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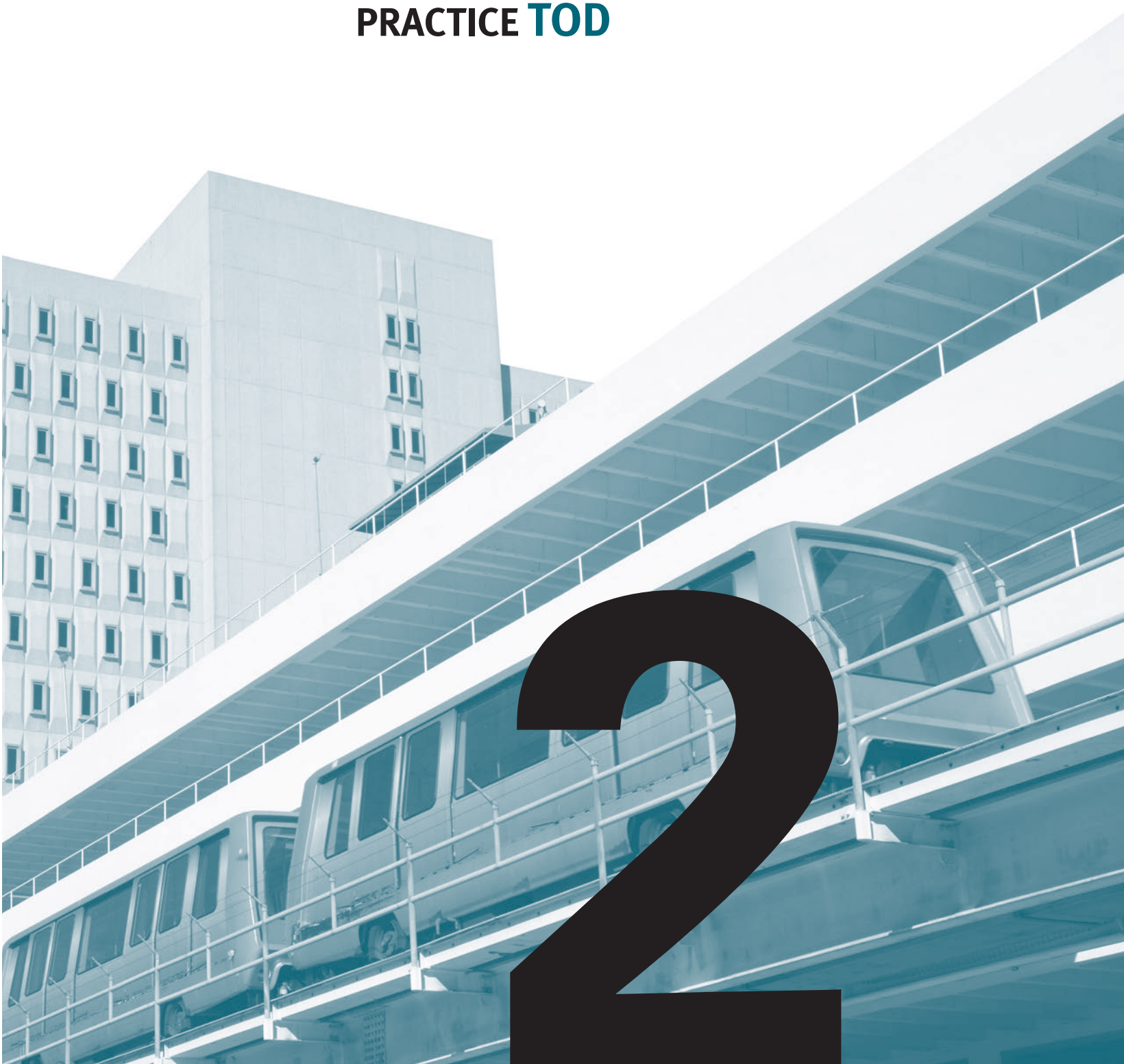
# PRACTICE TOD

