CHAPTER 4
MULTIMODAL PLANNING

Introduction

Transit

Pedestrians

Bicycles

Freight

Airports
Chapter 4 Multimodal Planning

4.1 Introduction

Hennepin County’s vision is of a future where residents are healthy and successful, living in communities that are safe and vibrant. Maintaining strong economic competitiveness and sustaining a high quality of life are critical to achieving this broad vision. A strong multimodal transportation system supported by complementary land development is central to achieving this vision and is pivotal to promoting economic strength, quality of life, and community vitality.1

Demographic and economic trends (aging population, rising fuel prices, increasing health and environmental concerns, changing consumer location preferences, etc.) tend to increase demand for more accessible, multimodal locations2.

One of the stated goals to support the county’s vision is to “provide mobility and choice to meet the diversity of transportation needs as well as to support health objectives throughout the county.” While the county’s transportation vision includes a more diverse multimodal transportation system, it recognizes that it is not feasible or responsible to provide for the same level of mobility and choice throughout the county. The county will develop and provide transportation systems including roadways, rail transit, and multiuse bikeways and walkways that link metropolitan systems and local systems. These transportation systems will be provided and maintained to enhance resident mobility, support economic vitality, and allow for flexibility in individual travel mode choices.

This chapter describes the roles and responsibilities of Hennepin County in providing and supporting a multimodal transportation system.

4.2 Transit

4.2.1 Roles and Responsibilities

Hennepin County Regional Railroad Authority

The Hennepin County Regional Railroad Authority (HCRRA) was established in 1980 as a political subdivision and local governmental unit of Minnesota. It was created as a separate political entity — with taxing authority — to preserve rail lines for planning, design, and implementation of rail transit in Hennepin County.

1 MSP Regional Business Plan (April 2011) supports transportation investments that increase spatial efficiencies; support focus on multimodal systems that connect housing and employment centers and reduces risks associated with auto-centric system.

2 Land Use Impacts on Transportation, Victoria Transport Policy Institute, May 2011
As part of its mission, HCRRA acquires abandoned freight rail corridors to preserve them for future transportation uses. HCRRA currently owns 55 miles of rail corridor encompassing approximately 650 acres, 11 sites suitable for future park-and-ride lots or stations encompassing approximately 94 acres, and two railroad depot buildings. County transit policies are included in Chapter 10.

**County Departments**

Several county departments are involved with transit:

- The Hennepin County Department of Housing, Community Works, and Transit is responsible for transit and corridor planning, engineering, design, and land purchasing for transit projects serving Hennepin County.

- The Hennepin County Transportation Department includes provisions for transit (bus pullouts, park/ride lots, etc.) where feasible and appropriate when designing and constructing county roads.

- The county’s Environmental Services Department supports transit activities through the Cool Counties Initiative.

- The Human Services and Public Health Department uses fixed route, dial-a-ride, and other transportation providers to take social service clients to medical and other appointments.

**Counties Transit Improvement Board**

In 2008, the State Legislature gave the seven metropolitan area counties the authority to impose a one-quarter cent sales tax and a $20 fee per vehicle sale to fund construction and operation of transitways. In 2008, Hennepin, Anoka, Dakota, Ramsey, and Washington Counties opted to impose the taxes and form the Counties Transit Improvement Board (CTIB), a joint powers board comprised of the five participating counties and the Metropolitan Council. CTIB pools the sales tax generated in the five counties and annually allocates the funds to transitway projects in the region. To date, CTIB has provided grants totaling $317 million. In 2008, the state prohibited county regional railroad authorities, which are part of CTIB, from contributing to the operating costs of LRT and commuter rail lines and capped their financial contribution towards capital costs to 10 percent. To date, the five-county sales tax is generating between $87 million and $91 million per year.

CTIB’s vision is a network of interconnected transitways that allows users to move efficiently and safely, while mitigating congestion, enhancing economic development, and improving environmental stability for the region.

Transitways are defined by CTIB as transit operating in a dedicated right-of-way with on-line stations to assure fast, reliable, attractive, and efficient service to residents and businesses within the metropolitan transportation area. This includes light rail transit (LRT), commuter rail, and limited bus rapid transit (BRT). Exhibit 4-1 is a map of CTIB’s transitway vision for the metropolitan area.
The Metropolitan Council

Acting as the region’s Metropolitan Planning Organization (MPO), the Metropolitan Council prepares a long-range transportation plan, the Transportation Policy Plan (TPP). A component of the current TPP is the Transit 2030 Plan, which includes a goal of doubling transit ridership through expanding the bus system and implementing a system of transitways (see Exhibit 4-2).
Areas of Hennepin County are within Market Areas I, II, III, and IV as defined by the Metropolitan Council. Additional information and a map of these market areas is provided in the 2030 HC-TSP Support Documents for this chapter. Service options for the market areas are as follows:

- **Market Area I** includes regular-route locals, all-day express service, special needs paratransit (such as ADA and seniors), and ridesharing.
- **Market Area II** includes similar services as Market Area I with the addition of small vehicle circulators.
- **Market Area III** includes peak-only express service, small vehicle circulators, midday circulators, special needs paratransit (such as ADA and seniors), and ridesharing.
- **Market Area IV** includes dial-a-ride service, volunteer driver programs, and ridesharing.

Most of the cities within Hennepin County are within the Metropolitan Council’s transit taxing district. The cities that are *not* in the transit taxing district include:

- Dayton
- Rogers
- Hassan
- Hanover
- Rockford
- Corcoran
- Greenfield
- Loretto
- Independence
- Medina
- Minnetrista
- St. Bonifacius
4.2.2 Existing Transit Systems

**Hiawatha LRT**

The Hiawatha LRT opened in 2004 providing a 12-mile connection between downtown Minneapolis, the Minneapolis / St. Paul International Airport, and the Mall of America (see Exhibit 4-3). The line has 19 stations; park-and-ride facilities are located at 28th Avenue, Bloomington, Fort Snelling, and Lake Street. The line also connects to a 975 space park-and-ride lot located near Fort Snelling, just north of the airport. Recently completed enhancements to the line include:

- A new five-story 1,450 space park-and-ride facility was completed at the 28th Avenue Station.

- A new Target Field station opened for revenue service on November 14, 2009, in conjunction with the opening of service on the Northstar Commuter Rail Line. The station also provides direct access to Target Field, the new 40,000-seat home of the Minnesota Twins baseball team. More than 20 percent of ballgame attendees used transit to get to games in the inaugural season.

- Opening ceremonies for the new American Boulevard Station in Bloomington were held on December 9, 2009.

- Platform extensions at 10 existing stations were completed in early spring 2010. All 19 Hiawatha stations are now capable of accommodating three-car trains, which are currently being used for high-volume events and some rush hour trains.

Ridership on the Hiawatha LRT has exceeded forecasts. Metro Transit had projected weekday ridership to reach 24,900 by the year 2020. In 2010, the line carried an average of 31,300 per weekday, with total annual ridership reaching 10.4 million. Metro Transit surveys conducted after start of service indicated that 50 percent of LRT passengers were new users of transit. The Hiawatha LRT is now carrying over 12 percent of all riders on the Metro Transit system.

HCRRA was a capital investment partner in Hiawatha LRT. HCRRA contributed $84.2 million toward the design and construction of the line, which is 11.8 percent of the $715.3 million total. HCRRA’s funding was part of the local match from state and local sources, which helped enable the project to receive a $334.3 million grant from the Federal Transit Administration’s (FTA) New Starts Program. From 2004 through 2008, HCRRA contributed half of the operating subsidy for the Hiawatha LRT. Due to changes in state law, operating grants starting in 2009 are from CTIB.

