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Table of Exhibits

Transit in the United States

Total Federal Assistance Applied to Transit and Unlinked Passenger Trips

The Federal Transit Administration (FTA) uses federal funds to offset operating, capital, and planning costs for agencies. Since 2007, ridership has increased 2.9 percent, while federal assistance for transit has increased 21.9 percent (2016 constant dollars).

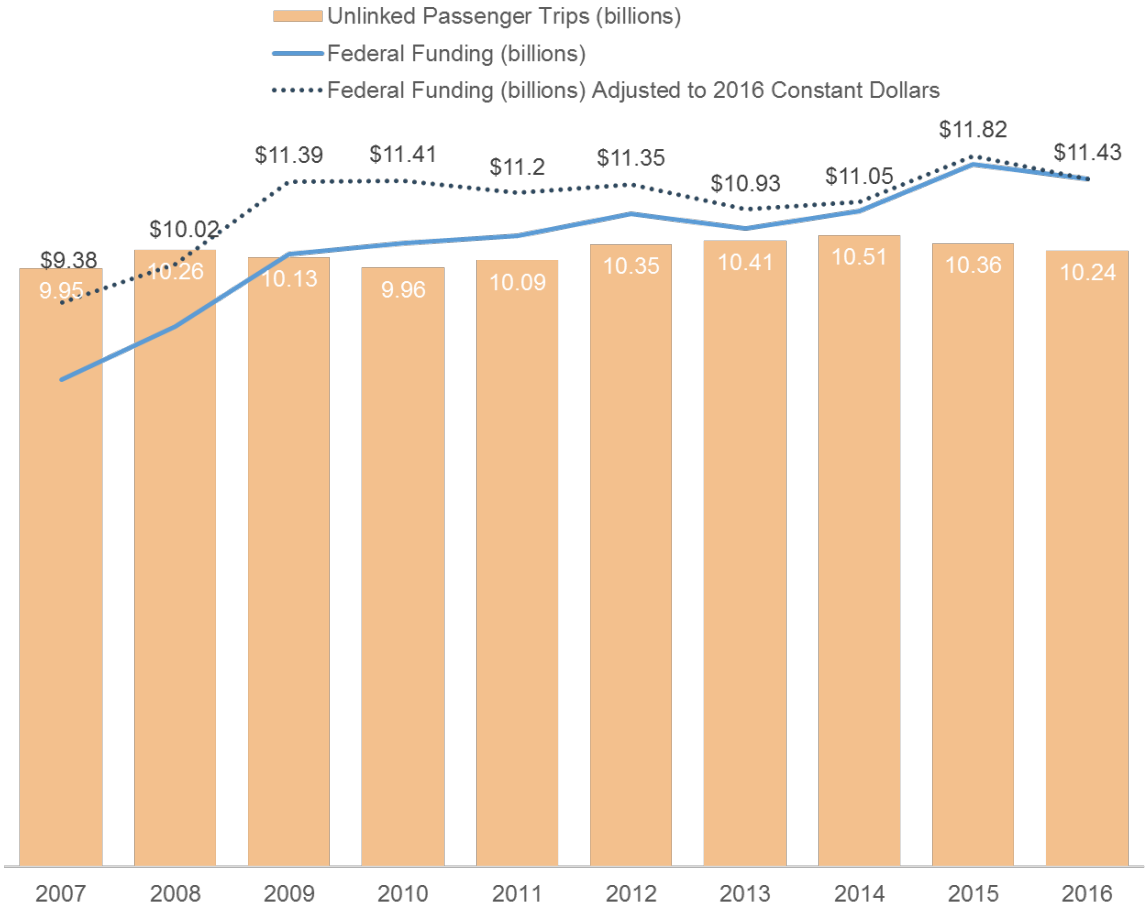

Exhibit A 1: Unlinked Passenger Trips and Funds Applied to Transit (2007-2016)

Number of Transit Agencies

Transit agencies that receive or benefit from FTA Urbanized Area Formula Program are required to report financial data and non-financial operating statistics to the National Transit Database (NTD) program. In order to receive funding from FTA, transit agencies must report to the NTD and follow NTD requirements. FTA uses NTD data to apportion funding to transit agencies in the United States. Transit agencies not receiving FTA funds

are encouraged to submit data to the NTD on a voluntary basis to help create a clearer picture of the public transit system throughout the United States.

The NTD separates urban and rural recipients and beneficiaries into two reporting groups: urban reporters and rural reporters. In 2016, 953 urban transit agencies, 54 States, 1,277 subrecipients and 127 Tribes reported data to the NTD program.

Reduced Reporters

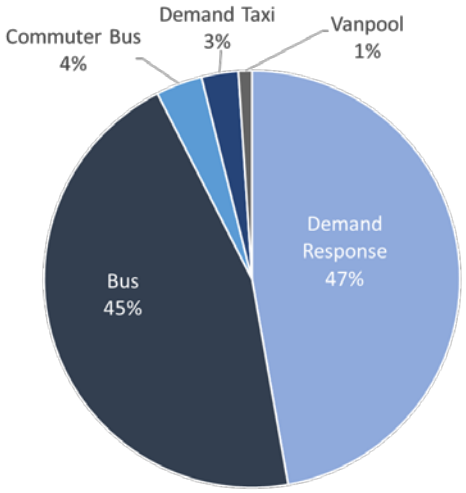

Exhibit A 2: 2016 Reduced Reporter Modes

Prior to 2011, agencies operating less than ten revenue vehicles were granted a waiver from reporting financial and service data. Agencies receiving this waiver, called the 9 or Fewer Vehicles Waiver, were still required to report basic information about their agency, including the number of vehicles operated in maximum service (VOMS) for each mode of service they offered. In 2011, the 9 or Fewer Vehicles Waiver was eliminated and replaced by the Small Systems Waiver (SSW). This policy required all agencies receiving FTA Urbanized Area Formula Program funding to report financial and service data. Agencies operating 30 or fewer VOMS and no fixed guideway or high intensity busway can report a condensed version of the full NTD report with only basic financial and service data. In 2014, Small Systems Waivers were renamed Reduced Reporters.

The data in Exhibit A2 shows transit modes operated by active agencies that received Reduced Reporting Waivers in 2016.

Relative Impact on Data by UZA Size Group

The US Census defines urbanized areas as geographic areas with a population of 50,000 or more. According to the 2010 US Census, there are 498 urbanized areas. For National Transit Database purposes, the NTST groups urbanized areas into three size categories:

- **Large urbanized areas:** population of more than 1 million (42 urbanized areas, 380 agencies, or 39.9 percent of all agencies reporting).

- **Medium urbanized areas:** population of more than 200,000 but less than 1 million (132 urbanized areas, 241 agencies, or 25.3 percent of all agencies reporting).
- **Small urbanized areas:** population of less than 200,000 but more than 50,000 (286 urbanized areas, 332 agencies, or 34.8 percent of all agencies reporting).

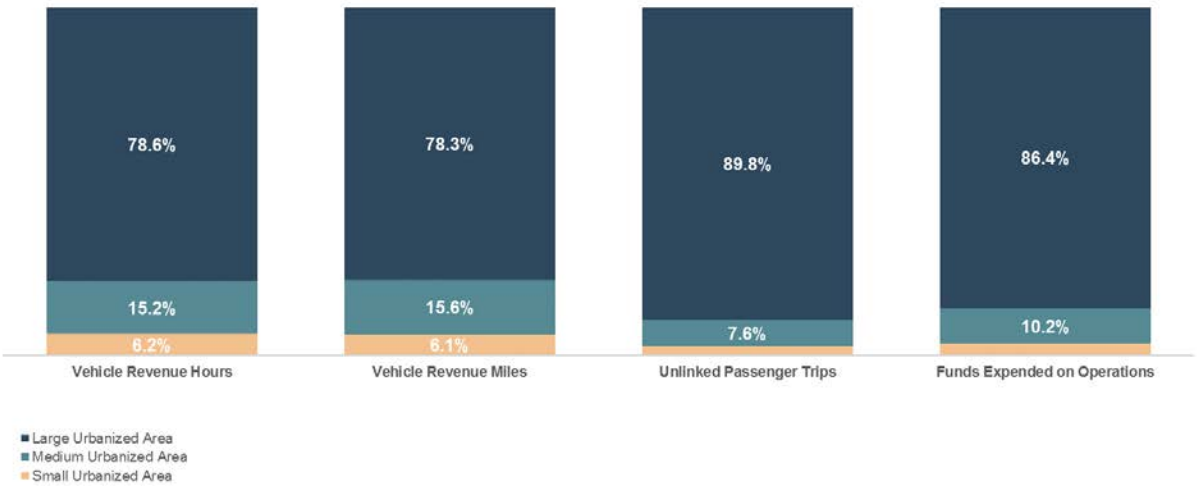

Exhibit A 3: 2016 Data Distribution According to UZA Size

Rural Reporters

The US Census defines rural areas as geographic areas with a population of less than 50,000. Because many of these geographic areas are quite large, rural areas usually have low population density, resulting in low recovery ratios and high cost per trip.

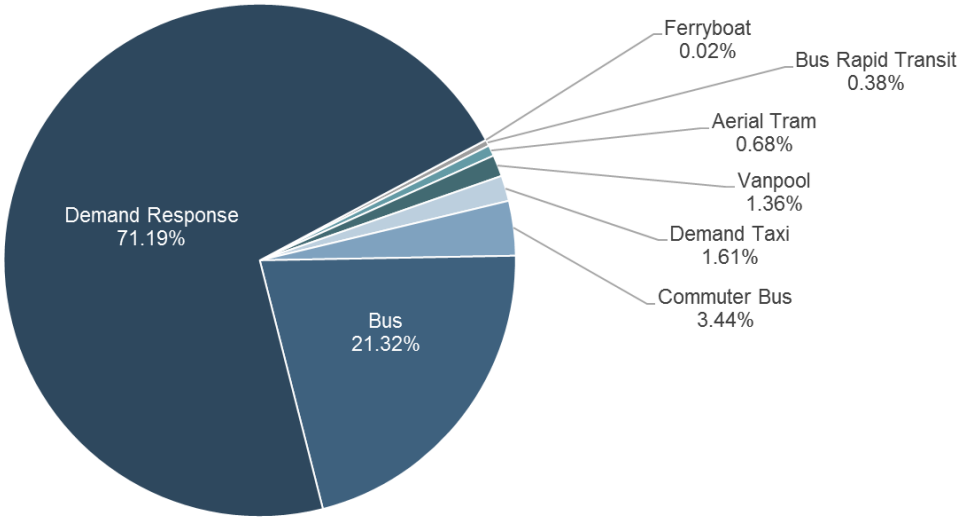

Exhibit A 4: 2016 Breakdown of Rural Service by Mode

For Report Year 2016, 1,277 sub-recipients and 54 states (the NTD considers Puerto Rico, Virgin Islands, American Samoa, Guam, and the Northern Mariana Islands as States for the purpose of rural data collection and funding) submitted data to the NTD through their State Department of Transportation.

The types of service provided in rural areas are similar to those in urban areas. In rural areas, bus service is divided into four categories: fixed route, deviated fixed route, fixed and deviated route, and private intercity bus service Bus. Demand response and Bus accounted for 92.51 percent of all rural transit service in 2016 due to the low population density of rural areas. For the definitions of modes and types of service, refer to the NTD Glossary available at https://www.transit.dot.gov/ntd/national-transit-database-ntd-glossary.

Operating Expenses and Performance Measures

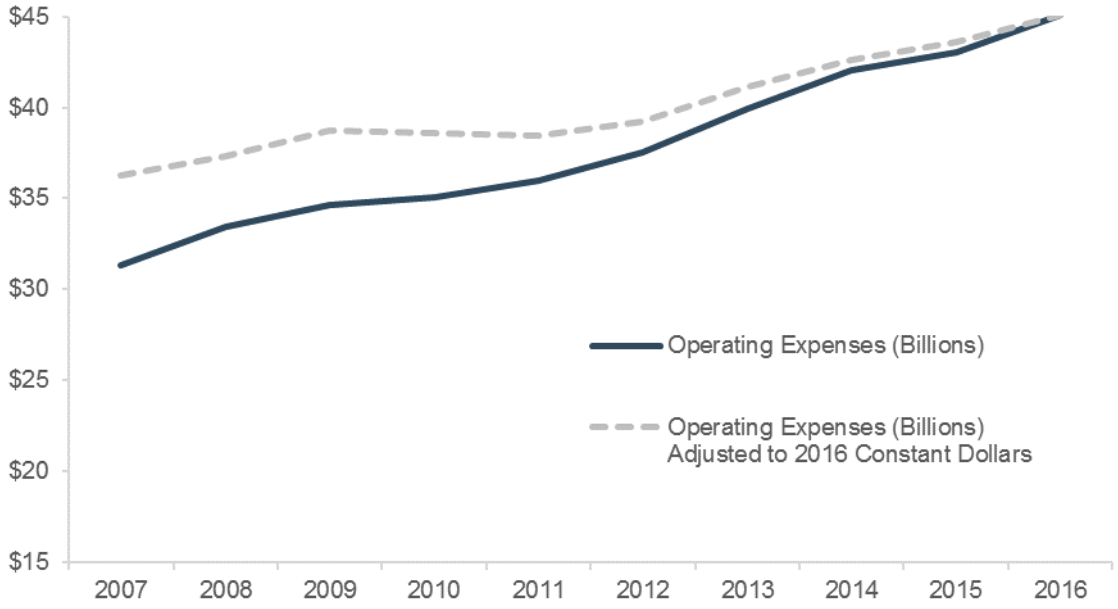

Exhibit A 5: Total Operating Expenses

Transit agencies that provide mass transportation services (vehicle operations, vehicle and non-vehicle maintenance, and administration) incur operating expenses. Transit agencies have various Reconciling items expenses because of different accounting practices implemented by local ordinances. The NTST excludes depreciation, interest expenses, leases, and rentals when accounting for Reconciling items expenses. Operating expenses have increased 36.0 percent over the past ten years (in 2016 Constant Dollars).

