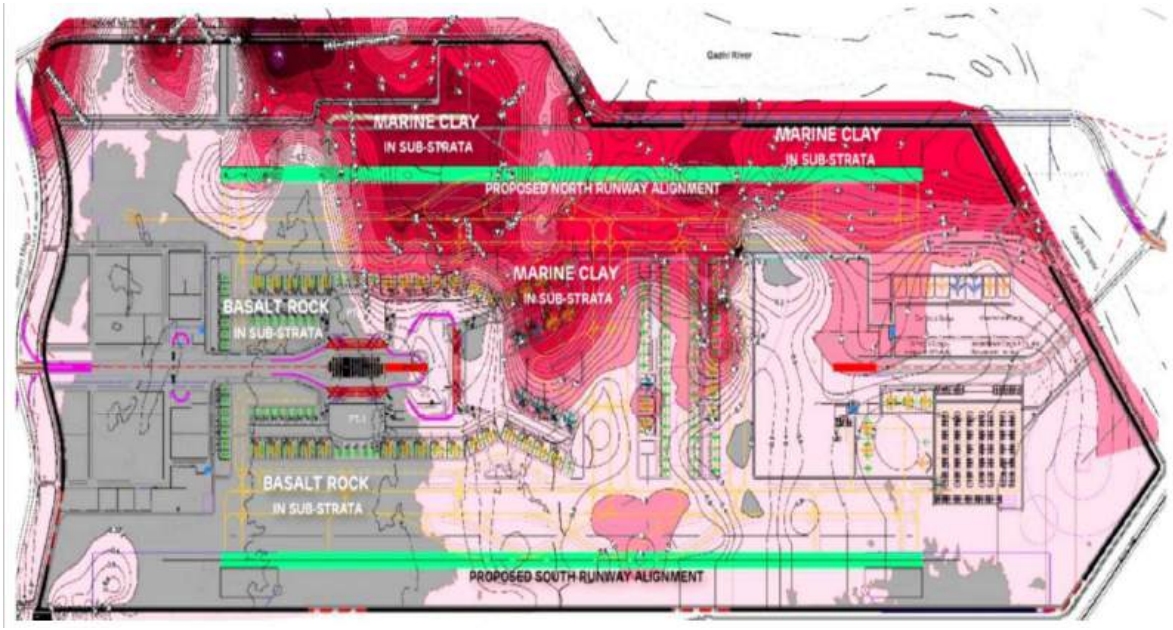

Fig-1: NMIA Sub – Soil Condition (2017)

Fig-2: Actual Site Photographs

2.3 Necessity of Greenfield Airport at Navi Mumbai

CSMIA has experienced rapid rise in air traffic growth since 2002, reflecting country's booming economy, rise of Low-Cost Carriers (LCC) and growing affordability of India's vast middle-class population. CSMIA has limited airport capacity of 65 MPPA due to saturation of facilities on account of land constraints. The rapidly increasing air passenger demand of Mumbai Metropolitan Region (MMR), have been the primary driver for development of a new Greenfield at Navi Mumbai to cater for the additional air traffic demand of MMR.

The projected traffic as per studies of ICF for MMR for the year 2026, 2027, 2028, 2029 & 2030 are 74.9 Mn, 81Mn, 86.9 Mn, 92.7 Mn & 98.3 Mn respectively. Thus, the excess air passenger traffic beyond the capacity of existing CSMIA shall be catered by the proposed NMIA. This is the justification for the development of New Greenfield Airport. The detailed analysis is provided at Table-9.

2.4 Salient features of the Project as per Concession Agreement:

The salient features of the Master Plan/ Development Plan includes following:

2.4.1 Passenger Terminal Building (Terminal-1):

- Level of service for Terminal Building – IATA Level of Service "C" (Optimum Standards) compliant.
- 80% of each of the international and domestic aircraft gates shall be served by the boarding bridges.
- The unit area of the Terminal Building (including all miscellaneous and support spaces), per Peak Hour Passengers (including arrival and departure) shall be a minimum of 30 sqm.
- Provide an international standard range of retail and other passenger services.
- Service Quality Requirements (SQR) standards are as mentioned under Schedule-I of the Concession Agreement.
- Terminal 1 facilities are planned in compliance with the parameters as per Clause 3, Schedule-B, Annex-II of the Concession Agreement.
- Terminal design must be capable of incremental expansion with minimum impact on extant operations.

2.4.2 Airside Facilities:

1. Operational Capability: All master plan facilities to support 24x7, all-weather operations.
2. To enable 24/7 CAT-II operations at NMIA, AGL is provided in accordance with relevant standards, including signages, PAPI, Apron flood lights etc.

2.4.3 Runway:

1. Runway (08R-26 L) Shall be Code 4F Aircraft operation compliant.
2. Critical Aircraft-A 380
3. Fixed separation distance of 1580 m between the two parallel Runways.

2.4.4 Taxiway:

1. The proposed taxiway system will be designed to comply with DGCA and ICAO standards, and it enables appropriate Code F Aircraft Operations.
2. As per ICAO Annex14 and DGCA CARs, Clause no. 3.9, Taxiways need to be provided to permit safe and expeditious surface movement of aircraft. Sufficient entrance and exit taxiways for a runway are required to expedite the movement of the aircraft to and from the runway.
3. Provision of Rapid Exit Taxiways (RETs) is essential to reduce runway occupancy time.

2.4.5 Defence Area:

The Concessionaire shall, in the Master Plan, earmark and carve out:

1. A separate parking area for military aircraft for use, whenever required.
2. A pocket of 16.42 ha of land for the strategic requirement of the Defence Forces ("Defence Area").
3. The Defence Area preferably should be located north of Runway 081·26 R along the northern boundary of the Site.

2.4.6 MRO Facility:

1. The Concessionaire shall earmark minimum 13 ha of land within the Site for the development of a MRO Facility in the Airport.

2. The Concessionaire shall procure that the MRO Facilities to be provided hereunder includes hangars designed to deal with maintenance of aircraft in a 'nose-in' orientation with coverage for the entire aircraft of 1 (one) CODE 'E' aircraft or 2 (two) CODE 'C' aircrafts.

2.4.7 Reserved Services Housing:

The Concessionaire will provide and maintain 200 flats ("Reserved Services Housing") for personnel deployed by Designated GOI Agencies for providing Reserved Services within Airport premises by seeking prior development approval from concerned government Instrumentalities.

Based on the above requirements as per CA and relevant governing parameters, the review of documents related to Passenger Traffic, Cargo Traffic, etc., ADRM calculations, sizing of Airside components and analysis of PTB area of the project have been done for assessing the Capital Expenditure of the Project.

2.5 Project Proposal by NMIAL

2.5.1 Phase-1&2 (20 MPPA) Development & Phase-3 (30 MPPA) Development:

NMIA airport development projects proposed in 1st Control Period are in accordance with requirements of Concession Agreement of this project and are limited to the essential airport infrastructure works of Phase 1&2 (20 MPPA) and Phase 3 (30 MPPA) of NMIA required to serve the projected air traffic demand of pax and cargo, from FY 2026 to FY 2030. These projects can be broadly classified under the following categories, for each of the two phases of NMIA development.

The PTB-1 & Southern Runway (08R-26L-3700 m long, Code F Compliant) are main features of Phase-1&2 and PTB-2 (Largest Terminal) & Northern Runway (08L-26R-3700 m long, Code F Compliant) are main features of Phase-3. The project have been be broadly classified under the following categories:

1. Pre-Development Works
2. Airside Development Projects
3. Passenger Terminal Development Projects
4. Landside Development Projects
5. Cargo Development Project
6. Support Facility Development Projects

7. Utility Development Projects
8. Sustainable / Minor Capex

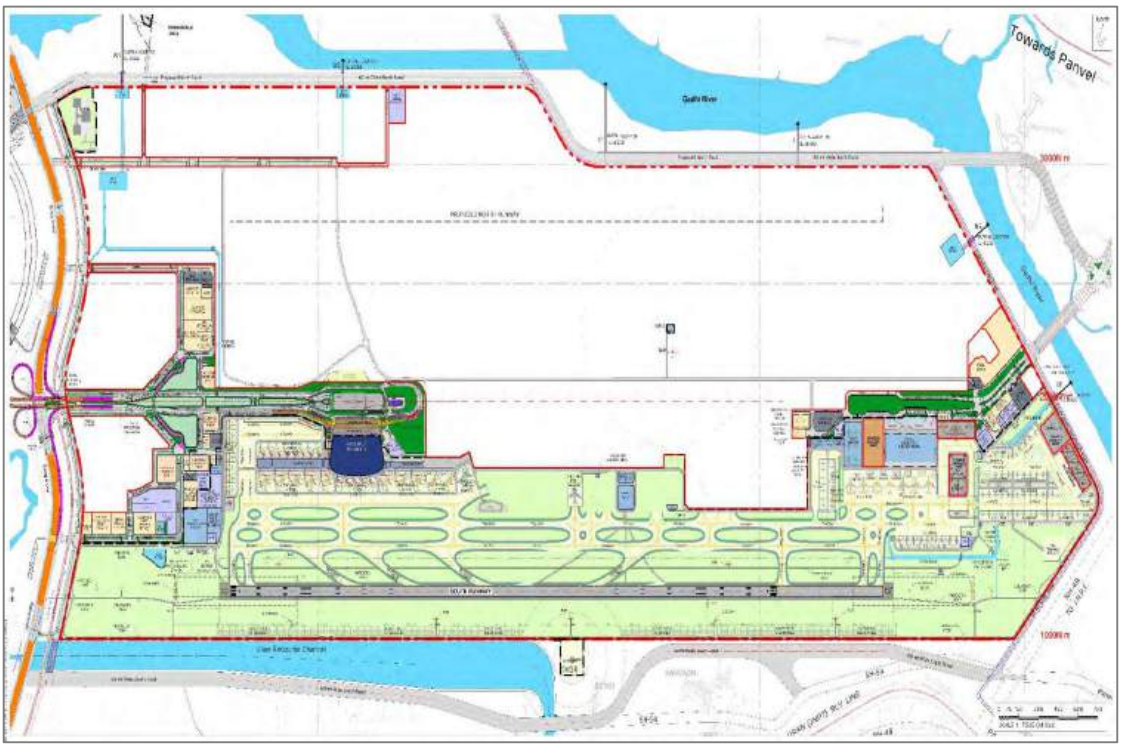

Fig-3: Proposed Master Plan: (Phase-1&2) for 20 MPPA

Fig-4: Proposed Master Plan: (Phase-3) for 50 MPPA

The Project Proposal for Phase-1&2 by NMIAL is summarized as below:

Table-3: Project Proposal by NMIAL (20 MPPA-Phase-1&2)

Scope of Work	Details
Airside Development Projects	1. Runway • Development of Southern Runway-08R-26L • Runway End Safety Area (RESA) • Runway Graded Strip 2. Taxiways System • Dual Parallel Taxiways & Associated Links • Runway Access Taxiways (RATs) • Intersection Take-Off • Rapid Exit Taxiway (RETs) 3. Apron • Commercial/Passenger Apron • Cargo Apron • General Aviation Apron • Isolation Pad/Bay & Passenger Holding Area • Authority Aircraft Parking 4. Aeronautical Ground Lighting/Signages 5. Instrument Landing System 6. RVR/MET Park 7. Bomb Cooling Pit 8. GSE Staging Area 9. Fire Training Ground 10. Static Tank 11. Emergency Airside Roads 12. Airside Perimeter Roads/Maintenance Road 13. Airside Boundary Wall 14. Airside Perimeter Security/PIDS 15. Jet Blast Fence 16. Airfield Pavement Marking 17. Apron Impact protection bollard 18. Perimeter Lights 19. Airside At grade Parking
Terminal Development Projects	1. Terminal Hotel 2. Passenger Concourses 3. Ticket offices 4. Check-in facilities 5. Centralized Security Screening 6. Security systems 7. Immigration, Customs and Security Counters 8. Baggage Handling System (BHS)

Scope of Work	Details
	9. Elevators and Escalators 10. Fixed FLBs/PBBs including ramp houses 11. Movable PBBs 12. VDGS 13. Bus gates for remote stands 14. Baggage trolleys (airside and landside) 15. Baggage trolley storage and recirculation areas 16. Signage 17. Offices 18. Retail and F&B stores 19. Medical Centre 20. Airport Operations Control Centre (AOCC) and Security Operations Control Center (SOCC) 21. Technical areas, stores and facilities for the employee's/ airlines staff in basement 22. Technical Shafts 23. Smoking Rooms 24. Left luggage facility 25. First Aid Rooms 26. Unloading bay 27. E&M Infrastructure 28. Façade and maintenance equipment 29. BMS and SCADA 30. IT Systems • Airport Community Network • Flight Information Display System, (ACN) • Common User Terminal Equipment (CUTE) and other Systems • Apron Management System • Airport Operational Database (AODB) • Airport Management Administrative Network • Billing System • Master Clock System • Master Antenna Television System (MATV) 31. Passenger Services 32. Passenger Lounges 33. VIP Lounges

Scope of Work	Details
Landside Development Projects	1. Development of Airport Perimeter Boundary Wall 2. Development of Roads, Flyovers, Underpasses 3. Development of Parking 4. Development of Ancillary Structures 5. Development of other Facilities 6. Landside Green & Landscape Development
Cargo Development Projects	1. Integrated Air Cargo Terminal (IACT) Building 2. Facilitation Block Building 3. Cargo Entrance Block Building 4. Service Block Building 5. Utility Block Building 6. Entrance and Exit Gates 7. Security Cabins 8. Internal Utility Infrastructure 9. Internal Roads, Drainage & Parking 10. Truck Docking and Maneuvering 11. Material Handling System and Equipment (MHS)
Support Facility Development Projects (Airside & Landside)	**A) Airside Support Facility Development Projects:** 1. GSE Maintenance Facility (Southwest) 2. Airport Maintenance Building (Southwest) 3. South ARFF Facility with Interim ATC Tower 4. Surface Movement Radar (SMR) (Southeast) 5. Airport Surveillance Radar 2 (ASR) 6. DVOR / DME 7. Airside Security Gates • Airside Security Gate (Southeast) • Airside Security Gate (Southwest) 8. INTO Plane Facility • INTO Plane Facility–A • INTO Plane Facility–B 9. Airside Fuel Station • Airside Fuel Station (Southwest) • Airside Fuel Station (Southeast) 10. Airside Solid Waste/Garbage Storage Facility (Southeast) 11. Constant Current Regulators (CCRs) • CCR (Southwest) • CCR (Southeast) **B) Landside Support Facility Development Projects** 1. Meteorological Station 2. ATC Technical Block 3. Project Office 4. Police Station

Scope of Work	Details
	5. Fuel Farm & Hydrant System 6. Airport Health Organization Facility 7. Airport Administration Building (West) 8. Airport Operational Staff Facility (AOSF) / CISF Barracks 9. Reserved Housing 10. Data Centre
Utility Development Projects	1. Water Supply Storage and Distribution Sewage Collection and Treatment 2. Solid Waste Collection, Treatment and Disposal 3. Piped Natural Gas Supply (PNG) and Distribution 4. IT Distribution Network & Data Centre 5. Development of Central Utility Plant (CUP) Installation of Solar Panels on Roof Tops & Beside Runway 6. Storm Water Drainage Network 7. Triturator 8. Water Filling Station 9. Hazardous Waste Storage Facility 10. Oil Water Separator (3 Nos.) 11. Development of Receiving Substation (RSS) 12. Development of Distribution Substation (DSS) & Power Supply

2.5.2 Brief on few Major Works Related to Phase-1&2 Developments:

2.5.2.1 Pre-Development Works by CIDCO

In view of the existing diverse natural topographic & geotechnical conditions, several site development works had to be initiated by CIDCO to enable subsequent construction of airport infrastructure by NMIAL. These site development works undertaken by CIDCO are termed as Pre-Development Works in the Concession Agreement of NMIA Project and were later novated to NMIAL. The expenditure incurred by CIDCO for these works is part of NMIA project cost. The Pre-Development Works included the following:

1. Cutting of hills (including Ulwe Hill) and filling of site to 5.5m AMSL
2. Ground Improvement Works
3. Construction of Sea Wall /Retaining Wall and Road along the northern boundary of site
4. Shifting /Relocation of existing Utilities

5. Construction of Diversion Channel for Ulwe River (Ulwe Recourse Channel / URC)
6. Re-routing of Extra High Voltage Transmission Lines

Completion of R&R of nine village gaothans located on NMIA site by CIDCO was a primary prerequisite for both Pre-Development Works by CIDCO and subsequent Airport Development Works by NMIAL. Rehabilitation & Re-Settlement (R&R) and all Pre-Development Works have been completed by CIDCO. The expenditure incurred by CIDCO for Rehabilitation & Re-Settlement (R&R) is not part of NMIA Project cost.

Fig 5: NMIA Site Conditions: Site Plan and View, (2016-17)

Fig-6: Actual Site Photograph

2.5.2.2 Airport Development work by NMIAL:

(1) Passenger Terminal Building (PTB)

The Passenger Terminal Building (PTB) at Terminal 1 has been designed to accommodate a Peak Hour Passenger (PHP) demand of 6,745 passengers. The terminal has been developed with an overall handling capacity of 20 million passengers per annum (MPPA), encompassing a total built-up area of 2,31,354 sq. m. The area of PTB per Peak Hour Passenger works out to 34.30 sq. m (in compliance of CA requirement of min. 30 sqm/PHP). Terminal-1 forms part of Phases-1&2 of the NMIA development.

In alignment with traffic forecasts, NMIA has adopted a multi-terminal development strategy to efficiently manage passenger traffic volumes and prevent over designing of the PTB as per traffic triggers approach specified in Schedule-A, Annexure-1 of the CA. By distributing passenger loads across multiple terminals, NMIA is positioned to respond more flexibly to evolving market conditions. In its ultimate configuration, NMIA is planned to operate four terminals to be constructed in multiple phases. Terminals T1, T2 and T3 will be located within the Central Terminal Complex with direct access from the western side, while Terminal 4 will be situated on the eastern side of the airport, accessible via the eastern public road network. The modular and phased development strategy ensures that airport operations remain uninterrupted during the construction of subsequent Phases 3 & 4, following the completion of preceding Phase 1 & 2.

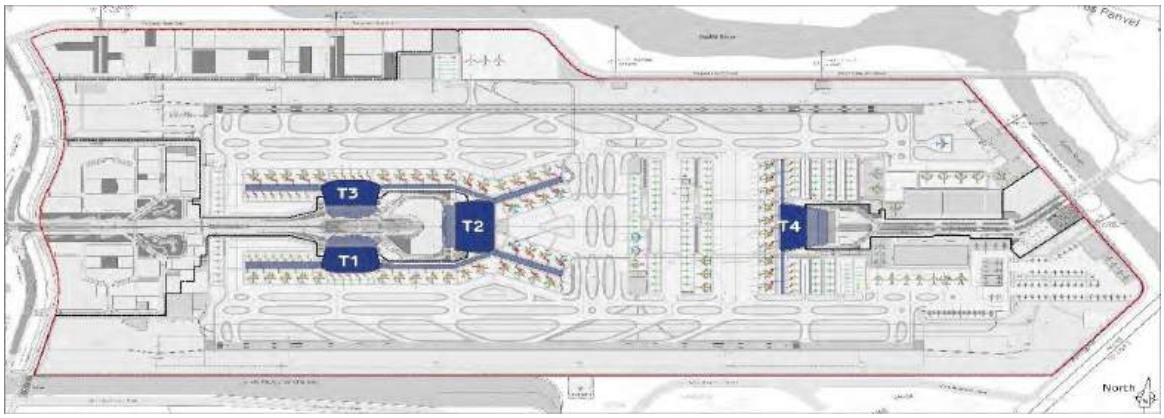

Fig-7: Final Phase Master Plan showing all Passenger Terminals

Terminal 1 is accessed via the Western Main Access Road (WMAR), with dedicated vehicular circulation provided through an up-ramp leading to the departure level and a down-ramp facilitating arrivals pick-up. The terminal is further integrated with the Multi-Level Car Park (MLCP) through a vehicular ramp, while pedestrian connectivity is ensured via a foot-over bridge.

The facilities and infrastructure within Terminal 1 have been designed to achieve International Air Transport Association (IATA) optimum Level of Service (LoS) 'C', in full compliance with the requirements of the Concession Agreement (CA).

Terminal-1 consists of 3 Major Zones-

- Head House-provides centralized processing of departing passengers, both for domestic & international passengers.
- West Pier- a double-sided pier designed for Domestic Arrivals and Departures.
- East Pier- a single sided pier designed for International Arrivals and Departures.

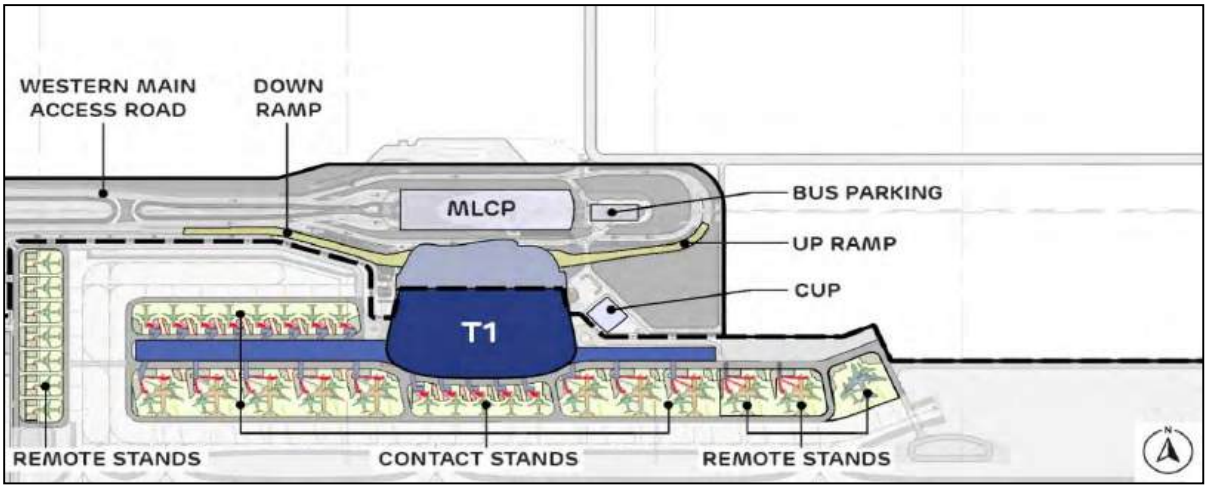

Fig-8: Terminal-1 & Associated Facilities

The gates and associated gate-hold areas have been designed with operational flexibility to allow seamless switching between domestic and international operations within the head-house zone.

Terminal 1 comprises five primary functional levels:

1) Departure Floor (Level +11 m): This level accommodates all domestic and international departure processing functions, including check-in, security screening, and passenger facilitation facilities.

2) Arrival Mezzanine Floor (Level +5.5 m): This floor provides connectivity between contact stands and the arrivals corridor, and also houses essential support areas such as MEP rooms, Baggage Handling System (BHS) spaces, and various Back-of-House (BOH) functions.

3) Arrival Floor (Level 0 m): This level supports domestic and international arrivals processing and includes BOH areas such as ground handling offices and the baggage makeup area.

4) Basement Level: The basement accommodates the Basement Baggage Area (BBA), utility tunnels, passenger pick-up zones, and other BOH operational functions.

5) Departure Mezzanines (Level +17 m): Located on the eastern and western sides of the head-house, these mezzanine levels serve the Domestic and International CIP lounges.

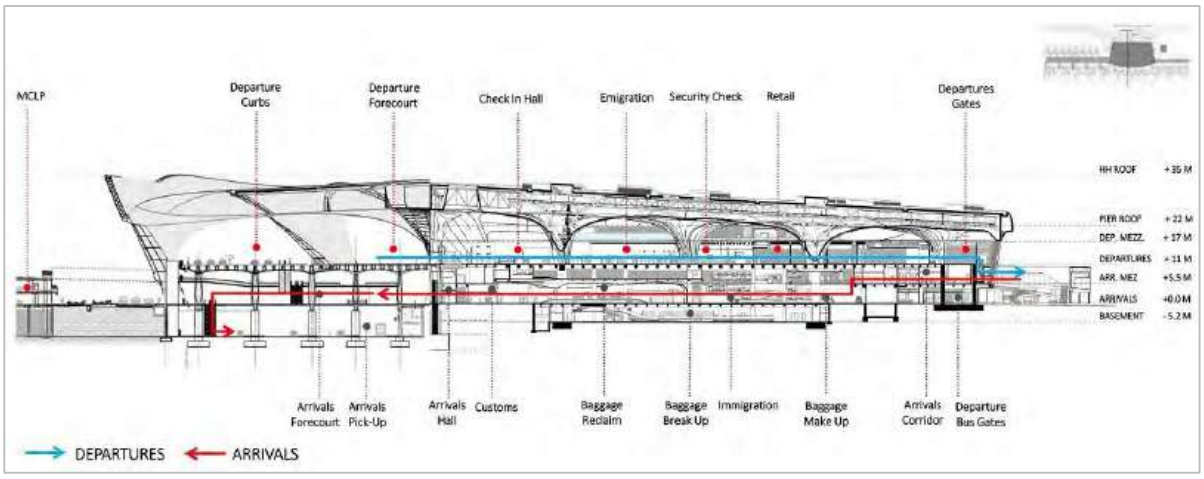

Fig-9: Terminal 1 – North South Section

(2) Runway and Taxiways

The Runways are oriented in the East-West direction. The Southern Runway (08R-26L) Code F is 3700 mtr length + 60 m extension from each runway end having a width of 45 mtr and shoulders of 15 mtr on either sides and blast pad at both Runway ends (total width of 75 mtr) & full-length dual parallel taxiways.

The dual parallel taxiways located along runway 08R-26L to south of T1 provide aircraft access to its apron accommodating 29 contact stands (Code C equivalent) & associated remote stands. The dual taxiways also lead aircrafts to cargo & GA aprons located on eastern side of NMIA airfield. The interim ATC Tower (the main 104 m high ATC Tower is planned in Phase 3) combined with south ARFF is planned in centre of Phase 1 & 2 airfield, offering clear visibility

of aprons and runway ends. Solar farm is planned on airside area in this phase, south of runway 08R- 26L, along with rooftop solar panels on T1 and other buildings constructed in Phase 1&2.

The Runway End Safety Area (RESA) of 240 x 150 m is provided on either side for RWY-08R-26L as essential and mandatory operational requirement to ensure safety of flight operations and DGCA CARs, Clause 3.5.
To enhance connectivity between runway and associated taxiway system, and to enable simultaneous lining up of aircraft for efficient departure sequencing with maximum TORA availability for departing aircraft RATs are essential. Therefore, Dual Code F compliant RATS are provided at each runway end.

To enhance runway capacity and minimize runway occupancy time, intersection taxiway is required for the aircraft which do not need full length runway for take-off. The same intersection take-off taxiway is also useful as runway exit when aircraft miss the RET's during opposite runway operation in reverse direction.

To maximize runway capacity by minimizing runway occupancy time of arriving aircrafts and for enhancing operational efficiency by reducing the number of missed approaches, RET's are provided.

(3) Apron

To ensure required commercial aircraft parking stands in peak hours, commercial apron accommodating 42 Code C equivalent stands (29 contact, 13 remote) have been provided adjacent to the Terminal 1. The details are further provided at Table-21.

To cater to dedicated wide body freighter aircraft operations at NMIA, Cargo Apron accommodating 7 wide body stands has been provided. The apron is planned considering minimum 7.5m wingtip clearance and 102 m apron depth which provides appx. 23-25m space between the nose tip to the 15m wide HOS road. This allows the nose loading operations to be carried out safely.

Recently GA Apron work is awarded as Item Rate contract under EPC-2 vide a change order dated:25th July 2025 for a value of Rs.278.49 Crores. Total 3 no of GA Apron is planned. Total GA Stand is 67 no's (Code B-17 & Code C-50) in Phase-1&2 of NMIA. Area of GA Apron awarded under this change order is 236915 sqm.

Total area of GA apron is 329176 sqm. This includes 92261 sqm of GA Apron under the original EPC contract. The components of this CO include Pavement,

Drains, OWS, Jet Blast Deflector, AGL, Utilities work & provisional sum works towards Utilities works, Removal of silt pond & enabling works.

2.6 NMIAL- Phase 3 (30 MPPA) Development

NMIA passenger traffic is projected to reach its Phase 1&2 capacity of 20 MPPA and cargo handling capacity of 0.5 MMTA by FY 2029-30, and the projected passenger demand shall be 50 MPPA in Phase 3 with 1.2 MMTA cargo demand. Accordingly, NMIAL shall commence implementation of Phase 3 of NMIA development from FY 2026 onwards for additional 30 MPPA passenger and 0.7 MMTA cargo handling capacity. Phase-3 Development of NMIA shall be implemented in northern half of the airport site, as expansion of preceding Phase 1&2 airport development. The northern half of NMIA site shall be available for development with required road access from northern, western and eastern sides of airport for movement of construction vehicles / equipment/ materials, without impacting extant on- going airport operations of Phase 1&2 in southern half of the site.

3. PROJECT CAPEX SUBMITTED BY NMIAL

3.1. Overview

This chapter outlines the Capital Expenditure (CAPEX) proposal submitted by Navi Mumbai International Airport Limited (NMIAL). The data presented below, details the total project costs proposed to be capitalized within the regulatory accounts during the Control Period. This includes a breakdown of Phase I & II, Phase III projections, and sustainable/minor capital expenditures.

The following table provide a granular view of the hard costs, soft costs, and financing allowances allocated across various airport assets.

3.2. Capitalization Summary

The table below summarizes the total project cost to be capitalized in the regulatory accounts. It distinguishes between direct project costs (excluding IDC and DSRA) and the financing allowance.

