2007 Pennsylvania Traffic Data



Bureau of Planning and Research Transportation Planning Information Division

In cooperation with: US Department of Transportaton Federal Highway Administration **PUB 601 (7-08)**



On The Cover: Tamaqua Train Station located in Tamaqua, PA (PennDOT Transportation Enhancement funded project completed in September, 2004.)



Table of Contents

Table of Contents	1
Introduction	2
How to Use This Booklet	2
New Developments and Enhancements	3
Internet Traffic Data Upload System	
ATR Quality Assurance Program	
Local Local Data Collection	3
Traffic Data Collection	4
Type of Data Collected	4
Traffic Data Collection Sources	5
Automatic Traffic Recorders (ATRs)	6
Traffic Pattern Group (TPG)	7
ATR Station Locations	
Strategic Highway Research Program (SHRP)	10
ATR and SHRP Weigh-in-Motion (WIM) Location Map	11
ATR Site Locations by TPG	12
2007 Peak Hour Summary by TPG	14
2007 30th Highest Hour Summary by TPG	16
2007 50th Highest Hour Summary by TPG	18
2007 Design Hour Summaries (Charts)	20
Five Year Summary of Annual Average Daily Traffic (AADT) From ATRs	22
Statewide Traffic Trends (Table)	24
Statewide Traffic Trends (Chart)	25
Heaviest Holiday Travel Periods: 2007	26
Factoring Process	28
Traffic Adjustment Factors	28
Table 350: Hourly Percentages Compiled for Total Vehicles	29
Table 360: Hourly Percentages Compiled for Truck Traffic	34
Hourly Percentages: Total Vehicles (Chart)	36
Hourly Percentages: Truck Traffic (Chart)	36
Table 355: Average Day of Week by Month Factors Compiled for Total Vehicles	37
Monthly Variation Charts By Traffic Pattern Group (TPG)	42
Table 365: Average Day of Week by Month Factors Compiled for Truck Traffic	45
Table 370: Yearly Growth Factors	46
Functional Class Groups (FCGs)	47
Table 380: Axle Correction Factors	48
Table 385: Design Hour Factor Default Value	49
Table 390: Rigid Equivalent Single Axle Load (ESAL) Factors	50
Table 395: Flexible ESAL Factors	50
Roadway Management System (RMS) Factor Table Application Flow Chart	51
Acronyms	52
Index	52







Introduction

The "Pennsylvania Traffic Data Book" documents procedures for developing accurate estimates of highway traffic volumes based on sample traffic counts.

Traffic information is critical in transportation decision-making related to highway funding, traffic engineering, highway design, air quality analysis, planning and programming, as well as winter services, highway maintenance and construction.

The "Pennsylvania Traffic Data Book" provides current traffic expansion factors through the use of tables, charts, and graphs. Expansion factors allow the traffic professional to use a sample traffic count and develop reliable and comparable Annual Average Daily Traffic (AADT) estimates. All tables & charts in the "Pennsylvania Traffic Data Book" are derived from the 60 permanent ATR site data.

How to Use this Booklet

This booklet provides current traffic expansion factors through the use of tables, charts, and graphs. All of the tables, charts, and graphs are listed in the Table of Contents. Refer to the description provided with each table, chart, and graph to ensure that the data presented is what you need.

Acronyms are used quite often throughout this publication. A complete list of acronyms and their meanings are located in the back of the booklet. In addition, an index was created for this booklet to help you find a particular topic quickly.

We would appreciate any comments or suggestions you can provide on information presented in this booklet. Questions or comments relating to data presented in this publication can be directed to:

Joseph E. Piper, Jr. Telephone: (717) 214-8687 Fax: (717) 783-9152 Email: josephpipe@state.pa.us

The 2007 Traffic Data Book and County Traffic Volume Maps are available free on our website!

www.dot.state.pa.us Select: More Links... Scroll to: Transportation Planning Select: Traffic Information Select: Traffic Volume Maps or Traffic Data Report

Traffic Volume Maps can be purchased through our Maps and Publications Sales Store by calling (717) 787-6746.







New Developments and Enhancements

Internet Traffic Monitoring System

The Traffic Monitoring System for the internet or iTMS allows you to look-up traffic data and traffic monitoring sites by county, municipality, zip code, PennDOT route, PennDOT route segment, place name, street name, road intersection, street address and traffic count site number. The information is displayed on an interactive map where you can find data such as AADT, ADTT, truck percent and others. Also available through iTMS are traffic factor reports and online video logging. iTMS can be found on our website with our traffic volume maps and traffic data books.

Federal Highway Administration Motorcycle Data Collection and Reporting

Due to motorcycle fatalities and the related fatality rate significantly increasing over the last 10 years, the Federal Highway Administration (FHWA) in cooperation with the National Highway Traffic Safety Administration (NHTSA) has implemented a new mandatory requirement for the collection of motorcycle travel data. In order to comply with the FHWA requirement to report motorcycle classification data for the Highway Performance Monitoring System (HPMS) program, the Transportation Planning Division is in the process of updating the Roadway Management System (RMS), which houses all traffic data information. Currently the system combines passenger cars, trucks and motorcycles into one category. RMS is being updated to handle all FHWA Scheme F 13 classes of data, which will allow the reporting of separate motorcycle data.

In addition to updating RMS, the Division is evaluating the permanent Automatic Traffic Recorder (ATR) sites throughout the state to determine which sites have considerable motorcycle traffic. Results of this study will help determine which ATR sites are converted to continuous automatic vehicle classification (CAVC) sites. The Division is also testing various portable machine classification counters for accuracy of motorcycle data collection.

Local Local Data Collection

Pennsylvania has over 72,000 miles of roadway, not on the Federal-aid system, owned by its 2,565 municipalities. Collecting traffic data on all 72,000 miles is not financially feasible. In order to improve traffic data collection on these roads, PennDOT hired a consultant to determine the number of traffic counts needed to be statistically significant when counting the total mileage was not possible. The consultant determined that approximately 7,200 counts would be required and provided a randomly selected listing of roads to count. PennDOT is currently determining the best way to include these counts in the existing traffic counting program.



I-78 in Northampton County





Traffic Data Collection

Traffic data is collected on 40,000 miles of PennDOT owned roads and 3,300 miles of local federal aid roads in Pennsylvania. Approximately 6,500 raw traffic counts are collected per year by:

- PennDOT Engineering Districts
- Fifteen Metropolitan Planning Organizations (MPOs)
- Two Rural Planning Organizations (RPOs)
- Contractors

Volume: The majority of the counts taken as part of our statewide count program record volume of traffic on a roadway. Volume is usually expressed as Annual Average Daily Traffic, (AADT) which represents traffic volume over an average 24-hour period.

Classification: One method of data collection used for our count program is vehicle classification. Vehicles are classified into 13 classes ranging from cars to trucks in accordance with the Federal Highway Administration vehicle classification scheme.

Weight: Truck weight data is collected from 12 Weigh-In-Motion stations.

Speed: Speed data is collected from 11 Automatic Traffic Recorders and 5 Continuous Automatic Vehicle Classifiers twice a year.



Traffic Count set in Harrisburg





Traffic Data Collection Sources

Automatic Traffic Recorders (ATRs)

60 ATRs strategically located throughout the state count volume and speed data on a continuous basis 365 days per year. A map showing the locations of ATRs throughout the state is provided on page 11.

Short-Term In-Pavement Sites (STIP)

Approximately 200 inductive loop sites, referred to as STIP sites are installed throughout the state of Pennsylvania. Volume data is collected from these permanent sites for a 24-hour period, once a year.

Continuous Automatic Vehicle Classifier (CAVC)

5 CAVC sites collect continuous vehicle classification data. A map showing CAVC locations is provided on page 11.

Weigh-In-Motion (WIM)

12 WIM stations provide continuous truck weight and vehicle classification data. WIM stations are shown on the map on page 11.

Pneumatic Tubes

The majority of the counts are collected using pneumatic tubes. Axle counts are collected using a traffic counting device in association with a single pneumatic tube stretched across the roadway. An axle correction factor is applied to adjust vehicle axle base data for the incidence of vehicles with more than two axles.

Two tubes are used to count and classify vehicles by type based on axle configuration.

Manual Counts

Manual counts are taken on sections of roadways that are not accessible to automated data collection equipment or have safety limitations. Observers classify vehicles by type based on axle configuration.

Toll Receipts

The Delaware River Joint Toll Bridge Commission and the Delaware River Port Authority document traffic between Pennsylvania and New Jersey.

The Pennsylvania Turnpike Commission toll receipt surveys provide automobile and truck data on the Commonwealth's toll roads.





Automatic Traffic Recorders (ATRs)

Pennsylvania maintains Automatic Traffic Recorders (ATRs) at 60 strategically selected locations throughout the state. These ATRs collect traffic volume data on a continuous basis throughout the year. This data is used to develop daily and seasonal factors, as well as to identify changes in traffic patterns. Based on a research study performed by Pennsylvania State University and West Virginia University, it was determined that PennDOT ATR locations in the traffic pattern groups were acceptable according to the FHWA Traffic Monitoring Guide.



ATR 380 in St. Lawrence, Berks County

The ATRs use magnetic loops embedded in the pavement for vehicle detection. The data is stored on site in traffic counters, prior to being automatically polled every night through the use of modems located at each ATR site.



Traffic Pattern Group (TPG)

Highway traffic characteristics can vary by geographical area, roadway type, and population density. Therefore, individual traffic volume counts are categorized into one of ten Traffic Pattern Groups (TPGs). The TPGs are based on highway functional classification, geographic area, and urban/rural characteristics.(See map on pg. 11) Each ATR is associated with one of the ten TPGs listed below.

TRAFFIC PATTERN GROUP	DESCRIPTION
TPG 1	URBAN - INTERSTATE
TPG 2	RURAL - INTERSTATE
TPG 3	URBAN - OTHER PRINCIPAL ARTERIALS
TPG 4	RURAL - OTHER PRINCIPAL ARTERIALS
TPG 5	URBAN - MINOR ARTERIALS, COLLECTORS, LOCAL ROADS
TPG 6	NORTH RURAL - MINOR ARTERIALS
TPG 7	CENTRAL RURAL- MINOR ARTERIALS
TPG 8	NORTH RURAL - COLLECTORS AND LOCAL ROADS
TPG 9	CENTRAL RURAL- COLLECTORS AND LOCAL ROADS
TPG 10	SPECIAL RECREATIONAL

ATR data is used in computing:

- Daily, monthly, and seasonal adjustment factors by highway functional classification and geographic location.
- Yearly growth factors which are used to update older counts in the Department's Roadway Management System (RMS).
- Design hour factors (peak hour, 30th highest and 50th highest hour) used for the design of highways.





Automatic Traffic Recorder (ATR) Station Locations

This chart lists the ATR stations by number, county, municipality, traffic route number, state route (SR), segment, and also by a physical description of where the ATR is located in the state.

