



TRANSIT-ORIENTED DEVELOPMENT

BEST PRACTICES PLANNING & DEVELOPMENT

JULY 2006

INTRODUCTION

Since the late 1980s, TOD has evolved from a planning theory to implementation. There are now numerous “built” TODs to study and learn from.

This report is a synthesis of “best practices” that was compiled to help policy-makers, planners and developers in Western Riverside County implement transit-oriented development.

There are nearly 100 different TOD guidebooks and related publications nationally. This compendium evolved from the “Statewide Transit-Oriented Development Study: Factors for Success in California” for the California Department of Transportation com-

pleted in 2002.

Decisions about what information to include were based on discussions with our partners in this project—transit agencies and local government officials, as well as the Urban Land Institute, and the Center for Sustainable Suburban Development at the University of California, Riverside.

Five Essential Elements of TOD

The best planning and development practices make up the essential elements of TOD. They are divided into the following five areas:



- Land Use
- Site and Building Design
- Street Patterns and Circulation
- Parking
- Access to TOD

WHAT IS TOD?

TOD focuses compact growth around transit stops, capitalizing on transit investments by bringing potential riders closer to transit facilities and increasing ridership. By encouraging denser “livable” mixed-use and a walkable pattern of development along transit

stops, TOD encourages people to use their cars less while walking and using transit more.

General Principles

TOD is a strategy that has broad potential for both large and small communities using bus or rail transit

systems. TOD draws on many of the same planning and development principles embraced by New Urbanism, Smart Growth and the Livable Communities movement:

Local governments play a significant role in promoting

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TOD PLANNING PRINCIPLES

Moderate to higher density development in relation to existing pattern of development.

A mix of land uses (horizontal or vertical).

Compact pedestrian-oriented design and streetscapes.

Building design and orientation to the street to allow easy pedestrian and transit access.

A fine-grained connected street pattern without cul-de-sacs.

A system of parks and open spaces.

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OVERVIEW—ELEMENTS OF SUCCESSFUL TODS



9 DUs Acre

A successful TOD pulls together the design practices found in the best new urban communities with the planning techniques used to create classic transit villages, vibrant main streets, and vital town centers.

These land development practices and techniques can be distilled into five primary elements: land use, site and building design, street patterns and circulation, parking, and development oriented to

transit. These elements are summarized below and described in more detail below and on the following pages:

- ⇒ Density and diversity in land use;
- ⇒ Quality design and placemaking;
- ⇒ Walkable connected transportation;
- ⇒ Parking sensitively sized and designed;



25 DUs Acre

- ⇒ Transit designed to welcome development.

DENSITY RULES OF THUMB:

- ⇒ 6 TO 7 DU ACRE FOR BUS
- ⇒ 9 TO +25 DU ACRE FOR RAIL
- ⇒ +50 DU ACRE: AUTO & NON-AUTO TRIPS ARE EQUAL
- ⇒ 10% MORE DENSITY = 5% MORE TRANSIT

LAND USE

Density, diversity, mixed uses, a pedestrian scale, and a defined center are primary attributes for a TOD.

- ⇒ Density needs to be transit supportive, yet designed to be attractive & readily absorbed by the market.
- ⇒ Diversity of residents and dwelling unit types can create long-term value by providing for multiple incomes

and lifestyles.

- ⇒ Mixed uses, both vertically and horizontally, create interest and vitality and balanced neighborhoods with places to live and work.
- ⇒ Defined neighborhood centers concentrate retail & pedestrian activities to form a dynamic sense of place.



35 DUs Acre

SITE AND BUILDING DESIGN

Varied architectural design, pedestrian-scale amenities, and carefully designed gathering places are the building blocks of urban vitality.

Strengthening the visual connections between buildings and streetscapes helps to create the sense of enclosure and enchantment that will keep people coming back.

Gathering places are an integral part of site and building design—they provide places for people to meet, to entertain, to rest, to contemplate and to simply watch other people.



15 DUs Acre



50 DUs Acre

PARKING

Parking is one of the most challenging aspects of any TOD. It has even been said that form follows parking.

