



DELAWARE VALLEY
REGIONAL PLANNING
COMMISSION

2008



CAMDEN COUNTY BUS PULLOUT Study



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EXECUTIVE SUMMARY

The purpose of this report is to develop criteria to identify potential locations for where bus pullouts could be located on county roads within Camden County. Bus pullouts are designated areas at bus stop locations that allow transit vehicles to pull in and out of traffic to pick up and discharge passengers without significantly impeding or delaying adjacent traffic.

Taking research gathered from other states and adhering to standards represented in the *New Jersey DOT Roadway Design Manual*, this report documents design criteria and guidelines on suggested locations for the placement of bus pullouts along the county-owned roadway system in Camden County. Bus pullout criteria were also generated by incorporating information found in the Delaware Valley Regional Planning Commission (DVRPC) Congestion Management Process (CMP), inventory of Camden County route network, New Jersey Transit ridership information and crash data.

Strategies from the CMP were incorporated to identify the relationship between transit and bus pullouts as it pertains to congested corridors in the Camden County. Given the definition and advantages of bus pullouts, two of the six transit strategies identified have a direct correlation to bus pullouts. The “*more frequent transit or more hours of service*” strategy focuses on the demand of transit travel and the “*enhance transit amenities and safety*” strategy relates to defining the bus stop area and making it safer for passengers boarding and alighting buses.

All recommended design standards are in accordance with the *New Jersey DOT Design Manual*. The design of bus pullouts generally consist of entrance and exit tapers, deceleration and acceleration lanes, and a bus stopping area. The length of the tapers and the deceleration and acceleration lanes vary depending on the posted speed of the roadway.

Information provided by the Camden County Engineering Department revealed that there are approximately 362 miles of county routes within Camden County. New Jersey Transit operates 30 bus lines throughout Camden County, 20 of which traverse the county road network.

Between 2002 and 2006, there were 114 crashes county-wide crashes involving a New Jersey Transit vehicle, 53 of which occurred on the County-owned roadway network. Sideswipe (same direction), rear end, and hit parked vehicle were the most common types of crashes. According to New Jersey and Oregon DOTs, bus pullouts do have an impact on crashes by potentially reducing the occurrence of rear end crashes. Buses are pulled out of the main stream of travel while passengers are boarding or disembarking the transit vehicle. This allows for traffic in the main travel lane(s) to flow freely. However, bus pullouts may increase rates of sideswipe crashes due to buses reentering the main travel lane.

Based upon research gathered from other states, current regional polices, *New Jersey DOT Design Manual* standards, and existing county road facilities, criteria were developed to screen appropriate areas where bus pullouts should be considered for construction. From the screening process, 29 county routes, broken into 114 segments were identified. Several of the routes selected were located in the suburban municipalities bordering Gloucester and Burlington counties in the central and southern sections of Camden County. In the analysis, these locations were further studied to show the relationship of the CMP, transit, and crash data. Based upon this, seven locations incorporated all of these factors and were identified as high priority for consideration for bus pullout construction. In terms of bus pullout potential, the remaining 107 locations met some of the criteria developed and are considered medium priority.

1.0 INTRODUCTION

1.1 *Project Purpose*

The purpose of this study is to develop design criteria and guidelines on select locations for the placement of bus pullouts along the county roadway system in Camden County. Specific goals of the study include:

- Identify general design standards related to the length and width of the pullout areas, as well as deceleration/acceleration tapers
- Identify a screening process for finding appropriate bus pullout areas on county roads that can be applied to the network
- Apply the screening process to county-owned roads in Camden County in order to determine appropriate locations for bus pullouts

1.2 *Background*

New Jersey Transit operates a system of bus routes throughout Camden County, many traveling on the county road system. In many instances, the existing roadway width is insufficient for transit buses to completely pull out of traffic for the purposes of boarding or alighting passengers. Buses stopped in traffic lanes exacerbate congested roads, impede mobility, and contribute to the overall poor air quality in Camden County.

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2.0 BUS PULLOUTS

2.1 *What are Bus Pullouts?*

Bus pullouts (also referred to as bus turnouts) are designated areas that allow transit buses to pull in and out of the main travel lane to pick up and discharge passengers at bus stop locations. The purpose of the pullout is to avoid blocking a lane of traffic and to improve safety during the boarding and disembarking of transit passengers.

2.2 *Types of Bus Pullouts*

Far-side pullouts are located just past an intersection. These pullout locations are recommended on routes on which buses make left turns at intersections. Once a bus negotiates a left turn, a far-side bus pullout provides a more appropriate service point. Far-side pullouts are also recommended in locations where dedicated right-turn lanes are present. These pullouts may facilitate easier bus reentry into traffic due to gaps created by intersection traffic signals. As stated in the *New Jersey Department of Transportation Design Manual*, alternate far-side pullouts should be considered at intersections where a high volume of traffic may make right turns and may use the bus pullout as an auxiliary lane.

Near-side pullouts are located just prior to an intersection and offer a number of features to pedestrians and vehicle drivers. Pullouts in these locations allow pedestrians to cross in front of the bus. Near-side pullouts also allow transit users to load and alight from buses close to crosswalks and intersections.

Midblock pullouts are located between intersections and are generally less congested than pullouts located at intersections.

2.3 *Ideal Locations for Placement of Bus Pullouts*

Careful consideration should be given to the location of bus pullouts. Below is a list of ideal locations for the suggested placement of bus pullouts, according to the New Jersey and Oregon Departments of Transportation:

- Near pedestrian generators—malls, office parks, and transportation hubs
- At locations with a high number of bus crashes
- At locations with a high frequency of bus stops per hour
- At locations with a high number of passenger boardings (30 or more boardings per hour)
- At locations where there is adequate right-of-way available
- At the far side of an intersection
- Along roadways posted with speeds of 35 mph or higher

2.4 Advantages and Disadvantages

Bus pullouts may not be suitable for every stop location. Table 1 highlights some of the common benefits and drawbacks associated with bus pullouts.

Table 1: Advantages and Disadvantages of Bus Pullouts

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> ◆ Allows traffic to proceed around stopped buses, reducing delay for other roadway traffic ◆ Assists in maximizing the vehicle capacity of the roadway ◆ Defines bus stops ◆ Relaxes passenger loading and unloading ◆ Reduces the potential for rear-end crashes 	<ul style="list-style-type: none"> ◆ Makes reentering traffic more difficult, increasing bus delay and slowing average travel time for buses ◆ Uses additional space; may require additional right-of-way (ROW) ◆ Increases the potential for sideswipe crashes between other vehicles and buses upon reentry ◆ Incurs costs associated with the purchasing of ROW

(Source: Oregon Department of Transportation)

3.0 APPLICATION OF BUS PULLOUT LOCATIONS IN CAMDEN COUNTY

Information provided from the DVRPC, Congestion Management Process (CMP), NJDOT Roadway Design Manual, Camden County Engineering, and NJ Transit was utilized in developing criteria for identifying where bus pullouts should be placed in Camden County. This approach provides guidance for NJ Transit and Camden County officials and will enable local planning and engineering agencies to consider the necessary provisions to accommodate bus pullouts in future development and capital projects.

3.1 *Congestion Management Process (CMP)*

The CMP advances the goals of the DVRPC Long Range Plan and strengthens the connection between the Plan and the Transportation Improvement Program (TIP), a capital program of highways, bridges, and public transit projects. It identifies congested corridors and strategies to mitigate the congestion. Where additions to capacity are appropriate, the CMP includes supplemental strategies to reduce travel demand and improve operations.



As shown in Map 1, Camden County contains eight of New Jersey's 14 congested corridors, as identified by the CMP. Each corridor includes several subcorridors (subdivided sections within the corridor), which provide further descriptions, examples, and sets of Very Appropriate and Secondary Appropriate strategies to mitigate congestion in these corridors.

Several transit-related strategies were identified within Camden County's congested corridors. Two of those strategies, "more frequent transit or more hours of service" and "enhance transit amenities and safety," have a direct correlation to determining applicable locations for considering the placement of bus pullouts.

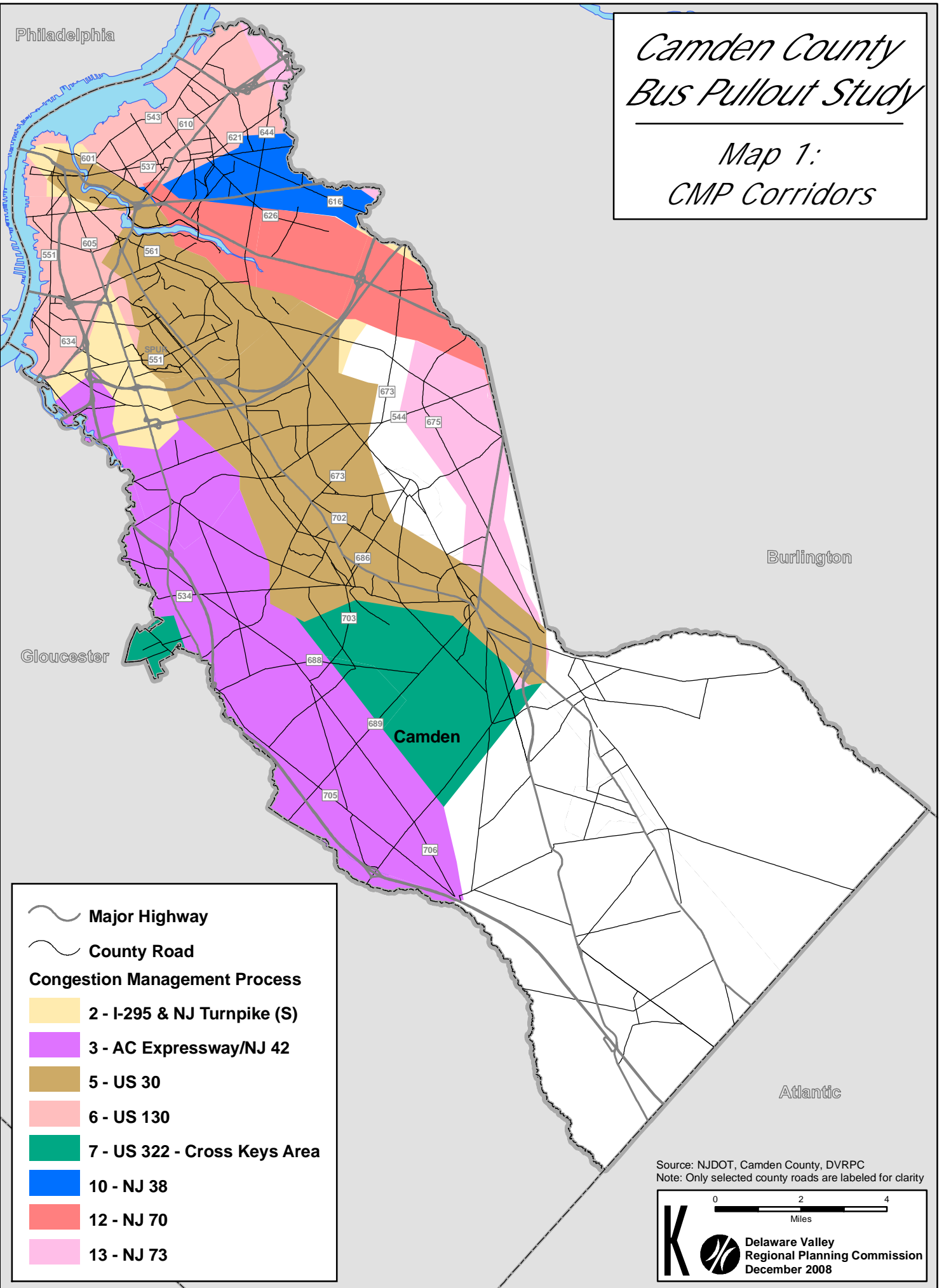
- More Frequent Transit and More Hours of Service involves providing additional service on an existing transit route. It can be done by increasing peak service and daily service, or by providing earlier or later services. As mentioned above, one of the ideal locations for considering bus pullouts is in situations where there is a high frequency of bus stops or high number of passengers. Therefore, this particular transit strategy is relevant if there is a demand for increased transit services.
- Enhance Transit Amenities and Safety can include a broad range of ways to make it more comfortable, safe, and convenient to use transit. It includes, but is not limited to, onboard features and improvements at transit stops. Some of the advantages of bus pullouts are that it helps to define a bus stop, provides for safer passenger loading and unloading, and has the potential for reducing rear-end crashes.











Maps A1 through A4, located in Appendix A, depicts each corridor with these two transit related strategies.

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Map 1: CMP Corridors



-  Major Highway
-  County Road
- Congestion Management Process**
-  2 - I-295 & NJ Turnpike (S)
-  3 - AC Expressway/NJ 42
-  5 - US 30
-  6 - US 130
-  7 - US 322 - Cross Keys Area
-  10 - NJ 38
-  12 - NJ 70
-  13 - NJ 73

Source: NJDOT, Camden County, DVRPC
 Note: Only selected county roads are labeled for clarity

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3.2 *New Jersey Department of Transportation Roadway Design Manual*

For the purpose of this study, the location and design criteria recommended for bus pullouts on the Camden County roadway system will be taken from research gathered from other states, along with guidelines and standards presented in the *New Jersey Department of Transportation (NJDOT) Roadway Design Manual*. Although the manual refers to pullouts as turnouts, this document will use pullout. When it has been determined that bus pullouts are warranted within Camden County, the following criteria should be considered to select the appropriate bus pullout locations:

1. Ideally, there should not be any driveways within the bus pullout. Having active driveways anywhere within a pullout raises the risks of conflicts and crashes. However, if a bus pullout is warranted in a particular location, at a minimum, there should be no driveways located within the bus stopping area. Driveways may be located within the acceleration and deceleration portions of the bus pullout, including the taper. However, to minimize conflicts between the vehicles using the driveway and the bus, the bus stopping area should be located on the far-side of the driveway.
2. The vertical and horizontal highway geometry meets current stopping sight distance criteria.
3. The bus pullouts should be located where patrons may park and cross roadways legally and safely. Ideally, bus pullouts should be located within 400 feet of an intersection or the parking areas used by the bus patrons. Alternatives, including review and possible modification of parking regulations, may be considered.
4. There is sufficient right-of-way available, or, if required, would not involve the acquisition of developed parcels or environmentally sensitive parcels.
5. The bus stop is close to the points of origin and/or destinations of the transit rider. Locations convenient to park-and-ride facilities, intermodal transfer facilities, and transfer facilities between bus services are desirable.
6. Access to and from the bus stop includes well-lit pedestrian crossings, crosswalks, or signalized crossings.
7. A bus pullout may be placed on the far-side or near-side of an intersection, or at midblock. When placed at intersections, locating the bus pullout on the far side is preferred. Near-side bus pullouts create conflicts with right-turning traffic, obscure pedestrian view of oncoming traffic, and may obscure a driver's view of signs, traffic control devices, and pedestrians. Midblock pullouts may be provided when there is a need to service a major pedestrian traffic generator (i.e., shopping mall, school, railroad station, hospital, etc.).
8. The location of the bus pullouts conform to local ordinances.

9. Bus pullouts are common on higher speed roadways (35+ mph).

In addition to the location criteria noted in the above section, the following features should be taken into account when selecting bus pullout locations:

1. **Utility and signal poles** – The relocation of utility poles could require the acquisition of additional right-of-way, and, depending upon the type of service provided, could involve excessive relocation costs. The location of bus pullouts at intersections could involve costly signal relocations and, when placed on the near-side of the intersection, stopped buses could obscure the signals.
2. **Drainage** – To avoid splashing the bus riders, pullouts should not be located at low points in the vertical alignment. Also, additional inlets may be necessary to limit the spread in the gutter to three feet. Grades should be checked to avoid ponding, where the pavement cross slope exceeds the longitudinal slope in the pullout.
3. **Guide rail** – Openings in guide rails located along the curblines may not be permitted due to inadequate length of need or the inability to provide the proper end treatment.
4. **Signing** – The location of the bus pullout could interfere with the visibility of regulatory, warning, and/or directional signs. The relocation of existing signs and/or the installation of new signs, including bus stop signs, should be coordinated with the NJDOT Bureau of Traffic Signals and Safety.
5. **Handicapped ramps** – When the construction of a bus pullout impacts an existing handicapped ramp at an intersection, the designer should assess the entire intersection to determine whether or not the remaining handicapped ramps will be compatible.
6. **Curb** – A curb should be provided at all bus pullouts. The curb height should conform to NJDOT standards.
7. **Shoulders** – The pavement section for widening or the reconstruction of shoulders for bus pullouts should be determined by Geotechnical Engineering.

Once a location has been determined for a bus pullout, the design and construction process should be in keeping with current New Jersey practices, as found in the *NJDOT Roadway Design Manual*.

3.3 Bus Pullout Design Elements

Shown below, Figures 1 and 2 illustrate typical bus pullout designs for a far-side, an alternate far-side, a near-side, and midblock bus pullout. These designs are based upon the location of the bus stop.

Lengths of Bus Stopping Area: The bus stopping areas should be a minimum of 50 feet in length for each standard 40-foot bus and 70 feet for every 60-foot bus expected to use the bus pullout. When more than one bus is expected to use the pullout simultaneously, the length of the bus stopping area should be adjusted accordingly. Ideally, the width of the bus stopping area, including the acceleration and deceleration lanes, should be 12 feet. Where it is not practical to provide the 12-foot width, a minimum width of 10 feet may be provided to reduce right-of-way or environmental impacts.

Lengths of Acceleration, Deceleration, and Tapers: Bus pullouts generally consist of entrance and exit tapers, deceleration and acceleration lanes, and a bus stopping area. The length of the tapers and the deceleration and acceleration lanes vary depending on the posted speed of the highway.

