Chapter 3: Existing Transportation System

An assessment of the existing transportation system provides a baseline for identifying future transportation investment needs. By understanding the availability and operation of the current transportation system, it is possible to recognize the implications of the future demand issues discussed in Chapter 4. This chapter includes an assessment of the current transportation system presenting each element of the county's transportation system, an analysis of changes, if any, since the 2025 Plan was adopted, and an evaluation of current operations and performance.

Roads

The roadway system serving Kent County includes 1,363.48 centerline (route) miles and 2,817.95 lane-miles of roadway in 2003, as illustrated in Table 3.1. There has been a marginal increase of 1.5 percent in route miles since 1999. Lane miles have also increased by 1.6 percent. The number of lane miles is a function of the number of lanes of each roadway. Across the state, DelDOT has jurisdiction over 88 percent of public roads, thus it has jurisdiction over the large majority of the total mileage in Kent County. When compared to the state, Kent County contains 23 percent of the total route miles in Delaware, with New Castle and Sussex counties containing 38 and 39 percent, respectively. Kent County also ranks third statewide in roadway density with 2.3 route miles per square mile, less than half the density of New Castle County but only 0.1 route mile per square mile less than Sussex County. Table 3.2 displays the route mileage and roadway density for all three counties and Figure 3.1 illustrates the major highways in Delaware.

Table 3.1 Roadway Mileage by Functional Classification in Kent County, 2003

Functional Class	Route Miles	% of Total	Lane Miles	% of Total
Interstate	0.00	0.0%	0.00	0.0%
Freeway & Expressway	9.75	0.71%	43.2	1.54%
Other Principal Arterials	50.44	3.70%	200.34	7.11
Minor Arterials	76.64	5.62%	197.77	7.04%
Collectors	266.23	19.53%	540.06	19.16%
Local	960.42	70.44%	1,836.58	65.17%
Total	1,363.48	100%	2,817.95	100%

Source: Delaware Department of Transportation (DelDOT), Highway Performance Monitoring System (HPMS)

Table 3.2
Roadway Route Miles and Density by County, 2003

	Route Miles	Area (sq. Mi.)	Roadway Density
New Castle	2,244.47	426.3	5.3
Kent	1,363.48	590.7	2.3
Sussex	2,285.30	937.7	2.4
State	5,893.25	1,954.6	3.0

Source: Delaware Department of Transportation (DelDOT), HPMS, and United States Department of Commerce - Bureau of Census

Functional Classification

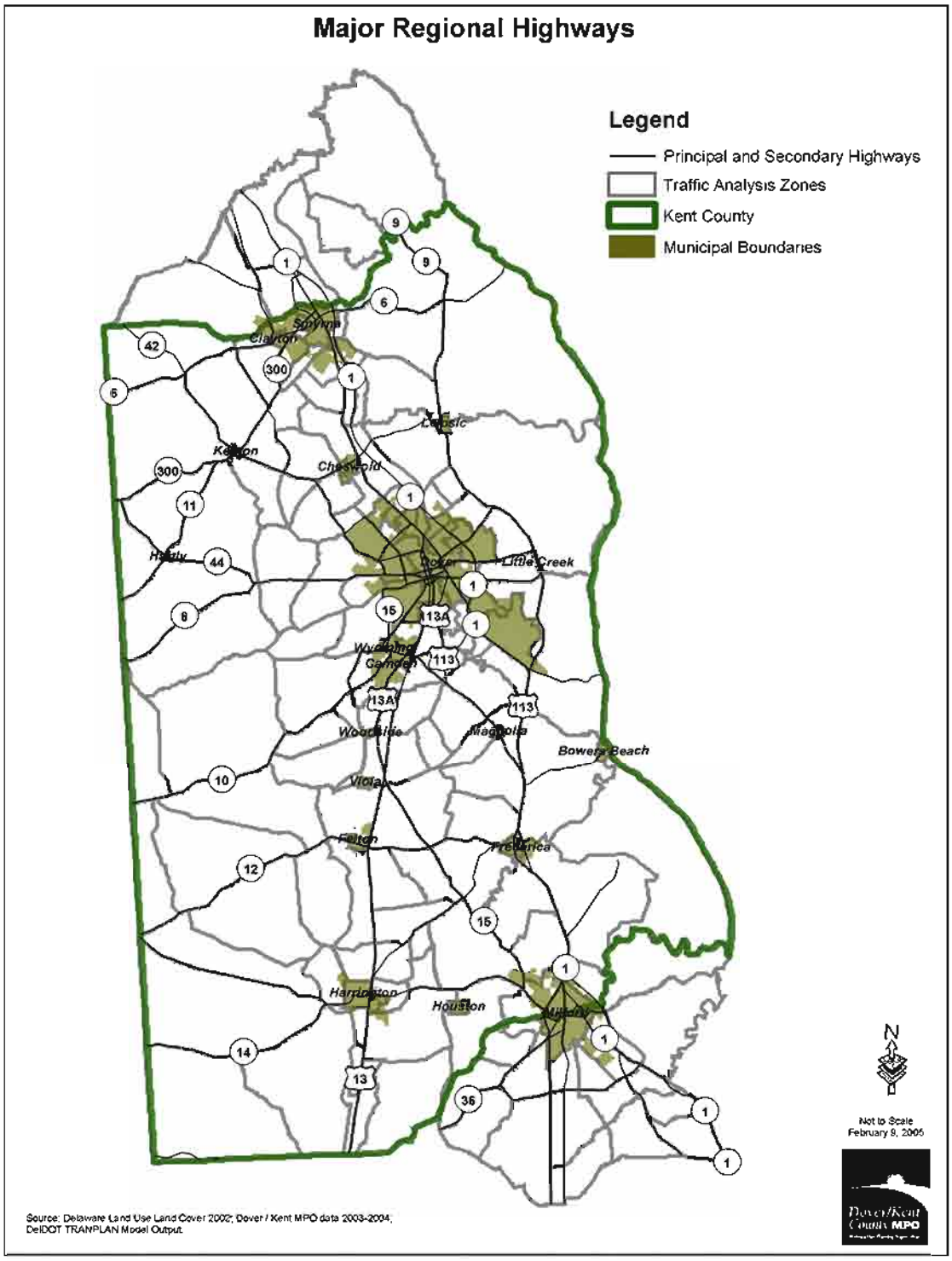
The county's roadways range in character from a four-lane expressway to local roads. The functional classification system is based on the character and purpose of the highway. For example, functional classifications range from freeways which are intended to provide regional mobility to local roads whose primary purpose is to provide direct access to adjacent land. Functional classification is important because it establishes the design standards for the roadway. The Federal Highway Administration (FHWA) most recently approved the Functional Classification Map for Kent County on November 9, 2001. Table 3.3 illustrates route miles and annual vehicle million miles traveled by functional class in Kent County as of 2003. The main functional classes of roadways are as follows:

- **Freeways and Expressways** are arterial highways with full control of access intended to provide for high levels of safety and efficiency in the movement of large volumes of traffic at high speeds. Kent County has 9.75 route miles of expressways including SR 1 and the Puncheon Run Connector to US 13. Essentially, this includes the area of SR1 located within the Dover urbanized area.

