Hamad International Airport Standard Operating Procedures (SOP)

Revision No	Changes	Editor	Effective Date
1.0	Initial Release	-	May 20th 2020
2.0	Procedures revised	-	Jan 23rd 2022
3.0	Layout Change Procedures revised	Mustafa Alsaif	March 6th 2022

Document Information

Purpose

This document prescribes the procedures to be utilized for providing air traffic control services at the Hamad Air Traffic Control Tower (OTHH) and APC. The procedures described herein are supplemental to the Hamad Facility Operating Guidelines and the Qatar eAIP, as well as any published guidelines or procedures.

Cancellation

This Document cancels any pre-existing SOP for OTHH This SOP shall become the procedures in use on the effective date.

Disclaimer

Information contained in this document is designed specifically for use in a **virtual** air traffic control environment.

Procedural Deviation

Deviation from this document may **not** occur unless otherwise announced by the FIR-CH and/or XG ATC Operations Department.

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General Information

Hamad International Airport									
ICAO-ID	OTHH	**IATA-ID**	DOH	**Time Zone**	UTC+3	**Elevation**	13 feet / 4 meters	**Magnetic Variation**	003° E
Location	Latitude: 25.153981 / 025° 15‘39.81“N					Longitude: 51.335434 / 051° 33‘54.34“E			

Airspace Information					Transition Level (TL)	Transition Altitude (TA)
	CTR	TMA	FIR/UIR		FL150	13000ft
Class	D	C	A	G		
Vertical Limit	SFC-2500ft	2500ft-FL245	FL245 FL460	FL460 UNL		

Parking Stands

Emiri Ramp: V1 to V5

Concourse A: A1 to A11

Concourse B: B1 to B10

Concourse C: C1 to C13

Concourse D: D1 to D17R

Concourse E: E1 to E17R

Remote Transfer G: G1 to G10

Remote Transfer H: H1 to H10

Cargo Apron: F1 to F16

Apron 4: Q1 to Q3 – 425E to 429W

Apron 5: 501 to 519

GA Apron: Y1 to Y9

Note: The airport is stages of construction, gate numbers and location are subject to change.

Runway Information

Runway	Length x width	Surface Type	TDZ- Eleve
16L	4850 x 60m	Asphalt	13ft
34R	4850 x 60m	Asphalt	13ft
16R	4250 x 60m	Asphalt	13ft
34L	4250 x 60m	Asphalt	13ft

Takeoff Run Available

Runway	Intersection	Takeoff Run Available
16R	L11	4130m
	L10	3614m
	L7	2348m
34L	L1	4122m
	L2	3646m
	L7	1935m
34R	A1	4730m
	A2	4266m
	A3	3077m
	A6	2386m
16L	A11	4730m
	A10	4082m
	A6	2497m

ATC positions

Primary Positions

Position	Radio Name	Callsign	Frequency
Clearance Delivery	Hamad Delivery	OTHH_DEL	120.875
Ground	Hamad Ground East	OTHH_E_GND	120.225
Ground	Hamad Ground West	OTHH_W_GND	118.650
Tower	Hamad Tower East	OTHH_E_TWR	118.525
Tower	Hamad Tower West	OTHH_W_TWR	118.025
Departure/Approach Radar	Hamad Approach	OTHH_APP	119.725
Radar	Doha Radar	OTHH_R_APP	121.100
Radar	Bahrain Radar	OBBB_CTR	127.525

Other Positions (XG-ATC Operations Department approval required)

Position	Radio Name	Callsign	Frequency
Approach	Doha Director	OTHH_F_APP	119.400
Radar	Doha Radar West	OTHH_W_APP	120.675
Radar	Doha Radar East	OTHH_E_APP	121.200
Radar	Bahrain North Radar	OBBB_NH_CTR	123.100
Radar	Bahrain Central Radar	OBBB_CH_CTR	127.525
Radar	Bahrain East Radar	OBBB_EH_CTR	132.125

Chapter 1. Clearance Delivery

1.1 Responsibilities

- Issue ATC clearances to all departing VFR and IFR aircraft.
- All departing aircraft contact Hamad Delivery on 120.875 MHZ for IFR enroute clearance or VFR departure instructions prior to start-up.

