

Chapter 1. Inventory

Chapter 1. INVENTORY

The collection and inventory of data pertinent to James M. Cox Dayton International Airport (DAY) is the initial step in a Master Plan Study and serves as the foundation for all subsequent studies. The main objective of this chapter is to provide a summary of the airport data. This chapter will be divided into three parts.

1. Airport Setting
2. Locale
3. Airport Facilities

1. AIRPORT SETTING

The National Plan of Integrated Airport Systems (NPIAS) classifies DAY as a long-haul commercial airport. Airports of this nature have the capability to provide nonstop commercial passenger airline service to destinations over 1,500 miles. Since DAY enplanes less than 0.25 percent of certificated airline passenger enplanements in the United States, the Dayton metropolitan area is classified as a small hub air passenger market. The airport has been the air carrier airport for the Dayton regional area since 1928.

On November 1, 1981, Emery Airfreight opened the North American Sortation Center at DAY, and processed 900,000 pounds of freight. Emery Airfreight became Emery Worldwide on April 3, 1989 after acquisition by Consolidated Freightways, Incorporated. In 1998 Emery processed 1.24 billion pounds of freight and employed 4,207 people.

2. LOCALE

DAY is in northern Montgomery County, Ohio on a 3,870 acre tract of land. It is located approximately 11 miles north of downtown Dayton, two miles northwest of the intersection of Interstate Highways 70 and 75. The field elevation at the airport is 1,009 feet above sea level. Miami County is located just north of the airport.

National Road (U.S. 40) is the southern boundary of the airport. North Dixie Drive is the eastern boundary. Lightner Road, Peters Pike, and Old Springfield Road are the northern boundaries. The western boundary is Dog Leg Road. [Exhibit 1-1](#) shows the location of DAY within the Dayton Miami Valley regional area.

Land north and west of the airport is mainly undeveloped, either being used as agriculture, residential, or is vacant. There are several residential areas west of the airport in Englewood and Union. There is a close-in residential area south of Runway 18/36 in Vandalia. On the east side of the airport there is a major commercial/industrial area also in the city of Vandalia. In Miami County, north of the airport, there are residential subdivisions in the Tipp City and Monroe Township areas. Butler Township is contiguous to the airport with various densities of residential development.

There are various other airports within close proximity of DAY that have an impact on the surrounding airspace. Wright-Patterson Air Force Base is located 6 miles southeast of DAY. Other cargo hub airports in the surrounding area include Indianapolis, 111 miles west; Toledo, 142 miles north; Wilmington, 34 miles southeast; Rickenbacker and Port Columbus, 76 miles east; Cincinnati, 63 miles south; and Louisville, 156 miles southwest. Indianapolis is a hub for FedEx and the United States Postal Service (USPS) and an airline maintenance base for United Airlines and ATA. Toledo is a hub for Burlington Air Express. Wilmington is a hub for Airborne Express. Rickenbacker is the cargo airport of Columbus and a hub for FedEx. Cincinnati is a hub for DHL and Comair, and Louisville is a hub for UPS. Dayton Wright-Brothers Airport, located approximately 19 miles south of DAY is Dayton's general aviation airport reliever. There are also a number of smaller general aviation airports in the region.

3. AIRPORT FACILITIES

The existing airport facilities are shown on [Exhibit 1-2](#) and discussed in the following paragraphs. A close-up view of the passenger terminal and other facilities is shown in [Exhibit 1-3](#).

(1) Airfield Facilities

Airfield facilities at DAY include runways, taxiways, aprons, airfield lighting and navigational aids. The runway data is summarized in **Table 1-1**.

Table 1-1 – Runway Data

	Runway					
	6L	24R	6R	24L	18	36
Length (ft)	10,900	10,900	7,000	7,000	8,500	8,500
Width (ft)	150	150	150	150	150	150
Approach Slope Ratio	50:1	50:1	20:1	50:1	50:1	20:1
Approach Aids						
ILS	CAT-III	CAT-I	No	CAT-I	CAT-I	No
VASI	No	Yes	Yes	Yes	No	Yes
NDB	Yes	No	Yes	No	No	No
GPS	Yes	No	No	No	No	No
Approach Lights	ALSF-II	MALSR	No	MALSR	MALSR	No
Runway Lighting	HIRL/CL/ TDZ	HIRL/CL	HIRL	HIRL	HIRL	HIRL
Runway Marking	Precision	Precision	Non-Prec.	Precision	Precision	Non-Prec.

