

CHAPTER 4

OVERALL TRIP RATES

TABLE 4.1 Daily person trips by residents (*metro area*)

Site	Year Data	Total Daily Person Trips	Person Trips in Private Vehicles	Transit Person Trips	Non-Motorized Person Trips	Other
Albuquerque	1992	2,750,000	2,664,000	15,900	180,000	
Amarillo, TX	1991	704,124	683,520	3,501	2,624	
Atlanta	1991	11,015,302	6,879,339	263,218		
Baltimore	1993	6,091,000	4,993,000	196,000	N/A	
Brownsville, TX	1991	292,994	270,128	4,658	2,624	
Cincinnati	1995	6,158,515	4,012,655	81,587	N/A	
Cleveland	1994	8,576,475	7,426,477	163,292	716,125	
Eugene	1994	1,210,000	1,015,000	24,000	171,000	
Las Vegas	1998	5,057,000	4,105,853			
Los Angeles	2000	49,999,541	36,260,752	1,454,859	507,744	
Madison	1990	1,217,848	1,188,055	29,793		
Minn./St. Paul	1990	8,860,634	6,711,500	225,128	N/A	49,100
New York City	1995	38,989,432				
Reno	1998	948,662	901,855	22,825	N/A	
San Antonio	1991	3,802,513	3,339,644	117,837	197,615	
San Francisco	1996	18,076,332	14,963,986	1,221,217	1,891,129	
Sher-Den, TX	1991	331,251	311,376	2,489	9,150	
Tucson	1993	2,253,613	1,916,572	47,345	227,544	
Washington, DC	1994		13,510,600	476,000		

Source: Surveys of MPOs.

TABLE 4.2P Daily person trip rates, latest survey

Site	Year	Population	All Trips		Vehicle Trips		Transit Trips	
			Daily Trips	Per Capita	Daily Trips	Per Capita	Daily Trips	Per Capita
Albuquerque	1992	693,000	2,750,000	3.97	2,664,000	3.84	15,900	0.02
Amarillo, TX	1991	197,547	704,124	3.56	683,520	3.46	3,501	0.02
Atlanta	1991	3,366,408	11,015,302	3.27	6,879,339	2.04	263,278	0.08
Brownsville, TX	1991	98,962	292,994	2.96	270,128	2.73	4,658	0.05
Cincinnati	1995			3.77				
Cleveland	1994	2,129,203	8,576,475	4.02	7,426,477	3.49	163,292	0.08
Denver	1997	2,169,400	8,236,500		7,256,400		164,400	
Eugene	1994	218,000	1,210,000	5.55	1,015,000	4.66	24,000	0.11
Ft. Collins	1995			4.25				
Kansas City	1991			2.40				
Las Vegas	1998		5,057,000		4,105,853			
Los Angeles	1991		42,132,875		35,548,686			
Madison	1990	317,581	1,217,848	3.83	1,188,055	3.74	29,793	0.09
Minn./St. Paul	1990	2,288,721	8,860,634	3.87	6,711,500	2.93	225,128	0.10
New York City	1995	11,277,407	38,989,432	3.74				
Phoenix	1988			4.16				
Reno	1991	300,041	948,662	3.16	901,855	3.01	22,825	0.08
San Antonio	1991	1,185,394	3,802,513	3.21	3,339,644	2.82	117,837	0.10
San Francisco	1996	6,023,577	18,076,332	3.00	14,963,986	2.48	1,221,217	0.20
Seattle	1998	3,149,700		4.14				
Sher-Den, TX	1991	95,021	331,251	3.49	311,376	3.28	2,489	0.03
Tucson	1993	637,094	2,253,613	3.54	1,916,572	3.01	47,345	0.07
Washington, DC	1994	5,066,600			13,510,600	2.67	476,000	0.09
Wilmington, DE	1995			2.22				0.02

Source: Surveys of MPOs.

