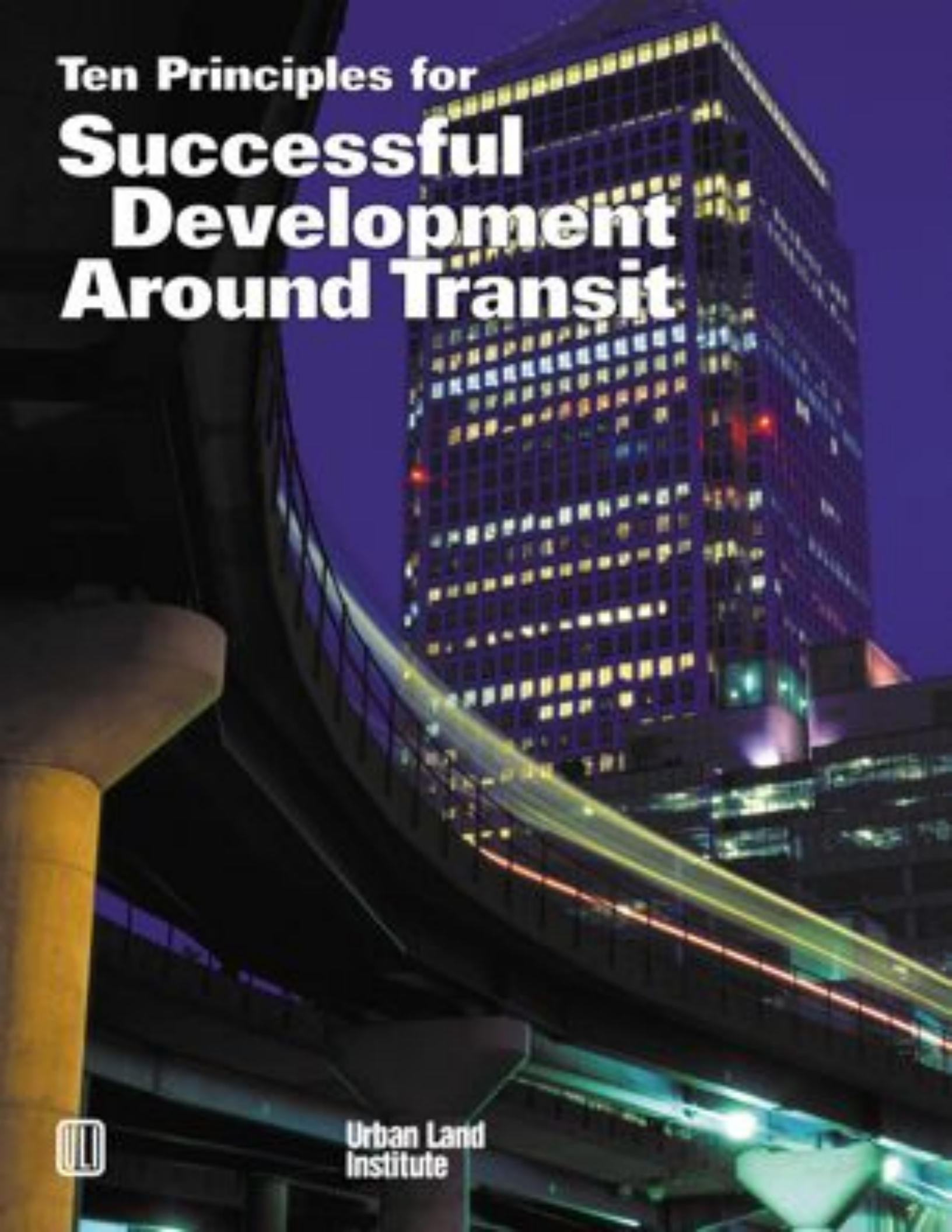
Ten Principles for Successful Development Around Transit



Urban Land Institute

Ten Principles for Successful Development Around Transit

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Bank of America.

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Introduction

In the early years of the 20th century, transit dominated travel in cities—and, by necessity, development was clustered near transit. In fact, transit and land use were so closely connected that private transit operators often developed real estate and used the profits to subsidize transit operations. By the close of the 20th century, however, the automobile had become the dominant means of travel in urban centers, cities with extensive transit networks were in decline, and proximity to transit was most often an afterthought in development. Once the norm in urban settings, development around transit became the exception. And, as accessibility for automobiles became the focus of development, with no regard for the location of transit, the basic principles for developing around transit fell into disuse, and were eventually lost.

Recently, however, new trends have emerged that favor cities, transit, and development around transit. A number of major cities with extensive transit networks—including Atlanta, Boston, Chicago, and Seattle—are enjoying increases in overall population and even greater gains in downtown areas, where transit is most accessible. It is even possible in some cities to get by without a car on most days.

Chicago, one of the nation's leading transit cities, has seen a reversal of its long-term population decline: between 1990 and 2000, the city experienced a

Computer simulation of bus rapid transit, Lane Transit District, Oregon.

LANE TRANSIT DISTRICT AND NEWLANDS & COMPANY, INC.

4 percent overall gain in population, and the downtown population jumped by 51 percent. Other older cities with rich transit traditions, such as Baltimore, Cleveland, and Philadelphia, gained population downtown, the center of their transit systems, while continuing to lose population overall. Older and newer suburbs—Palatine, outside Chicago; Richardson, outside Dallas; and Englewood, outside Denver—have refocused their attention on developing, or redeveloping, around new or mature transit stations.

Rowes Wharf, in Boston, Massachusetts. A city rich in transportation options, Boston has used transit to preserve and enhance its vitality and its character as an extraordinary place.

What does it take to make such developments work? The principles presented here can serve as reminders for communities, designers, and developers who may have forgotten them. For those in newer, automobile-oriented communities, who have experienced nothing else, these principles can serve as a checklist for the development of pedestrian-scale communities that will be suitable for public

Bay Area Rapid Transit (BART).

transportation, either now or in the future. The principles will also be useful for transit agencies and others engaged in new transit projects, to ensure that nearby development will generate sufficient numbers of riders to support transit, and that transit will indeed enhance the community.

DEVELOPMENT POTENTIAL AND TRANSIT MODES

Transit options can take a variety of forms—local buses, light rail, heavy rail, commuter rail, people movers, and bus rapid transit. Some cities have many different modes, providing high levels of mobility for users. San Francisco, for example, is among seven American cities that have maintained their original streetcars; in addition, San Francisco offers the beloved cable cars, an extensive bus system, the Bay Area Rapid Transit (BART) heavy-rail system, old and new light-rail lines, two commuter-rail lines (Caltrain and Altamont Commuter Express), and ferries. Such rich transit capacity can support extensive nearby development, particularly at the points in San Francisco and Oakland where many of these transit modes converge.

In most regions, however, especially the fast-growing communities in the South and West, the transit system is limited to buses and possibly light rail, and development opportunities must be scaled to the transit capacity and the local market. The sections that follow summarize the types of development suitable for each of the primary transit modes (the site may be served by secondary modes as well). The first rule, however, is that the local real estate market determines what kind of development would be appropriate near transit: the type of transit mode generally responds to development density.

