

Smart Communities: Zoning for Transit-Oriented Development

By Marya Morris, AICP

Transit-oriented development (TOD) is an important tool in the sensible growth toolbox, especially in metropolitan areas that are served by commuter or light rail service. TODs are vibrant, high-density, mixed-use areas designed for pedestrians and multiple modes of transportation. A TOD typically has a center with a commuter rail station or several intersecting bus routes, surrounded by clustered housing, commercial and office development, with progressively lower densities on the perimeter. TODs are carefully designed to balance relatively high-density housing with shops, workplaces and transit access.

Residents of TODs may walk to work in the neighborhood or commute from the transit station to other employment centers. A typical TOD includes a transit station that provides service to a larger employment center, and several multi-story commercial and residential buildings. Outside the core are several surrounding blocks of townhouses and small-lot, single-family homes, with larger-lot single-family housing on the outer ring. TOD neighborhoods typically have a diameter of one-quarter to one-half mile — a comfortable walking

distance for most pedestrians and transit users.

Planning for TODs is an important way for citizens, government officials and transit providers to protect their investment in the transit system. TODs help build and sustain demand for the transit system through users who live and work in the area. Along with other compact forms of development, such as New Urbanism, TODs are a key tool to implement

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- historic preservation
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ISSN 1533-3582

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PHOTO BY JON CUNNINGHAM, VILLAGE PROFILE

This pedestrian-friendly commuter rail station in Tinley Park, Ill., features a public plaza, green space, nearby retail and ample parking.





PHOTO COURTESY OF DALLAS AREA RAPID TRANSIT

This TOD project in Dallas' West End neighborhood links light rail with the Awalt building (photo center), which is being renovated for offices and apartments.

sensible growth policies, and can help solve air quality problems by reducing automobile dependence.

Before the automobile became most Americans' primary mode of transportation, common sense dictated that the highest-density neighborhoods and commercial developments be built in close proximity to streetcar lines, and, later, elevated trains and subways. Early developers and transit operators in large cities including Chicago, New York and Pittsburgh also recognized the value of building new neighborhoods along transit lines. Homebuyers and renters were willing to pay for ready access to jobs, schools and other places connected by the transit system. But, transit-oriented development is not solely an urban phenomenon. Commuter rail stations have long been the central feature around which suburban town centers and historic neighborhoods developed. Indeed some of Chicago's oldest suburbs, including Riverside, Hinsdale and Highland Park, are nothing short of organic TODs.

After World War II, development by and large catered to the automobile; conventional zoning kept land uses separate. Thus, most suburbs were built at density levels that could not support viable transit systems — not even bus routes. Demand for quality transit service dwindled during the car and highway boom of the 1950s and 1960s, and two- and three-car families emerged out of necessity, due to their geographic location in low-density, auto-dominated environments. In central cities, like Chicago, some high-density development that originally surrounded transit stations was demolished and replaced by lower-density development — like strip malls — that diminished neighborhood sense of community.

Zoning for Transit-Oriented Development

Today, communities are using zoning to generate more compact, higher-density development around transit stations to meet the mutually supportive goals of enhancing neighborhood livability, reducing automobile dependence and supporting transit through development. This can be accomplished through a range of zoning techniques, including transit- and pedestrian-friendly site design, increased residential and commercial densities, a mix of land uses, and modified parking requirements.

Transit- and pedestrian-friendly design

For transit to become or remain a viable alternative to the automobile, it must be safe, reliable and convenient. While transit system operators are responsible for safety and reliability, zoning can help maximize transit's accessibility and convenience. Researchers have found that people are willing to walk about 1,500 feet, or one-quarter mile, to shopping areas and transit stops.

The city of Eugene, Ore., has codified this principle of convenience in its decision criteria for new subdivisions, requiring that neighborhoods be designed to provide safe, convenient and direct bicycle and pedestrian access to nearby and adjacent residential areas, transit stops, schools, parks, commercial areas and industrial areas. The ordinance defines "nearby" as one-quarter mile for pedestrians and one to two miles for bicyclists.

Further, people on foot need direct routes on interconnected streets with relatively short blocks minimizing the need for people to walk out of their way to reach their destinations. In its zoning recommendations for municipalities, New Jersey Transit suggests that 10-foot-wide pedestrian easements be provided through the center of blocks that are more than 600 feet in length, to provide convenient pedestrian access to transit stations, shopping areas or other community facilities.

Convenient routes are those that have no gaps in the sidewalk network between pedestrians, their points of origin and their destinations. Cul-de-sacs and dead-end streets increase the distances that pedestrians and bicyclists must travel to reach transit stops or other areas. Further, when streets do

not connect, it is difficult for transit providers to establish sensible routes that pass conveniently near residences.