Table-4: Project Cost to be capitalized in Regulatory Accounts in the CP

Project Details	Capitalization	Project Cost (excl. IDC & DSRA) (Rs. Cr.)	Financing Allowance (Rs. Cr.)	Total (Rs. Cr.)
Phase I & II	FY26	18,207	4,324	**22,531**
Phase III	FY30	29,247	5,091	**34,337**
Sustainable / Minor Capex	FY26-FY30	464	-	**464**
	Total	**47,918**	**9,414**	**57,333**

***Note**: Soft Costs, Other costs and financing allowance has been allocated over the different assets on proportionate basis.*

3.3. Projected Capital Expenditure (Phase I & II)

The following table details the specific line items constituting the project cost for Phase I & II as submitted by NMIAL in its Multi Year Tariff Proposal (MYTP) for first control period.

Table–5: Projected CAPEX submitted with MYTP by NMIAL – Phase I & II

Sl. No.	Description of Item	Rs. (In Crs)
1	Land Development Works	1,919
2	Airside Development	2,030
3	Passenger Terminal Building	3,727
4	Landside Development	1,002
5	Support Facilities 1	964
6	Utilities Excl. PNG	452
7	PNG System	7
8	Support Facility Buildings 2	137
9	Cargo	466
10	Fuel Farm & Fuel Hydrant System	544
11	GPU &PCA	60
	Hard Cost (A)	**11,306**
	Cost Towards PMC / Statutory payments / ORAT / Pre-Operative Expenses etc. (B)	**2,876**
	Interest During Construction (C)	**1,862**
	DSRA (D)	**310**
	Payments to CIDCO (E)	**360**
	Pre-Development Cost (F)	**3,665**
	Total Cost (A+B+C+D+E+F)	**20,380**

3.4. Sustainable and Minor CAPEX (Phase-I & II)

The proposed capital expenditure for sustainable and minor works across various departments is detailed below.

Table-6: Sustainable/Minor CAPEX

Department	Proposed Capex (Rs. in Crs)
Security	129
IT	64
Engineering and Maintenance	59
Airside Operation	55
Fire	49
Horticulture	8
Terminal	4
Fuel Farm	4
Total	**371**
Soft Cost	93
Grand Total	**464**

3.5. Projected Capital Expenditure (Phase III)

NMIAL projected the capex for its phase-III development which is likely to be capitalized by FY 2030 for Rs. 32556 Crores. The details are appended below:

Table–7: Projected CAPEX submitted with MYTP by NMIAL – Phase III

S.N.	Project Details	Cost Rs. in Crs
1	Airside Development	4,856
2	Passenger Terminal Development	7,514
3	Landside Development	2,762
4	Support Facilities Development	3,256
5	Utilities Development	3,382
6	Cargo Development	1,274
7	Equipment	354
	Total - Hard Cost (A)	**23,397**
8	PMC, Consultancy Cost, etc.	5,849
9	Interest During Construction	3309
	Total Soft Cost (B)	**9,158**
	TOTAL PROJECT COST (A+B)	**32,556**

3.6. Revised CAPEX Proposal

During the site visit by EPIL along with AERA from 3rd July to 5th July 2025, NMIAL has submitted a revised Capex proposal for the first control period. The details are appended below showing the variation between the original MYTP figures and the revised proposal, including unawarded costs and expected claims.

NMIAL has revised the unawarded work cost to Rs. 656 Crs from Rs. 667 Crs as submitted with revised CAPEX, resulting into reduction of Rs.11 Crs. Out of Rs.656 Crs, Rs.290 Crs has been awarded. The balance has been reviewed by EPIL. Based on its need/essentiality, the admitted cost is Rs.59 Crs only out of balance unawarded cost of Rs. 366 Crs. For details refer **Annexure-XX**.

The copy of revised CAPEX submitted by NMIAL are appended as **Annexure-I** & also detailed in below table:

Table–8: Revised CAPEX Submitted by NMIAL

Sl. No.	Detail	Classification in MYTP		MYTP (A)	Revised CAPEX by NMIAL (B)	Unawarded Cost (C)	Expected Claims (D)	Expected Total cost for completion (E=B+C+D)	Variation (F=E-A)
1.	Site Preparation & Earthworks	Hard Cost	Cut and Filling from 5.5 m to 8.5 m	1,919	1,917	-	-	1,917	(-) 2
2.	Airside Development Works	Hard Cost	Runway, Apron, Taxiways, AGL	2,030	1,722	319	-	2,041	11
3.	Passenger Terminal Building	Hard Cost	Terminal Building	3,727	3,417	167	-	3,584	(-) 143
4.	Landside Development works	Hard Cost	Perimeter Boundary Wall, Access Roads, Flyovers, Security Gates, Signages, Landscaping	1,002	846	34	-	881	(-) 121
5.	Support Facilities 1	Hard Cost	Airport Admin Building, ATC Technical Block, Reserved Housing, Airport Maintenance Building, ARFF Facility, CISF Barracks, Crash Fire Tender, etc	964	845	88	-	933	(-) 31
6.	Utilities & PNG	Hard Cost	Power Substations, Chiller Plant, Electrical Infra Network	459	461	-	-	461	3
7.	Support Facilities 2	Hard Cost	GSE Maintenance Facility, Fuel Station, Into Plane Facility, Solar System	137	101	20	-	121	(-) 16
8.	Integrated Air Cargo Terminal (IACT)	Hard Cost	Integrated Cargo Terminal, Equipment's and its Utilities	466	409	-	-	409	(-) 57

Sl. No.	Detail	Classification in MYTP		MYTP (A)	Revised CAPEX by NMIAL (B)	Unawarded Cost (C)	Expected Claims (D)	Expected Total cost for completion (E=B+C+D)	Variation (F=E-A)
9.	Fuel Farm & Fuel Hydrant System	Hard Cost	Fuel Farm and its utilities	544	513	-	-	513	(-) 30
10.	GPU &PCA	Hard Cost	GPU &PCA	60	57	-	-	57	(-) 3
			Sub-Total-(A)	**11,308**	**10,288**	**628**	**-**	**10,917**	**(-) 388**
11.	Technical Services	Cost Towards PMC / Statutory / ORAT etc.	Master Planning, Design, Consultancies etc	679	671	-	-	671	-8
12.	Preliminaries	Site Office, Project Office, Temporary Roads, ORAT	-	201	156	16	-	172	-29
13.	Insurance & Permits	-	-	68	45	23	-	68	-
14.	Others	Hard Cost	-	-	59	-	-	59	59
15.	Expected Claims	Hard Cost	-	-	-	-	1,133	1,133	1,133
			Sub-Total-(B)	**948**	**931**	**39**	**1,133**	**2,102**	**1,154**
			Total Hard Cost-(A+B)	**12,254**	**11,220**	**667**	**1,133**	**13,020**	**766**
16.	Pre-Operative Cost (Manpower & other Costs)	Cost Towards PMC / Statutory / ORAT etc.	Manpower and other costs	1,020	788	232	-	1,020	-
17.	Other Technical Services	-	-	625	-	625	-	625	-
18.	Financing Cost	-	Upfront Fees to lenders	283	283	-	-	283	-
19.	CIDCO	Pre-Development Cost	Cut and filing upto5.5mtr	3,665	3,830	-	-	3,830	165
20.	Other Payment to CIDCO	Payment to CIDCO	Payment for Concession Fees (Rs 40 Cr) and Pre-Operative expenses (Rs 110 Cr) as per the provisions of CA	150	150	-	-	150	-

Sl. No.	Detail	Classification in MYTP		MYTP (A)	Revised CAPEX by NMIAL (B)	Unawarded Cost (C)	Expected Claims (D)	Expected Total cost for completion (E=B+C+D)	Variation (F=E-A)
21.	Allotment of Land	Payment to CIDCO	ASR/DVOR	60	60	-	-	60	-
22.	Building Approval Charges	-	-	150	150	-	-	150	-
			Grand Total	**18,209**	**16,481**	**1,524**	**1,133**	**19,138**	**931**
			Financing Allowance as per MYTP	**4324**	-	-	-	-	-
			Total	**22,533**	-	-	**-**	**-**	**-**
			Less GST Credit	**(-) 211**	**-**	**-**	**-**	**-**	**-**
			Grand Total	**22,322**	**-**	**-**	**-**	**-**	**-**

4. TRAFFIC REVIEW

4.1 Background:

ICF Consultant India Pvt. Ltd (ICF) has been engaged by Navi Mumbai International Airport Ltd. (NMIAL) to undertake a traffic forecast for Navi Mumbai International Airport (NMIA). Mumbai is presently served by a single commercial airport, the Chhatrapati Shivaji Maharaj International Airport (CSMIA). Since 2002, CSMIA has experienced rapid rise in air traffic growth due to:

- Country's booming economy
- Rise of Low-Cost Carriers (LCC)
- Growing affordability of India's vast middle-class population.

The study of traffic forecast is based on:

- Market Overview
- Historical Analysis
- Traffic forecast methodology

ICF made use of various sources while conducting study of air traffic, some of the sources are as below:

- AAI
- DGCA
- IATA's PaxIS
- Oxford Economics
- Global Insight
- IMF
- OAG Analyzer
- CAPA Fleet Data
- Airlines Interview
- Adani Airports
- Other government data sources.

4.2 Growth Potential of Aviation Industry in India:

India is the third largest aviation market in the world at an O&D basis, supported by the strong growth of the Indian economy and GDP, which has grown at a Compound Annual Growth Rate ("CAGR") of 7.5% over the past 10 years before the pandemic.

The domestic market grew from 32m passengers in FY04 to approximately 275m in FY19. The equivalent of a 15% CAGR, which was amongst the fastest-growing markets in the world as per historical Passenger Traffic growth data from AAI source.

Growth in Domestic Passenger Market Share by Carrier:

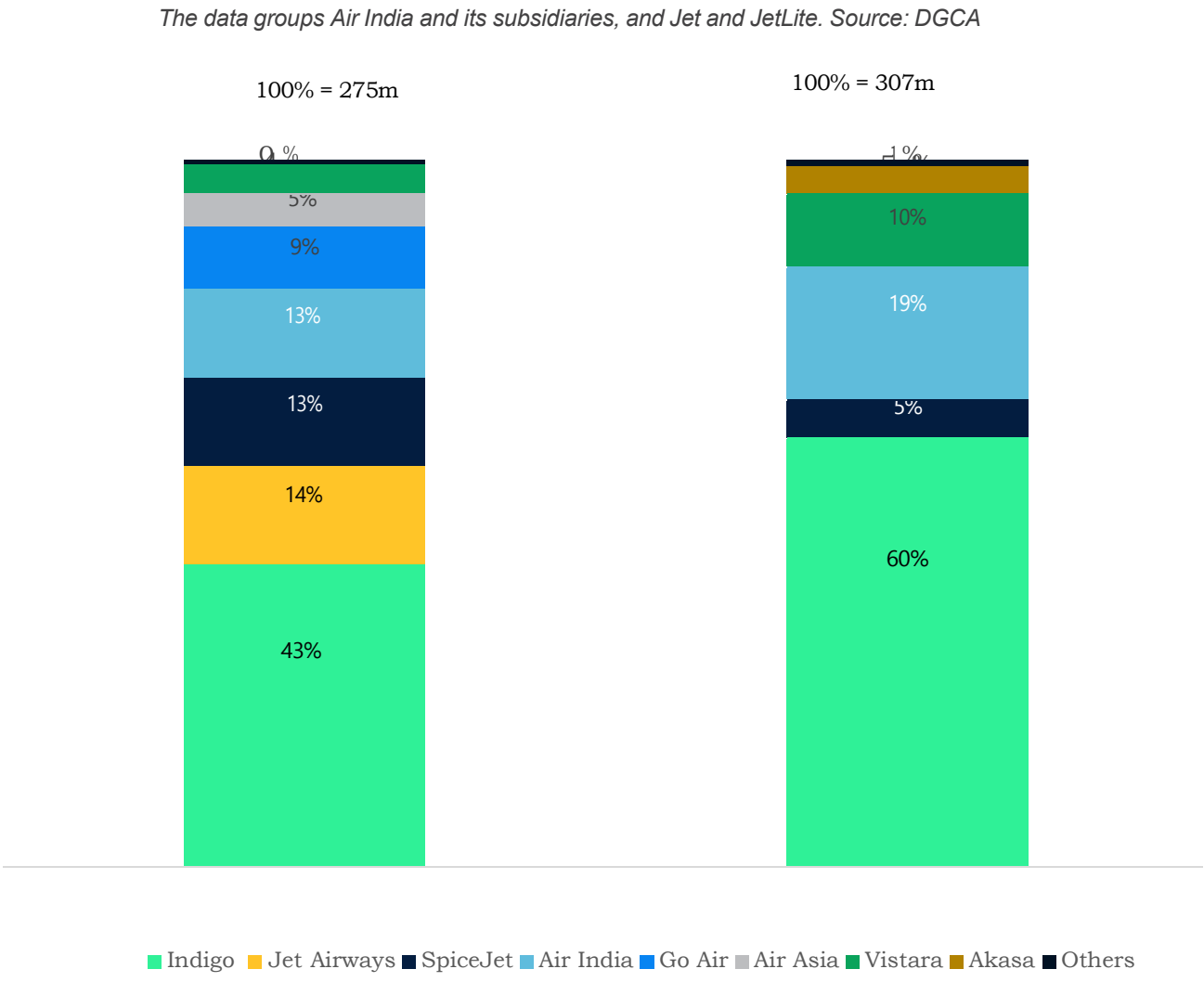

Fig-10: Domestic Passenger Market Share by Carrier

4.3 Fleet Forecast:

ICF did an independent fleet forecast from FY23 – FY33 for the Indian airlines as context for our macro forecast.

India Inservice Fleet Forecast by Airlines 2023 – 2033, Source: CAPA, ICF Analysis

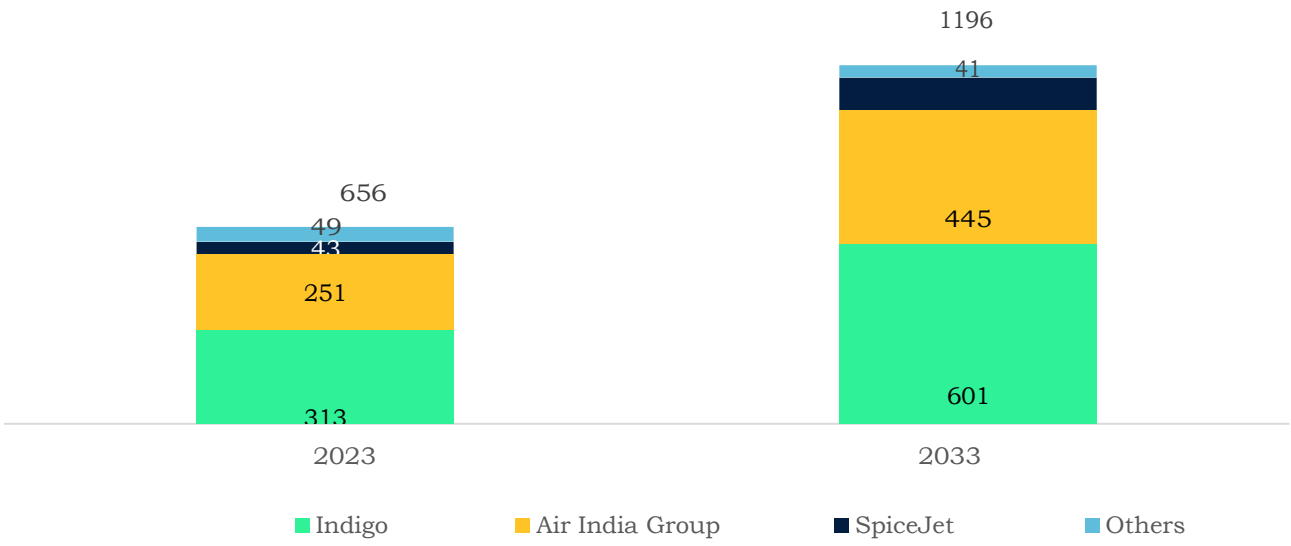

Fig-11: India Inservice Fleet Forecast by Airlines 2023 – 2033

These fleet expansions, combined with the growth potential of the Indian market, are expected to increase the presence of these carriers in key cities, particularly in the Mumbai Metropolitan Region (MMR). This shift will likely raise seat capacity per ATM, reflecting the deployment of more wide-body aircraft.

The Middle East has been a large source of international growth over the decade. As such, the region is a major destination for overseas workers from India who typically work in the service and construction industries. The international market has a significant mix of airlines serving the country, with Indian and Middle Eastern carriers representing most of the traffic.

4.4 Necessity for New Greenfield Airport at NMIA:

CSMIA has limited airport capacity of 65 MPPA due to saturation of facilities on account of land constraints. The Terminal-1 will cater for 20 MPPA and Terminal-2 is capable to handle 45 MPPA. Major Constraints at CSMIA:

- CSMIA had always been congested and slot-constrained, with its cross-runway system
- Limited land area for development towards any expansion due to existing development surrounding the airport.

The constraints at CSMIA and its limited ability to expand any further have been stagnating the passenger growth in MMR, and hence development of Navi Mumbai International Airport (NMIA) was imperative.

Thus, the excess air passenger traffic beyond the capacity of existing CSMIA shall be catered by the proposed NMIA, since constrained airport capacity of CSMIA unable to serve the rising air traffic demand of MMR alone.

Therefore, a greenfield airport at Navi Mumbai, located about 35 km from existing Mumbai airport has been proposed by City and Industrial Development Corporation of Maharashtra Ltd. (CIDCO) in order to cater the additional traffic in the upcoming years.

4.5 Methodology adopted by ICF for Traffic Forecast:

ICF adopted "Econometric Approach" to estimate the forecast for MMR utilizing factor like GDP, which directly impact aviation demand. GDP & Passenger growth have historically shown high correlation.

4.6 Analysis of Constrained & Unconstrained Traffic of CSMIA by ICF:

The following are the major analysis:

- Closure of Terminal 1 has been incorporated in ICF forecast (from Nov' 25 to Nov '28)
- Impact on 10 MPPA Domestic & 5 MPPA International Passengers.
- In November 2028 after expansion of T-1, T-1 capacity shall reach to 20 MPPA Domestic Passengers.
- Accordingly, it is concluded based on share of Airlines at CSMIA that spill over Traffic is absorbed by NMIA in the given time frame.

4.7 Analysis of Constrained & Unconstrained Traffic of NMIA by ICF:

As the airport starts to operate in Q1 FY26, the airport will first absorb traffic from its natural catchment area. Once established within its natural catchment area, the airport would attract traffic from the spill left by constrained CSMIA. With time, as the operations at the new airport get smoother, airlines would move more of their operations at the new airport from the already constrained and congested CSMIA. Further, the completion of developmental phases would add the additional capacity to the airport required to handle that traffic. Therefore, a smooth transition has been assumed for NMIA to absorb the spill from CSMIA. More domestic split traffic has been assumed to come to NMIA compared to international traffic.

AERA vide its Order on Determination of Aeronautical Tariffs for CSMIA for the Fourth Control Period (FCP) dated 7th May 2025 considered and accepted the traffic projections for CSMIA as submitted by the Airport Operator, MIAL, taking into consideration actual historical traffic of CSMIA, and various infrastructure constraints.

MIAL had engaged ICF for traffic projections for the Mumbai Metropolitan Region (MMR) as a whole and CSMIA in particular. ICF submitted its Traffic Study Report dated December 2023. NMIAL has also engaged the same consulting agency, ICF,

for traffic projections for its First Control Period. ICF submitted its Traffic Study Report dated December 2024.

In conducting the analysis, ICF made use of various sources including Airports Authority of India (AAI), India's Directorate General of Civil Aviation (DGCA), Other government data sources; IATA's PaxIS, Consensus GDP consisting of Oxford Economics, Global Insight, IMF WEO; OAG Analyzer, CAPA Fleet data, airline interviews.

The projected traffic as per studies of ICF for MMR for the year 2026, 2027, 2028, 2029 & 2030 are 74.9 Mn, 81Mn, 86.9 Mn, 92.7 Mn & 98.3 Mn respectively (refer Table-9).

IATA's Airport Development Reference Manual states "GDP remains usually the most important factor" when determining traffic growth, which is in line with ICF's way of looking at the potential air passenger traffic growth at MMR.

The details of Air Traffic Passengers as assessed by ICF is as below:

Table-9: Traffic Projections by ICF

	Mar-26	**Mar-27**	**Mar-28**	**Mar-29**	**Mar-30**	
MMR (A)- NMIAL MYTP FCP	74.90 Mn	81.00 Mn	86.90 Mn	92.70 Mn	98.30 Mn	Refer Table-7 Para-5.6.1.1 of Traffic Forecast Report of NMIA (Jan'2025)
MIAL (B)	44.60 Mn	41.00 Mn	42.50 Mn	48.30 Mn	55.50 Mn	Refer Table-10 Para-5.6.2.1 of Traffic Forecast Report of CSMIA (Dec'2023)
Surplus (A-B)	30.30 Mn	40.00 Mn	44.40 Mn	44.40 Mn	42.80 Mn	
NMIAL (Constrained)- NMIAL MYTP FCP	11.98 Mn	19.30 Mn	22.00 Mn	33.90 Mn	39.00 Mn	Refer Table under Para-3.3 of MYTP submission by NMIAL dtd:07.02.25
NMIAL (Traffic considered due to supply Constraints) *	12.00 Mn	19.30 Mn	22.00 Mn	22.00 Mn	33.90 Mn	

**Currently NMIAL has capacity of 20 Mn and additional capacity of 30 Mn in Phase III is expected to be operational during FY 2029-30. Due to supply constraints, for MYTP purposes, NMIAL has capped FY2028-29 Pax Traffic to 22 Mn. In FY 2029 -30, the Airport is expected to be able to cater to demand of 33.90 Mn pax.*

Conclusion:

It can be concluded from the above highlighted data that projections of NMIAL is reasonably in line with the surplus MMR traffic projected and NMIA would attract traffic from the spill over traffic by constrained CSMIA.

4.8 Projected Air Traffic Passengers, ATM & Cargo along with growth rate as assessed by ICF for NMIA:

Table-10: Projected Passenger Traffic and growth rate considered for FCP

Year	Passenger Traffic (In Mn)			Growth rate		
	Dom	Intl	Combined	Dom	Intl	Combined
2025-26	9.35	2.63	11.98	-	-	-
2026-27	14.40	4.91	19.31	54%	87%	61%
2027-28	16.00	6.00	22.00	11%	22%	14%
2028-29	16.00	6.00	22.00	-	-	-
2029-30	23.99	9.91	33.90	50%	65%	54%
Total	79.73	29.46	109.19			

Table-11: Projected ATM and growth rate considered for FCP

Year	ATM*			Growth rate		
	Dom.	Intl	Combined	Dom	Intl.	Combined
2025-26	61,458	14,871	76,329	-	-	-
2026-27	92,970	27,367	1,20,337	51%	84%	58%
2027-28	1,01,446	32,953	1,34,399	9%	20%	12%
2028-29	1,01,446	32,953	1,34,399	-	-	-
2029-30	1,49,384	54,470	2,03,854	47%	65%	52%
Total	506,704	162,614	669,317			

Table-12: Projected Cargo Volume and growth rate for NMIA for the FCP

Year	Cargo Volume (in MT)			Growth rate		
	Dom.	Intl.	Combined	Dom.	Intl.	Combined
2025-26	57,297	207,755	265,051	-	-	-
2026-27	87,164	309,639	396,803	52%	49%	50%
2027-28	119,198	510,675	629,872	37%	65%	59%
2028-29	119,198	510,675	629,872	-	-	-
2029-30	153,409	652,478	805,887	29%	28%	28%
Total	536,265	2,191,221	2,727,486			

4.9 Review by EPIL:

EPIL analysed the historical data of Air Traffic Passenger, Air Traffic Movement (ATM) & Cargo from AAI website from FY 2021 to FY 2025. The details are explained in following succeeding paras.

4.9.1 Air Traffic Passenger:

The passenger traffic data for CSMIA, Mumbai spans from 2020-21 to 2024-25, showing a robust post-pandemic recovery.

- Total Traffic: Increased significantly from 11.06 million in 2020-21 to 55.12 million in 2024-25.

- Domestic vs. International: Domestic traffic dominates the volume, rising from 9.84 million to 39.52 million. International traffic also shows strong recovery, growing from 1.22 million to 15.6 million.
- Growth Trends: The airport witnessed massive year-on-year growth, peaking at 49.41% annual growth by 2024-25 (as given in the table below).

CSMIA AIRPORT PASSENGER TRAFFIC ANNUAL GROWTH

Table-13: CSMIA Airport Passenger Traffic Annual Growth

CSMIA Airport					
Sl No.	**Year**	**Intl**	**Dom**	**Total Passenger Traffic (in Millions.)**	**CAGR**
1	2020-21	1.22	9.84	11.06	
2	2021-22	3.18	18.56	21.74	
3	2022-23	11.21	32.72	43.93	
4	2023-24	14.32	38.5	52.82	
5	2024-25	15.6	39.52	55.12	
				CAGR=	**49 %**

**Source- AAI website*

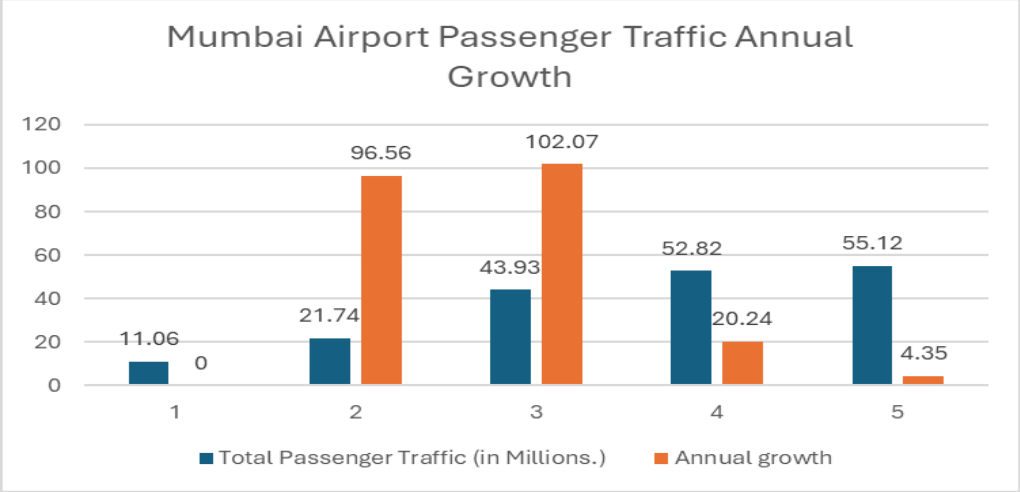

Fig-12: CSMIA Airport Passenger Traffic Growth

4.9.2 CSMIA Airport ATM Traffic (Aircraft Traffic Movements)

The data tracks Air Traffic Movements (in '000s) from 2020-21 to 2024-25.

- Total ATMs: Movements nearly tripled from 115.87 thousand in 2020-21 to a projected 330.06 thousand in 2024-25.
- Segment Growth: Domestic movements grew from 92.20 thousand to 240.35 thousand, while international movements rose from 23.67 thousand to 89.71 thousand.
- CAGR: The International segment shows a CAGR of 30%, indicating a rapid restoration of international connectivity.

Table-14: CSMIA Airport ATM Annual Growth

CSMIA Airport					
Sl No.	Year	Intl	Dom	Total ATM Traffic (in '000)	CAGR
1	2020-21	23.67	92.20	115.87	
2	2021-22	34.90	151.28	186.18	
3	2022-23	67.78	222.61	290.39	
4	2023-24	83.17	241.81	324.98	
5	2024-25	89.71	240.35	330.06	
				CAGR=	30%

*Source- AAI website

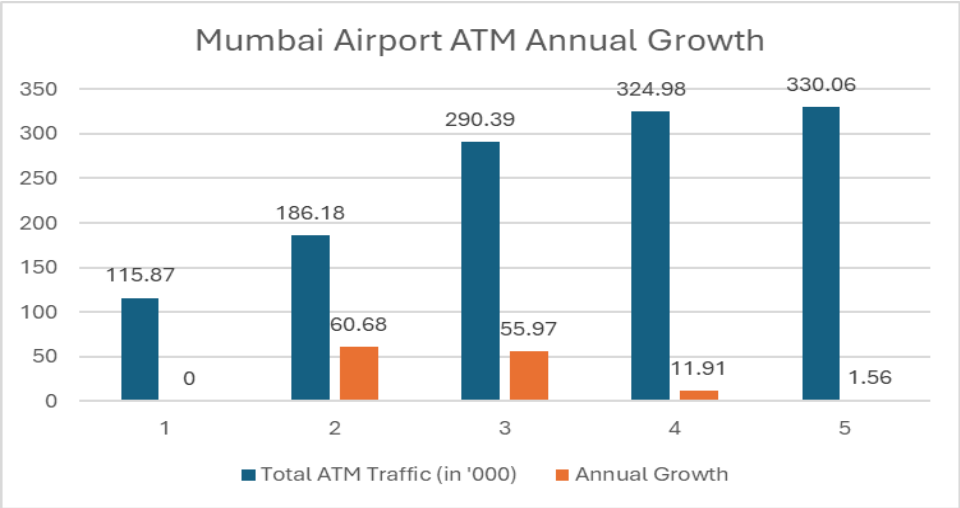

Fig-13: CSMIA Airport ATM Growth

4.9.3 CSMIA Airport Cargo Volume:

Cargo volume (in Metric Tonnes) shows steady growth over the period FY 2020-21 to FY 2024-25.

- Total Cargo volumes increased from 592,966 MT in 2020-21 to 889,900 MT in 2024-25.
- Composition: International cargo volume consistently comprises the majority of the volume (starting at ~440k MT and reaching ~654k MT). Domestic cargo grew more modestly from ~152k MT to ~235k MT.
- Growth Rate: The sector shows a healthy CAGR of 11%.

