



Summary of Regional Population and Development

within Transportation Investment Areas

2000 – 2011

January 2012

Transportation Investment Areas: An Introduction

WILMAPCO's Transportation Investment Areas (TIAs) identify where various types and intensities of transportation improvements should focus. Their aim is to help foster sustainable and smart development of our region. The TIAs were last revised in 2007 with 2030 Regional Transportation Plan (RTP). The five TIAs (Center, Core, Community, Developing and Rural) match closely with state and county priorities for land use development, preservation and funding priorities. Below are descriptions of the TIA types from our 2030 RTP:

Center - *These are municipal areas with the highest concentrations of population and/or employment with well-established land uses and development patterns and opportunities for significant re-development. The transportation objective for these areas is to provide intensive transportation investment with an emphasis on public transportation, walking and bicycling, and to make existing and planned improvements as safe and efficient as possible.*

Core - *These are municipal and non-municipal areas which contain densely settled population and employment patterns. In addition, these areas contain a substantial amount of key regional transportation infrastructure encompassing all modes. The transportation objective for these areas is to maintain the existing infrastructure while allowing for system expansion for all modes of transportation, including the expansion of rail service and the addition of roadway capacity.*

Community - *These are areas with well-established land uses and development patterns and where growth and development pressures are expected to be moderate. The transportation objective for these areas is to expand and improve transportation facilities and services, and to make each as safe and efficient as possible.*

Developing - *These are areas where land uses and development patterns are not yet set and where they continue to emerge. The transportation objective for these areas is to appropriately encourage growth and rational development through a planned set of phased investments, land use coordination, and policy actions consistent with zoning densities and designations.*

Rural - *These are rural areas where limited growth and development exist or are expected, where transportation facilities and services are considered adequate to meet needs, and where natural resources are to be preserved. The transportation objective of these areas is to preserve existing transportation facilities and services, and to manage the transportation system to support the preservation of the natural environment.*

Generally, Centers and Cores are found along the urban I-95 corridor in our region's north. Community TIAs are urban outgrowths from Cores, while the Developing TIA is a fast-growing section of Southern New Castle County targeted for more building. Rural TIAs represent expanses of agricultural and undeveloped lands. A map of the TIA boundaries follows on the next page.

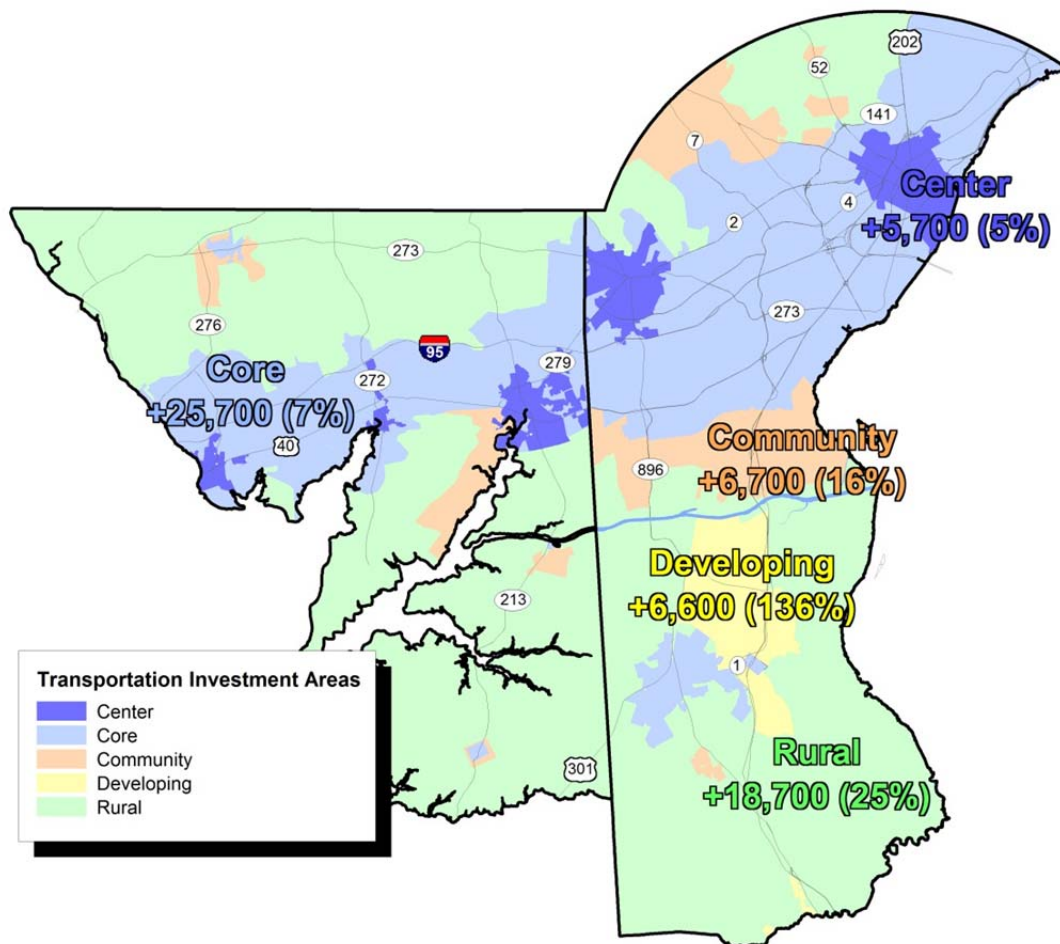
Our TIAs may be revised again with the 2014 RTP update. Their boundaries may shift to account for any designation changes from the counties or states.

Population Growth by TIA Analysis

Population change by TIA is tracked in our Regional Progress Reports. We use population figures by Traffic Analysis Zones (TAZs) to roughly estimate this growth. Because the TAZs do not align perfectly to the TIAs we must break the TAZs apart to begin the analysis. We reassign population figures to the now broken TAZs, assuming an equal spread of population by land area. As there is never an equal distribution of population within a TAZ, however, this method produces an error. So our results should be treated with caution, and considered rough estimates.

