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Transportation

A variety of public agencies supplied transportation data. The Transportation and Parking Services Division of the Minneapolis Public Works Department provided information on travel trends, traffic accidents, street lighting, managing the city's parking infrastructure, and bicycle facilities. Public Works' Engineering Services Division furnished information on roadway jurisdictions and mileage, residential paving and storm drain separation programs, and bridge conditions. Public Works' Field Services Division provided information on residential pavement condition and the city's preventative maintenance programs. Minneapolis Parks and Recreation Board staff provided information on the condition of the city's parkways. The Downtown Minneapolis Transportation Management Organization provided information on travel demand management efforts in downtown Minneapolis. The Metro Transit Operations Division provided information related to public transit service and ridership in Minneapolis.

The Metropolitan Airports Commission (MAC) provided information on airport activity and airport development.

This chapter can also be found on the city's website at: www.ci.minneapolis.mn.us/planning

The Transportation Picture
Roadway Infrastructure
Parking Infrastructure
Transit
Downtown Transportation Management
Bicycling
Airport Development



The Transportation Picture

Like other communities, the history of transportation is part and parcel of the city's historical development and growth. Much of the city's transportation system was built during a period when the region was considerably smaller, vehicle ownership was considerably less, and travel and shipping options were more constrained. Many of the city's commercial corridors once served as the region's primary transportation routes, and included many streetcar routes that local buses now traverse. The latter half of the last century saw considerable regional growth and the eventual dominance of the automobile, and with it, the adaptation of the city to this new environment. Some of the challenges that the city continues to face are increasing congestion, pollution, and the land requirements for traffic and parking.

Growth and concentration of regional office space in downtown Minneapolis, combined with other factors like the cost of parking, have continued to make transit a viable and attractive transportation option for a large percentage of the downtown community. Considerable growth has occurred over the last several years in the downtown area, both in terms of office space and housing. Regional growth, on the other hand, continues to create new demands on the transportation system, and its decentralized nature makes it more difficult to serve by mass transit. Continuing to improve transit access to job centers in suburban areas will be an important strategy in improving the economic well being of a large percentage of the city's population.

The policies of *The Minneapolis Plan* reflect an increasing desire to improve quality of life in the city by balancing automobile infrastructure (e.g., roads and parking) with improved facilities and services for alternatives like transit and bicycling. The region's first light rail transit line is under construction along Hiawatha Avenue, and policies and planning support concentration of new multi-family housing and neighborhood services along transit corridors. Citywide, results from the Census 2000 show a reverse in the decades-long population decline in the central cities of Minneapolis and St. Paul. Demand for new housing reflects a desire to live in areas that often require less auto-mobile travel and are easier to serve with transit.

Job and Population Growth

The Census 2000 begins to provide information that identifies potential impacts on the transportation system. During the 1990s, the Twin Cities metro area grew more than in any previous decade in its history. The population growth of 353,327 recorded in the Census 2000 for the seven-county region surpassed the growth of the 1960s, the previous record, by just over 4,000 people. Minneapolis proper also experienced a population increase of 3.6 percent, or just over 14,000 per-

sons, the first increase since 1950. Downtown employment is estimated at 140,000, reflecting significant growth during the latter part of the 1990s. More detailed census information related to travel patterns in the Twin Cities region will be available for State of the City 2002.

Travel Behavior in the Region

The biggest challenges to the city's transportation system relate not only to regional growth, but also to increases in personal mobility over the last several decades. This is reflected in the number and distance of trips taken by automobile. Detailed data regarding travel behavior in 1990 is reported in the Metropolitan Council's Travel Behavior Inventory, some of which was reported in the Minneapolis State of the City 2000. A new Travel Behavior Inventory, commissioned by the Metropolitan Council and MnDOT, will be conducted in 2001-2002. Information from this study will be summarized in the Minneapolis State of the City 2002.

More current information includes results from the 1998 Twin Cities Commuting Area Transportation System Performance Audit and the MnDOT Transportation System Plan. According to MnDOT, the number of miles traveled by metro area motorists increased 17 percent between 1990 and 2000 (contrasted with a 13 percent growth in population for the same period). In 1990, five or more hours of congestion were experienced on 60 "lane miles" of highway. (Congestion is considered travel conditions below 45mph. A three-lane segment of roadway that is one mile long equals three lane miles.) That figure increased to 210 lane miles in 1995, and may increase to 360 lane miles by 2020. Peak hour congestion already occurs on most highway segments within the city, but will likely worsen and incorporate additional segments.

Specific Changes in Minneapolis

The city has only just reversed its long population decline since 1950, but past trends have indicated that increases in vehicle ownership and their use have been largely unabated. The Planning Department estimates that between 1980 and 1990, although the city lost 2,500 people, it added about 14,000 cars. These 1990 figures, as reported last year, indicate that about 60 percent of those who work in the city drive alone, 10 percent carpool, and nearly 16 percent use existing public transit. This data also tells us that close to 60 percent of city's residents commute to jobs outside of the city, using the regional road network as well as city streets.

Transit ridership has been increasing in recent years, reflecting perhaps a variety of factors including growth in downtown Minneapolis, increasing parking costs, increasing congestion, service improvements, and financial incentives to use transit. The 1998 Cordon Count indicated that 58 percent of those travelling into the central core of downtown used means other than driving alone. This likely reflects the high density of the primary office district, the lack of immediate parking, and the high level of transit service along routes such as the Nicollet Mall and Marquette and 2nd Avenues.



Roadway Infrastructure

Roadways in the city are owned and maintained by different levels of government. Federal, state and county transportation agencies are partners with the City of Minneapolis in providing a properly functioning network of roadways for both personal and commercial transport. In general, higher units of government are responsible for roadways that carry larger volumes of traffic over larger distances and at higher speeds.

An ongoing challenge to the city is that many roadways were originally designed to carry less traffic than they do today. Some roadways that are designated to carry larger volumes of traffic also provide direct access to property, are principal bus routes, have residential uses along them, or provide street parking for commercial uses. Maintaining a balance between these functions or needs often requires difficult choices and tradeoffs.

Highway Use and Its Impact on City Streets: Current Conditions

The Minnesota Department of Transportation (MnDOT) estimates that congestion on the regional highway system will continue to worsen, associated with an estimated increase of 600,000 new regional residents and 300,000 new regional jobs by the year 2025. With limited resources, MnDOT's current "ABC" investment strategy relates to Advantages for Transit, Bottleneck Removal, and (creating or improving interregional) Corridor Connections. Without significant increases in funding, most resources will be dedicated to preservation and management of the existing system, with more limited spending on improvement and expansion to the system. Detailed information about regional transportation system planning can be found in MnDOT's Metro Division Transportation System Plan (TSP).

Much of the freeway network in the city was planned in the late 1950s and built in the 1960s and 1970s. I-94 through North Minneapolis was completed in the 1980s. In addition to the disruption, noise and pollution that residents near freeways often face, traffic on congested corridors often spills over onto the city's arterial and collector streets system. This is particularly a problem along I-35W, one of Hennepin County's most heavily traveled and congested corridors.

Only minor expansion to the capacity of the highway system is planned within the city limits through the year 2025, which would include bridge replacement and preservation and/or rehabilitation of other system elements. MnDOT has planned an extension of the I-35W High Occupancy Vehicle (HOV) lane north to 46th Street in South Minneapolis. This work would be combined with bottleneck removal where Highway 62 and I-35W lanes come together (the "Crosstown Commons"). Due to political and funding disputes, however, this work has been delayed.

MnDOT, the City of Minneapolis, Hennepin County, and organizations in the Phillips neighborhood are developing plans to improve access to Lake Street on the I-35W corridor. Currently there is no access to or from the north at Lake Street. A Project Advisory Committee is addressing concerns like aesthetics and increased traffic congestion and noise.

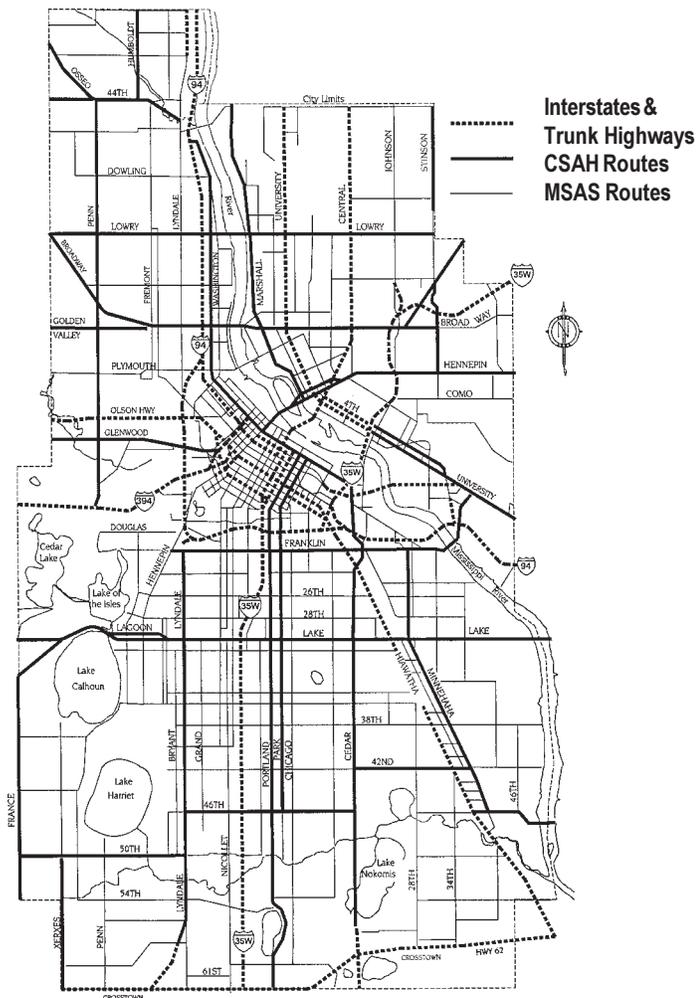
Finally, MnDOT proposes the eventual addition of a lane in each direction on I-35W from Washington Avenue to Trunk Highway 36. This project would include removal of bottlenecks and a design that would include 'bus-only' shoulder lanes where they do not currently exist.

Roadway Jurisdictions

The City works with partners at the federal, state and county level to maintain its streets and roadways. These partners provide major funding for rebuilding and redesigning the streets. The accompanying map indicates jurisdictional control of roadways as well as mileage. Interstates and state highways are under the jurisdiction of MnDOT. County State Aid Highways (CSAH) are under the jurisdiction of Hennepin County, but receive funding assistance from the state due to their significance. Finally, Municipal State Aid routes (MSA) routes are under the jurisdiction of the City of Minneapolis, but also receive funding from the State for the same reason. The city can request changes to MSA classification when portions of right-of-way are vacated or acquired, or when street volumes or the importance of the route change. All remaining streets are considered "local" and are fully funded and maintained by the City of Minneapolis.

Discussions and planning are underway for a number of possible roadway jurisdictional transfers. The State of Minnesota and Hennepin County are discussing a potential jurisdictional change from the former to the latter for State TH 65 (Central Avenue) and State TH 47 (University Avenue). Hennepin County is proposing that CSAH 31 (Xerxes Avenue between the city limits and 50th Street), and CSAH 27 (Stinson Boulevard between the city limits and St. Anthony Parkway) be transferred to the city. Hennepin County is also suggesting that all Mississippi River crossings of county roadways be transferred to MnDOT. For a full accounting of these potential changes, please refer to MnDOT's and Hennepin County's Transportation System Plans.

CITY OF MINNEAPOLIS: STATE-AID ROUTE DESIGNATIONS



City Street Maintenance Activities and Responsibilities

Hennepin County and the City of Minneapolis typically share funding responsibility over different elements within the rights-of-way of county roads. Generally, the county assumes responsibility over the maintenance and reconstruction of the principal part of the roadway (i.e., travel lanes). The city generally maintains and reconstructs as necessary any parking or bicycle lanes, sidewalks, curbs, and gutters. County roadways located downtown are maintained by the city under an agreement with the county. Over the recent past, the state has transferred jurisdiction of former trunk highways to the county, so that Minneapolis now assumes some costs associated with repairing these roads (e.g., Lake Street, West Broadway). Exchanges of jurisdictional control have also occurred between the city and county.

Street Renovation and Paving Program

The Minneapolis Public Works Department has developed a framework to set the priorities of the street renovation program relative to the age and condition of the streets and the kinds of rehabilitation work the streets have experienced in the past. There are nearly 1,400 miles of paved driving surfaces under the jurisdiction of the City of Minneapolis, including local streets and alleys. In addition, there is an estimated 1,900 miles of sidewalk. The Public Works Paving Construction division is responsible for major rehabilitation or reconstruction of those surface streets and sidewalks. The city recently completed a paving program devoted to the removal, grading and new construction of more than 600 miles of residential streets.