Density

Increasing the density of residential areas and employment centers is imperative to increasing transit ridership. A first step for many communities is to ensure that higher density levels are permitted by zoning regulations, especially in areas within walking distance of existing transit routes. However, in most metropolitan areas, residential development occurs at densities far lower than what is actually permitted. Simply zoning land for higher densities does not ensure that higher density projects will be developed. The most direct method to achieve TOD-supportive densities is to set forth a range of maximum and minimum densities. Tri-Met, the regional transportation agency of Portland, Ore., suggests achieving a workable minimum density by determining the maximum density that the real estate market will support and then setting that as the minimum density permitted. Areas served by transit should have an average housing density of at least seven dwelling units per acre, since areas with lower population densities are expensive to serve, and generate few riders. In Ontario, Canada, the Ministry of Transportation Guideline for municipalities calls for 90 percent of residences, jobs, and other activities to be within 400 meters, or a quarter of a mile, from a transit stop.

Neighborhoods must be designed to provide safe, convenient and direct bicycle and pedestrian access.

— Eugene, Ore. Zoning Code

There are a number of ways for communities to meet TOD density goals. Communities could provide for higher amounts of multifamily workforce housing along transit corridors, while maintaining extensive single-family housing districts at the perimeter of TODs. Alternately, a community could strive for more uniform densities of a more moderate level throughout the TOD; for instance,

a neighborhood of small-lot, single-family houses, lower density multifamily buildings like townhouses and duplexes, and accessory units like coach houses can easily achieve densities in the 20-30 units per acre range. To accommodate existing neighbors' concerns about raising densities, municipalities should insist on a high standard of design for infill development, and target currently under-used parcels for higher densities. Transit ridership and system viability depend on successfully implementing sensitively designed, transit-friendly infill construction projects within existing neighborhoods.

In terms of housing type, perhaps the most obvious approach to increasing density in single-family housing intensive areas is to allow or require smaller lots. An area with lots of 4,000 to 5,000 square feet can support some degree of transit service. Parcels with lots smaller than 5,000 feet can still accommodate single-family detached housing with private yards. Single-family housing zones in Renton, Wis., have a target of eight units per acre and a minimum of at least 5.6 units per acre.

Mixed Use

Transit use becomes a practical means of travel when housing, retail and job centers are located near one another. The key concept in mixing land uses in TODs is to create communities where daily activities — such as dropping off children at pre-school, picking up dry cleaning, going to the post office and grocery shopping — are all in close proximity to one another and to a transit station, so that a car trip is not a necessity. This arrangement allows transit riders and pedestrians to keep daily trips short and convenient, and can dramatically cut down on car trips that are not work related. TOD districts are most successful when there is a critical mass of housing types and commercial uses that reinforce one another and generate demand for transit.

Communities that actively encourage development near transit stations have used various types of mixed-use zoning to expand services to nearby residents and to transit users (see the Montgomery County case study for one example). As important as deciding which land uses are appropriate in a TOD zone is deciding which uses are incompatible or should be prohibited. Generally, auto-oriented uses, including large-scale surface parking lots, drive-through restaurants and banks, car dealerships

and outdoor storage yards detract from the walkability and accessibility of TODs. Existing ordinances should be evaluated to determine whether they encourage a mix of uses. In particular, housing should be a permitted use in TOD zones.

Parking

Parking policies can be a help or a hindrance to transit use, and to the viability of transit-oriented development. Expansive, poorly designed parking lots create barriers that discourage pedestrian travel and transit use. This is particularly true when people must traverse lots or circumvent them to reach a transit stop. In addition, plentiful, free parking, coupled with car-dominated neighborhood streets and land use patterns, provide powerful incentives to choose the car over other alternatives. Typical suburban development projects devote up to 75 percent of their sites to surface parking.

Ordinances that reduce the amount of parking available, or require buildings to be built to the sidewalk with parking to the side or rear of the building, can help reinforce the pedestrian scale of a neighborhood and can help maintain TODs as attractive settings for station users and bus passengers. Measures can also be taken to reduce the amount of parking allowed considering that demand for parking is lessened by the availability of transit. In Oregon, for example, model regulations prepared by the local APA chapter provided for a 10 percent reduction in the number of required parking spaces for uses within 400 feet of a transit route. In California, Sacramento County's transit-oriented development design guidelines call for land in TOD areas devoted to surface parking to be redeveloped into structured parking or more intensive uses.



PHOTO COURTESY OF THE SEATTLE DEPARTMENT OF TRANSPORTATION

Beacon Hill, a planned light rail station in Seattle, will benefit from Station Area Overlay District legislation that supports TOD and furthers community goals for walkable town centers, while providing flexibility for existing businesses and limiting auto-oriented uses.