HEAVY RAIL

Heavy rail, also known as rapid rail, subway, or metro, consists of high-capacity, higher-speed trains operating on separate rights-of-way or in tunnels. Heavy-rail stations are generally spaced farther apart than light-rail stops, especially on the outer segments of lines. North America's early heavy-rail systems are in Boston, Chicago, New York, Philadelphia, and Toronto. Newer systems have been built since the 1960s in Atlanta, Los Angeles, Miami, Montreal, the San Francisco Bay area, and Washington, D.C.—all of which are mature, higher-density regions, with development potential for high-density office and mixed-use projects in their downtowns, and for relatively high-density residential and commercial development in their suburbs. No new heavy-rail systems are planned in the United States or Canada, although expansions of existing systems have been built or are planned. While the high capacity of heavy rail supports high-density development, it is no guarantee that a given site will necessarily be attractive for development; there may be other factors that impede real estate development, such as lack of market potential, environmental constraints, inadequate infrastructure, or neighborhood opposition.

LIGHT RAIL

Light-rail vehicles, previously known as streetcars or trolleys ("trams" in Europe), are faster than buses but slower than heavy rail, and may travel either on existing streets or on separate rights-of-way. Development adjacent to light rail is generally less dense than development adjacent to heavy rail.

Seven North American cities have maintained their original light-rail systems: Boston, Philadelphia, San Francisco, Toronto (all of which also are heavy-rail cities), Cleveland, Newark, and Pittsburgh. All these cities are older, higher-density communities, typically with low growth to no growth. A number of cities have created new light-rail systems, including Dallas, San Diego, San Jose, St. Louis, and Portland, Oregon. Several other cities have projects in the proposal stage—in fact, almost every large city that does not already have light rail is considering it.

Many terms are used to refer to development around transit, the most popular of which are *transit-oriented development (TOD)*, *transit-focused development*, and *transit village*. Regardless of what development around transit is called, however, the desired outcome is the same: successful development, growing transit rider-

BUSES

The bus is the workhorse of public transit, making up in flexibility what it lacks in excitement. Buses are the mode used for two-thirds of the transit trips in the United States. Frequent stops make local service slow but ubiquitous, offering riders short walks to and from bus stops. Bus routes rarely figure in discussions of transit-oriented development. In fact, transit agencies often find businesses resistant to bus stops because of stereotypes about bus riders ("Rail riders linger; bus riders loiter").

Although bus routes, even busy ones, probably hold little appeal to most developers, given the fact that buses are the dominant transit mode in the United States and carry a significant share of travelers in some markets, opportunities for higher-density development around bus routes abound. Seattle, for example, while planning a light-rail project, is currently served by an extensive bus network, and ranks number seven among metropolitan regions in the percentage of workers who commute by transit. The city and inner suburbs have been developed at relatively high densities, all supported by bus transit. Such opportunities may not exist in smaller communities—especially today, when there is so much dependence on the auto—but should be sought out where possible. Undeveloped land near high-service bus corridors should be appropriately planned to facilitate higher-density development—a bonus that can be hard for a developer or landowner to pass up.

COMMUTER RAIL

Commuter-rail lines provide high-speed service to downtowns in many metropolitan areas, but typically only for inbound and outbound commuters and at less frequent service intervals than heavy rail, which operates in both directions during both peak and off-peak hours. The Long Island Railroad and Chicago's Metra are examples of traditional commuter-rail operations. A number of communities, such as Dallas, Seattle, and San Diego, have recently established commuter-rail service. Often, commuter-rail stations are simple platforms surrounded by parking, which limits development potential. However, communities near Chicago, in New Jersey, and elsewhere are rediscovering the potential of their train stations as town centers, and commuter-rail services in newer communities are considering development options concurrently with service planning.

EXPRESS BUSES AND BUS RAPID TRANSIT

Express bus service operates with few stops, and often on freeways, thus offering faster trips than local buses. Houston's extensive express-bus system, for example, picks up passengers at park-and-ride lots near freeway exits and takes them, via the freeway, to downtown, sometimes on express lanes. Riders have only a short drive to the pickup point and the convenience of nonstop freeway service to downtown. Because they are often surrounded by parking, express-bus operations have the same development limitations as commuter rail.

Bus rapid transit (BRT), an emerging transit option, is a bus service that has many of the features of a rail system and achieves average speeds that are two to three times that of light rail. With attractively designed buses and transit terminals, BRT can offer the look and feel of light-rail service at a substantially lower cost. Recent bus rapid transit projects in the United States cost an average of $13 million per mile ($8 million per kilometer) for exclusive busways, compared with $35 million per mile ($22 million per kilometer) for light rail. BRT has been popularized in Curitiba, Brazil, where it was a central strategy for expanding transit services to successfully compete with automobiles. Ottawa, Canada, is one of the few cities with extensive experience creating development around express-bus services, but new projects are being developed in a number of other cities, including Las Vegas and Phoenix. The permanence of an express-bus terminal gives developers a more substantial presence, which can support adjacent development.

Chicago, Illinois.

ship, and livable communities. For suburban and city developers alike, development around transit requires the same careful attention as any other project, with some minor adaptations. If real estate development is to support transit, the single most important requirement is that it be *near* transit. Once that requirement has been met, the principles outlined here will help support transit and strengthen both the project and the surrounding community.

Suburban gridlock is pushing many growing communities to explore alternatives to the automobile. The availability of options such as commuter rail, light rail, heavy rail, buses, and bus rapid transit will allow people to choose between wrestling with traffic and taking transit. Attractive development around transit can add to the positive aspects of the transit experience.

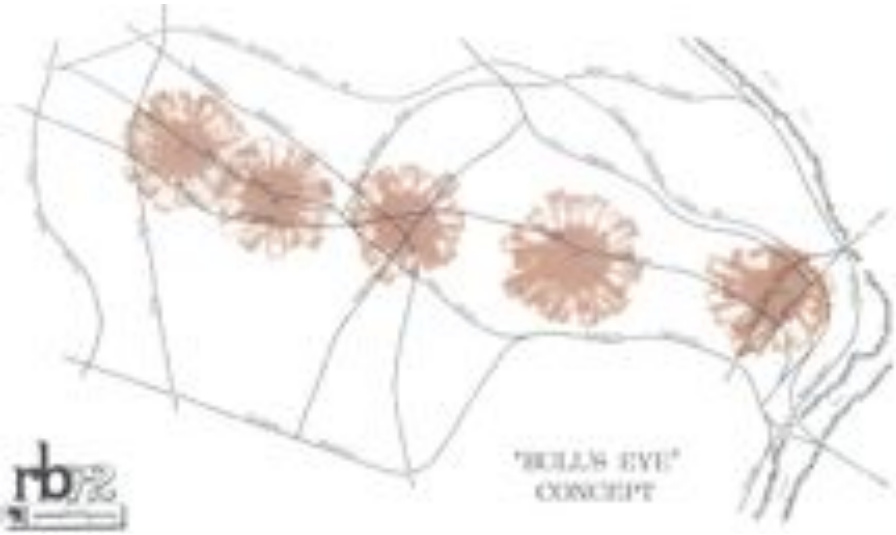
Development around transit promotes compact development, multiple rather than single uses, a pedestrian orientation, and attention to civic uses. Successful development around transit also demands a new form of community building that not only supports and encourages transit use but also transforms the surrounding area into a place that is so special and irresistible that people will invest there, live there, and visit again and again.

