Integration of Transit and Land Use:

A Study of Los Angeles Rail Transit Stations

University of California
Los Angeles

A comprehensive project submitted in partial satisfaction of the requirements for the degree Master of Arts in Urban Planning

Susan M. Herre, AIA
2003

Acknowledgements

This project completes a portion of the requirements for the degree Master of Urban Planning at University of California Los Angeles. In addition, it fulfills an agreement with the Federal Transit Administration.

Effie Stallsmith, Community Planner, is my primary agency contact within the Federal Transit Administration, Office of Planning. Effie Stallsmith provided guidance and ideas on the project while giving me complete latitude in the implementation. In addition, she generously made agency resources available to me. I am honored and thankful for her sponsorship.

My academic advisors are Professor Donald Shoup and Assistant Professor Vinit Mukhija, both faculty at UCLA Department of Urban Planning. Professor Shoup is Chair of my academic committee. His feedback on this project was very valuable. While requiring adherence to academic standards he encouraged creativity in my pursuit and portrayal of the issues. I am grateful to both Donald Shoup and Vinit Mukhija for their excellent advice and direction.

I would also like to thank UCLA Urban Planning Professors Anastasia Loukaitou-Sideris, Brian Taylor, and Leobard Estrada, for their guidance on this project.

The initial project idea, to do cases studies to identify factors for success in transit-oriented development, can be attributed to James Ryan, Deputy Associate Administrator of the FTA Office of Planning in Washington D.C. Terry Rosapep, of the same office, provided guidance and comments on the drafts, as did Ervin Poka, Jr. and Ray Tellis of the FHWA/FTA Los Angeles Metropolitan Office.

At the LACMTA, many persons provided me with information -- Matthew Barrett, MTA Librarian; James Walker, MTA Library Consultant; Anthony Loui, MTA Project Manager; MTA Transportation Planning Managers Timothy Papandreou, Nelia Custodio, and Stewart Chesler. By appointing me to the MTA Citizen's Advisory Committee, MTA Board Director Allison Yoh gave me an opportunity to be involved in the day-to-day working issues of the MTA.

David Wientraub and Phil Bacerra of the City of Los Angeles Planning Department talked with me a few times regarding planning in the City.

The material in the Hollywood & Western section was gathered by my fellow students, Heather Burton and Antonio Bermudez, and myself.

24 May 2003
Susan M. Herre, AIA
sherre@ucla.edu

Integration of Transit and Land Use:

A Study of Los Angeles Transit Stations

Photo right:
Looking west along Hollywood Boulevard,
past the Metro entrance and Kodak Theater,
to Grauman's Chinese Theater.

Contents

"We should not be surprised that efforts to shift travel to other modes, either by promoting higher-density land use patterns or building massive rail systems, are doomed to fail if current automobile pricing policies are maintained."

Guiliano, Genevieve. 1995. *The Weakening Transportation-Land Use Connection*. Access. Number 6, Spring.

Photo right:
Going down into the Hollywood & Highland station

Executive Summary

Overview

Some scholars tell us that the rail transit system in Los Angeles has been a waste of money and is ineffective as a means of mobility for more than a few people.[1] At the same time, advocates of transit-oriented development promote rail transit as a means of reshaping cities, reinvigorating them, making possible a better quality of urban life, and slowing sprawl. These views, while not polarized, represent two distinct aspects of the debate on the merits of rail transit.

In this study, I focus on transit-oriented development at rail transit stations in Los Angeles – what exists, and what could be. I review the development of rail transit and land use in Los Angeles and look at four specific station sites to see what is contributing to or hindering transit-oriented development at these sites. I make recommendations for what could be changed through the planning realm to achieve more effective use of rail transit and better transit-oriented developments. And finally, I comment on the claims of the high expense and low ridership associated with rail transit in Los Angeles.

LA's paradoxes

Since the late 1970s, Los Angeles planners have set the stage for transit-oriented development with the "Centers" plan and its recent incarnation, the Framework Element. Three lines of rail transit are now complete. When we look at these lines, and consider cost, ridership, and development, we are confronted with paradoxes.

Blue Line ridership is high, compared to the projections made when it was planned, yet Blue Line station areas are not "transit-oriented." The physical environment of the Green Line stations is abysmal and yet its ridership is 60 percent of original projections. The combined ridership of the Blue and Green Lines are equal to the Red Line's, yet their combined construction cost was only a third of the Red Line's cost. There is more development around Red Line stations than at Blue or Green Line stations, yet Red Line ridership is only 36 percent of what was projected in its planning documents. The spotlight shifts to the Red Line. "If you ask an academic, he will tell you the Red Line was a waste of money."[2] Are the academics right? More importantly, do these numbers tell the story we want to live by? In this study, I consider these things, to see if these seemingly paradoxical conditions are the real story.

LA as transit metropolis

Initially, I step back to consider what kind of rail transit network would make Los Angeles a "transit metropolis", where there is a "workable transit-land use nexus."[3] What would be the required extent and density of the network? What transit-to-land use geometries and ratios would be necessary, if not to live without a car, then to encourage transit ridership. What are the residential densities needed to support transit ridership? How many square miles should be served by one station? Is there an optimal distance between stations? What would a pedestrian-oriented transit network look like in LA?

A brief overview reveals that in cities such as New York City, Berlin, Paris, and Washington, D.C., where many people of all economic brackets take transit regularly, there is at least one rail transit station for every 1.5 square miles.[4] The length along the line between stations is less than one mile. In the central areas of Berlin, stations are on average only a third of a mile apart. In London, stations are located about a half mile apart, and in central Washington D.C. they are typically spaced at three-quarters of a mile. In Los Angeles, stations are about a mile apart, but there is only one transit station for every 15 square miles in the City and every 27 square miles in the MTA service area. It is easy to see that the Los Angeles rail transit network is still very young and that to achieve a workable transit-land use nexus, at least 200 miles and 200 stations would be required to be added to what exists today.

What is also clear is that a network with certain geometries is essential for a transit metropolis. Viewing transit lines in isolation is like viewing sewer lines in isolation. If the City constructed only 59 miles of sewer pipe, say from North Hollywood to Long Beach, and Norwalk to LAX, it would be very expensive to install on a per mile basis, the cost per user would be high, and it would serve an extremely small percentage of the population. Other examples are telephone lines and roads. For these kinds of systems, a network is required to achieve efficiency and a basic level of service.

The expense of building new transit networks is daunting, and because of sprawled land use patterns, the relatively low efficiency of the system does not seem to warrant the expense. In 1989, UC Professor Martin Wachs wrote, "The single most important change in the spatial distribution of activities since the 1960s has been the rapid decentralization of employment, [and] dramatic growth in work trips. . . between origins and destinations both located in the suburbs."[5] He cited the failure of transit policy to adapt its service to these conditions and its continued investment in high capacity systems as the reasons for transit's high costs per passenger, low passenger volumes, and general financial distress.

The transit-oriented development concept is an attempt to answer this failure, by taking responsibility for the land development patterns that are supportive of system capacity. Transportation planning need not be helpless to bring together the other factors it requires to succeed. Inherent in TOD is the notion that transit and appropriately scaled and dense development are implemented not in sequence, but concurrently. Where transit *does locate*, where it begins to create a network, through revised policies and practices for TOD, it can be provided with supportive land use and urban design. Islands of TOD will not transform a sprawled region instantaneously, but they may over time.

The discussion in transportation literature about the right order, that "land-use visions lead transportation policies, not the other way around," is correct for new pieces of the transit network.[6] A land-use vision should guide the location of new transit lines and stations. Even where a land-use vision has led the way, many rail transit stations lie in wait for the vision to be realized. In these cases, transit-supportive policies and implementation of the host of land uses must follow transportation infrastructure. To rebuild the fabric of the city into a "workable transit-land use nexus," to encourage walking and transit ridership, and finally, to receive an appropriate return on the transportation investment – these are the goals of this kind of transit-oriented development work.

Planning for the Red, Blue and Green lines

To understand the thinking by planners of rail transit lines in Los Angeles, I reviewed the environmental impact statements and related documents for the Red, Blue and Green Lines. I observed a striking difference between the tone of the text in the Blue and Red Line environmental impact reports, especially since they were written within just a few years of each other.

The Red Line was optimistic and bold, and placed a high priority on connecting high-density areas to achieve social and mobility benefits. The Blue Line was preoccupied with minimizing first costs and avoiding difficulties, even when avoidance meant limiting future development and ridership growth. Located in an existing railroad right-of-way, the Blue Line missed Central Avenue and other existing commercial and residential centers in South Los Angeles. Today, as when it first opened, the Blue Line runs through a predominantly industrial unpedestrian-friendly area. In contrast, the Red Line planners sought to locate stations in existing activity areas, to set the stage for high-density nodes. Although the development at Red Line stations that exists today is less than was anticipated for 2003, huge development potential remains, and City of Los Angeles land use planning supports this future development.

The motivation behind what is now the Green Line was to improve region-wide access from an underserved area of South Los Angeles. Since this project was originally planned as a busway in the median of a new freeway, the light rail line that was built instead requires that people cross over or under the freeway to access the station,

and wait, isolated yet surrounded by the roar of passing cars. The I-105 Freeway/Green Line achieves the original planning vision of regional connectivity, and even multi-modality, but the potential for these light rail station areas to become transit-oriented developments seems miniscule. Rail transit is meant for pedestrians. Freeways and pedestrians do not mix well.

The Blue, Green and Red Lines were built as separate projects, and opened for service in 1990, 1995, and 2000 respectively. Not only is this Los Angeles rail transit network of 59 miles very young compared with what would be required for a "workable transit-land use nexus" in the region, it is also very new.

Whether progress in building the rail transit network in LA has been slow is something to consider. In each of the 15 years of construction, an average of only 4 miles of track and 4 stations were built.[7] If one includes the planning activities in the 1970s, the average drops much lower. The point is not to criticize past work but to suggest that a more ambitious – maybe 10 miles and 10 stations per year -- rail transit plan for Los Angeles be embraced and pushed forward so that Los Angeles can become a place "where transit stands the best chance of competing with the car."[8]

Four stations as TOD

Finally, I focused on four rail transit stations, selected because they either have already been designated by planners as transit-oriented developments, or in my opinion, they should be. One Blue Line and three Red Line stations were selected. None is considered by LACMTA to be a park-n-ride station. At the level of the transit station area, my goal was to identify factors that lead to the success or failure of these areas as transit-oriented developments.

What is TOD

The idea behind transit-oriented development is that transit and land use support each other to their mutual benefit. Transit-oriented development should increase accessibility, or the ease of connection between places at the scale of the transit station area, to enable the transit network to increase accessibility at the scale of the city.

Transit-oriented developments should provide high levels of economic and social interaction, without using a lot of land or vehicles. When transit and the built environment reinforce each other, benefits can include increased accessibility, a more healthful lifestyle, a more interesting and vibrant physical environment, as well as increased ridership, transit revenues, and real estate values.

From the point of view of accommodating the pedestrian, I asked the following questions for the four station areas, to get at urban design as well as land use type and density issues:

- Does the surrounding built environment connect with the transit station so that walking to the station is comfortable and safe?
- Is walking to the station convenient and worthwhile, such that one can take care of errands on the way to work and home?
- Is the surrounding built environment sufficient to sustain the pedestrian's interest?

A higher quality physical context would be built at a scale and character that encourages walking, as shown in the mix of uses, number of destinations within walking distance of the station, and the streetscape and outdoor public spaces.

Findings and Conclusions

Grand Station

City land use planning appears to have "written off" the Blue Line stations in terms of transit-oriented development. Both the 2000 Southeast Los Angeles Community Plan and the 2001 Framework Element of the General Plan have retained an industrial land use designation along the northern Blue Line right-of-way, while they promote growth and reinvestment in existing commercial and residential areas a few blocks away. The Framework Element, which places so much emphasis on targeting growth in proximity to transit, designates the northern Blue Line corridor as a "conservation area."

I conclude that this land use planning response to the presence of transit is not irresponsible or unreasonable. Industrial lands are important and clean-up is expen-

sive. Existing commercial and residential areas can use all the revitalization dollars available. The transit planning which set this line and these stations in an industrial corridor, was based on "path of least resistance" thinking, bent on saving first-costs and avoiding political difficulties. The result is a severely limited long-term potential for ridership growth, for land use development coupled with mobility, and for the vitality of the South Los Angeles community. The Blue Line was not good transit planning.

Grand Station, has the lowest housing density of the four stations – 3 to 4 units per acre -- and even some nearby industrial buildings are vacant. Despite this, average weekday boardings at Grand are at the top end of all Blue Line stations. I believe this is due to two factors: The station anchor, the LA Trade Technical College is a destination for 13,000 students, and Grand is a transfer point between bus and rail for many people from South Los Angeles.

Should the zoning be changed, Grand is better positioned for new development than the other northern Blue Line stations because of its proximity to downtown, Staples Center, the LA Trade Technical College, the Orthopedic Hospital and USC, and because MTA sees Grand as a connecting point for its new Exposition Light Rail line.

Civic Center
Civic Center is physically very different from Grand Station -- it is the largest government center outside Washington D.C. Therefore it is amazing that ridership numbers at Civic Center and Grand are almost identical. In terms of their specific location, the Civic Center Red Line station portals were conveniently sited in the middle of the existing government building complex. Nevertheless, given its large population, Civic Center has a disproportionately small transit ridership. The reason may lie in the fact that there are 10, 741 parking spaces in the area within a one-quarter mile radius of the Civic Center rail transit stations. Averaged across approximately 166 acres in the combined one-quarter mile radius around the two station portals, there are 65 parking spaces per acre. If one figures an average of 300 square feet per space and related aisles, and if the spaces were all on-grade, 10,741 spaces equates to approximately 45 percent of the area within a quarter-mile walk of the station.

UC Berkeley Professor Christopher Alexander offered this in *A Pattern Language:* "We suspect that when the density of cars passes a certain limit, and people experience the feeling that there are too many cars, what is really happening is that subconsciously they feel that the cars are overwhelming the environment, that the environment is no longer "theirs," that they have no right to be there."[9] When people feel the environment is not longer "theirs", they will not walk. And transit use requires walking.

At present, Civic Center could be characterized as *transit-adjacent development*. Efforts to change to transit-oriented development must include streetscape treatments, bringing residential, restaurants and retail close to the heart of the district, marketing of transit, transforming surface lots into transit-supportive development, and removal of some parking garages, perhaps even the underground garage below the Civic Garden, so it can serve as a real city park. Civic Center shows that it is not enough to have a large activity center, and not enough to have conveniently located stations. It shows that auto-oriented uses, especially parking, undermine transit use. It also shows the need for secondary supporting uses such as restaurants and retail, so that walking to the station has use and interest beyond "getting there."

Hollywood & Highland
This Red Line station location was specifically selected to reinforce redevelopment efforts at the western end of Hollywood, historically the hub of filmmaking and TV production. Collaborative city, private and redevelopment agency efforts went into the $615 million entertainment and retail development, Hollywood & Highland. The development was to be physically integrated with the rail transit station so as to enhance the pedestrian environment and increase transit ridership.

The development is quite successful according to a redevelopment agency representa-

tive, except for the retail. This prompts one to consider the term "mixed use." The development essentially caters to the tourist market -- it includes entertainment, hotel, and retail. It does not include housing that could provide a stable base for the development during less robust economic periods that negatively affect tourism. Unfortunately, the redevelopment agency's housing projects are not within walking distance of the transit station either. Land for housing is available however, as there are many surface parking lots in the station area. It is fairly well accepted by City planners that residential development is required for Hollywood & Highland to thrive and for transit ridership to increase.

The development included a 3,000 car parking garage. The garage was built despite objections from MTA, which considered this station to be a "destination", not an "origin" or collector station, where park-n-ride lots are sometimes located. Given that MTA is currently developing a station area parking policy, it is timely to highlight the distinction between land use development which is transit-oriented, and the development of park-n-ride lots. The park-n-ride concept is incompatible with MTA's Joint Development policy, of which Hollywood & Highland is one example. The Joint Development program encourages coordination "with local jurisdictions in station area land use planning in the interest of establishing development patterns that enhance transit use." The development of park-n-ride lots at transit stations also contravenes the Land Use/ Transportation Policy which is part of the LA General Plan. The writing of this policy was a joint effort by the City of Los Angeles and LACMTA, to "foster the development of higher-density, mixed-use projects within one-quarter mile of rail and major bus transit facilities."[10]

The Hollywood & Highland station is well located, right in the center of a number of historic Hollywood attractions. The project in its context is a regional attraction. It is a catalyst for additional development. At the same time, the abundance of parking and the shortage of housing near the station detract from the area's 24-hour vitality and transit ridership. The issues are known. It is only implementation that remains.

Hollywood & Western

This station is one of four that are included in the Vermont-Western Transit Oriented District Specific Plan, approved by LA City Council in 2001. It provides land use designations, development standards and design guidelines for all parcels in the plan area. The land use designations override existing zoning, for the purpose of transforming the district into a more pedestrian and transit friendly area, to achieve maximum benefit from the rail transit stations as a valuable public asset, to improve the local economy, and to improve the physical appearance and comfort of the district through architecture and streetscape design.

At Hollywood & Western, the Specific Plan permits the mixing of uses, such as commercial on the first floor with residential above. The area around the transit station is considered to be a Community Center, the densest of all the land uses in the plan, at 60 dwelling units to the acre. Mixed-use buildings are allowed to be 75 feet in height with an FAR of 3:1.

The rail transit station at Hollywood & Western has been open for four years. The transit-oriented Specific Plan has been in effect for less than two. The value of these changes to the neighborhood is underappreciated, as evidenced by the slow pace of private development, and the stated correlation between a shortage of parking and the lack of business tenants in a building directly across from the station portal.

The effect of the Specific Plan's urban design guidelines is not yet evident. Both the main streets and the smaller residential streets tend to be very wide and to favor auto travel. However, retrofit to improve conditions for walkers and bicyclists, on both street types, is very doable.

Hollywood & Western has some important ingredients of a TOD – a central station location relative to the community, a fairly high residential density with some mix of neighborhood commercial uses, and transit-supportive planning and urban design policies. This station area is ready for an infusion of development dollars.

Principles

From the conclusions above, we can derive general principles for successful transit-oriented development.

Principle 1: Rail transit stations must be located in existing activity centers.

Principle 2: Transit-oriented development is undermined by a preponderance of parking. Corollary: TOD and transit use are supported by the presence of a primary and at least one supporting land use, so that people have at least two reasons to walk to the station.

Principle 3: In transit-oriented developments, the public realm – streets, sidewalks, plazas -- must be designed first for the pedestrian. When compromise is required, accommodation of auto travel should be compromised.

Principle 4: It is essential to build a transit network to obtain the livability benefits of rail transit.

So, back to the Red Line

When considering whether the $4.5 billion spent for construction for the Red Line was a waste, we must ask, compared to what? Let's try to put it in perspective: How does it compare to $1.5 billion for fuel cell technology research[11]; or $2.1 billion for fully funded Los Angeles freeway projects in 2003[12]; or $6.5 billion for the 2003-2009 Regional Transportation Program for Los Angeles County[13]; or $70 billion for road-related construction and maintenance in California over the next ten years[14]; or $160 billion[15] at 90 percent federal share for freeway construction, authorized in 1956 by the Federal-Aid Highway Act[16]; or $300 to $2,400 billion in total annual subsidies to U.S. motorists.[17]

How does it compared to the cost for the Blue and Green Lines? While the Red Line's 107, 000 average weekday boardings equal the sum of the Blue at 71,000 and the Green at 29,000, the construction cost of the Red Line, at $4.5 billion, was three times their combined cost. One could say that the Red Line cost $3 billion too much or that it should increase ridership by another 200,000 to make cost and ridership proportional with the Blue and Green Lines. Coincidentally, the Red Line EIR projected 297,000 average weekday boardings.

The question is potential for growth – development and ridership potential. After only three years of full operation, is it safe to assume that an additional two thirds of the Red Line ridership can be obtained over time? The strongest factor in its favor is the Red Line's general location. Despite critics who claim that the routing was "driven by pork-barrel politicking . . .in an effort to spread the spoils of construction jobs," the Red Line stations were sited in existing commercial and residential centers.[18] Furthermore, current City land use planning supports more development in these areas.[19] The Red Line siting was good transit planning.

UC Berkeley Professor Robert Cervero wrote that Stockholm and Copenhagen began investing in high-capacity transit systems fifty years ago. "In these places, too, it took time for the benefits of these investments to accrue. Much of the rationale for large-scale transit programs, especially in countries like the United States, must be viewed intergenerationally. . .Faulting today's ambitious transit programs overlooks potentially important societal benefits that will be passed on to our children and their children."[20]

By contrast, within only thirteen and eight years of operation respectively, the Blue and Green Lines have probably reached their maximum ridership and, in the case of the Blue Line, City land use planning appears to have discarded the notion of transit-oriented development in favor of existing industrial uses. Advocacy groups may try for TODs under the I-105 freeway/Green Line stations, but expectations should be kept low. The physical conditions repel and there is little political will. The question then becomes, if the Blue and Green are maxed out at such an early stage, were they not in fact the worse investment? At least, they should not be the standard by which the Red Line is judged.

Considering the Red, Blue and Green lines together, as the rail transit network that serves Los Angeles – is it a waste of money? Let's look at some other numbers: With

only 9 percent of the vehicles, and .2 percent of the stations or stops, rail transit in Los Angeles serves a full 20 percent of all transit boardings in the LACMTA service area.[21] Despite its youth in terms of a network, the fact that it has been in operation for relatively few years, and the specific land use constraints of the Blue and Green Line routes, rail transit in Los Angeles plays a critical role in the mobility of Angelenos.

Quality of life

Rail transit is recognized as a quality infrastructure improvement by the general public. After the underground Red Line segment opened in 1999, "other local politicians, especially those representing the heavily Hispanic area of East Los Angeles, continued to press for extending the subway – or at least a light rail line – to their neighborhoods as originally planned."[22] Cervero wrote, "the key to attracting riders and generating profits is to provide high-quality service. The key to providing high-quality service is to match transit supply to the cityscape."[23] This East LA constituency felt rail transit was the right infrastructure match for its part of the city. Is it because rail transit is fixed and the stations, when located in existing activity centers, can be important public spaces? Walter Kulyk of the Federal Transportation Administration, in his address to the Mobility 21 Transportation Summit in November 2002, said "collectively we haven't done enough in the past to make attractive systems, with stations that people are proud of and like to inhabit."[24] Many architects, not just urban design leaders such as Stephanos Polyzoides, recognize that "the rail transit station is a piece of infrastructure to be celebrated."[25]

Again, first decisions matter a lot

Sustainable mobility and sustainable urbanity require making change by "investing, reinvesting, organizing, reorganizing, inventing, and reinventing. . . [this is] adaptability."[26] Adaptability implies continuity of change. This does not lessen the importance of the initial decision, however, as "urban form is 'path dependent'."[27] A sad example is the Blue Line, which is stuck in a non-pedestrian oriented environment. The initial locational decision avoided the challenge of reinvestment and reinvention of existing centers, in favor of first-cost containment.

Even where planning, design and construction have brought together land use and transit into a critical mass or a coherent physical environment that exhibits a pedestrian-scale and a mix of useful activities, USC Professor Genevieve Guiliano cautions, "there are no guarantees with transit-oriented development unless a whole series of things is undertaken over 20 years."[28]

However, there is promise for the Red Line and much good station area development work to be done there over the next twenty years. Land use and urban design changes can successfully build upon a transportation framework with good fundamentals – that is, one that directly connects existing, however fledgling, commercial and residential activity centers. Let this TOD work progress with alacrity! At a recent USC forum, a policy analyst and lecturer James Moore quipped, "To plan is human, to implement is divine."[29]

[1] Wachs, Martin. 1989. U.S. Transit Policy: In Need of Reform. *Science.* Vol. 244. June 30. Pg. 1546.
[2] An academic. 2003. Conversation regarding rail transit in Los Angeles. April 25.
[3] As described by UC Berkeley Professor Robert Cervero, a transit metropolis is an "environment in which transit and the built environment harmoniously co-exist, reinforcing and enhancing each other . . . where enough travelers opt for transit riding, by virtue of the *workable transit-land use nexus*, to place a region on a sustainable course." Cervero, Robert. 1998. *The Transit Metropolis.Washing*ton D.C.: Island Press. Pg. 4.
[4] See Appendix A.
[5] Wachs, Martin. 1989. U.S. Transit Policy: In Need of Reform. *Science.* Vol. 244. June 30. Pg. 1547.
[6] Cervero, Robert. 1998. *The Transit Metropolis*. Washington D.C.: Island Press. Pg. 403.

[7] See chart, Pg. 10.
[8] Cervero, Robert. 1998. *The Transit Metropolis*. Washington D.C.: Island Press. Pg. 4.
[9] Alexander, Christopher. 1977. *A Pattern Language.* New York: Oxford University Press. Pg. 122.
[10] Los Angeles City Planning Department. 2001. *Citywide General Plan Framework, An Element of the Los Angeles City General Plan*. Los Angeles: LA City Planning Department. Pg. 3-6.
[11] Bush administration 2003 budget proposal.
[12] LACMTA Funding Priority Worksheet – Draft 4/10/03, Handout at MTA Citizen's Advisory Committee Staff Briefing.
[13] LACMTA. 2003. 2002 State Transportation Improvement Program Amendment Request for Los Angeles County. Handout at MTA Citizen's Advisory Committee Staff Briefing. March 26.
[14] AAA - Automobile Club of Southern California brochure. 2002. *The Quiet Crisis – The Summary.*
[15] $160 billion equals $24.8 billion in 1956 according to Bureau of Labor Statistics Inflation Calculator. [http://www.bls.gov/cpi]. Accessed November 2002.
[16] Weiner, Edward. 1992. *Urban Transportation Planning in the United States - An Historical Overview*. Office of Economics, Office of the Assistant Secretary for Policy and International Affairs, Office of the Secretary of Transportation, Washington, D.C. 20590, DOT-T-93-02, Pg. 39. [http://ntl.bts.gov/DOCS/UTP.html]. November. Accessed November 2002.
[17] Cervero, Robert. 1998. *The Transit Metropolis.*Washington D.C.: Island Press. Pg. 35.
[18] Purdum, Todd S. 1999. A Subway Line Extends to Hollywood. *The New York Times.* June 12. Pg. A9.
[19] Purdum, Todd S. 1999. A Subway Line Extends to Hollywood. *The New York Times.* June 12. Pg. A9.
[20] Cervero, Robert. 1998. *The Transit Metropolis*. Washington D.C.: Island Press. Pg. 440.
[21] See chart, Pg. 34. Rail transit serves 232,000 average weekday boardings, over 20 percent of the 1,155,000 bus boardings.
[22] Purdum, Todd S. 1999. A Subway Line Extends to Hollywood. *The New York Times.* June 12. Pg. A9.
[23] Cervero, Robert. 1998. *The Transit Metropolis.* Washington D.C.: Island Press. Pg. 412.
[24] Kulyk, Walter, Director, Office of Mobility Innovations, Federal Transit Administration. 2002. Address to Mobility 21 Transportation Summit. LACMTA and Los Angeles Chamber of Commerce. November 18, 2002.
[25] Polyzoides, Stephanos. 2003. Urban Growth Seminar. *Transit Oriented Development on Figueroa? Fantasy or Future?* USC School of Policy, Planning and Development. April 15.
[26] Cervero, Robert. 1998. *The Transit Metropolis.* Washington D.C.: Island Press. Pg. 3.
[27] Shoup, Donald. 2003. High Cost of Free Parking. Manuscript. Los Angeles: UCLA Institute for Transportation Studies.
[28] Guiliano, Genevieve. 2003. Urban Growth Seminar. *Transit Oriented Development on Figueroa? Fantasy or Future?* USC School of Policy, Planning and Development. April 15.
[29] Moore, James M.. 2003. Urban Growth Seminar. *Transit Oriented Development on Figueroa? Fantasy or Future?* USC School of Policy, Planning and Development. April 15.

"It was a moody, rainy morning in the spring of 1990, and I braved the freeways for three-plus hours in my thirteen-year-old Honda Civic to go to Moreno Valley in Riverside County. Skidding across the wet lanes of the freeway – Southern Californians are terrible wet-weather drivers, treating every rainstorm as if it were a blizzard – I traveled through suburb after suburb, past shopping center after shopping center and tract after tract. . . Then, after a hundred and thirty miles, I stopped and saw a meadow. . . this was obviously the edge of town."

William Fulton, 2001 The Reluctant Metropolis. Baltimore, Maryland: The Johns Hopkins University Press.

Chapter I
Los Angeles - A New Network in the Making

The Pattern of Transportation and Land Use Development in Los Angeles

Decentralization of Los Angeles began in the early 1900s. From 1874 to about 1940, the Pacific Electric streetcar system provided service from downtown Los Angeles to Long Beach, Santa Ana, Santa Monica, Ontario in the east, and San Fernando in the north.[1] Starting after World War I, land developers were building vast suburban housing tracts that were unrelated to streetcar routes and required the use of automobiles.

Los Angeles, like all of California, offered economic and housing opportunities. Especially after World War II, people flocked to the Los Angeles area from across the U.S. Small communities and cities sprang up, resulting in a metropolitan area that expanded faster than the population grew.

Pacific Electric, like many of the streetcar systems at that time, was privately owned yet heavily regulated in areas of service and fare structure. As it expanded routes to increase ridership, government imposed requirements for service levels, low fares and structured wages made business unprofitable. Historian Brian Cudahy said, "Transit was very much wedded to the whims and fancies of the public sector, and what could unarguably be identified as a hopelessly money-losing streetcar line in the electric railway's boardroom somehow or other became a necessary public service for the poor and down-trodden when the same subject was discussed in the city council chambers."[2]As early as 1925, there were signs that the streetcar could not compete with the combination of buses and automobiles, both subsidized by road building. Buses, not tied to a track, could better serve suburbs. And the automobile quickly spread to the middle class. It was perfectly suited to the low density suburban and exurban development patterns promoted by planners of the day. Transportation funding supported road building and further expansion of the metropolitan area.

On the State level, bond acts were passed in 1909, 1916 and 1919 to fund a State highway system, and in 1920 California established a gas tax solely to fund highway construction.[3] In 1934, the State highway code was revised to allow state highways to be built in cities and some gas tax revenue was allocated to urban highways. In Los Angeles in 1938, ground was broken on California's first freeway, the Arroyo Seco, known today as the Pasadena Freeway. In 1939, a transportation plan was made for Los Angeles that sought to integrate expressways into the grid of arterial streets and boulevards, with transit, to create a regional urban design. But by 1947, plans had developed for what would be more of the norm, "the world's first 'four-level grade separation' near downtown Los Angeles, connecting the 101 (Hollywood) and 110 (Harbor and Pasadena) freeways."[4]

After the establishment of the Highway Trust Fund in 1956, Los Angeles was provided with federal funding for freeways. As car ownership and driving increased, revenue to the Highway Trust Fund doubled nearly every six years. According to UCLA Professor Brian Taylor, "By 1961, an enormous combined state and federal financial commitment to freeways had been made. Inflation-adjusted revenues for state highways in California rose over 400 percent between 1947 and 1961, to the 1990 equivalent of over $3.5 billion per year."[5] When the federal – local funding match became nine-to-one for interstate highways, Los Angeles competed

with the rest of the country for this money. In 1959, the legislature established a 12,414-mile freeway and expressway system for the State of California. The peak in freeway development occurred in 1966, when over 300 miles of freeway opened in California in a single year.[6]

Between 1900 and 1960, the template for the built environment in the Los Angeles basin was set. The enormous scale of the circulation pattern was established and most areas had received some development. With growing environmental awareness and with Los Angeles as a reminder of what might occur in other areas if the course did not change, the legislature and Governor Jerry Brown in the 1970s proposed a new vision for California's future. It was based on quality of life for its citizens and preservation of California's natural resources and beauties. The new California Statute 65030 stated "that California's land is an exhaustible resource, not just a commodity. . . and it is the policy of the state and the intent of the Legislature to protect California's land resource. . ." [7]

A few years before, the "transit renaissance" began. Brian Cudahy, in his history of mass transit writes, "the use of the term "renaissance" must be correctly understood. It is clearly not the case that the days of the 1890s were recaptured. . . none of the critical social and demographic trends instrumental in bringing about the downfall of transit was reversed. . .private automobiles retain their inherent popularity; in most cities patterns of development continue to place new employment opportunities beyond the reach of existing public transit routes and systems."[8] Nevertheless, he states that the transit renaissance in North America is real, "and perhaps the event that deserves to be cited first in its documentation happened in California. Correctly or not, California is often perceived as being a place where important social trends first see the light of day, and it was in the San Francisco Bay area in 1961 that voters went to the polls and imposed upon themselves a major new tax so that a regional rail transit system could be constructed there."[9] Meanwhile, highway projects were literally being stopped by protestors.

A reevaluation of the role of mass transit in U.S. cities was taking place. At the federal level, concern that existing mass transit systems would crumble completely without aid, culminated in a report to Congress:

"Transportation is one of the key factors in shaping our cities...we must be sure that transportation planning and construction are integral parts of general development planning and programming. . . The major objectives of urban transportation policy are the achievement of sound land-use patterns, the assurance of transportation facilities for all segments of the population, the improvement of overall traffic flow, and the meeting of total transportation needs at minimum cost. . .Mass transportation in recent years experienced capital consumption rather than expansion. . . We therefore recommend a new program of grants and loans for urban mass transportation. (U.S. Congress, Senate, 1962)."[10]

Corrective intervention came in 1964 in the form of the Urban Mass Transportation Act. The first planning for rail transit in Los Angeles began in 1972 (check this).

In 1993, the last freeway in Los Angeles was built. The 17.3 mile I-105, the Century Freeway, runs between Norwalk and El Segundo and includes interchanges to four other freeways.

In the years between the Jerry Brown era and the present, the extent to which planning in California has been guided by an intention to protect its land resource, has been spotty at best. In his introduction to the 2001 Southern California Association of Governments State of the Region report, California State Librarian Kevin Starr wrote "growth, when combined with either cumbersome or elitist land-use policies, can fuel sprawl in a region that, having suburbanized the plain between the mountains and the sea, is now reaching its topographical limits. The question of growth, together with the increasing complexity of the SCAG region, accounts for the faint but persistent disquiet that pervades the generally optimistic information and evaluations in this report. . .Is the six-county SCAG region doing enough? Even more disquieting, can the governments

of the SCAG region do enough under present circumstances to deal with the complexities of a future which, while mysterious, even frightful, is already upon us?"[11]

Accommodating population growth, making better cities, providing a counterveiling influence to the forces of sprawl and the attractiveness of sprawl, preserving remaining scenic, agriculture and habitat lands, making it convenient and safe to live in an urban environment – these are the reasons to build transit and to *build around* transit in our existing urban environments.

Is transit today where highways were in the 1950's, with twenty years of ad hoc improvements completed across the country in piecemeal fashion? Is transit's 'golden age' still to come? Our country's population is still growing. The need to reconstruct our urban areas is an acknowledged priority. Can transit play an important role in this?

The goals set forth for transportation in the 1962 report to Congress are virtually the same as ours today.
Then: "Achievement of sound land-use patterns"
Now: Livable communities, smart growth

Then: "Assurance of transportation facilities for all segments of the population"
Now: Low-cost mobility

Then: "The improvement of overall traffic flow"
Now: Congestion relief

Then: "The meeting of total transportation needs at minimum cost"
Now: Cost efficiency in provision of transportation

In a place like Los Angeles, where the original template was set to the scale of the automobile, it is more difficult and costly to rebuild in ways that make it convenient and interesting to walk to transit and to the store. Transportation scholar Don Pickrell reminds us that unrealistic expectations occur with "failure to recognize the durability of and the costs of modifying the capital stock of structures inherited from an urban area's historical development."[12] Yet, rebuilding themselves is what cities must do. And we must do a better job of rebuilding Los Angeles around rail transit than we have in the past. Exploring how to do this through planning and design is the whole purpose of this project.

As Brian Cudahy wrote, "Mass transit is not neutral; it *stands* for something, and its effective presence in a community will significantly after the behavior of that community. Mass transit stands for urban centrality and focused travel corridors, not continual dispersal into patterns that render the private automobile the only effective means of personal mobility. And more importantly, mass transit claims there is value in the urban form and landscape that results from the behavior it fosters."[13]

[1] Van Doren, William. 1979. Pacific Electric Map. L.A.'s Rail Transit System – 'The One That Got Away'. Beverly Hills, CA.: William Van Doren.
[2] Cudahy, Brian J. 2001. *Cash Tokens and Transfers – A History of Urban Mass Transit in North America.* New York: Fordham University Press. Pg. 152.
[3] CALTRANS. 2003. History of Freeways in California. [http://www.dot.ca.gov/hq/paffairs/about/cthist.htm]. Accessed March 22, 2003.
[4] CALTRANS. 2003. History of Freeways in California. [http://www.dot.ca.gov/hq/paffairs/about/cthist.htm]. Accessed March 22, 2003.
[5] Taylor, Brian. 1995. Public Perceptions, Fiscal Realities, and Freeway Planning: The California Case. *Journal of the American Planning Association.* Vol. 61(1). Pgs.43-56.
[6] Taylor, Brian. 1995. Public Perceptions, Fiscal Realities, and Freeway Planning: The California Case. *Journal of the American Planning Association.* Vol. 61(1). Pgs.43-56.
[7]Legislative Information, State of California. 2003. California Codes Government Code, Section **65030-**65036.6. [http://www.leginfo.ca.gov]. Accessed March 22, 2003.
[8] Cudahy, Brian J. 2001. *Cash Tokens and Transfers – A History of Urban Mass Transit in North America.* New York: Fordham University Press. Pg. 196.
[9] Cudahy, Brian J. 2001. *Cash Tokens and Transfers – A History of Urban Mass Transit in North America.* New York: Fordham University Press. Pg. 197.
[10] Weiner, Edward. 1992. *Urban Transportation Planning in the United States - An Historical Overview*. Office of Economics, Office of the Assistant Secretary for Policy and International Affairs, Office of the Secretary of Transportation, Washington, D.C. 20590, DOT-T-93-02, Pg. 39. [http://ntl.bts.gov/DOCS/UTP.html]. Accessed March 1, 2003.
[11]Starr, Kevin. 2001. Overview, *State of the Region 2001 – Measuring Progress in the 21st Century*. Los Angeles: Southern California Association of Governments. November 2001. Pg. 4.
[12] Pickrell, Don. 1999. Transportation and Land Use, in *Essays in Transportation Economics and Policy*. Editors Jose A. Gomez-Ibanez, William B. Tye, Clifford Winston, pg.411.
[13] Cudahy, Brian J. 2001. *Cash Tokens and Transfers – A History of Urban Mass Transit in North America.* New York: Fordham University Press. Pg. 220.

The Los Angeles County Metropolitan Transportation Authority (MTA) was created by the California State Legislature in 1993, to assume the duties of both the Los Angeles County Transportation Commission and the Southern California Rapid Transit District.

Since 1964, the Southern California Rapid Transit District (SCRTD) has been responsible for constructing and operating rapid transit in the Los Angeles service area. In 1972, a state-wide one-quarter cent sales tax was enacted for construction of transit projects. To oversee the use of these transit funds, and to coordinate ad hoc planning efforts by transportation agencies in Los Angeles County, the State established the Los Angeles County Transportation Commission (LACTC) in 1976. In addition to transit, LACTC was given the authority to set policy for streets, highways, and paratransit.[1]

At the same time the Los Angeles to Long Beach Red Car Streetcar line was being shut down (1961), plans for new rail transit systems were being promoted. In 1976, SCRTD completed an integrated transportation program, including four elements, one of which was a rapid transit system for the regional core. Existing rail transit projects in our region today have their roots in this element. The 1978 EIR for the I-105

freeway-transitway project, now the Green Line, foresaw use of light rail, and in 1980, the Red Line Alternatives Analysis had been written. County-wide rail transit funding, (another one-quarter cent sales tax) was passed by voters in 1980, with the passage of Proposition A. Two years later, the LA-Long Beach Blue Line was selected as the first project to be built with these funds.

In 1990, LACTC assumed the planning and construction responsibilities of SCRTD, and in 1993, the MTA assumed all of the duties of both LACTC and SDRTD. Today, MTA is the state-designated transportation planning and programming agency for Los Angeles County. It is also the builder of major transportation improvements and the region's largest transit operator.[2] *MTA's Long Range Transportation Plan includes bus, rail and paratransit, commuter rail, highways, arterial streets, bikeways, pedestrian connections, and travel demand reduction. MTA's long range transportation plan is included in the Regional Transportation Plan developed by the Southern California Association of Governments (SCAG) for its six county area.*

[1] Gray, Dorothy Peyton. 1997. A Summary of Transit History In Los Angeles 1873-1997. Los Angeles: Los Angeles County Metropolitan Transportation Authority.
[2] LACMTA. 2001. Long Range Transportation Plan for Los Angeles County – Executive Summary, Draft.

Chart at right:
Over a period of 15 years, an average of four miles of track and four stations were built each year.

Growth of LA Metro Rail

Line	Groundbreaking to Year Open	Line Miles	Number of Stations	Cost in year of completion (MTA web-site, see below)	Cost in 2003 (http://www.bls.gov/cpi/home.htm)
Metro Blue	1985 - 1990	22	22	$877M	$1,228M
Metro Green	1991 - 1995	20	14	$718M	$863M
Metro Red	1986 - 1993 Seg. 1 1996 Seg. 2A 1999 Seg. 2B 2000 Seg. 3	17.4	16	$4,500M	$4,785M
Total	15 years of construction	59.4	52	$6,095M	$7,323M
Average per year		4	3.5	$406M	$488M
Metro Gold Pasadena Phase I	1994 - 2003	13.7	13	TBD	TBD
Metro Gold Eastside	2003 - 2008	6	9	TBD	$913M*
Metro Blue Exposition	open 2012 Seg. 1	9.6	TBD	TBD	$656M**

Los Angeles County Metropolitan Transportation Authority. Facts at A Glance. [http://www.mta.net/press/pressroom/facts.htm#Metro%20Rail]. Accessed 21 March 2003
*2002 LACMTA State Transportation Improvement Program Amendment Request for Los Angeles County
**Los Angeles County Transportation Authority Funding Priority Worksheet, Draft 4/10/03

More than a Sum of its Parts

To introduce the rail transit system in Los Angeles, the chart at the left shows the stages in which it has been built. The first, the Blue Line, opened in 1990. The most recent was Segment 3 of the Red Line, from Hollywood & Vine to North Hollywood, which opened in 2000.

