1.0 EXECUTIVE SUMMARY

The proposal is to develop Dr. Babasaheb Ambedkar International Airport, Nagpur as an International Hub Airport. Nagpur is strategically located around the geographical mid-point of India and is at the cross-roads of air routes, rail and road network of India. Many national air routes pass through Nagpur air space. The large number of international air routes passing through Nagpur airspace include air routes between Western world (Europe, Scandinavia, USA, Canada etc.) and SE Asia / Australasia / Asia and South Pacific countries; flights from African continent and MID east to Far East as well as those from CIS countries to S.E. Asia etc. Considering the above and also considering that no other international airport exists within 400- 500 Kms. around Nagpur, the proposal for a Hub airport at Nagpur gained further credence.

Dr. Babasaheb Ambedkar International Airport, Nagpur, which was earlier owned by the Airports Authority of India, was brought under a special purpose vehicle, established as a 'Joint Venture' between Maharashtra Airport Development Corporation (MADC) and the Airports Authority of India (AAI) with 51% and 49% stake holding respectively. It is proposed to develop Nagpur airport as the international hub airport under PPP mode.

With the subdued growth in aviation traffic over last two years, experienced globally and in India too, inducement to revisit the proposal and undertake the revision of the master plan also came from the fact that an agreement has been arrived at with IAF to shift the IAF operations at Nagpur to the newly allocated larger space to IAF, west of the proposed new parallel runway, thereby making available the land between the proposed new runway and the existing runway for airport infrastructure.

The traffic projections for passengers, freight and aircraft movements have been provided to the consultants by MIHAN India Ltd., for the next 30 years, based on the trends in air traffic. The incremental air-traffic potential, due to the upcoming industry in SEZ area, which have already commenced construction activity for starting operations in late 2014 or thereafter, have been computed by the consultants, in close co- ordination with MIL.

The available Nagpur airport infrastructure restricts operations of wide body aircraft with 'Code E' configuration, as the present runway only has a length of 3200 m and the existing sub base strength of the available runway and shoulders restrict regular operations by Code E type aircraft. The sub base needs to be strengthened and shoulders need to be developed with appropriate strength. A detailed scheme needs to be prepared for undertaking civil works to enable regular Code E type aircraft operations. MIL has, in the very recent past, carried out re-carpeting of the existing runway along with its shoulders. Any development work on the present runway, till an alternate runway is available, will result in closure of the airport and hence the need to develop the second runway, meeting both the requirement of continued airport operations as well as to meet the commitment made by MADC to IAF for their shifting to new area, before enabling further development of the Nagpur airport facilities. MIL will be appointing strategic partner for the said development activities.

2.0 INTRODUCTION

Dr. Babasaheb Ambedkar International Airport is an international airport serving the city of Nagpur, Maharashtra, India. The airport is located at Sonegaon, 8 km South-West of Nagpur. Geographically, airport is located at Latitude 21°05'5.08" to 21°06'35.23" N, Longitude 79°02'3.84"E to 79°03'4.43"E and altitude of 306-320 m of above MSL.

The proposed development of new parallel runway of 3200 m length, with sub base is suitable for 'Code E' type aircraft operations. In the future development activities it will be upgraded to 'Code F CAT F' type aircraft operations. The associated taxi tracks are designed for Code F type of aircraft operations but these will be developed as per Code 4E type of aircraft operations. The proposed development activities will involve, in addition to the construction of new 3200 m runway, the parallel taxi track south of the runway and the taxi lane for the movement of aircraft for push back etc. It also involves construction of the new ATC Control Tower and associated ATC Block as well as the New Main Fire station with Static tanks each of 1.5 lac litre capacity, the boundary wall to cover the additional area merging with the existing airport land, the perimeter road etc. in the first three years (0 – 3 years).

The following two years will be mandatory for the developer to invest in the development of the passenger terminal building (Area 56,250 sq m (2.5 level terminal design) for 34.75 Lacs of Dom & Int. Pax together; with design year 2029-30 – presuming starting year as 2015-16 for integrated operations of the international and domestic traffic along with associated Apron and taxiways as the present terminal building will get saturated by then and delay can cause severe inconvenience to travelling public; the cargo terminal (design year 2029-30; International – 1000 Sq m area and Domestic cargo terminal of 1600 sq m area) with associated apron for cargo aircraft and the necessary taxiways, etc. Space for the perishable cargo terminal has been provided on both the international as well as the domestic cargo terminal sides.

The Phase II of the project commences from the 16th year of the signing of the agreement viz. 2030-31 up to the 30th year (Size 2044-45). However, the investment for phase-II have to start two years earlier so that the additional passenger terminal and the additional cargo terminal etc. are ready by the design year of the Phase-I infrastructure.

The Phase-II involves increase in length of the new runway by 800 meters (to make it 4000 m long runway) catering to the 'Code 4 F Cat F' type of aircraft with the parallel taxi track on the North side. The incremental Phase-II part of the passenger terminal building -1,35,000 sqm area (2 ½ level) is to cater to the additional requirements due to growth in passenger traffic over the years. In addition the Phase-II part of the cargo terminal will include International cargo terminal of 1200 Sq m area and the Domestic cargo terminal of 1600 sq m area with associated apron area for two additional parking bays, the taxiways etc. and the Phase-II also includes the extension of the existing runway by 400 m length towards South East at the beginning of runway 32R and the associated parallel Taxi track.

2.1 Identification of project and project proponent

2.1.2 Project

- As per the revised master plan, the second runway initial length is of 3200 M suitable for Code 4E type aircraft operations. The new runway is proposed to be extended and upgraded to 4000 m with 'Code F Cat F' type of aircraft operations in future development (Phase II).
- The existing runway is proposed to be extended by 400 m in Phase II from beginning of Runway 32 in South East direction.
- The width of proposed new runway is 45m for Cat E operations (Sub-base design for "Code F Cat F" type of aircraft) and to be widened to 60 M for "Code F Cat F" operations in future development.
- The building provided with aesthetically appealing and soothing interior decoration matching the modern structure. Adoption of GRIHA measures in the design and consideration of the project to achieve the 4-star rating under GRIHA V-2015.

- Runway shoulders are planned to be 7.5 m on either side of runway during both Code E & Code F aircraft operations.
- A parallel taxiway south of the new runway is proposed. The partial portion of length 1270 m of this taxi track is already been constructed by MIL to provide connectivity to Air India MRO. The remaining portion of the length of 535 m at North West side and 1395 m at South East side to make the full parallel taxi track of 3200 m is proposed.
- This taxi track will be extended at North-West side up to 3600 m in Phase-II. Associated Rapid Exit Taxi tracks for reducing the occupancy time of runway has also been planned accordingly.
- Provision of proposed Apron of size 545 X 110 m for 12 Narrow body aircraft or 9 NBA and 2 WBA and Cargo Apron: 90 x 110 m for 2 bays for NB cargo aircraft or 1 WB Cargo Aircraft
- Provision of future development of Apron of size 180 X 110 M for 2 additional wide body aircraft or 4 narrow body aircraft Cargo Apron: 90 X 110 M for 2 narrow body or 1 wide body Cargo aircraft.
- GSE parking area is required to be designated, preferably as close as possible to the area of aircraft parking but at safe distance from Apron. GSE parking area of size 100 m X 40 m X 2 m (10% of Total Apron area) is provided for as shown on the master plan.
- Space for Isolated aircraft parking position has been provided. Size 100X 100 M for parking of aircraft believed to be the subject of unlawful interference. The location proposed is shown on the Master Plan. The isolated parking bay size provides 100 M space all around the bay.
- Other allied Works including Electrical Work, CNS Works, IT & Airports Systems Works, etc.

About 2138 acres of additional land free from all encumbrances has already been handed over by MADC for the proposed development activities. The site for the proposed development activities and allied works is free from vegetation and buildings.

2.1.2 Project proponent

The Multi Modal international Cargo Hub and Airport at Nagpur (MIHAN) is the flagship project of Maharashtra Airport Development Company Limited (MADC). MIHAN is an airport project for Dr. Babasaheb Ambedkar International Airport, Nagpur. It is the biggest economic development project currently underway in India in terms of investments. The project aims to develop the central location of Nagpur and convert the present airport into a major cargo hub with integrated road and rail connectivity.

Due to the development of MIHAN, the whole region around Nagpur is expected to witness a boost in economic activity and will also attract qualified and skilled talent form Maharashtra, rest of India as well as abroad. MIHAN is the country's first Multi-product special economic zone (SEZ) which is adjacent to existing international airport.

2.2 Brief Description of Nature of project

The proposal to develop Dr. Babasaheb Ambedkar International Airport involves extension of Phase-I development program with parallel runway construction up to 3200 m length and will further be upgraded to 'Code F Cat F' with the Extn. of 2nd Runway to 4000 m length with Taxiway, Apron, GSE Area, Isolation Bay and Terminal building & Miscellenious works. The project is an infrastructure project and earth work is the major activity to be performed as part of the project. The required earth shall be sourced from outside the project boundary and transported through trucks to the project locations. Cutting of earth shall be done from various approved quarries located outside the airport boundary at a distance of 10 -15 km radius from the airport premises.

