

Annex 1

Technical Requirements

1 Regulatory Framework Compliance

All proposals submitted in response to the operational requirements for Rene Mouawad Airport described in this Annex shall comply with the following regulatory framework:

- Directives, circulars, and operational requirements issued by the Lebanese Civil Aviation Authority (**LCAA**).
- Applicable **Lebanese Aviation Regulations (LARs)**.
- International standards and recommended practices issued by the International Civil Aviation Organization (**ICAO**), including relevant ICAO Annexes.
- Applicable Lebanese laws, decrees, and regulations issued under the authority of the Ministry of Public Works and Transport.
- International aviation security and safety requirements, including ICAO Annex 14 (Aerodromes), Annex 17 (Security), and Annex 9 (Facilitation).

The operator shall obtain all necessary permits, approvals, and operational certifications required to operate the airport and associated facilities.

2 Capacity Requirements

The proposed operational concept and the Temporary Passenger Building must demonstrate the capability to process, at a minimum:

- Directional Peak hour capacity of 150 passenger/hour.

Proposals must clearly demonstrate operational flexibility to accommodate potential increases in passenger traffic, aircraft movements.

The Lebanese Civil Aviation Authority (LCAA) reserves the right to request modifications or expansions to the operational facilities if required by air traffic demand or operational safety requirements.

3 Temporary Passenger Terminal

The Operator shall design, supply, construct, equip, and operate a temporary passenger terminal building to support the commencement of commercial passenger operations at Rene Mouawad Airport. The temporary terminal shall serve as the primary passenger processing facility for a minimum operational period of four (4) years, or until the permanent passenger terminal becomes operational, whichever occurs first.

The facility shall be designed as a modular, prefabricated steel structure capable of rapid installation while ensuring safety, operational efficiency, passenger comfort, and compliance with applicable aviation standards.

Pending the approval of LCAA, it may be possible to rehabilitate the existing Officer's Building into the temporary passenger terminal after assessment of its integrity by a structural engineer and its reinforcement as necessary, in lieu of constructing a new temporary terminal.

The temporary facility shall:

- Comply with all applicable safety, aviation security, and operational regulations.
- Provide adequate comfort, accessibility, and operational efficiency for passengers, airline staff, and airport personnel.
- Ensure safe, secure, and efficient passenger flows for both departures and arrivals.

The proposed space program and functional layout plan shall be submitted to the Lebanese Civil Aviation Authority (LCAA) for review and approval prior to the commencement of detailed design works.

All coordination with relevant airport, military, security and other governmental stakeholders shall be conducted through the LCAA.

The LCAA reserves the right to appoint an independent consultant to review and assess the design submitted by the consortium.

Minimum requirements include:

- Structural steel frame or equivalent modular structural system, if a new construction.
- Compliance with applicable Lebanese structural, seismic, and wind-load standards.
- Insulated roof and wall panels suitable for the regional climate.
- Weatherproof construction capable of year-round operation, if a new construction.
- Minimum ceiling height of 4 meters in main passenger processing areas, if a new construction.
- Durable, non-slip flooring suitable for high passenger traffic.
- Adequate insulation for thermal efficiency.
- Compliance with NFPA Fire Engineering Codes and regulations.
- Future relocation or dismantling where feasible, if a new construction.
- Expansion through modular extension, if a new construction.
- Covered walkways shall be provided where necessary to protect passengers moving between the terminal and aircraft boarding areas, if needed for a new construction.

The terminal shall be designed to ensure efficient passenger flow and clear functional separation between operational areas. If new construction, total terminal footprint is around 1,500 – 2,000 m².

The layout shall include, at a minimum:

Departure Areas

- Public departure lobby
- Check-in counters and airline support offices (minimum width 2 meters per counter)
- CUPPS-compliant terminals
- Boarding pass printers compliant with IATA BCBP standards
- Security screening area
- Security office
- 2 security screening machines (available at RHBIA - bidder to inspect)
- 2 Walk Through Metal Detectors
- 2 Passport control and immigration counters
- Mini CT scanner for hand baggage inspection
- Airside departure lounge
- Boarding gates and seating areas
- Commercial and retail areas (optional but recommended)
- Public restrooms
- First aid room
- VIP lounge (optional)
- 2 Hold Baggage X-ray machines
- 1 Explosive Trace Detector (ETD)
- 2 Toilets (M/F)
- BOH office
- 2 Departure gates

Arrival Areas

- Passenger arrival gates
- Dedicated sterile corridor from aircraft to immigration
- Immigration and passport control counters
- Lost and found service desk
- Customs inspection area
- Quarantine inspection area (if required)
- Arrival lobby
- Ground transportation interface
- Two immigration counters,
- One customs counter
- One scanner (available at RHBIA - bidder to inspect)
- Two toilets (M/F)

Manual baggage handling may be permitted provided operational efficiency is maintained.