1.2 IFR Departure Instructions

1.2.1 IFR Routing

- All routes must be checked for compliance with neighboring FIRs LOAs. Aircraft who do not file these routes should have them amended appropriately.
- Aircraft unable to accept preferred routes must **not** be cleared until coordination has occurred between affected/staffed facilities.

- Hamad Operates ten Standard Instrument Departures :

Departure Operations / SID										
RWY	**ALSEM**	**ALVEN**	**BATHA**	**BUNDU**	**NAMLA**	**PATOM**	**SALWA**	**VAXIN**	**LOXUL**	**MUXOP**
34R	1E	1E	1E	1E	1E	1E	1E	1E	N/A	1E
34L	1W	1W	1W	1W	1W	1W & 1Z	1W	1W	N/A	1W
16R	1C	1C	1C	1C	1C	1C	1C	1C	1C	N/A
16L	1M	1M	1M	1M	1M	1M	1M	1M	1M	N/A

- Non RNAV equipped aircrafts shall be issued LOXUL/MUXOP departures.
- Aircrafts unable to accept published departure procedures shall not be cleared on a radar vectored departure unless prior coordination with Doha APC is met.

1.2.2 IFR Altitudes

- Initial climb clearance depends on the aircrafts SID as outlined in the tables below:

6000ft
ALSEM **1C/1W**
ALVEN **1C/1W**
BATHA **1E/1M**
BUNDU **1C/1W**
NAMLA **1C/1W**
PATOM **1E/1M**
SALWA **1E/1M**
VAXIN **1C/1W**

7000ft
ALSEM **1E/1M**
ALVEN 1E/1M
BATHA **1C/1W**
BUNDU 1E/1M
NAMLA **1E/1M**
PATOM 1C/1W
SALWA **1C/1W**
VAXIN 1E/1M

8000ft
PATOM **1Z**

3000ft
LOXUL **1C/1M**
MUXOP **1E/1W**

- Charts can be used as a reference for the initial climb clearance as the altitude constraint on the SID ending waypoint.
- Substitute Initial Climb altitude mentioned above for lower if an aircraft's IFR cruise altitude is filed for lower.

1.2.3 IFR Clearance Example

- QTR1002, cleared to Dubai, via ALSEM1C departure climb via SID to altitude 6000ft, Squawk 4005.
- QTR1166, cleared to Riyadh via PATOM1C departure climb via SID to altitude 7000ft, Squawk 4056.

1.3 VFR Departure instructions

1.3.1 VFR Altitudes

- VFR Aircrafts (both remaining and not remaining in the pattern) shall be issued the instruction: ''not above 1500ft''

1.4 Facility Beacon Codes

- All Types of flight rules aircraft must be assigned a unique beacon (squawk) code in accordance with the provided SSR codes by the IVAO server.

1.5 Scratchpads

- To assist the Departure controller, Clearance Delivery shall input appropriate scratchpads (WP and ALT) entries into the flight plan, as outlined below, after the clearance has been issued.

- WP shall include the Departure assigned as per **section 1.2.1**.
- ALT shall include the Initial Climb clearance issued as per **section 1.2.2** for IFR aircrafts and **section 1.3.1**. for VFR departures.

