

Light-Rail Transit Phoenix, Arizona

Economic Development along the Planned Light-Rail Line

December 2-7, 2001
An Advisory Services Panel Report

ULI-the Urban Land Institute
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About ULI—the Urban Land Institute

ULI—the Urban Land Institute is a non-profit research and education organization that promotes responsible leadership in the use of land in order to enhance the total environment.

The Institute maintains a membership representing a broad spectrum of interests and sponsors a wide variety of educational programs and forums to encourage an open exchange of ideas and sharing of experience. ULI initiates research that anticipates emerging land use trends and issues and proposes creative solutions based on that research; provides advisory services; and publishes a wide variety of materials to disseminate information on land use and development.

Established in 1936, the Institute today has more than 17,000 members and associates from 60 countries, representing the entire spectrum of the land use and development disciplines. Professionals represented include developers, builders, property

owners, investors, architects, public officials, planners, real estate brokers, appraisers, attorneys, engineers, financiers, academics, students, and librarians. ULI relies heavily on the experience of its members. It is through member involvement and information resources that ULI has been able to set standards of excellence in development practice. The Institute has long been recognized as one of America's most respected and widely quoted sources of objective information on urban planning, growth, and development.

This Advisory Services panel report is intended to further the objectives of the Institute and to make authoritative information generally available to those seeking knowledge in the field of urban land use.

Richard M. Rosan
President

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About ULI Advisory Services

The goal of ULI's Advisory Services Program is to bring the finest expertise in the real estate field to bear on complex land use planning and development projects, programs, and policies. Since 1947, this program has assembled well over 400 ULI-member teams to help sponsors find creative, practical solutions for issues such as downtown redevelopment, land management strategies, evaluation of development potential, growth management, community revitalization, brownfields redevelopment, military base reuse, provision of low-cost and affordable housing, and asset management strategies, among other matters. A wide variety of public, private, and nonprofit organizations have contracted for ULI's Advisory Services.

Each panel team is composed of highly qualified professionals who volunteer their time to ULI. They are chosen for their knowledge of the panel topic and screened to ensure their objectivity. ULI panel teams are interdisciplinary and typically include several developers, a landscape architect, a planner, a market analyst, a finance expert, and others with the niche expertise needed to address a given project. ULI teams provide a holistic look at development problems. Each panel is chaired by a respected ULI member with previous panel experience.

The agenda for a five-day panel assignment is intensive. It includes an in-depth briefing day composed of a tour of the site and meetings with sponsor representatives; a day and a half of hour-long interviews of typically 80 to 100 key community representatives; and a day and a half of formulating recommendations. Many long nights of discussion precede the panel's conclusions. On the final day on site, the panel makes an oral presentation of its findings and conclusions to the sponsor. At the request of the sponsor, a written report is prepared and published.

Because the sponsoring entities are responsible for significant preparation before the panel's visit, including sending extensive briefing materials to each member and arranging for the panel to meet

with key local community members and stakeholders in the project under consideration, participants in ULI's five-day panel assignments are able to make accurate assessments of a sponsor's issues and to provide recommendations in a compressed amount of time.

A major strength of the program is ULI's unique ability to draw on the knowledge and expertise of its members, including land developers and owners, public officials, academicians, representatives of financial institutions, and others. In fulfillment of the mission of the Urban Land Institute, this Advisory Services panel report is intended to provide objective advice that will promote the responsible use of land to enhance the environment.

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Matt Crowe, chair of ULI Arizona, and his executive committee are to be commended for having the foresight to work with the city on the important issue of light rail for the Central Valley. Sheila Hamilton, district council coordinator, provided valuable assistance with panel logistics.

Finally, the panel would like to thank the more than 100 citizens and community leaders who took the time to be interviewed by the panel and who shared their visions for how light rail can be an asset to the community.

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Foreword: The Panel's Assignment

Initially, the Central Phoenix/East Valley Light-Rail Transit project is a 20.3-mile, \$1 billion rail transit project that traverses central and east Phoenix and connects with Tempe and Mesa, two adjoining municipalities. The project will link Phoenix's central business district, Phoenix Sky Harbor International Airport, Arizona State University, community college campuses, and event venues that currently draw about 12 million people per year from all over the region and, at times, the United States, including facilities for the teams of the National Basketball Association, the National Football League, Major League Baseball, and the National Hockey League, as well as the Phoenix Civic Plaza convention center, and an extensive array of museums and theaters. The project is scheduled to start construction in 2003 and to open in 2006.

The sponsors asked the panel to evaluate potential land uses around four light-rail stations along the planned transit line: Central Avenue and Camelback Road on the north end of the system, Washington/Jefferson streets at 22nd Street, Washington Street at 32nd Street, and Washington Street at 40th Street. As is typical with ULI panels, it is never easy to stay within the confines of the assignment, so the panel commented on much more since it was necessary to look at broader issues than just these four stations. For the rail line in general and for specific stations along the line, the panel looked at four broad issues as follows.

Market potential. The types of development attractive to light-rail ridership; opportunity and demand for these uses; and trends likely to occur along the corridor.

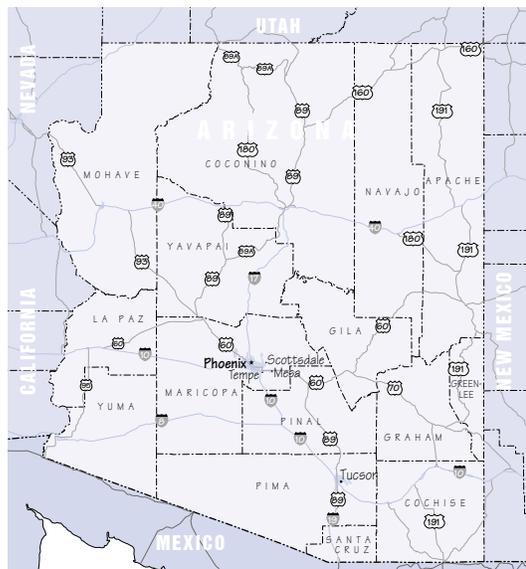
Planning and design. How to create a sense of place/identity that will be different; changes necessary in zoning and a range of standards; and the impact within the stations' zone of influence.

Development strategies. Ways to maximize opportunities for development; options/scale of development; and priority stations.

Implementation. Public/private strategies for the city to pursue and public incentives necessary to attract development from the private sector.

To tackle this assignment, the panel felt it was necessary to step back and look at the broad picture of development and land use policies and patterns that have influenced current conditions. Without question, Phoenix has welcomed growth and continues to do so—for years, it has been at or near the top of the list of the fastest-growing U.S. cities. However, land use patterns have been rather free-form, with centers or areas developing wherever growth has occurred. The result has been a consistent pattern of low-rise, low-density land use.

Before Phoenix's downtown core had a chance to develop as the single most powerful employment center, there was a move to create other core areas, including Uptown/Midtown, the Camelback



Location map.

Panel members investigate development potential at the future Camelback and Central transit stop.



Corridor, and other suburban locations, with the result that higher densities are scattered into several pockets with no significant high-density residential cores. Together with the city's well-developed grid system of generously wide streets, growth has occurred without the significant congestion that typically causes people to pursue alternate forms of transportation.

Why light rail? From the panel's perspective, the community's foresight is correct because it will take three to five years or more to complete the system and even longer to measure its success. The panel sensed that expectations for the system are very high; for it to succeed and be expanded and extended, great care must be given to the initial phase. The opportunity to make this a successful and positive experience for riders begins now. The cogent words of Daniel Burnham, a turn-of-the-century architect/planner in Chicago, indirectly attest to this: "Make no little plans. They have no magic to stir men's blood."

Given the tragedy of September 11, 2001, and its impact on a variety of quality-of-life issues, the opportunity to review, for example, the light-rail connection to the airport is relevant. The airport is and will continue to be the economic engine spurring growth in the valley. Offering seamless, safe, and comfortable transportation to the plane, the light rail will experience a significant increase in ridership.

As to whether light rail will be a catalyst for economic development, the city can look to the experience of other cities with existing systems. In older as well as newer systems, the average premiums in value for proximity to stations is 5 to 10 percent over time. In Pasadena, California, where light rail will not be operative for almost two years, two major mixed-use developments have been completed at stations: a residential project and a shopping mall/residential complex. Over time, light rail can stimulate development, which can have a "snowball effect" on future development. The trick is to begin the process now—as it seems the city has—to bring all the tools that the public and private sectors have available to make this a new beginning.

Market Potential

To assess potential opportunities for transit-oriented development (TOD) along the rail corridor, the panel made the following assumptions:

- Market opportunities incorporate political realities.
- Economic growth will be slightly slower than that witnessed during last decade.
- Stations will be completed in 2006 and after.
- Light-rail developments and commuter-rail developments have different characteristics.

To respond to questions about the market, the panel used the following:

- Analysis of the economic environment.
- Site analysis.
- Analysis of market demand by product type.
- Assessment of competitive environment by product type.

Economic and Market Overview

The following is a discussion of economic and market factors that will influence the success of TOD along the rail corridor.

Demographics

The population of the Phoenix metropolitan market (Maricopa County) has increased dramatically over the last decade and is projected to continue growing at a dramatic pace through the next five years. With a population of 3.1 million in 2001, the metropolitan area is projected to have a population of 3.4 million by the time the rail opens.

What supports and drives the need for the light rail is not population growth alone but the densification of the population. While the overall popula-

tion density of the metropolitan area has increased over the last ten years, the densification occurred due to the shrinking size of the suburban lot and to the addition of a third story to the suburban apartment complex. High-density residential development in the urban core—the area that is the focus of the panel's study—added to the process of population densification as well.

The urban core provides further opportunities to continue this trend, since undeveloped land still is abundant along the Central Avenue corridor and the Washington/Jefferson corridor offers a lot of redevelopment opportunities. For the city to be able to respond to opportunities for densification in the central core, land values and the cost of construction in general will need to be brought in line with the prevailing rental structure.

Nationwide, even in areas where the system is used heavily by broad segments of the population, the average household income of the light-rail user is below that of the respective region. Therefore, the planned Phoenix light rail's alignment is laid out appropriately: it travels through areas of the city where median household incomes are consistently below that of the metropolitan area. As such, the system will serve the very population that needs it most.

The population growth in the metropolitan area has brought significant ethnic diversity. Many neighborhoods along the light-rail alignment show high minority presence, which will provide opportunities to integrate those residents into the labor force and into the greater community as well. Because many minority households are relatively comfortable with high-density environments, they are seen as significant new elements of the urban landscape.

Meanwhile, the aging of the population, with the baby boom generation reaching the empty-nest stage of life, also bodes well for the future of



The Arizona Center provides a pleasant retail experience downtown.

urban areas. Freed of the necessity to live on large suburban lots, desiring to participate in concentrated cultural and entertainment activities, and having the ability to afford them, suburban empty nesters have been moving into the nation's downtowns.

Population growth in general and growth in certain segments of the population will contribute to repopulating the neighborhoods along the light-rail corridor. Such changes bode well for the future ridership of the light rail.

Economy

The number of people employed in the metropolitan area exceeded 1.6 million in 2001, making Phoenix, with 47 percent of its population working, one of the most highly employed cities in the nation. Despite a gradual slowing in new job additions since 1995, the area still added more than 50,000 jobs last year. It is projected to add approximately 160,000 more by the time the light rail opens.