Over a period of 15 years, an average of four miles of track and four stations were built each year, at an average yearly cost of approximately $400 million. These figures provide us with a basis from which to compare rail transit system development in other cities. It is also interesting to compare these very few miles per year with the number of California freeway miles built during different periods. Even during the "antifreeway" administration of Jerry Brown, an average of 36 freeway miles were constructed each year, equating to 291 miles over eight years.[1]

The official MTA Metro Rail Map below shows not only the existing Blue, Red and Green lines, but the Gold Pasadena, scheduled to open in 2003, and the Gold Eastside, currently in planning. Around the Gold Pasadena Line stations, great efforts are being made to integrate surrounding land uses with the transit stations. Of particular interest are the Del Mar and Memorial Park stations in Pasadena, and the Mission Meridian station in South Pasadena.

At the right are data and photos of the three lines currently operating. The comparison of the track and vehicle data is provided to clarify similarities and differences. Both the Blue and Gren lines are powered from an overhead contact wire, whereas the Red line is powered through a third rail in the "subway." The Blue and Green Lines can use cars interchangeably since they have the same track gauge and power source.

The Red Line is the highest capacity transit in the region, and is equal to high capacity transit in any of the largest cities in the world -- Paris, Berlin, New York, etc. For seated passengers, a pair of Red Line cars accommodates 55 percent more than either the Blue or Green Lines. For standing passengers, the Red Line accommodates 56 percent more than the Blue Line, and 100 percent more than the Green Line. Additional capacity can be obtained by adding cars to a train, however this is limited by the length of the station platforms which give access to the trains.

[1] Taylor, Brian. 1995. Public Perceptions, Fiscal Realities, and Freeway Planning: The California Case. *Journal of the American Planning Association.* Vol. 61(1). Pgs.43-56.

Map at right:
LACMTA
Metro Rail Map

Metro Blue Line

System:	Light Rail on-grade
Car Mfr.:	Sumitomo Corporation of America/ Nippon Sharyo, Japan (interchangeable w/Green Line)
Rail Gauge:	4'-8 1/2 inches
Operating cab:	Either end of the train performs as an operating cab for bi-directional movement
Max. speed:	55 mph
Power:	Electric, 750 volts DC through pantograph from the overhead contact wire
Car type:	Articulated
Capacity:	76 seats, 230 seated and standing (for the pair)
Length:	90 feet
Width:	8 feet and 8 ¾ inches
Height:	11 feet, 6 inches (rail to top of roof)
Floor Height:	4 feet (floor to ballast)

Metro Green Line

System:	Light Rail in Freeway Median
Manufacturer:	Siemens Transportation Systems U.S. (interchangeable w/Blue Line)
Rail Gauge:	4 feet 8 ½ inches
Operating cab:	Either end of the train performs as an operating cab for bi-directional movement
Max. speed:	55 mph
Power:	Electric, 750 volts DC through pantograph from the overhead contact wire
Car type:	Articulated
Capacity:	76 seats, 176 seated and standing (for the pair)
Length:	89 feet
Width:	8 feet and 9 inches
Height:	10 feet, 10 inches (rail to top of roof)
Floor Height:	3 feet, 3 inches (from floor to rail)

Metro Red Line

System:	Heavy Rail in Subway
Manufacturer:	Breda Costruzioni Ferroviarie of Pistoia, Italy
Rail Gauge:	4 feet 8 ½ inches
Operating cab:	Either end of the married pair per forms as an operating cab for bi-directional movement
Max. speed:	55 mph
Power:	Electric, 750 volts DC through rail
Car type:	Married pair
Capacity:	118 seats, 360 seated and standing (for the pair)
Length:	75 feet
Width:	10 feet
Height:	12 feet (top of rail to top of roof)
Floor Height:	3 feet, 8 ¾ inches (floor to top of rail)

Source: MTA Facts at a Glance, October 2001.

Touring Los Angeles on Rail Transit

In 1984, architect Charles Moore wrote in the introduction to his guidebook to Los Angeles, The City Observed, “Unlike most cities, Los Angeles is not organized as a set of places or neighborhoods. It is so big that it must be seen, for the most part, as a set of very long streets or freeways or rides, and the places of interest as events along the way. . . The order . . .might appear arbitrary because it mostly is a consequence of the famous sprawl. . .If Los Angeles, as we’ll try to demonstrate, is really a collection of theme parks, here are a group of them conflated, as fitting a terminus as any for our ride.”1

The notion that Los Angeles is a collection of theme parks, connected by a transportation system, was given a new twist by an LA Times writer recently – with rail transit. It’s all a matter of attitude or “train of thought”. Called “Transit In Los Angeles: It's Entertainment”, this article says “the problem with rail in Los Angeles is that we treat it as transit. That's all wrong. We should actually look at it as entertainment. "2

James Verini writes, “Los Angeles is a car city, the car city, so let's begin with the honest truth, shall we? The honest truth is: For many of us, the idea of riding the Metro Rail subway in Los Angeles ranks up there with an afternoon at the Natural History Museum or a night of Kabuki theater. . . if only we could overcome that innate reluctance. It just seems so puny and doesn't seem to go anywhere. But that's because we're looking at it all wrong. Look at the Metro instead as a winter boardwalk, your new recreational vehicle, as a whiz-bang trolley to those parts of the city you've always wanted to investigate but were afraid you wouldn't find adequate parking. . . Hop aboard Metro Rail for a tour of the unexplored city. And yes -- getting there really is half the fun.”3

Let’s give Verini’s tour a try:

The LA Metro Rail is clean, punctual and you can find a seat. Get a ticket and a map of the Metro and go. “Get a feel for the conveyance. . . Splendid, eh? There's no way you'd be moving like this on Laurel Canyon Boulevard.” Apparently written for folks from the Valley, the tour starts at North Hollywood. At the station, “Turn around. Good lord, look at the San Gabriel Mountains. Look at how the bandshell entranceway is set against those peaks. Feel the thrill of raw California.”

At Hollywood & Vine, the interior station art and architecture is world class. You have to see it to believe it. At Vermont and Sunset, Verini suggests you see “Los Feliz village, L.A.'s very own Left Bank.” After a few more stops, “transfer to the Blue Line at 7th Street/Metro Center and experience an incomparable transition as the train emerges from darkness into the open air. . .103rd Street. . .where, a few minutes' walk down Willowbrook Avenue, loom the stupendous Watts Towers. Like much that is great in Los Angeles, they were the product of one insanely driven man, who built them, alone, over the course of 30 years. . .as a weekend project in his backyard.”

Then get back on the Metro, transfer to the Green Line at Imperial/Wilmington/Rosa Parks, and go west, “no, you're not going to LAX. You're not going anywhere, in fact. You're here just to sit and look -- from Crenshaw to Aviation -- at the most stunning views of Los Angeles this side of Chinatown.”

“At Aviation, turn around and head back east. Sit behind any of the groups of scientists leaving Northrop Grumman or Hughes Electronics and listen to them talk about jet propulsion. It makes for quite stimulating eavesdropping.” Take the Blue Line to the Red Line to Union Station, “the apotheosis of Los Angeles' own mongrel Mission style”. Head west again to Civic Center station and the “Roman splendor of City Hall to the south. . . Walk north along Temple Street to the brand-spanking-new Cathedral of Our Lady of the Angels. Meander along in the Le Corbusier-like interior and, if the spirit moves you, dip a finger in the jacuzzi-size holy water font. . . [and] on the way back, kill that pain in your fallen arches at the Standard Downtown [with] a Jameson's on the rocks . . .”4

Transit should be fun. And yet, however

Hollywood & Highland

Skateboarders at Hollywood & Highland pass an advertisement for another Metro Rail stop, Universal City.

many transit projects are well justified by ridership generated by entertainment destinations, transit is not a theme-park ride. Special attractions can add to the allure of travel by transit, but if the ordinary, everyday places around transit are not treated with a certain dignity and scale, attributes such as walkability and livability are weak and ridership will be suppressed.

In his 1977 book, A Pattern Language, Christopher Alexander called the areas around transit stations, 'interchanges'. He wrote, "Interchanges play a central role in public transportation. Unless the interchanges are working properly, the public transportation system will not be able to sustain itself."5 "The system of public transportation...can only work if all the parts are well connected. . . It is therefore only possible for systems of public transportation to work, if there are rich connections between a great variety of different systems."6 Such systems include the types of land uses, the densities of land uses, and the urban design treatments which are employed.

Ours is a study of how rail transit can better support day-to-day life in Los Angeles for the complete range of trips, and how the built environment can better support transit ridership. Our focus is pedestrian orientation achieved through planning and urban design. So, looking at the photos of the stations, we ask the following three questions:

Is the surrounding built environment connected well with the transit station so that walking or bicycling to the station is comfortable and safe?

Is walking to the station convenient and worthwhile, such that one can take care of important everyday life activities at the market, store, bank, school, park, etc., on the way to work or home?

Is the surrounding built environment sufficient to sustain the pedestrian's interest?

In the following pages, we begin by describing and commenting on planning for the Blue, Red and Green Lines. We examine the factors that prompted the projects to arise and drove the decisions regarding alignment and station location. We also look at the projections for ridership and goals and plans for land use development.

1 Moore, Charles, Peter Becker and Regula Campbell. 1984. The City Observed: Los Angeles – A Guide to its Architecture and Landscapes. New York: Random House.
2 Oliver, Mindy. 2003."Transit In Los Angeles: It's Entertainment", Introduction to "LA Underground" by James Verini, Special to The Times, Los Angeles Times, January 16, 2003.
3 Verini, James. 2003. "LA Underground". Special to The Times, Los Angeles Times, January 16, 2003.
4 Verini, James. 2003. "LA Underground". Special to The Times, Los Angeles Times, January 16, 2003
5 Alexander, Christopher (1977). "Interchange", A Pattern Language, Pg. 184
6 Alexander, Christopher (1977). "Web of Public Transportation", A Pattern Language, Pg. 92

Vermont & Santa Monica

is a Red Line station, located at the intersection of two busy streets. As most of it existed prior to the construction of the Red Line, the development around the station is suburban and auto-oriented. One and two-story structures are loosely spaced along the wide streets.

7th St./Metro Center

This is the hub of the system, the crossing of the Red and Blue Lines in downtown Los Angeles. This is a pedestrian environment and there are many opportunities to work, shop, and live in the area. The station entrances are very subtly integrated into the buildings however, making them easy to miss.

Metro Blue Line

Originally called the "Long Beach – Los Angeles Rail Transit Project", the Metro Blue Line project was planned by the Los Angeles County Transportation Commission (LACTC). This was the first transit project, among a group of 13, to be built with funds from Proposition A. This act authorized a county-wide one-quarter-cent sales tax to be used for transit development.

The fundamental goals of the Long Beach – Los Angeles Rail Transit Project were stated as follows:

- To provide the citizens in the Long Beach – Los Angeles Rail Transit Project corridor with the benefits of improved public transportation in a cost-effective, environmentally sensitive and socially responsible manner, and
- To construct the system as expeditiously as possible.[1]

In retrospect, the goals seem modest and the tone seems cautious.

The LACTC's evaluation criteria for alignment alternatives were listed in the 1983 Concept Design Report:[2]

- Operating Speed
- Proximity to Generators
- Passenger Security and Safety
- Feeder Bus Connections.
- Ridership Potential
- Relative Capital Costs
- Traffic Impacts
- Land Availability
- Neighborhood Boundaries
- Redevelopment Impact Potential
- Environmental Impacts

Conventional light rail was selected over other technologies such as automated guideway because, among other things, it maximized use of existing rights-of-way -- public streets and rail routes. The Final EIR stated, "Much of the project route will be essentially the same as the last line operated by the Pacific Electric Railway's Red Cars which went out of service in 1961."[3] The right-of-way, owned by the Southern Pacific Transportation Company, would accommodate over 18 miles of the entire 22 mile long project.[4] The alignment starts at the subway interchange at 7$^{thSt.}$ Metro Center in the Los Angeles central business district, and runs primarily on grade through South Central LA to Long Beach. Three alternatives were evaluated in Downtown Los Angeles, three in the Mid-Corridor, and six in the Long Beach section.

Development

One of the alternative routes ran on-grade down Broadway and Spring, through the "historic core" and financial district of downtown Los Angeles. This would have been the most urban segment of the line. Ultimately rejected, the EIR's descriptive text reveals an uncertainty or ambivalence regarding the transit line's ability to be a positive economic agent. Running through the Downtown Core would provide "improved access to and visibility of Broadway-Spring area", but "it is possible that the LA-1 alignment could adversely affect retail activity on Broadway."[5]

The selected alternative was LA-2, promising 5,000 fewer persons within walking distance of the stations, and 40 fewer community facilities with improved access than Alternative LA-1[6]. This decision was not consistent with the project's No. 2 evaluation criterion, "proximity to ridership generators". And, by locating the alignment away from existing activity centers, it would be less likely that redevelopment would occur as a result of the project. This may not have weighed heavily on the minds of decision-makers, as "redevelopment impact potential" was listed second to last in the list of evaluation criteria.

Instead of encouraging development potential, the approach seems to be one of avoidance of detrimental effects, or at best, hopefulness that transit would strengthen development projects already in the pipeline. The Final EIR states "All of the downtown Los Angeles alternatives pass through predominantly highly-developed commercial areas which *would not be significantly affected* by the light rail system."[7] And, "none of the downtown Los Angeles alignments is expected to produce more than modest changes in economic development and revitalization. LA-2 [Flower Street Subway] and LA-3 could encourage development incentives already programmed for the South Park area."[8] Final selection of

alternatives seems to be based on how well they avoided perceived negative impacts (including political battles), and not on how well they capitalized on economic, social or mobility benefits possible through integration of transit and land use. The Blue Line is the embodiment of the phrase, 'path of least resistance'.

The EIR language portrays a rather passive role for the LACTC regarding joint development around the stations. "The Commission welcomes proposals from agencies and private developers for joint-development projects at station sites."[9] This approach was not inconsistent with project goals, which only required environmental sensitivity and social responsibility.

Nevertheless, some additional development was projected to occur because of the project. The Final EIR provides projected development data for the three selected alternatives that make up the Long Beach – Los Angeles Rail Transit Project. See the Appendix for Downtown Los Angeles (LA-2).[10] Note that 18th St. and Broadway were built as one station, Grand Station, located on Washington Avenue between Hope and Grand.

Since the choice to proceed with the Long Beach – Los Angeles Rail Transit Project was based on the use of the existing rail right-of-way, no consideration was given to alignments in the Mid-Corridor segment that would vary from this, alignments that might more directly link to areas where people lived, shopped and worked.

The varied neighborhoods along the corridor are primarily populated with low and very-low income households. For the character of the area, I will borrow from UCLA Professor Anastasia Loukaitou-Sideris's 2000 study, "The Blue Line Blues." "The Blue Line passes through some of the most depressed and neglected neighborhoods of Los Angeles County, which have suffered from poverty, abandonment and deterioration of their physical infrastructure."[11] "[The] physical context of its corridor is derelict and forbidding."[12]

Regarding the stations themselves, Loukaitou-Sideris writes, "Even though there is some variation from station to station regarding their distance to neighborhood amenities, the 0.25 mile radius is entirely devoid of any private or public facilities or services that constitute the everyday landscape of a market economy and offer the consumption, recreation and social interaction choices associated with the sense of quality of life."[13] For perspective, it is important to recognize that although the Red Car Streetcar in this same location was "successful" in terms of ridership, the lack of facilities and services around the streetcar stops would have been similar to that observed in 2000.

In the Mid-Corridor, locating the transit line on an existing railroad right-of-way was effective from a cost standpoint. It was less expensive than the other alternatives that included an "open cut" in Compton to avoid five on-grade arterial crossings, or rerouting existing freight lines, $140M and $12M less, respectively. And it would have been less costly than routing the line through residential areas, with intent to build-in convenience, to integrate the station into transit-complementary land use patterns and densities. Loukaitou-Sideris states, "To be sure, the Blue Line was an opportunistic transit investment…committed to minimizing costs as opposed to enhancing the urban development potential of the transportation system."[14]

Ridership

The earliest ridership forecast prepared by the Southern California Association of Governments (SCAG) indicated an average daily ridership of 27,800 for Year 2000 for the Long Beach – Los Angeles Rail Transit Project. This was based on two-car trains running "approximately every 12 to 15 minutes during normal service hours …[and] six-minute interval service…during the AM and PM commuting periods."[15]

In May 1984, SCAG revised its forecasted patronage for Year 2000 to between 54,702 total daily boardings including the selected Alternative LA-2, starting in the downtown Los Angeles subway interchange.[16] In December 1984, SCAG fine-tuned its estimates to factor various Long Beach alignments, but estimates remained in the same range.[17]

Commentary

Minimizing first costs is the predominant reason agencies give for using existing rail rights-of-way for transit. The financial pressures on transit agencies make this seem reasonable. And despite the fact that the Blue Line has exceeded the ridership projections made in 1984, it seems obvious that a short-term capital savings achieved by using existing rail rights-of-way is not worth long-term land use stagnancy. The MTA has tried to compensate for the lack of a real transit-land use integration in the Blue Line corridor by providing free parking at the stations. (See station chart at the end of this chapter.)

Old rail lines, especially freight routes, are often in "no man's zones," outside a community's commercial and residential districts. These areas do not provide fertile ground for "walkable communities" or transit-oriented developments. Anastasia Loukaitou-Sideris rightly argues that development will not automatically spring up just because transit is built, and that lack of necessary pre-conditions results in stagnancy. For the Blue Line, she lists the "antecedents, or lack thereof. . .
(1) The 'back-door' location. . .
(2) Missing density gradients. . .
(3) Inaccessible stations. . .
(4) Pedestrian-unfriendly station locations.
(5) Lack of an urban design framework."[18]

See the Appendix for a complete schedule of Blue Line planning and construction activities.

[1] LACTC. 1985. Final Environmental Impact Report. *The Long Beach – Los Angeles Rail Transit Project*. March 1985. Pg. S-1.
[2] LACTC. 1983. Concept Design Report, Volume 1. *Long Beach – Los Angeles Rail Transit Project.* September 1983. Pg. 30.
[3] LACTC. 1985. Final Environmental Impact Report. *The Long Beach – Los Angeles Rail Transit Project.* March 1985. Pg. S-1.
[4] LACTC. 1983. Concept Design Report, Executive Summary. *Long Beach – Los Angeles Rail Transit Project.* September 1983. Pg. 1.
[5] LACTC. 1985. Alternatives Evaluation, Final Environmental Impact Report. *Long Beach – Los Angeles Rail Transit Project.* March 1985. Pg. II-13.
[6] LACTC. 1985. Alternatives Evaluation, Final Environmental Impact Report. *Long Beach – Los Angeles Rail Transit Project*. March 1985. Pg. II-18.
[7] LACTC. 1985. Alternatives Evaluation, Final Environmental Impact Report. *Long Beach – Los Angeles Rail Transit Project*. March 1985. Pg. II-13.
[8] LACTC. 1985. Alternatives Evaluation, Final Environmental Impact Report. *Long Beach – Los Angeles Rail Transit Project.* March 1985. Pg. II-11.
[9] LACTC. 1983. Concept Design Report, Executive Summary. *Long Beach – Los Angeles Rail Transit Project.* September 1983. Pg. 18.
[10] LACTC. 1985. Table IV-12A. Final Environmental Impact Report. *Long Beach – Los Angeles Rail Transit Project.* March 1985. Pg. V-9-10.
[11] Loukaitou-Sideris, Anastasia. 2000. The Blue Line Blues: Why the Vision of Transit Village May Not Materialize Despite Impressive Growth in Transit Ridership. *Journal of Urban Design*,Vol. 5, No. 2, Pg. 114.
[12] Loukaitou-Sideris, Anastasia. 2000. The Blue Line Blues: Why the Vision of Transit Village May Not Materialize Despite Impressive Growth in Transit Ridership, *Journal of Urban Design*,Vol. 5, No. 2, Pg. 111.
[13] Loukaitou-Sideris, Anastasia. 2000. The Blue Line Blues: Why the Vision of Transit Village May Not Materialize Despite Impressive Growth in Transit Ridership, *Journal of Urban Design*,Vol. 5, No. 2, Pg. 111.
[14] Loukaitou-Sideris, Anastasia. 2000. The Blue Line Blues: Why the Vision of Transit Village May Not Materialize Despite Impressive Growth in Transit Ridership, *Journal of Urban Design*,Vol. 5, No. 2, Pg. 105.
[15] LACTC. 1983. Concept Design Report, Volume 1. *Long Beach – Los Angeles Rail Transit Project.* September 1983. Pg. 42-43.
[16] LACTC. 1984. Draft Environmental Impact Report, Summary. *Long Beach – Los Angeles Rail Transit Project.* May 1984. Pg. S-14.
[17] LACTC. 1984. Draft Supplemental Environmental Impact Report, Summary. *Long Beach – Los Angeles Rail Transit Project*. December 1984. Pg. I-8.
[18] Loukaitou-Sideris, Anastasia. 2000. The Blue Line Blues: Why the Vision of Transit Village May Not Materialize Despite Impressive Growth in Transit Ridership, *Journal of Urban Design*,Vol. 5, No. 2, Pg. 120.

Washington,

a Blue Line station, is located across the street from a steel tank fabricating plant. The industrial area does not generate or attract much pedestrian traffic. At 1,456 average weekday boardings in 2002, Washington had one of the lowest levels of activity on the Blue Line.

Outside Vernon,

a Blue Line station, are one-story houses. Vernon is the one northern Blue Line station area identified in the LA General Plan Framework Element as a "targeted growth" area. In 2002, average weekday boardings at Vernon were 2,892.

Metro Red Line

The Metro Red Line project was developed by the Southern California Rapid Transit District to serve the "Regional Core," a 55-square-mile triangular area located in the densest part of the Los Angeles Urbanized Area. The project was intended to relieve freeway congestion, and to spur development in the station areas to accommodate the fast-growing population. According to Alternatives Analysis, by 1980, the Regional Core already contained "600,000 residents, 21 percent of the City of Los Angeles total, and 542,000 jobs, 43 percent of the City of Los Angeles total."[1]

This 17.4-mile rail transit line provides service from Union Station and the Los Angeles Central Business District through Westlake, Wilshire, Hollywood, Sherman Oaks and North Hollywood in the San Fernando Valley. Tunnels for the length of track between subway stations were bored, while the station areas were built using the cut-and-cover method.

Development

Early planning documents justified the rail rapid transit project on the basis of the population and employment densities in the Regional Core corridor, said to be comparable to those in other cities which either had or were building rail transit. Community plan area data (excerpted below) were listed, along with the statement that the employment density in Central City surpassed that of many comparable cities with rail rapid transit.[2]

Chart at right:
Notice the difference between the population and employment densities in the Hollywood and Central City Commmunity Plan Areas.

Area	Square Miles	Percentage of Land in Residential Use	1975 Population / Square Mile	1970 Employment / Square Mile
Central City	3.44	1.1%	5,261	58,140
Hollywood	15.69	58.8%	10,388	5,600

The "centers concept" that had become the guiding principle for the City of Los Angeles General Plan, with the support of the State and County, specifically incorporated rapid rail as the link between high intensity residential and commercial centers. This was an important justification for the alignment.[3]

The project was intended to promote concentrated development around designated centers. In fact, thirteen of the sixteen stations were selected to reinforce revitalization at plan-designated centers.[4] Redevelopment potential was specifically cited for the Westlake area and Hollywood, based on existing blighted conditions.

The quality of the stations themselves, and the experience provided to passengers was an important consideration from the start. The Alternatives Analysis suggested that the design of the station should be well-lit and open, with views to the outside, so that the environment is pleasant and provides a feeling of safety for passengers.

The areas around the stations were seen to have potential for commercial development and "joint development," in which the transit agency shares in the costs and benefits of development. The one-quarter mile radius from each station was used to define the potential development impact area. And of this approximately 125 acres, 75 percent was considered generally developable land.[5] The stations along Hollywood Boulevard were listed by the predominant land use type, (excerpted as follows):[6]

Hollywood/Vine – Commercial
Hollywood/Western – Residential
Hollywood/Highland – Mixed Use

Another table lists the projected change in development "with effort," that is with a concerted station area development effort, and "without effort."[7] The authors of the EIR are bringing to their readers' attention the value of development, of positively seeking benefits from the project that are beyond normal transportation benefits. How completely different from the planning language in the Metro Blue Line EIR, in which avoidance of conflict seemed to set the course.

Going still further, the Land Use Impact Assessment Table indicates many beneficial development impacts of the transit project, and fewer potentially adverse yet mitigate-

Hollywood & Highland

For almost a century, Hollywood has been the movie-making hub of the world, and as such, is an international tourist destination. Still today, the area contains the largest concentration of film, television and post-production facilities in the world. The Kodak Theater is the venue for the Academy Awards.

Los Angeles Civic Center

The largest government center outside of Washington,D.C., with facilities for Federal, State, County, City and other local governments. *1997 Los Angeles Civic Center Shared Facilities and Enhancement Plan*. Pg. 19.

able impacts. The one unmitigatable impact is the anticipated increase in land values in the neighborhoods surrounding the stations. Normally an indicator of change for the better, an increase in land values can, in renter areas, negatively affect large numbers of people through increased rents.

Transit planners anticipated that considerable economic benefits would accrue to properties, especially those zoned for high-intensity commercial development, in the vicinity of the rail stations. SCRTD was authorized by the California State Public Utilities Code to establish Benefit Assessment Districts around the rail stations, to support the repayment of the construction bonds. However, it does not appear that these districts and assessments were implemented.[8]

In summary, was development central to the mission of the Red Line? It appears the answer is yes. Another indication can be found in the goals and objectives for evaluating alternatives evaluated, (in order listed):[9]

a) Conservation of Natural and Cultural Resources – Reduce air pollution and petroleum consumption; preserve open space and retard urbanization of agricultural land.

b) Land Use and Urban Form – Guide regional urban development into a more structured form, with evenly-spaced, high-density centers linked by high-intensity transportation corridors.

c) Conservation of the Urban Environment – Revitalize and develop, as much as possible, existing urban areas rather than urbanize new land.

d) Social – Improve mobility of people and enhance access to employment and urban services.

e) Transportation – Create a multimodal transportation system *integrated with planned land use* and furnishing a high level of mobility for all people. Particular emphasis shall be given to public transportation.[10]

This is a marked contrast with the EIR for the Blue Line, where the top evaluation criteria was 'speed' and the second to last was 'redevelopment impact potential'.

In addition, the guidelines for developing alternatives specifically include station location policies such as:

- Locate to encourage joint development and maximize "value capture" possibilities
- Station spacing within major activity centers shall be such that a comfortable maximum walking distance is maintained (say one-quarter mile or 1320 feet)[11]

Ridership

The 1980 Alternatives Analysis projected for selected Alternative II for 1990 that the rail line would carry 275,000 daily boarding passengers.[12] For the second and final Locally Preferred Alternative in the July 1989 EIR, the forecasted ridership for Year 2000, was 297,733.[13] The EIR indicated that at most station areas, between 35 and 47 percent of local households did not have access to a private automobile. Of the total of 16 stations, twelve of these had minority populations of 33 percent or more.

In the ridership table near the end of this chapter, the forecasted average daily ridership figures for each station are used as the basis for comparison with LACMTA FY2002 Current Average Weekday Boardings. Unfortunately, current Metro Red Line ridership is about a third of what was forecasted. Although some development of the station areas has taken place, and more is being planned, there is not the focus of development, in the one-quarter mile areas around the station that was envisioned and promoted by the City of Los Angeles plans.

[1] SCRTD. 1980. Setting and Need for Action. *Final Alternatives Analysis / Environmental Impact Statement / Environmental Impact Report on Transit System Improvements in the Los Angeles Regional Core*. Pg. I-5.
[2] SCRTD. 1980. Setting and Need for Action. *Final Alternatives Analysis / Environmental Impact Statement / Environmental Impact Report on Transit System Improvements in the Los Angeles Regional Core*. Pg. I-8,9.
[3] SCRTD. 1980. Summary. *Final Alternatives Analysis / Environmental Impact Statement / Environmental Impact Report on Transit System Improvements in the Los Angeles Regional Core*. Pg. S-10.
[4] SCRTD. 1989. Evaluation of Alternatives. *Final Supplemental Environmental Impact Statement / Subsequent Environmental Impact Report, Los Angeles Rail Rapid Transit Project – Metro Rail*. July 1989. Pg. S-5-4.
[5] SCRTD. 1989. Land Use and Development. *Final Supplemental Environmental Impact Statement / Subsequent Environmental Impact Report, Los Angeles Rail Rapid Transit Project – Metro Rail*. July 1989. Pg. 3-2-1.
[6] SCRTD. 1989. Land Use and Development. *Final Supplemental Environmental Impact Statement / Subsequent Environmental Impact Report, Los Angeles Rail Rapid Transit Project – Metro Rail*. July 1989. Pg. 3-2-3.
[7] SCRTD. 1989. Land Use and Development. *Final Supplemental Environmental Impact Statement / Subsequent Environmental Impact Report, Los Angeles Rail Rapid Transit Project – Metro Rail*. July 1989. Pg. 3-2-11.

[8] SCRTD. 1989. Economic and Fiscal Impacts. *Final Supplemental Environmental Impact Statement / Subsequent Environmental Impact Report, Los Angeles Rail Rapid Transit Project – Metro Rail*. July 1989. Pg. 3-3-3.
[9] SCRTD. 1980. Development of Alternatives. *Final Alternatives Analysis/ Environmental Impact Statement/ Environmental Impact Report on Transit System Improvements in the Los Angeles Regional Core*. 1980. Pg. II-7.
[10] My emphasis
[11] SCRTD. 1980. Development of Alternatives. *Final Alternatives Analysis/ Environmental Impact Statement/ Environmental Impact Report on Transit System Improvements in the Los Angeles Regional Core*. Pg. II-10.
[12] SCRTD. 1980. Development of Alternatives. *Final Alternatives Analysis/ Environmental Impact Statement/ Environmental Impact Report on Transit System Improvements in the Los Angeles Regional Core.* Pg. II-40.
[13] SCRTD. 1989. Project Alternatives. *Final Supplemental Environmental Impact Statement / Subsequent Environmental Impact Report, Los Angeles Rail Rapid Transit Project – Metro Rail*. July 1989. Pg. 2-1-47.

Hollywood & Highland

At right, the entrance to Hollywood & Highland Station is well integrated into the Hollywood Boulevard streetscape.

Metro Green Line

Project Origins and Goals

The Secretary of Transportation gave approval for construction of this project in October 1978. This was a highly controversial highway project with a transit component. For both the human and natural environment, the project would yield significant adverse impacts. It required the relocation of more than 25,000 residents. In addition, the newly formed EPA and the California Air Resources Board were concerned about air pollution impacts to the Southern California Air Basin. In 1972, a law suit had been filed to stop the purchase of residences, assembling of parcels, and clearing of land, pending the preparation of an EIR.

The project, called the "The Proposed Routes 1 & I-105 (El Segundo-Norwalk) Freeway – Transitway", "would accommodate up to 180,000 vehicles and 50,000 transit passengers per day by the year 2000."[1] It was consistent with the regional transportation plan, would connect four north-south freeways and, "improve access to Los Angeles International Airport (LAX)."[2] The project was "multi-modal," consistent with the policy priorities of the Administration, in that it provided transit (originally a busway, finally a light rail line), and HOV within eight freeway lanes. It extends 17.2 miles through LA County and seven cities.

The project was justified by the number of trips generated and congestion experienced in the project corridor, "especially near LAX."[3] The project never connecting to LAX, but stops about two miles away. According to a long-time transportation professional in Los Angeles, the reason was "parking revenues. The Airport Commission would not allow it."[4]

Development

Regarding development potential from the project, the 1977 Final EIR considered two effects. The first was the potential to increase "urban sprawl." The EIR noted that sprawl effects may be seen in the "eastern portion of the Santa Monica Mountains. . . Verdugo Mountains. . .southern foothills of the Angeles National Forest. . .Puente Hills. . .small portions in Orange County,"[5] however "since these areas are currently experiencing rapid growth and development." the potential effect of I-105 would be negligible.[6]

The second was "development intensification". The project "may contribute to intensification of development within the corridor."[7] Through redistribution, more residential development was anticipated to occur adjacent to the new freeway. Redistribution and an increase in magnitude were anticipated for commercial and industrial development, especially at the ends – near LAX to the west and in Norwalk to the east.

After the Green Line had been in operation for four years, development had not occurred as predicted. This prompted the Green Line Transit-Oriented Districts Advisory Committee, with LA County, to conduct a study of land use, housing and economic development, focusing on two stations, Vermont Avenue and Hawthorne Boulevard. The goals were to "achieve an overall reduction in congestion through increased rail and transit ridership. . .and to revitalize the neighborhoods around the transit stations."[8] The recommended strategy included a T.O.D. ordinance to revise zoning. The following is a partial list of the land use conditions it sought to correct:

- Inappropriate land uses in T.O.D. areas;
- Low residential densities surround transit stations;
- No land use, design, or aesthetic relationship between the Green Line transit stations and adjacent development;
- Unsafe. . . environments, [need] 'defensible space';
- Circulation patterns do not support neighborhood-, pedestrian-, and transit-oriented development; [9]

It is easier to comprehend the job of integrating land uses with transit stations set in a freeway, when one reads a proposed approach: "Areas surrounding transit stations should be pedestrian-friendly. . . It will be more difficult to achieve these goals given the location of the stations within the median of the vast right-of-way which constitutes the 105 Century Freeway. Additionally, the land uses around the station study areas do not make the most productive use of this very important space. Examples of

inefficient uses immediately adjacent to the station include vast storage areas, immense empty parking lots, physical barriers to pedestrian access, and other non-transit friendly and non-pedestrian friendly land uses. However, some things can be done in the areas surrounding the transit stations to provide a transition into the community. These include encouraging small, pedestrian-oriented retail and eating establishments, mixed-use developments and offices which will establish the tone for the community as a transit-oriented neighborhood. The key is to provide numerous pedestrian walkways and connections from the transit station to and from adjacent land uses, and from one land use and development to another."[10]

Does this sound convincing? UC Irvine Professor Marlon Boarnet found, in his study of the effects of highways on urban development in Orange County, that there is a negative effect when closer to the freeway than 1,125 feet, due to noise and the inherently non-pedestrian environment.[11]

Transportation researchers, David Lewis and Fred Laurence Williams, conducted a study of the effect of proximity to transit on residential values in three urban areas, one of which included transit stations on freeway. A conclusion they drew was that "building transit lines on freeway or major road right-of-ways sacrifices the neighborhood, livability benefits of transit."[12] Can we learn from this and the Green Line? What does this portend for the new stations in the freeway on the Gold Pasadena line?

Ridership

In the 1977 Final EIR, busway ridership was projected to be in the range of 50,000 to 60,000 passengers per day. With the change from busway to light rail, projections changed. And the downsizing in the aerospace industry, located in El Segundo and Inglewood in the early 1990s, prompted a decrease in ridership projections prior to the opening of the line. A 1994 document stated that "current ridership projections for the Metro Green Line is estimated to be about 18,000 riders per day. This latest estimate was revised downward from an earlier projection of 25,000 riders. . . The revision was

Imperial Station, on the Green Line, is a high-flying perch that looks like it is right out of the movie *Brazil*. Imperial's full station name is Imperial Wilmington / Rosa Parks, at Harbor Freeway & I-105.

necessary to reflect the continuing effects of the recession on Southern California and, in particular, the El Segundo area."[13]

[1] Adams, Brock, Secy of Transportation. 1978. *Decision on I-105, Los Angeles County, California.* Oct.17, 1978. Pg. 3.
[2] Adams, Brock, Secy of Transportation. 1978. *Decision on I-105, Los Angeles County, California.* Oct.17, 1978. Pg. 3.
[3] U.S. DOT, Federal Highway Administration and California Business & Transportation Agency, DOT. 1977. *Final EIS.* Pg. 1-1.
[4] Interview. April 22, 2003.
[5] U.S. DOT, Federal Highway Administration and California Business & Transportation Agency, DOT. 1977. *Final EIS.* Pg. 7-4.
[6] U.S. DOT, Federal Highway Administration and California Business & Transportation Agency, DOT. 1977. *Final EIS.* Pg. 7-9.
[7] U.S. DOT, Federal Highway Administration and California Business & Transportation Agency, DOT. 1977. *Final EIS.* Table 1-1c.
[8] Green Line Transit-Oriented Districts Advisory Committee w/LA County Dept.of Regional Planning. 1999. *Draft Green Line Transit-oriented Districts – Land Use, Housing and Economic Development Strategy Report.* September. Los Angeles: The Committee. Pg. 1.
[9] Green Line Transit-Oriented Districts Advisory Committee w/LA County Dept.of Regional Planning. 1999. *Draft Green Line Transit-oriented Districts – Land Use, Housing and Economic Development Strategy Report.* September. Los Angeles: The Committee. Pg. 3-13.
[10] Green Line Transit-Oriented Districts Advisory Committee w/LA County Dept. of Regional Planning. 1999. *Draft Green Line Transit-oriented Districts – Land Use, Housing and Economic Development Strategy Report.* September. Los Angeles: The Committee. Pg. 3-13.
[11] Boarnet, Marlon. UCLA Lecture February 11, 2003. Based on *New Highways, Induced Travel, and Urban Growth Patterns: A "Before and After" Test.*. University of California Transportation Center and Environmental Protection Agency. Sept. 2002.
[12] Lewis, David and Fred Laurence Williams. 1999. *Policy and Planning as Public Choice – Mass Transit in the United States*. Aldershot, Hants, England: Ashgate Publishing Limited. Pg. 245.
[13] Los Angeles County Metropolitan Transportation Authority. 1994. *Revised Bus/Rail Interface Concept for Metro Green Line*. October. Los Angeles: MTA Operations. Pg. 16.

Ridership Comparison

The chart below shows that actual ridership in 2002 is, on average, 52 percent of what was projected for the lines during planning. However, the lack of a consistent pattern among the lines leads one to question the reliability of the forecasts themselves. It seems that the ridership forecasts mirror the tone of the EIR. As noted above, the tone of the Red Line EIR was brave and visionary. The Blue Line EIR was cautious. It is therefore not so surprising that the Red Line promised much and fell short, while the Blue Line had low expectations and exceeded them. Because they have only been in operation for thirteen years or less, the potential of all three lines still remains to be seen.

The three large charts that follow show the projected and actual boardings by station. Highlighted are the four stations we will study in the next chapter.

LA Metro Rail Ridership by Line
Forecasted vs. Current Estimate

	Line Miles	EIR Date	Forecast Date	Forecasted Average Weekday Boardings	Current Average Weekday Boardings	**Current Ave. Weekday Boardings as percentage of Forecasted**	Current Annual Weekday Boardings (Ave Wkday x 300 days)	Total Current Annual Boardings (including Weekends)*
Metro Blue Line	22	1984	2000	54,702	71,397	**131%**	21,419,100	23,170,000
Metro Green Line	20	1978	2000	50,000	29,297	**59%**	8,789,100	9,050,000
Metro Red Line	17.4	1989	2000	297,733	106,974	**36%**	32,092,200	36,960,000
Totals	59.4			402,435	207,668	**52%**	62,300,400	69,180,000

*Totals in this column from LACMTA website. [http:www.mta.net/press/pressroom/facts.htm] Accessed 23 March 2003.

