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Subject: Hong Kong Terminal Airspace Standard Operating Procedures Annex I

STANDARD OPERATING PROCEDURE (SOP)

DOCUMENT NUMBER: HKVACC-SOP004-ANNEX-I

DATE ISSUED: 07 DEC 2024

REVISION: 7

SUBJECT: Hong Kong Terminal Airspace Standard Operating Procedures Annex I

EFFECTIVE DATE: 07 DEC 2024

SCOPE: Outlines standard techniques for online ATC service in Hong Kong APP/DEP/TMC positions on VATSIM.

1. PURPOSE

1.1. This Standard Operating Procedure (SOP) Annex I sets forth the procedures for all controllers providing terminal airspace air traffic control service in the Hong Kong Terminal Airspace (TMA) to improve communication, techniques, and to distinguish procedures that are specific to the online environment.

2. ROLES AND RESPONSIBILITIES

2.1. The Office of Primary Responsibility (OPR) for this SOP is the team under the supervision of the Facilities Director. This SOP shall be maintained, revised, updated or cancelled by the Facilities Director. Any suggestions for modification / amendment to this SOP should be sent to the Facilities Director for review.

3. DISTRIBUTION

3.1. This SOP is intended for controllers staffing Hong Kong APP/DEP/TMC positions.

4. BACKGROUND

4.1. Due to the complexity of sectorisation within Approach/Departure airspace, a supplementary document is required to support HKVACC-SOP004 so that controllers can have a clear idea on the responsibilities of different sectors within Approach/Departure airspace. This would also facilitate the coordination between controllers through standardising certain air traffic management strategies.

5. INFORMATION ON HANDOFF AGREEMENTS

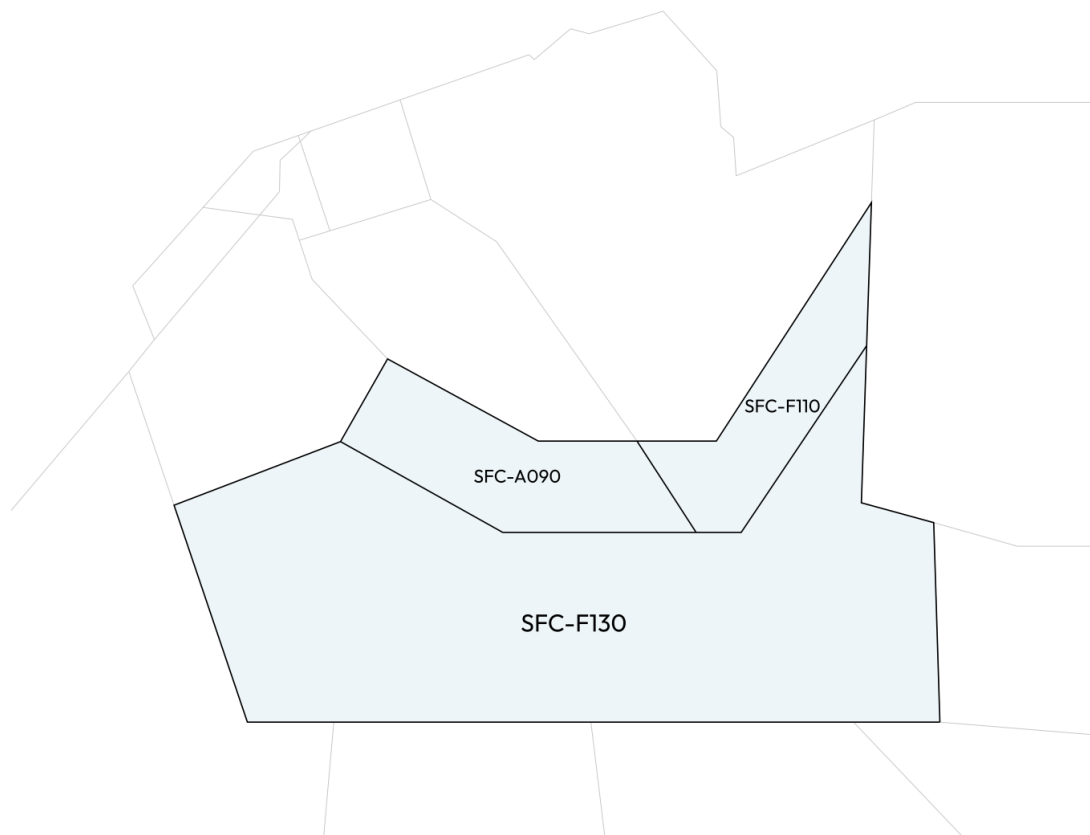
5.1. For handoff agreements, an up arrow ↑ indicates that aircraft are to be transferred whilst still climbing to that altitude, while a down arrow ↓ indicates that aircraft are to be transferred whilst descending to that altitude. Agreements with no arrows indicates that aircraft are to be transferred at the exact altitude specified in the agreement. Agreements are only valid when aircraft are flying the correct route as listed in the Hong Kong AIP and when the appropriate operating mode is in use. Other traffic (e.g. Kai Tak or off-mode departures) shall be individually coordinated.

6. HONG KONG APPROACH (APP)

6.1. Airspace Ownership Priority (Positions on the left have priority over positions on the right)

- APP -> TRW

6.2. Approach Sector in Runway 07 Operations



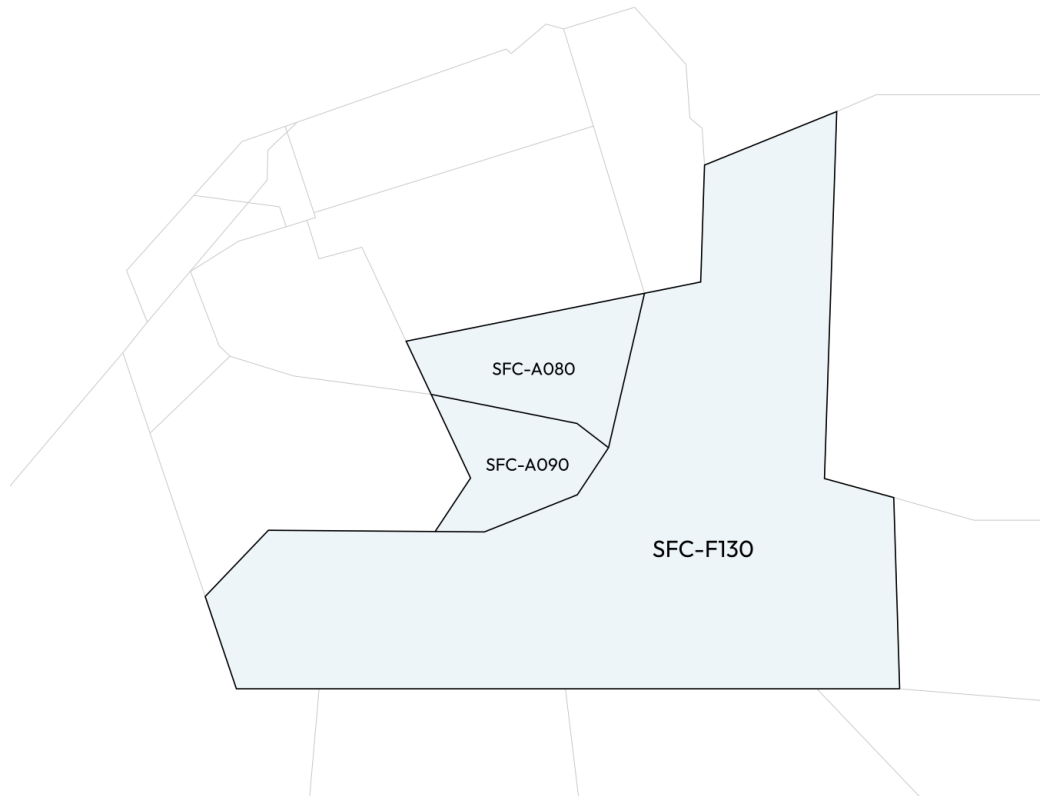
6.2.1. Responsibilities

- Arrivals from Terminal Radar via ABBEY, BETTY and CANTO until transferred to FAD

6.2.2. General Procedures

- Advise VHHH/VHHX arrivals of the expected landing runway (and IAP if not ILS) on first contact
- Descend aircraft to 4000ft prior to LIMES
- Transfer to FAD in a single sequence towards LIMES with an instruction to maintain 220 knots

6.3. Approach Sector in Runway 25 Operations



6.3.1. Responsibilities

- Please refer to Section 6.2.1.

6.3.2. General Procedures

- Advise VHHH/VHHX arrivals of the expected landing runway (and IAP if not ILS) on first contact
- Transfer to FAD in a single sequence towards RIVMI with an instruction to maintain 220 knots

6.4. Handoff Agreements

6.4.1. Runway 07 Operations

From Terminal Radar East (TME) to Approach (APP)

| To | Altitude | Handoff Location |
|------|----------|------------------|
| VHHH | FL110 | MUSEL |

From Terminal Radar South (TMS) to Approach (APP)

| To | Altitude | Handoff Location |
|------|----------|------------------|
| VHHH | FL130 | MANGO |

From Terminal Radar West (TMW) to Approach (APP)

| To | Altitude | Handoff Location |
|------|----------|------------------|
| VHHH | FL110 | MURRY |

From Approach (APP) to Final Approach Director (FAD)

| To | Altitude | Handoff Location |
|------|----------|------------------|
| VHHH | ↓ 4000ft | 7nm to LIMES |

6.4.2. Runway 25 Operations

From Terminal Radar South (TMS) to Approach (APP)

| To | Altitude | Handoff Location |
|------|----------|------------------|
| VHHH | FL130 | MANGO |

From Terminal Radar East (TME) to Approach (APP)

| To | Altitude | Handoff Location |
|------|----------|------------------|
| VHHH | FL110 | MUSEL |

From Terminal Radar West (TMW) to Approach (APP)

| To | Altitude | Handoff Location |
|------|----------|------------------|
| VHHH | FL110 | MURRY |

From Approach (APP) to Final Approach Director (FAD)