Patrick Grady (left), director of community and economic development for the city of Phoenix, and Matthew Crow, president and CEO of Grossman Company Properties and chair of ULI Arizona—cosponsors of the panel—brief the panel on its first day in Phoenix.



Employment followed the population growth to the suburbs, a trend throughout the nation, because even with growth in central cores, the central business district (CBD) is not capturing its fair share of the added employment to the metropolitan area. Yet, the panel learned from market research and its interviews with community members that much of the future employment growth projected for the Phoenix metropolitan area is assumed to occur along the light-rail alignment, in Phoenix and Tempe.

Furthermore, existing employment is strongly concentrated along the light-rail route and the Central Avenue corridor; in the downtowns of Phoenix and Tempe, and at the airport and Arizona State University. As such, the planned alignment touches on many of the current employment centers in addition to areas that have significant redevelopment opportunities: namely, empty parcels along Central Avenue and the underdeveloped Washington/Jefferson corridor.

The national trend toward a service economy is especially pronounced in the Phoenix metropolitan area. In Phoenix, service jobs make up more than 33 percent of the market and jobs in finance, insurance, and real estate (FIRE)—approximately 8 percent of the employment, compared with the national average of 30 percent and 5 percent, respectively.

Service jobs abound along the light-rail alignment and at hotels, restaurants, the sports facilities, and the convention center. Professional service employees, a significant element of the services sector, and in FIRE, are office tenants and as such represent the clientele for the Central Avenue corridor and downtown office buildings. They also are potential future riders of the light rail. The design and implementation of the light-rail system should be sensitive to the needs of the office tenants and office building owners. This will make the area competitive with suburban office concentrations.

Real Estate Markets

To understand the potential for TOD within the study area, several real estate markets ought to be considered.

Residential Market. Population and employment growth in Phoenix has generated significant demand for all types of real estate products, both residential and nonresidential. Yet, due to a very competitive building environment, even with significant appreciation over the last five years, Phoenix, among all major U.S. metropolitan areas, remains one of the most affordable residential markets, with an average single-family home price of approximately \$140,000 and with an average rent below \$700.

Phoenix in general and the neighborhoods along the light-rail route have the highest concentration of attached dwellings in the metropolitan area. During the last few years, more than 1,000 attached units have been added in the Central Avenue corridor and in downtown. Such concentration is necessary for the success of light rail and should be further encouraged along its alignment. Maintaining its fair share of the new residential growth over the next few years, the area is projected to add approximately 3,000 new attached housing units along the light-rail route.

Office Market. With its limited number of corporate headquarters, the Phoenix metropolitan area never has been a significant office market. While metropolitan Denver has 55 square feet of office space per resident and the Dallas Metroplex has 79, metropolitan Phoenix has only 16. As office users serve local and regional clientele, over the last few decades, office construction followed residential growth to the suburbs. (It should be noted that the trend in Phoenix is to develop suburban office campuses and industrial flex office space with ample parking.)

In the 1960s, nearly 80 percent of the 12 million-square-foot office market was in the CBD. Currently, only 28 percent—or 14 million of the total 50 million square feet—is located there. While the phenomenon of losing share while still growing is not unique to Phoenix, the growth in the city's CBD has been especially slow. In addition, the panel learned from market data and its interviews that, from time to time, many high-quality tenants have moved to the Camelback Road/24th Street location.



The light-rail alignment services three major office submarkets: downtown, Uptown, and Gateway. They represent a total of 16.5 million square feet of office space, offering Class B and Class A products in the range of \$18 to \$25 per square foot. Vacancies range from 12 percent at Gateway to more than 14 percent in Uptown. The design and development of the light rail will need to be especially office-friendly to reinforce, rather than undermine, the competitive appeal of the affected office concentrations.

Retail Market. Phenomenal population growth has induced a significant expansion of the retail real estate market. The amount of retail space per capita in Phoenix is one of the highest among U.S. metropolitan areas. Over the last five years, approximately 2.5 million square feet of retail space has been added to the metropolitan market.

Besides new construction, several old centers have been repositioned to meet the changing needs of their environment. As outlying areas catch up with demand and intown locations respond to the changing needs of their residents, projections for future expansion of the market are very encouraging.

Despite its central location, the alignment of the light rail offers limited destination retail services. The recently repositioned Chris-Town, now called Spectrum Mall, turned into more of a community than regional-serving facility. The Phoenix and Tempe downtowns' destination establishments offer goods and services more or less successfully to a regional audience. High-quality destination retail could turn this situation around and will be a key factor in the success of the light-rail system.

Palm-lined streets provide attractive approaches to future transit stops.

Market Characteristics of the Corridor

Because it encompasses such diverse market conditions, the Phoenix light-rail corridor is best understood by looking at it in five separate segments and then evaluating the strengths and weaknesses of each one. These segments are as follows:

- Segment 1: 19th Avenue/Bethany Home Road to Camelback/Central.
- Segment 2: Central Avenue/Midtown.
- Segment 3: Central Avenue/downtown.
- Segment 4: Washington/Jefferson/Seventh Street to I-10.
- Segment 5: Washington/Jefferson/Airport.

The panel's five study segments along the Phoenix light-rail system.

The following is a description of each segment along with a list of its market strengths and weaknesses.

Segment 1: 19th Avenue/Bethany Home Road to Camelback/Central

This segment, located along commercial streets, is complemented by comparatively dense well-established, suburban-type housing. Income levels and property values generally are lower along the 19th Avenue corridor. The segment includes two stations offering major redevelopment opportunities: the end of the line (19th Avenue and Bethany Home Road), and Central Avenue and Camelback Road.

Market strengths:

- Surrounding residential density.
- Access to a large workforce.



- Direction of future line extension.
- Availability of large parcels of assembled land, including the Spectrum Mall and others.
- Proximity to freeway.

Market weaknesses:

- Perception of unsafe neighborhoods.
- Nonpedestrian environment.
- Haphazard commercial development.

Segment 2: Central Avenue/Midtown

This segment follows the historic downtown/up-town corridor of Phoenix and incorporates a large employment base, many cultural facilities, and several recent multifamily residential developments, both for sale and for rent. The corridor benefits from the adjacency of strong, established neighborhoods. The stations there offer an opportunity for a variety of development types. The segment is expected to serve as both a significant point of origin and a destination for ridership.

Market strengths:

- Central location in metropolitan area.
- Heavy employment corridor.
- Proximity of high-end residential neighborhoods.
- Historical main street.
- Anchored by CBD.
- Cultural attractions.
- Parks and recreational facilities.
- Mixed-use environment.
- High vehicular counts.
- Availability of large land parcels.
- Freeway access.
- Fiber-optic capacity.

Market weaknesses:

- Lack of design continuity.
- Lack of amenities for residents within walking distance.

- Large inventory of outdated commercial buildings.
- Low rents that do not support replacement costs.
- Inflated land values that restrict development.

Segment 3: Central Avenue/Downtown

The CBD is home to a workforce of more than 30,000 people, one of the principal aggregations in the region but modest when compared with other comparably sized cities. There is about 5 million square feet of office space in the vicinity of the Central Avenue/downtown station, and the segment also incorporates museums, theaters, sporting arenas, and convention facilities. It is viewed as a primary destination for ridership on the light-rail line.

Market strengths:

- Comparatively large aggregation of workers.
- Regional amenities including BankOne Ballpark, America West Arena, symphony hall, museums, a science center, theaters, and a convention center.
- Proximity of government offices and courts.
- Large parcels of developable land.
- Ample parking.
- Good automobile access.
- Close proximity to the airport.

Market weaknesses:

- Physically large and spread-out urban core.
- Office-dominated area with little residential or retail space.
- Office users largely limited to government and finance.
- Perception of traffic congestion.

Segment 4: Washington/Jefferson/Seventh Street to I-10

This segment is an important part of the connector between the CBD and Tempe and the rest of the East Valley. Along the way, it accesses several commercial nodes, Phoenix Sky Harbor In-

ternational Airport, and some of the city's oldest neighborhoods.

Market strengths:

- Proximity to CBD employment and activities.
- Availability of land.
- Favorable land prices.
- Strong access to regional and local road systems.
- Strong, active churches.

Market weaknesses:

- Nearby neighborhoods in disrepair.
- Poor reputation of school district.
- Small parcel sizes.
- Spotty land use pattern.
- Perceptions of crime.

Segment 5: Washington/Jefferson/Airport

This segment, which comprises a variety of land uses, fronts along Phoenix Sky Harbor International Airport.

Market strengths:

- Excellent highway and road access.
- Proximity to the airport and to the jobs offered there.
- Historic neighborhoods.
- Large institutional employers.
- Large parcels of available land.
- Strong community spirit.

Market weaknesses:

- High land prices.
- Deteriorating building stock.
- Slum and blighted conditions.
- Perceived crime.

Transit-Oriented Development

For the purposes of this report, the panel defined TOD as compact, pedestrian-oriented villages around transit stations. These developments generally lie within a five-minute walk of the transit platform, comprise a mix of uses that support transit usage, encourage street-level activity, incorporate public plazas, and rely on structured or below-grade parking.

As this type of development has spread throughout the country, some fundamental lessons about TODs have emerged.

- Every TOD is unique because the community, the location, and the market are unique. Uses, size, design, and economics all should work together to compose a distinctive place.
- Like any other mixed-use development, TODs succeed only when there is market demand, infrastructure, zoning, and capital. Transit alone is not enough.
- In order to be economically feasible, TODs need to be of a minimum size, generally no smaller than five acres.
- Transit is supported best by multifamily residential uses (condominiums and apartments, including both market-rate and affordable units), offices with high employee counts (government, schools, call centers), civic facilities (libraries, museums, churches, post offices), and entertainment uses (theaters, arenas, cinemas, restaurants).
- Retail uses generally are the most difficult component of transit villages, and focus on convenience and service uses (e.g., coffeehouses, drugstores, video stores, cleaners, health clubs, food stores). These uses not only raise transit ridership, but also decrease the need for more trips by car.
- Transit villages are most successful when a critical mass of activity is created, when different types of people are brought to the station throughout the day, when they are carefully conceived to be destination places in their own

right, and when transit is simply an additional benefit.

- A difficult type of development, TODs require specialized treatment by qualified developers having successful experience with mixed-use projects, patient capital, and substantial equity. Projects frequently cost more, necessitate more capital upfront, and provide higher yields to developers over time.
- TODs have a track record of successfully introducing new types of development into communities and then leading the market as other developments emulate that success. This is common with new housing types, mixed-use products in particular.

Land values at transit stations generally benefit from their comparative density advantage, the ambience of the development, and a reduced need for cars. Precise research is difficult to procure, but conservative estimates indicate a stabilized 10 to 20 percent value premium to real estate located with easy access to the station.

Specific Station Development Opportunities

The panel considered potential development opportunities in the vicinity of five proposed stops: Spectrum, Central Avenue at Camelback Road, Washington/Jefferson at 22nd and 24th streets, Washington at 32nd Street, and Washington at 40th Street.