Metro Blue Line

Line Miles	Stations	Dec. 1984 Draft Supplemental EIR LB-5 Alternative Forecasted Ridership to Yr 2000	South Bound Boardings 08/2002	South Bound Alightings 08/2002	North Bound Boardings 08/2002	North Bound Alightings 08/2002	Estimated 2002 Ridership (average weekday boardings from MTA estimates 08/2002) (Two directions/2)	% of Forecast Ridership
22	**22**	**54,702**					**71,397**	**131%**
	7th St. Metro	3,959	13,045	0	0	10,585	11,815	298%
	Pico	412	1,359	616	810	1,553	2,169	526%
	Grand	**3,333**	**2,930**	**1,058**	**1,228**	**2,839**	**4,028**	**121%**
	San Pedro	3,148	1,107	879	810	1,152	1,974	63%
	Washington	1,583	847	685	562	817	1,456	92%
	Vernon	3,181	1,633	1,274	1,303	1,574	2,892	91%
	Slauson	1,752	1,233	1,114	949	971	2,134	122%
	Florence	2,420	2,130	2,921	2,145	2,161	4,679	193%
	Firestone	2,531	1,367	1,523	1,224	1,105	2,610	103%
	103rd St.	646	1,770	1,835	1,730	1,566	3,451	534%
	Imperial	8,207	3,805	6,726	5,292	3,910	9,867	120%
	Compton	2,272	1,626	3,696	3,165	1,731	5,109	225%
	Artesia	2,687	981	2,532	2,182	828	3,262	121%
	Del Amo	3,582	829	1,769	1,522	628	2,374	66%
	Wardlow	3,173	386	863	541	533	1,162	37%
	Willow	1,289	856	1,357	1,604	506	2,162	168%
	Pac Cst Hwy (EIR: Hill-655, PCH-3176)	3,831	554	1,990	2,216	380	2,570	67%
	Anaheim	1,862	488	2,254	2,223	361	2,663	143%
	5th St. (EIR: 6th St.)	1,809	552	1,688			1,120	62%
	1st. St.	3,025	379	1,266			823	27%
	Pacific	na			1,421	316	869	#VALUE!
	Transit Mall	na	0	1,836	2,590	0	2,213	#VALUE!
	Total Blue	**54,702**	**37,877**	**37,882**	**33,517**	**33,516**	**71,396**	**131%**

Metro Red Line

Line Miles	Stations	7/1989 Final Supp. EIS Subsequent EIR Forecasted Ridership to Yr 2000 Pgs. S-4-2 and 2-1-47	East Bound Boardings 08/2002	East Bound Alightings 08/2002	West Bound Boardings 08/2002	West Bound Alightings 08/2002	Estimated 2002 Ridership (average weekday boardings from MTA estimates 08/2002) (Two directions/2)	% of Forecast Ridership
17.4	**16**	**297,733**					**106,974**	**36%**
	Union Station	30,954	0	10,615	10,992	0	10,804	35%
	Civic Center	**23,978**	**975**	**3,853**	**3,400**	**861**	**4,545**	**19%**
	Pershing Square	47,694	2,364	7,972	8,386	2,121	10,422	22%
	7th St Metro	31,145	6,994	12,538	11,116	6,518	18,583	60%
	Westlake	28,821	3,110	3,334	3,715	3,311	6,735	23%
	Vermont	35,261	3,415	5,498	6,172	4,233	9,659	27%
	Normandie	5,096	2,336	151	257	2,358	2,551	50%
	Wilshire Western	16,992	3,937	0	0	3,483	3,710	22%
	Vermont Beverly	6,957	1,695	1,315	1,695	1,605	3,155	45%
	Vermont Santa Monica	7,399	3,123	1,480	1,835	3,155	4,797	65%
	Vermont Sunset	6,319	2,196	1,072	1,123	2,336	3,364	53%
	Hollywood Western	**9,115**	**2,151**	**1,494**	**1,593**	**2,325**	**3,782**	**41%**
	Hollywood Vine	9,689	2,963	926	1,203	2,886	3,989	41%
	Hollywood Highland	**12,379**	**2,797**	**2,133**	**1,806**	**3,083**	**4,910**	**40%**
	Universal City	15,468	6,269	460	838	7,290	7,429	48%
	North Hollywood	10,466	8,519	0	0	8,564	8,542	82%
	Total Red	**297,733**	**52,844**	**52,841**	**54,131**	**54,129**	**106,973**	**36%**

Metro Green Line

Line Miles	Station	Final EIS 10/18/78 DOT Secretary 10/17/1978 Forecasted Ridership to Yr 2000 (confirmed by Stewart Chesler, MTA March 24, 2003)	East Bound Boardings 08/2002	East Bound Alightings 08/2002	West Bound Boardings 08/2002	West Bound Alightings 08/2002	Estimated 2002 Ridership (average weekday boardings from MTA estimates 08/2002) (Two directions/2)	% of Forecast Ridership
20	**14**	**50,000**					**29,297**	**59%**
	I-605/I-105		0	3,518	2,806	0	**3,162**	
	Lakewood		135	1,520	1,208	111	**1,487**	
	Long Beach		495	1,922	1,504	473	**2,197**	
	Imperial		3,095	4,672	4,100	2,362	**7,115**	
	Avalon		984	1,102	1,220	962	**2,134**	
	Harbor Fwy		1,111	711	769	929	**1,760**	
	Vermont		1,489	814	706	1,324	**2,167**	
	Crenshaw		1,528	561	357	1,260	**1,853**	
	Hawthorne		1,533	564	522	1,656	**2,138**	
	Aviation		2,381	175	196	2,164	**2,458**	
	Mariposa		806	39	140	639	**812**	
	El Segundo		647	31	92	571	**671**	
	Douglas		640	26	20	523	**605**	
	Marine		813	0	0	665	**739**	
	Total Green	**50,000**	**15,657**	**15,655**	**13,640**	**13,639**	**29,296**	**59%**

"How well do models of transportation demand meet their objectives? ...If the objective is to predict the use of a particular transportation service at some date in the future, one is justified in taking a cynical view. Forecasts for new travel options, whether conventional or exotic, have often been far from the mark. In large part that is because models are asked to do what is impossible: predict accurate values for each of the many uncertainties in economic conditions, technology, administrative capabilities, logistical innovations, and other factors affecting demand…it is better to view projections as an exercise in understanding alternative possibilities than as forecasts of what is going to happen."

Small, Kenneth A. and Clifford Winston (1999). "The Demand for Transportation: Models and Applications", Essays in Transportation Economics and Policy, Editors Jose A. Gomez-Ibanez, William B. Tye, Clifford Winston, pg.47

Accessing Rail Transit

How people access transit is a critical factor in their choice to take transit. Travel behavior modeling focuses on circumstances that affect access, such as automobile availability or ownership, opportunities for car-sharing, proximity to transit stations, cost and availability of parking, and comfort of walking to a destination.

In his 1971 ground-breaking proposal to study the travel behavior of individuals instead of "traffic zones", UC Berkeley Professor of Economics, Daniel McFadden mentions "the number of blocks to a bus stop, or the amount of waiting time a trip would require" as the level of detail that would allow him "to forecast how individuals would change their behavior in response to policy alternatives."[1] In the next chapter, we will take a closer look at the access to four specific rail transit stations and consider such things as distance to station. What follows however, is a brief summary of the access issues that planners of the Blue, Red and Green lines noted in their EIRs, as contributing to the decisions for specific alignments.

Chart at right: Juxtaposed with the 2002 ridership are 1989 projections for means of accessing the individual stations. At Civic Center, for example, over 12,000 boarders were anticipated to walk to the station.

Blue Line

The 1985 Blue Line EIR indicated that the selected downtown Los Angeles alternative, LA-2, would provide the "best accessibility to youth" but "least to elderly." This alternative was considered to provide the best link with commuter rail, with a transfer volume of 2,504. It would provide an "indirect linkage to Harbor Transitway; no link with I-5 or I-10 busway; direct linkage to Century

Metro Red Line

	7/1989 EIR Forecast, Pgs. S-4-2, 2-1-47					Estimated 2002 Ridership (average weekday boardings) (from MTA Estimates 08/2002) (Two directions/2)
Station	Walk	Park-n-Ride	Kiss-n-Ride	Bus	Daily boardings	
Union Station	3,874	3,737	1,425	21,918	30,954	10,804
Civic Center	12,614	0	0	11,364	23,978	4,545
Pershing Square	28,972	0	0	18,722	47,694	10,422
7th St Metro	8,951	0	0	22,194	31,145	18,583
Westlake	17,557	0	3,631	7,633	28,821	6,735
Wilshire Vermont	16,656	0	3,419	15,186	35,261	9,659
Normandie	2,376	0	1,811	909	5,096	2,551
Wilshire Western	3,413	0	3,196	10,383	16,992	3,710
Vermont Beverly	2,026	0	338	4,593	6,957	3,155
Vermont Santa Monica	3,098	0	237	4,064	7,399	4,797
Vermont Sunset	1,552	0	483	4,284	6,319	3,364
Hollywood Western	1,803	0	553	6,759	9,115	3,782
Hollywood Vine	5,463	0	759	3,467	9,689	3,989
Hollywood Highland	6,527	0	802	5,050	12,379	4,910
Universal City	1,276	2,539	450	11,203	15,468	7,429
North Hollywood	251	2,188	356	7,671	10,466	8,542
Total Red Line	116,409	8,464	17,460	155,400	297,733	106,973

Transitway at Imperial, with a transfer volume of 7,573."[2]

Seventeen facilities would have improved access and a population of 8,830 would be within walking distance of stations with the LA-2 alignment. For the Mid-Corridor segment, population within walking distance of the station was not given, as there was considered to be no difference among the alternative alignments. For the Long Beach segment, for the selected alternative LB-5, the EIR indicated that a population of 22,775 would be within walking distance of the stations and 93 facilities would have improved transit access.

Green Line

The Final EIR from 1977, for the freeway-busway combination, contained very little discussion about access to the busway or bus stops. Instead it addressed larger concerns such as how the project might diminish community cohesion in the central part of the I-105 route. The project would promote "community segmentation", in areas that "have the least ability of all project-area communities to remain cohesively viable" -- South-Central LA and Willowbrook, despite the "relative residential stability, predominance of pedestrian activity, [and] a clustering of social facilities."[3] In 1994 and 1995, prior to the opening of the Green Line light rail, significant effort was put into coordinating bus feeder lines with rail transit stations. A bus/rail interface master plan was adopted by the MTA Board in March of 1995, that modified 46 bus lines and created 13 new feeder routes, for a total of 59 bus lines serving 14 rail transit stations.[4] The plan noted that in addition to MTA buses, Green Line passengers would be served by numerous other bus operators in the region.

Red Line

The 1989 EIR for the Red Line set forth projections for the various modes of access in a table.[5] See table excerpt at left. Planners anticipated that approximately 30 percent of all Red Line riders would access the stations by walking – 116,409 out of a total of 297,733. This shows high hopes for additional development around the stations.

Note that at the Civic Center and Pershing Square stations, over 50 percent of the total daily boardings were projected to gain access to the station by walking from downtown housing. Hollywood & Highland is similar, with 6,500 of the projected 12,379 boardings gaining access by walking. However, at Hollywood & Western, only 20 percent of riders were anticipated to walk to the station. North Hollywood was anticipated to have only 2% of riders access the station by walking. This is reflected in the Metro Rail Station Data chart below, where North Hollywood is shown to have MTA-provided free parking. For the downtown LA stations – Civic Center, Pershing Square and 7th Metro -- Red Line planners anticipated no Park-n-Ride and no Kiss-n-Ride. The Station Data chart indicates that today there are in fact no MTA parking lots at these stations.

Metro Rail Station Data *(below)*

By looking at this chart, one can judge fairly easily the level of urbanity at each station. Stations provided with free parking are less urban. Along the Blue and Green Lines in particular, many stations are provided with free parking. Although the density of residential population in the general area of the Blue and Green lines may be on the high side for Los Angeles, the density in the specific area of the transit stations is low. The land uses are not "integrated" with the transit, and walking to the stations is inconvenient. To build ridership in these situations, MTA has built parking lots.

The Station Data chart includes parking built by MTA only. At many of the stations, parking has been constructed by others. In the next chapter, we will look at parking in the context of all of the land uses at the four station areas which are the subject of closer study -- Hollywood & Highland, Grand, Hollywood & Western, and Civic Center.

As an aside, the MTA has made a great effort to facilitate bike travel with rail transit. The chart indicates that at many stations, bike parking – a bike rack or bike locker – is provided.

Bus Connections

There are numerous bus companies in the Southern California region. The MTA Metro Bus alone serves 18,500 bus stops on

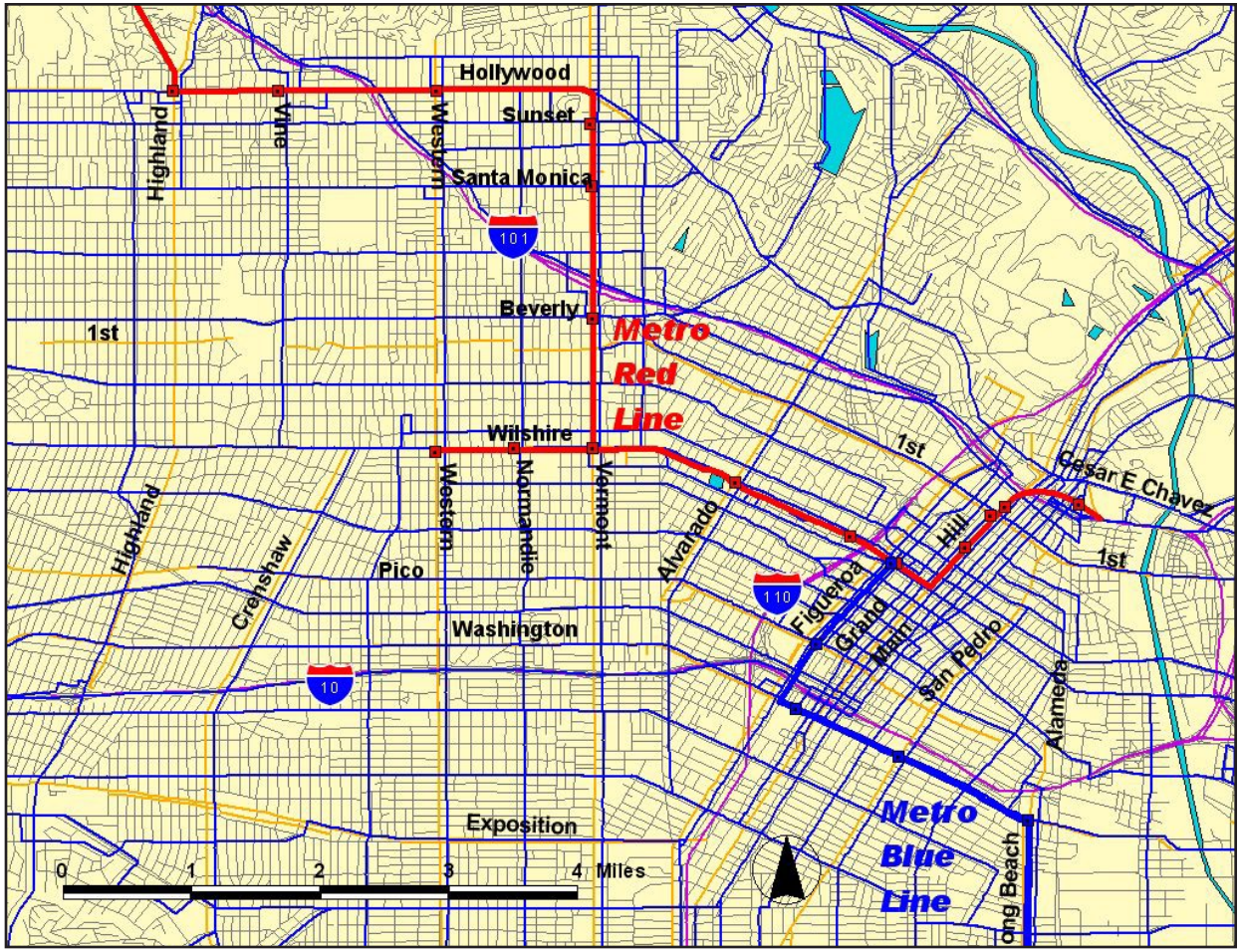
Metro Rail Station Data

Year Open Line Segment	Station	Parking and bike accommodation noted below is provided by LACMTA; privately run parking is not included.	City
1990 - 01 Blue Line	7th St. Metro Center	--	Los Angeles
	Julian Dixon Pico	--	Los Angeles
	Grand	Bike accommodation	Los Angeles
	San Pedro	--	Los Angeles
	Washington	--	Los Angeles
	Vernon	--	Los Angeles
	Slauson	Bike accommodation	Los Angeles
	Florence	Free parking;Bike	Los Angeles
	Firestone	Bike accommodation	Los Angeles
	103rd St. Kenneth Hahn	--	Los Angeles
	Imperial Wilmington Rosa Parks	Free parking;Bike	Los Angeles
	Compton	Free parking;Bike	Compton
	Artesia	Free parking;Bike	Compton
	Del Amo	Free parking;Bike	Los Angeles
	Wardlow	Free parking; Bike	Long Beach
	Willow	Free parking; Bike	Long Beach
	Pacific Coast Hwy	--	Long Beach
	Anaheim	--	Long Beach
	5th St.	--	Long Beach
	1st St.	--	Long Beach
	Pacific	--	Long Beach
	Transit Mall	Bike accommodation	Long Beach
1993 Red Line Seg.1	Union Station, Gateway Center	Pay parking; Bike	Los Angeles
	Civic Center, Tom Bradley	Bike accommodation	Los Angeles
	Pershing Square	Bike accommodation	Los Angeles
	7th St. Metro Center, Julian Dixon	--	Los Angeles
	Westlake MacArthur Park	Kiss & ride; Bike	Los Angeles
1996 Red Line Seg. 2A	Wilshire/Vermont	Bike accommodation	Los Angeles
	Wilshire/Normandie	--	Los Angeles
	Wilshire/Western	Bike accommodation	Los Angeles
1999 Red Line Seg. 2B	Vermont/Beverly	Bike accommodation	Los Angeles
	Vermont & Santa Monica	Bike accommodation	Los Angeles
	Vermont & Sunset	Bike accommodation	Los Angeles
	Hollywood & Western	Bike accommodation	Los Angeles
	Hollywood & Vine	Pay parking; Bike	Los Angeles
2000 Red Line Seg. 3	Hollywood & Highland	--	Los Angeles
	Universal City	Free parking; Bike	North Hollywood
	North Hollywood	Free parking; Bike	North Hollywood
1995 Green Line	I-605 & I-105	Free parking; Bike	Norwalk
	Lakewood	Free parking; Bike	Downey
	Long Beach	Free parking; Bike	Lynwood
	Imperial Wilmington Rosa Parks	Free parking; Bike	Los Angeles
	Avalon	Free parking; Bike	Los Angeles
	Harbor Freeway	Free parking; Bike	Los Angeles
	Vermont	Free parking; Bike	Los Angeles
	Crenshaw	Free parking; Bike	Hawthorne
	Hawthorne	Free parking; Bike	Inglewood
	Aviation	Free parking; Bike	Los Angeles
	Marisposa & Nash	Free parking; Bike	El Segundo
	El Segundo & Nash	Free parking; Bike	El Segundo
	Douglas & Rosecrans	--	El Segundo
	Marine & Redondo	--	Redondo Beach
2003 Gold Line Pasadena	Union Station	--	Los Angeles
	Chinatown	--	Los Angeles
	Avenue 26	Parking	Los Angeles
	French Avenue	Parking	Los Angeles
	Southwest Museum	--	Los Angeles
	Avenue 57	--	Los Angeles
	Mission	--	South Pasadena
	Fillmore St.	Parking	Pasadena
	Del Mar Blvd.	Parking	Pasadena
	Memorial Park	--	Pasadena
	Lake Ave.	--	Pasadena
	Allen Ave.	--	Pasadena
	Sierra Madre Villa	Parking	Arcadia

LACMTA. Station Data. [http://www.mta.net/metro_transit/metro_rail.htm]. Accessed March 5, 2003.

185 bus routes across a 1,433 square mile service area. For the four rail transit stations studied in the next chapter, bus connections are listed in the Appendix.

[1] McFadden, Daniel L. 2002. The Path to Discrete-Choice Models. *Access*. No. 20, Spring 2002. Pg. 3.
[2] LACTC. 1985. Final Environmental Impact Report. *The Long Beach – Los Angeles Rail Transit Project*. March.
[3] U.S. Department of Transportation, Federal Highway Administration and California Business & Transportation Agency, Department of Transportation. 1977. *Final EIS.* Pg. 6-32.
[4] Press Release: MTA Adopts Bus/Rail Interface Plan to Serve Cities Along Metro Green Line Corridor. March 27, 1995. Los Angeles County Metropolitan Transportation Authority. 1995. *Final Bus/Rail Interface Concept for Metro Green Line*. February. Los Angeles: MTA Operations. Pg. 1.
[5] SCRTD. 1989. Land Use and Development. *Final Supplemental Environmental Impact Statement / Subsequent Environmental Impact Report, Los Angeles Rail Rapid Transit Project – Metro Rail*. July. Table 2-1.



Map at right:

Bus lines. Civic Center station has by far the most connecting buses, including buses from MTA, Antelope Valley Transit Authority, Foothill Transit, LADOT and others.

Chart at right:

A comparison between MTA Metro Bus and Metro Rail for Yr 2002. Metro Rail serves 20 percent of all transit trips with only 9 percent of the vehicles and .2 percent of the stations or stops. LACMTA. Metro Bus ridership. 2002. [http://www.mta.net/press/pressroom/facts.htm]. Accessed 25 March 2003.

Bus Rail Comparison	Metro Bus	Metro Rail	Total	Rail as a percentage of Total
Ave. weekday boardings	1,155,094	232,169	1,387,263	20%
Ave. weekend boardings	728,007	121,235	849,242	17%
Annual boardings	377,739,457	69,180,000	446,919,457	18%
Stations or stops	18,500	52	18,552	.2%
Vehicles in fleet	2,346	207	2,553	9%

Chart at left:

Metro Rail Station Data. By looking at this chart, one can judge fairly easily the level of urbanity at each station. Stations provided with free parking are less urban.

"If you want to see where you are, you will have to get out of your space vehicle, out of your car, off your horse, and walk over the ground. On foot you will find that the earth is still satisfyingly large, and full of beguiling nooks and crannies."

Berry, Wendell. 1991. Out of Your Car, Off Your Horse. *The Atlantic*. February 1991: 61-63.

Chapter II
Four Rail Transit Stations

Looking for TOD

In this section, we study four rail transit station areas, all of which are located in an urban environment. From a planning and urban design perspective, we seek to understand what, if anything, is preventing them from becoming transit-oriented developments (TOD). Are there practices or regulations in place that work against the formation of a transit-oriented neighborhood? or that don't go far enough to allow it to form?

CALTRANS' recent study on TODs listed a number of barriers to their "broader implementation."[1] Of these, our study focuses on what CALTRANS calls "transit system location and design" and "zoning" -- more broadly, the planning and urban design regulatory structures and their sponsoring organizations. The planning analysis has to do with density and types of uses in the proposed TOD area, as well as the street pattern and hierarchy, block size, walking distance to destinations, and connection with bus transit. These things set the structure to house a population and generate activity in the public domain that is necessary to create a transit-riding constituency. The urban design analysis focuses on those things in the physical environment that affect the quality of experience for the pedestrian and transit-user. Included are the character of the streetscape and sidewalks, spatial relationship between buildings and street or sidewalk, proportions of the street enclosure and other public outdoor spaces, architectural quality, and accommodation of the pedestrian's need for comfort and pleasure.

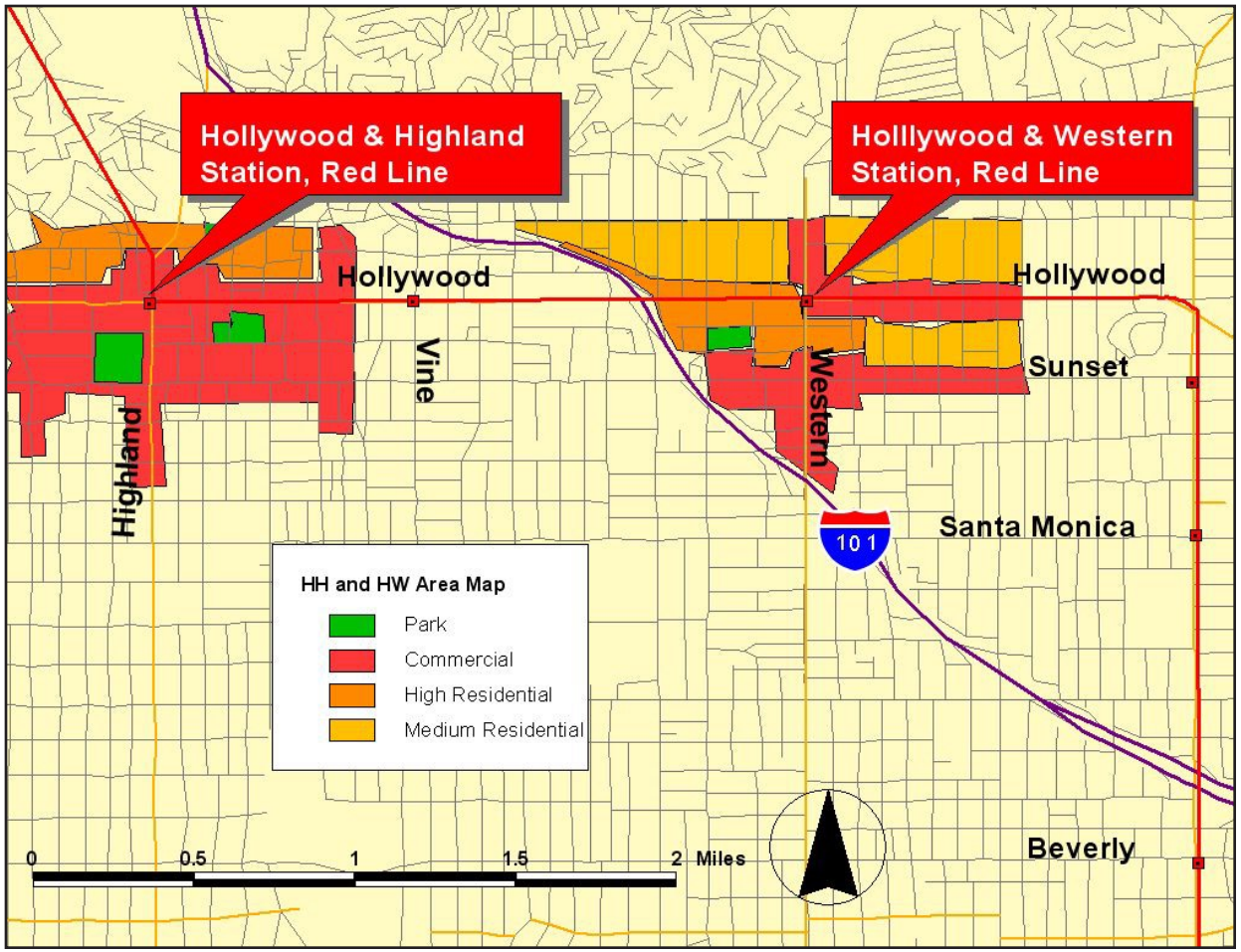
A one-quarter mile radius around the rail transit station is our proposed TOD study area. Although some research has shown that significant benefits can be measured over a mile from a transit station, there is general agreement that the one-quarter mile radius is the core "catchment area" based on an estimated five minute walk. UC Berkeley professor Robert Cervero, in *The Transit Metropolis*, refers to Ebenezer Howard's "idea of building pedestrian-oriented 'garden cities' more than a century ago" as "the seed[s] for creating. . .rail-oriented metropolises".[2] Following this, Stephen Marshall of University College London wrote, "Ebenezer Howard's ideas for the Garden City included the proposal that 'no inhabitant of the city is more than 660 yards from the railway."[3] Architect and planner Peter Calthorpe's "pedestrian pocket" development model is a "new vision for urbanizing suburbia", but its concept of a relatively dense settlement of mixed uses and housing

types within a quarter-mile walk of a transit stop is based on TOD principles applicable to urban areas and suburbia alike.[4]

The time it takes to walk the one-quarter mile (1,320 feet), or 660 yards (1,980 feet), can make the difference between people using transit or not. This is so important that researchers now use geographic information systems (GIS) to accurately plot distances to the transit station to determine potential benefits to the neighborhood. Researchers David Lewis and Fred Laurence Williams wrote, "The property attribute that must be measured in a transit access study is the actual walking distance to the transit station. . . The typical solution. . .is to use point to point, straight line. . .made by simply assuming that residents can walk in a straight line from their home to transit. This is never a truly accurate estimate of walking distance because streets do not always lead directly between two points."[5] Lewis and Williams plotted the actual routes from each residence that a walker would take to the station. In this study, we will take a more broad brush approach, as we trace the ways to the stations. We will note the street patterns and block sizes, which determine the distance and to some extent, the comfort of the walking journey.

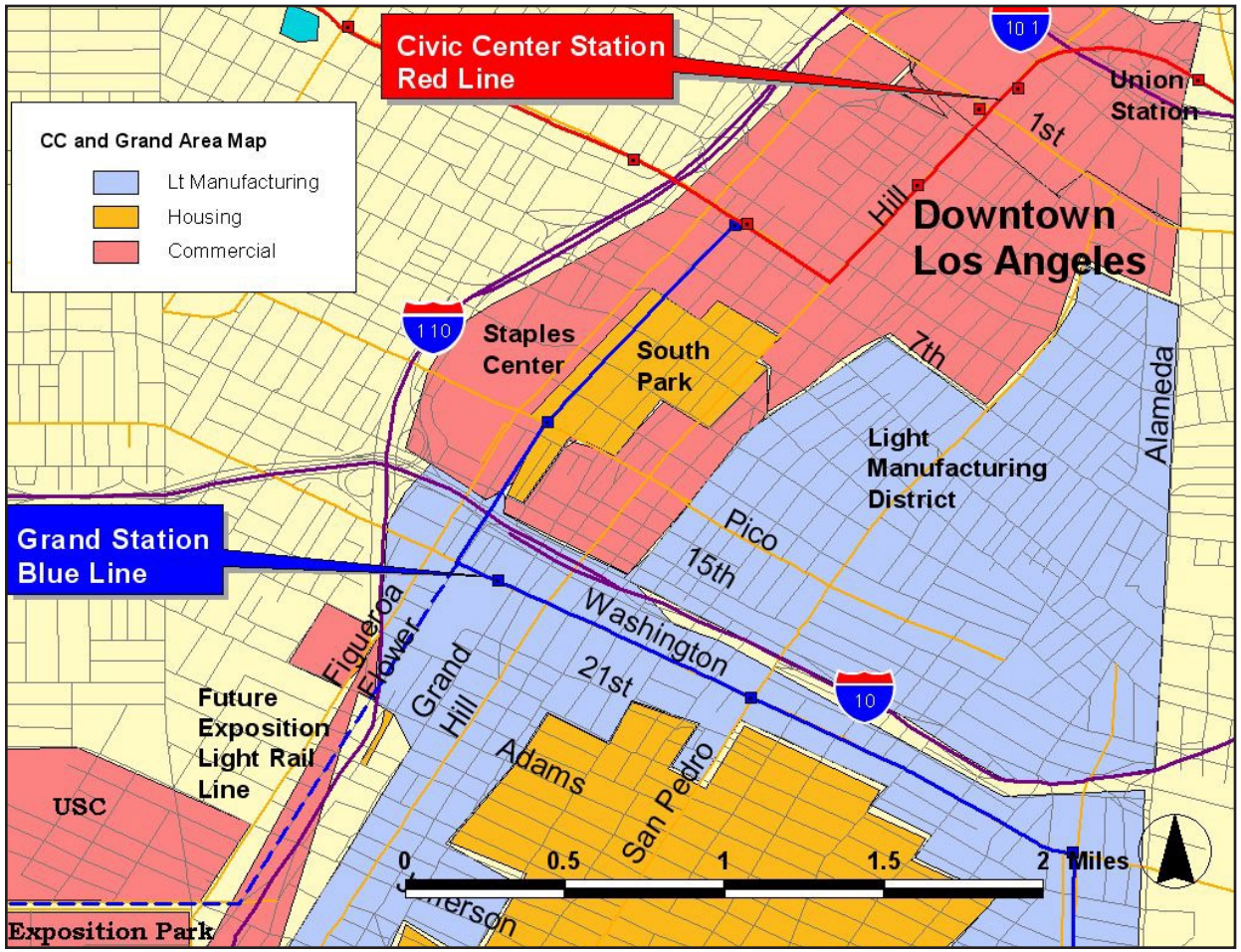
In *Home from Nowhere*, author James Howard Kunstler writes, "Our streets used to be charming and beautiful. The public realm of the street was understood to function as an outdoor room. Like any room, it required walls to define the essential void of the room itself."[6] "Buildings are disciplined on their lots in order to define public space successfully. The street is understood to be the pre-eminent form of public space, and the buildings that define it are expected to honor and embellish it."[7] "Buildings must be sized in proportion to the width of the street."[8] Regarding precepts such as this, architect Douglas Kelbaugh says "taken singly they are embarrassingly obvious revivals of traditional patterns of settlement, but in concert they form a compelling new vision. . .[and] aim to restore a human-scaled, humane, and formally coherent sense of public and private place."[9]

The purpose of the outdoor room, the public space, is to enhance the lives of those who use it and to build a greater sense of community. When the physical environment positively supports human interaction, a feeling of trust is possible. Author Jane Jacobs writes, "The trust of a city street is formed



over time from many, many little public sidewalk contacts. . . Most of it is ostensibly utterly trivial but the sum is not trivial at all. The sum of such casual, public contact at a local level. . .is a feeling for the public identity of people, a web of public respect and trust, and resource in time of personal or neighborhood need. The absence of this trust is a disaster to a city street."[10]

Ultimately, it is a greater sense of community and better quality of urban life that is at the heart of the push for transit-oriented development. Based on our findings at the four stations, we will make recommendations for changes within the planning realm to better achieve transit-oriented development.



[1] California Department of Transportation. 2002. *Statewide Transit-Oriented Development Study – Factors for Success in California, Final Report.* September. Pg. 6.
[2] Cervero, Robert. 1998. *The Transit Metropolis – A Global Inquiry*. Washington D.C.: Island Press. Pg. 8.
[3] Marshall, Stephen. 2001. Public transport-orientated urban design: plans and possibilities. *Transport and Environment – In Search of Sustainable Solutions*. Eran Feitelson and Erik T. Verhoef, Editors. Cheltenham, Glos GL50 1UA, UK: Edward Elgar Publishing Limited. Pg. 185.
[4] Kelbaugh, Douglas. 1997. *Common Place – Toward Neighborhood and Regional Design.* Seattle: University of Washington Press. Pg. 129.
[5] Lewis, David and Fred Laurence Williams. 1999. *Policy and Planning as Public Choice – Mass Transit in the United States*. Aldershot, Hants, England: Ashgate Publishing Limited. Pg. 231.
[6] Kunstler, James Howard. 1996. Home From Nowhere, *Atlantic Monthly.* September. Pg. 44.
[7] Kunstler, James Howard. 1996. Home From Nowhere, *Atlantic Monthly.* September. Pg. 56.
[8] Kunstler, James Howard. 1996. Home From Nowhere, *Atlantic Monthly.* September. Pg. 62.
[9] Kelbaugh, Douglas. 1997. *Common Place – Toward Neighborhood and Regional Design.* Seattle: University of Washington Press. Pg. 129, 131.
[10] Jacobs, Jane, "Death and Life of Great American Cities", 19761, pg. 56

Maps at left:
The four stations for special study are Hollywood & Highland, Hollywood & Western, Civic Center and Grand. The different shaded areas on the map roughly distinguish planned commercial, residential, and industrial land uses. This information was taken from three community plans -- Hollywood, Central City, and Southeast Los Angeles.

Selecting the Four Rail Transit Stations

The four rail transit station areas were selected for various reasons. The three on the Red Line were selected, after considering all of the station areas, because of the critical mass of development at these sites that would lend itself to study. The station areas are different from each other, different enough that one could think of each as a prototype.

Hollywood &Highland

This end of Hollywood Boulevard is an internationally known tourist destination, and contains historic and culturally important landmarks from the glory days of Hollywood. Incorporating the entrance to the Hollywood & Highland Metro Red Line Station into its design, the $615 million Hollywood & Highland mixed use project, opened in 2001. This project represents a significant effort by Los Angeles Community Redevelopment Agency, City of Los Angeles, and LACMTA, to revitalize an important area and to tie the development into the rail transit station. There was an intention to create a transit-oriented development at this site and, for these reasons, this is an important transit case study in Los Angeles.

Grand Station

Grand, a Blue Line station, is within a half-mile of Staples Center, and a mile from downtown LA, University of Southern California and Exposition Park. Located on Washington Boulevard, it marks the northern boundary of South Los Angeles, which has large low-income and immigrant populations.

From a physical design standpoint, the proportions of the open space on Washington Boulevard, with the raised light rail platform in the middle, suggest the possibility of a lively place or plaza, instead of the current Di Chirico-esque emptiness. Anchored by LA Trade Technical College, Grand Olympic Auditorium, and the Municipal Courts, the area looks ripe for development of light or high-tech manufacturing with housing above -- development that could benefit from the proximity to downtown and USC. This station could be a TOD, where the base is manufacturing, some retail and housing.

According to MTA data, except for the hub stations, Grand is in the top tier of all Blue Line stations in terms of the number of unlinked trips. The average weekday activity figures show approximately 3,000 persons traveling north to Grand, and 3,000 boarding at Grand to travel south. This pattern suggests that Grand is either a 'destination station' or a transfer point.

Civic Center

The Civic Center and Grand Stations make an interesting pair. They mark the north and south ends of downtown Los Angeles. Civic Center is so physically different from the Grand Station. It is "the largest government center outside Washington D.C."[1] Therefore, it is amazing that Civic Center ridership is almost identical to Grand's.[2] Average weekday boarding figures show that about 3,500 eastbound passengers get off at Civic Center, and about 3,500 westbound passengers board at the station.

Hollywood & Western

In 1999, the Metro Red Line station opened at this site. Designated a redevelopment area, new commercial and residential projects were already underway. But in 2001, the City of Los Angeles developed, with citizen participation, the Vermont/Western Transit Oriented District Specific Plan. The provisions of this document override the Zoning Code for the expressed purpose of creating a transit-oriented development. Although still in the early stages of development, this area provides a good opportunity to see state of the art planning for transit-oriented development in Los Angeles.

[1] Los Angeles Civic Center Public Parnership, Inc. 2000. *Los Angeles Civic Center Shared Facilities and Enhancement Plan*. March. Pg. 19.

[2] Los Angeles Metropolitan Transportation Authority. 2001. *Rail Transit Estimated Average Weekday Boardings by Station for FY 2001.*

Demographics

These data are from the 2000 U.S. Census, census tract level.[1] We averaged tract data for the Transportation to Work and History of Housing Built. Station area maps of the tracts are included below.

Median Household Income 1999

The Civic Center station area tracts show disparate income levels. The two Hollywood station areas are most similar to each other, with an average median household income of $21-23,000.

Transportation to Work

At all station areas, Transportation to Work shows a quite high percentage of workers outside the home traveling to work by public transportation -- 15 to 39 percent.

History of Housing Units Built

This graph shows that for all station areas, a significant amount of housing was built prior to 1939. Hollywood & Highland shows the most consistent level of building. Hollywood & Western building peaked in the 1960s and Civic Center shot up in the 1980s in the Bunker Hill tract area. Grand Station area has significantly fewer housing units than the other areas. The actual number of housing units in the tracts associated with each area are : H-Highland: 8,651, H-Western: 8,965, Civic Center: 6,885, and Grand: 1,574.

[1] Census 2000. [http://factfinder.census.gov]. Accessed April 2, 2003.

Median Household Income 1999	
Hollywood & Highland	
Average.	$22,727
1901	$27,872 Highest
1902	$19,317
1907	$20,993

Hollywood & Western	
Average	$21,055
1903.01	$22,020
1904	$22,521
1905.1	$19,601
1905.2	$20,078

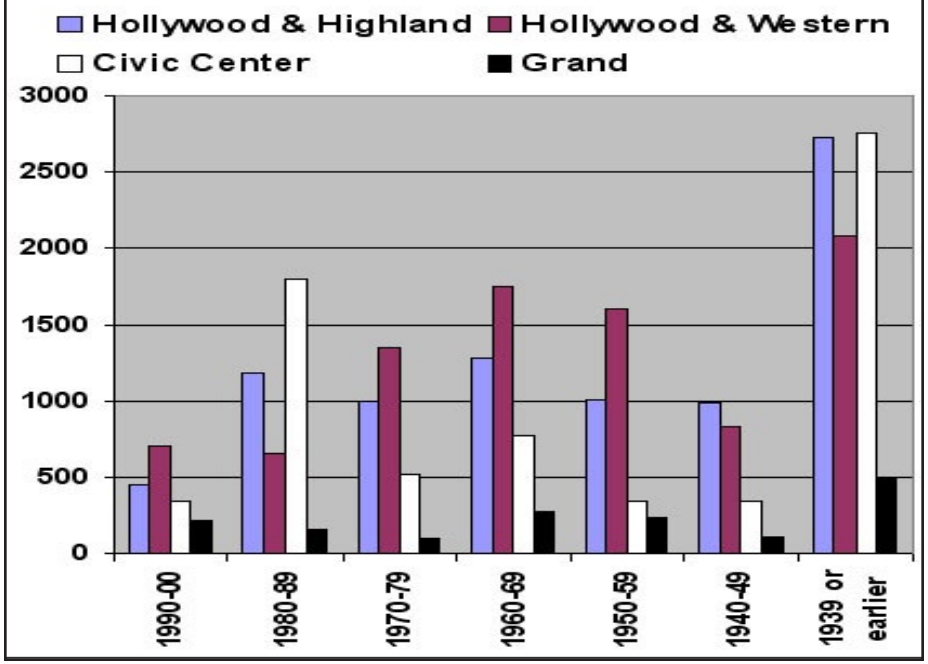
Civic Center	
Average	$13,365
2073	$8,125
2074	$6,250 Lowest
2075	$25,721 Second Highest

Grand	
Average	$19,945
2240.1	$17,587
2240.2	$22,303

Transportation to Work

Station Area	Workers Outside Home	Travel to Work by Public Transportation	Travel to Work by Walking	Travel to Work by Car, Truck or Van
Hollywood & Highland	2393	16%	8%	67%
Hollywood & Western	1898	22%	5%	68%
Civic Center	888	15%	22%	54%
Grand	813	39%	21%	39%

History of Housing Units Built by Station Area



The Planning Context

Los Angeles General Plan

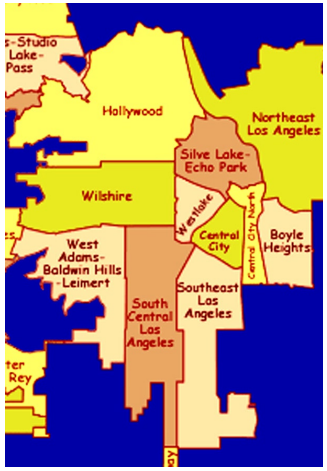
All four station areas are located in the City of Los Angeles. Therefore, the foundation for planning, design and construction in these areas is the Los Angeles General Plan. Since 1937, all cities and counties within California have been required by state law to adopt a general plan to guide their physical development. In 1965, a California "appellate court called the general plan 'a constitution for all future development in the city'."[1] In the 1950s, the State began to require the inclusion of specific "elements" or sections within the General Plan.

