OTHH — HAMAD INTERNATIONAL

OTHH AD 2.1 AERODROME LOCATION INDICATOR AND NAME

OTHH — HAMAD INTERNATIONAL

OTHH AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	*ARP coordinates and site at AD*	251628.43N 0513630.16E Adjacent to control Tower building
2	*Direction and distance from (city)*	5.5 NM East from Doha City Centre
3	*Elevation/Reference temperature*	13 FT/42°C
4	*Geoid undulation at AD ELEV PSN*	-98 FT
5	*MAG VAR/Annual change*	2.3°E (JUN 2014) / 0.05°E
6	*AD Operator, address, telephone, telefax, telex, AFS*	Post: Chief Operating Office Hamad International Airport P.O. Box 24730 Doha State of Qatar Tel: (974) 4010 7715 / (974) 4010 3999 Fax: (974) 4010 1010 SITA: DOHAOXH
7	*Types of traffic permitted (IFR/VFR)*	IFR / VFR
8	*Remarks*	Airport Operations Control Centre Duty Manager (AOCC DM) 24/7: Tel: (974) 4010 3999

OTHH AD 2.3 OPERATIONAL HOURS

1	*AD Operator*	H24
2	*Customs and immigration*	H24
3	*Health and sanitation*	H24
4	*AIS Briefing Office*	H24
5	*ATS Reporting Office (ARO)*	H24
6	*MET Briefing Office*	H24
7	*ATS*	H24
8	*Fuelling*	H24
9	*Handling*	H24
10	*Security*	H24
11	*De-icing*	Not required due to local climate
12	*Remarks*	a. Scheduled closure of RWY 16L/34R - Mondays 0700 to 1100 and Tuesdays 0000 to 0130. b. Scheduled closure of RWY 16R/34L - Wednesdays 0700 to 1100 and Thursdays 0000 to 0130.

OTHH AD 2.4 HANDLING SERVICES AND FACILITIES

1	*Cargo-handling facilities*	Available
2	*Fuel/oil types*	Jet A1

3	*Fuelling facilities/capacity*	Fuel Hydrant System on Concourse A, B, C, D and E, Remote Stands G and H, Emiri Apron, Cargo Apron and Maintenance Apron - stands Q1 ,Q2 ,Q3 and Q4 . Code C alternative Stands and General Aviation, bowsers only.
4	*De-icing facilities*	Not required due to local climate
5	*Hangar space for visiting aircraft*	NIL
6	*Repair facilities for visiting aircraft*	Qatar Airways Technical by arrangement .
7	*Remarks*	For Handling services. Contact QAS. See Item 9 of GEN 1.1 and 2.5 of GEN 1.2

OTHH AD 2.5 PASSENGER FACILITIES

1	*Hotels*	Hotel accommodation available in the airport and in Doha City
2	*Restaurants*	H24 Airport restaurant in the terminal building
3	*Transportation*	Bus Services ,Taxi and courtesy coaches to hotels
4	*Medical facilities*	Airport's Medical Centre located at passenger terminal complex. Operated H24. Full medical facilities (Level 3 Hospital) are available in the City of Doha. Ambulance available at airport.
5	*Bank and Post Office*	Available at Airport Terminal building
6	*Tourist Office*	Available at Airport Terminal building
7	*Remarks*	NIL

OTHH AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	*AD category for fire fighting*	CAT 10
2	*Rescue equipment*	Rescue equipment : As per ICAO Annex 14 and QCAR - ADR - "Aerodrome Design, Operations and Licensing"
3	*Capability for removal of disabled aircraft*	The recovery equipment available at Hamad International Airport is able to assist in the recovery of aircraft up to and including A380. The disabled Aircraft Recovery Team shall be activated through the Qatar Airways OCC H24. Duty Manager Telephone number(s) (974) 4018 4500 / 4018 4977 to activate the Disabled Aircraft Recovery Team.
4	*Remarks*	Total number of trained personnel: 100+ Communications with aircraft on ground available on 121.6 MHz

OTHH AD 2.7 SEASONAL AVAILABILITY - CLEARING

1	*Types of clearing equipment*	NIL
2	*Clearance priorities*	N / A
3	*Remarks*	Local climate precludes the requirement. Aerodrome is available in all seasons.

OTHH AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS/POSITIONS DATA

1	*Designation, surface and strength of aprons*	CONCOURSE A: concrete, PCN 110 / R / B / W / T CONCOURSE B: concrete, PCN 110 / R / B / W / T CONCOURSE C: concrete, PCN 92 / R / B / W / T CONCOURSE D: concrete, PCN 92 / R / B / W / T CONCOURSE E: concrete, PCN 92 / R / B / W / T APRON 4: concrete, PCN 76 / R / B / W / T APRON 5: concrete, PCN 185 / R / B/ W / T REMOTE TRANSFER: concrete, PCN 110 / R / B / W / T EMIRI TERMINAL: concrete, PCN 110 / R / B / W / T CARGO AND COURIER: concrete, PCN 110 / R / B / W / T MAINTENANCE: concrete, PCN 110 / R / B / W / T GENERAL AVIATION : asphalt, PCN 110 / F / B / W / T ISOLATION PAD: concrete, PCN 110 / R / B / W / T
2	*Designation, width, surface and strength of taxiways*	TWY A: 30 M, asphalt, PCN 110 / F / B / W / T TWY A1-A12: 30 M, asphalt, PCN 110 / F / B / W / T TWY B: 25 M, asphalt, PCN 110 / F / B / W / T TWY C: 25 M, asphalt, PCN 110 / F / B / W / T TWY D: 25 M, asphalt, PCN 110 / F / B / W / T & 168 / F / A / X / T TWY E: 30 M, asphalt, PCN 110 / F / B / W / T TWY E1: 25 M, asphalt, PCN 110 / F / B / W / T & 168 / F / A / X / T TWY E2: 25 M, asphalt, PCN 110 / F / B / W / T TWY E3: 25 M, asphalt, PCN 110 / F / B / W / T TWY E4: 25 M, asphalt, PCN 168 / F / A / X / T TWY G: 30 M, asphalt, PCN 110 / F / B / W / T TWY H: 25 M, asphalt, PCN 110 / F / B / W / T & 168 / F / A / X / T TWY J: between TWY L and TWY R: 25 M, asphalt, PCN 110 / F / B / W / T TWY J between TWY L10 and TWY L12: 25 M, concrete, PCN 107 / R / B / W / T TWY K: 25 M, asphalt, PCN 110 / F / B / W / T TWY L: 30 M, asphalt, PCN 110 / F / B / W / T TWY L1-L9: 30 M, asphalt, PCN 110 / F / B / W / T TWY L10-L12 between RWY 16R/34L and TWY K: 30 M, asphalt, PCN 110 / F / B / W / T TWY L10-L12 between TWY K and TWY J: 25 M, concrete, PCN 112 / R /B / X / T TWY N: 25 M, asphalt, PCN 168 / F / A / X / T TWY Q: 25 M, asphalt, PCN 110 / F / B / W / T TWY Q1: 25 M, asphalt, PCN 110 / F / B / W / T TWY Q2: 25 M, asphalt, PCN 110 / F / B / W / T TWY R: 25 M, asphalt, PCN 110 / F / B / W / T & 168 / F / A / X / T TWY S: 25 M, asphalt, PCN 110 / F / B / W / T & 168 / F / A / X / T TWY T: 40 M, asphalt, PCN 110 / F / B / W / T TWY T1: 25 M, asphalt, PCN 168 / F / A / X / T TWY T2: 25 M, asphalt, PCN 168 / F / A / X / T TWY T3: 25 M, asphalt, PCN 168 / F / A / X / T TWY T4: 25 M, asphalt, PCN 168 / F / A / X / T TWY V: 25 M, asphalt, PCN 110 / F / B / W / T TWY W: 30 M, asphalt, PCN 110 / F / B / W / T TWY W1: 25 M, asphalt, PCN 110 / F / B / W / T & 168 / F / A / X / T TWY W2: 25 M, asphalt, PCN 110 / F / B / W / T TWY W3: 25 M, asphalt, PCN 110 / F / B / W / T TWY W4: 25 M, asphalt, PCN 168 / F / A / X / T TWY Y: 30 M, asphalt, PCN 110 / F / B / W / T
3	*Altimeter checkpoint location and elevation*	All aircraft stands: 17 FT
4	*VOR checkpoints*	RWY 34R - Holding Point A; RWY 16L - Holding Point A12; RWY 34L - Holding Point L; RWY 16 R - Holding Point L12.
5	*INS checkpoints*	See AIRCRAFT PARKING / DOCKING CHARTS
6	*Remarks*	Code F aircraft operations are permitted on all taxiways except following taxiways: TWY E (BTN TWY D and Stand B2) TWY W (BTN TWY H and Stand A4) TWY N TWY Y

OTHH AD 2.9 SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM AND MARKINGS

1	Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system at aircraft stands	Mandatory signs at all intersections of TWYs and RWYs at all holding positions. Taxi information and location signs at all TWYs. VDGS installed and operational on all stands except for MARS stands. VDGS not available on APRON 4 Stands. Stands not equipped with VDGS have marked centre lines and will be marshalled. For information on VDGS; Stands 501-515 see OTBD AD 2.23.1 Visual Docking Guidance System For all other stands see OTHH AD 2.23.3 Visual Docking Guidance System.
2	*RWY and TWY markings*	RWY: Designation, THR, TDZ, CL, Edge, RWY end. See AD 2.14 and AD 2.15 for additional information on lighting. TWY: Edge marking, CL, Holding Positions at all TWY / RWY intersections.
3	*Stop bars*	Stop bars at all RWY entrances and where appropriate.
4	Remarks	Details of each aircraft stand in relation to common aircraft types for parking possibilities together with limitations are depicted in OTHH AD 2.23.4 Aircraft parking restrictions at Hamad International Airport.

OTHH AD 2.10 AERODROME OBSTACLES

1 OBSTACLES IN AREA 2

1.1 Obstacles in Area 2 are available in electronic format. Refer to GEN 3.1.6 Electronic terrain and obstacle data.

2 OBSTACLES IN AREA 3

2.1 Obstacles in Area 3 are available in electronic format. Refer to GEN 3.1.6 Electronic terrain and obstacle data.

OTHH AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	*Associated MET Office*	Forecast and Analysis Office, Qatar Met Dept, Doha International Airport.
2	*Hours of service*	H24
	MET Office outside hours	NIL
3	*Office responsible for TAF preparation*	Forecast and Analysis Office, Qatar Met Dept, Doha International Airport.
	Periods of validity	H30 (prepared 6 hourly).
4	*Trend forecast*	TREND
	Interval of issuance	½ HR
5	*Briefing/consultation provided*	Issue of forecast folders, Personal consultations, self briefings, telephone consultation with duty forecaster.
6	*Flight documentation*	Charts, abbreviated plain language text.
	Language(s) used	English
7	*Charts and other information available for briefing or consultation*	S, U_{25}, P_{25}, (other levels on request), T, SWH (East & West), SWM, TB (Gulf sector winds).
8	*Supplementary equipment available for providing information*	Fax, e-mail, IVR (Interactive Voice Response) for general information.
9	*ATS units provided with information*	HAMAD TOWER, DOHA APPROACH
10	*Additional information (limitation of service, etc.)*	NIL

OTHH AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY NR	TRUE BRG	Dimensions of RWY (M)	Strength (PCN) and surface of RWY and SWY	THR coordinates, RWY end coordinates, THR geoid undulation	THR elevation and highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
16L	158.17˚	4 850 X 60	110 / F / B / W / T asphalt	251745.97N 0513631.96E 251519.65N 0513736.41E -98.32 FT	THR 13.21 FT TDZ 13.39 FT
34R	338.18˚	4 850 X 60	110 / F / B / W / T asphalt	251519.65N 0513736.41E 251745.97N 0513631.96E -98.57 FT	THR 13.10 FT TDZ 13.39 FT
16R	158.16˚	4 250 X 60	110 / F / B / W / T asphalt	251727.52N 0513523.07E 251519.32N 0513619.56E -98.27 FT	THR 13.13 FT TDZ 13.50 FT
34L	338.17˚	4 250 X 60	110 / F / B / W / T asphalt	251519.32N 0513619.56E 251727.52N 0513523.07E -98.49 FT	THR 13.22 FT TDZ 13.47 FT

Designations RWY NR	Slope of RWY- SWY		SWY dimensions (M)	CWY dimensions (M)	Strip dimensions (M)	RESA dimensions (M)	Location and Arresting System	OFZ	Remarks
	RWY	SWY							
1	7		8	9	10	11	12	13	14
16L	0	NIL	NIL	NIL	4 970 X 300	240 x 120	NIL	Yes	Non-load bearing Runway shoulders - 7.5 M each side
34R	0	NIL	NIL	NIL	4 970 X 300	240 x 120	NIL	Yes	Non-load bearing Runway shoulders - 7.5 M each side
16R	0	NIL	NIL	NIL	4 370 X 300	240 x 120	NIL	Yes	Non-load bearing Runway shoulders - 7.5 M each side
34L	0	NIL	NIL	NIL	4 370 X 300	240 x 120	NIL	Yes	Non-load bearing Runway shoulders - 7.5 M each side

OTHH AD 2.13 DECLARED DISTANCES

RWY Designator	Intersection Departures	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	Remarks
1	2	3	4	5	6	7
16L	Not Applicable	4 850	4 850	4 850	4 850	NIL
	TWY A11	4 730	4 730	4 730	NIL	
	TWY A10	4 082	4 082	4 082	NIL	
	TWY A6	2 497	2 497	2 497	NIL	
34R	Not Applicable	4 850	4 850	4 850	4 850	
	TWY A1	4 730	4 730	4 730	NIL	
	TWY A2	4 266	4 266	4 266	NIL	
	TWY A3	3 077	3 077	3 077	NIL	
	TWY A6	2 386	2 386	2 386	NIL	
16R	Not Applicable	4 250	4 250	4 250	4 250	
	TWY L11	4 130	4 130	4 130	NIL	
	TWY L10	3 614	3 614	3 614	NIL	
	TWY L7	2 348	2 348	2 348	NIL	
34L	Not Applicable	4 250	4 250	4 250	4 250	
	TWY L1	4 122	4 122	4 122	NIL	
	TWY L2	3 646	3 646	3 646	NIL	
	TWY L7	1 935	1 935	1 935	NIL	

Note: Intersection departures are allowed subject to the following:
a. Initiated by pilot and approved by ATC, subject to traffic.
b. ATC is able to keep aircraft visual at all times.

OTHH AD 2.14 APPROACH AND RUNWAY LIGHTING

RWY Designator	APCH LGT type, LEN, INTST	THR LGT, colour,WBAR	VASIS (MEHT) PAPI	TDZ LGT LEN	RWY Centre Line LGT Length, spacing, colour, INTST
1	2	3	4	5	6
16L	CAT III 900 M LIH	LIH Green supplemented by WBAR	PAPI 3˚ (16.2M)	900 M	Length: 4 850 M Spacing : 15 M Colour: fm 0 M to last 900 M White, last 900 M to last 300 M Red / White, last 300 M Red INTST: LIH
34R	CAT III 900 M LIH	LIH Green supplemented by WBAR	PAPI 3˚ (16.0 M)	900 M	Length: 4 850 M Spacing: 15 M Colour: fm 0 M to last 900 M White, last 900 M to last 300 M Red / White, last 300 M Red INTST: LIH
16R	CAT III 900 M LIH	LIH Green supplemented by WBAR	PAPI 3˚ (15.8 M)	900 M	Length: 4 250 M Spacing: 15 M Colour: fm 0 M to last 900 M White, last 900 M to last 300 M Red / White , last 300 M Red INTST: LIH

RWY Designator	APCH LGT type, LEN, INTST	THR LGT, colour,WBAR	VASIS (MEHT) PAPI	TDZ LGT LEN	RWY Centre Line LGT Length, spacing, colour, INTST
1	2	3	4	5	6
34L	CAT III 900 M LIH	LIH Green supplemented by WBAR	PAPI 3˚ (17.4 M)	900 M	Length: 4 250 M Spacing: 15 M Colour: fm 0 M to last 900 M White, last 900 M to last 300 M Red / White, last 300 M Red INTST: LIH

RWY Designator	RWY edge LGT LEN, spacing, colour, INTST	RWY End LGT colour, WBAR	SWY LGT LEN, colour	Remarks
1	7	8	9	10
16L	Length: 4 850 M Spacing: 60 M Colour: fm 0 M to last 600 M White, last 600 M Yellow INTST: LIH	Red NIL	NIL	NIL
34R	Length: 4 850 M Spacing: 60 M Colour: fm 0 M to last 600 M White, last 600 M Yellow INTST: LIH	Red NIL	NIL	NIL
16R	Length: 4 250 M Spacing: 60 M Colour: fm 0 M to last 600 M White, last 600 M Yellow INTST: LIH	Red NIL	NIL	NIL
34L	Length: 4 250 M Spacing: 60 M Colour: fm 0 M to last 600 M White, last 600 M Yellow INTST: LIH	Red NIL	NIL	NIL

OTHH AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY

1	*ABN / IBN location, characteristics and hours of operation*	ABN: NIL IBN: NIL
2	*LDI location and LGT*	LDI: NIL
	Anemometer location and LGT	Anemometer: 16L - 251736.4560N 0513640.7313E 34R - 251532.1162N 0513735.5462E 16R - 251715.2675N 0513524.0348E 34L - 251530.2198N 0513609.9122E Automated Weather Observing System (AWOS). WS425 Ultrasonic wind Sensor

3	*TWY edge and centre line lighting*	Rapid Exit Taxiway Indicator Lights (RETIL) marked and lit when required. RETIL lead-off lights are alternate green/amber indicating within ILS sensitive area. Taxiway centreline lights are green, except when within ILS sensitive area, where taxiway centre line lights are alternate green/amber. Taxiway blue edge lighting provided on bends and curves only. Holding positions at all taxiway to runway intersections are lit by red stop bars except on Cat I holding position of Taxiway A2, A6, A10, L2, L7 and L10. Red stop bars will be switched off when permission is given to enter the runway. Aircraft are at no time to cross a lit red stop bar to enter a runway.
4	*Secondary power supply/switch-over time*	Available via UPS immediate power. Standby generator also available. Switch-over time of less than 1 second.
5	*Remarks*	NIL

OTHH AD 2.16 HELICOPTER LANDING AREA

1	*Coordinates TLOF or THR of FATO* *Geoid undulation*	NIL NIL
2	*TLOF and/or FATO elevation M/FT*	NIL
3	*TLOF and FATO area dimensions, surface, strength, marking*	NIL
4	*True BRG of FATO*	NIL
5	*Declared distance available*	NIL
6	*APP and FATO lighting*	NIL
7	*Remarks*	NIL

OTHH AD 2.17 ATS AIRSPACE

1	*Designation and lateral limits*	DOHA CTR: Refer to OTBD-AD-2.17
2	*Vertical limits*	SFC to 2 500 FT
3	*Airspace classification*	D
4	*ATS unit call sign* *Language(s)*	HAMAD Tower English
5	*Transition altitude*	13 000 FT
6	*Hours of applicability*	H24
7	*Remarks*	NIL

OTHH AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	Call sign	Frequencies allocation (MHz)	Logon address	Hours of operation	Remarks
1	2	3	4	5	6
APP	Doha Radar	121.100	N/A	H24	Primary
	Doha Approach	119.725	N/A	H24	Primary
		120.600	N/A	H24	Secondary
	Doha Director	119.400	N/A	H24	Primary
		121.125	N/A	H24	Secondary
	-	121.500	N/A	H24	Emergency
	-	243.000	N/A	H24	Emergency

Service designation	Call sign	Frequencies allocation (MHz)	Logon address	Hours of operation	Remarks
1	2	3	4	5	6
TWR	Hamad Tower East	118.525	N/A	H24	
	Hamad Tower West	118.025	N/A	H24	
	Hamad Tower	118.225	N/A	H24	Secondary
	Hamad Clearance Delivery	120.875	N/A	H24	
	-	121.500	N/A	H24	Emergency
	-	243.000	N/A	H24	Emergency
GMC	Hamad Ground East	120.225	N/A	H24	Note1
	Hamad Ground West	118.650	N/A	H24	Note2
	Hamad Ground	121.675	N/A	H24	Secondary
D-ATIS	Hamad Terminal Information	126.850	DOHATYA	H24	Data Link Service available. ATIS broadcast can also be obtained via hotline: (974)44705310-13
DCL	N/A	N/A	DOHDCYA	H24	Data Link Service for departure clearance
CPDLC	N/A	N/A	DOHFAYA	H24	

Note 1 - Aircraft on Cargo Apron, Emiri Terminal and aircraft leaving Aircraft Maintenance area and Emiri Hangar area.

Note 2 - Aircraft parked on the North Node and General Aviation Apron.

Note 3 - All departing aircraft shall immediately contact "Doha Approach" on 119.725 MHz

OTHH AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of Aid, MAG VAR, Type of supported OPS (for VOR/ILS/MLS, give declination)	IDENT	Frequency	Hours of operation	Position of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
DVOR / DME (2.3˚E / 2014)	DOH	114.400 MHz CH 91X	H24	251459.66N 0513634.80E	39.34 FT	NIL
LOC RWY 16L ILS CAT III	IDE	108.700 MHz	H24	251510.34N 0513740.51E		Distance from threshold 16L 5 158.71 M
GP RWY 16L		330.500 MHz	H24	251738.19N 0513640.39E		3˚ ILS RDH 55 FT
ILS DME RWY 16L	IDE	CH 24X	H24	251738.20N 0513640.43E	32.00 FT	Co - located with GP, DIST zero TDZ
MM RWY 16L		75 MHz	H24	251814.92N 0513619.21E		ELEV 26.65 FT
LOC RWY 34R ILS CAT III	AZM	110.100 MHz	H24	251755.28N 0513627.86E		Distance from threshold 34R 5 158.63 M
GP RWY 34R		334.400 MHz	H24	251530.57N 0513736.60E		3˚ ILS RDH 53 FT
ILS DME RWY 34R	AZM	CH 38X	H24	251530.56N 0513736.56E	31.46 FT	Co - located with GP, DIST zero TDZ
MM RWY 34R		75 MHz	H24	251450.69N 0513749.16E		ELEV 30.83 FT
LOC RWY 16R ILS CAT III	QAT	108.100 MHz	H24	251509.98N 0513623.68E		Distance from threshold 16R 4 559.70 M

Type of Aid, MAG VAR, Type of supported OPS (for VOR/ILS/MLS, give declination)	IDENT	Frequency	Hours of operation	Position of transmitting antenna coordinates	Elevation of DME transmitting antenna	Remarks
1	2	3	4	5	6	7
GP RWY 16R		334.700 MHz	H24	251716.61N 0513522.87E		3˚ ILS RDH 53 FT
ILS DME RWY 16R	QAT	CH 18X	H24	251716.62N 0513522.92E	32.47 FT	Co - located with GP, DIST zero TDZ
MM RWY 16R		75 MHz	H24	251756.47N 0513510.31E		ELEV 26.71 FT
LOC RWY 34L ILS CAT III	HJJ	111.900 MHz	H24	251736.83N 0513518.96E		Distance from threshold 34L 4 558.67 M
GP RWY 34L		331.100 MHz	H24	251528.74N 0513610.37E		3˚ ILS RDH 53 FT
ILS DME RWY 34L	HJJ	CH 56X	H24	251528.73N 0513610.33E	31.54 FT	Co - located with GP, DIST zero TDZ
MM RWY 34L		75 MHz	H24	251449.78N 0513632.57E		ELEV 23.39 FT

OTHH AD 2.20 LOCAL AERODROME REGULATIONS

1 AIRPORT REGULATIONS

1.1 Diversion Aircraft: Available as an alternate and can accommodate any type of diversion.

1.2 At Hamad International Airport a number of local regulations apply. The list of regulations listed below are available at the AIS Briefing Office.

- Airport By-Law 2010
- HIA Aerodrome Manual, Second Edition Version 1.0 April 2014
- HIA Safety Mangement System, Second Edition Version 1.0 April 2014
- Airport Emergency Plan - HIA Edition Version 1.0 July 2014
- Disabled Aircraft Recovery Plan - 1 NOV 2010
- HIA Airside Vehicle Operating Rules – April 2014
- Interim Wildlife Hazard Management Plan v.1 - May 2012

When a local regulation is of importance for the safe operation of aircraft on the apron, the information will be given to each aircraft by the TWR or GMC.

2 TAXIING TO AND FROM STANDS

2.1 Nose-in parking is mandatory. Exemptions only given in special cases with specific authorization from ATC & AD operator.

2.2 Aircraft are restricted to push back from nose in parking stands. Exemptions will be granted to certain aircraft by the AD operator.

2.3 Non-marked parking areas may also be assigned for aircraft parking. Aircraft will be hand-marshalled.

2.4 Parking Restrictions in APRON 4.

2.4.1 Apron 4 is having Power In – Power Out (PIPO) Aircraft stand parking configuration.

2.4.2 Power In – Power Out stands are 425E, 425W, 426E, 426W, 427E, 427W, 428E, 428W, 429E, 429W. There will be 5 parallel lead in/off lines with two nose wheel parking position on each line; Facing West to and from TWY Q; and Facing

East to and from TWY C. Pilots must follow " Follow Me vehicle" and marshaller for parking and shall use of minimum thrust taxiing only.

2.4.3 Power In – Power Out arrangement on Stands mentioned in 2.4.2 are for aircraft type up to code C only.

2.4.4 If stands 425W, 426W, 427W, 428W, 429W is/are occupied with Aircraft, stands 425E, 426E, 427E, 428E, 429E will be automatically blocked (vice versa).

2.4.5 180 degrees turn on the Power In – Power Out (PIPO) stands are not allowed.

3 PARKING AREA FOR SMALL AIRCRAFT (GENERAL AVIATION)

General Aviation Apron contains nine(09) code C stands (Y1-Y9). General aviation aircraft shall be guided by marshallers to the parking area for small aircraft.

4 PARKING AREA FOR HELICOPTERS

(To be developed).

5 APRON - TAXING DURING WINTER CONDITIONS

Not Applicable.

6 TAXIING — LIMITATIONS

Insufficient safety distances restrict large aircraft's use of certain taxiways when using their own power. Further information will be given to each aircraft from the TWR or GMC.

7 SCHOOL AND TRAINING FLIGHTS - TECHNICAL TEST FLIGHTS - USE OF RUNWAYS

Training flights not permitted.

8 HELICOPTER TRAFFIC — LIMITATION

(To be developed).

9 REMOVAL OF DISABLED AIRCRAFT FROM RUNWAYS

When an aircraft is wrecked on a runway, it is the duty of the owner or user of such aircraft to have it removed as soon as possible. If a wrecked aircraft is not removed from the runway as quickly as possible by the owner or user, the aircraft will be removed by the aerodrome authority at the owner's or user's expense.

OTHH AD 2.21 NOISE ABATEMENT PROCEDURES

NIL

OTHH AD 2.22 FLIGHT PROCEDURES

1 SPECIAL PROCEDURES APPLICABLE TO ILS CATEGORY II / III OPERATIONS AT HAMAD INTERNATIONAL

1.1 GENERAL

1.1.1 ILS CAT II / III approach facilities are available at HAMAD INTERNATIONAL airport as follows:

- OTHH: RWY 16L, CAT II or CAT III
- OTHH: RWY 34R, CAT II or CAT III
- OTHH: RWY 16R, CAT II or CAT III
- OTHH: RWY 34L, CAT II or CAT III

1.1.2 Current Information concerning surface, wind and RVR is immediately available from ATC and significant changes will be reported in accordance with the provisions of PANS - ATM (DOC 4444).

1.1.3 Any changes in the operational status expected to last more than one hour will be promulgated by NOTAM and pilots will be advised accordingly by ATIS or on initial contact with ATC.

1.2 MINIMA

See section OTHH 2.22.3 Aerodrome Operating Minima

1.3 AUTHORIZATION

Operators will be permitted to execute CAT II / III approaches and landings if they are legally authorized by their own state of registration to do so, and after having conveyed a copy of their relevant certification papers to the:

Post: Chairman
Civil Aviation Authority
P.O. Box 3000
Doha
State of Qatar
And obtaining endorsement of acceptance therefrom.

2 LOW VISIBILITY PROCEDURES (LVP)

2.1 As authorised by QCAA, Low Visibility Procedures (LVP) will be instituted in a phase approach manner at HAMAD INTERNATIONAL airport whenever the official meteorological visibility condition is 2000 M or less, or whenever the cloud base is 1000 FT or less, or whenever conditions are such that all of the manoeuvring area cannot be seen from the control tower.

2.2 The procedures will ensure protection of the ILS localizer and glide path signals to ILS CAT III limits, provide an effective surface movement guidance and control system, and ensure a safe ground environment for aircraft and vehicles.

2.3 LVP will not normally be introduced for aircraft carrying out practice CAT II or CAT III approaches although a request may be made to ATC for ILS signal protection.

3 AERODROME OPERATING MINIMA

3.1 LANDING OPERATING MINIMA

Straight-in RWY	Aircraft Category			
	A	B	C	D
RWY 16L				
CAT 3B ILS	RVR 50 M	RVR 50 M	RVR 50 M	RVR 50 M
CAT 3A ILS	RA 50 FT RVR 200 M	RA 50 FT RVR 200 M	RA 50 FT RVR 200 M	RA 50 FT RVR 200 M
CAT 2 ILS	DA (H) 113 FT (100 FT) RA 100 FT	DA (H) 113 FT (100 FT) RA 100 FT	DA (H) 113 FT (100 FT) RA 100 FT	DA (H) 129 FT (116 FT) RA 117 FT
ALS out	RVR 300 M	RVR 300 M	RVR 300 M	RVR 300 M*/350 M
ILS	DA (H) 213 FT (200 FT) RVR 550 M	DA (H) 213 FT (200 FT) RVR 550 M	DA (H) 213 FT (200 FT) RVR 550 M	DA (H) 220 FT (207 FT) RVR 550 M
ALS out	RVR 1 200 M	RVR 1 200 M	RVR 1 200 M	RVR 1 200 M
LOC	MDA (H) 370 FT (357 FT) RVR 900 M	MDA (H) 370 FT (357 FT) RVR 900 M	MDA (H) 370 FT (357 FT) RVR 900 M	MDA (H) 370 FT (357 FT) RVR 900 M
ALS out	RVR 1 600 M	RVR 1 600 M	RVR 1 600 M	RVR 1 600 M
RNP (LNAV/VNAV)	DA (H) 370 FT (357 FT) RVR 900 M	DA (H) 370 FT (357 FT) RVR 900 M	DA (H) 370 FT (357 FT) RVR 900 M	DA (H) 370 FT (357 FT) RVR 900 M
ALS out	RVR 1 600 M	RVR 1 600 M	RVR 1 600 M	RVR 1 600 M
RNP (LNAV)	MDA (H) 570 FT (557 FT) RVR 1800 M	MDA (H) 570 FT (557 FT) RVR 1 800 M	MDA (H) 570 FT (557 FT) RVR 1 800 M	MDA (H) 570 FT (557 FT) RVR 1 800 M
ALS out	RVR 2 500 M	RVR 2 500 M	RVR 2 500 M	RVR 2 500 M
VOR/DME	MDA (H) 1020 FT (1007 FT) RVR 4 100 M	MDA (H) 1020 FT (1007 FT) RVR 4 100 M	MDA (H) 1020 FT (1007 FT) RVR 4 100 M	MDA (H) 1020 FT (1007 FT) RVR 4 100 M
ALS out	RVR 4 900 M	RVR 4 900 M	RVR 4 900 M	RVR 4 900 M
RWY 16R				
CAT 3B ILS	RVR 50 M	RVR 50 M	RVR 50 M	RVR 50 M

Straight-in RWY	Aircraft Category			
	A	B	C	D
CAT 3A ILS	RA 50 FT RVR 200 M	RA 50 FT RVR 200 M	RA 50 FT RVR 200 M	RA 50 FT RVR 200 M
CAT 2 ILS	DA (H) 113 FT (100 FT) RA 100 FT	DA (H) 113 FT (100 FT) RA 100 FT	DA (H) 113 FT (100 FT) RA 100 FT	DA (H) 132 FT (119 FT) RA 123 FT
ALS out	RVR 300 M	RVR 300 M	RVR 300 M	RVR 300 M*/350 M
ILS	DA (H) 213 FT (200 FT) RVR 550 M	DA (H) 213 FT (200 FT) RVR 550 M	DA (H) 213 FT (200 FT) RVR 550 M	DA (H) 220 FT (207 FT) RVR 550 M
ALS out	RVR 1 200 M	RVR 1 200 M	RVR 1200 M	RVR 1 200 M
LOC	MDA (H) 370 FT (357 FT) RVR 900 M	MDA (H) 370 FT (357 FT) RVR 900 M	MDA (H) 370 FT (357 FT) RVR 900 M	MDA (H) 370 FT (357 FT) RVR 900 M
ALS out	RVR 1 600 M	RVR 1 600 M	RVR 1 600 M	RVR 1 600 M
RNP(LNAV/VNAV)	DA (H) 380 FT (367 FT) RVR 1 000 M	DA (H) 380 FT (367 FT) RVR 1 000 M	DA (H) 380 FT (367 FT) RVR 1 000 M	DA (H) 380 FT (367 FT) RVR 1 000 M
ALS out	RVR 1 700 M	RVR 1 700 M	RVR 1 700 M	RVR 1 700 M
RNP (LNAV)	MDA (H) 570 FT (557 FT) RVR 1 800 M	MDA (H) 570 FT (557 FT) RVR 1 800 M	MDA (H) 570 FT (557 FT) RVR 1 800 M	MDA (H) 570 FT (557 FT) RVR 1 800 M
ALS out	RVR 2 500 M	RVR 2 500 M	RVR 2 500 M	RVR 2 500 M
VOR/DME	MDA (H) 410 FT (397 FT) RVR 1 100 M	MDA (H) 410 FT (397 FT) RVR 1 100 M	MDA (H) 410 FT (397 FT) RVR 1 100 M	MDA (H) 410 FT (397 FT) RVR 1 100 M
ALS out	RVR 1 800 M	RVR 1 800 M	RVR 1 800 M	RVR 1 800 M
RWY 34L				
CAT 3B ILS	RVR 50 M	RVR 50 M	RVR 50 M	RVR 50 M
CAT 3A ILS	RA 50 FT RVR 200 M	RA 50 FT RVR 200 M	RA 50 FT RVR 200 M	RA 50 FT RVR 200 M
CAT 2 ILS	DA (H) 184 FT (171 FT) RA174 FT	DA (H) 200 FT (187 FT) RA 191 FT	DA (H) 213 FT (200 FT) RA 204 FT	DA (H) 226 FT (213 FT) RA 213 FT
ALS out	RVR 450 M	RVR 450 M	RVR 450 M	RVR 450 M
CAT 2 ILS 4.0% Missed Approach Climb Gradient	DA (H) 113 FT (100 FT) RA 99 FT	DA (H) 113 FT (100 FT) RA 99 FT	DA (H) 113 FT (100 FT) RA 99 FT	DA (H) 132 FT (119 FT) RA 120 FT
ALS out	RVR 300 M	RVR 300 M	RVR 300 M	RVR 300 M*/350 M
ILS	DA (H) 301 FT (288 FT) RVR 650 M	DA (H) 310 FT (297 FT) RVR 650 M	DA (H) 320 FT (307 FT) RVR 700 M	DA (H) 330 FT (317 FT) RVR 700 M
ALS out	RVR 1 400 M	RVR 1 400 M	RVR 1 400 M	RVR 1 400 M
ILS 4.0% Missed Approach Climb Gradient	DA (H) 213 FT (200 FT) RVR 550 M	DA (H) 213 FT (200 FT) RVR 550 M	DA (H) 213 FT (200 FT) RVR 550 M	DA (H) 220 FT (207 FT) RVR 550 M
ALS out	RVR 1 200 M	RVR 1 200 M	RVR 1 200 M	RVR 1 200 M
LOC	MDA (H) 340 FT (327 FT) RVR 800 M	MDA (H) 340 FT (327 FT) RVR 800 M	MDA (H) 340 FT (327 FT) RVR 800 M	MDA (H) 340 FT (327 FT) RVR 800 M
ALS out	RVR 1 500 M	RVR 1 500 M	RVR 1 500 M	RVR 1 500 M
RNP (LNAV/VNAV)	DA (H) 370 FT (357 FT) RVR 900 M	DA (H) 370 FT (357 FT) RVR 900 M	DA (H) 370 FT (357 FT) RVR 900 M	DA (H) 370 FT (357 FT) RVR 900 M
ALS out	RVR 1 600 M	RVR 1 600 M	RVR 1 600 M	RVR 1 600 M
RNP (LNAV)	MDA (H) 570 FT (557 FT) RVR 1 800 M	MDA (H) 570 FT (557 FT) RVR 1 800 M	MDA (H) 570 FT (557 FT) RVR 1 800 M	MDA (H) 570 FT (557 FT) RVR 1 800 M
ALS out	RVR 2 500 M	RVR 2 500 M	RVR 2 500 M	RVR 2 500 M

Straight-in RWY	Aircraft Category			
	A	B	C	D
VOR/DME	MDA (H) 530 FT (517 FT) RVR 1 600 M	MDA (H) 530 FT (517 FT) RVR 1 600 M	MDA (H) 530 FT (517 FT) RVR 1 600 M	MDA (H) 530 FT (517 FT) RVR 1 600 M
ALS out	RVR 2 400 M	RVR 2 400 M	RVR 2 400 M	RVR 2 400 M
RWY 34R				
CAT 3B ILS	RVR 50 M	RVR 50 M	RVR 50 M	RVR 50 M
CAT 3A ILS	RA 50 FT RVR 200 M	RA 50 FT RVR 200 M	RA 50 FT RVR 200 M	RA 50 FT RVR 200 M
CAT 2 ILS	DA (H) 113 FT (100 FT) RA 100 FT	DA (H) 124 FT (111 FT) RA 113 FT	DA (H) 137 FT (124 FT) RA 132 FT	DA (H) 156 FT (143 FT) RA 151 FT
ALS out	RVR 300 M	RVR 300 M	RVR 400 M	RVR 450 M
ILS	DA (H) 213 FT (200 FT) RVR 550 M	DA (H) 213 FT (200 FT) RVR 550 M	DA (H) 222 FT (209 FT) RVR 550 M	DA (H) 235 FT (222 FT) RVR 550 M
ALS out	RVR 1 200 M	RVR 1 200 M	RVR 1 200 M	RVR 1 200 M
LOC	MDA (H) 320 FT (307 FT) RVR 700 M	MDA (H) 320 FT (307 FT) RVR 700 M	MDA (H) 320 FT (307 FT) RVR 700 M	MDA (H) 320 FT (307 FT) RVR 700 M
ALS out	RVR 1 400 M	RVR 1 400 M	RVR 1 400 M	RVR 1 400 M
RNP (LNAV/VNAV)	DA (H) 310 FT (297 FT) RVR 650 M	DA (H) 310 FT (297 FT) RVR 650 M	DA (H) 310 FT (297 FT) RVR 650 M	DA (H) 310 FT (297 FT) RVR 650 M
ALS out	RVR 1 400 M	RVR 1 400 M	RVR 1 400 M	RVR 1 400 M
RNP (LNAV)	MDA (H) 410 FT (397 FT) RVR 1 100 M	MDA (H) 410 FT (397 FT) RVR 1 100 M	MDA (H) 410 FT (397 FT) RVR 1 100 M	MDA (H) 410 FT (397 FT) RVR 1 100 M
ALS out	RVR 1 800 M	RVR 1 800 M	RVR 1 800 M	RVR 1 800 M
VOR/DME	MDA (H) 1 360 FT (1 347 FT) RVR 4 600 M	MDA (H) 1 360 FT (1 347 FT) RVR 4 600 M	MDA (H) 1 360 FT (1 347 FT) RVR 4 600 M	MDA (H) 1 360 FT (1 347 FT) RVR 4 600 M
ALS out	RVR 5 000 M	RVR 5 000 M	RVR 5 000 M	RVR 5 000 M
**300 M may be used for Category D aeroplane conducting an auto-land*				

Circle to Land	100 KT	135 KT	180 KT	250 KT
After ILS 16L, LOC 16L, RNP 16L, ILS 16R, LOC 16R, RNP 16R, VOR 16R, ILS 34L, LOC 34L, RNP 34L, VOR 34L, ILS 34R, LOC 34R or RNP 34R.	MDA (H) 620 FT (607 FT) VIS 1 500 M	MDA (H) 620 FT (607 FT) VIS 1 600 M	MDA (H) 1 240 FT (1 227 FT) VIS 2 400 M	MDA (H) 1 240 FT (1 227 FT) VIS 3 600 M
After VOR 16L	MDA (H) 1 020 FT (1 007 FT) VIS 1 500 M	MDA (H) 1 020 FT (1 007 FT) VIS 1 600 M	MDA (H) 1 240 FT (1 227 FT) VIS 2400 M	MDA (H) 1 240 FT (1 227 FT) VIS 3 600 M
After VOR 34R	MDA (H) 1 360 FT (1 347 FT) VIS 1 500 M	MDA (H) 1 360 FT (1 347 FT) VIS 1 600 M	MDA (H) 1 360 FT (1 347 FT) VIS 2 400 M	MDA (H) 1 360 FT (1 347 FT) VIS 3 600 M

3.2 TAKE-OFF OPERATING MINIMA

Take-off RVR / Visibility for Runway 16L, 16R, 34L & 34R					
	LVP must be in force			Runway edge lighting and/or centre line marking (DAY only)	NIL (DAY only)
	Runway edge and centre line lighting and multiple RVR information	Runway edge and centre line lighting	Runway edge lighting and/or centre line marking (DAY only)		
A	150 M	200 M	250 M	-	500 M
B					
C					
D	200 M	250 M	300 M		

Note: The operational minima published for HAMAD INTERNATIONAL airport have been established in accordance with Appendix 1 (New) to QCAR - OPS 1.430.

4 RUNWAY UTILISATION

To ensure the maximum runway utilisation, pilots are expected to comply with the following operational procedures.

4.1 DEPARTURES

1. On receipt of line-up clearance pilots should ensure that they are able to taxi and line-up on the runway as soon as the preceding aircraft has commenced either its take-off roll or landing run.
2. On receipt of take-off clearance, pilots should ensure that they are able to commence take-off without delay.
3. Pilots not able to comply with these requirements should notify ATC as soon as possible, latest when transferred to Hamad Tower frequency.

4.2 ARRIVALS

1. Pilots shall plan their landing and roll out to target the rapid exit taxiways that provide for a safe and expeditious exit from the runway to reduce delays and maximize runway utilization at all times. 90° angle taxiways shall only be used if instructed by ATC.
2. The aircraft should not be slowed down significantly below normal taxi speed or stopped on any exit taxiway unless approved by ATC.
3. Rapid Exit Taxiway Indicator Lights (RETILs) are provided on runway 16R/34L and 16L/34R to assist pilots in judging distances to rapid exit taxiways and enable them to apply braking action for a more efficient roll-out and runway exit speed. RETILs are provided for rapid exit taxiways as follows:
   RWY 16R - L8, L5, L3
   RWY 34L - L4, L6, L9
   RWY 16L - A8, A7, A3
   RWY 34R - A4, A5, A9

5 TRANSPONDER OPERATING PROCEDURES ON THE GROUND

Advanced Surface Movement Guidance and Control System (A-SMGCS) using Mode-S Multi-lateration had been commissioned at Hamad International Airport.

Aircraft Transponder Operating Procedures, in the movement area, as listed below;

5.1 DEPARTURES

ACFT at parking stand

1. Enter the discrete SSR code received from Clearance Delivery/TWR.
2. Enter the three letter ICAO designator followed by the flight number (e.g.QTR123) through the FMS or the Transponder.

During Pushback

1. Transponder shall be selected manually in order to display the aircraft identification (Callsign and the SSR code) on the A-SMGCS display.
2. ATC will verify the data and use it for identification.

5.2 ARRIVALS

Landing aircraft to maintain their transponder switched - on until they park on the stand.

6 ARRIVAL AIRCRAFT CONTACT PROCEDURE

In the absence of instructions by DOHA APP to transfer frequency, landing aircraft are advised to contact Hamad Tower East - Frequency 118.525 MHz or Hamad Tower West - Frequency 118.025 MHz at 5 NM Final.

7 RNP INSTRUMENT APPROACH PROCEDURE

7.1 WAYPOINT LIST

Designator	Co-ordinates	Approach procedure
ODBIP	253537.40N 0512800.00E	RNP RWY16L, RNP RWY 16R
TANDO*	252853.68N 0512422.68E	RNP RWY16L, RNP RWY 16R
IVANI*	253302.21N 0513544.87E	RNP RWY16L, RNP RWY 16R
TOVAN*	253109.81N 0513037.05E	RNP RWY16L
HH601	252621.31N 0513244.59E	RNP RWY16L
RW16L	251745.97N 0513631.96E	RNP RWY16L
HH602	251449.85N 0513749.52E	RNP RWY16L
GENOT	252018.11N 0515114.66E	RNP RWY16L, RNP RWY 16R, RNP RWY 34L, RNP RWY 34R
GOLSI*	253047.17N 0512929.86E	RNP RWY16R
HH501	252602.84N 0513135.62E	RNP RWY16R
RW16R	251727.52N 0513523.07E	RNP RWY16R
HH502	251439.85N 0513636.94E	RNP RWY16R
VEKIS	250047.55N 0513419.39E	RNP RWY16R
PURVA	250341.28N 0514617.29E	RNP RWY16R
ASLEB	251255.45N 0515211.43E	RNP RWY16R
EMUNA	245712.86N 0514455.31E	RNP RWY34L, RNP RWY 34R
DANIK*	245948.49N 0513712.89E	RNP RWY34L, RNP RWY 34R
MUXED*	250356.10N 0514832.78E	RNP RWY34L, RNP RWY 34R
IMKAT*	250138.57N 0514220.38E	RNP RWY34L
HH801	250643.86N 0514006.34E	RNP RWY34L
RW34L	251519.32N 0513619.56E	RNP RWY34L
HH802	251806.98N 0513505.67E	RNP RWY34L
DARTU	252224.62N 0513133.18E	RNP RWY34L
SIVOT	252655.93N 0512749.08E	RNP RWY34L
BUBOD	252920.40N 0513612.95E	RNP RWY34L
TATSA	252615.54N 0514621.66E	RNP RWY34L
LAGMA*	250204.62N 0514325.78E	RNP RWY34R
HH901	250644.17N 0514123.09E	RNP RWY34R
RW34R	251519.65N 0513736.41E	RNP RWY34R
HH902	251807.32N 0513622.55E	RNP RWY34R
GOMBO	252944.22N 0514450.16E	RNP RWY34R
Note: Waypoints marked with asterisk (*) are listed in ENR 4.4		

8 ADVISORY NOTICE TO ALL DEPARTING TRAFFIC

8.1 Aircraft departing on RWY 16R/34L should be aware of possible TCAS warnings due to VFR (helicopter) operations East of OTBD RWY 15/33. OTBD VFR helicopter traffic are deemed separated from OTHH departing traffic.

8.2 VFR traffic at OTBD, operate as follows (Refer to AD.OTBD-CHART-55 - Helicopter Route Chart):

8.2.1 Rotary wing

← 1. VFR helicopter departures from OTBD: Helicopters departing from RWY 15 will turn left to CRA (251531.20N, 0513503.57E) climbing to 1000 FT to cross CRA at 1000 FT, then helicopter will proceed to MRT (251800.58N, 0513357.07E) and standby for ATC Clearance to cross north of THR RWY 16R/16L en-route to BAY (251923.40N,0513802.40E). From BAY aircraft will route via BNE (251850.49N, 0514140.25E) en-route to the East. Once cleared by ATC aircraft will climb to 1500 FT until CTR boundary.

← 2. VFR helicopter departures from OTBD: Helicopters departing from RWY 33 will turn right to CRA (251531.20N 0513503.57E) climbing to 1000 FT to cross CRA at 1000 FT, then helicopter will proceed to SRA (251423.05N 0513528.92E) and standby for ATC clearance to cross south of THR RWY 34L/34R en-route to SEA (251600.00N, 0513925.80E). From SEA aircraft will route via BNE (251850.49N, 0514140.25E) en-route to the East. Once cleared by ATC aircraft will climb to 1500 FT until CTR boundary.
3. VFR Helicopter landing at Doha from East: All helicopters from the East will route to BNE at 500 FT and will be route either via BAY or SEA depending on runway in use to cross either north or south of THR RWY 16L/16R or THR RWY 34R/34L en-route to Doha.

8.2.2 Fixed wing

1. VFR departures from OTBD - RWY 15 are independent from OTHH IFR traffic on the proviso that the VFR traffic climbs straight ahead to 700 FT, turns to the west before the upwind end of OTBD RWY 15. The VFR departure will state if it is unable to adhere to this route and will therefore be treated as per OTBD IFR departure.
2. VFR departures from OTBD - RWY 33 are independent from OTHH IFR traffic on the proviso that the VFR traffic climbs straight ahead to 700 FT, turns to the west and remains south of OTP45. The VFR departure will state if it is unable to adhere to this route and will therefore be treated as per OTBD IFR departure.

OTHH AD 2.23 ADDITIONAL INFORMATION

1 AREAS IN THE AD WHERE BIRDS ARE OBSERVED

A study has been conducted by AD Operator (interim Wildlife Hazard Management Plan / version May 2012). Chart is available at OTHH-AD-2.24.

2 SURFACE MOVEMENT GUIDANCE, CONTROL SYSTEM AND MARKINGS

2.1 Stand identification / taxiway guide lines / visual docking / parking guidance system.

2.2 Nose wheel guidelines on taxiways and aprons.

2.3 A follow-me vehicle will be provided for all non-standard parking.

2.4 Parking stands are equipped with Visual Docking Guidance System (VDGS).

3 VISUAL DOCKING GUIDANCE SYSTEM (VDGS)

The VDGS is an aircraft parking aid for airport and aircraft safety and efficiency.

