

Organizational and Staffing Framework

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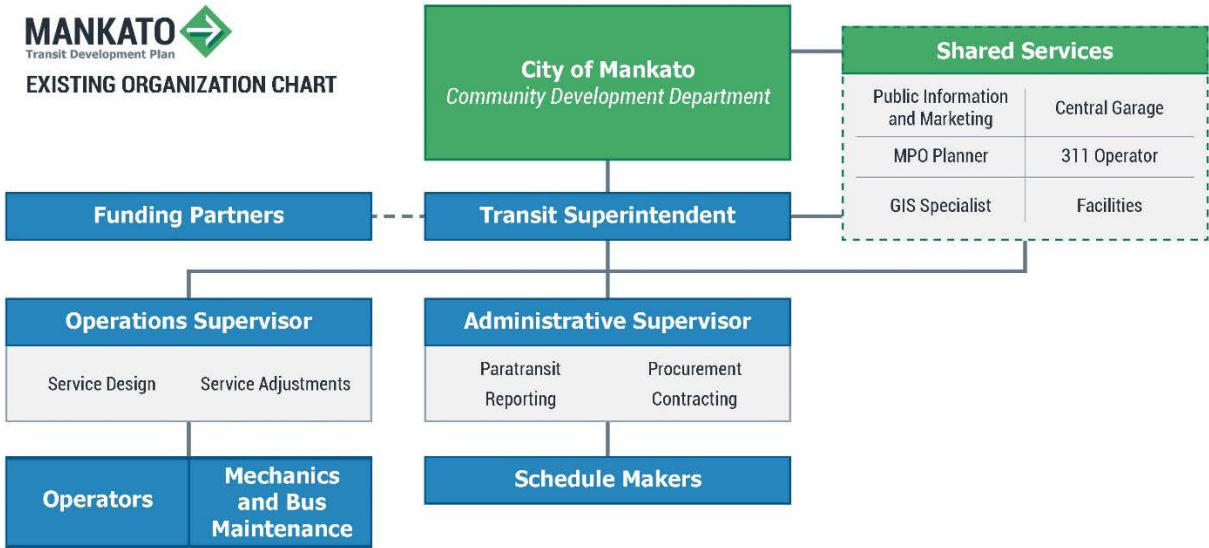
Organizational and Staffing Framework

This Organizational and Staffing Framework describes organizational structure and staffing for the Greater Mankato Transit System (GMTS). It assesses current and future organizational and staffing needs of the system, and includes recommendations on the type and number of employees that may strengthen the GMTS for 2018 through 2022.

2017 Organizational and Staffing Framework

The GMTS is a department within the City of Mankato. Figure 1 shows it is part of the Community Development department, and its sister department is the Mankato Area Planning Organization (MAPO), the region’s federally-recognized metropolitan planning organization for transportation. The GMTS receives funding from the City of Mankato, City of North Mankato, Minnesota State University, Mankato (MSU-Mankato), Minnesota Department of Transportation (MnDOT) and the Federal Transit Administration (FTA).

► Figure 1: Existing Organization Chart



GMTS Staffing

Staffing for the GMTS is lean and has, at times, been challenged to attract and retain staff. As of December 2017, the GMTS has 13 full-time employees (FTEs) and 37 part-time employees (PTEs) (Table 1).

► Table 1: GMTS Employee Counts (2017)

	LOCATION & LEVEL IN ORG CHART	FULL-TIME EMPLOYEES	PART-TIME OR SHARED EMPLOYEES	ADDITIONAL NOTES
Transit Superintendent <i>Responsible for oversight of the agency and coordination with other City departments</i>	Transit Superintendent – Manager	1	0	
Operations Supervisor <i>Responsible for management of daily street operations</i>	Operations – Supervisor	1	0	
Operators <i>Operates revenue vehicles</i>	Operations – Support	7	36-Part Time	
Mechanics and Bus Maintenance <i>Interior and exterior cleaning of buses, fuel and repair buses, and maintenance other equipment</i>	Operations – Support	1	2 (Shared)	Temporary staffing support is available from the City's Central Garage (mechanics) and permanent facilities maintenance support is provided by the City's Public Works Department
Administrative Supervisor <i>Responsible for management of administrative tasks and personnel</i>	Administrative – Supervisor	1	0	The GMTS had an Administrative Supervisor previously. The position is in the process of being filled.
Schedule Maker <i>Generate fixed route and dial-a-ride schedules</i>	Administrative – Support	0	1-Part Time	
Public Information and Marketing	Shared Services - Support	0	2 (Shared)	The public information and marketing staff are shared with the City and the School District
MPO Planner	Shared Services - Support	0	1 (Shared)	

