AD 2 AERODROMES

OTBD — DOHA INTL

OTBD AD 2.1 AERODROME LOCATION INDICATOR AND NAME

OTBD - DOHA INTL

OTBD AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA

1	*ARP coordinates and site at AD*	251540N 0513354E Mid - point of RWY, on CL
2	*Direction and distance from (city)*	3.5 NM SE from Doha City Centre
3	*Elevation / Reference temperature*	37 FT / 41.2°C
4	*Geoid undulation at AD ELEV PSN*	-98 FT
5	*MAG VAR / Annual change*	2.6°E 2025 / 0.003°W
6	*Aerodrome operator*	QATAR COMPANY FOR AIRPORTS OPERATION AND MANAGEMENT - MATAR
	Address	Chief Operating Officer Hamad International Airport P.O. Box 24730 DOHA STATE OF QATAR
	Telephone	+974 4010 7715, +974 4010 3999
	Telefax	+974 4010 1010
	AFS	SITA: DOHAOXH
	E-mail	coohiaoffice@hamadairport.com.qa
	Website	www.dohahamadairport.com
7	*Type of traffic permitted (IFR/VFR)*	IFR/VFR
8	*Remarks*	Airport Operations Control Centre Duty Manager (AOCC DM) 24/7: Tel: +974 4010 3999

OTBD 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*	On prior notification to fuel provider. See “GEN 1.1” item 10
9	*Handling*	On prior notification to ground handler. See “GEN 1.1” item 9
10	*Security*	H24
11	*De-icing*	Not required due to local climate
12	*Remarks*	NIL

OTBD AD 2.4 HANDLING SERVICES AND FACILITIES

1	*Cargo-handling facilities*	Available. (Qatar Aviation Services)

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2	*Fuel/oil types*	Fuel: Jet A1 AVGAS 100 - available at Qatar Aeronautical Academy (QAA) Oil: NIL
3	*Fuelling facilities / capacity*	On prior notification. See Item 10 of GEN 1.1
4	*De-icing facilities*	Not required due to local climate
5	*Hangar space for visiting aircraft*	NIL
6	*Repair facilities for visiting aircraft*	Contact QAS. See “GEN 1.1” item 9
7	*Remarks*	For handling facilities / services contact QAS. See “GEN 1.1” item 9

OTBD AD 2.5 PASSENGER FACILITIES

1	*Hotels*	Hotel accommodation available in Doha City
2	*Restaurants*	NIL
3	*Transportation*	NIL
4	*Medical Facilities*	Full medical facilities available in Doha
5	*Bank and Post Office*	NIL
6	*Tourist Office*	NIL
7	*Remarks*	NIL

OTBD AD 2.6 RESCUE AND FIRE FIGHTING SERVICES

1	*AD category for fire fighting*	CAT 9 with CAT 10 available on request. Notification time to upgrade to CAT 10 will require a period of APRX 45 MIN.
2	*Rescue equipment*	As per ICAO Annex 14 and QCAR - 006 - Aerodrome Design, Operations and Licensing
3	*Capability for removal of disabled aircraft*	All aircraft types, Contact +974 4018 4500 / +974 4018 4977
4	*Remarks*	Communication with aircraft on ground available on 121.8 MHz.

OTBD 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.

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

1	*Designation, surface and strength of aprons*	EASTERN APRON(1): concrete, PCR 1471/R/C/W/T EASTERN APRON (2) (Stands E11-E24): concrete, PCR 1471/R/C/W/T EASTERN APRON (2) (Stands C1-C9 and CE1-CE4): asphalt, PCR 531/F/A/W/T EASTERN APRON(3): asphalt, PCR 719/F/A/W/T EASTERN APRON(4): concrete, PCR 1471/R/C/W/T EASTERN APRON EXTENSION: concrete, PCR 365/R/A/X/U MAIN APRON: concrete, PCR 1471/R/C/W/T RIZON APRON: asphalt, PCR 317/F/B/X/U VVIP APRON: asphalt, PCR 719/F/A/W/T WESTERN APRON: asphalt, PCR 500/F/C/W/T

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2	*Designation, width, surface and strength of taxiways*	TWY A between TWY D and 84m from RWY Edge: 34 M, concrete, PCR 880/R/A/W/T TWY A between 84m from RWY Edge and RWY Edge: 34 M, asphalt, PCR 1280/F/A/W/T TWY B between TWY D and 84m from RWY Edge: 34 M, concrete, PCR 880/R/A/W/T TWY B between 84m from RWY Edge and RWY Edge: 34 M, asphalt, PCR 1280/F/A/W/T TWY B1 between TWY D1 and 85m from RWY Edge: 29 M, concrete, PCR 880/R/A/W/T TWY B1 between 85m from RWY Edge and RWY Edge: 29 M, asphalt, PCR 1280/F/A/W/T TWY C: 23 M, asphalt, PCR 1280/F/A/W/T TWY C1: 29 M, asphalt, PCR 1280/F/A/W/T TWY D: 23 M, asphalt, PCR 719/F/A/W/T TWY D1: 29 M, asphalt, PCR 719/F/A/W/T TWY D2: 23 M, asphalt, PCR 407/F/C/W/T TWY D2C: 18 M, asphalt, PCR 460/F/B/W/U TWY D2 EAST: 23 M, asphalt, PCR 719/F/A/W/T TWY E1 between TWY D and 67m from RWY Edge: 29 M, concrete, PCR 880/R/A/W/T TWY E1 between 67m from RWY Edge and RWY Edge: 29 M, asphalt, PCR 1280/F/A/W/T TWY E2 between TWY D and 83m from RWY Edge: 29 M, concrete, PCR 880/R/A/W/T TWY E2 between 83m from RWY Edge and RWY Edge: 29 M, asphalt, PCR 1280/F/A/W/T TWY F between TWY D and 83m from RWY Edge: 26 M, concrete, PCR 880/R/A/W/T TWY F between 83m from RWY Edge and RWY Edge: 26 M, asphalt, PCR 1280/F/A/W/T TWY G between TWY D and 106m from RWY Edge: 29 M, concrete, PCR 880/R/A/W/T TWY G between 106m from RWY Edge and RWY Edge: 29 M, asphalt, PCR 1280/F/A/W/T TWY H: 23 M, asphalt, PCR 719/F/A/X/U TWY J: 23 M, asphalt, PCR 719/F/A/X/U TWY K: 23 M, asphalt, PCR 719/F/A/X/U TWY L: 23 M, asphalt, PCR 1280/F/A/W/T TWY M between 135m RWY Edge and 50m from RWY Edge: 23 M, concrete, PCR 880/R/A/W/T TWY M between 50m RWY Edge and RWY Edge: 23 M, asphalt, PCR 1280/F/A/W/T TWY N: 23 M, concrete, PCR 880/R/A/W/T TWY N1 between TWY Z and 106m from RWY CL: 30 M, concrete, PCR 880/R/A/X/T TWY N1 between 106m from RWY CL and RWY Edge: 30 M, asphalt, PCR 1280/F/B/W/T TWY P between TWY Z and RWY Edge: 33 M, asphalt, PCR 1280/F/A/W/T TWY P between TWY Z and TWY D2 East: 33 M, asphalt, PCR 441/F/D/W/T TWY P between TWY D2 East up to end of TWY P: 23 M, asphalt, PCR 441/F/D/W/T TWY Q: 12 M, asphalt, PCR 133/F/D/W/T TWY Q1: 7.9 M, asphalt, PCR 138/F/B/X/T TWY R: 33 M, asphalt, PCR 317/F/B/X/U TWY S: 18 M, asphalt, PCR 317/F/B/X/U TWY T between TWY D and 119m from TWY D CL: 23 M, concrete, PCR 606/R/C/W/T TWY T between 119m from TWY D CL and TWY Y: 23 M, asphalt, PCR 317/F/B/X/U TWY U: 18 M, asphalt, PCR 317/F/B/X/U TWY Y between 127m from TWY D CL to TWY T: 23 M, asphalt, PCR 317/F/B/U TWY Y between TWY D and 127m from TWY D CL: 23 M, concrete, PCR 606/R/C/W/T TWY Z: 23 M, asphalt, PCR 985/F/C/W/T
3	*Altimeter checkpoint location and elevation*	VVIP APRON – 36 FT MAIN APRON – 23 FT WESTERN APRON – 30 FT EASTERN APRON (1) – 29 FT EASTERN APRON (2) – 21 FT EASTERN APRON (3) – 18 FT EASTERN APRON (4) – 16 FT
4	*VOR checkpoints*	NIL
5	*INS checkpoints*	See APDC.01 AIRCRAFT PARKING / DOCKING CHART - ICAO
6	*Remarks*	ACFT Stands E1 to E5 and E12 to E17 (including MARS Stands) restricted to daytime operations only.

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OTBD 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*	Aircraft stand ID signs and Visual Docking Guidance System (VDGS) are not available in MARS stands, stands E1 to E5, E12, C1 to C9, CE1 to CE4, G1, G2, G2P, G3 and G4. Parking with Follow Me vehicle only. Aircraft stand ID signs are available at stands A1 to A6, A9 to A18, W6 and W7, E11, E13 to E17, E18 to E24, E25 to E37 and Visual Docking Guidance System (VDGS) are available at stands A1 to A6, A9 to A18, W6 and W7 Taxiing guidance signs at all intersections with TWY and RWY at all holding positions. For information on Visual docking guidance system (VDGS) refer to OTBD AD 2.23
2	*RWY and TWY markings and lights*	RWY: designation, THR, displaced landing THR, TDZ, CL, edge, RWY end as appropriately marked. TWY: Edge, CL, holding positions at all TWY / RWY intersections marked. See OTBD AD 2.14 and OTBD AD 2.15 for additional information on lighting.
3	*Stop bars and RWY guard lights*	Stop bars at all RWY entrances and where appropriate. RWY guard lights provided at all RWY holding positions where appropriate.
4	Other RWY protection measures	NIL.
5	*Remarks*	TWY D2C: Taxiing to/from stands will be via follow-me vehicle.

OTBD 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 item 6 Digital data sets.

2 OBSTACLES IN AREA 3

2.1 Obstacles in Area 3 are available in electronic format. Refer to GEN 3.1 item 6 Digital data sets.

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OTBD AD 2.11 METEOROLOGICAL INFORMATION PROVIDED

1	*Associated MET Office*	DOHA MET OFFICE
2	*Hours of service*	H24
	MET Office outside hours	NIL
3	*Office responsible for TAF preparation*	DOHA MET OFFICE
	Periods of validity	24 HR
4	*Type forecast*	TREND
	Interval of issuance	½ HR
5	*Briefing/consultation provided*	Personal consultation, partial self briefing, telephone to 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 (MID), TB (Gulf sector winds)
8	*Supplementary equipment available for providing information*	Telefax
9	*ATS units provided with information*	DOHA TOWER, DOHA APPROACH
10	*Additional information (limitation of service, etc.)*	NIL

OTBD AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS

Designations RWY NR	***TRUE BRG***	***Dimensions of RWY (M)***	***Strength (PCR) 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**
15	158.15°	4570 x 46	First 197 M 880/R/A/W/T concrete Last 4 373 M 1280/F/A/W/T asphalt	251626.13N 0513333.92E 251430.88N 0513424.73E -98.23 FT	THR 34.70 FT TDZ 34.70 FT
33	338.16°	4570 x 46	First 4 373 M 1280/F/A/W/T asphalt Last 197 M 880/R/A/W/T concrete	251430.88N 0513424.73E 251648.74N 0513323.95E -98.43 FT	THR 26.57 FT TDZ 26.85 FT

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Designations RWY NR	Slope of RWY- SWY		SWY dimensions (M)	CWY dimensions (M)	Strip dimensions (M)	RESA dimensions (M)
	RWY	SWY				
1	7		8	9	10	11
15	0.11% first 1 524 M then 0.62% next 762 M then 0.00% next 914 M then 0.48% next 427 M then 0.15% next 945 M	NIL	NIL	274 x 150	4690 x 300	240 x 90
33	0.15% first 945 M then 0.48% next 427 M then 0.00% next 914 M then 0.62% next 762 M then 0.11% next 1 524 M	NIL	NIL	183 x 150	4690 x 300	240 x 90

Designations RWY NR	Location and Description of Arresting System	OFZ	Remarks
1	12	13	14
15	NIL	Yes	Non load bearing shoulders 15M. RWY Turn pad (Start of RWY 15) 880/R/A/W/T concrete
33	NIL	Yes	Non load bearing shoulders 15 M. RWY Turn pad (End of RWY 33) 880/R/A/W/T concrete

OTBD AD 2.13 DECLARED DISTANCES

RWY Designator	From	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	Remarks
1	2	3	4	5	6	7
15	START	4570	4844	4570	3820	Threshold Displacement 750 M
	TWY A	3821	4095	3821	Not Applicable	NIL
	TWY B	3058	3332	3058	Not Applicable	NIL
	TWY B1	3058	3332	3058	Not Applicable	NIL
	TWY C1	2516	2790	2516	Not Applicable	NIL
	TWY C	2490	2764	2490	Not Applicable	NIL
	TWY P	2451	2725	2451	Not Applicable	NIL
	TWY N1	1566	1840	1566	Not Applicable	NIL
	TWY E1	1144	1418	1144	Not Applicable	NIL
	TWY N	1144	1418	1144	Not Applicable	NIL
	TWY E2	706	980	706	Not Applicable	NIL
	TWY M	706	980	706	Not Applicable	NIL

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RWY Designator	From	TORA (M)	TODA (M)	ASDA (M)	LDA (M)	Remarks
1	2	3	4	5	6	7
33	THR	4570	4753	4570	4570	NIL
	TWY F	4126	4309	4126	Not Applicable	NIL
	TWY L	4126	4309	4126	Not Applicable	NIL
	TWY K	4024	4207	4024	Not Applicable	NIL
	TWY E2	3890	4073	3890	Not Applicable	NIL
	TWY M	3890	4073	3890	Not Applicable	NIL
	TWY E1	3450	3633	3450	Not Applicable	NIL
	TWY N	3450	3633	3450	Not Applicable	NIL
	TWY N1	3034	3217	3034	Not Applicable	NIL
	TWY C	2145	2328	2145	Not Applicable	NIL
	TWY P	2145	2328	2145	Not Applicable	NIL
	TWY B	1542	1725	1542	Not Applicable	NIL
	TWY B1	1542	1725	1542	Not Applicable	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*						

OTBD 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
15	ICAO CAT I precision approach lighting system 900 M LIH	GREEN supplemented by WBAR	PAPI 3.5° (69.6 FT)	NIL	Length: 4 570 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
33	ICAO CAT II and III precision approach lighting system 900 M LIH	GREEN supplemented by WBAR	PAPI 3° (65.1 FT)	900 M	Length: 4 570 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
15	Length: 4 570 M Spacing: 60 M Colour: fm 0 M to first 750 M Red 750 M to last 600 M White, last 600 M Amber INTST: LIH	RED, NIL	NIL	On full length departures, the first 750 M of edge lights are Red due to DTHR

RWY Designator	RWY edge LGT LEN, spacing, colour, INTST	RWY End LGT colour, WBAR	SWY LGT LEN, colour	Remarks
1	7	8	9	10
33	Length: 4 570 M Spacing: 60 M Colour: fm 0 M to last 600 M White, last 600 M Amber INTST: LIH	RED, NIL	NIL	NIL

OTBD AD 2.15 OTHER LIGHTING AND 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	Located at 251532.34N 0513352.83E (APRX 124 M West of RCL and 58 M East of TWY D CL, ABM mid RWY turning pad); Lighted.
3	*TWY edge and centre line lighting*	TWY CL lights are green, except when within ILS sensitive area, where TWY CL lights are alternate green/amber. TWY CL lights not available on TWY H, TWY J, TWY K, TWY L, TWY M, TWY Q1, TWY R and TWY S. Blue TWY edge lights are provided on all TWYs except TWY Q and TWY Q1. TWY edge markers are available on TWY Q and TWY Q1. Holding positions at all TWYs to RWY intersections are equipped with stop bars.
4	*Secondary power supply/switch-over time*	Secondary power for CAT I / II / III Ops - on UPS immediate power and with battery backup for up to 30 minutes. Backup generator also available. Other lightings on backup generator. Switch-over time: Switch over time within 15 seconds. Stand - by generator on test 0530 - 0630 every WED.
5	*Remarks*	NIL

OTBD AD 2.16 HELICOPTER LANDING AREA

1	*Coordinates TLOF or THR of FATO* *Geoid undulation*	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*	As directed by ATC.

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OTBD AD 2.17 ATS AIRSPACE

1	*Designation and lateral limits*	DOHA CTR Lateral limits are available in the AIP Data set, Feature ID: 8d22fe52-2ea1-4e50-9d95-28990073b667 Standardised presentation of the airspace lateral limits: 253407N 0513740E - 253023N 0513919E then clockwise 20NM arc centred on 251020N 0513838E to 252814N 0514835E - 251255N 0515519E then clockwise 20NM arc centred on 251939N 0513432E to 250143N 0512438E - 245951N 0511930E - 250205N 0511831E then clockwise 5NM arc centred on 250706N 0511846E to 251032N 0511446E - 251510N 0511243E - 251703N 0511751E then clockwise 20NM arc centred on 251020N 0513838E to 252425N 0512254E - 252808N 0512115E then clockwise 20NM arc centred on 251404N 0513659E to 253407N 0513740E.
2	*Vertical limits*	SFC to 2500 FT
3	*Airspace classification*	Class D
4	*ATS unit call sign* *Language(s)*	DOHA TOWER EN
5	*Transition altitude*	13000 FT
6	*Hour of applicability*	H24
7	*Remarks*	NIL

OTBD AD 2.18 ATS COMMUNICATION FACILITIES

Service designation	*Call sign*	*Channel(s)*	*SATVOICE number(s)*	*Logon address*	*Hours of operation*	*Remarks*
1	2	3	4	5	6	7
APP	DOHA APPROACH EAST	124.775 MHz As directed by ATC	N/A	N/A	H24	*Primary*
		120.600 MHz As directed by ATC	N/A	N/A		*Secondary*
	DOHA APPROACH WEST	119.725 MHz	N/A	N/A	H24	*Primary*
		125.125 MHz	N/A	N/A		*Secondary*
	DOHA DIRECTOR	124.050 MHz As directed by ATC	N/A	N/A	H24	*Primary*
		121.775 MHz As directed by ATC	N/A	N/A		*Secondary*
	DOHA DIRECTOR EAST	119.400 MHz	N/A	N/A	H24	*Primary*
		121.125 MHz	N/A	N/A		*Secondary*
	DOHA DIRECTOR WEST	123.875 MHz As directed by ATC	N/A	N/A	H24	*Primary*
		119.225 MHz As directed by ATC	N/A	N/A		*Secondary*
	DOHA RADAR NORTH	121.100 MHz	N/A	N/A	H24	*Primary*
		121.625 MHz	N/A	N/A		*Secondary*
	DOHA RADAR SOUTH	120.675 MHz As directed by ATC	N/A	N/A	H24	*Primary*
		119.150 MHz As directed by ATC	N/A	N/A		*Secondary*
	-	121.500 MHz	N/A	N/A	H24	*Emergency*
		243.000 MHz	N/A	N/A		*Emergency*
TWR	DOHA TOWER	118.900 MHz	N/A	N/A	H24	*Primary*
		119.025 MHz	N/A	N/A		*Secondary*
	-	121.500 MHz	N/A	N/A	H24	*Emergency*
		243.000 MHz	N/A	N/A		*Emergency*
GMC Vehicle	DOHA GROUND	121.800 MHz	N/A	N/A	H24	*Vehicles only*
GMC	DOHA GROUND	121.925 MHz	N/A	N/A	Daily 0400-2200 during peak traffic conditions or may be changed according to ATC requirements	*All TFC DEP OTBD for pushback, start-up & taxi clearance.*
D-ATIS	DOHA TERMINAL INFORMATION	126.450 MHz	N/A	DOHAAYA	H24	*Data Link Service available. ATIS broadcast can also be obtained via Hotline: +974 4465 6213*
DCL	N/A	N/A	N/A	DOHCAYA	H24	*Data Link Service for departure clearance*
Note: All departing aircraft when airborne, contact "Doha Approach West" on 119.725 MHz unless otherwise instructed.						

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OTBD AD 2.19 RADIO NAVIGATION AND LANDING AIDS

Type of aids, MAG VAR, Type of supported OPS for ILS/MLS/ GLS, basic GNSS and SBAS, Classification for ILS, Facility Classification and approach facility designation(s) for GBAS, VOR/ILS/MLS station declination	*IDENT*	*Frequency, Channel number, Service provider*	*Hours of operation*	*Position of transmitting antenna coordinates*	*ELEV of DME transmitting antenna, GBAS reference point ELEV/ ellipsoid HGT, SBAS LTP/FTP ellipsoid HGT*	*Service volume radius from the GBAS reference point*	*Remarks*
1	2	3	4	5	6	7	8
DVOR/DME (2.6°E 2025)	DIA	112.400 MHZ CH 71X	H24	251402.2N 0513437.4E	0 FT	NIL	NIL
ILS 15 (CAT I) (2.6°E 2025) I/C/2							
LOC 15	AMD	108.500 MHZ	H24	251419.2N 0513429.9E		NIL	LOC RWY 15 not usable beyond 17 DME from 'AMD'
GP 15		329.900 MHZ	H24	251617.9N 0513342.1E		NIL	GP Angle 3.5° RDH 60 FT
DME 15	AMD	CH 22X	H24	251617.9N 0513342.2E	90 FT	NIL	Co-located with GP, DIST zero TDZ
ILS 33 (CAT III) (2.6°E 2025) III/E/4							
LOC 33	IBD	109.500 MHZ	H24	251657.7N 0513320.0E		NIL	336° MAG, 2.63 NM fm THR RWY 33, ELEV 40.39 FT
GP 33		332.600 MHZ	H24	251442.2N 0513424.4E		NIL	GP Angle 3˚ RDH 52 FT
DME 33	IBD	CH 32X	H24	251442.2N 0513424.5E	50 FT	NIL	Co-located with GP, DIST zero TDZ

OTBD AD 2.20 LOCAL AERODROME REGULATIONS

1 AIRPORT REGULATIONS

1.1 Flight over Doha City is prohibited below 2 000 FT unless authorized by ATC.

1.2 Flight over QEAF Airbase below 1 500 FT prohibited at all times except for take offs and landings.

1.3 Voluntary reporting of any defect, fault, safety hazard, safety accident, serious incidents and occurrence should be reported to the aerodrome operator on the following email: safetyreports@hamadairport.com.qa

2 RUNWAY UTILISATION AND LIMITATIONS

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

2.1.1 DEPARTURES - When given clearance to enter the runway and take off, the manoeuvre shall commence without delay. If pre-take off checks have not been completed, ATC must be advised, and the delay is taken up at the holding point.

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2.1.2 ARRIVALS - Arriving flights shall, on completion of the landing roll, be excepted to vacate expeditiously at the first available taxiway exit, or as instructed by ATC. The aircraft should not be slowed significantly below normal taxi speed, or stopped, on the taxiway exit unless approved by ATC.

3 TAXIWAY UTILIZATION AND LIMITATIONS

3.1 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.

3.2 Pilots must follow centerline guidance on taxiways at all times.

3.3 Code F aircraft taxi limitations.

3.3.1 Code F aircrafts are permitted to use TWY A, TWY B, TWY B1, TWY C*, TWY C1*, TWY D*, TWY E1, TWY E2*, TWY F*, TWY G, TWY D1 between TWY B1 and TWY P, TWY N, TWY Z, TWY P between RWY & Stand E22 and Turn pad RWY 15.

*Restrictions - below turns are not allowed.

a) Left-turn from TWY C to TWY D
b) Right-turn from TWY D to TWY C
c) Entering RWY 33 VIA TWY C
d) Entering RWY 33 VIA TWY C1
e) Exiting RWY 15 VIA TWY C
f) Exiting RWY 15 VIA TWY C1
g) Exiting RWY 33 VIA TWY E2
h) Right turn from TWY D to TWY E2
i) Exiting RWY 33 VIA TWY F
j) Entering RWY 15 VIA TWY F
k) Left-turn from TWY F to TWY D
l) Right-turn from TWY D to TWY F

3.3.2 When taxing on TWY D between parking stand A18 and TWY E1, pilots of Code F aircraft need to exercise caution due to obstacle on the shoulder of TWY D. Obstacle is marked and lit.

3.4 TWY Q1 Limitations:

a) TWY Q1 restricted to aircraft up to Code A, Operated by Qatar Aeronautical Academy only.
b) Pilots shall maintain minimum taxi speed on TWY Q1.

4 AIRCRAFT PARKING STAND UTILIZATION AND LIMITATIONS

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

4.2 General aviation aircraft will be guided by marshallers to the parking area (Stands C1-C9) for small aircraft.

5 AIRPORT COLLABORATIVE DECISION MAKING (ACDM)

5.1 GENERAL

5.1.1 AIRPORT COLLABORATIVE DECISION MAKING (A-CDM) concept of operations has been implemented at Doha International Airport, to optimize airport operations by having an efficient turnaround process, departure and arrival sequencing planning and overall improving the predictability of events.

5.1.2 A-CDM involves the sharing of accurate and timely information between airport operator, aircraft operators, ground handlers and ATC through different supporting systems and implementing a set of operational procedures.

5.1.3 Target Off Block Time (TOBT) – The time an Aircraft Operator (AO) or Ground Handling Agent (GHA) or Airport authority estimates that an aircraft will be ready, all doors closed, push back vehicle connected to the aircraft and ready to start-up/pushback immediately upon reception of approval from ATC.

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5.1.4 Target Start Up Approval Time (TSAT) – The time provided by ATC that an aircraft can expect start-up/push back approval, based on RWY sequencing, push-back & taxi constrains and ATFM measures – Calculated Take-Off Time (CTOT), if applicable.

5.2 A-CDM PRE-DEPARTURE PROCEDURES

5.2.1 A-CDM procedures apply to all flights departing from Doha International Airport, except HEAD, Military, SAR,MEDEVAC, HOSP, and other special flights, whereby ATC shall have full discretion in the conduct of such operations.

5.2.2 A-CDM will generate and calculate an automated system-TOBT taking into account the estimated/actual in-block time (EIBT/AIBT), minimum turnaround time and scheduled time of departure (SOBT).

5.2.3 The ground handler (Qatar Aviation Services – QAS) will confirm the system generated TOBT at 45 minutes and later as required update the prior calculated TOBT. TOBT can be updated to an earlier time if needed. TOBT is subsequently updated to an accuracy of +/- 5 minutes if changes are expected.

5.2.4 TOBT is available through:

a) A-CDM platform
b) Turnaround Coordinator

5.2.5 TSAT information is available through:

a) A-CDM platform at 30 minutes before TOBT
b) Turnaround Coordinator

Note: Flight deck crew shall not contact ATC for start-up request earlier than TSAT -2 minutes.

5.3 OTBD A-CDM START-UP PROCEDURE

5.3.1 Flight deck crew shall report "ready" to ATC at TOBT until max TOBT +5.

5.3.2 Flight deck crew shall monitor ATC frequency to receive start- and push-back approval or taxi instruction for PIPO stands.

5.3.3 ATC amongst other entities can inform flight deck crew about CTOT (if applicable).

6 PARKING AREA FOR HELICOPTERS

6.1 To be developed.

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

7.1 Training flights and technical test flights necessary for the purpose of ascertaining the airworthiness of an aircraft during flight are accepted and must only be made after permission has been obtained from ATS.

7.1.1 Operators intending to conduct training or technical test flights at OTBD shall obtain prior approval from the Qatar Civil Aviation Authority (QCAA) through the on-line Non-Scheduled Flights Service Portal, available at: https://caa.gov.qa/en/non-scheduled-flights-service.

7.1.2 In case of any technical issue at the portal, operators may contact Doha Communication by telephone number +974 4470 5081 and through email at doha.comm@caa.gov.qa to process the request manually.

7.2 Civil fixed wing aircraft VFR training flights.

7.2.1 VFR circuit training will be conducted on RWY15 and RWY33.

8 REMOVAL OF DISABLED AIRCRAFT FROM RUNWAYS

8.1 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.

OTBD AD 2.21 NOISE ABATEMENT PROCEDURES

NIL

OTBD AD 2.22 FLIGHT PROCEDURES

1 SPECIAL PROCEDURES APPLICABLE TO ILS CATEGORY II / III OPERATIONS

1.1 ILS Category II / III approach facilities are available as follows:

a) **OTBD: RWY 33, CAT II or CAT III**

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).

1.3 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.

1.4 Operators are permitted to perform 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:

President
Civil Aviation Authority
P.O. Box 3000
Doha
State of Qatar

Operators must also obtain endorsement of acceptance from the Civil Aviation Authority.

2 LOW VISIBILITY PROCEDURES (LVP)

2.1 As authorized by QCAA, Low Visibility Procedures (LVP) will be instituted whenever the official meteorological visibility condition is 1 500 M or less, or whenever the cloud base is 1 000 FT or less, or whenever conditions are such that entire manoeuvring area cannot be seen from the control TWR.

2.2 The procedures will ensure protection of the ILS localizer and glidepath 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 TRANSPONDER AND COMMUNICATION PROCEDURES FOR DEPARTURES AND ARRIVALS

3.1 DEPARTURES

a) Departing aircraft are advised to switch on their transponder before requesting startup clearance from ATC. If an allocated code has not been assigned under DCL (Departure Clearance) procedures, conspicuity code A2000 should be selected.
b) Flight crew should inform Clearance delivery (if requesting clearance via frequency) or Ground Control on first contact if the Aircraft livery differs from the callsign.

3.2 ARRIVALS

a) Landing aircraft to maintain their transponder switched on until they park on the stand.
b) In the absence of instructions by Doha APP to transfer frequency, landing aircraft are advised to contact Doha Tower on Frequency 118.900 MHz at 5 NM final.

4 RNP INSTRUMENT APPROACH PROCEDURE

4.1 The following is the list of waypoints used in RNP Instrument Approach Procedures.

Designator	Co-ordinates	Approach procedure
MAXMO	253003.10N 0512732.91E	RNP RWY15 (LNAV ONLY), ILS RWY15
SOBOM	252728.46N 0512841.34E	ILS RWY15
LUGAM	252458.13N 0512947.84E	ILS RWY15
BD411	252227.78N 0513054.28E	ILS RWY15

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Designator	Co-ordinates	Approach procedure
BD412	250503.13N 0512943.40E	ILS RWY15
BD401	252344.28N 0513020.49E	RNP RWY15 (LNAV ONLY)
RW15	251626.13N 0513333.92E	RNP RWY15 (LNAV ONLY)
DEKMI	250006.66N 0513226.55E	RNP RWY15 (LNAV ONLY)
BUBOG	250204.78N 0514245.93E	RNP RWY15 (LNAV ONLY)
REVAT	251020.75N 0514932.10E	RNP RWY15 (LNAV ONLY)
NAJMA	250057.64N 0514022.44E	RNP RWY33, ILS RWY33
RAMPO	250430.44N 0513849.01E	ILS RWY33
BD711	250725.96N 0513731.83E	ILS RWY33
BD712	250552.88N 0512812.51E	ILS RWY33
BD701	250558.04N 0513810.48E	RNP RWY33
BD702	251401.07N 0513437.82E	RNP RWY33
SILDA	252100.22N 0513132.97E	RNP RWY33
GITNI	252633.64N 0512657.57E	RNP RWY33
IVIKA	252816.47N 0513625.72E	RNP RWY33
ELILO	252439.52N 0514513.38E	RNP RWY33

5 INDEPENDENT PARALLEL RUNWAY OPERATIONS (IPO)

5.1 Due to the proximity of OTHH runways, pilots should be aware that Independent Parallel Approaches take place at OTHH and that instructions, such as a break-out manoeuver or missed approaches instructions may be given to aircraft arriving at either OTBD or OTHH that may be considered entering a Non-Transgression Zone (NTZ) which is established between the runways at both airports.

5.2 When independent parallel approaches are in operation at OTHH, a 2NM diagonal stagger distance shall be provided between inbound aircraft to the OTHH Runway 16R/34L and the OTBD Runway.

5.3 The SIDs and OTBD are independent of those at OTHH and therefore pilots must be aware of simultaneous departures from both airports.

5.4 When independent parallel approaches are in operation, the following altitudes or last assigned altitudes must be maintained after ILS clearance granted until established on the glidepath. Pilots can expect to intercept the glidepath from 4500 FT for OTBD RWY 15/33. No early descend below glidepath to the Final Approach Altitude is permitted unless instructed by ATC.

6 PROCEDURES FOR HELICOPTER AND CIVIL FIXED WING AIRCRAFT

6.1 General

6.1.1 Aircraft returning from general flying training areas shall request joining instructions prior to leaving these areas.

6.1.2 All aircraft must maintain listening watch on the last assigned frequency whilst operating within the control zone.

6.1.3 “Operations Normal” calls must be made every 30 MIN.

6.2 Helicopter procedures

6.2.1 Reporting points on helicopter procedures.

VFR Rep Point	Designator	Coordinates	
AL HAZM	HZM	251955.49N	0512951.13E
ASPIRE	ASP	251544.78N	0512641.36E
BAHAR	BHR	250300.70N	0514141.50E
BANANA EAST	BNE	251850.49N	0514140.25E
BAY-POINT	BAY	251923.40N	0513802.40E
BOAT	BOT	253319.71N	0513801.01E

VFR Rep Point	Designator	Coordinates	
CENTRAL ROUNDABOUT	CRA	251531.20N	0513503.57E
DHOW	DOW	251245.63N	0515515.32E
DOHA FESTIVAL CITY	DFC	252247.88N	0512626.50E
EASTERN EDGE	ESE	252233.73N	0515101.55E
EZDAN	EZD	251957.21N	0512740.42E
HAMAMA	HMM	252653.28N	0512435.68E
HARBOR	HRB	251800.58N	0513357.07E
INTERCEPT POINT	INT	251055.73N	0514305.54E
IZBAH	IZB	250611.69N	0513420.36E
LUSAIL NORTH	LSN	252654.54N	0512856.63E
MAJD	MJD	252903.69N	0512036.29E
MINA	MIN	250304.70N	0513653.33E
MORJAN	MOR	251631.56N	0515349.00E
NORTH MALL	NML	252132.68N	0512645.23E
NORTH ROUNDABOUT	NRA	251623.55N	0513438.06E
ORANGE HOLD 16	OH 16	252048.18N	0514313.21E
ORANGE HOLD 34	OH 34	251838.13N	0514404.62E
RADISSON	RDS	251619.73N	0513049.22E
SBAQ	SBQ	252922.58N	0512709.46E
SEA-POINT	SEA	251600.00N	0513925.80E
SEEF	SEF	250750.70N	0513721.72E
SOUTH ROUNDABOUT	SRA	251423.05N	0513528.92E
THUMAMA	THM	251344.29N	0513120.70E
TURTLE	TTL	253251.76N	0513813.34E
ZULU	ZUL	251255.01N	0512700.43E

6.2.2 Standard VFR departure and arrival routes for helicopters.

6.2.2.1 Helicopters departing to and/or arriving at OTBD, crossing OTHH.

	Runway	Name	Description
a)	RWY 15	ORANGE ROUTE 15	Departure: After departure RWY 15, turn left towards CRA and climb to cross CRA maintaining 1 000 FT. Contact Hamad TWR West on Freq 118.025 MHz once East of OTBD RWY 15. From CRA, route to HRB and Hold, remaining clear of final approach path OTBD RWY 15 and OTHH RWY 16R whilst awaiting crossing clearance from OTHH ATC. When cleared, cross North of threshold OTHH RWY 16R/RWY 16L and route towards BAY. After BAY, route OH 16 maintaining 1 000 FT. After OH 16, climb to 1 500 FT and route to ESE.
			Arrival: Enter the CTR via ESE maintaining 500 FT. From ESE, route OH 16, BAY to hold, awaiting instructions from OTHH ATC. When cleared, cross north of threshold. Once West of OTHH RWY 16R, contact OTBD ATC Freq. 118.900 MHz and follow joining instructions.

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	Runway	Name	Description
b)	RWY 33	ORANGE ROUTE 33	Departure: After departure RWY 33, turn right towards CRA and climb to cross CRA maintaining 1 000 FT. Contact Hamad TWR West on Freq 118.025 MHz once East of OTBD RWY 33. From CRA, route to SRA and Hold, remaining clear of final approach path OTBD RWY 33 and OTHH RWY 34L whilst awaiting crossing clearance from OTHH ATC. When cleared, cross South of threshold OTHH RWY 34L/RWY 34R and route towards SEA. After SEA, route OH 34 maintaining 1 000 FT. After OH 34, climb to 1 500 FT and route ESE.
			Arrival: Enter the CTR via ESE maintaining 500 FT. From ESE, route OH 34, SEA to hold, awaiting instructions from OTHH ATC. When cleared, cross south of threshold. Contact OTBD ATC Freq. 118.900 MHz once west of OTHH RWY 34L and follow joining instructions.
Note: *Suspension of Orange Route* *1.The Orange route shall be suspended when the cloud ceiling is below 2 000 FT and/ or visibility is less than 3 500 M.* *2.The Orange route shall be suspended during peak arrival periods and IPO.* *3.The OTHH Supervisor may for any other valid reasons suspend the Orange Route.* *4.When the route is suspended, the OTHH ATCO Supervisor shall inform OTBD Tower who shall inform GHC immediately. Best practice is to provide a minimum of 15 minutes' notice to GHC.*			

6.2.2.2 Helicopters arriving and departing OTBD.

	Runway	Name	Description
a)	RWY 15 and RWY 33	TURTLE ROUTE (TTL)	Departure: After departure RWY 15/33, route direct RDS and climb to 1 500 FT. After RDS, route EZD, NML, DFC, LSN and exit via TTL.
			Arrival: Enter the CTR via TTL maintaining 1 000 FT. After TTL, route LSN, DFC, NML, EZD, RDS. After RDS, follow instructions from OTBD ATC.
b)	RWY 15 and RWY 33	BOAT ROUTE (BOT) (This route subject to ATC approval)	Departure: After departure OTBD turn to THM climbing 1 500 FT, route to ASP, HMM, SBQ to exit via BOT.
			Arrival: Enter the CTR via BOT, maintaining 1 000 FT and route to SBQ, HMM, then climb 1 500 FT and route to ASP, follow instructions from OTBD ATC.
c)	RWY 15 and RWY 33	DHOW ROUTE (DOW)	Departure: After departure RWY 15/33, route direct THM and climb to 1 500 FT. After THM, route IZB, MIN, BHR, DOW.
			Arrival: Enter the CTR via DOW maintaining 1 000 FT. After DOW, route BHR, MIN, IZB, THM. After THM, follow instructions from OTBD ATC.
d)	RWY 15 and RWY 33	MORJAN ROUTE (MOR)	Departure: After departure RWY 15/33, route direct THM and climb to 1 500 FT. After THM, join via IZB at 500 FT. After IZB, route SEF, INT, and exit via MOR.
			Arrival: Enter the CTR via MOR maintaining 500 FT. After MOR, route INT, SEF, and IZB to climb 1 000 FT to THM. After THM, follow instructions from OTBD ATC.

