

Streetcar Vs. City Bus Operating Cost Comparison

Are you old enough to remember Manhattan's iconic "Checker Taxi Cabs"? These vehicles were first built during the 1950's, but served New York City virtually unchanged, until the 1980's. How did they last so long? Answer- they were built out of a conglomeration of all the best parts and techniques available to the automotive industry of that time- regardless of the brand or manufacturer.

We think the new Brooklyn Streetcar should follow the overall design paradigm of the Checker Cab- use all the best aspects of currently available streetcar technology, regardless of where it comes from. For example, the Portland, Oregon streetcar system probably offers us the best design paradigm as far as [construction economy](#) is concerned. However, for the most cost effective results, Brooklyn may want to use pages out Memphis, TN 's and Little Rock, AR's play books, in regards to an "[operating system model](#)"...

According to the most up to date research available online, a new Brooklyn Streetcar would incur **LESS THAN One-Half (39% – 44%)** the operating costs of a NYC Transit Bus. According to the following research, the 2008 operating costs of a new Brooklyn Streetcar would be on average between **\$48.79/hr and \$60.02/hr** per streetcar*. The latter figure corresponds perfectly with the circa 2007 hourly operating cost of **\$59.40/hr** per streetcar, on the newly built (2004) Little Rock, AR line.

Known as the "River Rail System" (see # 79- LR as per the attached FTA 2007 Operating Cost spreadsheet), this line is 3 miles long, and has 13 stations- similar in scope to our proposed Red Hook-Boro Hall streetcar line of 2 miles. The fare is only 50 Cents for Kids/Seniors, \$1.00/Adult, 3 Day Pass is \$5.00 and a 20 Ride Pass \$15.00. It's operated by the Central Arkansas Transit Authority. For more information, see <http://www.cat.org/rrail/> .

For another example, (2009 data), of an efficiently operated modern **streetcar line** (**NOT** a Light Rail), is that of Memphis, TN, operated by MATA: **\$70.30/hr** per streetcar. This line consists of seven miles of route, and 18 streetcars, some refurbished, some new at the time of construction. For more information on MATA's streetcar line, see: <http://www.railwaypreservation.com/vintagetrolley/memphis.htm> .

On the other hand, as per Federal Transportation Administration (FTA) data, the known circa 2007 operating cost of an MTA NYC Transit Bus was **\$136.10/hr** (see #119- MB) as per the attached FTA 2007 Operating Cost spreadsheet.

For further comparison, the MTA NYC Transit Subway operating cost circa 2007, was \$155.20/hr (see #33- HR) on the aforementioned FTA spread sheet attached to this writing.

Circa 2000, the operating cost of a NYC Transit Bus was \$90.74/hr, followed by an increase in NYCT Bus operating costs of \$45.35/hr over 7 years, up to \$136.10/hr in 2007- **A NYCT Bus operating cost increase of 50% over only seven years**. The latest (2009) NYCT data shows Bus Operating Cost has risen further to \$146/hr. Why? Here's four likely contributing factors:

1. In order to reduce Bus pollution emissions, NYCT has reportedly been running its Buses slower than

in former years, increasing hourly operating cost.

2. NYCT Bus contractual labor cost increases.

3. Increased fossil fuel costs.

4. According to a ca. 2002 government report (U.S. Department of Energy), NYCT Hybrid buses had a 46%- 92% HIGHER operating cost over conventional buses, when compared to an RTS diesel. This is reportedly due to higher repair and maintenance costs, not covered by warranty.

And I quote:

"In addition, the following conclusions were reached: • During the evaluation, the NYCT hybrid buses had overall operating costs (excluding driver labor) 46%–92% higher than the NovaBUS RTS diesel buses. Much of this difference was caused by higher labor hours required to repair and maintain all bus subsystems on the 10 prototype hybrid buses, including the hybrid propulsion system".