TABLE 4.2PA Daily person trip rates, prior survey

Site	Year	All Trips		Vehicle Trips	Transit Trips
		Daily Trips	Per Capita	Daily Trips	Daily Trips
Atlanta	1972	4,087,000	2.49	36,496,691	425,078
Baltimore	1977	3,407,541	2.90	3,042,934	364,607
Buffalo	1973		2.50		
Chicago	1979		2.40		
Dallas	1984		3.40		
Denver	1971		2.83		
Detroit	1980		2.59		
Kansas City	1970	3,573,000			
Los Angeles	1976	31,949,900	2.99		
Louisville	1975	1,857,765	2.19		
Milwaukee	1972	4,681,900	2.50		
Minn./St. Paul	1982	6,700,000	3.37		
Philadelphia	1977	25,380,000	2.45		
Phoenix	1980	3,715,565	2.44		
Portland, OR	1977	3,550,300	3.67		
Rochester	1974		2.56		
Sacramento	1974		3.39		
San Diego	1977		3.50		
San Francisco	1980-1981	17,168,000	3.40		
Seattle	1977	5,504,910			
Washington, DC	1968	2,714,000	2.17		

Source: Surveys of MPOs.

TABLE 4.2H Daily household trip rates, latest survey

Site	Year	Population	All Trips		Vehicle Trips		Transit Trips	
			Daily Trips	Per Hsld.	Daily Trips	Per Hsld.	Daily Trips	Per Hsld.
Albuquerque	1992	272,910	2,750,000	10.08	2,664,000	9.76	15,900	0.06
Amarillo, TX	1991		704,124		683,520		3,501	
Atlanta	1991	1,303,719	11,015,302	8.45	6,879,339	5.28	263,278	0.20
Baltimore	1993	867,600	6,091,000	7.02	4,993,000	5.75	196,000	0.23
Brownsville, TX	1991		292,994		270,128		4,658	
Cincinnati	1995	1,817,569	6,158,515	9.76	4,012,655		81,587	
Cleveland	1994	2,129,203	8,576,475	10.39	7,426,477		163,292	
Eugene	1994	218,000	1,210,000	12.99	1,015,000		24,000	
Ft. Collins	1995			10.66				
Kansas City	1991			7.60		5.4		0.20
Las Vegas	1998	607,480	5,057,000	8.32	4,105,853	6.76		
Los Angeles	1991	5,429,530	49,999,541	7.60	36,260,752	6.68	1,454,859	0.27
Madison	1990	317,581	1,217,848	9.75	1,188,055		29,793	
Minn./St. Paul	1990	875,504	8,860,634	10.12	6,711,500	7.7	225,128	0.26
New York City	1995	3,754,251	38,989,432	10.39				
Phoenix	1988			8.38				
Reno	1991	124,428	948,662	7.62	901,855	7.2	22,825	0.18
Sacramento	1991			9.72				
San Antonio	1991		3,802,513		3,339,644		117,837	
San Francisco	1996		18,076,332		14,963,986		1,221,217	
Seattle	1998	3,149,700		8.38				
Sher-Den, TX	1991		331,251		311,376		2,489	
Tucson	1993		2,253,613		1,916,572		47,345	
Washington, DC	1994	5,066,600			13,510,600		476,000	
Wilmington, DE	1995			5.73				0.06

Source: Surveys of MPOs.

TABLE 4.2HA Daily household trip rates, prior survey

Site	Year	All Trips Per Hsld.	Vehicle Trips Per Hsld.
Atlanta	1972	7.20	
Baltimore	1977	8.30	
Buffalo	1973	7.50	
Chicago	1979	7.20	
Dallas	1984	8.68	6.40
Denver	1971	8.76	8.30
Detroit	1980	7.47	
Los Angeles	1976	8.15	
Louisville	1975	6.34	5.00
Milwaukee	1972	7.90	6.10
Minn./St. Paul	1982	N/A	6.90
Philadelphia	1977	7.66	6.00
Phoenix	1980	6.58	
Portland, OR	1977	8.66	
Rochester	1974	8.03	
Sacramento	1978	9.34	
San Diego	1977	9.80	
San Francisco	1980-1981	8.71	
Seattle	1977	6.63	

Source: Surveys of MPOs.

TABLE 4.3PA Person trip rates by household size, prior survey

Site	Year	Daily Trips Per Person By Hsld. Size			
		1	2	3	4+
Buffalo	1973	2.0	2.5	2.8	2.8
Chicago	1979	2.3	2.7	2.1	2.3
Los Angeles	1976	3.0	3.2	3.0	2.7
Milwaukee	1972	2.4	2.8	2.7	2.6
Phoenix	1980	2.9	2.8	2.5	2.2
Rochester	1974	2.3	2.8	2.8	2.8
Sacramento	1978	3.0	3.5	3.3	3.7
San Diego	1977	3.2	3.6	3.6	3.5
San Francisco	1980-1981	4.0	3.5	3.2	3.4

Source: Surveys of MPOs.