Table-15: CSMIA Airport Cargo Volume Annual Growth

CSMIA Airport						
Sl No.	Year	Intl	Dom	Total Cargo Traffic (in MT.)	Total Cargo Traffic (in Million MT.)	CAGR
1	2020-21	440584	152382	592966	5.93	
2	2021-22	556899	214054	770953	7.71	
3	2022-23	540137	236797	776934	7.77	
4	2023-24	591361	231603	822964	8.23	
5	2024-25	654756	235144	889900	8.90	
					CAGR=	**11%**

*Source- AAI website

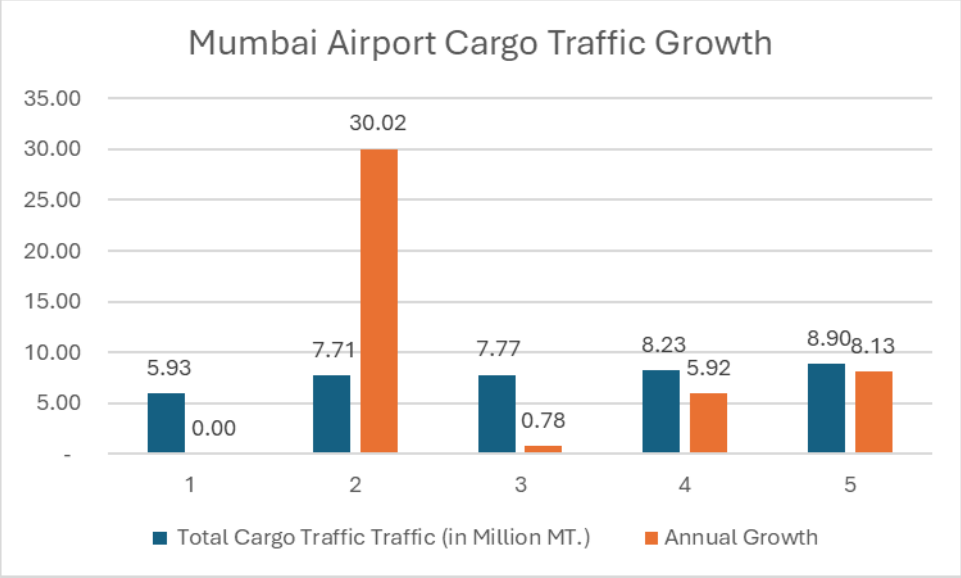

Fig-14: CSMIA Airport Cargo Traffic Growth

4.10 Concluding Remarks on Traffic Forecast:

1. It can be seen from the above highlighted data that projections of NMIAL are reasonably in line with the surplus MMR traffic projected which shows a rising trend.

2. It has been observed that the CAGR growth of Air Traffic Passenger, ATM & Cargo found to be 49%, 30% & 11% respectively indicating a very healthy growth in the past (Table-13, 14 & 15). The above growth rates observed under constrained conditions of the CSMIA. It appears that the higher growth rates as assessed by ICF for NMIA unconstrained condition with commensurate supply looks reasonable and justified.

5. GOVERNING PARAMETERS FOR CAPACITY AND COST EVALUATION

5.1 Inter-Ministerial Group (IMG) Report

The Inter-Ministerial Group (IMG) under Ministry of Civil Aviation, Govt. of India published the report in September 2008 (revised in January 2009) on the Norms & Standards for determining the Capacity of Airport Terminals in the country. IMG has deliberated in detail on various key issues and specified various norms and standards for evaluating capacity of airport terminals as follows:

5.1.1 Growth Rate for Traffic Forecast

The forecast/growth rate for Traffic Forecast is generally arrived using judgment analysis in the light of results obtained through Trend Analysis & Econometric Modelling and Origin Destination (O-D) Surveys & Market Surveys. In case of smaller airports and greenfield airports, O-D Surveys & Market Surveys are conducted to arrive at forecast. IMG in its report has recommended that a more reliable forecast may be obtained by employing more than one approach and consolidating differing results through judgment and knowledge of the markets concerned. The span for making forecast is recommended as 5 years up to 2021-26 and thereafter as the growth rate stabilizes, the span for making forecast should be increased to 7 years for a more realistic assessment.

5.1.2 Target year for Capacity Creation (Design Year)

IMG has recommended that the following norms could be adopted for capacity creation: Smaller airports (< 5.0 MPPA) – 10th year from Planning year. Bigger airports (> 5.0 MPPA) – 7th year from Planning year.

5.1.3 Peak Hour Projections

As per ICAO Manual, forecasts of peak period passengers are to be obtained from annual forecasts by applying ratios of busy period traffic to annual traffic derived from actual data at various airports. In the absence of actual data, the peak hour traffic may be estimated based on following norms:

Table-16: Normative Traffic Ratios for Airports in India

SL. No	Traffic (in MPPA)	Ratios for Terminal (PH/AD) *	
		International	Domestic
1	1.0-5.0	0.3000	0.2500
2	0.5-1.0	0.3500	0.3500

SL. No	Traffic (in MPPA)	Ratios for Terminal (PH/AD) *	
		International	Domestic
3	Less than 0.5	0.4500	0.4500

**PH–Peak Hour, AD –Average Day*

It may be noted that the above norms were prescribed for traffic up to 5 MPPA. Hence it was noted that for traffic above 5 MPPA, planning is to be undertaken based on actual data collection. Since the passenger traffic has subsequently increased beyond 5 MPPA in several airports, the ratios of Peak Day (PD) to Average Day (AD) traffic and Peak Hour (PH) to Peak Day (PD) traffic generally considered and is as follows:

Table-17: Traffic Ratios at International & Domestic Airports in India

S.N.	Traffic (in MPPA)	Ratios for Terminal			
		International		Domestic	
		PD/AD	PH/PD	PD/AD	PH/PD
1	10.0 and above	1.15	0.15	1.10	0.10
2	5.0-10.0	1.20	0.20	1.15	0.15
3	1.0-5.0	1.30	0.30	1.25	0.25
4	0.50-1.0	1.35	0.35	1.35	0.35
5	Less than 0.5	1.45	0.45	1.45	0.45

PD - Peak Day, AD - Average Day, PH - Peak Hour

5.1.4 Level of Services in Target Year

Level of Services 'C' (LoS) as per IATA Airport Development Reference Manual (Jan 2004) denotes good level of service (conditions of Stable Flow, Acceptable Delays and Good Levels of Comfort) at a reasonable cost. Therefore, this level could be used for design for target demand in the design year. A higher unit area than what is prescribed under Unit Area Norms (5.1.5) would ensure that in the initial years, the passengers may experience LoS 'A' or 'B' and as the traffic increases LoS 'C' would be achieved.

5.1.5 Unit Area Norms

In addition to sufficient facilities for passenger processing, area for commercial activities, retail outlets, food courts, bookshops, counters for car rental, vending machines, public rest rooms, etc. needs to be ensured in the terminal building. Considering these aspects and to ensure that the terminal is capable of

handling peak hour passenger traffic at the target level of service standard in the design year, unit area norms with respect to sq.m per Peak Hour Passenger (PHP) has been prescribed by various authorities ranging from 22 sq.m/ PHP to 30 sq.m/PHP. AAI is adopting the following norms.

- Domestic Terminal: 22-23 sq.m/PHP
- International Terminal: 27-28 sq.m/PHP
- Integrated Terminal: 24-25 sq.m/PHP

As per IMG recommendation, Commercial or Retail area providing amenities like food & beverages, book shops, counters for car rental, vending machines, public rest rooms, etc., normally require 8-12 percent of the overall area, and should be planned and provided accordingly. In bigger airports, i.e., with annual passenger traffic exceeding 10 million, commercial area could be up to 20 percent of overall area. Keeping in view the IATA norms and above considerations, the following norms are considered appropriate for Indian Airports.

Table-18: Unit Area Norms for Indian Airports

S.N.	Nature of Terminal	Area Norm sq.m/ PHP
1	Domestic Terminals	
	a) Traffic up to 100 PHP	12
	b) Traffic between 100 -150 PHP	15
	c) Traffic between 150 – 1000 PHP	18
	d) Traffic above 1000 PHP	20
2	Integrated Terminals for handling both domestic and international	25
3	International Terminals	27.5

5.1.6 Unit Cost of Construction

The Terminal Building should not only be Functionally Efficient but should be Aesthetically and Architecturally appealing. It encompasses a wide variety of activities related to Aviation, Leisure, Comfort, Shopping and Business apart from Customs, Immigration, Security, etc. Construction cost is generally driven by the target level of Service Standards and location of the airport. Hence IMG

had recommended for establishing an appropriate benchmarking for the construction cost.

5.2 IATA Airport Development Reference Manual (ADRM)- 12th Edition:

1. Airport floor area and design passenger numbers.
2. Analytical approach and capacity equation.
3. Level of service concept and planning guidelines.
4. Space and time variables for level of service concept.

The guideline as stipulated in IATA in line with above parameters have been utilized in evaluation of technical parameters adopted by the Airport Operators for designing of entry lane requirement, contacts gate demand, etc. have been utilized and details are given at Table-26 to Table-28 respectively.

6. TECHNICAL EVALUATION OF PROJECT COMPONENTS:

EPIL has conducted a comprehensive technical evaluation of the key project components in accordance with the prevailing industry norms and regulatory standards. The evaluation specifically encompasses the following critical areas:

- Airside Infrastructure: Assessment of all operational facilities and systems that support aircraft movement, including runways, taxiways, aprons, and associated support infrastructure.
- Passenger Terminal Building: Detailed review of the terminal facilities, including design, structural adequacy, passenger handling capacity, and compliance with functional and safety requirements.
- Landside Road Development Works: Evaluation of the road networks and access routes connecting the airport, ensuring efficient vehicular movement, connectivity, and adherence to applicable design and safety standards.

This structured evaluation ensures that each component aligns with best practices and supports the overall operational efficiency and sustainability of the project.

6.1 Airside Infrastructure

In accordance with the provisions of the Concessionaire Agreement, the development, construction, and procurement of all aeronautical assets—including runways, taxiways, aprons, aircraft parking bays, and other associated facilities—shall be carried out in strict compliance with the defined technical and operational standards. These assets are required to meet the following key criteria:

Design Code Compliance: The airport infrastructure shall be designed to accommodate Code F aircraft operations for both Phase I and Phase II, ensuring alignment with international aviation standards and facilitating safe, efficient handling of large aircraft.
This approach ensures that the aeronautical infrastructure is future-ready, compliant with global best practices, and capable of supporting the projected operational and traffic growth across the planned phases.

- Airport to be designed for Code F for Phase I & Phase II

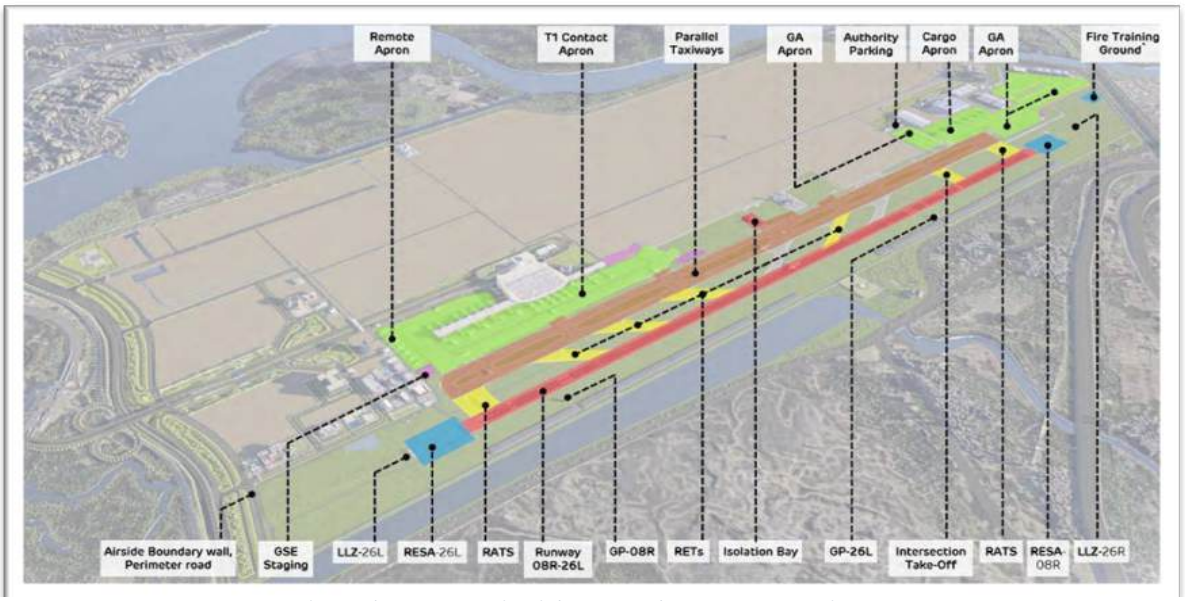

Fig-15: Airside Development Projects

6.1.1 Runway And Taxiways

6.1.1.1 Runways

In accordance with the provisions of the Concessionaire Agreement, the runway has been required to be designed as a Code F compliant runway, including blast pads at both runway ends, in line with DGCA CAR Clause 3.1. Technical evaluation indicates that a runway length of 3,700 meters is adequate to accommodate Code F category aircraft operations. Furthermore, the threshold of Runway 26R has been displaced by 600 meters to facilitate CAT II operations, ensuring compliance with advanced landing requirements. The runway length has also been cross-verified and validated against the ICAO Aerodrome Design Manual, Part 1, confirming its suitability for the intended operations.

As outlined in Clause 2, Schedule B of the Concessionaire Agreement, the airfield design and operational requirements are summarized as follows:

- ICAO Aerodrome Reference Code: Code F
- Critical Aircraft: Airbus A-380
- Fixed Separation Distance between Parallel Runways: 1,580 meters
- Operational Capability: All master plan facilities to support 24x7, all-weather operations

It is further noted that a runway length of 3,700 meters is sufficient for the majority of operating aircraft and is technically justified for standard operations, ensuring safe and efficient handling of air traffic under routine conditions.

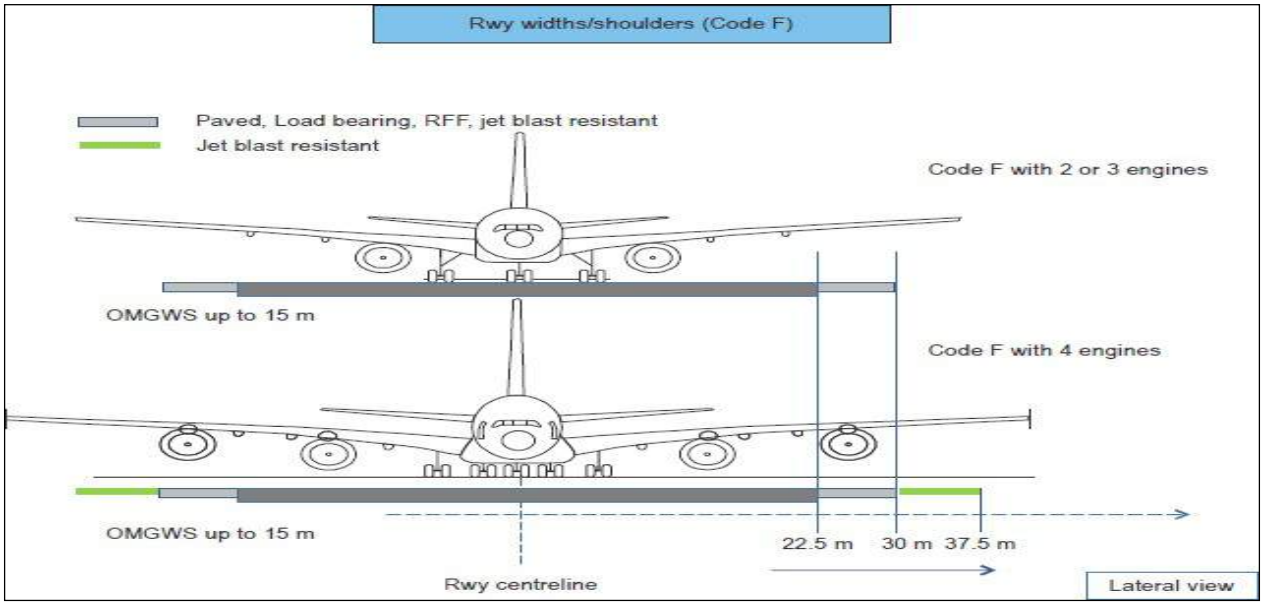

Fig-16: Critical Aircraft

6.1.1.2 Sizing of Runway and related components as per CA and ICAO guidelines

The sizing and design of the primary airside components associated with the runway have been thoroughly reviewed and cross-verified against the stipulations of the Concessionaire Agreement (CA) as well as the relevant ICAO guidelines**.** This comparative assessment ensures that all critical dimensions, operational parameters, and safety requirements are fully compliant with both contractual and international standards. The outcomes of this evaluation, highlighting alignment or deviations (if any), are summarized in the table below for management reference:

Table-19: Compliances of Design and Sizing Parameters - Runway System

S.N.	Component	Benchmark	Ref.	Requirement as per CA / ICAO / DGCA CA	Provided by NMIAL	Remarks by EPIL
1	Runway (08R-26 L)	CA/ICAOAnnex-14, Vol-1 / DGCACAR	Schedule-B,2/3.1	Shall be Code 4F Aircraft operation compliant	Code 4F Aircraft operation compliant	Complied
2	Runway Length	ICAOAnnex-14, Vol-1 /DGCACAR	Schedule B,2/3.1	3700 m	3700 m	Complied as per Sch-B of CA: Difference in WGS84 coordinates of both ends of Runway South: (294492.1734 – 298164.5942) = 3672.4208, say 3700 m
3	Runway Width	ICAOAnnex-14, Vol-1 /DGCACAR	3.1.10	45 m	45 m	Complied
4	Runway Shoulder	ICAOAnnex-14, Vol-1 /DGCACAR	3.2	15 m on either side of RWY	15 m on either side of RWY	Complied
5	Runway Strip	ICAOAnnex-14, Vol-1 /DGCACAR	3.4	(1). 60 m extension from each RWY end, i.e., 3820 m (60+3700+60) (2). 140 m from centre line of RWY for precession approach RWY	(1). 60m extension from each RWY end, i.e., 3820 m (60+3700+60) (2). 140 m from centre line of RWY for precession approach RWY	Complied
6	Runway End Safety Area (RESA)	ICAOAnnex-14, Vol-1 /DGCACAR	3.5	240 m (From the end of Runway strip)	240 m (From the end of Runway strip)	Complied
			3.5	90 m	150 m (Equal to graded strip width)	Complied

S.N.	Component	Benchmark	Ref.	Requirement as per CA / ICAO / DGCA CA	Provided by NMIAL	Remarks by EPIL
7	Isolation Pad/ Bay	ICAOAnnex -14, Vol-1 /DGCACAR	3.14	Shall not be located less than 100 m distance from other parking positions, buildings & Public areas	Located on the southern part of the Airport at mid-field location for upto ICAO Code F aircraft type & also at greater than 100 m distance from other parking positions, buildings & Public areas	Complied

6.1.1.3 Taxiways

Compliances of Design and Sizing Parameters

The proposed taxiway system has been designed to ensure full compliance with DGCA regulations and ICAO standards, thereby facilitating safe and efficient operations for Code F aircraft. Key design considerations and requirements are as follows:

- Operational Compliance: In accordance with ICAO Annex 14 and DGCA CARs, Clause 3.9, taxiways are designed to enable safe and expeditious surface movement of aircraft, minimizing delays and optimizing runway utilization.
- Runway Access and Egress: Adequate entrance and exit taxiways are incorporated to allow aircraft to efficiently move to and from the runway, supporting seamless operational flow and reducing potential bottlenecks.
- Rapid Exit Taxiways (RETs): Provision of RETs is included as a critical feature to reduce runway occupancy time, thereby enhancing overall airside capacity, operational efficiency, and safety.

This design approach ensures that the taxiway system not only meets regulatory requirements but also supports optimal operational efficiency for all scheduled aircraft operations.

6.1.1.4 Sizing of Taxiway and related components as per CA and ICAO guidelines

Table-20: Compliances of Design and Sizing Parameters

S.N.	Component	Benchmark	Ref.	Requirement as per CA / ICAO / DGCA CAR	Provided by NMIAL	Remarks by EPIL
1	Dual Code F Compliant Parallel Taxiway with associated links	ICAO Annex-14, Vol-1 / DGCA CAR, ICAO Doc ADM part-2	3.9 / ADM Table-1.1	Min. Taxiway width - 23 m Graded portion of Taxiway - 44 m Min width of Taxiway pavement & Shoulder - 44m Min. width of Taxiway strip-102 m	Provided	Complied
2	Dual Code F Compliant Runway Access Taxiways (RATs) - at both ends of the Runway	ICAO Annex-14, Vol-1 / DGCA CAR, ICAO Doc ADM part-2	3.9	Min separation distance between Taxiway centre line & instrument centre line shall be 180 m	Provided	Complied
3	Intersection Take-offs	ICAO Annex-14, Vol-1 / DGCA CAR, ICAO Doc ADM part-2	3.9		One additional 90° intersection take-off taxiway is provided at eastern half of the runway between the RETs and RATs	As per ADM-1.3.2, the right-angle taxiways may suffice when design peak-hour traffic density is approximately < 25 operations (Landing & Take-offs)
4	Rapid Exit Taxiways (RET's)	ICAO Annex-14, Vol-1 / DGCA CAR, ICAO Doc ADM part-2	3.9		1). 3 RET for runway 26L operation and 1 RET for runway 08R operation is provided. Location of RET's: RET 1-1500 m RET2-1910 m RET3-2250 m	Complied

6.1.2 Airside Infrastructure- Apron System

Table-21: Airside Infrastructure- Apron System

Stand Type	20 MPPA		
Passenger/ Commercial	**Contact**	**Remote**	**Total**
Code C	13	7	20
Code E MARS	8	2	10
Code F MARS	0	1	1
Total	**21**	**10**	**31**
Code C Equivalent	29	13	42

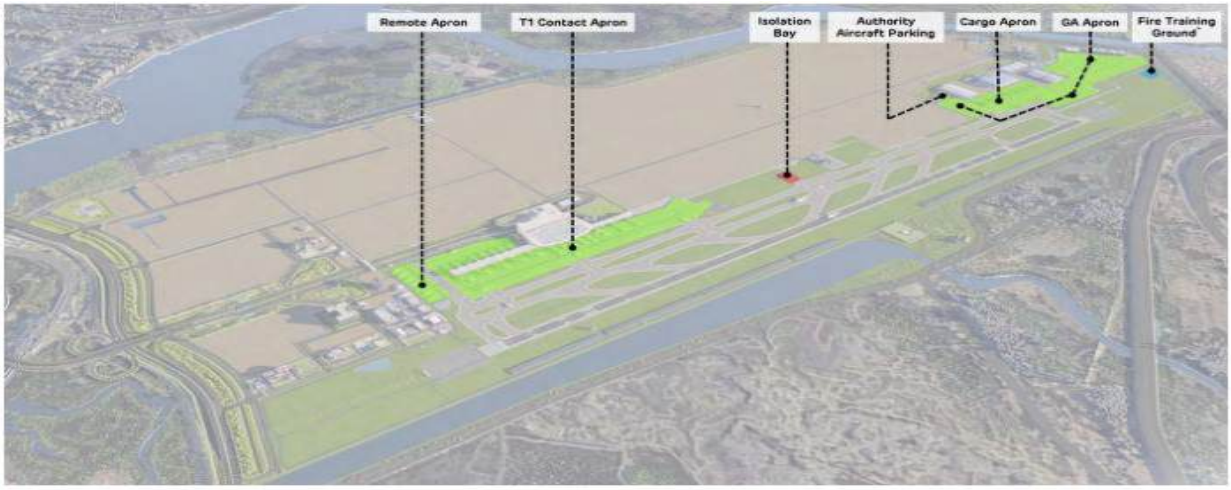

Fig-17: Apron System

Table-22: Cargo Apron

CARGO APRON	
Stand Type	**20 MPPA**
Code C	1
Code E	4
Code F	2
Total	**7**

Table-23: GA APRON

GA APRON	
Stand Type	**20 MPPA**
Code B	17
Code C	50
Total	**67**

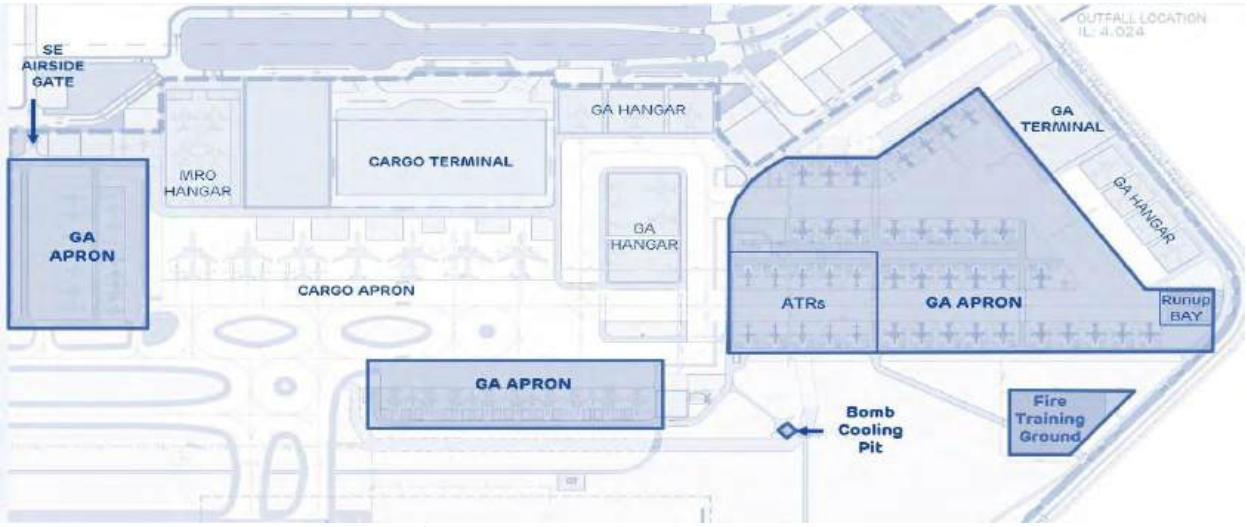

Fig-18: GA Apron System

6.1.3 Aircraft Parking

In accordance with the provisions of the Concessionaire Agreement (CA), dedicated parking facilities are required for both Aero-planes and Helicopters, along with provision for a hangar to accommodate aircraft belonging to the Authority or its nominees. In line with these requirements, the apron has been designed and provided to support these operations, with the total Authority Aircraft Parking area measuring 2,600 sqm. This ensures adequate space for safe maneuvering, parking, and servicing of aircraft while maintaining operational efficiency and compliance with regulatory standards.

6.2 Passenger Terminal Building (Terminal-1)

As stipulated in the Concessionaire Agreement, the Passenger Terminal Building (Terminal-1) has been designed to meet specified standards and operational requirements to ensure optimal passenger experience and regulatory compliance. Key requirements, as extracted from Clause 3 of Schedule B in Annex II of the Concession Agreement, are summarized below:

- Level of Service: The terminal shall comply with IATA Level of Service "C" standards, representing optimum service quality for passenger handling.

- Boarding Bridge Coverage: A minimum of 80% of both international and domestic aircraft gates shall be equipped with boarding bridges to facilitate efficient and safe boarding and deboarding operations.
- Terminal Area Standards: The unit area of the terminal building, inclusive of all miscellaneous and support spaces, shall be at least 30 sqm per peak hour passenger (covering both arrivals and departures).
- Passenger Services and Retail Facilities: The terminal design shall provide a comprehensive range of international-standard retail and passenger services, ensuring convenience and comfort. Additionally, the layout shall allow for incremental expansion with minimal disruption to ongoing operations.

This design approach ensures that Terminal-1 is both fully compliant with the CA requirements and capable of delivering a high-quality passenger experience while accommodating future growth efficiently.

