

Transit Village Monitoring Research

Executive Summary

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www.policy.rutgers.edu/tod/transitvillages

Introduction

From September 2004 to December 2005, the Alan M. Voorhees Transportation Center (VTC) at Rutgers University conducted an evaluation of the New Jersey Transit Village Initiative, funded by the New Jersey Department of Transportation (NJDOT). This project, entitled “Transit Village Monitoring Research”, continues the effort of a previous VTC study on the New Jersey Transit Villages, “Evaluation of the Transit Village Initiative”, carried out from September 2002 to December 2003.¹ Results of the current work can be found in the following reports:

- *State of the Literature 2004: Transit-Oriented Development (TOD)*
- *Demographic Data for “Second Generation” New Jersey Transit Villages*
- *Residential Survey Data: Rahway*
- *Commercial Survey Data: Metuchen, Rahway, South Amboy, South Orange*
- *Building Permit Data: 1999 – 2004*
- *Municipal Annual Report Form: Results of Pilot Survey*
- *Connectivity Measures*
- *Assessed Property Value Data*
- *Transit Village Maps: Pedestrian Sheds*

These reports can be downloaded from the VTC website:
<http://policy.rutgers.edu/vtc/tod>.² This Executive Summary highlights the major findings of these documents.

Background

The Transit Village Initiative is a program that seeks to revitalize and grow selected communities with transit as an anchor. Although the Transit Village Initiative is staffed and directed by the New Jersey Department of Transportation, a Task Force of representatives from several state agencies meets regularly to guide the Initiative. The participating agencies are:

- New Jersey Department of Transportation
- New Jersey Department of Environmental Protection
- New Jersey Redevelopment Authority
- New Jersey Transit
- New Jersey Department of Community Affairs
 - Office of Smart Growth
 - MainStreet New Jersey
- New Jersey Economic Development Authority
- New Jersey Housing and Mortgage Finance Agency
- New Jersey Commerce & Economic Growth Commission

¹ Reports from this study can be found at <http://policy.rutgers.edu/vtc/tod>

² They have also been submitted to NJDOT in paper copy and CD-Rom.

- New Jersey Council on the Arts

Within each agency, at least one person has been appointed the Transit Village representative. Each municipality also has a contact person who works directly with this representative, in addition to working with the Transit Village coordinator at NJDOT. The benefit of being a Transit Village is that this designation not only gives these municipalities priority consideration for state grants but also allows the municipalities to have direct contact with the representatives of these agencies. This is often helpful in expediting development approvals.

The Transit Village is designated as the half-mile area around the transit facility (this is also typically referred to as the Transit Village District). The Transit Village Initiative fits into the larger smart growth agenda in New Jersey because it helps to promote the growth of businesses and residential population around existing transportation infrastructure investments. Its aim is to reduce traffic congestion and improve air quality by promoting increased transit ridership, pedestrian activity, and bicycle use. In addition, the goals of economic revitalization and increasing the housing stock are part of an overall effort to create vibrant, enjoyable, and exciting areas around major transit nodes.

State of the Literature 2004: Transit-Oriented Development (TOD)

A literature review was conducted to update the previous literature review done in 2002, part of the first study described in the introduction. VTC found that with the growing number of TODs being planned and constructed across the country, the knowledge necessary to successfully design and implement TOD has expanded considerably, providing newcomers to TOD with the luxury of learning from past experiences to enhance the likelihood of future success. A growing base of knowledge is clearly evident in recent contributions to the literature on TOD. This literature review found three reports that provide comprehensive reviews of the topic, including coverage of the impacts of TOD, supportive public policies, financing issues, and a range of case studies. These three sources are:

- *Transit-Oriented Development in the United States: Experiences, Challenges, and Prospects* (TCRP Report 102). By Robert Cervero *et al.* (2004).
- *The New Transit Town: Best Practices in Transit-Oriented Development*. Ed. by Hank Dittmar and Gloria Ohland (2004).
- “Light Rail and the American City: State-of-the-Practice for Transit-Oriented Development.” By G.B. Arrington in *Transportation Research Circular EC508* (2003).