TABLE 4.3H Household trip rates by household size, latest survey

Site	Year	Percentage Of Households By Number Of Members				Average # Members	Daily Trips Per Household By Household Size			
		1	2	3	4+		1	2	3	4+
Albuquerque	1992	18.93	37.35	18.75	24.97	2.54				
Amarillo, TX	1991	21.41	33.46	18.89	26.24	2.59	4.40	8.80	11.56	18.51
Atlanta	1991					3.55				
Baltimore	1993	23.40	31.10	19.30	26.20	2.70	3.19	6.30	8.59	12.44
Brownsville, TX	1991	14.80	24.80	22.80	37.60	3.73	5.14	8.83	10.98	17.86
Cleveland	1994	27.00	32.00	18.00	23.00	2.58				
Eugene	1994	30.10	35.10	15.10	18.70	2.44	4.99	9.55	14.12	22.91
Kansas City	1991	15.60	35.10	20.30	28.40					
Los Angeles	1991						4.04	6.62	8.91	10.83
Madison	1990	28.00	34.50	16.00	22.00	2.54	2.90	5.87	6.06	7.79
Minn./St. Paul	1990	25.40	32.30	17.10	25.20	2.56	3.80	8.40	12.20	15.9 (for 4
New York City	1995	35.90	26.60	29.80	7.70	2.66				
Phoenix	1988						4.11	6.92	9.46	27.11
Reno	1991	27.00	39.50	14.00	20.00					
San Antonio	1991	20.86	28.61	18.78	31.76	2.89	4.07	7.60	10.20	15.49
San Diego	1995					2.61				
San Francisco	1996	26.0	32.30	16.70	25.00		3.64	6.34	8.43	12.60
Seattle	1998	21.40	41.40	15.00	22.20	2.51	4.30	7.80	10.30	12.40
Sher-Den, TX	1991	29.63	27.48	18.89	24.00	2.58	3.40	8.38	12.45	18.05
Tucson	1993						3.96	7.23	12.52 (3+)	
Washington, DC	1994					2.61				
Wilmington, DE	1995	23.30	38.30	17.20	21.10	2.47	2.27	5.15	7.63	9.07

Source: Surveys of MPOs.

TABLE 4.3HA Household trip rates by household size, prior survey

Site	Year	Daily Trips Per Household By Household Size			
		1	2	3	4+
Baltimore	1977	2.70	5.70	7.1	10.3
Buffalo	1973	2	5	8.5	11.2
Chicago	1979	2.3	5.4	6.3	9.3
Los Angeles	1976	3.02	6.46	8.7	12.87
Milwaukee	1972	2.4	5.5	8.2	10.4
Minn./St. Paul	1982	3.05	7.01	10.13	13.7
Phoenix	1980	2.89	5.63	7.38	8.73
Rochester	1974	2.3	5.6	8.3	11.1
Sacramento	1978	3.02	6.96	9.82	17.88
San Diego	1977	3.2	7.23	10.91	16.44
San Francisco	1980-1981	3.95	7.08	9.65	13.53

Source: Surveys of MPOs.

TABLE 4.4H Daily household trip rates by household vehicle ownership

Site (Year Survey)	Percentage Of Households By Number Of Vehicles				Average Vehicles By Household	Trips Per Household By Number Of Vehicles				
	0	1	2	3+		0	1	2	3	4+
Albuquerque (1992)	1.60	27.70	47.80	22.90	1.81					
Amarillo, TX					1.80					
Baltimore (1993)	16.50	31.70	35.90	15.90	1.05	3.17	5.39	9.53	13.52	N/A
Brownsville, TX	13.50	42.90	29.80	13.80	1.56					
Detroit (1994)	12.10	32.80	37.70	17.40						
Eugene	11.50	35.80	38.50	14.20	2.13	5.79	7.72	12.76	14.08	15.77
Los Angeles (1998)	9.50	34.90	55.60	?	1.94					
Madison (1990)	9.90	36.60	39.50	14.00	1.62	4.12	4.09	6.18	8.12	N/A
Minn./St. Paul (1990)	9.50	31.90	41.30	17.30	1.74					
New York City (1997)	38.80	28.90	32.20	8.30	1.16					
San Antonio (1991)	13.20	37.10	35.10	14.70	1.63					
San Francisco (1990)	10.30	32.10	37.00	21.00						
Seattle	2.90	25.00	44.40	19.10		3.69	5.88	8.82	10.48	11.10
Sher-Den, TX (1991)	9.20	34.40	31.20	25.30	1.84					
Wilmington, DE	4.30	29.80	44.00	21.80	2.47	2.37	3.78	6.04	8.13	9.06

Source: Surveys of MPOs.