- **Other Principal Arterials** are major highways or streets other than freeway and expressways and with multi-lane design that serve high-volume traffic and connect major generators of travel. Kent County has about 50.44 route miles of principal arterials including portions of US 13, US 113, and SR 1. Although they comprise only 3.72 percent of the total route miles in the county, they accommodate the majority (32.5%) of the annual Vehicle Miles Traveled (VMT).

- **Minor Arterials** are highways or streets that link towns by distributing trips to smaller areas. These highways serve higher classification roads by providing access to and from less-developed areas. The county has 76.64 route miles of minor arterials. The majority of minor arterials are located in the Dover urbanized area and include US 13, SR 8, SR 15 and US 13A. East-west connectors such as SR 44 and SR 300 are classified as minor arterials and provide links from Maryland's Eastern Shore to Dover and Smyrna respectively.

Figure 3.1
Major Regional Highways



Source: DelDOT, Delaware Transportation Facts 2003

- **Collectors** are roads that enable moderate quantities of traffic to move between arterials and local roads. Collectors also provide access to adjacent properties. The county has 266.23 route miles of collector roadways. These roadways comprise the majority of State Routes in the county.

- **Local Roads** are roads with a principal function of providing direct access to adjoining properties. Kent County has 960.42 miles of local roads, including suburban development streets. The majority of the county's roadway system (70.9 percent of route miles) is comprised of local roads.

Table 3.3 Roadway Functional Classification by Route Miles and VMT Annual in Kent County, 2003

Functional Class	Route Miles				
	1999	2003	% of Total	VMT	% of Total
Interstate	0.00	0.00	0.0%	0.00	0.0%
Freeways & Expressways	0.00	9.75	0.71%	90	6.1%
Other Principal Arterials	57.8	50.44	3.70%	476	32.5%
Minor Arterials	76.44	76.64	6.62%	384	26.2%
Collectors	267.17	266.23	19.53%	289	19.8%
Local	941.49	960.42	70.44%	226	15.4%
Total	1,342.9	2,295.30	100%	1,466	100%

Note: Vehicle Miles Traveled (VMT) in Millions
Source: Delaware Department of Transportation (DelDOT), HPMS

Surface Type and Lane Width

Two important physical characteristics of roadways are surface type and lane width. Kent County's roadways have several different types of surfaces, ranging from unpaved to Portland cement concrete pavement. The pavement design is typically a function of volume, truck percentage and life cycle costs. The majority of the county's arterials and major collectors have a concrete pavement or a combination of concrete pavement with a hot mix overlay. The majority of minor collectors, local roads, and suburban development streets have a flexible hot-mix or surface treatment.

The width of a travel lane is based upon the speed and type of traffic, particularly the presence of trucks, and available sight distances. The travel lane width also affects the ability of pedestrians and bicycles to interact safely with motor vehicles. Wider lanes reduce the level of friction created by passing bicyclists in the roadway. Wider lanes also create a greater amount of recovery room for motorists who lose control of their vehicles. However, wide lanes can also entice motorists to travel at greater speeds than they otherwise would on more narrow roadways. A wider lane can also increase the amount of

time needed for a pedestrian to cross a road. Again, lane widths are critical to the expected type and desired speed of roadway users.

Table 3.4 illustrates the percent of total mileage and functional classification of roadways in Kent County. In general, the lane width decrease as a roadway's functional classification lowers. The only exception to this observed trend are subdivision streets, which show a larger proportion of wider streets serving a typically local traffic flow. The most significant change in roadway width that has occurred since 1999 is the decrease in the percentage of Local Streets that are 9' wide or less; from 38.4 percent to 25.6 percent. And, the percentage of major and minor collectors, those roads with 11' or wider lanes, ha increased eleven percent (11%) and fifteen point five percent (15.5%) respectively.

Table 3.4
Lane Width by Functional Classification, 2002

Functional Class	Percent of Lane Miles					
	<9 Wide	9 Wide	10 Wide	11 Wide	12 Wide	>12 Wide
Interstate/ Freeway	0%	0%	0%	0.6%	18.7%	80.6%
Other Principal Arterial	0.1%	0%	0%	0.4%	45.9%	53.6%
Minor Arterial	0.2%	0%	6.3%	4.0%	66.0%	23.5%
Major Collector	0.6%	2.7%	32.4%	35.8%	17.8%	10.6%
Minor Collector	0%	34.4%	27.2%	29.1%	3.3%	6.0%
Local	5.5%	20.1%	50.5%	9.1%	2.7%	12.2%
Subdivision Development	3.2%	2.7%	16.6%	51.8%	8.8%	16.9%

Note: Total percentages may not equal 100% due to rounding
Source: Delaware Department of Transportation (DelDOT)

Pavement Conditions

The physical condition of roadways affects the costs required to maintain them. Poor roadway conditions may generate higher operating costs for motorists in the form of increased travel time and repair costs. DelDOT uses several well-established measures and rating techniques to monitor the physical condition of its roadways. The two key attributes of roadway condition are rideability and surface distress. Rideability (or roughness) relates to the comfort or smoothness experienced by a vehicle riding over the road, while surface distress relates to observed problems in the roadway such as cracking or rutting. The key indicator of pavement condition adopted by DelDOT is Overall Pavement Condition (OPC) which is based 25 percent on rideability and 75 percent on surface distress. Table 3.5 illustrates the pavement condition of each functional class in Lane Miles (Ln MI), while Tables 3.6 and 3.7 present the threshold and triggers used to create Table 3.5.

Table 3.5
Pavement Conditions in Kent County, 2002

Functional Class	Total Lane Miles	Good		Fair		Poor		Meets Trigger Value	
		Ln Mi	%	Ln Mi	%	Ln Mi	%	Ln Mi	%
Freeway/ Expressway	46.4	46.4	100%	0.0	0.0%	0	0.0%	0	0.0%
Major Arterial	199.5	181.2	90.9%	10.5	5.3%	7.7	3.9%	18.2	9.2%
Minor Arterial	185.4	163.3	88.1%	22.1	11.9%	0	0.0%	22.1	11.9%
Collector	562.0	475.1	84.5%	64.1	11.4%	22.9	4.1%	87.0	15.5%
Local	1,369.3	1,018.5	74.4%	267.1	19.5%	83.8	6.1%	83.8	6.1%
Suburban	220.1	182.6	82.9%	24.2	11.0%	13.4	6.1%	13.4	6.1%
Total	**2,582.7**	**2,067.0**	**80.0%**	**387.9**	**15.0%**	**127.8**	**4.9%**	**224.5**	**8.7%**

Source: Delaware Department of Transportation (DelDOT)

Table 3.6 presents the pavement condition thresholds used by DelDOT. However, DelDOT uses a slightly different trigger value to develop its candidate list of roads for maintenance. The trigger value is adjusted to give preference to higher functioning roads, as illustrated in Table 3.7. Once a road segment meets the trigger value of its category it is rescored and ranked statewide for maintenance.