* Indicates ATR site data is also used for the Department's Speed Monitoring Program. ** Indicates road is not a PA, US, or Interstate Route

ATR #	COUNTY	MUNICIPALITY	ROUTE	SR	SEGMENT	LOCATION
1	Erie	Springfield Twp.	US 20	20	10	0.4 mi. E of PA/Ohio State Line (West Springfield)
2	Crawford	Richmond Twp.	PA 77	77	270	0.7 mi. W of PA 408 (New Richmond)
3	Clearfield	Huston Twp.	PA 255	255	280	1.4 mi. N of PA 153 (Penfield)
4	Tioga	Delmar Twp.	US 6	6	400	0.9 mi. W of PA 287 (Wellsboro)
5	Bradford	Sheshequin Twp.	**	1043	10	0.1 mi. NW of SR 1041 (North Towanda)
8	Montgomery	Whitemarsh Twp.	PA 73	73	530	1.4 mi. NW of PA 309-Skippack Pike (Whitemarsh)
15	Fulton	Todd Twp.	US 522	522	540	1.3 mi. N of US 30 (McConnellsburg)
18	Butler	Summitt Twp.	PA 38	38	20	0.7 mi. NW of PA 68 (Butler)
19	Washington	Union Twp.	PA 88	88	750	0.4 mi. S of SR1006-Washington Ave. (Finleyville)
20	Lawrence	Shenango Twp.	PA 65	65	270	0.6 mi. S of US 422 (New Castle)
24	Westmoreland	Derry Twp.	US 22	22	340	1.0 mi. E of PA 981 (New Alexandria)
27	Elk	Highland Twp.	PA 66/948	66	60	0.2 mi. W of De-Young Post Office (Russell City)
29	Susquehanna	Rush Twp.	PA 267	267	190	0.9 mi. S of PA 706 (Lawton)
40	Schuylkill	Schuylkill Twp.	US 209	209	860	0.6 mi. SW of PA 309 (Tamaqua)
48	Susquehanna	New Milford Twp.	US 11	11	420	0.8 mi. SW of PA 848/492 (New Milford)
51	Potter	Eulalia Twp.	PA 44	44	700	0.7 mi. N of Coudersport Boro Line (Coudersport)
203	Allegheny	Leetsdale	PA 65	65	270	0.6 mi. S of Beaver County Line (Leetsdale)
206	Cumberland	Wormleysburg	Taylor Br.	1014	30	230' E of Second St. (Wormleysburg)
207*	Erie	Springfield Twp.	I-90	90	10	1.0 mi. E of Ohio Line (West Springfield)
208	Allegheny	Monroeville	I-376	376	120	2.2 mi. W of PA 48-Exit 14 (Monroeville)
210*	Cumberland	Lemoyne	I-83	83	416	0.6 mi. SW of York Ramp on John Harris Bridge (Lemoyne)
216*	Susquehanna	Great Bend Twp.	I-81	81	2314	1.1 mi. N of PA 171 (Great Bend)
301	Erie	Lawrence Park Twp.	PA 5	5	680	0.3 mi. E of Erie City Line (Erie)
306	Pike	Palmyra Twp.	PA 507	507	280	0.9 mi. S of US 6 (Hawley)
323	Bedford	Bedford Twp.	US 220	220	310	0.7 mi. S of Business US 220 (Bedford Springs)
326	Clarion	Paint Twp.	US 322	322	280	0.5 mi. E of PA 66 (Clarion)
328	Centre	Boggs Twp.	PA 150	150	194	1.1 mi. N of 1-80 (Milesburg)
330	Bucks	Northampton Twp.	PA 532	532	130	1.4 mi. SW of PA 413 (Newtown)





9

Automatic Traffic Recorder (ATR) Station Locations (Continued)

* Indicates ATR site data is also used for the Department's Speed Monitoring Program.

** Indicates road is not a PA, US, or Interstate Route

ATR #	COUNTY	MUNICIPALITY	ROUTE	SR	SEGMENT	LOCATION
334	York	W. Manchester Twp.	US 30	30	170	0.7 mi. W of PA 116 (Thomasville)
349	Lehigh	Upper Saucon Twp.	PA 309	309	30	0.7 mi. S of PA 378 (Coopersburg)
360	Clearfield	Bloom Twp.	US 219	219	670	3.2 mi. S of US 322 (Luthersburg)
362	York	North Codorus Twp.	PA 616	616	240	2 mi. S of New Salem Boro
363	McKean	Lafayette Twp.	US 219	219	290	0.1 mi. N of PA 59 (Lewis Run)
364	Lackawanna	Newton Twp.	PA 307	307	360	50' NW of SR 4017 (Clarks Summitt)
367	Union	West Buffalo Twp.	PA 45	45	250	0.6 mi. W of PA 104 (Mifflinburg)
370*	Westmoreland	Rostraver Twp.	I-70	70	454	0.9 mi. W of PA 51-Exit 46 (Uniontown)
371*	Fulton	Brush Creek Twp.	I-70	70	1522	5.1 mi. S of US 30 (Crystal Springs)
372*	Union	White Deer Twp.	I-80	80	2104	0.9 mi. W of I-180 (Milton)
374*	Butler	Lancaster Twp.	I-79	79	904	2.2 mi. N of PA 68-Exit 87 (Zelienople)
375*	Allegheny	N. Fayette Twp.	US 22/30	22	80	0.8 mi. E of PA 978 (Imperial)
376*	Luzerne	Wilkes-Barre Twp.	I-81	81	1664	0.7 mi. N of PA 309-Exit 165 (Wilkes-Barre)
377*	Bucks	Bristol Twp.	I-95	95	404	2.5 mi. S of US 1/PA 413 (PennDel)
378	Fayette	Redstone Twp.	US 40	40	160	5.6 mi. W of US 119 (Brier Hill)
379	Blair	Logan Twp.	**	4013	80	0.5 mi. SE of SR 4015 (Altoona)
380	Berks	St. Lawrence	PA 562	562	40	0.3 mi. W of SR 2033 (St. Lawrence)
381	Mercer	Hermitage Twp.	**	3019	20	0.8 mi. N of PA 718 (Sharon)
382	Cambria	Lower Yoder Twp.	**	3005	40	0.4 mi. SW of Johnstown City Line (Morrelville)
383	Clinton	Chatham Run	PA 150	150	360	0.7 mi. E of SR 1005 (Chatham Run)
384	Tioga	Lawrence Twp.	**	4022	50	1.9 mi. from PA 49 on Lakeview Dr. (Nelson)
385	Warren	Southwest Twp.	**	3002	30	1.7 mi. W of PA 27 (Enterprise)
386	Montour	Limestone Twp.	PA 254	254	10	1.9 mi. E of I-80 (Limestoneville)
387	Somerset	Brothers Valley	**	2031	120	2.0 mi. SW of US 219 (Garrett)
388	Monroe	Ross Twp.	**	3004	170	0.4 mi. SW of SR 3015-Rolling Hill Road. (Saylorsburg)
389	Jefferson	Perry Twp.	PA 536	536	210	3.5 mi. W of PA 36 (Frostburg)
390	Lancaster	West Donegal Twp.	PA 230	230	20	1.9 mi. W of PA 743/241 (Elizabethtown)
391	Chester	Warwick Twp.	PA 23	23	110	1.4 mi. E of PA 345 (Warwick Area)
392*	Luzerne	Foster Twp.	I-80	80	2684	5.9 mi. E of PA 309 (White Haven)
393*	Washington	Donegal Twp.	I-70	70	2	At the West Virginia State Line (West Alexander)
394*	Lehigh	Upper Saucon Twp.	I-78	78	614	1.5 mi. W of Northampton County Line (Allentown)
395	Fayette	German Twp.	PA 21	21	230	0.1 mi. E of SR 3023 (Footdale Rd)





Strategic Highway Research Program (SHRP) and LTPP

The Strategic Highway Research Program (SHRP) was authorized by the U.S. Congress in 1987 as a five-year research initiative. The focus of this initiative was to develop and evaluate technologies and techniques to improve the performance, safety, durability, and efficieny of the nation's highways. SHRP was directed by a committee of managers from state highway agencies, industry, and academia, and operated as a unit of the National Research Council. Research was concentrated in asphalt, concrete and structures, highway operations, and pavement performance.

The Federal Highway Administration assumed coordination of a national program to move the products evaluated or developed under SHRP to the state and local agencies upon completion of the research phase.

The Long Term Pavement Performance (LTPP) program was established under SHRP and is currently managed by FHWA. LTPP, which is a 20-year study of in-service pavements, provides the basis for pavement design, maintenance, rehabilitation, and construction methodologies. The Bureau supports this program by collecting weight and vehicle classification data and reporting the data to LTPP.

ATR and SHRP Weigh-In-Motion Locations Map (Opposite)

The ATR, SHRP, and WIM locations map of Pennsylvania, which is shown on the following page, gives an overview of where all of the ATRs and SHRP Weigh-In-Motion sites are located. Symbols are used in addition to the site number to identify the location of the site.



I-78 in Lehigh County.







PennDOT

11

Automatic Traffic Recorders

ATR Site Locations by Traffic Pattern Group (TPG)

This chart groups the ATR site locations by Traffic Pattern Group. It gives the ATR number, route, and the urban area or county depending on the TPG into which the ATR falls. The Annual Average Daily Traffic (AADT) for each ATR is also listed on this chart.

	ATR SITE LOCATIONS BY TPG												
	TPG 1: URB	AN INTERSTATE				TPG 2: RU	RAL INTERSTATE						
ATR	ROUTE	URBAN AREA	AADT		ATR	ROUTE	COUNTY	AADT					
208	I-376	PITTSBURGH	65,294		207	I-90	ERIE	21,038					
210	I-83	HARRISBURG	117,292		216	I-81	SUSQUEHANNA	27,395					
376	I-81	WILKES-BARRE	61,431		370	I-70	WESTMORELAND	31,865					
377	I-95	PHILADELPHIA	54,592		371	I-70	FULTON	19,092					
394	I-78	ALLENTOWN	52,003		372	I-80	UNION	27,031					
					374	I-79	BUTLER	33,181					
					392	I-80	LUZERNE	23,867					
					393	I-70	WASHINGTON	30,875					

	ATR SITE LOCATIONS BY TPG													
TP	G 3: URBAN P	RINCIPAL ARTER	IAL		TF	4L								
ATR	ROUTE	URBAN AREA	AADT		ATR	ROUTE	COUNTY	AADT						
8	PA 73	PHILADELPHIA	16,282		4	US 6	TIOGA	2,855						
203	PA 65	PITTSBURGH	20,491		19	PA 88	WASHINGTON	5,821						
206	H. Taylor Br.	HARRISBURG	29,004		24	US 22	WESTMORELAND	17,705						
301	PA 5	ERIE	15,045		323	US 220	BEDFORD	3,788						
330	PA 532	PHILADELPHIA	11,487		326	US 322	CLARION	10,027						
375	US 22/30	PITTSBURGH	24,070		334	US 30	YORK	18,125						
					349	US 309	LEHIGH	38,380						
					360	US 219	CLEARFIELD	2,580						
					363 US 219		MCKEAN	5,037						
					378	FAYETTE	10,660							
					395	PA 21	FAYETTE	11,550						



	ATR SITE LOCATIONS BY TPG													
TPG 5:	URBAN MINO	R ARTERIAL/COL	LECTOR		TPG 6: NORTH RURAL MINOR ARTER									
ATR	ROUTE	URBAN AREA	AADT		ATR	ROUTE	COUNTY	AADT						
18	PA 38	BUTLER	6,644		2	PA 77	CRAWFORD	2,098						
20	PA 65	NEW CASTLE	7,552		3	PA 255	CLEARFIELD	5,728						
379	SR 4013	ALTOONA	1,515		27	PA 66/948	ELK	2,799						
380	PA 562	READING	9,171		48	US 11	SUSQUEHANNA	4,547						
381	SR 3019	SHARON	612		51	PA 44	POTTER	3,388						
382	SR 3005	JOHNSTOWN	1,870		328	PA 150	CENTRE	5,138						

ATR Site Locations by TPG (Continued)

	ATR SITE LOCATIONS BY TPG												
TPG 7	CENTRAL R	URAL MINOR ART	ERIAL		TPG 8: NORTH RURAL COLLECTOR								
ATR	ROUTE	COUNTY	AADT		ATR	ROUTE	COUNTY	AADT					
1	US 20	ERIE	3,806		5	SR 1043	BRADFORD	1,400					
15	US 522	FULTON	5,832		29	PA 267	SUSQUEHANNA	1,156					
40	US 209	SCHUYLKILL	5,019		383	PA 150	CLINTON	3,926					
367	PA 45	UNION	6,087		384	SR 4022	TIOGA	606					
390	PA 230	LANCASTER	6,307		385	SR 3002	WARREN	1,929					
391	PA 23	CHESTER	8,549										

	ATR SITE LOCATIONS BY TPG													
ТРС	3 9: CENTRAL	RURAL COLLEC	TOR		TPG 10: SPECIAL RECREATIONAL									
ATR	ROUTE	COUNTY	AADT		ATR	ROUTE	COUNTY	AADT						
362	PA 616	YORK	6,019		306	PA 507	PIKE	5,991						
364	PA 307	LACKAWANNA	5,327											
386	PA 254	MONTOUR	2,235											
387	SR 2031	SOMERSET	3,301											
388	SR 3004	MONROE	3,822											
389	PA 536	JEFFFERSON	2,182											



2007 Peak Hour by Traffic Pattern Group (TPG)

	2007 Peak Hour by Traffic Pattern Group (TPG)													
TPG 1: Urban Interstate									TPG 2: Rural Interstate					
ATR	Date	Hour (start)	DOW	Volume	% AADT	AADT		ATR	Date	Hour (start)	DOW	Volume	% AADT	AADT
208	10/29	4:00 PM	Mon	6,125	9.38%	65,294		207	7/29	1:00 PM	Sun	2,846	13.53%	21,038
210	7/25	4:00 PM	Wed	10,453	8.91%	117,292		216	11/25	1:00 PM	Sun	4,689	17.12%	27,395
376	11/21	4:00 PM	Wed	6,255	10.18%	61,431		370	8/31	4:00 PM	Fri	3,280	10.29%	31,865
377	4/5	5:00 PM	Thu	5,925	10.85%	54,592		371	11/25	12:00 PM	Sun	3,477	18.21%	19,092
394	8/24	5:00 PM	Fri	5,237	10.07%	52,003		372	11/25	2:00 PM	Sun	4,363	16.14%	27,031
								374	8/31	5:00 PM	Fri	4,494	13.54%	33,181
								392	11/25	4:00 PM	Sun	3,843	16.10%	23,867
								393	11/25	2:00 PM	Sun	4,461	14.45%	30,875