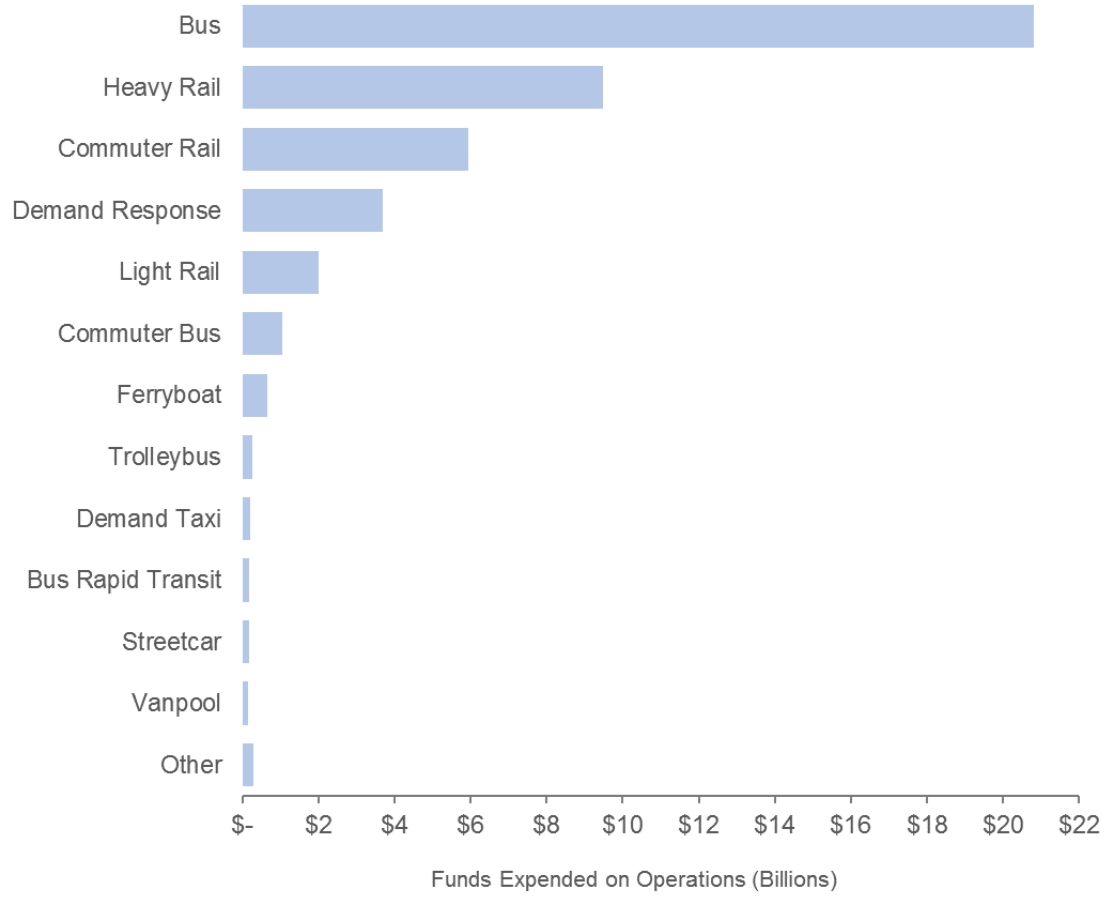

Exhibit A 6: 2016 Total Operating Expenses by Mode

Operating Funding

Operating funds are the funds transit agencies receive from federal, state, local, and directly-generated sources that are applied to operating expenditures. Transit agencies apply these funds in the same year that results in liabilities for benefits received, regardless of the year on the receipt or reporting year.

Transit agencies use federal funds to defray some of the operating costs of providing transit service.

Other operating funding sources include:

- Fare revenues
- Federal sources
- State sources

- Local sources
- Other sources

Other funds include non-transportation funds, subsidies from other sectors of operations, auxiliary funds such as advertising and concessions, charter service, freight tariffs, school bus funds, and directly levied taxes.

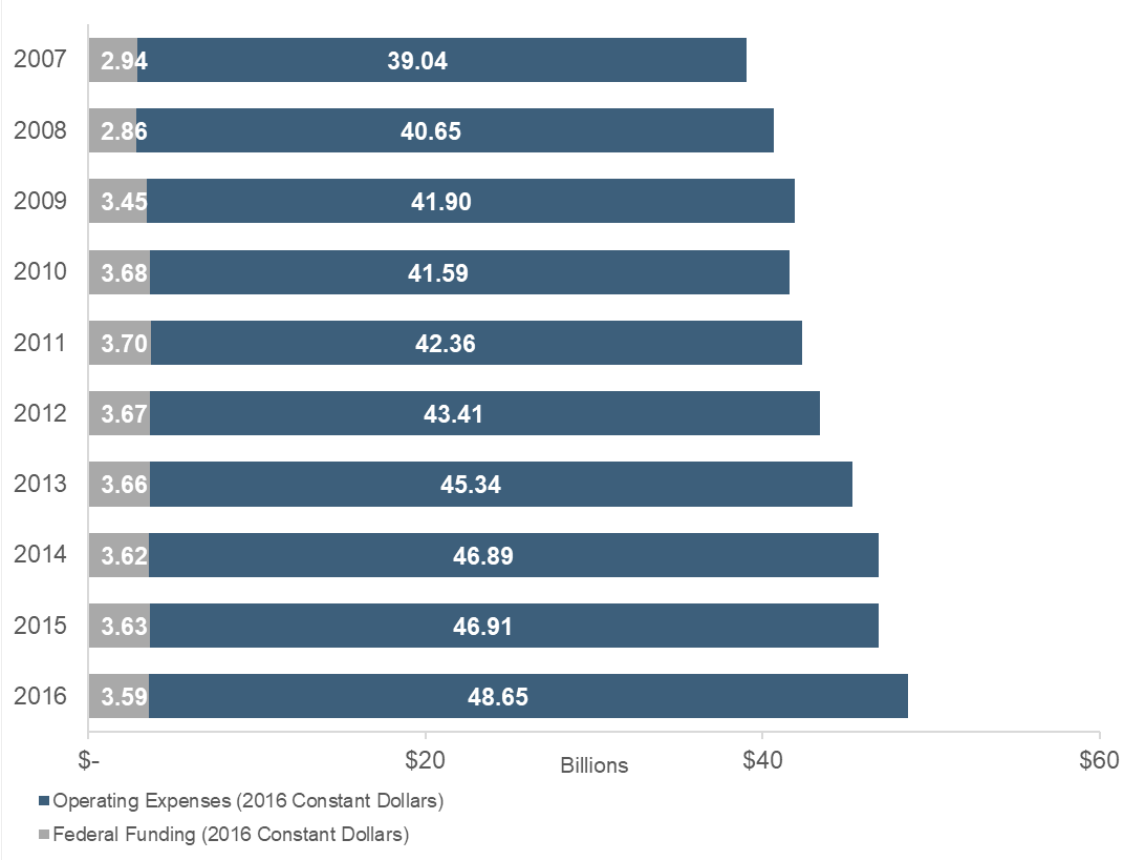

Exhibit A 7: Total Operating Expenses

	Federal	State	Fares	Local	Other
2016	$3,515 M	$11,860 M	$15,331 M	$15,543 M	$2,333 M
2015	$3,428 M	$10,666 M	$11,176 M	$15,211 M	$5,305 M
2014	$3,543 M	$11,677 M	$13,658 M	$14,767 M	$1,943 M
2013	$3,486 M	$11,276 M	$12,119 M	$14,068 M	$1,796 M
2012	$3,200 M	$10,279 M	$11,181 M	$13,023 M	$2,078 M
2011	$3,346 M	$9,127 M	$10,521 M	$12,296 M	$1,903 M
2010	$3,228 M	$8,574 M	$9,668 M	$11,029 M	$1,861 M
2009	$2,759 M	$8,482 M	$9,728 M	$10,561 M	$1,958 M
2008	$2,303 M	$8,436 M	$9,648 M	$10,215 M	$2,105 M
2007	$2,195 M	$6,859 M	$9,029 M	$9,156 M	$1,907 M

Exhibit A 8: Total Operating Expenses by Source

When using 2016 constant dollars, the total operating funds applied to transit operations increased 22.4 percent over the past ten years.

Operating Funding Sources by UZA

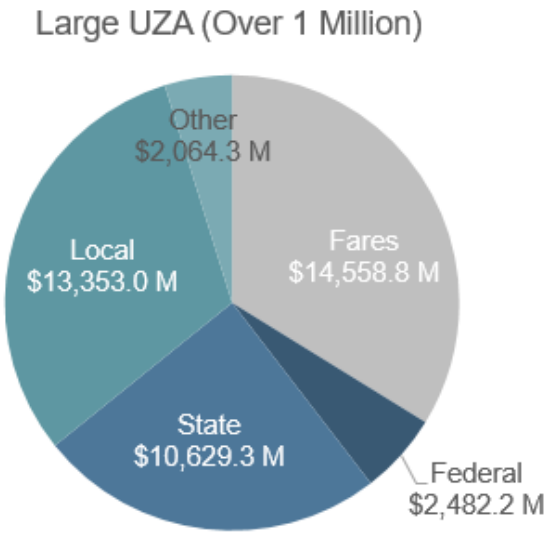

Exhibit A 9: Funding Sources by UZA Size (Large UZAs)

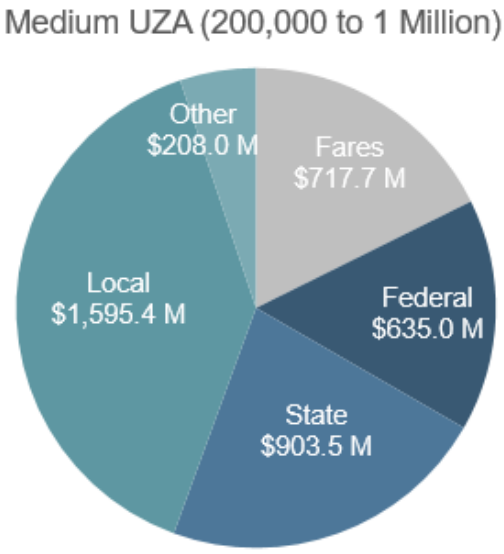

Exhibit A 10: Funding Sources by UZA Size (Medium UZAs)

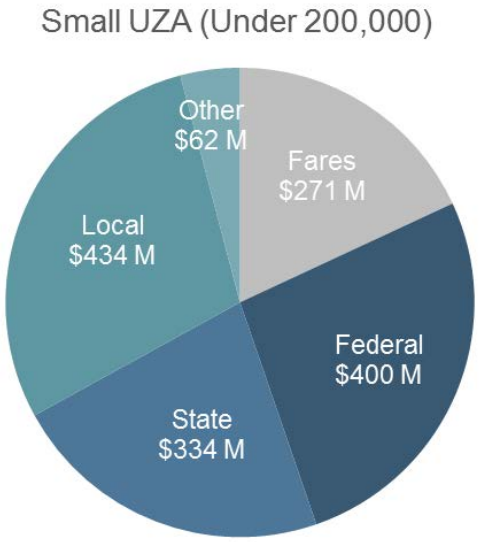

Exhibit A 11: Funding Sources by UZA Size (Small UZAs)

For large urbanized areas, fare revenues made up 33.8 percent of funding in 2016. Small and medium urbanized areas are more dependent upon operating subsidies than large urbanized areas. Fare revenues account for only about 17.9 percent for these two types of UZAs in 2016.

Operating Expenses by Function and Object Class

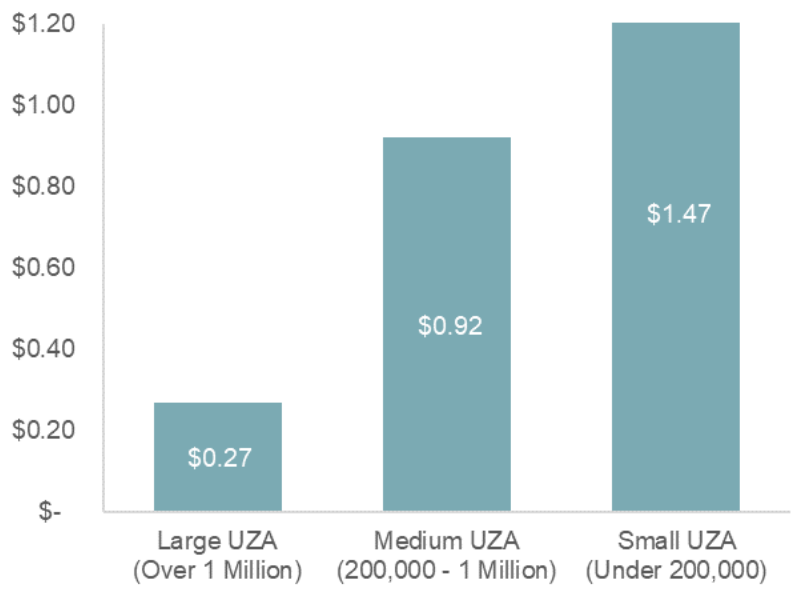

Exhibit A 12: 2016 Federal Operating Assistance per Trip by Urbanized Area Size

Agencies classified as full reporters must report finances according to the Uniform System of Accounts (USOA). The USOA contains the basic accounting structure required by Federal Transit Laws. Agencies must report operating expense data by mode, function, and object class. *Functions* refer to the activity performed, while *Object classes* refer to the cost of goods or services purchased. Agencies reporting a Small Systems Waiver are not required to classify their operating expenses by function and object; therefore, data from agencies reporting a Small Systems Waiver are not included in Exhibits A11 and A12.

Full reporting agencies group their operating expenses in the four functions listed below:

- Vehicle operations
- Vehicle maintenance
- Non-vehicle maintenance
- General administration

Funds used for Vehicle Operations account for 50.2 percent of all operating expenses. The categories of salaries and fringe benefits account for 63.4 percent of the total expenditures on direct operations.

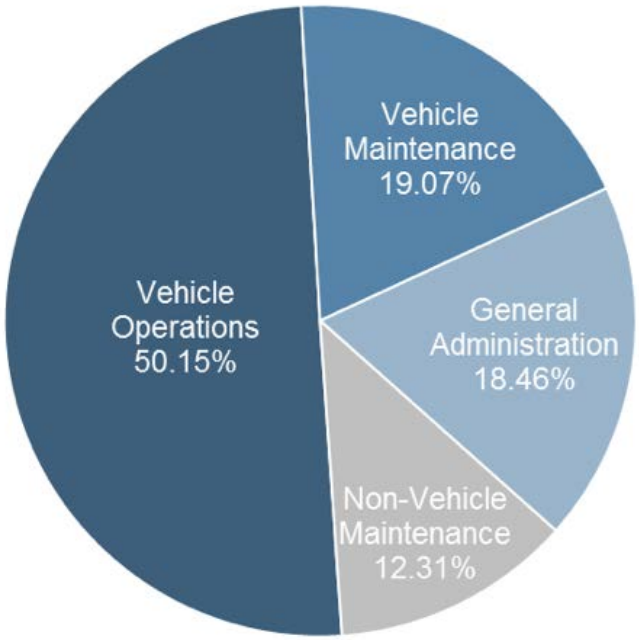

Exhibit A 13: Operating Expenses by Function

	Operating Expenses (in millions)
Vehicle Operations	$22,295 M
Vehicle Maintenance	$8,477 M
General Administration	$8,208 M
Non-Vehicle Maintenance	$5,474 M
Total	**$44,453 M**

Exhibit A 14: Operating Expenses by Function (in millions)

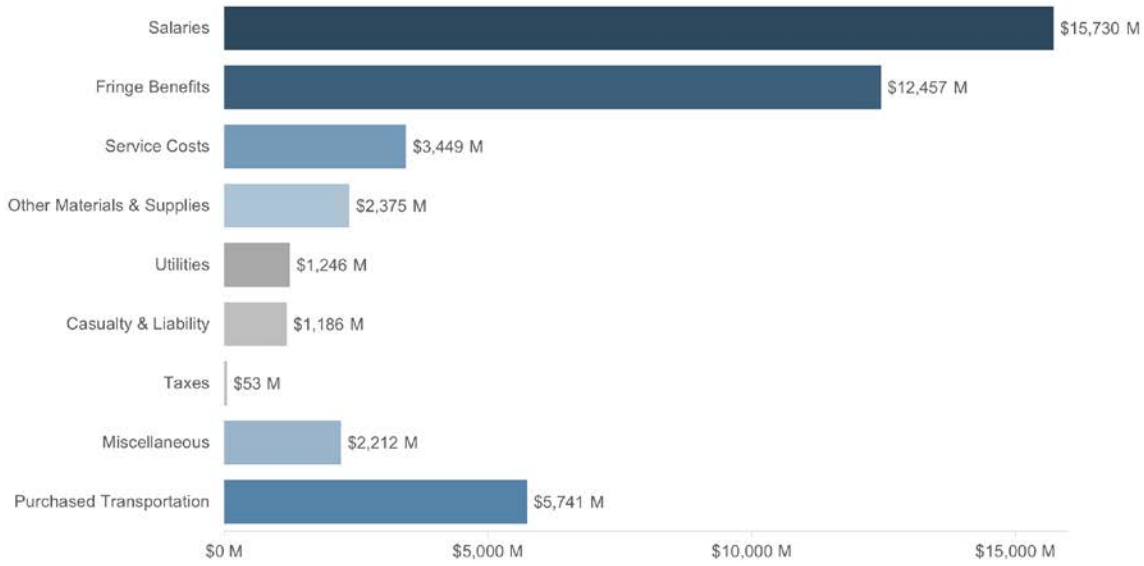

Exhibit A 15: 2016 Operating Expenses by Object Class

Farebox Recovery Ratio

Farebox recovery ratio is the proportion of the amount of revenue generated through fares by paying customers as a percentage of total operating expenses. Fare revenues are funds earned through carrying passengers in regularly scheduled service. It includes the base fare, zone premiums, express service premiums, extra cost transfers and quantity purchase discounts applicable to the passenger's ride.

