4. Financing

Background

Public transit is typically operated on a very tight budget, with nearly all revenue being utilized for capital and operating costs. Historical data often shows costs and revenues balancing out closely. Although this indicates that all available funding was used for necessary services, it does not mean that all needed service was able to be provided. For future planning, it is important to understand not just what has been spent on service, but also the amount that would be needed to provide the level of service that is necessary to fully meet the needs in the state.

For this plan, the Transit Needs Survey conducted in March 2019 provided input from the State's 35 public transit agencies on the additional personnel, vehicles, and facilities needed to provide their desired level of service for the short-range horizon of 2030 and the long-range horizon of 2050. The results of the survey were then validated in 2022. Since 2022, pandemic related funding has ceased, so there are additional immediate funding constraints that aren't addressed in this document. It is important to forecast what the costs to meet these needs may be and what amount of revenue is likely to be available. This chapter addresses that by forecasting costs based on historic operating costs along with anticipated staff, facility, and vehicle needs, and forecasting revenues based on historical funding levels. The most critical piece of information presented in this chapter is the shortfall between anticipated future costs and revenues. The chapter also includes potential revenue options to help close the gap between the two.

Historic Costs and Revenues

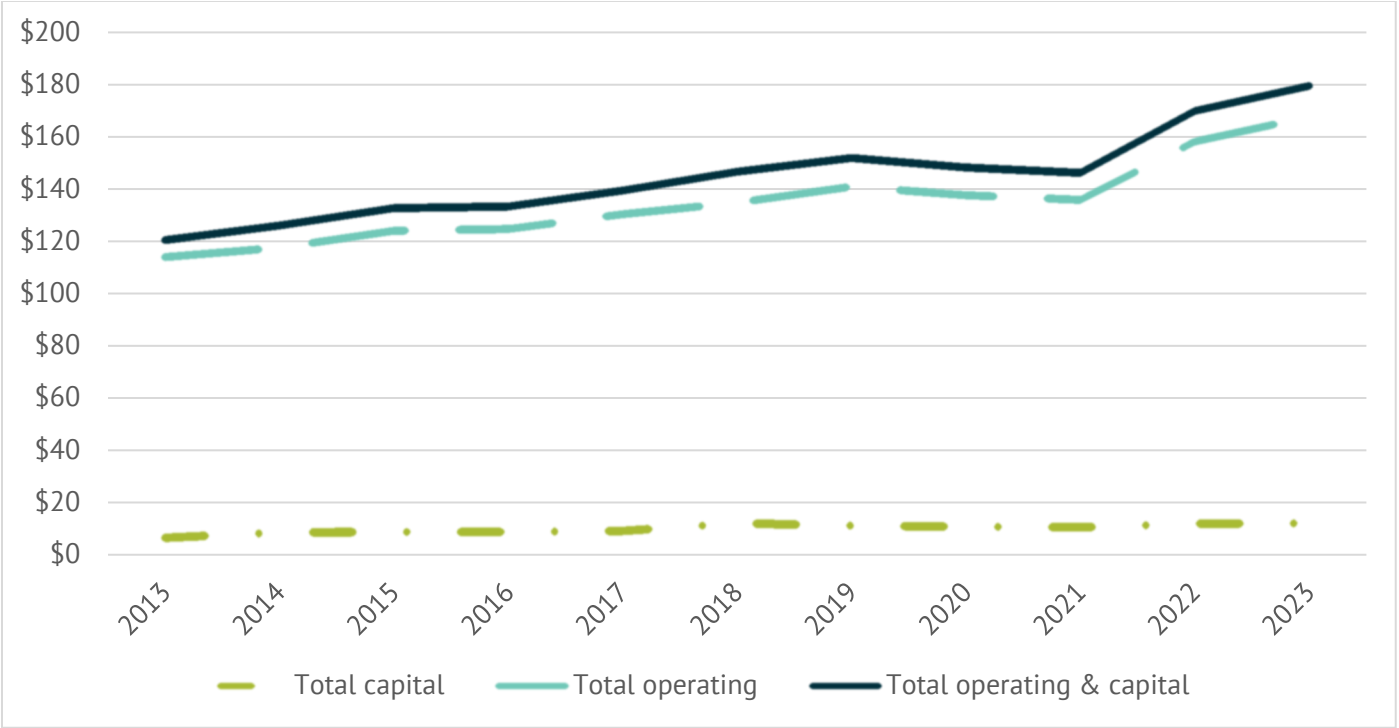
Costs and revenues for public transit from 2013 to 2023 were reviewed and average annual amounts were determined. Capital costs for public transit were calculated from reported totals of Section 5309 Capital Investment Program and Section 5339 Bus and Bus Facilities Formula Grant projects, Congestion Mitigation and Air Quality (CMAQ) funding dedicated to transit vehicle replacements, and Public Transit Infrastructure Grant (PTIG) projects. For operations costs, reported annual operating costs from the transit agencies were used. Overall average annual costs between 2013 and 2023 are shown in Figures 4.1 and 4.2. As shown, operating costs comprise most of the overall costs at 93.1 percent with capital expenditures representing roughly 6.9 percent.

Table 4.1: Historic Average Annual Transit Operating and Capital Costs, 2013-2023 ($ millions)

Funding Type	2013-2023 Average Costs	Percent of Total Costs
Capital	$9.938	6.9 %
Operating	$134.944	93.1 %
Total	$144.882	100.0 %

Source: Iowa DOT

Figure 4.1: Historic Transit Operating and Capital Costs (in millions), 2013–2023

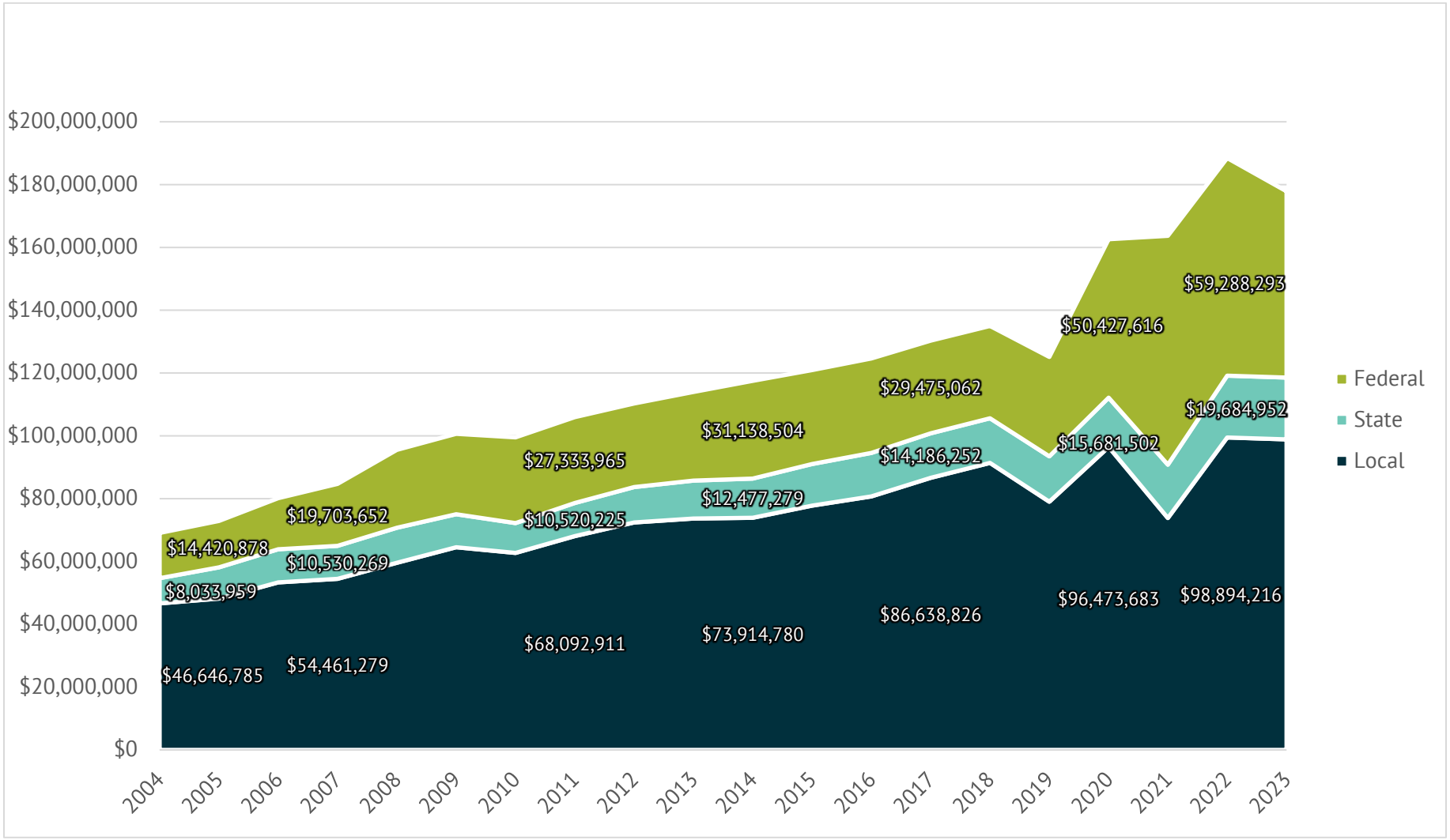


See Appendix D for financial data

Source: Iowa DOT

Historic operating costs can also be broken out into federal, state, and local funding sources. Figure 4.2 shows this breakout for operating costs from 2004-2023. Historic revenue in Figure 4.2 includes local funding and fare box revenues with the local, state and federal funding sources for transit in the state. While the percentage of overall funding from each level varies from year to year, across time they are relatively consistent. On average, 26.5 percent of operating costs were funded by federal sources, 11.0 percent by state sources, and 62.5 percent by local sources. Higher costs in 2023 have had an even greater impact to fleet maintenance and the ability to replace fleets. These rising costs have continued to increase and show no signs of decreasing anytime soon. The cost of new vehicles has led agencies to delay capital investments and federal funding has not been able to make up the difference.

