2010 ANNUAL REPORT TO THE LEGISLATURE

PREPARED BY THE
METROPOLITAN AIRPORTS COMMISSION
AVIATION NOISE AND SATELLITE PROGRAMS OFFICE

MARCH 2011

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1. INTRODUCTION

1.0 OVERVIEW

The Metropolitan Airports Commission (MAC) was created in 1943 by the Minnesota Legislature to promote air transportation in the seven-county metropolitan area. The MAC's 15-member board of commissioners consists of 13 appointments by Minnesota's Governor and one appointment each by the mayors of Minneapolis and St. Paul to set the MAC's policies. Those policies are implemented by the MAC's executive director and staff.

The MAC airport system is comprised of seven airports: Minneapolis-St. Paul International and six reliever airports. The reliever airports include Airlake, Anoka County-Blaine, Crystal, Flying Cloud, Lake Elmo and St. Paul Downtown. **Figure 1-1** shows each MAC airport location.

In 1989, the Minnesota Legislature adopted the Metropolitan Airport Planning Act. This legislation required the MAC and the Metropolitan Council (MC) to complete a comprehensive and coordinated program to plan for major airport development in the Twin Cities. The planning activities were designed to compare the option of expanding Minneapolis-St. Paul International Airport (MSP) at its current site with the option of building a new airport elsewhere.

The analysis was completed in 1996, and the MAC and the MC formally submitted their recommendations to the Legislature on March 18, 1996. On April 2, 1996, legislation was passed by both the House and Senate; Governor Arne Carlson signed it, terminating further study of a new airport and directing the MAC to implement the MSP 2010 Long Term Comprehensive Plan.

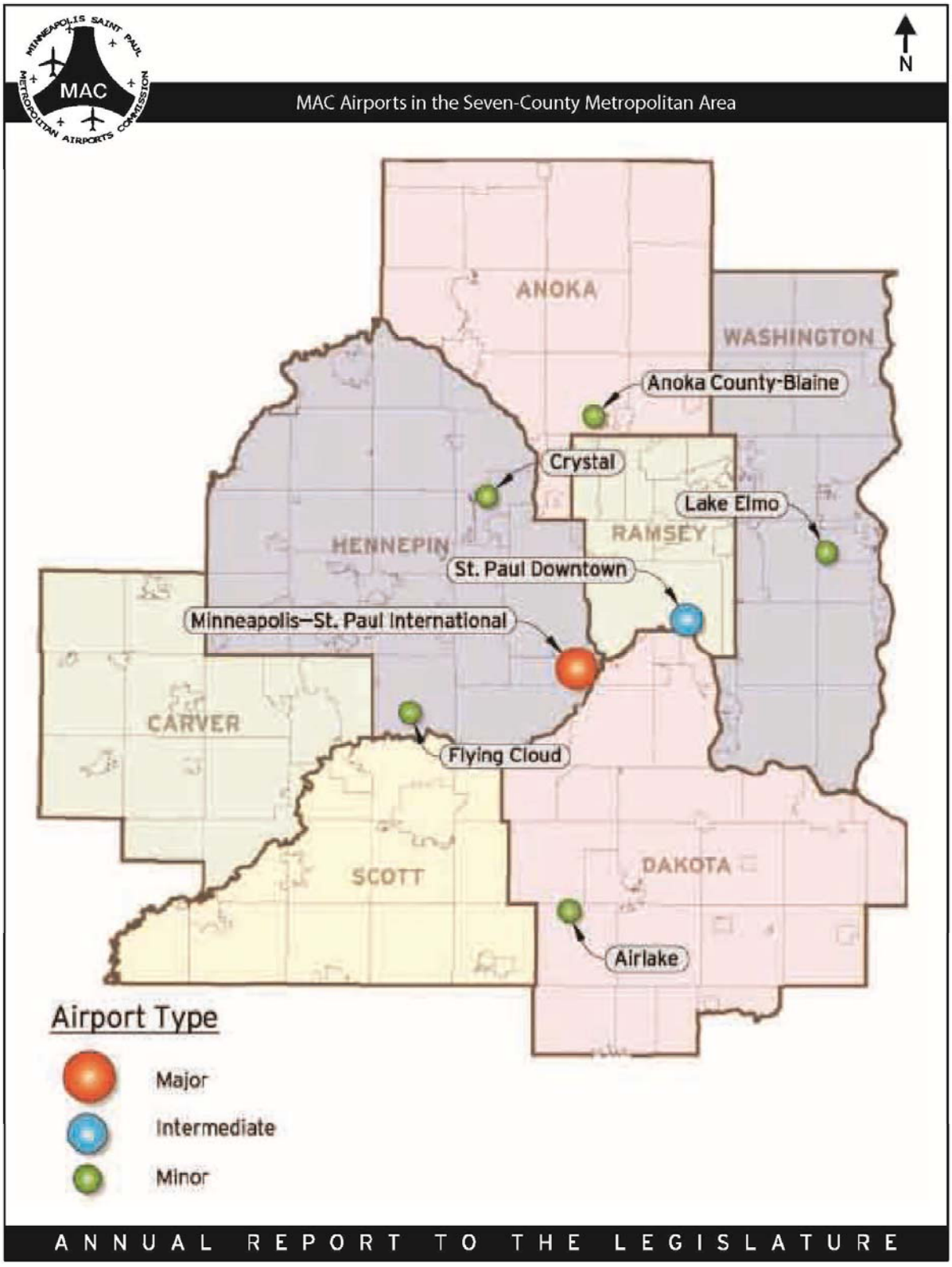
This same legislation requires the MAC to prepare an annual report to the Legislature that describes recent MSP airport activity, current and anticipated capacity and delay for the airfield and terminals, and technological developments that could improve airport efficiency. In 2006, the 1996 legislation was amended to require the MAC to include an update on the six reliever airports in the annual report and to submit the report to the Legislature by March 30 each year.

The 2010 Annual Report to the Legislature is divided into three main sections:

1. Introduction
2. Minneapolis-St. Paul International Airport
3. Reliever Airports

The main sections are further subdivided into sub-sections pertinent to the various facilities.

Figure 1-1: MAC Airports in the Seven-County Metropolitan Area



1.1 THE METROPOLITAN AIRPORTS COMMISSION STRATEGIC PLAN

The Metropolitan Airports Commission's (MAC) core mission is to provide and promote safe, convenient, environmentally-sound and cost-competitive aviation services for its customers. This mission and the MAC's organizational vision and goals for MSP and the reliever airports are outlined in the 2010-2015 Strategic Plan (Plan). The MAC's vision statement and commitment is "To give our customers the best airport experience in North America." To that end, several key initiatives included in the Plan focus on customer service enhancements.

Key initiatives for 2010 included:

1. Expansion of airport-wide customer service partnership program
2. Benchmarking top airport competition
3. Installation of new highway and terminal way-finding signage
4. Opening a new Terminal 2-Humphrey Skyway
5. Increasing MSP's Accessibility Index
6. Promoting MSP to international and domestic airlines
7. Implementation strategy for incorporating social media and mobile communications into customer communications
8. Development of a central Web portal for tenant communications, forms, process-instructions, feedback, and Q&A
9. Implementation of provisions of the 60 DNL Noise Program
10. Pursuance of new MSP and Reliever Airports revenue opportunities
11. Complete implementation and integration of EnterpriseOne and GIS elements

2. MINNEAPOLIS-ST. PAUL INTERNATIONAL AIRPORT (MSP)

2.0 OVERVIEW

Minneapolis-St. Paul International Airport (MSP) is the primary commercial service airport in Minnesota. Owned and operated by the Metropolitan Airports Commission (MAC), its funding stems from self-generated revenues from airport users, aviation grants, bonds, and passenger facility charges. MSP does not receive an appropriation from the State's local property taxes.

Aircraft operations and passenger activity associated with MSP contribute to the Twin Cities' economy by generating or supporting 153,000 associated jobs, $10.7 billion in business revenue and $1.4 billion in local purchases.[1]

The next sections of this report highlight facilities, activities and resource management at MSP as follows:

- A description of MSP facilities
- A description of MSP activity and service trends
- A comparison of MSP forecasted activity with actual activity
- Current airfield capacity and average length of delay statistics
- Technological developments affecting aviation and their effects on airport operations and capacity
- Environmental resource management

2.1 MSP AIRPORT FACILITIES

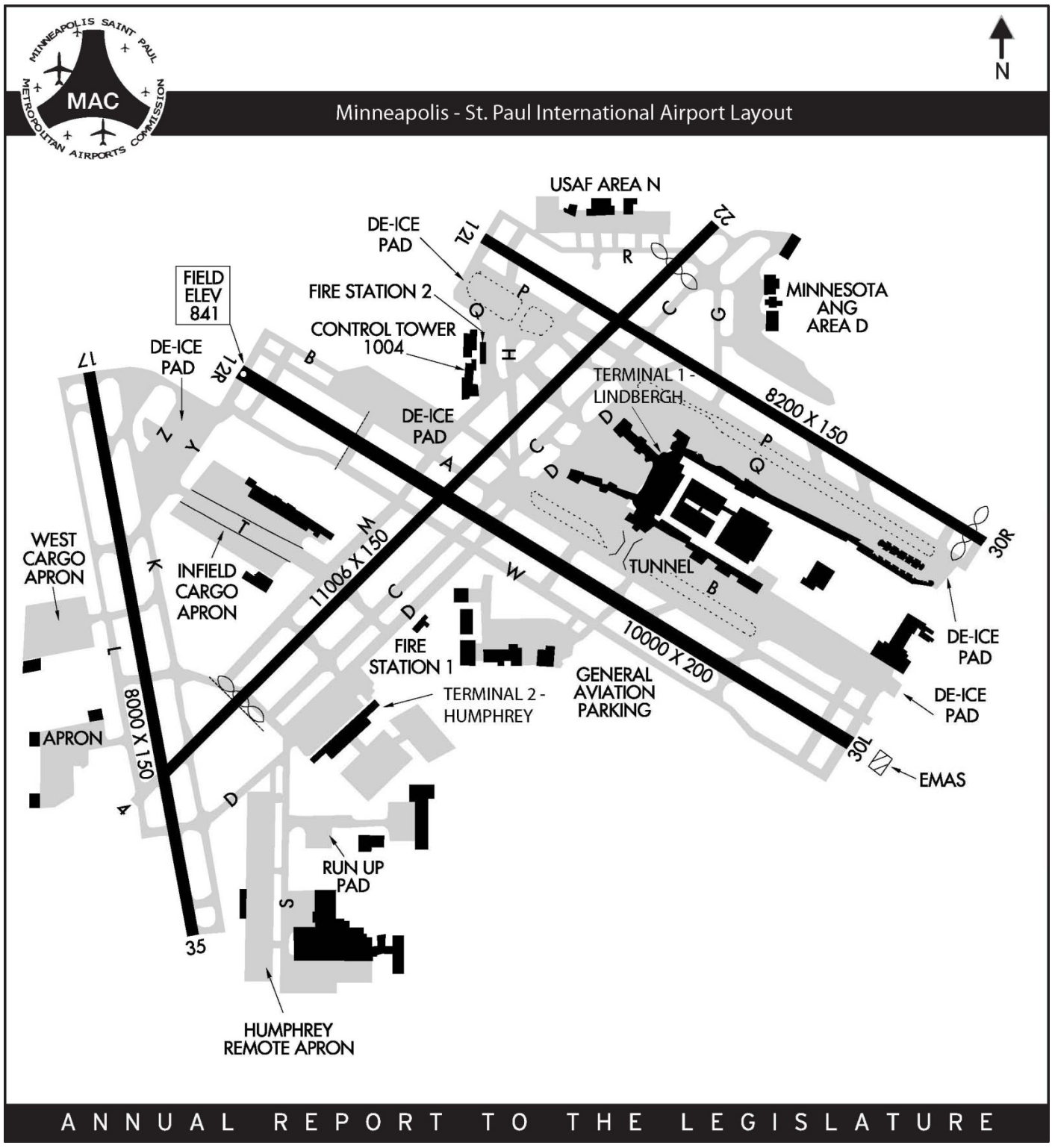
2.1.1 Airfield

The MSP airfield is approximately 3,400 acres in size and consists of two parallel runways, one north-south runway and one crosswind runway. Runway 4-22 is 11,006 feet long (with environmental approvals for an extension to 12,000 feet); Runway 12R-30L is 10,000 feet long; Runway 12L-30R is 8,200 feet long; and Runway 17-35 is 8,000 feet long. **Figure 2-1** shows MSP's current general airport layout, and **Table 2.1** summarizes the major airport components.

Deicing pads are located at the end of each parallel runway. Runway 17-35 has a seven-position deicing pad only at its north end to accommodate departures to the south because current operating restrictions normally preclude departures to the north over Minneapolis. All the deicing pads have facilities nearby for recharging deicing trucks and for providing a rest area for deicing crews. A combined operations and maintenance facility adjacent to the 12L deicing pad serves to coordinate deicing operations on all pads.

1 According to the Local and Regional Economic Impacts of the Minneapolis/St. Paul International Airport, conducted by John C. Martin Associates LLC. and completed in March 2005.

Figure 2-1: Minneapolis-St. Paul International Airport Layout



There are two cargo aprons (50 acres total) located at MSP: Infield Cargo Apron and West Cargo Apron. The Infield Cargo Apron is situated between Runway 12R-30L and Runway 17-35 and supports a FedEx cargo sort facility and a UPS facility. The West Cargo Apron accommodates a multi-tenant cargo facility, and three aircraft maintenance hangars are located on an apron on the western edge of the airfield.

Table 2.1

EXISTING AIRPORT FACILITIES

Airport Components		Quantity
RUNWAYS		
	East-West Parallel (Runways 12L-30R and 12R-30L)	2
	North-South (Runway 17-35)	1
	Crosswind (Runway 4-22)	1
	Total Runways	**4**
	Other Runway Information:	
	Longest Runway (Runway 4-22)	11,006 ft. [(1)]
TERMINAL BUILDING FACILITIES		
	Terminal 1-Lindbergh million sq. ft.	2.8
	Terminal 2-Humphrey million sq. ft.	.4
	Total Terminal Square Footage (millions)	**3.2**
	Terminal 1-Lindbergh Gates	117
	Terminal 2-Humphrey Gates	10
	Total Gates	**127**
PUBLIC AUTO PARKING		
	Terminal 1-Lindbergh	14,400
	Terminal 2-Humphrey	9,200
	Total Public Auto Parking Spaces	**23,600**

Note:
[(1)] Runway 4-22 is the longest runway (11,006 ft.) and has environmental approval to be extended to 12,000 feet.

Source: Metropolitan Airports Commission Airport Development.

2.1.2 Terminal 1-Lindbergh

Terminal 1-Lindbergh is the largest terminal at MSP. It was originally built in 1962 and named the Charles A. Lindbergh Terminal in 1985. During 2010, changes were made to roadway signage that now refer to this terminal as Terminal 1 and list the individual air carrier service providers that serve the terminal. For more information regarding this change, please refer to Section 2.1.4 of this document.

Terminal 1-Lindbergh is located between the north parallel runway (12L) and the south parallel runway (12R), east of Runway 4-22. **Figure 2-2** displays the terminal layout with single-loaded and double-loaded concourses, and 117 gate positions. Of those, 10 gates support international arrivals into the International Arrival Facility. A concourse tram and moving sidewalks assist passenger travel along Concourse C. Moving sidewalks also facilitate passenger movement on Concourses A, B and G, and through the skyway connector between Concourses C and G. Four parking ramps provide short- and long-term parking for passengers and space for rental cars. A tram assists passenger movements from the terminal to the two most distant parking ramps, light rail transit and auto rental facilities.

In 2010, eParkElite® was introduced to enhance the customer service experience for parking at MSP. eParkElite® is a convenient option for frequent parking customers because the program offers a guaranteed parking space in any of MSP's public parking ramps. It uses a ZipPass unit placed on a vehicle's dashboard to allow convenient, automatic ramp entry and exit.

2.1.3 Terminal 2-Humphrey

Terminal 2-Humphrey was opened in 1977 and named for Hubert H. Humphrey. A new terminal replaced the original terminal in 2001. The current terminal is located southwest of the parallel runways and consists of 10 gates currently used by Sun Country, AirTran, Icelandair, Southwest Airlines and charter companies.

Changes in roadway signage that occurred in 2010 refer to the Humphrey Terminal as Terminal 2 and list the individual air carrier service providers that serve the terminal (see Section 2.1.4).

The building layout of Terminal 2-Humphrey is depicted in **Figure 2-3**, and includes an International Arrival Facility, and public parking spaces for approximately 9,200 vehicles. The eParkElite® service explained in the previous section also apply to the Terminal 2-Humphrey parking facility.

In 2010, Terminal 2-Humphrey had its busiest year on record, accommodating more than 2.56 million total passengers and handling more than 26,000 aircraft operations.

In December 2010 the MAC completed construction of the Orange Ramp Skyway, which provides an elevated, temperature-regulated connection between Terminal 2, the Orange parking ramp and the light rail station. Construction of the Orange Ramp

