

Mall of America
28th Ave.
Cedar Grove
Cliff Road
Palomino Drive
140th St.
147th St.
Apple Valley
Transit Station
161st St.
Glacier Way
Lakeville Cedar
195th St.
215th St.

Cedar Avenue Transitway



2010 Cedar Avenue Transitway Implementation Plan Update

Final Report

August 2011 Amended



URS

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1. CEDAR AVENUE TRANSITWAY: A LIFELINE FOR DAKOTA COUNTY

As a main connection between the southern suburbs and both downtown Minneapolis and St. Paul, the Mall of America, the airport and the University of Minnesota, Cedar Avenue is one of the most traveled roads in Dakota County. More than 150,000 vehicles travel Cedar Avenue daily and that number is expected to almost double over the next 20 years as growth along the corridor continues. If no improvements are made in the corridor, congestion will continue to increase and traffic speeds will continue to decrease from an average of 35 mph today to 12 mph in 2030. Expanded transit service along Cedar Avenue is essential to meeting the needs of residents, businesses and commuters.

Communities south of the Minnesota River have been rapidly growing for decades, as has traffic along Cedar Avenue. In the late 1990s, Cedar Avenue was identified as a high priority for light rail or bus rapid transit development for the region. Dakota County Regional Railroad Authority, in partnership with local cities, Hennepin County, the Metropolitan Council, the Minnesota Valley Transit Authority (MVTA), the Minnesota Department of Transportation (Mn/DOT) and the federal government have been working to develop bus rapid transit along Cedar Avenue.

The Dakota County Regional Railroad Authority selected bus rapid transit as the best option and locally preferred alternative (LPA) for Cedar Avenue following an extensive evaluation of transit and highway alternatives and substantial public input. Bus rapid transit (BRT) was chosen because it combines the flexibility of buses with the frequency, speed and reliability of both commuter rail and light rail transit (LRT). BRT was also chosen for its ability to be implemented in phases. This provides flexibility by constructing transitway facilities or providing transit services when ridership and demand is warranted. Since buses operate on existing roadways, BRT has the advantage of operating on bus-only shoulders (i.e. widened and/or reinforced) to bypass congested roadways. BRT also uses convenient on-line stations and traffic signal priority to achieve a service similar to commuter rail and light rail transit service that is fast and reliable.

Today, the Cedar Avenue Transitway is recognized as one of the first bus rapid transit corridors in the state. The Cedar Avenue Transitway (Transitway) will provide access to other regional transitway investments such as the Hiawatha light rail transit line, the Northstar commuter rail line and the Central Corridor light rail line. Investments in the Transitway will provide transit patrons with a seamless, convenient way to travel to many destinations in and around the Twin Cities.

With its ability to ensure fast and reliable transit services, provide competitive travel time savings to the automobile and promote more sustainable transportation options, the Cedar Avenue Transitway will continue to be a lifeline for the residents and businesses of Dakota County.

2. CEDAR AVENUE TRANSITWAY DEVELOPMENT TIMELINE

Developing and implementing transit projects take time and extensive analysis. The Transitway has been in development since the late 1990s, seeking the most appropriate and reasonable transit and



roadway improvements along Cedar Avenue. Project development activities include feasibility studies, an alternative analysis, preliminary engineering, environmental documentation, final design and ultimately, construction.

In 1998, development of the Transitway was initiated with the beginning of the Cedar Avenue Corridor Study (Study). The purpose of the Study was to determine the feasibility of various transit options that could assist in meeting the growing travel demand on Cedar Avenue. The Study looked at numerous transit options including light rail and bus rapid transit. In addition, potential transit alignment options were considered that included Cedar Avenue, Galaxie Avenue in Apple Valley and Nicols Road in Eagan. At the conclusion of the Study in 2001, the report documented the benefits and the costs of both BRT and LRT options along Cedar Avenue.

Building off the results of the Cedar Avenue Corridor Study, a Federal Transit Administration compliant Alternatives Analysis (AA) was started in 2003 and was completed in 2004. The AA analyzed many elements for implementing transit options on Cedar Avenue. The AA documented the benefits and costs of:

- Center, side and shoulder running BRT configurations
- Capacity improvements to Cedar Avenue
- Station Sites and configurations
- Transit service concepts
- Commuter express to downtown Saint Paul, Minneapolis & Mall of America
- Station to station services along Cedar Avenue
- Ridership & Financial implications

In March 2004, the Dakota County Regional Railroad Authority (DCRRA) selected BRT as the Locally Preferred Alternative (LPA) for the Cedar Avenue Transitway. BRT was chosen for the following reasons:

- Eighty percent of the transit service need is commuter express service to both downtown Minneapolis and St. Paul
- BRT allows more flexibility to modify transit service based on community need
- BRT requires less land acquisition and has less environmental impact
- BRT is less capital intensive and therefore, less expensive than light rail

- BRT is quicker to implement, addressing growing congestion issues sooner

In 2004, the Metropolitan Council *2030 Transportation Policy Plan*, adopted in 2004, identified five “Tier 1” transitways as the first corridors to be examined for implementation. The Cedar Avenue Transitway was identified as one of the five Tier 1 transitways.

In 2006, Preliminary engineering (PE) and environmental documentation commenced the development of bus shoulder lanes along Cedar Avenue between 138th in Apple Valley through County Road 70 in Lakeville. In addition, station development and property acquisition started in Eagan, Apple Valley and Lakeville for stations beginning operation in late 2009 and early 2010.

In 2008, the Counties Transit Improvement Board (CTIB) developed and adopted an Interim Transit Investment Framework that includes capital and operating grants to the Cedar Avenue Transitway. Funding from CITB is used to construct the Apple Valley Transit Station and provide BRT express services to the Lakeville Cedar park-and-ride.

In 2009, Final Design (FD) activities for the Transitway’s bus shoulder lanes began and are ongoing at the time of this writing. FD follows the environmental process required by the federal partners of the Transitway’s development. FD activities include the development of detailed working drawings, specifications, and cost estimates for the proposed transportation project. The primary objective of FD is to use all previous work done as a starting point to prepare contract plans and specifications that can be used to bid and construct the project with a minimum of field changes, delays, and cost overruns.

Late 2009 and early 2010 also brought many exciting events in the Transitway. The Lakeville Cedar park-and-ride opened in Fall of 2009. In 2010, we saw the opening of the Apple Valley Transit Station and the Cedar Grove Transit Station in Eagan also opened for service.

In 2010, construction of the Transitway’s bus shoulder lane component will begin. First, utility relocations will occur in the fall to prepare for major construction in 2011 and 2012. In 2011, bus-only shoulders and other roadway improvements will be constructed from Dakota County Highway 42 in Apple Valley south to Dodd Boulevard in Lakeville. In 2012, bus-only shoulders and other roadway improvements will be constructed from Dakota County Highway 42 north to 138th Street in Apple Valley.

In late 2012, station-to-station service is scheduled to begin in the Transitway. This service will use the newly constructed bus shoulders lanes and on-line transit stations, providing benefits to all travelers along Cedar Avenue.

3. PROJECT OVERVIEW

The 2010 Cedar Avenue Transitway Implementation Plan Update (*2010 IPU*) has been undertaken as a result of recent major events in the Twin Cities’ transit direction. First, the Counties Transit Improvement Board (CTIB) was formed in 2008 that allowed Anoka, Dakota, Hennepin, Ramsey and Washington Counties to levy a quarter-cent sales tax dedicated to transit improvements. This new,

dedicated source of funding for fixed guideway transit projects has helped accelerate the implementation of the Cedar Avenue Transitway (Transitway). Another positive change in the implementation of the Transitway is the City of Lakeville joining the Regional Transit Capital Communities, formerly known as the Transit Taxing District. Third, the United States Department of Transportation awarded the Twin Cities with an Urban Partnership Agreement (UPA) grant to fund, in part, major transit projects in the region that included elements of the Transitway, I-35W BRT, and the Marquette and Second Transit Project in downtown Minneapolis. Through UPA funding, the Cedar Grove, Apple Valley and Lakeville Cedar stations were realized in late 2009 and early 2010. Additionally, updates to the 2030 comprehensive plans for cities along the Transitway and Dakota County showed areas of growth and development along the Transitway. With these changes, a review and refinement to earlier assumptions and recommendations regarding the Transitway became imperative.

Specifically, the *2010 IPU* reexamines the following elements of the Transitway in order to guide the next stages of Transitway development:

- Service plan
- Ridership
- Bus fleet
- Station, park-and-ride, layover, and fleet storage and maintenance facilities
- Station amenities
- Technology enhancements
- Pedestrian and bike facilities
- Integration with the regional transit system
- Capital and annual operating and maintenance costs
- Implementation and financial plan.

3.1. Agency Coordination

Because the Transitway uses Cedar Avenue (Dakota County Highway 23), Trunk Highway 77, Trunk Highway 62, and Interstate I-35W into downtown Minneapolis its development entailed coordination with multiple partners including Dakota County, Metropolitan Council, MVTA, Metro Transit, Mn/DOT, Lakeville, Apple Valley, Eagan, and Bloomington. To ensure communication and coordination between these multiple jurisdictions, the project has used an advisory structure that has been in place since the planning stages of the project, through design, environmental documentation, and construction. This structure has four elements – Dakota County Regional Railroad Authority, the Cedar Group, Project Management Team, and Technical Advisory Committee described as follows:

- The Dakota County Regional Railroad Authority (Authority) oversees the planning, development and implementation of bus rapid transit (through special legislation) for Cedar Avenue Transitway and other fixed guideway transit projects within the County. Dakota County staff, through agreement with the Authority, serves as the project manager for the *2010 IPU*.

- Cedar Group – The Cedar Group is composed mostly of elected officials from the cities and counties along the Transitway, the Metropolitan Council, MVTA, MnDOT and representatives from the business community. The Cedar Group has been the primary point of contact for their community’s constituents in the IPU process.
- Project Management Team – The Project Management Team is made up of staff representatives from Dakota County, MVTA, and the Metropolitan Council. The group’s purpose is to provide technical and policy guidance to the project, specifically as it relates to the financial, funding, and work plan elements of subsequent steps of the Transitway’s implementation. The group generally met twice a month.
- Technical Advisory Committee (TAC) – The TAC was made up of city, county, and transportation agency staff. The TAC meets monthly and at key milestones throughout the project to provide technical guidance, discuss interim results, and review draft products. In addition to representatives from local governments along the Transitway, the TAC membership included staff from Metro Transit, Metropolitan Council, MVTA, and Mn/DOT.

3.2. Public Involvement and Engagement

The purpose of public involvement in the 2010 IPU process was to support decision-making efforts and encourage an open, collaborative approach regarding a balanced transportation system. The key was to actively involve the community to create enthusiasm for and consensus on the Transitway. The IPU public involvement approach was to fulfill the following:

- Communicate with and educate the public, neighborhoods, businesses, and agencies in the project area regarding opportunities and impacts that the Transitway may present for their community and/or area of interest.
- Involve local residents and businesses in the decision-making process, thereby creating a sense of public ownership of the project.
- Gain insight into issues of greatest concern or interest to the public, businesses, and municipalities along the Transitway and incorporate them into the decision making process.
- Meet or exceed the requirement and intent of federal, state, and local public involvement policies.

Outreach Activities

Meaningful public input is not possible if constituents are uninformed about the project, or think it does not affect them. Several different outreach techniques were used to solicit a range of opinions regarding the Transitway.

- Monthly Project Update Meetings – Each month throughout the project, the Dakota County hosted project update meetings, at either 7:30 a.m. or 6:00 p.m., enabling the residents to attend the meetings on their way to or from work. At each of the meetings, a presentation was given informing the public of progress made to date on the IPU and the larger Transitway project.
- Public Open Houses – Three of the Monthly Project Update Meetings (September 2009, November 2009, and March 2010) were larger public open houses. The purpose of these open houses was to present information regarding all ongoing phases of the Transitway project to the public that included the Implementation Plan Update and Final Design. This same format was used during Preliminary Engineering and the Environmental Assessment. Being an open house, the format was informal and allowed the public to talk to members of project team individually to answer questions that they have regarding various aspects of Transitway development.
- Dakota County Web Site – The Dakota County web site serves as a clearinghouse for all information related to the development of the Transitway. Materials that are available from the web site include Transitway project history; meetings and events; construction updates; and information distributed at monthly project update meetings and open houses.
- City Council Presentations – In addition to the Technical Advisory Committee and Cedar Group, the *2010 IPU* was presented to individual city councils. Dakota County staff provided a preview of the preliminary recommendations of the *2010 IPU*, answered questions and clarified findings and recommendations, acting as a vehicle for the cities to adopt them in their plans.
- Special Presentations – Individual presentations are also part of the outreach for the *2010 IPU*. This outreach included stakeholders such as Chambers of Commerce, community groups, and transportation boards (e.g. CTIB). Similar to the city council presentations, this format allowed Dakota County staff to focus the recommendations of the *2010 IPU* to the particular interests of these groups.
- Newsletters – Dakota County also issued printed newsletters as part of its outreach program on the Cedar Avenue Transitway. During the *2010 IPU*, two newsletters were issued – in September 2009 and November 2009. These newsletters publicized upcoming open houses and provided updates on ongoing projects such as Final Design and the *2010 IPU*.

Summary of Public and Stakeholder Comments Received

Throughout, the course of the outreach activities and public involvement several themes continued to come as important elements that should be incorporated into the planning of the Transitway. Community residents and transit riders wanted the Transitway to include:

- Transit service that is both reliable and frequent – The public desires more reliability and predictability in services. For example if they want to take the bus from Cedar Grove Transit Center to go shopping in Apple Valley, that the buses will be there when they are scheduled to be. In addition, the public wants the reliability of knowing that when they are done shopping, they can walk to a bus stop and a bus will be there in a few minutes to take them back.
- Residents desire stations that are convenient to their destination to quicken their overall trip.
- Transit riders expressed a clear preference for shorter dwell time at stations. Riders consistently brought three means to accomplish this, as follows:
 - Fast fare collections systems similar to the off-board fare collection systems used on Hiawatha and Northstar.
 - Level boarding to allow persons with mobility limitations to board and disembark without the use of a ramp.
 - Interior bicycle racks to allow cycling patrons to wheel their bicycle into the bus. In addition, interior bicycle racks provide greater protection for bicycles and do not require passengers to lift their bicycle onto and off a rack.
- Both residents and transit riders stated that they wanted the Transitway to be an environmentally-friendly alternative to driving. They felt the Transitway should go beyond reducing dependence on personal automobiles to environmentally friendly buses, like hybrid-diesel buses used elsewhere in the Twin Cities.
- Business and commercial property owners along the Transitway felt that:
 - Stations should complement the nearby properties and buildings.
 - Station development should mirror initial ridership projections and increase capacity as transit demand increases.
 - Service should be fast and frequent enough to attract additional customers and convenient for employees to use.
 - Additional steps may be needed to ensure parking spaces near businesses are utilized by customers and not transit patrons.