The map below shows population growth by TIA estimates from 2000 – 2011. Striking is the rapid growth of the Developing and Rural TIAs. During this period about 18,700 new residents settled into rural housing, stressing our transportation network, and triggering major transportation projects. Meanwhile, growth within Centers—particularly those in New Castle County—has been weak.

Population Growth Estimates, by TIA, 2000-2011



Population Growth Estimates, by TIA, 2000-2011

New Castle County				
TIA	2000	2011	Increase	% Change
Center	99,042	99,544	502	1%
Core	326,717	345,764	19,047	6%
Community	35,505	40,794	5,289	15%
Developing	4,862	11,490	6,628	136%
Rural	33,994	45,212	11,218	33%
Cecil County				
TIA	2000	2011	Increase	% Change
Center	19,793	25,049	5,256	27%
Core	19,655	26,299	6,644	34%
Community	6,248	7,693	1,445	23%
Developing		(none in Cecil Co.)		
Rural	40,125	47,558	7,433	19%
WILMAPCO Region				
TIA	2000	2011	Increase	% Change
Center	118,835	124,593	5,758	5%
Core	346,372	372,063	25,691	7%
Community	41,753	48,487	6,734	16%
Developing	4,862	11,490	6,628	136%
Rural	74,119	92,770	18,651	25%

Building Permit by TIA Analysis, New Castle County, 2008-2010

Given the limitations of our population growth by TAZ analysis, we explored other available data to see if and how the trends differed. In New Castle County, Delaware's State Office of Planning and Coordination has a spatial record of building permit data since 2008. These data show where development is *planned* in a given year. As they are at the tax parcel level, these data allow for a more refined (and accurate) analysis than the TAZ population growth analysis.

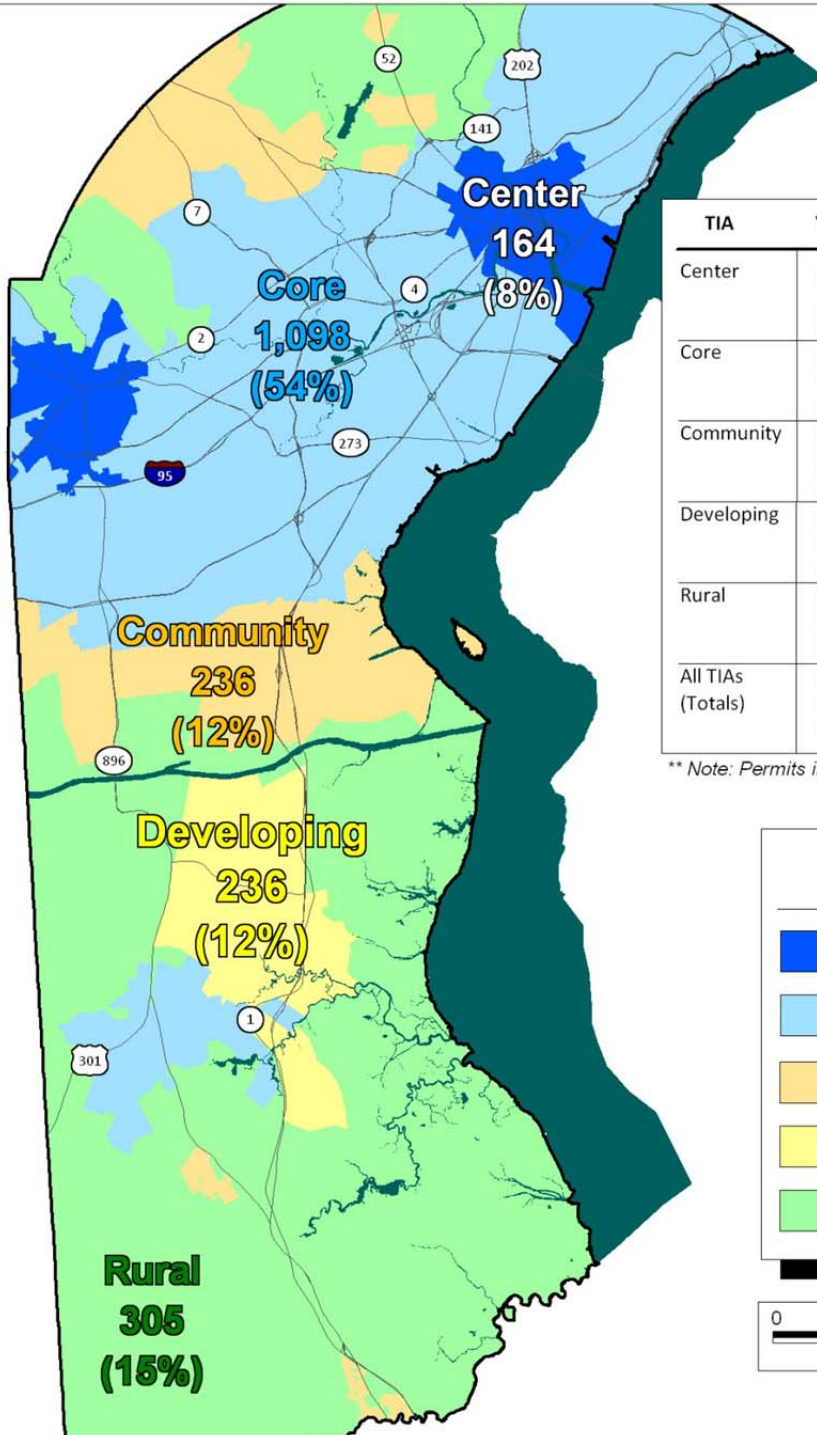
A possible result of the global economic recession, between 2008 and 2010 residential and non-residential development slowed in New Castle County. One-hundred and twenty-two non-residential permits were issued (accounting for 2.1 million square feet) in 2008. That figure dropped to 48 (1.3 million square feet) in 2010.