Table 3.6 Pavement Condition Thresholds	
Good	OPC > 60
Fair	OPC > 50 and OPC $\leq$ 60
Poor	OPC $\leq$ 50

Table 3.7 Pavement Condition Trigger Values	
Freeways and Expressways	70
Arterials and Collectors	60
Local Roads	50

Bridges

Kent County's roadway system includes 287 bridges under DelDOT jurisdiction. The number of bridges in the county has increased by nine percent since 1999. Of the 287 bridges, 193 are twenty feet or longer in length, which places them on the National Bridge Inventory (NBI). Ten bridges in Kent County are eligible for the National Register of Historic Places, based upon an updated 2000 edition of "Delaware Historic Bridges" by DelDOT. Among these historic structures, one bridge (Bridge 8F on Frederica Road over Murderkill River) has been replaced.

The condition of bridges is a primary concern in assessing transportation facilities. There are two key types of bridge deficiencies, structural deficiencies and functional obsolescence. Structural deficiencies require a bridge to be closed, immediately rehabilitated, or restricted to light vehicles only. Functional obsolescence refers to deck geometry, load carrying capacity, clearance, or roadway approach alignment that no longer meets current criteria.

Table 3.8 illustrates bridge deficiencies and conditions in Kent County. DelDOT's active bridge program has kept pace with the increase in number of bridges, and continues to steadily reduce the number of structurally deficient bridges in the region.

Table 3.8
Inventory of Substandard Bridges in Kent County, 1994-2002

Year	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total Bridges	261	261	261	267	263	275	287	288	287
Structurally Deficient	30	29	20	15	15	16	12	11	14
% of Total	11.5%	11.1%	7.7%	5.6%	5.7%	5.8%	4.2%	3.8%	4.9%
Structurally Deficient and Functionally Obsolete	44	39	30	28	31	30	26	25	27
% of Total	16.9%	14.9%	11.5%	10.5%	11.8%	11.0%	9.1%	8.7%	9.4%

Source: Delaware Department of Transportation (DelDOT), Bridge Management Section

Operations

Most traffic control design and operation issues are managed through the DelDOT division of Transportation Solutions (Traffic Section). This Division is responsible for traffic related analysis and design. The signing and pavement marking programs, however, are assigned to DelDOT's Central District office.

DelDOT uses epoxy resin paint for pavement markings. This represents a change from standard paint and thermoplastic. The epoxy resin paint's anticipated service life is three years. However, DelDOT will monitor the reflectivity on an annual basis. It is DelDOT's policy to repaint all roads at a minimum of once per year. Roadways with higher traffic volumes are painted twice a year. The painting of roadways is performed under contract, and can only be done during warm weather, typically from early May to late September.

In 1998, DelDOT began a program to replace all roadway signs statewide. Kent County signs were completely replaced in 2000. It is not anticipated to repeat this resigning effort until 2008. In the interim, roadway signage is replaced on an as-needed basis with priority given to new signs or sign changes such as revised speed limits.

Kent County has several major corridors with coordinated signal systems that are operated from a central computer controller. These corridors are:

- US 13 (through Smyrna)
- US 13 (Camden to north Dover)
- US 113 (SR 36 to north Milford)
- SR 8 (West Dover)
- SR 10 (US 13 to Dover Air Force Base)

For the majority of the corridors, the computer system operating these signals has been updated to the Actra System, which improves the flexibility and efficiency of the system. Roadways on the older system are SR 10 and US 13,from Star Hill Road to Roosevelt Avenue. Additionally, most of the signals in Kent County are equipped with Opticom preemptive systems that allow ambulance and fire trucks to trigger a green light at intersections so they can decrease their response time to emergencies.

Safety

Another important measure of roadway operations and performance is safety. A key indicator of roadway safety is the number and type of motor vehicle crashes. The general trend since 1990 has been a reduction in the number and rate of crashes with the lowest totals occurring in 2000. In fact, the total number of fatal crashes and fatalities has decreased more than 50 percent respectively in 2000. This is due, in part, to the attention paid by the Highway Safety Improvement Program to correcting traffic problems at high accident locations in Kent County, most of which are located in Dover.

Since 2000, though, there have been increases in the absolute number and as a rate per vehicle miles traveled of crashes. Most notable is the number of injury crashes, which peaked at 1,020 in 2002. The recent local trend mimics the statewide trend, which has shown decreases in total crashes for years 2000 and 2001, and an increase for year 2002. Of most concern, is the period between 2000 and 2002, which shows a steady increase in injury and fatal crash rates, refer to Figures 3.2 and 3.3 for Kent County data. Year 2002 has a record total number of injury crashes, as illustrated in Table 3.9, which illustrates these trends for the years 1990-2002.

Figure 3.2
Kent County Motor Vehicle Crash Rate, 1990-2002

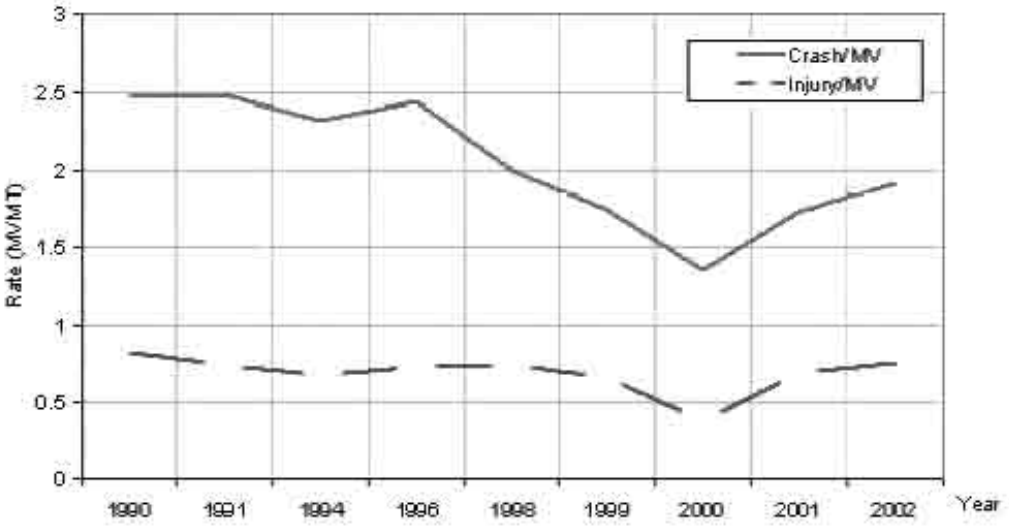


Figure 3.3
Kent County Motor Vehicle Fatal Crash Rate, 1990-2002

Table 3.9
Kent County Motor Vehicle Crashes By Injury Severity, 1990-2002

Year	1990	1992	1994	1996	1998	1999	2000	2001	2002
VMT (millions)	1,157	1,205	1,179	1,256	1,356	1,385	1,349	1,353	1,358
Total Crashes	2,853	2,994	2,734	3,068	2,705	2,429	1,837	2,357	2,610
Rate (per million VMT)	2.47	2.48	2.32	2.44	1.99	1.75	1.36	1.74	1.92
Injury Crashes	949	886	800	913	1,000	908	517	930	1,020
Rate (per million VMT)	0.82	0.74	0.68	0.73	0.74	0.66	0.38	0.69	0.75
Fatal Crashes	29	34	13	17	21	17	7	22	19
Rate (per million VMT)	0.025	0.028	0.011	0.014	0.015	0.012	0.005	0.016	0.014
Fatalities	33	38	15	25	23	19	7	23	23
Rate (per million VMT)	0.029	0.032	0.013	0.020	0.017	0.014	0.005	0.017	0.017