3.1 GENERAL SAFETY MEASURES

3.1.1 The VDGS has a built -in error detection program to inform the aircraft pilot of impending dangers during the docking procedure.

3.1.2 If the pilot is unsure of the information being shown on the VDGS display unit, he / she must immediately stop the aircraft and obtain further information for clearance.

3.1.3 The pilot shall not enter the stand area, unless the docking system first is showing the vertical running arrows. The pilot must not proceed beyond the bridge, unless these arrows have been superseded by the closing rate bar.

3.1.4 The pilot shall not enter the stand area, unless the aircraft type displayed is equal to approaching aircraft.

3.1.5 When using the docking system, pilots are advised to taxi into the aircraft stand at minimum speed. The system will display "SLOW" to inform the pilot if the aircraft's taxiing speed is too fast. (See ITEM 3.2.6 of Stand docking procedures).

3.1.6 To avoid overshooting, pilots are advised to approach the stop position slowly and observe the closing rate information displayed. Pilots should stop the aircraft immediately when seeing the "STOP" display or when given the "STOP" sign by the aircraft marshaller.

3.1.7 The SBU MESSAGE - The message STOP SBU means that docking has been interrupted and has to be resumed only by manual guidance. Do not try to resume docking without manual guidance.

3.2 STAND DOCKING PROCEDURES

No Marshall will be present in bays equipped with VDGS. In the event of malfunction of VDGS, pilots should hold position and inform ATC.

3.2.1 START-OF-DOCKING The system is activated by pressing one of the aircraft type buttons on the operator panel. When the system has been activated, 'WAIT' will be displayed.	
3.2.2 CAPTURE The yellow scrolling arrows indicate that the system is activated and in capture mode, searching for an approaching aircraft. It shall be checked that the correct aircraft type is displayed. The lead-in line shall be followed. The pilot must not enter the parking stand area unless the yellow scrolling arrows are displayed.	
3.2.3 TRACKING On successful capture of the aircraft, the yellow scrolling arrows are replaced by the yellow centre line indicator (Closing Rate Bar). The flashing red arrow indicates the direction the aircraft should turn. The yellow arrow shows position in relation to the centre line. This indicator gives the correct position and azimuth guidance. In the figure, the yellow arrow indicates an aircraft to the left of the centre line and the red flashing arrow indicates the direction to steer in-order to align the aircraft with the centre line.	
3.2.4 CLOSING RATE Display of digital countdown starts when the aircraft is 20 meters from stop position. When the aircraft is less than 12 meters from the stop-position, the closing rate is indicated by turning off one row of the centre line symbol per half a metre of the distance, covered by the aircraft towards the stop-position of the stand. The picture illustrates the aircraft is 16 meters from the stop-position, slightly left of the centre line. The red arrow indicates the direction to steer.	
3.2.5 ALIGNED TO CENTRE The absence of any direction arrow indicates the aircraft is on the centre line. The picture illustrates that the aircraft is 10 meters from the stop-position and is on the centre line.	

3.2.6 SLOW (DECREASE SPEED) If the aircraft is approaching faster than the accepted speed, the system will show 'SLOW' as a warning to the pilot.	
3.2.7 STOP POSITION REACHED When the correct stop-position is reached, the display will show 'STOP'.	
3.2.8 DOCKING COMPLETED When the aircraft has parked, 'OK' will be displayed.	
3.2.9 OVERSHOOT If the aircraft overshot the stop-position, 'TOO FAR' will be displayed.	
3.2.10 STOP SHORT If the aircraft is found standing still but has not reached the intended stop-position, the message 'STOP OK' will be shown after a while.	

3.2.11 WAIT

If some object is blocking the view toward approaching aircraft or the detected aircraft is lost during docking close to STOP, the display will show 'WAIT'.

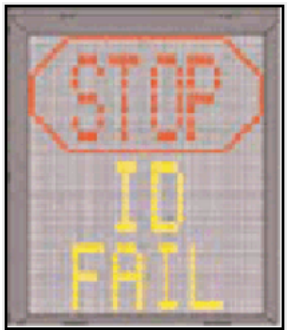
The docking will continue as soon as the blocking object has disappeared or the system detects the aircraft again.

The pilot must not proceed further, unless the ‘WAIT’ message has been superseded by the closing rate bar.

3.2.12 AIRCRAFT VERIFICATION FAILURE

During entry into the stand, the aircraft geometry is being checked. If, for any reason, aircraft verification is not made 12 M before the stop-position, the display will first show 'WAIT' and make a second verification check. If this fails 'STOP' and 'ID FAIL' will be displayed.

The pilot must not proceed further without manual guidance, unless the ‘WAIT’ message has been superseded by the closing rate bar.



3.2.13 SLOW (IN ABNORMAL SITUATIONS)

This display can be shown for two reasons:

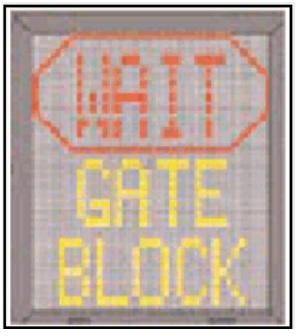
a. **BAD WEATHER CONDITION**
During heavy fog, rain or sandstorm, the visibility for the docking system can be reduced. When the system is activated and in capture mode, the display will disable the yellow scrolling arrows and display 'SLOW' and the aircraft type. As soon as the system detects the approaching aircraft, the closing rate bar will appear.
If the system has been configured in this mode to make a shortened ID verification (check of engine position excluded), the aircraft symbol will blink to give attention.

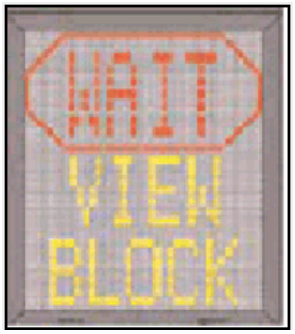
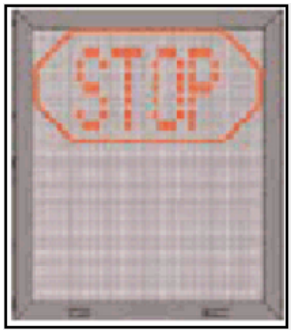
b. **AIRCRAFT LOST DURING DOCKING**
If the aircraft is lost during docking, the display will show 'SLOW'. As soon as the system detects the approaching aircraft, the closing rate bar will re-appear. The pilot must not proceed further, unless the closing rate bar is shown.

3.2.14 GATE BLOCKED

If an object is found blocking the view from the docking system to the planned stop position for the aircraft, the docking procedure will be halted with a 'WAIT' and 'GATE BLOCK' message. The docking procedure will resume as soon as the blocking object has been removed.

The pilot must not proceed further without manual guidance, unless the ‘WAIT’ message has been superseded by the closing rate bar.



3.2.15 VIEW BLOCKED If the view towards the approaching aircraft is hindered, for example internally in the unit on the laser lens or on the laser window by dirt, or another obstacle in the closest view area, the docking system will report a view blocked condition, i.e. 'VIEW BLOCK'. Once the system is able to see the aircraft through the hinder, the message will be replaced by closing rate bar. The pilot must not proceed further without manual guidance, unless the 'WAIT' message has been superseded by the closing rate bar.	
3.2.16 SBU-STOP Any unrecoverable error during the docking procedure will generate a SBU (Safety Back Up) condition. The display will show 'STOP SBU' message. A manual backup procedure will be used for docking guidance.	
3.2.17 TOO FAST If the aircraft approaches with a speed higher than the docking system can handle, the message 'STOP' and 'TOO FAST' will be displayed. The docking system must be re-started or the docking procedure completed by manual guidance.	
3.2.18 EMERGENCY STOP Pilots should stop the aircraft immediately when 'STOP' is displayed.	
3.2.19 CHOCKS ON 'CHOCK ON' will be displayed when the ground staff has put the chocks in front of the nose wheel and pressed the 'chocks on' button on the operator panel.	

3.2.20 ERROR If a system error occurs, the message 'ERROR' will be displayed with an error code.	
3.2.21 SYSTEM BREAKDOWN / POWER FAILURE In case of a severe system failure or power failure, the display will go black. A manual backup procedure will be used for docking guidance.	

4 AIRCRAFT PARKING RESTRICTIONS AT HAMAD INTERNATIONAL AIRPORT

4.1 Code C and Code D Aircraft

Stand ID & Code		**Aircraft Type & Code**										
Stand ID	**Stand Code**	**A318 A319 A320**	**A321**	**B732 B733 B734 B735 B737**	**B738**	**B739**	**E170**	**E190**	**F100**	**MD80 MD81 MD82 MD83 MD88**	**A300 A306 A310**	**B752 B753 B762 B763 B764**
		ACFT Code - C									**ACFT Code-D**	
A1	E	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
A3	F	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
A4	E	Y	Y	Y	Y	Y	L	L	L	L	L	L
A5	F	Y	Y	Y	Y	Y	L	L	L	Y	Y	Y
A6	E	Y	Y	Y	Y	Y	Y	Y	L	Y	Y	Y
A7	E	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
A8	E	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
A9	E	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
A10	E	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
A11	E	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
B1	F	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
B2	E	Y	Y	Y	Y	Y	Y	Y	L	L	L	L
B3	F	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
B4	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
B5	E	Y	Y	Y	Y	Y	L	Y	L	Y	Y	Y
B6	E	Y	Y	Y	Y	Y	Y	Y	L	Y	Y	Y
B7	E	Y	Y	Y	Y	Y	Y	Y	L	Y	Y	Y
B8	E	Y	Y	Y	Y	Y	L	Y	L	Y	Y	Y
B9	E	Y	Y	Y	Y	Y	Y	Y	L	Y	Y	Y
B10	E	Y	Y	Y	Y	Y	Y	Y	L	L	Y	Y
C1	E	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
C2	E	Y	Y	Y	Y	Y	L	L	L	L	Y	Y

Legend:
Y – Possible
N – Not Possible
L – Possible with aircraft handling constraints

Stand ID & Code		Aircraft Type & Code										
Stand ID	**Stand Code**	**A318 A319 A320**	**A321**	**B732 B733 B734 B735 B737**	**B738**	**B739**	**E170**	**E190**	**F100**	**MD80 MD81 MD82 MD83 MD88**	**A300 A306 A310**	**B752 B753 B762 B763 B764**
		ACFT Code - C									**ACFT Code-D**	
C3	E	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
C4	E	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
C5	E	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
C6	E	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
C7	E	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
C8	E	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
C9	E	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
C10	E	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
C11	E	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
C12	F	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
C13	F	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
D1	E	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
D2	E	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
D3	E	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
D3L	C	Y	N	L	N	N	L	L	L	L	N	N
D3R	C	Y	N	L	N	N	L	L	L	L	N	N
D4	E	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
D5	E	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
D5L	C	Y	Y	L	L	L	L	L	L	L	N	N
D5R	C	Y	N	L	N	N	L	L	L	L	N	N
D7	F	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
D7L	C	Y	Y	L	L	L	L	L	L	L	N	N
D7R	C	Y	Y	L	L	L	L	L	L	L	N	N
D9	E	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
D9L	C	Y	Y	L	L	L	L	L	L	L	N	N
D9R	C	Y	Y	L	L	L	L	L	L	L	N	N
D11	E	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
D13	E	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
D13L	C	Y	Y	L	L	L	L	L	L	L	N	N
D13R	C	Y	Y	L	L	L	L	L	L	L	N	N
D15	E	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
D15L	C	Y	Y	L	L	L	L	L	L	L	N	N
D15R	C	Y	Y	L	L	L	L	L	L	L	N	N
D17	E	N	N	N	N	N	N	N	N	N	N	N
D17R	C	Y	Y	L	L	L	L	L	L	L	N	N
D19	E	N	N	N	N	N	N	N	N	N	N	N
D19L	C	Y	Y	L	L	L	L	L	L	L	N	N
D19R	C	Y	Y	L	L	L	L	L	L	L	N	N
E1	E	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
E2	E	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
E3	E	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
E3L	C	Y	N	L	N	N	L	L	L	L	N	N
E3R	C	Y	Y	L	L	L	L	L	L	L	N	N
E4	E	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
E5	F	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
E5L	C	Y	Y	L	L	L	L	L	L	L	N	N

Legend:
Y – Possible
N – Not Possible
L – Possible with aircraft handling constraints

Stand ID & Code		Aircraft Type & Code										
Stand ID	**Stand Code**	**A318 A319 A320**	**A321**	**B732 B733 B734 B735 B737**	**B738**	**B739**	**E170**	**E190**	**F100**	**MD80 MD81 MD82 MD83 MD88**	**A300 A306 A310**	**B752 B753 B762 B763 B764**
		ACFT Code - C									**ACFT Code-D**	
E5R	C	Y	Y	L	L	L	L	L	L	L	N	N
E7	E	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
E7L	C	Y	Y	L	L	L	L	L	L	L	N	N
E7R	C	Y	Y	L	L	L	L	L	L	L	N	N
E9	E	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
E11	E	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
E11L	C	Y	N	L	N	N	L	L	L	L	N	N
E11R	C	Y	Y	L	L	L	L	L	L	L	N	N
E13	E	Y	Y	Y	Y	Y	L	L	L	L	Y	Y
E13L	C	Y	N	L	N	N	L	L	L	L	N	N
E13R	C	Y	Y	L	L	L	L	L	L	L	N	N
E15	E	N	N	N	N	N	N	N	N	N	N	N
E15L	C	Y	Y	L	L	L	L	L	L	L	N	N
E17	E	N	N	N	N	N	N	N	N	N	N	N
E17L	C	Y	Y	L	L	L	L	L	L	L	N	N
E17R	C	Y	Y	L	L	L	L	L	L	L	N	N
G1	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
G1L	C	Y	Y	L	L	L	L	L	L	L	N	N
G1R	C	Y	Y	L	L	L	Y	Y	L	L	N	N
G2	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
G2L	C	Y	Y	L	L	L	L	L	L	L	N	N
G2R	C	Y	Y	L	L	L	L	L	L	L	N	N
G3C	C	Y	Y	L	L	L	L	L	L	L	N	N
G4	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
G4L	C	Y	Y	L	L	L	L	L	L	L	N	N
G4R	C	Y	Y	L	L	L	Y	Y	L	L	N	N
G5	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
G5L	C	Y	Y	L	L	L	L	L	L	L	N	N
G5R	C	Y	Y	L	L	L	L	L	L	L	N	N
G6	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
G6L	C	Y	Y	L	L	L	L	L	L	L	N	N
G6R	C	Y	N	Y	N	N	L	L	L	L	N	N
H1	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
H1L	C	Y	Y	L	L	L	L	L	L	L	N	N
H1R	C	Y	Y	L	L	L	L	L	L	L	N	N
H2	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
H2L	C	Y	Y	L	L	L	L	L	L	L	N	N
H2R	C	Y	Y	L	L	L	L	L	L	L	N	N
H3C	C	Y	Y	L	L	L	L	L	L	L	N	N
H4	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
H4L	C	Y	Y	L	L	L	L	L	L	L	N	N
H4R	C	Y	Y	L	L	L	L	L	L	L	N	N
H5	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
H5L	C	Y	Y	L	L	L	L	L	L	L	N	N
H5R	C	Y	Y	L	L	L	L	L	L	L	N	N
H6	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Legend:
Y – Possible
N – Not Possible
L – Possible with aircraft handling constraints

Stand ID & Code		Aircraft Type & Code										
Stand ID	**Stand Code**	**A318 A319 A320**	**A321**	**B732 B733 B734 B735 B737**	**B738**	**B739**	**E170**	**E190**	**F100**	**MD80 MD81 MD82 MD83 MD88**	**A300 A306 A310**	**B752 B753 B762 B763 B764**
		ACFT Code - C									**ACFT Code-D**	
H6L	C	Y	N	L	N	N	L	L	L	L	N	N
H6R	C	Y	Y	L	L	L	Y	Y	L	L	N	N
F1	E	N	N	N	N	N	N	N	N	N	N	N
F2	E	N	N	N	N	N	N	N	N	N	N	N
F3	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
F4	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
F5	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
F6	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
F7	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
F8	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
F9	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
F10	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
F11	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Q1	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	L	L
Q2	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	L	L
Q3	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	L	L
Q4	F	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Q20	F	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Q21	F	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Q40	F	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Q41	F	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Q50	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Q51	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
V1	F	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
V2L	F	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
V2R	F	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
V3	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
V4	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
V5	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Y1	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
Y2	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
Y3	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
Y4	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
Y5	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
Y6	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
Y7	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
Y8	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
Y9	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
501	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
501L	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
501R	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
502	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
502L	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
502R	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
503	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
503L	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N

Legend:
Y – Possible
N – Not Possible
L – Possible with aircraft handling constraints

Stand ID & Code		Aircraft Type & Code										
Stand ID	**Stand Code**	**A318 A319 A320**	**A321**	**B732 B733 B734 B735 B737**	**B738**	**B739**	**E170**	**E190**	**F100**	**MD80 MD81 MD82 MD83 MD88**	**A300 A306 A310**	**B752 B753 B762 B763 B764**
		ACFT Code - C									**ACFT Code-D**	
503R	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
504	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
504L	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
504R	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
505	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
505L	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
505R	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
506	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
506L	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
506R	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
507	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
507L	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
507R	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
508	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
508L	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
508R	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
509	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
509L	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
509R	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
510	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
510L	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
510R	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
511	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
511L	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
511R	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
512	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
512L	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
512R	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
513	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
513L	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
513R	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
514	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
514L	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
514R	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
515	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
515L	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
515R	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
425E	C	Y	Y	N	N	N	Y	N	Y	Y	N	N
425W	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
426E	C	Y	Y	N	N	N	Y	N	Y	Y	N	N
426W	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
427E	C	Y	Y	N	N	N	Y	N	Y	Y	N	N
427W	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
428E	C	Y	Y	N	N	N	Y	N	Y	Y	N	N
428W	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
429E	C	Y	Y	N	N	N	Y	N	Y	Y	N	N

Legend:
Y – Possible
N – Not Possible
L – Possible with aircraft handling constraints

Stand ID & Code		Aircraft Type & Code										
Stand ID	**Stand Code**	**A318 A319 A320**	**A321**	**B732 B733 B734 B735 B737**	**B738**	**B739**	**E170**	**E190**	**F100**	**MD80 MD81 MD82 MD83 MD88**	**A300 A306 A310**	**B752 B753 B762 B763 B764**
		ACFT Code - C									**ACFT Code-D**	
429W	C	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N

Legend:
Y – Possible
N – Not Possible
L – Possible with aircraft handling constraints

4.2 Code E and Code F Aircraft

Stand ID & Code		Aircraft Type & Code										
Stand ID	**Stand Code**	**A332 A333 A342 A343**	**A345 A346**	**A359**	**B742 B743**	**B744**	**B747S**	**B772 B77L**	**B773 B77W**	**B788**	**A388**	**B748**
		ACFT Code - E									**ACFT Code-F**	
A1	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
A3	F	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
A4	E	L	L	L	L	L	L	L	L	L	N	N
A5	F	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
A6	E	Y	L	Y	Y	Y	Y	Y	L	Y	N	N
A7	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
A8	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
A9	E	Y	L	Y	Y	Y	Y	Y	L	L	N	Y
A10	E	Y	L	Y	Y	Y	Y	Y	L	Y	N	Y
A11	E	Y	N	N	N	N	N	Y	N	Y	N	N
B1	F	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
B2	E	L	L	L	L	L	L	L	L	L	N	N
B3	F	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
B4	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
B5	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
B6	E	Y	Y	Y	Y	Y	Y	Y	Y	L	N	N
B7	E	Y	L	Y	Y	Y	Y	Y	L	Y	N	N
B8	E	Y	L	Y	Y	Y	Y	Y	L	Y	N	Y
B9	E	Y	L	Y	Y	Y	Y	Y	L	Y	N	Y
B10	E	Y	N	N	Y	Y	Y	Y	N	Y	N	N
C1	E	Y	Y	L	Y	Y	Y	Y	Y	Y	N	N
C2	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
C3	E	Y	Y	L	Y	Y	Y	Y	Y	Y	N	N
C4	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
C5	E	Y	Y	Y	Y	Y	Y	Y	Y	L	N	N
C6	E	Y	Y	L	Y	Y	Y	Y	Y	Y	N	N
C7	E	Y	Y	L	Y	Y	Y	Y	Y	Y	N	N
C8	E	Y	Y	L	Y	Y	Y	Y	Y	Y	N	N
C9	E	Y	Y	L	Y	Y	Y	Y	Y	Y	N	N
C10	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
C11	E	Y	Y	L	Y	Y	Y	Y	Y	Y	N	N
C12	F	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
C13	F	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
D1	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y

Legend:
Y – Possible
N – Not Possible
L – Possible with aircraft handling constraints

Stand ID & Code		Aircraft Type & Code										
Stand ID	Stand Code	A332 A333 A342 A343	A345 A346	A359	B742 B743	B744	B747S	B772 B77L	B773 B77W	B788	A388	B748
		ACFT Code - E									ACFT Code-F	
D2	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
D3	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
D3L	C	N	N	N	N	N	N	N	N	N	N	N
D3R	C	N	N	N	N	N	N	N	N	N	N	N
D4	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
D5	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
D5L	C	N	N	N	N	N	N	N	N	N	N	N
D5R	C	N	N	N	N	N	N	N	N	N	N	N
D7	F	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
D7L	C	N	N	N	N	N	N	N	N	N	N	N
D7R	C	N	N	N	N	N	N	N	N	N	N	N
D9	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
D9L	C	N	N	N	N	N	N	N	N	N	N	N
D9R	C	N	N	N	N	N	N	N	N	N	N	N
D11	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
D13	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
D13L	C	N	N	N	N	N	N	N	N	N	N	N
D13R	C	N	N	N	N	N	N	N	N	N	N	N
D15	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
D15L	C	N	N	N	N	N	N	N	N	N	N	N
D15R	C	N	N	N	N	N	N	N	N	N	N	N
D17	E	L	L	L	L	L	L	L	L	L	N	N
D17R	C	N	N	N	N	N	N	N	N	N	N	N
D19	E	L	L	L	L	L	L	L	L	L	N	N
D19L	C	N	N	N	N	N	N	N	N	N	N	N
D19R	C	N	N	N	N	N	N	N	N	N	N	N
E1	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
E2	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
E3	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
E3L	C	N	N	N	N	N	N	N	N	N	N	N
E3R	C	N	N	N	N	N	N	N	N	N	N	N
E4	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
E5	F	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
E5L	C	N	N	N	N	N	N	N	N	N	N	N
E5R	C	N	N	N	N	N	N	N	N	N	N	N
E7	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
E7L	C	N	N	N	N	N	N	N	N	N	N	N
E7R	C	N	N	N	N	N	N	N	N	N	N	N
E9	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
E11	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
E11L	C	N	N	N	N	N	N	N	N	N	N	N
E11R	C	N	N	N	N	N	N	N	N	N	N	N
E13	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
E13L	C	N	N	N	N	N	N	N	N	N	N	N
E13R	C	N	N	N	N	N	N	N	N	N	N	N
E15	E	L	L	L	L	L	L	L	L	L	N	N
E15L	C	N	N	N	N	N	N	N	N	N	N	N

Legend:
Y – Possible
N – Not Possible
L – Possible with aircraft handling constraints

Stand ID & Code		Aircraft Type & Code										
Stand ID	Stand Code	A332 A333 A342 A343	A345 A346	A359	B742 B743	B744	B747S	B772 B77L	B773 B77W	B788	A388	B748
		ACFT Code - E									ACFT Code-F	
E17	E	L	L	L	L	L	L	L	L	L	N	N
E17L	C	N	N	N	N	N	N	N	N	N	N	N
E17R	C	N	N	N	N	N	N	N	N	N	N	N
G1	E	Y	Y	L	Y	Y	Y	Y	Y	Y	L	Y
G1L	C	N	N	N	N	N	N	N	N	N	N	N
G1R	C	N	N	N	N	N	N	N	N	N	N	N
G2	E	Y	Y	L	Y	Y	Y	Y	Y	Y	N	Y
G2L	C	N	N	N	N	N	N	N	N	N	N	N
G2R	C	N	N	N	N	N	N	N	N	N	N	N
G3C	C	N	N	N	N	N	N	N	N	N	N	N
G4	E	Y	Y	L	Y	Y	Y	Y	Y	Y	N	Y
G4L	C	N	N	N	N	N	N	N	N	N	N	N
G4R	C	N	N	N	N	N	N	N	N	N	N	N
G5	E	Y	Y	L	Y	Y	Y	Y	Y	Y	N	Y
G5L	C	N	N	N	N	N	N	N	N	N	N	N
G5R	C	N	N	N	N	N	N	N	N	N	N	N
G6	E	Y	Y	L	Y	Y	Y	Y	Y	Y	N	Y
G6L	C	N	N	N	N	N	N	N	N	N	N	N
G6R	C	N	N	N	N	N	N	N	N	N	N	N
H1	E	Y	Y	L	Y	Y	Y	Y	Y	Y	L	Y
H1L	C	N	N	N	N	N	N	N	N	N	N	N
H1R	C	N	N	N	N	N	N	N	N	N	N	N
H2	E	Y	Y	L	Y	Y	Y	Y	Y	Y	N	Y
H2L	C	N	N	N	N	N	N	N	N	N	N	N
H2R	C	N	N	N	N	N	N	N	N	N	N	N
H3C	C	N	N	N	N	N	N	N	N	N	N	N
H4	E	Y	Y	L	Y	Y	Y	Y	Y	Y	N	Y
H4L	C	N	N	N	N	N	N	N	N	N	N	N
H4R	C	N	N	N	N	N	N	N	N	N	N	N
H5	E	Y	Y	L	Y	Y	Y	Y	Y	Y	N	Y
H5L	C	N	N	N	N	N	N	N	N	N	N	N
H5R	C	N	N	N	N	N	N	N	N	N	N	N
H6	E	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y
H6L	C	N	N	N	N	N	N	N	N	N	N	N
H6R	C	N	N	N	N	N	N	N	N	N	N	N
F1	E	N	N	N	N	N	N	N	N	N	N	N
F2	E	N	N	N	N	N	N	N	N	N	N	N
F3	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
F4	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
F5	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
F6	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
F7	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
F8	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
F9	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
F10	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
F11	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
Q1	E	Y	Y	Y	L	L	L	L	L	Y	N	N

Legend:
Y – Possible
N – Not Possible
L – Possible with aircraft handling constraints

Stand ID & Code		Aircraft Type & Code										
Stand ID	**Stand Code**	**A332 A333 A342 A343**	**A345 A346**	**A359**	**B742 B743**	**B744**	**B747S**	**B772 B77L**	**B773 B77W**	**B788**	**A388**	**B748**
		ACFT Code - E									**ACFT Code-F**	
Q2	E	Y	Y	Y	L	L	L	L	L	Y	N	N
Q3	E	Y	Y	Y	L	L	L	L	L	Y	N	N
Q4	F	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Q20	F	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Q21	F	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Q40	F	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Q41	F	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Q50	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
Q51	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
V1	F	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
V2L	F	L	L	L	L	L	L	L	L	L	L	L
V2R	F	L	L	L	L	L	L	L	L	L	L	L
V3	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
V4	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
V5	E	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
Y1	C	N	N	N	N	N	N	N	N	N	N	N
Y2	C	N	N	N	N	N	N	N	N	N	N	N
Y3	C	N	N	N	N	N	N	N	N	N	N	N
Y4	C	N	N	N	N	N	N	N	N	N	N	N
Y5	C	N	N	N	N	N	N	N	N	N	N	N
Y6	C	N	N	N	N	N	N	N	N	N	N	N
Y7	C	N	N	N	N	N	N	N	N	N	N	N
Y8	C	N	N	N	N	N	N	N	N	N	N	N
Y9	C	N	N	N	N	N	N	N	N	N	N	N
501	E	Y	N	Y	N	N	N	Y	Y	Y	N	N
501L	C	N	N	N	N	N	N	N	N	N	N	N
501R	C	N	N	N	N	N	N	N	N	N	N	N
502	E	Y	N	Y	N	N	N	Y	Y	Y	N	N
502L	C	N	N	N	N	N	N	N	N	N	N	N
502R	C	N	N	N	N	N	N	N	N	N	N	N
503	E	Y	N	Y	N	N	N	Y	Y	Y	N	N
503L	C	N	N	N	N	N	N	N	N	N	N	N
503R	C	N	N	N	N	N	N	N	N	N	N	N
504	E	Y	N	Y	N	N	N	Y	Y	Y	N	N
504L	C	N	N	N	N	N	N	N	N	N	N	N
504R	C	N	N	N	N	N	N	N	N	N	N	N
505	E	Y	N	Y	N	N	N	Y	Y	Y	N	N
505L	C	N	N	N	N	N	N	N	N	N	N	N
505R	C	N	N	N	N	N	N	N	N	N	N	N
506	E	Y	N	Y	N	N	N	Y	Y	Y	N	N
506L	C	N	N	N	N	N	N	N	N	N	N	N
506R	C	N	N	N	N	N	N	N	N	N	N	N
507	E	Y	N	Y	N	N	N	Y	Y	Y	N	N
507L	C	N	N	N	N	N	N	N	N	N	N	N
507R	C	N	N	N	N	N	N	N	N	N	N	N
508	E	Y	N	Y	N	N	N	Y	Y	Y	N	N
508L	C	N	N	N	N	N	N	N	N	N	N	N

Legend:
Y – Possible
N – Not Possible
L – Possible with aircraft handling constraints

Stand ID & Code		Aircraft Type & Code										
Stand ID	Stand Code	A332 A333 A342 A343	A345 A346	A359	B742 B743	B744	B747S	B772 B77L	B773 B77W	B788	A388	B748
		ACFT Code - E									ACFT Code-F	
508R	C	N	N	N	N	N	N	N	N	N	N	N
509	E	Y	N	Y	N	N	N	Y	Y	Y	N	N
509L	C	N	N	N	N	N	N	N	N	N	N	N
509R	C	N	N	N	N	N	N	N	N	N	N	N
510	E	Y	N	Y	N	N	N	Y	Y	Y	N	N
510L	C	N	N	N	N	N	N	N	N	N	N	N
510R	C	N	N	N	N	N	N	N	N	N	N	N
511	E	Y	N	Y	N	N	N	Y	Y	Y	N	N
511L	C	N	N	N	N	N	N	N	N	N	N	N
511R	C	N	N	N	N	N	N	N	N	N	N	N
512	E	Y	N	Y	N	N	N	Y	Y	Y	N	N
512L	C	N	N	N	N	N	N	N	N	N	N	N
512R	C	N	N	N	N	N	N	N	N	N	N	N
513	E	Y	N	Y	N	N	N	Y	Y	Y	N	N
513L	C	N	N	N	N	N	N	N	N	N	N	N
513R	C	N	N	N	N	N	N	N	N	N	N	N
514	E	Y	N	Y	N	N	N	Y	Y	Y	N	N
514L	C	N	N	N	N	N	N	N	N	N	N	N
514R	C	N	N	N	N	N	N	N	N	N	N	N
515	E	Y	N	Y	N	N	N	Y	Y	Y	N	N
515L	C	N	N	N	N	N	N	N	N	N	N	N
515R	C	N	N	N	N	N	N	N	N	N	N	N
425E	C	N	N	N	N	N	N	N	N	N	N	N
425W	C	N	N	N	N	N	N	N	N	N	N	N
426E	C	N	N	N	N	N	N	N	N	N	N	N
426W	C	N	N	N	N	N	N	N	N	N	N	N
427E	C	N	N	N	N	N	N	N	N	N	N	N
427W	C	N	N	N	N	N	N	N	N	N	N	N
428E	C	N	N	N	N	N	N	N	N	N	N	N
428W	C	N	N	N	N	N	N	N	N	N	N	N
429E	C	N	N	N	N	N	N	N	N	N	N	N
429W	C	N	N	N	N	N	N	N	N	N	N	N

Legend:
Y – Possible
N – Not Possible
L – Possible with aircraft handling constraints

OTHH AD 2.24 CHARTS RELATED TO AN AERODROME

AERODROME CHART - ICAO

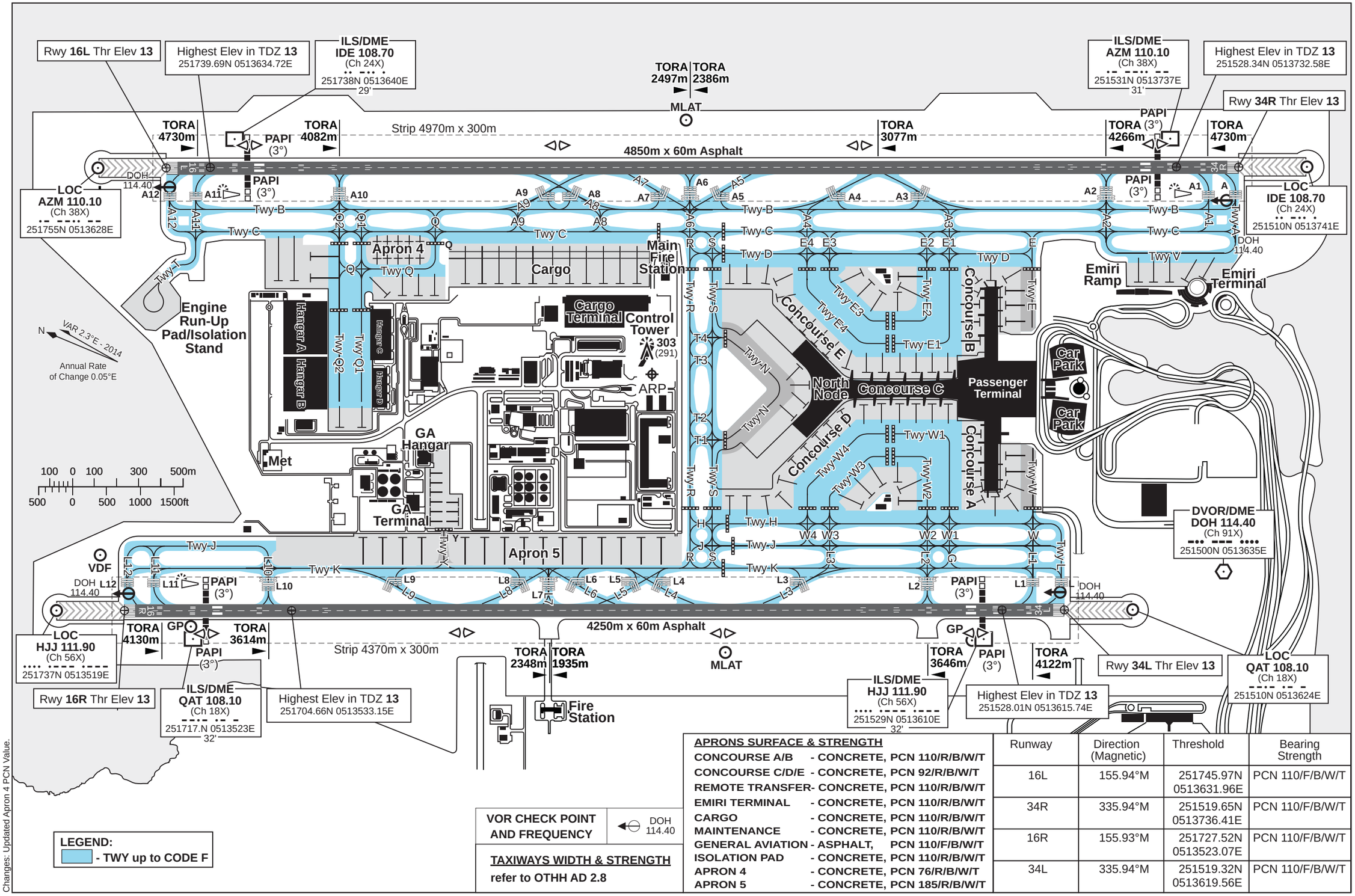
DISTANCES IN METRES.
ALTITUDES, ELEVATIONS
AND HEIGHTS IN FEET.

ARP
251628.43N
0513630.16E

AD ELEV 13FT

DOHA APP	119.725 / 120.60	GMC (EAST)	120.225
DIRECTOR	119.40 / 121.125	GMC (WEST)	118.650
TWR (EAST)	118.525 / 118.225	ATIS	126.850
TWR (WEST)	118.025 / 118.225		

HAMAD Intl.
OTHH



LEGEND:
- TWY up to CODE F

VOR CHECK POINT AND FREQUENCY — DOH 114.40

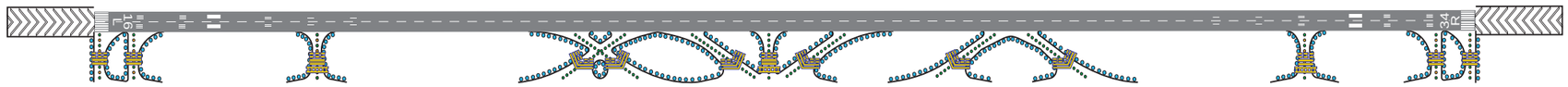
TAXIWAYS WIDTH & STRENGTH
refer to OTHH AD 2.8

APRONS SURFACE & STRENGTH

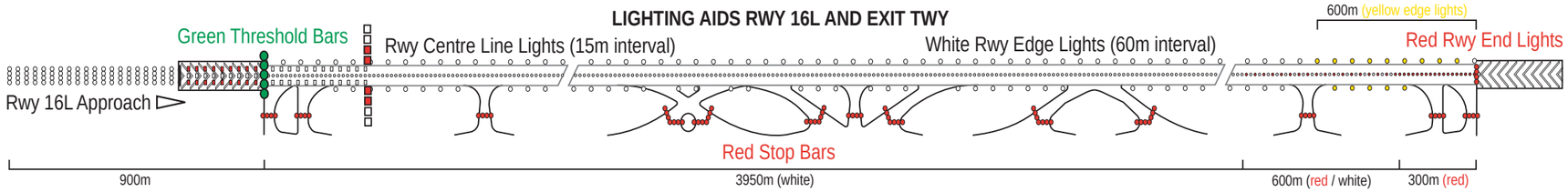
CONCOURSE A/B	- CONCRETE, PCN 110/R/B/W/T
CONCOURSE C/D/E	- CONCRETE, PCN 92/R/B/W/T
REMOTE TRANSFER	- CONCRETE, PCN 110/R/B/W/T
EMIRI TERMINAL	- CONCRETE, PCN 110/R/B/W/T
CARGO	- CONCRETE, PCN 110/R/B/W/T
MAINTENANCE	- CONCRETE, PCN 110/R/B/W/T
GENERAL AVIATION	- ASPHALT, PCN 110/F/B/W/T
ISOLATION PAD	- CONCRETE, PCN 110/R/B/W/T
APRON 4	- CONCRETE, PCN 76/R/B/W/T
APRON 5	- CONCRETE, PCN 185/R/B/W/T

Runway	Direction (Magnetic)	Threshold	Bearing Strength
16L	155.94°M	251745.97N 0513631.96E	PCN 110/F/B/W/T
34R	335.94°M	251519.65N 0513736.41E	PCN 110/F/B/W/T
16R	155.93°M	251727.52N 0513523.07E	PCN 110/F/B/W/T
34L	335.94°M	251519.32N 0513619.56E	PCN 110/F/B/W/T

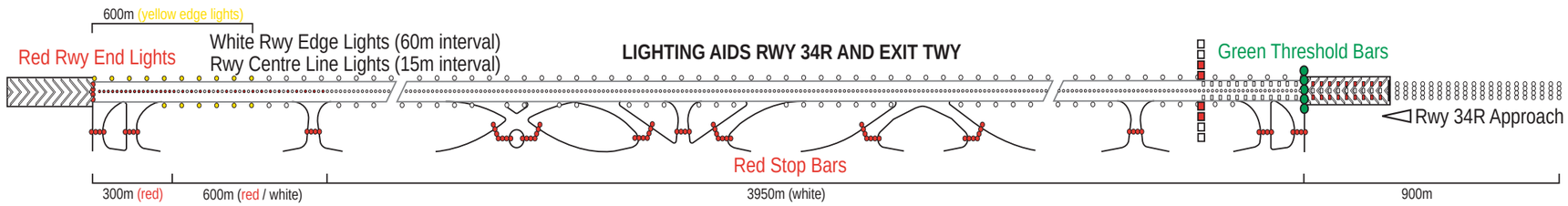
MARKING AIDS RWY 16L/34R AND EXIT TWY / TWY CENTRELINE AND EDGE LIGHTING



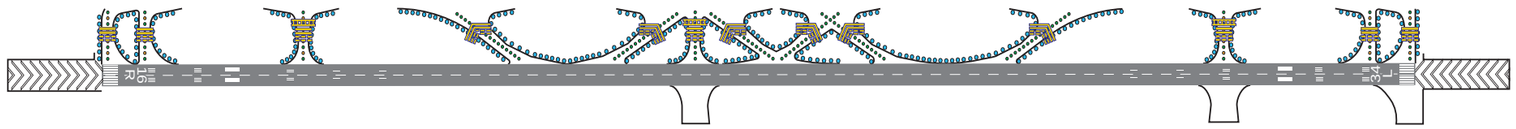
LIGHTING AIDS RWY 16L AND EXIT TWY



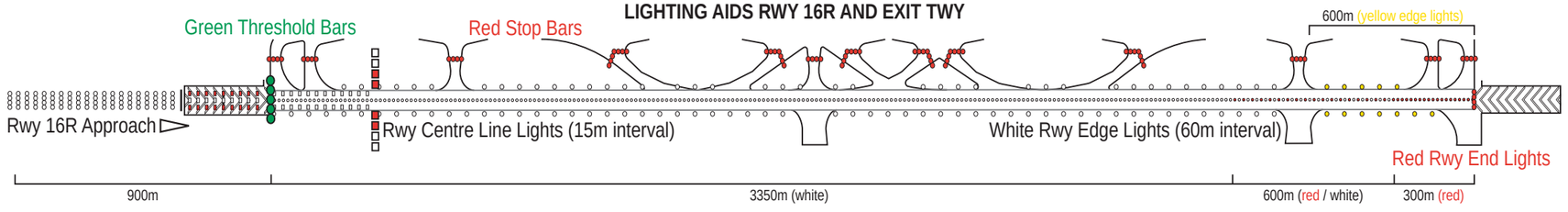
LIGHTING AIDS RWY 34R AND EXIT TWY



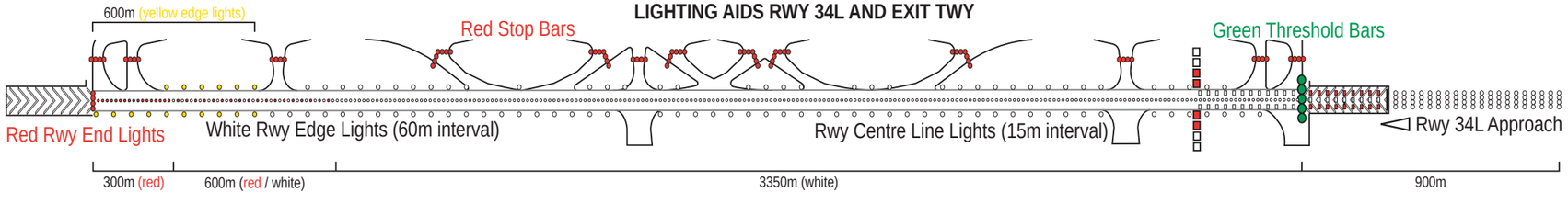
MARKING AIDS RWY 16R/34L AND EXIT TWY / TWY CENTRELINE AND EDGE LIGHTING

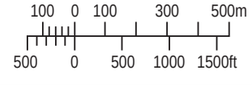


LIGHTING AIDS RWY 16R AND EXIT TWY



LIGHTING AIDS RWY 34L AND EXIT TWY





Changes: Chart re-issued.

AIRCRAFT PARKING/DOCKING CHART - ICAO

DISTANCES IN METRES.
ALTITUDES, ELEVATIONS
AND HEIGHTS IN FEET.

