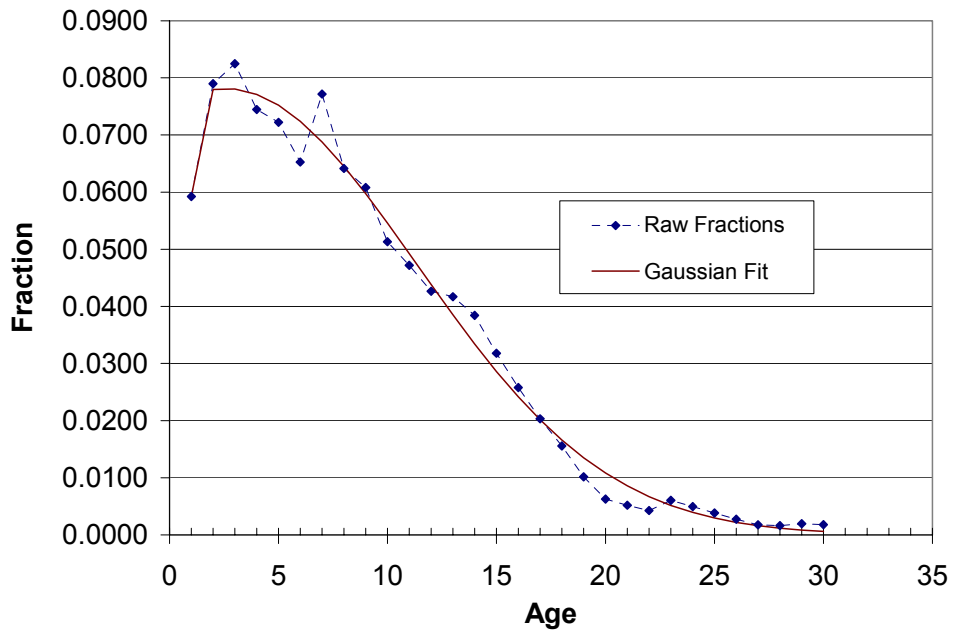


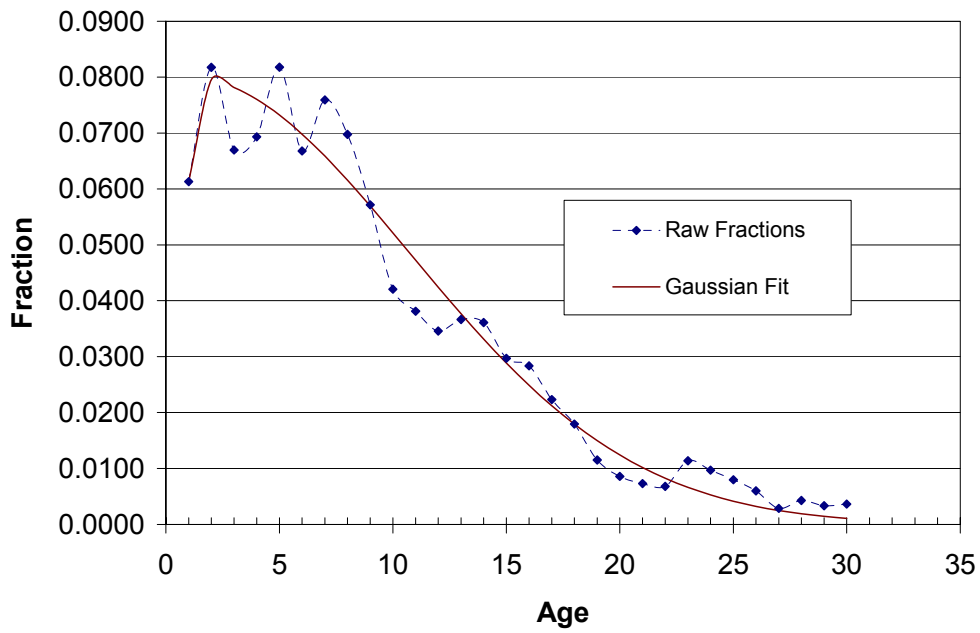
## **APPENDICES**

## **APPENDIX A**

### **REGISTRATION AGE DISTRIBUTION BEST-FIT GRAPHS**

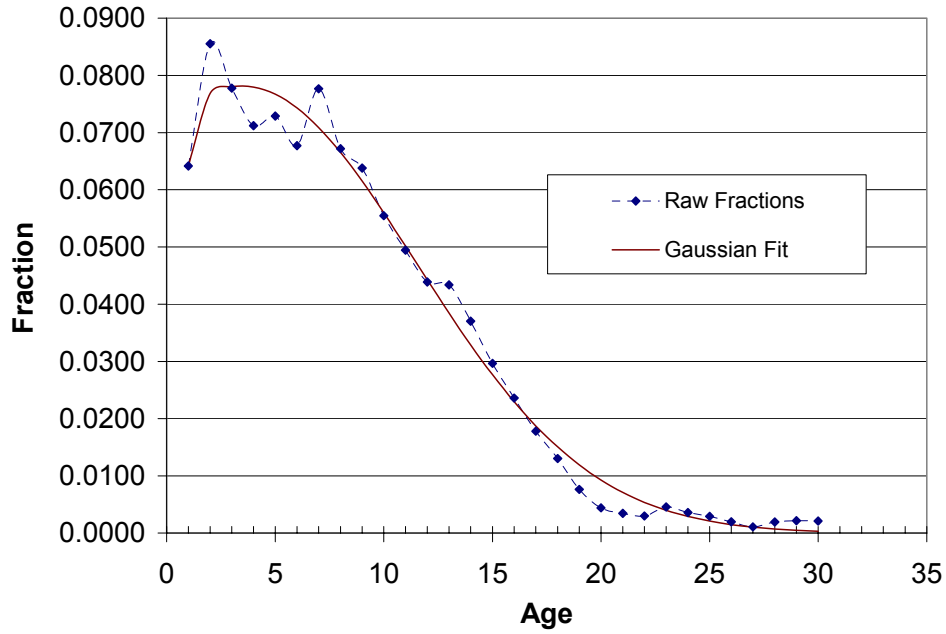


**a. LDV Vehicle Classification**

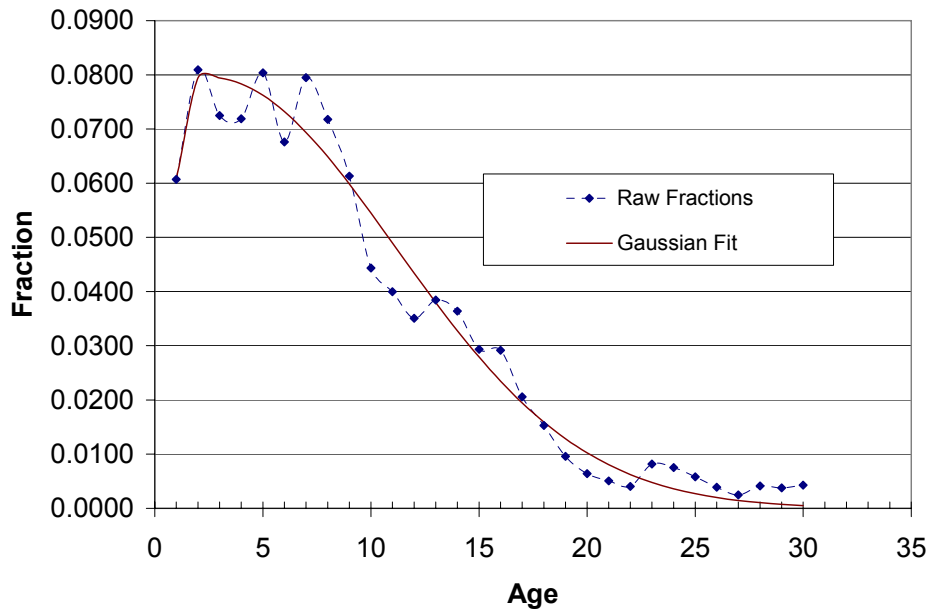


**b. LDT Vehicle Classification**

**Figure A1. Registration Distribution for Shelby +**

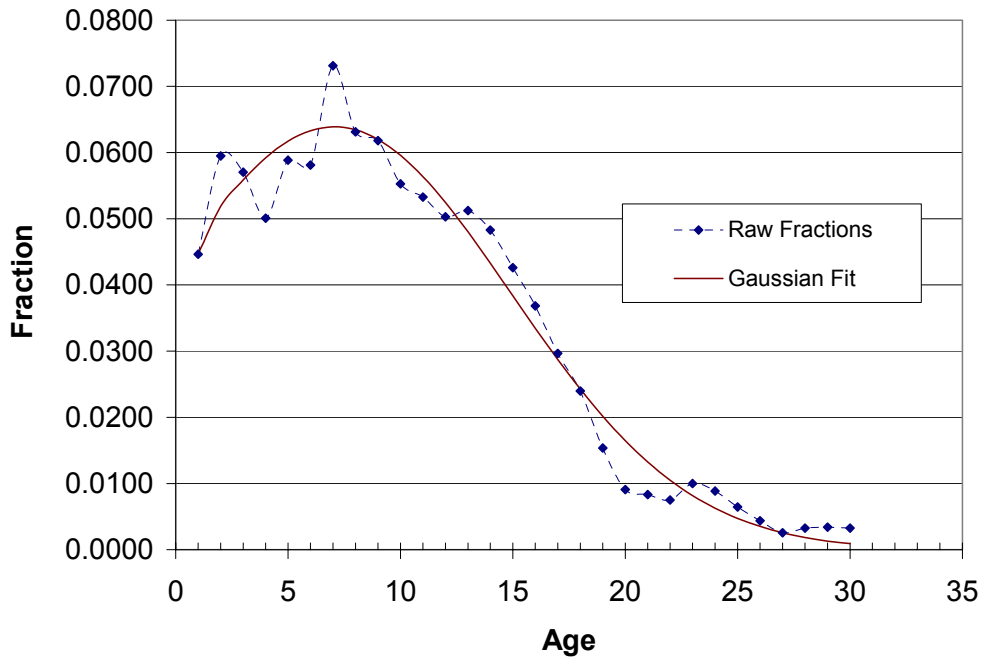


**a. LDV Vehicle Classification**

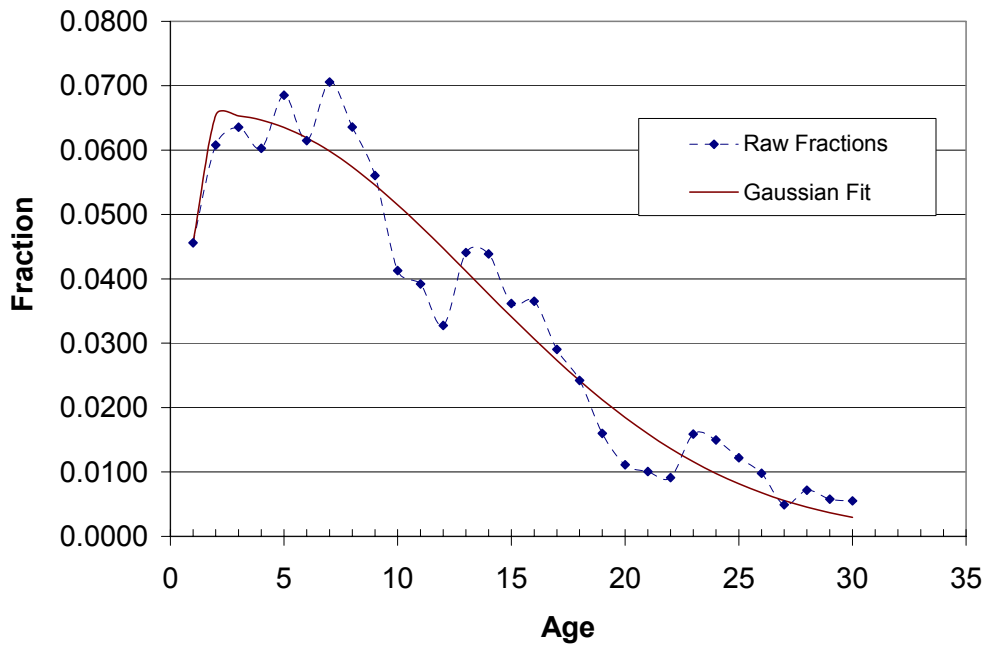


**b. LDT Vehicle Classification**

**Figure A2. Registration Distribution for Davidson +**

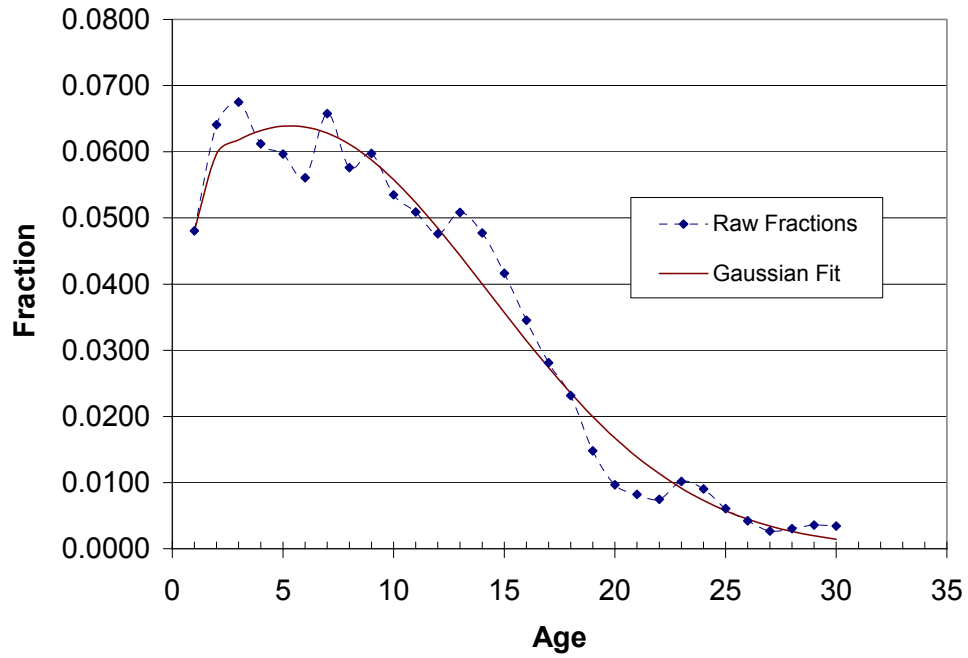


**a. LDV Vehicle Classification**

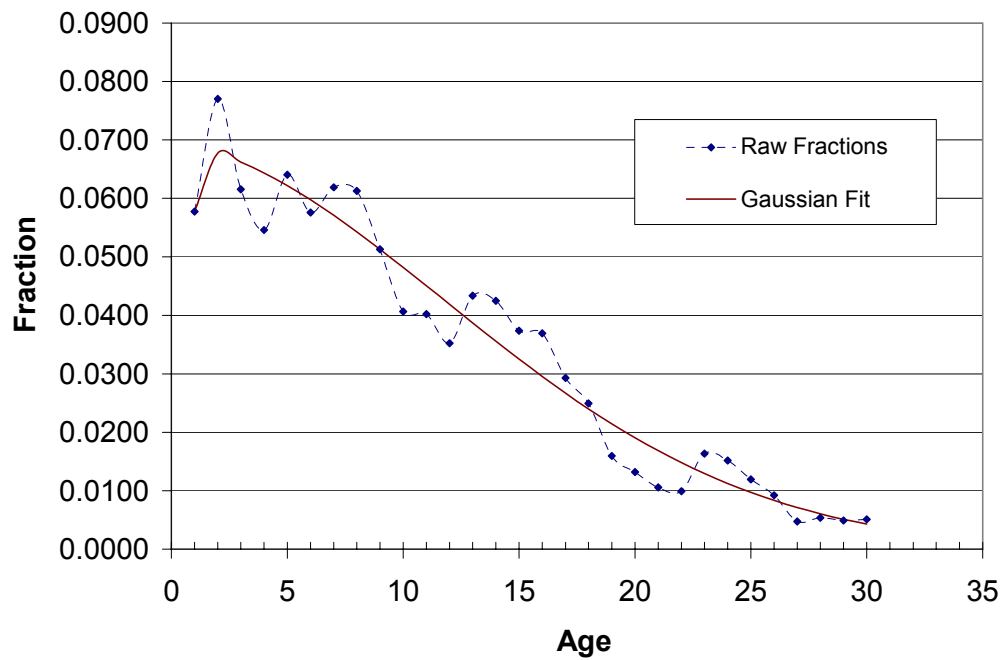


**b. LDT Vehicle Classification**

**Figure A3. Registration Distribution for Hamilton +**

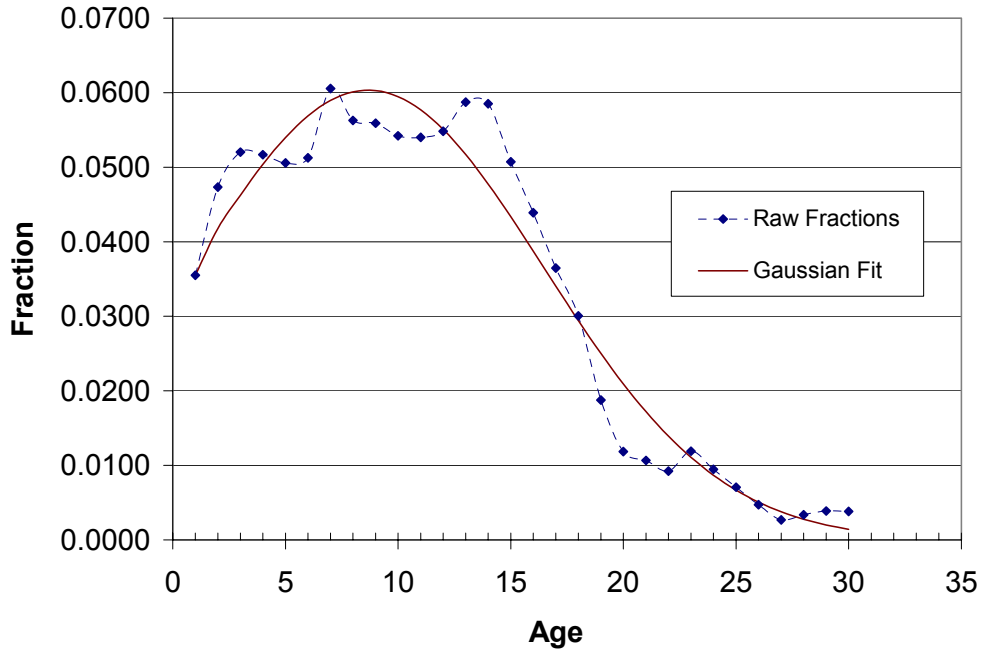


**a. LDV Vehicle Classification**

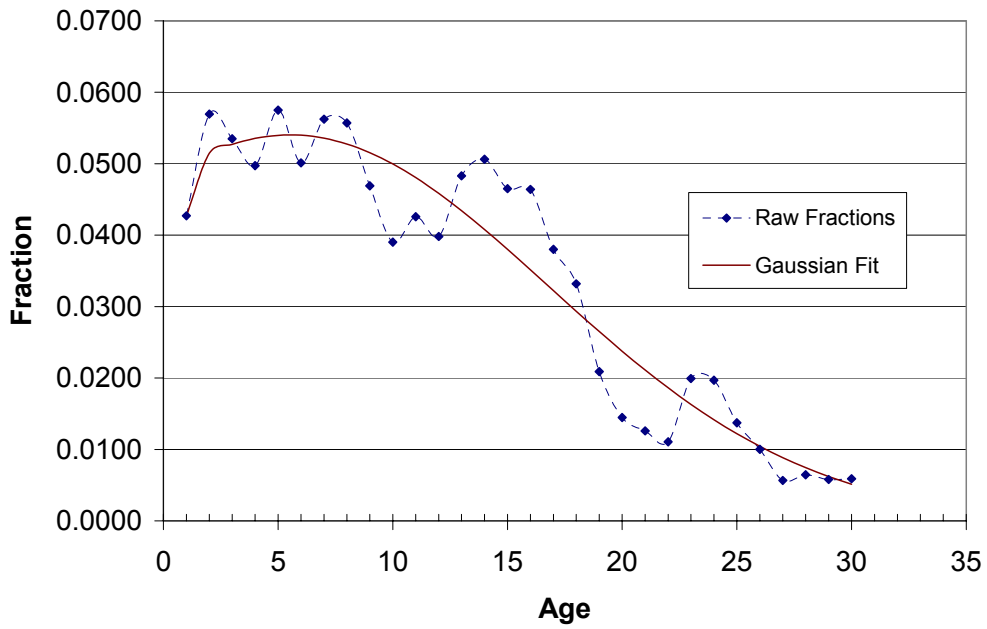


**b. LDT Vehicle Classification**

**Figure A4. Registration Distribution for Knox +**

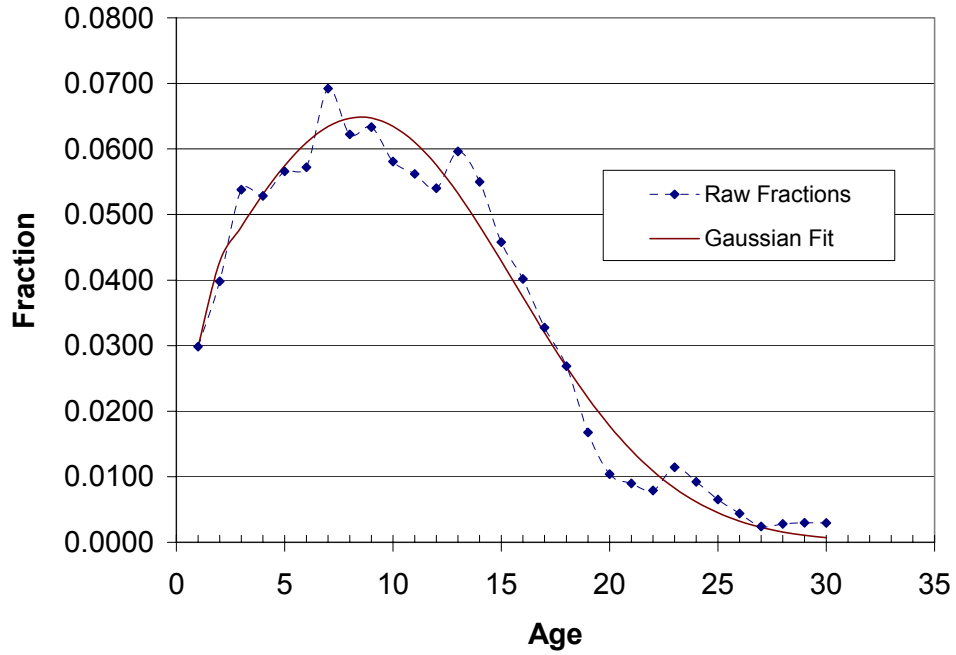


**a. LDV Vehicle Classification**

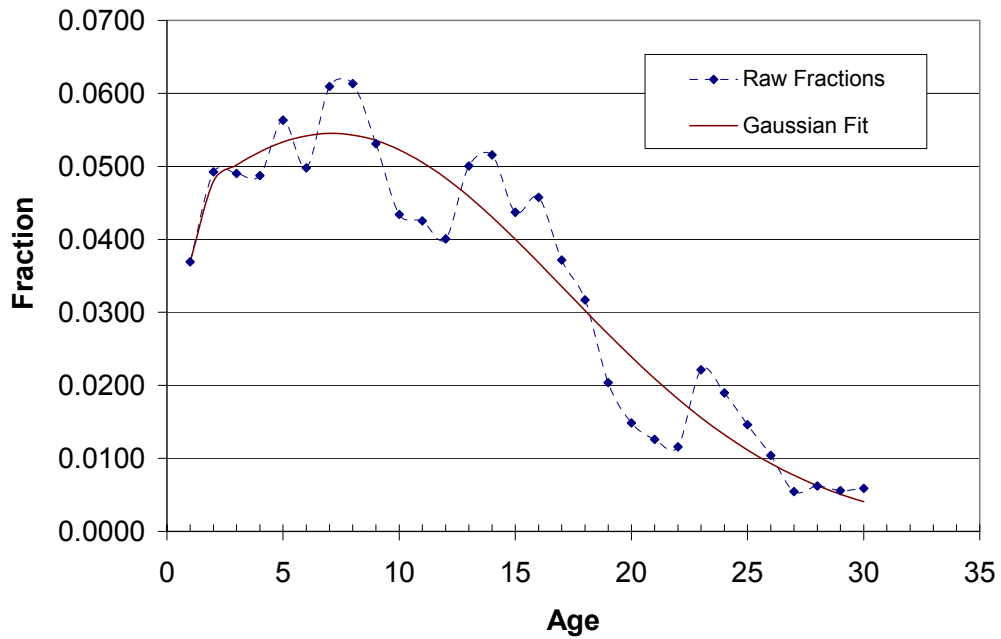


**b. LDT Vehicle Classification**

**Figure A5. Registration Distribution for Sullivan +**



**a. LDV Vehicle Classification**



**b. LDT Vehicle Classification**

**Figure A6. Registration Distribution for All Other Counties**



**APPENDIX B.1**

**VEHICLE MILES TRAVELED (VMT) FRACTIONS**

Table B.1-1. “Shelby +” VMT Mix

Roadway	Year	LDV	LDT1	LDT2	LDT3	LDT4	HDV2B	HDV3	HDV4	HDV5	HDV6	HDV7	HDV8A	HDV8B	HDBS	HDBT	MC	TOTAL
Urban Interstates	Shelby 1998,	0.578	0.048	0.160	0.049	0.022	0.032	0	0	0	0	0	0.025	0.084	0	0	0.002	1.000
Rural Interstates		0.439	0.037	0.122	0.037	0.017	0.078	0	0	0	0	0	0.061	0.201	0	0	0.008	1.000
Urban Arterials		0.640	0.053	0.177	0.054	0.024	0.011	0	0	0	0	0	0.009	0.028	0	0	0.003	1.000
Rural Arterials		0.630	0.053	0.175	0.054	0.024	0.014	0	0	0	0	0	0.011	0.035	0	0	0.005	1.000
Urban Local		0.663	0.055	0.184	0.056	0.025	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.651	0.054	0.180	0.055	0.025	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2001	0.552	0.053	0.175	0.054	0.024	0.032	0	0	0	0	0	0.025	0.084	0	0	0.002	1.000
Rural Interstates		0.419	0.040	0.134	0.041	0.018	0.078	0	0	0	0	0	0.061	0.201	0	0	0.008	1.000
Urban Arterials		0.611	0.058	0.194	0.060	0.027	0.011	0	0	0	0	0	0.009	0.028	0	0	0.003	1.000
Rural Arterials		0.602	0.057	0.191	0.059	0.026	0.014	0	0	0	0	0	0.011	0.035	0	0	0.005	1.000
Urban Local		0.634	0.060	0.201	0.062	0.027	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.621	0.059	0.197	0.060	0.027	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2002	0.526	0.057	0.190	0.058	0.026	0.032	0	0	0	0	0	0.025	0.084	0	0	0.002	1.000
Rural Interstates		0.400	0.044	0.145	0.044	0.020	0.078	0	0	0	0	0	0.061	0.201	0	0	0.008	1.000
Urban Arterials		0.582	0.063	0.210	0.065	0.029	0.011	0	0	0	0	0	0.009	0.028	0	0	0.003	1.000
Rural Arterials		0.574	0.062	0.207	0.064	0.028	0.014	0	0	0	0	0	0.011	0.035	0	0	0.005	1.000
Urban Local		0.604	0.065	0.218	0.067	0.030	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.592	0.064	0.214	0.066	0.029	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2003	0.500	0.062	0.205	0.063	0.028	0.032	0	0	0	0	0	0.025	0.084	0	0	0.002	1.000
Rural Interstates		0.380	0.047	0.156	0.048	0.021	0.078	0	0	0	0	0	0.061	0.201	0	0	0.008	1.000
Urban Arterials		0.553	0.068	0.227	0.070	0.031	0.011	0	0	0	0	0	0.009	0.028	0	0	0.003	1.000
Rural Arterials		0.545	0.067	0.223	0.069	0.031	0.014	0	0	0	0	0	0.011	0.035	0	0	0.005	1.000
Urban Local		0.574	0.071	0.235	0.072	0.032	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.563	0.069	0.230	0.071	0.032	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2004	0.474	0.066	0.220	0.067	0.030	0.032	0	0	0	0	0	0.025	0.084	0	0	0.002	1.000
Rural Interstates		0.360	0.050	0.167	0.051	0.023	0.078	0	0	0	0	0	0.061	0.201	0	0	0.008	1.000
Urban Arterials		0.525	0.073	0.243	0.075	0.033	0.011	0	0	0	0	0	0.009	0.028	0	0	0.003	1.000
Rural Arterials		0.517	0.072	0.240	0.074	0.033	0.014	0	0	0	0	0	0.011	0.035	0	0	0.005	1.000
Urban Local		0.544	0.076	0.252	0.077	0.034	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.534	0.074	0.247	0.076	0.034	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2005	0.448	0.070	0.234	0.072	0.032	0.032	0	0	0	0	0	0.025	0.084	0	0	0.002	1.000
Rural Interstates		0.340	0.054	0.179	0.055	0.024	0.078	0	0	0	0	0	0.061	0.201	0	0	0.008	1.000
Urban Arterials		0.496	0.078	0.260	0.080	0.036	0.011	0	0	0	0	0	0.009	0.028	0	0	0.003	1.000
Rural Arterials		0.489	0.077	0.256	0.079	0.035	0.014	0	0	0	0	0	0.011	0.035	0	0	0.005	1.000
Urban Local		0.514	0.081	0.269	0.083	0.037	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.505	0.079	0.264	0.081	0.036	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2006	0.422	0.075	0.249	0.077	0.034	0.032	0	0	0	0	0	0.025	0.084	0	0	0.002	1.000
Rural Interstates		0.321	0.057	0.190	0.058	0.026	0.078	0	0	0	0	0	0.061	0.201	0	0	0.008	1.000
Urban Arterials		0.467	0.083	0.276	0.085	0.038	0.011	0	0	0	0	0	0.009	0.028	0	0	0.003	1.000
Rural Arterials		0.460	0.082	0.272	0.084	0.037	0.014	0	0	0	0	0	0.011	0.035	0	0	0.005	1.000
Urban Local		0.485	0.086	0.286	0.088	0.039	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.475	0.084	0.281	0.086	0.038	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000