- **Examples**

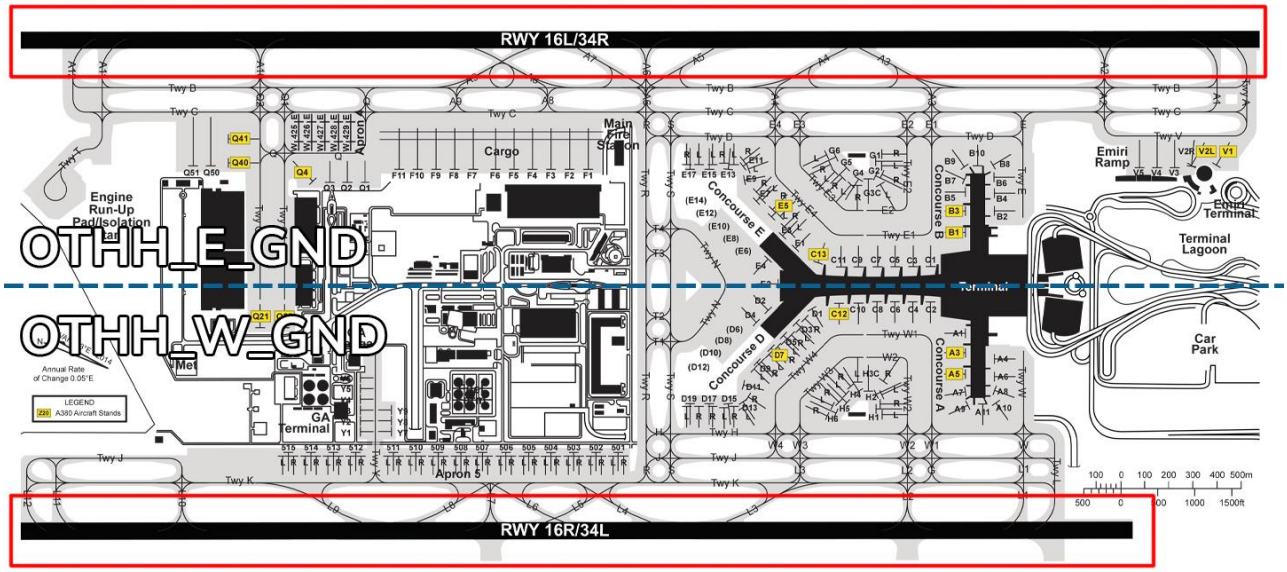
- Note that Altitude entries should be in level and not altitude such as: 070 and not 7000.

Chapter 2. Ground Control

2.1 Responsibilities

- Ground controls all airport movement areas except the Active Runway.

OTHH_E_TWR



OTHH_W_TWR

2.1.1 Ground East responsibilities

- Ground east is responsible for all traffic on adjacent taxiways to runway 34R/16L and the following aprons:

1. Apron V
2. Concourse B
3. Concourse C (odd gates)
4. Remote Transfer G
5. Concourse E
6. Apron 4
7. Apron Q

2.1.2 Ground West Responsibilities

- Ground West is responsible for all traffic on adjacent taxiways to runway 34L/16R and the following aprons:

1. Concourse A
2. Concourse C (even gates)
3. Remote Transfer H
4. Concourse D
5. Apron 5
6. GA Apron

2.2 General Airport Movement

- The following taxi routings can be used for traffic flow management when needed.

