



ANEXO 8: ESTUDIO DE CAPACIDAD Y NECESIDADES DEL ÁREA TERMINAL



1. INTRODUCCIÓN

Este Anexo presenta los listados de resultados ofrecidos por el programa CAPASS, desarrollado por la IATA, sobre el análisis, por un lado, de la capacidad actual de las dependencias del terminal de pasajeros del Aeropuerto de Madrid-Barajas, y del dimensionado, por otro lado, de dichas dependencias para el caso de una demanda de tráfico de pasajeros en dos niveles. Los dos niveles de previsión de demanda considerados son los siguientes:

➤ Nivel de tráfico A

- ◆ Pasajeros anuales: 38.000.000 pax
- ◆ Movimientos de aeronaves: 85 AHP

➤ Nivel de tráfico B:

- ◆ Pasajeros anuales: 47.000.000 pax
- ◆ Movimientos de aeronaves: 100 AHP



Los parámetros requeridos por el programa son diferentes, según se analice la capacidad del terminal o se dimensione para una demanda. No obstante la variación de los datos de entrada básicos, hay una serie de valores que se han tomado idénticos en ambos casos. Son los siguientes:

- i Estándar de actuación en cada dependencia. Representa la fracción de la hora punta en la cual se alcanza la demanda mayor para esa dependencia. Se ha tomado de 5 minutos en todas, excepto en las grandes superficies, los vestíbulos de salidas y de llegadas, donde se ha elegido 15 minutos como tiempo de saturación. Para la sala de embarques, sin embargo, por ser más crítica en cuanto a calidad de servicio del Aeropuerto, se ha tomado este valor como 10 minutos.
- ii Tiempos de permanencia en las dependencias y tiempos de procesado. Tanto en facturación como en controles de seguridad y de pasaportes se han tomado siempre los mismos tiempos de procesado; e idénticamente en los tiempos medios de estancia en salas y áreas de recogida de equipajes.
- iii Capacidad de vehículos (coche, taxi o autobús), longitud de acera ocupada por ellos y tiempos de carga y descarga de pasajeros.
- iv Superficie requerida por pasajero en cada sala. Representa un estándar de calidad para el Aeropuerto; se ha tomado como 2,5 m²/pax como mínimo, aumentando hasta 3 m²/pax en el caso de la Sala de Embarques puesto que

es donde el pasajero permanecerá más tiempo y el Aeropuerto busca allí un mejor servicio.

El resto de los parámetros se ha tomado variable según la intención del estudio. Los datos de reparto de pasajeros por modos de acceso se han tomado del Estudio de Movilidad del Modo Aéreo EMMA, de 1998; otros valores se han estimado en base a la experiencia o tras consultar a expertos del propio Aeropuerto.



2. ESTUDIO DE LA CAPACIDAD ACTUAL DEL EDIFICIO TERMINAL DE PASAJEROS DEL AEROPUERTO DE MADRID-BARAJAS

Para el análisis de la capacidad actual del edificio terminal de pasajeros del Aeropuerto de Barajas se ha distinguido, en primer lugar, entre las dependencias del módulo T1 y las de los módulos T2 y T3, considerando aparte el tráfico regional, por los motivos que se detallaron en el punto 4.4 y posteriormente en el 6.1: los valores de los parámetros requeridos por el programa no son los mismos que en los otros dos tipos de tráfico.

El tipo de tráfico tratado en cada terminal es el siguiente:

- Terminal T1: tráfico internacional puro, UE no Schengen y el de UE Schengen salvo el de la compañía Iberia.
- Terminal T2-T3: tráfico nacional, UE Schengen de Iberia y puente aéreo.
- Terminal T3-regional: tráfico regional

El programa ofrece las capacidades de cada dependencia considerada, en pasajeros hora punta, siendo la capacidad del terminal la menor de todas ellas (en salidas, por un lado, y en llegadas, por otro), pues condiciona todas las demás.

Las páginas siguientes muestran los listados de resultados y los valores asignados a los parámetros requeridos por el programa, desglosados por terminales.