Utility Infrastructure

- Location and configuration of supporting infrastructure (electricity generators, water supply, plumbing, IT and telecommunications infrastructure, others)

4 Terminal Equipment and Infrastructure

The temporary passenger terminal must be equipped with the following minimum infrastructure and systems:

Utilities and Building Systems

- Dual power supply connection where available.
- Minimum 250 kVA backup generator or capacity sufficient to support full terminal operations including security and safety systems.
- Potable water supply
- Wastewater management through septic systems sized according to passenger capacity or connection to municipal networks where available.
- High-speed fiber connectivity and public Wi-Fi access.
- HVAC system maintaining internal temperature of $25^{\circ}\text{C} \pm 2^{\circ}\text{C}$ year-round.
- Adequate ventilation in all passenger and operational areas.
- Emergency lighting system with minimum 90-min battery backup
- Fire detection system including smoke detectors and manual alarm points
- Portable fire extinguishers and suppression systems
- CCTV coverage of 100% of critical areas, including terminal interior, landside access points, airside apron, and security checkpoints.
- CCTV systems shall include digital recording capability with minimum 30-day storage.
- Access control systems at all restricted areas
- Airport communications and IT network infrastructure
- High-speed internet and public Wi-Fi
- Airport Operational Database (AODB) or equivalent flight information integration
- Flight Information Display System (FIDS) with real-time operational data integration
- Public address system (PA) covering all passenger areas
- Check-in counters (2 meters width) equipped with CUPPS (Common Use Passenger Processing System) terminals,
- Boarding Pass printers compliant with IATA Bar Coded Boarding Pass (BCBP) standards
- Public Restrooms sized according to peak hour passenger demand with a minimum ratio of 1 fixture per 50 passengers, with separate male and female facilities and accessible units.
- Seating areas planned at $1.5 \text{ m}^2/\text{pax}$
- First aid room (minimum 12m^2) equipped with stretcher, automated external defibrillator (AED), oxygen supply.

5 Ground Support Equipment (GSE)

The airport operator shall provide sufficient Ground Support Equipment (GSE) to support the planned aircraft operations.

Proposals must include:

- Description of equipment type
- Number of units
- Manufacturer and supplier
- Age and condition of equipment
- Maintenance and replacement plan

Minimum required equipment includes, but is not limited to:

- Passenger boarding stairs
- Baggage carts and dollies
- Aircraft tractors/tugs
- Belt loaders
- Pushback tugs and aircraft tow bars
- Ground Power Units (GPU)
- Air Conditioning Units (ACU)
- Aircraft lavatory service trucks
- Refueling trucks compliant with aviation fuel safety standards

6 Staffing

The operator must demonstrate in his proposal that an adequate staffing structure will be deployed to ensure safe and efficient airport operations.

Staffing plans must include:

- Organizational structure
- Staffing levels per operational function
- Staff qualifications and training programs
- Compliance with aviation safety and security certification requirements

Minimum operational staffing functions must include:

- Airside and ramp operations personnel
- Passenger terminal operations staff
- Airport maintenance and technical personnel
- Safety management personnel

7 Safety Management System (SMS)

The airport operator shall establish and maintain a Safety Management System (SMS) in accordance with international aviation safety standards.

The SMS shall comply with requirements established by the International Civil Aviation Organization (ICAO), including the provisions of ICAO Annex 19 – Safety Management, and with applicable safety regulations issued by the Lebanese Civil Aviation Authority (LCAA).

The Safety Management System shall include the following core components:

Safety Policy and Objectives

- Formal safety policy endorsed by senior management.
- Defined safety responsibilities and accountability throughout the airport organization.
- Designation of a Safety Manager responsible for SMS implementation.

Safety Risk Management

- Hazard identification processes for airport operations.
- Safety risk assessment and mitigation procedures.
- Continuous monitoring of operational risks.

Safety Assurance

- Safety performance monitoring and measurement.
- Internal safety audits and inspections.
- Incident and accident reporting and investigation procedures.

Safety Promotion

- Safety training programs for airport personnel.
- Continuous safety awareness and communication initiatives.

The SMS must cover all airport operational areas, including:

- Airside operations
- Ground handling activities
- Passenger terminal operations
- Maintenance activities
- Emergency response coordination

8 Aerodrome Manual and Emergency Planning

The airport operator shall also develop and maintain an Aerodrome Manual and Airport Emergency Plan (AEP) consistent with ICAO recommendations and national regulations.

The Aerodrome Manual shall include, at minimum:

- A detailed description of the aerodrome and its facilities
- Aerodrome physical characteristics including runway, taxiways, and apron
- Aerodrome operational procedures
- Safety management procedures
- Aerodrome inspection procedures
- Aerodrome maintenance procedures
- Emergency response procedures
- Coordination procedures with air navigation service providers and relevant authorities

The Emergency Plan shall include procedures for responding to:

- Aircraft accidents or incidents
- Fire and hazardous material events
- Medical emergencies
- Security threats
- Natural disasters or extreme weather events

The Aerodrome Manual and the AEP must be approved by the Lebanese Civil Aviation Authority prior to the commencement of commercial airport operations.