Figure 4.2: Historic Transit Operating Revenue, 2004–2023



See Appendix D for financial data

Source: Iowa DOT

4.1. Anticipated Costs

The costs associated with nearly all goods and services typically increase over time, including those in transportation. The increase is known as inflation and is usually measured as a rate or index. This Plan uses a few different indices to measure inflation for the construction of transit facilities, cost of transit vehicles, and compensation for transit employees.

The Producer Price Index (PPI) is utilized for calculating the inflation for transit facilities. Transit facilities can include a wide range of infrastructure, from bus stops and park and ride commuter lots to vehicle storage buildings and maintenance bays. To approximate transit facility construction inflation rates, data from the United States Department of Labor – Bureau of Labor Statistics for new non-residential building construction in the Midwest from 2014-2024 was used. This analysis resulted in an average annual inflation rate of 4.73 percent.

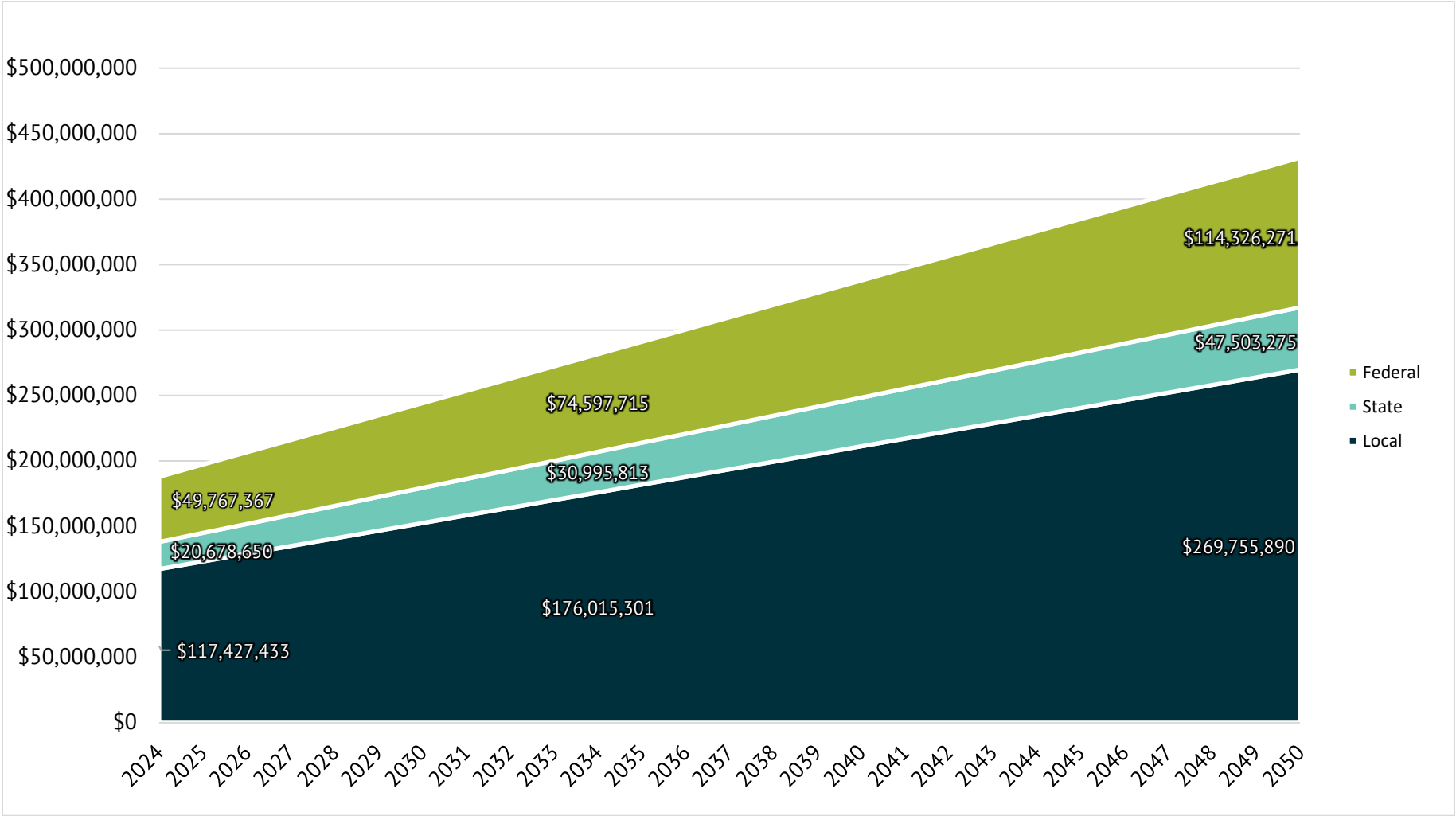
The PPI was also used as the index for calculating the inflation for transit vehicles, such as buses. To approximate these rates, data from Federal Research Economic Data – Economic Research Division for truck and bus bodies from 2013-2023 was used. This resulted in an average annual inflation rate of 4.38 percent.

Lastly, the Employment Cost Index (ECI) was utilized for calculating the inflation for paying transit personnel, such as bus drivers and administrative staff. Data from the United States Department of Labor – Bureau of Labor Statistics for the change in total compensation and cost of labor between 2013-2023 was used to calculate an average annual inflation rate of 2.73.

Operating Costs

Forecasting operating costs represented a combination of a few different approaches, since operations involve a wide variety of activities that occur within public transit. These activities include such things as personnel costs, including pay and benefits, fuel costs, and vehicle and building maintenance costs. Operating costs were largely projected based on historical expenditures on operations. Operations costs from 2004 to 2023 were reviewed, and the average annual percent change during this timeframe was 5.25 percent per year. This rate was applied to forecast operations costs for each year from 2024-2050. These annual costs were divided into federal, state, and local revenue sources based on the average historical percentage of each, as shown in Figure 4.3.

Figure 4.3: Forecasted Transit Operating Costs, 2024–2050



See Appendix D for financial data

Source: Iowa DOT

This cost forecast is based on historic trends with no expected change in service

Personnel Needs

In addition to calculating operations costs based on historical trends, additional future personnel costs were calculated based on feedback provided by the transit agencies in the Transit Needs Survey. Responses in that survey included estimates for the number of additional administrative, maintenance, and driver personnel that are collectively needed to support transit operations now and by the years 2030 and 2050.

Types of public transit employees:

Administrative: employees responsible for conducting payroll, dispatching vehicles, marketing and outreach, planning, and analysis-related activities.