The City of Los Angeles describes its plan this way: "The General Plan, prepared and maintained by the Department of City Planning, is a comprehensive, long-range declaration of purposes, policies and programs for the development of the City of Los Angeles. It is approved by the City Planning Commission and the Mayor, and adopted by the City Council. The General Plan is a dynamic document consisting of eleven elements; ten city-wide elements and the land use element or plan for each of the City's 35 Community Planning Areas."[2]

Community Plans – The Land Use Element

The state-mandated elements are Land use, Circulation, Housing, Conservation, Noise, Open Space, and Safety. The City of Los Angeles has elected to add the Framework Element, as well as Transportation, Infrastructure Systems, Air Quality, Historic Preservation and Cultural Resources, and Public Facilities and Services.

In our study of four station areas, we will look closely at the city-wide Framework Element and the community-specific Land Use Element as illustrated in the Hollywood, Central City, and Southeast Los Angeles community plans. See map below.



The Framework Element

The Framework Element is a recent addition to the General Plan. It was originally adopted in 1996 and readopted in 2001. It provides the City with a strategy for growth based on a 2010 planning horizon.[3] Its goal is to accommodate growth in a manner which "…enhances rather than degrades the environment… [to] focus density…in limited areas linked to infrastructure".[4] The Framework is considered an evolutionary step beyond the City's 1974 "Centers Concept," which called for focusing growth in centers connected by transit.

Residential Densities

In his survey of research on the relationships between land use / site design and travel behavior, Richard Pratt defines density as that "which relates to compactness of development, or the number of opportunities (activities, jobs, places to live, etc.) located within a given geographic space."

He writes, "A major issue in research on the land use-transportation connection has been the confounding role played by density. Most early land use studies relied strongly on density as the chief measure of land use and urban form, and while they found significant correlation between density and travel, they also discovered that density alone was not sufficient to explain all of the variation in observed travel behavior. . .Increasingly, land use research has come to appreciate this dilemma."

Pratt, Richard H. 2001. *Land Use and Site Design, Draft Chapter 15. Traveler Response to Transportation System Changes.* TCRP B-12A. September. Pg. 15-4, 15-6.

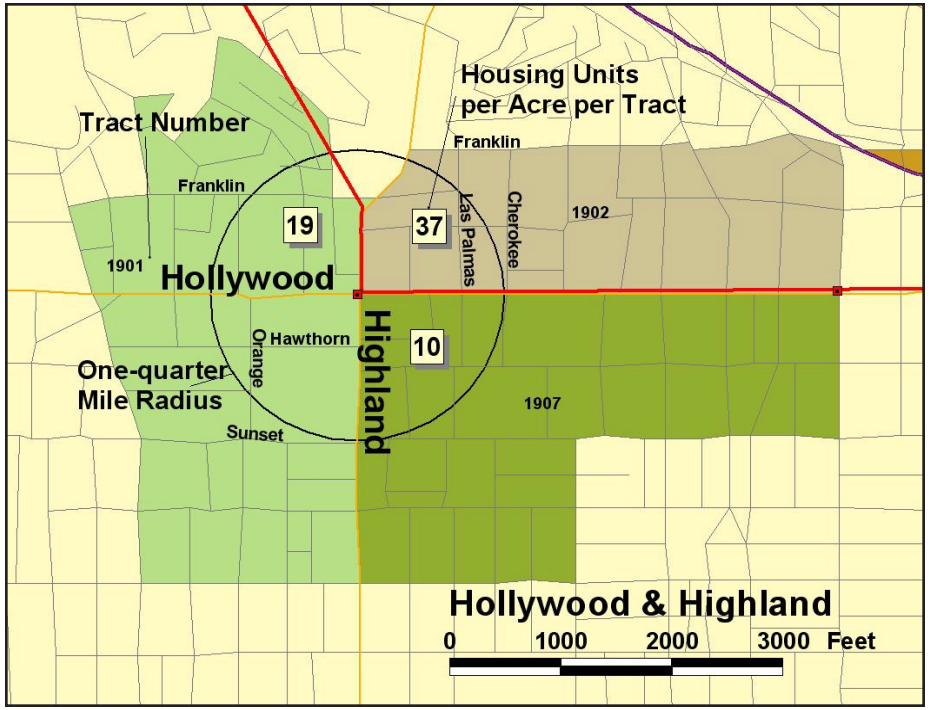
Housing Units per Acre by Tract

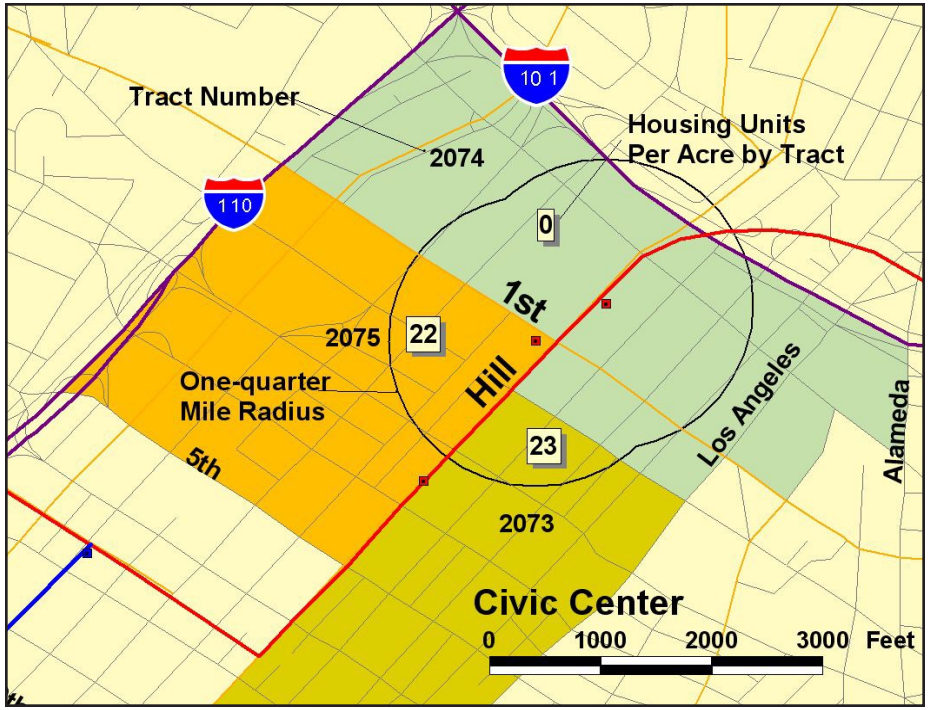
Maps at right:
The census tracts adjacent to the stations are identified by different colors and tract numbers. The number of housing units per acre was calculated by dividing the total number of housing units in the census tract by the area in the tract.

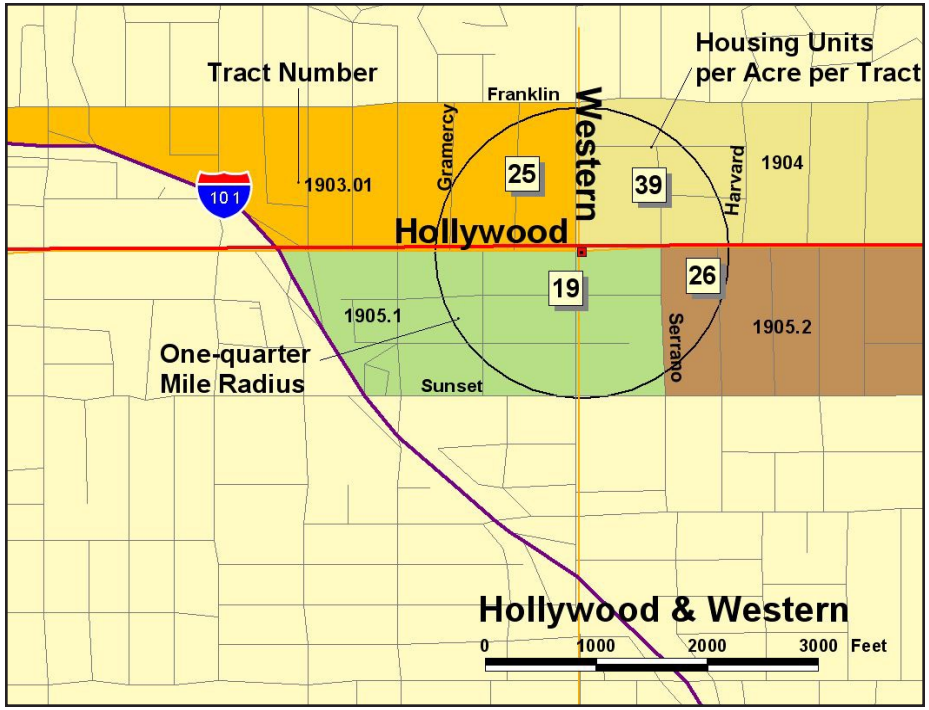
Average residential densities in the tracts around the four stations range from 3 to 39 housing units. As an illustration of the notion that "density alone [is] not sufficient to explain all of the variation in observed travel behavior," the wide range in residential densities can be contrasted with the quite uniform average daily boardings at each of the four stations. Boardings are as follows:

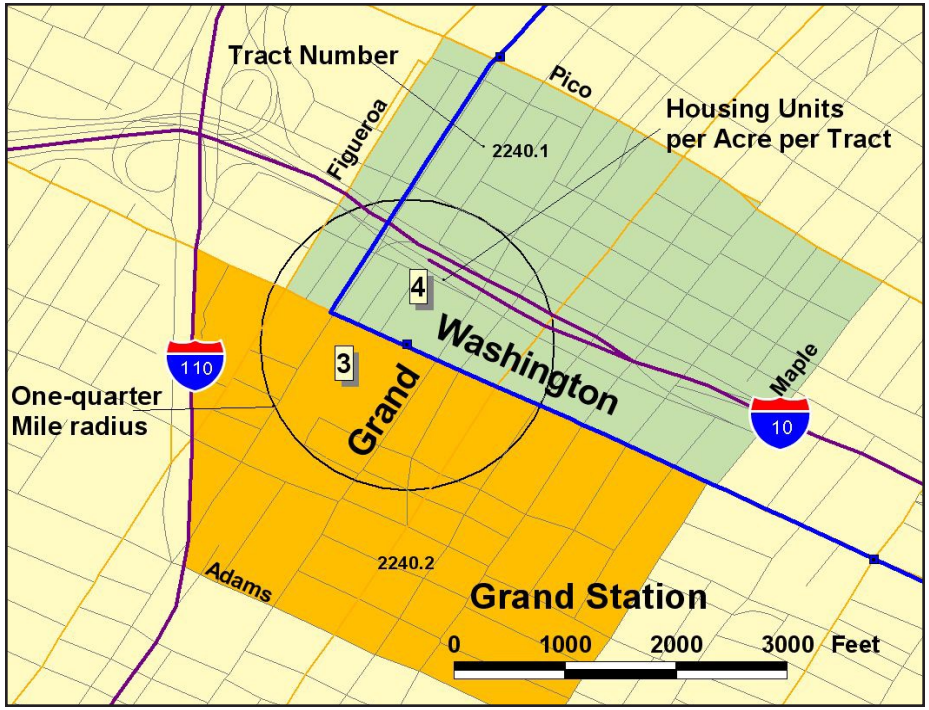
Grand	*4,028*
Civic Center	*4,545*
H- Highland	*4,910*
H- Western	*3,782*

Census 2000. [http://factfinder.census.gov]. Accessed April 2, 2003.


Tract Number
Housing Units
per Acre per Tract
Franklin
Franklin
1901
Hollywood
19
37
Las Palmas
Cherokee
1902
Hawthorn
Orange
Highland
10
One-quarter
Mile Radius
1907
Sunset
Hollywood & Highland
0 1000 2000 3000 Feet


Tract Number
10 1
Housing Units
Per Acre by Tract
2074
110
0
1st
2075
22
Hill
One-quarter
Mile Radius
Los Angeles
Alameda
5th
23
2073
Civic Center
0 1000 2000 3000 Feet


Tract Number
Housing Units
per Acre per Tract
Franklin
Western
Gramercy
101
1903.01
25
39
Harvard
1904
Hollywood
19
26
1905.1
1905.2
Serrano
One-quarter
Mile Radius
Sunset
Hollywood & Western
0 1000 2000 3000 Feet


Tract Number
Pico
Figueroa
Housing Units
per Acre per Tract
2240.1
4
Washington
110
3
Grand
Maple
10
One-quarter
Mile radius
2240.2
Adams
Grand Station
0 1000 2000 3000 Feet

The Framework differentiates higher-intensity districts not only by density, as the 1974 "Centers Concept" did, but also by their land uses, physical form, and character. The driving concept behind the Framework Element is the establishment of new land use categories for selected areas previously designated for commercial use, as a way to focus the growth "in a number of higher-intensity commercial and mixed-use districts, centers and boulevards and industrial districts, *particularly in proximity to transportation corridors and transit stations*."[5]

The importance of the link with transit is highlighted by this Framework goal: "Transit stations [are] to function as a primary focal point of the City's development."[6] The Framework's language is optimistic but warns that concerted effort will be required to make it work. The Transportation chapter begins:

"The General Plan Framework Element has a vision that includes a multimodal transportation system that provides choices and accessibility to everyone in Los Angeles. This vision is achievable and realistic. It cannot be achieved, however, without some difficult decisions to support the facilities and the behavioral changes that are incorporated within the vision."[7]

To support this vision, the Framework indicates that transportation investment and policy will need to follow a "strategic plan" which calls for capitalizing on existing and currently committed infrastructure with supportive land use policies, implementing better feeder systems, and utilizing advanced technologies for system management and telecommuting.[8]

The Framework Element Land Use

The Framework creates six new land use categories: Neighborhood District, Community Center, Regional Center, Downtown Center, and Mixed-Use Boulevard, all of which are "targeted growth areas." Development is encouraged in targeted growth areas; they should be located close to major transit infrastructure; targeted growth requires increased scale and density above existing conditions[9]. Any area not designated as "targeted growth" is a "conservation area" and is to be preserved.

The Framework's rationale for targeting growth is this: If continued increases in population cause all lands in the City to be developed to their existing maximum permitted densities, the scale and mass of existing residential neighborhoods will be uniformly increased, traffic congestion and air pollution will be increased further, infrastructure and services will be stressed, and the overall quality of life will be decreased. Targeting growth is portrayed as a way to preserve existing lower-density single and multi-family neighborhoods, while improving the character and quality of existing commercial or industrial areas through intensified redevelopment.

For our study areas, the diagrams on the next page, taken from the Framework's Long Range Land Use Diagrams, depict the locations of the new higher-intensity commercial and mixed-use districts. Civic Center is located in the Downtown Center; Hollywood & Highland is in a Regional Center; Hollywood & Western is a Community Center; Grand is depicted as part of the "conservation area".

Let's look at how the Framework defines these areas:

Community Center

- "A focal point for surrounding residential neighborhoods and containing a diversity of uses..."[10]
- Pedestrian-oriented, high activity centers that provide identity for the community;
- Buildings located along street frontage to form a common wall with parking to the rear;
- Served by "small shuttles, local buses in addition to automobiles and/or may be located along rail transit stops."[11]

Regional Center

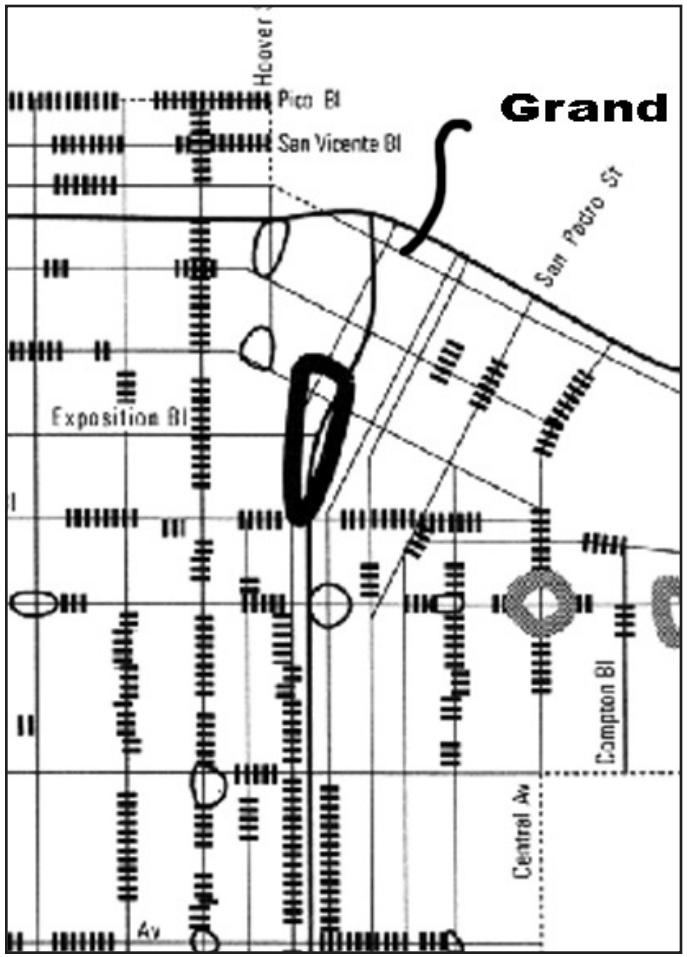
- "A focal point of regional commerce, identity, and activity. . .contain a diversity of uses..."[12]
- Housing is to be integrated "with commercial uses . . .in concert with supporting services, recreational uses, open spaces, and amenities."[13]
- Usually a major transportation hub.

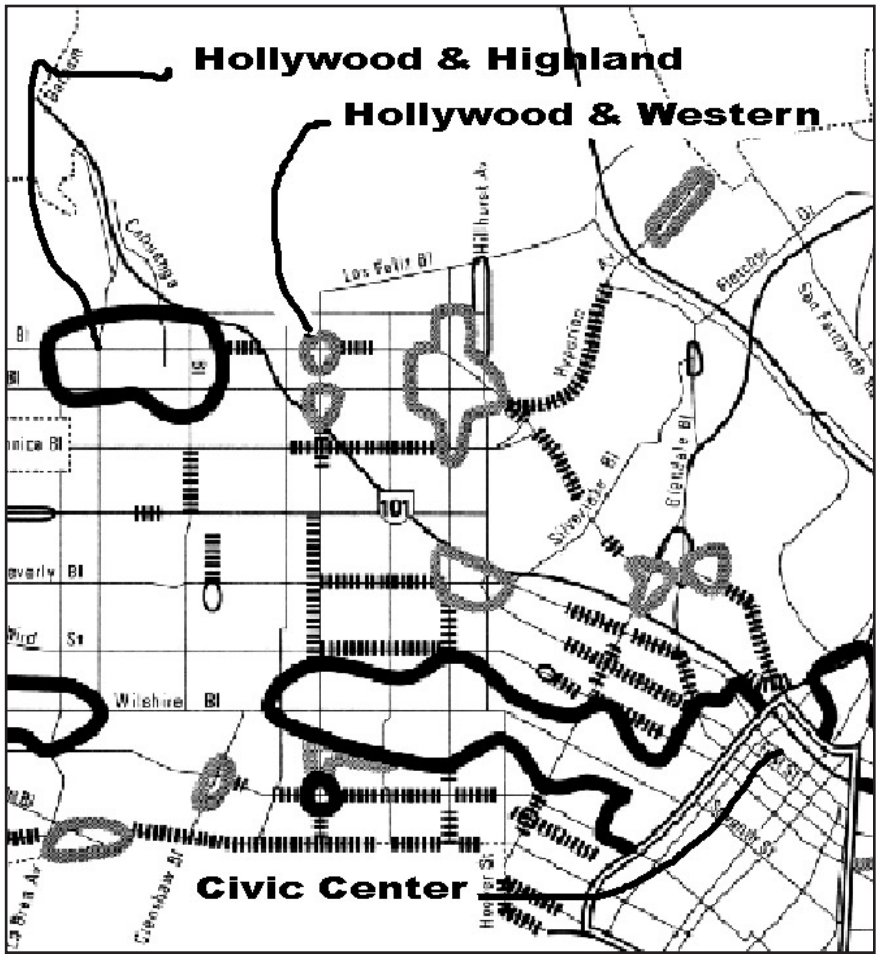
Downtown Center

- "An international center for finance and trade"[14]
- High-rise residential towers
- Regional transportation facilities

As we look at the four rail transit stations, we will consider how well the assigned category seems to fit the needs and potentials of the specific locale.

[1] Fulton, William. 1999. *Guide to California Planning.* Point Arena, CA: Solano Press Books. Pg. 62.
[2] City of Los Angeles Planning Department. General Plan. [http://www.lacity.org/PLN/]. Accessed April 11, 2003.
[3] Los Angeles City Planning Department, 2001. *Citywide General Plan Framework, An Element of the Los Angeles City General Plan*. Los Angeles: LA City Planning Department. Pg. 2
[4] Los Angeles City Planning Department, 2001. *Citywide General Plan Framework, An Element of the Los Angeles City General Plan*. Los Angeles: LA City Planning Department. Pg. 1
[5] Los Angeles City Planning Department, 2001. *Citywide General Plan Framework, An Element of the Los Angeles City General Plan*. Los Angeles: LA City Planning Department. Pg. 3
[6] Los Angeles City Planning Department. 2001. *Citywide General Plan Framework, An Element of the Los Angeles City General Plan*. Los Angeles: LA City Planning Department. Pg. 3-35.
[7] Los Angeles City Planning Department, 2001. *Citywide General Plan Framework, An Element of the Los Angeles City General Plan*. Los Angeles: LA City Planning Department. Pg. 8-1.
[8] Los Angeles City Planning Department, 2001. *Citywide General Plan Framework, An Element of the Los Angeles City General Plan*. Los Angeles: LA City Planning Department. Pg. 8-1.
[9] Los Angeles City Planning Department, 2001. *Citywide General Plan Framework, An Element of the Los Angeles City General Plan*. Los Angeles: LA City Planning Department. Pg. 3-2.





Maps at left:
These are excerpts from the LA General Plan Framework Element Long Range Land Use Diagrams. They show areas of "targeted growth." H-Highland is in a Regional Center. H-Western is a Community Center. Civic Center is in the Downtown Center. Grand is not in a "targeted growth" area.

[10] Los Angeles City Planning Department. 2001. *Citywide General Plan Framework, An Element of the Los Angeles City General Plan*. Los Angeles: LA City Planning Department. Pg. 3-9.
[11] Los Angeles City Planning Department. 2001. *Citywide General Plan Framework, An Element of the Los Angeles City General Plan*. Los Angeles: LA City Planning Department. Pg. 3-9.
[12] Los Angeles City Planning Department. 2001. *Citywide General Plan Framework, An Element of the Los Angeles City General Plan*. Los Angeles: LA City Planning Department. Pg. 3-23.
[13] Los Angeles City Planning Department. 2001. *Citywide General Plan Framework, An Element of the Los Angeles City General Plan*. Los Angeles: LA City Planning Department. Pg. 3-24.
[14] Los Angeles City Planning Department. 2001. *Citywide General Plan Framework, An Element of the Los Angeles City General Plan*. Los Angeles: LA City Planning Department. Pg. 3-24.

The Framework Element Urban Design

Three purposes for building around transit are inherent in the text of the Framework Element – to create more livable and interesting urban communities, to redirect the pattern of urban form in the City, and to increase ridership of the transit system.

The Framework calls for development in proximity to transit stations to "afford the opportunity to intermix uses, establish pedestrian areas …and create a "…sense of place."[1]

It calls for the implementation of a policy previously established by the City and MTA -- a Land Use/Transportation Policy, part of the Transportation Element – to "foster the development of higher-density, mixed-use projects within one-quarter mile of rail and major bus transit facilities."[2] The Framework asserts that adherence to this localized development strategy around transit stations will "*significantly influence the form and character of development in the City*."[3]

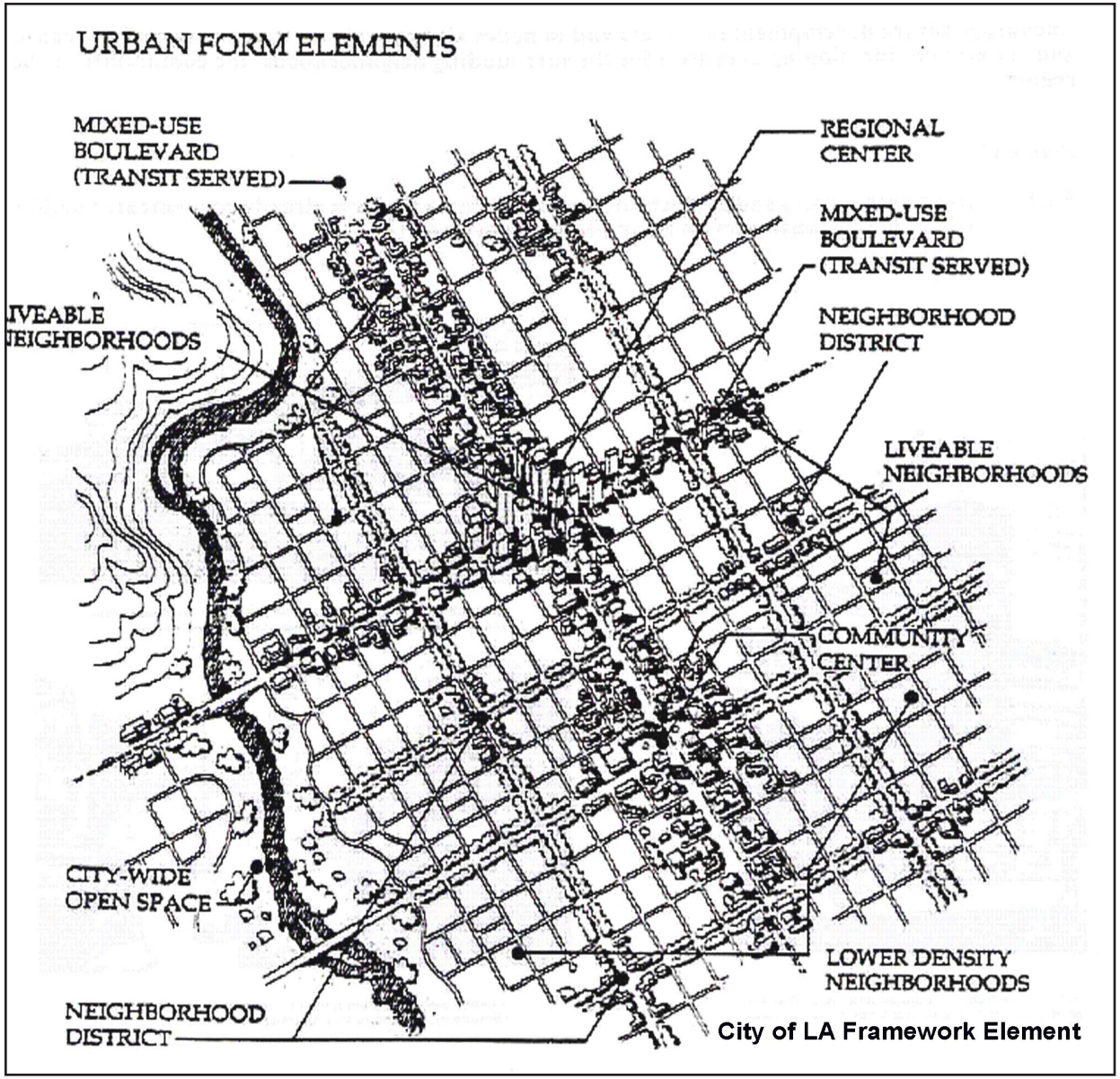
Finally, the Framework supports concentrations of development around transit to increase transit's effectiveness and maximize return on investment in transit. It states, "In particular, fixed rail transit requires a substantial capital investment and sufficient residential densities around station locations to make the system viable and the investment cost-effective. The area around transit stations should therefore be designed to support its use."[4]

Urban form is made of the "structural elements" of the City. As much as any other land use, the transportation system is fundamental to urban form. "The existing and planned transit system (both fixed rail and major bus routes), as well as corresponding concentrations of development, provide a structure for defining the City's form."[5] To guide the shape and pattern of development in these areas, the Framework describes how the land use categories would be visually differentiated, using low, medium and high rise structures.

[1] Los Angeles City Planning Department. 2001. *Citywide General Plan Framework, An Element of the Los Angeles City General Plan*. Los Angeles: LA City Planning Department. Pg. 3-3.
[2] Los Angeles City Planning Department. 2001. *Citywide General Plan Framework, An Element of the Los Angeles City General Plan*. Los Angeles: LA City Planning Department. Pg. 3-6.
[3] Los Angeles City Planning Department. 2001. *Citywide General Plan Framework, An Element of the Los Angeles City General Plan*. Los Angeles: LA City Planning Department. Pg. 3-6.
[4] Los Angeles City Planning Department. 2001. *Citywide General Plan Framework, An Element of the Los Angeles City General Plan*. Los Angeles: LA City Planning Department. Pg. 5-5.
[5] Los Angeles City Planning Department. 2001. *Citywide General Plan Framework, An Element of the Los Angeles City General Plan*. Los Angeles: LA City Planning Department. Pg. 5-1.

Drawing at right:
The Urban Form Elements Diagram shows the recommended scale of development for each new land use category.

Chart at right:
This chart indicates the F.A.R. and height for the land use categories.



Land Use Category	Floor-to-Area Ratio	Stories
Community Centers	1.5:1 to 3:1	2-6
Regional Centers	1.5:1 to 6:1	6-20
Downtown Center	Up to 13:1	highrise

The Framework Element is Just a Recommendation

The newly created Framework Element of the Los Angeles City General Plan "seeks to bring the demands on the urban systems into equilibrium with the systems' capacities and to maintain that balance in the future."[1] It provides the citywide perspective "often lacking from locally produced land use planning efforts to establish overall guidelines."[2]

However, the Framework Element does not supersede, override or mandate changes to community or specific plans. The Framework Element is only to be "used as a guide…*nothing in the Framework Element suggests that… the areas depicted … must be amended to the higher intensities or heights within the ranges described in the Framework Element.* The final determination about what is appropriate locally will be made through the community plans."[3] It exists solely as a planning recommendation to Los Angeles' thirty-five community plan areas.

Now we will begin the study of the four stations.

[1] Los Angeles City Planning Department. 1999. *Transportation Element of the General Plan.* Los Angeles: LA city Planning Department. Pg. 3.
[2] Los Angeles City Planning Department. 2001. *Citywide General Plan Framework, An Element of the Los Angeles City General Plan*. Los Angeles: LA City Planning Department. Pg. 1-9.
[3] Los Angeles City Planning Department. 2001. *Citywide General Plan Framework, An Element of the Los Angeles City General Plan*. Los Angeles: LA City Planning Department. Pg. 1-8.


A PUBLIC
COMMUNITY
LEARN
TO
EARN
Warning: Passengers Bey
This Point Must Have Tick
Long Beach
143
09

Grand Station

Existing Conditions

Grand Station is within a mile of some of the most important destinations in the Los Angeles region, but if this proximity is causing new spin-off development to take place, it is hard to spot. Of course, this is an industrial area. Still, there are a lot of industrial parcels that are vacant or appear to be underutilized. From the light rail station, there are four major destinations within walking distance.

The one that probably generates the greatest transit ridership is the LA Trade Technical College, part of the Los Angeles Community College District. According to its Information Desk, the school has a student enrollment of 13,000. Located just south of the light rail platform on Washington, it offers a wide variety of courses including architectural technology, computers, automotive services, carpentry, business administration, nursing, public administration, restaurant management, water systems technology, liberal arts, labor studies, fashion design, electrical and electronics design.

The Grand Olympic Auditorium, just north of Washington, is another important destination. It hosts musical concerts, boxing, graduation ceremonies, and local political

conventions.[1] However, it appears underbooked: The current schedule lists events only on Saturday nights through July 2003. The "Grandoly" owns a parking lot located between the auditorium and Grand Station so it is uncertain whether event-goers typically drive or take the Blue Line.

Grand-Olympic Auditorium and parking lot

In the past two to three years, the LA Mart, located at Broadway and Washington, significantly expanded its presence in the area. This is a designer furnishings center "like none other on the West Coast. . .300 showrooms within 724,000 square feet of space."[2] A large parking lot flanks the south side of the building and it seems unlikely, at this time, that very many designers and their patrons are walking the very short distance from the light rail station to this haven of fabric and furniture design.

Closer to Grand Station is the Municipal Courts building, between Hill and Broadway. It is set back from Washington to make room for an underground parking structure, topped by a 'rock garden', i.e. barren wasteland.[3] Courts personnel may take transit here.

Municipal Courts, rock garden in foreground

There is no housing within a quarter-mile, and very little housing within a half-mile of the station, and most of that is located north of the Santa Monica Freeway. Taken as an average across the census tracts adjacent to Grand Station, there are only 3 and 4 housing units per acre.

The industrial and commercial uses include warehouses, garment manufacturers, food processing, poultry butchering, a bakery, a market, the Boxing Club, Pac Bell building, and a newly renovated eleven-story office building on the north side of Washington, opposite LA Mart.

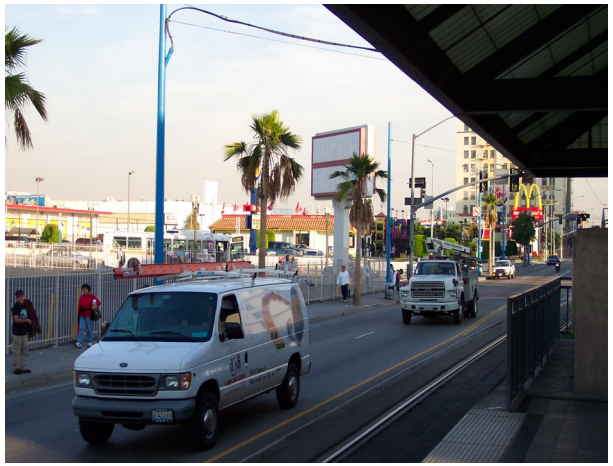
This mix of uses draws from diverse segments of the population. One could characterize the uses as non-complementary, but on the other hand, the diversity increases the potential for an interesting place. There are no uses that repel, except for the expanses

Looking northeast from Grand Station platform

of land devoted to parking. Manufacturing occurs during the day, whereas the Grandoly serves primarily a night-time clientele. The LA Trade Tech has day and night classes. McDonalds and Burger King provide the glue for the neighborhood…but gaining access to these places is more comfortable by car, even if one is just down the block. There is just not enough development here.

The photos show that only Pac Bell, LAMart, Municipal Courts, and the renovated office building are above two stories high.

As a percentage of the whole area -- approximately 125 acres within a one-quarter mile radius -- the allocation of land is very roughly as follows:



Looking northeast from Grand Station platform

General commercial	8.9%
Restaurant/Retail	.1%
Office	0%
Industrial	14%
Housing	0%
Public facility	14%
Subtotal built form	***37%***
Parking lots	20%
Streets and sidewalks	43%
Subtotal open land	***63%***

As the Grand Station platform is about three feet above street level, one exits the station via a long guard-railed cattle-chute-like ramp, toward the crosswalk. Heading south, one crosses three traffic lanes, one of which accommodates the light rail tracks. Turning back west on the sidewalk, one notices that a row of palm trees has been planted along both sides of this block. The sidewalks are neither wide nor narrow, but they are maintained and swept. The main thing is that

Exiting the platform via the chute

very little if anything opens onto the sidewalk. One walks along buildings or fences or parking lots, but has little opportunity to enter or interact. The LA Trade Tech is like an impenetrable compound, with no windows and few gates that open.

The freeway is located about 600 feet north of the station. This massive structure provides a build-to line, creating a potential development swath or precinct south of the freeway, between Figueroa and Main. Freeway noise and dirt also make adjacent occupied spaces less attractive – but this is not the same problem however, as attempting to make a transit-oriented district around transit stations located *in* the freeway, such as the Green Line. Here, low and mid-rise buildings can put their backs to the Santa Monica freeway and open themselves to the south light.

The Grand Station area is essentially flat,

Looking toward downtown from Grand Station area

however, between Washington Boulevard and Pershing Square in downtown, there is a 60 foot rise. To Bunker Hill, at 3rd and Grand, there is a 200 foot grade change, from Elevation 200 to 400. So there are notable north-facing views from this area to downtown LA.

Walking east-west along Washington now feels rather windblown, due to all the gaps in the streetwall. One passes fenced-in parking lots, drive–thru fast food joints, high fences around LA Trade Tech, and the rock garden. The blocks are only 250 feet long however, which makes walking efficient.

To the south of the station, the blocks are

long again -- about 900 feet long, and one owner typically holds the entire block, which makes the blocks seem longer. Again, there is very little opportunity for engagement.

Potential for Development

MTA's average weekday on/off activity data reveal that the travel pattern at Grand is northbound/exiting, southbound/boarding. Grand is probably both a 'destination station' and a transfer point. Just steps away from the Metro station, one can catch a bus on Grand, Washington, Figueroa, and Broadway. Walking north of the freeway on Grand, one can access the freeway-routed buses to Santa Monica and LAX. Therefore it makes sense that MTA is planning the Exposition light rail line to connect within a block of the Grand Station area to head west. This area is already an important hub for the City. It is a good beginning of a real place.

Compared to the ridership projections from 1984, current ridership at Grand Station is 121% of the projected. It is important to note that the projections anticipated two stations in this area, whereas only Grand Station was built, half-way between the two.[4] This undoubtedly contributes to Grand's high ridership activity, compared with other Blue Line stations.

Development *around* the Grand Station area is taking place: To the north of I-10, housing is being constructed in South Park. Along with the Staples Center expansion, a hotel is planned near Staples, as is housing for University of Southern California.

Washington Boulevard is the spine of a potential Grand District. The head of the district would be the parcels across Figueroa – now a car dealership and a box-like manufacturing building – and it would ideally participate in the public, regional functions, being developed a couple of blocks to the north, and would provide an entrance to the more intimate Grand District. In addition to the existing kinds of industrial uses, new high tech or biomedical industrial uses could thrive in this area, building upon the proximity to USC, LA Trade Tech, and the Orthopedic Hospital to the south. And housing could fit well on top of these uses. Mid-rise housing close to the freeway could open to the southern sunlight. On the parcels south of LA Mart and the PacBell building, housing could be taller to capture the views to downtown LA.

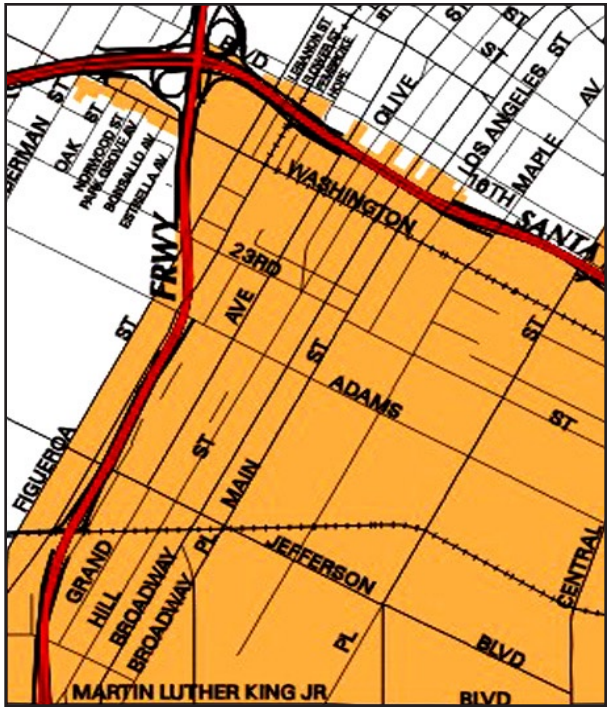
[1] Grand Olympic Auditorium. Events. [http://www.grandoly.com]. Accessed April 12, 2003.
[2] LA Mart [http://www.lamart.com]. Accessed April 12, 2003.
[3] Superior Court of California, County of Los Angeles, 1945 S. Hill Street, Los Angeles, California 90007
[4] In the 1984 EIR, stations were planned at 18th Street and Flower, and Washington and Broadway.

The Planning Context

The Grand Station area, as part of Southeast Los Angeles, has been included in a number of planning and development efforts over the years. We will trace them to see what is in store for this area.

Enterprise Zone

The area shown on the map below is part of the Central City Enterprise Zone, established in 1993. To businesses within the Enterprise Zone, this State program offers financial benefits including tax credits for hiring employees, for the purchase of machinery, for property for manufacturing, and deductions on earned interest. It also allows businesses to pay reduced utility charges and go through a simplified site plan review and

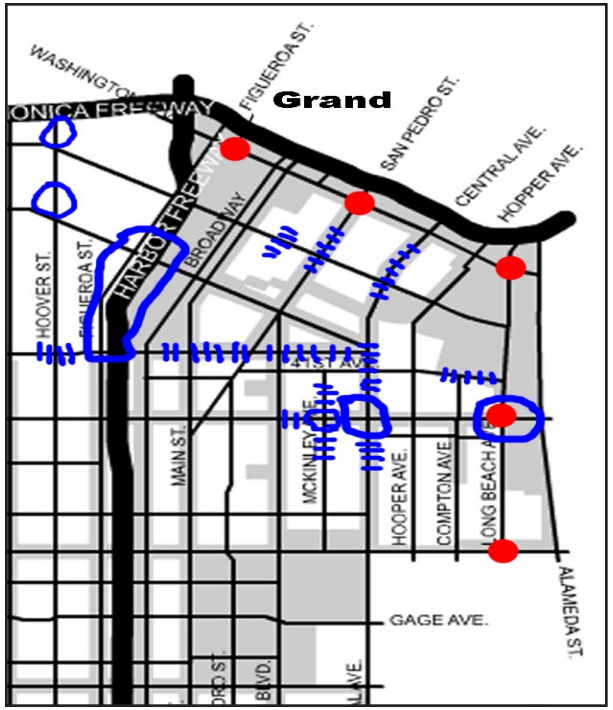


Map right:
1993 Central City Enterprise Zone Map.
[http://www.lacity.org/cdd/business].
Accessed April 7, 2003.

Map far right:
1995 CRA Corridors, Council District 9.
[http://www.ci.la.ca.us/cra/cd9.html].
Accessed April 6, 2003;
Framework Element growth areas added.

