



सत्यमेव जयते

Study Report on Expansion of Chennai Airport-Impact on Passengers



CHENNAI AIRPORT

ISO 9001: 2000 CERTIFIED

WELCOME
AIRPORTS AUTHORITY OF INDIA

चेन्नई हवाई अड्डा



Comptroller and Auditor General of India

January 2011



PREFACE

Airports Authority of India (AAI) has undertaken the Phase 1 of expansion in its operating Chennai Airport for finally handling a passenger capacity of 30 million by 2015. We undertook a study on the management of the transition and the impact on passengers, to serve as an advisory to AAI.

We conducted our field work in second quarter of 2010, after an entry conference with AAI explaining the scope and objectives of our study. The report was discussed with the AAI Management to obtain their response. We discussed with all stake holders like Airlines, State Government Authorities concerned with Planning and Development, Fire services, Customs, Immigration and Security. We gratefully acknowledge their positive response.

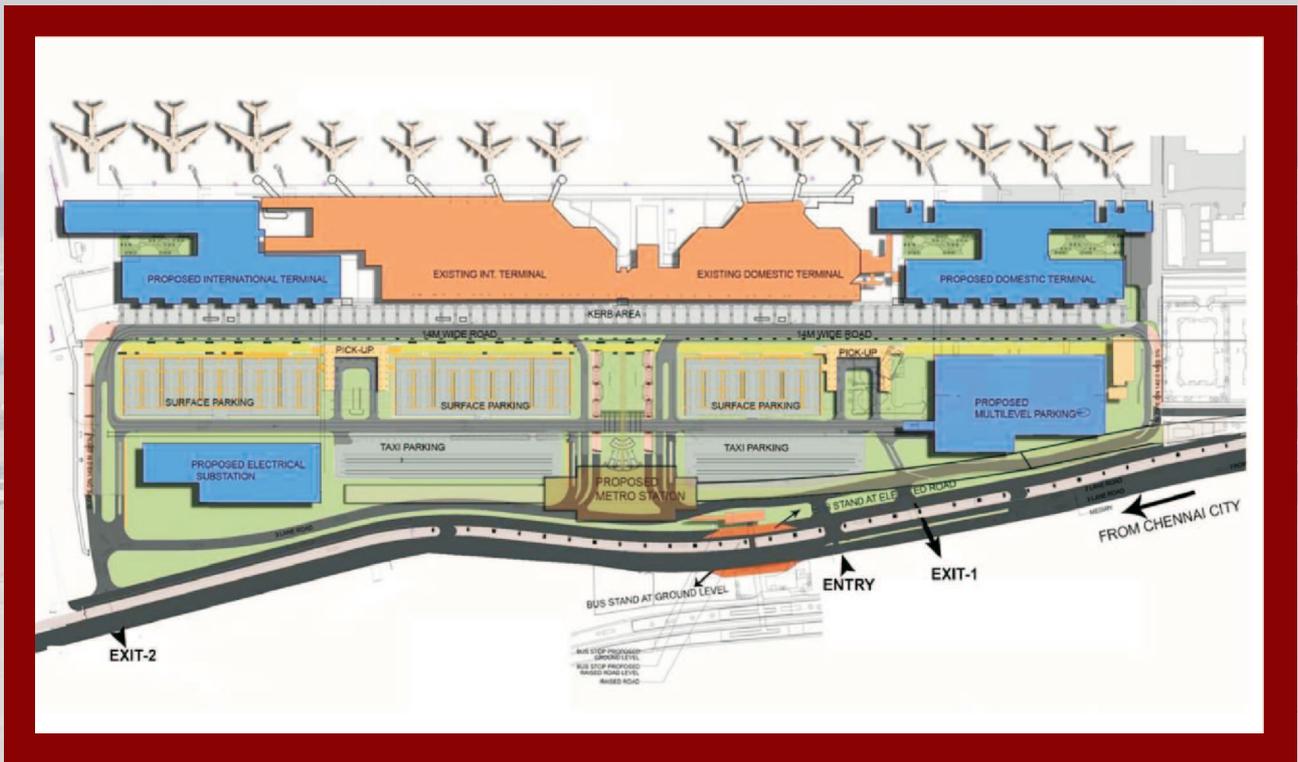
We are also happy to acknowledge the positive response of AAI management to our advisory and look forward to constructive improvements in the Airport.