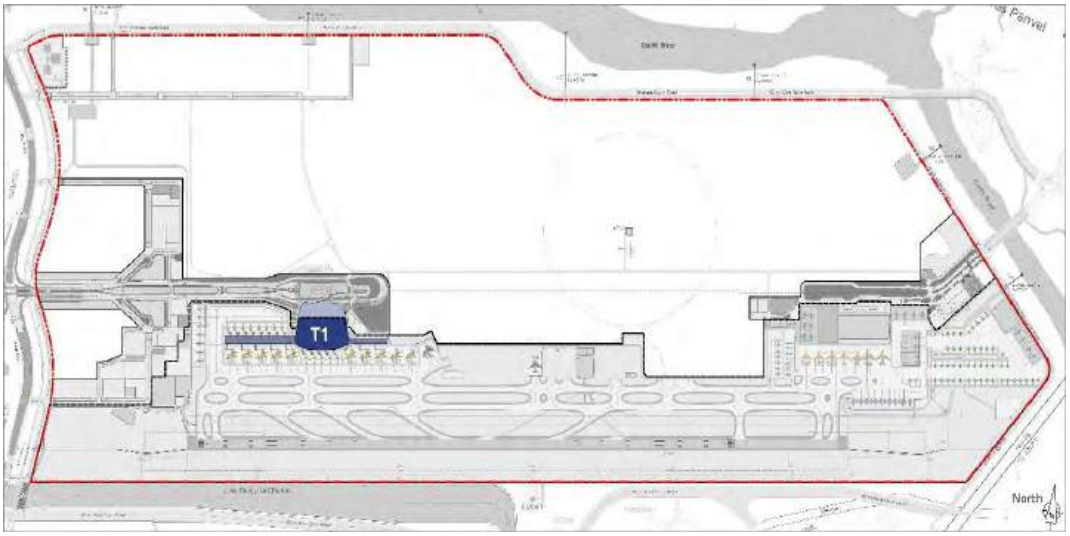

Fig-19: Phase 1 & 2 Master Plan showing Terminal-1

6.2.1 Summary Of Processing Facilities Planned At NMIA:

Table-24: Summary of Processing Facilities Planned at NMIA

S. N.	Facilities for 20 MPPA	Units	NMIAL	Remarks
1	Number of Terminal entrances control points	nos.	24	1. Queuing Time- 5 mins (As per CA) 2. Peak 15 mins factor of PHP- 45% of combined peak 3. Utilization Factor-90% 4. Processing Time- 15 sec
2	Kerb side CUSS kiosks	nos.	24	
3	Number of Terminal entrances for departure Check-in Pax	nos.	4	1. Queuing Time (check-in economy) - 10 mins (As per CA) 2. Queuing Time (check-in business) - 5 mins (As per CA) 3. Queuing Time (SBD all) - 5 mins (As per CA) 4. Peak 15 mins factor of PHP Dom- 45% 5. Peak 15 mins factor of PHP Int'l- 40% 6. Queuing Inefficiency Factor-100% 7. Queuing Time (CUSS Kiosks-Eco & Business) - 2 mins (As per CA)
4	Combined Economy Check-in desks	nos.	60	
5	Combined Premium Check-in desks	nos.	6	
6	Combined Self bag drops (SBD)	nos.	22	
7	Total Check-in desks	nos.	88	
8	Check in hall CUSS kiosks	nos.	48	
9	Transfer Desk CUSS one each at DOM and INT transfer	Nos	2	Minimum Requirement
10	Pre-Security DOM CUSS	nos	1	
11	Pre-Security INT CUSS	nos.	1	
12	Day Hotel to Arrival Hall CUSS	nos.	1	Passenger Facility requirement
13	Departure Emigration Control Points	nos.	26	1. Queuing Time- 5 mins (As per CA) 2. Peak 15 mins D-I factor of PHP-35% 3. Utilization Factor-100% 4. Processing Time with Indian & Non-Indian Passports- 72 secs 5. Pax with Indian Passport- 65% 6. Pax with Non-Indian Passport- 35%
14	Pre-Embarkation Security x-ray machines (Dom)	nos.	12	1. Queuing Time- 5 mins (As per CA) 2. Area per pax-1.0 sqm (IATA LoS C) 3. Peak 15 mins factor of PHP-30% 4. Queuing Inefficiency Factor-100%
15	Pre-Embarkation Security x-ray machines (Int'l)	nos.	5	
16	Pre-Embarkation Security x-ray machines (Swing)	nos.	2	
17	Dom-Dom Transfer Security x-ray machines	nos.	2	CA Service Quality Requirements: Minimum connect time for 80% of the transfer passengers - I to I – Up to 60 Min. & D to D – up to 60 Min. 1. Transfers I-I in peak hour passengers - 4.4% 2. Transfers D-D in peak hour passengers -10%
18	Int'l-Int'l Transfer Security x-ray machines	nos.	2	

S. N.	Facilities for 20 MPPA	Units	NMIAL	Remarks
19	Number of Domestic Contact Gates (Code C Equivalent)	nos.	21	(1). Connecting bridges to 13 Nos. Code-C Stands & 8 Nos. MARS Stands (2). 72 % of Total Domestic Contact Gate (3). 28 % of Total International Contact Gate.
20	Number of International Contact Gates (Code C Equivalent)	nos.	8	
21	Total Number of Contact Gates	nos.	29	
22	Number of Domestic Bus Gates	nos.	9	As per CA, 80% of each of the International & domestic gates shall be served by the boarding bridges & remaining 20% is served by Bus gates.
23	Number of International Bus Gates	nos.	3	
24	Total Number of combined Bus Gates with Swing	nos.	10	
25	Number of Arrival Bus Gates Domestic	nos.	1	Minimum Requirement
26	Number of Arrival Bus Gates International	nos.	1	
27	Medical Screening Desks	nos.	11	More than requirement, may restrict up to 6
28	Arrival Immigration Control Points	nos.	40	1.Queuing Time- 5 mins (As per CA) 2.Peak 15 mins International Arriving factor PHP- 45% 3.Utilization Factor-90% 4.Processing Time with Indian, Non-Indian Passports, 5.TVOA- 120 secs (As per CA) 6.Pax with Indian Passport- 67% 6. Pax with Non-Indian Passport- 33% 7.% of Transfer Pax going through Immigration- 5%
29	Domestic Reclaim belts	nos.	4	CA Service Quality Requirements: to fulfil Domestic - first bag - 10 Min., Last bag - 30 Min. from on blocks time. International -first bag - 15 Min., Last bag - 40 from on blocks time.
30	International Reclaim Belts	nos.	3	
31	Swing Condition Reclaim Belts	nos.	2	
32	Combined Reclaim Belts	nos.	9	
33	Customs X-Ray inspection counters (RED + Green Channel)	nos.	5	1. Peak Hour Arrival Pax in peak 15 mins- 45% 2. Processing Time- 9 sec 3. Utilization Factor 90%

6.2.2 Assessment of Area Per PHP:

The area proposed was examined in detailed in accordance to the guideline provided in IMG and IATA. In IMG the area per sq.m/PHP is defined as 25 sq.m and in IATA the area per sq.m/PHP is stipulated as 30 sq.m.

The built-up area of 2,31,354 sq. m of Passenger Terminal building for 6745 PHP is slightly higher than the requirement of IMG norms and as well as IATA norms. The unit area of the building is 34.30 sq. m which is in line with CA which states *"the unit are of terminal building shall be of minimum 30 sq. m"*

The floor wise breakup of area is given below in the table.

Table-25: Area Statement of Terminal-1

Floor wise Terminal Area (in sq. m.)	
Basement	34,008
L0 Arrivals	76,430
L1 Arrival Mezzanine	45,836
L1 BHS Mezzanine	1,912
L2 Departure	66,943
L3 Departure Mezzanine	6,225
Total Built-up Area	2,31,354

Table-26: Peak Hour Passengers of Terminal-1

Traffic (Peak Hour Passenger) for 20MPPA	As per NMIAL
Domestic Departure PHP	2566
Domestic Arrival PHP	2436
International Departure PHP	962
International Arrival PHP	781
Total PHP (including Arrival and Departure)	6745

Based on concession agreement requirement:
Total Built-up area = 2,31,354 Sqm
Total Peak hour passenger (PHP) = 6745
Therefore, Unit area of Terminal Building = (2,31,354) / 6745 = 34.30 Sqm (> 30 Sqm)
CA states that the unit area of the Terminal Building (including all miscellaneous and support spaces), per Peak Hour Passengers (including arrival and departure) shall be a minimum of 30 Sq.m.

6.2.3 Assessment of Entry Lane Requirement

The guidelines as stipulated in IATA have been utilized in calculating the entry lane requirement. The details are as below.

Table-27: Calculation of Entry Lanes Requirement in Forecourt AREA

Terminal Entry Lanes		
Assumptions	**Nos.**	**Remarks**
Dep PHP	2,656	Forecast (Combined peak – Dom +Intl)-Non-Linear DDFS based data obtained from Airport Operator
Peak 15 mins factor of PHP	45%	Considering max load
Peak 15 mins pax	1,195	2,656 x 0.45
Processing time (secs)	20	Based on real time survey
Queuing Time (mins)	5	Considering same queuing time as PESC
Utilization Factor	85%	IATA ADRM
Lanes required (nos.)	24	(1/utilization factor) *Peak 15 mins Pax * Process. Time / (900+Queuing time * 60) - IATA ADRM
Provided at NMIA	24	Hence Complied.

6.2.4 Assessment of Contact Gate

The guidelines as stipulated in IATA have been utilized in calculating the contact gates. The details are as below:

Table-28: Calculation of Contact Gate Demand (as per IATA)

Terminal Gates		
Assumptions	**Combined**	**Remarks**
2-way PHP	4,086	As per Traffic Forecast
Peak ATMS (v)	29	Average 144 pax per flight (4086/144=28.37, Say 29 ATM @ PH)
Stand Occupancy in min (t)	60	Average Stand Occupancy
Utilization factor (u)	0.8	
Gates requirement (n = vt/u)	37	(29*1/0.8=36.25 No's, Say 37 No's))
Contact gates requirement	29	80% as per CA req. (=36.25*0.8=29)
Provided at NMIA	29	Hence complied.
Remote/Bus gates requirement	10	Remaining 20% and plus, two gates and swing operations considered for airline flexibility as per CA. Balance = (37-29) + 2 = 8 +2 = 10 No's)
Provided at NMIA	10	Hence complied.

6.2.5 Calculation Of Aircraft Stands Requirement At PTB (T-1) (As Per ICAO Guidelines)

Table-29: Calculation of Aircraft Stands Requirement at PTB (T-1)

Commercial Stands			
Assumptions	**Narrow body**	**Wide body**	**Remarks**
Average dwell time (mins) Ti	60	120	Master Plan assumptions
Arriving aircrafts (peak hour) Ni	31	01	Traffic Forecast, DDFS
Spare stands (Contingency) α	10%	-	% Of arriving aircraft
Spare stands (RON) α	25%	-	% Of arriving aircraft
Stand requirement =Σ (Ti / 60 x Ni) + α	42 (31+(31*35%) = (31+10.85) =41.85 (Say 42)	01	(Gate occupancy time x no. of arriving a/c in peak hour) + extra a/c stand as spare- As per ICAO
Total Aircraft Stand requirement	42		Code C equivalent stands
Provided at NMIA	**42**		**Hence Complied.**

6.3 Airside Development Projects:

6.3.1 Pavement Crust Summary Adopted For Airside Flexible Pavement

The Thickness adopted for Runway, Taxiway and Apron are based on FARRFIELD design thickness. The proposed layer thickness & features are sufficient for Critical Aircrafts (B777, B727 & A-380). & Code F Aircraft compliant.

Table-30: Pavement Crust Summary for Flexible Pavement

S.N.	Pavement Facility	BC with PMB (mm)	DBM with VG 40 (mm)	WMM (mm)	Total Pavement Crust (mm)	Remarks
1	Runway 08 R- 26L	100	125	195	420	
2	Southern Parallel and Associated Taxiways and Isolation Bay	100	125	165	390	
3	Southern RETs and Code C Taxiway	100	125	150	375	
4	Access Taxiway for Authority Apron and Code B GA Apron Parking	*100	-	150	250	
5	HOS Road	*100	-	150	250	
	Subgrade CBR ≥ 30%					

S.N.	Pavement Facility	BC with PMB (mm)	DBM with VG 40 (mm)	WMM (mm)	Total Pavement Crust (mm)	Remarks
	Note: The 100 mm thick HMA surface course representing Item P- 401, shall be provided in 2 layers, i.e., 50 mm thick HMA surface course (BC) with VG 40 binder and 50 mm thick HMA base course (DBM) with VG 40 binder for airfield pavements.					

Table-31: Pavement Crust Summary for Rigid Pavement

S. N.	Pavement Facility	PQC (mm)	CTB (mm)	WMM (mm)	Total Pavement Crust (mm)	Remarks by EPIL
1	Runway 08 R- 26L Entrance Taxiway	490	125	150	765	Thickness adopted based on FARRFIELD design thickness. The proposed layer thickness & features are sufficient for Critical Aircrafts (B777, B727 & A-380). & Code F Aircraft compliant.
2	MARS Main Gear Area for Code E Aircrafts and Cargo Apron	490	125	150	765	
3	Main Gear Area for Code C Aircrafts	440	125	150	715	
4	GA Code C Stands	370	125	150	645	
5	GA Code C Taxilane	350	125	150	625	
6	MARS Nose Gear Area for Code E Aircrafts	320	125	150	595	
7	Authority Apron, GA Code B Stands, and Code B Taxilane	210	125	-	335	
8	Nose Gear Area for Code C Aircrafts	200	125	150	475	
9	GSE Parking	200	125	150	475	
	Subgrade K Value ≥ 110 MN/ m 2/m					

6.4 Landside Development Projects

The Landside Road Development Works planned under Phase I and Phase II encompass a comprehensive range of infrastructure and support facilities to ensure efficient, secure, and seamless access to the airport. The key components of the landside development are as follows:

- Airport Perimeter Boundary Wall: A secure boundary demarcating the NMIA site, providing a visible physical barrier to prevent unauthorized access.
- Road Infrastructure: Development of internal and external roads, flyovers, and underpasses to ensure smooth vehicular movement and connectivity with surrounding areas.

- Passenger and Vehicle Facilities: Construction of Multi-Level Car Parks (MLCP), bus terminals and stations, remote taxi staging areas, and a truck terminal to cater to diverse passenger and cargo transport needs.
- Ancillary and Security Structures: Check Nakas, security gates, and police chowkies to enhance safety, monitoring, and regulatory compliance across the airport perimeter.
- Additional Facilities: Provision of signage and wayfinding systems, bus stop shelters, and installation of Automated Weather Monitoring Stations (AWMS) to support operational efficiency and passenger convenience.

6.4.1 Development of Landside Airport Perimeter Boundary Wall:

The Airport Perimeter Boundary Wall is a critical security and demarcation feature required to safeguard the airport premises and define the physical extents of the NMIA site. The wall is designed to serve as a visible physical barrier for the public, ensuring that access to the airport site is strictly controlled and unauthorized entry is effectively prevented. This development supports the overall safety, security, and operational integrity of the airport.

Table-32: Development of Landside Airport Perimeter Boundary Wall

SN	TYPES	DESCRIPTION	LENGTH (M)
1	Type 3	Airport Perimeter Boundary Wall of 3 m height with 2.4 m of RCC panel wall with 0.6 m of Concertina wire to be constructed in phase I&II without PIDS which shall be Airside Operational Boundary Wall in Phase III.	6,627
2	Type 4	2.1 m high wall along the perimeter roads with 1.5m Block work wall and 0.6m grill above	3,765
3	Type 5	4.0 m high Fence along Phase I&II roads to separate development area of future Phases, i.e., Phase III, IV & V	3,802
Total Length of Landside Airport Perimeter Boundary Wall in Phase I&II			**14,194**

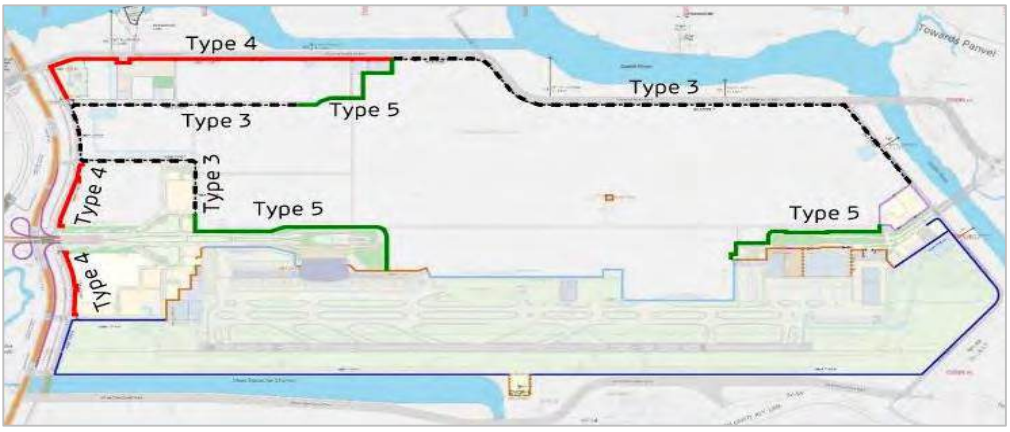

Fig-20: Landside Airport Perimeter Boundary Wall

6.4.2 Development of Roads, Flyovers, Underpass:

The landside road network at NMIA, including connections to external roadways, has been planned and structured into three primary segments:

1. Western Landside Road Network
2. Eastern Landside Road Network
3. Northern Landside Road Network

As stipulated in the Concessionaire Agreement (CA), Annexure I – Project Facilities for Airport, the scope of airport facilities includes the development of airside and landside access roads and forecourts, incorporating kerb side facilities, traffic signals, and wayfinding through appropriate signage.

To ensure seamless connectivity, the Passenger Terminal Building and other airport facilities will be integrated with the external road network via the Western Main Access Road (WMAR) and associated connector roads extending from NMIA to the Amra Marg service road. The WMAR is designed to link directly with Amra Marg and includes elevated two-lane entry and exit ramps (Ramp A & Ramp B). Additionally, the Airport Link Road provides a direct connection to Ulwe Coastal Road and the Mumbai Trans Harbour Link (MTHL – Atal Setu), ensuring efficient access for passengers, staff, and service vehicles while maintaining operational fluidity and compliance with regulatory requirements.

6.4.2.1 Western Landside Road Network:

Table-33: Western Landside Road Network

S N	Road Name	Road Length (m)	Carriageway Details
1	WMAR (West Main Access) including VUP	1,841	(7 + 7 lane) 160m, (4 + 4 lane) 600m (2 + 2 lane) 266m, (4 + 4 lane) 255m (3 lane) 560m
2	WNS (West North South)	1,417	(2 + 2 lane) 439m, (3 + 3 lane) 680m (2 lane) 298m
3	WEW (West East West) including CTC roads, Departure and Arrival Ramps	7,054	(3 + 3 lane) 3309m, (2 + 2 lane) 422m (6 + 6 lane) 246m, (2 lane) 3077m
4	Other Roads (East – West Connecting Road & CTC- Zone 5 connecting road)	3,393	(2 lane) 3393m
5	Airport Link Road (ALR)	265	(5 + 5 lane) 265m
6	Connectors between NMIA Boundary & Amra Marg Service Road	650	(3 + 3 lane) 374m, (2 lane) 276m
	Total	**14,620**	

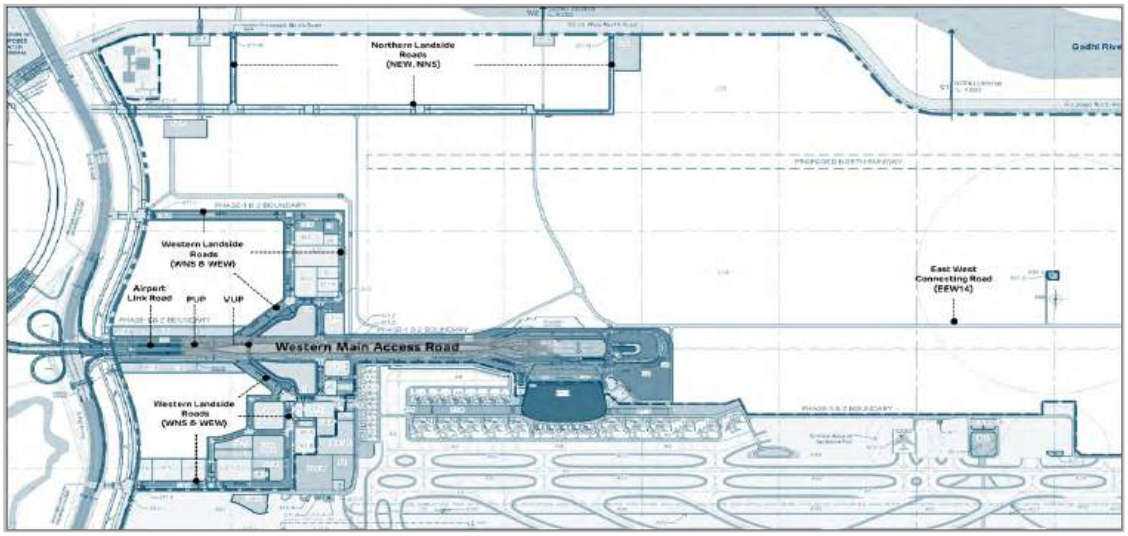

Fig-21: Layout showing Western Landside Road Network Details

6.4.2.2 Eastern Landside Road Network:

Table-34: Eastern Landside Road Network

S N	Road Name	Road Length (m)	Carriageway Details
1	EMAR (East Main Access)	1,335	(4 + 4 lane) 356m (3 + 3 lane) 749m (2 + 2 lane) 230m
2	ENS (East-North-South)	548	(2 + 2 lane) 368m (4 lane) 140m (3 lane) 40m
3	EEW (East-East-West)	1,201	(3 + 3 lane) 300m (3 lane) 175m (1 + 1 lane) 726m
	Total	**3,084**	

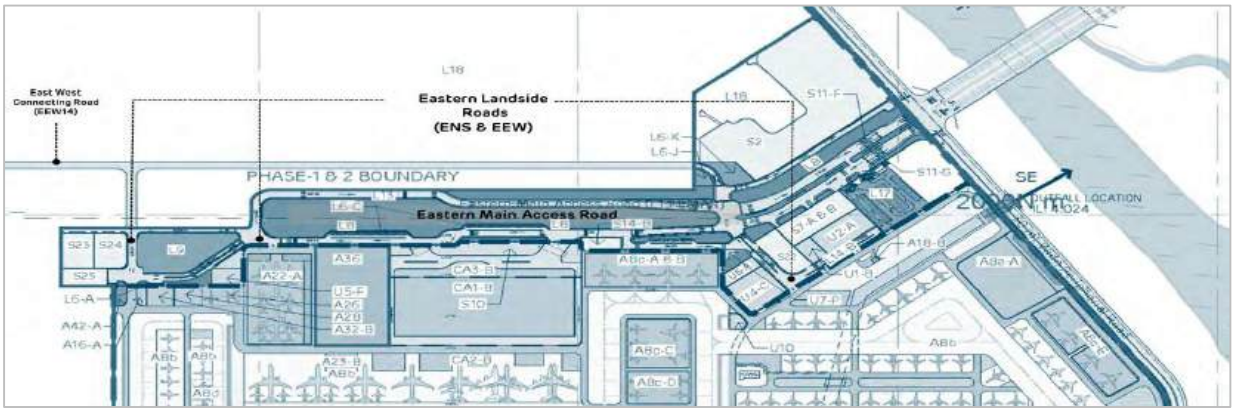

Fig-22: Sections showing configuration of EMAR

6.4.2.3 Northern Landside Road Network:

Table-35: Northern Landside Road Network

S N	Road Name	Road Length (m)	Carriageway Details
1	NEW (North-East-West)	1,774	(3+3 lane) 1482m (2 lane) 292m
2	NNS (North-North-South)	625	(3 lane) 300 m (2 lane) 325 m
	Total	**2,399**	

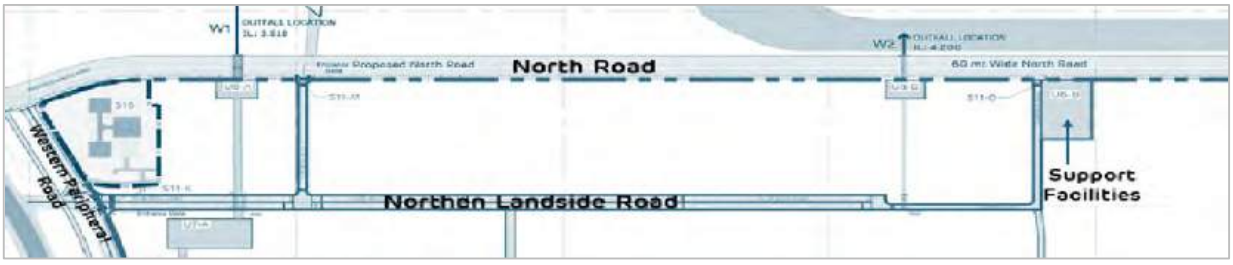

Fig-23: Layout showing Northern Landside Road Network

7. DEVELOPMENT WORKS UNDERTAKEN AT NMIA:

7.1 Pre-Development works by CIDCO:

In view of the existing diverse natural topographic & geotechnical conditions, several site development works had to be initiated by CIDCO to enable subsequent construction of airport infrastructure by NMIAL. These site development works undertaken by CIDCO are termed as Pre-Development Works in the Concession Agreement of NMIA Project. The expenditure incurred by CIDCO for these works is part of NMIA project cost.

The Pre-Development Works included the following:

1. Cutting of hills (including Ulwe Hill) and filling of site to 5.5m AMSL
2. Ground Improvement Works
3. Construction of Sea Wall /Retaining Wall and Road along the northern boundary of site
4. Shifting /Relocation of existing Utilities
5. Construction of Diversion Channel for Ulwe River (Ulwe Recourse Channel / URC)
6. Re-routing of Extra High Voltage Transmission Lines

Diversion of Ulwe river, shifting of existing villages etc were the pre-requisite for both the pre-Development work as well as subsequent Airport Development works by NMIAL. Rehabilitation & Re-Settlement (R&R) and all Pre-Development Works have been completed by CIDCO. The expenditure incurred by CIDCO for Rehabilitation & Re-Settlement (R&R) is not part of NMIA Project cost.

7.2 Nature of Pre-Development Work:

This work primarily pertains to Land Development of the site having 1160 Ha area, which was comprising of undulations and Ulwe hill range passing across having altitude of 104 m AMSL along with Deep Marshy Land. CIDCO has divided the entire site into four parts so as to take the development works simultaneously to make the site levelled at 5.5m AMSL over which the development of various aeronautical infrastructure and facilities are planned. The following pre-development work were carried out by CIDCO.

7.2.1 Hill Cutting and Site Filling

EPIL examined all the tender documents / agreements of the above packages and found that the works were awarded based on the competitive bidding as per CIDCO procurement policy & followed codal procedures. The rock cutting & filling quantity were also assessed based on the available record by Airport Operator and found the assessed quantity reasonable. The rates quoted by the bidders were also scrutinized by comparing with market rates duly analysed based on MORTH Rate Analysis & the prevailing SOR, Maharashtra PWD rates and were found reasonable.

7.2.2 Ground Improvement Works

This work mainly includes Disposal & spreading of soil/slush material from Package-IV, Soil stabilization, site levelling & compaction as ground Improvement measures.

7.2.3 Construction of Sea Wall / Retaining Wall and Northern Boundary Road

The site protection works along with Northern Boundary Road were undertaken under this package. The awarded amount is derived after calling open bids.

7.2.4 Shifting and Relocation of Existing Utilities

The diversion of Electric High Voltage Transmission line (EHVT) was imperative to facilitate the clear site on which aeronautical infrastructure were required to be taken up. The diversion of EHVT were assigned to M/s Tata Power and M/s MSETCL on deposit work basis. The other associated works such as service road for rerouting EHVT Line, construction of 260 M long bridge near vahal over Ulwe River, construction of approach road for sub-station Belapur etc. were taken up by CIDCO after calling open tenders.

7.2.5 Construction of the Ulwe River Diversion Channel (Ulwe Resource Channel / URC)

The above work was taken up as a river training work by diverting the Ulwe River away from the proposed site.

7.3 Examination and scrutiny of Pre-development work by EPIL:

CIDCO called open competitive bids for all the packages of Pre-development works. The package / workwise details indicating the awarded amount and completion cost along with the lowest bidder is appended below:

Table-36: Examination and scrutiny of Pre-development work by EPIL

S.N.	Package	Agency Deployed / Work awarded to	Estimated Value as per CIDCO (in Crs.)	Completion Value / Revised Estimated Value as per CIDCO (in Crs.)	Awarded Cost (in Crs.)	Completion cost i/c liabilities (in Crs.)	
						Upto June'25	Upto Oct'25
(1).	**Land Development Works awarded by CIDCO:**						
a.	Package I & II + (Ulwe Hill Cutting & filling up to + 5.5 m ASML+ Ulwe River Channel Diversion work)	M/s Thakur Infra Projects Pvt Ltd. & M/s J M Mhatre Infra Pvt Ltd (JV)	545	687	529.37	585.17	585.17
b.	Package III	M/s Gaytri Projects Ltd.	699	481	699.43	491.23	491.23
c.	Package IV	M/s Constructor San Jose S.A. & M/s GVK Projects & Technical Services Ltd. (JV)	805	703	804.91	749.43	749.43
d.	Other misc. works included in Pkg.-I & II, III & IV under Sr. No. (a), (b) & © above:						
	(i). Balance Land Development works at hindered area (ii). Disposal & spreading of soil/slush material from Package-IV (iii). Carrying out Tree census in Core Area (iv). Tree Cutting in Core Area	(i). M/s Bhartia Infra Projects Ltd. (ii). M/s K N Bhagat (iii). M/s SAAR IT Resources Pvt. Ltd (iv).M/s FDCM				21.18	21.18
(2).	**Ulwe Recourse**						

S.N.	Package	Agency Deployed / Work awarded to	Estimated Value as per	Completion Value / Revised	Awarded Cost (in Crs.)	Completion cost i/c liabilities (in Crs.)	
	Channel:						
	Excavation of Rock in URC & Cutting & removal of excess rock from Airport site	M/s Ketan Construction Ltd.				86.65	86.65
		Sub Total-(A)	**2,049**	**1,871**	**2,033.71**	**1,933.66**	**1,933.66**
(3).	**Re-routing of Extra High Voltage Transmission Lines passing through the Site**						
(a).	Tata Power EHVT Line	M/s Tata Power	615	679	615	679	596.31
(b).	MSETCL EHVT Line	M/s MSETCL	456	456	456	456	456
		(i). M/s Thakur Infraprojects Pvt. Ltd. (ii). M/s Thakur Infraprojects Pvt. Ltd. (iii). Shri Krishna Construction (iv). M/s S S Patil & Sons (v). M/s J M Mahatre Infra Pvt. Ltd. (vi). M/s Jaihind Road Builders Pvt. Ltd.	300	300	300	45.79	45.79

S.N.	Package	Agency Deployed / Work awarded to	Estimated Value as per	Completion Value / Revised	Awarded Cost (in Crs.)	Completion cost i/c liabilities (in Crs.)	
	(iv). Construction of 12 m/20 m approach road i/c SW Drain for rerouting of EHVT Line (v). Construction of balance RCC duct for electric supply to NMIA (vi). Construction of approach road for Tata Power & MESTCL switching station plots near the core area						
		Sub Total-(B)	**1,371**	**1,435**	**1,371**	**1,180.79**	**1,098.10**
(4).	**Excess Hill cutting & its disposal outside NMIA Site**	(1). M/s Ketan Construction Ltd. (2). M/s Balajee Infratech & Construction Pvt. Ltd. (3). M/s Bhartia Infra Projects Ltd.	359	120.53	715.14	715.14	
		Sub Total-(C)	**3,420**	**359**	**120.53**	**715.14**	**715.14**
		TOTAL (A+B+C)	**3,420**	**3,665**	**3,525.24**	**3,829.59**	**3746.90**
		Say	**3,420**	**3,665**	**3,525**	**3,830**	**3,747***

* *The CAPEX for pre-development works as submitted by CIDCO/NMIAL was Rs. 3420 Crores as mentioned in the CA duly approved by the PMIC, which was increased to Rs. 3830 Crores as per the submission of the NMIAL. On seeking approval of PMIC through email dated 18.11.2025 by EPIL, in response to the query NMIAL forwarded the MOM again vide email 24.11.2025 including submission of revised completion cost of pre-development work as Rs. 3747 Crores against Rs. 3830 Crores submitted earlier.*

7.4 Developments Works by NMIAL:

7.4.1 EPC-1: Site Preparation & Earthwork (M/s L&T Ltd.)

The contract of EPC-1 broadly included the following activities:

1. Survey of the entire 1160 Ha site area**.**
2. Clearing and grubbing of the designated site.
3. Installation of Permanent Settlement Monitoring Stations to track ground settlement.
4. Construction and maintenance of Temporary Drains to manage surface runoff.
5. Filling operations**,** including placement and compaction:
   - Rock Fill Type-A (up to 500 mm)
   - Rock Fill Type-A1 (up to 300 mm)
   - Rock Fill Type-B (up to 125 mm)
   - Rock fill material from quarrying operations
   - Imported murrum: These filling works were executed from and above +5.5 m in accordance with the approved grading plan.
6. Testing and quality verification at various finished grading levels, ensuring compliance with technical specifications.