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Airport Terminal Capacity Analysis

Date...: 06/14/99

Airport: Aeropuerto de Madrid-Barajas. Terminal T1

Airport terminal elements selected:

Departure Kerb

Departure Concourse

Check-In Desks

Departure Passport Control

Security Check

Departure Lounge

Arrival Passport Control

Baggage Claim Area

Number of Baggage Claim Devices

Arrival Concourse

Arrival Kerb



International Air Transport Association
Airport Terminal Capacity Analysis
Summary
Aeropuerto de Madrid-Barajas. Terminal T1

	Pax/Hr
Departure kerb capacity	4464
Departure concourse capacity	4892
Check-in desks capacity	5186
Departure passport control capacity	4345
Security check capacity (centralized)	4852
Departure lounge capacity	9133
Arrival passport control capacity required	2309
Baggage claim area capacity	11265
Narrow-body aircraft baggage claim device capacity ...	3209
Wide-body aircraft baggage claim device capacity	4243
Total	7452
Arrival concourse capacity	4135
Arrival kerb capacity	3318



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Departure Kerb - Capacity Analysis

Length of existing departure kerb (metres) . . .	:	375.0
Performance standard (minutes)	:	5.00
Proportion of passengers arriving by car . . .	:	0.31
taxi	:	0.46
coach	:	0.23
Number of passengers per car	:	1.20
taxi	:	1.30
coach	:	18.00
Kerb occupancy time (minutes) per car	:	1.00
taxi	:	1.00
coach	:	5.00
Kerb length (metres) per car	:	6.0
taxi	:	6.0
coach	:	14.0

Capacity of departure kerb : 4464

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Departure Concourse - Capacity Analysis

Existing departure concourse (sq. metres)	:	5300.0
Space required per person (sq. metres)	:	2.50
Performance standard (minutes)	:	15.00
Proportion of passengers (resident)	:	0.40
(foreign)	:	0.60
Well-wishers per passenger (resident)	:	0.50
(foreign)	:	0.30
Average wait (minutes) in concourse (resident) . . .	:	15.00
(foreign)	:	20.00

Departure concourse capacity : 4892



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Security Check - Capacity Analysis - Centralized

Number of X-ray units	:	6
Performance standard (minutes)	:	5.00
Number of hand baggage items per passenger	:	0.90
Capacity of hand baggage X-ray unit (pieces/hour) :	:	800

Security check capacity (centralized)	:	4852

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Departure Lounge - Capacity Analysis

Departure lounge area (sq. metres)	:	18000.0
Space required per person (sq. metres)	:	3.00
Performance standard (minutes)	:	10.00
Proportion of passengers (short-haul)	:	0.50
(long-haul)	:	0.50
Average wait (minutes) in lounge (short-haul) .	:	30.00
(long-haul) ..	:	45.00

Departure lounge capacity	:	9133



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Passport Control Arrival - Capacity Analysis

Number of passport positions	:	22
Performance standard (minutes)	:	5.00
Processing time per passenger (minutes)	:	0.50

Passport control capacity	:	2309

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Baggage Claim Area - Facility Sizing

Peak hour terminating passengers	:	0
Peak hour transfer passengers processed landside .	:	0
Space required per person (sq. metres)	:	2.50
Performance standard (minutes)	:	5.00
Average wait per passenger (minutes)	:	15.00

Baggage claim area required (sq. metres)	:	0.0



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Arrival Kerb - Capacity Analysis

Length of existing Arrival kerb (metres) ...	:	450.0
Performance standard (minutes)	:	5.00
Proportion of passengers using car	:	0.30
taxi	:	0.50
coach	:	0.20
Number of passengers per car	:	1.20
taxi	:	1.30
coach	:	18.00
Kerb occupancy time (minutes) per car	:	1.50
taxi	:	1.50
coach	:	10.00
Kerb length (metres) per car	:	6.0
taxi	:	6.0
coach	:	14.0

Capacity of arrival kerb : 3318

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Airport Terminal Capacity Analysis

Date...: 06/14/99

Airport: Aeropuerto de Madrid-Barajas. Terminales T2-T3

Airport terminal elements selected:

Departure Kerb

Departure Concourse

Check-In Desks

Security Check

Departure Lounge

Baggage Claim Area

Number of Baggage Claim Devices

Arrival Concourse

Arrival Kerb



International Air Transport Association

Airport Terminal Capacity Analysis
Summary

Aeropuerto de Madrid-Barajas. Terminales T2-T3

	Pax/Hr
Departure kerb capacity	4832
Departure concourse capacity	4717
Check-in desks capacity	4440
Security check capacity (centralized)	6551
Departure lounge capacity	15113
Baggage claim area capacity	10491
Baggage claim device capacity	3200
Arrival concourse capacity	4531
Arrival kerb capacity	4373



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Departure Kerb - Capacity Analysis

Length of existing departure kerb (metres)	:	225.0
Performance standard (minutes)	:	5.00
Proportion of passengers arriving by car	:	0.31
taxi	:	0.58
coach	:	0.11
Number of passengers per car	:	1.20
taxi	:	1.30
coach	:	18.00
Kerb occupancy time (minutes) per car	:	0.50
taxi	:	0.50
coach	:	5.00
Kerb length (metres) per car	:	6.0
taxi	:	6.0
coach	:	14.0

Capacity of departure kerb : 4832

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Departure Concourse - Capacity Analysis

Existing departure concourse (sq. metres)	:	3400.0
Space required per person (sq. metres)	:	2.50
Performance standard (minutes)	:	15.00
Proportion of passengers (resident)	:	0.70
(foreign)	:	0.30
Well-wishers per passenger (resident)	:	0.50
(foreign)	:	0.30
Average wait (minutes) in concourse (resident)	:	10.00
(foreign)	:	15.00

Departure concourse capacity : 4717



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Check-In Desks - Capacity Analysis

Number of check-in positions	:	98
Performance standard (minutes)	:	5.00
Processing time (minutes) per passenger	:	1.20

Check-In desks capacity	:	4440

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Security Check - Capacity Analysis - Centralized

Number of X-ray units	:	8
Performance standard (minutes)	:	5.00
Number of hand baggage items per passenger	:	0.90
Capacity of hand baggage X-ray unit (pieces/hour) :	:	800

Security check capacity (centralized)	:	6551



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Departure Lounge - Capacity Analysis

Departure lounge area (sq. metres) : 27500.0
Space required per person (sq. metres) : 3.00
Performance standard (minutes) : 10.00
Average wait (minutes) in lounge : 35.00

Departure lounge capacity : 15113

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Baggage Claim Area - Facility Sizing

Peak hour terminating passengers : 0
Peak hour transfer passengers processed landside . : 0
Space required per person (sq. metres) : 2.50
Performance standard (minutes) : 5.00
Average wait per passenger (minutes) : 15.00

Baggage claim area required (sq. metres) : 0.0



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Number of Baggage Claim Devices - Capacity Analysis

Number of baggage claim devices	:	17
Performance standard (minutes)	:	5.00
Number of passengers per aircraft	:	88
Average claim device occupancy time per aircraft	:	25.00

Baggage claim devices capacity	:	3200
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Arrival Concourse - Capacity Analysis

Existing arrival concourse (sq. metres)	:	4000.0
Space required per person (sq. metres)	:	2.50
Performance standard (minutes)	:	15.00
Proportion of passengers (resident)	:	0.70
(foreign)	:	0.30
Greeters per passenger (resident)	:	0.60
(foreign)	:	0.20
Average wait (minutes) in concourse (passengers) .	:	8.00
(greeters) ...	:	25.00

Arrival concourse area capacity	:	4531
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Arrival Kerb - Capacity Analysis

Length of existing Arrival kerb (metres) ...	:	375.0
Performance standard (minutes)	:	5.00
Proportion of passengers using car	:	0.30
taxi	:	0.60
coach	:	0.10
Number of passengers per car	:	1.20
taxi	:	1.30
coach	:	18.00
Kerb occupancy time (minutes) per car	:	1.00
taxi	:	1.00
coach	:	5.00
Kerb length (metres) per car	:	6.0
taxi	:	6.0
coach	:	14.0

Capacity of arrival kerb : 4373

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Airport Terminal Capacity Analysis

Date...: 06/14/99

Airport: Aeropuerto de Madrid-Barajas. Trafico regional T3

Airport terminal elements selected:

Check-In Desks

Security Check

Departure Lounge

Baggage Claim Area

Number of Baggage Claim Devices



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Airport Terminal Capacity Analysis