Source: Delaware Department of Transportation (DelDOT), Delaware State Police

The leading cause of motor vehicle crashes is driver error, but roadway conditions are also a factor in many crashes. The Federal Highway Safety Improvement Program (HSIP) aims to reduce crashes by improving roadway design. Each year, DelDOT identifies sites in the Dover/Kent MPO region that meet the HSIP criteria for inclusion in the program. The sites are reviewed to determine the principal type of accidents, conditions and severity. From this information, an assessment is made as to whether the location can be made safer with something as simple as roadway striping or a sign, or if a more detailed engineering study is needed to make the location safer. All locations identified in the HSIP are given due consideration.

Between Year 2002 and 2005, the HSIP identified 27 sites in the MPO region. The number of HSIP Sites added per year between 2002 to 2005 is shown in Table 3. Of the total twenty-seven sites, seven are located on US 13 and three area located on US 113.

Table 3.10
Number of HSIP Sites by Year (2002-2005)

Year	Number of HSIP Sites
2002	5
2003	8
2004	2
2005	12

As the region continues to develop and VMT increases, the number of crashes can also increase. DelDOT maintains a crash database to analyze the high-crash locations and identify the possible need for roadway improvements. Similar site-specific analysis and

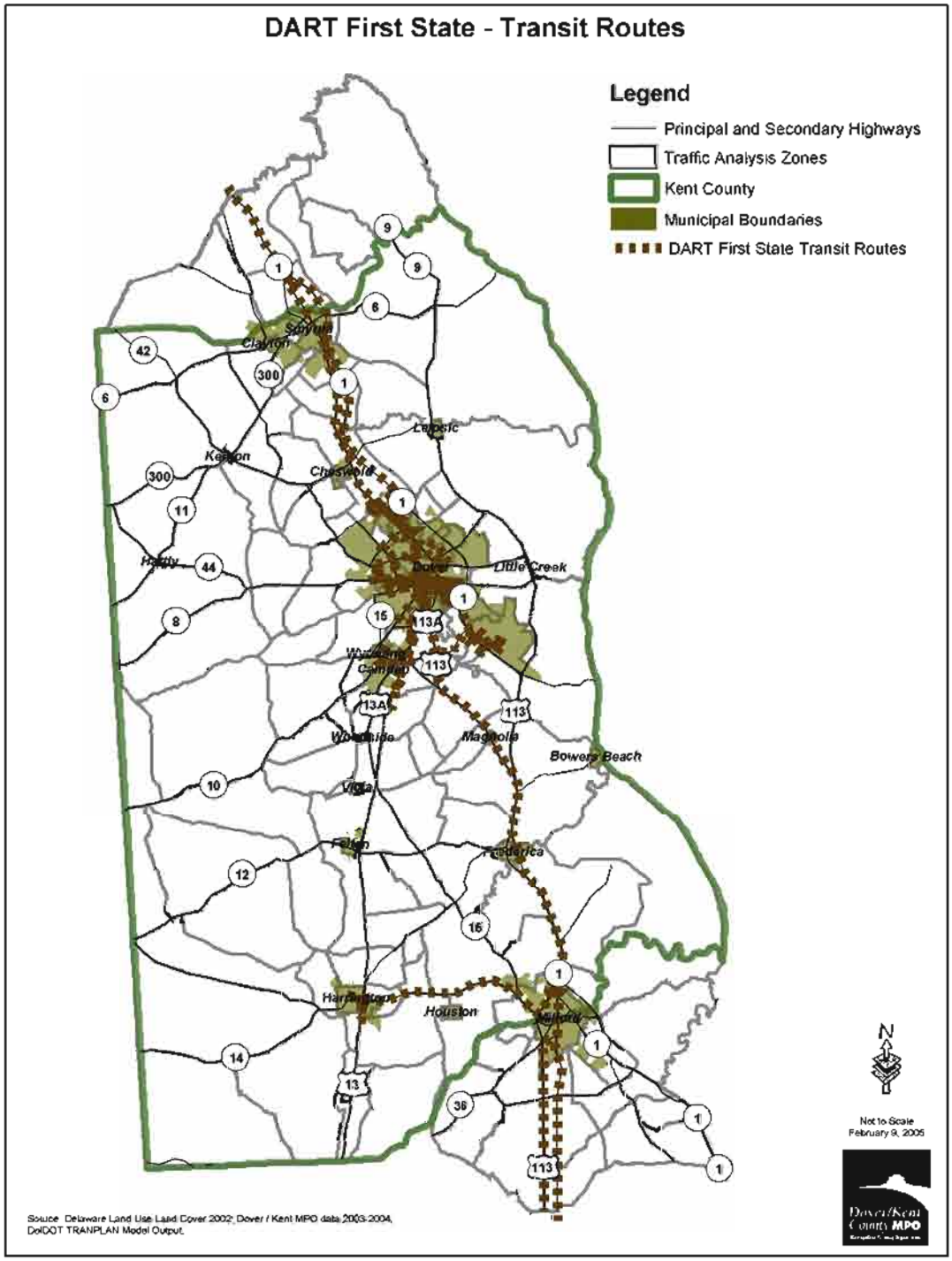
remedy may be necessary as increasing travel demand creates growing congestion conditions, which contribute to driver failure and increased accidents.

Public Transportation

Public transit includes a broad range of intermodal services, including local bus, express bus, intercounty bus, paratransit, subsidized taxi and passenger rail. Public transportation, or transit service, is provided by the Delaware Transit Corporation (DTC) operating as DART First State, including South District bus service, paratransit, and intercity transit. Some additional paratransit services operate in Kent County targeted to specific clients, such as the disabled community. Commercial intercity bus service is provided into Kent County by private operators.