Figure 2-2: Terminal 1-Lindbergh

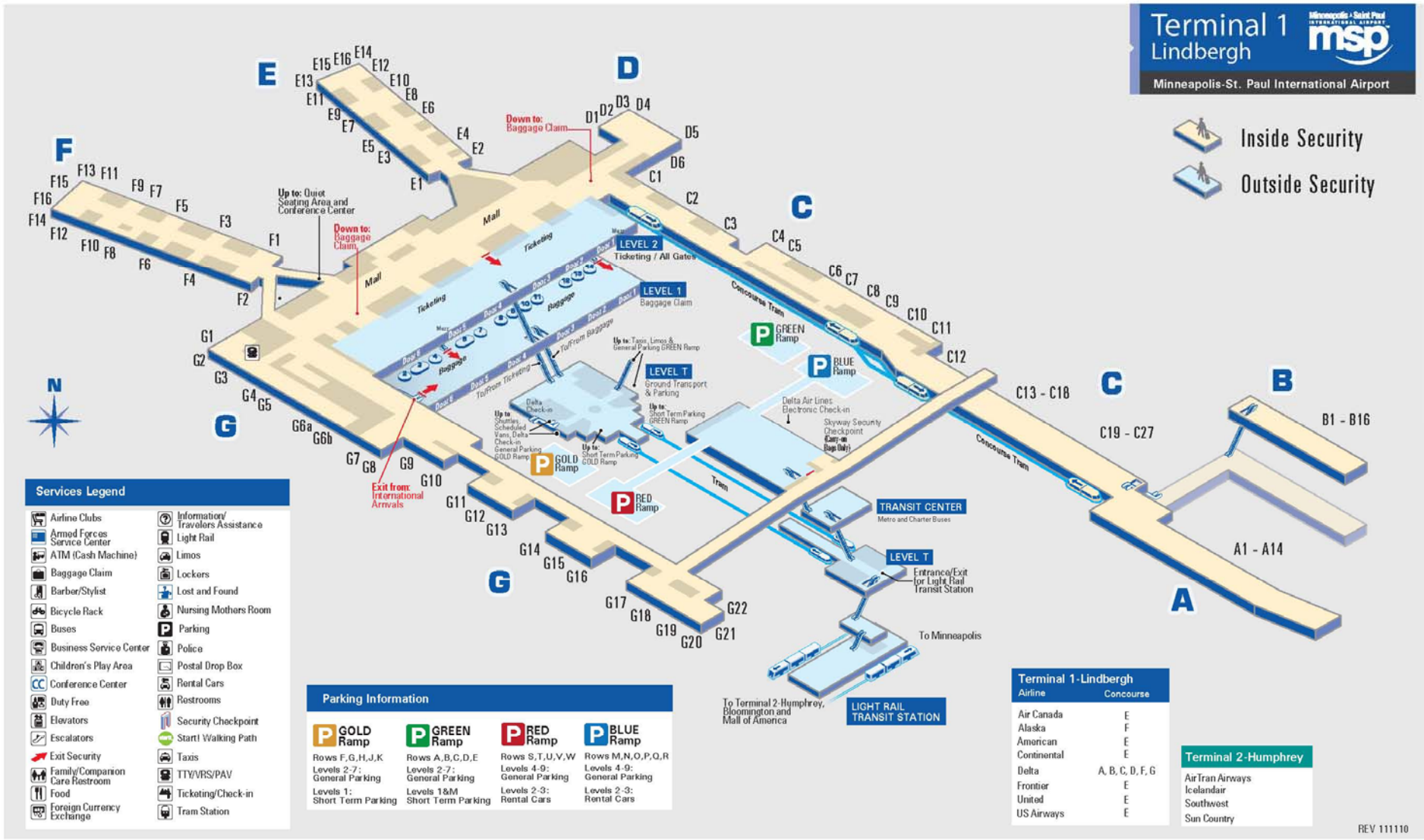
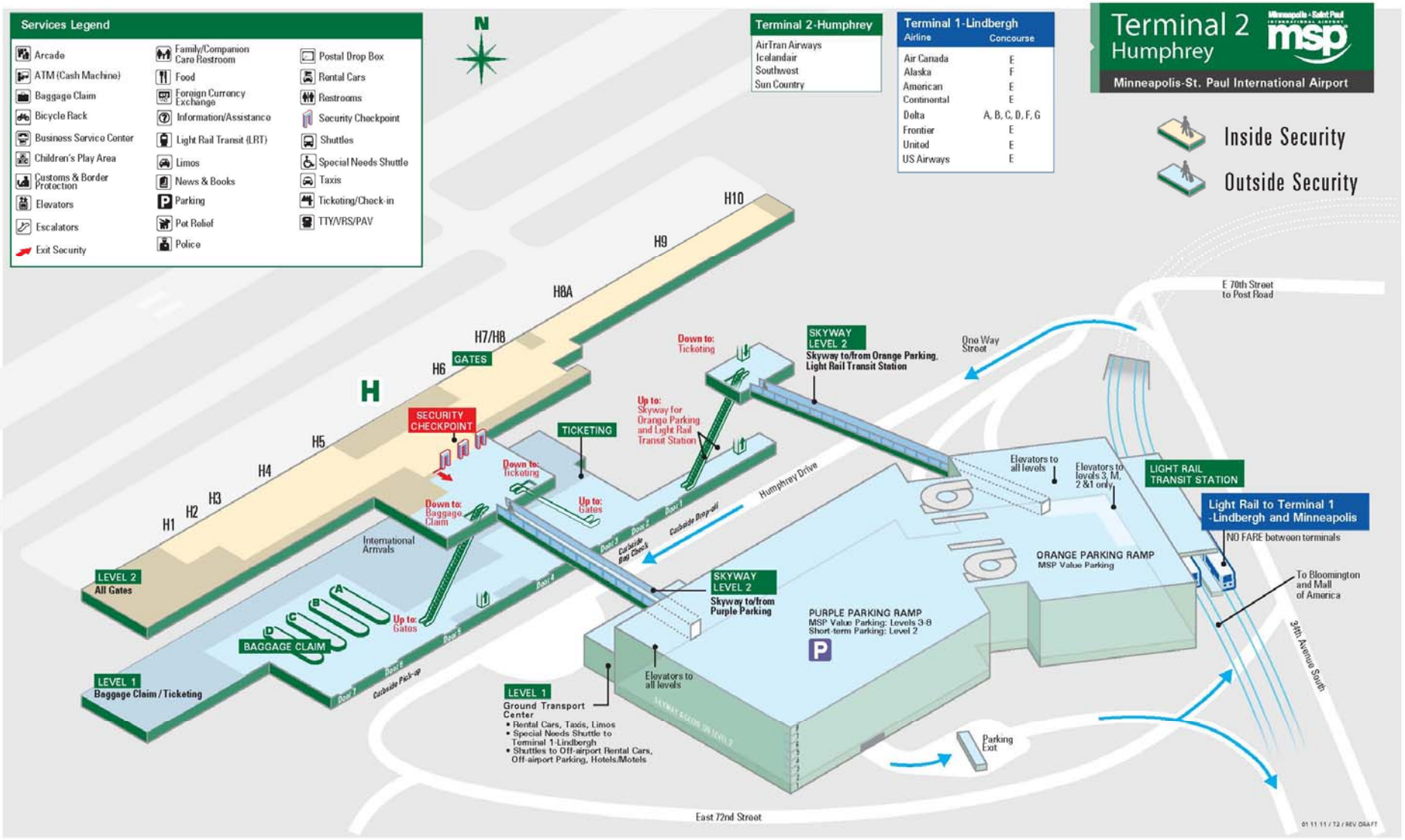


Figure 2-3: Terminal 2-Humphrey



Skyway and associated Terminal 2-Humphrey expansion was completed in less than a year and included installation of 1,154 linear feet of moving walk, two elevators, and an escalator bank.

2.1.4 Terminal Way-Finding Signage

MSP is the only major U.S. airport with passenger terminals located on two separate roadway systems. Between late March and mid-April 2010, new signs were installed along roadways and highways around MSP. The signs designate the terminals as Terminal 1 and Terminal 2 rather than Lindbergh and Humphrey, respectively. This new signage allowed, for the first time in MSP history, the names of the airlines located at each terminal to be listed on highway signs so passengers have the information they need to select the right highway exit and terminal for their airline. Since implementation of the new way-finding signage, complaints associated with terminal building location signage have been reduced.

At the MAC and in the terminal buildings, the official names of the terminals retain the historic references in addition to the supplemental numerical designations as follows: Terminal 1-Lindbergh and Terminal 2-Humphrey.

2.1.5 Light Rail and Bus Transit

The Metro Transit Hiawatha Line provides a light rail transit (LRT) option for MSP travelers and visitors commuting between terminals and off-airport locations from downtown Minneapolis to the Mall of America.

The Terminal 1-Lindbergh Station at MSP is located below ground at the south end of the Terminal 1-Lindbergh parking complex, and the Terminal 2-Humphrey Station is located directly east of Terminal 2-Humphrey. No fare is required for travel between the two MSP LRT stations. A bus station at ground level above the Terminal 1-Lindbergh LRT station provides additional mass transit service and connectivity between the LRT and bus systems.

Metro Transit estimates that approximately 3,400 boardings occurred per day in 2010 at the airport terminal stations, which remains consistent with the level of activity at those stations in 2009.

2.1.6 MSP Long Term Comprehensive Plan Update

In 2010, the MAC completed an update to the MSP Long Term Comprehensive Plan (LTCP). The previous plan was published in 1996 and included projects that dramatically improved airfield efficiency, particularly with the addition of Runway 17-35 and associated infrastructure in 2005. The updated LTCP is necessary for planning purposes, and it reflects significant changes in the aviation industry and impacts of recent economic conditions on aviation. This plan identifies facility improvements for MSP out to the year 2030 based upon revised aircraft operations and passenger activity forecasts.

Several goals were established as part of the LTCP Update:

1. Provide sufficient, environmentally-friendly facilities to serve existing and future demand;
2. Provide improved energy efficiencies;
3. Encourage increased use of public transportation;
4. Minimize confusion associated with having two terminals and multiple access points;
5. Allow for flexibility in growth;
6. Utilize and maintain existing facilities to the fullest extent possible; and
7. Enhance aircraft operational safety and efficiency.

Forecasts for the year 2030 indicate an increase in passenger boardings of more than 73 percent and aircraft operations of about 40 percent (see Figures 2-10 through 2-12). Based upon these forecasts, the LTCP Update primarily focuses on terminal and landside facilities that are inadequate for the increased passenger flow or have become outdated. Proposed modifications to the airfield in the updated LTCP address taxiway improvements intended to augment airfield circulation. There are no runway-related additions or improvements being proposed. The LTCP is divided into four 5-year phases with the following proposed projects:

Phase I: 2010 – 2015

- Seventeen new gates at Terminal 2-Humphrey
- New explosive detection system at Terminal 2-Humphrey
- Terminal 2-Humphrey Auto Rental Facility
- Terminal 2-Humphrey parking expansion
- Terminal 2-Humphrey roadway system improvements

Phase II: 2015 – 2020

- Curbside expansion at Terminal 1-Lindbergh
- Terminal 1-Lindbergh remodeling
- Expansion of Concourse G in Terminal 1-Lindbergh
- Terminal 1-Lindbergh parking expansion

Phase III: 2020 – 2025

- Ten new gates at Terminal 2-Humphrey
- Terminal 2-Humphrey roadway access improvements
- Terminal 2-Humphrey Orange Ramp parking expansion
- Terminal 1-Lindbergh in/outbound roadway improvements
- Continued expansion of Concourse G at Terminal 1-Lindbergh
- MSP Hotel
- Delta overnight package express relocation
- Airline flight kitchen replacement

Phase IV: 2025 – 2030

- Crossover taxiway construction
- Terminal 1-Lindbergh parking expansion
- Loading dock facility relocation
- Post Office retail operation relocation

Public review and comments on the LTCP Update were solicited in February 2010. The Metropolitan Council's approval was received in September 2010 and the MAC Commission approved the final document also in September 2010. The MAC also authorized staff to start the federal/state environmental review process for the projects proposed to be implemented by the year 2020.

2.1.7 MSP 2020 Improvements Environmental Assessment

In 2010, the MAC initiated an environmental assessment (EA) pertaining to Phase I and Phase II proposed projects to evaluate and disclose the potential environmental impacts of those development projects at MSP. The EA is being conducted in accordance with the requirements of the National Environmental Policy Act as well as the Minnesota Environmental Review Program.

The proposed development (Proposed Action) to be evaluated in the EA is based on the findings of the airport's Long Term Comprehensive Plan (LTCP) Update. The Proposed Action as identified in the 2030 Long Term Comprehensive Plan Update for MSP includes terminal and landside improvements needed by the year 2020. As such, the Proposed Action consists of the following components:

Improvements to Terminal 2-Humphrey:

- Construct approximately 17 new gates, including jet bridges, apron improvements, hydrant fueling, and site utility improvements
- Provide auto rental facilities (quick turnarounds)
- Expand parking
- Improve the roadway system, including the 34th Avenue/Interstate 494 interchange and MN State Highway 5/Post Road interchange if needed

Improvements to Terminal 1-Lindbergh:

- Reconfigure Ground Level Green/Gold Parking Ramp to provide additional arrival curb
- Remodel the ticketing and baggage claim areas and Concourse E
- Relocate a number of Concourse G gates to Concourse E
- Extend Concourse G for a new, expanded international terminal/Customs Border Protection (CBP) facility, including approximately 10 new gates, jet bridges, apron improvements, hydrant fueling, site utility improvements, and necessary support facilities
- Construct a new parking ramp east of the current Red-Blue Ramp

The EA will assess the environmental consequences of the Proposed Action and the reasonable alternatives. Impact categories will be analyzed according to the criteria included in Federal Aviation Administration (FAA) Orders 1050.1E, Environmental Impacts: Policies and Procedures, and 5050.4B National Environmental Policy Act Implementing Instructions for Airport Actions, and the Minnesota Environmental Assessment Worksheet (EAW). The impact analyses will be conducted for the five years after the Proposed Action is implemented, 2020-2025.

The EA analyses will likely focus on the environmental categories listed below:

1. Air Quality (Including Vehicle-related and Stationary Source Air Emissions)
2. Noise / Compatible Land Use
3. Vehicular Traffic
4. Water Quality (Including Physical Impacts on Water Resources)
5. Cumulative Impacts

Currently, the MAC is in the early stages of developing the Draft EA. As the environmental analysis process moves forward the development plans will be refined, possibly resulting in revisions to the phases and implementation timeframes specified in the LTCP Update. According to the project schedule, the analysis for the Draft EA will be completed in late 2011. The Draft and Final EA will be circulated for agency and public review in early 2012. If, based on the Final EA, it is determined that the Proposed Action would not result in a significant impact, the FAA will issue a Finding of No Significant Impact (FONSI) and the MAC will issue a Record of Decision (ROD). Implementation of each of the components of the Proposed Action will be demand-driven and may begin as early as mid-2012.

2.2 AIRPORT ACTIVITY AND SERVICE TRENDS

MSP is served by 12 commercial passenger airlines; eight are located at Terminal 1-Lindbergh and four are located at Terminal 2-Humphrey. This section highlights an overview of the airline and passenger activity, and aircraft operations trends in 2010.

There were economic challenges that beleaguered the entire aviation industry during the past several years, including MSP. However, in 2010 the passenger levels at MSP rose, marking the end of a consecutive four-year decline. In 2010 a total of 32,839,441 passengers arrived and departed MSP, a 1.4 percent increase over the 2009 passenger level of 32,378,599. Passengers included in these totals are revenue and non-revenue passengers that utilized traditional major air carrier services, regional air carriers or charter companies. Total passengers at MSP peaked in 2005 with 37,663,664, which is approximately 13 percent higher than the 2010 level.

Delta Air Lines is the largest air carrier service provider at MSP and operates out of Terminal 1-Lindbergh. The merger of Delta Air Lines with Northwest Airlines was completed on January 31, 2010 after first being announced in April 2008. Delta Air Lines and its regional partners currently operate 434 flights per day from MSP to more than 130 destinations worldwide. In 2010, flights were added to nine destinations, as follows: Buffalo NY, Bloomington IL, Birmingham AL, Lansing MI, Norfolk VA, Fort Dodge IA, Marquette MI, Providence RI, and Pierre SD.

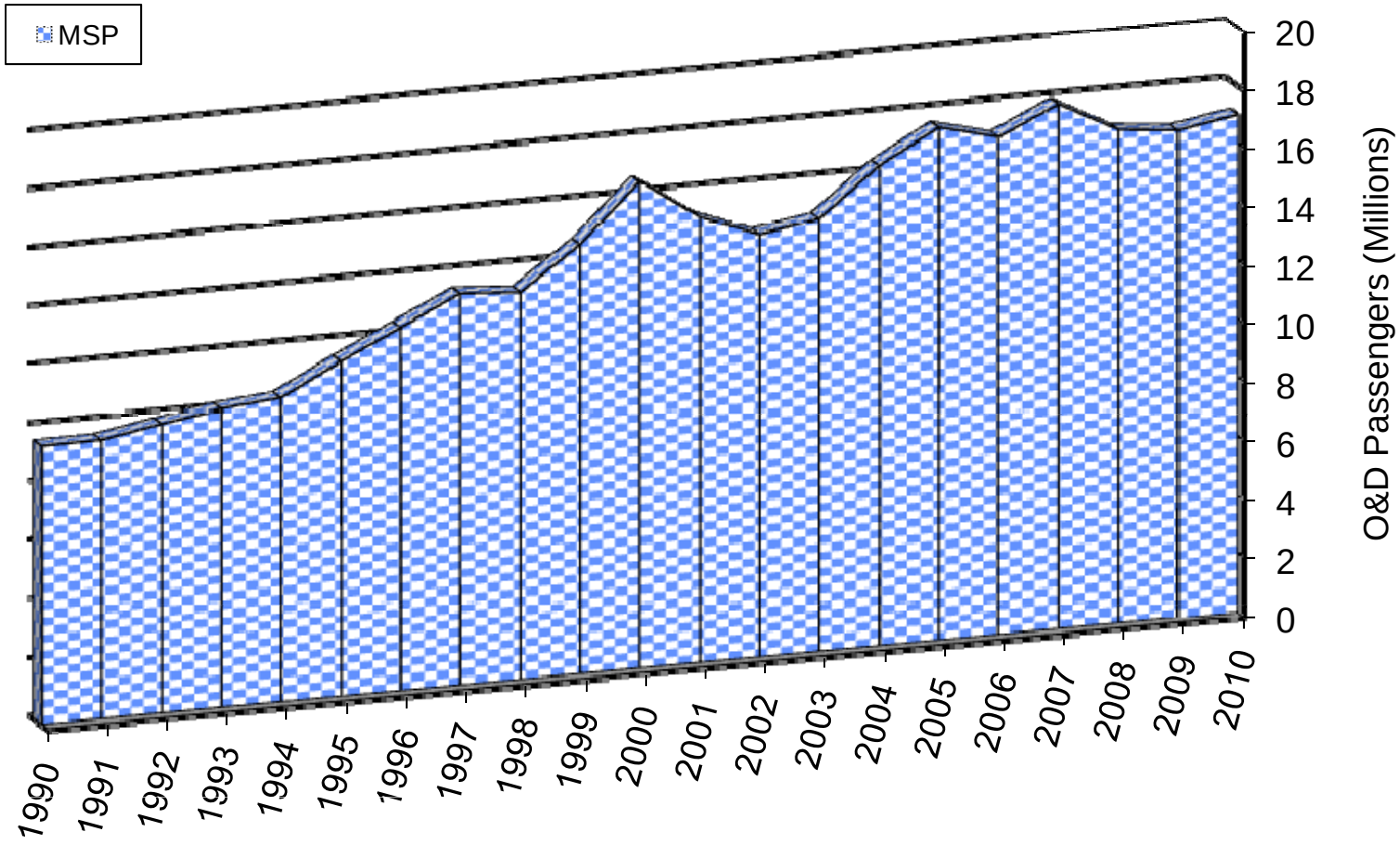
Sun Country Airlines is based at MSP and continues to grow its markets and expand its services from Terminal 2-Humphrey. In 2010, Sun Country operated approximately 25 flights per day and served more than 20 year-round and seasonal destinations. For the past five years, this MSP-based air carrier has consistently ranked within the top 10 domestic airlines in *Travel+Leisure*'s World's Best Service Awards. In December 2010, Sun Country announced it will begin new daily service to Washington-Reagan National Airport through Lansing MI in April 2011, and announced it will begin twice-weekly service from MSP to London Gatwick Airport in May 2011.

Southwest Airlines began service from MSP in March 2009 after nearly 20 years of recruitment efforts by the MAC. Southwest now operates approximately 17 roundtrip flights per day from two gates in Terminal 2-Humphrey and has expanded its daily service to four destinations: Chicago Midway, Denver, St. Louis, and (as of August 2010) Phoenix. Southwest Airlines reports that 2010 marked the airline's 38th consecutive year of profitability.

2.2.1 Passenger Originations/Destinations and Connections

Figure 2-4 depicts the annual historical passenger originations/destinations (O&D) data for MSP for the years 1990 through 2010. O&D passengers are those who begin or end their trip at the airport. Connecting passengers are those who travel through the airport en route to another destination.

Figure 2-4:
Annual Passenger Originations/Destinations (O&D)
Totals
1990-2010



Source: 1990-2008 U.S. DOT DB1B, Metropolitan Airports Commission 2010 Year End Statistics Report.

The following information details MSP O&D and connecting passenger data for 2010:

- There were 16,991,034 O&D passengers in 2010, which is nearly 2.1 percent higher than the 2009 O&D passenger level of 16,638,542.[2]

- Between 1990 and 2010, O&D passengers at MSP rose from 9.5 million to nearly 17 million. This change represents an estimated annual compounded growth rate of 2.95 percent. O&D passenger demand is driven primarily by local socioeconomic factors.

- There were 7,219,542 connecting passengers at MSP in 2010, which is slightly lower than the connecting passenger level of 7,232,185 in 2009[3].

2.2.2 Annual Revenue Passengers

The revenue passenger level at MSP reported by the airlines in 2010 reached 31,734,714, nearly 1.5 percent higher than the previous year's level of 31,273,244. Revenue passengers in 2010 accounted for 96.6 percent of total passengers at MSP.

When MSP revenue passengers and aircraft operations activity of traditional major air carriers is compared with the passengers and operations activity of regional air carriers over the past five years, there is a trend that indicates a shift toward increased use of regional-type aircraft (i.e., those with fewer than 100 seats). This shift was evident in 2010 with 20.9 percent more passengers traveling on regional air carriers than in 2009, while approximately 4.3 percent fewer passengers traveled on traditional air carriers[4]. Further, the number of aircraft arrivals and departures flown in regional aircraft rose by 10.6 percent while operations flown by the traditional aircraft in 2010 decreased by nearly 9.4 percent from the year earlier.

Total annual revenue passenger levels are shown in **Figure 2-5** and include O&D and connecting passengers.

Between 1990 and 2010, total annual revenue passengers grew from 19.2 million to 31.7 million, an annual compounded growth rate of 2.4 percent.

Rising passenger levels in 2010 were not isolated to MSP. Overall, Airports Council International reports that the level of domestic passengers is up 5.2 percent and the level of international passengers is up 7.3 percent compared to 2009[5].

