III-C. REGIONAL AIRPORT SYSTEM

A. INTRODUCTION

The region's airports are an essential component of the overall transportation system in Central Massachusetts. They serve a variety of purposes, including personal, business, and recreational travel as well as freight movement. Both people and goods are moved by air transportation. Although the number of passengers and the volume of freight moved by air may be relatively small compared to that of other modes serving the region, air transportation plays an important role.

The five airports located within the Central Massachusetts region are illustrated in Figure III-25. The airports shown are Hopedale Industrial Park Airport, Southbridge Municipal Airport, Spencer Airport, Tanner-Hiller Airport in New Braintree, and Worcester Regional Airport. All five have been designated by the Massachusetts Aeronautics Commission (MAC) as part of the statewide airport system. The purpose of the statewide airport system is to ensure that all areas of Massachusetts are accessible by air. With the exception of Worcester Regional Airport, these sites are all utility airports that are designed to accommodate smaller, lighter, general aviation aircraft. Worcester Regional Airport is classified as a "General Transport Airport", accommodating 727 and 737 class aircraft on routes with stage lengths up to 1,000 miles.

In addition to the five public airports, there are several private heliports serving local business needs. These include the UMass Medical Center Heliport for emergency medical transport, the Parker Heliport operated by the Parker Manufacturing Company, and the Atlantic Trade Heliport serving a locally owned private business. These facilities are not discussed any further in the RTP.

B. CHARACTERISTICS

B.1 Worcester Regional Airport

B.1.1 Existing Conditions

B.1.1.1 Introduction

Worcester Regional Airport is located approximately four miles west of the downtown area on the Worcester/Leicester town line. The airport is situated on a 2.04 square mile parcel of land on Airport Hill at an elevation of 1,009 feet above sea level. The National Plan of Integrated Airport Systems (NPIAS) has categorized Worcester Regional Airport as a "Primary Commercial Service" airport, designed to accommodate aircraft in the "Transport Short Haul" service. "Transport" airports, as opposed to "Utility" airports, are designed to accommodate the larger, heavier aircraft operated by commercial airlines as well as business and corporate jets. "Short Haul" service refers to a typical route length less than 500 miles.

The largest commercial aircraft that can be accommodated at Worcester Regional Airport is the Boeing 757 that has a capacity of 190 passengers. For an airport of Worcester's size, a Boeing 737, with a capacity of 100 to 130 passengers, is more typical. Long haul, intercontinental jumbo jets, which fly



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over 1500 miles, could not operate from Worcester, mainly due to short runway lengths. Any large scale physical expansion of the airport is precluded by limited land area, steep topography, and wetlands.

In March 1993, due to the decrease in aircraft operations as well as cutbacks in service, the FAA's Air Traffic Division reclassified Worcester as a "Level One" air traffic control facility, reflecting an average rate of fewer than 17 landings and takeoffs per hour. To obtain a "Level Two" status, the airport must reach an average of between 35 and 90 landings and takeoffs each hour.

Until very recently Worcester Regional Airport had been owned by the City of Worcester. In November 1999, Worcester reached an agreement with the Massachusetts Port Authority (Massport) on terms that would allow the agency to operate Worcester Regional Airport beginning in the 2000 fiscal year. Massport assumed operational responsibility on January 15, 2000, agreeing to operate and manage all aspects of the airport. Massport contributed \$250,000 in the first fiscal year to offset some of the Airport's estimated \$1 million annual operating deficit, and in the following four years, gradually assumed responsibility for more. The City continued to be responsible for outstanding debt obligations associated with ongoing and new capital projects as well as for city employees at the airport.

In early 2004, the agreement with Massport was modified and extended to June 2007. Massport agreed to absorb the entire operating deficit for 2005, but only 85% of it in 2006 and 68% in 2007. A specific termination date of July 1, 2007 was added. This time frame was selected in order that both the New England Regional Airport System Plan study and the Worcester Regional Airport Plan would be completed before further details and agreements were solidified.