Housing development near Hiawatha LRT stations has been stronger than forecasts made prior to the opening of the line. A TOD Market Study prepared in 1999 estimated 7,120 new housing units in this corridor by 2020.
Current data shows the following progress:

- Between 2000 and 2010, 7,535 housing units have opened near Hiawatha LRT stations with 5,825 in downtown Minneapolis; 1,450 in Minneapolis neighborhoods; and 260 in Bloomington. Another 250 units are under construction of which 175 are in downtown Minneapolis and 75 are in Minneapolis neighborhoods.

- Proposed housing units (although not all proposals will be built) call for 4,500 units in downtown Minneapolis; 2,175 in Minneapolis neighborhoods; and 840 in Bloomington. As part of the 46th Street Pilot Lighting Project, Hennepin County collaborated with the City of Minneapolis to install energy efficient street lights along 46th Street between 34th and 46th avenues. The project enhances, pedestrian, bike, and transit access to the 46th Street LRT station from nearby neighborhoods and Saint Paul while potentially saving operating and maintenance costs over conventional street lights.

Exhibit 4-3 Hiawatha LRT
**Northstar Commuter Rail**

Northstar Commuter Rail is an 82-mile transportation corridor that runs along Highway 10 from the St. Cloud area to downtown Minneapolis. In January 2008, the Northstar Commuter Rail project received a Full Funding Grant Agreement (FFGA) from the FTA for Phase I. Phase I provides an initial 40-mile long transportation corridor that parallels Trunk Highway 10 from the future Multimodal terminal in downtown Minneapolis to Big Lake (see Exhibit 4-4). The first phase of the Northstar Commuter Rail Line was completed in 2009.

Northstar Commuter Rail held its opening day ceremonies on Saturday, November 14, 2009, with revenue service commencing Monday, November 16, 2009. Current schedules provide six round-trips on weekdays and three round-trips each day of the weekend. Special trains are added on certain days with Twin games at Target Field. Between regularly scheduled and special event trains, Northstar will provide conveniently timed service to 53 of the 81 regular season home games. The line was estimated to carry 3,400 passengers per weekday in its first year of operation, with a projection of 5,900 passengers by 2030. During 2010, the average weekday ridership was 2,215. The 2011 average weekday ridership is 13 percent higher than the 2010 thru April 2011.

Exhibit 4-4 Northstar Commuter Rail
**Bus Service**

The bus is the primary transit mode used today. Bus trips account for approximately 2.5 percent of all daily trips in the region. A recent study by the Minneapolis Travel Management Organization (TMO) concluded that bus trips accounted for 37 percent of all trips entering the downtown area during the peak period.

**Metro Transit**

Metro Transit is the largest transit provider in the state. Bus service is provided using daily schedules on fixed routes that follow established street patterns. On an average day, Metro Transit provides service for approximately 90 percent of the region’s fixed-route transit users. Metro Transit’s service area primarily covers the core cities of Minneapolis and Saint Paul as well as the first ring suburbs. The Metropolitan Council provided more than 77.3 million bus and rail rides in 2010, which is the highest annual ridership since 1981.

**Suburban Transit Providers**

In addition to Metro Transit, a number of suburban transit (opt-out) transit systems provide express transit service to downtown Minneapolis, reverse commute service from downtown Minneapolis, and circulator service within various communities. Opt-out refers to the process whereby suburban communities were given an option to withdraw from the Metro Transit service area and replace the former fixed-route services with optional transit services.

Suburban transit provider systems operating in Hennepin County include:

- Maple Grove Transit
- Plymouth Metro-Link
- Southwest Transit
- Minnesota Valley Transit (Dakota County to Downtown Minneapolis)

The Suburban Transit Association, which includes these suburban transit providers in Hennepin County plus Shakopee Transit, recorded 4.8 million rides in 2010.

Fixed-route transit service is also provided between the University of Minnesota’s Minneapolis and Saint Paul Campuses via an exclusive transitway. There are also circulator routes over the Washington Avenue Bridge and in the East Bank and Saint Paul campuses. These services make connections to the Metro Transit system and provided more than 4 million rides in 2010. First Transit provides this service on a contract basis for the University.

When ridership numbers from Metropolitan Council contracted fixed-route services, Suburban Transit providers’ fixed-route and dial-a-ride services, University of Minnesota transit system, Northstar and Ramsey Star Express motor-coach services, dial-a-ride services, and Metro Mobility are combined, there were 90.9 million transit trips in the region in 2010.
Paratransit

In areas where fixed-route transit is not available, the Metropolitan Council funds a paratransit/dial-a-ride service called Transit Link. Transit Link is a flexible transit service that does not follow fixed routes or timetables. The service uses shared-ride buses and serves the general public in the seven-county metropolitan area. Rides must be made in advance and can be booked to any destination within that service area if a vehicle is available.

The Metropolitan Council contracts with one provider to deliver Transit Link service throughout Hennepin County. This service is designed to complement fixed-route service by providing rides to or from areas of the county where fixed-route rides are unavailable. This paratransit service is also linked into the fixed-route system at major transit hubs, allowing people to make connecting trips from rural parts of the county into the urban areas. In addition, rides can be coordinated with Transit Link services in the other six metropolitan counties, providing access to all destinations within the seven-county metropolitan area.

As required by the Federal Americans with Disabilities Act (ADA), Metro Mobility provides door-to-door transit service for people with disabilities who cannot use the fixed-route transit system. Metro Mobility’s service area coincides with the fixed-route public transit service area. In 2008, nearly 1.2 million rides were made using Metro Mobility. To use the Metro Mobility service, certified riders call in advance to schedule their trips.

In addition to the public transit systems, a number of private and non-profit transit providers operate shuttle buses which serve elderly housing and nursing homes. Paratransit/shuttle-type services are also provided by many local hotels and motels. These demand responsive systems provide direct service to major destinations such as the Minneapolis-St. Paul International Airport and the Mall of America.

Intercity Bus Service

Intercity bus service is available from private operators, such as Greyhound, Jefferson Lines and Megabus. The Greyhound and Jefferson Lines share a transit bus depot located in Downtown Minneapolis at Hawthorne Avenue and 9th Street South. Megabus provides non-stop service to Madison and Milwaukee, with continuing service to Chicago and uses stops in downtown Minneapolis at South 3rd Street and Chicago Avenue near the Metrodome and at the University of Minnesota near Williams Arena. Four roundtrips a day are scheduled to Chicago with two trips stopping in Madison and two stopping in Milwaukee. The Mn/DOT 2010-2030 Greater Minnesota Transit Plan reported that 85 percent of Minnesotans in rural areas live within 25 miles of an intercity bus stop.

Other Transit Infrastructure

Hennepin County roadways are an essential part of the overall transit system. County roads serve high volumes of buses, particularly in the City of Minneapolis. These bus corridors support a significant share of the bus transit ridership in the region and will continue to do so in the future. The county road
system also serves an important role in providing access to regional transitways. The county coordinates with transit providers and includes elements specifically for transit when roadways are upgraded or as the need arises. Other general improvements to county roadways for safety, ride, and reduced delay directly benefit transit users.

Some examples of transit elements that are integrated with county roadway designs include:

- Bus stop pull-outs
- Shelter locating in roadway right-of-ways
- Bus-only shoulder areas
- Signal adjustments to facilitate bus movements
- Crosswalk designs to access bus stops
- Urban bus stop pattern adjustments for opportunities to use turn lanes and no parking areas for stops
- ADA designs for bus stops, shelter pads, and connecting ramps for disabled transit passengers

Transit operations benefit from transit advantages provided on the region’s roadways. During the 1990s, Metro Transit, the Metropolitan Council, Mn/DOT, and several counties and cities worked together to develop transit advantages on the roadway system, such as high occupancy vehicle lanes (HOV), ramp meter bypasses for HOV vehicles, and bus-only shoulder use areas. This infrastructure is described in the following sections.