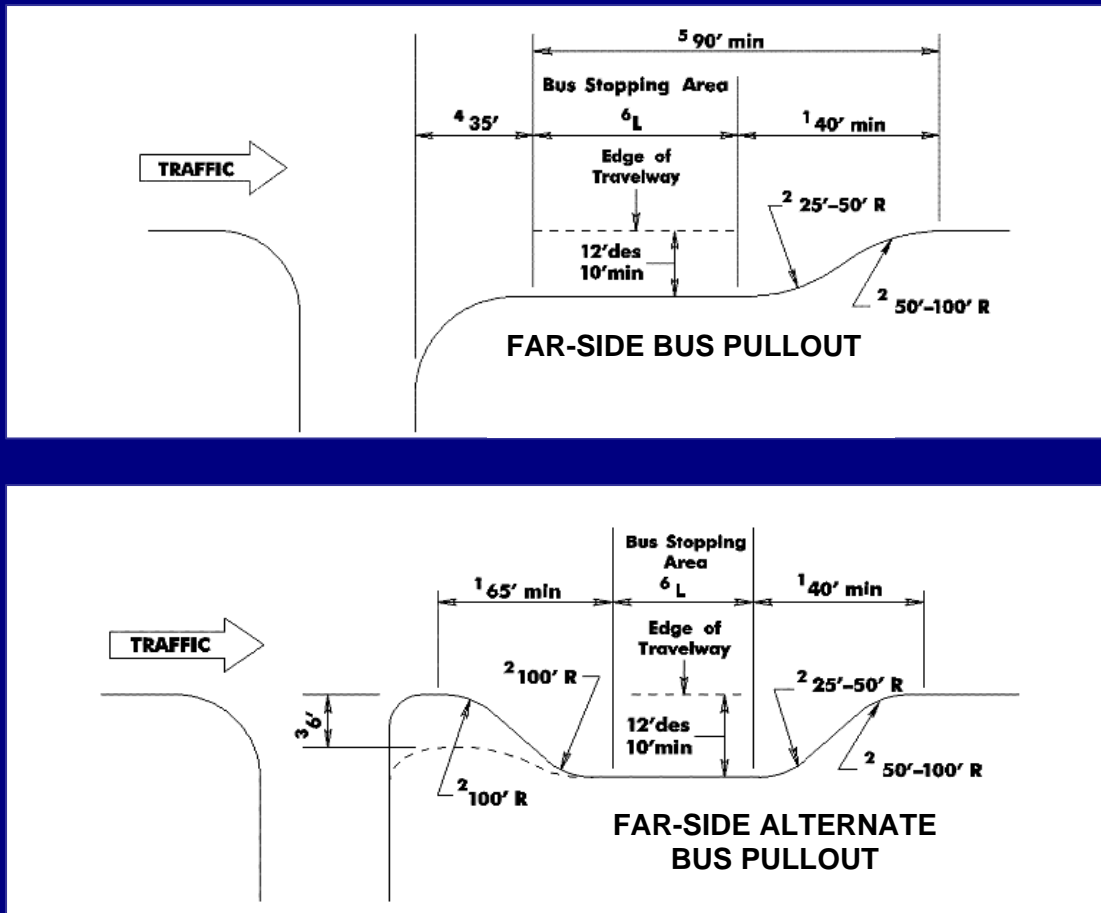
Table 2 provides the desirable lengths. The use of lengths less than those shown may cause delays to the transit service and could adversely impact the traffic flow on the highway.

Table 2: Bus Pullout Design Elements (Desirable)

Posted Speed (mph)	Length of Acceleration Lane (feet)	Length of Deceleration Lane (feet)	Length of Entrance and Exit Tapers (feet)
35	250	185	170
40	400	265	190
45	700	360	210
50	975	470	230
55	1400	595	250

(Source: NJDOT Roadway Design Manual)

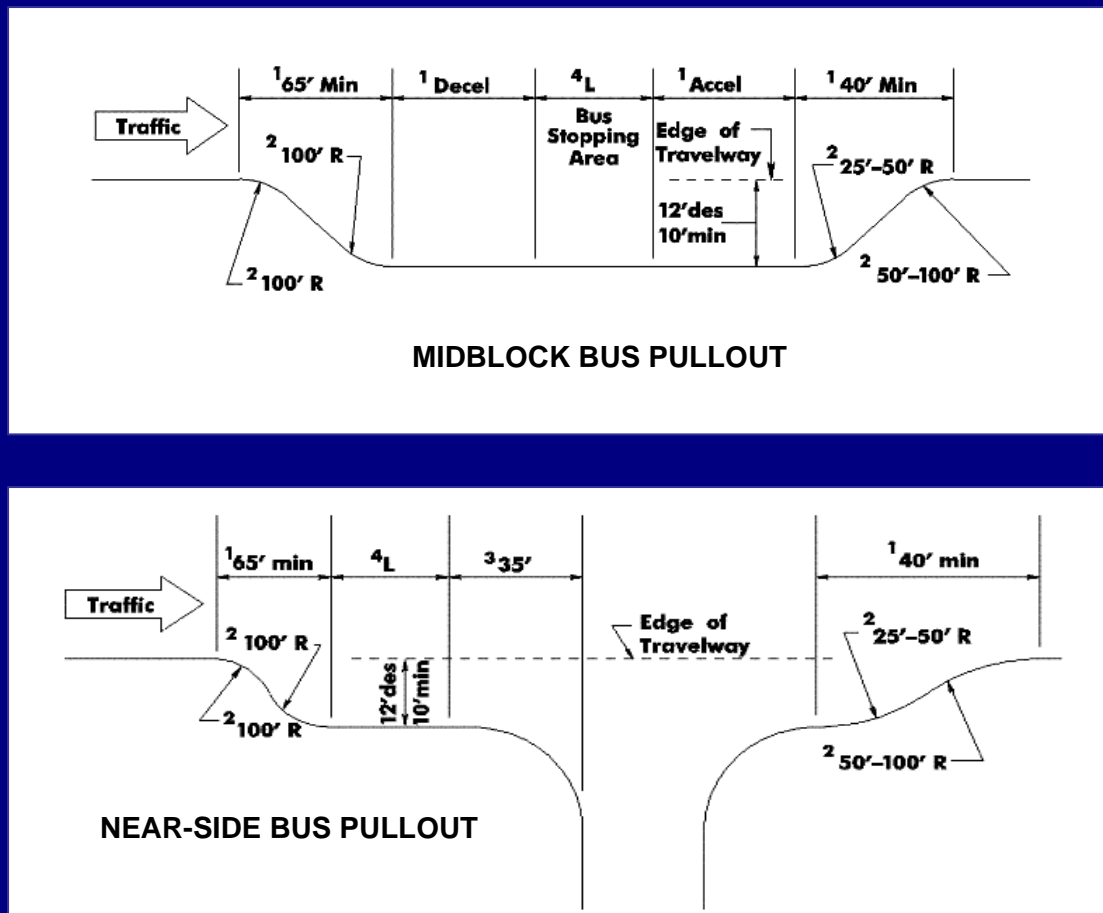
Figure 1: Far-side and Far-side Alternate Bus Pullout



1. Desirable taper and acceleration/deceleration lengths are shown in Table 2.
2. Use 300' R with 100' tangent separation when providing taper lengths.
3. A partial corner projection may be used in lieu of extending the curbline to the edge of the through lane.
4. NJSA 39:4.138e – No stopping or standing within 25' of a crosswalk or sideline of a street at 35' from the curbline.
5. Bus pullout standards based on recommendations of the Institute of Traffic Engineering and Studies conducted by the Bureau of Traffic Engineering.
6. See the above section to determine the minimum length (L) of bus stopping area.

(Source: NJDOT Design Manual)

Figure 2: Midblock and Near-side Bus Pullout



1. Desirable taper and acceleration/deceleration lengths are shown in Table 2.
2. Use 300' with 100' tangent separation when providing taper lengths.
3. NJSA 39:4.138e – No stopping or standing within 25' of a crosswalk or sideline of a street at 35' from the curbline.
4. See the above section to determine minimum length (L) of bus stopping area.

(Source: NJDOT Design Manual)

Bus pullouts may be constructed without acceleration and deceleration lanes when it is not practical to provide the above lengths. However, the designer should attempt to provide as much acceleration and deceleration lane length as possible.

The taper lengths shown in Table 2 are desirable. Minimum entrance and exit tapers shown in Figures 1 and 2 may be provided when it is not practical to provide those shown in Table 2. The minimum lengths of taper are applicable with or without acceleration or deceleration lanes.

Pavement Cross Slope Design: The pavement cross slope in the bus pullout should be one-half ($\frac{1}{2}$) percent greater than the adjacent through lane. On superelevated roadway sections, the pavement cross slope should be the same as the adjacent through lane. When conditions dictate maintaining drainage flow in the existing gutter, the bus pullout may be sloped toward the gutter line at one and one-half to two percent.

The width of the sidewalk in the bus loading area should be a minimum of seven feet and desirably 12 feet. Sidewalk should be provided where there is no existing sidewalk approaching the bus loading area. A survey of pedestrian traffic should be used in establishing a reasonable limit for the proposed sidewalk.

3.4 Existing Camden County Road Network

The guidelines presented in the *NJDOT Roadway Design Manual*, along with research gathered from other states' pavement widths, shoulder widths, right-of-way (ROW), and speed limits, are important factors in determining the design of bus pullouts and the location of where they are feasible in Camden County.

The following county roadway data was provided by the Camden County Engineering Department and the NJDOT Straight Line Diagram database. The Camden County route network is comprised of 500, 600, and 700 series roadways. The 500 series are intercounty routes and tend to be higher in functional classification. Thirteen 500 series routes were identified within Camden County. The 600 and 700 series routes are intracounty. Within Camden County, there are 107 600 series routes and 53 700 series routes. One common difference between the 600 and 700 series routes is that most of the 700 series routes are shorter in segment length. There are 391.60 miles of county routes within Camden County. Map 2 shows the county routes within Camden County. A detailed listing of the existing county road network and its characteristics can be found in Appendix B.



(Source: DVRPC)



(Source: DVRPC)

Along the county route system, the cartway width ranges from 11 to 66 feet and the shoulder width ranges from 0 to 22 feet. The ROW along the network ranges from 33 to 118 feet. The total amount of pavement, in conjunction with the existing ROW, is needed to determine if there is enough space available for the construction of a bus pullout. As indicated in the *NJDOT Roadway Design Manual*, a minimum width of 10 feet may be provided to reduce ROW or environmental impacts.

The speed limit on the county route system is posted between 25 to 50 mph. On many county routes, the speed limit increases or decreases depending upon the land use characteristics. As shown in Table 2 (Bus Pullout Design Elements (Desirable)), the speed limit posted along a particular roadway factors into the design of the length of the bus pullout. The higher the speed limit, the longer the length of the tapers and the acceleration and deceleration lanes of the pullout.

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Map 2: Regional Setting

Burlington

Camden County, New Jersey



* Note: Map not to scale *

Gloucester

Camden

WATERFORD

Atlantic

Major Highway

County Road

500 Series

600 Series

700 Series

Municipal Boundary

Source: NJDOT, Camden County, DVRPC
Note: Only selected county roads are labeled for clarity

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3.5 New Jersey Transit Bus Operations

Bus Routing: Bus routing and ridership are also key factors in determining where pullouts should be considered. Map 3 depicts the NJ Transit bus routes in relationship to the county route network. In order to access passenger services along the county route, network buses have to travel along the state highway system.

Bus Ridership: Philadelphia is the primary destination for 20 of the 30 NJ Transit bus routes. As suggested by New Jersey and Oregon DOT, ideal locations of pullouts should be considered along routes where there are pedestrian generators (malls, transportation hubs, and office parks) and where there is a high frequency of bus stops per hour and a high number of passenger boardings.

Table 3 lists the ridership information for the top-three New Jersey Transit bus routes traveling along the county route network in Camden County to pick up passengers. For example, Bus #400 primarily travels along NJ 168, which contains several of the bus stop locations along the county route. Some of these bus stop locations are at malls and park-and-ride lot facilities. Some of these locations may warrant further consideration for bus pullouts. A complete listing of the ridership information for the remaining bus routes is located in Appendix C.

Table 3: Top-Three New Jersey Transit Bus Routes by Ridership in Camden County

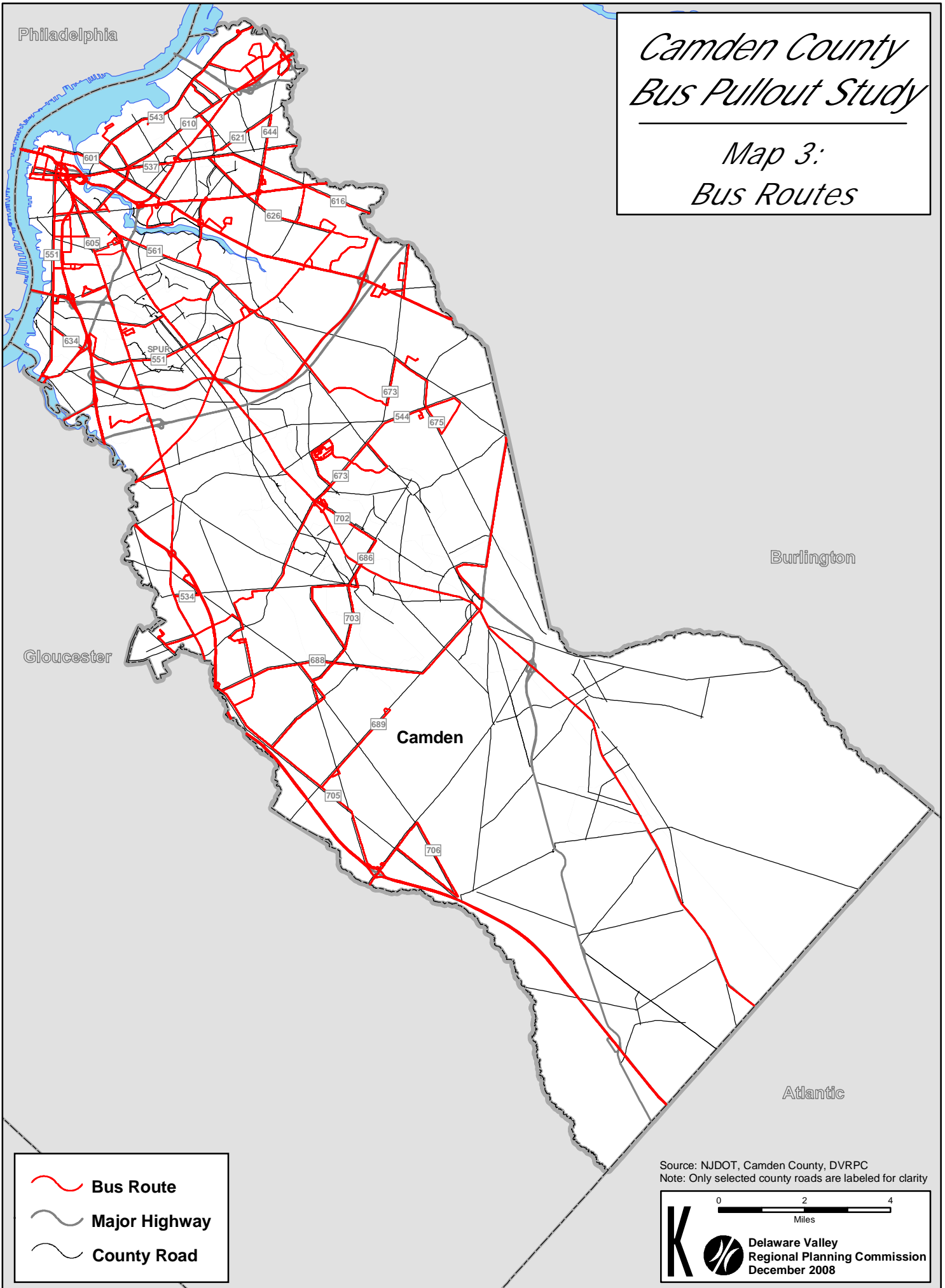
Bus #	Destination	Weekday (passengers)	Saturday (passengers)	Sunday (passengers)
400	Sicklerville, Philadelphia	5,119	3,647	2,538
403	Turnersville, Lindenwold PATCO, Philadelphia	3,291	2,020	1,055
409	Trenton, Willingboro, Philadelphia	3,044	1,428	1,047

(Source: New Jersey Transit, July 2007)

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Map 3: Bus Routes






Gloucester

Burlington


Camden

Atlantic

-  **Bus Route**
-  **Major Highway**
-  **County Road**

Source: NJDOT, Camden County, DVRPC
Note: Only selected county roads are labeled for clarity

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Yield-to-Bus Law: On August 1, 2004, the Yield-to-Bus Law became effective, requiring all New Jersey drivers (excluding emergency vehicles) to yield the right-of-way to buses reentering traffic after dropping off or picking up passengers. The penalty for violating this law includes a fine (\$50 to \$200) and/or up to 15 days in jail.

According to the law, drivers of cars, trucks, or motorcycles approaching the rear of any bus attempting to reenter traffic must yield the right-of-way to the bus, allowing the bus to enter the travel lane. Once the bus is back in the normal flow of traffic, though, motorists are not required to yield the right-of-way to buses changing lanes, and bus operators are required to drive in a safe and responsible manner. Yield-to-bus signs are placed on the back of all New Jersey Transit buses, reminding drivers to yield.