Summary

Aeropuerto de Madrid-Barajas. Trafico regional T3

	Pax/Hr
Check-in desks capacity	286
Security check capacity (centralized)	512
Departure lounge capacity	483
Baggage claim area capacity	475
Baggage claim device capacity	253



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Check-In Desks - Capacity Analysis

Number of check-in positions	:	8
Performance standard (minutes)	:	5.00
Processing time (minutes) per passenger	:	1.20

Check-In desks capacity	:	286

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Security Check - Capacity Analysis - Centralized

Number of X-ray units	:	1
Performance standard (minutes)	:	5.00
Number of hand baggage items per passenger	:	0.90
Capacity of hand baggage X-ray unit (pieces/hour) :	:	600

Security check capacity (centralized)	:	512



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Departure Lounge - Capacity Analysis

Departure lounge area (sq. metres)	300.0
Space required per person (sq. metres)	: 3.00
Performance standard (minutes)	: 5.00
Average wait (minutes) in lounge	: 10.00

Departure lounge capacity	: 483

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Baggage Claim Area - Facility Sizing

Peak hour terminating passengers	: 0
Peak hour transfer passengers processed landside .	: 0
Space required per person (sq. metres)	: 2.50
Performance standard (minutes)	: 5.00
Average wait per passenger (minutes)	: 10.00

Baggage claim area required (sq. metres)	: 0.0



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Number of Baggage Claim Devices - Capacity Analysis

Number of baggage claim devices	:	4
Performance standard (minutes)	:	5.00
Number of passengers per aircraft	:	45
Average claim device occupancy time per aircraft	:	30.00

Baggage claim devices capacity	:	253

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3. ESTUDIO DE LAS NECESIDADES DEL EDIFICIO TERMINAL DE PASAJEROS PARA LOS NIVELES DE TRÁFICO A Y B

A continuación se dimensionan las distintas dependencias de cada terminal para los niveles de tráfico A y B. El dato de entrada básico es en este caso los pasajeros hora punta de cada nivel de demanda, tanto en salidas como en llegadas, y los pasajeros hora punta en conexión. Todos estos datos se han extraído del Anexo de Previsión de la Demanda, para el tipo de tráfico tratado en cada terminal.

Las páginas siguientes muestran los listados obtenidos por el programa de las dimensiones de cada dependencia y los valores de los diferentes parámetros considerados por el programa, desglosados por terminales.



International Air Transport Association
Airport Terminal Facility Sizing

Date...: 06/14/99

Airport: Barajas-Terminal T1 con nivel de trafico A

Airport terminal elements selected:

- Departure Kerb
- Departure Concourse
- Check-In Desks
- Departure Passport Control
- Security Check
- Departure Lounge
- Arrival Passport Control
- Baggage Claim Area
- Number of Baggage Claim Devices
- Arrival Concourse
- Arrival Kerb



International Air Transport Association

Airport Terminal Facility Sizing
Summary

Barajas-Terminal T1 con nivel de trafico A

Departure kerb length required in metres	:	281.3
Departure concourse area required (sq. metres)	:	5888.9
Number of check-in desks positions required	:	179
Departure passport control positions required	:	15
Number of X-ray units required	:	7
Number of magnetometers required	:	3
Departure lounge area (sq.metres)	:	10896.9
Arrival passport control positions required	:	44
Baggage claim area required (sq. metres)	:	3298.7
Note: This excludes area occupied by baggage reclaim units.		
Number of claim devices required for narrow-body	:	9
Number of claim devices required for wide-body	:	9
Arrival concourse area required (sq. metres)	:	4969.3
Arrival kerb length required in metres	:	367.4



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Departure Kerb - Facility Sizing

Peak hour originating passengers	:	3327
Performance standard (minutes)	:	5.00
Proportion of passengers arriving by car ...	:	0.31
taxi ..	:	0.46
coach ..	:	0.23
Number of passengers per car	:	1.23
taxi	:	1.30
coach	:	18.00
Kerb occupancy time (minutes) per car	:	1.00
taxi	:	1.00
coach	:	5.00
Kerb length (metres) per car	:	6.0
taxi	:	6.0
coach	:	14.0

Kerb length required in metres

: 281.3

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Departure Concourse - Facility Sizing