2007 Pook Hour b	V Traffic Dattorn	Group	
2007 Feak Flour D		GIOUDI	IFG)

	TPG 3: Urban Principal Arterial								TPG 4: Ru	ıral Princip	oal Arterial		
ATR	Date	Hour (start)	DOW	Volume	% AADT	AADT	ATR	Date	Hour (start)	DOW	Volume	% AADT	AADT
8	10/17	8:00 AM	Wed	1,974	12.12%	16,282	4	11/25	12:00 PM	Sun	690	24.17%	2,855
203	5/7	3:00 PM	Mon	2,194	10.71%	20,491	19	5/8	5:00 PM	Tue	712	12.23%	5,821
206	4/17	5:00 PM	Tue	4,256	14.67%	29,004	24	4/13	4:00 PM	Fri	1,991	11.25%	17,705
301	5/23	4:00 AM	Wed	4,495	29.88%	15,045	323	8/10	3:00 PM	Fri	497	13.12%	3,788
330	11/14	5:00 PM	Wed	1,469	12.79%	11,487	326	5/11	4:00 PM	Fri	1,251	12.48%	10,027
375	8/10	5:00 PM	Fri	3,063	12.73%	24,070	334	7/14	11:00 AM	Sat	2,018	11.13%	18,125
							349	3/8	11:00 AM	Thu	7,240	18.86%	38,380
							360	9/20	4:00 PM	Thu	326	12.64%	2,580
							363	8/31	3:00 PM	Fri	624	12.39%	5,037
							378	10/3	6:00 AM	Wed	1,156	10.84%	10,660
							395	6⁄13	5:00 PM	Wed	2,152	18.63%	11,550



2007 Peak Hour by TPG (Continued)

				200	7 Peak He	our by Tr	affi	c Pattern	Group (1	FPG)				
	TP	G 5: Urban I	Minor Arter	ial or Colle	ctor					TPG 6: Nor	th Rural Mi	inor Arterial	I	
ATR	Date	Hour (start)	DOW	Volume	% AADT	AADT		ATR	Date	Hour (start)	DOW	Volume	% AADT	AADT
18	8/31	4:00 PM	Fri	823	12.39%	6,644		2	8/22	4:00 PM	Wed	358	17.06%	2,098
20	6/29	5:00 PM	Fri	821	10.87%	7,552		3	6/22	4:00 PM	Fri	772	13.48%	5,728
379	8/5	4:00 PM	Sun	933	61.58%	1,515		27	7/25	4:00 PM	Wed	655	23.40%	2,799
380	5/18	6:00 PM	Fri	1,223	13.34%	9,171		48	8/23	3:00 PM	Thu	617	13.57%	4,547
381	9/18	5:00 PM	Tue	90	14.71%	612		51	10/5	4:00 PM	Fri	401	11.84%	3,388
382	4/27	3:00 PM	Fri	256	13.69%	1,870		328	9/28	4:00 PM	Fri	689	13.41%	5,138

				200	7 Peak Ho	our by Tra	affi	c Pattern	Group (T	'PG)				
		TPG 7: Cent	ral Rural N	linor Arteria	I					TPG 8: N	orth Rural	Collector		
ATR	Date	Hour (start)	DOW	Volume	% AADT	AADT		ATR	Date	Hour (start)	DOW	Volume	% AADT	AADT
1	1/10	3:00 PM	Wed	486	12.77%	3,806		5	6/14	3:00 PM	Thu	285	20.36%	1,400
15	10/21	12:00 PM	Sun	802	13.75%	5,832		29	7/25	3:00 PM	Wed	274	23.70%	1,156
40	5/23	3:00 PM	Wed	556	11.08%	5,019		383	5/11	5:00 PM	Fri	600	15.28%	3,926
367	9/1	8:00 AM	Sat	829	13.62%	6,087		384	6/24	3:00 PM	Sun	113	18.65%	606
390	7/31	7:00 AM	Tue	819	12.99%	6,307		385	11/16	5:00 PM	Fri	287	14.88%	1,929
391	10/5	5:00 PM	Fri	996	11.65%	8,549								

				200	7 Peak Ho	our by Tr	affi	c Pattern	Group (1	TPG)				
		TPG 9: Ce	entral Rura	I Collector						TPG 10: \$	Special Re	creational		
ATR	Date	Hour (start)	DOW	Volume	% AADT	AADT		ATR	Date	Hour (start)	DOW	Volume	% AADT	AADT
362	5/9	5:00 PM	Wed	679	11.28%	6,019		306	7/21	1:00 PM	Sat	869	14.51%	5,991
364	6/22	5:00 PM	Fri	629	11.81%	5,327								
386	6/7	4:00 PM	Thu	467	20.89%	2,235								
387	8/24	6:00 PM	Fri	429	13.00%	3,301								
388	6/29	6:00 AM	Fri	555	14.52%	3,822								
389	8/5	5:00 PM	Sun	320	14.67%	2,182								



2007 30th Highest Hour by Traffic Pattern Group (TPG)

				2007	7 30th Hi g	ihest Hou	r b	y Traffic I	Pattern G	roup				
		TPG 1	: Urban Int	erstate						TPG 2	: Rural Inte	erstate		
ATR	Date	Hour (start)	DOW	Volume	% AADT	AADT		ATR	Date	Hour (start)	DOW	Volume	% AADT	AADT
208	10/18	5:00 PM	Thu	5,826	8.92%	65,294		207	7/27	4:00 PM	Fri	2,543	12.09%	21,038
210	4/12	3:00 PM	Thu	10,213	8.71%	117,292		216	6/22	4:00 PM	Fri	3,252	11.87%	27,395
376	3/9	4:00 PM	Fri	5,909	9.62%	61,431		370	5/18	4:00 PM	Fri	2,970	9.32%	31,865
377	10/23	5:00 PM	Tue	5,577	10.22%	54,592		371	8/5	3:00 PM	Sun	2,729	14.29%	19,092
394	5/18	4:00 PM	Fri	4,858	9.34%	52,003		372	11/20	4:00 PM	Tue	2,730	10.10%	27,031
								374	5/25	4:00 PM	Fri	3,763	11.34%	33,181
								392	8/5	7:00 PM	Sun	2,479	10.39%	23,867
								393	6/29	4:00 PM	Fri	3,102	10.05%	30,875

				2007	30th Hig	hest Hou	ır b	y Traffic I	Pattern G	roup				
		TPG 3: Ur	ban Princip	oal Arterial						TPG 4: Ru	ral Princip	al Arterial		
ATR	Date	Hour (start)	DOW	Volume	% AADT	AADT		ATR	Date	Hour (start)	DOW	Volume	% AADT	AADT
8	10/2	7:00 AM	Tue	1,866	11.46%	16,282		4	6/3	5:00 PM	Sun	409	14.33%	2,855
203	4/4	4:00 PM	Wed	2,096	10.23%	20,491		19	9/16	12:00 PM	Sun	602	10.34%	5,821
206	11/9	7:00 AM	Fri	3,928	13.54%	29,004		24	3/15	4:00 PM	Thu	1,778	10.04%	17,705
301	1/25	5:00 PM	Thu	1,620	10.77%	15,045		323	10/6	2:00 PM	Sat	396	10.45%	3,788
330	10/3	5:00 PM	Wed	1,100	9.58%	11,487		326	9/28	3:00 PM	Fri	1,099	10.96%	10,027
375	4/13	5:00 PM	Fri	2,325	9.66%	24,070		334	7/13	4:00 PM	Fri	1,633	9.01%	18,125
								349	10/24	3:00 PM	Wed	3,485	9.08%	38,380
								360	5/25	3:00 PM	Fri	276	10.70%	2,580
								363	5/25	2:00 PM	Fri	537	10.66%	5,037
								378	5/10	4:00 PM	Thu	1,070	10.04%	10,660
								395	6/13	12:00 PM	Wed	1,733	15.00%	11,550



2007 30th Highest Hour by TPG (Continued)

				2007	7 30th Hig	hest Hou	ır b	y Traffic I	Pattern G	roup				
	TP	G 5: Urban I	Vinor Arter	ial or Colle	ctor					TPG 6: Nor	th Rural Mi	inor Arterial	I	
ATR	Date	Hour (start)	DOW	Volume	% AADT	AADT		ATR	Date	Hour (start)	DOW	Volume	% AADT	AADT
18	5/1	4:00 PM	Tue	734	11.05%	6,644		2	9/28	4:00 PM	Fri	256	12.20%	2,098
20	10/26	4:00 PM	Fri	745	9.86%	7,552		3	5/4	5:00 PM	Fri	613	10.70%	5,728
379	5/7	5:00 PM	Mon	165	10.89%	1,515		27	7/8	12:00 PM	Sun	376	13.43%	2,799
380	5/22	5:00 PM	Tue	1,048	11.43%	9,171		48	10/12	4:00 PM	Fri	524	11.52%	4,547
381	5/4	4:00 PM	Fri	70	11.44%	612		51	1/5	4:00 PM	Fri	364	10.74%	3,388
382	4/30	3:00 PM	Mon	205	10.96%	1,870		328	8/10	3:00 PM	Fri	553	10.76%	5,138

				2007	30th Hig	hest Hou	ır b	y Traffic I	Pattern G	roup				
		TPG 7: Cent	ral Rural N	linor Arteria	ıl					TPG 8: N	orth Rural	Collector		
ATR	Date	Hour (start)	DOW	Volume	% AADT	AADT		ATR	Date	Hour (start)	DOW	Volume	% AADT	AADT
1	7/14	4:00 PM	Sat	406	10.67%	3,806		5	8/7	3:00 PM	Tue	193	13.79%	1,400
15	6/1	3:00 PM	Fri	635	10.89%	5,832		29	11/24	10:00 AM	Sat	140	12.11%	1,156
40	10/2	3:00 PM	Tue	480	9.56%	5,019		383	5/25	3:00 PM	Fri	425	10.83%	3,926
367	8/10	4:00 PM	Fri	671	11.02%	6,087		384	7/6	4:00 PM	Fri	78	12.87%	606
390	5/23	4:00 PM	Wed	667	10.58%	6,307		385	9/28	5:00 PM	Fri	210	10.89%	1,929
391	7/13	5:00 PM	Fri	911	10.66%	8,549								

				2007	7 30th Hig	hest Hou	ır b	y Traffic F	Pattern G	roup				
		TPG 9: Ce	entral Rura	Collector						TPG 10: 9	Special Rec	creational		
ATR	Date	Hour (start)	DOW	Volume	% AADT	AADT		ATR	Date	Hour (start)	DOW	Volume	% AADT	AADT
362	10/30	5:00 PM	Tue	614	10.20%	6,019		306	8/11	1:00 PM	Sat	742	12.39%	5,991
364	7/26	5:00 PM	Thu	574	10.78%	5,327								
386	5/3	5:00 PM	Thu	280	12.53%	2,235								
387	12/18	4:00 PM	Tue	351	10.63%	3,301								
388	5/29	4:00 PM	Tue	397	10.39%	3,822								
389	4/3	4:00 PM	Tue	235	10.77%	2,182								



2007 50th Highest Hour by Traffic Pattern Group (TPG)

				2007	50th Hig	hest Hou	r b	y Traffic I	Pattern G	iroup				
		TPG 1	: Urban Int	erstate						TPG 2	: Rural Inte	erstate		
ATR	Date	Hour (start)	DOW	Volume	% AADT	AADT		ATR	Date	Hour (start)	DOW	Volume	% AADT	AADT
208	6/22	5:00 PM	Fri	5,754	8.81%	65,294		207	7/8	2:00 PM	Sun	2,450	11.65%	21,038
210	4/18	4:00 PM	Wed	10,145	8.65%	117,292		216	4/6	1:00 PM	Fri	3,164	11.55%	27,395
376	7/20	3:00 PM	Fri	5,803	9.45%	61,431		370	10/18	4:00 PM	Thu	2,914	9.14%	31,865
377	10/24	5:00 PM	Wed	5,492	10.06%	54,592		371	7/20	3:00 PM	Fri	2,642	13.84%	19,092
394	4/13	5:00 PM	Fri	4,755	9.14%	52,003		372	7/29	2:00 PM	Sun	2,641	9.77%	27,031
								374	8/5	5:00 PM	Sun	3,640	10.97%	33,181
								392	8⁄24	2:00 PM	Fri	2,373	9.94%	23,867
								393	7/8	12:00 PM	Sun	3,023	9.79%	30,875