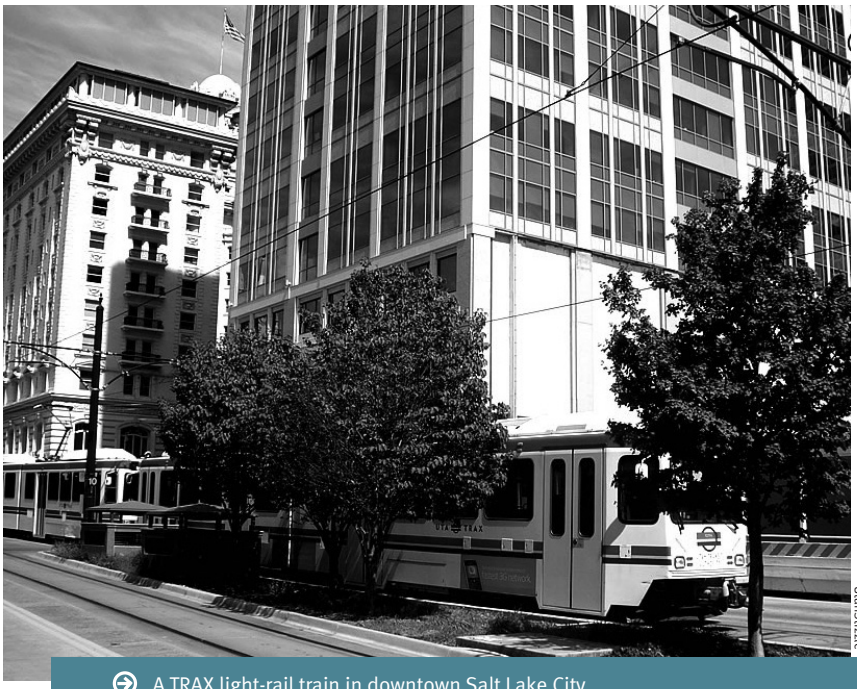


2

# Context-Sensitive Zoning for Transit-Oriented Development

*By David Morley, AICP*

The term "transit-oriented development" (TOD) typically refers to higher-density mixed use development in close proximity to a fixed-guideway transit station.



UtahStizzle

A TRAX light-rail train in downtown Salt Lake City.

Most TOD experts and advocates also clarify that the development pattern of the station area must support both walking and transit use in order for that area to qualify as transit oriented, rather than merely transit adjacent.

While some commentators treat TOD as though it is one distinct development model, it's probably more helpful to think of transit-oriented development as a spectrum of development patterns and densities. For example, a commuter rail station in a sleepy bedroom suburb cannot support the same types and intensity of development as a rapid transit hub in the downtown of a major city.

Many older cities and suburbs have well-established TOD areas that, in some cases, predate both widespread automobile usage and zoning. Meanwhile, there are numerous other communities looking to support planned or emerging TOD districts in areas where existing development does not take full advantage of existing or anticipated transit service. In fact, over the past 25 years, a growing number of localities have added special districts or overlays to their zoning codes to facilitate or reinforce TOD. For those communities just starting the process of zoning for TOD, it is vitally important to calibrate zoning standards to station-area context.

The first part of this article provides a brief summary of factors to consider when planning for new station-area development or redevelopment. Next, it presents key considerations for communities hoping to encourage TOD through special zoning districts or overlays. Finally, it highlights several examples of context-sensitive TOD zoning standards from localities across the country.

## PLANNING FOR SUCCESSFUL TOD DISTRICTS

Most TOD and transit policy experts see a symbiotic relationship between successful transit and successful TOD. In other words, development patterns and densities affect transit ridership, just as transit service characteristics influence development demand and potential.

For decades researchers have been investigating the effects of urban form on transit patronage. Some studies have looked narrowly at residential or employment densities in close proximity to transit stations or corridors. Others have considered a wide range of land-use characteristics, including use mix and urban design. Based on this body of research, few experts question the premise that higher densities and pedestrian-friendly design are associated with higher rates of ridership.

At the most simplistic level, transit agencies cannot afford to provide frequent, reliable service to areas below a certain density threshold. While there are some commonly used rules of thumb concerning the necessary densities to support transit service, in reality actual density thresholds depend on the frequency and convenience of transit service and the funding model of the transit agency.