In addition to their comprehensive coverage of TOD, these reports provide unique contributions to the subject literature. Cervero *et al.* present detailed analyses of surveys distributed to transit officials and private developers, as well as seldom seen case studies

of TOD in older regions with a history of transit-oriented land-use patterns, including Boston, Chicago, and New Jersey. *The New Transit Town*, which contains chapters by numerous authors, provides recommendations and strategies for successful TOD planning based on evidence from recent attempts. Finally, Arrington offers a perspective on the integration of transit and land-use based on the increasingly popular light rail mode of transit.

Demographic Data for the “Second Generation” New Jersey Transit Villages

The New Jersey Transit Village Initiative is now composed of 16 Villages (TVs). Using 2000 Census Block Group level data, the half-mile circle around the transit station demographics — the “Transit Village” area — have been compiled to establish a baseline for monitoring purposes (Tables 1A and 1B). The first seven Villages, which were designated prior to 2003, are being described as “First Generation” Transit Villages. The remaining nine Villages, designated from 2003–2005, are referred to as the “Second Generation”.

There are several reasons for this distinction. First, those early seven Villages now have six years of history in being a TV. They were designated when the program was a new experiment with outcomes unknown. But today there are substantial results that can be seen in increasing construction investment³ and new housing units in the half-mile circle around the transit stations.

Secondly, since the first designations, the value of being a TV has been growing. More and more funds for projects are being made available to the Villages. And, as many more municipalities seek to join this “elite group”, the criteria for designation have been refined. The first generation Transit Villages have “come of age”. The second generation is now evolving in a somewhat different environment with enhanced incentives.

Highlights of the socio-economic and transportation characteristics the new Transit Villages include:

- Journal Square, Jersey City, is by far the largest TV with a 2000 population of 38,462 persons and 15,487 dwelling units.
- Immigrants are a strong component: Nearly half (48.4%) of the Journal Square residents are foreign born. Almost 15% are black, 23.5% are Asian, just under 30% identify themselves as Hispanic, and a impressive 25% are classified as “other”.
- New Brunswick has a shocking poverty rate of 33.2% — greatly surpassing the next highest Villages: Journal Square (19.5%).

³ See Transit Village Monitoring Research, Building Permit Data (Wells and Schmidt, 2005).

- Belmar, Collingswood and Cranford are all over 90% white population with less than 10% foreign born.
- Metuchen (\$65,000–\$117,000)⁴ and Cranford (\$55,000 – \$111,000) are the second and third wealthiest TVs after South Orange (\$70,000 – \$200,000).
- The Metuchen TV not only enjoys a high income level as noted above, it also has an extremely high homeownership rate (81.3%). Interestingly, the share of married-couple households (60%) is the highest among all the TVs while the percentage of school-age children (9.5%) is the lowest — a significant concentration of childless couples!
- In Collingswood an astounding 79.2% of its housing stock was built before 1940 and it has the lowest level of post-1990 construction (.4%).⁵
- Residents in Journal Square are the least car dependent of all TVs with only .6 cars per household. An impressive 51.8% of households do not have a car and the portion of workers using public transit is almost 47%.
- New Brunswick leads in workers walking (almost 20%) and biking (1.5%), no doubt due to the impact of the Rutgers University community.
- Journal Square dominates local train service with 21,000 boardings per day. New Brunswick is a distant second with 5,136.
- Journal Square also leads in bus routes serving the TV (11) with 522 departures daily weekday departures — making it an exemplary transportation hub.
- Matawan (2,066 spaces) and Metuchen (1,453 spaces) are marked by large park and ride lots.⁶ TVs with over 90% utilization rates of their commuter parking are Bloomfield (101%), Collingswood (97%), Metuchen (95%), Cranford (92%), and South Orange (91%).

Residential Survey Data: Rahway

A mail survey of Rahway households was conducted in Spring 2005 to assess community perception about smart growth, the town and neighborhoods, changes in the Transit Village District, and the importance of transit in choice of housing location. The same survey has been previously carried out (Spring/Summer 2003) in three other Transit Villages — Metuchen, South Amboy and South Orange. These surveys contained “Smart Growth” questions, about downtown development, especially housing, that were also on

⁴ Range of 1999 block group median incomes.

⁵ The redevelopment plan for the Collingswood TV calls for almost 1,000 new housing units

⁶ Matawan has approved plans to develop their surface lots with mixed-use and structured parking.

