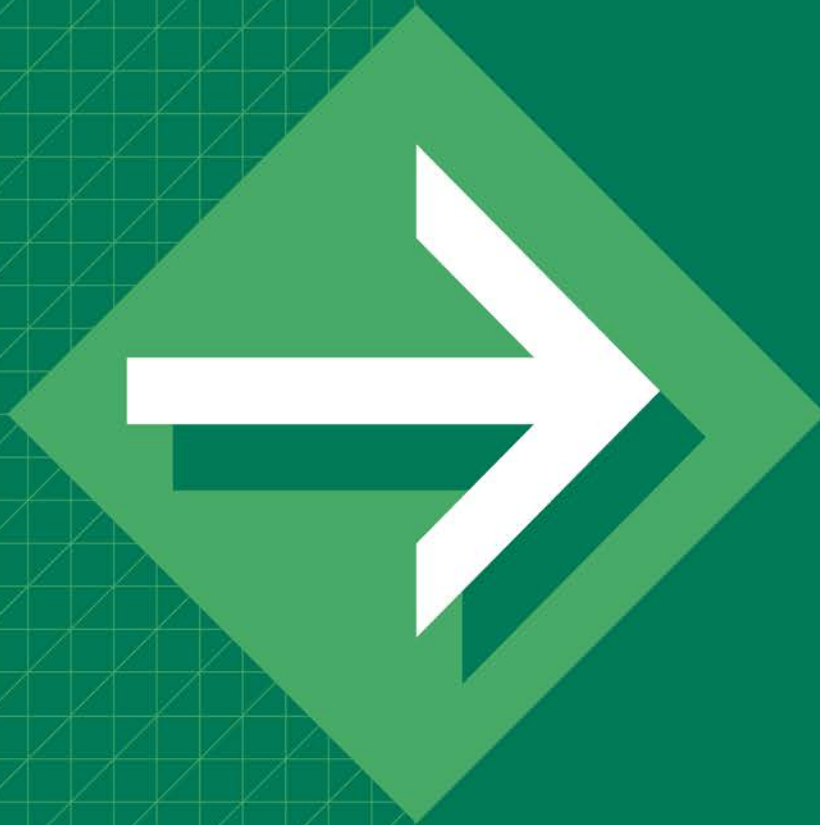


# Transit Capital Improvement Plan

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# Contents

- Capital Improvement Plan..... 1
- Asset Inventory and Condition Assessment..... 1
  - Existing Capital Assets..... 1
  - Existing Capital Asset Replacement Needs..... 2
  - Future Capital Assets Needed to Accommodate Future Service Levels..... 2
    - Current Funding Scenario..... 2
    - New Service Expansion Scenario..... 3
    - Illustrative Funding Scenario ..... 3
- Transit Center Evaluation..... 4
  - Goals, Objectives, and Design Guidelines for the Transit Centers ..... 4
  - Potential Transit Center Areas..... 6
    - River Hills Mall Area ..... 6
    - City Center Area (Existing) ..... 7
    - Minnesota State University-Mankato (Existing) ..... 7
- Transit Center Design Considerations ..... 7
  - Introduction..... 7
  - Transit Center Design ..... 8
  - Park-and-Ride Considerations ..... 8
  - Aesthetic Treatments..... 8
  - Wayfinding and Signage..... 9
  - Multimodal Connections ..... 9
  - Maintenance ..... 9

# List of Figures

- ▶ Figure 1: Replacement value of GMTS capital assets (2018 dollars) ..... 1
- ▶ Figure 2: Current funding scenario asset replacement expenditures by year, separated by asset category..... 2
- ▶ Figure 3: New Service Expansion funding scenario asset replacement expenditures by year, separated by asset category..... 3
- ▶ Figure 4: Illustrative funding scenario asset replacement expenditures by year, separated by asset category..... 4
- ▶ Figure 5: The TDP development process identified three primary transit center areas ..... 6

# List of Tables

- ▶ Table 1: Assets in backlog by category ..... 2
- ▶ Table 2: Performance-based decision-making criteria for potential transit center locations ..... 5