The existing taxiway system consists primarily of parallel taxiways for each runway and other interconnecting taxiways. The taxiway system has standard taxiway lighting and markings.

There are four major aircraft parking areas located on the airport and are listed below in order of size:

- Emery Air Cargo Area
- Air Carrier Terminal Area
- General Aviation Area
- Multi-Use Air Cargo Area

The Emery air cargo area is located on the northwest side of the airfield and has a 5,076,000 square foot ramp. The air carrier terminal area is centrally located on the airfield and consists of approximately 2,180,880 square feet of ramp space. The general aviation area is made up of two ramp areas on the east side of the airfield in GA Centers 1 and 2. These two areas total approximately 1,403,830 square feet. The multi-use cargo area is located west of the terminal area and consists of a 387,830 square foot ramp. There are also four aircraft deicing ramps located on the airport (two at Emery and two at the passenger terminal).

(2) Roadways

Passenger access to the airport is primarily provided via Interstates 70 and 75. The typical airport passenger would approach the airport from I-75, and take I-70 west to the DAY exit. This road is the Airport Access Road which then becomes Terminal Drive leading

directly to the short-term and long-term auto parking lots and the terminal building curbside. Terminal Drive forms a one-way loop around the main parking lot, which passes the main terminal entrance. Access to other terminal area facilities are by way of Valet Drive and Cargo Drive. The secondary access to the DAY passenger terminal area is via National Drive (U.S. 40) to Terminal Drive.

Terminal Drive splits into a 5-lane roadway in front of the terminal. The existing curbside length is approximately 500 lineal feet. This provides three curbs for commercial vehicles, one curb for passenger vehicles and one through lane.

The ticket counters are on the South end of the building, the associated curb is the enplaning curb. The baggage claim area is located in the Northwest side of the terminal, making this portion of the curb the deplaning curb.

(3) Vehicle Parking

In 1999, auto parking for the airport consisted of public (valet, short-term and long-term), employee, and rental car parking. There were 4,417 total public spaces which consisted of 100 valet spaces, 1,832 economy spaces, 1,512 long-term spaces, and 973 short-term positions (including business class). In addition to the on-airport public parking there were 1,000 spaces available in off-airport lots that were run by independent operators. There were 1,401 employee parking spaces located in two lots north of the terminal building. Rental car ready and return spaces were located next to short-term parking and total 386. Rental car storage consisted of six separate service center lots located on Valet Drive with 1,585 total spaces. National, Budget, Dollar, Avis, Thrifty, and Hertz occupied these lots.

(4) Passenger Terminal Building

The terminal building was first opened in 1961 and a major expansion was completed in 1989. The building is divided into a central core, ticketing wing, baggage claim wing, three two-story finger-type pier concourses, and the Air Traffic Control Tower (ATCT).

The central core serves as passenger circulation and includes the main entrance, restaurant, security check, gift shops, and public restrooms. The ticketing wing is located in the southwest portion of the building. The baggage claim area makes up the northwest corner of the building. A portion of this area is used by rental car companies and for storage and mechanical facilities. The remainder is used for baggage handling and passenger baggage

claim. The three passenger loading concourses are B, C, and D. They are accessed by a central connector concourse. The ATCT is a six-story structure, which is accessed from the central connector concourse at the north end of the restaurant. The ATCT houses offices for the Federal Aviation Administration (FAA), airport administration, airline offices, and radar and communication equipment for TRACON operation.