In January of 2008, while still in waiting for Master Plan results, Massport agreed to extend its support at its existing level. Shortly thereafter, it was proposed that Massport purchase the airport from the City, and this was accomplished as part of a state transportation reorganization plan passed by the legislature. In anticipating revenue from the sale, Worcester hoped for funds that could be use for other area needs as well as to be relieved of the operating expense burden. However, due to past commitments and investment by the FAA and other federal sources, it would soon become evident that only limited City reimbursement would be possible in implementing this transfer. While some concerns as to the state of ground transportation congestion in the immediate area in the future were expressed, and with all parties agreeing that access to the airport was "challenged", ongoing studies to alleviate pressure and improve the future outlook were cited as sufficient reason for optimism on both sides of the deal. A nine-member advisory group was to be formed, including seats for local residents, to take the place of the existing Airport Commission in the near future and to advise and inform management about local neighborhood and other issues.

In the end, the City received six years' worth of costs incurred plus release from future liabilities, net of a share of some environmental costs, and was able to retain ownership of the industrial park. Net transfer of funds to Worcester amounted to \$14.4 million.

B.1.1.2 Air Carrier Operations

There is currently a small amount of regularly scheduled air carrier operations at Worcester Regional Airport. Looking back over recent history, passenger traffic, totaling 49,727 in 1999, grew to 106,145

in 2000, but a shrinking economy in 2001 topped by the infamous events of September of that year conspired to reduce traffic from an expected redoubling down to 130,566. 2002 saw enplanements cut in half, and in the years 2003-2005 there were fewer than 5,000 annually, as scheduled service was totally lost in early 2003. Allegiant Airlines was responsible for a jump back to almost 15,000 in 2006; after its departure there were essentially no enplanements until 2008. Passenger boarding activity has again increased to the level of the Allegiant period, if not better. Still, Worcester Regional Airport is relatively sparsely used today in comparison to its own recent past and to the levels of other major regionals.

The reasons for this are many, and it is unclear which holds the greatest weight. Pricing has always been a problem, yet low-cost service did not thrive. Worcester is cited as an access hub, but this positioning also makes it easier for travelers to access airports "on the rim", such as Manchester and Providence. It has never been easy to locate and travel to Worcester airport, but over the years, people have been able to "get there from here", at least locally. Many believe that improved access would help generate increased passenger service; others take the point of view that other market forces would need to inspire the provision of new service which would in turn inspire the need for appropriate ground linkages. What follows is a look at the recent history of service at Worcester with the existing ground network in place that demonstrates at least some periods of relative success. Going back to the turn of this century:

- American Eagle Airlines, the regional carrier of American Airlines, once offered three roundtrips daily from Worcester to New York's John F. Kennedy International Airport. Twice-a-day service was even extended to Chicago for a time. New York service was cut in early Sept. of 2001, one Chicago flight was ended in February 2002, and the remaining flight was ended in September of that same year. The need to retrench economically was cited.
- Pan American Airways, a subsidiary of Guilford Transportation Industries, began once-daily flights to Orlando in early February of 2001. By April of 2002, service was dropped. The operator cited insufficient traffic originating here, despite prices as low as \$200 round-trip.
- Atlantic Southeast Airlines, a wholly owned subsidiary of Delta Airlines, once offered three flights a day from Worcester to its major hub in Atlanta. In November of 2001, two of those flights were axed, and one year later the remaining one was gone. Although planes were relatively full, Delta cited insufficient return on its investment when reasonable prices were in effect.
- US Airways Express once provided four daily commuter flights to Philadelphia, where many connections to domestic and international destinations were made. In January of 2003, US Air announced its departure from the Worcester market. After its departure, Worcester was left with no regularly-scheduled passenger service.
- Allegiant Airlines returned scheduled service to Worcester in December of 2005, but became the 13th airline in 18 years to leave the city in August of 2006. With initial one-way fares to Florida as low as \$39, interest was generated rapidly. However, as time went on, load levels fluctuated. While the City felt that strong numbers were seen in all but two months, the 100% load level was always a moving target (as 2 different size jets were used), and the effect that