**Table B.1-1. “Shelby +” VMT Mix (continued)**

Roadway	Year	LDV	LDT1	LDT2	LDT3	LDT4	HDV2B	HDV3	HDV4	HDV5	HDV6	HDV7	HDV8A	HDV8B	HDBS	HDBT	MC	TOTAL
Urban Interstates	2007	0.396	0.079	0.264	0.081	0.036	0.032	0	0	0	0	0	0.025	0.084	0	0	0.002	1.000
Rural Interstates		0.301	0.060	0.201	0.062	0.027	0.078	0	0	0	0	0	0.061	0.201	0	0	0.008	1.000
Urban Arterials		0.438	0.088	0.293	0.090	0.040	0.011	0	0	0	0	0	0.009	0.028	0	0	0.003	1.000
Rural Arterials		0.432	0.087	0.288	0.089	0.039	0.014	0	0	0	0	0	0.011	0.035	0	0	0.005	1.000
Urban Local		0.455	0.091	0.303	0.093	0.042	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.446	0.089	0.297	0.091	0.041	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2008	0.370	0.084	0.279	0.086	0.038	0.032	0	0	0	0	0	0.025	0.084	0	0	0.002	1.000
Rural Interstates		0.281	0.064	0.213	0.065	0.029	0.078	0	0	0	0	0	0.061	0.201	0	0	0.008	1.000
Urban Arterials		0.410	0.093	0.309	0.095	0.042	0.011	0	0	0	0	0	0.009	0.028	0	0	0.003	1.000
Rural Arterials		0.404	0.091	0.305	0.094	0.042	0.014	0	0	0	0	0	0.011	0.035	0	0	0.005	1.000
Urban Local		0.425	0.096	0.320	0.099	0.044	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.417	0.094	0.314	0.097	0.043	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2009	0.357	0.086	0.286	0.088	0.039	0.032	0	0	0	0	0	0.025	0.084	0	0	0.002	1.000
Rural Interstates		0.272	0.066	0.218	0.067	0.030	0.078	0	0	0	0	0	0.061	0.201	0	0	0.008	1.000
Urban Arterials		0.396	0.095	0.317	0.098	0.043	0.011	0	0	0	0	0	0.009	0.028	0	0	0.003	1.000
Rural Arterials		0.390	0.094	0.312	0.096	0.043	0.014	0	0	0	0	0	0.011	0.035	0	0	0.005	1.000
Urban Local		0.411	0.099	0.329	0.101	0.045	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.403	0.097	0.322	0.099	0.044	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2010	0.346	0.088	0.293	0.090	0.040	0.032	0	0	0	0	0	0.025	0.084	0	0	0.002	1.000
Rural Interstates		0.263	0.067	0.223	0.069	0.030	0.078	0	0	0	0	0	0.061	0.201	0	0	0.008	1.000
Urban Arterials		0.383	0.097	0.325	0.100	0.044	0.011	0	0	0	0	0	0.009	0.028	0	0	0.003	1.000
Rural Arterials		0.377	0.096	0.320	0.098	0.044	0.014	0	0	0	0	0	0.011	0.035	0	0	0.005	1.000
Urban Local		0.397	0.101	0.336	0.103	0.046	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.390	0.099	0.330	0.101	0.045	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2015	0.303	0.095	0.318	0.098	0.044	0.032	0	0	0	0	0	0.025	0.084	0	0	0.002	1.000
Rural Interstates		0.230	0.073	0.242	0.074	0.033	0.078	0	0	0	0	0	0.061	0.201	0	0	0.008	1.000
Urban Arterials		0.335	0.106	0.352	0.108	0.048	0.011	0	0	0	0	0	0.009	0.028	0	0	0.003	1.000
Rural Arterials		0.330	0.104	0.347	0.107	0.048	0.014	0	0	0	0	0	0.011	0.035	0	0	0.005	1.000
Urban Local		0.347	0.110	0.365	0.112	0.050	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.341	0.107	0.358	0.110	0.049	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2020	0.279	0.099	0.331	0.102	0.045	0.032	0	0	0	0	0	0.025	0.084	0	0	0.002	1.000
Rural Interstates		0.212	0.076	0.252	0.077	0.034	0.078	0	0	0	0	0	0.061	0.201	0	0	0.008	1.000
Urban Arterials		0.309	0.110	0.367	0.113	0.050	0.011	0	0	0	0	0	0.009	0.028	0	0	0.003	1.000
Rural Arterials		0.304	0.109	0.361	0.111	0.050	0.014	0	0	0	0	0	0.011	0.035	0	0	0.005	1.000
Urban Local		0.321	0.114	0.380	0.117	0.052	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.315	0.112	0.373	0.115	0.051	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2025	0.279	0.099	0.331	0.102	0.045	0.032	0	0	0	0	0	0.025	0.084	0	0	0.002	1.000
Rural Interstates		0.212	0.076	0.252	0.077	0.034	0.078	0	0	0	0	0	0.061	0.201	0	0	0.008	1.000
Urban Arterials		0.309	0.110	0.367	0.113	0.050	0.011	0	0	0	0	0	0.009	0.028	0	0	0.003	1.000
Rural Arterials		0.304	0.109	0.361	0.111	0.050	0.014	0	0	0	0	0	0.011	0.035	0	0	0.005	1.000
Urban Local		0.321	0.114	0.380	0.117	0.052	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.315	0.112	0.373	0.115	0.051	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2030	0.279	0.099	0.331	0.102	0.045	0.032	0	0	0	0	0	0.025	0.084	0	0	0.002	1.000
Rural Interstates		0.212	0.076	0.252	0.077	0.034	0.078	0	0	0	0	0	0.061	0.201	0	0	0.008	1.000
Urban Arterials		0.309	0.110	0.367	0.113	0.050	0.011	0	0	0	0	0	0.009	0.028	0	0	0.003	1.000
Rural Arterials		0.304	0.109	0.361	0.111	0.050	0.014	0	0	0	0	0	0.011	0.035	0	0	0.005	1.000
Urban Local		0.321	0.114	0.380	0.117	0.052	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.315	0.112	0.373	0.115	0.051	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000

**Table B.1-2. “Knox +” VMT Mix**

Roadway	Year	LDV	LDT1	LDT2	LDT3	LDT4	HDV2B	HDV3	HDV4	HDV5	HDV6	HDV7	HDV8A	HDV8B	HDBS	HDBT	MC	TOTAL
Urban Interstates	Knox 1998, 1999, 2000	0.487	0.062	0.207	0.064	0.028	0.034	0	0	0	0	0	0.027	0.088	0	0	0.002	1.000
Rural Interstates		0.444	0.057	0.189	0.058	0.026	0.050	0	0	0	0	0	0.039	0.129	0	0	0.008	1.000
Urban Arterials		0.547	0.070	0.233	0.072	0.032	0.010	0	0	0	0	0	0.008	0.026	0	0	0.002	1.000
Rural Arterials		0.525	0.067	0.224	0.069	0.031	0.018	0	0	0	0	0	0.014	0.047	0	0	0.005	1.000
Urban Local		0.565	0.072	0.240	0.074	0.033	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.554	0.071	0.236	0.072	0.032	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2001	0.472	0.065	0.216	0.066	0.030	0.034	0	0	0	0	0	0.027	0.088	0	0	0.002	1.000
Rural Interstates		0.430	0.059	0.197	0.061	0.027	0.050	0	0	0	0	0	0.039	0.129	0	0	0.008	1.000
Urban Arterials		0.531	0.073	0.243	0.075	0.033	0.010	0	0	0	0	0	0.008	0.026	0	0	0.002	1.000
Rural Arterials		0.509	0.070	0.233	0.072	0.032	0.018	0	0	0	0	0	0.014	0.047	0	0	0.005	1.000
Urban Local		0.547	0.075	0.250	0.077	0.034	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.537	0.074	0.245	0.076	0.034	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2002	0.457	0.068	0.225	0.069	0.031	0.034	0	0	0	0	0	0.027	0.088	0	0	0.002	1.000
Rural Interstates		0.416	0.062	0.205	0.063	0.028	0.050	0	0	0	0	0	0.039	0.129	0	0	0.008	1.000
Urban Arterials		0.514	0.076	0.252	0.078	0.035	0.010	0	0	0	0	0	0.008	0.026	0	0	0.002	1.000
Rural Arterials		0.493	0.073	0.243	0.075	0.033	0.018	0	0	0	0	0	0.014	0.047	0	0	0.005	1.000
Urban Local		0.530	0.078	0.260	0.080	0.036	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.520	0.077	0.255	0.079	0.035	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2003	0.442	0.070	0.233	0.072	0.032	0.034	0	0	0	0	0	0.027	0.088	0	0	0.002	1.000
Rural Interstates		0.403	0.064	0.213	0.065	0.029	0.050	0	0	0	0	0	0.039	0.129	0	0	0.008	1.000
Urban Arterials		0.497	0.079	0.262	0.081	0.036	0.010	0	0	0	0	0	0.008	0.026	0	0	0.002	1.000
Rural Arterials		0.477	0.076	0.252	0.077	0.034	0.018	0	0	0	0	0	0.014	0.047	0	0	0.005	1.000
Urban Local		0.512	0.081	0.270	0.083	0.037	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.502	0.080	0.265	0.082	0.036	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2004	0.427	0.073	0.242	0.074	0.033	0.034	0	0	0	0	0	0.027	0.088	0	0	0.002	1.000
Rural Interstates		0.389	0.066	0.221	0.068	0.030	0.050	0	0	0	0	0	0.039	0.129	0	0	0.008	1.000
Urban Arterials		0.480	0.082	0.272	0.084	0.037	0.010	0	0	0	0	0	0.008	0.026	0	0	0.002	1.000
Rural Arterials		0.460	0.078	0.261	0.080	0.036	0.018	0	0	0	0	0	0.014	0.047	0	0	0.005	1.000
Urban Local		0.495	0.084	0.280	0.086	0.038	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.485	0.083	0.275	0.085	0.038	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2005	0.412	0.075	0.251	0.077	0.034	0.034	0	0	0	0	0	0.027	0.088	0	0	0.002	1.000
Rural Interstates		0.375	0.069	0.229	0.070	0.031	0.050	0	0	0	0	0	0.039	0.129	0	0	0.008	1.000
Urban Arterials		0.463	0.085	0.281	0.087	0.039	0.010	0	0	0	0	0	0.008	0.026	0	0	0.002	1.000
Rural Arterials		0.444	0.081	0.270	0.083	0.037	0.018	0	0	0	0	0	0.014	0.047	0	0	0.005	1.000
Urban Local		0.477	0.087	0.290	0.089	0.040	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.468	0.086	0.285	0.088	0.039	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2006	0.397	0.078	0.259	0.080	0.035	0.034	0	0	0	0	0	0.027	0.088	0	0	0.002	1.000
Rural Interstates		0.361	0.071	0.236	0.073	0.032	0.050	0	0	0	0	0	0.039	0.129	0	0	0.008	1.000
Urban Arterials		0.446	0.087	0.291	0.090	0.040	0.010	0	0	0	0	0	0.008	0.026	0	0	0.002	1.000
Rural Arterials		0.428	0.084	0.280	0.086	0.038	0.018	0	0	0	0	0	0.014	0.047	0	0	0.005	1.000
Urban Local		0.460	0.090	0.300	0.092	0.041	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.451	0.088	0.294	0.091	0.040	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000

Table B.1-2. “Knox +” VMT Mix (continued)

Roadway	Year	LDV	LDT1	LDT2	LDT3	LDT4	HDV2B	HDV3	HDV4	HDV5	HDV6	HDV7	HDV8A	HDV8B	HDBS	HDBT	MC	TOTAL
Urban Interstates	2007	0.382	0.080	0.268	0.082	0.037	0.034	0	0	0	0	0	0.027	0.088	0	0	0.002	1.000
Rural Interstates		0.348	0.073	0.244	0.075	0.033	0.050	0	0	0	0	0	0.039	0.129	0	0	0.008	1.000
Urban Arterials		0.429	0.090	0.301	0.093	0.041	0.010	0	0	0	0	0	0.008	0.026	0	0	0.002	1.000
Rural Arterials		0.412	0.087	0.289	0.089	0.040	0.018	0	0	0	0	0	0.014	0.047	0	0	0.005	1.000
Urban Local		0.443	0.093	0.310	0.095	0.042	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.434	0.091	0.304	0.094	0.042	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2008	0.367	0.083	0.276	0.085	0.038	0.034	0	0	0	0	0	0.027	0.088	0	0	0.002	1.000
Rural Interstates		0.334	0.076	0.252	0.077	0.034	0.050	0	0	0	0	0	0.039	0.129	0	0	0.008	1.000
Urban Arterials		0.412	0.093	0.310	0.096	0.043	0.010	0	0	0	0	0	0.008	0.026	0	0	0.002	1.000
Rural Arterials		0.395	0.090	0.298	0.092	0.041	0.018	0	0	0	0	0	0.014	0.047	0	0	0.005	1.000
Urban Local		0.425	0.096	0.320	0.099	0.044	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.417	0.094	0.314	0.097	0.043	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2009	0.354	0.085	0.284	0.087	0.039	0.034	0	0	0	0	0	0.027	0.088	0	0	0.002	1.000
Rural Interstates		0.323	0.078	0.259	0.080	0.035	0.050	0	0	0	0	0	0.039	0.129	0	0	0.008	1.000
Urban Arterials		0.398	0.096	0.319	0.098	0.044	0.010	0	0	0	0	0	0.008	0.026	0	0	0.002	1.000
Rural Arterials		0.382	0.092	0.306	0.094	0.042	0.018	0	0	0	0	0	0.014	0.047	0	0	0.005	1.000
Urban Local		0.411	0.099	0.329	0.101	0.045	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.403	0.097	0.322	0.099	0.044	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2010	0.343	0.087	0.290	0.089	0.040	0.034	0	0	0	0	0	0.027	0.088	0	0	0.002	1.000
Rural Interstates		0.312	0.080	0.265	0.081	0.036	0.050	0	0	0	0	0	0.039	0.129	0	0	0.008	1.000
Urban Arterials		0.385	0.098	0.326	0.100	0.045	0.010	0	0	0	0	0	0.008	0.026	0	0	0.002	1.000
Rural Arterials		0.369	0.094	0.313	0.096	0.043	0.018	0	0	0	0	0	0.014	0.047	0	0	0.005	1.000
Urban Local		0.397	0.101	0.336	0.103	0.046	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.390	0.099	0.330	0.101	0.045	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2015	0.300	0.095	0.315	0.097	0.043	0.034	0	0	0	0	0	0.027	0.088	0	0	0.002	1.000
Rural Interstates		0.273	0.086	0.287	0.088	0.039	0.050	0	0	0	0	0	0.039	0.129	0	0	0.008	1.000
Urban Arterials		0.337	0.106	0.354	0.109	0.048	0.010	0	0	0	0	0	0.008	0.026	0	0	0.002	1.000
Rural Arterials		0.323	0.102	0.340	0.105	0.047	0.018	0	0	0	0	0	0.014	0.047	0	0	0.005	1.000
Urban Local		0.347	0.110	0.365	0.112	0.050	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.341	0.107	0.358	0.110	0.049	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2020	0.277	0.099	0.328	0.101	0.045	0.034	0	0	0	0	0	0.027	0.088	0	0	0.002	1.000
Rural Interstates		0.252	0.090	0.299	0.092	0.041	0.050	0	0	0	0	0	0.039	0.129	0	0	0.008	1.000
Urban Arterials		0.311	0.111	0.368	0.113	0.050	0.010	0	0	0	0	0	0.008	0.026	0	0	0.002	1.000
Rural Arterials		0.298	0.106	0.354	0.109	0.048	0.018	0	0	0	0	0	0.014	0.047	0	0	0.005	1.000
Urban Local		0.321	0.114	0.380	0.117	0.052	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.315	0.112	0.373	0.115	0.051	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2025	0.277	0.099	0.328	0.101	0.045	0.034	0	0	0	0	0	0.027	0.088	0	0	0.002	1.000
Rural Interstates		0.252	0.090	0.299	0.092	0.041	0.050	0	0	0	0	0	0.039	0.129	0	0	0.008	1.000
Urban Arterials		0.311	0.111	0.368	0.113	0.050	0.010	0	0	0	0	0	0.008	0.026	0	0	0.002	1.000
Rural Arterials		0.298	0.106	0.354	0.109	0.048	0.018	0	0	0	0	0	0.014	0.047	0	0	0.005	1.000
Urban Local		0.321	0.114	0.380	0.117	0.052	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.315	0.112	0.373	0.115	0.051	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2030	0.277	0.099	0.328	0.101	0.045	0.034	0	0	0	0	0	0.027	0.088	0	0	0.002	1.000
Rural Interstates		0.252	0.090	0.299	0.092	0.041	0.050	0	0	0	0	0	0.039	0.129	0	0	0.008	1.000
Urban Arterials		0.311	0.111	0.368	0.113	0.050	0.010	0	0	0	0	0	0.008	0.026	0	0	0.002	1.000
Rural Arterials		0.298	0.106	0.354	0.109	0.048	0.018	0	0	0	0	0	0.014	0.047	0	0	0.005	1.000
Urban Local		0.321	0.114	0.380	0.117	0.052	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.315	0.112	0.373	0.115	0.051	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000

Table B.1-3. “Hamilton +” VMT Mix

Roadway	Year	LDV	LDT1	LDT2	LDT3	LDT4	HDV2B	HDV3	HDV4	HDV5	HDV6	HDV7	HDV8A	HDV8B	HDBS	HDBT	MC	TOTAL	
Urban Interstates	Hamilton	0.482	0.056	0.187	0.058	0.026	0.043	0	0	0	0	0	0.034	0.112	0	0	0.002	1.000	
Rural Interstates		0.436	0.051	0.170	0.052	0.023	0.060	0	0	0	0	0	0	0.046	0.154	0	0	0.008	1.000
Urban Arterials		1998,	0.568	0.066	0.220	0.068	0.030	0.010	0	0	0	0	0	0.008	0.027	0	0	0.003	1.000
Rural Arterials		1999,	0.551	0.064	0.214	0.066	0.029	0.016	0	0	0	0	0	0.013	0.042	0	0	0.005	1.000
Urban Local		2000	0.587	0.068	0.227	0.070	0.031	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local			0.576	0.067	0.223	0.069	0.031	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2001	0.466	0.059	0.197	0.060	0.027	0.043	0	0	0	0	0	0.034	0.112	0	0	0.002	1.000	
Rural Interstates		0.421	0.054	0.178	0.055	0.024	0.060	0	0	0	0	0	0	0.046	0.154	0	0	0.008	1.000
Urban Arterials		0.549	0.069	0.231	0.071	0.032	0.010	0	0	0	0	0	0	0.008	0.027	0	0	0.003	1.000
Rural Arterials		0.532	0.067	0.225	0.069	0.031	0.016	0	0	0	0	0	0	0.013	0.042	0	0	0.005	1.000
Urban Local		0.567	0.072	0.239	0.074	0.033	0.003	0	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.556	0.070	0.234	0.072	0.032	0.008	0	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2002	0.449	0.062	0.206	0.063	0.028	0.043	0	0	0	0	0	0.034	0.112	0	0	0.002	1.000	
Rural Interstates		0.406	0.056	0.187	0.057	0.026	0.060	0	0	0	0	0	0	0.046	0.154	0	0	0.008	1.000
Urban Arterials		0.529	0.073	0.242	0.075	0.033	0.010	0	0	0	0	0	0	0.008	0.027	0	0	0.003	1.000
Rural Arterials		0.513	0.071	0.236	0.072	0.032	0.016	0	0	0	0	0	0	0.013	0.042	0	0	0.005	1.000
Urban Local		0.547	0.075	0.251	0.077	0.034	0.003	0	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.536	0.074	0.246	0.076	0.034	0.008	0	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2003	0.432	0.065	0.216	0.066	0.030	0.043	0	0	0	0	0	0.034	0.112	0	0	0.002	1.000	
Rural Interstates		0.391	0.059	0.196	0.060	0.027	0.060	0	0	0	0	0	0	0.046	0.154	0	0	0.008	1.000
Urban Arterials		0.509	0.076	0.254	0.078	0.035	0.010	0	0	0	0	0	0	0.008	0.027	0	0	0.003	1.000
Rural Arterials		0.494	0.074	0.246	0.076	0.034	0.016	0	0	0	0	0	0	0.013	0.042	0	0	0.005	1.000
Urban Local		0.526	0.079	0.262	0.081	0.036	0.003	0	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.516	0.077	0.257	0.079	0.035	0.008	0	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2004	0.416	0.068	0.225	0.069	0.031	0.043	0	0	0	0	0	0.034	0.112	0	0	0.002	1.000	
Rural Interstates		0.376	0.061	0.204	0.063	0.028	0.060	0	0	0	0	0	0	0.046	0.154	0	0	0.008	1.000
Urban Arterials		0.490	0.080	0.265	0.081	0.036	0.010	0	0	0	0	0	0	0.008	0.027	0	0	0.003	1.000
Rural Arterials		0.475	0.077	0.257	0.079	0.035	0.016	0	0	0	0	0	0	0.013	0.042	0	0	0.005	1.000
Urban Local		0.506	0.082	0.274	0.084	0.037	0.003	0	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.496	0.081	0.269	0.083	0.037	0.008	0	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2005	0.399	0.071	0.235	0.072	0.032	0.043	0	0	0	0	0	0.034	0.112	0	0	0.002	1.000	
Rural Interstates		0.361	0.064	0.213	0.065	0.029	0.060	0	0	0	0	0	0	0.046	0.154	0	0	0.008	1.000
Urban Arterials		0.470	0.083	0.276	0.085	0.038	0.010	0	0	0	0	0	0	0.008	0.027	0	0	0.003	1.000
Rural Arterials		0.456	0.081	0.268	0.082	0.037	0.016	0	0	0	0	0	0	0.013	0.042	0	0	0.005	1.000
Urban Local		0.486	0.086	0.285	0.088	0.039	0.003	0	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.477	0.084	0.280	0.086	0.038	0.008	0	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2006	0.382	0.073	0.245	0.075	0.033	0.043	0	0	0	0	0	0.034	0.112	0	0	0.002	1.000	
Rural Interstates		0.346	0.067	0.222	0.068	0.030	0.060	0	0	0	0	0	0	0.046	0.154	0	0	0.008	1.000
Urban Arterials		0.451	0.086	0.287	0.088	0.039	0.010	0	0	0	0	0	0	0.008	0.027	0	0	0.003	1.000
Rural Arterials		0.437	0.084	0.279	0.086	0.038	0.016	0	0	0	0	0	0	0.013	0.042	0	0	0.005	1.000
Urban Local		0.466	0.089	0.297	0.091	0.041	0.003	0	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.457	0.088	0.291	0.090	0.040	0.008	0	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000

Table B.1-3. "Hamilton +" VMT Mix (continued)

Roadway	Year	LDV	LDT1	LDT2	LDT3	LDT4	HDV2B	HDV3	HDV4	HDV5	HDV6	HDV7	HDV8A	HDV8B	HDBS	HDBT	MC	TOTAL
Urban Interstates	2007	0.366	0.076	0.254	0.078	0.035	0.043	0	0	0	0	0	0.034	0.112	0	0	0.002	1.000
Rural Interstates		0.331	0.069	0.230	0.071	0.031	0.060	0	0	0	0	0	0.046	0.154	0	0	0.008	1.000
Urban Arterials		0.431	0.090	0.299	0.092	0.041	0.010	0	0	0	0	0	0.008	0.027	0	0	0.003	1.000
Rural Arterials		0.418	0.087	0.290	0.089	0.040	0.016	0	0	0	0	0	0.013	0.042	0	0	0.005	1.000
Urban Local		0.445	0.093	0.309	0.095	0.042	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.437	0.091	0.303	0.093	0.041	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2008	0.349	0.079	0.264	0.081	0.036	0.043	0	0	0	0	0	0.034	0.112	0	0	0.002	1.000
Rural Interstates		0.315	0.072	0.239	0.073	0.033	0.060	0	0	0	0	0	0.046	0.154	0	0	0.008	1.000
Urban Arterials		0.411	0.093	0.310	0.095	0.042	0.010	0	0	0	0	0	0.008	0.027	0	0	0.003	1.000
Rural Arterials		0.399	0.090	0.301	0.093	0.041	0.016	0	0	0	0	0	0.013	0.042	0	0	0.005	1.000
Urban Local		0.425	0.096	0.320	0.099	0.044	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.417	0.094	0.314	0.097	0.043	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2009	0.337	0.081	0.271	0.083	0.037	0.043	0	0	0	0	0	0.034	0.112	0	0	0.002	1.000
Rural Interstates		0.305	0.074	0.245	0.075	0.033	0.060	0	0	0	0	0	0.046	0.154	0	0	0.008	1.000
Urban Arterials		0.397	0.095	0.318	0.098	0.044	0.010	0	0	0	0	0	0.008	0.027	0	0	0.003	1.000
Rural Arterials		0.385	0.093	0.309	0.095	0.042	0.016	0	0	0	0	0	0.013	0.042	0	0	0.005	1.000
Urban Local		0.411	0.099	0.329	0.101	0.045	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.403	0.097	0.322	0.099	0.044	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2010	0.326	0.083	0.277	0.085	0.038	0.043	0	0	0	0	0	0.034	0.112	0	0	0.002	1.000
Rural Interstates		0.295	0.075	0.251	0.077	0.034	0.060	0	0	0	0	0	0.046	0.154	0	0	0.008	1.000
Urban Arterials		0.384	0.098	0.325	0.100	0.045	0.010	0	0	0	0	0	0.008	0.027	0	0	0.003	1.000
Rural Arterials		0.373	0.095	0.316	0.097	0.043	0.016	0	0	0	0	0	0.013	0.042	0	0	0.005	1.000
Urban Local		0.397	0.101	0.336	0.103	0.046	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.390	0.099	0.330	0.101	0.045	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2015	0.285	0.090	0.300	0.092	0.041	0.043	0	0	0	0	0	0.034	0.112	0	0	0.002	1.000
Rural Interstates		0.258	0.082	0.272	0.084	0.037	0.060	0	0	0	0	0	0.046	0.154	0	0	0.008	1.000
Urban Arterials		0.336	0.106	0.353	0.109	0.048	0.010	0	0	0	0	0	0.008	0.027	0	0	0.003	1.000
Rural Arterials		0.326	0.103	0.343	0.105	0.047	0.016	0	0	0	0	0	0.013	0.042	0	0	0.005	1.000
Urban Local		0.347	0.110	0.365	0.112	0.050	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.341	0.107	0.358	0.110	0.049	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2020	0.263	0.094	0.313	0.096	0.043	0.043	0	0	0	0	0	0.034	0.112	0	0	0.002	1.000
Rural Interstates		0.238	0.085	0.283	0.087	0.039	0.060	0	0	0	0	0	0.046	0.154	0	0	0.008	1.000
Urban Arterials		0.310	0.110	0.368	0.113	0.050	0.010	0	0	0	0	0	0.008	0.027	0	0	0.003	1.000
Rural Arterials		0.301	0.107	0.357	0.110	0.049	0.016	0	0	0	0	0	0.013	0.042	0	0	0.005	1.000
Urban Local		0.321	0.114	0.380	0.117	0.052	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.315	0.112	0.373	0.115	0.051	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2025	0.263	0.094	0.313	0.096	0.043	0.043	0	0	0	0	0	0.034	0.112	0	0	0.002	1.000
Rural Interstates		0.238	0.085	0.283	0.087	0.039	0.060	0	0	0	0	0	0.046	0.154	0	0	0.008	1.000
Urban Arterials		0.310	0.110	0.368	0.113	0.050	0.010	0	0	0	0	0	0.008	0.027	0	0	0.003	1.000
Rural Arterials		0.301	0.107	0.357	0.110	0.049	0.016	0	0	0	0	0	0.013	0.042	0	0	0.005	1.000
Urban Local		0.321	0.114	0.380	0.117	0.052	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.315	0.112	0.373	0.115	0.051	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2030	0.263	0.094	0.313	0.096	0.043	0.043	0	0	0	0	0	0.034	0.112	0	0	0.002	1.000
Rural Interstates		0.238	0.085	0.283	0.087	0.039	0.060	0	0	0	0	0	0.046	0.154	0	0	0.008	1.000
Urban Arterials		0.310	0.110	0.368	0.113	0.050	0.010	0	0	0	0	0	0.008	0.027	0	0	0.003	1.000
Rural Arterials		0.301	0.107	0.357	0.110	0.049	0.016	0	0	0	0	0	0.013	0.042	0	0	0.005	1.000
Urban Local		0.321	0.114	0.380	0.117	0.052	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.315	0.112	0.373	0.115	0.051	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000