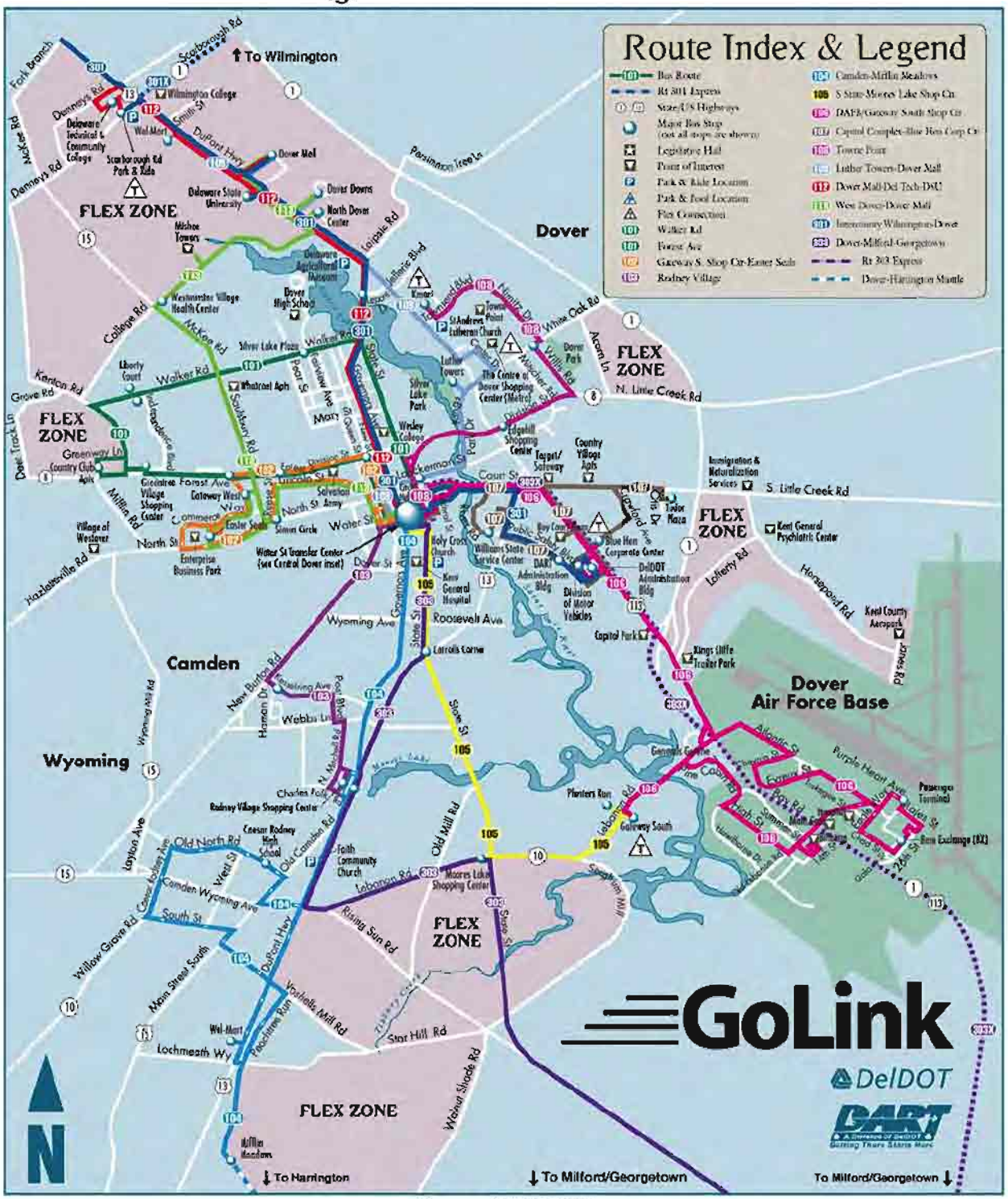
Public transit is provided to a service area covering 28 square miles in Kent County using a public transit service area definition as any location within one quarter mile on either side of a bus route. Within this service area, 37,761 Kent Countians can reasonably access transit from their homes (34 percent of total population based on 1990 census data). Local public transit is only available in the Dover area with some intercity services between Dover and points to the north and southeast. Additional paratransit and special transit services are available in other parts of Kent County for elderly and disabled residents. Figures 3.4 and 3.5 display maps of the areas served by transit in Kent County.

Figure 3.4 DART First State Transit Routes



Source: DART First State Transit Routes – www.state.de.us

Figure 3.5 Fixed Transit Routes



Source: DART 2004

DART First State South District

A fleet of medium-sized buses provides weekday services along twelve routes (Routes 101-109, 112, 113) in Dover and the surrounding areas. In 2002, this transit fleet logged 408,430 vehicle miles and 30,933 vehicle hours. The Water Street Transfer Center in Dover is a key hub for this operation, utilizing a timed transfer system. A maintenance and repair facility is located at the DelDOT complex in Dover. Besides the fixed route service which operates Monday through Friday from 6:00 AM to 6:00 PM, DART offers the GoLink night service from 6:00 PM to 9:00 PM on weekdays. Reservations are required for the service by 4:30 PM the day prior to travel.

Table 3.11 provides operating statistics for DART First State South Fixed Route Transit in Delaware and Kent County. According to recent Kent County data, ridership decreased from 311,964 riders in 1999 to 308,716 riders in 2002; an approximate one percent decrease of ridership. The statewide statistics, however, show an overall 1.9 percent (1.9%) increase in ridership for the same time period. Since 2002, Kent County ridership has increased to 2002 levels with 308,759 riders. In Kent County, nearly half of the transit riders were high school or university students while the remaining riders were largely transit dependent with little discretionary trip making. Primary trip destinations included school, commuting, medical services, and shopping.

Table 3.11
Kent County Fixed Route Operating Statistics, 1995-2004

Measure	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Miles	520,731	432,645	455,451	405,836	385,725	420,707	403,795	408,430	408,528	426,806
Hours	31,624	32,028	32,552	30,474	28,179	31,577	30,926	30,933	30,820	31,674
Passenger Trips	373,204	364,271	364,042	377,856	311,964	311,855	301,623	308,716	303,914	308,759
Trips/Mile	0.72	0.84	0.8	0.93	0.81	0.74	0.75	0.76	0.74	0.72
Trips/Hour	11.8	11.37	11.18	12.4	11.07	9.88	9.75	9.98	9.86	9.75

Source: Delaware Transit Corporation

To increase ridership in Kent County, DART is providing Flex Service within the Dover area. Flex service allows low performing fixed routes to "deviate" off route to pick up customers with advance reservations. Service will be available from 6:00 AM to 9:00 PM on weekdays. Flex service may increase ridership and provide more accessible service to communities and customers who do not have direct access to fixed route service. Flex service essentially expands transit service into low-density areas using existing resources. DART plans to relocate the Water Street transit hub to a new location within the next two to five years. The new transfer center is intended to serve inner city private transit operators in addition to DART vehicles.

Paratransit Services

According to the Delaware Statewide Long-Range Transportation Plan of 2002, DART First State provides a door-to-door service throughout the State for passengers who are unable to use fixed-route bus service, due to age or disability. In order to utilize the service, passengers must be certified as defined in the Americans with Disabilities Act. This service is also available for those who are in need of transportation to dialysis treatments at renal care centers. The following paratransit services are operated as part of the DART First State system in Kent County.