Ten Principles

1. **Make It Better with a Vision**
2. **Apply the Power of Partnerships**
3. **Think Development When Thinking about Transit**
4. **Get the Parking Right**
5. **Build a Place, Not a Project**
6. **Make Retail Development Market Driven, Not Transit Driven**
7. **Mix Uses, but Not Necessarily in the Same Place**
8. **Make Buses a Great Idea**
9. **Encourage Every Price Point to Live around Transit**
10. **Engage Corporate Attention**

1 Make It Better with a Vision

This "bull's eye" concept map from the 1970s, which shows the potential influence of development around each Metro station along the Ballston Corridor, in Arlington County, Virginia, was used to establish the vision for the corridor.



Transit is a tool to help achieve a community vision—a way of helping to create the kind of place in which residents want to live, work, play, and raise their children. Ideally, the desired development pattern for a region should be agreed on before transit and road plans are developed. In practice, however, development plans based on a clearly articulated vision for the community are the exception, which means that private land markets and public policy are left to battle out their differences. A transit station in an attractive location for businesses and housing may encourage developers to implement their own individual visions on a parcel-by-parcel basis. But the creation of a broader vision can help ensure that all developers pursue compatible strategies that reinforce the transit vision—and that those strategies will be supported, rather than opposed, by the surrounding community.

Shaping a vision means imagining a development future that recognizes both the

The vision was realized in these high-density development nodes along the Ballston Corridor. Outside the nodes, extensive traditional neighborhoods consisting of single-family houses have been preserved.

community's potential and the operative economic, political, and environmental constraints. Thus, the organization leading the visioning effort should understand the community's strengths and limitations. It should foster a vision that challenges, but does not exceed, the community's capabilities, and should ensure that the implementation schedule is realistic.

To succeed, a vision should be

- Oriented toward the future but based in reality;
- Stakeholder centered;
- Collaborative and educational;
- Focused on implementation; and
- Flexible.

VISION GENERATES DEVELOPMENT AROUND TRANSIT IN ARLINGTON COUNTY, VIRGINIA

Arlington County, Virginia, illustrates how a long-term vision can provide a vital foundation for planning development around transit. In 1960, when the Metrorail mass-transit system was in its initial planning stages, the 26-square-mile (67-square-kilometer) urban county across the Potomac River from Washington, D.C., had an emerging market for government office space, a strong single-family residential market, and a large number of garden apartments; it was also experiencing decline in its retail corridors.

Because the right-of-way for I-66 had already been acquired, transit planners originally proposed aligning the Metrorail tracks with the interstate, which would provide a cost-effective way of getting the Metro system through Arlington. But the county, envisioning the rail development as an opportunity to revitalize the county's commercial core, lobbied instead for a subway route that would run underneath Wilson Boulevard, a failing commercial corridor. The vision was established and sustained by what became known as "the Arlington Way," a consensus-driven decision-making process in which the county board relied on numerous citizen committees for advice.

To implement this vision, Arlington County embarked on an ambitious planning effort, lasting more than 25 years, that was designed to encourage growth and generate transit ridership. Through a series of community-oriented planning efforts, the county identified several major policy goals, including

- **A tax base consisting of a 50/50 mix of residential and commercial development;**
- **Mixed-use development that would include a significant number of residential units;**
- **Preservation of existing single-family and garden apartments; and**
- **An emphasis on redevelopment within one quarter-mile (0.4 kilometers) of Metro station entrances.**

The subway was an expensive proposition, but the county believed that it was worth the extra cost. Whereas a passenger train in the interstate right-of-way would have created an inconvenience for Arlington residents while offering little or no nearby development potential, the more expensive underground line fit the county's goal: to stimulate the kind of development that would generate social, economic, and quality-of-life benefits for residents.

Today, the Orange Line that runs through Arlington is recognized as one of the best U.S. success stories of development around transit. The Rosslyn, Courthouse, Clarendon, Virginia Square, and Ballston Metrorail stations are all hubs of activity, with pedestrian-oriented, high-density residential, commercial, and office development nearby. In 1970, for example, the corridor had 5.6 million square feet (520,800 square meters) of office space and 7,000 residential units. By 2002, the total had reached 21 million square feet (1,953,000 square meters) of office space and almost 25,000 residential units. Development in the two Metrorail corridors in Arlington County (the Orange Line and the Blue Line) uses 6 percent of the land in the county but produces almost one-half of the county's tax revenue. With a strong vision, smart planning, and the political will to sustain the vision over time, Arlington has leveraged Metrorail to nourish strong office, retail, and residential growth and to determine the direction of development.

Community visioning exercise in the Bay Area.

All those who have a stake in the future, as well as those who have the wherewithal to shape it, must be identified and brought into the process. The list of stakeholders typically includes citizens, landowners, developers, local businesses, the transit agency, local elected officials, and local government departments (such as planning, transportation, and public works). Interactions between stakeholders may yield disagreement and contention, but these are the very qualities that render the process collaborative and ensure that critical stakeholders will support the results. Tools such as visual preference surveys, charrettes, and focus groups can help stakeholders from disparate groups learn that they have more in common than they realize.

Grounding the vision in reality will help ensure that it is not so grand or impractical that it cannot possibly succeed. Financial considerations should be addressed early, ideally with the participation of the development community, to ensure that everyone understands the true cost of building the anticipated types of development and the marketability of the product. It is essential to test the financial feasibility of the development proposals that grow out of the visioning process and to coordinate that analysis with the financial analysis of the transit plan. The levels of development assumed in the transit forecasts, which are needed to make the transit project feasible, should be checked against the vision to see if they are realistic; if not, it may be necessary to revise the transit project. All the stakeholders must understand the actions that will be needed in order to realize the vision, including supportive planning and zoning actions and public and private investments. Being ready for implementation means having in place a land use plan and zoning ordinance that support the vision; it also means identifying the necessary financing tools.

Once the vision has been developed it should be publicized. The lead planning agency should identify advocates, preferably civic or business leaders, who can speak persuasively on behalf of the effort and use their influence to advance the project.

As implementation moves forward, phasing may become an important consideration: the vision may have to be adjusted to reflect changes in market dynamics, land ownership, community goals, economic prospects, or consumer preferences; at the same time, it is important to protect the vision against short-term opportunities that undermine the longer view. Shortsightedness may take the form of inappropriate rezoning, or allowing a use that will block the final achievement of the vision. With good planning, consistent policy implementation, and adherence to the vision, development around transit will eventually reach the critical mass that leads to success.

Arlington County, Virginia (see feature box on page 3), is a community that has supported, for four decades, a vision of concentrated development near transit.