2.3 Need for the project & its importance

Air routes are the highways of the global economy, transporting people and goods over the vast distance at great speed. Aviation as massively multiplied and facilitated business and leisure opportunities, cultural exchanges and the development of international institutional and political relationships. Airports are a major part of a country's infrastructure and foster economic activities by encouraging international commerce and tourism and generating employment.

With a growth rate of 18% per annum, a surging demand for large number of domestic and international companies are into the sector. Hence India's aviation industry ensures to witness a phenomenal growth in the near future. A large number of industries and infrastructure development in the southern region of the state will avail the facilities of Dr. Babasaheb Ambedkar International Airport. Besides, passenger traffic growth, a large mix of industries in this region offers a great potential of the enhanced cargo activities. The region offers unlimited scope for the growth of tourism, trade and commercial activities.

The passenger handling capacity of the existing terminal building at Dr. Babasaheb Ambedkar International Airport has been saturated. In view of the future traffic growth, there is an urgent requirement of extension of runway and Terminal Building with allied works at Dr. Babasaheb Ambedkar International Airport premises with additional land provided from MADC. adjacent to the existing Airport.

The direct and indirect benefits of the development activities at Dr. Babasaheb Ambedkar International Airport are as follows:

- Better infrastructure facilities for air passengers
- Promotion of tourism, trade, commerce, etc
- Increase in regional economy as it will boost tourism and commercial activities in the region.
- Generation of more revenue to the state, hence more development of the region.
- More employment opportunity to people.
- More business and industrial opportunities

2.4 Demand Supply Gap

The passenger traffic at Dr. Babasaheb Ambedkar International Airport has increased by 42.74% from 17.26 lacs No. in the year 2016-17 to 19.62 lacs No in the year 2018-19. Similarly, the Air Traffic Movements (ATM's) increased by 47.97% from 1596 Nos. in 2016-17 to 3068 No. in 2018-19. The passenger handling capacity at Dr. Babasaheb Ambedkar International Airport in future shall continue to increase. In view of rapid growth in passenger traffic & Aircraft movement, Dr. Babasaheb Ambedkar International Airport operational infrastructure needs to be upgraded to serve the

estimated demand of over 38.27 lacks Passengers Per Annum by 2031-32 to be achieved in phases. Improvements in connectivity will effectively contribute to the economic performance of the wider economy through enhancing its overall level of productivity.

2.5 Imports vs. Indigenous production

The design of the cargo terminal as proposed with 60m depth for straight in processing for cargo on for import (international) / domestic inbound cargo and Export (international) / domestic outbound cargo.

2.6 Export Possibility

The design of the cargo terminal as proposed with 60m depth for straight in processing for cargo on Export (international) / domestic outbound cargo.

2.7 Domestic / export markets

With the development of Dr. Babasaheb Ambedkar International Airport, there is a huge growth of air traffic from the Northern part of Nagpur. The passenger traffic growth, a large mix of industries in this region offers a great potential of the enhanced cargo activities. The growth of cargo traffic particularly exports out of this region is expected to increase manifold due to new manufacturing units, export of fisheries product, growth in textile and handicrafts, prevalence of large number of processing units.

Beside the high potential for export of cargo, the region offers unlimited scope of growth of tourism, trade and commercial activities due to its natural resources, skilled manpower, scenic beauty, rich heritage, special art, culture and religions. The Northern part of Nagpur have a high potential for tourism development. The proposed project will also enhance tourism potential of nearby tourism destinations located within 50 – 100 km from the airport site. From the above, it's clear that there is a high potential for traffic growth in Nagpur with the Airport.

2.8 Employment Generation (Direct and Indirect) due to the project.

The proposed project will provide direct employment during construction & operation phases. During the project operation stage for the purposes of day-to-day professional and maintenance works, additional staff will be required along with workers for commercial establishments provided in the proposed terminal building.

It is expected about 200 direct and 500 indirect employments during construction phase and 200 direct and 1000 indirect employment during operational phase of the proposed project. Local workers will be hired from the nearby areas by the contractors.

3.0 PROJECT DESCRIPTION

3.1 Type of project

Ministry of Environment, Forest and Climate Change (MoEF&CC) has made prior environmental clearance (EC) for Airport projects mandatory through EIA Notification dated 14th September, 2006 and its subsequent amendments under Category 'A', item 7(a) of the schedule. Since the project activity involves development of existing airport, it requires Environmental Clearance from Central level in MoEFCC, New Delhi.

3.2 Location Details

Dr. Babasaheb Ambedkar International Airport is located at Sonegaon. Geographically, airport is located at Latitude 21^{0}5'5.08" to 21^{0}6'35.23" N, Longitude 79°02'3.84"E to 79^{0}3'4.43"E and altitude of 306-320 m above MSL. Dr. Babasaheb Ambedkar International Airport is located about 8-km from Nagpur city in NH-44. Environmental setting of the study area of 10 km radius around the Airport is tabulated in **Table – 1**.

The index map showing the general location of the project site is presented in **Figure - 1**. The google image showing the project site is given in **Figure - 2.**

Table – 1: Environmental Setting

S. No.	Particulars	Details
1	Latitude	21°05′32″N
2	Longitude	79°02′50″E
3	Coordinates of ARP	20° 05'31''N, 79° 02'54''E
4	Elevation above MSL	306-320 m
5	Topography	Plain Terrain
6	Nearest Highway	NH-44, Sonegaon - Nagpur – 0.31 km, SE 71-67, Ring Rd, Pratap Nagar – Nagpur 1.75km, NW
7	Nearest Railway station	Ajni R.S. - 5 km, NE Khapri R.S. – 4.9 km, S
8	Nearest Air Port	Dr. Babasaheb Ambedkar International Airport – project site Gondia Airport – 137.27 km, NE
9	Nearest Habitation	Sonegaon – 0.77 km, E
10	Nearest Town	Sonegaon – 0.77 km, E
11	Reserve Forests	Nil in 10 km radius
12	Nearest Waterbody	Nag River Stream (kahan river) – adjacent to project site Ambazari Lake – 4.45 km, N Telhara tank – 4.46 km, SW
13	Ecologically sensitive sites	Nil in 10 km radius