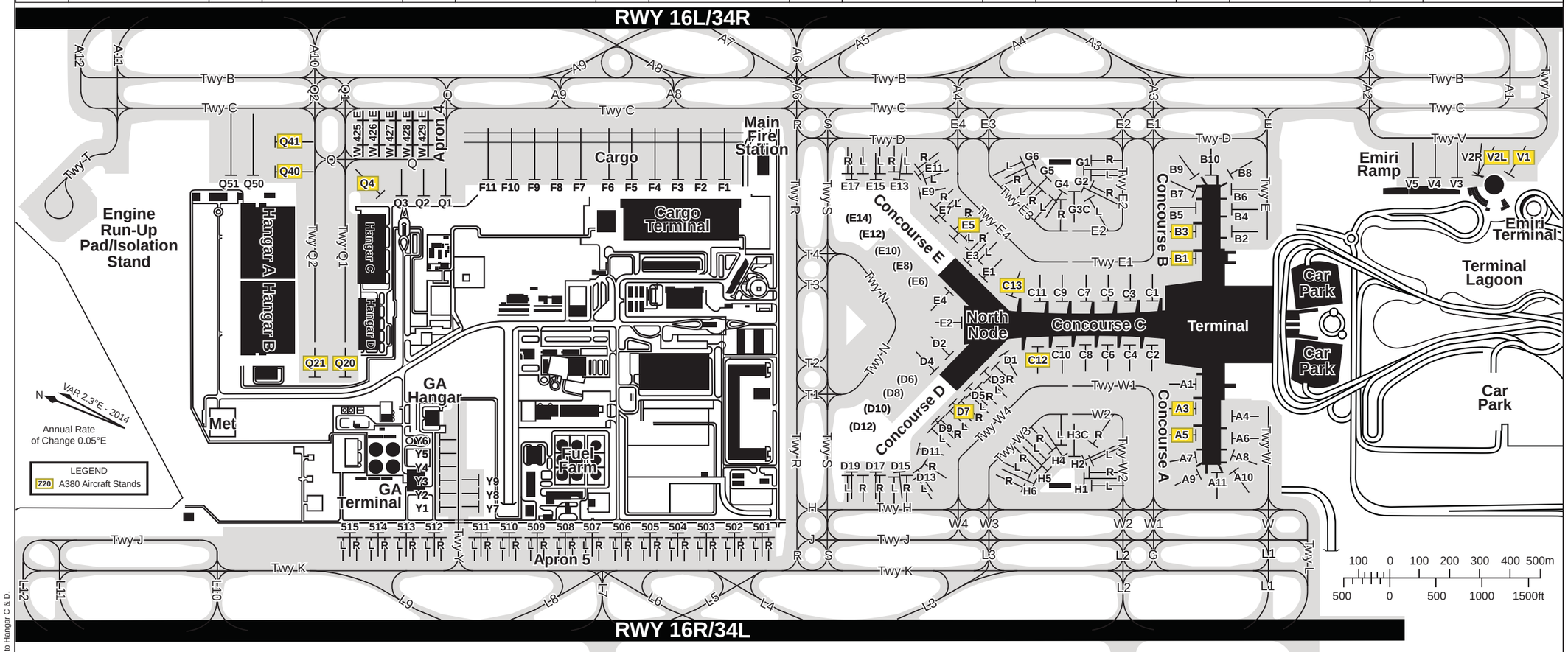
ARP
251628.43N
0513630.16E

APRON ELEV
17FT

DOHA APP	119.725 / 120.60	GMC (EAST)	120.225
DIRECTOR	119.40 / 121.125	GMC (WEST)	118.650
TWR (EAST)	118.525 / 118.225	ATIS	126.850
TWR (WEST)	118.025 / 118.225		

HAMAD Intl.
OTHH

A1	251540.55N 0513641.08E	B1	251545.50N 0513654.74E	C1	251548.15N 0513648.22E	C11	251559.27N 0513643.28E	D5L	251602.10N 0513629.61E	D10	Not available	D17R	251608.27N 0513618.03E	E5	251610.36N 0513646.36E
A3	251539.59N 0513638.43E	B2	251543.04N 0513659.30E	C2	251546.36N 0513643.29E	C12	251557.71N 0513638.27E	D5R	251601.51N 0513630.90E	D11	251605.16N 0513621.80E	D19	251610.47N 0513617.09E	E5L	251609.35N 0513646.87E
A4	251535.70N 0513639.16E	B3	251546.56N 0513657.64E	C3	251550.34N 0513647.25E	C13	251602.32N 0513642.64E	D6	Not available	D12	Not available	D19L	251610.43N 0513616.21E	E5R	251610.64N 0513647.36E
A5	251538.53N 0513635.53E	B4	251543.92N 0513701.71E	C4	251548.54N 0513642.33E	D1	251600.42N 0513635.64E	D7	251603.51N 0513627.87E	D13	251604.40N 0513619.59E	D19R	251609.15N 0513616.77E	E6	Not available
A6	251534.83N 0513636.75E	B5	251547.55N 0513700.29E	C5	251552.52N 0513646.29E	D2	251606.39N 0513633.60E	D7L	251603.07N 0513626.93E	D13L	251604.13N 0513618.81E	E1	251605.62N 0513644.21E	E7	251612.97N 0513647.67E
A7	251537.65N 0513633.14E	B6	251544.74N 0513703.87E	C6	251550.73N 0513641.37E	D3	251601.46N 0513633.06E	D7R	251602.61N 0513628.28E	D13R	251603.78N 0513620.11E	E2	251606.34N 0513637.35E	E7L	251612.32N 0513648.12E
A8	251534.13N 0513634.90E	B7	251548.25N 0513701.97E	C7	251554.71N 0513645.33E	D3L	251600.81N 0513632.40E	D8	Not available	D15	251606.14N 0513618.93E	E3	251607.89N 0513645.28E	E7R	251613.48N 0513648.97E
A9	251536.73N 0513631.40E	B8	251545.46N 0513705.50E	C8	251552.92N 0513640.40E	D3R	251600.23N 0513633.76E	D9	251604.61N 0513624.96E	D15L	251606.43N 0513617.88E	E3L	251606.98N 0513645.67E	E8	Not available
A10	251533.34N 0513633.25E	B9	251548.94N 0513703.71E	C9	251557.08N 0513644.25E	D4	251607.55N 0513631.33E	D9L	251604.46N 0513623.63E	D15R	251605.13N 0513618.40E	E3R	251608.20N 0513646.19E	E9	251615.49N 0513649.89E
A11	251534.92N 0513632.39E	B10	251547.34N 0513704.53E	C10	251555.30N 0513639.36E	D5	251602.44N 0513630.55E	D9R	251603.85N 0513625.13E	D17	251607.76N 0513617.53E	E4	251608.72N 0513640.02E	E10	Not available



E11	251616.28N 0513651.88E	F6	251646.89N 0513637.82E	G5R	251603.11N 0513656.10E	H6L	251553.32N 0513623.82E	Y1	251650.67N 0513554.76E	429W	251707.08N 0513633.96E*	506R	251630.99N 0513559.59E	512R	251650.04N 0513551.16E*
E11L	251615.36N 0513651.88E	F7	251649.65N 0513636.60E	G6	251605.33N 0513658.05E	H6R	251553.44N 0513622.39E	Y2	251651.20N 0513556.22E	501	251618.49N 0513606.06E	507	251634.57N 0513558.97E	513	251653.63N 0513550.54E*
E11R	251616.28N 0513652.65E	F8	251651.95N 0513635.60E	G6L	251606.40N 0513657.97E	Q1	251702.40N 0513628.93E	Y3	251651.73N 0513557.68E	501L	251618.84N 0513604.95E	507L	251634.93N 0513557.86E	513L	251653.98N 0513549.42E*
E12	Not available	F9	251654.24N 0513634.58E	G6R	251605.41N 0513657.02E	Q2	251704.59N 0513627.97E	Y4	251652.27N 0513559.13E	501R	251617.53N 0513605.53E	507R	251633.62N 0513558.44E	513R	251652.67N 0513550.00E*
E13	251617.89N 0513650.76E	F10	251656.53N 0513633.57E	H1	251547.90N 0513625.92E	Q3	251706.77N 0513627.00E	Y5	251652.80N 0513600.60E	502	251621.11N 0513604.91E	508	251637.54N 0513557.67E	514	251656.25N 0513549.38E*
E13L	251617.28N 0513651.71E	F11	251658.82N 0513632.56E	H1L	251546.83N 0513625.71E	Q4	251708.88N 0513626.22E	Y6	251653.33N 0513602.06E	502L	251621.47N 0513603.79E	508L	251637.89N 0513556.55E	514L	251656.60N 0513548.26E*
E13R	251618.59N 0513651.26E	G1	251600.17N 0513659.62E	H1R	251547.67N 0513626.96E	Q20	251705.13N 0513604.79E	Y7	251646.80N 0513556.46E	502R	251620.15N 0513604.37E	508R	251636.58N 0513557.13E	514R	251655.29N 0513548.84E*
E14	Not available	G1L	251559.34N 0513659.04E	H2	251548.63N 0513627.90E	Q21	251708.14N 0513603.46E	Y8	251647.33N 0513557.92E	503	251623.74N 0513603.75E	509	251640.16N 0513556.51E	515	251658.87N 0513548.22E*
E15	251619.87N 0513649.86E	G1R	251559.80N 0513700.45E	H2L	251547.91N 0513628.16E	Q40	251720.28N 0513624.13E	Y9	251647.86N 0513559.38E	503L	251624.09N 0513602.63E	509L	251640.52N 0513555.40E	515L	251659.23N 0513547.11E*
E15L	251619.85N 0513650.73E	G2	251559.46N 0513657.63E	H2R	251548.34N 0513629.56E	Q41	251721.45N 0513627.36E	425E	251712.33N 0513632.80E*	503R	251622.78N 0513603.21E	509R	251639.21N 0513555.97E	515R	251657.92N 0513547.69E*
E17	251622.05N 0513648.88E	G2L	251558.20N 0513656.65E	H3C	251549.27N 0513628.83E	Q50	251722.33N 0513622.76E	425W	251711.97N 0513631.81E*	504	251626.70N 0513602.44E	510	251642.79N 0513555.35E	Note:	* - Calculated values
E17L	251621.28N 0513650.05E	G2R	251558.78N 0513657.99E	H4	251550.89N 0513627.38E	Q51	251724.52N 0513621.80E	426E	251711.11N 0513633.34E*	504L	251627.06N 0513601.33E	510L	251643.14N 0513554.24E		
E17R	251622.55N 0513649.51E	G3C	251559.34N 0513656.47E	H4L	251551.06N 0513628.21E	V1	251517.78N 0513717.60E	426W	251710.75N 0513632.35E*	504R	251625.74N 0513601.91E	510R	251641.83N 0513554.81E		
F1	251635.43N 0513642.87E	G4	251601.42N 0513656.29E	H4R	251551.71N 0513627.62E	V2L	251520.87N 0513716.27E	427E	251709.89N 0513633.88E*	505	251629.33N 0513601.29E	511	251645.38N 0513554.17E*		
F2	251637.72N 0513641.86E	G4L	251601.87N 0513655.50E	H5	251551.82N 0513625.17E	V2R	251520.76N 0513715.67E	427W	251709.53N 0513632.89E*	505L	251629.68N 0513600.17E	511L	251645.74N 0513553.05E*		
F3	251640.01N 0513640.85E	G4R	251601.02N 0513655.56E	H5L	251552.23N 0513626.24E	V3	251522.82N 0513715.02E	428E	251708.67N 0513634.42E*	505R	251628.37N 0513600.75E	511R	251644.42N 0513553.63E*		
F4	251642.30N 0513639.84E	G5	251603.48N 0513657.18E	H5R	251552.69N 0513624.83E	V4	251525.01N 0513714.05E	428W	251708.30N 0513633.42E*	506	251631.95N 0513600.13E	512	251651.00N 0513551.69E*		
F5	251644.60N 0513638.83E	G5L	251604.33N 0513656.77E	H6	251552.61N 0513623.13E	V5	251527.19N 0513713.09E	429E	251707.44N 0513634.96E*	506L	251632.30N 0513559.01E	512L	251651.36N 0513550.58E*		

Changes: Renamed Aircraft Maintenance to Hangar A & B. Renamed Emiri Hangars to Hangar C & D.

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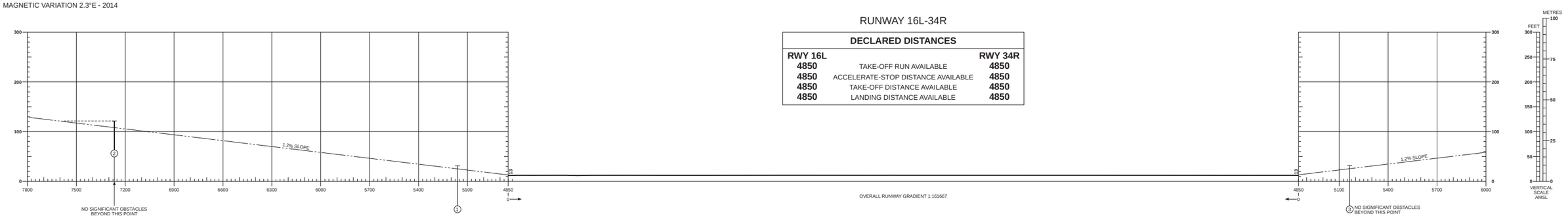
ELEVATIONS IN FEET
ALL OTHER DIMENSIONS IN METRES

AERODROME OBSTACLE CHART - ICAO
TYPE A OPERATING LIMITATIONS

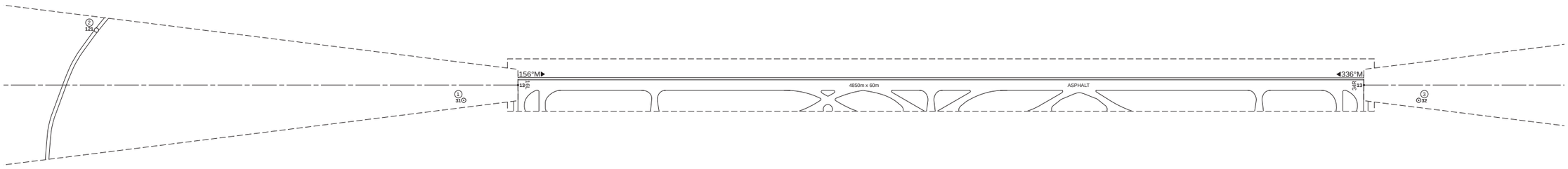
DOHA/Hamad Intl. (OTHH)
16L/34R - QATAR

MAGNETIC VARIATION 2.3°E - 2014



RUNWAY 16L-34R

DECLARED DISTANCES		
RWY 16L		**RWY 34R**
4850	TAKE-OFF RUN AVAILABLE	**4850**
4850	ACCELERATE-STOP DISTANCE AVAILABLE	**4850**
4850	TAKE-OFF DISTANCE AVAILABLE	**4850**
4850	LANDING DISTANCE AVAILABLE	**4850**



HORIZONTAL SCALE
METRES
500 400 300 200 100 0 500 1000 1500 2000 2500 3000
FEET
1000 500 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000

ORDER OF ACCURACY: Horizontal 3m; Vertical 1ft
CHANGE: Updated with new survey data.
Aerodrome information current SEPTEMBER 2014
Based on survey dated JULY 2014

LEGEND		
	PLAN	PROFILE
IDENTIFICATION NUMBER	③	③
HEIGHT AMSL	32	
POLE, TOWER, SPIRE, ANTENNA, ETC.	⊙	
MOBILE OBSTACLE		

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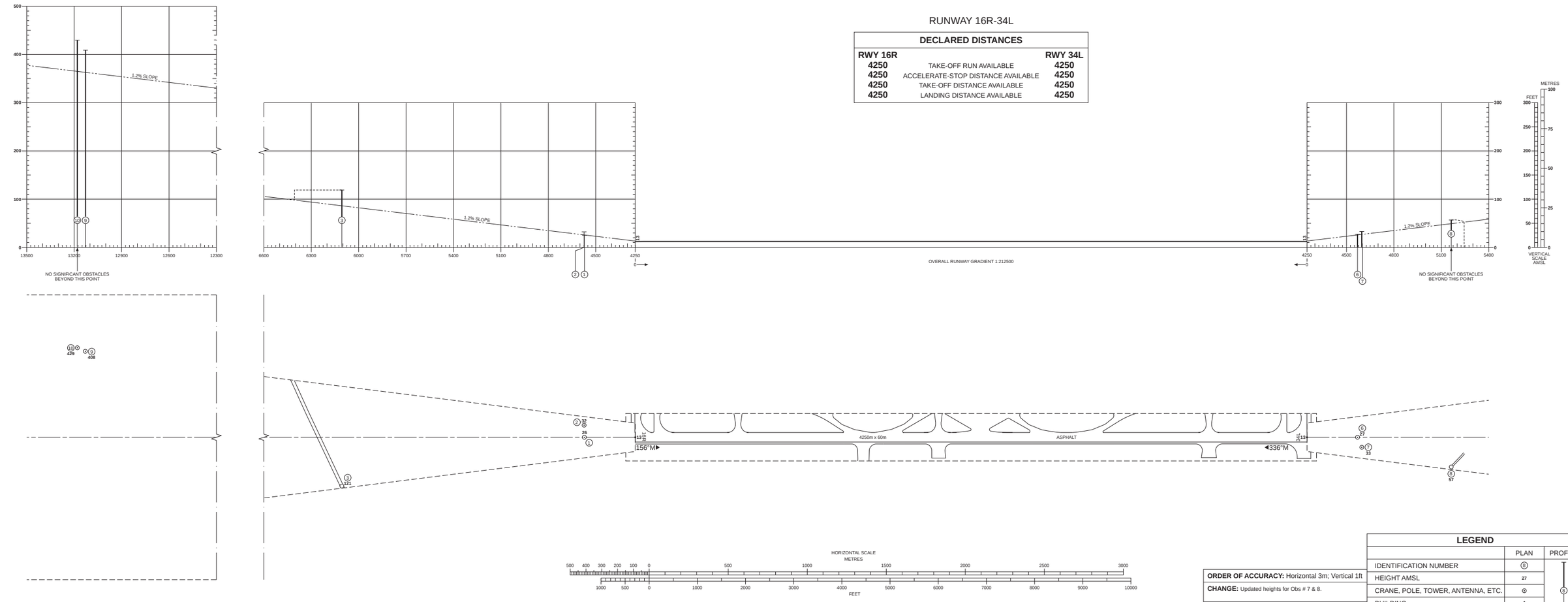
ELEVATIONS IN FEET
ALL OTHER DIMENSIONS IN METRES

AERODROME OBSTACLE CHART - ICAO
TYPE A OPERATING LIMITATIONS

DOHA/Hamad Intl. (OTHH)
16R/34L - QATAR

MAGNETIC VARIATION 2.3°E - 2014



DECLARED DISTANCES		
RWY 16R		RWY 34L
4250	TAKE-OFF RUN AVAILABLE	4250
4250	ACCELERATE-STOP DISTANCE AVAILABLE	4250
4250	TAKE-OFF DISTANCE AVAILABLE	4250
4250	LANDING DISTANCE AVAILABLE	4250

LEGEND		
	PLAN	PROFILE
IDENTIFICATION NUMBER	⑧	
HEIGHT AMSL	27	
CRANE, POLE, TOWER, ANTENNA, ETC.	⊙	
BUILDING	◆	
MOBILE OBSTACLE		

ORDER OF ACCURACY: Horizontal 3m; Vertical 1ft

CHANGE: Updated heights for Obs # 7 & 8.

Aerodrome information current SEPTEMBER 2014

Based on survey dated NOVEMBER 2016

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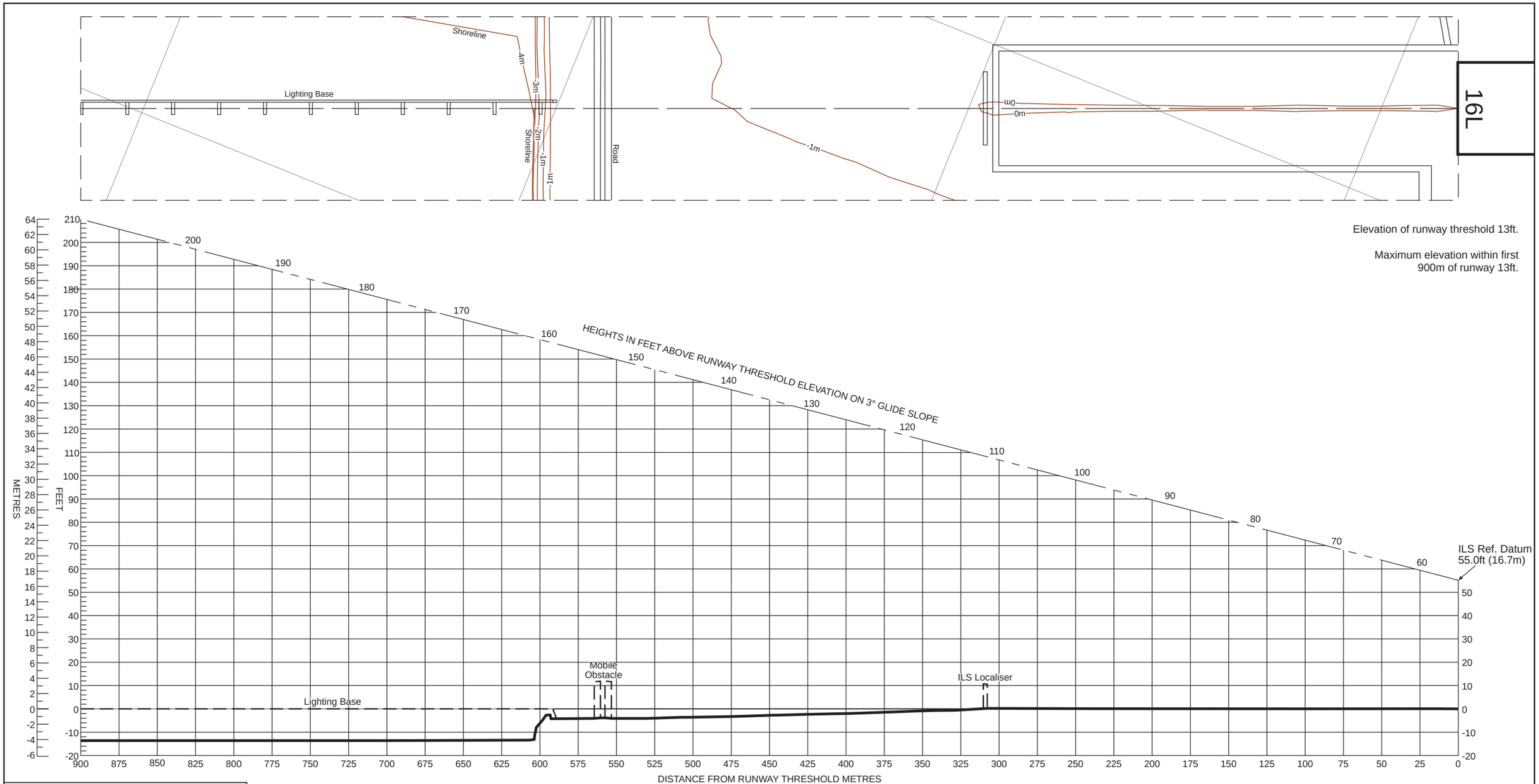
ELEVATIONS IN FEET
ALL OTHER DIMENSIONS IN METRES

PRECISION APPROACH TERRAIN CHART - ICAO

DOHA/Hamad Intl. (OTHH)
RUNWAY 16L



Elevation of runway threshold 13ft.

Maximum elevation within first 900m of runway 13ft.

LEGEND	
BUILDING OR LARGE STRUCTURE	
CENTRELINE PROFILE	
DEVIATION OF ±10ft (3m) IN HEIGHT FROM CENTRELINE PROFILE	

HORIZONTAL SCALE 1:2500

VERTICAL SCALE 1:500

CONTOURS AND HEIGHTS ARE RELATED TO ELEVATION OF RUNWAY THRESHOLD

CHANGE: Rev. max. elev. first 900m of rwy.
Aerodrome information current JAN 2013 V2
Based on survey dated AUG 2015

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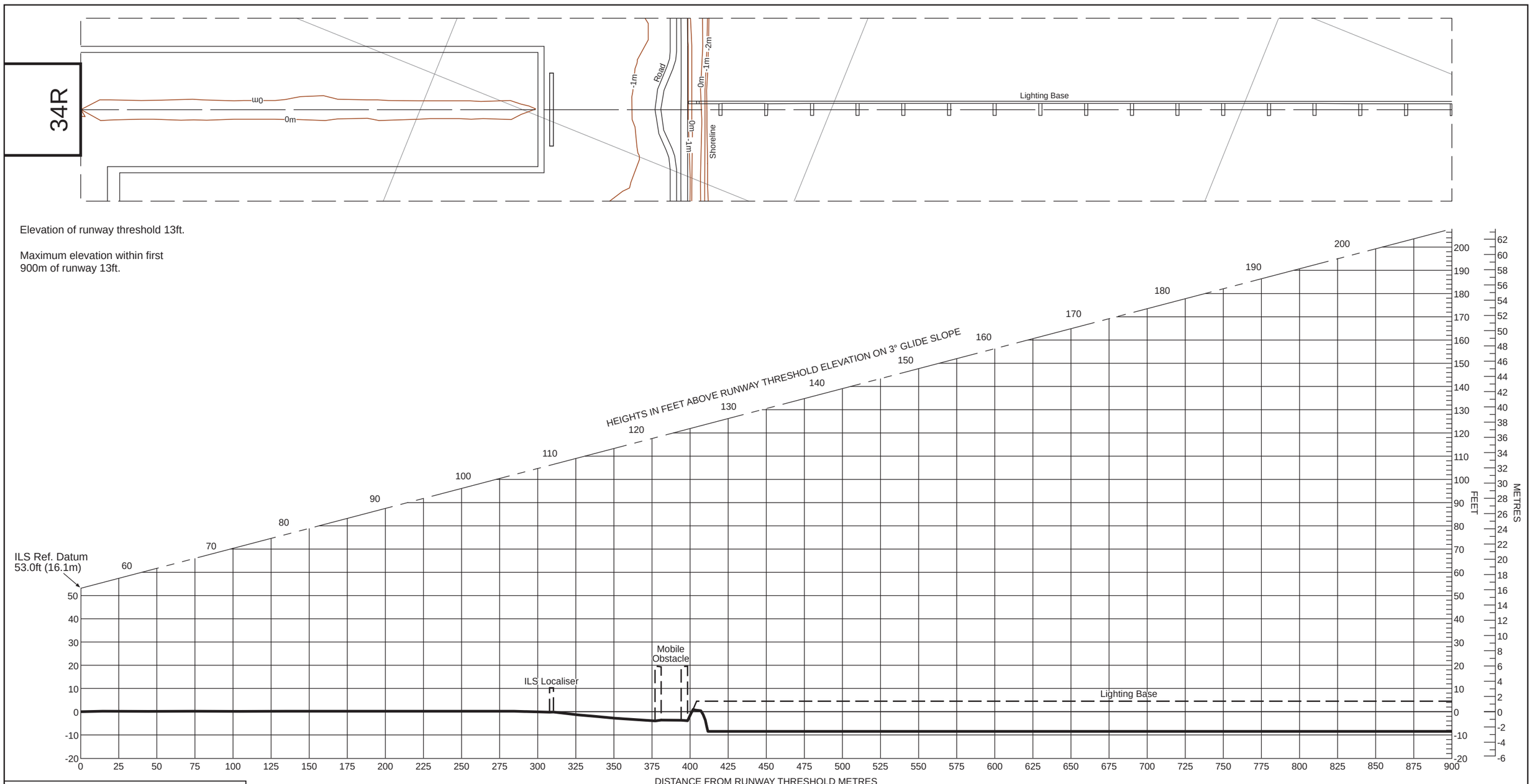
ELEVATIONS IN FEET
ALL OTHER DIMENSIONS IN METRES

PRECISION APPROACH TERRAIN CHART - ICAO

DOHA/Hamad Intl. (OTHH)
RUNWAY 34R



Elevation of runway threshold 13ft.

Maximum elevation within first
900m of runway 13ft.

LEGEND	
BUILDING OR LARGE STRUCTURE	
CENTRELINE PROFILE	
DEVIATION OF ±10ft (3m) IN HEIGHT FROM CENTRELINE PROFILE	

HORIZONTAL SCALE 1:2500

VERTICAL SCALE 1:500

CONTOURS AND HEIGHTS ARE RELATED TO ELEVATION OF RUNWAY THRESHOLD

CHANGE: Rev. max. elev. first 900m of rwy.

Aerodrome information current JAN 2013 V2

Based on survey dated AUG 2015

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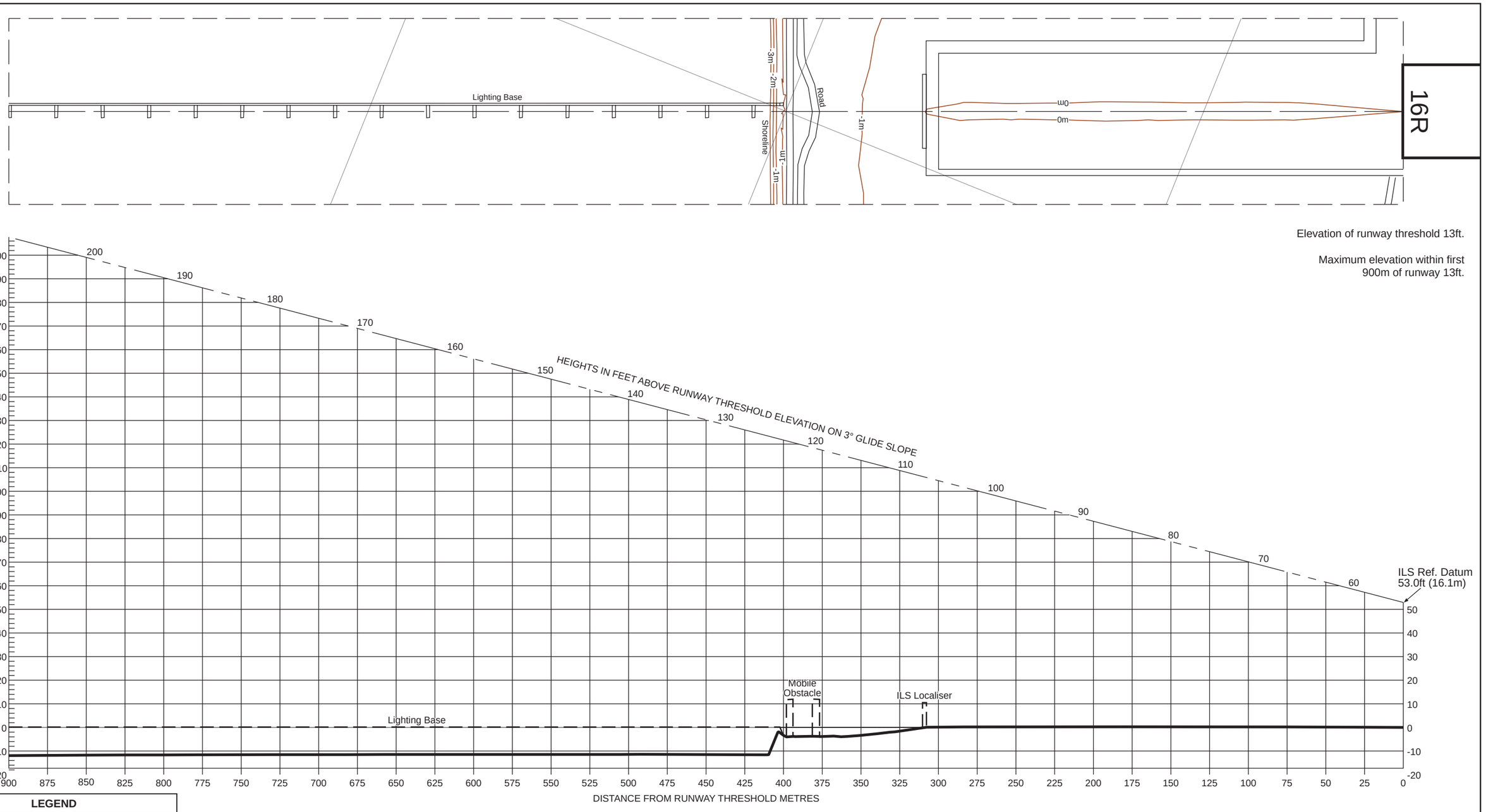
ELEVATIONS IN FEET
ALL OTHER DIMENSIONS IN METRES

PRECISION APPROACH TERRAIN CHART - ICAO

DOHA/Hamad Intl. (OTHH)
RUNWAY 16R



Elevation of runway threshold 13ft.

Maximum elevation within first 900m of runway 13ft.

LEGEND	
BUILDING OR LARGE STRUCTURE	
CENTRELINE PROFILE	
DEVIATION OF ±10ft (3m) IN HEIGHT FROM CENTRELINE PROFILE	

HORIZONTAL SCALE 1:2500

VERTICAL SCALE 1:500

CONTOURS AND HEIGHTS ARE RELATED TO ELEVATION OF RUNWAY THRESHOLD

CHANGE: Rev. max elev. first 900m of rwy.
Aerodrome information current JAN 2013 V2
Based on survey dated AUG 2015

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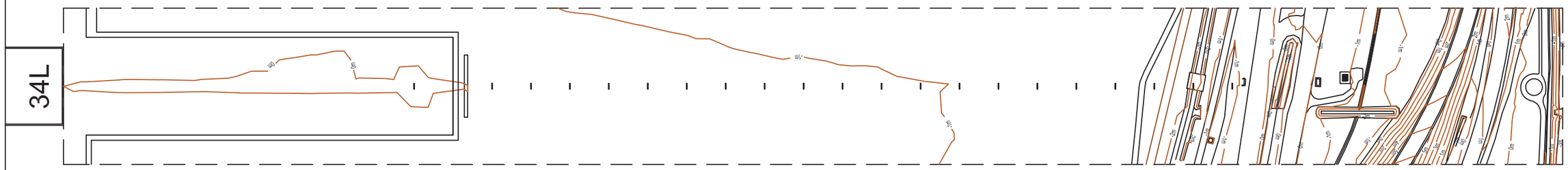
ELEVATIONS IN METERS
ALL OTHER DIMENSIONS IN METRES

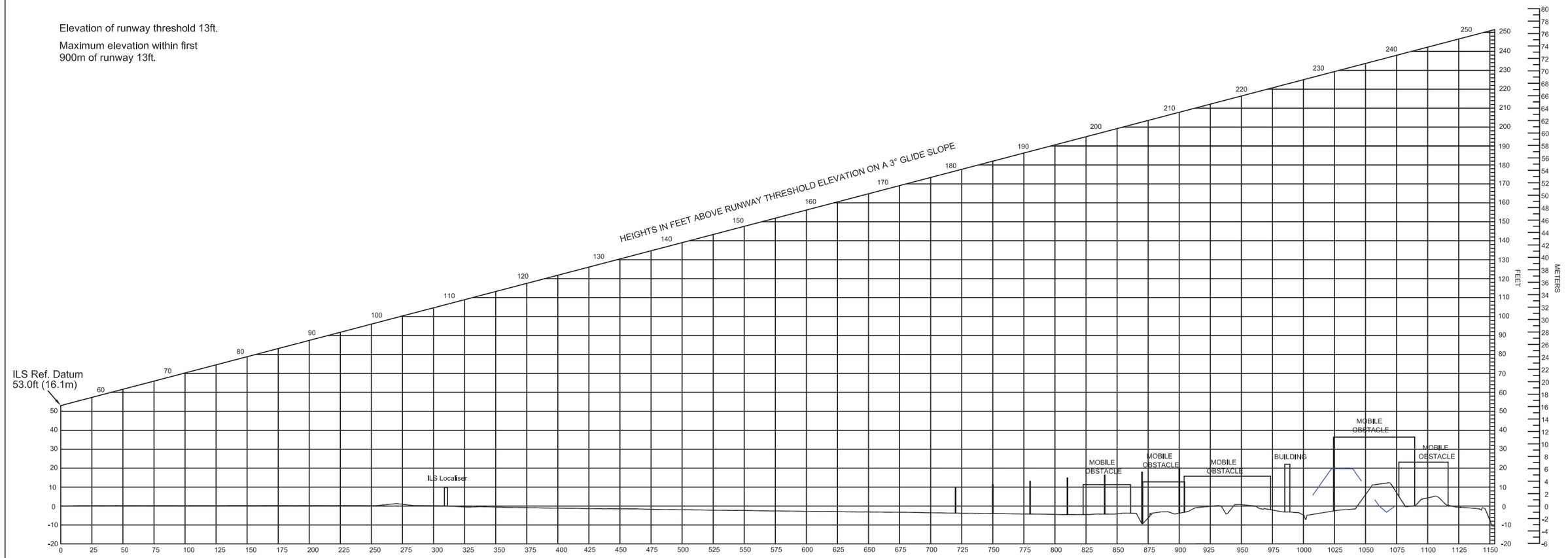
PRECISION APPROACH TERRAIN CHART - ICAO

DOHA/Hamad Intl. (OTHH)
RUNWAY 34L



Elevation of runway threshold 13ft.

Maximum elevation within first
900m of runway 13ft.



LEGEND	
BUILDING OR LARGE STRUCTURE	
CENTRELINE PROFILE	
DEVIATION AT LEAST ±10FT (3M) FROM CENTRELINE PROFILE	
APPROACH LIGHT	

HORIZONTAL SCALE 1:2500
VERTICAL SCALE 1:500
CONTOURS AND HEIGHTS ARE IN METRES AND RELATED TO ELEVATION OF RUNWAY THRESHOLD

CHANGE: Rev. max elev. first 900m of rwy..
Aerodrome Information Current JUNE 2014
Based on survey dated AUG 2015

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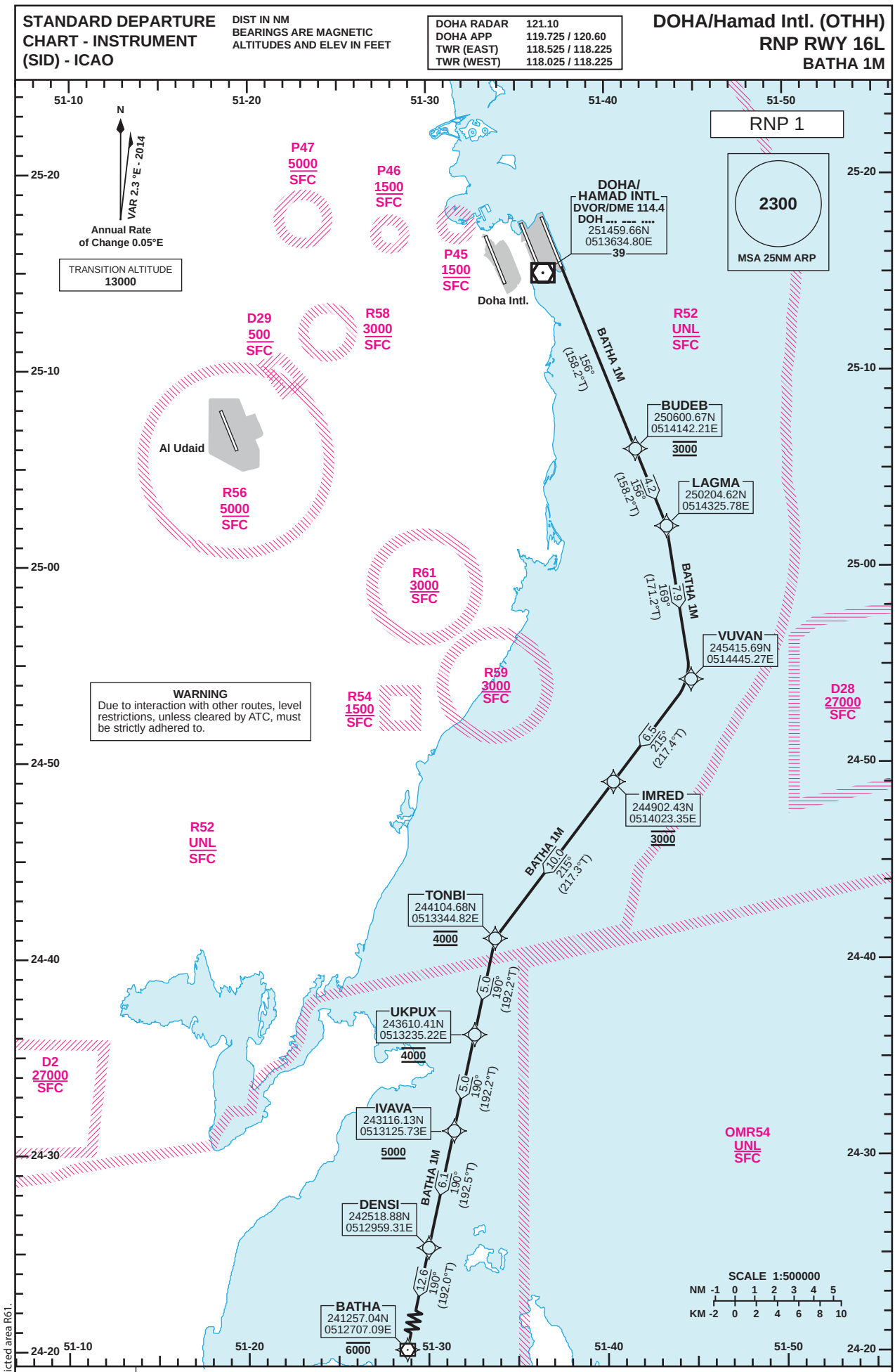
STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET

DOHA RADAR	121.10
DOHA APP	119.725 / 120.60
TWR (EAST)	118.525 / 118.225
TWR (WEST)	118.025 / 118.225

DOHA/Hamad Intl. (OTHH)
RNP RWY 16L
BATHA 1M



Route Designator	Routeing
BATHA 1M	**BUDEB**[T158.2;A3000] - **LAGMA** - **VUVAN** - **IMRED**[A3000] - **TONBI**[A4000] - **UKPUX**[A4000] - **IVAVA**[A5000+] - **DENSI** - **BATHA** [A6000-]

Changes: New restricted area R61.

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DOHA/Hamad Intl.(OTHH)
RNP RWY 16L
BATHA 1M

TABULAR DESCRIPTION

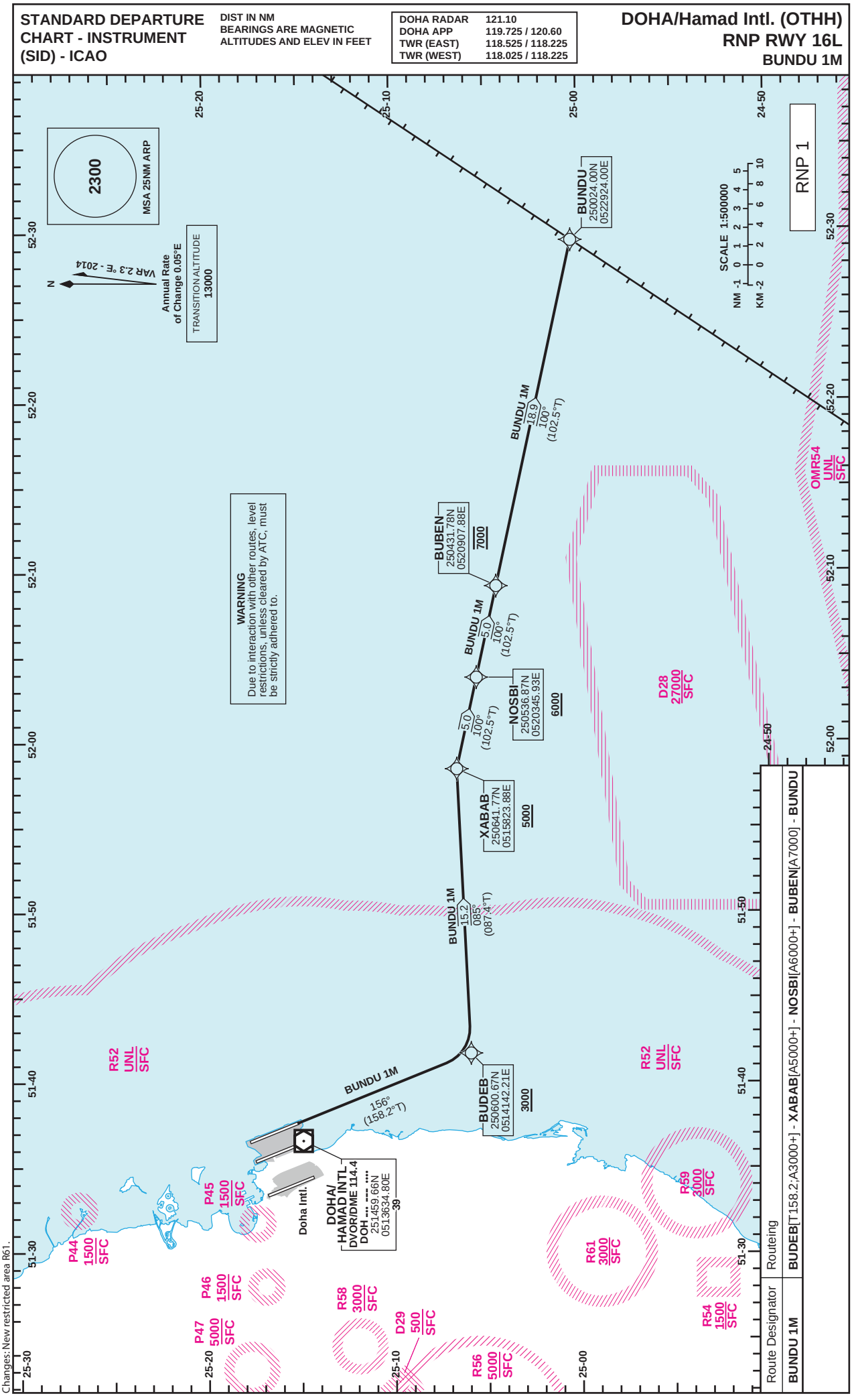
RNP SID BATHA 1M

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	CF	**BUDEB**	**-**	156 (158.2)	2.3	-		@3000			RNP 1
2	TF	**LAGMA**	**-**	156 (158.2)	2.3	4.2		-			RNP 1
3	TF	**VUVAN**	-	169 (171.2)	2.3	7.9		-			RNP 1
4	TF	**IMRED**	-	215 (217.4)	2.3	6.5		@3000			RNP 1
5	TF	**TONBI**	-	215 (217.3)	2.3	10.0		@4000			RNP 1
6	TF	**UKPUX**	-	190 (192.2)	2.3	5.0		@4000			RNP 1
7	TF	**IVAVA**	-	190 (192.2)	2.3	5.0		+5000			RNP 1
8	TF	**DENSI**	-	190 (192.5)	2.3	6.1		-			RNP 1
9	TF	**BATHA**	-	190 (192.0)	2.3	12.6		-6000			RNP 1

WAYPOINT LIST

RNP SID BATHA 1M

Waypoint Identifier	Coordinates
BUDEB	250600.67N 0514142.21E
LAGMA	250204.62N 0514325.78E
VUVAN	245415.69N 0514445.27E
IMRED	244902.43N 0514023.35E
TONBI	244104.68N 0513344.82E
UKPUX	243610.41N 0513235.22E
IVAVA	243116.13N 0513125.73E
DENSI	242518.88N 0512959.31E
BATHA	241257.04N 0512707.09E


STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO
DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET
DOHA RADAR 121.10
DOHA APP 119.725 / 120.60
TWR (EAST) 118.525 / 118.225
TWR (WEST) 118.025 / 118.225
DOHA/Hamad Intl. (OTHH)
RNP RWY 16L
BUNDU 1M
2300
MSA 25NM ARP
VAR 2.3°E - 2014
Annual Rate of Change 0.05°E
TRANSITION ALTITUDE 13000
SCALE 1:500000
RNP 1
WARNING
Due to interaction with other routes, level restrictions, unless cleared by ATC, must be strictly adhered to.
BUNDU 250024.00N 0522924.00E
BUNDU 1M 18.9 100° (102.5°T)
BUBEN 250431.78N 0520907.88E 7000
BUNDU 1M 5.0 100° (102.5°T)
NOSBI 250536.87N 0520345.93E 6000
5.0 100° (102.5°T)
XABAB 250641.77N 0515823.88E 5000
BUNDU 1M 15.2 085° (087.4°T)
BUDEB 250600.67N 0514142.21E 3000
BUNDU 1M 156° (158.2°T)
DOHA/ HAMAD INTL DVOR/DME 114.4 DOH --- --- --- 251459.66N 0513634.80E 39
Doha Intl.
OMR54 UNL SFC
D28 27000 SFC
R52 UNL SFC
R52 UNL SFC
P44 1500 SFC
P45 1500 SFC
P46 1500 SFC
P47 5000 SFC
R58 3000 SFC
D29 500 SFC
R56 5000 SFC
R61 3000 SFC
R59 3000 SFC
R54 1500 SFC
Changes: New restricted area R61.
Route Designator
Routeing
BUNDU 1M
BUDEB[T158.2;A3000+] - XABAB[A5000+] - NOSBI[A6000+] - BUBEN[A7000] - BUNDU

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DOHA/Hamad Intl.(OTHH)
RNP RWY 16L
BUNDU 1M

TABULAR DESCRIPTION

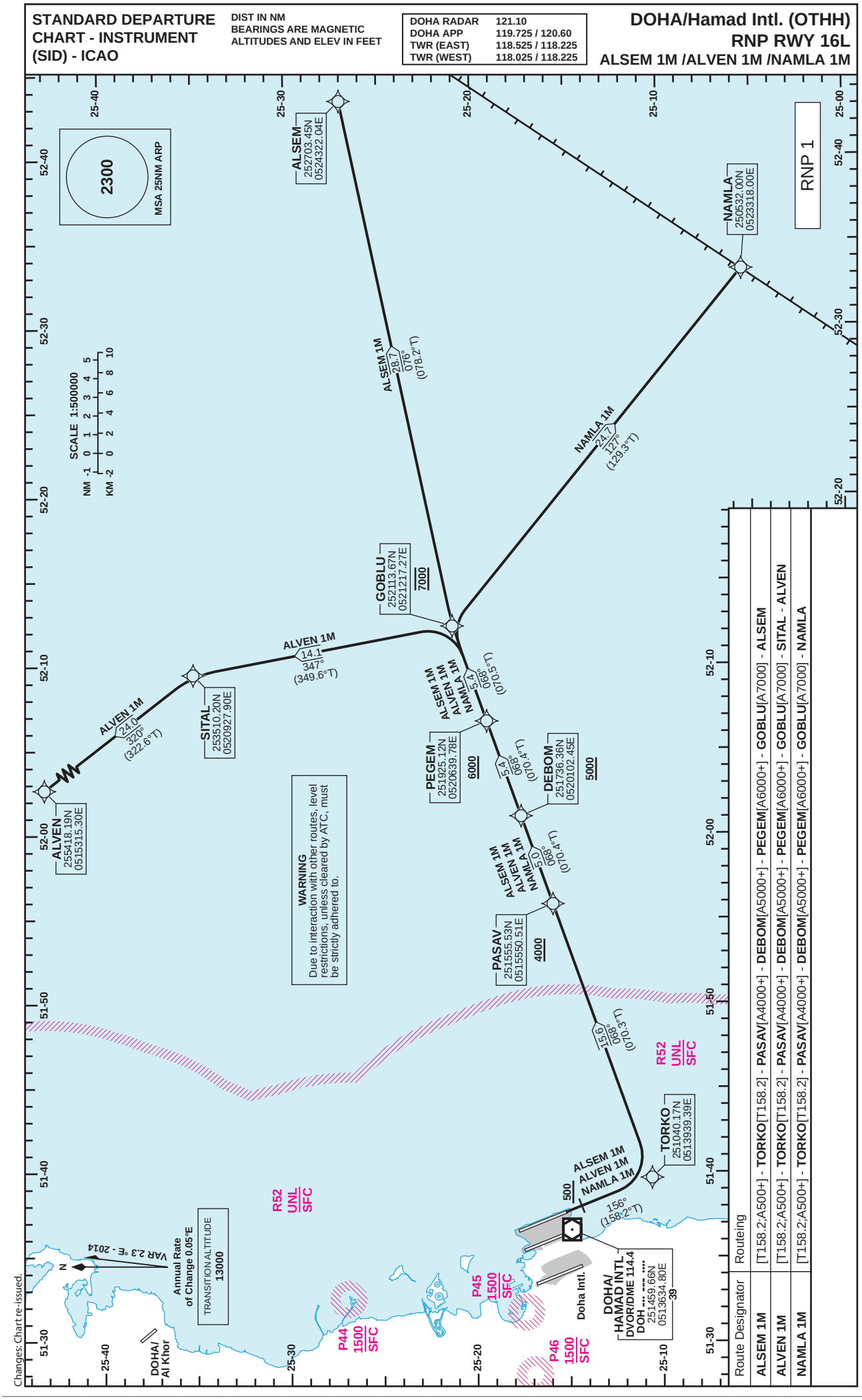
RNP SID BUNDU 1M

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	CF	**BUDEB**	**-**	156 (158.2)	2.3	-		+3000			RNP 1
2	TF	**XABAB**	**-**	085 (087.4)	2.3	15.2		+5000			RNP 1
3	TF	**NOSBI**	-	100 (102.5)	2.3	5.0		+6000			RNP 1
4	TF	**BUBEN**	-	100 (102.5)	2.3	5.0		@7000			RNP 1
5	TF	**BUNDU**	-	100 (102.5)	2.3	18.9		-			RNP 1

WAYPOINT LIST

RNP SID BUNDU 1M

Waypoint Identifier	Coordinates
BUDEB	250600.67N 0514142.21E
XABAB	250641.77N 0515823.88E
NOSBI	250536.87N 0520345.93E
BUBEN	250431.78N 0520907.88E
BUNDU	250024.00N 0522924.00E


STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO
DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET
DOHA RADAR 121.10
DOHA APP 119.725 / 120.60
TWR (EAST) 118.525 / 118.225
TWR (WEST) 118.025 / 118.225
DOHA/Hamad Intl. (OTHH)
RNP RWY 16L
ALSEM 1M /ALVEN 1M /NAMLA 1M
RNP 1
MSA 25NM ARP
2300
SCALE 1:500000
ALSEM 252703.45N 0524322.04E
NAMLA 250532.00N 0523318.00E
GOBLU 252113.67N 0521217.27E 7000
SITAL 253510.20N 0520927.90E
PEGEM 251925.12N 0520639.78E 6000
DEBOM 251736.36N 0520102.45E 5000
PASAV 251555.53N 0515550.51E 4000
TORKO 251040.17N 0513939.39E
ALVEN 255418.19N 0515315.30E
ALSEM 1M 28.7 076° (078.2°T)
NAMLA 1M 24.7 127° (129.3°T)
ALVEN 1M 14.1 347° (349.6°T)
ALVEN 1M 24.0 320° (322.6°T)
ALSEM 1M ALVEN 1M NAMLA 1M 5.4 068° (070.5°T)
5.4 068° (070.4°T)
ALSEM 1M ALVEN 1M NAMLA 1M 5.0 068° (070.4°T)
15.6 068° (070.3°T)
ALSEM 1M ALVEN 1M NAMLA 1M 500 156° (158.2°T)
WARNING
Due to interaction with other routes, level restrictions, unless cleared by ATC, must be strictly adhered to.
R52 UNL SFC
R52 UNL SFC
P44 1500 SFC
P45 1500 SFC
P46 1500 SFC
DOHA/ HAMAD INTL DVOR/DME 114.4 DOH 251459.66N 0513634.80E
Doha Intl.
DOHA/ Al Khor
TRANSITION ALTITUDE 13000
VAR 2.3°E - 2014
Annual Rate of Change 0.05°E
Changes: Chart re-issued.
Route Designator
Routeing
ALSEM 1M [T158.2;A500+] - TORKO[T158.2] - PASAV[A4000+] - DEBOM[A5000+] - PEGEM[A6000+] - GOBLU[A7000] - ALSEM
ALVEN 1M [T158.2;A500+] - TORKO[T158.2] - PASAV[A4000+] - DEBOM[A5000+] - PEGEM[A6000+] - GOBLU[A7000] - SITAL - ALVEN
NAMLA 1M [T158.2;A500+] - TORKO[T158.2] - PASAV[A4000+] - DEBOM[A5000+] - PEGEM[A6000+] - GOBLU[A7000] - NAMLA

