

**CHAPTER ONE****INTRODUCTION****1-1 PLANNING PROCESS**

This Airport Master Plan and accompanying plan define a concept for airport development at New Philadelphia Municipal Airport – Harry Clever Field over the course of a 20-year period. The document has been prepared in concert with the Ohio Department of Transportation (ODOT) and Federal Aviation Administration (FAA) guidelines as well as input from airport staff, local officials, and airport users.

The primary goal of the study is to determine the facility needs at the Airport during the 20-year period and to evaluate development alternatives that will best satisfy these needs in order to provide a useful plan for airport development at the Airport during the planning period. The plans for the Airport will recommend improvements in accordance with specific FAA criteria, taking into consideration demographic changes that have occurred in the City of New Philadelphia and Tuscarawas County, as well as physical and operational changes at the Airport since the last planning study. In addition to these changes, national and statewide changes include a significant shift in aviation activity, both within Ohio and at airports throughout the country. This shift has resulted in increased use of general aviation as a transportation tool for businesses. Since the preparation of the last Airport Layout Plan in 1992, the FAA has implemented changes to the Airport Design Advisory Circulars that affect the requirements of Airport Master Plans, Airport Layout Plans, and related planning documents.

Proposed facilities must adhere to standards that provide for safe aviation facilities, while accommodating future aviation demand. If the required facilities can not be provided at the existing airport, the report will recommend a site selection study to evaluate alternative sites that might better be able to do so.

The Airport Master Plan and Airport Layout Plan focus on basic aeronautical forecasts, need and justification for development, and a staged plan for recommended development. The staged plan typically looks at 0-5 year, 6-10 year, and 11-20 year planning horizons. The first phase focuses on correcting any existing facility deficiencies or violations of standards that can and should be corrected quickly. Subsequent phases typically address features needed to accommodate predicted growth, based on reasonable assumptions.

The main objective of this Airport Master Plan is to produce an efficient and environmentally acceptable development program for the Airport. This plan must also meet the goals and needs of the City of New Philadelphia and the surrounding Airport service area. The plan must also satisfy federal and state guidelines for the development of Airport Master Plans and facilities. Ultimately, this Airport Master Plan will provide the City of New Philadelphia with a comprehensive planning guide for the continued development of a safe, efficient, and environmentally compatible aviation facility.

**1-2 FUNDING**

Primary funding for this study is provided by an Airport Improvement Program grant from the FAA under Section 508 of the Airport and Airway Improvement Act of 1982, as amended. The remaining funding was provided by the City of New Philadelphia.

Historically, the Airport has benefited from being the recipient of federal and state airport development grants. **Table 1-1** summaries the federal and state funding that has been received.

**Table 1-1  
AIRPORT FUNDING SUMMARY**

Year	Project	Federal	State	Local	Total
1948	Land Acquisition; Clearing; Pave Runway, Connecting Taxiway and Apron	\$104,750	\$50,000	*	*
1952	Perimeter Fence, Waiting Room, Baggage Room, Offices, Restrooms, RW Marking	\$45,000	\$0	\$11,250	\$56,250
1970	New Partial Parallel Taxiway, REIL, NDB	\$0	\$50,000	\$0	\$50,000
1977	ALP, Obstruction Removal, Avigation Easements, Runway Lighting	\$144,000	\$0	\$16,000	\$160,000
1978	Runway Resurfacing, VASI-4	\$231,534	\$0	\$25,726	\$257,260
1986	Crack Seal Runway, Seal Apron	\$0	\$29,657	\$5,600	\$35,257
1988	Runway Resurfacing	\$0	\$29,528	\$0	\$29,528
1989	Apron and Taxiway Resurfacing	\$400,000	\$22,222	\$22,222	\$444,444
1990	Taxiway Lighting	\$0	\$39,303	\$4,367	\$43,670
1998	Obstruction Removal	\$0	\$42,300	\$4,700	\$47,000
2000	Runway Resurfacing	\$0	\$158,254	\$18,473	\$176,727
2001	Fencing	\$150,000	\$0	\$16,667	\$166,667
2002	Runway Lighting, PAPI, Fencing	\$165,190	\$0	\$18,354	\$183,544
2003	Master Plan, Hangar Taxiway Resurfacing, Apron Expansion, RSA Study	\$99,981	\$0	\$11,109	\$111,090
Total		\$1,340,455	\$378,964	*	*

\* Information not available.

## CHAPTER TWO

### INVENTORY

#### 2-1 INTRODUCTION

An inventory incorporates a broad spectrum of information including data on the Airport's history, existing airside and landside facilities, the current airport classification, and meteorological conditions. The objective of the inventory task is to provide background information necessary for subsequent phases of analysis. The information summarized in this chapter was obtained through on-site visits, discussions with City and Airport staff, and review of various plans and documents.