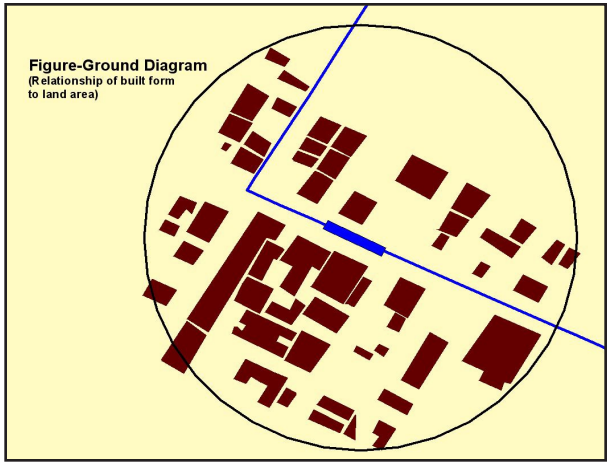
permit process. Enterprise Zone businesses may be allowed to waive parking space requirements for selected uses such as "office, retail, restaurant, bars, and similar high-trip generating uses in order to allow for continued business growth."[1]

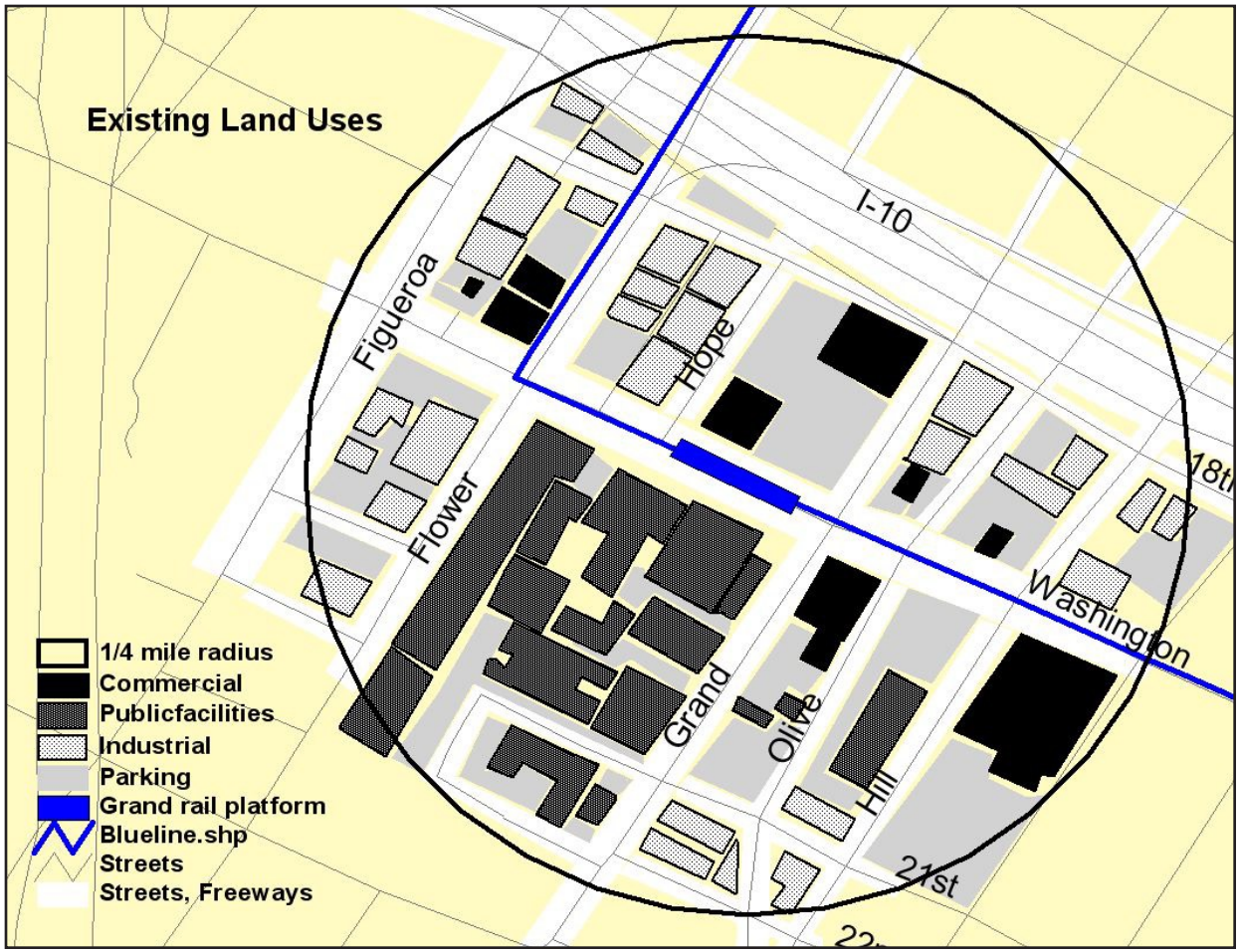
CRA Council District 9 Corridors Project
In 1995, the Los Angeles City Council adopted the *Recovery Redevelopment Plan for the Council District Nine Corridors South of the Santa Monica Freeway.* The project area includes commercial and industrial corridors throughout much of Southeast and South Central Los Angeles. The project's purpose is to "develop job-producing programs and to revitalize the major commercial and industrial corridors in the area."[2] Primary



Map below:
Existing land uses are shown. The LA Trade Technical College and the Municipal Courts Building are designated as Public Facilities. Notice the amount of land used for parking and one-story industrial warehouses.

Map at right:
Figure-Ground Diagram shows the ratio of built form to land area in one-quarter mile radius of station. Taking into account the I-10 freeway, there is a lot of undeveloped or underdeveloped land within the easy walking distance of the station.





concerns are the physical deterioration of buildings and streetscapes, broken sidewalks, graffiti, a lack of commercial facilities, the presence of incompatible uses, and the development of new industrial developments.[3]

Much of the redevelopment effort is targeted to areas south of Washington Boulevard -- Central Avenue Historic District, Slauson/ Central Shopping Center, Brownfields Economic Development Initiative (BEDI) project within the Goodyear Tract. This project focuses on commercial streets and places no particular importance on Blue Line stations as new development sites.

Southeast Los Angeles Community Plan
City Council approved an update to the 1979 Southeast Community Plan in March 2000 for a planning horizon of 2010. As of April 2003, the updated text is available to the public, however the maps are not. Referring to his map marked with changes, the City planner for this community plan area relayed that there are "no major changes" to the land use designations shown on the 1990 Community Plan.[4] Even at Grand Station, there is "no change."

The text of the Community Plan discusses the concept of building more densely around transit stations. It specifically mentions its consistency with the Land Use Transportation Policy of 1993, part of the Transportation Element of the General Plan. It says that transit-oriented districts are established in the plan area. However, the City planner for the area said that "TOD was never implemented in this area. There was talk of doing it, possibly around the Blue Line station in Watts, but it was not implemented and it won't be shown on the updated Community Plan map."[5]

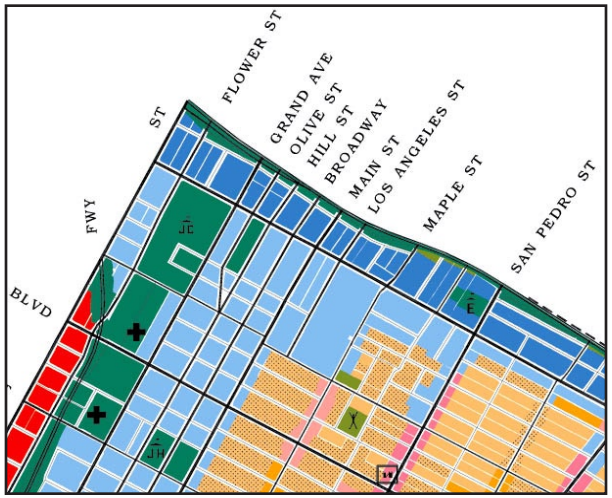
The plan states, "While it is anticipated that within the time frame of the Community Plan the private automobile will remain one of the principal modes of transportation, bus service will provide the basic public transportation system until the proposed Metro Rail projects are operational."[6] It is not clear what these Metro Rail projects are. The City planner said that these projects were discussed years ago but they have fallen by the way-side.

It seems that the plan puts a high priority on preserving, upgrading and where possible, expanding the "industrial areas associated with the railroad transportation facilities along Alameda and in the Slauson area."[7] Only increased commercial development, compatible with industrial, around the Blue Line stations is encouraged.[8] It seems to write off TOD at the light rail stations. The cost of clean up of industrial lands may be an economic deterrent to changing the land use. The City planner did not agree that the City has "written off" the Blue Line stations. He felt that a more accurate analysis of the situation is this: "Planning resources in the

Map right:
1990 Map excerpt - Southeast Los Angeles Community Plan

Map middle:
Close-up of land use at Grand Station. The area is Industrial except for the Public Facility designation at LA Trade Tech, Municipal Courts, and freeways.

Map far right:
2001 LA City Framework Element Long Range Land Use Diagram. [http://www.lacity.org/PLN]. Accessed April 7, 2003. Blue Line light rail stations added.



U.S. are limited. The idea of TOD around transit stations would require upzoning. This is difficult because of Proposition U, which reduced the allowable floor area ratio from previous zoning. It is also difficult because of potential claims of property right infringement due to anticipated increased traffic congestion at the TOD."[9]

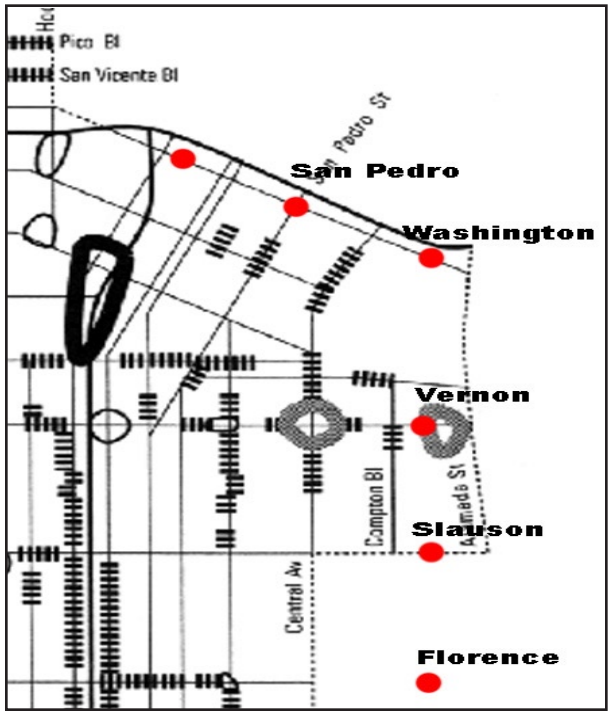
The bottom line is that the Southeast Los Angeles Community Plan ignores the Blue Line light rail stations when it considers transit-oriented development. These stations are primarily for passing through. The plan favors reinvestment in the existing and historically important commercial and residential districts. There is no mention in this community plan of the Framework Element of the General Plan, which was first written in 1996, and which places so much emphasis on targeting growth especially in proximity to transit.

The Framework Element

As shown on the map at left, the entire Blue Line corridor is a "conservation area." Despite the Framework's emphasis on targeting growth, particularly in proximity to transportation corridors and transit stations, the Blue Line is left out. Just as the Community Plan ignores these stations, so too does the Framework Element of 2001.

Conclusion

What do we make of this land use planning? Industrial lands are important. Clean-up in some areas could be economically untenable. Existing commercial and residential areas undoubtedly can use all the revitalization efforts and dollars available. This is not unreasonable. So what about the transit planning, and the decision to locate the Blue Line in an industrial corridor? It seems that taking the path of least resistance, as the planners and decision-makers of the Blue Line did -- using old abandoned rail tracks on the fringe of a community – is in the long run, a terrible waste of precious transit resources.



Population growth and income

In the two census tracts which are adjacent to the Grand station, the number of housing units per acre ranges from 3 to 4, and the total number of housing units is 1,574. A third of this housing was built prior to 1939. The low density of housing units per acre is due to the fact that this is largely an industrial area. Median income levels in the two tracts adjacent to the station range between $17,587 and $22,303.

Ridership

In the 1984 EIR, projections for Grand were 3,333 average weekday boardings. In 2002, the estimated actual average weekday boardings were 4,028 or 121percent of projected. Population in the two tracts adjacent to the station is 4,956. From the 2000 census we know that of those who work outside the home, 39 percent travel to work by public transportation, by rail or bus transit, 21 percent travel to work by walking, and 39 percent travel by car, truck or van.

[1] Los Angeles City Clerk's Office. Enterprise Zones. [www.lacity.org/cdd/business]. Accessed April 11, 2003.
[2] Los Angeles Community Redevelopment Agency. Council District 9 Corridors Project. [www.lacity.org/CRA]. Accessed April 12, 2003.
[3] Los Angeles Community Redevelopment Agency. Council District 9 Corridors Project. [www.lacity.org/CRA]. Accessed April 12, 2003.
[4] Southeast LA Planner. LA City Planning Dept. Phone conversation. April 16, 2003.
[5] Southeast LA Planner. LA City Planning Dept. Phone conversation. April 16, 2003.
[6] LA City Planning Dept. 2000. *Southeast Los Angeles Community Plan*. Los Angeles: City of LA. March 22. Pg. III-26.
[7] LA City Planning Dept. 2000. *Southeast Los Angeles Community Plan*. Los Angeles: City of LA. March 22. Pg. III-13.
[8] LA City Planning Dept. 2000. *Southeast Los Angeles Community Plan*. Los Angeles: City of LA. March 22. Pg. 111-27.
[9] Southeast LA Planner. LA City Planning Dept. Phone conversation. April 16, 2003.

Parking within the One-Quarter Mile Radius of the Civic Center Metro Red Line Stations*

Parking Garages	Spaces
200 Spring	465
215-45 N. Grand	1,485
131 S. Olive	1,295
120 S. Hope	2,500
111 N. Hope	2,300
555 W. Temple	600**
Total	8,645

Parking Lots:	Spaces
232 N. Grand	18
331 N. Grand	72
120 S. Olive	210
210 W. Temple	1,059
211 W. Temple	213
120 S. Main	524
Total	2,096

GRAND TOTAL	**10,741**

*Melendrez Babalas Associates, Johnson Fain Partners, RAW International, Suisman Urban Design, Landmark Partners. 1997. *Los Angeles Civic Center Shared Facilities and Enhancement Plan*. Los Angeles Civic Center Authority. Los Angeles: Reissued by the Los Angeles Civic Center Public Partnership, Inc. March 2000. Pg. 12.

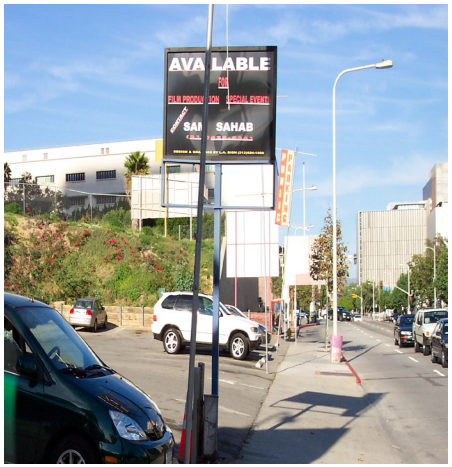
**http://california.construction.com/CACN/CA-features/CA-june01feature9-3.htm

---

Photos this page: Parking signs

Photos facing page:
Left: City Hall with ramp to parking under Civic Garden in foreground.

Right: Exiting the Civic Center north portal. County Courthouse and Bunker Hill highrises in background.



Civic Center

History and character

A quarter of a mile north of Civic Center, across the Hollywood Freeway, El Pueblo Historic Park is considered to be the birth-place of Los Angeles. Between 1760 and 1930, this area evolved into the Los Angeles regional hub for the railroads, manufactur-ing, retail and entertainment.[1] Today, the Civic Center area "straddles the City's origi-nal settlement and area of first expansion."[2]

City Hall and the County Hall of Justice were built in the 1920s. The U.S. Courthouse, just east of City Hall was built in 1940. But the character of Civic Center is best described by architect Charles Moore: "Ah, the sixties!"[3] During that era, Richard Neutra designed the Hall of Records, and Welton Becket designed the notable Music Center atop the hill above Grand Avenue.

Kevin Lynch recorded in his book, *Image of the City*, that within central Los Angeles, most people recognize the Civic Center district. "The Civic Center is strongest, because of its obvious function, size, spatial openness, new buildings, and definite edges. Few fail to remark it."[4]

Walking to and from the station

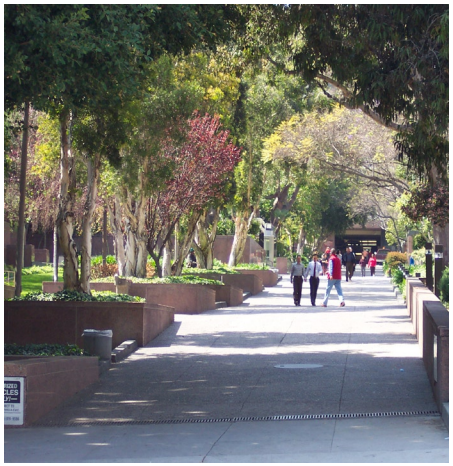
Bounded by the County Courthouse and the County Hall of Administration , the Civic Garden-over-Parking spans between Grand Avenue and Hill Street, where the Metro Red Line station is located. To walk back up to the Music Center from this station, one crosses Hill, selects the pedestrian way from the parking ramps and enters the garden. The government buildings flank the garden, but since they do not open into it, one feels a bit isolated and cut off. The garden is well landscaped, however, and contains a vintage 1960s saucer-shaped fountain. The approxi-mately 1,000 foot long walk to the Music Center ends in some hard turns to cross over the western entrances to the underground parking garage. From there, one crosses Grand and takes the monumental stair up to the Music Center. This is one way to get there.

Most people drive. According to Charles Moore, you have to drive if you want to enter the front door. About the Music Center he wrote in 1984, "It's all very L.A. and many people love it. But think what a wonderful acropolis might have ensued if . . .the designers might have remembered that you have to *get* to an acropolis. . .The main access to the Music Center is up from the basement parking. Otherwise you crawl up some emergency stairs that allow you to feel you've arrived at the service entrance. You feel really silly if you've gotten all dressed up."[5]

A 1997 study by a team of architects and urban designers, the Los Angeles Civic Center Shared Facilities and Enhancement Plan (LACCSHEP), addresses these and many more ceremonial and access issues related to the experience of walking around the Civic Center. The study recommends "breaking down or re-configuring the walls at each auto ramp for improved vis-ibility and pedestrian access into the Civic

Photo right:
Looking west into the Civic Garden

Photo far right:
Looking north along Hill Street, at ramp into parking garage under Civic Garden



Garden."[6] Possibly resulting from this study, a streetscape project along Grand, between the Music Center and the Civic Garden, is currently under construction.

The Hollywood and Harbor freeways frame the Civic Center area but they do not impact the most common walking journeys from the Red Line station portals to the numerous state, federal and local government buildings, the Music Center, and apartments on Bunker Hill.

If one were going to walk from the Bunker Hill apartments, which are within a one-quarter mile radius of the south portal, one would pass parking lots on the left side of Hill Street, and parking garages on the right. The photos below show that on Hill Street between Second and First there is no opportunity to take care of chores; this environment does not sustain the pedestrian's interest; it is not comfortable to walk, and it may be unsafe at night. A study conducted by UC Berkeley Professor Robert Cervero showed that having stores between a transit stop and one's residence "increases the share of work trips via transit by several percentage points. . .transit riders can then do their shopping en route home in the evening, thus linking work and shop trips in a single tour."[7]

Hill Street is quite wide south of First. The sidewalks and trees appear to be new, so a decision may have been made not to provide this stretch with the smaller-scaled landscaped-median roadway treatment that was used for the next block north.[8] Yet, this block of Hill is a critical link for residents of the only area of housing in the Civic Center station area. The fact that the block to the north was rebuilt with the median indicates that there is no overriding traffic issue that would preclude the same treatment to the south.

From the south portal of the Civic Center station, if one were to walk up First Street, up toward Grand and the Disney Hall, parking is on the left and the County Courthouse sits like a long bank vault on the right. The elevation change from Hill to Grand is about 50 feet over a 1,000 foot length, so at 1:20, this is still a "walk."

Development Potential

The walk from the south portal up First Street cries out for some diversions along the way. If one turns back east, one can enjoy a view of the valley and mountains beyond, complete with alpine glow. The south side of First could be lined with restaurants with tiered patios that open onto the view. This is a walk meant for business lunches, early evening dinners, after-concert gatherings, or just enjoyment of the way to the Metro station after a long day at work.

The LACC Shared Facilities and Enhancement Plan has a similar vision: "First Street should become the main Civic Boulevard through the Civic Center."[9] Its characteristics are:

• A pedestrian promenade with a mix of uses and "numerous front doors on First Street."

Photo left:
Looking north on Hill Street. Parking lots on the left, garages on the right.

Photo far left:
Looking south on HIll Street. Bunker Hill apartments on right.

• A ceremonial aspect achieved through landscaping -- sidewalk and median processional tree canopy with lights.
• At Olive Street, a "green 'finger" or pedestrian way would be cut through the County Courthouse to connect with the Civic Garden. (This may be a pipedream, although it would dramatically change the Civic Garden, and give it a sense of belonging to the outside world.)

Many new projects are scheduled in this immediate area. For instance, the State Office Building at First and Hill is vacant and waiting for demolition. Some parking structure land will be redeveloped into housing. There are opportunities for positive change, and possibly the Hill Street width and sidewalk treatment will change too. But according to the City planner for this area, only Grand Avenue has been "redesignated" so that it can become the "cultural corridor" of downtown, a "showcase street." Because of the redesignation from a "secondary highway", the street width can vary to allow different streetscape treatments and wider sidewalks.[10] Shouldn't all of the streets in the area immediately around a rail transit station be redesignated to better accommodate the pedestrian?

Parking

Johnson Fain Partners, architects for the LACC Shared Facilities and Enhancement Plan, wrote that "by supporting government's investment in transit through the development of a pedestrian-oriented Civic Center, automobile trips will be reduced in the Civic Center area."[11] Unfortunately, the parking at Civic Center tells a different story.

Using the LACCSFEP document as a data source for parking, and adding in the parking at the Cathedral of Our Lady of the Angels, there are 10, 741 parking spaces in the area within a one-quarter mile radius of the rail transit stations. Averaged across approximately 166 acres in the combined one-quarter mile radius around the two station portals, there are 65 parking spaces per acre. If one figures an average of 300 square feet per space and related aisles, and if the spaces were all on-grade, 10,741 spaces equates to approximately 45 percent of the area within a quarter-mile walk of the station. Eight thousand of the spaces are in above- and below-ground garages, but the point still stands. UC Berkeley Professor Christopher Alexander wrote in *A Pattern Language*, "Very simply – when the area devoted to parking is too great, it destroys the land. Very rough empirical observations lead us to believe that it is not possible to make an environment fit for human use when more than 9 percent of it is given to parking."[12]

The parking at Civic Center was constructed over more than thirty years. Throughout much of this time, the accepted planning approach was to require enough parking spaces so that all drivers can park free. UCLA Professor Donald Shoup has portrayed the approach of requiring parking minimums to a paradigm, overdue to shift. Shoup cites Thomas Kuhn on paradigm shifts, "How

Photo left:
From the parking lot south of Olive, looking northwest toward Disney Hall, Music Center, County Courthouse

Photo middle:
Turning west from the Red Line South Portal, this view shows the south side of First Street.

Photo right:
North side of First Street.

can a conceptual scheme that one generation admiringly describes as subtle, flexible, and complex become for a later generation merely obscure, ambiguous, and cumbersome?"[13] Minimum parking requirements are based on "the shaky foundation. . .of motorists' yearning to park free. . .without doubt, minimum parking requirements are obscure, ambiguous, and cumbersome. In addition, minimum parking requirements impose enormous hidden costs, and they impede our progress toward important social, economic, and environmental goals. Planning for parking deserves a new paradigm."[14]

The alternative is to "reduce demand rather than increase supply. . .For example, offering free transit passes to commuters will reduce the demand for parking at work. . .Suppose that providing free transit passes to the employees at a site would reduce parking demand at the site by one parking space per 1,000 square feet. In this case, a covenant to provide free transit passes to employees at the site is an appropriate alternative to providing one required parking space per 1,000 square feet."[15]

Another example is to "let prices do the planning. . . If cities priced curb parking to balance supply and demand with a few vacant spaces on every block, motorists could always find a convenient parking space close to their final destination."[16] Another example is to implement "parking cash out in lieu of required parking spaces -- offer commuters the option to cash out their employer-paid parking. Giving commuters the option to choose between free parking or its cash value makes it clear that even free parking has a price – the foregone cash."[17]

More innovative planning for parking is being done now at Civic Center. The Central City Community Plan includes provisions on shared parking to utilize spaces around the clock. It also includes policies to "limit parking to 0.60 spaces per 1,000 square feet of office space. . .[for] new office construction of over 100,000 leasable square feet within the Downtown Traffic Impact Zone. . .and constrain on-site supply in the CBD. . .and focus increasing emphasis on intercepting automobile travel further and further from the CBD."[18]

It would be good to see the abolition of all minimum parking requirements at least within one-quarter mile of the rail transit station portals. This might not have kept Disney Concert Hall and The Cathedral of Our Lady of the Angels from building their 2,500- and 600-space garages, but it might have. They might have found other uses for the money.

Donald Shoup writes, "Even if a city ceases to require parking spaces, most parking will remain free in the short run because the capital stock is long lived. In the long run, however, no cost is fixed, and nothing is free: without off-street parking requirements, the price of parking will rise toward the cost of providing parking spaces. Cities will become more compact and less automobile dependent over time. Just as cities have

Photo left:
Across Hill Street, looking east toward City Hall.

Photo middle:
Plaza at north portal.

Photo right:
The north portal is on axis with City Hall.

adjusted slowly to the arrival of cars, they will adjust slowly to the removal of parking requirements, because new development will occur in the midst of a largely car-oriented society. It will take decades for cities to recover from the damage that parking requirements have caused, and some of the damage may be permanent. Urban form is "path dependent," and cities that cease to require off-street parking may never resemble cities that never required it. Off-street parking requirements have cemented many planning mistakes into the built environment."[19]

The Plans

The Central City Community Plan, (the land use element of the LA General Plan), and the LA Civic Center Shared Facilities and Enhancement Plan are referenced in this section. Civic Center is one of nine districts within the Central City Community Planning Area. The current Community Plan was adopted by the Los Angeles City Council in January 2003. This plan incorporates many recommendations of the Los Angeles Civic Center Shared Facilities and Enhancement Plan.

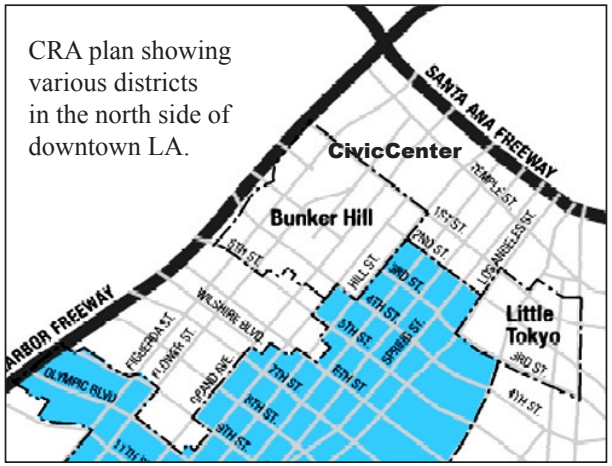
The Los Angeles Civic Center Shared Facilities and Enhancement Plan design study was conducted by the Civic Center Authority with the support of the Central City Association. It is based on the notion that government should continue to be concentrated in Civic Center and not dispersed. Concentration presents opportunities to share facilities and to support a mix of uses including restaurants, entertainment, housing, etc. Sponsors of the plan hope to make Civic Center more truly civic, more active and vibrant.

The Los Angeles Community Redevelopment Agency has three projects in the area -- Central Business District, Bunker Hill, and City Center.

Ridership

At Civic Center, we can see the negative relationship between parking and transit-ridership. In 1989, ridership projections for this station for the Year 2000 were about 24,000 average weekday boardings. In 2002, the estimated actuals were about 5,000 average weekday boardings. In terms of percentage of forecasted ridership achieved, Civic Center has achieved the least of all Red Line stations. Of the four stations we study, it represents the bottom end of the spectrum. At Civic Center, the high density of cars contributes to a non-walking and therefore, non-transit environment.

Christopher Alexander offered this in *A Pattern Language:* "We suspect that when the density of cars passes a certain limit, and people experience the feeling that there are too many cars, what is really happening is that subconsciously they feel that the cars are overwhelming the environment, that the environment is no longer "theirs," that they have no right to be there, that it is not a place for people, and so on. After all, the effect of the cars reaches far beyond the mere presence of the cars themselves. . .Instead of inviting them out, the environment starts giving them the message that the outdoors in not meant for them, that they should stay indoors, that they should stay in their own buildings, that social communion is no longer permitted or encouraged."[20]



CRA plan showing various districts in the north side of downtown LA.

In addition, maybe the rail transit network in Los Angeles is still too undeveloped to effectively serve the large and busy population that is drawn to Civic Center from all parts of the region, from all walks of life, at all times of day. Maybe the low rail transit ridership at Civic Center Station is due in part because people are taking the bus. The Appendix shows there are 86 bus lines that connect at Civic Center. If Los Angeles is truly polycentric or if, as USC Professor Peter Gordon says, LA has gone "beyond polycentricity," are all of these lines still needed?[21] Or is LA really still monocentric? Are bus routes a bell-weather or a remnant of times past?

What is the prospect for transit-oriented development and increased ridership at Civic Center?

The parking decks seem stacked against it. Although much good planning and projects are underway, when new projects like Disney and The Cathedral are allowed to add 2,500 and 600 parking spaces respectively,

hopes for a change from drive-orientation to walk-orientation are dashed. It would have been good to see Disney apply its parking structure funds instead to streetscape improvements and marketing -- to join with the Music Center in a massive campaign about how chic it is to take MetroRail to the symphony. LA could join the other great cities of the world in which people get dressed up and take transit to their event. Marketing is important and Disney has lots of experience at it.

Surface lots can be used for new development. For example, in northern California, at Pleasant Hill, efforts are underway to add development on "what is currently a BART parking lot. This initiative builds upon Toronto's experiences – using publicly owned land, in Pleasant Hill's case, a parking lot, to lure transit-supportive development."[22]

At present, Civic Center could be characterized as *transit-adjacent development*. Efforts to change to transit-oriented development must include streetscape treatments and appropriate widths; bringing residential, restaurants and retail close to the heart, close to Hill between First and Temple; intensive marketing of rail transit; using surface lots for new transit-supportive development; increasing the physical and visual connections with the Civic Garden; and removal of some parking garages, perhaps even the underground garage below the Civic Garden, so it can serve as a real city park.

[1] LACity Planning Dept. 2002. *Central City Community Plan Text.* Los Angeles: City of LA. September. Pg. 5.
[2] LACity Planning Dept. 2002. *Central City Community Plan Text.* Los Angeles: City of LA. September. Pg. 6.
[3] Moore, Charles, Peter Becker and Regula Campbell. 1984. *The City Observed: Los Angeles – A Guide to its Architecture and Landscapes*. New York: Random House. Pg. 15.
[4] Lynch, Kevin. 1960. *The Image of the City*. Cambridge, MA: MIT Press. Pg. 36.
[5] Moore, Charles, Peter Becker and Regula Campbell. 1984. *The City Observed: Los Angeles – A Guide to its Architecture and Landscapes*. New York: Random House. Pg. 15.
[6] Melendrez Babalas Associates, Johnson Fain Partners, RAW International, Suisman Urban Design, Landmark Partners. 1997. *Los Angeles Civic Center Shared Facilities and Enhancement Plan*. Los Angeles Civic Center Authority. Los Angeles: Reissued by the Los Angeles Civic Center Public Partnership, Inc. March 2000. Pg. 12.
[7] Cervero, Robert. 1998. *The Transit Metropolis – A Global Inquiry*. Washington D.C.: Island Press. Pg. 77.
[8] I believe the streetscape project on the block between First and Temple is called the Hill Street Avenida Improvements. Los Angeles Civic Center. [http://www.americancityandcounty.com]. June 1, 2002.
[9] Melendrez Babalas Associates, Johnson Fain Partners, RAW International, Suisman Urban Design, Landmark Partners. 1997. *Los Angeles Civic Center Shared Facilities and Enhancement Plan*. Los Angeles Civic Center Authority. Los Angeles: Reissued by the Los Angeles Civic Center Public Partnership, Inc. March 2000. Pg. 70.
[10] LA City Planner Defenderfer, Patricia. 2003, February 12. Civic Center Planning. Phone conversation.
[11] Johson Fain Partners. 2002. Los Angeles Civic Center. [http://www.jfpartners.com]. Accessed November 22, 2002.
[12] Alexander, Christopher. 1977. *A Pattern Language.* New York: Oxford University Press. Pg. 121.
[13] Shoup, Donald. 1999. Thomas Kuhn quote included in The trouble with minimum parking requirements. *Transportation Research Part A 33.* Elsevier Science Ltd. Pg. 549.
[14] Shoup, Donald. 1999. The trouble with minimum parking requirements. *Transportation Research Part A 33.* Elsevier Science Ltd. Pg. 549, 569-570.
[15] Shoup, Donald. 1999. In Lieu of Required Parking. *Journal of Planning Education and Research. Vol.* 18. Association of Collegiate Schools of Planning. Pg. 316.
[16] Shoup, Donald. 1999. The trouble with minimum parking requirements. *Transportation Research Part A 33.* Elsevier Science Ltd. Pg. 560.
[17] Shoup, Donald.2003. Chapter 10. Reduce Demand or Increase Supply. Manuscript. Los Angeles: UCLA Institute for Transportation Studies. Pg. 107.
[18] LA City Planning Department. 2002. Draft, Central City Community Plan Text. September. Los Angeles: Department of City Planning. Pg. 45, 46.
[19] Shoup, Donald. 2003. High Cost of Free Parking. Manuscript. Los Angeles: UCLA Institute for Transportation Studies.
[20] Alexander, Christopher. 1977. *A Pattern Language.* New York: Oxford University Press. Pg. 122.
[21] Gordon, Peter and H. Richardson. 1996. Beyond Polycentricity: The Dispersed Metropolis, Los Angeles, 1970-1990. *Journal of the American Planning Association*. Volume 62, No. 3.
[22] Cervero, Robert. 1998. *The Transit Metropolis – A Global Inquiry*. Washington D.C.: Island Press. Pg. 94.

Population growth and income
In the three census tracts which are adjacent to the Civic Center station, the number of housing units per acre ranges from 0 to 23, and the total number of housing units is 6,885. Almost half of this housing was built prior to 1939. A big spike occurred between 1980 and 1989, when about 1,750 housing units were built on Bunker Hill. Median income levels in the three tracts adjacent to the station range widely between $6,250 and $25,721.

Ridership
In the 1989 EIR, projections for Civic Center were 23,978 average weekday boardings, whereas in 2002, the estimated actual average weekday boardings were 4,545, or 19 percent of projected. In terms of accessing the station, the EIR anticipated that 12,614 persons would walk, none would park-n-ride, none would kiss-n-ride, and 11,364 would take the bus.

Population in the three tracts adjacent to the station is 8,931. From the 2000 census we know that of those who work outside the home, 15 percent travel to work by public transportation, by rail or bus transit, 22 percent travel to work by walking, while 54 percent travel by car, truck or van.

Photo at right:
Street entertainer on Hollywood Boulevard

Photo far right:
Entering the Babylon Court at Hollywood & Highland

Hollywood & Highland

History and Existing Conditions

From the turn of the century, Hollywood has been the movie-making hub of the world, and as such, is an international tourist destination. Even today, the area contains the largest concentration of film, television and post-production facilities in the world.

Despite this fact, over the past thirty years, Hollywood became dilapidated, deteriorated, and economically in decline. To reverse the decline and initiate redevelopment, the Los Angeles Community Redevelopment Agency (CRA) established the Hollywood Redevelopment Project in 1986. This 1,100 acre redevelopment area centers on Hollywood and Sunset Boulevards and extends from La Brea to east of Western Ave. Hollywood was designated as blighted. The CRA was given the power to accumulate land and manage the financing and development of projects within the Hollywood Redevelopment Plan area.

The Hollywood & Highland station location had been specifically selected to reinforce redevelopment efforts. Neighborhoods in proximity to the rail transit station were anticipated to see an increase in land values. In 1989, the final environmental document for the Red Line characterized the development potential for Hollywood Boulevard and Highland Avenue as "mixed use." Planners sought to establish a direct relationship between the density of land use development and the capacity of the transit line. The Red Line would have the highest passenger capacity of all rail transit in LA.[1] It demanded the creation of high intensity development within the one-quarter mile radius of the station.

In 1996, the LA City Council adopted the Framework Element as part of the LA General Plan. It confirmed the City's commitment to focus growth in limited areas linked by transit infrastructure. It designated Hollywood & Highland as part of a "Regional Center – a focal point of regional commerce, identity, and activity…containing a diversity of uses."[2]

Station area planning

From the start, transit planners set high design standards for the Red Line stations so as to provide a pleasant and safe experience for passengers. With the goal of implementing joint development between MTA and private developers, and maximizing "value capture" possibilities, the station locations within a major activity center were to be such that a comfortable maximum walking distance was maintained.

The CRA requested proposals for station area development at Hollywood & Highland in order to capitalize on the subway, and on the historic and cultural establishments along

Hollywood Boulevard. The development which exists today is an attempt by planners and architects to build something emblematic of the LA culture and to integrate past and future. Because of its unique history and the new development, people from all over the world visit this site.

The development was to be physically integrated with the rail transit station. The particular mix of uses was hoped to enhance the environment for pedestrians in this part of Hollywood, and to increase transit ridership. Additional project goals were to create an anchor development of sufficient critical mass and diversity of use to assure the long-term economic health of the Hollywood community, reestablish the Hollywood identity of the area, achieve high levels of architectural and urban design, and enhance existing historic structures.[3]

The rail transit station opened in 2000. The Hollywood & Highland development was completed in 2001. This 8.7 acre entertainment, retail, and hotel complex anchors the west end of the Hollywood redevelopment area, and is advertised as the new "epicenter of pop culture."[4]

The project was the result of combined financing from CRA, Trizec Hahn Corporation, the City of Los Angeles, and the MTA. It includes 640,000 square feet of shops, restaurants, studio broadcast facilities, plus cinemas, a 550,000 square foot hotel, meeting facilities, a 25,000 square foot grand ballroom, and parking garage. In addition, it includes the 180,000 square foot Kodak Theater, a live broadcast performing arts theater and new home of the Academy Awards presentations. The published construction cost is $615 million with an area of 1.2 million square feet. In addition, a 1.1 million square foot six-level parking structure below the Kodak Theater accommodates 3,000 cars. The project was designed by architects Ehrenkrantz, Eckstut & Kuhn, Rockwell Group and Altoon + Porter.

Development design

On Hollywood Boulevard, the project complements the scale and nature of the existing establishments. The new street

3-D model at right: The Metro entrance is adjacent to the entrances to the Babylon Court, Kodak Theater, and Grauman's Chinese Theater. The Babylon Court is the circular void with the ceremonial archway.

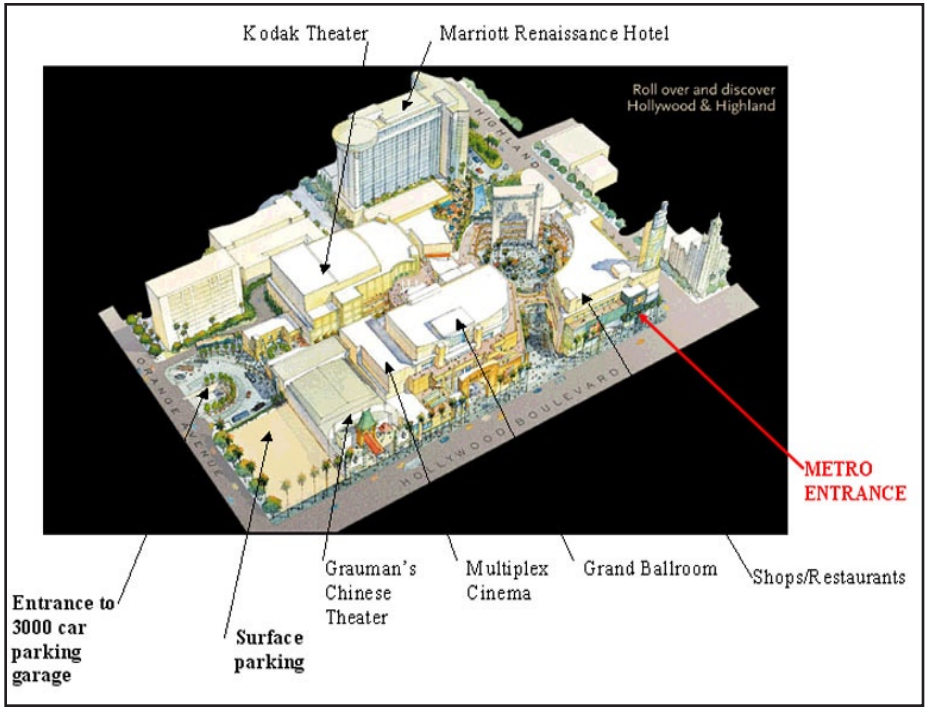


Photo middle: Across the street from the development, looking east on Hollywood Boulevard. One can see the pedestrian activity and the historic buildings.