6.3 Civil fixed wing aircraft procedures

6.3.1 Reporting points on Civil fixed wing aircraft procedures:

VFR Rep Points	**Designator**	**Coordinates**	
ALPHA	ALF	252344.84N	0512204.72E
AL HAZM	HZM	251955.49N	0512951.13E
ASPIRE	ASP	251544.78N	0512641.36E
THUMAMA	THM	251344.29N	0513120.70E
RADISSON	RDS	251619.73N	0513049.22E
CENTRAL ROUNDABOUT	CRA	251531.20N	0513503.57E

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VFR Rep Points	Designator	Coordinates	
SHAMAL	SML	253716.55N	0512405.05E
SOFIA	SOF	252425.00N	0512254.00E
SOUTH POINT	SPT	245917.99N	0513111.90E
ZULU	ZUL	251255.01N	0512700.43E

6.3.2 Standard VFR departure routes for Civil Fixed Wing Aircraft.

6.3.2.1 Aircraft departing from OTBD to the North.

	Runway	Name	Description
a)	RWY 33	ASPIRE 33 Visual Departure	Climb straight ahead to 700 FT, turn to the West and remain clear of prohibited area OTP45; route direct to ASP then direct to SOF; then direct to SML. Climb as instructed by ATC to 1500 FT.
b)	RWY 15	ASPIRE 15 Visual Departure	Climb straight ahead to 700 FT turn to the West before the upwind end of RWY 15; route direct to THM, direct to ASP, direct to SOF then direct to SML. Climb as instructed by ATC to 1500 FT.

6.3.3 Standard VFR arrival routes for Civil Fixed Wing Aircraft.

6.3.3.1 Civil Fixed Wing Aircraft arriving to OTBD from the North.

	Runway	Name	Description
a)	RWY 33	ASPIRE 33 Visual Arrival	From SML, route direct to SOF traffic must be 2000 FT at SOF. Then route direct to ASP and hold over ASP as required by ATC. From ASP, route direct to ZUL if requested. Hold at ZUL at 2000 FT. From ZUL, route direct to THM and descend as instructed by ATC. Hold overhead THM at 1500 FT. When instructed by ATC, route for final approach RWY 33.
b)	RWY 15	ASPIRE 15 Visual Arrival	From SML, route direct to SOF. Traffic must be 2000 FT by SOF, then route direct to ASP and hold over ASP as required by ATC. When cleared by ATC, proceed to VLG and descend to 1500 FT.

Note 1: Aircraft to contact Doha TWR at SML for inbound clearance.

Note 2: If more than two aircraft requesting to return to Doha from General Flying Area, and they will be required to Hold overhead ZUL for RWY 33 or VLG for RWY 15, succeeding aircraft will be advised to remain clear of the CTR and standby for joining instruction. Only one aircraft may hold at any one time over ZUL and VLG respectively. No Holding allowed overhead ASP.

Note 3: VFR traffic arriving on the ASP arrival are independent of OTHH IFR traffic.

Note 4: Aircraft proceeding to right base RWY 15 from VLG will maintain 1 500 FT until established on final approach to avoid infringing the restricted area over the Amiri Diwan. After establishing the approach, touchdown may be expected approximately abeam intersection TWY Q, with roll-out and vacation at intersection TWY B or TWY B1.

Note 5: Advanced students or instructors may be able to accomplish touchdown and roll-out earlier than the above, but no attempt should be made to request this from the pilot.

7 VFR RADIO COMMUNICATION FAILURE PROCEDURE

7.1 RADIO COMMUNICATION FAILURE (RCF) PROCEDURE FOR HELICOPTERS

7.1.1 Crossing OTHH Arrival OTBD via Orange Route

Helicopters inbound which are already on the East Route; or who are fuel critical and cannot route clear of the CTR shall:

a) Squawk 7600.
b) Follow the Orange Route inbound.
c) Execute 2 orbits at OH 34.
d) Route to cross OTHH as per the Orange Route 34 (even if RWY 16 is in use).
e) Land at OTBD RWY 33 unless wind conditions do not permit a safe landing in which case the helicopter shall join left downwind RWY 15 and land RWY 15.

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7.1.2 Departure OTBD via Orange Route:

a) Squawk 7600.
b) Execute 1 orbit at central roundabout.
c) Land in the RWY direction departed from.

7.1.3 ARRIVAL (TTL, DOW and MOR)

7.1.3.1 Arrival Turtle (TTL):

a) Squawk 7600.
b) Join the Turtle (TTL) route at 1000 FT at the nearest reporting point and follow the TTL route to Radisson (RDS).
c) Join left downwind RWY 33, follow the circuit pattern and look for the TWR for light signals to land RWY 33. If a tailwind is observed, join right hand downwind for RWY 15 and look to the TWR for light signals, to land RWY 15.

7.1.3.2 Arrival Dhow (DOW):

a) Squawk 7600.
b) Join the Dhow (DOW) route at 1000 FT at the nearest reporting point and follow the MIN route to Thumama (THM).
c) Join left downwind RWY 33, follow the circuit pattern and look for the TWR for light signals to land RWY 33. If a tailwind is observed, join right hand downwind for RWY 15 and look to the TWR for light signals, to land RWY 15.

7.1.3.3 Arrival Morjan (MOR):

a) Squawk 7600.
b) Join the Morjan (MOR) route at 500 FT at the nearest reporting point and follow the MOR route to Izbah (IZB) and climb 1000 FT up to Thumama (THM).
c) Join left downwind RWY 33, follow the circuit pattern and look for the TWR for light signals to land RWY 33. If a tailwind is observed, join right hand downwind for RWY 15 and look to the TWR for light signals, to land RWY 15.

7.2 RADIO COMMUNICATION FAILURE (RCF) PROCEDURES FOR CIVIL FIXED WING AIRCRAFT

7.2.1 Squawk 7600. Enter the CTR via SPT or ALF maintaining 2000 FT and route to ASP. At ASP, execute one orbit and route to THM descending to 1500 FT. Join left downwind RWY 33 and follow the circuit pattern. If a tailwind is observed, overfly the runway at 1000 FT. After crossing the upwind threshold, turn left and position for late downwind and then position to land RWY 15.

OTBD AD 2.23 ADDITIONAL INFORMATION

1 VISUAL DOCKING GUIDANCE SYSTEM (VDGS)

1.1 GENERAL SAFETY MEASURES

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

1.1.2 The pilot shall not enter the stand area, unless the docking system first is showing the vertical running arrows.

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

1.1.4 When using the docking system, pilots are advised to taxi into the aircraft stand at minimum speed. The system will display "SLOW DOWN" to inform the pilot if the aircraft‘s taxiing speed is too fast. (See 1.2 Stand docking procedures table item 1.2.6).

1.1.5 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.

1.1.6 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.

1.1.7 When VDGS displays TOO FAR, it indicates that the aircraft has passed the designated stop position. The pilot shall stop the aircraft, inform ATC, and wait for further assistance. Aircraft repositioning may be required, subject to further assessment.

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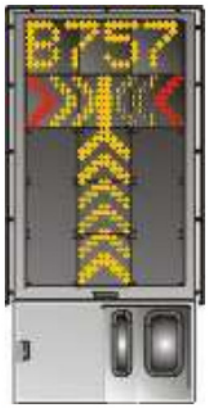
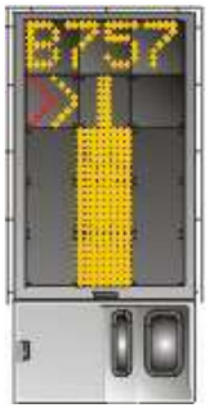
1.2 STAND DOCKING PROCEDURES

1.2.1 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.	
1.2.2 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.	
1.2.3 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 vertical 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.	

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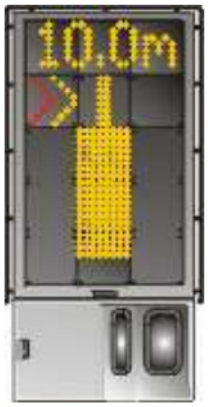
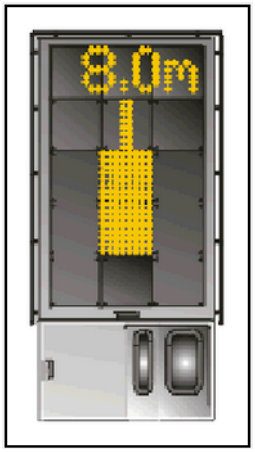
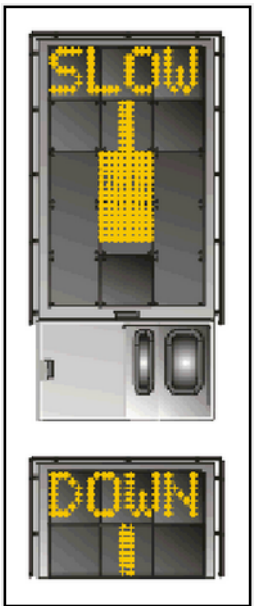
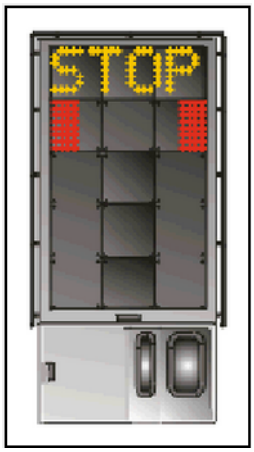
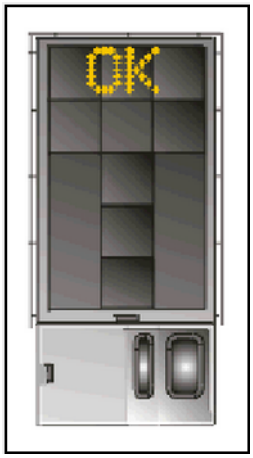
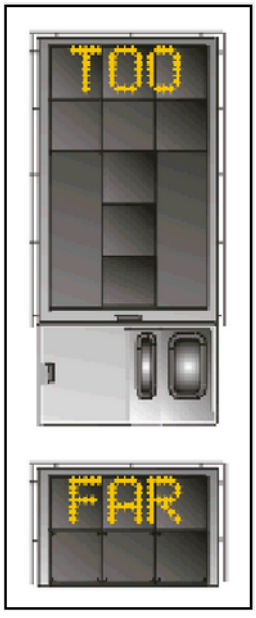
1.2.4 CLOSING RATE Display of digital countdown starts when the aircraft is 20 meters from stop position. When the aircraft is less than 12 meters from the stop-position, the closing rate is indicated by turning off one row of the centre line symbol per half a metre of the distance, covered by the aircraft towards the stop-position of the stand. The picture illustrates the aircraft is 10 metres from the stop-position, slightly left of the centre line. The red arrow indicates the direction to steer.	
1.2.5 ALIGNED TO CENTRE The absence of any direction arrow indicates the aircraft is on the centre line. The picture illustrates that the aircraft is 8 meters from the stop-position and is on the centre line.	
1.2.6 SLOW DOWN If the aircraft is approaching faster than the accepted speed, the system will show 'SLOW DOWN' as a warning to the pilot.	

1.2.7 STOP-POSITION REACHED When the correct stop-position is reached, the display will show 'STOP' and red lights will be lit.	
1.2.8 DOCKING COMPLETED When the aircraft has parked, 'OK' will be displayed.	
1.2.9 OVERSHOOT If the aircraft has overshot the stop-position, 'TOO FAR' will be displayed.	

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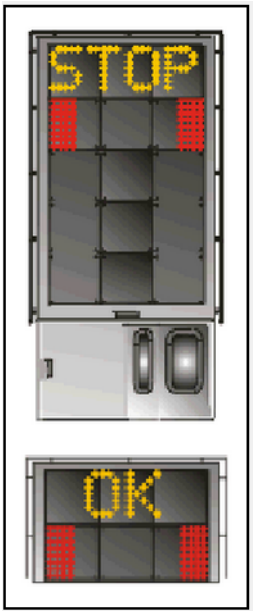
1.2.10 STOP SHORT If the aircraft is found standing still but has not reached the intended stop-position, the message 'STOP OK' will be shown after a while.	
1.2.11 WAIT If some object is blocking the view toward the approaching aircraft or the detected aircraft is lost during docking close to STOP, 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.	

1.2.12 SLOW

This display can be shown for two reasons:

a) BAD WEATHER CONDITION

During heavy sandstorm, fog or rain, 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.

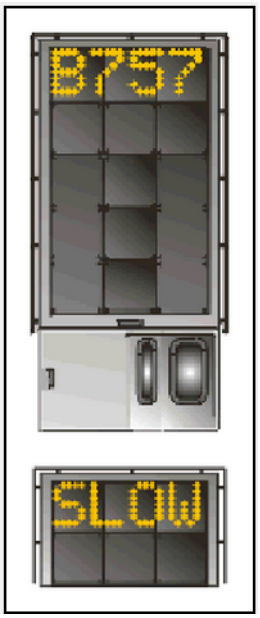
If the system has been configured in this mode to make a shortened ID verification (check of engine position excluded), the aircraft symbol will blink to give attention.

b) AIRCRAFT LOST DURING DOCKING

If the aircraft is lost during docking at a distance greater than STOP plus the distance between nose and engine, the display will show 'SLOW'.

As soon as the system detects the approaching aircraft, the closing-rate bar will appear.

The pilot must not proceed further, unless the closing rate bar is shown.



1.2.13 AIRCRAFT VERIFICATION FAILURE

During entry into the stand, the aircraft geometry is being checked. If, for any reason, aircraft verification is not made 12 meters 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 text will be alternating on the upper two rows of the display.

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



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1.2.14 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 BLOC' 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.	
1.2.15 VIEW BLOCKED If the view towards the approaching aircraft is hindered, for instance by dirt on the window, the docking system will report a view blocked condition, i.e. 'VIEW BLOC'. Once the system is able to see the aircraft through the dirt, 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.	

1.2.16 SBU-STOP

Any unrecoverable error during the docking procedure will generate a SBU (Safety Back Up) condition. The display will show red stop-bar and 'STOP SBU' message.

A manual backup procedure will be used for docking guidance.



1.2.17 TOO FAST

If the aircraft approaches with a speed higher than the docking system can handle, the message 'STOP' (with red squares) and 'TOO FAST' will be displayed. The docking system will be re-started or the docking procedure completed by manual guidance.



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1.2.18 EMERGENCY STOP Pilots should stop the aircraft immediately when 'STOP' is displayed.	
1.2.19 CHOCKS ON 'CHOC 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.	
1.2.20 ERROR If a system error occurs, the message 'ERR' will be displayed.	

1.2.21 SYSTEM BREAKDOWN In case of a severe system failure, the display will go black except for the red stop indicator. A manual backup procedure will be used for docking guidance.	
1.2.22 POWER FAILURE In case of a power failure, the display will be completely black. A manual backup procedure will be used for docking guidance.	

OTBD AD 2.24 CHARTS RELATED TO AN AERODROME

AERODROME CHART - ICAO	AD2.OTBD-ADC.01
AIRCRAFT PARKING / DOCKING CHART - ICAO	AD2.OTBD-APDC.01 *
AERODROME OBSTACLE CHART ICAO TYPE A RWY 15/33	AD2.OTBD-AOC-A.01
PRECISION APPROACH TERRAIN CHART ICAO RWY 33	AD2.OTBD-PATC.01
RWY 15 DATRI 2S / ULIKA 1S RNP CHART	AD2.OTBD-SID.01 *
RWY 15 ALSEM 4S / BUNDU 4S / KUPRO 2S / VAXIN 4S RNP CHART	AD2.OTBD-SID.03 *
RWY 15 ALVEN 3S / LUBET 2S / TULUB 2S RNP CHART	AD2.OTBD-SID.05 *
RWY 15 PATOM 3S RNP CHART	AD2.OTBD-SID.07 *
RWY 33 ALVEN 4N / LUBET 3N / TULUB 3N RNP CHART	AD2.OTBD-SID.09 *
RWY 33 ALSEM 4N / BUNDU 4N / KUPRO 2N / VAXIN 4N RNP CHART	AD2.OTBD-SID.11 *
RWY 33 DATRI 2N / ULIKA 2N RNP CHART	AD2.OTBD-SID.13 *
RWY 33 PATOM 4N RNP CHART	AD2.OTBD-SID.15 *
RWY 15 ALKAN 1F / HAYYA 1F / VEDED 1F RNP CHART	AD2.OTBD-STAR.01 *
RWY 15 ALKAN 1H / HAYYA 1H / VEDED 1H RNP CHART	AD2.OTBD-STAR.03 *
RWY 15 ALKAN 1P / HAYYA 1P / TOSNA 1T / VEDED 1P RNP CHART	AD2.OTBD-STAR.05 *
RWY 15 LAEEB 1F / LAEEB 1K / ORLEK 1F / TOSNA 2F / TOVOX 2F RNP CHART	AD2.OTBD-STAR.07 *
RWY 15 TOSNA 1P / TOVOX 1P RNP CHART	AD2.OTBD-STAR.09 *
RWY 33 ALKAN 1L / HAYYA 1L / TOSNA 1J / VEDED 1L RNP CHART	AD2.OTBD-STAR.11 *
RWY 33 ALKAN 1R / HAYYA 1R / TOSNA 1V / VEDED 1R RNP CHART	AD2.OTBD-STAR.13 *

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RWY 33 ALKAN 1V / HAYYA 1V / TOSNA 1R / TOVOX 1R / VEDED 1V RNP CHART	AD2.OTBD-STAR.15 *
RWY 33 LAEEB 1J / LAEEB 1L / ORLEK 1L / TOSNA 2L / TOVOX 2L RNP CHART	AD2.OTBD-STAR.17 *
RWY 15 ILS CHART	AD2.OTBD-IAC.01 *
RWY 15 RNP CHART	AD2.OTBD-IAC.03 *
RWY 33 ILS CHART	AD2.OTBD-IAC.05 *
RWY 33 RNP CHART	AD2.OTBD-IAC.07 *
VISUAL APPROACH CHART	AD2.OTBD-VAC.01
HELICOPTER ROUTE CHART	AD2.OTBD-HRC.01
BIRD CONCENTRATIONS	AD2.OTBD-BCC.01

* Contain multiple pages

OTBD AD 2.25 VISUAL SEGMENT SURFACE (VSS) PENETRATION

VSS is penetrated for the following Approaches of THR RWY 33.

PROCEDURE	OCA / OCH (FT)					VSS PENETRATION					
						OBST Description	OBST ELEV (FT)	Penetration (FT)	OBST Location		
	A	B	C	D	E				LAT	LONG	Description
OTBD RNP RWY 33 (LNAV/VNAV)	390 / 363					Streetlight	110	17.90	251407.46N	0513425.71E	0.37NM before THR RWY 33, left of approach centreline.
						Streetlight	110	10.22	251405.42N	0513426.80E	0.40NM before THR RWY 33, left of approach centreline.
						Streetlight	109	2.34	251403.39N	0513427.88E	0.44NM before THR RWY 33, left of approach centreline.
OTBD RNP RWY 33 (LNAV)	420 / 393					Streetlight	110	17.90	251407.46N	0513425.71E	0.37NM before THRRWY 33, left of approach centreline.
						Streetlight	110	10.22	251405.42N	0513426.80E	0.40NM before THRRWY 33, left of approach centreline.
						Streetlight	109	2.34	251403.39N	0513427.88E	0.44NM before THRRWY 33, left of approach centreline.

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AERODROME CHART - ICAO

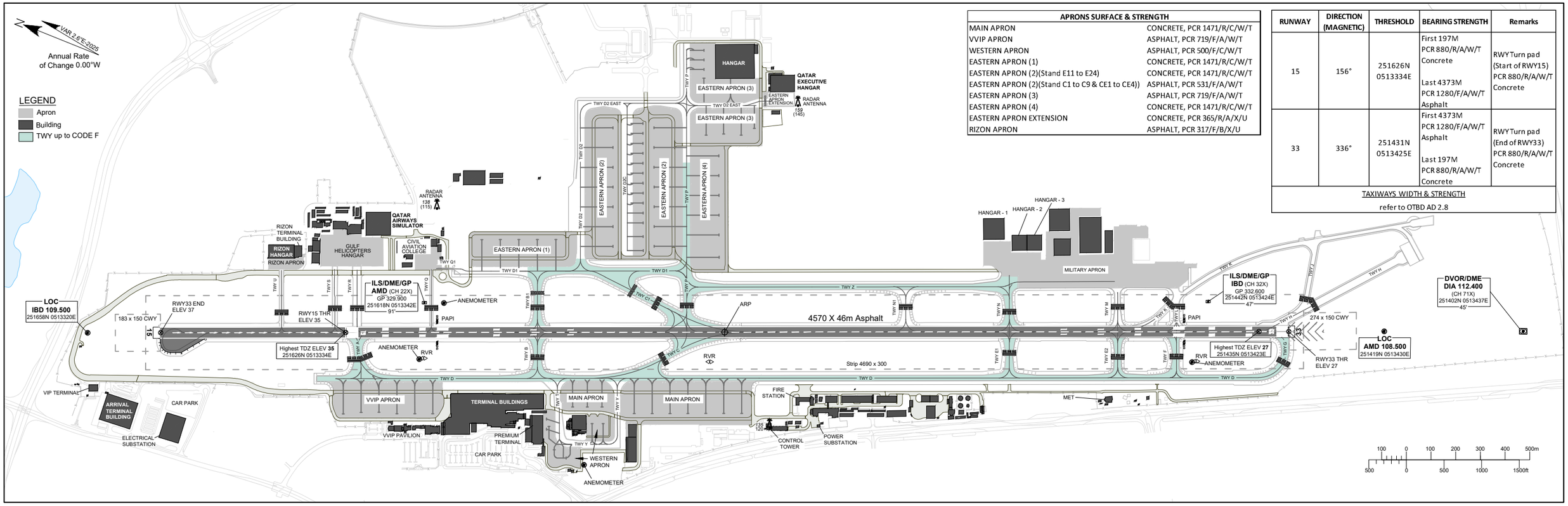
DISTANCES IN METERS, ALTITUDES, ELEVATIONS AND HEIGHTS IN FEET.

ARP
251540N
0513354E

AD ELEV 37 FT

DOHA APP EAST	124.775/120.600	DOHA DIRECTOR	124.050/121.775
DOHA APP WEST	119.725/125.125	DOHA GROUND GMC VEHICLE	121.800
DOHA DIRECTOR EAST	119.400/121.125	DOHA GROUND GMC	121.925
DOHA DIRECTOR WEST	123.875/119.225		
DOHA TOWER	118.900/119.025		

DOHA Intl. OTBD



APRONS SURFACE & STRENGTH

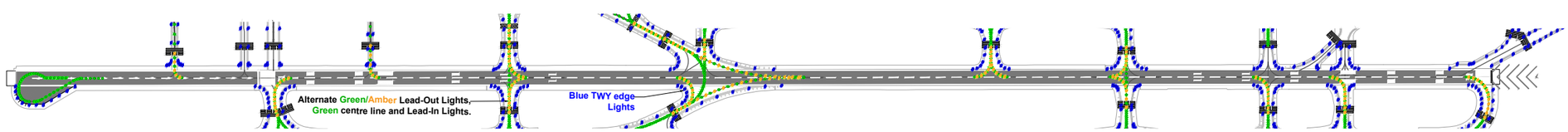
MAIN APRON	CONCRETE, PCR 1471/R/C/W/T
VVIP APRON	ASPHALT, PCR 719/F/A/W/T
WESTERN APRON	ASPHALT, PCR 500/F/C/W/T
EASTERN APRON (1)	CONCRETE, PCR 1471/R/C/W/T
EASTERN APRON (2)(Stand E11 to E24)	CONCRETE, PCR 1471/R/C/W/T
EASTERN APRON (2)(Stand C1 to C9 & CE1 to CE4))	ASPHALT, PCR 531/F/A/W/T
EASTERN APRON (3)	ASPHALT, PCR 719/F/A/W/T
EASTERN APRON (4)	CONCRETE, PCR 1471/R/C/W/T
EASTERN APRON EXTENSION	CONCRETE, PCR 365/R/A/X/U
RIZON APRON	ASPHALT, PCR 317/F/B/X/U

RUNWAY	DIRECTION (MAGNETIC)	THRESHOLD	BEARING STRENGTH	Remarks
15	156°	251626N 0513334E	First 197M PCR 880/R/A/W/T Concrete Last 4373M PCR 1280/F/A/W/T Asphalt	RWY Turn pad (Start of RWY15) PCR 880/R/A/W/T Concrete
33	336°	251431N 0513425E	First 4373M PCR 1280/F/A/W/T Asphalt Last 197M PCR 880/R/A/W/T Concrete	RWY Turn pad (End of RWY33) PCR 880/R/A/W/T Concrete

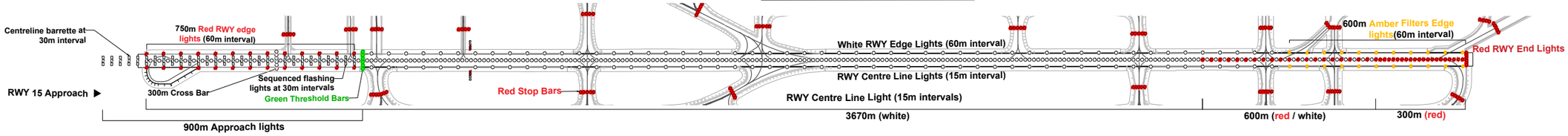
TAXIWAYS WIDTH & STRENGTH
refer to OTBD AD 2.8

Changes: RWY markings and lighting; TWY markings and lighting; RWY turn pad markings and lighting; RWY holding position markings; RWY stop bar lighting.

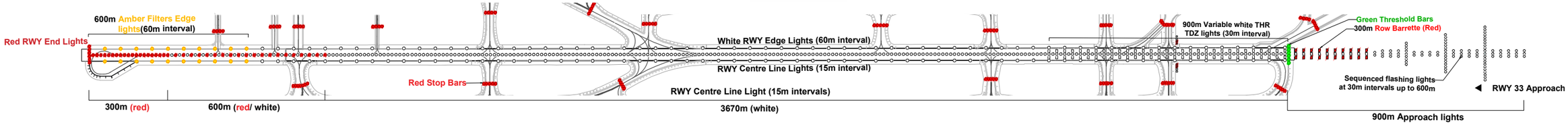
MARKING AIDS RWY 15/33 AND EXIT TWY / TWY CENTERLINE AND EDGE LIGHTING



LIGHTING AIDS RWY 15 AND EXIT TWY



LIGHTING AIDS RWY 33 AND EXIT TWY



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AIRCRAFT PARKING/DOCKING CHART - ICAO

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

ARP
251540N
0513354E

APRON ELEV
(See table)

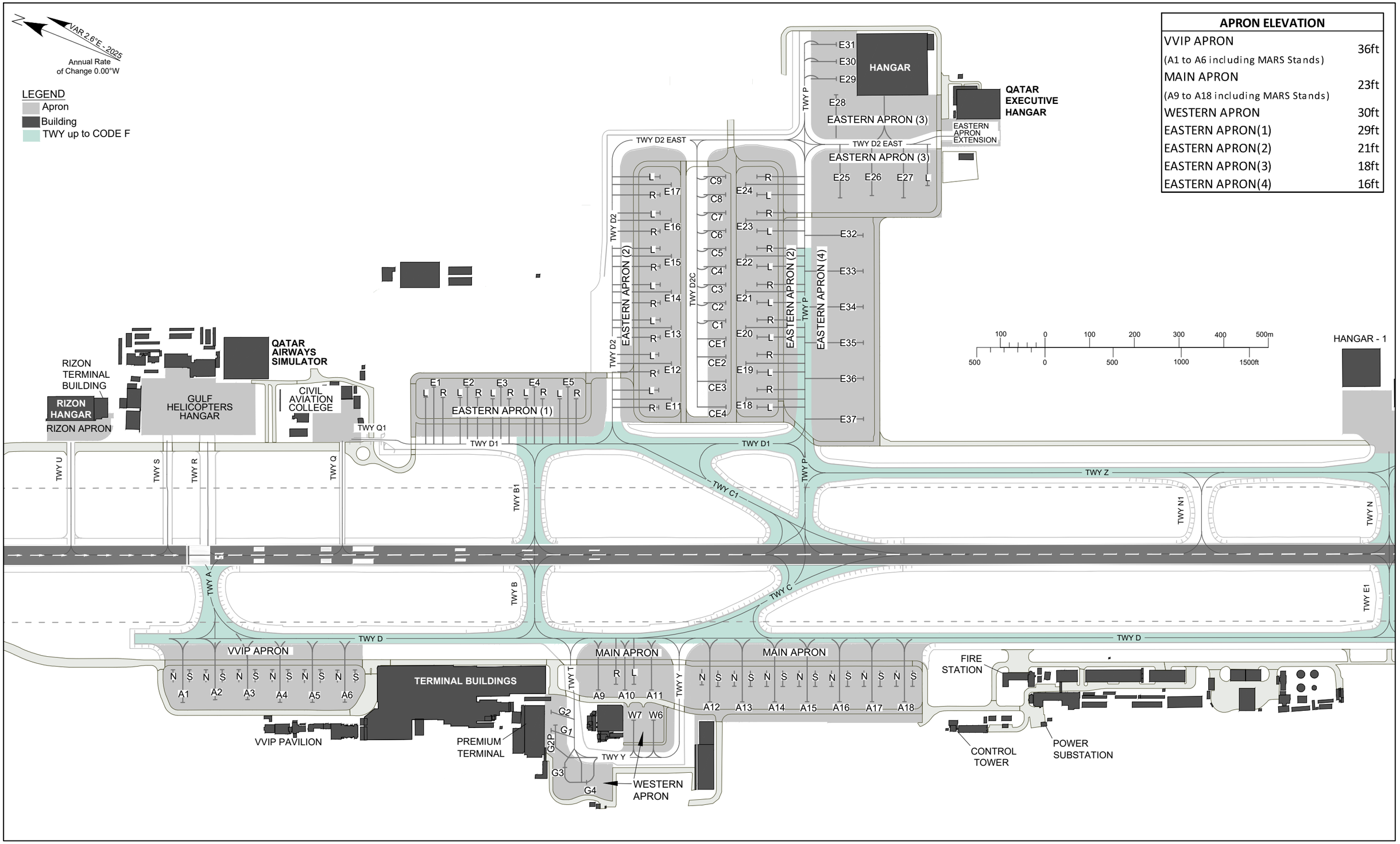
DOHA TOWER	118.900/119.025
DOHA GROUND GMC	121.925
DOHA GROUND GMC VEHICLE	121.800

DOHA Intl. OTBD

VAR 2.6°E - 2025
Annual Rate of Change 0.00°W

LEGEND
Apron
Building
TWY up to CODE F

APRON ELEVATION	
VVIP APRON (A1 to A6 including MARS Stands)	36ft
MAIN APRON (A9 to A18 including MARS Stands)	23ft
WESTERN APRON	30ft
EASTERN APRON(1)	29ft
EASTERN APRON(2)	21ft
EASTERN APRON(3)	18ft
EASTERN APRON(4)	16ft



Changes: RWY markings; TWY markings.

A1	251622.44N 0513322.87E	A17N	251536.91N 0513344.27E	E13	251559.58N 0513405.17E	E27L	251546.13N 0513423.31E
A1N	251623.98N 0513324.99E	A17S	251535.82N 0513344.75E	E13L	251600.54N 0513405.41E	E28	251554.74N 0513427.34E
A1S	251622.88N 0513325.49E	A18	251533.76N 0513344.34E	E13R	251600.07N 0513404.13E	E29	251555.15N 0513428.53E
A2	251620.33N 0513324.03E	A18N	251534.72N 0513345.23E	E14	251600.54N 0513407.83E	E30	251555.62N 0513429.81E
A2N	251621.76N 0513325.98E	A18S	251533.63N 0513345.72E	E14L	251601.50N 0513408.04E	E31	251556.09N 0513431.09E
A2S	251620.66N 0513326.46E	C1	251556.09N 0513407.30E	E14R	251601.01N 0513406.69E	E32	251549.14N 0513417.71E
A3	251618.14N 0513325.00E	C2	251556.58N 0513408.64E	E15	251601.51N 0513410.48E	E33	251548.16N 0513415.06E
A3N	251619.55N 0513326.96E	C3	251557.06N 0513409.97E	E15L	251602.48N 0513410.73E	E34	251547.19N 0513412.41E
A3S	251618.45N 0513327.44E	C4	251557.55N 0513411.31E	E15R	251601.99N 0513409.38E	E35	251546.22N 0513409.76E
A4	251615.88N 0513325.76E	C5	251558.04N 0513412.65E	E16	251602.48N 0513413.14E	E36	251545.25N 0513407.11E
A4N	251617.29N 0513327.96E	C6	251558.52N 0513413.98E	E16L	251603.43N 0513413.35E	E37	251544.15N 0513404.11E
A4S	251616.24N 0513328.42E	C7	251559.01N 0513415.32E	E16R	251602.94N 0513412.00E	G1	251556.84N 0513331.73E
A5	251613.70N 0513326.73E	C8	251559.50N 0513416.66E	E17	251603.45N 0513415.79E	G2	251557.33N 0513333.09E
A5N	251615.11N 0513328.91E	C9	251559.99N 0513417.99E	E17L	251604.41N 0513416.03E	G2P	251556.69N 0513332.25E
A5S	251614.05N 0513329.38E	CE1	251555.59N 0513405.96E	E17R	251603.92N 0513414.69E	G3	251554.90N 0513329.39E
A6	251611.51N 0513327.70E	CE2	251555.10N 0513404.62E	E18	251552.62N 0513402.08E	G4	251553.04N 0513328.92E
A6N	251612.88N 0513329.86E	CE3	251554.41N 0513402.79E	E18L	251551.65N 0513401.82E	W6	251550.20N 0513335.52E
A6S	251611.70N 0513330.38E	CE4	251553.74N 0513400.89E	E18R	251552.12N 0513403.12E	W7	251551.54N 0513334.93E
A9	251554.74N 0513336.12E	E1	251614.01N 0513353.72E	E19	251553.59N 0513404.74E	Note:	1. * - Calculated data
A10	251552.94N 0513336.92E	E1L	251614.28N 0513352.71E	E19L	251552.60N 0513404.42E		2. Stand availability refer to OTBD AD2.8 & 2.9
A10L	251552.49N 0513337.60E	E1R	251613.12N 0513353.22E	E19R	251553.07N 0513405.72E		
A10R	251553.70N 0513337.07E	E2	251611.75N 0513354.72E	E20	251554.55N 0513407.39E		
A11	251551.15N 0513337.71E	E2L	251611.95N 0513353.73E	E20L	251553.54N 0513407.02E		
A12	251546.88N 0513338.55E	E2R	251610.79N 0513354.25E	E20R	251554.01N 0513408.29E		
A12N	251547.85N 0513339.45E	E3	251609.48N 0513355.71E	E21	251555.52N 0513410.04E		
A12S	251546.76N 0513339.93E	E3L	251609.72N 0513354.60E	E21L	251554.48N 0513409.58E		
A13	251544.70N 0513339.52E	E3R	251608.62N 0513355.08E	E21R	251554.97N 0513410.92E		
A13N	251545.66N 0513340.44E	E4	251607.22N 0513356.71E	E22	251556.49N 0513412.70E		
A13S	251544.57N 0513340.89E	E4L	251607.46N 0513355.60E	E22L	251555.46N 0513412.26E		
A14	251542.51N 0513340.48E	E4R	251606.36N 0513356.09E	E22R	251555.95N 0513413.61E		
A14N	251543.47N 0513341.37E	E5	251604.96N 0513357.71E	E23	251557.46N 0513415.35E		
A14S	251542.38N 0513341.85E	E5L	251605.19N 0513356.60E	E23L	251556.41N 0513414.89E		
A15	251540.32N 0513341.44E	E5R	251604.09N 0513357.08E	E23R	251556.90N 0513416.24E		
A15N	251541.28N 0513342.34E	E11	251557.64N 0513359.87E	E24	251558.42N 0513418.00E		
A15S	251540.19N 0513342.82E	E11L	251558.74N 0513400.17E	E24L	251557.39N 0513417.58E		
A16	251538.14N 0513342.41E	E11R	251558.27N 0513358.88E	E24R	251557.88N 0513418.92E		
A16N	251539.09N 0513343.30E	E12	251558.61N 0513402.52E	E25	251551.69N 0513419.81E		
A16S	251538.01N 0513343.78E	E12L	251559.70N 0513402.81E	E26	251549.61N 0513420.92E		
A17	251535.95N 0513343.37E	E12R	251559.23N 0513401.53E	E27	251547.41N 0513421.70E		