- **DART First State Paratransit**. Statewide, a fleet of 187 vehicles provides door-to-door shuttle service for persons age 60 years and older or who are physically or mentally disabled. Forty-seven (47) of these buses operate in Kent County with an increase of 13 buses (38%) since 1999. In accordance with federal guidelines, this paratransit service is provided within service areas defined to be three quarters of a mile on either side of an existing fixed-route transit route forming a total one and one-half mile corridor. Under state mandate, DTC also operates paratransit services across the entire county. Customers must call to make a reservation the day before they plan to ride. Each eligible customer is permitted to bring one guest. DTC has a central reservation center that responds to ride reservations through dispatching centers located in each county. In Kent County, this service is offered Monday through Friday from 6:00 AM to 9:00 PM and on Saturdays 6 AM to 4 PM. Each trip is fifty percent subsidized by Kent County so that fares are $1.00 per one way trip. In 1995, over 81,000 passenger trips were made on this paratransit service in Kent County. In 2002, the number of passenger trips rose to 127,660, an increase of 57.4 percent. By 2004 the number of passenger trip Kent County has 23 percent of statewide total number of passenger trips and ranks second to New Castle County, which has twice as many. Operating Statistics for Kent County Paratransit is listed and compared to state-wide data on Table 3.12.

Table 3.12
Kent County Paratransit Operating Statistics, 2000 – 2004

	2000		2001		2002	
Measure	**Kent**	**Statewide**	**Kent**	**Statewide**	**Kent**	**Statewide**
Fleet	42	167	47	187	47	187
Miles	1.16 Million	5.11 Million	1.26 Million	5.82 Million	1.28 Million	6.27 Million
Hours	66,102	287,612	72,751	323,230	74,435	332,518
Passenger Trips	132,675	490,280	140,289	541,110	127,660	553,961
Trips/Mile	0.11	0.1	0.11	0.09	0.1	0.09
Trips/Hour	2.01	1.7	1.93	1.67	1.72	1.67

Source: Delaware Transit Corporation

	2003		2004	
Measure	Kent	Statewide	Kent	Statewide
Fleet	45	192	49	193
Miles	1.20 Million	6.18 Million	1.44 Million	7.14 Million
Hours	69,552	329,337	78,621	389,701
Passenger Trips	130,214	568,890	150,243	648,698
Trips/Mile	0.11	0.09	0.10	0.09
Trips/Hour	1.87	1.73	1.91	1.66

Source: Delaware Transit Corporation

- **Senior Citizen Affordable Taxi (SCAT).** This operation offers fifty percent discounted taxi services to senior citizens and persons with disabilities. Five cab companies throughout the state provide the service and are reimbursed by the state. In Kent County, City Cab of Dover and Watkins Cab of Milford provide these services.

- **Federal Section 5310 Pledge Program.** The state administers this federal program to provide capital funding to private and public social service agencies for the purchase of vehicles to provide transportation to the elderly and disabled. Although most of the funding for this program is from federal sources, some state funds are used.

- **Kent-Sussex Reimbursable Program.** Through this program, the state provides operating funds and paratransit fare subsidies for elderly and disabled residents in Kent and Sussex Counties. The funds are administered through local governments and social service agencies. Services are provided on demand with prior arrangement, and vehicles are equipped with wheelchair lifts.

Intercity Bus Service

The DART First State intercity transit operation provides Kent County service with stops in Smyrna, Dover, Magnolia, Milford, and Harrington. These routes connect through to Newark and Wilmington to the north and Georgetown to the south. Six vehicles operate between Dover and Wilmington (Route 301) with two more buses as backup. Three buses provide service between Dover, Magnolia, Milford, Frederica, and Harrington (Route 303). An average of twenty-two (22) round trips is made each weekday between Dover and Wilmington. Carolina Trailways, a private operator, provides intercity service to Kent County along US 13 making connections between Dover, Wilmington, Lewes, and Salisbury, Maryland. Ultimately, these routes provide connections to New York, North Carolina, Washington, D.C., and points west. Table 3.13 provides operating statistics for intercity public transit services to Kent County.

Table 3.13
Kent County Intercity Operating Statistics, 2000 - 2002

Measure	2000	2001	2002	2003	2004
Miles	439,844	447,348	459,601	460,317	427,331
Hours	12,108	13,561	14,010	13,867	14,606
Passenger Trips	79,069	103,153	106,688	111,858	115,130
Trips/Mile	0.18	0.23	0.23	0.24	0.27
Trips/Hour	6.53	7.61	7.62	8.07	7.88

Source: Delaware Transit Corporation

Get a Job Get a Ride Program

As part of "Business Partners in Transit" Program whereby being a "Business Partner in Transit", businesses can begin enjoying many tax and transit benefit programs from which they can profit, reward present employees, and attract new employees. By encouraging employees to use the bus system and other transit services such as the SEPTA R2 commuter train, an employer is entitled to tax credits and many transit benefit programs such as the Get-A-Job, Get-A-Ride program where new hires get three weeks of free travel to commute to and from work.

Other Value-Added Services

- Travel Training – Teaches people how to use transit services.
- Community Partners in Transit – Works with education, community and youth groups to encourage transit use and ride-matching service.
- Business Partners in Transit – Educates employers about transit programs and tax credits.
- Mobility Brokerage – Finds alternative transportation solutions when regular fixed-route services cannot satisfy customers' needs.
- TransitCheck – Helps employers subsidize employees' transit use.
- Register for Your Future – Provides free bus service to students registered in adult education classes.

Source: Transitioning to Transit, Delaware's Long Range Transit Plan for the 21st Century, Delaware Transit Corporation, a division of DelDOT.

Public Transportation Ridership

Total ridership on public transit has decreased in recent years in Kent County. Ridership on DART First State South District reported a decrease from 311,964 in 1999 to 308,716 in 2002. In year 2001, ridership dropped by 3.3 percent or an average of 40 passenger trips per day in Kent County. During the 2000 to 2002 period, ridership on statewide paratransit services, provided by the former DAST, rose from 490,280 to 553,961, a 13.0 percent increase. In Kent County the paratransit ridership dropped 3.8 percent during the same time period. Ridership on intercity public transit services to Kent County rose from 79.069 in 2000 to 106,688 in 2002. The service hours has increased from a total of 12,108 to a total of 14,010, an average of 5 additional service hours per day.

RideSharing

Ridesharing is carpooling, vanpooling, taking a bus or train, or biking or walking to work. About 14 percent of Delaware commuters share a ride to work to gain ridesharing benefits. Benefits include saving money in gas and vehicle maintenance and possibly lower insurance rates, creating more free time and reducing air pollution and traffic congestion.

RideShare Delaware

RideShare Delaware is a free public service of DART First State and is administered by Delaware's Transportation Management Association (TMA Delaware). This program matches individuals traveling to worksites who want to share a ride. Delaware employees who rideshare to work via carpool, vanpool or public transit are eligible for RideShare Delaware's Home Free Guarantee benefit. Ridesharing programs include Park-and-Ride/Pool locations, carpooling and vanpooling, school pool, Home Free Guarantee program, rewards discount card program and transit programs.