Spectrum (Formerly Chris-Town)

End-of-line stations are extremely important to the viability of light-rail lines because they generally draw the largest riderships and provide substantial parking reservoirs. As gateways to and anchors of the system, they establish the identity of the line and largely determine the overall quality of the transit experience. If it is user-friendly, attractive, and pedestrian-oriented, transit becomes an amenity that appeals to a broad groups of riders. If transit is difficult to use and located in uncomfortable environments, however, ridership is discouraged.

The Spectrum terminus offers an unusual opportunity because it is a large parcel owned by a national developer. It already includes substantial retail space and important village-center amenities such as a library and a community center in the vicinity. The panel's impression is that only minimal integration into the site and few gestures to transit riders have been proposed. Spectrum will pale in comparison to the Tempe experience if the developer and the city do not proactively look for ways to integrate the station into the project and make it a dynamic, exciting place.

Any consideration of building over the street at this station is misguided and should not be further considered. It is highly unlikely that Spectrum, in its existing form, will comprise underground parking. To ask riders to walk a long distance from the station to the mall hurts transit ridership and ignores a tremendous opportunity for the property owner.

Spectrum could benefit from a broader customer base and increased attention the neighborhood will give it if the station is exciting and well conceived. It has enough land in vacant parking lots to make possible a wholesale redesign and repositioning timed to coordinate with and capitalize on the opening of the line.

Central Avenue and Camelback Road

Members of the community have identified this site as having the potential to be the light-rail corridor's "crown jewel" of development, and the panel agrees. Of the five proposed stops under discussion, this will be the capture point for heavy ridership and may offer the best long-term development opportunity. The entire intersection should be master planned to strengthen connections with existing projects and to leverage public investment for maximum economic development.

The demographics of the area support housing, offices, restaurants, shopping, and entertainment there. This site potentially can resemble 57th Street and Fifth Avenue in New York City, Hyde Park Corner in London, and Ronde Point on the Champs-Élysées in Paris. It will be the gateway to Central Avenue and downtown. The city could take advantage of Central Avenue's negative attributes—too long, too wide, no fun—and remake it



The transit line will bring redevelopment opportunities to retail strips such as this one.

as a beautiful green street with lots of activity, restaurants, and stores unlike anything currently in Phoenix. The light rail, if done correctly, can serve as the catalyst for such a remake.

The tremendous opportunity at this location lies in the feasibility of mixed-use development there and its ability to help offset the cost of infrastructure. Assuming city acquisition of the face block along Camelback Road from Central Avenue to Third Avenue, there should be six to ten acres of developable land after the construction of necessary roads and infrastructure. This level of development supports several buildings in the four- to seven-story range totaling 600,000 square feet of development.

Specifically, the panel suggests anchoring the center with a major shopping and entertainment component comprising 250,000 to 300,000 square feet of space. The neighborhood can support substantial shopping and restaurants, a health club, nightclubs, and perhaps an art cinema or a dinner or neighborhood theater. Above this development would sit 300 to 350 mid- to upper-end apartments, offering 1.5 parking spaces per unit and other appropriate amenities.

Over time, rental units could be converted to ownership units, but experience in other TODs has shown that people are more willing to live in a new place when they can try it out on a rental basis first. Ironically, demand to purchase almost always follows immediately.

Next, retail uses would “wrap” around the parking structures and provide ground-floor activity. Another 100,000 square feet in smaller floor plate

office space would strengthen the mix. Park-and-ride parking would share spaces with evening entertainment uses, and overall parking ratios would be about 20 percent less than those of suburban locations because of the rail access. A diagonal underpass to the Uptown Plaza would provide pedestrian access to grocery stores and other shopping, and, over time, to even more amenities in the transit village.

Washington/Jefferson at 22nd and 24th Streets

As the entry point to the airport and the region’s broadest transit network, this is another site with enormous short-term *and* long-term potential. With Sky Harbor’s heavy and growing volume, strong national and international presence, significant access to downtown, and recent expansion, it will continue to be a major regional asset.

Light rail, buses, vans, taxis, Greyhound buses, tour buses, rental cars, and all other forms of transportation will be conveniently located there. Moreover, access to I-10 and 24th Street affords excellent auto connections. The panel believes this will be a powerful site.

Travelers and airport employees will constitute the major ridership component, but over time a stand-alone business and office base also will contribute to the formation of an International Commerce Center. On the parcel identified for the panel to review, three to five business-serving hotels will be four to seven stories tall—tall enough so that lighted logos on the tops of buildings, easily visible from the freeway, would be appropriate. Hotels there will need to contain restaurants, health clubs, and service retail uses, which will in turn attract suburban mid-rise office buildings. Commercial development of about 1.5 million square feet of space is possible.

A key concern of the panel is the airport connection for light-rail and other transit passengers. Ideally, transit riders should be able to check their bags at the station and then proceed easily to the airport terminal. Even though security concerns must be dealt with, creating a seamless transfer is a critical factor in building ridership. Extending the people mover further up to the parcel north of Van Buren Street also is recommended to expedite development of the area.

Washington at 32nd Street

In contrast to the scale of the airport and the proposed commerce center, this station offers an opportunity for a much smaller-scale town center. This would reinforce the efforts of the area's long-time residents and build on the ethnic heritage of the community. The Wilson School, an elementary school, is a treasure that should be nurtured, and the panel supports recent efforts for an expanded complex. A traditional town square could be an appropriate center supporting new infill housing, community services, and rejuvenated neighborhood retail uses.

Washington at 40th Street

This station will be jump-started by the critical mass already existing at the Gateway Corridor and Gateway Community College. Easy access to

the northeast area has fueled the development thus far, and it will continue to be an advantage. The station area site comprises about 15 acres, which, at the density of the current Gateway Corridor Development, supports about 250,000 square feet of additional office development, probably in two major buildings. Given the proximity of the college and the short distance by rail to Tempe, student housing and apartments may be appropriate components of the mix. If so, such residential development would support a growing amount of restaurant and other retail uses.

Planning and Design

Local and regional leaders have appropriately conceived the Central Phoenix/East Valley light-rail transit project as a catalyst for economic development. Light rail has the potential, in the long run, to influence the pattern of land use in this rapidly growing region and to transform the areas within walking distance of proposed transit stations into special places that will enrich regional urban life. The region's progress toward these goals is not inevitable, however. It will depend, in large measure, on how effectively the region addresses certain basic planning and design issues.

Public Policies Affecting TOD

The city of Phoenix and its regional partners are working to establish consistent transportation, land use, and urban design policies that will protect and enhance the region's long-term investment in light-rail transit. The panel commends the region's public officials for their foresight in this regard and strongly encourages the continuation of these efforts.

Transportation Policies

In Phoenix, as in any large urban area, the city's interest in facilitating automobile traffic often conflicts with the city's interest in promoting pedestrian activity and the use of mass transit. How the municipality resolves this conflict will profoundly influence the character of its built environment and the vitality of its public spaces.

Today, Phoenix has one of the lowest rates of transit ridership among major American cities. Phoenix also has a disturbingly low level of pedestrian activity within its central core, a fact that appears to be attributable more to its lack of pedestrian-friendly streets than to its desert climate. One civic leader underscored this point with the comment, "We drive to Tempe in order to walk."

The panel recommends that the city take a big step toward rectifying this situation by clearly and consistently assigning priority to pedestrians and transit riders within transit station areas, even if doing so marginally increases traffic congestion. More specifically, the city should designate major streets connecting neighborhoods to transit stations as transit-oriented landscaped streets that are characterized by high-quality sidewalks, street trees, streetlights, and bike-ways. These streets would include several east-west routes along the Central Avenue corridor as well as 22nd, 32nd, and 40th streets as they approach the Washington Street line.

Another transportation issue involves the provision of adequate parking at transit stations in order to promote transit ridership and to protect adjoining neighborhoods from the adverse impacts of spillover parking. Parking is a critical component of transit station design, yet many cities underestimate the demand for station-area parking. The demand will be particularly strong at peripheral stations—such as Camelback/Central, Spectrum, and 40th Street/Washington—because they will tend to capture large numbers of inbound commuters.

The panel recommends that the city pursue a strategy of mixed-use development and shared parking, whereby daytime and nighttime users of station-area parking facilities might share the same parking spaces and thus reduce demand for this expensive and inefficient use of urban land. Beyond the station areas, the city should encourage use of existing park-and-ride lots and consider establishing some with convenient bus connections to the stations where none exist. The city also should reinforce its commitment to light rail by discouraging the provision of excessive parking in the downtown area and by pricing municipal parking facilities at market rates, so as not

to subsidize automobile use at the expense of the mass transit system.

The integration of transportation and land use planning is critical to the sustainability of Phoenix's economic growth, and it is essential to the success of the light-rail transit system. The panel therefore commends local and regional leaders who are working to promote this coordination of planning functions. In particular, the panel commends the Phoenix Planning Commission for emphasizing the integration of transportation and land use planning in the current update of Phoenix's General Plan, and the panel urges other city officials to proceed accordingly.

The Maricopa Association of Governments (MAG), as the region's federally recognized transportation planning agency, is to be commended for allocating a high level of discretionary transportation funds to the light-rail transit system. The panel encourages MAG to continue assigning priority to light rail and, furthermore, to broaden its efforts by establishing innovative land use and transportation joint venture programs. Such sustainable development programs have been used successfully by other large regional planning agencies, such as the Metropolitan Transportation Commission in the San Francisco Bay Area, the North Central Texas Council of Governments in the Dallas/Fort Worth Metroplex, and the Atlanta Regional Commission. Finally, but not least important, the city should integrate transportation and land use planning by preparing station area plans concurrent with preliminary engineering for the light-rail system.

Land Use Policies

Specific land use policies can reinforce, and in turn can be reinforced by, the region's investment in light rail. For example, light-rail stations can be extremely effective catalysts for the development of compact, mixed-use village centers that create a strong sense of community and reduce automobile travel demand in accordance with the city's general plan. Station area planning also can provide an impetus to promote the compatibility of TOD with adjoining neighborhoods.

The city should use this planning process to demarcate neighborhood boundaries more clearly



and to defend existing residential areas from intrusion by incompatible commercial uses. The proposed First Avenue extension is a good example of current efforts to delineate neighborhood boundaries. The city should protect the residential character of existing neighborhoods by using traffic-calming measures, such as speed bumps, to discourage dangerous cut-through traffic; and by implementing transportation management programs, such as resident parking permits, to prevent nonresident parking.

The municipal zoning ordinance represents one of the city's most important tools for implementing station area land use plans. The panel supports Phoenix's initiative to establish interim overlay zoning districts for station areas to prohibit inappropriate auto-oriented land uses and to prevent frontyard parking along light-rail corridors. This interim measure is supported by the proposal to define station areas by a radius of a quarter mile to 2,000 feet.

The panel also supports the city's initiative to work with property owners and neighborhood residents in preparing station area plans, which will promote mixed-use development at densities that will generate ridership for the transit system. The panel believes that the city should assign a greater sense of urgency to this planning

Transitions between the close-in neighborhoods and the commercial areas need to be softened to attract riders to the transit stations.

New transit stations need to be designed to fit into their surroundings yet have a character of their own, such as this station in Cleveland.



process. The city should use station area plans as a means to prescribe specific public improvements and to depict the desired arrangement of proposed buildings and public spaces through illustrative site plans.

Upon adoption of each station area plan, the city should proceed to create an appropriate replacement zoning district for the pertinent station area. Among other objectives, these zoning regulations should reduce off-street parking requirements for development within station areas. The panel does not recommend, however, the establishment of a regulatory cap on station area parking, as such a limitation could have the unintended effect of impeding desirable development.