Source: DOE/NREL Report, 2002

www.brooklynrail.net/images/new_brooklyn_streetcar/nyct_hybrid_bus_evaluation.pdf

As a point of reference, it should be noted that on average, **diesel buses get 2.5 MPG (less than 3 MPG), while Hybrid Buses get 3.5 MPG (less than 4 MPG)**. However, certain times of the year, depending on weather conditions, Hybrid Buses get the same 2.5 MPG as their diesel counterparts. Generally, a Hybrid Bus costs \$150,000 more than a conventional bus, and has to be scrapped after a life span of 12 years.

METHODOLOGY:

I found the circa 2008 NYC Transit Bus Operator application online here:

<http://www.nyc.gov/html/dcas/downloads/pdf/noes/200808006000.pdf>

A NYC bus operator starts at \$18.84/hr, and rises in increments after 3 years to \$26.92/hr for a 40 hour week. However, this figure does not reflect benefits. So, let's add 66% to the numbers for the actual labor cost, including benefits, as per the 2010 Public Transportation Fact Book, by APTA, pg 21, Table 18:

Bus Operator hourly pay + benefits (66% / hr) = Total labor cost per hour

For vehicle operator starting pay scale, we get a total hourly labor cost of:

$\$18.84/\text{hr} + \$12.43/\text{hr} = \$31.27/\text{hr}$.

For vehicle operator pay scale after three years, we get a total hourly labor cost of:

$\$26.92/\text{hr} + \$17.77/\text{hr} = \$44.69/\text{hr}$

As per SEPTA (Philadelphia Transit Authority) circa 2001 streetcar operating cost breakdown, updated with 2010 data, "Labor" accounts for 77% of the total operating cost of \$47.05/hr. "Everything Else" accounts for 23%, or \$10.81/hr. Now, let's add \$10.81/hr to the actual hourly labor cost for "Power and Everything Else":

Total hourly operating cost per Streetcar, w/a newly appointed operator:
 \$31.27/hr + \$10.81/hr = **\$42.08/hr.**

Total hourly operating cost per Streetcar w/an operator having 3 years of service:
 \$44.69/hr + \$10.81/hr = **\$55.50/hr.**

A noteworthy point, is that the actual current (2008) SEPTA (Philadelphia) streetcar hourly operating cost of **\$47.05/hr**, is almost the exact average of the projected Brooklyn streetcar hourly operating cost, which is $(\$42.08 + \$55.50) / 2 =$ **\$48.79/hr.**

The current circa 2008, Philadelphia streetcar (Subway-Surface) operating cost of \$47.05/hr can be viewed here on page 58: <http://www.septa.org/reports/pdf/asp10.pdf>

As for the circa 2000 NYC Transit Bus operating cost data, the following is the **Manhattan Institute For Policy Research** Bus Operating Cost Table, circa 2002, created by:

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As we can see in the first row, the circa 2000 operating cost of a NYC Transit Bus, was **\$90.74/hr.**

Civic Report No. 30 November 2002

Competitive Contracting of Bus Service: A Better Deal for Riders and Taxpayers

Table 2: New York Metropolitan Area Bus Transit Services, Fiscal Year 2000

State	System	Annual Operator Type [a]	Vehicles Ridership [b] (1,000s)	Operating in Max. Service	Total Operating Expenses (1,000s)	Expense per Vehicle Hr.*
NY	New York City Transit Authority	1	821,994.5	3,840	\$ 1,323,556.89	\$ 90.74
NY	Long Island Bus	1	29,889.4	269	78,887.7	90.50
NJ	New Jersey Transit [c]	1	141,403.9	1,682	439,391.8	88.03
NY	New York City-Franchised	2	111,311	1,084	264,985	86.18
	<i>New York-GTJC</i>	2	78,729.2	601	150,295.7	83.76