**HOV Lanes**

Carpooling and vanpooling are used considerably in the metropolitan area. According to the Metropolitan Council Travel Behavior Inventory (TBI), approximately 20 percent of all vehicle trips include more than one passenger on an average day. Vehicles with more than one passenger are referred to as high occupancy vehicles (HOV). In 1998, there were more than 5,500 registered carpoolers and vanpools in the region. The level of usage is expected to remain fairly stable over the next 20 to 25 years.

Hennepin County provides ride-matching services that are accessible to its employees through the county intranet. Regionally, the Metropolitan Council – Metro Commuter Services division provides ride-matching services for carpools or vanpools.

Interstate 394 (Wayzata to downtown Minneapolis) and Interstate 35W (Dakota County to 76th Street in Bloomington) corridors have designated HOV lanes that allow buses and carpoolers (two or more persons) to travel in an exclusive lane during the peak periods. The timesaving is a significant incentive to encourage increased carpooling.
Additional corridors such as Interstate 94 in Maple Grove and Interstate 494 in Bloomington are being considered for future HOV facilities. These types of improvements are for Interstate highways and they are generally not appropriate for the county minor arterial roadway system.

**HOT Lanes**

High Occupancy Toll (HOT) lanes are similar to HOV lanes, where single-occupant vehicles are allowed access to the HOV lanes via a road pricing scheme. The tolls are adjusted based on the existing levels of congestion on the mainline highway.

MnPASS is the dynamic tolling system Mn/DOT is using, which was introduced in the Interstate 394 corridor in May 2005. As part of the Urban Partnership Agreement (UPA) federal grant, MnPASS Express Lanes were opened in the Interstate 35W corridor in September 2009 between downtown Minneapolis and 42nd Street and between Highway 62 and Highway 13.

**Ramp Meter Bypass Lanes and Shoulders**

More than 70 HOV ramp meter bypasses are currently in operation in the metropolitan area. These facilities allow HOVs to bypass the metered entrance ramps to the regional highway system, thus providing an average five to 10 minute travel time savings during the peak period. Not all metered ramps are designed with HOV bypasses due to existing design and right-of-way limitations.

More than 100 miles of highway shoulders have been designated as bus-only shoulder lanes that operate similar to the ramp meter bypasses. Special designated shoulders provide an inexpensive way to speed buses through areas of heavy traffic, specifically on major highways where traffic tends to regularly back up during peak periods.

Exhibit 4-5 on the following page illustrates the locations of HOV ramp meter bypasses and bus-only shoulder lanes in the Twin Cities.
Park-and-Ride Lots

Park-and-ride lots have been constructed throughout Hennepin County. These locations are used to access transit as bus transfer hubs and as a hub between the regional transit system and the suburban-based circulator bus systems. Exhibit 4-6 on the following page shows the locations of park and ride lots in Hennepin County.
The use of park-and-ride lots has climbed steadily since 2002. The challenge for the Metropolitan Council and other regional transit providers is to create new spaces fast enough to meet the need. The total capacity of the system is now at 28,860 spaces, which is the highest ever in the region.

Often park-and-ride lots provide bicycle parking, and they are sometimes jointly used as trailhead facilities. Some park-and-ride locations are being considered for future bicycle locker or bike corral sites and for increased pedestrian access as well.

A goal of the County’s Transportation Department is to coordinate the land acquisition for roadways with the siting of park-and-ride lots. Where opportunities occur, the department will integrate park-and-ride lots with the roadway improvements as well as pedestrian and bicycle system plans. A broader vision is now being examined, particularly along LRT corridors. This vision is the incorporation of shared parking facilities for commuters and users of new developments.

---

Transit Hubs

Transit hubs are locations where a number of fixed-route buses meet often on a timed coordinated schedule. Transit hubs are usually integrated with park-and-ride lots (like the Southwest Transit Terminal in Eden Prairie) or with a parking ramp (like the Haff Ramp in downtown Minneapolis). Similar to park-and-ride lots, transit hubs frequently offer amenities for bicycles such as parking racks and bicycle storage lockers.

4.2.3 Proposed Transit System

As mentioned previously, the Metropolitan Council, as the region’s MPO, develops a long-range plan for transit: the Transit 2030 Plan. The overall goal of the current Transit 2030 Plan is to double transit ridership by the year 2030 through expanded bus service and implementation of a system of transitways. Much of the expanded bus service and a number of the transitways will be implemented in Hennepin County to serve residents and businesses.

The HCRRA through Hennepin County Housing, Community Works and Transit, works with the Metropolitan Council to implement their shared vision of improving transit service in Hennepin County.

Bus Rapid Transit (BRT)

BRT is a premium transit service with substantially improved speed, reliability, and convenience in high-demand corridors. BRT operates on dedicated transitways, highways or arterial streets and features high-frequency service on high-capacity, low-floor vehicles with limited-stop or non-stop service, pre-paid boarding stations, and other improvements for a faster, more consistent trip than a regular bus route. In most cases, BRT links with local transit service in a corridor and provides the option of a faster, more reliable trip than local transit service.

The federal government identifies seven characteristics that together define BRT: running way, stations, vehicles, fare collection, use of Intelligent Transportation Systems (ITS), technology, service/operations, and identity/branding.
BRT is being implemented or considered for four corridors in Hennepin County:

- Cedar Avenue BRT (implementation)
- Interstate 35W Corridor BRT (implementation)
- Interstate 394 Corridor BRT (implemented)
- Bottineau Transitway (under consideration)

Metro Transit is conducting a feasibility study that is evaluating the potential for Arterial BRT along 11 corridors in the region (nine of the 11 are in Hennepin County). Because some of the corridors being considered in this study are potential streetcar routes, Metro Transit will coordinate with the various agencies throughout the project.

**Cedar Avenue**

The 16-mile Cedar Avenue BRT Corridor connects Bloomington and Lakeville. Major population growth is anticipated along this corridor. The first phase of the project includes BRT operations on the highway shoulders between 138th Street in Apple Valley and County Road 70 in Lakeville. Related improvements being implemented under the Urban Partnership Agreement (UPA) include: BRT stations, park-and-rides along Cedar Avenue, and an HOV bypass ramp at the congested Cedar Avenue and Highway 62 (Crosstown) interchange. This project will provide a major transit advantage in this corridor.

**Interstate 35W**

A range of congestion reduction improvements are being constructed along the Interstate 35W corridor between Downtown Minneapolis and Lakeville. While BRT service will not be operational until 2012, some of the improvements being made in the corridor for Phase I of the project include:

- Priced dynamic shoulder lanes (similar to the Interstate 394 MnPASS) on Interstate 35W from 46th Street to downtown Minneapolis
- Addition of a HOT lane in the Crosstown from 66th Street to 46th Street
- Conversion of the HOV lane to HOT lane on Interstate 35W from 66th Street to Burnsville Parkway
- Construction of a two-level transit station at 46th Street and Interstate 35W
- Construction of new stations at 82nd and 98th Streets
- Construction of additional park-and-ride lots along the Interstate 35W corridor north and south of Minneapolis
- Construction of additional dedicated bus lanes in downtown Minneapolis on Marquette and Second avenues
- Use of added ITS technology
Phase II improvements will include improved service frequency, additional park-and-rides, and additional stations at Lake Street and American Boulevard.

CTIB has committed to funding 50 percent of the operating subsidy for both the Cedar Avenue BRT and Interstate 35W BRT projects.