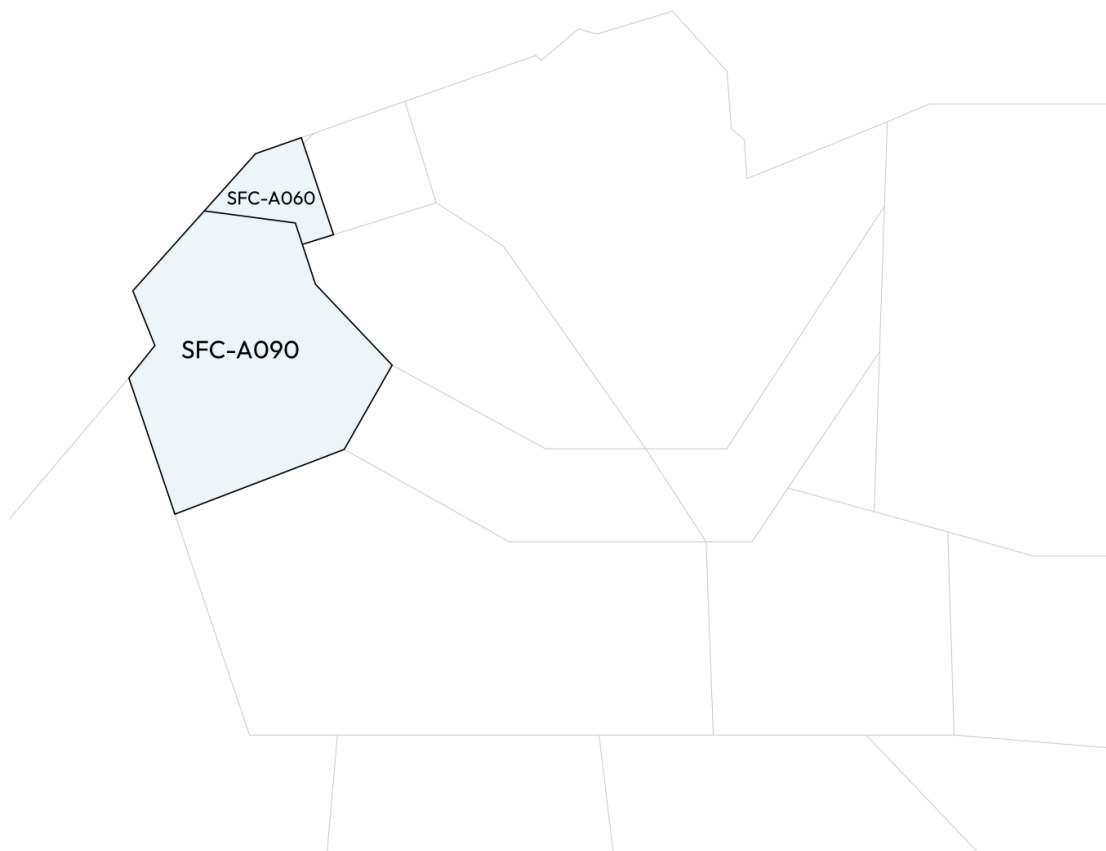
| To | Altitude | Handoff Location |
|------|----------|------------------|
| VHHH | 6000ft | TEDUR |

7. FINAL APPROACH DIRECTOR (FAD)

7.1. Airspace Ownership Priority (Positions on the left have priority over positions on the right)

- FAD -> APP -> TRW

7.2. Final Approach Director Sector in Runway 07 Operations



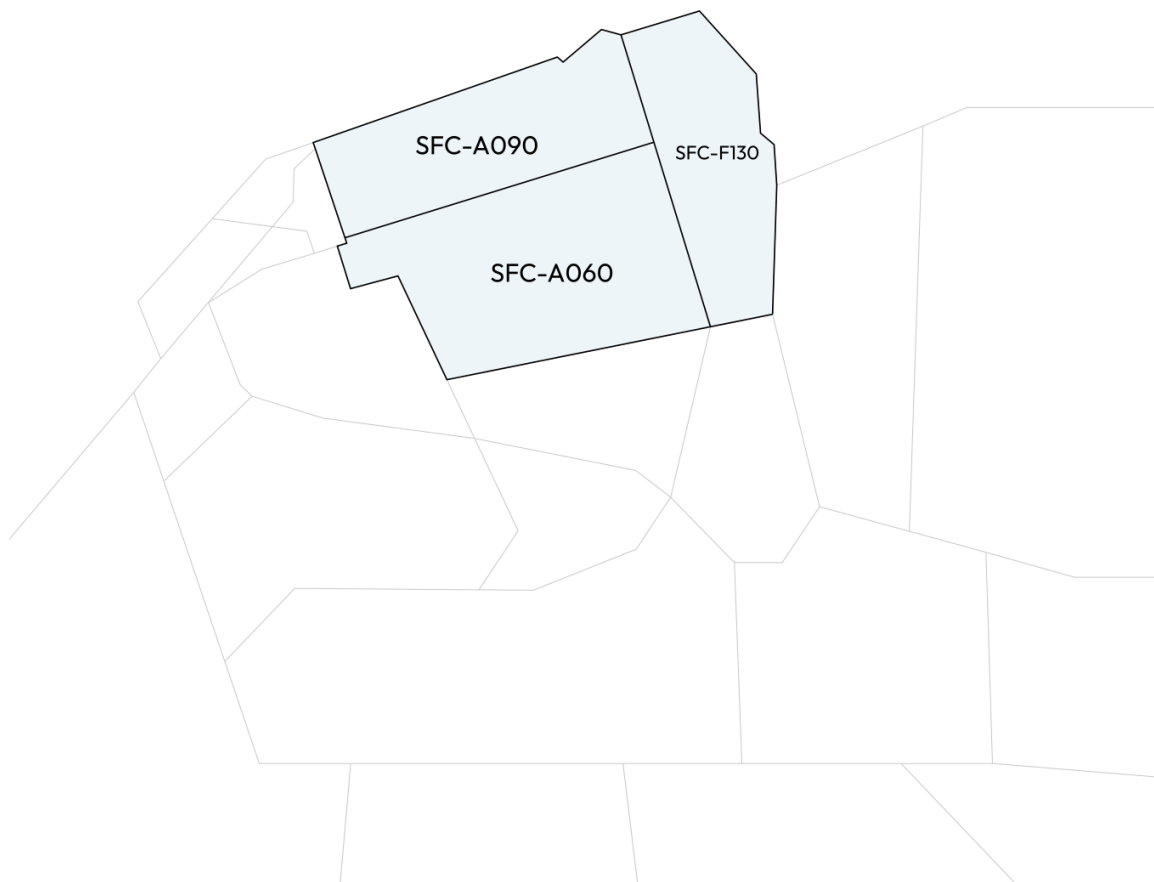
7.2.1. Responsibilities

- Tactically control aircraft to achieve accurate and consistent spacing
- Coordination between Air Movements Control and Final Approach Director regarding runway occupancy time (ROT) such that if the spacing results in a large number of late landing clearances, Air Movements Control must ask Final Approach Director to increase the spacing before missed approaches start to occur
- When vectoring aircraft for final approach, keep aircraft at least 1.5nm away from the sector boundary with PRC airspace

7.2.2. General Procedures

- Aircraft intercept localiser at 1700ft
- All aircraft fly a strict speed regime and then are permitted to reduce speed as required inside 5 DME. 180kts is used on base leg and 160kts to 5 DME

7.3. Final Approach Director Sector in Runway 25 Operations



7.3.1. Responsibilities

- Please refer to Section 7.2.1.

7.3.2. Procedures

- Aircraft intercept localiser at 4500ft for 25L and 25C, while 25R arrivals intercept the ILS after TOPUN
- All aircraft fly a strict speed regime and then are permitted to reduce speed as required inside 5 DME. 210kts is used on base leg, 180kts to 7 DME, and 160kts to 5 DME

7.4. Note to Final Approach Director

7.4.1. During strong northerly wind, ground speed increases on final causing increase in spacing (pull-away). Less than 4 miles spacing is required on base leg (vertical separation must be maintained) to achieve 4 miles on final. On the other hand, during strong southerly wind, ground speed reduces on final causing decrease in spacing (catch-up). More than 4 miles spacing is required on base leg but controlling speed during the turn is demanding. Not recommended to use NATS Style Final Approach Spacings (68-second spacing) in 07 operations.

7.5. Handoff Agreements

7.5.1. Runway 07 Operations

From Approach (APP) to Final Approach Director (FAD)

| To | Altitude | Handoff Location |
|------|----------|------------------|
| VHHH | ↓ 4000ft | 7nm to LIMES |

7.5.2. Runway 25 Operations

From Approach (APP) to Final Approach Director (FAD)

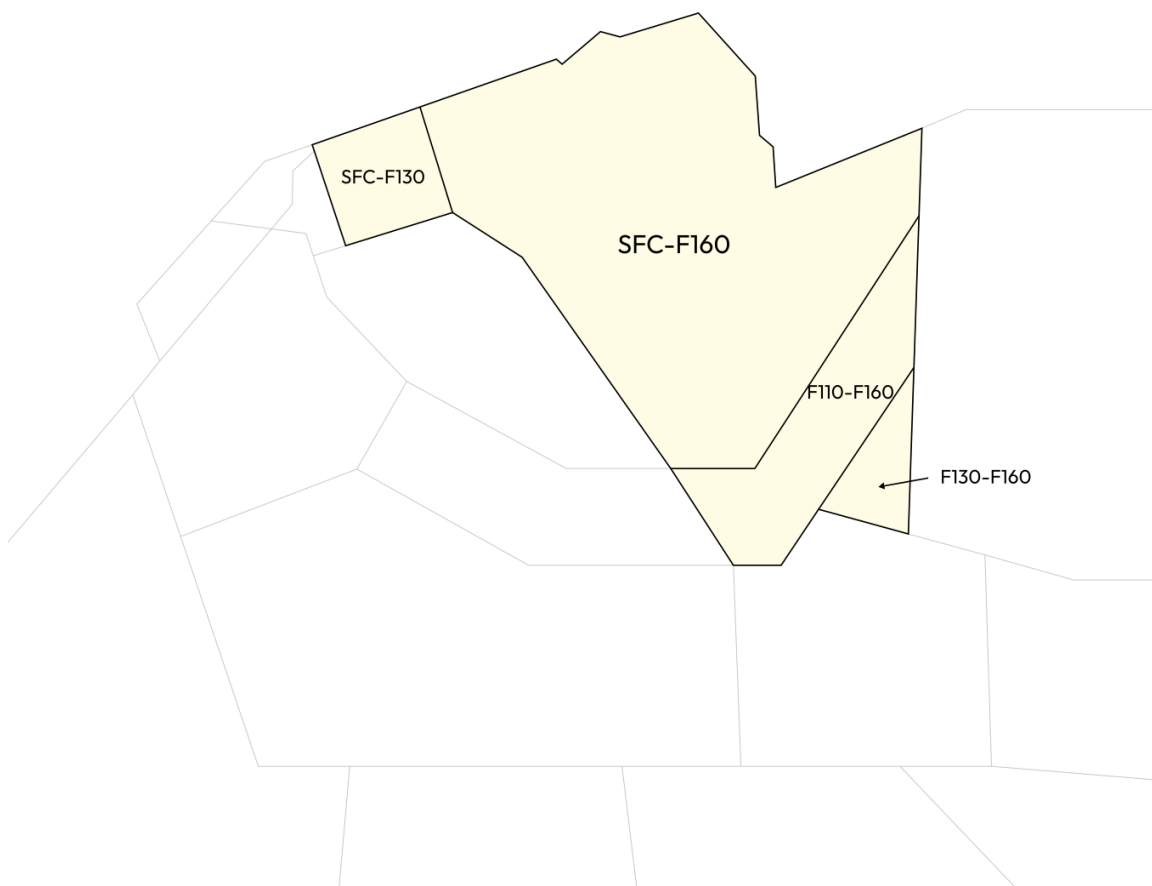
| To | Altitude | Handoff Location |
|------|----------|------------------|
| VHHH | 6000ft | TEDUR |