#### 2-2 AIRPORT LOCATION AND HISTORY

New Philadelphia Municipal Airport - Harry Clever Field is located in Goshen Township, Tuscarawas County, in east central Ohio. The Airport is located approximately 2 miles southeast of the New Philadelphia Municipal Building. New Philadelphia is approximately 22 miles south of Canton, Ohio, and 40 miles south of Akron, Ohio. Interstate 77 borders the City on the west and provides access to Interstate 70 approximately 36 miles to the south, in Cambridge, and to Interstate 76 approximately 40 miles to the north, in Akron.

The Airport is located along the south side of State Route 259 approximately 1/2 mile north of the Tuscarawas River and U.S. Route 250. Access to the Airport is by way of State Route 259, which connects with U.S. Route 250 approximately one mile east of the Airport. U.S. Route 250 provides access to Interstate 77 approximately two miles west of the Airport. A drawing showing the location of Harry Clever field is contained in **Exhibit 2-1** and a drawing showing the Airport vicinity is included in **Exhibit 2-2**.

New Philadelphia Municipal Airport is a general aviation airport, providing air access to the New Philadelphia and Tuscarawas County area.

Talk of an airport in the area began in 1927 because of the need for airmail service stops between New York, Cleveland, and Chicago. In 1928, a flying club was formed to help promote aviation. Harry Clever, a veteran of the Army Air Corps, and seven others formed Tuscarawas County Aviation, Inc. in 1929 and leased farmland for construction of the airport, which they named Schoenbrunn Field. The land was cleared to create two turf runways: one east-west with a length of 2,200 feet, and one north-south with a length of 1,600 feet. Harry Clever was named the field superintendent and mail delivery began.

Later that year, the first student - Charles (Bub) Miller, a 19-year old high school senior - received his limited commercial license. Since that time hundreds of students have received flying licenses, and a large number have made flying their career. Perhaps the best known student is John H. Glenn; a former Marine aviator, U.S. Senator, America's first astronaut to orbit the earth, and currently the oldest to venture into space.



