Performance-Based Transit-Oriented Development Typology Guidebook
The Center for Transit-Oriented Development (CTOD) is the only national nonprofit effort dedicated to providing best practices, research and tools to support market-based transit-oriented development. CTOD partners with both the public and private market sectors to strategize about ways to encourage the development of high performing communities around transit stations and to build transit systems that maximize development potential. CTOD works to integrate local and regional planning, generate new tools for economic development, real estate and investment issues, improve affordability and livability for all members of the community, and respond to imperatives for climate change and sustainability. The Center for TOD is a partnership of Reconnecting America, the Center for Neighborhood Technology, and Strategic Economics. For more information go to CTOD’s website at www.ctod.org.

Reconnecting America works to create better communities – places where transportation choices make it easy to get from place to place, where businesses flourish, and where people from all walks of life can afford to live, work and visit. Reconnecting America not only develops research and advocates for public policy, but we also build on-the-ground partnerships and convene the players necessary to accelerate decision-making.

The Center for Neighborhood Technology is a creative think-and-do tank that combines rigorous research with effective solutions. CNT works across disciplines and issues, including transportation and community development, energy, natural resources, and climate change. The goal is urban sustainability – the more effective use of resources and assets to improve the health of natural systems and the wealth of people.

Strategic Economics is a consulting and research firm specializing in urban and regional economics and planning. The firm helps local governments, community groups, developers and nonprofit organizations understand the economic and development context in which they operate in order to take strategic steps towards creating high-quality places for people to live and work.

Authors:
Mason Austin
Dena Belzer
Albert Benedict
Paul Esling
Peter Haas
Gajus Miknaitis
Elizabeth Wampler
Jeff Wood
Linda Young
Sam Zimbabwe

Financial Support for this Guidebook was provided by the Rockefeller Foundation.
Development of a Performance-Based TOD Typology Tool

Transit-Oriented Development is a community development model that when successfully implemented can produce significant economic, environmental and social benefits for people and the neighborhoods, cities and regions in which they live, work and play. These benefits can best be realized through the utilization of analytical tools that can provide all TOD stakeholders with the ability to make fully informed decisions.

To that end, the practitioners of TOD and the decision makers that help make TOD happen, can benefit from using a performance-based typology that helps identify the different conditions that exist in places, and that should ultimately determine the form that TOD takes. Some of the questions a performance-based TOD typology might answer include: What economic, environmental and social outcomes can we expect from investments in transit and TOD? What differentiates transit-oriented development from transit-adjacent development? What standards should be utilized in evaluating zoning for TOD or other policy interventions?

As evidenced in the following report, the compositions of our communities and the quality of transit has a great influence on greenhouse gas emissions and the ability of cities, regions and states to meet climate change goals outlined in public policy. Yet it has remained a challenge to better link land use and transportation decisions to meeting climate change policy goals. Mismatched decision-making structures, uncertain outcomes, and a lack of a common framework for measuring performance has often been a stumbling block in the attempts to use TOD to address climate change and community development goals simultaneously.

Executive Summary: Performance Based TOD Guidebook

To help address this issue, the Center for Transit-Oriented Development has designed the Performance-Based TOD Typology as a user-friendly tool that gives interested people around the country the ability to evaluate the performance of the transit zones in their neighborhoods and towns. The typology creates distinct place types by identifying the number of miles the typical household within each transit zone will travel in a year and whether the area is primarily residential, employment, or a balance of the two. Understanding where an individual transit zone sits in this spectrum, or how all of the transit zones in a region compare to one another can make it easier for stakeholders to identify strategies to reduce VMT or to take advantage of existing low VMT places.

CTOD affirms that the performance of TOD should be measured at the neighborhood scale, or larger. Therefore, the Performance-Based TOD Typology defines the half-mile radius around each transit station as a unique transit zone. The characteristics of all households within this radius are averaged together, and those averages are used to define the place types and other characteristics of each transit zone throughout this guidebook. This analysis includes the approximately 3,760 existing transit station areas in 39 regions across the country, as reported in the CTOD’s National TOD Database.
Key Findings

Overall, most transit stations perform better than or at the national average, outperforming the typical non-transit-oriented place on key metrics such as auto ownership, commuting behavior, and density/intensity. Within each metric or set of metrics there are some interesting variations on this general theme.

Auto Ownership & Transportation Costs:
Transit zones in low VMT places types tend to have low transportation costs and low rates of automobile ownership. Auto ownership in the lowest VMT places average 0.5 cars per household.

Commute Travel Behavior:
Low VMT place types exhibit more transit ridership and higher rates of walking and biking to work than high VMT transit zones. This finding is equally true of commutes by residents living in transit zones and commutes by workers who work in transit zones. Transit commute mode share in the lowest VMT place types is from 5 to 11 times greater than the national average.

Employment Proximity:
Low VMT transit zones are located much closer to employment than high VMT transit zones. A typical low VMT place is proximate to ten times more jobs than the highest VMT places.

Urban Form:
Low VMT transit zones tend to have more intensity (residents + workers) and higher residential densities than high VMT transit zones. Residential densities in low VMT transit zones are over 15 times as high compared to high VMT transit zones. Additionally, transit zones have smaller block sizes.

Case Studies

This report includes nine case studies of transit zones to help illustrate the concepts of the Performance-Based TOD Typology. The case studies were chosen in order to show a variety of types of transit zones that differ not only in their place type as defined by the Performance-Based TOD Typology, but also differ in where they are located in the US, the size of the overall region, the size and age of the transit network, the type of transit in place in the transit zone, and the median income in the transit zone. The case studies include:

Vermont/Santa Monica Station, Los Angeles CA
Oak Park, IL
West Irving, TX
East Liberty Station, Pittsburgh PA
Downtown Berkeley, CA
Gresham Transit Center, OR
Essex Street Station, Jersey City NJ
Buckhead Station, Atlanta GA
Rockville, MD

Detailed four-page spreads on each case study are included in the report.
Scenario Studies

This report includes a series of scenario studies, conducted to understand how additional increments of growth and development in existing transit zones would affect overall performance. Scenarios of 15%, 30%, and 50% increments of growth in both residential households and employment access were included, as well as an assessment of an increase in 2,000 households per station area.

Key lessons from the scenarios include:

1. Encouraging new development in transit zones, independent of the place type, can help reduce regional VMT, especially in regions where the average household VMT is higher than the average household VMT for even high VMT places.

2. High VMT transit zones (residential, balanced and employment) can see significant reductions in average household VMT from relatively moderate amounts of new development.

3. Prioritizing low VMT transit zones for new development can produce the largest reductions in total regional VMT.

Policy Implications

Creating a robust Performance-Based TOD Typology has implications for policy at all levels including local zoning codes, regional incentive programs, State housing allocations, and Federal funding decisions, and many more in between. While this effort has been primarily focused on developing a useful tool that can be used by many TOD stakeholders, this report includes a series of potential policy implications and outcomes that can be the basis for future applications of the typology.