

GENERAL SPECIFICATIONS ARGYLE INTERNATIONAL AIRPORT

OVERVIEW

St. Vincent and the Grenadines is located in the Eastern Caribbean at 13° North and 61° West or about 100 miles West of Barbados. The Argyle International Airport is located on the Eastern coastline of St. Vincent, with a geographical alignment of 20° - 43' - 54" / 200° - 43' - 54". Taking the magnetic variation into consideration, the runway designation is 02 and 20.

The proposed runway will be designated a non-precision approach runway, served by visual and non visual aids, providing directional guidance adequate for a straight in approach using visual approach procedures under visual meteorological conditions.

The design reference aircraft is the Boeing 747-400 aircraft for which the reference code of the airport was determined to be 4E and for which the standards and specifications are in accordance with ICAO annex 14.

An Airport Master Plan is now being prepared to guide development of the airport facilities over the long term.

AIRSIDE FACILITIES

Runway

Length:	2,743 metres
Width:	45 metres
Max longitudinal slope:	1.25%
Landing distance available:	2,623 metres
Take off distance available:	2,743 metres

The runway pavement design is for flexible pavement with the exception of the turning heads 02 and 20, which will be rigid pavement.

Taxiways

Two taxiways are being considered in the first stage. One taxiway will exit the runway to the west at 90° at approximately 1,150 metres from threshold 02 to service the general aviation and cargo apron. The second will be a high speed taxiway exiting the runway to the west at 45° at approximately 1,300 metres from the threshold to service the commercial apron with links to the general aviation apron. Aircraft with stopping distance beyond this taxiway will continue and make a 180° turn at the 20 head and taxi up the runway to the second Taxiway.

Provision is made in the Airport Master Plan for the future stages for additional taxi ways at the 20 head to exit unto a parallel taxiway to enter the apron. Provision is made in the Master Plan for a parallel taxi way for aircraft to taxi up to the 02 end of the runway for takeoff.

Apron

Three distinct interconnecting apron areas will be provided at the Argyle International Airport and are categorised as Commercial, General Aviation, and Cargo aprons.

Commercial Apron

Due to the limited transversal distance available, the apron will be linear with nose in at 90° mode, self propelled in and pushed out for the medium to large aircraft.

Telescopic air bridges for aircraft to be in contact with the passenger terminal building are being considered in the long term.

The commercial apron for the scheduled international passengers will serve one position of mixed aircraft such as B 747-400 and B767-200, one position for small to medium aircraft such as B737-800, and six positions for DHC-8 or similar aircraft. The dimension of the commercial apron is 262m x135m. Allowance has been made in the Master Plan for the future expansion of the apron towards the North.

General Aviation Apron

The general aviation apron is located south of the commercial apron with dimensions of 295 metres x179 metres. General aviation parking will be for mixed fleet such as executive jets (Global Express, Challenger), DHC-6 twin otter, and islanders. The general aviation apron will be flanked on the South of the apron by four (4) hangers, one of which will be earmarked for a FBO.

Cargo Apron

The Cargo facilities will be located immediately South of the General Aviation facilities. Apron parking will be provided for 2 aircraft of the size of the B727. Parking will be linear with nose in at 90°, self propelled in and pushed out.

NAVIGATION AIDS

Visual aids will be provided to insure sufficient visual guidance for approach, landing, takeoff and taxi procedures of aircraft. The operation of the visual guidance is independent of operations of the radio navigational system. The airfield lighting and markings will be installed to meet the requirements of ICAO.

Approach lighting system

A simple approach lighting system is being considered to the approach end of the runway. Because of the limited land space on the 02 end, and the elevation of land to sea, a displaced threshold of 150 metres is proposed at 02. The approach lighting will be recessed in the runway extending outwards from the landing threshold for a full 420 m long approach lighting system.

Precision approach path indicator

A 3° PAPI system is recommended for the 02 end. The outermost wing bar light unit will be installed at a distance of 42 metres from the edge of the pavement. Consideration is being given for similar installation at the 20 end.

Radio navigational - VOR/DME

It is proposed that the main navigation aid will be the VOR, co located with a DME, with no future plans to install an ILS to runway 02 mainly due to the restriction to install the localizer antenna. The final location will be defined after a full analysis of the instrument procedures and electronic evaluation of the site.

Metrological services

An automatic weather station (AWOS) will be installed and will provide the air traffic controllers (ATC) with relevant information to contribute toward Safety regularity and efficiency of international air navigation. The airport will be under visual metrological conditions (VMC) and will provide metrological reports required by the pilots.

Additionally, an illuminated wind direction indicator (WDI) equipped with obstacle lighting will be installed at each end to provide pilots upon approach with visual information on the surface wind speed and direction.

LANDSIDE FACILITIES

Passenger Terminal building

A single passenger terminal building will be located in front of the commercial apron to serve both domestic and international passengers, in the first stage. Future provision is made in the Master Plan for a separate domestic/general aviation terminal near the general aviation apron.

Telescopic air bridges to passenger terminal building to allow connection to aircraft is also being considered in the long term.

The building will be a modern terminal building that will provide a pleasant and efficient facility for passengers and users transiting the building, and with safety and security in accordance with ICAO annex 17.

Control tower

The control tower will be located immediately to the South of the cargo facilities and will be positioned on elevated land. The control tower will house the aerodrome and ground control at the upper level with complete view of the full length of the runway, taxiways, apron, and the approach and takeoff zones of the runway. The approach control and instrument room will be on the mid level. An emergency operation centre will be located on the lower level.

Fire fighting facility

The fire fighting facility will be located to the North of the commercial apron and shall fulfil the response time to any incident in accordance with the ICAO annex 14. The facility will have direct connection to the runway and apron.

Cargo facility

The cargo facility will be located in front of the cargo apron and will be a single building with a combination of elements in one building sufficiently integrated to permit operation as a single facility.

Ancillary facilities

The following facilities will be provided on the landside to support the terminal facilities and the airside operation:

1. Incinerators for solid waste,
2. Sewerage treatment for liquid waste,
3. Electrical substation, and
4. Water storage.