varying ticket prices had was not clear. As prices rose to more sustainable/profitable levels, more bookings would likely be lost to service at other nearby airports, as price differentials would begin to outweigh the conveniences of local flights. (Conversely, at \$39 fare levels, 100% ridership was no surprise, though of no long-term financial use to the aviation enterprise.) Fuel prices and taxes at Worcester were never low, and were cited publicly as the reason for Allegiant's decision to terminate service. However, it was clear in less public forums (as well as in subsequent remarks made by Allegiant officials and management) that load level factors and the overall profitability of the service were the core reasons for Allegiant's business decision.

In September of 2008, Direct Air made its initial announcement that it would begin service in • Worcester in November of that year, ending a two-year drought with respect to local scheduled passenger service. Service was scheduled 3 times a week to Orlando and Punta Gorda FL, with later seasonal flights to Myrtle Beach SC to be added. Many at the time feel that its success or failure would be critically important to the airport's near-term prospects for success. In August of 2009, some flight reductions were made, but in December it was reported that flights were 80-85% full and that expectations were that around 50,000 passengers would have used the service in the first year of operation. In July of 2010 it was announced that three flights to Palm Beach FL were being added in the fall. Ticket sales were reported to be running above the level experienced in the previous year. And, in April of 2011 Direct Air announced that flights to San Juan, P.R., and Nassau, Bahamas would be added in November. Planners continued to report that ground service improvements being studied both for the general Worcester east/west travel corridor as well as those that might result from the regional mobility study could only help further this developing success at the airport. However, there are no plans seen at this time to expand service to any destinations west of New England - routing that would help create access to a much wider range of ultimate destinations.

While Massport and others have been working to increase service and provide the beginning of a range of destinations, and while Direct Air, although not a full-service airline itself, has been somewhat successful to this point, at time of writing no additional air service routes or airlines were seen to be coming to the area in the near future.

B.1.1.3 General Aviation Operations

General aviation accounts for most of the aircraft landings and departures at Worcester Regional Airport. General aviation includes not only business and corporate flights, but also medical, air taxi, charter, crop dusting, flight training, and personal and recreational trips. General aviation is an important transportation mode for the Worcester business community. In addition to using charter services for business trips, several companies in the greater Worcester area own planes that are based at Worcester Regional Airport.

A rising level of general aviation operations supports MAC's classification of Worcester Regional Airport as a regional facility vital to the business and economic needs of central Massachusetts. As stated by Airport officials, Worcester Regional Airport attracts new businesses and jobs as well as major performers scheduled to appear at the Worcester DCU Center. According to the MAC's *Business Benefits of General Aviation Access*, over 25% of all employers in the Worcester area utilize the airport at least occasionally. The Worcester Area Chamber of Commerce has noted that the airport is

one of the major reasons companies cite for locating in Worcester's Biotechnology Park off Belmont and Plantation Streets, as air transportation is critical for maintaining competitiveness in the timesensitive biotechnical market. A general aviation airport is also important to electronics manufacturers for the delivery and receipt of supplies as well as for the transportation of real estate business staff and clients.

B.1.2 Current Situation / Future Requirements

Over time, the future of Worcester Airport had been suggested to be anything from a nature's wonderland to affordable housing territory to a casino. With Massport's financial and business investment, it will be retained as an air facility, with cargo/general aviation emphasis, while they work towards the day when the local flying public begins to seek (and can obtain) an easier, more convenient, less congested outlet with a suitable flight selection, for long-range travel. Abandonment of the site as a functioning airport, as had once been discussed, would have required the repayment of millions of dollars of aviation-associated grants over recent years, making any such strategy even more questionable. Now the future direction of the facility has been determined, and it will be led by an agency which is in the transportation business, and will not be a further burden to city coffers and personnel talent that can best be used in more direct and useful ways.