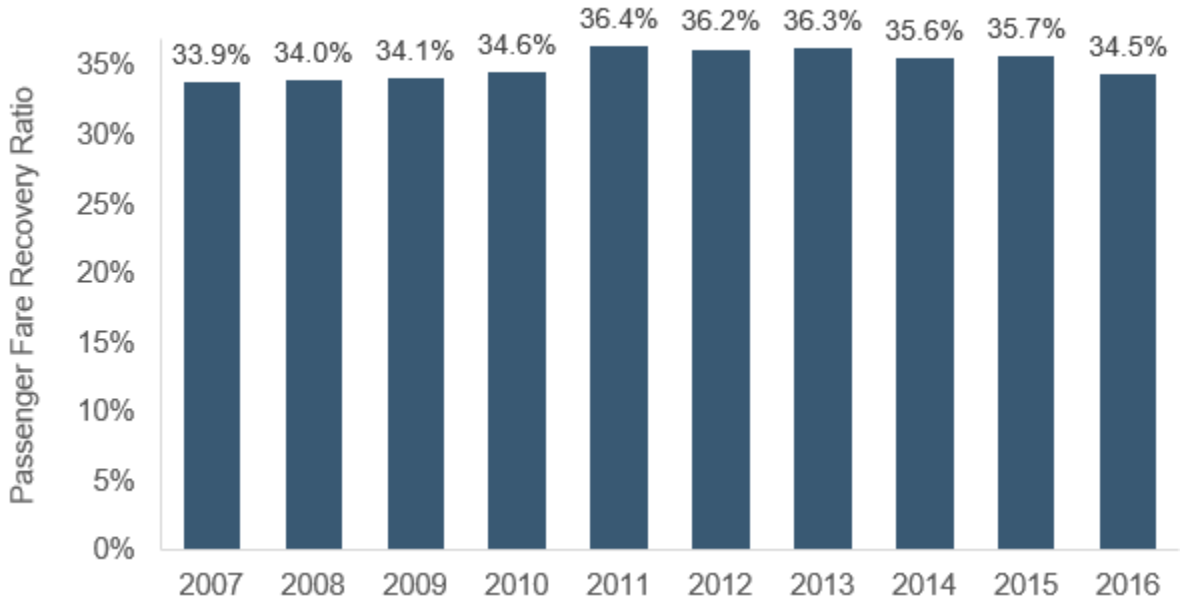

Exhibit A 16: Farebox Recovery Ratio (2006–2016)

Many large transit agencies have shown a steady improvement in farebox recovery ratios following the 2007 implementation of the Government Accounting Standards Board (as shown in Exhibit A16.) The Board requires transit agencies to accrue the cost of other post-employment benefits over an employee's career and to disclose the amount of any unfunded liability. This new requirement increased operating costs and initially affected agencies farebox recovery ratios.

Capital Expenditures

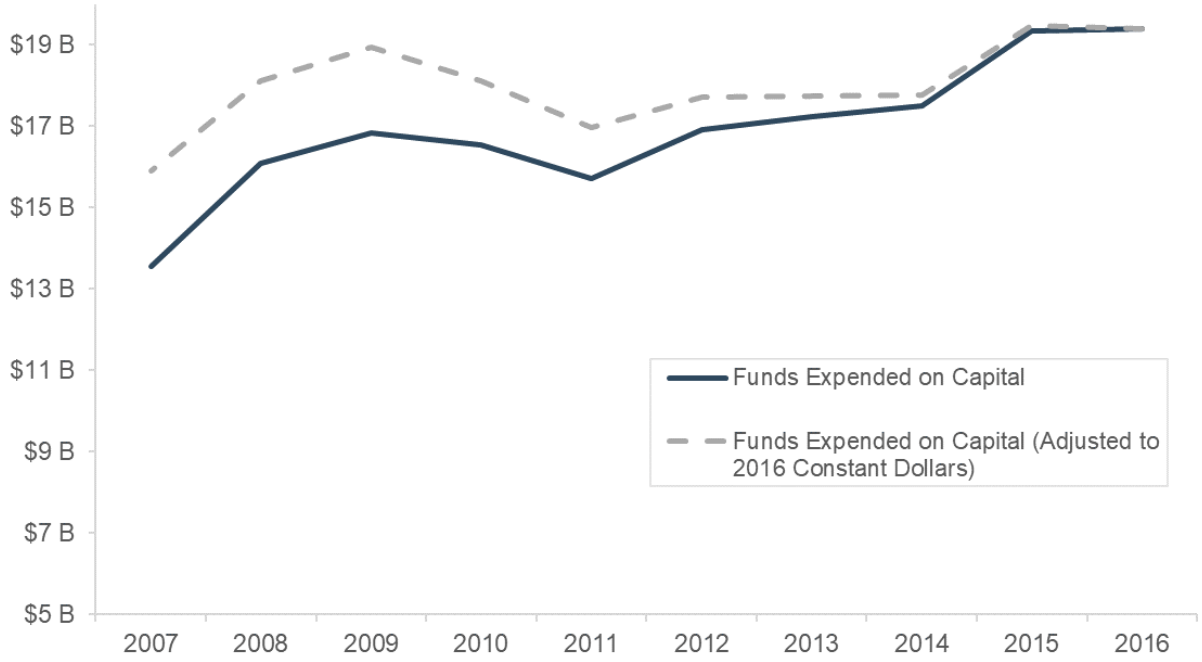

Exhibit A 17: Capital Expenditures

Uses of capital include:

- **Revenue vehicles:** Vehicles used to provide transit service for passengers. A transit agency may use capital funds for the replacement, rehabilitation, remanufacture, rail overhaul, and expansion of its fleet.
- **Guideway:** Buildings and structures dedicated to the operation of transit vehicles, such as: at grade, elevated and subway structures, tunnels, bridges, track and power systems for rail modes, and paved highway lanes dedicated to bus mode.
- **Communication and information systems:** Communication systems include two-way radios for communication between dispatchers and vehicle operations, cab signaling and train control equipment in rail systems, automatic vehicle locator systems, automated dispatching systems, vehicle guidance systems, telephones, facsimile machines, and public-address systems. Information systems include computers, monitors, printers, scanners, data storage devices, and associated software that support general office, accounting, scheduling, vehicle and non-vehicle maintenance, and customer service functions.
- **Fare revenue collection equipment:** Includes the acquisition of fare revenue collection equipment such as turnstiles, fare boxes (drop), automated fare boxes

and related software, money changers, and fare dispensing machines (tickets, tokens, passes).

- **Maintenance facilities:** Central/overhaul maintenance facilities, light maintenance facilities, and storage facilities.
- **Passenger stations:** Boarding/alighting facilities with a platform, which may include stairs, elevators, escalators, passenger controls (e.g., fare gates or turnstiles), canopies, wind shelters, lighting, signs. Buildings with a waiting room, ticket office or machines, restrooms, or concessions. Includes transportation/transit/transfer centers, park-and-ride facilities, and transit malls with the above components, including those only utilized by motor buses.
- **Administration buildings:** Administrative buildings including the cost for design and engineering, land acquisition and relocations, demolition, and purchase or construction of administrative buildings.
- **Service (non-revenue) vehicles:** Service, supervisory, and vehicles other than revenue vehicles.
- **Other:** Includes park and ride facilities, passenger shelters, signs and amenities, furniture, and equipment that are not integral parts of buildings and structures.

Uses of Capital by UZA Size

Large and medium-sized urbanized areas operate most of the country's rail systems. Guideway and facilities account for a significant portion of the overall capital costs. For small urbanized areas, bus and demand response are the most common modes and most uses of capital are for revenue vehicles and facilities.

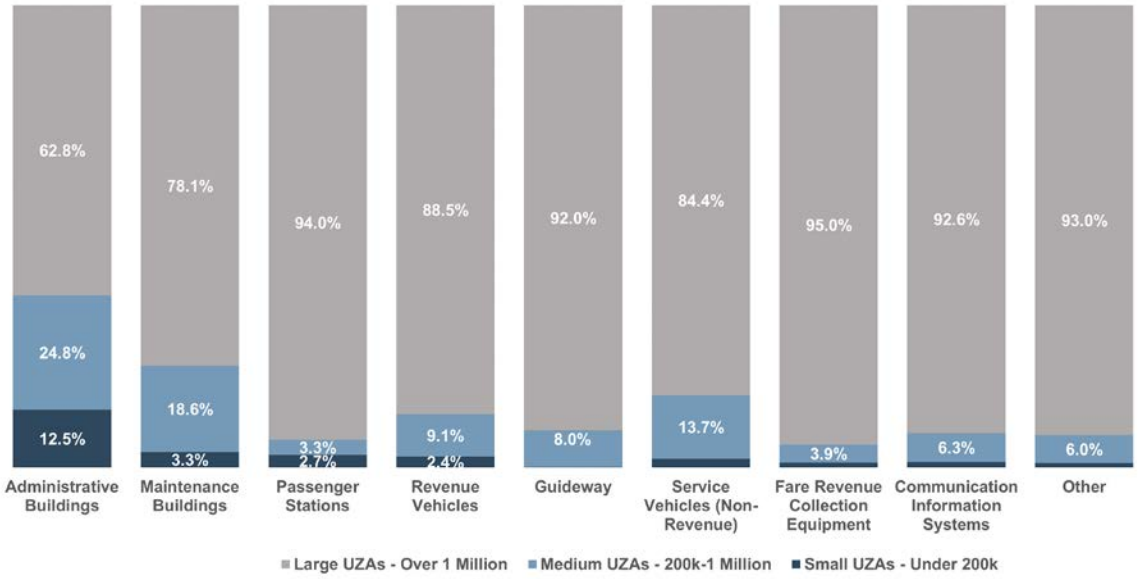

Exhibit A 18: 2016 Capital by Urbanized Area Size

Sources of Federal Funding by UZA

Federal sources account for about 38% of capital invested in transit. A significant portion of capital invested in small and medium urbanized areas is from federal funds. Large urbanized areas rely primarily on local and state funds and directly levied taxes to pay for capital projects.

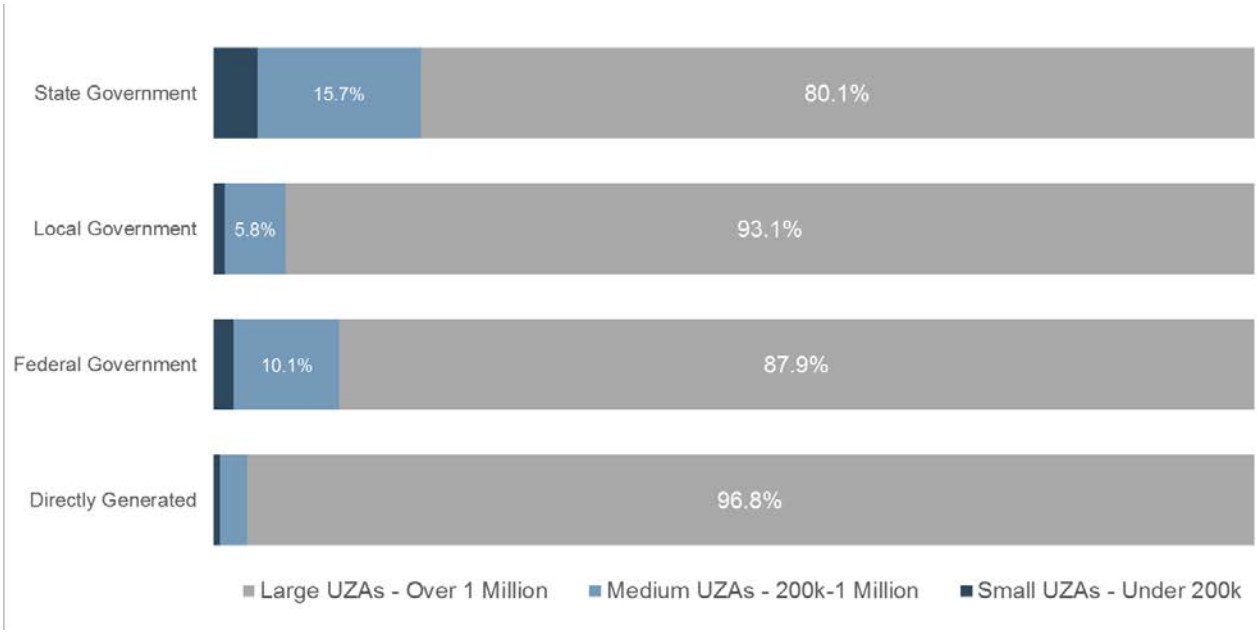

Exhibit A 19: Sources of Capital Funding by UZA Size

Capital Investment in Transit

Capital funds are funds from federal, state, and local governments and directly generated sources that transit agencies apply to purchases such as equipment or other assets. Directly generated sources include any funds generated or donated directly to the transit agency including passenger fares, advertising revenues, donations, and grants from private entities.