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DOHA/Hamad Intl.(OTHH)
RNP RWY 16L
ALSEM 1M /ALVEN 1M /NAMLA 1M

TABULAR DESCRIPTION

RNP SID ALSEM 1M

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	CA	-	-	156 (158.2)	2.3	-		+500			RNP 1
2	CF	TORKO	-	156 (158.2)	2.3	-		-			RNP 1
3	TF	PASAV	-	068 (070.3)	2.3	15.6		+4000			RNP 1
4	TF	DEBOM	-	068 (070.4)	2.3	5.0		+5000			RNP 1
5	TF	PEGEM	-	068 (070.4)	2.3	5.4		+6000			RNP 1
6	TF	GOBLU	-	068 (070.5)	2.3	5.4		@7000			RNP 1
7	TF	ALSEM	-	076 (078.2)	2.3	28.7		-			RNP 1

RNP SID ALVEN 1M

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	CA	-	-	156 (158.2)	2.3	-		+500			RNP 1
2	CF	TORKO	-	156 (158.2)	2.3	-		-			RNP 1
3	TF	PASAV	-	068 (070.3)	2.3	15.6		+4000			RNP 1
4	TF	DEBOM	-	068 (070.4)	2.3	5.0		+5000			RNP 1
5	TF	PEGEM	-	068 (070.4)	2.3	5.4		+6000			RNP 1
6	TF	GOBLU	-	068 (070.5)	2.3	5.4		@7000			RNP 1
7	TF	SITAL	-	347 (349.6)	2.3	14.1		-			RNP 1
8	TF	ALVEN	-	320 (322.6)	2.3	24.0		-			RNP 1

RNP SID NAMLA 1M

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	CA	-	-	156 (158.2)	2.3	-		+500			RNP 1
2	CF	TORKO	-	156 (158.2)	2.3	-		-			RNP 1
3	TF	PASAV	-	068 (070.3)	2.3	15.6		+4000			RNP 1
4	TF	DEBOM	-	068 (070.4)	2.3	5.0		+5000			RNP 1
5	TF	PEGEM	-	068 (070.4)	2.3	5.4		+6000			RNP 1
6	TF	GOBLU	-	068 (070.5)	2.3	5.4		@7000			RNP 1
7	TF	NAMLA	-	127 (129.3)	2.3	24.7		-			RNP 1

WAYPOINT LIST

RNP SID ALSEM 1M /ALVEN 1M /NAMLA 1M

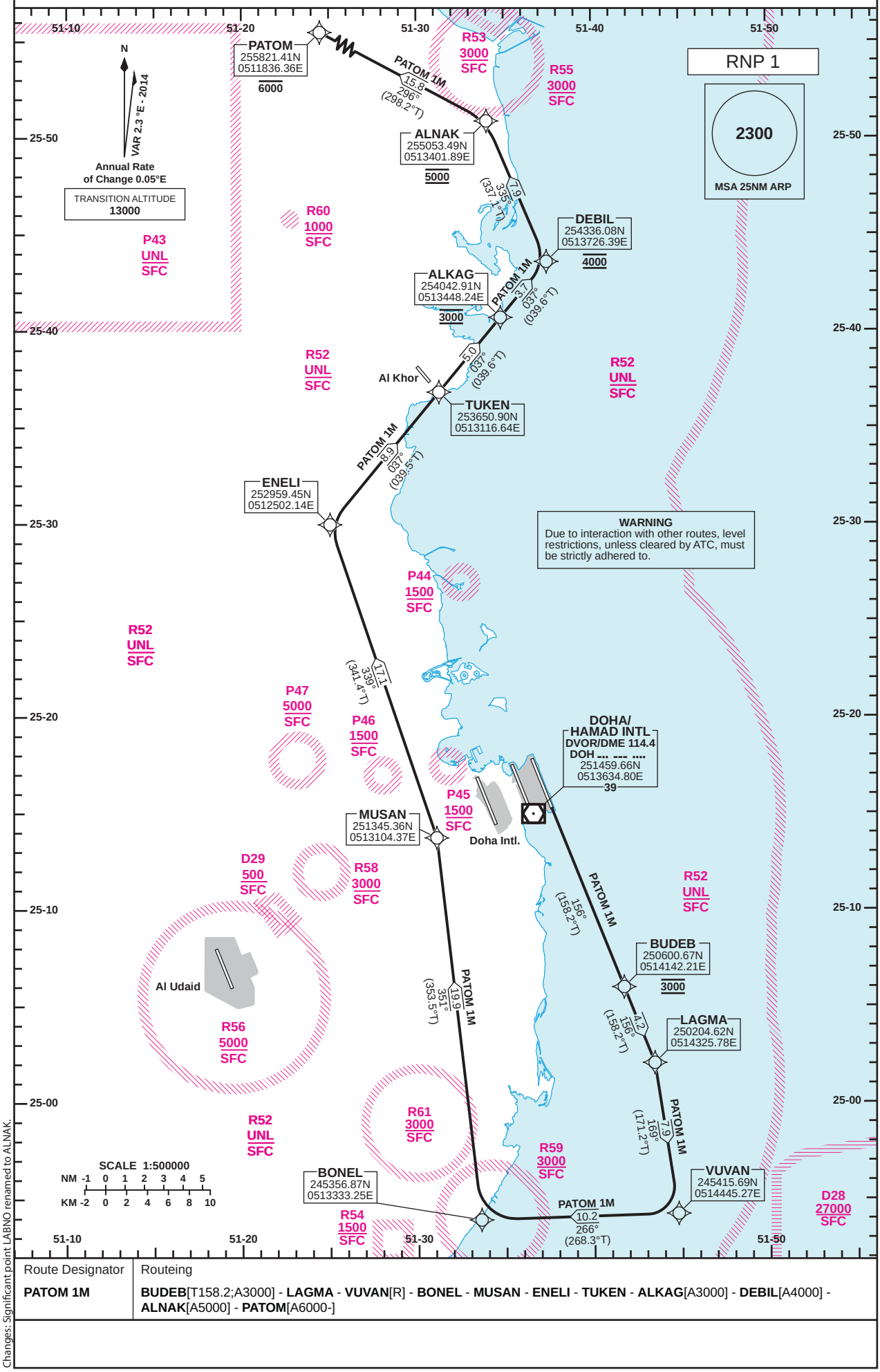
Waypoint Identifier	Coordinates
TORKO	251040.17N 0513939.39E
PASAV	251555.53N 0515550.51E
DEBOM	251736.36N 0520102.45E
PEGEM	251925.12N 0520639.78E
GOBLU	252113.67N 0521217.27E
ALSEM	252703.45N 0524322.04E
SITAL	253510.20N 0520927.90E
ALVEN	255418.19N 0515315.30E
NAMLA	250532.00N 0523318.00E

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET

DOHA RADAR	121.10
DOHA APP	119.725 / 120.60
TWR (EAST)	118.525 / 118.225
TWR (WEST)	118.025 / 118.225

DOHA/Hamad Intl. (OTHH)
RNP RWY 16L
PATOM 1M



Route Designator	Routeing
PATOM 1M	**BUDEB**[T158.2;A3000] - **LAGMA** - **VUVAN**[R] - **BONEL** - **MUSAN** - **ENELI** - **TUKEN** - **ALKAG**[A3000] - **DEBIL**[A4000] - **ALNAK**[A5000] - **PATOM**[A6000-]

Changes: Significant point LABNO renamed to ALNAK.

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DOHA/Hamad Intl.(OTHH)
RNP RWY 16L
PATOM 1M

TABULAR DESCRIPTION

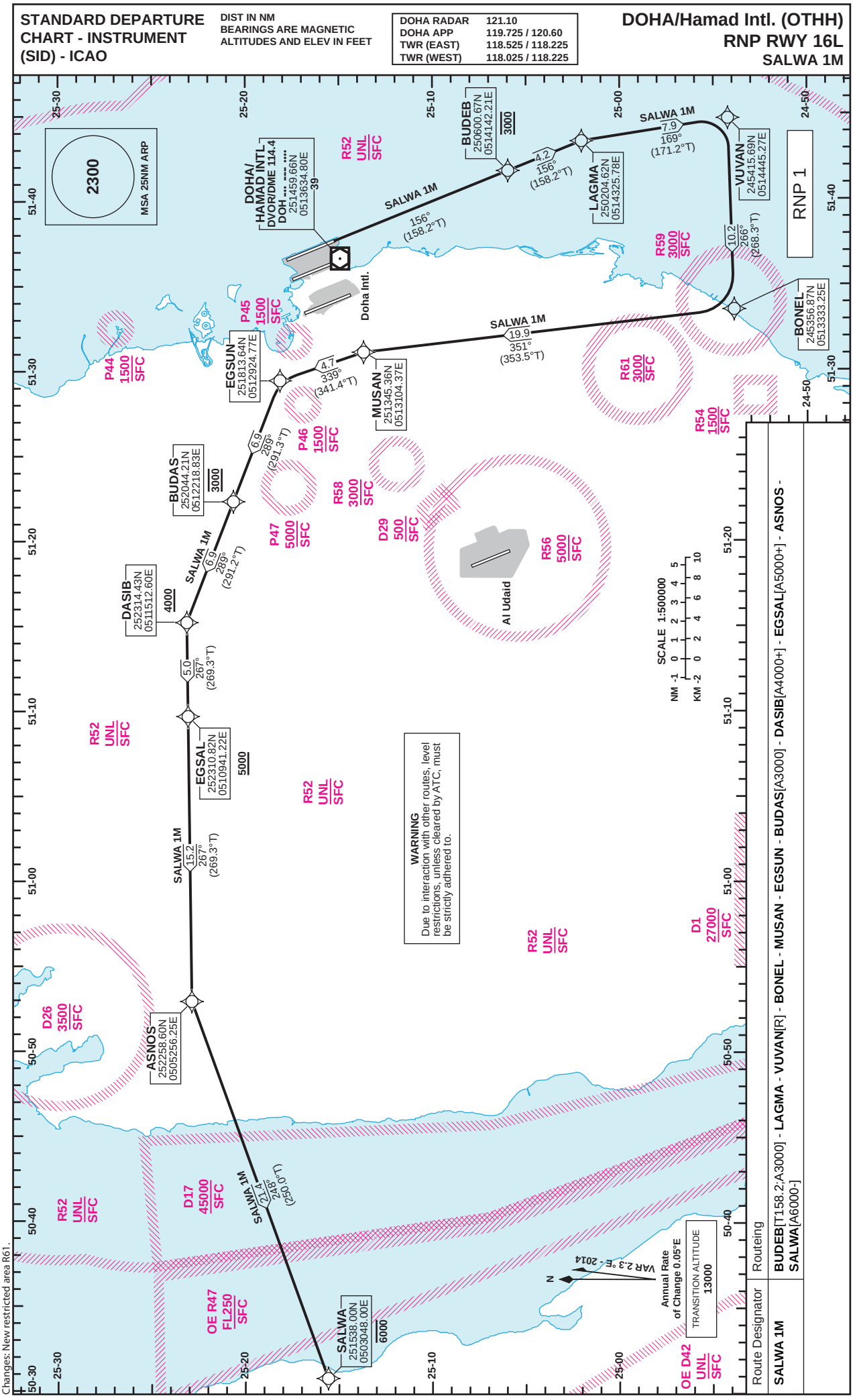
RNP SID PATOM 1M

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	CF	**BUDEB**	**-**	156 (158.2)	2.3	-		@3000			RNP 1
2	TF	**LAGMA**	**-**	156 (158.2)	2.3	4.2		-			RNP 1
3	TF	**VUVAN**	-	169 (171.2)	2.3	7.9	R	-			RNP 1
4	TF	**BONEL**	-	266 (268.3)	2.3	10.2		-			RNP 1
5	TF	**MUSAN**	-	351 (353.5)	2.3	19.9		-			RNP 1
6	TF	**ENELI**	-	339 (341.4)	2.3	17.1		-			RNP 1
7	TF	**TUKEN**	-	037 (039.5)	2.3	8.9		-			RNP 1
8	TF	**ALKAG**	-	037 (039.6)	2.3	5.0		@3000			RNP 1
9	TF	**DEBIL**	-	037 (039.6)	2.3	3.7		@4000			RNP 1
10	TF	**ALNAK**	-	335 (337.1)	2.3	7.9		@5000			RNP 1
11	TF	**PATOM**	-	296 (298.2)	2.3	15.8		-6000			RNP 1

WAYPOINT LIST

RNP SID PATOM 1M

Waypoint Identifier	Coordinates
BUDEB	250600.67N 0514142.21E
LAGMA	250204.62N 0514325.78E
VUVAN	245415.69N 0514445.27E
BONEL	245356.87N 0513333.25E
MUSAN	251345.36N 0513104.37E
ENELI	252959.45N 0512502.14E
TUKEN	253650.90N 0513116.64E
ALKAG	254042.91N 0513448.24E
DEBIL	254336.08N 0513726.39E
ALNAK	255053.49N 0513401.89E
PATOM	255821.41N 0511836.36E


STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO
DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET
DOHA RADAR 121.10
DOHA APP 119.725 / 120.60
TWR (EAST) 118.525 / 118.225
TWR (WEST) 118.025 / 118.225
DOHA/Hamad Intl. (OTHH)
RNP RWY 16L
SALWA 1M
RNP 1
MSA 25NM ARP
2300
DOHA/ HAMAD INTL DVOR/DME 114.4 DOH --- --- ---- 251459.66N 0513634.80E 39
BUDEB 250600.67N 0514142.21E 3000
LAGMA 250204.62N 0514325.78E
VUVAN 245415.69N 0514445.27E
BONEL 245356.87N 0513333.25E
EGSUN 251813.64N 0512924.77E
MUSAN 251345.36N 0513104.37E
BUDAS 252044.21N 0512218.83E 3000
DASIB 252314.43N 0511512.60E 4000
EGSAL 252310.82N 0510941.22E 5000
ASNOS 252258.60N 0505256.25E
SALWA 251538.00N 0503048.00E 6000
SALWA 1M
156° (158.2°T)
7.9
169° (171.2°T)
4.2
156° (158.2°T)
10.2
266° (268.3°T)
19.9
351° (353.5°T)
4.7
339° (341.4°T)
6.9
289° (291.3°T)
6.9
289° (291.2°T)
5.0
267° (269.3°T)
15.2
267° (269.3°T)
21.4
248° (250.0°T)
Doha Intl.
Al Udaid
R52 UNL SFC
R59 3000 SFC
R61 3000 SFC
R54 1500 SFC
P44 1500 SFC
P45 1500 SFC
P46 1500 SFC
R58 3000 SFC
P47 5000 SFC
D29 500 SFC
R56 5000 SFC
D1 27000 SFC
D26 3500 SFC
D17 45000 SFC
OE R47 FL250 SFC
OE D42 UNL SFC
WARNING
Due to interaction with other routes, level restrictions, unless cleared by ATC, must be strictly adhered to.
SCALE 1:500000
NM -1 0 1 2 3 4 5
KM -2 0 2 4 6 8 10
VAR 2.3°E - 2014
Annual Rate of Change 0.05°E
TRANSITION ALTITUDE 13000
Changes: New restricted area R61.
Route Designator
Routeing
SALWA 1M
BUDEB[T158.2:A3000] - LAGMA - VUVAN[R] - BONEL - MUSAN - EGSUN - BUDAS[A3000] - DASIB[A4000+] - EGSAL[A5000+] - ASNOS - SALWA[A6000-]

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DOHA/Hamad Intl.(OTHH)
RNP RWY 16L
SALWA 1M

TABULAR DESCRIPTION

RNP SID SALWA 1M

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	CF	**BUDEB**	**-**	156 (158.2)	2.3	-		@3000			RNP 1
2	TF	**LAGMA**	**-**	156 (158.2)	2.3	4.2					RNP 1
3	TF	**VUVAN**	-	169 (171.2)	2.3	7.9	R				RNP 1
4	TF	**BONEL**	-	266 (268.3)	2.3	10.2					RNP 1
5	TF	**MUSAN**	-	351 (353.5)	2.3	19.9					RNP 1
6	TF	**EGSUN**	-	339 (341.4)	2.3	4.7					RNP 1
7	TF	**BUDAS**	-	289 (291.3)	2.3	6.9		@3000			RNP 1
8	TF	**DASIB**	-	289 (291.2)	2.3	6.9		+4000			RNP 1
9	TF	**EGSAL**	-	267 (269.3)	2.3	5.0		+5000			RNP 1
10	TF	**ASNOS**	-	267 (269.3)	2.3	15.2					RNP 1
11	TF	**SALWA**	-	248 (250.0)	2.3	21.4		-6000			RNP 1

WAYPOINT LIST

RNP SID SALWA 1M

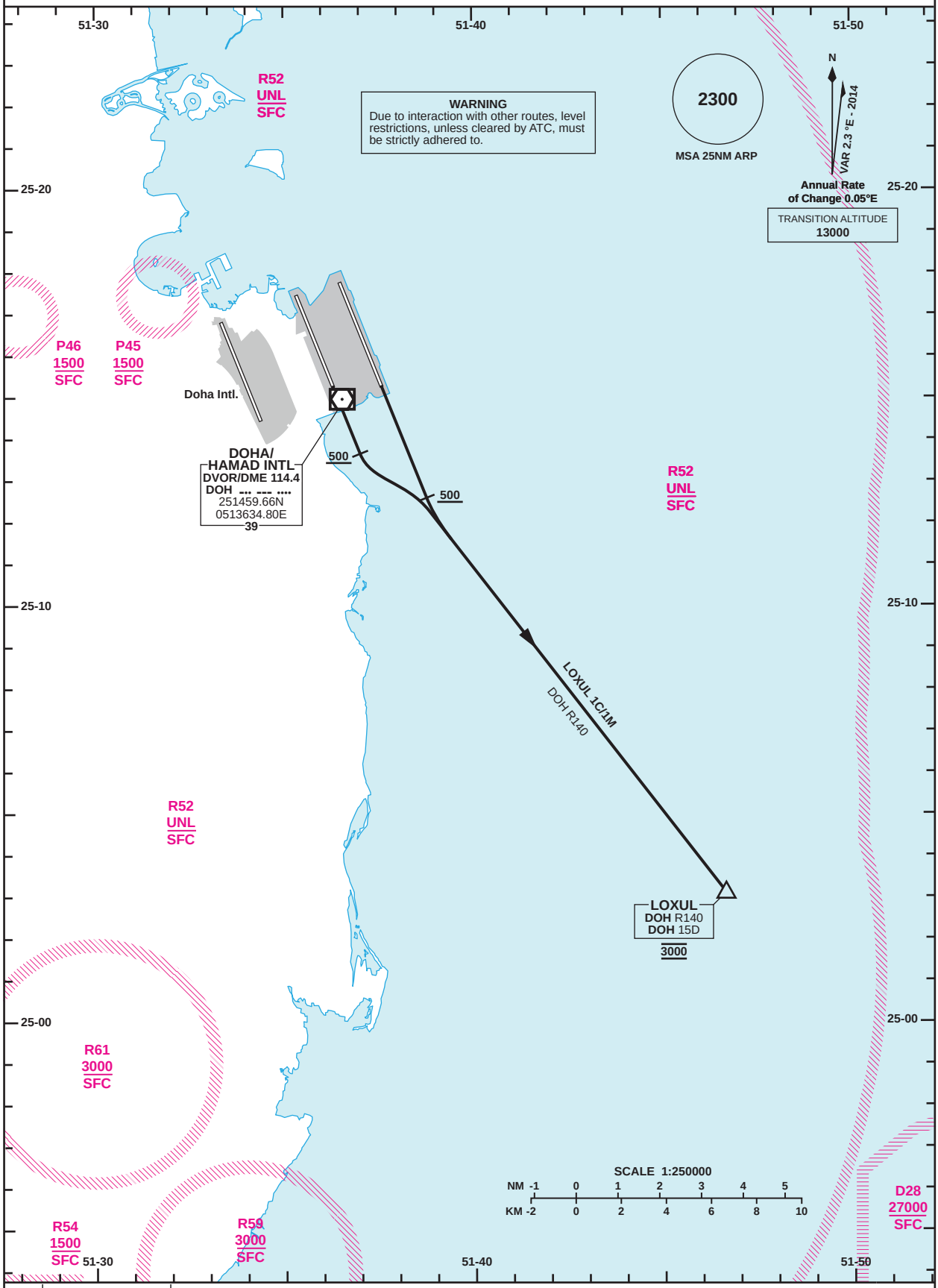
Waypoint Identifier	Coordinates
BUDEB	250600.67N 0514142.21E
LAGMA	250204.62N 0514325.78E
VUVAN	245415.69N 0514445.27E
BONEL	245356.87N 0513333.25E
MUSAN	251345.36N 0513104.37E
EGSUN	251813.64N 0512924.77E
BUDAS	252044.21N 0512218.83E
DASIB	252314.43N 0511512.60E
EGSAL	252310.82N 0510941.22E
ASNOS	252258.60N 0505256.25E
SALWA	251538.00N 0503048.00E

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET

DOHA RADAR	121.10
DOHA APP	119.725 / 120.60
TWR (EAST)	118.525 / 118.225
TWR (WEST)	118.025 / 118.225

DOHA/Hamad Intl. (OTHH)
RWY 16L/R
LOXUL 1C/1M



Rwy	Route Designator	Routeing
16L	**LOXUL 1M**	Climb straight ahead to **500**. Turn left to intercept **DOH** R140 to **LOXUL** (**DOH** 15D) at **3000**. Continue as directed.
16R	**LOXUL 1C**	Climb straight ahead to **500**. Turn left to intercept **DOH** R140 to **LOXUL** (**DOH** 15D) at **3000**. Continue as directed.

GENERAL INFORMATION : 1. Rwy16R - **4% CG** required until passing **700**.

Rwy	Primary SIDs	Initial Contact	Initial Altitude	Radio Fail Procedures
16L	**LOXUL 1M**	DEPs	Cross DOH D10 at 3000	Execute three left-hand orbits at LOXUL at 3000. Continue left-hand orbit climbing to 5000. Proceed direct to first enroute waypoint then continue as flight planned or proceed direct to DOH DVOR and follow the ILS 16L approach procedure to land at OTHH
16R	**LOXUL 1C**	DEPs	3000	

Changes: New restricted area R61.

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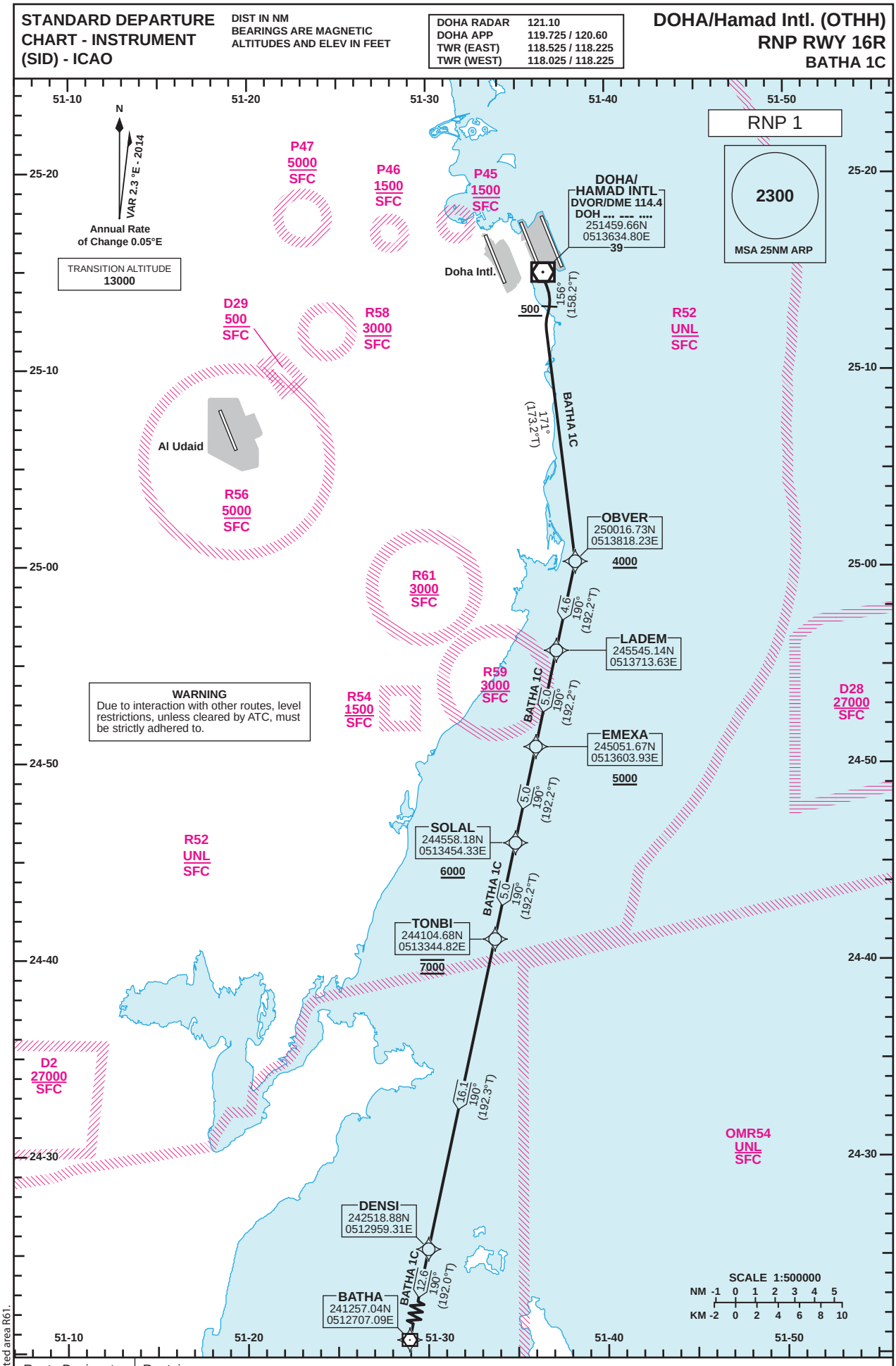
STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET

DOHA RADAR	121.10
DOHA APP	119.725 / 120.60
TWR (EAST)	118.525 / 118.225
TWR (WEST)	118.025 / 118.225

DOHA/Hamad Intl. (OTHH)
RNP RWY 16R
BATHA 1C



Route Designator	Routeing
BATHA 1C	[T158.2;A500+] - **OBVER**[T173.2;A4000+] - **LADEM** - **EMEXA**[A5000+] - **SOLAL**[A6000+] - **TONBI**[A7000] - **DENSI** - **BATHA**

GENERAL INFORMATION
1. Close-in obstacles exist for Rwy 16R departures.
2. **3.5% CG** required to **600**.

Changes: New restricted area R61.

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DOHA/Hamad Intl.(OTHH)
RNP RWY 16R
BATHA 1C

TABULAR DESCRIPTION

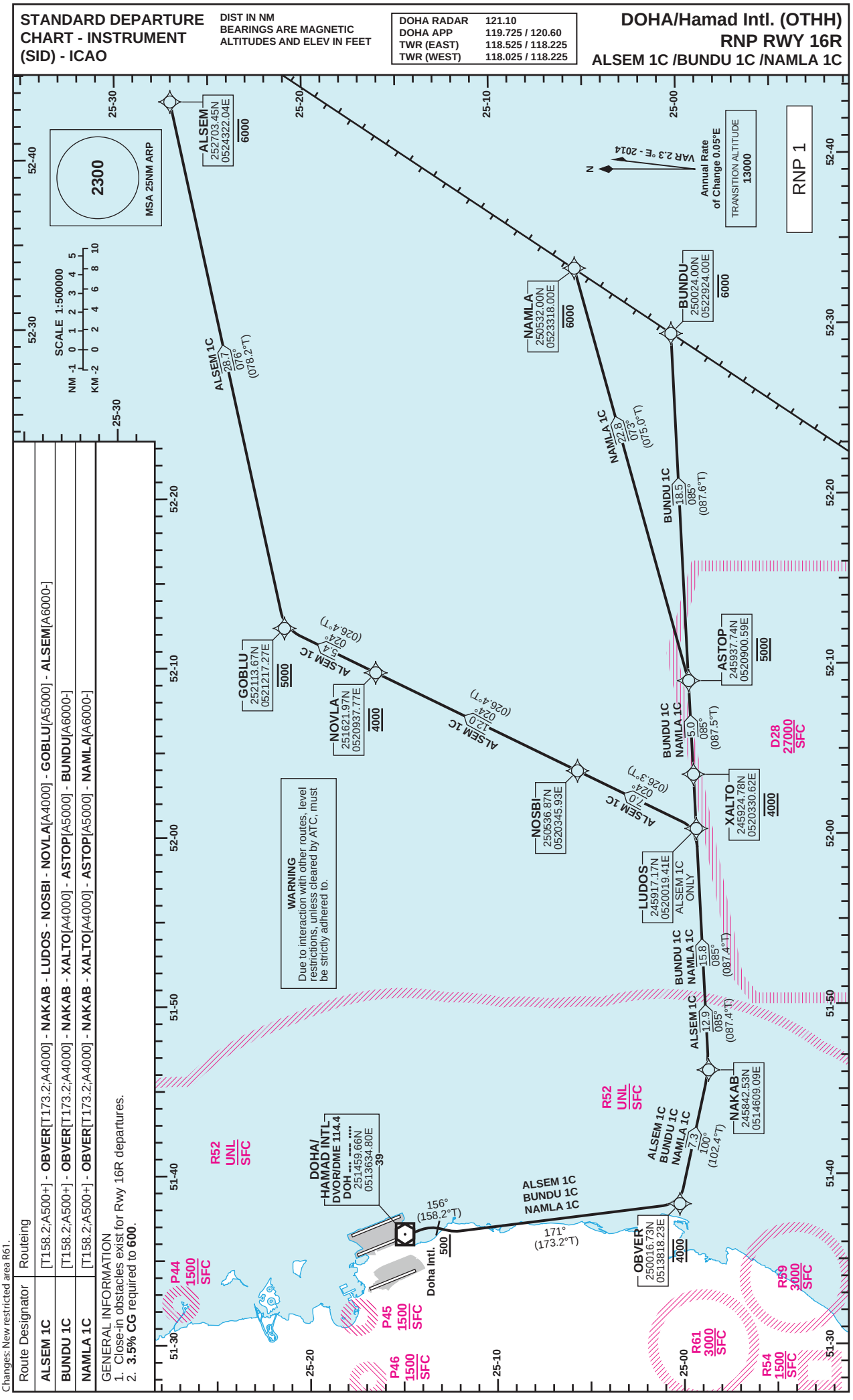
RNP SID BATHA 1C

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	CA		**-**	156 (158.2)	2.3	-		+500			RNP 1
2	CF	**OBVER**	**-**	171 (173.2)	2.3	-		+4000			RNP 1
3	TF	**LADEM**	-	190 (192.2)	2.3	4.6		-			RNP 1
4	TF	**EMEXA**	-	190 (192.2)	2.3	5.0		+5000			RNP 1
5	TF	**SOLAL**	-	190 (192.2)	2.3	5.0		+6000			RNP 1
6	TF	**TONBI**	-	190 (192.2)	2.3	5.0		@7000			RNP 1
7	TF	**DENSI**	-	190 (192.3)	2.3	16.1		-			RNP 1
8	TF	**BATHA**	-	190 (192.0)	2.3	12.6		-			RNP 1

WAYPOINT LIST

RNP SID BATHA 1C

Waypoint Identifier	Coordinates
OBVER	250016.73N 0513818.23E
LADEM	245545.14N 0513713.63E
EMEXA	245051.67N 0513603.93E
SOLAL	244558.18N 0513454.33E
TONBI	244104.68N 0513344.82E
DENSI	242518.88N 0512959.31E
BATHA	241257.04N 0512707.09E



Changes: New restricted area R61.

Route Designator	Routeing
ALSEM 1C	[T158.2;A500+] - **OBVER**[T173.2;A4000] - **NAKAB** - **LUDOS** - **NOSBI** - **NOVLA**[A4000] - **GOBLU**[A5000] - **ALSEM**[A6000-]
BUNDU 1C	[T158.2;A500+] - **OBVER**[T173.2;A4000] - **NAKAB** - **XALTO**[A4000] - **ASTOP**[A5000] - **BUNDU**[A6000-]
NAMLA 1C	[T158.2;A500+] - **OBVER**[T173.2;A4000] - **NAKAB** - **XALTO**[A4000] - **ASTOP**[A5000] - **NAMLA**[A6000-]

GENERAL INFORMATION
1. Close-in obstacles exist for Rwy 16R departures.
2. **3.5% CG** required to **600**.

STANDARD DEPARTURE
CHART - INSTRUMENT
(SID) - ICAO

DOHA/Hamad Intl.(OTHH)
RNP RWY 16R
ALSEM 1C /BUNDU 1C /NAMLA 1C

TABULAR DESCRIPTION

RNP SID ALSEM 1C

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	CA	-	-	156 (158.2)	2.3	-		+500			RNP 1
2	CF	OBVER	-	171 (173.2)	2.3	-		@4000			RNP 1
3	TF	NAKAB	-	100 (102.4)	2.3	7.3		-			RNP 1
4	TF	LUDOS	-	085 (087.4)	2.3	12.9		-			RNP 1
5	TF	NOSBI	-	024 (026.3)	2.3	7.0		-			RNP 1
6	TF	NOVLA	-	024 (026.4)	2.3	12.0		@4000			RNP 1
7	TF	GOBLU	-	024 (026.4)	2.3	5.4		@5000			RNP 1
8	TF	ALSEM	-	076 (078.2)	2.3	28.7		-6000			RNP 1

RNP SID BUNDU 1C

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	CA	-	-	156 (158.2)	2.3	-		+500			RNP 1
2	CF	OBVER	-	171 (173.2)	2.3	-		@4000			RNP 1
3	TF	NAKAB	-	100 (102.4)	2.3	7.3		-			RNP 1
4	TF	XALTO	-	085 (087.4)	2.3	15.8		@4000			RNP 1
5	TF	ASTOP	-	085 (087.5)	2.3	5.0		@5000			RNP 1
6	TF	BUNDU	-	085 (087.6)	2.3	18.5		-6000			RNP 1

RNP SID NAMLA 1C

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	CA	-	-	156 (158.2)	2.3	-		+500			RNP 1
2	CF	OBVER	-	171 (173.2)	2.3	-		@4000			RNP 1
3	TF	NAKAB	-	100 (102.4)	2.3	7.3		-			RNP 1
4	TF	XALTO	-	085 (087.4)	2.3	15.8		@4000			RNP 1
5	TF	ASTOP	-	085 (087.5)	2.3	5.0		@5000			RNP 1
6	TF	NAMLA	-	073 (075.0)	2.3	22.8		-6000			RNP 1

WAYPOINT LIST

RNP SID ALSEM 1C /BUNDU 1C /NAMLA 1C

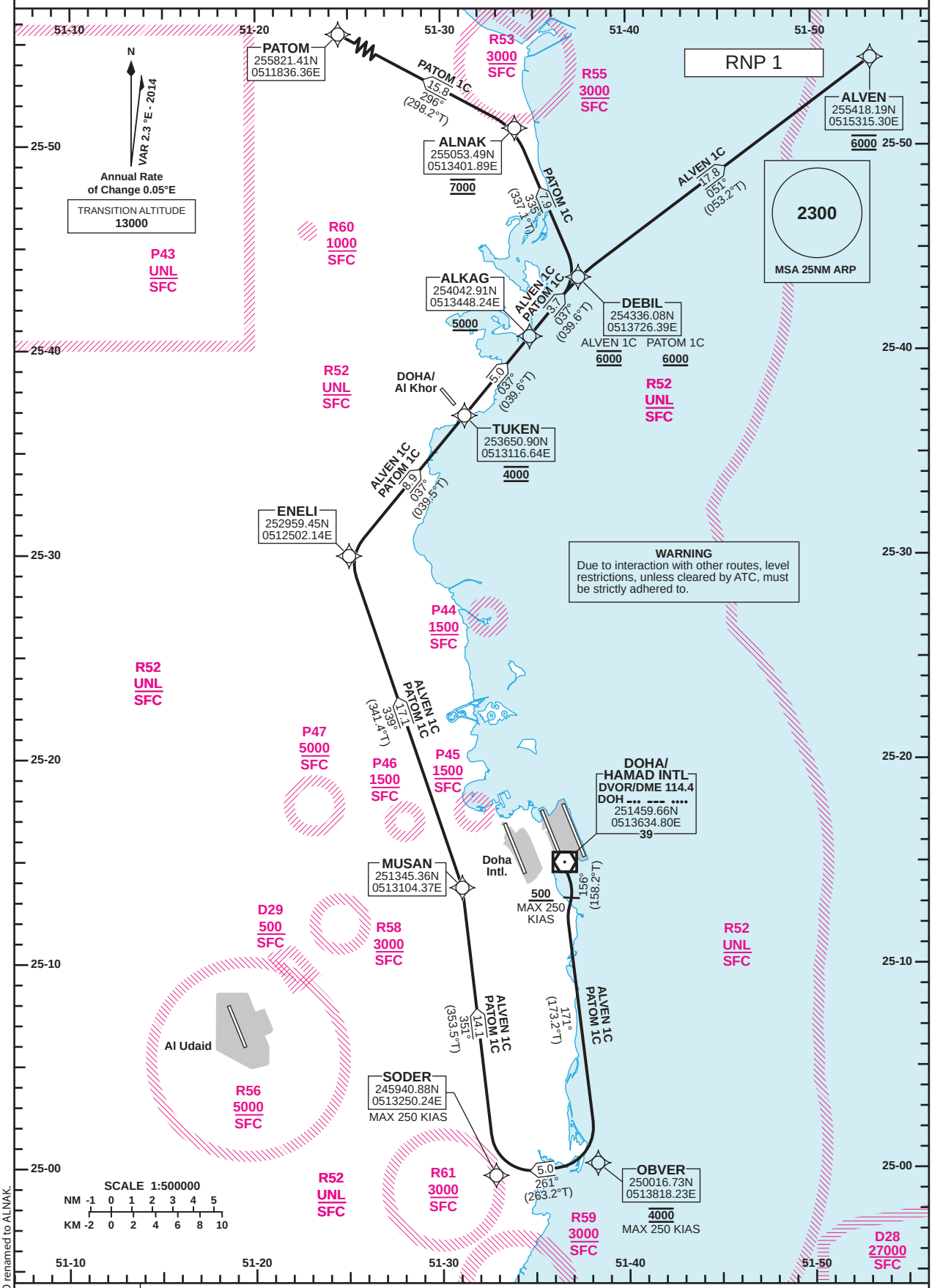
Waypoint Identifier	Coordinates
OBVER	250016.73N 0513818.23E
NAKAB	245842.53N 0514609.09E
LUDOS	245917.17N 0520019.41E
NOSBI	250536.87N 0520345.93E
NOVLA	251621.97N 0520937.77E
GOBLU	252113.67N 0521217.27E
ALSEM	252703.45N 0524322.04E
XALTO	245924.78N 0520330.62E
ASTOP	245937.74N 0520900.59E
BUNDU	250024.00N 0522924.00E
NAMLA	250532.00N 0523318.00E

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET

DOHA RADAR	121.10
DOHA APP	119.725 / 120.60
TWR (EAST)	118.525 / 118.225
TWR (WEST)	118.025 / 118.225

DOHA/Hamad Intl. (OTHH)
RNP RWY 16R
ALVEN 1C /PATOM 1C



Route Designator	Routeing
ALVEN 1C	[T158.2;A500+;K250-] - **OBVER**[R;T173.2;A4000;K250-] - **SODER**[R;K250-] - **MUSAN** - **ENELI** - **TUKEN**[A4000] - **ALKAG**[A5000+] - **DEBIL**[A6000] - **ALVEN**[A6000]
PATOM 1C	[T158.2;A500+;K250-] - **OBVER**[R;T173.2;A4000;K250-] - **SODER**[R;K250-] - **MUSAN** - **ENELI** - **TUKEN**[A4000] - **ALKAG**[A5000+] - **DEBIL**[A6000+] - **ALNAK**[A7000] - **PATOM**

GENERAL INFORMATION
1. Close-in obstacles exist for Rwy 16R departures.
2. **3.5% CG** required to **600**.

Changes: Significant point LABNO renamed to ALNAK.

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DOHA/Hamad Intl.(OTHH)
RNP RWY 16R
ALVEN 1C /PATOM 1C

TABULAR DESCRIPTION

RNP SID ALVEN 1C

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	CA		**-**	156 (158.2)	2.3	-		+500	-250		RNP 1
2	CF	**OBVER**	**-**	171 (173.2)	2.3	-	R	@4000	-250		RNP 1
3	TF	**SODER**	-	261 (263.2)	2.3	5.0	R	-	-250		RNP 1
4	TF	**MUSAN**	-	351 (353.5)	2.3	14.1		-			RNP 1
5	TF	**ENELI**	-	339 (341.4)	2.3	17.1		-			RNP 1
6	TF	**TUKEN**	-	037 (039.5)	2.3	8.9		@4000			RNP 1
7	TF	**ALKAG**	-	037 (039.6)	2.3	5.0		+5000			RNP 1
8	TF	**DEBIL**	-	037 (039.6)	2.3	3.7		@6000			RNP 1
9	TF	**ALVEN**	-	051 (053.2)	2.3	17.8		@6000			RNP 1

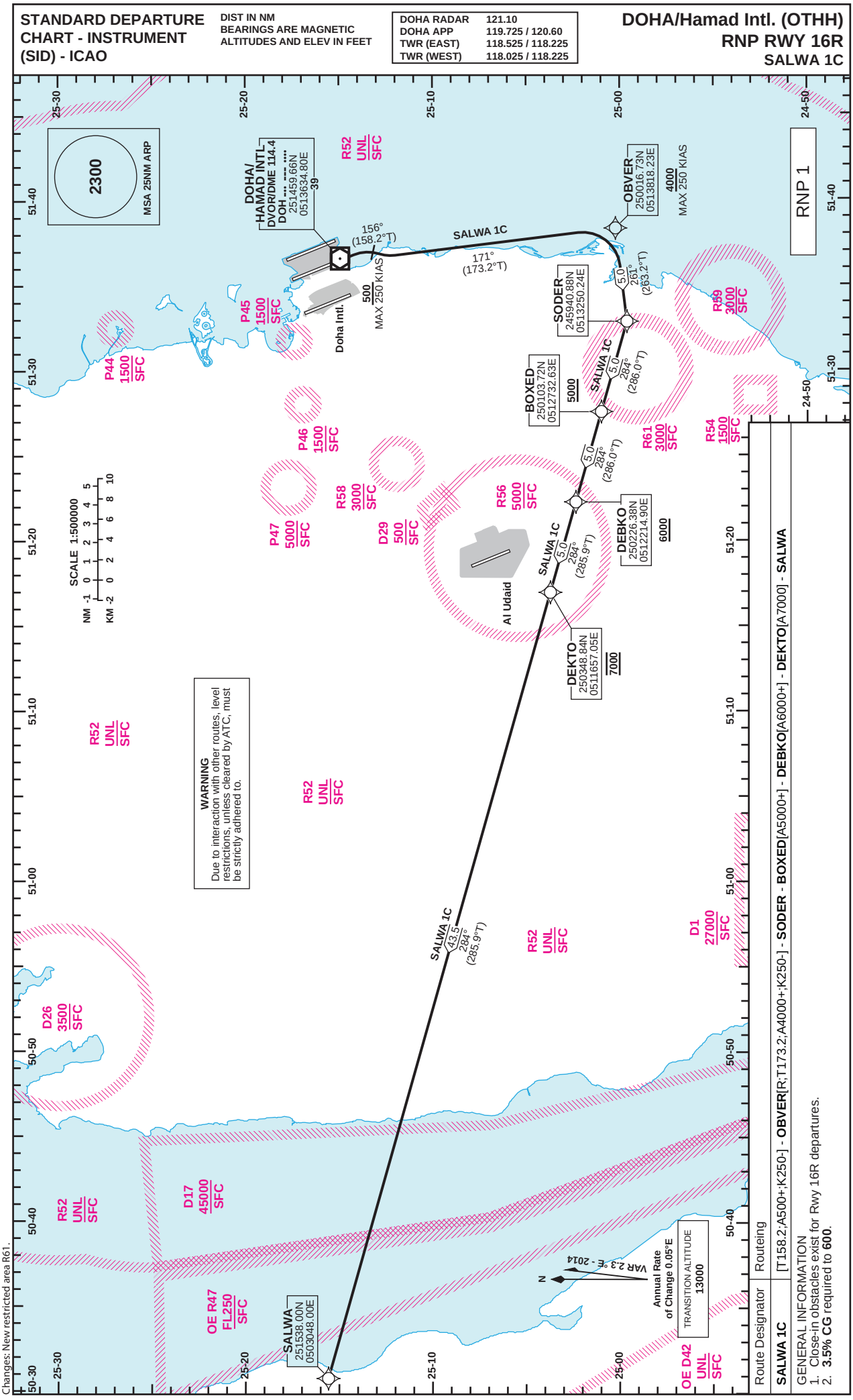
RNP SID PATOM 1C

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	CA		**-**	156 (158.2)	2.3	-		+500	-250		RNP 1
2	CF	**OBVER**	**-**	171 (173.2)	2.3	-	R	@4000	-250		RNP 1
3	TF	**SODER**	**-**	261 (263.2)	2.3	5.0	R	-	-250		RNP 1
4	TF	**MUSAN**	**-**	351 (353.5)	2.3	14.1		-			RNP 1
5	TF	**ENELI**	**-**	339 (341.4)	2.3	17.1		-			RNP 1
6	TF	**TUKEN**	**-**	037 (039.5)	2.3	8.9		@4000			RNP 1
7	TF	**ALKAG**	-	037 (039.6)	2.3	5.0		+5000			RNP 1
8	TF	**DEBIL**	-	037 (039.6)	2.3	3.7		+6000			RNP 1
→ **9**	TF	**ALNAK**	-	335 (337.1)	2.3	7.9		@7000			RNP 1
10	TF	**PATOM**	-	296 (298.2)	2.3	15.8		-			RNP 1

WAYPOINT LIST

RNP SID ALVEN 1C /PATOM 1C

Waypoint Identifier	Coordinates
OBVER	250016.73N 0513818.23E
SODER	245940.88N 0513250.24E
MUSAN	251345.36N 0513104.37E
ENELI	252959.45N 0512502.14E
TUKEN	253650.90N 0513116.64E
ALKAG	254042.91N 0513448.24E
DEBIL	254336.08N 0513726.39E
ALVEN	255418.19N 0515315.30E
→ ALNAK	255053.49N 0513401.89E
PATOM	255821.41N 0511836.36E


STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO
DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET
DOHA RADAR 121.10
DOHA APP 119.725 / 120.60
TWR (EAST) 118.525 / 118.225
TWR (WEST) 118.025 / 118.225
DOHA/Hamad Intl. (OTHH)
RNP RWY 16R
SALWA 1C
RNP 1
MSA 25NM ARP
2300
DOHA/ HAMAD INTL DVOR/DME 114.4 DOH --- --- ---
251459.66N 0513634.80E
39
OBVER 250016.73N 0513818.23E
4000
MAX 250 KIAS
SODER 245940.88N 05132250.24E
BOXED 250103.72N 0512732.63E
5000
DEBKO 250226.38N 0512214.90E
6000
DEKTO 250348.84N 0511657.05E
7000
SALWA 251538.00N 0503048.00E
SALWA 1C
156° (158.2°T)
171° (173.2°T)
261° (263.2°T)
284° (286.0°T)
284° (285.9°T)
43.5
5.0
500
MAX 250 KIAS
Doha Intl.
Al Udaid
TRANSITION ALTITUDE 13000
Annual Rate of Change 0.05°E
VAR 2.3°E - 2014
SCALE 1:500000
NM -1 0 1 2 3 4 5
KM -2 0 2 4 6 8 10
WARNING
Due to interaction with other routes, level restrictions, unless cleared by ATC, must be strictly adhered to.
P44 1500 SFC
P45 1500 SFC
P46 1500 SFC
P47 5000 SFC
R52 UNL SFC
R54 1500 SFC
R56 5000 SFC
R58 3000 SFC
R59 3000 SFC
R61 3000 SFC
D1 27000 SFC
D17 45000 SFC
D26 3500 SFC
D29 500 SFC
OE R47 FL250 SFC
OE D42 UNL SFC
Changes: New restricted area R61.
Route Designator
Routeing
SALWA 1C
[T158.2;A500+;K250-] - OBVER[R;T173.2;A4000+;K250-] - SODER - BOXED[A5000+] - DEBKO[A6000+] - DEKTO[A7000] - SALWA
GENERAL INFORMATION
1. Close-in obstacles exist for Rwy 16R departures.
2. 3.5% CG required to 600.