On a broader scale, the city should create an incentive for station area development by limiting higher-density development throughout the city to appropriate station areas and village cores. In the past, the city's tendency to grant generous zoning permission for development in widely scattered locations and the city's emphasis on the improvement of arterial streets and highways to

facilitate high-speed automobile traffic have combined to undermine efforts toward more orderly growth.

The municipality therefore should exercise its discretion in assigning preferential zoning permission to the Central Avenue corridor and to other appropriate areas in accordance with the general plan. The city also should reinforce its land use regulations with fiscal policies that focus its financial resources on station areas and village cores. This strategy would enable Phoenix to take better advantage of existing streets, utilities, and other infrastructure while reducing the need for expensive and inefficient infrastructure extensions into the city's fringe areas.

Urban Design Policies

The panel commends the Regional Public Transportation Authority (RPTA) and its Urban Design Task Force on their work in formulating appropriate guidelines for the design of transit stations. The panel concurs with the task force's definition of urban design as "the art and science of making places for people" and, accordingly, recommends that the city also establish detailed but flexible design guidelines for areas within walking distance of the stations. These guidelines should emphasize the creation of pedestrian-friendly environments, the provision of public spaces and community services, and connectivity to adjoining neighborhoods.

Station area urban design guidelines, coupled with a site plan review process that encourages full and meaningful citizen participation, can go a long way toward creating exceptional places that stimulate economic activity and social interaction around transit stations. These special places can be particularly important as oases along Washington Street and other thoroughfares that are characterized by a high incidence of visual and environmental blight. San Diego and its Metropolitan Transit Development Board have established station area urban design guidelines that could serve as a good model for Phoenix to consider.

Station Area Development Opportunities

For the purpose of analyzing the environments and development opportunities around various station areas, the planning and design team has divided the light-rail system into the same five segments that were used to analyze market potential. Each of these segments has a distinct set of physical characteristics and warrants a similarly distinct approach to transit-oriented development.

Spectrum/19th Avenue to Camelback Road/Central Avenue (Segment 1): Intense Redevelopment

This segment includes four proposed stations, the most important of which—from the standpoint of development opportunities—are Spectrum/19th Avenue and Camelback Road/Central Avenue. The panel recommends that the city take bold steps to promote intense redevelopment around these two stations. In particular, the city should use redevelopment around the Bethany Home Road/19th Avenue station as an opportunity to promote reinvestment in Spectrum Mall so as to restore its historic role as a community-serving commercial hub, thereby stabilizing and revitalizing the diverse neighborhoods that surround the mall.

The Camelback/Central station provides a different opportunity that takes advantage of Phoenix's "100 percent corner" at the juncture of the city's two most prestigious streets. This intersection, including the transit station site at its southwest corner, represents the city's greatest opportunity to demonstrate the potential of light rail to stimulate mixed-use development at densities that promote transit ridership. At the same time, the redevelopment of this area will demand special consideration to the historic character of Central Village and other adjoining neighborhoods.

Central Avenue/Midtown (Segment 2): Neighborhood Preservation

The Midtown portion of Central Avenue, between Camelback Road and I-10, contains six proposed stations. The most important stations along this stretch are located at Thomas and Central near St. Joseph's Hospital and the McDowell/Central station within the Arts District.



Neighborhood access to segment 2 light-rail stops.



Phoenix's established neighborhoods need to be buffered from the higher densities that will result along some portions of the transit line.

In general, the Midtown area is characterized by attractive but underdeveloped streetscapes, and by some of Phoenix's most historic and desirable neighborhoods. In promoting TOD around the Midtown stations, the city should emphasize the preservation of these neighborhoods and the establishment of improved pedestrian connections between those neighborhoods and the light-rail stations.

Central Avenue/Downtown (Segment 3): High-Density, Mixed-Use Development

The downtown area represents the hub of Phoenix's light-rail transit system, where the Central Avenue/First Avenue and Washington/Jefferson Street corridors interconnect. This area contains six stations, two of which serve the government district and another two serve the city's major-league sports facilities and convention center. The downtown area provides significant opportunities for high-density, mixed-use development within walking distance of major employers and attractions.

Washington/Jefferson/Seventh Street to I-10 (Segment 4): Infill Development

Between Seventh Street and I-10 are located only a pair of stations at 12th Street/Washington westbound and 12th Street and Jefferson eastbound. Current market and environmental conditions sug-

gest that development opportunities in the near term probably will be limited to infill residential, commercial, and light-industrial development.

Washington/Jefferson/Airport (Segment 5): Job Creation and Community Revitalization

Some of the most interesting but most challenging TOD opportunities are associated with the three stations along the Washington/Jefferson Street corridor that are located east of I-10 and north of Sky Harbor International Airport. The most important station along this segment—and perhaps the most important in the entire light-rail system—is the 22nd Street/Washington station, which would benefit from a proposed people-mover connection to the airport. This station has an extraordinary potential to generate transit ridership and to create jobs.

The 32nd Street/Washington station could spur revitalization of the historic but distressed Wilson community, which represents one of the oldest and largest concentrations of Hispanic families in Phoenix. Gateway Community College, with its 31-acre campus and 17,000 students, would generate considerable ridership at the 40th Street/Washington station and would serve as a natural partner on transit-oriented development.

Station Area Development Concepts

The appropriate design of station areas is a complex undertaking that demands extensive collaboration among public agencies, property owners, and neighborhood residents. The panel has prepared station area design concepts for four specific station areas—not to prescribe specific solutions, but rather to suggest and illustrate ideas that are consistent with recommended planning and design principles. Those principles are summarized as follows:

- Celebrate the unique features and community setting of each station.
- Define and defend adjoining residential neighborhoods.
- Create pedestrian-friendly “green streets.”
- Provide oasis destinations at light-rail stations.

- Turn Central Avenue into “Grand Central Avenue.”
- Make the station designs special and unique.
- Develop village centers at neighborhood-serving stations.
- Build an Intermodal Commerce Center at Sky Harbor International Airport.

Camelback Road/Central Avenue Station

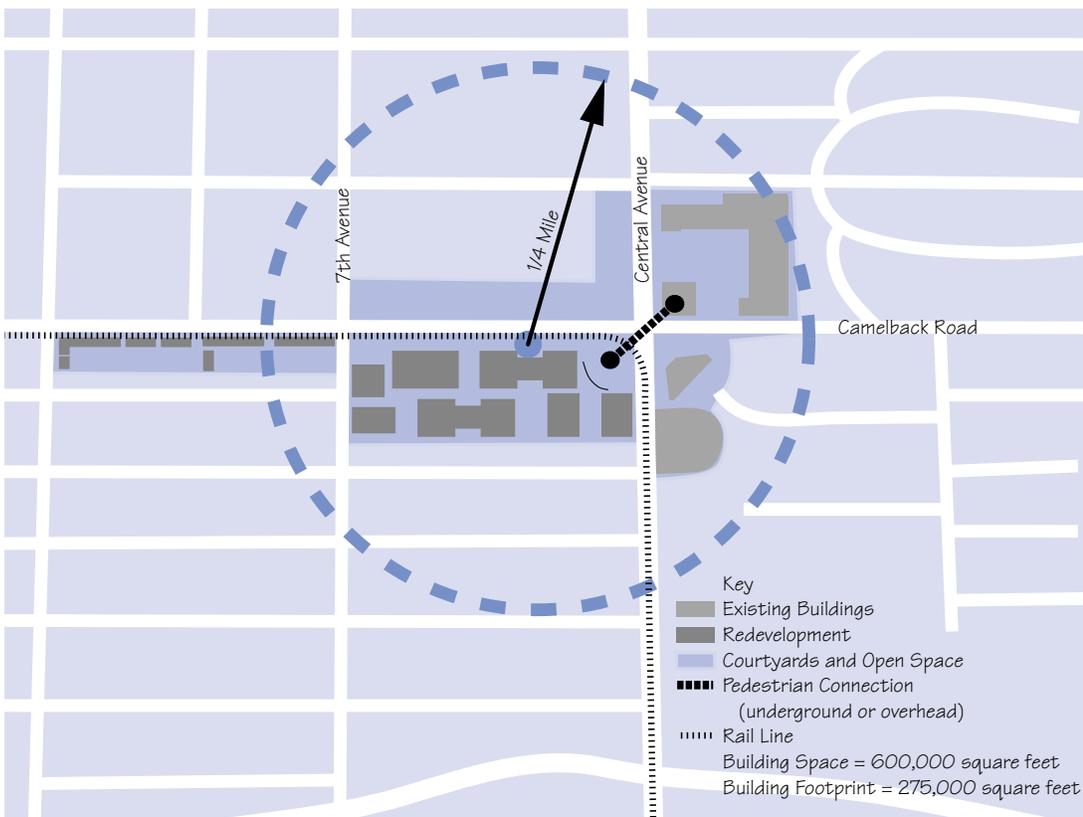
This site can accommodate approximately 600,000 square feet of mixed-use development, including residential, neighborhood-serving retail, and professional office space in mid-rise (four- to seven-story) buildings. The panel’s design concept is to create a village center with a town square at the intersection of Camelback Road and Central Avenue, and to connect the town square by a *paseo* or walkway to a series of landscaped courtyards.

Access to the historic Central Village neighborhood is provided at two points on the south and west sides of the site. A landscaped brick or tabby

wall with pedestrian access would buffer neighborhood residents from the proposed development. The town square is linked to Uptown Plaza by an underground retail concourse. The plan places the light-rail line along the south curb of Camelback Road and retains the existing alignment of this east-west street. The site would accommodate surface or structured parking for commuters. The panel recognizes that the city has studied several alignment options for this station. While the panel’s plan places the rail along the south curb, it also will work with the adopted alignment.

22nd Street/Washington Station

This site consists of two tracts at the entrance to Sky Harbor International Airport. A 12-acre parcel between Washington and Jefferson streets would contain an intermodal transportation center with access to an interstate highway and potential commuter rail as well as light rail and the airport. The adjoining 43-acre parcel would feature a proposed International Commerce Center



with a mix of hotel, office, and travel-oriented retail uses.

32nd Street/Washington Station

Development around the 32nd Street/Washington station would include a community-oriented transit village connecting the historic Wilson community to the light-rail system. The village center would feature a traditional *mercado* or town square, and could host a variety of neighborhood-serving businesses and cultural institutions. The panel's proposed plan envisions 32nd Street as a traditional main street that would facilitate pedestrian activity between the town square and the 32nd Street/Washington station.

40th Street/Washington Station

This station would serve the growing Gateway Community College as well as the Gateway Center office campus to the east. With feeder bus service, the 40th Street/Washington station also could serve the community of Scottsdale. Transit-oriented development would include retail services to support the college and businesses east of the site with Van Buren Street addresses. Van Buren would accommodate the growing demand for office space around Gateway Center, and businesses should locate directly on the street so as to promote pedestrian activity and the use of mass transit.

Design Concepts

The panel developed several concepts that need to be considered when the stations and the tran-

sit-oriented development surrounding them are designed. The following is a discussion of these concepts.

