Station Area Planning Manual

August 31, 2007

Placeholder
Photo: Credit

Prepared for:

METROPOLITAN TRANSPORTATION COMMISSION

Prepared by:

RECONNECTING AMERICA

CENTER FOR TRANSIT-ORIENTED DEVELOPMENT

VTA Light Rail in Downtown San Jose
Photo: E. Paul Baca

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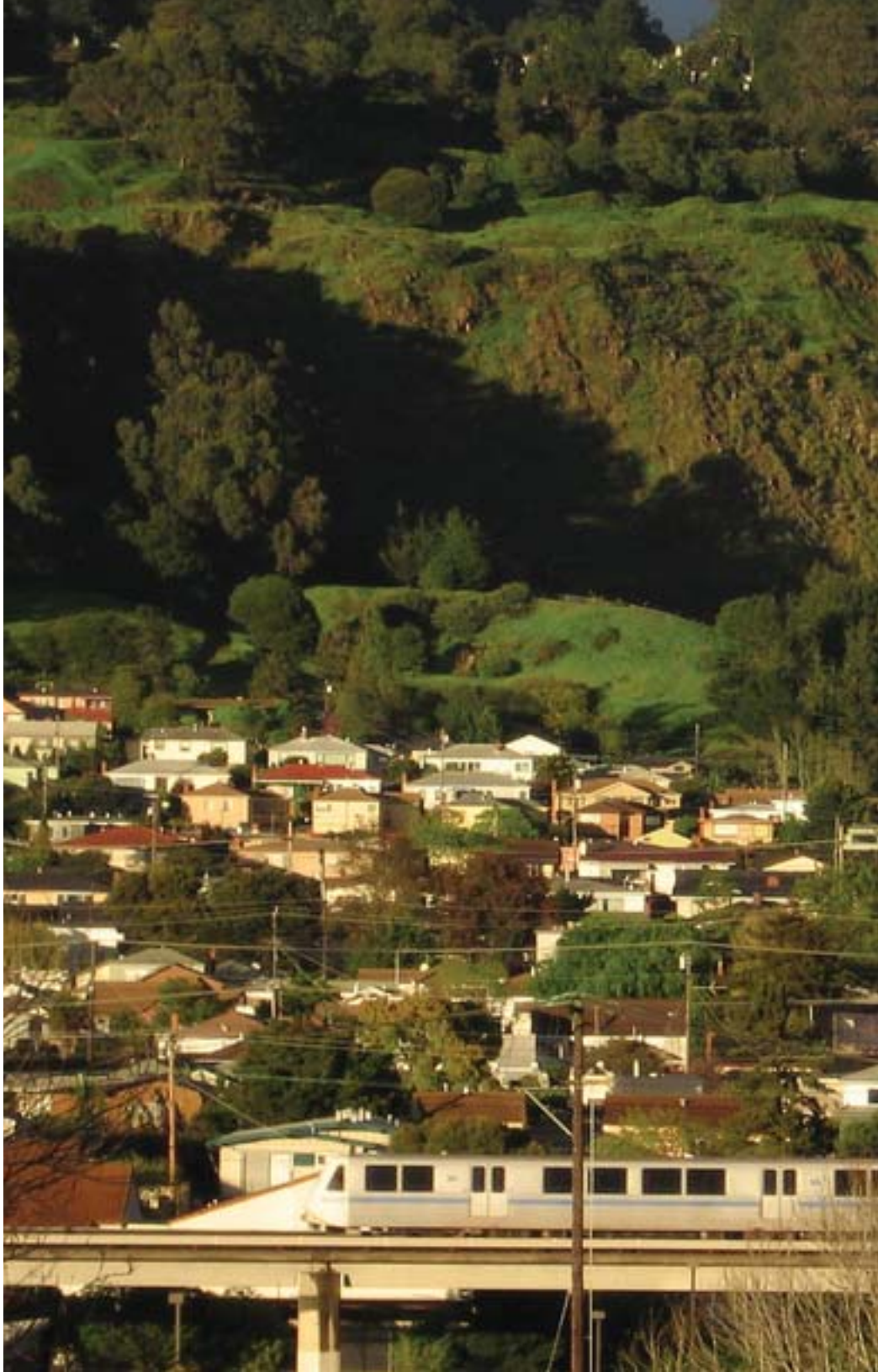
Future Ferry & Commuter Rail Terminal Location in Hercules
Photo: Hercules Redevelopment Authority

Introduction/Purpose

This manual is intended to serve as a companion to MTC's Transit Oriented Development (TOD) Policy, to assist jurisdictions with decision-making as they complete Station Area Plans around Bay Area transit stations. MTC's TOD Policy, adopted in 2005, requires new regional transit expansion projects to meet corridor housing thresholds that require local governments and transit providers to work together to show how they will provide for a minimum amount of housing within walking distance of transit stations.

The goal is to make regional transit investments as efficient as possible and encourage local jurisdictions to focus growth around transit nodes. In order to reinforce the requirements of the TOD Policy, MTC has made funding available for Station Area Plans that address future land use changes, station access needs, circulation improvements, pedestrian-friendly design, TOD-supportive parking policies and other key features in a transit-oriented development.

The guidelines in this manual were reviewed by the Technical Advisory Committee for the *Focusing Our Vision* (FOCUS) program. FOCUS is a multi-agency effort spearheaded by ABAG and MTC in coordination with the Bay Area Quality Management District (BAAQMD). FOCUS builds upon the Smart Growth Strategy/Regional Livability Footprint Project. This pioneering effort resulted in a series of regional policies established in 2002 that direct growth to transit corridors and existing communities as part of a "Network of Neighborhoods." Through these efforts and others, MTC and ABAG are working to create a vision for the Bay Area that brings transportation and land use together.



BART in El Cerrito
Photo: John McCartney

How to Use This Manual

This manual is divided into three sections. The first section defines seven Bay Area Place Types and is intended to help cities self-identify their vision for the future of station areas based on characteristics such as land use mix and transit mode. This self-identification serves to establish a common language for a regional policy framework. This section also presents simple guidelines for new development within a given station area according to Place Type. Development guidelines include such elements as typical housing types, total units per station area, and total jobs per station area. *This section should be used to understand the potential outcomes at the start of a planning process.*

The second section presents a number of station area planning principles. These principles are meant to inform the development of Station Area Plans, regardless of place type, and represent an understanding gained from previous MTC-sponsored Station Area Plan efforts. *This section should be used throughout the planning process to help make decisions that will support TOD.*

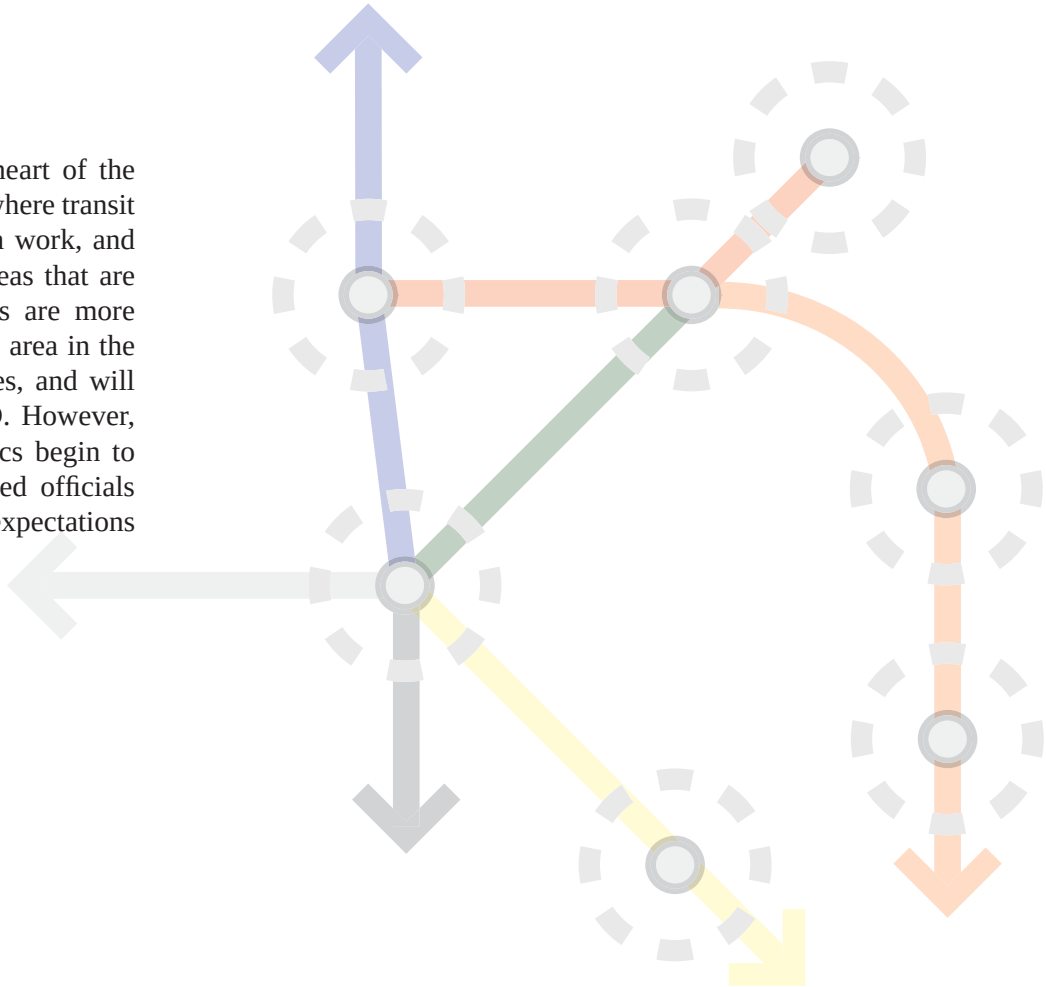
The third and final section provides illustrative examples of building and open space types as companions to the Station Area Plan guidelines and principles. The building types are meant to help visualize the possibilities and are not intended as an exhaustive list of the options. *This section should be used to help visualize potential development outcomes and implement Station Area Plans.*