4. TRANSITWAY VISION AND FRAMEWORK

The Cedar Avenue Corridor Transitway Alternatives Analysis was completed in 2004 and determined the most appropriate transit improvements for the Cedar Avenue Transitway between the Mall of America (MOA) in Bloomington and County State Aid Highway (CSAH) 70 in Lakeville. A Technical Advisory Committee and a Project Management Committee guided the study. Committee members were policy and technical representatives of the cities and other governmental jurisdictions in the Transitway. These committees adopted the following goals for the study:

1. Improve Transitway mobility.
2. Maximize the movement of people within the Transitway across the Minnesota River.
3. Provide cost-effective and efficient transit element of the transportation system.
4. Provide flexible, adaptable, and expandable transportation choices.
5. Enhance/promote transit-oriented development and economic development that are compatible with community planning goals.
6. Provide a convenient, desirable, and safe travel alternative.
7. Minimize adverse social, economic and environmental impacts, and pursue opportunities to enhance these qualities within the Transitway.

The 2010 IPU is a continuation of the AA and seeks to guide the Cedar Avenue Transitway into the realization of the goals identified for the Transitway. The Transitway will provide rapid transit through a combination of commuter express, station-to-station, and local service utilizing on-line stations, as well as bus-only shoulders. This unique combination of transit advantages will make transit service in the Transitway time competitive with the private automobile. Figure 4-1 presents the 2030 vision for the Transitway.

4.1 Overview of Existing Transit Conditions

The Minnesota Valley Transit Authority

The Minnesota Valley Transit Authority (MVTA) provides public transportation alternatives for Apple Valley, Burnsville, Eagan, Rosemount and Savage. The MVTA provides local and commuter express bus services in the Cedar Avenue Transitway in Eagan and Apple Valley with service to Bloomington and service to Lakeville Cedar Park & Ride. (illustrated on the following pages, Figures 4-2 and 4-3). Commuter express service is provided to downtown Minneapolis and downtown St. Paul. Commuter express routes operate in the morning and afternoon peak periods on frequencies of 10 minutes to 30 minutes, and local routes on frequencies of 30 to 60 minutes.

Currently, the Transitway has a strong ridership base associated with both local and commuter express service in the Transitway that is provided by MVTA. The 2010 IPU envisions that MVTA will continue to provide commuter express and local services within the Transitways that continues to meet local needs. An important goal of providing additional transit enhancements, such as stations that provide level-boarding, ticket vending machines, in the Transitway is to ensure that these enhancements build on the existing ridership base and create new patrons for the local and station-to-station services.

Table 4-1 presents the 2008 average weekday ridership on MVTA routes operating within the Transitway.

In 2010, five park-and-ride facilities exist along the Transitway – 28th Avenue Station in Bloomington with 1,440 spaces; Cedar Grove Station in Eagan with 164 spaces; Palomino Hills and Apple Valley Transit Station in Apple Valley with 312 and 750 spaces, respectively; and Lakeville Cedar in Lakeville with 190 spaces. These five facilities have a total capacity of approximately 2,860 spaces. The Apple Valley Transit Station and Palomino Hills facilities operate at almost full capacity.

There are three other park-and-ride facilities operated by MVTA that are proximate to the Transitway –Blackhawk park-and-ride lot at Cliff Road and I-35E; Burnsville Transit Station at Nicollet Avenue and TH 13; and 157th Street Station at Pilot Knob Road. As the Transitway develops, these facilities will experience an increase in usage as a result of investments in both transit service and capital facilities. Although these facilities are not directly located on the Transitway, the routes that serve them will operate on the Transitway, and patrons using these facilities will experience some of the benefits of the Transitway, i.e. reduced transit travel time.

It is also worth mentioning that Metro Transit provides commuter express services to Lakeville via the I-35W BRT Transitway with additional local transit services serving Bloomington as well.

**Table 4-1
Existing Transitway Ridership
With Connecting Local Service**

Route	Riders per Day in 2008
420	100
440	100
442	550
444	850
445	450
Local	2,050
472	450
476	550
477	1,500
479	50
480 ²	200
Express	2,750
Transitway Ridership With Connecting Local Service	4,800

Source: MVTA.

² Route 480 only reflects the 37.5 percent of the ridership on the route that is in the Cedar Avenue Transitway.

Figure 4-1
2030 Cedar Avenue Transitway Vision

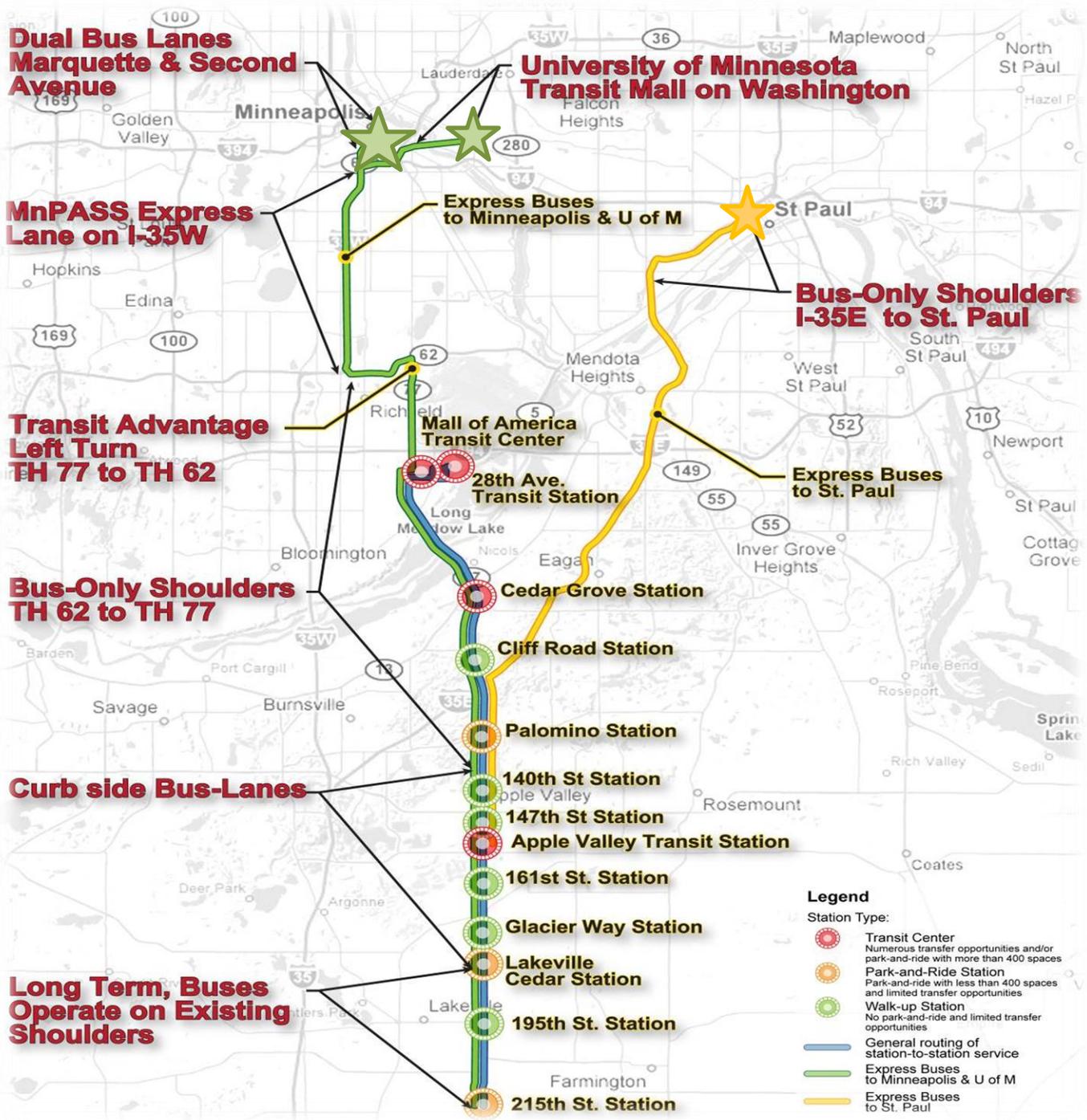


Figure 4-2
Existing Local Transit Routes Serving the Cedar Avenue Transitway

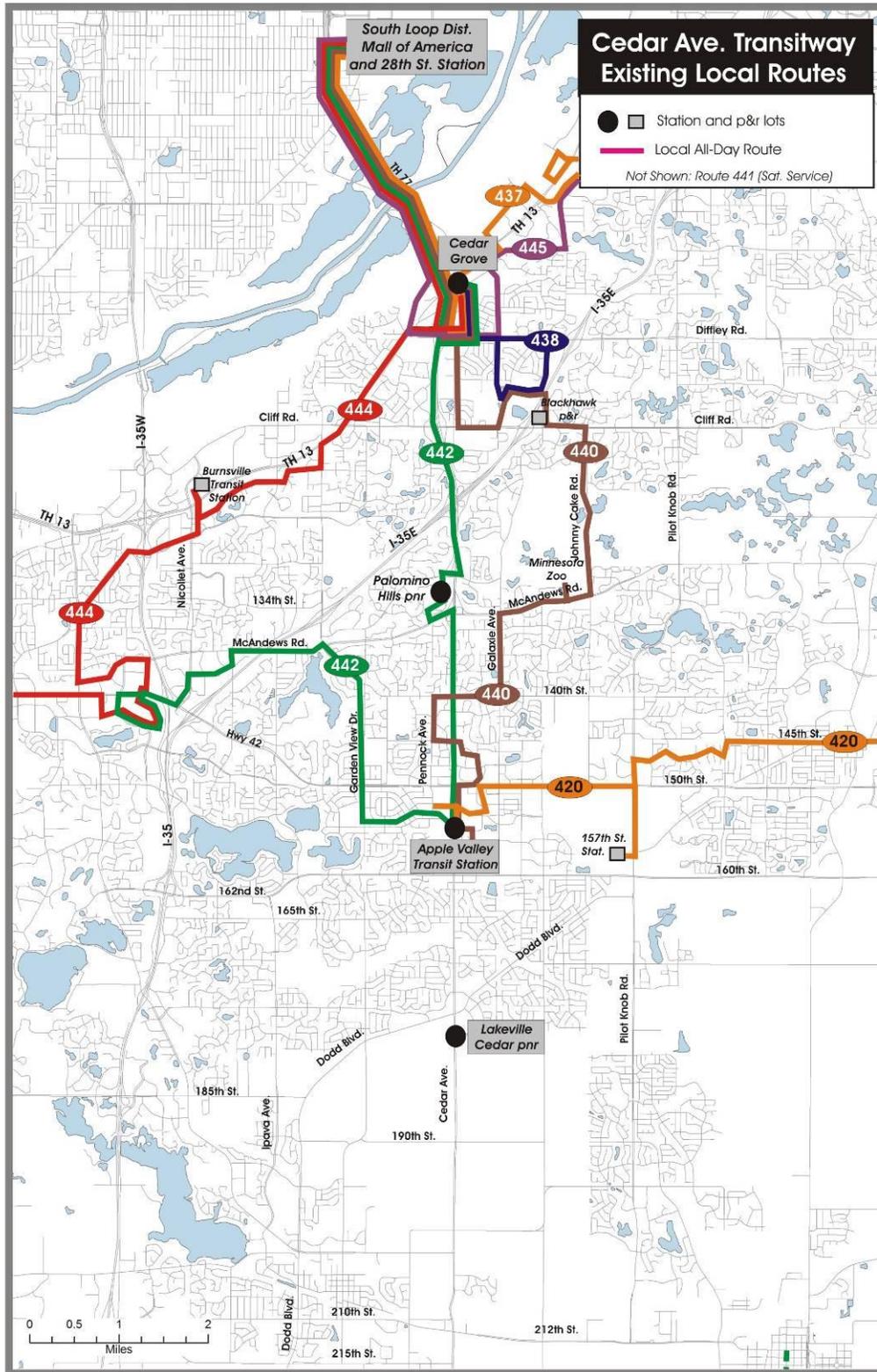
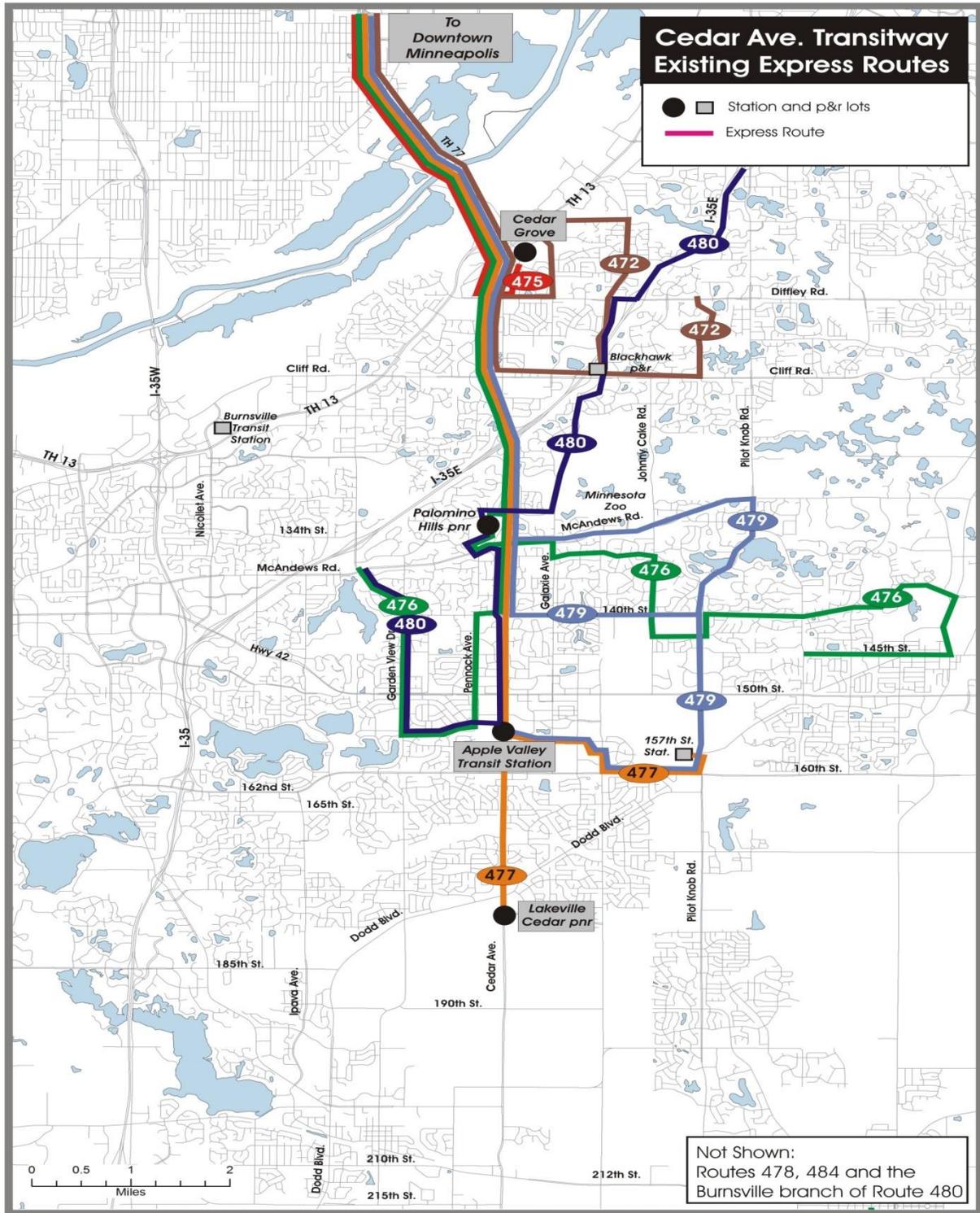


Figure 4-3
Existing Commuter Express Transit Routes Serving the Cedar Avenue Transitway



4.2 Overview of Currently Funded Improvements within the Transitway

The 2005 Implementation Plan identified four phases for project development of the Transitway. As shown in Table 4-2, the 2005 Implementation Plan estimated the Transitway capital cost at approximately \$120 million in 2003 dollars, and would require over 20+ years to implement.

