2017 REGIONAL ROUTE PERFORMANCE ANALYSIS

METROPOLITAN COUNCIL

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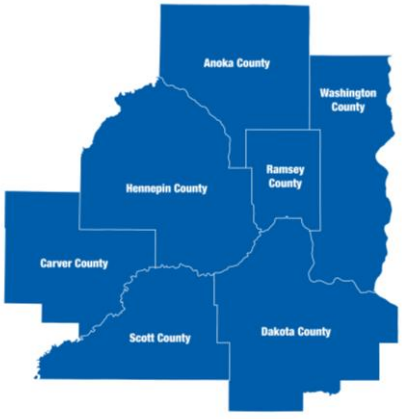

The Metropolitan Council is the regional planning organization for the seven-county Twin Cities area. The Council operates the regional bus and rail system, collects and treats wastewater, coordinates regional water resources, plans and helps fund regional parks, and administers federal funds that provide housing opportunities for low- and moderate-income individuals and families. The 17-member Council board is appointed by and serves at the pleasure of the governor.

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2017 REGIONAL ROUTE PERFORMANCE ANALYSIS

The Regional Route Performance Analysis evaluates how transit service in the Twin Cities region performs relative to the *2040 Transportation Policy Plan* (2040 TPP) performance standards. This report provides a summary of the performance standards in the 2040 TPP, the results of the analysis, the cost allocation methodology of each provider, and a definition of the data collected from each provider.

TRANSIT PERFORMANCE STANDARDS

The Metropolitan Council adopted the transit performance standards within Appendix G of the 2040 TPP. Performance standards are used to evaluate the relative productivity and efficiency of the services provided throughout the region. To be responsible and dynamic, a transit system must consistently measure and adjust service on unproductive routes and address insufficient service in productive areas. These standards serve as indicators of route performance and call attention to routes that may need to be adjusted. The use of multiple performance standards provides better insight into the operational and financial performance of individual services and allows transit providers to balance the cost and ridership of each route with its role in the regional transit network. The primary performance standards to measure service are Subsidy per Passenger and Passengers per In-Service Hour.

Because different types of routes are expected to have different levels of performance, each route's performance is compared to its peers. Each peer group is identified in the 2040 TPP.

REGIONAL TRANSIT SERVICE

This performance analysis includes the transit services provided by Metro Transit (a division of the Metropolitan Council), Metropolitan Transportation Services (a division of the Metropolitan Council), and the suburban transit Providers (Maple Grove, Minnesota Valley Transit Authority, Plymouth, and SouthWest Transit).

Tables shown at the end of this report summarize by service type ridership, hours of service, and total cost of service for each of these providers.

ALLOCATION METHODOLOGY

The various regional providers deliver transit services either through direct operations (Metro Transit – all operations, Southwest Transit – maintenance only) or through a contract with a third-party vendor. Providers submitted data on their direct and indirect costs, fare revenue, passengers, and in-service hours. To verify accuracy of the data, the data submitted by the providers was reconciled with data submitted to the National Transit Database (NTD). The NTD is used because it is a report to the Federal Transit Administration.

The allocation of costs and revenues by provider are summarized in the table below. The greatest variance in allocation methodology is in the indirect cost allocation to each route by provider, summarized in the following table.

ALLOCATION METHODOLOGY TABLE

Providers	Direct Costs	Indirect Costs	Fare Revenue
Metro Transit	Allocated by annual platform hour for each route.	Total indirect, less non-attributable costs, allocated by annual platform hour.	Fare earned by each route.
Metropolitan Transportation Services	Allocated to each route based on contract rates.	Allocated based on number of in-service hours for each route.	Fare earned by each route.
Maple Grove	Allocated to each route based on contract rates.	Allocated based on ridership.	Fare earned by each route. Some allocation of fares is done for connecting services.
MVTA	Allocated to each route based on contracted rates and fuel.	Allocated based on calculated percentage of route direct costs to total direct costs.	Fare earned by each route.
Plymouth	Allocated to each route based on contracted rates.	Divided equally among routes.	Fare earned by each route. Some allocation of fares is done for connecting services.
SouthWest Transit	Allocated by platform hour and total revenue hour.	Allocated based on total revenue hour for each route.	Fare earned by each route.

