

## **EXECUTIVE SUMMARY**

There was no significant geographic shift in the patron catchment areas of Ferry Avenue, Woodcrest, or Lindenwold PATCO stations between 2001 and 2006, with the exception of a slightly increased share of Gloucester County patrons among Ferry Avenue commuters.

## **INTRODUCTION**

As part of its FY 2006 work program, DVRPC undertook a survey and data analysis exercise at the request of the Delaware River Port Authority and PATCO. The central purpose of this exercise was to conduct license plate surveys at three PATCO stations: Ferry Avenue, Woodcrest, and Lindenwold, and to compare the results of these surveys (i.e. the geographic distribution of riders) to those of identical surveys conducted in 2001. PATCO staff wished to know whether this distribution had shifted in recent years in a way that might support one or more of the South Jersey Extension alignment alternatives presently under consideration.

As a second, ancillary exercise, DRPA/PATCO wished to know the scale and municipal distribution of transit reverse commuters (Philadelphia to New Jersey) from 2000 Census data.

## **LICENSE PLATE SURVEY & RESULTS**

With the assistance of DRPA/PATCO staff, DVRPC staff conducted surveys of Ferry Avenue Station on Thursday, February 2, 2006; Woodcrest Station on Thursday, March 9, 2006; and Lindenwold Station on Thursday, January 19, 2006. All surveys were conducted between 10:00 AM and 3:00 PM.

Table 1 summarizes the number of license plates counted for each station. Comparable numbers from 2001 license plate surveys<sup>1</sup> are also included for purposes of comparison.

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<sup>1</sup> Sources: *Ridership and Parking Requirement Forecasts for the PATCO High Speed Line New Jersey Stations*, DVRPC Technical Memorandum, February 2002; *PATCO Parking Study Final Report*, Orth-Rodgers & Associates, Inc., December 2002.

**TABLE 1: Parking Occupancy at Study PATCO Stations, 2001 & 2006**

<b>Station</b>	<b># of parking stalls</b>	<b># of plates Collected in 2001 (% utilization)</b>	<b># of plates Collected in 2006 (% utilization)</b>
Ferry Ave.	1,900	1,796 (94.5%)	1,316 (69.3%)
Woodcrest	2,673	2,388 (89.3%)	2,024 (75.7%)
Lindenwold	3,337	3,016 (90.4%)	2,762 (82.8%)

*Source: DVRPC 2002, 2007; Orth-Rodgers & Associates, 2002.*

As Table 1 indicates, we observed a consistently lower level of parking stall occupancy in our winter 2006 license plate surveys than were observed in May 2001. Following the collection of license plate numbers during these surveys, plates were submitted to NJDOT for processing and address matching.

The matched addresses were then geocoded, a process which uses GIS software to create point locations for addresses on the regional road network. Because of the broad catchment area of PATCO service, geocoding for this project was conducted on a broader street network that includes roadways within not only the DVRPC region, but also the South Jersey Transportation Planning Organization (SJTPA) and North Jersey Transportation Planning Authority (NJTPA) regions.

In order to enable an “apples to apples” comparison with 2001 survey results, we obtained the original matched addresses from those surveys, and re-geocoded them using the same broader roadway network. In this way, the analysis also benefits from improvements in geocoding techniques in more recent versions of GIS software than were available in 2001/02. Table 2 summarizes the degree of success had in geocoding addresses for both survey years.

**TABLE 2: Summary of License Plate Matching and Geocoding Success, 2001 & 2006**

<b>Station</b>	<b>Number of Plates Counted</b>	<b>Number of addresses returned by NJDOT</b>	<b>Number of addresses matched in GIS</b>	<b>Percent matched from NJDOT addresses</b>	<b>Percent matched from original plate count</b>
<b>2001</b>					
Ferry Ave.	1,796	1,644	1,525	92.8%	84.9%
Woodcrest	2,388	2,089	1,855	88.8%	77.7%
Lindenwold	3,016	2,669	2,426	90.9%	80.4%
<b>2006</b>					
Ferry Ave.	1,316	1,065	942	88.4%	71.6%
Woodcrest	2,024	1,718	1,527	88.9%	75.4%
Lindenwold	2,762	2,229	1,998	89.6%	72.3%

Source: DVRPC 2002, 2007; Orth-Rodgers & Associates, 2002.

As Table 2 indicates, we experienced similar levels of success in geocoding addresses from the two survey years. The central purpose of this exercise was to present the distribution of station patrons, and more specifically to compare their distribution in 2001 and 2006. This was accomplished in two ways.

First, we defined and compared core station shed (or catchment) areas for each survey year. Core station sheds generate the vast majority of a station’s ridership, and exclude more far-flung areas from which few patrons are generated, which are less reliably part of a station’s market area. To delineate a core shed area for each station, linear distances were first measured between each geocoded address and the station location.

In examining the distribution of patron locations among the study area stations, we determined that drawing an area enclosing the inner 90% of patron distances most reliably resulted in a station shed that appeared reasonable. Using GIS software, the outer boundaries of this inner 90% were connected and these lines smoothed to create a defined shed boundary for each station. Maps 1, 2, and 3 depict the 90% station sheds for Ferry Avenue, Woodcrest, and Lindenwold Stations, respectively. In comparing the shapes and distributions of the 90% shed outlines for 2001 and 2006 for each station, no significant movement in core catchment area is apparent.

The second means of comparing station patron distributions for the two survey years was to aggregate matched addresses by municipality (MCD) and county. Tables 3, 4, and 5 include this information for Ferry Avenue, Woodcrest, and Lindenwold Stations, respectively. These tables reflect the complete station sheds, rather than the core (90%) station sheds. While the number of matched plates was consistently lower for 2006

surveys in comparison to 2001 surveys, a comparison of the percentage of patrons located in each county for the two survey years is instructive.