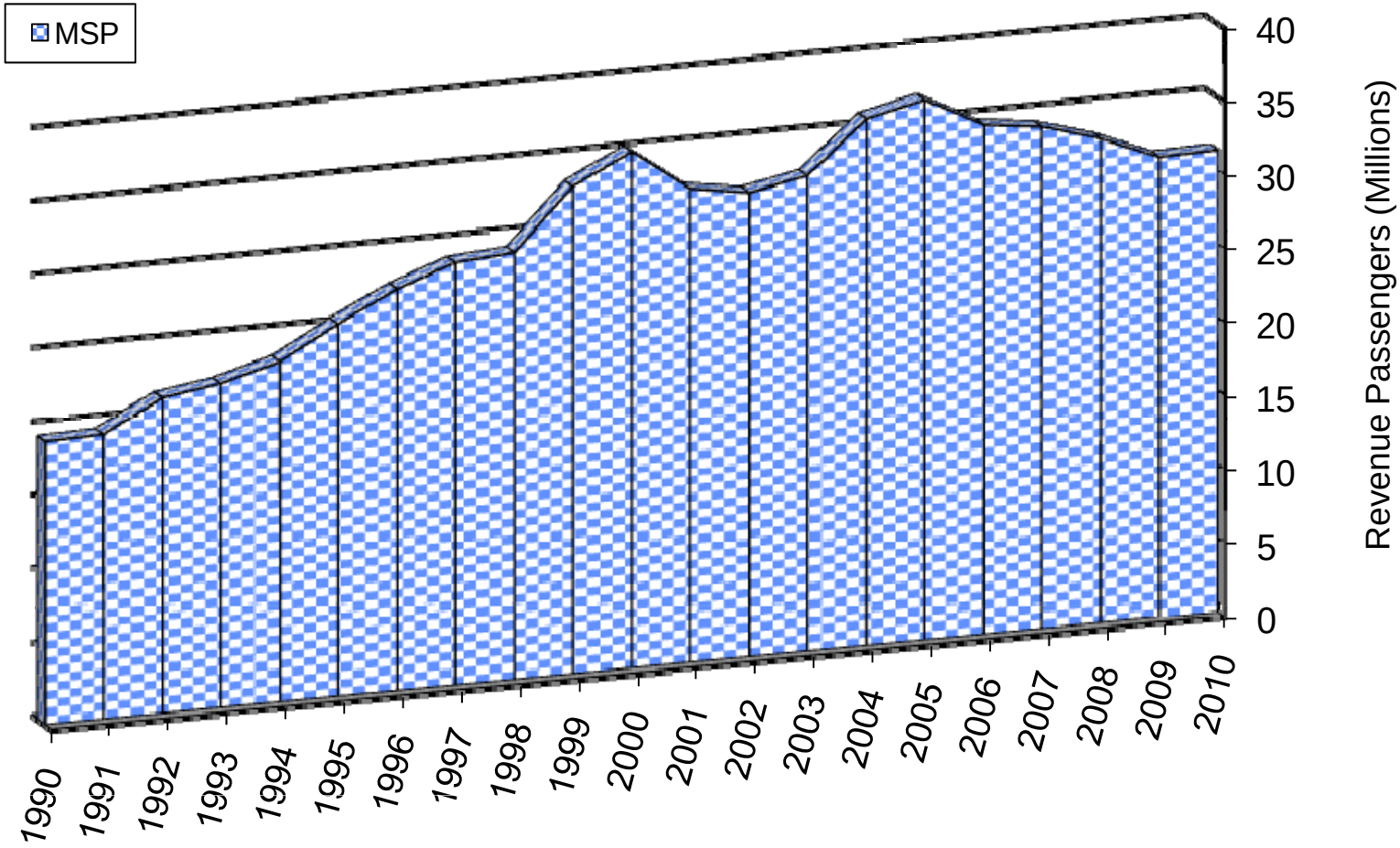
[2] Because of prior Detroit Metro Airport comparison requirements, the source used to obtain the data from 1990-2008 was based on data reported by the U.S. DOT and HNTB analysis. The airport comparison is no longer required in this report; therefore, the 2009 and 2010 numbers were derived from Metropolitan Airports Commission year end reports, providing the most accurate MSP-specific statistics.

[3] Metropolitan Airport Commission 2010 Year End Statistics report.

[4] Metropolitan Airport Commission 2010 Year End Statistics report.

[5] Airport Council International (ACI) Traffic Statistics – December 2010

Figure 2-5:
Total Annual Revenue Passengers
1990-2010



Sources: Metropolitan Airports Commission 2010 Year End Statistics Report.

2.2.3 Annual Aircraft Operations

Total aircraft operations at MSP in 2010 were slightly higher than the levels reported in 2009. The total number of landings and takeoffs reported by the Federal Aviation Administration (FAA) in 2010 is 435,583, 1 percent higher than the 2009 operations level of 432,604. Total operations at MSP peaked in 2004 when the FAA reported 540,727 aircraft arrived at and departed from the airport.

Annual MSP aircraft operations are presented in **Figure 2-6**. In 1990, MSP had 382,960 annual operations according to FAA Air Traffic Control Tower counts. Total annual operations at MSP generally increased through 2000 then declined as a result of the terrorist attacks on September 11, 2001. The year 2001 ended with 501,252 total operations at MSP, a 4 percent decline from the previous year. In 2002 and 2003 operations rose approximately 1.2 percent over the level in 2001, but then jumped up 6 percent in 2004.

The years that followed 2004 were impacted by increasing fuel prices and an overall struggling economy, which was reflected in the fairly steady decline of aircraft operations at MSP between 2004 and 2009. During that timeframe operations dropped from 540,727 to 432,604; many airlines reduced their scheduled flights and thinned out their fleets to lower operating costs, and several airlines raised ticket prices and initiated fees for traditionally “no-charge” passenger services (e.g., baggage fees, ticket counter customer service, in-flight food and beverages, etc.) to generate additional revenue.

2.2.4 Non-stop Markets

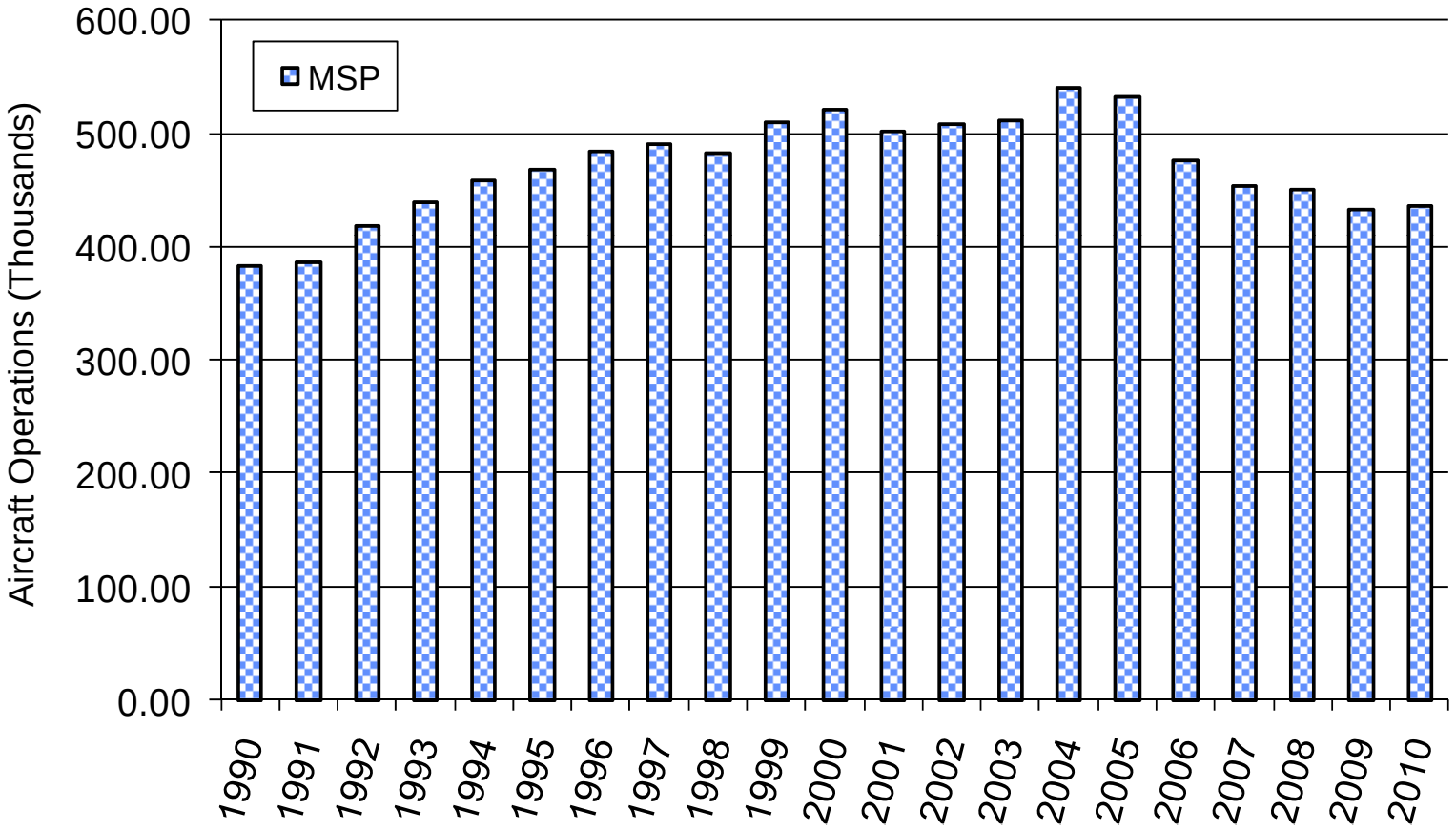
Figure 2-7 shows the number of non-stop domestic and international (including Canadian) markets served from MSP from 2004 through 2010. The domestic markets included in these totals are those that are served by an annual average of at least five weekly non-stop flights. The international markets include those that are served by an annual average of at least one weekly non-stop flight. Some of these markets are served only seasonally.

Based on Official Airline Guide data, there were 135 non-stop markets served by MSP in 2010—114 domestic and 21 international—that met the criteria mentioned above. This total is slightly greater than the 134 total non-stop markets served in 2009.

Figure 2-8 summarizes the use of various types of aircraft that serve MSP’s non-stop markets. In 2010, approximately 23.7 percent of the non-stop markets were served exclusively by traditional Air Carrier jet service compared with 22 percent in 2009. There is also an increase in the percentage of non-stop markets served by Regional air carrier aircraft from 14 percent in 2009 to 19.3 percent in 2010.

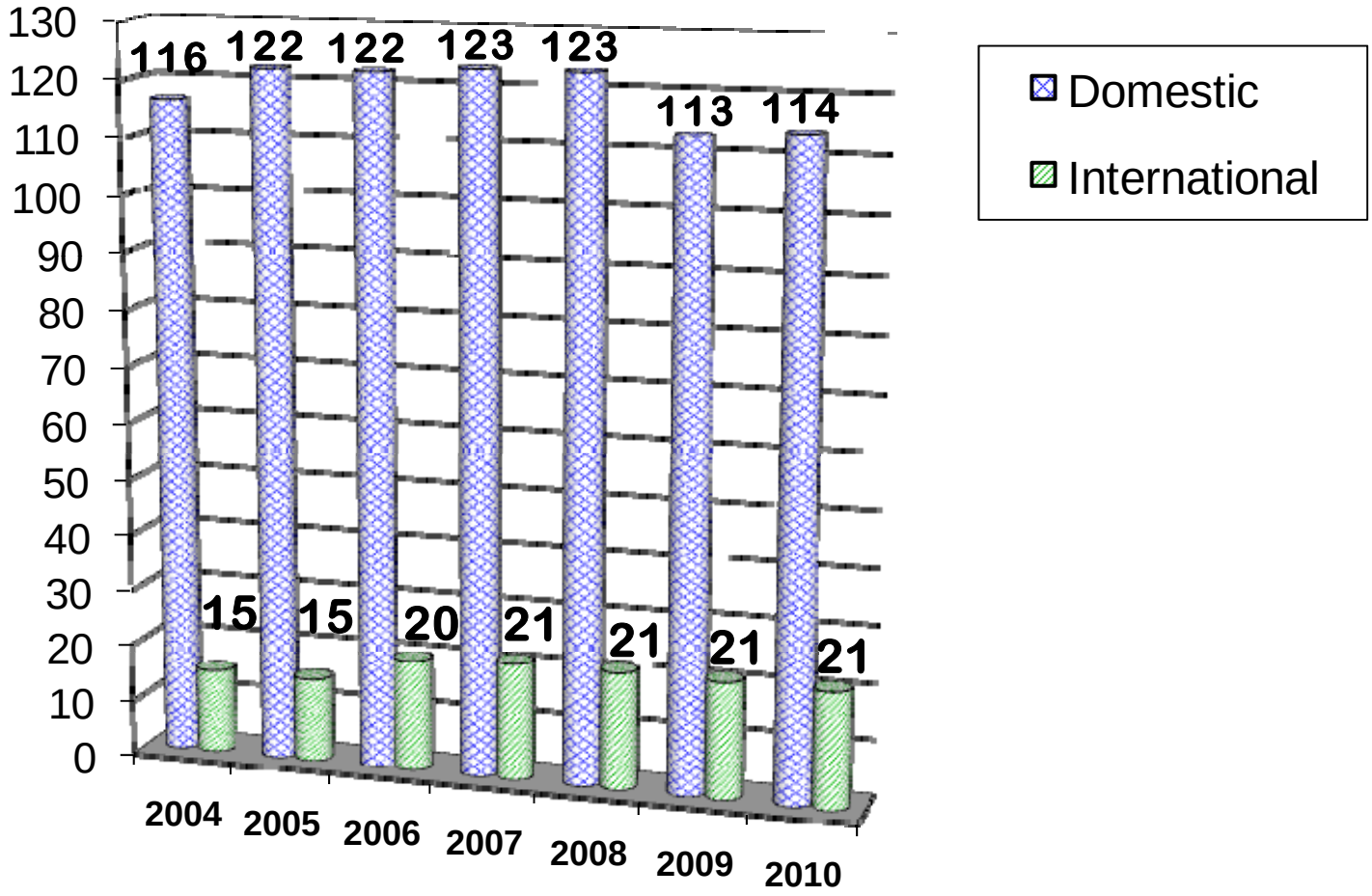
Markets served by Turboprop and Mixed Regional & Turboprop aircraft accounted for 5.9 percent and 9.6 percent respectively in 2010 compared with 5 percent and 14 percent in 2009. The remaining 41.5 percent of MSP non-stop markets in 2010 were served by Mixed Air Carrier & Regional aircraft.

Figure 2-6:
Annual Aircraft Operations
1990-2010



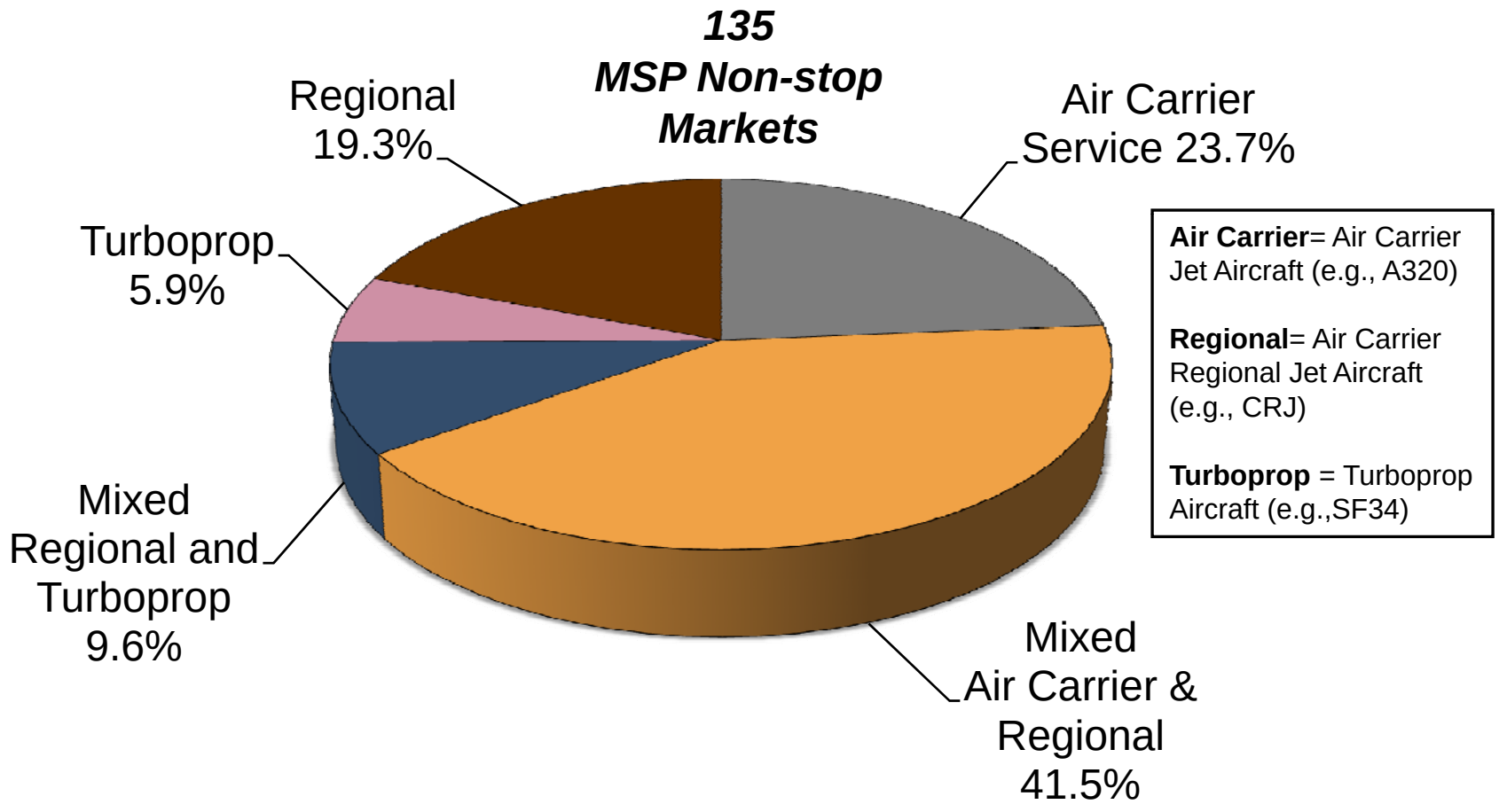
Sources: Metropolitan Airports Commission Year End Operations Report Updated 2/8/10 and FAA OpsNet.

Figure 2-7:
Number of Non-stop Markets
2004-2010



Sources: DataBase Products and BACK Aviation Solutions, Official Airline Guide, U.S. DOT T100 via InterVISTAS, and MAC Analysis

Figure 2-8:
MSP Non-stop Markets by Aircraft Type
2010



Source: Official Airline Guide, InterVISTAS, and MAC Analysis

Table 2.2 and **Figure 2-9** compare Minneapolis-St. Paul to other major metropolitan areas in terms of the number of non-stop markets served by each airport per population of the Metropolitan Statistical Area.