Metuchen is considering possible scenarios for redevelopment of their large parking areas downtown.

a statewide Eagleton Institute-*Star Ledger* poll of 802 households in Spring 2003. In each survey approximately 1500 households were polled: 1000 within the ½ circle around the transit station and 500 outside the circle. The overall response rate for the four towns was 38% with Metuchen highest at 49% and Rahway lowest at 30%. The following are the major results of the survey for Rahway:

- Rahway residents in general were significantly *more likely* to favor housing in the town's downtown center (71%) and a significant portion (67%) feel it is *very important* that the state actively encourage growth and development in existing downtowns.
- Rahway respondents indicated the highest support for downtown housing (71%) compared to South Orange (50%), South Amboy (50%), Metuchen (23%) and New Jersey (49%).
- Only 12% of residents living in the Transit Village District felt that their neighborhood was "much better" than the rest of the town, while 31% outside the TV felt that way.
- Most residents who classified themselves into any "non-white" category (i.e. black, Asian or Hispanic) were more likely to feel *positively* about their town but negatively about their own *neighborhood*.
- Less than 50% of Rahway residents saw improvement in downtown safety (35%), walkability (45%) and shopping (31%) over the last three years.
- However, minority groups, in particular blacks, were significantly *more likely* than white respondents to feel that downtown Rahway *had improved* over the past three years.
- Seventy-five percent (75%) of all respondents did feel that the downtown was more attractive.
- A substantial portion of non-whites (20%) said that transit was a "major reason" for moving to their current location. This compares to only 12% of whites, a statistically significant result.
- Outside the TV area Hispanics are significantly *more likely* than non-Hispanics to say that transit was a "major reason" for moving to their current location and are significantly *more likely* than non-Hispanics to use public transit more than five times a month.

The economic and diversity differences among the Transit Villages are evident in the survey results. South Orange and Metuchen are more bedroom commuter communities while Rahway and South Amboy represent a blue-collar manufacturing legacy. And, Rahway is the most diverse racially and ethnically. These perspectives have to be factored in when considering the survey results. However, it does appear that

improvements being made in all of the TVs are adding to the overall satisfaction of residents.

Commercial Survey Data: Metuchen, Rahway, South Amboy, South Orange

One component of VTC's evaluation of the New Jersey Transit Village Initiative involved conducting commercial surveys with businesses surrounding the transit stations in Metuchen, South Amboy, South Orange and Rahway. These surveys were administered to gather opinions from owners and managers about the effect of transit and the Transit Village designation on their businesses. There were also questions about the transportation habits of employees and parking provisions. The surveys took place from 2003–2005 and response rates were commendable, ranging from 31 to 50%, with Metuchen generating the highest number of returned surveys.

- 93% of business owners felt that it is either “very important” or “somewhat important” that the state actively encourage growth and development in New Jersey’s existing downtown areas and commercial centers, while only 65% of the commercial respondents favor new housing construction in the downtown areas of their respective towns.
- Over half said the Transit Village designation had no impact on the downtown or on their own business, while 43% were not even aware of their town’s designation.
- 70%–80% of the respondents in Metuchen and South Amboy are confident that their respective town is a good or excellent place to conduct business, while only 54% of the respondents in both South Orange and Rahway expressed this reaction.
- Respondents indicate that all four downtown areas are now more attractive and pleasant, with the greatest improvements seen in Rahway and South Amboy.
- 60% of businesses represented in this survey are situated within a five-minute walk from the transit station, yet respondents feel that transit service does not necessarily have a positive impact on their business.
- 70%–90% of businesses have at least one employee who drives alone to work, and South Orange has the highest percentage of businesses with at least one employee using the train or bus.
- More businesses provide parking for *employees* than for *customers*.
- 78% of responding businesses have been in operation in their present location for over five years, and 58% has been in operation in their present location for over 10 years.
- 63% of surveyed businesses employ two to 10 people; 11% do not have any additional employees aside from the owner/manager; 12% employ 11 to 20 people; the small remaining percentage employ greater than 20 people.

- Businesses near transit stations tend to receive a great deal of business in the morning rather than in the evening. On weekdays, 47% claim to be busiest during morning hours, while only 30% claim to be busiest during evening hours.
- 64% of business owners/managers indicated that they are *not* residents of the town where they conduct business.