BART on San Pablo Avenue
Photo: MTC

1 TOD Place Types

What is a Place Type?

Some transit stations are located in bustling downtowns at the heart of the regional economy; others are located in residential neighborhoods where transit provides a convenient means for commuters to travel to and from work, and get to and from leisure activities. Some stations are located in areas that are experiencing rapid pressures to grown and change, while others are more established, where change will be more incremental. Every station area in the Bay Area, existing and proposed, faces a unique set of challenges, and will require specially tailored strategies for creating high-quality TOD. However, across many different types of station areas, similar characteristics begin to emerge. These similarities can help planners, citizens, and elected officials quickly and easily understand the key planning considerations and expectations for the character, role, and function of different types of places.

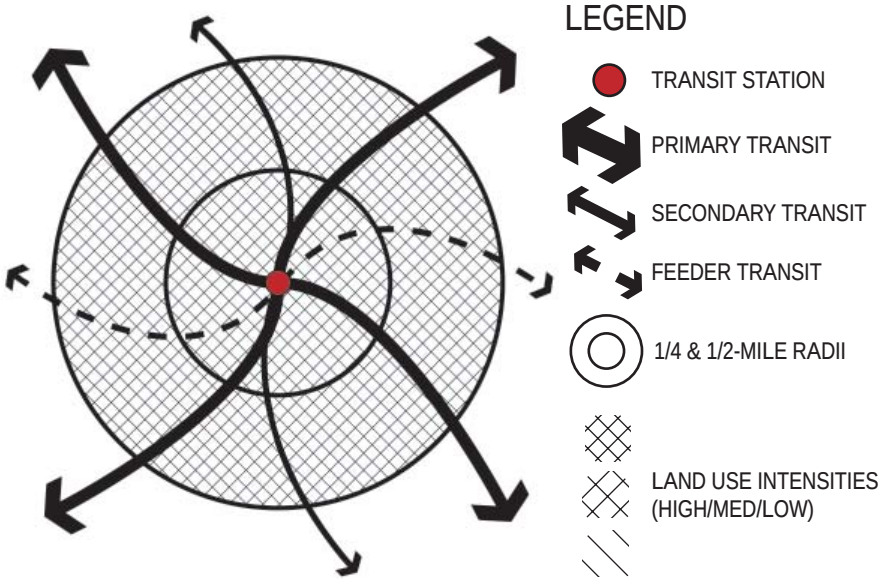


Place Type Characteristics

Duboce Park, San Francisco
Photo: Blaine Merker

Regional Center

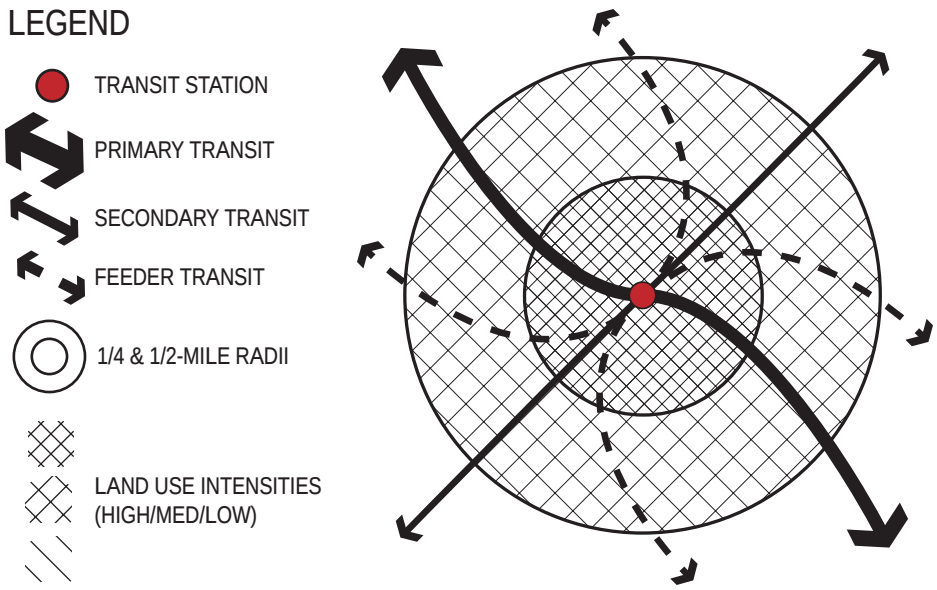
Regional Centers are primary centers of economic and cultural activity for the region. These are the regional downtowns, with a dense mix of employment, housing, retail and entertainment that caters to regional markets. They are served by a rich mix of transit modes and types such as BART, Caltrain, Muni light rail or VTA light rail that support the activity centers, as well as more local-serving bus networks. In the recent past, regional centers in the Bay Area have often lacked residential development, but a new focus on downtowns has created a boom in high-density housing. Densities in Regional Centers are usually slightly more intense within a 1/4-mile radius of the transit station than within the 1/2-mile radius. Examples of Regional Centers include downtown Oakland, San Francisco, and San Jose.



Market Street, San Francisco
Photo: Sean Duan

City Center

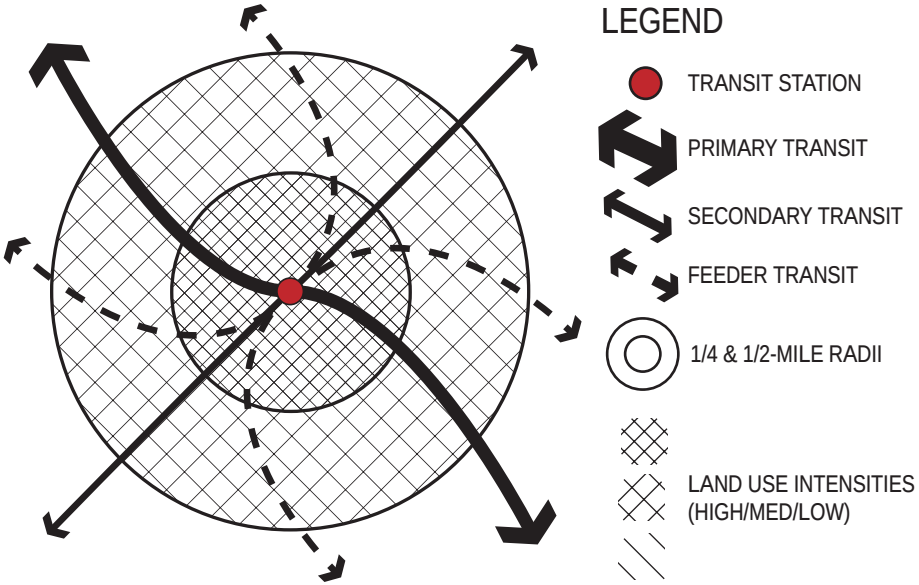
City Centers contain a mix of residential, employment, retail, and entertainment uses, usually at slightly lower intensities than Regional Centers. These places are magnets for surrounding areas, while also serving as commuter hubs to the larger region. Many City Centers retain their historic character in the structure of their street networks and buildings. City Centers are served by multiple transit options, usually including BART, LRT, or some other fixed-rail transit, but potentially including high volume bus or Bus Rapid Transit, as well as local bus routes. Intensities in City Centers are usually slightly greater within a 1/4-mile radius of the transit station than within the 1/2-mile radius. Examples of city centers include the downtowns of Hayward, Berkeley, Redwood City, and Santa Rosa.