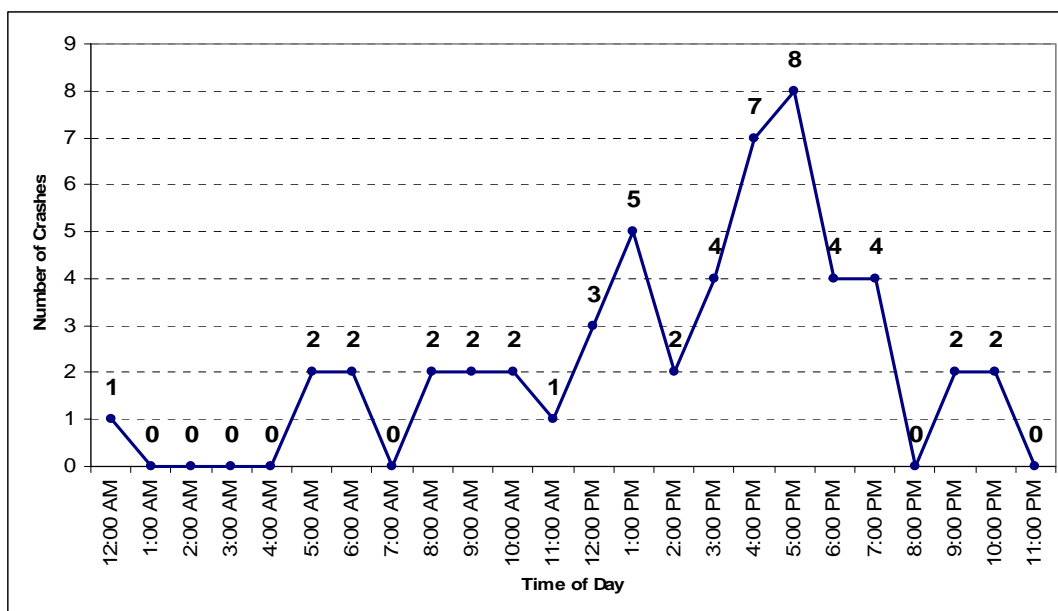
(Source: DVRPC)

Despite disadvantages associated with bus pullouts (the difficulty for buses reentering traffic and the possibility of increasing the potential of sideswipe crashes), the yield-to-bus law has a positive impact on the safety and operational concerns associated with buses reentering traffic.

3.6 New Jersey Transit Bus Crashes

The crash history at bus stops is one factor that should be taken into consideration when determining sites for bus pullouts. Crash data was provided by the NJDOT database for years 2002 to 2006. Over the five-year period, there were 114 countywide crashes involving a New Jersey Transit vehicle, 53 of which occurred on the county-owned roadway system. Map 4 shows the distribution of bus crashes that happened along the county road network verses all other roadways (municipal, state highway, and interstate roads). Crashes took place within 13 of the 37 municipalities. Camden City had the highest occurrence of bus crashes (33). Winslow, Voorhees, and Cherry Hill townships had five, four, and two crashes, respectively. The remaining nine localities had one crash each. Table 4 summarizes some of the crash statistics. Years 2003 and 2005 had the highest and lowest number of crashes: 15 and 7, respectively. There were no fatal crashes; however, there were 14 injury crashes and 39 property–damage-only crashes. Same direction sideswipe crashes were the most dominant crash type. They represented approximately 25 percent of the total. Rear-end and hit-parked-vehicle crashes were the next highest, with 11 and 10 crashes, respectively. Over the five-year study period, the rate of sideswipe crashes involving a NJ Transit bus has decreased from four crashes in 2002 and 2003 down to one crash in 2006. Seventy-five percent of the crashes involving New Jersey Transit buses occurred during daylight and clear weather conditions. The majority of crashes occurred on dry road surface conditions. Eleven crashes occurred under inclement weather conditions. The database reported three incidents when the road was snowy.

Figure 3: Crashes by Time of Day

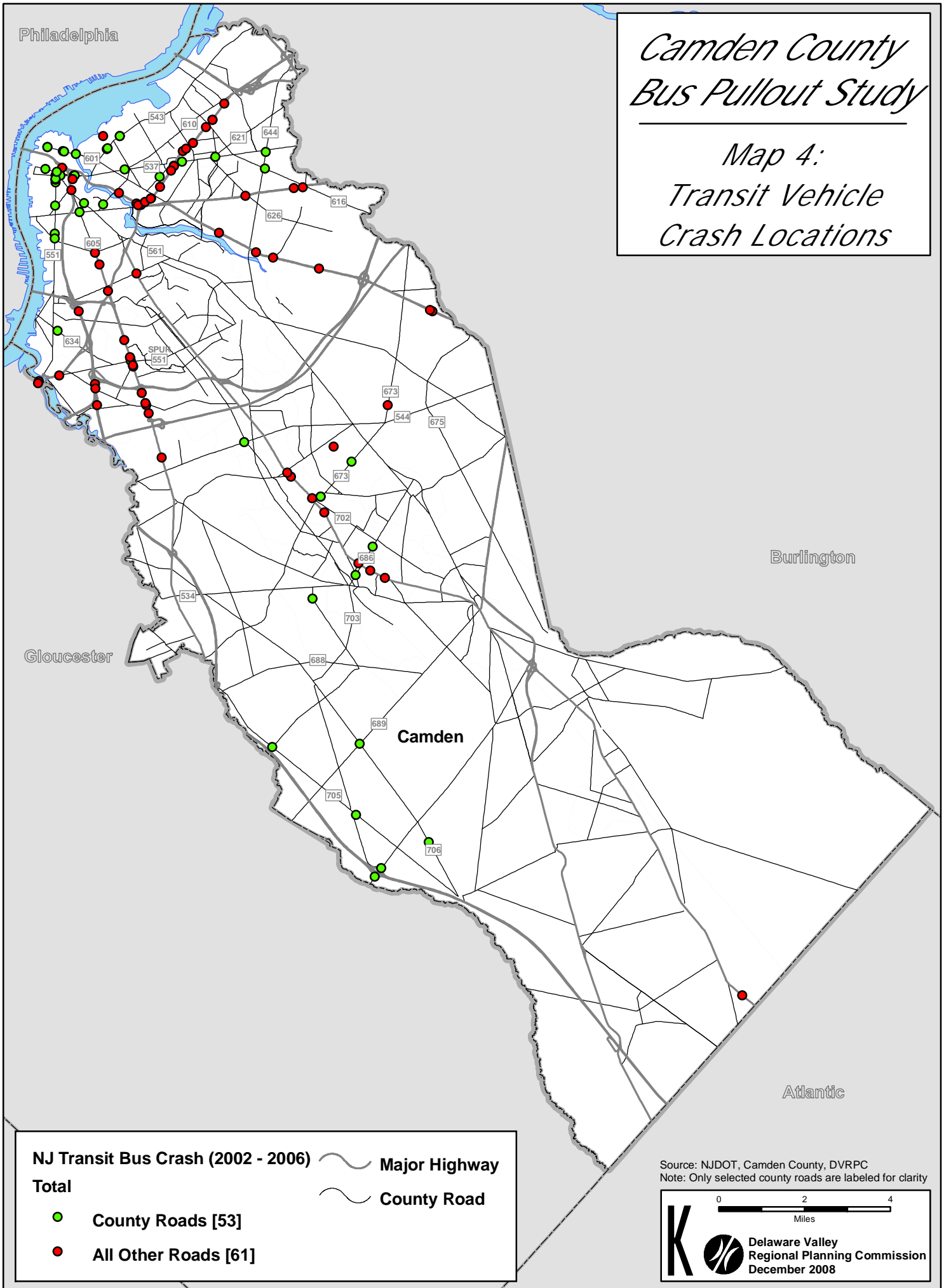


(Source: NJDOT Crash database (2002 – 2006))

Figure 3 depicts the crashes as they occurred over the course of a day. Forty-four of the 53 crashes occurred between the hours of 8:00AM and 7:00PM. The highest number of crashes occurred during the afternoon peak period.

Camden County Bus Pullout Study

Map 4: Transit Vehicle Crash Locations



NJ Transit Bus Crash (2002 - 2006)

Total

- County Roads [53]
- All Other Roads [61]

— Major Highway

— County Road

Source: NJDOT, Camden County, DVRPC
Note: Only selected county roads are labeled for clarity

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Table 4: New Jersey Transit Bus Crash Data Summary

	2002		2003		2004		2005		2006		Total	
	Actual	Percent	Actual	Percent	Actual	Percent	Actual	Percent	Actual	Percent	Actual	Percent
CRASHES												
Reportable	10	18.87%	15	28.30%	10	18.87%	7	13.21%	11	20.75%	53	100.00%
SEVERITY												
Fatalities	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Injuries	3	30.00%	3	20.00%	4	40.00%	1	14.29%	3	27.27%	14	26.42%
PDO	7	70.00%	12	80.00%	6	60.00%	6	85.71%	8	72.73%	39	73.58%
CRASH TYPES												
Rear End	1	10.00%	6	40.00%	0	0.00%	1	14.29%	3	27.27%	11	20.75%
Hit Parked Vehicle	3	30.00%	2	13.33%	3	30.00%	1	14.29%	1	9.09%	10	18.87%
Other	1	10.00%	2	13.33%	3	30.00%	1	14.29%	0	0.00%	7	13.21%
Sideswipe (same dir.)	4	40.00%	4	26.67%	2	20.00%	2	28.57%	1	9.09%	13	24.53%
Sideswipe (opp. dir.)	0	0.00%	0	0.00%	0	0.00%	0	0.00%	1	9.09%	1	1.89%
Angle	0	0.00%	0	0.00%	1	10.00%	2	28.57%	2	18.18%	5	9.43%
Hit Fixed Object	0	0.00%	0	0.00%	1	10.00%	0	0.00%	2	18.18%	3	5.66%
Nonfixed Object	0	0.00%	0	0.00%	0	0.00%	0	0.00%	1	9.09%	1	1.89%
Left Turn	1	10.00%	1	6.67%	0	0.00%	0	0.00%	0	0.00%	2	3.77%
LIGHTING CONDITIONS												
Daylight	8	80.00%	10	66.67%	9	90.00%	5	71.43%	10	90.91%	42	79.25%
Dark (street lights)	1	10.00%	3	20.00%	0	0.00%	2	28.57%	1	9.09%	7	13.21%
Dawn	0	0.00%	1	6.67%	1	10.00%	0	0.00%	0	0.00%	2	3.77%
Dusk	1	10.00%	1	6.67%	0	0.00%	0	0.00%	0	0.00%	2	3.77%
WEATHER CONDITIONS												
Clear	10	100.00%	10	66.67%	8	80.00%	6	85.71%	8	72.73%	42	79.25%
Rainy	0	0.00%	3	20.00%	2	20.00%	1	14.29%	2	18.18%	8	15.09%
Wintry	0	0.00%	1	6.67%	0	0.00%	0	0.00%	1	9.09%	2	3.77%
Unknown	0	0.00%	1	6.67%	0	0.00%	0	0.00%	0	0.00%	1	1.89%
ROAD SURFACE CONDITIONS												
Dry	10	100.00%	8	53.33%	8	80.00%	6	85.71%	8	72.73%	40	75.47%
Wet	0	0.00%	5	33.33%	2	20.00%	1	14.29%	2	18.08%	10	18.87%
Snowy	0	0.00%	2	13.33%	0	0.00%	0	0.00%	1	9.09%	3	5.66%

Source: New Jersey DOT Crash database (2002 – 2006)

All of the crashes shown on Map 4 occurred within 250 feet of a bus stop. Four of the crashes reported involved only the transit bus. Forty-five of the crashes involved the transit bus and another vehicle. Of the 53 reported crashes, one involved a pedestrian.

As indicated in Table 4, rear-end crashes represented 20.75 percent of the transit vehicle crashes on Camden County roads. One of the greatest benefits of bus pullouts is the potential for reducing rear-end crashes. Buses are pulled out of the main stream of travel while passengers are boarding or disembarking the transit vehicle. This allows for traffic in the main travel lane(s) to flow freely. Bus pullouts have the potential to have a higher number of sideswipe crashes due to buses reentering the main travel lane. Over the four-year study period, sideswipe (same-direction) crashes represented 25 percent of the all the bus related crashes.

As shown in Map 4, the highest concentration of crashes is located in the northern and central section of the county. Given the dense land use in the northern section of the county, there may be some constraints, such as limited ROW, on constructing pullouts. However, in the suburban sections of the county, pullouts may be feasible due to more open space and higher speeds along the county roadway network.

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4.0 PLACEMENT OF BUS PULLOUTS

As the demand for transit is likely to increase, CMP transit strategies, NJDOT criteria, existing conditions of the county roadway system, and crash history are all important factors in considering the placement of bus pullouts on the Camden County roadway system.

4.1 *Screening Methodology*

The following steps explain how the recommended county road segments for bus pullouts were determined:

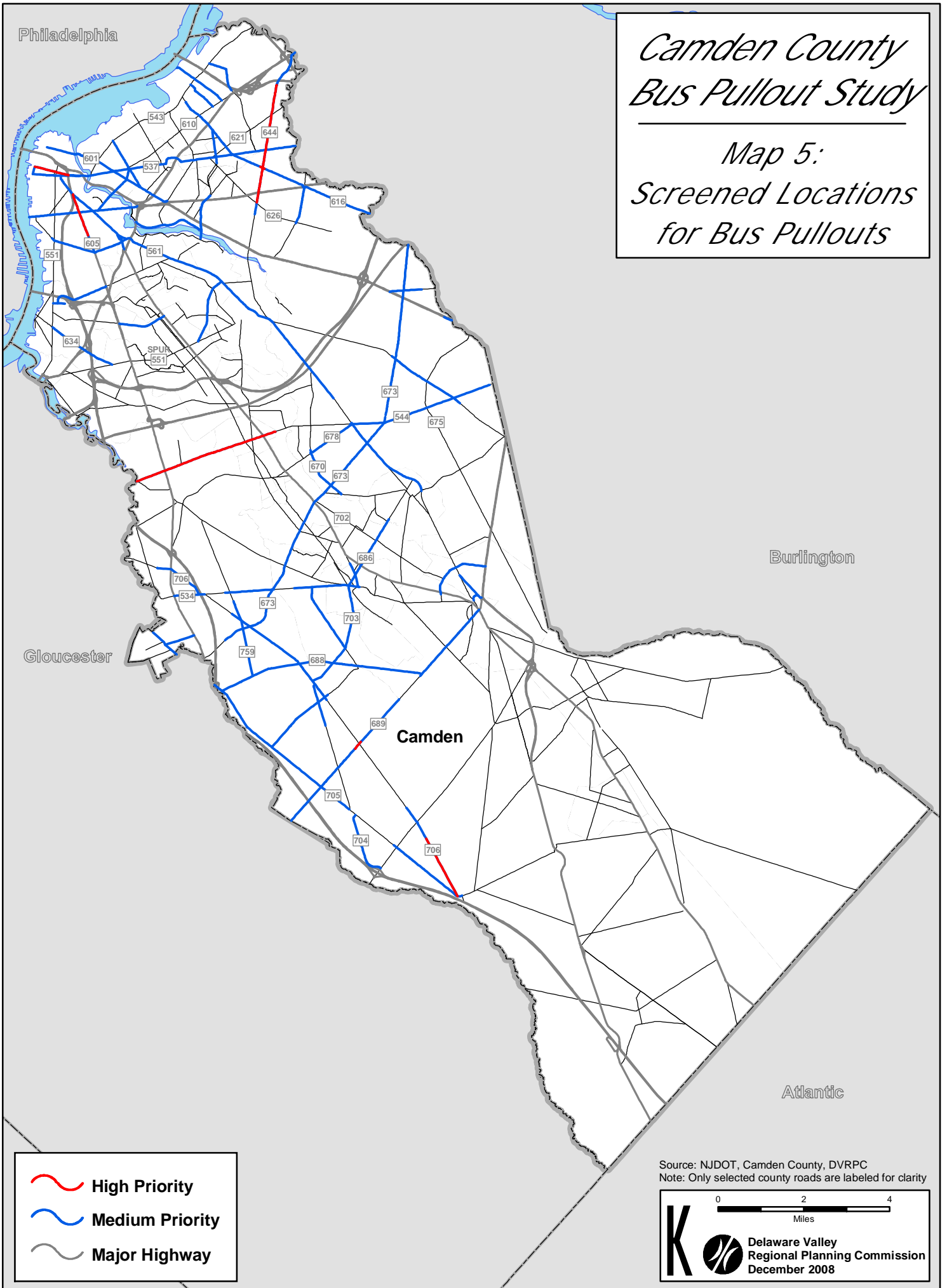
1. The identified posted speed limits were screened. If a road segment had posted speed limits of less than 35 mph, those segments were excluded from further consideration. This 35 mph limit was used based upon the design criteria identified by NJDOT.
2. The pavement width and shoulder width were added to get a sum total of the amount of available cartway.
3. The available cartway width was subtracted from the ROW width. This number represents the amount of space available (in feet) that could be utilized for the construction of a pullout.
4. Based upon NJDOT design standards, the desirable width for a bus pullout is 12 feet (the minimum is 10 feet). If the amount of space left over was greater than 10 feet, that segment was selected as a possible location for a bus pullout. If the amount of space left over was less than 10 feet, that segment was not included as a possible location.

As shown in Map 5, this process identified 25 county routes, which are comprised 114 segments that met the above criteria. This list was narrowed down further to incorporate CMP, transit routes, and crash information (See Table 5). If a particular route segment was also incorporated within a CMP congested corridor, was used by an active transit bus route, and had at least one or more crashes involving a transit vehicle, that segment location should warrant further consideration of a bus pullout. Of the 114 segments listed in Table 5, seven of the segments (highlighted in red) met this criterion and are high priority locations for bus pullout consideration. The remaining 107 locations are medium priority level (highlighted in blue). A detailed list of the segments selected is provided in Appendix B.