Table B.1-4. Davidson County VMT Mix

Roadway	Year	LDV	LDT1	LDT2	LDT3	LDT4	HDV2B	HDV3	HDV4	HDV5	HDV6	HDV7	HDV8A	HDV8B	HDBS	HDBT	MC	TOTAL	
Urban Interstates	Davidson	0.550	0.051	0.171	0.052	0.023	0.035	0	0	0	0	0	0.027	0.089	0	0	0.002	1.000	
Rural Interstates		0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	0	0.000	0.000	0	0	0.000	0.000	
Urban Arterials		1998,	0.613	0.057	0.190	0.058	0.026	0.012	0	0	0	0	0	0.009	0.032	0	0	0.003	1.000
Rural Arterials		1999,	0.591	0.055	0.183	0.056	0.025	0.019	0	0	0	0	0	0.015	0.050	0	0	0.005	1.000
Urban Local		2000	0.639	0.059	0.198	0.061	0.027	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local			0.627	0.058	0.194	0.060	0.027	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2001	0.526	0.055	0.184	0.056	0.025	0.035	0	0	0	0	0	0.027	0.089	0	0	0.002	1.000	
Rural Interstates		0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	0	0.000	0.000	0	0	0.000	0.000	
Urban Arterials		0.587	0.061	0.205	0.063	0.028	0.012	0	0	0	0	0	0.009	0.032	0	0	0.003	1.000	
Rural Arterials		0.567	0.059	0.197	0.061	0.027	0.019	0	0	0	0	0	0.015	0.050	0	0	0.005	1.000	
Urban Local		0.612	0.064	0.213	0.065	0.029	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000	
Rural Local		0.600	0.063	0.209	0.064	0.029	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000	
Urban Interstates	2002	0.503	0.059	0.197	0.060	0.027	0.035	0	0	0	0	0	0.027	0.089	0	0	0.002	1.000	
Rural Interstates		0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	0	0.000	0.000	0	0	0.000	0.000	
Urban Arterials		0.561	0.066	0.219	0.067	0.030	0.012	0	0	0	0	0	0.009	0.032	0	0	0.003	1.000	
Rural Arterials		0.542	0.064	0.212	0.065	0.029	0.019	0	0	0	0	0	0.015	0.050	0	0	0.005	1.000	
Urban Local		0.585	0.069	0.228	0.070	0.031	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000	
Rural Local		0.574	0.067	0.224	0.069	0.031	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000	
Urban Interstates	2003	0.480	0.063	0.210	0.065	0.029	0.035	0	0	0	0	0	0.027	0.089	0	0	0.002	1.000	
Rural Interstates		0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	0	0.000	0.000	0	0	0.000	0.000	
Urban Arterials		0.536	0.070	0.234	0.072	0.032	0.012	0	0	0	0	0	0.009	0.032	0	0	0.003	1.000	
Rural Arterials		0.517	0.068	0.226	0.069	0.031	0.019	0	0	0	0	0	0.015	0.050	0	0	0.005	1.000	
Urban Local		0.559	0.073	0.244	0.075	0.033	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000	
Rural Local		0.548	0.072	0.239	0.073	0.033	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000	
Urban Interstates	2004	0.457	0.067	0.223	0.069	0.031	0.035	0	0	0	0	0	0.027	0.089	0	0	0.002	1.000	
Rural Interstates		0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	0	0.000	0.000	0	0	0.000	0.000	
Urban Arterials		0.510	0.075	0.249	0.076	0.034	0.012	0	0	0	0	0	0.009	0.032	0	0	0.003	1.000	
Rural Arterials		0.492	0.072	0.240	0.074	0.033	0.019	0	0	0	0	0	0.015	0.050	0	0	0.005	1.000	
Urban Local		0.532	0.078	0.259	0.080	0.035	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000	
Rural Local		0.522	0.076	0.254	0.078	0.035	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000	
Urban Interstates	2005	0.434	0.071	0.237	0.073	0.032	0.035	0	0	0	0	0	0.027	0.089	0	0	0.002	1.000	
Rural Interstates		0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	0	0.000	0.000	0	0	0.000	0.000	
Urban Arterials		0.484	0.079	0.263	0.081	0.036	0.012	0	0	0	0	0	0.009	0.032	0	0	0.003	1.000	
Rural Arterials		0.468	0.076	0.254	0.078	0.035	0.019	0	0	0	0	0	0.015	0.050	0	0	0.005	1.000	
Urban Local		0.505	0.082	0.274	0.084	0.038	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000	
Rural Local		0.496	0.081	0.269	0.083	0.037	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000	
Urban Interstates	2006	0.411	0.075	0.250	0.077	0.034	0.035	0	0	0	0	0	0.027	0.089	0	0	0.002	1.000	
Rural Interstates		0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	0	0.000	0.000	0	0	0.000	0.000	
Urban Arterials		0.459	0.084	0.278	0.086	0.038	0.012	0	0	0	0	0	0.009	0.032	0	0	0.003	1.000	
Rural Arterials		0.443	0.081	0.268	0.083	0.037	0.019	0	0	0	0	0	0.015	0.050	0	0	0.005	1.000	
Urban Local		0.479	0.087	0.290	0.089	0.040	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000	
Rural Local		0.469	0.085	0.284	0.087	0.039	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000	



Table B.1-4. Davidson County VMT Mix (continued)

Roadway	Year	LDV	LDT1	LDT2	LDT3	LDT4	HDV2B	HDV3	HDV4	HDV5	HDV6	HDV7	HDV8A	HDV8B	HDBS	HDBT	MC	TOTAL
Urban Interstates	2007	0.388	0.079	0.263	0.081	0.036	0.035	0	0	0	0	0	0.027	0.089	0	0	0.002	1.000
Rural Interstates		0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	0	0.000	0.000	0	0	0.000	0.000
Urban Arterials		0.433	0.088	0.293	0.090	0.040	0.012	0	0	0	0	0	0.009	0.032	0	0	0.003	1.000
Rural Arterials		0.418	0.085	0.283	0.087	0.039	0.019	0	0	0	0	0	0.015	0.050	0	0	0.005	1.000
Urban Local		0.452	0.092	0.305	0.094	0.042	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.443	0.090	0.299	0.092	0.041	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2008	0.365	0.083	0.276	0.085	0.038	0.035	0	0	0	0	0	0.027	0.089	0	0	0.002	1.000
Rural Interstates		0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	0	0.000	0.000	0	0	0.000	0.000
Urban Arterials		0.407	0.092	0.308	0.095	0.042	0.012	0	0	0	0	0	0.009	0.032	0	0	0.003	1.000
Rural Arterials		0.393	0.089	0.297	0.091	0.041	0.019	0	0	0	0	0	0.015	0.050	0	0	0.005	1.000
Urban Local		0.425	0.096	0.320	0.099	0.044	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.417	0.094	0.314	0.097	0.043	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2009	0.353	0.085	0.283	0.087	0.039	0.035	0	0	0	0	0	0.027	0.089	0	0	0.002	1.000
Rural Interstates		0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	0	0.000	0.000	0	0	0.000	0.000
Urban Arterials		0.393	0.095	0.316	0.097	0.043	0.012	0	0	0	0	0	0.009	0.032	0	0	0.003	1.000
Rural Arterials		0.380	0.091	0.304	0.094	0.042	0.019	0	0	0	0	0	0.015	0.050	0	0	0.005	1.000
Urban Local		0.411	0.099	0.329	0.101	0.045	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.403	0.097	0.322	0.099	0.044	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2010	0.341	0.087	0.290	0.089	0.040	0.035	0	0	0	0	0	0.027	0.089	0	0	0.002	1.000
Rural Interstates		0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	0	0.000	0.000	0	0	0.000	0.000
Urban Arterials		0.381	0.097	0.323	0.099	0.044	0.012	0	0	0	0	0	0.009	0.032	0	0	0.003	1.000
Rural Arterials		0.367	0.094	0.312	0.096	0.043	0.019	0	0	0	0	0	0.015	0.050	0	0	0.005	1.000
Urban Local		0.397	0.101	0.336	0.103	0.046	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.390	0.099	0.330	0.101	0.045	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2015	0.298	0.094	0.314	0.097	0.043	0.035	0	0	0	0	0	0.027	0.089	0	0	0.002	1.000
Rural Interstates		0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	0	0.000	0.000	0	0	0.000	0.000
Urban Arterials		0.333	0.105	0.350	0.108	0.048	0.012	0	0	0	0	0	0.009	0.032	0	0	0.003	1.000
Rural Arterials		0.321	0.102	0.338	0.104	0.046	0.019	0	0	0	0	0	0.015	0.050	0	0	0.005	1.000
Urban Local		0.347	0.110	0.365	0.112	0.050	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.341	0.107	0.358	0.110	0.049	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2020	0.275	0.098	0.328	0.101	0.045	0.035	0	0	0	0	0	0.027	0.089	0	0	0.002	1.000
Rural Interstates		0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	0	0.000	0.000	0	0	0.000	0.000
Urban Arterials		0.307	0.110	0.365	0.112	0.050	0.012	0	0	0	0	0	0.009	0.032	0	0	0.003	1.000
Rural Arterials		0.297	0.106	0.352	0.108	0.048	0.019	0	0	0	0	0	0.015	0.050	0	0	0.005	1.000
Urban Local		0.321	0.114	0.380	0.117	0.052	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.315	0.112	0.373	0.115	0.051	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2025	0.275	0.098	0.328	0.101	0.045	0.035	0	0	0	0	0	0.027	0.089	0	0	0.002	1.000
Rural Interstates		0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	0	0.000	0.000	0	0	0.000	0.000
Urban Arterials		0.307	0.110	0.365	0.112	0.050	0.012	0	0	0	0	0	0.009	0.032	0	0	0.003	1.000
Rural Arterials		0.297	0.106	0.352	0.108	0.048	0.019	0	0	0	0	0	0.015	0.050	0	0	0.005	1.000
Urban Local		0.321	0.114	0.380	0.117	0.052	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.315	0.112	0.373	0.115	0.051	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2030	0.275	0.098	0.328	0.101	0.045	0.035	0	0	0	0	0	0.027	0.089	0	0	0.002	1.000
Rural Interstates		0.000	0.000	0.000	0.000	0.000	0.000	0	0	0	0	0	0.000	0.000	0	0	0.000	0.000
Urban Arterials		0.307	0.110	0.365	0.112	0.050	0.012	0	0	0	0	0	0.009	0.032	0	0	0.003	1.000
Rural Arterials		0.297	0.106	0.352	0.108	0.048	0.019	0	0	0	0	0	0.015	0.050	0	0	0.005	1.000
Urban Local		0.321	0.114	0.380	0.117	0.052	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.315	0.112	0.373	0.115	0.051	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000

**Table B.1-5. Rutherford County VMT Mix**

Roadway	Year	LDV	LDT1	LDT2	LDT3	LDT4	HDV2B	HDV3	HDV4	HDV5	HDV6	HDV7	HDV8A	HDV8B	HDBS	HDBT	MC	TOTAL
Urban Interstates	Rutherford 1998, 1999, 2000	0.483	0.045	0.150	0.046	0.020	0.058	0	0	0	0	0	0.045	0.151	0	0	0.002	1.000
Rural Interstates		0.477	0.045	0.148	0.045	0.020	0.059	0	0	0	0	0	0.046	0.152	0	0	0.008	1.000
Urban Arterials		0.620	0.058	0.192	0.059	0.026	0.010	0	0	0	0	0	0.007	0.025	0	0	0.003	1.000
Rural Arterials		0.611	0.057	0.190	0.058	0.026	0.012	0	0	0	0	0	0.009	0.032	0	0	0.005	1.000
Urban Local		0.639	0.059	0.198	0.061	0.027	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.627	0.058	0.194	0.060	0.027	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2001	0.463	0.048	0.161	0.049	0.022	0.058	0	0	0	0	0	0.045	0.151	0	0	0.002	1.000
Rural Interstates		0.457	0.048	0.160	0.049	0.022	0.059	0	0	0	0	0	0.046	0.152	0	0	0.008	1.000
Urban Arterials		0.594	0.062	0.207	0.064	0.028	0.010	0	0	0	0	0	0.007	0.025	0	0	0.003	1.000
Rural Arterials		0.586	0.061	0.204	0.063	0.028	0.012	0	0	0	0	0	0.009	0.032	0	0	0.005	1.000
Urban Local		0.612	0.064	0.213	0.065	0.029	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.600	0.063	0.209	0.064	0.029	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2002	0.442	0.052	0.173	0.053	0.024	0.058	0	0	0	0	0	0.045	0.151	0	0	0.002	1.000
Rural Interstates		0.437	0.051	0.171	0.052	0.023	0.059	0	0	0	0	0	0.046	0.152	0	0	0.008	1.000
Urban Arterials		0.568	0.067	0.222	0.068	0.030	0.010	0	0	0	0	0	0.007	0.025	0	0	0.003	1.000
Rural Arterials		0.560	0.066	0.219	0.067	0.030	0.012	0	0	0	0	0	0.009	0.032	0	0	0.005	1.000
Urban Local		0.585	0.069	0.228	0.070	0.031	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.574	0.067	0.224	0.069	0.031	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2003	0.422	0.055	0.185	0.057	0.025	0.058	0	0	0	0	0	0.045	0.151	0	0	0.002	1.000
Rural Interstates		0.417	0.055	0.183	0.056	0.025	0.059	0	0	0	0	0	0.046	0.152	0	0	0.008	1.000
Urban Arterials		0.542	0.071	0.237	0.073	0.032	0.010	0	0	0	0	0	0.007	0.025	0	0	0.003	1.000
Rural Arterials		0.535	0.070	0.234	0.072	0.032	0.012	0	0	0	0	0	0.009	0.032	0	0	0.005	1.000
Urban Local		0.559	0.073	0.244	0.075	0.033	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.548	0.072	0.239	0.073	0.033	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2004	0.402	0.059	0.196	0.060	0.027	0.058	0	0	0	0	0	0.045	0.151	0	0	0.002	1.000
Rural Interstates		0.397	0.058	0.194	0.060	0.026	0.059	0	0	0	0	0	0.046	0.152	0	0	0.008	1.000
Urban Arterials		0.516	0.076	0.251	0.077	0.034	0.010	0	0	0	0	0	0.007	0.025	0	0	0.003	1.000
Rural Arterials		0.509	0.075	0.248	0.076	0.034	0.012	0	0	0	0	0	0.009	0.032	0	0	0.005	1.000
Urban Local		0.532	0.078	0.259	0.080	0.035	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.522	0.076	0.254	0.078	0.035	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2005	0.382	0.062	0.208	0.064	0.028	0.058	0	0	0	0	0	0.045	0.151	0	0	0.002	1.000
Rural Interstates		0.377	0.062	0.205	0.063	0.028	0.059	0	0	0	0	0	0.046	0.152	0	0	0.008	1.000
Urban Arterials		0.490	0.080	0.266	0.082	0.036	0.010	0	0	0	0	0	0.007	0.025	0	0	0.003	1.000
Rural Arterials		0.483	0.079	0.263	0.081	0.036	0.012	0	0	0	0	0	0.009	0.032	0	0	0.005	1.000
Urban Local		0.505	0.082	0.274	0.084	0.038	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.496	0.081	0.269	0.083	0.037	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2006	0.362	0.066	0.219	0.067	0.030	0.058	0	0	0	0	0	0.045	0.151	0	0	0.002	1.000
Rural Interstates		0.357	0.065	0.217	0.067	0.030	0.059	0	0	0	0	0	0.046	0.152	0	0	0.008	1.000
Urban Arterials		0.465	0.084	0.281	0.086	0.038	0.010	0	0	0	0	0	0.007	0.025	0	0	0.003	1.000
Rural Arterials		0.458	0.083	0.278	0.085	0.038	0.012	0	0	0	0	0	0.009	0.032	0	0	0.005	1.000
Urban Local		0.479	0.087	0.290	0.089	0.040	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.469	0.085	0.284	0.087	0.039	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000

Table B.1-5. Rutherford County VMT Mix (continued)

Roadway	Year	LDV	LDT1	LDT2	LDT3	LDT4	HDV2B	HDV3	HDV4	HDV5	HDV6	HDV7	HDV8A	HDV8B	HDBS	HDBT	MC	TOTAL
Urban Interstates	2007	0.341	0.069	0.231	0.071	0.032	0.058	0	0	0	0	0	0.045	0.151	0	0	0.002	1.000
Rural Interstates		0.337	0.069	0.228	0.070	0.031	0.059	0	0	0	0	0	0.046	0.152	0	0	0.008	1.000
Urban Arterials		0.439	0.089	0.296	0.091	0.041	0.010	0	0	0	0	0	0.007	0.025	0	0	0.003	1.000
Rural Arterials		0.432	0.088	0.292	0.090	0.040	0.012	0	0	0	0	0	0.009	0.032	0	0	0.005	1.000
Urban Local		0.452	0.092	0.305	0.094	0.042	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.443	0.090	0.299	0.092	0.041	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2008	0.321	0.073	0.242	0.074	0.033	0.058	0	0	0	0	0	0.045	0.151	0	0	0.002	1.000
Rural Interstates		0.317	0.072	0.240	0.074	0.033	0.059	0	0	0	0	0	0.046	0.152	0	0	0.008	1.000
Urban Arterials		0.413	0.093	0.311	0.096	0.043	0.010	0	0	0	0	0	0.007	0.025	0	0	0.003	1.000
Rural Arterials		0.407	0.092	0.307	0.094	0.042	0.012	0	0	0	0	0	0.009	0.032	0	0	0.005	1.000
Urban Local		0.425	0.096	0.320	0.099	0.044	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.417	0.094	0.314	0.097	0.043	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2009	0.310	0.075	0.249	0.076	0.034	0.058	0	0	0	0	0	0.045	0.151	0	0	0.002	1.000
Rural Interstates		0.306	0.074	0.246	0.076	0.034	0.059	0	0	0	0	0	0.046	0.152	0	0	0.008	1.000
Urban Arterials		0.399	0.096	0.319	0.098	0.044	0.010	0	0	0	0	0	0.007	0.025	0	0	0.003	1.000
Rural Arterials		0.393	0.095	0.315	0.097	0.043	0.012	0	0	0	0	0	0.009	0.032	0	0	0.005	1.000
Urban Local		0.411	0.099	0.329	0.101	0.045	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.403	0.097	0.322	0.099	0.044	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2010	0.300	0.076	0.254	0.078	0.035	0.058	0	0	0	0	0	0.045	0.151	0	0	0.002	1.000
Rural Interstates		0.296	0.076	0.252	0.077	0.034	0.059	0	0	0	0	0	0.046	0.152	0	0	0.008	1.000
Urban Arterials		0.386	0.098	0.326	0.100	0.045	0.010	0	0	0	0	0	0.007	0.025	0	0	0.003	1.000
Rural Arterials		0.380	0.097	0.322	0.099	0.044	0.012	0	0	0	0	0	0.009	0.032	0	0	0.005	1.000
Urban Local		0.397	0.101	0.336	0.103	0.046	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.390	0.099	0.330	0.101	0.045	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2015	0.262	0.083	0.276	0.085	0.038	0.058	0	0	0	0	0	0.045	0.151	0	0	0.002	1.000
Rural Interstates		0.259	0.082	0.273	0.084	0.037	0.059	0	0	0	0	0	0.046	0.152	0	0	0.008	1.000
Urban Arterials		0.337	0.106	0.354	0.109	0.048	0.010	0	0	0	0	0	0.007	0.025	0	0	0.003	1.000
Rural Arterials		0.332	0.105	0.349	0.108	0.048	0.012	0	0	0	0	0	0.009	0.032	0	0	0.005	1.000
Urban Local		0.347	0.110	0.365	0.112	0.050	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.341	0.107	0.358	0.110	0.049	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2020	0.242	0.086	0.288	0.088	0.039	0.058	0	0	0	0	0	0.045	0.151	0	0	0.002	1.000
Rural Interstates		0.239	0.085	0.284	0.087	0.039	0.059	0	0	0	0	0	0.046	0.152	0	0	0.008	1.000
Urban Arterials		0.311	0.111	0.369	0.114	0.051	0.010	0	0	0	0	0	0.007	0.025	0	0	0.003	1.000
Rural Arterials		0.307	0.109	0.364	0.112	0.050	0.012	0	0	0	0	0	0.009	0.032	0	0	0.005	1.000
Urban Local		0.321	0.114	0.380	0.117	0.052	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.315	0.112	0.373	0.115	0.051	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2025	0.242	0.086	0.288	0.088	0.039	0.058	0	0	0	0	0	0.045	0.151	0	0	0.002	1.000
Rural Interstates		0.239	0.085	0.284	0.087	0.039	0.059	0	0	0	0	0	0.046	0.152	0	0	0.008	1.000
Urban Arterials		0.311	0.111	0.369	0.114	0.051	0.010	0	0	0	0	0	0.007	0.025	0	0	0.003	1.000
Rural Arterials		0.307	0.109	0.364	0.112	0.050	0.012	0	0	0	0	0	0.009	0.032	0	0	0.005	1.000
Urban Local		0.321	0.114	0.380	0.117	0.052	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.315	0.112	0.373	0.115	0.051	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2030	0.242	0.086	0.288	0.088	0.039	0.058	0	0	0	0	0	0.045	0.151	0	0	0.002	1.000
Rural Interstates		0.239	0.085	0.284	0.087	0.039	0.059	0	0	0	0	0	0.046	0.152	0	0	0.008	1.000
Urban Arterials		0.311	0.111	0.369	0.114	0.051	0.010	0	0	0	0	0	0.007	0.025	0	0	0.003	1.000
Rural Arterials		0.307	0.109	0.364	0.112	0.050	0.012	0	0	0	0	0	0.009	0.032	0	0	0.005	1.000
Urban Local		0.321	0.114	0.380	0.117	0.052	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.315	0.112	0.373	0.115	0.051	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000

Table B.1-6. Sumner County VMT Mix

Roadway	Year	LDV	LDT1	LDT2	LDT3	LDT4	HDV2B	HDV3	HDV4	HDV5	HDV6	HDV7	HDV8A	HDV8B	HDBS	HDDBT	MC	TOTAL
Urban Interstates	Sumner 1998, 1999, 2000	0.466	0.043	0.145	0.044	0.020	0.064	0	0	0	0	0	0.050	0.166	0	0	0.002	1.000
Rural Interstates		0.463	0.043	0.143	0.044	0.020	0.064	0	0	0	0	0	0.050	0.166	0	0	0.008	1.000
Urban Arterials		0.604	0.056	0.187	0.057	0.026	0.015	0	0	0	0	0	0.012	0.040	0	0	0.003	1.000
Rural Arterials		0.618	0.057	0.191	0.059	0.026	0.010	0	0	0	0	0	0.008	0.026	0	0	0.005	1.000
Urban Local		0.639	0.059	0.198	0.061	0.027	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.627	0.058	0.194	0.060	0.027	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2001	0.446	0.047	0.156	0.048	0.021	0.064	0	0	0	0	0	0.050	0.166	0	0	0.002	1.000
Rural Interstates		0.443	0.046	0.154	0.047	0.021	0.064	0	0	0	0	0	0.050	0.166	0	0	0.008	1.000
Urban Arterials		0.578	0.061	0.202	0.062	0.028	0.015	0	0	0	0	0	0.012	0.040	0	0	0.003	1.000
Rural Arterials		0.592	0.062	0.206	0.063	0.028	0.010	0	0	0	0	0	0.008	0.026	0	0	0.005	1.000
Urban Local		0.612	0.064	0.213	0.065	0.029	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.600	0.063	0.209	0.064	0.029	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2002	0.427	0.050	0.167	0.051	0.023	0.064	0	0	0	0	0	0.050	0.166	0	0	0.002	1.000
Rural Interstates		0.424	0.050	0.165	0.051	0.023	0.064	0	0	0	0	0	0.050	0.166	0	0	0.008	1.000
Urban Arterials		0.553	0.065	0.216	0.066	0.030	0.015	0	0	0	0	0	0.012	0.040	0	0	0.003	1.000
Rural Arterials		0.566	0.066	0.221	0.068	0.030	0.010	0	0	0	0	0	0.008	0.026	0	0	0.005	1.000
Urban Local		0.585	0.069	0.228	0.070	0.031	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.574	0.067	0.224	0.069	0.031	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2003	0.407	0.054	0.178	0.055	0.024	0.064	0	0	0	0	0	0.050	0.166	0	0	0.002	1.000
Rural Interstates		0.405	0.053	0.176	0.054	0.024	0.064	0	0	0	0	0	0.050	0.166	0	0	0.008	1.000
Urban Arterials		0.528	0.069	0.231	0.071	0.032	0.015	0	0	0	0	0	0.012	0.040	0	0	0.003	1.000
Rural Arterials		0.540	0.071	0.236	0.072	0.032	0.010	0	0	0	0	0	0.008	0.026	0	0	0.005	1.000
Urban Local		0.559	0.073	0.244	0.075	0.033	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.548	0.072	0.239	0.073	0.033	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2004	0.388	0.057	0.190	0.058	0.026	0.064	0	0	0	0	0	0.050	0.166	0	0	0.002	1.000
Rural Interstates		0.385	0.056	0.187	0.058	0.026	0.064	0	0	0	0	0	0.050	0.166	0	0	0.008	1.000
Urban Arterials		0.503	0.074	0.245	0.075	0.034	0.015	0	0	0	0	0	0.012	0.040	0	0	0.003	1.000
Rural Arterials		0.514	0.075	0.250	0.077	0.034	0.010	0	0	0	0	0	0.008	0.026	0	0	0.005	1.000
Urban Local		0.532	0.078	0.259	0.080	0.035	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.522	0.076	0.254	0.078	0.035	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2005	0.368	0.060	0.201	0.062	0.027	0.064	0	0	0	0	0	0.050	0.166	0	0	0.002	1.000
Rural Interstates		0.366	0.060	0.198	0.061	0.027	0.064	0	0	0	0	0	0.050	0.166	0	0	0.008	1.000
Urban Arterials		0.477	0.078	0.260	0.080	0.036	0.015	0	0	0	0	0	0.012	0.040	0	0	0.003	1.000
Rural Arterials		0.488	0.080	0.265	0.082	0.036	0.010	0	0	0	0	0	0.008	0.026	0	0	0.005	1.000
Urban Local		0.505	0.082	0.274	0.084	0.038	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.496	0.081	0.269	0.083	0.037	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2006	0.349	0.064	0.212	0.065	0.029	0.064	0	0	0	0	0	0.050	0.166	0	0	0.002	1.000
Rural Interstates		0.347	0.063	0.209	0.064	0.029	0.064	0	0	0	0	0	0.050	0.166	0	0	0.008	1.000
Urban Arterials		0.452	0.082	0.274	0.084	0.037	0.015	0	0	0	0	0	0.012	0.040	0	0	0.003	1.000
Rural Arterials		0.463	0.084	0.280	0.086	0.038	0.010	0	0	0	0	0	0.008	0.026	0	0	0.005	1.000
Urban Local		0.479	0.087	0.290	0.089	0.040	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.469	0.085	0.284	0.087	0.039	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000