## Capital Improvement Plan

Capital improvements are needed to continue supporting the Greater Mankato Transit System (GMTS) in offering a quality, reliable service to its customers. The GMTS is facing a bus shortage and has an interest in growing its other capital assets to accommodate expanded services. To maintain a reliable fleet, a well-funded preventive maintenance program, along with maintenance tools and a place to store and maintain vehicles, is essential. This capital improvement plan identifies:

- ◆ Existing capital assets and existing replacement needs
- ◆ Future capital assets needed to accommodate future service levels
- ◆ Potential sites for a new transit hub

## Asset Inventory and Condition Assessment

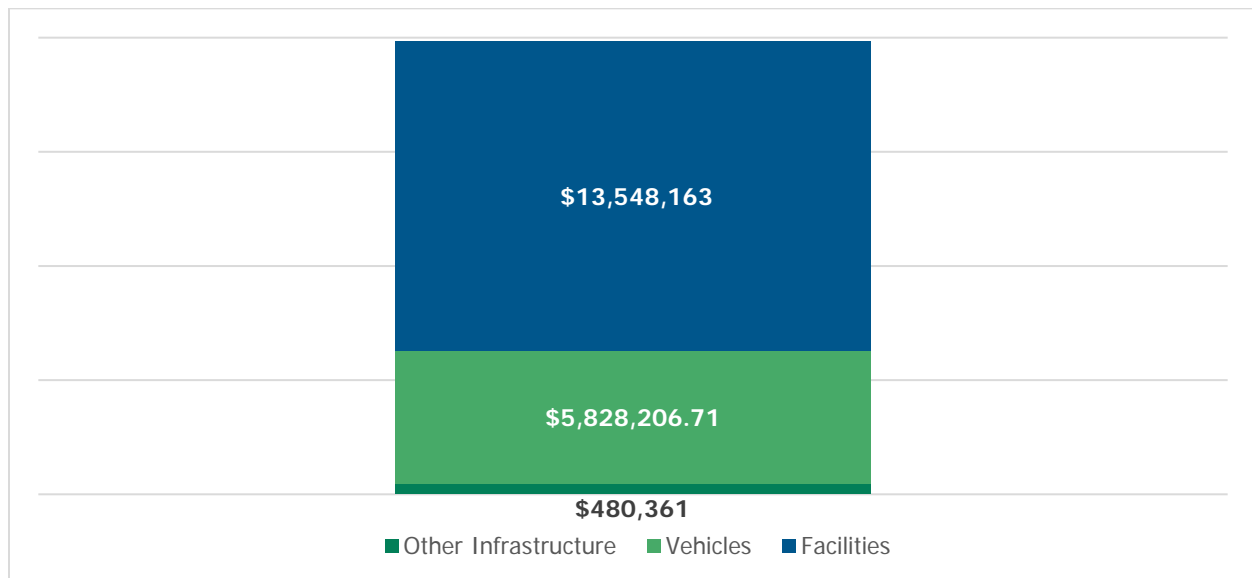
For this plan, existing and planned assets for the GMTS are broken into:

- ◆ Vehicles (fixed route buses, paratransit vehicles, dial-a-ride vehicles)
- ◆ Facilities (vehicle maintenance facilities, administrative, transit centers)
- ◆ Other infrastructure (bus stops and amenities, customer parking, information systems, and other technologies such as automatic vehicle location and automatic passenger counters)

### Existing Capital Assets

The capital assets owned by GMTS are summarized in **Figure 1**.

The current total replacement value of GMTS assets is \$19.9 million. About 30 percent of the value is in buses and non-revenue vehicles (totaling \$5.8 million), about 68 percent of the value is in maintenance facilities and equipment (totaling \$13.5 million), and about 2 percent is in bus stations, radio and revenue collection systems (totaling under \$500 thousand).



► **Figure 1: Replacement value of GMTS capital assets (2018 dollars)**

A comprehensive inventory of GMTS capital assets can be found in the Mankato Transit Asset Management Plan.

## Existing Capital Asset Replacement Needs

An asset is in a state of good repair if it has not reached the end of its useful life<sup>1</sup>. The state of good repair backlog represents the value of all assets in the transit system that are beyond their useful life and need replacement. Currently, one percent of the total value of GMTS's transit system is in backlog (**Table 1**).