Philadelphia

Camden County Bus Pullout Study

Map 5: Screened Locations for Bus Pullouts



Burlington

Gloucester


Camden

Atlantic

-  High Priority
-  Medium Priority
-  Major Highway

Source: NJDOT, Camden County, DVRPC
Note: Only selected county roads are labeled for clarity

0 2 4
Miles



Delaware Valley
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Table 5: Screened Locations – CMP, Transit, and Crashes Relationship

Route No.	Roadway Name	Milepost Start	Milepost End	CMP	Transit	Crashes	Municipality
CR 534	East Church Road	3.830	4.460	3	Yes	No	Gloucester Twp
CR 534	Blackwood-Clementon Road	4.460	4.540	3	No	No	Gloucester Twp
CR 534	Blackwood-Clementon Road	5.010	5.600	3	No	No	Gloucester Twp
CR 534	Blackwood-Clementon Road	6.620	7.420	5	Yes	No	Pine Hill Boro
CR 534	Berlin Road	7.420	7.790	5	Yes	No	Clementon Boro
CR 534	Berlin Road	7.790	7.920	5	Yes	No	Clementon Boro
CR 537	Maple Avenue	4.800	5.570	10	Yes	No	Cherry Hill Twp
CR 537	Maple Avenue	5.570	5.870	10	Yes	No	Cherry Hill Twp
CR 537	Maple Avenue	5.870	6.260	10	No	No	Cherry Hill Twp
CR 537	Maple Avenue	6.260	6.300	10	No	No	Cherry Hill Twp
CR 537 SPUR	Market Street	0.000	0.080	5, 6	Yes	No	Camden City
CR 537 SPUR	Market Street	0.080	0.190	5, 6	No	Yes	Camden City
CR 537 SPUR	Federal Street	0.190	1.080	5, 6	Yes	Yes	Camden City
CR 544	Evesham Road	2.160	5.590	3, 5	Yes	Yes	Gloucester Twp and Magnolia Boro
CR 544	Evesham Road	7.350	7.480	5, 13	No	No	Voorhees Twp
CR 544	Evesham Road	7.480	10.760	5, 13	Yes	No	Voorhees Twp
CR 561	Haddonfield-Berlin Road	39.500	40.570	None	No	No	Gibbsboro Boro and Voorhees Twp
CR 561	Haddonfield-Berlin Road	40.570	41.290	5	Yes	No	Voorhees Twp
CR 561	Haddonfield-Berlin Road	41.290	41.860	5	No	No	Voorhees Twp
CR 561	Haddonfield-Berlin Road	42.560	44.420	5	Yes	No	Cherry Hill Twp
CR 561	Haddonfield-Berlin Road	44.420	44.920	5	No	No	Cherry Hill Twp
CR 600	Marlton Pike	0.000	0.100	12	No	No	Cherry Hill Twp
CR 600	Marlton Pike	0.100	0.190	12	No	No	Cherry Hill Twp
CR 605	Mt Ephraim Avenue	0.000	0.420	6	No	No	Camden City
CR 605	Mt Ephraim Avenue	0.420	1.430	6	Yes	Yes	Camden City

Route No.	Roadway Name	Milepost Start	Milepost End	CMP	Transit	Crashes	Municipality
CR 616	Church Road	1.830	2.470	10	No	No	Cherry Hill Twp and Merchantville Boro
CR 616	Church Road	2.470	2.570	10	Yes	Yes	Cherry Hill Twp
CR 616	Church Road	2.950	3.530	10	Yes	No	Cherry Hill Twp
CR 616	Church Road	3.530	3.600	10	Yes	No	Cherry Hill Twp
CR 623	Hampton Road	0.320	0.550	10, 12	Yes	No	Cherry Hill Twp
CR 623	Hampton Road	0.550	0.710	10, 12	Yes	No	Cherry Hill Twp
CR 627	Cooper Landing Road	0.930	1.790	10, 12	Yes	No	Cherry Hill Twp
CR 636	Cuthbert Boulevard, Lexington Ave Extension	2.380	2.830	12	Yes	No	Cherry Hill Twp
CR 644	Haddonfield Road	2.570	2.840	6, 10, 12, 13,	Yes	No	Cherry Hill Twp
CR 644	Haddonfield Road	2.840	5.590	6, 10, 12, 13,	Yes	Yes	Cherry Hill Twp and Pennsauken Twp
CR 644	Haddonfield Road	5.590	6.480	6, 10, 12, 13	No	No	Pennsauken Twp
CR 670	Burnt Mill Road	0.450	1.300	5	Yes	No	Voorhees Twp
CR 671	Kresson Road	2.930	3.080	13	Yes	No	Cherry Hill Twp
CR 671	Kresson Road	3.210	3.230	13	No	No	Cherry Hill Twp
CR 671	Kresson Road	3.280	3.710	13	No	No	Cherry Hill Twp
CR 671	Kresson Road	3.820	4.710	13	Yes	No	Voorhees Twp
CR 673	White Horse Road, Springdale Road	7.370	7.510	None	No	No	Voorhees Twp and Cherry Hill Twp
CR 673	Springdale Road	7.570	7.710	None	No	No	Cherry Hill Twp
CR 673	Springdale Road	7.710	7.850	None	No	No	Cherry Hill Twp
CR 673	Springdale Road	7.850	7.890	None	No	No	Cherry Hill Twp
CR 673	Springdale Road	7.990	8.030	None	No	No	Cherry Hill Twp
CR 673	Springdale Road	8.290	8.570	None	Yes	No	Cherry Hill Twp
CR 673	Springdale Road	9.050	10.130	12	No	No	Cherry Hill Twp
CR 673	Springdale Road	10.130	11.380	12	Yes	No	Cherry Hill Twp
CR 688	Hickstown Road	0.000	0.470	3, 7	Yes	No	Gloucester Twp
CR 688	Hickstown Road	0.470	0.510	3, 7	No	No	Gloucester Twp

Route No.	Roadway Name	Milepost Start	Milepost End	CMP	Transit	Crashes	Municipality
CR 688	Hickstown Road	0.510	0.690	3, 7	No	No	Gloucester Twp
CR 688	Hickstown Road	1.270	1.270	3, 7	No	No	Gloucester Twp
CR 688	Hickstown Road	1.270	1.930	3, 7	No	No	Gloucester Twp
CR 688	Hickstown Road, Turnersville Road	1.930	2.490	3, 7	Yes	No	Gloucester Twp
CR 688	Turnersville Road	2.490	2.640	3, 7	No	No	Gloucester Twp
CR 688	Turnersville Road	2.640	2.810	3, 7	Yes	No	Gloucester Twp
CR 688	Turnersville Road	2.810	2.880	7	No	No	Gloucester Twp
CR 688	Turnersville Road	2.980	3.160	7	No	No	Gloucester Twp
CR 688	Turnersville Road	3.160	3.400	7	No	No	Gloucester Twp
CR 688	Turnersville Road	3.400	3.860	7	No	No	Gloucester Twp and Pine Hill Boro
CR 688	Turnersville Road	3.890	4.520	7	No	No	Pine Hill Boro
CR 688	Turnersville Road	4.520	4.810	7	No	No	Pine Hill Boro
CR 689	Cross Keys Road	1.150	1.220	3, 7	No	No	Winslow Twp
CR 689	Cross Keys Road	1.220	1.250	3, 7	No	No	Winslow Twp
CR 689	Cross Keys Road	1.250	1.320	3, 7	No	No	Winslow Twp
CR 689	Cross Keys Road	1.320	1.590	3, 7	No	No	Winslow Twp
CR 689	Cross Keys Road	1.590	1.760	3, 7	No	No	Winslow Twp
CR 689	Cross Keys Road	1.760	2.130	3, 7	No	No	Winslow Twp
CR 689	Cross Keys Road	2.130	2.250	3, 7	No	No	Winslow Twp
CR 689	Cross Keys Road	2.250	2.460	3, 7	Yes	Yes	Winslow Twp
CR 689	Cross Keys Road	2.460	2.490	3, 7	No	No	Winslow Twp
CR 689	Cross Keys Road	2.490	3.800	7	Yes	No	Winslow Twp
CR 689	Cross Keys Road	4.530	5.890	7	Yes	No	Winslow Twp and Berlin Boro
CR 689	Cross Keys Road	5.890	6.610	7	Yes	No	Berlin Boro
CR 695	Whitehorse Avenue	0.000	0.570	7	Yes	No	Clementon Boro and Lindenwold Boro
CR 703	Erial - Clementon Road	0.000	0.700	3, 7	Yes	No	Gloucester Twp and Pine Hill Boro

Route No.	Roadway Name	Milepost Start	Milepost End	CMP	Transit	Crashes	Municipality
CR 703	Erial - Clementon Road, Erial Avenue	0.700	1.140	7	Yes	No	Pine Hill Boro
CR 703	Erial Avenue	1.140	2.280	5, 7	Yes	No	Pine Hill Boro and Clementon Boro
CR 703	Erial Avenue	2.430	2.600	5, 7	Yes	No	Clementon Boro
CR 704	Erial - Williamstown Road	3.780	4.360	3, 7	Yes	No	Gloucester Twp
CR 704	Erial - Williamstown Road	4.360	4.410	3, 7	No	No	Gloucester Twp
CR 705	Sicklerville Road	0.000	0.340	3	No	No	Winslow Twp
CR 705	Sicklerville Road	0.340	1.120	3	Yes	No	Winslow Twp
CR 705	Sicklerville Road	1.120	1.470	3	Yes	No	Winslow Twp
CR 705	Sicklerville Road	1.470	1.520	3	No	No	Winslow Twp
CR 705	Sicklerville Road	1.520	1.860	3	No	No	Winslow Twp
CR 705	Sicklerville Road	1.860	1.920	3	No	No	Winslow Twp
CR 705	Sicklerville Road	3.340	5.510	3, 7	Yes	No	Winslow Twp
CR 705	Sicklerville Road	5.510	6.180	3, 7	No	No	Winslow Twp
CR 705	Sicklerville Road	6.180	7.390	3, 7	No	No	Winslow Twp
CR 705	Sicklerville Road	7.390	7.670	3, 7	Yes	No	Winslow Twp
CR 706	New Brooklyn - Blackwood Road	0.000	1.530	3	Yes	Yes	Winslow Twp
CR 706	New Brooklyn - Blackwood Road	1.530	1.620	3	Yes	No	Winslow Twp
CR 706	New Brooklyn - Blackwood Road	1.620	1.930	3	Yes	No	Winslow Twp
CR 706	New Brooklyn - Blackwood Road	1.930	2.390	3, 7	No	No	Winslow Twp
CR 706	New Brooklyn - Blackwood Road	5.510	5.670	3, 7	Yes	No	Gloucester Twp
CR 706	New Brooklyn - Blackwood Road	5.670	5.890	3, 7	No	No	Gloucester Twp
CR 706	New Brooklyn - Blackwood Road	5.890	5.960	3, 7	No	No	Gloucester Twp
CR 706	New Brooklyn - Blackwood Road	5.960	6.020	3, 7	Yes	No	Gloucester Twp
CR 706	New Brooklyn - Blackwood Road	6.020	6.140	3, 7	No	No	Gloucester Twp
CR 706	New Brooklyn - Blackwood Road	6.140	6.280	3, 7	No	No	Gloucester Twp
CR 706	New Brooklyn - Blackwood Road	6.420	6.470	3, 7	No	No	Gloucester Twp

Route No.	Roadway Name	Milepost Start	Milepost End	CMP	Transit	Crashes	Municipality
CR 706	New Brooklyn - Blackwood Road, Erial Road	6.470	8.280	3, 7	Yes	No	Gloucester Twp
CR 706	Erial Road	8.280	8.530	3, 7	No	No	Gloucester Twp
CR 707	Woodbury - Turnersville Road	0.430	0.670	3, 7	Yes	No	Gloucester Twp
CR 747	Lakeland Road	0.000	0.220	3, 7	Yes	No	Gloucester Twp
CR 747	Lakeland Road	0.220	0.340	3, 7	No	No	Gloucester Twp
CR 747	Lakeland Road	0.340	0.660	3, 7	Yes	No	Gloucester Twp
CR 747	Lakeland Road	0.660	0.700	3, 7	No	No	Gloucester Twp
CR 759	Peter Cheeseman Lane	0.000	0.580	3, 7	No	No	Gloucester Twp
CR 759	Peter Cheeseman Lane, Little Gloucester Road	0.580	1.460	3, 7	Yes	No	Gloucester Twp
CR 759	Little Gloucester Road	1.460	1.730	3, 7	No	No	Gloucester Twp
CR 759	Little Gloucester Road	1.730	1.810	3, 7	Yes	No	Gloucester Twp

(Source: DVRPC)

Red text represents county route segments that are incorporated within a CMP congested corridor, is used by an active transit bus route, and have had one or more crashes involving a transit vehicle.

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5.0 CONCLUSION

The separation of transit and passenger vehicles is critical in cases of high bus or traffic volumes or high speeds. Bus stops in the travel lane may be unsafe or impede the free flow of traffic.

As documented in this report, several factors should be taken into consideration for determining the placement of bus pullouts, including inventorying the county road network and NJ Transit bus routes and crash data, and identifying routes that fall within congested corridors (as determined from the CMP). The analysis generated from this data suggested seven optimal county roadway segments for considering construction of bus pullouts in Camden County. This information will provide guidance for New Jersey Transit and Camden County officials and will enable local planning and engineering agencies to consider the necessary provisions to accommodate bus pullouts in future development and capital projects.

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6.0 REFERENCES

The following materials and resources were used as references for the information documented in this report.

Publications

- Camden County Engineering – “Camden County Highway Circulation Plan,” 1998
- DVRPC – “Congestion Management Process,” July 2007
- Oregon DOT – “Highway Design Manual; Design Guidelines for Public Transportation,” 2003

Internet Resources

- New Jersey DOT Design Manual website:
<http://www.state.nj.us/transportation/eng/documents/RDME/>
- New Jersey DOT Straight Line Diagrams website:
<http://www.state.nj.us/transportation/refdata/sldiag/>
- New Jersey Transit Yield-to-Bus Law website:
http://www.njtransit.com/rg/rg_servlet.srv?hdnPageAction=BusLawTo
- Washington State DOT – Design Manual Transit Benefit Facilities website:
<http://www.wsdot.wa.gov>

Other Resources

- New Jersey DOT – Crash database, 2002 to 2006
- New Jersey Transit – Bus Ridership Information, July 2007

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APPENDIX A

CMP Subcorridor Transit Related Strategies



Camden County Bus Pullout Study

Map A1: CMP Corridors

Gloucester

Source: NJDOT, Camden County, DVRPC
Note: Only selected county roads are labeled for clarity

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Transit Related Strategies

- More Frequent Transit or More Hours of Service
- Enhanced Transit Amenities and Safety

Congestion Management Process

3 - AC Expressway/NJ 42

Camden County Bus Pullout Study

Map A2: CMP Corridors

Philadelphia

Source: NJDOT, Camden County, DVRPC
Note: Only selected county roads are labeled for clarity

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Transit Related Strategies

- Not Applicable

Congestion Management Process

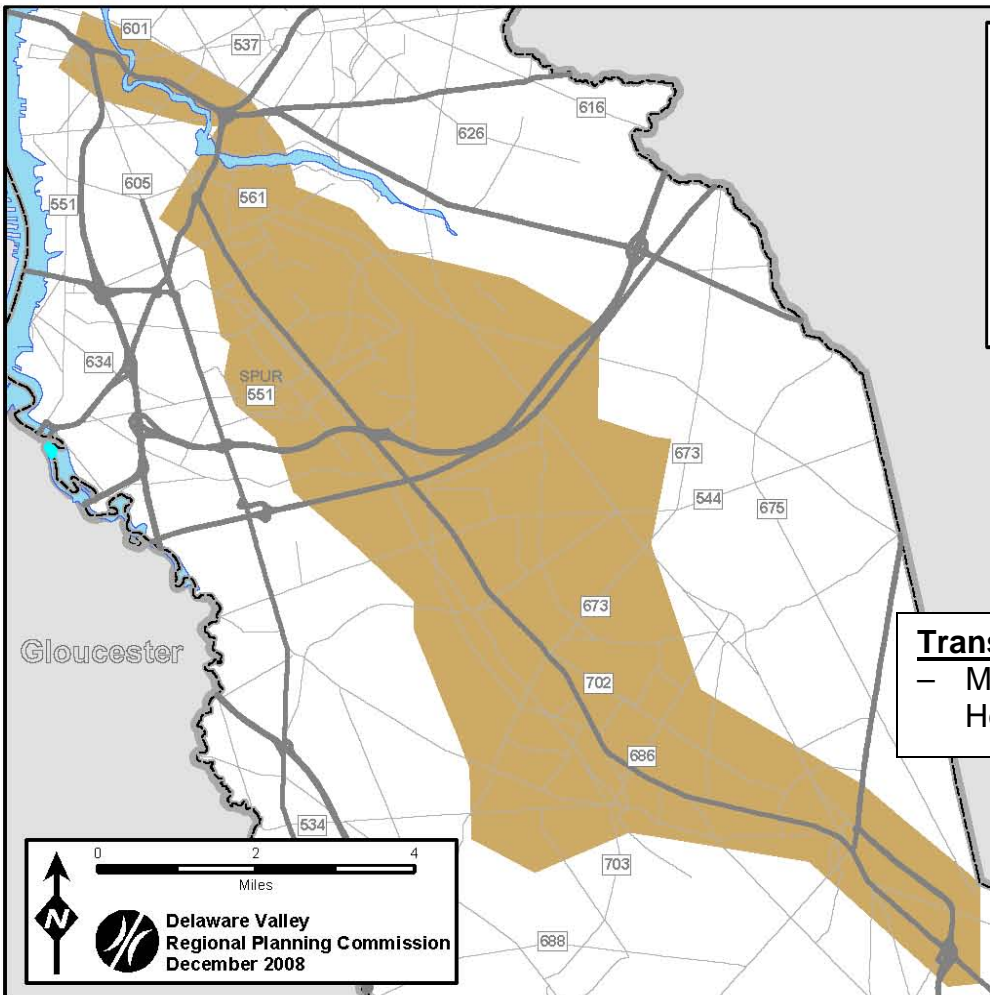
2 - I-295 & NJ Turnpike (S)

Burlington

Gloucester

Camden County Bus Pullout Study

Map A3: CMP Corridors



Transit Related Strategies

- More Frequent Transit or More Hours of Service

Source: NJDOT, Camden County, DVRPC
Note: Only selected county roads are labeled for clarity