Table 2.2

NON-STOP MARKETS BY METROPOLITAN AREA
2010

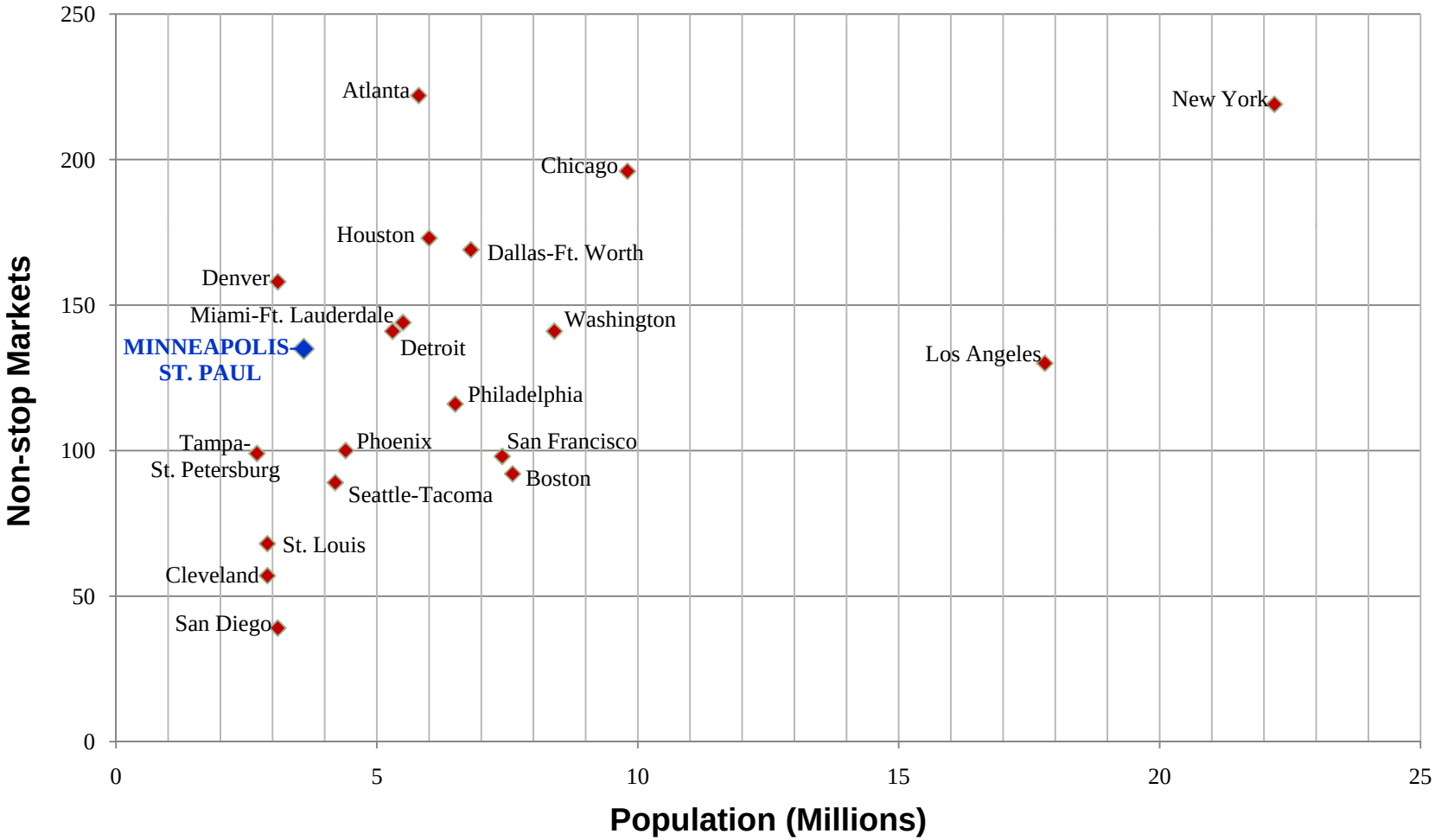
Rank	Metropolitan Area	Population[(1)] (Millions)	Non-stop Markets[(2)(3)]	Markets/Population (Millions) Ratio
1	New York	22.2	219	9.9
2	Los Angeles	17.8	130	7.3
3	Chicago	9.8	196	20.0
4	Washington D.C - Baltimore	8.4	141	16.7
5	Boston	7.6	92	12.1
6	San Francisco - Oakland	7.4	98	13.2
7	Dallas - Ft. Worth	6.8	169	24.8
8	Philadelphia	6.5	116	17.8
9	Houston	6.0	173	29.0
10	Atlanta	5.8	222	38.1
11	Miami - Fort Lauderdale	5.5	144	26.0
12	Detroit	5.3	141	26.5
13	Phoenix	4.4	100	22.9
14	Seattle	4.2	89	21.4
15	**Minneapolis - St. Paul**	**3.6**	**135**	**37.5**
16	Denver	3.1	158	50.8
17	San Diego	3.1	39	12.8
18	St. Louis	2.9	57	19.7
19	Cleveland	2.9	68	23.5
20	Orlando	2.7	99	36.0

Notes:
(1) U.S. Census Bureau; Annual Estimates of Population of Metropolitan and Micropolitan Statistical Areas: April 1, 2000 - July 1, 2009 (CBSA-EST2009-01); Annual Estimates of the Population of Combined Statistical Areas: April 1, 2000 to July 1, 2009 (CBSA-EST2009-02)

(2) Metropolitan areas served by more than one airport are counted once.
(3) Markets include those receiving an average of at least five weekly non-stop domestic flights or one weekly non-stop international flight during CY 2010.

Sources: US Census Bureau, OAG CY2010, InterVISTAS and MAC analysis

Figure 2-9:
Population vs. Non-stop Service
2010



Sources: US Census Bureau, OAG CY2010, InterVISTAS and MAC analysis

2.3 COMPARISON OF MAC FORECAST WITH ACTUAL ACTIVITY

In 2010, the MAC updated the Long Term Comprehensive Plan (LTCP) for MSP. Revised forecasts were approved as part of that process and published in mid-2010.

A critical element of the LTCP is to balance the long-term airfield, terminal, and landside facilities serving the airport. A re-appraisal of the forecasts was necessary given the merger of Delta Air Lines and Northwest Airlines and to assess the impacts of recent fuel price increases on the transportation industry as well as those of the recent economic recession.

The revised forecast analyses contain the annual and derivative activity forecasts for the airport, and assume landside and airfield capacity will be available to accommodate the anticipated demand. Forecast data were developed for the years: 2010, 2015, 2020, 2025, and 2030.

The General Base Forecast Assumptions considered during the forecasting process are detailed in the complete MSP LTCP document and include:

1. No return to airline regulation, as occurred prior to 1979; market conditions will dictate the airline services provided and associated fares/fees.
2. No major economic downturn, such as the depression that occurred during the 1930s.
3. No major international conflicts that would disrupt aviation.
4. No major trade wars or embargoes that would restrict flow of commerce and travel.
5. Security requirements are assumed as a result of terrorist activity; however, it is assumed that the Transportation Security Administration would establish measures to limit security-related delay.
6. The real cost of fuel is assumed to increase from 2009 levels; however, no major disruptions, similar to what occurred in the 1970s, are assumed.
7. No major changes in the physical environment are assumed. It is assumed that global climate changes will not be sufficient to force restrictions on the burning of hydrocarbons or major fuel tax increases.
8. Successful implementation of required changes and improvements for the national airspace system to accommodate unconstrained aviation demand are assumed.
9. No major airline consolidation is assumed due to established government regulations and labor union resistance; however, minor airline consolidation could continue. Further, it is assumed that major airlines that are in Chapter 11 bankruptcy during the preparation of the updated forecast will successfully re-emerge.
10. It is assumed that new entrants will attempt to establish service at MSP within the forecast period, including JetBlue, which will likely introduce service at MSP by 2015, while Southwest Airlines will continue to expand services and markets served from MSP.

11. It is assumed that airline alliances (e.g., SkyTeam) will continue; and Delta Air Lines is assumed to continue to operate as a hub air carrier at MSP.

The information provided in Figures 2-10 through 2-12 compares the actual 2010 activity with the 2010 updated low and high MSP forecast range. The bottom 2010 forecast line represents the low forecast range and assumes high fuel cost will cause air fares to rise and passenger demand to fall. In this scenario, by the year 2030, MSP passenger enplanements would rise slowly at an average annual increase of 1.2 percent, and aircraft operations would increase at an average annual rate of 0.6 percent.

The top 2010 forecast line represents the high range that assumes that low fuel cost will result in reduced air fares, which will boost air travel by increasing passenger demand. In this scenario, passenger enplanements will increase at an average of 2.9 percent annually, and aircraft operations are projected to increase at an average annual rate of 2 percent.

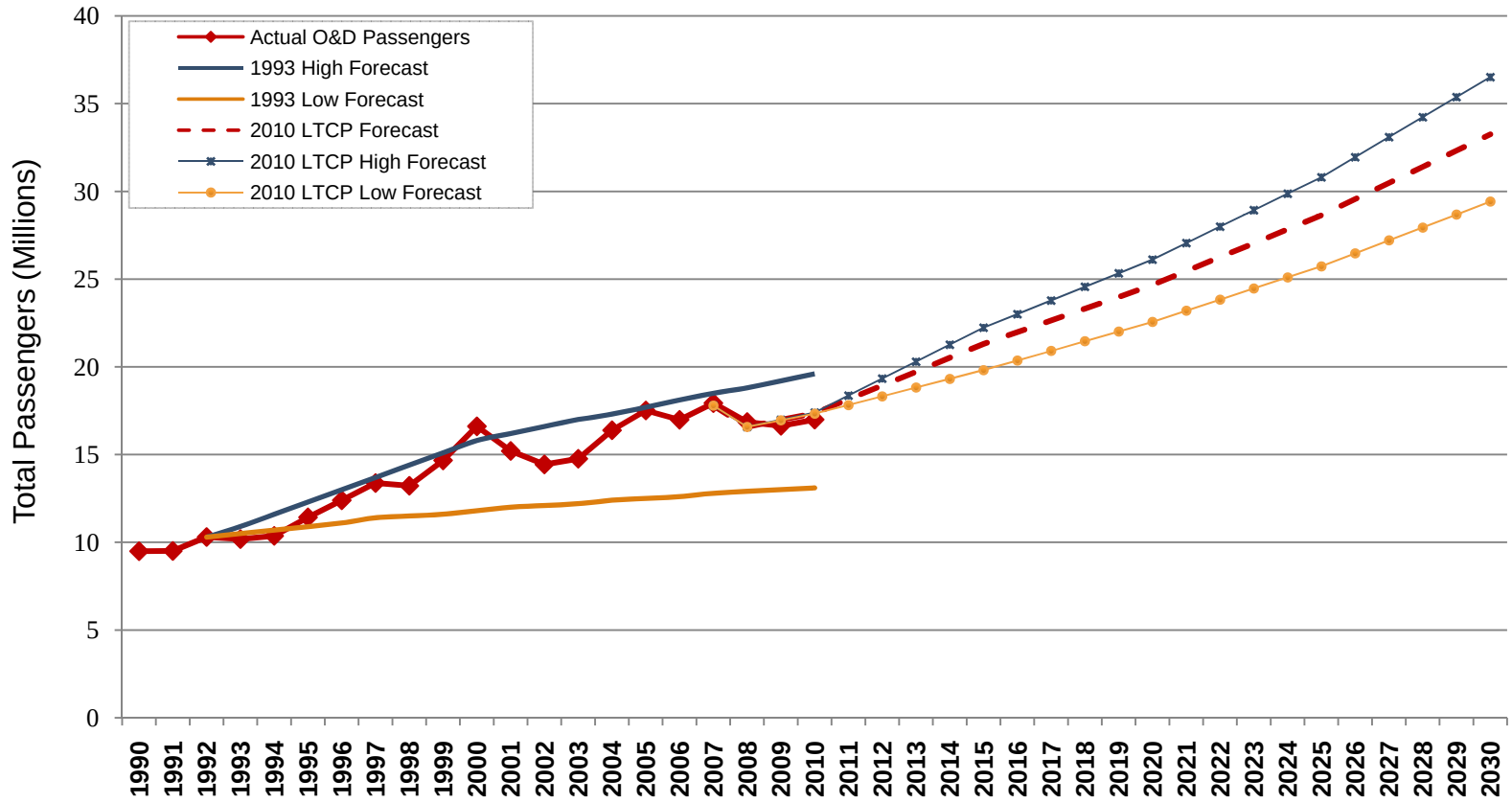
A comparison of actual 2010 activity and forecasted activity for the Origination and Destination (O&D) passengers, revenue passenger enplanements, and aircraft operations is provided in **Figures 2-10 through 2-12.** For reference, the updated 2010 forecast and the previous 1993 forecast are provided in the comparison figures. It should be noted that activity levels fluctuate from year to year around a long-term average, and it is important to distinguish between these short-term fluctuations and long-term trends when evaluating a forecast.

- **Figure 2-10** shows a comparison of actual and forecasted O&D passengers. Actual O&D passengers in 2010 were approximately 17 million, which is 2.2 percent below the 2010 LTCP Update Forecast of 17.4 million O&D passengers.

- **Figure 2-11** shows the slight increase in 2010 of actual revenue passengers over 2009 levels. This increase ended a four-year downward trend; however, the actual revenue passenger level of 31.73 million in 2010 is 4.2 percent below the 2010 LTCP Update Forecast level of 33.05 million

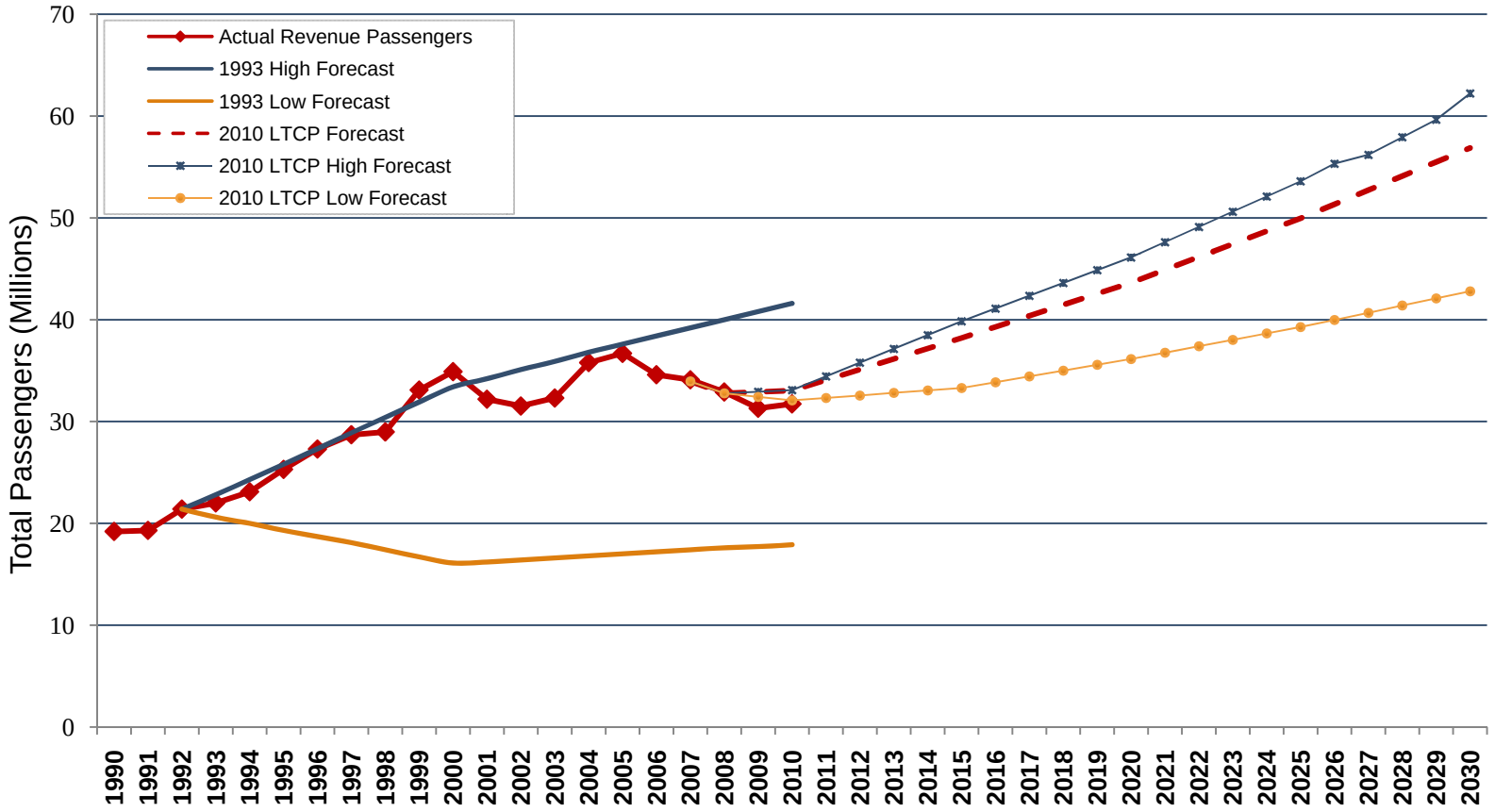
- **Figure 2-12** compares total aircraft operations as counted by the Federal Aviation Administration based on air traffic counts from MSP Air Traffic Control. Aircraft operations reached 435,583 in 2010, which is 1 percent higher than the 2009 operations level of 432,604. However, the actual total operations level in 2010 is 5.5 percent below the 2010 LTCP Update Forecast level of 463,938.

Figure 2-10:
Minneapolis-St. Paul International Airport
Forecast vs. Actual 2010 O&D Passengers



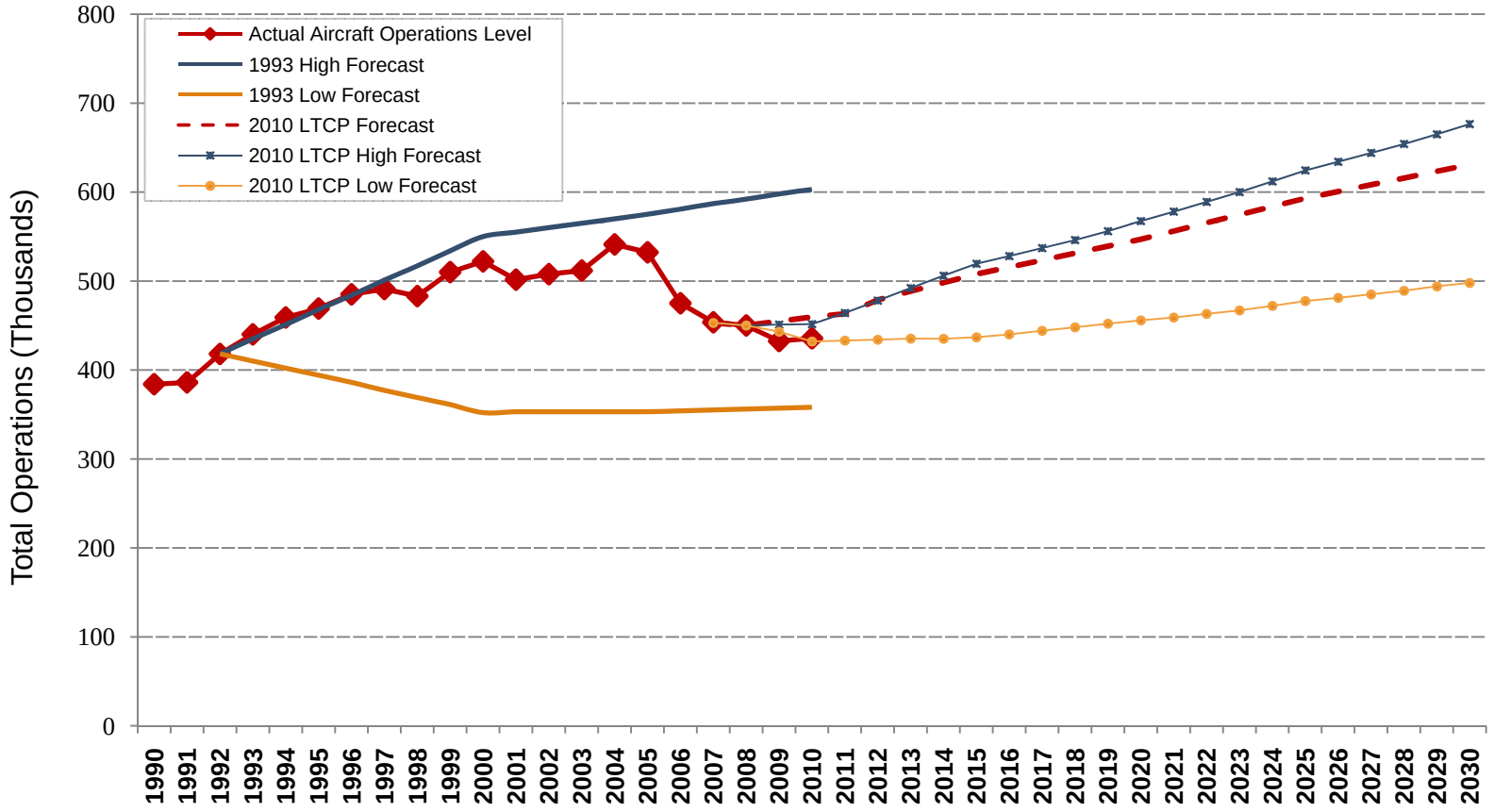
Sources: MSP Long Term Comprehensive Plan Update 2010, Metropolitan Airports Commission, and HNTB analysis.