Define and Defend Existing Neighborhoods

Two distinguishing characteristics of memorable cities are the character and the quality of their downtown residential neighborhoods. As such, in the last decade, Phoenix has invested significant resources to encourage the creation of new downtown housing.

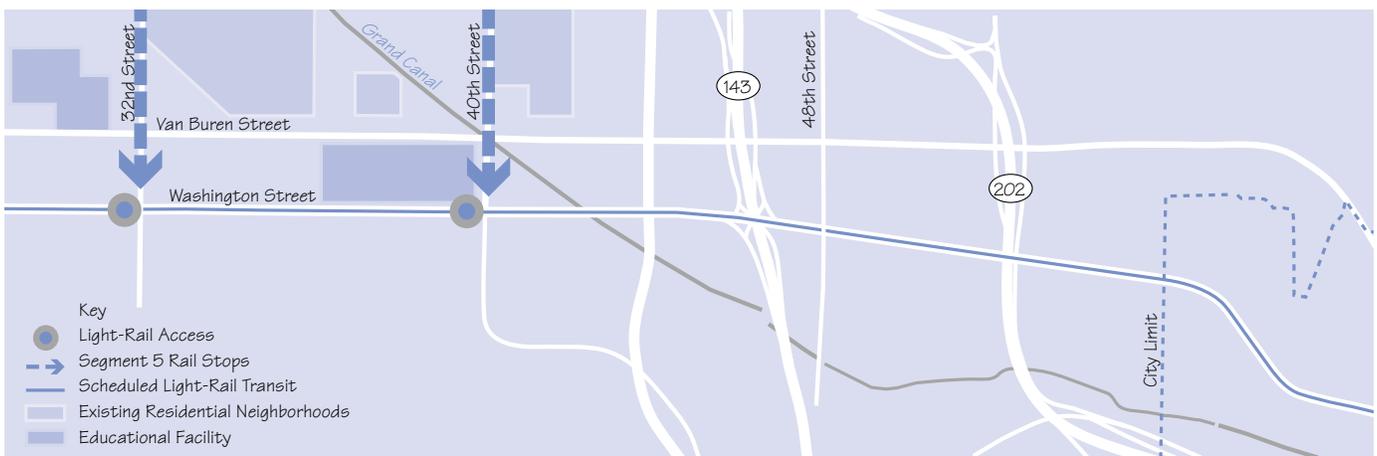
Yet within one-quarter to one-half mile of the proposed transit stations are beautiful residential neighborhoods, many of them historic, which are threatened by intense high-rise commercial development along the Central Avenue spine. Through-traffic to the Central Avenue commercial spine as well as the lack of edge definition and buffers between high-rise commercial buildings and garages to adjoining single-family neighborhoods represent serious nuisances and lessen the value of these neighborhoods.

The existing residential neighborhoods are a key source of potential light-rail ridership. The panel recommends that the city recognize the importance of these neighborhoods to the proposed light-rail system and that the existing deteriorating nuisances be mitigated.

Create Green Streets

Phoenix's arterial street system, which functions well for moving vehicular traffic, presents a very undesirable environment for pedestrians within one-quarter to one-half mile of proposed light-rail

Access to light-rail stops in segment 5.



stations. Safe, shaded, and beautiful pedestrian paths to these stations are an essential element of the planning for station areas.

The existing arterial street cross section places a narrow, unshaded sidewalk against the curb and alongside high-speed travel lanes. The panel recommends that streets leading to transit stations be designated as “green streets” and that the pedestrian environments be enhanced significantly by using an existing vehicular travel lane for widening sidewalks and by placing a landscaped strip between the sidewalk and adjacent high-speed vehicular travel lanes.

Phoenix has a grand tradition of beautiful streets. Palm Lane, for example, is an attractive residential street, and the new trail and bikeway system along 48th Street north of McDowell Road is a wonderful amenity.

The “existing” and “proposed” photographs taken at Thomas Road and 40th Street illustrate how the pedestrian environment along connecting streets to the transit stations could be enhanced with widened sidewalks, street lawns, and street trees.

Incorporate Oases

In response to Phoenix’s climate, as a way of creating “place,” and as a means of distinguishing the city’s light-rail system, the panel recommends that green, shaded, and cool oases be created at each transit station wherever possible.

The courtyards at the Arizona Center, a local *mercado*, illustrate the beauty and benefits of an oasis environment that is green and shaded, with water features and comfortable seating for visitors.

Make Central Avenue “Grand Central Avenue”

The panel recommends that the investment in infrastructure on Central Avenue for light rail be used to create “Grand Central Avenue” by placing the proposed light rail in a landscaped esplanade with a turf floor and an allée of palms. The before and after photographs of Central Avenue show how its character and quality could be changed by doing this. The proposed esplanade also would improve pedestrian safety and, if properly landscaped, could prove to be a magnet for potential riders.



Employ High-Quality Design

The panel recommends that Phoenix employ high-quality design in station design, wayfinding, graphics, and landscape as illustrated in the examples from Cleveland, Dallas, and San Francisco. Clean, modern trains in beautiful, high-quality station settings not only will help to attract riders, but also will lessen long-term operating costs.

Celebrate the Uniqueness of Each Station

Each light-rail station is unique in its function and community context. The panel recommends that the station area land use plans, connecting “green streets,” and the design of the stations themselves reflect the stations’ unique function and context. The proposed stations in the Washington/Jefferson corridor are a good illustration.

The proposed 22nd Street station, with its confluence of transportation modes, including the potential for commuter rail there, is an exceptional opportunity to create an international business center. The market potential team has identified the station’s potential as a mixed-use center containing hotels, offices, and traveler-serving retail uses at this entrance to the Sky Harbor International Airport. The panel recommends that the proposed Sky Harbor people

“Oases” such as this one at the Arizona Center can provide a pleasant destination for transit riders.

Right and far right: If the rail line runs down the center of the avenue and welcoming landscaping is provided, the rail line will become an amenity to the businesses along it.



SASAKI ASSOCIATES, INC.

Right and below: Softening the streetscape will provide transit riders with a more comfortable and attractive experience.



SASAKI ASSOCIATES, INC.



SASAKI ASSOCIATES, INC.

...mover be extended north of Washington to the potential development parcels between Washington and Van Buren streets.

With its direct links to the Wilson School and the surrounding neighborhood, the 32nd Street station is a community-serving station. A traditional main street could link this station along 32nd Street to Van Buren, where it could be received by a town square at the Wilson School.

The 40th Street station will serve the Gateway Community College and the Gateway business park, and is the station best located to serve the Scottsdale community with feeder bus service.

Create Village Centers

The large physical size of Phoenix has been mitigated by organizing the city into a series of villages. The proposed light-rail stations present an opportunity to create “village centers,” some of-

fering community-serving retail uses and facilities within them. The proposed station at Camelback Road and Central Avenue represents such an opportunity. It is important to note that any plan for this area needs to take into consideration the buffering of the adjacent neighborhood.

The panel recommends that a pedestrian-friendly, mixed-use village center featuring community-serving retail uses, professional offices, and housing be developed at this station. The panel's plan illustrates a 13-acre site with a footprint of approximately 275,000 square feet. In a three-story configuration, the site could accommodate up to 750,000 square feet.

The concept plan is organized around a series of interconnected landscaped pedestrian courtyards. A town square is shown at the intersection of Camelback Road and Central Avenue and is linked to Uptown Plaza via an underground concourse. The village center is buffered from the adjoining residential neighborhood while providing pedestrian connectivity from the south via First Avenue and from the west via Mariposa Street.

The concept plan also illustrates the potential of moving the light rail from the center of Camelback Road to the south frontage property, which had been scheduled to be used for the widening of Camelback Road. The village concept plan contains the planning and urban design characteristics that the panel recommends for the station area plans for Phoenix's light-rail system:

- Integrated planning involving existing land uses within one-half mile of the proposed stations.
- Mixed-use village center concept.
- Integration of the transit station into the village center concept.
- Pedestrian-friendly environment.
- Protection of adjacent residential neighborhoods while providing controlled pedestrian connectivity to and from the neighborhoods.
- Creation of a beautiful pedestrian destination with community-serving retail uses.

Planning and Design Conclusions

America's cities have rediscovered the value of pedestrian-friendly environments in rebuilding communities. The panel's recommendations urge the Phoenix community to make choices about the relationship of the pedestrian to the automobile and about the creation of pedestrian-serving environments. The success of the proposed light-rail system may well depend on these choices.

Transportation and Development

Public transit in Phoenix has been limited. Until recently, there has been no service at night or on weekends. This would appear to be an unlikely setting for a major transit improvement.

On the other hand, there are signs of change in the valley's growth and transportation philosophy. A resurgent downtown and a greater focus on in-town living offer a growing market for a more urbane intown market serving people interested in hanging out at cafés and patronizing shops within walking distance, or riding transit to intown attractions. And increasing auto use has resulted in growing concerns over traffic congestion, air quality, and livability.

Phoenix is one of the few U.S. regions experiencing increasing—rather than decreasing—development density. Nowadays, there is greater attention to creating meaningful transportation options as well as improving service to those without cars.

With the building of a new transit system, the region has embarked on a different course. It will be incumbent upon the city to take advantage of the opportunities for TOD, as a means of capitalizing on public investment, creating special places, improving residents' quality of life, increasing economic development, and presenting development opportunities for the private sector.

This section of the report presents development strategies for the stations addressed as market opportunities and planning and design targets, followed by some thoughts about how development-oriented transit can increase the transit system's ridership and revenues.

Station Strategies

Successful development strategies to promote TOD include the following:

- Programming of strategic public improvements to promote TOD.
- Enhanced land assembly for acquiring the necessary property for the stations and for ancillary development.
- A streamlined permitting process.
- Comprehensive and creative transit station parking policies.
- Reduced or delayed development fees.
- Creative use and application of redevelopment authority.
- Maximizing available federal grant funds.

Though the proposed light-rail system comprises 28 stations, the panel was asked to focus only on the station sites at Central and Camelback and those in the Washington/Jefferson Corridor.

Camelback Road and Central Avenue

Market studies show the potential for a signature project at this intersection of two main thoroughfares. This station is projected to be the third busiest in the system, with three-quarters of the riders arriving by bus and most of the rest by car. The panel endorses what it heard from many local developers: that this was one of the most significant stations and that it could have the best long-term development opportunities. It should be branded as the “100 percent corner.”

A number of barriers, however, must be addressed in order to facilitate development at this location. They include environmental contamination, a non-conforming billboard, access problems, image issues, traditional zoning, pedestrian safety and convenience, parking deficiencies, and conflicts between users of the transit station and users of the new development.

The public sector needs to assume a major role in the urban design and the master plan of the entire intersection. In order to expand the influence of the transit uses, good connections to all nearby properties must be created. For example, a pedestrian bridge or underground connection to the opposite corner—and possibly to all corners—is recommended.

There are critical traffic-access restrictions that must be dealt with, too, including the prohibited left turn from northbound Central Avenue, which could reduce the access—and value—of a new development there. Visionary traffic engineering solutions are needed.

Consideration of the connection to the future transit line on Camelback Road needs quick attention, so that developers can have some assurance that transit expansions will increase the value of their investment. Associated street enhancements and calmed traffic should help to make this location an “action arterial unlike anything in Phoenix.”

The nonconforming billboard needs to be acquired, or incorporated into the development, in order to avoid site design constraints. Also, environmental cleanup efforts now underway should be completed quickly to make a clean site available to developers.