Survey dates not given for Amarillo, Brownsville, Eugene, Seattle, and Wilmington.

TABLE 4.4HA Household trip rates by number household vehicles, prior survey

Site (Year Survey)	Trips Per Household By Number Of Vehicles				
	0	1	2	3	All
Buffalo (1973)	1.6	6.9	11.5	16.9	7.5
Chicago (1979)	1.7	6.4	10.7	12.7	7.2
Cincinnati (1972)	2.0	6.5	11.6	11.6	N/A
Los Angeles (1976)	2.0	5.8	11.0	11.0	8.1
Milwaukee (1972)	1.9	7.0	11.5	16.0	7.9
Minn./St. Paul (1982)	1.8	6.5	11.1	16.4	9.1
Portland, OR (1977)	3.0	6.2	11.5	11.5	8.7
Rochester (1974)	2.2	7.1	11.1	14.0	8.0
San Diego (1977)	3.0	6.6	13.0	13.0	9.8
San Francisco (1980-1981)	4.0	6.3	10.1	13.4	8.7
Washington, DC (1968)	2.1	5.9	9.7	10.6	N/A

Source: Surveys of MPOs.

TABLE 4.5 Person trip rates by major trip purpose, latest survey

Site	Pct. Trips By Type			Daily Trip Rate Per Person			Daily Trip Rate Per Household		
	HBW	HBO	NHB	HBW	HBO	NHB	HBW	HBO	NHB
Albuquerque	17.7%	53.9%	28.4%				1.70	5.20	2.80
Amarillo, TX	18.1%	49.5%	32.4%	0.72	1.93	1.26	1.86	5.00	3.26
Atlanta	21.6%	51.3%	27.1%	0.71	1.68	0.89	1.83	4.33	3.20
Baltimore	22.1%	50.3%	27.6%	0.62	1.42	0.78	1.69	3.84	2.10
Brownsville, TX	15.2%	57.2%	27.6%	0.48	1.74	0.85	1.80	6.51	3.17
Cincinnati	18.1%	51.6%	29.7%						
Dallas				0.75	1.65	0.84	1.94	4.30	2.18
Eugene	15.6%	57.6%	26.8%	0.76	2.82	1.32	1.80	6.70	3.10
Ft. Collins	13.0%	60.0%	27.0%	0.55	2.55	1.15	1.39	6.40	2.88
Houston	19.8%	52.3%	27.9%				1.79	4.75	2.53
Las Vegas	25.8%	42.0%	32.2%				2.15	3.49	2.68
Los Angeles	19.3%	52.1%	28.6%	0.60	1.62	0.89	1.78	4.80	2.64
Madison	19.6%	36.6%	19.0%	0.75	1.40	0.73	1.91	3.57	1.85
Minn/St. Paul	14.3%	52.8%	32.8%	0.56	2.03	1.28	1.45	5.31	3.36
Phoenix	22.8%	48.0%	29.2%				1.86	3.97	2.33
Reno	28.1%	40.8%	31.1%	0.89	1.29	0.98	2.15	3.12	2.37
San Antonio	26.9%	41.9%	31.2%	0.67	1.66	0.91	1.95	4.81	2.63
San Diego							1.20	2.40	
San Francisco	25.2%	46.4%	28.4%	0.76	1.39	0.85	2.03	3.73	2.29
Seattle	22.9%	44.3%	32.8%	0.94	1.81	1.34	1.99	3.85	2.85
Sher-Den, TX	20.5%	43.9%	35.6%	0.63	1.87	1.18	1.61	4.84	3.06
St. Louis				0.64	1.73	1.04	1.70	4.58	2.77
Tucson	17.6%	56.5%	25.9%	0.60	1.94	0.89	1.53	4.92	2.25
Wilmington, DE	32.1%	49.6%	18.3%	0.71	1.11	0.39	1.82	2.89	1.02

Source: Surveys of MPOs.

HBW = Home-based work; HBO = Home-based other; NHB = Non-home based.