8. HONG KONG DEPARTURE NORTH (DEN)

8.1. Airspace Ownership Priority (Positions on the left have priority over positions on the right)

- DEN -> APP -> TRW

8.2. Departure North Sector in Runway 07 Operations



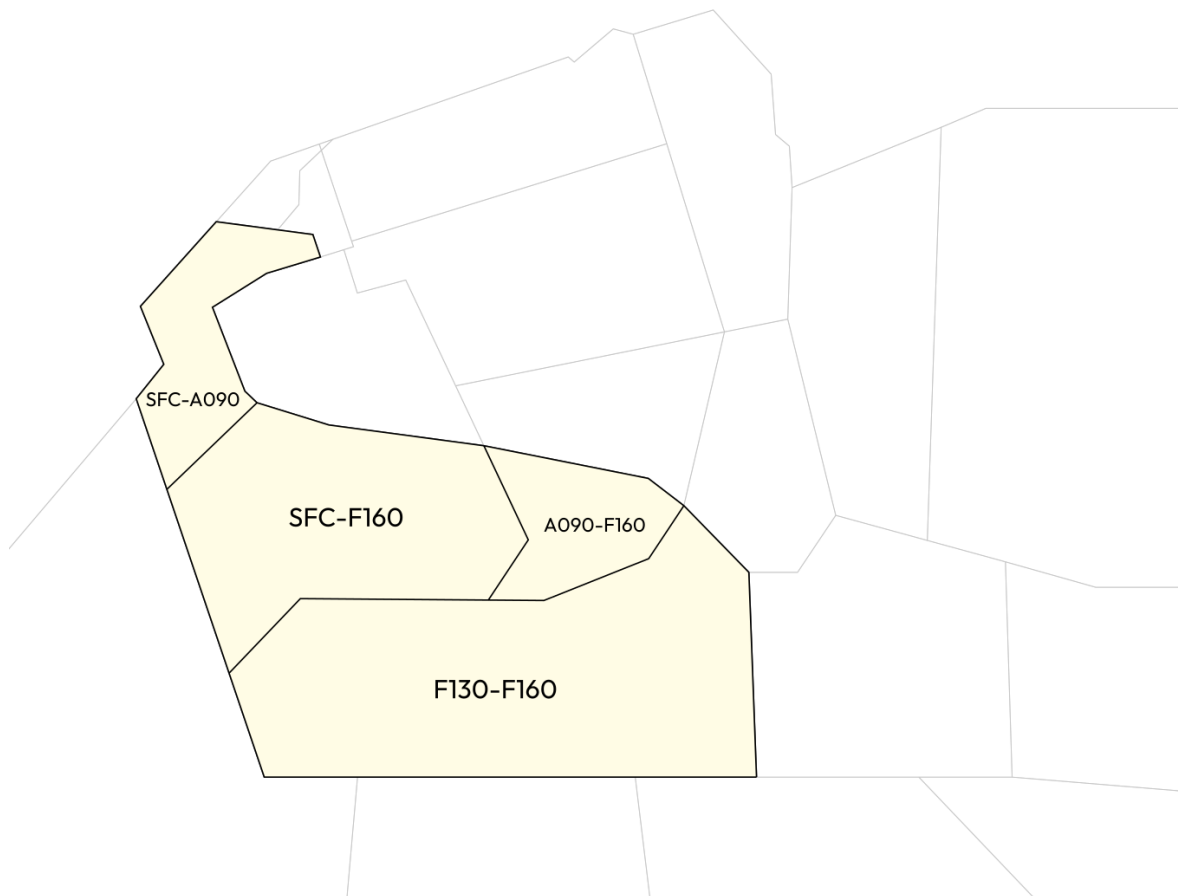
8.2.1. Responsibilities

- Hong Kong Centre / North Runway Departures via BEKOL, LEKEN & DALOL (V621, V631)
- Shenzhen Arrivals via BEKOL
- DES sector during non-3RS operations

8.2.2. General Procedures

- Climb / descend aircraft to the level specified within the handoff agreements below and transfer to DEH / TDE / ZUH

8.3. Departure North Sector in Runway 25 Operations



8.3.1. Responsibilities

- Hong Kong Centre / North Runway Departures via PECAN & DALOL
- DES sector during non-3RS operations

8.3.2. General Procedures

- Climb aircraft to the level specified within the handoff agreements below and transfer to TDC / TDE

8.4. Handoff Agreements

8.4.1. Runway 07 Operations

From Departure North (DEN) to Departure High (DEH)

| From | Altitude | Handoff Location |
|--------------|----------|-------------------|
| VHHH (BEKOL) | ↑ FL160 | Approaching FL160 |

From Departure North (DEN) to Terminal Departures East (TDE)

| From | Altitude | Handoff Location |
|------|----------|------------------|
| VHHH | ↑ FL160 | LUBMO |

From Departure North (DEN) to Zhuhai Approach (ZUH)

| To | Altitude | Handoff Location |
|------|------------------------------|--------------------|
| ZGSZ | S0180 (5900ft) | BEKOL (note 1) |
| ZGGG | S0420 (FL138), S0450 (FL148) | BEKOL (note 1 & 2) |

Note 1: This is an external agreement with VATPRC. As such, internal handoff releases are not applicable to this agreement and controllers shall adhere to the LoA between Hong Kong FIR and Guangzhou FIR when initiating a handoff per this agreement.

Note 2: S0450 (FL148) requires coordination with Zhuhai Approach.

8.4.2. Runway 25 Operations

From Departure North (DEN) to Terminal Departures Central (TDC)

| From | Altitude | Handoff Location |
|------|----------|------------------|
| VHHH | ↑ FL160 | SOSLU |

From Departure North (DEN) to Terminal Departures East (TDE)

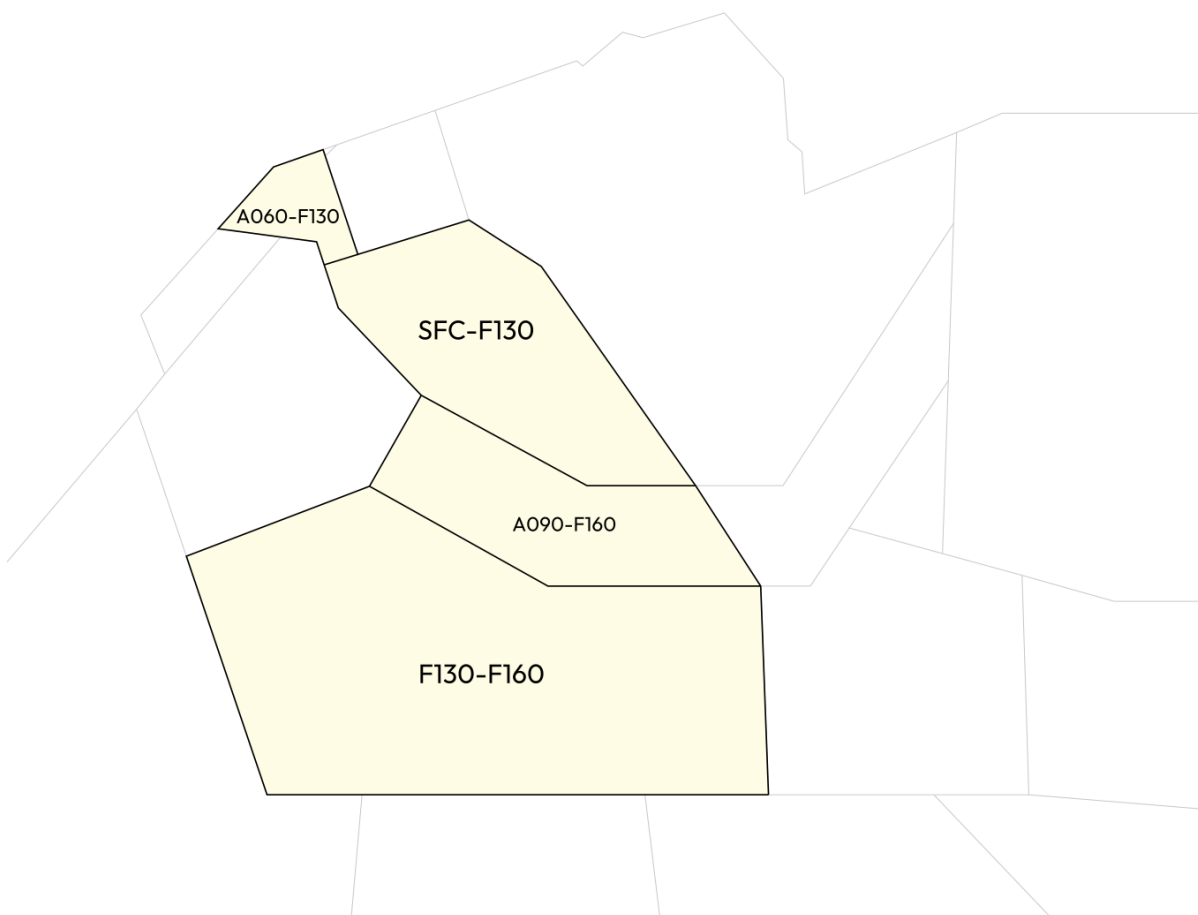
| From | Altitude | Handoff Location |
|------|----------|------------------|
| VHHH | ↑ FL160 | DAKIG |