As discussed earlier, the city should orchestrate an area master plan that will encourage a mix of uses that will support and extend the development on the transit property. The transit agency should conduct its land acquisition and site design to present the best opportunity for private development. The city should not withhold the needed funds for this site, for the resulting project could be a signature destination development.

The applicable development strategies for this station require bold initiatives that take full advantage of its location. The strategies that should be emphasized now include the following: assembling land through the advance acquisition of properties; and establishing a city policy on parking at and near transit stations.

Washington/Jefferson Corridor

Overall, the development of the light-rail system in the Washington/Jefferson corridor offers Phoe-



nix an opportunity to recover real estate assets long lost to decline and neglect. The panel believes that TOD projects are sound attempts to leverage public investments and to maximize the market potential of existing neighborhoods.

The development strategies call for capitalizing on the future expansion of the Sky Harbor International Airport connection. In addition, the strategies are intended to take full advantage of spin-off from the construction of a new rental car facility that will provide more than 1,600 parking spaces.

The corridor has image problems and weaknesses. Many small parcels there contain structures in serious disrepair, with a sizable number of absentee homeowners. There also are several assets—the Wilson School complex, Gateway Community College, Eastlake Park, and several well-established churches with large congregations—that can seed development in the corridor.

Successful redevelopment in this corridor will require a mix of favorable market and regulatory conditions, some of which can be made possible with direct government intervention or incentives. The panel recommends that the city undertake a comprehensive planning process for the entire corridor as well as a specific land use plan for each transit site.

The panel envisions the corner of Camelback Road and Central Avenue as a new vibrant center for the neighborhood and the city.

International Commerce Center at Washington and 22nd Street

The suggested development strategies call for capitalizing on the future expansion of Phoenix Sky Harbor International Airport and the proposed modern automated people-mover system, which will provide a direct connection to the airport from this station. In addition, the airport proposes to establish a new central rental car facility, also offering a direct people-mover connection to the airport. An opportunity exists to create a major intermodal transportation facility at this location, including light rail, an express bus, a people mover, rental cars, and commuter rail.

This station will be a major node for airport functions and services, and for the development of sites for several hotels, offices, and retail uses. It is recommended that the city acquire sufficient land to provide for the transportation link, related parking, and associated airport-serving commercial development.

One concern is that despite the enormous opportunity, the forecast for rail use at the time of the panel projects a mere 300 riders by the year 2020. The airport connection has the potential to be one of the largest stations, with a convenient transfer to a people mover for employees and passengers. Transit planners and the airport staff should work closely to make it happen.

32nd and Washington Streets

In the panel's opinion, this area seems neglected. Few riders are projected, considering current trends. As indicated above, the panel has identified opportunities to create retail services near the center and to enhance existing ones.

Many plans and charrettes have been completed, including a recent study by the Herberber Center for Design Excellence at Arizona State University, which appears to contain some excellent recommendations. It is suggested that the city move to implement some of these plans.

40th and Washington Streets

The 40th and Washington station serves students, faculty, and staff of Gateway Community College, and the location will offer convenient access to Tempe. The development strategies call for a mix-

ture of housing types that could serve students, employees, and others. Local-serving retail uses, small-scale professional offices, and possible R&D facilities are likely projects for the station.

The Transit Connection

There are many reasons for encouraging development around transit stations, the most important of which are to improve the quality of the surrounding district and to support economic development. In addition, station area development can generate ridership, providing revenues to the transit system. This is especially prudent transit management and may reduce the level of public investment needed for the system.

Although efforts are underway to reduce the cost of the light rail's construction, growth in ridership will reduce the effective cost per rider. Moreover, it will generate revenues without additional costs, reducing the operating cost burden.

As an example of how this might work in practice, a test of intensifying land uses along Central Avenue was conducted recently. Adding 15,000 office jobs and 3,000 residential units, with no change in the assumed transit service, was found to increase the number of boardings at these stations by 28 percent—a substantial gain achieved through land use strategies. Downtown Phoenix and the Central Avenue corridor accounted for about one of every four transit riders in 1995, a share that is projected to be similar in the future. There are about twice as many transit riders along Central Avenue as in downtown.

Providing good access to light rail is important. Walking is the preferred means of access to transit, because it avoids the expense of a parking space or a bus trip, which represents a convenience for passengers and a saving for public agencies. A fairly small share of riders—about 13 percent—are projected to walk to the proposed light rail.

However, stations with significant pedestrian access have the closest connection with adjacent land uses. Additional development at these stations can potentially encourage rail riders without the additional expense of buses or auto access.

The following stations are expected to account for about 80 percent of those walking to transit, so pedestrian access is especially important. Note that three are on Central Avenue. The following list is in order of decreasing ridership:

- McAllister/Orange
- Washington/Third
- Central/Roosevelt
- 19th/Camelback
- Third Street/Mill
- Apache/Dorsey
- Central/Campbell
- Central/Indian School Road.

Bus and auto access is especially critical, since about half of all rail riders are expected to reach the stations by bus, and one-third by car. Eight stations, two of which are end-of-line stations, account for 80 percent of those arriving by bus. The following list is in order of decreasing ridership:

- 19th Avenue/Bethany Home Road
- Main Street/Longmore
- Central/Camelback
- 19th Avenue/Camelback
- Central Station
- Central/McDowell
- Central/Washington
- Apache/McClintock.

Most of the light-rail riders arriving by automobile will park at five stations. Note that one is at Central and Camelback. The following list is in order of decreasing ridership:

- 19th Avenue/Bethany Home Road
- Main Street/Longmore
- Washington/40th Street



Each station needs to have unique features that give it a sense of place, such as this DART station.

- Washington/Priest
- Central/Camelback.

Because most future rail riders are predicted to get to the station by bus or car, well-located and convenient bus service, parking, and vehicle access are especially critical. Where appropriate, it also may be possible to reroute buses or to move parking lots to improve development options. Such opportunities should be sought out constantly, in the interest of increasing transit ridership and property values and making nearby communities better.

Implementation

The proposed light-rail system, successfully executed, could potentially provide the region with an important new transportation option for residents and a valuable new tool to use land more efficiently while preserving its unique desert environment. It is a serious effort to protect and enhance the region's quality of life.

Dress for Success

In preparation for the initiation of light-rail service in 2006, the city of Phoenix will tackle many issues related to this new mode of travel. Even though the economic development benefits of light rail seem apparent through the experiences of other systems, the underlying purpose of the service is to move people efficiently throughout a region.

Although it may not seem obvious initially, the benefit of light-rail transit will be realized as the mode is accepted and supported as the system expands over the next decades. Therefore, it is important that efforts in the years to come focus on a quality product when introducing station areas, designing stations, and integrating rail facilities into the automobile and pedestrian environment. One should not focus too much attention on the economic development aspects of the light-rail investment in the early stages.

The opening of 20 miles of light rail in Dallas in June 1996 provides an example of the "if you build it, they will come" philosophy. To date, the initial \$865 million investment of the Dallas Area Rapid Transit (DART) authority has generated more than \$1 billion in development at or near the stations; none of this development had been initiated prior to the opening. During these first years, the system has proven its effectiveness, beating opening projections of 32,000 riders a day to today's level of 40,000 riders per day. The economic development activity was spurred by the opening's suc-

cess, with developers tending to wait to see before believing it. Economic development follows success.

Prior to opening, Phoenix and the RPTA should focus on the building blocks of a new service; several issues need particular attention.

Parking

It is of utmost importance that the system provide ample parking early on. Many new riders will be choosing the park-and-ride option instead of taking a bus. Phoenix currently has only five stations with park-and-ride facilities, offering a total of just 3,500 spaces. Conversely, nine of the 22 stations in the DART system offer parking—approximately 6,500 spaces altogether. Moreover, DART is negotiating to acquire 150 spaces at its Cedars station, less than one mile outside of the CBD.

Neighborhood Issues

The threat of through-traffic, as well as that of commuters' parking in the neighborhoods, should be addressed upfront with those communities developing action plans in the event a station has an adverse impact on the community.

Median Running

When running alongside vehicular traffic, trains must be given priority to support improved travel times of transit. The benefit of trains is that they do not have to sit in traffic—a great selling point for public transit.

Bus Interface

There must be a high level of coordination between buses and the light rail; they must be joined at the hip. The bus feeder system serves as the backbone of all successful regional systems. The light rail allows the deployment of buses away from a radial system, resulting in better overall transit coverage. However, the bus interface at rail stations, particularly at those in the

median, must be designed to accommodate buses through improved pedestrian access. The bus is the primary conduit in tying transit-dependent communities to the rail system.

Median Platforms

A platform in the median will require a design that is TOD friendly—which represents extra effort. Developers want to build at the platform, but its being separated by traffic lanes can be seen as a barrier if appropriate attention is not given to pedestrian amenities.

Light-Rail Development Coordination

The city has done a good job of establishing the relationship between light rail and economic development around rail stations. However, these great expectations may not materialize immediately upon opening, thus creating negative public sentiment, particularly within the business community, for the city's having oversold the benefits of rail. Several efforts should be made over the next years prior to opening to narrow the focus on development opportunities.

Agency Coordination

The city of Phoenix should continue to support the TOD team that focuses on all aspects of station area development, from design issues to structuring “the deal.” As mentioned previously, if similar patterns from other cities are followed, developer interest will lag behind until the light rail proves its utility to development.

During this period, a joint development process should be created. This will entail the cooperation of several departments: planning, economic development, finance, street transportation, public works, and legal. At this time, the role of the RPTA (which is designing and constructing the line) and whoever is operating the line also must be taken into account.

Upon opening, the operator may tend to oppose any physical modifications requested by a developer. This may require additional coordination if no lead entity controls both rail and development around the rail stations.

For TOD to be successful, several issues and opportunities need to be addressed. These include how to handle unsolicited proposals and how to solicit proposals (e.g., requests for qualifications, requests for proposals, and requests for letters of interest). The development process should identify a lead agency and ideally a point person to head the team and to develop a review process. Once the system is successful and developer interest appears, everyone wants to be a deal maker; therefore, time is well spent now to prepare for this eventuality.

The process should address how the city will entertain developer interest. Many good ideas will come that will never be seen again. In many cases, it is wise to set up a “one-stop shopping” effort.

It is important that whoever interacts with the development community be knowledgeable of all facets of station area development. Development will not survive on light-rail traffic alone; there must be good vehicular and pedestrian access as well.

Finally, there must be an overall understanding of and consensus on the future, particularly from a regional perspective. Developers are interested in where future extensions are headed and knowing where new opportunities lie.

As Phoenix and the RPTA start wrestling with budget constraints, hard choices will need to be made regarding design issues throughout the system. A cooperative team should be set up to work out design issues as they come up. Until now, the light rail has been looked upon at a macrolevel of detail. At the microlevel, however, issues will be identified that should be consistently resolved citywide. Efforts must be coordinated, providing systemwide consistency and setting precedent for future extensions.

Regional Coordination

Where does the RPTA fit into the overall management of the light-rail system and its ancillary development, or is its fate to serve three masters? One entity should take a leadership role as many budget-driven issues come to the fore. Many good ideas, particularly those regarding property acquisition and station size, have been eliminated

due to budget constraints. It is important for efforts to be coordinated throughout the system, providing consistency and setting precedent for future extensions.