2 Apply the Power of Partnerships

DIGITAL VISION/GETTY IMAGES

Creating a development project around a planned or existing transit line is one of the best ways to increase ridership. And development, unlike the expansion of transit routes or the addition of more vehicles, comes at little cost to the transit agency. In addition to encouraging and supporting private development, transit agencies, local governments, or both may take a more active role, through partnerships with the development community. To be effective, however, these partnerships must be carefully crafted to benefit each of the partners—just as partnerships in the private sector would.

A successful partnership relies on the strengths of each partner. The public sector has the power to resolve land-assembly problems, ensure that the site is development-ready, ease the entitlement process, and contribute land, infrastructure costs, or both. Private developers bring the real estate savvy, the contacts with end users, and the understanding of financial resources. Smoothing the entitlement process keeps the developer confident, on track, and on schedule—and helps make it possible for the private sector to assume the risks and to produce an outcome that reflects both the community vision and the market reality.

Public/private and public/public partnerships provide opportunities to set mutual expectations and to share risks, costs, and rewards; they also provide a framework for conflict resolution. To help ensure a successful outcome, partners work together, obtaining financial leverage through tools such as tax increment financing, state and federal financing, and foundation grants.

Because the developer's return on investment is the first indication of success in developing or redeveloping communities around transit, it is critical for the partnership to focus on meeting investment goals. Other indicators of success are the profitability of the businesses that locate in the development, increases in transit ridership, increases in tax revenues, and the satisfaction of the community and other stakeholders.

Some commercial developments near transit have enjoyed rent premiums over nearby properties. In a study of Santa Clara County property values in 1998 and 1999, Robert Cervero, of the University of California at Berkeley, found that multifamily residential projects within one quarter-mile (0.4 kilometers) of light-rail stops commanded a premium of around $9 per square foot ($96 per square meter), meaning that prices were 45 percent higher than those for comparable properties farther from the transit stops. For commercial properties during this period (when the technology industry was booming), being within walking distance of a light-rail station yielded an additional $4 per square foot ($43 per

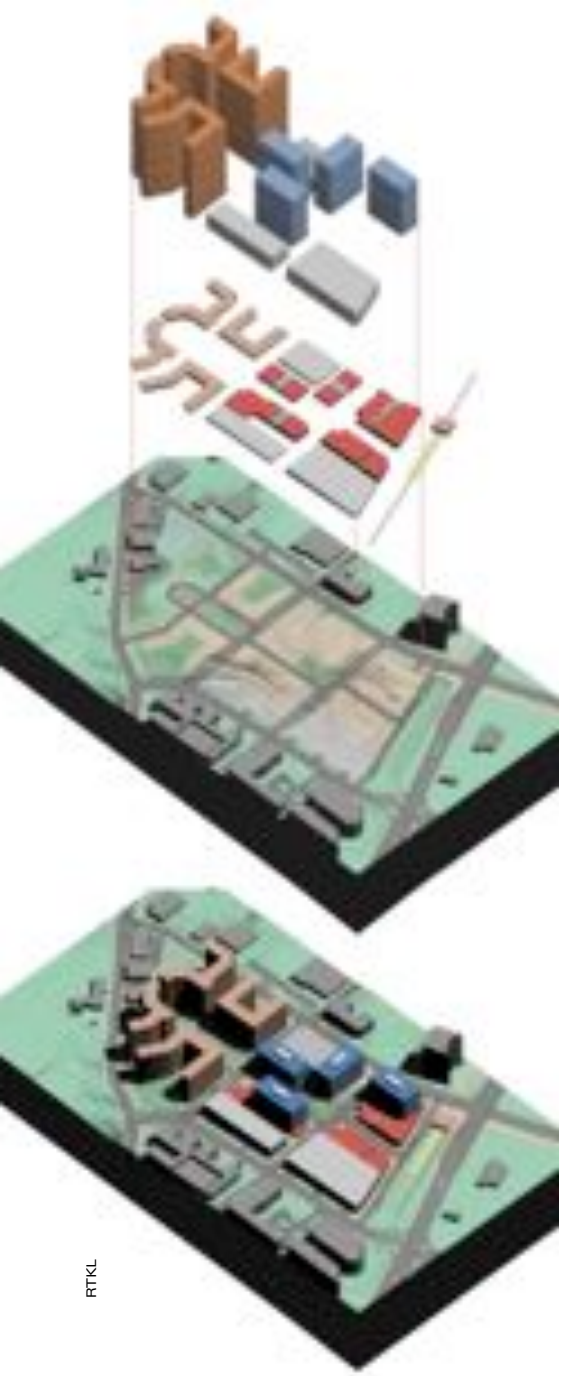
APPLYING THE POWER OF PARTNERSHIP: EL CERRITO DEL NORTE TRANSIT VILLAGE

The El Cerrito Del Norte BART mixed-use development is a new neighborhood located at the Del Norte BART rail station. It contains 135 multifamily units—20 percent of which are affordable—and 21,000 square feet of commercial space in the city of El Cerrito, California. The project provides a model for an effective public/private partnership. The El Cerrito Redevelopment Agency acquired the site for $3 million through the issuance of qualified redevelopment bonds, and leased it to the Ibex Group, the project owner/developer, for a period of 65 years. The redevelopment agency in return will receive 20 percent of the net project cash flow (after the fifth year) and a 20 percent share of the sales proceeds. Construction and permanent financing of approximately $11 million was provided through 40-year, fixed-rate, tax-exempt mortgage revenue bonds (multifamily housing bonds) issued by Contra Costa County. The loan proceeds were insured through the FHA coinsurance program, 221(d)(4), which gives the bonds a GNMA guarantee, and consequently a superior bond rating. The principal source of the remaining funds was equity provided by the Del Norte Place Limited Partnership. The Ibex Group contributed approximately $3.2 million. Low-income housing tax credits were syndicated to 30 individual limited partners for a further $1.8 million in equity contributions. In addition, the Contra Costa county department of community development provided $200,000 through the community development block grant program. Bay Area Rapid Transit participated in the partnership by selling an easement under the elevated track at Del Norte to be used for parking.

square meter), a 23 percent premium. Finally, being near a Caltrain commuter stop more than doubled land values. Perhaps the most consistent finding from California is that for-sale residential properties near suburban commuter-rail stops enjoy premiums; in the case of San Diego, for example, such properties enjoy a 17 percent advantage.

A growing body of literature shows the financial benefits of being near transit. The challenge is to create partnerships that allow those benefits to translate into profitability for the developer, rather than simply for the landowner.

3 Think Development When Thinking about Transit



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Real estate opportunities should always take priority over low-cost transit solutions. For example, running transit along the median of an interstate may save the transit agency from having to pay for a new right-of-way, but it will decrease accessibility for riders and eliminate opportunities to promote higher densities and economic growth around the stations. Opportunities for creating higher densities, and for mixing product types to market to a broader spectrum of incomes, should be sought out during transit project development. Higher densities strengthen the demand for transit; thus, new transit projects offer opportunities to be aggressive about density. Good design and a high level of amenities are vital, and can make a high-density urban setting seem much less dense.

Most new development near transit will be built on private property by private developers. To help these projects succeed, the public must be attuned to the needs of the private sector—which may be a difficult adjustment in communities that have historically had adversarial relations with developers. Being sensitive to the needs of the private sector does not mean compromising public goals, however; it simply means recognizing that those goals need to work for the developer as well.

