Rail transit speeds.

Page 1. Heavy rail speeds for individual lines.

Page 2. Light rail speeds for individual lines.

Page 3. Average speeds for rail transit nationwide.

Appendix B: Background Information on Rail Transit

TABLE B-1

CHARACTERISTICS OF INDIVIDUAL RAIL RAPID TRANSIT SYSTEMS

SOURCE: UMTA Section 15 data for 1989

TABLE B-1

		ANNUAL	REVENUE		ANNUAL			REV. VEH.
	ANNUAL			ANNUAL		ANNUAL	TOTAL	
		REVENUE	VEHICLE		REVENUE			MILES PER
	VEHICLE			VEHICLE		PASSENGER	MILES PER	
TRANSIT SYSTEM	NUL FO	VEHICLE	CAPACITY	LIQUES	VEHICLE	N# 50		REV. VEH.
	MILES	MILES	MILES	HUUKS	LOURS	MILES	REV. VER.	
	(THOUS)	IVILES	WILES	(THOUS)	HOURS	(THOUS)	MIE	HOOK
	((THOUS)	(THOUS)	(111000)	(THOUS)	((MPH)
New York CTA	325690	312195	42458464	18313	17384	7376121	1.04	18.0
Chicago-CTA	55158	54630	4916712	3028	2322	1050922	1.01	23.5
Washington, D.CWMATA	34087	32859	7393277	1498	1406	978315	1.04	23.4
Boston-MBTA	22981	21858		1116	1069	480185	1.05	20.4
San Francisco-BART	33873	33195	3817436	1182	1158	757350	1.02	28.7
New York-PATH	14203	13190	2018012	811	628	294983	1.08	21.0
Philadelphia-SEPTA	16542	16276	2115838	1048	1031	415800	1.02	15.8
Atlanta-MARTA	14795	14619	2967741	624	613	359270	1.01	23.8
Lindenwold-PATCO	4192	4096	491479	145	141	96731	1.02	29.0
Miami-Dade Cnty TA	4746	4657	435847	208	195	95450	1.02	23.9
Baltimore-MTA	3685	3530	432919	156	147	66871	1.04	24.1
Cleveland RTA	2137	1952	242009	93	74	58042	1.09	26.4
AVERAGE	44341	42755	6117249	2352	2181	1002503	1.04	23.2
STANDARD DEVIATION	86175	82604	11687346	4876	4627	1949957	0.03	3.8

CHARACTERISTICS OF INDIVIDUAL LIGHT RAIL SYSTEMS

SOURCE: UMTA Section 15 data for 1989

TABLE B-2

TABLE B-2 (continued)