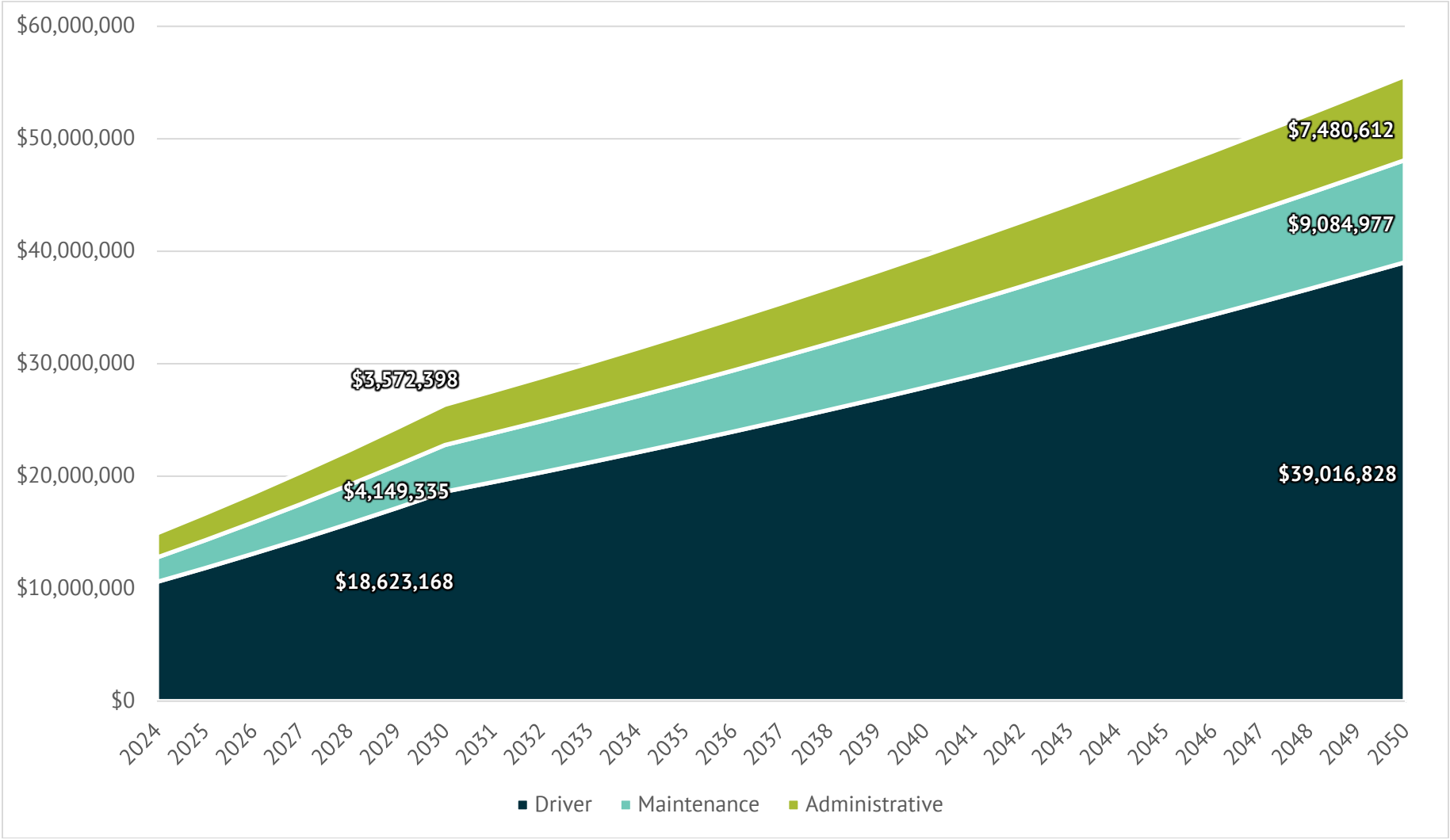
Maintenance: employees performing basic repairs and maintenance actions on the vehicle or facilities, such as a mechanic.

Drivers: employees responsible for operating revenue vehicles to pick up and drop off passengers.

The current annual salaries for these positions were estimated based on data from an Iowa Public Transit Association survey and Bureau of Labor Statistics State Occupational Employment and Wage estimates. To project these personnel costs, the analysis relied on the ECI trend discussed earlier to represent the inflated costs of hiring and employing projected personnel through 2050. The ECI trend includes both the costs of benefits and wages. ECI was estimated on a quarterly basis for a ten-year period between 2013 and 2023 for State and local government workers. The average ECI across this ten-year period was 2.73 percent, and this was used for the personnel cost inflation rate.

Figure 4.4 depicts the forecasted transit personnel costs through 2050. As shown, bus drivers make up a large portion of overall personnel needs for transit agencies. This trend was consistent between all sizes of transit agencies, regardless of whether they were in an urban or rural region.

Figure 4.4: Forecasted Additional Transit Personnel Costs, 2024–2050



See Appendix D for financial data

Source: Iowa DOT

Capital Costs

Unlike operational costs, which reflect the day-to-day costs of conducting transit activities, capital costs represent investments in items such as infrastructure, vehicles, or equipment. This can include passenger vehicles like buses and vans, maintenance and storage buildings, maintenance equipment, bus stops and bus shelters, park and ride commuter lots, and administrative buildings. The capital costs calculated for this Plan grouped these costs into two broader categories of facilities and vehicles, relying exclusively upon transit agency feedback to the Transit Needs Survey.

Facility Needs

Transit facility needs were determined through results of the Transit Needs Survey, which asked agencies to estimate the overall square footage needed in 2030 and 2050 by facility type. The number of needed bus shelters and park and ride locations were also requested.

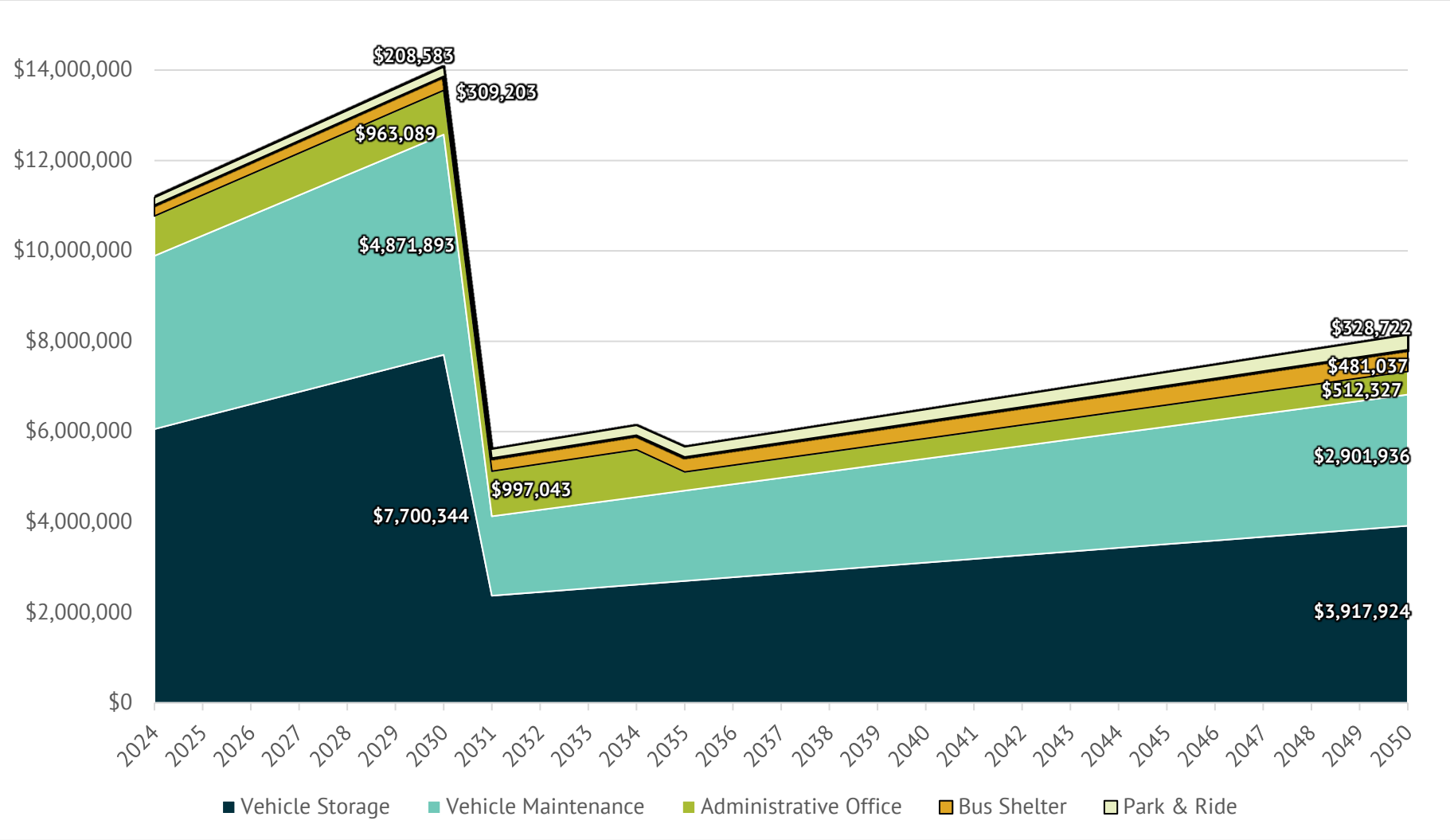
Types of public transit facilities:

- *Vehicle storage*: areas and buildings that serve as storage and protection for transit vehicles, such as buses.
- *Vehicle maintenance*: areas where basic repairs and maintenance activities take place. These can also include wash racks and wash bays.
- *Administrative office*: areas that support the internal staff operations of the transit agency, such as office activities.
- *Bus shelter*: enclosures to protect passengers as they wait at transit stops along established bus routes.
- *Park and ride*: parking lots where passengers can leave their vehicles while they take the bus. Park and ride lots can be constructed in a variety of configurations with surface types consisting of gravel (mainly in rural settings) or pavement.

Average costs for bus shelters were determined through previous research by a consultant partner, LT Leon Associates Inc., who conducted a bus stop Americans with Disabilities Act (ADA) compliance assessment and calculated the average based on data from multiple sources. Park and ride costs were derived from the 2014 Iowa Park and Ride System Plan and broken down further into gravel lots and paved lots. For the remaining facility types, a 2015 National Cooperative Highway Research Program (NCHRP) study on transit facility construction cost estimates was utilized.

These facility costs were adjusted to account for future inflation by using an average of the PPI. A 10-year average between 2013 and 2023 was calculated for a result of 4.73 percent. As facility costs continue to rise, agencies are scaling back facilities or delaying construction in hope of receiving additional funding. This rate was used to project the costs of the facility needs from the Transit Needs Survey to the short-term planning horizon of 2030 and the long-term planning horizon of 2050, as shown in Figures 4.5 and 4.6. These figures show the same information using two different chart types.