Courthouse Square, Santa Rosa
Photo: MTC

Suburban Center

Suburban Centers contain a mix of residential, employment, retail, and entertainment uses, usually at slightly lower intensities than Regional Centers, but similar to City Centers. Suburban Centers can act as both origin and destination settings for commuters, with a mix of transit service connected to the regional network. Development in Suburban Centers is often more recent than City Centers, and there are more single-use areas in Suburban Centers. Suburban Centers are served by multiple transit options, often including BART, LRT, or some other fixed-rail transit, but potentially including high volume bus or Bus Rapid Transit, as well as local bus routes. Intensities in Suburban Centers are usually noticeably greater within a 1/4-mile radius of the transit station than within the 1/2-mile radius. Examples of suburban centers include Pleasant Hill and Dublin/Pleasanton.



Wanted:

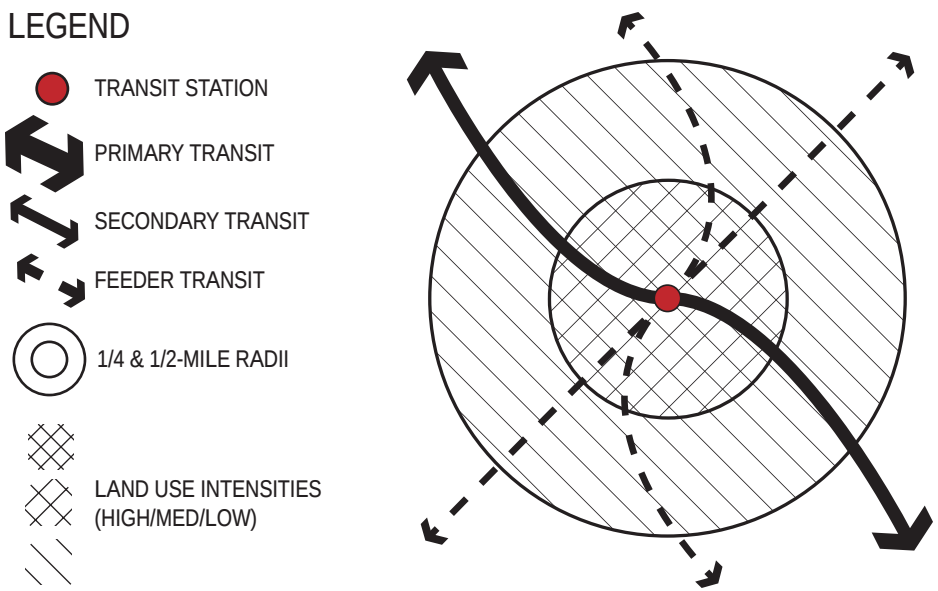
Photo of Pleasant Hill BART

Transit Town Center

Wanted:

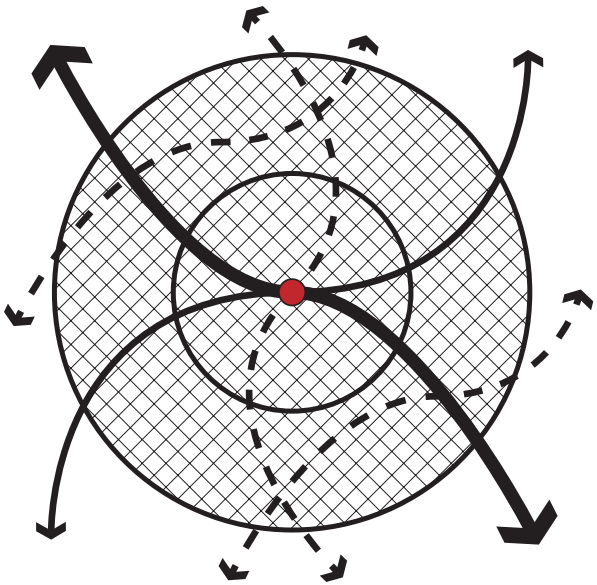
Hercules or Suisun

Transit Town Centers are more local-serving centers of economic and community activity than City Centers and Suburban Centers and attract fewer users from the greater region. A variety of transit options serve Transit Town Centers, with a mix of origin and destination trips, focusing primarily on commuter service to jobs in the greater region, with a lesser degree of secondary transit service than in other other centers. Residential density around Transit Town Centers is usually lower than larger centers, but there is still a mix of single- and multi-family residential, with a mix of retail, smaller-scale employment, and civic uses. Intensities in Transit Town Centers are usually noticeably greater within 1/4-mile of the transit station than within the 1/2-mile radius. Examples of Transit Town Centers are Hercules waterfront, Suisun City, and Livermore.



Urban Neighborhood

Urban Neighborhoods are primarily residential areas that are well-connected to regional or city centers. They have moderate-to-high densities, and usually feature local-serving retail mixed in with housing. Commercial and other employment is often limited to small businesses or historically industrial uses. Transit in Urban Neighborhoods is less of a focal point of activity than in the "Center" Place Types and development is usually part of a well-connected street grid with a good secondary transit network. Many urban neighborhoods were first developed before World War II as "streetcar suburbs" that grew around transit service. Intensities in Urban Neighborhoods are usually spread more evenly throughout the half mile radius with a small increase near the primary transit station. Examples of Urban Neighborhoods include the Fruitvale District in Oakland, Japantown in San Jose, and the Church/Market area in San Francisco.



LEGEND

- TRANSIT STATION
- PRIMARY TRANSIT
- SECONDARY TRANSIT
- FEEDER TRANSIT
- 1/4 & 1/2-MILE RADII
- LAND USE INTENSITIES (HIGH/MED/LOW)

Fruitvale Transit Village, Fruitvale
Photo: MTC

Transit Neighborhood

Transit Neighborhoods are primarily residential areas that are served by rail service or multiple bus lines that connect at one location. Transit neighborhoods have low-to-moderate densities, and the transit stations are often a more minor focus of activity than more intense place types. Secondary transit service is usually less frequent and well-connected. Transit Neighborhoods usually do not have enough residential density to support a large amount of local-serving retail, but can be served by nodes of retail activity. Transit Neighborhoods can be found in both older urbanized areas developed as "streetcar suburbs" or in more recently developed suburban areas. Transit Neighborhoods often have significant development opportunities, so, if desired by the surrounding community, there is the potential to transform these areas into Urban Neighborhoods. Transit Neighborhoods are usually just as intense within a 1/4-mile radius of the transit station as they are within 1/2-mile. Examples of Transit Neighborhoods include El Cerrito del Norte BART, Whisman Station in Mountain View, Glen Park in San Francisco, and Ohlone Chynoweth in San Jose.

LEGEND

- TRANSIT STATION
- PRIMARY TRANSIT
- SECONDARY TRANSIT
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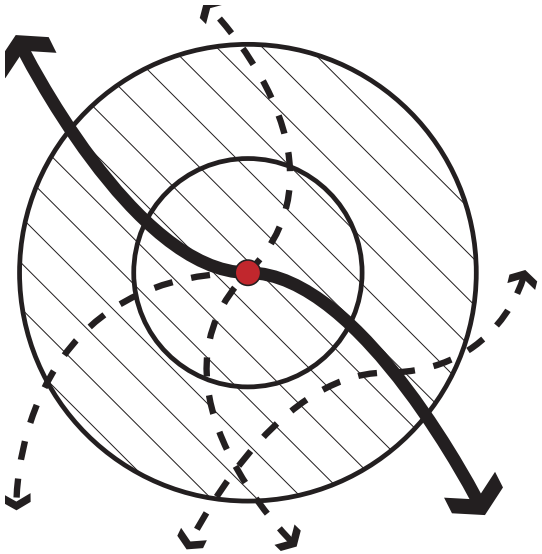
- 1/4 & 1/2-MILE RADII
- LAND USE INTENSITIES (HIGH/MED/LOW)