	LOCATION & LEVEL IN ORG CHART	FULL-TIME EMPLOYEES	PART-TIME OR SHARED EMPLOYEES	ADDITIONAL NOTES
GIS Specialist <i>Responsible for spatial analysis and route map production</i>	Shared Services – Support	0	1 (Shared)	
Central Garage	Shared Services - Support	0	1 (Shared)	
311 Operator <i>Answers public 311 calls for the agency</i>	Shared Services – Support	0	1 (Shared)	
Transit Engineer <i>Design and maintain bus shelters and facilities</i>	Shared Services - Support	0	1 (Shared)	The transit engineer is shared with the City's Public Works Department
Facility Maintenance	Shared Services - Support	0	1 (Shared)	
TOTAL EMPLOYEES		11	Transit: 37 Part Time Shared: 10	

Existing Staffing Issues

- ◆ **No transit development staff.** The Transit Superintendent is currently performing transit development work for the GMTS. These responsibilities include analyzing and evaluating service productivity, and identifying and evaluating emerging service needs, including fare policy and fare media, updating service plans, and securing funding for capital and operating expenditures. The GMTS hired a transit service planner, who left the position recently. The position has not been filled since the employee's departure.
- ◆ **No procurement staff.** The GMTS currently has no staff dedicated to FTA-compliant procurement and documentation of equipment. A procurement staff person coordinates the purchase of new vehicles and equipment to operate transit service plan.
- ◆ **Minimal mechanic staff.** One full-time employee currently performs all mechanic services on 17 buses and other garage equipment. When needed, the mechanic is supported by other mechanic staff from the City's Central Garage (mechanics). Having one person responsible for vehicle and equipment mechanics poses a threat to the system. Successful maintenance is essential to system safety and day-to-day operations. Vacations, sick-leave, or any sudden departure from the maintenance position has an immediate impact on daily operations. The FTA and MnDOT have noted in their formal reviews that GMTS needs more mechanic staff to safely and reliably execute the existing service plan.
- ◆ **No maintenance staff.** In addition to performing his mechanic duties, the mechanic also maintains, washes, and fuels all 17 buses and other garage equipment as of December 2017. When needed, the mechanic is supported by other maintenance staff from the City's Central

Garage (mechanics) and Engineering (facilities maintenance). Having one person responsible for vehicle and equipment maintenance poses a threat to the system. Successful maintenance is essential to system safety and day-to-day operations. Vacations, sick-leave, or any sudden departure from the maintenance position has an immediate impact on daily operations. The FTA and MnDOT have noted in their formal reviews that GMTS needs more committed maintenance staff to safely and reliably execute the existing service plan.

- ◆ **Shared marketing and communications staff.** Two public information and marketing staff support the GMTS, the City of Mankato, and the District 77 School District. The transit agency has significant communications and marketing demands, and demands are anticipated to increase beyond 66 percent of a full time equivalent (FTE). These responsibilities include maintaining Title VI-compliant communication and engagement policies and practices, developing and updating transit route maps and schedules, communicating route changes and system modifications, and reviewing customer comments for Title VI concerns.
- ◆ **Managerial-level coordination between GMTS and Managers for Shared Services Staff.** A shared-services model can be very effective in efficiently delivering services. Prioritizing efforts can be a major challenge with a shared-services model, requiring regular, proactive coordination between staff, especially management staff making assignments to staff. This kind of coordination can require time that is difficult for transit staff to prioritize as they balance operating the transit system daily. From interviews with transit staff, transit operating priorities became so significant that they could no longer coordinate meaningfully with shared services staff and managers, which resulted in failure to consistently leverage shared services such as public information and marketing, GIS mapping, and facilities engineering and maintenance.

Projected Staffing Needs

The National Transit Database (NTD) is the national database of transit statistics by provider. The planning team used the NTD to generate ratios of employees per vehicle, revenue mile, and revenue hour and assessed current and future staffing needs based on GMTS operations.