With most suburban development, surface lots and parking structures have dictated the way that land uses and buildings are arranged on the site.

The key is to consider parking early on in the planning and design process. The correct way to provide parking in a TOD requires attention to three fundamental compo-

nents—size, location, and design:

⇒ Parking needs to be sized sufficiently to meet automotive needs that cannot be satisfied by transit.

⇒ Parking facilities need to be located so that buildings, not the parked cars, are the dominant visual feature.

⇒ The design of the parking needs to relate to the street-scape, circulation routes, and

pedestrians to be an integral part of the development.



STREET PATTERNS AND CONNECTIONS

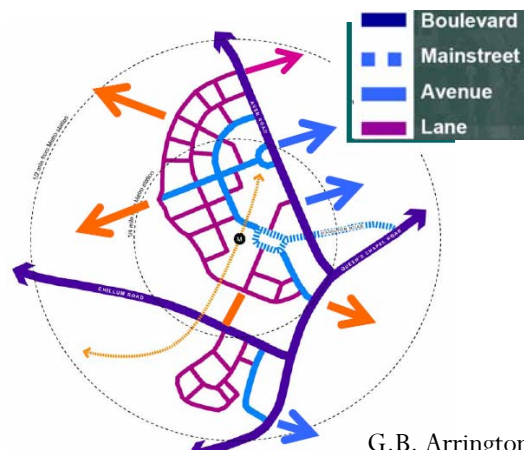
Connectivity is the thread that stitches the different pieces of the urban fabric together.

Designing a multi-modal circulation system with integrated walking, bicycling, transit, and automotive routes equalizes access for all residents and visitors.

Pedestrian crossings and intersections have to be carefully considered while

accommodating the needs for automotive travel.

Trees play an important role in the definition of the urban street pattern and helps reduce the conflicts between pedestrians and cars.



G.B. Arrington

DEVELOPMENT ORIENTED TRANSIT

Designing transit with development in mind is key to TOD success. Integrating transit into the community should be a key part of the planning process.

The relationship of land uses, circulation, and transit within the station area can have an impact on transit ridership, and neighborhood vitality.

Careful planning and architectural design of transit facilities can:

- ⇒ achieve transit needs,
- ⇒ create landmarks to orient the neighborhood and
- ⇒ provide a hub for community activities.

Auto or Development Oriented Design?



- Both designs have:
- ⇒ Same land uses
 - ⇒ Same transit
 - Rail station,
 - 800 Park & Ride
 - 12 Bus Transfer
 - ⇒ Same cost

One encourages TOD at the station.

One separates the station from the Community.

G.B. Arrington

A DEFINED NEIGHBORHOOD CENTER



“A defined neighborhood center serves as the focus of community life. Six key design principles refocus new investment to recreate traditional centers to take advantage of existing transit facilities to create pedestrian friendly retail, entertainment, employment, educational, and housing options for all community members.”

“A successful transit-oriented neighborhood center has the following characteristics:

It is a core of compact development focused around bus/rail stations;

It is the cornerstone of community life by providing opportunities to shop, work, live, learn and play;

It has a defined boundary and character distinct from surrounding neighborhood; and

It emphasizes the five key design principles listed in the left column.”¹

DESIGN PRINCIPLES

- ⇒ PEDESTRIAN ENVIRONMENT
- ⇒ MIX OF USES
- ⇒ BUILDING PLACEMENT
- ⇒ BUILDING ORIENTATION & FRONTAGE
- ⇒ PARKING

A SENSE OF GRAVITY

“Nothing is more powerful for a town center than a strong center of gravity, a focal point that provides a gathering place for people and an identity for the project. The center of gravity may be the main street itself, but more often, it is an urban park, a plaza, an outdoor dining area, a fountain, a transit station, a clock tower, or some other place to which

people are naturally drawn. A center of gravity helps visitors remain oriented to the larger setting, provides dramatic views of the town center, and offers an outdoor setting for meeting, mingling, lounging and conversing. The central public space should also be adaptable—providing performance space and seating for special events, as well as flexible space for kiosks,

and exhibits at art fairs and farmers’ markets. Public space is the great equalizer for town center projects. Whereas town center housing is often aimed at high-end homebuyers and renters, and many shops may cater to upscale households, the public spaces provide gathering places for people from all walks of life.”²