ELEVATIONS IN FEET
ALL OTHER DIMENSIONS IN METRES

AERODROME OBSTACLE CHART - ICAO
TYPE A OPERATING LIMITATIONS

DOHA/Doha Intl. (OTBD)
QATAR

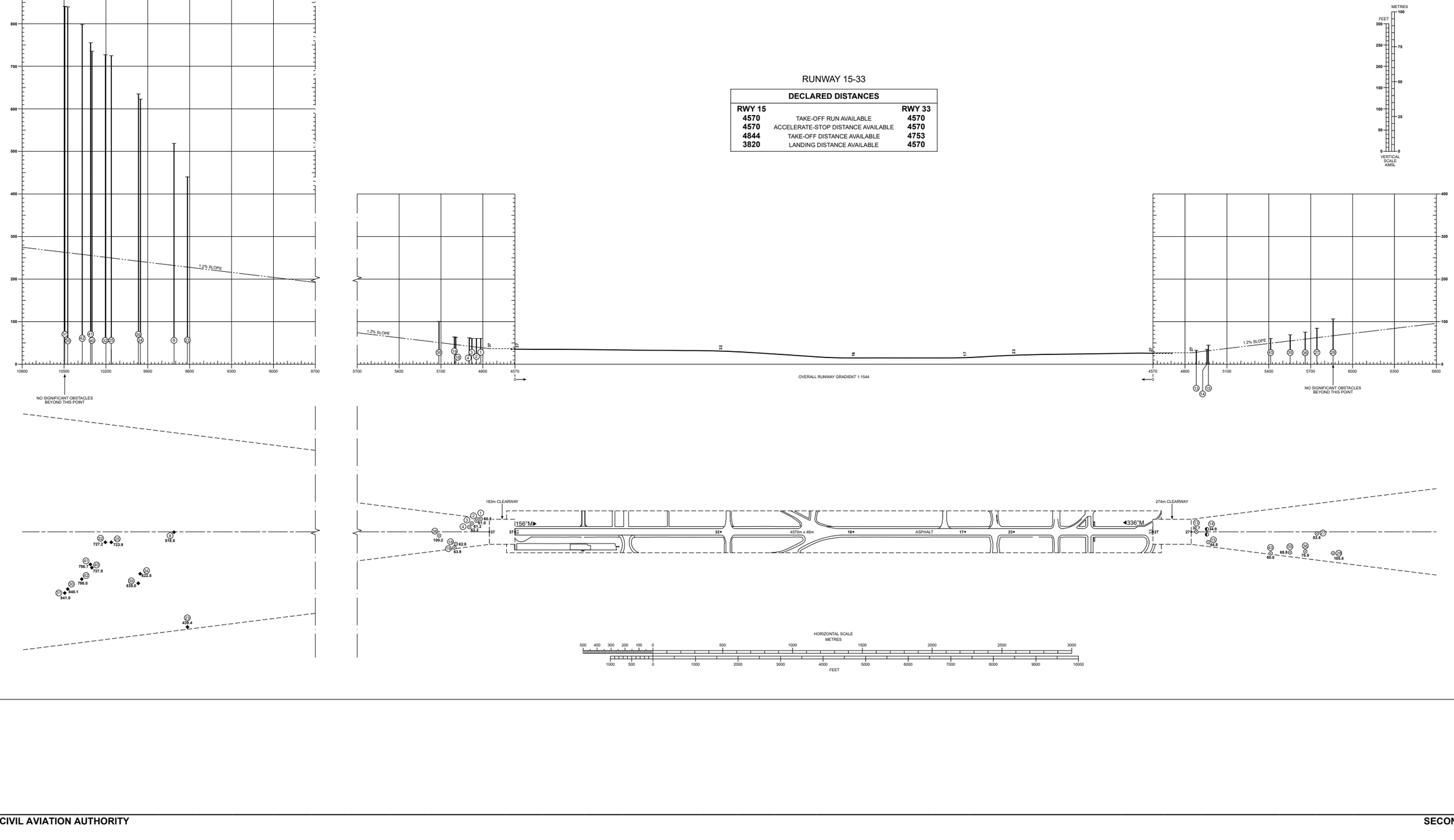
MAGNETIC VARIATION 2.6°E (2025)

ORDER OF ACCURACY: Horizontal 3m; Vertical 1ft
CHANGE:
Aerodrome information current JANUARY 2026
Based on survey dated JANUARY 2024

LEGEND		
	PLAN	PROFILE
IDENTIFICATION NUMBER	⑦	
HEIGHT AMSL	777.7	
ILS		
CRANE, POLE, TOWER, ANTENNA, ETC.	⊙	
BUILDING	◆	

RUNWAY 15-33

DECLARED DISTANCES		
RWY 15		**RWY 33**
4570	TAKE-OFF RUN AVAILABLE	**4570**
4570	ACCELERATE-STOP DISTANCE AVAILABLE	**4570**
4844	TAKE-OFF DISTANCE AVAILABLE	**4753**
3820	LANDING DISTANCE AVAILABLE	**4570**



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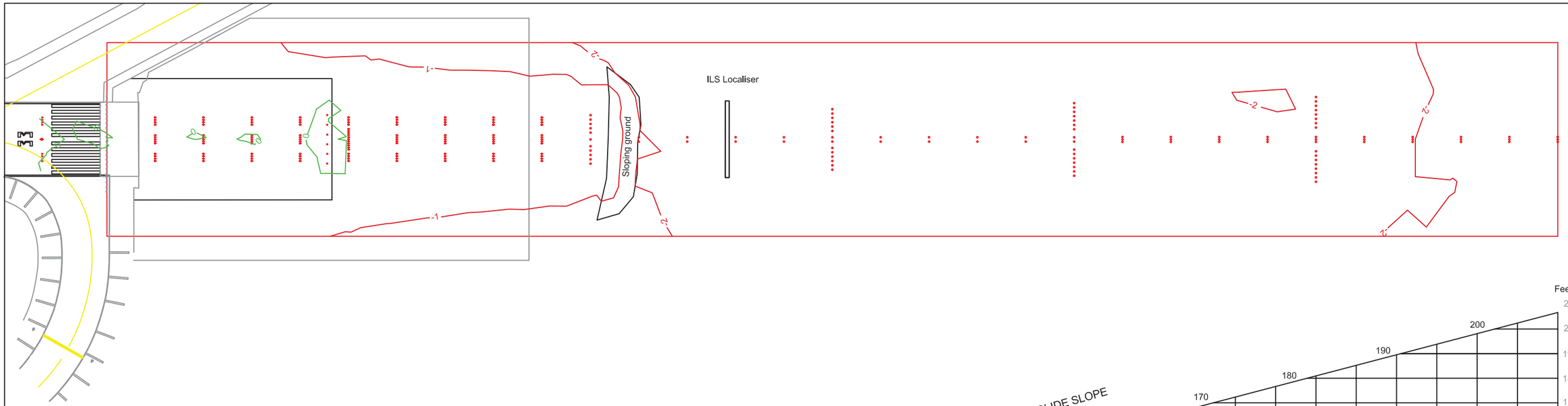
ELEVATIONS IN METERS
ALL OTHER DIMENSIONS IN METRES

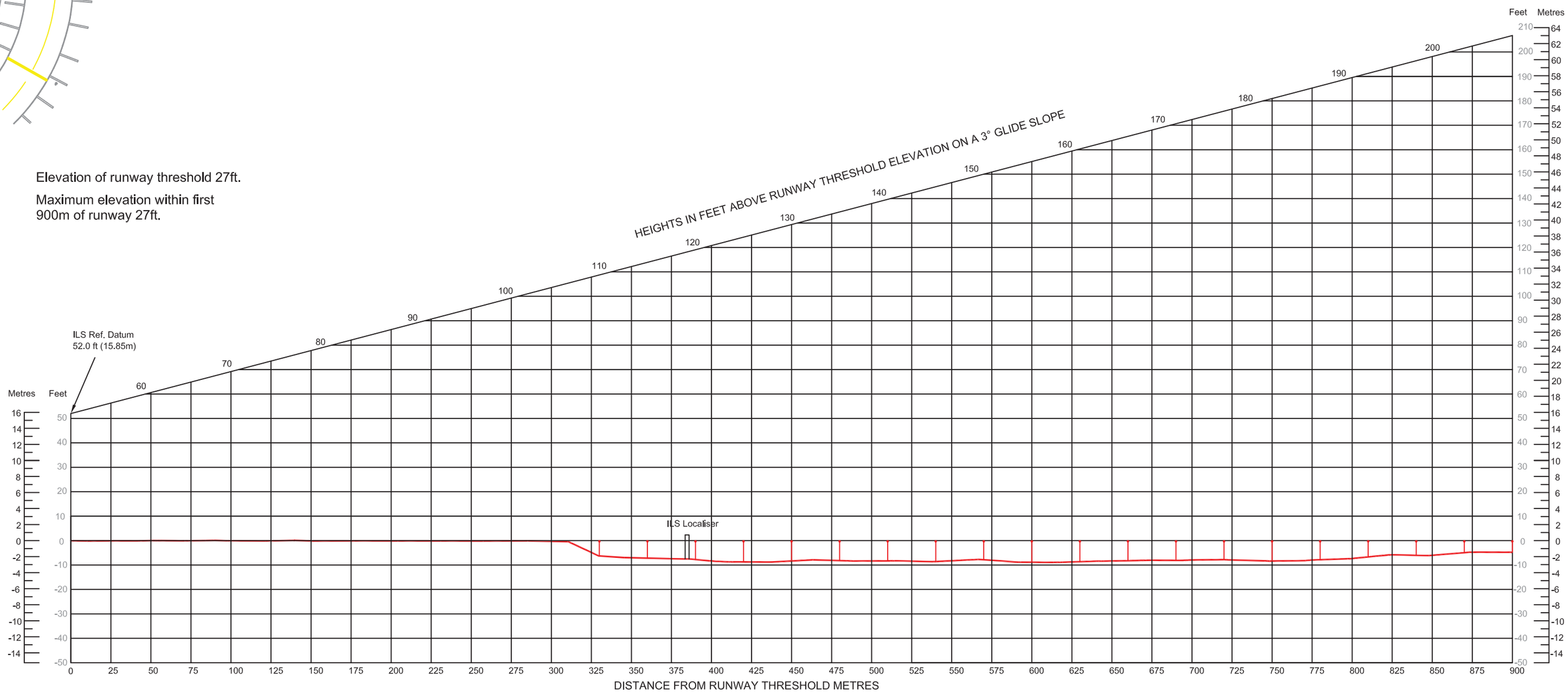
PRECISION APPROACH TERRAIN CHART - ICAO

DOHA/Doha International (OTBD)
RUNWAY 33



Elevation of runway threshold 27ft.

Maximum elevation within first 900m of runway 27ft.



LEGEND	
BUILDING OR LARGE STRUCTURE	
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:
Aerodrome Information Current JUNE 2014
Based on survey dated AUG 2015

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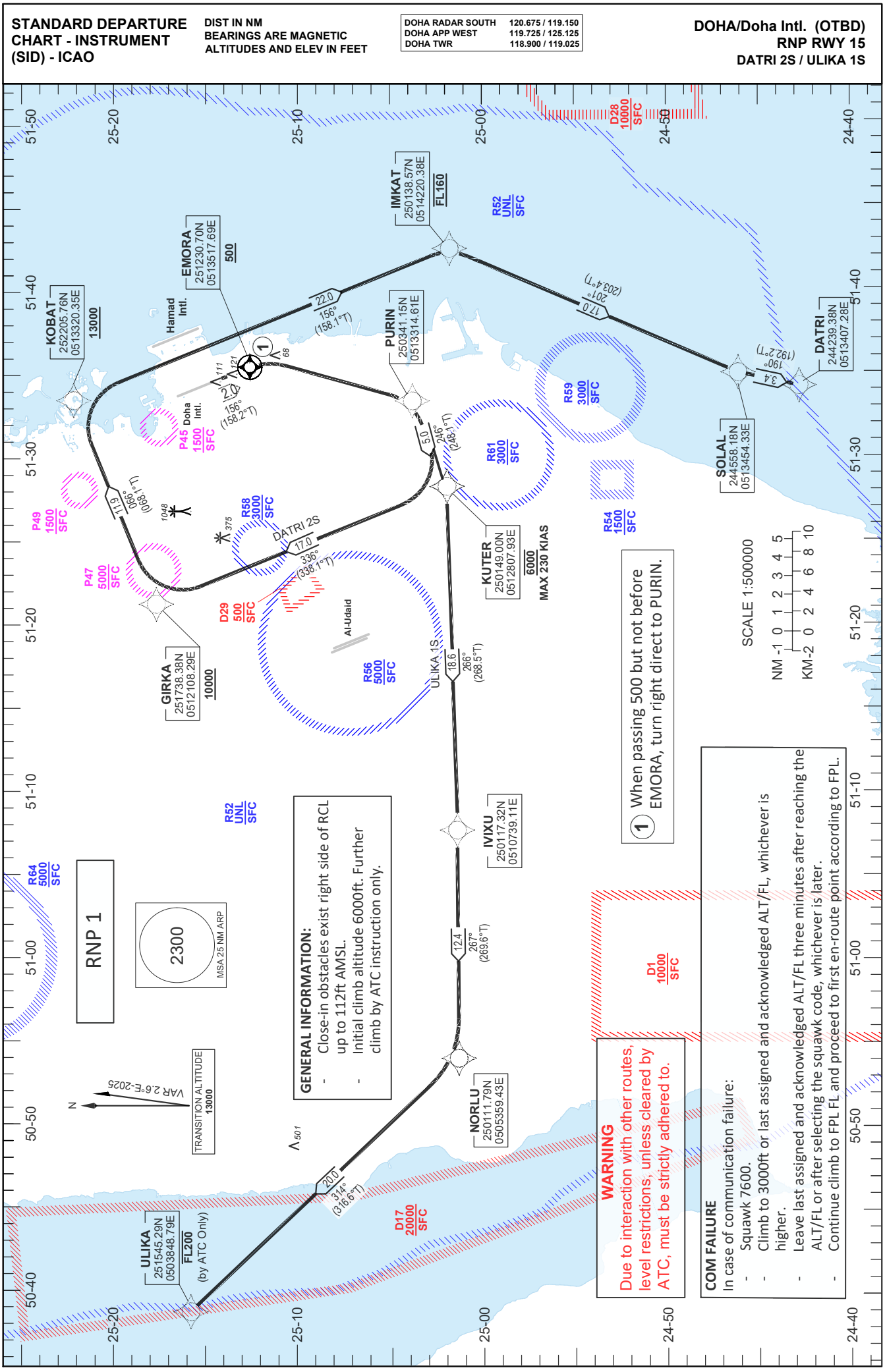
STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET

DOHA RADAR SOUTH	120.675 / 119.150
DOHA APP WEST	119.725 / 125.125
DOHA TWR	118.900 / 119.025

DOHA/Doha Intl. (OTBD)
RNP RWY 15
DATRI 2S / ULIKA 1S



STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DOHA/Doha Intl. (OTBD)
RNP RWY 15
DATRI 2S / ULIKA 1S

TABULAR DESCRIPTION

RNP SID DATRI 2S

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	EMORA	Y	156 (158.2)	-2.6	2.0	-	-	-	-	RNP1
2	CA	-	-	156 (158.2)	-2.6	-	-	+500	-	-	RNP1
3	DF	PURIN	-	-	-2.6	-	R	-	-	-	RNP1
4	TF	KUTER	-	246 (248.1)	-2.6	5.0	-	@6000	-230	-	RNP1
5	TF	GIRKA	-	336 (338.1)	-2.6	17.0	-	+10000	-	-	RNP1
6	TF	KOBAT	-	066 (068.1)	-2.6	11.9	-	+13000	-	-	RNP1
7	TF	IMKAT	-	156 (158.1)	-2.6	22.0	-	@FL160	-	-	RNP1
8	TF	SOLAL	-	201 (203.4)	-2.6	17.0	-	-	-	-	RNP1
9	TF	DATRI	-	190 (192.2)	-2.6	3.4	-	-	-	-	RNP1
Remarks											

RNP SID ULIKA 1S

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	EMORA	Y	156 (158.2)	-2.6	2.0	-	-	-	-	RNP1
2	CA	-	-	156 (158.2)	-2.6	-	-	+500	-	-	RNP1
3	DF	PURIN	-	-	-2.6	-	R	-	-	-	RNP1
4	TF	KUTER	-	246 (248.1)	-2.6	5.0	-	@6000	-230	-	RNP1
5	TF	IVIXU	-	266 (268.5)	-2.6	18.6	-	-	-	-	RNP1
6	TF	NORLU	-	267 (269.6)	-2.6	12.4	-	-	-	-	RNP1
7	TF	ULIKA	-	314 (316.6)	-2.6	20.0	-	-FL200	-	-	RNP1
Remarks			ULIKA -FL200 by ATC only								

WAYPOINT LIST

RNP SID DATRI 2S / ULIKA 1S

Waypoint Identifier	Coordinates
EMORA	251230.70N 0513517.69E
PURIN	250341.15N 0513314.61E
KUTER	250149.00N 0512807.93E
IVIXU	250117.32N 0510739.11E
NORLU	250111.79N 0505359.43E
ULIKA	251545.29N 0503848.79E
GIRKA	251738.38N 0512108.29E
KOBAT	252205.76N 0513320.35E
IMKAT	250138.57N 0514220.38E
SOLAL	244558.18N 0513454.33E
DATRI	244239.38N 0513407.28E

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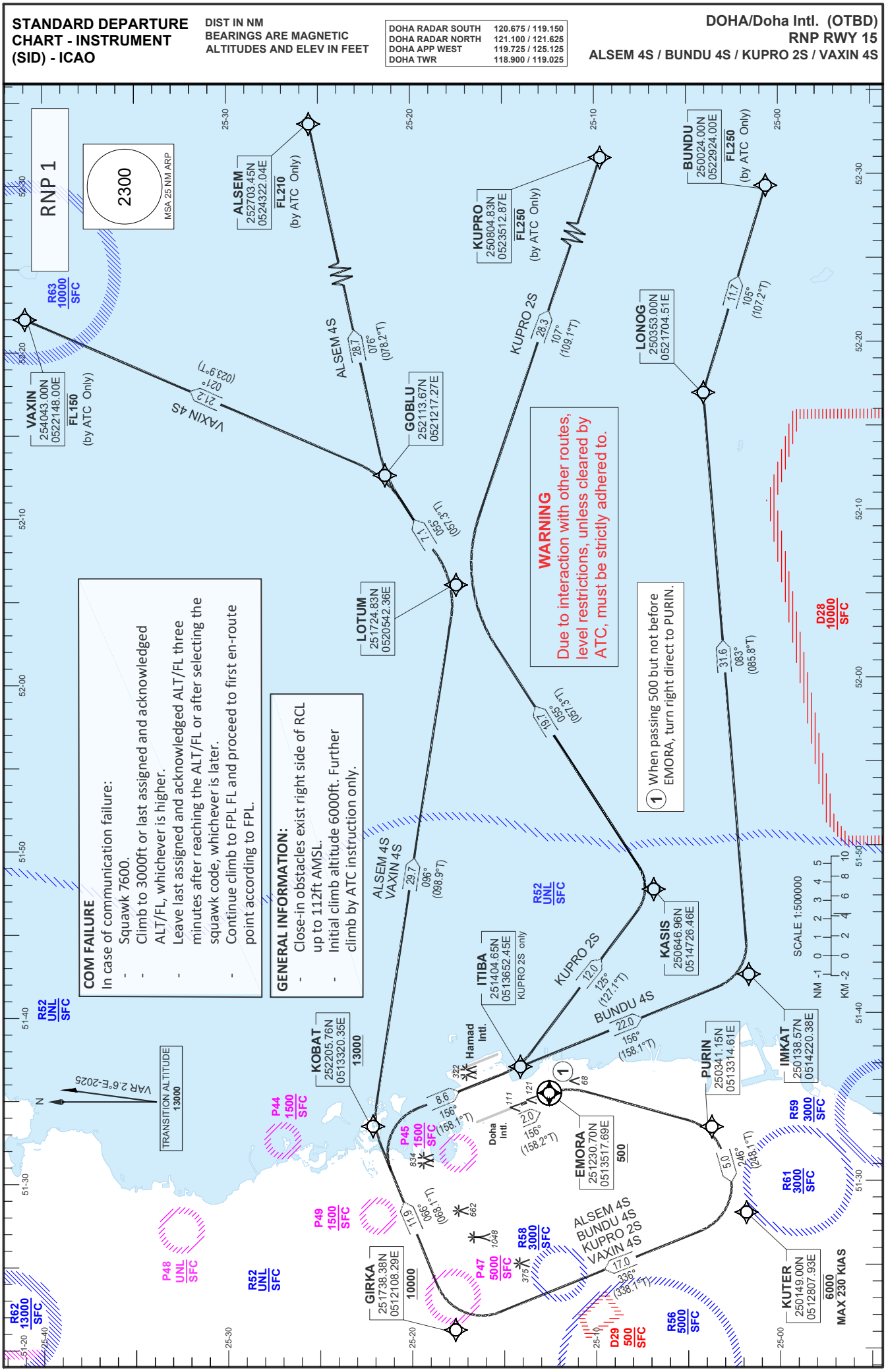
STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET

DOHA RADAR SOUTH	120.675 / 119.150
DOHA RADAR NORTH	121.100 / 121.625
DOHA APP WEST	119.725 / 125.125
DOHA TWR	118.900 / 119.025

DOHA/Doha Intl. (OTBD)
RNP RWY 15
ALSEM 4S / BUNDU 4S / KUPRO 2S / VAXIN 4S



STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DOHA/Doha Intl. (OTBD)
RNP RWY 15
ALSEM 4S / BUNDU 4S / KUPRO 2S / VAXIN 4S

TABULAR DESCRIPTION

RNP SID ALSEM 4S

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	EMORA	Y	156 (158.2)	-2.6	2.0	-	-	-	-	RNP1
2	CA	-	-	156 (158.2)	-2.6	-	-	+500	-	-	RNP1
3	DF	PURIN	-	-	-2.6	-	R	-	-	-	RNP1
4	TF	KUTER	-	246 (248.1)	-2.6	5.0	-	@6000	-230	-	RNP1
5	TF	GIRKA	-	336 (338.1)	-2.6	17.0	-	+10000	-	-	RNP1
6	TF	KOBAT	-	066 (068.1)	-2.6	11.9	-	+13000	-	-	RNP1
7	TF	LOTUM	-	096 (098.9)	-2.6	29.7	-	-	-	-	RNP1
8	TF	GOBLU	-	055 (057.3)	-2.6	7.1	-	-	-	-	RNP1
9	TF	ALSEM	-	076 (078.2)	-2.6	28.7	-	-FL210	-	-	RNP1
Remarks	ALSEM -FL210 by ATC only										

RNP SID BUNDU 4S

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	EMORA	Y	156 (158.2)	-2.6	2.0	-	-	-	-	RNP1
2	CA	-	-	156 (158.2)	-2.6	-	-	+500	-	-	RNP1
3	DF	PURIN	-	-	-2.6	-	R	-	-	-	RNP1
4	TF	KUTER	-	246 (248.1)	-2.6	5.0	-	@6000	-230	-	RNP1
5	TF	GIRKA	-	336 (338.1)	-2.6	17.0	-	+10000	-	-	RNP1
6	TF	KOBAT	-	066 (068.1)	-2.6	11.9	-	+13000	-	-	RNP1
7	TF	IMKAT	-	156 (158.1)	-2.6	22.0	-	-	-	-	RNP1
8	TF	LONOG	-	083 (085.8)	-2.6	31.6	-	-	-	-	RNP1
9	TF	BUNDU	-	105 (107.2)	-2.6	11.7	-	-FL250	-	-	RNP1
Remarks	BUNDU -FL250 by ATC only										

RNP SID KUPRO 2S

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	EMORA	Y	156 (158.2)	-2.6	2.0	-	-	-	-	RNP 1
2	CA	-	-	156 (158.2)	-2.6	-	-	+500	-	-	RNP 1
3	DF	PURIN	-	-	-2.6	-	R	-	-	-	RNP 1
4	TF	KUTER	-	246 (248.1)	-2.6	5.0	-	@6000	-230	-	RNP 1
5	TF	GIRKA	-	336 (338.1)	-2.6	17.0	-	+10000	-	-	RNP 1
6	TF	KOBAT	-	066 (068.1)	-2.6	11.9	-	+13000	-	-	RNP 1
7	TF	ITIBA	-	156 (158.1)	-2.6	8.6	-	-	-	-	RNP 1
8	TF	KASIS	-	125 (127.1)	-2.6	12.0	-	-	-	-	RNP 1
9	TF	LOTUM	-	055 (057.3)	-2.6	19.7	-	-	-	-	RNP 1
10	TF	KUPRO	-	107 (109.1)	-2.6	28.3	-	-FL250	-	-	RNP 1
Remarks	KUPRO -FL250 by ATC only										

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RNP SID VAXIN 4S											
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	**EMORA**	Y	156 (158.2)	-2.6	2.0	-	-	-	-	RNP 1
2	CA	**-**	-	156 (158.2)	-2.6	-	-	+500	-	-	RNP 1
3	DF	**PURIN**	-	-	-2.6	-	R	-	-	-	RNP 1
4	TF	**KUTER**	-	246 (248.1)	-2.6	5.0	-	@6000	-230	-	RNP 1
5	TF	**GIRKA**	-	336 (338.1)	-2.6	17.0	-	+10000	-	-	RNP 1
6	TF	**KOBAT**	-	066 (068.1)	-2.6	11.9	-	+13000	-	-	RNP 1
7	TF	**LOTUM**	-	096 (098.9)	-2.6	29.7	-	-	-	-	RNP 1
8	TF	**GOBLU**	-	055 (057.3)	-2.6	7.1	-	-	-	-	RNP 1
9	TF	**VAXIN**	-	021 (023.9)	-2.6	21.2	-	-FL150	-	-	RNP1
Remarks		VAXIN -FL150 by ATC only									

WAYPOINT LIST

RNP SID ALSEM 4S / BUNDU 4S / KUPRO 2S / VAXIN 4S	
Waypoint Identifier	**Coordinates**
EMORA	251230.70N 0513517.69E
PURIN	250341.15N 0513314.61E
KUTER	250149.00N 0512807.93E
GIRKA	251738.38N 0512108.29E
KOBAT	252205.76N 0513320.35E
ITIBA	251404.65N 0513652.45E
KASIS	250646.96N 0514726.46E
GOBLU	252113.67N 0521217.27E

RNP SID ALSEM 4S / BUNDU 4S / KUPRO 2S / VAXIN 4S	
Waypoint Identifier	**Coordinates**
ALSEM	252703.45N 0524322.04E
IMKAT	250138.57N 0514220.38E
LONOG	250353.00N 0521704.51E
BUNDU	250024.00N 0522924.00E
LOTUM	251724.83N 0520542.36E
KUPRO	250804.83N 0523512.87E
VAXIN	254043.00N 0522148.00E

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STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET

DOHA RADAR NORTH	121.100 / 121.625
DOHA RADAR SOUTH	120.675 / 119.150
DOHA APP WEST	119.725 / 125.125
DOHA APP EAST	124.775 / 120.600
DOHA TWR	118.900 / 119.025

DOHA/Doha Intl. (OTBD)
RNP RWY 15
ALVEN 3S / LUBET 2S / TULUB 2S

RNP 1

2300
MSA 25 NM ARP

TRANSITION ALTITUDE
13000

VAR 2.6°E-2025

LUBET
261440.67N
0510346.54E
FL180
(by ATC Only)

TULUB
260644.00N
0510041.00E
FL180
(by ATC Only)

MISEL
260906.55N
0510850.78E

PATOM
255821.41N
0511836.36E

IMSUN
255445.54N
0513833.11E
FL170

ALVEN
255418.19N
0515315.30E
FL150
(by ATC Only)

ALNAK
255053.49N
0513401.89E

EMISA
254658.35N
0514206.68E

KOBEN
253921.98N
0513334.39E
FL150

GIBIN
254006.23N
0514417.85E

PASIS
253154.63N
0514146.81E

ENELI
252959.45N
0512502.14E
12000

KOBAT
252205.76N
0513320.35E
12000

GIRKA
251738.38N
0512108.29E
9000
For ALVEN 3S and LUBET 2S only:
10000

EMORA
251230.70N
0513517.69E
500

PURIN
250341.15N
0513314.61E

KUTER
250149.00N
0512807.93E
6000
MAX 230 KIAS

LUBET 2S
TULUB 2S
ALVEN 3S
LUBET 2S
TULUB 2S
ALVEN 3S
LUBET 2S

R53 3000 SFC
R51 3000 SFC
R55 3000 SFC
R62 13000 SFC
R64 5000 SFC
R52 UNL SFC
R58 3000 SFC
R56 5000 SFC
D29 500 SFC
R61 3000 SFC
P43 15000 SFC
P48 UNL SFC
P49 1500 SFC
P47 5000 SFC
P44 1500 SFC
P45 1500 SFC
R60 1000 SFC

Hamad Intl.
Doha Intl.
Al-Udaid

COM FAILURE
In case of communication failure:
- Squawk 7600.
- Climb to 3000ft or last assigned and acknowledged ALT/FL, whichever is higher.
- Leave last assigned and acknowledged ALT/FL three minutes after reaching the ALT/FL or after selecting the squawk code, whichever is later.
- Continue climb to FPL FL and proceed to first en-route point according to FPL.

GENERAL INFORMATION:
- Close-in obstacles exist right side of RCL up to 112ft AMSL.
- Initial climb altitude 6000ft. Further climb by ATC instruction only.

(1) When passing 500 but not before EMORA, turn right direct to PURIN.

(2) Further climb clearance by ATC.

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

STANDARD DEPARTURE
CHART - INSTRUMENT
(SID) - ICAO

DOHA/Doha Intl. (OTBD)
RNP RWY 15
ALVEN 3S / LUBET 2S / TULUB 2S

TABULAR DESCRIPTION

RNP SID ALVEN 3S

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	EMORA	Y	156 (158.2)	-2.6	2.0	-	-	-	-	RNP1
2	CA	-	-	156 (158.2)	-2.6	-	-	+500	-	-	RNP1
3	DF	PURIN	-	-	-2.6	-	R	-	-	-	RNP1
4	TF	KUTER	-	246 (248.1)	-2.6	5.0	-	@6000	-230	-	RNP1
5	TF	GIRKA	-	336 (338.1)	-2.6	17.0	-	+10000	-	-	RNP1
6	TF	KOBAT	-	066 (068.1)	-2.6	11.9	-	+12000	-	-	RNP1
7	TF	PASIS	-	035 (038.0)	-2.6	12.4	-	-	-	-	RNP1
8	TF	GIBIN	-	013 (015.6)	-2.6	8.5	-	-	-	-	RNP1
9	TF	ALVEN	-	027 (029.7)	-2.6	16.3	-	-FL150	-	-	RNP1
Remarks	ALVEN -FL150 by ATC only										

RNP SID LUBET 2S

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	EMORA	Y	156 (158.2)	-2.6	2.0	-	-	-	-	RNP1
2	CA	-	-	156 (158.2)	-2.6	-	-	+500	-	-	RNP1
3	DF	PURIN	-	-	-2.6	-	R	-	-	-	RNP1
4	TF	KUTER	-	246 (248.1)	-2.6	5.0	-	@6000	-230	-	RNP1
5	TF	GIRKA	-	336 (338.1)	-2.6	17.0	-	+10000	-	-	RNP1
6	TF	KOBAT	-	066 (068.1)	-2.6	11.9	-	+12000	-	-	RNP1
7	TF	PASIS	-	035 (038.0)	-2.6	12.4	-	-	-	-	RNP1
8	TF	GIBIN	-	013 (015.6)	-2.6	8.5	-	-	-	-	RNP1
9	TF	EMISA	-	341 (343.9)	-2.6	7.1	-	-	-	-	RNP1
10	TF	IMSUN	-	335 (337.5)	-2.6	8.4	-	-FL170	-	-	RNP1
11	TF	MISEL	-	296 (298.2)	-2.6	30.3	-	-	-	-	RNP1
12	TF	LUBET	-	318 (320.6)	-2.6	7.2	-	+FL180	-	-	RNP1
Remarks	LUBET +FL180 by ATC only										

RNP SID TULUB 2S

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	EMORA	Y	156 (158.2)	-2.6	2.0	-	-	-	-	RNP 1
2	CA	-	-	156 (158.2)	-2.6	-	-	+500	-	-	RNP 1
3	DF	PURIN	-	-	-2.6	-	R	-	-	-	RNP 1
4	TF	KUTER	-	246 (248.1)	-2.6	5.0	-	@6000	-230	-	RNP 1
5	TF	GIRKA	-	336 (338.1)	-2.6	17.0	-	+9000	-	-	RNP 1
6	TF	ENELI	-	013 (016.0)	-2.6	12.8	-	-12000	-	-	RNP 1
7	TF	KOBEN	-	037 (039.5)	-2.6	12.1	-	@FL150	-	-	RNP 1
8	TF	ALNAK	-	359 (002.1)	-2.6	11.5	-	-	-	-	RNP 1
9	TF	PATOM	-	296 (298.2)	-2.6	15.8	-	-	-	-	RNP 1
10	TF	TULUB	-	295 (297.4)	-2.6	18.2	-	+FL180	-	-	RNP1
Remarks	TULUB +FL180 by ATC only										

WAYPOINT LIST

RNP SID ALVEN 3S / LUBET 2S / TULUB 2S	
Waypoint Identifier	**Coordinates**
EMORA	251230.70N 0513517.69E
PURIN	250341.15N 0513314.61E
KUTER	250149.00N 0512807.93E
GIRKA	251738.38N 0512108.29E
KOBAT	252205.76N 0513320.35E
PASIS	253154.63N 0514146.81E
GIBIN	254006.23N 0514417.85E
ALVEN	255418.19N 0515315.30E

RNP SID ALVEN 3S / LUBET 2S / TULUB 2S	
Waypoint Identifier	**Coordinates**
EMISA	254658.35N 0514206.68E
IMSUN	255445.54N 0513833.11E
MISEL	260906.55N 0510850.78E
LUBET	261440.67N 0510346.54E
ENELI	252959.45N 0512502.14E
KOBEN	253921.98N 0513334.39E
ALNAK	255053.49N 0513401.89E
PATOM	255821.41N 0511836.36E
TULUB	260644.00N 0510041.00E

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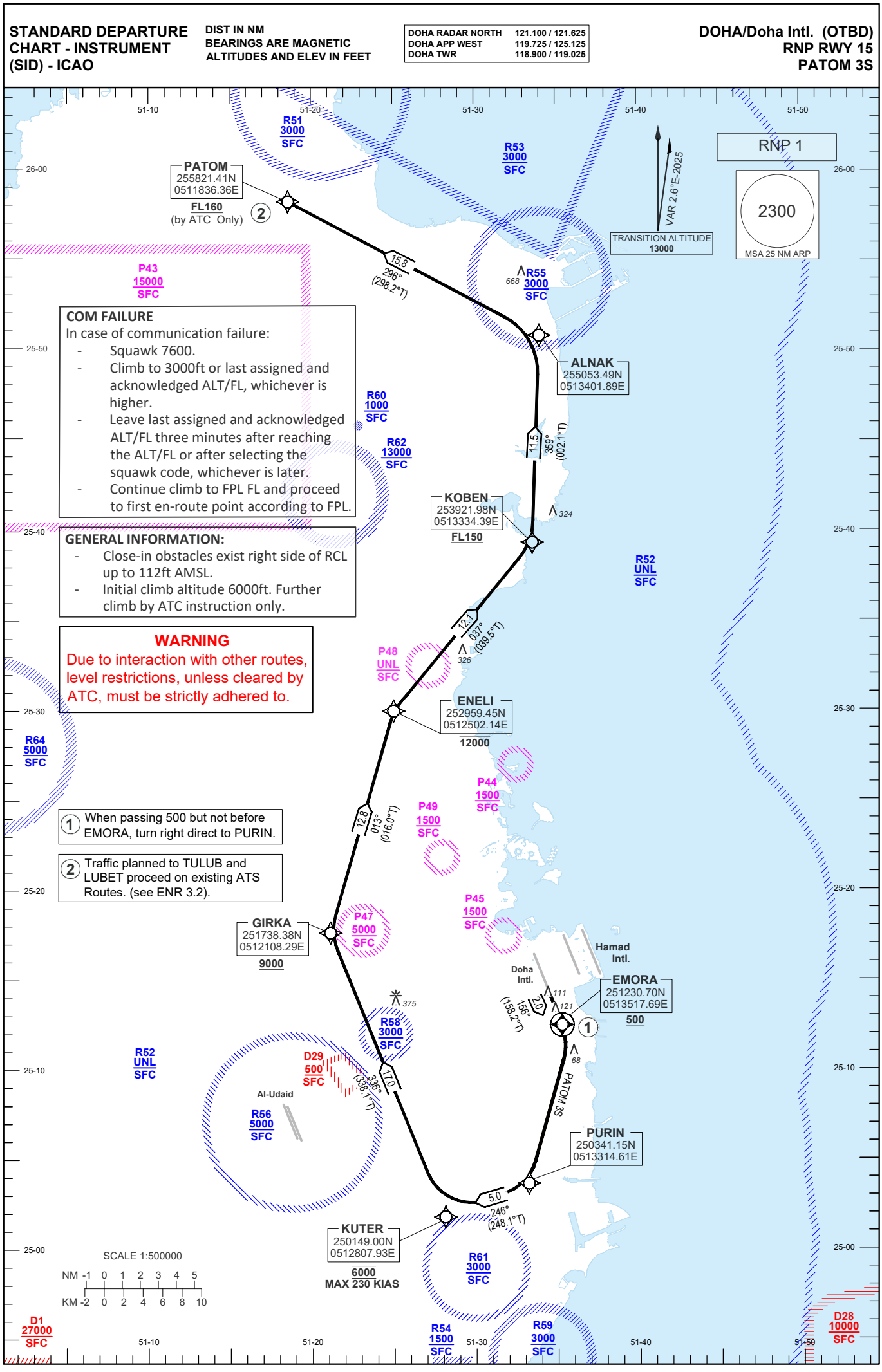
STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET

DOHA RADAR NORTH	121.100 / 121.625
DOHA APP WEST	119.725 / 125.125
DOHA TWR	118.900 / 119.025

DOHA/Doha Intl. (OTBD)
RNP RWY 15
PATOM 3S



COM FAILURE
In case of communication failure:
- Squawk 7600.
- Climb to 3000ft or last assigned and acknowledged ALT/FL, whichever is higher.
- Leave last assigned and acknowledged ALT/FL three minutes after reaching the ALT/FL or after selecting the squawk code, whichever is later.
- Continue climb to FPL FL and proceed to first en-route point according to FPL.

GENERAL INFORMATION:
- Close-in obstacles exist right side of RCL up to 112ft AMSL.
- Initial climb altitude 6000ft. Further climb by ATC instruction only.

WARNING
Due to interaction with other routes, level restrictions, unless cleared by ATC, must be strictly adhered to.

(1) When passing 500 but not before EMORA, turn right direct to PURIN.

(2) Traffic planned to TULUB and LUBET proceed on existing ATS Routes. (see ENR 3.2).