Congestion Management Process

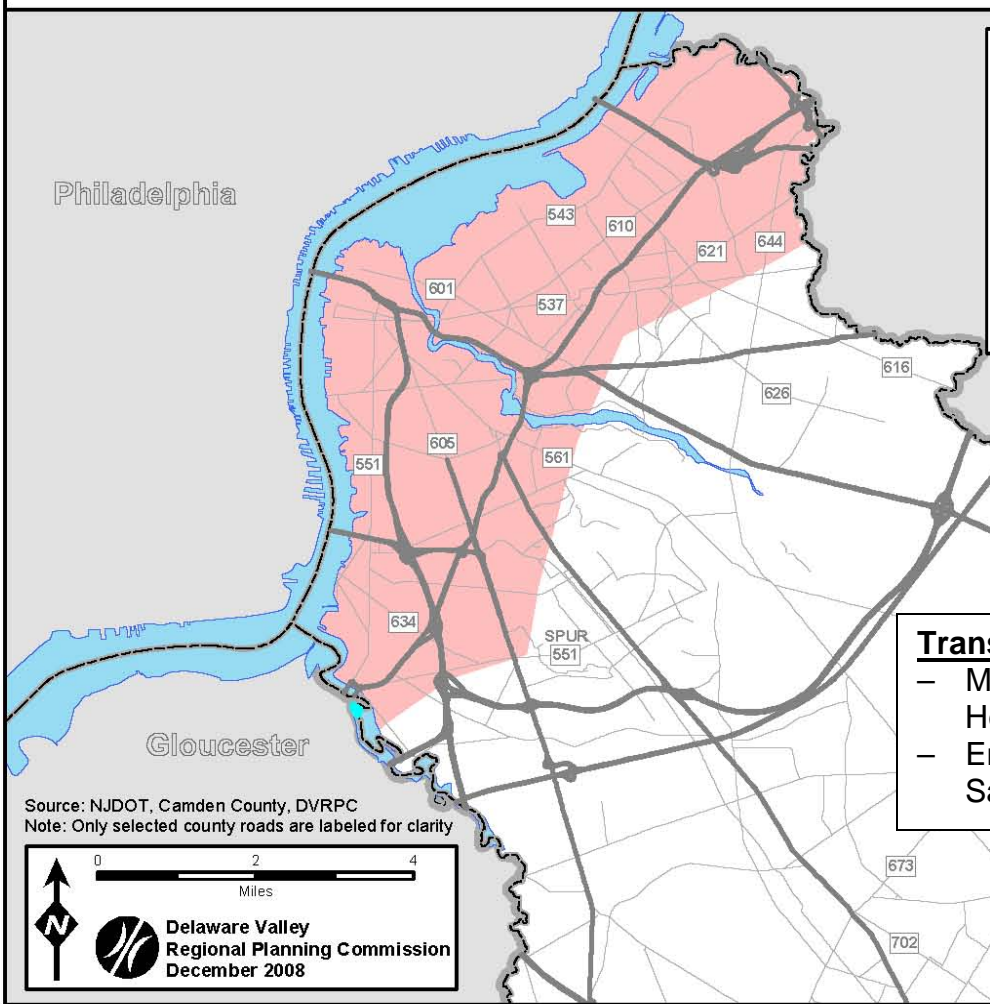
■ 5 - US 30

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Miles

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Camden County Bus Pullout Study

Map A4: CMP Corridors



Transit Related Strategies

- More Frequent Transit or More Hours of Service
- Enhanced Transit Amenities and Safety

Congestion Management Process

■ 6 - US 130

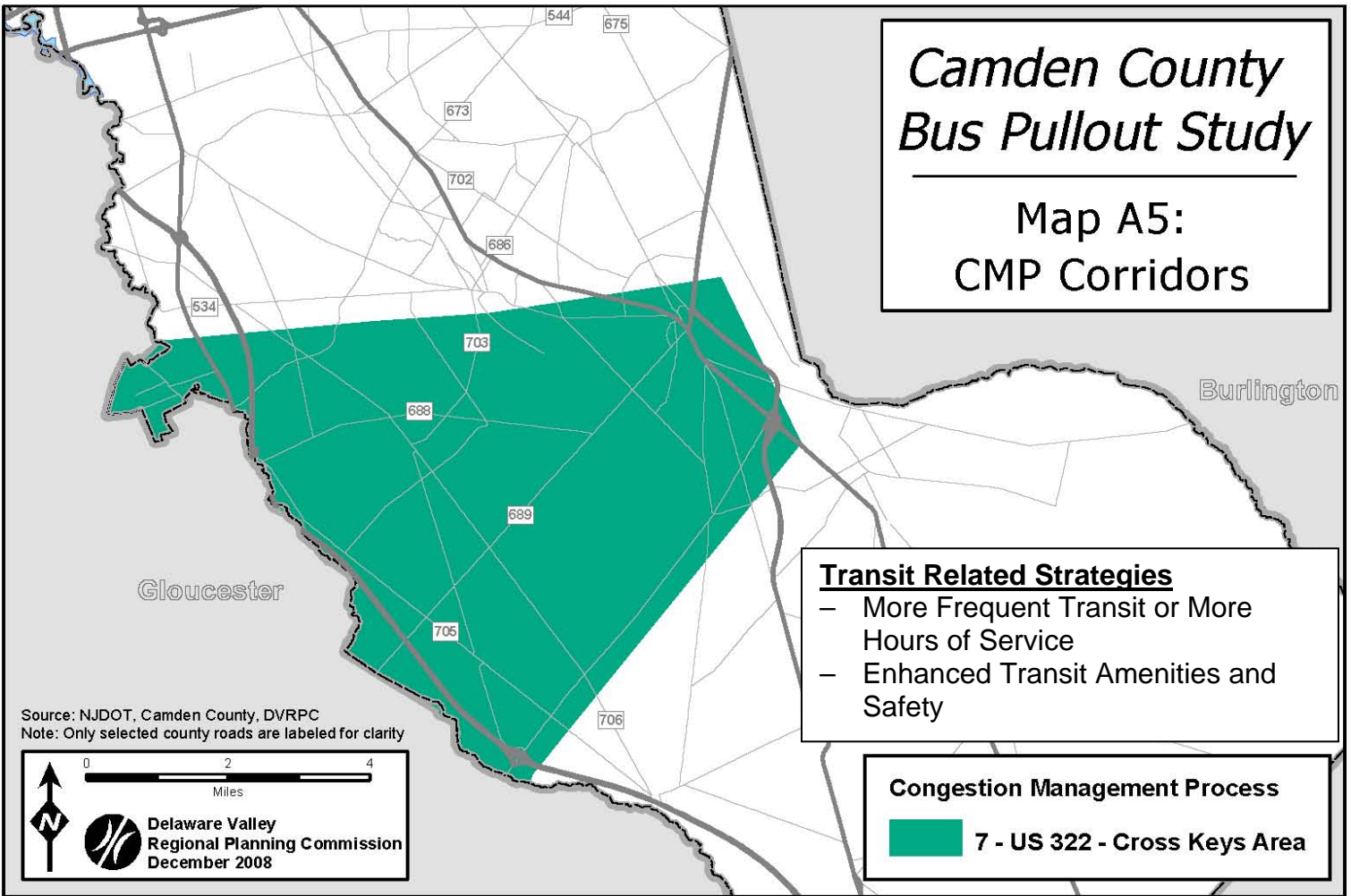
Source: NJDOT, Camden County, DVRPC
Note: Only selected county roads are labeled for clarity

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Miles

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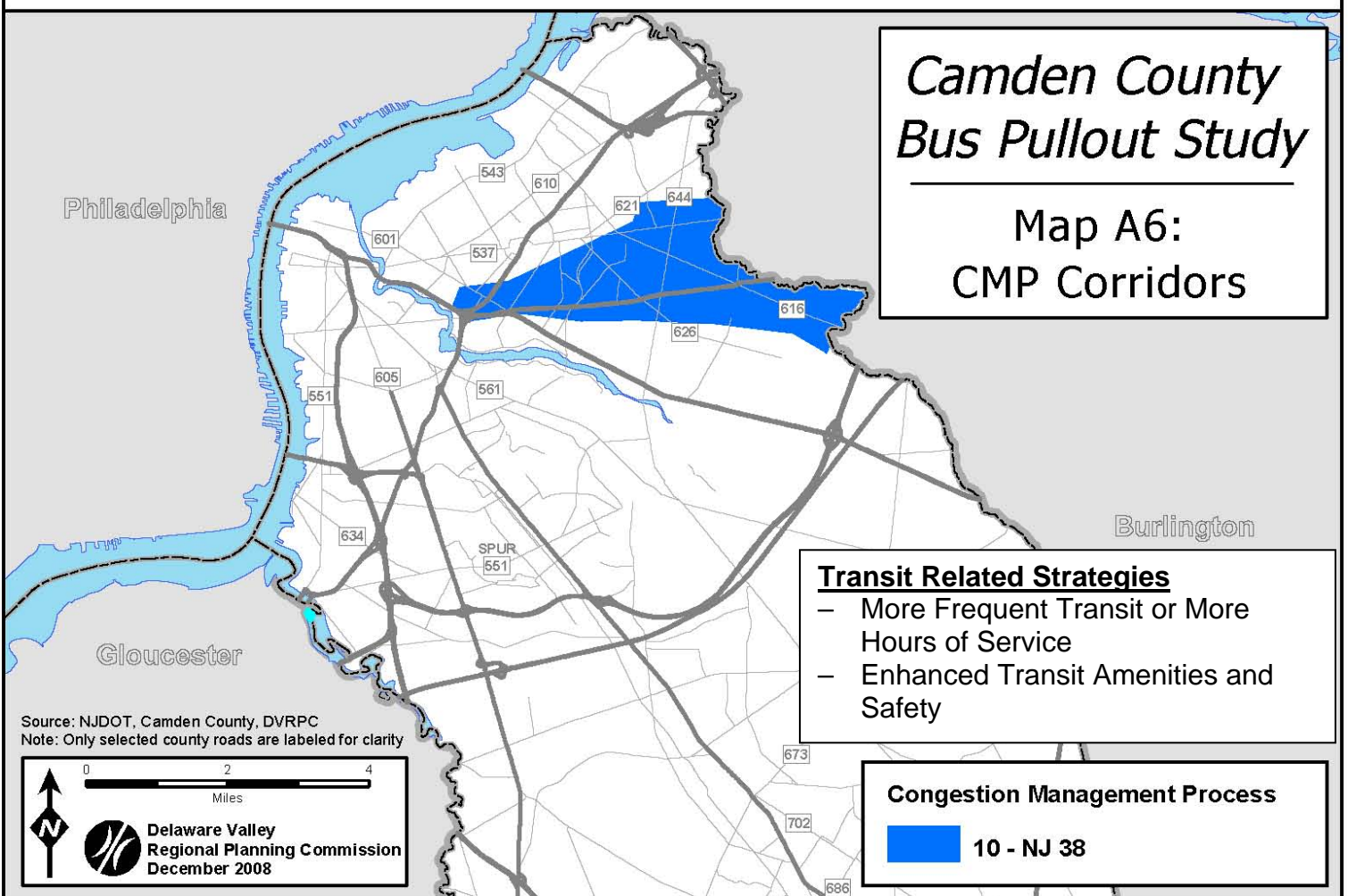
Camden County Bus Pullout Study

Map A5: CMP Corridors



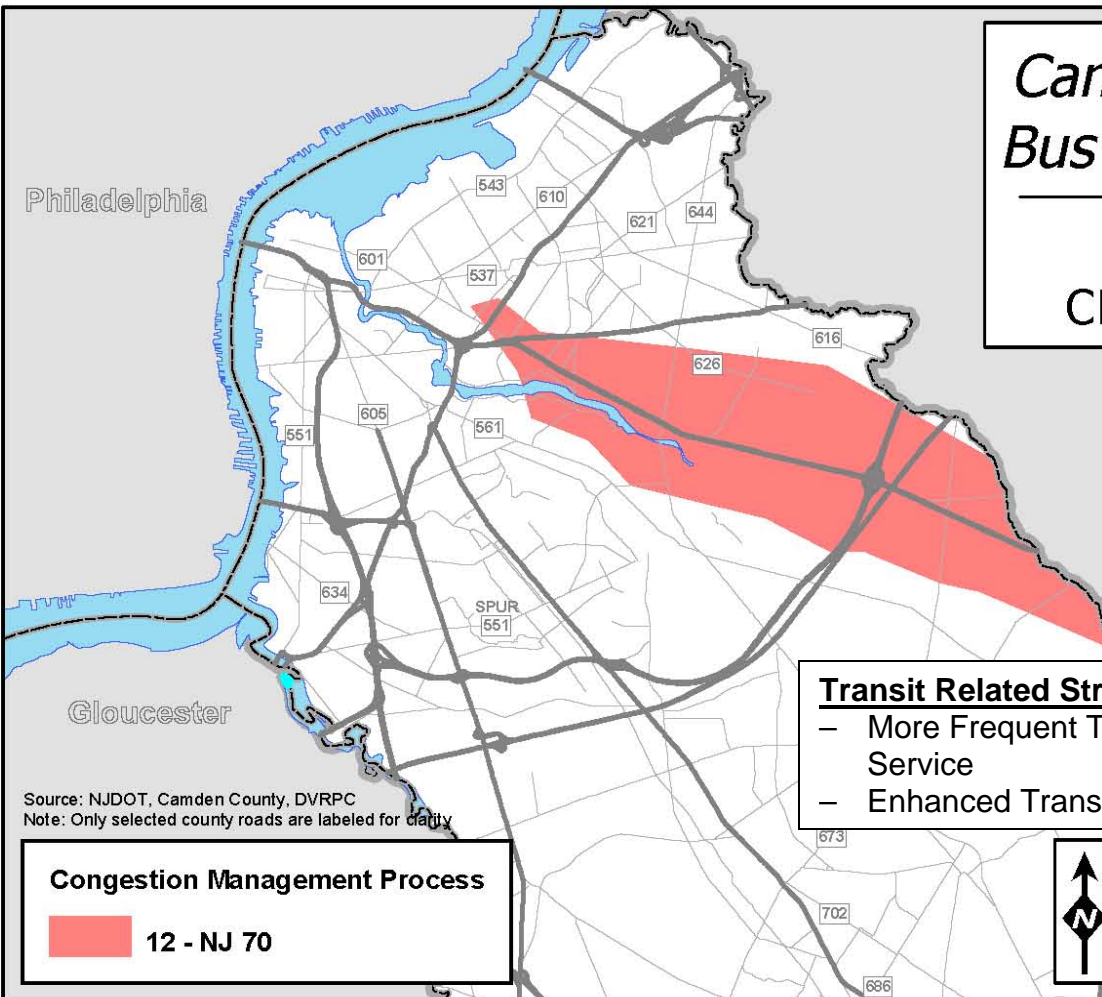
Camden County Bus Pullout Study

Map A6: CMP Corridors



Camden County Bus Pullout Study

Map A7: CMP Corridors



Source: NJDOT, Camden County, DVRPC
Note: Only selected county roads are labeled for clarity

Congestion Management Process

 12 - NJ 70

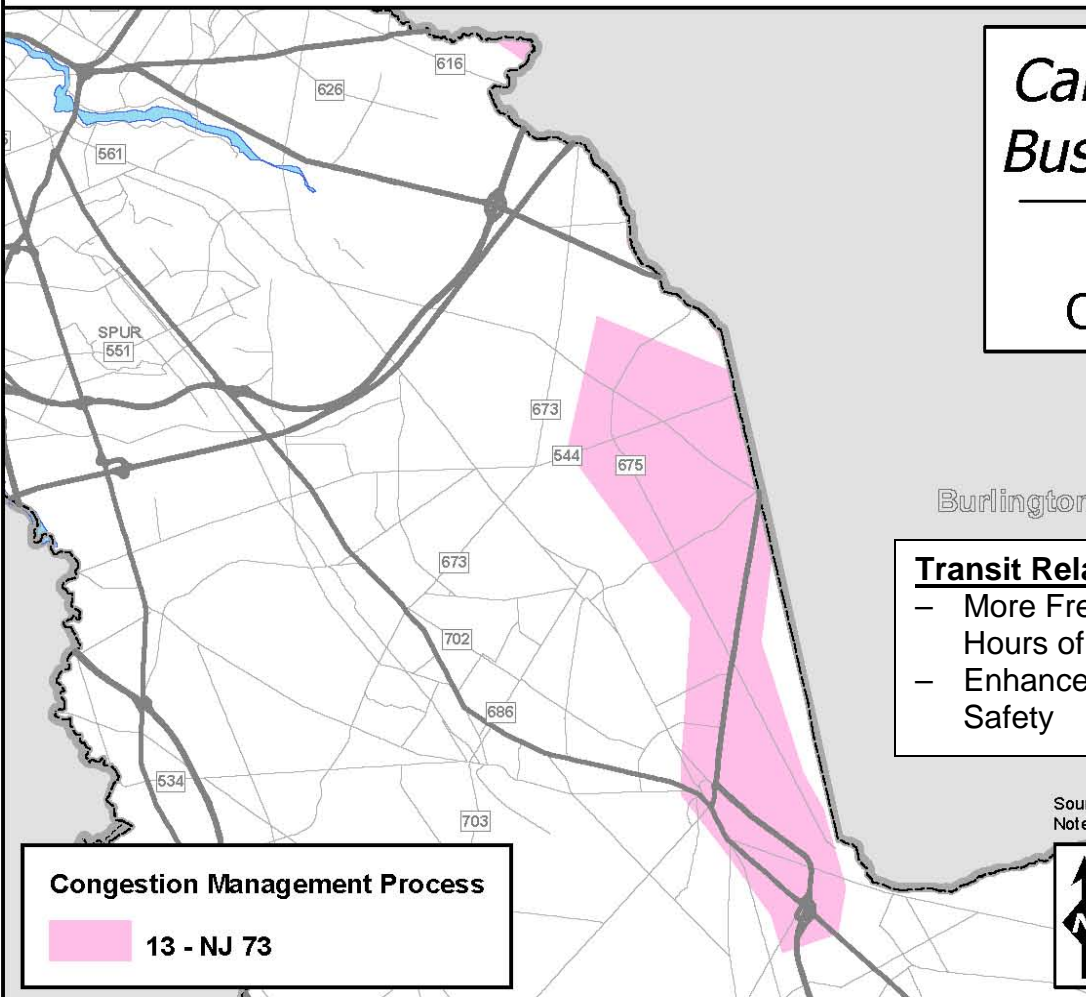
Transit Related Strategies

- More Frequent Transit or More Hours of Service
- Enhanced Transit Amenities and Safety



Camden County Bus Pullout Study

Map A8: CMP Corridors



Source: NJDOT, Camden County, DVRPC
Note: Only selected county roads are labeled for clarity

Congestion Management Process

 13 - NJ 73

Transit Related Strategies

- More Frequent Transit or More Hours of Service
- Enhanced Transit Amenities and Safety