2007 50th Highest Hour by Traffic Pattern Group TPG 3: Urban Principal Arterial **TPG 4: Rural Principal Arterial** Hour Hour ATR Date DOW Volume % AADT AADT ATR Date DOW Volume % AADT AADT (start) (start) 8 9/25 7:00 AM Tue 1,836 11.28% 16,282 4 6/30 12:00 PM Sat 385 13.49% 2,855 4:00 PM 203 1/11 3:00 PM Thu 2,063 10.07% 20,491 19 4/3 Tue 593 10.19% 5,821 3,882 206 10/5 4:00 PM Fri 13.38% 29,004 24 11/20 5:00 PM Tue 1,709 9.65% 17,705 301 9/19 3:00 PM 1,589 10.56% 15,045 323 11/2 4:00 PM Fri 383 10.11% 3,788 Wed 330 3/14 6:00 PM 1,074 9.35% 11,487 326 8/3 4:00 PM Fri 1,085 10.82% 10,027 Wed 375 6/23 3:00 PM Sat 2,288 9.51% 24,070 334 9/28 3:00 PM Fri 1,596 8.81% 18,125 349 10/2 6:00 AM Tue 3,439 8.96% 38,380 360 10/1 4:00 PM 272 10.54% 2,580 Mon 9/7 3:00 PM Fri 5,037 363 514 10.20% 378 7/13 3:00 PM Fri 1,047 9.82% 10,660 395 6/11 6:00 AM Mon 1,452 12.57% 11,550



2007 50th Highest Hour by TPG (Continued)

				2007	50th Hig	hest Hou	ır b	y Traffic I	Pattern G	roup				
	TPO	G 5: Urban I	Vinor Arter	ial or Collec	ctor					TPG 6: Nor	th Rural Mi	nor Arterial		
ATR	Date	Hour (start)	DOW	Volume	% AADT	AADT		ATR	Date	Hour (start)	DOW	Volume	% AADT	AADT
18	10/19	4:00 PM	Fri	713	10.73%	6,644		2	8/22	2:00 PM	Wed	242	11.53%	2,098
20	10/19	4:00 PM	Fri	734	9.72%	7,552		3	7/6	2:00 PM	Fri	595	10.39%	5,728
379	5/25	3:00 PM	Fri	154	10.17%	1,515		27	11/25	4:00 PM	Sun	352	12.58%	2,799
380	5/14	5:00 PM	Mon	1,017	11.09%	9,171		48	11/2	2:00 PM	Fri	500	11.00%	4,547
381	6/12	3:00 PM	Tue	67	10.95%	612		51	2/1	4:00 PM	Thu	358	10.57%	3,388
382	12/11	4:00 PM	Tue	199	10.64%	1,870		328	4/19	3:00 PM	Thu	538	10.47%	5,138

				2007	50th Hig	hest Hou	ır b	y Traffic I	Pattern G	roup				
		TPG 7: Cent	ral Rural N	linor Arteria	d					TPG 8: N	orth Rural	Collector		
ATR	Date	Hour (start)	DOW	Volume	% AADT	AADT		ATR	Date	Hour (start)	DOW	Volume	% AADT	AADT
1	7/13	4:00 PM	Fri	389	10.22%	3,806		5	7/9	3:00 PM	Mon	181	12.93%	1,400
15	9/6	3:00 PM	Thu	607	10.41%	5,832		29	8/3	6:00 PM	Fri	131	11.33%	1,156
40	4/18	3:00 PM	Wed	472	9.40%	5,019		383	6/6	4:00 PM	Wed	418	10.65%	3,926
367	9/14	5:00 PM	Fri	650	10.68%	6,087		384	6/9	5:00 PM	Sat	74	12.21%	606
390	10/3	4:00 PM	Wed	649	10.29%	6,307		385	11/25	2:00 PM	Sun	201	10.42%	1,929
391	5/4	6:00 PM	Fri	881	10.31%	8,549								

				2007	50th Hig	hest Hou	ır b	y Traffic F	Pattern G	iroup				
		TPG 9: Ce	entral Rural	Collector						TPG 10: \$	Special Rec	creational		
ATR	Date	Hour (start)	DOW	Volume	% AADT	AADT		ATR	Date	Hour (start)	DOW	Volume	% AADT	AADT
362	10/5	5:00 PM	Fri	602	10.00%	6,019		306	8/11	4:00 PM	Sat	720	12.02%	5,991
364	6/18	4:00 PM	Mon	563	10.57%	5,327								
386	7/19	3:00 PM	Thu	264	11.81%	2,235								
387	10/5	4:00 PM	Fri	342	10.36%	3,301								
388	5/31	5:00 PM	Thu	392	10.26%	3,822								
389	5/7	8:00 AM	Mon	229	10.49%	2,182								





2007 Design Hour Summaries: Peak, 30th and 50th Highest Hour

Design Hour Volume (DHV) is the hourly traffic volume used in the design of highways. The DHV is usually represented by the 30th highest hourly volume of the future year chosen for design. The following three graphs show the peak, 30th, and 50th highest hour summary by hour, day, and month.





21

2007 Design Hour Summaries: Peak, 30th and 50th Highest Hour









Five Year Summary of Annual Average Daily Traffic (AADT) from ATRs

This chart shows the ATR station numbers and their Annual Average Daily Traffic (AADT) for the past five years, 2003 through 2007. The percent change is also given for 2006 to 2007 and 2003 to 2007, showing where traffic has increased or decreased. **Indicates there is no data available.*

		Annual Ave	erage Daily Tra	affic (AADT)		Percent	Change
ATR#	2003	2004	2005	2006	2007	2006-2007	2003-2007
1	3,849	3,668	3,628	3,716	3,806	2.4%	-1.1%
2	2,136	2,153	2,120	2,058	2,098	1.9%	-1.8%
3	5,849	5,868	5,709	5,738	5,728	-0.2%	-2.1%
4	3,073	2,990	2,889	2,834	2,855	0.7%	-7.6%
5	1,461	1,502	1,433	1,441	1,400	-2.9%	-4.4%
8	17,475	17,531	15,733	15,912	16,282	2.3%	-7.3%
15	5,265	5,808	5,990	5,982	5,832	-2.6%	9.7%
18	6,921	6,434	6,598	7,015	6,644	-5.6%	-4.2%
19	6,512	6,389	6,321	5,982	5,821	-2.8%	-11.9%
20	8,293	7,939	7,769	7,801	7,552	-3.3%	-9.8%
24	17,027	17,310	17,443	17,350	17,705	2.0%	3.8%
27	2,661	2,708	2,737	2,773	2,799	0.9%	4.9%
29	1,126	1,104	1,111	1,173	1,156	-1.5%	2.6%
40	4,794	4,877	4,935	4,943	5,019	1.5%	4.5%
48	4,268	4,413	4,411	4,547	4,547	0.0%	6.1%
51	4,030	4,007	3,882	3,650	3,388	-7.7%	-18.9%
203	20,624	19,829	21,406	20,589	20,491	-0.5%	-0.6%
206	28,212	27,067	27,393	27,977	29,004	3.5%	2.7%
207	20,578	21,000	20,905	20,577	21,038	2.2%	2.2%
208	66,129	66,016	65,863	65,773	65,294	-0.7%	-1.3%
210	112,820	114,311	115,600	116,841	117,292	0.4%	3.8%
216	27,568	27,771	28,006	28,187	27,395	-2.9%	-0.6%
301	16,594	16,401	15,857	15,439	15,045	-2.6%	-10.3%
306	6,013	6,146	6,134	6,155	5,991	-2.7%	-0.4%
323	3,742	3,667	3,572	3,651	3,788	3.6%	1.2%
326	10,570	10,165	10,201	10,114	10,027	-0.9%	-5.4%
328	6,092	5,763	5,784	5,070	5,138	1.3%	-18.6%
330	12,102	11,818	11,392	11,471	11,487	0.1%	-5.4%



23

Five Year Summary of AADT from ATRs (Continued)

*Indicates there is no data available.

		Annual Ave	erage Daily Tra	affic (AADT)		Percent Change	
ATR#	2003	2004	2005	2006	2007	2006-2007	2003-2007
334	16,849	18,712	19,764	18,933	18,125	-4.5%	7.0%
349	36,626	37,775	38,372	38,480	38,380	-0.3%	4.6%
360	2,638	2,763	2,698	2,658	2,580	-3.0%	-2.2%
362	5,277	5,439	5,699	5,932	6,019	1.4%	12.3%
363	4,913	5,039	5,102	5,058	5,037	-0.4%	2.5%
364	4,976	5,198	5,310	5,352	5,327	-0.5%	6.6%
367	6,349	6,462	6,473	6,241	6,087	-2.5%	-4.3%
370	31,813	31,388	31,111	31,099	31,865	2.4%	0.2%
371	18,939	18,982	19,299	19,401	19,092	-1.6%	0.8%
372	25,430	25,527	26,111	26,696	27,031	1.2%	5.9%
374	33,569	33,404	33,870	33,927	33,181	-2.2%	-1.2%
375	24,500	24,945	25,013	25,170	24,070	-4.6%	-1.8%
376	56,893	58,645	59,882	61,170	61,431	0.4%	7.4%
377	52,814	53,595	54,307	53,219	54,592	2.5%	3.3%
378	10,682	11,025	10,989	10,922	10,660	-2.5%	-0.2%
379	1,370	1,422	1,474	1,493	1,515	1.5%	9.6%
380	9,610	9,634	9,563	9,451	9,171	-3.1%	-4.8%
381	649	634	701	671	612	-9.6%	-6.0%
382	2,136	2,115	1,963	1,927	1,870	-3.0%	-14.2%
383	4,196	4,366	4,209	4,181	3,926	-6.5%	-6.9%
384	675	647	622	630	606	-4.0%	-11.4%
385	2,043	2,021	2,159	2,081	1,929	-7.9%	-5.9%
386	2,013	2,123	2,056	2,122	2,235	5.1%	9.9%
387	3,525	3,469	3,379	3,384	3,301	-2.5%	-6.8%
388	3,163	3,569	3,862	3,961	3,822	-3.6%	17.2%
389	2,157	2,190	2,160	2,239	2,182	-2.6%	1.1%
390	7,308	6,862	6,673	6,608	6,307	-4.8%	-15.9%
391	8,266	8,498	8,607	8,733	8,549	-2.2%	3.3%
392	23,140	23,180	23,522	23,746	23,867	0.5%	3.0%
393	30,316	30,739	30,354	30,910	30,875	-0.1%	1.8%
394	50,527	50,618	50,879	52,363	52,003	-0.7%	2.8%
395	*	*	*	*	11,550	0.0%	0.0%

* 395 Percent change is taken from 2007 data only, first full year of data.



Statewide Traffic Trends: Annual and Multi-Year Change By Traffic Pattern Group

This table shows percent change for the traffic pattern groups at one-year intervals starting with 2002/2003 up to 2006/2007. An overall percent change for the traffic pattern groups is also shown on this table.

Perce	nt Change	Per Year, 2	002 - 2007			
TRAFFIC PATTERN GROUPS	2002-03	2003-04	2004-05	2005-06	2006-07	2002-07
TPG 1 Urban Interstate	3.0%	3.2%	3.2%	2.9%	3.0%	15.3%
TPG 2 Rural Interstate	3.0%	3.3%	3.2%	3.0%	3.0%	15.5%
TPG 3 Urban Principal Arterial	1.0%	1.4%	1.1%	0.7%	1.1%	5.3%
TPG 4 Rural Principal Arterial	1.3%	1.7%	1.6%	1.2%	1.3%	7.1%
TPG 5 Urban Minor Arterials or Collectors	1.0%	1.4%	1.1%	0.7%	1.1%	5.3%
TPG 6 North Rural Minor Arterials	1.3%	1.7%	1.6%	1.2%	1.3%	7.1%
TPG 7 Central Rural Minor Arterials	1.3%	1.7%	1.6%	1.2%	1.3%	7.1%
TPG 8 North Rural Collectors	1.3%	1.7%	1.6%	1.2%	1.3%	7.1%
TPG 9 Central Rural Collectors	1.3%	1.7%	1.6%	1.2%	1.3%	7.1%
TPG 10 Special Recreational	1.0%	1.7%	1.6%	1.2%	1.3%	6.8%
Statewide	1.6%	2.0%	1.8%	1.5%	1.6%	8.4%



Statewide Traffic Trends

This chart shows yearly changes from 1987 to 2007, and a 20-year cumulative trend for the same period.