	Queens Surface Corp	2	25,746.5	280	75,167.8	99.58
	New York Bus Tours, Inc.	2	3,943.9	128	22,293.9	75.00
	Liberty Lines Express	2	2,891.3	75	17,227.8	75.48
NY	Liberty Lines Transit (Westchester Bee Line)	2	23,927.6	273	62,622.3	78.23
NY	Suffolk County Transit [d]	2	4,406.2	130	23,524.6	59.19
NJ	New Jersey Transit (contract service)	2	8,375.8	143	25,704.3	56.92

Operator type:

1. Public

2. Public-private contract

a. All buses publicly owned; maintenance and support arrangements may differ by operator

b. Unlinked passenger trips

c. Includes statewide operations

d. County-sponsored service provided by seven private contractors

* Vehicle hours consist of all of the time a bus is on the road, in service and out of service, including "deadhead" periods most common in express service.

Source: Federal Transit Administration, National Transit Database, 2000.

Let's now breakdown the SEPTA "Everything Else" portion of operating cost further, this time using data from the APTA 2010 Public Transportation Fact Book:

As per the circa 2001 SEPTA operating cost allocation breakdown, labor accounts for 77% of the total operating cost of \$47.05. "Everything Else" accounts for 23%, or \$10.81. By working ratios on the "light rail" columns of Tables 17 and 18 of the APTA 2010 Public Transportation Fact Book, and using the SEPTA 2008 Subway- Surface figure of \$47.05/hr as an overall starting point, this is what we get:

Utilities [Power]:	\$3.45/hr
Casualty and Liability:	\$1.11/hr
Material & Supplies:	\$3.05/hr
General Administration:	\$8.18/hr
<u>Maintenance:</u>	<u>\$9.70/hr</u>
Subtotal:	\$22.04/hr

Or roughly double of the SEPTA "Everything Else" figure of \$10.81/hr.

Using this method, the average **Brooklyn** streetcar operating cost would be:

Average Total Labor Cost: \$37.98/hr
 “Everything Else”: \$22.04/hr

Total Operating Cost PER STREETCAR: \$60.02/hr.