To a developer, the clock starts ticking once the land is acquired and financing costs begin to accrue. Amenities desired by the public, whether identified during the visioning process or as part of entitlement review, should be agreed upon upfront, when there is still time to incorporate them into the project costs. Two things are critical to the developer's schedule: certainty and timeliness. To ensure both, the agencies responsible for project review should agree with the developer on a timeline for project entitlement and buildout. Delays in the approval process or the addition of requirements prior to, or as a condition of, approval add cost to the project and damage the bottom line. Facilitating the process with quick turnaround and on-time approvals helps to hold down the cost of borrowing money. For projects that are important to the public, the developer should be able to count on attentive staff and the support of top management.

Major public investments like transit can increase property values and create opportunities for community building. Because of the enormous potential to increase real estate value, generate jobs, and increase tax revenues, planning for areas around transit should be linked with economic development. Transit projects with thoughtfully planned routes and station locations can set the stage for significant private development: the careful coordination of transit and development is critical, so that each can optimally enhance the other.

Plano, Texas, after and before redevelopment. Plano, a suburb of Dallas, used a new transit station as a catalyst for downtown redevelopment.

During the early stages of planning for new development around transit, a market-wise transit agency would collaborate with local developers to create a fiscal analysis estimating building costs and investment returns for the private development of nearby properties. This approach will ensure that developers are active participants in the process and that the outcome will be realistic. Even though the planning horizon for transit may be 20 years or more, and the planning horizon for a development project may be only two or three years, design and buildout for the development project should anticipate the eventual transit facility so that when both are in place they work together.

MINIMUM DENSITIES FOR SUPPORTING TRANSIT

	Local Bus, Intermediate Service[1]	Local Bus, Frequent Service[2]	Light Rail[3]	Transit[4]
Dwelling units per acre	7	15	9	12
Residents per acre	18	38	23	30
Employees per acre	20	75	125+	N.A.[5]

Note: The density of the employment destination is more important in influencing trips than the density of the residential area where the trips originate.

1. Average density; varies as a function of downtown size and distance to downtown.
2. Average density over a two-square-mile tributary area.
3. Average density for a corridor of 25 to 100 square miles; transit to downtowns of 20 to 30 million square feet of nonresidential space.
4. Average density for a corridor of 100 to 150 square miles; transit to downtowns of more than 50 million square feet of nonresidential space.
5. Not available.

Sources: For residential densities, Boris Pushkarev and Jeffrey Zupan, *Public Transportation and Land Use Policy* (Bloomington and London: Indiana University Press, 1977). For employment densities, Reid Ewing, "Transit Oriented Development in the Sunbelt," *Transportation Research Record* 1552 (Transportation Research Board, National Research Council, Washington, D.C., 1996). L.D. Frank and Gary Pivo, *The Relationship between Land Use and Travel Behavior in the Puget Sound Region* (Olympia: Washington State Department of Transportation, 1994).

4 Get the Parking Right

As Goldilocks might say, parking around transit must be "Not too much, not too little, but just right." Too much parking makes the area less pedestrian friendly and wastes space that could be used for the types of development that increase ridership. Too little parking—or the perception that there is too little parking—can undermine the economic viability of projects built to take advantage of transit, making leasing or sales difficult. Insufficient parking at the station itself can force transit patrons to park in the surrounding neighborhoods, creating problems for nearby residents and businesses.

Parking is a big factor in determining the layout of the station area. How a transit station is connected with, or separated from, the surrounding community will largely determine the station's footprint and parking requirements. For example, to extend transit's reach into a wider, more auto-dependent travel region, terminal stations often serve as the primary location for parking lots. At closer-in stations, a greater share of transit riders frequently arrive on foot, or by bus or bicycle. On newer transit systems, stations adjacent to major roads often include extensive parking. The transit agency must find the balance between providing parking and allocating sufficient land for the types of adjacent development that will generate walk-on users.

Structured parking at Mockingbird Station, a 600,000-square-foot (55,740-square-meter) transit village in Dallas, Texas, is wrapped in retail and architecturally integrated into the community. In the aerial view on the next page, this garage can be seen at the very rear of the project.

Flexible parking standards provide some latitude in providing the optimal number of parking spaces. Of the many other tools that can be used to reduce the impact of parking, the four principal ones are "move it, share it, deck it, and wrap it."

- Move it: Contrary to common practice, in which parking is located immediately adjacent to the station, broader community goals are best served when parking is moved away from the platform. The land nearest the station is the best land for development, so using it for parking means a lost opportunity. Placing parking a five- to seven-minute walk from the station opens prime real estate for development.

- Share it: Sharing the parking among patrons who make use of it at different times of the day or week is an excellent way to minimize the space devoted to parking. The San Diego transit system, for example, shares one of its

commuter lots with a multiplex theater. Transit riders use the parking on weekdays, and movie patrons use it on evenings and weekends. Shared parking can be operated privately or by a local parking authority. Parking fees offer an opportunity for additional revenue.

WALKER PARKING CONSULTANTS

This parking structure in Glendale, California, is set back from the street in order to minimize the towering effect of its six levels. A pedestrian arcade that leads to the Market Place shopping plaza is enhanced by an overhead metal trellis, a waterfall, seating areas, and architectural light fixtures.

■ Deck it: Structured parking is expensive. Bernard Zyscovich, of Zyscovich, Inc., points out that in Miami, for example, a basic parking garage without sprinklers costs $6,000 to $7,000 per space; more highly finished facilities in urban neighborhoods cost between $10,000 and $13,000 (creating an additional incentive to charge for parking). Structured parking can be even pricier: a garage planned next to the Amtrak station in Philadelphia is projected to cost $33,000 a space. Charging for parking tends to be controversial for a transit agency because it is perceived as a deterrent to riders, but it is essential to finance needed facilities.

■ Wrap it: In place of the typical suburban sea of surface parking, creative designers can wrap a parking structure with retail shops, eateries, residences, and services, such as dry cleaners. This mixed-use approach makes the parking structure more attractive as an urban place, allows people who park there to take care of errands, makes the walk to and from the parking lot more interesting, and creates a built-in clientele for the businesses.

Mockingbird Station is located on the Dallas Area Rapid Transit system, along Dallas's Central Expressway, and across from Southern Methodist University. The mixed-use development consists of retail, residential lofts, and office space.

Under Federal Transit Administration regulations for joint development, transit agencies may sell off surface parking lots, as long as they are transformed into transit-supportive developments, without having to pay back the federal treasury (which typically covered 80 percent of the cost of building parking for rail systems). In some markets, such as the Washington, D.C., area, the San Francisco Bay area, and a few other locales, land values are high enough to make it economically feasible to replace surface parking with decked parking, freeing up half or more of the original parking lot for infill urban development. This approach allows surface parking to be used as a form of land banking.