**Interstate 394**

Although no additional improvements are planned for the Interstate 394 Corridor, the MnPASS lanes and corridor park-and-ride facilities currently provide BRT attributes that could be used with existing transit service. Transit buses provide a high level service between corridor park-and-ride lots and the Downtown Third Avenue Distributer Transit Hub via the Interstate 394 HOT lanes.

**Bottineau Transitway**

Years ago, the Bottineau Corridor was identified as a corridor desirable for BRT implementation. Park-and-ride improvements were made in preparation for BRT service, and the County Road 81 roadway reconstruction plans included BRT elements in the design development process.

More recently, there has been interest in an assessment of the corridor for potential LRT implementation. In March 2008, HCRRA initiated an Alternatives Analysis (AA) for the Bottineau Corridor. This study assessed a range of transit modes and alignments for the corridor, including both BRT and LRT. The Bottineau Transitway AA recommended further evaluation of the most promising LRT alternatives and an optimized BRT alternative through a Draft Environmental Impact Statement (DEIS). It is intended that the DEIS process will use the results of the Bottineau Transitway AA in combination with additional analysis conducted as part of the initial DEIS phase to inform a recommendation for a locally preferred alternative (LPA) for consideration by Metropolitan Council. In April 2011, HCRRA began the DEIS process.

**Light Rail Transit**

Three future LRT corridors are currently under consideration/construction in Hennepin County for the next phases of system expansion:

- Central Corridor
- Southwest Corridor
- Bottineau Transitway

**Central Corridor**

The Central Corridor, the next expansion of the LRT system, is currently under construction and will be operational in 2014. It will connect the downtown Minneapolis Transportation Interchange at Target Field Station to Union Depot Station in Saint Paul (see Exhibit 4-7). The line also connects to the University of Minnesota, the Midway Commercial Area, and the State Capitol.
Nearly 120,000 persons live in the vicinity of the Central Corridor, many of whom are transit-dependent. The corridor also serves almost 280,000 employees today, a number which is expected to grow to 345,000 employees by the year 2030. The Central Corridor is projected to carry 41,600 passengers per weekday by the year 2030.

An LPA was selected, which includes a transit mall along Washington Avenue at the University of Minnesota. The project received the federal Record of Decision (ROD) for the project’s Final Environmental Impact Statement (FEIS) on August 18, 2009. An important change to the FTA New Starts rating system, announced in January 2010, had a positive benefit for the Central Corridor Project. With the de-emphasis of the Cost Effectiveness Index Rating (CEI), the project received approval from FTA to add three additional stations in Saint Paul to the project’s scope. Additional funding for the three stations was provided through grants from FTA, City of Saint Paul, Ramsey County Regional Railroad Authority, and Central Corridor Funders Collaborative – a group of foundations making grants to guide economic development along the Central Corridor.

On April 26, 2011, the Metropolitan Council and FTA signed a Full Funding Grant Agreement (FFGA). The FFGA contractually commits the federal government to paying $478 million (half the project cost) of the $957 million line.

Exhibit 4-7 Central Corridor LRT
Southwest LRT

The Southwest LRT Corridor is a proposed 14-mile LRT line connecting downtown Minneapolis to St. Louis Park, Hopkins, Minnetonka, and Eden Prairie (see Exhibit 4-8). The proposed Southwest LRT line will connect two of the region’s largest job centers: downtown Minneapolis with more than 140,000 employees and the Opus / Golden Triangle area with more than 50,000 employees today.

In 2007, HCRRA completed an AA. During the AA process, a Transportation System Management (TSM) or Enhanced Bus Alternative along with 10 build alternatives were evaluated. The 10 build alternatives included two BRT and eight LRT alternatives. After a thorough review process and extensive public involvement, the ten build alternatives were narrowed to three LRT alternatives (LRT 1A, LRT 3A, and LRT 3C) for further evaluation during the DEIS process through which the LPA would be selected.

In 2008, the HCRRA initiated the DEIS. Four alternatives were evaluated in the DEIS: 1A, 3A, 3C-1, 3C-2.\(^4\) Based on initial evaluation results, LRT 3A was selected as the LPA. HCRRA submitted the DEIS to the FTA in June 2010. The document is currently under review by the FTA. A 45-day public comment period will occur once the DEIS is finalized and approved by the FTA.

After selection of the LPA, the Metropolitan Council submitted a New Starts application to the FTA to enter Preliminary Engineering. The Metropolitan Council anticipates starting Preliminary Engineering in 2011.

\(^4\) During the Scoping phase of the DEIS, an additional alternative was proposed. This proposed alternative, LRT 3C-2, was analyzed in the DEIS.
Exhibit 4-8 Southwest LRT

Bottineau Transitway

The Bottineau Transitway is an approximately 13-mile dedicated guideway that would connect downtown Minneapolis through North Minneapolis and the communities of Golden Valley, Robbinsdale, Crystal, New Hope, Osseo, Brooklyn Park and Maple Grove (see Exhibit 4-9).

As stated previously, HCRRA initiated an AA study in March 2008. The study evaluated a no-build alternative; an enhanced bus/transportation system management alternative; and a range of commuter rail, BRT, and LRT alternatives. The study process progressively narrowed the build alternatives from a range of alignments for each mode (“universe of alternatives”) to a preferred set of 21 alternatives (nine LRT and 12 BRT alignments) that underwent detailed evaluation. The evaluation process identified three LRT alignment alternatives as the most promising for implementation: A-D1, A-D2 and B-D1.

The Bottineau Transitway AA recommended further evaluation of the most promising LRT alternatives and an optimized BRT alternative into the DEIS. It is intended that the DEIS process will use the results of the Bottineau Transitway AA in combination with additional analysis conducted as part of the initial DEIS phase to inform a LPA recommendation for consideration by Metropolitan Council. In April 2011, the HCRRA began the DEIS process. It is anticipated that the DEIS will be completed in early 2013.
Commuter Rail

Commuter Rail is characterized as rail transit that runs on conventional railroad track and is designed to meet the rail transit needs of commuters who live outside the immediate core cities. Commuter rail is generally limited to morning and evening rush-hour service, operates with diesel locomotives and passenger cars, and stations are spaced further apart (usually three to five miles apart) than for LRT service.

Commuter rail service is currently provided in 19 urban areas in North America currently provide and is under consideration in another 20 urban areas. Surveys of commuter rail riders found that automobile access to the stations is important, as most users own two or more cars.
In cooperation with the metropolitan area regional railroad authorities, Mn/DOT developed a Commuter Rail System plan for the region in 2000. Additional commuter rail studies have since been performed as part of the planning effort. Two corridors that are being examined today include:

- Northstar Corridor (St. Cloud to Minneapolis)
- Red Rock Corridor (Hastings to Minneapolis via St. Paul)

**Northstar**

The Northstar Corridor Development Authority (NCDA), a partnership of the regional railroad authorities from Hennepin, Anoka, Sherburne, and Stearns counties, commissioned a study to examine extension of the Northstar Commuter Rail line to St. Cloud. This second phase of the Northstar Line would create a 65-mile line serving a population base expected to reach 850,000 by 2025. Based on the results of the study, additional efforts on the second phase were put on hold until Phase 1 ridership numbers are at a higher level. Currently, express bus service, the Northstar Link, provides St. Cloud area residents with a connection to Northstar Commuter Rail at Big Lake.

**Red Rock**

Red Rock Commuter Rail is a 30-mile corridor originating in the City of Hastings traveling through downtown St. Paul to downtown Minneapolis. The corridor roughly parallels Trunk Highway 61 and Interstate 94 (see Exhibit 4-10).