In the maps and graphs that follow, we explore where this development occurred. The first map considers where residential unit permits were granted by TIA, and the percentage of all permits found in that TIA. A second map shows the square footage associated with non-residential permits. Subsequent line charts depict development trends, by TIA. Unfortunately, only three years' worth of data makes the task difficult.

2008 - 2010 Building Permits by Transportation Investment Area (TIA)

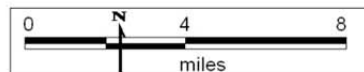
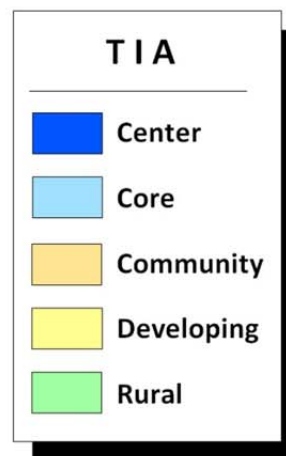
Residential Units

New Castle County, DE



TIA	Year	Permits (% of total)	Units (% of total)
Center	2008	77 (11%)	205 (21%)
	2009	46 (7%)	79 (10%)
	2010	47 (7%)	72 (9%)
Core	2008	401 (56%)	519 (53%)
	2009	344 (55%)	459 (60%)
	2010	354 (50%)	408 (52%)
Community	2008	97 (13%)	99 (10%)
	2009	60 (10%)	60 (8%)
	2010	79 (11%)	79 (10%)
Developing	2008	61 (8%)	63 (6%)
	2009	55 (9%)	55 (7%)
	2010	120 (17%)	120 (15%)
Rural	2008	84 (12%)	88 (9%)
	2009	117 (19%)	117 (15%)
	2010	105 (15%)	105 (13%)
All TIAs (Totals)	2008	720	974
	2009	622	770
	2010	705	784

** Note: Permits include residential and mixed usage



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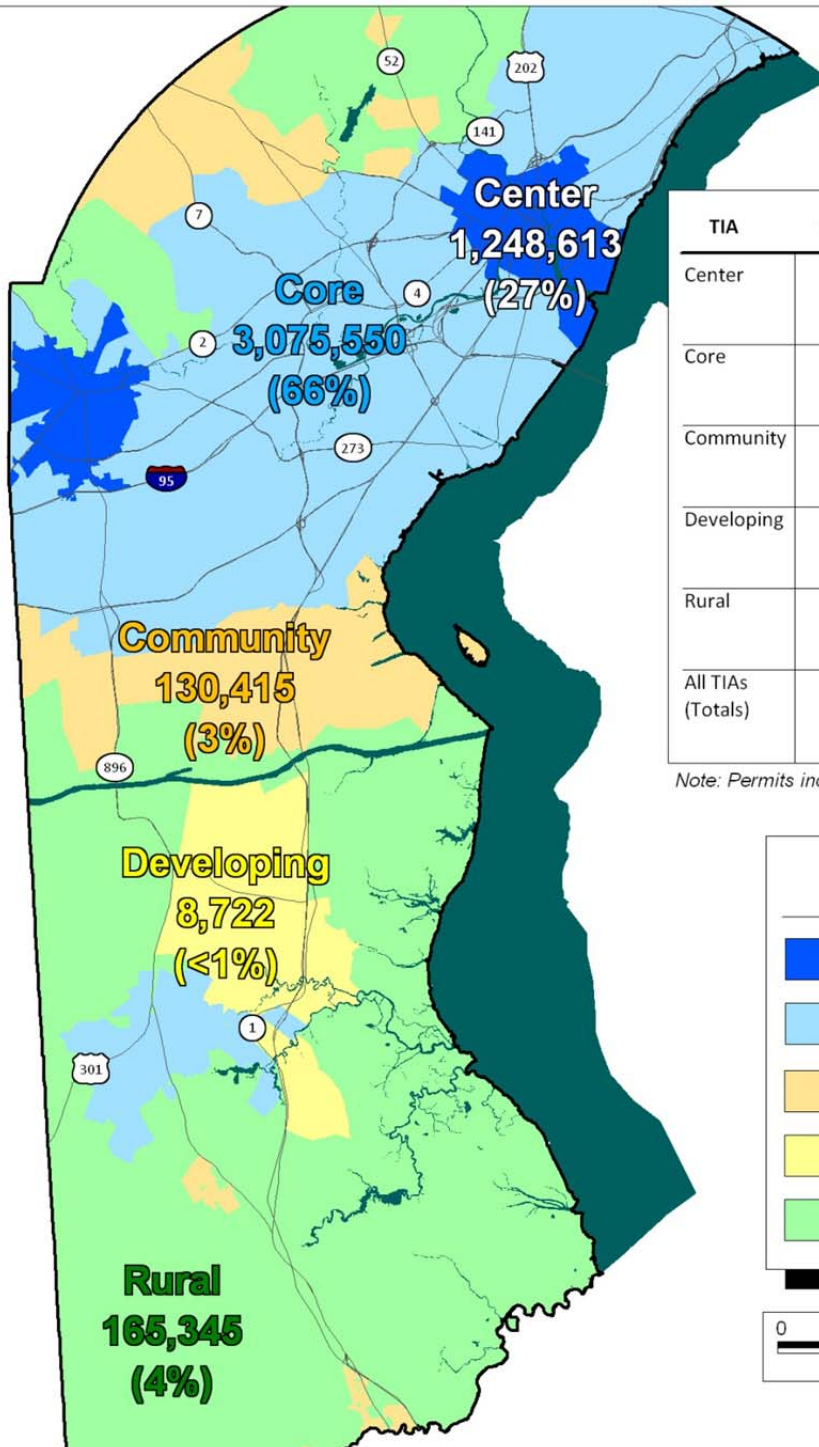
December 2011