Massport has consistently emphasized the need for better ground access to the airport. Their purchase of the facility indicates a belief that this situation can be appropriately settled over time.

When looking at the overall state of regional air service, Worcester has not been in a unique situation in recent years. Other regional airports across the country have lost service totally. Recent fuel price increases have caused even more dislocation in the industry, and airports that cannot support larger 70-80 (and more) seat planes with more efficient fuel utilization have been lost for that reason alone, in addition to general travel patterns and levels. Some airports have kept service alive via efforts such as dedicated flight accounts, into which local businesses deposit travel funds that are pledged to be used for tickets on locally-based flights. This type of action has at times kept major airlines running in marginal regions, but has become more difficult to put into place effectively more recently. Worcester has attempted to rally local economic support many times in the past but certainly has never been successful at the level of fixed financial commitment, for example. Most of the market that could have been won in one way another for traditional passenger travel has seemingly long been lost to other major regional airports, Providence and Manchester airports in particular. These regionals are now solidly entrenched, and those planning for Worcester can anticipate only marginal inroads to service levels at those locations, at best. Long term strategy and provision for eventualities to be realized over many years must be part of a rational plan for Worcester.

Fares have always been an area of contention. They quite clearly have often been substantially higher than those available at other major regional venues. It is said that lower prices would build volume, but in the instances where that has been attempted here it appears that not enough (if any) extra volume was generated to pay for the price cut, let alone to create profits. If flight usage is to be that inelastic, the argument that prices should, if anything, be increased - if not maximized - is hard to ignore. Under current general conditions there does not appear to be a level of pricing that would generate profit, and this has been borne out by the exodus of all carriers from Worcester in economic circumstances when they could afford to sustain no further loss. Airline executives have repeatedly declined to operate in a

situation where there is no major service or even other minor operators to feed other flights – nobody is connecting in Worcester, and this hurts the potential for additional fared passengers. Low-fare competition at any of the other ring airports is enough to severely hurt any one carrier who is trying to get a grip here on its own; that has happened time and time again. It simply appears as if the other ring regionals are providing sufficient low-cost accessible service to make Worcester a redundancy. Direct Air appears to be modestly successful because it is severely limited in its number of flights and well-targeted in its destinations and fare levels. Leased equipment has perhaps allowed a margin of profit to emerge when it would otherwise be unlikely. However, passenger loads in the marginal range plus the again –increased price of fuel will put increased financial pressure on this operation.

Massport once said that Worcester could someday be a major air transportation center under the right conditions, carrying up to a million passengers a year, ten times what it did a few years ago and 3 times its best year ever. However, they have felt that improved access to the airport is a precursor to attaining that passenger volume. The NERASP suggests the Worcester could eventually handle 1.5 million passengers - if infrastructure and access were improved and airlines were in fact willing to offer service to popular destinations. Conditional predictions aside, others feel that if improved access is ever needed, it will first be evidenced in the conditions in the ground network, and then the travel facts can help generate a unified approach to access improvement. Many feel that access itself will not bring travelers to Worcester, and they may have a valid point under current traffic conditions. Certainly no one on any side has cited access problems as one of the reasons that Allegiant decided to leave. However, all can agree that if various future conditions, such as worsening regional airport congestion at other venues or some new and attractive long-range destination point in the Worcester area itself, create the right conditions, profitable flights might thrive, and people will come regardless of the state of ground access. If and when there is a passenger load greater than ever before, ground conditions will have to be improved or effects will impact even those who are not flying. On top of the passenger issue, any increase or sustained usage of the airport for general aviation or freight will also force the consideration of ground connection enhancements.

In the meantime, Massport, MassDOT, the City of Worcester and the CMRPC have developed a plan for improving directional signage to ORH in the near-term. Due to the fact that a large percentage of Worcester Regional Airport users come from the local Worcester area, there is no one preferred route. Instead, it has been recognized that multiple routes are needed to meet current demand. The goal was to improve directional signage between ORH and the MassPike and I-290 by achieving the following objectives:

- To ensure that key decision points would be adequately signed;
- To reduce sign pollution by removing old and unnecessary signs (see the figure entitled *Example: Previous Airport Signs*); and,
- To design and install new airport trailblazer signs consistent with Logan Airport and MassDOT way-finding.