An AA was recently completed for the Red Rock Corridor. The results indicate that expanding bus service, increasing bus frequency, and providing additional park-and-ride facilities are the first steps toward building a stronger transit base in the corridor. This stronger base is a key component in the phasing of corridor improvements prior to the construction of commuter rail. A phased approach has been identified and approved by the Red Rock Corridor Commission (RRCC) in November 2007 to lay the groundwork for eventual commuter and high speed rail in the Red Rock Corridor. This approach has been split into immediate (zero to five year), near-term (six to 10 year), and long-term (10 to 20 year) strategies.
High Speed Rail/Intercity Passenger Rail

High speed rail has been considered as a future option for linking long distance trips between cities that are approximately 100 to 500 miles apart. Technologies range from using upgraded existing railroads to magnetically levitated vehicles. Generally, the service uses modern, high-speed trains operating at speeds up to 110 miles per hour.

The vision for passenger rail, as identified by the 2010 Comprehensive Statewide Freight and Passenger Rail Plan, is that Minnesota should develop a robust intrastate and interstate intercity passenger rail system which results in improved travel options, costs and speeds for Minnesota and interstate travelers.

Two potential high-speed rail services are currently being studied:

- Minneapolis to Chicago
- Northern Lights Express (Minneapolis-Duluth/Superior Passenger Rail)
Minneapolis to Chicago High Speed Rail

As part of the Midwest Regional Rail Initiative (MWRRI), Minnesota, eight other states, and Amtrak officials developed a blueprint for preserving, improving and expanding Chicago-hubbed rail passenger services. The group is following a dual-track approach of identifying short-range service improvement opportunities and long-range regional network development strategies with a focus on business travel and an eventual high speed component. The regional passenger rail system envisioned by the MWRRI Plan (2004) would encompass approximately 3,000 route miles.

In 1991, the Illinois, Wisconsin, and Minnesota Departments of Transportation completed a study to determine whether the Chicago-Milwaukee-Twin Cities corridor could support a high speed rail system. The study concluded that high speed rail may be economically and financially viable, and the agencies agreed to conduct further investigations. In the mid to late 1990s, further efforts were made to investigate the feasibility of high speed rail. There have been recent efforts to initiate a study to investigate available technologies to provide high speed rail service at 125, 150, and 185 miles per hour.

Recently, Minnesota received $600,000 in federal funds to study the potential for high-speed rail service between the Twin Cities and Madison, Wisconsin, which is one leg of the line being proposed to connect Minneapolis/Saint Paul with Chicago. The funds are part of $8 billion in American Recovery and Reinvestment Act dollars dedicated to high-speed rail projects nationwide. Midwestern states as a whole are expected to receive $2.6 billion. In addition to the federal funds, Minnesota and Wisconsin will each contribute $300,000 to the $1.2 million study, which Mn/DOT hopes to complete in 2012.

Hennepin County supports a dual hub configuration (The Interchange in Minneapolis and Union Depot in Saint Paul) of high-speed rail to Milwaukee and then ultimately Chicago.

Northern Lights Express Intercity Passenger Rail

Northern Lights Express (NLX) is a proposed passenger rail project between the Minneapolis Transportation Interchange and the City of Duluth, along Highway 65 and Interstate 35 (see Exhibit 4-11). The Minneapolis-Duluth/Superior Passenger Rail Alliance is a joint powers board formed to explore options for renewing passenger rail service on existing tracks in the 155-mile corridor. Members of this joint powers board include the regional rail authorities of Hennepin, Anoka, Isanti, Pine, St. Louis, and Lake counties; the cities of Duluth and Minneapolis, and Douglas County, Wisconsin.

In December 2007, the National Surface Transportation Policy and Revenue Study Commission established by Congress released a study recommending the Minneapolis-Duluth/Superior project as one of eight projects for new service. A feasibility study was also conducted in 2007 to assess restoring rail service between Minneapolis and the Twin Ports of Duluth and Superior.
In 2009, concept-level engineering plans and environmental review of NLX was initiated. It is anticipated that this analysis will be submitted to the FRA in late 2011. Upon FRA approval, NLX will be eligible for up to 80 percent federal funding.

**Exhibit 4-11 Northern Lights Express**

![Northern Lights Express Diagram]

**Downtown Minneapolis Interchange**

A comprehensive public transportation system for the region will include and require a centrally located hub for all modes to converge and provide maximum connectivity between modes and routes. This transit infrastructure is considered as being vital to the future transportation system — it will increase travel mobility, support a vibrant regional economy, and help to reduce greenhouse gas emissions.

HCRRA has been actively engaged in studies for a multimodal public transportation facility in downtown Minneapolis. A study was conducted in 2006 to examine expansion of the site where the Northstar Commuter Rail and Hiawatha LRT would eventually connect. The outcome of this study also addressed the uncertainty of the development of the new Twins ballpark.
In 2008, HCRRA retained consulting services to conduct a week-long workshop with all interested parties as part of a visioning process for a multimodal public transportation facility at the Hiawatha LRT/Northstar station/Twins ballpark site. The final product of the workshop was a presentation which included concepts for a number of modes and transportation lines; space requirements for passenger needs and rail operations; possible development of adjoining properties; connections to existing bus transit facilities in the area; and artistic concepts of the passenger facility and neighboring properties.

The creation of a transportation interchange will involve strategic elements that need to be built and other local amenities that need to be connected. The interchange is envisioned as a regional urban center spawned by transit investment that will:

- Serve as a gateway to the City of Minneapolis.
- Orient commuters and visitors.
- Support the vital links between modes of transportation on multiple levels.
- Connect to destinations adjacent to the interchange and surrounding neighborhoods.
- Stimulate economic development around the center, into adjacent neighborhoods and beyond.

Through creative planning, engineering, architecture, and urban design, Hennepin County believes that a unique place can be created that attracts a diversity of people and activities 365 days a year. The Interchange can serve as a model of environmentally responsible development, incorporating established best practices and innovative strategies for energy efficiency. The Interchange is anticipated to have a significant impact across a multitude of travel modes.
In 2009, a study was initiated to determine a practical and financially feasible approach for developing a site to accommodate LRT, Commuter rail, intercity rail, high speed rail, and bus operations. The study also identifies suitable space for train layover and maintenance needs.

HCRRA is currently completing an Environmental Assessment (EA) for the proposed LRT enhancements. The EA defines the project’s purpose, needs, and goals and leads to the recommendation of a preferred design, identifies potential impacts, and proposes mitigation strategies.

The Interchange is identified as one of two regional multimodal hubs in Mn/DOT’s State Rail Plan and the Metropolitan Council’s 2030 Transportation Policy Plan. The Interchange project will initially focus on LRT enhancements, then expansion of commuter and passenger rail service. HCRRA’s goal is to complete LRT enhancements prior to the opening of Central Corridor LRT in 2014.

Streetcars

A streetcar is an electrically powered rail transit vehicle designed for local transportation/circulation. The design of streetcar systems vary; however, streetcar vehicles are typically lighter than an LRT vehicle, have more stations, and have shorter segments than a typical LRT system.

The City of Minneapolis completed a Streetcar Feasibility Study in December 2007 as a component of the city’s Access Minneapolis Ten Year Transportation Plan. Several corridors were evaluated as potential streetcar routes. Seven corridors were recommended for the creation of a long-term streetcar network. These include:

- West Broadway Avenue (Robbinsdale Transit Center to downtown)
- Hennepin Avenue South (downtown to Lake Street)
- Midtown Corridor (SW LRT to Hiawatha LRT)
• Nicollet Avenue South (downtown to 46th Street)
• University Avenue Southeast (downtown to Stadium Village)
• Chicago Avenue South (downtown to 38th Street)
• Central Avenue Northeast (downtown to 49th Avenue Northeast)

In December 2010, the City of Minneapolis was awarded a grant from the FTA to evaluate alternative transit improvements (either streetcar or enhanced bus) on Nicollet and Central Avenues. The City of Minneapolis plans to begin the AA in 2011.