	ANNUAL	REVENUE		ANNUAL			REV. VEH.
ANNUAL			ANNUAL		ANNUAL	TOTAL	
	REVENUE	VEHICLE		REVENUE			MILES PER
VEHICLE			VEHICLE		PASSENGER	MILES PER	
	VEHICLE	CAPACITY		VEHICLE			REV. VEH.
MILES	MU EC	MILES.	HOURS	LIQUIDO	MILES	REV. VEH.	LIGUE
(THOUS)	MILES	MILES	(THOUS)	HOURS	(THOUS)	MILE	HOUR
(1110005)	(THOUS)	(THOUS)	(111000)	(THOUS)	(11000)		(MPH)
5046	4832	391354	566	541	104612	1.04	8.9
4002	4002	544316	382	382	105475	1.00	10.5
2079	1988	228602	138	132	63503	1.05	15.0
1103	1035	138625	67	44	29099	1.07	23.3
	2367	507683	132	126	75937		18.9
546	545	43602	61	60	8719	1.00	9.0
921	919	110208	85	82	19665	1.00	11.2
1084	1060	184459	61	54	21634	1.02	19.8
622	622	41055	42	42	8131	1.00	14.8
1415	1400	232340	94	73	34957	1.01	19.2
538	534	89250	43	42	6612	1.01	12.9
1230	1184	131278	82	79	28755	1.04	14.9
31	31	1229	6	6	203	1.00	5.0
1551	1578	203385	135	128	39023	1.02	14.1
1433	1356	168670	153	149	35090	0.02	5.0
	ANNUAL VEHICLE MILES (THOUS) 5046 4002 2079 1103 546 921 1084 622 1415 538 1230 31 1551 1433	ANNUAL ANNUAL VEHICLE REVENUE VEHICLE MILES MILES MILES (THOUS) (THOUS) 5046 4832 4002 4002 2079 1988 1103 1035 546 545 921 919 1084 1060 622 622 1415 1400 538 534 1230 1184 31 31 1551 1578 1433 1356	ANNUAL REVENUE VEHICLE VEHICLE VEHICLE VEHICLE CAPACITY MILES MILES MILES MILES (THOUS) (THOUS) (THOUS) (THOUS) 5046 4832 391354 4002 4002 544316 2079 1988 228602 1103 1035 138625 546 545 43602 921 919 110208 1084 1060 184459 622 622 41055 1415 1400 232340 538 534 89250 1230 1184 131278 31 31 1229 1551 1578 203385 1433 1356 168670	ANNUALREVENUEANNUALREVENUEVEHICLEANNUALREVENUEVEHICLEVEHICLEVEHICLEVEHICLECAPACITYMILESMILESMILES(THOUS)(THOUS)(THOUS)(THOUS)(THOUS)(THOUS)5046483239135456640024002544316382207919882286021381103103513862567546545436026192191911020885108410601844596162262241055421415140023234094538534892504312301184131278823131122961551157820338513514331356168670153	ANNUAL VEHICLEREVENUE VEHICLEANNUAL REVENUE VEHICLEREVENUE VEHICLE VEHICLEANNUAL REVENUE VEHICLE HOURS (THOUS)ANNUAL REVENUE VEHICLE HOURS (THOUS)ANNUAL REVENUE VEHICLE HOURS (THOUS)ANNUAL REVENUE VEHICLE HOURS (THOUS)ANNUAL REVENUE VEHICLE HOURS (THOUS)ANNUAL REVENUE VEHICLE HOURS (THOUS)ANNUAL REVENUE VEHICLE HOURS (THOUS)ANNUAL REVENUE VEHICLE HOURS (THOUS)ANNUAL REVENUE VEHICLE HOURS (THOUS)ANNUAL REVENUE VEHICLE HOURS (THOUS)ANNUAL REVENUE VEHICLE HOURS (THOUS)ANNUAL REVENUE 	ANNUAL VEHICLEREVENUE VEHICLEANNUAL VEHICLEANNUAL REVENUEAnnual REVENUE10310313862566 <td< td=""><td>ANNUAL VEHICLEANNUAL VEHICLEREVENUE VEHICLEREVENUE VEHICLEANNUAL VEHICLEANNUAL REVENUEANNUAL PASSENGERTOTALMILES (THOUS)</td></td<>	ANNUAL VEHICLEANNUAL VEHICLEREVENUE VEHICLEREVENUE VEHICLEANNUAL VEHICLEANNUAL REVENUEANNUAL PASSENGERTOTALMILES (THOUS)

Source: Federal Transit Administration, U.S. Dept. of Transportation:

<u>http://www.fta.dot.gov/transit_data_info/reports_publications/publications/characteristics</u> of urban transportation systems/2355 ENG HTML.htm

EXCERPT FROM THE FEDERAL TRANSIT ADMINISTRATION'S

CHARACTERISTICS OF URBAN TRANSPORTATION SYSTEMS

Chapter 2, TABLE 2-1

AVERAGE RAIL TRANSIT SPEEDS

	Systemwide Speed (MPH) ¹					
	Low ²	Average ³	High ²			
Rapid Rail (12) ⁴	15.8	22.5	29.0			
Light Rail (12)	8.9	12.0	23.3			
Commuter Rail (9)	27.6	30.1	36.5			

SOURCE: UMTA Section 15 data for 1989

¹Systemwide speed is actual vehicle revenue miles per vehicle revenue hour of operation. Revenue miles exclude all vehicle miles traveled when not in regular passenger service (i.e., deadheading). The ratio of total vehicle miles to revenue miles is shown in Tables B-1, B-2, and B-3 in Appendix B for each rail rapid transit system, light rail system, and commuter rail system, respectively. The ratios average 1.04, 1.02, and 1.08 for the three rail modes.

²Low and high values omit two small systems that may be unrepresentative: Seattle's two car streetcar operation (5.0 mph) and Staten Island Rapid Transit, a 36 car system which is classified as commuter rail (21.2 mph).

³Average speeds are harmonic means, unweighted by system size. Harmonic means are calculated by (1) inverting speeds for each system to get hours per mile, (2) taking the arithmetic mean of hours per mile, and (3) inverting the result. For example, the harmonic mean of 50 mph and 25 mph is calculated by (1) inverting the two speeds to get 0.02 and 0.04 hours per mile respectively, (2) taking the arithmetic mean to get 0.03 hours per mile, and (3) inverting the result to get 33.3 mph.

⁴Number of systems used in calculating averages.