Minneapolis has a renovation program that focuses on reconstruction and maintenance activities so that streets maintain a useful life of 60 years. This includes seal coating or more extensive maintenance or rehabilitation efforts such as mill-and-overlay treatment and curb and gutter replacement. The more extensive level of maintenance is more costly than routine seal coating and is an inevitable condition of older more established urban areas. The object of the program is to extend the residential pavement system through another life cycle.

While the residential street system is in relatively good condition for its age, due in part to the current seal coat program, the Municipal State Aid (MSA) routes have been in poorer condition. Public Works identifies routes that should receive mill and overlay as well as more extensive repair to reduce the backlog of streets in need of replacement. Interventions include extensive joint repair and some wholesale panel replacement, which may also require addressing the quality of the soil base.

**TOTAL CENTERLINE MILES OF ROADWAY IN MINNEAPOLIS
BY JURISDICTION, 2001**

Type of Roadway	Number of Miles
State Trunk Highways	54.0
Interstate Highways	22.9
I-35W	(10.2)
I-94	(8.4)
I-394	(4.3)
Other State Trunk Highways	31.1
County-State-Aid Highways	87.1
Parkways and Special Park Roadways	55.0
Municipal-State Aid Streets	187.6
Other City Streets	749.6
Alleys (Center Line Miles)	455.0
Total (Center Line Miles)	1,642.7

Source: Minneapolis Public Works Department, Engineering Services Division

CITY PAVING PROGRAM 2001-2002

2001	Miles	Estimated Cost
Main Street SE	0.21	\$ 2,922,000
2 nd Street SE Commercial	0.48	573,000
Harrison Street NE	0.30	477,000
Chicago Avenue. S	0.49	1,957,000
Harrison Renovation	4.30	3,092,000
Convention Center	0.40	1,800,000
Total	6.18	\$10,821,000

2002	Miles	Estimated Cost
Avenue of the Arts (3 rd Ave. S.)		
-Downtown	0.50	\$ 3,750,000
-Residential	0.75	2,950,000
Central Avenue. NE	1.42	3,182,000
Regina Paving	0.50	300,000
35 th Street E/W	2.20	2,186,000
36 th Street E/W	1.70	1,446,000
Fulton Street. SE	0.25	382,000
9 th Avenue SE	0.08	343,000
33 rd and Talmage	0.47	1,398,000
Total	7.87	\$15,937,000

Alley Resurfacing Program

The alley system in the city is even older than the roadway system. The prevalence of alleys throughout city neighborhoods, and the access they provide to housing, makes them an important part of the transportation network in Minneapolis neighborhoods. The funding source to resurface the city's 455 miles of alleys was re-established last year, beginning with a \$180,000 plus annual program. Four alleys were resurfaced in 2001.

Downtown Streets

The 2000 Downtown Transportation Study found that the downtown street system, as whole, functions well despite its congestion. At the micro level, deficiencies exist and are likely to become worse or be joined by new ones as the downtown continues to grow. The changes to LRT on 5th Street and 3rd Avenue (Avenue of the Arts) will result in reductions in roadway capacity. The study also predicts additional functional problems should certain streets be converted to two-way streets (e.g., Hennepin Avenue). The report identifies remedies and key strategies that could be implemented to maintain the functioning of key downtown streets and intersections. The Executive Summary, however, states that "the reduction of peak period vehicle trips through travel demand management (TDM), including transit, now remains the most viable and effective option for achieving an acceptable level of service throughout the downtown area." The study and its recommendations have not become city policy, but it serves as a resource and guide for staff and decision-makers.

Roadways in the Regional Park System

The Minneapolis Park & Recreation Board system includes 55 miles of parkway known as the Grand Rounds Scenic Byways. In 1998, the United States Federal Highway Commission designated the Grand

Rounds parkways as the nation's first completely urban scenic byway. While the parkways serve as principal means of moving around a large part of the city's park system, they are also elements of the city's transportation network. Projects occurring in 2001 are indicated below. Planned projects for 2002 include portions of Cedar Lake Parkway, Minnehaha Parkway, and River Parkway East.

The parkways are, however, clearly different from other city streets, as the design of their rights-of-way focus on the needs of recreational users as well as aesthetic and environmental quality. Parkway users and neighboring property owners consistently share concerns related to speeding traffic, the quality of pedestrian and bicyclist facilities, landscaping, and aesthetic features. Since 2000, the city assumed responsibility for the maintenance and upkeep of the parkway system, but the authority for planning and design remains with the Park Board.

2001 PARKWAY IMPROVEMENTS, MINNEAPOLIS PARK & RECREATION BOARD

Pavement Renovation (mill and overlay)

- Minnehaha Parkway (westbound from Stevens Avenue to Lyndale Avenue S.)
- Victory Memorial Parkway (45th Avenue. N. to Webber Parkway)

Pavement Seal Coat

- St. Anthony Parkway (Central to Stinson Blvd.)
- Dunwoody (frontage road from Dunwoody Blvd. to Emerson Avenue S.)
- Kenwood Pkwy. (Bryant Avenue S. to Mt. Curve Avenue)
- William Berry Pkwy. (Richfield Rd. to Lake Harriet Pkwy.)
- Lake Harriet Pkwy. (Linden Hills Blvd. to Lake Harriet Pkwy.)
- Roseway Road (Kings Highway to Lake Harriet Pkwy.)
- East Lake Harriet Blvd. (West 42nd Street to East Lake Harriet Pkwy.)

Traffic Calming

The City of Minneapolis, through its Transportation and Parking Services Division, continues to develop policies and procedures to assist neighborhoods in reducing the impact of high-speed traffic in residential areas. These "traffic calming" measures take many forms. The most common changes to city streets are the construction of speed humps, alley speed bumps, traffic lane narrowing, and intersection chokers (which make the intersection narrower).

Traffic calming measures are designed to reduce the comfort level of driving at high speeds. They can, however, be quite controversial because of a lack of familiarity and a perception of inconvenience. Therefore, whenever possible, temporary traffic calming measures are installed to determine the level of neighborhood acceptance prior to permanent installation.

Traffic Accidents

Improving the safety of streets is important in protecting residents and visitors to the city. Furthermore, the integrity of the roadway system and the vitality of neighborhoods are impacted by large numbers of traffic accidents, particularly those involving pedestrians and bicyclists. The total number of accidents in 2000 jumped 19 percent over the previous year, with total injuries/fatalities increasing 24 percent. The number of pedestrian and bicycle accidents, however, continued its decline since 1997. This is especially significant, considering the ongoing increase in bicycle volume due to improved bicycle parking and lane/trail facilities.

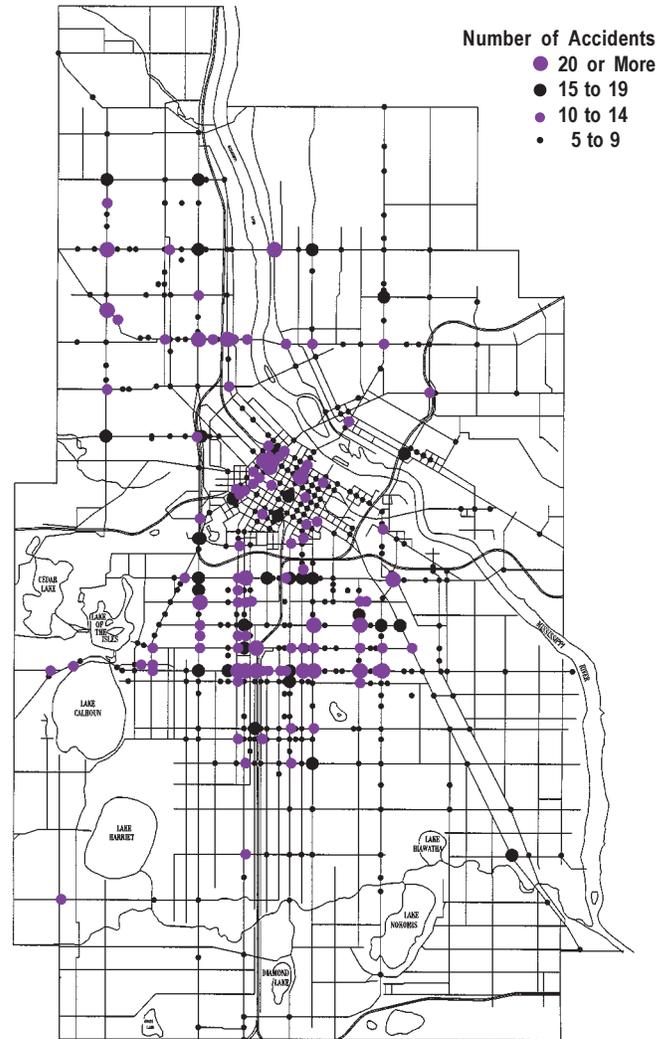
In 1982-1983, the Police and Public Works Departments cooperated in establishing the Top Accident Control Target (TACT) program. Through the TACT program, the city was able to obtain significant reductions in the number of accidents by targeting limited resources at twelve high-risk areas.

**TRAFFIC ACCIDENTS, BY TYPE
1997-2000**

	1997	1998	1999	2000
Total Accidents	8,031	7,590	7,077	8,418
Injuries	4,314	4,291	4,051	4,140
Fatalities	17	17	10	17
Pedestrian Accidents	407	383	383	352
Pedestrian Fatalities	6	10	5	2
Bicycle Accidents	375	348	304	298
Bicycle Fatalities	3	1	0	1

Source: Minneapolis Public Works Department, Transportation and Parking Services Division

2000 TRAFFIC ACCIDENTS



TACT AREAS COMPARED WITH REST OF THE CITY, ACCIDENTS BY YEAR

	1997		1998		1999		2000	
	Total Accidents	Injury Accidents						
TACT Areas	1,961	846	2,018	882	1,998	819	2,108	816
Rest of City	6,070	2,249	5,572	2,104	5,709	2,089	6,310	2,149

Source: Minneapolis Public Works Department, Transportation Division

Sidewalk Maintenance Program

The Sidewalk Division of the Public Works Department maintains the city's 1,900 miles of sidewalks and oversees the inspection and construction of sidewalks associated with all street-paving projects. This division is also responsible for permitting and inspecting concrete construction by private concrete contractors who work in the public right-of-way. Generally speaking, sidewalks are inspected and repaired on a seven to ten year cycle. If the property owner hires the city's contractor, the cost of repairs can be paid either by direct single payment or by special assessment to property taxes. During the 2001 construction season, over \$4,000,000 was spent on sidewalk infrastructure Citywide. Webber-Camden, Victory, Harrison, Loring Park, Uptown, Lakewood, Hiawatha, Phillips, and Powderhorn Park were the focus of activity during the past construction season.

Maintaining the sidewalks as a clear and safe pathway for pedestrians in the winter is a challenge in Minneapolis given the demands that the climate places on property owners. Yet, maintaining the walkability of the sidewalks is a key aspect of preserving a sense of livability in the winter months for all citizens. The Public Works Department has worked to meet this goal by creating a program that responds to snow and ice complaints from pedestrians. The City's Snow and Ice Ordinance requires property owners to maintain their sidewalks in all winter conditions and to make sure the sidewalk is clear after winter storms. Under the Winter Program, sidewalks are inspected and adjacent property owners are notified if their sidewalk is found to be in violation of the ordinance.

Bridges in the City

Minneapolis has a total of 608 bridges within the city limits (excluding bridges as part of interstate highways). Of the 608 bridge structures, 281 structures carry railroad, pedestrian, and skyway (pedestrian) traffic over roadways. The remaining 327 bridge structures carry roadways over creeks and rivers, railroads, and other roadways. These bridges are a critical part of the city's transportation network. The city owns 179 of these bridges and maintains an additional 149 bridges as a result of agreements with other entities.

Since the late 1970s, the city has had an aggressive bridge replacement program. It successfully secures a variety of funding sources to finance bridge repair and replacement. An ongoing five-year program is revised each year by the Public Works Department to keep the bridge network viable. The Public Works Department performs annual structural inspections of all bridges according to strict criteria set up by the federal government. This information is used to recommend a year-by-year schedule of short-term maintenance, major repair, and bridge replacement activities.