**Table 4-2
Summary of 2005 Implementation Plan Phases**

Phase	Timeframe	Capital Costs in 2003 dollars
Phase 1 – Strengthen Core BRT Service and Enhance BRT Facilities	Within 5- years	\$27.18 million
Phase 2 – Add Station-to-Station Service and On-Line Stations	5 to 10 years	\$15.68 million
Phase 3 – Extend BRT	5 to 15 years	\$11.50 million
Phase 4 – Expand and Improve BRT Service and Facilities	Long Term	\$65.24 million
Full Implementation of the Transitway		119.60 million

The 2010 IPU is building on and updating the 2005 Implementation Plan and, as such, project development has transitioned from phases to stages of implementation. The 2010 IPU proposes the new staging timeline that reflects an updated and a more balanced approach to developing the Transitway:

- **Stage 1 defined as the period between 2009 and 2012**
- **Stage 2 defined as the period between 2012 and 2020**
- **Stage 3 defined as the period between 2020 and 2030**

The Transitway is currently in Stage 1 of development, with several major elements of the Transitway already funded through the Dakota county and Dakota County Regional Railroad Authority, UPA, Congestion Mitigation and Air Quality (CMAQ), CTIB, and state bonds, either in part or in their entirety. The Transitway has secured approximately \$105 million for the capital and project development/administration activities associated with Stage 1. Examples of those funded improvements that are still under design or construction include:

- Runningway –bus shoulder lanes along Cedar Avenue between 138th Street and 181st Street.
- Stations - 140th Street and 147th Street Stations in Apple Valley; 28th Avenue Station in Bloomington.
- Buses for station-to-station and commuter express service (partial funding).
- Technology enhancements – Driver Assistance System and real-time signage for the Mall of America Station are fully funded; other technology enhancements such as off-board fare collection and customer information systems at stations are partially funded.

Additional information on each Stage and its associated costs are found in Section 7, *Staging Plan*.

4.3 2012 Transitway Vision

The 2012 vision for the Transitway is to commence station-to-station service, in addition to commuter express and local service, in late 2012 to connect the Mall of America/28th Avenue Park and Ride in Bloomington, to Egan, Apple Valley, and Lakeville. It is proposed that station-to-station service could operate with 10 minute peak/15 minute off-peak service from the South Loop District, through Egan and Apple Valley, with every other bus continuing to Lakeville. The anticipated ridership for this new service is 2,250 in 2012.

Curbside bus shoulder lanes and stations are anticipated to be in place by 2012 for station-to-station service. The following stations are anticipated to be developed or improved prior to station-to-station operations commencing– 28th Avenue, Mall of America Transit Center, Cedar Grove, 140th Street, 147th Street, Apple Valley Transit Station, and Lakeville Cedar (181st Street). Figure 4-4 indicates the general location of these stations within the ultimate 2030 Transitway vision. The 2010 Implementation Plan Update is recommending moderate increases in express and local service in the Transitway to be introduced with start of station-to-station service.

2012 Service Plan and Ridership

The 2010 IPU is proposing that in 2012, station-to-station service begin from the Mall of America and 28th Avenue Park and Ride in Bloomington, to Egan, Apple Valley and Lakeville, along with moderate expansion of the existing commuter express and local services. Figures 4-5 and 4-6 show 2012 conceptual commuter express service in the Transitway, while Figure 4-7 shows the conceptual local and station-to-station service plan for 2012.

These concepts propose the introduction of mid-day service on route 477 that serves the Cities of Apple Valley and Lakeville. In addition, the 2012 service plan includes service to the University of Minnesota from the Cedar Grove park and ride. Most notable is the introduction of station-to-station service in the Transitway. The station-to-station service is designed to provide transit customers with frequent, all day service that allows access too many of the region’s most popular destinations. Through station-to-station services, transit customers can access not only the Mall of America, but through connections with the Hiawatha LRT, have access to the Minneapolis/St. Paul International Airport and downtown Minneapolis. In 2012, the station-to-station service is envisioned to operate from 5 AM to midnight with frequencies ranging from 10 to 20 minutes, depending on the time of day.

The conceptual services plans identified in the 2010 IPU were developed for the purposes of estimating capital and operating costs, as well as modeling the potential ridership demand. The final alignment and service frequencies may differ from actual implementation as further refinement of actual services to be provided for commuter express, local and station-to-station services will be determined in cooperation with the Metropolitan Council and the transit operator.