DIVERSITY AND BALANCE

“Heterogeneous communities meet the needs of a society that is increasingly diverse in its needs, cultures, demographics, and daily living habits. Diversity can manifest in numerous ways in the build environment. Development that has a mix of uses provides a traditional urban form, a contrast to isolated suburban environments, where shop-

ping, friends’ houses, and other destinations are frequently inaccessible without a car. TODs can also enable diversity by creating mixed-income housing or greater variation of housing types such as residential units located over commercial uses, or ‘granny flats’ behind single-family homes. Housing choice provides for a range of

incomes and a range of family types in an inclusive environment that does not leave out major segments of the population. In turn, this gives all people who may work in or visit a community, such as teachers and single-parent households, affordable options to live there.”³



The Hazard Center
41-acre pedestrian scale residential/office/retail development in Mission Valley, San Diego, CA.

VERTICAL AND HORIZONTAL MIXED USE

“Mixed-use can occur when more than one land use is within a single building, or when different uses are located in separate buildings close to each other. The important component is that good walking access must exist between the different land uses. Mixed-use within buildings (known as “vertical mixed-use”) is an excellent way to increase building density while integrating mutually supportive land uses.

Residential above commercial will create all day activity and a functional place for pedestrians while increasing transit ridership. The same can be achieved with mixed-use in separate buildings (known as “horizontal mixed-use”) if they are in close proximity and have adequate pedestrian connections.”⁴

“All TODs must be mixed-use. A certain minimum proportion of uses are required to stimulate pedestrian activ-

ity and to provide economic incentives for developing with mixed-use patterns. The proportion is based on site area and does not preclude additional, different uses on upper floors. A minimum amount of retail, housing and public uses are required in all TODs. The different mix of uses for neighborhood TODs and urban TODs is intended to reflect the variations in intensity and type of development desired at these sites.”⁵



Uptown District, San Diego, CA

COMPACT MIX OF LAND USES

“A station area should generally include parcels within one-quarter mile to one-half mile walking distance of the transit facility. However, barriers, such as busy streets or steep slopes can reduce this distance, while pleasant walking routes, such as an unrestricted pedestrian path, can increase the size of the pedestrian area.

Each station area should be specifically defined based on local conditions, including the level of transit service provided, the likely purposes of the trips to be taken, and the pedestrian qualities in the immediate vicinity of the facility. Within a defined station area, the mix and density of land uses should be planned based on the location and access to the station. The

highest density developments should, ideally, be located closest to the transit facility.”⁶

Checklist for planning a mix of land uses:

Are land uses complimentary?

Are uses linked by sidewalks or paths?

Do uses create all day activity?

Are uses within walking distance?

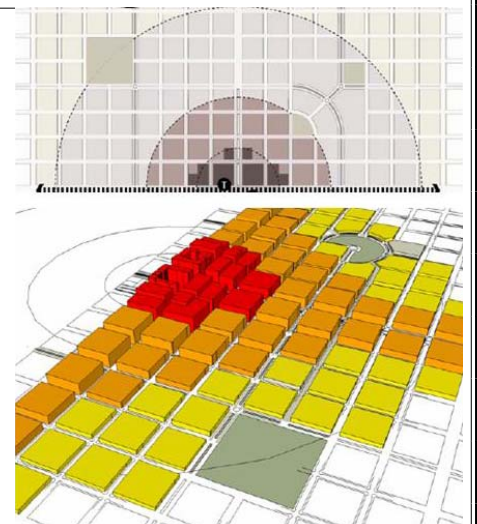
STATION AREA DENSITY

“Residential development near stations provides a ready market for transit trips. A variety of housing types, costs and ownership will establish diversity in a community and will lead to more transit trips through the day. More people will be around the [transit facility] and supporting local commercial establishments. Research indicates that 15

housing units per gross acre will support a high level of bus or rail service to a station area. High-density single family, townhouses, and apartments should be combined to achieve an adequate housing density. To maintain a good balance of activity, the number of jobs in the station area should not exceed the number of households by more than 3 to 1.”⁷