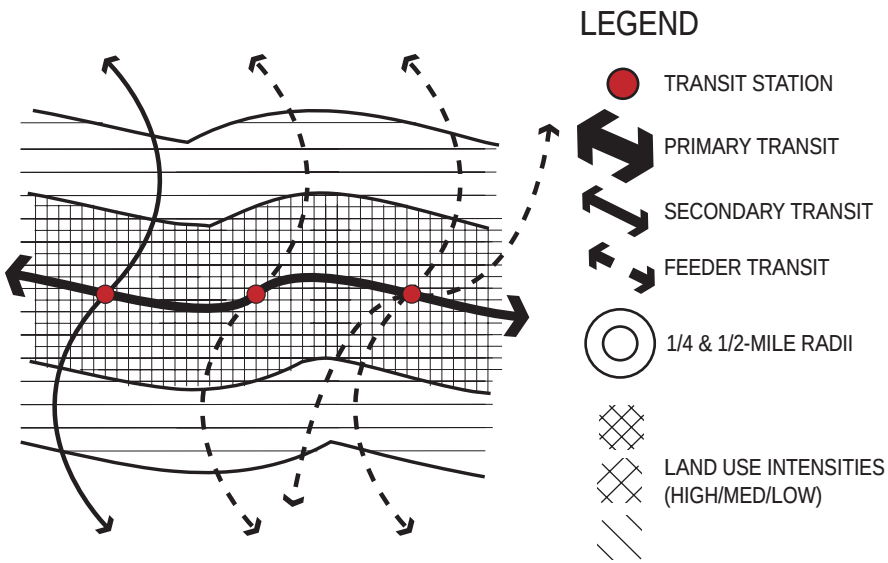


Ohlone Chynoweth, San Jose
Photo: Reconnecting America

Mixed-Use Corridor

Streetcars, light rail, bus rapid transit, or high-volume bus corridors can serve Mixed-Use Corridors. These areas create a focus of economic and community activity without a distinct center and their effect is usually limited to the corridor strip. They are made up of a mix of a moderate-density buildings housing services, retail, employment, and civic or cultural uses. Residential development is usually characterized by older, lower-density homes just off of the main strip and newer, denser development on the corridor itself.

Mixed-Use Corridors are also sometimes served by transit stations that create nodes as part of transit lines with wider station spacing, as well as networks of secondary transit, such as local buses. Bay Area corridors also present a good opportunity to create new models for future development. Mixed-Use Corridors are usually more intense within a 1/4-mile radius of stops along the corridor than within 1/2-mile Existing Mixed-Use Corridors include International Boulevard in Oakland, San Pablo Avenue in the East Bay, Geary Boulevard in San Francisco, and El Camino Real on the San Francisco Peninsula.



San Pablo Avenue, Emeryville
Photo: MTC

Identifying a Place Type

The Place Types described above account for the unique qualities of each community while also highlighting some common features across various types. The Place Types are intended to provide general guidelines and define the special features for Station Area Planning grants, but it is up to each local jurisdiction to identify the appropriate Place Type for any given location. The Key Identifying Questions on the next page help jurisdictions with this self-selection process to identify the appropriate Place Type for any location. These questions include information about the primary transit type present in the area, the land use mix, and other development characteristics. The Place Types described above are generalized to highlight similarities and differences, so it is unlikely that any location will fit the ideal characteristics of any of the types. These questions can help identify the most appropriate Place Type given actual, on the ground conditions.

A view from El Cerrito BART
Photo: Jeremy Brooks

STATION AREA PLANNING MANUAL

PLACE TYPE IDENTIFICATION

Key Identifying Questions	Centers			
	Regional Center	City Center	Suburban Center	Transit Town Center
What are/will be the characteristics of the Station Area?	Primary center of economic and cultural activity.	Significant center of economic and cultural activity with regional-scale destinations.	Significant center of economic and cultural activity with regional-scale destinations.	Local center of economic and community activity.
What is/will be the transit mode in the Station Area?	All Modes	All Modes	All Modes	Commuter Rail, Local/ Regional Bus Hub, Ferry, Potentially BART
What is/will be the land use mix and density in the Station Area?	High-density mix of residential, commercial, employment, and civic/cultural uses.	Moderate- to high-density mix of residential, commercial, employment, and civic/cultural uses.	Moderate- to high-density mix of residential, commercial, employment, and civic/cultural uses.	Moderate-density mix of residential, commercial, employment, and civic/cultural uses.
What are/will be the characteristics of retail in the Station Area?	Regional-serving destination retail opportunity; need for local-serving retail	Regional-serving destination retail opportunity; need for local-serving and community-serving retail	Regional-serving destination retail opportunity; need for local-serving and community-serving retail	Community-serving and destination retail opportunity; need for local-serving retail.
What are/will be major planning and development challenges?	Integrating dense mix of housing and employment into built-out context.	Integrating high-density housing into existing mix of housing and employment to support local-serving retail.	Introducing housing into predominantly employment uses and improving connections/access to transit.	Increasing densities while retaining scale and improving transit access.
Example [2]	Downtown San Francisco, Oakland & San Jose	Downtown Hayward, Berkeley, Redwood City & Santa Rosa	Pleasant Hill BART, Dublin/Pleasanton BART	Hercules Waterfront, Suisun City, Livermore

Notes

[1] Station Area typically refers to half mile radius around station or roughly 500 acres

[2] Station Areas are typically a mix of characteristics of several Place Types. These examples are meant to be illustrative of the qualities only.

Districts		Corridor	
Urban Neighborhood	Transit Neighborhood	Mixed Use Neighborhood	Key Identifying Questions
Predominantly residential district with good access to Regional and Sub-Regional Centers	Predominantly residential district organized around transit station	Local focus of economic and community activity without distinct "center"	What are/will be the characteristics of the Station Area?
BART, LRT/Streetcar, BRT, Commuter Rail, Local Bus	LRT/Streetcar, BRT, Commuter Rail, Potentially Ferry, Local Bus	LRT/Streetcar, BRT, Local Bus	What is/will be the transit mode in the Station Area?
Moderate - to high-density, predominantly residential uses with supporting commercial and employment uses.	Low- to moderate-density, predominantly residential uses with supporting commercial and employment uses.	Moderate-density mix of residential, commercial, employment, and civic/cultural uses.	What is/will be the land use mix and density in the Station Area?
Primarily local-serving retail opportunity; need for some community-serving retail	Primarily local-serving retail opportunity.	Primarily local-serving retail opportunity; need for some community-serving retail	What are/will be the characteristics of retail in the Station Area?
Expanding local-serving retail opportunities and increasing high-density housing opportunities.	Integrating moderate-density housing and supporting local-serving retail.	Expanding local-serving retail opportunities and increasing high-density housing opportunities.	What are/will be major planning and development challenges?
Fruitvale in Oakland, Japantown in San Jose, Church/Market in San Francisco	Whisman Station in Mountain View, El Cerrito del Norte, Ohlone Chynoweth in San Jose, Glen Park	San Pablo Avenue, El Camino Real, Geary Boulevard, International Boulevard	Example [2]

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Development Guidelines

Once a jurisdiction has identified the appropriate Place Type for a given planning area, it is important for the resulting plans to support the qualities and characteristics of that Place Type. The following Development Guidelines quantify the qualities and characteristics of the Place Types through simple targets for new development within a given station area using the following criteria:

- **Housing Mix defines appropriate Building Types for each Place Type.** This is intended to provide a range of appropriate housing types. Individual planning decisions should be based on local conditions and community vision. These building types do not apply to existing housing.
- **Station Area Total Units is a planning target for each Place Type.** Each Place Type has a range of total station area units. New Station Area Planning grants with funding from MTC, and areas wishing to designate as Development Priority Areas, should use these targets.
- **Net Project Density is a zoning target for new housing development.** New development in each Place Type should be permitted within the outlined range. The range is intended to provide opportunity for multiple housing types within a Station Area. New development should respond to local market conditions in determining the appropriate project density and design.
- **Station Area Total Jobs is a planning target for each Place Type.** Not all Place Types are appropriate for employment concentrations. These targets should be used to plan for appropriately-scaled employment bases for each Place Type, and should help determine the balance between land area devoted to various uses. The potential for jobs should also be checked against the potential market for employment uses.
- **Minimum FAR is a zoning target for new employment development.** The Floor/Area Ratios (FARs) outlined are intended to provide a baseline for new employment development. These FARs can also help determine the appropriate mix of building types in the station area.