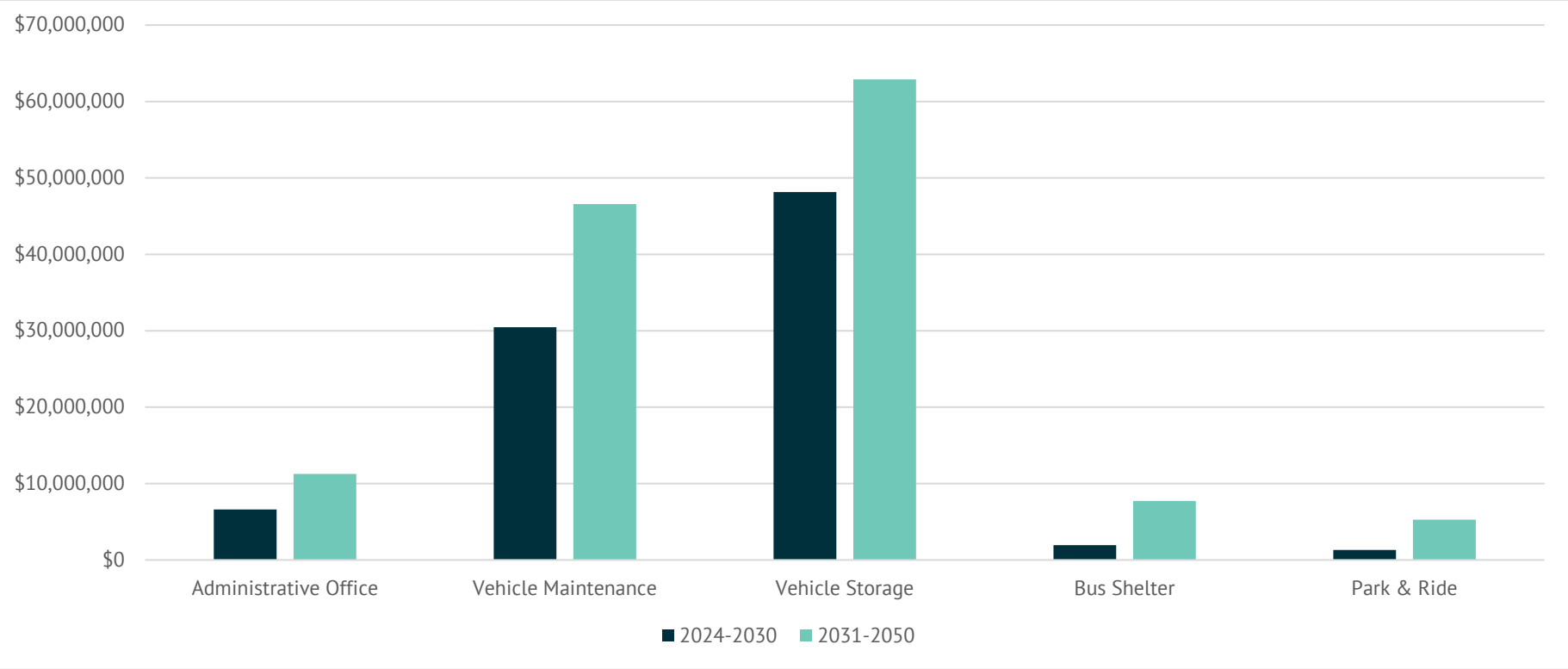
Figure 4.5: Forecasted Transit Facility Costs, 2024–2050



See Appendix D for financial data

Source: Iowa DOT

Figure 4.6: Forecasted Transit Facility Costs, 2024–2050



See Appendix D for financial data

Source: Iowa DOT

As shown in Figures 4.6 and 4.7, the results indicate that vehicle storage and maintenance facilities are a significant need across all transit agencies. These types of facilities help maintain and protect transit vehicles, prolonging their lifespan. By protecting and prolonging the life of vehicles, maintenance and repair costs can be reduced. As will be discussed in the next section, vehicle replacement needs represent a significant capital expense. As vehicle maintenance needs occur with increasing regularity, it drastically increases the overall operation costs described earlier in this chapter. Aging facilities have caused funds reserved for improvements to be redirected toward basic maintenance costs.

Vehicle Needs

Like transit facilities, vehicle needs were also obtained from the Transit Needs Survey. The survey asked how many of each type of vehicle agencies currently need, and how many additional vehicles of each type they will need by the years 2030 and 2050. Several agencies have been moving to different, more cost-effective vehicle types since the pandemic and as older contracts and prices escalate. Since 2020, the anticipated average price of vehicle replacements and acquisitions have doubled.

Types of public transit vehicles:

Sedan, Standard Van, Minivan, Conversion Van: 7- to 15-passenger vehicles, which may or may not be wheelchair lift equipped, with useful life up to 100,000 miles and 4 years.
Light Duty Bus: up to 25-passenger vehicles with useful life of 120,000 miles and 4 years.
Medium Duty Bus: up to 30-passenger vehicles with useful life of 200,000 miles and 7 years.
Heavy Duty Bus: up to 40-passenger vehicles with useful life of 300,000 to 350,000 miles and between 10 and 12 years.
Medium, Heavy Trolley: up to 40-passenger vehicles like buses but exterior (and usually interior) designed to look like a streetcar from the early 1900's, and useful life of 13 years.

Once the quantity and types of vehicle needs were known and distributed evenly across the short-range planning horizon of 2024 through 2030 and the long-range planning horizon of 2031 through 2050, this information was entered into an analysis tool designed to optimize future investment in transit vehicles. This software, called TERM-Lite, was developed by the Federal Transit Administration (FTA) Office of Budget and Policy and designed to account for typical rehabilitation, refurbishment, or replacement timelines for vehicles, while also factoring in vehicle condition and mileage of the existing vehicle fleet.

Figure 4.7 depicts the forecasted costs of replacing the existing transit vehicle fleet, in addition to vehicle expansion needs that the transit agencies indicated in the Transit Needs Survey. As shown, backlogged vehicles that are beyond their expected useful lives were front loaded into the forecast. This is based on an unconstrained funding scenario, although the reality is that several backlogged vehicles will not be replaced for a period of years after 2020. After 2030, expansion vehicle rehabilitation and replacements increasingly account for greater portions of overall vehicle costs. Since this information was gathered from the transit providers, the costs associated with vehicle needs have nearly doubled, with no clear sign of decreasing in the near future. As for the life of this plan, we can state that transit providers across the state are anticipating increased vehicle costs in the near and far future, but the figures in this document may be providing an underestimate to the actual costs of transit.

Figure 4.7: Forecasted Transit Vehicle Costs, 2024–2050

See Appendix D for financial data

Source: Iowa DOT

Cost Estimate Conclusions

Overall future cost estimates are higher than historic average expenditure trends. This is primarily due to the incorporation of additional personnel, facility, and vehicle needs that were reported in the Transit Needs Survey by the transit agencies. As discussed earlier, vehicle costs are much higher, near doubling from previous forecasts. This is partially due to the increasing number of transit vehicles that are continuing to be utilized beyond their useful life and difficulties of procuring new vehicles. These older vehicles result in much higher costs to maintain and repair over time, which increases operational costs. Older vehicles are also less fuel efficient compared to more modern vehicles and electric or hybrid buses.

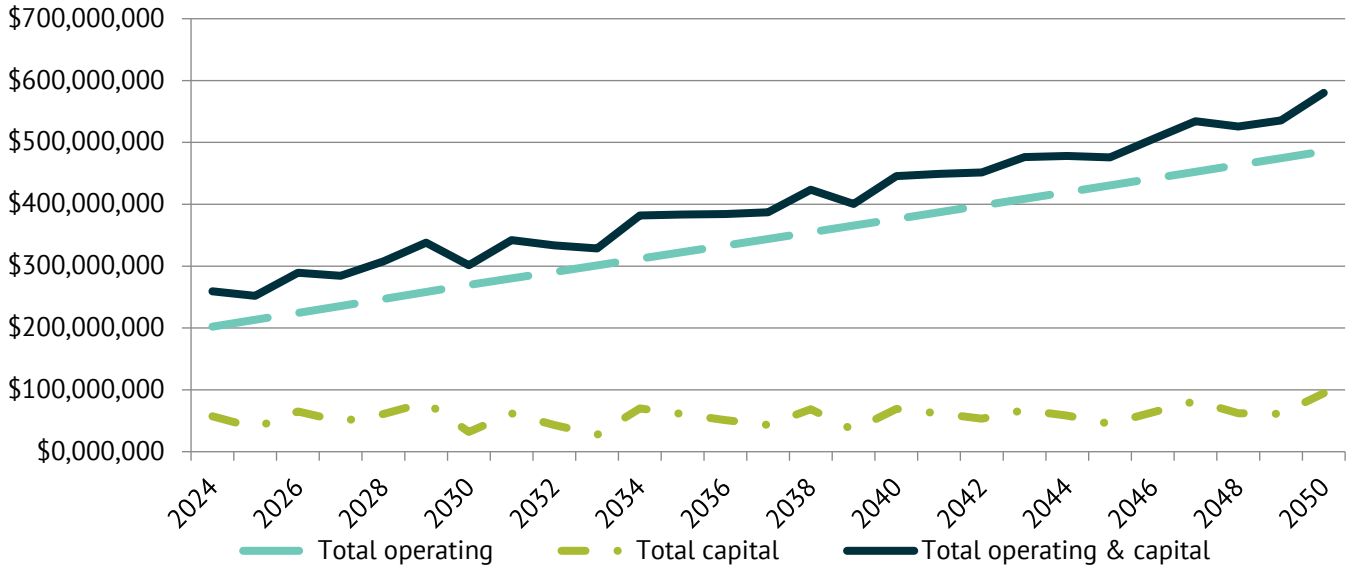
Table 4.2 shows the average annual projected operating and capital costs for the short-term timeframe of 2024-2030 and the long-term timeframe of 2031-2050, as well as the average annual cost for the overall period of 2024-2050. Figure 4.8 depicts the forecasted costs, which includes operating and capital costs. This cost forecast will be compared to the forecasted revenue (discussed next in Section 4.2) in Section 4.3, which examines the overall funding shortfalls. Understanding funding shortfalls will assist with identifying potential mechanisms to generate additional revenue.