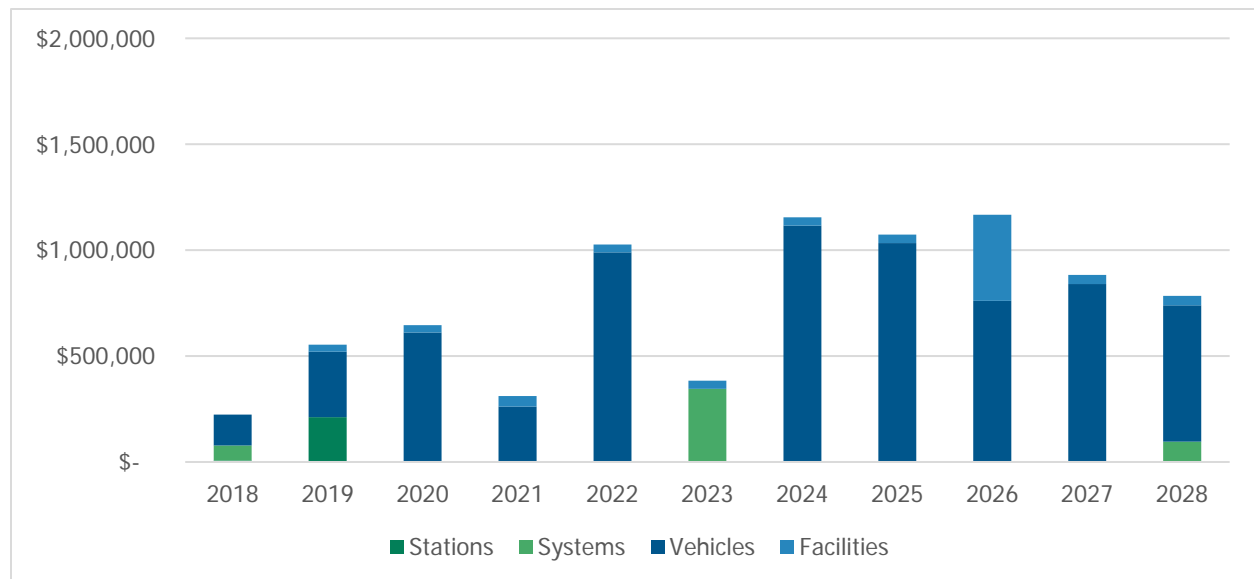
► **Table 1: Assets in backlog by category**

ASSET CATEGORY	REPLACEMENT VALUE	VALUE OF ASSETS IN BACKLOG	PERCENT OF ASSETS IN BACKLOG
<b>Stations</b>	\$110,699	\$104,084	94%
<b>Systems</b>	\$369,661	\$0	0%
<b>Vehicles</b>	\$5,828,207	\$152,221	3%
<b>Facilities</b>	\$13,548,163	\$0	0%
<b>Total Assets</b>	<b>\$19,856,730</b>	<b>\$256,306</b>	<b>1%</b>

## Future Capital Assets Needed to Accommodate Future Service Levels

### Current Funding Scenario

Based on GMTS' planned service and historic funding conditions, GMTS will invest a total of \$8.5 million to replace capital assets over the next decade (**Figure 2**). This includes eliminating the current system backlog during the first full year (2019) of this Capital Plan.