Labor Force Ratio Assumptions

National Comparison - General

The National Transit Database (NTD) captures FTEs and part-time equivalents (PTEs) by classification for larger agencies (agencies that are required to submit Directly Operated service reports). Revenue Miles, Vehicles, and Revenue Hours are also captured by NTD for these agencies. **Table 2** shows calculated labor force ratios for all agencies that report employee numbers to the NTD.

► Table 2: National Labor Force Ratios (2016)

	FULL-TIME	PART-TIME
Employees Per Vehicle	1.8	0.4
Employees Per 100,000 Revenue Miles	12.4	2.3
Employees Per 10,000 Revenue Hours	12.5	2.0



Peer Agency Comparison - General

Smaller agencies, including GMTS and two of the five peer agencies in the Existing Services, Ridership, and Standard report, are not required to submit this employee detail to NTD. However, three peer agencies did submit employee counts. The ratios from these peer agencies may be more relevant to the GMTS as their scope and transit context is more similar than the larger systems included in the full national database. Table 3 shows calculated labor force ratios for peer agencies that report employee numbers to the NTD.

► Table 3: Peer Agency Labor Ratios (2016)¹

2016	FTE PER VEHICLE	PTE PER VEHICLE	FTE PER 100,000 REVENUE MILES	PTE PER 100,000 REVENUE MILES	FTE PER 10,000 REVENUE HOURS	PTE PER 10,000 REVENUE HOURS
Municipal Transit Utility	0.6	0.1	4.3	0.5	5.9	0.7
Go Transit	0.8	0.0	3.3	0.1	5.1	0.2
Shoreline Metro	0.9	1.0	4.2	4.5	6.1	6.5
Average Peer Agency	0.8	0.4	4.0	1.7	5.7	2.5
Greater Mankato Transit System	0.8	2.2	3.8	10.8	4.6	13.0

National Comparison – Mechanics

There is no published industry standard for the number of mechanics required for transit agencies based on service or existing capital assets. For planning purposes, a mechanic to bus ratio was developed by reviewing resources provided by the Transit Cooperative Research Program (TCRP Report 184, published 2016) and conducting interviews with public- and private-sector transit providers. The TCRP report and provider interviews show that *providers that perform both core maintenance and heavy repair typically employ one mechanic per five to eight vehicles in the fleet*. These transit systems typically also employ mechanic technicians that can perform lower-skilled duties such as interior and exterior cleaning of buses and shelters, daily fueling, and repair of other maintenance equipment.

¹ Including GMTS, the revenue hours and revenue miles used to calculate the labor force ratios were all from NTD (2016).

► Table 4: Average Hours per Vehicle²

PERSON	ACTIVITY	AVERAGE TECHNICIAN HOURS PER YEAR PER VEHICLE MAINTAINED
Mechanic	Core vehicle maintenance	291
Mechanic	In-house heavy repair	47
Mechanic Subtotal		338
Mechanic Technicians	Cleaning, fueling, minor daily checks and fixes	12
Grand Total		350

Using the TCRP numbers, seventeen (17) vehicles in a fleet would require 5,746 mechanic hours annually (not including technicians). If a full-time mechanic works 2,000 hours per year (which allows for two weeks of paid vacation), a fleet of 17 vehicles would require nearly three full-time mechanics. This results in a ratio of one mechanic per five buses.

Additionally, the study team consulted with Maintenance Design Group, a consulting firm that specializes in transportation operations and maintenance facilities, and confirmed industry standard practice is a ratio of one mechanic per five buses.

PUBLIC SECTOR INTERVIEWS

The study team interviewed a diverse set of public sector transit providers to identify their current ratios of mechanics to buses. These providers are in Minnesota, Michigan, Virginia, and Texas, and their ratios are shown in Table 4.

► Table 5: Public Sector Transit Provider Ratios of Mechanics to Buses

STATE	RATIO OF MECHANICS: BUSES
Michigan	1:5.4
Minnesota	1:6.5 to 1:8
Texas	1:4.3
Virginia	1:3 to 1:4
California	1:3
Mankato GMTS	1:17

PRIVATE SECTOR INTERVIEWS

The study team interviewed a diverse set of private sector transit providers to identify their current ratios of mechanics to buses. The private-sector transit providers are in Arizona, do not need to maintain fleets against snow and winter conditions. And employ one mechanic per seven to thirteen buses in the fleet.