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DOHA/Doha Intl. (OTBD)
RNP RWY 15
PATOM 3S

TABULAR DESCRIPTION

RNP SID PATOM 3S

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	EMORA	Y	156 (158.2)	-2.6	2.0	-	-	-	-	RNP 1
2	CA	-	-	156 (158.2)	-2.6	-	-	+500	-	-	RNP 1
3	DF	PURIN	-	-	-2.6	-	R	-	-	-	RNP 1
4	TF	KUTER	-	246 (248.1)	-2.6	5.0	-	@6000	-230	-	RNP 1
5	TF	GIRKA	-	336 (338.1)	-2.6	17.0	-	+9000	-	-	RNP 1
6	TF	ENELI	-	013 (016.0)	-2.6	12.8	-	-12000	-	-	RNP 1
7	TF	KOBEN	-	037 (039.5)	-2.6	12.1	-	+FL150	-	-	RNP 1
8	TF	ALNAK	-	359 (002.1)	-2.6	11.5	-	-	-	-	RNP 1
9	TF	PATOM	-	296 (298.2)	-2.6	15.8	-	+FL160	-	-	RNP 1
Remarks	PATOM +FL160 by ATC only										

WAYPOINT LIST

RNP SID PATOM 3S

Waypoint Identifier	Coordinates
EMORA	251230.70N 0513517.69E
PURIN	250341.15N 0513314.61E
KUTER	250149.00N 0512807.93E
GIRKA	251738.38N 0512108.29E
ENELI	252959.45N 0512502.14E
KOBEN	253921.98N 0513334.39E
ALNAK	255053.49N 0513401.89E
PATOM	255821.41N 0511836.36E

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STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET

DOHA RADAR NORTH	121.100 / 121.625
DOHA RADAR SOUTH	120.675 / 119.150
DOHA APP WEST	119.725 / 125.125
DOHA APP EAST	124.775 / 120.600
DOHA TWR	118.900 / 119.025

DOHA/Doha Intl. (OTBD)
RNP RWY 33
ALVEN 4N / LUBET 3N / TULUB 3N

RNP 1

2300
MSA 25 NM ARP

VAR 2.6°E-2025

TRANSITION ALTITUDE
13000

LUBET
261440.67N
0510346.54E
FL180
(by ATC Only)

MISEL
260906.55N
0510850.78E

TULUB
260644.00N
0510041.00E
FL180
(by ATC Only)

PATOM
255821.41N
0511836.36E

IMSUN
255445.54N
0513833.11E
FL170
(by ATC Only)

ALVEN
255418.19N
0515315.30E
FL150
(by ATC Only)

ALNAK
255053.49N
0513401.89E

EMISA
254658.35N
0514206.68E

KOBEN
253921.98N
0513334.39E

GIBIN
254006.23N
0514417.85E

DEMBO
253453.32N
0513932.53E

SOKEN
252704.81N
0513225.39E

REVIN
252809.09N
0513754.68E

ULDOR
252210.12N
0512740.83E
2500
MAX 210 KIAS

SILSU
251845.91N
0513232.29E

KIPIK
251317.45N
0512900.51E
5000
MAX 230 KIAS

EGMED
251459.66N
0513634.80E
MAX 250 KIAS

Doha Intl.
Hamad Intl.

R53 3000 SFC
R51 3000 SFC
R55 3000 SFC
R60 1000 SFC
R62 13000 SFC
R64 5000 SFC
R52 UNL SFC
R56 5000 SFC
R58 3000 SFC
P43 15000 SFC
P44 1500 SFC
P45 1500 SFC
P47 5000 SFC
P48 UNL SFC
P49 1500 SFC
D29 500 SFC

COM FAILURE
In case of communication failure:
- Squawk 7600.
- Climb to 3000ft or last assigned and acknowledged ALT/FL, whichever is higher.
- Leave last assigned and acknowledged ALT/FL three minutes after reaching the ALT/FL or after selecting the squawk code, whichever is later.
- Continue climb to FPL FL and proceed to first en-route point according to FPL.

GENERAL INFORMATION:
- Close-in obstacles exist each side of RCL up to 135ft AMSL.
- 6.5% CG required to 1100ft.
- Initial climb altitude 5000ft. Further climb by ATC instruction only.

WARNING
Due to interaction with other routes, level restrictions, unless cleared by ATC, must be strictly adhered to.

(1) CTN: P47 SFC/5000ft.
Do not fly west of track 142° to KIPIK.
25° BANK OR STANDARD RATE REQUIRED.

SCALE 1:500000
NM -1 0 1 2 3 4 5
KM -2 0 2 4 6 8 10

STANDARD DEPARTURE
CHART - INSTRUMENT
(SID) - ICAO

DOHA/Doha Intl. (OTBD)
RNP RWY 33
ALVEN 4N / LUBET 3N / TULUB 3N

TABULAR DESCRIPTION

RNP SID ALVEN 4N

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	SILSU	Y	336 (338.2)	-2.6	2.0	-	-	-	-	RNP 1
2	CF	ULDOR	Y	305 (307.6)	-2.6	5.6	-	+2500	-210	-	RNP 1
3	DF	KIPIK	-	-	-2.6	-	L	@5000	-230	-	RNP 1
4	TF	EGMED	-	073 (076.1)	-2.6	7.1	-	-	-250	-	RNP 1
5	TF	REVIN	-	003 (005.2)	-2.6	13.2	-	-	-	-	RNP 1
6	TF	DEMBO	-	010 (012.4)	-2.6	6.9	-	-	-	-	RNP 1
7	TF	GIBIN	-	037 (039.6)	-2.6	6.7	-	-	-	-	RNP 1
8	TF	ALVEN	-	027 (029.7)	-2.6	16.3	-	-FL150	-	-	RNP 1
Remarks	ALVEN -FL150 by ATC only										

RNP SID LUBET 3N

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	SILSU	Y	336 (338.2)	-2.6	2.0	-	-	-	-	RNP 1
2	CF	ULDOR	Y	305 (307.6)	-2.6	5.6	-	+2500	-210	-	RNP 1
3	DF	KIPIK	-	-	-2.6	-	L	@5000	-230	-	RNP 1
4	TF	EGMED	-	073 (076.1)	-2.6	7.1	-	-	-250	-	RNP 1
5	TF	REVIN	-	003 (005.2)	-2.6	13.2	-	-	-	-	RNP 1
6	TF	DEMBO	-	010 (012.4)	-2.6	6.9	-	-	-	-	RNP 1
7	TF	EMISA	-	008 (010.9)	-2.6	12.3	-	-	-	-	RNP 1
8	TF	IMSUN	-	335 (337.5)	-2.6	8.4	-	-FL170	-	-	RNP 1
9	TF	MISEL	-	296 (298.2)	-2.6	30.3	-	-	-	-	RNP 1
10	TF	LUBET	-	318 (320.6)	-2.6	7.2	-	+FL180	-	-	RNP 1
Remarks	IMSUN -FL170 and LUBET +FL180 by ATC only										

RNP SID TULUB 3N

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	SILSU	Y	336 (338.2)	-2.6	2.0	-	-	-	-	RNP 1
2	CF	ULDOR	Y	305 (307.6)	-2.6	5.6	-	+2500	-210	-	RNP 1
3	DF	KIPIK	-	-	-2.6	-	L	@5000	-230	-	RNP 1
4	TF	EGMED	-	073 (076.1)	-2.6	7.1	-	-	-250	-	RNP 1
5	TF	SOKEN	-	340 (342.7)	-2.6	12.6	-	-	-	-	RNP 1
6	TF	KOBEN	-	002 (004.8)	-2.6	12.3	-	-	-	-	RNP 1
7	TF	ALNAK	-	359 (002.1)	-2.6	11.5	-	-	-	-	RNP 1
8	TF	PATOM	-	296 (298.2)	-2.6	15.8	-	-	-	-	RNP 1
9	TF	TULUB	-	295 (297.4)	-2.6	18.2	-	+FL180	-	-	RNP 1
Remarks	TULUB +FL180 by ATC only										

WAYPOINT LIST

RNP SID ALVEN 4N / LUBET 3N / TULUB 3N	
Waypoint Identifier	Coordinates
SILSU	251845.91N 0513232.29E
ULDOR	252210.12N 0512740.83E
KIPIK	251317.45N 0512900.51E
EGMED	251459.66N 0513634.80E
REVIN	252809.09N 0513754.68E
DEMBO	253453.32N 0513932.53E
GIBIN	254006.23N 0514417.85E
ALVEN	255418.19N 0515315.30E
EMISA	254658.35N 0514206.68E
IMSUN	255445.54N 0513833.11E

RNP SID ALVEN 4N / LUBET 3N / TULUB 3N	
Waypoint Identifier	Coordinates
MISEL	260906.55N 0510850.78E
LUBET	261440.67N 0510346.54E
SOKEN	252704.81N 0513225.39E
KOBEN	253921.98N 0513334.39E
ALNAK	255053.49N 0513401.89E
PATOM	255821.41N 0511836.36E
TULUB	260644.00N 0510041.00E

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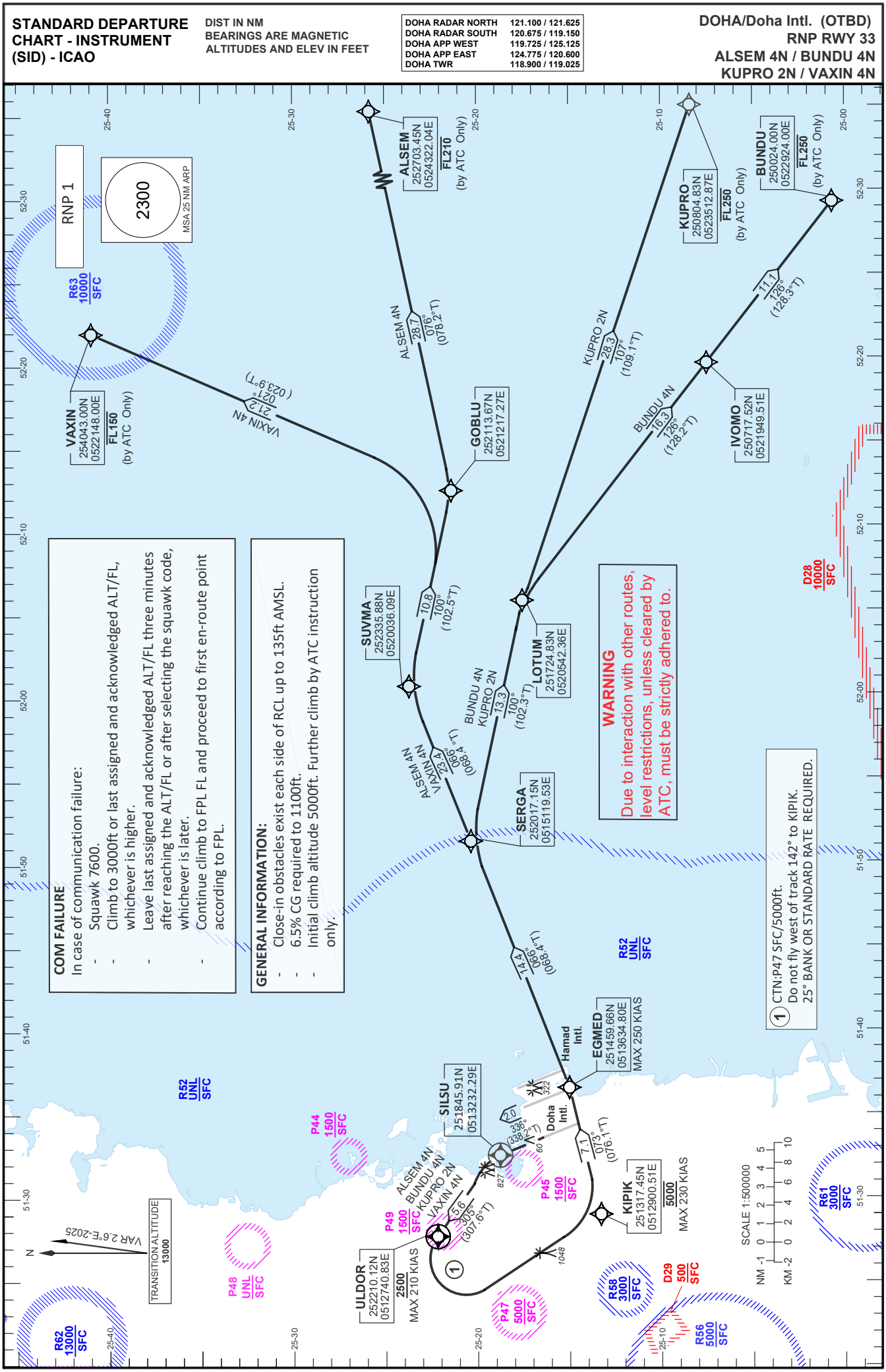
STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO
DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET
DOHA RADAR NORTH 121.100 / 121.625
DOHA RADAR SOUTH 120.675 / 119.150
DOHA APP WEST 119.725 / 125.125
DOHA APP EAST 124.775 / 120.600
DOHA TWR 118.900 / 119.025
DOHA/Doha Intl. (OTBD)
RNP RWY 33
ALSEM 4N / BUNDU 4N
KUPRO 2N / VAXIN 4N
RNP 1
2300
MSA 25 NM ARP
R63 10000 SFC
VAXIN 254043.00N 0522148.00E FL150 (by ATC Only)
ALSEM 252703.45N 0524322.04E FL210 (by ATC Only)
KUPRO 250804.83N 0523512.87E FL250 (by ATC Only)
BUNDU 250024.00N 0522924.00E FL250 (by ATC Only)
IVOMO 250717.52N 0521949.51E
GOBLU 252113.67N 0521217.27E
SUVMA 252335.88N 0520036.09E
LOTUM 251724.83N 0520542.36E
SERGA 252017.15N 0515119.53E
EGMED 251459.66N 0513634.80E MAX 250 KIAS
SILSU 251845.91N 0513232.29E
KIPIK 251317.45N 0512900.51E 5000 MAX 230 KIAS
ULDOR 252210.12N 0512740.83E 2500 MAX 210 KIAS
VAXIN 4N 21.2 021° (023.9°T)
ALSEM 4N 28.7 076° (078.2°T)
KUPRO 2N 28.3 107° (109.1°T)
BUNDU 4N 16.3 126° (128.2°T)
11.1 126° (128.3°T)
10.8 100° (102.5°T)
BUNDU 4N KUPRO 2N 13.3 100° (102.3°T)
ALSEM 4N VAXIN 4N 23.4 066° (068.4°T)
14.4 066° (068.4°T)
7.1 073° (076.1°T)
2.0 336° (338.3°T)
15.6 305° (307.6°T)
COM FAILURE
In case of communication failure:
- Squawk 7600.
- Climb to 3000ft or last assigned and acknowledged ALT/FL, whichever is higher.
- Leave last assigned and acknowledged ALT/FL three minutes after reaching the ALT/FL or after selecting the squawk code, whichever is later.
- Continue climb to FPL FL and proceed to first en-route point according to FPL.
GENERAL INFORMATION:
- Close-in obstacles exist each side of RCL up to 135ft AMSL.
- 6.5% CG required to 1100ft.
- Initial climb altitude 5000ft. Further climb by ATC instruction only.
WARNING
Due to interaction with other routes, level restrictions, unless cleared by ATC, must be strictly adhered to.
1 CTN:P47 SFC/5000ft.
Do not fly west of track 142° to KIPIK.
25° BANK OR STANDARD RATE REQUIRED.
R52 UNL SFC
P44 1500 SFC
P45 1500 SFC
P49 1500 SFC
P48 UNL SFC
P47 5000 SFC
R58 3000 SFC
D29 500 SFC
R56 5000 SFC
R62 13000 SFC
R61 3000 SFC
D28 10000 SFC
Hamad Intl.
Doha Intl.
VAR 2.6°E-2025
TRANSITION ALTITUDE 13000
SCALE 1:500000
NM -1 0 1 2 4 6 8 10
KM -2 0 2 4 6 8 10

STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DOHA/Doha Intl. (OTBD)
RNP RWY 33
ALSEM 4N / BUNDU 4N / KUPRO 2N / VAXIN 4N

TABULAR DESCRIPTION

RNP SID ALSEM 4N

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	SILSU	Y	336 (338.2)	-2.6	2.0	-	-	-	-	RNP 1
2	CF	ULDOR	Y	305 (307.6)	-2.6	5.6	-	+2500	-210	-	RNP 1
3	DF	KIPIK	-	-	-2.6	-	L	@5000	-230	-	RNP 1
4	TF	EGMED	-	073 (076.1)	-2.6	7.1	-	-	-250	-	RNP 1
5	TF	SUVMA	-	066 (068.4)	-2.6	23.4	-	-	-	-	RNP 1
6	TF	GOBLU	-	100 (102.5)	-2.6	10.8	-	-	-	-	RNP 1
7	TF	ALSEM	-	076 (078.2)	-2.6	28.7	-	-FL210	-	-	RNP 1
Remarks	ALSEM -FL210 by ATC only										

RNP SID BUNDU 4N

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	SILSU	Y	336 (338.2)	-2.6	2.0	-	-	-	-	RNP 1
2	CF	ULDOR	Y	305 (307.6)	-2.6	5.6	-	+2500	-210	-	RNP 1
3	DF	KIPIK	-	-	-2.6	-	L	@5000	-230	-	RNP 1
4	TF	EGMED	-	073 (076.1)	-2.6	7.1	-	-	-250	-	RNP 1
5	TF	SERGA	-	066 (068.4)	-2.6	14.4	-	-	-	-	RNP 1
6	TF	LOTUM	-	100 (102.3)	-2.6	13.3	-	-	-	-	RNP 1
7	TF	IVOMO	-	126 (128.2)	-2.6	16.3	-	-	-	-	RNP 1
8	TF	BUNDU	-	126 (128.3)	-2.6	11.1	-	-FL250	-	-	RNP 1
Remarks	BUNDU -FL250 by ATC only										

RNP SID KUPRO 2N

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	SILSU	Y	336 (338.2)	-2.6	2.0	-	-	-	-	RNP 1
2	CF	ULDOR	Y	305 (307.6)	-2.6	5.6	-	+2500	-210	-	RNP 1
3	DF	KIPIK	-	-	-2.6	-	L	@5000	-230	-	RNP 1
4	TF	EGMED	-	073 (076.1)	-2.6	7.1	-	-	-250	-	RNP 1
5	TF	SERGA	-	066 (068.4)	-2.6	14.4	-	-	-	-	RNP 1
6	TF	LOTUM	-	100 (102.3)	-2.6	13.3	-	-	-	-	RNP 1
7	TF	KUPRO	-	107 (109.1)	-2.6	28.3	-	-FL250	-	-	RNP 1
Remarks	KUPRO -FL250 by ATC only										

RNP SID VAXIN 4N

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	SILSU	Y	336 (338.2)	-2.6	2.0	-	-	-	-	RNP 1
2	CF	ULDOR	Y	305 (307.6)	-2.6	5.6	-	+2500	-210	-	RNP 1
3	DF	KIPIK	-	-	-2.6	-	L	@5000	-230	-	RNP 1
4	TF	EGMED	-	073 (076.1)	-2.6	7.1	-	-	-250	-	RNP 1
5	TF	SUVMA	-	066 (068.4)	-2.6	23.4	-	-	-	-	RNP 1
6	TF	GOBLU	-	100 (102.5)	-2.6	10.8	-	-	-	-	RNP 1
7	TF	VAXIN	-	021 (023.9)	-2.6	21.2	-	-FL150	-	-	RNP 1
Remarks	VAXIN -FL150 by ATC only										

WAYPOINT LIST

RNP SID ALSEM 4N / BUNDU 4N / KUPRO 2N / VAXIN 4N

Waypoint Identifier	Coordinates
SILSU	251845.91N 0513232.29E
ULDOR	252210.12N 0512740.83E
KIPIK	251317.45N 0512900.51E
EGMED	251459.66N 0513634.80E
SERGA	252017.15N 0515119.53E
LOTUM	251724.83N 0520542.36E
IVOMO	250717.52N 0521949.51E

RNP SID ALSEM 4N / BUNDU 4N / KUPRO 2N / VAXIN 4N

Waypoint Identifier	Coordinates
BUNDU	250024.00N 0522924.00E
KUPRO	250804.83N 0523512.87E
SUVMA	252335.88N 0520036.09E
GOBLU	252113.67N 0521217.27E
ALSEM	252703.45N 0524322.04E
VAXIN	254043.00N 0522148.00E

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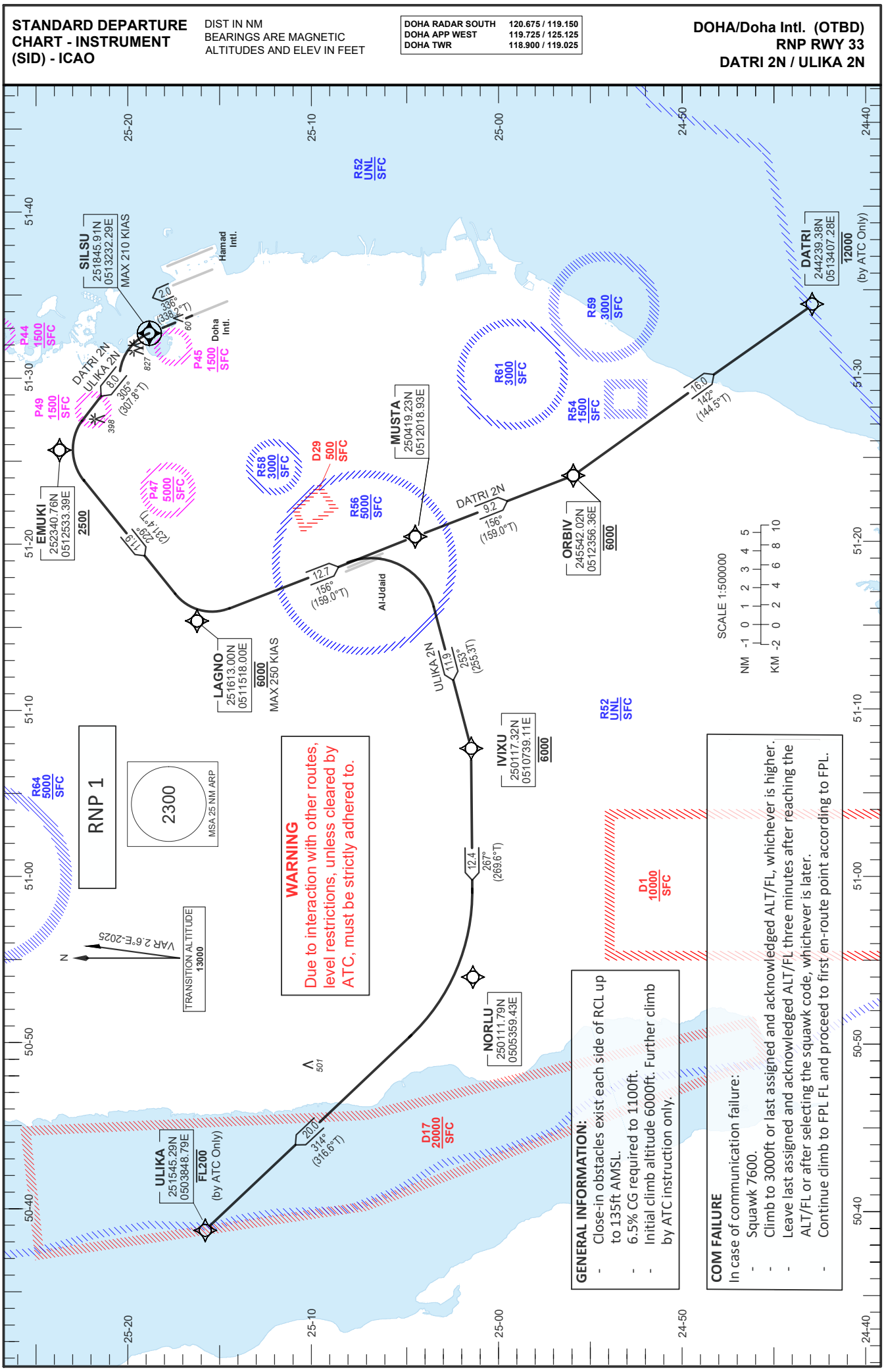
STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET

DOHA RADAR SOUTH	120.675 / 119.150
DOHA APP WEST	119.725 / 125.125
DOHA TWR	118.900 / 119.025

DOHA/Doha Intl. (OTBD)
RNP RWY 33
DATRI 2N / ULIKA 2N



STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DOHA/Doha Intl. (OTBD)
RNP RWY 33
DATRI 2N / ULIKA 2N

TABULAR DESCRIPTION

RNP SID DATRI 2N

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	SILSU	Y	336 (338.2)	-2.6	2.0	-	-	-210	-	RNP 1
2	CF	EMUKI	-	305 (307.8)	-2.6	8.0	-	+2500	-	-	RNP 1
3	TF	LAGNO	-	229 (231.4)	-2.6	11.9	-	@6000	-250	-	RNP 1
4	TF	MUSTA	-	156 (159.0)	-2.6	12.7	-	-	-	-	RNP 1
5	TF	ORBIV	-	156 (159.0)	-2.6	9.2	-	@6000	-	-	RNP 1
6	TF	DATRI	-	142 (144.5)	-2.6	16.0	-	-12000	-	-	RNP 1
Remarks	DATRI -12000 by ATC Only.										

RNP SID ULIKA 2N

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	SILSU	Y	336 (338.2)	-2.6	2.0	-	-	-210	-	RNP 1
2	CF	EMUKI	-	305 (307.8)	-2.6	8.0	-	+2500	-	-	RNP 1
3	TF	LAGNO	-	229 (231.4)	-2.6	11.9	-	@6000	-250	-	RNP 1
4	TF	MUSTA	-	156 (159.0)	-2.6	12.7	-	-	-	-	RNP 1
5	TF	IVIXU	-	253 (255.3)	-2.6	11.9	-	@6000	-	-	RNP 1
6	TF	NORLU	-	267 (269.6)	-2.6	12.4	-	-	-	-	RNP 1
7	TF	ULIKA	-	314 (316.6)	-2.6	20.0	-	-FL200	-	-	RNP 1
Remarks	ULIKA -FL200 by ATC only										

WAYPOINT LIST

RNP SID DATRI 2N / ULIKA 2N

Waypoint Identifier	Coordinates
SILSU	251845.91N 0513232.29E
EMUKI	252340.76N 0512533.39E
LAGNO	251613.00N 0511518.00E
MUSTA	250419.23N 0512018.93E
ORBIV	245542.02N 0512356.36E
DATRI	244239.38N 0513407.28E
IVIXU	250117.32N 0510739.11E
NORLU	250111.79N 0505359.43E
ULIKA	251545.29N 0503848.79E

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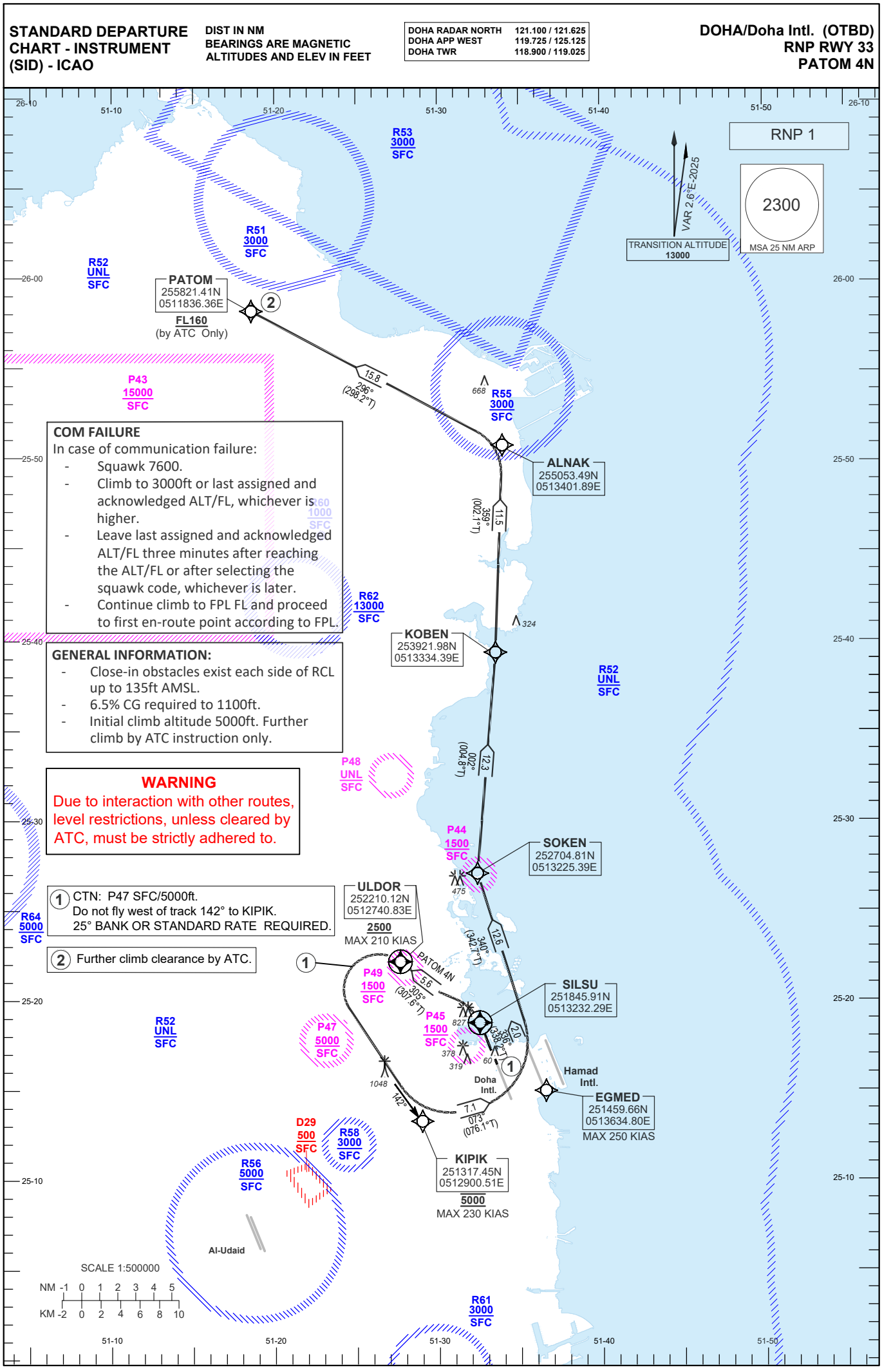
STANDARD DEPARTURE CHART - INSTRUMENT (SID) - ICAO

DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET

DOHA RADAR NORTH	121.100 / 121.625
DOHA APP WEST	119.725 / 125.125
DOHA TWR	118.900 / 119.025

DOHA/Doha Intl. (OTBD)
RNP RWY 33
PATOM 4N



COM FAILURE
In case of communication failure:
- Squawk 7600.
- Climb to 3000ft or last assigned and acknowledged ALT/FL, whichever is higher.
- Leave last assigned and acknowledged ALT/FL three minutes after reaching the ALT/FL or after selecting the squawk code, whichever is later.
- Continue climb to FPL FL and proceed to first en-route point according to FPL.

GENERAL INFORMATION:
- Close-in obstacles exist each side of RCL up to 135ft AMSL.
- 6.5% CG required to 1100ft.
- Initial climb altitude 5000ft. Further climb by ATC instruction only.

WARNING
Due to interaction with other routes, level restrictions, unless cleared by ATC, must be strictly adhered to.

(1) CTN: P47 SFC/5000ft.
Do not fly west of track 142° to KIPIK.
25° BANK OR STANDARD RATE REQUIRED.

(2) Further climb clearance by ATC.

STANDARD DEPARTURE
CHART - INSTRUMENT
(SID) - ICAO

DOHA/Doha Intl. (OTBD)
RNP RWY 33
PATOM 4N

TABULAR DESCRIPTION

RNP SID PATOM 4N											
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	**SILSU**	Y	336 (338.2)	-2.6	2.0	-	-	-	-	RNP 1
2	CF	**ULDOR**	Y	305 (307.6)	-2.6	5.6	-	+2500	-210	-	RNP 1
3	DF	**KIPIK**	-	-	-2.6	-	L	@5000	-230	-	RNP 1
4	TF	**EGMED**	-	073 (076.1)	-2.6	7.1	-	-	-250	-	RNP 1
5	TF	**SOKEN**	-	340 (342.7)	-2.6	12.6	-	-	-	-	RNP 1
6	TF	**KOBEN**	-	002 (004.8)	-2.6	12.3	-	-	-	-	RNP 1
7	TF	**ALNAK**	-	359 (002.1)	-2.6	11.5	-	-	-	-	RNP 1
8	TF	**PATOM**	-	296 (298.2)	-2.6	15.8	-	+FL160	-	-	RNP 1
Remarks	PATOM +FL160 by ATC only										

WAYPOINT LIST

RNP SID PATOM 4N	
Waypoint Identifier	**Coordinates**
SILSU	251845.91N 0513232.29E
ULDOR	252210.12N 0512740.83E
KIPIK	251317.45N 0512900.51E
EGMED	251459.66N 0513634.80E
SOKEN	252704.81N 0513225.39E
KOBEN	253921.98N 0513334.39E
ALNAK	255053.49N 0513401.89E
PATOM	255821.41N 0511836.36E

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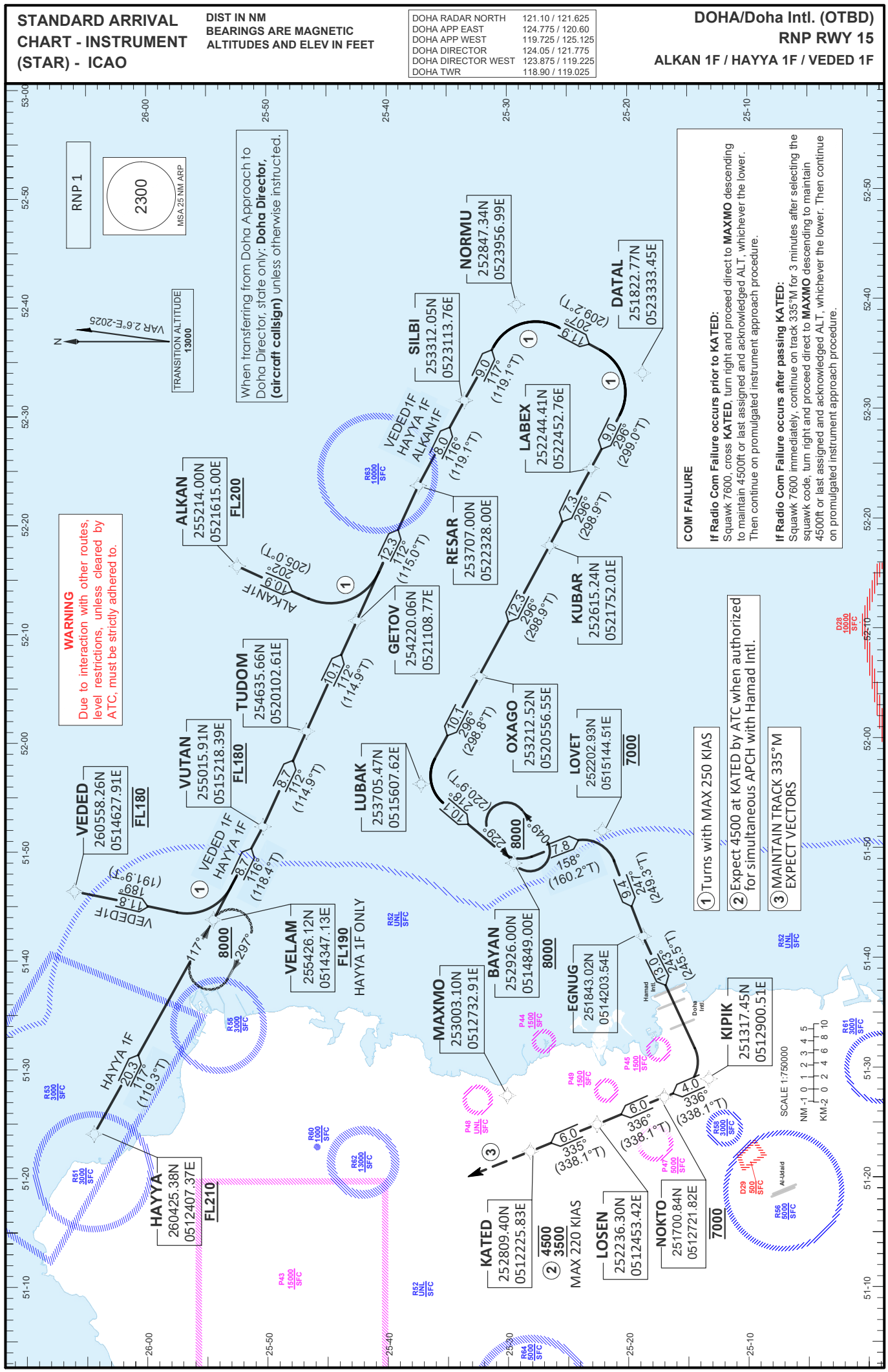
STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET

DOHA RADAR NORTH	121.10 / 121.625
DOHA APP EAST	124.775 / 120.60
DOHA APP WEST	119.725 / 125.125
DOHA DIRECTOR	124.05 / 121.775
DOHA DIRECTOR WEST	123.875 / 119.225
DOHA TWR	118.90 / 119.025

DOHA/Doha Intl. (OTBD)
RNP RWY 15
ALKAN 1F / HAYYA 1F / VEDED 1F



STANDARD ARRIVAL
CHART - INSTRUMENT
(STAR) - ICAO

DOHA/Doha Intl.(OTBD)
RNP RWY 15
ALKAN 1F / HAYYA 1F / VEDED 1F

TABULAR DESCRIPTION

RNP STAR ALKAN 1F

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	ALKAN	-	-	-2.6	-	-	+ FL200	-	-	RNP 1
2	TF	GETOV	-	202 (205.0)	-2.6	10.9	-	-	-250	-	RNP 1
3	TF	RESAR	-	112 (115.0)	-2.6	12.3	-	-	-	-	RNP 1
4	TF	SILBI	-	116 (119.1)	-2.6	8.0	-	-	-	-	RNP 1
5	TF	NORMU	-	117 (119.1)	-2.6	9.0	-	-	-250	-	RNP 1
6	TF	DATAL	-	207 (209.2)	-2.6	11.9	-	-	-250	-	RNP 1
7	TF	LABEX	-	296 (299.0)	-2.6	9.0	-	-	-	-	RNP 1
8	TF	KUBAR	-	296 (298.9)	-2.6	7.3	-	-	-	-	RNP 1
9	TF	OXAGO	-	296 (298.9)	-2.6	12.3	-	-	-	-	RNP 1
10	TF	LUBAK	-	296 (298.8)	-2.6	10.1	-	-	-	-	RNP 1
11	TF	BAYAN	-	218 (220.9)	-2.6	10.1	-	+8000	-	-	RNP 1
12	TF	LOVET	-	158 (160.2)	-2.6	7.8	-	@7000	-	-	RNP 1
13	TF	EGNUG	-	247 (249.3)	-2.6	9.4	-	-	-	-	RNP 1
14	TF	KIPIK	-	243 (245.5)	-2.6	13.0	-	-	-	-	RNP 1
15	TF	NOKTO	-	336 (338.1)	-2.6	4.0	-	@7000	-	-	RNP 1
16	TF	LOSEN	-	336 (338.1)	-2.6	6.0	-	-	-	-	RNP 1
17	TF	KATED	-	335 (338.1)	-2.6	6.0	-	+3500/-4500	-220	-	RNP 1
18	FM	KATED	-	335 (338.1)	-2.6	-	-	-	-220	-	RNP 1
Remarks		Expect 4500ft at KATED by ATC when authorized for simultaneous APCH with OTHH.									

