



ASSESSMENT OF ISSUES, FACILITIES, AND TRENDS

3.1 LAND USE, POPULATION AND EMPLOYMENT

The demand for roadways depends directly on land uses and their patterns. Residential, commercial, and industrial development all create a need for roadways to support their use. The intensity and mix of these uses can greatly affect the resulting number of vehicle trips. Controlling congestion requires not just changes in transportation policies, but complementary changes in land-use policies.

Since circulation and land use are so closely linked, the circulation network and the myriad of land use activities within Glendale mutually affect each other. Arterial roads, transit lines, and terminal facilities facilitate the viability of commercial, residential, and industrial activities.

A circulation system is a dominant feature in any city's land use development pattern. To a great extent, Glendale's layout of its 368.5 miles of surface streets and

freeways has influenced and will continue to influence the location and growth of land use activities.

Glendale's land uses include residential, commercial, industrial and open space areas encompassing 19,581 acres of land area. Exhibit 3-1 shows that approximately 8,198 acres of land is designated as residential use (single and multifamily) and of that, approximately 78.1% is low and very low density residential. Commercial land uses comprise about 824 acres or 4.2% of the city's total land area, the majority of which is located in the downtown area. Approximately 3.8% of Glendale's land area is classified industrial most of which is located along the San Fernando Road corridor. Streets and right-of-ways, including the freeways, comprise approximately 19.6% of the city's land area .

The City adopted a moderate growth plan on March 25, 1986 which was later modified on November 6, 1990 as

EXHIBIT 3-1 LAND USE ACREAGE

Land Use Classification	Existing Acreage	Total Area in Percent
Residential	8,190	41.83
Commercial	824	4.20
Industrial	751	3.84
Institutional	111	0.57
Open Space/ Recreation	5,866	29.96
Public Right of Way (roads and sidewalks)	3,839	19.60
Total Area	19,581	100.00

Source: City of Glendale Land Use Element Adopted on November 6, 1990

a result of increased housing construction during the 1980s. The plan indicates population capacity at 225,000 people with 77,700 housing units. During the past 20 years, Glendale has experienced significant growth and demographic changes that have affected the city's transportation network. Between 1970 and 1980 Glendale had an increase in population of 4.8 percent. This reflected a declining birthrate in the decade of the 1970s. This trend was reversed in the 1980s as a result of increasing birthrates and in-migration. In the 1980s Glendale experienced a population growth of 29.5 percent. Approximately 10,479 housing units were built between 1980 and 1990, a 17% increase in the City's housing stock compared to a 10.8% increase in Los Angeles County as a whole. The State certified population for Glendale in 1998 is estimated at 197,560. It is projected that the City of Glendale will increase its population to approximately 210,000 by the year 2010.

Between 1980 and 1990 Glendale showed a 15.4 percent increase in the number of households, totalling 68,604 households. Southern California Association of Governments (SCAG) projections indicate that between 1990 and 2000 a 7.3 percent increase will occur. Between 2000 and 2010 the number of households is projected to increase by 6.0 percent for a total of 78,051 households (see Exhibit 3-2 and 3-3).

The City's employment rose by 22.2 percent between 1970 and 1980 and by 20.1 percent between 1980 and 1990. From 1990 to 2010, it is projected that Glendale will gain 22,874 jobs. This represents a 26.0 percent increase in employment. The highest growth of jobs is

expected in Census Tract 3018 where 9,156 new jobs could be added. The smallest job growth is expected in Census Tracts 3005, 3007.01, 3007.02, 3009, and 3013 where, according to city's projections, no new jobs will be added due to the dominant residential character of those census tracts (Exhibit 3-4).