Exhibit 2-2 VICINITY MAP





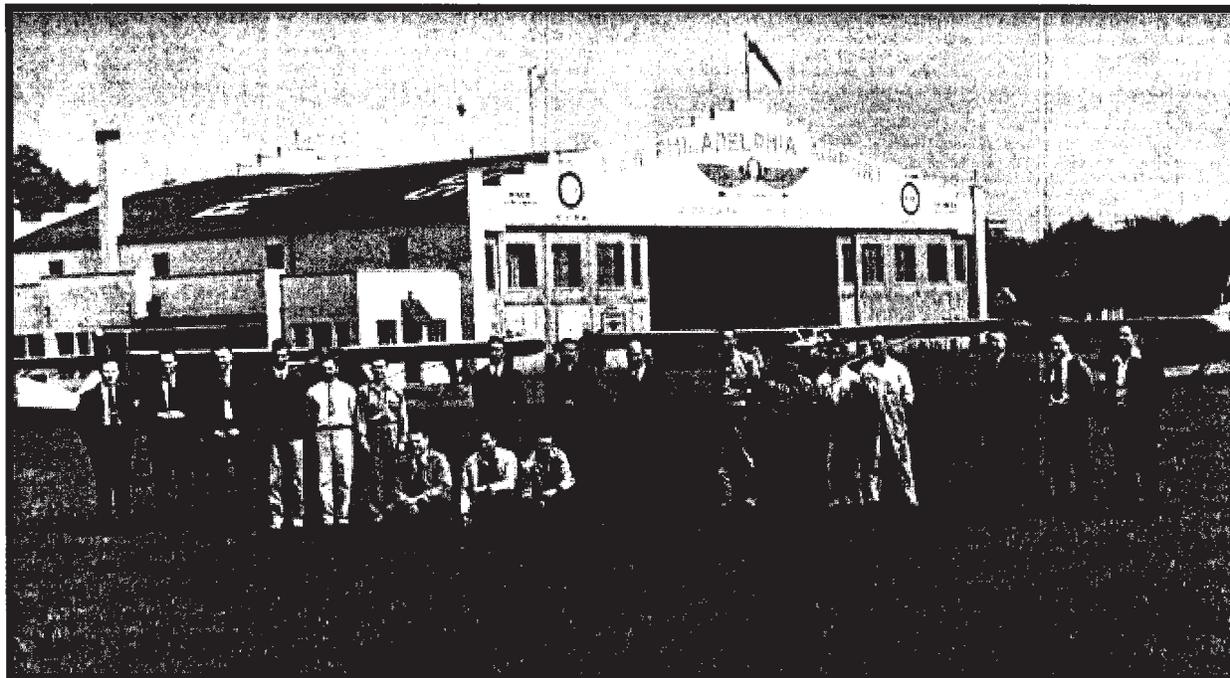
**Schoenbrunn Field August 1929**

Passenger service also began in 1929. Tri-Motor aircraft carried 10 or more passengers to Pittsburgh and Cleveland on a regular basis. A Stinson Luxury Liner made 90 flights in one day, carrying a total of 867 people. An Eastern Air Lines Curtiss Condor later carried 27 passengers from the airport.

To promote gasoline sales, the oil companies used aviation in their advertisements and promotions. Most of the visiting Tri-Motor aircraft that carried passengers were sponsored by the oil companies.

In the 1930s, before television, the Airport furnished excitement and entertainment to those in the community. Crowds of 15,000 to 30,000 people would attend air shows at the Airport. In 1934, the City took over the Airport lease and with the aid of federal funds constructed the current maintenance hangar. The airport became the Municipal Airport.

More and larger business planes began to use the Airport after World War II, and the need increased for a hard surface runway to permit all weather flying. With federal aid and local bond issue funds, the City installed the 3,950-foot long runway and lights. This \$200,000 project was dedicated in July of 1950 and provided the main facilities that now comprise the Airport. Several federal and state funded improvement projects have occurred since that time.



**Pilots, Instructors, and Mechanics at New Philadelphia Airport, 1935**

Lake Central Airlines began service in 1953 and continued for eight years. In 1960, Harry Clever retired and the business was sold. The Airport was renamed to Harry Clever Field in 1969 and the New Philadelphia Airport Commission was created in 1972.

## **2-3 EXISTING AIRPORT FACILITIES**

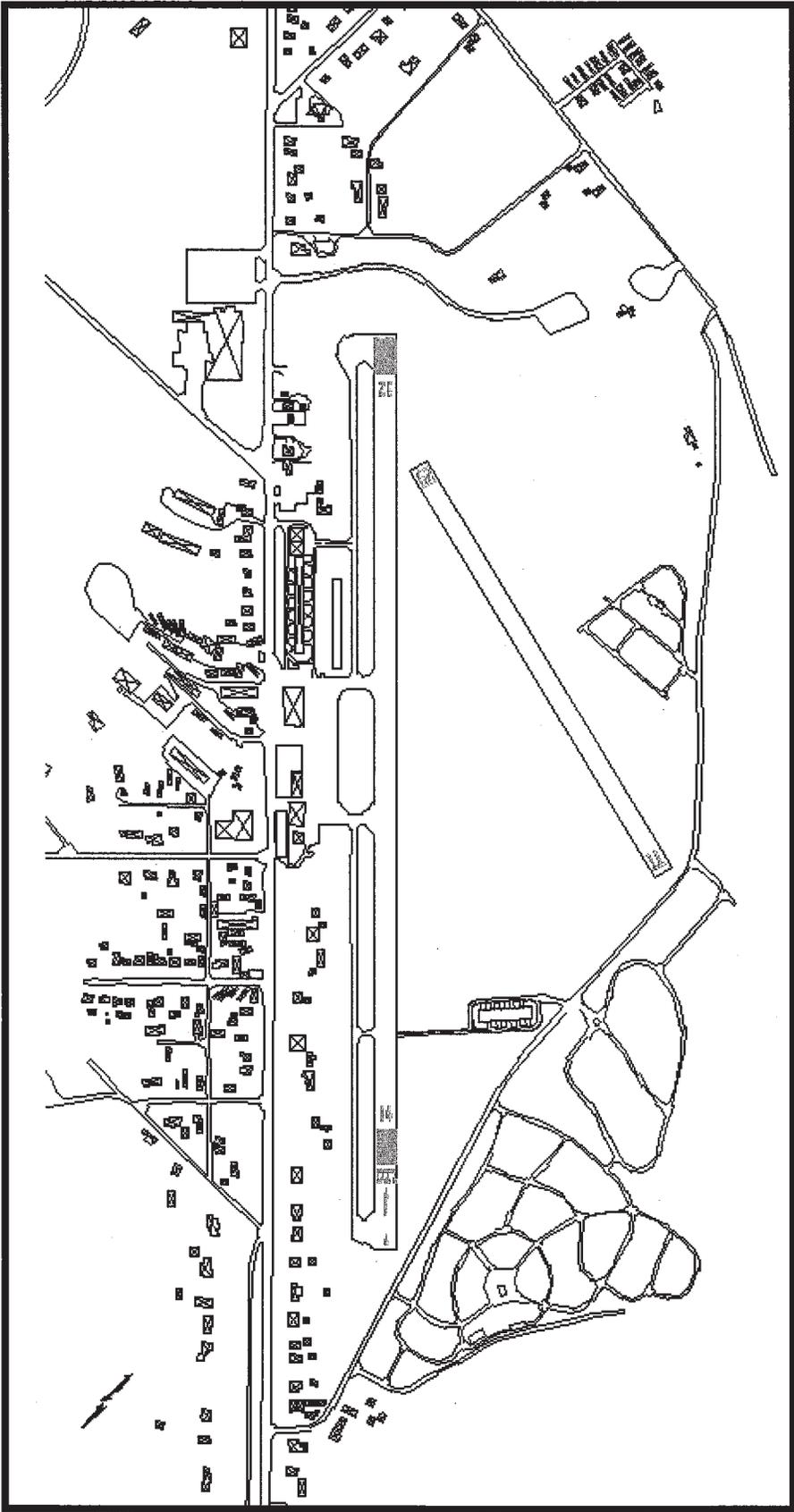
The following sections describe the existing facilities at New Philadelphia Municipal Airport – Harry Clever Field. The facilities are generally identified as “Airside Facilities” or “Landside Facilities”. The runway system, associated taxiway system, ramp and aircraft parking area, and any visual or electronic approach/navigational aids are airside facilities. All other facilities located on the Airport, which typically comprise the terminal area, including the administration building, hangars, automobile parking area, airport support facilities and areas, and access routes comprise the landside facilities. **Exhibit 2-3** illustrates the current facilities at the Airport.

### **2-3-1 Land**

The Airport is situated on 95.57 acres of land owned by the City of New Philadelphia. The surface is fairly level, with an elevation difference of approximately nine feet. Land around the Airport is partly rolling and hilly. The soil in the area is very fertile, especially in the valleys of the Tuscarawas River and Sugar Creek. The hills abound in coal, iron ore, and fire clay and quarries in different parts furnish excellent building stone. The country was formerly covered with dense forests, which have been cleared to provide cultivated farms.

At the east end of the Airport is Schoenbrunn Park, the first Protestant settlement in Ohio. The park is owned by the Ohio Historic Preservation Office. The east end of the Airport, including part of the runway, is located on approximately eight acres of park land that is leased from the State of Ohio.

Exhibit 2-3 AIRPORT FACILITIES



### **2-3-2 Runways**

There are two runways at the Airport. The primary paved runway (14/32) is 3,950 feet long by 100 feet wide. The turf runway (11/29) is 2,050 feet long by 100 feet wide. Runway 14/32 has an asphalt concrete surface with a load bearing capacity of 12,500 pounds for aircraft with single wheel gear configuration and 25,000 pounds for aircraft with dual gear configuration. The runway pavement condition index (PCI) rating of the pavement was 100 in 2001 - the last time it was inspected by ODOT. Runway 14 has a 320-foot displaced threshold to provide a clear approach surface over the road at this end of the runway. The FBO has stated that there is equal use of both ends on runway 14/32 and that approximately 10 percent of operations use runway 11/29.

### **2-3-3 Taxiways**

The taxiway system at Harry Clever Field includes two main paved taxiways that connect the runway to the aircraft ramp area, and east and west paved parallel taxiways that connect each of these connecting taxiways to the paved runway ends. These taxiways are 30 feet wide. There is also a 20-foot wide crossover taxiway that provides access from the west parallel taxiway to T-hangars on the opposite side of the runway. The taxiway pavement is in excellent condition with a PCI of 100.

There are two rows of T-hangars with narrow taxiways in the front and rear. The hangar taxiways on the south side of the runway have a reported PCI of 29, which requires reconstruction. The hangar taxiways on the north side of the runway have a reported PCI of 69, requiring an overlay. There is also a small connecting taxiway from this north hangar area to the east parallel taxiway. The reported PCI of this pavement is 43, requiring an overlay.

### **2-3-4 Aircraft Ramp**

The aircraft ramp area near the center of the runway encompasses approximately 9,300 square yards. The most recent PCI of the main ramp area was 65, which means that some preventative maintenance should be performed. The City has recently sealed the cracks and pavement surface in this area. The far west ramp is in worse condition with a reported PCI of 44. This indicates that an overlay is necessary. There are currently 27 tie-down spaces in the terminal area. Nine tie-down spaces are on the paved ramp and the other 18 are located in the grass south of the 14 unit T-hangar. Ten of the 27 tie-down spaces are occupied.