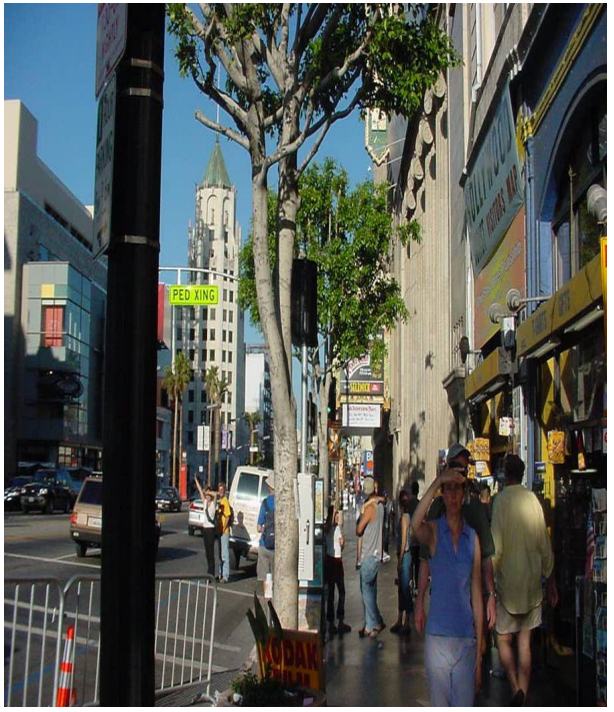


Photo far left: The entrance to the Kodak Theater.

facade continues the individual storefronts, sometimes blowing its own up to mega-scale, enhancing the sidewalking experience. The Hollywood Boulevard streetscape, upon exiting the transit station, presents a richness that results from building up forms and images over time.

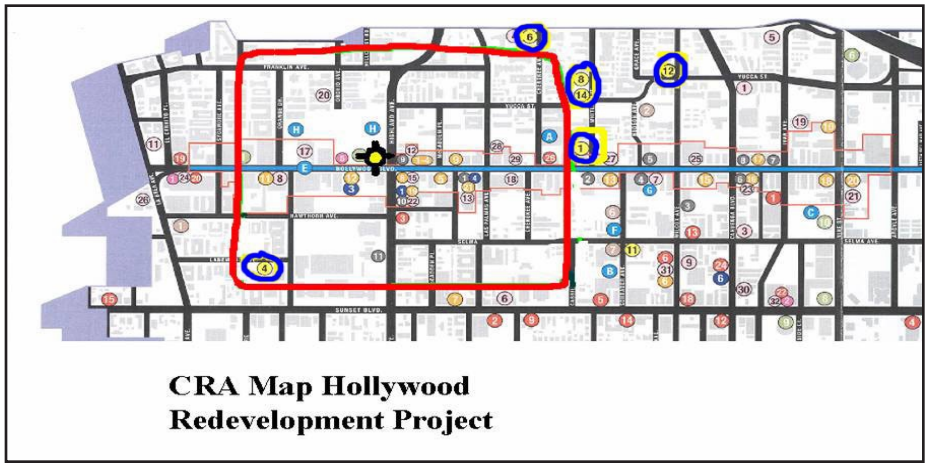
Babylon Court, Hollywood & Highland's major outdoor space, is elevated above the street, and is accessed by a grand outdoor stair. Because many of the new retail stores open into the Babylon Court, they do not benefit from the hordes of passers-by on the sidewalk below. Recent conversations with LA Community Redevelopment Agency staff indicate that while the Kodak Theater is doing very well, and the hotel and restaurants are "fair", the retail is "not doing so well."[5] In this setting, removing the storefronts in both elevation and distance from Hollywood Boulevard may have been a serious error. Last year, architect Andreas Duany, speaking about the body of design experience for liveable communities architects have gathered over the years, said, "We now know the negative consequences of building a main street development that internalizes the stores and sucks the life off the streets."[6] The type of retail may also contribute to its weak market. It is upscale, boutique, and is tailored more to the tourist than the neighborhood.

Housing

Within walking distance from the Hollywood & Highland transit station are many excellent commercial destinations -- El Capitan, Grauman's Chinese, and the Egyptian theaters; numerous historic office buildings, Ripley's Odditoriun, the Roosevelt Hotel, some private housing, and small retail shops. The Hollywood & Highland development itself, includes retail, restaurants, entertainment, hotel, and meeting facilities. But there is no housing to generate 24-hour pedestrian activity. The lack of it undoubtedly contributes to a weak retail market and lower transit ridership.

Hollywood & Highland spurs one to consider the term "mixed use." Getting the proportion of uses right is tricky, but including housing seems essential. As a point of comparison, the mixed use development in Berlin, Potsdamer Platz, dedicated 30 percent of its area to residential use. A residential base can buffer a development from the economic swings that affect tourism.

At Hollywood & Highland, the mix of uses could change to include both tourist and neighborhood venues. In conversations with a City of Los Angeles planner, he said that a critical mass of residential *and* commercial is required to make the Hollywood & Highland area a thriving transit station. "There is a demand for urban housing now,



Map at left:
Partial redevelopment area map, with outline approximately one-quarter mile distance from Hollywood & Highland station. CRA housing projects are located just beyond this distance.

and that is the key."[7]

Most of CRA's housing projects in the Hollywood & Highland area are not within walking distance of the rail transit station. See the map to the left. The square outline indicates a one-quarter mile distance, the dots indicate CRA redevelopment projects. The five large circles mark CRA housing projects, only one of which is within the one-quarter mile distance from the station. There is plenty of usable land however, currently occupied by surface parking. The aerial photo below shows the number of parcels currently devoted to surface parking lots.

Christopher Alexander, in *A Pattern Language*, said "The system of public transportation...can only work if all the parts are well connected. . . It is therefore only possible for systems of public transportation to work, if there are rich connections between a great variety of different systems."[8] Parking lots do not make the "rich connections" necessary to support the rail transit system.

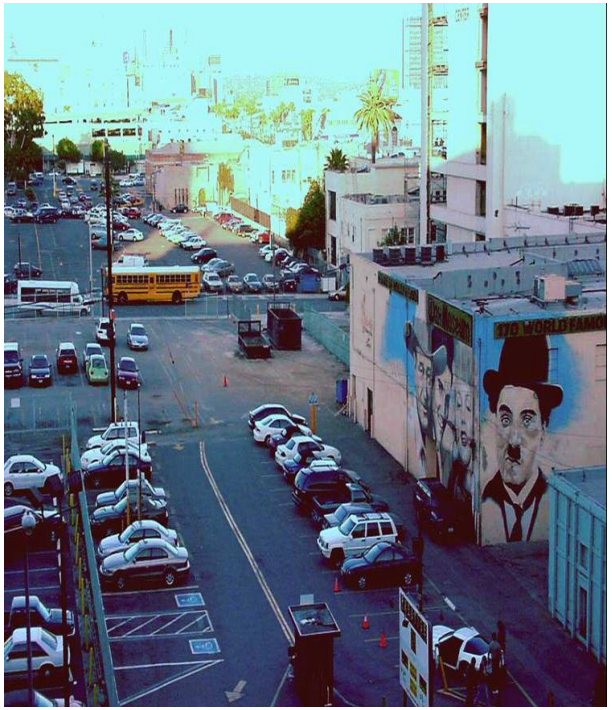
Parking

The park-n-ride concept is implemented for stations which are considered "origins", typically located at the ends of lines or in less urban locations. According to one transportation planner at the Los Angeles County Metropolitan Transportation Authority, MTA did not consider Hollywood and Highland to be an "origin," but a "destination station," because of the combined mass of retail, hotel, historic and entertainment venues in the area. The 3,000 car parking garage built as part of this development was a result of other motivations.[9]

Many parking lots already existed in the area. The Hollywood & Highland garage was constructed because the developer, Trizec Hahn, claimed that parking on that scale would be necessary to compete with other developments in the country. In a conversation last year, an LA Community Redevelopment Authority staff person said that his agency recognized that generous parking would undermine transit ridership, but it agreed to it, based on a concern for

Aerial photo right:
The Hollywood & HIghland development is marked by the dot. Parking areas within one-quarter mile of the station are shown outlined.

Photo far right:
Surface parking in the block east of Highland Avenue.



the development project's economic viability. He provided the rationalization that rail transit, especially a subway, "is a 100-year investment, and that the long-term transition from car to transit dependency in Los Angeles, requires the construction of parking in the short term."[10]

So, the side streets of Highland and Orange were surrendered to the automobile, with wide driveways marked with monumental signs to announce parking. The pedestrian was outgunned. A City of Los Angeles planner said parking lots are like "Nicoderm or methadone, we need these substances to wean people out of their cars. Unfortunately, we can't just stop building parking lots where there are transit stations…but we should have been a little tougher, been more anti-parking, at Hollywood & Highland".[11]

There are currently five or six projects planned for the Hollywood and Vine rail station location, and each one is projected to have a large parking garage attached. Maybe these can be reduced or stopped. As Moms Mabley said, "If you always do what you always did, you will always get what you always got."

MTA Parking Policy

Although it "currently controls approximately 15,000 public parking spaces throughout the MTA Metro system," MTA proposed, in January 2003, a new parking policy to answer a perceived demand for additional parking "at certain critical Metro Stations. . .[since] auto usage represents over 85% of the regional trips, [and] adequate parking near transit facilities is a crucial component of the transit system."[12] As shown on the Station Data Chart on page 29, many stations are already provided with parking. Implementing more park-n-ride stations depletes potential for transit-oriented development, for *transit-supportive land use*. It works against MTA's own Joint Development policy, and against the LA General Plan Framework Element strategy for "targeted growth" at transit stations.

The most ambitious of the individual policies are listed last:[13]

Policy 6.1 – Work with cities to develop bet-

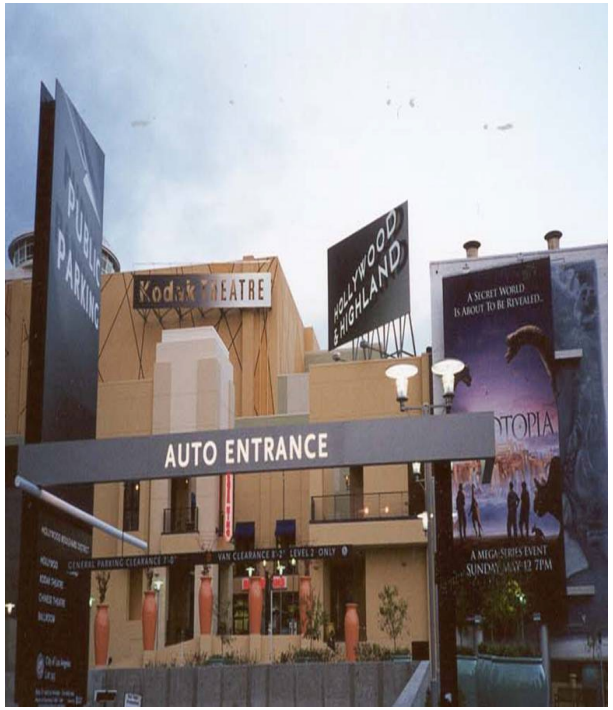


Photo left:
One Level of 3000 Car Park, Sunday afternoon

Photo far left:
Entrance to 3000 car park on Orange Avenue

ter land use and transportation integration; Policy 6.2 – Work with state and local jurisdictions to change ordinances that improve local parking controls. This includes parking benefit districts, reduction of employee parking subsidies, cash out of free parking so employees who use transit receive a comparable benefit.

One hopes that the more difficult policies will be attempted, and that MTA will not simply open new lots and build new structures after quick consultation with those in the immediate locale.

MTA Joint Development Policy

Typically, the joint development program is meant to secure private development on MTA-owned land. However, MTA need not own land adjacent to its transit stations in order to implement the policy:

"Joint Development also includes coordination with local jurisdictions in station area land use planning in the interest of establishing development patterns that enhance transit use."[14]

The goals of Joint Development are to encourage comprehensive planning and development around station sites, and to reduce auto use and congestion through encouragement of transit-linked development.[15] According to the policy, for each joint development site, the MTA retains responsibility and authority for the "intensity and type of land uses *that the MTA desires* for that site", while consulting "with local jurisdictions and with community input."[16]

The LA General Plan Framework Element, the City's strategy for growth, calls for focused growth "in a number of higher-intensity . . .districts. . *.particularly in proximity to transportation corridors and transit stations*."[17] It says clearly that "transit stations [are] to function as a primary focal point of the City's development."[18] The Framework warns that concerted effort will be required to make it work, that the vision "cannot be achieved. . .without some difficult decisions to support the facilities and the behavioral changes that are incorporated within the vision."[19]

The Framework Element lays down a challenge for both land use and transportation planners. Transportation planners need to take responsibility for land development. Land use planners should not toss aside the long-term strategy for growth when presented with low ridership counts. Joint development means just that – joint. Hollywood & Highland was in part a Joint Development project.

Hollywood & Highland – An assessment

The station is located right in the center of the historically important Hollywood destinations. It is not off to the side or an inconvenient distance away. Ridership at this station should continue to increase year after year, as transit-supportive development clusters around the station. Despite its somewhat weak retail market, the Hollywood & Highland development project is an asset to the area – it is a catalyst for other revitalization efforts. It draws tourists, movie-goers, shoppers and audiences for the broadcast studios, and it accommodates large events, conferences, and ceremonies in the theaters, ballrooms and hotel. Interestingly, the parking garage is not used as much as was anticipated. The parking fee was reduced from $10-11 to $2, as an inducement.

To strengthen the station area developments within a quarter-mile and to increase transit ridership, a two-pronged approach is suggested:

Focus on neighborhood venues:

- Build a range of housing -- luxury, medium and low income. High rise and mid-rise are appropriate, and the Framework Element's "Regional Center" designation supports these urban forms. Topographically, this is a highpoint in Los Angeles. There is a three hundred-foot grade change from Hollywood Boulevard to the Santa Monica Freeway. South facing views of the whole valley are ready for the taking.
- Integrate more neighborhood retail, restaurants and a grocery store.
- Market the transit lifestyle as a housing amenity.

Focus on the entertainment venues:

- Market rail transit as part of the entertainment experience for both the tourist

and the movie star. For example, ***Gwyneth Paltrow takes MetroRail to the Academy Awards.*** Rail transit can be glamorous and it could be advertised as such. For example, ***MetroRail is "the real kiss-n-ride."***[20]

[1] For standing loads, the Red Line can carry 56 percent more persons than the Blue Line, and 100 percent more than the Green Line.
[2] Los Angeles City Planning Department. 2001. *Citywide General Plan Framework, An Element of the Los Angeles City General Plan*. Los Angeles: LA City Planning Department. Pg. 3-23.
[3] Community Redevelopment Agency of the City of Los Angeles, RFP
[4] http://www.hollywoodandhighland.com/infofacts.html (Trizec Hahn website)
[5] CRA Interview, 2/5/03
[6] Wright, Steve. 2002. Architect Andreas Duany at the Congress for New Urbanism Conference, June 2002. Urban Laboratory. *UrbanLand*. October. Volume 61. Number 10.
[7] City of LA Planning staff interview, 5/9/02
[8] Alexander, Christopher (1977). "Web of Public Transportation", *A Pattern Language*, Pg. 92
[9] MTA staff interview, 5/2/02
[10] CRA staff interview, 5/2/02
[11] LA City planner interview, 5/9/02
[12] LACMTA. 2003. *Draft MTA Systemwide Parking Policy*. Agenda item to Planning and Programming Committee. January 15. Pg. 4.
[13] LACMTA. 2003. *Draft MTA Systemwide Parking Policy*. Agenda item to Planning and Programming Committee. January 15. Pg. 7.
[14] LACMTA. 2002. *Joint Development Policies and Procedures*. May. Pg. 1.
[15] LACMTA. 2002. *Joint Development Policies and Procedures*. May. Pg. 1.
[16] LACMTA. 2002. *Joint Development Policies and Procedures*. May. Pg. 2.
[17] Los Angeles City Planning Department, 2001. *Citywide General Plan Framework, An Element of the Los Angeles City General Plan*. Los Angeles: LA City Planning Department. Pg. 3
[18] Los Angeles City Planning Department. 2001. *Citywide General Plan Framework, An Element of the Los Angeles City General Plan*. Los Angeles: LA City Planning Department. Pg. 3-35.
[19] Los Angeles City Planning Department, 2001. *Citywide General Plan Framework, An Element of the Los Angeles City General Plan*. Los Angeles: LA City Planning Department. Pg. 8-1.
[20] Herre, Susan. 2002. University of California Los Angeles.

Below:
Sample advert for MetroRail
by Susan M. Herre, AIA

Hollywood & Highland

Population growth and income

Between 1980 and 1999, the area population grew at twice the rate anticipated in the land use plan – at 1.4 percent per year instead of .69 percent.[1] By 1999, the Hollywood Community Plan Area had a total population of 230,090 with 100,840 dwelling units, 80 percent of which is multi-family.

In the three census tracts which are adjacent to the Hollywood & Highland station, the number of housing units per acre ranges from 10 to 37, and the total number of housing units is 8,651. A quarter of this housing was built prior to 1939, and the remainder was built in approximately 1,000 unit increments in each following decade. The median household income ranges from $19, 317 to $27,872.

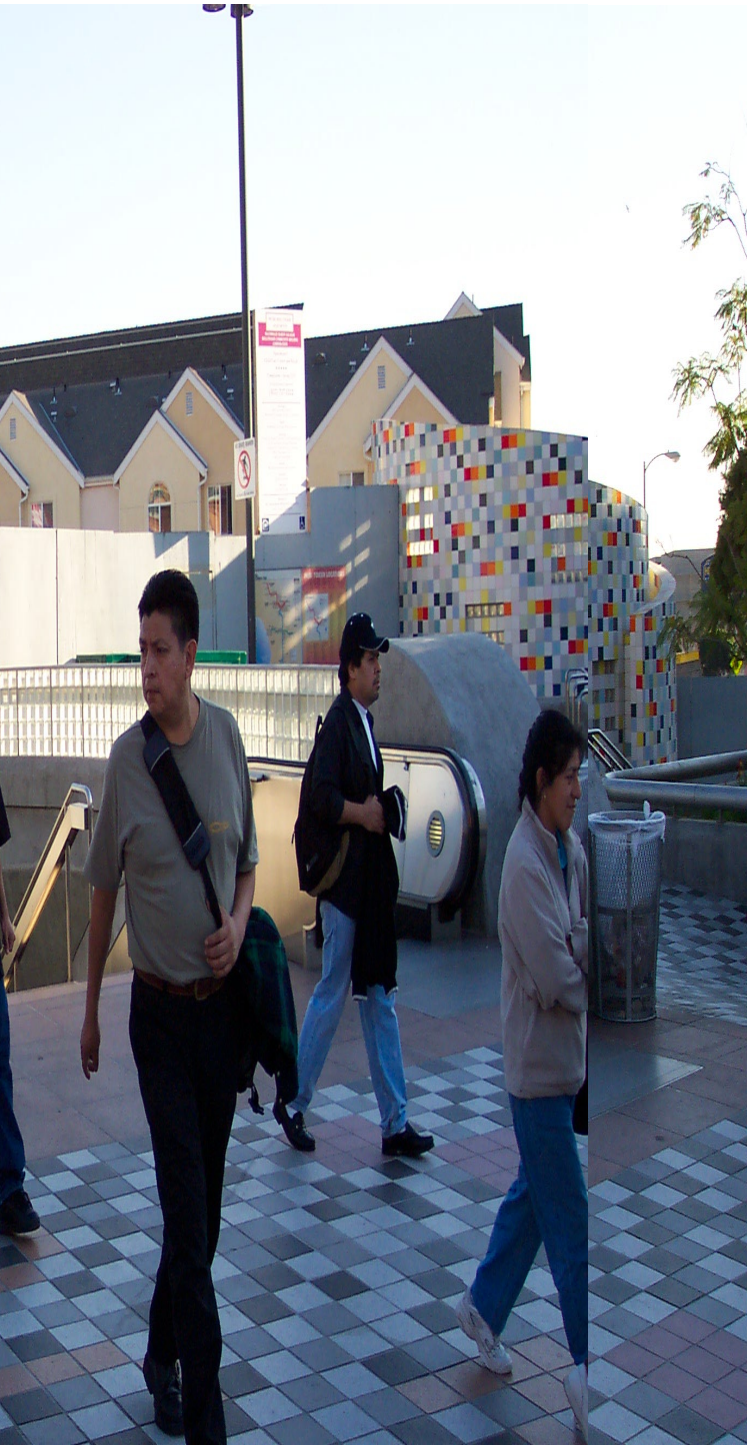
Ridership

In the 1989 EIR, projections for Hollywood & Highland were 12,379 average weekday boardings, whereas in 2002, the estimated actual average weekday boardings were 4,910, or 40 percent of projected. In terms of accessing the station, the EIR anticipated that 6,527 persons would walk, none would park-n-ride, 802 would kiss-n-ride, and 5,050 would take the bus. Population in the three tracts adjacent to the station is 14,808. Of those who work outside the home from the three tracts, 16 percent travel to work by public transportation, by rail or bus transit. Only 9 percent travel to work by walking, while 67 percent travel by car, truck or van. More pedestrian and transit-based travel patterns were envisioned in the EIR than have evolved so far.

[1] The Hollywood Community Plan projected a population in 2010 of 219,000 persons (an increase of 38,000 over the 1980 population). The City of Los Angeles Planning Department website indicates that the Hollywood Community Plan area, as of October 1999, contained a total population of 230,090 in 100,840 dwelling units.[2]

Photo right:
The Hollywood & Western station portal is located on the southeast corner of the intersection. Along the south side of the portal, the two and three story Carlton Court affordable family housing was recently developed by the Los Angeles Community Redevelopment Agency.

Surrounding the portal itself and extending to the east along Hollywood Boulevard, is the Metro Hollywood project currently under construction. Also developed by CRA, this project will include affordable family housing, a childcare center and ground floor retail.



Hollywood & Western

Overview and history

In addition to the LA General Plan Framework Element, the Hollywood Community Plan, and CRA's Hollywood Redevelopment Plan, this station is included in a "specific plan" which promotes transit-oriented development along a segment of the Red Line. Hollywood & Western therefore provides us with an opportunity to study TOD planning provisions and what has been built so far, and to assess potential for the future.

Going back to the 1980s, this area of Hollywood was economically depressed. It experienced a high rate of population growth -- more than twice that anticipated in the Hollywood Community Plan. As part of a 1,100 acre urban swath along Hollywood Boulevard, it was designated as blighted and slated for redevelopment in 1986. The Los Angeles Community Redevelopment Agency (CRA) was given the power to accumulate land and manage the financing and development of projects within the *Hollywood Redevelopment Plan* area.

In 1988, a *Hollywood Community Plan* was adopted by the Los Angeles City Council. As the land use element of the *City's General Plan*, this document indicated that Hollywood & Western should be comprised of medium and high density residential. Similarly, the 1989 Red Line EIR characterized Hollywood & Western's future development as a high-density node, "primarily residential," supported by community commercial.

In the early 1990s, planning for the Metro and for redevelopment continued, but physical conditions didn't visibly improve. The area experienced housing overcrowding and unemployment. In 1992, this area sustained a significant amount of damage in the Los Angeles riots. In 1994, the Northridge earthquake took its toll and required structural retrofit on older mid-rise structures. Eventually, redevelopment funds were combined with FEMA post-earthquake funds to start new projects and save historic structures from the wrecking ball. The Red Line segment that included Hollywood & Western station opened for service in 1999. A number of housing, retail and office projects have been completed and more are under construction.

Economic disparities continue to exist in the area around Hollywood & Western. Property values increase as one travels north into the hills. Lower income housing is located around and to the south of the station. Unlike Hollywood & Highland, CRA's new low income housing is clustered around the transit station.

The Planning Context

The Framework Element
The Framework's Long Range Land Use Diagram designates Hollywood & Western as a "Community Center. . .a focal point for surrounding residential neighborhoods, containing a diversity of uses. . .located along rail transit stops."[1]

In the hierarchy of the Framework's new "targeted growth" land use categories, a Community Center is more dense than a Neighborhood District and less dense than a Mixed Use Boulevard, Regional Center, or Downtown Center. Community Centers should be "pedestrian-oriented, high activity, multi- and mixed-use centers that support and provide identity for Los Angeles' communities."[2]

Supporting policies include allowable zones (CR, C4, and C2), centralized and shared parking, and development of public streetscapes. The CR zone permits R4 for a maximum of 60 units per acre. The Framework Element diagram on the next page shows the area of "targeted growth" at Hollywood & Western. In the Framework Element, buildings in a Community Center are to range from two to six stories, with a floor area ratio of 1.5:1 to 3:1.

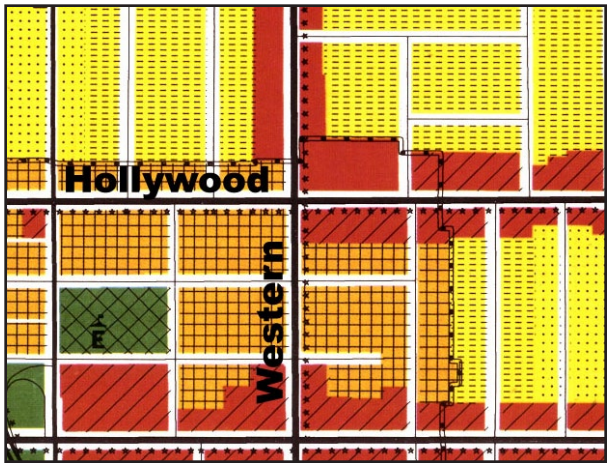
It is interesting to compare the maximum allowable number of housing units in the 2000 Framework Element with the Hollywood Community Plan, from twelve years earlier. Since the Framework's goal is targeting growth around transit stations, it is curious that the maximum was reduced from eighty to sixty units per acre.

Hollywood Community Plan
As the land use element of the General Plan, the community plan defines the location, intensity, and distribution of land use districts in the Hollywood area. While it provides latitude, the community plan requires compliance in the "total acreage of each type of land use…the intensities…[and] the physical relationships among [them]."[3] Zoning derives its authority from the community plan.

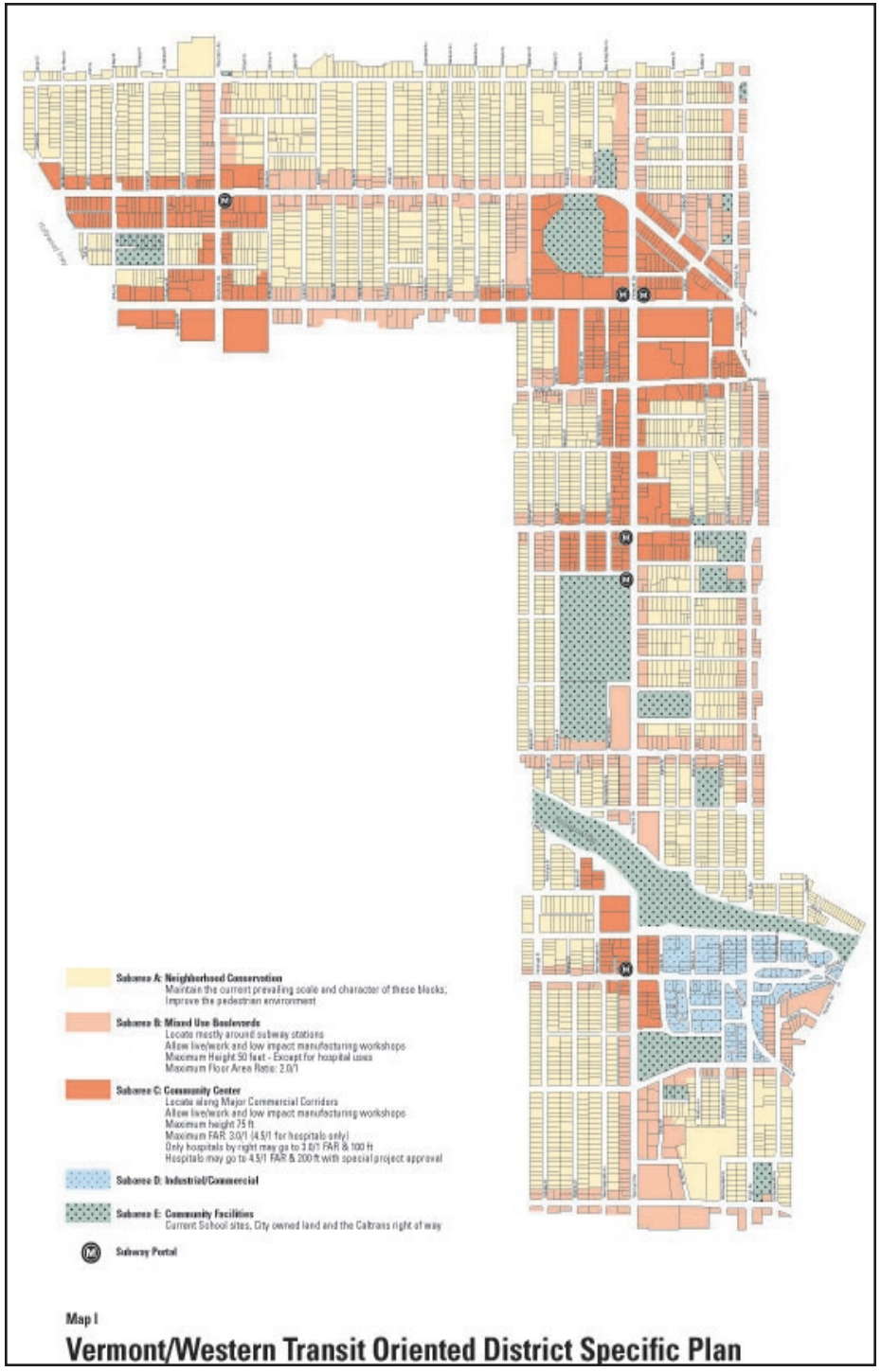
The City of Los Angeles Planning Department is developing an update to the 1988 Hollywood Community Plan to reflect the increase in area population and to make it consistent with the Framework Element and the Specific Plan of 2001. The 1988 community plan is based on traditional Euclidean zoning, or the separation of uses such as commercial and residential.

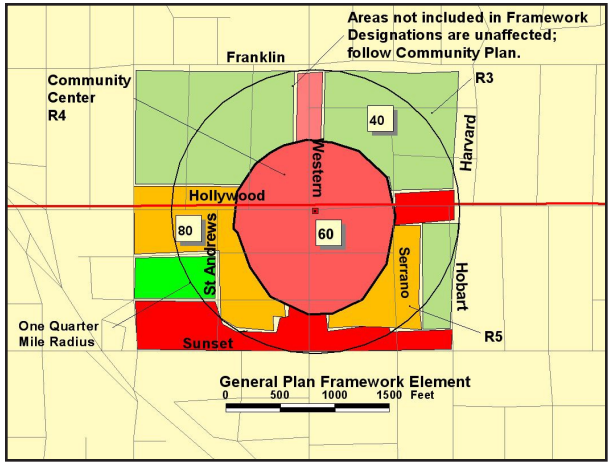
As shown in the excerpt from the community plan below, the Community Plan allows Medium Density Residential north of Hollywood Boulevard, with Commercial and High Density Residential, up to 80 units per acre, concentrated to the south.

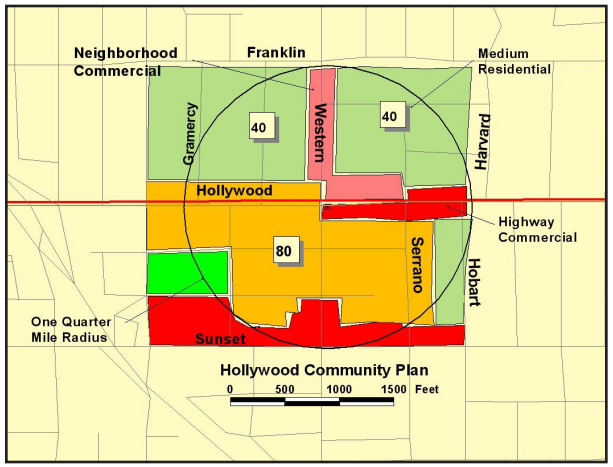
Vermont-Western Transit Oriented District Specific Plan
In his book, *Common Place, Toward Neighborhood and Regional Design,* architect Douglas Kelbaugh writes, the "Specific Plan is as essential to community planning and community building as a third leg is to a stool. If the Comprehensive Plan provides an overall framework and vision for a municipality or county and the urban design guidelines illustrate the character and physical configuration or development, the [Specific Plan] maps out the future of a particular neighborhood or district. More than a land-use map, it is an illustrative masterplan that delineates building types as well as use. It can actually plat streets and lots, as the public sector once did in American cities. (Municipalities need to take back this important function from private developers or at least provide and enforce guidelines.) It also suggests phasing of development and may include three-dimensional drawings and scale models of critical areas."[4]

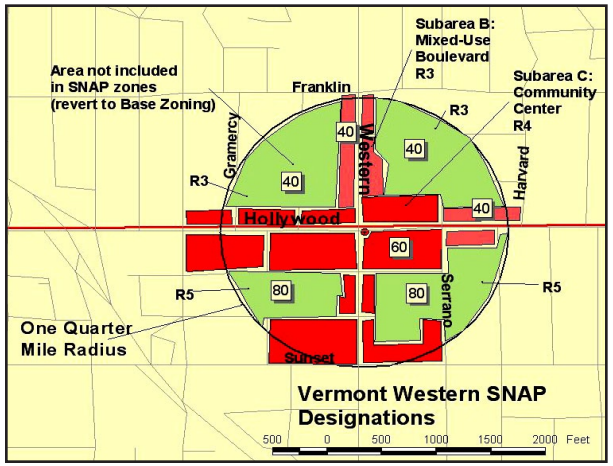


Plan right:
Excerpt from Hollywood Community Plan









Plan far left: Vermont-Western Transit Oriented District Specific Plan, Station Neighborhood Area Plan (SNAP), 2001

Diagram top left: General Plan Framework Element, 2000, indicating land use designations and allowable number of housing units per acre

Diagram, middle left: Hollywood Community Plan, 1988, indicating land usees and allow-able number of housing units per acre

Diagram bottom left: Specific Plan, 2001, indicating land use des-ignations and allowable number of housing units per acre

The Vermont-Western Transit Oriented District Specific Plan does not plat new streets and lots, but it does suggest that some residential streets could be shared better with pedestrians and bicyclists through traffic calming measures. In other ways though, this specific plan performs the functions that Douglas Kelbaugh describes. While the Framework Element provides urban form recommendations for all areas designated as Community Centers, the Vermont-Western Specific Plan, provides development standards and design guidelines for the specific parcels in the plan area. Within the Specific Plan, the parcels are designated as one of five subareas or land uses, each having associated building forms and streetscape characteristics -- many of which are portrayed in three-dimensional drawings and photos.

Also called the Station Neighborhood Area Plan, the Specific Plan was passed by City Council in 2001. As a Specific Plan, it overrides existing zoning for the plan area. Its purpose is to better implement the transportation and land use goals of the General Plan Framework Element by establishing a transit-oriented district along the Red Line stations from Vermont & Beverly to Hollywood & Western.

The Specific Plan stems from three motivations: It aims to guide urban development in a way that is "pedestrian and transit friendly" and "achieves maximum benefit from the subway stations as a valuable public asset."[5] It seeks to improve the local economy by adding local retail, public facilities and housing, and opportunity for jobs. Thirdly, there is an aesthetic motivation – to promote higher architectural quality in building facades and streetscape treatments.

A Closer Look at the Vermont-Western Transit Oriented District Specific Plan

Land Use Type and Density Issues

In terms of land use types, the Specific Plan differs from the Hollywood Community Plan in that it permits the mixing of uses, such as commercial on the first floor with residential above, and combined live/work spaces along transit corridors. Through mixed-use zoning, it encourages neighborhood commerce, including retail, office and small manufacturing shops. It means to set the stage for 24-hour activity within the one-quarter mile area of the transit station. And with the increased activity, there may be momentum to develop public facilities -- parks, pools, libraries.

In the hierarchy of subareas within the Specific Plan, the Community Center is the densest. This designation is used for the areas immediately around each of the four rail transit stations. The other subareas are Mixed Use Boulevards, Industrial/ Commercial, Community Facilities, and Neighborhood Conservation. In the Community Center, commercial-only uses are permitted with a maximum building height of 35 feet and a maximum FAR of 1.5:1. Mixed uses, however, are allowed to be 75 feet in height with an FAR of 3:1.

Looking east on Hollywood toward Western Ave.

Looking west on Hollywood toward Western Ave.

Looking north on Western toward Franklin

While the permitted density of 60 maximum units per acre around the Hollywood and Western intersection is less than the 80 maximum units allowed by the Hollywood Community Plan, the Specific Plan calls for a greater concentration of mixed use development on all four sides of the intersection. The Specific Plan is consistent with the General Plan Framework Element in that both allow a maximum of 60 units per acre in the center. Perhaps the reduction from 80 to 60 units was intended to compensate for a first floor commercial occupancy.

In terms of housing units per acre, the Specific Plan allows many more units than currently exist at Hollywood & Western. The Census data for Year 2000 indicate there are between 19 and 39 housing units per acre in four tracts adjacent to the rail transit station. Therefore, the differential between what exists and what is allowed by the Specific Plan is between 0 and 60 units to the acre, depending on the area. The plan allowables do not appear to be constraining development.

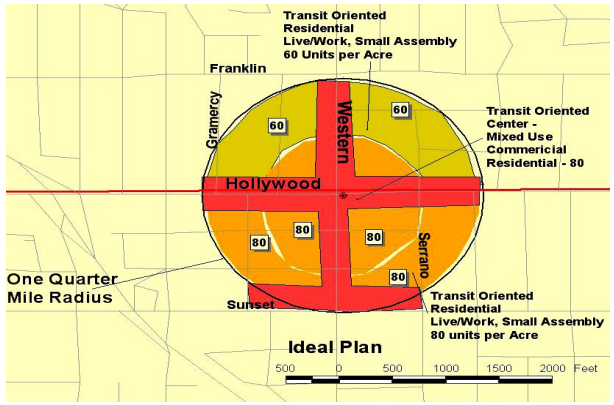
It seems inevitable, however, that the value of proximity to this rail transit station will one day be realized and a greater allowable may be desired. The "ideal plan" below is a suggested change to the Specific Plan. The density of dwelling units is increased along Hollywood and Western to a maximum of 80 units per acre. The mixing of uses would be retained along the main streets. While typical retail would be confined to the main streets, all of the areas within the one-quarter mile radius are encouraged to incorporate live/work units and small assembly workshops.

In an attempt to be more node-based and less corridor-based, the "ideal" TOD clusters mixed use development and high density residential around the transit station. The upzoning would solve the present inconsistency between the areas along Hollywood Boulevard and those south of it, as both would be zoned to a maximum of 80 units.

In addition, a minimum density of 60 units would be paired with the maximum of 80. Sixty provides a reasonable threshold, promising a return on the investment in transit.

According to a City planner, the City is considering increasing the FAR above 3:1 at Community Centers in the Specific Plan, to better match the high capacity of the existing transit infrastructure. A change of this sort would simply restore the 6:1 FAR that was previously applicable to certain areas in the Hollywood Redevelopment Area.[6] [7]

Looking north on Western toward Hollywood Blvd.



"Ideal" plan for land use type and density

Population growth and income

In the four census tracts which are adjacent to the Hollywood & Western station, the number of housing units per acre ranges from 19 to 39, and the total number of housing units is 8,965. A quarter of this housing was built prior to 1939, there was a peak in the 1950s and 1960s. Between 1990 and 2000 about 650 units were built. The median household income ranges from $19, 601 to $22,521.

Ridership

In the 1989 EIR, projections to Year 2000 for Hollywood & Western were 9,115 average weekday boardings. In 2002, the estimated actual average weekday boardings were 3,782 or 41 percent of projected. In terms of accessing the station, the EIR anticipated that 1,803 persons would walk, none would park-n-ride, 553 would kiss-n-ride, and 6,759 would take the bus. Transit planners anticipated a much greater percentage of bus-to-rail connections than actually take place.

Population in the three tracts adjacent to the station is 20,654, the highest of the four stations. From the 2000 Census, we know that of those who work outside the home from the three tracts, 22 percent travel to work by public transportation, by rail or bus transit. Only 5 percent travel to work by walking, while 68 percent travel by car, truck or van.

Financing mixed-use, mixed-income projects
At this point, most of the new development at Hollywood & Western has been instigated and partially funded by government. For private developers, the desirability of sites adjacent to transit stations still seems uncertain. A Los Angeles City planner recently said, "Unfortunately, there is not yet the Darwinistic economic draw for developers at transit station areas that prompts them to say 'I'm gonna kick your butt and get that location first!' By contrast, government didn't have to induce developers to build at highway interchanges; they instinctively knew that it was a good idea."[8]

According to the developer of one of the low-income housing projects at Hollywood & Western, financing for a mixed-use project is more difficult to arrange and the lending industry is still skeptical of the market demand for these projects.

In addition to mixed use, mixing income levels in housing, is desirable from a social and economic perspective. However, a CRA project manager said that the agency would not be inclined to fund the cost differential between market-rate and affordable units in a mixed-income project, on a long-term basis. The CRA representative also asserted that affordable and market-rate units in the same building or complex ought to be identical. This person acknowledged that mixing incomes would be better for the community, but suggested that CRA funds go farther by building low-income *only* housing.[9]

To bridge the issues of urban form, mixing of income levels in housing, and difficulties of financing, the following suggestion is offered:

Kevin Lynch in his book, *The Image of the City*, compares three cities and records common themes in people's experience. He says, "the tests made clear the significance of space and breadth of view. . .Jersey City subjects responded to the view before them as they descended the Palisades toward the Manhattan skyline. There was an emotional delight arising from a broad view, which was referred to many times. Would it be possible, in our cities, to make this panoramic experience a more common one, for the thousands who pass everyday? A broad view. . .seems to be a staple of urban enjoyment."[10]

Hollywood Boulevard is set up high above the Los Angeles basin. Given the possibility of such a view to the south, it is a shame to not take advantage of it. The land is a finite resource and sites with a topographical gift like this are not everywhere. Along Hollywood Boulevard, and the blocks immediately to the south, an opportunity exists to build combined market-rate and affordable housing structures, and to more easily obtain financing *because of the view and proximity to rail transit*. High rents or sales prices could be obtained for the market-rate units, but the view could be enjoyed by market-rate and subsidized tenants alike.