Figure 4-4

Location of Transitway Stations Envisioned for 2030

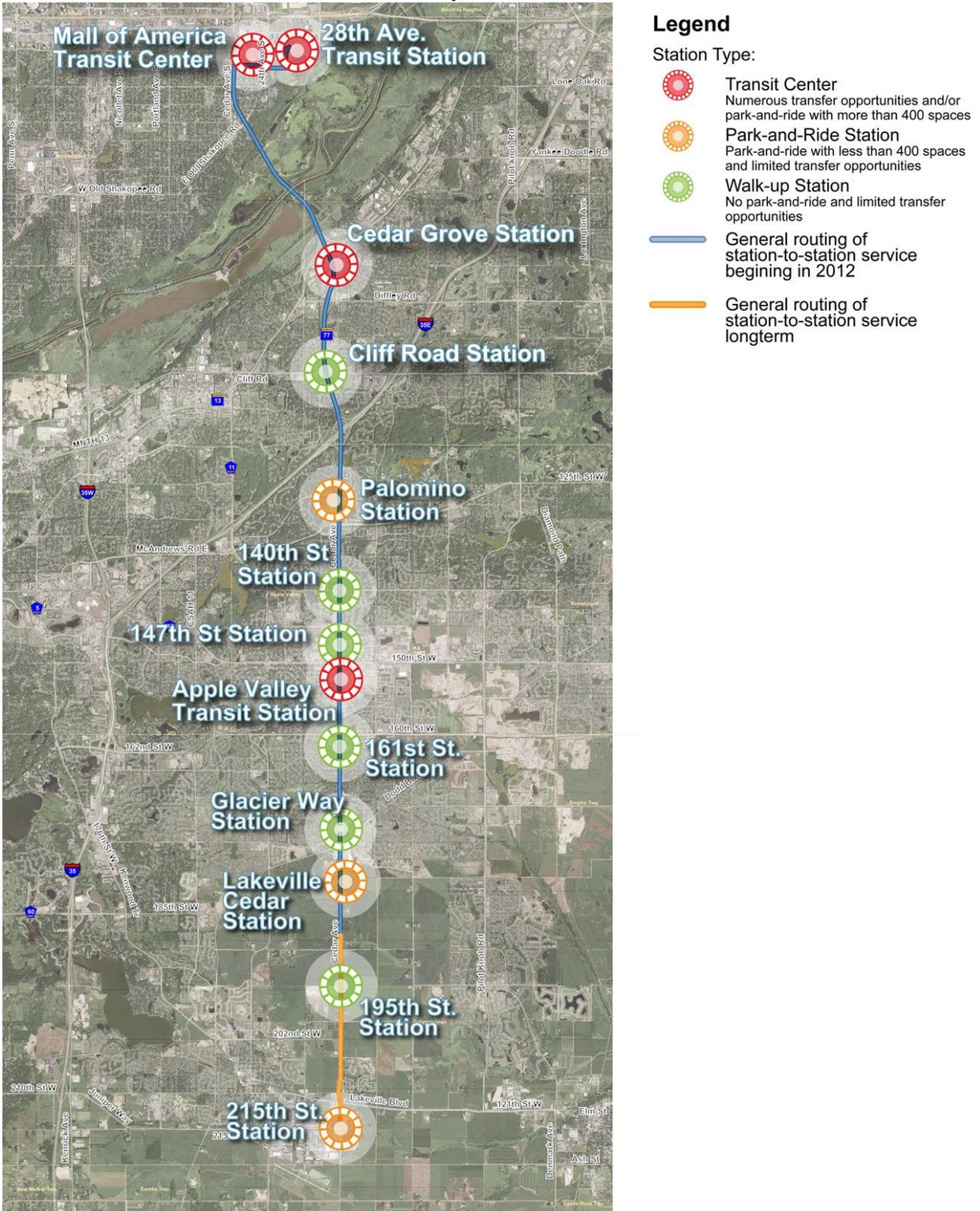


Figure 4-5

Conceptual Express Service Plan for 2012

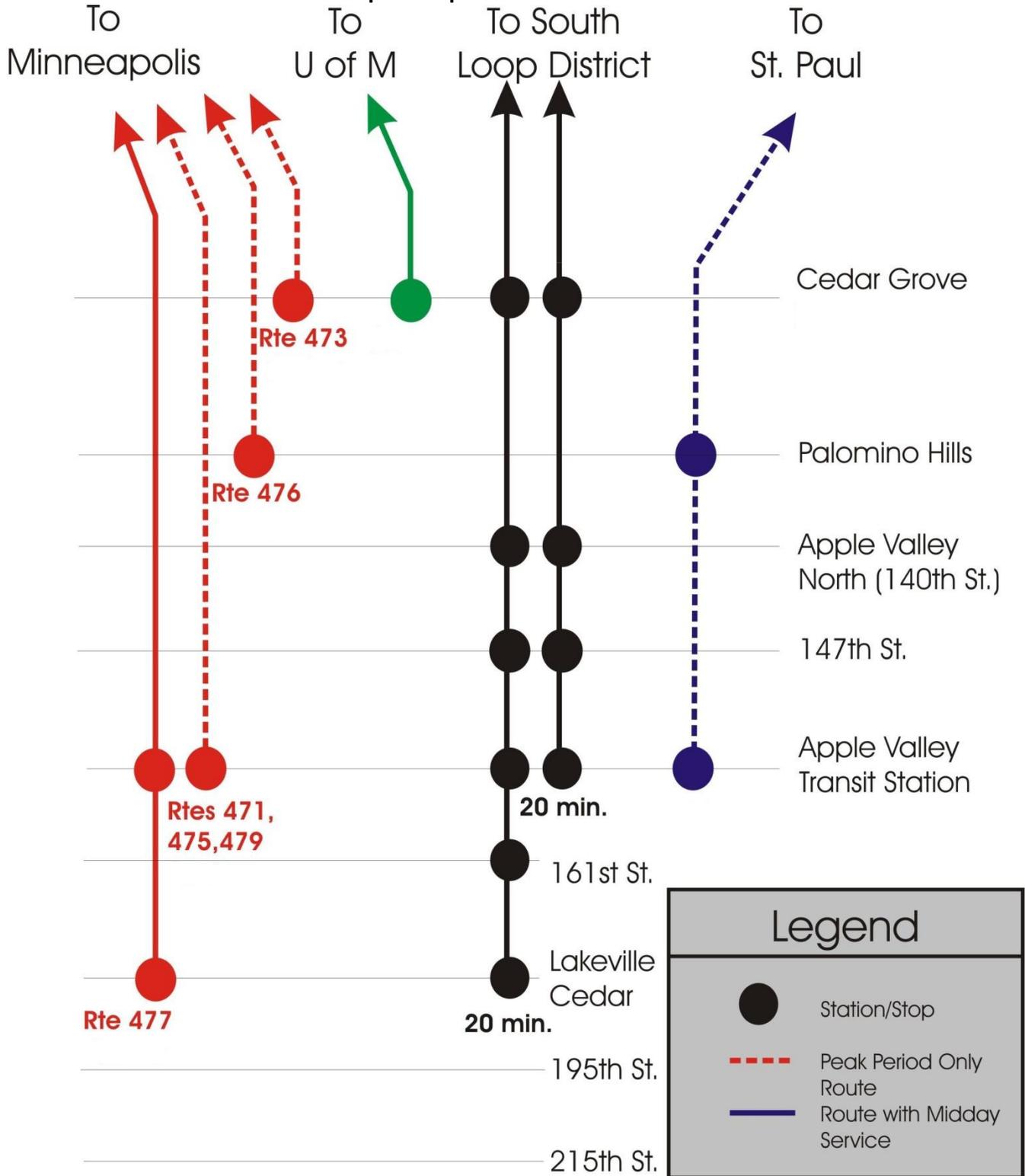


Figure 4-6
 Conceptual Commuter Express Service Plan Map for 2012

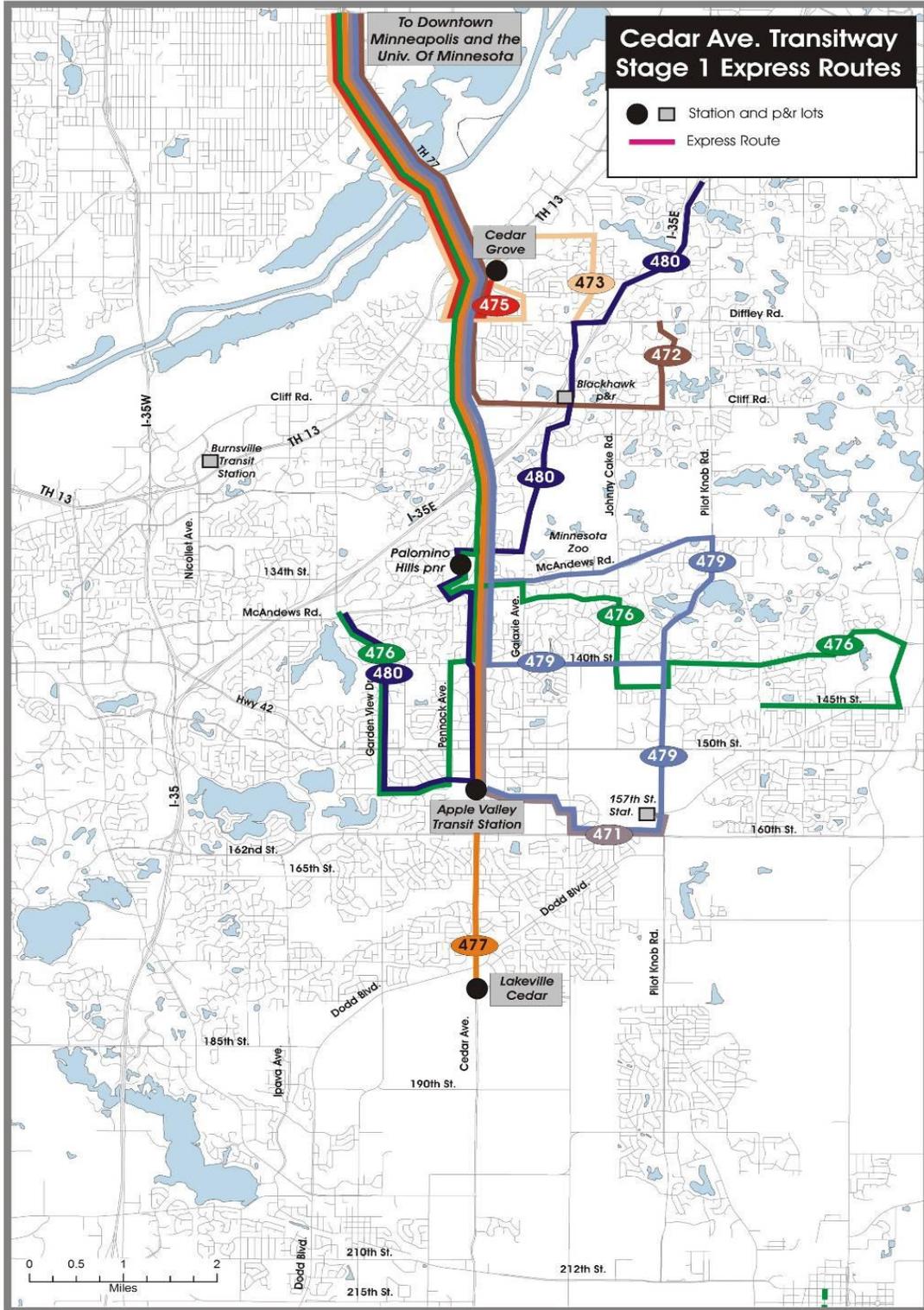


Figure 4-7
Conceptual Local and Station-to-Station Service Plan for 2012

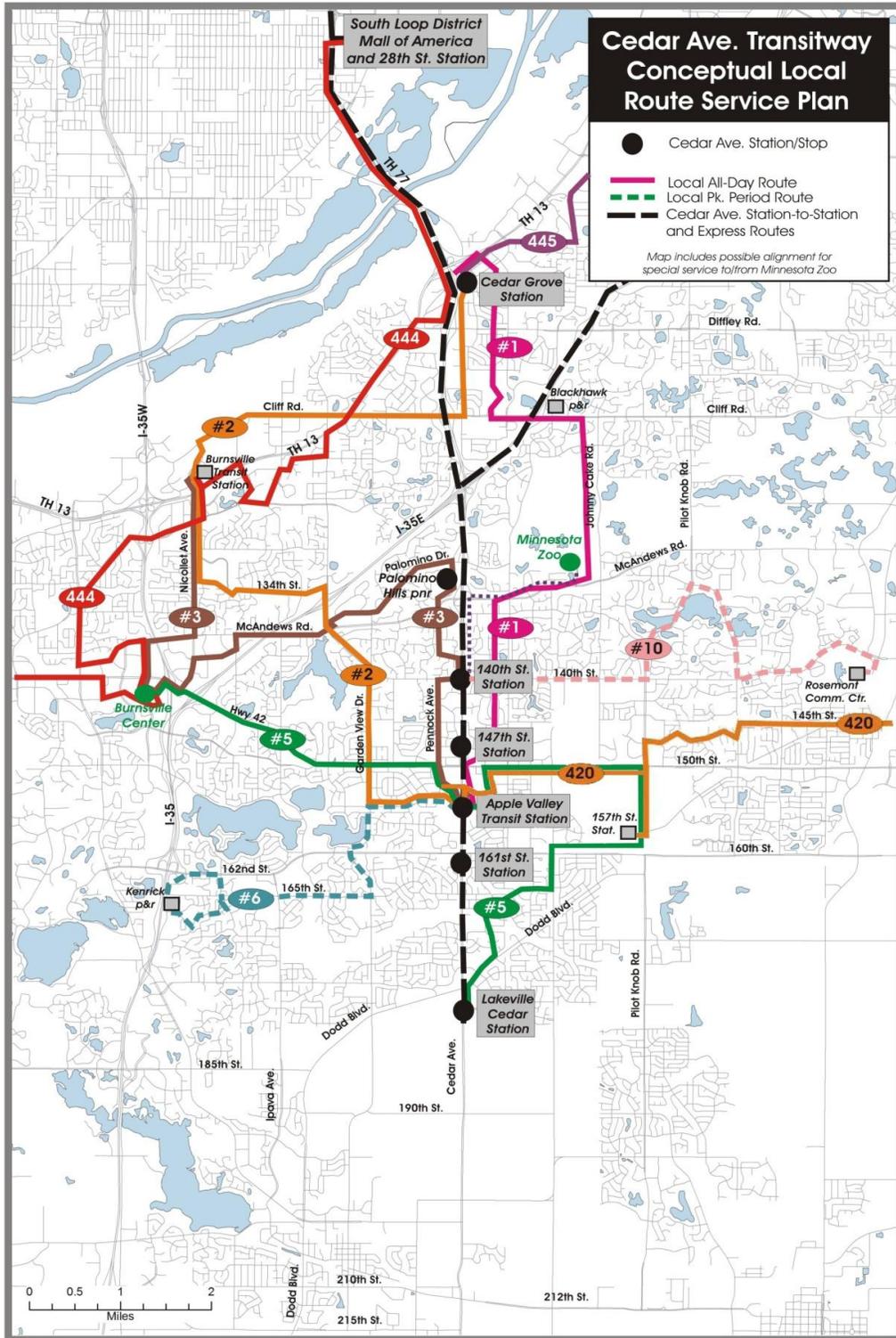


Table 4-3 presents the estimated 2012 Cedar Avenue Transitway ridership for recommended conceptual service plan.

**Table 4-3
2012 Cedar Avenue Transitway Forecasted Ridership -**

Service Type	2008 Existing Ridership ¹	2012 Forecasted Ridership ²
Commuter express	2,750	3,500
Station-to-Station	Not Applicable	2,250
Transitway Total	2,750	5,750
<i>Local Feeder Service</i>	<i>2,050</i>	<i>2,000</i>
Transitway With Connecting Local Service Total	4,800	7,750

It is worth noting that ridership forecasts do not include potential ridership gains that may be associated with special events, such as sporting events, that service regional attractions such as the Metrodome or Twins Stadium. It has been the experience of the Northstar and Hiawatha rail lines to see increased ridership on transit services that provide a safe, fast connection to sporting and special events in downtown Minneapolis. It is anticipated that Transitway project sponsors will work together to promote and maximize opportunities to serve event goers through convenient transit services.

2012 Park-and-Ride Facilities

As previously stated, five park-and-ride facilities directly serve the Transitway, with a total of approximately 2,860 spaces³. There is capacity at the 28th Avenue, Cedar Grove and Lakeville Cedar park-and-ride facilities to meet near-term needs. However, Apple Valley Transit Station and Palomino Hills are operating at capacity. The 2010 IPU is recommending additional analysis be done to determine how to accommodate future park-and-ride demand, approximately 1,400 additional spaces by 2030, in northern Apple Valley through the *North Apple Valley Park-and-Ride Demand Project*. Additional analysis is needed to quantify the costs and benefits of potential options of serving northern Apple Valley and meeting anticipated transit demand. Potential options could include:

- Adding additional capacity to the Apple Valley Transit Station park-and-ride structure;
- Identifying an additional park-and-ride location between 147th Street and 138th Street;
- Providing the infrastructure to physically connect the Palomino Hills to the Transitway;
- Identifying service adjustments along the Transitway that address the park and ride needs.

¹ Source: MVTA

² Source: URS and Metropolitan Council travel demand model.

³ Metro Transit, Engineering and Facilities, Facilities Planning, 2008. *2008 Annual Regional Park-and-Ride System Survey Report*.

Minnesota Valley Transit Authority, 2010. *Park & Ride*. Available: http://www.mvta.com/Park_and_Ride.html.

Metropolitan Council, 2009. *New peak express bus service from Lakeville to downtown Minneapolis launches Sept .28*.

Available: http://www.metrocouncil.org/news/2009/news_653.htm

It is anticipated that this analysis of additional park and ride needs will commence spring of 2011.

4.4 2030 Transitway Conceptual Service Plan

The 2030 vision for the Cedar Avenue Transitway includes extending the Transitway south along Cedar Avenue to 215th Street in Lakeville, utilizing the existing shoulders as bus shoulders lanes and constructing stations at Cliff Road in Eagan and Glacier Way, 195th Street, and 215th Street in Lakeville. Of these four new stations, only the 215th Street Station would include a park-and-ride and serve as the new southern terminus for the Transitway. Numerous 2030 conceptual service plans were analyzed to assess the impact of different park-and-ride locations in northern Apple Valley with Palomino Hills and 140th Street. Generally, the 2030 conceptual service plan consisted of the following proposed services:

- Direct commuter express service from each park-and-ride to downtown Minneapolis and increased services to downtown St. Paul;
- Introduction of additional limited stop, express services to downtown Minneapolis during the mid-day;
- Continued services to the University of Minnesota;
- Expand hours of service, frequencies and geographic coverage of the local/feeder service network;
- Increasing station-to-station service every 20 minutes in the peak and off-peak from Lakeville, and every 10 minutes in the peak and off-peak in Apple Valley and points north, as ridership demand warrants.

Figure 4-8 presents the conceptual 2030 commuter express and station-to-station service that was modeled for services that included a park-and-ride at Palomino Hills. Figure 4-9 presents the conceptual local/feeder service network that was used for all 2030 scenarios.

2030 Ridership Forecasts

The 2030 ridership forecasts were developed employing two methodologies. The first methodology builds on the 2012 Scenario based on MVTA's existing service and assumes ridership will increase in proportion to population within the Transitway. This represents the most conservative, lower end of possible ridership in the Transitway in 2030. The second methodology modeled a more robust transitway highway network comprised of a richer feeder network in addition to higher transit frequencies and direct services. The 2030 forecasted weekday ridership for the Transitway with connecting local service in the Transitway range from 11,250 to 19,200 - with the higher end of the ridership forecasts representing a higher level of region-wide travel benefits-meaning all trips using some physical (station or roadway) aspect of the Transitway.

The 2010 IPU recommends that any future transit service investment should be tied to ridership demand that best reflects current socio-economic and market conditions. Periodic ridership updates will need to be conducted to monitor service demand and to plan for additional services and/or facilities. As the ridership modeling exercise was based on the Metropolitan Council's regional transportation model, it is not a sufficient tool to do finer level route and service planning. This additional analysis will need to be completed before any transit service adjustments are made to the existing transit service framework.

In addition, any modifications to the Metropolitan Council's regional transportation model or socio-economic data supporting the model may impact the 2010 IPU 2030 ridership forecasts. Moving forward, periodic updates to the ridership forecasts have been included in each stage of Transitway development to reflect changes that may occur due to population, development and economic factors.