Table 4.2: Average Annual Projected Transit Operating and Capital Costs ($ millions)

Funding Type	2024-2030 average annual costs	2031-2050 average annual costs	2024-2050 average annual costs
Capital	$54.620	$58.975	$55.572
Operating	$190.243	$299.809	$271.402
Total	$244.864	$358.783	$329.249

Source: Iowa DOT

Figure 4.8: Forecasted Transit Operating and Capital Costs, 2024–2050



See Appendix D for financial data

Source: Iowa DOT

4.2. Expected Revenue

Revenue Projections

Operating Funding

Operational funding was calculated by using historical trends in federal transit assistance, state transit assistance, and local funding sources between 2004 and 2023. This trend was projected out to 2050 to forecast expected funding amounts, as shown in Figure 4.9. On average, federal funds account for approximately 26.5 percent of the budget, while state funds account for 11.0 percent. The remaining portion is covered by local funding at 62.5 percent of total funding.

Federal Transit Assistance

The Federal Transit Administration of the U.S. Department of Transportation administers programs offering financial assistance for capital, operating, planning, and training assistance of local public transportation. For operations, the two most significant sources of funding are Urbanized Area Formula Funding (Section 5307) and the Rural Area Formula Funding (Section 5311).

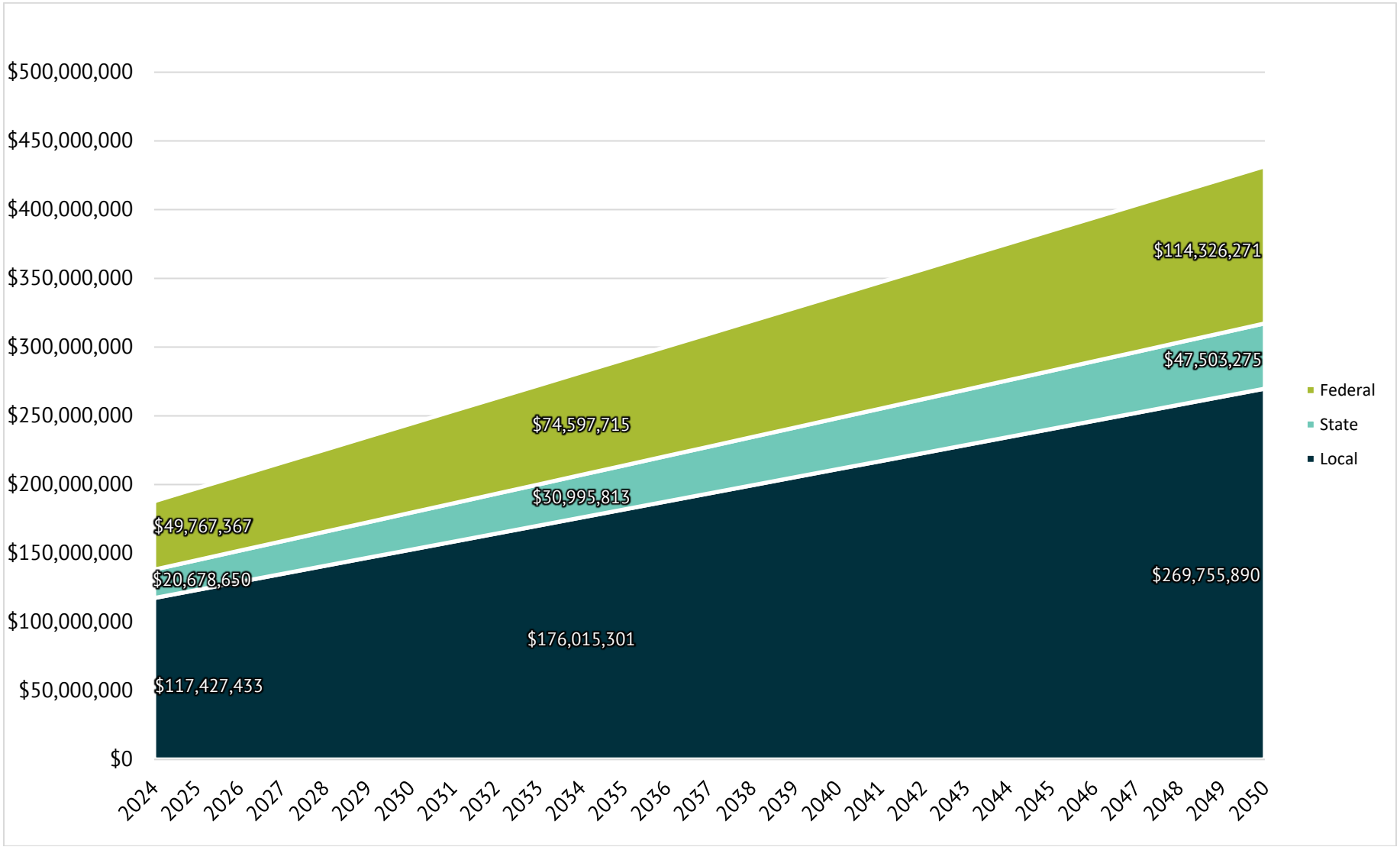
State Transit Assistance (STA)

Iowa devotes an amount equal to four percent of the fees for new registration collected on sales of motor vehicle and accessory equipment to support public transit. Funding is distributed by an STA formula that is based on each transit system's performance during the previous year in terms of rides, miles, and local funding support. These formula funds are usable for support of any operating, capital, or planning costs related to the provision of public passenger transportation, along with addressing long range public transit needs.

Local Transit Funding

Local funding support for transit includes fares or contributions received from riders, revenues from contracts with social service agencies, counties or employers, student fees, and taxes levied by local cities and counties. Cities are allowed under the Iowa Code to levy a dedicated property tax for transit of 95 cents per $1,000 assessed valuation. Other local tax funding comes from general fund levies.

Figure 4.9: Forecasted Transit Operating Funding, 2024–2050



See Appendix D for financial data

Source: Iowa DOT

Capital Funding

Funding for capital projects and expenditures was calculated by examining historical trends in Bus and Bus Facilities Formula Grants, Discretionary Competitive funding, Public Transit Infrastructure Grants (PTIG), and Congestion Mitigation and Air Quality (CMAQ) funding. Other funding potentials include competitive grants through Iowa's Clean Air Attainment Program (ICAAP), and Surface Transportation Block Grant (STBG) funds that are distributed to the State's metropolitan planning organizations (MPOs) and regional planning affiliations (RPAs). These sources have not been included in the revenue projections as the amount spent for transit projects varies considerably from year to year.

5339 Funding

Bus and Bus Facilities Formula Grants (Section 5339) are used to finance capital projects to replace, rehabilitate, and purchase buses and related equipment, or to construct bus-related facilities. This is a formula program with state apportionments based on population size; the funding is provided as a statewide appropriation for small urban and regional transit systems. Iowa receives individual allocations for each large urban transit system serving populations between 50,000 and 200,000, but the large urban funds are pooled since individual allocations would not allow for bus purchases on an annual basis. All funds are spent on vehicle replacements rather than on expansion vehicles or bus-related facilities and are distributed utilizing the vehicle rankings of the Public Transit Management System (PTMS), which prioritizes bus replacements based on age and mileage of vehicles.

Discretionary Funding

Discretionary competitive funding is a federal funding source in which all states compete for funds nationally to be used for bus replacement. Should Iowa be awarded this funding, PTMS is utilized to prioritize applications.

CMAQ Funding

CMAQ funds Iowa's Clean Air Attainment Program (ICAAP) and helps finance transportation projects and programs that result in attaining or maintaining federal clean air standards. A portion of Iowa's CMAQ funding is awarded through a competitive grant program; transit improvements such as construction of new facilities and bus expansion projects are eligible costs. In recent years, Iowa has also allocated $3 million annually to statewide bus replacement. The $3 million annual allocation is the only portion of Iowa's CMAQ funding that is shown in the projections; competitive grant awards for transit are not included. As this $3 million annual allocation is not expected to grow, it is imperative to note that with each year, CMAQ funding's buying power decreases due to rising costs in inflation. In order for this funding source to remain competitive, it is essential that more funding be allocated to it.