One of the best resources available for data from existing station areas is the Center for Transit-Oriented Development's TOD Database. This tool allows users to see actual residential and employment densities within a half-mile radius of each fixed-guideway transit station in the United States (as of October 2011). Planners and policy makers can use the database to compare existing local conditions and projected market potential to existing figures from potential peer station areas.

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**About the Author**
David Morley, AICP, is a senior research associate with the American Planning Association, as well as APA's Planning Advisory Service (PAS) coordinator and coeditor of *Zoning Practice*. Since 2007 he has contributed to APA research projects on topics including brownfields redevelopment, complete streets, urban agriculture, shrinking cities, solar energy, disaster recovery, and green infrastructure. Apart from his contributions to research projects and APA publications, Morley provides customized research on a daily basis for PAS subscribers.

A basic caveat for any community considering adding or amending zoning standards for areas near transit stations is that upzoning alone may not be enough to create a successful TOD district. In order for developers (and financiers) to have confidence in the TOD concept, developers, residents, and business owners alike must believe that development coordinated with transit offers value and benefits above and beyond conventional development patterns. Some of the factors that seem to drive TOD success are the certainty of transit service, the frequency of that service, the number and desirability of destinations in the transit station area, and the relationship of the TOD district to its more auto-oriented surroundings.

All of this is to say that a robust station-area planning process should precede any attempts to draft zoning standards that promote transit-oriented development. At a minimum, this plan should address the community's desired vision for the station area in light of existing and projected market conditions, transit-service characteristics, and public infrastructure condition and capacity. Having a plan in place not only provides a policy basis for specific zoning standards, but also sends a clear message to developers about the area's potential.

### A TYPOLOGY OF STATION AREAS

Because TOD exists on a spectrum, it can be helpful to examine the common characteristics of different types of station areas. Hank Dittmar provided one early example of a typology of station areas in the August 2004 edition of *Zoning Practice*; subsequently, many other TOD experts and advocates have offered their own takes on generalized types. The station-area types below are rooted in the Center for Transit Oriented Development's refinement of Dittmar's TOD place types. For each of these types the extent of the station area is defined as a half-mile radius around the station.

#### Regional Hubs

Regional hubs are located in the downtowns of major cities. Regional hub stations allow riders to transfer between multiple rail or bus rapid transit lines in addition to multiple local and regional bus routes. The development pattern in a regional hub is characterized predominantly by mid- and high-rise buildings with a mix of retail, office, and residential uses. These station areas are major regional employment, shopping, and cultural centers with a high level of street activity during most times of the day throughout week.

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A view of the Santa Ana Regional Transportation Center in downtown Santa Ana, California.

### Urban Centers

Urban centers are areas that draw visitors from multiple neighborhoods or nearby suburbs for employment, shopping, or entertainment. Urban-center stations typically connect to at least one high-frequency rail or bus rapid transit line and multiple local bus routes. The development pattern in an urban center is characterized predominantly by mid-rise buildings with a mix of retail, office, and residential uses within a quarter-mile of the station and a mix of low- and mid-rise buildings with residential and neighborhood-serving, storefront-commercial uses beyond this radius. These station areas tend to have a high level of street activity during morning and evening rushes and on weekends.

### Suburban Centers

Suburban centers are located in the downtowns of large suburbs. Suburban-center stations typically connect to one high-frequency rail or bus rapid transit line and multiple local or regional bus routes. The development pattern in a suburban center is characterized predominantly by mid- and low-rise buildings with a mix of retail, office, and residential uses within a quarter-mile of the station and a mix of low-rise and small-lot, single-family residential buildings beyond this radius. These station areas tend to have a medium to high level of street activity during morning and evening rushes and on weekends.

### Neighborhood Centers

Neighborhood centers are located in areas surrounding the downtowns of central cities and large suburbs. Neighborhood-center stations typically connect to one high-frequency rail or bus rapid transit line and at least one local or regional bus route. The development pattern in a neighborhood center is characterized predominantly by low- and mid-rise buildings with a mix of neighborhood-serving storefront-commercial and residential uses within a very small radius of the station and a mix of low-rise and small-lot, single-family residential buildings beyond this radius. These station areas tend to have a medium level of street activity during morning and evening rushes and on weekends.

### Town Centers

Town centers are located in the downtowns of smaller suburbs. Town-center stations typically connect to one low- to medium-frequency rail transit line and may also connect to a regional bus route. The development pattern in a town center is characterized predominantly by low-rise buildings with a mix of retail, office, and residential uses within a very small radius of the station and small-lot, single-family residential buildings beyond this radius. These station areas tend to have a low to medium level of street activity during morning and evening rushes and on weekends.

### Commuter Neighborhoods

Commuter neighborhoods are located in residential areas of central cities and large suburbs. Commuter-neighborhood stations typically connect to one low- to medium-frequency rail or bus rapid transit line. The development pattern in a commuter neighborhood is characterized predominantly by low-rise and small-lot, single-family residential buildings. These station areas tend to have a low to medium level of street activity during morning and evening rushes.

### Special Districts

Special districts are areas dominated by large institutions or employers that draw visitors from throughout a region. Special-district stations typically connect to one low- to medium-frequency rail or bus rapid transit line and at least one local or regional bus route. The development pattern in a special district may either be characterized predominantly by a campus-style arrangement of low- and mid-rise buildings with a mix of educational, office, or light industrial uses or large floor plate buildings with a mix of retail, office, and industrial uses.


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A view of downtown Beaverton, Oregon, from the Beaverton Central MAX light-rail platform.

## CONSIDERATIONS FOR TOD DISTRICTS

Given the diversity of existing and planned TOD areas and approaches to zoning, it is difficult to suggest specific model provisions. However, there are a number of key considerations for any community contemplating adding a new TOD district to its zoning code.

### Station-Area Type

As implied by the typology discussion above, each section of the TOD district standards should support the type or types of station areas the community is trying to foster, enhance, or protect through zoning. In practice, localities with multiple stations and station-area types can accomplish this either by creating a unique district for each station area or by adopting multiple generalized districts for different station-area types.

### Boundaries and Subdistricts

Communities should map a TOD district to all parcels that can be reasonably expected

to generate regular pedestrian trips to a particular transit station. In areas with a highly connected street pattern, a comprehensive sidewalk network, and no major physical obstructions, this may roughly correspond to a concentric circle extending a half-mile around the station.

Because transit usage strongly correlates with proximity to a station, it often makes sense to map multiple subdistricts with distinct use permissions and development standards. One of these subdistricts would typically be a core area in very close proximity to the station with a greater variety of permitted uses and larger buildings. Other subdistricts would step down in intensity to provide a transition between the core and surrounding areas not expected to generate pedestrian trips to the station.

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A view of the southbound Fulton Street bus rapid transit station just south of downtown Grand Rapids, Michigan.

### Density

As indicated above, all transit service requires some minimum residential or employment density to remain viable, and these density thresholds are largely dependent on the type and frequency of transit service as well as regional context. Consequently, many TOD districts include both minimum and maximum densities, typically expressed in dwelling units per acre for residential projects and floor area ratio (FAR) for mixed use and nonresidential projects.

The risk of including a minimum density standard is that it may limit new construction in areas targeted for new transit service. That is, some developers and financiers may be reluctant to "jump first" in an untested market. However, the risk of not including a minimum density standard is that interim, smaller redevelopment projects may not be transit supportive. Consequently, most TOD experts contend that minimum density requirements are an important ingredient for successful TOD implementation.

### Use Mix

Successful TOD districts require transit-supportive uses. With the exception of special districts, this will include a mix of residential and nonresidential uses. However, the specific permitted uses should very among subdistricts. For example, a core subdistrict in a center-type station area should permit a wide variety of pedestrian-friendly nonresidential uses by right. These might include shops, restaurants, personal services, hotels, professional offices, theaters, galleries, public plazas, and civic buildings. Meanwhile, a transitional subdistrict would typically permit a smaller range of nonresidential uses by right, and these might include corner stores, schools, live-work spaces, neighborhood-scale parks, or home-based businesses.

Because residential and employment density drive transit usage, most permitted uses must be resident- or job-dense. This means large-format retailers, warehouses, and regional-scale parks are typically not appropriate for TOD districts.

### Built Form

Arguably, the form of development is more important than the permitted uses in most TOD districts. If the arrangement of blocks, lots, and buildings does not contribute to a pedestrian-friendly environment, the TOD district will not reach its full potential. Consequently, many communities include extensive form controls in their TOD standards.

At a minimum, TOD districts should specify maximum building setbacks (or build-to lines) and minimum building heights for each subdistrict, and require sidewalk connections and street-facing building entrances for all development.

In station areas with large parcels and a discontinuous street network, TOD districts should also include maximum block lengths, minimum street connectivity requirements, and street design standards that make walking and biking safer and more convenient.

In addition to these basic standards, some form-based coding experts recommend specifying permitted building types. This would typically entail adding descriptions and illustrations of different types of buildings to the TOD standards. These building types may be rather general (e.g., a mid-rise building with ground-floor storefront space). Or they may include specific architectural features and corollary site design requirements (e.g., provisions addressing parking facilities, open space, and landscaping).

### Parking Standards

One of the basic goals of a TOD district is to promote transit usage over private automobile trips. In practice, this means fostering an environment where it is safe and convenient to walk to transit, while simultaneously making driving less convenient. Consequently, TOD districts should not require permitted uses (or building types) to provide as many off-street parking spaces as the same uses in more automobile-oriented parts of the jurisdiction. Furthermore, TOD standards

should prohibit or severely restrict surface parking lots in favor of on-street parking and structured shared parking facilities.

### CONTEXT-SENSITIVE TOD DISTRICTS

There are two basic alternative approaches to context-sensitive TOD zoning. Some communities have adopted one or more districts (or a stand-alone code) with standards calibrated to a specific station area. Other communities have adopted TOD districts or overlays that include standards for multiple, distinct station-area contexts.

#### Zoning for Specific Station Areas

After a community has adopted an area plan for a specific station area, it will often use a special zoning district or a stand-alone form-based code to help implement that plan. This approach provides the most precision in calibrating use permissions and development standards to the anticipated market conditions and community preferences in that station area. Three examples of localities with specific station-area codes are Farmers Branch, Texas; Santa Ana, California; and Babylon, New York.

***Farmers Branch, Texas.*** In 2005 Farmers Branch adopted a stand-alone form-based code for a 143-acre site surrounding a planned light-rail station with service to Dallas and connections to multiple regional bus routes. The Station Area Code ties use permissions and form controls to street frontage types. Each existing and planned street segment in the site area is assigned a street frontage type that controls the placement, form, and massing of buildings and permissible uses on different building floors. After light-rail service finally commenced in 2010, the city later added four subdistricts with minimum height requirements to the code.

This station-area code is an implementation tool for a conceptual master plan adopted in 2002. At the time of adoption, the station site was a park-and-ride lot with connections to regional bus service, and the surrounding area included a mix of open space and low-density commercial, civic, and residential uses. The community's vision for the site was to establish a new town center through higher-density, pedestrian-friendly mixed use development. In 2007 the Form-Based Codes Institute honored the Station Area Code with its Driehaus Award in recognition of the code's clear, richly illustrated guidance for future redevelopment projects.

***Santa Ana, California***. In 2010 Santa Ana adopted a stand-alone form-based code for a 457-acre site surrounding an existing multimodal transit center with commuter rail service to Los Angeles and connections to Amtrak, Greyhound, and multiple regional bus routes. The Transit Zoning Code divides the station area into nine zones with distinct use permissions, form controls (including detailed building types and architectural guidelines), and parking standards.

At the time of adoption, most of the site was already developed with a diverse mix of residential and nonresidential uses at widely varying densities. Therefore, the primary purpose of the code is to ensure that future infill and redevelopment projects in the station area are pedestrian friendly and transit supportive. In 2012 the Form-Based Codes Institute honored the code with its Driehaus Award.

***Babylon, New York***. In 2011 the town of Babylon on New York's Long Island adopted a stand-alone form-based code for a 142-acre site surrounding an existing commuter rail station with service to New York City and connections to regional bus routes. The Downtown Wyandanch and Straight Path Corridor Redevelopment Zone divides the immediate station area and an adjacent corridor into five zones, each with distinct use permissions, density allowances, form controls (including extensive architectural standards), and parking standards.