In 2002, the Public Works Department will develop updated information on the structural deficiency and budget implications of future bridge rehabilitation and replacement. As reported last year, at the end of 1999, 27 bridges were structurally deficient, and 30 were functionally obsolete, as defined by federal rating criteria. The cost of replacing these bridges was estimated at about \$50 million in 1996 dollars. By the year 2001, about 85 more bridges built prior to 1940, will be added to the deficient list and will require an additional \$70 million in 1996 dollars. At the replacement rate of four bridges per year, it will take about 20-25 years to replace the deficient structures without counting additional bridges that may become deficient as they exceed their useful life of 60 years.

Pedestrian Level Lighting

Residents of the City of Minneapolis are becoming more interested in the installation of pedestrian level lighting around their neighborhoods as concern over security and aesthetics becomes more focused on conditions on neighborhood streets after nightfall. The city's program is based on responding to neighborhood petitions for lighting installation, with an accompanying assessment for the light fixtures and installation. While the city does not budget for the installation of pedestrian level lighting in neighborhoods, it contributes to costs by assuming responsibility for ongoing maintenance and operation of the lighting system. Many neighborhood organizations offset the costs to property owners by allocated resources through the NRP. In 2001, approximately 1200 pedestrian 'low level' lights were installed within this program. To date, the Public Works Department has already received successful petitions for over 450 lights for 2002.



Parking Infrastructure

The public parking system in Minneapolis consists of parking garages, surface parking lots, and on-street parking (whether metered or not). The challenge facing the city is to provide sufficient parking to maintain the competitiveness of downtown and neighborhood commercial districts. At the same time, there are needs related to managing the supply, cost, and location of parking so that people are encouraged to use transit and non-motorized modes to reach their destinations.

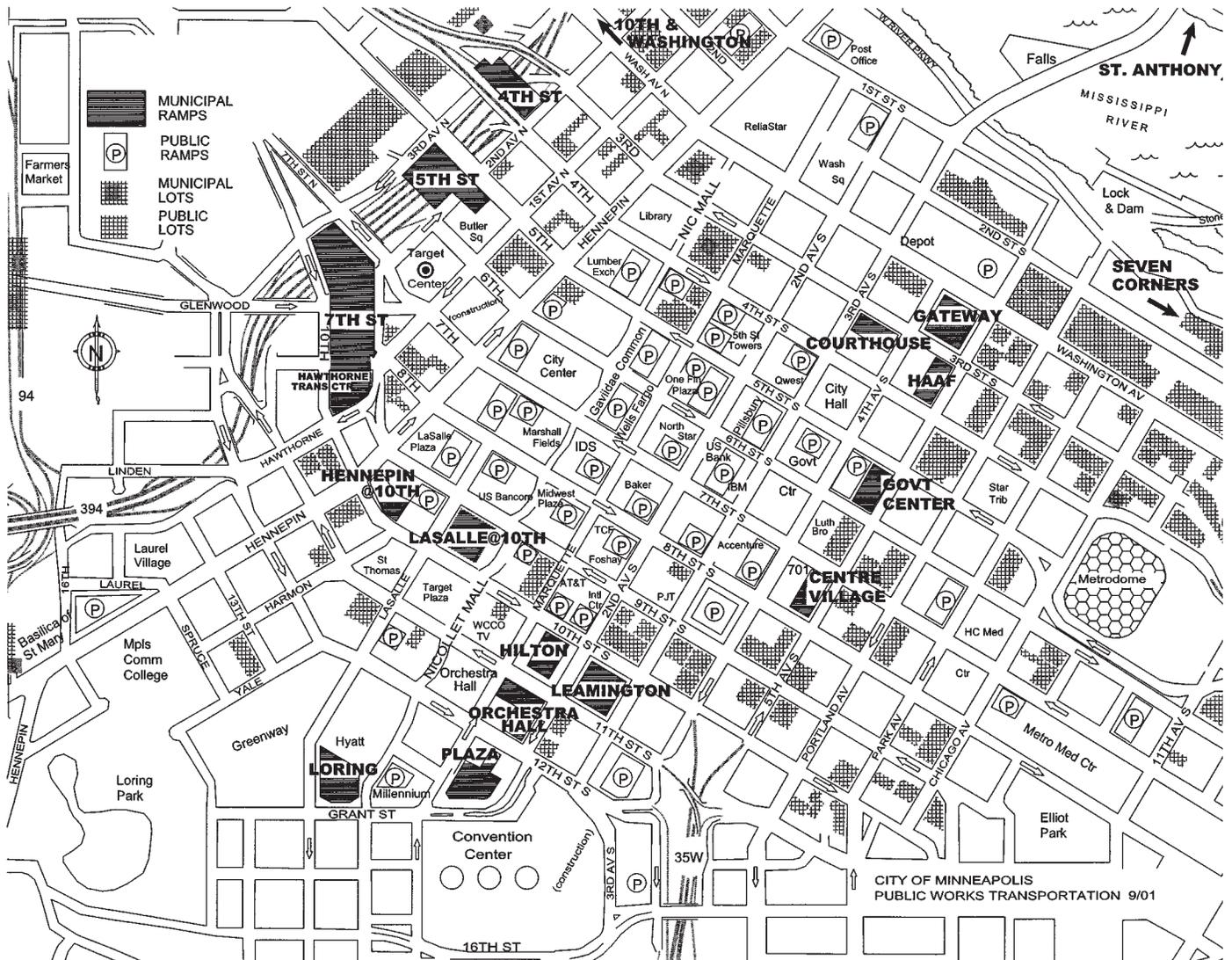
Downtown Parking

Downtown Minneapolis is the commercial and financial hub of the metropolitan region. The City of Minneapolis, through its downtown municipal parking system, plays a crucial role in maintaining a balance between parking demand and supply and, on a larger scale, between automobile and transit use into and out of downtown. Most of the city's parking facilities are located at the periphery of downtown, to reduce congestion as well as facilitate a compact downtown that is well-served by transit.

The downtown parking garages, ten parking lots, and 5,000 of the city's 6,000 on-street parking meters are the municipal component of the parking supply that represents about 38 percent of all available parking in downtown Minneapolis. Financing for the system has come from the city, MnDOT and the Federal Highway Administration. The aggregate public investment in the downtown parking system is about \$340,180,000.

New transit initiatives and increased vehicle occupancy play increasingly important roles in downtown's ability to grow. Reliance on single-occupant vehicles has costs that include both time and money as downtown further develops and congestion grows. A typical bus carries as many people as 38 automobiles. The 2000 Downtown Transportation Study projected that if transit's share of travel increased five percentage points by the year 2010; downtown would need 8,856 fewer parking spaces than would otherwise be needed. This is equivalent to 125 percent of the number of spaces in the I-394 garages (4th Street, 5th Street, 7th Street, and Hawthorne).

MUNICIPAL PARKING SYSTEM



Downtown Parking Rates and Revenues

The city sets its parking fees at market rate, which is somewhat lower than parking facilities in the center of downtown. Parking fees must cover all construction, maintenance and operating expenses from patrons; and the city's pricing policy must avoid adversely affecting the private parking market. The parking meter system is a significant revenue-producer for the city. The 2000 Downtown Transportation Study indicated that some areas in the core were priced below market rate, resulting in a lack of free meters. The following table and chart identify the typical users of the city's downtown municipal parking system.

MUNICIPALLY-OWNED PARKING SPACES¹

User Type	Percent of Total	Avg. Number of Vehicles Parked
Hourly / Daily	41.8	11,060
Monthly	35.4	9,923
Carpool, Vanpool	8.7	2,439
Commercial Validation	2.4	672
Event Parking	11.7	3,280
Total	100.0	28,031
Total cars parked in 2001		7,288,172

¹The total number of off-street parking spaces in the downtown municipal system is 23,350.

Source: Public Works Department, Transportation and Parking Services Division.

Parking in Commercial Areas and Neighborhoods

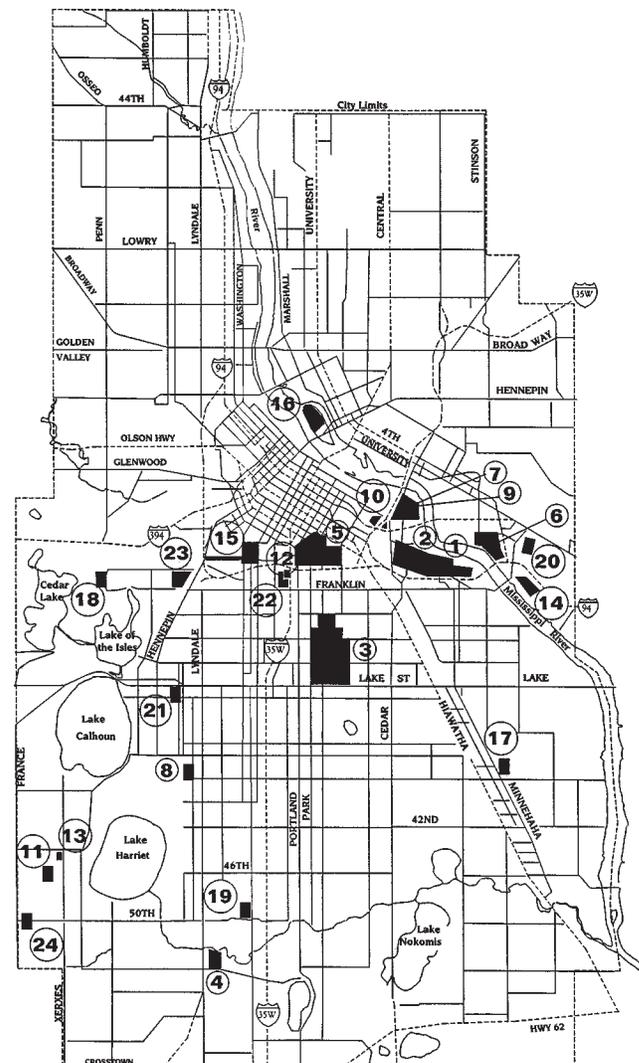
According to city business and community leaders, the availability of nearby parking is critical for the success of neighborhood businesses. In order to manage this type of parking, the city often implements a number of strategies for on-street parking including parking meters and time restrictions. In some cases, municipal parking lots are provided. In the Lyn-Lake area of Minneapolis, two municipal lots were recently established. They are funded by an assessment formula based largely on factors related to lack of on-site parking and proximity to the municipal lots.

In many corridors of the city, traffic volumes during peak periods result in problems related to safety and efficient operation of the roadway. In some cases, on-street parking is prohibited. This reduces conflicts with parked cars, allows easier right-hand turns, and allows buses to reach their stops easier. In this case, off-street private and public parking becomes more important for the health of commercial areas.

Critical Parking Areas

Some activity centers in the city attract so many people that parking spills over onto surrounding residential streets. Residential areas close to these activity centers receive special consideration from the city when officially designated as critical parking areas. On-street parking is limited to a number of hours during certain periods of the day. In exchange for a small fee and a parking permit sticker, residents are allowed to use on-street parking without restriction. These critical parking areas are established by the transportation and parking services division, and are enforced by the traffic control section of licenses and consumer services. The accompanying map identifies the locations of the twenty-four critical parking areas throughout the city.

CRITICAL PARKING AREAS





According to a recent Metro Transit advertisement, the city's future is "riding" on transit. Minneapolis' economic competitiveness in the region, as well as the livability of its neighborhoods, depends on a successful transportation system that is multi-modal and inter-modal. Establishing and maintaining high quality transit will allow the city to continue to grow and thrive in sustainable ways, as well as provide viable travel options to specific destinations like work, school or recreational activities.

As a region that has grown up with the automobile over the last four decades, the challenge that the city faces is to improve the quality and attractiveness of alternative transportation modes. The Minneapolis Plan has a "transit first" policy. This involves building partnerships to advance transit strategies and programs, focusing transit services and development along particular corridors, giving public transit priority on the Minneapolis street system, and working to secure reliable source of public funding.

The Public Transit System

One of the city's most important transit partners working toward these objectives is Metro Transit. Metro Transit is an operating division of the Metropolitan Council responsible for planning and operating the biggest share of transit service in Minneapolis and throughout the metropolitan area. Metro Transit is one of the country's largest transit systems, providing roughly 95 percent of the 73 million bus trips taken annually in the Twin Cities. Metro Transit uses a fleet of 939 buses to operate 132 routes: 63 local routes, 48 express routes, and 31 contract service routes. Other transit providers that serve Minneapolis are Plymouth Metrolink, Southwest Metro Transit, Maple Grove Transit, and Minnesota Valley Transit.

Facilities

A number of improvements related to bus transit were implemented or began implementation in 2001. Park-and-ride lots, as well as bus-only freeway shoulder lanes, which serve downtown Minneapolis, were also opened. Metro Transit capital improvements related to Minneapolis service are identified below.