Generally speaking, the proportions of each station's patrons by county were very similar for the two survey years, with the notable exception that Gloucester County's share of Ferry Avenue patrons increased between 2001 and 2006, from 44.5% to 51.6%. This increase was accompanied by a decrease in Burlington County Ferry Avenue patrons, from 21.9% to 14.9%, which likely reflects the impact of the New Jersey Transit RiverLINE, which opened in 2004 (many of those passengers likely access inbound PATCO trains via RiverLINE transfer, rather than by park & ride).

In summary, whereas there was no significant change for any station's core shed or catchment area between 2001 and 2006, Ferry Avenue Station's total patron catchment showed a shift toward Gloucester County ridership. No such shift was observed for Woodcrest and Lindenwold Stations.

**TABLE 3: Municipal and County Distribution of Ferry Avenue Station Patron License Plates, 2001 & 2006**

2001		2006	
Municipality	Number of Plate Matches	Municipality	Number of Plate Matches
<b>Burlington County</b>	<b>334 (21.9%)</b>	<b>Burlington County</b>	<b>140 (14.9%)</b>
Cinnaminson Twp.	85	Cinnaminson Twp.	36
Delran Twp.	64	Delran Twp.	23
Willingboro Twp.	28	Maple Shade Twp.	16
Palmyra Bor.	23	Mount Laurel Twp.	12
Mount Laurel Twp.	20	Willingboro Twp.	11
Moorestown Twp.	17	Moorestown Twp.	11
Maple Shade Twp.	16	Palmyra Bor.	9
Riverton Bor.	15	Riverton Bor.	7
Burlington Twp.	12	Riverside Twp.	3
Delanco Twp.	11	Evesham Twp.	3
Riverside Twp.	11	Hainesport Twp.	2
Evesham Twp.	10	Lumberton Twp.	2
Edgewater Park Twp.	7	North Hanover Twp.	1
Burlington City	4	Burlington City	1
Westampton Twp.	3	Beverly City	1
Florence Twp.	2	Westampton Twp.	1
Medford Twp.	2	Eastampton Twp.	1
Eastampton Twp.	1		
Mount Holly Twp.	1		
Pemberton Twp.	1		
Tabernacle Twp.	1		
<b>Camden County</b>	<b>463 (30.4%)</b>	<b>Camden County</b>	<b>282 (30.0%)</b>
Pennsauken Twp.	99	Pennsauken Twp.	65
Camden City	70	Camden City	37
Gloucester Twp.	44	Collingswood Bor.	26

2001		2006	
Collingswood Bor.	37	Gloucester City City	24
Cherry Hill Twp.	29	Cherry Hill Twp.	23
Bellmawr Bor.	27	Gloucester Twp.	21
Gloucester City City	26	Audubon Bor.	10
Mount Ephraim Bor.	14	Mount Ephraim Bor.	10
Brooklawn Bor.	14	Runnemede Bor.	10
Runnemede Bor.	14	Winslow Twp.	9
Winslow Twp.	14	Bellmawr Bor.	8
Oaklyn Bor.	13	Woodlynne Bor.	7
Merchantville Bor.	10	Oaklyn Bor.	5
Haddon Twp.	10	Brooklawn Bor.	5
Woodlynne Bor.	6	Haddon Heights Bor.	4
Audubon Bor.	6	Clementon Bor.	3
Audubon Park Bor.	4	Haddon Twp.	2
Voorhees Twp.	4	Haddon Twp.	2
Haddon Twp.	3	Lindenwold Bor.	2
Haddon Heights Bor.	3	Pine Hill Bor.	2
Lindenwold Bor.	3	Merchantville Bor.	1
Haddon Twp.	2	Haddonfield Bor.	1
Barrington Bor.	2	Audubon Park Bor.	1
Somerdale Bor.	2	Barrington Bor.	1
Stratford Bor.	2	Magnolia Bor.	1
Haddonfield Bor.	1	Stratford Bor.	1
Lawnside Bor.	1	Chesilhurst Bor.	1
Berlin Bor.	1		
Pine Hill Bor.	1		
Waterford Twp.	1		
<b>Cumberland County</b>	<b>12 (0.8%)</b>	<b>Cumberland County</b>	<b>12 (1.3%)</b>
Vineland City	5	Vineland City	7
Bridgeton City	2	Deerfield Twp.	2
Millville City	2	Millville City	2
Hopewell Twp.	1	Fairfield Twp.	1
Deerfield Twp.	1		
Maurice River Twp.	1		
<b>Gloucester County</b>	<b>679 (44.5%)</b>	<b>Gloucester County</b>	<b>486 (51.6%)</b>
Washington Twp.	179	Washington Twp.	107
West Deptford Twp.	94	Deptford Twp.	73
Deptford Twp.	91	West Deptford Twp.	63
Mantua Twp.	52	Mantua Twp.	42
Glassboro Bor.	35	Harrison Twp.	22
Harrison Twp.	33	Glassboro Bor.	22
East Greenwich Twp.	24	Woodbury City	18
Monroe Twp.	23	East Greenwich Twp.	18
Pitman Bor.	22	Monroe Twp.	16
Woodbury City	19	Logan Twp.	15
Woodbury Heights Bor.	18	Pitman Bor.	14
Logan Twp.	15	Wenonah Bor.	11