Source: Delaware State Office of State Planning Coordination

2008 - 2010 Building Permits by Transportation Investment Area (TIA)

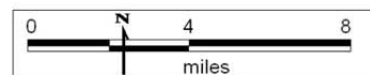
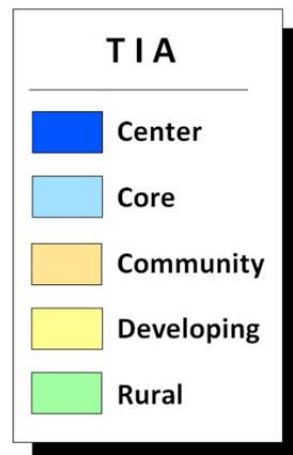
Non-Residential Square Footage

New Castle County, DE



TIA	Year	Permits (% of total)	Sq Ft (% of total)
Center	2008	12 (10%)	311,864 (14%)
	2009	15 (23%)	486,069 (44%)
	2010	9 (19%)	450,680 (34%)
Core	2008	83 (68%)	1,749,696 (80%)
	2009	39 (59%)	515,389 (46%)
	2010	35 (73%)	810,465 (61%)
Community	2008	13 (11%)	71,835 (3%)
	2009	4 (6%)	58,580 (5%)
	2010	0 (0%)	0 (0%)
Developing	2008	1 (< 1%)	960 (< 1%)
	2009	0 (0%)	0 (0%)
	2010	2 (4%)	7,762 (< 1%)
Rural	2008	13 (11%)	59,398 (3%)
	2009	8 (12%)	54,237 (5%)
	2010	2 (4%)	51,710 (4%)
All TIAs (Totals)	2008	122	2,193,753
	2009	66	1,114,275
	2010	48	1,320,617

Note: Permits include non-residential and mixed usage.