9 Airport Maintenance Requirements

Upon completion of the new permanent passenger terminal building and its associated facilities, as well as the pavement maintenance, AGL, NAVAIDs, fencing, and other essential infrastructure by the Government and the LCAA, the Operator shall assume responsibility for the maintenance of all airport infrastructure, equipment, and operational systems.

Maintenance responsibilities shall include, but are not limited to:

- Runway pavement maintenance
- Taxiway and apron pavement maintenance
- Maintenance of runway and taxiway lighting systems
- Maintenance of terminal facilities
- Maintenance of security systems
- Maintenance of ground handling equipment
- Maintenance of fire safety equipment.

The Operator shall establish preventive maintenance programs to ensure that airport infrastructure and systems remain operational and compliant with applicable safety standards.

Maintenance activities must be conducted in accordance with internationally recognized airport maintenance practices and up to the approval of LCAA.

10 Operational Readiness Requirements Prior to First Flight

Prior to the commencement of commercial flight operations at Rene Mouawad Airport, the Operator shall demonstrate to the Lebanese Civil Aviation Authority that the airport is fully operational and compliant with all applicable aviation safety and regulatory requirements.

Commercial operations shall not commence until the following minimum conditions have been satisfied:

- Aerodrome operational approval or certification issued by the Lebanese Civil Aviation Authority
- Approval of the Aerodrome Manual
- Implementation of the airport Safety Management System
- Approval and implementation of the Airport Emergency Plan
- Availability of ground support equipment required for aircraft operations

11 Pre-Opening First Flight Validation

Prior to opening the airport to commercial operations, the Operator is required to conduct a trial aircraft operation or validation flight.

The validation flight shall confirm that the airport is capable of supporting safe aircraft operations and that all operational procedures are functioning correctly.

The validation flight may include:

- Aircraft landing and taxi operations
- Passenger processing tests
- Ground handling procedures
- Emergency response readiness verification.

12 Post-Opening Operational Monitoring

Following the commencement of commercial operations, the Operator shall implement enhanced monitoring of airport operations during the initial operational phase.

This monitoring period shall include:

- Monitoring of passenger processing performance
- Monitoring of safety incidents and operational irregularities
- Monitoring of service level performance indicators.

Corrective actions shall be implemented where necessary to ensure that operational performance meets the requirements specified in this Annex.

13 Reporting Requirements

The Operator shall provide periodic operational reports to the Lebanese Civil Aviation Authority.

These reports shall include, but are not limited to:

- Passenger traffic statistics
- Aircraft movement statistics
- Cargo traffic volumes, if any
- Safety and security incident reports
- Service performance indicators.

The reporting frequency and format shall be agreed upon with the LCAA.

14 Compliance Monitoring and Audits

The Lebanese Civil Aviation Authority retains the right to monitor the Operator's compliance with the requirements of this Annex and applicable aviation regulations.

Compliance monitoring may include:

- Operational inspections of airport facilities
- Safety audits
- Security audits
- Review of operational performance reports.

The Operator shall cooperate fully with such inspections and audits and shall implement corrective actions where deficiencies are identified.

15 Airline Attraction and Route Development Obligations

The Operator shall actively promote the development of air services at Rene Mouawad Airport and shall implement a structured airline attraction and route development strategy.

The Operator shall:

- Develop and maintain a Route Development Plan throughout the operation period
- Engage with airlines operating in the Middle East, Europe, and regional markets to promote scheduled and charter services to the airport
- Target the attraction of low-cost carriers (LCCs), regional carriers, and charter operators
- Participate in international aviation route development forums and airline marketing events
- Promote the airport as an alternative gateway to Northern Lebanon and surrounding regions.

The Route Development Plan shall include:

- Identification of target airline markets
- Proposed air routes and destinations
- Passenger demand forecasts
- Airline marketing and engagement strategy.

The Operator shall submit annual reports to the LCAA detailing:

- Airline engagement activities
- Routes secured
- Passenger traffic growth
- Marketing initiatives undertaken.

Any airline incentive programs or route development incentives implemented by the Operator must comply with applicable aviation regulations and must be applied in a transparent, non-discriminatory, and commercially justified manner.

16 Airport Commercial Revenue Framework

The Operator shall develop and manage non-aeronautical commercial activities within the airport in order to enhance passenger experience and generate sustainable revenue streams.

Non-aeronautical commercial activities may include, but are not limited to:

- Food and beverage concessions
- Duty-free retail outlets
- Car rental services
- Airport parking facilities
- Advertising spaces
- VIP lounge services

Commercial activities shall be developed in accordance with:

- Lebanese commercial regulations
- Customs regulations applicable to duty-free retail operations
- Aviation security regulations and passenger flow requirements.

Commercial concession agreements shall be established through transparent contractual arrangements with commercial tenants.