2001		2006	
Wenonah Bor.	12	Woolwich Twp.	11
Clayton Bor.	10	National Park Bor.	10
National Park Bor.	9	Woodbury Heights Bor.	8
Westville Bor.	7	Franklin Twp.	8
Paulsboro Bor.	6	Paulsboro Bor.	7
Woolwich Twp.	6	Clayton Bor.	6
Elk Twp.	6	Westville Bor.	5
Franklin Twp.	6	South Harrison Twp.	4
Greenwich Twp.	5	Elk Twp.	3
South Harrison Twp.	4	Greenwich Twp.	2
Swedesboro Bor.	3	Swedesboro Bor.	1
<b>Hunterdon County</b>	<b>1 (0.1%)</b>	<b>Hunterdon County</b>	<b>1 (0.1%)</b>
East Amwell Twp.	1	Raritan Twp.	1
<b>Mercer County</b>	<b>3 (0.2%)</b>	<b>Mercer County</b>	<b>0 (0.0%)</b>
Lawrence Twp.	1		
Hamilton Twp.	1		
Trenton City	1		
<b>Middlesex County</b>	<b>3 (0.2%)</b>	<b>Middlesex County</b>	<b>4 (0.4%)</b>
North Brunswick Twp.	1	Metuchen Bor.	1
Plainsboro Twp.	1	North Brunswick Twp.	1
Wall Twp.	1	Monmouth County	1
		Manalapan Twp.	1
<b>Salem County</b>	<b>30 (2.0%)</b>	<b>Salem County</b>	<b>17 (1.8%)</b>
Pittsgrove Twp.	6	Carneys Point Twp.	4
Pilesgrove Twp.	4	Pittsgrove Twp.	3
Pennsville Twp.	4	Pilesgrove Twp.	2
Penns Grove Bor.	3	Pennsville Twp.	2
Upper Pittsgrove Twp.	3	Woodstown Bor.	2
Woodstown Bor.	3	Penns Grove Bor.	1
Oldmans Twp.	2	Upper Pittsgrove Twp.	1
Carneys Point Twp.	2	Somerset County	1
Alloway Twp.	1	Montgomery Twp.	1
Elmer Bor.	1		
Salem City	1		
<b>TOTAL</b>	<b>1,525 (100.0%)</b>		<b>942 (100.0%)</b>

Source: DVRPC 2002, 2007; Orth-Rodgers & Associates, 2002.

**TABLE 4: Municipal and County Distribution of  
Woodcrest Station Patron License Plates, 2001 & 2006**

2001		2006	
Municipality	Number of Plate Matches	Municipality	Number of Plate Matches
<b>Burlington County</b>	<b>1041 (56.1%)</b>	<b>Burlington County</b>	<b>809 (53.0%)</b>
Mount Laurel Twp.	357	Mount Laurel Twp.	255
Evesham Twp.	246	Evesham Twp.	195
Medford Twp.	73	Moorestown Twp.	58
Moorestown Twp.	64	Medford Twp.	57
Willingboro Twp.	56	Lumberton Twp.	35
Burlington Twp.	42	Burlington Twp.	25
Maple Shade Twp.	24	Westampton Twp.	20
Westampton Twp.	23	Maple Shade Twp.	17
Delran Twp.	20	Hainesport Twp.	15
Eastampton Twp.	17	Willingboro Twp.	14
Florence Twp.	11	Tabernacle Twp.	14
Mount Holly Twp.	11	Eastampton Twp.	12
Tabernacle Twp.	10	Delran Twp.	11
Burlington City	9	Mount Holly Twp.	11
Pemberton Twp.	9	Pemberton Twp.	10
Springfield Twp.	8	Southampton Twp.	10
Cinnaminson Twp.	7	Medford Lakes Bor.	10
Bordentown Twp.	6	Shamong Twp.	7
Lumberton Twp.	6	Florence Twp.	6
Southampton Twp.	6	Mansfield Twp.	5
Medford Lakes Bor.	6	Bordentown Twp.	4
Riverside Twp.	5	Burlington City	4
Chesterfield Twp.	4	Cinnaminson Twp.	4
Bordentown City	4	North Hanover Twp.	3
Mansfield Twp.	4	Springfield Twp.	2
Edgewater Park Twp.	4	Edgewater Park Twp.	2
Shamong Twp.	4	New Hanover Twp.	2
Hainesport Twp.	2	Pemberton Bor.	1
Palmyra Bor.	1		
Pemberton Bor.	1		
Woodland Twp.	1		
<b>Camden County</b>	<b>556 (30.0%)</b>	<b>Camden County</b>	<b>521 (34.1%)</b>
Cherry Hill Twp.	383	Cherry Hill Twp.	377
Voorhees Twp.	52	Voorhees Twp.	40
Gloucester Twp.	34	Gloucester Twp.	28
Lawnside Bor.	17	Barrington Bor.	9
Bellmawr Bor.	13	Lawnside Bor.	9
Magnolia Bor.	9	Bellmawr Bor.	9
Runnemede Bor.	8	Runnemede Bor.	8
Winslow Twp.	7	Magnolia Bor.	5
Haddon Heights Bor.	6	Winslow Twp.	5

2001		2006	
Barrington Bor.	5	Haddon Heights Bor.	4
Gloucester City City	3	Waterford Twp.	4
Somerdale Bor.	3	Pennsauken Twp.	3
Collingswood Bor.	2	Collingswood Bor.	3
Gibbsboro Bor.	2	Haddon Twp.	3
Pennsauken Twp.	1	Somerdale Bor.	3
Camden City	1	Audubon Bor.	2
Haddon Twp.	1	Lindenwold Bor.	2
Haddonfield Bor.	1	Berlin Bor.	2
Audubon Bor.	1	Haddonfield Bor.	1
Hi-Nella Bor.	1	Brooklawn Bor.	1
Stratford Bor.	1	Gibbsboro Bor.	1
Lindenwold Bor.	1	Hi-Nella Bor.	1
Berlin Twp.	1	Berlin Twp.	1
Berlin Bor.	1		
Pine Hill Bor.	1		
Waterford Twp.	1		
<b>Cumberland County</b>	<b>7 (0.4%)</b>	<b>Cumberland County</b>	<b>2 (0.1%)</b>
Millville City	3	Vineland City	1
Vineland City	2	Millville City	1
Greenwich Twp.	1		
Commercial Twp.	1		
<b>Gloucester County</b>	<b>151 (8.1%)</b>	<b>Gloucester County</b>	<b>129 (8.4%)</b>
Washington Twp.	37	Washington Twp.	23
West Deptford Twp.	16	Deptford Twp.	21
Deptford Twp.	15	West Deptford Twp.	16
Pitman Bor.	13	Mantua Twp.	9
Mantua Twp.	10	Woodbury City	7
East Greenwich Twp.	8	Woolwich Twp.	7
Harrison Twp.	8	Logan Twp.	5
Glassboro Bor.	8	East Greenwich Twp.	5
Woodbury City	7	Glassboro Bor.	5
Logan Twp.	6	Monroe Twp.	5
Monroe Twp.	5	Greenwich Twp.	4
Clayton Bor.	5	Harrison Twp.	4
Woodbury Heights Bor.	3	Franklin Twp.	4
Paulsboro Bor.	2	Westville Bor.	3
Wenonah Bor.	2	Wenonah Bor.	3
Franklin Twp.	2	Pitman Bor.	3
Westville Bor.	1	National Park Bor.	1
Greenwich Twp.	1	Woodbury Heights Bor.	1
Woolwich Twp.	1	South Harrison Twp.	1
Swedesboro Bor.	1	Elk Twp.	1
		Clayton Bor.	1
<b>Hunterdon County</b>	<b>1 (0.1%)</b>	<b>Hunterdon County</b>	<b>0 (0.0%)</b>
Delaware Twp.	1		
<b>Mercer County</b>	<b>33 (1.8%)</b>	<b>Mercer County</b>	<b>15 (1.0%)</b>