A more caustic treatment of not mixing incomes in housing, as an extension of zoning's separation of uses, is provided by James Howard Kunstler in *Home from Nowhere*. He writes, "After all, the basic idea of zoning is that every activity demands a separate zone of its own. For people to live around shopping would be harmful and indecent. Better not even to allow them within walking distance of it. . .While we're at it, let's separate the homes by income gradients. Don't let the $75,000-a-year families live near the $200,000-a-year families – they'll bring down property values – and for God's sake don't let a $25,000-a-year recent college graduate or a $19,000-a-year widowed grandmother on Social Security live near any of them. There goes the neighborhood!"[11]

Kunstler continues, "Zoning required the artificial creation of "affordable housing," because the rules of zoning prohibited the very conditions that formerly made housing available to all income groups and integrated it into the civic fabric."[12]

Transit and Autos
The first two redevelopment projects in the area, Hollywest – Ralph's and Senior Housing, and Carlton Court apartments opened in 2002. These individual projects constitute a good beginning, but the transformation of the present pattern to transit-supportive land use may take twenty years. It is not surprising that existing urban form at the macro-level, or scale of the community, is

still dominated by the automobile.

The 1988 Hollywood Community Plan foresaw the need for an intensification of land uses around the rail transit station. The 2000 General Plan Framework specifically states that transit stations should be primary focal points for the City surrounded by increased density.[13] The 2001 Specific Plan establishes a transit oriented district to capitalize on the investment in rail transit.

Despite these positive planning moves, there are underlying parking provisions running at cross-purposes. For example, CRA grants density bonuses to developers for the provision of public parking lots, even next to a rail transit station such as Hollywood & Western. The Specific Plan's *off-street minimum parking requirements* are virtually the same as those found in the existing zoning code, except for a 15 percent reduction for developments within 1,500 feet of the rail transit station portal. For a 100 unit family apartment complex, the reduction in off-street parking spaces would be 23 spaces – a change from 150 spaces to 127. This timid change to the parking provisions of the code is not proportionate to the high capacity transit investment that has been made. This small change does not encourage the transit-based lifestyle.

The existing zoning requirements for parking in residential areas are listed below:
Min./max.: 1 space for every DU with less than 3 rooms
Min.: 1 ½ spaces for every DU with 3 or more rooms
Max.: 2 spaces for every DU with more than 3 rooms

Abolition of minimum parking requirements within the one-quarter mile radius of rail transit station is a necessary component of transit-supportive land use. Abolition wouldn't mean no parking. It would mean that parking in these very special transit-oriented, pedestrian based areas would no longer be required by City code. At Hollywood & Western, parking sharing agreements, for example, with the never-full 300 car park under Hollywest - Ralph's, could be arranged.

According to G.B. Arrington of Parsons Brinckerhoff, "properly executed transit-oriented development. . .will reduce 20 percent of the parking needed for residential development, 15 percent for office development, and 25 percent for mixed-use development that exploits shared-use parking."[14] These reductions seem low for urban locations. Los Angeles architect Stephanos Polyzoides obtained Pasadena's approval for nearly a 50 percent reduction in parking for the retail component of a mixed-use development at Del Mar Station, Metro Gold Pasadena Line. For 14,000 square feet of retail, the approved reduction was from 86 to 46 spaces.[15]

Urban Design
For the Community Plan areas, "the purpose is to create a denser, livelier pedestrian environment along the major commercial and transit corridors like Hollywood Boulevard."[16]

All new buildings are to be "oriented toward the main commercial street", with a "building façade facing the pedestrian walk way [that] provides windows, doors and signs at ground level oriented to pedestrian traffic."[17]

New buildings are to avoid large blank expanses of wall, but instead to have a clearly defined ground plane, middle and top. The design guidelines call for the second floor to be set back from the first by at least ten feet so that a thirty foot maximum height is maintained within fifteen feet of the front property line. (This height limit seems extremely restrictive, more befitting a small town than a major urban node in a large city.)

The guidelines call for a good percentage of "transparent building elements", articulation in the plane of the building façades to create visual breaks, two types of building materials, and site lighting. Additionally, creative signage, information kiosks, and façade plant materials are all encouraged as a way to create an inviting and lively atmosphere.

Any surface parking is to be located at the rear of the structure, accessed from an alley or a narrow driving lane from the

main street. Buildings may have a second entrance from the parking lot. Mid-block throughways and arcades are to be provided for every 250 feet of street frontage and are to be given special design attention to be attractive to pedestrians.

Parking structures must provide ground floor commercial space along the entire frontage facing the main street. Other exterior elevations are to match the main building they serve or provide landscape planters to soften the view of the parking structure.

Streetscape

In terms of buildings for work, living or parking, the Specific Plan's design guidelines provide images, diagrams, and recommended models. For each land use, such as Community Center, they show the types, scale and organization of the desired buildings. While the Specific Plan describes a goal for the streetscapes, it provides less in the way of actual design motifs. The plan says that implementation of the guidelines will "begin to transform these commercial streets away from a highway oriented, suburban format into a distinctly urban, pedestrian oriented and enlivened atmosphere. Outdoor eating areas, and informal gatherings of chairs and benches are encouraged. These streets should begin to function for the surrounding community like an outdoor public living room."[18] However, the streetscape guidelines are less graphically depicted and more dependent upon itemization of street elements.

For instance, along Hollywood Boulevard, streetscape improvements are to include shade trees planted every 30 feet, bike racks every 50 feet, and public benches every 250 feet. "The pedestrian walkway shall. . .have a minimum horizontal clearance of ten feet."[19] The treatment of the larger streets, such as Hollywood and Western, is critical to the success of the TOD, and yet they seem to not be very well addressed. Some smaller residential streets are identified in the plan as "shared streets", that is, to be "shared by pedestrians, bicycles, and low-speed cars."[20] In these streets, gateway signage, trees, planters, various paving materials, bike routes and curb parking would be built as traffic calming instruments.

Commentary

Hollywood Boulevard and Western Avenue

Hollywest was planned before the Specific Plan was implemented so it did not have the benefit of the design guidelines. Nevertheless, the project is an asset to the community, and it is an interesting attempt to bridge a suburban model with the charge to make transit oriented development. To its credit, parking has been located behind the building. However, the primary access to all the stores is via this central auto court, and not from the main streets as one would expect in a transit-oriented district. Of course, the task of creating two viable shop entrances is difficult from a design and merchandising point of view. At Hollywest, the compromise was made in favor of auto access. Along Hollywood Boulevard, the

Hollywest Development
Ralph's & Senior Housing

Left: Right turn lane favors autos in heart of TOD.

Middle: Corner of Hollywood and Western. Impaired access to store fronts due to ramp.

Right: No transparency.

Far left: Auto court with arcade to shelter shoppers.

façades are empty, the sidewalk is narrow, and without landscaping or seating except for the MTA-provided bench. While the sun beats on this exposed building face, the walk along the auto-accessible north side is provided with a generous arcade.

Major Streetscapes

Even in this designated transit-oriented district, additional outside lanes were added to the north and south sides of Hollywood to accommodate vehicular traffic. At Western, Hollywood is very wide, at least 90 feet, and pedestrian crossing is difficult. The sidewalks at this important intersection have been squeezed to allow for the additional driving lanes. In a TOD, designing for pedestrians should take precedence over design for vehicular traffic. At Hollywood & Western, retrofit adjustments need to be made to achieve better streetscape scale and treatment.

To create "streets [that] function for the surrounding community like an outdoor public

living room," a change in the proportions, the height-to-width ratios, will be required.[21] Urban designer Richard Hedman stated in *Fundamentals of Urban Design* that a 1:4 ratio provides a weak sense of space. Streets of such proportions have their "counterpart in the very low and wide rooms popular in modern convention hotels. A typical modern "Grand Ballroom" may have floor dimensions of 80-by-125-feet and a ceiling height of 20 feet or less."[22] A "1:2 ratio provides sufficient spatial containment to permit the creation of intensely three-dimensional space. . .A 1:2 ratio is the minimum desirable ratio of height to width for good street spatial definition. . . Strong spatial definition is possible" within a cross section with a 1:1 ratio.[23]

Architects Duany Plater-Zyberk & Company, in *The Lexicon of New Urbanism*, note that the "height-to-width ratio is the proportion of spatial enclosure related to the physiology of the human eye. If the width of space is such that the cone of vision encompasses less street wall than open sky, the degree of spatial enclosure is slight. As a general rule, the tighter the ratio, the stronger the sense of place, and often, the higher the real estate value. . . 1:1 [are] the best for thoroughfares."[24]

To approach desirable proportions, Hollywood Boulevard should be narrowed by one or two driving lanes and provided with 20 to 25 foot wide sidewalks/landscape strips on either side. If the front building façade extends to the maximum allowable height of 75 feet for a Community Center, the proportion of the outdoor room along Hollywood would be between 1:2 and 1:1. Unfortunately, the guidelines require a ten foot setback of the second floor so that no front wall is higher than 30 feet. This provision works against the goal of creating outdoor rooms.

To achieve continuity of the streetwall, Richard Hedman suggests that buildings "be of a uniform height that does not vary more than 25 percent. The more uniform the frame, the easier it becomes to suggest the presence of an invisible ceiling to define the height of the space."[25]

Allan Jacobs wrote in *Great Streets* that urban streets need certain physical qualities to be great. His list includes:

- Places for people to walk with some leisure
- Physical comfort - climate-related characteristics (wind, shade, and sun treatments)
- Definition – boundaries such as building walls and street floor. Jacobs refers to the "two (street width) to three (height to the cornice line) proportion of streets" that was traditional, then changed by Haussmann "to a square section. . .Most of the streets we have studied seem to fall within a range (vertical to horizontal) of from 1:1.1 to 1:2.5."[26]
- Qualities that engage the eye
- Transparency into what is behind the street wall
- Complementarity - "buildings on the best streets get along with each other. They are not the same but they express respect for one another, most particularly in height and in the way they look."[27]
- Maintenance
- Quality of construction and design

Smaller streets

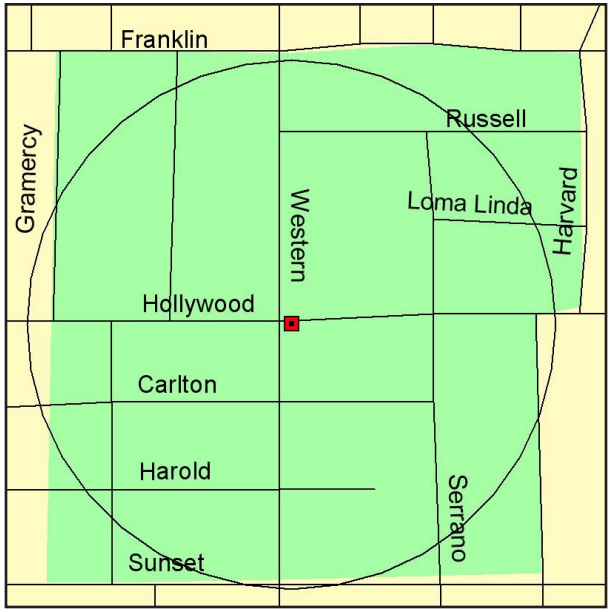
Walking to the station, one finds that the block sizes in this area are large. Franklin to Hollywood is one block long and a full one-quarter mile, 1,320 feet. The shortest block lengths are about 600 feet long. Unfortunately, this is not untypical of the rest of the City. It is just less than optimal for a transit-oriented district.

The Specific Plan identifies some smaller residential streets as potential "shared streets". Through traffic calming changes, vehicular traffic would be given less priority and more priority would be placed on use of the streets by pedestrians and bicyclists.[28]

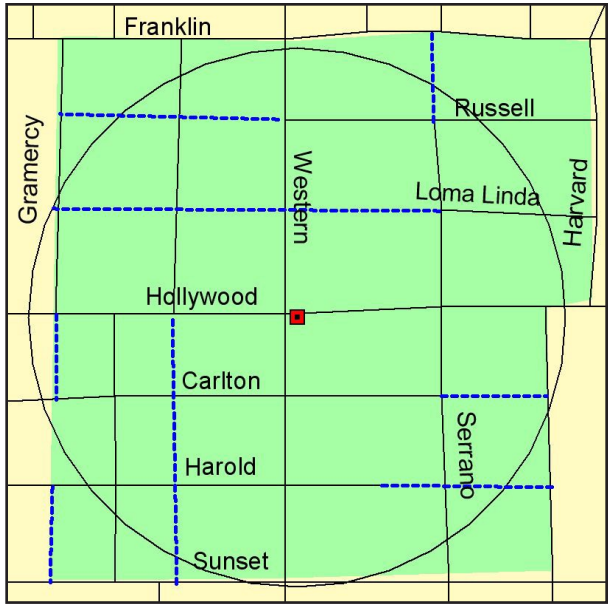
Many of the residential streets around Hollywood & Western are very wide. For example, Garfield and Gramercy are at least 72 feet wide. Harold is in the range of 60 feet wide. Streets like Serrano Street, which is only 31 feet wide, could serve as a model for retrofitting other streets in this district, without even reducing the number of driving lanes. Serrano has two lanes of curb parking, and enough room for two cars to pass in either direction. In contrast, Garfield has curb parking on both side, and pavement for four driving lanes, although only two cars pass at a time. This residential street section could easily be changed to give more priority to the pedestrian through widened sidewalks and tree-planting strips on both sides. Without actually "sharing the street", the street realm could be more accommodating to pedestrians.

The plans below show existing and a proposed street pattern for this transit-oriented district. The idea is to create a district for comfortable walking, with a smaller scaled grid, more ways to short-cut, and more interesting corner conditions. The block sizes change from 1,320 x 600 to 400 x 600. A shorter block sets up an encouraging rhythm for the walker.

Looking south on Serrano, a smaller street, approximately 30'-8" from curb to curb.



Existing block pattern within the one-quarter mile of station. Some blocks are one-quarter mile long.



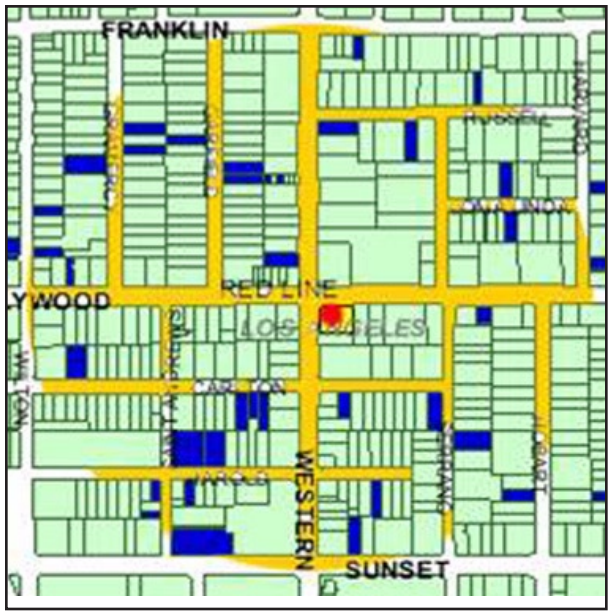
Proposed block pattern makes this district distinctive, smaller scale in character, and more walkable.

Conclusion

UC Berkeley Professor wrote in *The Transit Metropolis*, "Just as built environments shape transit demand, transit investments shape built environments. . .Transit is the magnet, the glue, that attracts this efficient cluster of diverse urban activities to a well-defined and internally walkable district."[29]

Based on the notion that transit is the magnet for an urban cluster, the Vermont-Western Transit Oriented District Specific Plan requires higher density new development to support transit ridership and it insists that design attention be given to the public way, the pedestrian realm.

The Specific Plan could be strengthened,



Assessor's parcel map. Street widths are evident.

but it is an important step in the making of transit-supportive development. How it will be implemented remains to be seen. Plans such as this should be applied to all rail transit station areas in Los Angeles, as there is nothing particularly unique to the Vermont-Western plan area in the language or design concepts advocated.

The question of how to "incentivize" greater participation by developers in transit-oriented districts remains. One idea is to work through the new Mobility 21 Coalition formed by MTA and LA Chamber of Commerce. This coalition was brought together to discourage infighting and parochialism in the quest for state and federal transportation funds. This same coalition could collaboratively develop the districts within walking distance of existing rail transit stations in LA. Such a collaborative effort would show ingenuity and responsibility for the transportation investment already made, and would serve to justify additional investment.

[1] Los Angeles City Planning Department., 2001. *Citywide General Plan Framework, An Element of the Los Angeles City General Plan*. Los Angeles: LA City Planning Department. Figure 3-1.
[2] Los Angeles City Planning Department. 2001. *Citywide General Plan Framework, An Element of the Los Angeles City General Plan*. Los Angeles: LA City Planning Department. Pg. 3-23-24.
[3] Los Angeles City Planning Department, 1988. *Hollywood Plans.* Los Angeles: LA City Planning Department. Pg. HO-1.
[4] Kelbaugh, Douglas. 1997. *Common Place – Toward Neighborhood and Regional Design.* Seattle: University of Washington Press. Pg. 120.
[5] City of Los Angeles, 2001. *(Station Neighborhood Area Plan).* Pg. 1.
[6] The Red Line Final EIR indicates that the 1988 Hollywood Community Plan called for FAR of 6:1 in some areas. SCRTD. 1989. Land Use and Development. *Final Supplemental Environmental Impact Statement / Subsequent Environmental Impact Report, Los Angeles Rail Rapid Transit Project – Metro Rail*. July 1989. Pg. 3-2-6.
[7] In early 2003, the City created by ordinance a new zone called the Residential/Accessory Services Zone (RAS), to "permit retail uses on the ground floors of multiple-family projects."[8] The RAS zone applies to some commercial uses in R3 and R4 throughout the City. Theoretically, the new zone would accomplish basically what the Community Center designation does in the Specific Plan.
[9] Bacerra, Phil. Los Angeles City Planner. LA City Planning Department. Conversation. March 3, 2003.
[10] CRA Interview, 2/5/03.
[11] Lynch, Kevin. 1960. *The Image of the City.* Boston: Massachusetts Institute of Technology. Pg. 44.
[12] Kunstler, James Howard. 1996. Home from Nowhere. *The Atlantic Monthly*. September. Pg. 50.
[13] Kubstler, James Howard. 1996. Home from Nowhere. *The Atlantic Monthly*. September. Pg. 61.
[14] Los Angeles City Planning Department., 2001. *Citywide General Plan Framework, An Element of the Los Angeles City General Plan*. Los Angeles: LA City Planning Department. Pg. 3-35.
[15] Wright, Steve. 2002. Urban Laboratory. *UrbanLand*. October. Volume 61. Number 10.
[16] Bohn, Michael. Moule and Polyzoides Architects, Urbanists. Pasadena, CA. Phone/email. April 17, 2003.
[17] City of Los Angeles, 2001. *Development Standards and Design Guidelines. Vermont/Western TOD Specific Plan.* Pg. 14.
[18] City of Los Angeles, 2001. *Development Standards and Design Guidelines. Vermont/Western TOD Specific Plan.* Pg. 17.
[19] City of Los Angeles, 2001. *Development Standards and Design Guidelines. Vermont/Western TOD Specific Plan.* Pg. 22.
[20] City of Los Angeles, 2001. *Development Standards and Design Guidelines. Vermont/Western TOD Specific Plan.* Pg. 17.
[21] City of Los Angeles, 2001. *Development Standards and Design Guidelines. Vermont/Western TOD Specific Plan.* Pg. 8.
[22] City of Los Angeles, 2001. *Development Standards and Design Guidelines. Vermont/Western TOD Specific Plan.* Pg. 22.
[23] Hedman, Richard with Andrew Jaszewshi. 1984. *Fundamentals of Urban Design.* Washington D.C.: American Planning Association. Pg. 58.
[24] Hedman, Richard with Andrew Jaszewshi. 1984. *Fundamentals of Urban Design.* Washington D.C.: American Planning Association. Pg. 58, 59.
[25] Duany Plater-Zyberk & Company. 2002. Streetscape Principles. *The Lexicon of the New Urbanism*. Version 3.1. March 1. Pg. G2.
[26] Hedman, Richard with Andrew Jaszewshi. 1984. *Fundamentals of Urban Design.* Washington D.C.: American Planning Association. Pg. 75.
[27] Jacobs, Allan B. 1995. *Great Streets.* Cambridge, MA: The MIT Press. Pg. 271, 277, 279.
[28] Jacobs, Allan B. 1995. *Great Streets.* Cambridge, MA: The MIT Press. Pg. 287.
[29] City of Los Angeles, 2001. *Development Standards and Design Guidelines. Vermont/Western Transit Oriented District Specific Plan.* Pg. 8.
[30] Cervero, Robert. 1998. *The Transit Metropolis – A Global Inquiry*. Washington D.C.: Island Press. Pg. 82.

The Projects

Hollywood & Western is the least-known of the "Big Three" redevelopment areas in Hollywood, after Hollywood & Highland and Hollywood & Vine. Unlike its more tourist and movie industry-oriented counterparts, redevelopment efforts at Hollywood & Western have focused on meeting the needs of neighborhood residents. Despite the relative lack of investment dollars in this area, a number of projects have been spawned because of planning efforts.[1]

A push to alleviate the affordable housing shortage has led to three housing projects by CRA. An historic office building and apartment building have been renovated and seismically upgraded. A mixed-use complex of senior housing, Ralph's Market, and other retail, opened in 2002. This last project, prominently sited at the corner of Hollywood Boulevard and Western Avenues, was planned well before the Specific Plan was issued. Two implications are that the project did not benefit from the Specific Plan's urban design guidelines, and the mixed-use aspect of the project was not able to be permitted as-of-right.

Hollywest – Ralph's and Senior Housing

Planning for this $37 million development began in the early 1990s. Over 94 percent of the 120,000 square feet of retail space has been rented at $1.75 to $2.50/square foot.[2] [3] Retail uses include Ralph's Market, a Chinese restaurant, dry cleaners, beauty salon, plus stores for clothes, coffee, juice, shoes, eyeglasses, picture frames, and health food. For retail users, 300 free parking spaces are provided. According to the lot attendant, the lot has only been full once, on Grand Opening. The residential portion of the project consists of 100 one-bedroom units for senior citizens. Over 5,000 applications had been received for these units that are scheduled to open in June 2003. Parking for residents is provided at one space per unit.

Carlton Court Apartments

The Carlton Court Apartments are located on Western, adjacent to the transit portal. The complex is comprised of 60 two- to three-bedroom affordable rental units that resemble townhouses around an interior court, complete with children's play area, barbeque, and common party room. Each unit is afforded one underground parking space. The land was assembled by CRA through eminent domain and payment of fair market value.

Metro Hollywood

This is a mixed-use project located directly above the Metro portal. Scheduled to open in late 2003, it consists of 10,000 square feet of retail space, 83 two- to four-bedroom units, residential and commercial parking and 5,000 square feet of daycare. The project sponsor and owner of the property is MTA.

Mayer Building

The Louie B. Mayer building, formerly used for retail and office space, was damaged in the 1994 Northridge earthquake. The Federal Emergency Management Agency funded the seismic retrofit and Community Redevelopment Agency (CRA) funds helped to preserve this historically significant building. Despite its location across from the Hollywood & Western Metro station, the building remains vacant. According to a CRA staff person, this is due to the shortage of on-site parking!

Thai Restaurant

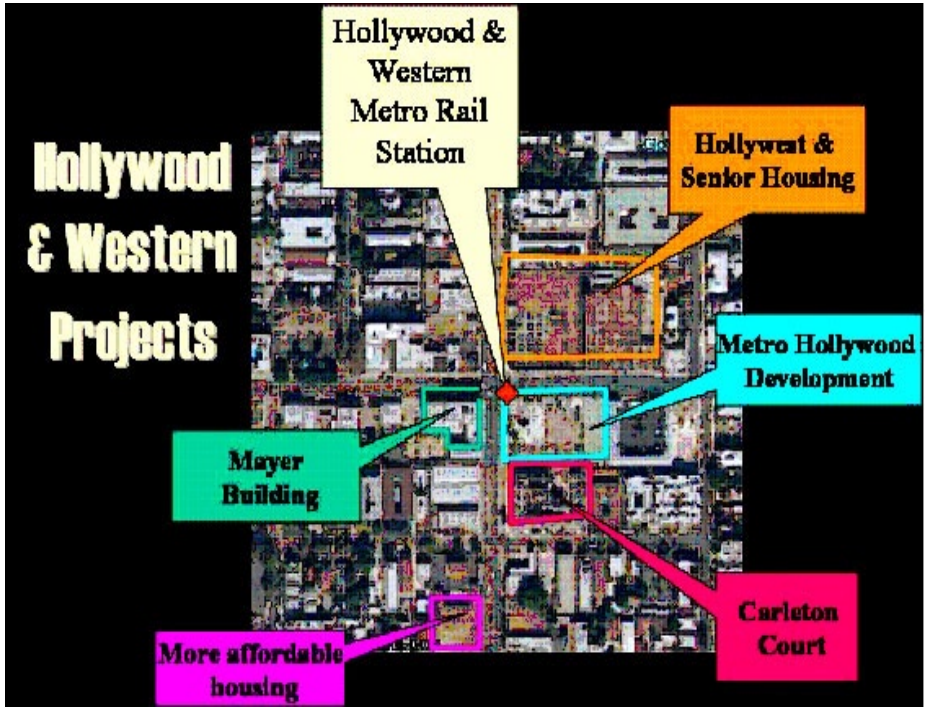
On the northwest corner of Hollywood & Western, and katy-corner from the Metro, is a small Thai restaurant, formerly hot dog stand. Plans exist for redevelopment by site owner, Urs Jakob. In addition to the Mayer Building and this northwest corner, Jakob owns the adjacent Hollywood Gershwin Hotel and has reportedly lamented the lack of parking in the area. According to the Hollywood Chamber of Commerce, Jakob is considering replacing the affordable units on Western Avenue, directly across from the Metro Station, with a public parking structure![4]

[1] The Hollywood & Highland development cost $615 million. Investment at the MTA-owned site at Hollywood & Vine is expected to reach $282 million. Hollywood Chamber of Commerce, 2002. *Projects in the Pipeline.* [http://www.hollywoodbid.org/news/pipeline]. Accessed March 11, 2003.

[2] Hollywood Chamber of Commerce, 2002. *Projects in the Pipeline*. [http://www.hollywoodbid.org/news/pipeline]. Accessed March 11, 2003.

[3] Phone conversation with Tanya Keshishian of Shelter Bay, January 29, 2003.

[4] Hollywood Chamber of Commerce, 2002. *Projects in the Pipeline.* [http://www.hollywoodbid.org/news/pipeline]. Accessed March 11, 2002.



Bottom left:
Hollywest
Ralph's Market and
Senior Housing

Top right:
Louis B. Mayer
Building

Second right:
Metro Hollywood
Housing and Retail

Third right:
Carlton Court
Apartments

Bottom right:
Thai Restaurant

"With walking, half the fun is getting there. It is an end in itself. This is an important way to think about the concept of travel, as opposed to "travel as a derived demand." The notion that transportation serves only the desire to be someplace else is too limited. In the U.S., we are so much on the wrong path. Walking is undoubtedly the most important transportation topic. By accelerating sprawl, planning in the U.S. has made our cities unpleasant for walking. We should think about what planners can do to make things better for walking. Focus on William Whyte not on the National Personal Transportation Survey."

Shoup, Donald C. 2002. UCLA Department of Urban Planning. Professor Shoup provided this response to a doctoral student's dissertation proposal on walking. April.

Chapter III
Principles and Matrix

From our studies of the planning for the Red, Blue and Green Lines, the existing and planned conditions for four rail transit stations, and the comparison between Los Angeles and other world cities, we have drawn some conclusions. We can generalize these into principles for transit-oriented development. Stated another way, we can derive requirements for success, things that are absolutely essential for success in an urban TOD.

Principle 1: Rail transit stations must be located in existing activity centers. Outlying locations and freeway medians are unsuitable for transit. Transit is inherently a pedestrian-accessed mode, and outlying areas and freeways have low pedestrian populations. The notion that future zoning changes and incentive programs will overcome existing conditions is a first-cost saving strategy, that results in early peaking out of ridership and development. We have seen with the Blue Line that zoning may not change, incentive programs can be ineffectual, and investment monies are more often targeted to existing activity centers where they have more effect.

Station must be located *as close to the heart of existing activity centers as possible*. This strategy costs more in the short-term, but the potential for transit ridership and land use integration with transit is maximized.

The first principle is the most important one, because it has the greatest long-term effect on the success of the system. Following this principle yields a high probability that *the surrounding built environment will be well connected with the transit station so that walking or bicycling to the station is comfortable and safe.*

Principle 2: Transit-oriented development is undermined by a preponderance of parking. Corollary: TOD and transit use is supported by the presence of a primary and at least one supporting land use, so that people have at least two reasons to walk to the station.

The second principle is shown most clearly at Civic Center where ridership is low and parking averages 65 spaces to the acre. The corollary is shown by Hollywood & Highland, in which there is a clear need for housing as a supporting land use, as a means to build transit ridership and to create a stable base for the primarily tourist-serving development project.

This principle and its corollary address the types, mix and densities of land uses at transit-oriented developments. They address the question, *"Is walking to the station convenient and worthwhile, such that one can take care of important everyday life activities at the market, store, bank, school, park, etc., on the way to work or home?"*

Matrix - Four Rail Transit Stations

Station	Forecasted Ridership to 2000	Current Average Weekday Boardings 2002 Estimate	% of Forecasted Ridership	Census Tracts Associated with Station Area	Housing Units per acre in Census Tracts adjacent to Station	Cenus Median Household Income	Census Travel to Work by Public Transportation	Census Travel to Work by Walking	Number of Connecting Buses	1989 Red Line EIR Percentage of Riders Accessing Station by Walking
Grand	**3,333**	**4,028**	**121%**				**39%**	**21%**	**14**	**NA**
				2240.1	4	$17,587				
				2240.2	3	$22,303				
Hollywood & Western	**9,115**	**3,782**	**41%**				**22%**	**5%**	**5**	**20%**
				1903.01	25	$22,020				
				1904	39	$22,521				
				1905.1	19	$19,601				
				1905.2	26	$20,078				
Hollywood & Highland	**12,379**	**4,910**	**40%**				**16%**	**8%**	**11**	**50%**
				1901	19	$27,872				
				1902	37	$19,317				
				1907	10	$20,993				
Civic Center	**23,978**	**4,545**	**19%**				**15%**	**22%**	**86**	**50%**
				2073	23	$8,125				
				2074	0	$6,250				
				2075	22	$25,721				

Principle 3: In transit-oriented developments, the public realm – streets, sidewalks, plazas -- must be designed first for the pedestrian. When compromise is required, accommodation of auto travel should be compromised.

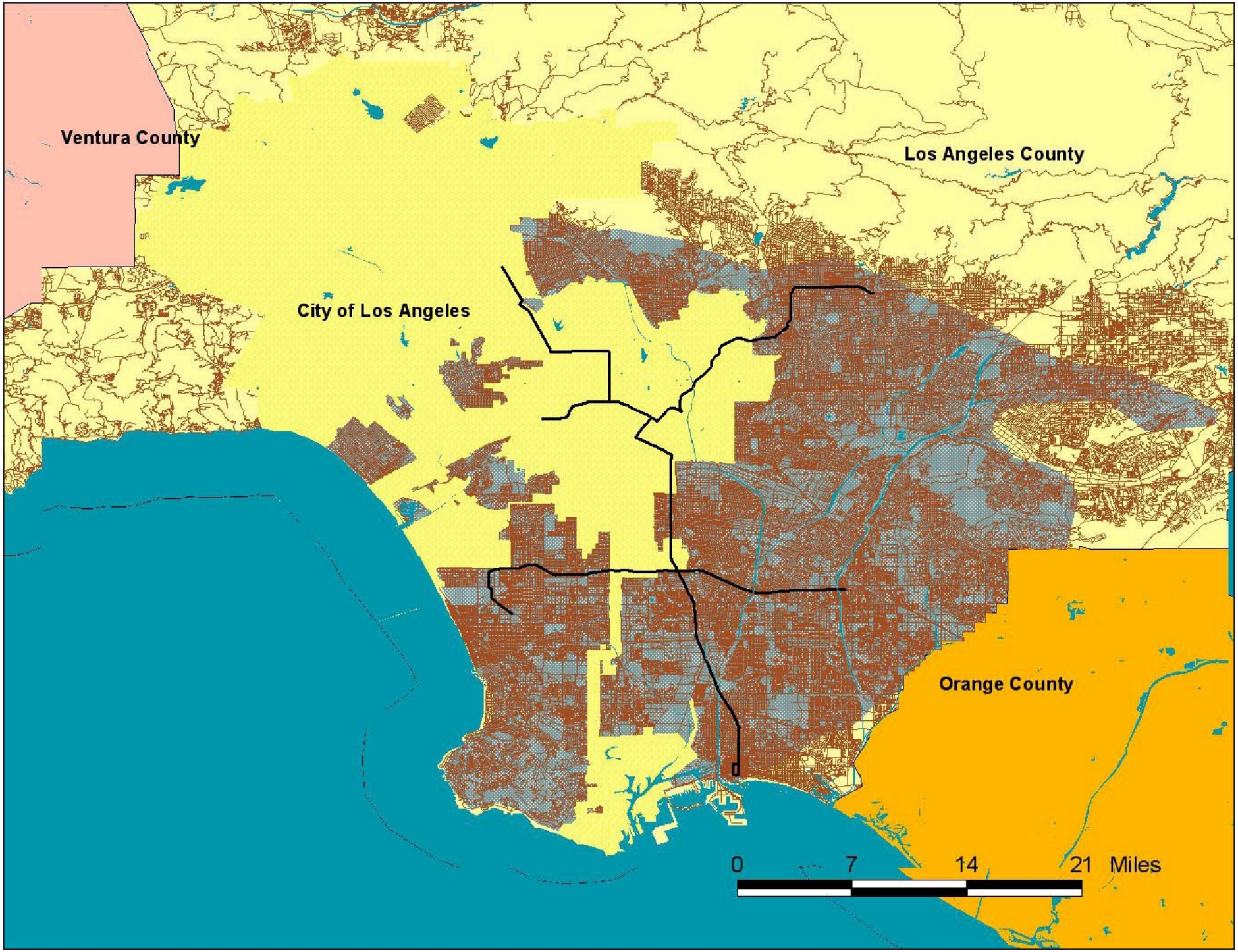
When the principles above are met, then urban design treatments that make walking pleasant -- such as pedestrian scale, architecture that is inviting at ground level, and the enclosure of public outdoor space that provides climatic comfort – these become critical for success. The catch phrases, "density isn't enough" and "the devil is in the details" apply. Although Hollywood & Western has great potential, we now see the main intersection designed to favor auto travel, and the new Hollywest development that compromised streetside pedestrians in favor of drivers around back. Persons walking by the storefronts or waiting for the bus are made to feel as if the retail space is not quite "theirs." The third principle addresses the question, "Is the surrounding built environment sufficient to sustain the pedestrian's interest (and comfort)?"

Principle 4: It is essential to build a transit network to obtain the livability benefits of rail transit.

Building a line at a time, one long spoke at a time, without cross-connecting rings, is conventional. The linear form is justified on the basis of congestion relief, although many scholars dispute transit's ability to relieve congestion. Building spokes to outlying suburbs promotes sprawl and sacrifices the livability, place-making role of transit in urban areas. A better strategy might be to concentrate transit around the urban center, and incrementally build chunks of the network outward. Building a chunk or district at a time would be an inherently localized, place-based, and development-focused strategy. The comparison between Los Angeles and other world cities begins to show the importance of network density and geometry. This fourth principle addresses the general approach to planning transit in a metropolitan area.

John Holtzclaw, a member of the Sierra Club's national anti-sprawl campaign, puts it this way: "The people out there, when they're informed about the results or the consequences of their choices, ... want more density. And they want it to be in city centers or near transit corridors. Compared to what they wanted, what (regional planners) are settling on is way too timid."

Fischer, Douglas. 2003. Greens, Developers link on Growth. *Oakland Tribune.* March 19, 2003. [dfischer@angnewspapers.com].



A1 Comparing Los Angeles with other World Cities

"These special places are modeled on a pre-automobile template. They were designed for a human scale and in some respects maintained that way. Such a thing is unimaginable to us today. We must design for the automobile, because. . .because all our laws and habits tell us we must. Notice that you can get to all these special places in your car. It's just a nuisance to use the car while you're there – so you stash it someplace for the duration of your visit and get around perfectly happily on foot, by bicycle, in a cab, or on public transit. The same is true, by the way, of London, Paris, and Venice."

Kunstler, James Howard. 1996. Home From Nowhere, Atlantic Monthly. September. Pg. 54.

Appendix A
Comparing Los Angeles with Other World Cities

LA as transit metropolis

What kind of rail transit network would make Los Angeles a transit metropolis? As described by UC Berkeley Professor Robert Cervero, a transit metropolis is an "environment in which transit and the built environment harmoniously co-exist, reinforcing and enhancing each other . . . where enough travelers opt for transit riding, by virtue of the *workable transit-land use nexus*, to place a region on a sustainable course."[1]

What would be the required extent and density of the network in Los Angeles? What transit-to-land use geometries and ratios would be necessary, if not to live without a car, then to encourage transit ridership. What are the residential densities needed to support transit ridership? How many square miles should be served by one station? Is there an optimal distance between stations? What would a pedestrian-oriented transit network look like in LA?

A brief overview reveals that in cities such as New York City, Berlin, Paris, and Washington, D.C., where many people of all economic brackets take transit regularly, there is at least one rail transit station for every 1.5 square miles. The length along the line between stations is less than one mile. In the central areas of Berlin, stations are on average spaced at a third of a mile on the line. In London, the spacing is about a half mile apart, and in central Washington D.C. they are typically spaced at three-quarters of a mile. Los Angeles has by far, the least dense network. While stations are about a mile apart, there is only one transit station for every 15 square miles in the City and every 27 square miles in the MTA service area.

For Los Angeles to become a transit metropolis, to achieve a workable transit-land use nexus, almost 300 miles of track and 300 stations would be required. See the proposed network drawing at the end of this appendix. This is not unreasonable given the size of the metropolitan area and the population, and when one compares the number of stations in other world cities.

Importance of a dense network

In their 2002 examination of U.S. transit agencies that increased ridership in the latter half of the 1990s, UCLA researchers cited Robert Cervero's finding that "transit use varies significantly by proximity to transit lines and stations." UCLA researchers write that "these findings imply that *increasing service network densities to decrease the average distance from residences and work-*

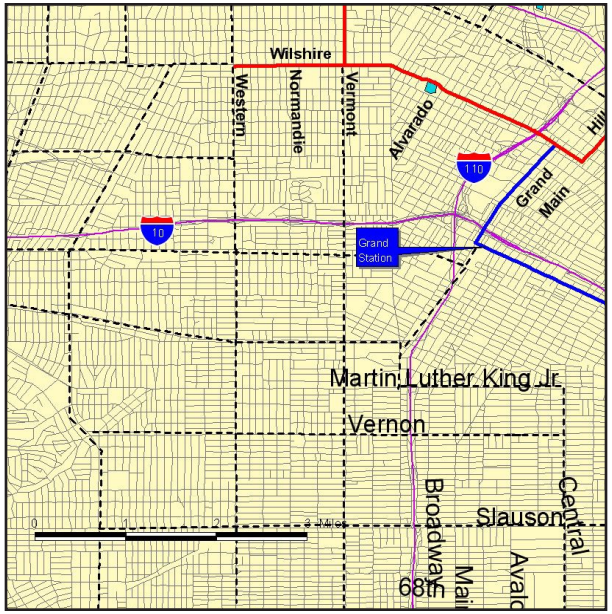
places to transit stations and stops would significantly increase transit use."[2] This statement has implications for how we build segments of the system. It suggests an increased emphasis on implementing "chunks of network" at a time, instead of implementing 20 mile spokes to outlying jurisdictions. Implementing a chunk would be inherently localized, place-based, development focused -- in short, transit-oriented.

Suburban connectors – a questionable approach in terms of transit benefits

Eroding urban livability benefits of transit
Researchers David Lewis and Fred Laurence Williams wrote, in their 1999 book on mass transit, "Transit budgets for large urban areas have a different problem. Most large transit systems have increased suburban-central city commuter services, to help contend with congested highways. However, due to chronic budget tightness since 1982, the spreading of transit has come at the expense of intensive local and crosstown services that sustain walkable neighborhoods in the central cities. "Regionalization" of transit has mustered suburban financial support at the cost of eroding the taxpayer benefits of transit in central city neighborhoods."[3]

Mode bias
UCLA Professor Brian Taylor's report on successful transit systems in terms of ridership refers to a 1995 TCRP study that concludes "that because mode choice decision is strongly influenced by vehicle ownership and the private vehicle is overwhelmingly preferred by many travelers who have the choice, then strategies that target transit service alone have little chance of being very effective."[4] While this is primarily an argument for increased gas taxes and roadway usage fees to disincentivize auto use, it also raises the issue of mode bias. Especially in low density suburban settings, where parking is always available, transit cannot compete with the automobile.

Urban areas build transit ridership
Gomez-Ibanez's 1996 study of ridership on the MBTA system in Boston, reportedly found "that decentralized residential and occupational locations are difficult to serve by public transit because transit works best when a large number of people are all headed to activity nodes that contain various destinations. Dense, compact development is more conducive to efficient transit operations than dispersed and sprawling patterns of urban development."[5]



Chunk of network, totalling approximately 40 miles.