TABLE 4.5A Person trip rates by major trip purpose, prior survey

Site (Year Survey)	Pct. Trips By Type			Daily Trip Rate Per Household		
	HBW	HBO	NHB	HBW	HBO	NHB
Atlanta (1972)	25.4%	55.4%	19.2%			
Baltimore (1977)	22.3%	54.7%	23.0%			
Cincinnati	28.7%	53.3%	18.0%			
Dallas (1980)	19.9%	59.7%	20.4%			
Denver (1982)	25.2%	54.0%	20.8%			
Detroit (1980)	20.3%	53.8%	25.9%			
Houston	0.0%	0.0%	0.0%	1.71	4.8	2.96
Kansas City (1970)	18.7%	59.1%	22.2%			
Los Angeles(1976)	19.2%	52.7%	28.2%			
Louisville (1975)	26.6%	54.1%	19.3%			
Milwaukee (1972)	33.0%	47.0%	20.0%			
Minn/St. Paul (1980)	17.9%	53.7%	28.4%			
Philadelphia (1977)	23.0%	55.0%	22.0%			
Phoenix (1980)	25.7%	53.5%	20.8%			
Portland, OR (1977)	19.3%	57.9%	22.8%			
Sacramento (1978)	13.9%	58.8%	27.3%			
San Diego (1977)	14.6%	57.5%	28.0%			
San Francisco (1980)	18.2%	51.4%	30.4%			
Washington, DC (1968)	24.4%	62.8%	12.8%			

Source: Surveys of MPOs.

HBW = Home-based work; HBO = Home-based other; NHB = Non-home based.

TABLE 4.6 Home-based person trips by trip purpose

Site	Home-Based Trips As Pct. Of All Trips	Pct. Of Home-Based Trips To And From:					Total Home-Based Trips Per Household
		Work	School	Shop	Soc./Rec.	Other	
Albuquerque	76.1%	24.7%		14.6%	13.7%	47.0%	6.9
Amarillo, TX	67.6%	26.7%				73.3%	6.9
Atlanta	72.9%	21.6%				78.4%	
Baltimore	72.4%	22.1%				77.9%	
Boston	71.6%						
Brownsville, TX	72.4%	21.0%				79.0%	8.3
Cincinnati	69.7%	18.1%				81.9%	
Eugene	73.2%	21.3%	12.0%	18.4%		60.3%	
Ft. Collins	13.0%						7.8
Las Vegas	67.8%	25.8%				74.2%	
Los Angeles	71.4%	27.0%			12.8%	60.0%	
Louisville							
Madison	56.2%	34.9%	7.1%	15.1%		42.9%	
Minn/St. Paul	66.8%	21.5%	7.4%	17.4%	53.7%		6.8
New York City	25.0%	11.0%	46.0%	19.0%	0.0%	24.0%	
Reno	68.9%	40.8%	11.9%	17.2%	12.5%	17.6%	5.3
San Antonio	72.0%	28.8%				71.2%	6.8
San Francisco	71.6%	35.2%	12.6%	36.0%	16.2%	0.0%	5.8
Seattle	67.0%						
Sher-Den, TX	66.3%	24.2%				75.8%	6.5
Tucson	56.5%	31.1%	25.8%	18.3%	N/A	N/A	6.5
Wilmington, DE	71.7%	39.3%	3.5%	21.1%		36.2%	

Source: Surveys of MPOs.

TABLE 4.6A Home-based person trips by trip purpose, prior survey

Site (Year Survey)	Home-Based Trips As Pct. Of All Trips	Pct. Of Home-Based Trips To And From:					Total Home-Based Trips Per Household
		Work	School	Shop	Soc./Rec.	Other	
Atlanta (1972)	80.8%	31.4%				68.6%	5.8
Dallas (1984)	74.7%	36.1%				63.9%	6.4
Denver (1982)	79.2%	31.8%		21.5%		46.7%	N/A
Detroit (1980)	74.1%	27.4%				72.6%	5.5
Louisville (1975)	80.7%	33.0%		21.6%	21.2%	24.2%	N/A
Philadelphia (1977)	78.0%	29.5%				70.5%	N/A
Phoenix (1980)	79.2%	32.4%	11.4%	20.5%		37.5%	N/A
Portland, OR (1977)	77.2%	25.0%	14.0%		21.3%	39.7%	N/A
San Diego (1977)	71.0%	22.3%		18.2%		59.5%	7.0
San Francisco	73.2%	29.6%	14.9%		19.8%	35.7%	6.4
Washington, DC (1968)	87.2%	28.0%	8.0%	23.4%	17.7%	22.9%	6.3

Source: Surveys of MPOs.

Survey date not given for San Francisco.