Greater Density than community average

- ⇒ Up to 600 ft. = greatest intensity
- ⇒ 600 to 1,500 ft. = intermediate intensity
- ⇒ 1,500 to 3,000 ft. = greater than community average intensity



VARIED ARCHITECTURAL DESIGN & DETAIL



“Varied details on the exterior of buildings and in the public spaces adds interest for pedestrians, patrons and residents. These details assist in defining a TOD and establishing a separate identity from other parts of a community. The exterior treatments also help in relating the building(s) to the sidewalk and other public areas.”⁹ “The way that streets and pathways weave through the town center, connecting its buildings and public spaces, can provide pedestri-

ans with a sense of discovery and delight that is seldom experienced in the suburban landscape, and that is essential to the town center experience. Like great plazas and squares, great streets also offer a sense of enclosure, and build on a human scale that is related to the proportion between the height of the buildings and the amount of open space (in this case, the space between the facades of the buildings that face one another), Streets in suburban

areas are typically many times wider than the heights of the buildings that line them, often reaching ratios of 1:6 and higher. Such wide streets prevent a spatial enclosure from being achieved and are more difficult for pedestrians to cross. The types of historic urban streets that are considered models for town centers achieve tighter proportions, approaching 1:1 relationship.”¹⁰

BUILDINGS... “DO MUCH MORE THAN HOUSE PEOPLE AND SHOPS: THEY ESTABLISH THE DESIGN VOCABULARY OF PLACES AND THE VISUAL RHYTHM OF STREETSAPES.”

PEDESTRIAN-FRIENDLY DESIGN

“In pedestrian friendly areas, land use activities are designed and arranged in a way that emphasizes travel on foot rather than driving by car. Creating an environment at pedestrian scale requires careful consideration of the dimensions of the human body and the proportions of the spaces that people use. The factors that encourage people to walk are often subtle, but

they most regularly focus upon the creation of pleasant environments for the pedestrian.

Most people do not feel comfortable walking in a wide-open area with busy traffic passing closely by. Pedestrians are drawn to streets and paths with a feeling of intimacy and enclosure. This feeling can be created by lo-

cating buildings close to the sidewalk, by lining the street with trees, and by buffering the sidewalk with planting strips or parked cars. People on foot enjoy small details, such as displays in shop windows, street level lighting and signs, and public art and displays.”¹¹

ARCHITECTURAL ELEMENTS

“Architectural elements that contribute to the overall sense of place include:

- Height (of both buildings and individual floors)
- Scale and massing
- The extent to which buildings are attached or detached from one another

- The spacing between buildings and the street
- The proportions of windows, bays, doorways, porches, and other features
- Architectural style
- Materials, finishes, and textures, and
- A number of other elements, including shadow patterns, landscaping, the location and treatment of entryways, and the response of buildings to climate and topography.”¹²



Fruitvale Village
California

COMMERCIAL BUILDINGS

The configuration of shops in a core area must seek a balance between pedestrian and auto comfort, visibility, and accessibility. While anchor stores may orient to the arterial and parking lots, smaller shops must orient to pedestrian “main” streets and plazas.¹³

Primary ground floor commercial building entrances must orient to plazas, parks or pedestrian oriented streets, not to interior blocks or park-

ing lots. Secondary entries from the interior of a block will be allowed. Anchor retail buildings may have their entries from off-street parking lots however, on-street entries are strongly encouraged.¹⁴

Entries into small shops and offices should orient directly onto pedestrian-oriented street. Buildings with multiple retail tenants should have numerous entries to the street; small single entry

malls will be discouraged. Off street parking should also be located at the rear of buildings with paths or sidewalks leading to the street and entry.¹⁵



Orenco Station, Hillsboro, OR

RESIDENTIAL BUILDINGS

“As with commercial uses, residential entries should face the street to encourage public activity in the public realm and to welcome visitors from on-street guest parking.”¹⁶

“In all cases, primary ground floor residential building entrances must orient to streets, not to interior blocks or parking lots. Secondary and upper floor entries from the

interior of a block will be allowed.