APPENDIX B

Summary of Camden County Route Network



500 Series Camden County Roads with New Jersey Transit Bus Routes

ROUTE #	Milepost Start	Milepost End	Functional Classification	# of Lanes	Posted Speed	Shoulder Width	Pavement Width	Segment Length	ROW Width	CMP	Transit	Crashes	Roadway Name	Municipality
CR 534	3.830	4.460	Urban Principal Arterial	2	35	0	40	0.63	50	3	Yes	No	East Church Road	Gloucester Twp
CR 534	4.460	4.540	Urban Principal Arterial	2	40	0	40	0.08	50	3	No	No	East Church Road	Gloucester Twp
CR 534	5.010	5.600	Urban Principal Arterial	2	40	0	40	0.59	50	3	No	No	Blackwood-Clementon Road	Gloucester Twp
CR 534	5.600	6.150	Urban Principal Arterial	4	40	0	72	0.55	50	N/A	N/A	N/A	Blackwood-Clementon Road	Gloucester Twp
CR 534	6.620	7.420	Urban Principal Arterial	2	45	6	24	0.80	60	5	Yes	No	Blackwood-Clementon Road	Pine Hill Boro.
CR 534	7.420	7.790	Urban Principal Arterial	2	40	6	24, 40	0.37	60	5	Yes	No	Berlin Road	Clementon Boro.
CR 534	7.790	7.920	Urban Principal Arterial	2	40	0	40	0.13	66	5	Yes	No	Berlin Road	Clementon Boro.
CR 534	7.920	8.140	Urban Minor Arterial	2	30	0	40	0.22	66	N/A	N/A	N/A	Clementon Road	Clementon Boro.
CR 537	0.000	0.170	Urban Collector	4	Not Posted	0	48	0.17	66	N/A	N/A	N/A	Federal Street	Camden City
CR 537	0.170	0.240	Urban Minor Arterial	4	Not Posted	0	48	0.07	66	N/A	N/A	N/A	Federal Street	Camden City
CR 537	0.240	0.320	Urban Minor Arterial	3	Not Posted	0	48	0.08	66	N/A	N/A	N/A	Federal Street	Camden City
CR 537	0.320	0.390	Urban Minor Arterial	2	Not Posted	0	48	0.07	66	N/A	N/A	N/A	Federal Street	Camden City
CR 537	0.390	0.520	Urban Minor Arterial	3	Not Posted	0	42	0.13	66	N/A	N/A	N/A	Federal Street	Camden City
CR 537	0.520	0.640	Urban Principal Arterial	3	Not Posted	0	48	0.12	66	N/A	N/A	N/A	Federal Street	Camden City
CR 537	0.640	0.770	Urban Minor Arterial	2	Not Posted	0	48	0.13	66	N/A	N/A	N/A	Federal Street	Camden City
CR 537	0.770	0.930	Urban Minor Arterial	3	Not Posted	0	48	0.16	66	N/A	N/A	N/A	Federal Street	Camden City
CR 537	0.930	1.070	Urban Minor Arterial	4	Not Posted	0	66	0.14	66	N/A	N/A	N/A	Federal Street	Camden City
CR 537	1.070	1.800	Urban Minor Arterial	2	Not Posted	0	66, 40, 46	0.73	66	N/A	N/A	N/A	Federal Street	Camden City
CR 537	1.800	1.910	Urban Minor Arterial	3	Not Posted	0	46	0.11	66	N/A	N/A	N/A	Federal Street	Camden City
CR 537	1.910	3.580	Urban Minor Arterial	2	Not Posted	0	46, 26	1.67	66	N/A	N/A	N/A	Federal Street	Camden City and Pennsauken Twp
CR 537	3.580	4.800	Urban Minor Arterial	2	30	0	40	1.22	66	N/A	N/A	N/A	Maple Avenue	Merchantville Boro.
CR 537	4.800	5.570	Urban Minor Arterial	2	35	0	48, 50	0.77	66	10	Yes	No	Maple Avenue	Cherry Hill Twp
CR 537	5.570	5.870	Urban Minor Arterial	2	40	15	26	0.30	86	10	Yes	No	Maple Avenue	Cherry Hill Twp
CR 537	5.870	6.280	Urban Minor Arterial	4	40	0	60	0.39	86	10	No	No	Maple Avenue	Cherry Hill Twp
CR 537	6.280	6.300	Urban Minor Arterial	2	40	8	60, 26	0.32	86	10	No	No	Maple Avenue	Cherry Hill Twp

NOTE:
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 - NA = segment did not meet screening criteria

500 Series Camden County Roads with New Jersey Transit Bus Routes

ROUTE #	mp_start	mp_end	Functional Classification	# of Lanes	Posted Speed	Shoulder Width	Pavement Width	Segment Length	ROW Width	CMP	Transit	Crashes	Roadway Name	Municipality
CR 537 SPUR	0.000	0.080	Urban Minor Arterial	1	35	0	24	0.08	80	5, 6	Yes	No	Market Street	Camden City
CR 537 SPUR	0.080	0.190	Urban Minor Arterial	2	35	0	24, 30	0.11	80	5, 6	No	Yes	Market Street	Camden City
CR 537 SPUR	0.190	1.080	Urban Minor Arterial	3	35	0	30	0.89	80	5, 6	Yes	Yes	Market Street	Camden City
CR 543	0.000	1.720	Urban Minor Arterial	2	35	0	36, 30, 40	1.72	varies	N/A	N/A	N/A	River Road	Camden City
CR 543	1.720	3.460	Urban Minor Arterial	2	40	0	40, 60, 30	1.74	varies	N/A	N/A	N/A	River Road	Pennsauken Twp
CR 543	3.460	4.250	Urban Minor Arterial	2	35	0	30, 36	0.79	varies	N/A	N/A	N/A	River Road	Pennsauken Twp
CR 543	4.250	4.420	Urban Minor Arterial	2	45	0	36	0.17	varies	N/A	N/A	N/A	River Road	Pennsauken Twp
CR 543	4.420	5.300	Urban Minor Arterial	2	45	8	26	0.88	varies	N/A	N/A	N/A	River Road	Pennsauken Twp
CR 544	2.160	5.590	Urban Principal Arterial	2	35	0	38, 45, 34, 36	3.43	66	3, 5	Yes	Yes	Evesham Road	Gloucester Twp and Magnolia Boro.
CR 544	7.350	7.480	Urban Principal Arterial	2	40	0	38	0.13	66	5, 13	No	No	Evesham Road	Voorhees Twp
CR 544	7.480	10.760	Urban Principal Arterial	4	40	0	40	3.28	66	5, 13	Yes	No	Evesham Road	Voorhees Twp
CR 551	29.460	32.180	Urban Minor Arterial	2	25	0	44	2.72	66	N/A	N/A	N/A	New Broadway to Broadway	Brooklawn Boro., Gloucester City, and Camden City
CR 551	32.180	34.570	Urban Principal Arterial	2	25	0	44	2.39	66	N/A	N/A	N/A	Broadway	Camden City
CR 551 SPUR	1.230	4.270	Urban Minor Arterial	2	25	0	40, 42, 36, 32	3.04	66	N/A	N/A	N/A	Kings Highway	Mount Ephraim Boro., Haddon Heights Boro and Haddonfield Boro.
CR 561	39.500	40.570	Urban Principal Arterial	4	40	0	50	1.07	60	None	No	No	Haddonfield-Berlin Road	Gibbsboro Boro. and Voorhees Twp
CR 561	40.570	41.290	Urban Principal Arterial	5	40	0	64	0.72	74	5	Yes	No	Haddonfield-Berlin Road	Voorhees Twp
CR 561	41.290	41.860	Urban Principal Arterial	4	40	0	48	0.57	66	5	No	No	Haddonfield-Berlin Road	Voorhees Twp
CR 561	42.560	44.420	Urban Principal Arterial	4	40	0	48	1.86	60	5	Yes	No	Haddonfield-Berlin Road	Cherry Hill Twp
CR 561	44.420	44.920	Urban Principal Arterial	4	35	0	48	0.50	66	5	No	No	Haddonfield-Berlin Road	Cherry Hill Twp
CR 561	44.920	45.000	Urban Principal Arterial	2	25	0	48, 40	0.08	50	N/A	N/A	N/A	Haddonfield-Berlin Road	Cherry Hill Twp
CR 561	45.000	50.460	Urban Minor Arterial	2	25	0	40, 36, 46, 36	5.46	66	N/A	N/A	N/A	Ellis Avenue to Haddon Avenue	Haddonfield Boro., Haddon Twp, Collingswood Boro. and Camden City
CR 561	50.460	50.930	Urban Principal Arterial	2	25	0	40	0.47	66	N/A	N/A	N/A	Haddon Avenue	Camden City
CR 561	50.930	51.050	Urban Principal Arterial	3	25	0	36	0.12	66	N/A	N/A	N/A	Carmen Street	Camden City

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600 Series Camden County Roads with New Jersey Transit Bus Routes

ROUTE #	mp_start	mp_end	Functional Classification	# of Lanes	Posted Speed	Shoulder Width	Pavement Width	Segment Length	ROW Width	CMP	Transit	Crashes	Roadway Name	Municipality
CR 600	0.000	0.100	Urban Minor Arterial	1	35	0	16	0.10	60	12	No	No	Marlton Pike	Cherry Hill Twp
CR 600	0.100	0.190	Urban Minor Arterial	2	35	0	30	0.09	60	12	No	No	Marlton Pike	Cherry Hill Twp
CR 601	0.000	0.700	Urban Minor Arterial	2	25	0	34	0.70	70	N/A	N/A	N/A	State Street	Camden City
CR 601	0.700	0.860	Urban Minor Arterial	2	25	9	24	0.16	70	N/A	N/A	N/A	Estate Street	Camden City
CR 601	0.860	1.140	Urban Minor Arterial	2	25	15	24, 56	0.28	70	N/A	N/A	N/A	Estate Street	Camden City
CR 601	1.140	3.130	Urban Minor Arterial	2	25	0	31, 39	1.99	80	N/A	N/A	N/A	Estate Street, Marlton Avenue,	Camden City and Pennsauken Twp
CR 603	0.620	2.410	Urban Minor Arterial	2	25	0	24, 29	1.79	50	N/A	N/A	N/A	Ferry Avenue, Dwight Avenue	Camden City, Woodlynne Boro. and Collingswood Boro.
CR 605	0.000	0.420	Urban Principal Arterial	4	35	0	46	0.42	66	6	No	No	Mt Ephraim Avenue	Camden City
CR 605	0.420	1.430	Urban Principal Arterial	2	35	0	46	1.01	66	6	Yes	Yes	Mt Ephraim Avenue	Camden City
CR 606	0.000	0.290	Urban Minor Arterial	2	25	0	40	0.29	70	N/A	N/A	N/A	White Horse Pike	Collingswood Boro. and Camden City
CR 606A	0.000	0.190	Urban Local	2	25	0	31	0.19	66	N/A	N/A	N/A	Camden County 606A	Camden City
CR 607	0.000	2.460	Urban Minor Arterial	2	Not Posted	0	41, 36	2.46	66	N/A	N/A	N/A	Kaighns Avenue	Pennsauken Twp and Camden City
CR 608	0.000	0.380	Urban Minor Arterial	2	25	0	34	0.38	110	N/A	N/A	N/A	Baird Boulevard	Camden City
CR 608	0.380	0.480	Urban Minor Arterial	2	25	9	21	0.10	110	N/A	N/A	N/A	Baird Boulevard	Camden City
CR 608	0.480	0.580	Urban Minor Arterial	1	25	9	18	0.10	110	N/A	N/A	N/A	Baird Boulevard	Camden City
CR 608	0.580	1.230	Urban Minor Arterial	1	25	0	18, 24	0.65	110	N/A	N/A	N/A	Baird Boulevard	Camden City
CR 609	0.000	1.260	Urban Minor Arterial	2	25	0	25, 33	1.26	50	N/A	N/A	N/A	27th Street	Camden City
CR 610	0.000	2.940	Urban Minor Arterial	2	25	0	46, 39	2.94	66	N/A	N/A	N/A	Westfield Avenue, Burlington Pike	Camden City and Pennsauken Twp
CR 614	0.000	0.810	Urban Minor Arterial	2	25	0	29, 33	0.81	50	N/A	N/A	N/A	Derousse Avenue	Pennsauken Twp
CR 614	0.810	1.330	Urban Local	2	25	0	33	0.52	50	N/A	N/A	N/A	Derousse Avenue	Pennsauken Twp
CR 615	1.580	2.520	Urban Minor Arterial	2	25	0	45, 30	0.94	50	N/A	N/A	N/A	Union Avenue	Pennsauken Twp
CR 616	0.140	1.830	Urban Minor Arterial	2	25	0	23	1.69	47 -55	N/A	N/A	N/A	Cove Road	Pennsauken Twp and Merchantville Boro.
CR 616	1.830	2.470	Urban Minor Arterial	2	35	0	27	0.64	50	10	No	No	Church Road	Cherry Hill Twp and Merchantville Boro.
CR 616	2.470	2.570	Urban Minor Arterial	3	35	0	36, 55	0.10	50	10	Yes	Yes	Church Road	Cherry Hill Twp
CR 616	2.570	2.750	Urban Minor Arterial	4	35	0	55	0.18	50	N/A	N/A	N/A	Church Road	Cherry Hill Twp

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600 Series Camden County Roads with New Jersey Transit Bus Routes

ROUTE #	mp_start	mp_end	Functional Classification	# of Lanes	Posted Speed	Shoulder Width	Pavement Width	Segment Length	ROW Width	CMP	Transit	Crashes	Roadway Name	Municipality
CR 616	2.750	2.950	Urban Minor Arterial	4	40	0	55	0.20	50	N/A	N/A	N/A	Church Road	Cherry Hill Twp
CR 616	2.950	3.530	Urban Minor Arterial	2	40	0	47, 66, 34	0.58	50	10	Yes	No	Church Road	Cherry Hill Twp
CR 616	3.530	3.600	Urban Minor Arterial	1	40	0	34	0.07	50	10	Yes	No	Church Road	Cherry Hill Twp
CR 616	3.600	3.640	Urban Minor Arterial	1	25	0	32	0.04	50	N/A	N/A	N/A	Church Road	Cherry Hill Twp
CR 616	3.640	5.230	Urban Minor Arterial	2	25	0	32, 35	1.59	50	N/A	N/A	N/A	Church Road	Cherry Hill Twp
CR 621	0.280	2.040	Urban Minor Arterial	2	25	0	27, 31, 29, 31, 35	1.76	33-53	N/A	N/A	N/A	Park Avenue	Merchantville Boro. and Pennsauken Twp
CR 622	0.060	0.850	Urban Minor Arterial	2	25	0	30	0.79	50	N/A	N/A	N/A	Center Street	Merchantville Boro. and Pennsauken Twp
CR 623	0.320	0.550	Urban Principal Arterial	2	40	0	24	0.23	50	10, 12	Yes	No	Hampton Road	Cherry Hill Twp
CR 623	0.550	0.710	Urban Minor Arterial	2	40	0	24	0.16	50	10, 12	Yes	No	Hampton Road	Cherry Hill Twp
CR 626	0.000	0.200	Urban Minor Arterial	2	25	0	27	0.20	50	N/A	N/A	N/A	Chapel Avenue	Cherry Hill Twp
CR 626	0.200	0.270	Urban Minor Arterial	1	25	0	17	0.07	50	N/A	N/A	N/A	Chapel Avenue	Cherry Hill Twp
CR 626	0.270	2.580	Urban Minor Arterial	2	25	0	30, 34, 39, 4, 62	2.31	50	N/A	N/A	N/A	Chapel Avenue	Cherry Hill Twp
CR 626	2.580	3.180	Urban Minor Arterial	2	25	8	61, 41, 31	0.60	50	N/A	N/A	N/A	Chapel Avenue	Cherry Hill Twp
CR 626	3.180	3.220	Urban Minor Arterial	1	25	8	31	0.04	50	N/A	N/A	N/A	Chapel Avenue	Cherry Hill Twp
CR 626	3.220	3.370	Urban Minor Arterial	2	25	8	31	0.15	50	N/A	N/A	N/A	Chapel Avenue	Cherry Hill Twp
CR 626	3.370	3.430	Urban Minor Arterial	2	25	0	31, 50	0.06	50	N/A	N/A	N/A	Chapel Avenue	Cherry Hill Twp
CR 627	0.930	1.790	Urban Minor Arterial	2	40	0	26, 39, 35	0.86	50	10, 12	Yes	No	Cooper Landing Road	Cherry Hill Twp
CR 628	0.390	2.050	Urban Minor Arterial	2	35	0	48, 50, 48	1.66	60-75	N/A	N/A	N/A	North Park Boulevard	Pennsauken Twp
CR 630	0.000	0.500	Urban Collector	2	25	0	39	0.50	118	N/A	N/A	N/A	Collings Avenue	Gloucester Twp and Camden City
CR 630	0.500	0.610	Urban Minor Arterial	2	25	0	39	0.11	118	N/A	N/A	N/A	Collings Avenue	Camden City
CR 630	0.610	1.330	Urban Minor Arterial	1	25	0	30, 32	0.72	118	N/A	N/A	N/A	Collings Avenue	Camden City
CR 634	0.500	2.140	Urban Minor Arterial	2	25	0	33, 40	1.64	50-60	N/A	N/A	N/A	Market Street	Gloucester City and Mount Ephraim Boro.
CR 635	1.650	1.950	Urban Principal Arterial	2	25	0	29, 35	0.30	50	N/A	N/A	N/A	Nicholson Road	Audubon Boro.
CR 635	1.950	2.780	Urban Principal Arterial	4	25	0	39	0.83	50	N/A	N/A	N/A	Nicholson Road	Audubon Boro.
CR 636	2.100	2.380	Urban Principal Arterial	2	25	0	17, 26	0.28	100	N/A	N/A	N/A	Cuthbert Boulevard	Haddon Twp and Cherry Hill Twp

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600 Series Camden County Roads with New Jersey Transit Bus Routes