Table B.1-6. Sumner County VMT Mix (continued)

Roadway	Year	LDV	LDT1	LDT2	LDT3	LDT4	HDV2B	HDV3	HDV4	HDV5	HDV6	HDV7	HDV8A	HDV8B	HD8S	HD8T	MC	TOTAL
Urban Interstates	2007	0.329	0.067	0.223	0.068	0.030	0.064	0	0	0	0	0	0.050	0.166	0	0	0.002	1.000
Rural Interstates		0.327	0.066	0.220	0.068	0.030	0.064	0	0	0	0	0	0.050	0.166	0	0	0.008	1.000
Urban Arterials		0.427	0.087	0.288	0.089	0.039	0.015	0	0	0	0	0	0.012	0.040	0	0	0.003	1.000
Rural Arterials		0.437	0.089	0.295	0.091	0.040	0.010	0	0	0	0	0	0.008	0.026	0	0	0.005	1.000
Urban Local		0.452	0.092	0.305	0.094	0.042	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.443	0.090	0.299	0.092	0.041	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2008	0.309	0.070	0.234	0.072	0.032	0.064	0	0	0	0	0	0.050	0.166	0	0	0.002	1.000
Rural Interstates		0.308	0.070	0.231	0.071	0.032	0.064	0	0	0	0	0	0.050	0.166	0	0	0.008	1.000
Urban Arterials		0.401	0.091	0.303	0.093	0.041	0.015	0	0	0	0	0	0.012	0.040	0	0	0.003	1.000
Rural Arterials		0.411	0.093	0.309	0.095	0.042	0.010	0	0	0	0	0	0.008	0.026	0	0	0.005	1.000
Urban Local		0.425	0.096	0.320	0.099	0.044	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.417	0.094	0.314	0.097	0.043	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2009	0.299	0.072	0.240	0.074	0.033	0.064	0	0	0	0	0	0.050	0.166	0	0	0.002	1.000
Rural Interstates		0.297	0.071	0.238	0.073	0.033	0.064	0	0	0	0	0	0.050	0.166	0	0	0.008	1.000
Urban Arterials		0.388	0.093	0.311	0.096	0.043	0.015	0	0	0	0	0	0.012	0.040	0	0	0.003	1.000
Rural Arterials		0.397	0.095	0.318	0.098	0.043	0.010	0	0	0	0	0	0.008	0.026	0	0	0.005	1.000
Urban Local		0.411	0.099	0.329	0.101	0.045	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.403	0.097	0.322	0.099	0.044	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2010	0.289	0.074	0.246	0.076	0.034	0.064	0	0	0	0	0	0.050	0.166	0	0	0.002	1.000
Rural Interstates		0.288	0.073	0.243	0.075	0.033	0.064	0	0	0	0	0	0.050	0.166	0	0	0.008	1.000
Urban Arterials		0.375	0.096	0.318	0.098	0.044	0.015	0	0	0	0	0	0.012	0.040	0	0	0.003	1.000
Rural Arterials		0.384	0.098	0.325	0.100	0.044	0.010	0	0	0	0	0	0.008	0.026	0	0	0.005	1.000
Urban Local		0.397	0.101	0.336	0.103	0.046	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.390	0.099	0.330	0.101	0.045	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2015	0.253	0.080	0.267	0.082	0.036	0.064	0	0	0	0	0	0.050	0.166	0	0	0.002	1.000
Rural Interstates		0.252	0.079	0.264	0.081	0.036	0.064	0	0	0	0	0	0.050	0.166	0	0	0.008	1.000
Urban Arterials		0.328	0.104	0.345	0.106	0.047	0.015	0	0	0	0	0	0.012	0.040	0	0	0.003	1.000
Rural Arterials		0.336	0.106	0.352	0.108	0.048	0.010	0	0	0	0	0	0.008	0.026	0	0	0.005	1.000
Urban Local		0.347	0.110	0.365	0.112	0.050	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.341	0.107	0.358	0.110	0.049	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2020	0.233	0.083	0.278	0.085	0.038	0.064	0	0	0	0	0	0.050	0.166	0	0	0.002	1.000
Rural Interstates		0.232	0.083	0.275	0.085	0.038	0.064	0	0	0	0	0	0.050	0.166	0	0	0.008	1.000
Urban Arterials		0.303	0.108	0.359	0.111	0.049	0.015	0	0	0	0	0	0.012	0.040	0	0	0.003	1.000
Rural Arterials		0.310	0.110	0.367	0.113	0.050	0.010	0	0	0	0	0	0.008	0.026	0	0	0.005	1.000
Urban Local		0.321	0.114	0.380	0.117	0.052	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.315	0.112	0.373	0.115	0.051	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2025	0.233	0.083	0.278	0.085	0.038	0.064	0	0	0	0	0	0.050	0.166	0	0	0.002	1.000
Rural Interstates		0.232	0.083	0.275	0.085	0.038	0.064	0	0	0	0	0	0.050	0.166	0	0	0.008	1.000
Urban Arterials		0.303	0.108	0.359	0.111	0.049	0.015	0	0	0	0	0	0.012	0.040	0	0	0.003	1.000
Rural Arterials		0.310	0.110	0.367	0.113	0.050	0.010	0	0	0	0	0	0.008	0.026	0	0	0.005	1.000
Urban Local		0.321	0.114	0.380	0.117	0.052	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.315	0.112	0.373	0.115	0.051	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2030	0.233	0.083	0.278	0.085	0.038	0.064	0	0	0	0	0	0.050	0.166	0	0	0.002	1.000
Rural Interstates		0.232	0.083	0.275	0.085	0.038	0.064	0	0	0	0	0	0.050	0.166	0	0	0.008	1.000
Urban Arterials		0.303	0.108	0.359	0.111	0.049	0.015	0	0	0	0	0	0.012	0.040	0	0	0.003	1.000
Rural Arterials		0.310	0.110	0.367	0.113	0.050	0.010	0	0	0	0	0	0.008	0.026	0	0	0.005	1.000
Urban Local		0.321	0.114	0.380	0.117	0.052	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.315	0.112	0.373	0.115	0.051	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000

Table B.1-7. Williamson County VMT Mix

Roadway	Year	LDV	LDT1	LDT2	LDT3	LDT4	HDV2B	HDV3	HDV4	HDV5	HDV6	HDV7	HDV8A	HDV8B	HDBS	HDBT	MC	TOTAL	
Urban Interstates	Williamson 1998, 1999, 2000	0.554	0.052	0.172	0.053	0.023	0.033	0	0	0	0	0	0.026	0.085	0	0	0.002	1.000	
Rural Interstates		0.482	0.045	0.150	0.046	0.020	0.057	0	0	0	0	0	0	0.044	0.148	0	0	0.008	1.000
Urban Arterials		0.620	0.058	0.192	0.059	0.026	0.010	0	0	0	0	0	0	0.008	0.025	0	0	0.003	1.000
Rural Arterials		0.623	0.058	0.193	0.059	0.026	0.008	0	0	0	0	0	0	0.006	0.022	0	0	0.005	1.000
Urban Local		0.639	0.059	0.198	0.061	0.027	0.003	0	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.627	0.058	0.194	0.060	0.027	0.008	0	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2001	0.531	0.056	0.185	0.057	0.025	0.033	0	0	0	0	0	0.026	0.085	0	0	0.002	1.000	
Rural Interstates		0.462	0.048	0.161	0.049	0.022	0.057	0	0	0	0	0	0	0.044	0.148	0	0	0.008	1.000
Urban Arterials		0.594	0.062	0.207	0.063	0.028	0.010	0	0	0	0	0	0	0.008	0.025	0	0	0.003	1.000
Rural Arterials		0.597	0.062	0.208	0.064	0.028	0.008	0	0	0	0	0	0	0.006	0.022	0	0	0.005	1.000
Urban Local		0.612	0.064	0.213	0.065	0.029	0.003	0	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.600	0.063	0.209	0.064	0.029	0.008	0	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2002	0.508	0.060	0.198	0.061	0.027	0.033	0	0	0	0	0	0.026	0.085	0	0	0.002	1.000	
Rural Interstates		0.442	0.052	0.173	0.053	0.024	0.057	0	0	0	0	0	0	0.044	0.148	0	0	0.008	1.000
Urban Arterials		0.568	0.067	0.221	0.068	0.030	0.010	0	0	0	0	0	0	0.008	0.025	0	0	0.003	1.000
Rural Arterials		0.571	0.067	0.223	0.068	0.030	0.008	0	0	0	0	0	0	0.006	0.022	0	0	0.005	1.000
Urban Local		0.585	0.069	0.228	0.070	0.031	0.003	0	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.574	0.067	0.224	0.069	0.031	0.008	0	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2003	0.485	0.064	0.212	0.065	0.029	0.033	0	0	0	0	0	0.026	0.085	0	0	0.002	1.000	
Rural Interstates		0.422	0.055	0.184	0.057	0.025	0.057	0	0	0	0	0	0	0.044	0.148	0	0	0.008	1.000
Urban Arterials		0.542	0.071	0.236	0.073	0.032	0.010	0	0	0	0	0	0	0.008	0.025	0	0	0.003	1.000
Rural Arterials		0.545	0.071	0.238	0.073	0.032	0.008	0	0	0	0	0	0	0.006	0.022	0	0	0.005	1.000
Urban Local		0.559	0.073	0.244	0.075	0.033	0.003	0	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.548	0.072	0.239	0.073	0.033	0.008	0	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2004	0.462	0.068	0.225	0.069	0.031	0.033	0	0	0	0	0	0.026	0.085	0	0	0.002	1.000	
Rural Interstates		0.401	0.059	0.196	0.060	0.027	0.057	0	0	0	0	0	0	0.044	0.148	0	0	0.008	1.000
Urban Arterials		0.516	0.075	0.251	0.077	0.034	0.010	0	0	0	0	0	0	0.008	0.025	0	0	0.003	1.000
Rural Arterials		0.519	0.076	0.252	0.078	0.035	0.008	0	0	0	0	0	0	0.006	0.022	0	0	0.005	1.000
Urban Local		0.532	0.078	0.259	0.080	0.035	0.003	0	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.522	0.076	0.254	0.078	0.035	0.008	0	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2005	0.438	0.072	0.238	0.073	0.033	0.033	0	0	0	0	0	0.026	0.085	0	0	0.002	1.000	
Rural Interstates		0.381	0.062	0.207	0.064	0.028	0.057	0	0	0	0	0	0	0.044	0.148	0	0	0.008	1.000
Urban Arterials		0.490	0.080	0.266	0.082	0.036	0.010	0	0	0	0	0	0	0.008	0.025	0	0	0.003	1.000
Rural Arterials		0.493	0.080	0.267	0.082	0.037	0.008	0	0	0	0	0	0	0.006	0.022	0	0	0.005	1.000
Urban Local		0.505	0.082	0.274	0.084	0.038	0.003	0	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.496	0.081	0.269	0.083	0.037	0.008	0	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2006	0.415	0.076	0.252	0.077	0.034	0.033	0	0	0	0	0	0.026	0.085	0	0	0.002	1.000	
Rural Interstates		0.361	0.066	0.219	0.067	0.030	0.057	0	0	0	0	0	0	0.044	0.148	0	0	0.008	1.000
Urban Arterials		0.464	0.084	0.281	0.086	0.038	0.010	0	0	0	0	0	0	0.008	0.025	0	0	0.003	1.000
Rural Arterials		0.466	0.085	0.282	0.087	0.039	0.008	0	0	0	0	0	0	0.006	0.022	0	0	0.005	1.000
Urban Local		0.479	0.087	0.290	0.089	0.040	0.003	0	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.469	0.085	0.284	0.087	0.039	0.008	0	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000

**Table B.1-7. Williamson County VMT Mix (continued)**

Roadway	Year	LDV	LDT1	LDT2	LDT3	LDT4	HDV2B	HDV3	HDV4	HDV5	HDV6	HDV7	HDV8A	HDV8B	HDBS	HDBT	MC	TOTAL
Urban Interstates	2007	0.392	0.080	0.265	0.081	0.036	0.033	0	0	0	0	0	0.026	0.085	0	0	0.002	1.000
Rural Interstates		0.341	0.069	0.231	0.071	0.032	0.057	0	0	0	0	0	0.044	0.148	0	0	0.008	1.000
Urban Arterials		0.438	0.089	0.296	0.091	0.040	0.010	0	0	0	0	0	0.008	0.025	0	0	0.003	1.000
Rural Arterials		0.440	0.089	0.297	0.091	0.041	0.008	0	0	0	0	0	0.006	0.022	0	0	0.005	1.000
Urban Local		0.452	0.092	0.305	0.094	0.042	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.443	0.090	0.299	0.092	0.041	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2008	0.369	0.084	0.278	0.085	0.038	0.033	0	0	0	0	0	0.026	0.085	0	0	0.002	1.000
Rural Interstates		0.321	0.073	0.242	0.074	0.033	0.057	0	0	0	0	0	0.044	0.148	0	0	0.008	1.000
Urban Arterials		0.412	0.093	0.310	0.096	0.043	0.010	0	0	0	0	0	0.008	0.025	0	0	0.003	1.000
Rural Arterials		0.414	0.094	0.312	0.096	0.043	0.008	0	0	0	0	0	0.006	0.022	0	0	0.005	1.000
Urban Local		0.425	0.096	0.320	0.099	0.044	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.417	0.094	0.314	0.097	0.043	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2009	0.356	0.086	0.285	0.088	0.039	0.033	0	0	0	0	0	0.026	0.085	0	0	0.002	1.000
Rural Interstates		0.310	0.075	0.248	0.076	0.034	0.057	0	0	0	0	0	0.044	0.148	0	0	0.008	1.000
Urban Arterials		0.398	0.096	0.319	0.098	0.044	0.010	0	0	0	0	0	0.008	0.025	0	0	0.003	1.000
Rural Arterials		0.400	0.096	0.320	0.099	0.044	0.008	0	0	0	0	0	0.006	0.022	0	0	0.005	1.000
Urban Local		0.411	0.099	0.329	0.101	0.045	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.403	0.097	0.322	0.099	0.044	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2010	0.345	0.088	0.292	0.090	0.040	0.033	0	0	0	0	0	0.026	0.085	0	0	0.002	1.000
Rural Interstates		0.300	0.076	0.254	0.078	0.035	0.057	0	0	0	0	0	0.044	0.148	0	0	0.008	1.000
Urban Arterials		0.385	0.098	0.326	0.100	0.045	0.010	0	0	0	0	0	0.008	0.025	0	0	0.003	1.000
Rural Arterials		0.387	0.098	0.328	0.101	0.045	0.008	0	0	0	0	0	0.006	0.022	0	0	0.005	1.000
Urban Local		0.397	0.101	0.336	0.103	0.046	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.390	0.099	0.330	0.101	0.045	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2015	0.301	0.095	0.317	0.097	0.043	0.033	0	0	0	0	0	0.026	0.085	0	0	0.002	1.000
Rural Interstates		0.262	0.083	0.276	0.085	0.038	0.057	0	0	0	0	0	0.044	0.148	0	0	0.008	1.000
Urban Arterials		0.337	0.106	0.354	0.109	0.048	0.010	0	0	0	0	0	0.008	0.025	0	0	0.003	1.000
Rural Arterials		0.339	0.107	0.355	0.109	0.049	0.008	0	0	0	0	0	0.006	0.022	0	0	0.005	1.000
Urban Local		0.347	0.110	0.365	0.112	0.050	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.341	0.107	0.358	0.110	0.049	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2020	0.278	0.099	0.330	0.102	0.045	0.033	0	0	0	0	0	0.026	0.085	0	0	0.002	1.000
Rural Interstates		0.242	0.086	0.287	0.088	0.039	0.057	0	0	0	0	0	0.044	0.148	0	0	0.008	1.000
Urban Arterials		0.311	0.111	0.368	0.113	0.050	0.010	0	0	0	0	0	0.008	0.025	0	0	0.003	1.000
Rural Arterials		0.313	0.111	0.370	0.114	0.051	0.008	0	0	0	0	0	0.006	0.022	0	0	0.005	1.000
Urban Local		0.321	0.114	0.380	0.117	0.052	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.315	0.112	0.373	0.115	0.051	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2025	0.278	0.099	0.330	0.102	0.045	0.033	0	0	0	0	0	0.026	0.085	0	0	0.002	1.000
Rural Interstates		0.242	0.086	0.287	0.088	0.039	0.057	0	0	0	0	0	0.044	0.148	0	0	0.008	1.000
Urban Arterials		0.311	0.111	0.368	0.113	0.050	0.010	0	0	0	0	0	0.008	0.025	0	0	0.003	1.000
Rural Arterials		0.313	0.111	0.370	0.114	0.051	0.008	0	0	0	0	0	0.006	0.022	0	0	0.005	1.000
Urban Local		0.321	0.114	0.380	0.117	0.052	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.315	0.112	0.373	0.115	0.051	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2030	0.278	0.099	0.330	0.102	0.045	0.033	0	0	0	0	0	0.026	0.085	0	0	0.002	1.000
Rural Interstates		0.242	0.086	0.287	0.088	0.039	0.057	0	0	0	0	0	0.044	0.148	0	0	0.008	1.000
Urban Arterials		0.311	0.111	0.368	0.113	0.050	0.010	0	0	0	0	0	0.008	0.025	0	0	0.003	1.000
Rural Arterials		0.313	0.111	0.370	0.114	0.051	0.008	0	0	0	0	0	0.006	0.022	0	0	0.005	1.000
Urban Local		0.321	0.114	0.380	0.117	0.052	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.315	0.112	0.373	0.115	0.051	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000

**Table B.1-8. Wilson County VMT Mix**

Roadway	Year	LDV	LDT1	LDT2	LDT3	LDT4	HDV2B	HDV3	HDV4	HDV5	HDV6	HDV7	HDV8A	HDV8B	HDBS	HDBT	MC	TOTAL	
Urban Interstates	<b>Wilson</b>	0.530	0.049	0.165	0.050	0.022	0.042	0	0	0	0	0	0.032	0.107	0	0	0.002	1.000	
Rural Interstates		0.463	0.043	0.143	0.044	0.020	0.064	0	0	0	0	0	0	0.050	0.165	0	0	0.008	1.000
Urban Arterials		<b>1998,</b>	0.609	0.057	0.189	0.058	0.026	0.013	0	0	0	0	0	0.010	0.035	0	0	0.003	1.000
Rural Arterials			0.610	0.057	0.189	0.058	0.026	0.013	0	0	0	0	0	0.010	0.032	0	0	0.005	1.000
Urban Local		<b>2000</b>	0.639	0.059	0.198	0.061	0.027	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local			0.627	0.058	0.194	0.060	0.027	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	<b>2001</b>	0.508	0.053	0.177	0.054	0.024	0.042	0	0	0	0	0	0.032	0.107	0	0	0.002	1.000	
Rural Interstates		0.444	0.046	0.154	0.047	0.021	0.064	0	0	0	0	0	0.050	0.165	0	0	0.008	1.000	
Urban Arterials		0.584	0.061	0.204	0.063	0.028	0.013	0	0	0	0	0	0.010	0.035	0	0	0.003	1.000	
Rural Arterials		0.585	0.061	0.204	0.063	0.028	0.013	0	0	0	0	0	0.010	0.032	0	0	0.005	1.000	
Urban Local		0.612	0.064	0.213	0.065	0.029	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000	
Rural Local		0.600	0.063	0.209	0.064	0.029	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000	
Urban Interstates	<b>2002</b>	0.486	0.057	0.190	0.058	0.026	0.042	0	0	0	0	0	0.032	0.107	0	0	0.002	1.000	
Rural Interstates		0.425	0.050	0.165	0.051	0.023	0.064	0	0	0	0	0	0.050	0.165	0	0	0.008	1.000	
Urban Arterials		0.558	0.066	0.218	0.067	0.030	0.013	0	0	0	0	0	0.010	0.035	0	0	0.003	1.000	
Rural Arterials		0.559	0.066	0.218	0.067	0.030	0.013	0	0	0	0	0	0.010	0.032	0	0	0.005	1.000	
Urban Local		0.585	0.069	0.228	0.070	0.031	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000	
Rural Local		0.574	0.067	0.224	0.069	0.031	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000	
Urban Interstates	<b>2003</b>	0.463	0.061	0.203	0.062	0.028	0.042	0	0	0	0	0	0.032	0.107	0	0	0.002	1.000	
Rural Interstates		0.405	0.053	0.176	0.054	0.024	0.064	0	0	0	0	0	0.050	0.165	0	0	0.008	1.000	
Urban Arterials		0.533	0.070	0.233	0.072	0.032	0.013	0	0	0	0	0	0.010	0.035	0	0	0.003	1.000	
Rural Arterials		0.533	0.070	0.233	0.072	0.032	0.013	0	0	0	0	0	0.010	0.032	0	0	0.005	1.000	
Urban Local		0.559	0.073	0.244	0.075	0.033	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000	
Rural Local		0.548	0.072	0.239	0.073	0.033	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000	
Urban Interstates	<b>2004</b>	0.441	0.065	0.215	0.066	0.029	0.042	0	0	0	0	0	0.032	0.107	0	0	0.002	1.000	
Rural Interstates		0.386	0.056	0.187	0.058	0.026	0.064	0	0	0	0	0	0.050	0.165	0	0	0.008	1.000	
Urban Arterials		0.507	0.074	0.247	0.076	0.034	0.013	0	0	0	0	0	0.010	0.035	0	0	0.003	1.000	
Rural Arterials		0.508	0.074	0.248	0.076	0.034	0.013	0	0	0	0	0	0.010	0.032	0	0	0.005	1.000	
Urban Local		0.532	0.078	0.259	0.080	0.035	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000	
Rural Local		0.522	0.076	0.254	0.078	0.035	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000	
Urban Interstates	<b>2005</b>	0.419	0.069	0.228	0.070	0.031	0.042	0	0	0	0	0	0.032	0.107	0	0	0.002	1.000	
Rural Interstates		0.366	0.060	0.199	0.061	0.027	0.064	0	0	0	0	0	0.050	0.165	0	0	0.008	1.000	
Urban Arterials		0.482	0.079	0.262	0.081	0.036	0.013	0	0	0	0	0	0.010	0.035	0	0	0.003	1.000	
Rural Arterials		0.482	0.079	0.262	0.081	0.036	0.013	0	0	0	0	0	0.010	0.032	0	0	0.005	1.000	
Urban Local		0.505	0.082	0.274	0.084	0.038	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000	
Rural Local		0.496	0.081	0.269	0.083	0.037	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000	
Urban Interstates	<b>2006</b>	0.397	0.072	0.241	0.074	0.033	0.042	0	0	0	0	0	0.032	0.107	0	0	0.002	1.000	
Rural Interstates		0.347	0.063	0.210	0.065	0.029	0.064	0	0	0	0	0	0.050	0.165	0	0	0.008	1.000	
Urban Arterials		0.456	0.083	0.277	0.085	0.038	0.013	0	0	0	0	0	0.010	0.035	0	0	0.003	1.000	
Rural Arterials		0.457	0.083	0.277	0.085	0.038	0.013	0	0	0	0	0	0.010	0.032	0	0	0.005	1.000	
Urban Local		0.479	0.087	0.290	0.089	0.040	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000	
Rural Local		0.469	0.085	0.284	0.087	0.039	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000	



**Table B.1-8. Wilson County VMT Mix (continued)**

Roadway	Year	LDV	LDT1	LDT2	LDT3	LDT4	HDV2B	HDV3	HDV4	HDV5	HDV6	HDV7	HDV8A	HDV8B	HDBS	HDBT	MC	TOTAL
Urban Interstates	2007	0.375	0.076	0.254	0.078	0.035	0.042	0	0	0	0	0	0.032	0.107	0	0	0.002	1.000
Rural Interstates		0.328	0.066	0.221	0.068	0.030	0.064	0	0	0	0	0	0.050	0.165	0	0	0.008	1.000
Urban Arterials		0.431	0.087	0.291	0.090	0.040	0.013	0	0	0	0	0	0.010	0.035	0	0	0.003	1.000
Rural Arterials		0.431	0.088	0.292	0.090	0.040	0.013	0	0	0	0	0	0.010	0.032	0	0	0.005	1.000
Urban Local		0.452	0.092	0.305	0.094	0.042	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.443	0.090	0.299	0.092	0.041	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2008	0.352	0.080	0.266	0.082	0.036	0.042	0	0	0	0	0	0.032	0.107	0	0	0.002	1.000
Rural Interstates		0.308	0.070	0.232	0.071	0.032	0.064	0	0	0	0	0	0.050	0.165	0	0	0.008	1.000
Urban Arterials		0.405	0.092	0.306	0.094	0.042	0.013	0	0	0	0	0	0.010	0.035	0	0	0.003	1.000
Rural Arterials		0.406	0.092	0.306	0.094	0.042	0.013	0	0	0	0	0	0.010	0.032	0	0	0.005	1.000
Urban Local		0.425	0.096	0.320	0.099	0.044	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.417	0.094	0.314	0.097	0.043	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2009	0.340	0.082	0.273	0.084	0.037	0.042	0	0	0	0	0	0.032	0.107	0	0	0.002	1.000
Rural Interstates		0.298	0.071	0.238	0.073	0.033	0.064	0	0	0	0	0	0.050	0.165	0	0	0.008	1.000
Urban Arterials		0.391	0.094	0.314	0.097	0.043	0.013	0	0	0	0	0	0.010	0.035	0	0	0.003	1.000
Rural Arterials		0.392	0.094	0.314	0.097	0.043	0.013	0	0	0	0	0	0.010	0.032	0	0	0.005	1.000
Urban Local		0.411	0.099	0.329	0.101	0.045	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.403	0.097	0.322	0.099	0.044	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2010	0.329	0.084	0.280	0.086	0.038	0.042	0	0	0	0	0	0.032	0.107	0	0	0.002	1.000
Rural Interstates		0.288	0.073	0.243	0.075	0.033	0.064	0	0	0	0	0	0.050	0.165	0	0	0.008	1.000
Urban Arterials		0.379	0.096	0.321	0.099	0.044	0.013	0	0	0	0	0	0.010	0.035	0	0	0.003	1.000
Rural Arterials		0.379	0.097	0.321	0.099	0.044	0.013	0	0	0	0	0	0.010	0.032	0	0	0.005	1.000
Urban Local		0.397	0.101	0.336	0.103	0.046	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.390	0.099	0.330	0.101	0.045	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2015	0.288	0.091	0.303	0.093	0.042	0.042	0	0	0	0	0	0.032	0.107	0	0	0.002	1.000
Rural Interstates		0.252	0.079	0.264	0.081	0.036	0.064	0	0	0	0	0	0.050	0.165	0	0	0.008	1.000
Urban Arterials		0.331	0.105	0.348	0.107	0.048	0.013	0	0	0	0	0	0.010	0.035	0	0	0.003	1.000
Rural Arterials		0.331	0.105	0.349	0.107	0.048	0.013	0	0	0	0	0	0.010	0.032	0	0	0.005	1.000
Urban Local		0.347	0.110	0.365	0.112	0.050	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.341	0.107	0.358	0.110	0.049	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2020	0.266	0.095	0.316	0.097	0.043	0.042	0	0	0	0	0	0.032	0.107	0	0	0.002	1.000
Rural Interstates		0.233	0.083	0.275	0.085	0.038	0.064	0	0	0	0	0	0.050	0.165	0	0	0.008	1.000
Urban Arterials		0.306	0.109	0.363	0.112	0.050	0.013	0	0	0	0	0	0.010	0.035	0	0	0.003	1.000
Rural Arterials		0.306	0.109	0.363	0.112	0.050	0.013	0	0	0	0	0	0.010	0.032	0	0	0.005	1.000
Urban Local		0.321	0.114	0.380	0.117	0.052	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.315	0.112	0.373	0.115	0.051	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2025	0.266	0.095	0.316	0.097	0.043	0.042	0	0	0	0	0	0.032	0.107	0	0	0.002	1.000
Rural Interstates		0.233	0.083	0.275	0.085	0.038	0.064	0	0	0	0	0	0.050	0.165	0	0	0.008	1.000
Urban Arterials		0.306	0.109	0.363	0.112	0.050	0.013	0	0	0	0	0	0.010	0.035	0	0	0.003	1.000
Rural Arterials		0.306	0.109	0.363	0.112	0.050	0.013	0	0	0	0	0	0.010	0.032	0	0	0.005	1.000
Urban Local		0.321	0.114	0.380	0.117	0.052	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.315	0.112	0.373	0.115	0.051	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2030	0.266	0.095	0.316	0.097	0.043	0.042	0	0	0	0	0	0.032	0.107	0	0	0.002	1.000
Rural Interstates		0.233	0.083	0.275	0.085	0.038	0.064	0	0	0	0	0	0.050	0.165	0	0	0.008	1.000
Urban Arterials		0.306	0.109	0.363	0.112	0.050	0.013	0	0	0	0	0	0.010	0.035	0	0	0.003	1.000
Rural Arterials		0.306	0.109	0.363	0.112	0.050	0.013	0	0	0	0	0	0.010	0.032	0	0	0.005	1.000
Urban Local		0.321	0.114	0.380	0.117	0.052	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.315	0.112	0.373	0.115	0.051	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000