In residential areas, the front door and guest entry must orient to the street. Private back-door entries can provide access from alleys, garages, and parking lots. Ancillary units and upper floor units in multi-family or apartment complexes may be accessed by rear entries.”¹⁷



Pedestrian-oriented mixed-use residential development in San Diego’s Hillcrest neighborhood in the Uptown District.

IN AREAS WHERE WALKING IS TO BE ENCOURAGED, ALLEYS PROVIDE AN OPPORTUNITY TO BRING THE MORE ‘SOCIAL’ ASPECTS OF THE HOME TO THE FRONT OF THE STREET.

GATHERING PLACES

Whether large or small, TOD projects should provide attractive public gathering spaces. These urban open spaces differ significantly from more fluid and spacious parks and open spaces commonly found in today’s suburban areas. Throughout urban history, public plazas, village greens, and town squares have been the focal points of

towns and town centers, providing a public realm for everyday social life, housing bustling marketplaces and places to meet, mingle, and “people watch” and providing a backdrop for more exceptional events such as fairs, festivals, coronations, protests, and even revolutions.¹⁸



STREET VITALITY



Neighborhood streets are an important element of the design of livable residential communities. They perform many diverse functions, serving as:

- Public space defining collective values and civic sensibility;
- Spaces for social interaction;
- A framework that gives structures an address, access, and identity;

Public infrastructure for the through movement of traffic and vehicular access to private dwellings;

- Places for storage of vehicles;
- Places for cycling;
- Walking environments and play spaces
- Locations for underground services, including sewer, water, gas, electricity, cable television, and telephone.¹⁹

Street Patterns—The street pattern should be memorable, avoid winding, dead end roads, dean end streets, and cul-de-sacs. With an interconnected street system, any single street will not be overburdened by excessive traffic, thus reducing the need for cul-de-sacs. A street pattern which is circuitous and complex will discourage pedestrians; a street system with land marks and a simple form will be memorable and familiar.²⁰

“STREETS AND THEIR SIDEWALKS, THE MAIN PUBLIC PLACES OF A CITY, ARE ITS MOST VITAL ORGANS.”

JANE JACOBS

INTERSECTIONS

Intersections should be designed to facilitate both pedestrian and vehicular movement by slowing traffic and reducing pedestrian crossing distances. Minimizing curb radii at intersections reduces pedestrian crossing distances, as well as the speed of cars. Unless absolutely necessary for safety, right and left turn lanes at intersections should be avoided.²¹

CONNECTIVITY

To achieve pedestrian-friendly design, the circulation network must serve as the framework for placing and orienting buildings. Whenever possible, pedestrian routes should be along, not separate from the street system. Streets should be designed for all travel modes, not just cars. Clear formalized, narrow and interconnected streets and small

blocks make destinations visible and easier to access. They also provide the shortest and most direct route for pedestrians and bicyclists.²²



Castro Street
Mountain View, CA

PEDESTRIAN STREET CROSSINGS

Pedestrians must be able to cross streets easily and safely at many different points within the station area if they are to do without their automobiles. Signalized well-designed pedestrian crossings should be provided at all road intersections in the station area. “Bulbs” and median strips should be used to shorten or break up crossing

distances, and mid-block crossings should be established where intersections are far apart.²³

routes should be located along or visible from all streets, and provide clear comfortable, and direct access to the core commercial area and transit stop. When street connections are not feasible, short pedestrian paths should provide walking connections Walkways between buildings are encouraged when blocks are large.²⁴

PEDESTRIAN ROUTES

A continuous sidewalk system should be established within the station area. Pedestrian



Pedestrian and bicycle bridge connects the Uptown District to an adjacent neighborhood.