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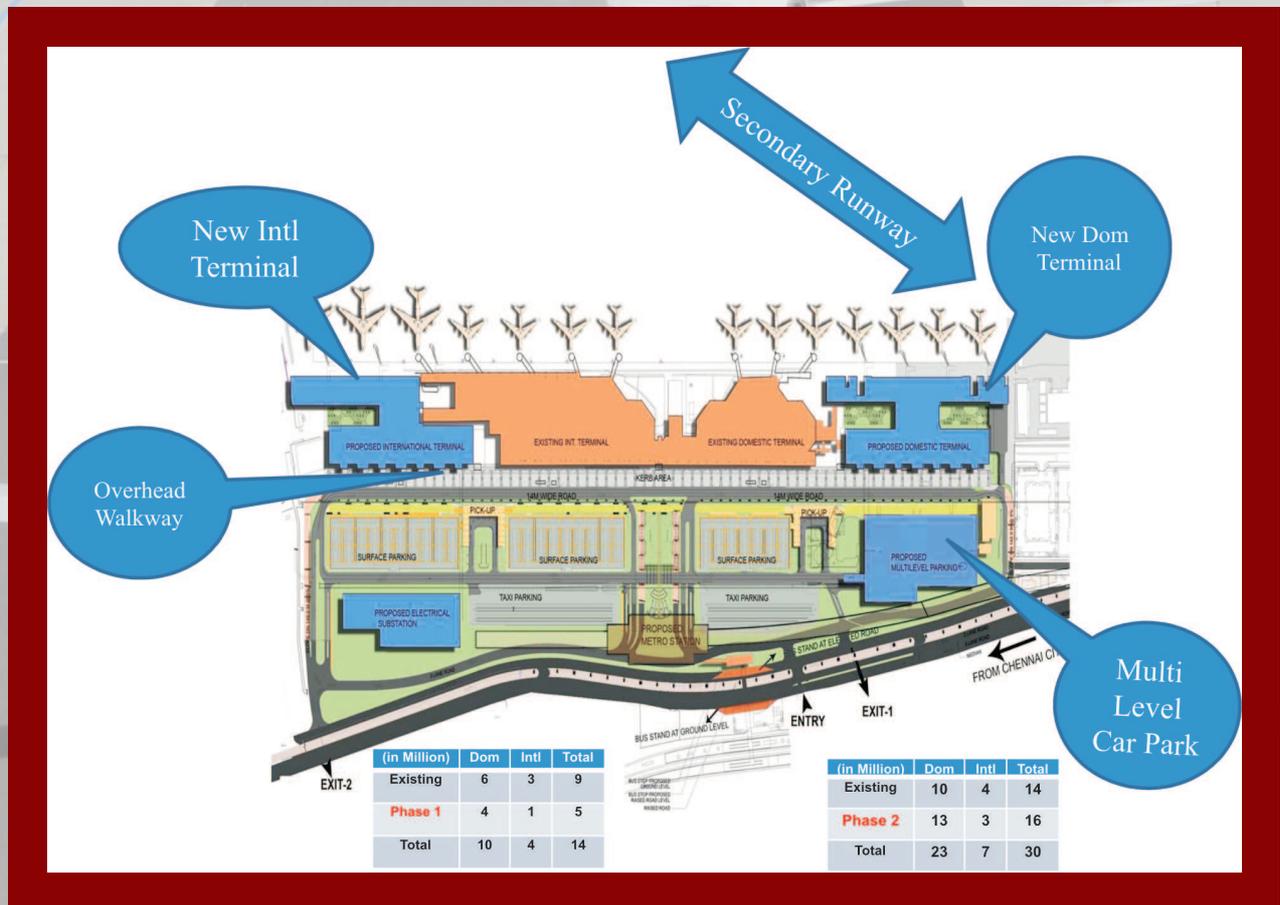
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Project Plan



Project Components





Study on “Expansion of Chennai Airport - Impact on Passengers”

1. Introduction

Airports Authority of India (AAI) took up Phase 1 of Chennai Airport Expansion Project (September 2008) at a cost of ₹1,808 crore*, to be completed by January, 2011 to expand the capacity from 6 million passengers per annum to 14.5 million passengers per annum. Major components of the modernisation and expansion of Chennai Airport approved by the Ministry (August 2008) are given below.