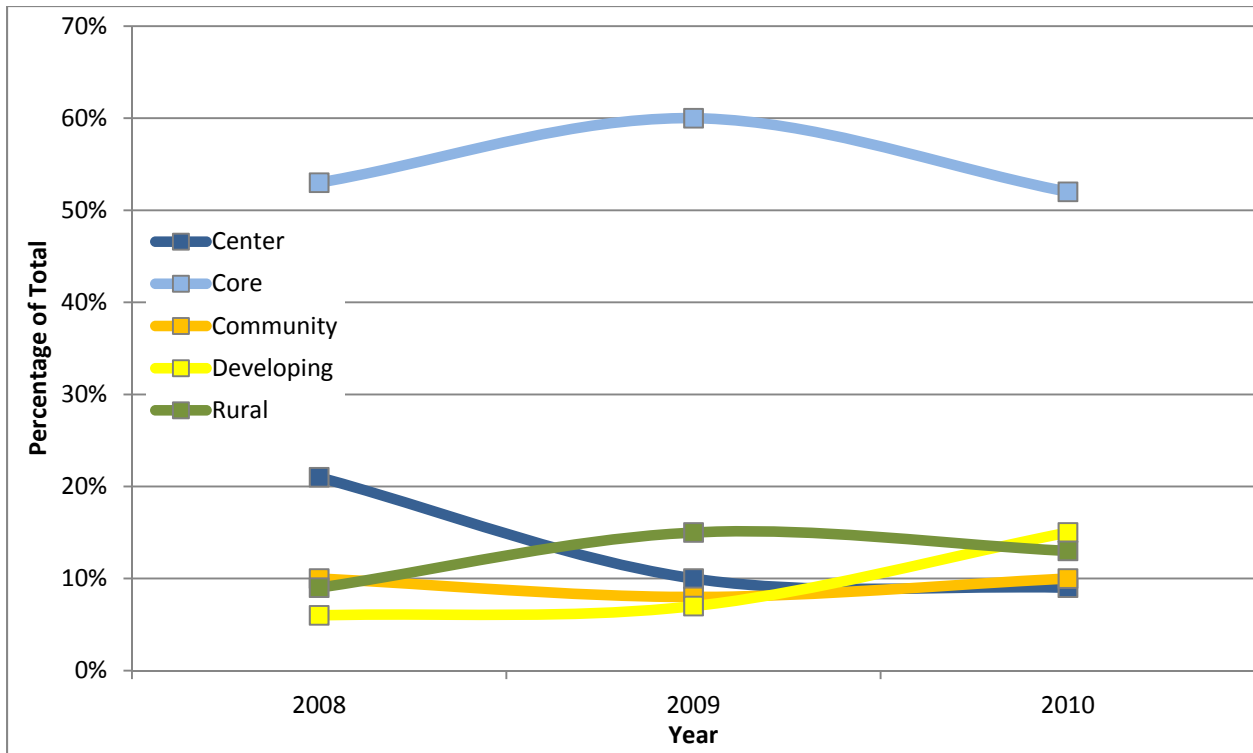


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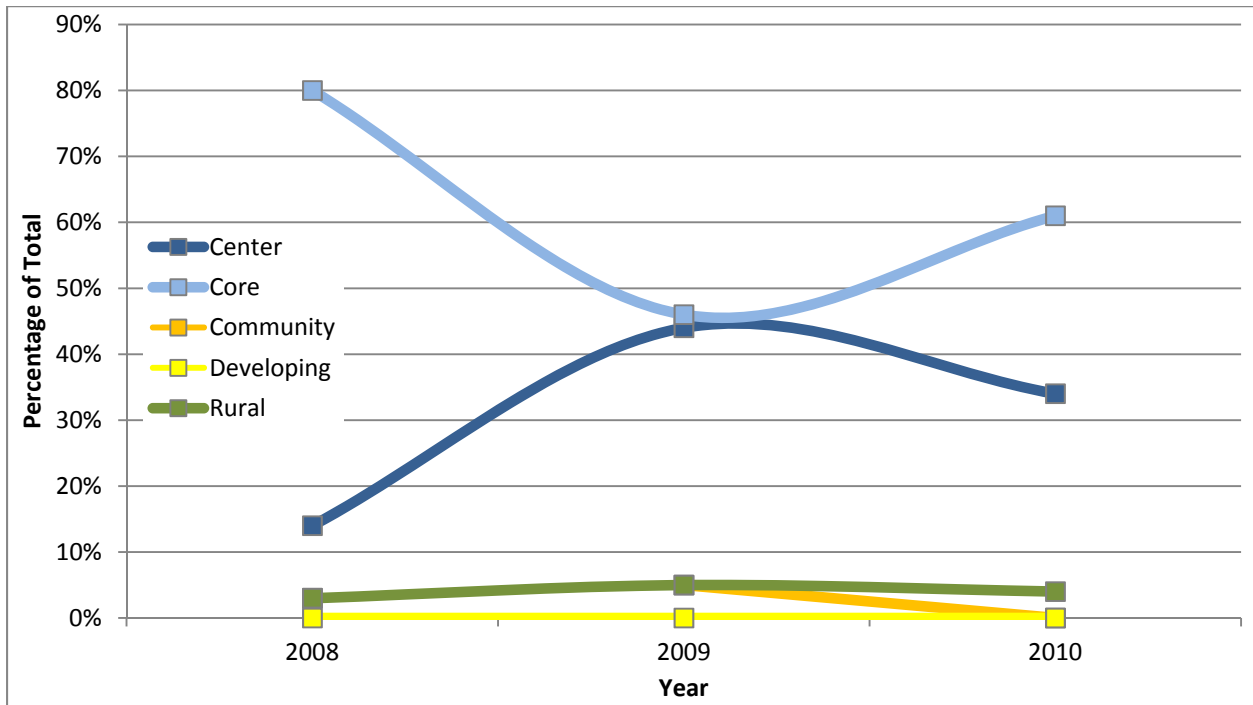
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Source: Delaware State Office of State Planning Coordination

Residential Units (Building Permits), New Castle Co. TIAs, 2008-10



Non-residential Square Footage (Building Permits), New Castle Co. TIAs, 2008-10



County-wide, both the number of residential units that received permits and the square footage associated with non-residential permits sank over the three-year period. However, those figures rose, or remained relatively unchanged within Developing and Rural TIAs. This correlates with the sharper population growth trends experienced within Developing and Rural TIAs described earlier, and suggests sustained building in these places.

Curious is the difference between where residential and non-residential permits were issued. While areas outside the Center, Core and Community TIAs were home to only about 10% of the county's population in 2011, they accounted for 27% of all residential unit permits issued between 2008 and 2010. However, merely 5% of the square footage associated with non-residential permits was to be found in Developing and Rural TIAs. This signals strong residential development in Developing and Rural TIAs but limited commercial.

Building Parcel by TIA Analysis, Cecil County, 2001-2010

In Cecil County individual tax parcel data from Maryland's Property View offers a wealth of data, and the same potential for an extremely fine-grained level of analysis. Note these data represent *existing* residential and commercial structures, not *planned* as in New Castle County. In the maps and graphs that follow, we explore residential and commercial development from 2001-2010.

During the decade development slowed considerably. From 2003-04, for example, 3.5 million residential square feet were cleared in Cecil County. During 2009-10 that figure barely topped 1 million.

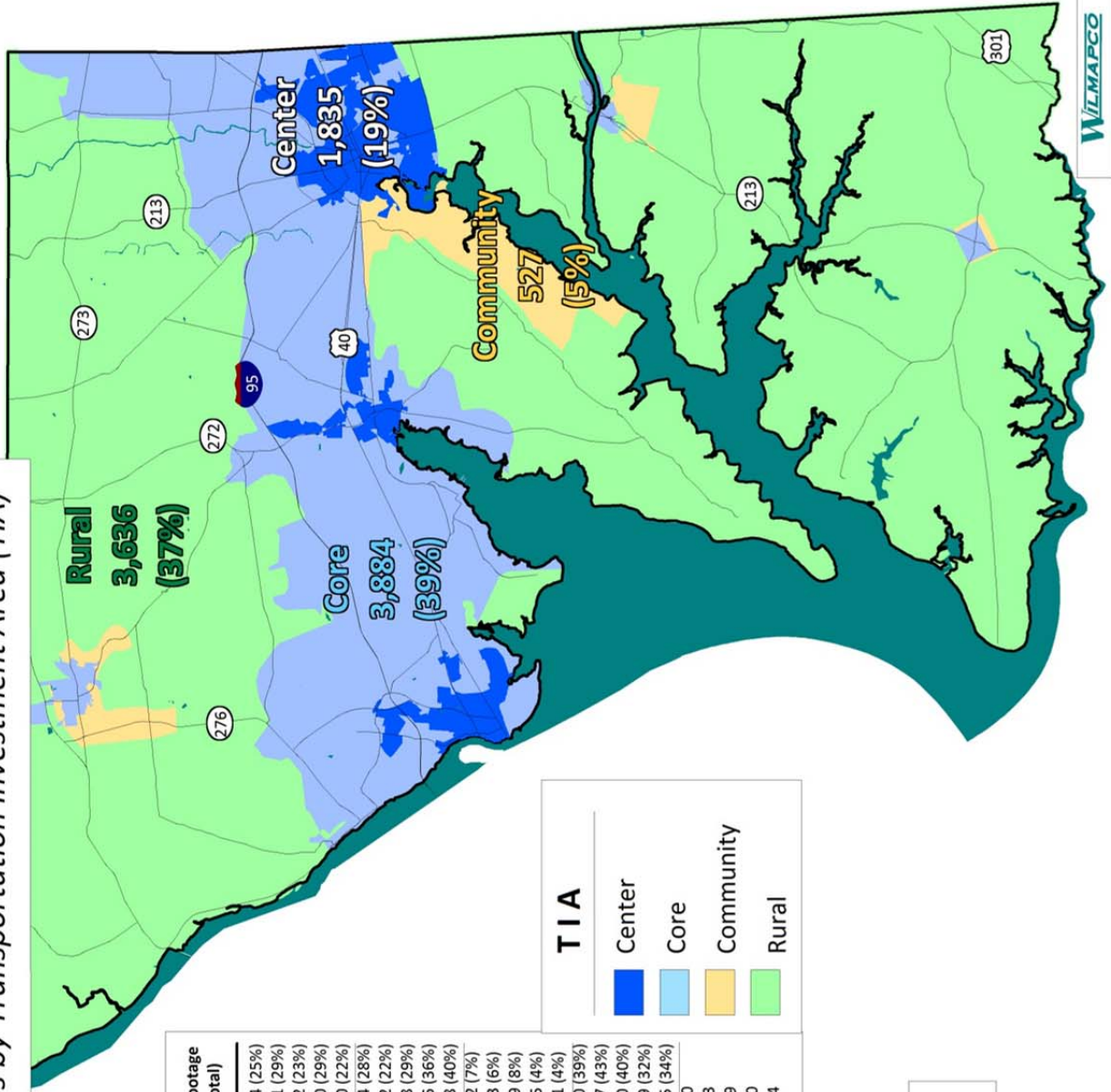
In terms of where residential development occurred, our Core TIA absorbed a markedly higher percentage of development during the years at the tail end of the decade (46% of units, 40% of square footage) than at the beginning (33% and 28%). In step with this, development dipped slightly in Center, Community and Rural TIAs. Heavy building within the Core correlates with the population trends we observed earlier, as the Core TIA witnessed the strongest growth in Cecil County.