5 Build a Place, Not a Project

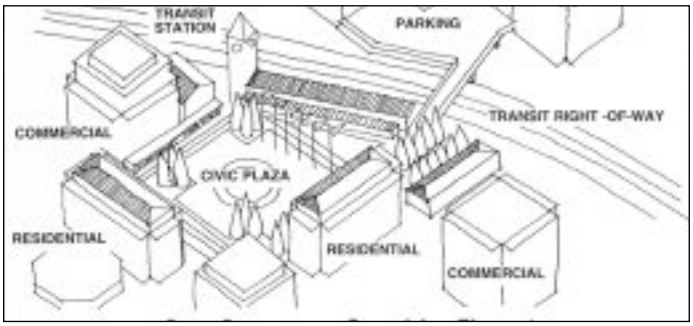
FEDERAL REAL ESTATE INVESTMENT TRUST

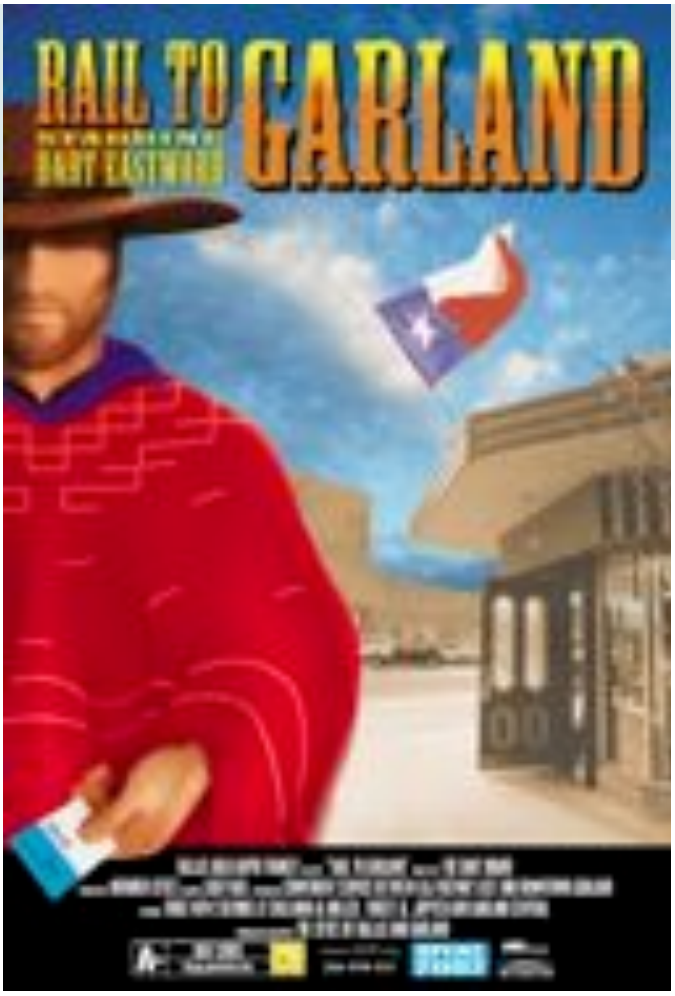
A major new transit station in a community should bring more than the trains. It presents an opportunity not only for "a project at the station," but for a full-fledged transit-centered community, with all the attendant economic and cultural benefits.

Although transit agencies often feel that their responsibility ends at the fare gates, the creation of a genuinely transit-centered community requires attention to scale and design. It is essential to engage all the principals (the transit agency, the local government, the citizens, and the participating developers), to employ highly skilled and experienced designers, and to use design principles that support the creation of a genuine sense of place. Among these principles are the following:

- Locate the transit stop at the center of the neighborhood rather than on its periphery. The new station will connect an entire regional transit system to the surrounding community, and its location should reflect the centrality of its role.
- Design and position the station to foster the creation of an activity center that surrounds the station on all sides.
- Ensure that the design of the station is of high quality and reflects the character of the surrounding community.
- Include engaging public spaces, attractive street furniture, and public art. Public space is important in the creation of place; among other things, it allows for events such as concerts, markets, exhibits, and celebrations—events that bring people and vitality to the area and stimulate economic activity.

Open space can be used as an organizing element in the creation of a transit village.





- Promote pedestrian connections by creating compact blocks, pleasant walkways, and comfortable, well-marked, and continuous streetfront experiences. The appeal of the pedestrian environment strengthens the sense of place and supports retail spending.
- Create attractive landmarks and gateways to the development.
- To ensure round-the-clock activity, incorporate a variety of residential uses.

Because development around transit benefits from higher density, it is important to avoid suburban-oriented traffic standards, which are specifically designed to limit density and relieve congestion. Typical suburban standards for parking and road access are excessive for development around transit and can undermine the site's pedestrian orientation and sense of place. Regulators should develop more appropriate standards, which will preserve pedestrian amenities and enhance place-making opportunities. A supportive planning staff can be of tremendous help in guiding the implementation of the vision and establishing appropriate standards and criteria.

Impact fees for development around transit should reflect the goals and benefits of compact, transit-oriented development. One possibility is a sliding scale that allows offsets for development within walking distance of a train station or that provides special allowances for mixed-use development. Recognizing that smart growth requires smart pricing, a number of cities, including San Jose and Orlando, have introduced such modifications to their program of impact fees.

FEDERAL REAL ESTATE INVESTMENT TRUST

6 Make Retail Development Market Driven, Not Transit Driven

Although the retail component may be viewed as the generator of excitement for development around transit, it cannot be the justification for the development. The most important considerations for retail development are location, market, and design; proximity to transit is not a prime consideration in most markets. Transit access can strengthen the retail market, but the market must be viable without the transit component. Consequently, it is misguided to believe that just because there is transit, if you build retail "they will come."

Loft apartments over retail at Mockingbird Station, Dallas, Texas.

Successful real estate development requires careful attention to real estate markets; increasing transit requires careful attention to transit markets. Although knowledge of the community's demographic and psychographic profiles can help to inform both of these undertakings, they are not the same. Retail is the one land use that is least likely to succeed where it lacks strong market support. Thus, retail does not drive development around transit; it "follows rooftops."

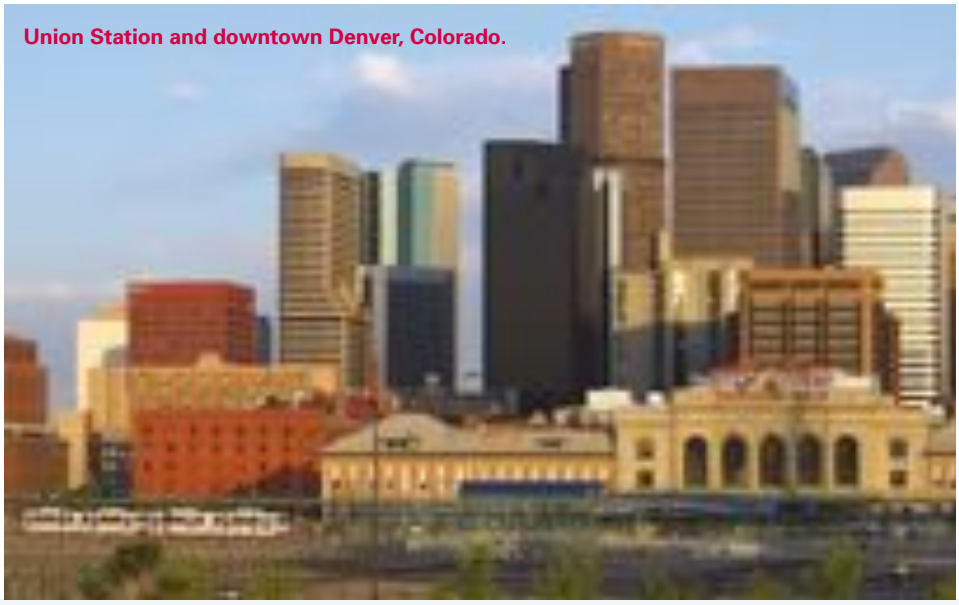
Development plans for the area surrounding the station should reflect the volume that retail developers need; the rules specifying the distance that people will travel to any particular store are immutable. High-density office or residential developments may be ideal sources of transit riders, but they cannot be counted upon to support retail. If there is an existing market for retail, then developing retail first and subsequently adding residential or office space can help reinforce the retail demand.