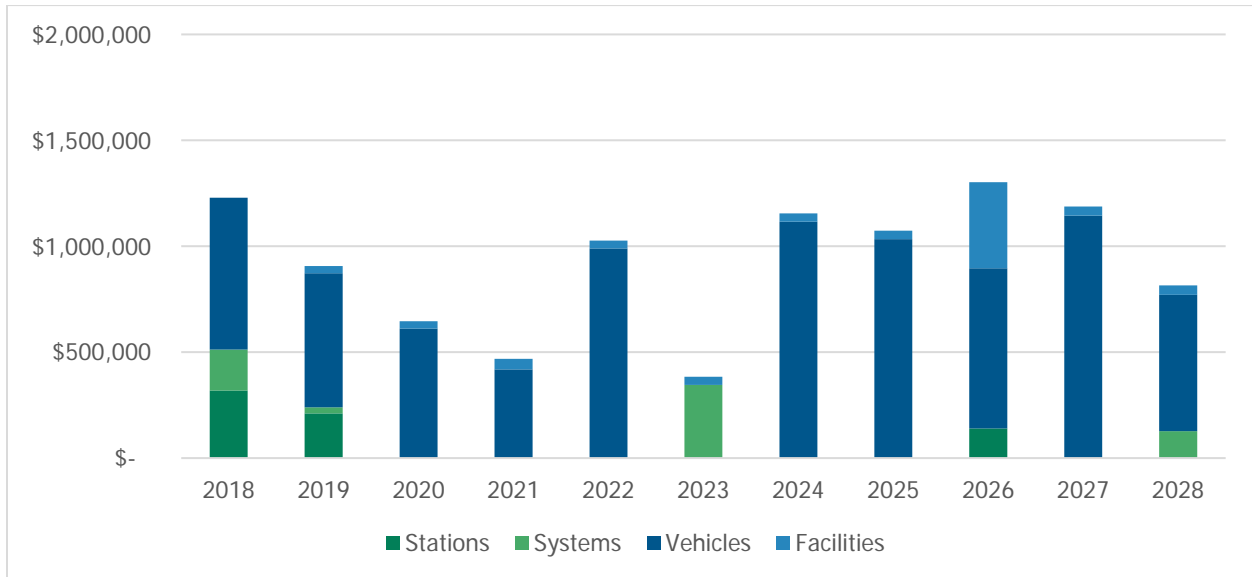


► **Figure 2: Current funding scenario asset replacement expenditures by year, separated by asset category**

<sup>1</sup> Useful life varies by capital asset type. See Transit Asset Management Plan for more information.

### New Service Expansion Scenario

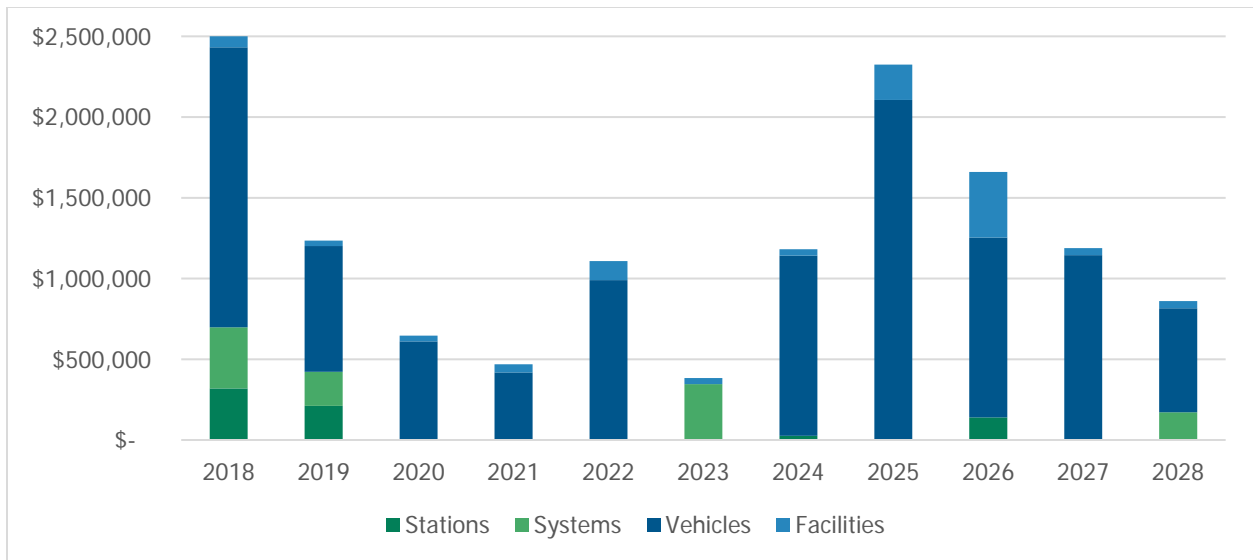
The New Service Expansion (NSE) funding scenario models the asset replacement expenditures that would occur under the NSE service plan, as detailed in the Service Recommendation Report and Financial Plan. Under this plan, GMTS would invest in additional assets including 5 revenue vehicles, 13 bus shelters, and various radio and revenue collection units. This includes eliminating the current system backlog during the first full year (2019) of this Capital Plan. Under the NSE scenario, a total of \$10.8 million is spent over the project horizon (**Figure 3**).