Figure 4-8
2030 Conceptual Express and Station-to-Station Service Plan

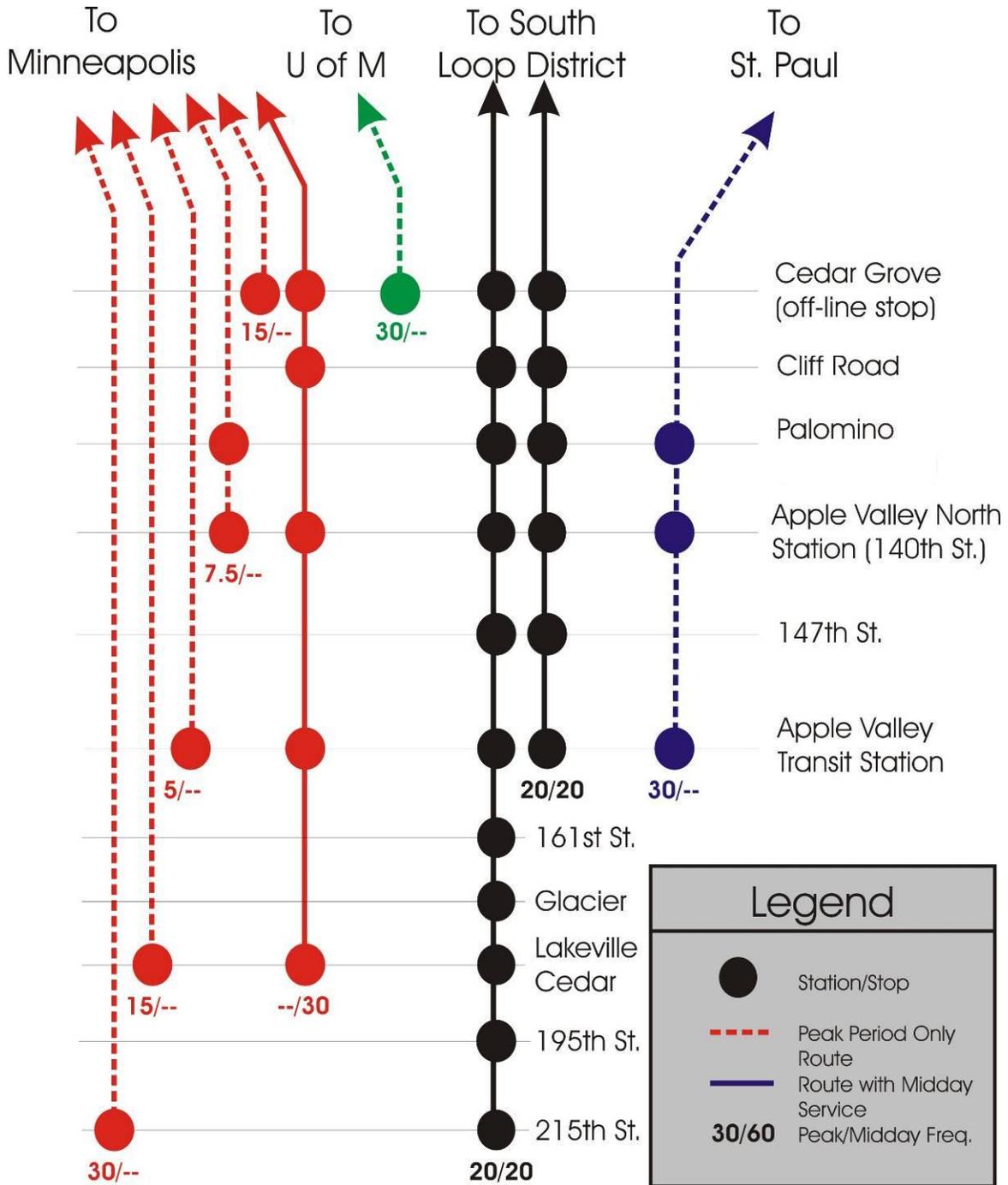
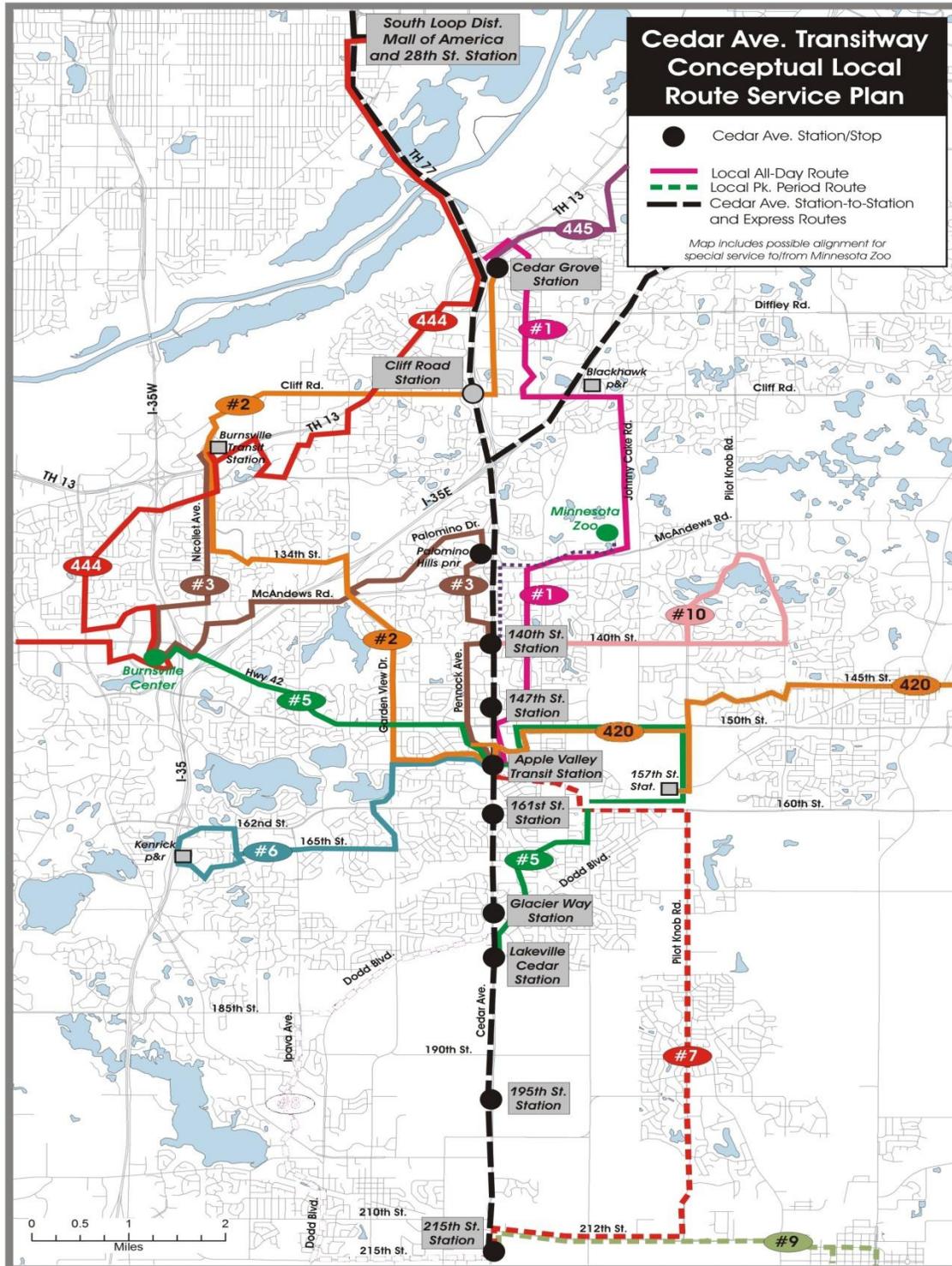


Figure 4-9
2030 Conceptual Local Service Plan



**Table 4-4
2012 and 2030 Ridership Forecasts for Cedar Avenue Transitway⁴**

Service	2008	2012	2030
Transitway Commuter Express	2,750	3,500	5,350
Transitway Station-to-station	-----	2,250	3,650
Transitway Total	2,750	5,750	9,000
<i>Local Feeder Service</i>	<i>2,050</i>	<i>2,000</i>	<i>9,850</i>
Transitway With Connecting Local Services Total	4,800	7,750	18,850

Table 4-5: Regional Transitway Ridership Forecast Comparison		
Transitway	2030 Transitway	2030 Transitway With Connecting Local Service
Cedar Avenue BRT	9,000	18,850
Central Corridor LRT	40,690	103,400
Hiawatha LRT* *Illustrative Purposes Only	25,000	82,000

2030 Park-and-Ride Facilities

Currently, 28th Avenue (in Bloomington), Cedar Grove (in Eagan), and Lakeville Cedar (in Lakeville) park-and-ride facilities have additional capacity, while the two Apple Valley park-and-ride facilities (Apple Valley Transit Station and Palomino Hills) are operating at capacity. The Apple Valley Transit Station was designed to accommodate future expansion. However, the Palomino Hills park-and-ride facility has significant challenges associated with expanding the facility. In addition, the travel demand modeling completed as part of the 2010 IPU indicated that a park-and-ride facility located in the vicinity of 140th Street and Cedar Avenue would attract more commuter express than Palomino Hills park-and-ride with equivalent service. As a result, this may be a better location to develop a park-and-ride facility.

The Metropolitan Council estimates that by 2030 there will be demand for an additional 1,400 park-and-ride spaces in Apple Valley⁵. The 2010 IPU is recommending that MVTA conduct the *Apple Valley*

⁴ Local ridership maybe overestimated in the Regional Travel Demand Model based on comparisons with observed data in the transitway.

⁵ Metropolitan Council, 2009. *Regional Solicitation of Federal Transportation Projects*. Appendix G included the 2030 park-and-ride demand by TAZ for the Twin Cities.

Park-and-Ride Siting Project to identify when and where these park-and-ride spaces should be built in Apple Valley. However, since the existing facilities are currently operating at capacity, development of the additional park-and-ride spaces in Apple Valley is targeted for Stage 2. The expansion/development of other park-and-ride facilities Cedar Grove, Lakeville Cedar (expansion), and 215th Street (development) are currently planned for Stage 3.

2030 I-35W/Cedar Avenue Transit Travelshed

The I-35W Transitway runs parallel to the Cedar Avenue Transitway and will also have bus rapid transit station-to-station service beginning in 2012. Using a select link analysis to analyze the 2030 model results allowed for the identification of transit travelsheds for both the I-35W and Cedar Avenue Transitway crossings over the Minnesota River. Figure 4-10 shows the distinct travelshed for each transitway as well as the overlapping portions of their travelsheds. The majority of the transit travelsheds for both Transitways is located south of the Minnesota River, reflecting the strong northern transit commute patterns from Dakota County.

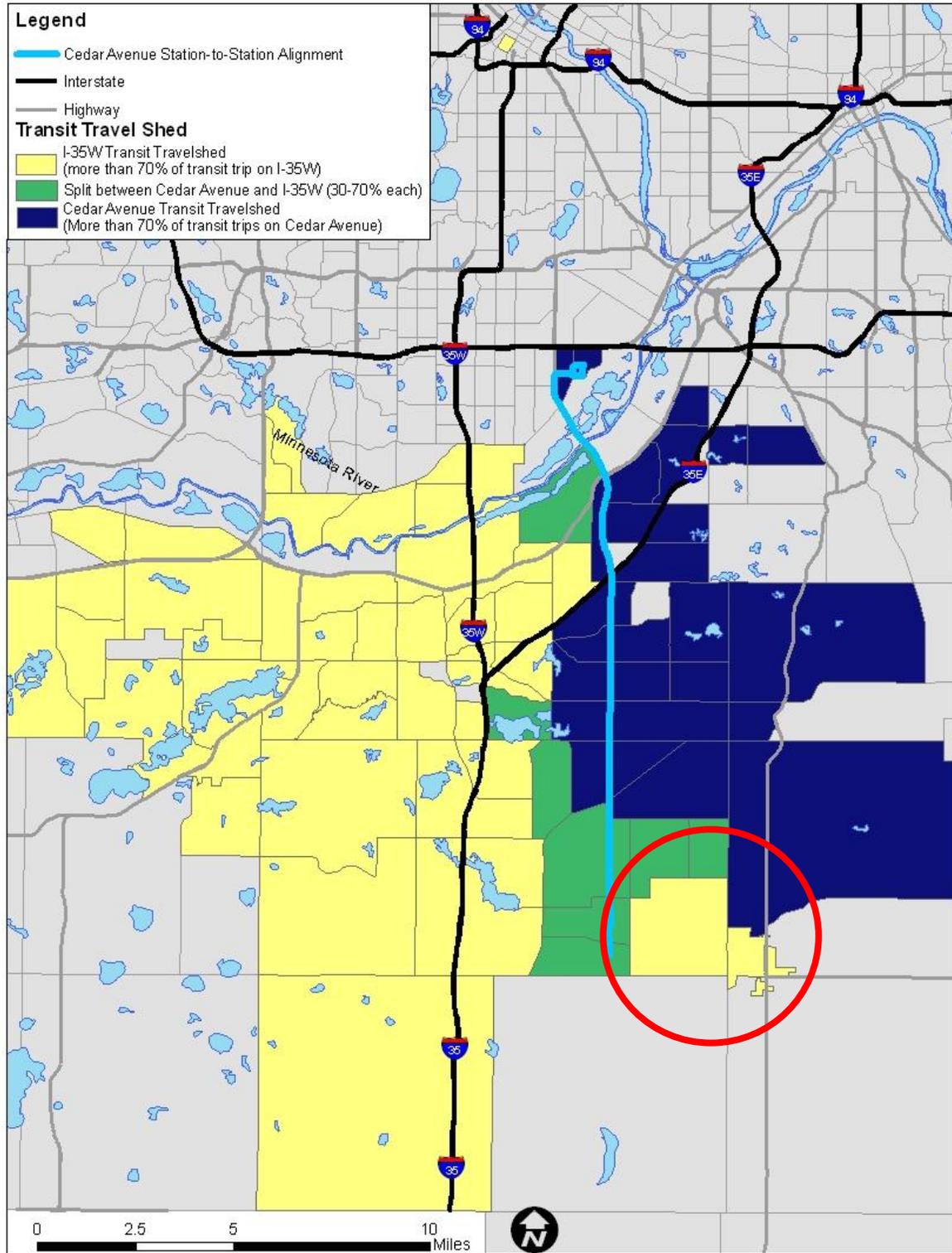
However, the model does indicate that some riders beginning their trip in the South Loop District will use the Cedar Avenue Transitway to travel south into Dakota County. The majority of the potential riders originating in the Mall of America/South Loop District will use the 28th Avenue park-and-ride, via pedestrian movements, to access Cedar Avenue Transitway services. This option of accessing the Transitway via walking is a strong testament to the transit oriented development (TOD) principles and zoning the City of Bloomington has enacted in the Mall of America/South Loop District to encourage alternative travel options.

Similarly, the I-35W Transitway will also have transit riders starting their trip in the southern portion of Bloomington (primarily south of Old Shakopee Road) who will use the I-35W to travel to Dakota County. South of the Minnesota River, the I-35W Transitway travelshed includes TAZs west of I-35W/I-35 and the TAZs east of Cedar Avenue and north of what will be 180th Street make up the Cedar Avenue Transitway travelshed. There are several TAZs located between I-35/I-35W and Cedar Avenue that are split between the two travelsheds and south of what will be 180th Street. Of interest is the model's indication that the transit riders from the TAZs near Farmington (circled in red) would travel past Cedar Avenue for the benefit of the faster transit travel times along I-35/I-35W⁶. The transit trips originating south of the Minnesota River for both Transitways are headed to destinations north of the River.

<http://www.metrocouncil.org/planning/transportation/RegSolicit/2009/AppendixG5.htm>

⁶ The Travel Demand Model assumes maximum transit travel speeds of 50 miles per hour (mph) on I-35W Transitway and maximum transit travel speeds of 35 mph along Cedar Avenue, TH 77, and TH 62.

Figure 4-10
2030 Transit Travelsheds for I-35W and Cedar Avenue BRT Transitways



5. 2010 IMPLEMENTATION PLAN UPDATE RECOMMENDATIONS

Based on the analysis of ridership, cost, benefits and feedback from the Cedar Avenue Transitway stakeholders and public, this *2010 Implementation Plan Update* makes the following recommendations. Timing and cost of each of these elements are described in detail in Section 4 as well as Section 7.

5.1 Runningway

Runningway is the exclusive or semi-exclusive bus lane. The Transitway will utilize numerous types of runningways to take advantage of regional transit advantages while providing cost effective transit travel time advantages.

Stage 1: 2009 - 2012

- Bus shoulder lanes on Cedar Avenue (Dakota County Highway 23) between 138th Street and 181st Street are in final design. Construction will begin in 2011 and will be completed in fall of 2012, in time for the start of station-to-station service.
- For express service to/from downtown Minneapolis, buses will use new bus shoulder lanes south of 138th Street for Apple Valley and Lakeville destinations and north of 138th street will continue to use existing bus-only shoulder on TH 77 and TH 62 north of Bloomington, employ the transit advantage for buses traveling northbound TH 77 to westbound TH 62 and access the High Occupancy/Toll (HOT) lanes on I-35W and utilize the designated transit corridors on Second and Marquette in downtown Minneapolis. The Cedar Grove to University of Minnesota service will use existing infrastructure to serve both west and east bank campuses.