Transit Capital Facility Improvements

- 80 new buses
- 4th Street downtown "contraflow" bus lane (for buses displaced from 5th Street by LRT construction)
- (Minneapolis) Uptown Transit Hub
- Nine new large custom shelters in downtown Minneapolis and on Washington Avenue at the University of Minnesota
- Hopkins Transit Hub
- Robbinsdale Transit Hub
- St. Louis Park Transit Hub
- Coon Rapids park-and-ride (400 spaces)
- Woodbury park-and-ride (300 spaces)

- 1.75 miles of bus-only freeway shoulder lanes in the following locations:
 - Southbound I-35W from Franklin Avenue to Lake Street in south Minneapolis
 - Northbound Highway 100 from Benton Blvd. to Minnehaha Creek in Edina

Source: Metro Transit

The period 2001-2002 will see the construction of 32 standard bus shelters within the city of Minneapolis, as well as further study of transit improvements in downtown associated with implementation of LRT. With downtown growth and increases in transit ridership, bus congestion is an increasing problem. Metro Transit has expressed interest in exploring opportunities for new bus-only facilities in downtown Minneapolis.

Ramp Meter Bypasses

In 2001, MnDOT constructed ramp meter bypasses for high-occupancy vehicles (HOV). The following serve Minneapolis express bus routes:

- Highway 36 and Highway 51 in Roseville
- I-94 and 6th Street near the Metrodome in Minneapolis
- I-694 and county Road 81 in Brooklyn Park

Transit Service and Ridership

A fundamental measurement of the success of any transit system is its ridership. For the past four years, Metro Transit has met and surpassed its ridership objectives. In 1999, Metro Transit had the second fastest growing ridership among the largest bus systems in America. Ridership in 2000 reached 73.5 million, the highest ridership in 15 years. Between 1997 and 2000, ridership grew at a rate nearly twice as fast as new service. Ridership growth remained strong through the first half of 2001, but experienced an expected initial drop-off as a result of a 25-cent fare increase on July 1, 2001. July ridership was down almost four percent and August ridership was about two percent lower than in 2000.

METRO TRANSIT AVERAGE DAILY RIDERSHIP

Year	Weekday	Sat	Sun
1997	205,168	105,633	63,069
1998	219,230	115,562	69,630
1999	237,731	127,562	80,306
2000	242,582	130,035	80,875

Source: Metro Transit

Two key programs, Metropass and U-Pass, have contributed significantly to increasing ridership over the past several years. Under the Metropass program, companies subsidize deeply discounted annual transit passes for their employees. Patterned after Metropass, U-Pass permits unlimited rides for students of the Twin Cities campuses of the University of Minnesota. In September 2001, more than 50 employers participated in Metropass, recognizing transportation as an important variable in attracting and retaining quality employees. In

2000, Metropass holders rode Metro Transit buses 8.3 million times. For the Upass program, students pay just \$50 per semester for their unlimited ride pass, thanks to a subsidy program underwritten by the University through a federal grant. For the first nine months of 2001, U-Pass ridership reached 1.1 million.

In addition to these fare incentive programs, Metro Transit is in the midst of a comprehensive restructuring of its route network in an effort to make transit more attractive to prospective riders. Working closely with communities and customers on a quadrant-by-quadrant basis, Metro Transit is realigning its services to simplify routes, improve Crosstown service and create faster routes. Routes in both the northeast sector of the Twin Cities and services in Hopkins, Minnetonka, and St. Louis Park have undergone restructuring

Route and Service Changes

Specific route and service changes affecting Minneapolis in 2001 included:

- New Route 3 replaced Route 6 on Como Avenue SE. The new route provides first-time one-seat service to the University of Minnesota and downtown Minneapolis from the Como Park area of St. Paul.
- New Route 61 replaced a portion of Routes 6 and 260. The new route provides first-time one-seat service to downtown Minneapolis from Larpenteur Avenue in Lauderdale, Falcon Heights, Roseville, St. Paul and Little Canada.
- Route 32 Lowry Avenue Crosstown was extended to the new Robbinsdale transit hub.
- New express bus service was initiated to downtown from Elk River and Coon Rapids.
- Demonstrator Route 101 connecting Prospect Park to the Quarry Center in northeast was discontinued.
- New midday express Route 660 began service between downtown and St. Louis Park.

Regional Transit and Transportation System Planning

The Metropolitan Council's Transportation Planning Division has identified a network of transitways connecting job and population centers throughout the seven county metropolitan area, including the Hiawatha Corridor.

Other than Hiawatha, only the Northstar Corridor is at an advanced state of planning. It is, however, not yet fully funded. Project supporters have asked Governor Ventura to propose a state commitment of \$120 million, which will be considered during the next legislative cycle. Important regional transit corridors and the preferred transit modes, as identified in the Transit 2020 Master Plan, include:

Commuter Rail Corridors

- Northstar Corridor (Street Cloud to downtown Minneapolis)
- Dan Patch Corridor (Dakota County to downtown Minneapolis)
- Red Rock Corridor (Hastings to downtown St. Paul)
- Central Corridor (between downtown St. Paul and downtown Minneapolis)

Dedicated Busway Corridors

- Minneapolis Southwest/29th Street Greenway (Eden Prairie to downtown Minneapolis/Midtown Greenway)
- Minneapolis Northwest (Maple Grove to downtown Minneapolis)
- Minneapolis East a.k.a. Northeast Diagonal (White Bear Lake to downtown Minneapolis)

The Hiawatha Corridor

The Hiawatha Light Rail Transit (LRT) route is the first LRT line planned for the Twin Cities metropolitan area. The 11.6-mile route will run along 5th Street in downtown Minneapolis and along Hiawatha Avenue through Minneapolis neighborhoods. The line, which will include 17 stations and link downtown Minneapolis, the airport and the Mall of America, will be operated by Metro Transit. There will be a total of four stations in downtown Minneapolis and six stations in Minneapolis neighborhoods. LRT will be an important part of a transit system because of its ability to transport high numbers of commuters comfortably, efficiently and quietly. LRT trains can operate as single cars, or can be combined into two and three-car trains. LRT trains are clean and quiet as its source of power is overhead electrical wires.

Stations are planned at the following locations:

- Between Hennepin Avenue and 1st Avenue. (Entertainment District Station)
- Between the Nicollet Mall and Marquette Avenue (Nicollet Mall Station)
- Between Minneapolis City Hall and the Hennepin County Government Center (Government Center Station)
- On the block immediately west of the Metrodome (Downtown East Station)
- At 16th Avenue in Cedar-Riverside neighborhood (Cedar-Riverside Station)
- Franklin Avenue Station
- Lake Street (Lake Street/Midtown Station)
- 38th Street Station
- 46th Street Station
- 50th Street/Minnehaha Park Station

Stops outside of the city include the Veterans Administration, the Fort Snelling/General Services Administration Park-n-Ride, both terminals of the main airport, and three stops in Bloomington including the Mall of America.

The Metropolitan Council estimates that the line will provide full revenue service to and from Fort Snelling in late 2003, and to and from the Mall of America in 2004.

Metro Transit forecasts a daily ridership of 24,000, with an estimated travel time between Nicollet Mall and the Airport of 23 minutes. Travel from one end of the line to the other (from the Entertainment District Station to the Mall of America) is estimated to be 33 minutes. Weekdays, the trains are expected to run every 7-1/2 to 10 minutes during rush hours, every 15 minutes mid-day, and every 30 minutes following the evening rush hour.

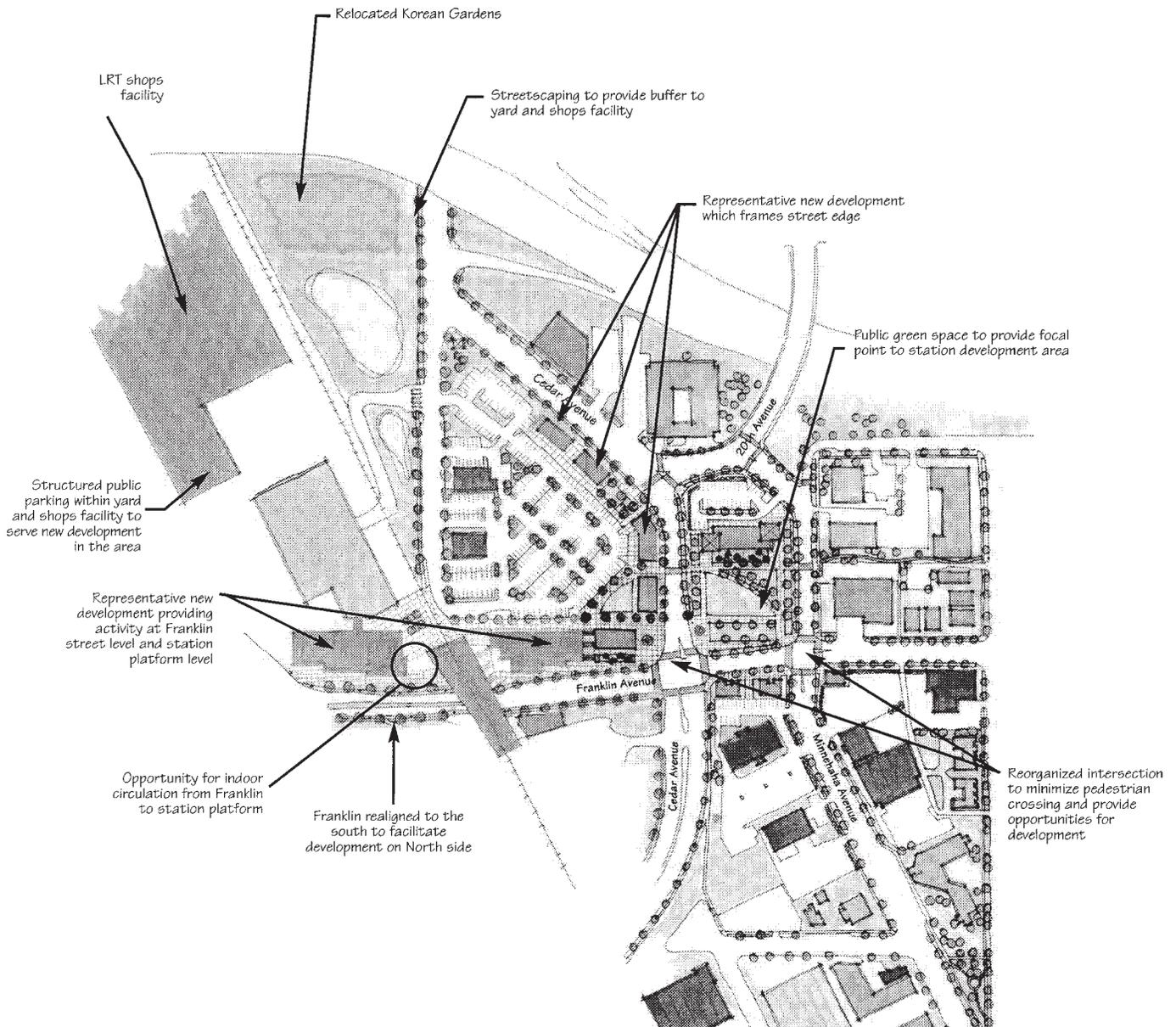
During weekends and holidays, trains will run every 30 minutes, except for Saturday and Sunday afternoon service, which will be every 10 minutes. A bus circulator service will meet LRT passengers at the Nicollet Mall Station, shuttling passengers along the Nicollet Mall during the workday, and along Nicollet Mall and Hennepin Avenue during the evening.

Construction of the Hiawatha Corridor Light Rail Transit line shifted into high gear in 2001. City staff have worked closely with staff at Metro Transit, Metropolitan Council, the Hennepin County Regional Rail Authority and the Minnesota Department of Transportation to plan for final station locations, preliminary engineering design, coordinated bus service in neighborhoods and long-range plans for development. Station designs allow access by pedestrians, passenger drop-off, and bus

connections. No park-and-ride facilities have been planned around the stations located in the city. Rather, the city will rely on various strategies (such as controlled on-street parking) to ensure that LRT riders do not use neighborhood streets for all-day parking. Dedicated parking facilities will be built at Fort Snelling and GSA park-and-ride (Highway 55 and 62), and Mall of America.

Fundamental to the success of the rail line is good feeder bus service. Bus hubs will be located at Fort Snelling, Veterans Hospital, 46th Street and 38th Street stations. Existing buses will be rerouted and service will be increased to better match the LRT. The buses will also be timed to make transfers with each other, thus improving neighborhood-to-neighborhood transit.