RNP STAR HAYYA 1F

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	HAYYA	-	-	-2.6	-	-	+ FL210	-	-	RNP 1
2	TF	VELAM	-	117 (119.3)	-2.6	20.3	-	+FL190	-	-	RNP 1
3	TF	VUTAN	-	116 (118.4)	-2.6	8.7	-	+ FL180	-	-	RNP 1
4	TF	TUDOM	-	112 (114.9)	-2.6	8.7	-	-	-	-	RNP 1
5	TF	GETOV	-	112 (114.9)	-2.6	10.1	-	-	-	-	RNP 1
6	TF	RESAR	-	112 (115.0)	-2.6	12.3	-	-	-	-	RNP 1
7	TF	SILBI	-	116 (119.1)	-2.6	8.0	-	-	-	-	RNP 1
8	TF	NORMU	-	117 (119.1)	-2.6	9.0	-	-	-250	-	RNP 1
9	TF	DATAL	-	207 (209.2)	-2.6	11.9	-	-	-250	-	RNP 1
10	TF	LABEX	-	296 (299.0)	-2.6	9.0	-	-	-	-	RNP 1
11	TF	KUBAR	-	296 (298.9)	-2.6	7.3	-	-	-	-	RNP 1
12	TF	OXAGO	-	296 (298.9)	-2.6	12.3	-	-	-	-	RNP 1
13	TF	LUBAK	-	296 (298.8)	-2.6	10.1	-	-	-	-	RNP 1
14	TF	BAYAN	-	218 (220.9)	-2.6	10.1	-	+8000	-	-	RNP 1
15	TF	LOVET	-	158 (160.2)	-2.6	7.8	-	@7000	-	-	RNP 1
16	TF	EGNUG	-	247 (249.3)	-2.6	9.4	-	-	-	-	RNP 1
17	TF	KIPIK	-	243 (245.5)	-2.6	13.0	-	-	-	-	RNP 1
18	TF	NOKTO	-	336 (338.1)	-2.6	4.0	-	@7000	-	-	RNP 1
19	TF	LOSEN	-	336 (338.1)	-2.6	6.0	-	-	-	-	RNP 1
20	TF	KATED	-	335 (338.1)	-2.6	6.0	-	+3500/-4500	-220	-	RNP 1
21	FM	KATED	-	335 (338.1)	-2.6	-	-	-	-220	-	RNP 1
Remarks		Expect 4500ft at KATED by ATC when authorized for simultaneous APCH with OTHH.									

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RNP STAR VEDED 1F											
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	**VEDED**	**-**	-	-2.6	-	**-**	@ FL180	-	**-**	RNP 1
2	TF	**VELAM**	**-**	189 (191.9)	-2.6	11.8	-	-	-250	**-**	RNP 1
3	TF	**VUTAN**	-	116 (118.4)	-2.6	8.7	-	+ FL180	-	-	RNP 1
4	TF	**TUDOM**	-	112 (114.9)	-2.6	8.7	-	-	-	-	RNP 1
5	TF	**GETOV**	-	112 (114.9)	-2.6	10.1	-	-	-	-	RNP 1
6	TF	**RESAR**	-	112 (115.0)	-2.6	12.3	-	-	-	-	RNP 1
7	TF	**SILBI**	-	116 (119.1)	-2.6	8.0	-	-	-	-	RNP 1
8	TF	**NORMU**	-	117 (119.1)	-2.6	9.0	-	-	-250	-	RNP 1
9	TF	**DATAL**	-	207 (209.2)	-2.6	11.9	-	-	-250	-	RNP 1
10	TF	**LABEX**	-	296 (299.0)	-2.6	9.0	-	-	-	-	RNP 1
11	TF	**KUBAR**	-	296 (298.9)	-2.6	7.3	-	-	-	-	RNP 1
12	TF	**OXAGO**	-	296 (298.9)	-2.6	12.3	-	-	-	-	RNP 1
13	TF	**LUBAK**	-	296 (298.8)	-2.6	10.1	-	-	-	-	RNP 1
14	TF	**BAYAN**	-	218 (220.9)	-2.6	10.1	-	+8000	-	-	RNP 1
15	TF	**LOVET**	-	158 (160.2)	-2.6	7.8	-	@7000	-	-	RNP 1
16	TF	**EGNUG**	-	247 (249.3)	-2.6	9.4	-	-	-	-	RNP 1
17	TF	**KIPIK**	-	243 (245.5)	-2.6	13.0	-	-	-	-	RNP 1
18	TF	**NOKTO**	-	336 (338.1)	-2.6	4.0	-	@7000	-	-	RNP 1
19	TF	**LOSEN**	-	336 (338.1)	-2.6	6.0	-	-	-	-	RNP 1
20	TF	**KATED**	-	335 (338.1)	-2.6	6.0	-	+3500/-4500	-220	-	RNP 1
21	FM	**KATED**	-	335 (338.1)	-2.6	-	-	-	-220	-	RNP 1
Remarks		**Expect 4500ft at KATED by ATC when authorized for simultaneous APCH with OTHH.**									

WAYPOINT LIST

RNP STAR ALKAN 1F / HAYYA 1F / VEDED 1F	
Waypoint Identifier	**Coordinates**
ALKAN	255214.00N 0521615.00E
GETOV	254220.06N 0521108.77E
RESAR	253707.00N 0522328.00E
SILBI	253312.05N 0523113.76E
NORMU	252847.34N 0523956.99E
DATAL	251822.77N 0523333.45E
LABEX	252244.41N 0522452.76E
KUBAR	252615.24N 0521752.01E
OXAGO	253212.52N 0520556.55E
LUBAK	253705.47N 0515607.62E
BAYAN	252926.00N 0514849.00E

RNP STAR ALKAN 1F / HAYYA 1F / VEDED 1F	
Waypoint Identifier	**Coordinates**
LOVET	252202.93N 0515144.51E
EGNUG	251843.02N 0514203.54E
KIPIK	251317.45N 0512900.51E
NOKTO	251700.84N 0512721.82E
LOSEN	252236.30N 0512453.42E
KATED	252809.40N 0512225.83E
HAYYA	260425.38N 0512407.37E
VELAM	255426.12N 0514347.13E
VUTAN	255015.91N 0515218.39E
TUDOM	254635.66N 0520102.61E
VEDED	260558.26N 0514627.91E

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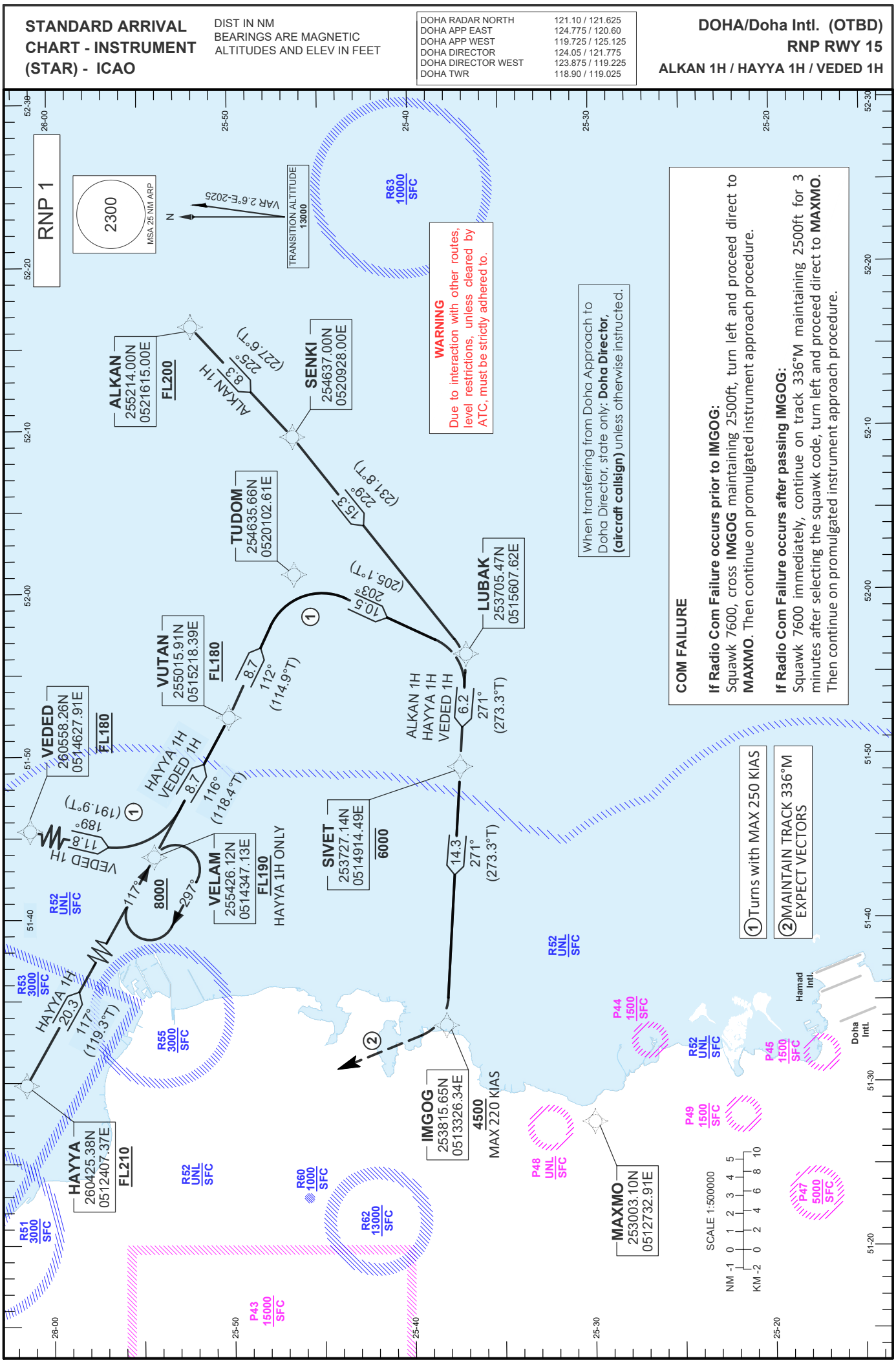
STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO
DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET
DOHA RADAR NORTH 121.10 / 121.625
DOHA APP EAST 124.775 / 120.60
DOHA APP WEST 119.725 / 125.125
DOHA DIRECTOR 124.05 / 121.775
DOHA DIRECTOR WEST 123.875 / 119.225
DOHA TWR 118.90 / 119.025
DOHA/Doha Intl. (OTBD)
RNP RWY 15
ALKAN 1H / HAYYA 1H / VEDED 1H
RNP 1
2300
MSA 25 NM ARP
VAR 2.6°E-2025
TRANSITION ALTITUDE 13000
WARNING
Due to interaction with other routes, level restrictions, unless cleared by ATC, must be strictly adhered to.
When transferring from Doha Approach to Doha Director, state only: Doha Director, (aircraft callsign) unless otherwise instructed.
COM FAILURE
If Radio Com Failure occurs prior to IMGOG:
Squawk 7600, cross IMGOG maintaining 2500ft, turn left and proceed direct to MAXMO. Then continue on promulgated instrument approach procedure.
If Radio Com Failure occurs after passing IMGOG:
Squawk 7600 immediately, continue on track 336°M maintaining 2500ft for 3 minutes after selecting the squawk code, turn left and proceed direct to MAXMO. Then continue on promulgated instrument approach procedure.
ALKAN 255214.00N 0521615.00E FL200
SENKI 254637.00N 0520928.00E
TUDOM 254635.66N 0520102.61E
LUBAK 253705.47N 0515607.62E
VUTAN 255015.91N 0515218.39E FL180
VEDED 260558.26N 0514627.91E FL180
VELAM 255426.12N 0514347.13E FL190
HAYYA 260425.38N 0512407.37E FL210
SIVET 253727.14N 0514914.49E 6000
IMGOG 253815.65N 0513326.34E 4500
MAX 220 KIAS
MAXMO 253003.10N 0512732.91E
8000
HAYYA 1H ONLY
ALKAN 1H
HAYYA 1H
VEDED 1H
R63 10000 SFC
R52 UNL SFC
R53 3000 SFC
R55 3000 SFC
R51 3000 SFC
R60 1000 SFC
R62 13000 SFC
P43 15000 SFC
P44 1500 SFC
P45 1500 SFC
P47 5000 SFC
P48 UNL SFC
P49 1500 SFC
Hamad Intl.
Doha Intl.
① Turns with MAX 250 KIAS
② MAINTAIN TRACK 336°M EXPECT VECTORS
SCALE 1:500000
NM -1 0 1 2 3 4 5
KM -2 0 2 4 6 8 10

STANDARD ARRIVAL
CHART - INSTRUMENT
(STAR) - ICAO

DOHA/Doha Intl.(OTBD)
RNP RWY 15
ALKAN 1H / HAYYA 1H / VEDED 1H

TABULAR DESCRIPTION

RNP STAR ALKAN 1H

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	ALKAN	-	-	-2.6	-	-	+FL200	-	-	RNP 1
2	TF	SENKI	-	225 (227.6)	-2.6	8.3	-	-	-	-	RNP 1
3	TF	LUBAK	-	229 (231.8)	-2.6	15.3	-	-	-	-	RNP 1
4	TF	SIVET	-	271 (273.3)	-2.6	6.2	-	-6000	-	-	RNP 1
5	TF	IMGOG	-	271 (273.3)	-2.6	14.3	-	+4500	-220	-	RNP 1
6	FM	IMGOG	-	336 (338.2)	-2.6	-	-	+4500	-220	-	RNP 1
Remark											

RNP STAR HAYYA 1H

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	HAYYA	-	-	-2.6	-	-	+FL210	-	-	RNP 1
2	TF	VELAM	-	117 (119.3)	-2.6	20.3	-	+FL190	-	-	RNP 1
3	TF	VUTAN	-	116 (118.4)	-2.6	8.7	-	+FL180	-	-	RNP 1
4	TF	TUDOM	-	112 (114.9)	-2.6	8.7	-	-	-250	-	RNP 1
5	TF	LUBAK	-	203 (205.1)	-2.6	10.5	-	-	-	-	RNP 1
6	TF	SIVET	-	271 (273.3)	-2.6	6.2	-	-6000	-	-	RNP 1
7	TF	IMGOG	-	271 (273.3)	-2.6	14.3	-	+4500	-220	-	RNP 1
8	FM	IMGOG	-	336 (338.2)	-2.6	-	-	+4500	-220	-	RNP 1
Remark											

RNP STAR VEDED 1H

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	VEDED	-	-	-2.6	-	-	@FL180	-	-	RNP 1
2	TF	VELAM	-	189 (191.9)	-2.6	11.8	-	-	-250	-	RNP 1
3	TF	VUTAN	-	116 (118.4)	-2.6	8.7	-	+FL180	-	-	RNP 1
4	TF	TUDOM	-	112 (114.9)	-2.6	8.7	-	-	-250	-	RNP 1
5	TF	LUBAK	-	203 (205.1)	-2.6	10.5	-	-	-	-	RNP 1
6	TF	SIVET	-	271 (273.3)	-2.6	6.2	-	-6000	-	-	RNP 1
7	TF	IMGOG	-	271 (273.3)	-2.6	14.3	-	+4500	-220	-	RNP 1
8	FM	IMGOG	-	336 (338.2)	-2.6	-	-	+4500	-220	-	RNP 1
Remark											

WAYPOINT LIST

RNP STAR ALKAN 1H / HAYYA 1H / VEDED 1H

Waypoint Identifier	Coordinates
ALKAN	255214.00N 0521615.00E
SENKI	254637.00N 0520928.00E
LUBAK	253705.47N 0515607.62E
SIVET	253727.14N 0514914.49E
IMGOG	253815.65N 0513326.34E
HAYYA	260425.38N 0512407.37E
VELAM	255426.12N 0514347.13E
VUTAN	255015.91N 0515218.39E
TUDOM	254635.66N 0520102.61E
VEDED	260558.26N 0514627.91E

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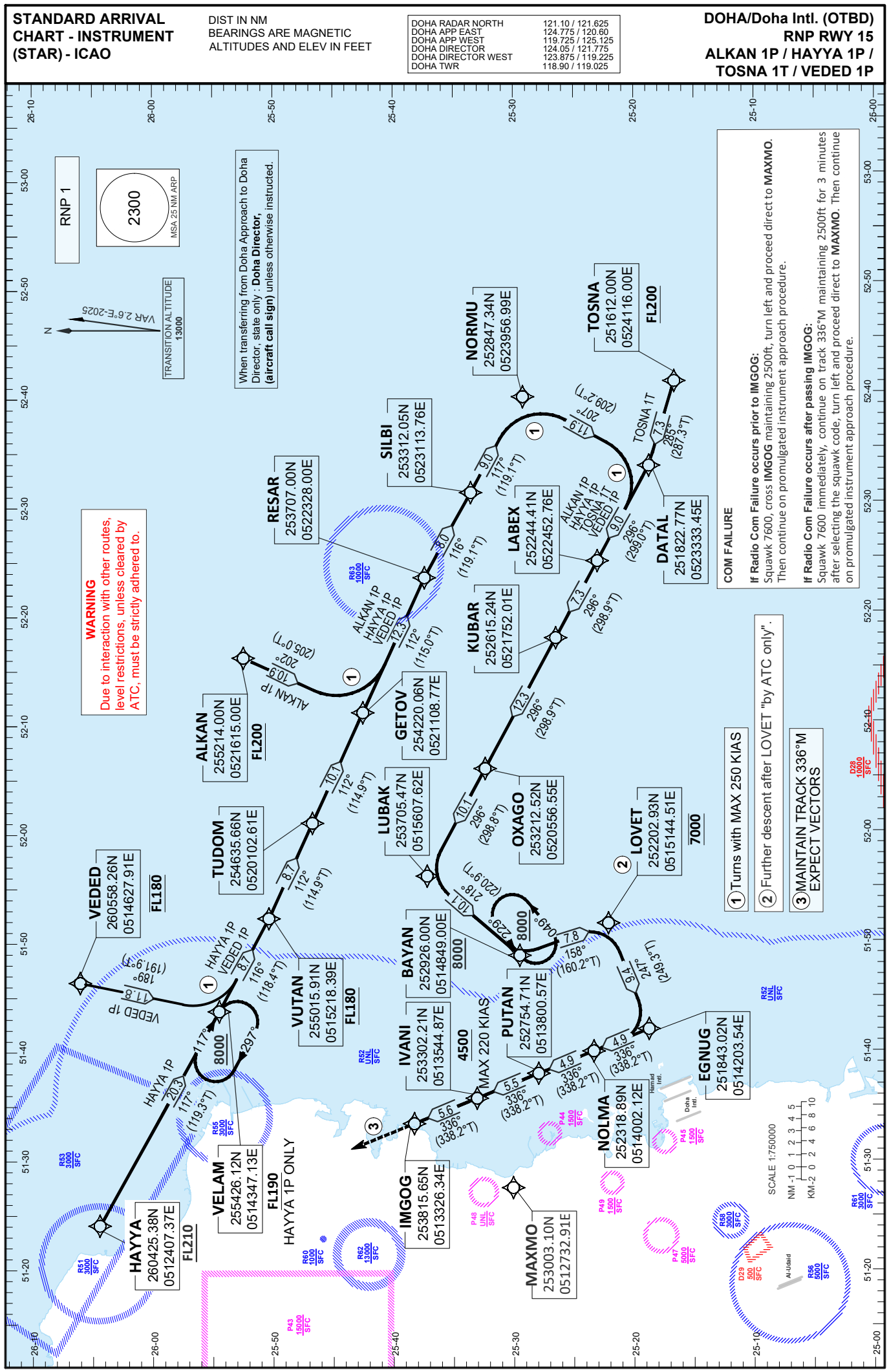
STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET

DOHA RADAR NORTH	121.10 / 121.625
DOHA APP EAST	124.775 / 120.60
DOHA APP WEST	119.725 / 125.125
DOHA DIRECTOR	124.05 / 121.775
DOHA DIRECTOR WEST	123.875 / 119.225
DOHA TWR	118.90 / 119.025

DOHA/Doha Intl. (OTBD)
RNP RWY 15
ALKAN 1P / HAYYA 1P / TOSNA 1T / VEDED 1P



STANDARD ARRIVAL
CHART - INSTRUMENT
(STAR) - ICAO

DOHA/Doha Intl.(OTBD)
RNP RWY 15
ALKAN 1P / HAYYA 1P / TOSNA 1T / VEDED 1P

TABULAR DESCRIPTION

RNP STAR ALKAN 1P

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	ALKAN	-	-	-2.6	-	-	+FL200	-	-	RNP 1
2	TF	GETOV	-	202 (205.0)	-2.6	10.9	-	-	-250	-	RNP 1
3	TF	RESAR	-	112 (115.0)	-2.6	12.3	-	-	-	-	RNP 1
4	TF	SILBI	-	116 (119.1)	-2.6	8.0	-	-	-	-	RNP 1
5	TF	NORMU	-	117 (119.1)	-2.6	9.0	-	-	-250	-	RNP 1
6	TF	DATAL	-	207 (209.2)	-2.6	11.9	-	-	-250	-	RNP 1
7	TF	LABEX	-	296 (299.0)	-2.6	9.0	-	-	-	-	RNP 1
8	TF	KUBAR	-	296 (298.9)	-2.6	7.3	-	-	-	-	RNP 1
9	TF	OXAGO	-	296 (298.9)	-2.6	12.3	-	-	-	-	RNP 1
10	TF	LUBAK	-	296 (298.8)	-2.6	10.1	-	-	-	-	RNP 1
11	TF	BAYAN	-	218 (220.9)	-2.6	10.1	-	+8000	-	-	RNP 1
12	TF	LOVET	-	158 (160.2)	-2.6	7.8	-	@7000	-	-	RNP 1
13	TF	EGNUG	-	247 (249.3)	-2.6	9.4	-	-	-	-	RNP 1
14	TF	NOLMA	-	336 (338.2)	-2.6	4.9	-	-	-	-	RNP 1
15	TF	PUTAN	-	336 (338.2)	-2.6	4.9	-	-	-	-	RNP 1
16	TF	IVANI	-	336 (338.2)	-2.6	5.5	-	+4500	-220	-	RNP 1
17	TF	IMGOG	-	336 (338.2)	-2.6	5.6	-	-	-	-	RNP 1
18	FM	IMGOG	-	336 (338.2)	-2.6	-	-	-	-	-	RNP 1
Remark		Further descent after LOVET by ATC only									

RNP STAR HAYYA 1P

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	HAYYA	-	-	-2.6	-	-	+FL210	-	-	RNP 1
2	TF	VELAM	-	117 (119.3)	-2.6	20.3	-	+FL190	-	-	RNP 1
3	TF	VUTAN	-	116 (118.4)	-2.6	8.7	-	+FL180	-	-	RNP 1
4	TF	TUDOM	-	112 (114.9)	-2.6	8.7	-	-	-	-	RNP 1
5	TF	GETOV	-	112 (114.9)	-2.6	10.1	-	-	-	-	RNP 1
6	TF	RESAR	-	112 (115.0)	-2.6	12.3	-	-	-	-	RNP 1
7	TF	SILBI	-	116 (119.1)	-2.6	8.0	-	-	-	-	RNP 1
8	TF	NORMU	-	117 (119.1)	-2.6	9.0	-	-	-250	-	RNP 1
9	TF	DATAL	-	207 (209.2)	-2.6	11.9	-	-	-250	-	RNP 1
10	TF	LABEX	-	296 (299.0)	-2.6	9.0	-	-	-	-	RNP 1
11	TF	KUBAR	-	296 (298.9)	-2.6	7.3	-	-	-	-	RNP 1
12	TF	OXAGO	-	296 (298.9)	-2.6	12.3	-	-	-	-	RNP 1
13	TF	LUBAK	-	296 (298.8)	-2.6	10.1	-	-	-	-	RNP 1
14	TF	BAYAN	-	218 (220.9)	-2.6	10.1	-	+8000	-	-	RNP 1
15	TF	LOVET	-	158 (160.2)	-2.6	7.8	-	@7000	-	-	RNP 1
16	TF	EGNUG	-	247 (249.3)	-2.6	9.4	-	-	-	-	RNP 1
17	TF	NOLMA	-	336 (338.2)	-2.6	4.9	-	-	-	-	RNP 1
18	TF	PUTAN	-	336 (338.2)	-2.6	4.9	-	-	-	-	RNP 1
19	TF	IVANI	-	336 (338.2)	-2.6	5.5	-	+4500	-220	-	RNP 1
20	TF	IMGOG	-	336 (338.2)	-2.6	5.6	-	-	-	-	RNP 1
21	FM	IMGOG	-	336 (338.2)	-2.6	-	-	-	-	-	RNP 1
Remark		Further descent after LOVET by ATC only									

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RNP STAR TOSNA 1T

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	TOSNA	-	-	-2.6	-	-	+FL200	-	-	RNP 1
2	TF	DATAL	-	285 (287.3)	-2.6	7.3	-	-	-	-	RNP 1
3	TF	LABEX	-	296 (299.0)	-2.6	9.0	-	-	-	-	RNP 1
4	TF	KUBAR	-	296 (298.9)	-2.6	7.3	-	-	-	-	RNP 1
5	TF	OXAGO	-	296 (298.9)	-2.6	12.3	-	-	-	-	RNP 1
6	TF	LUBAK	-	296 (298.8)	-2.6	10.1	-	-	-	-	RNP 1
7	TF	BAYAN	-	218 (220.9)	-2.6	10.1	-	+8000	-	-	RNP 1
8	TF	LOVET	-	158 (160.2)	-2.6	7.8	-	@7000	-	-	RNP 1
9	TF	EGNUG	-	247 (249.3)	-2.6	9.4	-	-	-	-	RNP 1
10	TF	NOLMA	-	336 (338.2)	-2.6	4.9	-	-	-	-	RNP 1
11	TF	PUTAN	-	336 (338.2)	-2.6	4.9	-	-	-	-	RNP 1
12	TF	IVANI	-	336 (338.2)	-2.6	5.5	-	+4500	-220	-	RNP 1
13	TF	IMGOG	-	336 (338.2)	-2.6	5.6	-	-	-	-	RNP 1
14	FM	IMGOG	-	336 (338.2)	-2.6	-	-	-	-	-	RNP 1
Remark		Further descent after LOVET by ATC only									

RNP STAR VEDED 1P

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	VEDED	-	-	-2.6	-	-	@FL180	-	-	RNP 1
2	TF	VELAM	-	189 (191.9)	-2.6	11.8	-	-	-250	-	RNP 1
3	TF	VUTAN	-	116 (118.4)	-2.6	8.7	-	+FL180	-	-	RNP 1
4	TF	TUDOM	-	112 (114.9)	-2.6	8.7	-	-	-	-	RNP 1
5	TF	GETOV	-	112 (114.9)	-2.6	10.1	-	-	-	-	RNP 1
6	TF	RESAR	-	112 (115.0)	-2.6	12.3	-	-	-	-	RNP 1
7	TF	SILBI	-	116 (119.1)	-2.6	8.0	-	-	-	-	RNP 1
8	TF	NORMU	-	117 (119.1)	-2.6	9.0	-	-	-250	-	RNP 1
9	TF	DATAL	-	207 (209.2)	-2.6	11.9	-	-	-250	-	RNP 1
10	TF	LABEX	-	296 (299.0)	-2.6	9.0	-	-	-	-	RNP 1
11	TF	KUBAR	-	296 (298.9)	-2.6	7.3	-	-	-	-	RNP 1
12	TF	OXAGO	-	296 (298.9)	-2.6	12.3	-	-	-	-	RNP 1
13	TF	LUBAK	-	296 (298.8)	-2.6	10.1	-	-	-	-	RNP 1
14	TF	BAYAN	-	218 (220.9)	-2.6	10.1	-	+8000	-	-	RNP 1
15	TF	LOVET	-	158 (160.2)	-2.6	7.8	-	@7000	-	-	RNP 1
16	TF	EGNUG	-	247 (249.3)	-2.6	9.4	-	-	-	-	RNP 1
17	TF	NOLMA	-	336 (338.2)	-2.6	4.9	-	-	-	-	RNP 1
18	TF	PUTAN	-	336 (338.2)	-2.6	4.9	-	-	-	-	RNP 1
19	TF	IVANI	-	336 (338.2)	-2.6	5.5	-	+4500	-220	-	RNP 1
20	TF	IMGOG	-	336 (338.2)	-2.6	5.6	-	-	-	-	RNP 1
21	FM	IMGOG	-	336 (338.2)	-2.6	-	-	-	-	-	RNP 1
Remark		Further descent after LOVET by ATC only									

WAYPOINT LIST

RNP STAR ALKAN 1P / HAYYA 1P / TOSNA 1T / VEDED 1P

Waypoint Identifier	Coordinates
ALKAN	255214.00N 0521615.00E
GETOV	254220.06N 0521108.77E
RESAR	253707.00N 0522328.00E
SILBI	253312.05N 0523113.76E
NORMU	252847.34N 0523956.99E
DATAL	251822.77N 0523333.45E
LABEX	252244.41N 0522452.76E
KUBAR	252615.24N 0521752.01E
OXAGO	253212.52N 0520556.55E
LUBAK	253705.47N 0515607.62E
BAYAN	252926.00N 0514849.00E
LOVET	252202.93N 0515144.51E

RNP STAR ALKAN 1P / HAYYA 1P / TOSNA 1T / VEDED 1P

Waypoint Identifier	Coordinates
EGNUG	251843.02N 0514203.54E
NOLMA	252318.89N 0514002.12E
PUTAN	252754.71N 0513800.57E
IVANI	253302.21N 0513544.87E
IMGOG	253815.65N 0513326.34E
HAYYA	260425.38N 0512407.37E
VELAM	255426.12N 0514347.13E
VUTAN	255015.91N 0515218.39E
TUDOM	254635.66N 0520102.61E
TOSNA	251612.00N 0524116.00E
VEDED	260558.26N 0514627.91E

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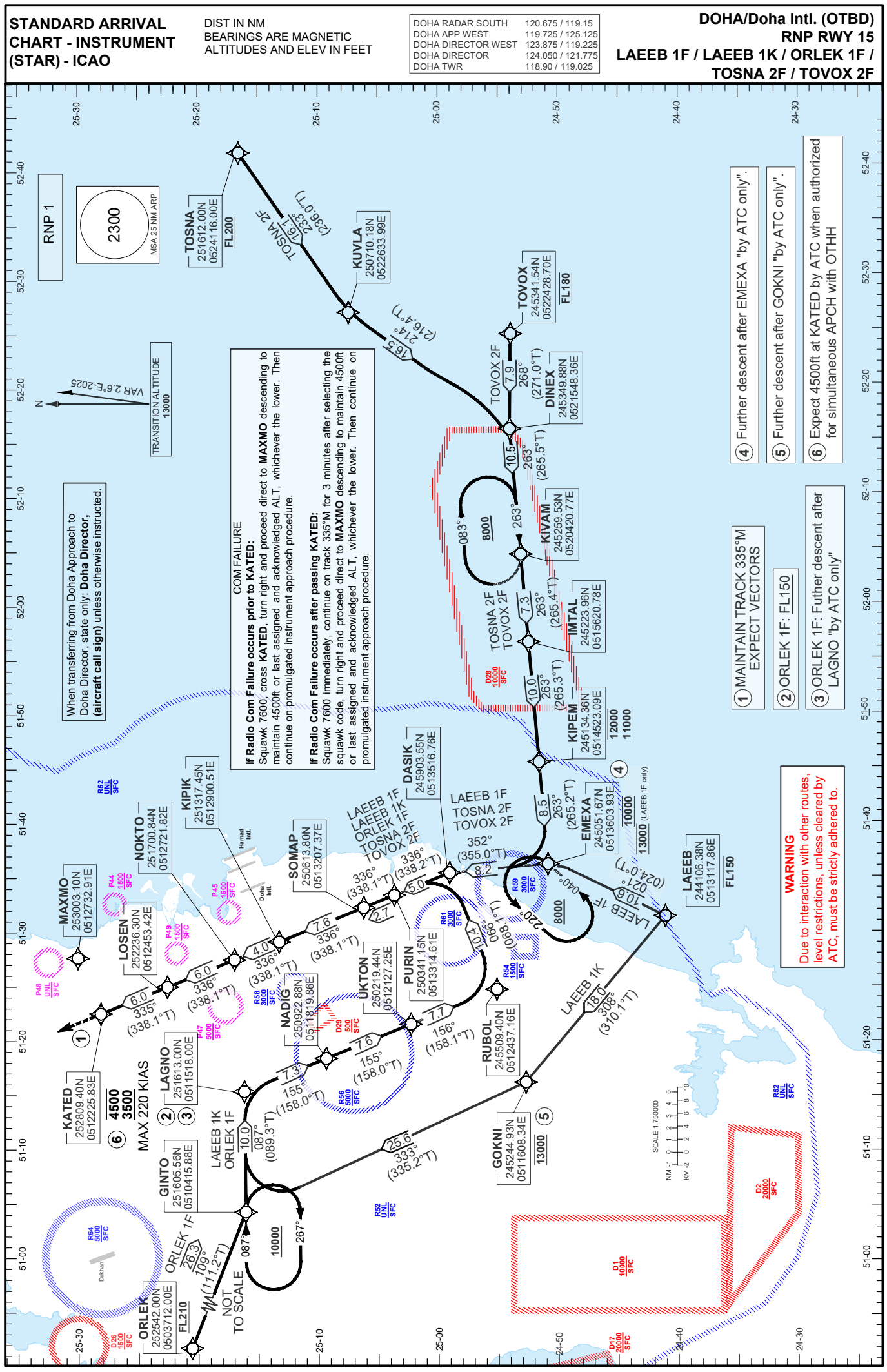
STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET

DOHA RADAR SOUTH	120.675 / 119.15
DOHA APP WEST	119.725 / 125.125
DOHA DIRECTOR WEST	123.875 / 119.225
DOHA DIRECTOR	124.050 / 121.775
DOHA TWR	118.90 / 119.025

DOHA/Doha Intl. (OTBD)
RNP RWY 15
LAEEB 1F / LAEEB 1K / ORLEK 1F / TOSNA 2F / TOVOX 2F



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STANDARD ARRIVAL
CHART - INSTRUMENT
(STAR) - ICAO

DOHA/Doha Intl.(OTBD)
RNP RWY 15
LAEEB 1F / LAEEB 1K / ORLEK 1F / TOSNA 2F / TOVOX 2F

TABULAR DESCRIPTION

RNP STAR LAEEB 1F

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	LAEEB	-	-	-2.6	-	-	-FL150	-	-	RNP 1
2	TF	EMEXA	-	021 (024.0)	-2.6	10.6	-	@13000	-	-	RNP 1
3	TF	DASIK	-	352 (355.0)	-2.6	8.2	-	-	-	-	RNP 1
4	TF	PURIN	-	336 (338.2)	-2.6	5.0	-	-	-	-	RNP 1
5	TF	SOMAP	-	336 (338.1)	-2.6	2.7	-	-	-	-	RNP 1
6	TF	KIPIK	-	336 (338.1)	-2.6	7.6	-	-	-	-	RNP 1
7	TF	NOKTO	-	336 (338.1)	-2.6	4.0	-	-	-	-	RNP 1
8	TF	LOSEN	-	336 (338.1)	-2.6	6.0	-	-	-	-	RNP 1
9	TF	KATED	-	335 (338.1)	-2.6	6.0	-	+3500/-4500	-220	-	RNP 1
10	FM	KATED	-	335 (338.1)	-2.6	-	-	-	-220	-	RNP 1
Remarks		Further descent after EMEXA by ATC only. Expect 4500ft at KATED by ATC when authorized for simultaneous APCH with OTHH.									

RNP STAR LAEEB 1K

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	LAEEB	-	-	-2.6	-	-	-FL150	-	-	RNP 1
2	TF	GOKNI	-	308 (310.1)	-2.6	18.0	-	@13000	-	-	RNP 1
3	TF	GINTO	-	333 (335.2)	-2.6	25.6	-	-	-	-	RNP 1
4	TF	LAGNO	-	087 (089.3)	-2.6	10.0	-	-	-	-	RNP 1
5	TF	NADIG	-	155 (158.0)	-2.6	7.3	-	-	-	-	RNP 1
6	TF	UKTON	-	155 (158.0)	-2.6	7.6	-	-	-	-	RNP 1
7	TF	RUBOL	-	156 (158.1)	-2.6	7.7	-	-	-	-	RNP 1
8	TF	DASIK	-	066 (068.1)	-2.6	10.4	-	-	-	-	RNP 1
9	TF	PURIN	-	336 (338.2)	-2.6	5.0	-	-	-	-	RNP 1
10	TF	SOMAP	-	336 (338.1)	-2.6	2.7	-	-	-	-	RNP 1
11	TF	KIPIK	-	336 (338.1)	-2.6	7.6	-	-	-	-	RNP 1
12	TF	NOKTO	-	336 (338.1)	-2.6	4.0	-	-	-	-	RNP 1
13	TF	LOSEN	-	336 (338.1)	-2.6	6.0	-	-	-	-	RNP 1
14	TF	KATED	-	335 (338.1)	-2.6	6.0	-	+3500/-4500	-220	-	RNP 1
15	FM	KATED	-	335 (338.1)	-2.6	-	-	-	-220	-	RNP 1
Remarks		Further descent after GOKNI by ATC only. Expect 4500ft at KATED by ATC when authorized for simultaneous APCH with OTHH.									

RNP STAR ORLEK 1F

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	ORLEK	-	-	-2.6	-	-	+FL210	-	-	RNP 1
2	TF	GINTO	-	109 (111.2)	-2.6	26.3	-	-	-	-	RNP 1
3	TF	LAGNO	-	087 (089.3)	-2.6	10.0	-	+FL150	-	-	RNP 1
4	TF	NADIG	-	155 (158.0)	-2.6	7.3	-	-	-	-	RNP 1
5	TF	UKTON	-	155 (158.0)	-2.6	7.6	-	-	-	-	RNP 1
6	TF	RUBOL	-	156 (158.1)	-2.6	7.7	-	-	-	-	RNP 1
7	TF	DASIK	-	066 (068.1)	-2.6	10.4	-	-	-	-	RNP 1
8	TF	PURIN	-	336 (338.2)	-2.6	5.0	-	-	-	-	RNP 1
9	TF	SOMAP	-	336 (338.1)	-2.6	2.7	-	-	-	-	RNP 1
10	TF	KIPIK	-	336 (338.1)	-2.6	7.6	-	-	-	-	RNP 1
11	TF	NOKTO	-	336 (338.1)	-2.6	4.0	-	-	-	-	RNP 1
12	TF	LOSEN	-	336 (338.1)	-2.6	6.0	-	-	-	-	RNP 1
13	TF	KATED	-	335 (338.1)	-2.6	6.0	-	+3500/-4500	-220	-	RNP 1
14	FM	KATED	-	335 (338.1)	-2.6	-	-	-	-220	-	RNP 1
Remarks		Further descent after LAGNO by ATC only. Expect 4500ft at KATED by ATC when authorized for simultaneous APCH with OTHH.									