Six primary routes that travelers now use to access the airport (refer to the figure entitled *Existing Routes*) were identified. MassDOT and Massport consulted with local jurisdictions in which the signs would be placed, and MassDOT installed the signs that were produced by their own sign shop. A total of eighty (80) signs were installed on the six primary routes. These newly posted consistent signs should be of great help to those seeking quick ground access routes within the area.





One factor that may be hard to change in any case is the weather. While it has been said that "the perception of the weather issue is worse than the reality here", Worcester airport's siting is not conducive to good flying weather. Its relatively high elevation puts it into fog and clouds often, as well as keeping temperatures about five degrees colder in an area which is very much impacted by winter weather effects. While it can be ascertained that not many more flight departures are delayed here due to weather, the fact remains that landings are often forced to divert to other area airports, and departures are often affected by icing conditions not experienced at other nearby regionals. Once aloft, an aircraft must come down in a reasonable amount of time. For Worcester-bound passengers, at times this means landing in Providence, Boston or elsewhere. No matter how cheap or convenient the parking is in Worcester, it isn't particularly beneficial to use it if you have to take a bus to your car from another airport. Even cargo outfits have the perception that Worcester is not a good, efficient destination point by air, and dependability and delivery time are part of what drives their profitability. Enhanced landing equipment in recent years, and the possibility of more of the same, is encouraging, but the general weather conditions are just one more negative in an overall picture that has always seemed to result in an overall situation that airlines have been unable to conquer thus far.

However, it is generally recognized that a viable, functioning airport may be critical to the city and the region's long-term economic development. Every effort should be made to envision, plan and build a total working infrastructure that will make economic contributions in the present as well as when general passenger demand grows again in the future. The general business and governmental community has seemed to do all it can in recent years to overcome the obstacles, but that alone does not appear to be enough. Perhaps Massport can help swell a tide which can lift Airport operations and economic contributions to a new level, one which will again command respect and appreciation from the public and business communities.

B.2 Other Airports in the Region

B.2.1 Existing Conditions

In addition to Worcester Regional Airport, four other airports serve the Central Massachusetts region. The Southbridge Municipal Airport in Southbridge, the Hopedale Industrial Park Airport in Hopedale, the Tanner-Hiller Airport in New Braintree, and Spencer Airport in Spencer are utility airports that are designed to accommodate smaller, lighter, general aviation aircraft. Table III-19 lists some of the characteristics of these area airports, along with those of the larger Worcester facility.

As shown in Table III-19, the majority of the operations at these smaller airports consist of general aviation flights. However, air taxi services are offered at the Hopedale Industrial Park Airport and Southbridge Municipal Airport. Also, a relatively small number of military flights have occurred at the Hopedale airport.

Of the four utility airports in the region, Southbridge Municipal Airport is utilized the most and has been designated by MAC as part of the statewide airport system. Southbridge Municipal Airport is owned and operated by the Town of Southbridge. The airport is located three miles northwest of downtown Southbridge and approximately five miles from the regional highway system in Sturbridge. The Massachusetts Turnpike (I-90), Interstate 84, and US Route 20 are all accessible via State Route 131 west to Sturbridge. Southbridge Municipal Airport has two runways. The first, Runway 2/20, is a 3,500 foot, paved runway, serviced by a full-length, parallel taxiway. Runway 2/20 also has a non-precision instrument approach and lighting. The second runway has a grass surface and has been closed indefinitely.

