

Suvarnabhumi Airport

Fact Sheet

1. Model Scheme

At the initial phase of service provision, the north section of the airport will be able to accommodate 45 million passengers per year, 76 flights per hour and 3 million tons of cargo handling per year.

1.1 The external of the passenger terminal complex

1.1.1 The entrance from the Motorway at the north side of the airport is a 2-way 8 lane traffic on elevated frontage road, and will increase to 10 lane traffic approaching the airport leading up to the main entrance of the of the passenger terminal complex.

1.1.2 The passenger terminal complex has the length of 444 meters and the width of 111 meters. Facilities for both domestic and international passengers are situated in the same building.

1.1.3 The concourse buildings are connected to the passenger terminal. There are 7 concourse buildings: A, B, C, D, E, F and G. The combined area of the concourse buildings and the passenger terminal expands over 563,000 square meters, whereas the area of the current Bangkok International Airport (Terminals 1&2) totals 321,166 square meters.

1.1.4 The car parking buildings are situated at the front of the passenger terminal complex. There are 2 car parking buildings with the capacity of approximately 5,000 cars. In addition, there are parking areas on the ground level on the exterior which can accommodate approximately 1,100 cars. There is also a long term parking area that can accommodate approximately 4,000 cars and 78 buses.

1.1.5 The control Tower rises over the height of 132.2 meters. It is the world's tallest control tower, fully equipped with the best technologies that will facilitate smooth air traffic control. It has the ability to manage approximately 76 flights per hour.

1.1.6 The airport information management system building is a 6 storey building with the technologies for the purposes of technical management. There are 4 main technical centers: Airport Operation Center (AOC), Security Control Center (SCC), Crisis Control Center (CCC) and Network Management Center (NMC).

The floor plan:

1st floor is for the installation of the foundation structures such as the power distribution system, the security system, fire extinguishing system and the computer and the electronic network systems.

2nd floor consists of the Crisis Control Center (CCC) and seminar rooms.

3rd floor consists of the Airport Operation Center (AOC) and the Security Control Center (SCC).

4th floor is used as administrative offices.

5th floor is for the Network Management Center (NMC) and the Benchmark Test Laboratory.

1.1.7 The airport operation building is a 6 storey building which consists of AOT administrative office, offices of airlines and governmental offices, with a canteen on 1st floor.

1.1.8 The runways that will be open for operation in the initial phase are the Eastern runway with the length of 4,000 meters and width of 60 meters, and the Western runway with the length of 3,700 meters and width of 60 meters.

Taxiways 52 taxiways are to be in operational service.

Aircraft parking space expands over the area of 1,053,000 square meters for 120 aircraft parking stands, 8 of which are for Airbus A380 (5 of them are contact gates)

1.1.9 The operations of Thai Airways International outside the passenger terminal complex include commercial products and postal services, valet parking service, ground equipment service, ground customer service, aircraft maintenance service and general operational services.

1.1.10 6 supporting services besides those of Thai Airways International PLC's include cargo houses of WFSPG Cargo Co., Ltd., ground equipment services by Worldwide Flight Services Bangkok Air, catering services by Catering Company Limited and LSG Sky Chefs (Thailand) Co., Ltd., refueling services by Bangkok Aviation Fuel Services Public Company Limited and ASIG (Thailand) Co., Ltd.

1.1.11 Free Zone arranged by AOT is a new system of handling cargos at the Suvarnabhumi Airport, "Customs Free Zone". This new system is aimed at enhancing the efficiency of cargo management at Suvarnabhumi Airport. A state-of-the-art technology will be employed to facilitate the new system. Business traders who have to go through the free zone will experience systematic steps of unproblematic administration which involve much less paperwork.

The Free Zone area is located in the Northeastern part of the airport possessing the ground area of 549,416 square meters or approximately 345 rai with further 111,156 square meters of ground for public use. The main buildings include:

1. Cargo handling building of Thai Airways International PLC and WFSPG Cargo Co., Ltd.

2. 4 buildings for cargo facilities

3. 4 Buildings for Freight Forwarders

4. Buildings for customs offices and related

governmental offices

5. Buildings for the administrative offices of Free Zone

1.1.12 The public transportation center covers an area of 42,000 square meters or approximately 26 rai; it is located adjacent to the catering facilities of Bangkok Catering Company Limited and LSG Sky Chefs. The interior of the public transportation center is used for parking taxis, limousines and rented cars; moreover, there is a bus terminal within the center for the public mass transport systems. There are also petrol stations and convenient stores.

1.1.13 Police Station has the area of approximately 10 rai and is located adjacent to the public transportation centre.

1.1.14 The airport maintenance facilities buildings are the workplace for AOT staff who oversee the maintenance and repair tasks of the airport. These offices are located at the East side of airport, expanding over 96 rai with 5 main buildings: administrative building, aircraft maintenance and repair building, workshop building, main store building and landscape building.

1.1.15 The meteorological center is responsible for supporting the air traffic management at the Suvarnabhumi Airport to comply with ICAO's standards and the World Meteorological Organization standards . The observation equipment will be installed for the benefit of monitoring and reporting weather conditions at airports around the world and along flight paths in order to release any harsh weather warnings when necessary. The meteorological centre also provides the services of flight documentation for the royal aircrafts, aircrafts for the VIPs and all commercial aircrafts that come to Thailand.

1.1.16 The airport hotel will be built under the "Novotel Suvarnabhumi Airport" appointed by the AOT on October 24, 2003. This is a joint venture project between 3 parties: the AOT, Thai International Airways PCL and Krung Thai Bank PCL. The airport hotel will cover the ground of approximately 17 rai, located in front of the passenger terminal complex with 300 meters in between. There will be 600 rooms in the hotel, 500 of which will be opened at the initial phase. The hotel will be of recognized international standard with complete lines of services, along with a connecting route linking the hotel itself to the car parking building.

1.1.17 The co-generation plant is managed by District Cooling System and Power Plant Co., Ltd. (DCAP). DCAP is a state enterprise, which is a joint project between PTT PLC, EGAT PLC and Metropolitan Electricity Authority. The district cooling system and the power plant will be operated by using natural gases in order to feed to the Suvarnabhumi Airport. The surplus energy from the generation of electricity, heat energy, will be used to produce cold water and steam for the purposes of air conditioning in the passenger terminal complex.

1.1.18 The power sub-station is a place for transforming 115 KV of electricity from the Metropolitan Electricity Authority into 24 KV. Within the plant, there are 2 main buildings: GIS, which holds major control switches for allowing electricity in and out of the airport; and command and control building, which is the place that installs control systems, security systems, reserve electricity management systems, air conditioning systems, lighting systems and fire safety systems. The AOT has appointed personnel who will carefully and consistently monitor and maintain the high standard of the systems and the equipments so as to enable proficient distribution of electricity among the various buildings at the airport.

1.1.19 The fire brigade and the rescue center consists of 3 separate centers. The Main station is situated near the catering facilities of Bangkok Catering Company Limited and LSG Sky Chefs. The other two are substations located in the airside area between the East runway and West runway. These two substations hold responsibilities over the fire extinguishing of the aircrafts in the airside area. Each station has the ability to provide rescue services of the standard of Category 10.

1.1.20 The water supply station obtains water from the Metropolitan Waterworks Authority in order to distribute to the passenger terminal complex and other buildings within the airport via the 35 kilometer underground pipeline network. The water supply station is able to collect 40,000 cubic meter of reserved water and has the potential to distribute water to serve 60 million people per year; during the initial phase of service, Suvarnabumi Airport is expected to serve 45 million passengers per year.

1.1.21 The wastewater treatment plant is adjacent to the meteorological centre. Its function will be gathering wastewater from the passenger terminal complex and other buildings via the underground pipeline network and transport to the treatment pool. Currently, it is capable of treating 9,000 cubic meter of wastewater per day. Threatened wastewater will be reused for cooling the air conditioning system and for watering the plants in the airport area. In addition, the AOT is investigating to increase the treatment capability by further 9,000 cubic meters per day, which is due to be completed by May 31, 2006.

1.1.22 The solid waste transfer station is a 2 storey building near the airport maintenance offices. When the Suvarnabhumi Airport is in full operation, it is estimated that there will be 66.5 tons of waste per day, which includes recyclable waste such as paper, plastic, and non-recyclable waste such as discarded food, waste from the aircrafts and toxic waste. There will be bins for different kinds of litter positioned at various places around the airport. The maintenance staff will gather these wastes and deposit them in the solid waste center until the infectious garbage trucks come to collect and transport them out of the airport.

1.2 Suvarnabhumi passenger terminal complex comprises of 7 stories above ground and 2 stories below ground.

- 1st floor is the bus lobby. Buses are not allowed to go to 2nd and 3rd floors in order to avoid the traffic congestion. Additionally, there will be a medical center, AOT offices for electricity monitoring and airport control offices.

- 2nd floor is the arrivals hall for both domestic and international passengers.

- 3rd floor consists of airlines passenger waiting lounges, some shops, security checkpoints, meeting points, shops, service counters and CIP lounges.

- 4th floor is the departures hall. This hall features the facilities for both international and domestic passengers, lounges for premium passengers Thai Airways International PLC, customs control checkpoints, some governmental offices, airline booths, airport information counters and escalators in the centre which can take passengers right up to the restaurants on 6th floor.

- 5th floor is the offices for Thai Airways International PLC and Star Alliance airlines.

- 6th floor consists of restaurants, which can be accessed via the escalators from 4th floor.

- 7th floor serves as observation area.

The lower ground floors are termed floor 0 which serves as the train station, and floor -1 which is the place for train platforms. The lower ground floors also function as a place for baggage conveyor systems.

1.3 The concourse buildings: A, B, C, D, E, F and G have the roofs that are made of glass and special synthetic material which is very tough and durable, with Teflon coated, that will prevent the accumulation of dirt and grime. Passengers can walk to the concourse buildings from the terminal complex via the concourse building D, which is directly connected to the terminal complex.

- The concourse buildings A and B are for domestic passengers. Detail are as follows :

- Concourse building A is for domestic passengers, with the length of approximately 432 meters. This building can accommodate 6 aircrafts and has 1 connection channel that allows access to the remote parking bays.

- Concourse building B is for domestic passengers, with the length of approximately 270 meters. This building can accommodate 6 aircrafts and has 2 connection channels that allow access to the remote parking bays.

The Concourse buildings C, D, E, F and G are for international passengers. Details are as follows :

- Concourse building C has the length of approximately 459 meters, and can accommodate 10 aircrafts with 2 connection channels to access to the remote parking bays.

- Concourse building D has the length of approximately 909 meters, and can accommodate 8 aircrafts with 2 connection channels to access to the remote parking bays.

- Concourse building E has the length of approximately 459 meters, and can accommodate 10 aircrafts with 2 connection channels to access to the remote parking bays.

- Concourse building F has the length of approximately 270 meters, and can accommodate 6 aircrafts with 2 connection channels to access to the remote parking bays.

- Concourse building G has the length of approximately 432 meters, and can accommodate 5 aircrafts with 1 connection channel to access to the remote parking bays. VIP lounge also situated at this building.

The intersections of the concourse buildings are termed the airside center. There are 2 intersections on 3rd and 4th floors which will be used for shops; the exterior of the concourse buildings will be developed into airline offices and airline lounges.

2. Passenger flow

2.1 International passengers flow

2.1.1 Departure passengers can come through via the entrance on the 4th floor of the departures hall, which can be accessed by car or by foot from the car parking buildings, which is connected to the 3rd floor of the departures hall. Upon entering the departures hall, passengers can check-in at counters 4-10 before proceeding to the passport control and the customs control checkpoints. Passengers can then continue to the concourse building D via 2 connection channels from the terminal complex. The 4th floor of concourse building D consists of a wide variety of shops that passengers can enjoy shopping while waiting to board. When called for boarding, they can approach the gate via the 3rd floor of the departures hall; and when arrived at the gate, they have to proceed to the 2nd floor to the hold room.

All passengers and hand luggage taken on board must be examined. The examination points are on 3rd and 4th floors in the airside area of the concourse buildings.

2.1.2 Arrival passengers can come through to the passenger terminal via 2nd floor of the concourse buildings except the bus gate passengers. At the

terminal, there will be passport control checkpoints and this is also a place where they collect their baggage from one of the 22 baggage conveyor belts, 17 of which are for international passengers and 5 are for domestic passengers. Once passengers have collected their baggage and passed the customs control checkpoints, they can proceed to the arrivals hall where they can find transportation counters, hotel and accommodation counters and tourist information centre. Outside the arrivals hall will be pick-up points; in the case of passengers traveling with a tour agency, they must proceed to 1st floor for buses and coaches. There is a general meeting point on 3rd floor.

2.1.3 Transit/transfer passengers will have to go to the airside area after they arrive at the 2nd floor of the concourse building from the aircraft in order to proceed with the transfer processes before continuing to 3rd and 4th floors to complete the departure procedures.

In the case of transit passengers, they will have to go through the airside area to the departures service area in order to complete the departure procedures.

2.2 Domestic passengers flow

2.2.1 Domestic departure passengers will be able to check-in at counters 2 and 3 on 4th floor of the departures hall. Afterwards they will have to proceed to 2nd floor to the hold room where they and their hand luggage will be examined.

2.2.2 Arriving passengers will come to the terminal through the 2nd floor of the concourse building to collect their baggage from the 5 domestic baggage conveyor belts before proceeding to the arrival hall. The service counters outside the arrival hall will be shared by both the domestic and the international passengers.

3. Road networks

3.1 Road networks within landside

There are 5 access routes to passenger terminal complex from the road networks within the landside.

3.1.1 Access route from the North

Passenger terminal complex can be accessed from the North entrance via the motorway. The elevated frontage of the terminal is divided into inner and outer parts for both the arrival and the departure halls.

3.1.2 Access route from the Northwest

Passenger terminal complex can be accessed from the Northwest entrance via the Rom Klao elevated highway and King Kaew Road which will pass the customs free zone before arriving at the terminal.

3.1.3 Access route from the South

Passenger terminal complex can be accessed from the South entrance via the Bang Na-Trat highway and the service road which will pass the long term parking area and the public transportation centre before arriving at the terminal.

3.1.4 Access route from the Northeast

Passenger terminal complex can be accessed from the Northeast entrance via the Lad Kra Bung (Onnuj Road), then through the East-West main service road within the airport, the long term parking area and the public transportation centre before arriving at the terminal.

3.1.5 Access route from the West

Passenger terminal complex can be accessed from the West entrance via King Kaew Road.

3.2 Road networks within airside, the area which features runways, taxiways, aircraft parking space, ground equipments and services for aircrafts and baggage management area. There are 4 access routes from landside to airside.

1st access route is adjacent to the concourse building G.

2nd access route is adjacent to the concourse building A.

3rd access route is in the domestic cargo warehouse area of Thai Airways International PLC

4th access route is adjacent to the ground customer service building of Thai Airways International PLC.

4. The transportation system service

4.1 Buses and coaches for passengers traveling with tour agencies are able to drop off the passengers at 4th floor of the passenger terminal complex for departure passengers. Buses and coaches will have to park at the public transportation center. As for the arrival passengers, there are pick-up points at 1st floor of the terminal.

4.2 Airport shuttle buses will be in service for the personnel and passengers traveling between the public transportation center, the long term parking area and the passenger terminal complex. At the initial phase, there will be 3 routes.

Route 1 is for people who want to minimize the traveling time. The distance will be 8.7 kilometers. The starting point is at the public transportation center and there is only one pick-up point at the long term parking area. One round trip takes approximately 10 minutes.

Route 2 is for passengers who park their cars at the long term parking area. There are approximately 11 pick-up points along the journey. The trip from the parking area to the terminal takes approximately 11 minutes, and the return trip 16 minutes.

Route 3 is for passengers traveling between the terminal and the public transportation center. There are approximately 10 pick-up places along the journey.

The trip from the public transportation center takes approximately 11 minutes, and the return trip 16 minutes.

4.3 Private cars can be parked at the parking building after dropping off passengers at the 4th floor of the terminal complex. Pick-up points are on the 2nd floor.

4.4 Taxis can drop off passengers at the 4th floor of the terminal complex, and will have to leave the area immediately. Pool taxis can wait for passengers at the public transportation center.

4.5 Limousines can be ordered at the service counters outside the terminal on the 2nd and 4th floors but will be parked at the public transportation center.

4.6 Airport express service will be operating between the airport, hotels and various important places in Bangkok and the suburbs.

4.7 Public bus services (air conditioned) will be operating in 7 routes.

- 1) Suvarnabhumi – Sri Phraya Pier (Expressway)
- 2) Suvarnabhumi – Bang Lumphoo (Expressway)
- 3) Suvarnabhumi - Bangna Intersection
- 4) Suvarnabhumi – Don Mueng (Bangkok International Airport)
- 5) Suvarnabhumi - Hua Lumphong Railway Station
- 6) Suvarnabhumi – Tepharak Road to Samutprakarn
- 7) Suvarnabhumi – Srinakarin Road to Samutprakarn

All the bus services operating along all these 7 routes will drop off airport passengers at the public transportation center.

4.8 Trains by the State Railway of Thailand will be in service between Suvarnabhumi Airport and major places in Bangkok and the suburbs. There will be an electric train service between Suvarnabhumi Airport rail link and the city air terminals along the East rail track, totaling 28 kilometers. There are 8 city air terminals: Phayathai, Ratchaprarop, Makkasan/Asoke, Ramkamhaeng, Huamak, Bantubchang, Ladkrabung and Suvarnabhumi)

5. Traffic management at the elevated frontage of the terminal complex -

There are elevated frontages on the 1st, 2nd and 4th floors of the terminal complex; these will be divided into 2 parts: the inner and the outer. The AOT does not allow any public transport vehicles to park in this area at all.

6. The security procedures for the personnel – The main security and emergency center is in the AIMS building, where the comprehensive high-class security system is installed. In addition, there is the designation of restricted areas, authorization entrance and exit and security cards for the personnel.

6.1 Restricted areas

- Security fences will be erected to distinctly separate the airside from the landside.

- In the initial phase, there will be 6 restricted coded areas.

Restricted area 1 is the area between the baggage belts in the arrivals hall, from the exit of the arrival passengers via the customs checkpoints, and the area behind the counters of the passport control checkpoints.

This area also expands to include the area in the arrivals hall from the exit of the arrival passengers to the connection channel that links the terminal complex to the concourse building D.

Restricted area 2 is the area in the international section of the departures hall from behind the passport control checkpoints to the front of the AOT security examination point. This area also expands to include the front of the passport control checkpoints to the entrances into aerobridges and the departure terminal.

As for the domestic section of the departures hall, the restricted area is between the connection channel that links the terminal to the concourse building D to the entrances into aerobridges.

Restricted area 3 is the area behind the AOT security examination point, the hold room and until entrances into aerobridges.

Restricted area 4 is the designated commercial aircraft parking space, runways, taxiways and the baggage sorting area.

Restricted area 5 includes all the restricted areas, except the area in the Suvarnabhumi reception lounge in the case of the VIP visits.

Restricted area 6 is the area in the building with the Suvarnabhumi reception lounge in the case of the foreign and domestic diplomat visits.

6.2 The assigning of entrance and exit into and out of the restricted areas

- In the initial phase, there will be 29 entrance and exit which require authorization, the significant ones are:

The access points through to the 4 aircraft parking bays.

The access points for only permitted personnel.

The cargo transportation channels.

6.3 Security ID cards

- Security ID cards can be categorized into 2 kinds: security ID cards for personnel, and security ID for vehicles.

- Personnel security ID cards will display the codes of the restricted areas that that particular personnel is permitted to enter.

- The personnel security ID cards will be made 6 months prior to the opening of the Suvarnabhumi Airport and will be issued to the relevant personnel 1 month prior to the opening.

- All charges for security ID cards will be collected according to the AOT regulations for airport service charges.

7. Facilities and services – There are many more facilities at Suvarnabhumi Airport compared to the current Bangkok International Airport to facilitate more efficient service provision to passengers.

- 130 passport control checkpoints for arrivals, 72 for departures.
- 26 customs control checkpoints for arrivals, 8 for departures.
- 22 baggage conveyor belts.
- 360 check-in counters. There are 100 additional counters for passengers with no luggage to check-in to minimize the queuing time.
- 107 moving walkways.
- 102 elevators.
- 83 escalators
- 18 slanted moving sideways.

8. Airport Information Management System - AIMS – The management of Suvarnabhumi Airport will follow a comprehensive hi-tech system, which employs the Airport Information Management System (AIMS) in supporting and coordinating all the inter connected systems in the various buildings of the airport. This AIMS will facilitate the smooth operation of the baggage sorting conveyor belts, the loudspeaker system, the aircraft parking control system, commercial activities management and the free zone management that will assist the air freight activities. In addition, the AIMS is also connected to 4 computer systems outside the terminal complex:

- Aeronautical Information is connected to the systems of the Aeronautical Radio of Thailand Co.Ltd, airline offices, immigration offices, the Customs Department, the Department of Civil Aviation and other relevant offices.
- Commercial Activities Information Within the AIMS, there is the POS (Point of Sales) system that handles commercial activities. All traders who come to conduct business at the airport will have to submit their financial materials to the AIM.
- Security Information The AIMS will be fed with picture and information output from the access control system which links together the closed circuit television and other security systems.
- Maintenance and Equipment Information There is a support and maintenance system to aid the work of all the other systems.

AIM is therefore the core of the control system of Suvarnabhumi Airport.

9. The baggage handling system at Suvarnabhumi Airport has the capability to serve 45 million passengers per year. The baggage handling system at Suvarnabhumi Airport uses the in-line screening method, which scans the luggage while they are on the transporting belts; whereas the system at the current Donmeung Airport X-rays the luggage before check-in.

10. The medical institution comprises 3 separate medical buildings. The main medical center is on the 1st floor of the passenger terminal complex, which opens 08.00-17.00. There are 2 further small clinics in the concourse buildings A and G, which open 24 hours for passengers. In addition, the medical institution will assign 5 ambulances to stand-by at the airport in the case of emergency.