► **Figure 3: New Service Expansion funding scenario asset replacement expenditures by year, separated by asset category**

### Illustrative Funding Scenario

The Illustrative funding scenario models the asset replacement expenditures that would occur under the Illustrative expanded service plan, as detailed in the Service Recommendation Report and Financial Plan. Under this plan, GMTS would make immediate additions that include 14 revenue vehicles, 13 bus shelters, an integrated Automatic Passenger Counter (APC) system, dispatching software, and various radio and revenue collection units. This includes eliminating the current system backlog during the first full year (2019) of this Capital Plan. Under the Illustrative Funding Scenario, a total of \$14.6 million is spent over the project horizon (**Figure 4**).



► Figure 4: Illustrative funding scenario asset replacement expenditures by year, separated by asset category

## Transit Center Evaluation

Through the transit development planning process, the planning team observed that new transit centers are needed within the GMTS. The new transit centers would complement any of the service scenarios recommended in this plan.

### Goals, Objectives, and Design Guidelines for the Transit Centers

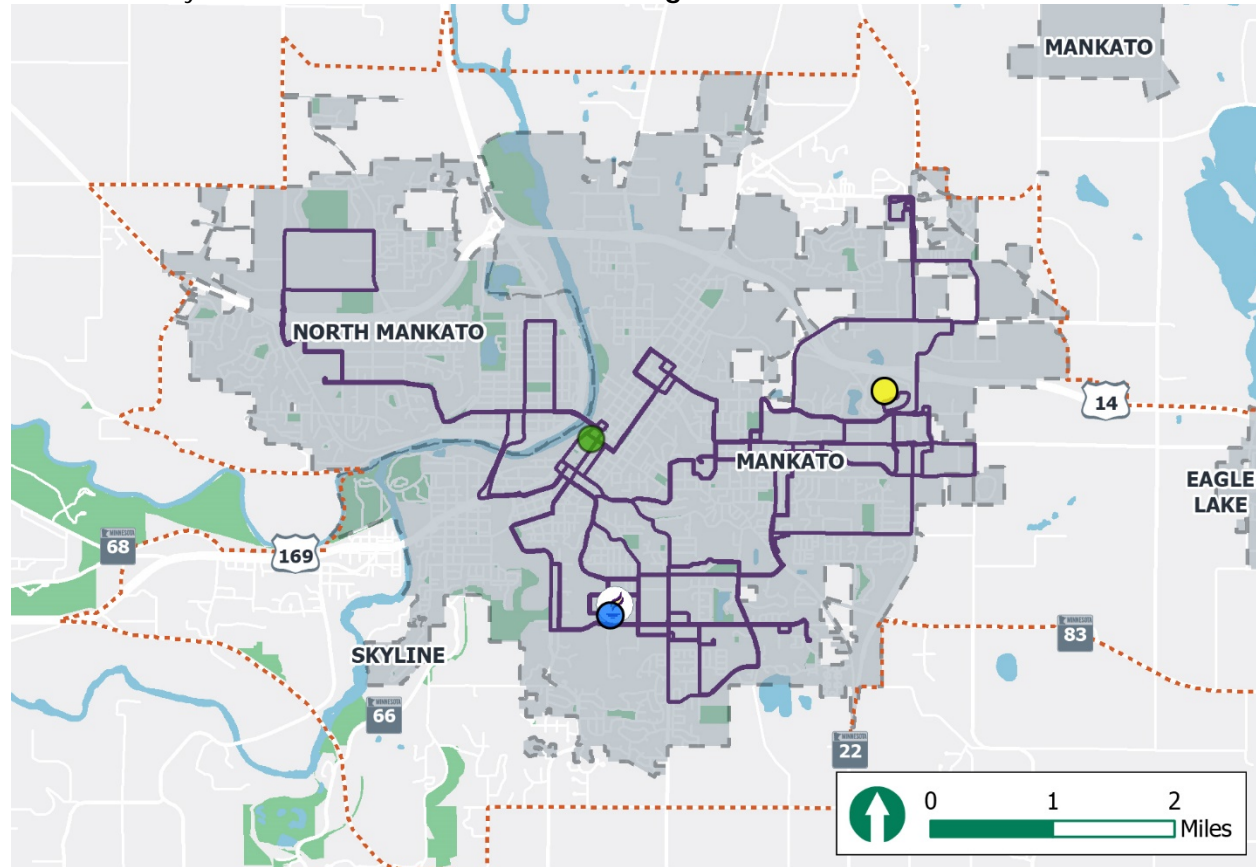
The GMTS has identified goals, objectives, design guidelines and performance targets for transit centers. Relevant outcomes from the Goals, Objectives, and Design Guidelines Report are summarized in [Table 2](#), and paired with text describing how the relevant goals, objectives, and performance measures translate into site evaluation criteria for potential transit center locations.