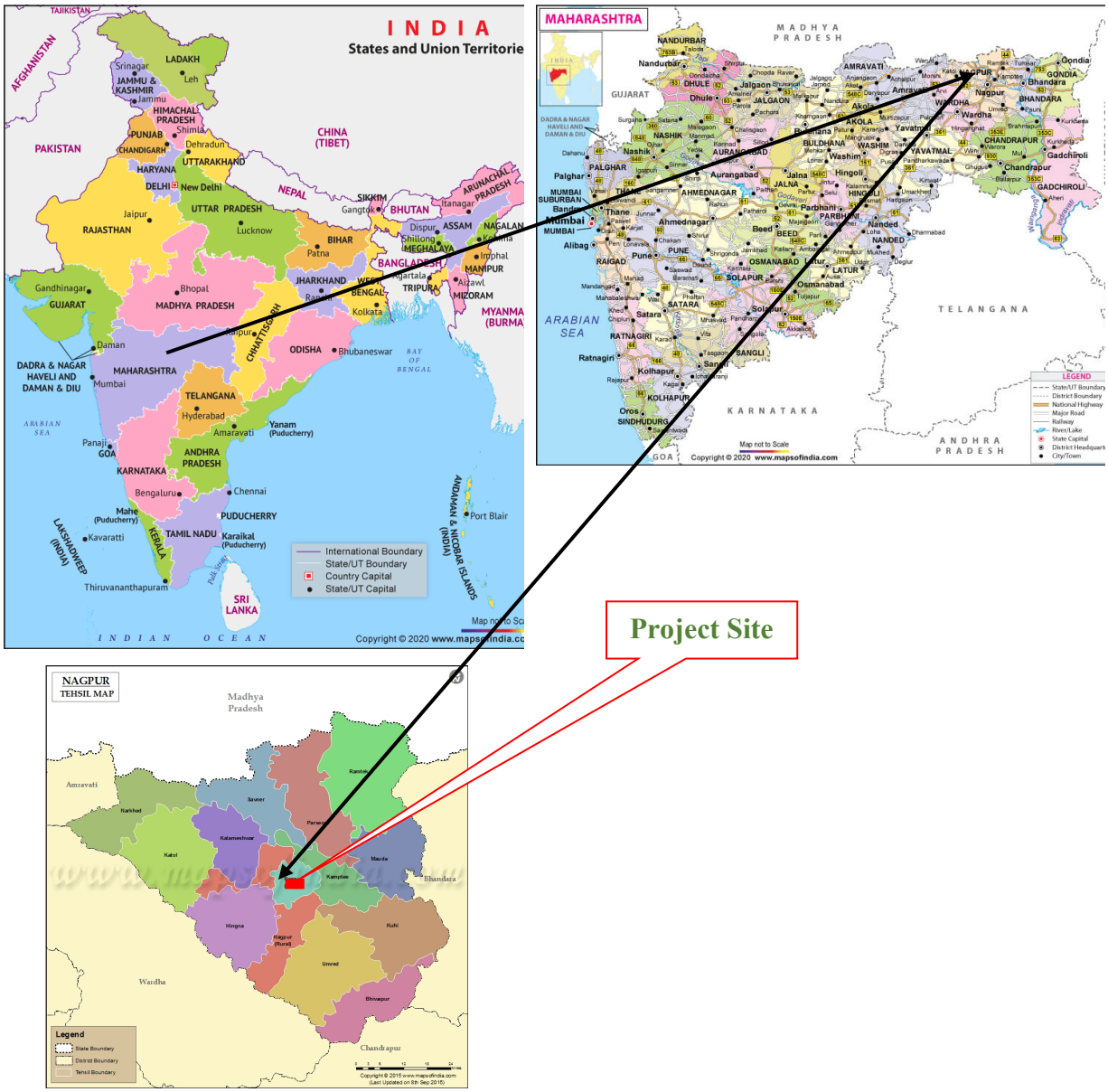


FIGURE – 1: INDEX MAP DR. BABASAHEB AMBEDKAR INTERNATIONAL AIRPORT

FIGURE - 2: GOOGLE IMAGE SHOWING DR. BABASAHEB AMBEDKAR INTERNATIONAL AIRPORT

3.3 Alternate Sites

The proposed project involved work will be done in the land abutting the existing airport. Hence, no alternative sites have been considered.

3.4 Size or Magnitude of Operation

Dr. Babasaheb Ambedkar International Airport is spread over an area of 520.83 Ha (1287 acres). It is proposed to be provided with additional land of 865.21 Ha (2138 acres), (Total Land 1287+2138=3425 acres) free from all encumbrances will be hand over by MADC for the proposed development activities. Structure of Air force station and residential houses from Shivangaon area will be demolished in this expansion and debris will be used for land leveling in our premises. [R&R cleared by MADC (Maharashtra Airport Development Company). The proposed expansion project involves Extension of Runway with RESA, Taxiway, Apron, GSE Area, Isolation Bay, Terminal Building & Miscellaneous Works as per the conceptual layout plan enclosed.

The existing runway is proposed to be extended by 400 m in Phase II from beginning of Runway 32 in South East direction. As per the proposed revised master plan, the new runway is proposed in Phase-I with an initial length of 3200 m with Code 4E type aircraft operations capability (with sub base designed for Code F operations). The new runway is proposed to be extended and upgraded to 4000 M with Code F Cat F type of aircraft operations in 2nd Phase.

The area of 140 X 40 M for HVAC plant for passenger terminal building is provided in front of the terminal building. The Cargo Terminal Building has been proposed at beginning of runway 32L. Area for Perishable cargo terminal of size 30 X 40 M has been provided for both Domestic and International perishable cargo separately. The cargo terminal design, based on peak day cargo data provides for dwell time of Int. cargo of 4 days and dwell time of Dom cargo of 2 days.

A parallel taxiway South of the new runway is proposed in Phase-I. The partial portion of length 1270 M of this taxi track is already been constructed by MIL to provide connectivity to Air India MRO. The remaining portion of the length of 535 M at North

West side and 1395 M at South East side to make the full parallel taxi track of 3200 M is proposed. A parallel taxiway of length 3600 for existing runway is proposed in phase-II (3200 M+ 400 m extension of runway) with associated Rapid Exit Taxiways. Parallel taxiways of both the runways will be connected by the taxi track which is already being constructed by MIL utilizing the disused runway.

3.5 Project Description with process details

3.5.1 Project Description

The proposed expansion project involves Extension of Phase I and Phase II Runway with RESA, Taxiway, Apron, GSE Area, Isolation Bay, Terminal Building & Miscellenious Works, as detailed below.

CIVIL WORKS

Runway Extension:

i. Existing Runway is proposed to be extended by 400 m inPhase II from beginning of Runway 32 in South East direction. As per the proposed revised master plan, the second runway is proposed in Phase-I with an initial length of 3200m with Code 4E type aircraft operations capability (with sub base designed for Code F operations). The new runway is proposed to be extended and upgraded to 4000m with Code F Cat F type of aircraft operations in 2nd Phase The width of new runway is proposed in Phase I as 45m for Cat E operations and to be widened to 60 M for Cat F operations in Phase II.
ii. Provision of 7.5 M wide Shoulder on both side Runway during both Code E & Code F aircraft operations.
iii. RESA provision shall be for 240 m X 90 m as per DGCA CAR on the subject.
iv. Length of the basic strip includes 60 m length before the threshold and beyond the end of runway, Width of strip 300 m (extend laterally 150m on either side of the center line of the runway)

v. Development of drainage network in the operational area Provision of Runway, Taxiway & Apron marking, mandatory instruction marking wherever required and Aerodrome Design Manual Part-IV (Visual Aids)/DGCA-CAR.

New Taxiway:

i. A parallel taxiway South of the new runway is proposed in Phase-I. The partial portion of length 1270 M of this taxi track is already been constructed by MIL to provide connectivity to Air India MRO. The remaining portion of the length of 535 M at North West side and 1395 M at South East side to make the full parallel taxi track of 3200 M is proposed.

ii. This taxi track will be extended at North-West side up to 4000 M in Phase-II. Associated Rapid Exit Taxi tracks for reducing the occupancy time of runway has also been planned accordingly.

iii. A push back taxi lane with a length of 1750 m for 2nd runway has also been planned in Phase-I to cater to the passenger as well as cargo aircraft.

iv. A parallel taxiway of length 3600 for existing runway is proposed in phase-II (3200 M+ 400 m extension of runway) with associated Rapid Exit Taxiways.

New Apron:

i. Provision of Apron Phase-I: Pax : 545 X 110 m for 12 Narrow body aircraft or 9 NBA and 2 WBA and Cargo Apron: 90 x 110 m for 2 bays for NB cargo aircraft or 1 WB Cargo Aircraft. And Provision of Apron Phase II Pax: 180 X 110 M for 2 additional wide body aircraft or 4 narrow body aircraft and Cargo Apron: 90 X 110 M for 2 narrow body or 1 wide body Cargo aircraft.

ii. The Slopes to be provided on Apron as specified / DGCA-CAR.

Isolation Aircraft Parking Position:

i. Space for Isolated aircraft parking position has been provided. Size 100X 100 M for parking of aircraft believed to be the subject of unlawful interference. The isolated parking bay size provides 100 M space all around the bay.

Perimeter road

ii. Provision of 6 M wide inner perimeter road all along the boundary wall is proposed, as per security requirements.

Perimeter wall (Phase II)

i. Construction of Operational Boundary wall/ Property for the newly acquired land at Dr. Babasaheb Ambedkar International Airport (Phase -II)
ii. Provision of operational wall along newly acquired land.

Construction of watch tower

i. Watch tower will be provided with tilted – anti glare glass all round with a suitable platform outside the tower for maintenance purpose and sunscreen protection file on glass to avoid UV light and glare.

Passenger Terminal Building

i. Phase-I passenger terminal building (Area 56,250 sq. m (2.5 level terminal design) for 34.75 Lacs of Dom & Int. Pax together; with design year 2029-30 – presuming starting year as 2015-16 for integrated operations of the international and domestic traffic along with associated Apron and taxiways as the present terminal building will get saturated by then and delay can cause severe inconvenience to travelling public; the Phase -I cargo terminal (design year 2029-30; International – 1000 Sq m area and Domestic cargo terminal of 1600 sq. m area) with associated apron for cargo aircraft and the necessary taxiways, etc. Space for the perishable cargo terminal has been provided on both the international as well as the domestic cargo terminal sides.
ii. The incremental Phase-II part of the passenger terminal building -13,500 sq.m area (2 ½ level) is to cater to the additional requirements due to growth in passenger traffic over the years. In addition the Phase-II part of the cargo terminal will include International cargo terminal of 1200 Sq. m area and the Domestic cargo terminal of 1600 sq. m area with associated apron area for two additional parking bays, the taxiways etc.

iii. Departure area, Arrival area, Security Hold Area and Concourse area provided with adequate nos. of toilets for gents, ladies and differently-abled persons along with drinking water facility. Suitable number of ramps provided for entry and exit of differently-abled persons in Departure and Arrival area. Additional fixtures in the toilet provided for arrival passengers arriving together at one time.

iv. The design of Terminal Building to include Media planning, F&B plan, etc. The overall planning of Terminal Building capture local architecture.

a) Departure Area

i) Check-in Area

The Terminal Building with provision for Departure concourse, check-in area and check-in counters, feeder conveyor belts, queuing space, queue managers, back-up offices for Airlines, facilitation counters, weighing machines, X-BIS for registered baggage counters etc.

ii) Security Check Area

The passenger frisking area in security check area with adequate space for locating DFMDs, X-ray machines, frisking platforms for gents and frisking cubicles for ladies, Inspection Tables for manual checking of hand baggage and adequate space / room for security staff, etc.

iii) Security Hold area

Security Hold area and bus lounge area, isolated smoking area, child care room, prayer room, Security check and holding area and associated facilities. Creation of Retail Area having Retail Islands/Shops are made.

b) Arrival Area

i. Baggage Claim area with two number of baggage Carousel of adequate size provided.

ii. Adequate space provided for required number of offices, Bank/Money Exchange Centre, concessionaires, space for storing of baggage trolleys, space for storage of

mishandled baggage for airlines, segregation railing and associated passenger amenities.

Other requirements for Terminal Building

i. Provision for Snack Bar counter, Travel Requisite, Pharmaceutical shops, Airlines offices & ticket selling counters, ATM / Bank counters etc., Meet and Greet area, First Aid room, Facilitation counters, caretaker room with store, Airport Terminal Manager office and other facilities, infrastructure for advertisements and Art work at suitable locations.
ii. Adequate space for CISF, Airlines etc. along with required staff toilet, concessionaire, backup offices for GHS etc. provided.
iii. Provision made for VIP / CIP lounges.
iv. Provision made for water supply, pumping arrangement system, Water Filtration, water cooler & R.O/U.V. Filters, sewage Treatment Plant (STP) & Effluent Treatment Plant (ETP) as per norms and as per site conditions.
v. Horticulture-landscaping in the city side of Terminal Building, drainage system, water supply, Rain Water Harvesting etc.

ELECTRICAL WORKS:

i. Provision / Relocation for Runway edge lights, Threshold / End Lights, Turn Pad lights and illuminated Runway Marking /Marker.
ii. Installation of the CAT I Approach Lighting System for ILS Runway on runway 32R & Simple Approach Lighting System on runway 14L and Runway 14R.
iii. Trans-installation / Relocation of PAPI at RWY32R and RWY 14R ends.
iv. Provision of obstruction lights on the identified hills and other obstructions around the Airfield to cater to operation during night if necessary.
v. Provision of Apron edge lights and Taxiway edge lights, lighted mandatory information / information signs etc. including cabling works.
vi. Provision of high mast Apron and car park flood lights at appropriate locations to meet the desired illumination standards.
vii. Provision of adequate nos. of illuminated signage / pictographs, cubes etc. inside and illuminated fascia signage outside the Terminal building.

viii. Provision of Perimeter lightings within operational area.

ix. Augmentation of Power supply if any. Substation equipment's, DG sets for secondary power supply, AC Plant equipment, Internal and external electrification of Terminal building, Car park, approach roads and other ancillary buildings, provisions of CCR equipment if any.

x. Central Air-conditioning of Terminal building.

xi. Provision for 2 nos. of PBB

xii. Fire detection, Alarm and protection system with fire control room.

xiii. Provision of Check-in conveyor belts without in-line X-ray inspection system.

xiv. Building Management system.

xv. Passenger elevators.

xvi. Rerouting of existing cables and necessary items for relocation of services as per requirement during work progress.

CNS WORKS

i. installation building and Airport Hangar are classified under Business-cum-Assembly and storage & hazardous based on the classification of building and hence are required to comply with proper fire prevention and fire protection, confirming to high hazard occupancy as per National Building Code (NBC). It requires highest fire safety protection measures..

ii. Installation of DVOR in the approach of runway 14L and Runway 14R for 11m high clearance for antenna as per master plan.

IT & AIRPORTS SYSTEMS

i. Public address system and car calling systems

ii. Surveillance close circuits TV system (SCCTV) and provision of adequate numbers of close circuits TV monitors.

iii. Provision of flight information display system (FIDS) with adequate numbers of plasma TVs in departure, arrival and security hold area for passenger facilitation / entertainment.

iv. Provision / Relocation of adequate no. of X-ray machines for scanning hand / checked in baggage including provision of required numbers of ETDs, DFMDs & HHMDs as per BCAS norms.
v. Computer cable data networking.
vi. Provision of adequate no. of VHF FM sets (Walkie Talkis, Base Stations & Mobile Stations).
vii. Provision/ relocation of digital EPABX system including telephone/intercom instruments, wiring etc.

MISCELLANEOUS WORKS

i. Development of site.
ii. Provision of gates to segregates air side and city side area with security guard posts at the entry gate.
iii. Construction of STP, Storm water drains and water treatment's plant.
iv. Augmentation of water supply i/c provision of dedicated feeder.
v. Provision of water storage and water supply scheme and rain water harvesting systems.
vi. Car park to accommodate 50 cars to be provided.
vii. All works necessary to achieve 4 star GRIHA rating.
viii. Removal and relocation of existing structures from the proposed site.

3.6 Raw Material requirement

Airport being a service industry doesn't process any raw material or deal in production of products. The proposed project is development of Dr. Babasaheb Ambedkar International Airport which requires general construction materials viz. steel, cement, RMC, sand, aggregates, bricks, etc. will be used for infrastructure development like building construction, road lying, service area development, etc. These materials will be procured from nearby markets as per requirements and transportation facilities will be provided by construction contractor.

3.7 Resource optimization / recycling and reuse

The resource optimization is always pre-requisite for any development project. In quest towards resource optimization in proposed project, the tradition practices are substituted by modern practices involving water reduction, rain water harvesting, energy conservation, etc.

As per the NBC, 2016, the per capita water requirement varies with building type. Measures have been proposed to reduce the consumption of fresh water through efficient practices and devices. Some of these practices include:

- Regulating flow rate of fixtures used in toilets
- Dual plumbing system
- By installations of sensor-based urinals such as magic eye sensor, the water use is reduced to 0.4 liters per flush
- A normal tap works at a flow rate as high as 20 lpm. Use of low flow faucets along with other water saving devices such as auto control valves, pressure reducing devices, aerators and pressure inhibitors for constant flow, magic eye solenoid valve and self-operating valves can result in 25 – 50% of water savings.
- Rainwater harvesting for ground water recharge.

MIHAN is following GRIHA (Green Rating for Integrated Habitat Assessment) system for sustainable and environment friendly design. All the new buildings will be constructed as per the ECBC (Energy Conservation Building Code) norms and obtain 4 star GRIHA rating.

3.8 Availability of Water with Source, Energy / Power requirement with source

3.8.1 Water Requirement details

Water requirement of the proposed expansion airport after development will be met from MADC. Water requirement and water balance chart details of the proposed development of existing airport is tabulated in the **Table – 2 & 3.**

Table - 2: Water Balance Chart of Dr. Babasaheb Ambedkar International Airport

A	**Total Water Demand**	**Qty (m^3/day)**
1)	**DOMESTIC WATER DEMAND**	
(i)	Total Potable Water Demand	748
(ii)	Total Flushing Water Demand	559
	Total Domestic Water Demand	**1307**
2)	Total HVAC Soft Water Demand	**152**
3)	Total Horticulture Water Demand	**502**
	Grand Total of Water Demands for all Purposes	**1961**
B	**Total Available Treated Sewage for Recycling**	**Qty (m^3/day)**
1)	Total Sewerage Generated (Total Domestic Demand x 0.7)	**524**
2)	Sewage available for Recycling	**559**
3)	Treated sewage available from STP for Recycling (98%)	**1083**
	Total of Available Water for Re-use	**1061**
C	**Total Utilized Treated Effluent**	**(In m^3/Day)**
1)	Total Amount Re-used for Flushing Water Purposes	**559**
2)	Balance Amount Reused for Horticulture Purposes	**502**
D	**Balance Water Requirements**	**(In m^3/Day)**
1)	Daily Fresh Water Required per Day for Potable & HVAC purpose	**900**
	Excess treated effluent disposed outside the site in m^3/day	**0**

Table – 3: Water Requirement calculations

S. No.	Description	Total Population at Peak hour	Daily Population (Considering 6 hr Peak population per day)	LPCD for Potable water	LPCD for Flushing water	Potable Water Demand (lpd)	Flushing Water Demand (lpd)	Total Water Demand (lpd)
1	Terminal Building (Passenger Load)	2844 (1422 Arrival & 1422 Departure)	17064	40	30	682560	511920	1194480
2	Permanent Terminal Building Population (Airlines & O&M, Vendors)		2000	25	20	50000	40000	90000
3	Visitors, drivers, etc.		1500	10	5	15000	7500	22500
	TOTAL					747560	559420	1306980
	TOTAL (m^3/day)					**748**	**559**	**1307**
4	**Soft Water Demand for HVAC**							
	Soft water Make-up requirements for Cooling Towers							152000
	Say in (Cum/day)							**152**
5	**Horticultural Water Demand**							
								502000
	Say in (Cum/day)							**502**
Total Water Demand For All Purposes In m^3/day								**1961**

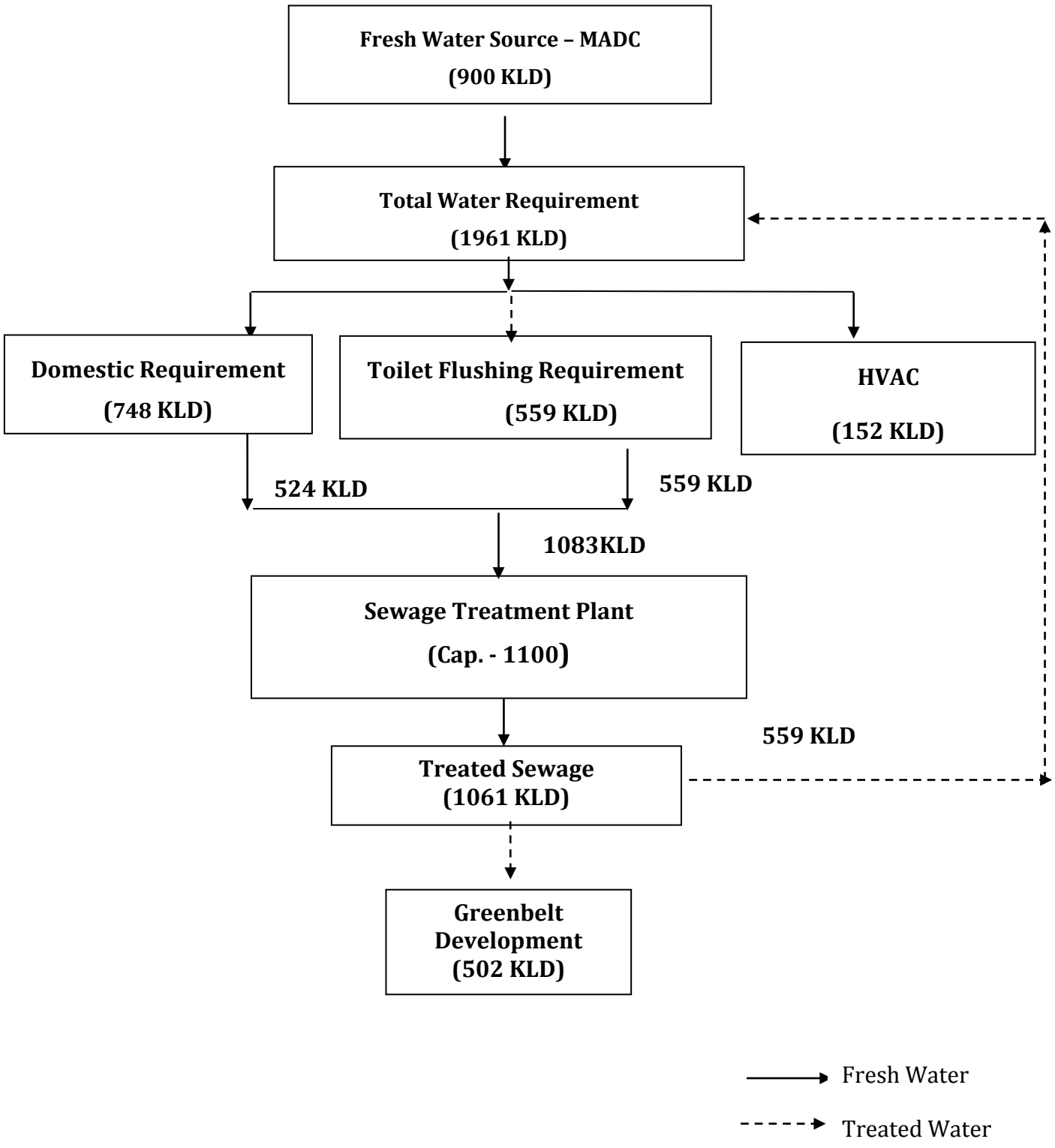


Figure – 3: Water Balance Diagram

3.8.2 Power Requirement details

Total connected load of the power for proposed expansion airport operations which will be 7000 KW after the development activities. The power supply shall be drawn from existing MADC Power supply.

There will be power backup through 3 No of DG sets of capacity of 1010 KVA & 3 No of DG sets of 320 KVA used in case of power cut or failure. DG sets will be provided with inbuilt acoustic enclosures and effective safe stack height for proper dispersion of pollutants that will keep the emissions within the permissible limit. The fuel required will be HSD and its quantity depend on as and when used.

MIL has installed 17Nos of solar operated Walkie Talkie Chargers for CISF Watch Towers in July 2017 and in operation. MIL has installed an On Grid Solar Power Plant of 3 KW capacity in 2017 and in operation. MIL has constructed the canopy of the Terminal Building and the design of the same has been made in such a way to use the natural sunlight in daytime to reduce power consumption.

3.9 Quantity of waste generation (Liquid and Solid) & its management

3.9.1 Sewage generation and Management

As per water balance diagram, 1083 KLD of sewage will be generated after the development of Dr. Babasaheb Ambedkar International Airport which will be treated in STP of capacity 1100 KLD (Existing 150KLD and proposed 950KLD).

Sewage Treatment Plant

Sewage generated from the airport will be treated in a well-designed Sewage Treatment Plant (STP). It is proposed to install CAMUS-SBT type sewage treatment plant of 950 KLD capacity. After meeting stipulated standards, treated sewage will be utilized for flushing and irrigation of greenery and landscaping.

Details of Sewage Treatment Plant

CAMUS-SBT® Technology is an advanced version of SBT® technology. It incorporates a bioconversion process where fundamental reactions of nature namely respiration, photosynthesis, mineral weathering take place in a media housing micro and macro organisms which bring about the desired purification. CAMUS Technology is an oxygen supplying high reaction rate biological engine and so the process can treat all types of water - domestic, municipal and industrial. CAMUS Technology uses the ecology of soil media and biological reactions within a constructed bioreactor to treat wastewater. This is a giant technological leap forward from current technologies which rely on aquatic ecology for treatment. This technological advance allows us to offer energy efficient treatment solutions and deliver superior water quality.

VEC's Soil Bio Technology system encompasses a host of technologies, patents, trademarks, copyrights and knowhow from many institutions some of which are mentioned below. Soil Bio Technology SBT covered by multiple Indian Trademarks assigned to VEC, two US patents (patent no 6890438 B2 dated 5 May 2005 and 7604742 B2 dated 20 October 2009) and 2 Indian patents (patent no - 203744 and 203425) all assigned to IIT Bombay and licensed to VEC which pertain to the use of geophagus earthworms in BioMounds. Knowhow designs regards other organisms in the SBT process is being copyrighted, patented or trademarked as applicable.

The Raw Sewage (Black Water) is received directly by gravity into Raw Sewage Tank where it is screened and degritted sewage is dosed with the appropriate flocculant and coagulant inside then allowed via VEC FRP settler system with appropriate baffle arrangement which allows the finer floc solids to settle. The clear water from the other side of the FRP settler is pumped to Bio Mound 1 (BM1), where the Clear Black water is treated in BM1 and collected in the Collection Tank 1. (CT1a).

The Grey water is taken to Fine screen chamber and then received in the Collection Tank 2 (CT1b). The water from CT1b is pumped to Bio Mound 2 (BM2) where the treatment takes place and then collected in the Treated Water Tank (TWT) via weep holes in the bottom in BM2. As the Waste Water percolates downward in the BioMound it came in contact with the specially selected, graded and formulated CAMUS-SBT Bio

Media (enriched with Vision Earth care's proprietary cultures and catalyst) substantial reduction of parameters is achieved in BM1 and BM2.

Special Features

CAMUS-SBT is very different from other treatment solutions. Some of these special features are listed in this section. Unlike other treatment facilities, CAMUS-SBT does not need expensive pre-treatment, equalization or the very expensive to operate Aerators or Membrane systems that other options employ often at drastic operating costs to the Client. As a result in most other technologies operation of effluent treatment facilities is limited to special occasions. Unlike conventional treatment plants which need continuous running CAMUS-SBT allows users to operate the plant in intermittent mode, batch mode and continuous mode as the situation arises. Typically CAMUS-SBT plants are easily able to handle shock load of about 50% over or under design load for a few days automatically.

Low Maintenance:

Apart from easily replaceable pumps specified there are no other moving parts in the CAMUS-SBT plant. In case of mechanical failure of pumps all the operators have to do is to replace the broken down unit with a similar unit from the market and restart the process.

High Aesthetics:

The CAMUS-SBT plant is generally adorned with specially selected plants to give it a garden like appearance. The garden is not essential but most of our clients and perhaps even you have opted for greenery. There is however a secondary function to the plants: They behave as bio-indicators to the health of the entire process. Toxic waste entering the process will have a detrimental effect to the health of the plants and corrective action can be immediately initiated.

Low Depreciation:

Since the plant contains very little mechanical equipment apart from the pumps and the civil works themselves depreciate over larger time scales (~30 years). There are considerable financial benefits to the agency.

Low Operating Cost:

As mentioned earlier since there are no special machines apart from the process pumps. Therefore the operating power requirements are very minimal and operators. themselves need minimal training to operate the plant. At its simplest the plant is operated by turning it on when there is adequate water in the influent tank and turning it off as soon as there is enough water in the final storage tank. One person to periodically maintain the top bed to prevent water logging at the top of the bed is required.

Low Sludge*:*

Most other technologies require you to ship the sludge generated to a disposal station such as a land fill at significant cost not to mention much hassle. CAMUS-SBT avoids sludge generation and treats all of it within the process itself. However a provision for a biofertilizer from the process can be arranged should the customer need such a facility for other landscaping use.

No Odor:

Conventional treatment plants create a very bad working environment with many noxious fumes. They therefore have to be sited far away from living and working spaces. CAMUS-SBT is completely odorless and the output water is not conducive to disease causing insects such as mosquitoes and flies.

Superior Water Quality:

In most CAMUS-SBT plants treating normal sewage, the output water is exceptional. With proper final polishing with chlorine for disinfection where required it is near drinking water standards. Only cultural inhibitions prohibit drinking and should the customer desire it we offer such solutions also.

The effluent of the STP using the CAMIS-SBT technology meets the standards for release in inland water bodies. The typical parameters of outlet quality of water are presented in the table given below. While the BOD is less than 10 mg/l, the COD level attained is less than 30 mg/l. All other parameters also conform to the specifications.

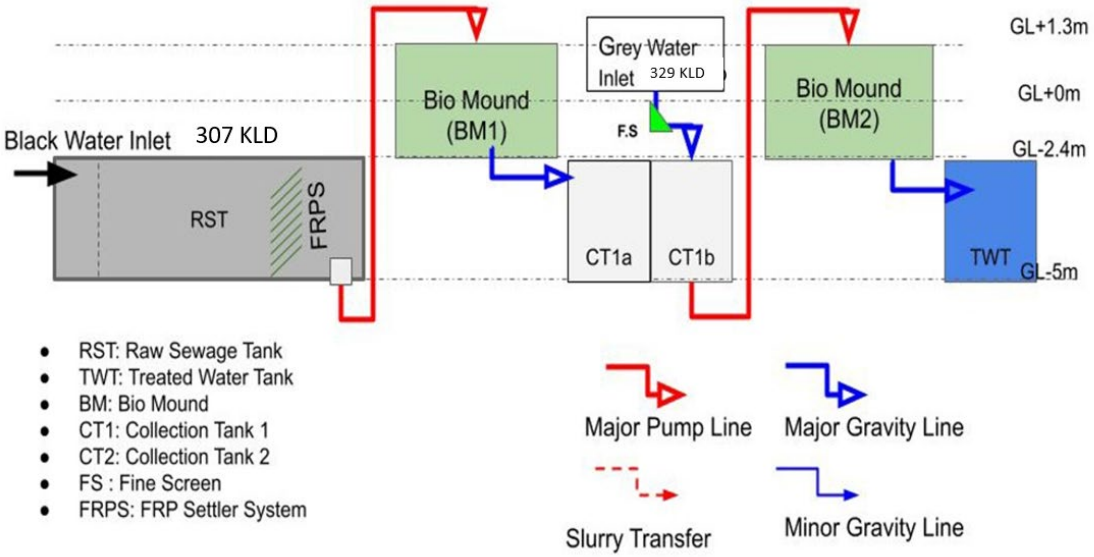


FIGURE – 4 : SCHEMATIC DIAGRAM OF STP

3.9.2 Solid Waste Generation and Disposal

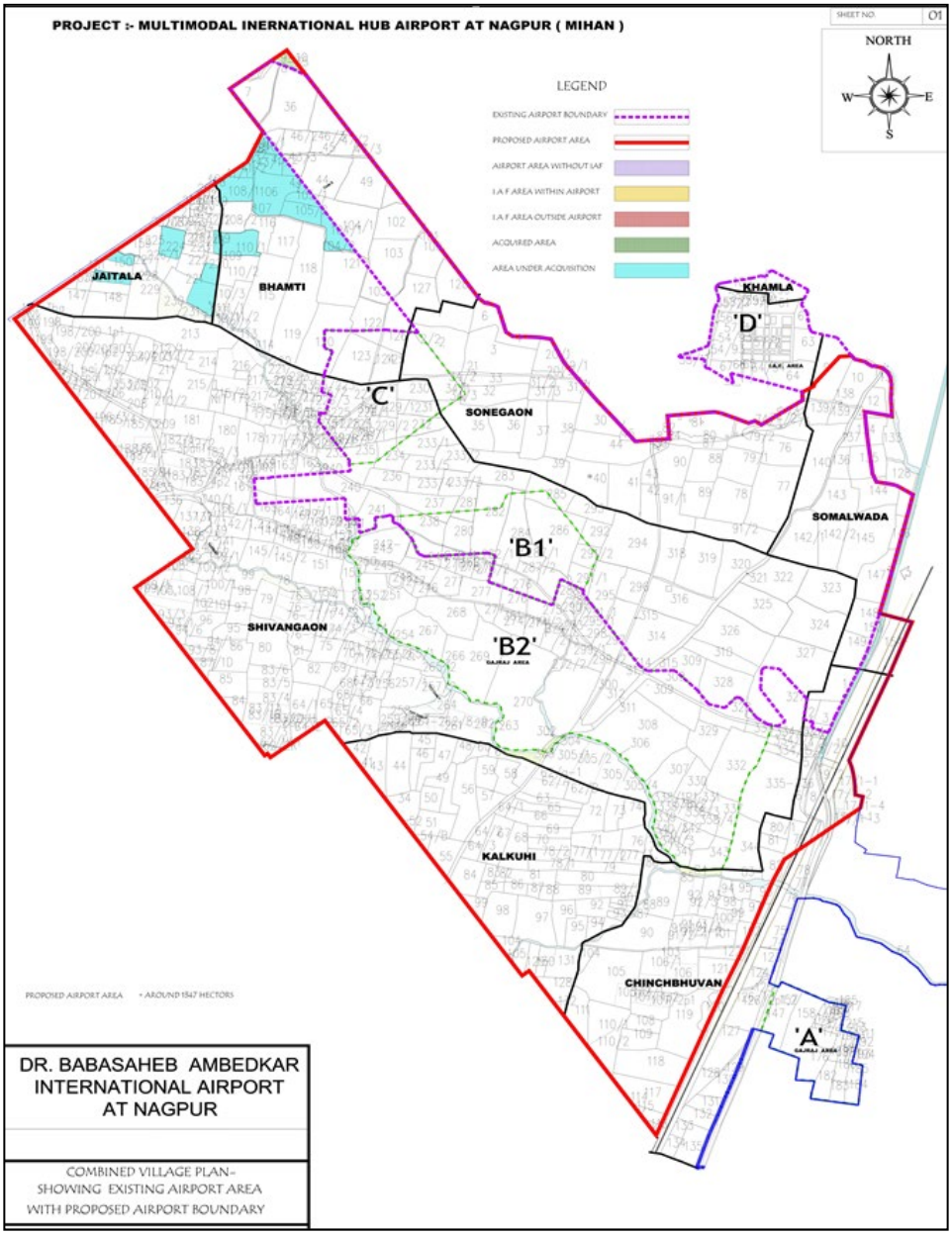
About 1050 kg per day solid waste will be generated during operation after the proposed development activities at Dr. Babasaheb Ambedkar International Airport, which will be collected, segregated and managed by external agency for disposal as per Solid Waste Management Rules, 2016. Hence, the impact on the soil will be insignificant as an organized solid waste collection and disposal practices exist at the Dr. Babasaheb Ambedkar International Airport. Some of the mitigation measures adopted are as follows.

- Municipal solid waste collection bins will be placed at strategic locations in the terminal building;
- Approx. 1000 kg per day municipal wastes, like, plastic, paper, packing waste, bottles, oil contaminated cottons and clothes, food waste from labour camp, etc will also be generated from Airport premises and Aircraft. It may contaminate soil of the site, if not disposed properly. These wastes will be segregated and disposed as per Solid Waste Management Rules, 2016.
- Agency has been hired for disposal of solid wastes as per the provisions of the Solid Waste Management Rule, 2016
- Solid waste generated from the airport is transported in close containers;

- Used lubricating waste oil and oil contaminated clothes etc is collected separately in containers and is sold to authorized recyclers as per CPCB/State Pollution Control Board guidelines.

3.10 Schematic representations of the Project Site:

Layout of the proposed development of Dr. Babasaheb Ambedkar International Airport is shown below.



4.0 SITE ANALYSIS

Site analysis is a pre-design research activity which focuses on existing and potential conditions on and around the project site. It is an inventory of the site factors and forces, and how they coexist and interact. The purpose of the analysis is to provide through information about the site assets and liabilities prior to starting the design process. The typical site analysis includes the site location and size, neighbourhood context, zoning, legal aspects, geology, physiographic (natural and man-made features), hydrology, soils, vegetation, wildlife, climate, culture, pedestrian and vehicular circulation, access, utilities, historic factors, density, sensory stimuli and any other factor deemed appropriate for the particular site.

4.1 Connectivity

Dr. Babasaheb Ambedkar International Airport is located on National Highways 44, Nagpur – Dhantoli Road and approached through the same road from Nagpur and Dhantoli. NH 44 is presently 4 lane highway. The nearest railway station of Dr. Babasaheb Ambedkar International Airport is Nagpur Railway Station which is located about 18 km in NE direction by road. It is well connected to Kalamna, Pardi, Kamptee, Pipla halt and other parts of our nation. The nearest Domestic airport is Jabalpur Airport which is located about 254 km by road and connected to national destinations like Katni, Sagar, Damoh, Rewa, Satna, Shahdol, Umaria, Anuppur.

4.2 Land Form, Land use and Land ownership

Presently, Dr. Babasaheb Ambedkar International Airport is situated in an area of 520.83 Ha (1287 Acres) of plain land. Currently, ATR type aircrafts are in operation. An additional area of about 865.21 Ha (2138 acres) of additional land free from all encumbrances will be hand over by MADC for the proposed development activities.

4.3 Topography

The topography of the most of study area is plain topography. The elevation of the site varies from 306 - 320 m above MSL. Not much hills are located in the study area. Map showing the topographical features around the project site covering 10 km radius are given in **Figure – 5.**

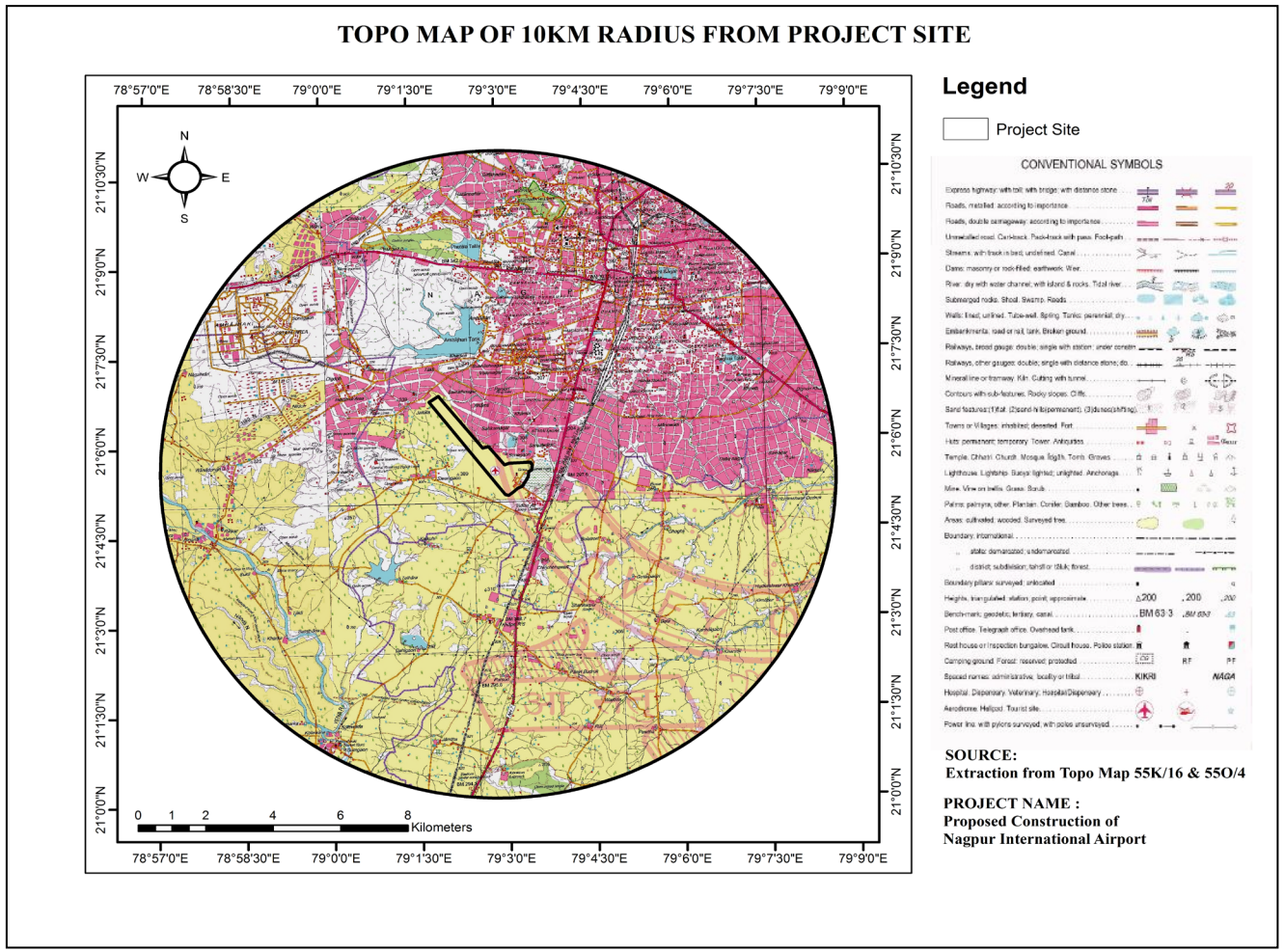


FIGURE – 5: TOPO MAP COVERING 10 KM RADIUS AROUND PROJECT SITE

4.4 Existing Land Use Pattern

The land use classification of the existing lands is categorized as Public and Semi-public use as per the records of Local Planning Authority, Nagpur. About 865.21 Ha (2138 acres) of additional land of industrial, commercial, public & semi-public, mixed residential, transportation will be handed over to MIL which will be converted to Public & semi-public use after development of the proposed project. Distance from various sensitive locations like forests, national park, wild life sanctuary, eco sensitive areas, water bodies including CRZ with its distance and direction has already been provided.

4.5 Existing infrastructure

Existing airport is located in Public & Semi-public categorized zone. The water requirement is being met through existing bore wells and MIL will obtain water from MADC. Adequate power is being sourced from by MADC and additional power is also available in the region to manage the expansion proposal. As the site is located on a Highway connecting Nagpur and Dhantoli (NH 44), all sort of constriction and other materials can be easily transported for the development works. All sort of supply as well as supporting industries are also available in the region to support the growth of this project.

Availability of amenities like education, medical, water supply, communication, road network, electricity, etc. significantly reflects the level of development of an area.

4.6 Soil Classification

Soil is usually differentiated into horizons of mineral and organic constituents of variable depth, which differ from the parent material below in morphology, physical properties and constituents, chemical properties and composition and biological characteristics. The district is covered by Black Cotton soil in the west with isolated red soil patches in high ground. Alluvial soil is restricted to river flood plain and coastal part. Alkaline and saline soils are also noticed at places.

4.7 Climate data

Nagpur lies at 316 - 320 meters above mean sea level and the climatic condition of this area is classified as tropical. The underlying rock strata are covered with alluvial deposits resulting from the flood plain of the Kanhan River. In some places, these give rise to granular sandy soil. In low-lying areas, which are poorly drained, the soil is alluvial clay with poor permeability characteristics. In the eastern part of the city, crystalline metamorphic rocks such as gneiss, schist and granites are found, while in the northern part yellowish sandstones and clays of the lower Gondwana formations are found. Nagpur registers the maximum temperature of 47.9 °C and the minimum temperature of 3.5 °C. It receives about 163 mm of rainfall in June. The amount of rainfall is increased in July to 294 mm. Gradual decrease of rainfall has been observed from July to August (278 mm) and September (160 mm). The highest recorded daily rainfall was 304 mm on 14 July 1994. Summers are extremely hot, lasting from March to June, with May being the hottest month. Winter lasts from November to February, during which temperatures drop below 10 °C.

4.8 Social Infrastructure Available

The existing social infrastructure already available in and around Dr. Babasaheb Ambedkar International Airport is located are listed below.

- Hospital with ambulance;
- Banks;
- Post office;
- Bus station;
- Railway station;
- Fire station;
- Secondary school;
- Police station;
- Shopping complex;
- Sports infrastructure (Stadium & Camps);
- Community halls;
- Cinema halls; and
- Primary health care centres

5.0 PLANNING BRIEF

5.1 Planning concept

This is a planned airport development project to cater aviation demand as per Master Plan. The development proposal of Dr. Babasaheb Ambedkar International Airport including Extension of Runway with RESA, Taxiway, Apron, GSE Area, Isolation Bay, New Domestic Terminal Building & Miscellenious Works. Other facilities such as power, transportation and communication, social infrastructure facilities are already available at project site.