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DOHA/Hamad Intl.(OTHH)
RNP RWY 16R
SALWA 1C

TABULAR DESCRIPTION

RNP SID SALWA 1C

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	CA		**-**	156 (158.2)	2.3	-		+500	-250		RNP 1
2	CF	**OBVER**	**-**	171 (173.2)	2.3	-	R	+4000	-250		RNP 1
3	TF	**SODER**	-	261 (263.2)	2.3	5.0					RNP 1
4	TF	**BOXED**	-	284 (286.0)	2.3	5.0		+5000			RNP 1
5	TF	**DEBKO**	-	284 (286.0)	2.3	5.0		+6000			RNP 1
6	TF	**DEKTO**	-	284 (285.9)	2.3	5.0		@7000			RNP 1
7	TF	**SALWA**	-	284 (285.9)	2.3	43.5					RNP 1

WAYPOINT LIST

RNP SID SALWA 1C

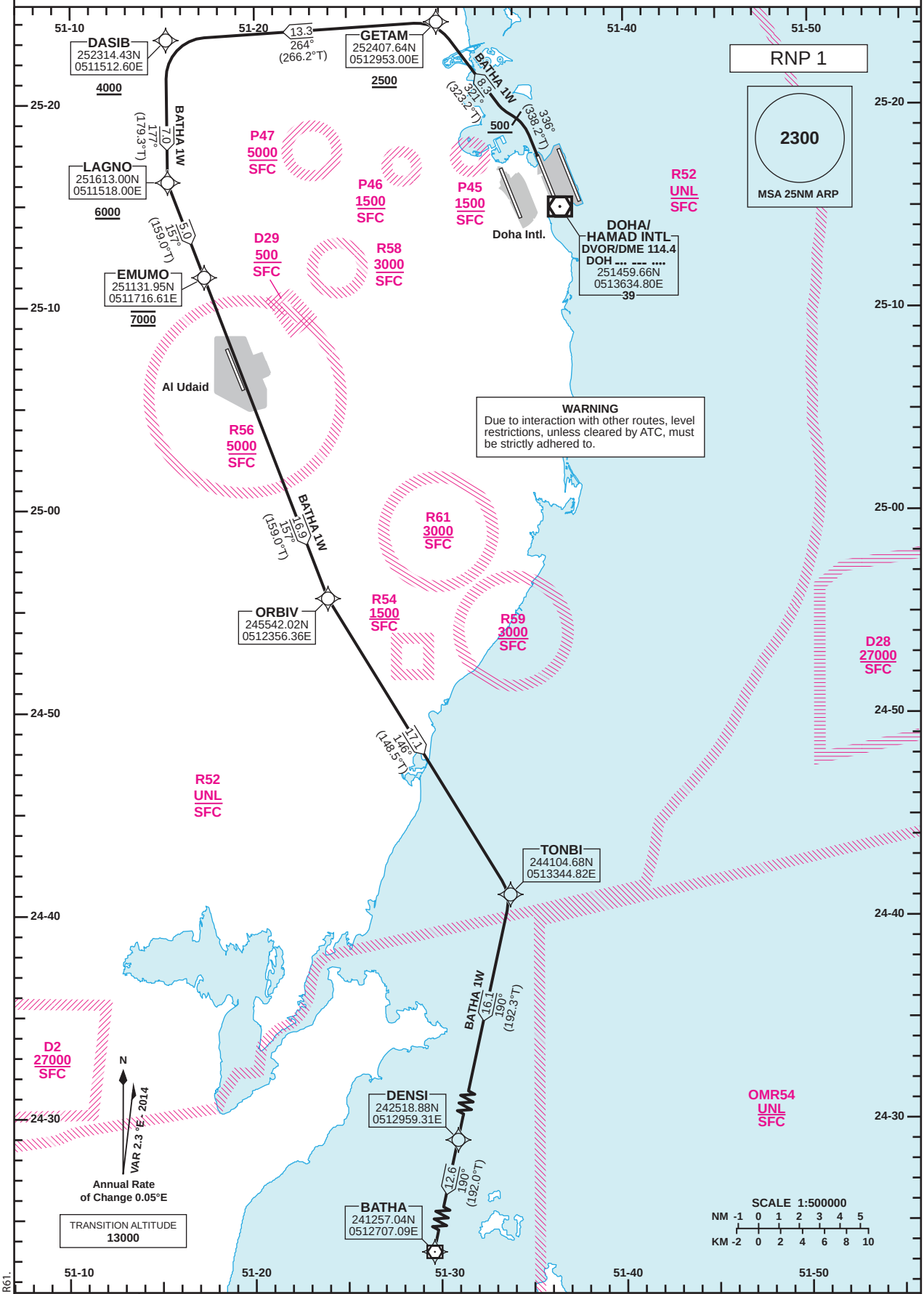
Waypoint Identifier	Coordinates
OBVER	250016.73N 0513818.23E
SODER	245940.88N 0513250.24E
BOXED	250103.72N 0512732.63E
DEBKO	250226.38N 0512214.90E
DEKTO	250348.84N 0511657.05E
SALWA	251538.00N 0503048.00E

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET

DOHA RADAR	121.10
DOHA APP	119.725 / 120.60
TWR (EAST)	118.525 / 118.225
TWR (WEST)	118.025 / 118.225

DOHA/Hamad Intl. (OTHH)
RNP RWY 34L
BATHA 1W



Route Designator	Routeing
BATHA 1W	[T338.2; A500+] - **GETAM**[T323.2;A2500+] - **DASIB**[A4000+] - **LAGNO**[A6000+] - **EMUMO**[A7000] - **ORBIV** - **TONBI** - **DENSI** - **BATHA**

GENERAL INFORMATION
1. Close-in obstacles exist for Rwy 34L departures.
2. **4.8% CG** required to **1200**.

Changes: New restricted area R61.

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DOHA/Hamad Intl.(OTHH)
RNP RWY 34L
BATHA 1W

TABULAR DESCRIPTION

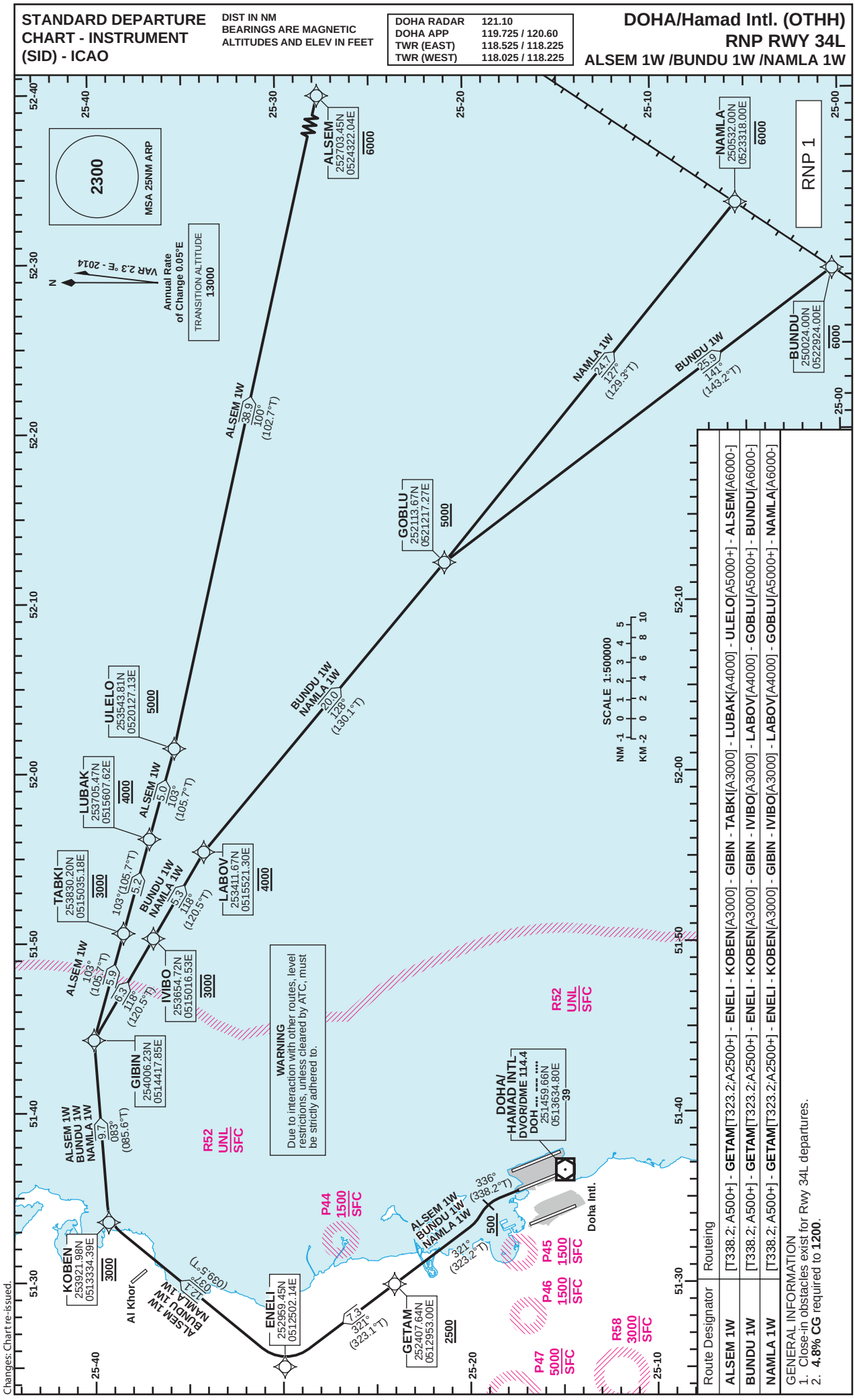
RNP SID BATHA 1W

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	CA		**-**	336 (338.2)	2.3	-		+500			RNP 1
2	CF	**GETAM**	**-**	321 (323.2)	2.3	-		+2500			RNP 1
3	TF	**DASIB**	-	264 (266.2)	2.3	13.3		+4000			RNP 1
4	TF	**LAGNO**	-	177 (179.3)	2.3	7.0		+6000			RNP 1
5	TF	**EMUMO**	-	157 (159.0)	2.3	5.0		@7000			RNP 1
6	TF	**ORBIV**	-	157 (159.0)	2.3	16.9		-			RNP 1
7	TF	**TONBI**	-	146 (148.5)	2.3	17.1		-			RNP 1
8	TF	**DENSI**	-	190 (192.3)	2.3	16.1		-			RNP 1
9	TF	**BATHA**	-	190 (192.0)	2.3	12.6		-			RNP 1

WAYPOINT LIST

RNP SID BATHA 1W

Waypoint Identifier	Coordinates
GETAM	252407.64N 0512953.00E
DASIB	252314.43N 0511512.60E
LAGNO	251613.00N 0511518.00E
EMUMO	251131.95N 0511716.61E
ORBIV	245542.02N 0512356.36E
TONBI	244104.68N 0513344.82E
DENSI	242518.88N 0512959.31E
BATHA	241257.04N 0512707.09E


STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO
DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET
DOHA RADAR 121.10
DOHA APP 119.725 / 120.60
TWR (EAST) 118.525 / 118.225
TWR (WEST) 118.025 / 118.225
DOHA/Hamad Intl. (OTHH)
RNP RWY 34L
ALSEM 1W /BUNDU 1W /NAMLA 1W
RNP 1
MSA 25NM ARP
2300
TRANSITION ALTITUDE 13000
Annual Rate of Change 0.05°E
VAR 2.3°E - 2014
ALSEM 252703.45N 0524322.04E 6000
NAMLA 250532.00N 0523318.00E 6000
BUNDU 250024.00N 0522924.00E 6000
GOBLU 252113.67N 0521217.27E 5000
ULELO 253543.81N 0520127.13E 5000
LUBAK 253705.47N 0515607.62E 4000
LABOV 253411.67N 0515521.30E 4000
TABKI 253830.20N 0515035.18E 3000
IVIBO 253654.72N 0515016.53E 3000
GIBIN 254006.23N 0514417.85E
KOBEN 253921.98N 0513334.39E 3000
ENELI 252959.45N 0512502.14E
GETAM 252407.64N 0512953.00E 2500
DOHA/ HAMAD INTL DVOR/DME 114.4 DOH 251459.66N 0513634.80E 39
ALSEM 1W 38.9 100° (102.7°T)
NAMLA 1W 24.7 127° (129.3°T)
BUNDU 1W 25.9 141° (143.2°T)
BUNDU 1W NAMLA 1W 20.0 128° (130.1°T)
ALSEM 1W 5.0 103° (105.7°T)
BUNDU 1W NAMLA 1W 5.3 118° (120.5°T)
ALSEM 1W 103° (105.7°T) 5.2
ALSEM 1W 103° (105.7°T) 5.9
BUNDU 1W NAMLA 1W 5.3 118° (120.5°T)
ALSEM 1W BUNDU 1W NAMLA 1W 9.7 083° (085.6°T)
ALSEM 1W BUNDU 1W NAMLA 1W 12.1 089° (091.5°T)
7.3 321° (323.1°T)
ALSEM 1W BUNDU 1W NAMLA 1W 336° (338.2°T)
321° (323.2°T)
WARNING
Due to interaction with other routes, level restrictions, unless cleared by ATC, must be strictly adhered to.
R52 UNL SFC
R52 UNL SFC
P44 1500 SFC
P45 1500 SFC
P46 1500 SFC
P47 5000 SFC
R58 3000 SFC
Doha Intl.
Al Khor
SCALE 1:500000
NM -1 0 1 2 3 4 5
KM -2 0 2 4 6 8 10
Changes: Chart re-issued.
Route Designator
Routeing
ALSEM 1W
[T338.2; A500+] - GETAM[T323.2;A2500+] - ENELI - KOBEN[A3000] - GIBIN - TABKI[A3000] - LUBAK[A4000] - ULELO[A5000+] - ALSEM[A6000-]
BUNDU 1W
[T338.2; A500+] - GETAM[T323.2;A2500+] - ENELI - KOBEN[A3000] - GIBIN - IVIBO[A3000] - LABOV[A4000] - GOBLU[A5000+] - BUNDU[A6000-]
NAMLA 1W
[T338.2; A500+] - GETAM[T323.2;A2500+] - ENELI - KOBEN[A3000] - GIBIN - IVIBO[A3000] - LABOV[A4000] - GOBLU[A5000+] - NAMLA[A6000-]
GENERAL INFORMATION
1. Close-in obstacles exist for Rwy 34L departures.
2. 4.8% CG required to 1200.

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DOHA/Hamad Intl.(OTHH)
RNP RWY 34L
ALSEM 1W /BUNDU 1W /NAMLA 1W

TABULAR DESCRIPTION

RNP SID ALSEM 1W

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	CA	-	-	336 (338.2)	2.3	-		+500			RNP 1
2	CF	GETAM	-	321 (323.2)	2.3	-		+2500			RNP 1
3	TF	ENELI	-	321 (323.1)	2.3	7.3		-			RNP 1
4	TF	KOBEN	-	037 (039.5)	2.3	12.1		@3000			RNP 1
5	TF	GIBIN	-	083 (085.6)	2.3	9.7		-			RNP 1
6	TF	TABKI	-	103 (105.7)	2.3	5.9		@3000			RNP 1
7	TF	LUBAK	-	103 (105.7)	2.3	5.2		@4000			RNP 1
8	TF	ULELO	-	103 (105.7)	2.3	5.0		+5000			RNP 1
9	TF	ALSEM	-	100 (102.7)	2.3	38.9		-6000			RNP 1

RNP SID BUNDU 1W

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	CA	-	-	336 (338.2)	2.3	-		+500			RNP 1
2	CF	GETAM	-	321 (323.2)	2.3	-		+2500			RNP 1
3	TF	ENELI	-	321 (323.1)	2.3	7.3		-			RNP 1
4	TF	KOBEN	-	037 (039.5)	2.3	12.1		@3000			RNP 1
5	TF	GIBIN	-	083 (085.6)	2.3	9.7		-			RNP 1
6	TF	IVIBO	-	118 (120.5)	2.3	6.3		@3000			RNP 1
7	TF	LABOV	-	118 (120.5)	2.3	5.3		@4000			RNP 1
8	TF	GOBLU	-	128 (130.1)	2.3	20.0		+5000			RNP 1
9	TF	BUNDU	-	141 (143.2)	2.3	25.9		-6000			RNP 1

RNP SID NAMLA 1W

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	CA	-	-	336 (338.2)	2.3	-		+500			RNP 1
2	CF	GETAM	-	321 (323.2)	2.3	-		+2500			RNP 1
3	TF	ENELI	-	321 (323.1)	2.3	7.3		-			RNP 1
4	TF	KOBEN	-	037 (039.5)	2.3	12.1		@3000			RNP 1
5	TF	GIBIN	-	083 (085.6)	2.3	9.7		-			RNP 1
6	TF	IVIBO	-	118 (120.5)	2.3	6.3		@3000			RNP 1
7	TF	LABOV		118 (120.5)	2.3	5.3		@4000			RNP 1
8	TF	GOBLU		128 (130.1)	2.3	20.0		+5000			RNP 1
9	TF	NAMLA		127 (129.3)	2.3	24.7		-6000			RNP 1

WAYPOINT LIST

RNP SID ALSEM 1W /BUNDU 1W /NAMLA 1W

Waypoint Identifier	Coordinates
GETAM	252407.64N 0512953.00E
ENELI	252959.45N 0512502.14E
KOBEN	253921.98N 0513334.39E
GIBIN	254006.23N 0514417.85E
TABKI	253830.20N 0515035.18E
LUBAK	253705.47N 0515607.62E
ULELO	253543.81N 0520127.13E

RNP SID ALSEM 1W /BUNDU 1W /NAMLA 1W

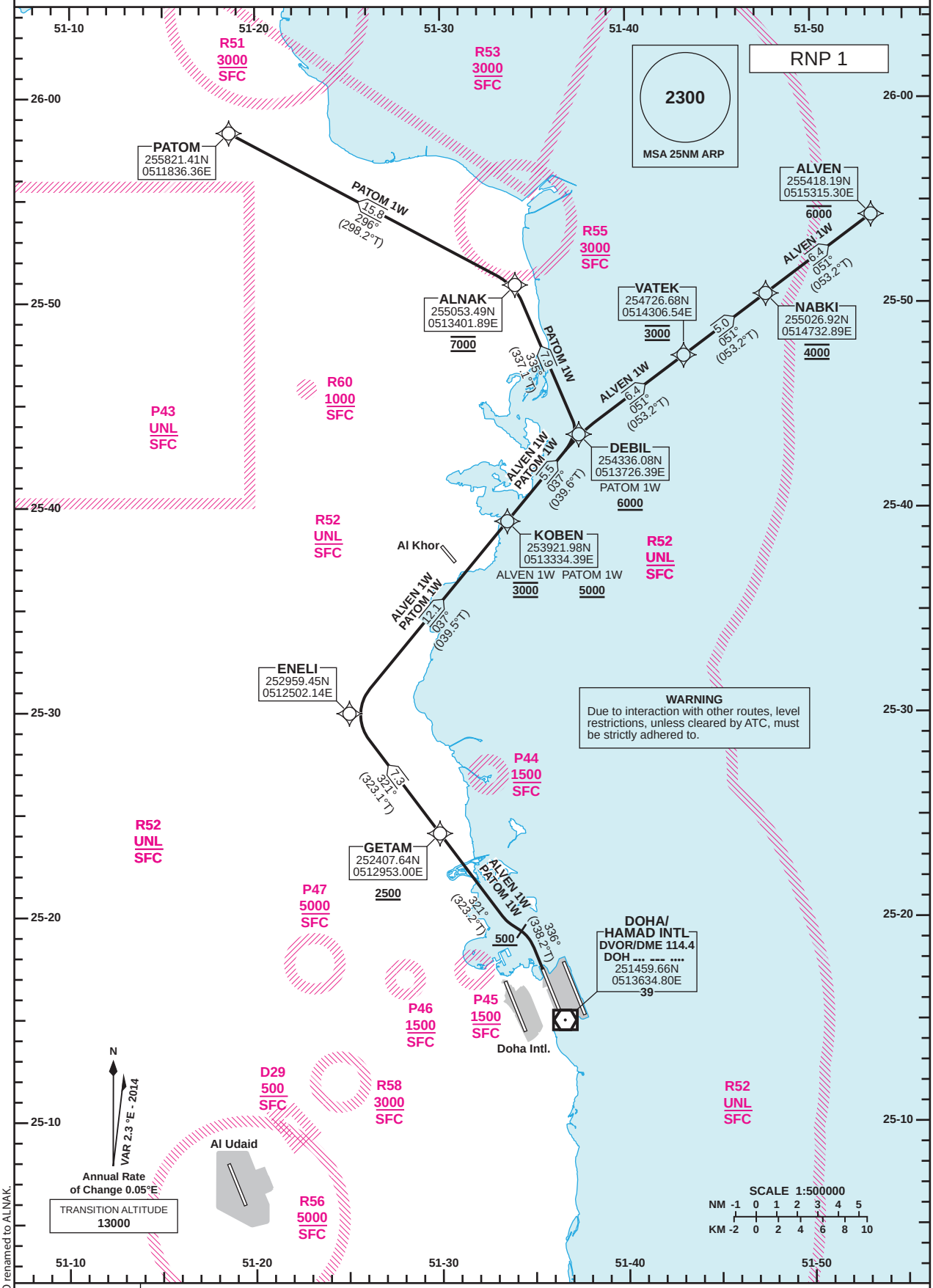
Waypoint Identifier	Coordinates
ALSEM	252703.45N 0524322.04E
IVIBO	253654.72N 0515016.53E
LABOV	253411.67N 0515521.30E
GOBLU	252113.67N 0521217.27E
BUNDU	250024.00N 0522924.00E
NAMLA	250532.00N 0523318.00E

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET

DOHA RADAR	121.10
DOHA APP	119.725 / 120.60
TWR (EAST)	118.525 / 118.225
TWR (WEST)	118.025 / 118.225

DOHA/Hamad Intl. (OTHH)
RNP RWY 34L
ALVEN 1W /PATOM 1W



Route Designator	Routeing
ALVEN 1W	[T338.2; A500+] - **GETAM**[T323.2;A2500+] - **ENELI** - **KOBEN**[A3000] - **DEBIL** - **VATEK**[A3000] - **NABKI**[A4000] - **ALVEN**[A6000-]
PATOM 1W	[T338.2; A500+] - **GETAM**[T323.2;A2500+] - **ENELI** - **KOBEN**[A5000+] - **DEBIL**[A6000+] - **ALNAK**[A7000] - **PATOM**

GENERAL INFORMATION
1. Close-in obstacles exist for Rwy 34L departures.
2. **4.8% CG** required to **1200**.

Changes: Significant point LABNO renamed to ALNAK.

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DOHA/Hamad Intl.(OTHH)
RNP RWY 34L
ALVEN 1W /PATOM 1W

TABULAR DESCRIPTION

RNP SID ALVEN 1W

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	CA	**-**	**-**	336 (338.2)	2.3	-		+500			RNP 1
2	CF	**GETAM**	**-**	321 (323.2)	2.3	-		+2500			RNP 1
3	TF	**ENELI**	-	321 (323.1)	2.3	7.3		-			RNP 1
4	TF	**KOBEN**	-	037 (039.5)	2.3	12.1		@3000			RNP 1
5	TF	**DEBIL**	-	037 (039.6)	2.3	5.5		-			RNP 1
6	TF	**VATEK**	-	051 (053.2)	2.3	6.4		@3000			RNP 1
7	TF	**NABKI**	-	051 (053.2)	2.3	5.0		@4000			RNP 1
8	TF	**ALVEN**	-	051 (053.2)	2.3	6.4		-6000			RNP 1

RNP SID PATOM 1W

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	CA	**-**	**-**	336 (338.2)	2.3	-		+500			RNP 1
2	CF	**GETAM**	**-**	321 (323.2)	2.3	-		+2500			RNP 1
3	TF	**ENELI**	-	321 (323.1)	2.3	7.3		-			RNP 1
4	TF	**KOBEN**	-	037 (039.5)	2.3	12.1		+5000			RNP 1
5	TF	**DEBIL**	-	037 (039.6)	2.3	5.5		+6000			RNP 1
→ **6**	TF	**ALNAK**	-	335 (337.1)	2.3	7.9		@7000			RNP 1
7	TF	**PATOM**	-	296 (298.2)	2.3	15.8		-			RNP 1

WAYPOINT LIST

RNP SID ALVEN 1W/PATOM 1W

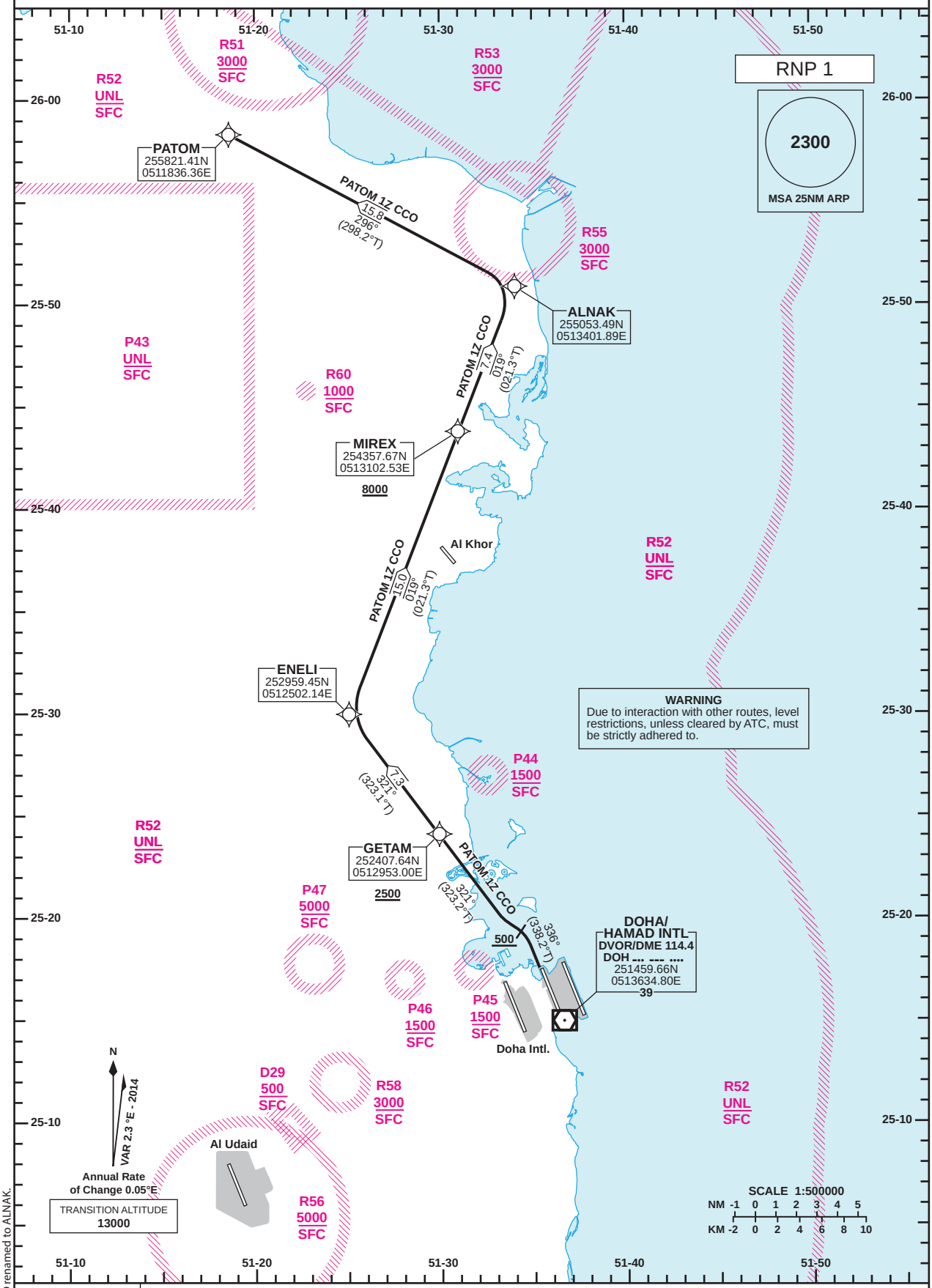
Waypoint Identifier	Coordinates
GETAM	252407.64N 0512953.00E
ENELI	252959.45N 0512502.14E
KOBEN	253921.98N 0513334.39E
DEBIL	254336.08N 0513726.39E
VATEK	254726.68N 0514306.54E
NABKI	255026.92N 0514732.89E
ALVEN	255418.19N 0515315.30E
→ ALNAK	255053.49N 0513401.89E
PATOM	255821.41N 0511836.36E

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET

DOHA RADAR	121.10
DOHA APP	119.725 / 120.60
TWR (EAST)	118.525 / 118.225
TWR (WEST)	118.025 / 118.225

DOHA/Hamad Intl. (OTHH)
RNP RWY 34L
PATOM 1Z CCO



Route Designator	Routeing
PATOM 1Z CCO	[T338.2; A500+] - **GETAM**[T323.2;A2500+] - **ENELI**[R] - **MIREX**[A8000+] - **ALNAK**[L] - **PATOM**

GENERAL INFORMATION
1. Close-in obstacles exist for Rwy 34L departures.
2. **4.8% CG** required to **1200**.

Changes:Significant point LA8NO renamed to ALNAK.

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DOHA/Hamad Intl.(OTHH)
RNP RWY 34L
PATOM 1Z CCO

TABULAR DESCRIPTION

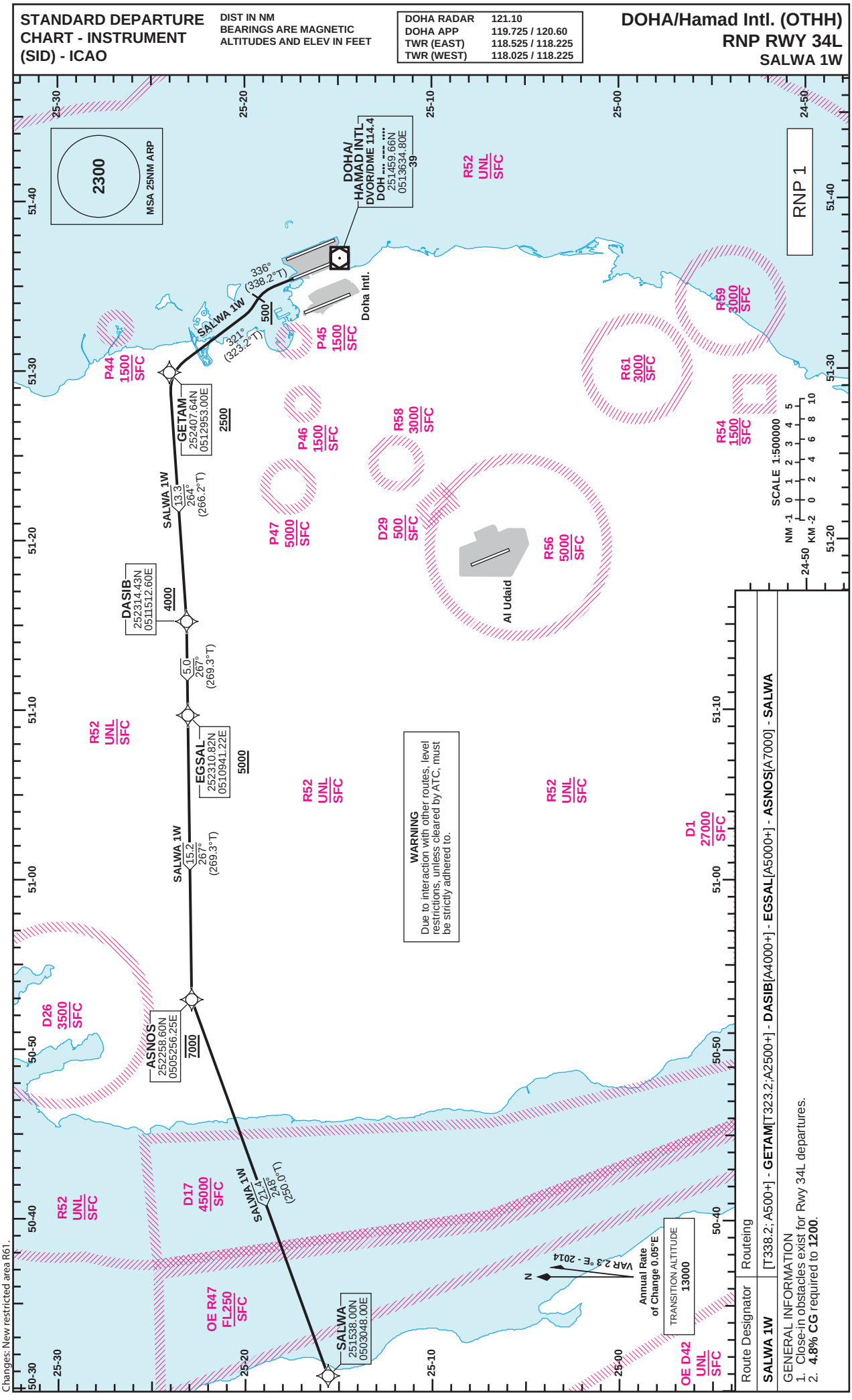
RNP SID PATOM 1Z CCO

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	CA	**-**	**-**	336 (338.2)	2.3	-		+500			RNP 1
2	CF	**GETAM**	**-**	321 (323.2)	2.3	-		+2500			RNP 1
3	TF	**ENELI**	-	321 (323.1)	2.3	7.3		-			RNP 1
4	TF	**MIREX**	-	019(021.3)	2.3	15.0		+8000			RNP 1
5	TF	**ALNAK**	-	019(021.3)	2.3	7.4		-			RNP 1
6	TF	**PATOM**	-	296 (298.2)	2.3	15.8		-			RNP 1

WAYPOINT LIST

RNP SID PATOM 1Z CCO

Waypoint Identifier	Coordinates
GETAM	252407.64N 0512953.00E
ENELI	252959.45N 0512502.14E
MIREX	254357.67N 0513102.53E
ALNAK	255053.49N 0513401.89E
PATOM	255821.41N 0511836.36E


STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO
DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET
DOHA RADAR 121.10
DOHA APP 119.725 / 120.60
TWR (EAST) 118.525 / 118.225
TWR (WEST) 118.025 / 118.225
DOHA/Hamad Intl. (OTHH)
RNP RWY 34L
SALWA 1W
RNP 1
2300
MSA 25NM ARP
DOHA/ HAMAD INTL DVOR/DME 114.4 DOH 251459.66N 0513634.80E 39
Doha Intl.
SALWA 1W
336° (338.2°T)
321° (323.2°T)
500
GETAM 252407.64N 0512953.00E
2500
SALWA 1W 13.3 264° (266.2°T)
DASIB 252314.43N 0511512.60E
4000
5.0 267° (269.3°T)
EGSAL 252310.82N 0510941.22E
5000
SALWA 1W 15.2 267° (269.3°T)
ASNOS 252258.60N 0505256.25E
7000
SALWA 1W 21.4 248° (250.0°T)
SALWA 251538.00N 0503048.00E
Al Udaid
P44 1500 SFC
P45 1500 SFC
P46 1500 SFC
P47 5000 SFC
R58 3000 SFC
D29 500 SFC
R56 5000 SFC
R59 3000 SFC
R61 3000 SFC
R54 1500 SFC
R52 UNL SFC
D1 27000 SFC
D26 3500 SFC
D17 45000 SFC
OE R47 FL250 SFC
OE D42 UNL SFC
WARNING
Due to interaction with other routes, level restrictions, unless cleared by ATC, must be strictly adhered to.
SCALE 1:500000
NM -1 0 1 2 3 4 5
KM -2 0 2 4 6 8 10
TRANSITION ALTITUDE 13000
Annual Rate of Change 0.05°E
VAR 2.3°E - 2014
Changes: New restricted area R61.
Route Designator | Routeing
SALWA 1W | [T338.2; A500+] - GETAM[T323.2;A2500+] - DASIB[A4000+] - EGSAL[A5000+] - ASNOS[A7000] - SALWA
GENERAL INFORMATION
1. Close-in obstacles exist for Rwy 34L departures.
2. 4.8% CG required to 1200.

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DOHA/Hamad Intl.(OTHH)
RNP RWY 34L
SALWA 1W

TABULAR DESCRIPTION

RNP SID SALWA 1W

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	CA	**-**	**-**	336 (338.2)	2.3	-		+500			RNP 1
2	CF	**GETAM**	**-**	321 (323.2)	2.3	-		+2500			RNP 1
3	TF	**DASIB**	-	264 (266.2)	2.3	13.3		+4000			RNP 1
4	TF	**EGSAL**	-	267 (269.3)	2.3	5.0		+5000			RNP 1
5	TF	**ASNOS**	-	267 (269.3)	2.3	15.2		@7000			RNP 1
6	TF	**SALWA**	-	248 (250.0)	2.3	21.4		-			RNP 1

WAYPOINT LIST

RNP SID SALWA 1W

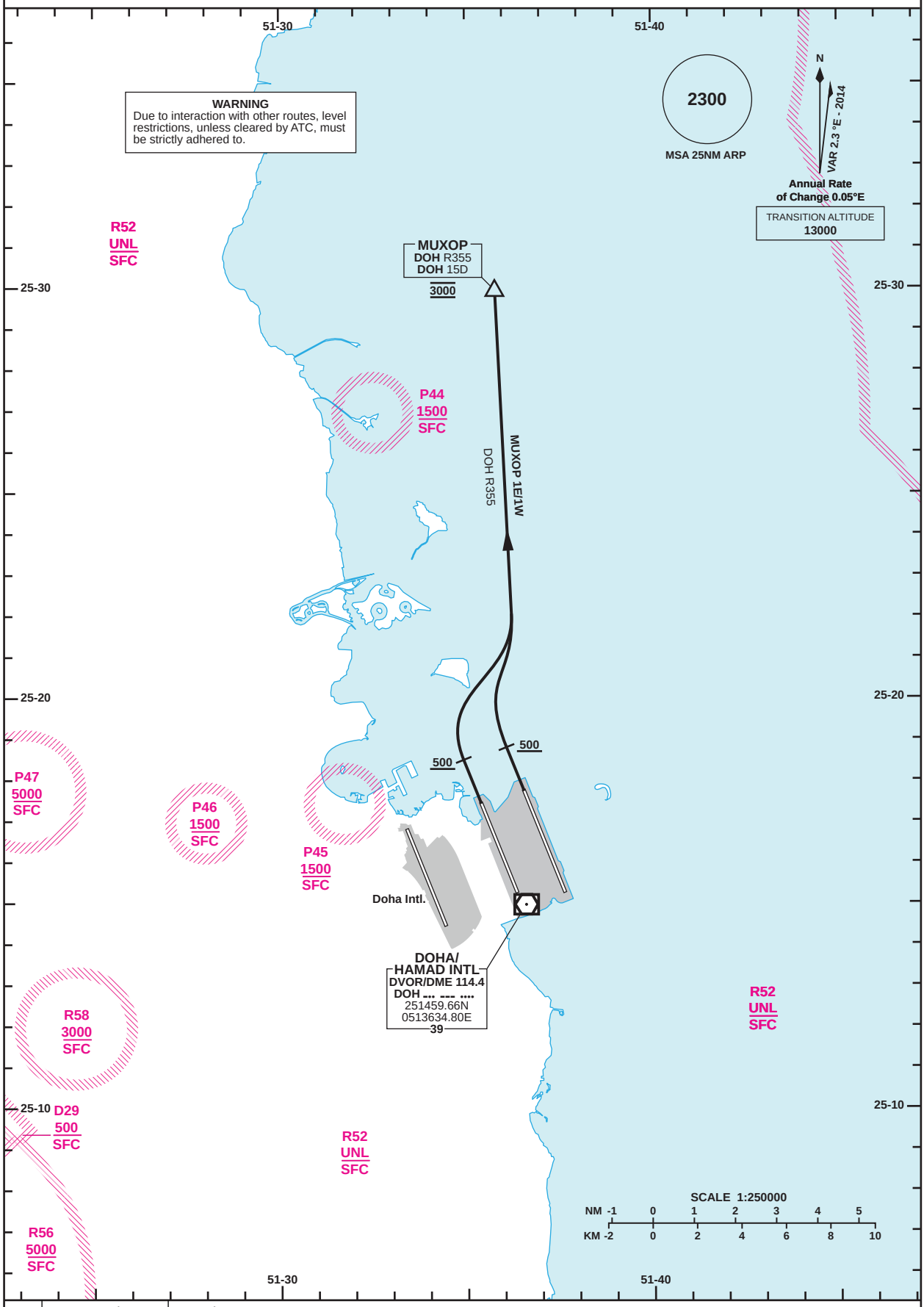
Waypoint Identifier	Coordinates
GETAM	252407.64N 0512953.00E
DASIB	252314.43N 0511512.60E
EGSAL	252310.82N 0510941.22E
ASNOS	252258.60N 0505256.25E
SALWA	251538.00N 0503048.00E

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET

DOHA RADAR	121.10
DOHA APP	119.725 / 120.60
TWR (EAST)	118.525 / 118.225
TWR (WEST)	118.025 / 118.225

DOHA/Hamad Intl. (OTHH)
RWY 34L/R
MUXOP 1E/1W



Rwy	Route Designator	Routeing
34L	**MUXOP 1W**	Climb straight ahead to **500**. Turn right to intercept **DOH** R355 to **MUXOP** (**DOH**15D) at **3000**. Continue as directed.
34R	**MUXOP 1E**	Climb straight ahead to **500**. Turn right to intercept **DOH** R355 to **MUXOP** (**DOH**15D) at **3000**. Continue as directed.

Rwy	Primary SIDs	Initial Contact	Initial Altitude	Radio Fail Procedures
34L	**MUXOP 1W**	DEPs	3000	Execute three right-hand orbits at MUXOP at 3000. Continue right-hand orbit climbing to 5000. Proceed direct to first enroute waypoint then continue as flight planned or proceed direct to DOH DVOR and follow the ILS 34R approach procedure to land at OTHH.
34R	**MUXOP 1E**	DEPs	3000	

Changes: Update MSA.

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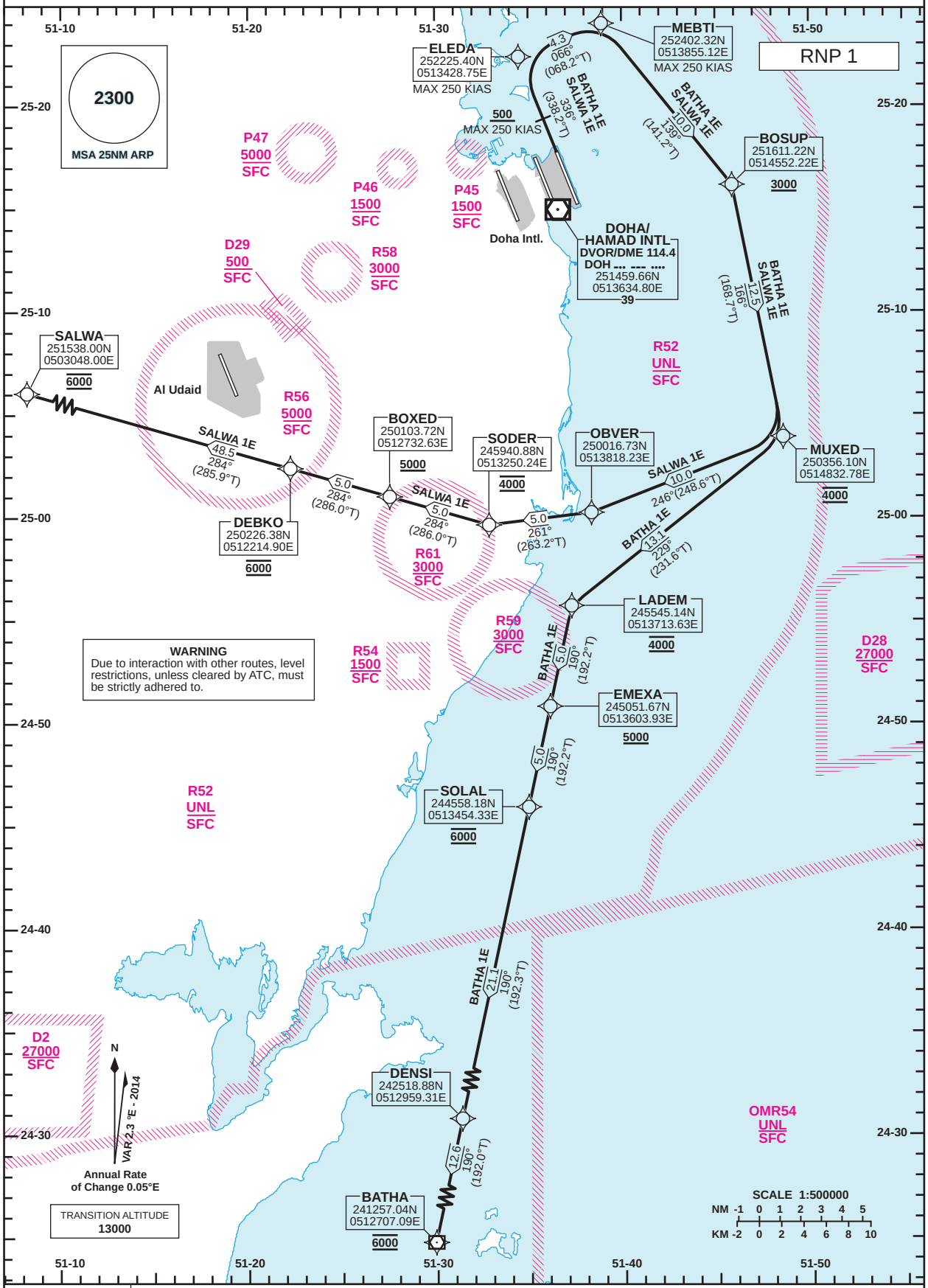
STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET

DOHA RADAR	121.10
DOHA APP	119.725 / 120.60
TWR (EAST)	118.525 / 118.225
TWR (WEST)	118.025 / 118.225

DOHA/Hamad Intl. (OTHH)
RNP RWY 34R
BATHA 1E /SALWA 1E



Route Designator	Routeing
BATHA 1E	[T338.2; A500+;K250-] - **ELEDA**[R;T338.2;K250-] - **MEBTI**[K250-] - **BOSUP**[A3000+] - **MUXED**[A4000] - **LADEM**[A4000] - **EMEXA**[A5000+] - **SOLAL**[A6000] - **DENSI** - **BATHA**[A6000]
SALWA 1E	[T338.2; A500+;K250-] - **ELEDA**[R;T338.2;K250-] - **MEBTI**[K250-] - **BOSUP**[A3000+] - **MUXED**[A4000] - **OBVER** - **SODER**[A4000] - **BOXED**[A5000+] - **DEBKO**[A6000] - **SALWA**[A6000]

GENERAL INFORMATION
1. Close-in obstacles exist for Rwy 34R departures.

Changes: New restricted area R61.