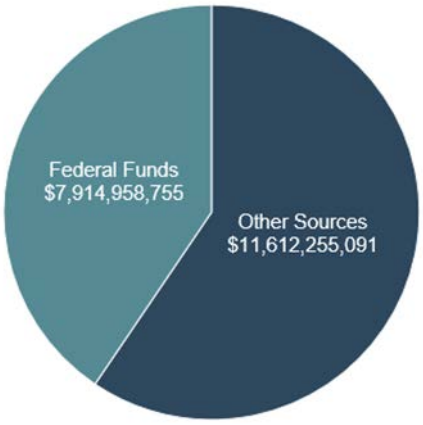

Exhibit A 20: 2016 Sources of Capital Funding

Capital investment increased approximately 43.9 percent over the past ten years. Funds from the federal government accounted for 40.5 percent of capital invested in transit in 2016.

Distribution of Capital by Mode

Generally, rail systems are in high-density corridors within the larger metropolitan areas of the United States. The high levels of service supplied in these areas require large investments in transit infrastructure (e.g., track, signals and communication systems, complex maintenance facilities, passenger stations, inter-modal terminals, real time data acquisition systems and other cost intensive items). Bus systems do not require the same level of investment in infrastructure as rail. Therefore, revenue vehicles are the main use of capital for bus systems.

	Commuter Rail	Heavy Rail	Light Rail
2007	82.2%	82.8%	89.3%
2008	74.1%	79.8%	85.8%
2009	83.2%	72.9%	88.7%
2010	86.2%	84.0%	89.7%
2011	70.1%	91.6%	91.1%
2012	77.3%	95.3%	93.2%
2013	73.6%	92.8%	91.1%
2014	76.4%	88.1%	92.2%
2015	79.4%	94.0%	92.3%
2016	82.0%	92.1%	92.2%

Exhibit A 21: Percent of Capital Expended on Non-Rolling Stock by Rail Mode

Rural Operating and Capital Funding

The sources of funds for rural areas (operating and capital) include local, state, and the federal government as well as funds generated by service providers (fares and contract revenues).

FTA funding categories available for Rural Transit include:

- Section 5309 – FTA Capital Program
- Section 5310 – FTA Special Needs of Elderly Individuals and Individuals with Disabilities Program
- Section 5311 – FTA Non-Urbanized Area Program
- Section 5316 – FTA Job Access and Reverse Commute Program
- Section 5317 – FTA New Freedom Program

- Section 5320 – FTA Alternative Transportation in Parks and Public Lands Program

The federal government provided 33.7 percent of the rural transit-operating budget, while 18.7 percent of funds came directly from service providers. The majority of rural transit-operating funds came from State and local funds, making up 44.4 percent.

Source	Funds Expended on Operations		Percentage of Total
Rural Area Operating Assistance 5311	$	362,520,221	27.41%
Local Funds	$	330,708,841	25.01%
State Funds	$	257,065,140	19.44%
Contract Revenue	$	139,756,174	10.57%
Fares	$	107,724,735	8.15%
Other	$	41,922,753	3.17%
Other Federal Funds	$	40,308,674	3.05%
Tribal Transit Funds 5311	$	20,476,288	1.55%
Elderly and Disabled Program 5310	$	13,319,445	1.01%
Job Access Rev Commute 5316	$	2,860,831	0.22%
New Freedom Program 5317	$	1,763,428	0.13%
Other FTA Funds	$	1,609,409	0.12%
USDOT Funds	$	1,587,279	0.12%
ARRA Rural Area Program 5311	$	481,247	0.04%
Bus and Bus Facilities 5339	$	283,344	0.02%
Capital Investment Program Funds 5309	$	49,479	0.00%
Total		**$1,322,437,288**	

Exhibit A 22: 2016 Source of Funding Expended on Operations

Rural transit capital budgets relied mostly on federal assistance, accounting for 61.5 percent of all funds expended on capital.

Source	Funds Expended on Capital	Percentage of Total
Other Urbanized Area Operating Assistance 5311	$ 59,001,513	31.47%
Local Funds	$ 35,826,208	19.11%
State Funds	$ 35,012,747	18.67%
FTA Capital Program Funds 5309	$ 15,444,346	8.24%
MAP-21 Bus and Bus Facilities Formula (5339)	$ 14,772,316	7.88%
Special Needs Disabilities Program 5310	$ 10,978,084	5.85%
Other FTA Funds	$ 4,772,009	2.54%
Tribal Transit Funds 5311	$ 2,495,716	1.33%
Other Federal Funds	$ 2,127,428	1.13%
ARRA Other Urbanized Area Program 5311	$ 2,038,949	1.09%
Other	$ 1,401,297	0.75%
Contract Revenue	$ 1,398,225	0.75%
Job Access Rev Commute 5316	$ 846,732	0.45%
Freedom Program 5317	$ 709,244	0.38%
ARRA Maj Cap Investment (New Start) 5309	$ 558,845	0.30%
USDOT Funds	$ 57,604	0.03%
ARRA Tribal Transit Funds 5311	$ 44,676	0.02%
Fares	$ 21,463	0.01%
Park Transit Funds 5320	$ 4,088	0.00%
ARRA TIGGER Funds	$ 2,553	0.00%
Total	**$187,514,043**	

Exhibit A 23: 2016 Source of Funding Expended on Capital

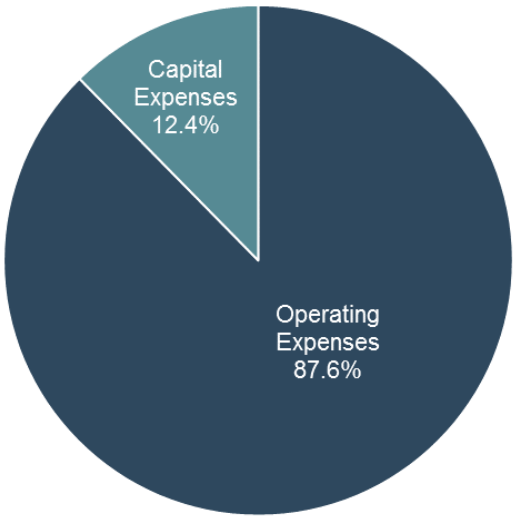

Exhibit A 24: Expenses by Type – Rural Transit

Unlinked Passenger Trips

The National Transit Database (NTD) defines Unlinked Passenger Trips (UPT) as the number of passengers who board public transportation vehicles. Passengers are counted each time they board vehicles, no matter how many vehicles they use to travel from their origin to their destination. Unlinked passenger trips have steadily increased over the past twenty years. Exhibit A25 shows the steady 35.4 percent increase in unlinked passenger trips over the twenty-year period spanning 1996 to 2016.

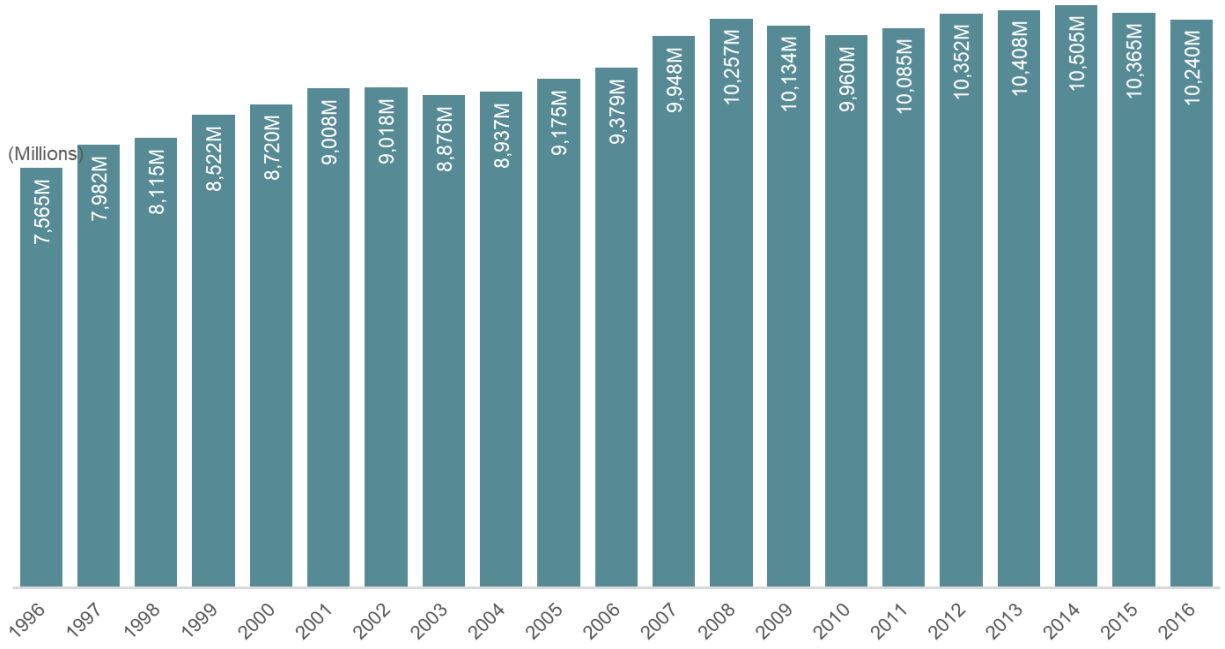

Exhibit A 25: Unlinked Passenger Trips

Ridership increased 2.9 percent from 2007 to 2016. Unlinked passenger trips increased for the following modes over the ten-year period:

- Vanpool – 59.3 percent
- Demand Response – 22.5 percent
- Heavy Rail – 11.2 percent
- Light Rail – 19.1 percent
- Commuter Rail – 9.0 percent
- Bus – (5.9 percent)

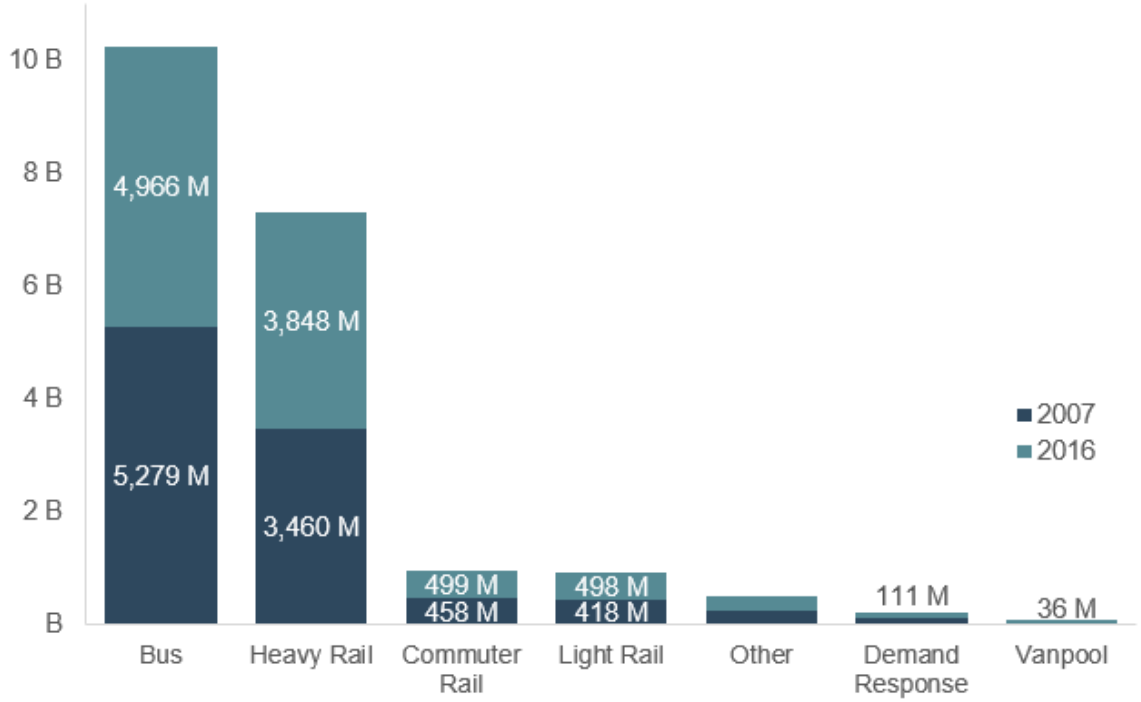

Exhibit A 26: Unlinked Passenger Trips by Mode

Mode	2007	2016	% Change
Bus	5,279 M	4,966 M	-5.93%
Heavy Rail	3,460 M	3,848 M	11.21%
Commuter Rail	458 M	499 M	9.04%
Light Rail	418 M	498 M	19.12%
Other	220 M	282 M	28.19%
Demand Response	91 M	111 M	22.46%
Vanpool	23 M	36 M	59.33%

Exhibit A 27: Distribution of Unlinked Passenger Trips (Millions) by Mode

Vehicle Revenue Miles

2016	4,245.0 M
2015	4,173.7 M
2014	4,109.2 M
2013	4,039.3 M
2012	3,960.0 M
2011	3,914.8 M
2010	3,919.6 M
2009	3,987.8 M
2008	3,894.5 M
2007	3,769.0 M

Exhibit A 28: Vehicle Revenue Miles

Vehicle revenue miles are the miles a transit vehicle travels while in revenue service. A transit vehicle is in revenue service when the vehicle is available to the public with the expectation of carrying passengers. Revenue service includes both times when passengers pay a fare and when the service is operating fare-free. Agencies must exclude non-public transportation services (charter services, school bus services, etc.) and deadhead travel from revenue service tracking. Deadhead travel consists of the miles a transit vehicle travels while not in revenue service, such as leaving or returning to the garage or yard or changing routes.

Vehicle revenue miles increased by 12.6 percent between 2007 and 2016 across all transit modes. Vehicle revenue miles increased for the following modes over the ten-year period:

- Vanpool – 77.3 percent
- Demand Response – 29.4 percent
- Light Rail – 35.5 percent
- Commuter Rail – 16.0 percent
- Bus – 3.5 percent
- Heavy Rail – 5.9 percent

	2007	2016	% Change
Bus	1,931,961,445	2,000,270,010	3.54%
Commuter Rail	296,781,976	344,388,920	16.04%
Demand Response	645,093,467	834,952,947	29.43%
Heavy Rail	638,485,078	675,888,552	5.86%
Light Rail	82,281,550	111,447,046	35.45%
Vanpool	128,467,431	227,827,041	77.34%
Other	45,943,417	50,221,933	9.31%

Exhibit A 29: Distribution of Vehicle Revenue Miles by Mode

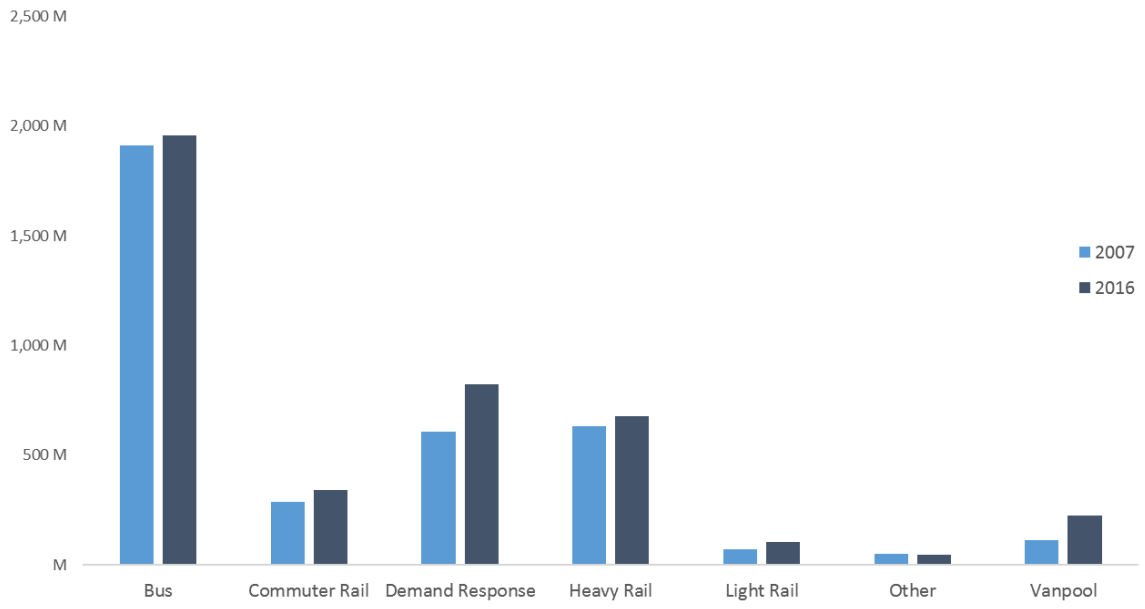

Exhibit A 30: Vehicle Revenue Miles (Millions) by Mode

Subsidy per Trip

A subsidy is financial assistance received from federal, state and local governments. Subsidies also include directly generated funds, including grants from private foundations, directly levied taxes and other funds dedicated to transit. Subsidies do not include the fare revenue collected by the agency.