Although retail is a desirable element in a community and a valuable generator of tax revenues, it may not be supported by market demand, and public agencies must resist the temptation to require retail as part of a project. If stores remain dark and businesses fail, the whole transit village will suffer the stigma of failure. Far better to have a few busy, successful stores than many dark and empty ones.

7 Mix Uses, but Not Necessarily in the Same Place

Denver, Colorado.

A good mix of uses generates a vibrant assortment of people going about their business at many hours of the day. But the creation of an attractive community does not require that uses be mixed on the same site, or even at each station. Integrated mixed-use projects are difficult to finance and complex to build. A transit corridor that offers an advantageous mix of uses, however, can be used to integrate a number of separate activity nodes, particularly when the various uses are close together, easily accessible, and support each other. It is possible, for example, to live at one station, work at another, and shop at a third, with transit making possible the connections among all three. The accessi-



Union Station and downtown Denver, Colorado.

MIXING IT UP ON THE C LINE

An excellent example of mixing uses along a corridor is the light-rail C Line in Denver, Colorado. At one end of the line, Mineral Station offers the 300,000-square-foot (27,900-square-meter) Aspen Grove Lifestyle Shopping Center. Three stops up the line, at the Englewood Station, is a mixed-use area that includes a library and the Museum of Outdoor Arts. Farther on, at the Auraria Station, is the 33,000-student college campus shared by the Community College of Denver, the Metropolitan State College of Denver, and the University of Colorado at Denver. The next stop is Invesco Field, home of the Denver Broncos, and the stop after that is the Pepsi Center, home of the National Hockey League's Colorado Avalanche and the National Basketball Association's Denver Nuggets; the stadium is also used for arena football, professional lacrosse, and concerts. An amusement park, Six Flags Elitch's, is adjacent to the Pepsi Center. At the other end of the line, the light-rail system winds into Denver's Union Station, near the LoDo district and Coors Field, home of the Colorado Rockies baseball team. The mix of uses along the corridor facilitates bidirectional and off-peak travel on the C Line. Events held at Invesco Field, the Pepsi Center, and Coors Field account for a significant percentage of the off-peak use of the C Line.

Events held at Invesco Field, the Pepsi Center, and Coors Field account for a significant percentage of the off-peak use of the C Line. The accompanying chart shows the average numbers of riders for various sports and other events.

Broncos (football)	10,000–12,000
Avalanche (hockey)	1,500
Nuggets (basketball)	500
Mammoth (lacrosse)	1,900
Crush (arena football)	2,400
Concerts	1,500
Rockies (baseball)	3,700

D.A. Horchner/DesignWorkshop

Patterned after other transit-served neighborhoods like Boston's Back Bay and New York's Upper East Side, Denver's Commons neighborhood is a 21-square-block district of homes, businesses, shops, and entertainment, situated next to the Lower Downtown historic district.

bility of the uses along the corridor will render it attractive, and the diverse kinds of trips generated by the activity nodes may help to prevent the typical peak-demand patterns that are common to transit.

Any consideration of the market for mixed use should take into account the two-way nature of the transit corridor. Encouraging travel in both directions, throughout the day, makes the most efficient use of the transit system. Most transit systems are predominantly inbound in the morning and outbound during the evening. Retail and entertainment uses that encourage riders to travel to downtown during midday, after work, or on weekends help take advantage of excess transit capacity. Similarly, locating jobs at suburban stations can help encourage reverse commuting. Some of the other uses that foster two-way travel are schools and universities, airports, hospitals, and retail.

Development around transit responds to changing, growing, and often pent-up market demand. Because many consumers are seeking diverse urban environments and transportation choices in addition to driving, each juncture in the corridor can offer attractive real estate opportunities.

The Pepsi Center (left) and Waterside Lofts (below)—uses along the C Line.

8 Make Buses a Great Idea

COURTESY OF APTA

The bus is the mode of choice for most transit users. Buses carry the most transit passengers in all major markets except Atlanta, Boston, New York, and Washington, D.C., and they are the exclusive carrier in many large metropolitan areas. But buses offer no frills, and are often perceived as crowded, dirty, and bad-smelling. How can buses be made more appealing to businesses, developers, and potential riders? The answer can be found in the vehicles themselves, the quality of service, the attractiveness of bus stops, and, finally, in the characteristics of fellow riders.

Rail is often associated with white-collar commuters; buses, in contrast, are viewed as the mode of travel for the poor, for students, and for others with few transportation choices. If buses are to generate development in transit corridors, they need to serve a strong cross-section of the community—including middle-class riders. Successfully attracting middle-class riders will improve service for all, and will also provide a diverse market to encourage developers to build around bus stops.

To encourage ridership, buses need to be attractive, clean, fast, and fun. Boulder's Community Transit Network, for example, by designing services from the ground up, to meet customer needs, has made its sleek, brightly painted fleet of buses appealing and easy to use. Bus routes are named the Hop, Skip, Jump, Leap, Bound, Dash, and Stampede. Powered by natural gas instead of diesel fuel, the vehicles project a pro-environmental image.

Bus rapid transit vehicles can run in a fixed guideway, like light rail, but are equipped with rubber tires that allow them to run on regular roads.

LANE TRANSIT DISTRICT AND NEWLANDS & COMPANY, INC.

Buses should also be simple to use and offer regular, reliable service. Bus stops should be attractive and comfortable, especially in bad weather, and should have clearly posted schedules and maps showing both individual and system routes. Passengers should be able to determine without difficulty how to get where they want to go.

The 16th Street Transit Mall, in Denver, has helped transform a decaying downtown street into a vibrant, modern shopping and entertainment center at the heart of a revitalized central city. The one-mile- (1.6-kilometer-) long pedestrian and transit mall provides a car-free environment with transit centers at either end, offering express and regional bus service as well as connections to the light-rail system. An extension of the mall built in 2001 links to Denver's

COURTESY OF METRO MAGAZINE

Metro Rapid, a high-speed bus rapid transit that connects Santa Monica with downtown Los Angeles.