REGIONAL SYSTEM PERFORMANCE

Cost Effectiveness

The cost effectiveness of a route is measured by the subsidy required to operate the route per passenger trip delivered. Subsidy per passenger for each route is calculated by dividing the net subsidy by the number of passenger trips delivered, with net subsidy being equal to total cost minus passenger fares. Certain other revenue may be collected by a provider for items such as advertising and shared use rentals to reduce the taxpayer burden for the service. Those revenues do not reduce the net cost of service but are considered sources for funding the subsidy.

The table below shows both route-level average peer subsidy per passenger (left half of table below) and system subsidy per passenger (right half of table below). The route-level subsidy standard is used for performance comparison, as described later in this document.

The route-level average is determined by calculating the subsidy per passenger per route then creating an average of those values and is used for route performance purposes. The system subsidy per passenger is calculated by dividing the total subsidy for a route type by the total number of passengers on that route type, e.g., total subsidy of all commuter and express routes divided by total number of passengers for the route type. The following table shows a comparison of the peer average subsidy per passenger and the system subsidy per passenger by type of service.

SUBSIDY PER PASSENGER BY TYPE OF SERVICE

	Route Performance Average Peer Subsidy Per Passenger (Route-Level)				System Subsidy Per Passenger (Passenger-Level)			
Route Type	**Weekday**	**Saturday**	**Sunday**	**Total**	**Weekday**	**Saturday**	**Sunday**	**Total**
Commuter and Express Bus	$6.91	$30.32*	$30.32*	N/A	$4.28	$9.71*	$9.71*	$4.67
Core Local Bus	$4.51	$6.22	$6.35	N/A	$3.63	$4.57	$4.76	$3.82
Supporting Local Bus	$6.75	$8.35	$10.38	N/A	$5.93	$8.45	$10.46	$6.52
Suburban Local Bus	$14.82	$10.18	$11.17	N/A	$6.09	$6.01	$6.99	$6.14
Arterial BRT	$3.40	$4.06	$5.40	N/A	$3.40	$4.06	$5.40	$3.71
Highway BRT	$11.05	$7.45	$9.93	N/A	$11.05	$7.45	$9.93	$10.45
Light Rail Transit	$1.89	$2.22	$2.67	N/A	$1.83	$2.18	$2.67	$1.97
Commuter Rail	$16.15	$16.15	$16.15	N/A	$16.15	$16.15	$16.15	$16.15
General Public Dial-A-Ride**	N/A	N/A	N/A	$20.88	N/A	N/A	N/A	$18.76
Metro Mobility/ADA	N/A	N/A	N/A	$23.46	N/A	N/A	N/A	$23.46

* Express Saturday and Sunday were averaged together because of the limited number of routes.
** For General Public Dial-A-Ride, each provider is considered a route. Excludes Metro Mobility service.
** Subsidy for dial-a-ride services given at Total level only because some services operated on weekdays only and some operate on weekdays and weekends.

System Subsidy per Passenger by Provider

The table at the end of this document shows the system subsidy per passenger (passenger-level) for each provider and service type. The accompanying Excel file provides the route-level detail to this table.

Subsidy per Passenger – Route-Level

For the cost effectiveness standard in the 2040 TPP, each route and day of service was compared against the route-level subsidy per passenger for its peer group. The 2040 TPP specifies a monitoring goal and possible corrective action for routes that fall within certain levels compared to the peer average, which are shown in the table below.

Threshold No.	Level of Subsidy per Passenger Performance	Monitoring Goal	Possible Action
1	> 20% to 35% over peer average	For Quick Review	Minor Modifications
2	> 35% to 60% over peer average	For Intense Review	Major Changes
3	> 60% over peer average	For Significant Change	Restructure/Eliminate

The following table shows a summary of the routes by service type and day of service and the number of routes in each threshold.