2001		2006	
Hamilton Twp.	16	Hamilton Twp.	7
East Windsor Twp.	7	East Windsor Twp.	6
West Windsor Twp.	2	Lawrence Twp.	1
Ewing Twp.	2	Hightstown Bor.	1
Washington Twp.	2		
Hopewell Twp.	1		
Princeton Twp.	1		
Lawrence Twp.	1		
Trenton City	1		
<b>Middlesex County</b>	<b>17 (0.9%)</b>	<b>Middlesex County</b>	<b>8 (0.5%)</b>
Sayreville Bor.	2	South Amboy City	2
East Brunswick Twp.	2	North Brunswick Twp.	2
North Brunswick Twp.	2	Cranbury Twp.	2
Old Bridge Twp.	2	Piscataway Twp.	1
South Brunswick Twp.	2	South Brunswick Twp.	1
Edison Twp.	1		
Piscataway Twp.	1		
Middlesex Bor.	1		
South Amboy City	1		
Spotswood Bor.	1		
Monroe Twp.	1		
Plainsboro Twp.	1		
<b>Monmouth County</b>	<b>16 (0.9%)</b>	<b>Monmouth County</b>	<b>12 (0.8%)</b>
Manalapan Twp.	3	Aberdeen Twp.	1
Marlboro Twp.	2	Middletown Twp.	1
Wall Twp.	2	Holmdel Twp.	1
Aberdeen Twp.	1	Marlboro Twp.	1
Hazlet Twp.	1	Fair Haven Bor.	1
Keyport Bor.	1	Manalapan Twp.	1
Middletown Twp.	1	Tinton Falls Bor.	1
Monmouth Beach Bor.	1	Freehold Twp.	1
Millstone Twp.	1	Ocean Twp.	1
Deal Bor.	1	Millstone Twp.	1
Howell Twp.	1	Upper Freehold Twp.	1
Allentown Bor.	1	Manasquan Bor.	1
<b>Ocean County</b>	<b>20 (1.1%)</b>	<b>Ocean County</b>	<b>17 (1.1%)</b>
Jackson Twp.	5	Brick Twp.	4
Brick Twp.	2	Jackson Twp.	3
Plumsted Twp.	2	Point Pleasant Bor.	3
Point Pleasant Bor.	2	Dover Twp.	3
Lakewood Twp.	1	Plumsted Twp.	1
Dover Twp.	1	Manchester Twp.	1
Berkeley Twp.	1	Berkeley Twp.	1
Lacey Twp.	1	Barneгат Twp.	1
Barneгат Twp.	1		
Little Egg Harbor Twp.	1		
Stafford Twp.	1		

2001		2006	
Ship Bottom Bor.	1		
Long Beach Twp.	1		
<b>Salem County</b>	<b>5 (0.3%)</b>	<b>Salem County</b>	<b>11 (0.7%)</b>
Pennsville Twp.	2	Carneys Point Twp.	2
Elmer Bor.	1	Pilesgrove Twp.	2
Pittsgrove Twp.	1	Pennsville Twp.	2
Quinton Twp.	1	Pittsgrove Twp.	2
		Penns Grove Bor.	1
		Upper Pittsgrove Twp.	1
		Elmer Bor.	1
<b>Somerset County</b>	<b>5 (0.3%)</b>	<b>Somerset County</b>	<b>2 (0.1%)</b>
Bridgewater Twp.	2	Bernards Twp.	1
Montgomery Twp.	2	Franklin Twp.	1
Franklin Twp.	1		
<b>Warren County</b>	<b>3 (0.2%)</b>	<b>Warren County</b>	<b>1 (0.1%)</b>
Blairstown Twp.	1	Greenwich Twp.	1
White Twp.	1		
Franklin Twp.	1		
<b>TOTAL</b>	<b>1,855 (100.0%)</b>		<b>1,527 (100.0%)</b>

Source: DVRPC 2002, 2007; Orth-Rodgers & Associates, 2002.