STATION AREA PLANNING MANUAL

DEVELOPMENT GUIDELINES

Development Guidelines	Centers			
	Regional Center	City Center	Suburban Center	Transit Town Center
Housing Mix (New Development) [2]	High rise & mid rise apartments/condos	Mid-rise, low-rise, some high-rise and townhomes	Mid-rise, low-rise, some high-rise and town-homes	Mid-rise, low-rise, townhomes, small lot single family
Station Area Total Units Target [3]	8,000 - 30,000	5,000 - 15,000	2,500 - 10,000	3,000 - 7,500
Net Project Density (New Housing) [4]	75-300 du/acre	50 -150 du/acre	35 - 100 du/acre	20 - 75 du/acre
Station Area Total Jobs Target	40,000 - 150,000	5,000 - 30,000	7,500 - 50,000	2,000 - 7,500
Minimum FAR (New Employment Development)	5.0 FAR	2.5 FAR	4.0 FAR	2.0 FAR

Notes

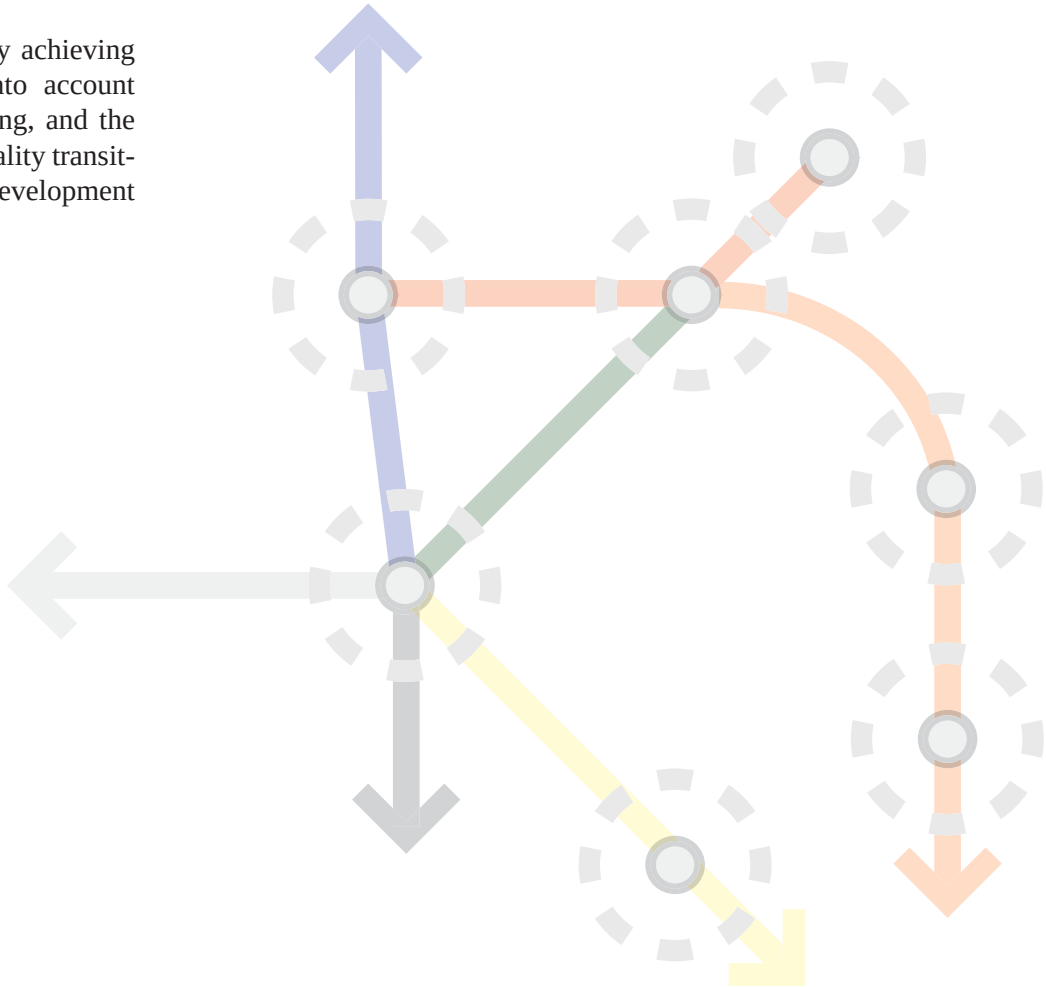
[1] Station Area typically refers to half mile radius around station or roughly 500 acres
[2] See attached building types for more detail on each type.
[3] The MTC TOD Policy corridor housing thresholds—which represent an average for the entire corridor—still apply to Resolution 3434 Transit Expansion projects.
[4] Allowable densities within the 1/2-mile station area should fall within this range and should be planned in response to local conditions, with higher intensities in close proximity to transit and neighborhood-serving retail areas.

Districts		Corridor		
Urban Neighborhood	Transit Neighborhood	Mixed Use Neighborhood		
Mid-rise, low-rise, town-homes	Low-rise, townhomes, some mid-rise and small lot single family	Mid-rise, low-rise, townhomes, small lot sf off immediate corridor	Housing Mix (New Development) [2]	Development Guidelines
2,500 - 10,000	1,500 - 4,000	2,000 - 5,000	Station Area Total Units Target [3]	
40 - 100 du/acre	20 - 50 du/acre	25 - 60 du/acre	Net Project Density (New Housing) [4]	
N.A.	N.A.	750 -1,500	Station Area Total Jobs Target	
1.0 FAR	1.0 FAR	2.0 FAR	Minimum FAR (New Employment Development)	

2

Station Area Planning Principles

Successfully planning for a station area requires more than simply achieving housing production guidelines; station area plans must take into account transportation and circulation issues, urban design and placemaking, and the public infrastructure that make for great neighborhoods and high quality transit-oriented development. The following nine principles help guide the development of future Station Area Plans.



Maximize Ridership Through Appropriate Development

Bay Area residents who live within 1/2-mile of rail or ferry stops are four times as likely to use transit, three times as likely to bike, and twice as likely to walk as those who live at greater distances.[1] Station Area Plans help communities identify the appropriate scale and type of development that can support both local visions and the regional transit network. Standards for new development should recognize the travel behavior of residents close to transit and appropriately plan for reduced residential parking demand, local-serving retail demand, and the need for pedestrian and bicycle infrastructure.

1. Data from *Characteristics of Rail and Ferry Station Area Residents in the San Francisco Bay Area: Evidence from the 2000 Bay Area Travel Survey*, published by MTC (2006)

Housing at Hayward BART
Photo: MTC

TOD Plan Checklist

- **Conceptual land use alternatives -** Developing options for different development scenarios should be at the heart of the planning process. The scenarios should be developed through the input of the community members, property owners and other key stakeholders early on in the station area planning process.
- **Minimum allowable densities -** The housing unit thresholds in MTC's TOD policy only consider minimum residential densities. While zoning codes may specify a density range, only the minimum is used when determining TOD policy compliance.
- **Analyze impact of other requirements on potential densities (setbacks, lot coverage, etc.) -** Zoning provisions such as lot coverage or height limits may make it difficult to achieve the potential densities envisioned by the plan.
- **Alternatives analysis using TOD modeling tools -** TOD modeling tools should be used where feasible to estimate the change in ridership from different alternatives (parking provision, development levels, transit access, etc.).
- **Market analysis of local retail demand -** Where plans include a retail or mixed-use component, including local-serving stores, the feasibility of these uses should be analyzed.
- **Market analysis of employment and housing potential -** Plans will need to analyze the fiscal impacts and financial feasibility of different land-use scenarios, and ideally should look at the station in the context of the corridors as a whole.
- **Locate Key Services Near Stations -** Key social services like child care centers, health clinics and other essiential destinations, particularly for transit-dependent populations, should be located close to heavily used transit stations and hubs

Generate Meaningful Community Involvement

Engaging the public early and often in the decision-making process is critical to the success of any station area plan. A recent web survey by MTC on community involvement affirms the importance of keeping information relevant, removing barriers to participation, building in redundancy, and focusing on outcomes.[5] It also reinforced the need to "go where the people are," instead of expecting them to come to you. And while the internet has become an essential tool for involvement, it is important to continue to provide mail and paper communication. These techniques are essential for creating station area plans that communities feel reflect their needs and values. Meaningful community involvement also includes educating the community about the potential and tradeoffs of TOD. Engaging in open and honest discussion of the issues and using information and experience to address community concerns is a critical component of this principle.

5. Metropolitan Transportation Commission, *Public Participatoin Plan for the Bay Area.* Released for public comment May 4th, 2007.