*** If streetcars are operated in 2 car “trains”, then the operating cost would be:**

Labor- 1 Operator (average): \$37.98/hr
 “Everything Else” x 2 : \$44.08/hr

Total Operating Cost Per 2 Car “Train”: \$82.06/hr

OPERATING COST RATIOS p. 1											
1	2	3	State	Name	Mode	TOS	VOMS	Operating Expense			
								per Vehicles Operated in Maximum Service	per Vehicle Hour	per Unlinked Passenger Trip	per Passenger Mile Traveled
4	NV	Las Vegas Monorail Company (LVMC)	AG	PT	32	1,677,779.3	2,005.5	5.8	24.2	0.0	
5	FL	Miami-Dade Transit (MDT)	AG	DO	20	1,050,032.6	225.7	2.4	2.4	60.4	
6	MI	Detroit Transportation Corporation (Detroit People Mover)	AG	DO	10	1,282,764.4	225.3	5.6	3.6	75.1	
7	FL	Jacksonville Transportation Authority (JTA)	AG	DO	7	658,681.6	237.9	7.4	18.0	53.5	
8	AK	Alaska Railroad Corporation (ARRC)	AR	DO	57	58,810.9	463.0	25.8	1.4	82.3	
9	CA	San Francisco Municipal Railway (MUNI)	CC	DO	28	1,571,915.0	305.2	6.2	5.4	57.3	
10											
11	IL	Northeast Illinois Regional Commuter Railroad Corporation (Metra)	CR	DO	1,056	464,656.8	344.0	6.6	0.3	64.8	
12	NY	Metro-North Commuter Railroad Company, dba: MTA Metro-North	CR	DO	1,051	764,431.9	435.3	10.1	0.4	77.8	
13	NY	MTA Long Island Rail Road (MTA LIRR)	CR	DO	998	1,036,998.0	436.7	10.1	0.5	86.0	
14	NJ	New Jersey Transit Corporation (NJ TRANSIT)	CR	DO	881	822,289.1	335.7	9.0	0.3	76.9	
15	MA	Massachusetts Bay Transportation Authority (MBTA)	CR	DO	388	586,376.0	312.3	5.9	0.3	58.0	
16	PA	Southeastern Pennsylvania Transportation Authority (SEPTA)	CR	DO	308	640,786.6	311.3	5.9	0.4	55.5	
17	CA	Southern California Regional Rail Authority (Metrolink)	CR	PT	173	715,799.4	427.6	10.3	0.3	0.0	
18	MD	Maryland Transit Administration (MTA)	CR	PT	132	582,553.4	552.5	10.2	0.3	0.0	
19	CA	Peninsula Corridor Joint Powers Board (PCJPB)	CR	PT	96	778,724.0	385.1	7.3	0.3	0.0	
20	VA	Virginia Railway Express (VRE)	CR	PT	75	615,899.1	699.1	13.6	0.4	0.0	
21	IN	Northern Indiana Commuter Transportation District (NICTD)	CR	DO	66	550,928.0	332.0	8.6	0.3	65.6	
22	WA	Central Puget Sound Regional Transit Authority (ST)	CR	PT	35	703,771.3	1,018.8	11.4	0.5	0.0	
23	FL	South Florida Regional Transportation Authority (TRI-Rail)	CR	PT	34	1,273,728.9	635.1	12.7	0.4	0.0	
24	CA	North County Transit District (NCTD)	CR	PT	24	740,984.5	507.8	11.4	0.4	0.0	
25	PA	Pennsylvania Department of Transportation (PENNDOT)	CR	PT	24	512,101.8	419.8	32.7	0.4	0.0	