ROUTE #	mp_start	mp_end	Functional Classification	# of Lanes	Posted Speed	Shoulder Width	Pavement Width	Segment Length	ROW Width	CMP	Transit	Crashes	Roadway Name	Municipality
CR 636	2.380	2.830	Urban Principal Arterial	2	40	0	26	0.45	100	12	Yes	No	Guthbert Boulevard, Lexington Ave Extension	Cherry Hill Twp
CR 643	0.000	1.560	Urban Minor Arterial	2	25	0	29, 38, 31, 43	1.56	60	N/A	N/A	N/A	Crystal Lake Avenue	Haddon Twp
CR 644	2.570	2.840	Urban Principal Arterial	4	40	0	40	0.27	66	6, 10, 12, 13,	Yes	No	Haddonfield Road	Cherry Hill Twp
CR 644	2.840	5.590	Urban Principal Arterial	4	45	0	40, 45, 50	2.75	66	6, 10, 12, 13,	Yes	Yes	Haddonfield Road	Cherry Hill Twp and Pennsauken Twp
CR 644	5.590	6.480	Urban Principal Arterial	2	45	0	34, 23	0.89	66	6, 10, 12, 13	No	No	Haddonfield Road	Pennsauken Twp
CR 670	0.000	0.450	Urban Minor Arterial	2	30	0	35, 37, 46	0.45	60	N/A	N/A	N/A	Burnt Mill Road	Voorhees Twp
CR 670	0.450	1.300	Urban Minor Arterial	2	35	0	46, 59, 36	0.85	60	5	Yes	No	Burnt Mill Road	Voorhees Twp
CR 671	2.930	3.080	Urban Minor Arterial	3	40	0	37	0.15	50	13	Yes	No	Kresson Road	Cherry Hill Twp
CR 671	3.080	3.160	Urban Minor Arterial	3	40	9	37	0.08	50	N/A	N/A	N/A	Kresson Road	Cherry Hill Twp
CR 671	3.160	3.210	Urban Minor Arterial	3	40	0	48	0.05	50	N/A	N/A	N/A	Kresson Road	Cherry Hill Twp
CR 671	3.210	3.230	Urban Minor Arterial	2	40	0	48, 33	0.02	50	13	No	No	Kresson Road	Cherry Hill Twp
CR 671	3.230	3.280	Urban Minor Arterial	2	40	8	33	0.05	50	N/A	N/A	N/A	Kresson Road	Cherry Hill Twp
CR 671	3.280	3.710	Urban Minor Arterial	2	40	3	33	0.43	50	13	No	No	Kresson Road	Cherry Hill Twp
CR 671	3.710	3.820	Urban Minor Arterial	2	40	17	33	0.11	50	N/A	N/A	N/A	Kresson Road	Cherry Hill Twp and Voorhees Twp
CR 671	3.820	4.710	Urban Minor Arterial	2	40	2	33	0.89	50	13	Yes	No	Kresson Road	Voorhees Twp
CR 671	4.710	4.800	Urban Minor Arterial	2	Not Posted	2	33	0.09	50	N/A	N/A	N/A	Kresson Road	Voorhees Twp
CR 671	4.800	4.860	Urban Minor Arterial	3	Not Posted	2	33	0.06	50	N/A	N/A	N/A	Kresson Road	Voorhees Twp
CR 673	0.650	1.320	Urban Minor Arterial	2	Not Posted	0	36	0.67	100	N/A	N/A	N/A	Greenloch-Little Gloucester Road, College Road	Gloucester Twp
CR 673	1.320	1.400	Urban Minor Arterial	4	Not Posted	0	36	0.08	varies	N/A	N/A	N/A	College Road	Gloucester Twp
CR 673	1.400	2.490	Urban Minor Arterial	4	35	0	36	1.09	varies	N/A	N/A	N/A	College Road	Gloucester Twp
CR 673	2.490	2.640	Urban Minor Arterial	2	35	0	36	0.15	33	N/A	N/A	N/A	Laurel Road	Lindenwold Boro.
CR 673	2.640	2.750	Urban Minor Arterial	2	25	0	36	0.11	33	N/A	N/A	N/A	Laurel Road	Lindenwold Boro.
CR 673	2.750	2.840	Urban Minor Arterial	2	25	12	36	0.09	33	N/A	N/A	N/A	Laurel Road	Lindenwold Boro.
CR 673	2.840	2.960	Urban Minor Arterial	2	25	0	36	0.12	33	N/A	N/A	N/A	Laurel Road	Lindenwold Boro.
CR 673	2.960	3.030	Urban Minor Arterial	2	25	12	36	0.07	33	N/A	N/A	N/A	Laurel Road	Lindenwold Boro.

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600 Series Camden County Roads with New Jersey Transit Bus Routes

ROUTE #	mp_start	mp_end	Functional Classification	# of Lanes	Posted Speed	Shoulder Width	Pavement Width	Segment Length	ROW Width	CMP	Transit	Crashes	Roadway Name	Municipality
CR 673	3.030	3.130	Urban Minor Arterial	4	25	12	36	0.10	33	N/A	N/A	N/A	Laurel Road	Lindenwold Boro.
CR 673	3.130	4.450	Urban Minor Arterial	2	25	12	36	1.32	50	N/A	N/A	N/A	Laurel Road	Lindenwold Boro. and Stratford Boro.
CR 673	4.450	4.510	Urban Minor Arterial	2	25	18	36	0.06	50	N/A	N/A	N/A	Laurel Road	Stratford Boro.
CR 673	4.510	4.760	Urban Minor Arterial	2	25	0	36	0.25	50	N/A	N/A	N/A	Laurel Road	Stratford Boro.
CR 673	4.760	4.820	Urban Minor Arterial	4	25	0	36	0.06	50	N/A	N/A	N/A	Glendale Road	Stratford Boro.
CR 673	4.820	5.110	Urban Minor Arterial	3	25	0	36	0.29	50	N/A	N/A	N/A	Glendale Road	Stratford Boro. and Voorhees Twp
CR 673	5.110	5.560	Urban Minor Arterial	4	25	0	45, 55	0.45	60	N/A	N/A	N/A	Glendale Road, White Horse Road	Voorhees Twp
CR 673	5.560	7.320	Urban Minor Arterial	4	40	0	55, 43	1.76	50	N/A	N/A	N/A	Glendale Road, White Horse Road	Voorhees Twp
CR 673	7.370	7.510	Urban Minor Arterial	2	40	0	43, 34	0.14	50	None	No	No	White Horse Road, Springdale Road	Voorhees Twp and Cherry Hill Twp
CR 673	7.510	7.570	Urban Minor Arterial	2	40	7	34	0.06	50	N/A	N/A	N/A	Springdale Road	Cherry Hill Twp
CR 673	7.570	7.710	Urban Minor Arterial	2	45	7	34	0.14	50	None	No	No	Springdale Road	Cherry Hill Twp
CR 673	7.710	7.850	Urban Minor Arterial	2	45	0	34	0.14	50	None	No	No	Springdale Road	Cherry Hill Twp
CR 673	7.850	7.890	Urban Minor Arterial	2	45	1	35	0.04	50	None	No	No	Springdale Road	Cherry Hill Twp
CR 673	7.890	7.990	Urban Minor Arterial	2	45	10	35	0.10	50	N/A	N/A	N/A	Springdale Road	Cherry Hill Twp
CR 673	7.990	8.030	Urban Minor Arterial	2	45	2	35	0.04	50	None	No	No	Springdale Road	Cherry Hill Twp
CR 673	8.030	8.200	Urban Minor Arterial	2	45	10	35	0.17	50	N/A	N/A	N/A	Springdale Road	Cherry Hill Twp
CR 673	8.200	8.290	Urban Minor Arterial	2	45	5	35	0.09	50	N/A	N/A	N/A	Springdale Road	Cherry Hill Twp
CR 673	8.290	8.570	Urban Minor Arterial	2	45	0	34	0.28	50	None	Yes	No	Springdale Road	Cherry Hill Twp
CR 673	8.570	9.050	Urban Minor Arterial	3	45	0	34	0.48	66	N/A	N/A	N/A	Springdale Road	Cherry Hill Twp
CR 673	9.050	10.130	Urban Minor Arterial	3	40	0	34	1.08	66	12	No	No	Springdale Road	Cherry Hill Twp
CR 673	10.130	11.380	Urban Minor Arterial	4	40	0	40	1.25	50	12	Yes	No	Springdale Road	Cherry Hill Twp
CR 674	0.000	0.760	Urban Collector	3	Not Posted	0	45, 23, 27	0.76	66	N/A	N/A	N/A	Green Tree Road	Cherry Hill Twp
CR 675	5.100	5.740	Urban Minor Arterial	2	45	3	55	0.64	50	N/A	N/A	N/A	Cooper Road	Voorhees Twp
CR 675	5.740	5.970	Urban Minor Arterial	2	45	2	55	0.23	50	N/A	N/A	N/A	Cooper Road	Voorhees Twp
CR 675	5.970	6.030	Urban Minor Arterial	2	40	2	43	0.06	50	N/A	N/A	N/A	Cropwell Road	Cherry Hill Twp

NOTE:
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 - NA = segment did not meet screening criteria

600 Series Camden County Roads with New Jersey Transit Bus Routes

ROUTE #	mp_start	mp_end	Functional Classification	# of Lanes	Posted Speed	Shoulder Width	Pavement Width	Segment Length	ROW Width	CMP	Transit	Crashes	Roadway Name	Municipality
CR 675	6.030	6.100	Urban Minor Arterial	2	40	13	43	0.07	50	N/A	N/A	N/A	Cropwell Road	Cherry Hill Twp
CR 675	6.100	6.200	Urban Minor Arterial	2	40	17	43	0.10	50	N/A	N/A	N/A	Cropwell Road	Cherry Hill Twp
CR 675	6.200	6.240	Urban Minor Arterial	2	40	9	43	0.04	50	N/A	N/A	N/A	Cropwell Road	Cherry Hill Twp
CR 675	6.240	6.290	Urban Minor Arterial	2	40	7	43	0.05	50	N/A	N/A	N/A	Cropwell Road	Cherry Hill Twp
CR 675	6.290	6.410	Urban Minor Arterial	2	40	3	43	0.12	50	N/A	N/A	N/A	Cropwell Road	Cherry Hill Twp
CR 675	6.410	6.510	Urban Minor Arterial	2	40	8	43	0.10	50	N/A	N/A	N/A	Cropwell Road	Cherry Hill Twp
CR 675	6.510	6.630	Urban Minor Arterial	2	40	0	34	0.12	50	N/A	N/A	N/A	Cropwell Road	Cherry Hill Twp
CR 678	0.950	1.010	Urban Minor Arterial	4	35	0	63	0.06	50	N/A	N/A	N/A	Somerdale Road	Voorhees Twp
CR 678	1.010	1.240	Urban Minor Arterial	3	35	0	60	0.23	50	N/A	N/A	N/A	Somerdale Road	Voorhees Twp
CR 678	1.240	2.130	Urban Minor Arterial	2	35	0	60, 50, 56, 45	0.89	50	N/A	N/A	N/A	Somerdale Road	Voorhees Twp
CR 686	0.000	0.540	Urban Principal Arterial	2	35	0	45	0.54	50	N/A	N/A	N/A	Gibbsboro Road	Clementon Boro.
CR 686	0.540	0.720	Urban Minor Arterial	2	35	0	45	0.18	50	N/A	N/A	N/A	Gibbsboro Road	Clementon Boro. and Lindenwold Boro.
CR 686	0.720	1.800	Urban Minor Arterial	2	25	0	45, 30	1.08	50	N/A	N/A	N/A	Gibbsboro Road	Lindenwold Boro. and Gibbsboro Boro.
CR 687	0.000	0.670	Urban Minor Arterial	2	35	1	36, 26	0.67	varies	N/A	N/A	N/A	Janvis Road	Gloucester Twp
CR 687	0.670	0.850	Urban Minor Arterial	2	35	0	26, 36	0.18	varies	N/A	N/A	N/A	Janvis Road	Gloucester Twp
CR 687	0.850	1.510	Urban Minor Arterial	2	35	1	36, 26	0.66	varies	N/A	N/A	N/A	Janvis Road	Gloucester Twp
CR 687	1.510	1.800	Urban Collector	2	35	1	41, 33	0.29	varies	N/A	N/A	N/A	Janvis Road	Gloucester Twp
CR 687	3.320	3.410	Urban Minor Arterial	2	40	2	26	0.09	50	N/A	N/A	N/A	Branch Avenue	Pine Hill Boro.
CR 687	3.410	3.770	Urban Minor Arterial	2	40	1	26	0.36	50	N/A	N/A	N/A	Branch Avenue	Pine Hill Boro.
CR 687	3.770	4.640	Urban Minor Arterial	2	45	1	26	0.87	50	N/A	N/A	N/A	Branch Avenue	Pine Hill Boro.
CR 687	4.640	4.770	Urban Minor Arterial	2	45	4	26	0.13	50	N/A	N/A	N/A	Branch Avenue	Pine Hill Boro.
CR 687	4.770	4.830	Urban Minor Arterial	2	35	4	26	0.06	50	N/A	N/A	N/A	Branch Avenue, Branch Avenue	Pine Hill Boro.
CR 687	4.830	4.980	Urban Minor Arterial	2	35	2	26	0.15	50	N/A	N/A	N/A	Delou Road	Pine Hill Boro.
CR 688	0.000	0.470	Urban Minor Arterial	2	45	2	24	0.47	50	3, 7	Yes	No	Hickstown Road	Gloucester Twp
CR 688	0.470	0.510	Urban Minor Arterial	2	45	10	24	0.04	50	3, 7	No	No	Hickstown Road	Gloucester Twp

NOTE:
 - All widths and lengths are measured in feet
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 - NA = segment did not meet screening criteria

600 Series Camden County Roads with New Jersey Transit Bus Routes

ROUTE #	mp_start	mp_end	Functional Classification	# of Lanes	Posted Speed	Shoulder Width	Pavement Width	Segment Length	ROW Width	CMP	Transit	Crashes	Roadway Name	Municipality
CR 688	0.510	0.690	Urban Minor Arterial	2	45	1	24	0.18	50	3, 7	No	No	Hickstown Road	Gloucester Twp
CR 688	0.690	0.890	Urban Minor Arterial	2	30	1	32	0.20	50	N/A	N/A	N/A	Hickstown Road	Gloucester Twp
CR 688	0.890	1.270	Urban Minor Arterial	2	30	0	24	0.38	50	N/A	N/A	N/A	Hickstown Road	Gloucester Twp
CR 688	1.270	1.270	Urban Minor Arterial	2	30	1	36	0.00	50	3, 7	No	No	Hickstown Road	Gloucester Twp
CR 688	1.270	1.930	Urban Minor Arterial	2	45	1	36, 32	0.66	50	3, 7	No	No	Hickstown Road	Gloucester Twp
CR 688	1.930	2.490	Urban Minor Arterial	2	45	2	24	0.56	50	3, 7	Yes	No	Hickstown Road, Turnersville Road	Gloucester Twp
CR 688	2.490	2.640	Urban Minor Arterial	2	45	4	24, 35	0.15	50	3, 7	No	No	Turnersville Road	Gloucester Twp
CR 688	2.640	2.810	Urban Minor Arterial	2	45	0	24, 35	0.17	50	3, 7	Yes	No	Turnersville Road	Gloucester Twp
CR 688	2.810	2.880	Urban Minor Arterial	2	45	1	24	0.07	50	7	No	No	Turnersville Road	Gloucester Twp
CR 688	2.880	2.980	Urban Minor Arterial	2	45	22	24	0.10	50	N/A	N/A	N/A	Turnersville Road	Gloucester Twp
CR 688	2.980	3.160	Urban Minor Arterial	2	45	1	24	0.18	50	7	No	No	Turnersville Road	Gloucester Twp
CR 688	3.160	3.400	Urban Minor Arterial	2	45	0	30, 49, 36	0.24	50	7	No	No	Turnersville Road	Gloucester Twp
CR 688	3.400	3.860	Urban Minor Arterial	2	45	2	36, 40	0.46	50	7	No	No	Turnersville Road	Gloucester Twp and Pine Hill Boro.
CR 688	3.860	3.890	Urban Minor Arterial	2	40	2	40	0.03	50	N/A	N/A	N/A	Turnersville Road	Pine Hill Boro.
CR 688	3.890	4.520	Urban Minor Arterial	2	40	0	40, 44	0.63	50	7	No	No	Turnersville Road	Pine Hill Boro.
CR 688	4.520	4.810	Urban Minor Arterial	2	40	3	40, 34	0.29	50	7	No	No	Turnersville Road	Pine Hill Boro.
CR 689	0.000	1.070	Urban Principal Arterial	2	Not Posted	2	25, 29	1.07	50	N/A	N/A	N/A	Cross Keys Road	Gloucester Twp and Winslow Twp
CR 689	1.070	1.150	Urban Principal Arterial	2	Not Posted	1	29, 26	0.08	50	N/A	N/A	N/A	Cross Keys Road	Winslow Twp
CR 689	1.150	1.220	Urban Principal Arterial	2	Not Posted	4	26	0.07	50	3, 7	No	No	Cross Keys Road	Winslow Twp
CR 689	1.220	1.250	Urban Principal Arterial	2	Not Posted	0	26	0.03	50	3, 7	No	No	Cross Keys Road	Winslow Twp
CR 689	1.250	1.320	Urban Principal Arterial	2	Not Posted	1	26	0.07	50	3, 7	No	No	Cross Keys Road	Winslow Twp
CR 689	1.320	1.590	Urban Principal Arterial	2	Not Posted	0	38	0.27	50	3, 7	No	No	Cross Keys Road	Winslow Twp
CR 689	1.590	1.760	Urban Principal Arterial	2	Not Posted	8	25	0.17	50	3, 7	No	No	Cross Keys Road	Winslow Twp
CR 689	1.760	2.130	Urban Principal Arterial	2	Not Posted	1	25	0.37	50	3, 7	No	No	Cross Keys Road	Winslow Twp
CR 689	2.130	2.250	Urban Principal Arterial	2	Not Posted	2	33	0.12	50	3, 7	No	No	Cross Keys Road	Winslow Twp

NOTE:

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- NA = segment did not meet screening criteria

600 Series Camden County Roads with New Jersey Transit Bus Routes

ROUTE #	mp_start	mp_end	Functional Classification	# of Lanes	Posted Speed	Shoulder Width	Pavement Width	Segment Length	ROW Width	CMP	Transit	Crashes	Roadway Name	Municipality
CR 689	2.250	2.460	Urban Principal Arterial	4	Not Posted	2	24	0.21	50	3, 7	Yes	Yes	Cross Keys Road	Winslow Twp
CR 689	2.460	2.490	Urban Principal Arterial	3	Not Posted	2	24	0.03	50	3, 7	No	No	Cross Keys Road	Winslow Twp
CR 689	2.490	3.800	Urban Principal Arterial	2	Not Posted	2	24	1.31	50	7	Yes	No	Cross Keys Road	Winslow Twp
CR 689	4.530	5.890	Urban Principal Arterial	2	Not Posted	3	24	1.36	50	7	Yes	No	Cross Keys Road	Winslow Twp and Berlin Boro.
CR 689	5.890	6.610	Urban Principal Arterial	2	Not Posted	2	24	0.72	50	7	Yes	No	Cross Keys Road	Berlin Boro.
CR 692	0.170	1.660	Urban Minor Arterial	2	25	0	31, 35	1.49	33	N/A	N/A	N/A	Franklin Avenue	Berlin Boro. and Berlin Twp
CR 695	0.000	0.570	Urban Minor Arterial	2	35	0	29	0.57	50	7	Yes	No	Whitehorse Avenue	Clementon Boro. and Lindenwold Boro.