	HOPEDALE INDUSTRIAL PARK AIRPORT	SOUTHBRIDGE MUNICIPAL AIRPORT	SPENCER AIRPORT	TANNER-HILLER AIRPORT	WORCESTER AIRPORT
Location	Hopedale	Southbridge	Spencer	New Braintree	Worcester- Leicester
Elevation	267 Ft	699 Ft	1040 Ft	584 Ft	1009 Ft
Runway	18/36	02/20, 10/28(closed)	01/19	06/24	11/29, 15/33
Runway Dimensions	3172'x90'	3500'x75', 1450'x100'	1950'x50'	3027'x40'	7000'x150', 5000'x100'
Runway Lighting	Low Intensity	Medium Intensity	Low Intensity	No	High/Medium Intensity
Airport Attended	Dawn-Dusk, Mon-Fri	8 AM-Dusk	9 AM-6 PM, Mon-Sat	8 AM-6 PM M-F 8 AM-4 PM Sat	Continuous
Registered Based Aircraft	14 Single Engine 1 Multi Engine	30 Single Engine 2 Multi Engine 1 Helicopter	25 Single Engine	3 Single Engine	56 Single Engine 6 Multi Engine 1 Jet
Operations Per Year	28,000	52,000	12,000	500	45,000
% Air Taxi	12%	2%	0	0	4%
% Local General Aviation	36%	59%	82%	89%	31%
% Transient General Aviation	52%	39%	17%	9%	61%
% Military	<1%	0	<1%	2%	2%
% Commercial	0	0	0	0	1%

Table III-19Airport Characteristics

B.2.2 Future Conditions

Beginning in the fall of 1998, the Tri-community area of Charlton, Southbridge and Sturbridge undertook a Corridor Planning Study. The goal of the study was to identify projects that might alleviate transportation problems in the area bounded roughly by Route 131, Route 169, and US Route 20, and to meet three specific objectives:

- (1) reduce traffic congestion on Route 131 between Southbridge and Sturbridge
- (2) reduce the traffic impacts from the Hobbs Brook shopping plaza
- (3) improve access to industrial/commercial land and, indirectly, to the adjacent airport, in Southbridge.

To guide the study, a Technical Task Force was established, consisting of 20 local and state officials plus 10 interested citizens from the three towns. That group met nearly every month from September 1998 through November 1999. All meetings were open to the public, and many individuals took advantage of those meetings to share their thoughts and concerns with the Task Force. Suggestions and proposals were obtained from the public and from Task Force members during an open meeting in October 1998 as well as throughout the study. The group initially considered 17 different alternatives and options to alleviate the problems. After careful evaluation, six complete alternatives, including a No-Action Alternative, were selected for more complete analysis. CMRPC staff conducted the analysis and presented the results to the Task Force. The Task Force also heard from recognized authorities on Massachusetts environmental regulations, highway planning and design procedures, and computer models for travel demand forecasting.

Only Southbridge supported the construction of the Northern Connector from US Route 20 in Charlton to the proposed access road described above which will connect to Route 169 in Southbridge. This approach was not favored by either the Charlton or Sturbridge groups because of potential negative impacts to nearby residents and potential environmental and societal impacts. Southbridge favored this approach as the one providing the greatest reduction of Route 131 traffic and improved access to the regional highway system. At present, only the link from Route 169 to the Airport/industrial park will be constructed. This link, called Commercial Drive, was finally completed and opened in 2011. It serves as access to Casella Waste Systems on Barefoot Road as well as being a more convenient, direct link to the airport. It is hoped that further industrial development can occur on this route as well.

In early 2011 Southbridge Airport was in the midst of undergoing an update to its Airport Master Plan. Additionally, the potential installation of solar energy generation equipment on the site was being pursued with the FAA and other concerned parties.

On June 1, 2011, severe local weather in the form of two tornadoes affected the south-central portion of Massachusetts. One of these travelled to the east just far enough to cross Airport property. Hangars were damaged, some totally, and many aircraft were strewn about as well. Up to \$3 million in damage occurred. With this particular area of the storm path not eligible for federal assistance, insurance and town money will need to be allocated to the rebuilding effort. The FAA hoped to fast-track the master plan update effort in recognition of the need to get back to normal operations as quickly as possible.