

Inventory of Existing Airport Facilities

Introduction

King County International Airport (KCIA)/Boeing Field consists of two runways, an extensive system of taxiways, aircraft parking aprons, industrial aviation facilities, hangars, commercial aviation business facilities, a terminal building and various other airport facilities. The airport has an elevation of 18 feet AMSL and occupies 594 acres. The following illustration, entitled *EXISTING AIRPORT LAYOUT*, provides a graphic presentation of the existing airport facilities.

Airside Facilities

The main runway at KCIA is Runway 13R/31L. It is 10,000 feet in length and 200 feet in width. To accommodate a new Instrument Landing System approach procedure, the southern threshold (the approach threshold of Runway 31L) was displaced 800 feet in 1998. The runway is constructed of a combination of asphaltic concrete and portland cement concrete and has a gross weight-bearing capacity of 100,000 pounds single wheel, 125,000 pounds dual-wheel, and 330,000 pounds dual-tandem wheel main landing gear configuration. The runway is equipped with High Intensity Runway lights, an Instrument Landing System (ILS) [consisting of Glide Slope, Localizer, and a Short Approach Light System with Sequenced Flashing Lights (SALSF)] serving Runway 13R; an ILS (consisting of Glide Slope and Localizer) serving Runway 31L; and threshold lights at each runway end. Precision Approach Path Indicator (PAPI) lights serve Runway 13R and Runway 31L. Runway 31L also has Runway End Identifier Lights (REIL).

The secondary runway at KCIA is Runway 13L/31R. It is 3,710 feet in length and 100 feet in width. The runway's northern threshold (Runway 13L) is displaced 250 feet and the runway's southern threshold (Runway 31R) is displaced 375 feet. It is constructed of asphaltic concrete and portland cement concrete and has a gross weight bearing capacity of 50,000 pounds for aircraft

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Not to Scale

Figure A1 Existing Airport Layout

INTERNATIONAL AIRPORT/Boeing Field

with single wheel main landing gear configuration. The runway is equipped with Medium Intensity Runway Lights, and VASI lights serving both runway ends.

Additional airside facilities at KCIA include the taxiway system that provides access to various landside areas. Both runways have full-length parallel taxiway systems. The parallel taxiway located on the west side of the main runway (Runway 13R/31L) is designated as Taxiway B. The Taxiway A parallel taxiway system serves the east side of the secondary runway (Runway 13L/31R) and the southern end of the primary runway. The function of these parallel taxiways is supported by a system of exit taxiways, providing the ability for landing aircraft to exit the runway at convenient locations along its length, and connecting taxiways, providing access from the parallel taxiway to aircraft parking and hangar areas.

Landside Facilities

Landside facilities vary from one airport to another and can be categorized differently depending on the purpose of the documentation. For the purpose of this master planning documentation, landside facilities include aircraft parking aprons, passenger terminal facilities, industrial aerospace facilities, air cargo facilities, storage hangars, maintenance hangars, air traffic control tower facilities, fuel storage facilities, automobile access and parking, and other on-airport facilities not related to the aircraft landing, takeoff, and taxi functions. Each of these components that are located at KCIA are discussed in the following narrative, and are also illustrated in the figure entitled *EXISTING AIRPORT LAYOUT*.

Aircraft Parking Aprons. On the west side of the airport, the northern aircraft parking apron areas are occupied by the Boeing Company, while the southern apron areas (adjacent to the Washington State Department of Aeronautics and the Airpark Hangars) are utilized by general aviation aircraft.

On the east side of the airport, the aprons north of the terminal building are used for general aviation aircraft parking. South of the terminal, the aprons are used by air cargo and general aviation operators.

Industrial Aviation Facilities. The Boeing Company conducts a wide variety of activities at facilities on and near Boeing Field, on both sides of East Marginal Way. Among others, these activities include engineering, administration, flight test, and aircraft delivery. The primary use of the airport facilities at KCIA by the Boeing Company is for flight test and customer delivery. In addition, the maintenance of the world's fleet of AWACS (Airborne Warning and Control System) aircraft is conducted at Boeing Field. AWACS are modified B-707 and B-767 aircraft.

Commercial Aviation Facilities. Commercial aviation businesses at KCLIA primarily serve the general aviation industry. Types of facilities range from large multi-building Fixed Base Operators (FBOs) to small specialized aircraft repair shops occupying only a portion of a building. An FBO is a full service commercial airport business that caters to the needs of the general aviation community, offering services such as aircraft sales, aircraft rental, aircraft maintenance, aircraft fueling, flight training, etc.