► Table 2: Performance-based decision-making criteria for potential transit center locations

GOAL	OBJECTIVE OR PERFORMANCE MEASURE AND TARGET	TRANSIT CENTER SITE EVALUATION CRITERIA
<p><b>Economic Vitality: Maintain a transportation system that promotes economic growth throughout the planning area</b></p>	<p>Objective 1: Provide service within ¼ mile of local commercial activity centers and other major destination points</p>	<p>Does the site fall within ¼ mile of local commercial activity center or other major destination points?</p>
<p><b>Safety: Develop and maintain a transportation system that promotes the safety of all users</b></p>	<p>Objective 3: Ensure safe waiting areas for passengers by providing lighting, benches, and/or shelters at major stops</p> <ul style="list-style-type: none"> <li>◆ Shelters at stops with at least 20 boardings per day or major transfer points</li> <li>◆ Benches at bus stops with 15 or more daily boardings</li> <li>◆ Lights at bus stops with 15 or more daily boardings</li> </ul>	<p>Does the site have space and infrastructure supporting new lighting, benches, and shelters?</p> <p>Does the site serve more than 20 boarding per day? Is the site a major transit point?</p>
<p><b>Multimodal Transportation: Develop and maintain a transportation system that integrates multimodal options for all users, while taking into account active living and public health initiatives</b></p>	<p>Objective 1: Connect to other local and regional transit services (Minnesota River Valley Transit and True Transit)</p> <ul style="list-style-type: none"> <li>◆ 90 percent of regional transit routes have no wait transfers to GMTS routes</li> </ul> <p>Objective 2: Provide bicycle parking at transit hubs and major bus stops</p> <ul style="list-style-type: none"> <li>◆ Bicycle parking at transit stops with 20 or more boardings per day</li> <li>◆ Pedestrian sidewalks or trails within ¼ mile of bus stops with at least 20 boardings per day</li> </ul>	<p>Does Minnesota River Valley Transit or True Transit stop in the transit center area? If yes, does the site have space to accommodate local bus, ridesharing services, Minnesota River Valley Transit and/or True Transit?</p> <p>Does the site have space for bicycle parking?</p> <p>Does the site need new or improved sidewalk and/or crosswalk connections?</p>
<p><b>Land Use: Establish a strong connection between transportation modes and the land uses that they serve</b></p>	<p>Objective 1: Facilitate and promote moderate to higher density and mixed-use development in areas near or along planned/existing transit routes</p>	<p>Is the site near moderate to higher density and/or mixed-use development?</p>

## Potential Transit Center Areas

The project team identified three areas as primary transit center locations based on the site evaluation criteria. Primary transit center areas are illustrated in **Figure 5** and discussed below.