Carbon Reduction Program (CRP)

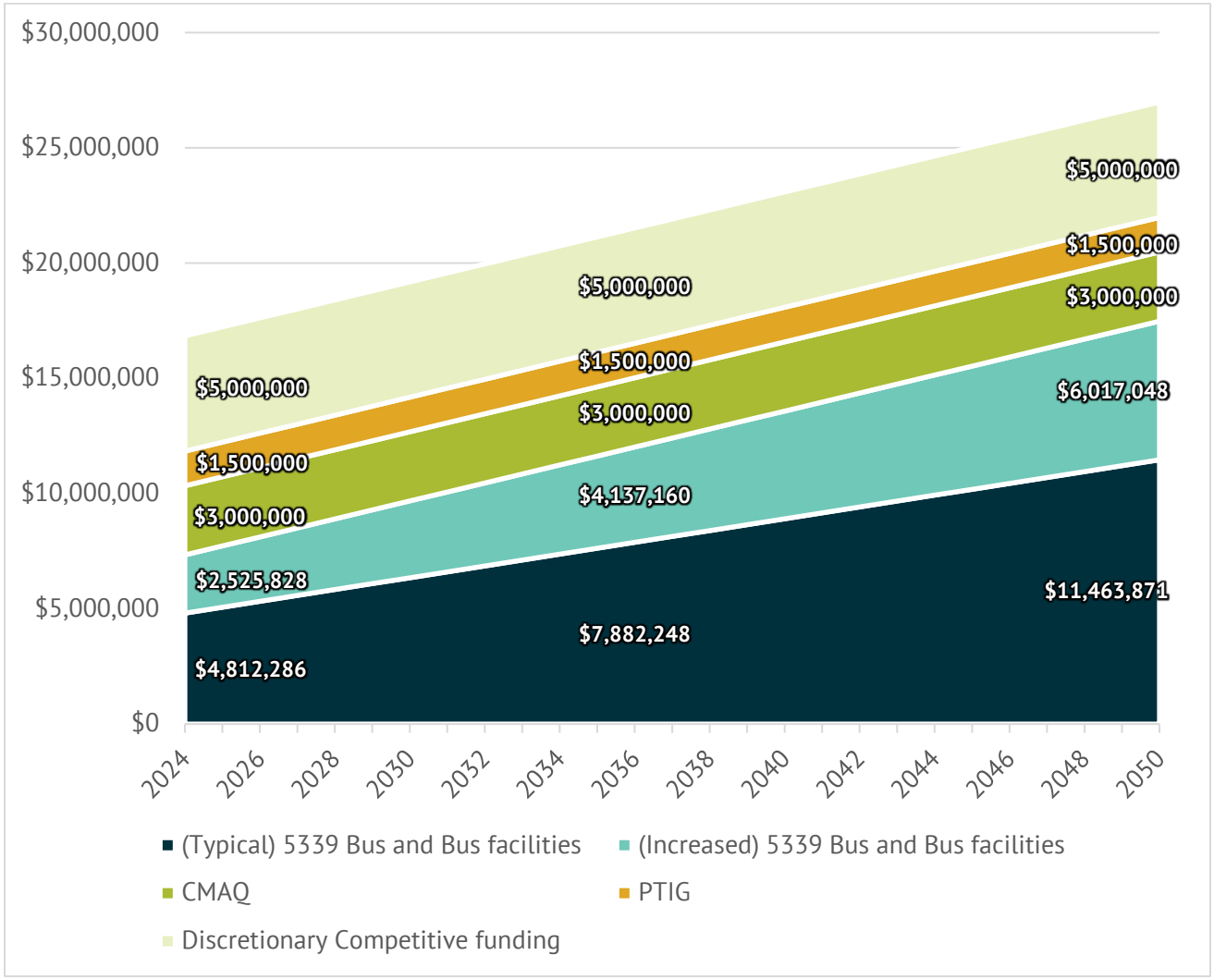
The CRP program was authorized through the Infrastructure Investment and Jobs Act (IIJA) with the purpose of reducing transportation emissions through the development of state Carbon Reduction Strategies (CRS) and by funding projects designed to reduce transportation emissions.

Public Transit Infrastructure Grant (PTIG)

This program is funded by an annual appropriation by the state legislature to fund some of the vertical infrastructure needs of Iowa's transit systems. Projects can involve new construction, reconstruction, or remodeling, but must include a vertical component to qualify. Projects are evaluated based on the anticipated benefits to transit, as well as the ability to complete the projects quickly. PTIG funding has remained constant at $1.5 million, but its buying power declines each year due to inflation.

Figure 4.10 shows the forecasted transit capital funding to the year 2050. As shown, PTIG, CMAQ, and Discretionary Competitive funding sources have been held constant at $1.5 million, $3 million, and $5 million, respectively, through the long-term planning horizon of 2050. Historical trends for Section 5339 funds have generally increased over time and were projected to continue to do so through 2050. Starting in 2018, these funds have received an additional annual boost through congressional appropriations.

Figure 4.10: Forecasted Transit Capital Funding, 2024–2050



See Appendix D for financial data

Source: Iowa DOT

Funding Scenarios

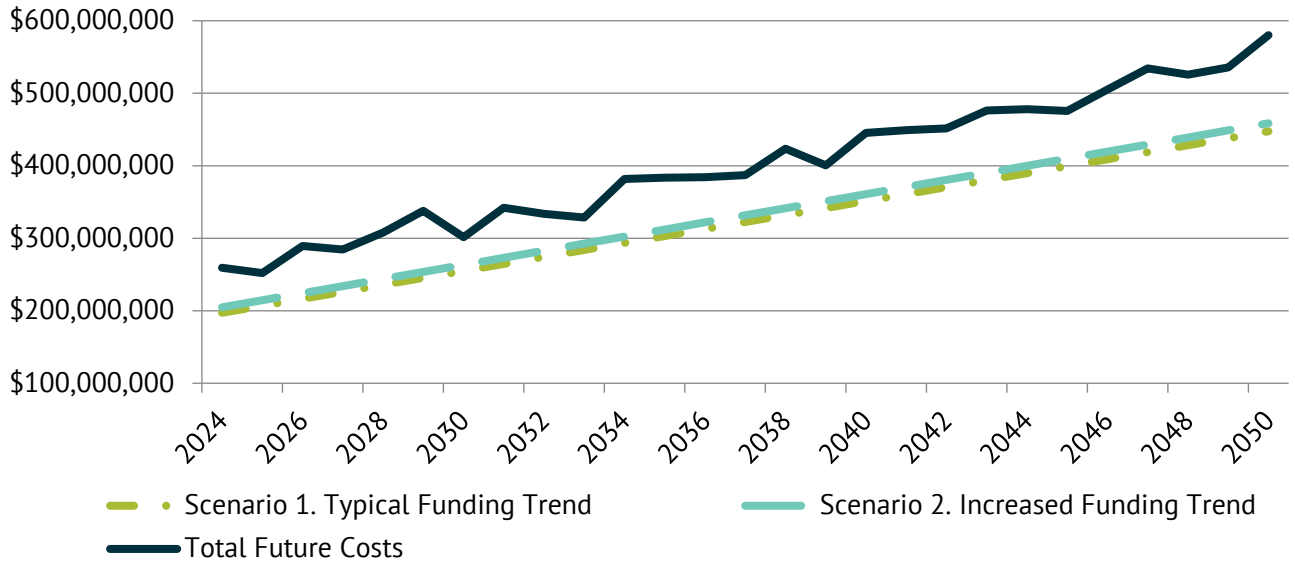
The operating and capital revenue projections discussed previously were combined and projected out to 2050. Average annual Iowa DOT revenues (Table 4.3) over the life of the Plan were then calculated for two different scenarios, which differ based on availability of PTIG funding, competitive funding, and the inclusion of additional Section 5339 funding. PTIG funding is dependent on an annual appropriation from the state legislature. As mentioned earlier, available capital funding from discretionary funds and Section 5339 funds have varied in the past. Competitive funding is dependent upon Congressional appropriation and competitive with other states across the nation, making this an unpredictable source of funds. Additionally, Section 5339 funding has increased significantly in recent years; however, it is unknown if this increased amount will continue. Given the variability of these two sources of funds, only CMAQ and the pre-2018 level of Section 5339 Bus and Bus Facility funding levels were used to forecast a baseline or typical funding scenario. PTIG, competitive funds, and the increased amount of Section 5339 since 2018 were added to the typical funding scenario to generate an alternative funding scenario for comparison. Having two scenarios of typical funding and optimistic funding levels helps illustrate the potential range of public transit revenue that Iowa can expect to receive in the future.