Figure 2-11:
Minneapolis-St. Paul International Airport
Forecast vs. Actual 2010 Total Revenue Passengers



Sources: MSP Long Term Comprehensive Plan Update 2010, Metropolitan Airports Commission, and HNTB analysis.

Figure 2-12:
Minneapolis-St. Paul International Airport
Forecast vs. Actual 2010 Total Aircraft Operations



Sources: MSP Long Term Comprehensive Plan Update 2010, Metropolitan Airports Commission, and HNTB analysis.

2.4 AIRPORT CAPACITY AND DELAY

This section describes the airfield capacity at MSP. Aircraft delay analysis also is provided.

2.4.1 Airfield Capacity

Airfield capacity is typically described in terms of hourly capacity and annual capacity under good and poor weather conditions. **Table 2.3** shows existing and future hourly capacity for MSP.

Table 2.3

MSP AIRFIELD CAPACITY

Hourly Airfield Capacity	Existing	Future
Optimum Rate [1]	150	160
Marginal Rate [2]	142	155
IFR Rate [3]	120	125

Notes:
[1] Ceiling and visibility above minima for visual approaches.
[2] Below visual approach minima but better than instrument conditions.
[3] Instrument conditions (ceiling less than 1,000 feet or visibility less than 3 miles).

Source: Federal Aviation Administration (FAA) Air Traffic Control Tower Analysis

- As shown in **Table 2.3**, existing hourly capacity at MSP is about 150 operations in good weather and 120 operations in poor weather. Specific conditions that define poor weather include the airport's most commonly used instrument configuration, where operations are conducted below visual approach minima (e.g., instrument approaches).

- According to the FAA's 2004 *Airport Capacity Benchmark Report*, it is possible that improvements in technology could occur in the future that will support higher capacity levels. These improvements include advanced Traffic Management Advisor (TMA) technology to allow controllers to sequence aircraft more efficiently, and Cockpit Display of Traffic Information (CDTI) and CDTI Enhanced Flight Rules (CEFR), which will enable specially-equipped aircraft to maintain visual approaches even in marginal weather conditions.

- In 2010 the MSP Performance Based Navigation (PBN) Task Force convened to discuss the implementation of navigational technologies to enhance air traffic procedures at MSP. These enhancements include a coordinated airspace-wide

analysis for use of Area Navigation (RNAV) departure and arrival procedures and Optimum Profile Descent (OPD) arrivals.

- Forecasted aircraft operations developed for the MSP LTCP Update project total aircraft operations will reach 630,837 operations in 2030. Therefore, MSP's current airfield location and configuration have the capacity necessary to meet projected demand through 2030.

- In 2009, the MSP Noise Oversight Committee (NOC) and the MAC's Stewards of Tomorrow's Airport Resources (STAR) Program focused on development of RNAV departure procedures for Runway 17 and Runways 12L and 12R. These procedures are designed to help increase airspace efficiency and reduce airport delay, fuel burn, emissions and noise impacts. These developments are likely to positively influence airport capacity. Testing of these procedures was conducted and completed in phases with voluntary cooperation by three participant airlines that had aircraft equipped with the necessary technology. The MAC worked closely with FAA Air Traffic Control on development of these procedures and received input and endorsement from the MSP NOC prior to submitting the final procedures in late 2009 for FAA approval. These procedures are currently on hold pending the outcome of MSP Performance Based Navigation (PBN) Task Force airspace-wide coordination efforts.

2.4.2 Airfield Delay

Delay can be measured in several ways. This section reviews various delay measures as they are reported by the FAA and apply to MSP.

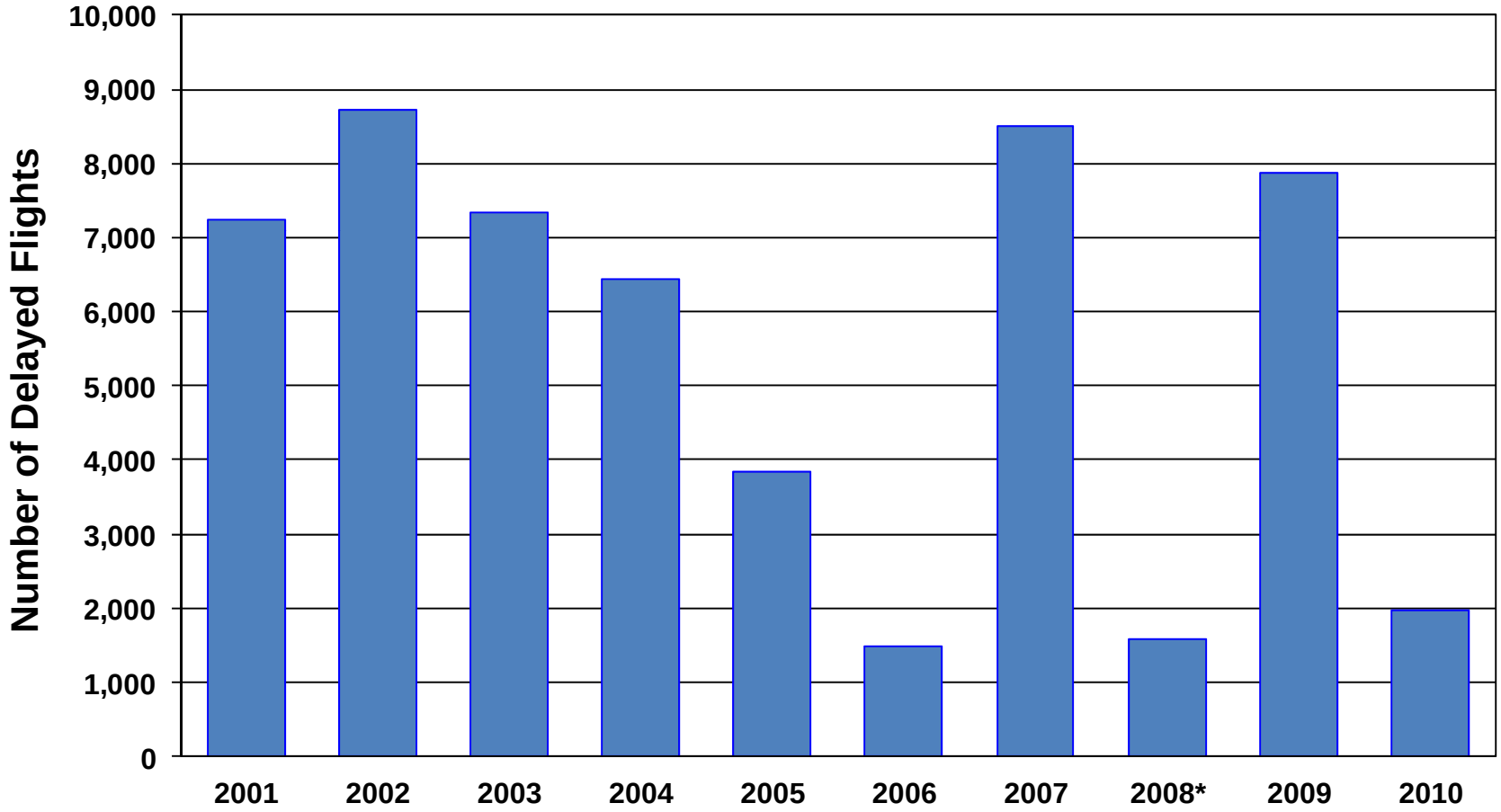
Number of Delayed Flights as Reported by the FAA

The FAA Air Traffic Operations Network (OPSNET) database counts flights that were reported by Air Traffic Control (ATC) to be delayed for more than 15 minutes. Delays of less than 15 minutes are not counted, nor are delays not initiated by ATC. In addition, since delays are reported by facility, a flight that was delayed by 13 minutes by one facility and 12 minutes by another facility (for a total delay of 25 minutes) was not included in the OPSNET database prior to October 1, 2008. These data limitations should be kept in mind when reviewing OPSNET delay data.

In 2008, the FAA made significant modifications to its reporting rules that will affect historical data comparisons. The FAA now combines arrival and enroute delays into one category, and now reports delays for aircraft which accumulate 15 minutes or more holding delay at each facility throughout the entire route of flight.

Figure 2-13 depicts the number of MSP flights delayed by ATC. Delays peaked in 2002 when a total of 8,733 flights were reported delayed. Over the next five years, the number of delayed flights steadily decreased, reaching a low of 1,474 in 2006 (which was the first full year of operation with Runway 17-35). In 2007, the closure of Runway 12R-30L for two months due to reconstruction contributed to the jump in the number of reported delays. The number of delayed flights dropped significantly in 2008 to 1,579,

Figure 2-13:
MSP Flights Delayed by ATC*
2001-2010



*This total is reported differently in 2008 due to FAA adjusting the way air traffic control calculates delays for arriving and departing flights.

Source: FAA OPSNET

but dramatically increased in 2009 to 7,880 due to the closure of Runway 12L-30R for two months for reconstruction work. The number of delayed flights in 2010 totaled 1,962.

Percentage of Flights Arriving On-time

The data series used to calculate on-time performance for arrivals is the FAA's Aviation System Performance Metrics (ASPM) database. Within this data set, aircraft must be airborne in order for them to be considered delayed; therefore, cancelled and/or diverted flights are not considered late in this system. Scheduled times typically include some cushion for delay, especially for arrivals operating during peak periods. A delayed flight can be attributed to mechanical problems, lack of crew or poor weather, and is not limited to capacity constraints.

Figure 2-14 shows average on-time gate arrival performance for domestic air carrier flights at MSP based on the delay data extracted from the FAA ASPM database. The top graph compares MSP's rolling 12-month average for on-time performance and compares it with the national average. Between 2001 and 2008, the highest on-time performance for MSP occurred in 2002 and 2003, when overall annual on-time performance averaged about 84 percent. In 2004 and 2005, on-time performance slowly declined to about 80 percent, and remained at roughly 80 percent through 2006. In general, MSP's on-time performance has tracked fairly closely to the national average. MSP saw its on-time performance decline in 2007 to a low of 73 percent due to reconstruction of Runway 12R-30L from August 13, 2007 to October 18, 2007 and poor weather at MSP in December 2007. In 2008 MSP's on-time percentages remained steady at about 74 percent for the first six months. By year's end the annual average in 2008 rose to 79.6 percent.

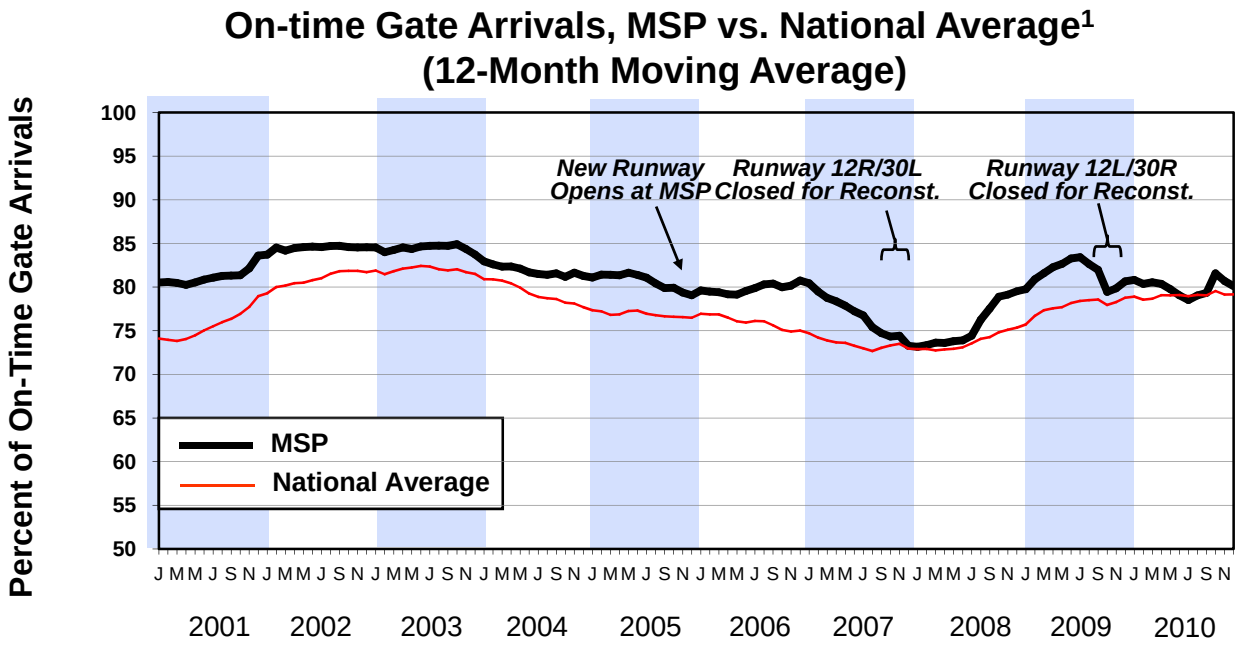
In 2009, MSP's annual rolling average for on-time gate arrivals reached a high of 83.4 percent by July, but then dipped to 80.6 percent by the end of the year. The reconstruction of Runway 12L-30R from August 18 to October 30, 2009 was a contributing factor to this decline in on-time performance. In 2010, the rolling average for on-time gate arrivals reached 80.8 percent in January, tracked slightly above the national average level until June, then remained slightly below the national average through the summer months. In October the 12-month rolling average peaked at 81.57 percent and then dipped to 80.10 percent in December.

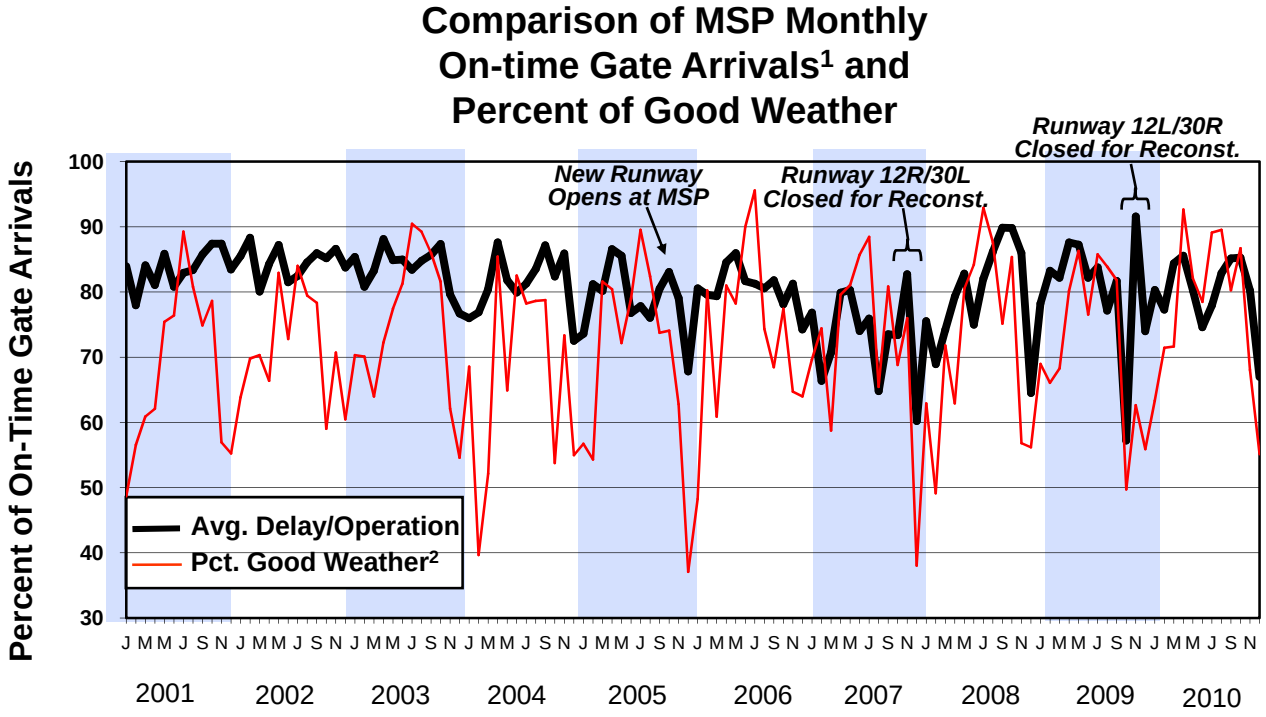
Average Delay per Aircraft Operation

Finally, average delay per operation that is attributable to the airport is examined. Airport-attributable delay can be estimated by comparing a flight's actual air and taxi times with estimated unconstrained times. The total cumulative amount of delay experienced by all scheduled flights in the database is then divided by the total number of flights in the database for the same time period. The output is usually expressed in minutes of delay per operation.

In editions of this report prior to 2005, delay was estimated by using the FAA's Consolidated Operations and Delay Analysis System (CODAS) and the U.S.

Figure 2-14





1. Percentage of flights arriving within 15 minutes of scheduled arrival time. National average consists of the top 55 airports in ASPM database through Oct. 2004 and top 75 airports for rest of period.
2. Good weather is defined as when conditions may allow visual approaches; actual separation standards used at time of observation are not available in ASPM database.

Sources: FAA-APO Aviation System Performance Metrics (ASPM) database.

Department of Transportation (DOT) Airline Service Quality Performance (ASQP) database to compare optimal vs. actual taxi and flight times for MSP.

Subsequent to 2005, the FAA's Aviation System Performance Metrics (ASPM) database was used to estimate delay. The FAA replaced CODAS with this new program, providing delay information to industry professionals and government agencies. ASPM data come from ARINC's Out-Off-On-In (OOOI), Enhanced Traffic Management System (ETMS), ASQP, weather data, airport arrival and departure rates (15-minute interval), airport runway configurations and cancellations. Creation of the ASPM database provided a more comprehensive analysis of airport delay and capacity. The FAA also uses the results to create performance benchmarks for airports based on facility enhancements that occur each year. The FAA's main objective was to develop a clear and well-supported methodology to calculate aircraft delays that would be accepted by both government and industry as valid, accurate and reliable. Currently, there is general industry acceptance of the ASPM metric.

The ASPM information presented in **Figure 2-15** shows average delay per operation. The top graph compares MSP's 12-month rolling average with the average for 75 high-delay airports tracked by the FAA. Between 2001 and 2005, MSP's average delay per operation ranged between 6.5 minutes and 7.1 minutes, while the average delay for the 75 airports tracked by the FAA ranged from about 4.8 minutes to 5.6 minutes. After MSP's new runway opened in late October 2005, average delay per aircraft began to decrease dramatically, reaching a low of about 5.5 minutes toward the end of 2006. The 12-month rolling average delay per operation began to increase steadily, reaching about 7.5 minutes by the end of 2007, while average delay for the 75 airports tracked by the FAA remained fairly constant at about 6.0 minutes. During 2008, MSP's average delay per operation dropped from 7.6 minutes in January to 5.6 in December, and remained between 5.0 and 5.9 minutes until October 2010 when the 12-month rolling average reached an all-time low average delay per aircraft operation of 4.83 minutes.