Considerably fewer commercial parcels appeared in Cecil County during this period, resulting in dramatic shifts year-to-year. No discernable patterns related to commercial development can be observed.

2001 - 2010 Building Parcels by Transportation Investment Area (TIA)

Residential Units

Cecil County, MD



TIA	Years	Units (% of total)	Square Footage (% of total)
Center	2001-2002	484 (30%)	780,494 (25%)
	2003-2004	625 (37%)	1,044,121 (29%)
	2005-2006	368 (27%)	729,922 (23%)
	2007-2008	242 (28%)	453,950 (29%)
	2009-2010	116 (23%)	220,230 (22%)
Core	2001-2002	533 (33%)	881,284 (28%)
	2003-2004	422 (25%)	785,412 (22%)
	2005-2006	441 (33%)	920,998 (29%)
	2007-2008	430 (49%)	565,676 (36%)
	2009-2010	232 (46%)	405,138 (40%)
Community	2001-2002	87 (5%)	221,582 (7%)
	2003-2004	71 (4%)	221,673 (6%)
	2005-2006	81 (6%)	237,309 (8%)
	2007-2008	17 (2%)	63,445 (4%)
	2009-2010	15 (3%)	38,201 (4%)
Rural	2001-2002	534 (33%)	1,227,570 (39%)
	2003-2004	577 (34%)	1,539,477 (43%)
	2005-2006	452 (34%)	1,240,360 (40%)
	2007-2008	187 (21%)	504,879 (32%)
	2009-2010	136 (27%)	338,435 (34%)
All TIAs (Totals)	2001-2002	1,638	3,110,930
	2003-2004	1,695	3,590,683
	2005-2006	1,342	3,128,589
	2007-2008	876	1,587,950
	2009-2010	499	1,002,004