[1] Cervero, Robert. 1998. *The Transit Metropolis, A GlobalInquiry*. Washington D.C.: Island Press. Pg. 4.
[2] Taylor, Brian and Peter Haas, et al. 2002. *Increasing Transit Ridership: Lessons from the Most Successful Transit Systems in the 1990s*. San Jose, CA: The Mineta Transportation Institute College of Business. June. Pg. 10-11.
[3] Lewis, David and Fred Laurence Williams. 1999. *Policy and Planning as Public Choice – Mass Transit in the United States*. Aldershot, Hants, England: Ashgate Publishing Limited. Pg. 256.
[4] Taylor, Brian and Peter Haas, et al. 2002. *Increasing Transit Ridership: Lessons from the Most Successful Transit Systems in the 1990s*. San Jose, CA: The Mineta Transportation Institute College of Business. June. Pg. 12.
[5] Taylor, Brian and Peter Haas, et al. 2002. *Increasing Transit Ridership: Lessons from the Most Successful Transit Systems in the 1990s*. San Jose, CA: The Mineta Transportation Institute College of Business. June. Pg. 15.

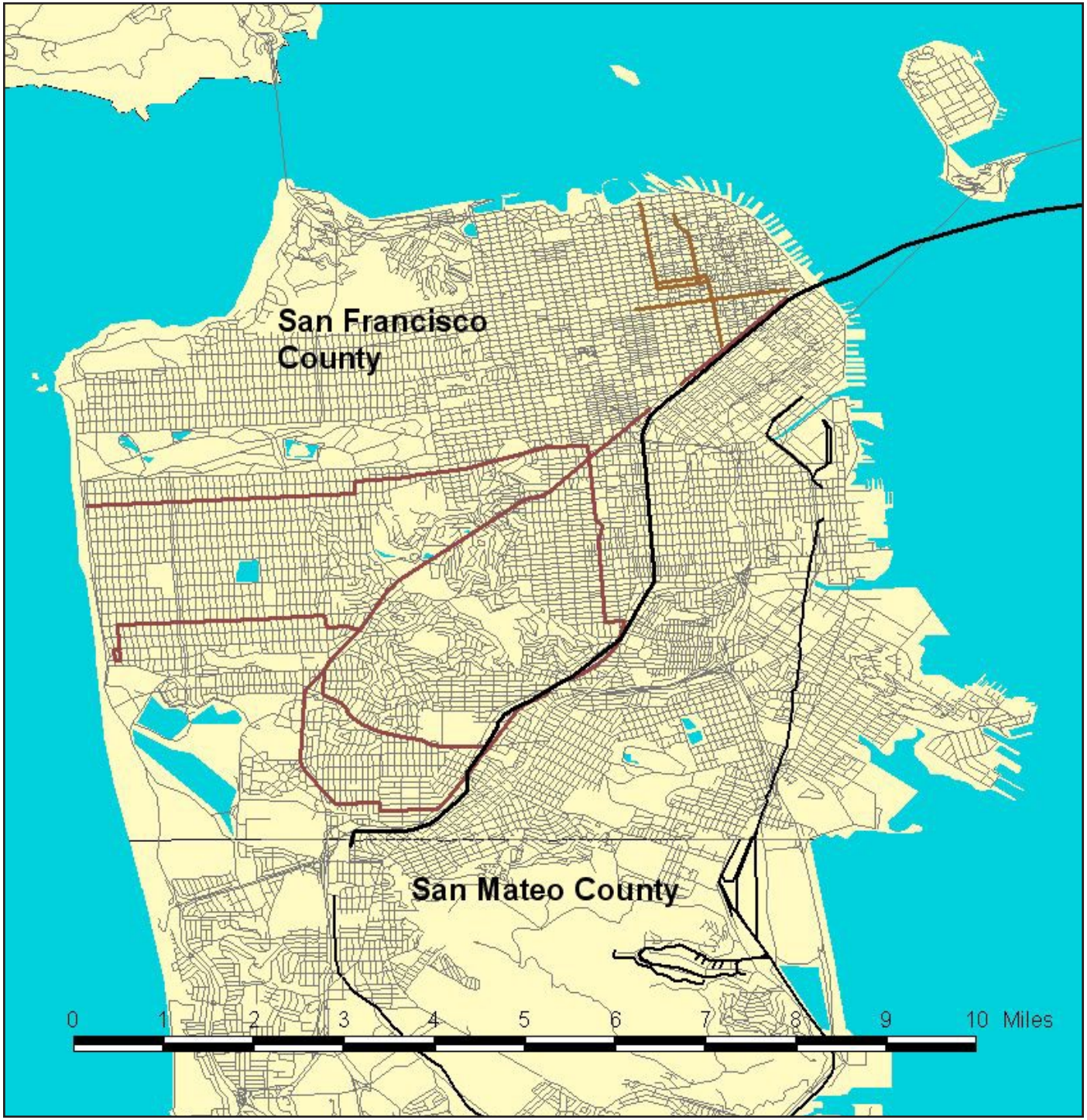
Comparison of Rail Transit Networks

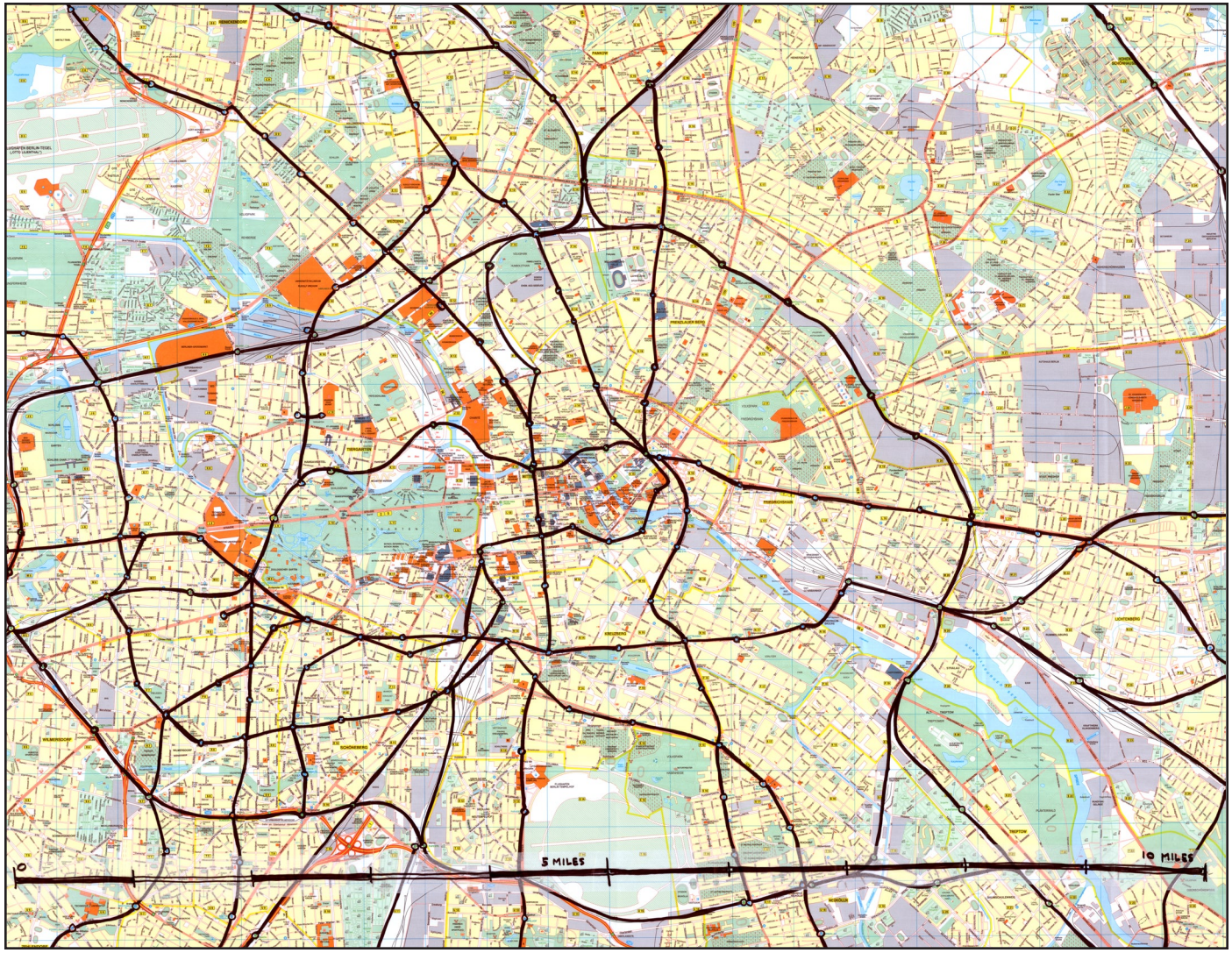
City	System Name/s	Area in Sq. Miles	Population (in 1000s)*	Population per Sq.Mile	Passengers Per Year	Track Miles	Number of Stations	Track Miles per Station	Sq. Miles per Station
New York City Metro Area	NY Subway	303	7,323 18,087	26,400 (41p/acre)	1.3B	?	468	?	.65
Berlin Metro Area	U & S Bahn	347	3,434 4,150	10,100 (16p/acre)	450 M	113 ?	170 & 163= 333	.33	1.04
Paris Metro Area	Metro & RER	562	2,152 10,275	17,800 (28 p/acre)	1.2 B	131 + 71= 202	297 + 67= 364	.5	1.5
Washington D.C. Metro Area	Metrorail	61	607 3,900	9,400 (15p/acre)	181 M	38 103	39 83	.97 1.2	1.5?
London Metro Area	Underground		6,574 11,100						
St. Louis Metro Area			397 2,400						
Tokyo Metro Area			8,164 30,300						
Mexico City Metro Area			8,236 14,100						
San Francisco Metro Area			724 6,250						
Sacramento** Metro Area	SacRT	97	407	4,200 7p/acre	8.6M	20.6	31	.6	3
Boston Boston Metro	MBTA		574 4,172						
Denver Metro Area			468 1848						
San Diego Metro Area	MTDB		1,101 2,949						
City of LA LA Metro Area MTA Service Area	Metro Rail	468 1,433	3,485 14,531 9,000	7,900 (12p/acre) 6,280 (10p/acre)	69M	59	31 52 52	1	15 27

* Population figures from Rand McNally Quick Reference World Atlas. 2000. United States of America: Rand McNally & Company. (Populations are estimates for 1/97.)
**Sacramento population figures from

San Francisco

Map Legend:
(applicable to all maps in Appendix)



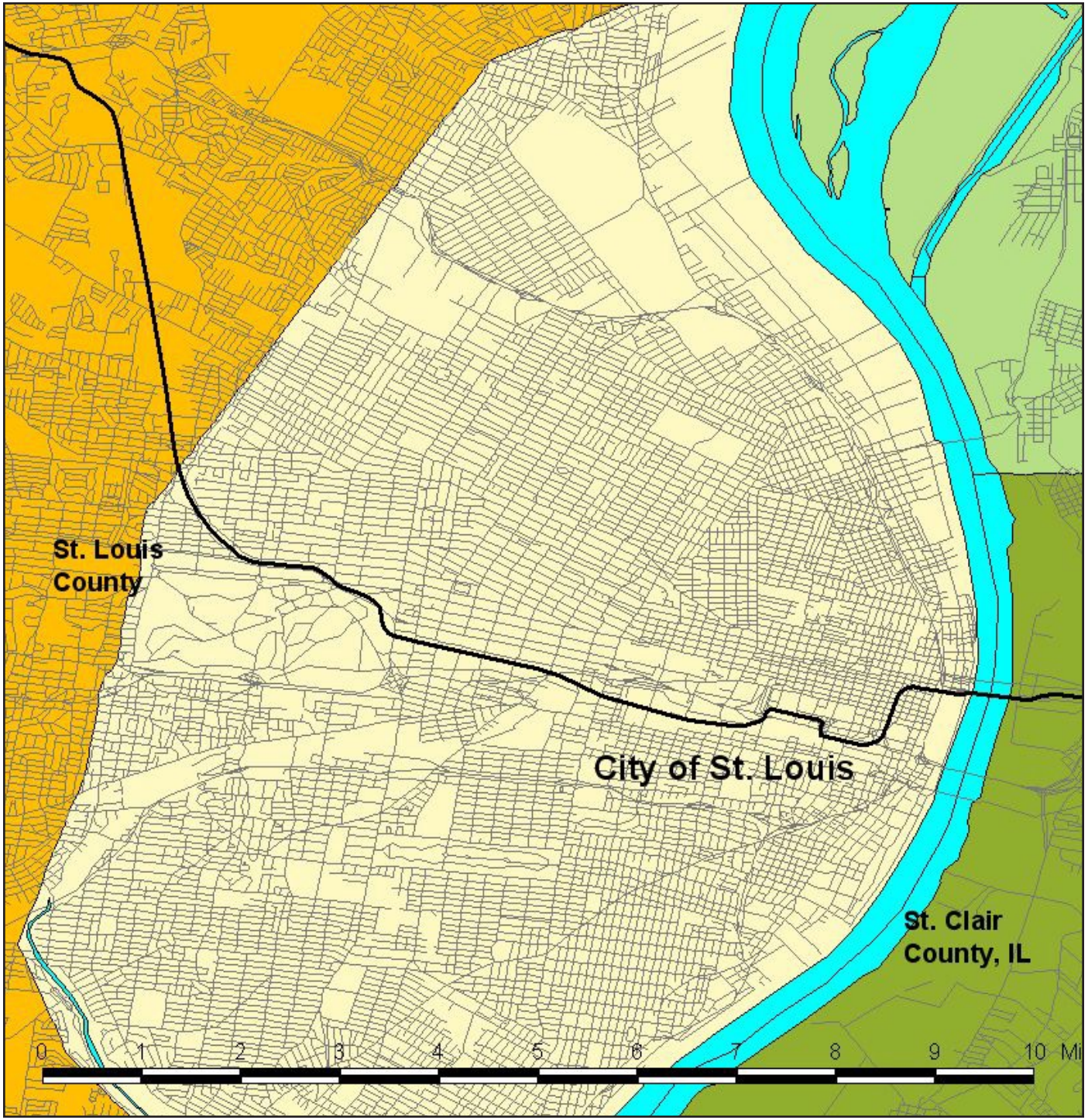


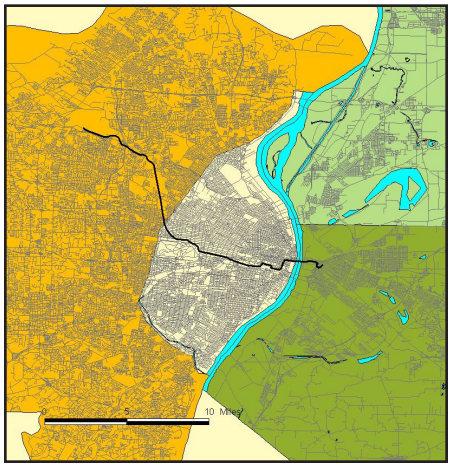
Berlin

add tram lines in east

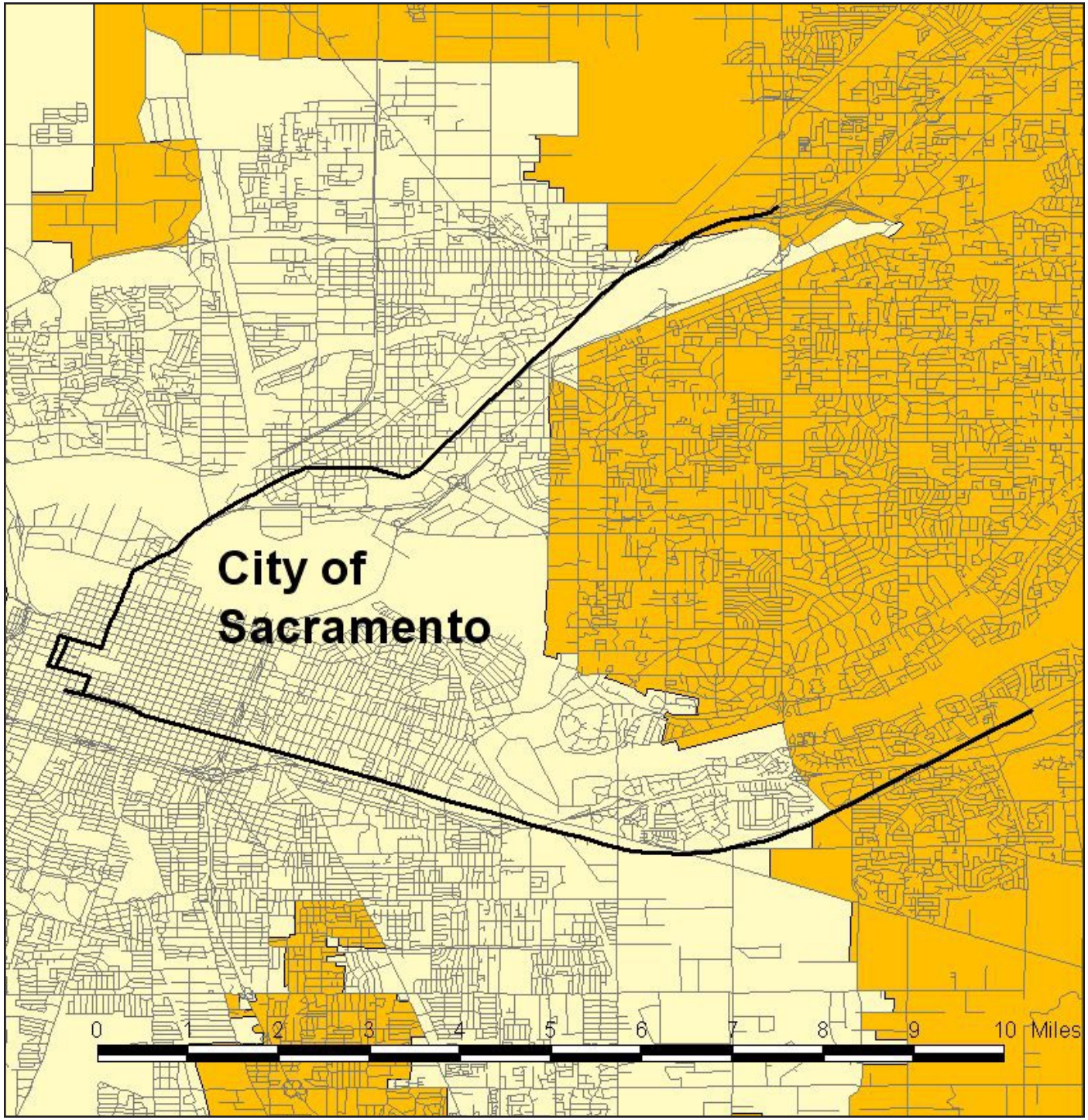
St. Louis

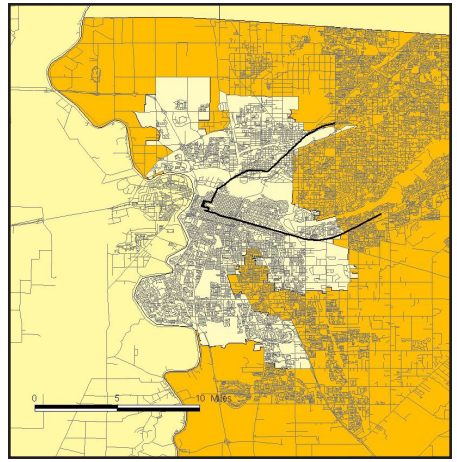
"Much of Metrolink's success stems from smart routing. The 29-kilometer line connects downtown to three large professional sports complexes, three universities, two medical centers, an active riverfront and gaming boat port, colorful Union Station, entertainment sites, and the airport -- land uses that in combination guarantee traffic throughout the day and week."
Cervero, Robert. 1998. *The Transit Metropolis – A Global Inquiry*. Washington D.C.: Island Press. Pg. 431.



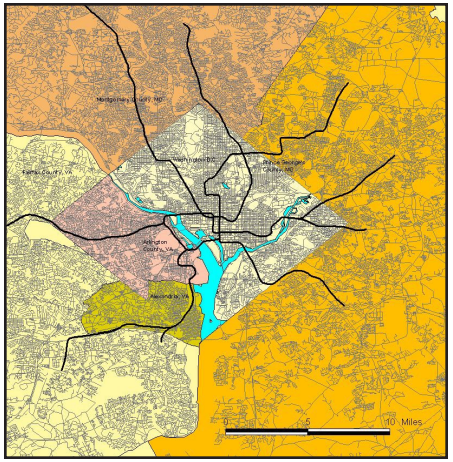


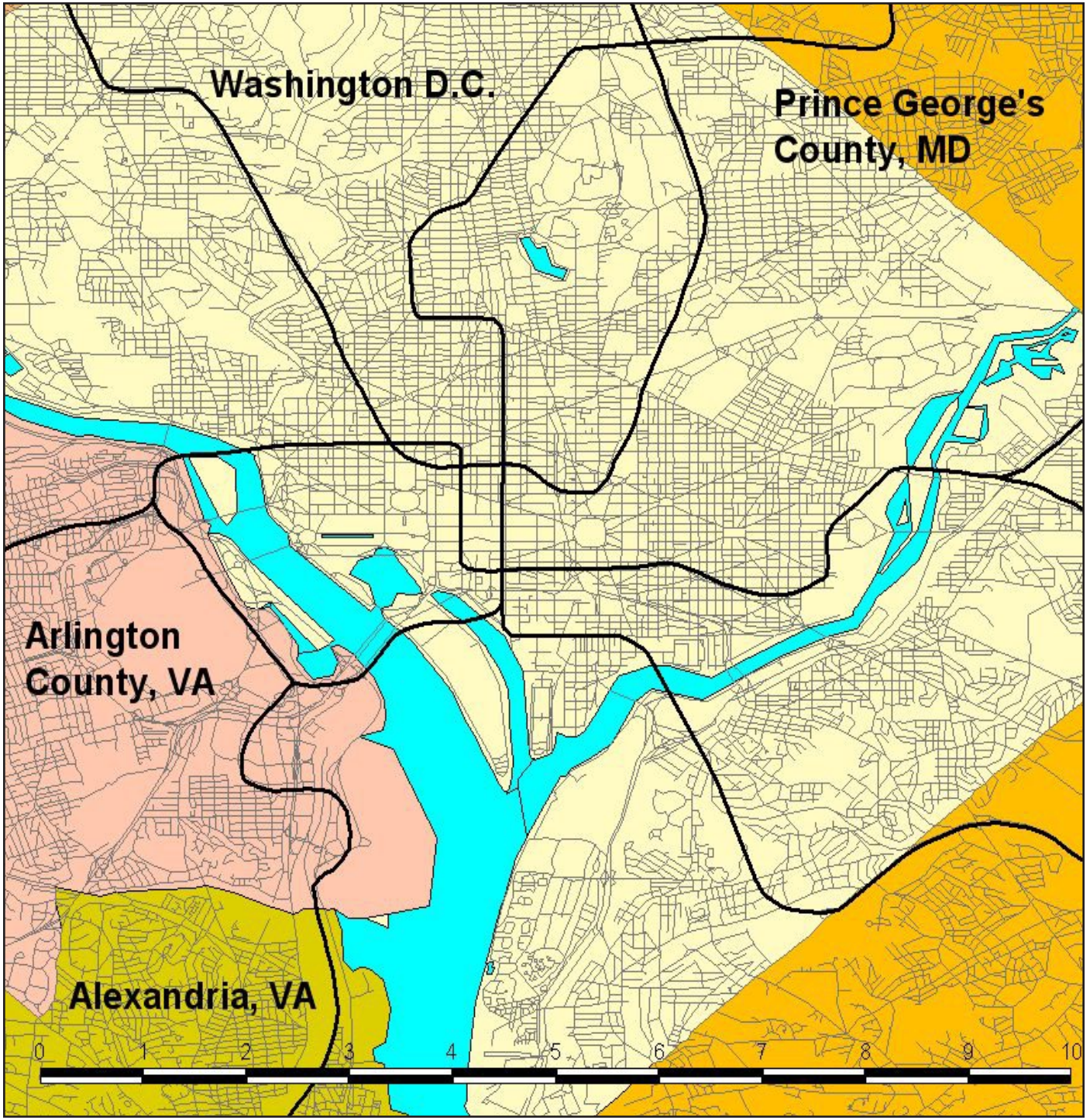
Sacramento





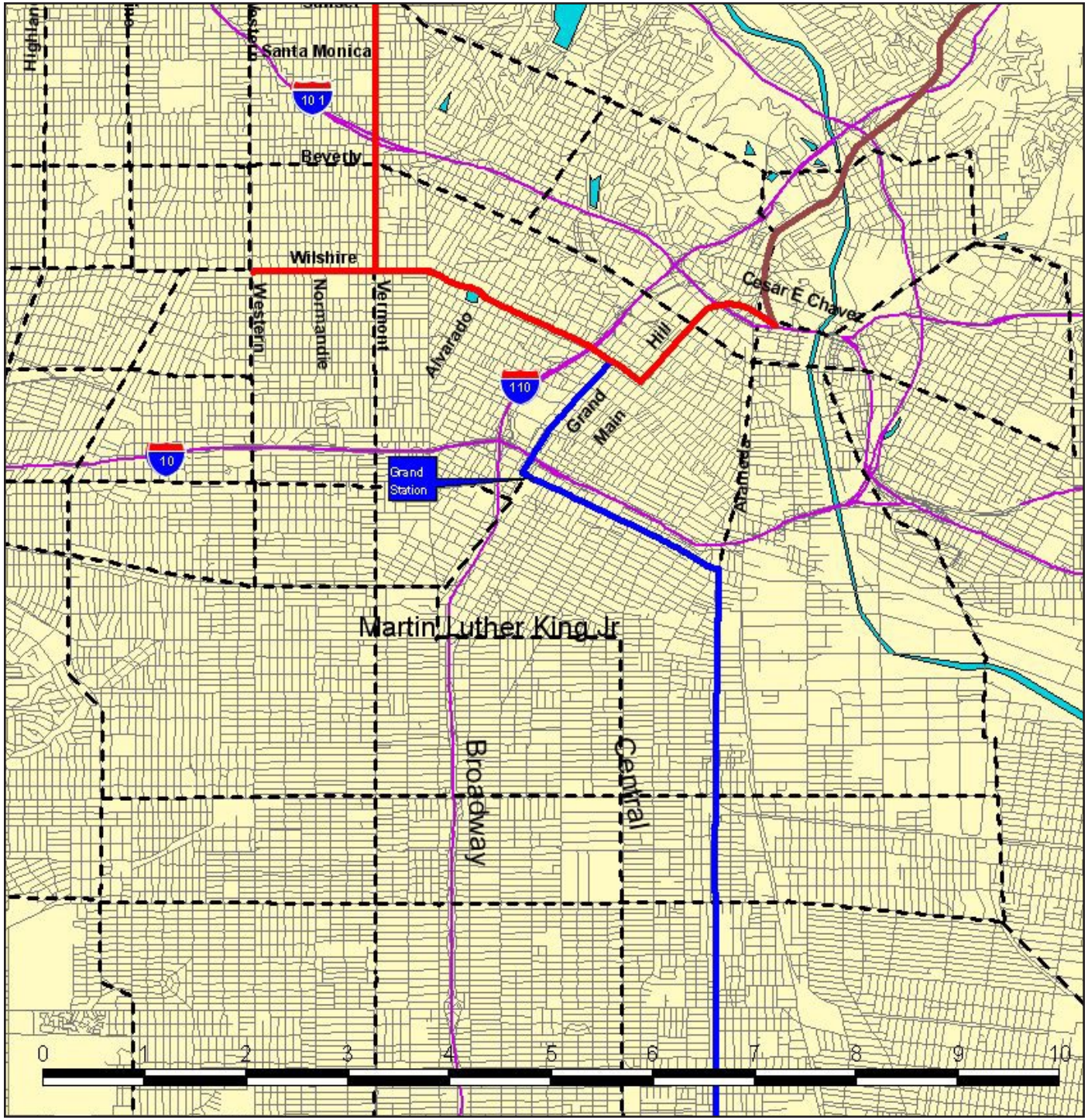
Washington D.C.

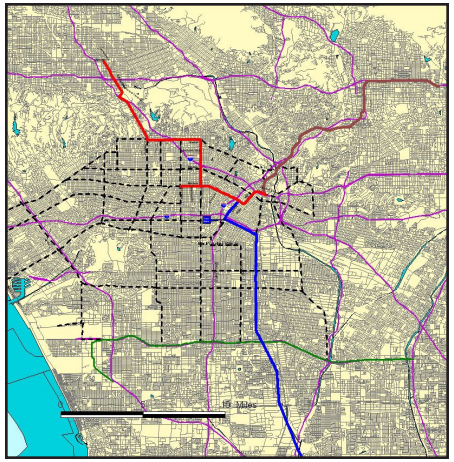




Los Angeles

Proposed network with density somewhat greater than Washington D.C.





Project Schedules

Metro Green Line

1972	Highway/busway project. Lawsuit filed to stop assembling of parcels pending preparation of EIR
4/1977	Final EIS
10/1978	Approval for construction received from DOT
1991	Start of construction
1991	Revised ridership projections based on one-car train
1993	I-105 Freeway opened
10/1994	Draft Revised Bus/Rail Interface Concept issued
2/1995	Final Bus/Rail Interface Plan
1995	Line opens (line complete)

Appendix B
Project Schedules, Bus Connections, Development Projections

Metro Blue Line

1982	Feasibility Study selected LB-LA corridor
9/1983	Concept Design Report Executive Summary, Vol. 1 & 2
5/1984	Draft EIR
12/1984	Draft Supplemental EIR
3/1985	Final EIR
10/1985	Groundbreaking
7/1990	Line opens bet. Pico Blvd. and Anaheim St.
9/1990	Line opens bet. Anaheim St. and Long Beach terminal
2/1991	Line opens bet. Pico and 7th Metro Center (line complete)
11/2001	Three-car trains accommodated by platform extension

Metro Red Line

1976	Request for funding to UMTA for Alternatives Analysis for Regional Core Area
5/18/1979	Draft Final Alternatives Analysis/ EIS/EIR
7/1979	Alternative II selected – Locally Preferred Alternative
4/8/1980	Final Alternatives Analysis/ EIS/EIR on Transit System Improvements in the Los Angeles Regional Core
12/1983	Original Locally Preferred Alternative (West on Wilshire to North on Fairfax)
3/1985	Methane Gas Fire at Ross Dress for Less Store causes Congressionally Ordered Re-Engineering Study
12/1985	U.S.Congress signs Public Law 99-190 to stipulate that SCRTD could not tunnel in methane gas risk zones
8/15/86	UMTA signed full-funding contract w/SCRTD for construction of MOS-1
9/1986	Groundbreaking at site of Civic Center Station - MOS-1
11/1987	Draft SEIS/SEIR
7/1988	Locally Preferred Alternative selected (route actually constructed)
1/1989	Final Supplemental EIS/Subsequent EIR. LA Rail Rapid Transit Project– Metro Rail. SCRTD
7/1989	Final Supplemental EIS/ Subsequent EIR.
1/1993	Segment 1 Union Station to Alvarado (Westlake McArthur Park) opens
7/15/1996	Segment 2A Alvarado (Westlake McArthur Park) to Wilshire & Western opens
6/12/1999	Segment 2B Wilshire & Vermont to Hollywood & Vine opens
6/24/2000	Segment 3 Hollywood & Vine to North Hollywood opens (line complete)

Bus Connections

LACMTA. 2001. *Metro Rail Map and Guide to Connecting Bus Services by Station.* March 2001.

Civic Center

Metro Bus
2 Sunset Bl.
3 Sunset Bl.-Beverly Dr.
4 Santa Monica Bl.
10 Melrose Av.-Virgil Av.-Clinton St.-Hoover St.-Temple St.
11 Melrose Av.-Vermont Av.-Beverly Bl.-Temple St.
14 Beverly Bl.
28 W. Olympic Bl.
30 W. Pico Bl.-E. 1st St.-Floral Dr.
31 W. Pico Bl.-E. 1st St.
33 Venice Bl.
37 Adams Bl.
38 W. Jefferson Bl.
40 Patsaouras Transit Plaza/Union Station-Inglewood-Hawthorne-South Bay Galleria Transit Center
42 Patsaouras Transit Plaza/Union Station-LAWestchester-LAX City Bus Center
45 Broadway-Mercury Av.
46 Broadway-Griffin Av.
48 Maple Av.-S. San Pedro St.
55 LA-Imperial/Wilmington/Rosa Parks Metro Rail Station via Patsaouras Transit Plaza/Union Station-Compton Av.
68 Washington Bl.-Cesar Chavez Av.-Montebello Town Center
70 Garvey Av. via Marengo St.
71 City Terrace Dr.-CSULA
76 LA-El Monte via Valley Bl.
78 LA-S. Arcadia via Las Tunas Dr.
79 LA-Arcadia via Huntington Dr.
81 Figueroa St.
83 Pasadena Av.-York Bl.
84 LA-Cypress Av.-Eagle Rock Bl.
85 Cypress Av.-Eagle Rock Bl.-Verdugo Rd.
90 LA-Sunland-Sylmar via Pennsylvania Av.
91 LA-Sunland-Sylmar via La Crescenta Av.
92 LA-Glendale-Burbank-San Fernando via Glendale Bl.
93 LA-Glendale-Burbank-San Fernando via Allesandro St.
94 San Fernando Rd.
96 LA-Burbank-Sherman Oaks via LA Zoo
302 Sunset Bl. Limited
304 Santa Monica Bl. Limited
328 W. Olympic Bl. Limited
333 Venice Bl. Limited
340 Hawthorne Bl. Limited
394 San Fernando Rd. Limited
401 LA-Pasadena Express
410 LA-Glendale-Burbank-San Fernando Express
434 Patsaouras Transit Plaza/Union Station-Santa Monica-Malibu-Trancas Express
439 Patsaouras Transit Plaza/Union Station-LAX City Bus Center-Redondo Beach Freeway Express
442 Patsaouras Transit Plaza/Union Station-Inglewood-Hawthorne-South Bay Galleria Freeway Express
445 Patsouras Transit Plaza/Union Station-San Pedro Express
446 Patsaouras Transit Plaza/Union Station-Carson-Wilmington-San Pedro via Pacific Av. Express
447 Patsaouras Transit Plaza/Union Station-Carson-Wilmington-San Pedro via 7th St. Express
483 LA-Altadena via Fair Oaks Av. Express
484 LA-La Puente-Pomona via Valley Bl. Express
485 LA-Altadena via Lake Av. Express
487 LA-San Gabriel-Sierra Madre Express
489 LA-Rosemead Bl.-Hastings Ranch Dr. Express
490 LA-Baldwin Park-Covina-Walnut-Cal Poly Pomona-Lanterman Developmental Center-Brea Mall-CSU Fullerton Express
491 LA-El Monte-Arcadia-Sierra Madre Express Metro Rapid
745 Metro Rapid-S. Broadway

Antelope Valley Transit Authority
785 Downtown LA-Antelope Valley

Foothill Transit
480 LA-El Monte-West Covina-Pomona-Claremont-Montclair
482 LA-Rowland Heights-Diamond Bar-Pomona
486 LA-Puente Hills Mall-Cal Poly Pomona-Baldwin Park-El Monte Station
488 LA-El Monte Station-West Covina-Glendora
492 LA-Temple City-San Dimas-Montclair via Arrow Hwy.
493 LA-Rowland Heights-Phillips Ranch
494 LA-Monrovia-Glendora-San Dimas
495 Downtown LA-Rowland Heights-Diamond Bar
498 Downtown LA-Eastland-San Dimas-Citrus Con LA-Eastland-San Dimas park/ride
699 Downtown LA-Fairplex park/ride

LADOT Commuter Express
409 Downtown LA-E. Glendale-Montrose-Sunland-Sylmar
413 Downtown LA-Burbank-North Hollywood-Van Nuys
419 Downtown LA-Mission Hills-Granada Hills-Chatsworth
423 Exposition Park/USC Downtown LA-Encino-Woodland Hills-Calabasas-Westlake Village-Thousand Oaks-Newbury Park
430 Downtown LA-Westwood-Brentwood-Pacific Palisades
431 Downtown LA-Palms-Rancho Park-Westwood
437 Downtown LA-Marina Del Rey-Venice
438 Downtown LA-El Segundo-Manhattan Beach-Hermosa Beach
448 Downtown LA-Exposition Park/USC-Harbor City-Wilmington-Lomita-Rolling Hills Estates-Rancho Pasos Verdes
534 Patsaouras Transit Plaza/Union Station-Mid-City-Century City-Westwood (reverse rush hour service)

LADOT – Dash
Route A Little Tokyo-Convention Center (Mon-Fri)
Route B Chinatown-Financial District (Mon-Fri)
Route D Union Station/Gateway Transit Center-South Park (Mon-Fri)
Route DD Downtown Discovery (weekends only)

Orange County Transportation Authority
701 LA-Huntington Beach

Santa Clarita Transit
799 LA-Santa Clarita-Express

Santa Monica Big Blue Bus
10 Downtown LA-Santa Monica Freeway Express

Torrance Transit
1 Downtown LA-Torrance via Vermont Av.
2 Downtown LA-Torrance via Crenshaw Bl.

Grand

Metro Bus
14 Beverly Bl.
37 W. Adams Bl.
38 W. Jefferson Bl.
55 LA-Imperial/Wilmington/Rosa Parks Metro Rail Station via Patsaouras Transit Plaza/Union Station-Compton Av.
65 Washington Bl.-Indiana St.-Gage Av.-CSULA
68 West LA Transit Center/W. Washington Bl./Cesar Chavez Av/Montebello Town Center
76 LA-El Monte via Valley Bl.
78 LA-S. Arcadia via Las Tunas Dr.
79 LA-Arcadia via Huntington Dr.
603 Hoover St.-Rampart Bl.-Glendale Galleria

LADOT – Dash
Route D Union Station/Gateway Transit Center-South Park (Mon-Fri)
Pico Union/Echo Park (daily)

Torrance Transit
1 LA via Gardena
2 LA via South Bay Galleria Transit Center

Hollywood & Highland

Metro Bus
26 7th St./Virgil Av./Franklin Av./Highland Av.
156 LA City College-Van Nuys-Panorama City
180 Hollywood Bl./Los Feliz Bl./Colorado Bl./N. Lake Av.
181 Hollywood Bl./Los Feliz Bl./Yosemite Dr./Colorado Bl./Pasadena City College
210 Vine St./Crenshaw Bl./South Bay Galleria Transit Center
212 La Brea Av.
217 Fairfax Av./West LA Transit Center
310 Vine St./Wilshire/Western Metro Rail Station/Crenshaw Bl./South Bay Transit
426 San Fernando Valley/Sherman Way/Victory Bl./Mid-Wilshire Express

LADOT – Dash
Hollywood (Mon-Sat)
Hollywood-West Hollywood (Mon-Sat)

Hollywood &Western

Metro Bus
180 Hollywood Bl./Los Feliz Bl./Colorado Bl./N. Lake Av.
181 Hollywood Bl./Los Feliz Bl./Yosemite Dr./Colorado Bl./Pasadena City College
207 Western Av./120th St. Limited
217 Fairfax Av./West LA Transit Center
357 Western Av./ 120th St. Limited

Development Projections

Blue Line, LACTC. 1985. Table IV-12A. Final Environmental Impact Report. Long Beach – Los Angeles Rail Transit Project. March 1985. Pg. V-9-10.
In the area of Grand Station, the Blue Line project was anticipated to catalyze additional development in the amount of 40,000 GSF retail and 100,000 GSF rehabilitation of industrial structures.

Development within One-Quarter Mile of Stations, Downtown Los Angeles *Grand Station was built in lieu of 18th St. and Broadway												
	Existing in 1980				1980-2000 without Project				Additional by 2000 with Project			
	Office	Retail	Hotel	Housing Units	Office	Retail	Hotel	Housing Units	Office	Retail	Industrial	Housing Units
(000s of gross square feet)												
7th Metro	10,622	1,330	1,907	1,236	6,700	440	250	200	350	25	0	250
Pico	1,214	143	1,196	808	130	40	0	580	0	25	0	730
18th St*	243	382	0	558	0	15	0	160	0	25	50 rehab	0
Broadway*	185	304	0	302	0	15	0	90	0	15	50 rehab	0
San Pedro	0	98	0	520	0	0	0	40	0	10	50 rehab	0
TOTAL	12,264	2,257	3,103	3,424	6,830	510	250	1,070	350	100	150 rehab	980

Red Line, SCRTD. 1989. Land Use and Development. *Final Supplemental Environmental Impact Statement / Subsequent Environmental Impact Report, Los Angeles Rail Rapid Transit Project – Metro Rail*. July 1989. Pg. 3-2-11. Data for the individual stations was not provided.

(Excerpt from) Expected Net Change in Commercial and Residential Development in Metro Rail Station Areas, 1980 - 2000				
Development Category Planning Area	New Locally Preferred Alternative in thousands of square feet		Null Alternative in thousands of square feet	
	Without Effort	With Effort	Without Effort	With Effort
CBD Commercial	19,650	24,500	15,410	19,650
CBD Residential	11,330		11,330	
Hollywood Commercial	3,883	4,846	3,100	3,100
Hollywood Residential	7,185		4,025	

Front Cover:
Pico Station, Blue Line

Front Inner Cover:
Vermont & Santa Monica, Red Line

Facing Page:
Hollywood & Western, Red Line

Back Cover:
Metro Rail Map Los Angeles Metropolitan Transportation Authority

Photo of Los Angeles Arnesen Photography/ LACVB, PictureLA.com. By: Photo Credit: © Erik Arnesen. [http: // gocalifornia. about.com/bl_ laskphoto.htm]. Accessed March 29, 2003.

"Despite our inevitable inability to micro-manage all the forces that have resulted in sprawl, we can do better at managing some of them. First and foremost, we must eliminate the two principal causes of sprawl: artificially cheap land and artificially cheap energy. Like a supertanker that takes ten miles to stop, the American economy will be slow to change, even if we throw ourselves into reverse immediately. However, if we don't reverse these twin propellers, many of our other urban reforms will be in vain."

Kelbaugh, Douglas. 1997. *Common Place – Toward Neighborhood and Regional Design.* Seattle: University of Washington Press. Pg. 115.

"Where one wishes to go depends on whether one is able to get there."

Wildavsky, Aaron. 1987. *Speaking Truth to Power.* New Brunswick, New Jersey: Transaction Publishers. Pg. 9.