Union Station, which will be a major multimodal center. Buses run about once a minute during peak hours and every few minutes the rest of the day, giving downtown workers, residents, and visitors convenient access to the city's many attractions, including Tabor Center, the Denver Pavilions shopping center, and Coors Field. The mall shuttle carries 59,000 passengers on an average weekday, more than most new light-rail systems.

Buses have the important advantage of being flexible; for example, operations can be shifted from frequent neighborhood stops to high-speed freeway services. In Houston, the operating speed of buses on freeways is over 50 miles (80 kilometers) per hour—even faster than urban light- or heavy-rail services. Moreover, a bus line can evolve into light rail as traffic levels and nearby development increase—as is the case in Las Vegas, where a new Automated People Mover is being built along the Strip, which is currently a busy bus corridor.

One popular new approach to reinventing bus service is bus rapid transit (BRT), a fusion of bus and light-rail technologies. BRT has many of the features of a rail system, such as fixed terminal locations and dedicated guideways. Buses can be given priority at traffic signals to speed them on their way, and achieve average speeds that are two to three times that of light rail. With attractive new buses and transit terminals, BRT can offer the look and feel of light-rail service at substantially lower cost.

Developers do not typically regard bus stops as hubs for development. In many transit corridors, however, bus service supports downtown businesses and higher-density residential neighborhoods. Enlightened zoning, which allows higher densities and requires less parking along well-served bus corridors, will create opportunities for development that supports transit, even if developers do not consider such development "transit oriented." Redmond, Washington, and Eden Prairie, Minnesota, offer examples of development at suburban bus terminals; upgrading the image of bus transit can expand such opportunities.

9 Encourage Every Price Point to Live around Transit

Some of the more successful new transit cities have discovered what Boston, New York, and Washington, D.C., have known for years: just as people from every part of the economic spectrum ride transit, people from every part of the economic spectrum like to live *near* transit. After all, some of the toniest neighborhoods developed at the dawn of the 20th century—including Chevy Chase, Maryland, and Philadelphia's suburban Main Line—were linked to transit. Urban living has undergone a resurgence in recent years, and the quest for diversity is one of the drivers of that resurgence. Even traditionally suburban, auto-oriented cities, including Atlanta and Dallas, have discovered that important market segments are seeking out residential locations characterized by a mix of incomes; such cities are expanding their transit systems to address these market needs. Young workers often choose to live in urban neighborhoods, even if their jobs are in the suburbs. Living near transit can satisfy a desire for community, independence, opportunity, and convenience. Creating new communities around

MCLARAND VASQUEZ EMSIEK & PARTNERS, INC.

San Diego, California.

A HOT HOUSING MARKET IN SAN DIEGO

The San Diego Trolley, one of the most successful new transit projects in the United States, has become an attractive magnet for new housing across a range of price points. In downtown alone, where the trolley, buses, and commuter rail lines converge, there are 4,000 new apartments and 4,000 condominiums under construction or in the approval process. Rent levels are expected to range from $400 to more than $3,000, while sales prices will run from $200,000 to $1 million. In downtown San Diego, 101 Market Street is a luxury development whose monthly rents range from $1,000 to $2,000. In fashionable Mission Valley, there has been extensive housing developed along the trolley line. The Promenade is a mixed-use project with 970 market-rate units and 30,000 square feet (2,788 square meters) of retail space at the Rio Vista station. Affordable housing has been developed downtown and in outlying areas near transit.

A major new mixed-use development, City Heights Urban Village, is being planned along with a new transit service called the Transit First Showcase Project, high-quality, rubber-tired transit that will offer the speed, comfort, and amenities of a trolley connection to downtown San Diego. The project is being developed by a partnership of the city of San Diego, the San Diego Redevelopment Agency, the San Diego Foundation, CityLink Investment Corp., and Price Charities. It will include civic, employment, retail, and education uses, as well as affordable housing, a library, and a park.

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Townhouses in the Uptown District, San Diego, California.

intown transit development offers the opportunity to put forward a mix of upscale, market, and assisted housing.

It is important for developers and their market consultants to know the demographic profiles of those who are seeking to live close to transit; these groups include

- People who are tired of fighting traffic and are willing to give up their second car;
- People from a variety of age groups who are looking for opportunities to move up or down in housing size, depending on where they are in their lives; and
- Seniors who want an independent lifestyle and to reduce their dependence on the automobile.

A loft apartment, Mockingbird Station, Dallas, Texas.

Residential development around transit, especially when it is part of a mixed-use strategy, can be so successful that it attracts wealthier households, resulting in escalating real estate values, numerous upscale conversions, and rising rents. Preserving and expanding affordable housing is important as well, and is a special concern for development around transit because lower-income transit users often represent the core of the ridership. Local agencies should link transit funding with the provision of affordable housing so that transit and housing can reinforce each other.

10 Engage Corporate Attention

BellSouth's Lindburgh project, Atlanta, Georgia.

Corporations can play an influential role in stimulating development around transit. If corporations see transit as a slow and unreliable means of getting to work, executives in charge of location decisions will pay scant attention to transit access. If transit is viewed, however, as a valuable tool for recruiting scarce talent, companies will include "good transit access" on their checklist of considerations for site selection. More companies are focusing on transit access for workers, even if management does not plan to use it. David Houck, senior vice president of the Staubach Company, notes that public transportation is, or should be, a critical factor in locating call centers, which require large numbers of low-wage employees. Some companies that have moved to remote sites accessible only by car have found it so difficult to recruit workers that they moved back to closer-in sites.

In Atlanta, when corporations were asked to name the most serious impediment to business in the metropolitan area, the overwhelming answer was

MARTA Station at Lindburgh.

BELLSOUTH'S METRO PLAN

BellSouth Corporation's Atlanta Metro Plan will ultimately consolidate employees from approximately 23 locations all over the Atlanta region into three business centers, all of which are strategically located along Metropolitan Atlanta Rapid Transit Authority (MARTA) rail lines. When the Metro Plan is completed, in 2003, almost 15,000 BellSouth employees will have access to their jobs via mass transit.

By implementing the Metro Plan, BellSouth will replace 2 million square feet (186,000 square meters) of suburban office space with 3 million square feet (279,000 square meters) of new development downtown. The $750 million project will ultimately relocate nearly 13,000 employees, 30 percent of whom are expected to commute by transit.

The BellSouth effort demonstrates a clear commitment to developing around transit. As one of Atlanta's largest employers, BellSouth believes that the Metro Plan will proactively address Atlanta's traffic and pollution issues and inspire other companies to take action.

"traffic congestion." In response to the Atlanta area's growing traffic problems, BellSouth Corporation is consolidating all its suburban offices into three central locations accessible from MARTA (Metropolitan Atlanta Rapid Transit Authority), the city's rail system.

WORKPLACE CULTURE: WHAT'S OUT AND WHAT'S IN

OUT	IN
Suburban/exurban campus locations	Locations close to transit
Corporate campuses	Mixed-use developments
Kiss and ride	Live, work, play, and ride
Location near the chief executive's home	Location convenient for workers
Free parking	Free transit passes
Driving to lunch	Walking to lunch
Errands on the way home	Errands at lunchtime
Commuting car	Fuel-efficient station car
Quality of the workplace	Quality of life