2.2.1 Runway 34R/34L Operations

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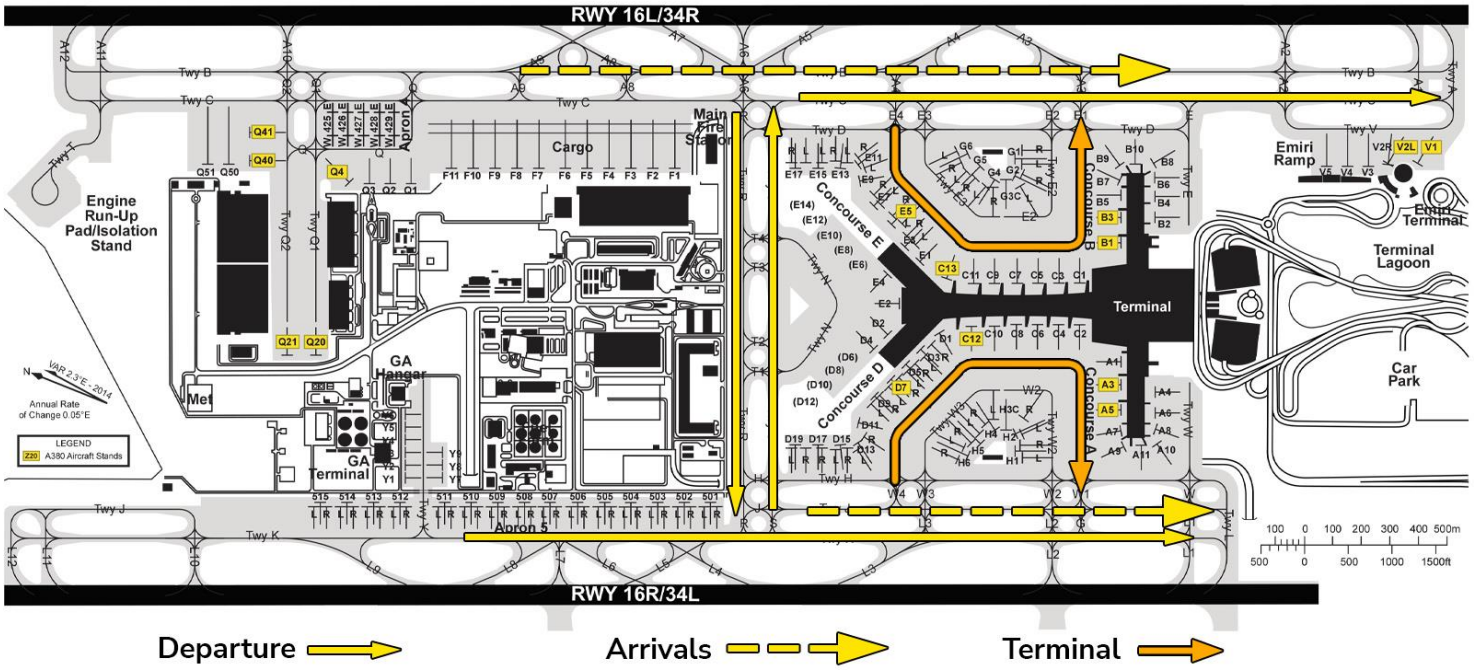

2.2.2 Runway 16R/16L Operations

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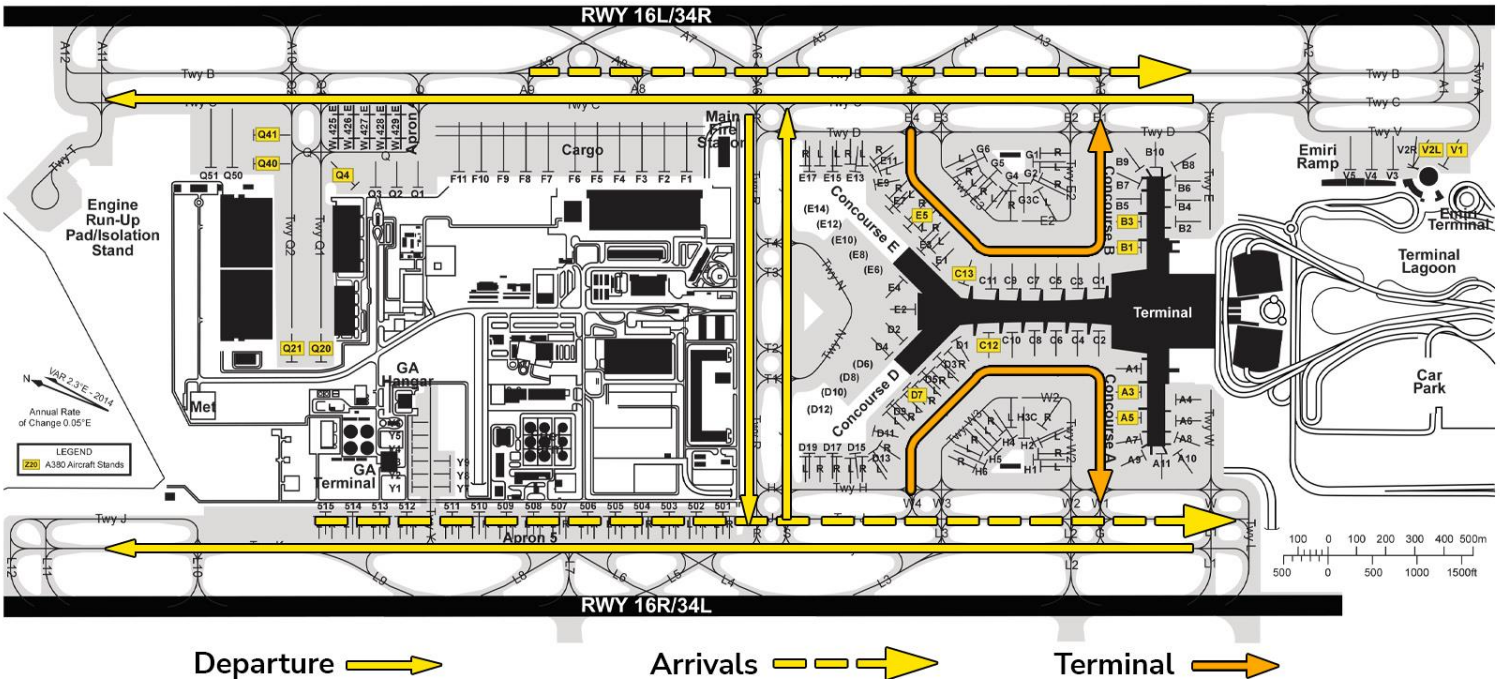
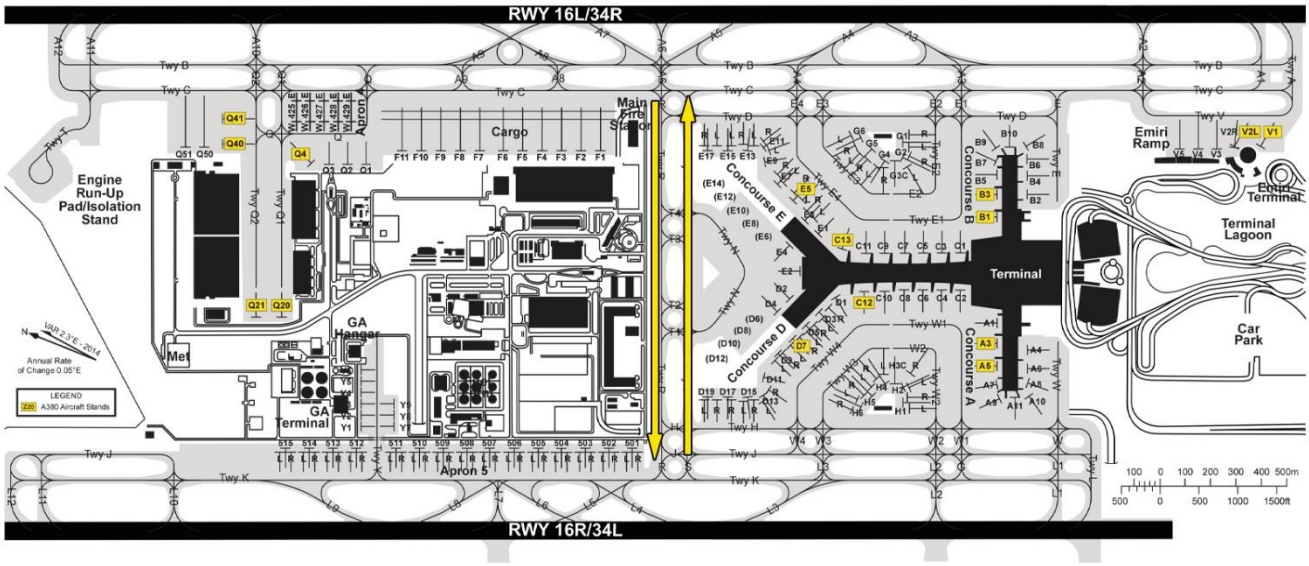


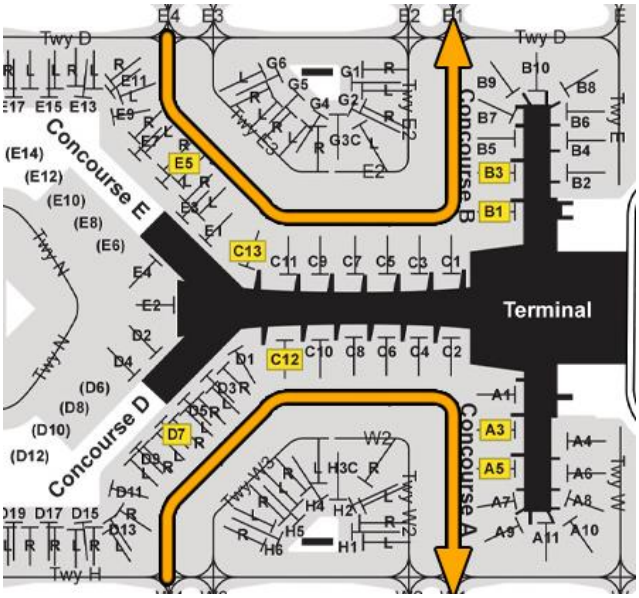
2.2.3 Taxiways R & S

- Ground Control shall only taxi aircrafts east on taxiway S.
- Ground Control shall only taxi aircrafts west on taxiway R.



2.3 Startup and Pushback

- Ground controller shall authorize pushback upon checking the selected transponder code assigned by Bahrain Delivery, with phraseology:
  '' Push and start approved facing (direction)''.
- Aircrafts on Concourses A, B, C, E, D, Remote Transfer H and G shall be given a direction according to entry and exit taxiways as outlined below:



2.4 Intersection Departures

- Ground must notify the Tower Controller of all intersection departure verbally or via the combox.

2.5 Current ATIS

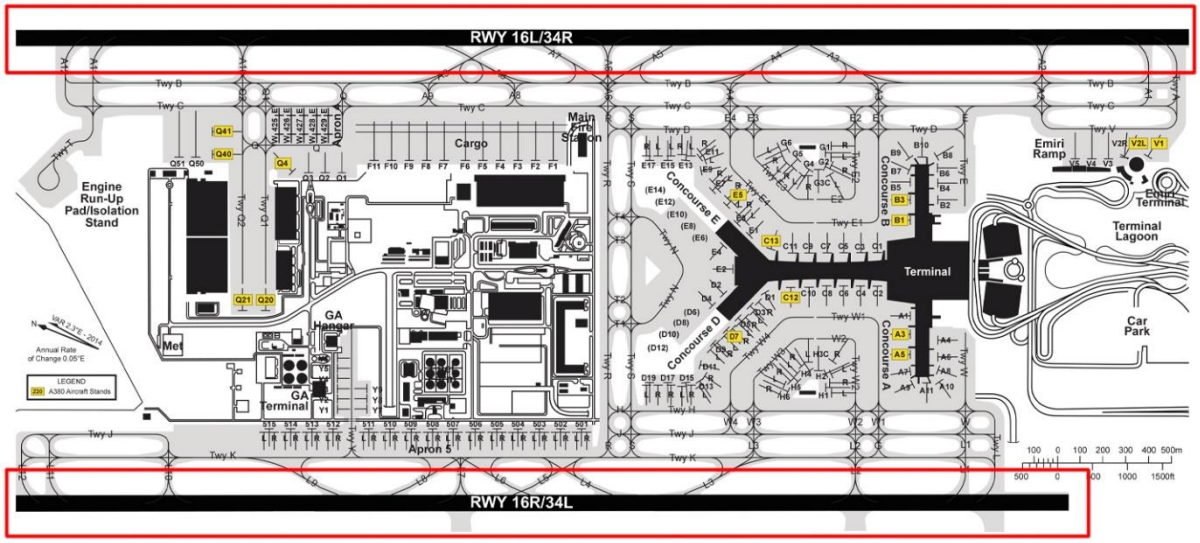
- Ground controller shall ensure pilots have the current ATIS and/or the Local QNH prior handoff to the tower controller.

Chapter 3. Tower Control

3.1 Responsibilities

- Tower controller has responsibility for the class D airspace above Hamad Airport from surface up to and including 2,500 MSL.