Table B.1-9. "Sullivan +" VMT Mix

Roadway	Year	LDV	LDT1	LDT2	LDT3	LDT4	HDV2B	HDV3	HDV4	HDV5	HDV6	HDV7	HDV8A	HDV8B	HBBS	HDBT	MC	TOTAL
Urban Interstates	Sullivan +: 1998, 1999, 2000	0.461	0.060	0.201	0.062	0.027	0.043	0	0	0	0	0	0.033	0.110	0	0	0.002	1.000
Rural Interstates		0.411	0.054	0.179	0.055	0.024	0.062	0	0	0	0	0	0.048	0.159	0	0	0.008	1.000
Urban Arterials		0.538	0.070	0.234	0.072	0.032	0.011	0	0	0	0	0	0.009	0.030	0	0	0.003	1.000
Rural Arterials		0.531	0.069	0.231	0.071	0.032	0.014	0	0	0	0	0	0.011	0.036	0	0	0.005	1.000
Urban Local		0.559	0.073	0.243	0.075	0.033	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.549	0.072	0.239	0.073	0.033	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2001	0.447	0.063	0.209	0.064	0.029	0.043	0	0	0	0	0	0.033	0.110	0	0	0.002	1.000
Rural Interstates		0.398	0.056	0.186	0.057	0.025	0.062	0	0	0	0	0	0.048	0.159	0	0	0.008	1.000
Urban Arterials		0.522	0.073	0.244	0.075	0.033	0.011	0	0	0	0	0	0.009	0.030	0	0	0.003	1.000
Rural Arterials		0.515	0.072	0.240	0.074	0.033	0.014	0	0	0	0	0	0.011	0.036	0	0	0.005	1.000
Urban Local		0.543	0.076	0.253	0.078	0.035	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.532	0.074	0.248	0.076	0.034	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2002	0.434	0.065	0.217	0.067	0.030	0.043	0	0	0	0	0	0.033	0.110	0	0	0.002	1.000
Rural Interstates		0.386	0.058	0.193	0.059	0.026	0.062	0	0	0	0	0	0.048	0.159	0	0	0.008	1.000
Urban Arterials		0.506	0.076	0.253	0.078	0.035	0.011	0	0	0	0	0	0.009	0.030	0	0	0.003	1.000
Rural Arterials		0.499	0.075	0.250	0.077	0.034	0.014	0	0	0	0	0	0.011	0.036	0	0	0.005	1.000
Urban Local		0.526	0.079	0.263	0.081	0.036	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.516	0.077	0.257	0.079	0.035	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2003	0.420	0.068	0.225	0.069	0.031	0.043	0	0	0	0	0	0.033	0.110	0	0	0.002	1.000
Rural Interstates		0.374	0.060	0.200	0.062	0.027	0.062	0	0	0	0	0	0.048	0.159	0	0	0.008	1.000
Urban Arterials		0.490	0.079	0.262	0.081	0.036	0.011	0	0	0	0	0	0.009	0.030	0	0	0.003	1.000
Rural Arterials		0.483	0.078	0.259	0.080	0.035	0.014	0	0	0	0	0	0.011	0.036	0	0	0.005	1.000
Urban Local		0.509	0.082	0.272	0.084	0.037	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.499	0.080	0.267	0.082	0.037	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2004	0.406	0.070	0.233	0.072	0.032	0.043	0	0	0	0	0	0.033	0.110	0	0	0.002	1.000
Rural Interstates		0.361	0.062	0.207	0.064	0.028	0.062	0	0	0	0	0	0.048	0.159	0	0	0.008	1.000
Urban Arterials		0.474	0.082	0.271	0.083	0.037	0.011	0	0	0	0	0	0.009	0.030	0	0	0.003	1.000
Rural Arterials		0.467	0.080	0.268	0.082	0.037	0.014	0	0	0	0	0	0.011	0.036	0	0	0.005	1.000
Urban Local		0.492	0.085	0.282	0.087	0.039	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.483	0.083	0.276	0.085	0.038	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2005	0.392	0.072	0.241	0.074	0.033	0.043	0	0	0	0	0	0.033	0.110	0	0	0.002	1.000
Rural Interstates		0.349	0.064	0.214	0.066	0.029	0.062	0	0	0	0	0	0.048	0.159	0	0	0.008	1.000
Urban Arterials		0.458	0.084	0.281	0.086	0.038	0.011	0	0	0	0	0	0.009	0.030	0	0	0.003	1.000
Rural Arterials		0.451	0.083	0.277	0.085	0.038	0.014	0	0	0	0	0	0.011	0.036	0	0	0.005	1.000
Urban Local		0.475	0.088	0.291	0.090	0.040	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.466	0.086	0.286	0.088	0.039	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2006	0.378	0.075	0.249	0.076	0.034	0.043	0	0	0	0	0	0.033	0.110	0	0	0.002	1.000
Rural Interstates		0.337	0.067	0.221	0.068	0.030	0.062	0	0	0	0	0	0.048	0.159	0	0	0.008	1.000
Urban Arterials		0.441	0.087	0.290	0.089	0.040	0.011	0	0	0	0	0	0.009	0.030	0	0	0.003	1.000
Rural Arterials		0.436	0.086	0.286	0.088	0.039	0.014	0	0	0	0	0	0.011	0.036	0	0	0.005	1.000
Urban Local		0.459	0.090	0.301	0.093	0.041	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.450	0.089	0.295	0.091	0.040	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000

Table B.1-9. “Sullivan +” VMT Mix (continued)

Roadway	Year	LDV	LDT1	LDT2	LDT3	LDT4	HDV2B	HDV3	HDV4	HDV5	HDV6	HDV7	HDV8A	HDV8B	HDBS	HDBT	MC	TOTAL
Urban Interstates	2007	0.364	0.077	0.257	0.079	0.035	0.043	0	0	0	0	0	0.033	0.110	0	0	0.002	1.000
Rural Interstates		0.324	0.069	0.228	0.070	0.031	0.062	0	0	0	0	0	0.048	0.159	0	0	0.008	1.000
Urban Arterials		0.425	0.090	0.299	0.092	0.041	0.011	0	0	0	0	0	0.009	0.030	0	0	0.003	1.000
Rural Arterials		0.420	0.089	0.295	0.091	0.040	0.014	0	0	0	0	0	0.011	0.036	0	0	0.005	1.000
Urban Local		0.442	0.093	0.311	0.096	0.043	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.433	0.092	0.305	0.094	0.042	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2008	0.350	0.079	0.265	0.081	0.036	0.043	0	0	0	0	0	0.033	0.110	0	0	0.002	1.000
Rural Interstates		0.312	0.071	0.236	0.072	0.032	0.062	0	0	0	0	0	0.048	0.159	0	0	0.008	1.000
Urban Arterials		0.409	0.093	0.308	0.095	0.042	0.011	0	0	0	0	0	0.009	0.030	0	0	0.003	1.000
Rural Arterials		0.404	0.091	0.304	0.094	0.042	0.014	0	0	0	0	0	0.011	0.036	0	0	0.005	1.000
Urban Local		0.425	0.096	0.320	0.099	0.044	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.417	0.094	0.314	0.097	0.043	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2009	0.338	0.082	0.271	0.083	0.037	0.043	0	0	0	0	0	0.033	0.110	0	0	0.002	1.000
Rural Interstates		0.301	0.073	0.242	0.074	0.033	0.062	0	0	0	0	0	0.048	0.159	0	0	0.008	1.000
Urban Arterials		0.395	0.095	0.316	0.097	0.043	0.011	0	0	0	0	0	0.009	0.030	0	0	0.003	1.000
Rural Arterials		0.390	0.094	0.312	0.096	0.043	0.014	0	0	0	0	0	0.011	0.036	0	0	0.005	1.000
Urban Local		0.411	0.099	0.329	0.101	0.045	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.403	0.097	0.322	0.099	0.044	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2010	0.327	0.083	0.278	0.085	0.038	0.043	0	0	0	0	0	0.033	0.110	0	0	0.002	1.000
Rural Interstates		0.292	0.074	0.247	0.076	0.034	0.062	0	0	0	0	0	0.048	0.159	0	0	0.008	1.000
Urban Arterials		0.382	0.097	0.324	0.100	0.044	0.011	0	0	0	0	0	0.009	0.030	0	0	0.003	1.000
Rural Arterials		0.377	0.096	0.320	0.098	0.044	0.014	0	0	0	0	0	0.011	0.036	0	0	0.005	1.000
Urban Local		0.397	0.101	0.336	0.103	0.046	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.390	0.099	0.330	0.101	0.045	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2015	0.286	0.090	0.301	0.093	0.041	0.043	0	0	0	0	0	0.033	0.110	0	0	0.002	1.000
Rural Interstates		0.255	0.081	0.268	0.082	0.037	0.062	0	0	0	0	0	0.048	0.159	0	0	0.008	1.000
Urban Arterials		0.334	0.105	0.351	0.108	0.048	0.011	0	0	0	0	0	0.009	0.030	0	0	0.003	1.000
Rural Arterials		0.330	0.104	0.347	0.107	0.047	0.014	0	0	0	0	0	0.011	0.036	0	0	0.005	1.000
Urban Local		0.347	0.110	0.365	0.112	0.050	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.341	0.107	0.358	0.110	0.049	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2020	0.264	0.094	0.314	0.097	0.043	0.043	0	0	0	0	0	0.033	0.110	0	0	0.002	1.000
Rural Interstates		0.235	0.084	0.279	0.086	0.038	0.062	0	0	0	0	0	0.048	0.159	0	0	0.008	1.000
Urban Arterials		0.309	0.110	0.366	0.113	0.050	0.011	0	0	0	0	0	0.009	0.030	0	0	0.003	1.000
Rural Arterials		0.304	0.109	0.361	0.111	0.049	0.014	0	0	0	0	0	0.011	0.036	0	0	0.005	1.000
Urban Local		0.321	0.114	0.380	0.117	0.052	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.315	0.112	0.373	0.115	0.051	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2025	0.264	0.094	0.314	0.097	0.043	0.043	0	0	0	0	0	0.033	0.110	0	0	0.002	1.000
Rural Interstates		0.235	0.084	0.279	0.086	0.038	0.062	0	0	0	0	0	0.048	0.159	0	0	0.008	1.000
Urban Arterials		0.309	0.110	0.366	0.113	0.050	0.011	0	0	0	0	0	0.009	0.030	0	0	0.003	1.000
Rural Arterials		0.304	0.109	0.361	0.111	0.049	0.014	0	0	0	0	0	0.011	0.036	0	0	0.005	1.000
Urban Local		0.321	0.114	0.380	0.117	0.052	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.315	0.112	0.373	0.115	0.051	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2030	0.264	0.094	0.314	0.097	0.043	0.043	0	0	0	0	0	0.033	0.110	0	0	0.002	1.000
Rural Interstates		0.235	0.084	0.279	0.086	0.038	0.062	0	0	0	0	0	0.048	0.159	0	0	0.008	1.000
Urban Arterials		0.309	0.110	0.366	0.113	0.050	0.011	0	0	0	0	0	0.009	0.030	0	0	0.003	1.000
Rural Arterials		0.304	0.109	0.361	0.111	0.049	0.014	0	0	0	0	0	0.011	0.036	0	0	0.005	1.000
Urban Local		0.321	0.114	0.380	0.117	0.052	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.315	0.112	0.373	0.115	0.051	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000

Table B.1-10. “All Other Counties” VMT Mix

Roadway	Year	LDV	LDT1	LDT2	LDT3	LDT4	HDV2B	HDV3	HDV4	HDV5	HDV6	HDV7	HDV8A	HDV8B	HDBS	HDDBT	MC	TOTAL	
Urban Interstates	All Other Counties: 1998, 1999, 2000	0.419	0.068	0.225	0.069	0.031	0.043	0	0	0	0	0	0.033	0.110	0	0	0.002	1.000	
Rural Interstates		0.373	0.060	0.201	0.062	0.027	0.062	0	0	0	0	0	0	0.048	0.159	0	0	0.008	1.000
Urban Arterials		0.489	0.079	0.263	0.081	0.036	0.011	0	0	0	0	0	0	0.009	0.030	0	0	0.003	1.000
Rural Arterials		0.482	0.078	0.259	0.080	0.036	0.014	0	0	0	0	0	0	0.011	0.036	0	0	0.005	1.000
Urban Local		0.508	0.082	0.273	0.084	0.037	0.003	0	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.498	0.080	0.268	0.082	0.037	0.008	0	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2001	0.410	0.069	0.230	0.071	0.032	0.043	0	0	0	0	0	0.033	0.110	0	0	0.002	1.000	
Rural Interstates		0.365	0.062	0.205	0.063	0.028	0.062	0	0	0	0	0	0	0.048	0.159	0	0	0.008	1.000
Urban Arterials		0.479	0.081	0.268	0.083	0.037	0.011	0	0	0	0	0	0	0.009	0.030	0	0	0.003	1.000
Rural Arterials		0.472	0.080	0.265	0.082	0.036	0.014	0	0	0	0	0	0	0.011	0.036	0	0	0.005	1.000
Urban Local		0.498	0.084	0.279	0.086	0.038	0.003	0	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.488	0.082	0.273	0.084	0.037	0.008	0	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2002	0.402	0.071	0.235	0.072	0.032	0.043	0	0	0	0	0	0.033	0.110	0	0	0.002	1.000	
Rural Interstates		0.358	0.063	0.209	0.064	0.029	0.062	0	0	0	0	0	0	0.048	0.159	0	0	0.008	1.000
Urban Arterials		0.469	0.082	0.274	0.084	0.038	0.011	0	0	0	0	0	0	0.009	0.030	0	0	0.003	1.000
Rural Arterials		0.463	0.081	0.271	0.083	0.037	0.014	0	0	0	0	0	0	0.011	0.036	0	0	0.005	1.000
Urban Local		0.487	0.086	0.285	0.088	0.039	0.003	0	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.478	0.084	0.279	0.086	0.038	0.008	0	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2003	0.393	0.072	0.240	0.074	0.033	0.043	0	0	0	0	0	0.033	0.110	0	0	0.002	1.000	
Rural Interstates		0.350	0.064	0.214	0.066	0.029	0.062	0	0	0	0	0	0	0.048	0.159	0	0	0.008	1.000
Urban Arterials		0.459	0.084	0.280	0.086	0.038	0.011	0	0	0	0	0	0	0.009	0.030	0	0	0.003	1.000
Rural Arterials		0.453	0.083	0.276	0.085	0.038	0.014	0	0	0	0	0	0	0.011	0.036	0	0	0.005	1.000
Urban Local		0.477	0.087	0.291	0.089	0.040	0.003	0	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.468	0.086	0.285	0.088	0.039	0.008	0	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2004	0.385	0.074	0.245	0.075	0.034	0.043	0	0	0	0	0	0.033	0.110	0	0	0.002	1.000	
Rural Interstates		0.342	0.066	0.218	0.067	0.030	0.062	0	0	0	0	0	0	0.048	0.159	0	0	0.008	1.000
Urban Arterials		0.449	0.086	0.286	0.088	0.039	0.011	0	0	0	0	0	0	0.009	0.030	0	0	0.003	1.000
Rural Arterials		0.443	0.085	0.282	0.087	0.039	0.014	0	0	0	0	0	0	0.011	0.036	0	0	0.005	1.000
Urban Local		0.466	0.089	0.297	0.091	0.041	0.003	0	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.458	0.087	0.291	0.089	0.040	0.008	0	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2005	0.376	0.075	0.250	0.077	0.034	0.043	0	0	0	0	0	0.033	0.110	0	0	0.002	1.000	
Rural Interstates		0.335	0.067	0.222	0.068	0.030	0.062	0	0	0	0	0	0	0.048	0.159	0	0	0.008	1.000
Urban Arterials		0.439	0.087	0.291	0.090	0.040	0.011	0	0	0	0	0	0	0.009	0.030	0	0	0.003	1.000
Rural Arterials		0.433	0.086	0.287	0.088	0.039	0.014	0	0	0	0	0	0	0.011	0.036	0	0	0.005	1.000
Urban Local		0.456	0.091	0.302	0.093	0.041	0.003	0	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.447	0.089	0.297	0.091	0.041	0.008	0	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2006	0.367	0.077	0.255	0.078	0.035	0.043	0	0	0	0	0	0.033	0.110	0	0	0.002	1.000	
Rural Interstates		0.327	0.068	0.227	0.070	0.031	0.062	0	0	0	0	0	0	0.048	0.159	0	0	0.008	1.000
Urban Arterials		0.429	0.089	0.297	0.091	0.041	0.011	0	0	0	0	0	0	0.009	0.030	0	0	0.003	1.000
Rural Arterials		0.423	0.088	0.293	0.090	0.040	0.014	0	0	0	0	0	0	0.011	0.036	0	0	0.005	1.000
Urban Local		0.446	0.093	0.308	0.095	0.042	0.003	0	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.437	0.091	0.302	0.093	0.041	0.008	0	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000

Table B.1-10. "All Other Counties" VMT Mix (continued)

Roadway	Year	LDV	LDT1	LDT2	LDT3	LDT4	HDV2B	HDV3	HDV4	HDV5	HDV6	HDV7	HDV8A	HDV8B	HDBS	HDBT	MC	TOTAL
Urban Interstates	2007	0.359	0.078	0.260	0.080	0.036	0.043	0	0	0	0	0	0.033	0.110	0	0	0.002	1.000
Rural Interstates		0.320	0.069	0.231	0.071	0.032	0.062	0	0	0	0	0	0.048	0.159	0	0	0.008	1.000
Urban Arterials		0.419	0.091	0.303	0.093	0.041	0.011	0	0	0	0	0	0.009	0.030	0	0	0.003	1.000
Rural Arterials		0.413	0.090	0.299	0.092	0.041	0.014	0	0	0	0	0	0.011	0.036	0	0	0.005	1.000
Urban Local		0.435	0.094	0.314	0.097	0.043	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.427	0.093	0.308	0.095	0.042	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2008	0.350	0.079	0.265	0.081	0.036	0.043	0	0	0	0	0	0.033	0.110	0	0	0.002	1.000
Rural Interstates		0.312	0.071	0.236	0.072	0.032	0.062	0	0	0	0	0	0.048	0.159	0	0	0.008	1.000
Urban Arterials		0.409	0.093	0.308	0.095	0.042	0.011	0	0	0	0	0	0.009	0.030	0	0	0.003	1.000
Rural Arterials		0.404	0.091	0.304	0.094	0.042	0.014	0	0	0	0	0	0.011	0.036	0	0	0.005	1.000
Urban Local		0.425	0.096	0.320	0.099	0.044	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.417	0.094	0.314	0.097	0.043	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2009	0.338	0.082	0.271	0.083	0.037	0.043	0	0	0	0	0	0.033	0.110	0	0	0.002	1.000
Rural Interstates		0.301	0.073	0.242	0.074	0.033	0.062	0	0	0	0	0	0.048	0.159	0	0	0.008	1.000
Urban Arterials		0.395	0.095	0.316	0.097	0.043	0.011	0	0	0	0	0	0.009	0.030	0	0	0.003	1.000
Rural Arterials		0.390	0.094	0.312	0.096	0.043	0.014	0	0	0	0	0	0.011	0.036	0	0	0.005	1.000
Urban Local		0.411	0.099	0.329	0.101	0.045	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.403	0.097	0.322	0.099	0.044	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2010	0.327	0.083	0.278	0.085	0.038	0.043	0	0	0	0	0	0.033	0.110	0	0	0.002	1.000
Rural Interstates		0.292	0.074	0.247	0.076	0.034	0.062	0	0	0	0	0	0.048	0.159	0	0	0.008	1.000
Urban Arterials		0.382	0.097	0.324	0.100	0.044	0.011	0	0	0	0	0	0.009	0.030	0	0	0.003	1.000
Rural Arterials		0.377	0.096	0.320	0.098	0.044	0.014	0	0	0	0	0	0.011	0.036	0	0	0.005	1.000
Urban Local		0.397	0.101	0.336	0.103	0.046	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.390	0.099	0.330	0.101	0.045	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2015	0.286	0.090	0.301	0.093	0.041	0.043	0	0	0	0	0	0.033	0.110	0	0	0.002	1.000
Rural Interstates		0.255	0.081	0.268	0.082	0.037	0.062	0	0	0	0	0	0.048	0.159	0	0	0.008	1.000
Urban Arterials		0.334	0.105	0.351	0.108	0.048	0.011	0	0	0	0	0	0.009	0.030	0	0	0.003	1.000
Rural Arterials		0.330	0.104	0.347	0.107	0.047	0.014	0	0	0	0	0	0.011	0.036	0	0	0.005	1.000
Urban Local		0.347	0.110	0.365	0.112	0.050	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.341	0.107	0.358	0.110	0.049	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2020	0.264	0.094	0.314	0.097	0.043	0.043	0	0	0	0	0	0.033	0.110	0	0	0.002	1.000
Rural Interstates		0.235	0.084	0.279	0.086	0.038	0.062	0	0	0	0	0	0.048	0.159	0	0	0.008	1.000
Urban Arterials		0.309	0.110	0.366	0.113	0.050	0.011	0	0	0	0	0	0.009	0.030	0	0	0.003	1.000
Rural Arterials		0.304	0.109	0.361	0.111	0.049	0.014	0	0	0	0	0	0.011	0.036	0	0	0.005	1.000
Urban Local		0.321	0.114	0.380	0.117	0.052	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.315	0.112	0.373	0.115	0.051	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2025	0.264	0.094	0.314	0.097	0.043	0.043	0	0	0	0	0	0.033	0.110	0	0	0.002	1.000
Rural Interstates		0.235	0.084	0.279	0.086	0.038	0.062	0	0	0	0	0	0.048	0.159	0	0	0.008	1.000
Urban Arterials		0.309	0.110	0.366	0.113	0.050	0.011	0	0	0	0	0	0.009	0.030	0	0	0.003	1.000
Rural Arterials		0.304	0.109	0.361	0.111	0.049	0.014	0	0	0	0	0	0.011	0.036	0	0	0.005	1.000
Urban Local		0.321	0.114	0.380	0.117	0.052	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.315	0.112	0.373	0.115	0.051	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000
Urban Interstates	2030	0.264	0.094	0.314	0.097	0.043	0.043	0	0	0	0	0	0.033	0.110	0	0	0.002	1.000
Rural Interstates		0.235	0.084	0.279	0.086	0.038	0.062	0	0	0	0	0	0.048	0.159	0	0	0.008	1.000
Urban Arterials		0.309	0.110	0.366	0.113	0.050	0.011	0	0	0	0	0	0.009	0.030	0	0	0.003	1.000
Rural Arterials		0.304	0.109	0.361	0.111	0.049	0.014	0	0	0	0	0	0.011	0.036	0	0	0.005	1.000
Urban Local		0.321	0.114	0.380	0.117	0.052	0.003	0	0	0	0	0	0.003	0.008	0	0	0.002	1.000
Rural Local		0.315	0.112	0.373	0.115	0.051	0.008	0	0	0	0	0	0.006	0.019	0	0	0.002	1.000

**APPENDIX B.2**

**DEVELOPMENT OF VEHICLE SPEEDS FOR EMISSIONS MODELING**

## **Development of Vehicle Speeds for Emissions Modeling**

### **Introduction**

Mobile source emissions vary considerably for different vehicle speeds. As a result, accurate vehicle data is needed in order to calculate emissions with the MOBILE model. Vehicle speeds are generally different for different types of roadway facilities and for urban vs. rural areas. Guidance for determining vehicle speeds for use in emissions modeling are published in two EPA documents: Procedures for Emission Inventory Preparation, Vol. IV, Mobile Sources (EPA-450/4-81-026) and Use of Locality Specific Transportation Data for the Development of Mobile Source Emission Inventories, (An EPA EIIP Emission Inventory Improvement Program Report; September, 1996). The first report offers several default speed profiles that can be used if more reliable local data are not available. The second report describes special speed studies that can be performed in order to determine appropriate speeds for modeling emissions. In Tennessee, special studies have been performed in the Memphis, Nashville, and Knoxville Metropolitan Planning Areas. These studies have been evaluated in order to develop vehicle speed inputs for use in modeling emissions for Tennessee counties outside the MPO areas.

### **Default Speeds**

Default vehicle speeds and speeds derived from special studies in Tennessee have been compiled and are summarized in Table B.2-1. Speeds are shown for each of 6 roadway types and for both urban and rural areas. The first row in the table shows a default speed of 19.6 mph for all types of roadways. This speed is the average speed in the FTP, Federal Test Procedure used to measure emissions from vehicles. This speed was originally derived from studies in Los Angeles, California and is supposed to represent the average speed for a typical urban commuter trip. EPA suggests that 19.6 mph can be used for all roadway types, but it clearly underestimates the speeds on many roadways. The NAPAP National Acid Precipitation Study calculated regional emissions from mobile sources using 19.6 mph for all road types in urban areas, 55 mph for rural interstates, and 45 mph for all other rural roads. In the Procedures for Emission Inventory Preparation, Vol. IV, Mobile Sources EPA suggests default speeds for all roadway types ranging from 19.6 mph on local streets, collectors and arterials in urban areas, to 57.3 mph on rural interstates (See Table B.2-1 for details). These default speeds are intended for use only if more accurate data are not available for the local area.

### **Speed Data for Tennessee Highways**

Three MPOs in Tennessee have performed special studies to determine vehicle speeds for use in emission inventory development (Knoxville, Memphis and Nashville). The studies were of two types: transportation modeling studies and floating car travel

speed studies. The average speeds determined from these studies for each roadway type are summarized in Table B.2-1.

### **Transportation Modeling Studies**

Transportation modeling studies were performed by all 3 MPOs to predict VMT (vehicles miles of travel) for each roadway type. The types of models used are TDM travel demand models such as MINUTP (the minicomputer version of UTP the Urban Transportation Planning model). TDM models employ the traditional 4-step process consisting of trip generation, trip distribution, mode choice and traffic assignment to predict the traffic volumes on each link in the highway system. From this, VMT and vehicle speeds can be calculated. Appendix C, page 8 of the Memphis Metropolitan Area Long Range Transportation Plan states “Operating vehicle speeds for each forecast year and road type were obtained from the regional travel demand model after processing the speeds through a feedback loop to simulate the speeds as close to operating conditions as possible. This is a preferred approach and was discussed and approved by FHWA prior to use in the air quality model.” The resulting speeds predicted for each road type in the Memphis area are shown in Table B.2-1.

The MINUTP transportation demand model was also used to develop the Nashville area plan. Data from the MINUTP model were input to the model PPAQ (Post-Processor for Air Quality). This model was developed by Garmen Associates and is an approved EPA model. According to the Nashville Area 2025 Long-Range Transportation Plan, the PPAQ model was used to calculate average speeds for each roadway type for each hour of the day, based on the predicted volume to capacity ratios for each link. Average speeds predicted for the Nashville area are summarized in Table B.2-1.

### **Floating Car Travel Speed Studies**

In addition to the modeled speeds, two of the MPOs conducted floating car travel speed studies on selected corridors. In floating car studies, the investigators travel selected routes in a vehicle keeping the same speed as surrounding traffic. The measuring vehicle must not pass more cars than passes it. The time and distance traveled are recorded so average speeds can be calculated for the corridor. These studies were performed in the Knoxville and Nashville areas.