Peak hour originating passengers	:	3327
Peak hour transfer passengers processed landside ..	:	2123
Performance standard (minutes)	:	15.00
Space required per person (sq. metres)	:	2.50
Proportion of passengers (resident)	:	0.40
(foreign)	:	0.60
Well-wishers per passenger (resident)	:	0.50
(foreign)	:	0.30
Average wait (minutes) in concourse (resident) ...	:	15.00
(foreign)	:	20.00

Departure concourse area required (sq. metres) ... : 5888.9



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Passport Control Arrival - Facility Sizing

Peak hour terminating passengers	:	2675
Peak hour transfer passengers processed landside .	:	2123
Performance standard (minutes)	:	5.00
Processing time per passenger (minutes)	:	0.50

Number of passport control positions required	:	44

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Baggage Claim Area - Facility Sizing

Peak hour terminating passengers	:	2675
Peak hour transfer passengers processed landside .	:	2123
Performance standard (minutes)	:	5.00
Space required per person (sq. metres)	:	2.50
Average wait per passenger (minutes)	:	15.00

Baggage claim area required (sq. metres)	:	3298.7

Note: This excludes area occupied by baggage reclaim units.



International Air Transport Association

Number of Baggage Claim Devices - Facility Sizing

Peak hour terminating passengers	:	2675
Peak hour transfer passengers processed landside	:	2123
Performance standard (minutes)	:	5.00
Proportion of passengers arriving by aircraft narrow-body	:	0.50
wide-body	:	0.50
Number of passengers per aircraft narrow-body	:	150
wide-body	:	220
Average claim device occupancy time per aircraft narrow-body ...	:	30.00
wide-body ...	:	45.00

Number of claim devices required for narrow-body	:	9
Number of claim devices required for wide-body	:	9

Suggested length of each baggage claim device for aircraft

narrow-body	:	30-40 metres
wide-body	:	50-60 metres

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Arrival Concourse - Facility Sizing

Peak hour originating passengers	:	2675
Peak hour transfer passengers processed landside ..	:	2123
Performance standard (minutes)	:	15.00
Space required per person (sq. metres)	:	2.50
Proportion of passengers (resident)	:	0.40
(foreign)	:	0.60
Greeters per passenger (resident)	:	0.80
(foreign)	:	0.50
Average wait (minutes) in concourse (passengers) ..	:	8.00
(greeters) ...	:	25.00
Arrival concourse area required (sq. metres)	:	4969.3



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Arrival Kerb - Facility Sizing

Peak hour terminating passengers	:	2675
Performance standard (minutes)	:	5.00
Proportion of passengers using car	:	0.30
taxi	:	0.50
coach	:	0.20
Number of passengers per car	:	1.20
taxi	:	1.30
coach	:	18.00
Kerb occupancy time (minutes) per car	:	1.50
taxi	:	1.50
coach	:	10.00
Kerb length (metres) per car	:	6.0
taxi	:	6.0
coach	:	14.0

Kerb length required in metres

:	0.0
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International Air Transport Association
Airport Terminal Facility Sizing

Date...: 06/15/99

Airport: Barajas-Terminal T23 con nivel de trafico A

Airport terminal elements selected:

Departure Kerb

Departure Concourse

Check-In Desks

Security Check

Departure Lounge

Baggage Claim Area

Number of Baggage Claim Devices

Arrival Concourse

Arrival Kerb



International Air Transport Association

Airport Terminal Facility Sizing
Summary

Barajas-Terminal T23 con nivel de trafico A

Departure kerb length required in metres	:	154.8
Departure concourse area required (sq. metres)	:	4164.4
Number of check-in desks positions required	:	127
Number of X-ray units required	:	8
Number of magnetometers required	:	3
Departure lounge area (sq. metres)	:	10817.4
Baggage claim area required (sq. metres)	:	3752.7
Note: This excludes area occupied by baggage reclaim units.		
Number of baggage claim devices required	:	29
Arrival concourse area required (sq. metres)	:	4822.8
Arrival kerb length required in metres	:	253.6



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Departure Kerb - Facility Sizing

Peak hour originating passengers	:	3260
Performance standard (minutes)	:	5.00
Proportion of passengers arriving by car ...	:	0.31
taxi ..	:	0.58
coach .	:	0.11
Number of passengers per car	:	1.20
taxi	:	1.30
coach	:	18.00
Kerb occupancy time (minutes) per car	:	0.50
taxi	:	0.50
coach	:	5.00
Kerb length (metres) per car	:	6.0
taxi	:	6.0
coach	:	14.0

Kerb length required in metres

:	154.8
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Departure Concourse - Facility Sizing

Peak hour originating passengers	:	3260
Peak hour transfer passengers processed landside .	:	2548
Performance standard (minutes)	:	15.00
Space required per person (sq. metres)	:	2.50
Proportion of passengers (resident)	:	0.70
(foreign)	:	0.30
Well-wishers per passenger (resident)	:	0.50
(foreign)	:	0.30
Average wait (minutes) in concourse (resident) ...	:	10.00
(foreign)	:	15.00

Departure concourse area required (sq. metres) ... : 4164.4



International Air Transport Association

Check-In Desks - Facility Sizing

Peak hour originating passengers : 3260
Peak hour transfer passengers processed landside : 2548
Performance standard (minutes) : 5.00
Processing time (minutes) per passenger : 1.20

Number of check-in positions required : 127

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Security Check - Facility Sizing - Centralized

Peak hour originating passengers : 3260
Peak hour transfer passengers processed landside . : 2548
Performance standard (minutes) : 5.00
Number of hand baggage items per passenger : 0.90
Capacity of hand baggage X-ray unit (pieces/hour) : 800

Number of X-ray units required : 8
Number of magnetometers required..... : 3



International Air Transport Association

Number of Baggage Claim Devices - Facility Sizing

Peak hour terminating passengers	:	2943
Peak hour transfer passengers processed landside	:	2548
Performance standard (minutes)	:	5.00
Number of passengers per aircraft	:	88
Average claim device occupancy time per aircraft	:	25.00

Number of baggage claim devices required

: 29

Suggested length of each baggage claim device intended to be used for either narrow-body or wide-body aircraft is 50-60 metres

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Arrival Concourse - Facility Sizing

Peak hour originating passengers	:	2943
Peak hour transfer passengers processed landside ..	:	2548
Performance standard (minutes)	:	15.00
Space required per person (sq. metres)	:	2.50
Proportion of passengers (resident)	:	0.70
(foreign)	:	0.30
Greeters per passenger (resident)	:	0.60
(foreign)	:	0.20
Average wait (minutes) in concourse (passengers) .	:	8.00
(greeters) ...	:	25.00

Arrival concourse area required (sq. metres)	:	4822.8
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International Air Transport Association

Arrival Kerb - Facility Sizing

Peak hour terminating passengers	:	2943
Performance standard (minutes)	:	5.00
Proportion of passengers using car	:	0.30
taxi	:	0.50
coach	:	0.20
Number of passengers per car	:	1.20
taxi	:	1.30
coach	:	18.00
Kerb occupancy time (minutes) per car	:	1.00
taxi	:	1.00
coach	:	5.00
Kerb length (metres) per car	:	6.0
taxi	:	6.0
coach	:	14.0

Kerb length required in metres

:	0.0
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International Air Transport Association
Airport Terminal Facility Sizing

Date...: 06/15/99

Airport: Barajas-Terminal T1 con nivel de trafico B

Airport terminal elements selected:

Departure Kerb

Departure Concourse

Check-In Desks

Departure Passport Control

Security Check

Departure Lounge

Arrival Passport Control

Baggage Claim Area

Number of Baggage Claim Devices

Arrival Concourse

Arrival Kerb



International Air Transport Association

Airport Terminal Facility Sizing
Summary

Barajas-Terminal T1 con nivel de trafico B

Departure kerb length required in metres	:	338.1
Departure concourse area required (sq. metres)	:	7395.2
Number of check-in desks positions required	:	224
Departure passport control positions required	:	19
Number of X-ray units required	:	9
Number of magnetometers required	:	4
Departure lounge area (sq.metres)	:	12205.2
Arrival passport control positions required	:	59
Baggage claim area required (sq. metres)	:	4386.8
Note: This excludes area occupied by baggage reclaim units.		
Number of claim devices required for narrow-body	:	12
Number of claim devices required for wide-body	:	12
Arrival concourse area required (sq. metres)	:	6642.2
Arrival kerb length required in metres	:	484.1