Stage 2: 2012 - 2020

- Provide transit advantage for southbound buses traveling to TH 77 from the South Loop District. Currently, buses experience delays from Killebrew Drive to southbound TH 77 in the afternoon peak hours.

Further analysis and coordination with the City of Bloomington, MVTA, and the Metropolitan Council, at a minimum, are needed to identify how best to improve transit travel times for buses entering and exiting the South Loop District to southbound TH 77. Consideration should be given to rerouting of buses via Old Shakopee Road (Hennepin County Highway 1). Providing transit advantages along Old Shakopee Road may provide a significant travel time savings at lower cost than providing a transit advantage on the on ramp from Killebrew Drive to TH 77.

Stage 3: 2020 - 2030

- Long-term, center-running transitway is no longer recommended for the long-term because of the high capital cost associated with its implementation; and its potential to limit Mn/DOT's ability to provide additional capacity to TH 77 as recommended in its pending *TH 77 Managed*

Lane Study. In addition, center-running operations would require additional weaving of transit vehicles to serve on-line stations and return to bus-only shoulders. Instead, a more cost-effective means of enhancing travel time savings and reliability would be to provide direct access between stations (e.g. Cedar Grove and Cliff Road) and TH 77.

- Connecting Cedar Grove Transit to the Transitway is a priority of MVTA and the City of Eagan and is envisioned through providing a pedestrian connection the platforms on the Transitway. To provide greater information and analysis of this can be accomplished, funding for an access design project has been identified in Stage 1.
- Long-term, buses would use existing shoulders on Cedar Avenue between 181st Street and 215th Street. These shoulders were constructed accommodate buses.

5.2 Stations and Park-and Ride Facilities

Stations are where riders board and alight the transit vehicles. They also provide a connection between the Transitway and the surrounding community. Some stations along the corridor are designed to be walk-up stations – stations that have no park-and-ride facilities like those envisioned at 140th Street, 147th Street, 161st Street, Glacier Way and 195th Street. Walk-up stations would be designed to protect transit patrons from the weather, include customer information systems and ticket vending machines. Walk-up stations will be conservatively sized and designed to balance the needs of transitway ridership projections, safe roadway operations and adjacent land use and development impacts. These walk-up stations will be designed and constructed to be easily expanded as ridership demand grows.

Some stations, like the Cedar Grove Station, the Apple Valley Transit Station and the Lakeville Cedar station will have park-and-ride facilities that could accommodate local, commuter express and station-to-station service park and ride demands. With such flexibility, the Transitway can add capacity as transit demand grows over time for transit services without making large initial investments. The 2010 IPU recommends that when locating and sizing transit stations that ridership, service levels, roadway impacts, bike and pedestrian connectivity as well as development potential be considered.

- This Implementation Plan Update reaffirms location and function of stations identified in the Alternatives Analysis, i.e. at Mall of America, Cedar Grove, Cliff Road, 140th Street, 147th Street, 181st Street (Lakeville Cedar), 195th Street, and 215th Street.
- New station locations resulting from the 2010 IPU include 28th Avenue Park-and-Ride in Bloomington and 161st/162nd Street and Glacier Way in Lakeville.

Figure 5-1
Apple Valley Transit Station



- Provide pedestrian bridges at locations such as Cedar Grove, 140th Street, 147th Street and Lakeville Cedar as warranted by ridership, safety and operations.

Stage 1: 2009 - 2012

- Cedar Grove, Apple Valley, and Lakeville Cedar Transit Stations have been constructed. These stations have park-and-ride facilities.
- Construct walk-up stations at 140th Street, 147th Street, and Apple Valley Transit Station improvements for 2012 ridership projections and allow for expansion capability as ridership grows.
- Park-and-ride facilities were constructed at Cedar Grove, Apple Valley, and Lakeville Cedar Transit Stations. Figure 5-2 shows the existing park-and-ride at the Apple Valley Transit Station.
- This updated analysis confirms the need for more detailed analysis regarding how to provide additional park-and-ride capacity in northern Apple Valley, i.e. limited expansion capability at the Palomino Hills facility, vis-à-vis traffic and access constraints at a potential site in the northwest quadrant of 140th Street/Cedar Avenue.

Stage 2: 2012 - 2020

- Construct 161st and Glacier Way Station as a walk-up station and construct Lakeville Cedar Improvements.
- Construct park-and-ride facilities in northern Apple Valley as recommended by the *Apple Valley Park-and-Ride Siting Project*.
- Add a pedestrian skyway connection and additional capacity to the 140th Street station as warranted by ridership and service demand.

Stage 3: 2020 - 2030

- Construct walk-up stations at Cliff Road in Eagan and 195th Street in Lakeville.
- Construct park-and-ride station at 215th Street in Lakeville.
- Add pedestrian skyways at Cedar Grove, 147th Street, and Lakeville Cedar Transit Stations, as warranted.
- Expand park-and-ride facilities at Cedar Grove and Lakeville Cedar Transit Stations.
- Eagan: Add 550 spaces at Cedar Grove Transit Station.
- Lakeville: Add 200 spaces at Lakeville Cedar Station; construct park and ride spaces at 215th Street Station.

5.3 Transit Fleet

The Transitway fleet will consist of vehicles that are designed to serve station-to-station, commuter express and local markets. Typically, commuter express vehicles are designed to provide comfort to those passengers that are travelling longer distances and higher speeds, such as downtown Minneapolis or downtown St. Paul. The vehicles typically have more comfortable seats and provide such amenities of overhead lighting and headrests. Local vehicles are designed to move transit patrons typically from neighborhoods to local attractions such as employment and educational centers and community services. These vehicles can vary in size from small mini-buses to 40 foot city vehicles. Station-to-station vehicles are designed for fast and frequent boarding and alighting such as light rail like seats, wider aisles and area that are designed for standing for short trips.



Figure 5-3
On-Board Bicycle Racks
Swift BRT, Snohomish County, WA

Based on feedback from stakeholders and the public, station-to-station vehicles are recommended to have the following features:

- Streamlined, rail-like and aerodynamic in appearance to allow passengers waiting at a station to easily recognize the bus and distinguish it from other buses operating within the Transitway.
- On-board fare collection to offer greater flexibility for route planning and use of vehicles along various routes.
- Off-board fare collection systems to decrease station dwell times and shorten passenger in-vehicle travel time.
- Multiple doors to facilitate boarding and alighting and reduce station dwell times.
- On-board bicycle racks to decrease boarding and alighting time and reduce station dwell times; could allow buses to accommodate more than two bicycles at a time as compared to racks installed on the front of the bus. Figure 3-3 shows the on-board bicycle rack used on *Swift* BRT.
- Compliant with Americans with Disability Act (ADA), for compliance with federal law.
- Compliant with Buy America Requirements, for purposes of federal and state funding requirements.
- Environmentally-friendly propulsion, for cleaner air emissions and quieter buses.

- Low-floor, to facilitate boarding and alighting.

The region's transitway guidelines will provide guidance on procuring station-to-station vehicles for the Transitway. These guidelines will be referenced as project sponsors address vehicle design and procure transitway vehicles.

Implementation of the Transitway will require MVTa to expand its fleet of express and local buses in addition to adding station-to-station vehicles to the fleet. Table 5-1 shows how the fleet will increase by Stage.

Stage 1: 2009 - 2012

- Ten 40-foot buses for station-to-station service
- Four additional commuter express buses
- Four additional local/feeder buses.

Stage 2: 2012 - 2020

- Seven additional express buses (seven new plus four shifted from local service due to recommended changes in local/feeder network the total increase in buses used for express service is 11).
- Twenty-six Local/feeder buses (13 new and 13 replacement)

Stage 3: 2020 - 2030

- Eleven 60-foot buses for station-to-station service (as required by ridership and scheduled vehicle replacement)
- Twenty-four express buses (nine new and 14 replacement, plus three shifted from local service)
- Fifty-eight additional local/feeder buses (16 additional and 42 replacement)

**Table 5-1
Cedar Avenue Transitway Fleet Requirements^{7, 8}**

Service and vehicle type	Existing	Stage 1		Stage 2		Stage 3		Total
		Total	Increase from Existing	Total	Increase from Stage 1	Total	Increase from Stage 2	Increase from Existing
Station-to-station vehicles	0	10	10	10	0	11	1	11
Commuter express (Standard)	51	55	4	65	11	77	12	27
Local	16	20	4	29	9	42	13	26
Standard	12	16	4	12	-4	9	-3	-3
Cutaway	4	4	0	17	13	33	16	29
Total	67	84	17	104	20	130	26	64

5.4 Vehicle Storage and Maintenance Facility

As the size of the transitway fleet increases, there is also the need to increase capabilities to store and maintain vehicles. The 2010 IPU identifies the following storage and maintenance facilities for the following development stages:

Stage 1: 2009 - 2012

- MVTA will use its planned expansion and existing storage and maintenance facilities in Eagan to accommodate the increase in the vehicle fleet during Stage 1.

Stage 2: 2012 - 2020

- MVTA is planning to expand the Eagan Bus Garage to accommodate fleet increases associated with station-to-station, express, and local service for Stage 2.

Stage 3: 2020 - 2030

- In the long-term, the 2010 IPU recommends a project to develop and analyze alternatives for to expand MVTA's system-wide capabilities for vehicle storage and maintenance and not just due to fleet expansion associated with the Cedar Avenue Transitway or station-to-station service.

5.5 Vehicle Layover Facilities

Layover facilities provide increased schedule reliability and quality of transit service, by minimizing the impact of congestion and other delays on transit service. Layover facilities are typically located near

⁷ In Stages 2 and 3, the number of standard buses needed for local service decreases from the previous Stage. It was assumed that these buses will be used to off-set the need to purchase additional express buses, since MVTA provides express service in the Transitway with standard buses.

⁸ The table above only includes increases in the MVTA fleet; all buses in the MVTA fleet will need to be replaced when they reach the end of their useful life, 12-years for station-to-station vehicles and standard buses, 5-years for cutaway buses.

larger transit facilities as to minimize travel transit time from one location to another. Some layover facilities also provide break facilities for bus drivers.

An overall recommendation is to coordinate Transitway layover needs with Metro Transit's 2010 *Downtown Minneapolis Layover Study*, ensuring adequate layover facilities are available in downtown Minneapolis will require continual coordination between MVTA and Metro Transit.

Stage 1: 2009 - 2012

- Provide layover capability in Apple Valley near the Apple Valley Transit Station, as recommended in the forthcoming 2010 Apple Valley Layover Siting Project.
- Provide layover capability in the vicinity of 28th Avenue/Mall of America/ South Loop District for three buses.

Stage 2: 2012 - 2020

- The forthcoming *2010 Apple Valley Layover Siting Project* will provide more detail regarding any additional needs for layover facilities in the Transitway.

Stage 3: 2020 - 2030

- The 2030 conceptual service plan proposed in the 2010 IPU would require an additional layover space in Apple Valley or in Lakeville to maintain schedule reliably.

5.6 Technology

Use of technology in the Transitway will improve service reliability and the passenger experience with the Transitway, resulting in increased ridership. Technology will be implemented in the Transitway as stations are constructed, vehicles are acquired, and the runningway is constructed and/or extended.

- Implement comparable, consistent and uniform on- and off-board fare collection used on the Hiawatha light rail and Northstar commuter rail and is anticipated for Central and Southwest Transitways.
- Provide customer information/real-time signs at stations, similar to those at the Mall of America Transit Center and Marquette and Second Avenues in downtown Minneapolis.
- Install Driver Assist System to facilitate buses to stay within the runningway on Cedar Avenue between 138th and 181st Streets and deploy along the Transitway as needed.
- Implement Transit Signal Priority to minimize delays to buses at signalized intersections along Cedar Avenue south of 138th Street. The use of transit signal priority will be explored for as a way to reduce transit travel time to/from Cedar Grove Transit Station and TH 77.

5.7 Pedestrian and Bicycle Facilities

As all transit patrons are a pedestrian at one end or another of their trip, providing safe environment for transit patrons to walk to facilities adjacent to the new bus shoulder lanes and busy highway is a necessity. Further, appropriate pedestrian and bicycle facilities improves the passenger experience and tends to result in additional ridership. Improving the pedestrian environment along the Transitway is important because it allows transit riders to complete the final portion of the trip via pedestrian movements comfortably and encourage more walking and biking within the Transitway. Similar to technology enhancements, transitway enhancements will be implemented as the stations are constructed and the runningway is constructed and/or extended.

- Additional streetscaping will thematic unity along pedestrians and bicyclists by creating a comfortable buffer from roadway traffic. Figure 5-4 is a sketch of provides a concept of what pedestrian facilities could look like in Apple Valley.
- Public art is encouraged, but not mandated, and can be achieved through the use of construction materials and elements with function.
- Identify opportunities to partner with businesses, arts organizations and other stakeholders along the Transitway and implement public art.

Figure 5-4
Potential Pedestrian Improvements



5.8 Transit Service Modeling Results

Service planning in the Transitway was conducted using the Metropolitan Council's regional transportation model. The results of the modeling effort has provided a framework for developing conceptual service plans that meet projected ridership demands. As with any transit service planning process, additional analysis is needed to develop detailed service and operating plans for the Transitway. In addition, service and operating plans need to be conducted in consultation with communities and residents that may be impacted. The 2010 IPU modeling activities is based on the latest socio-economic data available from the Metropolitan Council, and that actual transit service introduced in 2012 and beyond will be dependent upon many factors including but not limited to:

- Service planning updates performed by the service provider;
- Actual ridership data; and
- Available transit capital and operating funding.

For planning purposes, the 2010 IPU is recommending the following service plans are used as a starting point for developing more detailed service plans:

Stage 1: 2009 - 2012

- Moving forward, the 2010 IPU suggests making minor changes to commuter express and local/feeder 2010 existing service that primarily eliminate redundancy due to the introduction of station-to-station service in 2012. The 2010 IPU recommends no reductions in existing commuter express services with the initiation of station-to-station service in 2012. However, the 2010 IPU recognizes the need for the development of more detailed service and operating services plans to be developed by the transit provider that address existing and future service level issues for communities. In addition, any proposed service changes must be conducted in consultation with stakeholders and the public.
- In 2012, station-to-station service is proposed as follows:
 - From Lakeville to the Mall of America/South Loop District: Every 20 minutes in the peak and every 30 minutes in the off-peak
 - From Apple Valley to the Mall of America/South Loop District: Every 10 minutes in the peak and every 15 minutes in the off-peak.
 - More detailed service plans will need to be developed in consultation with stakeholders and the public prior to implementation of station-to-station service.