### **2-3-5 Lighting**

The runway lighting at Harry Clever Field consists of medium intensity edge lighting (MIRL) on a series circuit. This lighting was installed in 2003. The taxiway system is lighted with medium intensity taxiway edge lights on a parallel circuit. These lights were installed around 1990.

Runway end identifier lights (bright white flashing strobe lights that help pilots locate the runway ends in darkness, during inclement weather, and against a background of severe lighting) are present on both runway ends. Precision approach path indicators (PAPI), provide visual descent information to pilots during approaches to the runway. The PAPI lights, located near both runway ends, help keep pilots on the proper glide slope. Both of these lighting systems

were installed in 2003.

A large, rotating beacon is located off of airport property on top of a hill near the Airport. There is also a lighted wind tee and a lighted wind sock that depict current wind direction at the Airport. Typically, the wind tee is used by pilots in the air and the wind sock is used by pilots on the ground to determine wind direction. The wind sock also provides some measure of wind speed based on how far the sock extends in the wind.

The airfield lighting can be controlled by pilots using their aircraft radio on a frequency 123.3 or by the Airport manager.



**Current Airport**

### **2-3-6 Airspace**

New Philadelphia Municipal Airport is located within Class E airspace, with a floor 700 feet above the surface. The airspace system surrounding Harry Clever Field is composed of three major components: **enroute**, **transitional**, and **terminal airspace network**. Each component has a specific function and is supported by a network of air traffic control procedures, facilities, and NAVAIDs. **Exhibit 2-4** depicts the surrounding airspace.

- **Enroute Airspace:** Aircraft flying under instrument flight rules (IFR) are the responsibility of the Akron-Canton Approach Control. Aircraft flying through the region typically use Victor Airways (VORs) or jet routes. These airways are delineated by a

system of ground based radio navigation transmitters called VORs (very-high frequency omni-directional radio-beacons). The Briggs VOR (BSV) on a frequency of 112.4 and the Newcomerstown VOR (CTW) on a frequency of 111.8 are the closest transmitters and both are used for approaches to the Airport.

- **Transitional Airspace:** Transitional Airspaces have been established between enroute and terminal airspaces. They extend from an elevation of 700 feet above the existing surface for a facility with an instrument flight rule (IFR) approach or from 1,200 feet above the surface when in use with airway route segments. This allows a pilot to stay within controlled airspace as he descends for an instrument approach to an airport.

New Philadelphia Municipal Airport – Harry Clever Field lies under Class E airspace that starts at 700 feet above ground level and extends in a five-mile radius around the Airport (see **Exhibit 2-4**).

- **Terminal Airspace Facilities:** The terminal airspace facilities include all visual and electronic equipment and personnel used to aid pilots when landing at an airport. These facilities include electronic Navigational aids (NAVAIDS) and visual aids. An Automated Surface Observation Station (ASOS) is present on the Airport to report current weather conditions on and surrounding the Airport. Other NAVAIDS located off of the Airport include the VORs listed above, as well as GPS equipment. Communication with aircraft is by way of a UNICOM radio in the Airport administration building operating on a frequency of 122.8.

### 2-3-7 Instrument Approaches

The following instrument approaches to the Airport are available: a VOR-A circling approach to the Airport area from the north using the Briggs VOR, a VOR/DME circling approach to the Airport from the south using the Newcomerstown VOR (or GPS-B), a GPS circling approach to Runway 14, and a straight-in non-precision instrument GPS approach to Runway 14. The straight-in approach provides visibility minima as low as one mile for category A and B aircraft, and 1-3/4 miles for category C aircraft. These instrument approaches provide horizontal guidance only and are important in determining the standards used for delineating the civil imaginary surfaces for the Airport defined under Part 77 of the Federal Aviation Regulations. **Exhibits 2-5 through 2-7** depict the published instrument approaches available for the Airport.

### 2-4 LANDSIDE FACILITIES

The majority of landside facilities at New Philadelphia Municipal Airport – Harry Clever Field are located on the north side of the Airport. However, there is a row of T-hangars located on the south side of the runway. The Airport administration building is a modern facility located along the north edge of the main apron. It includes a lobby, restrooms, a meeting room, two offices, and a flight training room. In the attached 9,000-square foot main hangar, there are two additional offices - one finished and one unfinished. The hangar has a door opening of 60 feet, which can accommodate a wide range of aircraft. There is also a restaurant on the Airport property adjacent to the terminal building. Rental cars are available at the Airport for customers.

Exhibit 2-4 HARRY CLEVER FIELD AIRSPACE