OTHH_E_TWR



OTHH_W_TWR

3.1.1 Hamad Tower East Responsibilities

- All active operations on runway 34R/16L.

3.1.2 Hamad Tower West Responsibilities

- All active operations on runway 34L/16R.

3.2 Arrival Procedures

- Communication transfer must be completed prior to five nautical miles from the runway.
- Tower controller shall not change the approach sequence without coordination with APC.

3.3 Runway Change Checklist

- When changing runways, the Tower controller must coordinate with the appropriate Dep/App position(s).

  a. Tower shall be responsible for coordinating the last departure off the previously used runway and the first departure off the newly selected active runway.

  b. APC controller shall be responsible for coordinating the last arrival on the previously used runway and the first arrival on the newly selected active runway.

- Notify APC of the new runway configuration and last departure and arrivals.
- When notified by APC, stop all departures on the present configuration.
- Notify the Ground controller of the new runway configurations and divert all departures to the new runways.
- When APC is ready for the new configuration, APC will notify Tower. Upon completion of notification, departures may resume with the new configuration.
- Ensure ATIS has been updated to reflect the new configuration.

3.4 Go Around/Missed Approach procedure

- Missed approach procedure depends on the runway configuration.
- Hamad tower shall give the instruction ‘’follow published missed approach procedure’’ which includes the following climb clearances:

- RWY 16L: 4000ft.
- RWY 16R: 2000ft.
- RWY 34L: 5000ft.
- RWY 16L: 4000ft.

3.5 VFR Patterns

- VFR patterns are conducted at or below 1,500 feet.
- Runways 34R & 16R utilize **right** traffic
- Runways 34L & 16L utilize **left** traffic

Chapter 4. Departure & Approach Radar

4.1 Departure Procedures

- IFR departures will be automatically released if the aircraft departs with procedures outlined in and Chapter 1 sections 1.2.
- After the completion of transfer between Bahrain tower and Bahrain Departure, climb clearance shall be issued as well as a heading or a direct on the aircrafts course, more Information is included in the OBBB FIR SOP.

4.2 Arrival Procedures

- Hamad operates 3 RNAV STARs

  - GINTO
  - BAYAN
  - AFNAN

RWY 34L		RWY 34R	
AFNAN	1W	AFNAN	1E
BAYAN	1W	BAYAN	1E
GINTO	1W	GINTO	1E

RWY 16L		RWY 16R	
AFNAN	1M	AFNAN	1C
BAYAN	1M	BAYAN	1C
GINTO	1M	GINTO	1C

- Aircrafts unable to comply with the published STARs, shall expect radar vectors.

4.2.1 Hamad Tower and TMA controller handover agreement

- Arrival Procedures tower shall be responsible for separation of all arrival aircraft that have been handed off by APC from all departing aircraft still under tower jurisdiction.
- Communication transfer must be completed prior to five nautical miles from the runway.
- Tower control shall not change the approach sequence without coordination with APC.

4.3 Automatic Releases

- Hamad Tower is authorized for automatic releases from the APC controller so long as the aircraft departs on the pre-coordinated active departing runway(s) on approved procedures in section 1.2.

4.4 Go-Around Procedures

- Tower controller shall assign go around traffic published missed approach procedures as outlined in section 3.4 , prior handoff to APC.

4.5 Arrival Holdings

4.5.1 Arrival Holdings - ACC

	EMEXA	VELAM	BAYAN	AFNAN	GINTO
TRK	040°	117°	229°	268°	087°
Turn	Left	Right	Left	Right	Right
Upper limit	FL200	FL240	FL240	FL220	FL210
Lower limit	8000ft	FL190	10000ft	FL150	FL150

4.5.2 Arrival Holdings - APC

	BAYAN	AFNAN	GINTO	GENOT
TRK	229°	268°	087°	66°
Turn	Left	Right	Right	Left
Upper limit	13000ft	FL150	13000ft	5000ft
Lower limit	10000ft	8000ft	8000ft	2000ft

References

- Qatar FIR eAIP publication 27/JAN/2022
- Jeppesen charts
- Qatar eAIP charts