Note: The "Units" field is the combination of dwelling total and apartment units



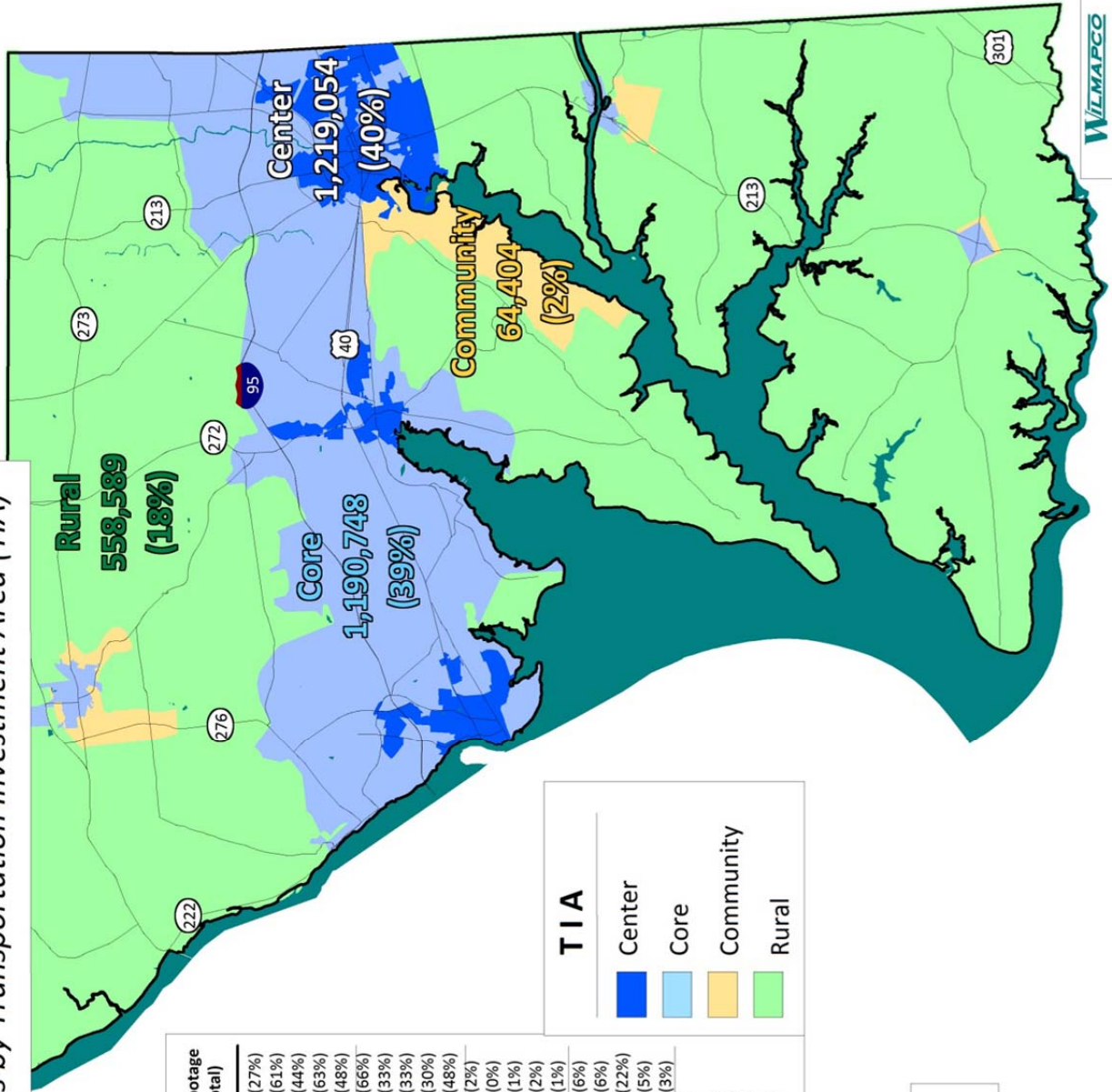
December 2011

Source: Maryland Property View (2011)

2001 - 2010 Building Parcels by Transportation Investment Area (TIA)

Commercial Square Footage

Cecil County, MD



TIA	Years	Parcels (% of total)	Square Footage (% of total)
Center	2001-2002	16 (38%)	215,684 (27%)
	2003-2004	10 (31%)	289,267 (61%)
	2005-2006	9 (38%)	355,184 (44%)
	2007-2008	9 (36%)	227,531 (63%)
	2009-2010	6 (29%)	131,388 (48%)
Core	2001-2002	19 (45%)	534,437 (66%)
	2003-2004	16 (50%)	155,576 (33%)
	2005-2006	6 (25%)	261,178 (33%)
	2007-2008	11 (44%)	108,803 (30%)
	2009-2010	10 (48%)	130,754 (48%)
Community	2001-2002	2 (5%)	13,194 (2%)
	2003-2004	1 (3%)	2,070 (0%)
	2005-2006	2 (8%)	9,293 (1%)
	2007-2008	1 (4%)	6,595 (2%)
	2009-2010	1 (5%)	2,100 (1%)
Rural	2001-2002	5 (12%)	49,754 (6%)
	2003-2004	5 (16%)	30,728 (6%)
	2005-2006	7 (29%)	174,765 (22%)
	2007-2008	4 (16%)	19,531 (5%)
	2009-2010	4 (19%)	9,033 (3%)
All TIAs	2001-2002	42	813,069
(Totals)	2003-2004	32	477,641
	2005-2006	24	800,420
	2007-2008	25	362,460
	2009-2010	21	273,275

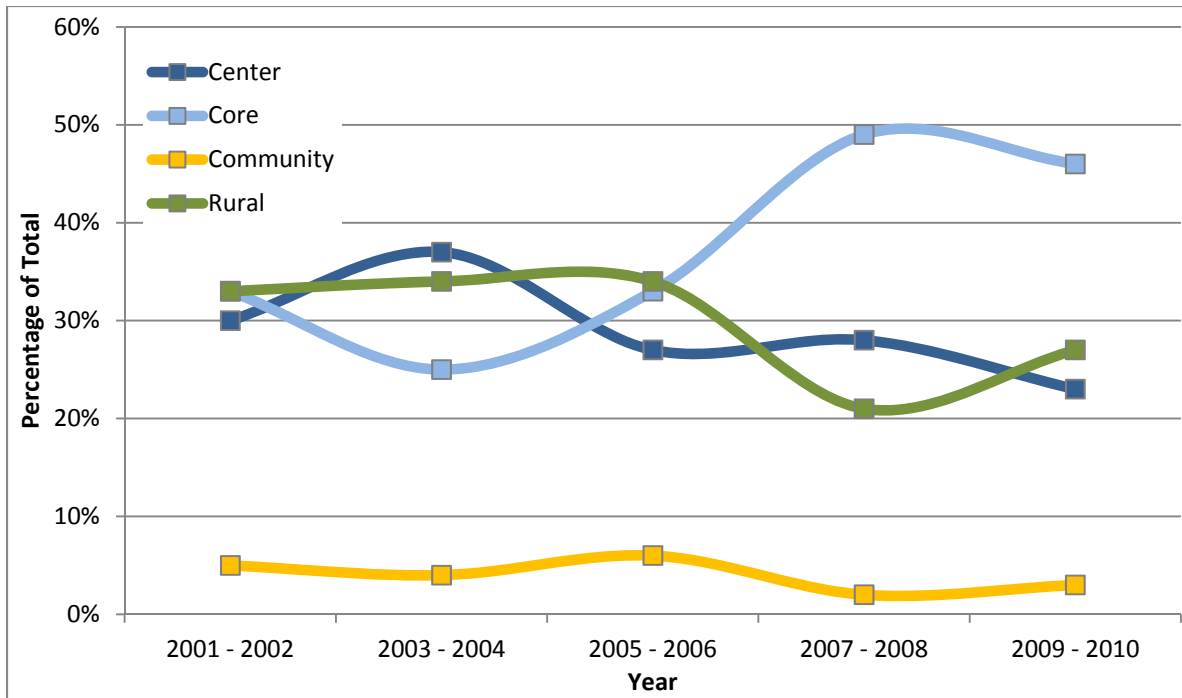
Note: The "Parcel" field reflects the number of buildings constructed.