Heaviest Holiday Travel Periods: 2007

The 60 ATRs were used to calculate the holidays having the highest seven-day periods of traffic. The highest seven-day holiday periods and the highest day within the seven-day holiday period (total traffic at all ATR stations) are shown on the chart below:



The chart indicates that Independence Day had the highest seven-day holiday period in 2007 with a total volume of 6,820,227. Labor Day ranked second (6,796,086) followed by Memorial Day (6,657,789) and Thanksgiving (6,523,583). New Year's Day and Christmas ranked fifth (6,386,081) and sixth (5,962,334) respectively.

The highest day during a seven-day holiday period in 2007 was the Friday before Labor Day (August 31, 2007), which had a volume of 1,198,519. The second highest day was the Friday before Independence Day (June 29, 2007), which had a volume of 1,185,366. The Wednesday before Thanksgiving, (November 28, 2007), ranked third (1,176,760), while the Friday before Memorial Day, (May 25, 2007) ranked fourth (1,140,784). The Friday before Christmas ranked fifth (1,110,131), while the Friday before New Year's Day ranked sixth (1,106,487).



Heaviest Holiday Travel Period Comparisons: 2006-2007

	Highest	Holid	lay (Day)				
2006			2007				
Holiday	Total Volume		Holiday	Total Volume			
1. Independence Day	1,252,903		1. Labor Day	1,198,519			
2. Thanksgiving	1,231,722		2. Independence Day	1,185,366			
3. Memorial Day	1,228,346		3. Thanksgiving	1,176,760			
4. Labor Day	1,222,212		4. Memorial Day	1,140,784			
5. Christmas	1,152,215		5. Christmas	1,110,131			
6. New Year's Day	1,080,630		6. New Year's Day	1,106,487			

	Highest Holi	day P	eriod (7-Day)				
2006			2007				
Holiday Total Volume			Holiday	Total Volume			
1. Memorial Day	7,276,090		1. Independence Day	6,820,227			
2. Independence Day	7,157,181		2. Labor Day	6,796,086			
3. Labor Day	6,949,487		3. Memorial Day	6,657,789			
4. Thanksgiving	6,905,889		4. Thanksgiving	6,523,583			
5. Christmas	6,535,556		5. New Year's Day	6,386,081			
6. New Year's Day	6,339,447		6. Christmas	5,962,334			





Factoring Process: Traffic Adjustment Factors

Traffic Adjustment Factors

Traffic Adjustment Factors are numbers that are used to create traffic statistics representing an average day. Factors are generated by applying statistical methods and programs to raw traffic counts. The different procedures used to factor counts depend on the following outcomes:

24-Hour Total Traffic and Truck Traffic Estimation

Count data less than 24-hours (short term counts) must first be expanded to a 24-hour total, which is accomplished through the use of hourly percentage tables. Separate tables are utilized for total vehicles and truck data application.

AADT and ADTT Estimation

A 24-hour count is processed to an Annual Average Daily Traffic (AADT) and Average Daily Truck Traffic (ADTT) through the application of a "day of week by month" factor. Separate tables are utilized for total vehicle and truck data application.

Axle Correction

Axle volume count data is collected by counting the number of axles striking a single pneumatic tube stretched across a section of highway and dividing by two. This type of data must be corrected to compensate for vehicles containing more than two axles (specifically truck data) to obtain a representative number of vehicles actually traveling that road section. This representation is obtained through the application of an axle correction factor.

Equivalent Single Axle Load Adjustment (ESAL)

ESAL adjustment factors are applied to the ADTT for each type of truck classification, to determine the loading effect these truck classes have on the pavement. Two separate calculations are performed: one for rigid type pavement (concrete) and one for flexible type pavement (bituminous). The AASHTO Empirical Pavement Design Guide has incorporated improved methods of determining loading effects of traffic. In the future, these new methods may supercede the use of ESAL factors.

Growth Factor

If the count to be analyzed was taken earlier than the current year, a regional growth trend is applied to project the older count data to a representative current year estimate. Regional growth trends are established based on Functional Class Group (FCG).

Design Hour Volume Factor, DHV(K)

The K-factor represents the percentage of AADT during the design hour. It is calculated by dividing the peak hour volume by the AADT. A 24-hour count is required to calculate the K-factor. If this condition is not met (in the case of manual counts), a default value is applied. The default value is calculated from the 60 ATR stations using the 30th highest hour and is established based on Traffic Pattern Group (TPG).



The following table shows hourly percentages of total vehicles sorted by Traffic Pattern Group (TPG) for the year 2007. Factors from this table are applied to raw traffic counts of less than 24 hours, which may include volume counts (axle and loop), automatic vehicle classification (AVC), or manual classification counts. Hourly percentages from this table are applied to the known hour periods of the raw count, converting it to a 24-hour total.

The factors were developed using the Department's Traffic Information System (TIS), a PC-based computer application. Raw count data from 1,700 raw AVC counts, collected statewide and averaged over the last five years, was assigned to the respective TPG and a summary was produced showing the hourly percentage tables by direction (applied to divided roadways).

		Hourly	Percentag	es: Total V	ehicles			
	TP	G 1		TPG 2				
HOUR	DIR 1	DIR 2	TOTAL	HOUR	DIR 1	DIR 2	TOTAL	
1	1.22%	1.35%	1.23%	1	1.52%	1.85%	1.80%	
2	0.94%	0.98%	0.90%	2	1.24%	1.55%	1.49%	
3	0.86%	0.89%	0.82%	3	1.18%	1.48%	1.38%	
4	0.91%	0.93%	0.85%	4	1.21%	1.49%	1.39%	
5	1.26%	1.17%	1.13%	5	1.44%	1.72%	1.58%	
6	2.53%	2.06%	2.23%	6	2.38%	2.37%	2.29%	
7	5.67%	4.01%	4.81%	7	4.12%	3.75%	3.62%	
8	7.78%	5.25%	6.58%	8	5.52%	4.61%	4.69%	
9	6.64%	5.01%	5.86%	9	5.28%	4.77%	4.83%	
10	5.47%	4.80%	5.14%	10	5.42%	4.91%	5.12%	
11	5.34%	4.91%	5.11%	11	5.75%	5.17%	5.46%	
12	5.37%	5.15%	5.29%	12	5.97%	5.29%	5.67%	
13	5.43%	5.40%	5.45%	13	5.93%	5.39%	5.72%	
14	5.44%	5.56%	5.52%	14	5.96%	5.70%	5.89%	
15	5.87%	6.25%	6.04%	15	6.26%	6.20%	6.27%	
16	6.49%	7.49%	6.97%	16	6.62%	6.95%	6.78%	
17	6.52%	8.39%	7.46%	17	6.78%	7.59%	7.05%	
18	6.30%	7.94%	7.20%	18	6.23%	6.89%	6.50%	
19	5.23%	5.66%	5.52%	19	5.07%	5.32%	5.31%	
20	4.06%	4.46%	4.35%	20	4.20%	4.29%	4.40%	
21	3.38%	3.95%	3.71%	21	3.69%	3.84%	3.92%	
22	2.97%	3.53%	3.29%	22	3.24%	3.47%	3.49%	
23	2.45%	2.75%	2.59%	23	2.77%	2.94%	2.94%	
24	1.86%	2.10%	1.95%	24	2.21%	2.46%	2.41%	
TOTAL	100.00%	100.00%	100.00%	TOTAL	100.00%	100.00%	100.00%	

		Hourly	Percentag	es: Total V	ehicles			
	TP	G 3		TPG 4				
HOUR	DIR 1	DIR 2	TOTAL	HOUR	DIR 1	DIR 2	TOTAL	
1	0.74%	1.03%	0.83%	1	0.89%	1.02%	0.81%	
2	0.48%	0.61%	0.51%	2	0.61%	0.71%	0.54%	
3	0.43%	0.48%	0.42%	3	0.54%	0.61%	0.48%	
4	0.51%	0.47%	0.45%	4	0.65%	0.63%	0.56%	
5	0.96%	0.69%	0.76%	5	1.16%	0.91%	1.00%	
6	2.70%	1.61%	2.04%	6	3.02%	2.00%	2.47%	
7	6.29%	3.63%	4.74%	7	5.86%	3.76%	4.76%	
8	8.60%	5.39%	6.71%	8	7.40%	5.08%	6.10%	
9	7.10%	5.04%	5.97%	9	6.25%	4.99%	5.61%	
10	5.47%	4.63%	5.12%	10	5.46%	4.79%	5.28%	
11	5.18%	4.68%	5.09%	11	5.31%	4.86%	5.39%	
12	5.30%	5.07%	5.42%	12	5.44%	5.19%	5.59%	
13	5.50%	5.38%	5.72%	13	5.64%	5.44%	5.80%	
14	5.54%	5.56%	5.75%	14	5.82%	5.78%	5.99%	
15	6.04%	6.37%	6.32%	15	6.27%	6.56%	6.57%	
16	6.67%	8.18%	7.34%	16	6.92%	8.26%	7.54%	
17	6.88%	9.28%	7.84%	17	7.20%	9.14%	7.91%	
18	6.68%	9.11%	7.68%	18	6.79%	8.69%	7.42%	
19	5.33%	6.35%	5.93%	19	5.23%	5.87%	5.59%	
20	4.04%	4.74%	4.58%	20	3.92%	4.46%	4.32%	
21	3.26%	3.97%	3.80%	21	3.20%	3.84%	3.63%	
22	2.75%	3.44%	3.16%	22	2.80%	3.29%	2.99%	
23	2.14%	2.44%	2.26%	23	2.14%	2.39%	2.14%	
24	1.42%	1.84%	1.56%	24	1.47%	1.72%	1.47%	
TOTAL	100.00%	100.00%	100.00%	TOTAL	100.00%	100.00%	100.00%	



		Hourly	Percentag	es: Total V	ehicles			
	TP	G 5		TPG 6				
HOUR	DIR 1	DIR 2	TOTAL	HOUR	DIR 1	DIR 2	TOTAL	
1	0.77%	1.05%	0.73%	1	0.88%	0.70%	0.80%	
2	0.46%	0.61%	0.42%	2	0.48%	0.36%	0.52%	
3	0.40%	0.50%	0.34%	3	0.34%	0.28%	0.47%	
4	0.43%	0.49%	0.35%	4	0.43%	0.33%	0.52%	
5	0.79%	0.69%	0.64%	5	0.78%	0.59%	0.94%	
6	2.27%	1.67%	1.84%	6	2.10%	1.53%	2.23%	
7	5.41%	3.78%	4.46%	7	4.47%	4.00%	4.30%	
8	7.66%	5.23%	6.46%	8	6.18%	6.45%	5.76%	
9	6.73%	5.00%	5.80%	9	6.12%	5.26%	5.50%	
10	5.33%	4.63%	4.99%	10	5.57%	4.88%	5.38%	
11	5.06%	4.63%	5.00%	11	5.17%	4.93%	5.54%	
12	5.44%	5.06%	5.45%	12	5.57%	5.34%	5.85%	
13	5.73%	5.65%	5.86%	13	5.84%	5.91%	6.07%	
14	5.69%	5.58%	5.75%	14	6.03%	5.96%	6.18%	
15	6.02%	6.27%	6.34%	15	6.60%	6.83%	6.82%	
16	6.87%	7.88%	7.53%	16	7.29%	8.53%	7.82%	
17	7.16%	8.96%	8.11%	17	7.35%	9.13%	8.00%	
18	6.93%	8.85%	7.93%	18	7.10%	9.08%	7.26%	
19	5.62%	6.41%	6.16%	19	6.16%	6.04%	5.58%	
20	4.60%	4.81%	4.89%	20	4.73%	4.36%	4.41%	
21	3.75%	4.08%	4.07%	21	3.80%	3.61%	3.68%	
22	3.11%	3.51%	3.20%	22	2.91%	2.65%	2.88%	
23	2.30%	2.67%	2.21%	23	2.50%	1.93%	2.08%	
24	1.46%	1.97%	1.45%	24	1.61%	1.32%	1.41%	
TOTAL	100.00%	100.00%	100.00%	TOTAL	100.00%	100.00%	100.00%	