Park-and-Ride Lots

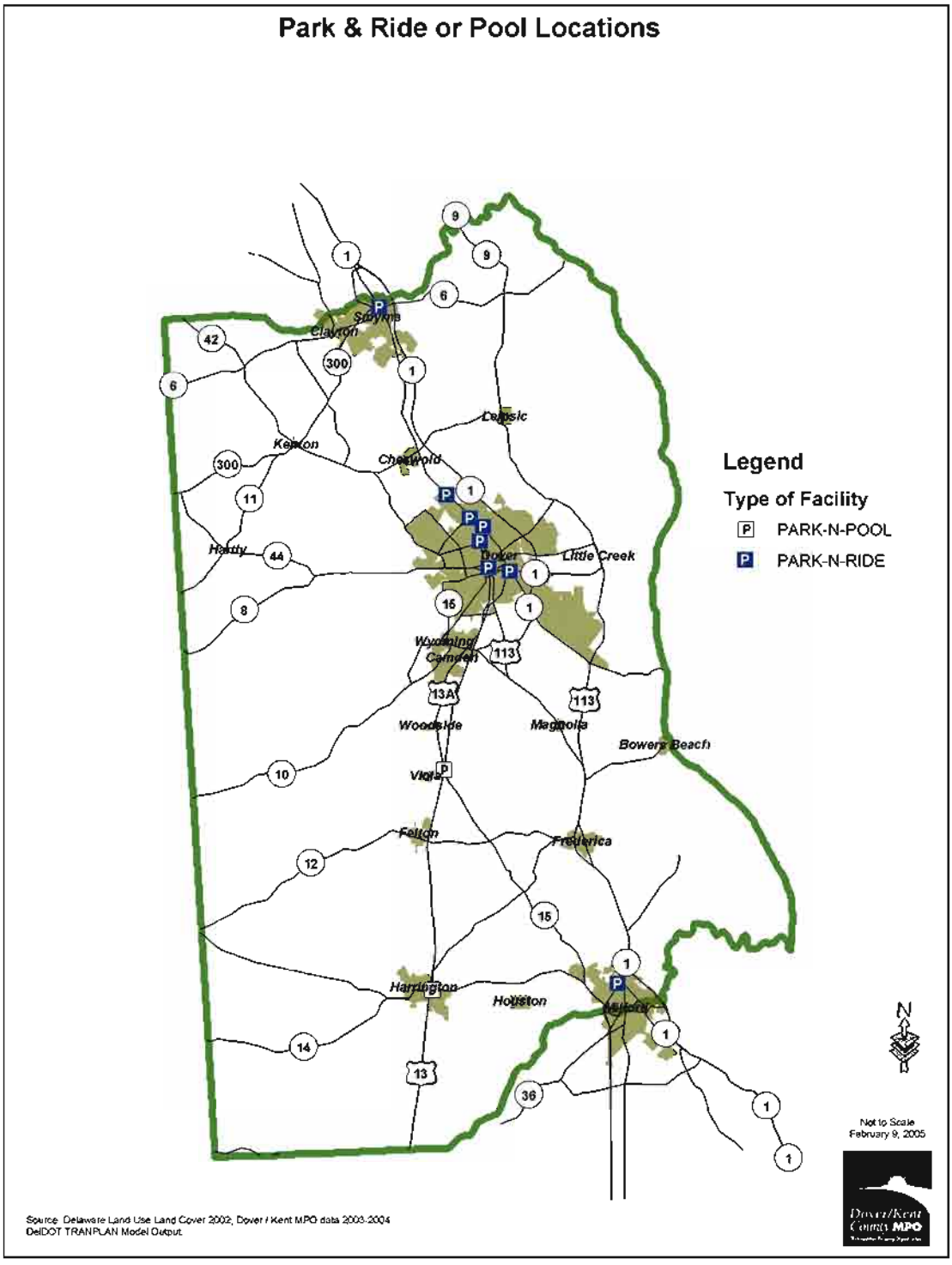
Park-and-Ride lots and Park-and-Pool lots provide convenient parking and a place where commuters may meet carpools or vanpools, or use a variety of modes of transportation such as buses or shuttles. Kent County has facilities and services that promote ridesharing (carpooling and vanpooling). Lot utilization in Kent County is the second highest in the State (26%) followed by Sussex County. The County has 11 designated public park-and-ride locations, with an average usage of ten vehicles per weekday, as listed in Table 3.14. Nine of the lots are official while the rest are considered unofficial. The majority of the lots are within a few miles of downtown Dover, which is located centrally in Kent County, refer to Figure 3.6 for the location of facilities. Also, the Statewide Employees Vanpool Program operates in the county. In 1995, fourteen state employee vanpools were operating in Kent County. Fleet Links, which took over the operation of vanpools from DTC, has increased the number to 30 as of 2000. The 50 percent increase in a five-year span demonstrates the commitment of employees to vanpool.

Table 3.14
Kent County Park-and-Ride and Park-and-Pool Facilities, 2000

Location	Address	Parking Spaces	Daily Use	Usage Rate 1998	Usage Rate 2000
Delaware Agricultural Museum	DuPont Highway, Dover	40	10	11%	20.%
St. Andrew's Lutheran Church	DuPont Highway, Dover	15	5	4%	33%
Holy Cross Church	S. State Street, Dover	25	5	8%	20%
Faith Community Church	DuPont Highway, Dover	15	0	27%	0%
Scarborough Road Park and Ride	DuPont Highway, Dover	100	19	33%	19%
Milford Bowling Lanes	DuPont Highway, US 113	20	3	0.0%	15%
Shore Stop	DuPont Highway, Canterbury	15	2	25%	13%
Harrington Moose Lodge	US 13 Harrington	15	0	11%	0%
Water Street Transfer Center	Dover	75	23	N/A	31%
COUNTY TOTAL		**320**	**67**	**N/A**	**21%**

Source: Delaware Transit Corporation as of December 1, 2003.

Figure 3.6
Park-and-Ride and Park-and-Pool Locations



Source: DelDOT, Delaware Transportation Facts 2003

Bicycle and Pedestrian Facilities

Several facilities accommodate the use of bicycling and walking as a travel mode. Bicycle facilities on separate rights-of-way include shared use paths, trails, and greenways. Bicycle facilities within the roadway rights-of-way include bike lanes, paved shoulders, wide curb lanes, shared roadways, and bike routes. The bikeways in Kent County are predominantly paved shoulder roadways and are not necessarily shared use signed as bike routes. These in-street bicycle facilities are sometimes referred to as Class II type facilities. Refer to Figure 3.7, the Delaware Bicycle Touring Map, for the location and suitability for cycling along bicycle trails, greenways, and shared use paths in Kent County.

Shared Use Paths

A shared use path provides a paved travel path, completely separated from vehicular traffic. Shared use paths are typically bi-directional and should be at least ten feet wide or greater depending upon the expected usage level. Pedestrians and non-motorized, wheeled modes may also use the paths; and some may be expected to carry golf carts and other small motorized vehicles. Therefore, the width and design should account for the variety of users and potential conflicts. DelDOT does not have any shared use paths in Kent County, but municipalities, state parks, and local parks may maintain other bike paths. Other bike paths, which total about a mile, are on Scarborough Road, McKee Road and near Killen's Pond.