Subsidy per Passenger Performance Standard

Service Type	Day of Service	Peer Group Subsidy Average	Threshold Information				
			Level Number	Description	Min	Max	Routes
Commuter and Express Bus	Weekday	$6.91	Meets	Less than 20% over peer average		$8.28	97
			1	20% to 35% over peer average	$8.29	$9.32	7
			2	35% to 60% over peer average	$9.33	$11.05	4
			3	60 % over peer average	$11.06		19
Commuter and Express Bus	Saturday	$30.32	Meets	Less than 20% over peer average		$36.37	4
			1	20% to 35% over peer average	$36.38	$40.92	0
			2	35% to 60% over peer average	$40.93	$48.50	0
			3	60 % over peer average	$48.51		1
Commuter and Express Bus	Sunday	$30.32	Meets	Less than 20% over peer average		$36.37	3
			1	20% to 35% over peer average	$36.38	$40.92	0
			2	35% to 60% over peer average	$40.93	$48.50	0
			3	60 % over peer average	$48.51		1

Service Type	Day of Service	Peer Group Subsidy Average	Threshold Information				
			Level Number	Description	Min	Max	Routes
Core Local	Weekday	$4.51	Meets	Less than 20% over peer average		$5.40	26
			1	20% to 35% over peer average	$5.41	$6.08	0
			2	35% to 60% over peer average	$6.09	$7.21	5
			3	60 % over peer average	$7.22		2
Core Local	Saturday	$6.22	Meets	Less than 20% over peer average		$7.45	22
			1	20% to 35% over peer average	$7.46	$8.39	1
			2	35% to 60% over peer average	$8.40	$9.94	1
			3	60 % over peer average	$9.95		3
Core Local	Sunday	$6.35	Meets	Less than 20% over peer average		$7.61	19
			1	20% to 35% over peer average	$7.62	$8.56	2
			2	35% to 60% over peer average	$8.57	$10.15	1
			3	60 % over peer average	$10.16		3
Supporting Local	Weekday	$6.75	Meets	Less than 20% over peer average		$8.09	9
			1	20% to 35% over peer average	$8.10	$9.10	2
			2	35% to 60% over peer average	$9.11	$10.79	2
			3	60 % over peer average	$10.80		1
Supporting Local	Saturday	$8.35	Meets	Less than 20% over peer average		$10.01	5
			1	20% to 35% over peer average	$10.02	$11.26	3
			2	35% to 60% over peer average	$11.27	$13.35	2
			3	60 % over peer average	$13.36		0
Supporting Local	Sunday	$10.38	Meets	Less than 20% over peer average		$12.45	6
			1	20% to 35% over peer average	$12.46	$14.00	2
			2	35% to 60% over peer average	$14.01	$16.60	2
			3	60 % over peer average	$16.61		0
Suburban Local	Weekday	$14.82	Meets	Less than 20% over peer average		$17.77	30
			1	20% to 35% over peer average	$17.78	$20.00	3
			2	35% to 60% over peer average	$20.01	$23.70	4
			3	60 % over peer average	$23.71		2
Suburban Local	Saturday	$10.18	Meets	Less than 20% over peer average		$12.21	14
			1	20% to 35% over peer average	$12.22	$13.73	2
			2	35% to 60% over peer average	$13.74	$16.28	1
			3	60 % over peer average	$16.29		2
Suburban Local	Sunday	$11.17	Meets	Less than 20% over peer average		$13.39	11
			1	20% to 35% over peer average	$13.40	$15.07	0
			2	35% to 60% over peer average	$15.08	$17.86	0
			3	60 % over peer average	$17.87		2