Stage 2: 2012 - 2020

- Continue to expand commuter express and local service to meet ridership demand.
- Investigate the option of offering hybrid station-to-station and express service to some stations and destinations along the Transitway.
- Increase frequency of station-to-station service as warranted by ridership to provided as follows:
 - From Lakeville to the South Loop District: Every 20 minutes all day
 - From Apple Valley to the South Loop District: Every 10 minutes all day.

Stage 3: 2020 - 2030

- Provide direct express service to downtown Minneapolis from all park-and-rides in the Transitway
- Expand the local feeder network to access more neighborhoods, business districts and local attractions
- In 2030, station-to-station service is recommend as follows:

- From Lakeville to the Mall of America/South Loop District: Every 20 minutes all day
- From Apple Valley to the Mall of America/South Loop District: Every 10 minutes all day.

5.9 Other Recommendations

The following recommendations have regional implications that need to be addressed within a larger context than the Cedar Avenue Transitway. The *Regional Transitways Group* is anticipated to address these additional topics.

- Improvements to the Mall of America/South Loop District
 - Expansion of the Mall of America Transit Center: The Mall of American Transit Center is the focus of significant transit services and infrastructure in the Twin Cities that include the Hiawatha light rail line, and Metro Transit and MVTA services today. In the future, additional development in the area and growth in the Twin Cities’ transit network would add demand at the facility. The facility also has virtually no expansion capability to accommodate long-term growth. Also, existing security procedures to enter the facility as required by the Mall of America (a private entity) add to transit travel times, which impact the attractiveness of using transit. A comprehensive analysis of the South Loop District that involves stakeholders such as transit providers, Metropolitan Council, and the City of Bloomington (at a minimum) should examine these needs in detail to determine the long-term plan for the area.
 - American Boulevard/I-494, Chicago Avenue and Seventh Street BRT Corridors: The Metropolitan Council’s *2030 Transit Policy Plan* identifies these three arterial BRT lines connecting to the Cedar Avenue Transitway. Required services and infrastructure to provide or facilitate these connections are regional in nature and should be addressed as such.
 - The City of Bloomington estimates an additional 15 million square feet of development will on in the South Loop District over the next 40 years⁹. The anticipated development will only increase the traffic related delays MVTA buses experience exiting the South Loop District to TH 77. As part of the *South Loop Project*, it will be important to identify a long-term solution to reduce transit travel times from the South Loop District to TH 77.

An option that should be considered in could providing a transit advantages on the Killebrew Boulevard to southbound TH 77 ramp and along Old Shakopee Road to TH 77. When considering the routing of buses along Old Shakopee Road consideration should be given to, a station located at the intersection of 86th Street and Old Shakopee Road.

- Maintenance facility for other station-to-station service such as I-35W: Depending on the station-to-station vehicle that is selected and whether a regional BRT fleet is decided upon,

⁹ City of Bloomington, 2010. South Loop (formerly Airport South) District Energy. Available: <http://www.ci.bloomington.mn.us/cityhall/dept/commdev/planning/longrang/southloop/distrenergy.htm>

there might be economies of scale associated with sharing common maintenance facilities for station-to-station fleet. With BRT service envisioned not just on Cedar Avenue, but I-35W, I-494/American Boulevard, Chicago Avenue and Seventh Street as well, this issue warrants further discussion.

- Branding for other station-to-station service such as I-35W, I-494/American Boulevard, Chicago Avenue, and Seventh Street should be consistent and easily recognizable as BRT. Branding for BRT services is key to their success and should be given careful consideration during implementation.

6. CEDAR AVENUE TRANSITWAY FUNDING PLAN

The Cedar Avenue Transitway, like most major capital transit investments, has been and will continue to be funded through a combination of local, state, and federal funds. For planning purposes, major transit capital projects in the Twin Cities region are assumed to be funded in one of two ways, with varying combinations of federal and non-federal sources such as the State of Minnesota, CTIB and other local sources such as municipal funds. The first method employs the FTA's Section 5309 (New Starts) funds, with the typical funding ratios:

- 50 percent FTA Section 5309
- 30 percent CTIB
- 10 percent State of Minnesota
- 10 percent other local.

As an example, the Central Corridor Light Rail Transit Project is partially funded by the FTA's New Starts program. The project is currently in preliminary engineering. Depending on the size and scope of a project, the New Starts project development process has rigorous requirements, entails extensive environmental documentation, and is an extremely competitive process. This typical funding formula will be pursued for Stages 2 and 3.

The second approach is a non-New Starts approach. The Cedar Avenue Transitway AA determined that the project would not enter the New Starts program. For projects such as Stage 1 of the Cedar Avenue Transitway – i.e. non-New Starts. Through this approach, a broader array of federal, state, and regional funds are pursued resulting in less rigid funding ratios:

- 60 percent or more federal, state and regional
- Up to 30 percent CTIB
- 10 percent local.

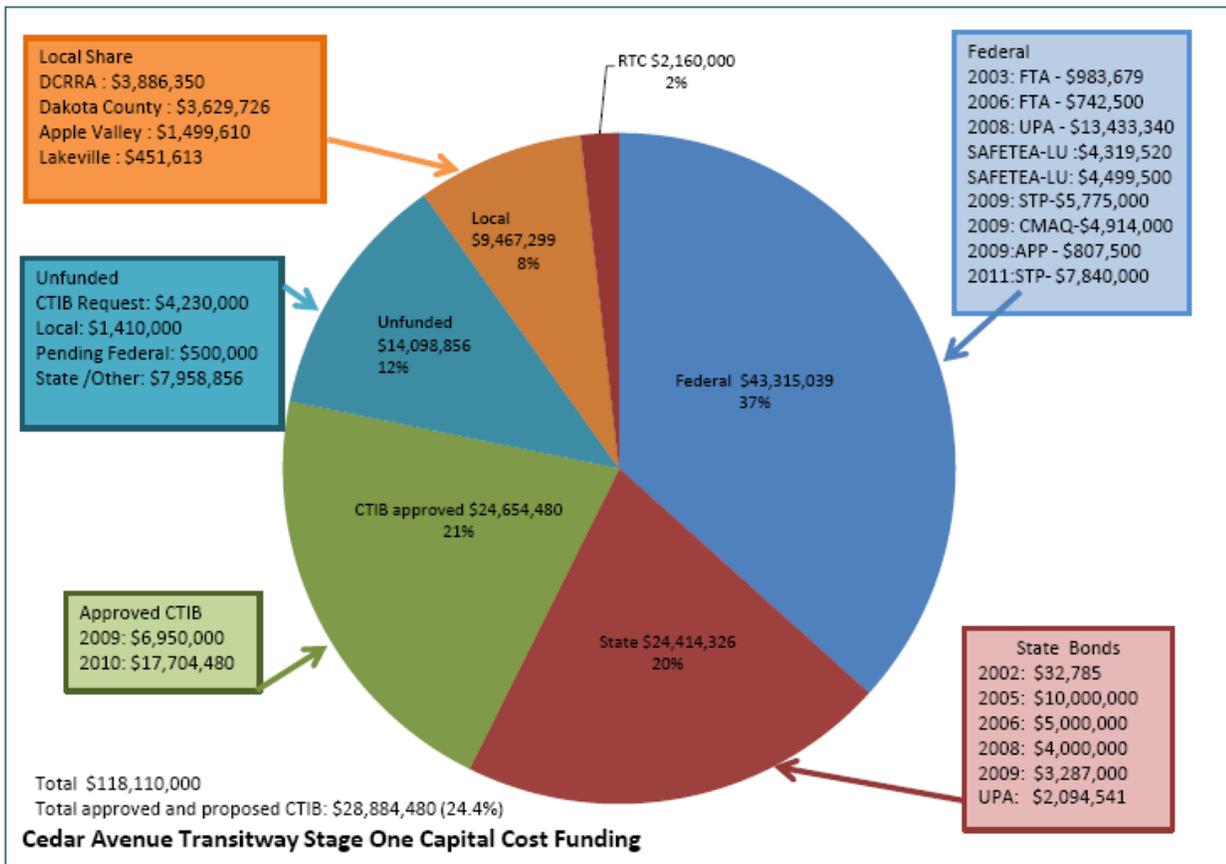
6.1 Funding To-Date

Approximately \$104 million have been secured for the capital development of the Cedar Avenue Transitway. These funds have come from five sources: federal, state, Regional Transit Capital (formerly the Twin Cities regional transit taxing district), CTIB, and local sources such as Dakota County, Dakota County Regional Railroad Authority, and Transitway communities. Table 6-1 presents the funding secured for the project to-date.

**Table 6-1
Capital Funding Secured for the Cedar Avenue Transitway¹⁰**

	Federal	State	CTIB	DCRRA Dakota County Cities	Regional Transit Capital	Total
Funding Secured (\$ millions)	\$43.32	\$ 24.41	\$24.65	\$9.47	\$2.16	\$104.01

Figure 6-1
Capital Funding Secured for the Cedar Avenue Transitway



¹⁰ Dakota County presentation to the CTIB on May 19, 2010.

Federal

Through various federal programs, the Transitway has secured approximately \$45 million. This includes a CMAQ grant used to purchase vehicles. UPA funds were used for station development, including Cedar Grove, Apple Valley, and Lakeville Cedar. UPA funds were also used to fund a portion of the DAS Technology that is being installed on buses operating in the Transitway. Federal Highway Administration (FHWA) funds were used to fund a portion of preliminary engineering and the environmental assessment for the runningway. FHWA funds will also be used to fund a portion of the construction of the bus-only shoulders to Cedar Avenue.

State

The Transitway has used and will continue to use the State of Minnesota bonding authority to fund portions of the capital costs of the Transitway. State bonds have been used to fund right-of-way acquisition, final design of the runningway, a portion of preliminary engineering and the environmental assessment for the runningway, and station development for the Cedar Grove, Apple Valley, and Lakeville Cedar Transit Stations. State bonds were used to provide off-board fare collection and real time information signs at the Mall of America Transit Center. In addition, property tax supported regional transit capital (RTC) bonds have been used to fund capital elements of the Transitway.

As of this writing, the State legislature has approved the use of approximately \$25 million in State bonding for the Transitway. However, use of additional State bonding funds does require the approval of both the Legislature and Governor, on a biannual basis. The continued use of State bonds will depend on bi-annual Legislative and Gubernatorial approval.

Counties Transit Improvement Board (CTIB)

In 2008, a 0.25 percent sale tax and a \$20 excise tax on vehicles sold at retail dedicated to Transitway development/operations were passed by five counties in the Twin Cities region, including Dakota County. The revenues from this tax are managed by the CTIB. The sales tax and vehicle excise tax create a dedicated source for transit funding in the Twin Cities region. CTIB is made up of representatives from five metro counties and the Chair of the Metropolitan Council. CTIB funding provides up to 30% of project funding for eligible transitway elements. To receive CTIB funding, CTIB requires a 10 percent local match for all capital grants. The remaining 60% funds will require a mix of federal, state, regional and local funds.

CTIB funds were used to fund a portion of the Apple Valley Transit Station. CTIB funds will be used to fund a portion of the runningway improvement in the Transitway and are planned to be used to fund 30 percent of all other capital costs associated with implementation of the Transitway.

In addition to capital funding, CTIB can provide up to 50 percent of annual operating and maintenance costs for station-to-station and BRT express service. Based on the recommended service plan for 2012, this funding is estimated at \$1.77 million annually, in 2009 dollars.

Local: Dakota County Regional Railroad Authority

In 1987, the Dakota County Regional Railroad Authority (DCRRA) was created with broad authority to oversee the development and implementation of BRT in Dakota County. The DCRRA has the authority to levy up to 0.04835 percent of the market value of all taxable property situated within Dakota County (Minnesota Statutes, Chapter 398A.04(8)).

DCRRA provided a portion of the funding for the Apple Valley Transit Station and will provide a portion of the funds for the development of runningway along Cedar Avenue. DCRRA will be a source of the 10 percent local match for all CTIB funds used for the implementation of the Transitway.

Local: Cities

The Cities of Apple Valley and Lakeville provided funding for a portion of the runningway improvements within their respective cities for Stage 1 development. In the future, city participation of local funding elements may be required to complete elements of the Transitway.

7. STAGING PLAN

Findings and recommendations on conceptual service planning, ridership, and capital needs have led to the development of the staging plan defined in this document. Capital and operating and maintenance costs accompany the elements under each project implementation stage. Note that there is a difference in costs identified in the 2009 Implementation Plan Update relative to the 2005 Plan, as the latter did not include estimates for the following major elements:

- Buses (fleet)
- Fleet storage and maintenance
- Technology – Customer information, transitway, fare collection
- Maintenance and layover facilities
- Transitway enhancements
- Ridership specific to route and station
- Adjustments for growth in the system
- Environmental documentation
- Enhancements such as public art, service marketing and branding
- Project management and oversight
- Periodic plan refinements

This staging plan was developed using results of technical analysis, vetted through the Technical Advisory Committee, Project Management Team, Cedar Group and the Dakota County Regional Railroad Authority. The staging plan encompasses three time periods, similar to the 2005 Implementation Plan. Stage 1 encompasses the time 2009 through 2012, when station-to-station service is envisioned to begin. Stage 2 is the period between 2012 and 2020, while Stage 3 represents the long-term plan, from 2020 to 2030. There are many variables that can impact the ultimate implementation and either advance or delay Transitway elements, they include:

- Capital and operating funding
- Ridership demand
- Increased transportation costs (e.g. gas, parking)
- Development.

Thus, this staging plan includes periodic updates. Following is a summary of the elements of each stage in the plan.

7.1 Stage 1: 2009 - 2012

Stage 1 is preparing for the introduction of station-to-station service. It represents the most visible transformation of the Cedar Avenue into a Transitway. Stage 1 includes the introduction of runningway on the shoulders of Cedar Avenue from 138th to 181st Street, as well as, the construction of transit stations and park-and-ride facilities. Transit riders will also notice the benefits provided through transit technology.

Many of the elements in Stage 1 are under design or have been constructed as part of the UPA improvements. Express and local transit riders are benefiting from the early implementation of these elements. Table 5-1 presents the elements included in Stage 1.