**TABLE 5: Municipal and County Distribution of  
Lindenwold Station Patron License Plates, 2001 & 2006**

2001		2006	
Municipality	Number of Plate Matches	Municipality	Number of Plate Matches
<b>Atlantic County</b>	<b>1 (0.0%)</b>	<b>Atlantic County</b>	<b>0 (0.0%)</b>
Buena Vista Twp.	1		
<b>Burlington County</b>	<b>129 (5.3%)</b>	<b>Burlington County</b>	<b>112 (5.6%)</b>
Evesham Twp.	72	Evesham Twp.	60
Medford Twp.	24	Medford Twp.	19
Shamong Twp.	10	Shamong Twp.	10
Willingboro Twp.	6	Mount Laurel Twp.	6
Mount Laurel Twp.	5	Willingboro Twp.	3
Tabernacle Twp.	4	Tabernacle Twp.	3
Delran Twp.	2	Medford Lakes Bor.	3
North Hanover Twp.	1	Moorestown Twp.	2
Florence Twp.	1	Lumberton Twp.	2
Delanco Twp.	1	Burlington Twp.	1
Cinnaminson Twp.	1	Riverside Twp.	1
Moorestown Twp.	1	Eastampton Twp.	1
Medford Lakes Bor.	1	Southampton Twp.	1
<b>Camden County</b>	<b>2003 (82.6%)</b>	<b>Camden County</b>	<b>1621 (81.1%)</b>
Gloucester Twp.	539	Gloucester Twp.	453
Winslow Twp.	297	Voorhees Twp.	245
Voorhees Twp.	258	Winslow Twp.	205
Lindenwold Bor.	240	Lindenwold Bor.	170
Waterford Twp.	105	Stratford Bor.	83
Stratford Bor.	99	Pine Hill Bor.	80
Pine Hill Bor.	91	Waterford Twp.	79
Berlin Bor.	88	Berlin Bor.	55
Berlin Twp.	54	Cherry Hill Twp.	40
Clementon Bor.	52	Clementon Bor.	38
Cherry Hill Twp.	41	Berlin Twp.	36
Somerdale Bor.	33	Somerdale Bor.	31
Laurel Springs Bor.	29	Gibbsboro Bor.	25
Gibbsboro Bor.	21	Laurel Springs Bor.	22
Chesilhurst Bor.	10	Magnolia Bor.	10
Camden City	7	Chesilhurst Bor.	9
Bellmawr Bor.	5	Haddonfield Bor.	5
Hi-Nella Bor.	5	Runnemede Bor.	5
Collingswood Bor.	4	Camden City	4
Magnolia Bor.	4	Pennsauken Twp.	3
Runnemede Bor.	4	Collingswood Bor.	3
Audubon Bor.	3	Audubon Bor.	3
Lawnside Bor.	3	Hi-Nella Bor.	3
Haddonfield Bor.	2	Merchantville Bor.	2
Barrington Bor.	2	Haddon Twp.	2

2001		2006	
Pennsauken Twp.	1	Haddon Heights Bor.	2
Woodlynne Bor.	1	Barrington Bor.	2
Gloucester City City	1	Bellmawr Bor.	2
Haddon Twp.	1	Woodlynne Bor.	1
Mount Ephraim Bor.	1	Oaklyn Bor.	1
Haddon Heights Bor.	1	Mount Ephraim Bor.	1
Brooklawn Bor.	1	Brooklawn Bor.	1
<b>Cumberland County</b>	<b>9 (0.4%)</b>	<b>Cumberland County</b>	<b>6 (0.3%)</b>
Vineland City	5	Vineland City	5
Millville City	2	Commercial Twp.	1
Upper Deerfield Twp.	1		
Fairfield Twp.	1		
<b>Gloucester County</b>	<b>266 (11.0%)</b>	<b>Gloucester County</b>	<b>240 (12.0%)</b>
Washington Twp.	153	Washington Twp.	139
Monroe Twp.	73	Monroe Twp.	57
Franklin Twp.	11	Franklin Twp.	14
Glassboro Bor.	9	Deptford Twp.	11
Deptford Twp.	5	Glassboro Bor.	6
Pitman Bor.	4	Clayton Bor.	6
Mantua Twp.	2	Harrison Twp.	2
Clayton Bor.	2	Pitman Bor.	2
West Deptford Twp.	1	West Deptford Twp.	1
Paulsboro Bor.	1	Logan Twp.	1
Woodbury City	1	Woodbury Heights Bor.	1
Logan Twp.	1		
Woodbury Heights Bor.	1		
Harrison Twp.	1		
Elk Twp.	1		
<b>Hunterton County</b>	<b>0 (0.0%)</b>	<b>Hunterton County</b>	<b>1 (0.1%)</b>
		Hampton Bor.	1
<b>Mercer County</b>	<b>1 (0.0%)</b>	<b>Mercer County</b>	<b>4 (0.2%)</b>
Lawrence Twp.	1	Hamilton Twp.	2
		Lawrence Twp.	1
		Washington Twp.	1
<b>Middlesex County</b>	<b>3 (0.1%)</b>	<b>Middlesex County</b>	<b>4 (0.2%)</b>
New Brunswick City	1	Perth Amboy City	1
Sayreville Bor.	1	East Brunswick Twp.	1
South Brunswick Twp.	1	North Brunswick Twp.	1
		Milltown Bor.	1
<b>Monmouth County</b>	<b>3 (0.1%)</b>	<b>Monmouth County</b>	<b>4 (0.2%)</b>
Hazlet Twp.	1	Aberdeen Twp.	1
Ocean Twp.	1	Holmdel Twp.	1
Howell Twp.	1	West Long Branch Bor.	1
		Howell Twp.	1
<b>Ocean County</b>	<b>5 (0.2%)</b>	<b>Ocean County</b>	<b>5 (0.3%)</b>
Lakewood Twp.	1	Dover Twp.	2
Dover Twp.	1	Point Pleasant Bor.	1

2001		2006	
Little Egg Harbor Twp.	1	Lacey Twp.	1
Long Beach Twp.	1	Eagleswood Twp.	1
Tuckerton Bor.	1		
<b>Salem County</b>	<b>3 (0.1%)</b>	<b>Salem County</b>	<b>1 (0.1%)</b>
Penns Grove Bor.	1	Carneys Point Twp.	1
Pennsville Twp.	1		
Pittsgrove Twp.	1		
<b>Somerset County</b>	<b>2 (0.1%)</b>	<b>Somerset County</b>	<b>0 (0.0%)</b>
Warren Twp.	1		
Bridgewater Twp.	1		
<b>Warren County</b>	<b>1 (0.0%)</b>	<b>Warren County</b>	<b>0 (0.0%)</b>
Greenwich Twp.	1		
<b>TOTAL</b>	<b>2,426 (100.0%)</b>		<b>1,998 (100.0%)</b>

Source: DVRPC 2002, 2007; Orth-Rodgers & Associates, 2002.