The Lake Street/ Midtown Corridor is one of the seven corridors selected for future implementation. The Midtown Corridor, previously known as the 29th Street Corridor, is a component of the 55-mile network of corridors currently owned by HCRRRA and held for future transit development. This east-west corridor is approximately 5.5 miles long, extending from the Mississippi River to a point near the junction with the Kenilworth/Cedar Lake Corridor at Lake of the Isles. Most of the corridor is separated from north-south roads by virtue of being below grade. This occurred in the decade 1910-1920 when the city of Minneapolis mandated the Chicago, Milwaukee and St. Paul Railroad (commonly known as the Milwaukee Road) to eliminate grade crossings along their 29th Street South right of way.

After the railroad abandoned the Lake Street/Midtown corridor, HCRRRA purchased it and helped develop the biking and hiking trail that is currently in use and operated by the city of Minneapolis. Development of the corridor as a transitway has been studied since the 1980s.

An important challenge for any transitway development in the Lake Street/Midtown corridor is sufficient width between the columns supporting the north-south streets on the bridges over the corridor. Many bridges over the corridor were constructed between 1913 and 1916 and will need to be replaced within a decade. Wider spans could be created with new bridges, but must be compliant within historic design constraints. An inventory of these bridges was conducted as part of the Midtown Corridor Historic Bridge Study Final Report of 2007.

### 4.3 Pedestrians

Pedestrian travel accounts for approximately four percent of all trips in the county. In recent years, there has been an explosion in the growth of walking and bicycling in Hennepin County for both recreational and utilitarian trips. Based on the American Community Survey, the City of Minneapolis has the second highest mode share of commuters biking to work in the country. Three Rivers Regional Park District, which monitors usage of many of the regional trails in the county, has counted the total pedestrian and bicycle usage of its system – the trend over the last 15 years is particularly striking as shown in Exhibit 4-10 below.
The reasons for this marked increase are varied. Increased fuel costs, increased health consciousness, and a desire for reduced environmental impacts certainly have played a role in increased usage. The most important factor may be the significant mileage of new trails that have been added to the system since 1995. This unprecedented level of infrastructure investment has begun to provide a connected system that includes linkages between Minneapolis and other parts of Hennepin County.

Increased levels of walking and bicycling have resulted in heightened awareness of potential modal conflicts related to roadway design including crossings, spanning barriers, and simply accessing the sidewalk and trail systems. As usage of walkways and trails has increased, so have complaints related to the problems of crossing busy streets. In a few cases, such as in St. Louis Park, these conflicts have led to serious crashes.

Safety is a major concern for pedestrians walking along or crossing county roadways. For the last three years that data is available (2006 to 2008), a total of 432 pedestrian crashes occurred on the county roadway system. Four persons died as a result of these crashes between 2006 to 2008. County roadways in Minneapolis experience a much higher level of pedestrian crashes than county roadways in the suburban system. Pedestrian volumes are higher in Minneapolis, and some county roadways are in need of pedestrian improvements to increase pedestrian safety, comfort, and accessibility. The City of Minneapolis has recently completed a pedestrian plan that addresses safety issues specific to urban areas.
4.3.1 Roles and Responsibilities

Historically, cities have been primarily responsible for providing pedestrian accommodations within their jurisdictions. Hennepin County has supported these pedestrian provisions when appropriate by incorporating provisions into the design of roadway facilities. Generally, individual cities within the county have been responsible for participating in the costs of new sidewalk and trail construction, and they are responsible for the on-going maintenance of these facilities.

In conjunction with the increased support of trail development, the county has become more aware of the needs of pedestrians. In keeping with the county’s overall transportation philosophy, there is a desire to provide options for residents to travel, especially to closer destinations. Advocacy groups such as Transit for Livable Communities (TLC), health organizations such as Blue Cross Blue Shield, and Travel Management Organizations such as the Interstate 494 Corridor Commission have also identified a demand for improved pedestrian accommodations.

County Guidelines and Policies

Current county guidelines and policies that affect pedestrian accommodations are included in the following documents:

- Americans with Disabilities Act (ADA) Transition Plan (2011)
- Complete Streets Policy (2009)
- Active Living Policy (2009)
- Policies for Cost Participation (2009)
- Bicycle Transportation Plan (1997)

4.3.2 Existing Pedestrian System

A network of walkways and multiuse trails exists throughout Hennepin County. The level of integration and completeness of these facilities varies widely. Since many of the longer regional facilities use old rail corridors, they tend to radiate outward from Minneapolis. Hennepin County trail facilities tend to follow the grid of county roadway corridors, while individual cities have sidewalk and trail systems that tend to orient to local activity centers.

Due to its very nature, walking is generally a localized activity. Most destination-type walking trips are ¼ to ½ mile in length and include libraries, clinics, recreational areas, and retail nodes. Bus stops and LRT stations also are key destinations. Walking is an important access mode to transit, which enables this mode to be a part of longer distance trips throughout the metro. Walking also has

---

5 Includes Roadside Enhancement Program
a significant recreational element. Pedestrians walking for health and enjoyment often use various walkway facilities to “loop” back to their original trip origin, such as a residence.

Hennepin County has been very involved with providing pedestrian accommodations through roadway construction projects, coordination with other agencies to assist in spanning major barriers to pedestrian and bicycle travel, safety improvements for crosswalks and trail crossings, and most recently pedestrian planning efforts aimed at increasing overall pedestrian safety and promotion of walking as a transportation option.

The recently constructed Lake Street (CSAH 3) projects highlight the coordinated efforts of Hennepin County and Minneapolis to provide a streetscaped area that includes sidewalks along a busy urban arterial. These projects were a particular challenge due to the many design elements competing for space within a limited right-of-way.

Another example of a coordinated improvement with other agencies is the SW LRT Tunnel under CSAH 101 in Minnetonka. This project replaced a difficult at-grade trail crossing with a grade separated culvert/tunnel, which allowed unimpeded pedestrian and bicycle movements for a major regional trail. Hennepin County’s project partners with included Three Rivers Park District and the City of Minnetonka.
Grade-separated structures typically involve large construction projects. These projects can be a financial strain for an individual city, and often are not used by the pedestrians and bicyclists they are meant to serve – grade separation generally means a much less direct and therefore longer route across a barrier. A Hennepin County success story is the recently completed pedestrian/multiuse trail bridge over Hiawatha Avenue (Trunk Highway 55) as part of the extension to the Midtown Greenway Corridor.

In the downtown urban setting, the county has also successfully acquired federal funding to extend the Minneapolis downtown skyway system to serve both the users of its facilities and those passing through its facilities to other destinations. The skyway system provides for safe, weather-protected movement of pedestrians in the downtown area.

Various “spot safety improvements” are being made where pedestrians experience difficulty crossing busy roadways. One such example is the construction of a refuge island on CSAH 19 in the cities of Shorewood and Tonka Bay. This improvement enables pedestrians to cross half of the roadway at a time when sufficient gaps in the traffic are available. Hennepin County is
The county has also recently initiated a number of pedestrian planning efforts aimed at increasing awareness and studying how improvements should be made to better accommodate walking. Through a recent grant from Blue Cross Blue Shield, Hennepin County has hosted workshops encouraging communities to incorporate pedestrian planning and design into their Comprehensive Plans and to add active living elements and TOD principles into development design.

Hennepin County has supported the Safe Routes to School program that is focuses on encouraging and enabling children to safely walk and bike to school. This support has been in the form of endorsements for funding applications from cities for improvements along the county roadway system.