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RNP STAR TOSNA 2F

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	TOSNA	-	-	-2.6	-	-	+FL200	-	-	RNP 1
2	TF	KUVLA	-	233 (236.0)	-2.6	16.1	-	-	-	-	RNP 1
3	TF	DINEX	-	214 (216.4)	-2.6	16.5	-	-	-	-	RNP 1
4	TF	KIVAM	-	263 (265.5)	-2.6	10.5	-	-	-	-	RNP 1
5	TF	IMTAL	-	263 (265.4)	-2.6	7.3	-	-	-	-	RNP 1
6	TF	KIPEM	-	263 (265.3)	-2.6	10.0	-	+11000/-12000	-	-	RNP 1
7	TF	EMEXA	-	263 (265.2)	-2.6	8.5	-	@10000	-	-	RNP 1
8	TF	DASIK	-	352 (355.0)	-2.6	8.2	-	-	-	-	RNP 1
9	TF	PURIN	-	336 (338.2)	-2.6	5.0	-	-	-	-	RNP 1
10	TF	SOMAP	-	336 (338.1)	-2.6	2.7	-	-	-	-	RNP 1
11	TF	KIPIK	-	336 (338.1)	-2.6	7.6	-	-	-	-	RNP 1
12	TF	NOKTO	-	336 (338.1)	-2.6	4.0	-	-	-	-	RNP 1
13	TF	LOSEN	-	336 (338.1)	-2.6	6.0	-	-	-	-	RNP 1
14	TF	KATED	-	335 (338.1)	-2.6	6.0	-	+3500/-4500	-220	-	RNP 1
15	FM	KATED	-	335 (338.1)	-2.6	-	-	-	-220	-	RNP 1
Remarks	Further descent after EMEXA by ATC only. Expect 4500ft at KATED by ATC when authorized for simultaneous APCH with OTHH.										

RNP STAR TOVOX 2F

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	TOVOX	-	-	-2.6	-	-	@FL180	-	-	RNP 1
2	TF	DINEX	-	268 (271.0)	-2.6	7.9	-	-	-	-	RNP 1
3	TF	KIVAM	-	263 (265.5)	-2.6	10.5	-	-	-	-	RNP 1
4	TF	IMTAL	-	263 (265.4)	-2.6	7.3	-	-	-	-	RNP 1
5	TF	KIPEM	-	263 (265.3)	-2.6	10.0	-	+11000/-12000	-	-	RNP 1
6	TF	EMEXA	-	263 (265.2)	-2.6	8.5	-	@10000	-	-	RNP 1
7	TF	DASIK	-	352 (355.0)	-2.6	8.2	-	-	-	-	RNP 1
8	TF	PURIN	-	336 (338.2)	-2.6	5.0	-	-	-	-	RNP 1
9	TF	SOMAP	-	336 (338.1)	-2.6	2.7	-	-	-	-	RNP 1
10	TF	KIPIK	-	336 (338.1)	-2.6	7.6	-	-	-	-	RNP 1
11	TF	NOKTO	-	336 (338.1)	-2.6	4.0	-	-	-	-	RNP 1
12	TF	LOSEN	-	336 (338.1)	-2.6	6.0	-	-	-	-	RNP 1
13	TF	KATED	-	335 (338.1)	-2.6	6.0	-	+3500/-4500	-220	-	RNP 1
14	FM	KATED	-	335 (338.1)	-2.6	-	-	-	-220	-	RNP 1
Remarks	Further descent after EMEXA by ATC only. Expect 4500ft at KATED by ATC when authorized for simultaneous APCH with OTHH.										

WAYPOINT LIST

RNP STAR LAEEB 1F / LAEEB 1K / ORLEK 1F / TOSNA 2F / TOVOX 2F

Waypoint Identifier	Coordinates
LAEEB	244106.38N 0513117.86E
EMEXA	245051.67N 0513603.93E
DASIK	245903.55N 0513516.76E
PURIN	250341.15N 0513314.61E
SOMAP	250613.80N 0513207.37E
KIPIK	251317.45N 0512900.51E
NOKTO	251700.84N 0512721.82E
LOSEN	252236.30N 0512453.42E
KATED	252809.40N 0512225.83E
ORLEK	252542.00N 0503712.00E
GOKNI	245244.93N 0511608.34E
GINTO	251605.56N 0510415.88E

RNP STAR LAEEB 1F / LAEEB 1K / ORLEK 1F / TOSNA 2F / TOVOX 2F

Waypoint Identifier	Coordinates
LAGNO	251613.00N 0511518.00E
NADIG	250922.88N 0511819.86E
UKTON	250219.44N 0512127.25E
RUBOL	245509.40N 0512437.16E
TOSNA	251612.00N 0524116.00E
KUVLA	250710.18N 0522633.99E
DINEX	245349.88N 0521548.36E
KIVAM	245259.53N 0520420.77E
IMTAL	245223.96N 0515620.78E
KIPEM	245134.36N 0514523.09E
TOVOX	245341.54N 0522428.70E

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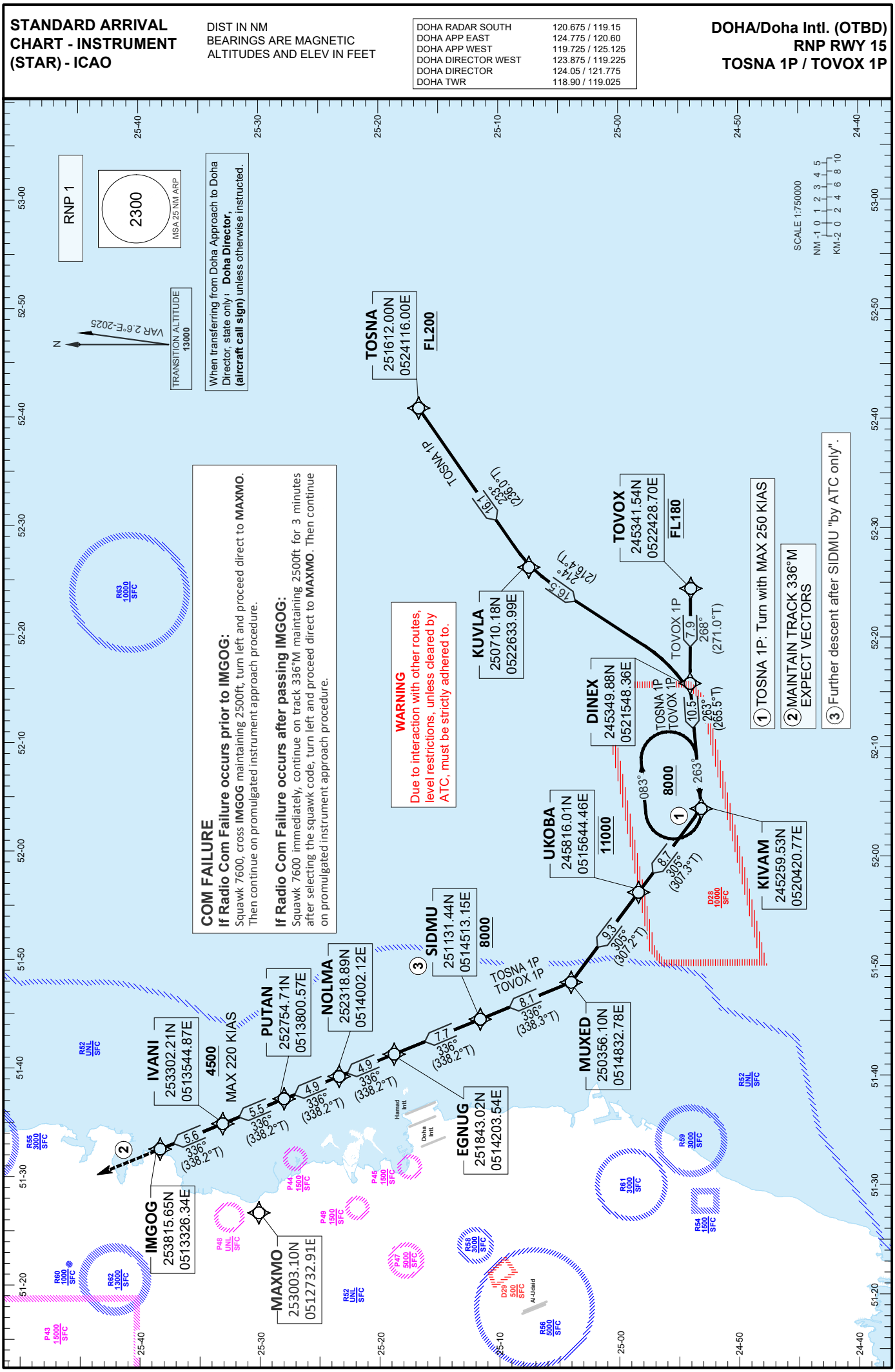
STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET

DOHA RADAR SOUTH	120.675 / 119.15
DOHA APP EAST	124.775 / 120.60
DOHA APP WEST	119.725 / 125.125
DOHA DIRECTOR WEST	123.875 / 119.225
DOHA DIRECTOR	124.05 / 121.775
DOHA TWR	118.90 / 119.025

DOHA/Doha Intl. (OTBD)
RNP RWY 15
TOSNA 1P / TOVOX 1P



STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DOHA/Doha Intl.(OTBD)
RNP RWY 15
TOSNA 1P / TOVOX 1P

TABULAR DESCRIPTION

RNP STAR TOSNA 1P

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	TOSNA	-	-	-2.6	-	-	+FL200	-	-	RNP 1
2	TF	KUVLA	-	233 (236.0)	-2.6	16.1	-	-	-	-	RNP 1
3	TF	DINEX	-	214 (216.4)	-2.6	16.5	-	-	-	-	RNP 1
4	TF	KIVAM	-	263 (265.5)	-2.6	10.5	-	-	-250	-	RNP 1
5	TF	UKOBA	-	305 (307.3)	-2.6	8.7	-	@11000	-	-	RNP 1
6	TF	MUXED	-	305 (307.2)	-2.6	9.3	-	-	-	-	RNP 1
7	TF	SIDMU	-	336 (338.3)	-2.6	8.1	-	+8000	-	-	RNP 1
8	TF	EGNUG	-	336 (338.2)	-2.6	7.7	-	-	-	-	RNP 1
9	TF	NOLMA	-	336 (338.2)	-2.6	4.9	-	-	-	-	RNP 1
10	TF	PUTAN	-	336 (338.2)	-2.6	4.9	-	-	-	-	RNP 1
11	TF	IVANI	-	336 (338.2)	-2.6	5.5	-	+4500	-220	-	RNP 1
12	TF	IMGOG	-	336 (338.2)	-2.6	5.6	-	-	-	-	RNP 1
13	FM	IMGOG	-	336 (338.2)	-2.6	-	-	-	-	-	RNP 1
Remark	Further descent after SIDMU by ATC only										

RNP STAR TOVOX 1P

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	TOVOX	-	-	-2.6	-	-	@FL180	-	-	RNP 1
2	TF	DINEX	-	268 (271.0)	-2.6	7.9	-	-	-	-	RNP 1
3	TF	KIVAM	-	263 (265.5)	-2.6	10.5	-	-	-	-	RNP 1
4	TF	UKOBA	-	305 (307.3)	-2.6	8.7	-	@11000	-	-	RNP 1
5	TF	MUXED	-	305 (307.2)	-2.6	9.3	-	-	-	-	RNP 1
6	TF	SIDMU	-	336 (338.3)	-2.6	8.1	-	+8000	-	-	RNP 1
7	TF	EGNUG	-	336 (338.2)	-2.6	7.7	-	-	-	-	RNP 1
8	TF	NOLMA	-	336 (338.2)	-2.6	4.9	-	-	-	-	RNP 1
9	TF	PUTAN	-	336 (338.2)	-2.6	4.9	-	-	-	-	RNP 1
10	TF	IVANI	-	336 (338.2)	-2.6	5.5	-	+4500	-220	-	RNP 1
11	TF	IMGOG	-	336 (338.2)	-2.6	5.6	-	-	-	-	RNP 1
12	FM	IMGOG	-	336 (338.2)	-2.6	-	-	-	-	-	RNP 1
Remark	Further descent after SIDMU by ATC only										

WAYPOINT LIST

RNP STAR TOSNA 1P / TOVOX 1P

Waypoint Identifier	Coordinates
TOSNA	251612.00N 0524116.00E
KUVLA	250710.18N 0522633.99E
DINEX	245349.88N 0521548.36E
KIVAM	245259.53N 0520420.77E
UKOBA	245816.01N 0515644.46E
MUXED	250356.10N 0514832.78E
SIDMU	251131.44N 0514513.15E
EGNUG	251843.02N 0514203.54E
NOLMA	252318.89N 0514002.12E
PUTAN	252754.71N 0513800.57E
IVANI	253302.21N 0513544.87E
IMGOG	253815.65N 0513326.34E
TOVOX	245341.54N 0522428.70E

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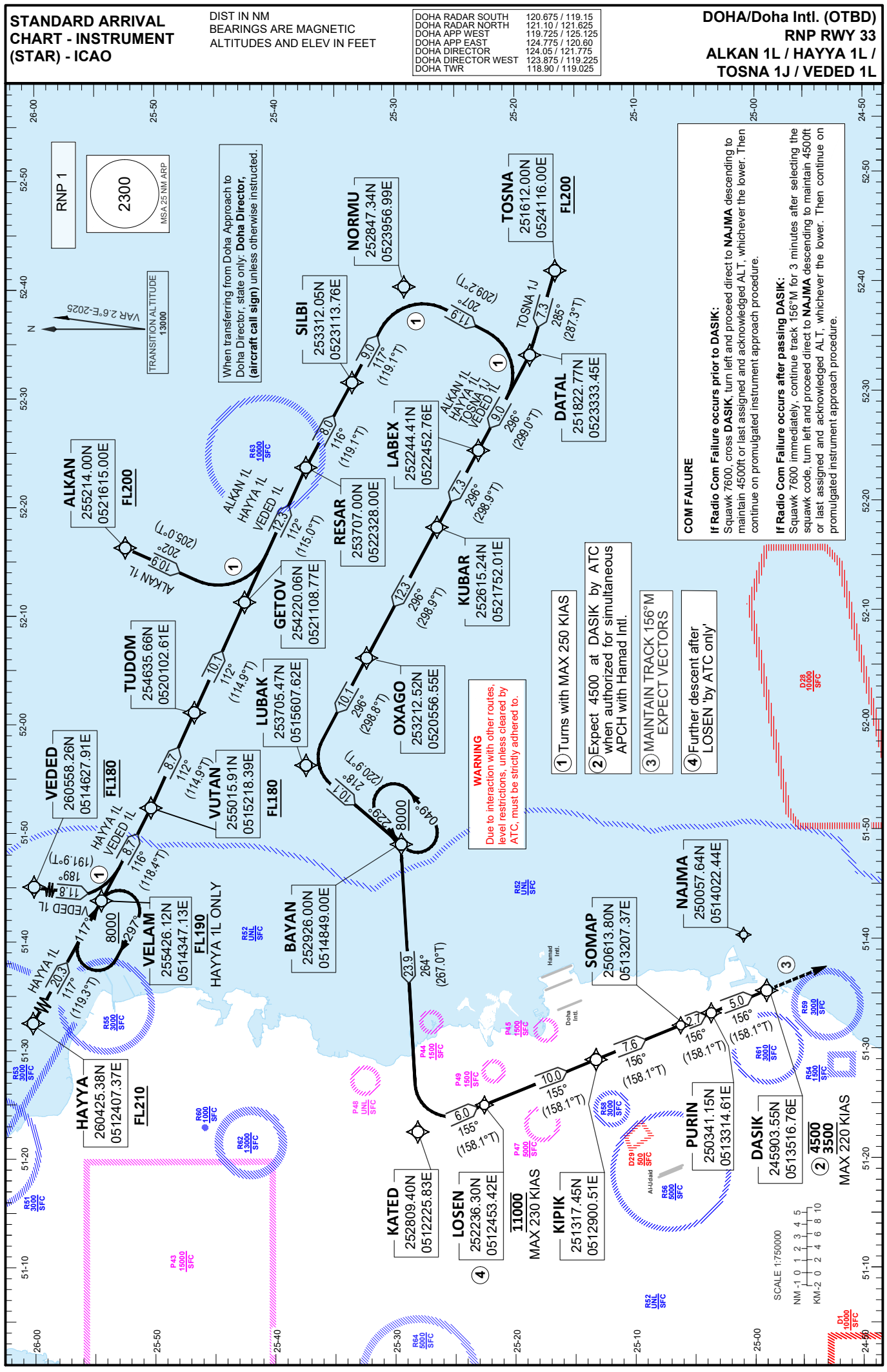
STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET

DOHA RADAR SOUTH	120.675 / 119.15
DOHA RADAR NORTH	121.10 / 121.625
DOHA APP WEST	119.725 / 125.125
DOHA APP EAST	124.775 / 120.60
DOHA DIRECTOR	124.05 / 121.775
DOHA DIRECTOR WEST	123.875 / 119.225
DOHA TWR	118.90 / 119.025

DOHA/Doha Intl. (OTBD)
RNP RWY 33
ALKAN 1L / HAYYA 1L / TOSNA 1J / VEDED 1L



STANDARD ARRIVAL
CHART - INSTRUMENT
(STAR) - ICAO

DOHA/Doha Intl.(OTBD)
RNP RWY 33
ALKAN 1L / HAYYA 1L / TOSNA 1J / VEDED 1L

TABULAR DESCRIPTION

RNP STAR ALKAN 1L

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	ALKAN	-	-	-2.6	-	-	+FL200	-	-	RNP 1
2	TF	GETOV	-	202 (205.0)	-2.6	10.9	-	-	-250	-	RNP 1
3	TF	RESAR	-	112 (115.0)	-2.6	12.3	-	-	-	-	RNP 1
4	TF	SILBI	-	116 (119.1)	-2.6	8.0	-	-	-	-	RNP 1
5	TF	NORMU	-	117 (119.1)	-2.6	9.0	-	-	-250	-	RNP 1
6	TF	DATAL	-	207 (209.2)	-2.6	11.9	-	-	-250	-	RNP 1
7	TF	LABEX	-	296 (299.0)	-2.6	9.0	-	-	-	-	RNP 1
8	TF	KUBAR	-	296 (298.9)	-2.6	7.3	-	-	-	-	RNP 1
9	TF	OXAGO	-	296 (298.9)	-2.6	12.3	-	-	-	-	RNP 1
10	TF	LUBAK	-	296 (298.8)	-2.6	10.1	-	-	-	-	RNP 1
11	TF	BAYAN	-	218 (220.9)	-2.6	10.1	-	-	-	-	RNP 1
12	TF	KATED	-	264 (267.0)	-2.6	23.9	-	-	-	-	RNP 1
13	TF	LOSEN	-	155 (158.1)	-2.6	6.0	-	@11000	-230	-	RNP 1
14	TF	KIPIK	-	155 (158.1)	-2.6	10.0	-	-	-	-	RNP 1
15	TF	SOMAP	-	156 (158.1)	-2.6	7.6	-	-	-	-	RNP 1
16	TF	PURIN	-	156 (158.1)	-2.6	2.7	-	-	-	-	RNP 1
17	TF	DASIK	-	156 (158.1)	-2.6	5.0	-	+3500/-4500	-220	-	RNP 1
18	FM	DASIK	-	156 (158.1)	-2.6	-	-	-	-220	-	RNP 1
Remarks		Expect 4500ft at DASIK by ATC when authorized for simultaneous APCH with OTHH.									

RNP STAR HAYYA 1L

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	HAYYA	-	-	-2.6	-	-	+FL210	-	-	RNP 1
2	TF	VELAM	-	117 (119.3)	-2.6	20.3	-	+FL190	-	-	RNP 1
3	TF	VUTAN	-	116 (118.4)	-2.6	8.7	-	+FL180	-	-	RNP 1
4	TF	TUDOM	-	112 (114.9)	-2.6	8.7	-	-	-	-	RNP 1
5	TF	GETOV	-	112 (114.9)	-2.6	10.1	-	-	-	-	RNP 1
6	TF	RESAR	-	112 (115.0)	-2.6	12.3	-	-	-	-	RNP 1
7	TF	SILBI	-	116 (119.1)	-2.6	8.0	-	-	-	-	RNP 1
8	TF	NORMU	-	117 (119.1)	-2.6	9.0	-	-	-250	-	RNP 1
9	TF	DATAL	-	207 (209.2)	-2.6	11.9	-	-	-250	-	RNP 1
10	TF	LABEX	-	296 (299.0)	-2.6	9.0	-	-	-	-	RNP 1
11	TF	KUBAR	-	296 (298.9)	-2.6	7.3	-	-	-	-	RNP 1
12	TF	OXAGO	-	296 (298.9)	-2.6	12.3	-	-	-	-	RNP 1
13	TF	LUBAK	-	296 (298.8)	-2.6	10.1	-	-	-	-	RNP 1
14	TF	BAYAN	-	218 (220.9)	-2.6	10.1	-	-	-	-	RNP 1
15	TF	KATED	-	264 (267.0)	-2.6	23.9	-	-	-	-	RNP 1
16	TF	LOSEN	-	155 (158.1)	-2.6	6.0	-	@11000	-230	-	RNP 1
17	TF	KIPIK	-	155 (158.1)	-2.6	10.0	-	-	-	-	RNP 1
18	TF	SOMAP	-	156 (158.1)	-2.6	7.6	-	-	-	-	RNP 1
19	TF	PURIN	-	156 (158.1)	-2.6	2.7	-	-	-	-	RNP 1
20	TF	DASIK	-	156 (158.1)	-2.6	5.0	-	+3500/-4500	-220	-	RNP 1
21	FM	DASIK	-	156 (158.1)	-2.6	-	-	-	-220	-	RNP 1
Remarks		Expect 4500ft at DASIK by ATC when authorized for simultaneous APCH with OTHH.									

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RNP STAR TOSNA 1J

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	TOSNA	-	-	-2.6	-	-	+FL200	-	-	RNP 1
2	TF	DATAL	-	285 (287.3)	-2.6	7.3	-	-	-	-	RNP 1
3	TF	LABEX	-	296 (299.0)	-2.6	9.0	-	-	-	-	RNP 1
4	TF	KUBAR	-	296 (298.9)	-2.6	7.3	-	-	-	-	RNP 1
5	TF	OXAGO	-	296 (298.9)	-2.6	12.3	-	-	-	-	RNP 1
6	TF	LUBAK	-	296 (298.8)	-2.6	10.1	-	-	-	-	RNP 1
7	TF	BAYAN	-	218 (220.9)	-2.6	10.1	-	-	-	-	RNP 1
8	TF	KATED	-	264 (267.0)	-2.6	23.9	-	-	-	-	RNP 1
9	TF	LOSEN	-	155 (158.1)	-2.6	6.0	-	@11000	-230	-	RNP 1
10	TF	KIPIK	-	155 (158.1)	-2.6	10.0	-	-	-	-	RNP 1
11	TF	SOMAP	-	156 (158.1)	-2.6	7.6	-	-	-	-	RNP 1
12	TF	PURIN	-	156 (158.1)	-2.6	2.7	-	-	-	-	RNP 1
13	TF	DASIK	-	156 (158.1)	-2.6	5.0	-	+3500/-4500	-220	-	RNP 1
14	FM	DASIK	-	156 (158.1)	-2.6	-	-	-	-220	-	RNP 1
Remarks	Expect 4500ft at DASIK by ATC when authorized for simultaneous APCH with OTHH.										

RNP STAR VEDED 1L

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	VEDED	-	-	-2.6	-	-	@FL180	-	-	RNP 1
2	TF	VELAM	-	189 (191.9)	-2.6	11.8	-	-	-250	-	RNP 1
3	TF	VUTAN	-	116 (118.4)	-2.6	8.7	-	+FL180	-	-	RNP 1
4	TF	TUDOM	-	112 (114.9)	-2.6	8.7	-	-	-	-	RNP 1
5	TF	GETOV	-	112 (114.9)	-2.6	10.1	-	-	-	-	RNP 1
6	TF	RESAR	-	112 (115.0)	-2.6	12.3	-	-	-	-	RNP 1
7	TF	SILBI	-	116 (119.1)	-2.6	8.0	-	-	-	-	RNP 1
8	TF	NORMU	-	117 (119.1)	-2.6	9.0	-	-	-250	-	RNP 1
9	TF	DATAL	-	207 (209.2)	-2.6	11.9	-	-	-250	-	RNP 1
10	TF	LABEX	-	296 (299.0)	-2.6	9.0	-	-	-	-	RNP 1
11	TF	KUBAR	-	296 (298.9)	-2.6	7.3	-	-	-	-	RNP 1
12	TF	OXAGO	-	296 (298.9)	-2.6	12.3	-	-	-	-	RNP 1
13	TF	LUBAK	-	296 (298.8)	-2.6	10.1	-	-	-	-	RNP 1
14	TF	BAYAN	-	218 (220.9)	-2.6	10.1	-	-	-	-	RNP 1
15	TF	KATED	-	264 (267.0)	-2.6	23.9	-	-	-	-	RNP 1
16	TF	LOSEN	-	155 (158.1)	-2.6	6.0	-	@11000	-230	-	RNP 1
17	TF	KIPIK	-	155 (158.1)	-2.6	10.0	-	-	-	-	RNP 1
18	TF	SOMAP	-	156 (158.1)	-2.6	7.6	-	-	-	-	RNP 1
19	TF	PURIN	-	156 (158.1)	-2.6	2.7	-	-	-	-	RNP 1
20	TF	DASIK	-	156 (158.1)	-2.6	5.0	-	+3500/-4500	-220	-	RNP 1
21	FM	DASIK	-	156 (158.1)	-2.6	-	-	-	-220	-	RNP 1
Remarks	Expect 4500ft at DASIK by ATC when authorized for simultaneous APCH with OTHH.										

WAYPOINT LIST

RNP STAR ALKAN 1L / HAYYA 1L / TOSNA 1J / VEDED 1L

Waypoint Identifier	Coordinates
ALKAN	255214.00N 0521615.00E
GETOV	254220.06N 0521108.77E
RESAR	253707.00N 0522328.00E
SILBI	253312.05N 0523113.76E
NORMU	252847.34N 0523956.99E
DATAL	251822.77N 0523333.45E
LABEX	252244.41N 0522452.76E
KUBAR	252615.24N 0521752.01E
OXAGO	253212.52N 0520556.55E
LUBAK	253705.47N 0515607.62E
BAYAN	252926.00N 0514849.00E
KATED	252809.40N 0512225.83E

RNP STAR ALKAN 1L / HAYYA 1L / TOSNA 1J / VEDED 1L

Waypoint Identifier	Coordinates
LOSEN	252236.30N 0512453.42E
KIPIK	251317.45N 0512900.51E
SOMAP	250613.80N 0513207.37E
PURIN	250341.15N 0513314.61E
DASIK	245903.55N 0513516.76E
HAYYA	260425.38N 0512407.37E
VELAM	255426.12N 0514347.13E
VUTAN	255015.91N 0515218.39E
TUDOM	254635.66N 0520102.61E
TOSNA	251612.00N 0524116.00E
VEDED	260558.26N 0514627.91E

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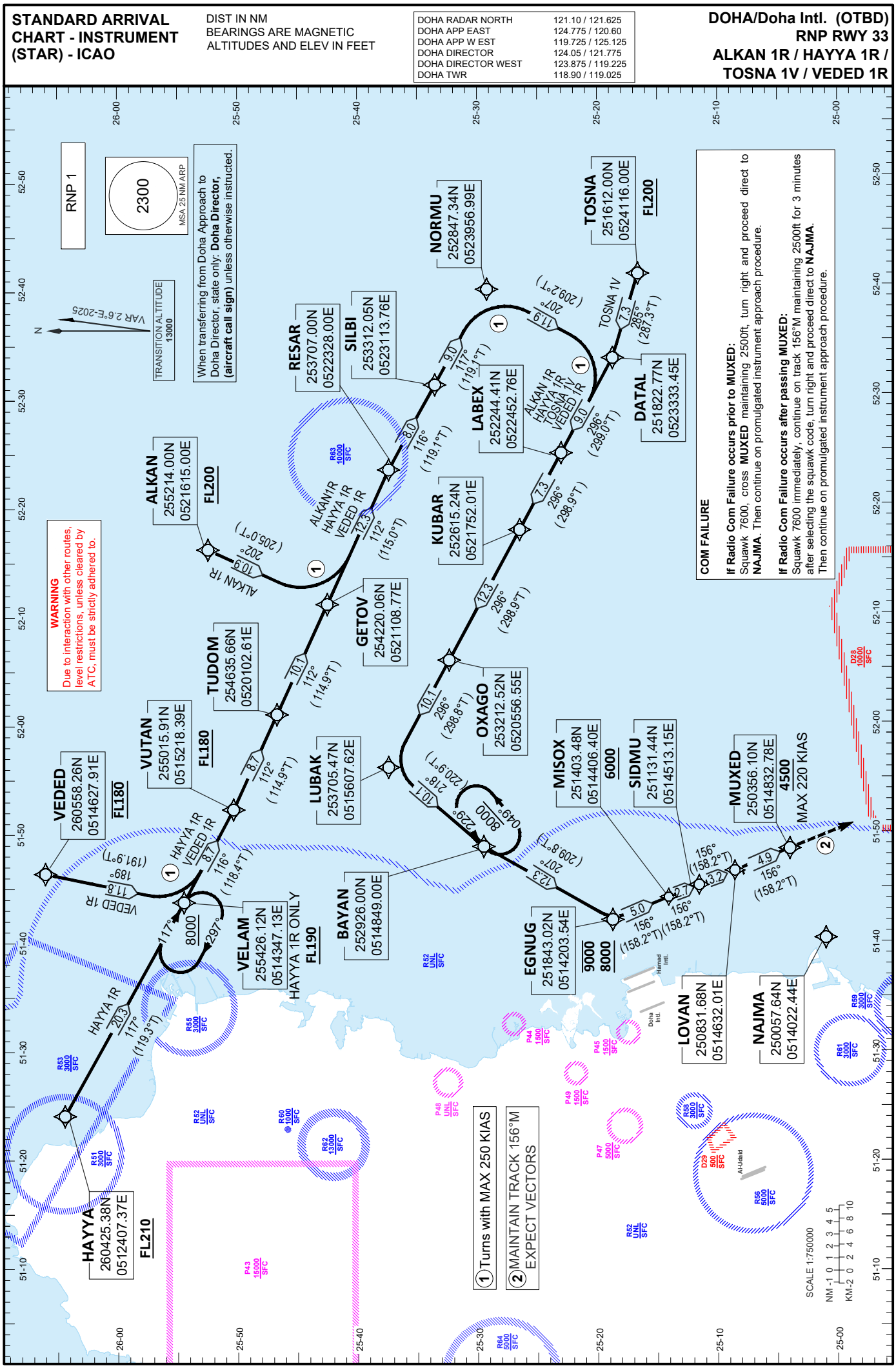
STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET

DOHA RADAR NORTH	121.10 / 121.625
DOHA APP EAST	124.775 / 120.60
DOHA APP W EST	119.725 / 125.125
DOHA DIRECTOR	124.05 / 121.775
DOHA DIRECTOR WEST	123.875 / 119.225
DOHA TWR	118.90 / 119.025

DOHA/Doha Intl. (OTBD)
RNP RWY 33
ALKAN 1R / HAYYA 1R / TOSNA 1V / VEDED 1R



STANDARD ARRIVAL
CHART - INSTRUMENT
(STAR) - ICAO

DOHA/Doha Intl.(OTBD)
RNP RWY 33
ALKAN 1R / HAYYA 1R / TOSNA 1V / VEDED 1R

TABULAR DESCRIPTION

RNP STAR ALKAN 1R

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	ALKAN	-	-	-2.6	-	-	+FL200	-	-	RNP 1
2	TF	GETOV	-	202 (205.0)	-2.6	10.9	-	-	-250	-	RNP 1
3	TF	RESAR	-	112 (115.0)	-2.6	12.3	-	-	-	-	RNP 1
4	TF	SILBI	-	116 (119.1)	-2.6	8.0	-	-	-	-	RNP 1
5	TF	NORMU	-	117 (119.1)	-2.6	9.0	-	-	-250	-	RNP 1
6	TF	DATAL	-	207 (209.2)	-2.6	11.9	-	-	-250	-	RNP 1
7	TF	LABEX	-	296 (299.0)	-2.6	9.0	-	-	-	-	RNP 1
8	TF	KUBAR	-	296 (298.9)	-2.6	7.3	-	-	-	-	RNP 1
9	TF	OXAGO	-	296 (298.9)	-2.6	12.3	-	-	-	-	RNP 1
10	TF	LUBAK	-	296 (298.8)	-2.6	10.1	-	-	-	-	RNP 1
11	TF	BAYAN	-	218 (220.9)	-2.6	10.1	-	-	-	-	RNP 1
12	TF	EGNUG	-	207 (209.8)	-2.6	12.3	-	+8000/-9000	-	-	RNP 1
13	TF	MISOX	-	156 (158.2)	-2.6	5.0	-	+6000	-	-	RNP 1
14	TF	SIDMU	-	156 (158.2)	-2.6	2.7	-	-	-	-	RNP 1
15	TF	LOVAN	-	156 (158.2)	-2.6	3.2	-	-	-	-	RNP 1
16	TF	MUXED	-	156 (158.2)	-2.6	4.9	-	+4500	-220	-	RNP 1
17	FM	MUXED	-	156 (158.2)	-2.6	-	-	+4500	-220	-	RNP 1
Remarks											

RNP STAR HAYYA 1R

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	HAYYA	-	-	-2.6	-	-	+FL210	-	-	RNP 1
2	TF	VELAM	-	117 (119.3)	-2.6	20.3	-	+FL190	-	-	RNP 1
3	TF	VUTAN	-	116 (118.4)	-2.6	8.7	-	+FL180	-	-	RNP 1
4	TF	TUDOM	-	112 (114.9)	-2.6	8.7	-	-	-	-	RNP 1
5	TF	GETOV	-	112 (114.9)	-2.6	10.1	-	-	-	-	RNP 1
6	TF	RESAR	-	112 (115.0)	-2.6	12.3	-	-	-	-	RNP 1
7	TF	SILBI	-	116 (119.1)	-2.6	8.0	-	-	-	-	RNP 1
8	TF	NORMU	-	117 (119.1)	-2.6	9.0	-	-	-250	-	RNP 1
9	TF	DATAL	-	207 (209.2)	-2.6	11.9	-	-	-250	-	RNP 1
10	TF	LABEX	-	296 (299.0)	-2.6	9.0	-	-	-	-	RNP 1
11	TF	KUBAR	-	296 (298.9)	-2.6	7.3	-	-	-	-	RNP 1
12	TF	OXAGO	-	296 (298.9)	-2.6	12.3	-	-	-	-	RNP 1
13	TF	LUBAK	-	296 (298.8)	-2.6	10.1	-	-	-	-	RNP 1
14	TF	BAYAN	-	218 (220.9)	-2.6	10.1	-	-	-	-	RNP 1
15	TF	EGNUG	-	207 (209.8)	-2.6	12.3	-	+8000/-9000	-	-	RNP 1
16	TF	MISOX	-	156 (158.2)	-2.6	5.0	-	+6000	-	-	RNP 1
17	TF	SIDMU	-	156 (158.2)	-2.6	2.7	-	-	-	-	RNP 1
18	TF	LOVAN	-	156 (158.2)	-2.6	3.2	-	-	-	-	RNP 1
19	TF	MUXED	-	156 (158.2)	-2.6	4.9	-	+4500	-220	-	RNP 1
20	FM	MUXED	-	156 (158.2)	-2.6	-	-	+4500	-220	-	RNP 1
Remarks											

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RNP STAR TOSNA 1V

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	TOSNA	-	-	-2.6	-	-	+FL200	-	-	RNP 1
2	TF	DATAL	-	285 (287.3)	-2.6	7.3	-	-	-	-	RNP 1
3	TF	LABEX	-	296 (299.0)	-2.6	9.0	-	-	-	-	RNP 1
4	TF	KUBAR	-	296 (298.9)	-2.6	7.3	-	-	-	-	RNP 1
5	TF	OXAGO	-	296 (298.9)	-2.6	12.3	-	-	-	-	RNP 1
6	TF	LUBAK	-	296 (298.8)	-2.6	10.1	-	-	-	-	RNP 1
7	TF	BAYAN	-	218 (220.9)	-2.6	10.1	-	-	-	-	RNP 1
8	TF	EGNUG	-	207 (209.8)	-2.6	12.3	-	+8000/-9000	-	-	RNP 1
9	TF	MISOX	-	156 (158.2)	-2.6	5.0	-	+6000	-	-	RNP 1
10	TF	SIDMU		156 (158.2)	-2.6	2.7	-	-	-	-	RNP 1
11	TF	LOVAN		156 (158.2)	-2.6	3.2	-	-	-	-	RNP 1
12	TF	MUXED	-	156 (158.2)	-2.6	4.9	-	+4500	-220	-	RNP 1
13	FM	MUXED	-	156 (158.2)	-2.6	-	-	+4500	-220	-	RNP 1
Remarks											

RNP STAR VEDED 1R

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	VEDED	-	-	-2.6	-	-	@FL180	-	-	RNP 1
2	TF	VELAM	-	189 (191.9)	-2.6	11.8	-	-	-250	-	RNP 1
3	TF	VUTAN	-	116 (118.4)	-2.6	8.7	-	+FL180	-	-	RNP 1
4	TF	TUDOM	-	112 (114.9)	-2.6	8.7	-	-	-	-	RNP 1
5	TF	GETOV	-	112 (114.9)	-2.6	10.1	-	-	-	-	RNP 1
6	TF	RESAR	-	112 (115.0)	-2.6	12.3	-	-	-	-	RNP 1
7	TF	SILBI	-	116 (119.1)	-2.6	8.0	-	-	-	-	RNP 1
8	TF	NORMU	-	117 (119.1)	-2.6	9.0	-	-	-250	-	RNP 1
9	TF	DATAL	-	207 (209.2)	-2.6	11.9	-	-	-250	-	RNP 1
10	TF	LABEX	-	296 (299.0)	-2.6	9.0	-	-	-	-	RNP 1
11	TF	KUBAR	-	296 (298.9)	-2.6	7.3	-	-	-	-	RNP 1
12	TF	OXAGO	-	296 (298.9)	-2.6	12.3	-	-	-	-	RNP 1
13	TF	LUBAK	-	296 (298.8)	-2.6	10.1	-	-	-	-	RNP 1
14	TF	BAYAN	-	218 (220.9)	-2.6	10.1	-	-	-	-	RNP 1
15	TF	EGNUG	-	207 (209.8)	-2.6	12.3	-	+8000/-9000	-	-	RNP 1
16	TF	MISOX	-	156 (158.2)	-2.6	5.0	-	+6000	-	-	RNP 1
17	TF	SIDMU	-	156 (158.2)	-2.6	2.7	-	-	-	-	RNP 1
18	TF	LOVAN	-	156 (158.2)	-2.6	3.2	-	-	-	-	RNP 1
19	TF	MUXED	-	156 (158.2)	-2.6	4.9	-	+4500	-220	-	RNP 1
20	FM	MUXED	-	156 (158.2)	-2.6	-	-	+4500	-220	-	RNP 1
Remarks											

WAYPOINT LIST

RNP STAR ALKAN 1R / HAYYA 1R / TOSNA 1V / VEDED 1R

Waypoint Identifier	Coordinates
ALKAN	255214.00N 0521615.00E
GETOV	254220.06N 0521108.77E
RESAR	253707.00N 0522328.00E
SILBI	253312.05N 0523113.76E
NORMU	252847.34N 0523956.99E
DATAL	251822.77N 0523333.45E
LABEX	252244.41N 0522452.76E
KUBAR	252615.24N 0521752.01E
OXAGO	253212.52N 0520556.55E
LUBAK	253705.47N 0515607.62E
BAYAN	252926.00N 0514849.00E

RNP STAR ALKAN 1R / HAYYA 1R / TOSNA 1V / VEDED 1R

Waypoint Identifier	Coordinates
EGNUG	251843.02N 0514203.54E
MISOX	251403.48N 0514406.40E
SIDMU	251131.44N 0514513.15E
LOVAN	250831.68N 0514632.01E
MUXED	250356.10N 0514832.78E
HAYYA	260425.38N 0512407.37E
VELAM	255426.12N 0514347.13E
VUTAN	255015.91N 0515218.39E
TUDOM	254635.66N 0520102.61E
VEDED	260558.26N 0514627.91E
TOSNA	251612.00N 0524116.00E

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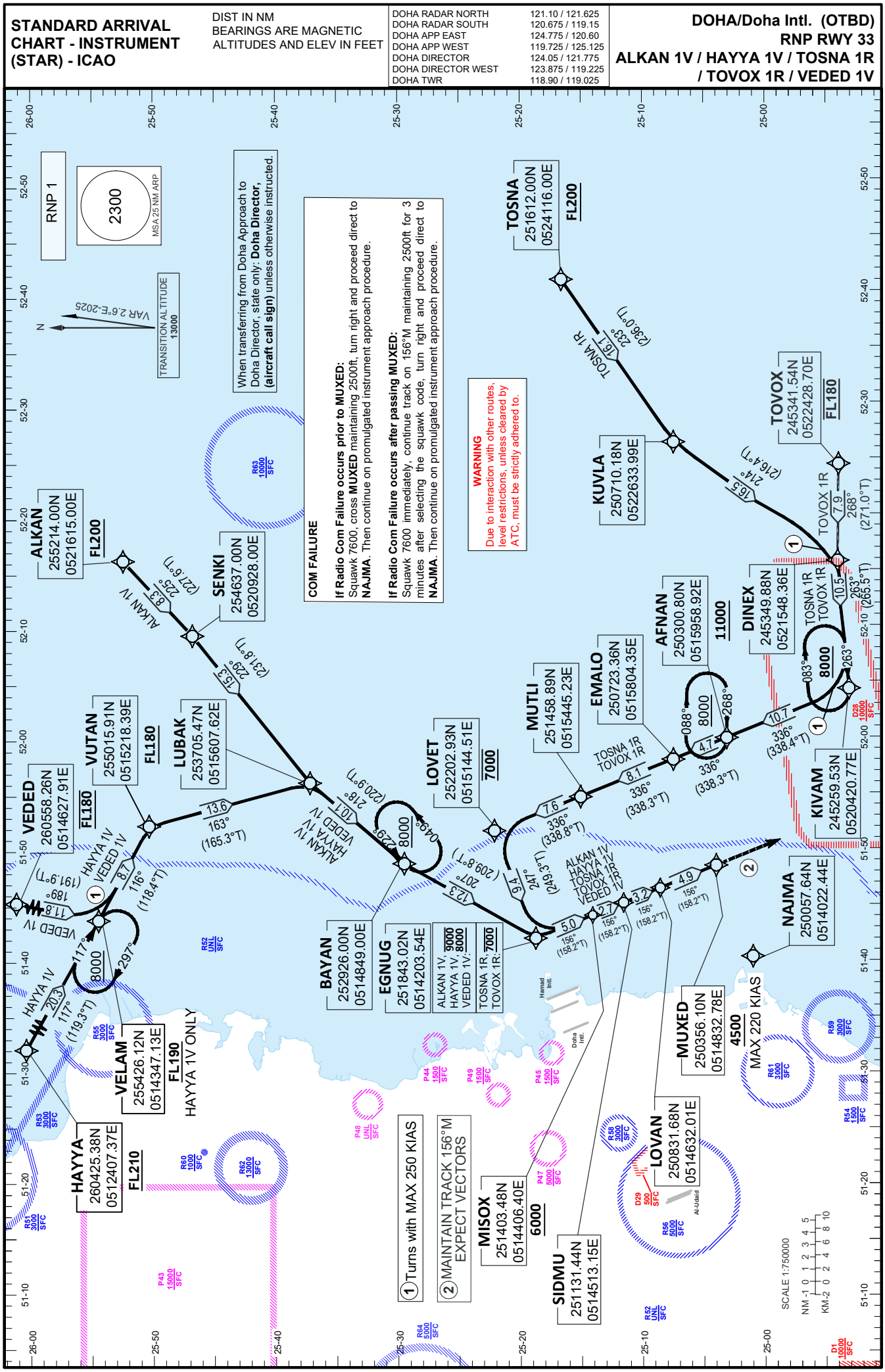
STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO
DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET
DOHA RADAR NORTH 121.10 / 121.625
DOHA RADAR SOUTH 120.675 / 119.15
DOHA APP EAST 124.775 / 120.60
DOHA APP WEST 119.725 / 125.125
DOHA DIRECTOR 124.05 / 121.775
DOHA DIRECTOR WEST 123.875 / 119.225
DOHA TWR 118.90 / 119.025
DOHA/Doha Intl. (OTBD)
RNP RWY 33
ALKAN 1V / HAYYA 1V / TOSNA 1R / TOVOX 1R / VEDED 1V
RNP 1
2300
MSA 25 NM ARP
VAR 2.6°E-2025
TRANSITION ALTITUDE 13000
When transferring from Doha Approach to Doha Director, state only: Doha Director, (aircraft call sign) unless otherwise instructed.
COM FAILURE
If Radio Com Failure occurs prior to MUXED: Squawk 7600, cross MUXED maintaining 2500ft, turn right and proceed direct to NAJMA. Then continue on promulgated instrument approach procedure.
If Radio Com Failure occurs after passing MUXED: Squawk 7600 immediately, continue track on 156°M maintaining 2500ft for 3 minutes after selecting the squawk code, turn right and proceed direct to NAJMA. Then continue on promulgated instrument approach procedure.
WARNING
Due to interaction with other routes, level restrictions, unless cleared by ATC, must be strictly adhered to.
ALKAN 255214.00N 0521615.00E FL200
SENKI 254637.00N 0520928.00E
VUTAN 255015.91N 0515218.39E FL180
LUBAK 253705.47N 0515607.62E
VEDED 260558.26N 0514627.91E FL180
HAYYA 260425.38N 0512407.37E FL210
VELAM 255426.12N 0514347.13E FL190
HAYYA 1V ONLY
BAYAN 252926.00N 0514849.00E
EGNUG 251843.02N 0514203.54E
ALKAN 1V, 9000
HAYYA 1V, 8000
VEDED 1V:
TOSNA 1R, 7000
TOVOX 1R:
LOVET 252202.93N 0515144.51E 7000
MUTLI 251458.89N 0515445.23E
EMALO 250723.36N 0515804.35E
AFNAN 250300.80N 0515958.92E 11000
DINEX 245349.88N 0521548.36E 8000
KIVAM 245259.53N 0520420.77E
NAJMA 250057.64N 0514022.44E
TOSNA 251612.00N 0524116.00E FL200
KUVLA 250710.18N 0522633.99E
TOVOX 245341.54N 0522428.70E FL180
MUXED 250356.10N 0514832.78E 4500
MAX 220 KIAS
LOVAN 250831.68N 0514632.01E
MISOX 251403.48N 0514406.40E 6000
SIDMU 251131.44N 0514513.15E
1 Turns with MAX 250 KIAS
2 MAINTAIN TRACK 156°M EXPECT VECTORS
SCALE 1:750000
NM -1 0 1 2 3 4 5
KM -2 0 2 4 6 8 10

STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DOHA/Doha Intl.(OTBD)
RNP RWY 33
ALKAN 1V / HAYYA 1V / TOSNA 1R / TOVOX 1R / VEDED 1V

TABULAR DESCRIPTION

RNP STAR ALKAN 1V

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	ALKAN	-	-	-2.6	-	-	+FL200	-	-	RNP 1
2	TF	SENKI	-	225 (227.6)	-2.6	8.3	-	-	-	-	RNP 1
3	TF	LUBAK	-	229 (231.8)	-2.6	15.3	-	-	-	-	RNP 1
4	TF	BAYAN	-	218 (220.9)	-2.6	10.1	-	-	-	-	RNP 1
5	TF	EGNUG	-	207 (209.8)	-2.6	12.3	-	+8000/-9000	-	-	RNP 1
6	TF	MISOX	-	156 (158.2)	-2.6	5.0	-	+6000	-	-	RNP 1
7	TF	SIDMU	-	156 (158.2)	-2.6	2.7	-	-	-	-	RNP 1
8	TF	LOVAN	-	156 (158.2)	-2.6	3.2	-	-	-	-	RNP 1
9	TF	MUXED	-	156 (158.2)	-2.6	4.9	-	+4500	-220	-	RNP 1
10	FM	MUXED	-	156 (158.2)	-2.6	-	-	+4500	-220	-	RNP 1
Remarks											

RNP STAR HAYYA 1V

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	HAYYA	-	-	-2.6	-	-	+FL210	-	-	RNP 1
2	TF	VELAM	-	117 (119.3)	-2.6	20.3	-	+FL190	-	-	RNP 1
3	TF	VUTAN	-	116 (118.4)	-2.6	8.7	-	+FL180	-	-	RNP 1
4	TF	LUBAK	-	163 (165.3)	-2.6	13.6	-	-	-	-	RNP 1
5	TF	BAYAN	-	218 (220.9)	-2.6	10.1	-	-	-	-	RNP 1
6	TF	EGNUG	-	207 (209.8)	-2.6	12.3	-	+8000/-9000	-	-	RNP 1
7	TF	MISOX	-	156 (158.2)	-2.6	5.0	-	+6000	-	-	RNP 1
8	TF	SIDMU	-	156 (158.2)	-2.6	2.7	-	-	-	-	RNP 1
9	TF	LOVAN	-	156 (158.2)	-2.6	3.2	-	-	-	-	RNP 1
10	TF	MUXED	-	156 (158.2)	-2.6	4.9	-	+4500	-220	-	RNP 1
11	FM	MUXED	-	156 (158.2)	-2.6	-	-	+4500	-220	-	RNP 1
Remarks											

RNP STAR TOSNA 1R

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	TOSNA	-	-	-2.6	-	-	+FL200	-	-	RNP 1
2	TF	KUVLA	-	233 (236.0)	-2.6	16.1	-	-	-	-	RNP 1
3	TF	DINEX	-	214 (216.4)	-2.6	16.5	-	-	-250	-	RNP 1
4	TF	KIVAM	-	263 (265.5)	-2.6	10.5	-	-	-250	-	RNP 1
5	TF	AFNAN	-	336 (338.4)	-2.6	10.7	-	+11000	-	-	RNP 1
6	TF	EMALO	-	336 (338.3)	-2.6	4.7	-	-	-	-	RNP 1
7	TF	MUTLI	-	336 (338.3)	-2.6	8.1	-	-	-	-	RNP 1
8	TF	LOVET	-	336 (338.8)	-2.6	7.6	-	@7000	-	-	RNP 1
9	TF	EGNUG	-	247 (249.3)	-2.6	9.4	-	@7000	-	-	RNP 1
10	TF	MISOX	-	156 (158.2)	-2.6	5.0	-	+6000	-	-	RNP 1
11	TF	SIDMU	-	156 (158.2)	-2.6	2.7	-	-	-	-	RNP 1
12	TF	LOVAN	-	156 (158.2)	-2.6	3.2	-	-	-	-	RNP 1
13	TF	MUXED	-	156 (158.2)	-2.6	4.9	-	+4500	-220	-	RNP 1
14	FM	MUXED	-	156 (158.2)	-2.6	-	-	+4500	-220	-	RNP 1
Remarks											

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RNP STAR TOVOX 1R

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	TOVOX	-	-	-2.6	-	-	@FL180	-	-	RNP 1
2	TF	DINEX	-	268 (271.0)	-2.6	7.9	-	-	-	-	RNP 1
3	TF	KIVAM	-	263 (265.5)	-2.6	10.5	-	-	-250	-	RNP 1
4	TF	AFNAN	-	336 (338.4)	-2.6	10.7	-	+11000	-	-	RNP 1
5	TF	EMALO	-	336 (338.3)	-2.6	4.7	-	-	-	-	RNP 1
6	TF	MUTLI	-	336 (338.3)	-2.6	8.1	-	-	-	-	RNP 1
7	TF	LOVET	-	336 (338.8)	-2.6	7.6	-	@7000	-	-	RNP 1
8	TF	EGNUG	-	247 (249.3)	-2.6	9.4	-	@7000	-	-	RNP 1
9	TF	MISOX	-	156 (158.2)	-2.6	5.0	-	+6000	-	-	RNP 1
10	TF	SIDMU	-	156 (158.2)	-2.6	2.7	-	-	-	-	RNP 1
11	TF	LOVAN	-	156 (158.2)	-2.6	3.2	-	-	-	-	RNP 1
12	TF	MUXED	-	156 (158.2)	-2.6	4.9	-	+4500	-220	-	RNP 1
13	FM	MUXED	-	156 (158.2)	-2.6	-	-	+4500	-220	-	RNP 1
Remarks											

RNP STAR VEDED 1V

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	VEDED	-	-	-2.6	-	-	@FL180	-	-	RNP 1
2	TF	VELAM	-	189 (191.9)	-2.6	11.8	-	-	-250	-	RNP 1
3	TF	VUTAN	-	116 (118.4)	-2.6	8.7	-	+FL180	-	-	RNP 1
4	TF	LUBAK	-	163 (165.3)	-2.6	13.6	-	-	-	-	RNP 1
5	TF	BAYAN	-	218 (220.9)	-2.6	10.1	-	-	-	-	RNP 1
6	TF	EGNUG	-	207 (209.8)	-2.6	12.3	-	+8000/-9000	-	-	RNP 1
7	TF	MISOX	-	156 (158.2)	-2.6	5.0	-	+6000	-	-	RNP 1
8	TF	SIDMU	-	156 (158.2)	-2.6	2.7	-	-	-	-	RNP 1
9	TF	LOVAN	-	156 (158.2)	-2.6	3.2	-	-	-	-	RNP 1
10	TF	MUXED	-	156 (158.2)	-2.6	4.9	-	+4500	-220	-	RNP 1
11	FM	MUXED	-	156 (158.2)	-2.6	-	-	+4500	-220	-	RNP 1
Remarks											

WAYPOINT LIST

RNP STAR ALKAN 1V / HAYYA 1V / TOSNA 1R / TOVOX 1R / VEDED 1V

Waypoint Identifier	Coordinates
ALKAN	255214.00N 0521615.00E
SENKI	254637.00N 0520928.00E
LUBAK	253705.47N 0515607.62E
BAYAN	252926.00N 0514849.00E
EGNUG	251843.02N 0514203.54E
MISOX	251403.48N 0514406.40E
SIDMU	251131.44N 0514513.15E
LOVAN	250831.68N 0514632.01E
MUXED	250356.10N 0514832.78E
HAYYA	260425.38N 0512407.37E
VELAM	255426.12N 0514347.13E

RNP STAR ALKAN 1V / HAYYA 1V / TOSNA 1R / TOVOX 1R / VEDED 1V

Waypoint Identifier	Coordinates
VUTAN	255015.91N 0515218.39E
TOSNA	251612.00N 0524116.00E
KUVLA	250710.18N 0522633.99E
DINEX	245349.88N 0521548.36E
KIVAM	245259.53N 0520420.77E
AFNAN	250300.80N 0515958.92E
EMALO	250723.36N 0515804.35E
MUTLI	251458.89N 0515445.23E
LOVET	252202.93N 0515144.51E
TOVOX	245341.54N 0522428.70E
VEDED	260558.26N 0514627.91E

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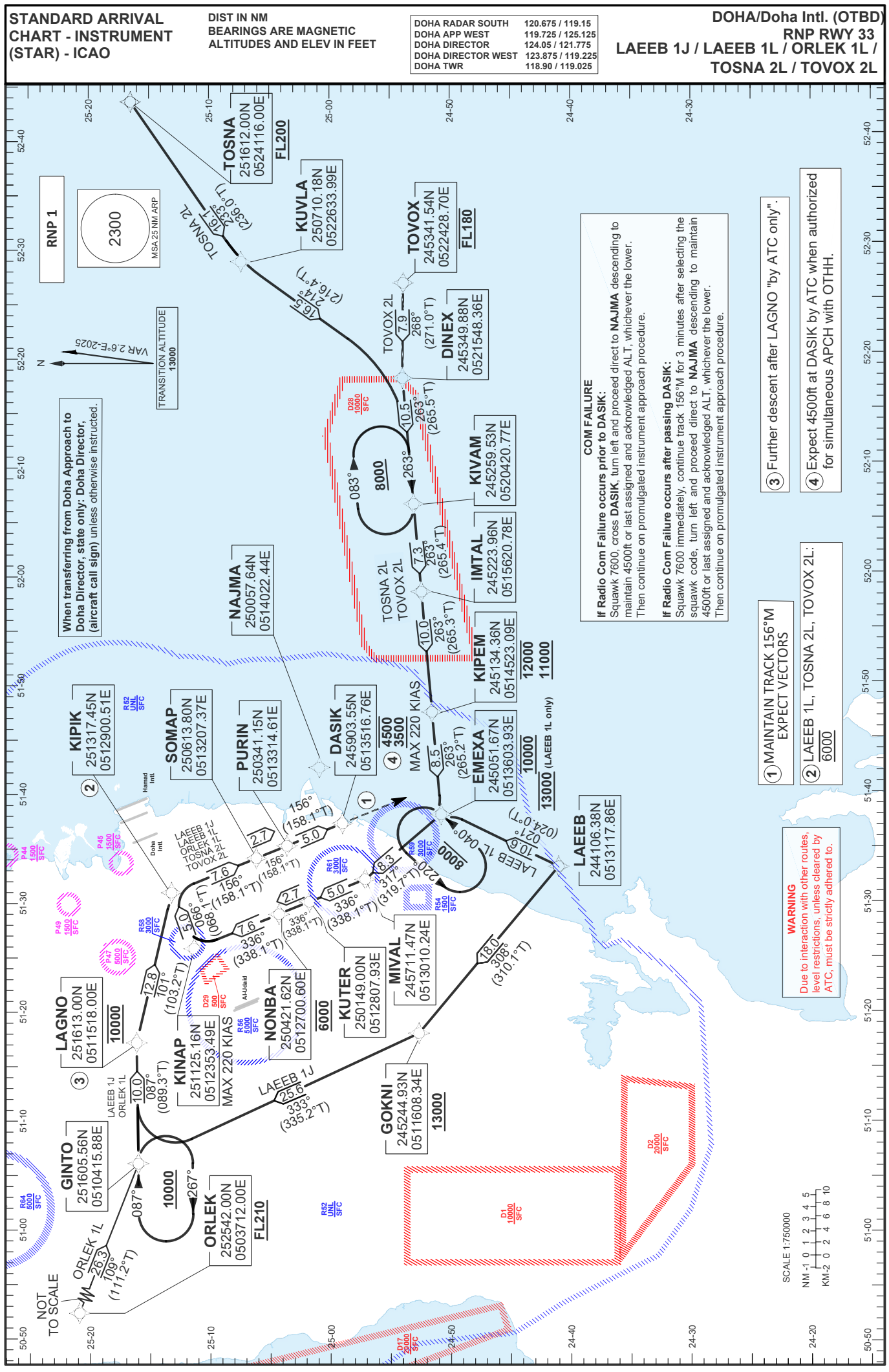
STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET

DOHA RADAR SOUTH	120.675 / 119.15
DOHA APP WEST	119.725 / 125.125
DOHA DIRECTOR	124.05 / 121.775
DOHA DIRECTOR WEST	123.875 / 119.225
DOHA TWR	118.90 / 119.025

DOHA/Doha Intl. (OTBD)
RNP RWY 33
LAEEB 1J / LAEEB 1L / ORLEK 1L / TOSNA 2L / TOVOX 2L



STANDARD ARRIVAL CHART - INSTRUMENT (STAR) - ICAO

DOHA/Doha Intl.(OTBD)
RNP RWY 33
LAEEB 1J / LAEEB 1L / ORLEK 1L / TOSNA 2L / TOVOX 2L

TABULAR DESCRIPTION

RNP STAR LAEEB 1J

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	LAEEB	-	-	-2.6	-	-	-	-	-	RNP 1
2	TF	GOKNI	-	308 (310.1)	-2.6	18.0	-	+13000	-	-	RNP 1
3	TF	GINTO	-	333 (335.2)	-2.6	25.6	-	-	-	-	RNP 1
4	TF	LAGNO	-	087 (089.3)	-2.6	10.0	-	@10000	-	-	RNP 1
5	TF	KIPIK	-	101 (103.2)	-2.6	12.8	-	-	-	-	RNP 1
6	TF	SOMAP	-	156 (158.1)	-2.6	7.6	-	-	-	-	RNP 1
7	TF	PURIN	-	156 (158.1)	-2.6	2.7	-	-	-	-	RNP 1
8	TF	DASIK	-	156 (158.1)	-2.6	5.0	-	+3500/-4500	-220	-	RNP 1
9	FM	DASIK	-	156 (158.1)	-2.6	-	-	-	-220	-	RNP 1

Remark	Further descent after LAGNO by ATC only. Expect 4500ft at DASIK by ATC when authorized for simultaneous APCH with OTHH.

RNP STAR LAEEB 1L

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	LAEEB	-	-	-2.6	-	-	-	-	-	RNP 1
2	TF	EMEXA	-	021 (024.0)	-2.6	10.6	-	@13000	-	-	RNP 1
3	TF	MIVAL	-	317 (319.7)	-2.6	8.3	-	-	-	-	RNP 1
4	TF	KUTER	-	336 (338.1)	-2.6	5.0	-	-	-	-	RNP 1
5	TF	NONBA	-	336 (338.1)	-2.6	2.7	-	@6000	-	-	RNP 1
6	TF	KINAP	-	336 (338.1)	-2.6	7.6	-	-	-220	-	RNP 1
7	TF	KIPIK	-	066 (068.1)	-2.6	5.0	-	@6000	-	-	RNP 1
8	TF	SOMAP	-	156 (158.1)	-2.6	7.6	-	-	-	-	RNP 1
9	TF	PURIN	-	156 (158.1)	-2.6	2.7	-	-	-	-	RNP 1
10	TF	DASIK	-	156 (158.1)	-2.6	5.0	-	+3500/-4500	-220	-	RNP 1
11	FM	DASIK	-	156 (158.1)	-2.6	-	-	-	-220	-	RNP 1

Remark	Expect 4500ft at DASIK by ATC when authorized for simultaneous APCH with OTHH.

RNP STAR ORLEK 1L

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	ORLEK	-	-	-2.6	-	-	+FL210	-	-	RNP 1
2	TF	GINTO	-	109 (111.2)	-2.6	26.3	-	-	-	-	RNP 1
3	TF	LAGNO	-	087 (089.3)	-2.6	10.0	-	@10000	-	-	RNP 1
4	TF	KIPIK	-	101 (103.2)	-2.6	12.8	-	-	-	-	RNP 1
5	TF	SOMAP	-	156 (158.1)	-2.6	7.6	-	-	-	-	RNP 1
6	TF	PURIN	-	156 (158.1)	-2.6	2.7	-	-	-	-	RNP 1
7	TF	DASIK	-	156 (158.1)	-2.6	5.0	-	+3500/-4500	-220	-	RNP 1
8	FM	DASIK	-	156 (158.1)	-2.6	-	-	-	-220	-	RNP 1

Remark	Further descent after LAGNO by ATC only. Expect 4500ft at DASIK by ATC when authorized for simultaneous APCH with OTHH.

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RNP STAR TOSNA 2L

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	TOSNA	-	-	-2.6	-	-	+FL200	-	-	RNP 1
2	TF	KUVLA	-	233 (236.0)	-2.6	16.1	-	-	-	-	RNP 1
3	TF	DINEX	-	214 (216.4)	-2.6	16.5	-	-	-	-	RNP 1
4	TF	KIVAM	-	263 (265.5)	-2.6	10.5	-	-	-	-	RNP 1
5	TF	IMTAL	-	263 (265.4)	-2.6	7.3	-	-	-	-	RNP 1
6	TF	KIPEM	-	263 (265.3)	-2.6	10.0	-	+11000/-12000	-	-	RNP 1
7	TF	EMEXA	-	263 (265.2)	-2.6	8.5	-	@10000	-	-	RNP 1
8	TF	MIVAL	-	317 (319.7)	-2.6	8.3	-	-	-	-	RNP 1
9	TF	KUTER	-	336 (338.1)	-2.6	5.0	-	-	-	-	RNP 1
10	TF	NONBA	-	336 (338.1)	-2.6	2.7	-	@6000	-	-	RNP 1
11	TF	KINAP	-	336 (338.1)	-2.6	7.6	-	-	-220	-	RNP 1
12	TF	KIPIK	-	066 (068.1)	-2.6	5.0	-	@6000	-	-	RNP 1
13	TF	SOMAP	-	156 (158.1)	-2.6	7.6	-	-	-	-	RNP 1
14	TF	PURIN	-	156 (158.1)	-2.6	2.7	-	-	-	-	RNP 1
15	TF	DASIK	-	156 (158.1)	-2.6	5.0	-	+3500/-4500	-220	-	RNP 1
16	FM	DASIK	-	156 (158.1)	-2.6	-	-	-	-220	-	RNP 1
Remark	Expect 4500ft at DASIK by ATC when authorized for simultaneous APCH with OTHH.										

RNP STAR TOVOX 2L

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	TOVOX	-	-	-2.6	-	-	@FL180	-	-	RNP 1
2	TF	DINEX	-	268 (271.0)	-2.6	7.9	-	-	-	-	RNP 1
3	TF	KIVAM	-	263 (265.5)	-2.6	10.5	-	-	-	-	RNP 1
4	TF	IMTAL	-	263 (265.4)	-2.6	7.3	-	-	-	-	RNP 1
5	TF	KIPEM	-	263 (265.3)	-2.6	10.0	-	+11000/-12000	-	-	RNP 1
6	TF	EMEXA	-	263 (265.2)	-2.6	8.5	-	@10000	-	-	RNP 1
7	TF	MIVAL	-	317 (319.7)	-2.6	8.3	-	-	-	-	RNP 1
8	TF	KUTER	-	336 (338.1)	-2.6	5.0	-	-	-	-	RNP 1
9	TF	NONBA	-	336 (338.1)	-2.6	2.7	-	@6000	-	-	RNP 1
10	TF	KINAP	-	336 (338.1)	-2.6	7.6	-	-	-220	-	RNP 1
11	TF	KIPIK	-	066 (068.1)	-2.6	5.0	-	@6000	-	-	RNP 1
12	TF	SOMAP	-	156 (158.1)	-2.6	7.6	-	-	-	-	RNP 1
13	TF	PURIN	-	156 (158.1)	-2.6	2.7	-	-	-	-	RNP 1
14	TF	DASIK	-	156 (158.1)	-2.6	5.0	-	+3500/-4500	-220	-	RNP 1
15	FM	DASIK	-	156 (158.1)	-2.6	-	-	-	-220	-	RNP 1
Remark	Expect 4500ft at DASIK by ATC when authorized for simultaneous APCH with OTHH.										

WAYPOINT LIST

RNP STAR LAEEB 1L / LAEEB 1J / ORLEK 1L / TOSNA 2L / TOVOX 2L

Waypoint Identifier	Coordinates
LAEEB	244106.38N 0513117.86E
GOKNI	245244.93N 0511608.34E
EMEXA	245051.67N 0513603.93E
MIVAL	245711.47N 0513010.24E
KUTER	250149.00N 0512807.93E
NONBA	250421.62N 0512700.60E
KINAP	251125.16N 0512353.49E
KIPIK	251317.45N 0512900.51E
SOMAP	250613.80N 0513207.37E
PURIN	250341.15N 0513314.61E
DASIK	245903.55N 0513516.76E

RNP STAR LAEEB 1L / LAEEB 1J / ORLEK 1L / TOSNA 2L / TOVOX 2L

Waypoint Identifier	Coordinates
ORLEK	252542.00N 0503712.00E
GINTO	251605.56N 0510415.88E
LAGNO	251613.00N 0511518.00E
TOSNA	251612.00N 0524116.00E
KUVLA	250710.18N 0522633.99E
DINEX	245349.88N 0521548.36E
KIVAM	245259.53N 0520420.77E
IMTAL	245223.96N 0515620.78E
KIPEM	245134.36N 0514523.09E
TOVOX	245341.54N 0522428.70E

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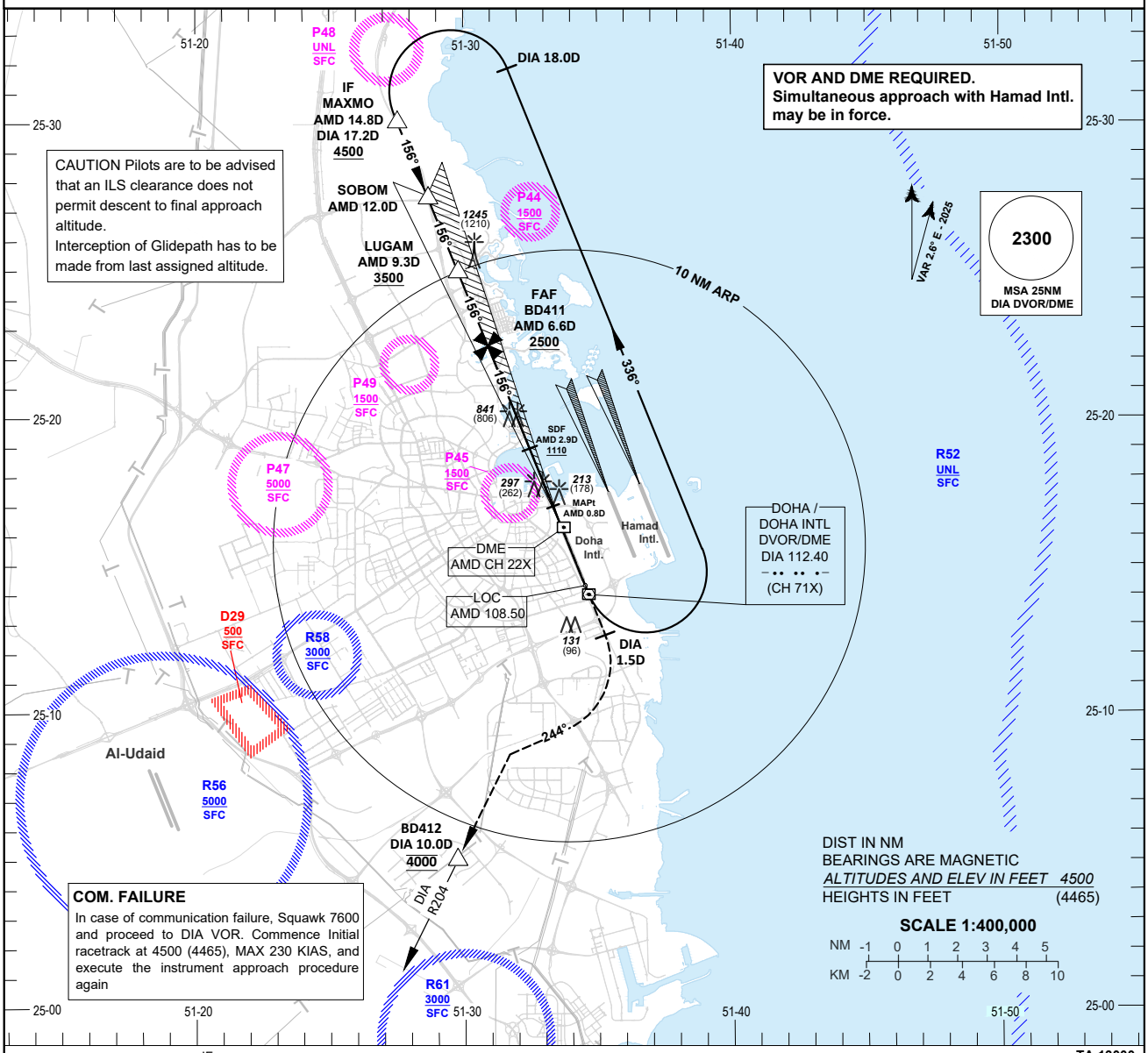
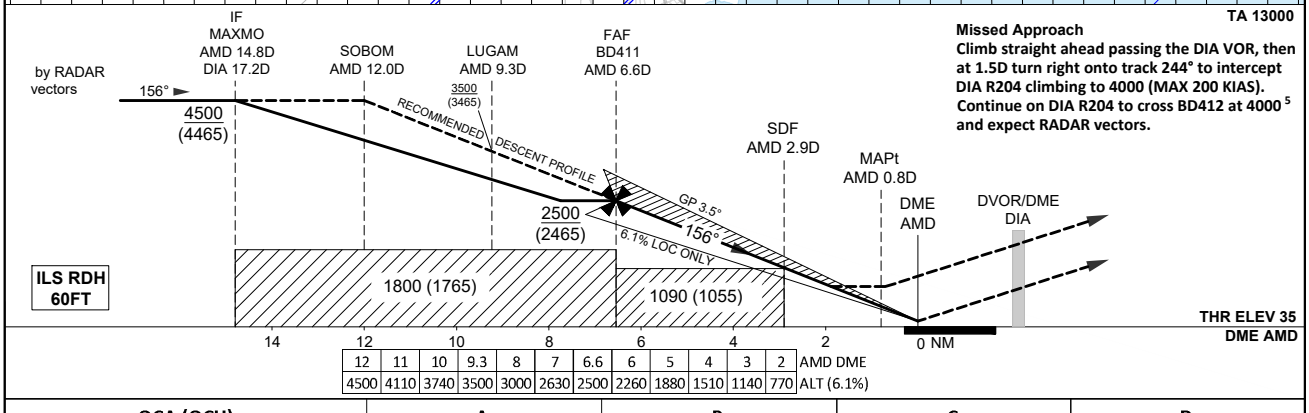
INSTRUMENT APPROACH CHART - ICAO

AD ELEV 37
HEIGHTS RELATED TO THR RWY 15 - ELEV 35

DOHA RADAR NORTH	121.10 / 121.625	DOHA DIRECTOR WEST	123.875 / 119.225
DOHA RADAR SOUTH	120.675 / 119.15	DOHA DIRECTOR	124.05 / 121.775
DOHA APP EAST	124.775 / 120.60	DOHA TWR	118.90 / 119.025
DOHA APP WEST	119.725 / 125.125		

DOHA/Doha Intl. (OTBD)
ILS RWY15
ACFT CAT A B C D





OCA (OCH)		A	B	C	D
Straight in Approach	ILS	221 (186)	229 (194)	241 (206)	257 (222)
	LOC ONLY	490 (455)			
Circling		720 (683)	910 (873)	1310 (1273)	

1. AMD DME Zero Ranged to TDZ.
2. Expect RADAR vectors to establish on final approach course.
3. Expect Glide Path intercept at SOBOM 4500 (4465).
4. In case of Missed Approach inform ATC immediately.
5. If unable, report to ATC.
6. Racetrack to be used only in case of communication failure.
7. LOC/DME AMD not usable beyond 17 DME from AMD.