- ◆ First Transit - 1:6.8

² TCRP Report 184: Maintenance Technician Staffing Levels for Modern Public Transit Fleets (2016) includes Table S-1 (p.2)



- ◆ Transdev - ranges from 1:8 to 1:13

Assumed Ratios

Based on review of the national and peer agencies, the study team identified the following for FTEs:

- ◆ 1 (or more) full-time employees per vehicle
- ◆ 4 (or more) full-time employees per 100,000 revenue miles
- ◆ 6 (or more) full-time employees per 10,000 revenue hours

Based on review of the national and peer agencies, the following ratios were deduced for PTEs:

- ◆ 0.5 part-time employees per vehicle
- ◆ 2 part-time employees per 100,000 revenue miles
- ◆ 2 part-time employees per 10,000 revenue hours

The planning team noted potential for more variance on part-time employee ratios as compared to full-time employee labor ratios. Part-time employee hours and application varied between agencies in the NTD reports.

Current Staffing Needs

Table 6 shows the anticipated employee needs of GMTS based on current service statistics. The labor ratios, which are detailed in Table 5 and in the “National Comparison – Mechanics” section, have been rounded here to the nearest 0.5 for clarity.

► Table 6: FT and PT Employee Needs Based on Current Service Plan and Cost Neutral Service Plan

STATISTIC	CURRENT SERVICE PLAN ³	FT EMPLOYEE LABOR RATIO	FT LABOR NEED	PT LABOR RATIO	PT LABOR NEED
Vehicles	17	1 per vehicle	17.0	0.5 per vehicle	8.5
Revenue Miles	343,263	4 per 100,000 miles	13.7	2 per 100,000 miles	6.9
Revenue Hours	28,492	6 per 10,000 hours	17.1	2 per 10,000 hours	0.6
Mechanic to Bus Ratio	17 (vehicles)	1 per 5 buses	3.4	N/A	N/A

Based on national and peer trends and given existing operations, the GMTS should have at least 17 full-time employees, including three mechanics, and 8 part-time employees. *The GMTS is currently understaffed by 4 FTEs and overstaffed with PTEs.*

³ Revenue Miles and Hours are NTD 2016 Statistics

Projected Staffing Needs

Tables 7 and 8 show forecast staffing needs based on the GMTS New Service Expansion Plan (Table 7) and the Illustrative Service Plan (Table 8).

► Table 7: FT and PT Employee Needs Based on New Service Expansion Plan

STATISTIC	RECOMMENDED SERVICE PLAN	FT EMPLOYEE LABOR RATIO	FT LABOR NEED	PT LABOR RATIO	PT LABOR NEED
Vehicles	22	1 per vehicle	22	0.5 per vehicle	11
Revenue Miles	406,422	4 per 100,000 miles	16.3	2 per 100,000 miles	8.1
Revenue Hours	38,925	6 per 10,000 hours	23.4	2 per 10,000 hours	7.8
Mechanic to Bus Ratio	1	1 per 5 buses	4.4	N/A	N/A

► Table 8: FT and PT Employee Needs Based on Illustrative Plan

STATISTIC	ILLUSTRATIVE PLAN	FT EMPLOYEE LABOR RATIO	FT LABOR NEED	PT LABOR RATIO	PT LABOR NEED
Vehicles	31	1 per vehicle	31	0.5 per vehicle	15.5
Revenue Miles	873,758	4 per 100,000 miles	35	2 per 100,000 miles	17.5
Revenue Hours	66,839	6 per 10,000 hours	40.1	2 per 10,000 hours	13.4
Mechanic to Bus Ratio	1	1 per 5 buses	6.2	N/A	N/A

Based on the New Service Expansion Plan, the GMTS should employ 16 to 23 full-time staff, including at least four full-time mechanics, and 8 to 11 part-time staff. *When comparing to 2017 staffing levels, the GMTS will be understaffed by 5 full-time staff, including three full-time mechanics, and overstaffed with PTEs if implementing the New Service Expansion Plan.*

Based on the Illustrative Plan, the GMTS should employ 31 to 40 full-time staff, including six full-time mechanics, and 13 to 18 part-time employees. *When comparing to 2017 staffing levels, the GMTS will be understaffed by 20 to 29 FTEs and overstaffed with PTEs if the Illustrative Plan is implemented.*

Recommendations

Staffing

The GMTS is understaffed for both the existing and the two proposed service plans. Figure 2 shows the proposed organization chart for the GMTS.