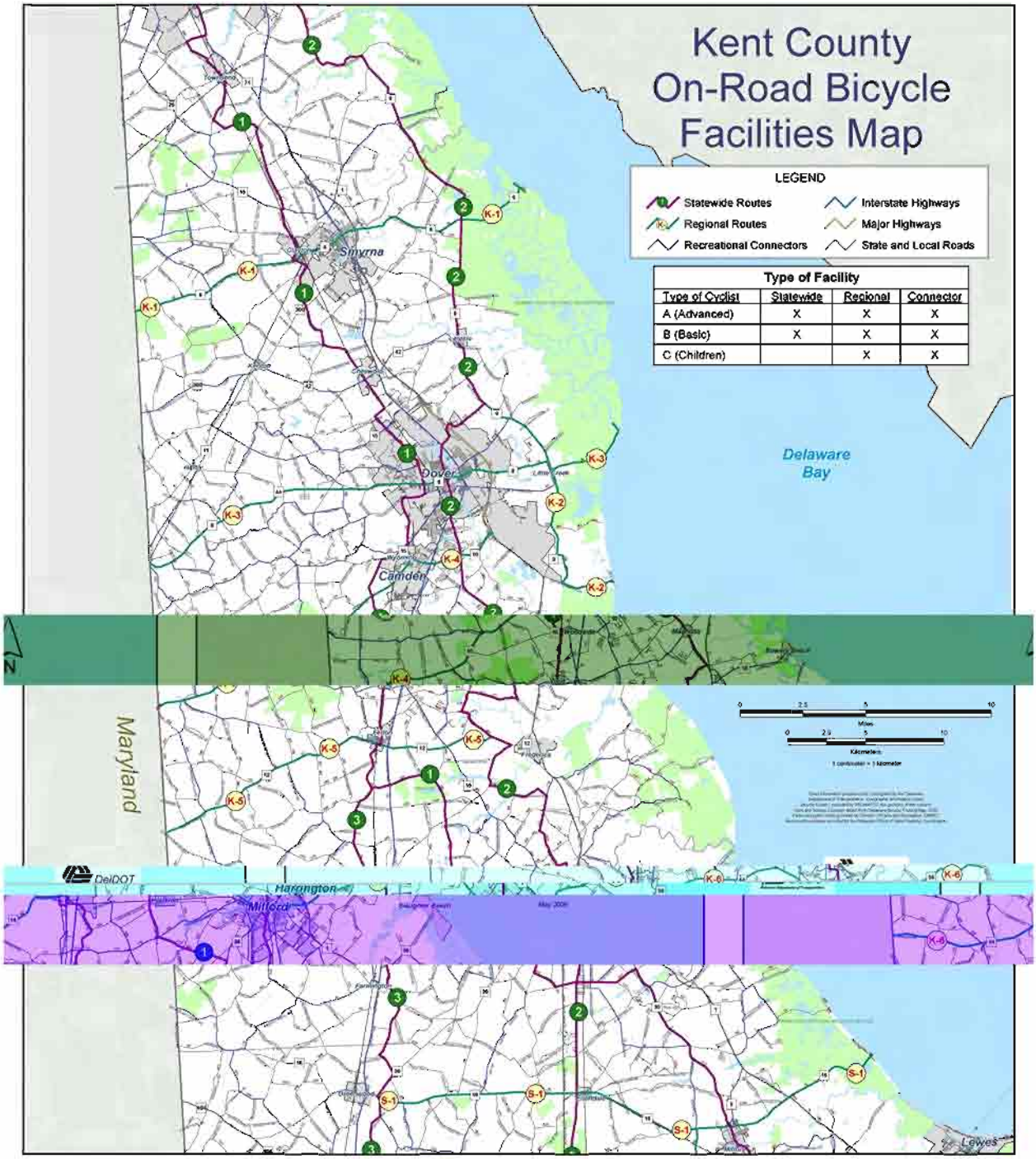
Bike Trails

A bike trail is similar to a bike path, but with an unimproved surface. Pedestrians may use bike trails for hiking, bird watching, or basic transportation needs. Each facility design should account for the variety of users and potential conflicts. DelDOT does not own any bike trails in Kent County, but other government agencies such as municipalities, state parks, and local parks own or maintain some.

Greenways

Greenways are primarily developed for environmental preservation purposes as habitat corridors, but may also provide corridors for the development of shared use paths and trails. The transportation value of a Greenway is to provide public access to natural resources and to provide access through or between destinations as an alternative to bicyclists and pedestrians travel along roads. A sample in Kent County includes the Coastal Heritage Greenway, which extends along the Delaware Bay coast from Cape Henlopen State Park in Sussex County to Fox Point State Park in New Castle County; the Saint Jones Greenway will eventually extend from Dover to Bowers Beach.

Figure 3.7
Kent County Bicycle Facilities Map



Source: DelDOT May 2005

Bike Lanes
A bike lane provides an officially designated, (with signs and pavement markings), travel path for bicyclists within the roadway. National standards and guidelines recommend appropriate pavement markings, intersection treatments, and lane widths (generally four feet) for bike lanes. Bike lanes create a more visible and predictable operating environment for bicyclists and automobiles.

Paved Shoulder
Similar to bike lanes, paved shoulders provide a travel path for bicyclists within the roadway. Unlike a bike lane, paved shoulders do not provide any special signs, markings, or intersection treatments to direct bicycle/automobile interactions. To accommodate bicycles, a paved shoulder must be smooth surfaced and at least four feet wide. A paved shoulder may be concrete, hot mix, or surface treated to provide an acceptable riding surface for bicyclists. Sometimes these roadways are augmented with a cautionary "Share the Road" sign to increase motorists' awareness of the presence of bicycles. Kent County has over 330 miles of paved shoulder that meet these criteria.

Wide Curb Lane
Vehicular travel lanes that are wider than twelve feet are considered wide curb lanes. These lanes provide an environment where motorists can typically pass a bicyclist without needing to change lanes. Wide curb lanes also provide additional maneuvering room when drivers are exiting from driveways or in areas with limited sight distance. Wide curb lanes with greater than fourteen feet width may encourage the undesirable operation of two motor vehicles in one lane, especially in urban areas, and consideration should be given to striping as a bicycle lane when wider widths exist. Many roadways in Kent County provide the extra width of a wide curb lane, although they are not readily recognized for their benefit as a bicycle facility. Sometimes these roadways are augmented with a cautionary "Share the Road" sign to increase motorists' awareness of the presence of bicycles.

Shared Roadway
In Delaware, bicycles are legally defined as vehicles; therefore, they may ride on any roadway unless specifically prohibited. These prohibitions may be found on limited access highways, such as interstates, with very high vehicular speeds. Shared roadways do not provide separate lanes or paved shoulders specifically for bicyclists, but bicyclists may choose to use them depending upon an individual bicyclist's experience and transportation needs. Roadways that have low speed and/or low volumes of vehicular traffic are generally suitable for bicycle use without any special treatments. Sometimes these roadways are augmented with a cautionary "Share the Road' sign to increase motorists' awareness of the presence of bicycles.

Bike Route
Bike routes provide special directional signs to direct bicyclists to roadways that are convenient routes for bicyclists. These routes may be part of a recreational route system and/or may serve as alternatives to more heavily trafficked roadways. Roads with low traffic volumes and low-posted speeds may be designated as bike routes, even if they lack bike lanes or paved shoulders. The state, as of publication, has one officially designated