Service Type	Day of Service	Peer Group Subsidy Average	Threshold Information				
			Level Number	Description	Min	Max	Routes
Arterial BRT	Weekday	$3.40	Meets	Less than 20% over peer average		$4.07	1
			1	20% to 35% over peer average	$4.08	$4.58	0
			2	35% to 60% over peer average	$4.59	$5.43	0
			3	60 % over peer average	$5.44		0
Arterial BRT	Saturday	$4.06	Meets	Less than 20% over peer average		$4.86	1
			1	20% to 35% over peer average	$4.87	$5.47	0
			2	35% to 60% over peer average	$5.48	$6.49	0
			3	60 % over peer average	$6.50		0
Arterial BRT	Sunday	$5.40	Meets	Less than 20% over peer average		$6.47	1
			1	20% to 35% over peer average	$6.48	$7.28	0
			2	35% to 60% over peer average	$7.29	$8.63	0
			3	60 % over peer average	$8.64		0
Highway BRT	Weekday	$11.05	Meets	Less than 20% over peer average		$13.25	1
			1	20% to 35% over peer average	$13.26	$14.91	0
			2	35% to 60% over peer average	$14.92	$17.67	0
			3	60 % over peer average	$17.68		0
Highway BRT	Saturday	$7.45	Meets	Less than 20% over peer average		$8.93	1
			1	20% to 35% over peer average	$8.94	$10.05	0
			2	35% to 60% over peer average	$10.06	$11.91	0
			3	60 % over peer average	$11.92		0
Highway BRT	Sunday	$9.93	Meets	Less than 20% over peer average		$11.91	1
			1	20% to 35% over peer average	$11.92	$13.40	0
			2	35% to 60% over peer average	$13.41	$15.88	0
			3	60 % over peer average	$15.89		0
Light Rail	Weekday	$1.89	Meets	Less than 20% over peer average		$2.26	1
			1	20% to 35% over peer average	$2.27	$2.54	1
			2	35% to 60% over peer average	$2.55	$3.02	0
			3	60 % over peer average	$3.03		0
Light Rail	Saturday	$2.22	Meets	Less than 20% over peer average		$2.65	2
			1	20% to 35% over peer average	$2.66	$2.99	0
			2	35% to 60% over peer average	$3.00	$3.54	0
			3	60 % over peer average	$3.55		0
Light Rail	Sunday	$2.67	Meets	Less than 20% over peer average		$3.19	2
			1	20% to 35% over peer average	$3.20	$3.60	0
			2	35% to 60% over peer average	$3.61	$4.26	0
			3	60 % over peer average	$4.27		0

Service Type	Day of Service	Peer Group Subsidy Average	Threshold Information				
			Level Number	Description	Min	Max	Routes
Commuter Rail	Weekday	$16.15	Meets	Less than 20% over peer average		$19.37	1
			1	20% to 35% over peer average	$19.38	$21.79	0
			2	35% to 60% over peer average	$21.80	$25.83	0
			3	60 % over peer average	$25.84		0
Commuter Rail	Saturday	$16.15	Meets	Less than 20% over peer average		$19.37	1
			1	20% to 35% over peer average	$19.38	$21.79	0
			2	35% to 60% over peer average	$21.80	$25.83	0
			3	60 % over peer average	$25.84		0
Commuter Rail	Sunday	$16.15	Meets	Less than 20% over peer average		$19.37	1
			1	20% to 35% over peer average	$19.38	$21.79	0
			2	35% to 60% over peer average	$21.80	$25.83	0
			3	60 % over peer average	$25.84		0
General Public Dial-a-Ride	All Days	$20.88	Meets	Less than 20% over peer average		$25.05	3
			1	20% to 35% over peer average	$25.06	$28.18	0
			2	35% to 60% over peer average	$28.19	$33.40	0
			3	60 % over peer average	$33.41		1

Passengers per In-Service Hour

The 2040 TPP establishes average and minimum passenger per in-service hour standards for light rail transit, big bus fixed-route service, small bus fixed-route service, and paratransit operations. Passengers per in-service hour represents the total passengers carried divided by the in-service time (time a vehicle is traveling on routes and available for passenger pickups). The standard for each type of service is shown in the table below.

For this analysis, the measure is analyzed at the route/day of service level.