Details	Cost (₹in Crore)	Time (in months)	Date of start	Original Date of Completion
Development, Expansion and Face-lifting of terminals [€]	1273	26	Nov 2008	Jan 2011
Extension of Secondary Runway	535	18	Oct 2008	April 2010
Construction of Adyar bridge		15	June 2009	Sep 2010
Total	1808			

The completion has since been rescheduled for June 2011.

2. Changes

The following changes were made to the then existing facilities in the city/ airside during ongoing transition period.

City Side:

- Reduction in entry and exit points
- Shifting of bus stop
- Change in car boarding / alighting point
- Drastic reduction in parking and scattering of reduced parking slots
- Combining exit corridor for all except international Departure
- Conversion of international arrival for domestic and
- Elimination of dedicated fire service lane.

*revised ₹ 2,015 crore in February, 2010, excluding multi level car parking
 € this also included construction of a multi-level car parking which was part of the Detailed Project Report, but was deferred (February 2010), to be taken up under Public Private Partnership (PPP) on Build Operate Own and Transfer (BOOT) model.

Airside

- Closure of secondary runway and
- Non-availability of main runway due to maintenance for two and half hours duration.

3. Scope

This study examined the transition arrangements at the Chennai Airport during Phase 1 of expansion project, currently underway.

4. Objectives of Study

The main objective of the study was to review the adequacy of transition arrangements during the Phase I expansion. We conducted a limited review of the capacity estimations, internal consistency and future utilisation.

5. Acknowledgement

Audit acknowledges the cooperation extended by AAI management at various levels and other stakeholder's viz. Airline Operators, Chennai Metro Rail Limited (CMRL), Chennai Metropolitan Development Authority (CMDA), Chennai City Traffic Police, Tamil Nadu Fire and Rescue Services (TNFRS) Department, etc

We appreciate AAI's response to issues like provision of hotline and wheel chair facility for differently abled persons, opening the direct exit for arriving passengers, decongesting the terminal corridors during the course of study.

We also note that they have promised to take action on other issues like Congestion, Opening of Secondary Runway/Transport/Parking facilities etc.





6. Findings - Cityside

6.1 Sequencing of construction

The project plans to expand the floor space by four fold by building two new structures on either side of the existing terminal and an elevated corridor in front of both existing and the proposed terminals. A Multi Level Car Parking (MLCP) is to be built later.

The construction of the terminals and corridor resulted in limited parking space and tremendous problem to the passengers. Had AAI constructed the parking first and then taken up elevated corridor it would have reduced the inconvenience. Such sequencing of project components was successfully implemented in Delhi Airport.

AAI stated (November 2010) that the project itself had been taken up in two phases with due consideration for passenger convenience. This however does not seem to be enough and Airport's operational management agreed with our view. It is ironical that MLCP is likely to be delayed even beyond completion of terminals as the work is yet to be awarded (December 2010).

6.2 Transition Plan

A well planned transition plan is a pre-requisite for expansion of a busy airport, which had already exceeded its rated capacity, for reducing the inconvenience to various users of the airport. The DPR did not envisage any transition plan. Though AAI stated that they had the transition methodology, audit could not find any indication of such methodology being put into practice and AAI was only reactive to the problems.

Recommendation:

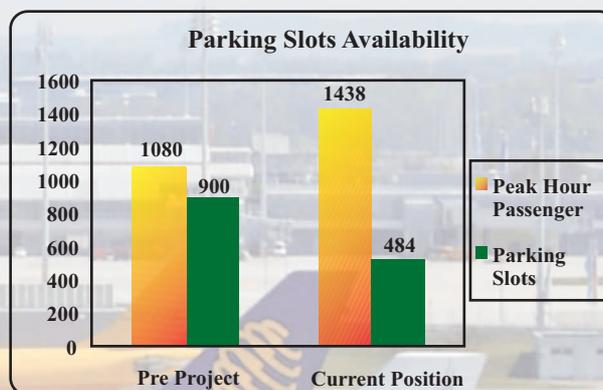
A transition plan for the remaining activities may be drawn up immediately. In future, the DPR should address the transition plans for constructions at working Airports.

6.3 Impact of City side changes

6.3.1 Parking

Airport expansion included MLCP in Phase 1. The same was subsequently proposed (February 2010) to be taken as a PPP on BOOT model, which is yet (December 2010) to be awarded. Due to ongoing expansion project which is making access to public transport difficult, passengers and staff are forced to use their personal transport. The increased parking, which is a necessity was drastically reduced, as seen from the graph, despite increase in peak hour passengers at these terminals.