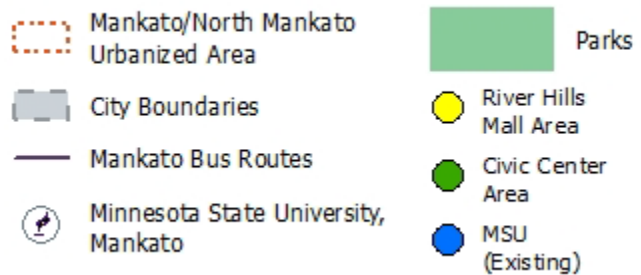
► Figure 5: The TDP development process identified three primary transit center areas

### River Hills Mall Area

The River Hills Mall area is a regional employment and activity center for Greater Mankato and is the primary retail center for south-central Minnesota and northern Iowa.

The region's primary retail development is near River Hills Mall. The area's retail services include more than 100 stores within River Hills Mall, Shopko, Best Buy, Sam's Club, Walmart, grocery stores, banks, and several restaurants. Offices for the Minnesota Valley Action Council are also in the area. Activities center around the intersection of Madison Avenue and State Highway 22.

The need for a transit center in the River Hills Mall Area was identified through public and stakeholder engagement and service planning. The planning team did not identify a specific site for a transit center in the River Hills Mall area. The site evaluation criteria should guide decision-making as potential transit center sites are identified and evaluated in the River Hills Mall area.





## City Center Area (Existing)

The City Center area is a regional employment and activity center for multiple levels of government, and includes several civic offices and services:

- ◆ Intergovernmental center for Mankato and Blue Earth County with city offices, county offices, the county courthouse, law enforcement, and highway maintenance
- ◆ Blue Earth County library
- ◆ Mankato Area Public Schools headquarters
- ◆ Minnesota Department of Employment and Economic Development Workforce Development Center
- ◆ Minnesota Department of Health offices
- ◆ Fifth Judicial District Court
- ◆ Region Nine Development Commission
- ◆ Minnesota Valley Council of Governments
- ◆ Mankato YWCA
- ◆ Greater Mankato Area United Way

Activities in the City Center area are focused around the intersection of South 2<sup>nd</sup> Street and Civic Center Plaza/East Hickory Street. Buses currently start and end their routes in this area on Cherry Street, which is located one block south of Civic Center Plaza. The need for a new transit center in the City Center Area was identified through public and stakeholder engagement and service planning. In preparation for future updates of the transit development plan, GMTS should evaluate operations at the Cherry Street site. The evaluation should include both operational and site evaluation criteria, and other potential sites should be considered if operational issues are present.

## Minnesota State University-Mankato (Existing)

The MSU-Mankato area is a regional employment, education, and activity center. It hosts more 2,000 faculty and staff, and more than 15,000 students. MSU-Mankato has an institutional commitment to welcoming and empowering historically underrepresented populations, and its community consists of more than 2,200 students of color and more than 1,100 international students from more than 90 countries. It also hosts over 600 student athletes and their fans, including NCAA Division I men's and women's hockey, NCAA Division II men's baseball, basketball, cross country, football, golf, track and wrestling, and NCAA Division II women's basketball, cross country, golf, soccer, softball, swimming, tennis, track and volleyball.

The MSU-Mankato Transit Center is currently located on the south side of Centennial Student Union. Transit information is available inside the Union, and this site works well for the University and GMTS. In future updates of the transit development plan, GMTS should evaluate operations at the MSU-Mankato site based on both operational and site evaluation criteria, and other potential sites should be considered if operational issues are present.

## Transit Center Design Considerations

### Introduction

Transit centers should be sited to maximize convenience and minimize travel times for transit passengers and vehicles under existing and planned future conditions. Decisions to build transit centers should be based in both transit demand analysis and land use considerations. Land use considerations include and are not limited to the following:

- Land availability
- Land type and costs (e.g., public right-of-way, joint-use, private, etc.)

- Mix of land uses and compatibility with transportation functions
- Development plans including comprehensive and transit center area plans
- Available infrastructure and the cost of providing additional infrastructure including bicycle and pedestrian infrastructure (e.g., sidewalks, bicycle-pedestrian overpass/underpass, etc.)
- Proximity to affordable housing
- Proximity to education and/or employment
- Size of and proximity to people to rely on transit, have low incomes, and/or are members of minority populations

## Transit Center Design

Transit centers should be context sensitive and enhance the neighborhoods surrounding them today and in the future. They should be functional, attractive, cost-effective, and generally consistent across the transit system. Well-designed transit centers will provide an attractive, informative environment for passengers at stations that is consistent with local community context, transit system identity, and passenger waiting times. Safety and security are particularly increased when all elements enhance passive security by maintaining visibility to and within the transit center area. These outcomes can be achieved by an interdisciplinary design team that responds to this direction while incorporating advancements in technology and balancing aesthetics with funding availability.