Type of Service	Average Passengers per In-Service Hour Standard
Core Local Bus	≥20
Supporting Local Bus	≥15
Suburban Local Bus	≥10
Arterial BRT	≥25
Highway BRT	≥25
Light Rail Transit	≤70
Commuter & Express Bus	Peak ≥20; Off-peak ≥10
Commuter Rail	≥70
General Public Dial-a-Ride	≥2

Passengers per In-Service Hour Standard

Type of Service	Weekday		Saturday		Sunday	
	Routes Meeting Standard	Routes Below Standard	Routes Meeting Standard	Routes Below Standard	Routes Meeting Standard	Routes Below Standard
Core Local Bus	31	2	22	5	20	5
Supporting Local Bus	12	2	5	5	2	8
Suburban Local Bus	25	14	12	7	9	4
Arterial BRT	1	0	1	0	1	0
Highway BRT	0	1	0	1	0	1
Light Rail Transit	2	0	2	0	2	0
Commuter & Express Bus (peak standard on weekday)	88	39	0	5	0	4
Commuter Rail	1	0	1	0	1	0
General Public Dial-a-Ride	4	0	NA	NA	NA	NA

Table references

The following tables with route-level subsidy per passenger information are attached:

- Table 1 – Commuter & Express – Subsidy per passenger and passengers per hour for commuter and express bus service, sorted by day of service and route number.
- Table 2 – Core Local – Subsidy per passenger and passengers per hour for core local bus service, sorted by day of service and route number.
- Table 3 – Supporting Local – Subsidy per passenger and passengers per hour for supporting local bus service, sorted by day of service and route number.
- Table 4 – Suburban Local – Subsidy per passenger and passengers per hour for suburban local bus service, sorted by day of service and route number.
- Table 5 – Arterial BRT – Subsidy per passenger and passengers per hour for Arterial BRT, sorted by day of service.
- Table 6 – Highway BRT – Subsidy per passenger and passengers per hour for Highway BRT, sorted by day of service and route number.
- Table 7 – Light Rail Transit – Subsidy per passenger and passengers per hour for light rail transit, sorted by day of service and route number.
- Table 8 – Commuter Rail – Subsidy per passenger and passengers per hour for commuter rail, sorted by day of service and route number.
- Table 9 – General Public Dial-a-Ride – Subsidy per passenger and passengers per hour for dial-a-rides.

DATA COLLECTION AND DEFINITIONS

The regional providers submitted data regarding the routes that they operate. Routes were categorized by type of service, as specified by the 2030 TPP, and by day of service (weekday, Saturday, and Sunday). Following is a list of data that were collected or calculated for each route:

Total Cost – Expenses related to all activities associated with the route. Includes vehicle operations, vehicle maintenance, non-vehicle maintenance, and general administration.

Fare Revenue – All revenues earned from carrying passengers. Includes all income received directly from passengers, paid either in cash or through pre-paid media, and donations from those passengers who donate money on the vehicle. Also includes payments made by a third party for reduced fare or free ride arrangements such as when a university pays for students to ride for free. Does not include governmental subsidies for reduced- or free-fare programs.

Net Subsidy –Total cost minus fare revenue.

Passenger Trips – Number of people who board a transit vehicle. If one customer boards multiple vehicles to complete their journey, each boarding should be counted as a passenger trip. In dial-a-ride service, late cancels, no-show, etc. are not passengers.

In-Service Hours – Time when vehicle is traveling on the route and available for picking up passengers. Calculated from first time point to last time point on each vehicle trip. Excludes layover/recovery and deadhead.

Revenue Hours – Time from first timepoint to last timepoint of a series of vehicle trips. Includes In-Service Hours plus layover/recovery time between trips. Excludes deadhead time between trips.

Subsidy per Passenger – Net subsidy divided by number of passengers.

Passengers per Hour – Number of passengers divided by hours.

Bus route types as defined by 2040 TPP:

- Core Local – Routes that serve the denser urban areas of Market Areas I and II, usually providing access to a downtown or major activity center. They form the vase of the core bus network.
- Supporting Local – Routes that provide crosstown connections within Market Areas I and II and provide connections to Core Local routes.
- Suburban Local – Routes that serve Market Areas II and III and provide a basic level of transit coverage throughout the region.