Average travel speeds were measured during AM and PM peak hours and off-peak hour periods on 47 different highway segments in the Knoxville area. The results of the travel speeds measurements were grouped by roadway type. Measurements were taken on urban and rural interstates, freeways, arterials, collectors and local streets to establish actual speeds for these roadway types. The average speed for all roads within each type was calculated. The AM and PM peak hour speeds were averaged together to get a composite peak hour speed. Then the composite peak hour speed was averaged



with the off-peak hour speed to get an overall average speed. The overall average speeds were then included in the summary of speed results shown in Table B.2-1.

Travel speed studies using a floating car were also conducted in the Nashville area. Speeds were measured during peak hour periods on 19 different facilities. Speeds were measured on urban interstates, urban arterials, urban collectors, and rural arterials. The average speed for all roads within each type was calculated. The AM and PM peak hour speeds were averaged together to get a composite peak hour speed. No measurements were performed during off-peak periods in the Nashville area. The peak hour average speeds were then included in the summary of speed results shown in Table B.2-1.

### **Combined Speed Results**

In the report, Use of Locality Specific Transportation Data for the Development of Mobile Source Emission Inventories, (An EPA EIIP Emission Inventory Improvement Program Report; September, 1996) the EPA recommends the use of locality specific data for emission inventories wherever possible instead of using default values. Therefore the data from the MPO modeling and speed measurement studies were judged to be more reliable than the default values. To obtain a reasonable value to use for other counties in Tennessee, the results of the modeling and speed measurement studies for each roadway type were averaged together. The average speeds thus calculated are shown in Table B.2-1. The highest average speed was calculated for rural interstates at 63.8 mph. Urban interstate speeds averaged 54.9 mph. Speeds uniformly decreased from interstates to arterials to collectors to local streets. The lowest average speed was 20.9 mph for urban local streets. Also shown in the table is the standard deviation of the speeds calculated for each roadway type. The speeds for each roadway type were fairly consistent for both the modeling and travel speed measurement approaches. The standard deviation of the speeds ranged from 1.2 mph for rural interstates to 6.0 mph for urban collectors. The average values for speeds for each roadway type shown in Table B.2-1 were considered to be the best available for use in estimating emissions from mobile sources on Tennessee roadways.

**Table B.2-1. Vehicle Speeds For Emissions Modeling by Source.**

**Rural Areas - All Speeds in Miles Per Hour**

<b>Source</b>	<b>Interstates</b>	<b>Prin Arterials or Expressway</b>	<b>Min Arterials</b>	<b>Maj Collectors</b>	<b>Min Collectors</b>	<b>Local Streets</b>
FTP	19.6	19.6	19.6	19.6	19.6	19.6
NAPAP	55.0	45.0	45.0	45.0	45.0	45.0
Default speed in Inventory Guidance	57.3	45.4	39.9	35.1	30.5	30.5
<b>Knox MPO Trans Plan - 1997</b>	<b>62.5</b>	<b>47.5</b>	<b>37.5</b>	<b>37.5</b>	<b>37.5</b>	<b>30.0</b>
<b>Memphis MPO Plan - 2000</b>	<b>64.0</b>	<b>42.9</b>	<b>41.0</b>	<b>39.2</b>	<b>39.2</b>	<b>24.3</b>
<b>Knox Travel Speeds Study</b>	<b>64.9</b>	<b>46.6</b>	<b>46.6</b>	<b>35.1</b>	<b>35.1</b>	
<b>Nashville Speeds Study</b>		<b>42.6</b>	<b>42.6</b>			
<b>Average Last 4:</b>	<b>63.8</b>	<b>44.9</b>	<b>41.9</b>	<b>37.3</b>	<b>37.3</b>	<b>27.2</b>
Standard Deviation	1.2	2.5	3.8	2.1	2.1	4.0

**Urban Areas - All Speeds in Miles Per Hour**

<b>Source</b>	<b>Interstates</b>	<b>Freeways</b>	<b>Prin Arterials</b>	<b>Minor Arterials</b>	<b>Collectors</b>	<b>Local Streets</b>
FTP	19.6	19.6	19.6	19.6	19.6	19.6
NAPAP	19.6	19.6	19.6	19.6	19.6	19.6
Default speed in Inventory Guidance	46.3	43.3	18.9	19.6	19.6	19.6
<b>Knox MPO Trans Plan - 1997</b>	<b>52.5</b>	<b>42.5</b>	<b>32.5</b>	<b>32.5</b>	<b>27.5</b>	<b>25.0</b>
<b>Memphis MPO Plan - 2000</b>	<b>58.0</b>	<b>42.8</b>	<b>37.3</b>	<b>35.8</b>	<b>35.8</b>	<b>19.0</b>
<b>Nashville MPO Plan - 1998</b>	<b>55.9</b>		<b>34.5</b>	<b>34.5</b>		<b>18.7</b>
<b>Knox Travel Speeds Study</b>	<b>55.2</b>	<b>51.2</b>	<b>30.6</b>	<b>30.6</b>	<b>21.9</b>	
<b>Nashville Speeds Study</b>	<b>52.7</b>		<b>32.8</b>	<b>32.8</b>	<b>31.9</b>	
<b>Average Last 5:</b>	<b>54.9</b>	<b>45.5</b>	<b>33.5</b>	<b>33.2</b>	<b>29.3</b>	<b>20.9</b>
Standard Deviation	2.3	4.9	2.5	2.0	6.0	3.6

FTP = Federal Test Procedure

NAPAP = National Acid Precipitation Study

\*Default Speeds in Procedures For Emission Inventory Preparation, Vol IV Mobile Sources. EPA-450/4-81-026.

**APPENDIX C**  
**CLASSIFICATION OF COUNTIES INTO EAST, MIDDLE AND WEST**  
**TENNESSEE**

**Table C1. Classification of Counties into East, Middle and West\***

West Tennessee	Middle Tennessee	East Tennessee
<ol style="list-style-type: none"> <li>1. Benton</li> <li>2. Carroll</li> <li>3. Chester</li> <li>4. Crockett</li> <li>5. Decatur</li> <li>6. Dyer</li> <li>7. Fayette</li> <li>8. Gibson</li> <li>9. Hardeman</li> <li>10. Hardin</li> <li>11. <i>Haywood</i></li> <li>12. <i>Henderson</i></li> <li>13. Henry</li> <li>14. Lake</li> <li>15. Lauderdale</li> <li>16. McNairy</li> <li>17. Madison</li> <li>18. Obion</li> <li>19. Shelby</li> <li>20. Tipton</li> <li>21. Weakley</li> </ol>	<ol style="list-style-type: none"> <li>1. Bedford</li> <li>2. Cannon</li> <li>3. Cheatham</li> <li>4. Clay</li> <li>5. <i>Coffee</i></li> <li>6. Davidson</li> <li>7. DeKalb</li> <li>8. Dickson</li> <li>9. Fentress</li> <li>10. Franklin</li> <li>11. Giles</li> <li>12. Grundy</li> <li>13. Hickman</li> <li>14. Houston</li> <li>15. Humphreys</li> <li>16. Jackson</li> <li>17. Lawrence</li> <li>18. Lewis</li> <li>19. Lincoln</li> <li>20. Macon</li> <li>21. Marshall</li> <li>22. Maury</li> <li>23. Montgomery</li> <li>24. Moore</li> <li>25. Overton</li> <li>26. Perry</li> <li>27. Picket</li> <li>28. <i>Putnam</i></li> <li>29. <i>Robertson</i></li> <li>30. Rutherford</li> <li>31. Sequatchie</li> <li>32. <i>Smith</i></li> <li>33. Stewart</li> <li>34. Sumner</li> <li>35. Trousdale</li> <li>36. Van Buren</li> <li>37. Warren</li> <li>38. Wayne</li> <li>39. White</li> <li>40. Williamson</li> <li>41. Wilson</li> </ol>	<ol style="list-style-type: none"> <li>1. Anderson</li> <li>2. Bledsoe</li> <li>3. Blount</li> <li>4. Bradley</li> <li>5. <i>Campbell</i></li> <li>6. Carter</li> <li>7. Claiborne</li> <li>8. Cocke</li> <li>9. <i>Cumberland</i></li> <li>10. Grainger</li> <li>11. Greene</li> <li>12. Hamblen</li> <li>13. Hamilton</li> <li>14. Hancock</li> <li>15. Hawkins</li> <li>16. Jefferson</li> <li>17. Johnson</li> <li>18. Knox</li> <li>19. Loudon</li> <li>20. McMinn</li> <li>21. Marion</li> <li>22. Meigs</li> <li>23. Monroe</li> <li>24. Morgan</li> <li>25. Polk</li> <li>26. Rhea</li> <li>27. <i>Roane</i></li> <li>28. Scott</li> <li>29. Sevier</li> <li>30. Sullivan</li> <li>31. Unicoi</li> <li>32. Union</li> <li>33. Washington</li> </ol>

\* Counties in italics represent counties with interstate traffic more than 50% of total DVMT

**APPENDIX D**  
**INPUT PARAMETERS FOR MOBILE6 RUNS**

**Table D1. Header Section (same for ALL subgroups)**

<b>Input Command</b>	<b>Value / Description</b>
MOBILE6 INPUT FILE	Identifies input file as a regular command input file rather than a batch file.  Self-sufficient command*.
NO DESC OUTPUT	Prevents reporting in descriptive output format  Self-sufficient command*.
DATABASE OUTPUT	Specifies MOBILE6 to report output in database format  Self-sufficient command*.
WITH FIELDNAMES	Specifies MOBILE6 to include a header record of field names for the database output  Self-sufficient command*.
RUN DATA	Marks end of Header section and beginning of Run Section of a regular command input file.  Self-sufficient command*.

\* A command by itself - no further information required.

**Table D2. Shelby + Subgroup**

**a. Shelby County: Run Section**

<b>Input Command</b>	<b>Value / Description</b>
EXPRESS HC AS VOC	Directs model to output exhaust HC as volatile organic compound. Self-sufficient command*.
NO REFUELING	Exclude refueling (stage II) emission from all output values. Self-sufficient command*.
MIN/MAX TEMPERATURE	Minimum Temperature = 71 F Maximum Temperature = 95 F
ABSOLUTE HUMIDITY	Absolute Humidity = 88 grains/pound
REG DIST	Name of the external file that contains the registration distribution fractions.  UShreg.d (for urban) or RShreg.d (for rural)  Shelby specific registration distribution by age for LDV, LDT1, LDT2, LDT3, and LDT4 and national default distribution for the other 11 vehicles types.
SPEED VMT	Name of the external file that contains the speeds.  Ushelby.spd (for urban) or RShelby.spd (for rural)  <b>Rural:</b> Interstate = 64 mph Arterial = 41 mph Local = National default speed (12.9 mph) Ramps = Not applicable (assume no ramps in rural part of the county) (Filename: RShelby.spd)  <b>Urban:</b> Interstate = 55 mph Arterial = 33 mph Local = National default speed (12.9 mph) Ramps = National default speed (34.6 mph) (Filename: Ushelby.spd)

\* A command by itself - no further information required.

**a. Continued.**

<b>Input Command</b>	<b>Value / Description</b>
VMT BY FACILITY	<p>Name of the external file that contains the VMT distribution fractions.</p> <p>Art-only.vmt (Arterial) or            F-only.vmt (Freeway) or            R-only.vmt (Ramps) or            L-only.vmt (Local).</p> <p>Allocate all VMT to various roadway or facility types by vehicle class for both rural and urban.</p>
VMT FRACTIONS	<p>Shelby County specific VMT fractions by each of 16 combined vehicle types for rural and urban roadway classification. (From TDOT)</p>
FUEL RVP	<p>Average fuel Reid vapor pressure = 7.8</p>
ANTI_TAMP PROG	<p>19 95 30 22222 22222222 1 11 092 12211112</p> <p>19 = Program Start Year 2019            95 = First Model Year 1995 - 25-year window; For example            1995 model year in analysis year 2020.            30 = Last Model Year 2030</p> <p>Next set of 14 values - Vehicle Type subject/not subject to ATP Inspection (1 = NO, 2 = YES) in the following order            LDGV, LDGT1, LDGT2, LDGT3, LDGT4,            HDGV2B, HDGV3, HDGV4, HDGV5,            HDGV6, HDGV7, HDGV8A, HDGV8B,            GAS BUS</p> <p>1 = must be entered, entering '2' will discontinue ATP benefits.            1 = Inspection Frequency -Annual            092 = Compliance Rate 92%            12211112 = Inspections Performed (1 = NO, 2 = YES)            Air Pump System Disablement = NO            Catalyst Removal = YES            Fuel Inlet Restrictor Disablement = YES            Tailpipe Lead Deposit Test = NO            EGR Disablement = NO            Evaporative System Disablement = NO            PVC System Disablement = NO            Missing Gas Cap = YES</p>
I/M DESC FILE	<p>Name of the external file that contains the I/M program specifications:            IM99-01.d, IM02-15.d, or IM20-30.d</p>



**b. Shelby County: I/M Program “1” Parameters**

<b>Input Command</b>	<b>Value / Description*</b>
I/M PROGRAM	1 1984 2030 1 T/O IDLE 1 = 1 <sup>st</sup> I/M Program 1984 = Program Start Year 1984 2030 = Program End Year 2030 1 = Inspection Frequency - Annual T/O = Program Type - Test Only IDLE = Test Type - Idle Test
I/M MODEL YEARS	1 1974 1995 or 1 1974 2001 1974 = First Model Year 1974 1995 = Last Model Year 1995 for analysis years 2002 through 2010, 2015, 2020, 2025 and 2030. 2001 = Last Model Year 2001 for analysis years 1999 through 2001
I/M VEHICLES	1 22222 22222222 1 Vehicle Types subject/not subject to Inspection (1 = NO, 2 = YES) in the following order: LDGV, LDGT1, LDGT2, LDGT3, LDGT4 HDGV2B, HDGV3, HDGV4, HDGV5, HDGV6, HDGV7, HDGV8A, HDGV8B GAS BUS
I/M STRINGENCY	1 17.0 17.0 = Stringency level 17%
I/M COMPLIANCE	1 84.0 or 1 92.0 84.0 = Compliance rate of 84% for analysis years 1999 through 2010, and for 2015. 92.0 = Compliance rate of 92% for analysis years 2020, 2025, 2030
I/M WAIVER RATES	1 1.0 1.0 1.0 = waiver rate for pre-1981 model year vehicle 1.0 = waiver rate for 1981 and later model year vehicles
I/M EXEMPTION AGE	1 25 25 = vehicles 25 years and older exempt from I/M
I/M GRACE PERIOD	1 1 1 = 1 year grace period when I/M testing not required

\* The first value of “1” in all records refers to the 1<sup>st</sup> I/M program type.

**c. Shelby County: I/M Program “2” Parameters**

<b>Input Command</b>	<b>Value / Description*</b>
I/M PROGRAM	2 2002 2030 1 T/O OBD I/M  2 = 2 <sup>nd</sup> I/M Program 2002 = Program Start Year 2002 2030 = Program End Year 2030 1 = Inspection Frequency - Annual T/O = Program Type - Test Only OBD I/M= Test Type – Exhaust OBD I/M program
I/M MODEL YEARS	2 1996 2030  1996 = First Model Year 1996 2030 = Last Model Year 2030
I/M VEHICLES	2 22222 22222222 1  Vehicle Types subject/not subject to Inspection (1 = NO, 2 = YES) in the following order: LDGV, LDGT1, LDGT2, LDGT3, LDGT4 HDGV2B, HDGV3, HDGV4, HDGV5, HDGV6, HDGV7, HDGV8A, HDGV8B GAS BUS
I/M STRINGENCY	2 17.0  17.0 = Stringency level 17%
I/M COMPLIANCE	2 84.0 <i>or</i> 2 92.0  84.0 = Compliance rate of 84% for analysis years 1999 through 2010, and for 2015. 92.0 = Compliance rate of 92% for analysis years 2020 2025, 2030
I/M WAIVER RATES	2 1.0 1.0  1.0 = waiver rate for pre-1981 model year vehicle 1.0 = waiver rate for 1981 and later model year vehicles

\* The first value of “2” in all records refers to the 2<sup>nd</sup> I/M program type. I/M Program 2 applies to analysis years 2002 and later.

**d. Shelby County: I/M Program “3” Parameters**

<b>Input Command</b>	<b>Value / Description*</b>
I/M PROGRAM	3 2002 2030 1 T/O EVAP OBD & GC  3 = 3 <sup>rd</sup> I/M Program 2002 = Program Start Year 2002 2030 = Program End Year 2030 1 = Inspection Frequency - Annual T/O = Program Type - Test Only EVAP OBD & GC = Evaporative OBD and Gas cap I/M program
I/M MODEL YEARS	3 1996 2006  1996 = First Model Year 1996 2006 = Last Model Year 2006
I/M VEHICLES	3 22222 11111111 1  Vehicle Types subject/not subject to Inspection (1 = NO, 2 = YES) in the following order: LDGV, LDGT1, LDGT2, LDGT3, LDGT4 HDGV2B, HDGV3, HDGV4, HDGV5, HDGV6, HDGV7, HDGV8A, HDGV8B GAS BUS
I/M STRINGENCY	3 17.0  17.0 = Stringency level 17%
I/M COMPLIANCE	3 84.0 <i>or</i> 3 92.0  84.0 = Compliance rate of 84% for analysis years 1999 through 2010, and for 2015. 92.0 = Compliance rate of 92% for analysis years 2020, 2025, 2030
I/M WAIVER RATES	3 1.0 1.0  1.0 = waiver rate for pre-1981 model year vehicle 1.0 = waiver rate for 1981 and later model year vehicles

\* The first value of “3” in all records refers to the 3<sup>rd</sup> I/M program type. I/M Program 3 applies to analysis years 2002 and later.

**e. Shelby County: I/M Program “4” Parameters**

<b>Input Command</b>	<b>Value / Description*</b>
I/M PROGRAM	4 2002 2030 1 T/O GC  4 = 4 <sup>th</sup> I/M Program 2002 = Program Start Year 2002 2030 = Program End Year 2030 1 = Inspection Frequency - Annual T/O = Program Type - Test Only GC = Gas cap Evaporative I/M program
I/M MODEL YEARS	4 1996 2006  1996 = First Model Year 1996 2006 = Last Model Year 2006
I/M VEHICLES	4 11111 22222222 1  Vehicle Types subject/not subject to Inspection (1 = NO, 2 = YES) in the following order: LDGV, LDGT1, LDGT2, LDGT3, LDGT4 HDGV2B, HDGV3, HDGV4, HDGV5, HDGV6, HDGV7, HDGV8A, HDGV8B GAS BUS
I/M STRINGENCY	4 17.0  17.0 = Stringency level 17%
I/M COMPLIANCE	4 84.0 <i>or</i> 4 92.0  84.0 = Compliance rate of 84% for analysis years 1999 through 2010, and for 2015. 92.0 = Compliance rate of 92% for analysis years 2020, 2025, 2030
I/M WAIVER RATES	4 1.0 1.0  1.0 = waiver rate for pre-1981 model year vehicle 1.0 = waiver rate for 1981 and later model year vehicles

\* The first value of “4” in all records refers to the 4<sup>th</sup> I/M program type. I/M Program 4 applies to analysis years 2002 and later.

**f. Shelby County: I/M Program “5” Parameters**

<b>Input Command</b>	<b>Value / Description*</b>
I/M PROGRAM	5 2002 2030 1 T/O EVAP OBD & GC  5 = 5 <sup>th</sup> I/M Program 2002 = Program Start Year 2002 2030 = Program End Year 2030 1 = Inspection Frequency - Annual T/O = Program Type - Test Only EVAP OBD & GC = Evaporative OBD and Gas cap I/M program
I/M MODEL YEARS	5 2007 2030  2007 = First Model Year 2007 2030 = Last Model Year 2030
I/M VEHICLES	5 22222 22222222 1  Vehicle Types subject/not subject to Inspection (1 = NO, 2 = YES) in the following order: LDGV, LDGT1, LDGT2, LDGT3, LDGT4 HDGV2B, HDGV3, HDGV4, HDGV5, HDGV6, HDGV7, HDGV8A, HDGV8B GAS BUS
I/M STRINGENCY	5 17.0  17.0 = Stringency level 17%
I/M COMPLIANCE	5 84.0 <i>or</i> 5 92.0  84.0 = Compliance rate of 84% for analysis years 1999 through 2010, and for 2015. 92.0 = Compliance rate of 92% for analysis years 2020, 2025, 2030
I/M WAIVER RATES	5 1.0 1.0  1.0 = waiver rate for pre-1981 model year vehicle 1.0 = waiver rate for 1981 and later model year vehicles

\* The first value of “5” in all records refers to the 5<sup>th</sup> I/M program type. I/M Program 5 applies to analysis years 2002 and later.

Filenames: IM99-01.d – for analysis years 1999 through 2001; only IDLE I/M  
IM02-15.d – for analysis years 2002 through 2015; IDLE and EVAP OBD & GC  
IM20-30.d – for analysis years 2020 through 2030; same as IM02-15.d, but different compliance rate (92%)

**Table D3. Shelby + Subgroup – Tipton & Fayette Counties: Run Section**

<b>Input Command</b>	<b>Value / Description</b>						
EXPRESS HC AS VOC	Directs model to output exhaust HC as volatile organic compound Self-sufficient command*						
NO REFUELING	Exclude refueling (stage II) emission from all output values Self-sufficient command*						
MIN/MAX TEMPERATURE	Minimum Temperature = 71 F Maximum Temperature = 95 F						
ABSOLUTE HUMIDITY	Absolute Humidity = 88 grains/pound						
REG DIST	Name of the external file that contains the registration distribution fractions.  <table border="1"> <thead> <tr> <th><u>County</u></th> <th><u>Urban</u></th> <th><u>Rural</u></th> </tr> </thead> <tbody> <tr> <td>Tipton &amp; Fayette</td> <td>UTipreg.d</td> <td>RTipreg.d</td> </tr> </tbody> </table> Area specific registration distribution by age for LDV, LDT1, LDT2, LDT3, and LDT4 and national default distribution for the other 11 vehicles types.	<u>County</u>	<u>Urban</u>	<u>Rural</u>	Tipton & Fayette	UTipreg.d	RTipreg.d
<u>County</u>	<u>Urban</u>	<u>Rural</u>					
Tipton & Fayette	UTipreg.d	RTipreg.d					
SPEED VMT	Name of the external file that contains the speeds.  <table border="1"> <thead> <tr> <th><u>County</u></th> <th><u>Urban</u></th> <th><u>Rural</u></th> </tr> </thead> <tbody> <tr> <td>Tipton &amp; Fayette</td> <td>UTip&amp;Fay.spd</td> <td>RTip&amp;Fay.spd</td> </tr> </tbody> </table> <b>Rural:</b> Interstate = 64 mph Arterial = 41 mph Local = National default speed (12.9 mph) Ramps = Not applicable (assume no ramps in rural part of the county)  <b>Urban:</b> Interstate = 55 mph Arterial = 33 mph Local = National default speed (12.9 mph) Ramps = National default speed (34.6 mph)	<u>County</u>	<u>Urban</u>	<u>Rural</u>	Tipton & Fayette	UTip&Fay.spd	RTip&Fay.spd
<u>County</u>	<u>Urban</u>	<u>Rural</u>					
Tipton & Fayette	UTip&Fay.spd	RTip&Fay.spd					
VMT BY FACILITY	Name of the external file that contains the VMT distribution fractions.  Art-only.vmt (Arterial) or F-only.vmt (Freeway) or R-only.vmt (Ramps) or L-only.vmt (Local).  Allocate all VMT to various roadway or facility types by vehicle class for both rural and urban.						
VMT FRACTIONS	County specific VMT fractions by each of 16 combined vehicle types for rural and urban roadway classification. (From TDOT).						
FUEL RVP	Average fuel Reid vapor pressure = 9.0						

\* A command by itself - no further information required.

**Table D4. Davidson + Subgroup**

**a. Run Section**

<b>Input Command</b>	<b>Value / Description</b>																		
EXPRESS HC AS VOC	Directs model to output exhaust HC as volatile organic compound  Self-sufficient command*																		
NO REFUELING	Exclude refueling (stage II) emission from all output values  Self-sufficient command*																		
MIN/MAX TEMPERATURE	Minimum Temperature = 66 F Maximum Temperature = 93 F																		
ABSOLUTE HUMIDITY	Absolute Humidity = 75 grains/pound																		
REG DIST	Name of the external file that contains the registration distribution fractions.  <table border="1"> <thead> <tr> <th><b>County</b></th> <th><b>Urban</b></th> <th><b>Rural</b></th> </tr> </thead> <tbody> <tr> <td>Davidson</td> <td>UDavreg.d</td> <td>RDavreg.d</td> </tr> <tr> <td>Rutherford</td> <td>URureg.d</td> <td>RRureg.d</td> </tr> <tr> <td>Sumner</td> <td>USumreg.d</td> <td>RSumreg.d</td> </tr> <tr> <td>Wilson</td> <td>UWnreg.d</td> <td>RWnreg.d</td> </tr> <tr> <td>Williamson</td> <td>UWilreg.d</td> <td>RWilreg.d</td> </tr> </tbody> </table> Area specific registration distribution by age for LDV, LDT1, LDT2, LDT3, and LDT4 and national default distribution for the other 11 vehicles types.	<b>County</b>	<b>Urban</b>	<b>Rural</b>	Davidson	UDavreg.d	RDavreg.d	Rutherford	URureg.d	RRureg.d	Sumner	USumreg.d	RSumreg.d	Wilson	UWnreg.d	RWnreg.d	Williamson	UWilreg.d	RWilreg.d
<b>County</b>	<b>Urban</b>	<b>Rural</b>																	
Davidson	UDavreg.d	RDavreg.d																	
Rutherford	URureg.d	RRureg.d																	
Sumner	USumreg.d	RSumreg.d																	
Wilson	UWnreg.d	RWnreg.d																	
Williamson	UWilreg.d	RWilreg.d																	
SPEED VMT	Name of the external file that contains the speeds.  <table border="1"> <thead> <tr> <th><b>County</b></th> <th><b>Urban</b></th> <th><b>Rural</b></th> </tr> </thead> <tbody> <tr> <td>Davidson</td> <td>UDav.spd</td> <td>RDav.spd</td> </tr> <tr> <td>Rutherford</td> <td>URu.spd</td> <td>RRu.spd</td> </tr> <tr> <td>Sumner</td> <td>USum.spd</td> <td>RSum.spd</td> </tr> <tr> <td>Wilson</td> <td>UWn.spd</td> <td>RWn.spd</td> </tr> <tr> <td>Williamson</td> <td>UWil.spd</td> <td>RWil.spd</td> </tr> </tbody> </table> <b>Rural:</b> Interstate = 64 mph Arterial = 41 mph Local = National default speed (12.9 mph) Ramps = Not applicable (assume no ramps in rural part of the county)	<b>County</b>	<b>Urban</b>	<b>Rural</b>	Davidson	UDav.spd	RDav.spd	Rutherford	URu.spd	RRu.spd	Sumner	USum.spd	RSum.spd	Wilson	UWn.spd	RWn.spd	Williamson	UWil.spd	RWil.spd
<b>County</b>	<b>Urban</b>	<b>Rural</b>																	
Davidson	UDav.spd	RDav.spd																	
Rutherford	URu.spd	RRu.spd																	
Sumner	USum.spd	RSum.spd																	
Wilson	UWn.spd	RWn.spd																	
Williamson	UWil.spd	RWil.spd																	

\* A command by itself - no further information required.

a. Continued.