Source: California Department of Transportation

SIDEWALKS

Comfortable sidewalks are key to reinforcing a pedestrian environment within a TOD. The comfort and convenience of the pedestrian trip will reinforce the efficiency of the transit system by creating destinations which are attainable without a car and origins which do not depend solely on park and ride mode transfers.²⁵

Comfortable sidewalks should

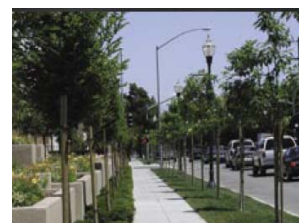
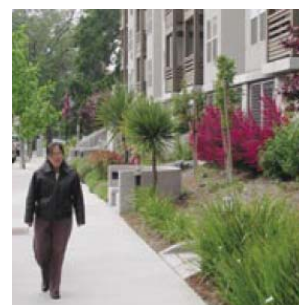
- Connect the bus stop with adjacent pedestrian destinations, including building en-

trances, street crossings, other walkways and with the nearest intersection

- Minimize barriers (landscaping, berms, or fences) that impede pedestrian access or visibility.
- Provide buffers between pedestrians and moving traffic without obstructing bus boardings/deboardings
- Vary sidewalk and buffer widths depending on traffic volumes and speeds and on pedestrian volumes (i.e. increase buffer widths as speeds increase; increase sidewalk

widths to accommodate increased pedestrian volumes).²⁹

“The preferred sidewalk width in a downtown is 12 feet, at least 6 feet of which must be clear of obstructions. This width allows pairs of pedestrians to walk side by side, or to pass each other comfortably. It generally provides enough width for window shopping, street furniture, and is desirable to accommodate bus shelters, sidewalk cafes, and other outdoor retail. other outdoor retail.”



PEDESTRIAN AMENITIES

“Along with comfortable transit stops, it is important to provide other amenities that increase the comfort and safety of pedestrians. These amenities have many practical applications but they also play an important role in elevating the place of the pedestrian and transit user in the built environment.”²⁹

“Clearly articulated pedestrian areas with smaller dimensioned surfaces and site elements improve pedestrian safety by distinguishing the pedestrian network from car, bike or transit circulation. The treatment of sidewalks, streets, and driveways is particularly important at points where they intersect.”³⁰

“Where it can be justified, and all other measures have been examined (such as narrowing or eliminating medians, bike lanes, parking lanes or travel lanes), the sidewalk width can be reduced to as narrow as 8 feet. In general, however, the rule is: the wider the sidewalk, the more pleasant the pedestrian experience.”²⁸

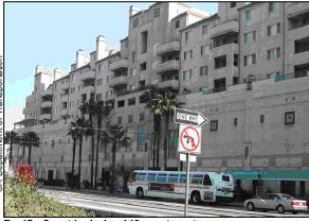
STREET TREES

“Street trees and other landscaping provide a pleasing contrast and softening of the urban environment. They enliven streetscapes by blending natural features with built features. Street trees, when planted between sidewalks and streets, buffer pedestrians from vehicles.”³¹

“Trees are an important element in the creation of livable communities. Trees add color and contrast to the street. They moderate the micro-climate of the street, filter pollution, and can act as a separator between uses.”³²

Bikeways

“Biking can be a major alternative to the auto for local trips or trips to the transit stop. Separated or marked bike lanes on several primary routes to the core area will support this alternative. On smaller streets, bikes sharing the travel lane will help slow cars to speeds more appropriate for residential streets.”³³



Pamela Bruckhoff and the CA Department of Transportation

Pacific Court, Long Beach, CA, includes 142 apartments over retail and a multiplex theatre. Visitor Parking was reduced in order to take advantage of transit availability.

PARKING MANAGEMENT

“Managing the growth of surface parking represents a major challenge to TOD. Typical suburban development projects devote 50 to 75% of their sites to surface parking. The result is land use densities that are too low to serve frequent and fast regional transit service. A more limited parking supply encourages residents, employees, and shoppers to use transit.

Surface lots separate buildings from public streets, making it

difficult for pedestrians to walk between buildings and to transit facilities.