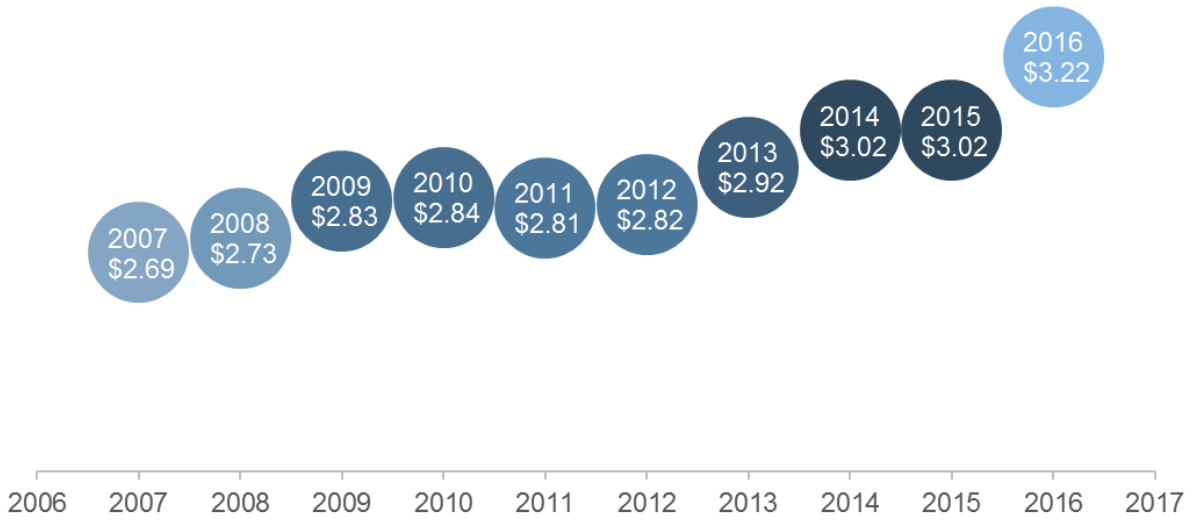

Exhibit A 31: Total Operating Subsidy per Trip

(Subsidies for prior years adjusted to 2016 Constant Dollars)

Subsidy per trip has increased 20.1 percent over the past ten years, adjusting to 2016 dollars. Medium and small urbanized areas have a greater subsidy per trip rate increase than large urbanized areas. This is due in part to the expansion of fixed route service in low-density areas, combined with the expansion of in-demand response services. Demand response service accounts for a substantial portion of the service provided in medium and small urbanized areas.

Cost Effectiveness

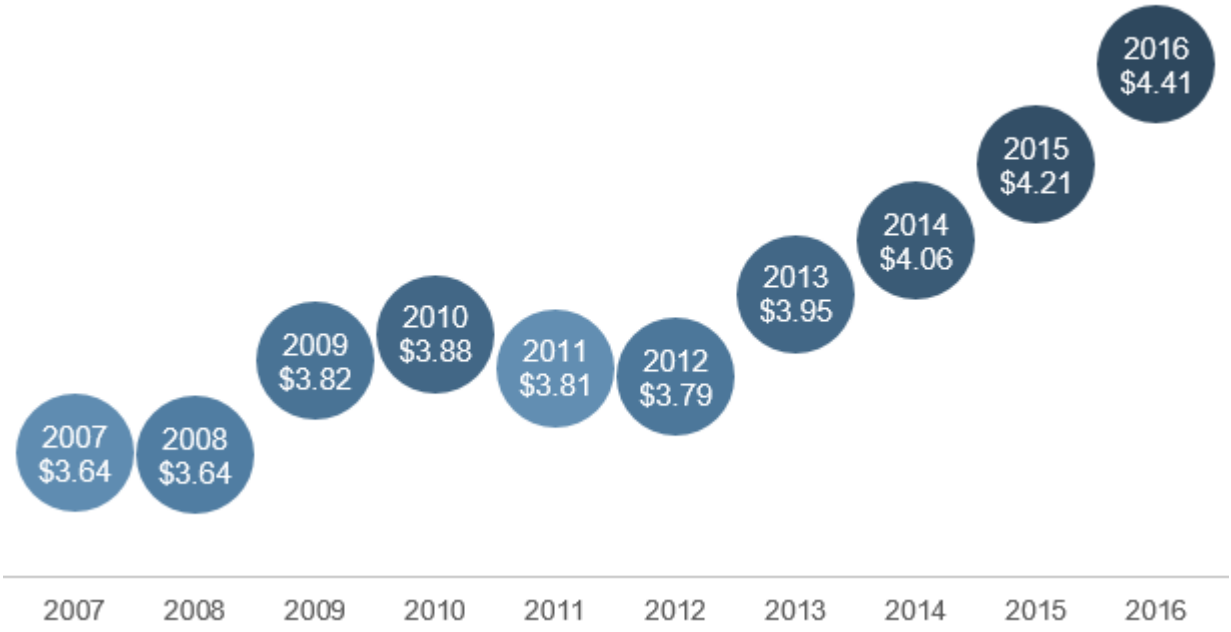

Exhibit A 32: Operating Expenses per Unlinked Passenger Trip

(Operating expenses for prior years adjusted to 2016 Constant Dollars)

Cost effectiveness is the relationship between service input and service consumption. Service input is the quantity of resources expended to produce transit service, expressed in operating cost (dollars expended for operations, maintenance, and administration). Service consumption is the amount of service used by the public, expressed in non-monetary terms as unlinked passenger trips. Using 2016 constant dollars, operating expense per unlinked passenger trip increased 20.9 percent over the past ten years.

	Cost Efficiency Ratio	Unlinked Passenger Trips	Operating Expenses
2007	$3.64	9,948,210,473	$36,235,247,425
2008	$3.64	10,256,681,637	$37,320,837,997
2009	$3.82	10,133,816,578	$38,749,367,155
2010	$3.88	9,959,675,640	$38,601,881,597
2011	$3.81	10,085,446,841	$38,421,071,229
2012	$3.79	10,351,682,871	$39,258,094,111
2013	$3.95	10,408,368,210	$41,163,915,227
2014	$4.06	10,504,992,319	$42,633,883,532
2015	$4.21	10,364,763,427	$43,615,945,788
2016	$4.41	10,240,302,177	$45,108,680,292

Exhibit A 33: Total Operating Expenses per Unlinked Passenger Trip

(Operating expenses for prior years adjusted to 2016 Constant Dollars)

	Bus	Commuter Rail	Heavy Rail	Light Rail
2007	**$3.19**	**$8.73**	**$1.70**	**$2.78**
2008	**$3.30**	**$9.11**	**$1.73**	**$2.79**
2009	**$3.42**	**$9.78**	**$1.81**	**$3.00**
2010	**$3.58**	**$9.99**	**$1.79**	**$3.28**
2011	**$4.98**	**$10.12**	**$1.83**	**$3.21**
2012	**$4.65**	**$10.51**	**$1.87**	**$3.31**
2013	**$5.25**	**$11.12**	**$2.14**	**$3.46**
2014	**$5.56**	**$11.65**	**$2.20**	**$3.62**
2015	**$5.68**	**$11.86**	**$2.32**	**$3.83**
2016	**$6.09**	**$11.92**	**$2.46**	**$4.06**

Exhibit A 34: Operating Expenses per UPT for Bus and Rail Modes

(Operating expenses for prior years adjusted to 2016 Constant Dollars)

Cost Efficiency

Cost efficiency is the relationship between service inputs and service outputs. Service output is the quantity of service produced by a transit operator, expressed in non-monetary terms as vehicle revenue hours. Overall, operating expenses per vehicle revenue hour increased 11.4 percent over the last ten years.

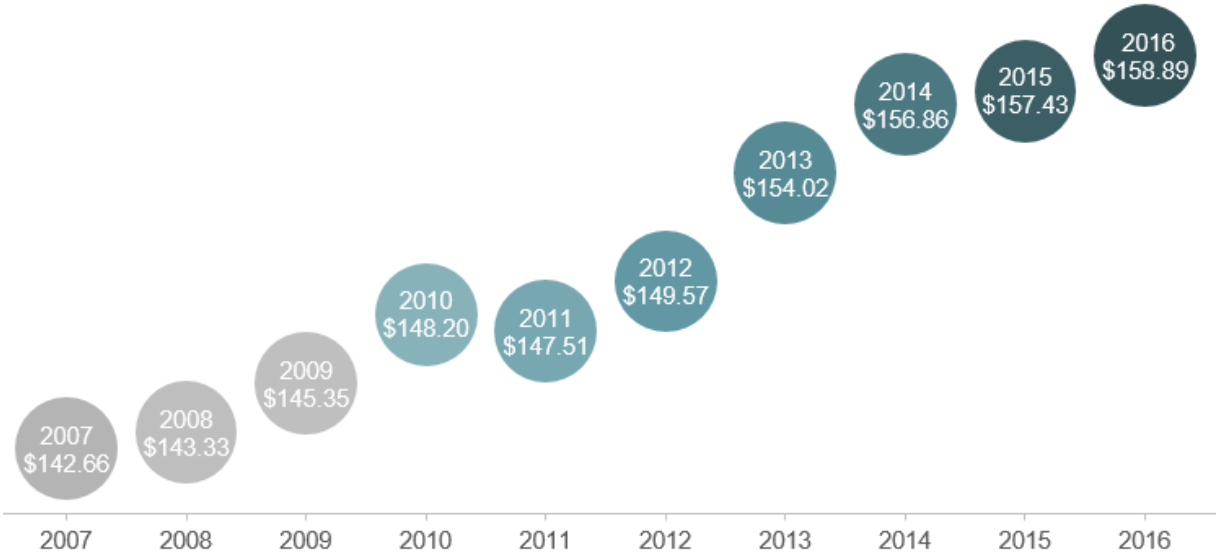

Exhibit A 35: Total Operating Expenses per Vehicle Revenue Hour

(Operating expenses for prior years adjusted to 2016 Constant Dollars)

Service Effectiveness

Service effectiveness is the relationship between service consumption and service output. Unlinked passenger trips per vehicle revenue hour decreased 5.3 percent over the past ten years.

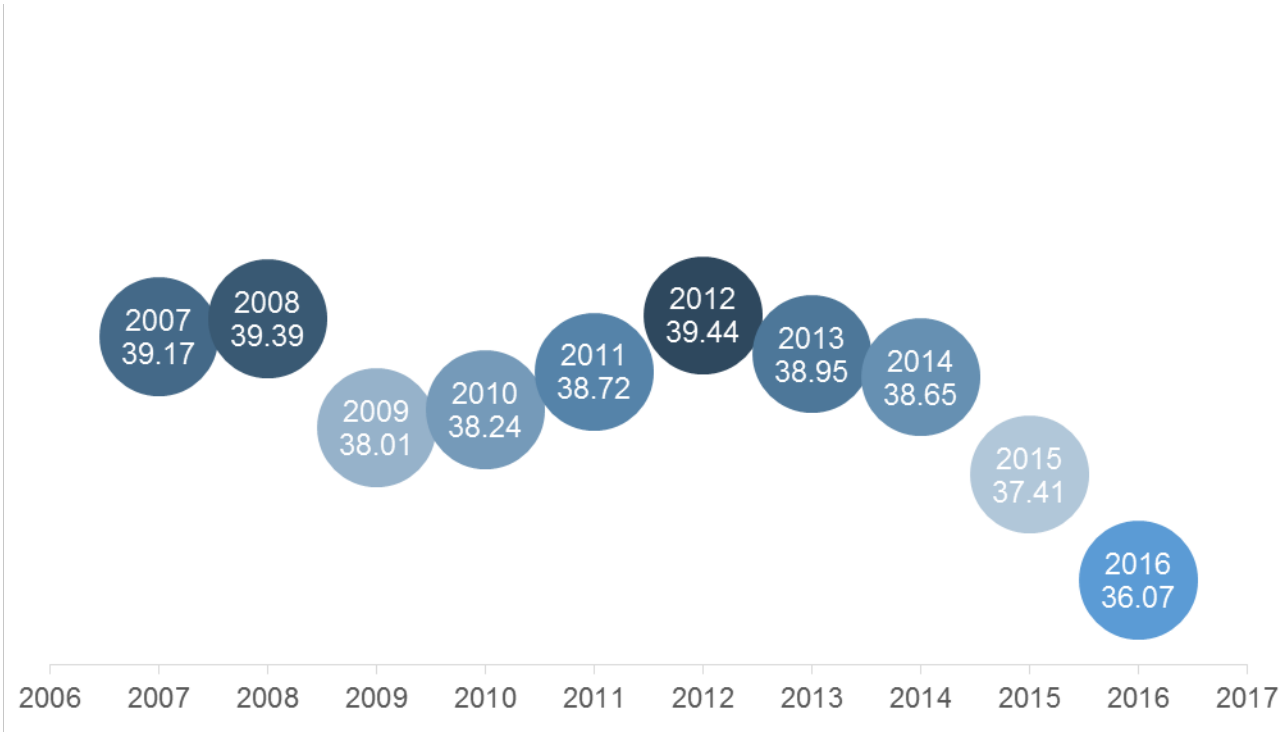

Exhibit A 36: Unlinked Passenger Trips per Vehicle Revenue Hour

	Bus	Commuter Rail	Heavy Rail	Light Rail
2007	34.3	48.5	108.8	77.0
2008	34.8	47.7	109.3	78.7
2009	34.1	46.4	106.2	79.0
2010	33.5	48.0	110.8	74.6
2011	34.1	48.5	114.9	77.5
2012	34.8	48.3	117.6	77.1
2013	34.3	47.1	117.1	72.2
2014	33.5	46.1	119.9	75.0
2015	32.4	45.9	115.3	71.4
2016	30.7	45.8	114.2	70.0

Exhibit A 37: Unlinked Passenger Trips per Vehicle Revenue Hour by Mode

Load Factor

Average load factor is the ratio of passenger miles traveled per vehicle revenue mile. Beginning in 2011, reporting agencies operating 30 vehicles or fewer were not required to report passenger miles traveled. For this reason, the NTST excludes data from agencies reporting a Small Systems Waiver or Reporting Waiver during the years 2011 to 2016 in the following load factor exhibits.