		Hourly	Percentag	es: Total V	ehicles			
	TP	G 7		TPG 8				
HOUR	DIR 1	DIR 2	TOTAL	HOUR	DIR 1	DIR 2	TOTAL	
1	0.89%	0.96%	0.77%	1	0.58%	0.83%	0.72%	
2	0.55%	0.68%	0.47%	2	0.40%	0.56%	0.43%	
3	0.48%	0.58%	0.40%	3	0.37%	0.37%	0.35%	
4	0.55%	0.63%	0.47%	4	0.48%	0.37%	0.37%	
5	1.01%	0.98%	0.90%	5	0.80%	0.76%	0.70%	
6	2.61%	1.98%	2.48%	6	2.34%	1.77%	1.96%	
7	5.55%	3.78%	5.05%	7	5.36%	3.72%	4.37%	
8	7.19%	4.88%	6.32%	8	7.17%	5.74%	6.09%	
9	6.21%	4.52%	5.45%	9	5.72%	5.18%	5.61%	
10	5.51%	4.49%	5.08%	10	5.25%	4.82%	5.12%	
11	5.32%	4.71%	5.17%	11	5.34%	5.23%	5.26%	
12	5.58%	5.10%	5.42%	12	5.88%	5.54%	5.60%	
13	5.97%	5.63%	5.80%	13	6.35%	5.95%	5.93%	
14	5.83%	5.72%	5.73%	14	6.24%	5.94%	5.98%	
15	6.41%	6.76%	6.45%	15	6.29%	6.60%	6.56%	
16	7.07%	8.72%	7.66%	16	6.87%	8.25%	7.74%	
17	7.33%	9.69%	8.11%	17	7.32%	8.32%	8.12%	
18	6.63%	8.86%	7.61%	18	7.02%	8.19%	7.69%	
19	5.16%	5.89%	5.74%	19	5.60%	6.23%	6.04%	
20	4.07%	4.56%	4.47%	20	4.69%	4.76%	4.81%	
21	3.55%	3.73%	3.78%	21	3.86%	3.94%	3.97%	
22	2.88%	3.09%	3.05%	22	2.91%	3.29%	3.10%	
23	2.16%	2.33%	2.17%	23	1.89%	2.21%	2.11%	
24	1.50%	1.72%	1.45%	24	1.28%	1.42%	1.37%	
TOTAL	100.00%	100.00%	100.00%	TOTAL	100.00%	100.00%	100.00%	



		Hourly	Percentag	es: Total V	ehicles			
	TP	G 9		TPG 10				
HOUR	DIR 1	DIR 2	TOTAL	HOUR	DIR 1	DIR 2	TOTAL	
1	0.84%	1.10%	0.80%	1	0.08%	0.07%	0.81%	
2	0.50%	0.60%	0.47%	2	0.02%	0.02%	0.50%	
3	0.42%	0.48%	0.39%	3	0.02%	0.00%	0.34%	
4	0.52%	0.50%	0.42%	4	0.03%	0.02%	0.34%	
5	0.98%	0.76%	0.77%	5	0.00%	0.02%	0.59%	
6	2.71%	1.79%	2.13%	6	0.56%	0.10%	1.45%	
7	6.09%	3.85%	4.68%	7	1.87%	0.52%	3.01%	
8	8.09%	5.36%	6.34%	8	2.40%	1.25%	4.79%	
9	6.96%	5.24%	5.62%	9	3.02%	1.87%	5.01%	
10	5.56%	4.63%	4.96%	10	4.45%	2.42%	5.14%	
11	5.02%	4.60%	4.97%	11	6.66%	3.20%	5.47%	
12	5.08%	4.91%	5.28%	12	8.31%	4.36%	5.99%	
13	5.33%	5.23%	5.62%	13	11.24%	6.14%	6.30%	
14	5.52%	5.37%	5.64%	14	8.63%	7.66%	6.39%	
15	5.86%	6.34%	6.31%	15	7.76%	8.11%	6.83%	
16	6.31%	7.89%	7.60%	16	6.50%	9.51%	7.86%	
17	6.71%	8.76%	8.10%	17	5.50%	9.10%	8.51%	
18	6.82%	8.65%	7.83%	18	7.60%	8.36%	8.12%	
19	5.75%	6.46%	6.16%	19	9.74%	8.13%	6.31%	
20	4.43%	4.86%	4.85%	20	9.02%	9.76%	5.23%	
21	3.57%	4.11%	4.04%	21	4.52%	12.70%	4.20%	
22	3.09%	3.69%	3.22%	22	1.45%	5.14%	3.12%	
23	2.36%	2.72%	2.28%	23	0.47%	1.10%	2.20%	
24	1.49%	2.09%	1.52%	24	0.16%	0.43%	1.48%	
TOTAL	100.00%	100.00%	100.00%	TOTAL	100.00%	100.00%	100.00%	



Table 360Hourly Percentages Compiled for Truck Traffic

The following four tables and chart show hourly percentages of truck traffic sorted by Maintenance Functional Class (MFC). These tables are applied separately to raw truck data of less than 24-hours, including both Automatic Vehicle Classification (AVC) and manual counts. Manual classification counts are the primary source of data using these tables. The hourly percentages are calculated from these tables and applied to the sum of the known hour periods and in turn converted to a 24-hour truck total.

The factors were developed using 1,700 AVC counts, collected and verified over the last five years. The raw count data was assigned to the respective Traffic Pattern Group (TPG), the truck data was extracted by vehicle type, TIS generated a summary showing the hourly percentage table by direction (applied to divided roadways). Truck data is tabulated according to MFC. Hourly weekday truck distribution provides evidence that the hourly percentage changes by MFC provide a valid breakdown of groups. Therefore, a summary was produced converting the TPGs to comparable MFC groups to be consistent with the characteristics of the 2007 Hourly Percentages (Truck Traffic) tables.

	TPG	1 & 2		TPG 3 & 4				
MAINT	ENANCE FUI	NCTIONAL C	LASS A	MAINT	ENANCE FUN	CTIONAL C	LASS B	
	(INTERS	STATES)		(PRINCIPAL ARTERIALS)				
HOUR	DIR 1	DIR 2	TOTAL	HOUR	DIR 1	DIR 2	TOTAL	
1	2.79%	3.28%	2.95%	1	1.32%	1.60%	1.25%	
2	2.49%	3.18%	2.71%	2	1.20%	1.51%	1.18%	
3	2.43%	2.98%	2.63%	3	1.25%	1.61%	1.26%	
4	2.46%	3.15%	2.71%	4	1.52%	1.86%	1.54%	
5	2.69%	3.29%	2.92%	5	2.06%	2.40%	2.08%	
6	2.96%	3.58%	3.28%	6	3.19%	3.40%	3.19%	
7	3.61%	3.97%	3.88%	7	4.83%	4.81%	4.88%	
8	4.05%	4.30%	4.28%	8	6.11%	5.65%	6.15%	
9	4.39%	4.53%	4.55%	9	6.72%	6.19%	6.68%	
10	4.89%	4.73%	4.85%	10	6.48%	6.25%	6.62%	
11	5.18%	4.74%	5.06%	11	6.70%	6.36%	6.75%	
12	5.49%	4.70%	5.15%	12	6.74%	6.36%	6.78%	
13	5.35%	4.70%	5.12%	13	6.72%	6.47%	6.71%	
14	5.41%	4.82%	5.18%	14	6.67%	6.56%	6.73%	
15	5.57%	4.89%	5.26%	15	6.68%	6.66%	6.84%	
16	5.60%	4.98%	5.27%	16	6.54%	6.34%	6.60%	
17	5.55%	4.77%	5.13%	17	5.72%	5.76%	5.76%	
18	5.12%	4.57%	4.87%	18	4.82%	4.71%	4.74%	
19	4.79%	4.51%	4.61%	19	3.71%	3.72%	3.63%	
20	4.53%	4.38%	4.37%	20	2.91%	2.98%	2.84%	
21	4.14%	4.14%	4.15%	21	2.47%	2.59%	2.41%	
22	3.82%	4.20%	3.98%	22	2.18%	2.34%	2.09%	
23	3.54%	3.96%	3.72%	23	1.87%	2.05%	1.77%	
24	3.15%	3.66%	3.36%	24	1.59%	1.81%	1.52%	
TOTAL	100.00%	100.00%	100.00%	TOTAL	100.00%	100.00%	100.00%	





Table 360Hourly Percentages Compiled for Truck Traffic (Continued)

	TPG 5	,6&7		TPG 8 & 9				
MAINT	ENANCE FUI	NCTIONAL C	LASS C	MAINTEN	ANCE FUNCT	10NAL CLAS	SD, E & F	
	(MINOR A	RTERIALS)			(RURAL CO	LLECTORS)		
HOUR	DIR 1	DIR 2	TOTAL	HOUR	DIR 1	DIR 2	TOTAL	
1	1.04%	1.42%	0.85%	1	1.28%	2.16%	1.00%	
2	0.93%	1.30%	0.77%	2	1.18%	1.80%	0.88%	
3	0.98%	1.41%	0.82%	3	1.19%	1.91%	0.92%	
4	1.15%	1.68%	1.02%	4	1.44%	2.26%	1.14%	
5	1.60%	1.93%	1.49%	5	1.87%	2.55%	1.60%	
6	2.68%	2.92%	2.70%	6	2.81%	3.71%	2.80%	
7	4.64%	4.58%	4.97%	7	4.81%	5.19%	4.93%	
8	6.59%	5.91%	6.81%	8	5.76%	6.02%	6.61%	
9	7.15%	6.25%	7.13%	9	6.04%	5.97%	6.81%	
10	6.93%	6.31%	6.82%	10	6.46%	6.26%	6.53%	
11	6.89%	6.26%	6.80%	11	6.35%	6.01%	6.63%	
12	6.96%	6.29%	6.95%	12	6.50%	5.64%	6.66%	
13	6.87%	6.36%	6.84%	13	6.69%	5.67%	6.65%	
14	6.80%	6.54%	6.93%	14	6.60%	5.89%	6.79%	
15	6.84%	6.76%	7.28%	15	6.70%	5.73%	7.15%	
16	7.03%	6.65%	7.36%	16	6.37%	5.85%	7.34%	
17	6.32%	6.24%	6.33%	17	5.95%	5.48%	6.27%	
18	4.90%	5.53%	5.03%	18	5.15%	4.65%	5.02%	
19	3.62%	3.94%	3.64%	19	4.12%	3.99%	3.82%	
20	2.86%	3.18%	2.81%	20	3.30%	3.34%	3.01%	
21	2.35%	2.64%	2.27%	21	2.88%	2.82%	2.49%	
22	2.01%	2.22%	1.83%	22	2.60%	2.73%	2.02%	
23	1.55%	1.99%	1.43%	23	2.17%	2.35%	1.61%	
24	1.28%	1.68%	1.13%	24	1.78%	2.03%	1.30%	
TOTAL	100.00%	100.00%	100.00%	TOTAL	100.00%	100.00%	100.00%	



Hourly Percentages Charts



PennDOT



Table 355

Average Day of Week by Month Factors Compiled for Total Vehicles

The following 12 tables show average day of week factors by month compiled for total vehicles for the year 2007. Current year Automatic Traffic Recorder (ATR) traffic data is assembled and the data is placed in the respective TPG. Annual Average Daily Traffic (AADT) is tabulated individually for each of the 60 ATR stations. A factor is calculated for each day from each station and a list is tabulated by month and day of the week. This data is assembled by day and TPG for each station. The result is a group factor, which can be applied to a 24-hour raw traffic count taken during any day of the year to develop an AADT volume.