9. HONG KONG DEPARTURE SOUTH (DES)

9.1. Airspace Ownership Priority (Positions on the left have priority over positions on the right)

- DES -> DEN -> APP -> TRW

9.2. Departure South Sector in Runway 07 Operations



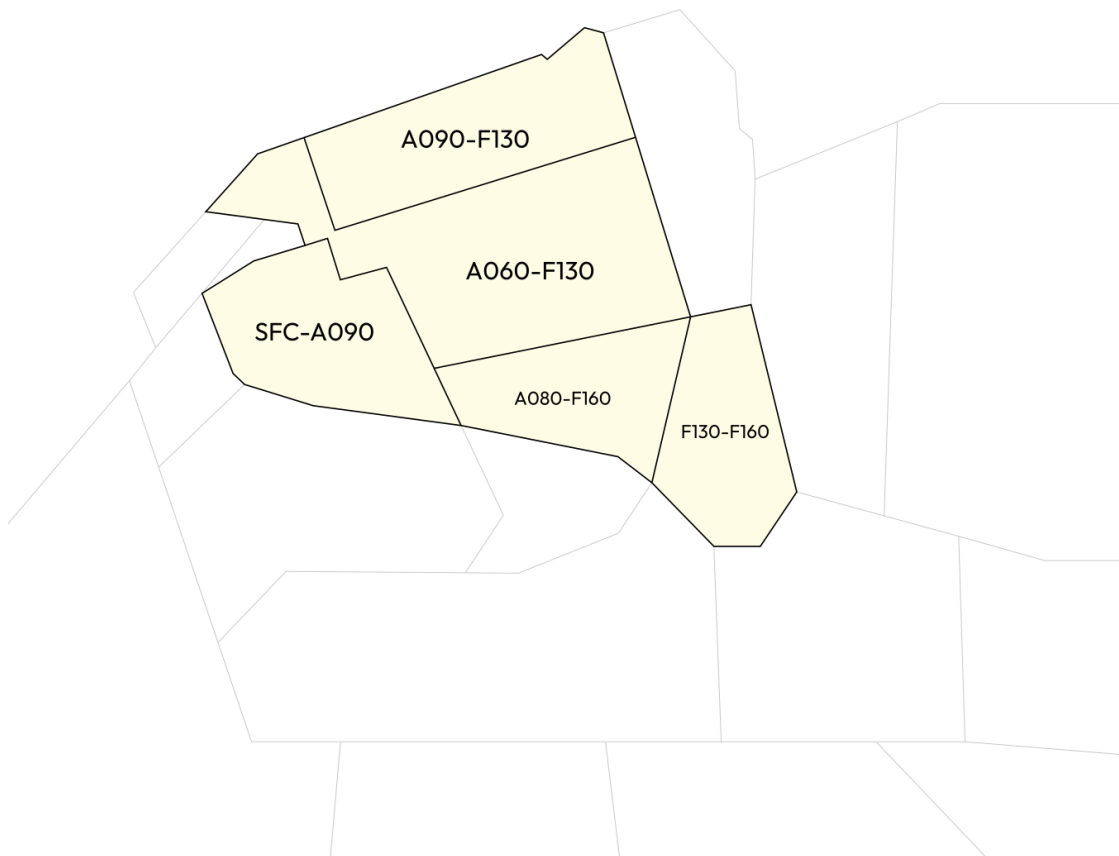
9.2.1. Responsibilities

- Hong Kong South Runway Departures via DALOL (V641, V651) & PECAN
- Macau Runway 34 Departures via Hong Kong FIR

9.2.2. General Procedures

- Climb aircraft to the level specified within the handoff agreements below and transfer to DEH / TDE

9.3. Departure South Sector in Runway 25 Operations



9.3.1. Responsibilities

- Hong Kong South Runway Departures via BEKOL & LEKEN
- Macau Runway 34 Departures via Hong Kong FIR
- Shenzhen Arrivals via BEKOL

9.3.2. General Procedures

- Climb aircraft to the level specified within the handoff agreements below and transfer to DEH / TDE / ZUH

9.4. Note to Hong Kong Departure South

- 9.4.1. During Runway 34 Operations at Macau, departures are transferred from Zhuhai Approach at an altitude of 6000ft. Zhuhai will transfer aircraft on the Zhuhai QNH. As such, if Departure needs aircraft to remain on an altitude instead of a Flight Level, then the Hong Kong QNH shall be passed to the aircraft.

9.5. Handoff Agreements

9.5.1. Runway 07 Operations

From Zhuhai Approach (ZUH) to Departure South (DES)

| From | Altitude | Handoff Location |
|------|----------|------------------|
| VMMC | 6000ft | LUKBU |

From Departure South (DES) to Departure High (DEH)

| From | Altitude | Handoff Location |
|--------------|----------|------------------|
| VMMC (ALLEY) | ↑ FL130 | MC311 (note) |

Note: Aircraft shall cross MC311 at or above A090.

From Departure South (DES) to Terminal Departures East (TDE)

| From | Altitude | Handoff Location |
|------|-----------------------|------------------|
| VHHH | ↑ FL140, FL160 (note) | DAKIG |
| VMMC | ↑ FL210 | |

Note: When simultaneous independent departures are in progress at VHHH, then FL140 shall be used. Otherwise, FL160 shall be used.

From Departure South (DES) to Terminal Departures Central (TDC)

| From | Altitude | Handoff Location |
|------|----------|------------------|
| VHHH | FL160 | SOSLU |

9.5.2. Runway 25 Operations

From Zhuhai Approach (ZUH) to Departure South (DES)

| From | Altitude | Handoff Location |
|------|----------|------------------|
| VMMC | 6000ft | LUKBU |

From Departure South (DES) to Departure High (DEH)

| From | Altitude | Handoff Location |
|--------------|----------|------------------|
| VHHH (BEKOL) | A070 | HH481 |
| VMMC | ↑ FL130 | MC315 |

From Departure South (DES) to Terminal Departures East (TDE)

| From | Altitude | Handoff Location |
|------|-----------------------|------------------|
| VHHH | ↑ FL140, FL160 (note) | LUBMO |

Note: When simultaneous independent departures are in progress at VHHH, then FL140 shall be used. Otherwise, FL160 shall be used.

From Departure South (DES) to Zhuhai Approach (ZUH)

| To | Altitude | Handoff Location |
|------|----------------|--------------------|
| ZGSZ | S0180 (5900ft) | BEKOL (note 1 & 2) |

Note 1: This is an external agreement with VATPRC. As such, internal handoff releases are not applicable to this agreement and controllers shall adhere to the LoA between Hong Kong FIR and Guangzhou FIR when initiating a handoff per this agreement.

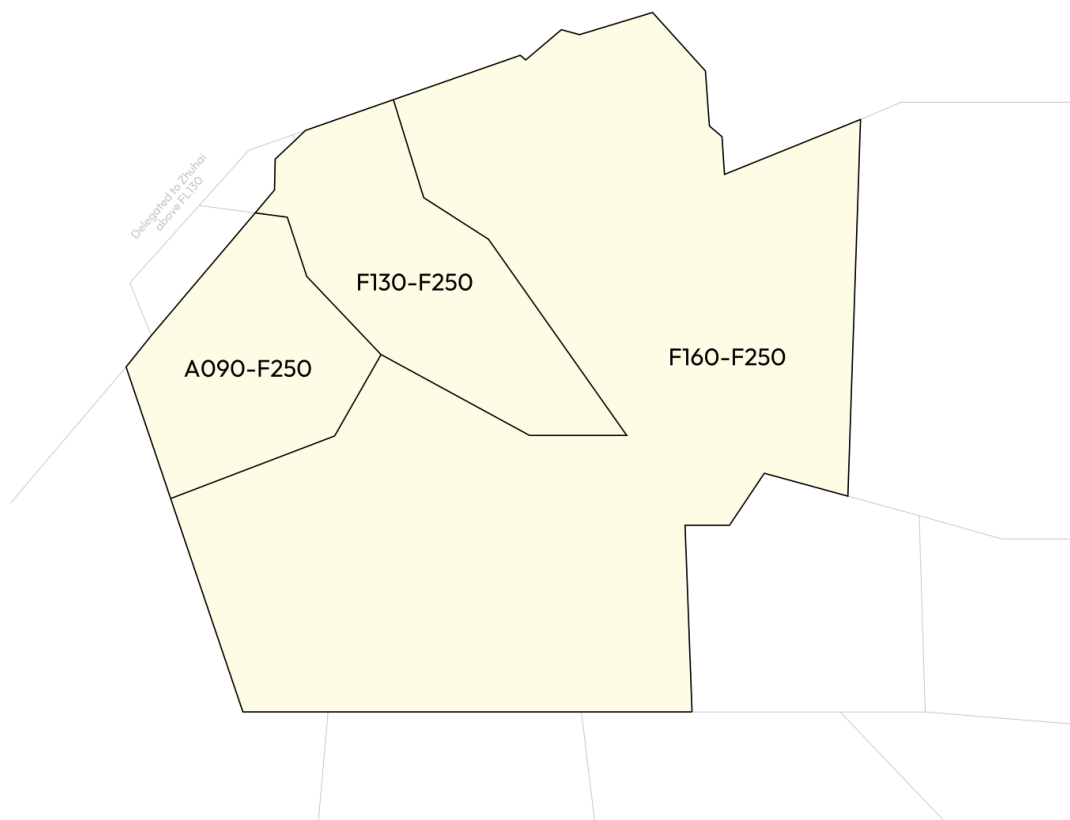
Note 2: Aircraft flying a BEKOL departure to ZGSZ will enter Final Approach Director airspace. Coordination shall be made with FAD to prevent conflicts with VHHH 25 arrivals.