► Figure 2: Proposed Organization Chart

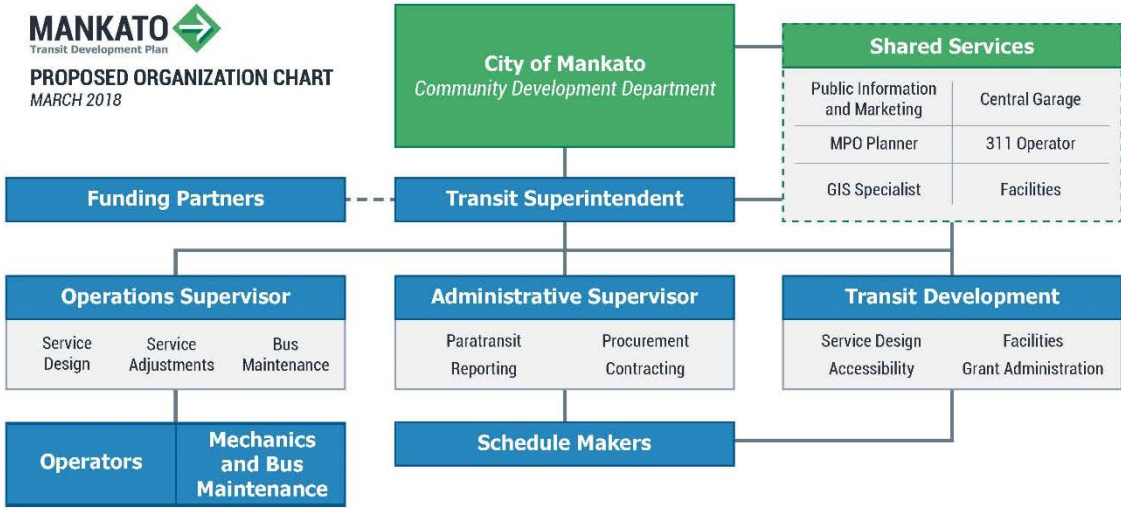


Table 9 shows a recommended staffing plan that would address the existing and future deficit of staffing at GMTS. Each position is listed as Filled, Inadequate, Over-Employed, or Missing in the current staffing plan.

- ◆ Filled: Position exists, and the proper number of people are employed
- ◆ Inadequate: Position exists, but too few people are employed in that position
- ◆ Over-Employed: Position exists, but too many people are employed in that position
- ◆ Missing: Position does not exist in the current staffing structure and should be considered for hire.

► Table 9: Recommended GMTS Staffing Levels for the New Service Expansion Plan

	LOCATION & LEVEL IN ORG CHART	FULL-TIME EMPLOYEES	PART-TIME EMPLOYEES	POSITION STATUS IN CURRENT (2017) STAFFING STRUCTURE	RECOMMENDATION
Transit Superintendent <i>Responsible for oversight of the agency and coordination with other City departments</i>	Transit Superintendent – Manager	1	0	Filled	No change
Operations Supervisor <i>Responsible for management of daily street operations</i>	Operations – Supervisor	1	0	Filled	No change

	LOCATION & LEVEL IN ORG CHART	FULL-TIME EMPLOYEES	PART-TIME EMPLOYEES	POSITION STATUS IN CURRENT (2017) STAFFING STRUCTURE	RECOMMENDATION
Operators <i>Operate revenue vehicles</i>	Operations – Support	8 to 15 ⁴	As needed to provide peak service	FT need	Add one to eight full-time operators for the New Service Expansion plan
Mechanics (Buses)	Operations – Support	4	1-Part time	FT need	Add at least three full time and one part-time mechanics for the New Expansion plan Make at least one mechanic a Maintenance Supervisor to oversee all daily maintenance operations
Bus Maintenance <i>Interior and exterior cleaning of buses and shelters, fuel and repair buses and other maintenance equipment</i>	Operations – Support	As needed to support Maintenance	As needed to support Maintenance	Need	
Administrative Supervisor <i>Responsible for management of administrative tasks and personnel, paratransit reporting, and procurement and contracting</i>	Administrative – Supervisor	1	0	Filled	No change
Scheduler Maker <i>Generate fixed route and dial-a-ride schedules</i>	Administrative – Support	0	1-Part time	Filled	No change

⁴ Operator numbers should be finalized based on specific service plans and blocking schedule.