			J	anuar	y 2007					
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	1.128	1.293	1.106	1.179	1.160	1.282	1.176	1.245	1.170	1.302
Tuesday	1.099	1.300	0.992	1.110	1.081	1.218	1.114	1.192	1.087	1.262
Wednesday	1.057	1.317	0.991	1.124	1.083	1.218	1.090	1.206	1.085	1.354
Thursday	1.031	1.261	0.964	1.082	1.063	1.186	1.070	1.186	1.066	1.243
Friday	0.966	1.125	0.929	0.991	1.020	1.064	0.999	1.066	1.004	1.124
Saturday	1.313	1.438	1.305	1.314	1.210	1.450	1.223	1.298	1.268	1.212
Sunday	1.487	1.383	1.673	1.468	1.384	1.662	1.462	1.516	1.505	1.362
DAY OF MONTH	1.154	1.302	1.137	1.181	1.143	1.297	1.162	1.244	1.169	1.265

February 2007												
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10		
Monday	1.067	1.260	1.020	1.122	1.129	1.193	1.108	1.203	1.114	1.293		
Tuesday	1.059	1.317	0.974	1.099	1.084	1.160	1.089	1.159	1.067	1.234		
Wednesday	1.028	1.246	0.957	1.078	1.049	1.152	1.030	1.176	1.114	1.208		
Thursday	0.995	1.193	0.931	1.041	1.043	1.098	1.033	1.112	1.047	1.209		
Friday	0.942	1.071	0.896	0.946	0.996	0.992	0.984	1.021	1.010	0.914		
Saturday	1.233	1.377	1.227	1.215	1.160	1.299	1.172	1.226	1.219	1.140		
Sunday	1.354	1.314	1.496	1.409	1.335	1.498	1.357	1.483	1.466	1.427		
DAY OF MONTH	1.097	1.254	1.071	1.130	1.114	1.199	1.111	1.197	1.148	1.203		



Table 355Average Day of Week by Month Factors Compiled for Total Vehicles
(Continued)

				March	2007					
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	1.014	1.194	0.974	1.056	1.038	1.112	1.083	1.119	1.024	1.260
Tuesday	1.002	1.194	0.948	1.038	1.017	1.098	1.066	1.095	0.992	1.184
Wednesday	0.977	1.161	0.937	1.034	1.013	1.096	1.034	1.100	0.991	1.228
Thursday	0.947	1.098	0.926	1.004	1.004	1.057	1.023	1.067	0.985	1.199
Friday	0.925	0.981	0.896	0.929	0.946	0.960	0.960	0.982	0.940	1.096
Saturday	1.183	1.233	1.194	1.141	1.086	1.235	1.122	1.157	1.129	1.149
Sunday	1.226	1.131	1.545	1.284	1.190	1.365	1.251	1.273	1.276	1.071
DAY OF MONTH	1.039	1.142	1.060	1.069	1.042	1.132	1.077	1.113	1.048	1.169

April 2007												
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10		
Monday	0.971	1.080	0.938	0.977	0.964	0.998	0.998	1.010	0.957	1.106		
Tuesday	0.958	1.105	0.905	0.977	0.944	1.000	0.968	0.994	0.923	1.060		
Wednesday	0.939	1.066	0.893	0.961	0.930	0.997	0.926	0.986	0.916	1.074		
Thursday	0.908	0.990	0.881	0.935	0.929	0.948	0.935	0.956	0.900	1.038		
Friday	0.889	0.861	0.868	0.860	0.886	0.861	0.873	0.877	0.858	0.949		
Saturday	1.131	1.100	1.159	1.058	1.004	1.071	1.012	1.024	1.035	1.005		
Sunday	1.164	1.016	1.356	1.135	1.093	1.136	1.136	1.090	1.170	1.220		
DAY OF MONTH	0.994	1.031	1.000	0.986	0.964	1.002	0.978	0.991	0.966	1.064		

				May 2	2007					
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	1.005	1.004	0.952	0.977	0.982	0.955	0.985	0.927	0.954	0.997
Tuesday	0.949	1.044	0.887	0.951	0.913	0.935	0.933	0.907	0.894	0.952
Wednesday	0.930	1.031	0.874	0.939	0.902	0.923	0.900	0.894	0.883	0.959
Thursday	0.897	0.947	0.862	0.909	0.889	0.888	0.897	0.859	0.869	0.920
Friday	0.880	0.828	0.844	0.836	0.854	0.797	0.818	0.797	0.828	0.838
Saturday	1.107	1.024	1.131	0.999	0.957	0.986	0.963	0.887	0.999	0.842
Sunday	1.133	0.967	1.325	1.078	1.059	1.032	1.067	0.941	1.111	0.721
DAY OF MONTH	0.986	0.978	0.982	0.956	0.937	0.931	0.938	0.887	0.934	0.890





Table 355Average Day of Week by Month Factors Compiled for Total Vehicles
(Continued)

				June	2007					
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	0.928	0.950	0.915	0.943	0.918	0.910	0.977	0.907	0.913	0.910
Tuesday	0.918	0.995	0.888	0.943	0.912	0.919	0.957	0.906	0.896	0.888
Wednesday	0.902	0.964	0.872	0.924	0.899	0.904	0.921	0.895	0.884	0.898
Thursday	0.878	0.892	0.862	0.907	0.895	0.868	0.929	0.871	0.872	0.873
Friday	0.844	0.757	0.854	0.835	0.865	0.806	0.871	0.797	0.827	0.768
Saturday	1.077	0.937	1.137	0.993	0.957	0.980	0.988	0.901	0.991	0.777
Sunday	1.068	0.872	1.251	1.035	1.004	0.987	1.002	0.953	1.088	0.940
DAY OF MONTH	0.945	0.909	0.968	0.940	0.921	0.911	0.949	0.890	0.925	0.865

July 2007												
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10		
Monday	0.938	0.893	0.973	0.944	0.939	0.893	0.946	0.919	0.929	0.833		
Tuesday	0.931	0.942	0.938	0.927	0.914	0.889	0.916	0.911	0.897	0.806		
Wednesday	0.920	0.920	0.925	0.917	0.926	0.885	0.876	0.901	0.909	0.822		
Thursday	0.876	0.841	0.911	0.884	0.909	0.853	0.882	0.870	0.893	0.782		
Friday	0.851	0.722	0.893	0.850	0.886	0.784	0.832	0.814	0.860	0.698		
Saturday	1.050	0.830	1.201	0.976	0.998	0.924	0.937	0.901	1.001	0.640		
Sunday	1.070	0.793	1.420	1.002	1.050	0.903	0.973	0.947	1.091	0.808		
DAY OF MONTH	0.948	0.849	1.037	0.929	0.946	0.876	0.909	0.895	0.940	0.770		

				August	2007					
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	0.915	0.894	0.948	0.938	0.944	0.901	0.949	0.938	0.927	0.821
Tuesday	0.914	0.946	0.911	0.934	0.918	0.907	0.930	0.927	0.901	0.813
Wednesday	0.890	0.912	0.893	0.916	0.921	0.890	0.900	0.912	0.892	0.808
Thursday	0.861	0.839	0.885	0.892	0.909	0.852	0.895	0.889	0.878	0.788
Friday	0.824	0.709	0.879	0.833	0.885	0.773	0.843	0.816	0.839	0.705
Saturday	1.012	0.824	1.177	0.957	0.996	0.905	0.966	0.929	1.001	0.691
Sunday	1.004	0.795	1.165	0.994	1.078	0.913	0.998	0.967	1.098	0.804
DAY OF MONTH	0.917	0.845	0.980	0.923	0.950	0.877	0.926	0.911	0.934	0.776





Table 355Average Day of Week by Month Factors Compiled for Total Vehicles
(Continued)

			Se	ptemb	er 200	7				
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	1.017	1.026	1.021	0.977	0.988	0.973	1.009	1.008	0.979	0.994
Tuesday	0.963	1.078	0.909	0.952	0.940	0.938	0.963	0.971	0.927	0.974
Wednesday	0.940	1.066	0.893	0.943	0.940	0.942	0.926	0.968	0.910	0.977
Thursday	0.920	0.991	0.884	0.923	0.929	0.906	0.937	0.929	0.903	0.966
Friday	0.855	0.832	0.852	0.838	0.888	0.825	0.867	0.869	0.867	0.876
Saturday	1.106	1.018	1.168	1.007	1.017	0.996	0.993	0.987	1.041	0.888
Sunday	1.156	0.946	1.378	1.075	1.114	1.031	1.117	1.060	1.166	0.818
DAY OF MONTH	0.994	0.994	1.015	0.959	0.974	0.945	0.973	0.970	0.971	0.928

			C)ctobe	r 2007					
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	0.958	1.035	0.928	0.958	0.983	0.958	0.986	1.004	0.956	1.016
Tuesday	0.956	1.095	0.899	0.956	0.961	0.963	0.966	0.993	0.934	1.018
Wednesday	0.950	1.071	0.886	0.950	0.953	0.969	0.936	0.994	0.926	1.027
Thursday	0.909	0.982	0.871	0.914	0.945	0.908	0.930	0.947	0.910	0.987
Friday	0.849	0.839	0.846	0.845	0.907	0.831	0.865	0.878	0.867	0.892
Saturday	1.096	1.053	1.152	1.017	1.033	1.022	1.005	1.016	1.060	0.943
Sunday	1.127	0.926	1.321	1.042	1.074	1.014	1.094	1.061	0.999	1.099
DAY OF MONTH	0.978	1.000	0.986	0.955	0.979	0.952	0.969	0.985	0.950	0.997





Table 355 Average Day of Week by Month Factors Compiled for Total Vehicles (Continued)

			No	ovemb	er 200	7				
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	0.983	1.081	0.960	1.014	1.026	1.026	1.034	1.049	1.014	1.184
Tuesday	0.949	1.076	0.922	0.976	0.990	0.987	0.996	1.018	0.965	1.076
Wednesday	0.943	1.065	0.911	0.969	0.989	0.991	0.966	1.015	0.946	1.100
Thursday	0.979	1.049	0.966	1.003	1.028	1.001	1.019	1.003	0.959	1.070
Friday	0.914	0.937	0.940	0.914	0.963	0.923	0.926	0.948	0.933	0.991
Saturday	1.119	1.082	1.201	1.087	1.087	1.115	1.058	1.077	1.102	1.050
Sunday	1.158	1.067	1.512	1.184	1.217	1.197	1.221	1.137	1.068	0.941
DAY OF MONTH	1.007	1.051	1.059	1.021	1.043	1.034	1.031	1.035	0.998	1.059

			De	ecemb	er 200	7				
DAY	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
Monday	1.028	1.192	1.004	1.072	1.049	1.136	1.080	1.136	1.058	1.307
Tuesday	0.998	1.153	1.005	1.053	1.038	1.102	1.046	1.111	1.025	1.159
Wednesday	0.964	1.108	0.947	1.026	1.016	1.067	1.009	1.077	0.985	1.135
Thursday	0.959	1.070	0.944	1.020	1.042	1.099	1.044	1.083	1.032	1.190
Friday	0.947	1.045	0.954	0.992	1.004	1.025	0.973	1.022	0.990	1.086
Saturday	1.173	1.180	1.228	1.153	1.108	1.251	1.103	1.161	1.149	1.203
Sunday	1.340	1.265	1.536	1.348	1.263	1.426	1.356	1.353	1.358	1.572
DAY OF MONTH	1.058	1.145	1.088	1.095	1.074	1.158	1.087	1.135	1.085	1.236



Monthly Variation Charts by Traffic Pattern Group (TPG)

The charts below show the different variations between months and traffic pattern groups (TPG). The seasonal factors, which are the data these charts are derived from, show the percentage difference between the raw data count and the annual average daily traffic (AADT). The seasonal factors data can be seen in Table 355.









Monthly Variation Charts by TPG (Continued)















Monthly Variation Charts by TPG (Continued)











Table 365

Average Day of Week by Month Factors Compiled for Truck Traffic

The following table shows average day of week factors by month compiled for truck traffic. This data is used to convert 24-hour truck data to Average Daily Truck Traffic (ADTT). The ADTT is determined by applying the appropriate factor for the day of week and month to the truck traffic. Truck seasonal variation charts, which are based on truck traffic studies, indicate that truck traffic varies little for both the Interstate and Non-Interstate systems. On the other hand, day of week distribution does indicate a large variation between weekday (Monday through Friday) versus week-end (Saturday through Sunday) truck flow. Continuous truck data obtained from the Pennsylvania Turnpike Commission toll collection facilities was evaluated and used to formulate the required truck factors.

Delaware River toll bridges and SHRP locations that also collect continous vehicle classification data are being evallated and may be used in calculation of future truck factors.

AVERAGE DAY OF WEEK BY MONTH FOR TRUCK TRAFFIC												
	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY					
JANUARY	0.94	0.87	0.85	0.84	0.88	2.34	3.70					
FEBRUARY	0.92	0.85	0.85	0.84	0.87	2.38	3.57					
MARCH	0.88	0.82	0.81	0.80	0.84	2.15	3.30					
APRIL	0.87	0.79	0.77	0.76	0.77	1.86	2.91					
MAY	0.82	0.78	0.75	0.75	0.76	1.82	2.66					
JUNE	0.83	0.76	0.75	0.72	0.74	1.74	2.40					
JULY	0.84	0.77	0.76	0.75	0.76	1.63	2.28					
AUGUST	0.81	0.76	0.76	0.74	0.75	1.65	2.27					
SEPTEMBER	0.82	0.75	0.73	0.72	0.73	1.72	2.41					
OCTOBER	0.80	0.75	0.74	0.73	0.74	1.85	2.46					
NOVEMBER	0.85	0.77	0.77	0.75	0.77	1.86	2.85					
DECEMBER	0.85	0.85	0.83	0.78	0.81	2.13	3.10					



Table 370 Yearly Growth Factors

The yearly growth factors (shown in the following table) are used to compute the current estimated average daily traffic for count data that is older than the current year. The factor application is applied by Traffic Pattern Group (TPG) and is used to calculate total vehicles and truck estimates. A limited amount of count data is processed through the Yearly Growth Factor table, since most traffic counts are for the current year.