Chart-1



Further the problem of reduced parking area has been aggravated by scattering of the car parking to over six places, without proper signage.

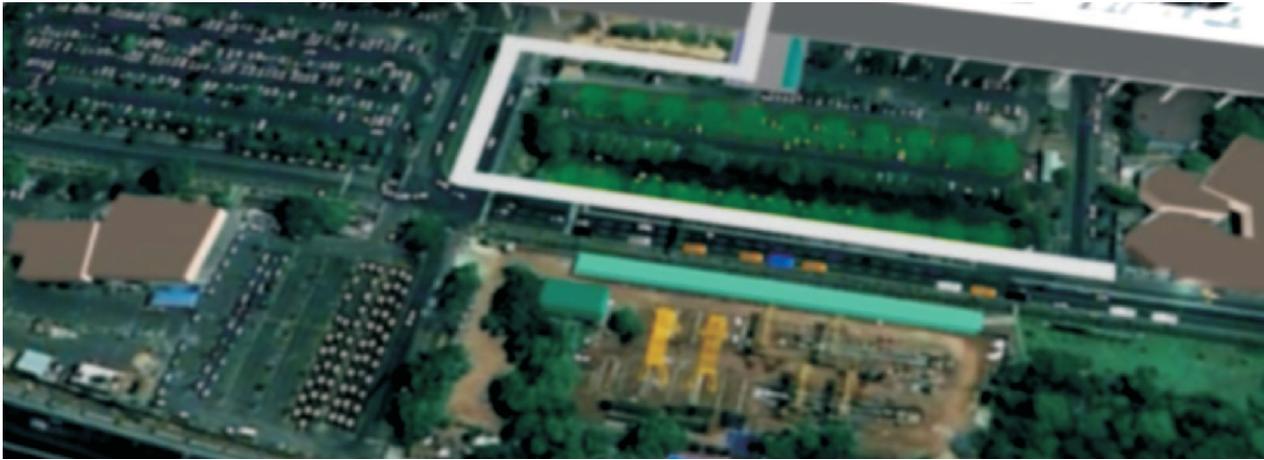
In addition crew and employees are dissatisfied due to absence of exclusive parking area contravening clause 6.18 of Annex 9 of International Civil Aviation Organisation (ICAO).

Recommendation:

AAI should immediately set up an exclusive parking area for its crew and employees and provide for their transportation from parking to terminal.



Auto Alighting Point



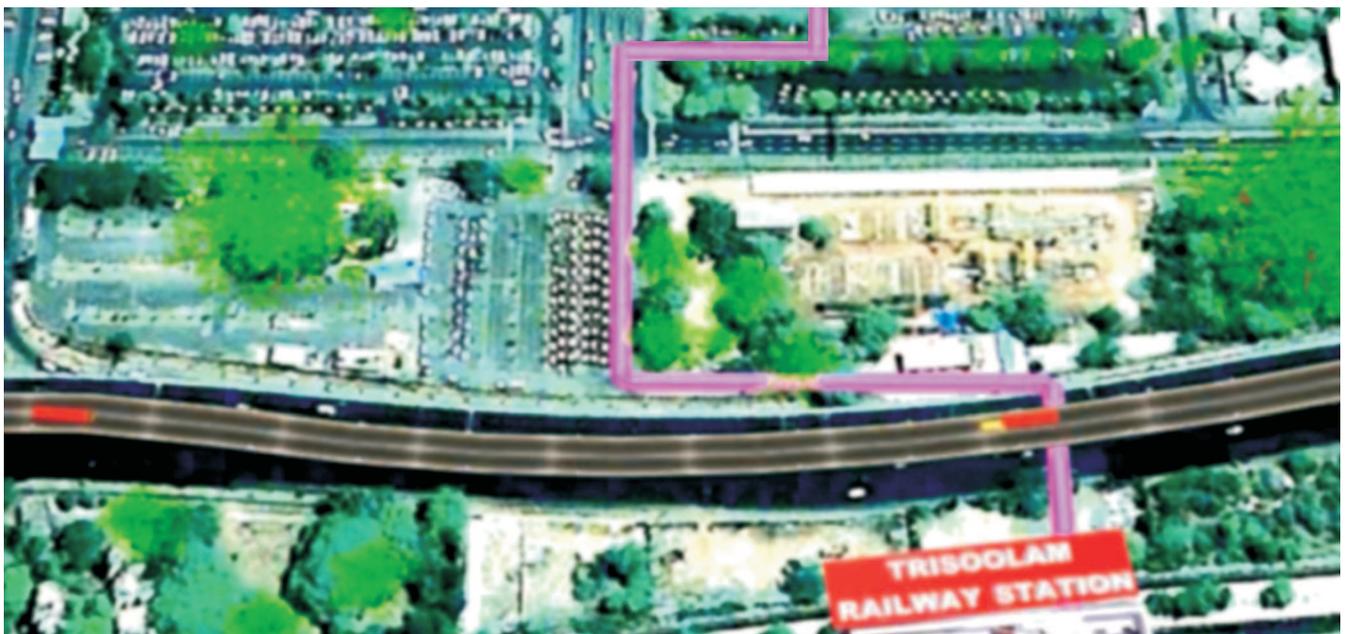
Shuttle Service From Auto Alighting Point