Input Command	Value / Description												
VMT BY FACILITY	<p>Name of the external file that contains the VMT distribution fractions.</p> <p>Art-only.vmt (Arterial) or F-only.vmt (Freeway) or R-only.vmt (Ramps) or L-only.vmt (Local).</p> <p>Allocate all VMT to various roadway or facility types by vehicle class for both rural and urban.</p>												
VMT FRACTIONS	<p>County specific VMT fractions by each of 16 combined vehicle types for rural and urban roadway classification. (From TDOT).</p>												
FUEL RVP	<p>Average fuel Reid vapor pressure = 7.8</p>												
ANTI_TAMP PROG	<p>95 75 30 22222 11111111 1 11 098 12211112 <i>or</i> 95 75 30 22222 11111111 1 11 095 12211112</p> <p>95 = Program Start Year 1995 75 = First Model Year 1975 30 = Last Model Year 2030</p> <p>Next set of 14 values - Vehicle Type subject/not subject to ATP Inspection (1 = NO, 2 = YES) in the following order LDGV, LDGT1, LDGT2, LDGT3, LDGT4, HDGV2B, HDGV3, HDGV4, HDGV5, HDGV6, HDGV7, HDGV8A, HDGV8B, GAS BUS</p> <p>1 = must be entered, entering '2' will discontinue ATP benefits. 1 = Inspection Frequency -Annual 098 <i>or</i> 095 = Compliance Rate of 98% for Davidson County and 95% for other 4 Counties. 12211112 = Inspections Performed (1 = NO, 2 = YES) Air Pump System Disablement = NO Catalyst Removal = YES Fuel Inlet Restrictor Disablement = YES Tailpipe Lead Deposit Test = NO EGR Disablement = NO Evaporative System Disablement = NO PVC System Disablement = NO Missing Gas Cap = YES</p>												
I/M DESC FILE	<p>Name of the external file that contains the I/M program specifications</p> <table border="0"> <thead> <tr> <th data-bbox="630 1581 760 1612"><u>County</u></th> <th data-bbox="922 1581 1084 1612"><u>I/M file name</u></th> </tr> </thead> <tbody> <tr> <td data-bbox="630 1612 760 1644">Davidson</td> <td data-bbox="922 1612 1247 1644">DIM99-01.d <i>or</i> DIM02-30.d</td> </tr> <tr> <td data-bbox="630 1644 760 1675">Rutherford</td> <td data-bbox="922 1644 1247 1675">RIM99-01.d <i>or</i> RIM02-30.d</td> </tr> <tr> <td data-bbox="630 1675 760 1707">Sumner</td> <td data-bbox="922 1675 1247 1707">SIM99-01.d <i>or</i> SIM02-30.d</td> </tr> <tr> <td data-bbox="630 1707 760 1738">Wilson</td> <td data-bbox="922 1707 1247 1738">WnIM9901.d <i>or</i> WnIM0230.d</td> </tr> <tr> <td data-bbox="630 1738 760 1770">Williamson</td> <td data-bbox="922 1738 1247 1770">WIM99-01.d <i>or</i> WIM02-30.d</td> </tr> </tbody> </table>	<u>County</u>	<u>I/M file name</u>	Davidson	DIM99-01.d <i>or</i> DIM02-30.d	Rutherford	RIM99-01.d <i>or</i> RIM02-30.d	Sumner	SIM99-01.d <i>or</i> SIM02-30.d	Wilson	WnIM9901.d <i>or</i> WnIM0230.d	Williamson	WIM99-01.d <i>or</i> WIM02-30.d
<u>County</u>	<u>I/M file name</u>												
Davidson	DIM99-01.d <i>or</i> DIM02-30.d												
Rutherford	RIM99-01.d <i>or</i> RIM02-30.d												
Sumner	SIM99-01.d <i>or</i> SIM02-30.d												
Wilson	WnIM9901.d <i>or</i> WnIM0230.d												
Williamson	WIM99-01.d <i>or</i> WIM02-30.d												



**b. I/M Program “1” Parameters**

<b>Input Command</b>	<b>Value / Description*</b>
I/M PROGRAM	1 1985 2030 1 T/O IDLE <i>or</i> 1 1995 2030 1 T/O IDLE  1 = 1 <sup>st</sup> I/M Program 1985 <i>or</i> 1995 = Program Start Year 1985 for Davidson County and 1995 for other 4 Counties 2030 = Program End Year 2030 1 = Inspection Frequency - Annual T/O = Program Type - Test Only IDLE = Test Type - Idle Test
I/M MODEL YEARS	1 1975 2001 <i>or</i> 1 1975 1995  1975 = First Model Year 1975 2001 = Last Model Year 2001 for analysis years 1999 through 2001. 1995 = Last Model Year 1995 for analysis years 2002 through 2010, 2015, 2020 and 2030
I/M VEHICLES	1 22222 11111111 1  Vehicle Types subject/not subject to Inspection (1 = NO, 2 = YES) in the following order:  LDGV, LDGT1, LDGT2, LDGT3, LDGT4 HDGV2B, HDGV3, HDGV4, HDGV5, HDGV6, HDGV7, HDGV8A, HDGV8B GAS BUS
I/M STRINGENCY	1 30.0  30.0 = Stringency level 30%
I/M COMPLIANCE	1 98.0 <i>or</i> 1 95.0  98.0 = Compliance rate of 98% for Davidson County 95.0 = Compliance rate of 95% for other 4 Counties
I/M WAIVER RATES	1 0.0 0.0 <i>or</i> 1 5.0 5.0  0.0 <i>or</i> 5.0 = Waiver rate for pre-1981 model year vehicle 0% for Davidson County and 5% for other 4 Counties 0.0 <i>or</i> 5.0 = Waiver rate for 1981 and later model year vehicles 0% for Davidson County and 5% for other 4 Counties
I/M EXEMPTION AGE	1 25  25 = vehicles 25 years and older exempt from I/M
I/M GRACE PERIOD	1 1  1 = 1 year grace period when I/M testing not required

\* the first value of “1” in all records refers to the 1<sup>st</sup> I/M program type.

**c. I/M Program “2” Parameters**

<b>Input Command</b>	<b>Value / Description*</b>
I/M PROGRAM	2 2002 2030 1 T/O OBD I/M 2 = 2 <sup>nd</sup> I/M Program 2002 = Program Start Year 2002 2030 = Program End Year 2030 1 = Inspection Frequency - Annual T/O = Program Type - Test Only OBD I/M= Test Type – OBD type I/M
I/M MODEL YEARS	2 1996 2030 1996 = First Model Year 1996 2030 = Last Model Year 2030
I/M VEHICLES	2 22222 11111111 1 Vehicle Types subject/not subject to Inspection (1 = NO, 2 = YES) in the following order: LDGV, LDGT1, LDGT2, LDGT3, LDGT4 HDGV2B, HDGV3, HDGV4, HDGV5, HDGV6, HDGV7, HDGV8A, HDGV8B GAS BUS
I/M STRINGENCY	2 30.0 30.0 = Stringency level 30%
I/M COMPLIANCE	2 98.0 <i>or</i> 2 95.0 98.0 = Compliance rate of 98% for Davidson County 95.0 = Compliance rate of 95% for other 4 Counties
I/M WAIVER RATES	2 0.0 0.0 <i>or</i> 2 5.0 5.0 0.0 <i>or</i> 5.0 = Waiver rate for pre-1981 model year vehicle 0% for Davidson County and 5% for other 4 Counties 0.0 <i>or</i> 5.0 = Waiver rate for 1981 and later model year vehicles 0% for Davidson County and 5% for other 4 Counties

\* the first value of “2” in all records refers to the 2<sup>nd</sup> I/M program type. I/M Program 2 applies to analysis years 2002 and later.

**d. I/M Program “3” Parameters**

<b>Input Command</b>	<b>Value / Description*</b>
I/M PROGRAM	3 2002 2030 1 T/O EVAP OBD & GC  3 = 3 <sup>rd</sup> I/M Program 2002 = Program Start Year 2002 2030 = Program End Year 2030 1 = Inspection Frequency - Annual T/O = Program Type - Test Only EVAP OBD & GC = Evaporative OBD and Gas cap I/M program
I/M MODEL YEARS	3 1996 2030  1996 = First Model Year 1996 2030 = Last Model Year 2030
I/M VEHICLES	3 22222 11111111 1  Vehicle Types subject/not subject to Inspection (1 = NO, 2 = YES) in the following order: LDGV, LDGT1, LDGT2, LDGT3, LDGT4 HDGV2B, HDGV3, HDGV4, HDGV5, HDGV6, HDGV7, HDGV8A, HDGV8B GAS BUS
I/M STRINGENCY	3 30.0  30.0 = Stringency level 30%
I/M COMPLIANCE	3 98.0 <i>or</i> 3 95.0  98.0 = Compliance rate of 98% for Davidson County 95.0 = Compliance rate of 95% for other 4 Counties
I/M WAIVER RATES	3 0.0 0.0 <i>or</i> 3 5.0 5.0  0.0 <i>or</i> 5.0 = Waiver rate for pre-1981 model year vehicle 0% for Davidson County and 5% for other 4 Counties 0.0 <i>or</i> 5.0 = Waiver rate for 1981 and later model year vehicles 0% for Davidson County and 5% for other 4 Counties

\* the first value of “3” in all records refers to the 3<sup>rd</sup> I/M program type. I/M Program 3 applies to analysis years 2002 and later.

**Table D5. Hamilton + Subgroup: Run Section**

<b>Input Command</b>	<b>Value / Description</b>
EXPRESS HC AS VOC	Directs model to output exhaust HC as volatile organic compound Self-sufficient command*
NO REFUELING	Exclude refueling (stage II) emission from all output values Self-sufficient command*
MIN/MAX TEMPERATURE	Minimum Temperature = 66 F Maximum Temperature = 90 F
ABSOLUTE HUMIDITY	Absolute Humidity = 91 grains/pound
REG DIST	Name of the external file that contains the registration distribution fractions. <b>County</b> <b>Urban</b> <b>Rural</b> Hamilton & Marion              UHareg.d              RHareg.d  Area specific registration distribution by age for LDV, LDT1, LDT2, LDT3, and LDT4 and national default distribution for the other 11 vehicles types.
SPEED VMT	Name of the external file that contains the speeds. <b>County</b> <b>Urban</b> <b>Rural</b> Hamilton & Marion              UHam.spd              RHam.spd  <b>Rural:</b> Interstate = 64 mph Arterial = 41 mph Local = National default speed (12.9 mph) Ramps = Not applicable (assume no ramps in rural part of the county)  <b>Urban:</b> Interstate = 55 mph Arterial = 33 mph Local = National default speed (12.9 mph) Ramps = National default speed (34.6 mph)
VMT BY FACILITY	Name of the external file that contains the VMT distribution fractions.  Art-only.vmt (Arterial) or F-only.vmt (Freeway) or R-only.vmt (Ramps) or L-only.vmt (Local).  Allocate all VMT to various roadway or facility types by vehicle class for both rural and urban.
VMT FRACTIONS	County specific VMT fractions by each of 16 combined vehicle types for rural and urban roadway classification. (From TDOT).
FUEL RVP	Average fuel Reid vapor pressure = 9.0

\* A command by itself - no further information required.

**Table D6. Knox + Subgroup: Run Section**

<b>Input Command</b>	<b>Value / Description</b>						
EXPRESS HC AS VOC	Directs model to output exhaust HC as volatile organic compound Self-sufficient command*						
NO REFUELING	Exclude refueling (stage II) emission from all output values. Self-sufficient command*						
MIN/MAX TEMPERATURE	Minimum Temperature = 66 F Maximum Temperature = 90 F						
ABSOLUTE HUMIDITY	Absolute Humidity = 91 grains/pound						
REG DIST	Name of the external file that contains the registration distribution fractions.  <table border="1"> <thead> <tr> <th><u>County</u></th> <th><u>Urban</u></th> <th><u>Rural</u></th> </tr> </thead> <tbody> <tr> <td>Knox + subgroup (all 7 counties)</td> <td>UKnreg.d</td> <td>RKnreg.d</td> </tr> </tbody> </table> Area specific registration distribution by age for LDV, LDT1, LDT2, LDT3, and LDT4 and national default distribution for the other 11 vehicles types.	<u>County</u>	<u>Urban</u>	<u>Rural</u>	Knox + subgroup (all 7 counties)	UKnreg.d	RKnreg.d
<u>County</u>	<u>Urban</u>	<u>Rural</u>					
Knox + subgroup (all 7 counties)	UKnreg.d	RKnreg.d					
SPEED VMT	Name of the external file that contains the speeds.  <table border="1"> <thead> <tr> <th><u>County</u></th> <th><u>Urban</u></th> <th><u>Rural</u></th> </tr> </thead> <tbody> <tr> <td>Knox + subgroup (all 7 counties)</td> <td>UKnox.spd</td> <td>RKnox.spd</td> </tr> </tbody> </table> <b>Rural:</b> Interstate = 64 mph Arterial = 41 mph Local = National default speed (12.9 mph) Ramps = Not applicable (assume no ramps in rural part of the county)	<u>County</u>	<u>Urban</u>	<u>Rural</u>	Knox + subgroup (all 7 counties)	UKnox.spd	RKnox.spd
<u>County</u>	<u>Urban</u>	<u>Rural</u>					
Knox + subgroup (all 7 counties)	UKnox.spd	RKnox.spd					
VMT BY FACILITY	Name of the external file that contains the VMT distribution fractions.  Art-only.vmt (Arterial) or F-only.vmt (Freeway) or R-only.vmt (Ramps) or L-only.vmt (Local).  Allocate all VMT to various roadway or facility types by vehicle class for both rural and urban.						
VMT FRACTIONS	County specific VMT fractions by each of 16 combined vehicle types for rural and urban roadway classification. (From TDOT).						
FUEL RVP	Average fuel Reid vapor pressure = 9.0						

\* A command by itself - no further information required.

**Table D7. Sullivan + Subgroup: Run Section**

<b>Input Command</b>	<b>Value / Description</b>						
EXPRESS HC AS VOC	Directs model to output exhaust HC as volatile organic compound Self-sufficient command*						
NO REFUELING	Exclude refueling (stage II) emission from all output values Self-sufficient command*						
MIN/MAX TEMPERATURE	Minimum Temperature = 66 F Maximum Temperature = 90 F						
ABSOLUTE HUMIDITY	Absolute Humidity = 91 grains/pound						
REG DIST	Name of the external file that contains the registration distribution fractions.  <table border="0"> <thead> <tr> <th><u>County</u></th> <th><u>Urban</u></th> <th><u>Rural</u></th> </tr> </thead> <tbody> <tr> <td>Sullivan + subgroup (all 5 counties)</td> <td>USnreg.d</td> <td>RSnreg.d</td> </tr> </tbody> </table> Area specific registration distribution by age for LDV, LDT1, LDT2, LDT3, and LDT4 and national default distribution for the other 11 vehicles types.	<u>County</u>	<u>Urban</u>	<u>Rural</u>	Sullivan + subgroup (all 5 counties)	USnreg.d	RSnreg.d
<u>County</u>	<u>Urban</u>	<u>Rural</u>					
Sullivan + subgroup (all 5 counties)	USnreg.d	RSnreg.d					
SPEED VMT	Name of the external file that contains the speeds.  <table border="0"> <thead> <tr> <th><u>County</u></th> <th><u>Urban</u></th> <th><u>Rural</u></th> </tr> </thead> <tbody> <tr> <td>Sullivan + subgroup (all 5 counties)</td> <td>USn.spd</td> <td>RSn.spd</td> </tr> </tbody> </table> <b>Rural:</b> Interstate = 64 mph Arterial = 41 mph Local = National default speed (12.9 mph) Ramps = Not applicable (assume no ramps in rural part of the county) <b>Urban:</b> Interstate = 55 mph Arterial = 33 mph Local = National default speed (12.9 mph) Ramps = National default speed (34.6 mph)	<u>County</u>	<u>Urban</u>	<u>Rural</u>	Sullivan + subgroup (all 5 counties)	USn.spd	RSn.spd
<u>County</u>	<u>Urban</u>	<u>Rural</u>					
Sullivan + subgroup (all 5 counties)	USn.spd	RSn.spd					
VMT BY FACILITY	Name of the external file that contains the VMT distribution fractions.  Art-only.vmt (Arterial) or F-only.vmt (Freeway) or R-only.vmt (Ramps) or L-only.vmt (Local).  Allocate all VMT to various roadway or facility types by vehicle class for both rural and urban.						
VMT FRACTIONS	County specific VMT fractions by each of 16 combined vehicle types for rural and urban roadway classification. (From TDOT).						
FUEL RVP	Average fuel Reid vapor pressure = 9.0						

\* A command by itself - no further information required.

**Table D8. All Other Counties Subgroup: Run Section**

<b>Input Command</b>	<b>Value / Description</b>												
EXPRESS HC AS VOC	Directs model to output exhaust HC as volatile organic compound  Self-sufficient command*												
NO REFUELING	Exclude refueling (stage II) emission from all output values  Self-sufficient command*												
MIN/MAX TEMPERATURE	<table border="1"> <thead> <tr> <th><u>Temperature (deg F)</u></th> <th><u>West</u></th> <th><u>Middle</u></th> <th><u>East</u></th> </tr> </thead> <tbody> <tr> <td>Minimum</td> <td>71</td> <td>66</td> <td>66</td> </tr> <tr> <td>Maximum</td> <td>95</td> <td>93</td> <td>90</td> </tr> </tbody> </table>	<u>Temperature (deg F)</u>	<u>West</u>	<u>Middle</u>	<u>East</u>	Minimum	71	66	66	Maximum	95	93	90
<u>Temperature (deg F)</u>	<u>West</u>	<u>Middle</u>	<u>East</u>										
Minimum	71	66	66										
Maximum	95	93	90										
ABSOLUTE HUMIDITY	<table border="1"> <thead> <tr> <th></th> <th><u>West</u></th> <th><u>Middle</u></th> <th><u>East</u></th> </tr> </thead> <tbody> <tr> <td>Abs. Humidity (gr/lb)</td> <td>88</td> <td>75</td> <td>91</td> </tr> </tbody> </table>		<u>West</u>	<u>Middle</u>	<u>East</u>	Abs. Humidity (gr/lb)	88	75	91				
	<u>West</u>	<u>Middle</u>	<u>East</u>										
Abs. Humidity (gr/lb)	88	75	91										
REG DIST	<p>Name of the external file that contains the registration distribution fractions.</p> <table border="1"> <thead> <tr> <th><u>Region</u></th> <th><u>Urban</u></th> <th><u>Rural</u></th> </tr> </thead> <tbody> <tr> <td>West</td> <td>UWestreg.d</td> <td>RWestreg.d</td> </tr> <tr> <td>Middle</td> <td>UMidreg.d</td> <td>RMidreg.d</td> </tr> <tr> <td>East</td> <td>UEastreg.d</td> <td>REastreg.d</td> </tr> </tbody> </table> <p>Area specific registration distribution by age for LDV, LDT1, LDT2, LDT3, and LDT4 and national default distribution for the other 11 vehicles types.</p>	<u>Region</u>	<u>Urban</u>	<u>Rural</u>	West	UWestreg.d	RWestreg.d	Middle	UMidreg.d	RMidreg.d	East	UEastreg.d	REastreg.d
<u>Region</u>	<u>Urban</u>	<u>Rural</u>											
West	UWestreg.d	RWestreg.d											
Middle	UMidreg.d	RMidreg.d											
East	UEastreg.d	REastreg.d											
SPEED VMT	<p>Name of the external file that contains the speeds.</p> <table border="1"> <thead> <tr> <th><u>Region</u></th> <th><u>Urban</u></th> <th><u>Rural</u></th> </tr> </thead> <tbody> <tr> <td>West</td> <td>UWest.spd</td> <td>RWest.spd</td> </tr> <tr> <td>Middle</td> <td>UMiddle.spd</td> <td>RMiddle.spd</td> </tr> <tr> <td>East</td> <td>UEast.spd</td> <td>REast.spd</td> </tr> </tbody> </table> <p><b>Rural:</b>                      Interstate = 64 mph                      Arterial = 41 mph                      Local = National default speed (12.9 mph)                      Ramps = Not applicable (assume no ramps in rural part of the county)</p> <p><b>Urban:</b>                      Interstate = 55 mph                      Arterial = 33 mph                      Local = National default speed (12.9 mph)                      Ramps = National default speed (34.6 mph)</p>	<u>Region</u>	<u>Urban</u>	<u>Rural</u>	West	UWest.spd	RWest.spd	Middle	UMiddle.spd	RMiddle.spd	East	UEast.spd	REast.spd
<u>Region</u>	<u>Urban</u>	<u>Rural</u>											
West	UWest.spd	RWest.spd											
Middle	UMiddle.spd	RMiddle.spd											
East	UEast.spd	REast.spd											

\* A command by itself - no further information required.

**Table D8. Continued.**

<b>Input Command</b>	<b>Value / Description</b>
VMT BY FACILITY	Name of the external file that contains the VMT distribution fractions.  Art-only.vmt (Arterial) or F-only.vmt (Freeway) or R-only.vmt (Ramps) or L-only.vmt (Local).  Allocate all VMT to various roadway or facility types by vehicle class for both rural and urban.
VMT FRACTIONS	County specific VMT fractions by each of 16 combined vehicle types for rural and urban roadway classification. (From TDOT).
FUEL RVP	Average fuel Reid vapor pressure = 9.0

**Table D9. Scenario Section (same for ALL subgroups)**

<b>Input Command</b>	<b>Value / Description</b>
SCENARIO REC	Label/Title for each scenario
CALENDAR YEAR	1999 through 2010 every year, 2015,2020,2025 and 2030
EVALUATION MONTH	7 = July 1 <sup>st</sup> of calendar year



**APPENDIX E**

**MOBILE SOURCE EMISSIONS FOR EAST, MIDDLE AND WEST TENNESSEE**

**Table E1. East Tennessee  
a. VOC Emissions (tons/day)**

N°	County	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2015	2020	2025	2030
1	Anderson	6.07	5.80	5.54	5.23	4.96	4.54	4.14	3.91	3.76	3.53	3.37	3.20	2.41	1.89	1.72	1.80
2	Bledsoe	0.70	0.67	0.65	0.61	0.59	0.55	0.51	0.48	0.47	0.44	0.42	0.40	0.30	0.24	0.22	0.23
3	Blount	6.67	6.48	6.29	6.03	5.80	5.38	4.97	4.75	4.61	4.38	4.22	4.04	3.16	2.57	2.41	2.58
4	Bradley	7.42	7.13	6.88	6.56	6.28	5.84	5.41	5.15	4.99	4.73	4.54	4.34	3.29	2.60	2.40	2.54
5	Campbell	3.61	3.53	3.44	3.30	3.14	2.89	2.63	2.48	2.39	2.24	2.14	2.04	1.65	1.44	1.36	1.45
6	Carter	3.92	3.75	3.58	3.39	3.23	2.98	2.73	2.59	2.50	2.35	2.25	2.14	1.59	1.22	1.09	1.14
7	Claiborne	2.34	2.26	2.19	2.10	2.02	1.89	1.75	1.68	1.63	1.55	1.49	1.43	1.09	0.86	0.80	0.86
8	Cocke	3.36	3.23	3.12	2.98	2.85	2.66	2.46	2.34	2.28	2.16	2.08	1.99	1.52	1.21	1.12	1.18
9	Cumberland	4.38	4.30	4.21	4.05	3.87	3.57	3.26	3.09	2.98	2.79	2.68	2.56	2.08	1.83	1.74	1.86
10	Grainger	1.90	1.84	1.79	1.72	1.66	1.56	1.45	1.39	1.36	1.29	1.25	1.20	0.92	0.74	0.69	0.74
11	Greene	6.71	6.51	6.32	6.07	5.85	5.48	5.10	4.88	4.76	4.53	4.38	4.20	3.26	2.62	2.45	2.62
12	Hamblen	4.93	4.75	4.58	4.37	4.20	3.91	3.62	3.45	3.34	3.16	3.04	2.90	2.19	1.73	1.61	1.70
13	Hamilton	25.58	24.65	23.79	22.72	21.75	20.09	18.65	17.68	17.06	16.15	15.46	14.69	11.11	8.99	8.52	9.06
14	Hancock	0.31	0.30	0.29	0.28	0.27	0.25	0.24	0.23	0.22	0.21	0.20	0.19	0.15	0.12	0.11	0.12
15	Hawkins	3.70	3.53	3.38	3.20	3.06	2.82	2.58	2.46	2.37	2.24	2.14	2.04	1.52	1.17	1.05	1.09
16	Jefferson	5.33	5.18	5.03	4.81	4.61	4.27	3.94	3.76	3.66	3.48	3.37	3.24	2.57	2.10	1.97	2.11
17	Johnson	1.07	1.03	0.99	0.94	0.90	0.84	0.78	0.74	0.71	0.67	0.65	0.62	0.46	0.36	0.33	0.35
18	Knox	31.81	30.81	29.81	28.45	27.26	25.17	23.16	22.05	21.39	20.28	19.52	18.67	14.54	11.77	10.97	11.69
19	Loudon	4.76	4.60	4.43	4.22	4.02	3.70	3.40	3.23	3.13	2.97	2.86	2.73	2.13	1.72	1.59	1.69
20	McMinn	5.99	5.77	5.58	5.33	5.11	4.76	4.41	4.21	4.09	3.88	3.73	3.57	2.74	2.18	2.02	2.14
21	Marion	4.30	4.18	4.06	3.90	3.74	3.48	3.24	3.09	3.01	2.87	2.77	2.65	2.08	1.72	1.65	1.76
22	Meigs	0.77	0.73	0.70	0.66	0.62	0.57	0.52	0.49	0.47	0.44	0.42	0.40	0.29	0.22	0.20	0.20
23	Monroe	3.26	3.15	3.04	2.91	2.79	2.60	2.41	2.31	2.24	2.13	2.05	1.96	1.50	1.19	1.10	1.17
24	Morgan	1.11	1.06	1.02	0.97	0.93	0.86	0.79	0.75	0.73	0.69	0.66	0.63	0.47	0.36	0.33	0.35
25	Polk	1.45	1.39	1.33	1.26	1.20	1.11	1.03	0.97	0.94	0.88	0.85	0.81	0.60	0.46	0.42	0.44
26	Rhea	2.10	2.01	1.93	1.83	1.75	1.62	1.50	1.42	1.37	1.29	1.24	1.18	0.87	0.68	0.62	0.65
27	Roane	4.01	3.87	3.73	3.54	3.35	3.05	2.75	2.57	2.45	2.27	2.15	2.04	1.59	1.34	1.24	1.29
28	Scott	1.36	1.32	1.28	1.23	1.19	1.11	1.03	0.99	0.96	0.92	0.89	0.85	0.65	0.52	0.49	0.52
29	Sevier	6.24	6.09	5.94	5.70	5.51	5.12	4.74	4.54	4.43	4.22	4.08	3.92	3.10	2.54	2.40	2.58
30	Sullivan	13.91	13.40	12.93	12.33	11.83	10.99	10.12	9.68	9.40	8.90	8.57	8.20	6.26	4.90	4.46	4.73
31	Unicoi	1.48	1.44	1.40	1.34	1.29	1.21	1.12	1.08	1.05	1.00	0.97	0.93	0.72	0.57	0.52	0.56
32	Union	0.80	0.77	0.75	0.71	0.68	0.63	0.58	0.55	0.53	0.50	0.48	0.46	0.36	0.29	0.26	0.28
33	Washington	8.67	8.37	8.09	7.73	7.43	6.91	6.37	6.10	5.94	5.63	5.43	5.20	3.99	3.14	2.86	3.04
		180.03	173.89	168.07	160.45	153.75	142.42	131.37	125.09	121.25	114.76	110.35	105.39	81.18	65.29	60.71	64.52