NMIAL was required to undertake the development works over the prepared site by CIDCO at 5.5M AMSL till the final finished level which is 8M AMSL.

NMIAL in accordance to Article 5.2.6 of the Concession Agreement, which stipulates for award of works more than Rs. 25 crores through call of open tenders, i.e., through Competitive Bidding Process. As such NMIAL through open competitive bidding, EOI notice was published in Business Standard Newspaper and NMIAL website on 24.08.2018, awarded the contract of EPC-1 comprising of Site Preparation & Earthwork for the proposed Greenfield Airport. The contract was awarded to M/s Larsen & Turbo Limited for an amount of Rs. 1503 Crores (EPC-1).

There were only two bidders qualified out of 6 bidders participated in the tendering process i.e. M/s IC-ICTAS and M/s L&T Ltd. Finally, only M/s L&T has submitted its price bid. Even after 2nd call the other bidder i.e. M/s IC-ICTAS has not submitted its price bid. Hence M/s L&T Ltd. was the only single bidder having quoted for the work.

Thereafter, based on proposal submitted by NMIAL, CIDCO Vide Letter No. CIDCO/T&C/CT&CP/NMIA dated 21.06.2019 conveyed approval (through its Board Resolution dated 11.06.2019) for award of EPC-1 to M/s L&T.

The work was completed with final completion cost of Rs.1681 Crores having main works of Rs.1503 Crs including Price Adjustment for Rs.105 Crs and Change orders for Rs. 73 Crs with GST. For copy of Change order & Price adjustment, refer enclosed **Annexure-II.**

Table-37: Break-up of EPC-1

Sr No	Description of Item	Cost in Crs (i/c GST)
	EPC 1	**1,681**
a	Main works	1,503
b	Price Adjustment	105
c	Change Order	73

The EPC contract was awarded on 31 August 2019 with time period of 455 days from the date of Notice to Proceed (NTP), i.e., May 2022, which involved huge mechanical means and controlled blasting for excavation. The extension of time in completing the work is extended till September 2025 by CIDCO. In view of the blasting involved in the process of excavation and in the process earth filling work got interrupted frequently and therefore considering the voluminous nature of work having around ~32 million cum of Rock cutting & filling involved with other associated activities, the time period found to be reasonable for such a massive works.

7.4.2 EPC-2 (M/s L&T Ltd.):

The contract of EPC-2 broadly included the following activities:

i) Airside development Works
ii) Passenger Terminal Building
iii) Landside Development
iv) Support Facilities
v) Utility & PNG System

NMIAL through call of open tenders by publishing EOI Notice in Business Standard Newspaper and NMIAL website on 24.08.2018, i.e., through

Competitive Bidding Process and awarded the contract of EPC-2 to M/s Larsen & Turbo Limited for an amount of Rs. 4720 Crores (EPC-2). Also, the tender did not have any restrictive clause.
There were only two bidders qualified out of 6 bidders participated in the tendering process, i.e., M/s IC-ICTAS and M/s L&T Ltd. Finally, only M/s L&T has submitted its price bid. Even after 2nd call the other bidder, i.e., M/s IC-ICTAS has not submitted its price bid. So, M/s L&T Ltd. was the only single bidder having quoted for the work.

Thereafter, based on proposal submitted by NMIAL, CIDCO Vide Letter No. CIDCO/T&C/CT&CP/NMIA dated 21.06.2019 conveyed approval (through its Board Resolution dated 11.06.2019) for award of EPC-2 to M/s L&T.

The work was completed with final completion cost of Rs.5829 Crores (inclusive of Price Adjustment Rs.460 Crs, Change orders for Rs.453 Crs and additional Cost for Provisional Sum Works for Rs.197 Crs. including GST). For copy of Change orders, Price adjustment & list of provisional sum works, refer enclosed **Annexure-III.**

Table-38: Break-up of EPC-2

S.N.	Description of Item	Cost in Crs (i/c GST)
	EPC 2	**5,829**
a	Main works	4,720
b	Price Adjustment	460
c	Change Order	453
d	Provisional Sum Works	197

The EPC contract was awarded on August 2019 and NTP was issued on May 2022 with time period of 940 days. The extension of time was granted till September 2025 by CIDCO. Considering the vast nature of work, the time period found to be reasonable comparing with similar other projects.

7.4.3 Non-EPC Works (M/s NCC Ltd):

NMIAL through open competitive bidding, EOI notice was published in Business Standard Newspaper and NMIAL website on 23.12.2022, awarded the contract to M/s NCC Ltd. The contract was awarded to M/s NCC Ltd. for an amount of Rs. 1350 Crores (Non-EPC).

There were Six bidders participated in the tendering process out of which all were qualified and issued the tender documents. Finally, M/s NCC found the lowest bidder for having quoted an amount of Rs.1350 Crores including GST.

The contract mainly comprises following major Works apart from other scope:

- Integrated Air Cargo Terminal (IACT) Building
- Fuel Farm & Fuel Hydrant System

The work was completed with final completion cost of Rs.1362 Crores including GST.

7.4.4 Connectivity to Coastal Road Works:

Airport Connectivity to Coastal Road within NMIA site was awarded to M/s J Kumar & J.M. Mhatre (JV) for an amount of Rs.46 Crores on nomination basis based upon approval from M/s CIDCO. M/s CIDCO vide letter dated 27.09.2023, had requested NMIAL to consider M/s J. Kumar -J. M. Mhatre (JV), for execution of the said work due to Paucity of time and in the interest of timely completion of this critical link and to ensure continuity in the design and execution.

7.4.5 Miscellaneous Works:

- Works amounting to award value more than Rs. 25 crores - There are total 14 nos. of contracts amounting to Rs. 9843 Crores which had been awarded based on the open tender with no restrictive clause. (**Annexure-I A & also refer Table-77**).

- Works amounting to award value between Rs. 5 Crores to Rs. 25 crores - There are total 80 nos. of contracts amounting to Rs. 955 Crores which had been awarded based on the open tender with no restrictive clause. (Refer **Annexure-I B**).

- Works amounting to award value Less than Rs. 5 Crores - There are total 638 nos. of contracts amounting to Rs. 385 Crores which had been awarded based on the open tender with no restrictive clause. (Refer **Annexure-I C**).

8. EVALUATION / ANALYSIS OF CAPEX FOR DEVELOPMENT OF NAVI MUMBAI AIRPORT AT NAVI MUMBAI (GREENFIELD):

EPIL conducted a comprehensive analysis of NMIAL's submission of the CAPEX involved in Multi-Year Tariff Proposal (MYTP) which was incurred for the development of Navi Mumbai International Airport corresponding to the first control period.

For the purpose of a structured evaluation, EPIL has categorized the capital expenditure into the following key components:

8.1. Hard Cost of Construction

8.1.1 Pre-Development works by CIDCO:

An amount of Rs. 3,747 crores (Completion cost i/c liabilities up to Oct'2025) have been incurred by CIDCO on the development of the site of 1160 Ha enabling to undertake the Development of Airport & work is completed. For details pertaining to Pre-Development cost, *refer Table-35*.

As per the Concession Agreement (CA), the expenditure incurred towards pre-development works by CIDCO have been categorized as a Soft Loan on the Concessionaire repayable in five equal instalments starting from 11th year of COD till 15th year @ 2% + MCLR (i.e., 2% above Bank Rate) as per Clause-12.9.6 (ii) of CA.

As per Para-4(b)(ii) of CIDCO letter dated:08.05.2018, the concessionaire shall also have an option to make the payment of instalments from 21st year of COD till 25th year at the same terms & conditions. This soft loan shall be treated as part of the Capital Expenditure for determining aeronautical charges by AERA. For CIDCO letter dated: 08.05.2018, refer enclosed **Annexure-IV**.

The key provisions of the Concession Agreement in relation to the soft cost forming the part of the CAPEX are as below:

- **Clause 12.9.1:**
  The Concessionaire acknowledges that the Authority has carried out Pre-Development Works as specified in Annex-B of the Concession

Agreement (CA). The Authority's expenditure on these works, up to Rs.3,420 crores, shall be treated as a Soft Loan.

- **Clause 12.9.2:**
  Out of the Soft Loan, Rs. 430 crores shall be considered as the Authority's equity capital infusion in the Concessionaire. The Soft Loan amount shall be reduced accordingly while determining repayment obligations.

- **Clause 12.9.3:**
  Any additional cost incurred by the Authority for implementing Pre-Development Works (beyond the Soft Loan limit) shall be paid separately in accordance with the LDS Agreement(s). Such additional amounts shall not form part of the Soft Loan.

- **Clause 12.9.7:**
  All assets created under the Pre-Development Works and financed through the Soft Loan shall be treated as part of the Capital Expenditure for determining aeronautical charges by AERA.

CIDCO has further stated in reference of Clause 12.9.3 vide its letter dated 19.06.2019 **(Refer Annexure-V)**, wherein it is stated that: "*Any incremental cost beyond Rs. 3,420 crores shall also be considered as Soft Loan on the same terms and conditions of the Concession Agreement.*" However, during the visit of EPIL on NMIA site on 04.07.2025, CIDCO provided a completion cost statement of works for an amount of Rs. 3830 Crore.

EPIL vide its email dated 18.11.2025 sought the letter vide which, approval of the PMIC, the Competent Authority**,** for the incremental increase in amount over and above Rs. 3420 Crores, i.e., Rs. 410 Crores was conveyed. CIDCO/NMIAL in response to above, submitted through its email dated 24.11.2025 revising the Pre-Development reconciled cost as on Oct'2025 as Rs. 3747 Crores (**Refer Annexure-VI**) against Rs. 3830 Crores submitted earlier. CIDCO has again forwarded the contents of MoM "*Further any incremental cost required to be incurred for cutting of excess rock over and above Rs. 3420 crores, if any, shall also be considered as soft loan on the same terms and condition as in the concession agreement".*

However, after examination of the revised submission of the CIDCO/NMIAL, it was observed that the submission of CIDCO/ NMIAL does not contain any specific approval of the incremental amount over & above the stipulated amount of Rs. 3420 Crores in the CA by the Competent Authority as requested by EPIL. In this context, Copy of CIDCO letter dated:02.04.2019 as forwarded by CIDCO/NMIAL, Copy of Maharashtra Order dated:27.04.2016 & the signed old payment statement upto March'2025 is Appended as **Annexure-VII**.

Accordingly, EPIL recommends to restrict the expenditure to Rs. 3,420 crores as of now as per the provisions of the CA. The Authority (AERA) may revisit this decision on receipt of final reconciled amount and duly approved by CIDCO, during the tariff determination exercise**.**

Table-39: Pre-Development Works by CIDCO

S. N.	Description of Item	Cost by NMIAL (in Rs. Cr.)	Recommended by EPIL (in Rs. Cr.)	Variance (in Rs. Cr.)	Reference
		(A)	(B)	(B-A)	
1	Pre-Development Works by CIDCO	3747	3420	(-) 327	

8.1.2 Developments Works by NMIAL:

8.1.2.1 Site Preparation & Earthwork-EPC-1 (M/s L&T Ltd.):

An amount of Rs.1,917 crores have been incurred in the capital expenditure by NMIAL against completed works of Site Preparation & Earthwork having break-up of various works as tabulated at Table-40 below:

Table-40: Detailed Break-up of Works under Site Preparation & Earthwork

S.N.	Package	Details of work	Cost (in Crs.)	Remarks
1	EPC-1 (M/s L&T Ltd.)	Site Preparation & Earthwork (Cut & Fill works)		
1.1		Quarrying Operation by Controlled Blasting incl transportation for all lead & lifts	1615	

1.2		Rock fill embankment using rock available at site (incl crushing of rock) **(<500 mm)**		
1.3		Rock fill embankment using rock available at site (incl crushing of rock) **(<300 mm)**		
1.4		Rock fill embankment using rock available at site (incl crushing of rock) **(<125 mm)**		
1.5		Earthwork in fill using Soil brought from outside all lead & lifts		
1.6		Clearing jungle including uprooting of rank vegetation, grass etc		
1.7		Settlement gauge Supply, Installation, Survey & Monitoring etc		
2	EPC-2 (M/s L&T)	Supply of Grade M5 concrete from NMIAL (Estimated Value)	3	This cost was shifted from scope of EPC 1 contractor (due to non-availability of Batching plant) to M/s NCC Ltd. (EPC-2/CO/002)
3	NON-EPC (M/s NCC Ltd.)	Construction of Miscellaneous Structures-**Reduction towards Supply of concrete to NMIAL**	7	This cost was shifted from scope of EPC 1 contractor (due to non-availability of Batching plant) to M/s NCC Ltd. (NMIAL/NCC/CO/005, Item No-4A, P-5)
4	(5-25 Crs.)	Misc. Works	290	
5	Less than 5 Crs. (M/s Vishal Enterprises)	Removal of rank vegetation, shrubs	1.40	
6	Less than 5 Crs. (M/s Manasi Consultants)	Removal of rank vegetation, shrubs	1.00	
		Total	**1917**	

Justification for Price Adjustment

The EPC contract was awarded on 31 August 2019, with the requirement that a Notice to Proceed (NTP) be issued before commencement of works. However, the NTP could only be issued in May 2022, primarily due to

COVID-19 disruptions and associated delays, resulting in a 32-month gap between contract award and actual commencement.

The total price adjustment amount is Rs. 105 Crores in EPC-1 and the package awarded to M/s L&T on EPC contract basis. In the Concession agreement there is no provision/clause envisaged for any payment against price adjustment & claims for idling. However, after detailed examination by EPIL, it is concluded that CA clause be applicable in case the subject site was handed over to the contractor (M/s L&T) as stipulated in EPC contract. The site was handed over to the contractor after lapse of 32 months and the delay is not attributable to the contractor.

Further the outbreak of global COVID-19 pandemic and also considering the increase in cost of basic input materials during the delay period of two & half years (32 months), EPIL found adjustment of cost through price adjustment reasonable and hence admitted the price adjustment payable to M/s L&T & approved by NMIAL.

Analysis of Cost:

The cost of this work was analyzed based on MORTH rate analysis, CPWD DSR and market rates. As per cost analysis and scrutiny by EPIL, the cost submitted by NMIAL for Rs.1917 Crores pertaining to Site Preparation & Earth Work is found reasonable and hence recommended.

Table-41: Site Preparation & Earthwork

S. N.	Description of Item	Cost by NMIAL (in Rs. Cr.)	Recommended by EPIL (in Rs. Cr.)	Variance (in Rs. Cr.)	Reference
		(A)	(B)	(B-A)	
1	Site Preparation & Earthwork	1917	1917	0	

8.1.2.2 EPC-2 (M/s L&T Ltd)

An amount of Rs.5,829 crores have been incurred in the capital expenditure by NMIAL towards various completed works under EPC-2 having break-up of various associated works is tabulated at Table-42:

Table-42: Asset wise break-up of EPC-2 works

S.N.	Description of Item	Cost in Crs. (i/c GST)
1.	Site Preparation & Earthwork	3
2.	Airside Development	1693
3.	Passenger Terminal Building	2575
4.	Landside Development	626
5.	Support Facility 1	199
6.	Utilities & PNG	461
	Sub-Total-(1)	5,558
7.	Technical Services (Consultancy services related to Traffic forecast, Planning, design & updation of Master plan, Airside & Landside Infrastructure, review of BOQ etc)	168
8.	Preliminaries (Site enabling works, ORAT, IT Infrastructure, Site fencing, Project Office etc)	44
9	Others	59
	Sub-Total-(2)	271
	Total-(1+2)	**5,829**

The contract of EPC-2 broadly included the following activities:

A). Airside development Works
B). Passenger Terminal Building
C). Landside Development
D). Support Facilities
E). Utility & PNG System

(A) Airside Development Works:

An amount of Rs.2,041 crores have been incurred in the capital expenditure by NMIAL towards completed works of Airside Development works (Airside Pavements & other miscellaneous Airside works), which also

includes Rs.211 crores towards approved Price Adjustment (refer Annexure-III) claims including GST payable to M/s L&T.

Table-43: Detailed Break up of Airside Development under EPC-2

S.N.	Asset	Cost (in Crs.)
1	Runway	149
2	RESA	5
3	Runway System-Grading/Graded Strip	42
4	Taxiway	254
5	Taxiway System-Land Grading	31
6	Apron	398
7	Aircraft Parking for Authority	3
8	Isolation Bay	5
9	NAVAIDS	6
10	Airside Roads	47
11	Airfield Ground Lighting System (AGL)	257
12	Storm Water Drainage System	404
13	Airport Perimeter / BW Wall	61
14	PIDS	27
15	Watch tower including crash gate	2
16	DVOR	3
	Sub-Total-(A)	**1693**

Table-44: Break-up of Airside Development works

SN	Description of Item	Cost in Crs (i/c GST)
1.	EPC-2	1693
2.	Non-EPC works (M/s NCC)	16
3.	Misc works (Less than 5 Crs.)	13
	Sub-Total	**1722**
4.	Unawarded works	319
	Total	**2,041**

The cost incurred for Rs.2041 Crores against Airside Development works, which also includes Rs.319 Crores against unawarded cost. Subsequently, the GA Apron work is awarded as Item Rate contract under EPC-2 vide a change order dated:25th July 2025 for a value of Rs.278.49 Crores. Total 3 no of GA Apron is planned. Total GA Stand is 67 no's (Code B-17 & Code C-50) in Phase-1&2 of NMIA. Area of GA Apron awarded under this change order is 236915 sqm. Pavement cost is Rs 112.56 Cr out of total cost of Rs 278.49 Crs inclusive of GST.

Total area of GA apron is 329177 sqm. This includes 92261 sqm of General Aviation (GA) Apron under the original EPC contract. The components of this CO include Pavement, Drains, Oil Water Separator (OWS), Jet Blast Deflector, Airside Ground Lighting (AGL), Utilities work & provisional sum works towards Utilities works, Removal of silt pond & enabling works.

Therefore, the differential amount of unawarded cost considered in revised MYTP for GA Apron expansion & actual awarded cost is to be deducted, i.e., (319-278) = Rs.41 Crs.

Justification for Price Adjustment

The EPC contract was awarded on 31 August 2019, with the requirement that a Notice to Proceed (NTP) be issued before commencement of works. However, the NTP could only be issued in May 2022, primarily due to COVID-19 disruptions and associated delays, resulting in a 32-month gap between contract award and actual commencement.

The total price adjustment amount is Rs.460 Crores in EPC-2 and awarded to M/s L&T on EPC contract basis. In the Concession agreement there is no provision/clause envisaged for any payment against price adjustment & claims for idling. However, after detailed examination by EPIL, it is concluded that CA clause be applicable in case the subject site was handed over to the contractor (M/s L&T) as stipulated in EPC contract. The site was handed over to the contractor after lapse of 32 months and the delay is not attributable to the contractor.

Further the outbreak of global COVID-19 pandemic and also considering the increase in cost of basic input materials during the delay period of two & half years (32 months), EPIL found adjustment of cost through price adjustment reasonable and hence admitted the price adjustment payable to M/s L&T & approved by NMIAL.

The cost of this work was analysed based on MORTH rate analysis, CPWD DSR/DAR and market rates and also compared with other comparable similar Airports.

Hence the recommended cost is Rs.2000 Crs only after deducting the differential amount of Rs.41 Crs.

Table-45: Airside Development Works

S. N.	Description of Item	Cost by NMIAL (in Rs. Cr.)	Recommended by EPIL (in Rs. Cr.)	Variance (in Rs. Cr.)	Reference
		(A)	(B)	(B-A)	
1	Airside Development works	2041	2000	(-) 41	

(A.1) Analysis of cost for Airside Pavement (Runway, Taxiway, Apron):

The component wise Airside Pavement area details are as below:

Table-46: Area Statement-Airside Pavement

S.N.	Pavement	Area (in Sqm.)
1	Runway	2,86,500
2	Taxiway	5,22,211
3	Apron (Passenger, Cargo, GSE staging & GA Apron)	3,29,177
4	Authority Apron	2,600
5	Isolation Bay	8,400
	Total	**16,58,170**

a) The inflation adjusted cost has been analyzed below at Table-47 in accordance to AERA Order No. 07/2016-17 to compare with Normative rates by AERA.

Table-47: Airside Pavement (Runway, Taxiway, Apron)

AIRSIDE PAVEMENT											
Financial Year	FY 16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY 26
AERA Normative Cost/Sqm	4700										
WPI*	109.7	111.6	114.9	119.8	121.8	123.4	-	-	-	-	-
Inflation %*							7.41%	9.41%	0.20%	2.20%	0.70%
Inflation Adjusted Cost	4700	4781	4923	5133	5218	5287	5664	6197	6210	6346	6378
AERA Normative Cost is inclusive of GST @ 12%, therefore the cost per Sqm of Airside Pavements including 18% GST shall be as under: (6378) x 1.18/1.12) = **Rs.6720 per Sqm**											

* Source: Office of the Economic Advisor, Government of India (https:eaindustry.nic.in)

b) The cost was also analysed based on MoRTH/CPWD DSR/DAR & Market Rates by EPIL and the cost of pavements works out to Rs.811 Crs, i.e., Rs.4891/Sqm.

c) The Cost of pavement as per the submission of NMIAL found to be Rs.809 Crs, i.e., Rs.4879/Sqm.

The normative cost of Airside pavement as arrived is Rs.6720 per Sq.m. (Refer Table-47) and Cost analysed based on market rate by EPIL found to be Rs.4891/Sqm against the cost/Sqm submitted by NMIAL as Rs.4879/Sqm as per Table-50.

Table-48: Break-up of Airside Pavement (Runway, Taxiway, Apron)

S.N.	Asset	Cost (in Crs.)
1	Runway	149
4	Taxiway	254
6	Apron	398
7	Aircraft Parking for Authority	3
8	Isolation Bay	5
	Sub-Total-(A)	**809**

Comparison of Pavement cost per Sq.m by NMIAL and EPIL cost:

Table-49: Comparison of Pavement cost

S.N	Pavement	Pavement Area (in Sqm.)	NMIAL	EPIL	Inflation Adjusted Normative Cost i/c GST @18% for Airside Pavement works in FY 25 (in Rs. Crs.)	Recommendations by EPIL
			Pavement Cost / Rate per Sqm (in Rs. Crs.)			
1.	Runway	286500	Rs. 809 Crs. / (Rs. 4879/Sqm)	Rs. 811 Crs. / (Rs. 4891/Sqm)	6720	Normative rate is more than the NMIAL & also found reasonable. Thus Rs.809 Crs is admitted in accordance to para 4.2(v) of AERA Order No. 07/2016-17.
2.	Taxiway	522211				
3.	Apron	849459				
	Total	**16,58,170**				

Hence Rs.809 Crs as submitted by NMIAL found reasonable.

For Cost analysis of Airside Pavement works work by EPIL, refer enclosed **Annexure-VIII**.

(B) Passenger Terminal Building (Terminal-1):

An amount of Rs.3,584 crores have been incurred in the capital expenditure by NMIAL towards completed works of Passenger Terminal Building (T-1), which also includes Rs.148 crores (refer Annexure-III) towards approved Price Adjustment claims including GST payable to M/s L&T.

Table-49: Break up of Passenger Terminal Building (T-1)

S.N.	Description of Items	Cost (in Crs.)
1	Shell & Core	616
2	Facade Systems	237
3	Roofing System	471
4	Interior Finishes	629
5	MEP Works	366
6	ICT	215
7	Other Airport Systems (VHT, PBB, BHS, SBD)	42
	Total-I	**2575**
S.N.	**Description of Items**	**Cost (in Crs.)**
8	HBS SSE (EIE)	103
9	BHS (EIE)	249
10	PBB (EIE)	76
11	VHT(EIE)	57
12	Misc works (5-25 Crs.)	281
13	Misc works (Less than 5 Crs.)	68
	Total-II	**834**
14	NCC (NON-EPC)-Softscape work at PTB	8
	Total-III	**8**
	Grand Total-(I+II+III)	**3417**
15	Unawarded works	167
	Total	**3,584**

The cost of Rs.3584 Crs also includes unawarded cost of Rs.167 Crs in the revised CAPEX submitted by NMIAL, having break-up as below:

i) Digital & Physical Art Work
ii) Security Equipment's (Body Scanners/CTX/ATRS)
iii) Other Miscellaneous works.

(B.1) Digital & Physical Art work:

NMIAL has considered Rs.71 Crores in revised CAPEX proposal submitted on 07.07.25, which is further revised to Rs.51 Crores, in submission of "Revised list of unawarded work" dated:25.09.25 against Digital & Physical Art Program including Construction. For list of unawarded work during MYTP & revised list dated:25.09.25 with EPIL recommendations, refer enclosed **Annexure-XX**.

It is noted that two contracts on digital art had already been awarded by NMIAL as below:

a) Digital Art Program at NMIA Passenger Terminal Development- M/s TAMSCHICK MEDIA+ SPACE GMBH- Rs.16 Crores.

b) SITC of Equipment's for System Integration for Digital Art Programme in Passenger Terminal Development- M/s INFOSOFT DIGITAL DESIGN-Rs 12 Crores.

Now it is an additional requirement raised by M/s NMIAL, which are yet to be awarded. Therefore, proposed amount of Rs.71 Crores as proposed in revised MYTP by NMIAL is disallowed & may be considered at the time of issuance of final Tariff order based on actual incurrence.

(B.2) Security Equipment's (Body Scanners/CTX/ATRS):

NMIAL has considered Rs. 26 Crores in revised CAPEX proposal submitted on 07.07.25, but later on the claim was removed in submission of "Revised list of unawarded works" dated: 25.09.25 against Security Equipment's.

It is noted that already an amount of Rs. 54 Crores was incurred in the PTB towards Security Screening Equipment (SSE) such as Body Scanners/CTX/ATRS. Further an amount of Rs. 95 Crores was also admitted towards CTX machine and body scanner under head "Minor/ Sustainable CAPEX".

The Claim of Rs. 26 Crores against Security Equipment's (Body Scanners/CTX/ATRS) under Non-EPC works is disallowed based on following:

a. Not claimed in "Revised list of unawarded works" submitted on 25.09.25 by NMIAL.
b. No details/break-up submitted for review & acceptance.
c. This expenditure is yet to be incurred.

Therefore, Rs.26 Crores as proposed in revised MYTP by NMIAL is disallowed & may be considered at the time of issuance of final Tariff order based on actual incurrence.

(B.3) Other Misc. works (Scope Gap/Additional Changes):

NMIAL has considered Rs.70 Crores in revised CAPEX proposal submitted 07.07.25, which is further revised to Rs.68 Crores in submission of "Revised list of unawarded work" dated:25.09.25 as Misc. works (Scope Gap/Additional Changes).

Claim of Rs.68 Crores against Other miscellaneous works under non-EPC works are disallowed based on following:

a) No details/break-up submitted for review & acceptance.
b) This expenditure is yet to be incurred.

Therefore, Rs. 70 Crores disallowed as proposed in revised MYTP by NMIAL & may be considered at the time of issuance of final Tariff order based on actual incurrence.

Hence a total amount of Rs.167 Crores (Rs. 71 Crores + Rs. 26 Crores + Rs. 70 Crores) disallowed & may be considered at the time of issuance of final Tariff order based on actual incurrence.

(B.4) Analysis of PTB Cost by EPIL:

The built-up area of Passenger Terminal building is 2,31,354 Sqm.

(1) The Cost of PTB analysed by EPIL based on CPWD PAR, DSR, Market rates and also compared with other comparable similar Airports. As per analysis the cost of PTB worked out to Rs. 3452 Crores, which works out to **Rs.1,49,209 per Sqm.,** whereas AERA has prescribed a normative cost of Rs. 1,00,000 per Sqm in FY 2020-21. EPIL assessed the Inflation adjusted Normative rate as on FY-2025-26 based on Inflation rates, which works out to **Rs.1,33,913 per Sqm** as appended below:

Table-50: Inflation Adjusted Cost-Passenger Terminal Building (T-1)

Inflation-Adjusted normative rate-Passenger Terminal Building						
Financial Year	FY21	FY22	FY23	FY24	FY25	FY26
Inflation Adjusted normative Cost (in Rs. Per Sqm)	100000					
Inflation %	-	7.14%	9.41%	0.20%	2.20%	0.50%
Inflation Adjusted Cost @18% GST (in Rs. Per Sqm)	105357	112880	123502	123749	126471	127103
AERA normative Cost is inclusive of GST @ 12%, therefore the cost per Sqm of PTB including 18% GST shall be as under: (127103) x 1.18/1.12) =**Rs.1,33,913 per Sqm**						

Source: Office of the Economic Advisor, Government of India (https: eaindustry.nic.in)

(3). It has been observed that the Terminal Building is equipped with latest advanced equipment & superior finishes in addition to the conventional items which were not the part of the normative rates considered by AERA. The PTB contains advance equipment like CT Xray machine, Dual view X-Ray machine, Full body scanners, Self Baggage Drop, Arrival Remote Sensing system, Automated Tag Reader in Arrival Baggage, Advanced BHS with Auto sortation, E-gates, Digi Yatra, PM WANI etc and superior finishes in Building to make it more energy efficient in compliance of IGBC LEED Gold certification.