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DOHA/Hamad Intl.(OTHH)
RNP RWY 34R
BATHA 1E /SALWA 1E

TABULAR DESCRIPTION

RNP SID BATHA 1E

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	CA	-	-	336 (338.2)	2.3	-		+500	-250		RNP 1
2	CF	ELEDA	-	336 (338.2)	2.3	-	R	-	-250		RNP 1
3	TF	MEBTI	-	066 (068.2)	2.3	4.3		-	-250		RNP 1
4	TF	BOSUP	-	139 (141.2)	2.3	10.0		+3000	-		RNP 1
5	TF	MUXED	-	166 (168.7)	2.3	12.5		@4000	-		RNP 1
6	TF	LADEM	-	229 (231.6)	2.3	13.1		@4000	-		RNP 1
7	TF	EMEXA	-	190 (192.2)	2.3	5.0		+5000	-		RNP 1
8	TF	SOLAL	-	190 (192.2)	2.3	5.0		@6000	-		RNP 1
9	TF	DENSI	-	190 (192.3)	2.3	21.1		-	-		RNP 1
10	TF	BATHA	-	190 (192.0)	2.3	12.6		@6000	-		RNP 1

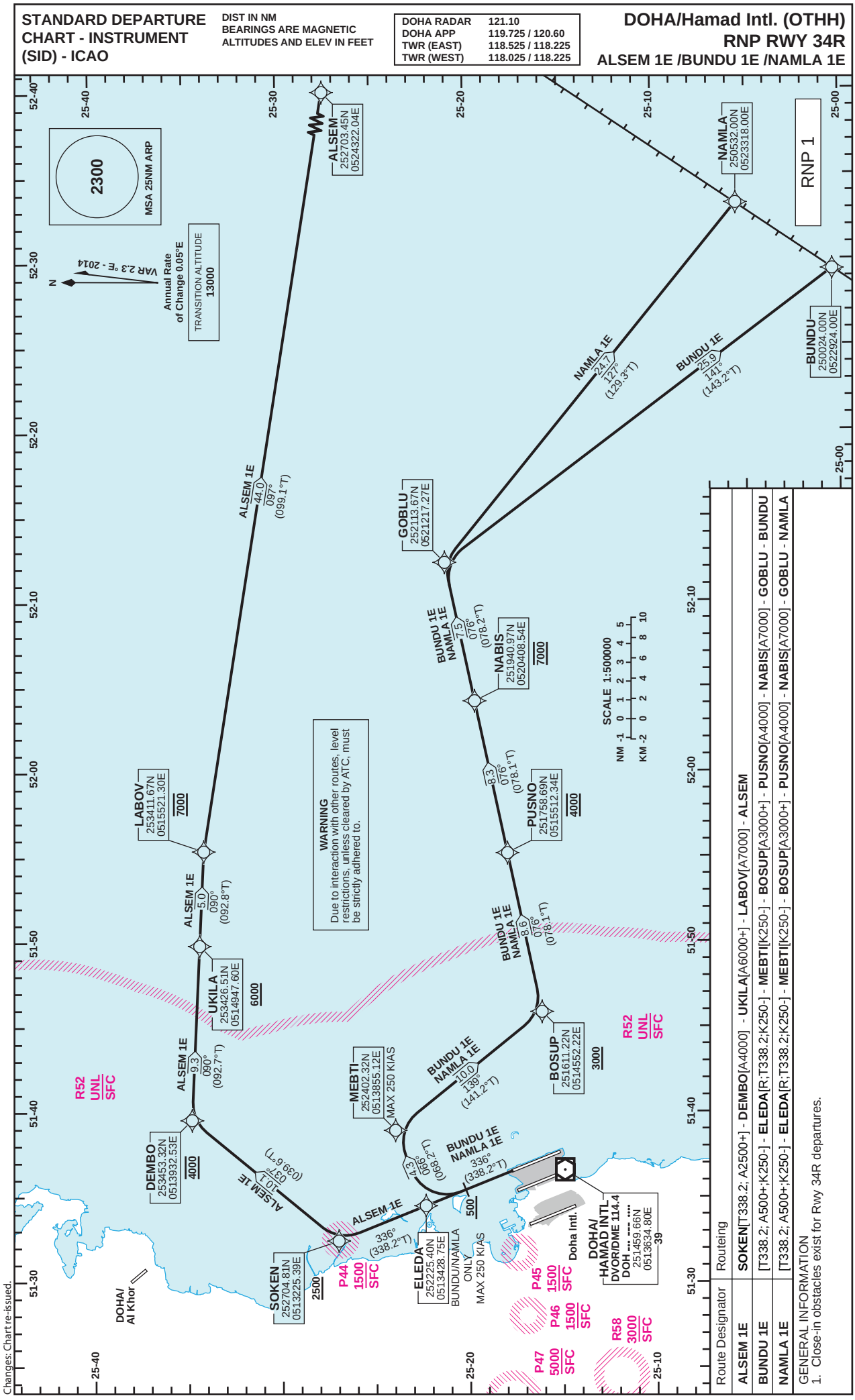
RNP SID SALWA 1E

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	CA	-	-	336 (338.2)	2.3	-		+500	-250		RNP 1
2	CF	ELEDA	-	336 (338.2)	2.3	-	R	-	-250		RNP 1
3	TF	MEBTI	-	066 (068.2)	2.3	4.3		-	-250		RNP 1
4	TF	BOSUP	-	139 (141.2)	2.3	10.0		+3000	-		RNP 1
5	TF	MUXED	-	166 (168.7)	2.3	12.5		@4000	-		RNP 1
6	TF	OBVER	-	246 (248.6)	2.3	10.0		-	-		RNP 1
7	TF	SODER	-	261 (263.2)	2.3	5.0		@4000	-		RNP 1
8	TF	BOXED	-	284 (286.0)	2.3	5.0		+5000	-		RNP 1
9	TF	DEBKO	-	284 (286.0)	2.3	5.0		@6000	-		RNP 1
10	TF	SALWA	-	284 (285.9)	2.3	48.5		@6000	-		RNP 1

WAYPOINT LIST

RNP SID BATHA 1E /SALWA 1E

Waypoint Identifier	Coordinates
ELEDA	252225.40N 0513428.75E
MEBTI	252402.32N 0513855.12E
BOSUP	251611.22N 0514552.22E
MUXED	250356.10N 0514832.78E
LADEM	245545.14N 0513713.63E
EMEXA	245051.67N 0513603.93E
SOLAL	244558.18N 0513454.33E
DENSI	242518.88N 0512959.31E
BATHA	241257.04N 0512707.09E
OBVER	250016.73N 0513818.23E
SODER	245940.88N 0513250.24E
BOXED	250103.72N 0512732.63E
DEBKO	250226.38N 0512214.90E
SALWA	251538.00N 0503048.00E


STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO
DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET
DOHA RADAR 121.10
DOHA APP 119.725 / 120.60
TWR (EAST) 118.525 / 118.225
TWR (WEST) 118.025 / 118.225
DOHA/Hamad Intl. (OTHH)
RNP RWY 34R
ALSEM 1E /BUNDU 1E /NAMLA 1E
RNP 1
MSA 25NM ARP
2300
VAR 2.3°E - 2014
Annual Rate of Change 0.05°E
TRANSITION ALTITUDE 13000
ALSEM 252703.45N 0524322.04E
NAMLA 250532.00N 0523318.00E
BUNDU 250024.00N 0522924.00E
GOBLU 252113.67N 0521217.27E
NABIS 251940.97N 0520408.54E 7000
PUSNO 251758.69N 0515512.34E 4000
BOSUP 251611.22N 0514552.22E 3000
LABOV 253411.67N 0515521.30E 7000
UKILA 253426.51N 0514947.60E 6000
MEBTI 252402.32N 0513855.12E MAX 250 KIAS
DEMBO 253453.32N 0513932.53E 4000
ELEDA 252225.40N 0513428.75E BUNDU/NAMLA ONLY MAX 250 KIAS
SOKEN 252704.81N 0513225.39E 2500
DOHA/HAMAD INTL DVOR/DME 114.4 DOH 251459.66N 0513634.80E 39
Doha Intl.
DOHA/ Al Khor
ALSEM 1E 44.0 097° (099.1°T)
NAMLA 1E 24.7 127° (129.3°T)
BUNDU 1E 25.9 141° (143.2°T)
BUNDU 1E NAMLA 1E 7.5 076° (078.2°T)
8.3 076° (078.1°T)
8.6 076° (078.1°T)
10.0 139° (141.2°T)
4.3 060° (060.2°T)
ALSEM 1E 5.0 090° (092.8°T)
9.3 090° (092.7°T)
10.1 057° (059.9°T)
ALSEM 1E 336° (338.2°T)
BUNDU 1E NAMLA 1E 336° (338.2°T)
WARNING
Due to interaction with other routes, level restrictions, unless cleared by ATC, must be strictly adhered to.
SCALE 1:500000
NM -1 0 1 2 3 4 5
KM -2 0 2 4 6 8 10
R52 UNL SFC
P44 1500 SFC
P45 1500 SFC
P46 1500 SFC
P47 5000 SFC
R58 3000 SFC
Changes: Chart re-issued.
Route Designator
Routeing
ALSEM 1E
SOKEN[T338.2; A2500+] - DEMBO[A4000] - UKILA[A6000+] - LABOV[A7000] - ALSEM
BUNDU 1E
[T338.2; A500+;K250-] - ELEDA[R;T338.2;K250-] - MEBTI[K250-] - BOSUP[A3000+] - PUSNO[A4000] - NABIS[A7000] - GOBLU - BUNDU
NAMLA 1E
[T338.2; A500+;K250-] - ELEDA[R;T338.2;K250-] - MEBTI[K250-] - BOSUP[A3000+] - PUSNO[A4000] - NABIS[A7000] - GOBLU - NAMLA
GENERAL INFORMATION
1. Close-in obstacles exist for Rwy 34R departures.

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DOHA/Hamad Intl.(OTHH)
RNP RWY 34R
ALSEM 1E /BUNDU 1E /NAMLA 1E

TABULAR DESCRIPTION

RNP SID ALSEM 1E

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	CF	SOKEN	-	336 (338.2)	2.3	-		+2500			RNP 1
2	TF	DEMBO	-	037 (039.6)	2.3	10.1		@4000			RNP 1
3	TF	UKILA	-	090 (092.7)	2.3	9.3		+6000			RNP 1
4	TF	LABOV	-	090 (092.8)	2.3	5.0		@7000			RNP 1
5	TF	ALSEM	-	097 (099.1)	2.3	44.0		-			RNP 1

RNP SID BUNDU 1E

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	CA		-	336 (338.2)	2.3	-		+500	-250		RNP 1
2	CF	ELEDA	-	336 (338.2)	2.3	-	R	-	-250		RNP 1
3	TF	MEBTI	-	066 (068.2)	2.3	4.3		-	-250		RNP 1
4	TF	BOSUP	-	139 (141.2)	2.3	10.0		+3000			RNP 1
5	TF	PUSNO	-	076 (078.1)	2.3	8.6		@4000			RNP 1
6	TF	NABIS	-	076 (078.1)	2.3	8.3		@7000			RNP 1
7	TF	GOBLU	-	076 (078.2)	2.3	7.5		-			RNP 1
8	TF	BUNDU	-	141 (143.2)	2.3	25.9		-			RNP 1

RNP SID NAMLA 1E

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	CA		-	336 (338.2)	2.3	-		+500	-250		RNP 1
2	CF	ELEDA	-	336 (338.2)	2.3	-	R	-	-250		RNP 1
3	TF	MEBTI	-	066 (068.2)	2.3	4.3		-	-250		RNP 1
4	TF	BOSUP	-	139 (141.2)	2.3	10.0		+3000			RNP 1
5	TF	PUSNO	-	076 (078.1)	2.3	8.6		@4000			RNP 1
6	TF	NABIS	-	076 (078.1)	2.3	8.3		@7000			RNP 1
7	TF	GOBLU	-	076 (078.2)	2.3	7.5		-			RNP 1
8	TF	NAMLA	-	127 (129.3)	2.3	24.7		-			RNP 1

WAYPOINT LIST

RNP SID ALSEM 1E/BUNDU 1E/NAMLA 1E

Waypoint Identifier	Coordinates
SOKEN	252704.81N 0513225.39E
DEMBO	253453.32N 0513932.53E
UKILA	253426.51N 0514947.60E
LABOV	253411.67N 0515521.30E
ALSEM	252703.45N 0524322.04E
ELEDA	252225.40N 0513428.75E
MEBTI	252402.32N 0513855.12E

RNP SID ALSEM 1E/BUNDU 1E/NAMLA 1E

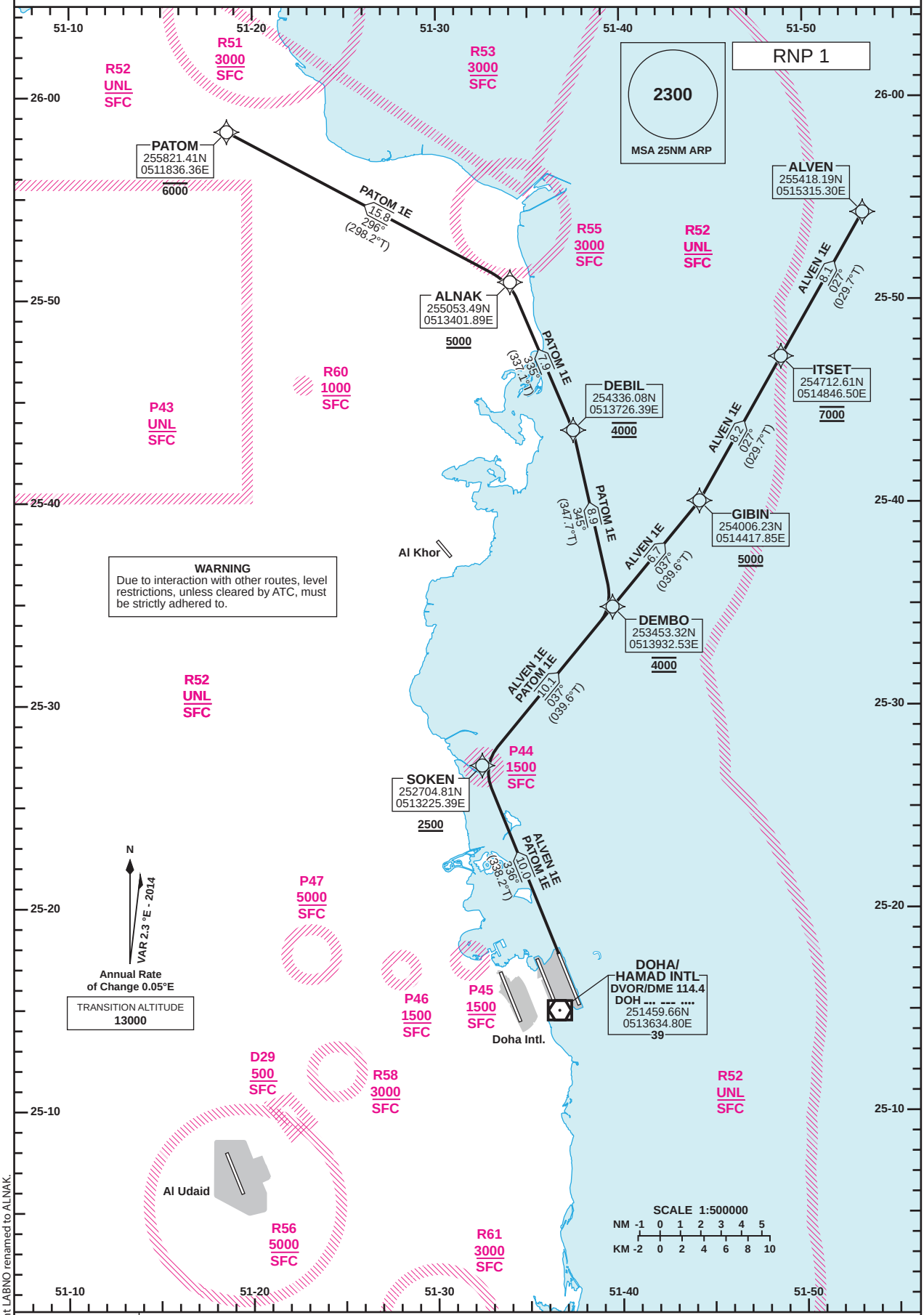
Waypoint Identifier	Coordinates
BOSUP	251611.22N 0514552.22E
PUSNO	251758.69N 0515512.34E
NABIS	251940.97N 0520408.54E
GOBLU	252113.67N 0521217.27E
BUNDU	250024.00N 0522924.00E
NAMLA	250532.00N 0523318.00E

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET

DOHA RADAR	121.10
DOHA APP	119.725 / 120.60
TWR (EAST)	118.525 / 118.225
TWR (WEST)	118.025 / 118.225

DOHA/Hamad Intl. (OTHH)
RNP RWY 34R
ALVEN 1E /PATOM 1E



Route Designator	Routeing
ALVEN 1E	**SOKEN**[T338.2; A2500+] - **DEMBO**[A4000] - **GIBIN**[A5000+] - **ITSET**[A7000] - **ALVEN**
PATOM 1E	**SOKEN**[T338.2; A2500+] - **DEMBO**[A4000] - **DEBIL**[A4000] - **ALNAK**[A5000+] - **PATOM**[A6000-]

GENERAL INFORMATION
1. Close-in obstacles exist for Rwy 34R departures.

Changes: Significant point LABNO renamed to ALNAK.

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DOHA/Hamad Intl.(OTHH)
RNP RWY 34R
ALVEN 1E /PATOM 1E

TABULAR DESCRIPTION

RNP SID ALVEN 1E

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	CF	**SOKEN**	**-**	336 (338.2)	2.3	-		+2500			RNP 1
2	TF	**DEMBO**	**-**	037 (039.6)	2.3	10.1		@4000			RNP 1
3	TF	**GIBIN**	-	037 (039.6)	2.3	6.7		+5000			RNP 1
4	TF	**ITSET**	-	027 (029.7)	2.3	8.2		@7000			RNP 1
5	TF	**ALVEN**	-	027 (029.7)	2.3	8.1		-			RNP 1

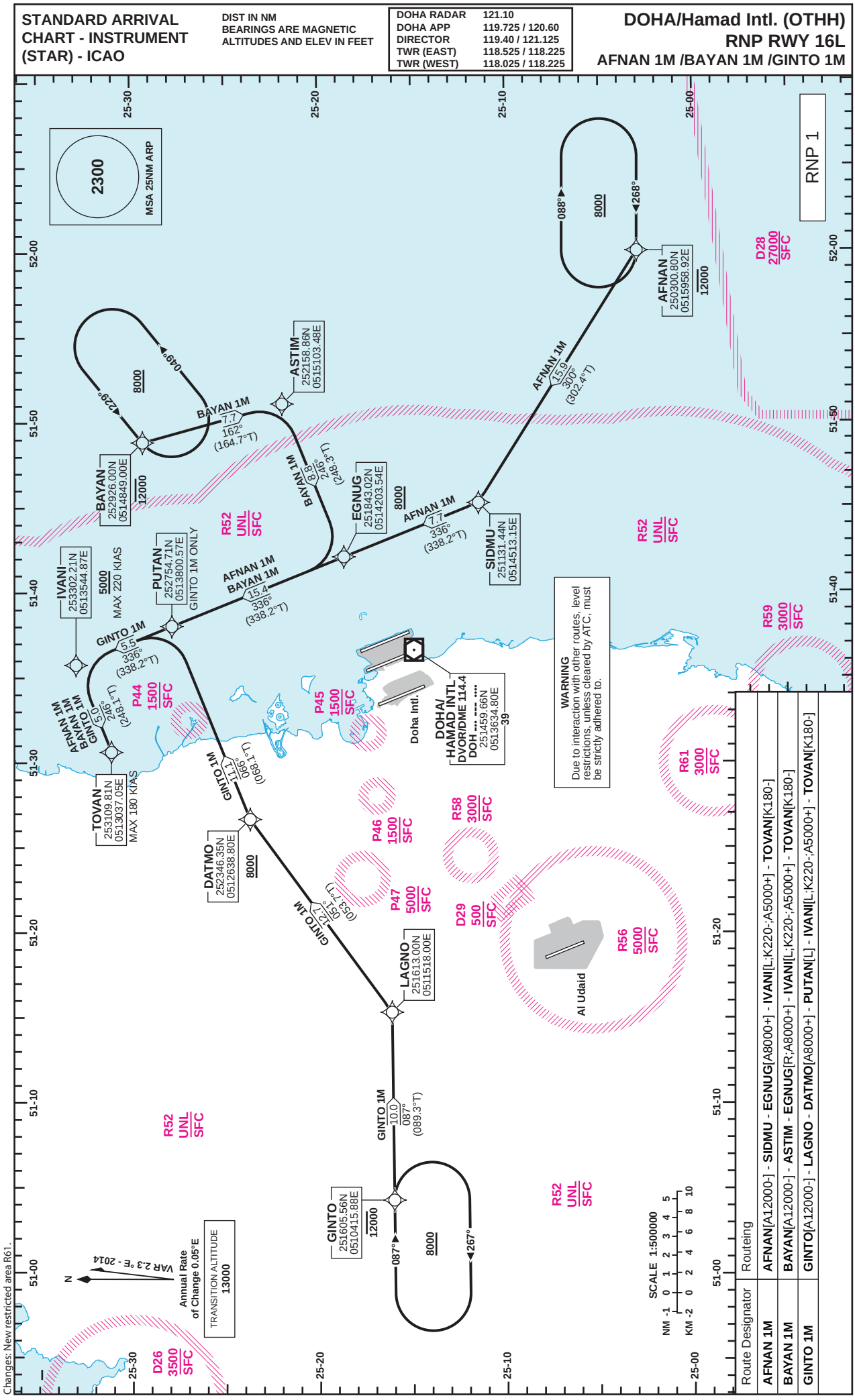
RNP SID PATOM 1E

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	CF	**SOKEN**	**-**	336 (338.2)	2.3	-		+2500			RNP 1
2	TF	**DEMBO**	**-**	037 (039.6)	2.3	10.1		@4000			RNP 1
3	TF	**DEBIL**	-	345 (347.7)	2.3	8.9		@4000			RNP 1
→ **4**	TF	**ALNAK**	-	335 (337.1)	2.3	7.9		+5000			RNP 1
5	TF	**PATOM**	-	296 (298.2)	2.3	15.8		-6000			RNP 1

WAYPOINT LIST

RNP SID ALVEN 1E /PATOM 1E

Waypoint Identifier	Coordinates
SOKEN	252704.81N 0513225.39E
DEMBO	253453.32N 0513932.53E
GIBIN	254006.23N 0514417.85E
ITSET	254712.61N 0514846.50E
ALVEN	255418.19N 0515315.30E
DEBIL	254336.08N 0513726.39E
→ ALNAK	255053.49N 0513401.89E
PATOM	255821.41N 0511836.36E


STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO
DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET
DOHA RADAR 121.10
DOHA APP 119.725 / 120.60
DIRECTOR 119.40 / 121.125
TWR (EAST) 118.525 / 118.225
TWR (WEST) 118.025 / 118.225
DOHA/Hamad Intl. (OTHH)
RNP RWY 16L
AFNAN 1M /BAYAN 1M /GINTO 1M
RNP 1
MSA 25NM ARP
2300
AFNAN 250300.80N 0515958.92E 12000
ASTIM 252158.86N 0515103.48E
BAYAN 252926.00N 0514849.00E 12000
EGNUG 251843.02N 0514203.54E 8000
SIDMU 251131.44N 0514513.15E
PUTAN 252754.71N 0513800.57E GINTO 1M ONLY
IVANI 253302.21N 0513544.87E 5000 MAX 220 KIAS
TOVAN 253109.81N 0513037.05E MAX 180 KIAS
DATMO 252346.35N 0512638.80E 8000
LAGNO 251613.00N 0511518.00E
GINTO 251605.56N 0510415.88E 12000
DOHA/ HAMAD INTL DVOR/DME 114.4 DOH 251459.66N 0513634.80E 39
Doha Intl.
Al Udaid
AFNAN 1M 15.9 300° (302.4°T)
BAYAN 1M 7.7 162° (164.7°T)
BAYAN 1M 8.8 246° (248.3°T)
AFNAN 1M 7.7 336° (338.2°T)
AFNAN 1M BAYAN 1M 15.4 336° (338.2°T)
GINTO 1M 5.5 336° (338.2°T)
AFNAN 1M BAYAN 1M GINTO 1M 5.0 246° (248.1°T)
GINTO 1M 11.7 068° (068.1°T)
GINTO 1M 12.7 057° (059.7°T)
GINTO 1M 10.0 087° (089.3°T)
088° 268° 8000
049° 229° 8000
087° 267° 8000
WARNING
Due to interaction with other routes, level restrictions, unless cleared by ATC, must be strictly adhered to.
R52 UNL SFC
R59 3000 SFC
R61 3000 SFC
R58 3000 SFC
R56 5000 SFC
D28 27000 SFC
D26 3500 SFC
D29 500 SFC
P44 1500 SFC
P45 1500 SFC
P46 1500 SFC
P47 5000 SFC
TRANSITION ALTITUDE 13000
Annual Rate of Change 0.05°E
VAR 2.3 °E - 2014
SCALE 1:500000
NM -1 0 1 2 3 4 5
KM -2 0 2 4 6 8 10
Changes: New restricted area R61.
Route Designator | Routeing
AFNAN 1M | AFNAN[A12000-] - SIDMU - EGNUG[A8000+] - IVANI[L-K220-;A5000+] - TOVAN[K180-]
BAYAN 1M | BAYAN[A12000-] - ASTIM - EGNUG[R-A8000+] - IVANI[L-K220-;A5000+] - TOVAN[K180-]
GINTO 1M | GINTO[A12000-] - LAGNO - DATMO[A8000+] - PUTAN[L] - IVANI[L-K220-;A5000+] - TOVAN[K180-]

STANDARD ARRIVAL
CHART - INSTRUMENT
(STAR) - ICAO

DOHA/Hamad Intl.(OTHH)
RNP RWY 16L
AFNAN 1M /BAYAN 1M /GINTO 1M

TABULAR DESCRIPTION

RNP STAR AFNAN 1M

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	IF	AFNAN	-		2.3			-12000			RNP 1
2	TF	SIDMU	-	300 (302.4)	2.3	15.9					RNP 1
3	TF	EGNUG	-	336 (338.2)	2.3	7.7		+8000			RNP 1
4	TF	IVANI	-	336 (338.2)	2.3	15.4	L	+5000	-220		RNP 1
5	TF	TOVAN	-	246 (248.1)	2.3	5.0			-180		RNP 1

RNP STAR BAYAN 1M

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	IF	BAYAN	-		2.3			-12000			RNP 1
2	TF	ASTIM	-	162 (164.7)	2.3	7.7					RNP 1
3	TF	EGNUG	-	246 (248.3)	2.3	8.8	R	+8000			RNP 1
4	TF	IVANI	-	336 (338.2)	2.3	15.4	L	+5000	-220		RNP 1
5	TF	TOVAN	-	246 (248.1)	2.3	5.0			-180		RNP 1

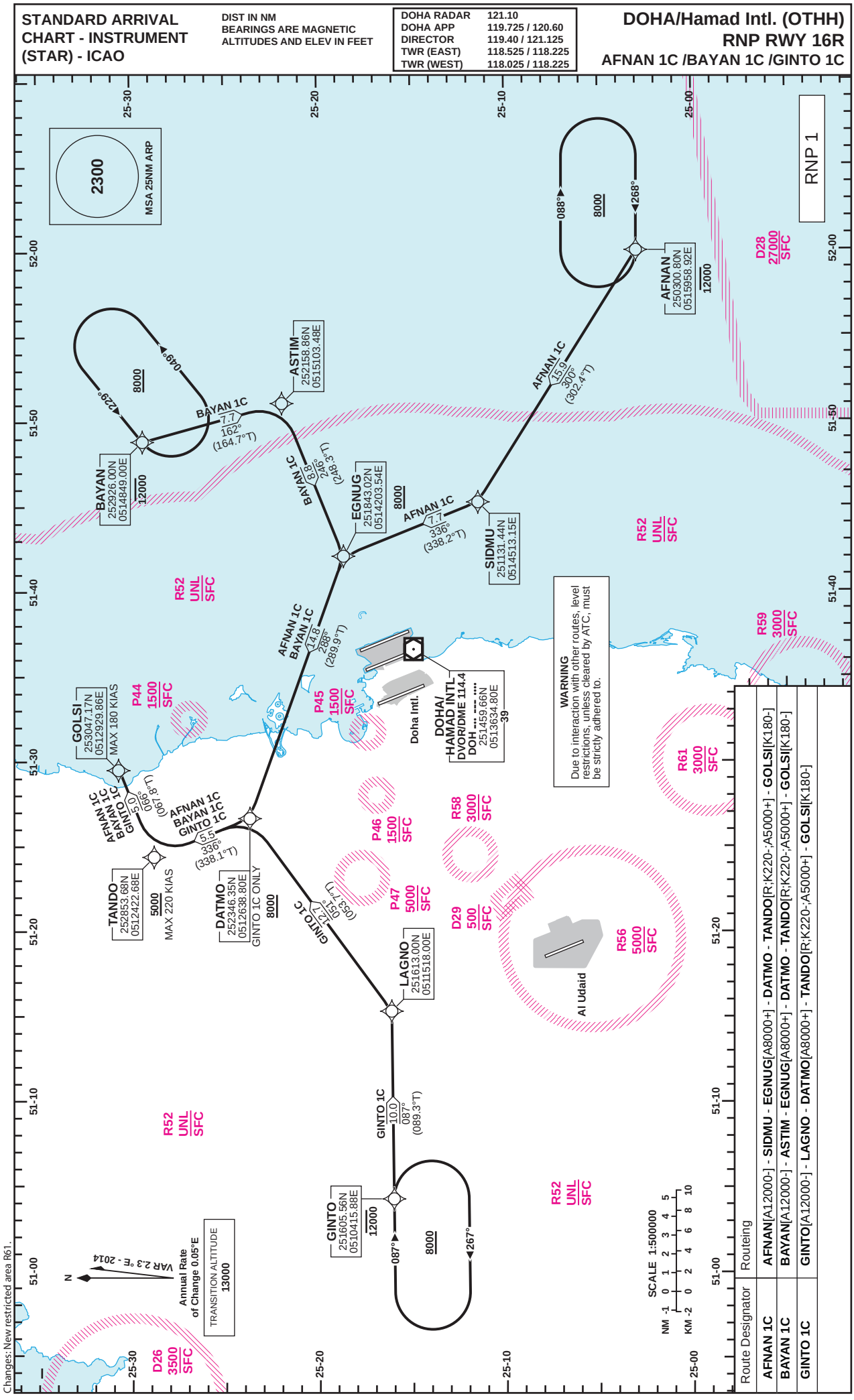
RNP STAR GINTO 1M

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	IF	GINTO	-		2.3			-12000			RNP 1
2	TF	LAGNO	-	087 (089.3)	2.3	10.0					RNP 1
3	TF	DATMO	-	051 (053.7)	2.3	12.7		+8000			RNP 1
4	TF	PUTAN	-	066 (068.1)	2.3	11.1	L				RNP 1
5	TF	IVANI	-	336 (338.2)	2.3	5.5	L	+5000	-220		RNP 1
6	TF	TOVAN	-	246 (248.1)	2.3	5.0			-180		RNP 1

WAYPOINT LIST

RNP STAR AFNAN 1M /BAYAN 1M /GINTO 1M

Waypoint Identifier	Coordinates
AFNAN	250300.80N 0515958.92E
SIDMU	251131.44N 0514513.15E
BAYAN	252926.00N 0514849.00E
ASTIM	252158.86N 0515103.48E
EGNUG	251843.02N 0514203.54E
GINTO	251605.56N 0510415.88E
LAGNO	251613.00N 0511518.00E
DATMO	252346.35N 0512638.80E
PUTAN	252754.71N 0513800.57E
IVANI	253302.21N 0513544.87E
TOVAN	253109.81N 0513037.05E


STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO
DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET
DOHA RADAR 121.10
DOHA APP 119.725 / 120.60
DIRECTOR 119.40 / 121.125
TWR (EAST) 118.525 / 118.225
TWR (WEST) 118.025 / 118.225
DOHA/Hamad Intl. (OTHH)
RNP RWY 16R
AFNAN 1C /BAYAN 1C /GINTO 1C
RNP 1
2300
MSA 25NM ARP
BAYAN 252926.00N 0514849.00E 12000
ASTIM 252158.86N 0515103.48E
EGNUG 251843.02N 0514203.54E 8000
SIDMU 251131.44N 0514513.15E
AFNAN 250300.80N 0515958.92E 12000
GOLSI 253047.17N 0512929.66E MAX 180 KIAS
TANDO 252853.68N 0512422.68E 5000 MAX 220 KIAS
DATMO 252346.35N 0512638.80E GINTO 1C ONLY 8000
LAGNO 251613.00N 0511518.00E
GINTO 251605.56N 0510415.88E 12000
DOHA/ HAMAD INTL DVOR/DME 114.4 DOH 251459.66N 0513634.80E 39
Doha Intl.
Al Udaid
BAYAN 1C 7.7 162° (164.7°T)
BAYAN 1C 8.8 246° (248.3°T)
AFNAN 1C 15.9 300° (302.4°T)
AFNAN 1C 7.7 336° (338.2°T)
AFNAN 1C BAYAN 1C 14.8 288° (289.9°T)
AFNAN 1C BAYAN 1C GINTO 1C 5.0 (8.9°T)
AFNAN 1C BAYAN 1C GINTO 1C 5.5 336° (338.1°T)
GINTO 1C 12.1 (059.7°T)
GINTO 1C 10.0 087° (089.3°T)
049° 229° 088° 268° 087° 267°
8000
WARNING
Due to interaction with other routes, level restrictions, unless cleared by ATC, must be strictly adhered to.
R52 UNL SFC
R59 3000 SFC
R61 3000 SFC
R58 3000 SFC
R56 5000 SFC
P44 1500 SFC
P45 1500 SFC
P46 1500 SFC
P47 5000 SFC
D29 500 SFC
D28 27000 SFC
D26 3500 SFC
TRANSITION ALTITUDE 13000
Annual Rate of Change 0.05°E
VAR 2.3°E - 2014
SCALE 1:500000
Changes: New restricted area R61.
Route Designator
Routeing
AFNAN 1C
AFNAN[A12000-] - SIDMU - EGNUG[A8000+] - DATMO - TANDO[R;K220-;A5000+] - GOLSI[K180-]
BAYAN 1C
BAYAN[A12000-] - ASTIM - EGNUG[A8000+] - DATMO - TANDO[R;K220-;A5000+] - GOLSI[K180-]
GINTO 1C
GINTO[A12000-] - LAGNO - DATMO[A8000+] - TANDO[R;K220-;A5000+] - GOLSI[K180-]

STANDARD ARRIVAL
CHART - INSTRUMENT
(STAR) - ICAO

DOHA/Hamad Intl.(OTHH)
RNP RWY 16R
AFNAN 1C /BAYAN 1C /GINTO 1C

TABULAR DESCRIPTION

RNP STAR AFNAN 1C

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	IF	AFNAN	-		2.3			-12000			RNP 1
2	TF	SIDMU	-	300 (302.4)	2.3	15.9		-			RNP 1
3	TF	EGNUG	-	336 (338.2)	2.3	7.7		+8000			RNP 1
4	TF	DATMO	-	288 (289.9)	2.3	14.8		-			RNP 1
5	TF	TANDO	-	336 (338.1)	2.3	5.5	R	+5000	-220		RNP 1
6	TF	GOLSI		066 (067.8)	2.3	5.0		-	-180		RNP 1

RNP STAR BAYAN 1C

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	IF	BAYAN	-		2.3			-12000			RNP 1
2	TF	ASTIM	-	162 (164.7)	2.3	7.7		-			RNP 1
3	TF	EGNUG	-	246 (248.3)	2.3	8.8		+8000			RNP 1
4	TF	DATMO	-	288 (289.9)	2.3	14.8		-			RNP 1
5	TF	TANDO	-	336 (338.1)	2.3	5.5	R	+5000	-220		RNP 1
6	TF	GOLSI		066 (067.8)	2.3	5.0		-	-180		RNP 1

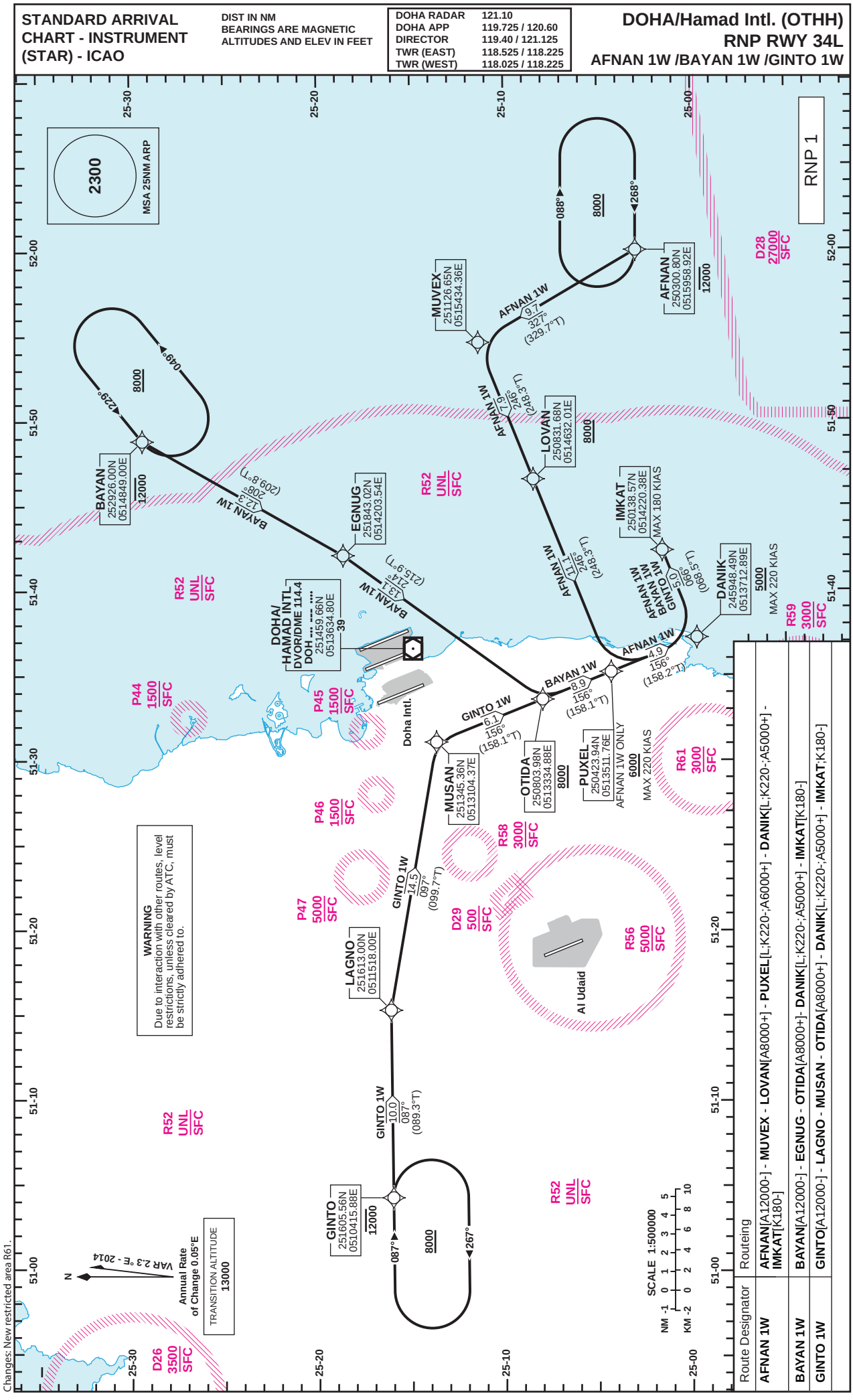
RNP STAR GINTO 1C

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	IF	GINTO	-		2.3			-12000			RNP 1
2	TF	LAGNO	-	087 (089.3)	2.3	10.0		-			RNP 1
3	TF	DATMO	-	051 (053.7)	2.3	12.7		+8000			RNP 1
4	TF	TANDO	-	336 (338.1)	2.3	5.5	R	+5000	-220		RNP 1
5	TF	GOLSI	-	066 (067.8)	2.3	5.0		-	-180		RNP 1

WAYPOINT LIST

RNP STAR AFNAN 1C /BAYAN 1C /GINTO 1C

Waypoint Identifier	Coordinates
AFNAN	250300.80N 0515958.92E
SIDMU	251131.44N 0514513.15E
BAYAN	252926.00N 0514849.00E
ASTIM	252158.86N 0515103.48E
EGNUG	251843.02N 0514203.54E
GINTO	251605.56N 0510415.88E
LAGNO	251613.00N 0511518.00E
DATMO	252346.35N 0512638.80E
TANDO	252853.68N 0512422.68E
GOLSI	253047.17N 0512929.86E


STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO
DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET
DOHA RADAR 121.10
DOHA APP 119.725 / 120.60
DIRECTOR 119.40 / 121.125
TWR (EAST) 118.525 / 118.225
TWR (WEST) 118.025 / 118.225
DOHA/Hamad Intl. (OTHH)
RNP RWY 34L
AFNAN 1W /BAYAN 1W /GINTO 1W
RNP 1
2300
MSA 25NM ARP
MUVEX 251126.65N 0515434.36E
AFNAN 250300.80N 0515958.92E
LOVAN 250831.68N 0514632.01E
IMKAT 250138.57N 0514220.38E MAX 180 KIAS
DANIK 245948.49N 0513712.89E 5000 MAX 220 KIAS
BAYAN 252926.00N 0514849.00E 12000
EGNUG 251843.02N 0514203.54E
DOHA/ HAMAD INTL DVOR/DME 114.4 DOH ... --- ... 251459.66N 0513634.80E 39
OTIDA 250803.98N 0513334.88E 8000
PUXEL 250423.94N 0513511.76E AFNAN 1W ONLY 6000 MAX 220 KIAS
MUSAN 251345.36N 0513104.37E
LAGNO 251613.00N 0511518.00E
GINTO 251605.56N 0510415.88E 12000
AFNAN 1W 9.7 327° (329.7°T)
LOVAN 1W 7.9° 246° (248.3°T)
IMKAT 1W 11.7° 246° (248.3°T)
AFNAN 1W BAYAN 1W GINTO 5.0 066° (068.5°T)
BAYAN 1W 12.3 208° (209.8°T)
EGNUG 1W 13.1 214° (215.9°T)
AFNAN 1W 4.9 156° (158.2°T)
BAYAN 1W 8.9 156° (158.1°T)
GINTO 1W 6.1 156° (158.1°T)
GINTO 1W 14.5 097° (099.7°T)
GINTO 1W 10.0 087° (089.3°T)
088° 268° 8000
049° 229° 8000
087° 267° 8000
D28 27000 SFC
R59 3000 SFC
R61 3000 SFC
R58 3000 SFC
R56 5000 SFC
D29 500 SFC
P47 5000 SFC
P46 1500 SFC
P44 1500 SFC
P45 1500 SFC
R52 UNL SFC
D26 3500 SFC
Doha Intl.
Al Udaid
WARNING
Due to interaction with other routes, level restrictions, unless cleared by ATC, must be strictly adhered to.
TRANSITION ALTITUDE 13000
VAR 2.3 °E - 2014
Annual Rate of Change 0.05°E
SCALE 1:500000
NM -1 0 1 2 3 4 5
KM -2 0 2 4 6 8 10
Changes: New restricted area R61.
Route Designator
Routeing
AFNAN 1W
AFNAN[A12000-] - MUVEX - LOVAN[A8000+] - PUXEL[L;K220-;A6000+] - DANIK[L;K220-;A5000+] - IMKAT[K180-]
BAYAN 1W
BAYAN[A12000-] - EGNUG - OTIDA[A8000+]- DANIK[L;K220-;A5000+] - IMKAT[K180-]
GINTO 1W
GINTO[A12000-] - LAGNO - MUSAN - OTIDA[A8000+] - DANIK[L;K220-;A5000+] - IMKAT[K180-]

STANDARD ARRIVAL
CHART - INSTRUMENT
(STAR) - ICAO

DOHA/Hamad Intl.(OTHH)
RNP RWY 34L
AFNAN 1W /BAYAN 1W /GINTO 1W

TABULAR DESCRIPTION

RNP STAR AFNAN 1W

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	IF	AFNAN	-		2.3			-12000			RNP 1
2	TF	MUVEX	-	327 (329.7)	2.3	9.7					RNP 1
3	TF	LOVAN	-	246 (248.3)	2.3	7.9		+8000			RNP 1
4	TF	PUXEL	-	246 (248.2)	2.3	11.1	L	+6000	-220		RNP 1
5	TF	DANIK	-	156 (158.2)	2.3	4.9	L	+5000	-220		RNP 1
6	TF	IMKAT	-	066 (068.5)	2.3	5.0			-180		RNP 1

RNP STAR BAYAN 1W

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	IF	BAYAN	-		2.3			-12000			RNP 1
2	TF	EGNUG	-	208 (209.8)	2.3	12.3					RNP 1
3	TF	OTIDA	-	214 (215.9)	2.3	13.1		+8000			RNP 1
4	TF	DANIK	-	156 (158.1)	2.3	8.9	L	+5000	-220		RNP 1
5	TF	IMKAT	-	066 (068.5)	2.3	5.0			-180		RNP 1

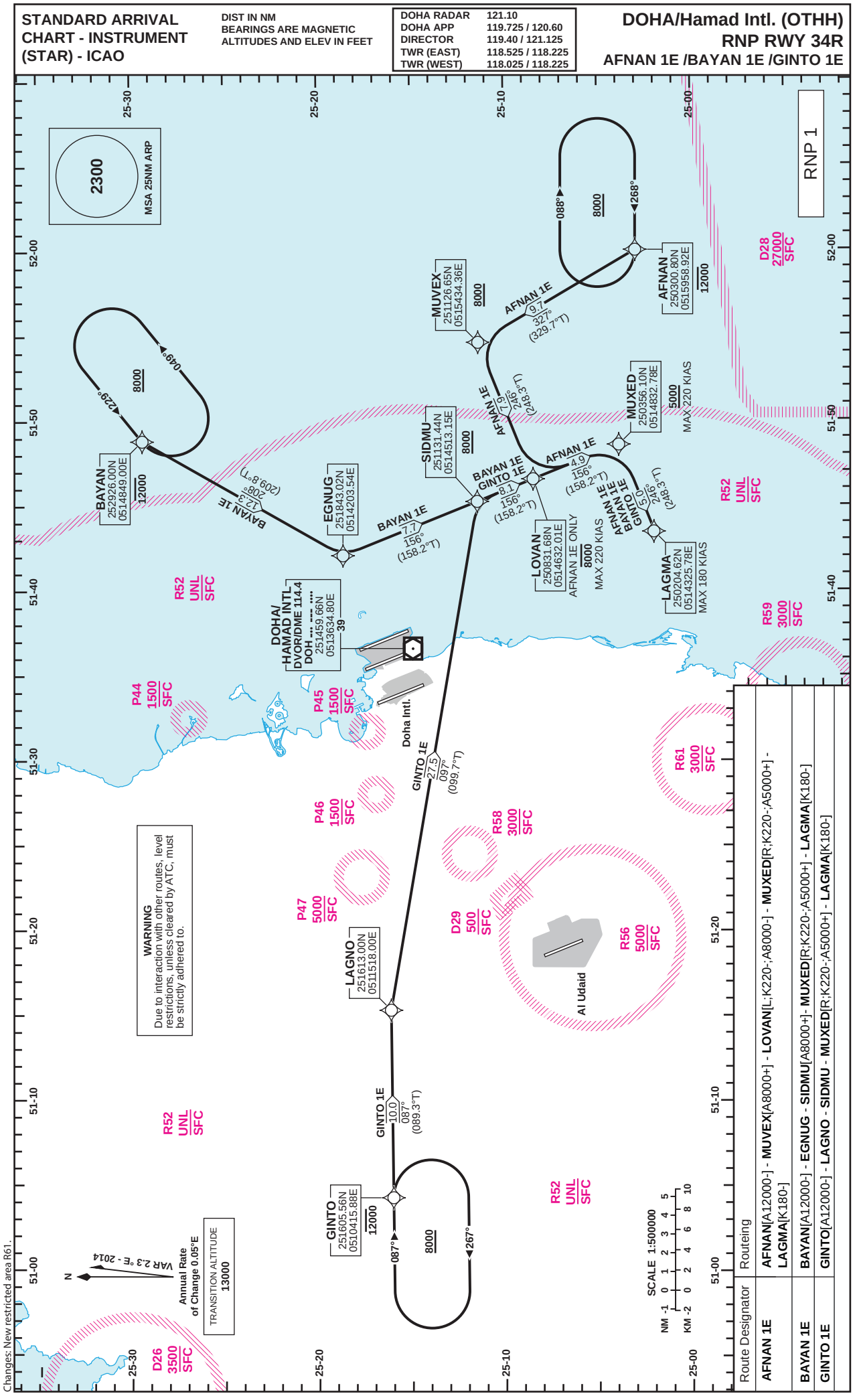
RNP STAR GINTO 1W

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	IF	GINTO	-		2.3			-12000			RNP 1
2	TF	LAGNO	-	087 (089.3)	2.3	10.0					RNP 1
3	TF	MUSAN	-	097 (099.7)	2.3	14.5					RNP 1
4	TF	OTIDA	-	156 (158.1)	2.3	6.1		+8000			RNP 1
5	TF	DANIK	-	156 (158.1)	2.3	8.9	L	+5000	-220		RNP 1
6	TF	IMKAT	-	066 (068.5)	2.3	5.0			-180		RNP 1

WAYPOINT LIST

RNP STAR AFNAN 1W /BAYAN 1W /GINTO 1W

Waypoint Identifier	Coordinates
AFNAN	250300.80N 0515958.92E
MUVEX	251126.65N 0515434.36E
LOVAN	250831.68N 0514632.01E
PUXEL	250423.94N 0513511.76E
BAYAN	252926.00N 0514849.00E
EGNUG	251843.02N 0514203.54E
GINTO	251605.56N 0510415.88E
LAGNO	251613.00N 0511518.00E
MUSAN	251345.36N 0513104.37E
OTIDA	250803.98N 0513334.88E
DANIK	245948.49N 0513712.89E
IMKAT	250138.57N 0514220.38E


STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO
DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET
DOHA RADAR 121.10
DOHA APP 119.725 / 120.60
DIRECTOR 119.40 / 121.125
TWR (EAST) 118.525 / 118.225
TWR (WEST) 118.025 / 118.225
DOHA/Hamad Intl. (OTHH)
RNP RWY 34R
AFNAN 1E /BAYAN 1E /GINTO 1E
RNP 1
MSA 25NM ARP
2300
BAYAN 252926.00N 0514849.00E 12000
MUVEX 251126.65N 0515434.36E 8000
AFNAN 250300.80N 0515958.92E 12000
SIDMU 251131.44N 0514513.15E 8000
EGNUG 251843.02N 0514203.54E
MUXED 250356.10N 0514832.78E 5000 MAX 220 KIAS
LOVAN 250831.68N 0514632.01E AFNAN 1E ONLY 8000 MAX 220 KIAS
LAGMA 250204.62N 0514325.78E MAX 180 KIAS
DOHA/ HAMAD INTL DVOR/DME 114.4 DOH ... --- ... 251459.66N 0513634.80E 39
GINTO 251605.56N 0510415.88E 12000
LAGNO 251613.00N 0511518.00E
AFNAN 1E 9.7 327° (329.7°T)
BAYAN 1E 7.7 156° (158.2°T)
GINTO 1E 10.0 087° (089.3°T)
GINTO 1E 27.5 097° (099.7°T)
AFNAN 1E 7.9 246° (248.3°T)
AFNAN 1E 4.9 156° (158.2°T)
AFNAN 1E BAYAN 1E GINTO 5.0 246° (248.3°T)
BAYAN 1E GINTO 1E 8.1 156° (158.2°T)
BAYAN 1E 12.3 208° (209.8°T)
088° 268° 049° 229° 087° 267°
8000
D28 27000 SFC
D26 3500 SFC
R52 UNL SFC
R59 3000 SFC
R61 3000 SFC
R58 3000 SFC
R56 5000 SFC
D29 500 SFC
P44 1500 SFC
P45 1500 SFC
P46 1500 SFC
P47 5000 SFC
Doha Intl.
Al Udaid
WARNING
Due to interaction with other routes, level restrictions, unless cleared by ATC, must be strictly adhered to.
TRANSITION ALTITUDE 13000
VAR 2.3 °E - 2014
Annual Rate of Change 0.05°E
SCALE 1:500000
NM -1 0 1 2 3 4 5
KM -2 0 2 4 6 8 10
Changes: New restricted area R61.
Route Designator
Routeing
AFNAN 1E
AFNAN[A12000-] - MUVEX[A8000+] - LOVAN[L;K220-;A8000-] - MUXED[R;K220-;A5000+] - LAGMA[K180-]
BAYAN 1E
BAYAN[A12000-] - EGNUG - SIDMU[A8000+]- MUXED[R;K220-;A5000+] - LAGMA[K180-]
GINTO 1E
GINTO[A12000-] - LAGNO - SIDMU - MUXED[R;K220-;A5000+] - LAGMA[K180-]

STANDARD ARRIVAL
CHART - INSTRUMENT
(STAR) - ICAO

DOHA/Hamad Intl.(OTHH)
RNP RWY 34R
AFNAN 1E /BAYAN 1E /GINTO 1E

TABULAR DESCRIPTION

RNP STAR AFNAN 1E

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	IF	AFNAN	-		2.3			-12000			RNP 1
2	TF	MUVEX	-	327 (329.7)	2.3	9.7		+8000			RNP 1
3	TF	LOVAN	-	246 (248.3)	2.3	7.9	L	-8000	-220		RNP 1
4	TF	MUXED	-	156 (158.2)	2.3	4.9	R	+5000	-220		RNP 1
5	TF	LAGMA	-	246 (248.3)	2.3	5.0			-180		RNP 1

RNP STAR BAYAN 1E

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	IF	BAYAN	-		2.3			-12000			RNP 1
2	TF	EGNUG	-	208 (209.8)	2.3	12.3					RNP 1
3	TF	SIDMU	-	156 (158.2)	2.3	7.7		+8000			RNP 1
4	TF	MUXED	-	156 (158.2)	2.3	8.1	R	+5000	-220		RNP 1
5	TF	LAGMA	-	246 (248.3)	2.3	5.0			-180		RNP 1

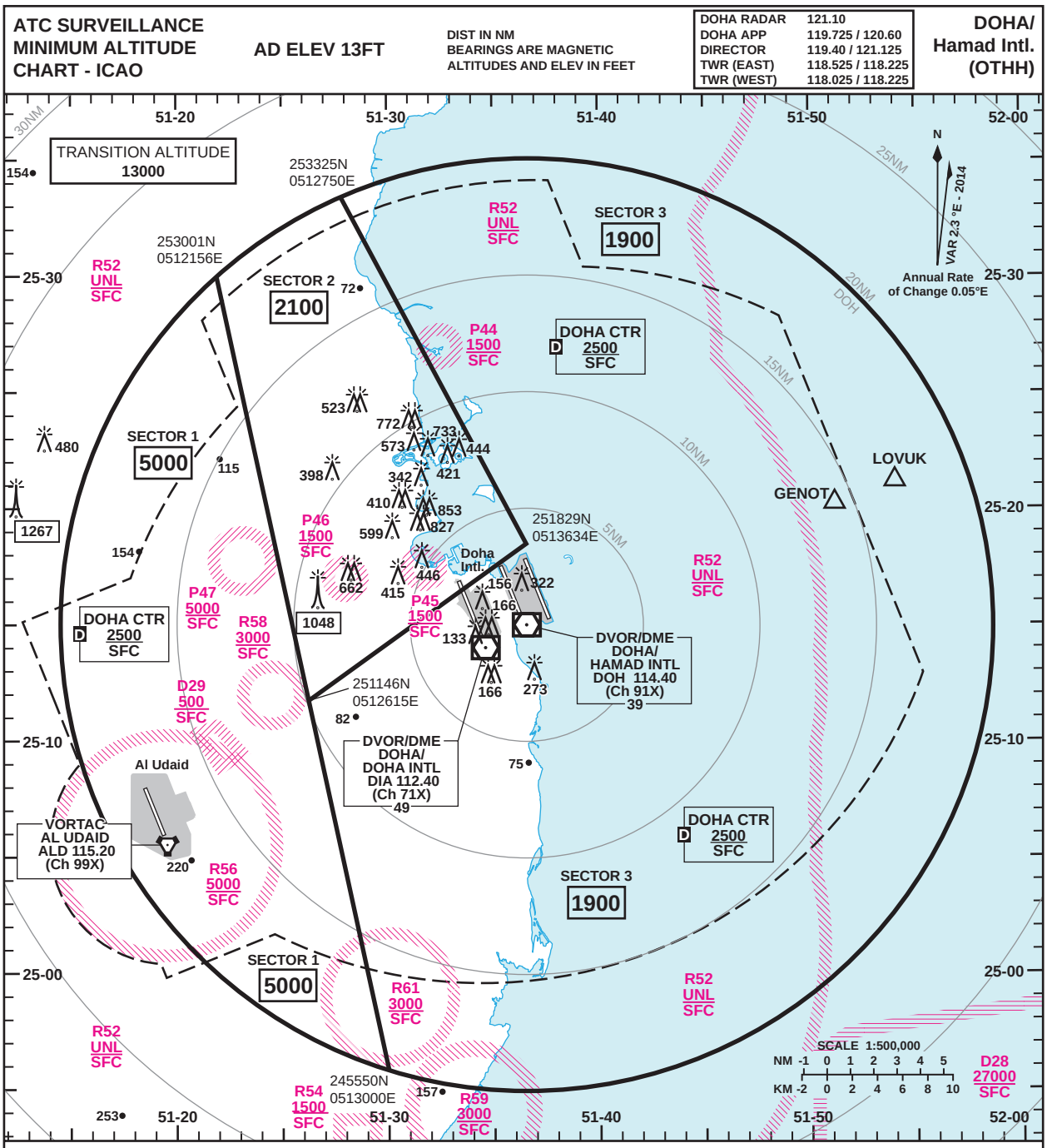
RNP STAR GINTO 1E

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	IF	GINTO	-		2.3			-12000			RNP 1
2	TF	LAGNO	-	087 (089.3)	2.3	10.0					RNP 1
3	TF	SIDMU	-	097 (099.7)	2.3	27.5		+8000			RNP 1
4	TF	MUXED	-	156 (158.2)	2.3	8.1	R	+5000	-220		RNP 1
5	TF	LAGMA	-	246 (248.3)	2.3	5.0			-180		RNP 1

WAYPOINT LIST

RNP STAR AFNAN 1E /BAYAN 1E /GINTO 1E

Waypoint Identifier	Coordinates
AFNAN	250300.80N 0515958.92E
MUVEX	251126.65N 0515434.36E
LOVAN	250831.68N 0514632.01E
BAYAN	252926.00N 0514849.00E
EGNUG	251843.02N 0514203.54E
GINTO	251605.56N 0510415.88E
LAGNO	251613.00N 0511518.00E
SIDMU	251131.44N 0514513.15E
MUXED	250356.10N 0514832.78E
LAGMA	250204.62N 0514325.78E



LOSS OF COMMUNICATION PROCEDURES

Initial Approach

Continue visually or by means of an appropriate approved final approach aid. If not possible proceed at **2100**, or last assigned level if higher to **GENOT** if runway 34R is in use or **LOVUK** if runway 16L is in use.