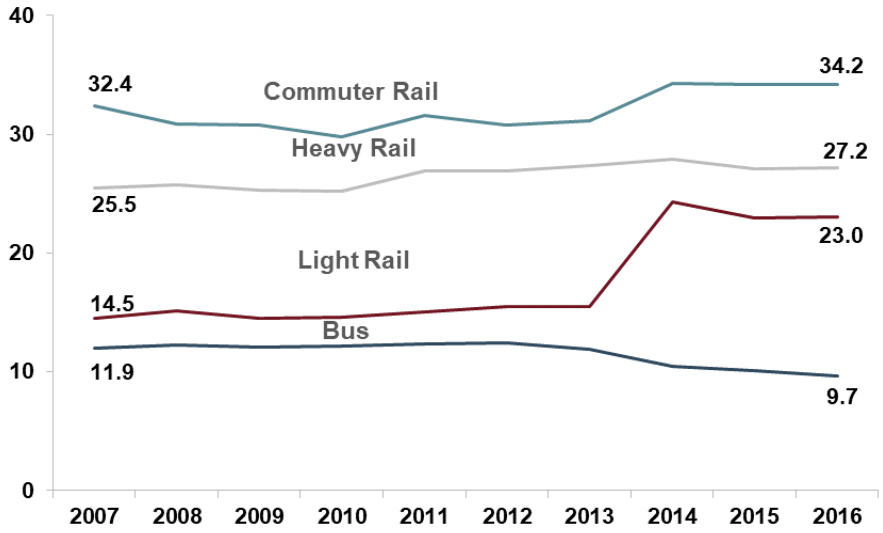

Exhibit A 38: Load Factor by Mode

Data for agencies reporting a Small Systems or Reduced Reporter Waiver in 2011-2016 have been excluded from this exhibit.

The load factor exhibits provide the following information:

- Commuter Rail average load factor increased 5.5 percent over the past ten years, and 9.6 percent over the past three years.
- Heavy Rail average load factor increased 6.6 percent over the past ten years. In the past three years, the heavy rail average load factor decreased .6 percent.
- Light Rail average load factor increased 58.7 percent in the past ten years. In the past three years, the light rail average load factor increased 48.8 percent.
- Bus average load factor decreased 19.0 percent in the past ten years. In the past three years, the bus average load factor decreased 18.6 percent.

	Bus	Commuter Rail	Heavy Rail	Light Rail
2007	11.9	32.4	25.5	14.5
2008	12.3	30.8	25.7	15.2
2009	12.1	30.8	25.3	14.5
2010	12.1	29.8	25.2	14.6
2011	12.3	31.6	26.9	15.1
2012	12.4	30.8	26.9	15.5
2013	11.9	31.2	27.3	15.5
2014	10.5	34.3	27.9	24.3
2015	10.1	34.2	27.1	23.0
2016	9.7	34.2	27.2	23.0

Exhibit A 39: Load Factor by Mode

(Data for agencies reporting a Small Systems or Reduced Reporter Waiver in 2011-2016 have been excluded from this exhibit.)

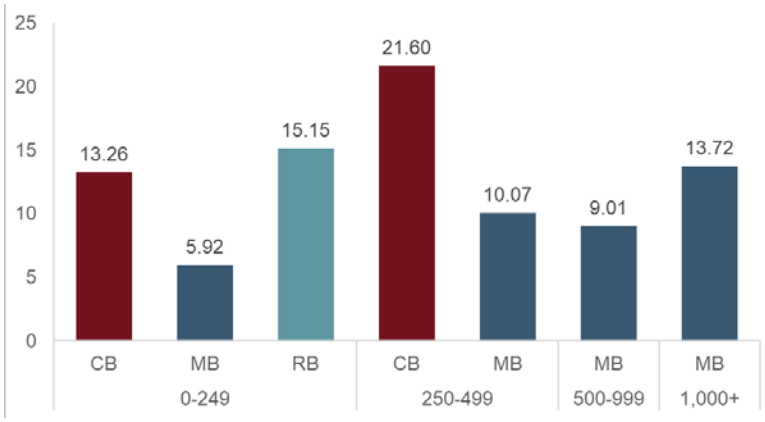

Exhibit A 40: Load Factor by VOMS for Bus Mode

Data for agencies reporting a Small Systems or Reduced Reporter Waiver in 2011-2016 have been excluded from this exhibit.

Rural Service Supplied and Consumed

Rural Metric	2016 Totals
Operating Expense (OE)	$1,318,948,399
Fares	$107,742,460
Unlinked Passenger Trips (UPT)	132,795,916
Vehicle Revenue Miles (VRM)	524,597,831
Vehicle Revenue Hours (VRH)	27,495,866
Operating Expenses per UPT	$9.93
Operating Expenses per VRM	$2.51
Fare Recovery (Fares per OE)	8.17%

Exhibit A 41: Rural Service Supplied and Consumed

Fixed Guideway Mileage

Fixed guideway directional route miles are the miles in each direction that transit vehicles travel while in revenue service on fixed guideways (high occupancy vehicle lanes, transit malls, busways, or rail track).

Fixed guideway mileage is a measure of the route path over a facility or roadway; it does not measure the service carried on the facility. This mileage is computed with regard to direction of service and is recorded without regard to the number of traffic lanes or rail tracks existing on the right-of-way.

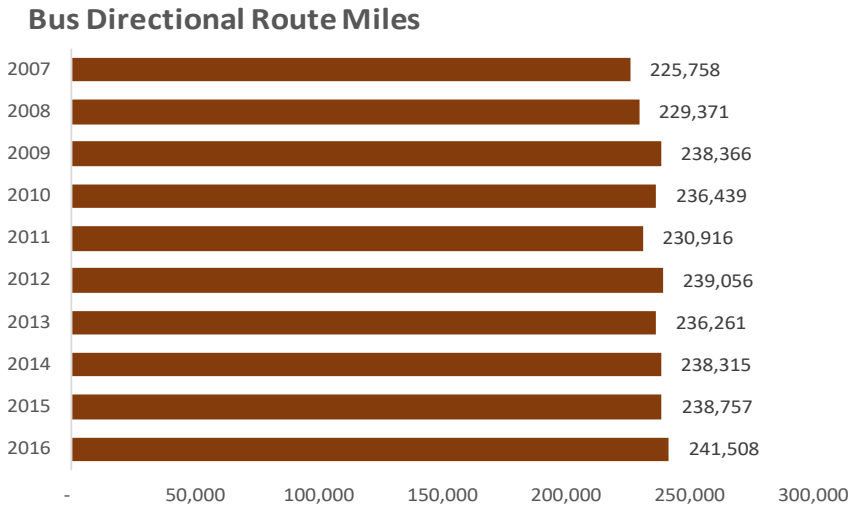

Exhibit A 42: Fixed Guideway Mileage – Bus

Exhibit A 43: Fixed Guideway Mileage – Rail

Beginning in 2013, FTA classified segments previously reported as fixed guideway into three subcategories:

- **Fixed Guideway (FG).** Roadways that agencies reserve at all times (24 hours / 7 days per week) for public transportation vehicles. This type of ROW must meet safe operations and have strict enforcement.
- **High Intensity Bus (HIB).** Roadways that agencies reserve at some times for transit use, for high occupancy vehicle (HOV), or high occupancy / toll (HO/T) operations.
- **Mixed-traffic ROW (Non-Fixed Guideway (NFG)).** Mixed-traffic ROW are normal streets and roads where transit vehicles operate. Public transportation shares these roadways with personal cars and trucks. Mixed Traffic ROW is the most common ROW.

Service Utilization

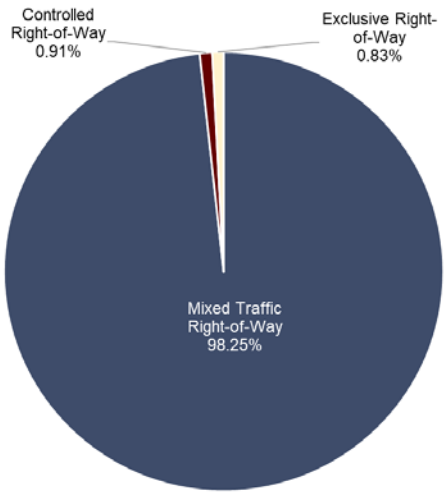

Exhibit A 44: Guideway Classes

The NTST defines the average service utilization as the ratio of vehicle revenue miles per directional route mile.

Average service utilization is inversely proportional to average headway, meaning the higher the average service utilization, the smaller the average headway, and vice versa.

The geographical expansion of transit service contributes to reductions in average service utilization if the average headway of expanded areas is greater than the average headway before the expansion.

For this section, *Bus* includes motor bus (MB), commuter bus (CB), and bus rapid transit (RB). Beginning in 2011, reporting agencies operating 30 vehicles or fewer were not required to report passenger miles traveled. Hence, the NTST excludes data from agencies reporting a Small Systems or Reporting waiver from 2011 to 2016 in the following service utilization exhibits.

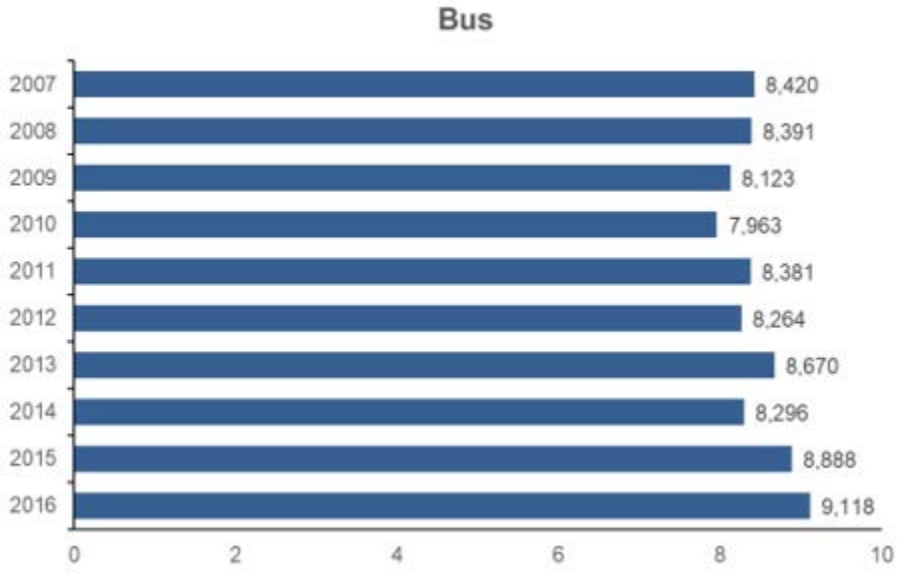

Exhibit A 45: Bus Service Utilization

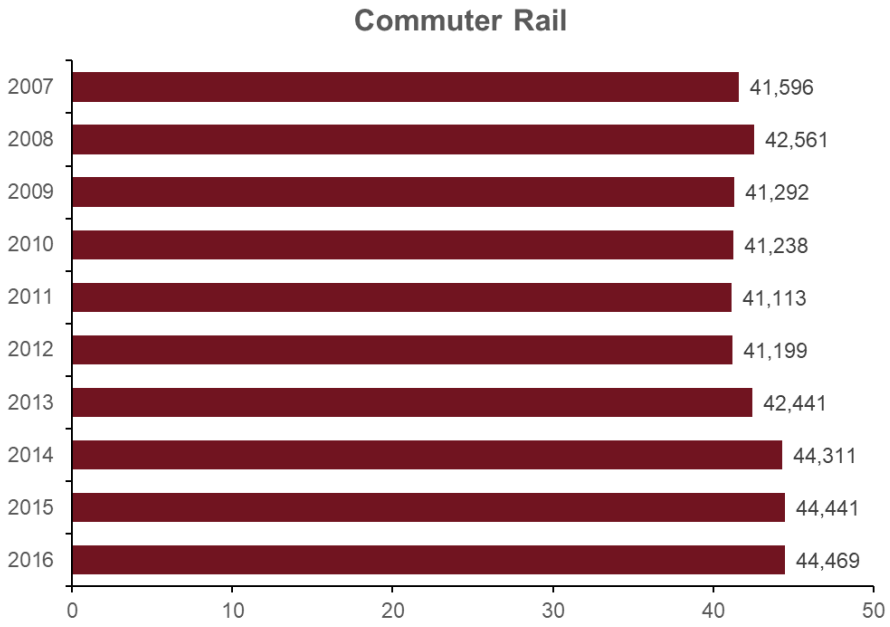

Exhibit A 46: Commuter Rail Service Utilization

- From 2011 to 2016, fixed guideway directional route mile totals for *Bus* included segments defined as Fixed Guideway and High Intensity Bus. The bus-service use average increased 8.3 percent over the past ten years and increased 9.9 percent over the past three years.
- Commuter rail use average increased 6.9 percent over the past ten years and increased 0.4 percent over the past three years.