26	CT	Connecticut Department of Transportation (CDOT)	CR	PT	22	496,271.5	589.5	23.4	1.2	0.0	
27	TX	Dallas Area Rapid Transit (DART)	CR	PT	21	996,180.8	796.9	14.2	1.3	0.0	
28	CA	Altamont Commuter Express (ACE)	CR	PT	18	604,403.3	550.3	15.4	0.3	0.0	
29	TX	Fort Worth Transportation Authority (The T)	CR	PT	15	582,407.8	335.7	8.7	0.5	0.0	
30	ME	Northern New England Passenger Rail Authority (NNEPRA)	CR	PT	12	937,155.6	236.5	33.0	0.4	0.0	
31	TN	Regional Transportation Authority (RTA)	CR	PT	5	730,933.0	594.3	33.8	1.9	0.0	
32											
33	NY	MTA New York City Transit (NYCT)	HR	DO	5,280	573,581.0	155.2	1.3	0.3	63.4	
34	IL	Chicago Transit Authority (CTA)	HR	DO	1,002	534,979.1	129.5	2.8	0.5	72.1	
35	DC	Washington Metropolitan Area Transit Authority (WMATA)	HR	DO	782	890,454.5	248.7	2.5	0.4	66.0	
36	CA	San Francisco Bay Area Rapid Transit District (BART)	HR	DO	517	887,639.7	213.9	4.2	0.3	84.5	
37	MA	Massachusetts Bay Transportation Authority (MBTA)	HR	DO	320	816,090.5	173.5	1.8	0.5	65.6	
38	PA	Southeastern Pennsylvania Transportation Authority (SEPTA)	HR	DO	278	517,045.4	174.2	1.6	0.4	53.8	
39	NJ	Port Authority Trans-Hudson Corporation (PATH)	HR	DO	266	840,479.3	263.7	2.8	0.6	108.1	
40	GA	Metropolitan Atlanta Rapid Transit Authority (MARTA)	HR	DO	182	943,001.0	194.5	2.2	0.3	42.6	
41	FL	Miami-Dade Transit (MDT)	HR	DO	98	822,744.9	207.3	4.6	0.6	61.4	
42	NJ	Port Authority Transit Corporation (PATCO)	HR	DO	78	502,589.0	257.7	4.2	0.5	68.9	
43	CA	Los Angeles County Metropolitan Transportation Authority (LACMTA)	HR	DO	70	1,248,116.9	305.9	2.1	0.5	85.7	
44	MD	Maryland Transit Administration (MTA)	HR	DO	54	936,117.8	252.9	3.8	0.8	58.5	
45	NY	Staten Island Rapid Transit Operating Authority, dba: MTA Stat	HR	DO	46	715,352.4	299.5	4.4	0.7	66.2	
46	PR	Puerto Rico Highway and Transportation Authority (PRHTA)	HR	PT	40	1,334,981.3	260.1	6.8	1.3	0.0	
47	OH	The Greater Cleveland Regional Transit Authority (GCRTA)	HR	DO	22	1,109,464.6	303.9	3.3	0.5	46.9	
48	AG = automated guideway; CC = cable car; CR = commuter rail; HR = heavy rail (subway).										
49	Vehicles Operated in Maximum Service (VOMS) includes directly operated (DO) and purchased transportation (PT) vehicles by mode and type of service (TOS) reported on the Identification form (B-10) under the same NTD identification number.										
50	Source: Federal Transit Administration National Transit Database										
51											