(5) Air Cargo Facilities

Emery Worldwide operates their principal U.S. sort hub at DAY. As depicted on [Exhibit 1-4](#), Emery operates from Emery Plaza located on the northwest side of the airfield with access from Old Springfield Road. The Emery complex consists of a 5,275,000 square foot ramp, a 1,000,000 square foot sort facility, a four million gallon fuel farm, employee parking, offices, and maintenance support buildings. In 1998 Emery operated approximately 58 scheduled flights each night and various on demand flights with 3.5 million pounds of freight. The day sort operated 22 flights with 1.3 million pounds of freight.

The remaining cargo facilities are located north of Terminal Drive in the terminal area. This cargo area consists of five cargo buildings. The United States Postal Service (USPS) building is located west of the public auto parking lot and has approximately 42,500 square feet. It is used by the USPS and several other air carriers. Federal Express is located in two buildings east of the USPS building. The other two buildings in the cargo complex are multi-tenant cargo buildings.

(6) General Aviation Complex

The General Aviation (GA) facilities at the airport consist of GA Center 1 and GA Center 2, as depicted in [Exhibit 1-5](#). GA Center 1 is located on the east side of the airfield near the mid-point of Runway 18/36. GA Center 2 is located at the southeast corner of airport property, adjacent to North Dixie Drive. GA Center 1 consists of corporate hangars, two FBOs, manufacturing facilities, airshow facilities, FAA Manufacturing Inspection District Office (MIDO) and Flight Service Station (FSS) offices, and airport maintenance buildings. GA Center 2 consists of an FBO, four t-hangars, a helicopter facility, and an airshow storage building.

(7) Airport Support Facilities

The airport support facilities at DAY consist of:

1. Airline Maintenance

Airline maintenance facilities for US Airways Express and Comair are located at DAY. US Airways Express utilizes a hangar on Cargo Road near the terminal area. Comair leases a hangar from Wright Bros. Aero in GA Center 1. Also, Ryan Air and Emery Worldwide have a joint use hangar located in GA Center 1.

2. Aircraft Fuel Facilities

The FBOs provide fueling service to the airlines and GA aircraft. Delta Airlines maintains an above ground fuel farm in the cargo area on Cargo Road. Emery maintains an above ground fuel farm north of its ramp. Emery maintains four fuel tanks with a total capacity of 4,000,000 gallons.

3. Flight Kitchen

There is one flight kitchen at DAY. It is located on Cargo Road between the Emery Worldwide office/truck building and an Airport Properties office building. It is operated by Dobbs International Services.

4. Airport Maintenance

Airport maintenance shops are located in GA Center 1. They have airside access via Taxiway F and landside access by way of Wright Drive. These facilities include indoor vehicle and equipment storage, maintenance shops and a ground vehicle fueling facility. There is also a yard for outside storage of airport vehicles and equipment.

5. Aircraft Rescue and Firefighting

The Aircraft Rescue and Firefighting (ARFF) facility is located at the junction of Taxiway A and N, just east of the terminal ramp. The Code of Federal Regulations (CFR) Part 139.315 includes an index for the ARFF requirements at certificated airports. This index is based on the number of departures conducted at an airport by aircraft within specific length categories. DAY currently operates as an Index C airport.

6. Other Facilities

The United States Air and Trade Show is held on the grounds of DAY in July of most years. It is the largest aviation trade show in the country. There is a trade pavilion in GA Center 1 on McCauley Drive which consists of office space and an exhibit hall for the industry buyers and sellers of the show. Also associated with the show are foundations for temporary "chalets" structures located on the airport infield just north of the terminal ramp. These foundations are near Taxiway "O", and accessed from a service road behind the ARFF facility. In addition to the foundations, there are 500 concrete picnic tables on the infield near the intersection of Taxiways "X" and "A". Runway 18/36 and the GA Center 1 ramps are closed during the show to provide parking for the static displays.

DAY is also the location of the Amateur Trapshooters Association. Their trapline is on the south side of the airport adjacent to National Road. The line is approximately 1.5 miles long and contains 100 trapfields. The All Ohio Trap Shoot is held here in June, and the Grand American Trap Shoot is held here in August. Runway 6R/24L is closed during the shoot. There are also several permanent buildings and a grand stand area along the service road.

S:\00DAY\027901\DAY_CH1.DOC