FRANKLIN STATION AREA - EAST





Downtown Transportation Management

More so than bus transit, LRT stations attract new development and investment at and near the station. The City of Minneapolis, in cooperation with the Metropolitan Council, Hennepin County, and neighborhood groups, has conducted master planning for the areas around LRT stations. These plans focus on identifying goals and specific priorities for future development. This process has involved members of the general public, neighborhood organizations, multiple public agencies and consultant teams. They have included a series of planning exercises designed to inform, provide options and ultimately recommend a preferred scenario for the sites that are likely to be most influenced by the benefits associated with proximity to an LRT station. A station area plan was adopted for the Lake Street Station area in May. Approval of plans for the Cedar-Riverside, Franklin, and 46th Street Station areas is anticipated at the end of 2001, or beginning of 2002.

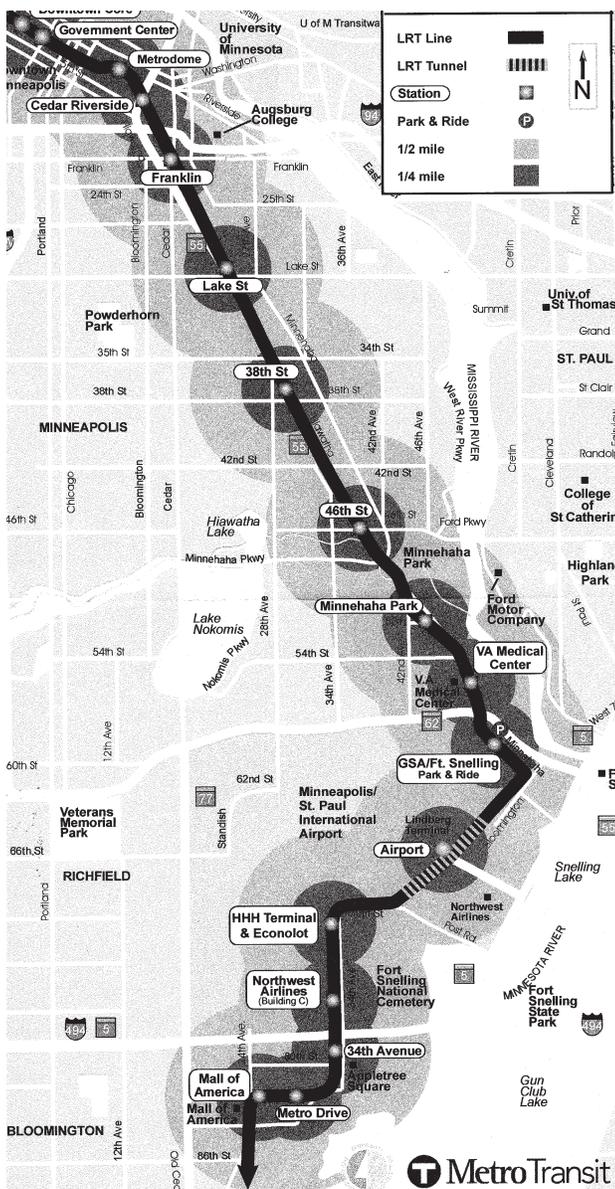
The Downtown Minneapolis Transportation Management Organization (TMO), a non-profit, is a partnership between the City of Minneapolis and the downtown business community. The TMO's mission is "to promote congestion mitigation strategies and advocate for environmentally sound transportation policies to assure the continued growth and prosperity of downtown Minneapolis."

The TMO's activities include:

- Operating Commuter Connection, a one-stop resource center for downtown employees and visitors located in the Pillsbury Center (www.mplstmo.org). Commuter Connection provides personalized assistance on bus riding, carpooling (including ridematching and registration), bicycling or walking to work. They also provide regional incentives.
- Motivating employers and building managers to promote alternative commuting options by employees and tenants. TMO staff assists employers with creating employee transit benefits such as discounted bus passes (e.g. MetroPass), state and federal tax advantages, with developing flexible work arrangements (e.g. telecommuting). They also work with building managers to implement transportation demand management strategies, often required by city zoning code.
- Providing commuting information access to job clients and employment counselors countywide, and assisting job developers and employers in implementing programs that overcome transportation barriers to hiring clients.
- Advising the Minneapolis City Council, the Downtown Council of Minneapolis and the private sector on key transportation concerns. The Minneapolis City Council Executive Committee supports legislation and city/regional policies that enhance access to downtown (e.g. dedicated transit funding and the Minnesota Employer Transit Pass Tax Credit).
- Educating business leaders, key policymakers and employers, through a multi-media presentation, on the impacts of traffic congestion on downtown and the region, and through sharing of data on effective travel demand strategies in Minneapolis and beyond.

The TMO collaborates with various city departments and regional transportation planners to enhance the variety of commuting options to downtown. The TMO's outreach to commuters and employers contributes to a more efficient and environmentally sound transportation system serving downtown Minneapolis.

The TMO advances the "transit first" policies of the city's comprehensive plan (*The Minneapolis Plan*) through means including the following activities in 2001:





Bicycling

- Based on past surveys, documented substantial increases in transit ridership at numerous companies who implemented new transit programs;
- Highlighted transit programs and incentives in transportation management plans completed for twelve employers (3,303 employees) in 2001;
- Assisted enrollment in MetroPass (discounted annual bus pass) by 25 downtown Minneapolis employers (12 employers enrolled in 2001);
- Assisted 40+ employers with implementing pretax transit benefits that sharply reduce the cost of transit for employees. Informed employers about the MN Employer Transit Pass Tax Credit, contributing to over 50 downtown employers subsidizing transit;
- Provided a convenient location for purchase of bus passes (approximately \$1.5 million in sales in 2001). Served approximately 90,000 customers in 2001 with bus pass purchase or commuter information (33 percent said Commuter Connection helped them change from driving alone);
- Facilitated parking cash-out at three employment sites leading to increases in transit ridership with no additional costs to employers or government, encouraging a trend for employers to provide equitable transportation benefits to employees.

Bicycle use as a form of transportation is on the rise. From the early 1980s to the early 1990s, bicycle commuting to downtown almost doubled. Recent data has shown that this upward trend continued through 1998. In 1990, the counts showed that close to 750 people were commuting to work downtown on a bicycle, and by 1998, staff recorded approximately 2,800 bicyclists commuting to work on an average day in the April to November months. The following table has been prepared by Minneapolis Public Works to estimate bicycle use in downtown Minneapolis:

2001 DOWNTOWN MINNEAPOLIS BICYCLE USE

Season	Weather Type	Estimated Bicyclists Per Day	Percent of 140,000 Commuters
Spring	Good	2500	1.8%
	Poor	1800	1.3%
Summer	Good	3000	2.1%
	Poor	2500	1.8%
Fall	Good	2500	1.8%
	Poor	1800	1.3%
Winter	Good	1000	0.7%
	Poor	500	0.4%

Minneapolis Bicycle Advisory Committee

The role of the Minneapolis Bicycle Advisory Committee (BAC) is to promote both commuter and recreational bicycling, to advocate bicycling infrastructure improvements, to encourage safe riding, and to involve people interested in bicycling issues throughout the city. The BAC functions as an advisory committee to the Mayor and City Council as well as the Park Board and serves as a liaison to bicyclists, businesses, neighborhoods, and other communities and agencies. The BAC is comprised of various individuals interested in bicycling issues representing both the public and private sectors. In 2001 the Minneapolis BAC re-evaluated its roles and responsibilities. As part of the discussion, voting membership was more clearly defined to include more citizen representation on the committee. The BAC meets monthly and meetings are open to the public.

Minneapolis 5-Year Bicycle Plan

The Minneapolis 5-Year Bicycle Plan was updated in 2001 and was approved by the Minneapolis City Council, the Mayor, and the Minneapolis Park and Recreation Board in June of 2001. The Minneapolis 5-Year Bicycle Plan consists of a bikeways plan and several bicycle program goals. These goals include increasing bicycle mode share in downtown Minneapolis from 2 percent in 2001 to 3 percent in 2005 and to 4 percent in 2010. In addition, downtown Minneapolis bicycle parking goals were set to compliment the mode share goals. The Minneapolis 5-Year Bikeways Plan includes existing and candidate routes under the following three primary classifications:

- Off-street paved bike trails;
- On-street striped bike lane;
- On-street signed routes.

The Minneapolis 5-Year Bikeways Plan only includes planned routes that have funding assigned to that bikeway and where ownership and maintenance has been designated for that bikeway. Ownership and maintenance responsibilities for the 5-Year Bikeways Plan are listed in the City Council and MPRB approved October 2000 Bikeways report. An amendment to this report defining ownership and maintenance for additional bikeways was submitted and accepted at the time of City Council and MPRB approval. The Minneapolis 5-Year Bicycle Plan can be viewed on the City of Minneapolis website.

Minneapolis Bicycle Master Plan

Phase 1 – Minneapolis Bikeways Master Plan

In early 2001, Minneapolis Public Works in cooperation with the Minneapolis Park and Recreation Board and under the direction of the Minneapolis Bicycle Advisory Committee, solicited each Minneapolis neighborhood to map existing and candidate bikeways in their neighborhood. Neighborhoods were asked to consider a number of factors in determining appropriate bikeway routes including proximity to schools, cultural centers, business and retail nodes, connections to regional bikeways, feasibility, and maximizing use. Most neighborhoods complied with the request and sent back suggestions for off-street trails, on-street bike lanes, and on-street signed routes. After city staff compiled and researched the bikeways, four public meetings were held in each of the four quadrants of Minneapolis. Neighborhood representatives were asked to attend their appropriate quadrant meeting to attempt to work out a cohesive bicycle network based on their neighborhood's suggestions.

The Minneapolis Bikeways Master Plan was presented to both the Minneapolis City Council and Minneapolis Park and Recreation Board in June 2001 for consideration with approval slated for December 2001 after further public input. The Minneapolis Bikeways Master Plan can be viewed on the City of Minneapolis website at www.ci.minneapolis.mn.us/planning

Phase 2 – Minneapolis Bikeways Master Plan Goals and Policy Recommendations

In the fall of 2001, the second phase of the Minneapolis Bicycle Master Plan started to look at bicycle program needs, goals, and priorities. Roles and responsibilities to accomplish the aforementioned goals are also addressed. The Minneapolis bicycle program has been separated into the following categories:

- Safety (accident reduction, accident prevention, personal security, and infrastructure safety improvements);
- Education (educating the public on bicycle initiatives and projects);
- Health and Fitness (working to make Minneapolis a more healthy community through bicycling);
- Promotion (promoting utilitarian bicycling and bicycle commuting, tourism, and other safety and public education campaigns);
- Community Involvement (involving schools, residents, businesses, and bicyclists);
- Infrastructure (includes bikeways, bicycle parking, and roadway improvements for bicyclists).

Although many of the above categories overlap, it is important to note that an effective and successful bicycle program must include projects and initiatives from each category. The difficult reality is that bicycle program must be prioritized to maximize limited resources such as funding and staff time.

After public input is collected and considered, the Minneapolis Bicycle Advisory Committee will work to develop goals, policy recommendations, and bicycle program priorities for the City Council, Mayor, and Minneapolis Park and Recreation Board for their approval.

Bicycle Infrastructure

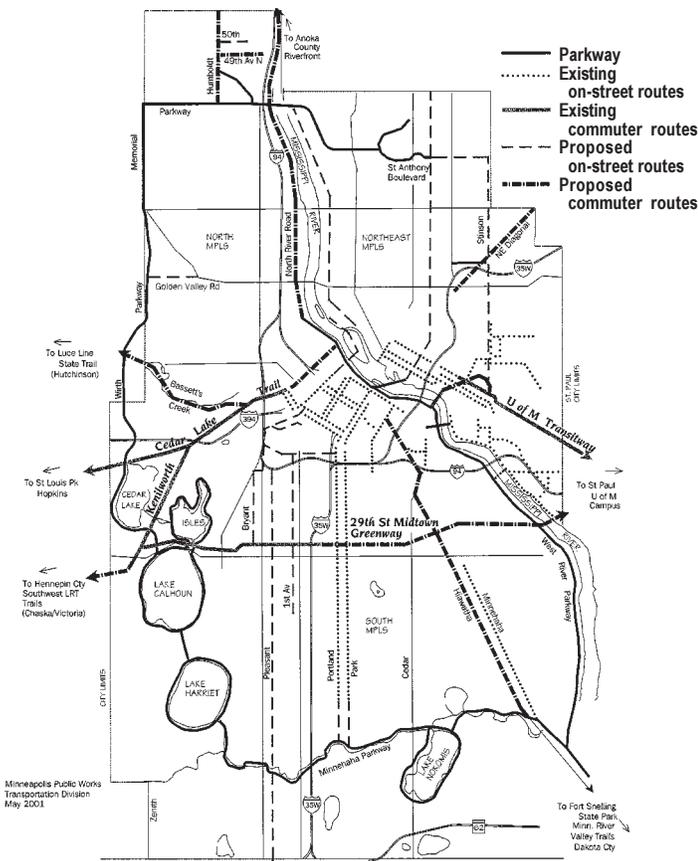
In 2001 the City of Minneapolis had over 53 miles of existing off-street trails and 26 miles of existing on-street bike lanes. Planned Bikeways within 5 years (funded or partially funded) include 13 miles of additional off-street trails and 23 miles of additional on-street bike lanes. Along with the 79 miles of existing on-street and off-street bikeways, Minneapolis has over 700 miles of low volume residential streets appropriate for bicycling. Approximately 75 percent of Minneapolis streets are bicycle friendly. Within five years Minneapolis will have over 115 miles of designated bikeways.