Some of the larger commercial aviation operators on the east side of airport property include: Classic Helicopter, King County Jet Center, Galvin Flying Service, Boeing Business Jets, Flightcenter, Aeroflight, and Wings Aloft, among others.

Aircraft Storage Facilities. Aircraft storage facilities are located primarily on the east side of the airport with some on west side. On the west side, there are two general aviation aircraft storage areas, the Southwest Airpark Hangars and the hangars mid-field adjacent to the Airport Office Center. Both of these hangar areas are located north of the Museum of Flight.

On the east side of the airport, there are numerous general aviation aircraft storage hangars, housing all types of aircraft from small helicopters and two-seat training aircraft to large corporate business jets. In general, the east side facilities are arranged so that the small aircraft storage hangars are located on the north and south ends of the developable area (where building height is restricted because the areas are near the runways), and the larger FBO and corporate facilities are more centrally located.

Air Cargo Facilities. As identified on the previously presented *EXISTING AIRPORT LAYOUT* illustration, there are several air cargo facilities located on the east side of the airport, south of the terminal building. Air cargo carriers currently operating at the airport include Aeroflight, Airborne Express, Airpac, Ameriflight, Burlington Air Express, and United Parcel Service.

Terminal Facilities. The Terminal Building is centrally located on the east side of the airport. The Terminal Building is a two-story structure, containing approximately 28,000 square feet floor area. The building was originally constructed in 1930 and has undergone considerable renovation over the years, as the original air carrier function has been largely replaced by other uses. The scheduled aircraft passenger users of the building presently are West Isle Air, North Vancouver Air, and Helijet Airways. In addition, the terminal building supports nonscheduled charter activity.

South of and connected to the terminal building is the 38,000 square foot Arrivals Building. The Arrivals Building was constructed in 1978 to provide additional

waiting areas and eight boarding gates. The first floor currently houses U.S. Customs and Immigration. The second floor is currently used as office space.

Access and Parking. Perimeter Road provides automobile access to and from all facilities on the east side of the airport. Perimeter Road is connected to Airport Way South through four separate entrances: north, main, Portland Street, and south. In addition to businesses having direct access onto Ellis Avenue South, the northwest portion of airport property is provided access via South Warsaw Street, South Myrtle Street, and Albro Place. On the west side of the airport, individual airport tenants are accessed directly off of East Marginal Way South.

The majority of the public/semi-public automobile parking on the airport is located in the vicinity of the Terminal Building. The largest lot is located on the east side of the Terminal Building and has 195 automobile parking spaces. There are four more lots in the vicinity, located on either side of the 7300 building, between Perimeter Road and Airport Way South. Other parking on the airport is associated with individual leased tracts.

Other Landside Facilities. Other on-airport facilities include:

- *Air Traffic Control Tower (ATCT).* The FAA ATCT at KCIA is operated 24 hours a day, seven days a week. It has a mid-field location on the west side of the airport.
 - *Aircraft Rescue and Fire Fighting (ARFF) Facility.* The ARFF facility is located directly adjacent to and on the north side of the ATCT.
 - *Fuel Storage Facility.* The airport's main fuel storage area is located at the north end of airport property. The facility is privately owned by a company that leases storage in the tanks to the fixed base operators on the airport. It consists of ten 20,000-gallon underground storage tanks (seven jet fuel tanks and three aviation gasoline tanks). Because the fuel storage facility is located within the Runway 13R runway protection zone, airport administration has it programmed for relocation. This Airport Master Plan identifies potential sites for the relocation of the fuel storage area.
 - *Airport Maintenance Facility.* The airport's airfield maintenance facility is located in the northwest corner of the airport in a 51,840 square foot building.
 - *Airport Administrative Offices.* The administrative offices for the airport are located in the North Annex Building, which is located directly north of the Terminal Building.
 - *7300 Building.* This building is located east of the Terminal Building (on the east side of the terminal parking area). It contains a variety of King County administrative functions.
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- *Northwest Area.* This area is located in the northwest corner of airport property and, because it cannot be reasonably provided with taxiway access, is dominated by non-aviation uses, including: the Washington Air National Guard (non-aviation mission), a landscape nursery, a soil distributor, airport maintenance, and the FAA Flight Service Station (providing weather and flight planning information to pilots).

Summary

The goal of this chapter is to provide general background information pertaining to the physical layout of airport facilities. The *Inventory of Existing Airport Facilities* chapter is vital from the standpoint that it is used as a reference in the analysis and design process that is required to prepare the Airport's future development plan.