In addition to the aforesaid NMIAL has also provided Baggage make-up & Break-up in Basement area along with BHS Tunnel to transfer Baggage from

Check-in facility at CTC Metro Station to Terminal, which involved rock cutting in excavation etc. Thus, the cost of Passenger Terminal Building works out to **Rs.1,54,914/-** per Sqm as appended at **Annexure-IX**. However, it includes the works amounting to Rs.167 Crs, which are still unawarded. Accordingly, the cost of PTB after adjustment of unawarded cost works out to Rs.3417 Crs., which translates into **Rs.1,47,696/- per Sqm** and is reasonable.

Further the work is already awarded based on competitive bidding without any restrictive clause and completed as on date, which is in line with para 4.2(v) of AERA Order No. 07/2016-17, which states as follows:

"These ceiling rates shall apply only in case of new projects where the works are yet to be awarded. In case of awarded projects, the capital expenditures will need to be examined by the committee approved for the purpose."

Hence, the final recommended cost is Rs. 3417 Crs.

Table-51: Passenger Terminal Building (Terminal-1)

S. N.	Description of Item	Cost by NMIAL (in Rs. Cr.)	Recommended by EPIL (in Rs. Cr.)	Variance (in Rs. Cr.)	Reference
		(A)	(B)	(B-A)	
1	Passenger Terminal Building (Terminal-1)	3584 (Rs.1,54,914/Sqm)	3417 (Rs.1,47,696/Sqm)	(-) 167	

(C) Landside Development Works:

An amount of Rs. 881 Crores have been incurred in the capital expenditure by NMIAL towards completed works of Landside Development Works details of which is appended at Table-52, which also includes Rs.33 crores towards approved Price Adjustment (refer Annexure-III) claims including GST payable to M/s L&T.

Table-52: Break-up of Landside Development Work

S.N.	Description of Item	Cost in Crs (i/c GST)
1.	**EPC-1**	**65**
2.	EPC-2	

(a)	MLCP	181
(b)	At Grade Parking	11
(c)	Main Access At Grade Road i/c Foot path (West + East)	136
(d)	Drainage	69
(e)	Elevated Road	157
(f)	Vehicular Underpass (VUP) i/c Ramps	34
(g)	Pedestrian Underpass (PUP)	8
(h)	Metro Rail Civil Structure	13
(i)	Foot Over Bridge/Connecting Bridge	17
	Sub-Total	**626**
3.	Non-EPC works (M/s NCC)	19
4.	VHT EPC	4
5.	Coastal Road to NMIA	46
8.	5 Crores to 25 Crores	73
6.	**< 5 Crores**	13
	Sub-Total	846
7.	Unawarded works	34
	Total	**881**

The cost of Rs.881 Crs also includes unawarded cost of Rs.34 Crs in the revised CAPEX submitted by NMIAL, having break-up as below:

a) For Landscape work- Rs. 10 Crs
b) For change orders in various existing contracts- Rs. 24 Crs

However, the Rs.24 Crs above is also part of Rs.76 Crs as claimed in revised MYTP under Change Orders in various existing contracts having break-up as below:

a) For Landside Development works- Rs. 24 Crs claimed against change order in various existing contracts.
b) For Support Facility-1 works- Rs. 52 Crs claimed against change order in various existing contracts (dealt in support facility-1 works at para-D.1) & will be part of unawarded cost of Rs.88 Crs under Support facility-1 claimed as New Change/NFA Approved.

It is to be noted that, NMIAL has awarded two contracts of Landscaping works detailed as below:

a) Landscaping work (Pkg-3, EMAR)- M/s Grotech Landscape Development Private Ltd- Rs. 7.85 Crs.
b) Supply of Plants & Plants supplements for Landscaping works- M/s Grotech Farms & Nursery- Rs. 3.82 Crs.

Thus, total works awarded against Rs. 34 Crs is Rs.11.67 Crs, Say Rs. 12 Crs (Rs. 7.85 Crs + Rs. 3.82 Crs) and hence admitted. The balance Rs.24 Crs as claimed against change orders in various existing contracts is not admitted since no details submitted for its review & acceptance. Therefore, the differential amount of Rs.22 Crs, i.e., (Rs. 34 Crs – Rs. 12 Crs) is still unawarded and thus disallowed.

Hence the recommended cost is Rs. 859 Crs (Rs. 881 Crs- Rs. 22 Crs). The Cost of Landside Development works are duly analysed by EPIL based on CPWD PAR, DSR, Market rates and also compared with other comparable similar Airports and found reasonable.

It is to be noted that the cost of Landside Development Works submitted by NMIAL is inclusive of cost of MLCP for Rs.181 Crs. The nature of MLCP being non-aeronautical and therefore the same to be treated and analysed by Tariff consultant and not considered by EPIL in Cost analysis.

Hence the recommended cost is Rs. 859 Crs after deducting the differential amount of Rs.22 Crs.

Table-53: Landside Development Work

S. N.	Description of Item	Cost by NMIAL (in Rs. Cr.)	Recommended by EPIL (in Rs. Cr.)	Variance (in Rs. Cr.)	Reference
		(A)	(B)	(B-A)	
1	Landside Development Work	881	859	(-) 22	

(D) Support Facility Works:

An amount of Rs. 933 crores & Rs.121 Crs have been incurred in the capital expenditure by NMIAL towards Support Facility-1 & Support Facility-2 works at the NMIA site, which includes Rs.9 crores towards approved Price Adjustment (refer Annexure-III) claims payable to M/s L&T.

(D.1) Support Facility-1 Works:

The details of works under support facility-1 amounting to Rs. 933 crores have been detailed below in Table-54 & considered for CAPEX by NMIAL. The work was undertaken by M/s L&T and M/s NCC both and works are completed.

Table-54: Break-up of Support Facility-I Work

S.N.	Description of Items (In Rs Crs)	Cost (in Crs.)
(i).	**EPC-2 Scope: M/s L&T Ltd.**	
1	ATC Technical Block	50
2	Airport Maintenance Building	39
3	Meteorological Station /IMD facility	14
4	ARFF Facility & Interim ATC Tower	49
5	Airfield Ground Lighting Substation (CCR)-East	11
6	Airfield Ground Lighting Substation (CCR)-West	10
7	ASR 2 Buildings	10
8	SMR Buildings	2
9	Airside Security Gate-East	8
10	Airside Security Gate-West	6
	Sub-Total-I	**199**
11	VHT (EPC-02)	3
12	HBS SSE (EPC-02)	8
	Sub-Total-II	**11**
(ii)	**Non-EPC Scope: M/s NCC Ltd.**	
1	Airport Administration Building West	115
2	Police Station	17
3	Airport Health Organization	17
4	Airport Operational Staff Facility (CISF Barracks)	83
5	Reserved Housing	85
6	General Aviation Terminal only Shell & core works	54
7	MOER/Data Centre	25
8	Central Storage	18
	Sub-Total-III	**414**
9	VHT (Non-EPC)	16

S.N.	Description of Items (In Rs Crs)	Cost (in Crs.)
10	Crash Fire Tender (CFT)	56
11	Airside Vehicles & Equipment's	**59**
12	Plant & Machinery	**90**
	Sub-Total-IV	**221**
	Total-V=(I+II+III+IV)	**845**
(B).	**Unawarded works**	88
	Total	**933**

The cost incurred for Rs. 933 Crores against completed Support Facility-1 works also includes Rs. 88 Crores unawarded works, having following break-up:

(a). For Airport Operational Equipment's & Vehicles-Rs.35 Crs as per revised MYTP submitted dated:07.07.25, which is further revised to Rs.48 Crores, in submission of "Revised list of unawarded work" dated:25.09.25.

(b). For Change order in various existing contracts- ***Rs.53 Crs** (considered in place of Rs.52 Crs) as per revised MYTP submitted dated:07.07.25 and same amount of Rs.52 Crs is claimed in submission of "Revised list of unawarded work" dated:25.09.25 as New Change/NFA Approved.

(***Remarks:** Rs.88 Crs is basically a round off figure of (Rs.35.48+Rs.52.35=Rs.87.83 Crs), say, Rs.88 Crs. However, component wise individual figure considered as Rs.35 Crs+Rs.52 Crs=Rs.87 Crs & there will be a difference of Rs.1.0 Crs observed. EPIL has considered this Rs.1.0 Crs under Change Order amount and considered this as Rs.53 Crs).

(1) Airport Operational Equipment's & Vehicles:

As stated above, NMIAL has considered Rs. 35 Crores under unawarded works in revised CAPEX proposal submitted in July-2025, which further revised to Rs. 48 Crores while submitting the revised list of unawarded works on dated 16.09.2025 against Operational Equipment's & Vehicles (Other than CFT).

It has been noted that in Support Facility-1 under non-EPC works, an amount of Rs. 59 Crores already considered in the CAPEX against "Airside Operational Equipment's & vehicles" (**Refer Sr. No.-(ii)-11 of Table-54 above**).

Thus, it is additional requirement and not yet awarded. Therefore, this is an additional requirement of Rs.35 Crores against "Airside Operational Equipment's & vehicles" which is still unawarded and therefore disallowed & may be considered at the time of issuance of final Tariff order based on actual incurrence.

(2) Change order in various existing contracts:

Claim of Rs. 53 Crores against change order in various existing contracts under non-EPC works disallowed based on following:

a) No details/break-up submitted for review & acceptance.
b) This expenditure is yet to be incurred.

Hence, a total amount of Rs. 88 Crores (Rs. 35 Crores + Rs. 53 Crores) disallowed & may be considered at the time of issuance of final Tariff order based on actual incurrence.

All the works under Support Facility-1 were examined and analysed by EPIL based on CPWD PAR, DSR, Market rates and also compared with other comparable similar Airports.

Hence the recommended cost is restricted to Rs. 845 Crores after deducting the unawarded works of Rs.88 Crs.

Table-55: Support Facility 1 Works

S. N.	Description of Item	Cost by NMIAL (in Rs. Cr.)	Recommended by EPIL (in Rs. Cr.)	Variance (in Rs. Cr.)	Reference
		(A)	(B)	(B-A)	
1	Support Facility 1 Works	933	845	(-) 88	

(D.2) Support Facility-2 Works:

The details of the works/ items in Support Facility- 2 amounting to Rs. 121 crores have been incurred in the capital expenditure by NMIAL and awarded to M/s NCC under Non-EPC works.

Table-56: Break-up of Support Facility-2 Work

S.N.	Description of Items (in Crs.)	Cost (in Crs.)
(i)	**Support Facility 2: Under Non-EPC-M/s NCC Ltd**	
1	GSE Maintenance Facility South West	54
2	Airside Fuel Station South West	10
3	INTO Plane Facility (South side)	9
4	INTO Plane Facility (South side)	9
5	Fuel Station South East	8
S.N.	**Description of Items (in Crs.)**	**Cost (in Crs.)**
6	Fuel Station South West (S14D)	6
7	Hazardous Waste Facility	3
	Total	**99**
8	VHT (NON-EPC)	2
	Total	**101**
7.	Unawarded works	20
	Grand Total	**121**

The cost of Rs. 121 Crores against Support Facility-2 also includes Rs. 20 Crores against unawarded cost, which is claimed for Solar Power 2.5 MW and proposed the installation on Terminal T1 roof.

The unawarded work of Rs. 20 Crores towards solar power is admitted being part of proposed/approved Master Plan & also being initiative towards enhancement of Green Energy concept at NMIA Airport.

The Cost of works in Support Facility-2 analysed by EPIL based on CPWD PAR, DSR, Market rates and also compared with other comparable similar Airports and found costs reasonable.

As per cost analysis and scrutiny by EPIL, the cost submitted by NMIAL for Rs.121 Crores pertaining to Support Facility-2 is thus recommended.

Table-57: Support Facility 2 Works

Description of Item	Cost by NMIAL (in Rs. Cr.)	Recommended by EPIL (in Rs. Cr.)	Variance (in Rs. Cr.)	Reference
	(A)	(B)	(A-B)	
Support Facility-2	121	121	0	

(E) Utilities & PNG Works:

An amount of Rs.461 crores have been incurred in the capital expenditure by NMIAL towards Utilities & PNG Works at the NMIA site, which includes Rs. 19 crores towards approved Price Adjustment (refer Annexure-III) claims payable to M/s L&T and the works are completed.

The details of the facilities and equipment along with respective costs considered in "Utilities & PNG works" are appended below:

Table-58: Utilities & PNG-M/S L&T LTD

S.N.	Description of Items (in Crs)	Cost (in Crs.)
1	Water Supply & Pump House	15
2	Power Distribution Substation (DSS)	21
3	Power Receiving Substation (RSS)	56
4	Sewerage treatment plant	24
5	Chiller Plant Building	42
6	Solid Waste Facility	4
7	Triturator	1
S.N.	**Description of Items (in Crs)**	**Cost (in Crs.)**
9	IT (Data Centre for IT)	4
10	Electrical Infra Network	179
11	PHE Piping Network	24
12	IT Networking	48
13	Utilities	36
14	PNG	**7**
	Grand Total	**461**

The Cost of Utilities & PNG analysed by EPIL based on CPWD PAR, DSR, Market rates and also compared with other comparable similar Airports.

As per cost analysis and scrutiny by EPIL, the cost submitted by NMIAL for Rs. 461 Crores pertaining to Utilities & PNG Works is found reasonable and hence recommended.

Table-59: Utilities & PNG System

Description of Item	Cost by NMIAL (in Cr.)	Recommended by EPIL (in Cr.)	Variance (in Cr.)	Reference
	(A)	(B)	(A-B)	
Utilities & PNG System	461	461	0	

(F) Integrated Air Cargo Terminal (IACT):

The scope of this package includes:

- IACT Building
- Facilitation Block
- Cargo Entrance Block
- Service Block
- Utility Block
- Entry and Exit Gates
- Security Cabins
- Internal Utility Services
- Internal Roads, Drainage Systems, and Parking
- Truck Docking and Manoeuvring Areas
- Material Handling System (MHS) and Associated Equipment

In accordance with the requirements of the Concession Agreement (CA) and the projected cargo demand for Phase 1 and Phase 2 of NMIA, an Integrated Air Cargo Terminal (IACT) has been planned with a designed handling capacity of 0.50 MMTPA. The planned Phase 1 & 2 IACT facility includes a ground-floor warehousing area measuring 283.65 m × 120 m, equipped to support comprehensive cargo processing operations along with all necessary ancillary facilities.

To support the development of this critical cargo infrastructure, NMIAL has incurred Rs. 409 Crores in the project's capital expenditure towards IACT Works at the NMIA site. The works have been awarded to M/s NCC under a Non-EPC contract.

The Cost of IACT analyzed by EPIL based on CPWD PAR, DSR, Market rates and also compared with other comparable similar Airports.

Table-60: Integrated Air Cargo Complex (IACT)

Description of Item	Cost by NMIAL (in Cr.)	Recommended by EPIL (in Cr.)	Variance (in Cr.)	Reference
	(A)	(B)	(A-B)	
Integrated Air Cargo Complex (IACT)	409	409	0	

The asset wise CAPEX submitted by NMIAL for IACT and analysed by EPIL is appended below:

Table-61: Integrated Air Cargo Terminal (IACT)

S.N.	Description of Item	Cost by NMIAL (in Cr.)	Cost as per EPIL analysis (in Cr.)	Variance (in Cr.)	EPIL Comments
		(A)	(B)	(A-B)	
1	Integrated Air Cargo Terminal (IACT)	352	355	3	Refer **Annexure-I**. Total Built-Up area- 53561 Sqm. Admitted as per cost analysis based on CPWD PAR
S.N.	**Description of Item**	**Cost by NMIAL (in Cr.)**	**Cost as per EPIL analysis (in Cr.)**	**Variance (in Cr.)**	**EPIL Comments**
		(A)	**(B)**	**(A-B)**	
2	IACT Equipment Cost	38	38	0	Awarded cost admitted based on PO submitted, market rates and also compared with other comparable similar Airports
3	VHT/HBS/SSE	19	19	0	
	Total	**409**	**412**	**3**	

Unit Rate/Sqm	**76,362**	**76,922**		

As per cost analysis and scrutiny by EPIL, the cost incurred by NMIAL for **Rs.409 Crores** pertaining to completed works of IACT is found reasonable and hence recommended.

(G) Fuel Farm & Fuel Hydrant System (FF & FHS):

The Fuel Farm and Hydrant System constitute critical infrastructure required to support uninterrupted and efficient Aviation Turbine Fuel (ATF) refuelling operations for aircraft at NMIA. In line with operational requirements for Phase 1 & Phase 2, NMIAL has planned a dedicated Fuel Farm with a total ATF storage capacity of 24,000 KL, along with an underground fuel hydrant network designed to supply fuel directly to all aircraft stands, ensuring safety, operational reliability, and efficiency in refuelling processes.

During Phase 1 & 2 development (20 MPPA), it is envisaged that NMIA will receive ATF through a dedicated pipeline and via tank truck deliveries to the Fuel Farm. The stored fuel will be accommodated in four ATF storage tanks, each with a capacity of 6,000 KL, supported by an integrated pipeline receipt system. Additionally, the facility includes two underground tanks of 100 KL each for storing Sustainable Aviation Fuel (SAF), which can be blended with ATF as required. With these additions, the total storage capacity for Phase 1 & 2 amounts to 24,200 KL.

For the ultimate development phase, the peak ATF demand has been estimated at 2,300 KL/hour. To meet this requirement, the project includes a 14.19 km fuel hydrant pipeline network, with pipe diameters ranging from 24 inches to 12 inches serving as the main header and subloop lines. A 24-inch pipeline connection has also been reserved for future expansion. A brief detail of ATF is as below:

(A) Outright Purchase (5700 KL)**:** Rate per KL (Jet A-1) @ Rs.62,847

1. Tank Soaking- 2400 KL
2. FF Pieline Soaking- 300 KL
3. Hydrant Line Soaking- 3000 KL

Part of which shall be part of dead stock and balance will be used for soaking and flushing the system as per regulatory guidelines.

(B) Rented Fuel (6300 KL): Inventory carrying Rate per day per KL @ Rs.11.02

1. Will be returned back to Supplier or Transferred upon COD.
2. NMIAL has claimed only rental charge on 6300 KL.

NMIAL has incurred Rs. 513 Crores in the capital expenditure for the development of the Fuel Farm and Fuel Hydrant System.

During site visit from 3rd to 5th July 2025 it was found that there was a provision of 5 fuel tanks in the fuel farm system but only 4 tanks were found to be installed. Therefore, the price implication of 1 fuel tank along with its accessories worked out to Rs.42 Crs based on original agreement which was duly adjusted from the final cost.

The Cost of FF & FHS analyzed by EPIL based on CPWD PAR, DSR, Market rates and also compared with other comparable similar Airports such as Ahmedabad and Lucknow Airports.

As per cost analysis and scrutiny by EPIL, the cost incurred for completed works of FF&FHS by NMIAL (after adjustment of cost for 1 no Tank for Rs. 42 Crs), found to be recommended as Rs.471 Crs only. For analysis of cost for one (1) no Fuel Tank for Rs.42 Crs (For 6000 KL @ Rs.70,300/KL=Rs.42 Crs.) Refer enclosed **Annexure-X.**

Table-62: Fuel Farm & Fuel Hydrant System

Description of Item	Cost by NMIAL (in Cr.)	Recommended by EPIL (in Cr.)	Variance (in Cr.)	Reference
	(A)	(B)	(A-B)	
FF & FHS	513	471	(-) 42	

The asset wise CAPEX submitted by NMIAL for FF&FHS and analysed by EPIL is appended below:

Table-63: Fuel Farm & Fuel Hydrant System

S. No.	Description of Item	Cost by NMIAL (in Cr.)	Cost as per EPIL analysis (in Cr.)	Variance (in Cr.)	EPIL Comments
		(A)	(B)	(A-B)	
1	Fuel Farm, Fuel Tank & Fuel Hydrant System	439	434	5	Refer **Annexure-I**. Fuel Farm-Civil work-10057 Sqm Fuel Farm Infra Development-49056 Total-59113 Sqm Fuel Hydrant System-14.19 Kms Admitted as per cost analysis based on CPWD PAR & Market Rate.
2	Fuel Farm Equipment	38	38	0	Awarded cost admitted based on PO submitted, market rates and also compared with other comparable similar Airports
3	Supply of ATF	37	37	0	
Total		**513**	**509**	**5**	
Deduct for 1 no Tank		(-) 42			Cost of 1 no Tank for Rs.42 Crs. deducted considering cost of 1 Tank in original agreement (Out of 5 Tank, only 4 nos installed at Site)
Net Cost		**471**			
Unit Rate/Sqm		79,678	86,106		

(H) General Power Unit (GPU) & Pre-Conditioned Air (PCA):

NMIAL has allocated Rs. 57 Crores in the project's capital expenditure for the procurement and installation of Ground Power Units (GPU) and Pre-Conditioned Air (PCA) systems, which are essential for supporting aircraft on the ground by supplying electrical power and pre-conditioned air without reliance on aircraft auxiliary power units.

A GPU at an airport stands for Ground Power Unit, a critical piece of airport equipment that provides electrical power (AC/DC) to aircraft when their engines are off, running systems like lights, avionics, and air conditioning without burning fuel, reducing costs and emissions. GPUs can be mobile (towed) or fixed (at gates) and come in diesel, electric, or hybrid models, essential for maintenance, servicing, and passenger boarding/disembarkation. Hybrid model GPU (Fixed for PBB & mobile for Remote Gates) planned for NMIA.

PCA at an airport stands for Pre-Conditioned Air, a crucial ground support system that delivers temperature-controlled, filtered air to parked aircraft, replacing the need for noisy, fuel-burning Auxiliary Power Units (APUs) for passenger comfort

and equipment cooling. These electric or engine-driven units connect via the jet bridge, reducing airport emissions, fuel use, and noise while improving energy efficiency and passenger comfort.

A detailed market analysis was conducted to evaluate the cost benchmarks for similar systems across comparable airports. Based on this review, the award cost proposed by NMIAL has been assessed and found to be reasonable and in line with prevailing market rates.

Accordingly, a capital expenditure of Rs. 57 Crores is recommended for completed works of GPU and PCA systems.

Table-64: GPU & PCA

Description of Item	Cost by NMIAL (in Crs.)	Recommended by EPIL (in Crs.)	Variance (in Cr.)	Reference
	(A)	(B)	(A-B)	
GPU & PCA	57	57	0	

(I) Project Office (NMIAL):

An amount of Rs.59 crores have been incurred in the capital expenditure by NMIAL towards Project Office (NMIAL) Works at the NMIA site. The Project Office is a G+2 permanent structure, complemented by a G+1 Staff Facilitation Centre, developed on a total plot area of 11,937 Sq.m with a constructed area of 5,766 Sq.m.

The core and shell of the Project Office were executed by M/s L&T, while the remaining associated works were undertaken through various specialized agencies.

A dedicated Project Office is essential for accommodating staff involved in the planning, monitoring, and execution of on-site airport development activities during the initial construction phase, as well as for overseeing works in subsequent phases of NMIA's development. In line with this

requirement, NMIAL has established its Project Office in the southwestern landside zone of the NMIA site.

The Project Office complex accommodates the Planning, Design, and Construction Departments of NMIAL and temporarily houses the Corporate and Operations Departments, which will later be relocated to their permanent facility in the Administration Building – West.

Given its role as a long-term operational facility supporting the airport's phased development, the Project Office has been classified under hard cost, previously shifted from preliminaries. Establishing a permanent Project Office is essential for managing ongoing expansion and operational oversight.

The awarded cost of completed works of Project Office analysed by EPIL based on CPWD PAR, DSR & Market.

As per cost analysis and scrutiny by EPIL, the awarded cost submitted by NMIAL for Rs.59 Crores pertaining to completed work of Project Office is found reasonable and hence recommended. The break-up of Project office works is appended at **Annexure-XI**.

Table-65: Project Office

Description of Item	Cost by NMIAL (in Crs.)	Recommended by EPIL (in Crs.)	Variance (in Crs.)	Reference
	(A)	(B)	(A-B)	
Project Office	59	59	0	

(J) Expected claims (hard cost):

This is the expected claim of Rs. 1133 Crores submitted by NMIAL during site visit from 3rd to 5th July 2025 along with submission of revised CAPEX. This claim was based on the claim raised by the contactor, M/s L&T. It was informed by NMIAL during meeting on 04th July 2025, that the claims are being examined by NMIAL which are claimed on account of Price adjustment, due to delay caused in handing over of the site & subsequent

delay caused due to blasting operations during hill cutting works by CIDCO.

EPIL examined that, the CA / EPC does not have any provision of payment of claims towards price adjustment and therefore the claim has not been recommended. Further no payment details/supporting documents received from NMIAL in the MYTP proposal which has been considered by the Concessionaire (NMIAL). However, claim on account of price adjustments amounting to Rs.565 Crs (Rs.105 Crs (in EPC-1) and Rs.460 Crs (in EPC-2)) already admitted by NMIAL before issuing Notice to Proceed (NTP). Refer Annexure-II & III for Price Adjustment claims for EPC-1 & 2 respectively.

Hence, the same has not been recommended. Issue may be re-examined, during tariff determination, if any details/supporting documents is provided by NMIAL.

Table-66: Expected Claims (Hard Cost)

Description of Item	Cost by NMIAL (in Crs.)	Recommended by EPIL (in Crs.)	Variance (in Crs.)	Reference
	(A)	(B)	(A-B)	
Expected Claims (Hard Cost)	1133	0	(-) 1133	

(K) Others (hard Cost)-Claims for Idling:

This is settlement of cost Impact for Rs.59 Crs due to idling of manpower & machinery during hill cutting & blasting activities at NMIA**.** This cost of Rs.59 Crs is included in EPC-2 vide Change Order EPC-02/CO/022.

However, claim is disallowed since there is no clause in CA/EPC contract which permits compensation to the contractor against idling of work. The copy of Change order issued to M/s L&T by NMIAL against claim of Rs.59 Crs is enclosed at **Annexure-XII.**

Table-67: Other (Hard Cost claim for Idling)

Description of Item	Cost by NMIAL (in Crs.)	Recommended by EPIL (in Crs.)	Variance (in Crs.)	Reference
	(A)	(B)	(A-B)	
Others (hard Cost)-Claims for Idling	59	0	(-) 59	

8.2 Soft Cost

As part of the CAPEX submission, NMIAL has incurred against Soft cost, over and above the hard cost expenditure. The soft cost includes Technical & Other Technical Services, Preliminaries, Pre-Operative Expenses, Insurance and Statutory Payments, Building Approvals, and other associated activities. The head wise details are as below:

8.2.1 Technical Services and Other Technical Services (Design Consultancy Services)

(A) Technical Services

NMIAL has provisioned a total of Rs. 671 Crores towards Technical Services for Phase 1 & 2. (Refer **Annexure- XIII**). The Technical Services scope covers a broad range of specialized consultancy assignments, including:

- Airside Master Planning and Pavement Design
- Peer Review Services
- Traffic Forecasting and Transportation Master Planning
- Landside Transport Infrastructure and Road Traffic Solutions
- Landside Commercial Development Programme
- Landscape Master Planning, Design, and Updates
- Technical Review of BOQs for Support and Utility Buildings (including landscaping)
- Architectural and Engineering Design Consultancy for terminal, support facilities, and cargo complex
- Consultancy for Material Handling Systems (MHS)
- Planning, Design, and Engineering Services for the ATF Fuel Farm and Fuel Hydrant System

- Preparation of Concept Master Plan and RFP Documentation for Fuel Facilities
- Consultancy for Factory Licensing and PESO Approvals for Fuel Farm
- Consultancy Services for LEED Certification and related sustainability requirements

Observations from EPIL's Analysis:

1. Rs. 37.17 Crores (Consultancy Services – M/s GVKPIL)
   (Refer S.N.-1 of **Annexure- XIII**).

   This cost is disallowed due to reasons stated below:
   - M/s GVKPIL is a subsidiary of GVK.
   - The engagement was done on a nomination basis through GVK Board approval.
- No competitive bidding was conducted, contrary to Clause 5.6 of the Concession Agreement**,** which mandates competitive procurement for contracts exceeding Rs. 25 Crores**.**

2. Rs. 33.90 Crores of Technical services not admitted
   (For details/works of disallowed technical services, refer S.N. 2 to 23 of **Annexure-XIII)**

   These technical costs are disallowed due to reasons stated below:
- Duplication / repetition of consultancy services for similar work.
- Consultancy related to review of BOQs, which is not considered admissible.
- Costs attributed to Master Plan and Design updates.
- Consultancy for Terminal and Landside Commercial Programme, categorized as non-aeronautical services.

Based on above Rs.600 Crores (Rs. 671 Crores – Rs. 37.17 Crores – Rs. 33.9 Crores) is recommended under Technical Services by EPIL.

(B) Other Technical Services (Unawarded / Expected Costs)

NMIAL has provisioned a total of Rs. 625 Crores towards Other Technical Services for unawarded/ anticipated consultancy requirements.

This component for Rs.625 Crores has been disallowed**,** as the expenditure is yet to be incurred and no supporting details were provided by NMIAL for review. These costs may be considered at the time of actual incurrence during tariff determination. As most of the works have been completed & no consultancy work is foreseen for the works listed under unawarded / expected works.