Tremendous improvements have been made to improve bicycling within the city in the last three years. In 1999, the City of Minneapolis constructed the Kenilworth Trail in southwest Minneapolis along with the Dinkytown Bikeway Connection (Bridge #9) near the University of Minnesota Campus. In 2000, Phase 1 of the 29th Street Midtown Greenway was completed. Paralleling Lake Street along the Hennepin County Regional Rail Authority (HCRRA) rail corridor, this commuter trail runs from 31st Avenue and Chowen Avenue to 5th Avenue South. In 2001, the Minneapolis Park and Recreation Board completed the Mill Ruins Trail near downtown Minneapolis along the south bank of the Mississippi River in addition to renovating the Minnehaha Creek trails in south Minneapolis. Future bikeways and priorities are addressed in the Minneapolis 5-Year Bicycle Plan and the Minneapolis Bicycle Master Plans described above.



Bicycle amenities such as bicycle parking and secure locker and shower facilities are critical components to encouraging bicycle use. By City of Minneapolis ordinance, all new development over 500,000 square feet must provide secure bicycle parking spaces, shower facilities, and clothing storage areas as based on the size of the development. The recently opened Hawthorne Transportation Center is the first building within the city to offer showers and lockers to the public. The City of Minneapolis also offers a unique 50/50 cost sharing program to provide and install public bicycle racks throughout the city. Businesses and neighborhoods are encouraged to participate in this effective program.

MINNEAPOLIS BIKE ROUTES, FIVE YEAR PLAN



The Minneapolis-St. Paul International Airport is the seventh busiest airport in the world for operations activity and the eighth busiest United States airport based on passenger activity.

History

One of the nation's busiest airports started from relatively humble beginnings. In 1920, the Aero Club of Minneapolis leased land from an unsuccessful auto speedway and began operations from unpaved landing strips in the centerfield of the speedway. Mail service was initiated operating from the field's single hangar. In 1923, the field was re-named Twin Cities Airport-Wold Chamberlain Field in honor of two Minnesota aviators killed in action during World War I. Northwest Airways began operations from the field in 1926, having been successful in obtaining the mail service contract from the federal government.

The Minneapolis Park Board took over airport operations in 1928 and gave the field another name—Minneapolis Municipal Airport. At that time, the field consisted of approximately 325 acres and had eight hangars. In 1929, Northwest began offering passenger service with 12-passenger Ford Trimotor aircraft. By 1938, the airport had three paved runways, each 3000 feet long, a terminal building, a control tower, and administrative facilities.

The Minnesota legislature created the Metropolitan Airports Commission in 1943 to combine Minneapolis and St. Paul under one airport authority. This action ended the rivalry between the two cities for providing air passenger service. In 1948, the airport was named Minneapolis-St. Paul International Airport-Wold Chamberlain Field. Since World War II, the tremendous growth in aviation is reflected by the expansion of the airport's facilities.

Existing Minneapolis-St. Paul International Airport Facilities

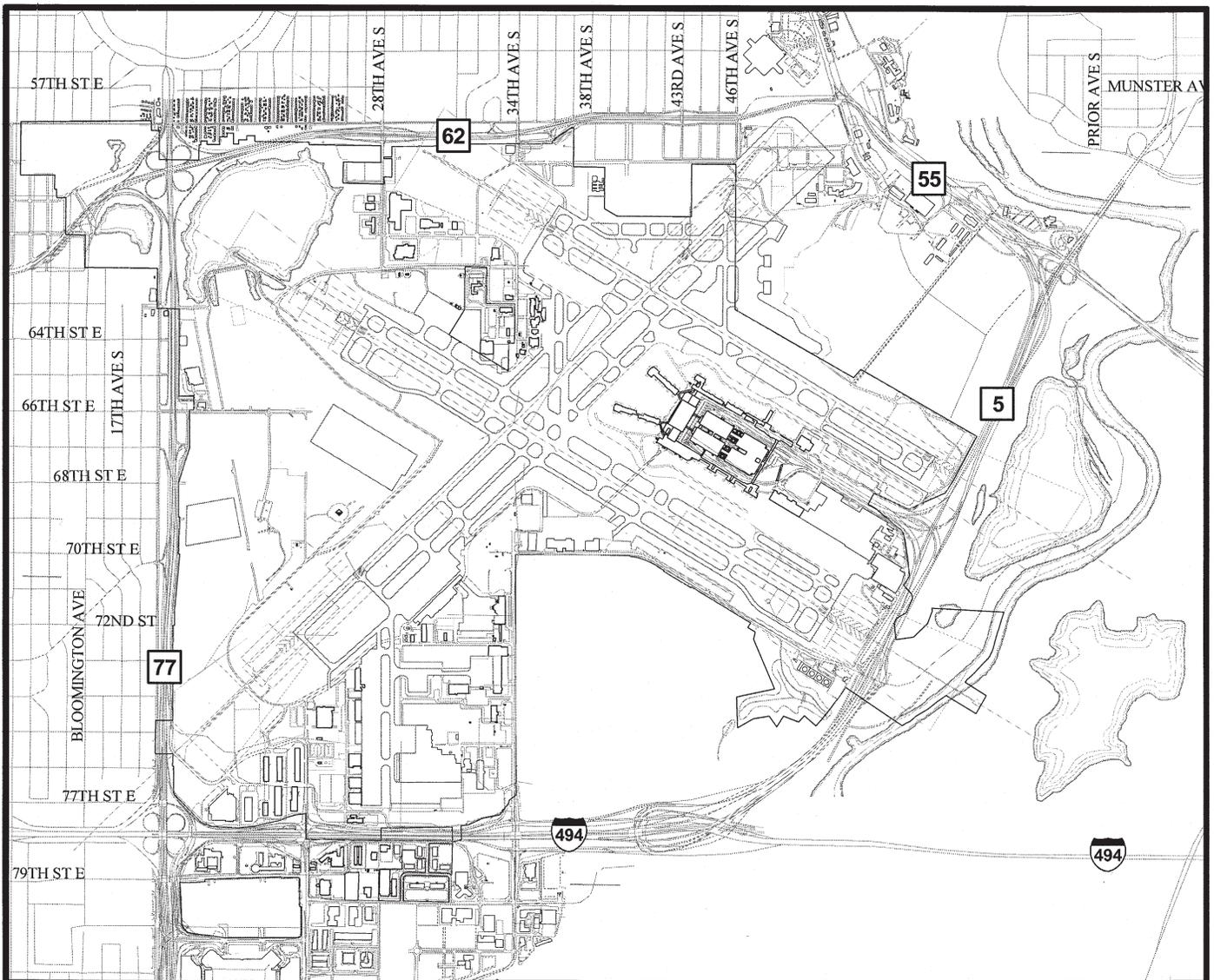
Minneapolis-St. Paul International Airport (MSP) currently consists of three runways, two of which are parallel oriented in a northwest-southeast direction and a crosswind runway approximately perpendicular oriented in a northeast-southwest direction. The airport has grown to encompass 3,400 acres with two passenger terminals, cargo facilities, airline maintenance facilities, auto parking, and support service facilities.

The crosswind runway 4/22 is the longest runway at 11,000 feet enabling the largest fully loaded aircraft to fly nonstop to European and Asian destinations under all weather conditions. Runway 12R/30L is 10,000 feet long and 12L/30R is 8,200 feet. All runways are equipped with special lighting and landing aids to provide operational service in poor weather conditions.

Scheduled passenger service is accommodated at the Lindbergh Terminal with four concourses and 76 jet aircraft parking gates. Major facility improvements at the terminal area are ongoing in order to keep pace with passenger service requirements, better road access, and increased auto parking demands. Due to MSP's status as a Northwest Airlines hub airport, major improvements have been made in passenger movement systems, as well as, retail shops and concessions. International passengers on scheduled airlines are now processed through customs and immigration in the Lindbergh Terminal making faster and easier connections to other flights possible.

The newly opened Humphrey (HHH) Terminal replaced a badly outdated terminal facility serving charter and other international passengers. The new terminal opened in May of 2001 and has eight aircraft parking gates with the capability to expand to 16 gates. Two additional gates are anticipated to be operational by 2002. Sun Country Airline, the anchor tenant in the new terminal, provides charter operations. Scheduled operations were recently discontinued. Charter operators and low fare carriers have played an increasingly important role in serving the needs of the leisure passenger since airline deregulation in 1978.

MSP AIRPORT EXISTING FACILITIES



Airline Service

Twelve major U.S. passenger airlines, three foreign-based carriers, four regional commuter carriers, seven charter carriers, and 19 cargo carriers serve MSP. Combined passenger and cargo flights link the region directly to over 20 international destinations, including: two Asian cities, nine Canadian cities, 10 Caribbean and Latin American cities, and 175 domestic destinations. Currently, the carriers providing service to MSP are:

Passenger Airlines	Foreign Carriers	Regional Airlines
Air Tran Airways	Air Canada	GreatLakes
America West	KLM	Mesaba
American	IcelandAir	COMAIR
American Trans Air		Skywest
Continental		
Delta		
Frontier		
Northwest		
TransWorld		
United		
USAir		
Charter Airlines	Cargo Airlines	
American Trans Air	Airborne Express	
Champion Air	AM Intl/KittyHawk	
Casino Express	ATI/BAX Global	
Omni Int'l	Basler Airlines	
Ryan Int'l	Bemidji	
Miami Air	Blackhawk Airways	
Sun Country	Connie Kalitta	
	CSA Air	
	DHL Airways	
	Emery Worldwide	
	Fed Ex	
	Mountain Air Cargo	
	Orion Air	
	Sioux Falls Av.	
	Southern Air	
	Sup Av	
	UPS	
	Viking Express	
	Zantop	

Northwest with its home based at MSP continues to dominate operations with the breakout as shown for 1999 and 2000:

PERCENT OPERATIONS BY MAJOR CARRIER

Airline	1999	2000
Northwest	76.3	76.5
United	4.1	4.0
American	3.3	3.3
Delta	2.5	2.5
Continental	2.5	2.2
TWA	1.8	1.8
Sun Country	3.6	3.8
Vanguard**	1.8	1.3
US Airways	1.7	1.6
America West	1.0	0.9
Frontier	0.4	0.4
Iceland Air	0.2	0.2
KLM	0.2	0.2
Air Tran Airways	NA	0.5*
American Trans Air	NA	0.4*
Canadian Regional		0.3
Air Canada	0.5	0.2

* New carrier entrants in year 2000

** Terminated service 3/01

Operational Characteristics

Aircraft Operations

Each flight (or flight segment) consists of two aircraft operations: a take off or a landing. Operations activity has increased significantly, albeit at a lower growth rate than passenger activity. In the 11-year period from 1985 to 1995, total operations increased from 373,000 to 465,000, almost a 25 percent increase. The growth in operations since 1995 is shown below:

Year	Total Operations	% Chg
1996	485,480	4.3
1997	491,273	1.2
1998	483,013	-1.7
1999	510,421	5.67
2000	522,257	2.32
2001YTD	424,552*	

*Through October 31, 2001

OPERATIONS BY CLASSIFICATION

Operations	1999	2000	% Chg	2001YTD*
Major	320,919	349,204	8.81	295,063
Regional	109,017	89,105	-18.27	68,727
Charter	10,600	5,152	-51.40	3,580
Air Freight	17,271	18,247	5.65	14,507
General				
Aviation	49,256	58,076	17.91	39,832
Military	3,358	2,473	-26.35	2,843
Total	510,421	522,257		424,552

*Through October 31, 2001

During the five-year period from 1996 through 2000, the MSP experienced a 7.6 percent increase in aircraft operations, a slowdown in the rate of increase from the earlier period. Operational characteristics are further broken down by six general classifications. The accompanying table illustrates this breakdown for 1999, 2000, and 2001 year to date.