10. HONG KONG DEPARTURE HIGH (DEH)

10.1. Airspace Ownership Priority (Positions on the left have priority over positions on the right)

- DEH -> DEN -> APP -> TRW

10.2. Departure High Sector in Runway 07 Operations



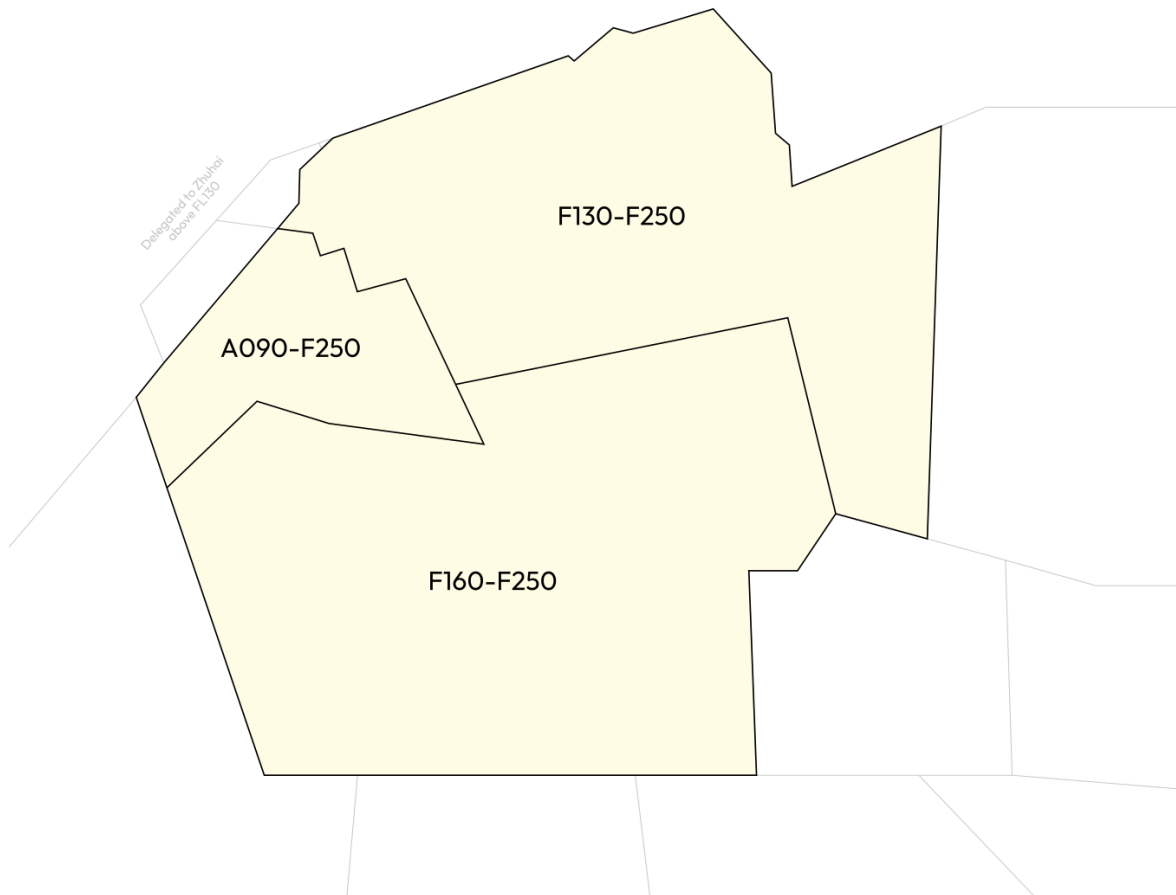
10.2.1. Responsibilities

- Hong Kong Departures via BEKOL
- Macau Runway 34 Departures via PECAN
- Macau Arrivals from NEDLE
- Guangzhou Arrivals

10.2.2. General Procedures

- Climb / descend aircraft to the level specified within the handoff agreements below and transfer to TDC / TDE / MCU

10.3. Departure High Sector in Runway 25 Operations



10.3.1. Responsibilities

- Hong Kong Departures via BEKOL
- Macau Runway 34 Departures
- Macau Arrivals from NEDLE
- Guangzhou Arrivals

10.3.2. General Procedures

- Climb / descend aircraft to the level specified within the handoff agreements below and transfer to TDC / TDE / MCU

10.4. Handoff Agreements

10.4.1. Runway 07 Operations

From Departure North (DEN) to Departure High (DEH)

| From | Altitude | Handoff Location |
|--------------|----------|-------------------|
| VHHH (BEKOL) | ↑ FL160 | Approaching FL160 |

From Departure South (DES) to Departure High (DEH)

| From | Altitude | Handoff Location |
|--------------|----------|------------------|
| VMMC (ALLEY) | ↑ FL130 | MC311 (note) |

Note: Aircraft shall cross MC311 at or above A090.

From Terminal Departures Central (TDC) to Departure High (DEH)

| To | Altitude | Handoff Location |
|------|----------|------------------|
| ZGGG | FL220 | SAPAX |

From Terminal Radar East (TME) to Departure High (DEH)

| To | Altitude | Handoff Location |
|------------|----------|------------------|
| VMMC, ZGGG | FL230 | NEDLE |

From Departure High (DEH) to Terminal Departures Central (TDC)

| From | Altitude | Handoff Location |
|--------------|----------|------------------|
| VMMC (ALLEY) | ↑ FL210 | SOSLU |

From Departure High (DEH) to Macau Approach Radar (MCU)

| To | Altitude | Handoff Location |
|------|----------|------------------|
| VMMC | FL110 | HAZEL |

From Departure High (DEH) to Guangzhou Control (GGG)

| To | Altitude | Handoff Location |
|---------------|---|--------------------|
| Guangzhou FIR | ↑ S0690 (FL226) but not below S0480 (FL157) | BEKOL (note 1 & 2) |

Note: This is an external agreement with VATPRC. As such, internal handoff releases are not applicable to this agreement and controllers shall adhere to the LoA between Hong Kong FIR and Guangzhou FIR when initiating a handoff per this agreement.

From Departure High (DEH) to Zhuhai Approach (ZUH)

| To | Altitude | Handoff Location |
|------|-------------------------------|--------------------|
| ZGGG | S0420 (FL138) & S0450 (FL148) | TAMOT (note 1 & 2) |
| | | BEKOL (note 1 & 3) |

Note 1: This is an external agreement with VATPRC. As such, internal handoff releases are not applicable to this agreement and controllers shall adhere to the LoA between Hong Kong FIR and Guangzhou FIR when initiating a handoff per this agreement.

Note 2: Descent to S0420 (FL138) requires coordination with DES due to DES airspace ceiling being FL130. Coordination is additionally required with Zhuhai Approach.

Note 3: S0450 (FL148) requires coordination with Zhuhai Approach.

10.4.2. Runway 25 Operations

From Departure South (DES) to Departure High (DEH)

| From | Altitude | Handoff Location |
|--------------|----------|------------------|
| VHHH (BEKOL) | ↑ A070 | HH481 |
| VMMC | ↑ FL130 | MC315 |

From Terminal Departures Central (TDC) to Departure High (DEH)

| To | Altitude | Handoff Location |
|------|----------|------------------|
| ZGGG | FL220 | SAPAX |

From Terminal Radar East (TDE) to Departure High (DEH)

| To | Altitude | Handoff Location |
|------------|----------|------------------|
| VMMC, ZGGG | FL230 | NEDLE |

From Departure High (DEH) to Terminal Departures Central (TDC)

| From | Altitude | Handoff Location |
|--------------|----------|------------------|
| VMMC (ALLEY) | ↑ FL210 | SOSLU |

From Departure High (DEH) to Terminal Departures East (TDE)

| From | Altitude | Handoff Location |
|------|----------|------------------|
| VMMC | ↑ FL210 | LUBMO |

From Departure High (DEH) to Macau Approach Radar (MCU)

| To | Altitude | Handoff Location |
|------|----------|------------------|
| VMMC | FL110 | HAZEL |

From Departure High (DEH) to Guangzhou Control (GGG)

| To | Altitude | Handoff Location |
|---------------|---|------------------|
| Guangzhou FIR | ↑ S0690 (FL226) but not below S0480 (FL157) | BEKOL (note) |

Note: This is an external agreement with VATPRC. As such, internal handoff releases are not applicable to this agreement and controllers shall adhere to the LoA between Hong Kong FIR and Guangzhou FIR when initiating a handoff per this agreement.

From Departure High (DEH) to Zhuhai Approach (ZUH)

| To | Altitude | Handoff Location |
|------|-----------------------|--------------------|
| ZGGG | S0420 (FL138) & S0450 | TAMOT (note 1 & 2) |
| | (FL148) | BEKOL (note 1 & 2) |

Note 1: This is an external agreement with VATPRC. As such, internal handoff releases are not applicable to this agreement and controllers shall adhere to the LoA between Hong Kong FIR and Guangzhou FIR when initiating a handoff per this agreement.

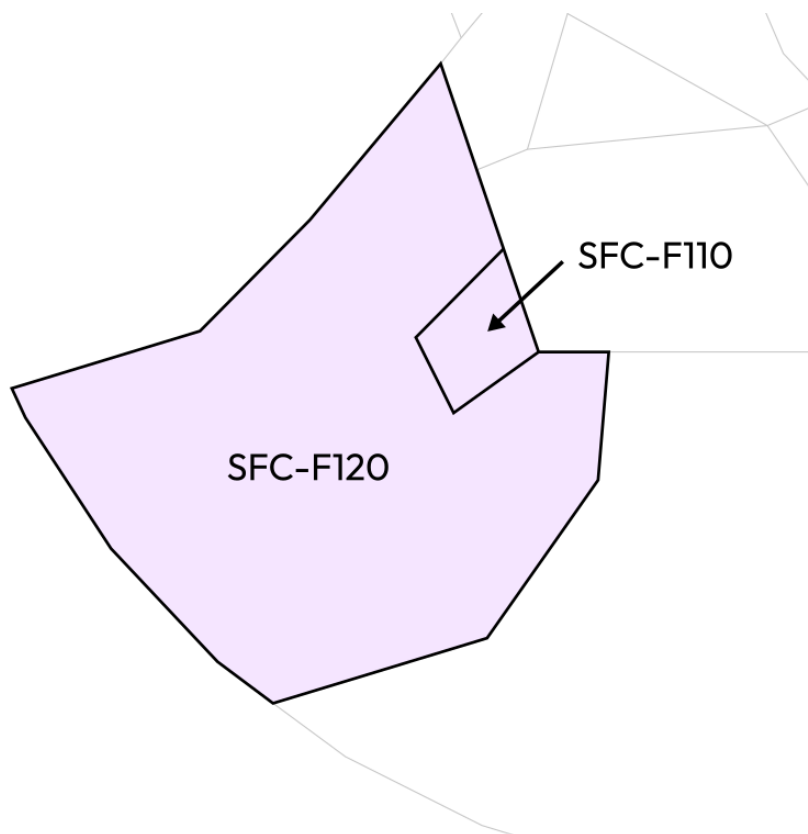
Note 2: S0420 (FL138) and S0450 (FL148) requires coordination with Zhuhai Approach.