### 4.3.3 Future Pedestrian System

To develop a cohesive walkway system, it is recommended that an approach be followed similar to that used for the Bicycle Transportation Plan. Individual city walkway and trail systems would be reviewed and a composite system developed that highlights the improvements needed in county roadway corridors to close any existing gaps to major activity centers.

Individual city walkway systems should be mapped to examine how these systems coordinate with the county system. Recommended county improvements will result by locating major pedestrian trip generators and studying the gaps in the walkway system serving these generators and major activity centers. The
guidelines noted earlier in this section should be reviewed to determine if changes or refinements are needed to better support pedestrian accommodations.

There are significant challenges to accommodating the competing uses within the limited Hennepin County roadway right-of-ways. Design issues and individual elements within the roadway typical section need to be evaluated as a whole to provide the best balance between the competing uses of roadway traffic, utilities, streetscaping, pedestrian and bicycle facilities, ADA requirements, and impacts to adjacent properties.

As noted previously, Hennepin County recently completed an inventory and assessment of existing corridors and is developing Complete Streets implementation and evaluation procedures. The Complete Streets policy and implementation procedures is referenced in the HC-TSP.

### 4.4 Bicycles

Bicycle transportation is used increasingly for utilitarian transportation and recreational trips. Bicycle use is increasing for a variety of reasons, including health, exercise, financial, and environmental factors. These values support the development of an interconnected bikeway system that supports recreational trips and utilitarian trips that connect to job centers, commercial centers, schools, transit, and other important destinations.

#### 4.4.1 Roles and Responsibilities

Hennepin County has been an active participant in planning, designing, and constructing bicycle facilities. The county has continued a collaborative effort with communities and other agencies to develop an interconnected system of bikeways. To support these efforts, the county has established a variety of funding assistance programs to implement bicycle projects. In recent years, added emphasis has been placed on closing “gaps” in the bikeway system especially where natural or man-made barriers might exist.

Three Rivers Park District manages 27,000 acres of park reserves, regional parks, regional trails, and special-use facilities in the west suburban Twin Cities metropolitan area. It is responsible for the acquisition, design, construction, operation, and maintenance of regional parks and trails in suburban Hennepin County. The Minneapolis Park and Recreation Board is the counterpart of Three Rivers Park District in the City of Minneapolis.

Metro Transit has outfitted the complete fixed route bus system with on-board bicycle racks and maintains information and instructions on how to use the bus bike racks on their website. Similar to the bus system, Metro Transit also provides in-vehicle bike racks for bicyclists using the Hiawatha LRT Line. Bicycle accommodations will continue to be integrated into future transit vehicles.
Rail Corridor Preservation

Since the early 1980s, HCRRRA has purchased and preserved a number of abandoned rail corridors. Although purchased for future LRT service, HCRRRA allowed the development of trails as an interim use. Since this time, there has been a commitment to maintain pedestrian and bicycle facilities even with the eventual addition of LRT. To allow for the addition of LRT, the planning, design, and construction of major trail facilities, such as bridges and tunnels, within the LRT corridors have been completed to preserve these structures and allow bicycle facilities to continue after LRT begins service. This strategy has proven invaluable in the development of rail projects, such as the Hiawatha and Southwest LRT lines and the Midtown Greenway.

The LRT North / South trails were constructed by Three Rivers Parks in 1994. Three Rivers Park District completed the construction of the Dakota Rail Trail in 2009. The Hutchinson Spur rail corridor through St. Louis Park was preserved in 1997 through the assistance of a federal grant and is not part of the future LRT system.

Bicycle Project Funding

Two special funds have been established as part of the five-year Capital Improvements Program especially for bicycle projects:

- Bicycle CIP Funds
- Bicycle GAP Program

To date, these programs have assisted in funding 35 projects with 17 communities and agencies. A total of about $2.7 million has been invested using a typical 50/50 cost sharing arrangement. Hennepin County has committed an additional $1.4 million in local funds over the next five years in the current CIP (2011 to 2015).

The county has been very successful in obtaining additional federal funding through the metropolitan solicitation process. Assistance for the CSAH 19 trail through Medina and Loretto was obtained in the 2005 solicitation. In 2009, funding was obtained for the Intercity Trail connecting Lake Nokomis in Minneapolis through Richfield to the Mall of America in Bloomington.

In combination with other state and federal funds, Hennepin County has helped to provide $30 million for right-of-way acquisition, design, and trail construction for the Midtown Greenway and, as noted previously, an additional $4 million for the construction of the pedestrian / bicycle bridge over Hiawatha Avenue (Trunk Highway 55).

Bike Walk Twin Cities (BWTC) is an effort to increase biking and walking and decrease driving. It is a part of a federal initiative, the Non-Motorized Transportation Pilot Program, which gave each of the pilot cities $22 million to invest in planning, infrastructure, and public education. The communities also studied the impact of these investments on traffic congestion, energy use, health, and the environment. TLC was designated to administer the BWTC for
Minneapolis and its neighboring communities, most of which are in Hennepin County. Fifty projects have been funded through BWTC.

The Roadside Enhancements Partnership Program (REPP) began in 1999 under a policy adopted by the Hennepin County Board of Commissioners. It provides funding for infrastructure and facilities, including pedestrian level lighting, sidewalks, and other enhancements that improve the pedestrian and bicyclist experience along and across Hennepin County roadways. Its use is complementary to Active Living, Complete Streets, and to current and future pedestrian and bicycle programs throughout the county.

### 4.4.2 Existing Bicycle System

Nearly 125 miles of bicycle facilities have been constructed within Hennepin County since the late 1990s (see Exhibit 4-13).

#### Exhibit 4-13 County Bicycle Facilities - Miles Constructed

Hennepin County produces a roadway system map every two years. A separate bikeway map was developed in 2000, and the roadway and bikeway maps were combined for the first time in 2002. Each year approximately 35,000 maps are distributed to county service centers, libraries, and individuals. The maps are also available on the county website or via an online ordering form.

#### Bicycle Transportation Systems Plan

The county adopted the Bicycle Transportation Systems Plan in 1996, which established the bold goal of providing “full accommodations” to all types of bicycle riders. Full accommodation means providing for all types of bicyclists having differing levels of riding experience. The implementation of this goal leads to providing corridors that have both on- and off-road bicycle facilities.

The Bike Plan provides a future system linking regional and local bicycle facilities throughout the county. The system map designates about 910 miles of
bikeways throughout Hennepin County. Over half of these segments (533 miles) have been built today. Each year an average of four to five miles are added to the system. Exhibit 4-14 illustrates the Bicycle System Map (a large-scale version is included as Map A in the report map pocket).

The plan also adopted 12 policies covering the areas of commitment, design guidelines, signing, right-of-way acquisition, funding participation, maintenance, capital improvements, information, and bicycle parking. These have been incorporated into the 2030 HC-TSP. The Executive Summary of the Bicycle Transportation Plan is included in the Support Documents provided on the accompanying CD in the map pocket.

**Exhibit 4-14 Hennepin County Bicycle System Plan**
**Bicycle System Gap Study**

In 2002, the Hennepin County Bicycle Gap Study examined gaps in the bikeway system. As many miles of county, regional park district, and city bikeway facilities had been built, additional focus was needed to ensure that these facilities interconnected. Greater interconnection would add to the utility of existing investments by multiplying potential routes for bicyclists. In addition, it was felt that attention was needed regarding closing gaps that existed due to barriers, such as highway interchanges, major river crossings, and other natural and man-made barriers.

The study identified 110 gaps in 2002, and a total of 48 gaps have been closed since then. Similar to the bicycle system, new gaps have been identified as the system expands and new bikeways are built. Since 2002, an additional 30 gaps have been identified as other facilities were constructed. Map B in the report map pocket illustrates the locations of the bikeway system gaps.