As indicated, both regional and charter activity dropped off significantly between 1999 and 2000, while general aviation (primarily corporate) experienced substantial growth. The picture is somewhat distorted, however, since a significant number of regional and charter operations are now classified as major carrier operations. Restrictions imposed on general aviation after September 11, 2001 contributed to a significant decline in general aviation operations. Military operations contribute a very small percentage of the total operations at MSP. These operations declined substantially from 1999 to 2000, generally reflecting a reduced defense operational budget. While year-end figures will not be available for 2001 in time for this printing, military operations are anticipated to increase, reflecting security flights after September 11, 2001.

Passengers

While aircraft operations have increased significantly over the last 15 years, passenger activity has increased at a much greater rate due to: Northwest Airlines' hub activity with more connecting flights; a higher number of larger aircraft; increased load factors (number of passengers/aircraft flight); and more leisure travel. From 1985 through 1995 total passengers increased from 14.8 million annually to 26.8 million, a 70 percent increase. Since 1995 time the total number of passengers has increased to over 36 million, a 27 percent increase over the five-year period.

Year	Total Passengers*	% Chg
1996	28,772,000	7.5
1997	30,208,000	5.0
1998	30,347,920	0.5
1999	34,721,879	14.4
2000	36,614,671	5.5
2001	29,371,777**	

* Includes both revenue and non-revenue (frequent flyer awarded trips, airline employees, or other non-paying) passengers

**Through October 31, 2001

Cargo

Air cargo is an important aspect of service provided at MSP. Cargo includes heavier freight, small package and mail services. Regional commuters carry a small percentage of cargo, but the bulk of cargo is shipped in the belly holds of passenger aircraft or in all-cargo carriers. Nearly 59 percent of cargo was shipped via passenger aircraft while all-cargo carriers shipped about 40 percent. The following table illustrates cargo volume at MSP for the period 1995-2001 year to date. Significant growth in air cargo total tonnage occurred from 1992 to 1995. The volume of cargo shipped through MSP has remained relatively stable over the last seven years with a spiked increase in 1997. Freight and express service accounted for 64 percent of the cargo tonnage, while mail service accounted for 36 percent of the total.

MAIL AND CARGO VOLUMES

Year	Metric tons	% Chg
1995	365,203	
1996	361,662	-1.0
1997	379,117	4.8
1998	366,347	-3.4
1999	366,425	0.0
2000	376,032	2.6
2001YTD	289,333*	

*Through October 31, 2001

Impact of September 11, 2001 on Operations and Passenger Activity at MSP

At the time of this writing, only September's and October's operations and passenger activity data were available. Passenger activity was down over 30 percent during September 2001 compared to September 2000 passenger activity. The following synopsis provides a brief look at passenger activity for the two periods.

All operations activities except military, fell dramatically, however passenger activity was the hardest hit. This was due to the immediate grounding of aircraft on Sept. 11, 2001 followed by voluntarily reduced schedules in anticipation of much reduced demand. Even with reduced schedules, the number of passengers per flight was lower. The restrictions on general aviation contributed to an even greater reduction in the number of general aviation flights. As part of the security response measures, military flights increased substantially. Operations data is briefly synopsisized for the months of September and October 2001 and 2000.

IMPACT OF SEPTEMBER 11, 2001 ON OPERATIONS AND PASSENGER ACTIVITY AT MSP

Passengers (Orig. and Deplane)	Sept. 2001	Sept. 2000	% Chg	Oct. 2001	Oct. 2000	%Chg
Major Carrier	1,791,617	2,589,884	-30.8	2,218,200	2,577,383	-13.9
Regional	167,668	221,549	-24.3	226,717	236,940	-4.3
Charter	17,241	21,296	-19.0	24,967	33,699	-25.9
Total Revenue Passengers	1,976,526	2,832,729	-30.2	2,469,884	2,848,022	-13.3
Non-Revenue Passengers	93,432	134,048	-30.3	107,481	151,302	-29.0
Total Passengers	2,069,958	2,966,777	-30.2	2,577,365	2,999,324	-14.1

COMPARISON OF SEPTEMBER AND OCTOBER 2000 AND 2001 OPERATIONS

Operations	Sept. 2001	Sept. 2000	% Chg	Oct. 2001	Oct. 2000	%Chg
Major carrier	24,720	29,265	-15.53	26,851	28,438	-5.58
Regional	5,911	7,156	-17.40	6,788	7,434	-8.69
Charter	162	203	-20.20	242	301	-19.60
Air Freight	527	1,596	-33.90	1,327	1,595	-16.80
General Aviation	2,154	4,724	-54.40	4,938	6,832	-27.72
Military	655	233	181.12	238	233	2.15
Total Operations	34,657	43,177	-19.73	40,384	44,833	-9.92

Prior to the events in September 2001, operations and passenger activity had been down only slightly comparing 2001 and 2000 figures, with operations being down 0.81 percent and total passenger activity down just over 2 percent.

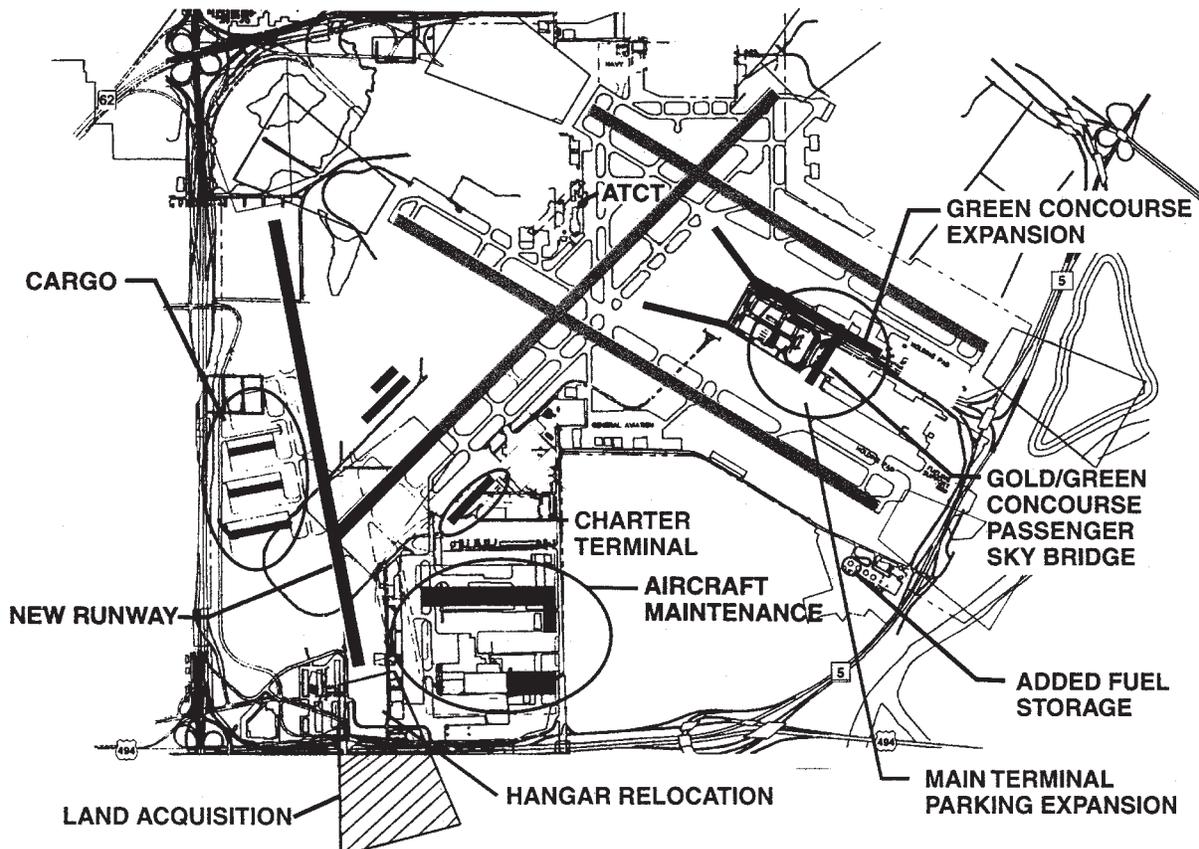
Facility Improvements

In 1989, the Metropolitan Airport Planning Act required the Metropolitan Council and the Metropolitan Airports Commission to undertake an extensive study to plan for long term major airport development to serve the aviation needs of the region. The study included assessing the possibility of meeting long term needs through 2020 at the current site, as well as the option of developing a new airport at a new site. This study process became known as the dual track process and had a number of component parts. In 1996, the Minnesota Legislature decided that a new airport would not

be needed, and that MSP could meet the region's air traffic needs beyond 2020. The State legislature thereby ended the dual track study.

One of the dual track study components was the development of a long-term comprehensive plan for MSP to meet aviation needs through 2010. Major improvements needed to meet operational demand included significant improvements to runways, the addition of a new north-south runway, taxiway improvements, aircraft holding aprons, and additional passenger and cargo aprons. In addition to runway reconstruction of older pavement areas on the south parallel, the crosswind runway was extended to provide greater utilization for international flights. Staged construction for the new north-south runway, 17/35, is underway and was originally anticipated to be operational in 2003. Due to funding constraints, portions of work were deferred with a new anticipated operational date late in 2004.

2010 AIRPORT PLAN



Major improvements have also been made in both terminals, concourses, vehicle parking ramps, terminal access roads, and support facilities. Among the major improvements brought into service in 2001 were:

- New HHH Terminal
- In and outbound parking roadways reconstructed

Other projects initiated, but under various stages of construction, with anticipated completion dates beyond 2001 include:

- Runway 30R Deicing Pad
- Runway 17/35 Phased Construction
- Concourse C Expansion
- New Airport Mail Center
- Tunnel work for Light Rail Transit (LRT) and Infield Access
- Regional Concourse Expansion
- Vehicle Parking Ramps

In addition to general airport improvements, the MAC has continued with the acquisition of properties necessary for development of the north/south runway and with its noise mitigation program.

Airport Noise

A consequence of having a busy airport in the urban area is the noise impacts on neighboring communities. The Federal Aviation Act of 1958 gave the federal government complete and exclusive national sovereignty in the airspace over the United States. The Act also created the Federal Aviation Administration (FAA) and gave it broad authority to control and regulate the use of navigable airspace and aircraft operations. At the time of the Act, most airports were locally owned and operated, and local governments were responsible for controlling and regulating the airports.

The Aviation Safety and Noise Abatement Act of 1979 established the basis for FAA to develop specific rules under Part 150, which focused on the reduction of non-compatible uses and the prevention of additional non-compatible uses. As commercial aviation grew and noise became an increasing problem, airport owners and operators began imposing restrictions on the use of airports. Local mitigation efforts included various forms of control such as curfews limiting hours of operation, noise limitations, preferential runway systems, limits on types of aircraft that could use the airport, and modification of flight procedures. This localized approach to combat noise through airport use restrictions prompted the airline and air cargo industries to lobby Congress for a more uniform approach and to limit local authorities' ability to place restrictions that interfered with interstate and global commerce.

To balance the interests of the airline industry and those of residents living near airports, Congress responded with the Airport Noise and Capacity Act of

1990 (ANCA). A key provision of the Act was the implementation of a national phase out of older, noisier Stage 2 aircraft with the goal of achieving a 100 percent transition to new generation, quieter aircraft (Stage 3) by the year 2000. The Act also authorized DOT to establish a national aviation noise policy and program for reviewing noise and airport access restrictions. In effect, the ability of airport proprietors or local communities to control noise impacts through airport use restrictions was severely limited. The federal preemption of state and local regulatory efforts left airport proprietors and local governments faced with the task of making airports compatible with their environments through noise compatibility and abatement programs. Such programs may include: a combination of land acquisition for highly impacted areas; establishment of preferential runway use systems; modification of flight patterns and procedures; soundproofing of residences; sensitive uses and public buildings; and zoning for compatible land use.