Table 4.3: Average annual public transit revenue, 2024 - 2050 ($ millions)

Scenarios	Average Annual Iowa DOT revenue
Scenario 1: Typical funding	$249.35
Scenario 2: Increased funding	$258.62

Source: Iowa DOT

Figure 4.11: Forecasted Costs and Funding Scenarios, 2024-2050



See Appendix D for financial data

Source: Iowa DOT

4.3. What are the shortfalls?

The anticipated future costs and expected revenues are compared to identify financial gaps. These gaps represent shortfalls in transit funding that will need to be addressed to support the operating and capital investments that have been identified as priorities. As shown in Figure 4.11, total future costs exceed available revenues in both funding scenarios.

Implications of the shortfall

- Expanding storage facilities will decrease the overall operational costs of maintaining vehicles over time. However, the number of vehicles beyond useful life right now may result in vehicles being prioritized over facilities.
- Increased vehicle costs will make it difficult for agencies to replace their fleet, leading to higher demand for local funding.
- Since 2020, the cost to expand fleets has increased dramatically, which will force agencies to delay fleet replacements and force older buses to go beyond their useful life benchmarks, leading to higher costs of operation.
- Impacts to operational funding may affect facilities or vehicles in terms of deferred maintenance and the hiring or retention of personnel.
- Decreasing staff levels as a cost saving measure, particularly drivers, will result in a decrease to overall transit service and further limit farebox revenue and additional sources of funding.
- If shortfalls in transit funding are not addressed, priority operating and capital investments cannot be supported.
- Increase in drivers' wages will make operational funding shortfalls worse.
- Rising inflation rates are reducing transit agencies' limited buying power every year, which will require agencies to find new funding sources.

4.4. Potential Revenue Sources

With the funding shortfall and its impacts noted in the previous section, it becomes imperative to examine other potential sources of revenue. Additionally, it is prudent to continuously evaluate alternative funding sources for public transit and passenger transportation services for their advantages, disadvantages, and overall viability. This is particularly important as circumstances change, or, as in the case of this Plan, agencies work to right-size transit service and reduce the number of capital assets that are beyond their useful lives.

Input was gathered from a variety of stakeholders on potential mechanisms or enhancements that could be made to more efficiently support Iowa's public transit system and to right-size transit service. This feedback resulted in the list shown in Table 4.4, which indicates the type of mechanism proposed, as well as potential advantages of implementing it.

Table 4.4: Potential Revenue Sources

Type of Financing	Description/Mechanism	Advantages
Population Threshold (Iowa Code 28M.2)	Reduce population threshold for Regional Transit District (RTD) formation for counties from 150,000 to 90,000. The current RTD population threshold restricts regional districts to Polk County and contiguous counties in central Iowa and Linn County and contiguous counties in eastern Iowa. Reducing the population threshold would allow an additional six counties to collaborate on transit funding through the formulation of a multi-city/county RTD to do so.	• Increases the number of authorized RTDs.
Property Tax (Iowa Code 28M.5)	Increase the property tax cap from $0.95 to $1.45 per $1,000 of taxable valuation for Regional Transit Districts and municipal transit levies. Two cities are currently capped (Iowa City and Windsor Heights), and more will reach the cap in the future.	• Collection and administration process already in place. • Broad coverage.
Local Option Sales Tax (Iowa Code 422B)	Enable Regional Transit Districts to levy local option sales taxes to meet the public transportation needs of those who work and live in their district. This taxing authority can be used in conjunction with several infrastructure projects, but often is associated with transportation. Iowa RTDs, currently only available to counties with at least 150,000 residents, have the power to implement a property tax of up to 95 cents per $1,000 of assessed value; municipalities also have this authority, but it cannot be used in conjunction with an RTD levy.	• Collection and administration process already in place. • Revenue generated locally and available for local public transit priorities.

Sources: Iowa DOT, Iowa Public Transit Association

Table 4.4 (continued): Potential Revenue Sources

Type of Financing	Description/Mechanism	Advantages
Rebuild Iowa Infrastructure Fund (RIIF) (Iowa Code 8.57(5))	Sustain the Rebuild Iowa Infrastructure Fund (RIIF) to help with a variety of transit projects including maintenance facility improvements, construction of bus storage buildings, and repair of bus shelters. In the past, RIIF expenditures have been reduced or eliminated for some programs; sustaining this amount of funding would help ensure continued transit infrastructure improvements.	• Collection and administration process already in place.
State Transit Assistance (STA) (Iowa Code 321.145(2)(a) (1))	Increase State Transit Assistance standing appropriation from 4 percent to 5 percent (equivalent to the state sales tax) of the fees for new registration collected on sales of motor vehicle and accessory equipment to support public transportation. Most of this funding is distributed by the STA formula that is based on each transit system's performance during the previous year in terms of rides, miles, and local funding support. These formula funds are usable for support of any operating, capital, or planning costs related to the provision of public passenger transportation.	• Collection and administration process already in place.
Vehicle Rental/Leased Car Sales Tax	Add vehicle rental/leased car sales tax to support public transit. Iowa currently devotes a portion of new vehicle registrations to fund public transit. Vehicle rental and lease taxation would place a premium on the usage of such personal transportation options compared to other more cost-effective modes of transit.	• Collection and administration process already in place. • Provides revenue source based on ability to pay. • Proportional to cost of vehicle.
TNC Tax	Establish Transportation Network Company tax. Research shows that TNCs increase the number of vehicle trips by users and draw riders away from alternative transit and mobility options, thus decreasing the operating revenue of the bus systems. Taxation of TNC usage would balance the return-on-investment of the public transportation infrastructure versus the net negative impacts of congestion and increased road surface deterioration. Additionally, TNC usage and ridership data would be shared with the state for planning purposes to more effectively analyze trends in transportation infrastructure and forecast future needs. Adequate planning becomes a challenge when vital transportation data is obscured or denied outright.	• Discourages single-occupant vehicle usage. • Enables better data sharing of road usage by TNCs.

Sources: Iowa DOT, Iowa Public Transit Association

4.5. Economic Impact of Public Transit

In addition to being a vital service for Iowa residents, public transit also delivers positive economic impacts, supporting the case for exploring additional funding mechanisms, as discussed in the prior section. Research was conducted to better understand the economic impact of public transit, as well as the necessary inputs and methodology to tailor it to Iowa's public transit system. The study discussed below is presented as an example of research that helps quantify the economic benefit of public transit; further research would be needed to fully address this topic for Iowa.

Research

The study used to inform the proposed strategy on benefit-cost analysis and justify investment in the public transit system was conducted by the Upper Great Plains Transportation Institute of North Dakota State University and published by and for U.S. DOT's National Center for Transit Research (NCTR) in 2014, titled "*Cost-Benefit Analysis of Rural and Small Urban Transit*."[i] The intent of the study was to create a methodology for quantifying the benefits of public transit services in smaller communities. This type of quantification of services has generally gone unaddressed and unmeasured in past studies as most have focused on much larger urban transit systems. Given the smaller size of Iowa's transit systems and the coverage of Iowa's regional transit systems across wide swaths of rural area, a study like North Dakota State's research is very applicable for informing this Plan and any subsequent benefit-cost analyses. For Iowa, the "small urban areas" referenced in the study would include service in metropolitan areas between 50,000 and 200,000 population, and the "rural areas" would include Iowa's small urban and regional transit systems.

According to Dr. Jeremy Mattson, a researcher from North Dakota State University, their study of small urban and rural transit systems revealed benefits that could be quantified and categorized into three types:

- ***Transportation cost savings***: costs that would have been incurred if the transit rider used a different mode in absence of transit
- ***Low-cost mobility benefits***: benefits of trips made that would otherwise have been foregone in the absence of transit
- ***Economic impacts:*** economic activity resulting from the existence of transit operations

Total benefit amount was divided by the total cost amount to determine the benefit-cost ratio, which can then be compared between small urban and rural transit services. The table highlights the national results found from the study and can serve as a rough approximation or starting point when attempting to perform a similar analysis in Iowa. As shown, while transit service in rural areas showed a much higher benefit per trip compared to small urban service, it was the cost to operate transit service in rural areas that brought the benefit-cost ratio down and tilted it in favor of small urban areas. It should be noted that both types of transit service resulted in a ratio greater than 1.0, which indicates that there is a positive return on investment.

Table 4.5: National Summary: Transit Benefits, Costs, and Their Benefits Analysis Results

Transit Benefits	Small Urban Areas Benefit per Trip	Rural Areas Benefit per Trip
Vehicle cost savings	$0.32	$0.38
Chauffeuring cost savings	$0.56	$1.21
Taxi cost savings	$1.04	$1.34
Travel time cost savings	-$0.47	-$0.58
Accident cost savings	$0.07	$0.15
Emission cost savings	-$0.01	-$0.49
Cost of foregone medical trips	$4.16	$6.65
Cost of foregone work trips	$4.24	$5.00
Cost of other foregone trips	$0.52	$0.83
Total Transit Benefits	*$10.43*	*$14.49*

Source: North Dakota State University – Small Urban and Rural Transit, Upper Great Plains Transportation Institute

Table 4.6: National Summary: Transit Benefits, Costs, and Their Costs Analysis Results

Transit Costs	Cost per Trip	Cost per Trip
Operational costs	$4.49	$10.78
Capital costs	$0.33	$1.03
Total Transit Costs	*$4.83*	*$11.81*
Benefit-Cost Ratio	***2.16***	***1.20***

Source: North Dakota State University – Small Urban and Rural Transit, Upper Great Plains Transportation Institute

While the results may address the 'Transportation cost savings' and 'Low-cost mobility benefits' categories for quantifying the overall benefit of public transit, the researchers also examined transit's economic impact. There are several perspectives and factors that could be utilized when trying to quantify economic impact; however, the study focused on comparisons of financial investment in public transit through funds spent outside the transit area and inside the transit area. Expenditures, such as on large capital assets like buses, in most cases involve the procurement of vehicles from outside the transit service area. As a result, these costs were considered to have a negative economic effect on the local area as those investments represent local funding that is leaving the area. In contrast, operating costs are typically spent on locally sourced maintenance supplies, contributing directly to the local economy. These expenditures also generate indirect benefits, including job creation and support for local businesses.