5.2 Population Projection

The expected population at the Airport is given below:

Arriving and Departing Passengers (phase I and II)	- 696823
Airport staff / contract employees / commercial area staffs	- 2000
Drivers/Visitors	- 1500

As per current traffic data, the Dr. Babasaheb Ambedkar International Airport handled about 20.78 lakhs No of passengers in the year 2019-20. The airport is expected to handle 68.92 lakhs passengers by the year 2048.

5.3 Land use planning

Land use has been categorized based on the following functional groups:

Airfield Dependent: Land uses with the highest location and area priority include those that are fully within the airfield, or overlapping the airside-landside boundary.

Airport Supporting: Land uses with functional priority include those that are required for the airport to function. Their location may be on the airside or landside but preferably within the airport boundary.

Commercial: Land uses that are fully provide non-aviation revenues. These uses have flexibility of location but should not interfere with the functional operation of Airfield Dependent or Airport Supporting Land Uses.

Infrastructure & Open Space: These land use areas are determined by the needs of all the land uses above. Since supporting infrastructure must be within the development areas the first three groups determine the area required for this group. Open space includes those areas remaining which cannot be developed.

The proposed expansion proposal requires about 2138 acres of additional land which is already handed over by state Govt. For designing of the proposed development activities National Building Code and ICAO guidelines have been followed.

5.4 Assessment of Infrastructure Demand

Social Demand

The assessment will be identified in the socio economic survey, after the grant of TOR and will be submitted at the time of final presentation regarding Environmental Clearance.

Physical infrastructure

Physical infrastructure is an important aspect of the site. It determines the quality of life to a large extent. Physical infrastructure deals with:

- Water supply
- Electricity
- Waste management & treatment

Water supply

The daily consumption of water in the airport during operation phase for domestic & HVAC uses will be about 1961 KLD out of which 900 KLD will be fresh water and 1061 KLD will be recycled / treated wastewater. The water requirement for Landscaping will

be about 502 KLD (treated wastewater). The water will be met through MADC water supply.

Electricity

Total connected load of the power for proposed expansion airport operations which will be 7000 KW after the development activities. The power supply shall be drawn from existing MADC Power supply.

There will be power backup through 3 No of DG sets of capacity of 1010 KVA & 3 No of DG sets of 320 KVA used in case of power cut or failure. DG sets will be provided with inbuilt acoustic enclosures and effective safe stack height for proper dispersion of pollutants that will keep the emissions within the permissible limit. The fuel required will be HSD and its quantity depend on as and when used.

MIL has installed 17Nos of solar operated Walkie Talkie Chargers for CISF Watch Towers in July 2017 and in operation. MIL has installed an On Grid Solar Power Plant of 3 KW capacity in 2017 and in operation. MIL has constructed the canopy of the Terminal Building and the design of the same has been made in such a way to use the natural sunlight in daytime to reduce power consumption.

Solid Waste management:

MIL has engaged the solid waste management agency, whose nature of work is to collect the garbage/ solid waste from airport premises, airport residential colony and all the concessionaires' shops on daily basis and dumping the same at the dumping station established by Nagpur Municipal Corporation.

Waste water treatment & management:

During operation phase, wastewater generated from Dr. Babasaheb Ambedkar International Airport will be treated in Sewage Treatment Plant (STP).

5.5 Amenities/Facilities

The following facilities will be available in the airport premises

- Baggage handling system
- Passenger boarding bridges
- Flight information and displays
- Sewage treatment facility
- Fire-fighting system
- Security equipment
- Restaurant

All infrastructure facilities such as Educational Facilities, Post and Telegraph, Power supply, Medical Facilities, Drinking Water Facility, Well-Connected to internal roads and internal electrical lines which makes site the region adequate in amenities.

6.0 PROPOSED INFRASTRUCTURE

6.1 Industrial Area – Processing Area

During year 2017 & 2018, on the East and North-west side of the airport, about 1287 acres of land has been handed over to MIL by Maharashtra Airport Development Company for the development of Dr. Babasaheb Ambedkar International Airport including runway extension, terminal building construction and other associated services. Total additional land available for Dr. Babasaheb Ambedkar International Airport is about 2138 Acres. The proposed activities will be carried out within the above area itself which is sufficient for the planned activities.

6.2 Residential area - non processing area

Not Applicable as the project is development of Dr. Babasaheb Ambedkar International Airport including Extension of runway, apron and construction of Parallel / link Taxiway, construction of Terminal Building and associated services. No residential colony or township is planned under this project.

6.3 Green Belt

About 33% of the total project area will be under green belt and plantation. Entire landscaping is irrigated with treated wastewater having automatic water efficient water dispensing system.

6.4 Social Infrastructure

The proposed infrastructure will be identified in the socio-economic survey, after the grant of ToR and will be submitted at the time of final presentation of Environmental Clearance. Adequate capacity of social infrastructure like road, water supply, etc. is available in the region to manage the current expansion proposal.

6.5 Connectivity

Dr. Babasaheb Ambedkar International Airport is located on National Highways 44, Nagpur – Dhantoli Road and approached through the same road from Nagpur and Dhantoli. NH 44 is presently 4 lane highway. The nearest railway station of Dr. Babasaheb Ambedkar International Airport is Nagpur Railway Station which is located about 18 km in NE direction by road. It is well connected to Kalamna, Pardi, Kamptee, Pipla halt and other parts of our nation. The nearest Domestic airport is Jabalpur Airport which is located about 254 km by road and connected to national destinations like Katni, Sagar, Damoh, Rewa, Satna, Shahdol, Umaria, Anuppur.

6.6 Drinking Water Management (Source & Supply of Water)

The daily consumption of water for Dr. Babasaheb Ambedkar International Airport during operation phase for domestic use will be about 1961 KLD out of which 900 KLD will be fresh water and 1061 KLD will be recycled/treated wastewater. Fresh water of domestic requirement includes drinking water which will be met through MADC Board water supply.

6.7 Sewerage System

As per water balance diagram, 1083 KLD sewage will be generated after the proposed development at Dr. Babasaheb Ambedkar International Airport which will be treated in STP of 11500 KLD capacity.

6.8 Industrial Waste Management

No Industrial waste will be generated from the project.

6.9 Solid waste Management

Solid waste generated from the airport mainly comprises of food waste and garbage waste. Further, small quantities of sludge from STP and other waste are being generated. Collection and handling of domestic solid waste is being done in line with the provisions of the Solid Waste Management Rules 2016.

6.10 Waste water treatment & management

During operation phase, wastewater generated from Airport will be treated in Sewage Treatment Plant (STP) comprising primary, secondary and tertiary treatment facilities. The treated wastewater from the STP will be used for flushing and landscaping.

6.11 Power Requirement & Supply/ Source

Total connected load of the power for proposed expansion airport operations which will be 7000 KW after the development activities. The power supply shall be drawn from existing MADC Power supply.

There will be power backup through 3 No of DG sets of capacity of 1010 KVA & 3 No of DG sets of 320 KVA used in case of power cut or failure. DG sets will be provided with inbuilt acoustic enclosures and effective safe stack height for proper dispersion of pollutants that will keep the emissions within the permissible limit. The fuel required will be HSD and its quantity depend on as and when used.

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7.0 REHABILITATION AND RESETTLEMENT (R & R) PLAN

The entire additional land required for the proposed development activities of 2138 acres (865.21 ha) will be hand over by MADC free from all encumbrances. So, there shall be no Rehabilitation & Resettlement (R&R) in the proposed expansion project.

8.0 PROJECT SCHEDULE & COST ESTIMATES

The proposed expansion project will be implemented immediately after obtaining EC from MoEFCC and CTE from MPCB.

The implementation period of the development of Dr. Babasaheb Ambedkar International Airport is categorized into two Phases from date of implementation to complete the entire project and commission the proposed building, runway, etc.

The total cost estimate for the proposed expansion project (development of existing airport) is about 1685 Crores as detailed below.

9.0 ANALYSIS OF PROPOSAL – FINAL RECOMMENDATIONS

The present proposal of development of Dr. Babasaheb Ambedkar International Airport including Extension of Runway with RESA, Taxiway, Apron, GSE Area, Isolation Bay, Terminal Building & Miscellenious Works. Improvements in connectivity will effectively contribute to the economic performance of the wider economy through enhancing its overall level of productivity.

The project will boast economic growth benefitting the whole region through the generation of both direct and indirect economic value. Airport operations will have a considerable economic and social impact in surrounding regions. These benefits extend far beyond the direct effect of an airport's operation on its community development to the wider benefits that air service accessibility brings to business interests and to consumers. The construction and operation of airport will generate direct employment opportunity, indirectly contributed jobs through supply chain, enhance induced impact through tourism. Thus the project will prove beneficial to the area.