Seattle, Washington

The Station Area Planning (SAP) Program, launched in 1998, was a three-year effort led by Seattle's Strategic Planning Office in partnership with Sound Transit, the regional transit agency. SAP engaged city departments, community representatives, neighborhood planning offices, and partner agencies in planning and development guidelines for the one-quarter mile area around proposed light rail stations. In 1999, the city convened Station Area Advisory Committees to involve citizens in station area planning, and to launch Sound Transit's design process. Between February 1999 and March 2001, SAP staff organized 95 publicly advertised Station Area Advisory Committee meetings and participated in more

than 200 additional community meetings. More than 800 participants attended Station Area Planning open houses, and SAP staff conducted approximately 150 interviews and focus groups. In July 2001, the Seattle City Council enacted Station Area Overlay district ordinances, and rezoned land around eight future light rail stations to accommodate higher-density development and walkable neighborhoods.

Montgomery County, Maryland

Montgomery County has devised its own version of mixed-use zoning near transit stations, in which traditional zoning classifications (e.g., residential or commercial) are applied but in very small zones, which makes walking between uses more practical. The Transit Station–Mixed Use (TS-M) zone, located closest to transit stations, provides for a wide range of commercial, service and residential uses with a 3.0 maximum Floor Area Ratio (FAR).¹ The Transit Station–Residential (TS-R) zone, allows a mix of residential uses, with retail and service uses permitted as incidental uses or by special exception, and has a 2.5 FAR or 150 dwellings per acre. Because the TS-R zone

is within walking distance of transit stations, residents can take advantage of retail and services in the TS-M zone. Although Montgomery County transit zones are focused on rapid transit stations, similar zoning arrangements can be applied to bus transfer stations.



RENDERING COURTESY OF THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION.

This mixed-use development in Montgomery County, Md., combines retail, high-density housing, and public park space all within walking distance of a commuter rail stop.

Portland Metro Area

A four-year intergovernmental effort involving the city of Portland, Ore., the suburb of Hillsboro, and Washington County was completed in 1998 to update comprehensive plans, development regulations and capital improvement programs for areas within one-half mile of light rail stations. The goal of the zoning regulations was to minimize parking, increase density, prohibit inappropriate land uses and require pedestrian-oriented design near the stations. Approximately 7,000 homes and more than \$505 million worth

of residential and non-residential development have been built, permitted, or proposed in the area since 1990 within one-half mile of designated light rail stations. About 3,600 homes were completed in 1998; more than 3,000 of those homes are located within a quarter mile of two station areas.

Arlington County, Virginia

The Roslyn and Ballston areas of Arlington County were models of TOD decades before planners had even coined the phrase. The Ballston Sector Plan, which was adopted by the County in May 1980, called for Ballston to be transformed into a modern housing and commercial center focused around the Metro rail commuter station. A seven-block area around the station was designated as a coordinated mixed-use district with higher permitted densities of 3.5 Floor Area Ratio (FAR) for commercial buildings, 135 dwelling units per acre for apartments and a maximum of 210 dwelling units per acre for hotels. Street-level retail uses were also required for all commercial office

buildings within the district. Developers can receive a density bonus of up to an FAR of 6 in exchange for public improvements including connections to the transit stations, public art and streetscape improvements.

¹ Floor Area Ratio (FAR) expresses the relationship between the amount of usable floor area permitted in a building and the area of the lot on which the building stands. It is calculated by dividing gross floor area of a building by total area of the lot.

We are deeply grateful to the following for their funding of research that forms the basis for this edition of *ideas@work*:

Graham Foundation for Advanced Studies in the fine Arts
Illinois Department of Commerce and Community Affairs
Steans Family Foundation
Woods Fund of Chicago

We also thank the following for their generous support of research and programs that form the basis for the *ideas@work* series:

The John D. and Catherine T. MacArthur Foundation
The Chicago Community Trust
McCormick Tribune Foundation
Gaylord and Dorothy Donnelley Foundation
Grand Victoria Foundation
Bank of America

Aon Corporation
Arie & Ida Crown Memorial
State Farm Insurance Companies

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Regional Transportation Authority (Chicago)

www.rtachicago.com/programs/tod.asp
312.917.0700

American Planning Association

www.planning.org
312.431.9100

Seattle Station Area Planning Program

www.ci.seattle.wa.us/planning/transportation/sap/homesap.htm

Montgomery County (Maryland) Planning Department

www.mc-mncppc.org/pubs/zoning_ordinance.htm

General information on TOD in Portland, Oregon

www.portlandtransit.org; www.tri-met.org

Arlington County, Virginia

www.co.arlington.va.us/cphd/planning/metro_profile/index.htm

Tri-County Metropolitan Transportation District of Oregon (Tri-Met). *Planning and Design for Transit Handbook*. Portland, Ore.: Tri-Met. January 1986.

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