Auto Stand at National Highway Road



Approach from Railway Station





6.3.2 Public Transport discouraged.

The Airport expansion had drastically reduced the parking facilities. Under these circumstances, AAI should have encouraged use of public transport.

Instead the actual position was as follows

- (i) Abolition of auto stand and provision of auto alighting point one km (approx) from entry/exit exposed the passengers to weather conditions and also made it difficult for passengers using autos to access the terminal with luggage, or use autos to commute to their destination. There is no auto stand or pre-paid auto service
- (ii) The nearest bus stop was at a distance of 1.5 km from the Airport. Passengers were forced to cover the distance by foot, contravening ICAO's recommendations to assist the passengers with a provision for mechanical systems
- (iii) Chennai Airport is fortunate as it is close to a suburban railway line. A station was constructed with subway to the Airport. This was blocked by the pre-casting yard of the contractor defeating the very purpose.

The above issues were taken up by us with AAI during the course of our field work.

Good Practice:

AAI provided (June 2010) free transportation for departing auto passengers and restored (August 2010) the old bus shelter.

AAI also promised (November 2010) to shorten the approach to subway and consider operating a shuttle service from railway station.

Recommendation:

AAI should explore the possibility of utilising the vacant defence land as temporary parking area and introduce a dedicated bus bay inside the Airport.

Bus stand at NH Road



Vacant Defence land





Crowded Alighting Point



Crowded Alighting Point



Open to sky - No Canopy





6.3.3 Crowded Boarding & Alighting point

A common alighting and boarding area for International Arrival, Domestic Arrival and Domestic Departure has choked the area leading to frequent traffic holdups.

Recommendation:

AAI should implement all safety and security measures as per best recommended practices / ICAO standards and maintain safe distance immediately to avoid recurrence of mishap that happened recently (April 2010).

Good Practice:

Based on the audit suggestion, AAI decongested the corridor by pushing back the visitors' area towards city side.

AAI has also put up a canopy to shield passengers on their way from/to Boarding/Alighting points and agreed to open one more exit.

Recommendation:

AAI may consider two exits for a mix of Domestic and International passengers to leverage the difference to the peak hour traffic of Domestic and International passengers.

6.3.4 Fuel Outlet

It is surprising to note that there is no fuel outlet available in the Airport for use within Airport premises, or is even being planned as part of expansion. All the airline vehicles/ coaches are taken out from the air-side using the common limited exit roads available for passengers which additionally chokes the traffic. On account of coordination problem among the oil companies, fuel to Aviation fuelling stations (AFS) is supplied through tank trucks instead of the pipeline which connects refinery and AFS.