OPERATING COST RATIOS p. 2

State	Name	Mode	TOS	VOMS	Operating Expense				
					per Vehicles Operated in Maximum Service	per Vehicle Hour	per Unlinked Passenger Trip	per Passenger Mile Traveled	per Employee Work Hour
MA	Massachusetts Bay Transportation Authority (MBTA)	LR	DO	150	802,932.5	208.3	1.7	0.7	61.0
CA	San Francisco Municipal Railway (MUNI)	LR	DO	141	876,724.8	216.1	3.0	1.2	64.7
PA	Southeastern Pennsylvania Transportation Authority (SEPTA)	LR	DO	127	444,204.0	136.0	2.0	0.8	51.0
CA	Los Angeles County Metropolitan Transportation Authority (LACMTA)	LR	DO	102	1,416,329.3	370.7	3.5	0.5	84.3
CA	San Diego Metropolitan Transit System (MTS)	LR	DO	93	601,629.7	127.6	1.6	0.3	59.9
CO	Denver Regional Transportation District (RTD)	LR	DO	91	445,059.7	84.9	2.2	0.3	50.2
TX	Dallas Area Rapid Transit (DART)	LR	DO	85	939,010.7	315.7	4.5	0.6	58.5
OR	Tri-County Metropolitan Transportation District of Oregon (TriMet)	LR	DO	81	909,335.5	170.1	2.0	0.4	66.9
NJ	New Jersey Transit Corporation (NJ TRANSIT)	LR	PT	58	1,539,407.7	393.4	6.8	1.2	0.0
PA	Port Authority of Allegheny County (Port Authority)	LR	DO	57	748,521.4	289.2	6.0	1.2	49.5
CA	Sacramento Regional Transit District (Sacramento RT)	LR	DO	56	846,858.1	217.5	3.3	0.6	81.7
MO	Bi-State Development Agency (METRO)	LR	DO	56	917,808.4	196.7	2.4	0.4	72.1
UT	Utah Transit Authority (UTA)	LR	DO	46	569,367.7	105.5 Q	1.6	0.3	44.0
CA	Santa Clara Valley Transportation Authority (VTA)	LR	DO	39	1,434,243.5	260.7	5.4	1.0	84.7
MD	Maryland Transit Administration (MTA)	LR	DO	36	1,104,153.4	278.7	5.9	1.0	64.1
MN	Metro Transit	LR	DO	27	812,105.1	163.7	2.4	0.4	75.9
NY	Niagara Frontier Transportation Authority (NFT Metro)	LR	DO	23	1,013,210.8	305.4	4.0	1.6	88.2
LA	New Orleans Regional Transit Authority (NORTA)	LR	DO	19	652,267.7	297.6	9.0	7.6	69.2
NJ	New Jersey Transit Corporation (NJ TRANSIT)	LR	DO	17	1,083,199.5	322.0	3.1	1.4	60.4
OH	The Greater Cleveland Regional Transit Authority (GCRTA)	LR	DO	17	756,747.7	221.9	4.2	0.7	45.8
TX	Metropolitan Transit Authority of Harris County, Texas (Metro)	LR	DO	17	885,283.7	191.5	1.3	0.5	40.3
TN	Memphis Area Transit Authority (MATA)	LR	DO	12	357,656.2	70.7	4.2	4.9	34.8
FL	Hillsborough Area Regional Transit Authority (HART)	LR	DO	8	300,294.6	131.6	4.3	2.8	39.8
TX	Island Transit (I T)	LR	DO	4	148,957.0	101.5	19.0	14.8	39.9
AR	Central Arkansas Transit Authority (CATA)	LR	DO	3	236,208.3	59.4	4.6	2.8	34.6
WI	Kenosha Transit (KT)	LR	DO	3	106,467.0 Q	106.8 Q	5.1 Q	4.5 Q	48.6 Q
WA	Central Puget Sound Regional Transit Authority (ST)	LR	DO	2	1,489,941.0	291.3	3.5	3.4	94.4
GA	Chatham Area Transit Authority (CAT)	FB	DO	2	433,276.0	88.7	1.9 Q	6.1 Q	32.6
VA	Transportation District Commission of Hampton Roads, dba: Hampton Roads	FB	PT	2	368,299.5	121.8	1.9	3.8	0.0
WA	Kitsap Transit	FB	PT	2	790,301.5	237.9	3.4	2.1	0.0
LA	Crescent City Connection Division - Louisiana Department of Transportation	FB	DO	3	2,361,636.7	504.8	4.2	8.4	55.8
NJ	Port Imperial Ferry Corporation dba NY Waterway	FB	DO	13	1,645,623.5	589.8	4.5	1.2	97.9
ME	Casco Bay Island Transit District (CBITD)	FB	DO	4	1,041,282.5	327.5	4.6	1.5	35.7
NY	BillyBey Ferry Company, LLC	FB	DO	5	1,525,470.8	432.2	4.8	1.9	133.8
NJ	Port Authority Trans-Hudson Corporation (PATH)	FB	PT	8	1,142,652.9	430.1	5.0	1.9	0.0
NY	New York City Department of Transportation (NYCDOT)	FB	DO	4	25,033,405.3	5,620.7	5.3	1.0	60.2
MA	Massachusetts Bay Transportation Authority (MBTA)	FB	PT	9	1,094,116.7	450.4	7.1	0.8	0.0
WA	Washington State Ferries (WSF)	FB	DO	22	9,489,242.2	1,622.8	8.7	1.1	68.2
CA	City of Alameda Ferry Services	FB	PT	3	1,705,594.7	701.0	8.9	1.3	0.0
CA	Golden Gate Bridge, Highway and Transportation District (GGBHTD)	FB	DO	5	3,805,905.8	1,330.5	9.4	0.9	89.7
NY	Metro-North Commuter Railroad Company, dba: MTA Metro-North	FB	PT	2	1,370,293.0	597.5	13.1	3.8	0.0
WA	Pierce County Ferry Operations (Pierce County Ferry)	FB	PT	1	2,792,242.0	486.9	14.2	1.6	0.0
CA	City of Vallejo Transportation Program (Vallejo Transit, Baylink)	FB	PT	3	3,712,534.7	1,200.8	14.3	0.6	0.0
PR	Puerto Rico Ports Authority (PRPA)	FB	DO	15	1,094,178.9	603.5	16.7 Q	4.6	42.9

LR = light rail (trolley or streetcar); FB = ferry boat.