Intermediate and Final Approach

Continue visually or by means of an appropriate final approach aid. If not possible follow the Missed Approach Procedure to **GENOT** if runway 34R is in use or **LOVUK** if runway 16L is in use.

GENERAL INFORMATION

1 - Levels shown are based on QNH.
2 - The minimum levels shown within the ATC Surveillance Minimum Altitude Area (SMAA) provides 300m of obstacle clearance over all obstacles within the SMAA and within a 3NM buffer area.
3 - The minimum levels shown within the ATC Surveillance Minimum Altitude Area (SMAA) provide separation from all Danger, Prohibited and Restricted areas within the SMAA.
4 - SMAA do not constitute controlled airspace.
5 - **This chart may only be used for cross-checking of altitudes assigned when in receipt of an ATC Surveillance service.**

Changes: New restricted area R61.

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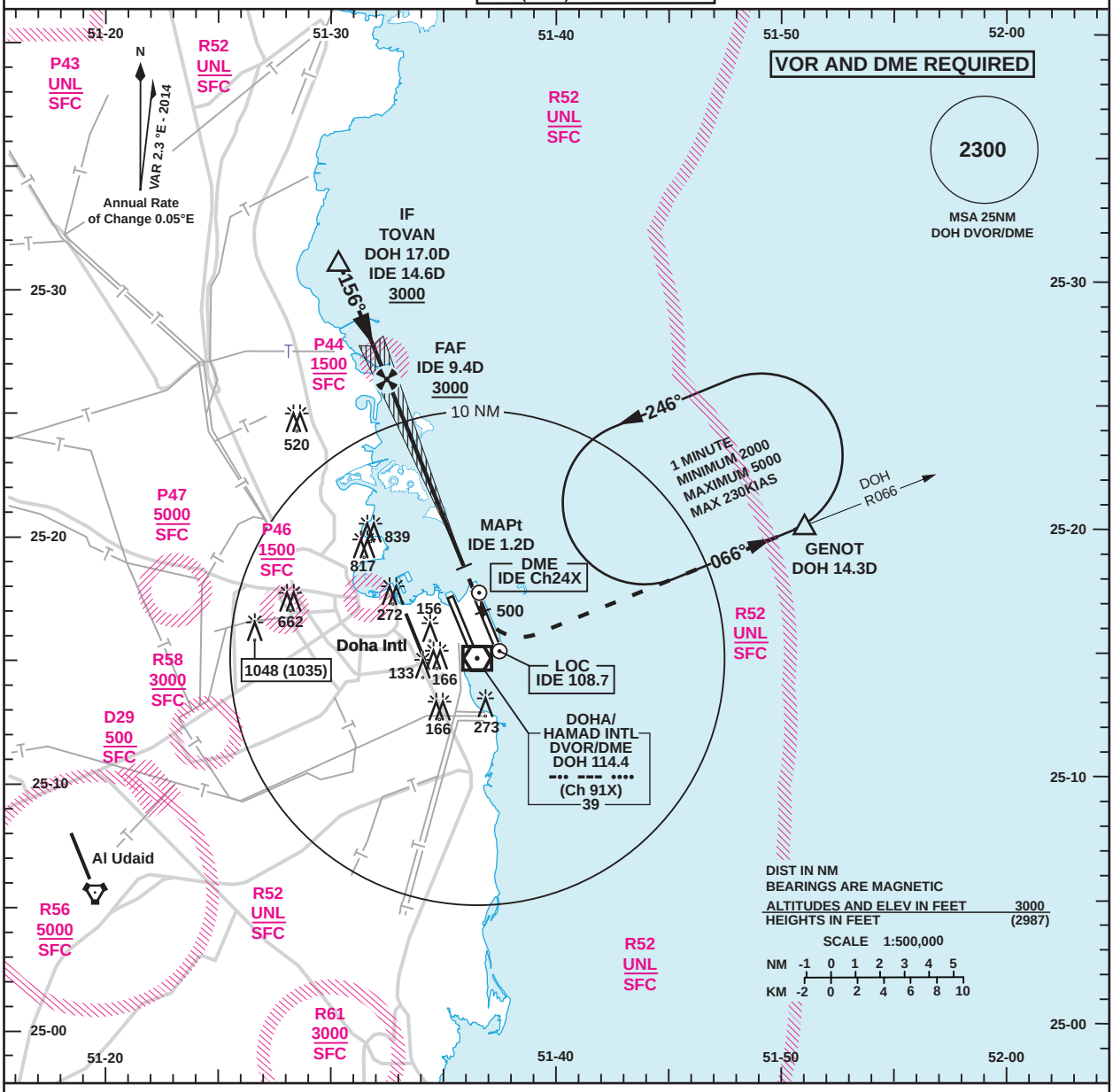
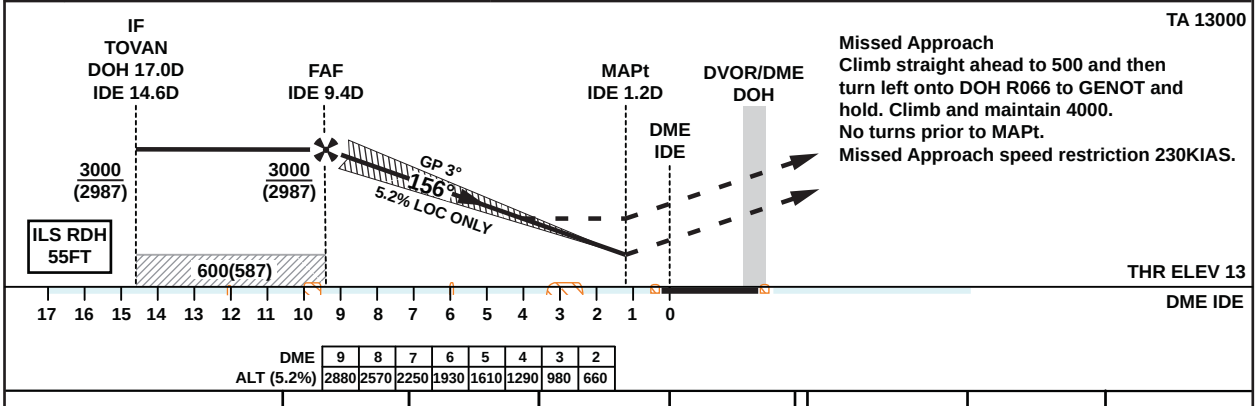
INSTRUMENT APPROACH CHART - ICAO

AD ELEV 13
HEIGHTS RELATED TO THR RWY 16L - ELEV 13

DOHA RADAR	121.10
DOHA APP	119.725 / 120.60
DIRECTOR	119.40 / 121.125
TWR (EAST)	118.525 / 118.225
TWR (WEST)	118.025 / 118.225

DOHA/Hamad Intl. (OTHH)
ILS RWY 16L
ACFT CAT A,B,C,D





Missed Approach
Climb straight ahead to 500 and then turn left onto DOH R066 to GENOT and hold. Climb and maintain 4000.
No turns prior to MAPt.
Missed Approach speed restriction 230KIAS.

OCA (OCH)		A	B	C	D
Straight in Approach	ILS CAT I	180 (167)	192 (179)	205 (192)	220 (207)
	ILS CAT II	83 (70)	95 (82)	109 (96)	129 (116)
	LOC ONLY	370 (357)			
Circling		620 (607)		1240 (1227)	

DA (DH)	A B C	D
ILS CAT II ALS OUT	113 (100) RVR 300m	129 (116) RVR 300m*/ RVR 350m
ILS CAT IIIA	63 (50) / RVR 200m	
ILS CAT IIIB	RVR 50m	

Note: * - 300m may be used for CAT D aeroplane conducting autoland.

1. IDE DME zero ranged to TDZ.
2. HOLD at GENOT protected for sector 3 Entry only.

LOC only Approach: MAPt at IDE 1.2D

Speed	KT	80	100	120	140	160	180
Time	MIN:SEC	Timing Not Authorized					
Rate of Descent	FT/MIN	420	530	640	740	850	960

Changes: Updated dominating obstacle height.

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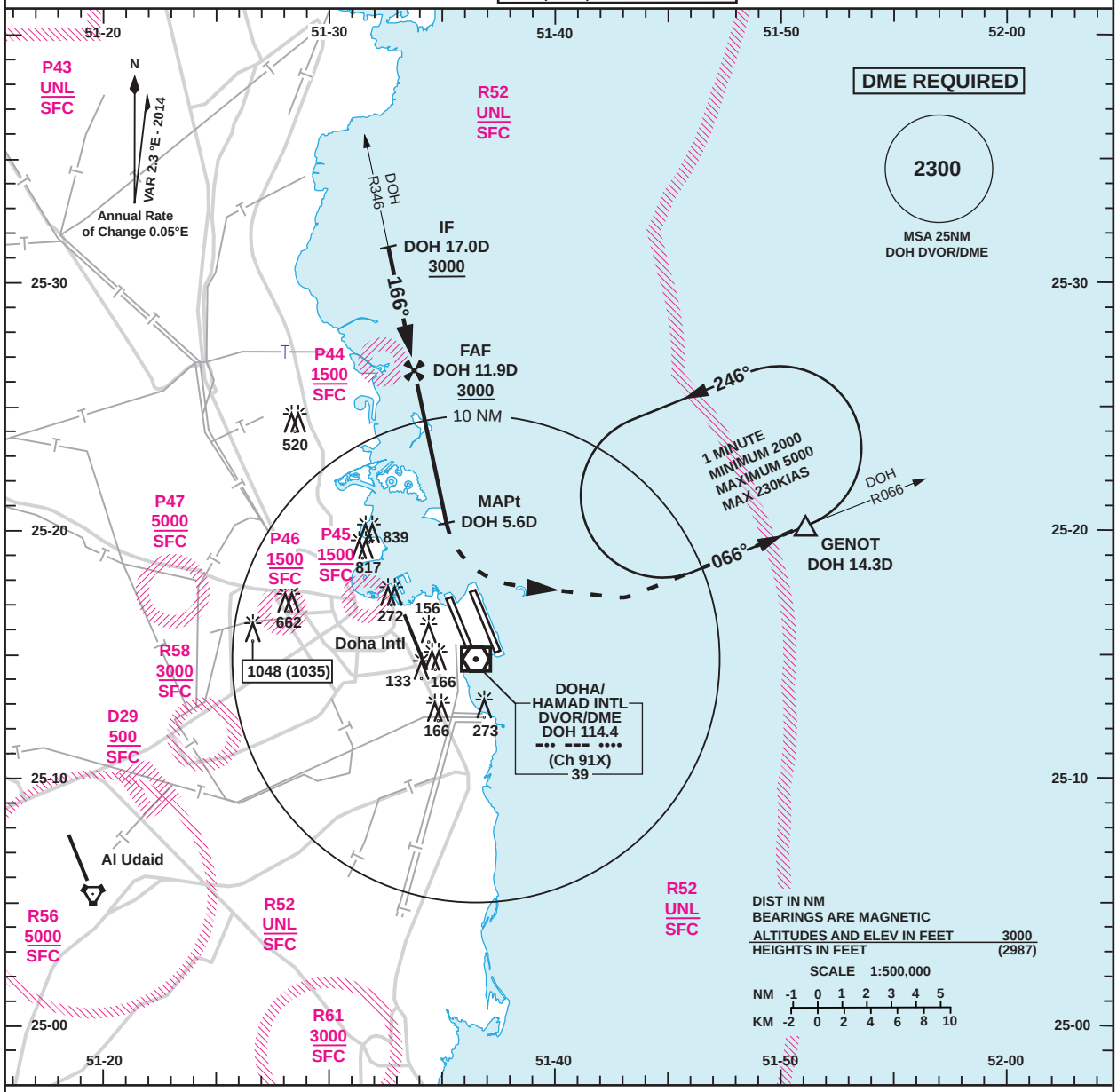
INSTRUMENT APPROACH CHART - ICAO

AD ELEV 13
HEIGHTS RELATED TO AD ELEV

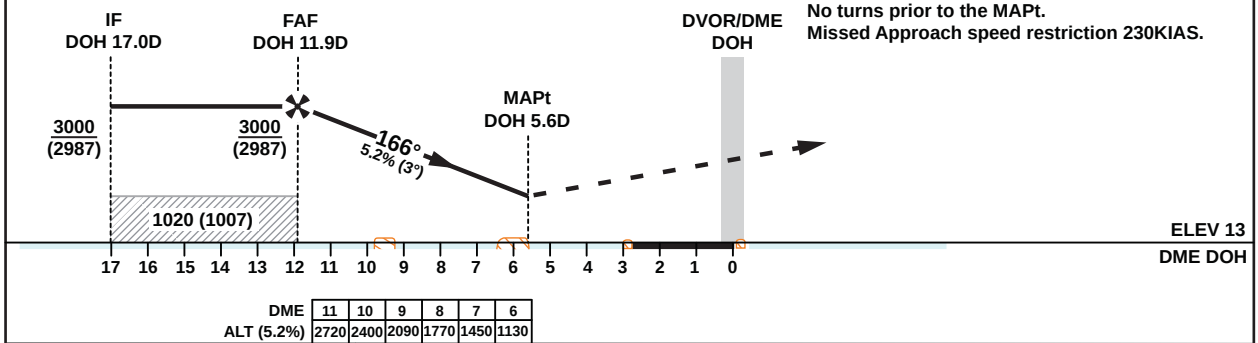
DOHA RADAR	121.10
DOHA APP	119.725 / 120.60
DIRECTOR	119.40 / 121.125
TWR (EAST)	118.525 / 118.225
TWR (WEST)	118.025 / 118.225

DOHA/Hamad Intl. (OTHH)
VOR RWY 16L
ACFT CAT A,B,C,D



TA 13000

Missed Approach
Turn left onto DOH R066 to GENOT and hold.
Climb and maintain 4000.
No turns prior to the MAPt.
Missed Approach speed restriction 230KIAS.



DME	11	10	9	8	7	6
ALT (5.2%)	2720	2400	2090	1770	1450	1130

OCA (OCH)	A	B	C	D
Straight in Approach	VOR	1020 (1007)		
Circling	1020 (1007)		1240 (1227)	

1. CAUTION - Final Approach Track offset from runway centre line by 10°.
2. HOLD at GENOT protected for sector 3 Entry only.

VOR Approach: MAPt at DOH 5.6D

Speed	KT	80	100	120	140	160	180
Time	MIN:SEC	Timing Not Authorized					
Rate of Descent	FT/MIN	420	530	640	740	850	960

Changes: Updated dominating obstacle height.

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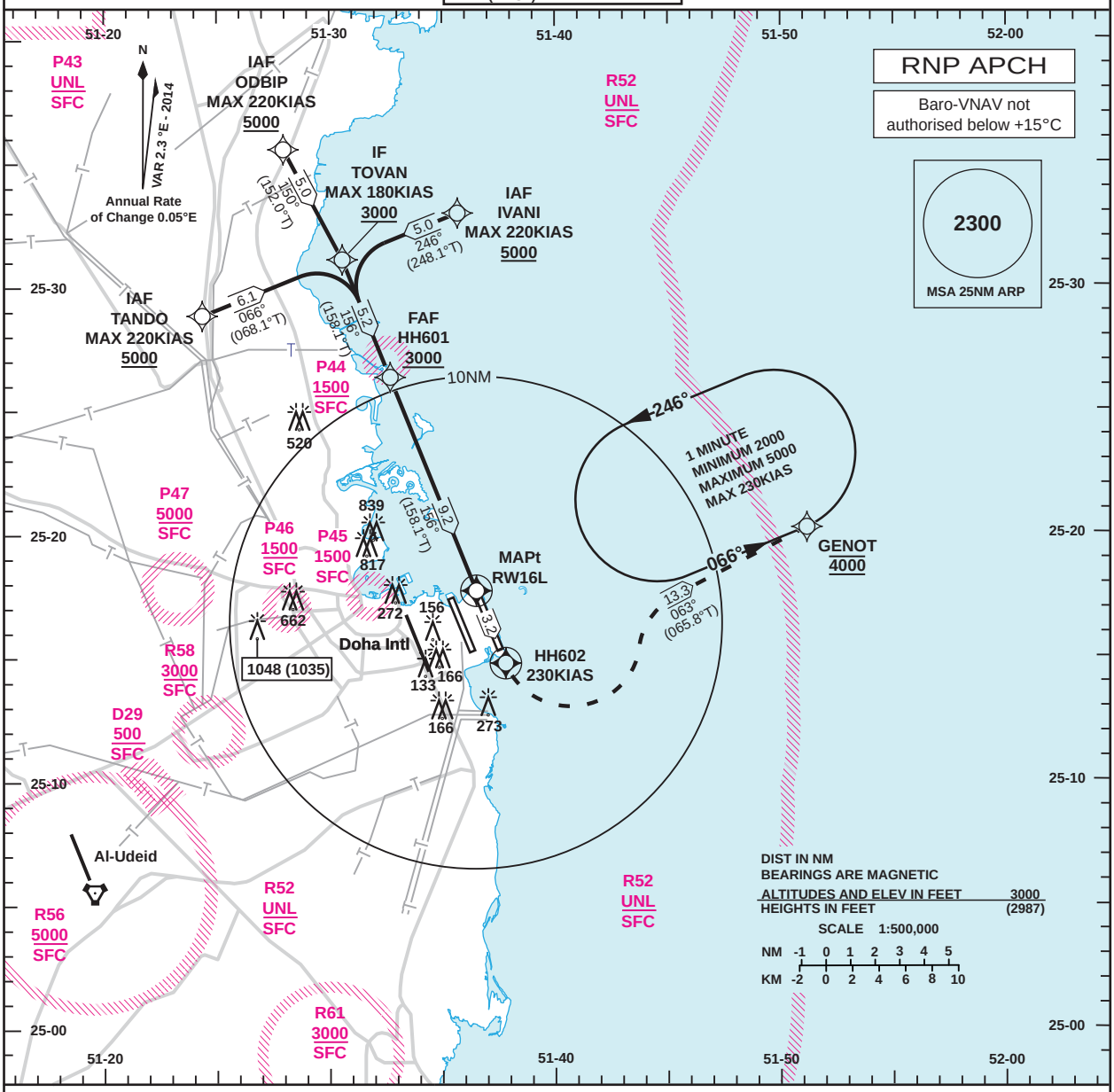
INSTRUMENT APPROACH CHART - ICAO

AD ELEV 13
HEIGHTS RELATED TO AD ELEV

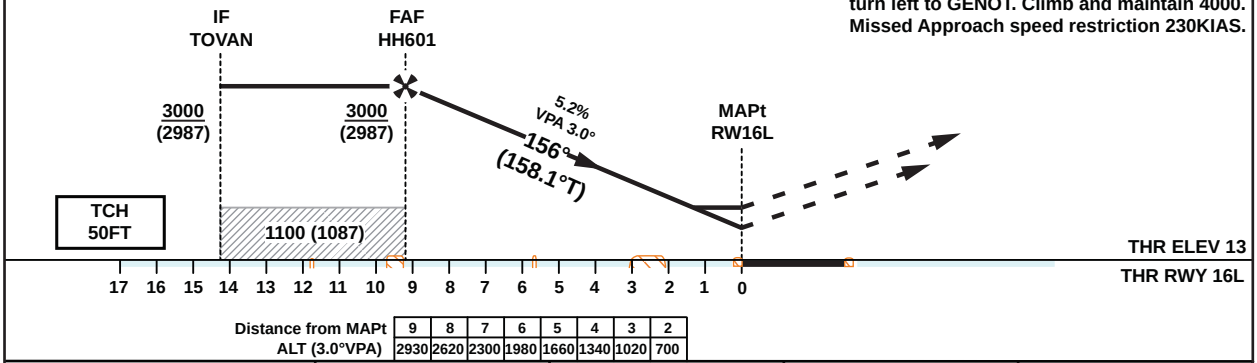
DOHA RADAR	121.10
DOHA APP	119.725 / 120.60
DIRECTOR	119.40 / 121.125
TWR (EAST)	118.525 / 118.225
TWR (WEST)	118.025 / 118.225

DOHA/Hamad Intl. (OTHH)
RNP RWY 16L
ACFT CAT A,B,C,D



TA 13000

Missed Approach
Climb straight ahead to HH602. At HH602, turn left to GENOT. Climb and maintain 4000.
Missed Approach speed restriction 230KIAS.



Distance from MAPt	9	8	7	6	5	4	3	2
ALT (3.0°VPA)	2930	2620	2300	1980	1660	1340	1020	700

OCA (OCH)		A	B	C	D
Straight in Approach	LNAV/VNAV	370 (357)			
	LNAV	570 (557)			
Circling		620 (607)		1240 (1227)	

1. HOLD at GENOT protected for sector 3 Entry only.

Approach: MAPt at RW16L

Speed	KT	80	100	120	140	160	180
Time	MIN:SEC	Timing Not Authorized					
Rate of Descent	FT/MIN	420	530	640	740	850	960

Changes: Updated dominating obstacle height.

INSTRUMENT APPROACH CHART-ICAO

AD ELEV 13
HEIGHTS RELATED TO AD ELEV

DOHA/Hamad Intl.(OTHH)
RNP RWY 16L
ACFT CAT A,B,C,D

TABULAR DESCRIPTION

RNP RWY 16L TANDO

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	IF	TANDO	-		2.3			+5000	-220		RNP APCH
2	TF	TOVAN	-	066 (068.1)	2.3	6.1	R	+3000	-180		RNP APCH

RNP RWY 16L ODBIP

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	IF	ODBIP	-		2.3			+5000	-220		RNP APCH
2	TF	TOVAN	-	150 (152.0)	2.3	5.0		+3000	-180		RNP APCH

RNP RWY 16L IVANI

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	IF	IVANI	-		2.3			+5000	-220		RNP APCH
2	TF	TOVAN	-	246 (248.1)	2.3	5.0	L	+3000	-180		RNP APCH

RNP RWY 16L FINAL

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	IF	TOVAN	-		2.3	-		+3000	-180		RNP APCH
2	TF	HH601	-	156 (158.1)	2.3	5.2		+3000	-180		RNP APCH
3	TF	RW16L	Y	156 (158.1)	2.3	9.2			-180	-3.0/50	RNP APCH
4	CF	HH602	Y	156 (158.2)	2.3	-	L		-230		RNP APCH
5	TF	GENOT	-	063 (065.8)	2.3	13.3		@4000	-230		RNP APCH
6	HM	GENOT	Y	066 (068.3)	2.3	4.3	L	@4000	-230		RNP APCH

WAYPOINT LIST

RNP RWY 16L

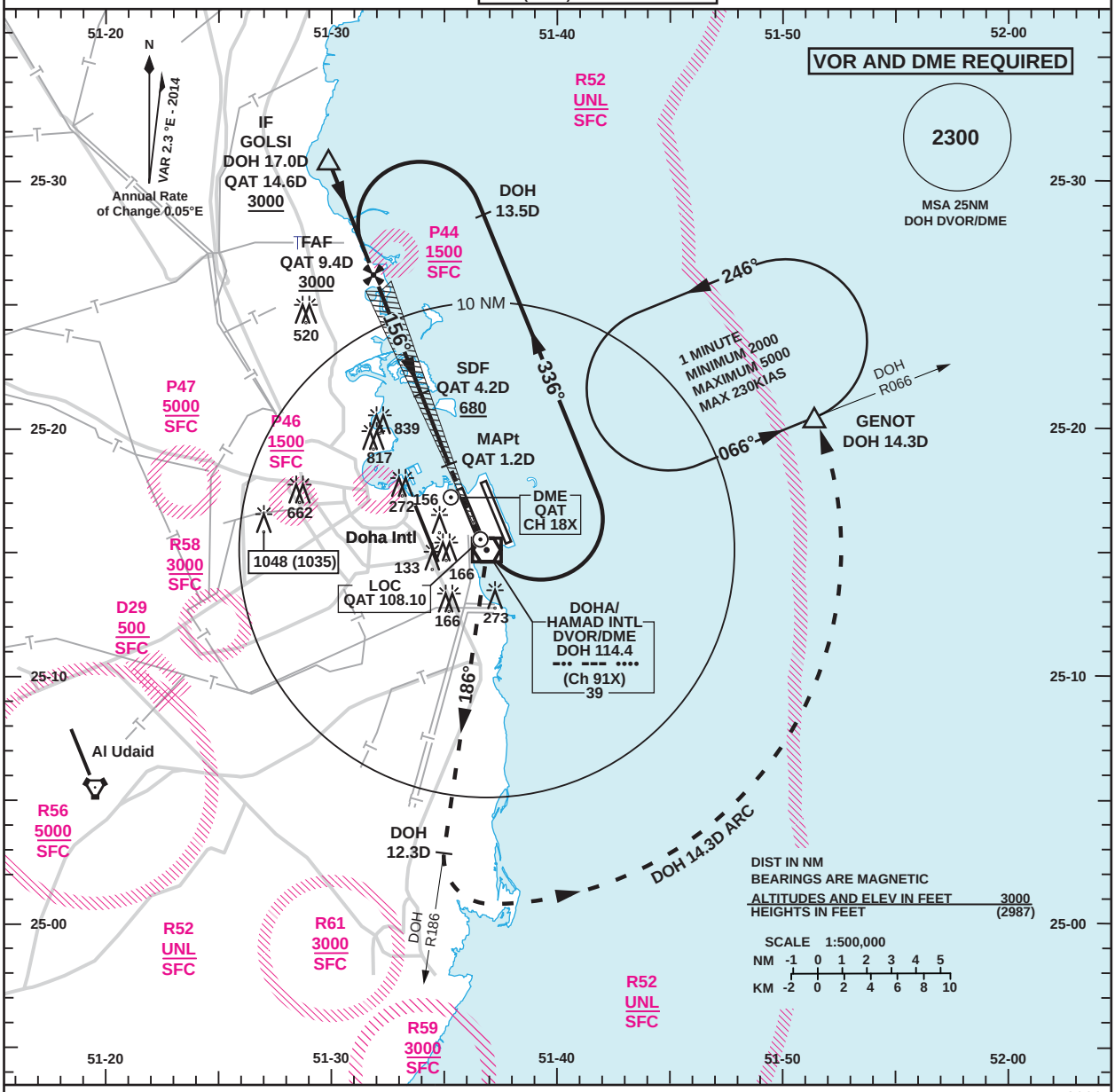
Waypoint Identifier	Coordinates
TANDO	252853.68N 0512422.68E
ODBIP	253537.40N 0512800.00E
IVANI	253302.21N 0513544.87E
TOVAN	253109.81N 0513037.05E
HH601	252621.31N 0513244.59E
RW16L	251745.97N 0513631.96E
HH602	251449.85N 0513749.52E
GENOT	252018.11N 0515114.66E

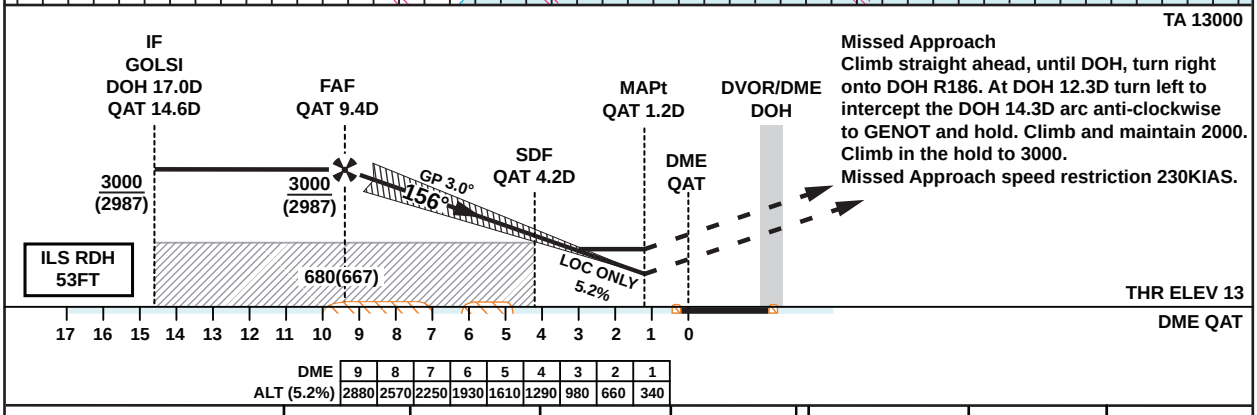
INSTRUMENT APPROACH CHART - ICAO

AD ELEV 13
HEIGHTS RELATED TO THR RWY 16R - ELEV 13

DOHA RADAR	121.10
DOHA APP	119.725 / 120.60
DIRECTOR	119.40 / 121.125
TWR (EAST)	118.525 / 118.225
TWR (WEST)	118.025 / 118.225

DOHA/Hamad Intl. (OTHH)
ILS RWY 16R
ACFT CAT A,B,C,D





Missed Approach
Climb straight ahead, until DOH, turn right onto DOH R186. At DOH 12.3D turn left to intercept the DOH 14.3D arc anti-clockwise to GENOT and hold. Climb and maintain 2000. Climb in the hold to 3000.
Missed Approach speed restriction 230KIAS.

OCA (OCH)		A	B	C	D
Straight in Approach	ILS CAT I	181 (168)	192 (179)	205 (192)	220 (207)
	ILS CAT II	87 (74)	99 (86)	112 (99)	132 (119)
	LOC ONLY	370 (357)			
Circling		620 (607)		1240 (1227)	

DA (DH)	A B C	D
ILS CAT II ALS OUT	113 (100) RVR 300m	132 (119) RVR 300m*/ RVR 350m
ILS CAT IIIA	63 (50) / RVR 200m	
ILS CAT IIIB	RVR 50m	

Note:* - 300m may be used for CAT D aeroplane conducting autoland.

1. QAT DME zero ranged to TDZ.
2. Aircraft to commence initial Racetrack at 3000 (2987).
3. Racetrack to be used only in case of communications failure.
4. HOLD at GENOT protected for sector 3 Entry only.

LOC only Approach: MAPt at QAT 1.2D

Speed	KT	80	100	120	140	160	180
Time	MIN:SEC	Timing Not Authorized					
Rate of Descent	FT/MIN	420	530	640	740	850	960

Changes: Updated dominating obstacle height.

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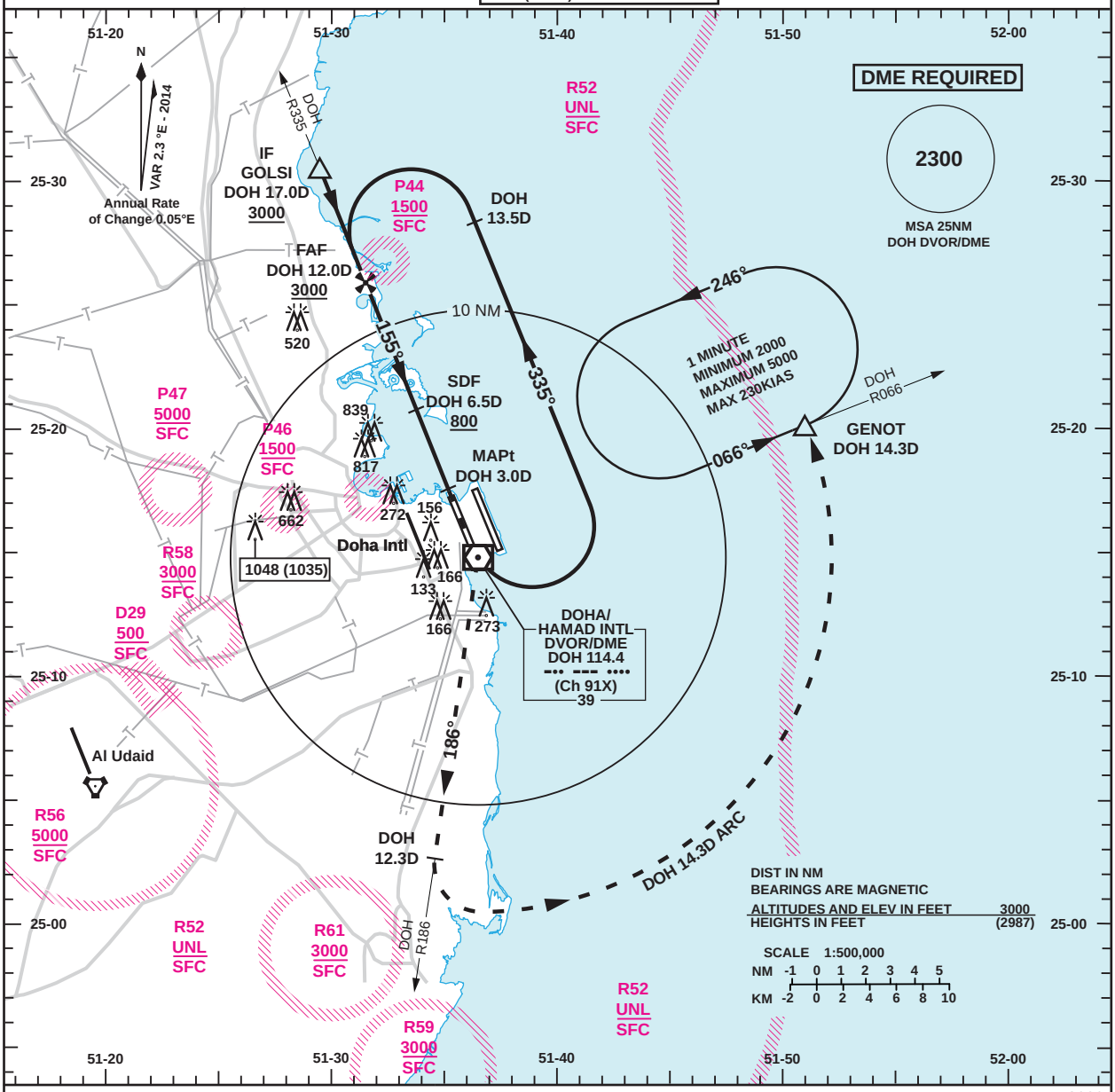
INSTRUMENT APPROACH CHART - ICAO

AD ELEV 13
HEIGHTS RELATED TO AD ELEV

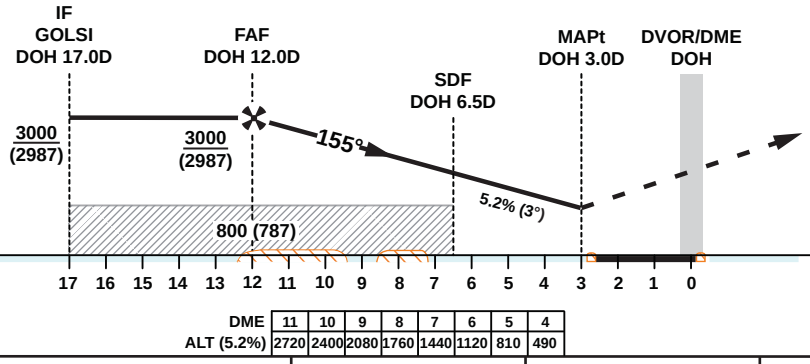
DOHA RADAR	121.10
DOHA APP	119.725 / 120.60
DIRECTOR	119.40 / 121.125
TWR (EAST)	118.525 / 118.225
TWR (WEST)	118.025 / 118.225

DOHA/Hamad Intl. (OTHH)
VOR RWY 16R
ACFT CAT A,B,C,D



TA 13000

Missed Approach
Climb straight ahead, until DOH, turn right onto DOH R186. At DOH 12.3D turn left to intercept the DOH 14.3D arc anti-clockwise to GENOT and hold. Climb and maintain 2000. Climb in the hold to 3000.
Missed Approach speed restriction 230KIAS.



DME	11	10	9	8	7	6	5	4
ALT (5.2%)	2720	2400	2080	1760	1440	1120	810	490

OCA (OCH)	A	B	C	D
Straight in Approach	VOR	410 (397)		
Circling		620 (607)	1240 (1227)	

1. Aircraft to commence initial Racetrack at 3000 (2987).
2. Racetrack to be used only in case of communications failure.
3. HOLD at GENOT protected for sector 3 Entry only.

VOR Approach: MAPt at DOH 3.0D

Speed	KT	80	100	120	140	160	180
Time	MIN:SEC	Timing Not Authorized					
Rate of Descent	FT/MIN	420	530	640	740	850	960

Changes: Updated dominating obstacle height.

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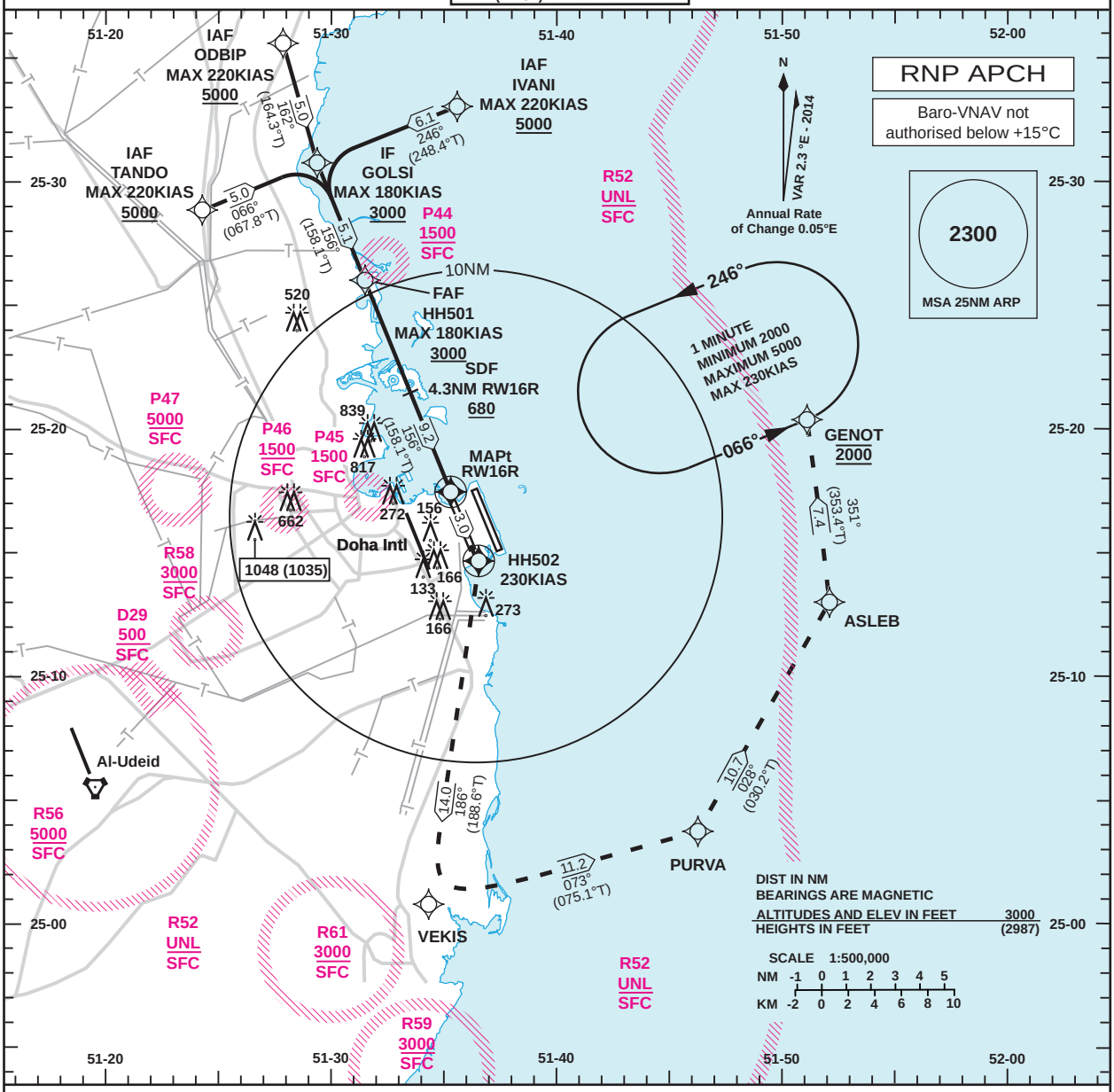
INSTRUMENT APPROACH CHART - ICAO

AD ELEV 13
HEIGHTS RELATED TO AD ELEV

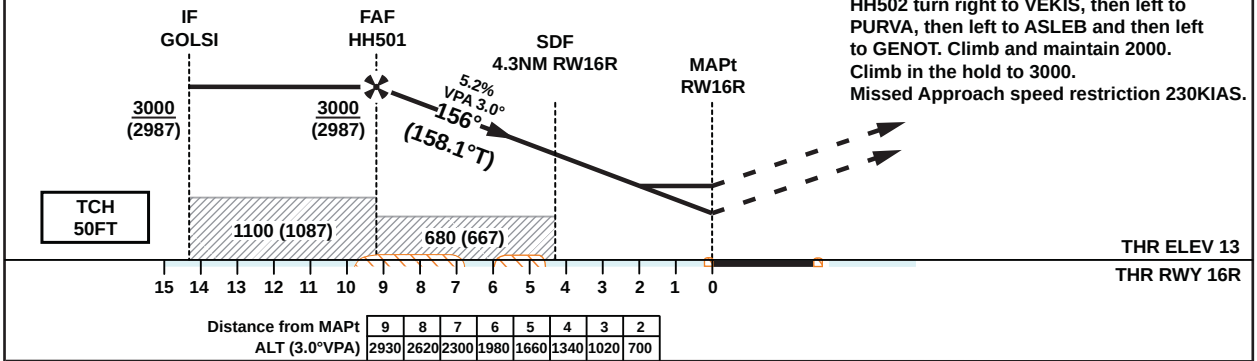
DOHA RADAR	121.10
DOHA APP	119.725 / 120.60
DIRECTOR	119.40 / 121.125
TWR (EAST)	118.525 / 118.225
TWR (WEST)	118.025 / 118.225

DOHA/Hamad Intl. (OTHH)
RNP RWY 16R
ACFT CAT A,B,C,D



TA 13000

Missed Approach
Climb straight ahead to HH502. At HH502 turn right to VEKIS, then left to PURVA, then left to ASLEB and then left to GENOT. Climb and maintain 2000.
Climb in the hold to 3000.
Missed Approach speed restriction 230KIAS.



OCA (OCH)		A	B	C	D
Straight in Approach	LNAV/VNAV	380 (367)			
	LNAV	570 (557)			
Circling		620 (607)		1240 (1227)	

1. HOLD at GENOT protected for sector 3 Entry only.

Approach: MAPt RW16R

Speed	KT	80	100	120	140	160	180
Time	MIN:SEC	Timing Not Authorized					
Rate of Descent	FT/MIN	420	530	640	740	850	960

Changes: Updated dominating obstacle height.

INSTRUMENT APPROACH CHART-ICAO

AD ELEV 13
HEIGHTS RELATED TO AD ELEV

DOHA/Hamad Intl.(OTHH)
RNP RWY 16R
ACFT CAT A,B,C,D

TABULAR DESCRIPTION

RNP RWY 16R TANDO

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	IF	TANDO	-		2.3			+5000	-220		RNP APCH
2	TF	GOLSI	-	066 (067.8)	2.3	5.0	R	+3000	-180		RNP APCH

RNP RWY 16R ODBIP

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	IF	ODBIP	-		2.3			+5000	-220		RNP APCH
2	TF	GOLSI	-	162 (164.3)	2.3	5.0		+3000	-180		RNP APCH

RNP RWY 16R IVANI

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	IF	IVANI	-		2.3			+5000	-220		RNP APCH
2	TF	GOLSI	-	246 (248.4)	2.3	6.1	L	+3000	-180		RNP APCH

RNP RWY 16R FINAL

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	IF	GOLSI	-		2.3	-		+3000	-180		RNP APCH
2	TF	HH501	-	156 (158.1)	2.3	5.1		+3000	-180		RNP APCH
3	TF	RW16R	Y	156 (158.1)	2.3	9.2			-180	-3.0/50	RNP APCH
4	CF	HH502	Y	156 (158.2)	2.3	-			-230		RNP APCH
5	TF	VEKIS	-	186 (188.6)	2.3	14.0	L		-230		RNP APCH
6	TF	PURVA	-	073 (075.1)	2.3	11.2			-230		RNP APCH
7	TF	ASLEB	-	028 (030.2)	2.3	10.7			-230		RNP APCH
8	TF	GENOT	-	351 (353.4)	2.3	7.4		@2000	-230		RNP APCH
9	HM	GENOT	Y	066 (068.3)	2.3	4.3	L	@3000	-230		RNP APCH

WAYPOINT LIST

RNP RWY 16R

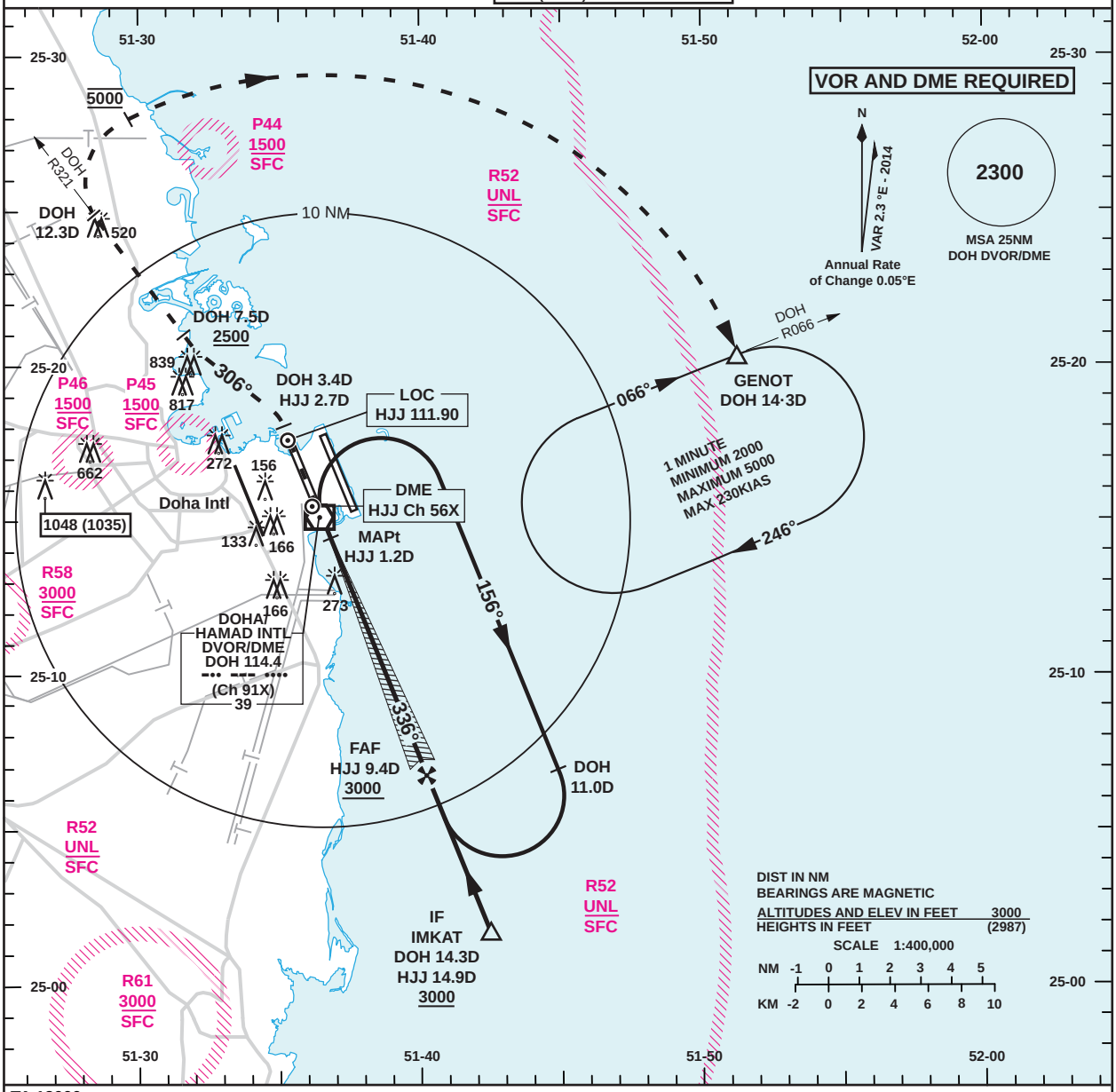
Waypoint Identifier	Coordinates
TANDO	252853.68N 0512422.68E
ODBIP	253537.40N 0512800.00E
IVANI	253302.21N 0513544.87E
GOLSI	253047.17N 0512929.86E
HH501	252602.84N 0513135.62E
RW16R	251727.52N 0513523.07E
HH502	251439.85N 0513636.94E
VEKIS	250047.55N 0513419.39E
PURVA	250341.28N 0514617.29E
ASLEB	251255.45N 0515211.43E
GENOT	252018.11N 0515114.66E

INSTRUMENT APPROACH CHART - ICAO

AD ELEV 13
HEIGHTS RELATED TO THR RWY 34L - ELEV 13

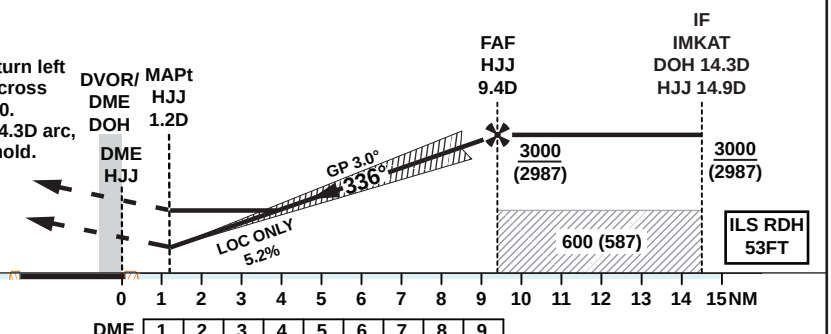
DOHA RADAR	121.10
DOHA APP	119.725 / 120.60
DIRECTOR	119.40 / 121.125
TWR (EAST)	118.525 / 118.225
TWR (WEST)	118.025 / 118.225

DOHA/Hamad Intl. (OTHH)
ILS RWY 34L
ACFT CAT A,B,C,D



TA 13000

Missed Approach
Climb straight ahead, at HJJ 2.7D (DOH 3.4D), turn left onto track 306° to intercept DOH R321 (do not cross DOH R318) crossing DOH 7.5D at or above 2500.
At DOH 12.3D turn right to intercept the DOH 14.3D arc, at 5000, proceeding clockwise to GENOT and hold.
Climb and maintain 5000.
Missed Approach speed restriction 230KIAS.



OCA (OCH)		A	B	C	D
Straight in Approach	ILS CAT I 2.5%	301 (288)	310 (297)	320 (307)	330 (317)
	ILS CAT I 4.0%	181 (168)	192 (179)	205 (192)	220 (207)
	ILS CAT II 2.5%	184 (171)	200 (187)	213 (200)	226 (213)
	ILS CAT II 4.0%	86 (73)	99 (86)	111 (98)	132 (119)
	LOC ONLY	340 (327)			
Circling		620 (607)		1240 (1227)	

DA (DH)	A	B	C	D
ILS CAT II ALS OUT	184 (171) RVR 450m	200 (187) RVR 450m	213 (200) RVR 450m	226 (213) RVR 450m
ILS CAT II 4.0% MA ALS OUT	113 (100) / RVR 300m			132(119) RVR 300m*/ RVR 350m
ILS CAT IIIA	63 (50) / RVR 200m			
ILS CAT IIIB	RVR 50m			

Note:* - 300m may be used for CAT D aeroplane conducting autoland.

1. HJJ DME zero ranged to TDZ.
2. Aircraft to commence initial racetrack at 3000 (2987).
3. Revert back to 2.5% climb gradient on passing HJJ 2.7D or DOH 3.4D.
4. Racetrack to be used only in the case of communications failure.
5. HOLD at GENOT protected for sector 3 Entry only.

LOC only Approach: MAPt at HJJ 1.2D

Speed	KT	80	100	120	140	160	180
Time	MIN:SEC	Timing Not Authorized					
Rate of Descent	FT/MIN	420	530	640	740	850	960

Changes: Updated dominating obstacle height.

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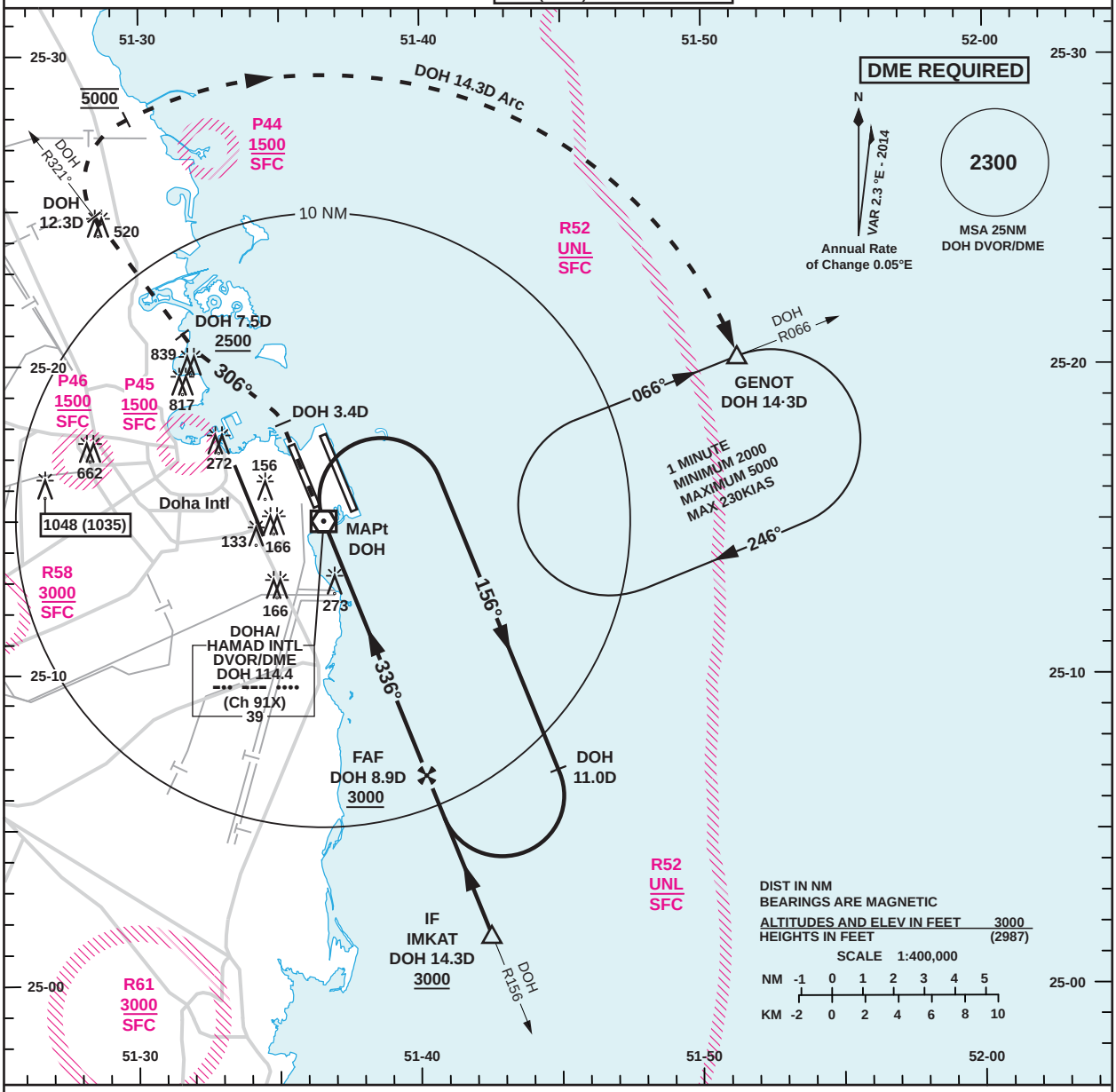
INSTRUMENT APPROACH CHART - ICAO

AD ELEV 13
HEIGHTS RELATED TO AD ELEV

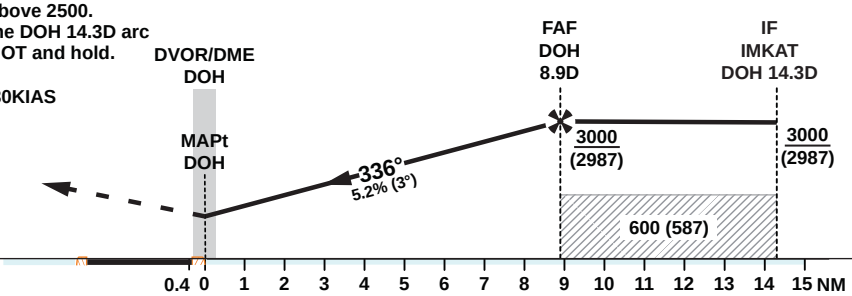
DOHA RADAR	121.10
DOHA APP	119.725 / 120.60
DIRECTOR	119.40 / 121.125
TWR (EAST)	118.525 / 118.225
TWR (WEST)	118.025 / 118.225

DOHA/Hamad Intl. (OTHH)
VOR RWY 34L
ACFT CAT A,B,C,D



TA 13000

Missed Approach
Climb straight ahead, at DOH 3.4D, turn left onto track 306° to intercept DOH R321 (do not cross DOH R318) crossing DOH 7.5D at or above 2500.
At DOH 12.3D turn right to intercept the DOH 14.3D arc at 5000, proceeding clockwise to GENOT and hold.
Climb and maintain 5000.
Missed Approach speed restriction 230KIAS



ELEV 13
DME DOH

DME	2	3	4	5	6	7	8
ALT (5.2%)	830	1150	1460	1780	2100	2420	2740

OCA (OCH)	A	B	C	D
Straight in Approach	VOR	530 (517)		
Circling		620 (607)		1240 (1227)

1. Aircraft to commence initial Racetrack at or below 3000 (2987).
2. Racetrack to be used only in case of communications failure.
3. HOLD at GENOT protected for sector 3 Entry only.

VOR Approach: MAPt DOH.

Speed	KT	80	100	120	140	160	180
Time	MIN:SEC	Timing Not Authorized					
Rate of Descent	FT/MIN	420	530	640	740	850	960

Changes: Updated dominating obstacle height.

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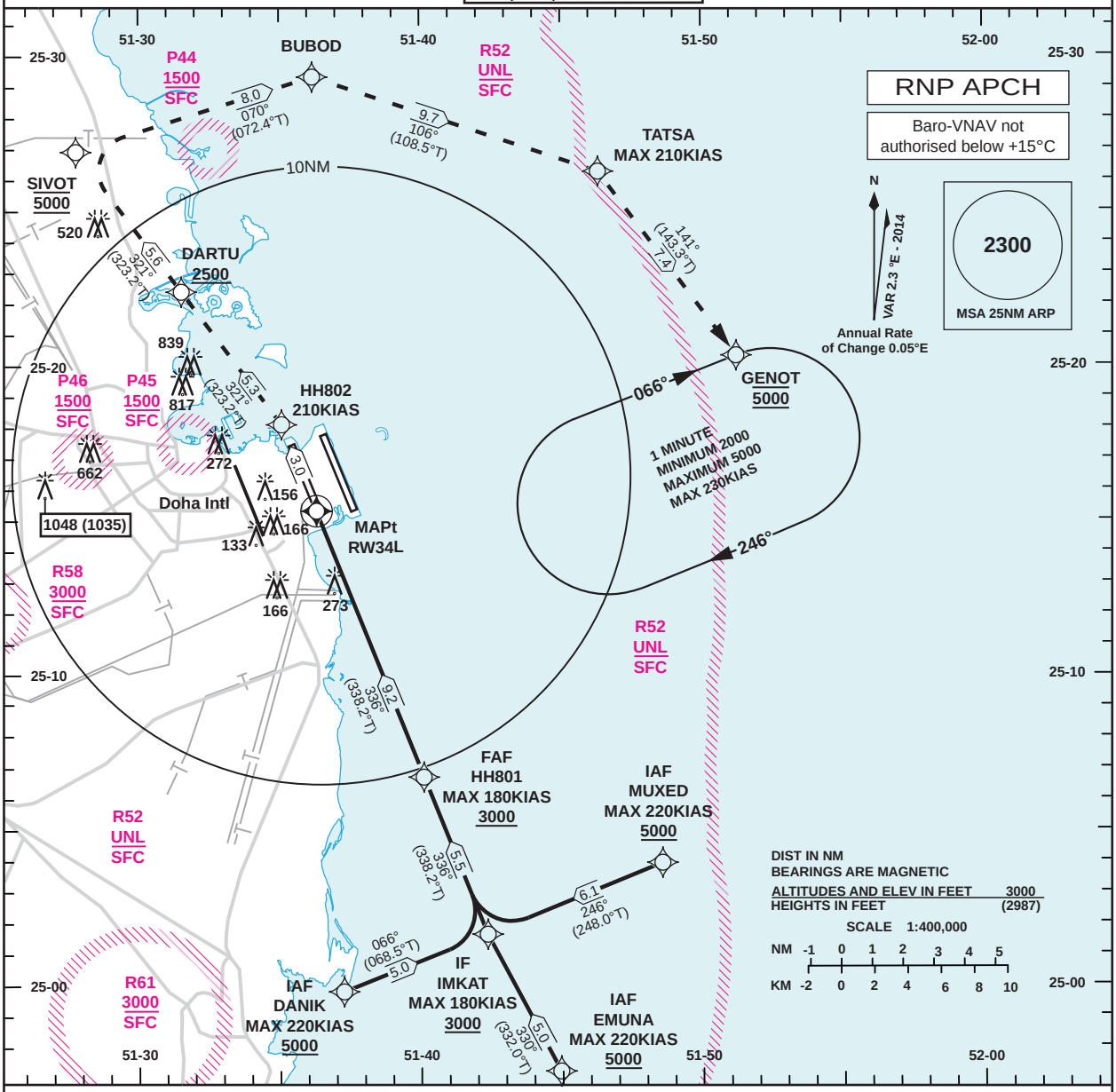
INSTRUMENT APPROACH CHART - ICAO

AD ELEV 13
HEIGHTS RELATED TO AD ELEV

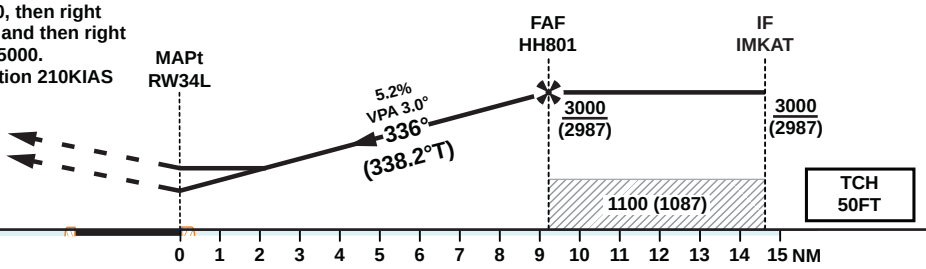
DOHA RADAR	121.10
DOHA APP	119.725 / 120.60
DIRECTOR	119.40 / 121.125
TWR (EAST)	118.525 / 118.225
TWR (WEST)	118.025 / 118.225

DOHA/Hamad Intl. (OTHH)
RNP RWY 34L
ACFT CAT A,B,C,D



TA 13000

Missed Approach
Climb straight ahead to HH802. At HH802 turn left to DARTU, at or above 2500, then straight ahead to SIVOT, at 5000, then right to BUBOD, then right to TATSA and then right to GENOT. Climb and maintain 5000.
Missed Approach speed restriction 210KIAS



THR ELEV 13
THR RWY 34L

Distances from MAPt	2	3	4	5	6	7	8	9
ALT (3.0° VPA)	700	1020	1340	1660	1980	2300	2620	2930

OCA (OCH)		A	B	C	D
Straight in Approach	LNAV/VNAV	370 (357)			
	LNAV	570 (557)			
Circling		620 (607)		1240 (1227)	

1. HOLD at GENOT protected for sector 3 Entry only.

Approach: MAPt at RW34L

Speed	KT	80	100	120	140	160	180
Time	MIN:SEC	Timing Not Authorized					
Rate of Descent	FT/MIN	420	530	640	740	850	960

Changes: Updated dominating obstacle height.

INSTRUMENT APPROACH CHART-ICAO

AD ELEV 13
HEIGHTS RELATED TO AD ELEV

DOHA/Hamad Intl.(OTHH)
RNP RWY 34L
ACFT A,B,C,D

TABULAR DESCRIPTION

RNP RWY 34L DANIK

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	IF	DANIK	-		2.3			+5000	-220		RNP APCH
2	TF	IMKAT	-	066 (068.5)	2.3	5.0	L	+3000	-180		RNP APCH

RNP RWY 34L EMUNA

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	IF	EMUNA	-		2.3			+5000	-220		RNP APCH
2	TF	IMKAT	-	330 (332.0)	2.3	5.0		+3000	-180		RNP APCH

RNP RWY 34L MUXED

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	IF	MUXED	-		2.3			+5000	-220		RNP APCH
2	TF	IMKAT	-	246 (248.0)	2.3	6.1	R	+3000	-180		RNP APCH

RNP RWY 34L FINAL

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH(ft)	Navigation Specification
1	IF	IMKAT	-		2.3	-		+3000	-180		RNP APCH
2	TF	HH801	-	336 (338.2)	2.3	5.5		+3000	-180		RNP APCH
3	TF	RW34L	Y	336 (338.2)	2.3	9.2			-180	-3.0/50	RNP APCH
4	CF	HH802	-	336 (338.2)	2.3	-			-210		RNP APCH
5	TF	DARTU	-	321 (323.2)	2.3	5.3			-210		RNP APCH
6	TF	SIVOT	-	321 (323.1)	2.3	5.6	R	@5000	-210		RNP APCH
7	TF	BUBOD	-	070 (072.4)	2.3	8.0			-210		RNP APCH
8	TF	TATSA	-	106 (108.5)	2.3	9.7			-210		RNP APCH
9	TF	GENOT	-	141 (143.3)	2.3	7.4		@5000	-230		RNP APCH
10	HM	GENOT	Y	066 (068.3)	2.3	4.3	R	@5000	-230		RNP APCH

WAYPOINT LIST

RNP RWY 34L

Waypoint Identifier	Coordinates
DANIK	245948.49N 0513712.89E
EMUNA	245712.86N 0514455.31E
MUXED	250356.10N 0514832.78E
IMKAT	250138.57N 0514220.38E
HH801	250643.86N 0514006.34E
RW34L	251519.32N 0513619.56E

RNP RWY 34L

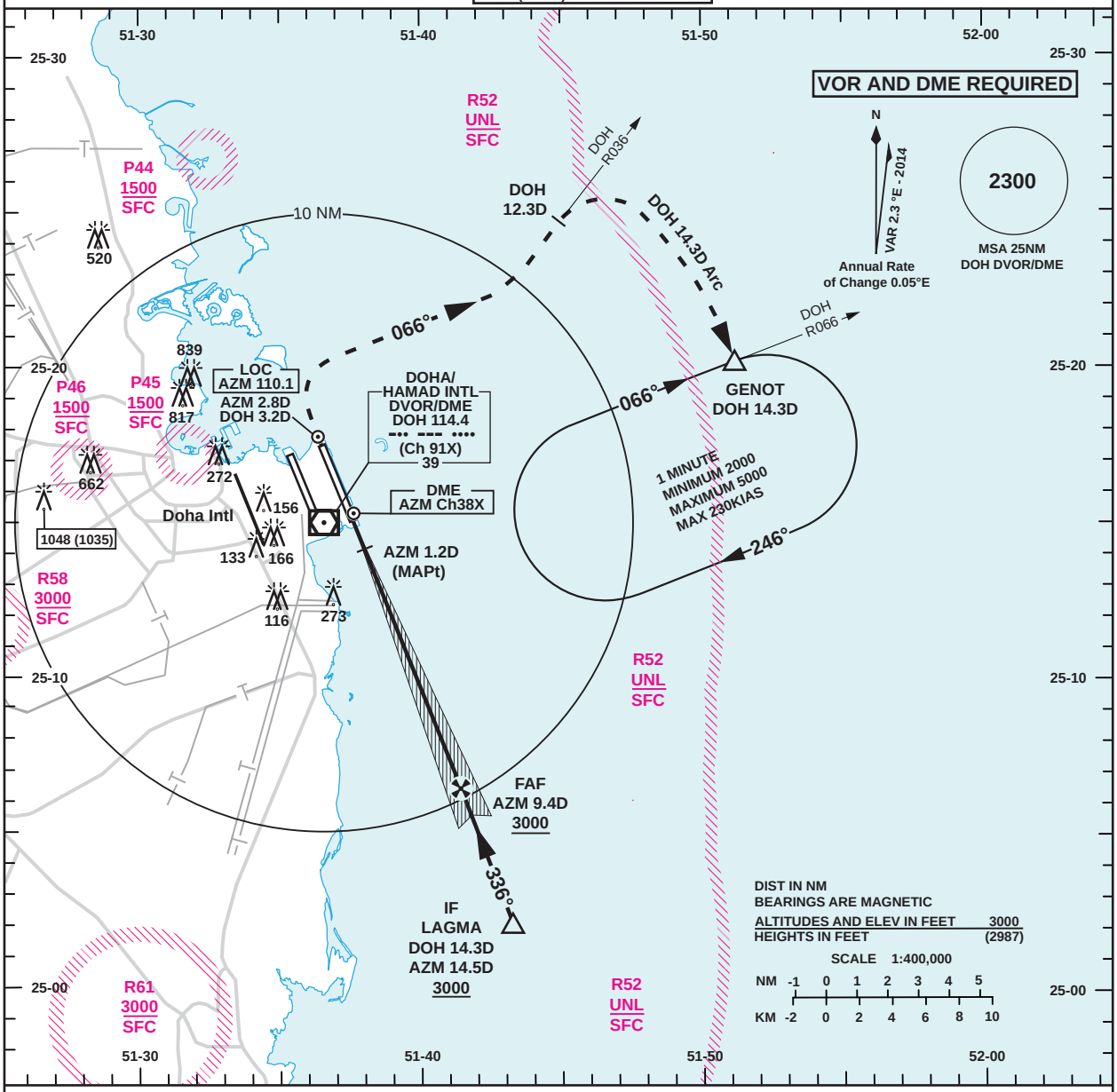
Waypoint Identifier	Coordinates
HH802	251806.98N 0513505.67E
DARTU	252224.62N 0513133.18E
SIVOT	252655.93N 0512749.08E
BUBOD	252920.40N 0513612.95E
TATSA	252615.54N 0514621.66E
GENOT	252018.11N 0515114.66E

INSTRUMENT APPROACH CHART - ICAO

AD ELEV 13
HEIGHTS RELATED TO THR RWY 34R - ELEV 13

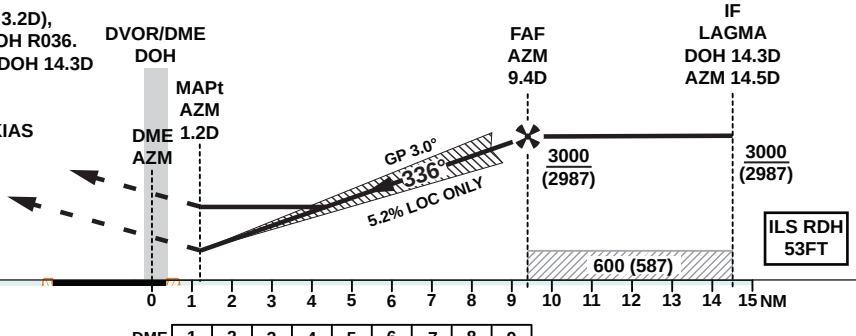
DOHA RADAR	121.10
DOHA APP	119.725 / 120.60
DIRECTOR	119.40 / 121.125
TWR (EAST)	118.525 / 118.225
TWR (WEST)	118.025 / 118.225

DOHA/Hamad Intl. (OTHH)
ILS RWY 34R
ACFT CAT A,B,C,D



TA 13000

Missed Approach
Climb straight ahead, at AZM 2.8D (DOH 3.2D), turn right onto Track 066° to intercept DOH R036.
At DOH 12.3D turn right to intercept the DOH 14.3D arc clockwise to GENOT and hold.
Climb and maintain 4000.
Missed Approach speed restriction 230KIAS



DME	1	2	3	4	5	6	7	8	9
ALT (5.2%)	340	660	980	1290	1610	1930	2250	2570	2880

OCA (OCH)		A	B	C	D
Straight in Approach	ILS CAT I	199 (186)	210 (197)	222 (209)	235 (222)
	ILS CAT II	111 (98)	124 (111)	137(124)	156 (143)
	LOC ONLY	320 (307)			
Circling		620 (607)		1240 (1227)	

DA (DH)	A	B	C	D
ILS CAT II ALS OUT	113 (100) RVR 300m	124 (111) RVR 300m	137 (124) RVR 400m	156 (143) RVR 450m
ILS CAT IIIA	63 (50) / RVR 200m			
ILS CAT IIIB	RVR 50m			

1. AZM DME zero ranged to TDZ.
2. HOLD at GENOT protected for sector 3 Entry only.

LOC only Approach: MAPt at AZM 1.2D

Speed	KT	80	100	120	140	160	180
Time	MIN:SEC	Timing Not Authorized					
Rate of Descent	FT/MIN	420	530	640	740	850	960

Changes: Updated dominating obstacle height.

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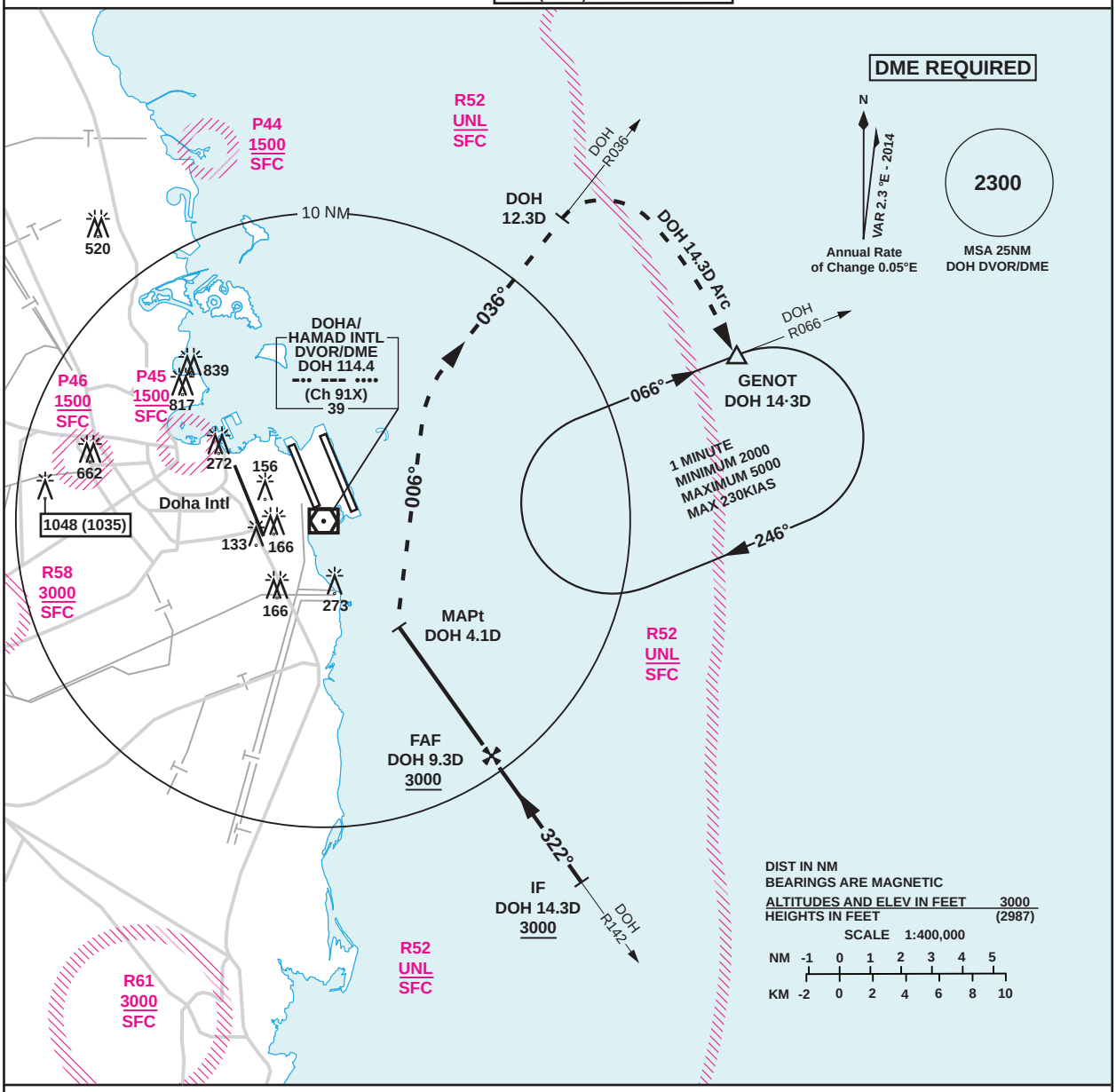
INSTRUMENT APPROACH CHART - ICAO

AD ELEV 13
HEIGHTS RELATED TO AD ELEV

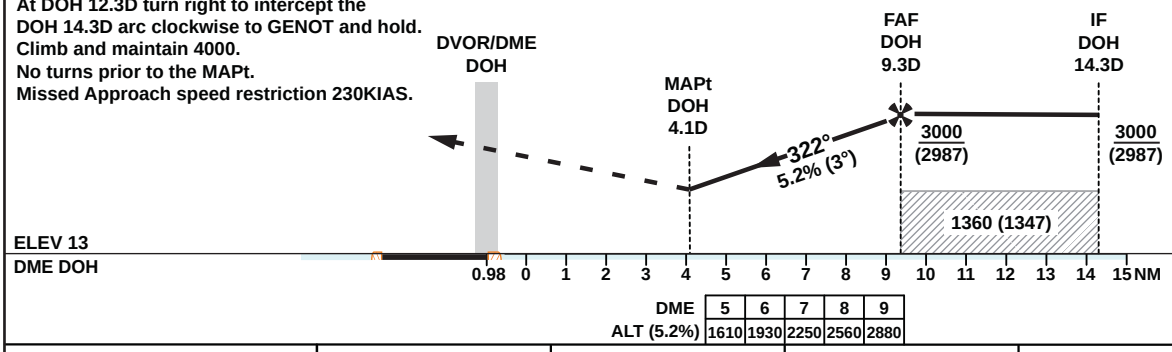
DOHA RADAR	121.10
DOHA APP	119.725 / 120.60
DIRECTOR	119.40 / 121.125
TWR (EAST)	118.525 / 118.225
TWR (WEST)	118.025 / 118.225

DOHA/Hamad Intl. (OTHH)
VOR RWY 34R
ACFT CAT A,B,C,D



TA 13000

Missed Approach
Turn right heading 006° to intercept DOH R036.
At DOH 12.3D turn right to intercept the
DOH 14.3D arc clockwise to GENOT and hold.
Climb and maintain 4000.
No turns prior to the MAPt.
Missed Approach speed restriction 230KIAS.



OCA (OCH)	A	B	C	D
Straight in Approach — VOR	1360 (1347)			
Circling	1360 (1347)			

1. CAUTION - Final Approach Track offset from runway centre line by 014°.
2. HOLD at GENOT protected for sector 3 Entry only.

DVOR/DME Approach: MAPt at DOH 4.1D

Speed	KT	80	100	120	140	160	180
Time	MIN:SEC	Timing Not Authorized					
Rate of descent	FT/MIN	420	530	640	740	850	960

Changes: Updated dominating obstacle height.

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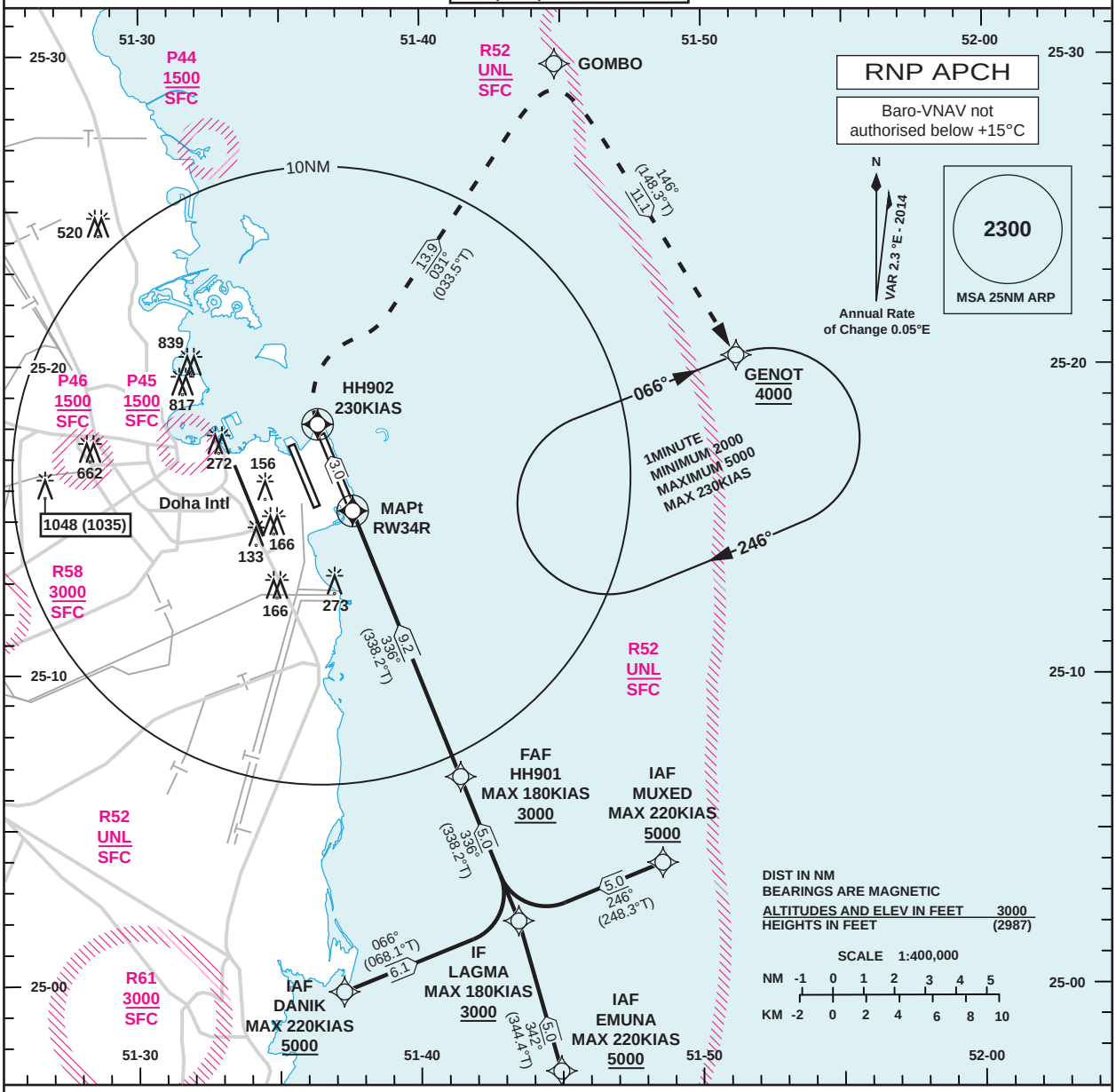
INSTRUMENT APPROACH CHART - ICAO

AD ELEV 13
HEIGHTS RELATED TO AD ELEV

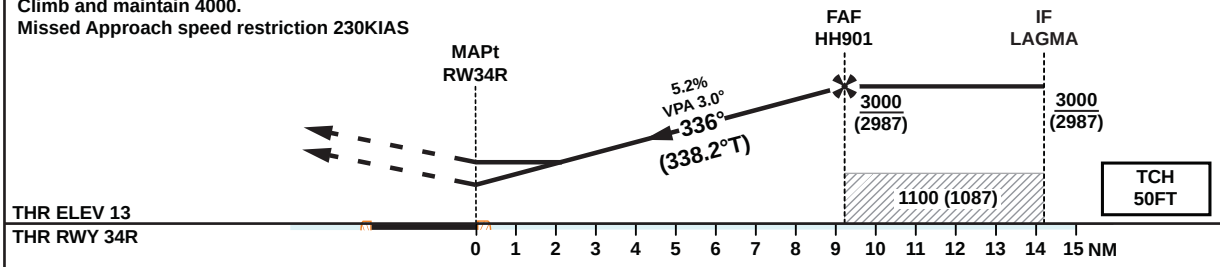
DOHA RADAR	121.10
DOHA APP	119.725 / 120.60
DIRECTOR	119.40 / 121.125
TWR (EAST)	118.525 / 118.225
TWR (WEST)	118.025 / 118.225

DOHA/Hamad Intl. (OTHH)
RNP RWY 34R
ACFT CAT A,B,C,D



TA 13000

Missed Approach
Climb straight ahead to HH902. At HH902 turn right to GOMBO then right to GENOT.
Climb and maintain 4000.
Missed Approach speed restriction 230KIAS



Distances from MAPt	2	3	4	5	6	7	8	9
ALT (3.0° VPA)	700	1020	1340	1660	1980	2300	2620	2930

OCA (OCH)		A	B	C	D
Straight in Approach	LNAV/VNAV	310 (297)			
	LNAV	410 (397)			
Circling		620 (607)		1240 (1227)	

1. HOLD at GENOT protected for sector 3 Entry only.

Approach: MAPt at RW34R

Speed	KT	80	100	120	140	160	180
Time	MIN:SEC	Timing Not Authorized					
Rate of Descent	FT/MIN	420	530	640	740	850	960

Changes: Updated dominating obstacle height.

INSTRUMENT APPROACH CHART-ICAO

AD ELEV 13
HEIGHTS RELATED TO AD ELEV

DOHA/Hamad Intl.(OTHH)
RNP RWY 34R
ACFT A,B,C,D

TABULAR DESCRIPTION

RNP RWY 34R DANIK

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH (ft)	Navigation Specification
1	IF	DANIK	-		2.3	-		+5000	-220		RNP APCH
2	TF	LAGMA	-	066 (068.1)	2.3	6.1	L	+3000	-180		RNP APCH

RNP RWY 34R EMUNA

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH (ft)	Navigation Specification
1	IF	EMUNA	-		2.3	-		+5000	-220		RNP APCH
2	TF	LAGMA	-	342 (344.4)	2.3	5.0		+3000	-180		RNP APCH

RNP RWY 34R MUXED

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH (ft)	Navigation Specification
1	IF	MUXED	-		2.3			+5000	-220		RNP APCH
2	TF	LAGMA	-	246 (248.3)	2.3	5.0	R	+3000	-180		RNP APCH

RNP RWY 34R FINAL

Serial Num	Path Descriptor	Waypoint Identifier	Fly-over	Course °M(°T)	Magnetic Variation(°)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	VPA(°)/ TCH (ft)	Navigation Specification
1	IF	LAGMA	-		2.3	-		+3000	-180		RNP APCH
2	TF	HH901	-	336 (338.2)	2.3	5.0		+3000	-180		RNP APCH
3	TF	RW34R	Y	336 (338.2)	2.3	9.2		-	-180	-3.0/50	RNP APCH
4	CF	HH902	Y	336 (338.2)	2.3	-		-	-230		RNP APCH
5	TF	GOMBO	-	031 (033.5)	2.3	13.9	R	-	-230		RNP APCH
6	TF	GENOT	-	146 (148.3)	2.3	11.1		@4000	-230		RNP APCH
7	HM	GENOT	Y	066 (068.3)	2.3	4.3	R	@4000	-230		RNP APCH

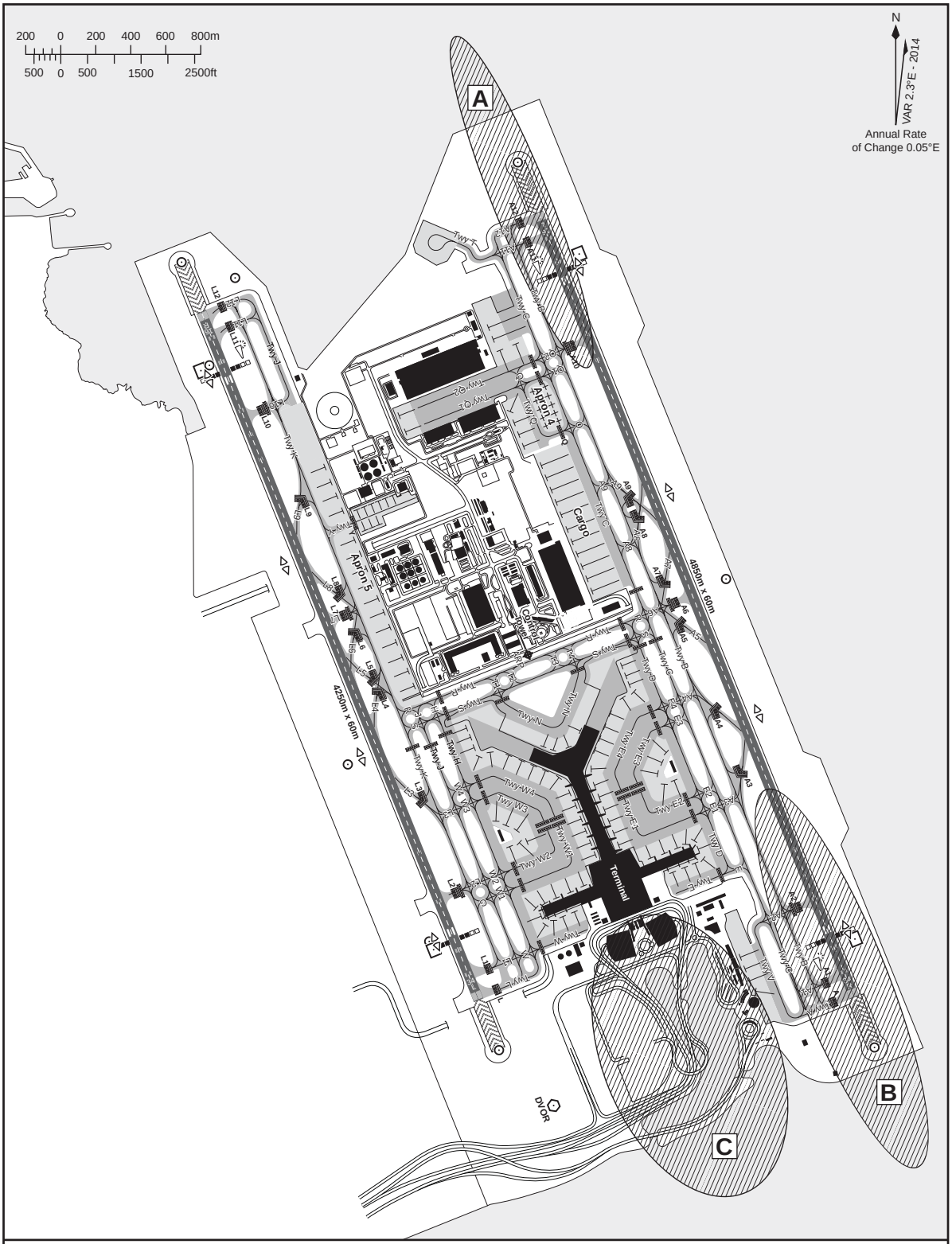
WAYPOINT LIST

RNP RWY 34R

Waypoint Identifier	Coordinates
DANIK	245948.49N 0513712.89E
EMUNA	245712.86N 0514455.31E
MUXED	250356.10N 0514832.78E
LAGMA	250204.62N 0514325.78E
HH901	250644.17N 0514123.09E
RW34R	251519.65N 0513736.41E
HH902	251807.32N 0513622.55E
GOMBO	252944.22N 0514450.16E
GENOT	252018.11N 0515114.66E

BIRD CONCENTRATIONS

HAMAD Intl.
OTHH



Areas with concentrations of birds

A Elevated Runway Approach Lights + part of the runway 16L

B Elevated Runway Approach Lights + part of the runway 34R
(the concentration of birds in area B is more important than in area A)

C Emiri Terminal +Terminal lagoon + part of the sea

Changes: Added portion of TWY J between TWY L10 & L12.

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