As stated previously, the county Bicycle Plan should be reviewed and revised to incorporate the many developments in policies and programs since the development of the county Bicycle Plan. The county will go beyond the stated goal of providing “full accommodations” to providing “full integration” to all types of bicycle riders. On some county roads, “full integration” may be difficult to implement because of the high traffic volumes present; however, the county will strive to achieve this goal when practical. The Bicycle System Gap Study is included in the Support Documents provided on the accompanying CD in the map pocket.

**Exhibit 4-15 Trail Cross Section**

Trailheads often radiate from facilities, such as park-and-ride lots. Besides the typical bicycle amenities of racks and storage lockers, trailheads offer kiosk information on the bike route system and nearby points of interest.

One new type of trailhead that is being investigated in an urban setting is the “bike station.” The bike station concept has recently become popular in California, where bicycle repair, information, and supervised parking are
provided. These types of facilities are often integrated within or near transit hubs and park-and-ride lots. The Department of Housing, Transit and Community Works is completing construction of the first bike station in Minnesota, which is located along the Midtown Greenway at Elliot Avenue South.

### 4.4.3 Future Bicycle System

Where possible, the county Transportation Department incorporates bicycle facilities within its capital improvement and maintenance projects. Right-of-way and easement dedication for future bikeways is also routinely requested for city action as part of the county preliminary plat and site plan reviews. The Bicycle Transportation Plan originally developed typical roadway sections that are used as the basis for planning and right-of-way dedication requests.

Recognizing the increasing demand for bicycle travel facilities and that the City of Minneapolis has the second highest mode share by bicycle in the nation, Hennepin County should integrate planning and design for bicycle infrastructure into all phases of its project planning for roadway and building facilities. Similar to other travel modes, bicycling should be viewed as a transportation option with care given to bicycle facility safety, continuity, and connections.

### 4.5 Freight

Trucks, railroads, barges, and airplanes handle freight movement in Hennepin County. Generally, the responsibilities for planning and implementation of rail and barge facilities fall to agencies outside of Hennepin County. The Hennepin County Transportation Department incorporates truck freight movement on county roads as part of the planning, design, construction, operations, and maintenance of the system. The following sections describe the various modes of freight in the county.

#### 4.5.1 Trucks

Within the region, freight moves primarily by trucks using the regional highway system, although many destinations require trucks to use county facilities. Hennepin County supports freight movement through the county roadway connections to these terminals. The county has placed emphasis on roads serving these terminals by developing a system of 10-ton routes shown in Exhibit 4-16. The county now routinely designs new or reconstructed county roadways to a 10-ton pavement design which will continue to improve truck access to the major freight terminals.
4.5.2 Railroads

A number of freight rail systems continue to operate in Hennepin County and throughout Minnesota. The use of existing freight rail tracks is expected to continue into the foreseeable future. As discussed previously in the commuter rail section, Hennepin County is working with Mn/DOT, the Metropolitan Council, and affected counties and cities to study the possibility of shared use of the existing freight rail track for commuter passenger service.

In 2010, Mn/DOT completed the Minnesota Comprehensive Statewide Freight and Passenger Rail Plan. The plan provides guidance for rail initiatives and
investments in the state and is included in the State Transportation Plan. The plan addresses the following areas:

- An overall vision for effective use of the state’s rail network and its future development.
- More clearly defined private and public sector roles, including the role of the State, and the integration of those roles into planning, coordinating, and use of rail in the state’s transportation system.
- Identification of priority rail corridors, programs and projects.
- Freight access enhancements as well as improvements to overall freight flows and logistics.
- Development of practical and usable performance measures and investment guidelines for public development of rail assets and services.
- Compliance with federal planning and funding requirements to expedite the participation of Minnesota initiatives in national programs and resources.

Intermodal freight transport involves the transportation of freight in a container using multiple modes (rail, ship, and truck). Hennepin County has one major intermodal freight terminal at the Canadian Pacific Rail (CPR) / Shoreham Yards in northeast Minneapolis.

The CPR / Shoreham Intermodal Yard processes about 30 percent of the state’s intermodal freight in bulk distribution containers. The only other Intermodal Freight Facilities in Minnesota are the BNSF Yard located in St. Paul, which handles about 70 percent of the intermodal freight, and a small rail transfer yard located in Dilworth that processes less than 1 percent of the state’s intermodal freight.

### 4.5.3 Water Ports

Waterway transportation is a low cost means of shipping bulk commodities over long distances whose delivery is not particularly time sensitive. Commodities shipped from Minnesota via the Mississippi River tend to be agricultural products (corn, soybeans and wheat).

The Mississippi River supports five ports in Minnesota with the Minneapolis port being the sole port in Hennepin County. Table 4-1 provides a comparison of the history of the annual tonnages shipped from the major Mississippi water ports in Minnesota. From a tonnage and percentage standpoint, the contribution of shipping from the Minneapolis ports has decreased over the last five years.
### Table 4-1 Comparison of Mississippi River Ports Shipping Tonnage

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Minneapolis</td>
<td>795,372</td>
<td>1,069,238</td>
<td>1,024,877</td>
<td>1,282,993</td>
<td>1,683,650</td>
</tr>
<tr>
<td>St. Paul</td>
<td>5,126,732</td>
<td>5,511,445</td>
<td>5,462,801</td>
<td>5,660,509</td>
<td>5,479,857</td>
</tr>
<tr>
<td>Savage</td>
<td>3,201,406</td>
<td>3,214,351</td>
<td>3,018,613</td>
<td>3,427,182</td>
<td>4,204,697</td>
</tr>
<tr>
<td>Red Wing</td>
<td>851,692</td>
<td>920,610</td>
<td>787,883</td>
<td>830,446</td>
<td>1,026,891</td>
</tr>
<tr>
<td>Winona</td>
<td>2,099,746</td>
<td>2,204,375</td>
<td>2,008,029</td>
<td>1,781,079</td>
<td>2,263,660</td>
</tr>
<tr>
<td>Total</td>
<td>12,074,948</td>
<td>12,920,019</td>
<td>12,302,203</td>
<td>12,982,209</td>
<td>14,658,755</td>
</tr>
</tbody>
</table>

Source: Mn/DOT Ports and Waterways website

### 4.6 Airports

Three airport facilities exist within Hennepin County. The primary facility is the Minneapolis-St. Paul International (MSP) Airport. In 2008, MSP was ranked by the Federal Aviation Administration as the 13th busiest airport in the United States. MSP has two terminals: the main Lindbergh Terminal at 2.8 million square feet with 117 gates and the Humphrey Terminal at 400,000 square feet and 10 gates. MSP provides parking for nearly 20,000 vehicles.

As a hub for a major airline, the Twin Cities benefit from non-stop and direct service to 116 domestic destinations and 14 international markets. In 2007, approximately 35.2 million passengers used MSP; half of these passengers were using MSP for connecting flights. About half a million landings and takeoffs occurred in 2007, with Northwest Airlines (now part of Delta) accounting for about 77 percent of these operations. MSP is very important to the local economy as it employs 25,000 people and generates more than $100 million in annual operating revenue.

Two municipal airports are located in Hennepin County at Eden Prairie (Flying Cloud Airport) and in Crystal (Crystal Airport). County roadways serve as the primary access to these municipal airports. Flying Cloud Airport has three runways, an instrument landing system and an air traffic control tower. Flying Cloud Airport has 463 aircraft based at the airport, and in 2006 it recorded 144,000 takeoffs and landings. Crystal Airport has four runways and has an air traffic control tower. In 2006 Crystal Airport recorded 65,500 takeoffs and landings.

Additional information on aviation planning and facilities is provided in the 2005 System Statement developed by the Metropolitan Council (included with the 2030 HC-TSP Support Documents CD).