OPERATING COST RATIOS p. 3

State	Name	Mode	TOS	VOMS	Operating Expense				
					per Vehicles Operated in Maximum Service	per Vehicle Hour	per Unlinked Passenger Trip	per Passenger Mile Traveled	per Employee Work Hour
NY	MTA New York City Transit (NYCT)	DR	PT	1,580	177,414.8Q	60.4 Q	70.2 Q	6.7 Q	0.0 Q
CA	San Francisco Paratransit (ATC)	DR	PT	1,555	12,025.8	50.2	16.1	2.8	0.0
IL	Pace - Suburban Bus Division (PACE) - ADA Paratransit Services	DR	PT	705	118,730.0	46.0	31.9	3.6	0.0
CA	Access Services Incorporated (ASI)	DR	PT	561	129,847.7	45.5	30.1	2.4	0.0
MA	Massachusetts Bay Transportation Authority (MBTA)	DR	PT	453	114,762.1	42.4	32.8	2.5	0.0
DC	Washington Metropolitan Area Transit Authority (WMATA)	DR	PT	406	142,411.8	38.9	39.5	3.9	0.0
TX	Metropolitan Transit Authority of Harris County, Texas (Metro)	DR	PT	398	85,821.9	39.5	23.7	2.0	0.0
PA	Access Transportation Systems (ACCESS)	DR	PT	390	84,805.2	45.1	19.4	2.7	0.0
CO	Denver Regional Transportation District (RTD)	DR	PT	354	101,832.5Q	50.3 Q	30.2 Q	4.6 Q	0.0 Q
WA	King County Department of Transportation - Metro Transit Division (King)	DR	PT	354	135,402.9	66.6	42.1	4.2	0.0
NJ	New Jersey Transit Corporation (NJ TRANSIT)	DR	PT	343	160,368.0	82.6	50.6	8.3	0.0
PA	Southeastern Pennsylvania Transportation Authority (SEPTA)	DR	PT	343	134,736.5	43.0	26.3	4.4	0.0
FL	Miami-Dade Transit (MDT)	DR	PT	301	140,195.6	41.7	25.1	1.7	0.0
MD	Maryland Transit Administration (MTA)	DR	PT	275	125,026.1	42.3	31.3	4.1	0.0
NY	MTA New York City Transit (NYCT)	MB	DO	3,896	536,985.1	136.1	2.4	1.2	63.0
CA	Los Angeles County Metropolitan Transportation Authority (LACMTA)	MB	DO	2,094	409,658.6	109.2	2.2	0.6	54.0
IL	Chicago Transit Authority (CTA)	MB	DO	1,846	472,475.6	123.6	2.8	1.1	66.9
NJ	New Jersey Transit Corporation (NJ TRANSIT)	MB	DO	1,785	357,888.0	114.8	4.2	0.7	55.6
DC	Washington Metropolitan Area Transit Authority (WMATA)	MB	DO	1,261	381,263.2	121.4	3.7	1.2 Q	56.0
PA	Southeastern Pennsylvania Transportation Authority (SEPTA)	MB	DO	1,171	403,707.3	110.6	2.8	1.0	54.3
NY	MTA Bus Company (MTABUS)	MB	DO	1,137	400,137.2	127.8	4.1	1.5	73.1
WA	King County Department of Transportation - Metro Transit Division (King)	MB	DO	942	366,157.3	114.8	4.0	0.7	64.4
FL	Miami-Dade Transit (MDT)	MB	DO	839	380,605.0	99.7	3.8	0.7	47.6
TX	Metropolitan Transit Authority of Harris County, Texas (Metro)	MB	DO	837	270,795.5	95.1	3.3	0.6	41.5
PA	Port Authority of Allegheny County (Port Authority)	MB	DO	813	318,318.1	107.7	4.3	0.9	48.9
MA	Massachusetts Bay Transportation Authority (MBTA)	MB	DO	768	386,419.9	112.1	3.0	1.5	55.8
MN	Metro Transit	MB	DO	740	293,518.4	99.0	3.2	0.7	50.1