LOC ONLY Approach: MAPt at AMD 0.8D							
Speed	KT	80	100	120	140	160	180
Time	MIN:SEC	Timing Not Authorized					
RATE OF DESCENT	FT/MIN	500	620	740	870	990	1110

INSTRUMENT APPROACH CHART-ICAO

DOHA/Doha Intl.(OTBD)
ILS RWY 15
ACFT CAT A B C D

AERONAUTICAL DATA TABULATION

ILS approach to RWY15 from MAXMO (IF)	
Fix/Point	**Coordinates**
MAXMO (IF) - BRG 155.55° / 14.80 NM AMD	253003.10N 0512732.91E
SOBOM - BRG 155.55° / 12.03 NM AMD	252728.46N 0512841.34E
LUGAM - BRG 155.55° / 9.34 NM AMD	252458.13N 0512947.84E
BD411 (FAF) - BRG 155.55° / 6.65 NM AMD	252227.78N 0513054.28E
AMD 2.9D (SDF LOC Only) - BRG 155.55° / 2.90 NM AMD	251858.50N 0513226.69E
Final approach descent angle (LOC Only) - 3.50°	-
AMD 0.8D (MAPt LOC Only) - BRG 155.55° / 0.80 NM AMD	251701.05N 0513318.52E
DIA 1.5D (MATF) - INT TR 155.55° / 1.50 NM DIA	251238.31N 0513514.33E
BD412 (MATF) - INT R204 / 10.00 NM DIA	250503.13N 0512943.40E

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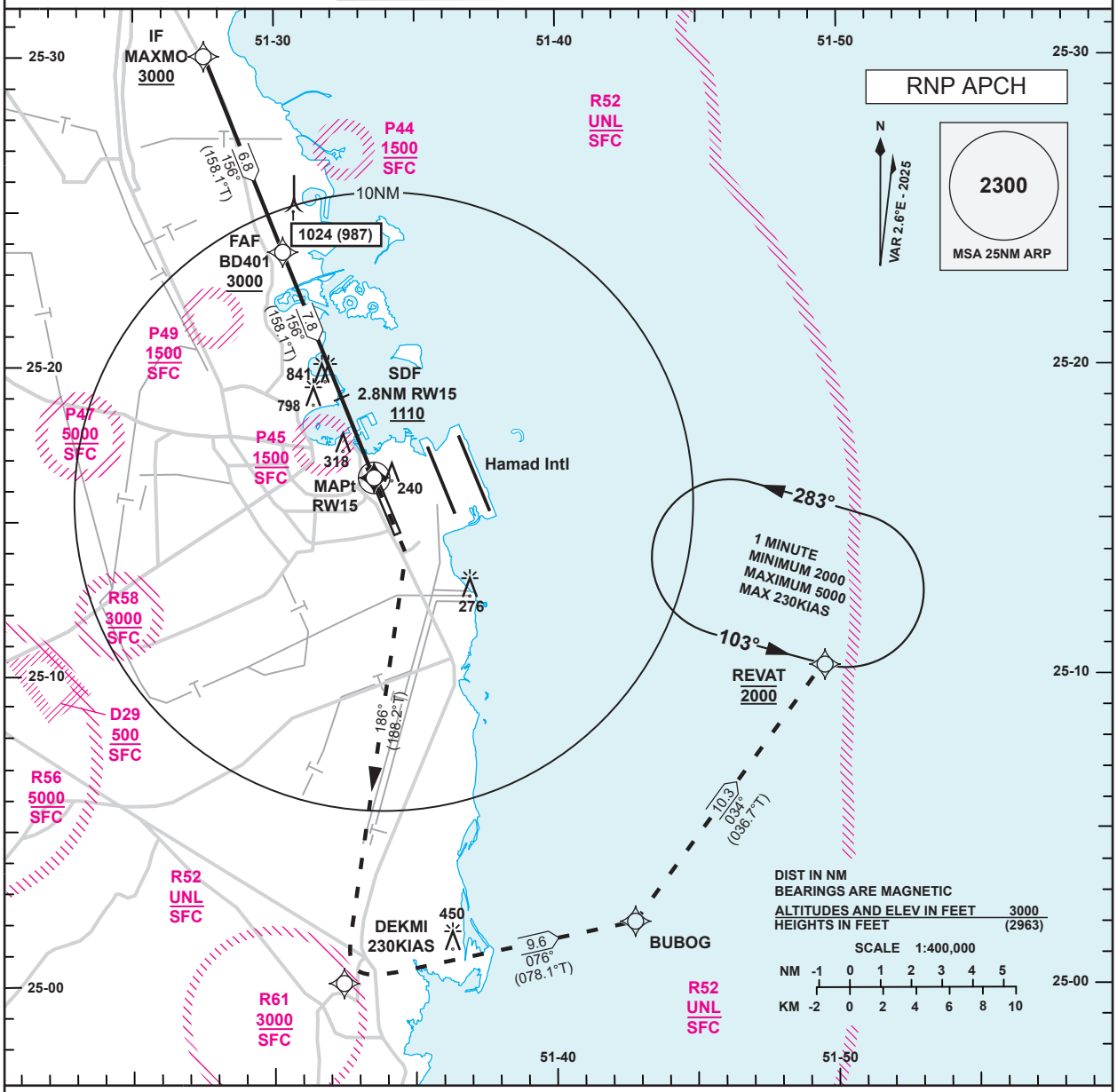
INSTRUMENT APPROACH CHART - ICAO

AD ELEV 37
HEIGHTS RELATED TO AD ELEV

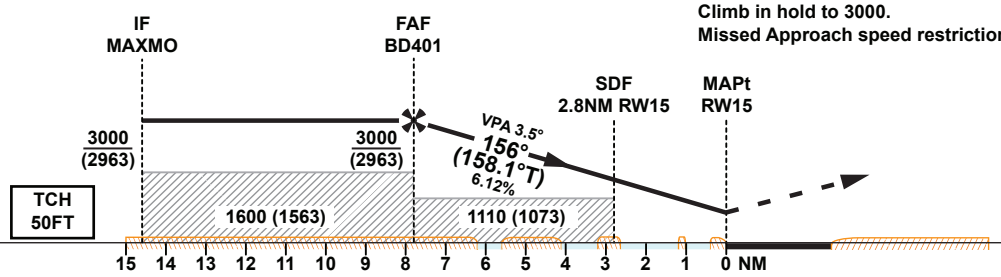
DOHA RADAR NORTH	121.100 / 121.625	DOHA DIRECTOR WEST	123.875 / 119.225
DOHA RADAR SOUTH	120.675 / 119.150	DOHA DIRECTOR	124.050 / 121.775
DOHA APP EAST	124.775 / 120.600	DOHA TWR	118.900 / 119.025
DOHA APP WEST	119.725 / 125.125		

DOHA/Doha Intl. (OTBD)
RNP RWY 15 (LNAV only)
ALL ACFT CATEGORIES



TA 13000

Missed Approach
Climb straight ahead, then turn right to intercept course 186° (188.2°T) to DEKMI. At DEKMI turn left to BUBOG, then left to REVAT and hold. Climb and maintain 2000.
Climb in hold to 3000.
Missed Approach speed restriction 230KIAS.



7	6	5	4	3	2	Distance from MAPt
2690	2320	1950	1580	1200	830	ALT (3.5°VPA)

OCA (OCH)		A	B	C	D	E
Straight in Approach	LNAV	550 (513)				
Circling		720 (683)	910 (873)	1310 (1273)		1550 (1513)

1. Hold at REVAT protected for Sector 3 Entry only.

Approach: MAPt at RW15

Speed	KT	80	100	120	140	160	180
Time	MIN:SEC	Timing Not Authorized					
RATE OF DESCENT	FT/MIN	490	610	740	860	990	1110

Change: MOCA, Obstacle.

INSTRUMENT APPROACH CHART-ICAO

AD ELEV 37
HEIGHTS RELATED TO AD ELEV

DOHA/Doha Intl.(OTBD)
RNP RWY 15 (LNAV only)
ALL ACFT CATEGORIES

TABULAR DESCRIPTION

RNP RWY 15 (LNAV Only)

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	**MAXMO**	**-**	-	-2.6	-	**-**	+3000	**-**	**-**	RNP APCH
2	TF	**BD401**	**-**	156 (158.1)	-2.6	6.8	-	+3000	**-**	**-**	RNP APCH
3	TF	**RW15**	Y	156 (158.1)	-2.6	7.8	-	-	**-**	-3.5/50	RNP APCH
4	CF	**DEKMI**	-	186 (188.2)	-2.6	-	L	-	-230	**-**	RNP APCH
5	TF	**BUBOG**	-	076 (078.1)	-2.6	9.6	-	-	-230	**-**	RNP APCH
6	TF	**REVAT**	-	034 (036.7)	-2.6	10.3	-	@2000	-230	**-**	RNP APCH
7	HM	**REVAT**	Y	103 (105.2)	-2.6	4.3	L	@3000	-230	**-**	RNP APCH

WAYPOINT LIST

RNP RWY 15 (LNAV Only)

Waypoint Identifier	Coordinates
MAXMO	253003.10N 0512732.91E
BD401	252344.28N 0513020.49E
RW15	251626.13N 0513333.92E
DEKMI	250006.66N 0513226.55E
BUBOG	250204.78N 0514245.93E
REVAT	251020.75N 0514932.10E

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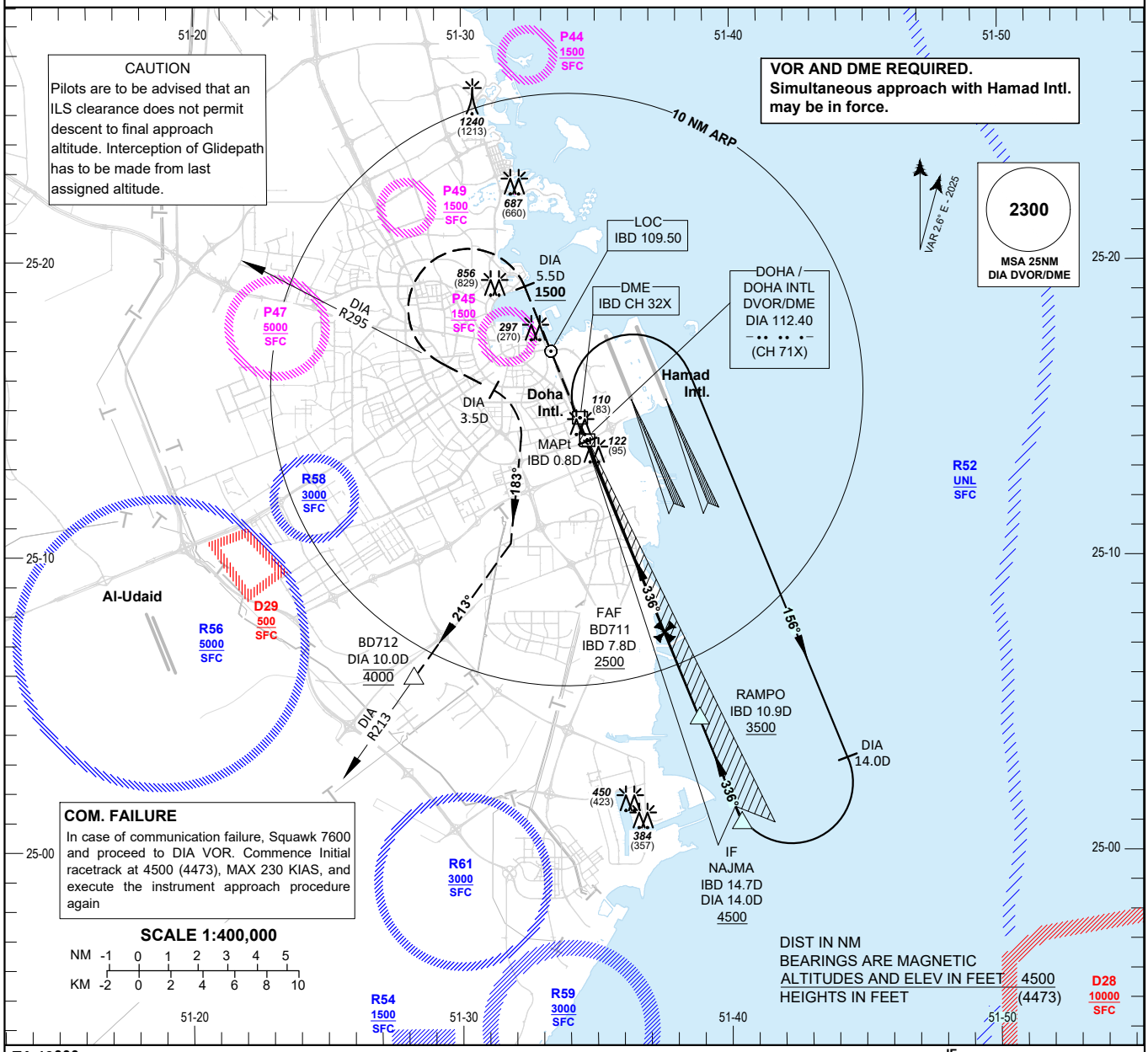
INSTRUMENT APPROACH CHART - ICAO

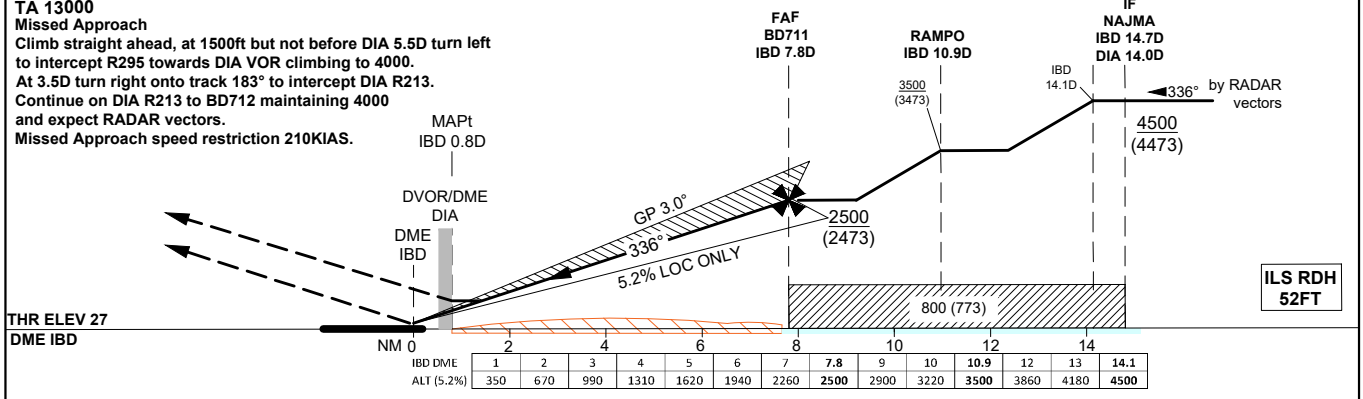
AD ELEV 37
HEIGHTS RELATED TO THR RWY 33 - ELEV 27

DOHA RADAR NORTH	121.10 / 121.625	DOHA DIRECTOR WEST	123.875 / 119.225
DOHA RADAR SOUTH	120.675 / 119.15	DOHA DIRECTOR	124.05 / 121.775
DOHA APP EAST	124.775 / 120.60	DOHA TWR	118.90 / 119.025
DOHA APP WEST	119.725 / 125.125		

DOHA/Doha Intl. (OTBD)
ILS RWY33 CAT II & III
ACFT CAT A B C D E



TA 13000
Missed Approach
Climb straight ahead, at 1500ft but not before DIA 5.5D turn left to intercept R295 towards DIA VOR climbing to 4000.
At 3.5D turn right onto track 183° to intercept DIA R213.
Continue on DIA R213 to BD712 maintaining 4000 and expect RADAR vectors.
Missed Approach speed restriction 210KIAS.



OCA (OCH)		A	B	C	D	E
Straight in Approach	ILS CAT I	210 (183)	221 (194)	236 (209)	248 (221)	296 (269)
	ILS CAT II	141 (114)	150 (123)	159 (132)	171 (144)	229 (202)
	LOC ONLY	420 (393)				
Circling		720 (683)	910 (873)	1310 (1273)		1550 (1513)

1. IBD DME Zero Ranged to TDZ.
2. Expect RADAR vectors to establish on final approach course 2NM prior to NAJMA (IF).
3. Expect Glide Path intercept shortly after NAJMA (IF) at 4500 (4473) - IBD 14.1D.
4. Aircraft deceleration and configuration may occur prior to NAJMA (IF) or whilst in a continuous descent.
5. In case of Missed Approach inform ATC immediately.
6. Racetrack to be used only in case of communication failure.
7. CAT IIIA and CAT IIIB Approved for aircraft CAT A, B, C, D only.

LOC ONLY Approach: MAPt at IBD 0.8D

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

INSTRUMENT APPROACH CHART-ICAO

DOHA/Doha Intl.(OTBD)
ILS RWY 33 CAT II & III
ACFT CAT A B C D E

AERONAUTICAL DATA TABULATION

ILS approach to RWY 33 from NAJMA (IF)	
Fix/Point	**Coordinates**
NAJMA (IF) - BRG 335.55° / 14.73 NM IBD	250057.64N 0514022.44E
RAMPO - BRG 335.55° / 10.92 NM IBD	250430.44N 0513849.01E
BD711 (FAF) - BRG 335.55° / 7.78 NM IBD	250725.96N 0513731.83E
Final approach descent angle (LOC Only) - 3.00°	-
IBD 0.8D (MAPt LOC Only) - BRG 335.55° / 0.76 NM IBD	251358.46N 0513439.02E
DIA 5.5D (MATF) - INT TR 335.55° / 5.50 NM DIA	251909.48N 0513221.84E
DIA 3.5D (MATF) - INT R295 / 3.50 NM DIA	251538.91N 0513111.92E
BD712 (MATF) - INT R213 / 10.00 NM DIA	250552.88N 0512812.51E

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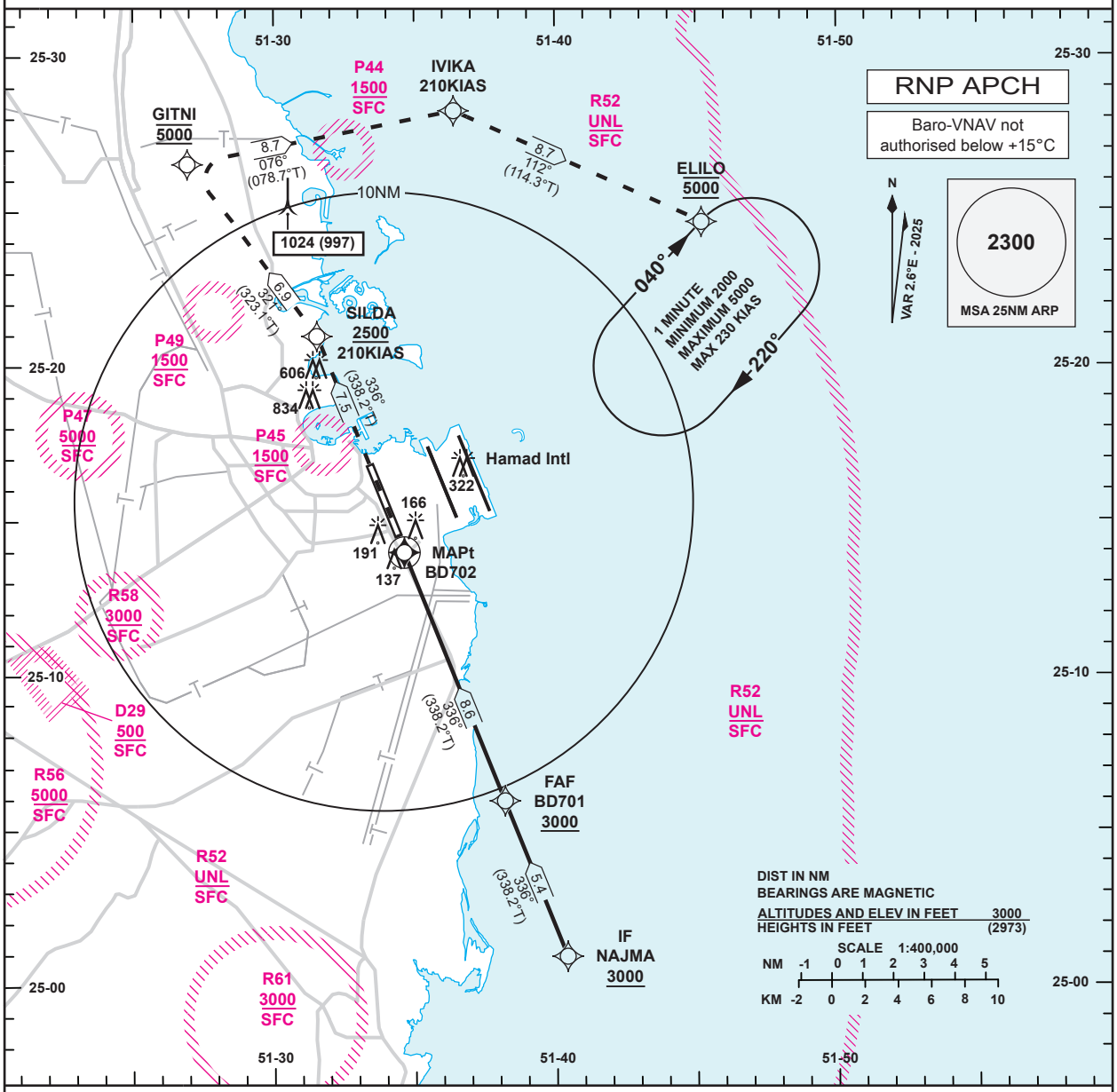
INSTRUMENT APPROACH CHART - ICAO

AD ELEV 37
HEIGHTS RELATED TO THR RWY 33 - ELEV 27

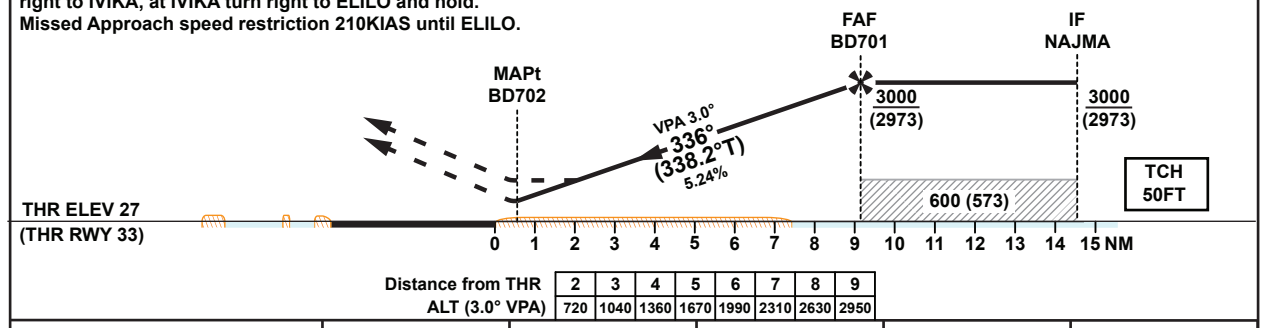
DOHA RADAR NORTH	121.100 / 121.625	DOHA DIRECTOR WEST	123.875 / 119.225
DOHA RADAR SOUTH	120.675 / 119.150	DOHA DIRECTOR	124.050 / 121.775
DOHA APP EAST	124.775 / 120.600	DOHA TWR	118.900 / 119.025
DOHA APP WEST	119.725 / 125.125		

DOHA/Doha Intl. (OTBD)
RNP RWY 33
ALL ACFT CATEGORIES



TA 13000

Missed Approach
Climb straight ahead to SILDA, at or above 2500.
At SILDA turn left to GITNI, at 5000. At GITNI turn right to IVIKA, at IVIKA turn right to ELILO and hold.
Missed Approach speed restriction 210KIAS until ELILO.



Distance from THR	2	3	4	5	6	7	8	9
ALT (3.0° VPA)	720	1040	1360	1670	1990	2310	2630	2950

OCA (OCH)		A	B	C	D	E
Straight in Approach	LNAV/VNAV	390 (363)				
	LNAV	420 (393)				
Circling		720 (683)	910 (873)	1310 (1273)		1550 (1513)

1. Hold at ELILO protected for Sector 3 Entry only.
2. 5.8% CG required to SILDA.

Approach: MAPt at BD702

Speed	KT	80	100	120	140	160	180
Time	MIN:SEC	Timing Not Authorized					
Rate of descent	FT/MIN	420	530	630	740	840	950

Change: Obstacle.

INSTRUMENT APPROACH CHART-ICAO

AD ELEV 37
HEIGHTS RELATED TO THR RWY 33 - ELEV 27

DOHA/Doha Intl.(OTBD)
RNP RWY 33
ALL ACFT CATEGORIES

TABULAR DESCRIPTION

RNP RWY 33

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	**NAJMA**	**-**	-	-2.6	-	**-**	+3000	**-**	**-**	RNP APCH
2	TF	**BD701**	**-**	336 (338.2)	-2.6	5.4	-	+3000	**-**	**-**	RNP APCH
3	TF	**BD702**	Y	336 (338.2)	-2.6	8.6	-	-	**-**	-3.0/50	RNP APCH
4	CF	**SILDA**	-	336 (338.2)	-2.6	-	**-**	+2500	-210	**-**	RNP APCH
5	TF	**GITNI**	-	321 (323.1)	-2.6	6.9	R	@5000	-210	**-**	RNP APCH
6	TF	**IVIKA**	-	076 (078.7)	-2.6	8.7	-	-	-210	**-**	RNP APCH
7	TF	**ELILO**	-	112 (114.3)	-2.6	8.7	-	@5000	-230	**-**	RNP APCH
8	HM	**ELILO**	Y	040 (042.2)	-2.6	4.3	R	@5000	-230	**-**	RNP APCH

WAYPOINT LIST

RNP RWY 33

Waypoint Identifier	Coordinates
NAJMA	250057.64N 0514022.44E
BD701	250558.04N 0513810.48E
BD702	251401.07N 0513437.82E
SILDA	252100.22N 0513132.97E
GITNI	252633.64N 0512657.57E
IVIKA	252816.47N 0513625.72E
ELILO	252439.52N 0514513.38E

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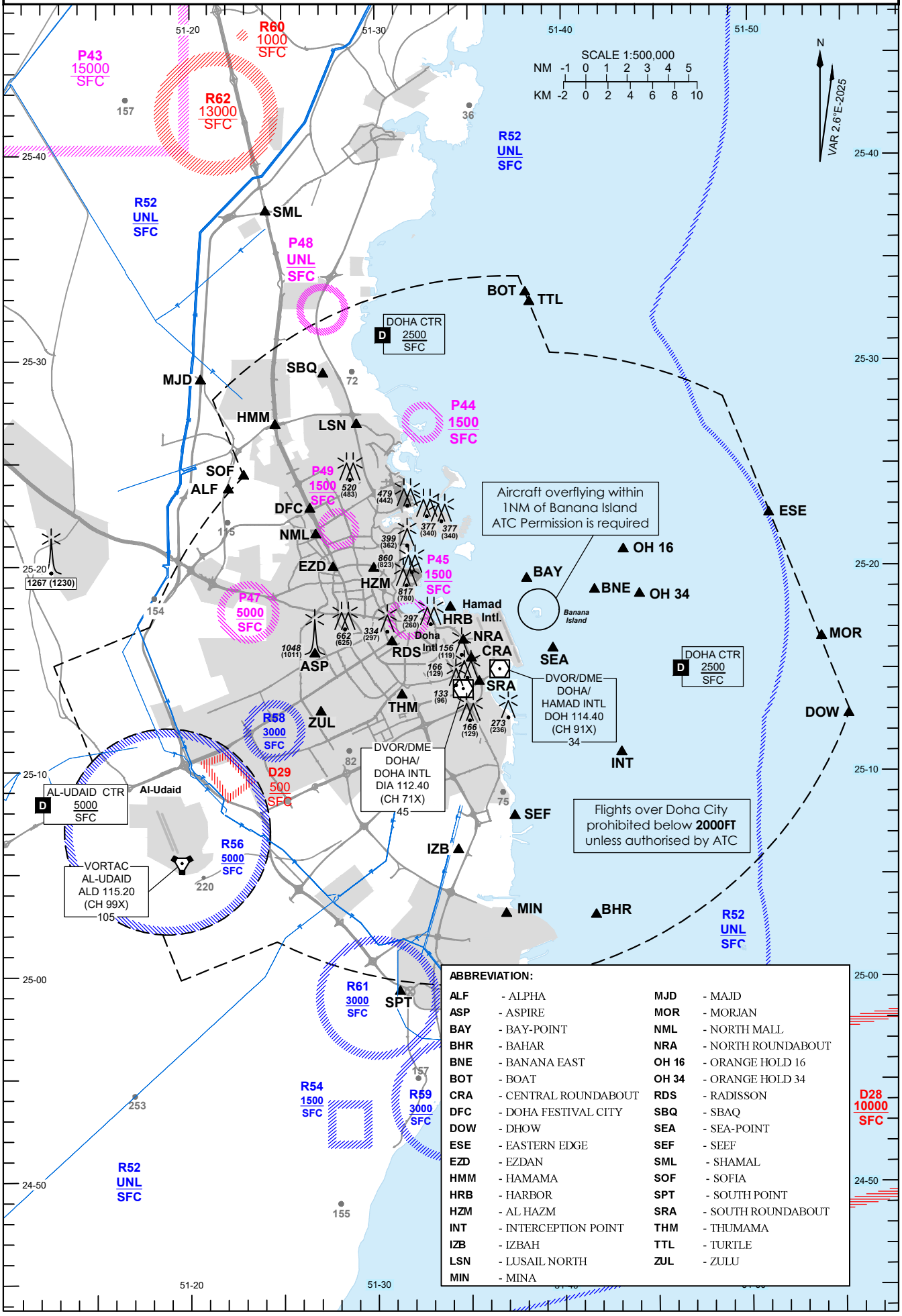
VISUAL APPROACH CHART - ICAO

AD ELEV 37FT
HEIGHTS RELATED TO AD ELEV

DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET 3000
HEIGHTS IN FEET (2963)

DOHA RADAR NORTH	121.100 / 121.625	DOHA DIRECTOR WEST	123.875 / 119.225
DOHA RADAR SOUTH	120.675 / 119.150	DOHA DIRECTOR	124.050 / 121.775
DOHA APP EAST	124.775 / 120.600	DOHA TWR	118.900 / 119.025
DOHA APP WEST	119.725 / 125.125	HAMAD TWR EAST	118.525 / 118.225
DOHA DIRECTOR EAST	119.400 / 121.125	HAMAD TWR WEST	118.025 / 118.225

DOHA/ Doha Intl. (OTBD)



ABBREVIATION:

ALF	- ALPHA	MJD	- MAJD
ASP	- ASPIRE	MOR	- MORJAN
BAY	- BAY-POINT	NML	- NORTH MALL
BHR	- BAHAR	NRA	- NORTH ROUNDABOUT
BNE	- BANANA EAST	OH 16	- ORANGE HOLD 16
BOT	- BOAT	OH 34	- ORANGE HOLD 34
CRA	- CENTRAL ROUNDABOUT	RDS	- RADISSON
DFC	- DOHA FESTIVAL CITY	SBQ	- SBAQ
DOW	- DHOW	SEA	- SEA-POINT
ESE	- EASTERN EDGE	SEF	- SEEF
EZD	- EZDAN	SML	- SHAMAL
HMM	- HAMAMA	SOF	- SOFIA
HRB	- HARBOR	SPT	- SOUTH POINT
HZM	- AL HAZM	SRA	- SOUTH ROUNDABOUT
INT	- INTERCEPTION POINT	THM	- THUMAMA
IZB	- IZBAH	TTL	- TURTLE
LSN	- LUSAIL NORTH	ZUL	- ZULU
MIN	- MINA		

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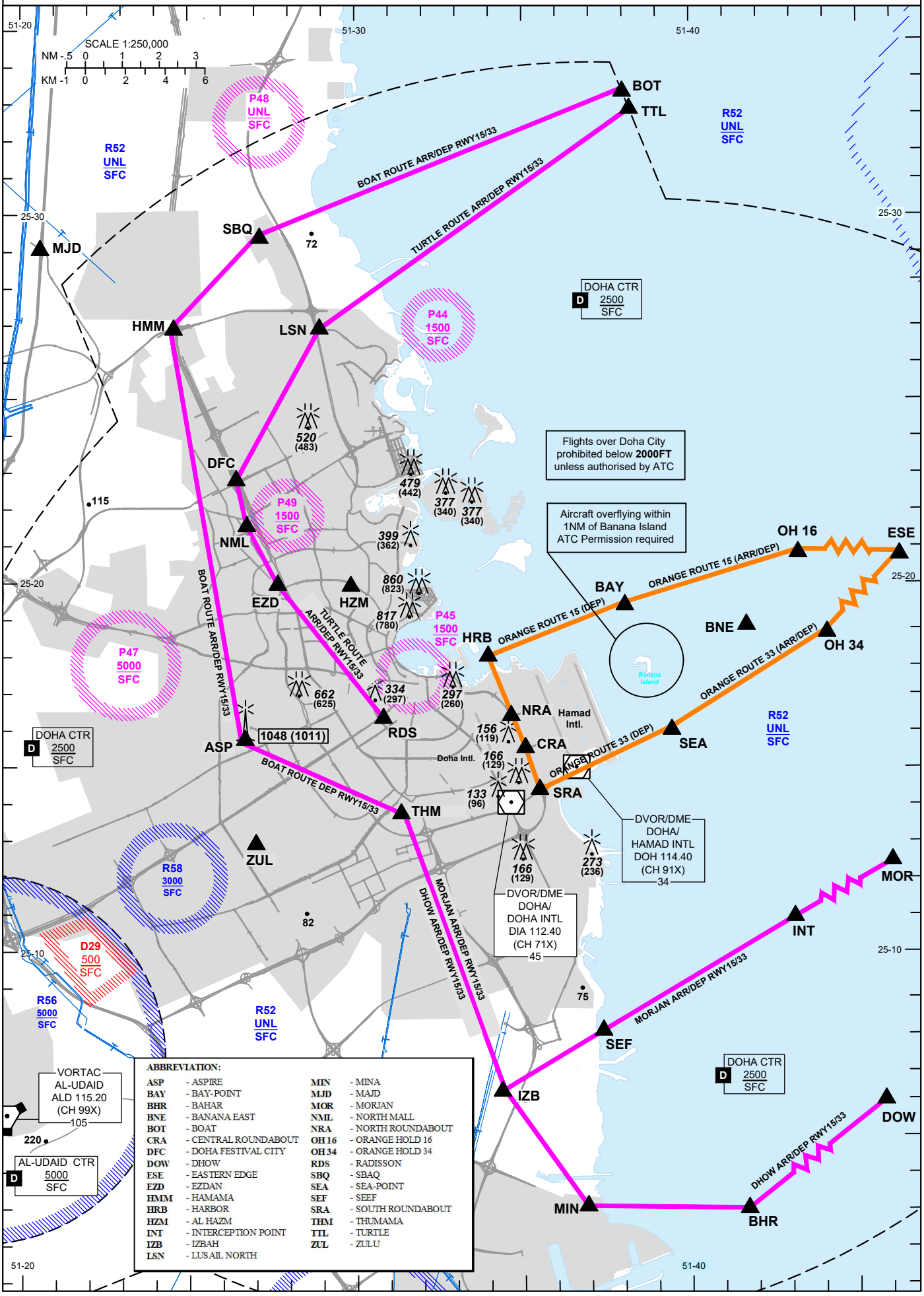
HELICOPTER ROUTE CHART

AD ELEV 37FT
HEIGHTS RELATED TO AD ELEV

DIST IN NM
BEARINGS ARE MAGNETIC
ALTITUDES AND ELEV IN FEET 3000
HEIGHTS IN FEET (2963)

DOHA RADAR NORTH	121.100 / 121.625	DOHA DIRECTOR WEST	123.875 / 119.225
DOHA RADAR SOUTH	120.675 / 119.150	DOHA DIRECTOR	124.050 / 121.775
DOHA APP EAST	124.775 / 120.600	DOHA TWR	118.900 / 119.025
DOHA APP WEST	119.725 / 125.125	HAMAD TWR EAST	118.525 / 118.225
DOHA DIRECTOR EAST	119.400 / 121.125	HAMAD TWR WEST	118.025 / 118.225

DOHA /Doha Intl. (OTBD)



ABBREVIATION:

ASP	- ASPIRE	MIN	- MINA
BAY	- BAY-POINT	MJD	- MAJD
BHR	- BAHAR	MOR	- MORJAN
BNE	- BANANA EAST	NML	- NORTH MALL
BOT	- BOAT	NRA	- NORTH ROUNDABOUT
CRA	- CENTRAL ROUNDABOUT	OH 16	- ORANGE HOLD 16
DFC	- DOHA FESTIVAL CITY	OH 34	- ORANGE HOLD 34
DOW	- DHOW	RDS	- RADISSON
ESE	- EASTERN EDGE	SBQ	- SBAQ
EZD	- EZDAN	SEA	- SEA-POINT
HMM	- HAMAMA	SEF	- SEEF
HRB	- HARBOR	SRA	- SOUTH ROUNDABOUT
HZM	- AL HAZM	THM	- THUMAMA
INT	- INTERCEPTION POINT	TTL	- TURTLE
IZB	- IZBAH	ZUL	- ZULU
LSN	- LUSAIL NORTH		

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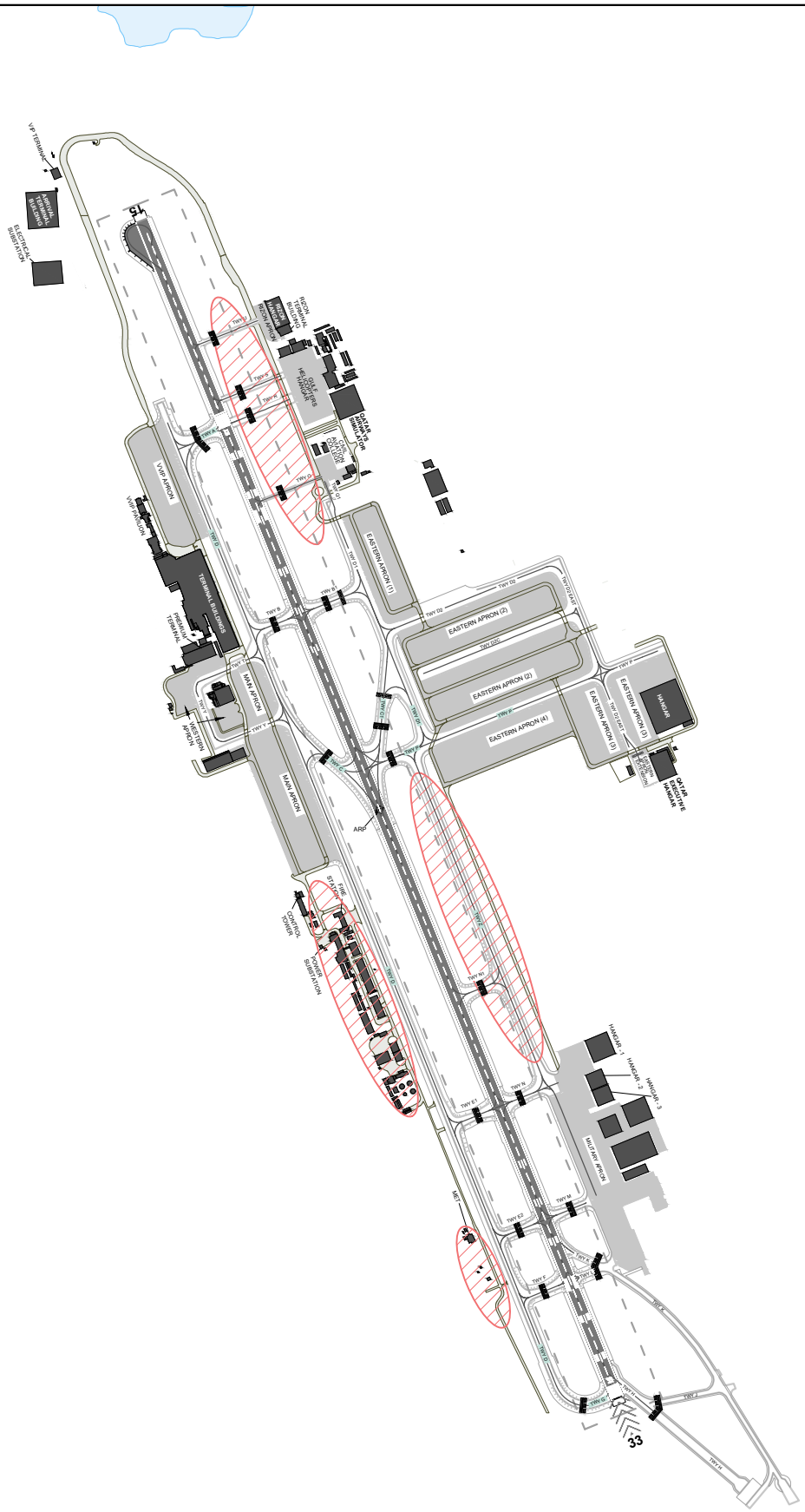
BIRD CONCENTRATION

DOHA/Doha Intl.
OTBD


VIP TERMINAL
ARRIVAL BUILDING
ELECTRICITY SUBSTATION
15
RESCUE FIRE STATION BUILDING
GULF AIR HANGAR
QATAR AIRWAYS SIMULATOR
ATC TOWER
TWY P
TWY K
TWY A
TWY B
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