EPIL's Recommendation: Following comprehensive review and analysis:

- Technical Services (awarded): Rs.600 Crores – *Recommended*
- Other Technical Services (unawarded/anticipated): Rs. 0 Crores – *Not Recommended.*

Accordingly, Rs.600 Crores is considered the admissible and recommended soft cost under Technical & other technical services.

Table-68: EPIL's Recommendation

Description of Item	Cost by NMIAL (in Rs. Cr.)	Recommended by EPIL (in Rs. Cr.)	Variance (in Rs. Cr.)	Reference
	(A)	(B)	(A-B)	
Technical Services	671	600	(-) 71	
Other Technical Services	625	0	(-) 625	
Total	**1296**	**600**	**(-) 696**	

8.2.2 Pre-operative Expenses

NMIAL has included an amount of Rs.1,020 Crores as *Pre-Operative Expenses* for the combined Phase I and Phase II development. These pre-operative expenses comprise a wide range of establishment and administrative costs necessary for project initiation and early-stage development activities. The key cost components include:

- Salaries, wages, and bonuses of NMIAL staff
- Professional charges, including fees paid to external consultants
- Travel and conveyance expenses
- Manpower service charges

- Depreciation and amortization of IT assets
- Legal and statutory expenses
- Fees, subscriptions, and membership charges
- Rent and infrastructure usage charges
- Miscellaneous administrative and operational costs

As per the certification provided by the Chartered Accountant (CA), the actual expenditure incurred towards pre-operative activities up to September 2025 amounts to Rs. 933.93 Crores (say Rs.933 Crs.).

Based on above, Rs. 933 Crores is considered admissible and recommended in soft cost under Pre-Operative Cost. For all relevant documents pertaining to pre-operative expenses, refer enclosed **Annexure-XIV.**

Table-69: Pre-Operative Cost

Description of Item	Cost by NMIAL (in Rs. Cr.)	Recommended by EPIL (in Rs. Cr.)	Variance (in Rs. Cr.)	Reference
	(A)	(B)	(A-B)	
Pre-Operative Cost	1020	933	(-) 87	

8.2.3 Preliminaries & Insurance/Permits

NMIAL has proposed a total provision of Rs.172 Crores towards Preliminaries**,** Rs.68 Crores towards Insurance and Statutory Permits and Rs.150 Crores towards Building Approvals (payable to CIDCO as per the Concession Agreement) for the combined Phase I and Phase II development.

1. Preliminaries

Preliminary expenses comprise a range of activities and essential preparatory works required for project mobilization and operational readiness. These include:

- Establishment of NMIAL Project Office
- Site enabling works such as site office setup, access road development, construction power substations and utilities
- Perimeter fencing
- IT infrastructure (desktops, laptops, software, licenses, etc.) for office and site usage

- Geotechnical investigations and various site surveys
- Engagement of specialized consultancy services (e.g., ORAT)

Out of the total Rs.172 Crores reported under Preliminaries, an amount of Rs.59 Crores related to the construction of the NMIAL Project Office has not been considered under Preliminaries, as the facility constitutes a permanent structure. Accordingly, this expenditure has been reclassified and assessed under Hard Cost provisions.

After excluding Project Office costs, the revised Preliminaries amount stands at Rs.113 Crores, which has been evaluated as follows:

a) Rs.67 Crores – Recommended towards site enabling works already executed.

b) Rs.30 Crores – Recommended towards ORAT consultancy services awarded to M/s Munich Airport International GmbH.

c) Rs.16 Crores – Recommended Provision kept for balance ORAT services yet to be awarded; considered justifiable as these services are essential for operational readiness.

Accordingly, the revised and justified cost under the Preliminaries head is Rs.113 Crores, while the Rs.59 Crores pertaining to the Project Office has been shifted and considered under Hard Cost.

For all relevant documents pertaining to Preliminaries expenses, refer enclosed **Annexure-XV.**

Table-70: Preliminaries

Description of Item	Cost by NMIAL (in Rs. Cr.)	Recommended by EPIL (in Rs. Cr.)	Variance (in Rs. Cr.)	Reference
	(A)	(B)	(A-B)	
Preliminaries	172	113	(-) 59	

2. Insurance & Permits

The expenditure under *Insurance & Permits* comprises costs incurred towards various statutory and regulatory requirements essential for project execution. This includes premium payments for CAR (Contractors' All Risk) insurance policies, charges for obtaining CTE (Consent to Establish) approval from MPCB, water connection fees, payments related to the 33 kV GIS feeder, stamp duty charges, and processing fees paid to multiple local authorities for securing mandatory clearances and approvals.

Based on verification of the documents submitted by NMIAL, an amount of Rs.45 Crores has been recommended. Additionally, although costs amounting to Rs.23 Crores are yet to be incurred, these pertain to statutory obligations and are therefore considered justifiable for recommendation.

Based on above, Rs. 68 Crores is considered admissible and recommended soft cost under Insurance & Permits. For Insurance & Permits related relevant documents, refer enclosed **Annexure-XVI.**

Table-71: Insurance & Permits

Description of Item	Cost by NMIAL (in Rs. Cr.)	Recommended by EPIL (in Rs. Cr.)	Variance (in Rs. Cr.)	Reference
	(A)	(B)	(A-B)	
Insurance & Permits	68	68	0	

8.2.4 Financing Cost (Upfront fees to Lenders):

An amount of Rs.283 Crores towards financing costs, specifically the upfront fees payable to lenders, is considered justifiable. The assessment of actual financing Cost depends on the capitalization of the project and therefore Tariff Consultant may examine the same and consider in the Tariff determination.

This recommendation is aligned with Clause 5.1.4(e) of the AERA Guidelines for Tariff Determination, 2011, which stipulates that financing costs associated with debt—when such debt is considered for determining

the weighted average cost of debt—shall form part of the project's capital expenditure rather than being treated as an adjustment to the cost of debt.

This treatment ensures compliance with regulatory guidelines and reflects the appropriate capitalization of financing-related expenditures.

Table-72: Financing Cost

Description of Item	Cost as per MYTP (in Rs. Cr.)	Recommended by EPIL (in Rs. Cr.)	Variance (in Rs. Cr.)	Reference
	(A)	(B)	(A-B)	
Financing Cost (Upfront Fee to Lenders)	*283	283	**0**	

**The provisions for Financing Cost have been considered in line with the amounts proposed in the Multi-Year Tariff Proposal (MYTP) & also in revised CAPEX proposal submitted by NMIAL. As these are financial components requiring detailed actuarial and financial modeling, the final computation and validation shall be carried out by CRISIL, in accordance with standard regulatory and financial assessment practices.*

8.2.5 Payment to CIDCO by NMIAL:

8.2.5.1 Allotment of Land

As part of the CNS-ATM infrastructure requirements, land has been allotted to AAI for the installation of ASR-1 (Airport Surveillance Radar) and DVOR (Doppler VHF Omnidirectional Range) systems.

The CAPEX claimed towards Allotment of Land not recommended at present due to reasons stated below:

1. The ASR-1 planned in Phase-3 development.
2. Payment has not been made yet.
3. The term of payment of lease premium is not defined.
4. The treatment of cost to this land parcel should also be done as per 1160 Ha, which has been provided free of cost.

Based on above ground the cost pertaining to allotment of land for Rs.60 Crore is not recommended by EPIL. For Allotment of Land related relevant documents refer enclosed **Annexure-XVII.**

Table-73: Allotment of Land

Description of Item	Cost by NMIAL (in Crs.)	Recommended by EPIL (in Crs.)	Variance (in Crs.)	Reference
	(A)	(B)	(A-B)	
Allotment of Land	60	0	(-) 60	

8.2.5.2 Payment to CIDCO as per Concession Agreement:

In accordance with the obligations stipulated under the Concession Agreement (CA), NMIAL has earmarked Rs.150 Crores in the project's capital expenditure towards the Payment to CIDCO. This provision is mandated under Clause 25.2 and Clause 26.1 of the CA, which specify the financial commitments payable by the Airport Operator to the Concessioning Authority.

Hence, Rs.150 Crores is recommended by EPIL. For relevant clauses from the Concession Agreement (CA) pertaining to payment to CIDCO, refer enclosed **Annexure-XVIII**.

Table-74: Payment to CIDCO as per Concession Agreement

Description of Item	Cost by NMIAL (in Crs.)	Recommended by EPIL (in Crs.)	Variance (in Crs.)	Reference
	(A)	(B)	(A-B)	
Payment to CIDCO as per Concession Agreement	150	150	0	

8.2.5.3 Building Approvals

The expenditure incurred against Building Approvals for Rs.150 Crs pertains to statutory charges paid for obtaining mandatory clearances required for project execution and commissioning. This includes costs associated with securing the:

(1). Provisional Fire NOC
(2). Fees for obtaining the Commencement Certificate

(3). Charges for issuance of the Occupancy Certificate
(4). Vital Urban Transportation Project (VUTP) charges

In CA, Clause-5.1.7 (a) states that "The Concessionaire shall, at its own cost & expense procure all Applicable permits in conformity with applicable laws".

In CA, Clause-6.1.2 (a) states that "The Authority shall, provide reasonable support and assistance to cause to procure all Applicable permits required from any Government Instrumentality, at the cost & expense of the Concessionaire".

Out of Rs. 150 Crores, Rs. 90 Crores has been paid by NMIAL for various building approvals. However, Rs. 60 Crores cost is yet to be paid against occupancy certificate. Being statutory and mandatory compliance, it is admitted by EPIL.

Based on the verification of documents submitted by NMIAL, an amount of Rs.150 Crores as claimed by NMIAL has been recommended, as these payments constitute statutory obligations.

Hence, Rs.150 Crores against building approvals is recommended by EPIL. For Building Approvals related relevant documents, refer enclosed **Annexure-XIX.**

Table-75: Building Approvals

Description of Item	**Cost by NMIAL (in Rs. Cr.)**	**Recommended by EPIL (in Rs. Cr.)**	**Variance (in Rs. Cr.)**	**Reference**
	(A)	**(B)**	**(A-B)**	
Building Approvals	150	150	0	Refer Annexure-I

8.3 Unawarded Works:

NMIAL has revised the unawarded work cost to Rs. 656 Crores on 16.09.2025 against Rs. 667 Crores as submitted with revised CAPEX in July-2025, resulting into reduction of Rs. 11 Crores. Out of Rs.656 Crores, Rs. 290 Crores has been awarded. The balance has been reviewed by EPIL. Based on its essentiality/need, the admitted cost is Rs.59 Crores only out of balance unawarded cost of Rs. 366 Crores. The variation in proposed

cost & admitted cost is Rs.307 Crores, which is not recommended by EPIL. The balance unawarded work cost will be trued up at the time of issuance of final Tariff order based on actual incurrence.

For list of unawarded work during MYTP & revised list dated:25.09.25 with EPIL recommendations, refer enclosed **Annexure-XX.**

8.3.1 Others:

(a). Contingency Provision under Non-EPC:

Claim of Rs. 25 Crores against Contingency Provision under Non-EPC disallowed based on following:

- Not claimed in revised MYTP submission dated:07.07.25.
- No details/break-up submitted for review & acceptance.
- This expenditure is yet to be incurred.

Hence Rs.25 Crs not admitted & may be considered based on actual incurrence basis.

(b). Claim of Rs.3 Crs against Technical Services:

Claim of Rs.3 Crores against Technical services under Non-EPC works is raised in the revised list of unawarded works submitted by NMIAL on 16.09.2025 is, disallowed based on following:

- Technical services for Rs.671 Crs already claimed in revised CAPEX proposal (Rs.600 Crs recommended) & Rs.3 Crs is an additional claim.
- No details/break-up submitted for review & acceptance.
- This expenditure is yet to be incurred.

Hence Rs.3 Crores not admitted & may be considered at the time of issuance of final Tariff order based on actual incurrence basis.

(c). Claim against Statutory Payments:

Table-76: Statutory payments & Permits

STATUTORY PAYMENT & PERMITS
Breakup of To-be-Incurred Rs 23 Cr

Sr No	Item Description	Estimated Amount in Crs
1	Security Deposit various Govt Department for various License (like for lift, VHT, DG set, etc)	2.00
2	Security Deposit Electricity	10.00
3	DGCA Aerodrome License	
4	Application Fee for Water Charges / Electricity / Gas, Factory license etc	
5	Fee for Approval/NOC from (PWD / CPWD), Lift Escalator Installation & Electric substation (RSS&DSS), Transformers, DG Set	3.00
6	Calibration of weighing scale	
7	License for operating commercial outlets under shop act	
8	MPCB Consent to Operate (CTO) for Phase I & II	4.00
9	MPCB Consent to Operate for all DG set	0.50
10	Environment Impact Assessment (EIA) related Compliance	3.00
11	Miscellaneous	0.50
	Total	**23.00**

Claim of Rs.23 Crs against statutory payments & permits, admitted based on scrutiny of detailed break-up submitted & being a mandatory statutory requirement.

(d). Claim against ORAT Balance:

Claim of Rs.16 Crs against ORAT Balance is yet to be incurred and therefore admitted being a mandatory requirement for commissioning of Passenger Terminal Building & to increase its overall operational efficiency.

8.4 NMIA- Phase-III (30 MPPA) Development

The capitalization of the project is indicated in FY 2030 in MYTP proposal.

The capacity assessment shall only be done after the evaluation of the traffic trend in NMIA and the utilization of the infrastructure/ Terminal Building developed during FY-2025 to FY-2030 i.e. in first Control Period to avoid any over design or redundancy of the capacity. Thus, such CAPEX may be considered on incurrence basis subject to its reasonableness and efficiency during the true up exercise.

9. TENDERING PROCESS AND TIME LINE SCHEDULE

9.1 Analysis of Tendering and Contract Award Procedures Adopted by NMIAL (as per clause-5.6 of CA) (Value ≥ Rs.25 CRS.)

The analysis of the tendering and work award procedures of various packages also approved by Govt. of Maharashtra (CIDCO) have been carried out and the summary of the analysis done by EPIL is tabulated below:

REVIEW OF CONTRACT AWARD PROCEDURE:

Table-77: Review of Contract Award Procedure

Sr. No.	Package Name/ Description of Work	Scope of work	SITC (YES/ No)	Type of Tender	Evaluation Procedure Adopted	Awarded Agency Name	Contract Agreement Date	Contract value including GST (In Crs.)	Remarks
1	EPC Contract -1 (EPC/19/01)	1. Cutting of existing hill by blasting and filling of site with available rock from +5.5 m AMSL to the required level as per grading plan on the site including murrum filling. 2. Survey works 3. Clearing and grubbing	No	1. Two Stage Open Competitive Bidding (EOI + Tender Stage) procedure adopted, 2. EOI Notice was published in Business Standard Newspaper (Indian	Against Open EOI invited: EOI Received-6 Bidder's Qualified-2 RFP issued to-Both the Qualified Bidder's 1. Larsen & Toubro 2.IC-ICTAS From the qualified bidders only 1 bid, i.e., M/s Larsen & Turbo was received even in second call.	Larsen & Toubro	31-Aug-19	Original Cost: 1503 Revised Cost : 1681 (As per Price Adjustment and change orders (Vide three Change orders (No.1 Dated	1. No restrictive clause observed. 2.Tendering Procedure followed. 3.CIDCO Vide Letter No. CIDCO/T&C/CT&CP/NMIA Dated 21.06.2019 has accorded approval (Vide Board Resolution Dated

Sr. No.	Package Name/ Description of Work	Scope of work	SITC (YES/ No)	Type of Tender	Evaluation Procedure Adopted	Awarded Agency Name	Contract Agreement Date	Contract value including GST (In Crs.)	Remarks
		4. Establishment of permanent settlement monitoring stations. 5. Establishment and maintaining temporary drains.		Express) and NMIAL website on 24.08.2018	The Final negotiated EPC bid is 3.79% lower than the Approved Budget and 4.47 % lower than internal cost Estimate.			04.07.23, No.2 Dated 18.04.24 No.3 Dated 30.06.22)	11.06.19) for selection of EPC Contractor M/s L &T. 4.Due to delay in the commissioning of the project, Scope & cost has been revised.
2	EPC Contract -2 (EPC/19/ 02)	Scope under Package-I: 1. Terminal Works including departure and arrival forecourt 2. Airfield development Works 3. Landside facilities 4. Support facilities; and 5. Temporary fence, illumination and temporary access road Works Utilities Scope under Package-II: 1. Pier (East) of	No.	Two Stage Open Competitive Bidding (EOI + Tender Stage) procedure adopted, EOI Notice was published in Business Standard Newspaper (Indian Express) and NMIAL website on 24.08.2018	Against Open EOI invited: EOI Received-6 Bidder's Qualified-2 RFP issued to-Both the Qualified Bidder's 1. Larsen & Toubro 2. IC- ICTAS From the qualified bidders only 1 bid, i.e., M/s Larsen & Turbo was received even in second call. The Final EPC bid is 3.79% lower than the Approved Budget and 4.47% lower than	Larsen & Toubro	31-Aug-19	Original Cost : Rs.4720 Revised Cost : Rs.5829 (As per Price Adjustment and change order (vide orders No.32 Dated 20.03.25)	1. No restrictive clause observed. 2.Tendering Procedure followed. 3.CIDCO Vide Letter No. CIDCO/T&C/CT&CP/NMIA Dated 21.06.2019 has accorded approval (Vide Board Resolution dated 11.06.2019) for selection of EPC Contractor M/s L

Sr. No.	Package Name/ Description of Work	Scope of work	SITC (YES/ No)	Type of Tender	Evaluation Procedure Adopted	Awarded Agency Name	Contract Agreement Date	Contract value including GST (In Crs.)	Remarks
		Terminal Building 2. Extension of Passenger Apron 3. Misc. associated works like VDGS, Blast fence, High Mast Light, OWS, Drain, AGL etc.			internal cost Estimate.				&T. 4.Due to delay in the commissioning of the project, Scope & cost has been revised.
3	NMIAL/CC /23/JULY/ 001 Construction of Miscellaneous structures	1. Fuel Farm (Fuel Storage Facility including distribution network/FHS) 2. Air Cargo Terminal 3. Police Station 4. Airport Health Organization Building 5. Fuel Stations (N/S/N-W/S-W) 6. GSE Maintenance Facility (S-W) 7. Airport Administration Building (W) 8. INTO Plane Facilities	No	Two Stage Open Competitive Bidding (EOI + Tender Stage) procedure adopted, EOI Notice was published in Business Standard Newspaper.	Against Open EOI invited: EOI Received-6 Bidder's Qualified-6 RFP issued to-All the 6 Qualified Bidder's As listed below: 1. NCC 2. Howe 3. ITD cementation 4. Tata Projects 5. SPCPL 6. L&T L-1 Bidder M/s NCC Ltd. Rs.1350Crs. L-2 Bidder Howe Rs.1418.31 Crs.	NCC Ltd.	15-Jul-23	Original Cost: 1350 Revised Cost: 1362	1. No restrictive clause observed. 2.Tendering Procedure followed.

Sr. No.	Package Name/ Description of Work	Scope of work	SITC (YES/ No)	Type of Tender	Evaluation Procedure Adopted	Awarded Agency Name	Contract Agreement Date	Contract value including GST (In Crs.)	Remarks
		9. Airport Operational Staff Facility (Canteen) 10. Reserved Housing Facility 11. Hazardous Waste Storage							
4	NMIAL/DC /24/JUN/ 001 Airport Connectivit y to Coastal Road within NMIA site	Design & Construction of NMIA Connectivity of Airport Link Road of Ulwe Coastal Road inside NMIA boundary, which includes: 1. Survey & Soil exploration 2. Approach Road-5 Lanes (265 m Long) 3. Viaduct Extension-5 Lanes	No	Nomination Basis	Awarded on Nomination basis based upon recommendations of CIDCO.	J Kumar & J.M. Mhatre (JV)	25-Jun-24	45.99	M/s CIDCO vide letter dated 27.09.23, had requested NMIAL to consider M/s J. Kumar -J. M. Mhatre (JV), for execution of the said work due to Paucity of time and in the interest of timely completion of this critical link and to ensure continuity in the design and execution.

Sr. No.	Package Name/ Description of Work	Scope of work	SITC (YES/ No)	Type of Tender	Evaluation Procedure Adopted	Awarded Agency Name	Contract Agreement Date	Contract value including GST (In Crs.)	Remarks
5	NMIAL/LOA/17-18/004 Lead consultant for Terminal 1 at NMIA	Design Responsibility and Design Management for Terminal 1 and ATC Tower. Which includes: Design services for: 1. Architectural and interior works. 2. Structural, mechanical, electrical, plumbing, life safety systems (e.g. FPS and FAS), signage and wayfinding, lighting. 3. Vertical and horizontal transportation (VHT) 4. Baggage handling system (BHS) 5. Information communication and technology (ICT) 6. Security systems, sustainability, retail strategy, and acoustics.	No	Two Stage Open Competitive Bidding (EOI + Tender Stage) procedure adopted, EOI Notice was published in Business Standard Newspaper.	Against Open EOI invited: EOI Received-4 Bidder's Qualified-4 RFP issued to-All the 4 Qualified Bidder's As listed below: 1. Skidmore, Owings & Merill 2. Zaha Hadid Architects 3.Masimiliano Fuksas 4.Rogers Stirk Harbour+ Partners QCBS Basis (80:20 Weightage) Highest Score-1 Bidder: M/s Zaha Hadid Architects Highest Score-2 Bidder: M/s Skidmore, Owings & Merill	Zaha Hadid Limited	06-Apr-18	$28396935 INR 217.80 (Dollar Price $65 mentioned in Report +GST) Revised Cost INR 172.52 Crs.	1. No restrictive clause observed. 2.Tendering Procedure followed. 3.Scope of original contract includes Concept Design, Scheme Design and Detail Design. However, Detail design was descoped from the original contract and same was later awarded to L&T (EPC contractor) at lower cost. .

Sr. No.	Package Name/ Description of Work	Scope of work	SITC (YES/ No)	Type of Tender	Evaluation Procedure Adopted	Awarded Agency Name	Contract Agreement Date	Contract value including GST (In Crs.)	Remarks
6.	Appointment of Independent Engineer (IE) for Development of Navi Mumbai International Airport (NMIA) Project as per provisions of Sch-M, Clause-23.1 of Concession Agreement	Role of IE as per TOR (Annex-I, Clause-3.1.2 of Agreement) are: 1. Review of Master Plan, design, drawing & documents 2. Review, Inspection & monitoring of construction works & O&M works 3. Reviewing & witnessing the testing on completion of work & assist Authority in issuing completion certificate 4. Determining cost of any works & services and its reasonableness & determination of extension 5. Assisting parties in resolution of disputes etc.	No	Two Stage Open Competitive Bidding (EOI + Tender Stage)	RFP on DBFOT basis published in 28th March'25 & 3 bids received: 1. AECOM 2. EIL 3. Padeco + Meinhardt (JV) Only 02 bidders qualified & evaluated on QCBS basis: 1. AECOM 2. Padeco + Meinhardt (JV) L1 Bidder- M/s AECOM	AECOM	29 -Nov-18	64.66	1. No restrictive clause observed. 2.Tendering Procedure followed. 3.The Board has extended their appointment twice and AECOM continues to be the IE for combined Phase 1&2 of NMIA. 4. (34.80+19.99) x 1.18 = 64.66 Crs.

Sr. No.	Package Name/ Description of Work	Scope of work	SITC (YES/ No)	Type of Tender	Evaluation Procedure Adopted	Awarded Agency Name	Contract Agreement Date	Contract value including GST (In Crs.)	Remarks
7.	E/NOA/NMIA/EIE/002 Dtd:10.05.23 Baggage Handling System (BHS) - EIE Package	1. Supply (including system design), installation, integrated testing, commissioning of BHS for Terminal-1 2. Layout for departure and arrival inline baggage handling system.	Yes	Two Stage Open Competitive Bidding (EOI + Tender Stage) procedure adopted, EOI Notice was published in Business Standard Newspaper with last date of submission as 07.10.2022.	Against Open EOI invited: EOI Received-4 Bidder's Qualified-4 RFP issued to-All the 4 Qualified Bidder's As listed below: 1. Siemens Logistics India Pvt. Ltd. 2.Glidepath (Alstef Group). 3. Beumer India Pvt Ltd. 4.Pteris Global Ltd. L1–Beumer India Pvt. Ltd. L2–Pteris Global Ltd The final negotiated offer of L-1 bidder is within the budget approved for the works.	Beumer India Pvt. Ltd.	19-Jun-23	248.94 (Supply)	1. No restrictive clause observed. 2.Tendering Procedure followed. 3.Installation Cost of Rs.15.73 Crs. Cover under EPC Contract-2 (i.e. L & T Scope). 3. O&M cost for 7 years (i/c 2 years warranty period i/c GST@18%) - Rs.114.46 Crores

Sr. No.	Package Name/ Description of Work	Scope of work	SITC (YES/ No)	Type of Tender	Evaluation Procedure Adopted	Awarded Agency Name	Contract Agreement Date	Contract value including GST (In Crs.)	Remarks
8.	NMIAL/EPC 2/EIE/PPA/ 23/003 Passenger Boarding Bridges (PBB)-EIE Package (29 no's)	1. Supply of PBB for Terminal 1 including complete system design, detailing. 2. Supply, installation, integration & testing of Apron drive. 3. Electromechanical works 4. Glass wall PBB 5. PBB Structure and Supports, PBB Lightings, Electrical and LLC Controls) 6. Supply of PBB IT system)Original Contract	Yes	Two Stage Open Competitive Bidding (EOI + Tender Stage) procedure adopted, EOI Notice was published in Business Standard Newspaper on 19.10.2022 with last date of submission as 25.11.2022.	Against Open EOI invited: EOI Received-5 Bidder's Qualified-5 RFP issued to-All the 5 Qualified Bidder's As listed below: 1. Adelte Airport Technologies S.L.U. 2. Bukaka Three D Pvt. Ltd. 3. Shenzen CIMC-Tianda Airport Support Ltd. 4. TK Airport Solutions S.A. 5. Shinmaywa (Asia) Pte. Ltd. L1 – Shenzen CIMC Tianda Airport Support Ltd. L2 – TK Airport Solutions S.A. The final negotiated offer of L-1 bidder is within the budget approved for the works.	Shenzen CIMC-Tianda Airport Suppo rt Ltd.	17-Oct-23	INR 76.18 (Supply) Awarded in USD 7,163,000 (Plus Custom Duties on import portion +GST) USD conversion of 1 USD = 82 INR	1. No restrictive clause observed. 2.Tendering Procedure followed. 3.Installation Cost of Rs.8.41 Crs. Covers under provisional sum order issued by NMIAL to M/s MADPL. 4. O&M cost for 7 years (i/c 2 years warranty period i/c GST@18%) - Rs.54.28 Crores

Sr. No.	Package Name/ Description of Work	Scope of work	SITC (YES/ No)	Type of Tender	Evaluation Procedure Adopted	Awarded Agency Name	Contract Agreement Date	Contract value including GST (In Crs.)	Remarks
9.	NMIAL/EPC 2/EIE/PPA/ 23/002 Vertical Horizontal Transportation (EPC Portion)-EIE Package	SITC of VHT for Terminal 1 @ NMIA Vertical & Horizontal Transportation (VHT) system (i.e. Escalators, Elevators & Travelators) including system Design, installation, integration testing, commissioning of VHT works.	Yes	Two Stage Open Competitive Bidding (EOI + Tender Stage) procedure adopted, EOI Notice was published in Business Standard Newspaper with last date of submission as 03.11.2022	Against Open EOI invited: EOI Received-6 Bidder's Qualified-5 RFP issued to-All the 5 Qualified Bidder's As listed below: 1. Otis Elevator Company (India) Ltd. 2. TKE Elevator India Pvt. Ltd. 3. Schindler India Pvt. Ltd. 4. Kone Elevator India Pvt. Ltd. 5. Mitsubishi Elevator India Pvt. Ltd. L1 – Schindler India Pvt. Ltd. L2 – TKE Elevator Pvt. Ltd. The final negotiated offer of L-1 bidder is within the budget approved for the works.	Schindler India Pvt. Ltd.	05-Sep-23	Original 59.60 (Supply) Revised Cost to Rs.64.73 Crs. (Vide Amendment No.1 Dated 04.04.2024 due to addition in scope (Elevators)	1. No restrictive clause observed. 2.Tendering Procedure followed. 3.Installation Cost of Rs.13.48 Crs. Cover under EPC Contract-2 i.e. (L & T Scope) 4. O&M cost for 7 years (i/c 2 years warranty period i/c GST@18%) - Rs.16.50 Crores

Sr. No.	Package Name/ Description of Work	Scope of work	SITC (YES/ No)	Type of Tender	Evaluation Procedure Adopted	Awarded Agency Name	Contract Agreement Date	Contract value including GST (In Crs.)	Remarks
	NMIAL/CC /23/AUG/ 001 Vertical Horizontal Transportation (Non EPC Portion)- EIE Package	SITC of VHT for ancillary Building @ NMIA Original Contract	Yes		-do-	Schindler India Pvt. Ltd.	09-Oct-23	Original- Rs.19.08 Crs. Revised Cost to Rs. 21.11 Crs. (vide Amendment No.2 Dated 16.11.2024 additional elevator in new Data Centre Building)	1. No restrictive clause observed. 2.Tendering Procedure followed. 3.Tendering Procedure followed found in order. 4.O&M cost for 7 years (i/c 2 years warranty period i/c GST@18%) - Rs.5.07 Crores
10.	NMIAL/CC /24/FEB/ 001 Hold Baggage System (HBS) & Security Screening Equipment	Supply, Installation, Testing and Commissioning of HBS & SSE - Package 1 for ancillary Building @ NMIA Fully functional Hold baggage screening and Standalone Screening Equipment at NMIAL	Yes	Two Stage Open Competitive Bidding (EOI + Tender Stage) procedure adopted, EOI Notice was published in Business	Against Open EOI invited: EOI Received-7 Bidder's Qualified-3 RFP issued to-All the 3 Qualified Bidder's As listed below: 1. Rapiscan Systems Pvt. Ltd.	Rapiscan Systems Pvt. Ltd.	27-Mar-24	126.70 (Supply + Installation) (vide Amendment No.3 Dated 27.01.2025 for 3 no's ETD machines)	1. No restrictive clause observed. 2.Tendering Procedure followed. 3. O&M cost for 5 years (i/c GST@18%) - Rs.34.69 Crores