International Air Transport Association

Departure Kerb - Facility Sizing

Peak hour originating passengers	:	4003
Performance standard (minutes)	:	5.00
Proportion of passengers arriving by car ...	:	0.31
taxi ..	:	0.46
coach .	:	0.23
Number of passengers per car	:	1.20
taxi	:	1.30
coach	:	18.00
Kerb occupancy time (minutes) per car	:	1.00
taxi	:	1.00
coach	:	5.00
Kerb length (metres) per car	:	6.0
taxi	:	6.0
coach	:	14.0

Kerb length required in metres

: 338.1

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Departure Concourse - Facility Sizing

Peak hour originating passengers	:	4003
Peak hour transfer passengers processed landside .	:	2880
Performance standard (minutes)	:	15.00
Space required per person (sq. metres)	:	2.50
Proportion of passengers (resident)	:	0.40
(foreign)	:	0.60
Well-wishers per passenger (resident)	:	0.50
(foreign)	:	0.30
Average wait (minutes) in concourse (resident) ...	:	15.00
(foreign)	:	20.00

Departure concourse area required (sq. metres) ... : 7395.2



International Air Transport Association

Security Check - Facility Sizing - Centralized

Peak hour originating passengers	:	4003
Peak hour transfer passengers processed landside .	:	2880
Performance standard (minutes)	:	5.00
Number of hand baggage items per passenger	:	0.90
Capacity of hand baggage X-ray unit (pieces/hour)	:	800

Number of X-ray units required	:	9
Number of magnetometers required.....	:	4

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Departure Lounge - Facility Sizing

Peak hour originating passengers	:	4003
Performance standard (minutes)	:	10.00
Peak hour all transfers	:	2123
Peak hour transits	:	0
Space required per person (sq. metres)	:	3.00
Proportion of passengers (short-haul)	:	0.50
(long-haul)	:	0.50
Average wait (minutes) in lounge (short-haul) .	:	30.00
(long-haul) ..	:	45.00

Departure lounge area (sq. metres)

: 12205.2



International Air Transport Association

Passport Control Arrival - Facility Sizing

Peak hour terminating passengers	:	3582
Peak hour transfer passengers processed landside .	:	2880
Performance standard (minutes)	:	5.00
Processing time per passenger (minutes)	:	0.50

Number of passport control positions required	:	59

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Baggage Claim Area - Facility Sizing

Peak hour terminating passengers	:	3582
Peak hour transfer passengers processed landside .	:	2880
Performance standard (minutes)	:	5.00
Space required per person (sq. metres)	:	2.50
Average wait per passenger (minutes)	:	15.00

Baggage claim area required (sq. metres)	:	4386.8
Note: This excludes area occupied by baggage reclaim units.		



International Air Transport Association

Arrival Kerb - Facility Sizing

Peak hour terminating passengers	:	3582
Performance standard (minutes)	:	5.00
Proportion of passengers using car	:	0.30
taxi	:	0.50
coach	:	0.20
Number of passengers per car	:	1.20
taxi	:	1.30
coach	:	18.00
Kerb occupancy time (minutes) per car	:	1.50
taxi	:	1.50
coach	:	10.00
Kerb length (metres) per car	:	6.0
taxi	:	6.0
coach	:	14.0

Kerb length required in metres

:	0.0
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International Air Transport Association
Airport Terminal Facility Sizing

Date...: 06/14/99

Airport: Barajas-Terminal T23 con nivel de trafico B

Airport terminal elements selected:

Departure Kerb

Departure Concourse

Check-In Desks

Security Check

Departure Lounge

Baggage Claim Area

Number of Baggage Claim Devices

Arrival Concourse

Arrival Kerb



International Air Transport Association

Airport Terminal Facility Sizing
Summary

Barajas-Terminal T23 con nivel de trafico B

Departure kerb length required in metres	:	233.7
Departure concourse area required (sq. metres)	:	5975.0
Number of check-in desks positions required	:	181
Number of X-ray units required	:	11
Number of magnetometers required	:	5
Departure lounge area (sq. metres)	:	15492.9
Baggage claim area required (sq. metres)	:	5117.1
Note: This excludes area occupied by baggage reclaim units.		
Number of baggage claim devices required	:	39
Arrival concourse area required (sq. metres)	:	6610.3
Arrival kerb length required in metres	:	355.8



International Air Transport Association

Departure Kerb - Facility Sizing

Peak hour originating passengers	:	5026
Performance standard (minutes)	:	5.00
Proportion of passengers arriving by car ...	:	0.31
taxi ..	:	0.58
coach ..	:	0.11
Number of passengers per car	:	1.20
taxi	:	1.30
coach	:	18.00
Kerb occupancy time (minutes) per car	:	0.50
taxi	:	0.50
coach	:	5.00
Kerb length (metres) per car	:	6.0
taxi	:	6.0
coach	:	14.0

Kerb length required in metres

: 233.7

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Departure Concourse - Facility Sizing

Peak hour originating passengers	:	5026
Peak hour transfer passengers processed landside ..	:	3378
Performance standard (minutes)	:	15.00
Space required per person (sq. metres)	:	2.50
Proportion of passengers (resident)	:	0.70
(foreign)	:	0.30
Well-wishers per passenger (resident)	:	0.50
(foreign)	:	0.30
Average wait (minutes) in concourse (resident) ...	:	10.00
(foreign)	:	15.00

Departure concourse area required (sq. metres) ... : 5975.0



International Air Transport Association

Check-In Desks - Facility Sizing

Peak hour originating passengers : 5026
Peak hour transfer passengers processed landside : 3378
Performance standard (minutes) : 5.00
Processing time (minutes) per passenger : 1.20

Number of check-in positions required : 181

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Security Check - Facility Sizing - Centralized

Peak hour originating passengers : 5026
Peak hour transfer passengers processed landside . : 3378
Performance standard (minutes) : 5.00
Number of hand baggage items per passenger : 0.90
Capacity of hand baggage X-ray unit (pieces/hour) : 800

Number of X-ray units required : 11
Number of magnetometers required..... : 5



International Air Transport Association

Departure Lounge - Facility Sizing

Peak hour originating passengers : 5026
Performance standard (minutes) : 10.00
Peak hour all transfers : 3378
Peak hour transits : 0
Space required per person (sq. metres) : 3.00
Average wait (minutes) in lounge : 35.00

Departure lounge area (sq. metres) : 15492.9

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Baggage Claim Area - Facility Sizing

Peak hour terminating passengers : 4206
Peak hour transfer passengers processed landside . : 3378
Performance standard (minutes) : 5.00
Space required per person (sq. metres) : 2.50
Average wait per passenger (minutes) : 15.00

Baggage claim area required (sq. metres) : 5117.1
Note: This excludes area occupied by baggage reclaim units.



International Air Transport Association

Number of Baggage Claim Devices - Facility Sizing

Peak hour terminating passengers	:	4206
Peak hour transfer passengers processed landside	:	3378
Performance standard (minutes)	:	5.00
Number of passengers per aircraft	:	88
Average claim device occupancy time per aircraft	:	25.00

Number of baggage claim devices required

: 39

Suggested length of each baggage claim device intended to be used for either narrow-body or wide-body aircraft is 50-60 metres

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Arrival Concourse - Facility Sizing

Peak hour originating passengers	:	4206
Peak hour transfer passengers processed landside ..	:	3378
Performance standard (minutes)	:	15.00
Space required per person (sq. metres)	:	2.50
Proportion of passengers (resident)	:	0.70
(foreign)	:	0.30
Greeters per passenger (resident)	:	0.60
(foreign)	:	0.20
Average wait (minutes) in concourse (passengers) ..	:	8.00
(greeters) ...	:	25.00

Arrival concourse area required (sq. metres)	:	6610.3
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International Air Transport Association

Arrival Kerb - Facility Sizing

Peak hour terminating passengers	:	4206
Performance standard (minutes)	:	5.00
Proportion of passengers using car	:	0.30
taxi	:	0.50
coach	:	0.20
Number of passengers per car	:	1.20
taxi	:	1.30
coach	:	18.00
Kerb occupancy time (minutes) per car	:	1.00
taxi	:	1.00
coach	:	5.00
Kerb length (metres) per car	:	6.0
taxi	:	6.0
coach	:	14.0

Kerb length required in metres	:	0.0

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