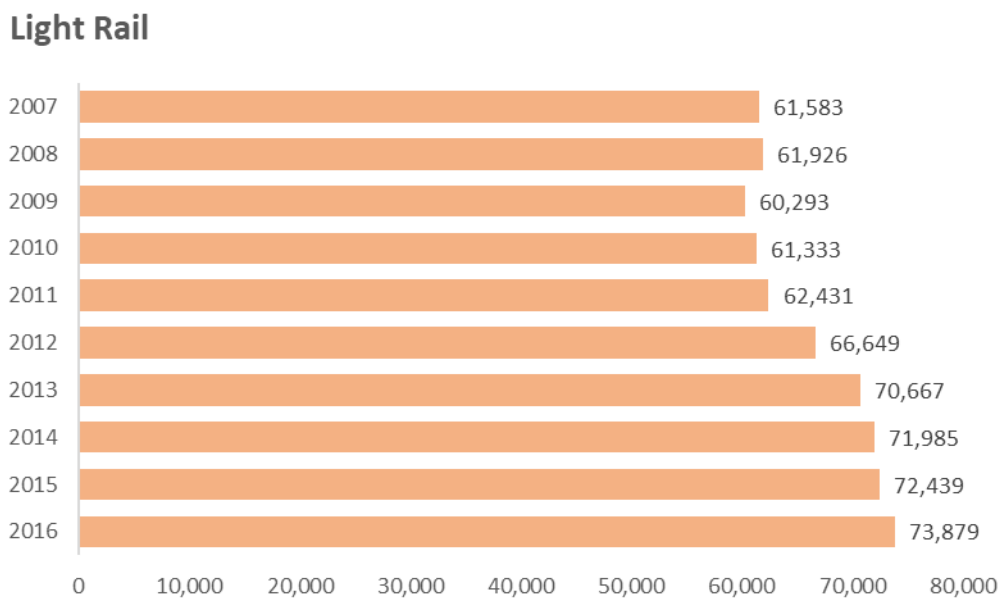

Exhibit A 47: Light Rail Service Utilization

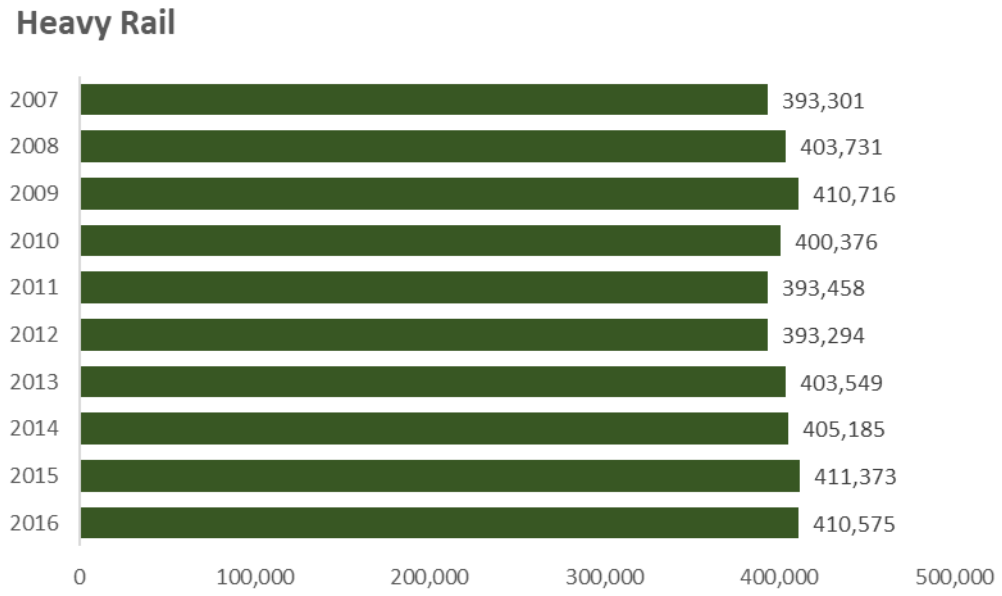

Exhibit A 48: Heavy Rail Service Utilization

- Light rail average service utilization increased 20.0 percent over the past ten years and increased 2.6 percent over the past three years.
- Heavy rail average service utilization increased 4.4 percent over the past ten years and 1.3 percent over the past three years.

Quality of Transit Service

Safety

The NTD defines a fatality as a death confirmed within 30 days following a transit-related incident. Deaths in or on transit property resulting from illness or other natural causes are not reportable to the NTD and are excluded from this dataset. Suicides are included in these totals. NTD defines an injury as any person who was transported from the scene of the event for medical attention.

Additional notes on safety data:

- All safety data presented on the following pages are sourced from Calendar Year 2016 NTD major event reports. At the time of this document's publication, NTD reporters can still add, modify, and delete major event data for Calendar Year 2016. As such, these data are considered "preliminary" and numbers may change based on ongoing validation activity.
- The analyses on the following page uses Fiscal Year service data sourced from the NTD's Annual Report data collection and Calendar Year Safety and Security data to estimate Fatalities per 100 million Passenger Miles Traveled.
- The Federal Railroad Administration oversees safety for Commuter Rail (CR) systems and a select set of Hybrid Rail (YR) and Heavy Rail (HR) systems. These agencies do not report safety data to the NTD and are therefore excluded from any safety analyses in this document.

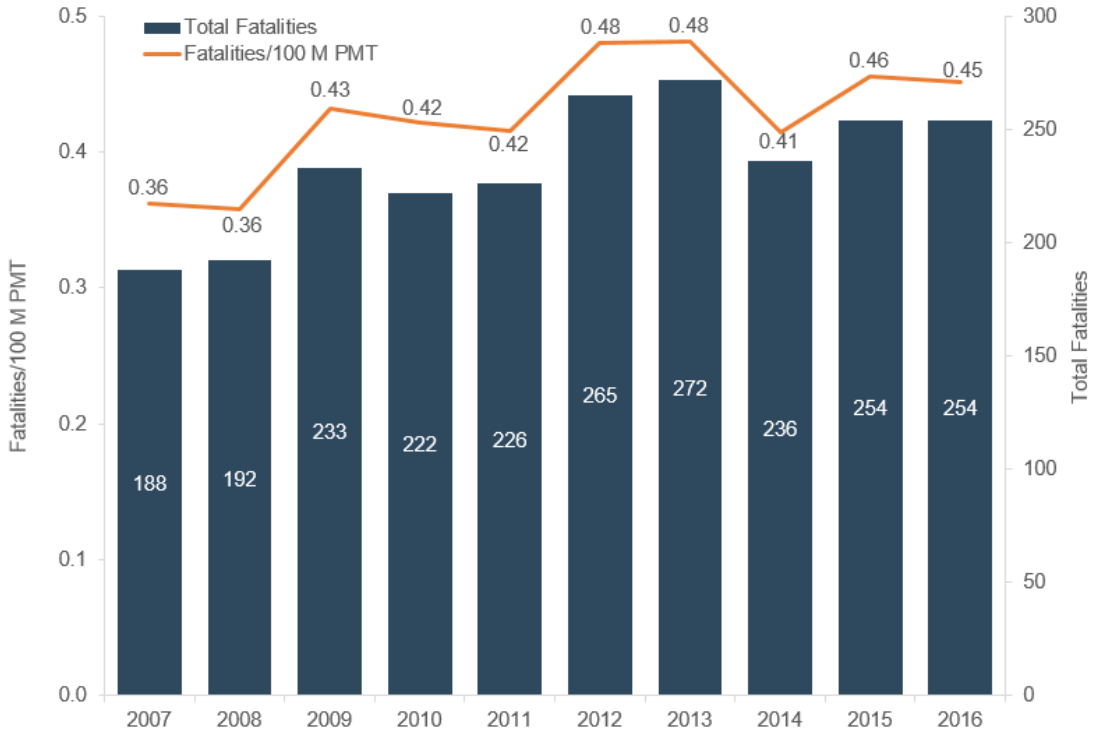

Exhibit A 49: Fatalities per 100 Million Passenger Miles (Full Reporting Agencies)

The NTD groups injuries and fatalities according to seven categories of individuals:

- **Passenger:** An individual who is onboard a transit vehicle or who is boarding/alighting, including those using ramps and lifts.
- **Revenue facility occupant:** An individual who is inside the public passenger area of transit revenue facility. Employees, other workers, and trespassers are not considered revenue facility occupants.
- **Employee:** An employee of the transit agency.
- **Other worker:** A non-employee who is contracted to provide specific services to the transit agency.
- **Pedestrian:** An individual walking in a crosswalk, out of a crosswalk, crossing tracks, or walking along tracks, and bicyclists.
- **Other Vehicle Occupant:** A driver or passenger in a privately owned vehicle.
- **Others:** An individual who is not included in the above categories – many trespassing-related fatalities are reported under this category.

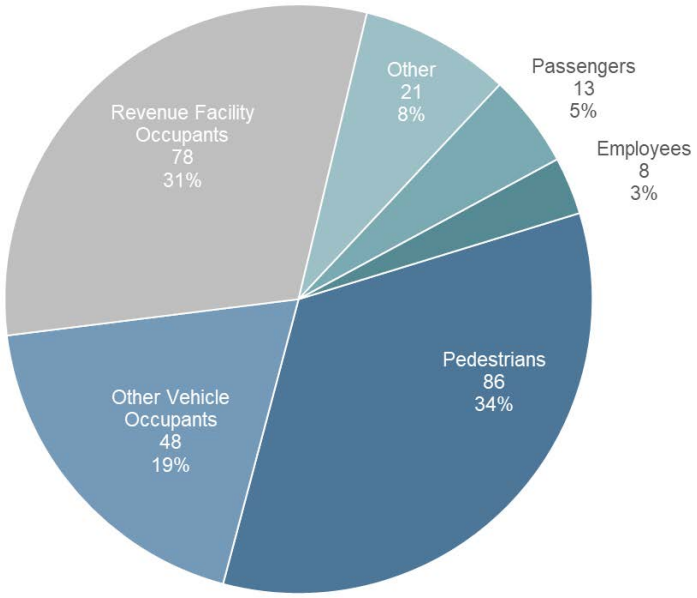

Exhibit A 50: 2016 Total Fatalities by Person Type

Most fatalities in transit-related accidents are non-passengers. Passenger fatalities accounted for only 5 percent of all reportable fatalities in 2016.

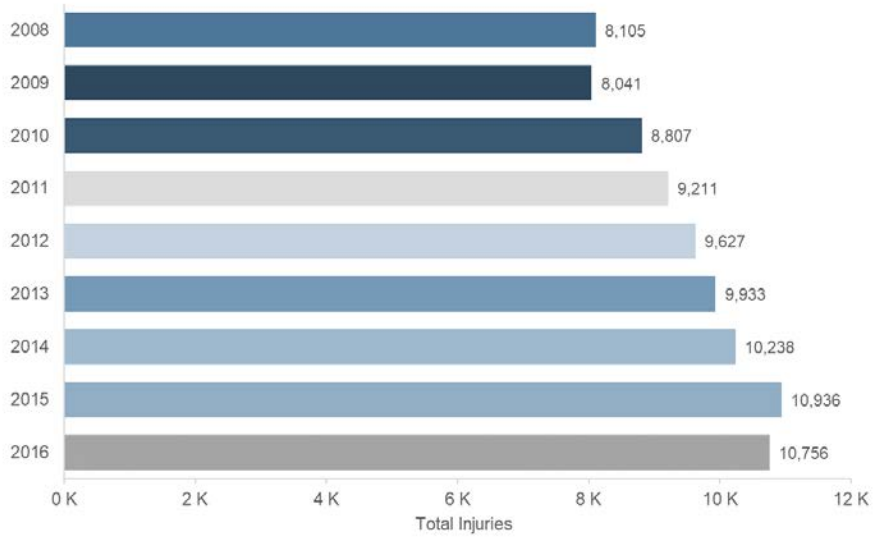

Exhibit A 51: Total Injuries (Major Events)

	Total Injuries	Total Fatalities
2007	5,642	185
2008	8,105	192
2009	8,041	233
2010	8,807	222
2011	9,211	226
2012	9,627	265
2013	9,933	272
2014	10,238	236
2015	10,877	254
2016	10,756	254

Exhibit A 52: Injuries and Fatalities (Major Events)

Reduced Reporter Safety Data

Agencies filing a Reduced/Rural Report submit safety data differently than Full Reporter agencies. These reporters report only the total number of events which meet a major event threshold and fatalities and injuries resulting from such events for the entire Fiscal Year of that agency. Most Reduced/Rural Reporters (1,357 agencies) reported zero major safety and security events in 2016. Of the 330 agencies that did report events, 10 experienced fatalities.

	Fatalities	Injuries	Reportable Incidents
Total Safety Incidents	10	476	711
Number of Agencies	10	197	330

Exhibit A 53: 2016 Safety Events, Reduced Reporting Transit

Reliability

Miles between Major Mechanical System Failures

Major mechanical system failures prevent the revenue vehicle from completing a scheduled revenue trip, starting the next scheduled revenue trip because actual movement is limited, or because of safety concerns. Examples of major mechanical bus failures include breakdowns of air equipment, brakes, doors, engine cooling system, steering and front axle, rear axle, and suspension and torque converters.

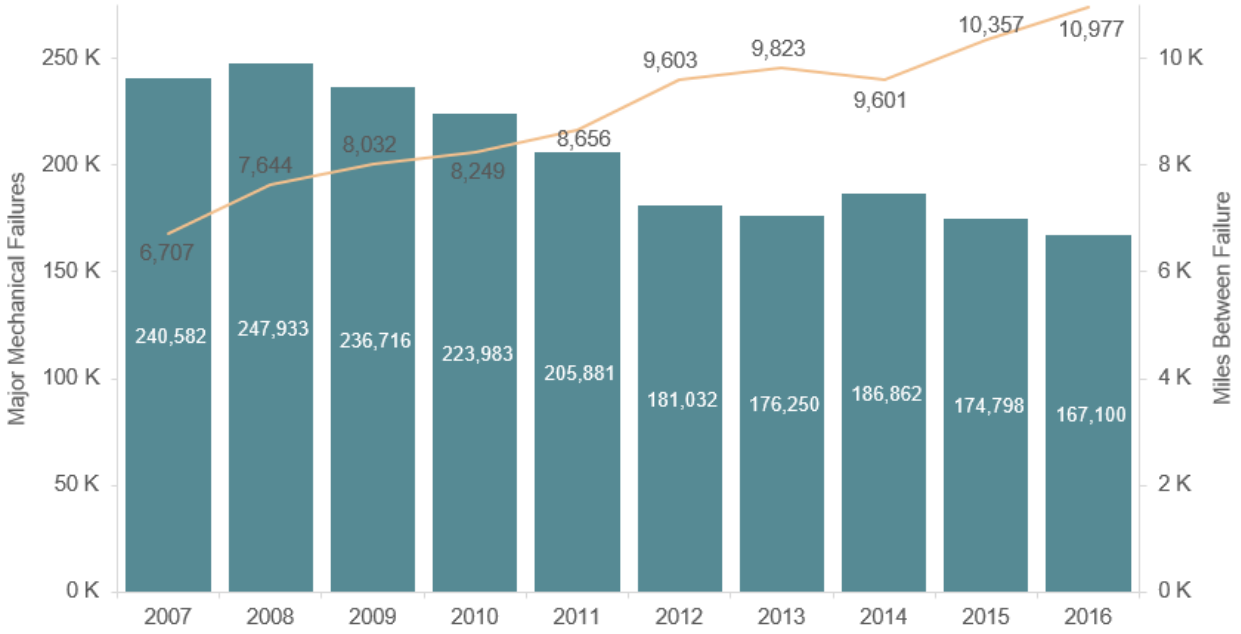

Exhibit A 54: Miles between Major Mechanical System Failures, Directly Operated Bus Service

Many factors can affect how many major mechanical system failures a transit agency incurs. A few examples are local operating conditions, types of vehicles operated, and effectiveness of the maintenance program. However, different transit agencies report the same types of major mechanical system failures. The differences among agencies are in the numbers reported, not the types of major mechanical system failures.

Vehicle miles are the total miles that a vehicle travels while in service (actual vehicle revenue miles and deadhead miles). See the *Transit in the United States* section for definitions of vehicle revenue miles and deadhead miles.

Major mechanical system failures have decreased 30.5 percent over the last ten years. Vehicle miles between major mechanical system failures have increased 69.9 percent over the same period.