Sr. No.	Package Name/ Description of Work	Scope of work	SITC (YES/ No)	Type of Tender	Evaluation Procedure Adopted	Awarded Agency Name	Contract Agreement Date	Contract value including GST (In Crs.)	Remarks
	(SSE) - Package 1	Terminal-1. The equipment shall be deployed for HBSS (Inline and Standalone X-Ray machines), Airport Staff, Goods, Cargo Security and also for Custom Screening Purposes. Original Contract		Standard Newspaper (Indian Express) and NMIAL website on 01.07.2023 with last date of submission as 12.07.2023	2.Smiths Detection Pvt. Ltd. 3.Vehant Technologies Pvt. Ltd. L1–Rapiscan Systems Pvt. Ltd. L2-Vehant Technologies Pvt. Ltd. The final negotiated offer of L-1 bidder is within the budget approved for the works				
11.	NMIAL/CC/ 25/MAR/01 4 SITC of Ground Power Unit (GPU) and Pre-conditioned Air (PCA) for T1 NMIA	Design & Supply (Import Portion)	Yes	Two Stage Open Competitive Bidding (EOI + Tender Stage) procedure adopted, EOI Notice was published in Business Standard	Against Open EOI invited: EOI Received-6 Bidder's Qualified-5 RFP issued to-All the 5 Qualified Bidder's As listed below: 1. Three D Integrated Solutions Ltd.(Three D) 2. Shenzhen CIMC-Tianda Airport Support LTD. (CIMC) 3. Smart Airport System (SAS) 4.ITW GSE (ITW)-	ITW GSE - Millenniu m	21-Mar-25	46.26 (1 Euro=90 INR)	1. No restrictive clause observed. 2. Tendering Procedure followed. 3. O&M cost for 5 years (i/c GST@18%) - Rs.8.86 Crores 4. GPU-36 no's (Bridge & fixed mounted)

Sr. No.	Package Name/ Description of Work	Scope of work	SITC (YES/ No)	Type of Tender	Evaluation Procedure Adopted	Awarded Agency Name	Contract Agreement Date	Contract value including GST (In Crs.)	Remarks
				Newspaper with last date of submission as 12.06.2024	Millennium Aerodynamics 5. Dabico Airport Solutions India Private Limited (Dabico) L1 – ITWGSE L2 – Dabico Commercially lowest bidder, Final Offer is within approved cost.				PCA-29 no's (Bridge mounted)
12.	NMIAL/CC /25/MAR/ 017 SITC of Ground Power Unit (GPU) and Pre-conditioned Air (PCA) for T1 NMIA	Installation, Testing & Commissioning (Local Portion)	Yes			Millennium Aero Dynamics Pvt Ltd		10.38	
13.	Crash Fire Tender (05 no's)	Supply, installation, testing, commissioning, handover & associated works.	Yes	Two Stage Open Competitive Bidding (EOI + Tender Stage) procedure adopted, EOI Notice was	Against Open EOI invited: EOI Received-4 Bidder's Qualified-4 RFP issued to-All the 4 Qualified Bidder's As listed below: 1. Oshkosh Airport Products LLC 2.National Fire Fighting	Rosenbauer International AG - Austria	24-Dec-23	56.47 (Euro 45,99,995 plus Taxes+ custom clearance etc.)	1. No restrictive clause observed. 2.Tendering Procedure followed. 3. O&M cost for 5 years i/c GST@18%)

Sr. No.	Package Name/ Description of Work	Scope of work	SITC (YES/ No)	Type of Tender	Evaluation Procedure Adopted	Awarded Agency Name	Contract Agreement Date	Contract value including GST (In Crs.)	Remarks
				published in Business Standard Newspaper with last date of submission as 25.07.2023.	Manufacturing Fzco 3.Rosenbauer International AG - Austria 4.NewAge Fire Fighting Company Limited L1 – Rosenbauer L2 – National Fire Fighting Commercially lowest bidder, Final Offer is within approved cost				- Rs.9.68 Crores
14.	Supply of Aviation Turbine Fuel	Supply of 12000 KL Aviation Turbine Fuel (JET A-1) for Fuel farm and hydrant commissioning.	Supply + Rented	Two Stage Open Competitive Bidding (EOI + Tender Stage) procedure adopted, EOI Notice was published in Business Standard Newspaper.	Since, there are limited companies who are authorized to supply and sell jet fuel in Indian Domestic market. RFP was floated to following suppliers: 1. Indian Oil Corporation Limited. (IOCL) 2. Bharat Petroleum Corporation Limited. (BPCL) 3. Hindustan Petroleum Corporation Limited (HPCL).	Bharat Petroleum Corporation Limited (BPCL)	24-Feb-25	36.56	1.No restrictive clause observed. 2. Tendering Procedure followed. 3.Reverse Auction was conducted for competitive price. Justification: (A). Outright Purchase (5700 KL): Rate per KL(Jet A-1) @ Rs.62,847 1. Tank Soaking-2400 KL. 2. FF Pieline

Sr. No.	Package Name/ Description of Work	Scope of work	SITC (YES/ No)	Type of Tender	Evaluation Procedure Adopted	Awarded Agency Name	Contract Agreement Date	Contract value including GST (In Crs.)	Remarks
					4. Reliance Industries Limited. 5. Shell MRPL 6. Nayara Energy 7. ONGC 8.NRL 9. HMEL L-1 Bidder is Bharat Petroleum Corporation Limited with Price of Rs.36.56 Crs. L-2 Bidder is HPCL with price Rs.36.64 Crs. The final negotiated offer after Reverse Auction of L-1 bidder is within Budget Cost of Rs.56 Crs.				Soaking-300 KL. 3. Hydrant Line Soaking- 3000KL. Part of which shall be part of dead stock and balance will be used for soaking and flushing the system as per regulatory guidelines. (B). Rented Fuel (6300 KL): Inventory carrying Rate per day per KL @Rs.11.02 (for 90 days) Will be returned back to Supplier or Transferred upon COD. NMIAL has claimed only rental charge on 6300 KL.
							Total	**9843**	

9.2 Summary of Review of Contract Award Procedure With EPIL Comment

Table-78: Summary of Contract Award Procedure

Sr. No.	Package Name/ Description of Work	Total Contract award value (in Crores)	EPI Comment
(A).	Pre-Development works by CIDCO	3747	The revised financial statement furnished by CIDCO for cost of completion of Pre-Development works up to October 2025.
	(A)	**3747**	
(B).	Development works by NMIAL:		
1.	Contract Award >25 Crores	9843	• Total-14 No's Contract • Two Stage Open Competitive Bidding (EOI + Tender Stage) - EPC-1 & 2 on single bid received Based on CIDCO approval-02 No's • Two Stage Open Competitive Bidding (EOI + Tender Stage)- 11 No's • On Nomination Basis-1 No-On recommendation of CIDCO • Consultancy services of GVKPIL for Rs.37 Crores shifted under technical services.
2.	Contract Award > 5 Crores but < 25 Crores	955	Total-80 no's contract All Reviewed
3	Contract Award < 5 Crores	385	Total-638 no's contract All contracts reviewed related to Consultancy services. For other works, checked on random basis.
	Total Awarded Contract Amt-(B)	**11,183**	
(C).	Unawarded Contract Amt-**(C)**	366*	* Out of total unawarded work for Rs.656 Crs as per MYTP, Rs.290 Crs. works has been awarded recently)
	Total-D= (A+B+C)	**15,296**	(CIDCO + NMIAL)
Note:- As per Concession Agreement Clause 5.6.2, procurement above Rs.25 Crores shall be by open competitive bidding. NMIAL has complied to this requirement. All procurement below Rs.25 Crores was carried out through standard procurement manual formulated by NMIAL.			

9.3 EPIL Remarks on Tendering Procedures adopted by NMIAL

Open Tendering procedure was found to be adopted for the following critical packages:

a. EPC (Phase I and Phase II) for Greenfield Airport Construction awarded to M/s Larsen & Toubro Limited for an amount of Rs. 1503 Crores (EPC-1) & Rs.4720 Crores (EPC-2). EOI notice was published in Business Standard Newspaper and NMIAL website on 24.08.2018.

CIDCO Vide Letter No. CIDCO/T&C/CT&CP/NMIA Dated 21.06.2019 has accorded approval (Vide Board Resolution Dated 11.06.2019) for selection of EPC Contractor M/s L &T. The Completion Cost of EPC-1 is Rs. 1681 Crore as per Price adjustment and change orders (Refer Table-37). The Completion Cost of EPC-2 is Rs.5829 Crores as per Price adjustment and change orders (Refer Table-38).

b. Contract for Construction of Miscellaneous structures was awarded to NCC Ltd for an amount of Rs.1350 Crores as Non-EPC contract (Revised to 1362 Crore) - EOI notice was published in Business Standard Newspaper and website on 23.12.2022 (Refer Annexure-I for detailed Break-up).

c. Contract for Airport Connectivity to Coastal Road within NMIA site was awarded to M/s J Kumar & J.M. Mhatre (JV) for an amount of Rs.46 Crores on nomination basis based upon approval from M/s CIDCO. M/s CIDCO vide letter dated 27.09.2023, had requested NMIAL to consider M/s J. Kumar -J. M. Mhatre (JV), for execution of the said work due to Paucity of time and in the interest of timely completion of this critical link to Airport and to ensure continuity in the design and execution. Refer Table-77 for detail.

d. SITC for Baggage Handling System (BHS) – Employer's Issue Equipment (EIE) Package awarded to M/s Beumer India Pvt. Ltd. For an amount of Rs.248.91 Crore. EOI notice was published in Business Standard Newspaper and website on 27.09.2022. Refer Table-77 for detail.

e. SITC for Passenger Boarding Bridges (PBB)-EIE Package awarded to M/s Shenzen CIMC-Tianda Airport Support Ltd. For an amount of Rs.75.03 Crore. EOI notice was published in Business Standard Newspaper and website on 19.10.2022. Refer Table-77 for detail.

f. SITC for Hold Baggage System (HBS) & Security Screening Equipment (SSE) - Package 1 awarded to M/s Rapiscan Systems Pvt. Ltd. For an amount of Rs.126.70 Crore. EOI notice was published in Business Standard Newspaper and website on 29.08.2023. Refer Table-77 for detail.

g. Supply of Aviation Turbine Fuel awarded to M/s Bharat Petroleum Corporation Limited (BPCL) for an amount of Rs.36.56 Crore. Since, there are limited companies who are authorized to supply and sell jet fuel in Indian Domestic Market and have required approvals for same from Govt of India and DGCA. RFP was floated for limited tenders and notice was published in Business Standard Newspaper on 13.12.2024 for participation in the RFP. Refer Table-77 for detail.

All above Tenders have been done following open competitive bidding process as per Clause 5.6.2 of Concession Agreement between NMIAL & CIDCO, which states as under:

"For procurement of goods, works or services and for award of leases, licences, sub-licenses or any other rights or privilege where the consideration exceeds Rs.25,00,00,000 (Rupees twenty-five crore) in any Accounting Year (collectively the "Contracts"), the Concessionaire shall invite offers through open competitive bidding by means of e-tendering and shall select the awardees in accordance with the policy specified under Clause 5.6.1. For the avoidance of doubt, the Parties agree that the Concessionaire may, in its discretion, pre-qualify and shortlist the applicants in a fair and transparent manner for ensuring that only experienced and qualified applicants are finally selected on arm's length in a manner that is commercially prudent and protects the interests of the Users. The Parties further agree that the Concessionaire shall not enter into any Related Party Transaction or contract with any related party except with (a) with the prior written consent of the Authority, which consent shall not be unreasonably withheld as a reserved item/affirmative action in accordance with the terms of the Shareholders' Agreement; and (b) such transaction is on

arm's length basis and is in compliance with the provisions of the Companies Act, 2013. The Parties also agree that before granting any consent hereunder, the Authority shall be entitled to seek such information as it may reasonably require in relation to the Contract and the Related Party with whom the Contract is proposed to be executed and in the event the Authority does not approve or reject the proposal within 30 (thirty) days of the date on which the required information has been provided, it shall be deemed that the Authority has no objection to such Contract."

h. RFQ for all work packages other than mentioned above were floated through M/s. NMIAL internal procurement portal and it was explained that they have adopted the procedures laid down in their Standard Procurement Manual formulated specifically for this Project.

9.4 Analysis of Timeline Schedule for Completion of Work

1. The original COD was on 3rd December 2021 (1245th day from the Appointed Date) for Phase I of NMIA.
2. EPC Contract Was awarded on 31st August 2019. As per the contract provision, notice to proceed (NTP) was supposed to be issued to the EPC Contractor to proceed with the work. However, due to Covid 19 Pre-development work by CIDCO not completed and similar other miscellaneous reasons, NTP was issued in May 2022, almost 32 Months after award of Work.
3. CIDCO vide letter No. CIDCO/JMD1/SAP-213 dated 22nd October 2021 has granted approval of revised COD to 30th December 2024.
4. CIDCO vide letter No. CIDCO/JMD-1/NMIA/E-84860 dated 24th December 2021 has revised COD to 30th December 2024 for Phase-I & II of NMIA (combined) and the phased milestones dates in accordance with the provision of CA.
5. NMIAL vide letter no. NMIAL/CIDCO/GEN/0678 dated 30th January 2023 had agreed with CIDCO that the case of extension of time in achievement of COD will be submitted after completion of excess hill cutting works, which indicates that the COD could not be achieved on

time and work got delayed due to delay caused by CIDCO in removing the hill.

6. CIDCO vide letter no. CIDCO/JMD-I/2023/E-192350 dated 10th March 2023 has conveyed that the matter regarding change in COD for Phase I & Phase II shall be mutually discussed after achievement of 4th Milestone of 40% Physical and Financial progress by NMIAL.

7. CIDCO vide letter no. CIDCO/T&C/CGM (T&A)/NMIA/685 dated 28th August 2024 & Letter No. CIDCO/JMD-II/NMIA/2024/0058 dated 2nd August 2024 has granted resetting the milestones for achievement of 30% and 40% Physical and Financial Progress.

8. Vide Letter No. CIDCO/JMD-II/NMIA/2024/064 Dated 21st August 2024 an extension of COD (Provisional Completion) for Phase I & II to 31st March 2025 and Scheduled Completion date to 30th September 2025 is granted by CIDCO.

RECOMMENDATIONS

ON

CAPEX EVALUATION

BY EPIL

10. RECOMMENDATIONS ON CAPEX EVALUATION BY EPIL:

The final recommendations of EPIL on CAPEX have been examined in detailed in the previous chapter-8. The summary of the CAPEX recommended for the first control period of NMIAL is as below:

Table-79: Recommendations on CAPEX Evaluation by EPIL

S.N.	Detail	CAPEX submitted with MYTP (in Rs Cr.)	Revised CAPEX by NMIAL (in Rs Cr.)	Unawarded Cost (in Rs Cr.)	Expected Claims (in Rs. Cr.)	Expected Total cost for completion by NMAIL (in Rs. Cr.)	Recommended by EPIL (in Rs Cr.)	Variance (in Rs Cr.)	Remarks
		A	B	C	D	E=(B+C+D)	F	G=(F-E)	
(A)	**HARD COST:**								
(1)	**Pre-Development Work by CIDCO**								
	Pre-Development Work by CIDCO	3665	3747	-	-	3747	3420	(-) 327	For details Refer **Para-8.1.1**
(2).	**DEVELOPMENT WORKS BY NMIAL**								
a.	Site Preparation & Earthworks	1919	1917	-	-	1917	1917	0	For details Refer **Para-8.1.2.1** above
b.	Airside Development Works	2030	1722	319	-	2041	2000	(-) 41	For details Refer **Para-8.1.2.2-(A)** above

S.N.	Detail	CAPEX submitted with MYTP (in Rs Cr.)	Revised CAPEX by NMIAL (in Rs Cr.)	Unawarded Cost (in Rs Cr.)	Expected Claims (in Rs. Cr.)	Expected Total cost for completion by NMAIL (in Rs. Cr.)	Recommended by EPIL (in Rs Cr.)	Variance (in Rs Cr.)	Remarks
		A	B	C	D	E=(B+C+D)	F	G=(F-E)	
c.	Passenger Terminal Building	3727	3417	167	-	3584	3417	(-) 167	For details **Refer Para-8.1.2.2 (B)** above
d.	Landside Development works	1002	846	34	-	881	859	(-) 22	For details **Refer Para-8.1.2.2 (C)** above
e.	Support Facilities 1	964	845	88	-	933	845	(-) 88	For details **Refer Para-8.1.2.2 (D1)** above
f.	Utilities & PNG	459	461	-	-	461	461	0	For details **Refer Para-8.1.2.2 (E)** above
g.	Support Facilities 2	137	101	20	-	121	121	0	For details **Refer Para-8.1.2.2 (D 2)** above

Sl. No.	Detail	CAPEX submitted with MYTP (in Rs Cr.)	Revised CAPEX by NMIAL (in Rs Cr.)	Unawarded Cost (in Rs Cr.)	Expected Claims (in Rs. Cr.)	Expected Total cost for completion by NMAIL (in Rs. Cr.)	Recommended by EPIL (in Rs Cr.)	Variance (in Rs Cr.)	Remarks
		A	B	C	D	E=(B+C+D)	F	G=(F-E)	
h.	Integrated Air Cargo Terminal (IACT)	466	409	-	-	409	409	0	For details **Refer Para-8.1.2.2 (F)** above
i.	Fuel Farm & Fuel Hydrant System	544	513	-	-	513	471	(-) 42	For details **Refer Para-8.1.2.2 (G)** above
j.	GPU & PCA	60	57	-	-	57	57	0	For details **Refer Para-8.1.2.2 (H)** above
k.	Project Office (NMIAL)		-	-	-	-	59	59	For details **Refer Para-8.1.2.2 (I)** above
l.	Expected Claim (Hard Cost)		-	-	1133	1133	0	(-) 1133	For details **Refer Para-8.1.2.2 (J)** above

Sl. No.	Detail	CAPEX submitted with MYTP (in Rs Cr.)	Revised CAPEX by NMIAL (in Rs Cr.)	Unawarded Cost (in Rs Cr.)	Expected Claims (in Rs. Cr.)	Expected Total cost for completion by NMAIL (in Rs. Cr.)	Recommended by EPIL (in Rs Cr.)	Variance (in Rs Cr.)	Remarks
		A	B	C	D	E=(B+C+D)	F	G=(F-E)	
m.	Others (hard Cost)-Claims for Idling	-	-	-	-	59	0	(-) 59	For details **Refer Para-8.1.2.2 (K)** above
Total-Hard Cost-A = (1+2)		**14,972**	**14,035**	**628**	**1,133**	**15,856**	**14,036**	**(-) 1,820**	
(B)	**Soft Cost**								
i.	Technical Services	679	671	-	-	671	600	(-) 71	For details **Refer Para-8.2.1-(A)** above
ii.	Preliminaries	201	156	16	-	172	113	(-) 59	For details **Refer Para-8.2.3-(1)** above
iii.	Insurance & Permits	68	45	23	-	68	68	0	For details **Refer Para-8.2.3-(2)** above
iv.	Pre-Operative Cost	1020	788	232	-	1020	933	(-) 87	For details **Refer Para-8.2.2** above

Sl. No.	Detail	CAPEX submitted with MYTP (in Rs Cr.)	Revised CAPEX by NMIAL (in Rs Cr.)	Unawarded Cost (in Rs Cr.)	Expected Claims (in Rs. Cr.)	Expected Total cost for completion by NMAIL (in Rs. Cr.)	Recommended by EPIL (in Rs Cr.)	Variance (in Rs Cr.)	Remarks
		A	B	C	D	E=(B+C+D)	F	G=(F-E)	
v.	Other Technical Services	625	-	625	-	625	0	(-) 625	For details **Refer Para-8.2.1-(B)** above
vi,	Financing Cost	283	283	-	-	283	283	0	For details **Refer Para-8.2.4** above
(C)	**Payment to CIDCO:**								
i.	Allotment of Land	60	60	-	-	60	0	(-) 60	For details **Refer Para-8.2.5.1** above
ii.	Payment to CIDCO as per CA	150	150	-	-	150	150	0	For details **Refer Para-8.2.5.2** above
iii.	Building Approvals	150	150	-	-	150	150	0	For details **Refer Para-8.2.5.3** above
Total -Soft Cost-(D)=(B+C)		**3236**	**2303**	**896**	**-**	**3199**	**2297**	**(-) 902**	
(E)	Sustainable / Minor CAPEX	464	-	-	-	464	182	(-) 282	For details **Refer Table-80 of Para-10.2 below**
(F).	Deduct for GST Input Credit by NMIAL	-	-	-	-	(-) 211	(-) 314	-	**Refer Annexure-XXI**
Recommended CAPEX excluding IDC & DSRA-Grand Total-(A+D+E+F)		**18,673**	**16,338**	**1,524**	**1,133**	**19,308**	**16,201**	**(-) 3,107**	

10.1 Statement Showing % of Soft Cost w.r.t. Hard Cost

Table-80: Statement Showing % of Soft Cost w.r.t Hard Cost

		Cost (in Crs.)		**Reference**
	Total Recommended CAPEX	**16201**		
	Total Recommended Hard Cost	**14036**		
	Soft Costs:		**% of Hard Cost**	
(A).	Technical Services:			
	Technical Services	600	4.27	Para 8.2.1 (A) & (B)
	Other Technical Services	0	0.00	
	Sub-Total	600	4.27	
(B).	Preliminaries	113	0.81	Para 8.2.3-(1)
(C).	Insurance & Permits	68	0.48	Para 8.2.3-(2)
(D).	Allotment of Land	0	0.00	Para 8.2.5.1
(E).	Payment to CIDCO as per CA	150	1.07	Para 8.2.5.2
(F).	Building Approvals	150	1.07	Para 8.2.5.3
(G).	Financing Cost	283	2.02	Para 8.2.4
	Grand Total-Soft Cost	**1364**	**9.72**	
(E).	Pre-Operative Cost	933	6.65	Para 8.2.2

10.2 EPI Recommendation On Sustainable / Minor CAPEX

Table-81: EPI Recommendation on Sustainable / Minor CAPEX

Department	Proposed Operational Capex (Rs. in Crs.)	Recommended by EPIL	Remarks
Security	129	95	NMIAL planned to install 27 no's CTX machine at expected cost of Rs.106 Crs. 4 no's CTX machine is already considered currently by NMIAL out of 27 nos. It is proposed to consider only 16 CTX machine against proposed 8 Full Body Scanner (@ 2.5 Crs. each) (i.e., in Ratio 1:2). Accordingly, a proportionate amount of Rs.73.43 Crs (@ Rs.4.59 Crs per CTX machine) only has been allowed. EPIL has recommended Rs.95 Crores and Balance may be allowed on actual incurrence basis.
IT	64	10	EPIL has recommended Rs. 10 Crores and Balance may be allowed on actual incurrence basis.
E & M	59	36	EPIL has recommended Rs. 36 Crores and Balance may be allowed on actual incurrence basis.
Airside Operation	55	10	May be deferred till ASMGCS level 4 is implemented by AAI at NMIA Site since implementation of FTG concept can take only when ASMGCS Level 4 is implemented by AAI, which will take at least 1-2 years of time span. Hence Rs.45 Crs shall be allowed on actual incurrence basis.
Fire	49	3	
Horticulture	8	8	
Terminal	4	4	
Fuel Farm	4	4	
Total	**371**	**169**	
Soft Cost	93	13	Considered Soft Cost @ 8% of total recommended Substantial CAPEX (i.e., 8% x 169=13)
Grand Total	**464**	**182**	Refer **Annexure-XXII** for summary & asset wise list of Sustainable / Minor CAPEX with EPIL recommendations

11. CONCLUSION

11.1 Major Findings

The major findings in the Capital Expenditure Assessment by EPIL with reference to scope of work are summarized as below:

11.1.1 On Traffic Forecast:

- The major scope is to examine the proposal of the airport and assess the need for the proposed project and its capacity/scope with reference to passenger growth/Cargo volumes/ Air Traffic Movement and also to suggest cost effective alternatives.

- The Constructed Greenfield Airport at NMIA, at Navi Mumbai, by NMIAL is justified in view of the traffic forecast and ATM projections for the design year 2025 and is detailed in Chapter 4.

- Considering the forecasted Traffic Data indicating significant increase in Passenger Traffic, Aircraft Movement and Cargo Volume in the state of Maharashtra and the saturation of operations foreseen in CSMIA, Mumbai due to land constraint the need for a New International Greenfield Airport (NMIA) at Navi Mumbai is justified.

11.1.2 On Building Standard and Design:

To examine the building standards and designs proposed by the Airport Operator is in line with IMG norms/IATA/ICAO norms are as below:

- The built-up area of 2,31,354 sq. m of Passenger Terminal building for 6745 PHP is slightly higher than the requirement of IMG norms which stipulates for 25 sq.m/PHP but closer to IATA norms which specifies 30 sq.m/PHP for Integrated Terminal Building. The unit area of the building is 34.30 sq. m is in line with CA which states "*the unit are of terminal building*

shall be of minimum 30 sq. m" (refer clause 3 of schedule-B of CA). Hence justified as detailed in Chapter 6.

- The entry lanes requirement in forecourt area (as per IATA ADRM), Contact gate demand (As per IATA) and aircraft stand requirement at PTB (as per ICAO guidelines) calculations are complying as per requirement of IATA.

- Processing facility planned at NMIA is well planned to enhance the operational efficiency of the overall Airport.

11.1.3 On Reasonableness of CAPEX:

To analyses the reasonableness of the proposed cost with reference to the tentative ceiling decided by Authority vide order No.7 dated 13.06.2016 based on the details of the rates and quantity as per Government/Industry Approved Norms and advise the Authority on the reasonableness of the costs.

- Review of the CAPEX proposal submitted by NMIAL has been done by EPIL based on the information provided by NMIAL, lump sum estimates, various Purchase Orders (POs) submitted and Government/Industry Approved Norms. Major works being EPC contract for major components, no detailed estimates or component wise BOQ are available.

- In view of this, EPIL evaluated the same in detail, on the basis of site visit, analysis of design and specifications provided by Airport Operator, CPWD PAR, MORTH, Market rates, cost allowed at other comparable Airports and arrived to the final cost as per the table below (Table 61).

- While analyzing and recommending the CAPEX the AERA order no. 7 was followed in letter and spirit. It was noted that all the works for which CAPEX considered and recommended are awarded through competitive bidding process and completed, therefore ceiling of rates prescribed in AERA order number 7 are not applicable.
- Soft costs submitted by NMIAL are reviewed as per industry practices and

as certified by Statutory Auditor. The details of above analysis briefed in Chapter 8 are summarized as below.

CAPEX for 1st CP claimed by NMIAL and recommended by EPIL

(Rs. In Cr.)

Table-82: CAPEX for 1st CP claimed by NMIAL and recommended by EPIL

Sl. No.	Description	As per Revised CAPEX submitted by NMIAL	Cost as assessed by EPIL	Variations	Reference
1	Hard Cost (A)	15,856	14,036	(-) 1,820	Para 8.1.1, 8.1.2.1 & to 8.1.2.2 (A to K)
2	Soft Cost (B)	3199	2297	(-) 902	Para 8.2.1 to 8.2.5
4	Sustainable / minor CAPEX	464	182	(-) 282	Refer Table-80 of Para 10.2
5	Deduct for GST Input Credit	(-) 211	(-) 314		**Annexure-XXI**
	Grand Total	**19,308**	**16,201**	**(-) 3,107**	

The cost is inclusive of GST.

* *The provisions for Financing Allowance, Interest During Construction (IDC), and Debt Service Reserve Account (DSRA) have been considered in line with the amounts proposed in the Multi-Year Tariff Proposal (MYTP). As these are financial components requiring detailed actuarial and financial modeling, the final computation and validation shall be carried out by CRISIL, in accordance with standard regulatory and financial assessment practices.*

11.1.4 On Cost Analysis and Tender Procedures:

To review designs and specifications proposed in case the costs are assessed to be excessive where the Projects are already in progress or the contracts are already awarded. Further to examine whether proper procedures have been followed in the award of the work.

- Design and specifications proposed for Terminal Building and other works can be considered generally in order keeping in view the best industry practices as per the analysis done by EPIL.

- Review of the Tendering process and award of work submitted by NMIAL has been done by EPIL based on the information provided by NMIAL. The details of analysis are briefed in Chapter 9.

- Two stage Open competitive bidding procedure was found to be adopted for critical packages as detailed in Chapter 9 and in accordance to provision of clause 5.6.2 of Concession Agreement

- RFQ for all work packages other than mentioned above were floated through the M/s NMIAL and it was explained that they have adopted the procedures laid out in their Standard Procurement Manual.

11.1.5 On Reasonableness of Time Schedule:

To review and justify the reasonableness of time schedule of completion of work proposed by Airport Operator.

- Review of the reasonableness of time schedule of completion of work submitted by NMIAL has been done by EPIL based on the information provided by NMIAL. The details of analysis are briefed in Chapter 9.

11.1.6 Rationalization of CAPEX for Tariff Determination

The phase wise land development area involved for the various required Airport Infrastructures necessary for the operational requirement is provided below:

Table-83: NMIA Phase wise Development Area

Phase	Approx. area (in Ha)
Total NMIA Plot Area	**1160**
Phase-I & II	560
Phase-III	460

Phase	Approx. area (in Ha)
Phase-IV	60
Phase-V	80

The Tariff consultant may examine the issues from regulatory perspectives.

Tariff consultant may apply suitable allocation ratios on the CAPEX recommended while determining the Tariff.

****