Partial canopy now provided

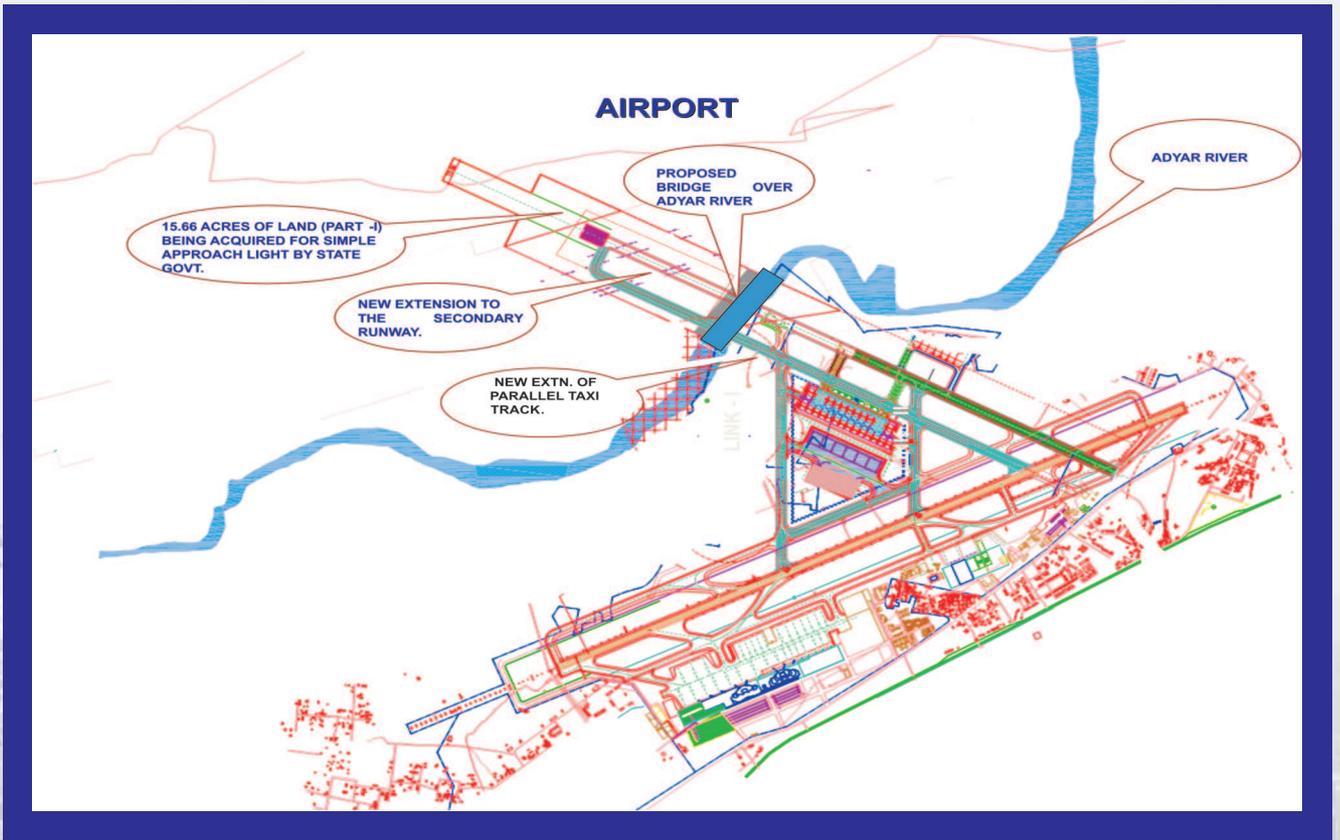


Recommendation:

AAI should provide a fuel outlet facility in the city side, at the earliest. Oil Marketing Companies should be encouraged to use the existing common aviation fuel pipeline available at the Airport, to reduce congestion.

6.3.5 Inadequate safety measures

Due to limited availability of space in the city side during construction, AAI is not able to provide dedicated fire lanes around the terminals. The shortest route has been blocked due to construction. The present planned approach of the Fire Fighting engines is likely to be seriously hampered by traffic and construction work for the elevated corridor. Fire sprinklers are not installed in terminal corridors violating the National Building Code No. 6.4.8.3. Further, safe distances are not maintained from the work area to avoid any eventuality.



Parallel Taxi Track To Secondary Runway - in progress





7. Air side Findings

7.1 Secondary runway

In order to operate both runways and to accommodate wide bodied aircrafts, extension of secondary runway (12/30) from 2205 metres to 3235 metres was taken up in October 2008 with scheduled date of completion by April 2010. The target date was re-scheduled to December 2010. Further, obstacles such as multi-storeyed building, water tank etc. in the approach funnel have not been removed. AAI stated (November 2010) that the State Government has been requested to expedite acquisition of additional land required for approach lighting.

7.2 Impact of delay

The delay in completion of secondary runway works has the following impact on the operations of the Airport.