Public Forum in Redwood CIty
Photo: MTC

TOD Plan Checklist

- **Multi-lingual outreach -** Depending on the demographic make-up of the community, outreach may need to be conducted in multiple languages. ☐
- **Citizens Advisory Committee -** Citizens Advisory Committees can provide broad-based participation in the development of the plan. ☐
- **Technical Advisory Committee -** Technical Advisory Committees provide input from partner agencies, including other city departments, transit providers and regional agencies. ☐
- **Plan website -** Websites can be an effective way of generating input and disseminating information on the plan. ☐
- **Wide public outreach – workshops, open houses -** A range of opportunities should be used to secure public participation in the development of the plan. ☐
- **Involve Council /Planning Commissioners -** Early involvement of elected and appointed officials can help ensure their buy-in and smooth the plan adoption process. ☐
- **Visual alternatives (e.g. photosimulations) -** Photosimulations of development alternatives may be a useful tool to engage the public, and help secure support for higher densities. ☐
- **Developer participation -** Developers and property owners bring an important perspective, particularly regarding market feasibility of plan alternatives. ☐
- **Media strategy -** A media strategy can help secure more coverage of planning efforts in the local media ☐

Design Streets for All Users

Streets in Station Areas need to support multiple modes, including pedestrians, bicyclists, transit vehicles, and automobiles. Streets should also plan for safe mobility for all users, including intersection and crossing design, universal design of sidewalks and transit stops to provide for the young, old, and mobility impaired. This approach to the design of streets may result in tradeoffs due to space constraints In close proximity to transit, priority should be given to non-automobile modes whenever possible.

TOD Plan Checklist

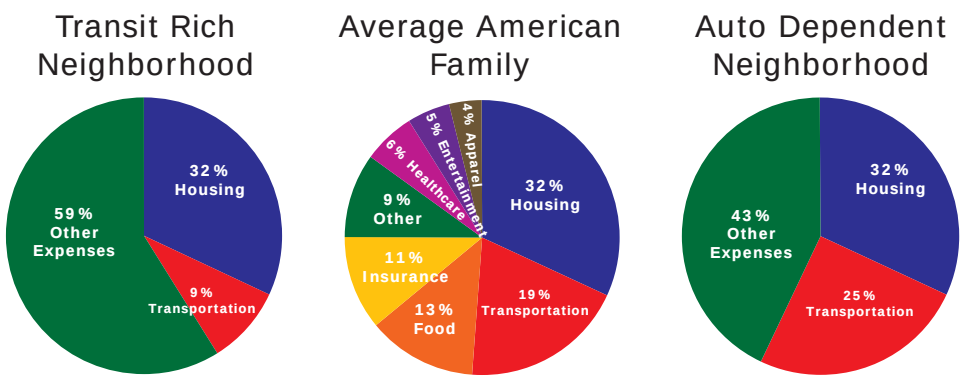
Consider TOD-specific street design standards (lane widths, design speeds) - Often, narrower travel lanes and slower design speeds may be appropriate in TOD neighborhoods, and these should be considered in the planning process.	☐
Consider multimodal LOS - Plans should consider adopting performance standards for other modes, and assess flexible TOD appropriate standards for autos.	☐
Incorperate bike and pedestrian access - Plans should account for bicyclists and pedestrians accessing the station, particularly wheelchair users. This includes wide sidewalks, curb cuts and ramps, audible signals, bike lanes, trails, and bike parking appropriate for anticipated demand.	☐
Consider transit village designation for Congestion Management Plan purposes - Cities and counties can designate Infill Opportunity Zones under SB 1636, which provides exemptions from auto level of service requirements in Congestion Management Plans. Station area plans should consider taking advantage of this provision.	☐

Downtown Walnut Creek
Photo: MTC

Create Opportunities for Affordable & Accessible Living

After housing, transportation is typically the second largest household expense for American families. The combined cost of housing and transportation is a particular challenge for low and moderate-income households. A recent study by the Center for Housing Policy found that families earning $20,000-$50,000 in the San Francisco Bay Area had the highest combined housing and transportation costs (63% of household income) of 28 major metropolitan regions around the country.[2] Transit offers households a substantial reduction in transportation costs. Households with good access to transit spend an average of 9% of household income on transportation costs vs. 19% for the average household. Station Area Plans should account for the affordable living opportunities provided by transit to create targeted plans for affordable housing production.

2 *A Heavy Load:The Combined Housing and Transportation Burdens of Working Families*, Center for Housing Policy, Washington, DC (2006).



Source: Center for TOD Housing + Transportation Affordability Index, 2004 Bureau of Labor Statistics

TOD Plan Checklist

- **Set affordable housing goals -** Plans should set goals for the level of affordable housing provision in the station area, whether achieved through inclusionary requirements or other policies and financing mechanisms (including targeting existing programs to the station area). ☐
- **Consider appropriate inclusionary housing requirements -** Plans should analyze whether higher inclusionary housing requirements can be supported in station areas. More affordable housing will promote transit ridership and social justice goals, and also help corridors achieve the housing unit threshold. ☐
- **Provide a range of housing options -** A range of housing choices should ideally be made available within the station area, including new housing that can accommodate families as well as senior housing and ordinances allowing and encouraging secondary units ☐
- **Minimize displacement of existing residents -** Policies to minimize displacement of existing lower-income residents should be analyzed and adopted where appropriate and feasible. ☐
- **Accessibility/visitability policies -** Accessibility policies may go beyond the scope of ADA requirements and ensure that new development is fully "visitable" by visitors with disabilities, as well as residents. Other issues to consider include the accessibility of the most direct routes to the transit station. ☐

Make Great Public Spaces

In order to create a station area that encourages transit use and TOD, the public space around stations must be inviting and usable. A successful public space is easy to walk through, is comfortable to sit and visit, and has attractive features such as water fountains and public art. Great public spaces often include retail so people can grab a coffee or a snack or pick up a magazine. Parks and plazas should be able to attract a variety of users so they are active throughout the day. Making public space around transit feel safe, welcoming and useful will increase transit use and encourage people to live near transit.

16th Street BART Plaza, San Francisco
Photo: Mark Pritchard

TOD Plan Checklist

Architectural and public realm design standards - In addition to the zoning, good plans often include detailed design standards that provided detailed requirements, e.g. on facades, signage, fenestration and street furniture.	☐
Parks and open space - Open space provision will be an integral part of the conceptual land-use alternatives.	☐
Visual alternatives (e.g. photosimulations) - Photosimulations of open space and public space development alternatives may be a useful tool to engage the public in programming, and help secure support for higher densities.	☐

Manage Parking Effectively

Parking policies in Station Areas should be reformed to reduce parking demand and encourage transit, walking, and bicylcing. A variety of transit/TOD supportive parking policies exist, including transit incentive programs, carsharing, TOD-friendly parking design, and Transit Overlay Zones. When managed poorly, parking creates a barrier by increasing development costs and making station access difficult. When managed well, parking can be used to create revenue for public improvements and infrastructure, as well as provide convenient access to neighborhood-serving retail and balanced access to transit stations. For details, see MTC's "Reforming Parking Policies to Support Smart Growth," a handbook with recomenndations for implementing parking policies and programs.[3]

3. Metropolitan Transportation Commission, *Reforming Parking Policies to Support Smart Growth: Toolbox/Handbook: Parking Best Practives & Strategies for Supporting Transit Oriented Development in the San Francisco Bay Area.* June 2007,

TOD Plan Checklist

Baseline parking supply and demand analysis -
Plans should quantify existing supply and occupancy, and estimate future occupancy with new development under different zoning and parking management options.

Consider parking policies in MTC Toolbox -
MTC's regional Parking Study produced a toolbox of potential parking policies, which should be considered in station area plans.

Consider park-and-ride provision -
Plans will need to consider the appropriate size, location and funding of any parking facilities for transit riders, and analyze the relative costs and land requirements of generating riders via park-and-ride vs. other access modes and TOD

Provide bicycle parking facilities -
Bike access to stations should be analyzed and sufficient parking provided as appropriate. In areas with strong bicycling demand and heavy transit usage, full service "bike stations" should be considered.