11. MACAU APPROACH RADAR (MCU)

11.1. Airspace Ownership Priority (Positions on the left have priority over positions on the right)

- MCU -> TMW -> TRW -> APP

11.2. Macau Approach Radar Sector



11.3. Responsibilities

- Macau 16 Departures
- Macau Arrivals
- Shenzhen Arrivals via LANDA
- Holding at PAPA
- Oil Rig Track D (Refer to SOP006)
- Top-down control for VMCC when aerodrome ATC offline

11.4. General Procedures

- Climb / descend aircraft to the level specified within the handoff agreements below and transfer to TDC / ZUH

11.5. Note to Macau Approach Radar

11.5.1. The section of airspace around MURRY from FL110 – FL120 (known as the **MURRY Box**) is delegated to Terminal Radar West to facilitate descent to FL110. As such, the highest assignable altitude for aircraft within Macau Approach Radar is **9000ft**. Higher altitudes may conflict with VHHH arrivals.

11.6. Handoff Agreements

11.6.1. Runway 16 Operations

From Departure High (DEH) to Macau Approach Radar (MCU)

| To | Altitude | Handoff Location |
|------|----------|------------------|
| VMMC | FL110 | HAZEL |

From Area Radar West (TRW) to Macau Approach Radar (MCU)

| To | Altitude | Handoff Location |
|------------|----------|------------------|
| VMMC, ZGSZ | FL120 | COTON |

From Terminal Departures Central (TDC) to Macau Approach Radar (MCU)

| To | Altitude | Handoff Location |
|------|----------|-------------------|
| VMMC | FL110 | 15nm before CHALI |

From Macau Approach Radar (MCU) to Terminal Departures Central (TDC)

| From | Altitude | Handoff Location |
|----------------------------|----------|------------------|
| VMMC (NUDPI, CONGA, GRUPA) | ↑ 9000ft | After MULET |
| VMMC (ALLEY) | ↑ FL120 | After MULET |

From Macau Approach Radar (MCU) to Zhuhai Approach (ZUH)

| To | Altitude | Handoff Location |
|------|----------------|------------------|
| VMMC | S0270 (8900ft) | INDUS (note) |
| ZGSZ | S0330 (FL108) | LANDA (note) |

Note: This is an external agreement with VATPRC. As such, internal handoff releases are not applicable to this agreement and controllers shall adhere to the LoA between Hong Kong FIR and Guangzhou FIR when initiating a handoff per this agreement.

11.6.2.Runway 34 Operations

From Departure High (DEH) to Macau Approach Radar (MCU)

| To | Altitude | Handoff Location |
|------|----------|------------------|
| VMMC | FL110 | HAZEL |

From Area Radar West (TRW) to Macau Approach Radar (MCU)

| To | Altitude | Handoff Location |
|------------|----------|------------------|
| VMMC, ZGSZ | FL120 | COTON |

From Terminal Departures Central (TDC) to Macau Approach Radar (MCU)

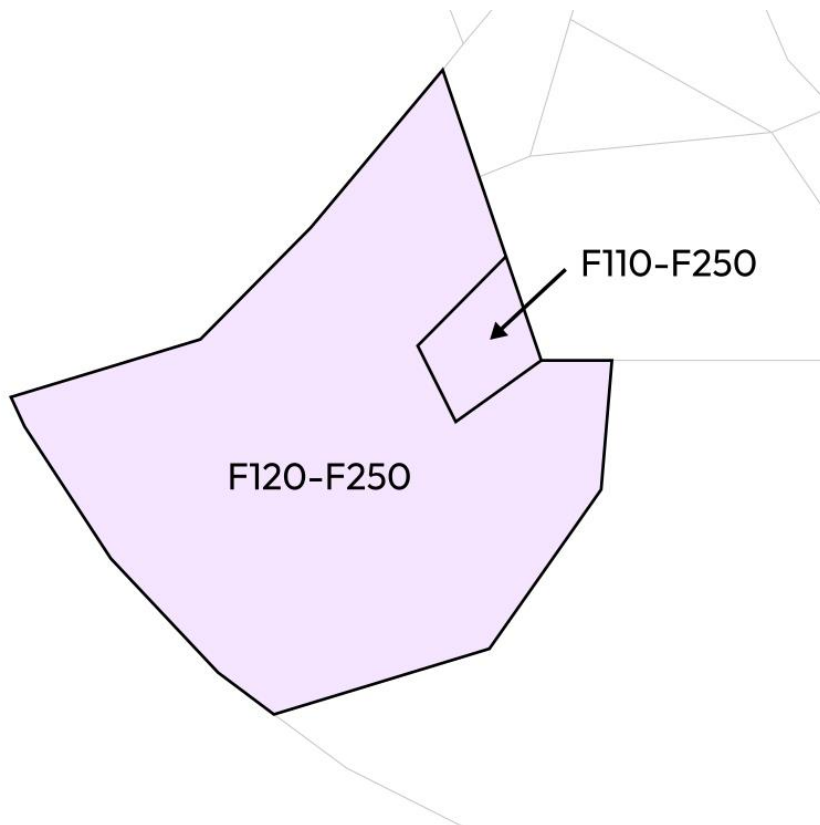
| To | Altitude | Handoff Location |
|------|----------|-------------------|
| VMMC | FL110 | 15nm before CHALI |

12. TERMINAL RADAR WEST (TMW)

12.1. Airspace Ownership Priority (Positions on the left have priority over positions on the right)

- TMW -> TRW -> APP

12.2. Terminal Radar West Sector



12.3. Responsibilities

- Hong Kong Arrivals via CANTO/SIERA
- Shenzhen/Guangzhou Departures via SIERA
- Holding at CANTO / COMBI

12.4. General Procedures

- Climb / descend aircraft to the level specified within the handoff agreements below and transfer to TDC / ZUH
- Clear VHHH arrivals for their STAR if Area Radar is offline

12.5. Note to Terminal Radar West

12.5.1. The section of airspace around MURRY from FL110 – FL120 (known as the **MURRY Box**) is delegated to Terminal Radar West to facilitate descent to FL110. Aircraft descending to FL110 on the CANTO/SIERA STARs do not have to be individually coordinated with Macau Approach Radar. Controllers should still remain vigilant in case aircraft inadvertently descend into Macau Approach Radar airspace.

12.6. Handoff Agreements

12.6.1. Runway 07 Operations

From Zhuhai Approach (ZUH) to Terminal Radar West (TMW)

| From | Altitude | Handoff Location |
|------|----------|------------------|
| ZGSZ | FL120 | SIERA |

From Area Radar West (TRW) to Terminal Radar West (TMW)

| To | Altitude | Handoff Location |
|------|----------|------------------|
| VHHH | FL260 | MAPLE |

From Guangzhou Control (GGG) to Terminal Radar West (TMW)

| To | Altitude | Handoff Location |
|---------------|---------------------|------------------|
| VHHH | FL190, FL210, FL230 | SIERA |
| Hong Kong FIR | FL230, FL250 | |

From Terminal Radar West (TMW) to Approach (APP)

| To | Altitude | Handoff Location |
|------|----------|------------------|
| VHHH | FL110 | MURRY |

From Terminal Radar West (TMW) to Terminal Departures Central (TDC)

| From | Altitude | Handoff Location |
|------|----------|------------------|
| ZGSZ | FL120 | After ROCCA |

12.6.2. Runway 25 Operations

From Zhuhai Approach (ZUH) to Terminal Radar West (TMW)

| From | Altitude | Handoff Location |
|------|----------|------------------|
| ZGSZ | FL120 | SIERA |

From Area Radar West (TRW) to Terminal Radar West (TMW)

| To | Altitude | Handoff Location |
|------|----------|------------------|
| VHHH | FL260 | MAPLE |

From Guangzhou Control (GGG) to Terminal Radar West (TMW)

| To | Altitude | Handoff Location |
|------|---------------------|------------------|
| VHHH | FL190, FL210, FL230 | SIERA |

From Terminal Radar West (TMW) to Departure High (DEH)

| To | Altitude | Handoff Location |
|------|----------|------------------|
| VHHH | FL150 | MURRY |

From Terminal Radar West (TMW) to Terminal Departures Central (TDC)

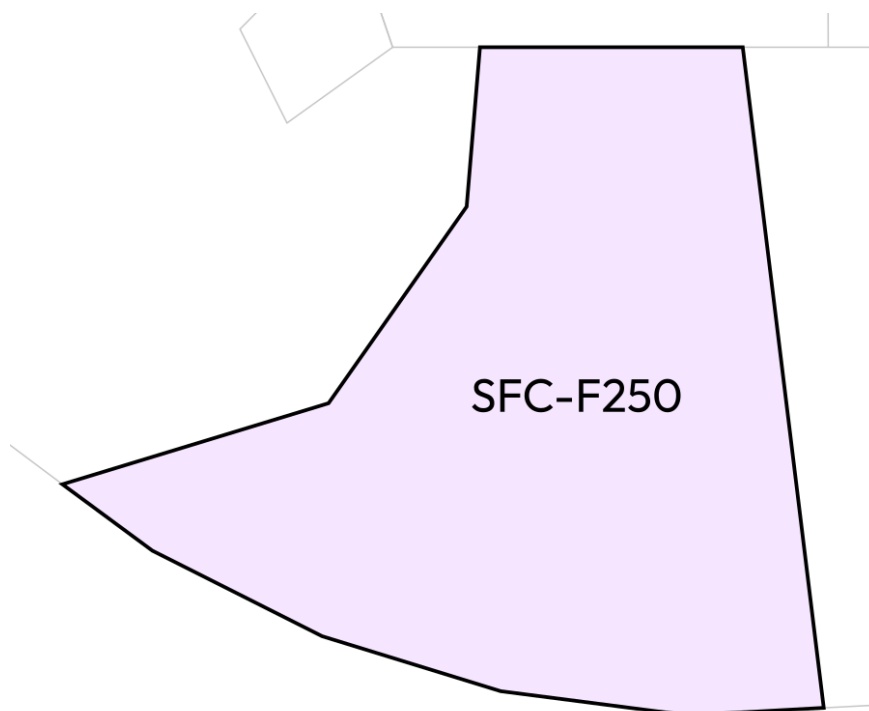
| From | Altitude | Handoff Location |
|------|----------|------------------|
| ZGSZ | FL120 | After ROCCA |

13. TERMINAL DEPARTURES CENTRAL (TDC)

13.1. Airspace Ownership Priority (Positions on the left have priority over positions on the right)

- TDC -> TMS -> TMW -> TRW -> APP

13.2. Terminal Departures Central Sector



13.3. Responsibilities

- Hong Kong/Macau/Shenzhen Departures via SOSLU
- Shenzhen Departures via SKATE/ALLEY
- Macau Arrivals via ROBIN
- Guangzhou Arrivals from the Southwest

13.4. General Procedures

- Climb / descend aircraft to the level specified within the handoff agreements below and transfer to TRS / TRW / TRV