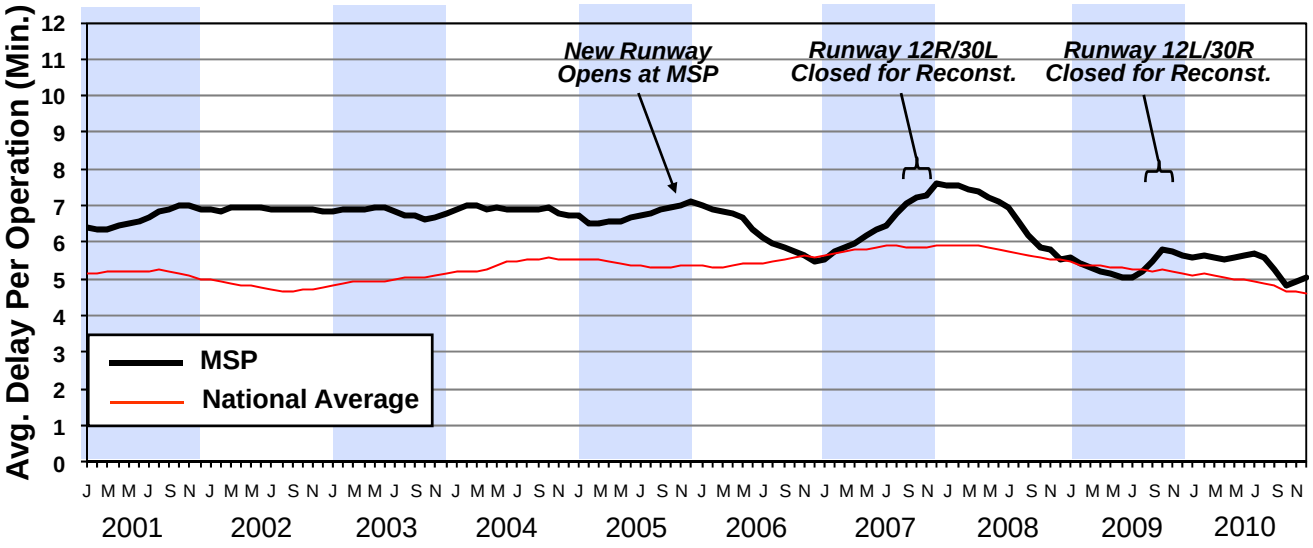
There are many factors that contribute to airfield delay, including poor weather conditions, runway closures (typically due to construction), changes in airline schedules, changes in Air Traffic Control procedures, airline fleet mix changes, airline practices, and other factors. In addition, how delays are defined or reported can change over time. For these reasons, it is often difficult to determine and report the precise causes for delays or to be definitive about delay trends.

The bottom graph of **Figure 2-15** compares MSP's month-by-month average delay per operation with the percentage of time the airport operated in poor weather conditions (which typically increases delays). As shown, the highest delays were experienced in summer 2007 when Runway 12R-30L was closed for reconstruction, and again in December 2007 when the airport was operating in poor weather conditions more than 60 percent of the time.

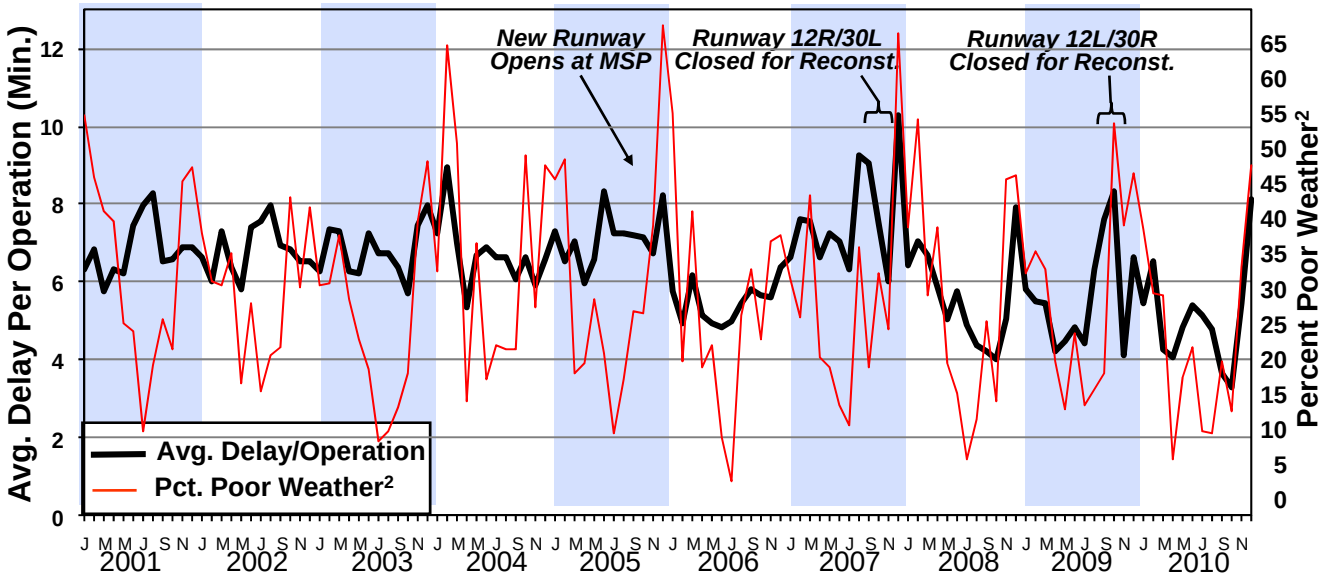
Poor weather conditions contributed significantly to the level of delay exceeding 7.1 minutes in February 2008, 7.9 minutes in December 2008, and 8.3 minutes in October 2009. When compared to other large hub U.S. airports as shown in **Table 2.4**, MSP ranked 11th overall in 2010 in terms of highest average delay per operation.

Figure 2-15

MSP Average Delay Per Aircraft Operation[1] Compared to National Average (12-Month Moving Average)



Comparison of MSP Average Delay Per Aircraft Operation and Percent Poor Weather[2]



(1) An operation is either a landing or a takeoff. National average consists of top 55 airports in ASPM database through Oct. 2004 and top 75 airports for rest of period.

(2) Poor weather is defined as when aircraft must make instrument approaches; actual separation standards used at time of observation are not available in ASPM database.

Sources: FAA-APO Aviation System Performance Metrics (ASPM) database.

Table 2.4

TOP 15 LARGE HUB AIRPORTS
WITH HIGHEST AVERAGE TOTAL DELAY PER OPERATION

Rank	Airport	2010 Total Airport Operations	2010 Average Minutes of Delay per Operation	2009 Avg. Minutes of Delay per Operation	2009 Rank	Change from 2009 to 2010
1	LGA	367,346	9.3	10.4	2	-1.1
2	JFK	404,174	9.1	10.7	1	-1.6
3	ATL	950,119	7.6	8.9	5	-1.3
4	PHL	460,779	7.4	9.5	4	-2.1
5	EWR	408,821	6.8	10.0	3	-3.2
6	DTW	432,589	6.5	6.4	6	0.1
7	ORD	882,617	5.3	6.3	7	-1.0
8	SLC	365,579	5.3	6.0	8	-0.7
9	BOS	368,851	5.3	5.6	11	-0.3
10	CLT	529,107	5.2	5.8	9	-0.6
11	**MSP**	**435,583**	**5.1**	**5.6**	**12**	**-0.5**
12	DEN	635,458	4.6	5.7	10	-1.1
13	DFW	652,258	4.6	5.2	14	-0.6
14	MIA	376,208	4.6	4.5	21	0.1
15	IAH	531,983	4.4	5.3	13	-0.9

Source: FAA OPSNET for airport operations data, and FAA ASPM for average minutes of delay (taxi-in, taxi-out, and airborne delay).

2.5 TECHNOLOGICAL AND CAPACITY ENHANCEMENTS

The FAA continuously investigates potential capacity-enhancing development/ technology in an effort to increase airport efficiency and reduce delay. When advances are identified, efforts are made to implement the technology at the busiest airports. This section describes these efforts as they apply to MSP.

- In 1993, the FAA published the *Minneapolis-Saint Paul International Airport Capacity Enhancement Plan*. The purpose of the plan was to identify potential cost-effective projects which would appreciably increase airport capacity. The plan was followed by the 1996 *Airport Capacity Enhancement Terminal Airspace Study*, which identified potential methods of improving airspace capacity.

- Airport Surface Detection Equipment (ASDE-3) was installed at MSP in 1996 to allow air traffic controllers to "see" aircraft maneuvering on the ground during poor visibility conditions. Installation of an upgraded system called ASDE-X was completed in 2009, but the upgraded system retained some components of the older ASDE-3. All-in-all, the upgraded system added remote units around MSP's airfield to provide for more precise aircraft positioning; it provides seamless coverage for complete aircraft identification information, and it will allow for the Next Generation (NextGen) of navigation technology (Automatic Dependence Surveillance - Broadcast "ADS-B") to broadcast critical information using the Global Navigation Satellite System.

- Capacity improvements at MSP will be aided by the use of Flight Management System/Area Navigation Routes (FMS/ RNAV). These RNAV Routes will provide a more efficient and predictable traffic flow of aircraft during the arrival and departure phases of flight. In 2009 development of RNAV departure procedures for Runways 17, 12L and 12R were completed by the MAC in coordination with the FAA and three air carrier service airlines at MSP. The MSP Noise Oversight Committee endorsed the final procedures in July 2009; the MAC board approved the procedures in December; and the final procedures were submitted for FAA approval and implementation in late 2009. As mentioned in section 2.4.1, these procedures are currently on hold pending the outcome of MSP Performance Based Navigation (PBN) Task Force airspace-wide coordination efforts.

- In an effort to increase the operational efficiency and capacity of MSP during inclement weather, the MAC has implemented additional CAT II and CAT III capabilities at the airport. Cat II approaches (currently on Runway 30L) allow approaches down to 1200 feet visibility and 110-feet cloud ceiling. CAT III(a) approaches (Runway 12R) allow descent down to 700 feet visibility and no ceiling. CAT III(b) approaches (currently on Runways 12L and 35) allow descent down to 600 feet visibility, and no ceiling.

- Future increases in MSP capacity levels will depend, in part, on the introduction of new aircraft avionics. An enhanced tool called Automatic Dependent Surveillance-Broadcast/Cockpit Display of Traffic Information (ADS-B/CDTI)

identifies the location of other aircraft and displays their position in the cockpit. This technology allows pilots to maintain the desired separation between aircraft more precisely; however, aircraft must be properly equipped to use this device. The ADS-B system requires associated ground equipment to be installed to facilitate the transfer of traffic information to the aircraft. The ground equipment associated with ADS-B was installed at MSP in September 2010. The FAA has issued a Notice of Proposed Rule Making that calls for all aircraft that will operate in a terminal area, such as MSP, to have on-board aircraft equipment by 2020.

- Alternative airspace improvements were studied in the *Airport Capacity Enhancement Terminal Airspace Study*. The report found that the existing airspace around MSP could be reconfigured to accommodate the then-proposed north-south runway. In addition, airspace efficiency could be improved either by adding a new jet arrival fix or a new parallel jet arrival stream. These improvements were implemented with the opening of Runway 17-35 in October 2005.

- In 2009, installation of the Multilateration Flight Tracking (MLAT) System and upgrades to the Metropolitan Airports Commission Noise and Operations Monitoring System (MACNOMS) were completed and full implementation occurred in 2010. The original Airport Noise and Operations Monitoring System (ANOMS) was installed in 1992 and was used extensively for reporting and analyzing aircraft operations and related noise levels around MSP. Data limitations with ANOMS included a minimum hold period of three days before the flight tracks were received and available for analysis. The new MLAT System provides increased functionality and same-day flight track data availability, including near real-time access to flight track data through the noise program website: www.macnoise.com.

2.5.1 Precision Instrument Approaches

In addition to runway separation and configuration, airfield capacity can be greatly affected by how the runways are equipped for inclement weather. The number and type of precision instrument approaches at MSP is summarized in **Table 2.5**.

Table 2.5

PRECISION INSTRUMENT APPROACHES

MSP	CAT I	CAT II	CAT III
Runways:	30R	30L	12L (b) 12R (a) 35 (b)

Notes: The term decision height is defined as the height at which a decision must be made during a precision approach to either continue the landing maneuver or execute a missed approach.

Precision approaches are categorized based on decision height and the horizontal visibility that a pilot has along the runway. Visibility values are expressed in statute miles or in terms of runway visual range (RVR) if RVR measuring equipment is installed at an airport.

The different classes of precision instrument approaches are:

i. Category I (CAT I) – provides approaches to a decision height down to 200 feet and a basic visibility of ¾ statute miles or as low as 1,800 feet RVR.
ii. Category II (CAT II) – provides approaches to a decision height down to 100 feet and an RVR down to 1,200 feet.
iii. Category IIIa (CAT IIIa) – provides approaches without a decision height (down to the ground) or a decision height below 100 feet and an RVR down to 700 feet.
iv. Category IIIb (CAT IIIb) – provides approaches without a decision height or a decision height below 50 feet and an RVR down to 150 feet.
v. Category IIIc (CAT IIIc) – provides approaches without a decision height and RVR. This will permit landings in "0/0 conditions," that is, weather conditions with no ceiling and visibility as during periods of heavy fog.

Source: December 2006 U.S. Terminal Procedures, NOAA.

2.6 STEWARDS OF TOMORROW'S AIRPORT RESOURCES (STAR) PROGRAM

The Metropolitan Airports Commission (MAC) has been a longtime leader in addressing environmental concerns through a wide spectrum of initiatives, ranging from a standard-setting noise mitigation program to the preservation of Minnesota wetlands.

The MAC views environmental sustainability as an integral part of its mission and is committed to setting the standard in environmental stewardship in the development and operation of its airport system. Sustainable solutions are those that address long-term environmental, operational, financial and social needs.

Recognizing that MSP is a large and complex operation with many stakeholders, the MAC is focused on optimizing and improving all MAC-controlled operation and development actions at MSP in an effort to minimize impacts to the environment and implement sustainable solutions. Additionally, the MAC continues to conduct outreach and advocacy to influence, to the degree possible, non-MAC-controlled activities at MSP to further reduce environmental impacts.

At the March 17, 2008 MAC Commission meeting, the Stewards of Tomorrow's Airport Resources (STAR) Program was introduced. The intent of the STAR Program is to maintain a focus on the MAC's commitment to the environment and the community through the development of initiatives that are environmentally-sound and contribute to the financial viability and operational efficiency at MSP and the reliever airports.

Sustainable practices to date focus on the following areas:

- Energy Conservation/Renewable Energy
- Green Buildings, Facilities and Infrastructure
- Water Quality and Conservation
- Air Quality
- Waste Management and Recycling
- Noise Abatement
- Natural Resources Management
- Financial Stability

The 2010 energy conservation program is estimated to have reduced electrical consumption by 825 MWH/yr and natural gas usage by 148,500 Therms/yr, which results in a projected utility cost savings of $208,600. In addition, the MAC received utility company rebates of approximately $30,000 for 2010.

Since the STAR program's inception in 2008, the calculated electrical-usage reduction is 135,137,625 kilowatts; gas-usage reduction is 748,148 therms; and the cumulative total utility cost reduction equates to $9,919,000. Additionally, the 2008-2010 utility rebates total $174,394.

In 2010, the MAC STAR Program accomplishments included energy conservation projects and education, environmental enhancements for facilities, water quality and conservation efforts, and air quality improvements.

Other STAR program efforts in 2010 included:

1. Recovering heat expelled from the Terminal 1-Lindbergh boilers and installation of supplemental cooling to allow the winter chilled water cooling system to be used in lieu of the less-efficient air-cooled condensing units.

2. Lighting conservation at Concourse C with installation of automatic lighting controls that turn off lights when the space is unoccupied.

3. Installation of energy conservation devices on moving walks and escalators. These devices will reduce moving walkway energy consumption by approximately 15 percent and escalator energy consumption by 23 percent.

4. Evaluation of infrared imaging used to identify areas of Terminal 1-Lindbergh that waste energy through excessive air leakage or inadequate insulation.

3. RELIEVER AIRPORTS

3.0 OVERVIEW

The Metropolitan Airports Commission (MAC) owns and operates six reliever airports throughout the metropolitan area that surrounds Minneapolis-St. Paul International Airport (MSP). Reliever airports are defined by the Federal Aviation Administration (FAA) as airports designated to relieve congestion at commercial service airports and to provide improved general aviation access to the overall community. This system of airports generates an estimated $1.4 billion annually for the Twin Cities economy[6] while reducing general aviation operations at MSP. The reliever airports are Airlake, Anoka County-Blaine, Crystal, Flying Cloud, Lake Elmo and St. Paul Downtown.

This portion of the report highlights the facilities and activities at each of the reliever airports and organizes the information into the following three sections:

- Description of Reliever Airport Facilities
- Historic and Existing Activity Levels
- Development Programs

3.1 RELIEVER AIRPORT FACILITIES

According to the Metropolitan Council Transportation Policy Plan, adopted January 14, 2009, all but one of the MAC reliever airports are classified as minor airports. This means that primary runway lengths are between 2,500 and 5,000 feet. St. Paul Downtown is classified as an intermediate airport, which means its primary runway is between 5,000 and 8,000 feet long.

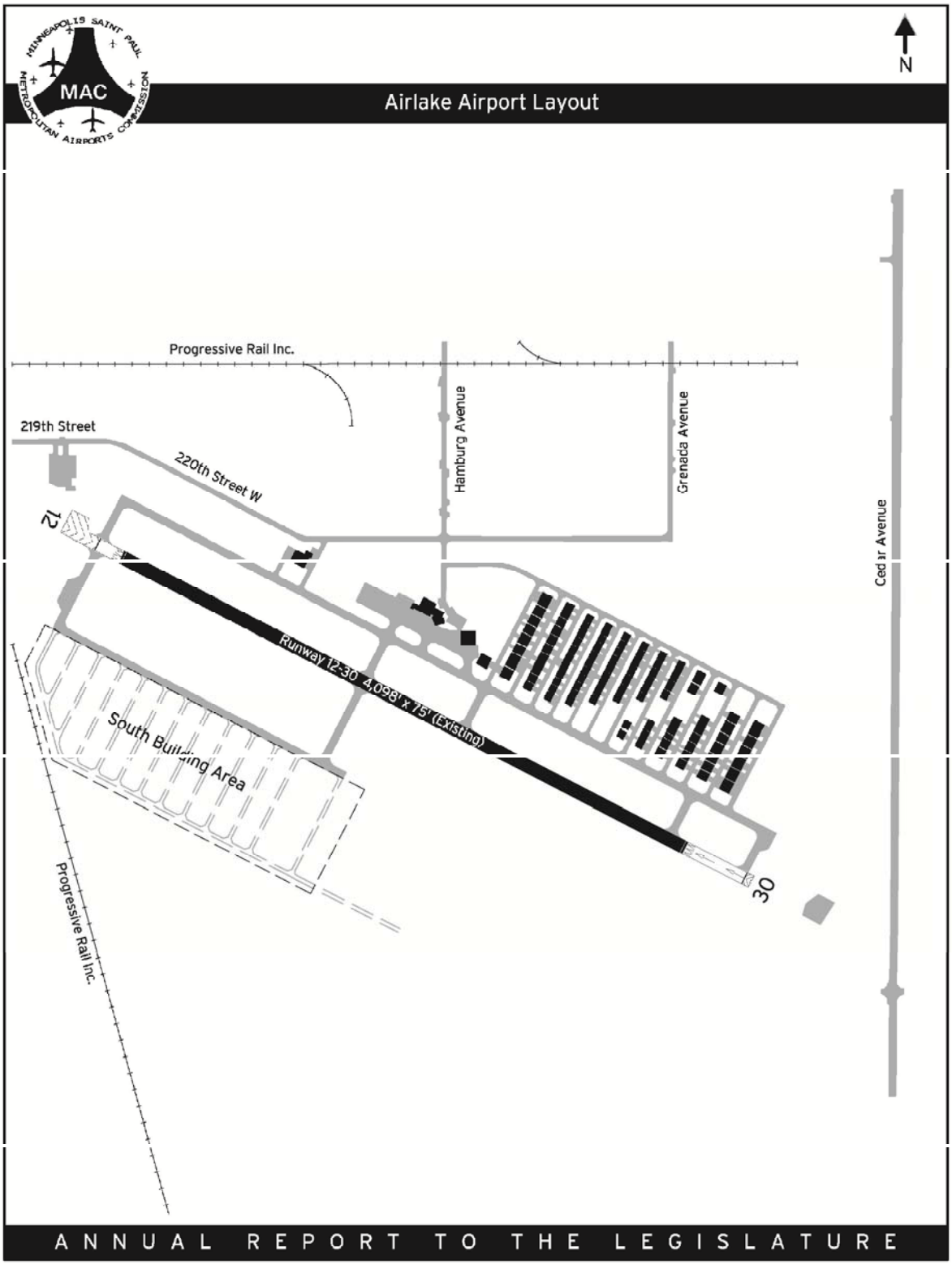
Airport users at the MAC reliever airports include air taxi, business aviation, general aviation, flight training, recreational aviation, and military aviation. Each of the reliever airports is open for public use 24 hours per day, in keeping with federal regulations. The following sections outline the existing airport facilities at each location.