TX	Dallas Area Rapid Transit (DART)	MB	DO	559	379,082.1	97.5	4.0	0.9	47.4
CO	Denver Regional Transportation District (RTD)	MB	DO	533	352,692.6	108.8	3.8	0.7	48.3
CA	Alameda-Contra Costa Transit District (AC Transit)	MB	DO	532	505,571.4	135.7	4.0	1.3	67.9
OR	Tri-County Metropolitan Transportation District of Oregon (TriMet)	MB	DO	532	390,415.9	104.9	3.3	0.9	60.1
GA	Metropolitan Atlanta Rapid Transit Authority (MARTA)	MB	DO	522	358,188.6	89.0	2.7	0.9	43.0
OH	The Greater Cleveland Regional Transit Authority (GCRTA)	MB	DO	522	329,422.5	94.7	3.5	1.0	47.3
MD	Maryland Transit Administration (MTA)	MB	DO	510	416,441.4	117.4	2.8	0.9	53.2
NY	Westchester County Bee-Line System (The Bee-Line System)	MB	PT	281	384,410.6	126.2	3.5	0.7	0.0
NY	Metropolitan Suburban Bus Authority, dba: MTA Long Island Bus	MB	DO	279	417,317.0	124.2	3.6	0.7	57.0
DR = demand response (paratransit for the handicapped); MB = motor bus.									
NJ	New Jersey Transit Corporation (NJ TRANSIT)	MB	PT	327	220,440.1	88.5	4.8	1.2	0.0
NY	Niagara Frontier Transportation Authority (NFT Metro)	MB	DO	286	298,971.4	99.3	4.7	1.2	52.7
NY	Capital District Transportation Authority (CDTA)	MB	DO	189	254,440.4	81.6	3.9	1.2	43.3
NY	Regional Transit Service, Inc. and Lift Line, Inc. (R-GRTA)	MB	DO	189	263,558.2	101.2	4.1	1.2	50.3
NY	CNY Centro, Inc. (CNY Centro)	MB	DO	130	248,353.3	89.0	2.7 Q	0.9 Q	41.6
NY	Broome County Department of Public Transportation (Broome County)	MB	DO	38	230,198.2	73.5	2.9	1.0	50.1
NY	Suffolk County Department of Public Works - Transportation Division (Suffolk)	MB	PT	138	243,598.1	83.0	5.7	0.6	0.0
NY	Transport of Rockland (TOR)	MB	PT	62	241,120.9	67.4	4.3	0.7	0.0
NY	Dutchess County Division of Mass Transportation (Loop Bus)	MB	DO	26	128,226.3	56.6	5.6 Q	0.5	32.9
NY	New York City Department of Transportation (NYCDOT)	MB	PT	24	216,714.6	111.5	7.5	1.4	0.0
NY	Huntington Area Rapid Transit (HART)	MB	DO	10	256,866.9	107.9	10.5	2.3	57.2
NY	City of Long Beach	MB	DO	9	160,665.6	54.9	3.0	1.6	27.8
NY	Tompkins Consolidated Area Transit (TCAT)	MB	PT	8	88,937.1	58.9 Q	7.3	1.5	0.0
NY	Metro-North Commuter Railroad Company, dba: MTA Metro-North Railroad	MB	PT	7	182,311.0	58.8	3.2	10.0	0.0
NY	City of Poughkeepsie	MB	DO	6	220,023.8	81.7	3.5 Q	1.2 Q	47.1
NY	Hendrick Hudson Bus Lines, Inc. (HHBL)	MB	DO	6	218,057.2	87.3	29.5	0.6	56.1
NY	Newburgh Beacon Bus Corporation (NBBC)	MB	DO	6	128,749.8	54.9 Q	7.6	1.7	32.3
NY	Private Transportation Corporation	MB	PT	6	200,739.8	80.9	2.1	0.3	0.0
NY	Putnam County Transit (PART)	MB	PT	6	246,710.5	76.2	9.8	1.8	0.0
NY	Clarkstown Mini-Trans	MB	DO	5	304,405.8	78.6	10.2	1.9	55.9