NOTE:

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- Highlighted rows in red text = high priority routes
- NA = segment did not meet screening criteria

700 Series Camden County Roads with New Jersey Transit Bus Routes

ROUTE #	mp_start	mp_end	Functional Classification	# of Lanes	Posted Speed	Shoulder Width	Pavement Width	Segment Length	ROW Length	CMP	Transit	Crashes	Roadway Name	Municipality
CR 702	0.000	0.380	Urban Minor Arterial	4	Not Posted	0	39, 57, 49	0.38	66	N/A	N/A	N/A	Berlin Avenue	Stratford Boro.
CR 702	0.380	0.420	Urban Minor Arterial	3	Not Posted	0	49, 44	0.04	66	N/A	N/A	N/A	Berlin Avenue	Stratford Boro.
CR 702	0.420	0.690	Urban Minor Arterial	2	Not Posted	0	44, 39	0.27	66	N/A	N/A	N/A	Berlin Avenue	Stratford Boro. and Lindenwold Boro.
CR 702	0.690	0.740	Urban Minor Arterial	2	Not Posted	11	39, 23	0.05	66	N/A	N/A	N/A	Berlin Avenue	Lindenwold Boro.
CR 702	0.740	1.680	Urban Minor Arterial	2	Not Posted	5	23	0.94	66	N/A	N/A	N/A	Berlin Avenue	Lindenwold Boro.
CR 702	1.680	1.780	Urban Minor Arterial	2	Not Posted	2	23	0.10	66	N/A	N/A	N/A	Berlin Avenue	Lindenwold Boro.
CR 703	0.000	0.700	Urban Minor Arterial	2	35	0	35	0.70	50	3, 7	Yes	No	Erial - Clementon Road	Gloucester Twp and Pine Hill Boro.
CR 703	0.700	1.140	Urban Minor Arterial	2	40	0	35	0.44	50	7	Yes	No	Erial - Clementon Road, Erial Avenue	Pine Hill Boro.
CR 703	1.140	2.280	Urban Minor Arterial	2	35	0	28	1.14	50	5, 7	Yes	No	Erial Avenue	Pine Hill Boro. and Clementon Boro.
CR 703	2.280	2.430	Urban Minor Arterial	2	25	0	38	0.15	50	N/A	N/A	N/A	Erial Avenue	Clementon Boro.
CR 703	2.430	2.600	Urban Minor Arterial	2	45	0	38	0.17	50	5, 7	Yes	No	Erial Avenue	Clementon Boro.
CR 704	0.000	0.290	Urban Collector	2	Not Posted	2	27	0.29	50	N/A	N/A	N/A	Erial - Williamstown Road	Winslow Twp
CR 704	0.290	0.430	Urban Collector	2	Not Posted	12	27	0.14	50	N/A	N/A	N/A	Erial - Williamstown Road	Winslow Twp
CR 704	0.430	0.670	Urban Collector	2	Not Posted	3	27	0.24	50	N/A	N/A	N/A	Erial - Williamstown Road	Winslow Twp
CR 704	0.670	0.760	Urban Collector	2	Not Posted	1	27	0.09	50	N/A	N/A	N/A	Erial - Williamstown Road	Winslow Twp
CR 704	0.760	0.810	Urban Collector	2	Not Posted	9	27	0.05	50	N/A	N/A	N/A	Erial - Williamstown Road	Winslow Twp
CR 704	0.810	0.900	Urban Collector	2	Not Posted	20	27	0.09	50	N/A	N/A	N/A	Erial - Williamstown Road	Winslow Twp
CR 704	0.900	1.380	Urban Collector	2	Not Posted	1	27, 29	0.48	50	N/A	N/A	N/A	Erial - Williamstown Road	Winslow Twp
CR 704	1.380	1.540	Urban Collector	2	Not Posted	0	29, 22	0.16	50	N/A	N/A	N/A	Erial - Williamstown Road	Winslow Twp
CR 704	3.780	4.360	Urban Collector	2	35	0	25, 42, 49	0.58	50	3, 7	Yes	No	Erial - Williamstown Road	Gloucester Twp
CR 704	4.360	4.410	Urban Minor Arterial	2	35	0	42, 36	0.05	50	3, 7	No	No	Erial - Williamstown Road	Gloucester Twp
CR 704	4.410	4.790	Urban Minor Arterial	2	25	0	36	0.38	50	N/A	N/A	N/A	Erial - Williamstown Road	Gloucester Twp
CR 705	0.000	0.340	Urban Minor Arterial	2	45	0	31, 29	0.34	50	3	No	No	Sicklerville Road	Winslow Twp
CR 705	0.340	1.120	Urban Minor Arterial	2	45	6	31, 19	0.78	50	3	Yes	No	Sicklerville Road	Winslow Twp
CR 705	1.120	1.470	Urban Minor Arterial	2	45	19	19	0.35	50	3	Yes	No	Sicklerville Road	Winslow Twp

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700 Series Camden County Roads with New Jersey Transit Bus Routes

ROUTE #	mp_start	mp_end	Functional Classification	# of Lanes	Posted Speed	Shoulder Width	Pavement Width	Segment Length	ROW Length	CMP	Transit	Crashes	Roadway Name	Municipality
CR 705	1.470	1.520	Urban Minor Arterial	2	45	0	19, 30	0.05	50	3	No	No	Sicklerville Road	Winslow Twp
CR 705	1.520	1.860	Urban Minor Arterial	2	45	5	30	0.34	50	3	No	No	Sicklerville Road	Winslow Twp
CR 705	1.860	1.920	Urban Minor Arterial	3	45	5	40, 57	0.06	50	3	No	No	Sicklerville Road	Winslow Twp
CR 705	1.920	2.010	Urban Minor Arterial	2	45	5	36	0.09	50	N/A	N/A	N/A	Sicklerville Road	Winslow Twp
CR 705	3.340	5.510	Urban Minor Arterial	2	45	1	22, 28	2.17	50	3, 7	Yes	No	Sicklerville Road	Winslow Twp
CR 705	5.510	6.180	Urban Minor Arterial	2	35	1	28, 13, 24	0.67	50	3, 7	No	No	Sicklerville Road	Winslow Twp
CR 705	6.180	7.390	Urban Minor Arterial	2	35	3	24	1.21	50	3, 7	No	No	Sicklerville Road	Winslow Twp
CR 705	7.390	7.670	Urban Minor Arterial	2	35	0	40	0.28	50	3, 7	Yes	No	Sicklerville Road	Winslow Twp
CR 706	0.000	1.530	Urban Collector	2	50	1	27	1.53	50	3	Yes	Yes	New Brooklyn - Blackwood Road	Winslow Twp, Winslow Twp
CR 706	1.530	1.620	Urban Collector	2	50	12	27	0.09	50	3	Yes	No	New Brooklyn - Blackwood Road	Winslow Twp
CR 706	1.620	1.930	Urban Collector	2	50	2	27	0.31	50	3	Yes	No	New Brooklyn - Blackwood Road	Winslow Twp
CR 706	1.930	2.390	Urban Collector	2	50	0	27, 30, 28	0.46	50	3, 7	No	No	New Brooklyn - Blackwood Road	Winslow Twp
CR 706	5.510	5.670	Urban Collector	2	45	0	27	0.16	50	3, 7	Yes	No	New Brooklyn - Blackwood Road	Gloucester Twp
CR 706	5.670	5.890	Urban Collector	2	45	5	27	0.22	50	3, 7	No	No	New Brooklyn - Blackwood Road	Gloucester Twp
CR 706	5.890	5.960	Urban Collector	2	45	0	27	0.07	50	3, 7	No	No	New Brooklyn - Blackwood Road	Gloucester Twp
CR 706	5.960	6.020	Urban Minor Arterial	2	45	0	27	0.06	50	3, 7	Yes	No	New Brooklyn - Blackwood Road	Gloucester Twp
CR 706	6.020	6.140	Urban Minor Arterial	3	45	0	23	0.12	50	3, 7	No	No	New Brooklyn - Blackwood Road	Gloucester Twp
CR 706	6.140	6.280	Urban Minor Arterial	2	45	0	23	0.14	50	3, 7	No	No	New Brooklyn - Blackwood Road	Gloucester Twp
CR 706	6.280	6.420	Urban Minor Arterial	2	45	1	44	0.14	50	N/A	N/A	N/A	New Brooklyn - Blackwood Road	Gloucester Twp
CR 706	6.420	6.470	Urban Minor Arterial	2	45	2	44, 14	0.05	50	3, 7	No	No	New Brooklyn - Blackwood Road	Gloucester Twp
CR 706	6.470	8.280	Urban Minor Arterial	2	45	0	14, 36, 49, 35, 42	1.81	50	3, 7	Yes	No	New Brooklyn - Blackwood Road, Erial Road	Gloucester Twp
CR 706	8.280	8.530	Urban Minor Arterial	3	45	0	43, 11	0.25	50	3, 7	No	No	Erial Road	Gloucester Twp
CR 706	9.450	9.480	Urban Minor Arterial	2	25	0	36	0.03	50	N/A	N/A	N/A	Blenheim - Erial Road	Gloucester Twp
CR 706	9.480	9.570	Urban Minor Arterial	2	25	2	27	0.09	50	N/A	N/A	N/A	Blenheim - Erial Road	Gloucester Twp
CR 706	9.570	10.670	Urban Minor Arterial	2	25	0	30, 32, 35	1.10	50	N/A	N/A	N/A	Almonesson - Blenheim Road	Gloucester Twp

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700 Series Camden County Roads with New Jersey Transit Bus Routes

ROUTE #	mp_start	mp_end	Functional Classification	# of Lanes	Posted Speed	Shoulder Width	Pavement Width	Segment Length	ROW Length	CMP	Transit	Crashes	Roadway Name	Municipality
CR 707	0.000	0.160	Urban Minor Arterial	2	25	1	23	0.16	50	N/A	N/A	N/A	Woodbury - Turnersville Road	Gloucester Twp
CR 707	0.160	0.430	Urban Minor Arterial	2	25	0	23, 26	0.27	50	N/A	N/A	N/A	Woodbury - Turnersville Road	Gloucester Twp
CR 707	0.430	0.670	Urban Minor Arterial	2	35	0	26, 37, 34	0.24	50	3, 7	Yes	No	Woodbury - Turnersville Road	Gloucester Twp
CR 708 I	0.000	0.170	Urban Collector	2	Not Posted	0	41	0.17	66	N/A	N/A	N/A	Zolkes Avenue	Berlin Twp
CR 708 II	0.000	0.690	Urban Collector	2	40	0	45, 49	0.69	66	N/A	N/A	N/A	Walker Avenue	Berlin Twp
CR 737	0.000	0.160	Urban Collector	2	Not Posted	0	48	0.16	unknown	N/A	N/A	N/A	Delaware Avenue	Camden City
CR 747	0.000	0.220	Urban Minor Arterial	2	35	0	35	0.22	50	3, 7	Yes	No	Lakeland Road	Gloucester Twp
CR 747	0.220	0.340	Urban Minor Arterial	2	35	1	25	0.12	50	3, 7	No	No	Lakeland Road	Gloucester Twp
CR 747	0.340	0.660	Urban Minor Arterial	2	35	2	25	0.32	50	3, 7	Yes	No	Lakeland Road	Gloucester Twp
CR 747	0.660	0.700	Urban Minor Arterial	2	35	0	40	0.04	50	3, 7	No	No	Lakeland Road	Gloucester Twp
CR 755	0.000	0.280	Urban Collector	2	25	0	35, 29, 30	0.28	60	N/A	N/A	N/A	Essex Street	Gloucester Twp
CR 759	0.000	0.580	Urban Minor Arterial	2	50	0	35	0.58	50	3, 7	No	No	Peter Cheeseman Lane	Gloucester Twp
CR 759	0.580	1.460	Urban Minor Arterial	2	35	0	35, 32, 24	0.88	50	3, 7	Yes	No	Peter Cheeseman Lane, Little Gloucester Road	Gloucester Twp
CR 759	1.460	1.730	Urban Minor Arterial	2	35	2	24	0.27	50	3, 7	No	No	Little Gloucester Road	Gloucester Twp
CR 759	1.730	1.810	Urban Minor Arterial	2	35	12	24	0.08	50	3, 7	Yes	No	Little Gloucester Road	Gloucester Twp
CR 760	0.000	0.740	Urban Local	2	25	0	24, 26	0.74	50	N/A	N/A	N/A	Sherman Avenue	Pennsauken Twp

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 - NA = segment did not meet screening criteria

APPENDIX C

New Jersey Transit Bus Information



New Jersey Transit Bus Ridership Information for Camden County (2007)

Bus #	Points of Departure and Destination	Weekday (passengers)	Saturday (passengers)	Sunday (passengers)
313/315	Cape May, Wildwood, Philadelphia	275/192	291/174	239/159
316	Cape May, Wildwood, Philadelphia (summer only)	513	595	567
317	Asbury Park, Fort Dix, Philadelphia	961	805	729
318	Philadelphia, Six Flags Great Adventure	47	144	85
400	Sicklerville, Philadelphia	5119	3647	2538
401	Salem, Woodbury, Philadelphia	645	586	529
402	Pennsville, Woodbury, Philadelphia	691	241	136
403	Turnersville, Lindenwold PATCO, Philadelphia	3291	2020	1055
404	Cherry Hill Mall, Pennsauken, Philadelphia	1822	1230	602
405	Philadelphia, Merchantville, Cherry Hill Mall	969	787	323
406	Berlin, Marlton, Philadelphia	1923	1021	682
407	Philadelphia, Merchantville, Moorestown Mall	1426	816	575
408	Millville, Philadelphia	1417	712	482
409	Trenton, Willingboro, Philadelphia	3044	1428	1047
410	Bridgeton, Woodbury, Philadelphia	1082	997	700
412	Glassboro, Woodbury, Philadelphia	1262	445	N/A

New Jersey Transit Bus Ridership Information for Camden County (2007)

Bus #	Points of Departure and Destination	Weekday (passengers)	Saturday (passengers)	Sunday (passengers)
413	Philadelphia, Mt. Holly, Burlington	1643	1245	902
418	Camden Express – Camden, Cherry Hill Mall, Moorestown Mall, Trenton	49	N/A	N/A
419	Burlington, Riverside, Philadelphia (via River Road)	762	451	344
450	Cherry Hill, Audubon, Camden	1309	675	498
451	Camden, Echelon Mall, Lindenwold PATCO	407	N/A	N/A
452	Camden, 36 th Street Station	1864	885	555
453	Ferry Avenue PATCO, Camden	393	189	N/A
455	Cherry Hill Mall, Woodbury, Paulsboro	799	660	108
457	Moorestown Mall, Camden	777	419	N/A
459	Echelon Mall, Camden County College, Avandale Park-n-Ride	849	442	198
463	Woodbury, Avandale Park-n-Ride	313	N/A	N/A
551	Philadelphia, Atlantic City, Ocean City	2418	2528	2147
554	Lindenwold PATCO, Atlantic City	2736	2574	2362

(Source: New Jersey Transit, July 2007)

Title of Report: Camden County Bus Pullout Study

Publication No.: 08040

Date Published: December 2008

Geographic Area Covered: The study area for this analysis covers Camden County, New Jersey

Key Words: Bus pullout, New Jersey Transit, Camden County, county routes, transit, bus passengers, bus crashes, Yield to Bus Law, New Jersey DOT, CMP, transit strategies

Abstract: The purpose of this report is to develop criteria to identify potential locations for where bus pullouts could be located on county roads within Camden County. The DVRPC Congestion Management Process (CMP), New Jersey DOT design standards, and local data (county road inventory, crash history and current bus operations) assisted in the development of the Plan. This document will provide guidance for New Jersey Transit and Camden County officials and will enable local planning and engineering agencies to consider the necessary provisions to accommodate bus pullouts in future development and capital projects.

Bus pullouts (also referred to as bus turnouts) are designated areas which allow transit buses to pull in and out of the main travel lane to pick up and discharge passengers at bus stop locations. The purpose of the pullout is to avoid blocking a lane of traffic and to improve passenger safety during the boarding and disembarking of transit passengers. Bus pullouts are provided primarily on high-volume and/or high speed roadways. In New Jersey, bus pullouts are commonly placed along the state highway system and in areas where there are a high number of passengers boarding such as large shopping centers and transit transfer centers.

Delaware Valley Regional Planning Commission
190 North Independence Mall West, 8th Floor
Philadelphia, PA 19106-1572

Phone: 215.592.1800
Fax: 215.592.9125
Internet: www.dvrpc.org

Staff Contacts:
Regina Moore, Project Manager

Direct Phone:
215.238.2862

E-Mail
rmoore@dvrpc.org



**DELAWARE VALLEY
REGIONAL PLANNING
COMMISSION**

**190 N Independence Mall West
8th Floor
Philadelphia, PA 19106-1520
215.592.1800
www.dvrpc.org**