- The main runway remains closed on two days in a week (Tuesday and Saturday) for two and half hours between 1400 hrs and 1630 hrs for planned maintenance work. This has led to congestion over Chennai Airport before and after the reopening hours and consequential passenger inconvenience.
- The nearby Airports viz., Bengaluru and Hyderabad also have planned maintenance of runways on Saturdays and Tuesdays respectively, which worsens the problem.
About 54 *per cent* of flights landed after a delay ranging from 11 minutes to 60 minutes during the closure of main runway for maintenance work resulting in an additional expenditure of ₹0.62 crore due to hovering of aircrafts
- This has forced airline operators to cancel some of their flights and divert some others on maintenance days.
- Similarly, 37 *per cent* of flights landed after a delay ranging from 11 minutes to 60 minutes due to peak hour congestion over Chennai Airport. This delay affected 99,470 passengers, during the period of review and cost the airline operators ₹2.21 crore.

Good Practice:

We suggested that the length of secondary runway presently available may be put to use immediately. AAI has agreed to implement this.

Recommendation:

AAI may also consider taking up maintenance of runway on different days in such a way that it does not coincide with major Airports like Hyderabad and Bengaluru.

7.3 Liaison with airlines

There was no sharing of Project Schedule/details by the AAI with the Airlines. This would impact eventual utilisation of the expansion.

Recommendation

AAI should communicate the progress of the expansion project on a continuous basis with all stakeholders to ensure eventual utilization.

7.4 Internal Inconsistencies

IATA defines six levels of service standard, from “A” for excellent service to “F” for unacceptable level of service. AAI in its approach to DPR has assured of providing “Excellent” Level of Service (LOS) for all areas as prescribed by IATA / Ministry. However, it is noticed that AAI has not planned so in the DPR in respect of check-in queue area and security hold both in international and domestic terminals on completion also, contravening the norms set by the IATA / Ministry.

Extension of Secondary Runway - in progress





Bridge across Adyar River - in progress



Bridge across Adyar River another view - in progress



Defence Land



Metro Station





8. Major Risk Factors

8.1 Completion of Adyar bridge

For catering to wide bodied aircrafts and operation of both the runways, it is necessary to extend the secondary runway (12/30) from 2205 metres to 3235 metres. The extended runway crossed over the Adyar River. Hence construction of a bridge across the river was inevitable, which was commenced in June 2009 with target date for completion by September 2010. The target date was re-scheduled to December 2010. The bridge, however, could not be completed by December 2010.

8.2 Metro Rail construction non-synchronization

CMRL agreed to an Audit suggestion for construction of the Metro Station simultaneously with the present Airport expansion. AAI, however, felt the site for construction of Metro Station can be handed over only after April 2011, since the identified area is currently in use. Construction of Metro Station, subsequent to completion of expansion project, will put passengers to prolonged inconvenience

Recommendation

AAI should make available the site to CMRL for commencing civil works for metro station enabling completion of all cityside civil works to avoid extended inconveniences to passengers.

8.3 Completion of MLCP.

With a proposal for a MLCP in its DPR, the Board decided (February 2010) to take up construction on BOOT model, within a period of 11 months. The work is yet to be awarded (December 2010). Hence MLCP is unlikely to be completed along with the new terminals.

Recommendation

AAI may ensure that MLCP is completed expeditiously.

8.4 Transfer of Defence land

The project started with an in-principle approval from Ministry of Defence to transfer 21 acres of land in lieu of equal value of land to be transferred by the State Government in favour of the Ministry. With transfer of land yet to take place

(December 2010), key facilities of the project proposed on the defence land is likely to be delayed with consequential delay in commissioning of the terminal.

Recommendation:

AAI should take steps with the State Government and Government of India to ensure immediate takeover of defence land to complete the project in time.

9. Further Expansion of Chennai Airport

9.1 Greenfield Airport-Validation of Project estimates/ assumptions

Airport Expansion envisaged handling of 14.35 million passengers in Phase 1, 30.13 million passengers in Phase 2 and Greenfield Airport thereafter. DPR had projected a growth rate of 20 per cent for domestic and 10 per cent for international passengers for the period 2007-12, while planning expansion facilities in the Airport. Actual passenger traffic data revealed that variations were nominal in the International sector while wide variations were noticed in the Domestic sector. Further, aircraft movements were also down to the extent of 8 per cent even during 2009-10 in domestic sector, where the economy had otherwise showed a recovery. The traffic projections could not be validated by Audit and therefore there is no other independent validation available as to whether Phase 2 would suffice or a Greenfield Airport is also required in the present scenario. AAI stated (November 2010) that Phase 2 expansion to the existing terminal would be triggered by its operational needs and suggested that it could happen even after Greenfield Airport is constructed. In the meantime, AAI undertook (July 2010) a fresh feasibility study for Greenfield Airport and its outcome is awaited.

