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New Jersey Department of Transportation
Bureau of Research

Technical Brief

Measuring the Benefits of Transit-Oriented Development

This study provides an overview of the beneficial impacts of transit-oriented development – compact, mixed-use pedestrian land uses within walking distance of transit stations. These benefits can lead to more vibrant and healthier communities and provide personal benefits to those choosing to live in TODs and near stations.

Background

A major goal of transit-oriented development (TOD) is to direct land development to where public transit and infrastructure already exist, with the expectation that transit ridership will increase and auto use will decrease as the convenience of transit leads it to become the mode of choice. Increased transit ridership and decreased auto use are generally accepted as public benefits – resulting in reduced air pollution, greenhouse gas emissions, traffic congestion and crashes, as well as increased physical activity if walking trips increase with associated health benefits. Other benefits that may accrue to individuals, households, and communities include the creation of a more stable economic base and promotion of community.

Research Objectives and Approach

Our objective was to document and assess the benefits gained through the implementation of a TOD strategy through both qualitative and quantitative approaches. To do so, we collected and examined data from key informant interviews, focus groups of those living near four stations, and a mail and online survey of 1,629 households near eight stations. Additionally we conducted case studies of three communities that have adopted a TOD strategy.

Findings

- Professionals and decision makers in New Jersey are highly supportive of TODs and see this as a way to rejuvenate communities and benefit the residents of those communities. Those we interviewed are highly supportive of TOD.
- Focus group participants offered broad support for development near stations. These residents appreciated the rejuvenation that TOD has brought

their communities, access to transit, and the ability to walk in their downtown area. Their opinions of the retail component of some projects were mixed as they felt that most of the retail was geared toward entertainment and not basic needs. There were also concerns about increased traffic endangering pedestrians.

- We found that residents living within a ½ mile of a station are more likely to walk and to take public transit more frequently than those who live from ½ to two miles from a station, while also driving less. This finding holds when controlling for various attitudes towards one's neighborhood, demographic factors such as income and age, vehicle ownership, how long one has lived in one's current residence, and features of the built environment.
- Results show that being close to a station enhances residential property values, while controlling for other factors that influence valuations. TOD can also be used as a way to increase the diversity of housing choices in a community as smaller units, or more affordable units, mitigate the impact of any increase in property values.
- Casualties from traffic crashes are less frequent near rail or light-rail stations. Pedestrian casualties are less frequent in areas with more population density. Bicycle casualties are higher near stations, perhaps due to more bicycling activity.
- Out-of-pocket expenses associated with using transit are less than those associated with driving. Travel time costs, however, are higher for transit except for those boarding in lower income communities. This is a result of our methodology that bases the value of time on average wages. Total costs of using transit are lower for those boarding at Broad St (Newark) and Plainfield and also at New Brunswick.
- We analyzed the impact of shifting population to be closer to the station using a regional travel demand model. If more people lived near transit stations, regional congestion would be reduced, and more people would take transit.

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A final report is available online at: http://www.state.nj.us/transportation/refdata/research/. If you would like a copy of the full report, send an e-mail to: Research.Bureau@dot.state.nj.us.

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