The city's ability to use its condemnation powers in property acquisition can be used during the early stages when acquiring parking, staging areas, and substation locations. There should be a cooperative effort to identify sites, particularly staging areas, that can serve in the future to leverage station area development.

As the system is designed, acquisition can be used to assemble property at strategic station locations. It also is imperative that property at those stations be identified as a priority for development, and not designed for primary use as a bus transfer facility or as a location for a substation. DART, for example, has a one-acre piece of land, with frontage on a major arterial, valued at more than \$30 a square foot, that is being used to accommodate a substation. Such predicaments should be avoided.

The early stages of design and strategic acquisition of land can establish an atmosphere of cooperation, with the city and the transit entity partnering with a developer at those stations with development potential.

Communication Strategy

As inevitable tough decisions are approached, a single governmental focus encompassing all agencies and communities is important for communications. During construction, businesses, citizens, and motorists always will express concerns. As such, timely responses are imperative and most often need to be coordinated with the contractor.

All developers of light-rail systems can tell horror stories about contractors being unresponsive to adjacent businesses and communities. The construction period is a time when excellent communications can pay back dividends in the form of public support, but response must be immediate, coordinated, and informative.

Coordination with the Development Community

When dealing with the development community, there is a definite need to coordinate land use, transportation, and community facilities. A coop-

erative effort between the city and the RPTA should be undertaken to develop flexible station area plans that can be integrated into the final design but that lend themselves to the desired development after the light rail is up and running. Even though a regional transit system relies on an efficient and dependable bus system, developers building at station areas do not like them due to their lack of appeal and the exhaust and noise they generate. Furthermore, a station must be able to conform to new concepts and a rearrangement of bus access.

The city and the RPTA need to think outside the box, to build coalitions both internally and externally, and to network with the real estate community. This is when having a point person who speaks for the entire system would pay off, as he or she would depict the rail system as offering regional benefits.

If each entity has to operate on its own, it may appear that there is no comprehensive approach to the future. As a project is developed, there will be an interest in knowing how many additional riders transit will bring to the project, and when it will happen. Development takes time, particularly mixed-use ones; nothing related to light rail happens fast.

Expectations for great station area development already seem high, and the development community appears supportive. However, support and investment are not necessarily the same thing. Unless Phoenix is an anomaly, developers there will wait, possibly investing in property but hedging their bets on any transit-oriented development. From now until the rail line's opening, the parties involved should coordinate efforts to market and develop support from the start of construction through and beyond opening day.

Communication with the Public

During construction, there always will be a need for immediate communication with the public through the media and community newsletters. Expectations for the light-rail system's success are high. Efforts should be made to ensure that these expectations are realistic, however. No matter how much planning and design have gone into

a project, there always will be events that, if not prepared for, can cause the public concern.

As station area plans are developed, the city may consider holding economic development conferences periodically. Such conferences are organized to present the concepts to the public and to the development community and to generate interest in how the investment in infrastructure will pay back as development ensues. This also is a good time to start tracking land value and demographic information. As the transit system matures, this base of information used to develop before and after profiles can be one of the most powerful marketing tools.

It is important to develop marketing packages—an excellent information tool for the development community and the general public—for all rail stations in the system. They should describe the station area, future zoning, demographics, improvement districts, financing, redevelopment zone classification, and any other information that may be relevant to a developer. Marketing packages also are used extensively by the real estate community when dealing with everything from corporate relocations to single-family relocations. Direct and convenient access to light rail is seen as an asset that can give a competitive edge when trying to attract employees or to relocate a family that comes from a transit-friendly place.

Finally, a regional vision should be developed and marketed as it relates to transit. Now is the time to market the 2006 alignment as the beginning of greater regional accessibility that affords the public choices and opportunities. An efficient and integrated bus and rail system, supplemented with shuttles to entertainment centers, people movers to the airport, and opportunities for new development as nodes of activity are created, will present a region that is forward thinking and headed into the 21st century.

Financial Strategies

The light rail, together with an improved feeder bus system, offers the region's cities an opportunity to encourage new development in areas where schools, city roads, utilities, police and fire protection, and other public services already are



in place. At the same time, it should reduce cities' need to fund the construction of public infrastructure in new fringe locations.

Positioning cities to take full advantage of new TOD opportunities and also repositioning other underutilized areas affected by the light rail will require some changes in financial strategies. These changes can be considered because of prudent past fiscal management, evidenced by the strength of each city's credit rating. While maintaining fiscal prudence and the best possible credit rating is an important goal, the panel recommends the following changes to the cities' development policies:

- Emphasize TOD as the highest priority for new development and redevelopment activity.
- Deemphasize the extension of new public infrastructure in fringe areas.
- Establish the criteria and standards with which TOD can qualify for public financial participation.
- Prioritize public funding based on the achievement of specific goals for each station's TOD and the private sector's willingness to enter into a fair risk-sharing agreement for each project. The goal is to achieve a win-win financial result for public and private participants alike.
- Link and leverage local public and private funding with external sources of public and private funding, such as federal funding and investment from companies outside the Central Valley.

Streetscapes, such as this one in a neighborhood near Midtown, can help make the approaches to transit stations more inviting.

- Either create a new authority or assign a senior official to integrate the city staff functions required to stimulate and guide the TOD initiative.

Absent these changes in financial strategies, it is unlikely that TOD projects simply will happen on their own. Each city must take the initiative by assuming responsibility for TODs at the light-rail stations within its jurisdiction. Financing of related public improvements must be an integral component of TOD.

In light of experiences elsewhere, it is highly probable that the recommended changes will contribute significantly to the desired level of TOD activity. In the past, each city in the region has done this to varying degrees on a project-by-project basis. The panel now is urging that a highly concentrated effort be directed toward TOD. Through this process, the cities will increase use of existing public infrastructure as well as their residents' use of public transit.

Following is a brief description of the financial mechanisms that can be used independently or in combination, depending on the specific nature of each station's development. In compiling this list, the panel has taken into consideration best practices used in other regions of the United States, as well as its understanding of practices that are specific to the Phoenix region.

Existing Mechanisms

The following finance mechanisms currently are in use in the Phoenix area for other projects and can be applied to help encourage TOD around the transit stations.

Redevelopment Area. Initially, a redevelopment area should be created to include each station site along the light-rail corridor. This designation enables the use of several mechanisms that follow. Criteria can be developed to establish preliminary feasibility before subsequent actions are taken at specific stations.

Land Assemblage. With use of the redevelopment area designation, the respective cities should assemble the land necessary for each station and its specific TOD. Eminent domain powers should be available to use as needed. Each city will need the

ability to write down the land cost for ultimate reconveyance at certain stations.

Planning. Each site should be planned under the direction of the city through an inclusive planning process, which must involve citizens from nearby neighborhoods.

Brownfield Cleanup. The acquired sites must be cleaned up either by the city or by its designee and brought into environmental compliance for development purposes, if necessary.

City Retail Sales Tax Reimbursement. This provision for sales revenues subject to city sales taxes should be used to the extent the development generates qualified revenue sources.

City Capital Bond Improvement Program (CIP). These programs should be used for the costs that the city incurs in off-site improvements and land acquisitions. Used judiciously on a TOD-specific basis to promote early success of a project, any long-term public capital of this nature would be expected to be repaid from each TOD's stabilized operating income.

Improvement Districts. Specifically designated improvement districts should apply to light-rail station area improvements. They enable property owners to finance infrastructure within a public right-of-way that benefits their property. These improvements either are an enhancement of standard city-financed improvements or are those that the city has determined must be the responsibility of the property owner. Such improvements may include pavement, curbs and gutters, sidewalks, decorative street lighting, landscaping, street furniture, and decorative walls (i.e., murals). When completed and paid for by the city, projects within an improvement district result in an assessment to the property owner. These assessments are repaid over ten years with semi-annual payments of principal and interest. A lien is placed on each property with an outstanding assessment.

Government Property Lease Excise Tax (GLET). State of Arizona property tax incentives are available in designated central city redevelopment areas. In such areas, real property may be subject to an excise tax, which is significantly

lower than a traditional property tax. This excise tax can be levied on government-owned property and on improvements that are leased for private commercial or industrial purposes.

One limitation of this incentive is that the city must own the property and the improvements on it in order to levy the excise tax in lieu of property tax. Further, the city can provide a financial incentive in the form of an eight-year tax abatement only if the property is located within a single CBD in a redevelopment area. The program also may be available outside of redevelopment areas; however, the tax rate would be one and one-half times the rate applied within redevelopment areas.

In addition, existing provisions for the abatement of real property taxes should be utilized, as provided through the GLET program. Abatement laws allow for as much as 100 percent abatement for up to eight years.

New Mechanisms

There are at least two additional funding mechanisms that the city could use to help support TOD along the rail system. These tools have been used successfully in other parts of the county.

Tax Increment Financing (TIF). TIFs enable a city to finance infrastructure improvements within a defined area (TIF zone). The improvements increase property values within the zone, which incrementally increase tax revenues from the TIF area. The city then uses the extra revenue to retire the cost of the improvements.

Although similar to the city retail sales tax reimbursement, TIFs are not currently permissible in Arizona. The region's cities therefore should consider proposing state legislation to create TIFs, as they have proven to be a successful way to finance public investment nationwide.

Transit Fund. In recent years, several cities have created funding mechanisms to provide gap funding for projects in areas that are not attractive to private sector developers. Such mechanisms are intended to supplement self-generated and conventional funding sources.



Generally, they are established after a transit agency's TOD program has completed a sufficient number of projects to generate lease revenue or sales proceeds to be used as a "starter fund." Specific project selection criteria are established, including the maximum amount of funds that can be made available and payback requirements. In all cases, the developer must demonstrate a need, prove that funding is not available through conventional sources, and show that the proposed project will benefit the implementation of the local comprehensive plan and will generate additional riders for the transit system.

Example Application

Each aforementioned mechanism allows cities to leverage their resources while encouraging TOD initiatives by the private sector. To illustrate the approach, panel members created a preliminary model of the TOD program proposed for the Central Avenue/Camelback Road light-rail station discussed earlier in the report.

In this instance, \$8 million in public sector funding is leveraged on a one-to-nine ratio by \$72 million of external private capital. An \$80 million project is brought on the property tax rolls, which on a stabilized basis is expected to generate approximately \$4 million of annual property taxes and city sales tax. The project will be of such scale as to help create a major focal point for the uptown area of Central and Camelback.

To optimize the new development opportunities associated with the light-rail line, the cities must be prepared to use all their various financing mechanisms to facilitate TOD projects. The objective is to incentivize the best private sector de-

Amenities such as bicycle paths along the roadways leading to transit stations provide additional access options.

velopment companies to use the light-rail stations to create and manage the highest-quality TODs. These transit stations will benefit the neighborhoods immediately surrounding them as well as the city at large.

In exchange for their fundings, cities should expect ultimate repayment of any longer-term fundings in addition to the receipt of new incremental property and sales tax revenues. In addition, municipalities should expect savings to result from the reduced need to fund public improvements in new fringe locations.