To use this table, select the base year of the count from the "YEAR" column and multiply it by the percentage under the corresponding "TPG" row.

For example, to determine the current year estimate (2007) of a 1998 base year count having a TPG 5, multiply 1.122 (12.2%) by the AADT of the 1998 count.

Yearly Growth Factors: 1997-2007												
TPG	97-98	98-99	99-00	00-01	01-02	02-03	03-04	04-05	05-06	06-07		
TPG1	2.0%	3.0%	0.5%	2.0%	3.0%	3.0%	3.2%	3.2%	2.9%	3.0%		
TPG 2	3.0%	3.0%	0.5%	2.0%	3.0%	3.0%	3.3%	3.2%	3.0%	3.0%		
TPG 3	2.0%	2.0%	0.5%	2.0%	1.8%	1.0%	1.4%	1.1%	0.7%	1.1%		
TPG4	2.0%	2.0%	0.3%	1.0%	1.8%	1.3%	1.7%	1.6%	1.2%	1.3%		
TPG 5	2.0%	2.0%	0.5%	2.0%	1.8%	1.0%	1.4%	1.1%	0.7%	1.1%		
TPG6	2.0%	2.0%	0.3%	1.0%	1.9%	1.3%	1.7%	1.6%	1.2%	1.3%		
TPG7	2.0%	2.0%	0.3%	1.0%	1.9%	1.3%	1.7%	1.6%	1.2%	1.3%		
TPG 8	2.0%	2.0%	0.3%	1.0%	1.9%	1.3%	1.7%	1.6%	1.2%	1.3%		
TPG 9	2.0%	2.0%	0.3%	1.0%	1.9%	1.3%	1.7%	1.6%	1.2%	1.3%		
TPG 10	5.0%	2.0%	1.0%	1.0%	1.0%	1.0%	1.7%	1.6%	1.2%	1.3%		

The table below shows yearly growth percentages by TPG for 1997 through 2007.

Percent Growth: 1997-2007											
TPG	97-06	98-06	99-06	00-06	01-06	02-06	03-06	04-06	05-06	06-07	
TPG1	29.0%	26.4%	22.8%	22.1%	19.8%	16.3%	12.9%	9.4%	6.0%	3.0%	
TPG 2	30.5%	26.7%	23.0%	22.4%	20.0%	16.5%	13.1%	9.5%	6.1%	3.0%	
TPG 3	14.4%	12.2%	10.0%	9.5%	7.3%	5.4%	4.4%	2.9%	1.8%	1.1%	
TPG 4	15.1%	12.9%	10.7%	10.3%	9.2%	7.3%	5.9%	4.2%	2.5%	1.3%	
TPG 5	14.4%	12.2%	10.0%	9.5%	7.3%	5.4%	4.4%	2.9%	1.8%	1.1%	
TPG6	15.2%	13.0%	10.8%	10.4%	9.3%	7.3%	5.9%	4.2%	2.5%	1.3%	
TPG7	15.2%	13.0%	10.8%	10.4%	9.3%	7.3%	5.9%	4.2%	2.5%	1.3%	
TPG 8	15.2%	13.0%	10.8%	10.4%	9.3%	7.3%	5.9%	4.2%	2.5%	1.3%	
TPG 9	15.2%	13.0%	10.8%	10.4%	9.3%	7.3%	5.9%	4.2%	2.5%	1.3%	
TPG 10	18.1%	12.4%	10.2%	9.1%	8.1%	7.0%	5.9%	4.2%	2.5%	1.3%	







Functional Class Groups

Traffic volume data displayed in PennDOT's Roadway Management System (RMS) is projected to a current estimate year (2007) based on County/Functional Class Group (FCG). This provides the user with trends relative to a specific county. The factors are applied annually to the Department's Roadway Management System (RMS) to produce the current year traffic volume estimate values.

This table shows the FCGs with a description and corresponding Functional Class Codes (FCCs).

FCG	DESCRIPTIVE NAME	FCC
FCG 1	URBAN INTERSTATE	FCC 11
FCG 2	RURAL INTERSTATE	FCC 01
FCG 3	URBAN - OTHER FREEWAYS/EXPRESSWAYS	FCC 12
	URBAN - OTHER PRINCIPAL ARTERIALS	FCC 14
	URBAN - MINOR ARTERIALS	FCC 16
	RAMPS	FCC 99
FCG 4	RURAL - OTHER PRINCIPAL ARTERIALS	FCC 02
	RURAL - MINOR ARTERIAL	FCC 06
FCG 5	URBAN COLLECTORS	FCC 17
	URBAN - LOCAL	FCC 19
FCG 6	RURAL - MAJOR COLLECTOR	FCC 07
	RURAL - MINOR COLLECTOR	FCC 08
	RURAL - LOCAL	FCC 09





Table 380Axle Correction Factors

Axle volume count data is collected by counting vehicle axles (two axle strikes equals one vehicle). Since these counts may include a number of trucks with more than two axles, they must be corrected to represent the actual volume of total vehicles. The axle correction factors are applied to raw axle volume count data, adjusting it to a correct representative volume.

2007 Axle Correction Factors are shown in the table below.

TPG	Axle Correction Factor
1	82.37%
2	68.99%
3	93.72%
4	88.93%
5	97.20%
6	92.55%
7	94.91%
8	95.10%
9	96.56%
10	95.91%



Table 385Design Hour Factor Default Values

The design hour factor (K-factor) represents the percent of Annual Average Daily Traffic (AADT) occuring in the peak hour. This value is important in the design of roadways and capacity analysis studies.

Count data less than 24-hours and/or data not having directional volumes will not have the necessary raw data required to compute actual K-factor values. The K-factor default values were produced to complete unknown values not generated through the raw count factoring process, and to satisfy Highway Performance Monitoring System (HPMS) reporting requirements. They were developed by processing the actual hourly data from the 60 ATR stations to identify the 30th highest hour; this hourly volume was divided by the AADT for each station, producing a K-factor. The factors were then averaged by Traffic Pattern Group (TPG).

During the raw count factoring process, the K-factor value is programmatically inserted into the Roadway Management System (RMS) database if the raw count data is insufficient to calculate an actual K-factor.

TPG	K factor default value
1	9%
2	11%
3	11%
4	10%
5	11%
6	11%
7	11%
8	12%
9	11%
10	12%

2007 K-Factors and corresponding TPGs are shown in the table below.



Tables 390 and 395Equivalent Single Axle Load Factors

Equivalent Single Axle Load (ESAL) tables are used to calculate pavement loadings (rigid and flexible types) to produce a common parameter for design and planning purposes.

ESAL factors used in RMS were derived through a composite of data obtained from AASHTO guidelines and test data collected from historical Loadometer Surveys. Data obtained through WIM equipment is under review at this time and will be considered in development of future ESAL factors. The AASHTO Mechanistic Empirical Design Guide (MEPDG) has incorporated improved methods of determining loading effects of traffic. In the future, these new methods may supercede the use of ESAL factors.

2007 ESAL factors for rigid pavements are shown by Traffic Pattern Group (TPG) and vehicle classification in **Table 390**, below.

RIGID ESAL FACTORS										
CLASS	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10
2 AXLE SINGLE UNIT TRUCK	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240
3 AXLE SINGLE UNIT TRUCK	1.150	1.150	1.150	1.150	1.150	1.150	1.150	1.150	1.150	1.150
4 AXLE SINGLE UNIT TRUCK	7.000	7.000	7.000	7.000	7.000	7.000	7.000	7.000	7.000	7.000
3 AXLE SINGLE TRAILER	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430	0.430
4 AXLE SINGLE TRAILER	0.900	0.900	0.900	0.900	0.900	0.900	0.900	0.900	0.900	0.900
5 AXLE SINGLE TRAILER	1.590	1.590	1.590	1.590	1.590	1.590	1.590	1.590	1.590	1.590
5 AXLE MULTI TRAILER	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400	2.400
6 AXLE MULTI TRAILER	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.420

2007 ESAL factors for flexible pavements are shown by Traffic Pattern Group (TPG) and vehicle classification in **Table 395**, below.

FLEXIBLE ESAL FACTORS											
CLASS	TPG 1	TPG 2	TPG 3	TPG 4	TPG 5	TPG 6	TPG 7	TPG 8	TPG 9	TPG 10	
2 AXLE SINGLE UNIT TRUCK	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	0.240	
3 AXLE SINGLE UNIT TRUCK	0.820	0.820	0.820	0.820	0.820	0.820	0.820	0.820	0.820	0.820	
4 AXLE SINGLE UNIT TRUCK	4.500	4.500	4.500	4.500	4.500	4.500	4.500	4.500	4.500	4.500	
3 AXLE SINGLE TRAILER	0.440	0.440	0.440	0.440	0.440	0.440	0.440	0.440	0.440	0.440	
4 AXLE SINGLE TRAILER	0.760	0.760	0.760	0.760	0.760	0.760	0.760	0.760	0.760	0.760	
5 AXLE SINGLE TRAILER	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	
5 AXLE MULTI TRAILER	2.330	2.330	2.330	2.330	2.330	2.330	2.330	2.330	2.330	2.330	
6 AXLE MULTI TRAILER	1.276	1.276	1.276	1.276	1.276	1.276	1.276	1.276	1.276	1.270	





Roadway Management System Factor Table Application Flow Chart

I. MANUAL COUNT (LESS THAN 24 HOURS)



II. AUTOMATIC VEHICLE CLASSIFICATION COUNT



III. AXLE AND LOOP VOLUME COUNTS







Acronyms

AADT	Annual Average Daily Traffic
AASHTO	American Association of State Highway &
	Transportation Officials
ACF	Axle Correction Factor
ADL	Average Daily Load
ADT	Average Daily Traffic
ADTT	Average Daily Truck Traffic
AGF	Annual Growth Factor
ATR	Automatic Traffic Recorder
AVC	Automatic Vehicle Classification
CAVC	Continuous Automatic Vehicle Classification
DHV	Design Hour Volume
DOW	Day Of Week
DRJTBC	Delware River Joint Toll Bridge Commission
DVMT	Daily Vehicle Miles of Travel
ESAL	Equivalent Single Axle Load
FCC	Functional Classification Code
FCG	Functional Classification Group
FHWA	Federal Highway Administration
GIS	Geographic Information System
HMPS	Highway Performance Monitoring System
HVTIS	Heavy Vehicle Travel Information System
ITDUS	Internet Traffic Data Upload System
ITS	Intelligent Transportation Systems
LTPP	Long Term Pavement Performace
MEPDG	Mechanistic Empirical Design Guide
MFC	Maintenance Functional Classification
MPO	Metropolitan Planning Organization
RPO	Rural Planning Organization
RMS	Roadway Management System
SHRP	Strategic Highway Research Program
SR	State Route
STIP	Short-Term In-Pavement
TIS	Traffic Information System
TMG	Traffic Monitoring Guide
TMS/H	Traffic Monitoring System for Highways
TPG	Traffic Pattern Group
TR	Traffic Route
WIM	Weigh-in-Motion







Index

AADT 4, 22,28,37
ADTT
Automatic Traffic Recorders 6
Station Locations 8,11
Locations by Traffic Pattern Group 12
Five Year ADT Summary22
Monthly Variations from AADT 42
Peak Hour 14
Statewide Trends
30th Highest Hour16
50th Highest Hour18
Axle Correction Factors
Axle Counts
Continuous Automatic Vehicle Classification
Data Collection
Design Hour Volume
Design Hour Summaries
Equivalent Single Axle Load 28,50
Rigid 50
Flexible
Factors
Average Day of Week for Total Vehicles
Average Day of Week for Truck Traffic
Axle Correction
County Functional Class Group Trends 47
Factor Table Application Flowchart51
Growth Factor
Hourly Percentages for Total Vehicles
Hourly Percentages for Truck Traffic
K-Factor
Monthly Variation 42
Traffic Growth Projections 46
Yearly Growth
Functional Class

	-0
Inductive Loops	5
K-Factor	19
Manual Counts	5
Pneumatic Tubes	5
Statewide Traffic Trends2	24
Toll Receipts	5
Traffic Growth Projections	16
Traffic Pattern Group1	12
Weigh-In-Motion	11