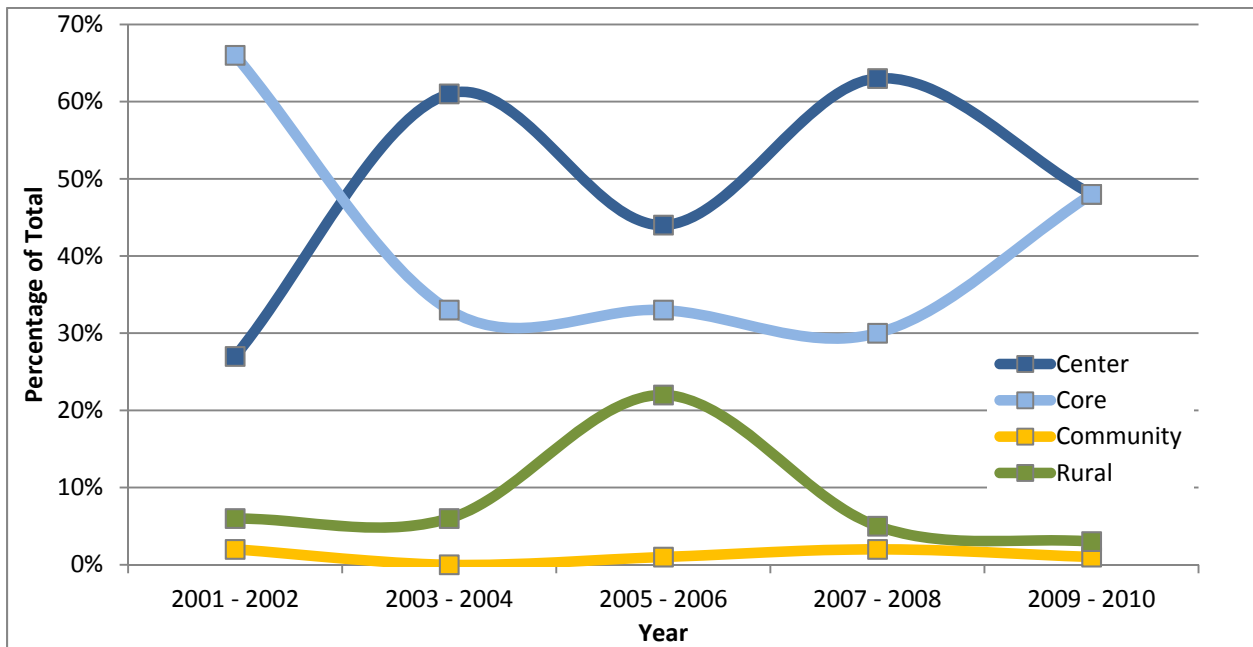
December 2011

Source: Maryland Property View (2011)

Residential Units, by Parcels, Cecil Co. TIAs, 2001-10



Commercial Square Footage, by Parcels, Cecil Co. TIAs, 2001-10



Comparing Population and Building Trends

It is telling to compare where existing population resides, and where development is planned (New Castle County) or has recently occurred (Cecil County). The table below compares these relevant data. Note that the population figures are based on our rough TAZ analysis, described earlier, and the permit and parcel data were produced by the Delaware Office of State Planning and the Maryland Property View.

Population and Development Comparisons, New Castle and Cecil Counties

New Castle County			
TIA	Population (2011)	Permits: Residential Units (2008-10)	Permits: Non-residential Square Footage (2008-10)
Center	18%	8%	27%
Core	64%	54%	66%
Community	8%	12%	3%
Developing	2%	12%	0%
Rural	8%	15%	4%
Cecil County			
TIA	Population (2011)	Parcels: Residential Units (2001-10)	Parcels: Commercial Square Footage (2001-10)
Center	23%	30%	47%
Core	25%	34%	46%
Community	7%	5%	3%
Rural	45%	31%	22%

In New Castle County, we can show heavy residential building in Developing, Rural, and Community TIAs, relative to their share of the population. By contrast few residential unit permits were issued within Centers (Newark and Wilmington). The Core and Center TIAs in New Castle County were, however, home to an overrepresentation of planned non-residential development, again relative to population.

Continuing residential growth outside our Centers and Cores in New Castle County (where our transportation network is most robust) stresses the system, leading to system expansion projects. That residential growth in Developing, Rural, and Community TIAs has not been paired with commercial development, as these permitting data suggests, compounds the problem. New residents to these communities may be doubly-reliant on highways to reach commercial activities, planned almost exclusively for Centers and Cores.

Development within Cecil County has been more balanced across TIAs, relative to population, according to recent parcel data. And indeed, both residential and commercial development over the last decade was stronger within Center and Core TIAs than Community and Rural TIAs. About half (45%) of Cecil County's population found themselves within a Rural TIA in 2011. Rural areas saw only 31% of the county's residential building and 22% of its commercial development within the last decade. While these figures may still be too high, by contrast, Center TIAs, home to 23% of the county's population, captured 30% of new residential development and 47% of new commercial growth.

These data suggest Cecil County may be beginning to better target development within Center and Core TIAs. As the county's population increases, a lower and lower percentage should locate within rural areas. Like New Castle County, Cecil County's transportation network is concentrated within Center and Core TIAs. Targeting development (and redevelopment) in these places makes for the most sustainable policy.