When the economic framework from the study was applied to the state of North Dakota, they found that the results also displayed a net benefit in terms of economic impact. The study found that in North Dakota, every $1 spent on public transit produced $1.35 as a net economic output, with $0.57 worth of benefit added to the economy as local gross domestic product — a $0.37 net increase to local wages when travel time costs are factored in. Additionally, for every $1 million in investment, 10.3 jobs were produced in the local area.

The researchers expanded the economic model to calculate benefit-cost rations for all states with available data in the FTA's National Transit Database (NTD). Iowa's findings also show a new benefit across most transit services — except for demand-response service in small urban systems, which showed a net loss with a ratio of 0.82. When compared nationally with other transit systems (for which reported data was available), Iowa ranked 5th in the nation overall for the benefit-cost ratio of small urban systems, and 8th for rural transit systems. This ranking was determined out of 46 states for small urban area transit systems and 48 states for rural area transit systems. States not included lacked sufficient data for those areas.

Table 4.6: Benefit-Cost Ratios for Iowa in Small Urban and Rural Areas

	Fixed-Route	Demand-Response	Small Urban Total	Rural Total
Iowa	3.69	0.82	3.22	1.87

Source: North Dakota State University – Small Urban and Rural Transit, Upper Great Plains Transportation Institute

Implications of a benefit-cost analysis

- Models exist that can attempt to quantify net benefit and economic impact, which can serve as a starting point for conducting similar analyses for Iowa's public transit services.
- Results show that through a broad statewide examination of reported data, Iowa ranks among the top states in terms of benefit-cost for providing small urban and rural transit service.
- Positive benefit-cost analysis and economic impact assessments can help justify the implementation of alternative revenue generating mechanisms to fund public transit.

National Public Transit Economic Impact

The benefits of public transit are not limited just to Iowa. Nationally, where investments in public transit occur, we see general benefits for communities as well. *The Economic Impact of Public Transportation Investment: 2020 Update*[ii] is a comprehensive report that evaluates the economic benefits of investing in public transit in the United States, developed by the American Public Transit Association (APTA). It suggests that investment in transit infrastructure and operations not only supports immediate job creation but also yields long-term economic growth. For every $1 invested annually in public transportation, we see about a 5-to-1 economic return on investment. The report outlines three funding scenarios, showing that higher levels of investment lead to greater ridership, reduced household transportation costs, improved business productivity, and significant reductions in car ownership and congestion. These benefits are especially impactful for lower-income households and urban economies, where access to reliable transit can expand labor markets and reduce the cost of doing business.

Beyond direct economic returns, the report highlights how public transportation investment contributes to broader societal goals, including environmental sustainability, safety improvements, and equitable access to mobility. It emphasizes that while the study focuses on economic impacts—such as job creation, GDP growth, and tax revenue—additional benefits like reduced emissions, improved public health, and land use efficiency are also critical but not monetized in this analysis. By 2040, under APTA's recommended funding levels, the U.S. could see annual economic impacts exceeding $34 billion and the creation or support of over 340,000 jobs.

As of the report's publication, U.S. transit ridership had remained relatively flat since 2008, largely due to underinvestment in infrastructure and service quality. The backlog for maintaining a state of good repair was estimated at nearly $90 billion (2015), with declining reliability and speed contributing to ridership losses in many regions. However, cities that invested in expanding and modernizing transit systems saw ridership gains. Surveys revealed that a significant portion of transit users—especially bus riders—do not have access to a car, highlighting transit's role as a mobility lifeline. The report also notes the growing integration of transit with other mobility options like TNCs, micromobility, and carsharing, which can complement and extend the reach of public transportation.

Iowa Public Transit Economic Impact

Statewide Transit Economic Impact Study

The 2025 *Statewide Transit Economic Impact Study*[iii], commissioned by the Iowa Public Transit Association (IPTA) and conducted by Iowa State University's CyBIZ Lab and Extension teams, provides a comprehensive analysis of the economic value generated by public transit systems across the state. Using input-output modeling and regional data from Cedar Rapids, Clinton, and Region 13 (Southwest Iowa Transit Agency/SWITA), the study reveals that public transit is a critical economic engine, not just a mobility service. For every dollar invested in Iowa's public transit, the state receives approximately $3 in return, with urban areas seeing even higher returns of up to $6 per dollar. In total, the sampled regions support over 219 jobs, generate $9.6 million in labor income, and contribute more than $456 million in economic output annually. Public transit also facilitates significant retail spending—up to $5.6 million in Cedar Rapids alone—and enables access to employment, healthcare, and essential services for thousands of Iowans.

The study highlights that public transit is especially vital for vulnerable populations, including seniors, low-income workers, and individuals with disabilities. Over half of surveyed riders use transit four or more times per week, and nearly half rely on it to commute to work. Many respondents reported that transit helped them maintain employment, gain independence, and reduce transportation costs. However, the report also identifies pressing challenges: declining ridership post-pandemic, aging infrastructure, limited funding due to property tax caps, and competition from private transport providers. To address these issues, the study recommends expanding and diversifying funding sources, investing in fleet modernization and ADA-compliant infrastructure, and strengthening partnerships with employers, healthcare providers, and educational institutions. A standout example is SWITA's employer-backed workforce transportation model, which provides over 100,000 rides annually and demonstrates how private-sector collaboration can sustain rural transit. Overall, the report positions public transit as a strategic investment in Iowa's economic resilience, equity, and community well-being.

Appendix E in this document includes a comprehensive list of partnering opportunities across the state with major employers and other activity centers. All of these opportunities are derived from the Passenger Transportation Plans from the local planning agencies.

Greater Des Moines Transit Funding Study

The Greater Des Moines Transit Funding Study (November 2017) was commissioned by the Greater Des Moines Partnership in collaboration with the Des Moines Area Regional Transit Authority (DART) and prepared by HNTB Corporation. Its purpose was to develop a long-term funding strategy for public transit in the region, addressing DART's structural deficit and planning for future service expansion. The study involved extensive stakeholder engagement, including workshops with city officials, business leaders, and community organizations. It evaluated DART's financial outlook, explored alternative funding sources, and modeled various funding scenarios to sustain and grow transit services. The study also considered the impact of emerging mobility technologies like ridesourcing and autonomous vehicles.

DART had made significant investments in infrastructure and technology, including the opening of DART Central Station and implementation of real-time tracking and mobile ticketing. Despite these improvements, operating costs have outpaced revenue growth, largely due to limitations in property tax funding. The study's financial modeling revealed that maintaining current service levels would require incremental property tax increases, reaching the legal cap of $0.95 per $1,000 of taxable value by 2025. A moderate growth scenario would enhance service frequency, expand routes, and improve infrastructure, but would require new revenue sources. Stakeholders broadly supported expanding transit services and identified a dedicated sales tax as the preferred long-term funding strategy. Other options included vehicle taxes, hotel/motel taxes, and private partnerships. Near-term recommendations included increasing property tax levies where possible, using tax increment financing (TIF) funds, and expanding private sector contributions.

The study also explored the role of ridesourcing platforms like Uber and Lyft, suggesting that up to 10% of DART's service could be cost-effectively replaced with on-demand options, particularly in suburban areas during off-peak hours. While this could yield up to $1 million in annual savings, stakeholders cautioned that subsidizing such services could lead to unpredictable cost increases. The majority of DART's network remains cost-effective as fixed-route service, and integrating ridesourcing for first- and last-mile connections could enhance ridership. Stakeholders strongly supported continued exploration of new mobility technologies and integration with DART's digital platforms. Ultimately, the study concluded that a legislative strategy to secure additional funding options—particularly a dedicated sales tax—would be essential for sustaining and expanding transit services in Greater Des Moines.

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[i] "Cost-Benefit Analysis of Rural and Small Urban Transit", 2014 Small Urban and Rural Transit Center, Upper Plains Transportation Institute, North Dakota State University: https://www.nctr.usf.edu/wp-content/uploads/2014/01/77060-NCTR-NDSU031.pdf

[ii] Economic Development Research Group. (2020). *Economic impact of public transportation investment: 2020 update*. American Public Transportation Association. https://www.apta.com/wp-content/uploads/APTA-2025-Public-Transportation-Fact-Book.pdf

[iii] "Statewide Transit Economic Impact Study", 2025 Iowa Public Transit Association: