

C1

TRANSIT READY DEVELOPMENT



Transit and development

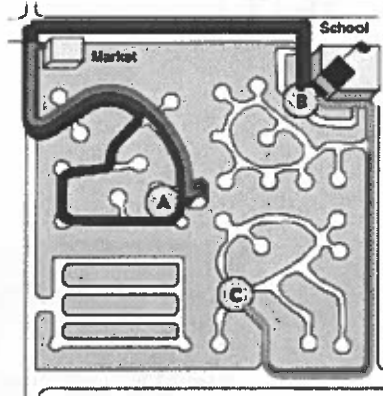
- Efficiency of transit depends on the places it serves
- Matching land use & transit in the planning stage makes both work better
- Design, Density, and Diversity



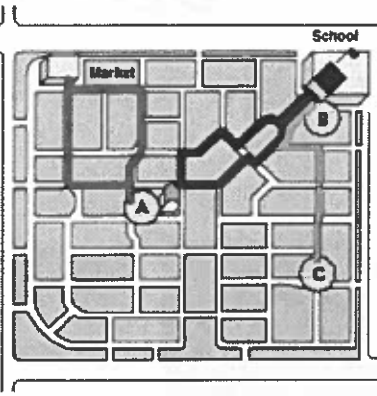
TRANSIT-READY DEVELOPMENT GUIDE

Design – Connecting the Streets

Typical Cul-de-sac Subdivision



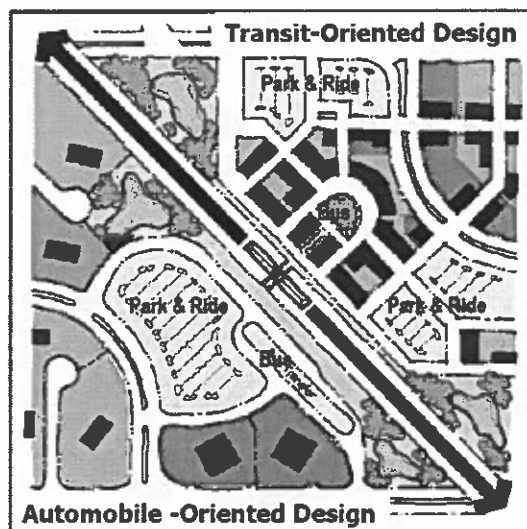
Well-Connected Street Network



Route Options

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• Design – Connecting the transit



Both designs provide

Same land uses

Same transit

Same parking

One is walkable/bikable neighborhood

One is car-access only

One will have more riders and higher transit efficiency

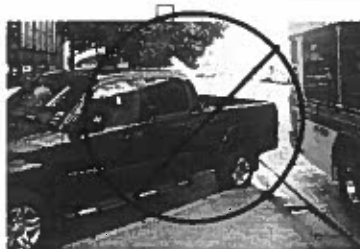
Source: PB PlaceMaking

- **Design – Street elements**

- Transit stops need sidewalk connections
- Transit needs bicycle connections
- Catchment area depends on design- ¼ mile is the minimum
- Transit goes both ways

Bus Specifications

- Safe and efficient bus operation depends on street design
- Buses require different specifications for street design
- Specific site planning requires meeting with CMTA staff



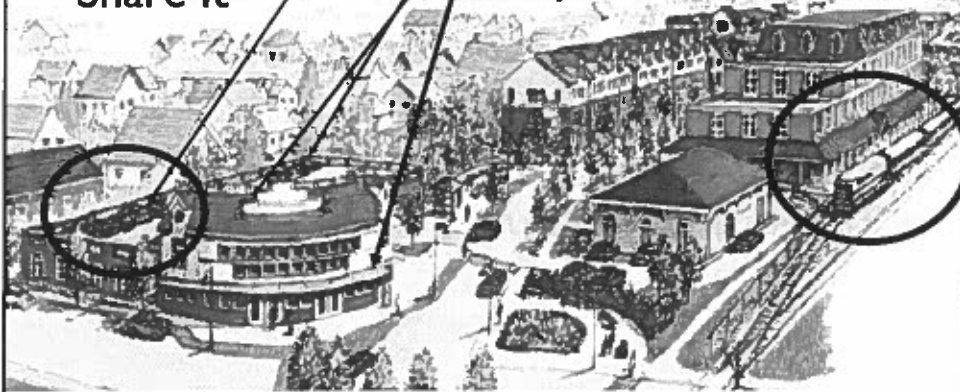
Parking Options that help transit

- Move It
- Share It

Commuter about to leave lot
just arrived for dinner

• Deck It

• Wrap It



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Density, Transit and Traffic impacts

- Transit needs to match demand
- More density means more potential transit customers
- Higher capacity transit can support more intensive development with less traffic
- Transit oriented developments generate about half as much vehicular traffic per household as standard developments

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Density

- Many possibilities for good density
- Many housing types work



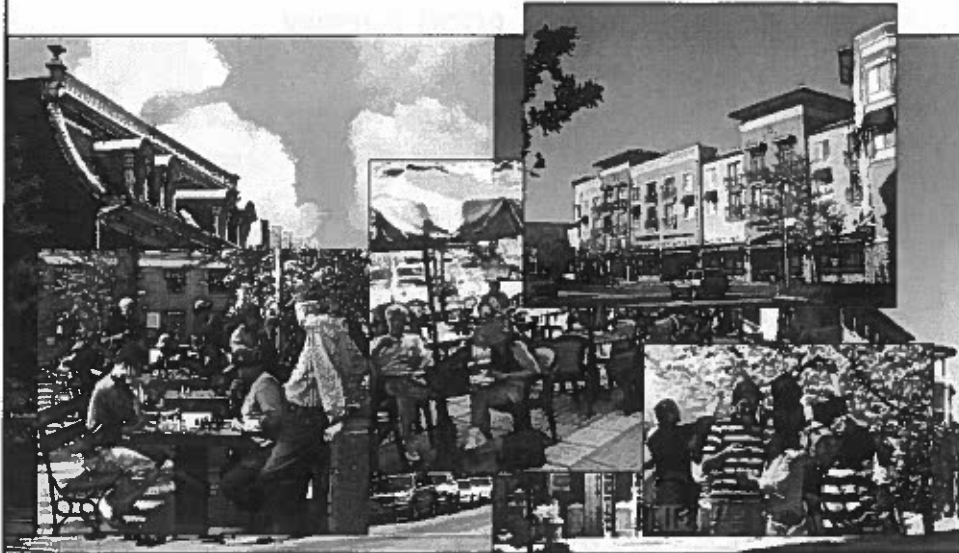
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Diversity

- Transit is more efficient if ridership is spread throughout more hours
- More diversity means more potential transit customers at more times
- Transit frequency can be more even
- Transit oriented developments encourage people to use transit for many purposes

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Diversity



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THE END



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TRANSIT-READY DEVELOPMENT GUIDE



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TRANSIT-READY DEVELOPMENT GUIDE

A resource manual for designing intermodal transportation places

2010



METRO

Notes

[illegible]

Purpose

This brochure is meant to provide the real estate development community a set of guidelines for creating transit-ready developments for bus and rail integration. As the Austin region continues to grow, there will be an increased demand for additional transit connections with pedestrian-friendly street design. Development plays a key role in making transit a success, and the more transit is considered in the design of a project early on, the more the development will benefit from its proximity to and integration with transit. Developments that are not adjacent to an existing rail line should be transit ready in order to be considered for bus service.

Design—Getting the Streets Right

Connectivity

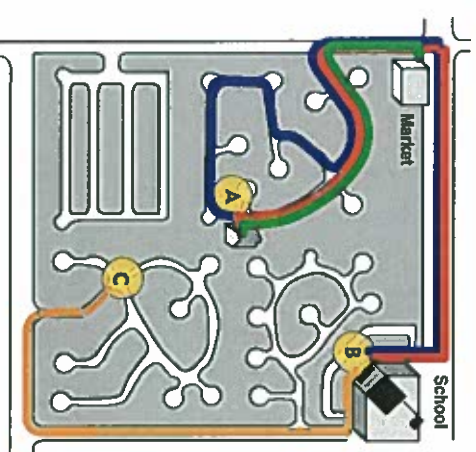
The most important part of any Transit Oriented Development (TOD) is the seamless connectivity of the streets. Well connected streets offer a variety of benefits to a community providing pedestrians, cyclists, and drivers with multiple direct routes for travelling short distances without being forced onto an arterial road. Street connections are the most important up-front infrastructure component that is very difficult to change later:

To be considered a TOD, a new project should include the following connected street-design components:

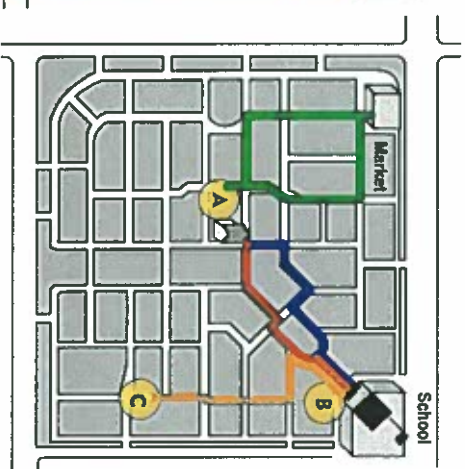
- Connected streets for pedestrian, bicycle and vehicular connectivity
- Frequent intersections to create a pedestrian-scale block pattern
- A dense grid-like pattern of arterial, collector, and local streets

The examples below illustrate the contrast between a typical suburban subdivision land plan with a well-connected street network that offers a variety of safe and efficient options for vehicular, pedestrian, and bicycle movement throughout the development.

Typical Cul-de-sac Subdivision



Well-Connected Street Network



Route Options



Grid Connectivity • Hyde Park • Austin, TX



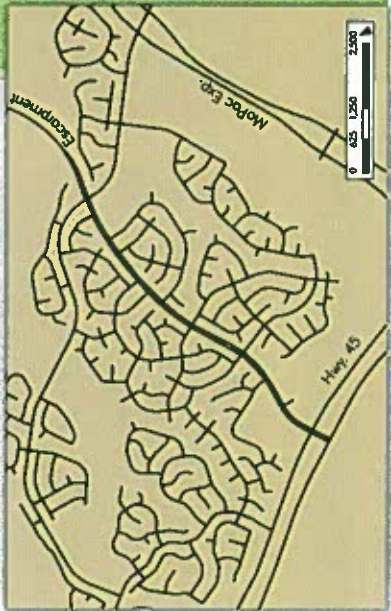
Originally built as a streetcar suburb in 1891, Hyde Park's streets were created specifically to facilitate transit use. The grid system offers extremely efficient local travel for both vehicles and pedestrians with multiple access points to the collectors and arterials.

Non-Grid with Moderate Connectivity • Zilker and Barton Heights • Austin, TX

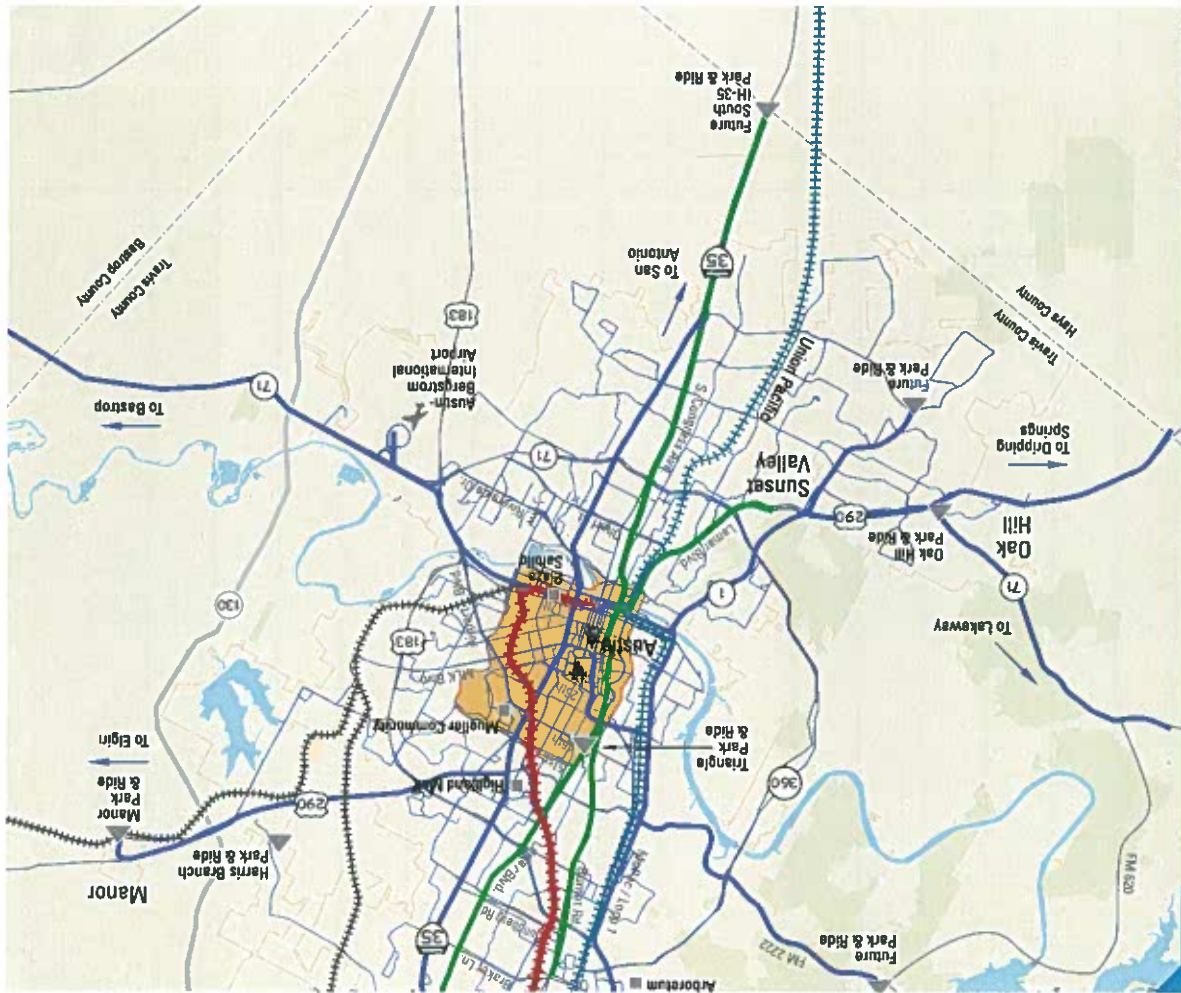


The street design in these neighborhoods is not a grid but the street network is still very connected. This modified grid serves local vehicular traffic well and has adequate pedestrian connections; some block lengths are larger than desired largely due to terrain constraints.

Poor Connectivity • Circle C • Austin, TX



The street network is not well connected. This type of street layout is inefficient for local neighborhood travel and creates pressure on arterial roads due to limited access points. Transit cannot be operated efficiently in this environment.



Regional Commuter Rail**

- * Any potential future rail service would require a referendum.
- ** Being planned by the Austin-San Antonio Inter-municipal Commuter Rail District.

Great residential sidewalks
Plum Creek-Kyle, TX

Legend

All Systems Go Long-Range Transit Plan — 2025

Capital MetroRail

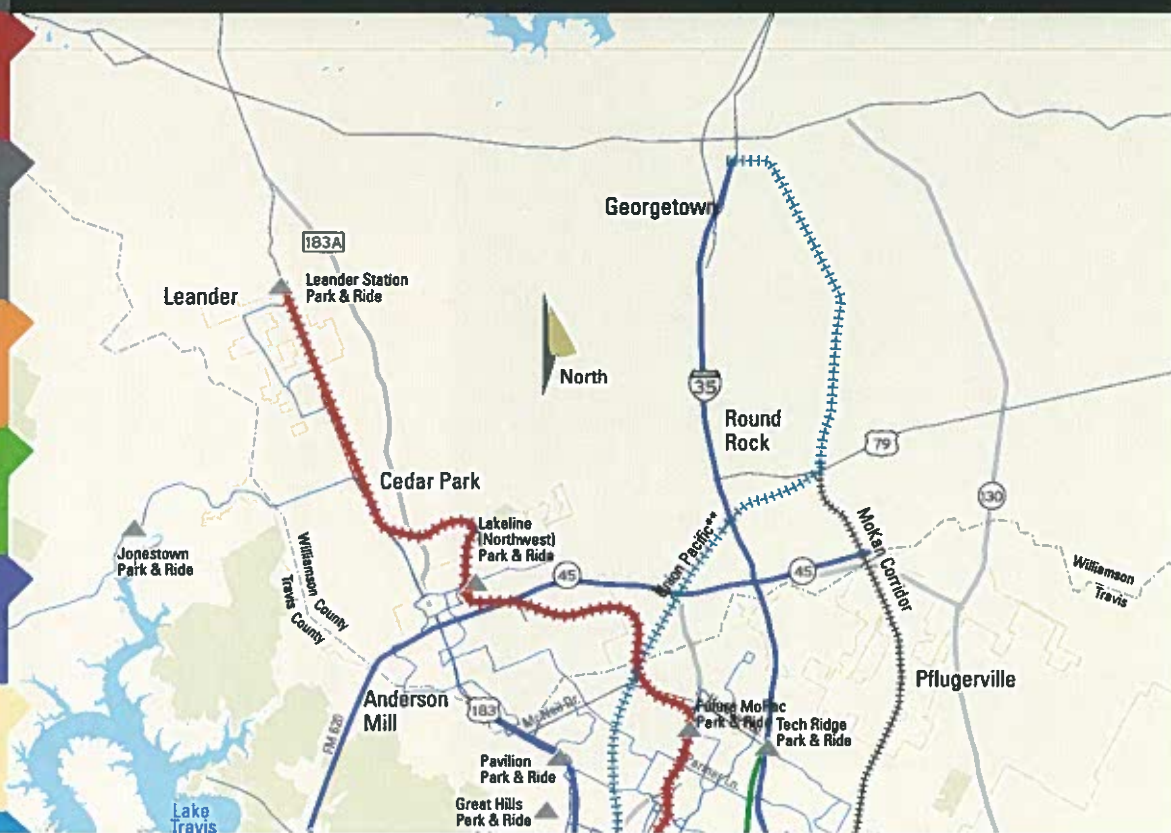
Capital MetroRail
Potential Future
Service*

Future Connections
Study Area*

Rapid Bus Routes

Express &
Local Bus

Capital Metro
Service Area



Street Character

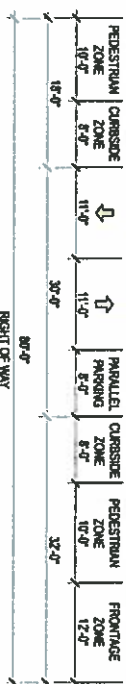
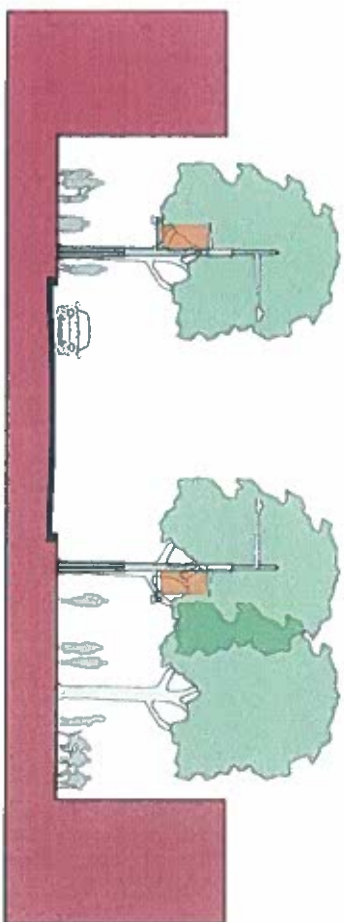
Brunswick, Maine TOD • Mixed housing and pedestrian-friendly street character

Commercial and Mixed Use

TODs work best when streets are designed at a pedestrian scale. Key components of pedestrian-scale commercial streets include:

- Fewer lanes designated for cars than conventional roads designed for cars
- Sidewalks and crosswalks
- Windows facing pedestrian routes with variation in building facade design
- Designated bicycle lanes and pedestrian-friendly intersections
- No “free right” lanes
- Street hierarchy with wider, designated travel lanes adequate for buses and preliminary bus stop designations

Commercial and Mixed Use building facades should be oriented to public activity along primary streets. Diverse building design is necessary to keep pedestrians engaged during their walk. Sufficient width should be allotted for sidewalk activity including restaurant sidewalk cafes and retail activity, if appropriate.



Street Section of pedestrian scale. Courtesy of Black & Veatch

Residential

Residential areas should also maintain a good sidewalk network; setbacks should vary and both single-family and multi-family developments should include street trees wherever possible. Also, driveways should not encroach on sidewalks.

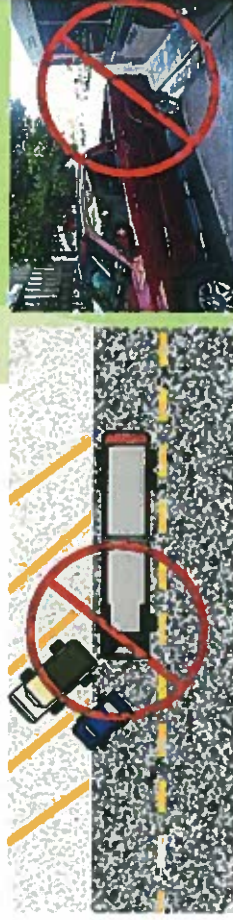
Bus Specifications

Bus stops and loading zones, while important to transit, can cause conflicts with other functions and urban forms. However, land devoted exclusively to bus loading can feel empty during non-peak times. In a TOD, where land is especially valuable and pedestrian activity most intense, the amount of land and public right-of-way space dedicated to bus operations should be used as efficiently as possible.

Bus operation compatibility with other transit modes require a few key elements in street design. In addition to the most fundamental of bus integration priorities (safety, security, and service) a few required components include, but are not limited to:

- Intersection design that prioritizes pedestrian movement and access to bus stops
- Bus turns that are accommodated at controlled intersections.
- Bus and street design that provides protection for both bus and vehicular movements from unnecessary conflict points (e.g., NO angled parking (see diagram below), 90 degree front-in parking must fully clear drive aisle, 22 foot depth recommended)

Complete guidelines for street design to complement bus traffic can be obtained by meeting with Capital Metro planners. However, streets should generally be in a designated hierarchy to accommodate uses appropriately. Those streets designated for bus service should not have front-in angled parking. See diagram below.



In addition, bus stops should be inviting environments and complement the surrounding architecture and setting.



Example of bus stop without consideration of or complementing surrounding environment.



Local example that complements surrounding architecture with similar brick work.



Contact Information

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TOD Checklist for New Projects

Connectivity

- ☐ Does pedestrian-oriented design come first?
- ☐ Are the streets designed to connect the development to adjacent areas?
- ☐ Is there more than one road to carry multiple modes of transportation?
- ☐ Are bicycle parking and access facilities provided with the building project?
- ☐ Are transit facilities located near the entrances to buildings and project facilities?
- ☐ Does the project seek out ways to provide short walking distances between housing, shopping and transit facilities?
- ☐ Does the development have alley-loaded design that hides less desirable elements, i.e. dumpsters, loading docks, service entrances, etc. from public view?

Street Character

- ☐ Do the buildings face the streets, sidewalks, and public spaces?
- ☐ Has space been provided for bus stop shelters and/or benches? Are trees, street lamps, benches, planters, statues, and sculptures used to enhance the street and make it more pedestrian-friendly?
- ☐ Are there wheelchair ramps to access the street at crosswalks or mid-blocks?
- ☐ Are these stops accessible by sidewalk or pedestrian paths?
- ☐ Are there shaded areas for pedestrians?

Parking and Access Improvements

- ☐ Does the development provide preferred parking for wheelchair users, carpoolers, and service vehicles?
- ☐ If there is surface parking, is it located in the rear of buildings?
- ☐ Does the development consider the use of garage parking to avoid large surface parking lots?
- ☐ Does the project encourage shared-parking for complementary uses?
- ☐ Is bicycle parking available?

Land Uses Near Transit Facilities

- ☐ Is there a mix of residential and commercial land uses near transit?
- ☐ Is parking at a minimum and are mixed land uses at a maximum near the transit service facility?
- ☐ Are transit facilities accessible by bicycle or on-road bikeways?

Advanced Mass Transit Services and Facilities

- ☐ If existing transit services are not immediately accessible to the development, could transit access be made available to the project site with the rerouting of an existing transit line?
- ☐ Are the road dimensions adequate to accommodate transit vehicles?
- ☐ Is there adequate traffic-control at intersections for buses to operate safely?
- ☐ Does the bus stop layout environment meet Capital Metro standards?

Community Development Public and Private Partnerships

- ☐ Did the project development process involve Capital Metro staff at the early design stages?
- ☐ Are there opportunities for partnerships and additional funding?

Parking in a TOD

The biggest challenge in a TOD is to get the parking right. Too much parking makes a TOD less pedestrian friendly and wastes valuable real estate. Of course too little parking may hurt retailers. Introduce creative parking strategies that integrate, rather than divide the site and reduce the sense of auto domination. Some general “rules of thumb” for parking integration include:



Move It—Community goals are best served when parking is moved away from the transit nodes within a quarter mile radius.

Share It—Sharing parking among patrons who use transit at different times of the day or week is an excellent way to minimize land devoted to parking.

Deck It—Structured parking enables pedestrian prioritization and provides revenue opportunities to offset increased cost.

Wrap It—Wrapping a parking structure with retail, service, shops, restaurants and residences, enables the street edge to host continual activity.

Density and Mixed-Use

Mix Uses, but Not Necessarily All in the Same Place

A transit corridor that offers an advantageous mix of uses can be used to integrate a number of separate activity nodes, particularly when the uses are close together, easily accessible, and support each other. Capital Metro can justify more transit service in TOD areas due to the increase in ridership and foot traffic—a direct result of density. In addition, more community services that serve the community will locate in denser areas where there are more people.

TOD Districts:

The City of Austin interim TOD ordinance established districts around future urban commuter rail stations that provide for development that is compatible with and supportive of public transit and a pedestrian-oriented environment.

The City has defined four general types of TOD districts:

1. **Neighborhood Center TOD**—located at the commercial center of a neighborhood; lowest density of all classifications.
2. **Town Center TOD**—located at a major commercial, employment or civic center; moderate densities relative to other classifications.
3. **Regional Center TOD**—located at the juncture of regional transportation lines or at a major commuter or employment center; greater densities relative to other classifications but less than in a downtown TOD.
4. **Downtown TOD**—located in a highly urbanized area; highest density of all classifications; allows for high-rise development.

Density Realized—What Do Different Density Levels Look Like?

The photos below illustrate different levels of local housing density that are well-integrated into an attractive neighborhood context and in direct proximity to transit.

5–20 du/ac

Chestnut Commons • East Austin
MLK Station



Mueller • East Austin
Future Rail Access



20–40 du/ac

Bel Air Lofts • South Congress
On-street Bus Stop



Saltlito Loft • East Austin
Saltlito Plaza Station

40–60 du/ac

TwentyOne24 • East Austin
Saltlito Plaza Station



404 Rio Grande • Downtown
On-street Bus Stop



Courtesy of PB Placemaking

Diversity in Design

All TODs are not the same. Some are primarily residential, some are primarily commercial, some are urban in nature and some are town-center oriented. A great TOD would do all of the following:

- Include engaging, high quality public spaces (e.g. small parks or plazas) as organizing features and gathering places for the neighborhood.
- Encourage a variety of housing types near transit facilities available to a wide range of ages and incomes.
- Incorporate retail into the development if it is a viable use at the location without transit, ideally drawing customers both from the TOD and adjacent streets.
- Ensure compatibility and connectivity with surrounding neighborhoods.
- Create TOD plans that are flexible so they can respond to changing conditions.
- Strive to make TODs realistic yet economically viable and valuable from a diversity of perspectives (city, transit agency, developer, resident, employer).
- Recognize that all TODs are not the same; each development is located within its own unique context and serves a specific purpose in the larger context.

Note: Of course, not all TODs will accomplish all of these goals; the best TODs include most of these components.



Orenco Station outside of Portland, Oregon is a 260 acre TOD with housing choices ranging from 5-story condos, 3-story apartments, and single-family homes. Orenco Station is a great example of how to create a TOD in a suburban context.