## PHILADELPHIA TO NEW JERSEY TRANSIT COMMUTING

Table 6 summarizes transit journey to work reverse commutes from Philadelphia according to 2000 Census data. Destinations in Burlington, Camden, and Gloucester Counties are indicated. As the data makes clear, bus reverse commutes were significantly more common than rail commutes in 2000.

**TABLE 6: Select New Jersey Destinations for Philadelphia Bus & Rail Reverse Commutes, 2000**

County	Municipality	Bus	Rail
Burlington	Burlington township	64	0
Burlington	Palmyra borough	34	0
Burlington	Moorestown township	23	4
Burlington	Evesham township	27	9
Burlington	Delran township	16	6
Burlington	New Hanover township	9	0
Burlington	Cinnaminson township	8	0
Burlington	Westampton township	7	0
Burlington	Edgewater Park township	6	0
Burlington	Willingboro township	6	0
Burlington	Maple Shade township	4	0
Burlington	Hainesport township	0	26
Burlington	Bordentown city	0	10
Burlington	Mount Laurel township	0	8
Burlington	Burlington city	0	7
Burlington	Medford Lakes borough	0	5
<b>Subtotal</b>		<b>204</b>	<b>75</b>
Camden	Camden city	189	61
Camden	Pennsauken township	91	23

County	Municipality	Bus	Rail
Camden	Berlin township	34	7
Camden	Cherry Hill township	94	5
Camden	Bellmawr borough	18	0
Camden	Merchantville borough	16	0
Camden	Collingswood borough	14	5
Camden	Audubon Park borough	14	0
Camden	Haddon Heights borough	13	0
Camden	Gloucester City	12	0
Camden	Stratford borough	10	0
Camden	Haddonfield borough	8	0
Camden	Berlin borough	7	0
Camden	Voorhees township	0	20
Camden	Somerdale borough	0	14
Camden	Mount Ephraim borough	0	12
Camden	Gloucester township	0	10
<b>Subtotal</b>		<b>520</b>	<b>157</b>
Gloucester	Logan township	14	0
Gloucester	Monroe township	22	0
Gloucester	Deptford township	8	0
Gloucester	Woodbury city	0	16
Gloucester	West Deptford township	0	9
Gloucester	Paulsboro borough	0	3
<b>Subtotal</b>		<b>44</b>	<b>28</b>
<b>TOTAL</b>		<b>768</b>	<b>260</b>

Source: CTPP 2000

For purposes of comparison and in order to provide a scale for the numbers in the above table, Table 7 summarizes total interstate journey to work flows, both by transit and for all modes.

**TABLE 7: Regional Interstate Journey-to-Work Patterns by Movement & Mode, 2000**

Origin and Destination	Bus	Rail	Other	Transit Total	All Modes Total	Transit Share (%)
NJ to PA (non-PHL)	297	275	30,908	572	31,480	2 %
NJ to PHL	2,731	13,692	49,525	<u>16,423</u>	<u>65,948</u>	25 %
<b>NJ to PA total</b>				<b>16,995</b>	<b>97,428</b>	<b>17 %</b>
PA (non-PHL) to NJ	73	190	39,093	263	39,356	1 %
PHL to NJ	800	323	14,338	<u>1,123</u>	<u>15,461</u>	7 %
<b>PA to NJ total</b>				<b>1,386</b>	<b>54,817</b>	<b>3 %</b>

Source: CTPP 2000

**TITLE: SURVEY SUPPORT FOR PATCO TRANSIT EXTENSION STUDY**

**Publication No.: 08018**

**Date Released: February 2008**

**Geographic Area Covered:** Southern New Jersey

**Key Words:** DRPA, PATCO, parking sheds, Gloucester County, Camden County

**ABSTRACT:** As part of its FY 2006 work program, DVRPC undertook a survey and data analysis exercise at the request of the Delaware River Port Authority and PATCO. The central purpose of this exercise was to conduct license plate surveys at three PATCO stations: Ferry Avenue, Woodcrest, and Lindenwold, and to compare the results of these surveys (i.e. the geographic distribution of riders) to those of identical surveys conducted in 2001. PATCO staff wished to know whether this distribution had shifted in recent years in a way that might support one or more of the South Jersey Extension alignment alternatives presently under consideration. License plate survey findings indicated that there was no significant geographic shift in the patron catchment areas of these stations between 2001 and 2006, with the exception of a slightly increased share of Gloucester County patrons among Ferry Avenue commuters.

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Delaware Valley Regional Planning Commission  
190 North Independence Mall West, 8<sup>th</sup> Floor  
Philadelphia, PA 19106-1520