**b. NO<sub>x</sub> Emissions (tons/day)**

<b>N°</b>	<b>County</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>
1	Anderson	10.08	9.76	9.33	8.94	8.36	7.61	7.12	6.57	6.17	5.71	5.32	4.89	3.07	2.13	1.72	1.58
2	Bledsoe	0.67	0.65	0.64	0.62	0.60	0.56	0.53	0.49	0.47	0.45	0.43	0.40	0.29	0.22	0.19	0.18
3	Blount	6.54	6.48	6.39	6.28	6.05	5.60	5.33	4.97	4.77	4.52	4.29	4.04	2.90	2.25	1.99	1.97
4	Bradley	14.90	14.51	13.90	13.35	12.50	11.50	10.85	10.14	9.57	8.91	8.34	7.70	4.86	3.32	2.64	2.42
5	Campbell	14.88	14.54	13.89	13.33	12.40	11.37	10.67	9.94	9.29	8.56	7.93	7.22	4.19	2.70	2.06	1.78
6	Carter	3.55	3.45	3.35	3.24	3.08	2.83	2.67	2.49	2.37	2.24	2.12	1.99	1.41	1.06	0.90	0.86
7	Claiborne	2.23	2.20	2.17	2.13	2.05	1.91	1.83	1.72	1.66	1.58	1.51	1.43	1.04	0.80	0.70	0.69
8	Cocke	8.50	8.28	7.91	7.59	7.08	6.51	6.13	5.74	5.40	5.01	4.68	4.30	2.65	1.76	1.37	1.23
9	Cumberland	15.60	15.32	14.72	14.19	13.27	12.20	11.48	10.72	10.06	9.30	8.64	7.90	4.69	3.09	2.41	2.13
10	Grainger	1.81	1.80	1.77	1.75	1.69	1.58	1.52	1.43	1.38	1.32	1.26	1.20	0.88	0.68	0.60	0.59
11	Greene	14.47	14.20	13.69	13.24	12.46	11.54	10.94	10.29	9.75	9.11	8.56	7.93	5.06	3.48	2.78	2.56
12	Hamblen	7.02	6.86	6.62	6.41	6.06	5.60	5.30	4.96	4.72	4.42	4.17	3.88	2.58	1.85	1.53	1.44
13	Hamilton	41.94	40.98	39.41	37.98	35.72	32.72	30.90	28.75	27.19	25.37	23.77	21.99	14.21	10.05	8.33	7.88
14	Hancock	0.30	0.29	0.29	0.29	0.28	0.26	0.25	0.23	0.22	0.21	0.20	0.19	0.14	0.11	0.10	0.09
15	Hawkins	3.24	3.16	3.07	2.98	2.84	2.62	2.48	2.31	2.21	2.09	1.99	1.87	1.34	1.01	0.86	0.83
16	Jefferson	15.00	14.71	14.15	13.65	12.80	11.79	11.12	10.41	9.81	9.11	8.51	7.82	4.81	3.23	2.53	2.28
17	Johnson	1.02	1.00	0.98	0.96	0.92	0.85	0.81	0.76	0.73	0.69	0.66	0.62	0.44	0.33	0.29	0.28
18	Knox	54.30	53.22	51.35	49.62	46.74	42.86	40.44	37.67	35.64	33.26	31.19	28.89	18.81	13.39	11.06	10.39
19	Loudon	13.40	13.05	12.47	11.96	11.15	10.21	9.58	8.93	8.38	7.75	7.20	6.60	3.99	2.64	2.05	1.83
20	McMinn	14.90	14.53	13.90	13.35	12.47	11.48	10.82	10.13	9.54	8.87	8.28	7.62	4.71	3.15	2.45	2.21
21	Marion	15.73	15.42	14.79	14.25	13.32	12.29	11.60	10.89	10.24	9.50	8.85	8.11	4.85	3.16	2.41	2.13
22	Meigs	0.74	0.72	0.69	0.67	0.63	0.58	0.55	0.51	0.48	0.45	0.43	0.40	0.28	0.20	0.17	0.16
23	Monroe	5.58	5.46	5.27	5.09	4.80	4.44	4.20	3.94	3.74	3.50	3.29	3.06	2.00	1.40	1.15	1.07
24	Morgan	1.06	1.03	1.01	0.98	0.94	0.87	0.83	0.77	0.74	0.70	0.67	0.63	0.44	0.33	0.29	0.28
25	Polk	1.38	1.35	1.31	1.28	1.22	1.13	1.07	1.00	0.96	0.90	0.86	0.81	0.57	0.43	0.36	0.35
26	Rhea	1.92	1.87	1.83	1.78	1.70	1.58	1.50	1.40	1.34	1.27	1.20	1.13	0.81	0.61	0.52	0.51
27	Roane	12.25	11.85	11.24	10.71	9.90	8.99	8.37	7.72	7.17	6.57	6.05	5.49	3.17	2.05	1.59	1.39
28	Scott	1.30	1.28	1.27	1.25	1.21	1.13	1.08	1.02	0.98	0.94	0.90	0.85	0.62	0.48	0.42	0.42
29	Sevier	8.47	8.39	8.23	8.06	7.71	7.14	6.79	6.36	6.08	5.73	5.42	5.07	3.48	2.60	2.23	2.16
30	Sullivan	17.93	17.52	16.92	16.35	15.43	14.20	13.43	12.57	11.97	11.24	10.62	9.91	6.73	4.89	4.07	3.85
31	Unicoi	1.35	1.34	1.32	1.30	1.25	1.17	1.11	1.05	1.01	0.97	0.93	0.88	0.65	0.51	0.44	0.44
32	Union	0.93	0.92	0.89	0.87	0.83	0.77	0.72	0.67	0.64	0.60	0.57	0.53	0.37	0.28	0.24	0.23
33	Washington	11.20	10.97	10.61	10.27	9.72	8.95	8.48	7.95	7.58	7.13	6.74	6.30	4.30	3.14	2.62	2.49
		324.21	317.13	305.37	294.69	277.19	254.82	240.50	224.51	212.28	197.99	185.55	171.68	110.35	77.32	63.04	58.69

**Table E2. Middle Tennessee**  
**a. VOC Emissions (tons/day)**

Nº	County	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2015	2020	2025	2030
1	Bedford	2.9684	2.871	2.7823	2.6672	2.572	2.4057	2.2354	2.14081	2.0818	1.977	1.9052	1.822	1.3895	1.1029	1.029	1.09943
2	Cannon	0.93	0.89	0.86	0.82	0.78	0.73	0.67	0.64	0.62	0.59	0.56	0.54	0.40	0.31	0.29	0.30
3	Cheatham	3.37	3.27	3.17	3.04	2.94	2.75	2.55	2.45	2.39	2.28	2.21	2.12	1.65	1.33	1.24	1.32
4	Clay	0.54	0.51	0.49	0.47	0.44	0.41	0.38	0.36	0.35	0.33	0.31	0.30	0.22	0.17	0.15	0.16
5	Coffee	4.35	4.23	4.11	3.92	3.73	3.42	3.10	2.91	2.80	2.60	2.48	2.36	1.87	1.61	1.51	1.60
6	Davidson	32.59	32.03	31.41	30.09	28.83	26.11	24.58	22.74	21.64	20.32	19.11	17.87	12.75	10.55	10.53	11.34
7	DeKalb	1.26	1.21	1.17	1.11	1.07	0.99	0.92	0.88	0.85	0.81	0.77	0.74	0.56	0.44	0.40	0.43
8	Dickson	4.61	4.44	4.28	4.08	3.91	3.64	3.37	3.21	3.11	2.95	2.84	2.71	2.06	1.62	1.50	1.59
9	Fentress	1.23	1.18	1.14	1.09	1.05	0.98	0.90	0.86	0.84	0.79	0.76	0.73	0.55	0.43	0.40	0.42
10	Franklin	2.69	2.55	2.43	2.29	2.18	2.00	1.83	1.73	1.66	1.56	1.48	1.40	1.02	0.77	0.69	0.71
11	Giles	3.49	3.37	3.26	3.12	3.00	2.80	2.60	2.48	2.42	2.30	2.22	2.12	1.63	1.30	1.21	1.28
12	Grundy	1.33	1.27	1.21	1.15	1.10	1.01	0.93	0.88	0.85	0.81	0.77	0.74	0.55	0.43	0.39	0.41
13	Hickman	2.73	2.65	2.57	2.46	2.37	2.21	2.05	1.97	1.92	1.83	1.76	1.69	1.31	1.05	0.98	1.04
14	Houston	0.45	0.43	0.41	0.40	0.38	0.35	0.33	0.31	0.30	0.29	0.28	0.26	0.20	0.16	0.14	0.15
15	Humphreys	2.50	2.42	2.34	2.24	2.16	2.01	1.87	1.79	1.74	1.66	1.60	1.54	1.19	0.95	0.88	0.94
16	Jackson	0.81	0.77	0.74	0.70	0.67	0.62	0.57	0.54	0.52	0.49	0.47	0.45	0.33	0.26	0.23	0.25
17	Lawrence	2.86	2.77	2.68	2.57	2.48	2.32	2.16	2.07	2.01	1.91	1.84	1.76	1.34	1.06	0.99	1.06
18	Lewis	0.61	0.59	0.57	0.55	0.53	0.49	0.46	0.44	0.43	0.40	0.39	0.37	0.28	0.23	0.21	0.22
19	Lincoln	2.51	2.39	2.29	2.17	2.07	1.91	1.76	1.67	1.61	1.51	1.44	1.37	1.01	0.77	0.70	0.74
20	Macon	1.19	1.13	1.08	1.03	0.98	0.91	0.83	0.79	0.76	0.72	0.69	0.65	0.48	0.37	0.34	0.36
21	Marshall	2.80	2.70	2.62	2.51	2.41	2.25	2.09	2.00	1.95	1.85	1.79	1.71	1.31	1.05	0.97	1.04
22	Mauzy	7.39	7.15	6.92	6.63	6.38	5.96	5.53	5.30	5.15	4.89	4.71	4.51	3.45	2.74	2.55	2.72
23	Montgomery	9.99	9.66	9.36	8.97	8.65	8.09	7.51	7.19	6.99	6.64	6.39	6.11	4.66	3.71	3.47	3.70
24	Moore	0.44	0.42	0.40	0.38	0.36	0.33	0.31	0.29	0.28	0.26	0.25	0.24	0.17	0.13	0.12	0.12
25	Overton	1.72	1.66	1.61	1.54	1.48	1.39	1.29	1.23	1.20	1.14	1.10	1.05	0.80	0.63	0.59	0.63
26	Perry	0.68	0.66	0.65	0.62	0.60	0.56	0.53	0.51	0.49	0.47	0.45	0.44	0.34	0.27	0.25	0.27
27	Picket	0.37	0.35	0.34	0.33	0.32	0.30	0.28	0.27	0.26	0.25	0.24	0.23	0.18	0.14	0.13	0.14
28	Putnam	5.26	5.16	5.04	4.85	4.64	4.28	3.90	3.69	3.56	3.33	3.19	3.05	2.48	2.17	2.06	2.20
29	Robertson	4.76	4.67	4.58	4.40	4.21	3.89	3.55	3.36	3.25	3.04	2.92	2.79	2.28	2.00	1.90	2.03
30	Rutherford	8.72	8.60	8.46	8.11	7.79	7.08	6.68	6.19	5.91	5.56	5.23	4.89	3.48	2.86	2.86	3.09
31	Sequatchie	1.08	1.05	1.02	0.98	0.95	0.89	0.83	0.80	0.78	0.74	0.72	0.69	0.53	0.43	0.40	0.43
32	Smith	2.16	2.12	2.07	1.98	1.89	1.74	1.58	1.49	1.44	1.35	1.29	1.23	1.00	0.87	0.82	0.87
33	Stewart	0.93	0.89	0.86	0.82	0.78	0.73	0.67	0.64	0.62	0.58	0.56	0.53	0.40	0.31	0.28	0.30
34	Sumner	5.48	5.37	5.25	5.01	4.79	4.34	4.08	3.77	3.58	3.35	3.14	2.92	2.04	1.65	1.64	1.76
35	Trousdale	0.66	0.63	0.60	0.57	0.54	0.50	0.46	0.44	0.42	0.40	0.38	0.36	0.26	0.20	0.18	0.19
36	Van Buren	0.50	0.49	0.48	0.46	0.45	0.43	0.40	0.39	0.38	0.36	0.35	0.34	0.27	0.22	0.20	0.22
37	Warren	3.02	2.90	2.78	2.64	2.53	2.35	2.16	2.06	1.99	1.88	1.80	1.71	1.27	0.99	0.91	0.95
38	Wayne	1.16	1.12	1.09	1.04	1.00	0.94	0.87	0.83	0.81	0.77	0.74	0.71	0.54	0.42	0.39	0.42
39	White	1.78	1.72	1.67	1.60	1.55	1.45	1.34	1.29	1.26	1.19	1.15	1.10	0.85	0.67	0.63	0.67
40	Williamson	5.92	5.86	5.77	5.53	5.32	4.83	4.56	4.22	4.03	3.79	3.57	3.34	2.38	1.95	1.95	2.11
41	Wilson	5.14	5.06	4.96	4.73	4.53	4.10	3.86	3.57	3.40	3.19	3.00	2.80	1.98	1.62	1.61	1.73
		142.97	139.22	135.54	129.67	124.40	114.50	106.59	100.40	96.63	91.15	86.87	82.28	61.43	49.94	47.75	51.05

**b. NO<sub>x</sub> Emissions (tons/day)**

N°	County	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2015	2020	2025	2030
1	Bedford	2.82	2.79	2.75	2.70	2.61	2.44	2.34	2.20	2.12	2.02	1.93	1.83	1.34	1.03	0.91	0.89
2	Cannon	0.89	0.87	0.85	0.84	0.80	0.75	0.71	0.67	0.64	0.61	0.58	0.55	0.39	0.30	0.26	0.25
3	Cheatham	8.83	8.67	8.35	8.06	7.58	7.02	6.65	6.25	5.92	5.52	5.18	4.78	3.00	2.03	1.60	1.45
4	Clay	0.51	0.50	0.49	0.48	0.46	0.42	0.40	0.37	0.36	0.34	0.32	0.30	0.21	0.16	0.14	0.13
5	Coffee	13.98	13.63	13.02	12.49	11.62	10.63	9.95	9.24	8.63	7.94	7.35	6.70	3.95	2.61	2.04	1.80
6	Davidson	79.67	78.43	75.97	73.08	68.98	62.95	59.41	54.77	51.44	47.59	44.05	40.18	23.42	14.95	11.78	10.88
7	DeKalb	1.20	1.18	1.16	1.14	1.09	1.02	0.97	0.91	0.88	0.83	0.79	0.75	0.54	0.42	0.36	0.35
8	Dickson	9.47	9.24	8.86	8.53	8.00	7.37	6.96	6.52	6.15	5.73	5.37	4.96	3.15	2.16	1.72	1.58
9	Fentress	1.18	1.16	1.14	1.11	1.07	1.00	0.96	0.90	0.86	0.82	0.78	0.74	0.54	0.41	0.36	0.35
10	Franklin	2.47	2.40	2.32	2.25	2.14	1.97	1.87	1.73	1.65	1.56	1.47	1.38	0.97	0.72	0.61	0.58
11	Giles	7.79	7.62	7.33	7.07	6.64	6.14	5.81	5.45	5.16	4.81	4.51	4.17	2.65	1.81	1.44	1.32
12	Grundy	3.35	3.24	3.08	2.94	2.73	2.50	2.34	2.18	2.04	1.89	1.75	1.61	0.98	0.64	0.49	0.44
13	Hickman	7.14	7.00	6.72	6.49	6.09	5.63	5.32	5.00	4.73	4.40	4.13	3.81	2.38	1.61	1.26	1.14
14	Houston	0.43	0.42	0.41	0.40	0.39	0.36	0.35	0.32	0.31	0.30	0.28	0.27	0.19	0.15	0.13	0.13
15	Humphreys	6.58	6.44	6.19	5.96	5.59	5.16	4.88	4.58	4.33	4.03	3.77	3.48	2.17	1.46	1.14	1.03
16	Jackson	0.77	0.75	0.73	0.72	0.69	0.64	0.60	0.56	0.54	0.51	0.49	0.46	0.33	0.25	0.21	0.21
17	Lawrence	2.60	2.57	2.54	2.50	2.42	2.27	2.17	2.05	1.98	1.89	1.81	1.72	1.27	0.98	0.87	0.86
18	Lewis	0.58	0.58	0.57	0.56	0.54	0.50	0.48	0.45	0.44	0.42	0.40	0.38	0.28	0.21	0.19	0.19
19	Lincoln	2.28	2.23	2.17	2.11	2.02	1.87	1.78	1.65	1.58	1.50	1.42	1.34	0.95	0.72	0.62	0.60
20	Macon	1.13	1.11	1.08	1.05	1.00	0.93	0.88	0.82	0.79	0.74	0.71	0.67	0.47	0.36	0.31	0.30
21	Marshall	5.42	5.31	5.13	4.96	4.68	4.33	4.11	3.86	3.66	3.42	3.22	2.99	1.94	1.35	1.09	1.02
22	Mauzy	11.51	11.31	10.96	10.64	10.08	9.35	8.88	8.34	7.95	7.47	7.05	6.58	4.40	3.16	2.62	2.48
23	Montgomery	12.57	12.38	12.05	11.75	11.20	10.40	9.92	9.32	8.92	8.42	7.99	7.50	5.20	3.84	3.26	3.14
24	Moore	0.42	0.41	0.40	0.39	0.37	0.34	0.32	0.30	0.29	0.27	0.26	0.24	0.17	0.13	0.11	0.10
25	Overton	1.64	1.62	1.60	1.57	1.52	1.42	1.36	1.28	1.24	1.18	1.13	1.07	0.78	0.60	0.53	0.52
26	Perry	0.65	0.65	0.64	0.64	0.62	0.58	0.56	0.52	0.51	0.49	0.47	0.44	0.33	0.26	0.23	0.22
27	Picket	0.35	0.35	0.34	0.34	0.33	0.31	0.30	0.28	0.27	0.26	0.25	0.24	0.17	0.14	0.12	0.12
28	Putnam	18.84	18.50	17.77	17.13	16.02	14.73	13.86	12.94	12.14	11.22	10.43	9.54	5.67	3.75	2.94	2.60
29	Robertson	18.22	17.90	17.21	16.60	15.53	14.30	13.47	12.59	11.81	10.92	10.15	9.28	5.50	3.62	2.82	2.48
30	Rutherford	25.77	25.46	24.72	23.84	22.53	20.70	19.57	18.17	17.07	15.80	14.64	13.34	7.63	4.71	3.56	3.17
31	Sequatchie	1.03	1.02	1.01	1.00	0.97	0.91	0.88	0.83	0.80	0.77	0.74	0.70	0.52	0.41	0.36	0.36
32	Smith	8.98	8.79	8.41	8.08	7.53	6.91	6.49	6.05	5.66	5.22	4.84	4.41	2.58	1.67	1.28	1.11
33	Stewart	0.89	0.87	0.85	0.84	0.80	0.74	0.71	0.66	0.64	0.60	0.57	0.54	0.39	0.30	0.26	0.25
34	Sumner	13.03	12.82	12.44	11.95	11.29	10.31	9.72	8.96	8.40	7.76	7.17	6.53	3.72	2.31	1.77	1.61
35	Trousdale	0.63	0.62	0.60	0.58	0.56	0.52	0.49	0.45	0.43	0.41	0.39	0.37	0.26	0.19	0.16	0.16
36	Van Buren	0.48	0.48	0.48	0.47	0.46	0.44	0.42	0.40	0.39	0.38	0.36	0.35	0.26	0.21	0.18	0.18
37	Warren	2.72	2.67	2.61	2.55	2.45	2.27	2.17	2.02	1.94	1.84	1.75	1.66	1.19	0.91	0.79	0.77
38	Wayne	1.11	1.10	1.08	1.06	1.03	0.96	0.92	0.86	0.83	0.79	0.76	0.72	0.52	0.40	0.35	0.35
39	White	1.70	1.68	1.66	1.64	1.58	1.48	1.42	1.34	1.29	1.23	1.18	1.12	0.83	0.64	0.56	0.56
40	Williamson	16.14	15.97	15.55	15.02	14.24	13.08	12.38	11.48	10.80	10.01	9.28	8.47	4.88	3.05	2.34	2.11
41	Wilson	16.85	16.56	15.99	15.35	14.42	13.19	12.44	11.52	10.79	9.96	9.20	8.36	4.72	2.87	2.13	1.86
		312.63	307.30	297.23	286.88	270.69	248.83	235.23	218.82	206.39	191.85	178.92	164.52	100.85	67.47	53.88	49.71

**Table E3. West Tennessee  
a. VOC Emissions (tons/day)**

No.	County	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2015	2020	2025	2030
1	Benton	2.16	2.08	2.01	1.92	1.84	1.71	1.58	1.51	1.46	1.39	1.34	1.28	0.97	0.76	0.71	0.75
2	Carroll	2.58	2.47	2.37	2.25	2.15	1.99	1.84	1.75	1.69	1.59	1.53	1.45	1.08	0.83	0.76	0.80
3	Chester	1.22	1.17	1.14	1.08	1.04	0.97	0.90	0.86	0.84	0.80	0.77	0.73	0.55	0.44	0.40	0.43
4	Crockett	1.46	1.41	1.36	1.30	1.25	1.16	1.08	1.03	1.00	0.95	0.91	0.87	0.66	0.52	0.48	0.51
5	Decatur	1.57	1.53	1.49	1.43	1.39	1.30	1.21	1.17	1.14	1.09	1.05	1.01	0.79	0.63	0.60	0.64
6	Dyer	3.71	3.55	3.40	3.22	3.07	2.84	2.61	2.48	2.39	2.26	2.16	2.05	1.51	1.17	1.06	1.12
7	Fayette	2.85	2.77	2.69	2.57	2.46	2.26	2.11	1.99	1.92	1.82	1.74	1.65	1.27	1.10	1.09	1.18
8	Gibson	3.79	3.61	3.45	3.27	3.11	2.88	2.64	2.51	2.41	2.27	2.17	2.05	1.50	1.15	1.05	1.09
9	Hardeman	2.25	2.15	2.05	1.95	1.86	1.72	1.58	1.50	1.44	1.36	1.30	1.23	0.90	0.69	0.63	0.66
10	Hardin	2.20	2.12	2.04	1.95	1.87	1.74	1.61	1.54	1.49	1.41	1.35	1.29	0.97	0.76	0.70	0.74
11	Haywood	2.57	2.50	2.43	2.31	2.20	2.01	1.82	1.71	1.64	1.53	1.46	1.39	1.10	0.95	0.89	0.94
12	Henderson	3.33	3.27	3.21	3.09	2.96	2.73	2.49	2.36	2.28	2.14	2.05	1.96	1.60	1.40	1.34	1.43
13	Henry	2.80	2.67	2.56	2.43	2.32	2.15	1.98	1.88	1.82	1.71	1.64	1.56	1.15	0.89	0.81	0.85
14	Lake	0.35	0.33	0.31	0.29	0.27	0.25	0.23	0.21	0.20	0.19	0.18	0.17	0.11	0.08	0.07	0.07
15	Lauderdale	2.10	2.00	1.90	1.79	1.70	1.56	1.43	1.35	1.29	1.21	1.15	1.09	0.78	0.59	0.53	0.55
16	Madison	11.19	10.81	10.46	10.00	9.62	8.99	8.33	7.97	7.75	7.36	7.08	6.77	5.15	4.08	3.80	4.06
17	McNairy	2.52	2.43	2.34	2.23	2.14	2.00	1.85	1.76	1.71	1.62	1.56	1.48	1.11	0.87	0.80	0.85
18	Obion	3.27	3.12	2.99	2.82	2.69	2.49	2.28	2.17	2.09	1.96	1.87	1.78	1.30	0.99	0.90	0.94
19	Shelby	44.36	43.18	42.07	40.24	38.54	35.02	32.77	30.59	29.29	27.64	26.19	24.68	18.20	12.39	11.97	12.84
20	Tipton	2.11	2.03	1.96	1.87	1.79	1.63	1.52	1.43	1.37	1.30	1.23	1.16	0.87	0.74	0.73	0.78
21	Weakley	2.49	2.37	2.27	2.15	2.04	1.89	1.74	1.65	1.58	1.49	1.42	1.35	0.99	0.76	0.69	0.72
		100.88	97.57	94.50	90.17	86.31	79.29	73.60	69.40	66.81	63.08	60.15	57.00	42.58	31.79	30.02	31.97

**b. NO<sub>x</sub> Emissions (tons/day)**

No.	County	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2015	2020	2025	2030
1	Benton	4.84	4.72	4.52	4.35	4.08	3.76	3.55	3.32	3.13	2.92	2.73	2.52	1.57	1.06	0.84	0.76
2	Carroll	2.55	2.49	2.43	2.37	2.26	2.09	1.99	1.86	1.78	1.68	1.59	1.50	1.05	0.79	0.67	0.65
3	Chester	1.11	1.10	1.08	1.06	1.03	0.96	0.92	0.86	0.83	0.79	0.76	0.72	0.52	0.40	0.35	0.35
4	Crockett	1.33	1.31	1.29	1.27	1.23	1.14	1.09	1.03	0.99	0.94	0.90	0.85	0.62	0.47	0.42	0.41
5	Decatur	3.60	3.55	3.44	3.34	3.15	2.93	2.78	2.63	2.49	2.33	2.19	2.04	1.30	0.89	0.71	0.66
6	Dyer	4.73	4.61	4.44	4.28	4.04	3.72	3.52	3.28	3.11	2.91	2.74	2.55	1.69	1.21	1.00	0.95
7	Fayette	10.24	10.03	9.63	9.28	8.69	7.99	7.54	7.04	6.60	6.11	5.68	5.18	3.05	1.99	1.54	1.38
8	Gibson	3.30	3.22	3.14	3.06	2.92	2.71	2.57	2.39	2.29	2.16	2.05	1.93	1.37	1.03	0.88	0.86
9	Hardeman	2.00	1.95	1.90	1.86	1.78	1.64	1.56	1.46	1.39	1.32	1.25	1.18	0.84	0.63	0.54	0.52
10	Hardin	1.94	1.92	1.88	1.85	1.78	1.66	1.59	1.49	1.43	1.36	1.30	1.23	0.89	0.68	0.60	0.59
11	Haywood	9.91	9.65	9.19	8.80	8.16	7.46	6.98	6.49	6.05	5.56	5.14	4.67	2.69	1.73	1.31	1.13
12	Henderson	11.70	11.53	11.10	10.74	10.06	9.28	8.76	8.19	7.70	7.13	6.63	6.07	3.62	2.40	1.88	1.66
13	Henry	2.42	2.37	2.32	2.27	2.17	2.02	1.92	1.79	1.72	1.63	1.55	1.46	1.04	0.79	0.68	0.67
14	Lake	0.32	0.31	0.30	0.28	0.27	0.24	0.23	0.21	0.20	0.19	0.17	0.16	0.11	0.08	0.06	0.06
15	Lauderdale	1.82	1.77	1.71	1.66	1.58	1.46	1.38	1.28	1.22	1.15	1.09	1.02	0.71	0.53	0.45	0.43
16	Madison	18.11	17.77	17.17	16.64	15.72	14.56	13.83	12.98	12.33	11.56	10.89	10.13	6.66	4.71	3.86	3.63
17	McNairy	2.30	2.27	2.23	2.19	2.11	1.96	1.88	1.76	1.69	1.61	1.53	1.45	1.05	0.80	0.70	0.69
18	Obion	2.86	2.79	2.72	2.65	2.53	2.34	2.23	2.07	1.98	1.87	1.78	1.67	1.19	0.89	0.76	0.74
19	Shelby	74.83	73.80	71.97	69.79	66.48	60.88	57.67	53.19	50.27	46.83	43.65	40.16	25.04	14.29	11.19	10.36
20	Tipton	2.40	2.37	2.33	2.29	2.21	2.03	1.94	1.78	1.70	1.59	1.50	1.39	0.94	0.72	0.65	0.65
21	Weakley	2.19	2.14	2.09	2.03	1.94	1.80	1.71	1.59	1.52	1.44	1.36	1.28	0.91	0.68	0.58	0.57
		164.51	161.68	156.89	152.04	144.19	132.63	125.61	116.69	110.45	103.07	96.47	89.17	56.86	36.77	29.68	27.70

**Table E4. Statewide Emissions**

**a. VOC Emissions (tons/day)**

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2015	2020	2025	2030
East	180.03	173.89	168.07	160.45	153.75	142.42	131.37	125.09	121.25	114.76	110.35	105.39	81.18	65.29	60.71	64.52
Middle	142.97	139.22	135.54	129.67	124.40	114.50	106.59	100.40	96.63	91.15	86.87	82.28	61.43	49.94	47.75	51.05
West	100.88	97.57	94.50	90.17	86.31	79.29	73.60	69.40	66.81	63.08	60.15	57.00	42.58	31.79	30.02	31.97
TOTAL	423.89	410.69	398.11	380.29	364.46	336.21	311.55	294.89	284.69	269.00	257.38	244.66	185.19	147.01	138.48	147.54

**b. NO<sub>x</sub> Emissions (tons/day)**

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2015	2020	2025	2030
East	324.21	317.13	305.37	294.69	277.19	254.82	240.50	224.51	212.28	197.99	185.55	171.68	110.35	77.32	63.04	58.69
Middle	312.63	307.30	297.23	286.88	270.69	248.83	235.23	218.82	206.39	191.85	178.92	164.52	100.85	67.47	53.88	49.71
West	164.51	161.68	156.89	152.04	144.19	132.63	125.61	116.69	110.45	103.07	96.47	89.17	56.86	36.77	29.68	27.70
TOTAL	801.35	786.11	759.48	733.62	692.07	636.29	601.34	560.02	529.11	492.91	460.94	425.37	268.05	181.56	146.60	136.10