The FAA developed and implemented Federal Aviation Regulation (FAR, since re-coded as part of the Code of Federal Regulations) Part 150 in the early 1980s as a voluntary program that allowed airport operators to define noise impacted areas through development of noise exposure maps. Airport owners develop recommended operational or procedural measures to reduce noise impacts or land use measures to prevent or ameliorate non-compatible land uses. The noise exposure maps show impacted areas through noise contour lines, illustrating points of equal noise exposure (similar to a topographic contour line). Part 150 studies reflect conditions such as aircraft activity, fleet mix, runway usage, flight procedures, airfield changes, and other pertinent conditions to develop the noise contours representing a five-year projection of the yearly noise average of the airport. The noise contour is generated using a federally endorsed computer noise model called the Integrated Noise Model (INM). INM considers the actual number of operations, aircraft flight tracks, actual flyover noise, type of aircraft, hours of operation, and applies a 10 decibel penalty to nighttime operations occurring between 10:00 p.m. and 7:00 a.m. The FAA and other federal agencies have defined a noise level of 65 DNL as the threshold at which a significantly large percentage of the residential population (approximately 12.3 percent) can be expected to be highly annoyed by airport noise, and therefore is generally incompatible with residential development.

MAC has one of the most aggressive noise mitigation programs in the country under Part 150. In addition to operational procedures, preferential runway use, voluntary noise restrictions, and noise monitoring, it has included land acquisition and relocation of non-compatible uses. Land acquisition has primarily been focused toward residential development in Richfield.

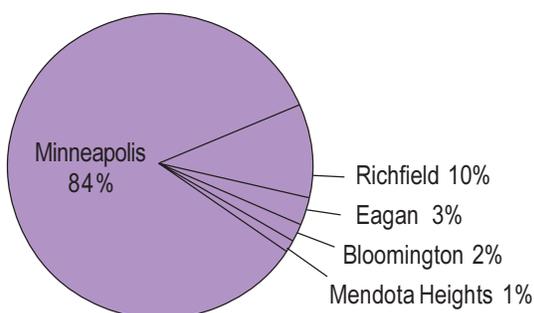
Sound Insulation Program

The MAC implemented a residential Sound Insulation Program (SIP) providing neighboring homes with a sound insulation package which reduces the noise environment inside homes. Homeowner participation in the program is voluntary. Efforts of the program have focused on relieving the highest noise impacted areas first and moving outward toward areas of lower noise levels. Since eligibility and sequencing in the insulation program was defined by intermediate contour locations, the boundary definitions became an issue with residents who may have been close, but were not within the contours. In November 1995, the FAA approved a recommendation whereby all homes in a given block would be eligible to participate in the program if the noise contour touched or passed through any part of that city block.

Treatment methods vary by individual home, but are designed to achieve a five-decibel reduction inside the home. A five-decibel noise reduction is roughly equal to doubling the distance of an aircraft from the roof of the home. A combination of methods may be used to treat noise infiltration including replacement of doors and windows, addition of acoustical storm windows, vent baffles, additional insulation in walls and attics, central air conditioning, and vent or duct modifications.

Since 1992, the MAC has insulated 6,476 homes. There are an additional 306 homes in the construction phase. With the completion of the homes currently underway, the total residential program costs to date will be \$191.0 million. Of these, 5,701 (84 percent) were in Minneapolis. In addition, 105 homes are in the pre-construction phase with all but four of these being in Minneapolis. The following graph illustrates the distribution of completed homes by affected community. A cost summary since the inception of the program outlines the construction effort and expenditure by year. The cost per home reflects both construction and administrative costs. In addition to the effects of inflation, the increased cost per home in recent years also is attributed to: work being conducted on larger homes, generally higher costs associated with construction materials and labor during a period of sustained construction growth, and addition of air quality enhancement services, which were not available with the early program.

PART 150 SOUND INSULATION PROGRAM HOMES COMPLETED 1992-2001 TOTAL: 6,790 HOMES



MAC PART 150 PROGRAM COST SUMMARY*

Year	Awarded Homes	Yearly Cost	Ave. Cost/ Home
1992	139	\$ 4.4M	\$28,500
1993	243	5.9M	\$24,100
1994	599	10.4M	\$17,300
1995	843	14.5M	\$17,300
1996	1,002	20.7M	\$19,100
1997	847	20.7M	\$23,850
1998	912	25.5M	\$31,000
1999	758	25.5M	\$33,500
2000	831	36.3M	\$43,700
2001YTD	616	27.1M	\$44,000
Totals	6,790	\$191.0M	

*As of October 2001

School Sound Abatement

Prior to the single family homes program, the MAC initiated school sound abatement projects in neighboring communities starting in 1981. St. Kevin's School in Minneapolis was the initial project. Since that time an additional seven schools have been completed in Minneapolis and one more is in the process of completion. Two schools were completed in Mendota Heights, and an additional five have been completed in Richfield. The sound abatement measures generally consist of adding a secondary roof system and suspended ceiling, window reduction and replacement, re-working of doors and entryways, baffling of air intakes and vents, and air conditioning. MAC has spent approximately \$41.7 million on this aspect of the compatibility program in the three communities. Schools located in Minneapolis have received approximately two-thirds of the funds.

SOUND ABATEMENT PROJECTS AT MINNEAPOLIS SCHOOLS

School	Project Years	Project Cost
St. Kevin's	1981/87	215,300
Wenonah	1988/89	1,153,500
Hale	1998	1,585,600
Resurrection	1989/90	1,263,300
Windom	1991/92	1,926,200
Keewaydin	1997	2,185,400
Ramsey	1999/2000	9,142,900
Washburn	1999/2000	8,544,500
Clara Barton	In Process	<u>1,729,700</u>
Total Minneapolis		\$27,746,400

Multiple Family Residential Noise Mitigation

MAC initiated a pilot program in 2001 to insulate affected multiple family structures within the 1996 65 DNL contour. Six structures are in the initial pilot program designed to determine the most suitable and effective techniques to achieve a similar five-decibel reduction that is comparable to the single-family homes. Implementation of the pilot program was deferred from the 2002 capital improvements program, along with most other construction projects, in response to anti-

pated revenue shortfalls. A total of 960 multiple family units situated in 64 structures were identified within the 1996 65 DNL contour of which the great majority are in Minneapolis.

Summary of Existing Part 150 Program

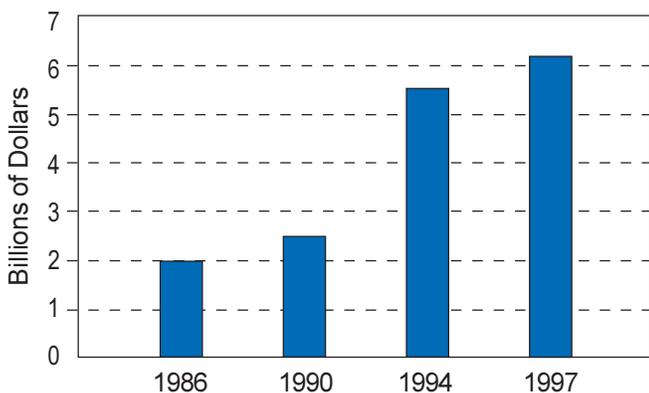
The existing noise compatibility program has 19 elements, which have been approved by the FAA and put into effect at MSP in order to alleviate noise impacts on neighboring residents. These elements include 11 noise abatement measures aimed at noise reduction affecting overall noise exposure levels. These measures include voluntary nighttime flight restrictions, training restrictions, utilization of runways most favorable to alleviating noise impacts to residents, noise monitoring, and flight tracking. In addition, eight measures are directed at either corrective action to mitigate non-compatible land uses or to prevent future non-compatible uses. These measures include acquisition, relocation, zoning, building code revisions, and the sound insulation program. While a significant number of Minneapolis residents are yet impacted by airport noise, the MAC has had one of the most aggressive noise compatibility programs in the nation.

Airport Economic Impacts

Notwithstanding the impacts on the aviation industry in the aftermath of September 11, 2001 terrorist attack, the growth in air transport is unmatched by any other form of transport. Over 1.6 billion passengers per year rely on the world's airlines for business and vacation travel. Around 40 percent of the world's manufactured exports, by value, are transported by air. North American carriers fly about 40 percent of the world's total passenger traffic, while European carriers transport about 26 percent and Asian/Pacific carriers account for 24 percent of passenger traffic. Over half of all international tourists outside Europe travel by air.

Locally, MSP is an important economic hub and generator of revenue for the region. The following figure illustrates the growth of economic impact of air transportation to the region from 1986 through 1997. In 1997, the total economic impact to the region was approximately \$6.25 billion.

**ECONOMIC IMPACT OF MSP INTERNATIONAL AIRPORT
SELECTED YEARS**



In 1999, more than 32,000 people were employed at MSP including airline employees, retail and concessions, rental car companies, freight, security, construction, architectural, and engineering personnel, administrative and support staff. An additional 100,000 jobs were indirectly related, including 48,000 jobs in the entertainment, hospitality, food, lodging, retail, and transportation services. More recent figures are not available, however, a 1997 study reported that 30 percent of the direct and indirect job holders lived in Dakota County, 21 percent resided in Minneapolis, 12 percent in St. Paul, and 10 percent in Hennepin County outside of Minneapolis.

Approximately 17.2 million people boarded flights at MSP in 1999, 5.1 million of whom were visitors to the Twin Cities. It is estimated that they spent more than \$2.2 billion while visiting. Airport activity at MSP in 1999 generated \$270 million in state taxes, \$136 million in local county taxes, and \$6 million for local governments. An additional \$295 million was generated in federal aviation taxes and \$73 million in U.S. Customs revenue. MAC reports that the airport in 1999 generated direct, indirect, and induced economic activity of approximately \$6.4 billion.

City Airport Efforts in 2001

One of the stated city goals is to, "reduce the negative environmental impacts of the Airport while maintaining its economic benefits to the people who live, work, and play in Minneapolis." To that end, the city was actively involved at the staff, mayoral and council levels monitoring the Part 150 update and advocating the city's position that the sound insulation program must extend to the 60 DNL contour.

The current limits of federal eligibility in noise mitigation programs such as the Sound Insulation Program are defined by the 65 DNL contour, but on August 20, 2001 MAC committed to provide a full sound insulation package out to the 60 DNL contour up to a limit of \$150 million. In large part, this was accomplished through the untiring efforts of elected officials and concerned citizens. The \$150 million is anticipated to be significantly less than the funding necessary to complete the project, therefore additional funding sources will be necessary. The MAC, however, is reconsidering this decision in December 2001.

As part of the legislative decision to expand the existing airport rather than develop a new airport, the legislature committed to reducing the noise impacts on affected communities. No state funds have been allocated to this end although it was recognized that the financial commitment required was beyond MAC's ability alone. The city has thus ardently worked for and will continue in its efforts to find an equitable means of additional funding for future noise mitigation efforts.

Elected officials and residents of Minneapolis have served on a number of airport advisory bodies over the years and continue to do so. In 2001, the city is represented on a special blue ribbon panel charged with developing the basis for an advisory board, which would replace the now defunct Metropolitan Aircraft Sound Abatement Council (MASAC). The purpose of such a replacement organization would be to provide a balanced forum of airport users and community representatives to discuss, develop, and recommend noise abatement initiatives to the Metropolitan Airports Commission.

The city is participating as a member of the reconvened Minneapolis-St. Paul International Airport Joint Zoning Board (JZB). The JZB is in the process of amending the previous airport zoning ordinance, adopted in 1984, to reflect changed conditions such as the new north-south runway, and the future one thousand foot extension of Runway 4/22. The zoning ordinance addresses height limitation and land use safety concerns in the airport environs.

In an effort to make airport issues and information more readily accessible to residents, the city has provided a website link from the city's web site to the MAC's website and to their environmental website.

The city hired a full time staff planner assigned specifically to airport issues to provide continuity, and serve as a liaison between the city, residents, various agencies, and entities involved with the airport.

Citizens Organizations

The Airport Noise and Capacity Act mandated the phase out of older, noisier, Stage 2 aircraft to be completed by December 31, 1999. Despite that transition, however, a September, 2001 U. S. General Accounting Office study reports that at 35 of the nation's 50 busiest airports, noise issues are still the primary environmental concern and challenge for airports. Additionally, a growing body of research is questioning potential health impacts that may be attributed to noise or air quality near airports.

Notwithstanding noise reduction efforts being made by the industry and local airport operators, an increasing number of citizens groups have developed focusing on airport issues that affect their communities. Residents of Minneapolis have long been involved with airport issues. The oldest local citizens advocacy group is the South Metro Airport Action Council (SMAAC). SMAAC promotes community awareness and participation on airport and airport noise issues. A second citizens group, Residents Opposed to Airport Racket (ROAR) was founded in 1998. ROAR focuses on reducing airport noise impacts, increasing community awareness of airport issues, and provides a forum for exploring options in meeting future transportation needs.