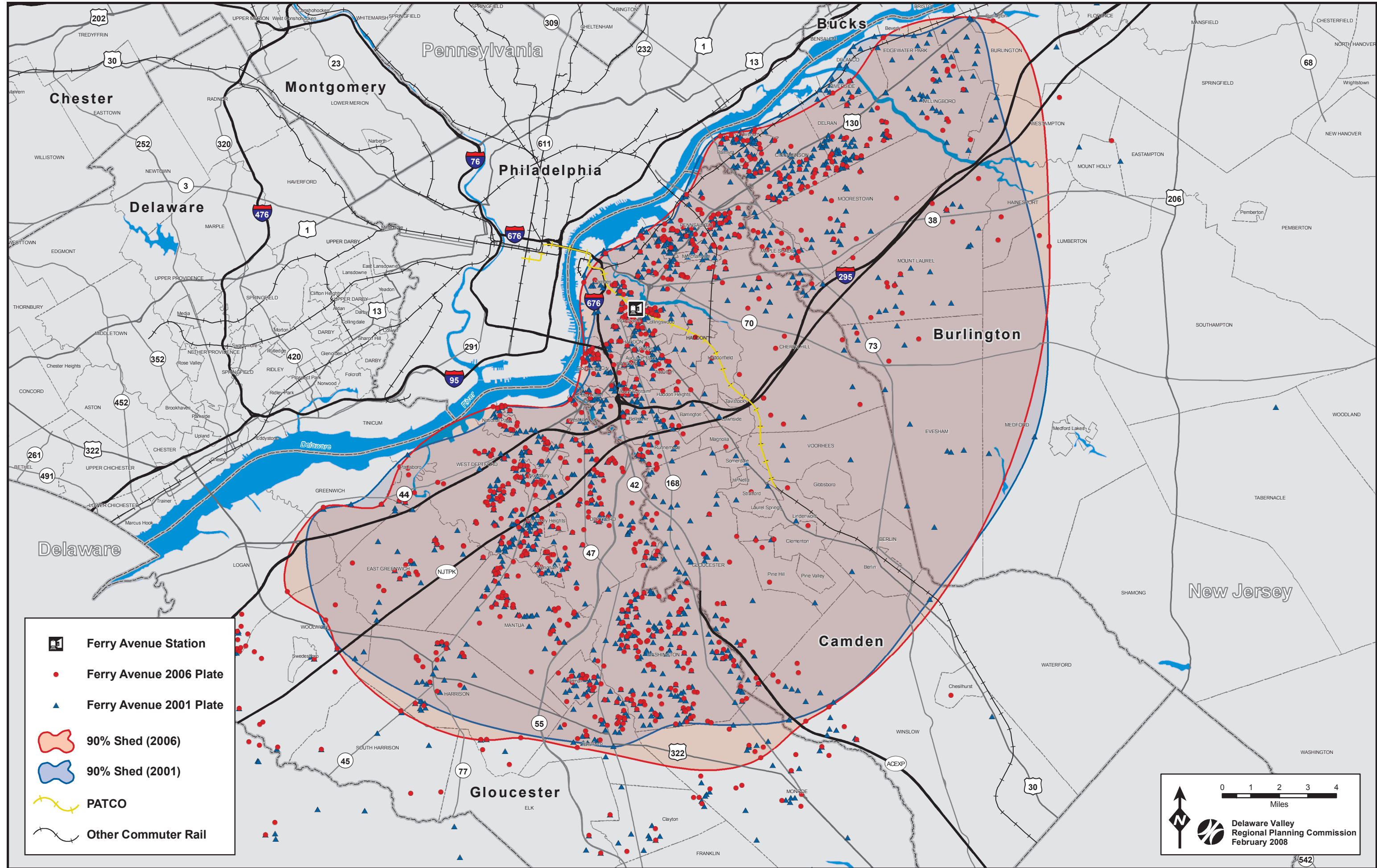
**Phone:** 215-592-1800  
**Fax:** 215-592-9125  
**Internet:** [www.dvrpc.org](http://www.dvrpc.org)

**Staff Contacts:**

**Gregory R. Krykewycz, PP, AICP**  
Transportation Planner, Office of Transit, Bicycle, and Pedestrian Planning  
**Direct Phone:** 215-238-2945  
**Email:** [gkrykewycz@dvrpc.org](mailto:gkrykewycz@dvrpc.org)

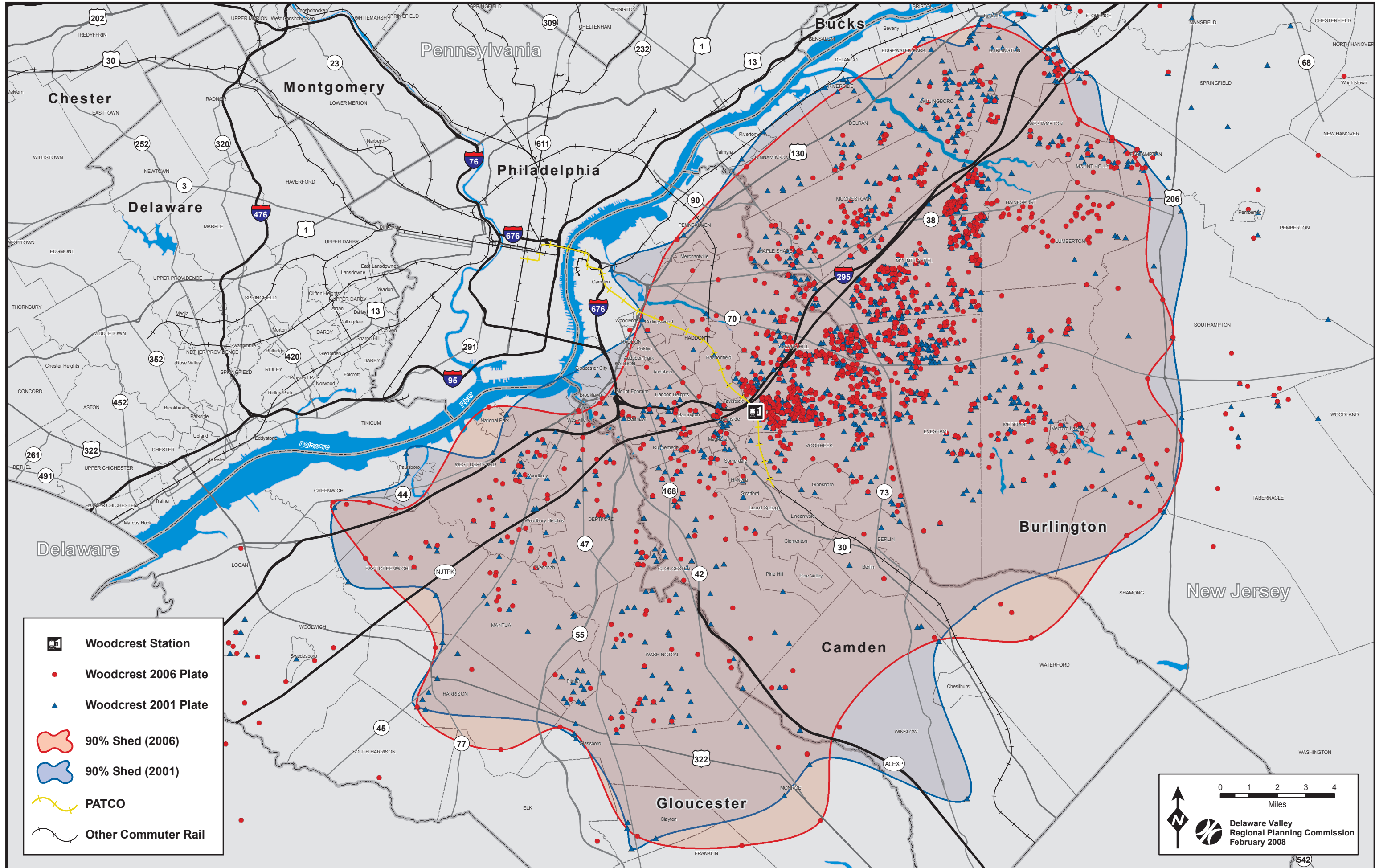
**Joseph F. Hacker, Ph.D., AICP**  
Manager, Office of Transit, Bicycle, and Pedestrian Planning  
**Direct Phone:** 215-238-2935  
**Email:** [jhacker@dvrpc.org](mailto:jhacker@dvrpc.org)