Parking management provides alternative strategies to traditional surface parking and can result in more compact developments. If properly designed and located, auto parking can be provided to meet demand and not negatively impact the pedestrian environment.”³⁴

REDUCE THE IMPACT OF PARKING

“The single most effective way of reducing the impact of large areas devoted to parking is to build parking structures. Property values, proximity to riders, and existing development character all play a role in the viability of structured park and ride facilities. When planning park-and-ride facilities, create an environment that encourages walking.”³⁵

“CONTROLLING THE PARKING SUPPLY IS AN EXCELLENT WAY TO SHIFT PEOPLE TO OTHER MODES OF TRAVEL, INCLUDING TRANSIT.”³⁶

SURFACE PARKING

“Street-side parking is critical to keeping the focus of a community on the street, rather than on the interior of lots. Parallel parking helps to create street activity, as well as provide functional spaces. It supports orienting building entries to the street by providing convenient access for guests and patrons.

“Where parking is or can be

located at the side or rear of buildings, attractive, public pedestrian connections to the primary street should be created. Signs should be posted to direct drivers to parking entrances that may not be obvious. Encourage commercial district people and employees to use transit or limit employee parking to remote spaces, freeing the most desirable spaces for

customers.

Consolidate parking into shared lots. Where shared parking is desirable, consideration should be given to time-share possibilities. Merchants are encouraged to share parking with other users that need parking primarily during hours when stores are closed, e.g., a movie theatre or church.”³⁷

GROUND FLOOR DEVELOPMENT IN PARKING STRUCTURES



Pedestrians stroll past the outdoor seating of a restaurant in the Uptown District TOD, San Diego, CA

“Design parking lots and structures so that they do not dominate the frontage of pedestrian-oriented streets or establish impediments to pedestrian routes. Retail or other land uses should be located on the ground floor and incorporated into the building’s design. Portions of parking structures that do not have first level retail uses

should be designed to have an appearance that blends with neighboring structures.”³⁸

Bike Parking—Bike racks or other bike storage facilities must be provided at various shopping, transit, and employment destinations in the TOD. Bike parking may be shared between uses, but should be centrally located, easily accessible to building entries, and visible from streets or parking lots.³⁹

Source: California Department of Transportation

CHANGING THE RULES FOR PARKING 40



- Private off-street commercial parking
- Shared parking opportunity
- P Surface parking
- S Structured parking
- U Tuck under garage
- G Private garages
- C Car sharing
- Public on-street parking
- Alley parking
- Bus staging
- Taxi
- Kiss & ride

“GOOD URBAN
DESIGN BEGINS
WITH THE
LOCATION OF
THE PARKING
LOT.”

DAVID SUCHER, AUTHOR
OF CITY COMFORTS

The design of the parking needs to relate to the streetscape, circulation routes, and pedestrians to be an integral part of the development.



GROUND FLOOR DEVELOPMENT IN PARKING STRUCTURES

CREATING PLACES



“Hollywood/Highland” is a major new mixed-use TOD featuring retail, entertainment, and lodging over a Red Line subway station in Hollywood, CA.

SOURCE: CALIFORNIA DEPARTMENT OF TRANSPORTATION

Transit stations should be places to come back to, not just places from which to leave. The challenge for the transit system designer is to successfully balance the needs of two masters: accommodating transit requirements of bus transfer facilities and park-n-rides while designing a facility that welcomes and reinforces the adjacent community and accommodates TOD.

The template for contemporary transit design—getting the parking right, automobile drop-off and bus transfers as close as possible to the platform—can be deadly for TOD and for the integration of the station into the community.

With careful attention to detail, it is possible to meet all of the transit needs and still use the station to anchor

wonderful people-oriented places.⁴¹

“DEVELOPMENT MUST ADEQUATELY ACCOMMODATE AUTOMOBILES. IT SHOULD DO SO IN WAYS THAT RESPECT THE PEDESTRIAN AND THE FORM OF PUBLIC SPACE.”