13.5. Handoff Agreements

13.5.1. Runway 07 Operations

From **Departure South (DES)** to Terminal Departures Central (TDC)

| From | Altitude | Handoff Location |
|------|----------|------------------|
| VHHH | ↑ FL160 | SOSLU |

From **Departure High (DEH)** to Terminal Departures Central (TDC)

| From | Altitude | Handoff Location |
|------|----------|------------------|
| VMMC | ↑ FL210 | SOSLU |

From **Macau Approach Radar (MCU)** to Terminal Departures Central (TDC)

| From | Altitude | Handoff Location |
|----------------------------|----------|------------------|
| VMMC (NUDPI, CONGA, GRUPA) | ↑ 9000ft | After MULET |
| VMMC (ALLEY) | ↑ FL120 | After MULET |

From **Terminal Radar West (TMW)** to Terminal Departures Central (TDC)

| From | Altitude | Handoff Location |
|------|----------|------------------|
| ZGSZ | FL120 | After ROCCA |

From **Area Radar Central (TRC)** to Terminal Departures Central (TDC)

| To | Altitude | Handoff Location |
|------|----------|------------------|
| ZGGG | FL260 | ISBAN |
| VMMC | FL200 | ISBAN |

From **Area Radar West (TRW)** to Terminal Departures Central (TDC)

| To | Altitude | Handoff Location |
|------|----------|------------------|
| ZGGG | FL260 | CHALI |

From Terminal Departures Central (TDC) to Area Radar West (TRW)

| From | Altitude | Handoff Location |
|--------------------------|----------|------------------|
| ZGSZ, VHHH, VMMC (SIKOU) | ↑ FL250 | ALLEY (note) |

Note: The agreed level for aircraft with a RFL below FL250 (e.g. those landing at airports near SIKOU) shall be individually coordinated.

From Terminal Departures Central (TDC) to Area Radar South (TRS)

| From | Altitude | Handoff Location |
|---|----------|-----------------------------|
| ZGSZ, VMMC (DOTMI, LELIM, ELATO, ENVAR, NOMAN, SABNO) | ↑ FL160 | On approaching FL160 (note) |

Note: ZGSZ and VMMC departures will enter Terminal Radar South airspace. Coordination shall be performed with TMS to prevent conflicts with VHHH arrivals.

From Terminal Departures Central (TDC) to Area Radar West (TRV)

| From | Altitude | Handoff Location |
|---------------------------------|----------|------------------|
| ZGSZ, VHHH, VMMC (IDOSI, EPDOS) | ↑ FL250 | ALLEY/LAXET |

From Terminal Departures Central (TDC) to Macau Approach Radar (MCU)

| To | Altitude | Handoff Location |
|------|----------|-------------------|
| VMMC | FL110 | 15nm before CHALI |

From Terminal Departures Central (TDC) to Departure High (DEH)

| To | Altitude | Handoff Location |
|------|----------|------------------|
| ZGGG | FL220 | SAPAX |

13.5.2. Runway 25 Operations

From Departure North (DEN) to Terminal Departures Central (TDC)

| From | Altitude | Handoff Location |
|------|----------|------------------|
| VHHH | ↑ FL160 | SOSLU |

From Departure High (DEH) to Terminal Departures Central (TDC)

| From | Altitude | Handoff Location |
|--------------|----------|------------------|
| VMMC (ALLEY) | ↑ FL210 | SOSLU |

From Macau Approach Radar (MCU) to Terminal Departures Central (TDC)

| From | Altitude | Handoff Location |
|----------------------------|----------|------------------|
| VMMC (NUDPI, CONGA, GRUPA) | ↑ 9000ft | After MULET |
| VMMC (ALLEY) | ↑ FL120 | After MULET |

From Terminal Radar West (TMW) to Terminal Departures Central (TDC)

| From | Altitude | Handoff Location |
|------|----------|------------------|
| ZGSZ | FL120 | After ROCCA |

From Area Radar Central (TRC) to Terminal Departures Central (TDC)

| To | Altitude | Handoff Location |
|------|----------|------------------|
| ZGGG | FL260 | ISBAN |
| VMMC | FL200 | ISBAN |

From Area Radar West (TRW) to Terminal Departures Central (TDC)

| To | Altitude | Handoff Location |
|------|----------|------------------|
| ZGGG | FL260 | CHALI |

From Terminal Departures Central (TDC) to Area Radar West (TRW)

| From | Altitude | Handoff Location |
|--------------------------|----------|------------------|
| ZGSZ, VHHH, VMMC (SIKOU) | ↑ FL250 | ALLEY |

From Terminal Departures Central (TDC) to Area Radar South (TRS)

| From | Altitude | Handoff Location |
|---|----------|-----------------------------|
| ZGSZ, VMMC (DOTMI, LELIM, ELATO, ENVAR, NOMAN, SABNO) | ↑ FL160 | On approaching FL160 (note) |

Note: ZGSZ and VMMC departures will enter Terminal Radar South airspace. Coordination shall be performed with TMS to prevent conflicts with VHHH arrivals.

From Terminal Departures Central (TDC) to Area Radar West (TRV)

| From | Altitude | Handoff Location |
|---------------------------------|----------|--------------------|
| ZGSZ, VHHH, VMMC (IDOSI, EPDOS) | ↑ FL250 | ALLEY/LAXET (note) |

From Terminal Departures Central (TDC) to Macau Approach Radar (MCU)

| To | Altitude | Handoff Location |
|------|----------|-------------------|
| VMMC | FL110 | 15nm before CHALI |

From Terminal Departures Central (TDC) to Departure High (DEH)

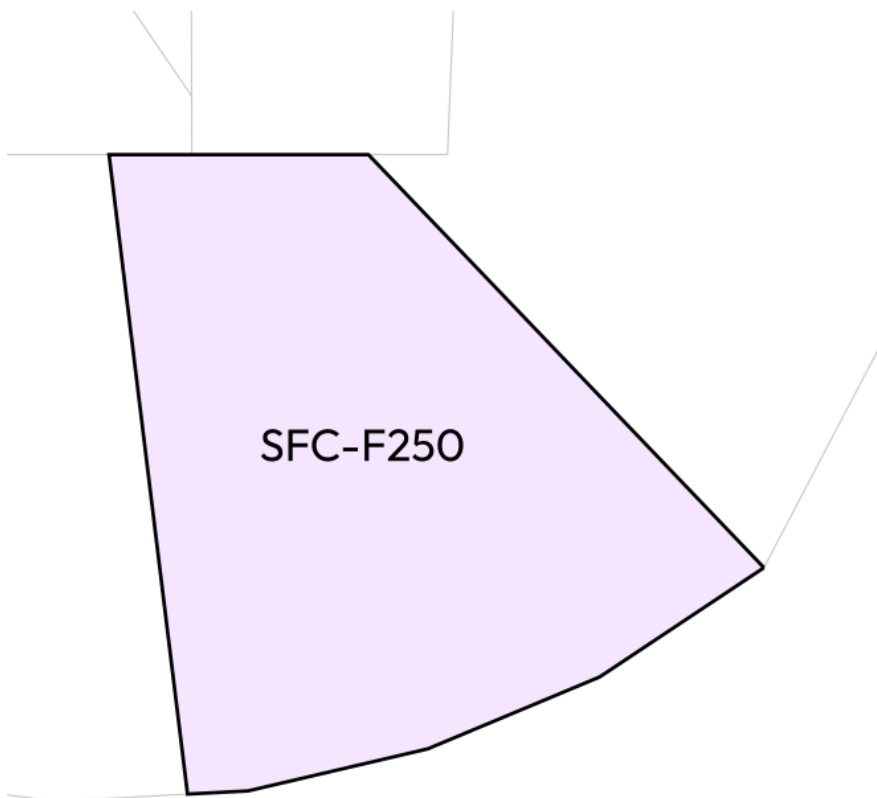
| To | Altitude | Handoff Location |
|------|----------|------------------|
| ZGGG | FL220 | SAPAX |

14. TERMINAL RADAR SOUTH (TMS)

14.1. Airspace Ownership Priority (Positions on the left have priority over positions on the right)

- TMS -> TMW -> TRW -> APP

14.2. Terminal Radar South Sector



14.3. Responsibilities

- Hong Kong Arrivals via BETTY

14.4. General Procedures

- Climb / descend aircraft to the level specified within the handoff agreements below and transfer to APP
- Clear VHHH arrivals for their STAR if Area Radar is offline

14.5. Handoff Agreements

14.5.1. Runway 07 Operations

From Area Radar South (TRS) to Terminal Radar South (TMS)

| To | Altitude | Handoff Location |
|------|----------|------------------|
| VHHH | FL260 | SONNY |

From Area Radar Central (TRC) to Terminal Radar South (TMS)

| To | Altitude | Handoff Location |
|------|----------|------------------|
| VHHH | FL260 | CYBER |

From Terminal Radar South (TMS) to Approach (APP)

| To | Altitude | Handoff Location |
|------|----------|------------------|
| VHHH | FL130 | MANGO |

14.5.2. Runway 25 Operations

From Area Radar South (TRS) to Terminal Radar South (TMS)

| To | Altitude | Handoff Location |
|------|----------|------------------|
| VHHH | FL260 | SONNY |

From Area Radar Central (TRC) to Terminal Radar South (TMS)

| To | Altitude | Handoff Location |
|------|----------|------------------|
| VHHH | FL260 | CYBER |

From Terminal Radar South (TMS) to Approach (APP)

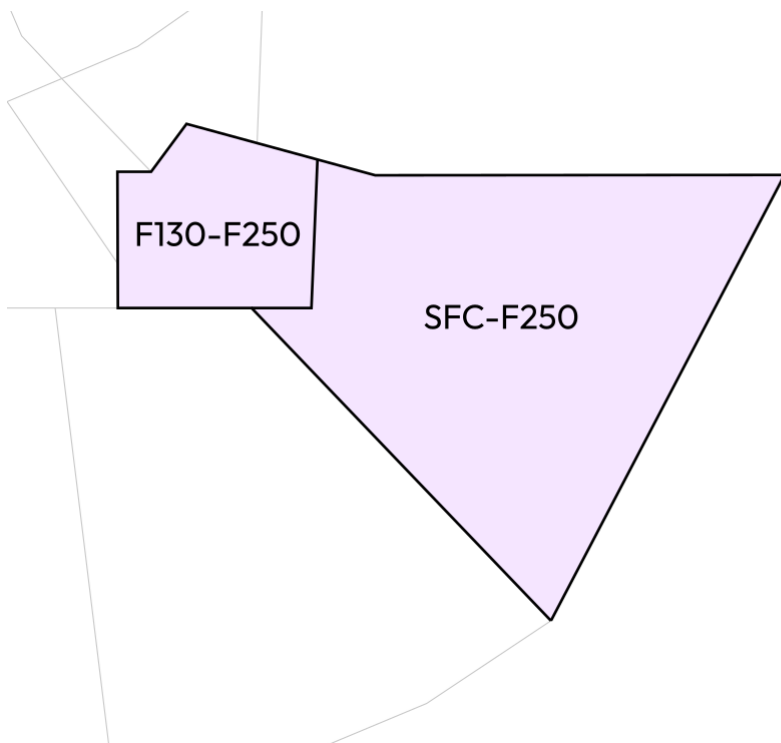
| To | Altitude | Handoff Location |
|------|----------|------------------|
| VHHH | FL130 | MANGO |