Fleet Characteristics

Average Fleet Age by Vehicle Type

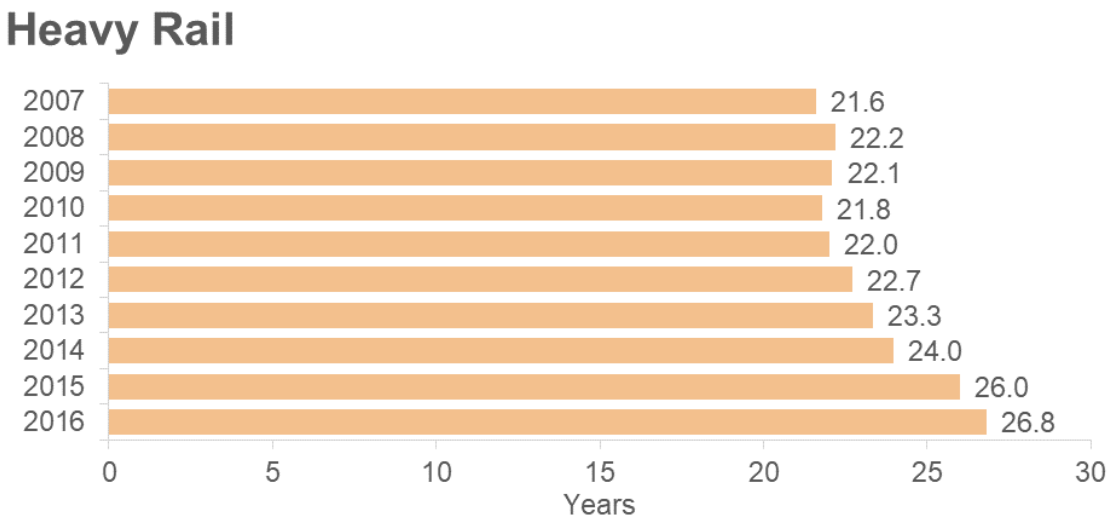

Exhibit A 55: Average Heavy Rail Mode Fleet Age

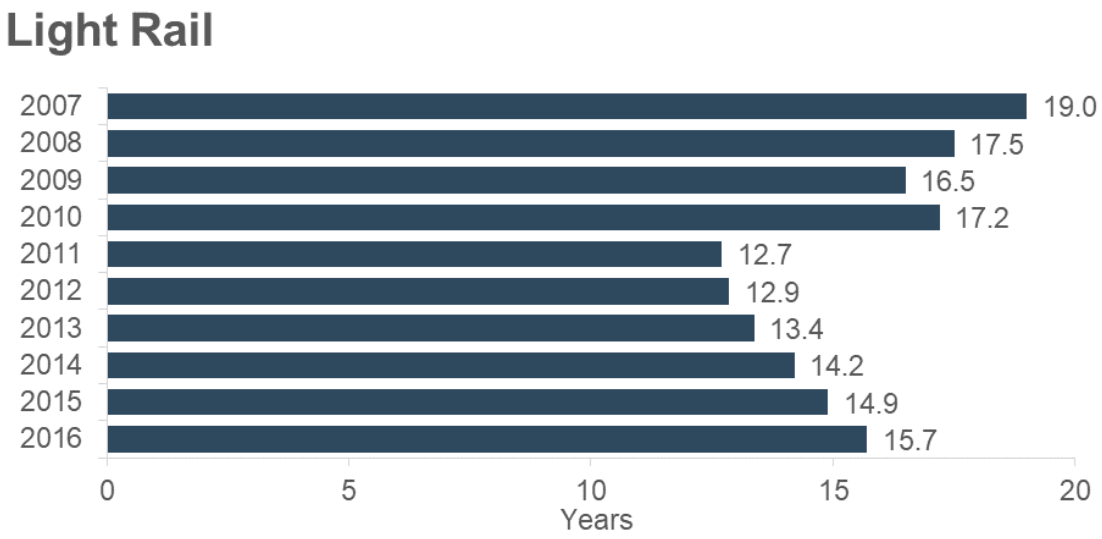

Exhibit A 56: Average Light Rail Mode Fleet Age

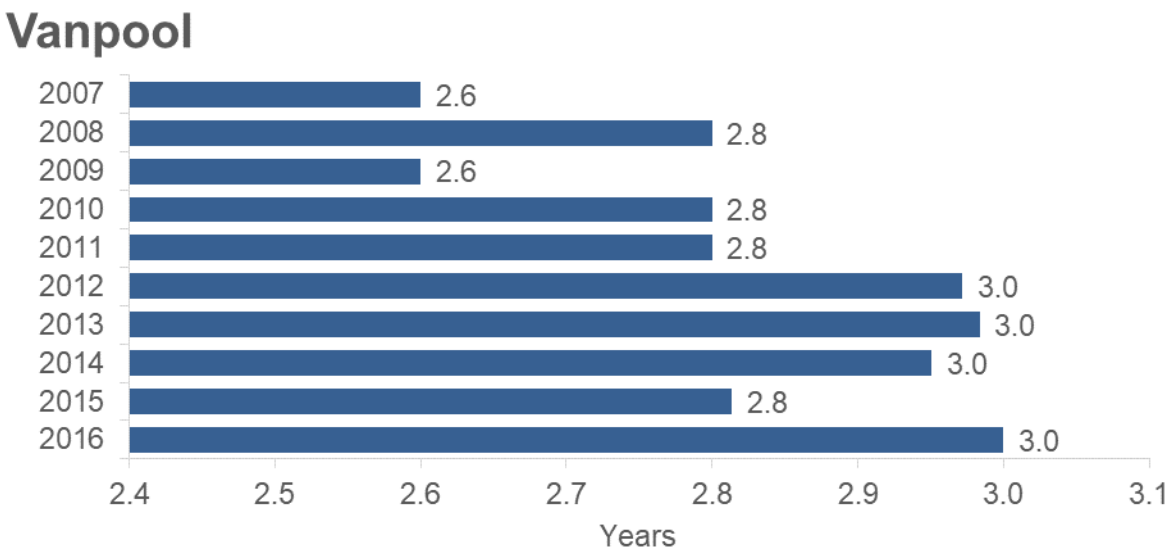

Exhibit A 57: Average Vanpool Mode Age

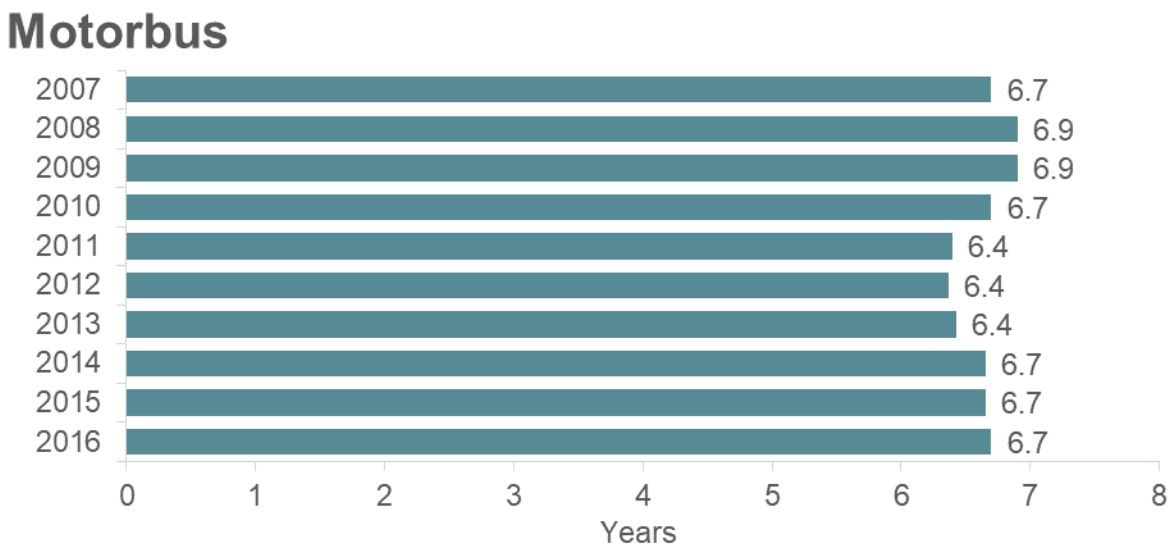

Exhibit A 58: Average Bus Mode Age

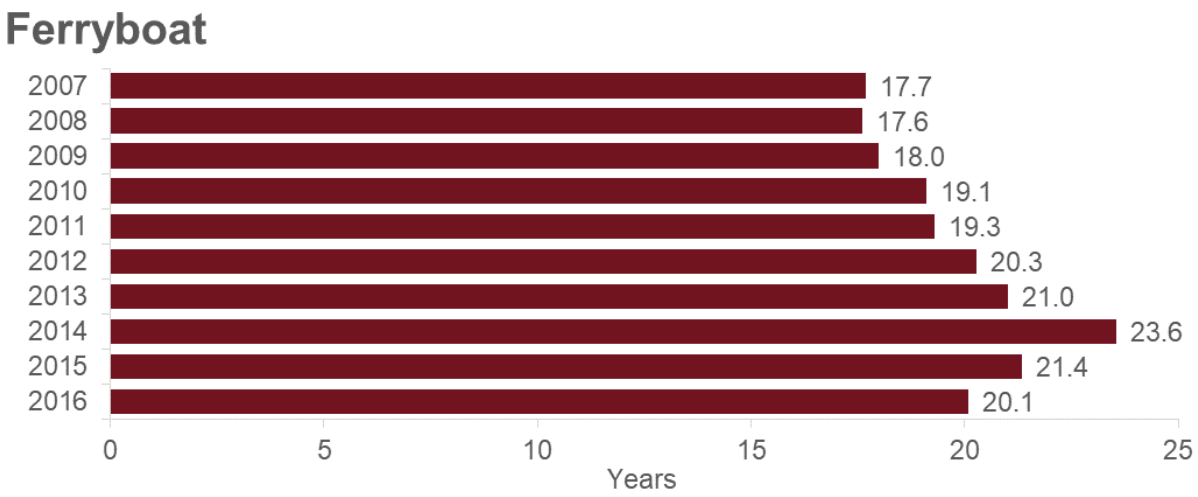

Exhibit A 59: Average Ferryboat Mode Fleet Age

Alternative Fuel Usage

Alternative fuels are not diesel or gasoline. They include compressed natural gas (CNG), electric, battery, ethanol, methanol, liquefied petroleum gas, liquefied natural gas (LNG), kerosene, bio-diesel, grain substitute and other fuels. The national bus fleet includes only buses fully dedicated to transit service.

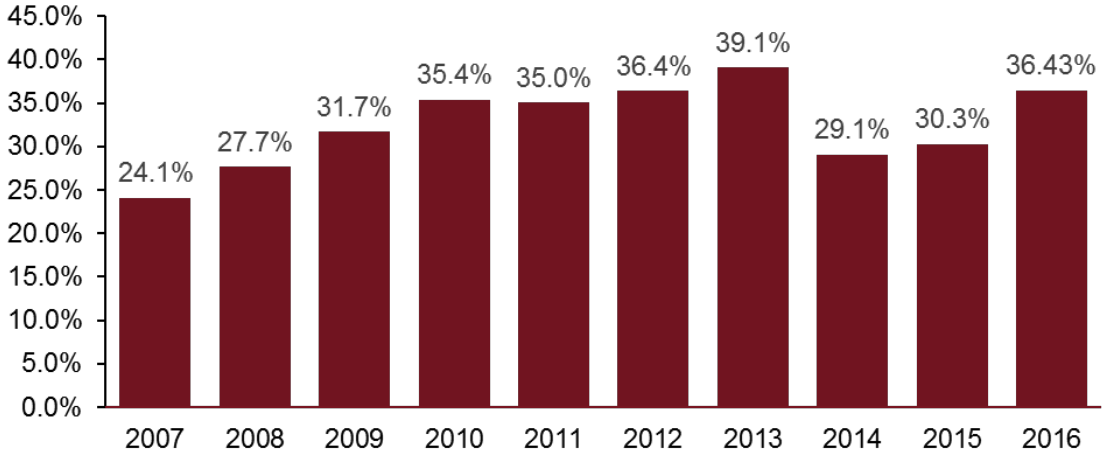

Exhibit A 60: Percent of National Bus Fleet Using Alternative Fuels

The share of the national bus fleet using alternative fuels rose from 24.1 percent in 2006 to 36.43 percent in 2016.

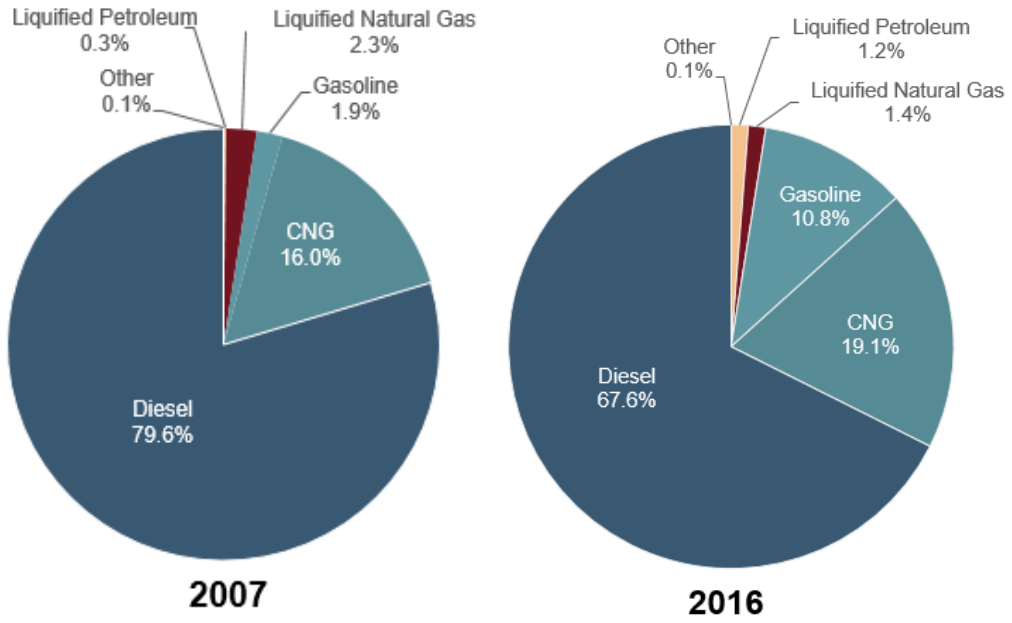

Exhibit A 61: Percentage of Fuel Consumption for Non-Electric Modes

ADA Compliance

ADA Lift or Ramp-Equipped Vehicles

The Americans with Disabilities Act of 1990 requires that transit agencies are accessible to individuals with special needs.

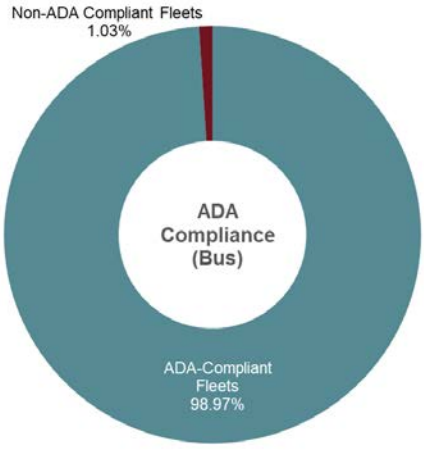

Exhibit A 62: 2016 ADA Compliance (Bus)