Conclusion

The panel spent considerable time discussing the feasibility of light rail in Phoenix as well as what is needed to promote successful real estate development along the proposed line. In all these discussions and deliberations, the following common themes were evident:

- Some key stations will be the catalyst for TOD in the region. They include Camelback Road/Central Avenue, downtown, and the stations serving the area around the airport.
- Camelback Road/Central Avenue is the “100 percent corner”—where a big impact can be effected—and the adjacent neighborhood does not have to suffer because of it.
- There are several unique neighborhoods along the line. They should be viewed as an asset to

the system (and vice versa), not as a hindrance. Station planning and design need to incorporate the uniqueness of these neighborhoods.

- Start early in the process to promote TOD in Phoenix. Do not have the “if we build it, they will come” attitude. The process for promoting the light-rail line and TOD needs to be clear and organized.

The panel believes that the city and the region are well on their way to a successful system and looks forward to returning to Phoenix for the rail’s opening in 2006.

About the Panel

Frank J. Sparicio

*Panel Chair
Rumford, Rhode Island*

Sparicio is founding principal of Corporate Real Estate Strategies, a consulting firm dealing primarily with the repositioning and disposition of assets resulting from consolidations within the financial sector. Previously, he served as senior vice president of Fleet Boston, where he was responsible for the bank's corporate real estate assets.

Before joining Fleet Boston, Sparicio was responsible for all major real estate transactions as director of corporate real estate for GTE, a position in which one of his principal responsibilities involved the relocation of the company's entire telephone operations to a new headquarters in Las Colinas, Texas. Earlier, he served as an officer of Harco, the Hartford Insurance Company's real estate subsidiary.

A member of the Urban Land Institute for more than 30 years, Sparicio has served as vice chairman of its Corporate Real Estate Council. He also has served on a number of the Institute's advisory services panel assignments.

Marta Borsanyi

San Francisco, California

Borsanyi is a founder of the Concord Group, a Newport Beach, California-based real estate advisory firm that provides strategic advice on land use issues and development. She has expertise in market, economic, and financial analyses associated with existing properties as well as developmental opportunities.

Borsanyi has extensive experience in the evaluation of both residential and nonresidential properties. She has participated in numerous projects in which identifying the highest and best mix of uses for very large properties was the objective.

Focusing on redevelopment of urban cores and first-generation suburbs, Borsanyi has been actively involved in a variety of assignments, some associated with gaming venues, throughout the United States, including Richmond, Virginia; St. Louis, Missouri; and Santa Ana, California.

Fernando Costa

Fort Worth, Texas

Costa serves as planning director for the city of Fort Worth. Before moving to Texas in 1998, he served for 11 years as planning director for the city of Atlanta. He also served for 11 years as a planner, a senior planner, and a planning director for the Middle Georgia Area Planning and Development Commission. He has extensive experience in transportation and land use planning, including the formulation of public policy to promote transit-oriented development.

Costa is chair-elect of the American Planning Association's City Planning and Management Division and is a past vice chair of the Planning Accreditation Board, for which he continues to serve as a site visitor. His other memberships include the boards of the Tarrant Area Food Bank; the Amon Carter, Jr., Downtown YMCA; and the local chapter of the National Conference for Community and Justice.

Costa received degrees in civil engineering and city planning from Georgia Tech and served as an officer in the U.S. Army Corps of Engineers. His previous ULI panel assignments include those for Kansas City, Kansas (1999), and Trenton, New Jersey (2000).

Robert Dunphy

Washington, D.C.

Dunphy is senior resident fellow of transportation at the Urban Land Institute, where he directs

studies on transportation and land use and assists in outreach efforts to business and government on development and transportation issues. He is the author of *Moving Beyond Gridlock: Traffic and Development*, and he contributed to *Transforming Suburban Business Districts* and *Making Smart Growth Work*, to be published in summer 2002. Furthermore, he assisted in the development of land use criteria now being used as part of the federal approval process for new transit systems.

Dunphy's previous experience includes consulting, metropolitan transportation planning, and teaching. He is active in national committees of the Institute of Transportation Engineers, chairs the transportation and land development committee of the Transportation Research Board, and is a member of Lambda Alpha International, an honorary land economics society.

Richard Galehouse

Watertown, Massachusetts

Galehouse is a principal and senior planner at Sasaki Associates, Inc., in Watertown, Massachusetts. Sasaki Associates is a multidisciplinary firm with an international practice offering services in planning, architecture, landscape architecture, civil engineering, interior design, and graphic design. Since joining Sasaki in 1960, he has directed complex mixed-use urban, new community, resort, institutional, regional, and environmental planning and design projects.

Galehouse's project work, writing, and speaking have focused on urban and mixed-use development. He has been a guest lecturer and critic at colleges, universities, and professional organizations, and has provided expert testimony on visual and environmental impact issues facing various communities.

Galehouse has been an active ULI member for more than 20 years, serving on its UDMUC and recreation councils. He also has been a panel member for various plan analysis sessions, and has served as the planner/urban designer for ULI's Advisory Services Panel for Treasure Island in San Francisco, California; Downtown

Grand Forks, North Dakota; Downtown Bound Brook, New Jersey; and Hengelo in the Netherlands. Moreover, he has written several articles for *Urban Land Magazine*, including "Measurements of Community," which was published in the June 1999 issue.

He received a bachelor's degree in architecture from the University of Notre Dame and a master's degree in city and regional planning from the Harvard University Graduate School of Design.

Kenneth H. Hughes

Dallas, Texas

Since founding Kenneth H. Hughes Interests, Inc., in 1983 and UC URBAN in 1996, Hughes has built developments comprising more than 1 million square feet of office and shopping center space, both for his own investment portfolio as well as for third-party investors.

Since the late 1960s, he has traveled extensively in Asia and Europe seeking tenants for projects in the United States and Mexico. Having focused on European fashion and merchandising, Hughes brought to Texas such retailers as Guy Laroche, Courreges, Emanuel Ungaro, Pierre Deux, Louis Vuitton, Hermes, and others.

One of Hughes's office/retail projects, 3311 Oak Lawn, won an American Institute of Architects award. Other awards include the 1989 ICSC Annual Design Award for Pavilion Saks Fifth Avenue, and *Monitor Magazine's* 1992 Award for Excellence for the Plaza at University Park, Dallas, among others. Furthermore, Hughes is the developing partner in a large mixed-use project in Dallas called Mockingbird Station, which won the Best Real Estate Deals award from *Dallas Business Journal* in 1997.

Hughes began his career with the Henry S. Miller Company in Dallas and stayed with the company for 15 years. He eventually became executive vice president of the firm and a member of its board of directors.

Hughes attended the University of Texas at Austin School of Architecture and the Cox School of Business at Southern Methodist University. He

is a member of and serves in a leadership capacity in several professional and civic organizations. In Washington, D.C., he has been a trustee of the Urban Land Institute and chairman of its *Dollars and Centers of Shopping Centers*. He currently is on the Institute's policy and practice committee.

Hughes also has served on the board of directors of the Real Estate Council in Dallas and has been a member of the advisory board of the Cox School of Business and the Meadows School of the Arts at Southern Methodist University. At present, he serves on the board of the University of Texas at Austin School of Architecture and is the sole benefactor of the Kenneth H. Hughes Teaching Excellence program at the school.

Richard W. Maine

Simsbury, Connecticut

Maine is a managing partner at Landmark Partners, Inc., which specializes in secondary market purchases of private equity interests in venture capital, leveraged buyouts, and mezzanine and commercial real estate. Prior to joining the firm, he was president of Hyperion Realty Advisors and for 25 years held various investment department positions at Cigna, including serving as chief investment officer.

Maine is a board member of the Local Initiatives Support Corporation (LISC), where he chairs the executive and finance committee and also is chairman of LISC's affiliate, the Retail Initiative. He is a member of the Urban Land Institute, too. Locally, Maine recently stepped down as a board member of the Knox Foundation. He is president of All Aboard! and also is a member of the finance committee of the CRCOG Regional Transportation Strategy.

Alvin R. McNeal

Washington, D.C.

McNeal oversees the public/private development program of the Washington Metropolitan Area Transit Authority (WMATA), which includes 54 transit-oriented joint development projects. Since its inception in 1974, the program has generated

more than \$100 million; by 2003, that amount will increase to about \$150 million. In addition, the program's projects have provided 60,000 new daily riders to WMATA's rail and bus systems, 25,000 primary jobs, and several million dollars in new taxes to local jurisdictions.

McNeal has written articles on public/private development issues for local publications and has presented papers at several local and national conferences. He has served on national advisory panels on transit-related development in Dallas, Texas; Long Beach and San Francisco, California; St. Louis, Missouri; San Juan, Puerto Rico; Research Triangle (Raleigh, Durham, and Chapel Hill), North Carolina; Baltimore, Maryland; Salt Lake City, Utah; Miami, Florida; and Atlanta, Georgia.

McNeal holds a bachelor's degree from North Carolina Central University and a master's degree from the University of Cincinnati. He has extensive postgraduate training in management, development financing, real estate negotiations, and real estate asset management.

Marilee A. Utter

Denver, Colorado

Utter directs transit-oriented development for Denver's Regional Transportation District (RTD). She is responsible for bringing land use and transportation together by fostering transit villages at rail and bus station sites throughout the region.

Utter's background in public and private real estate has led to nationally published articles and engagements focused on innovative approaches to community redevelopment and urban issues. Her areas of expertise include mixed-use projects, public/private transactions, transit-anchored developments, and large-scale master planning.

Utter's projects of note include the redevelopment of a failed regional mall, Cinderella City, into a 1 million-square-foot, mixed-use transit-oriented town center; the redevelopment of a 350,000-square-foot historic downtown department store, the Denver Dry Building, into housing, retail, and office space; and the master plan

and zoning for 65 acres in Denver's Central Platte Valley, transforming the urban rail yard into more than 6 million square feet of commercial, residential, and recreational uses.

Prior to her position at RTD, she was president of Citiventure Associates LLC, a real estate consulting firm; regional vice president for Trillium Corporation, a real estate development company; director of asset management for the city and county of Denver; and vice president of Wells Fargo Bank.

Utter holds a bachelor's degree in mathematics and French from Colorado Women's College, a master's degree in business administration from UCLA's Anderson School, and a certificate in state and local public policy from Harvard's Kennedy School.

Her professional affiliations include the Counselor of Real Estate designation as well as membership in the Urban Land Institute, the Colorado University Real Estate Center, and the Congress for New Urbanism. She also serves on the boards of several community organizations, including the Denver Art Museum and the Metropolitan State College of Denver Foundation.

Jack Wierzenski

Dallas, Texas

Wierzenski is the assistant vice president for economic development and planning for the Dallas Area Rapid Transit (DART) system. He is re-

sponsible for developing and maintaining long-range strategies to take advantage of economic development opportunities around DART transit facilities.

He represents the agency in initial contacts with the development community and facilitates appropriate transit-supportive development at light-rail stations, working with DART member cities and with the development community. Wierzenski also provides communication, education, and information on transit-oriented development, economic development, and quality-of-life issues and acts as a liaison among developers, member cities, and various DART departments and staff to implement transit-oriented development and to maximize the interface between transit and mixed land uses.

Wierzenski serves on the Rail-Volution Conference Steering Committee and also is a member of the American Institute of Certified Planners and the Institute of Transportation Engineers. He received a bachelor's degree in art from the University of Minnesota and a master's degree in urban and regional planning from Texas A&M University.