Table 7-1: Summary of Stage 1 Elements

Element	Description	Cost in 2009 dollars	Funding Secured
Runningway	Bus-only shoulders along Cedar Avenue between 138 th and 181 st Streets	\$57.28 million	\$57.28 million
Stations	Cedar Grove Transit Station – Opened in March 2010; with 164 park-and-ride spaces and passenger waiting facility	2.63 million	2.63 million
	Apple Valley Transit Station – Opened in January 2010; with 750-space parking garage; temperature-controlled passenger waiting areas and pedestrian bridge over Cedar Avenue.	21.48 million	21.48 million
	Lakeville Cedar Station – Opened in September 2009; with 190-space park-and-ride	2.29 million	2.29 million
	140 th Street Station – Walk-up station with anticipated boardings of 250 to 1,410 per day, depending on whether a park-and-ride is associated with the station.	3.50 million	3.50 million
	147 th Street Station – Walk-up station with anticipated boardings of 450 to 700 per day.	3.50 million	3.50 million
	Apple Valley Transit Station Expansion and Platform Improvements	1.40 million	1.4 million
	28 th Avenue Station – Improvements at this station include a bus pull-off for station-to-station service, sidewalk reconstruction, shelter upgrade, and real-time signs.	0.20 million	0.20 million
Buses	Station-to-station: 10-40' buses	7.35 million	2.94 million
	Commuter Express: 4 30'-40' buses	1.42 million	1.26 million
Vehicle Storage and Maintenance /Layover	Layover facility allowance	1.55 million	-
	Storage and maintenance allowance: Station-to-station Express	3.00 million 0.90 million	- -
Technology	Off-board fare collection, customer information system, real-time signs, Driver Assist, and Transit Signal Priority	9.05 million	6.73 million
Project Development/ Administration	Includes this Implementation Plan Update, project administration for construction of stations and runningway between 138 th and 181 st Streets; various projects such as Apple Valley Layover and Lakeville Station Siting; Environmental Assessment for station-to-station service; etc.	2.25 million	2.25 million
Stage 1 Transitway Capital Total		\$117.80 million	\$104.10 million -
Stage 1 Transitway Annual Operating and Maintenance Costs	Incremental cost in 2012, by type of service:		
	Station-to-station	2.90 million	-
	Express	0.46 million	-
	Additional BRT facilities	0.17 million	-
Stage 1 Transitway Annual Operating and Maintenance Cost Total		3.53 million	
Local Feeder Costs			
Buses	Local feeder: 4-40' buses	1.89 million	-

Element	Description	Cost in 2009 dollars	Funding Secured
Vehicle Storage / Maintenance / Layover		1.20 million	-
Stage 1 Local Feeder Capital Cost Total		3.09 million	-
Stage1 Local Feeder Annual Operating and Maintenance Cost		0.27 million	-

Of the total capital needs in Stage 1, approximately \$ 104 million is already funded, yielding \$14 million gap that require additional funding. The \$7.46 million in project development/administration are fully funded. The O&M cost for additional transit service do not have identified funding. Although, 50 percent of the increased O&M costs associated with station-to-station and express service is eligible for operating funds through CTIB, or 1.77 million in 2012.

One of the priorities that this study was tasked to confirm was the need for a station at 140th Street and 147th Street. The ridership forecasts for 2012 and 2030 indicate that there is indeed a need for stations at these two locations. In the short- and mid-term, the range of boardings at the 140th Street Station is from 250 to 1,400 per day, depending on whether the station remains a walk-up station or it includes a park-and-ride facility. Similarly, the range of boardings at 147th Street Station is from 450 to 700 per day – a narrower range than 140th Street Station because there is no other scenario for a station here but a walk-up.

7.2 Stage 2: 2012- 2020

During Stage 2 the Transitway will be augmented through introduction of additional service and facilities. Stage 2 will guide the Transitway through early years of operation and will expand Transitway facilities, towards the ultimate 2030 vision for the Transitway. Transit riders will continue to experience the benefits of Transitway, as local and express service is expanded in the Transitway. Table 7-2 summarizes the implementation elements included in Stage 2. Stage 2 is the period between 2012 and 2020. At this juncture, funding for all Stage 2 elements have yet to be identified.

**Table 7-2
Summary of Stage 2 Elements**

Element	Description	Cost in 2009 dollars
Runningway	Transitway improvements between the Mall of America/28 th Avenue stations and southbound TH 77	\$5.20 million
Stations	Apple Valley park-and-ride allowance for 1,400 spaces, pending findings of <i>Northern Apple Valley Park-and-Ride Siting Project</i> .	38.49 million
	140 th Street Station pedestrian bridge	1.72 million
	161 st /162 nd Station	1.4 million
	Glacier Way Station, pending findings of <i>Lakeville Station Siting Project</i>	1.40 million
	Lakeville Cedar Station	1.31 million
Buses	Station-to-station: No increase over Stage 1	--
	Commuter Express: 7 30'-40' buses, in addition to Stage 1 (shift 4 from local)	3.31 million
Vehicle Storage and Maintenance/Layover	Layover facility allowance – No increase over Stage 1	--
	Storage and maintenance allowance: Station-to-station – No increase over Stage 1 Express – Increase of 7 over Stage 1	-- 2.18 million
Technology	Off-board fare collection, customer information system, real-time signs, Driver Assist, and Transit Signal Priority	1.82 million
Project Development/Administration	South Loop Project, Stage 2/3 Planning, and Maintenance Facility Project	0.95 million
Stage 2 Transitway Capital Cost Total	Capital Project Development/Administration	55.83 million 0.95 million
Stage 2 Transitway Annual Operating and Maintenance Cost	Incremental cost in 2020, by type of service: Station-to-station Express Additional BRT Facilities Additional bus garage	3.44 million 1.50 million 0.50 million 0.40 million
Stage 2 Transitway Annual Operating and Maintenance Cost Total		5.84 million
Local Feeder Costs		
Buses	Local Feeder: 26-30' buses (13 additional over Stage 1 and 13 replacement)	4.24 million
Vehicle Storage and Maintenance/Layover	Local Feeder: Increase of 13 over Stage 1	4.06 million
Stage 2 Local Feeder Cost Total		8.3 million
Stage 2 Local Feeder Annual Operating and Maintenance Cost		1.21million

7.3 Stage 3: 2020 - 2030

Stage 3 is the realization of the long-term vision for the Transitway. It includes the extension of the Transitway south from Lakeville Cedar Transit Station to 215th Street Transit Station, as well as the expansion of existing stations with the addition of new stations and park-and-ride facilities. Table 7-3 below summarizes the implementation elements included in Stage 3. Stage 3 is the period between 2020 and 2030. At this juncture, funding for all Stage 3 elements have yet to be identified.

**Table 7-3
Summary of Stage 3 Elements**

Element	Description	Cost in 2009 dollars
Runningway	Pending findings of Mn/DOT's <i>TH 77 Managed Lane Study</i> .	\$--
Stations	Cedar Grove– Add 550 structured spaces to park-and-ride	13.75 million
	Cliff Road– Walk-up station	2.34 million
	147 th Street– Pedestrian bridge allowance	1.72 million
	Lakeville Cedar – Add 200 park-and-ride spaces	2.80 million
	195 th Street – Construct walk-up station as development warrants	1.40 million
	215 th Street – Construct station with park-and-ride facilities	2.99 million
Buses	Station-to-station: 11 articulated buses	13.86 million
	Commuter Express: 9 additional and 14 replacement 30'-40' buses (shift 3 from local)	10.87 million
Vehicle Storage and Maintenance/Layover	Layover facility allowance – Increase of one space over Stages 1 and 2	0.19 million
	Storage and maintenance allowance: Station-to-station – For 1 artic Express – For 9 buses, increment over Stages 1 and 2	0.31 million 2.81 million
Technology	Off-board fare collection, customer information system, real-time signs, Driver Assist, and Transit Signal Priority	2.65 million
Project Development/Administration	Stage 3 Planning, Maintenance Facility Project	0.55 million
Annual Operating and Maintenance Cost	Incremental cost in 2030, by type of service:	
	Station-to-station	4.11 million
	Express	2.80 million
	Additional BRT facilities	0.61 million
	Additional bus garage	0.50 million
Stage 3 Transitway Capital Cost Total	Capital	\$55.69 million
	Project Development/Administration	0.55 million
Stage 3 Transitway Annual Operating and Maintenance Costs	Incremental cost in 2030, by type of service:	
	Station-to-station	4.11 million
	Express	2.80 million
	Additional BRT facilities	0.61 million
	Additional bus garage	0.50 million
Stage 3 Transitway Annual Operating and Maintenance Costs		8.02 million
Local Feeder Costs		
Buses	Local feeder: 16 additional and 42 replacement 30' buses	9.44 million
Vehicle Storage and Maintenance/Layover	Local feeder: For 16 buses, increment over Stage 1 and 2	4.99 million
Stage 3 Local Feeder Capital Cost Total		14.43 million
Stage 3 Local Feeder Annual Operating and Maintenance Cost		2.40 million

7.4 Cedar Avenue Transitway

Cedar Avenue Transitway is being implemented in three Stages. Table 7-4 below presents a summary of costs by Stage for each of the major elements. These costs are comparable to original estimates developed for the 2005 IPU. Table 7-5 presents the cost estimates in 2005 and what those costs would be when adjusted for inflation.

**Table 7-4
Summary of Cedar Avenue Transitway Elements by Stage**

	Costs 2009 (\$ millions)	Funded Portion (\$ millions)
Stage 1: 2009 - 2012 Prepare for Station-Station Service in 2012		
Total Capital	\$ 115.55	\$ 104.10
Runningway	\$ 57.28	\$ 57.28
Stations		
New: Cedar Grove Transit Station, 140th St. Station, 147th St. Station, Apple Valley Transit Station, 161st St. Station, and Lakeville Cedar Transit Station	\$ 35.00	\$ 33.60
Expanded: 28th Avenue Transit Station		
Buses	\$ 8.77	\$ 4.20
Vehicle Storage Maintenance and Layover	\$ 5.45	\$ -
Technology	\$ 9.05	\$ 6.73
Project Development/Administration	\$ 2.25	\$ 2.25
Annual Transitway Incremental Operating & Maintenance Cost	\$ 3.53	\$ -
Stage 2: 2012 - 2020 Augment Stage 1 Service and Facilities		
Total Transitway Capital	\$ 55.83	\$ -
Runningway	\$ 5.20	\$ -
Stations		
New: 161 st /162 nd , Glacier Way Stations and Lakeville Cedar Improvements	\$ 43.32	\$ -
Additional 1,400 park-and-ride spaces in Apple Valley location pending <i>Apple Valley Station Siting Project</i> . Expand 140th St. Station		
Buses	\$ 3.31	\$ -
Vehicle Storage Maintenance and Layover	\$ 2.18	\$ -
Technology	\$ 1.82	\$ -
Project Development/Administration	\$ 0.95	\$ -
Annual Transitway Incremental Operating & Maintenance Cost	\$ 5.84	\$ -
Stage 3: 2020 - 2030 Expand and Improve Station-Station Service, Facilities and Fleet		
Total Transitway Capital	\$ 55.69	\$ -
Runningway	\$ -	\$ -
Stations		
New: Cliff Rd. Station, 195th St. Station, 215th St. Transit Station	\$ 25.00	\$ -
Expanded: Cedar Grove Transit Station, 147th St. Station, Lakeville Cedar Transit Station		
Buses	\$ 24.73	\$ -
Vehicle Storage Maintenance and Layover	\$ 3.31	\$ -
Technology	\$ 2.65	\$ -
Project Development/Administration	\$ 0.55	\$ -
Annual Transitway Incremental Operating & Maintenance Cost	\$ 8.02	\$ -

8. Completion of Stage 1 Capital Improvements and Implementation of Next Steps

Station-to-station service is scheduled to begin revenue operations in late 2012 from Lakeville to Apple Valley, Eagan, and the Mall of America/South Loop District in Bloomington. To this end, the following work plan for the period between 2010 and 2012 has been developed:

- *Environmental Assessment* – MVTA is leading the Environmental Assessment activities that documents the impacts of station-to-station service and construction of additional stations along the Transitway. The EA must be completed prior to the construction of any new stations, ordering of vehicles and the beginning station-to-station service. It is anticipated that the EA will be completed by early 2011.
- *Cedar Avenue Bus Shoulder Lane Construction* – Dakota County will reconstruct Cedar Avenue from 138th Street in Apple Valley to 181st Street in Lakeville to include bus shoulder lanes. This project also includes construction of pedestrian enhancements and streetscaping. It is anticipated that bus shoulder lanes will be constructed by fall of 2012.
- *Apple Valley Layover Siting Project*– MVTA is conducting a project examining the possibility of layover facility near the Apple Valley Transit Station. It is anticipated the project will be completed by winter 2010. MVTA will also lead the design and construction of the layover facility.
- *Apple Valley Park-and-Ride Siting Project* – Additional analysis is needed for the siting of an additional 1,400 park-and-ride spaces in Apple Valley. It is anticipated this study will commence in spring of 2011.
- *Lakeville Station Siting Project* – DCRRA will identify the location of stations in Lakeville. The Project will consider station access and pedestrian crossing issues. It is anticipated this project will be completed by early 2011.
- *Station Design and Construction* – The transit provider will lead the design and construction of 140th, 147th, 161st stations. In addition, the transit provider will work with Met Council and Metro Transit in implementing the improvements for the 28th Avenue park and ride in Bloomington as well implementing any technology improvements at existing stations.
- *Transit Signal Priority* - Dakota County will study, determine the appropriate technology and implement a transit signal priority along CR 23 from Apple Valley to Lakeville.
- *Vehicle Procurement* – The transit provider will lead vehicle procurement activities. The following additional buses required to provide service in the Transitway:
 - Station-to-station: 10 buses
 - Commuter Express: 4 buses

- Local: 4 buses.
- *Construction of Vehicle Storage and Maintenance Facility Expansion*-MVTA will lead the design and construction of expanded maintenance and storage facilities as its Eagan Bus Garage to accommodate the bus rapid transit fleet requirements.
- *Cedar Grove Transit Station Access Project* – DCRRA, MVTA, City of Eagan, Mn/DOT, Metropolitan Council, and Metro Transit will develop a plan to decrease transit travel time to/from TH 77 and the Cedar Grove Transit Station for both the short and long-term. The purpose of this project is to identify opportunities that could lead to connectivity between the roadway and the Cedar Grove park and ride facility in earlier development stages. The results of this project will be incorporated in future implementation plans. A project leader has not been identified at this time for the leading the access project.
- *Mall of America/South Loop District Transit Plan* – Metropolitan Council, Metro Transit, MVTA, City of Bloomington, DCRRA, and Mn/DOT will develop a coordinated plan to address the future transit needs of the South Loop District. The plan will address the expansion of the MOA Transit Center, layover facility needs, transit advantages to/from TH 77, and accommodation for future arterial BRT lines in the Mall of America/South Loop District.



**APPENDIX 1: Summary of Comments Received and Staff Responses on
the Draft 2010 Implementation Plan Update**



APPENDIX 2: Comments Received on the Draft 2010 Implementation Plan Update