Congress for a New Urbanism

7 PRINCIPLES OF DEVELOPMENT-ORIENTED TRANSIT

1. Locate the station in an area with development potential.
2. Develop transit facilities in a compact, pedestrian-oriented manner, allow for direct pedestrian connections from the transit facility to adjacent communities.
3. Don't allow park-n-ride lots to separate the station from the community that it is serving.
4. Incorporate TOD into the transit facility as appropriate.
5. Be a good neighbor.
6. Use quality materials.
7. Routinely maintain the facility.⁴²

TRANSIT STATION AS COMMUNITY LANDMARK



Pioneer Square Portland, OR

“A well-designed transit station can become a community-centering landmark in a TOD, both a distinctive central place that draws people by choice and necessity, and a symbol that people associate with their community's identity. The station's nodal importance can be expressed through a variety of design treatments. For example,

stations can generate community landmark quality through distinctive and unique architecture, a style that picks up on the vernacular of surrounding buildings, or vertical punctuations that align with major community routes and can be seen through the neighborhood.”⁴³

COMMUNITY CONNECTION TO TRANSIT

“With rail systems, how to connect the station to the community involves a decision about whether the station will be at-grade with surrounding roads and buildings, or elevated from them. Elevated stations can provide greater system speed, but create a visual disconnect between areas on either side of the tracks.

Elevated stations should contain pedestrian crossings over and under the tracks, or a

station mezzanine level that contains exits to either side.

At-grade light rail stations are preferable from an urban design standpoint. At-grade stations allow visual and pedestrian connections across the rail right-of-way, creating a coherent public space around the transit station and eliminating the need for dark underpasses that may become unsafe.”⁴⁴



Parsons Brinckerhoff and the California Department of Transportation

The Uptown neighborhood in San Diego has an extensive network of inviting pedestrian pathways and plazas.

LEARNING FROM THE PAST

Designing a new transit line to be development-friendly does not necessitate the sacrifice of transit requirements. The requirements can be successfully incorporated and the system can be integrated into the TOD community.

Transit designers can learn much by looking at how older established commuter rail, such as Metra in Chicago, has been well-integrated into the communities it serves. For example, the parking tends to be dispersed in a number of small lots rather than one mega lot. In that way, the community, and the transit stations happily co-exist with each other.⁴⁵

“COMMUNITIES
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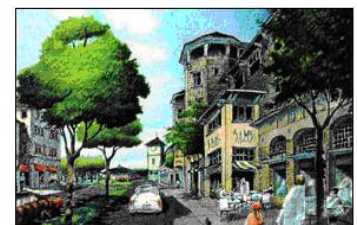
JIM MIARA, “ON ROUTE”,
URBAN LAND INSTITUTE,
MAY 2001

WHAT IS TOD? CONTINUED FROM PAGE 1

TOD through plans, policies, zoning provisions, and incentives for supportive densities, designs, and mix of land uses. A successful TOD will reinforce the community and the transit system.

Successful TOD implementation typically involves a number of elements, such as

- Optimal transit system design;
- Community partnerships.
- An understanding of local real estate markets.
- Planning for TOD.
- Coordination among
- local, regional, and state organizations; and
- Providing the right mix of planning and financial incentives and resources.



An addition to the existing Pleasant Hill BART station is one of a record number of TOD planning projects underway in California.

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WRCOG MISSION

Future growth in Western Riverside County will place increasing demands on the available land and transportation infrastructure.

The WRCOG TOD Study is an initiative about providing transportation and housing choices in Western Riverside County.

The Western Riverside Council of Governments is a sub-regional Joint Powers Authority formed in 1990 that includes the voluntary participation of the County of Riverside and the 14 cities within the western portion of Riverside County, California. WRCOG is an important forum for the collective examination of issues that are regional in nature that transcend individual political boundaries

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The contents of this report reflect the views of the author, who is responsible for the facts and the accuracy of the data presented herein.

The contents of this report do not necessarily reflect the official views or policies of WRCOG or the California Department of Transportation.

The report can be downloaded from the WRCOG website. Please access the websites identified above.

Parsons Brinckerhoff and the CA Department of Transportation



Ohlone Chynoweth is a precedent-setting project in the San Francisco Bay Area that redeveloped a park-and-ride lot into housing, including these units developed by Eden Housing.

Parsons Brinckerhoff and the CA Department of Transportation



The 1,100 space park-and-ride lot was redeveloped into 330 units of affordable housing, retail, childcare, and a 240 space park-and-ride lot.