# MAP 1: Ferry Avenue 90% Station Shed

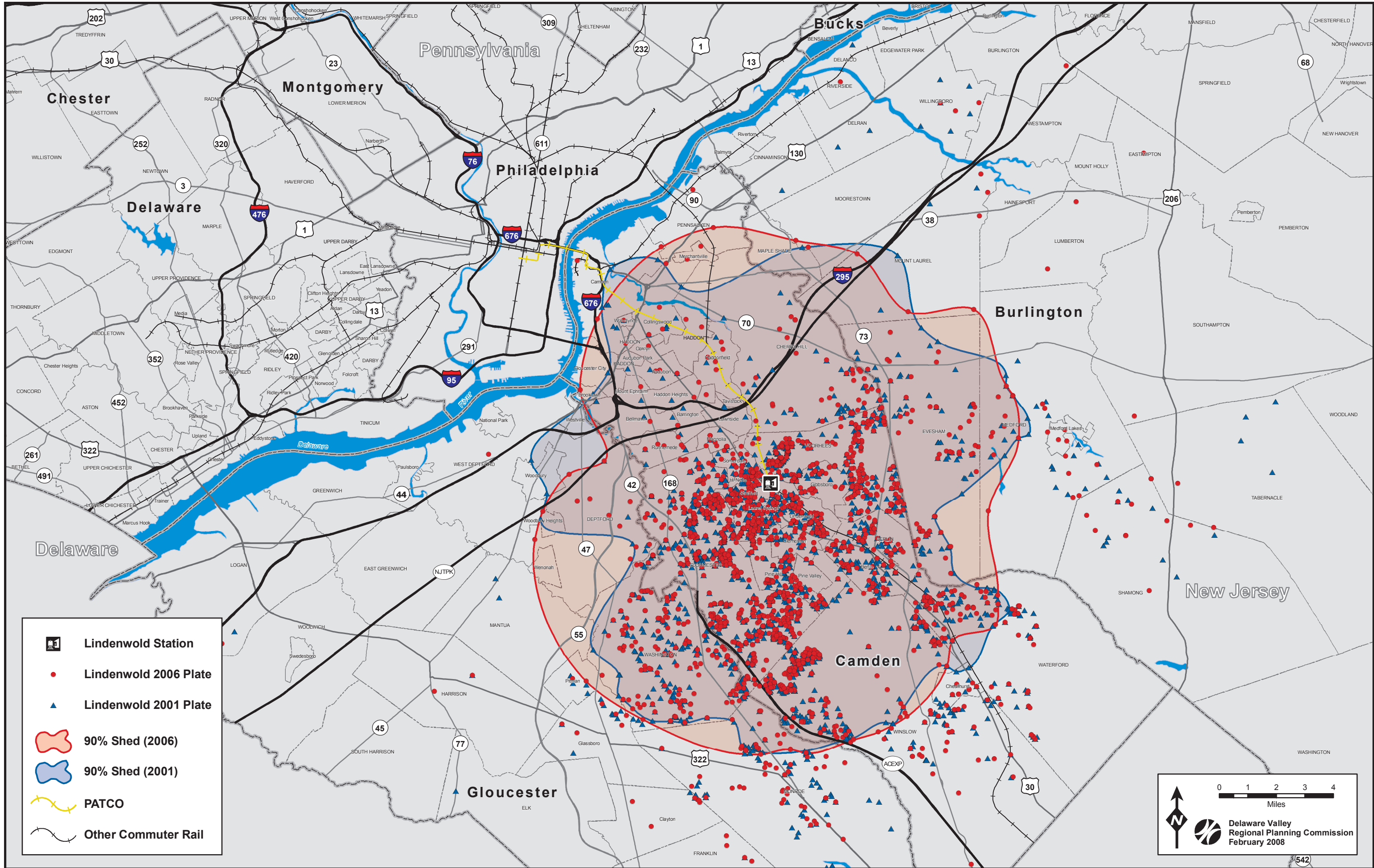











# MAP 2: Woodcrest 90% Station Shed




# MAP 3: Lindenwold 90% Station Shed



-  Lindenwold Station
-  Lindenwold 2006 Plate
-  Lindenwold 2001 Plate
-  90% Shed (2006)
-  90% Shed (2001)
-  PATCO
-  Other Commuter Rail

0 1 2 3 4  
Miles

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