	LOCATION & LEVEL IN ORG CHART	FULL-TIME EMPLOYEES	PART-TIME EMPLOYEES	POSITION STATUS IN CURRENT (2017) STAFFING STRUCTURE	RECOMMENDATION
Transit Development <i>Responsible for bus route and service design; facilities development; Americans with Disabilities Act (ADA) compliance; and grant administration</i>	Transit Development – Supervisor	1	0	FT Need	Add position and full-time staff person
Public Information and Marketing <i>Design and lead public engagement, communicate route changes, system branding</i>	Shared Services - Support	2 (Shared)	0	Filled	Empower the existing shared resources to cover public engagement and communication processes, graphic design, and actively support other transit communication duties
MPO Planner	Shared Services - Support	1 (shared)	0	Filled	
GIS Specialist <i>Responsible for spatial analysis and route map production</i>	Shared Services - Support	1 (shared)	0	Filled	No change
Central Garage	Shared Services - Support	1 (shared)	0	Filled	No change
311 Operator <i>Answers public 311 calls for the agency</i>	Shared Services - Support	0	1 (shared)	Filled	No change

	LOCATION & LEVEL IN ORG CHART	FULL-TIME EMPLOYEES	PART-TIME EMPLOYEES	POSITION STATUS IN CURRENT (2017) STAFFING STRUCTURE	RECOMMENDATION
Transit Engineer	Shared Services - Facilities	1 (shared)	0	Filled	Partner with City, MSU-Mankato, and/or County Public Works to identify several engineers for whom transit infrastructure development is part of their job description
Facilities Maintenance	Shared Services - Support	1 (shared)	0	Filled	No change
TOTAL EMPLOYEES		16-23 7 (shared)	2+ part time 1 (shared) part time		

Organizational Framework

The GMTS can approach its organizational framework in several ways:

- ◆ Retain all GMTS staff as City of Mankato employees
- ◆ Retain some GMTS staff and contract some services (e.g., contract bus operations and service planning)
- ◆ Contract most services and retain administrative staff (e.g., contract vehicle maintenance, bus operations, service planning, and communications and marketing)

Table 10 illustrates opportunities and challenges with each approach.

► Table 10 Options for GMTS Organizational Framework

ORGANIZATIONAL MODEL	OPPORTUNITIES	CHALLENGES
Retain all GMTS staff as City of Mankato employees	<ul style="list-style-type: none"> • GMTS has more direct control of service quality 	<ul style="list-style-type: none"> • GMTS is responsible for recruiting and retaining all staff, including operators • GMTS has few performance comparison opportunities
Retain some GMTS staff and contract some services	<ul style="list-style-type: none"> • GMTS can have more focused operational priorities • GMTS can provide performance comparisons between in-house and contracted services 	<ul style="list-style-type: none"> • GMTS has less direct control of service quality • GMTS assumes greater procurement and contracting responsibilities

ORGANIZATIONAL MODEL	OPPORTUNITIES	CHALLENGES
<p>Contract most services and retain administrative staff</p>	<ul style="list-style-type: none"> • GMTS can have highly focused operational priorities • GMTS can request performance comparisons for various contracted services 	<ul style="list-style-type: none"> • GMTS has least direct control of service quality • GMTS assumes significant procurement and contracting responsibilities

The shared services model used by the GMTS appears to be working and should be maintained. The GMTS organizational framework is similar to other hybrid frameworks including:

- ◆ Maple Grove Transit (MN), which contracts most services and retains administrative staff only; In May 2018, Metro Transit maintains and operates all Maple Grove Transit routes
- ◆ Minnesota Valley Transit (MN), which contracts maintenance and operations, but retains service planning and administrative responsibilities; In May 2018, Schmitt & Sons performs all maintenance and operations for MVTA routes
- ◆ Metropolitan Council (MN), which has two operating divisions – Metro Transit and Metropolitan Transportation Services
- ◆ Metro Transit performs all activities for its routes and facilities
- ◆ Metropolitan Transportation Services contracts most services and retains administrative staff only
- ◆ CobbLinc (Cobb County, GA), which contracts service planning, maintenance, and operations, but retains ownership of all vehicles and facilities

If maintaining the current shared-services approach, the GMTS and City of Mankato should be more responsive to staffing shortages as they are identified in the future, especially for staff charged with safely and reliably operating and maintaining vehicles and facilities.