3.1.1 Airlake Airport (LVN)

Airlake Airport (LVN) consists of approximately 595 acres, and the airfield includes one northwest-southeast runway and one full-length parallel taxiway. Runway 12-30 is 4,098 feet long by 75 feet wide. The airport has a precision instrument approach to Runway 30 and a non-precision approach to Runway 12. **Figure 3-1** shows the general airport layout and facilities. A Fixed Base Operator (FBO) at the airport provides fueling and aircraft maintenance services. The airport had approximately 147 based aircraft and an estimated 35,662 aircraft operations in 2010. There is no Air Traffic Control

[6] Metropolitan Airports Commission, Economic Impact Analysis of the Reliever Airport System, Wilder Research, October 2005

Figure 3-1: Airlake Airport (LVN) Layout



Tower located at the airport. Aircraft operators utilize common traffic advisory procedures while flying to and from the airport.

3.1.2 Anoka County-Blaine Airport (ANE)

Anoka County-Blaine Airport (ANE), also known as Janes Field, consists of approximately 1,900 acres, and the airfield includes one east-west runway and one north-south runway. Both runways have full-length parallel taxiways. Runway 9-27 is 5,000 feet long by 100 feet wide and Runway 18-36 is 4,855 feet long by 100 feet wide. The airport has a precision instrument approach to Runway 27 and non-precision instrument approaches to Runways 9, 18 and 27. **Figure 3-2** shows the general airport layout and facilities. Two FBOs at the airport provide fueling, flight training and aircraft maintenance services for aircraft and helicopters. The airport had 433 based aircraft and 79,589 aircraft operations in 2010. A non-federal Air Traffic Control Tower is located at the airport and operates each day in the winter from 7 a.m. to 9 p.m., and 7 a.m. to 10 p.m. in the summer. The change in operating hours coincides with daylight saving time.

3.1.3 Crystal Airport (MIC)

Crystal Airport (MIC) consists of approximately 436 acres and includes two northwest-southeast runways and two southwest-northeast runways. Runway 14R-32L has a full-length parallel taxiway. Runway 14L-32R is 3,263 feet long by 75 feet wide, Runway 14R-32L is 3,266 feet long by 75 feet wide and Runway 6L-24R is 2,499 feet long by 75 feet wide. The turf runway (6R-24L) is 2,122 feet long by 150 feet wide, and is closed during the winter months. The airport has two non-precision instrument approaches. **Figure 3-3** shows the general airport layout and facilities. Three FBOs at the airport provide fueling, flight training and aircraft maintenance services. The airport had 219 based aircraft and 44,229 annual aircraft operations in 2010. An FAA-operated Air Traffic Control Tower is located at the airport and operates each day in the winter from 7 a.m. to 9 p.m., and 7 a.m. to 10 p.m. in the summer. The change in operating hours coincides with daylight saving time.

3.1.4 Flying Cloud Airport (FCM)

Flying Cloud Airport (FCM) consists of approximately 860 acres and includes two east-west runways and one north-south runway. All runways have full-length parallel taxiways. Runway 10R-28L was extended to 5,000 feet long and widened to 100 feet in 2009; Runway 10L-28R was extended to 3,900 feet in 2008 and is 75 feet wide; and Runway 18-36 is 2,691 feet long by 75 feet wide. The airport has a precision instrument approach to Runway 10R and non-precision instrument approaches to Runways 10L, 28L, 28R, 18, and 36. It also has a published precision instrument approach procedure for helicopters. **Figure 3-4** shows the general airport layout and facilities. Six FBOs at the airport provide fueling, flight training and aircraft maintenance services for aircraft and helicopters. The airport had approximately 403 based aircraft and 94,244 aircraft operations in 2010. An FAA-operated Air Traffic Control Tower is located at the airport,

Figure 3-2: Anoka County-Blaine Airport (ANE) Layout

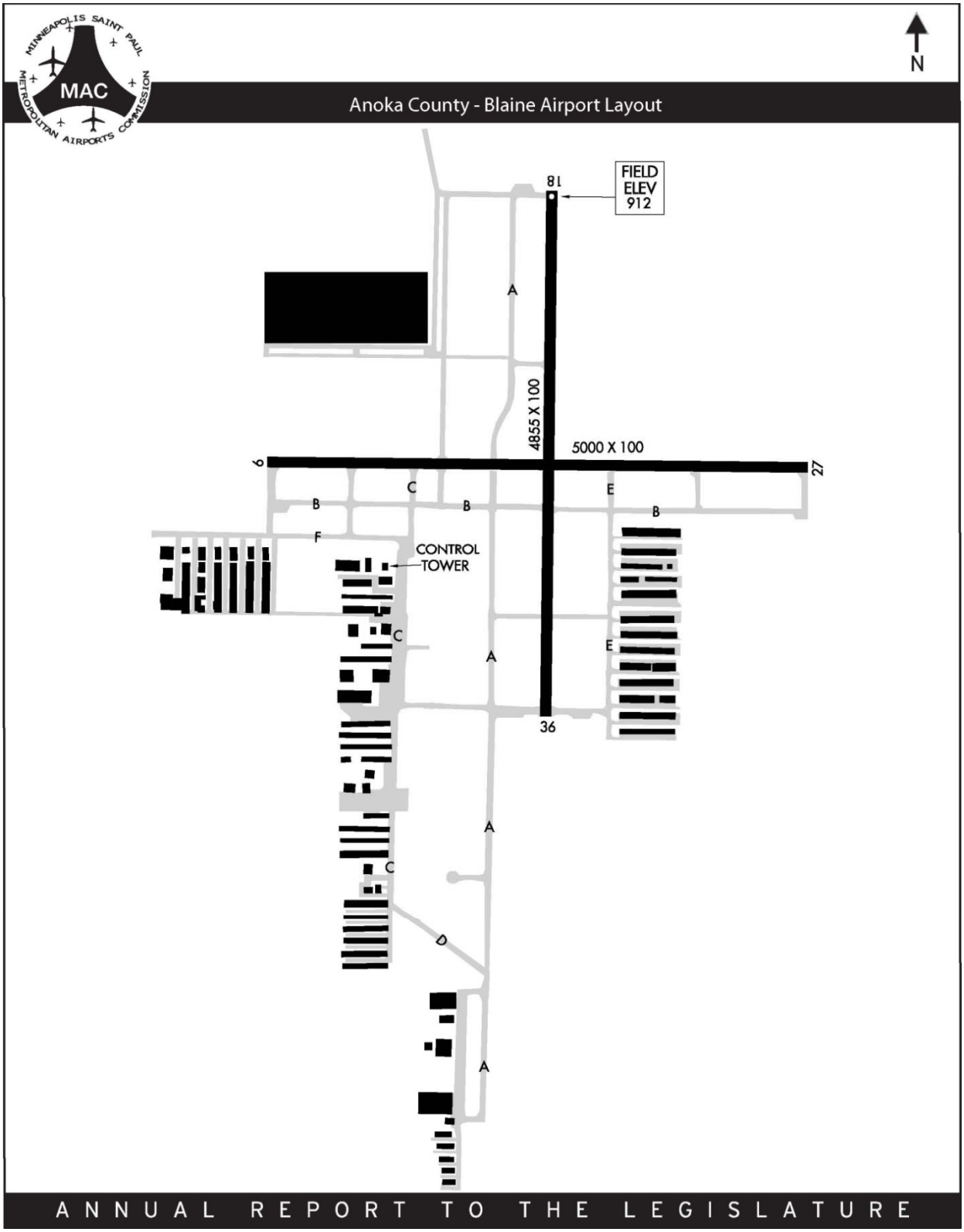


Figure 3-3: Crystal Airport (MIC) Layout

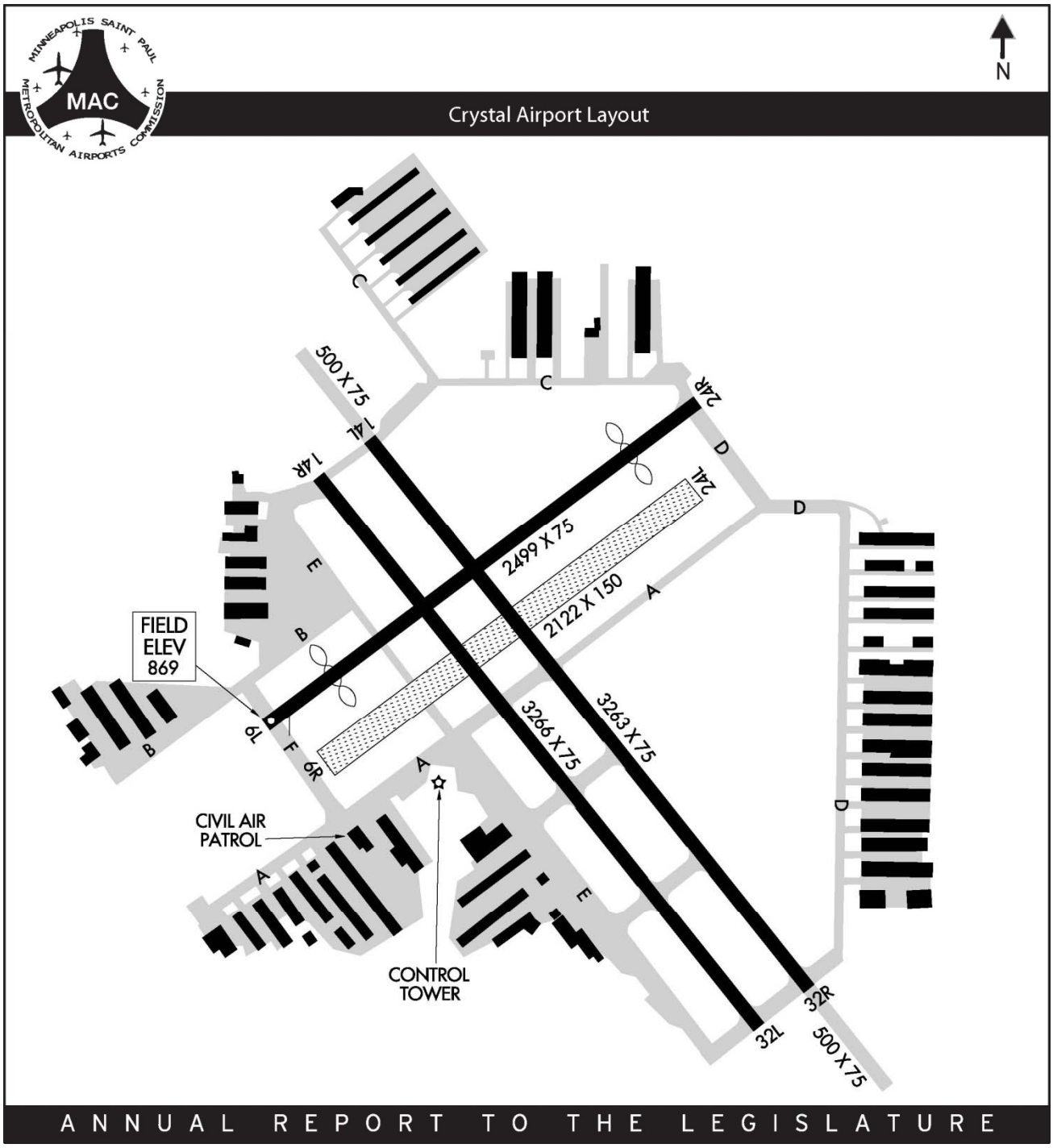
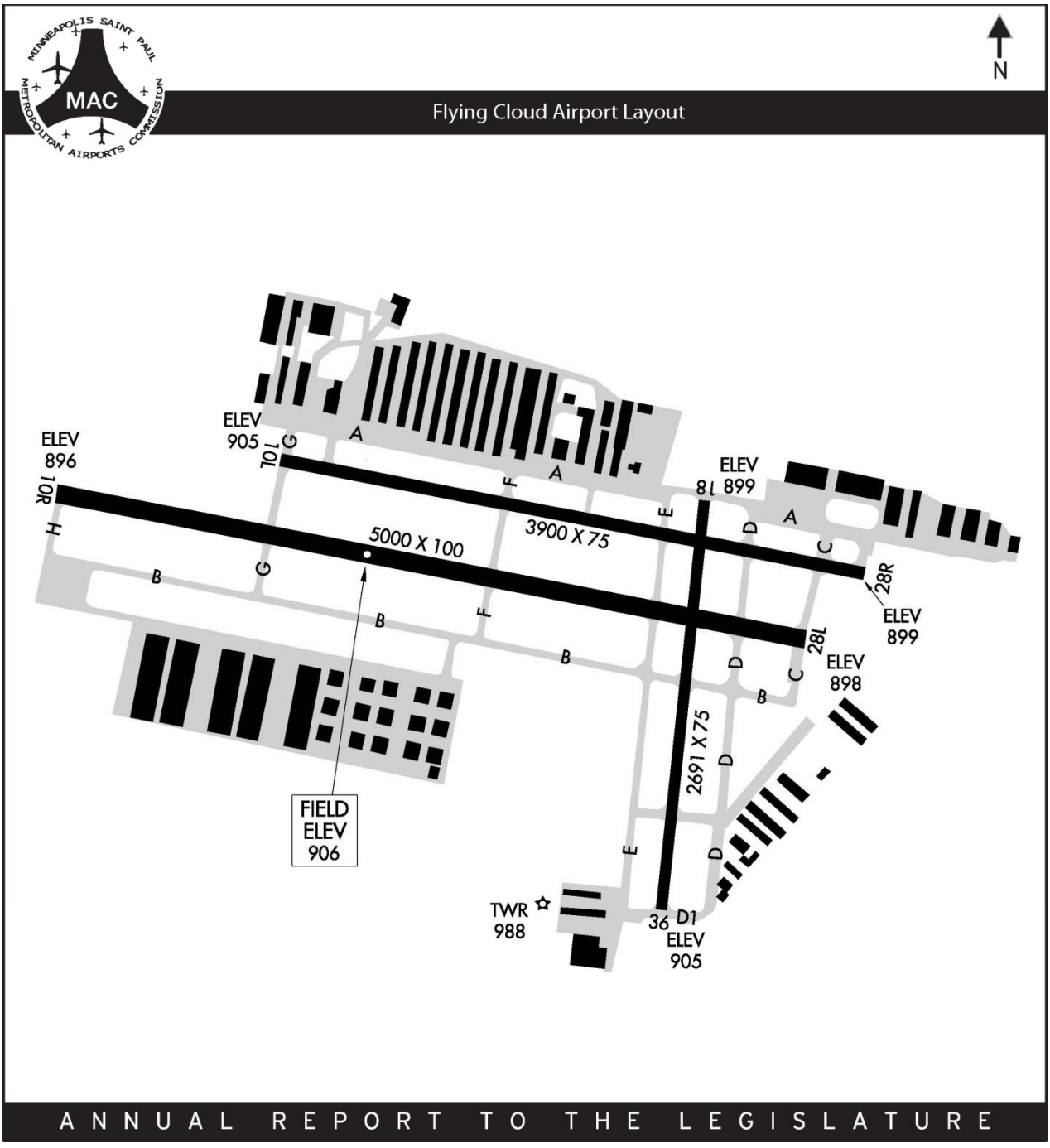


Figure 3-4: Flying Cloud Airport (FCM) Layout



and operates each day in the winter from 7 a.m. to 9 p.m. and 7 a.m. to 10 p.m. in the summer. The change in operating hours coincides with daylight saving time.

3.1.5 Lake Elmo Airport (21D)

Lake Elmo Airport (21D) consists of approximately 640 acres and includes one northwest-southeast runway and one southwest-northeast runway. Both runways have full-length parallel taxiways. Runway 14-32 is 2,850 feet long by 75 feet wide, and Runway 4-22 is 2,497 feet long by 75 feet wide. The airport has two non-precision instrument approaches to the airport. **Figure 3-5** shows the general airport layout and facilities. One FBO at the airport provides fueling, flight training and aircraft maintenance services. The airport had 229 based aircraft and an estimated 34,374 aircraft operations in 2010. There is no Air Traffic Control Tower located at the airport. Aircraft operators utilize common traffic advisory procedures while flying to and from the airport.

3.1.6 St. Paul Downtown Airport (STP)

St. Paul Downtown Airport (STP) is commonly referred to as Holman Field. The land area measures approximately 576 acres, and the airfield consists of two northwest-southeast runways and one east-west runway. Runway 14-32 has a full-length parallel taxiway. Both of the other runways have partial parallel taxiways. Runway 14-32 is 6,491 feet long by 150 feet wide; Runway 13-31 is 4,004 feet long by 150 feet wide; and Runway 9-27 is 3,642 feet long by 100 feet wide. The airport has precision instrument approaches to Runways 14 and 32 and non-precision instrument approaches to Runways 14, 31 and 32. It also has a published precision instrument approach procedure for helicopters. **Figure 3-6** shows the general airport layout and facilities. Two FBOs at the airport provide fueling, flight training and aircraft maintenance services for aircraft. The airport had 100 based aircraft and 88,995 aircraft operations in 2010. An FAA-operated Air Traffic Control Tower is located at the airport and operates from 7 a.m. to 10 p.m. on weekends and 6 a.m. to 10 p.m. on weekdays.