Table 1: Ridership by Service Type

Provider	Core Local	Supporting Local	Suburban Local	Arterial BRT	Highway BRT	Light Rail	Commuter & Express Bus	Commuter Rail	General Public Dial-a-Ride	ADA Dial-a Ride	Commuter Vanpool	Total All Types	%
Maple Grove							793,767		39,741			833,508	0.9%
Metro Transit	41,668,907	2,120,711	2,077,485	1,631,686		23,810,995	8,450,383	793,796				80,553,963	88.8%
MTS		852,727	1,292,939		270,400		97,710		286,325	2,256,154	149,904	5,206,159	5.7%
MVTA			626,961				1,939,554					2,566,515	2.8%
Plymouth							486,905		31,026			517,931	0.6%
SW Transit			22,001				931,812		74,531			1,028,344	1.1%
Total All Providers	41,668,907	2,973,438	4,019,386	1,631,686	270,400	23,810,995	12,700,131	793,796	431,623	2,256,154	149,904	90,706,420	100%
Percent of Total	45.9%	3.3%	4.4%	1.8%	0.3%	26.3%	14.0%	0.9%	0.5%	2.5%	0.2%	100%	

Table 2: Hours by Service Type

Provider	Core Local	Supporting Local	Suburban Local	Arterial BRT	Highway BRT	Light Rail	Commuter & Express Bus	Commuter Rail	General Public Dial-a-Ride	ADA Dial-a Ride	Commuter Vanpool	Total All Types	%
Maple Grove							22,485		11,548			34,033	1.0%
Metro Transit	1,181,328	103,590	67,121	37,711		116,628	243,394	3,186				1,752,958	49.6%
MTS		55,452	104,256		14,641		6,777		117,772	1,153,352	35,509	1,487,759	42.1%
MVTA			64,682				87,959					152,641	4.3%
Plymouth							26,423		10,773			37,196	1.1%
SW Transit			3,236				40,528		24,300			68,064	1.9%
Total All Providers	1,181,328	159,042	239,295	37,711	14,641	116,628	427,566	3,186	164,393	1,153,352	35,509	3,532,651	100.0%
Percent of Total	33.4%	4.5%	6.8%	1.1%	0.4%	3.3%	12.1%	0.1%	4.7%	32.6%	1.0%	100.0%	

Table 3: Total Cost by Service Type

Provider	Core Local	Supporting Local	Suburban Local	Arterial BRT	Highway BRT	Light Rail	Commuter & Express Bus	Commuter Rail	General Public Dial-a-Ride	ADA Dial-a-Ride	Commuter Vanpool	Total All Types	%
Maple Grove							4,470,542		757,688			5,228,230	1.0%
Metro Transit	195,080,658	18,195,371	12,252,405	7,561,075		70,956,842	52,237,760	15,337,874				371,614,985	73.7%
MTS		3,978,056	7,801,696		3,024,449		1,126,517		6,436,951	64,200,843	985,014	87,553,526	17.4%
MVTA			8,274,694				17,197,626					25,472,320	5.0%
Plymouth							3,270,319		1,232,818			4,503,137	0.9%
SW Transit			609,312				8,658,773		829,977			10,098,062	2.0%
Total All Providers	195,080,658	22,173,427	28,938,107	7,564,075	3,024,449	70,946,842	86,961,537	15,337,874	9,257,434	64,200,843	985,014	504,470,260	100.0 %
Percent of Total	38.7%	4.4%	5.7%	1.5%	0.6%	14.1%	17.2%	3.0%	1.8%	12.7%	0.2%	100.0%	

Table 4: System Subsidy per Passenger by Provider

Provider	Core Local	Supporting Local	Suburban Local	Arterial BRT	Hwy BRT	Light Rail	Commuter & Express Bus	Commuter Rail	General Public Dial-a-Ride	ADA Dial-a-Ride	Commuter Vanpool	Total All Types
Maple Grove							$3.08		$17.90			$3.79
Metro Transit	$3.82	$7.76	$5.05	$3.71		$1.97	$4.11	$16.15				$3.56
MTS		$3.46	$4.63		$10.45		$9.00		$19.48	$25.92	$2.26	$14.80
MVTA			$12.19				$6.50					$7.89
Plymouth							$4.70		$37.43			$6.66
SW Transit			$25.64				$6.80		$8.71			$7.34
Total all providers	$3.82	$6.52	$6.14	$3.71	$10.45	$1.97	$4.67	$16.15	$18.76	$25.92	$2.26	$4.39

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