Surveyed business proprietors in these four Transit Villages seem to be supportive of downtown growth and development, although they are somewhat ambivalent about new housing. And, while it is troubling that 43% of business owners were *unaware* of the Transit Village designation, it is encouraging that most feel that the appearance and atmosphere of their downtown has *improved* since the Transit Village designation.

It is interesting that the majority of respondents feel that transit service *does not necessarily influence* the success of their business. Further, transit does not seem to play a role in work trips for employees, as most drive alone. As a result, businesses provide parking primarily for employees as opposed to customers.

Finally, two-thirds of the owners/managers that responded do not live in the community. This fact most likely explains their lack of knowledge about Transit Village designation and suggests that more should be done to involve proprietors in the concepts and goals of transit-oriented development.

Building Permit Data: 1999 – 2004

Since 1999 the New Jersey Transit Village Initiative has demonstrated impressive results in construction investment in the 16 designated Transit Village districts:

- \$521.9 million total construction activity
 - \$330.9 million non-residential
 - \$191.0 million residential
- 879 net housing units added

The “First Generation” Transit Villages (Morristown, Pleasantville, Rahway, Riverside, Rutherford, South Amboy, and South Orange) represent \$236.8 million of the total construction activity. Construction investment in these Transit Villages has steadily grown from \$1.7 million in 1999 to over \$50 million in 2004. Yearly growth rates over the period far exceed those for the state. Planning and redevelopment efforts in these designated Transit Villages are clearly having a positive economic effect.

The “Second Generation” Transit Villages (those named from 2003 – 2005: Belmar, Bloomfield, Bound Brook, Collingswood, Cranford, Journal Square/Jersey City, Matawan, Metuchen, and New Brunswick) represent \$285.1 million of the total building investment in just two years. The more urban communities of Bloomfield and New Brunswick were primarily responsible for this performance. However, construction in Bloomfield (\$129.2 million) was predominantly non-residential, whereas building investment in New Brunswick (\$101 million) was largely for housing.

Housing production across all Transit Villages has been somewhat light over the six year period: 628 units have been constructed in the First Generation Transit Villages and 251 were constructed in the Second Generation Transit Villages. On the other hand, it appears that the emphasis on non-residential improvements has been necessary to set the stage for a more attractive housing market. Indeed, many residential projects are now in production after extensive improvements in downtown areas. We expect the number of residential units constructed to increase in coming years.

Finally, some Transit Villages are more successful than others. Some have encountered unexpected delays and some have failed to attract substantial investment. While we recognize that projects take many years to complete and are highly dependent on contextual economic and demographic factors, the Transit Village Initiative Task Force may wish to revisit the strategies of selected Transit Villages in an effort to bolster their progress.

Municipal Annual Report Form: Results of Pilot Survey

In early 2005, the New Jersey Department of Transportation (NJDOT) worked with the Voorhees Transportation Center (VTC) at Rutgers University to prepare an Annual Municipal Reporting Form for the Transit Village Initiative Program (Exhibit A). The purpose of the form is two-fold: to gauge development activities in the Transit Village District and to assess the strengths and weaknesses of each municipality in finding and reporting development data.

The form itself has four major sections: *Construction Activity*, *Grants & Incentive Programs*, *Other Transit Village Activity* and *Additional Comments and Suggestions*. Each section contains a set of questions relating to its heading, and preparers were asked to respond as completely and honestly as possible to all questions. The questions dealt predominantly with construction and development activity in the Transit Village District (the half-mile circle around the train station).

NJDOT chose to perform a pilot study of the Annual Municipal Reporting Form. This “trial run” would allow us to determine how successfully municipalities were able to complete the form, and would also demonstrate the general level of coordination and integration within each Transit Village area. Each participant in the pilot study was asked to relate any comments or concerns in filling out the form, and there was frequent contact with each representative to ensure that any questions they had were answered.

For the pilot study, the form was sent to three Transit Villages: Rahway, Cranford and Pleasantville. The Transit Village representative in each municipality was contacted ahead of time by NJDOT or VTC to request their participation. The form was sent to municipalities during the first week of May 2005. VTC made adjustments to the form based on the feedback from the three municipalities.