All transit centers serve people who are often linking multimodal trips. People usually travel to transit centers by walking, biking, using a wheelchair, or by driving/being dropped off. The transit centers should include sheltered waiting areas, lighting, heating, security features (e.g., cameras), and litter receptacles. Decisions to provide a fully enclosed facility should be justified. Shelters can be bolted or affixed to a concrete pad with or without a foundation; enclosures have foundations. The GMTS may want to explore fully enclosed transit centers in the following cases:

- ◆ The center serves high passenger volumes with long transfer times (e.g., 500 or more boardings per day)
- ◆ The center includes circulation systems (e.g., elevators or escalators)
- ◆ The center is part of multiuse buildings (e.g., MSU-Mankato Centennial Student Union)
- ◆ Right-of-way is available. Radiant heat and passive cooling is typical for enclosed transit centers.

Some transit centers may also function as transit operator layover areas or terminal stops. Transit centers that function as layover facilities should include restrooms for transit operators. Where transit centers are located within a multi-use building or qualify as an assembly area according to the State Building Code, public restrooms should be provided. Restroom evaluation criteria typically include the number of passengers and routine wait times of one hour or more.

## Park-and-Ride Considerations

Some transit centers may also function as park-and-ride locations. In low-density land uses or high parking cost areas, transit customers may want to utilize the park-and-ride feature to ride transit to a destination. In general, the amount of parking provided at a park-and-ride is typically inverse to the density of surrounding land uses. Decisions to provide parking at transit centers should be made based on available right-of-way and thorough demand analysis.

## Aesthetic Treatments

Landscaping (plant materials), streetscaping (hardscape), and/or public art is common at transit centers to help create quality public spaces and complement the surrounding area. Whenever possible, public art should be incorporated into other functional transit center elements so it does not interfere with pedestrian, bicycle, bus, and vehicular paths. All visual treatments should provide clear sight lines, avoid

creating areas of concealment, and not impede visibility for waiting transit passengers, buses, or other modes of transportation in the area.

### Wayfinding and Signage

One of the primary functions of transit centers is the provision of transit information. Transit information and wayfinding information within and to transit facilities should be provided at all transit centers. Signage should seamlessly guide passengers to and through the transit center and its functions, including passengers who are not familiar with the transit system, who have disabilities, who are non-English speakers, and/or who are non-readers. Wayfinding information to major, permanent civic attractions should also be provided at all transit centers. Placement and general content of information should be consistent within transit centers when possible. Real-time schedule information should be provided at high-volume centers whenever site conditions allow.

### Multimodal Connections

Special attention should be given to providing convenient and safe bicycle and pedestrian access to and through transit centers including improved bicycle and pedestrian facilities and roadway modifications where appropriate. Pedestrian and bicycle paths should be designed to provide the most direct route. They should also be paved, clearly marked, lighted, and buffered to improve active transportation experiences and discourage people from crossing roadways in other than designated areas. Mid-block crossings between transit centers and street intersections should be avoided. At-grade crossing should be utilized where feasible.

Improved bicycle and pedestrian facilities include features such as more visible crossings using pavement treatments, colors, or markings; pedestrian refuge medians; roadway curb extensions; intersection countdown timers; or passive crossing control (e.g., “z-type” crossings). Roadway modifications include features such as adjusted intersection traffic signal timings to accommodate bicycles/pedestrians; additional traffic signals; elimination of conflicting turn movements such as free-right turn movements; and intersection modifications to provide more convenient and safer bicycle and/or pedestrian crossings.

### Maintenance

All transit centers, bus stops, and transit customer facilities should receive regular maintenance during all seasons, including snow removal, and designs should seek to minimize maintenance costs.