STRATEGIES	Regional Center	City Center	Urban Neighborhoods	Suburban Center	Town Center	Transit Neighborhood	Small Town
1 Transit/TOD Supportive Policies							
Transit Incentive Programs	■	■	■	■	■		
Transit Friendly Parking Design	■	■	■	■	■		
Transit Supportive Zoning	■	■	■	■			
Carsharing	■	■		■			
Walkability and Wayfinding	■	■	■	■	■		
2. Parking Requirements							
Reduced Parking Requirements	■	■	■	■	■		
TOD Friendly Parking Requirements	■	■		■			
Parking Maximums	■	■		■			
Shared Parking	■	■	■	■	■		
3. Parking Pricing							
On-street Parking Pricing	■	■	■	■			
Variable Rate Parking Pricing	■	■	■	■			
Coordinated Off-street and On-street Pricing	■	■	■	■			
Unbundled Parking	■	■		■			
Parking Cash-Out	■	■	■	■			
4. Parking Management Strategies							
Parking Payment Technology	■	■	■	■			
Parking Database	■	■	■	■		■	
Real-time Parking Information	■	■	■	■			
5. Parking Districts							
Assessment Districts	■	■	■	■		■	
Revenue Districts	■	■	■	■		■	
Residential Permit Parking	■	■	■	■			
6. Parking Financing							
In-Lieu Fees	■	■	■	■		■	
Risk Fund	■	■	■	■			
Parking Occupancy Tax	■	■		■			
Parking Tax by Space	■	■	■	■			
Tax Exemptions and Variable Rate Tax	■	■		■			

Capture the Value of Transit

There is mounting empirical evidence of the substantial value created by transit and TOD. This value can be captured to fund station area improvements and programs. Value capture strategies can include fiscal policies, including property and sales taxes, real-estate lease and sales revenues, farebox revenues, and fees on everything from parking to business licenses.[4] Value capture strategies can also include non-fiscal strategies, including inclusionary zoning, where the value of transit access can induce a market-rate development to include affordable units, or "in kind" public improvements such as parks or plazas that are conditions of development.

4. Gloria Ohland, *Value Capture: How to Get a Return on Investment in Transit and TOD*, 2004.

TOD Plan Checklist

Consider financing mechanisms for public infrastructure - Plans should analyze ways to fund transit, station access and other infrastructure needs identified in the plan, including developer fees, value capture and other innovative strategies.	☐
Consider affordable housing financing mechanisms - Plans should analyze ways to finance affordable housing through a range financing mechanisms (including targeting existing programs to the station area).	☐

Diridon Station, San Jose
Photo: MTC

Maximize Neighborhood & Station Connectivity

Studies show that the walkability of the streets in a station area has a significant impact on people's choice to walk to the station.[6] Strong pedestrian orientation, including adequate circulation space, safe street crossings, and appropriate amenities will increase transit use and support vibrant communities. This applies beyond the immediate station and into the surrounding areas.[7] In particular, shorter more connected blocks give pedestrians and cars more options and shorter distances to travel. In contrast, disconnected street patterns, with major arterial streets serving cul-de-sacs reinforce dependence on the automobile for all mobility needs. In these disconnected environments, transit is more of an afterthought, and cannot provide a viable alternative mode in creating walkable mixed-use communities.

6. Asha Weinstein, *How Far, By Which Route, and Why?: A Spatial Analysis of Pedestrian Preference*. TRB 2007 Annual Meeting CD-ROM.
7. Project on Public Spaces, Inc., *Transit-Friendly Streets: Design and Traffic Management Strategies to Support Livable Communities*. National Academy Press, Washington, D.C., 1998.

Courthouse Square, Santa Rosa
Photo: MTC

TOD Plan Checklist

Key pedestrian corridors -
Plans should specify a network of key pedestrian corridors and detail how they will provide the necessary high-quality walking environment. Plans should also look for ways to reduce block sizes and walking distances, and to provide for sidewalk retail where appropriate. ☐

Bicycle network -
Plans should specify the network of Class I, II and III bicycle facilities and detail improvement plans. ☐

Intermodal facilities (e.g. bus facilities at rail stations) -
Plans should address the need for seamless bus access to rail and ferry stations for areas with heavy transit patronage. Stations and transit hubs should be planned for or upgraded with way-finding signage; accessible transit information; real-time technology; schedule coordination; fare coordination; and last-mile connecting services ☐

Monitor Implementation & Benchmark Success

A plan is only as good as its outcome. TOD plans generate positive outcomes in terms of transit ridership, pedestrian activity, and economic development. Good Station Area plans also set the stage for building needed affordable and market-rate housing and retail, and meeting market demand for employment uses. Setting programs set in place early to monitor the success of the plan including before and after pedestrian, bicycle, and vehicle trip counts, measures of economic activity, and housing production benchmarks all help monitor the success of a plan and help alert a City when targeted follow-up may be necessary. A Program Level EIR and other tools, such as fast-tracked development review, will help facilitate implementation, too.

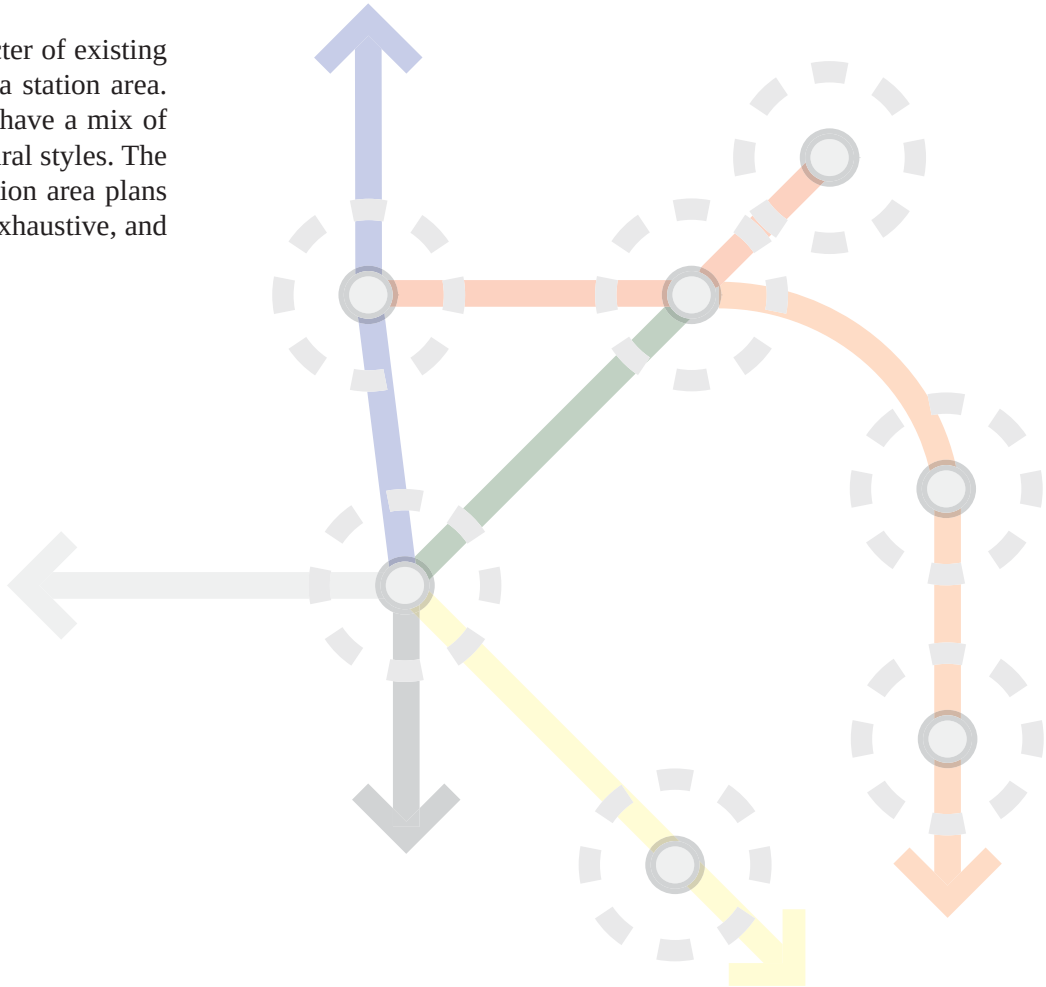
Fruitvale Transit Village, Oakland
Photo: MTC

TOD Plan Checklist

Program-level EIR or Negative Declaration - The scope should include all necessary environmental clearances for plan adoption.	☐
Monitoring program - Plans should specify how progress towards plan goals (e.g. development activity, transit ridership, pedestrian volumes, trip generation rates, retail sales, etc.) is to be monitored.	☐
Develop an Implementation Plan & Budget - The station area plan should identify critical infrastructure and services that are needed to accomodate new development and meet transportation and land use goals. Examples include streets & sidewalks, local transit and shuttle services, parks, sewers, schools, and housing.	☐

3 TOD Building/Open Space Types

Ultimately, the success of a plan is based on the quality and character of existing and new buildings, as well as the streets and open spaces within a station area. Different place types that are built using the plan's guidance will have a mix of building types, and each building type will have a mix of architectural styles. The following are basic building types that are likely to be part of station area plans in the Bay Area. The list is intended to be informative rather than exhaustive, and there are many variations that are possible.