Figure 3-5: Lake Elmo Airport (21D) Layout

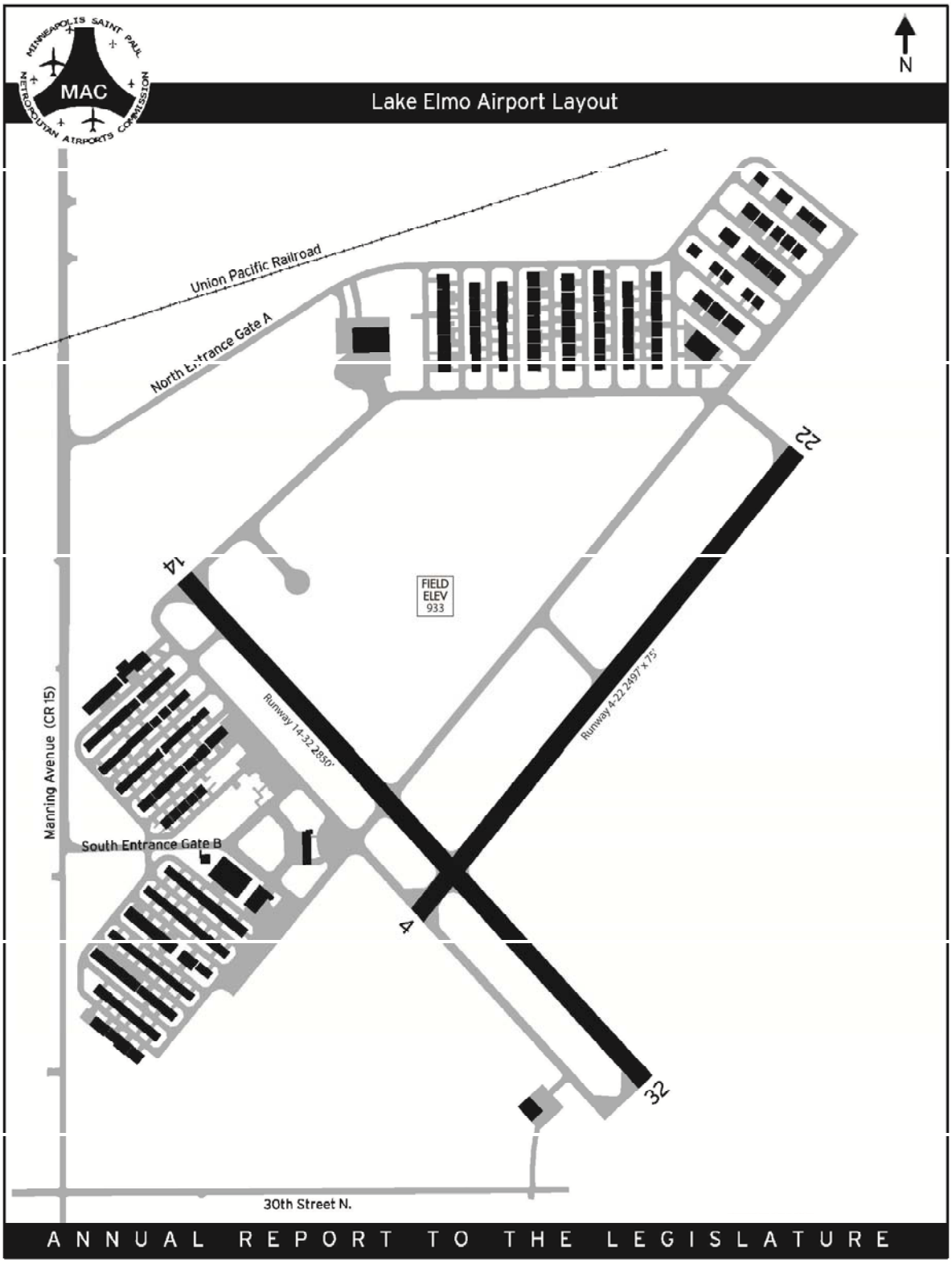
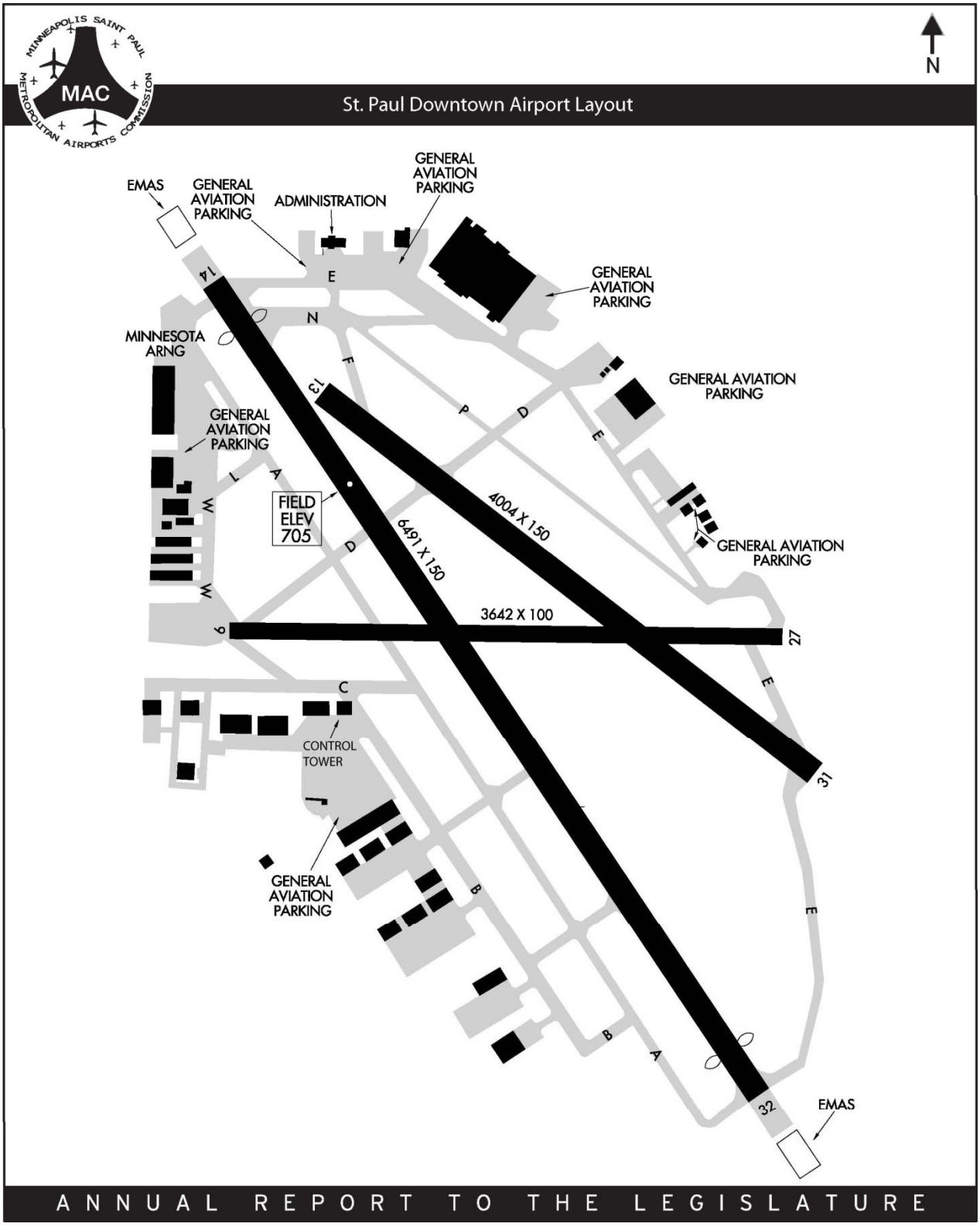


Figure 3-6: St. Paul Downtown Airport (STP) Layout



3.2 HISTORIC AND FORECAST ACTIVITY LEVELS

Aircraft operators must choose an airport at which to base their aircraft. Airports in Minnesota are required to submit to the State a report that identifies the aircraft based at their facilities for 180 days or more. **Table 3.1** shows historical based aircraft counts for each of the reliever airports from 1980 through 2010. Total based aircraft grew slowly between 1984 and 1999, peaking at 1,864 aircraft in 1999. Since that time, total based aircraft have declined to 1,520 in 2009, but rose slightly to 1,531 in 2010.

While the number of based aircraft has decreased at each of the six airports during the past nine years, the largest reductions cumulatively occurred at FCM and MIC. The data in **Table 3.1** are the best available but should be viewed purely as estimates. Numbers that remained unchanged over periods of several years suggest that data limitations were likely and that updated information may not be available.

Historically, the total number of aircraft based at MAC reliever airports has accounted for less than 1 percent of the U.S. active fleet. Since 1999, the share has been gradually declining. In 2010, based aircraft levels at five of the six MAC reliever airports remained unchanged from 2009. STP was the only airport that showed an increase. When comparing the total based aircraft estimate of 1,520 in 2010, there is an increase of 0.7 percent when compared to the base aircraft total in 2009.

Historical data on aircraft operations at the reliever airports are presented in **Table 3.2**. An operation is either an arrival or a departure. Therefore, one arrival and one departure together equal two operations. Aircraft operations totals reported for each airport are generally obtained from the Air Traffic Control Towers located at each airport. Of the six reliever airports, ANE, FCM, MIC, and STP have control towers. However, aircraft operations are only counted while the towers at those airports are operational. It should be noted that these airports are open 24 hours per day, but the control towers are closed during late night and early morning hours. The aircraft operations totals in **Table 3.2** do not include operations that occurred while the towers were closed.

At airports where there is no air traffic control tower, such as LVN and 21D, the operations totals are estimated through various methods and available data. The operations totals presented for LVN and 21D are airport staff estimations calculated from airport inspection data and comparative analyses with airports that have similar conditions.

The combined total for aircraft operations estimated at the reliever airports in 2010 is 377,093. This total represents a decrease of 3.2 percent when compared with a total operations level of 389,843 in 2009. Individually, MIC and ANE were the only two MAC reliever airports that showed an increase in operations in 2010. The other four MAC reliever airports show a decrease in operations. The most notable reduction occurred at FCM, with 22,936 fewer operations in 2010 when compared to 2009.

Table 3.1

HISTORICAL VIEW OF BASED AIRCRAFT AT MAC RELIEVER AIRPORTS

Year	Airlake (LVN)	Anoka County (ANE)	Crystal (MIC)	Flying Cloud (FCM)	Lake Elmo (21D)	St. Paul (STP)	Total
1980	N/A	353	315	582	170	190	1,610
1981	N/A	360	297	580	220	205	1,662
1982	N/A	384	337	608	238	181	1,748
1983	N/A	362	327	615	236	164	1,704
1984	61	361	352	568	244	165	1,751
1985	63	390	338	568	145	147	1,651
1986	93	412	333	560	145	160	1,703
1987	153	408	345	565	150	168	1,789
1988	153	384	325	492	149	181	1,684
1989	140	405	320	485	171	188	1,709
1990	140	411	324	485	177	191	1,728
1991	140	414	327	487	179	193	1,740
1992	165	408	327	482	189	198	1,769
1993	179	408	327	482	189	198	1,783
1994	179	415	327	482	198	198	1,799
1995	179	415	327	482	198	198	1,799
1996	179	431	327	482	205	198	1,822
1997	179	441	327	482	210	203	1,842
1998	179	451	327	482	210	180	1,829
1999	178	472	309	509	250	146	1,864
2000	175	454	296	485	245	137	1,792
2001	170	447	280	461	235	131	1,724
2002	170	464	278	473	237	130	1,752
2003	190	490	288	463	237	124	1,792
2004	177	488	263	456	236	124	1,744
2005	163	482	265	451	239	124	1,724
2006	159	475	261	447	233	124	1,699
2007	162	437	244	421	229	93	1,586
2008	158	439	238	413	230	124	1,602
2009	147	433	219	403	229	89	1,520
2010	147	433	219	403	229	100	1,531

Source: Metropolitan Airports Commission Records, and MSP Reliever Airports Activity Forecasts Technical Report, April 2009.

Table 3.2

HISTORICAL VIEW OF OPERATIONS AT MAC RELIEVER AIRPORTS

Year	Airlake (LVN)	Anoka County (ANE)	Crystal (MIC)	Flying Cloud (FCM)	Lake Elmo (21D)	St. Paul (STP)	Total
1980	N/A	190,000	183,840	218,975	100,000	134,286	827,101
1981	N/A	150,000	154,436	194,229	90,000	107,305	695,970
1982	N/A	150,000	123,577	145,718	90,000	77,509	586,804
1983	20,000	140,000	136,314	166,266	90,000	97,118	649,698
1984	23,000	145,000	140,704	165,542	92,000	103,118	669,364
1985	35,000	160,000	143,665	176,246	82,000	112,019	708,930
1986	40,000	165,000	152,773	191,350	70,000	124,786	743,909
1987	52,000	180,000	165,367	209,423	63,000	135,397	805,187
1988	64,000	200,000	172,074	186,699	65,000	151,869	839,642
1989	66,000	212,000	177,679	207,661	65,000	166,436	894,776
1990	67,980	215,000	189,910	227,410	66,950	190,507	957,757
1991	74,745	195,650	173,150	186,503	69,650	168,450	868,148
1992	81,087	195,650	179,546	198,306	69,650	152,378	876,617
1993	81,087	195,650	183,554	218,643	69,950	131,388	880,272
1994	82,500	199,000	185,991	239,038	71,000	146,839	924,368
1995	75,397	181,866	171,478	216,309	64,887	133,686	843,623
1996	75,397	192,600	187,957	212,695	68,400	139,056	876,105
1997	72,382	143,063	175,728	198,199	65,664	135,079	790,115
1998	76,725	143,981	179,186	210,908	69,604	158,705	839,109
1999	76,725	149,769	178,342	192,746	70,996	158,808	827,386
2000	76,418	156,546	176,554	186,078	70,687	158,216	824,499
2001	70,229	136,892	156,801	185,593	64,962	142,794	757,271
2002	69,176	138,935	127,095	176,408	64,529	171,628	747,771
2003	58,108	132,145	98,612	155,837	54,205	131,794	630,701
2004	53,309	109,853	75,023	159,648	49,855	127,478	575,166
2005	51,678	101,272	72,205	157,710	48,329	131,708	562,902
2006	48,014	92,947	65,528	144,178	44,903	135,156	530,726
2007	41,292	80,517	53,038	118,178	38,617	117,977	449,619
2008	39,021	69,403	49,244	119,139	37,612	109,512	423,931
2009	35,802	68,534	42,311	117,180	34,509	91,507	389,843
2010	35,662	79,589	44,229	94,244	34,374	88,995	377,093

Source: Metropolitan Airports Commission Records, and MSP Reliever Airports Activity Forecasts Technical Report, April 2009.

Table 3.3 and **Table 3.4** show forecasts for based aircraft and operations at the six MAC reliever airports through 2025. More detailed analyses of forecasted based aircraft and forecasted operations were done as part of the Long Term Comprehensive Plan (LTCP) updates for LVN, MIC, 21D, ANE, FCM, and STP.

Table 3.3

SUMMARY OF BASED AIRCRAFT FORECAST AT MAC RELIEVER AIRPORTS 2010-2025

Year	Airlake (LVN)	Anoka County (ANE)	Crystal (MIC)	Flying Cloud (FCM)	Lake Elmo (21D)	St. Paul (STP)	Total
2010	162	437	244	421	229	93	1,586
2015	195	455	261	420	253	105	1,689
2020	211	452	269	411	261	117	1,721
2025	203	433	254	406	247	128	1,671

Source: MSP Reliever Airports Activity Forecasts Technical Report, April 2009.

Table 3.4

SUMMARY OF FORECAST OPERATIONS AT MAC RELIVER AIRPORTS 2010-2025

Year	Airlake (LVN)	Anoka County (ANE)	Crystal (MIC)	Flying Cloud (FCM)	Lake Elmo (21D)	St. Paul (STP)	Total
2010	58,590	72,424	74,719	99,540	60,197	111,870	477,340
2015	60,546	73,328	74,686	97,154	61,321	117,399	484,434
2020	61,519	75,973	76,850	106,030	61,764	130,056	512,192
2025	61,325	79,560	77,266	113,876	63,700	137,310	533,037

Source: Metropolitan Airports Commission MIC Long Term Comprehensive Plan Update, June 2008; and MSP Reliever Airports Activity Forecasts Technical Report, April 2009.

3.3 DEVELOPMENT PROGRAMS

This section outlines the status of major development programs at each of the reliever airports. It is important to note that the MAC is investigating opportunities for non-aeronautical development at the reliever airports as a way to help make the reliever airport system as financially self-sustaining as possible.

3.3.1 Airlake Airport (LVN)

The LVN 2008 Long Term Comprehensive Plan (LTCP) update recommends that the airfield's only runway (Runway 12-30) be extended to 5,000 feet at some point in the future to coincide with industrial/commercial development in Lakeville and potentially in Eureka Township. The runway extension shown in the plan requires relocation of a portion of Cedar Avenue. In 2010 the MAC completed a Draft Scoping Decision Document and a Draft Environmental Assessment Worksheet (EAW) for the proposed development activity. An Environmental Impact Statement (EIS) is required before the project can begin. The MAC will continue to work with Dakota county and other agencies as appropriate on the runway extension and roadway realignment.

3.3.2 Anoka County – Blaine Airport (ANE)

A Long Term Comprehensive Plan (LTCP) update was completed in 2010 for ANE. This plan analyzed existing facilities, forecasted future activity, and outlined development needed to meet the projected demand. Based upon the forecasts and existing airfield configuration, no airside or landside expansions are proposed in the LTCP. Currently, there is no demonstrated need for longer runway lengths, additional runways or additional hangar areas.

The recommendations included in the LTCP for ANE are as follows:

1. Xylite Street relocation to facilitate future construction of the East Building area annex
2. Improvements to the existing security gate system
3. Consideration for an extension to Taxiway C to the south
4. Continuation of existing pavement reconstruction and rehabilitation as part of the MAC's ongoing pavement maintenance program
5. Potential development of non-aeronautical land uses on airport property that is not needed for aviation purposes
6. Continuation of cooperative community interactions including, but not limited to, coordination with the existing Anoka County Airport Advisory Commission

The MAC has an ongoing program to rehabilitate aircraft operational areas (runways, taxiways, aprons) through bituminous overlays and seal coats; in some instances, reconstruction is necessary to restore the surfaces to a smooth, even condition for optimum operating conditions. In 2010, Taxiway Alpha (3,600 feet x 40 feet of asphalt pavement), south of Runway 36, was reconstructed with sub-grade rehabilitation. This

pavement reached the end of its useful life and needed to be reconstructed. The total project cost was approximately $600,000.

The existing entrance gates at ANE had exhibited numerous maintenance problems over the past few years. The gates were very large and heavy, especially for the single-operator systems. Therefore, a security gate replacement project was incorporated into the 2010 Capital Improvement Program. This project included upgrades to the three existing entrance gates with new dual-operators. The project cost was approximately $300,000.

3.3.3 Crystal Airport (MIC)

The MAC completed the Long Term Comprehensive Plan (LTCP) update for MIC in 2008. The adopted LTCP recommends that two runways be closed to "right-size" the airport. The LTCP for MIC suggests keeping the original paved runway and one paved crosswind runway intact. The MAC is evaluating the process for implementing the runway closure recommendations.

3.3.4 Flying Cloud Airport (FCM)

The Long Term Comprehensive Plan (LTCP) update for FCM was completed in 2010. This plan analyzed existing facilities, forecasted future activity, and outlined development needed to meet projected demands. Draft LTCP documents were made available for public review and comment in November 2009. Plan recommendations include the following:

1. Shift Runway 18-36 to the north 58 feet and extend the total runway length from 2,691 feet to 2,800 feet in order to comply with FAA standards pertaining to Runway Safety Area (RSA) and Object Free Area (OFA) requirements
2. Continuation of pavement reconstruction and rehabilitation as part of the ongoing pavement maintenance program
3. Continue to work with FCM tenants along Taxiway A to eliminate taxiway obstructions in compliance with FAA standards pertaining to OFA requirements
4. Continue discussions with the FAA related to ultimate relocation of the air traffic control tower
5. Potential development of non-aeronautical land uses on airport property not needed for aviation purposes
6. Continue cooperative interactions with the City of Eden Prairie through, but not limited to, the existing Flying Cloud Airport Advisory Commission

In 2009, the MAC convened a Joint Airport Zoning Board (JAZB), the purpose of which was to develop a Flying Cloud Airport Zoning Ordinance for review and approval by the Minnesota Department of Transportation (MnDOT) Commissioner of Transportation, then subsequent adoption by the JAZB and local municipalities in accordance with Minnesota statutes. The JAZB submitted the draft ordinance to MnDOT in December 2010 and is awaiting comments.

3.3.5 Lake Elmo Airport (21D)

The MAC completed the Long Term Comprehensive Plan (LTCP) for 21D in 2008. The plan recommends that a new hangar area be constructed in the near future.

The LTCP also recommends that the crosswind runway be reconstructed and extended from 2,499 feet to 3,200 feet to better accommodate the existing aircraft at the airport. The plan acknowledges the long-term future proposal to relocate and extend the primary runway, but there was no justification to do so within the 20-year period outlined in the plan.

3.3.6 St. Paul Downtown Airport (STP)

Construction of a perimeter floodwall and its components were completed in 2008, and related aesthetic improvements were completed in 2009. The wall has been deployed three times since the project was completed, protecting STP's infrastructure, tenant investments and operational capabilities of the airfield.

The Long Term Comprehensive Plan (LTCP) update was completed for STP in 2010. This plan analyzed existing facilities, forecasted future activity and outlined development needs in order to meet projected demand. Based upon the forecasts and existing airfield configuration, no airside or landside expansions are proposed in the LTCP. There is currently no demonstrated need for longer runways, additional runways or additional hangar areas.

The STP LTCP recommendations include:

1. Continuation of the MAC's ongoing pavement maintenance program
2. Ongoing maintenance, training, compensatory excavation monitoring, and permit compliance for the floodwall
3. Continuation of research and potential development of non-aeronautical land uses on airport property not needed for aviation purposes
4. Continuation of cooperative interactions with the cities of St. Paul, South St. Paul and West St. Paul through, but not limited to, the existing Downtown St. Paul Airport Advisory Council (DAAC)

The MAC began working with local communities in 2008 to enact airport safety zoning around STP. A Joint Airport Zoning Board (JAZB) was formed, and its first meeting was held in May 2008. The goal of the JAZB is to develop a zoning ordinance for STP for review and approval by the Minnesota Department of Transportation (MnDOT) Commissioner of Transportation and subsequent adoption by the JAZB and local municipalities. This process continued through 2009 and 2010. The JAZB submitted the draft ordinance to MnDOT in September 2010 and is awaiting comments.