This station-area code is an implementation tool for a redevelopment plan for Wyandanch, a hamlet in the Town of Babylon. At the time of adoption, the site had experienced a long period of disinvestment, and the existing development pattern consisted of irregularly shaped lots with multiple brownfields, blighted buildings, and surface parking lots. Consequently, the primary purpose of the code is to encourage pedestrian-

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friendly and transit-supportive redevelopment, including the subdivision of larger parcels. In 2013 the Form-Based Codes Institute honored the code with its Driehaus Award.

### TOD Districts for Multiple Contexts

While calibrating TOD district standards to specific station-area conditions may be ideal, communities with multiple existing or planned stations may struggle to get station-specific standards in place in a timely manner. An alternative approach is to adopt TOD standards that explicitly acknowledge multiple locally relevant, but generalized, station-area types. Three examples of communities that have taken this approach are Salt Lake City, Utah; Beaverton, Oregon; and Grand Rapids, Michigan.

***Salt Lake City, Utah***. The Utah Transit Authority provides light-rail service to more than 20 stations throughout Salt Lake City. In recognition of the diversity of station-area contexts, the city uses four types of TOD districts in its zoning code: Transit Station Area—Urban Center, Transit Station Area—Urban Neighborhood, Transit Station Area—Mixed Use Employment Center, and Transit Station Area—Special Purpose. And each district is further divided into core- and transition-area subdistricts, which roughly correspond to locations within one-quarter and one-half mile, respectively, of a station platform.

The four types of station-area districts have distinct use permissions and minimum/maximum height limits. However, they share a common set of development standards addressing setbacks, lot area and street frontage, open space, circulation and connectivity, building design, and parking.

***Beaverton, Oregon***. The Tri-County Metropolitan Transportation District of Oregon provides light rail service to six stations along an east-west transit corridor through Beaverton in western suburban Portland. While the city doesn't have as many stations as Salt Lake City, there are still multiple, distinct station-area contexts along the corridor. Consequently, Beaverton uses three types of generalized TOD districts in its code: Station Community—Multiple Use, Station Community—High Density Residential, and Station Community—Employment. The city has also adopted a fourth district for the Sunrise station area.

Each station-area district has its own use permissions and development standards addressing minimum/maximum density, building height, and setbacks. And Multiple Use and High Density Residential districts permit higher intensity development within 400 feet of station -area platforms. Meanwhile, all station areas are subject to the same set of design standards for commercial and multiple-use zones, including special building orientation, height, and massing requirements along pedestrian routes leading to transit stations.

TOD districts should encourage projects that are both pedestrian friendly and transit supportive. But district use permissions and form controls need to respect both market conditions and community context.

***Grand Rapids, Michigan***. In the summer of 2014, the Interurban Transit Partnership began providing bus rapid transit service to 14 stations in Grand Rapids. However, local officials and transit advocates began laying the political groundwork for fixed-guideway service many years earlier. When the city adopted a new zoning code in 2008, it included three types of TOD districts: Traditional Neighborhood TOD Zone District, Mid-20th Century Neighborhood TOD Zone District, and Modern Era TOD Zone District.

While all three districts are designed to encourage more pedestrian-friendly and transit-supportive development, the individual district purpose statements acknowledge variations in the character of the built environment around different types of existing or planned stations. Each TOD district has its own use permissions, height limits, and lot width requirements, but the districts share a larger set of development standards related to site and building design. And large projects located in close proximity to planned transit stations are eligible for bonus height.

## CONCLUSIONS

Given that transit-oriented development exists on a spectrum, it makes sense that TOD zoning standards should reflect the diversity of station-area types. Simply put, TOD districts should encourage projects that are both pedestrian friendly and transit supportive. But district use permissions and form controls need to respect both market conditions and community context. Localities interested in encouraging context-sensitive TOD may choose to develop special districts for each individual station area or a range of generalized TOD district options that reflect local conditions. While political realities may tip the scales in favor of one approach over the other, both are likely to net better results than treating all station areas the same.

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# DOES YOUR COMMUNITY'S ZONING CODE PROMOTE CONTEXT-SENSITIVE TOD?

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