Building Types

Building types are categorized by several characteristics, including the typical density of development, typical construction method, and typical configuration of parking. The following table outlines the distinctions between some of the most common TOD building types. The TOD Examples are recent Bay Area TOD projects that are meant to illustrate the possibilities. Building design is a site and neighborhood-specific endeavor, and new TOD buildings should respond to the qualities of the surrounding context.

STATION AREA PLANNING MANUAL

TOD BUILDING TYPES (RESIDENTIAL)

Residential Type	TOD BUILDING TYPES					
	Net Density (Target)[1]	Characteristics	Construction Type	Parking Configuration	Examples	Photo
Small-Lot Single Family/Duplex	8-20 du/acre (15 du/acre)	- small lots (max 6,000 sf) - 2-3 stories with detached units - direct entry from streets with potential for secondary units	Type V (max 3 stories / 35 feet)	Individual garage/driveway and on-street	The Crossings, Mountain View. Waterfront, Hercules	
Townhouse	12-40 du/acre (30 du/acre)	- 2-4 stories with attached units - direct entries from street - units can be paired with flats for increased density	Type III/V (max 4 stories / 50 feet)	Tuck-under garage/driveway and on-street	Hayward Civic Center Cotati Townhomes Iron Horse Lofts, Pleasant Hil	
Low Rise Multi-Family	20-75 du/acre (55 du/acre)	- 2-4 stories with apartments/condos - single- or double-loaded corridors with lobby entrance - off-street parking in surface/structure	Type III (max 4 stories / 50 fee)	Tuck-under garage or surface parking lot. Potential for structured parking	Mandela Gateway, Oakland	
Mid-Rise Multi-Family	50-150 du/acre (110 du/acre)	- 4-6 stories with apartments/condos - single- or double-loaded corridors with lobby entrance - off-street parking structure/ below grade	Type I/III (max 5 stories / 65 feet)	Ground floor podium/ sub-grade or elevated structure	Fine Arts Building, Berkeley	
High-Rise Multi-Family	75+ du/acre	- 7+ stories, usually with base and point tower - single- or double-sided corridors with lobby entrance - off-street parking in structure or below grade	Type I/II (max. 12 stories / 120 feet/no limits on Type I)	Off-street parking in structure or below grade	200 Brannan, San Francisco	

Notes

[1] Individual projects should seek to meet the Target Density for each building type. Station area plans should assess the feasibility of meeting these targets and modify parking requirments and other development regulations if necessary.

STATION AREA PLANNING MANUAL

TOD BUILDING TYPES (MIXED USE/EMPLOYMENT)

	TOD BUILDING TYPES						
		Net Density	Characteristics	Construction Type	Parking Configuration	Examples	Photo
Mixed Use Types	Mid-Rise Residential over Commercial	40-90 du/acre	- 3-6 stories with apartments - single- or double-loaded corridors with lobby entrance - off-street parking in structure or below grade	Type I/III (max 6 stories with building code modification / 65 feet)	Ground floor podium/ sub-grade or elevated structure	City Center Apartments, Redwood City	
Mixed Use Types	High-Rise Residential over Commercial	60+ du/acre	- 7+ stories, usually with base and point tower - single- or double-sided corridors with lobby entrance - off-street parking in structure or below grade	Type I/II (max. 12 stories / 120 feet/no limits on Type I)	Off-street parking in structure or below grade	Plaza Apartments, San Francisco The Paramount, San Francisco	
Employment Types	Low-Rise Office/ Commercial	0.5-2.5 FAR	- 1-3 stories, with lobby entrance to upper floors - retail, office, or mixed-use, with mix of tenant types, including limited large-footprint retail uses - parking in surface lots or structures	Type III/IV/V (max. 4 stories / 65 feet)	Off-street parking in ground floor podium or surface	Broadway Plaza, Walnut Creek, Telegraph Oakland/Temescal	
Employment Types	Mid-Rise Office/ Commercial	2.0-5.0 FAR	- 3-7 stories, with lobby entrance to upper floors - office with potential retail ground floor - parking in structure or below grade	Type I/II (max 12 stories / 160 feet)	Off-street parking in structure or below grade	PMI Plaza, Pleasant Hill BART	
Employment Types	High-Rise Office/ Commercial	4.0+ FAR	- 6+ stories, with lobby entrance to upper floors sometimes with point tower over base - office with potential ground floor retail - parking in structure or below grade	Type I (no limits)	Off-street parking in structure or below grade	101 Second Street, San Francisco	
Employment Types	Institutional/ Other Employment	varies	- schools, civic uses, stadia, hospitals, and other entertainment uses - densities and size range - parking often in structures or below grade	Varies	Parking often in structures or below grade	Hayward City Hall	

Open Space Types

In addition to buildings, there are different types of open spaces appropriate for TOD. The regional transit network should provide access to a range of different types of open spaces, from small transit plazas to large regional parks. While it is unlikely that a single Station Area would include the full range of open space types, this typology is useful when making decisions about open spaces in Station Area Plans. The TOD Examples are Bay Area open spaces that are meant to illustrate the possibilities, not as examples to be replicated in every TOD location. The design of each open space should respond to site conditions, expected use patterns, and an analysis of station area open space needs.

Dolores Park, San Francisco
Photo: Bruno Furnari

STATION AREA PLANNING MANUAL

OPEN SPACE TYPES

TOD OPEN SPACE TYPES

Open Space Types	Size	Characteristics	Examples	Photo
Transit Plaza	0.1-0.5 acres	- small open space, adjacent to the station - can be linear or with defined center - primarily hardscape amenities for riders - used to support a number of station access functions and passive recreation	16th Street BART Plaza Pleasant Hill BART Plaza	
Plaza	0.1-1.0 acres	- small open space, usually close to buildings - primarily hardscape with some landscaped areas - primarily passive recreation	Frank Ogawa Plaza Justin Herman Plaza United Nations Plaza	
Small Parks	0.1-2.0 acres	- small open space, often separated from buildings by roadway - primarily landscaped areas with some hardscape - primarily passive recreation	Duboce Park, SF Cedar-Rose Park, Berkeley, Todos Santos Park, Concord	
Community-Scaled Parks	1.0-5.0 acres	- med. sized open space, usually separated from buildings by roadway - mix of landscaped areas and hardscape - mix of active and pasive recreation	Dolores Park, SF St. James Park, San Jose	
Regional Open Space	varies	- large open space as part of trail system or continuous network of parks - primarily landscaped areas - primarily active recreation	Embarcadero, SF Golden Gate Park, SF	

Resource Documents

The following documents and resources are available to assist communities in the development of new station area guidelines:

Travel Characteristics of Transit-Oriented Development in California *by Lund/Cervero/Wilson*
2003 research focused on measuring the success of California TODs in enhancing transit ridership and identifying key design and policy features that affect the level of success.

http://www.bart.gov/docs/planning/Travel_of_TOD.pdf

Public Participation Plan for the Bay Area *by MTC*
This initial release is full of suggestions for inviting communities into your process.

www.ecy.wa.gov/programs/tcp/sites/blhm_bay/sites/central_waterfront/Public%20Participation%20Plan.pdf

Value Capture: How to Get a Return on Investment in Transit and TOD *by Reconnecting America*
This presentation addresses the impacts of parking policy at transit stations on transit ridership, congestion and transit revenues.

http://www.reconnectingamerica.org/public/download/valuecap

Transit-Friendly Streets: Design and Traffic Management Strategies *by TCRP*
Case studies with valuable conclusions on designing station areas for a mix of uses.

http://nelsonnygaard.com/ITE_Parking_for_TOD.pdf

Reforming Parking Policies for Smart Growth *by MTC*
A handbook for best practices and strategies for parking policy to support TOD in the Bay Area.

www.mtc.ca.gov/planning/smart_growth/parking_study/April07/Toolbox_draft_041907.pdf

Parking for Transit Stations *by Nelson/Nygaard Associates*
This presentation addresses the impacts of parking policy at transit stations on transit ridership, congestion and transit revenues.

http://nelsonnygaard.com/ITE_Parking_for_TOD.pdf

TOD 101: Why Transit-Oriented Development and Why Now?
This guidebook gives a presentation of the benefits of TOD in every community.

http://www.reconnectingamerica.org/public/download/tod101full