15. TERMINAL DEPARTURES EAST (TDE)

15.1. Airspace Ownership Priority (Positions on the left have priority over positions on the right)

- TDE -> TME -> TMW -> TRW -> APP

15.2. Terminal Departures East Sector



15.3. Responsibilities

- Hong Kong Departures via DALOL & LEKEN
- Macau Runway 34 Departures via DALOL & LEKEN

15.4. General Procedures

- Climb / descend aircraft to the level specified within the handoff agreements below and transfer to TRE / TRS

15.5. Handoff Agreements

15.5.1. Runway 07 Operations

From Departure North (DEN) to Terminal Departures East (TDE)

| From | Altitude | Handoff Location |
|------|----------|------------------|
| VHHH | ↑ FL160 | LUBMO |

From Departure South (DES) to Terminal Departures East (TDE)

| From | Altitude | Handoff Location |
|------|-----------------------|------------------|
| VHHH | ↑ FL140, FL160 (note) | DAKIG |
| VMMC | ↑ FL210 | |

Note: When simultaneous independent departures are in progress at VHHH, then FL140 shall be used. Otherwise, FL160 shall be used.

From Terminal Departures East (TDE) to Area Radar East (TRE)

| From | Altitude | Handoff Location |
|---------------------------|-------------------|------------------|
| VHHH, VMMC (DOTMI, LELIM) | ↑ FL170 , ↑ FL230 | NUDPI (note) |
| VHHH, VMMC (ELATO, ENVAR) | ↑ FL250 | MEBKI |

Note: Aircraft with RFL below S0690 (FL226) shall be climbed to FL170, whilst aircraft with RFL at or above S0690 (FL226) shall be climbed to FL230.

From Terminal Departures East (TDE) to Area Radar South (TRS)

| From | Altitude | Handoff Location |
|----------------------------------|----------|------------------|
| VHHH, VMMC (NOMAN, SABNO, KAPLI) | ↑ FL250 | SKATE |

15.5.2. Runway 25 Operations

From Departure North (DEN) to Terminal Departures East (TDE)

| From | Altitude | Handoff Location |
|------|----------|------------------|
| VHHH | ↑ FL160 | DAKIG |

From Departure South (DES) to Terminal Departures East (TDE)

| From | Altitude | Handoff Location |
|------|-----------------------|------------------|
| VHHH | ↑ FL140, FL160 (note) | LUBMO |

Note: When simultaneous independent departures are in progress at VHHH, then FL140 shall be used. Otherwise, FL160 shall be used.

From Departure High (DEH) to Terminal Departures East (TDE)

| From | Altitude | Handoff Location |
|------|----------|------------------|
| VMMC | ↑ FL210 | LUBMO |

From Terminal Departures East (TDE) to Area Radar East (TRE)

| From | Altitude | Handoff Location |
|---------------------------|-------------------|------------------|
| VHHH, VMMC (DOTMI, LELIM) | ↑ FL170 , ↑ FL230 | NUDPI (note) |
| VHHH, VMMC (ELATO, ENVAR) | ↑ FL250 | MEBKI |

Note: Aircraft with RFL below S0690 (FL226) shall be climbed to FL170, whilst aircraft with RFL at or above S0690 (FL226) shall be climbed to FL230.

From Terminal Departures East (TDE) to Area Radar South (TRS)

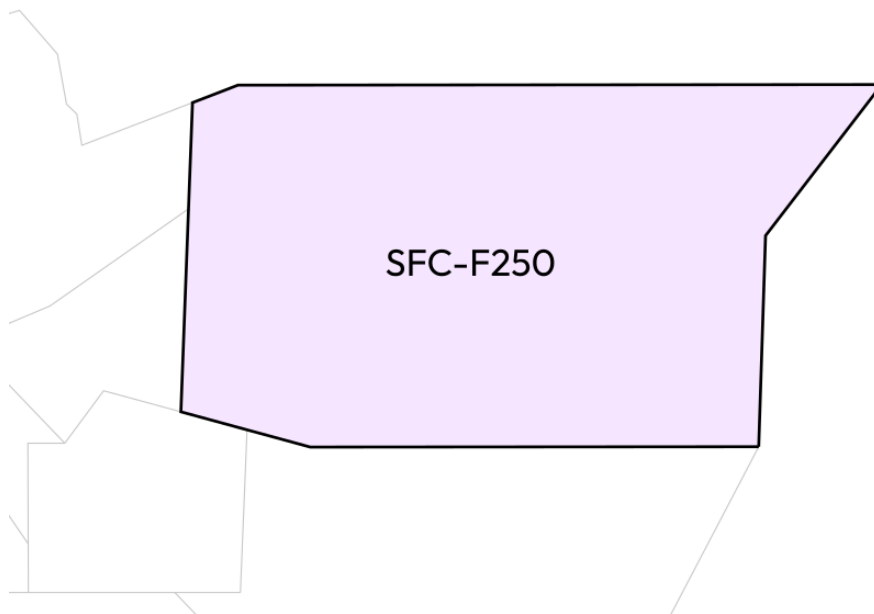
| From | Altitude | Handoff Location |
|----------------------------------|----------|------------------|
| VHHH, VMMC (NOMAN, SABNO, KAPLI) | ↑ FL250 | SKATE |

16. TERMINAL RADAR EAST (TME)

16.1. Airspace Ownership Priority (Positions on the left have priority over positions on the right)

- TME -> TMW -> TRW -> APP

16.2. Terminal Radar East Sector



16.3. Responsibilities

- Hong Kong Arrivals via ABBEY
- Macau Arrivals via NEDLE
- Guangzhou Arrivals via ELATO
- Holding at ABBEY/FISHA

16.4. General Procedures

- Climb / descend aircraft to the level specified within the handoff agreements below and transfer to APP / TME
- Clear VHHH arrivals for their STAR if Area Radar is offline

16.5. Handoff Agreements

16.5.1. Runway 07 Operations

From Area Radar East Arrivals (TRK) to Terminal Radar East (TME)

| To | Altitude | Handoff Location |
|------------|----------|------------------|
| VHHH | FL260 | ENPET |
| VMMC, ZGGG | FL260 | After SAMMI |

From Terminal Radar East (TME) to Approach (APP)

| To | Altitude | Handoff Location |
|------|----------|------------------|
| VHHH | FL110 | MUSEL |

From Terminal Radar East (TME) to Departure High (DEH)

| To | Altitude | Handoff Location |
|------------|----------|------------------|
| VMMC, ZGGG | FL230 | NEDLE |

16.5.2. Runway 25 Operations

From Area Radar East Arrivals (TRK) to Terminal Radar East (TME)

| To | Altitude | Handoff Location |
|------------|----------|------------------|
| VHHH | FL260 | ENPET |
| VMMC, ZGGG | FL260 | After SAMMI |

From Terminal Radar East (TME) to Approach (APP)

| To | Altitude | Handoff Location |
|------|----------|------------------|
| VHHH | FL110 | MUSEL |

From Terminal Radar East (TME) to Departure High (DEH)

| To | Altitude | Handoff Location |
|------------|----------|------------------|
| VMMC, ZGGG | FL230 | NEDLE |

RECORD OF REVISION

| DATE | REV. | REVISION CONTENT | APPROVAL |
|-------------|------|--|----------|
| 17 JUN 2020 | 0 | Initial Release | J. CHENG |
| 09 SEP 2023 | 1 | Major Rewrite Added all 4 Terminal Radar Sectors Added Macau Radar Control Added Handoff Agreements | T. SIU |
| 03 APR 2024 | 2 | Updated all Sector Diagrams Added missing TRC -> TDC restriction for VMMC J103 Added noise abatement agreement between APP and DEP Added procedure for Approach to route aircraft towards LIMES from BETTY during noise abatement Renamed TMA Position Names to match reality Added KAPLI to DEP -> TRS handoff agreement Added missing TDC -> TRS handoff agreement Added ZGSZ to TRW -> TMW COTON handoff agreement Fixed a typo in TMW VHHX restriction Added Airspace Ownership Priority Updated erroneous agreement between Departure and Departure High regarding BEKOL departures during runway 25 operations | T. SIU |
| 23 APR 2024 | 3 | Updated TMW -> TDC agreement to FL120 for ZGSZ departures Added note for TDC -> TRS agreement for ZGSZ / VMMC departures Moved VHHX SIKOU1A/IDOSI1A/EPDOS1A agreements from APP/DEP -> TMW to APP/DEP -> TDC Added missing MAGOG13 agreements from TME -> APP/DEP/DEH Added top-down responsibility for VMMC to Macau Approach Radar | T. SIU |
| 09 JUN 2024 | 4 | Updated agreed handoff levels to match VATPRC LOA Revision 1 Added missing agreement from DEP -> APP for VMMC ALLEY departures during runway 07 operations Updated STAR clearances to be provided by Area Radar (Terminal Radar if Area is offline) | T. SIU |
| 05 OCT 2024 | 5 | Renamed Terminal Radar South Departures to | T. SIU |

| | | | |
|-------------|---|--|--------|
| | | Terminal Departures Central Corrected handoff level for VHHH departures via PECAN within procedures section Added information about MURRY Box Updated sector diagrams for TMW and MCU Added note about vectoring close to the boundary within FAD airspace Added note about Macau 34 departures remaining on Zhuhai QNH when handed off from Zhuhai Approach Updated handoff agreements between APP and FAD | |
| 28 NOV 2024 | 6 | Updated agreements / diagrams for 3RS Added Terminal Departures East Added Departure South & Departure North | T. SIU |
| 07 DEC 2024 | 7 | Updated certain agreements with real world data Updated diagrams with real world data | T. SIU |