Connectivity Measures

Due to the increasing availability and accessibility of technology and data, a number of metrics have evolved to measure urban form. Some of these measures have been used to determine land use characteristics, such as: residential density, the ‘strength’ of the neighborhood center, or downtown⁷, average lot size, and the mix of residential, commercial, and office uses.⁸ However, other measures have focused on levels of “accessibility” between land use and the transportation network. These accessibility indicators are considered to be one of the primary tests of how well the two are coordinated.⁹

Connectivity, a measure of the interconnectedness of a transportation network or pattern, is one of the more important indicators.¹⁰ A more highly connected transportation network indicates a greater number of available options in route planning.

This study examined relative connectivity, using the New Jersey Transit Villages and a random selection of sample road networks, ranging from rural to urban throughout the state¹¹. The purpose was to compare relative connectivity (and thus the ‘walkability’ or ‘pedestrian friendliness’) of the transit villages with other road networks.

Results indicate that Transit Villages tend to have higher connectivity indices. This is what should be expected. Most are older communities, laid out in the 19th century, when the grid was the most common form of street pattern and residents walked to the transit station. Newer developments, particularly suburban and exurban communities tend to be auto-oriented, and consequently less connected. The higher connectivity of the Transit Villages is conducive to encouraging pedestrian-oriented development, fostering a sense of place, and increasing transit ridership.

It should be cautioned that with any attempt to quantify ‘walkability’ or ‘pedestrian-friendliness’, *quantitative* information can only say so much. A complete examination would also include *qualitative* measures. Therefore, it is recommended that:

- Pedestrian-streetscape audits should be conducted in all Transit Villages in order to complement the Beta index
- Other quantitative measures — “average block length”, “average distances to the nearest commercial use, park or transit stop”, and “percentage of residential land use within walking distance of commercial uses or transit” — should also be developed.

⁷ Ewing *et al*, 2002

⁸ Song and Knaap

⁹ Ewing *et al*, 2002

¹⁰ Demers, 1997

¹¹ Internal and external connectivity are irrelevant in this situation as they are intended for well defined neighborhoods, not a half mile buffer line around a train station.

Assessed Property Value Data

In a recent nationwide survey¹² transportation professionals were asked to rank indicators of success in transit-oriented development (TOD). The fifth most highly rated indicator was “estimated increase in property value”. It was not, however, identified by the respondents as “easy to collect”. And, in New Jersey, trying to establish change in property values in the Transit Village (TV) District is a challenge.

It was decided that establishing a data base of assessed values in the TV and reviewing the change from year to year would be the first place to start. However, it was discovered that information varied greatly, depending on the town and the county. In calculating changes in the assessed value, digital parcel information was used, wherever this was possible. Digital information was available for the following towns: Pleasantville, Riverside, Bound Brook, Belmar, Matawan, and Rutherford. Digital information is usually organized at the county level, but is spotty throughout the state. If digital information was lacking, paper copies of tax index maps (available through the town tax assessor’s office) were used.

It is clear from the data that only modest gains were made in overall assessed property values, with the exception of New Brunswick, reporting a nearly 5% increase over a year (there has been tremendous redevelopment in downtown New Brunswick), and South Orange, which reported a slight decrease over a two-year period between 2002 and 2004 (several properties in the downtown area near the train station have become vacant and are awaiting approvals for redevelopment). The increase in assessed property value between the years 2002 and 2003 in Belmar is due to a revaluation. Other recent revaluations are: Morristown, 2004; and South Amboy, 2005.

It appears that additional approaches need to be taken to monitor changes in property values. While it is suggested that assessed values continue to be monitored, it is recommended that arrangements be made to work with local Multiple Listing Services (Realtors MLS) and/or other local organizations such as Mainstreet, Downtown Partnership, and the Chamber of Commerce to document:

- residential sales and rents levels;
- commercial space rent levels and improvements; and,
- general level of real estate activity in the Transit Village area.

Transit Village Maps: Pedestrian Sheds

As with the first seven Transit Villages, true half-mile and quarter-mile walking distances from the transit station (“pedsheds”) have been mapped for the “Second Generation” Transit Villages. These maps can be downloaded from the VTC website: at <http://policy.rutgers.edu/vtc/tod>.

¹² Renne and Wells. 2005. *Developing a Strategy to Measure Success*. Research Results Digest 294, National Cooperative Highway Research Program.