

Pre-feasibility Report

Extension of Runway, Construction of
Isolation Bay, Link Taxiway and Other Allied
Works at Dibrugarh Airport



Airports Authority of India
Dibrugarh Airport, Dibrugarh - 786012,
Assam State



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Chapter 1

Dibrugarh Airport at Airport

Chapter 1

Dibrugarh Airport at Dibrugarh

1.1 Present Status & Facilities at Existing Airport

Dibrugarh Airport is the operational airport in Assam State, belongings to Airports Authority of India. Presently, it has runway with orientation 05/23 of 1836 m x 60m dimension, which is suitable for A320 operation with load penalty in all weather condition.

1.2 Locational Details of Dibrugarh Airport

The total area of the existing airport is 253.959 Acres. The airport is located near Mohanbari at distance about 15 km in north-east from Dibrugarh City. The geographical coordinates of the airport are 27°28'50" North and 95 °01 '18" East. The location of existing airport on Google Map is shown in **Figures 1.1**.

1.3 Existing Terminal Building of Dibrugarh Airport

The existing terminal building covers 10536 sqm plinth area. The passenger capacity of terminal building is 500 passengers at one point of time.

1.4 Runway Details

The details of existing runway at Dibrugarh Airport are as given below:

Runway Orientation	:	05/23
Runway Dimension	:	1836 m/45 m
Runway PCN/LCN	:	57/F/C/W/U
Runway Surface	:	Bituminous

1.5 Taxiway Details

The details of taxiway at Dibrugarh Airport are as given below:

Taxiway Width	:	23 m
Taxiway PCN/LCN	:	55R/C/W/T
Shoulder	:	Available

1.6 Apron

At Dibrugarh Airport, Apron covering 47142 sqm area is available, which is suitable for 5 A 320 type aircraft. The PCN of apron is 55 R/C/W/T. The size of apron is 263 m x 110 m, which is sufficient for 7 Aircrafts (One B-737-800, four AB 321 and two AB 310 aircrafts).

1.7 Traffic Handled

In 2013-14, Dibrugarh Airport handled 2.46 Lakhs passengers and movement of Aircraft was 2328.

1.8 Navigational Aids (CNS)

At the Dibrugarh Airport, DVOR, DME, NDB, ILS, VHF are available as Navigational Aids.

1.9 Visual Aids

At the Dibrugarh Airport, PAPI and Runway lights are available as Navigational Aids.

1.10 Car Park

At the Dibrugarh Airport, parking facilities are available for 240 Cars.

1.11 Water Requirement and Its Source

Total water requirement for Dibrugarh Airport is 30 kld which is met through existing bore well at the airport.

1.12 Sewage Generation, Treatment and Disposal

From the Dibrugarh airport, 20 kld sewage is generated which is treated in 40 kld capacity sewage treatment plant.

1.13 Power Requirement for Existing Airport

Total power requirement is estimated as 1275 kW which is met through Assam State Electricity Board (CSEB) power supply. For the power back-up, 3 DG sets of 750

KVA capacity each have been installed at the airport, which are operated in the event of grid power failure.

1.14 Central Air Conditioning and MBS

At the existing airport, 3 air cooled chillers of 282 TR capacity each have been installed to meet the central air conditioning requirement. Building Management System (BMS) has been adopted at the airport.

1.15 Fire Fighting Facilities at Existing Airport

At the existing airport, the following fire fighting facilities has been provided:

- Fire Alarm and Detection System
- Fire Fighting and Sprinkler System

At the existing airport, the following fire fighting systems are available as per statutory requirements.

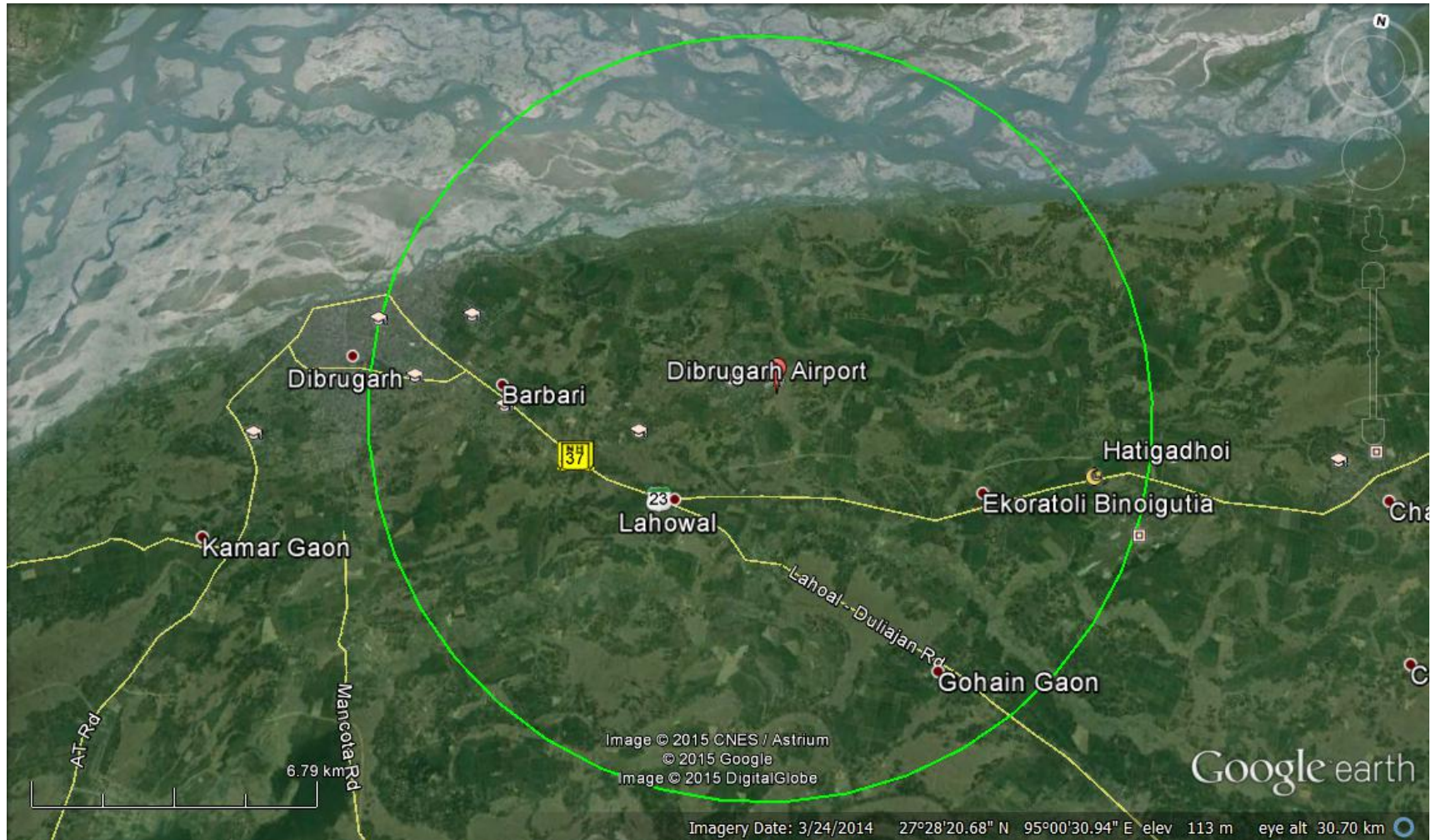


Figure 1.1 : Location of Dibrugarh Airport on Google Map

Chapter 2

Proposed Extension at Dibrugarh Airport

Chapter 2

Proposed Extension at Dibrugarh Airport

2.1 Background of Proposed Extension

Dibrugarh is one of the major airports in NER. Dibrugarh is located 439 km (273 miles) east of Guwahati. Dibrugarh is well connected to the rest of India by rail, road and air transport and thus serves as a gateway to eastern Assam and also parts of Arunachal Pradesh. The city Master Plan area of Dibrugarh is 66.14 sq. kilometers.

Presently, Dibrugarh has runway 05/23 of 1836m x 60m suitable for A320 operation with load penalty in all weather condition. AAI planned the extension of runway to 2287m in July 2000 as it was part of the MOU signed between AAI and NEC in March 2000.

AAI requested, Indian Army and IAF to transfer 5.33 Acres and 0.71 Acres of their respective land to be used for runway extension. The work could not be taken up as land issues with Army and IAF were not resolved. A SOW was also prepared in January 2008 for the same work but only strengthening of existing runway could be taken up as the land issue with Army was still unresolved.

Subsequently, after prolonged persuasion, Indian Army and IAF have recently accorded working permission to AAI for 5.33 Acres and 0.71 Acres of their respective land. As the land is available to extend the runway, the fresh SOW is being prepared.

In a recent meeting between AAI and Indian Army officers at Dibrugarh airport, the proposal of Indian Army, that they will make their own arrangements for water and electricity at the satellite portion of their establishment Nepalipatti, through new bore well and new electricity connections from ASEB, as deposit work, with the funds provided by Airports Authority of India, was agreed upon. However the road outside the perimeter wall is to be provided. The existing road, electrical and water connections, between the army units across the proposed runway extension area, can be discontinued only after the works mentioned in previous paragraph are satisfactorily completed.

In addition, 32.5 Acres land has been handed over to Airports Authority of India for proposed extension.

2.2 Proposed Extension at the Airport

Airports Authority of India has proposed for extension of runway to 2407 m x 300 m dimension, construction of Isolation Bay, Link Taxiway and Other Allied Works at Dibrugarh Airport. The details of scope of proposed extension at the Airport are given in following sections.

2.3 Scope of Work for Extension of Airport

2.3.1 Civil Works

- i) Extension of Runway 05/23 towards runway 05 beginning.
- ii) Provision of runway shoulders 7.5 m wide on either side of extended portion or runway in continuation of existing shoulders.
- iii) Provision of Turn pad.
- iv) Grading of runway strip of 2407m x 300m dimension. Additional land has been requested from the State Govt. for 300m runway strip.
- v) Demolition of boundary wall of IAF in north - west direction and to construct new frangible boundary wall at 150m from the center line of the runway.
- vi) Provision of storm water drain for extended portion of runway beyond the runway strip of 300m.
- vii) Provision of perimeter road, along with lighting and CISF watch tower inside the boundary as per the current norms.
- viii) Rerouting and construction of 5m wide link road to Nepalipatti, drainage system etc. outside boundary wall towards runway 05 beginning, with lightings.
- ix) Construction of box culverts of strength to withstand B747 - 400 type of Aircraft operations.
- x) Removal of obstructions and structures in the area of extension of Runway, basic strip and approach funnel.

2.3.2 Electrical Works

- i) Provision of CAT-I precision Approach lights of 900m length for runway 05.
- ii) Provision of simple approach lights of 420m length for runway 23.
- iii) Provision of HIRL system including the threshold lights and with standby circuit, on the extended portion of runway, integrated with existing runway lights and also integrated with remote control provided in ATC control Tower.
- iv) Installation of New PAPI on runway 05 and runway 23.
- v) Electrical works for trans-installation of glide path of runway 05.
- vi) Rerouting of electrical cables falling in area of runway extension, of any.

- vii) Provision of illuminated mandatory instruction signs and information signs at appropriate points.

2.3.3 CNS Works

- i) Trans installation of Glide Path runway 05, including frangible Glide Path hut.
- ii) Installation of frangible LLZ monitoring antenna.
- iii) Calibration of ILS system.
- iv) Rerouting of communication cables falling in the area of runway extension, if any.

2.3.4 IT & Airports Systems Works

2.4 Land Required for Proposed Extension

For extension of runway, Indian Army and IAF have recently accorded working permission to AAI for 5.33 Acres and 0.71 Acres of their respective land. In addition, 32.5 Acres land has been handed over to Airports Authority of India for proposed extension.

2.5 Justification of Proposed Extension

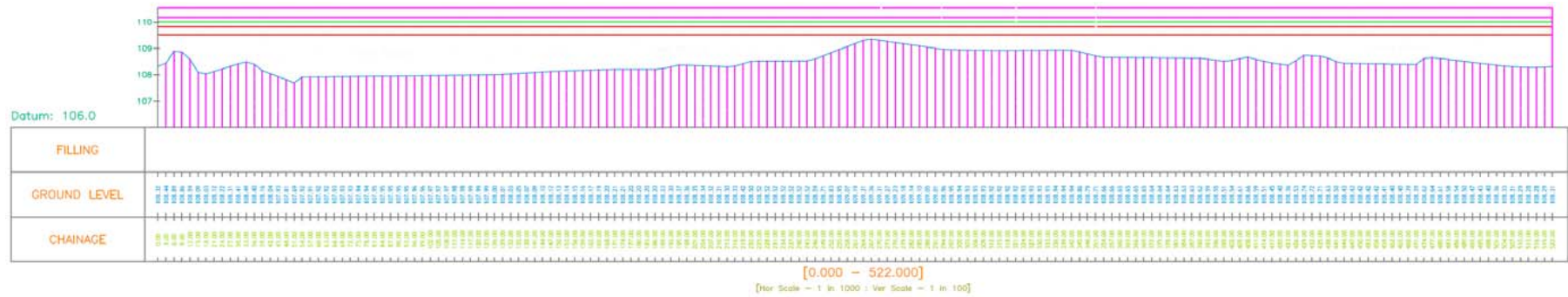
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2.6 L-Section of Proposed Runway

The ground elevation at existing and proposed extension of runway of Dibrugarh Airport varies from 107.81 m to 109.36 m above mean sea level (amsl). The L section for proposed extension of runway is shown in **Figure 2.1**.

2.7 Master Plan for Existing Airport and Proposed Extension

The master plan for existing airport and proposed extension of runway and associated services at Dibrugarh Airport is shown in **Figure 2.2**.



Extension of Runway, Construction of Isolation Bay, Link Taxiway and Other Allied Works at Dibrugarh Airport

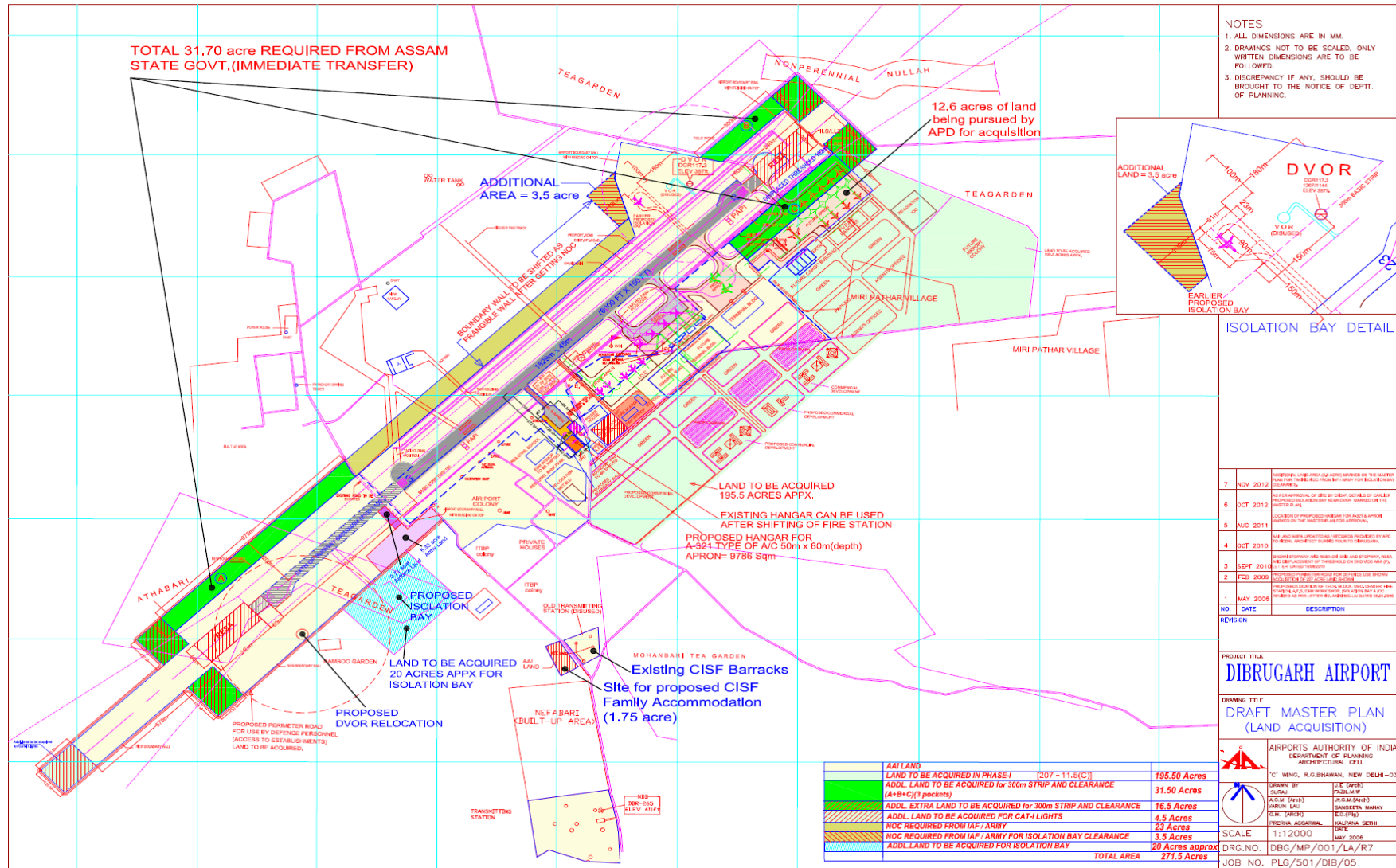


Figure 2.2 : Master Plan showing Existing facilities and Proposed Runway

2.8 Filling Required for Proposed Extension

Terrain at the site within airport and proposed extension is plain with elevation varying from 107.69 m to 110.0 m above mean sea level (amsl). For proposed extension, approx. 123200 cum earth filling will be required and same will be obtained from approved sand quarries of Brahmaputra River at distance of about 7 km from the airport.

2.9 Funnel Area for Airport

The landing and take off funnel area for Dibrugarh Airport are shown in **Figure 4.3**.

2.10 Construction Materials Requirement for Proposed Extension

The construction materials requirement for the proposed extension of runway and associated works at Dibrugarh Airport has been estimated and given in **Table 4.2**.

Table 4.2: Construction Materials Requirement for Proposed Extension

S. No.	Construction Materials	Quantity Required
1	Earth	123200 cum
2	Total aggregate	67500 cum
3	Steel	145 MT
4	Cement	9000 MT
5	Sand	19000 cum
6	Filling Sand	9000 cum

2.11 Project Cost

The estimated cost of the proposed extension of Dibrugarh Airport is Rs 59.85 Crores.