It is apparent that AAI may construct the Greenfield Airport before taking up Phase 2, if at all.

Recommendation:

A decision to develop a Greenfield Airport and its timing should be validated on economic considerations. It should contain enough safeguards to protect the investment made in the present Airport and planned future investments if Phase 2 is carried out to avoid Bengaluru and Hyderabad experience.

9.2 Mismatch of design, if Phase 2 is dropped

Phase 1 of the expansion was finalised with an ultimate plan to handle 30 million passengers on completion of both phases. Some of the infrastructure/utility created would be sub-optimal in case Phase 2 is given up.



Chennai Metro Rail Limited

Dr. T.V. SOMANATHAN, I.A.S.,
MANAGING DIRECTOR

D.O. Letter No. 118/CMRL/2008 dated 19.7.2010

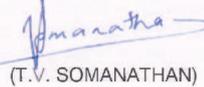
Dear Thiru Srinivasan,

Sub: Chennai Metro Rail Limited- Meeting on Traffic Handling aspects of Chennai Airport Expansion-reg.

I thank you for the valuable suggestions made during the meeting with us on 14.07.2010, regarding the traffic handling aspects at the Chennai Airport's expansion works and the metro connectivity. Minutes of the meeting are enclosed herewith. Incidentally, it is learnt informally from AAI that their contractor may demand an exorbitant price for any additional variation. In that context, we are examining the possibility of a single tender covering both viaduct & station within the airport premises, with cost sharing.

Best regards,

Yours sincerely,


(T.V. SOMANATHAN)

Encl: As above

To

Thiru K.Srinivasan,
Principal Director,
O/o The Principal Director of Commercial Audit,
Indian Audit and Accounts Department,
Indian Oil Bhavan – I floor,
139, Mahatma Gandhi Road,
Chennai – 600 034.

Website



Media Management





10. Communication

10.1 Interaction with Stakeholders

Airport is essentially a public utility with various stakeholders. Any Airport expansion project would, therefore, have to obtain participation and cooperation from various stakeholders, if it is to be successfully completed and utilised. We reviewed the communication of Airport expansion plans with the following stakeholders and the state of readiness of the stakeholders to utilise or provide services for the expanded Airport.

- Airline operators
- CISF
- Customs
- Immigration
- CMRL
- CMDA
- Chennai City Traffic Police
- TNFRS Department

The interaction with the above agencies revealed that AAI was not sharing traffic data and infrastructure developments with other stakeholders denying them the benefits of planning and better utilisation of their resources

Good Practice:

We appreciate the fact that connectivity to Metro Rail is being planned for the Airport, which is one of the necessary facilities for an Airport of international class.

We would appreciate if the metro connectivity could be leveraged to provide city check-in facilities. This may enable the Airport to handle higher passenger load, within the existing infrastructure.

Recommendation:

We also strongly recommend that the AAI should take this opportunity to consider other integration arrangements like city check-in on the lines of metro international Airports.

10.2 Media Management

An important aspect of communication would be to share information with the travelling public. In this connection, it is very apparent that media both print and television plays a very important role. In our view, Airport and the expansion project had been receiving very adverse coverage during the last few months. We did not find adequate communication efforts from AAI to set the record straight. AAI stated (November 2010) that Regional Executive Director and Airport Director have been authorised to issue rejoinders on important incorrect media reports and an independent website for Chennai Airport is approved, to provide more updates on Airport.

We also find that the existing AAI's website, which can help in information sharing, is neither updated nor contains full details of Chennai project. When this was taken up with the AAI's project authorities, they agreed to update the site, which has not happened.

Recommendation:

We strongly recommend that AAI strengthen its public relations and corporate communication functions and attempt to remove public misgivings by providing the correct information in a proactive manner. Transitional arrangements may also be posted on the website for the benefit of passengers.

(K. SRINIVASAN)

Principal Director of Commercial Audit &
ex-officio Member, Audit Board
Chennai

Countersigned

(SUNIL VERMA)

Deputy Comptroller and Auditor General
(Commercial) and Chairman Audit Board



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