MAJOR REGIONAL PROJECTS

GREATER DOWNTOWN STRATEGIC PLAN

In 1996, the City approved the Glendale Greater Downtown Strategic Plan to provide direction for growth and revitalization of the downtown area. The City Council certified the Master Environmental Impact Report for a specific development scenario for the greater downtown area and approved an implementation program under this scenario. The EIR analyzes impacts resulting from those developments that can reasonably be expected in the next 15 years under ideal market conditions. The development projected in the EIR included approximately 3.5 million square feet of commercial space (retail, office, hotel, theater) and approximately 380 housing units, primarily within the boundary of the current Redevelopment Project Area. According to the EIR, approximately 10,038 new jobs could be added due to development under the plan.

SAN FERNANDO ROAD CORRIDOR REDEVELOPMENT PROJECT

In 1992, the San Fernando Road Corridor Redevelopment Project area was established to address the declining industrial area along San Fernando Road and surrounding areas. The project is bounded by Allen Avenue to the north and Tyburn Street to the south. The project area is approximately 750 acres. The redevelopment plan proposes approximately 4.97 million square feet of new development. The traffic study in the EIR for the project area indicated that a total of twenty-eight signalized intersections could operate at an unacceptable level of service during either of the peak periods for the year 2027. A Design and Implementation Plan, prepared for the Glendale Redevelopment Agency by Cooper, Robertson and Partners lays out changes in land uses and street connections to address future development of this area.

OTHER REGIONAL PROJECTS

Several projects are proposed in the region outside Glendale which may have an impact on Glendale's transportation network. The following is a summary of known projects:


EXHIBIT 3-2 POPULATION, HOUSEHOLD, AND EMPLOYMENT PROJECTIONS

	1980	1990	% Change 1980-1990	2010	% Change 1990-2010
Population	139,060	180,038	+29.5	210,256	+16.8
Households	59,437	68,604	+15.4	78,051	+13.8
Employment	73,370	88,148	+20.1	111,022	+26.0

Source: U.S. Census
SCAG 1995 Projections
City of Glendale Planning Division

CITY OF BURBANK

- The combined City Centre and South San Fernando Redevelopment Project Areas area proposed to be developed with a maximum of 4.3 million square feet of office, media industry, research and development, retail, hotel, and public facility uses. In addition, between 250 and 1,000 residential dwelling units may be added within these two Redevelopment Project Areas.
- The Burbank-Glendale-Pasadena Airport Authority is proposing to construct a new terminal in two phases to be completed by the year 2010. A total of 670,000 square feet might be constructed by the year 2010.
- The Warner Brothers Main Lot 20-year master Plan adds approximately 2.2 million gross square feet to the existing 2.3 million square feet. The new development consists of media office space, studios, and related production space. At project buildout, approximately 8,600 new parking spaces would be provided. This development would result in 5,900 new jobs.
- The Warner Brothers Ranch Lot entitlement includes approximately 1.1 million gross square feet of media office space and related production facilities, in addition to the one million square feet that existed. Approximately 3,100 parking spaces are planned to accommodate the project buildout. The development would provide 2,600 new jobs.
- The NBC Studios has entitlements under its approved Master Plan to add approximately 1.8 million gross square feet of media offices, studios, and production support buildings, totalling three million gross square feet at the year 2015 buildout. Approximately 7,800 parking spaces are planned for development during the 20-year term.

- The Disney Studios Master Plan entitles 1.8 million gross square feet of studio, office and production space during the 25-year term. At the conclusion of the project, cumulative totals of 2.9 million gross square feet of building space and 7,800 parking spaces are expected.
- The Burbank Empire Center project (former Lockheed B-1 and B-199 sites) is a proposed mixed use development that includes the following uses: commercial retail, neighborhood retail, restaurants, hotel, entertainment, and office. The project would include up to 2.0 million square feet of development.

CITY OF LOS ANGELES

- The Costco project located on Los Feliz Boulevard near Glendale/ Los Angeles border was built in 1996. The project included 300,000 square feet of retail uses and some fast food restaurants. In addition, a 3,500 seat church has been approved.
- The Taylor Yards area has the potential to generate substantial additional traffic as it redeveloped in the future.

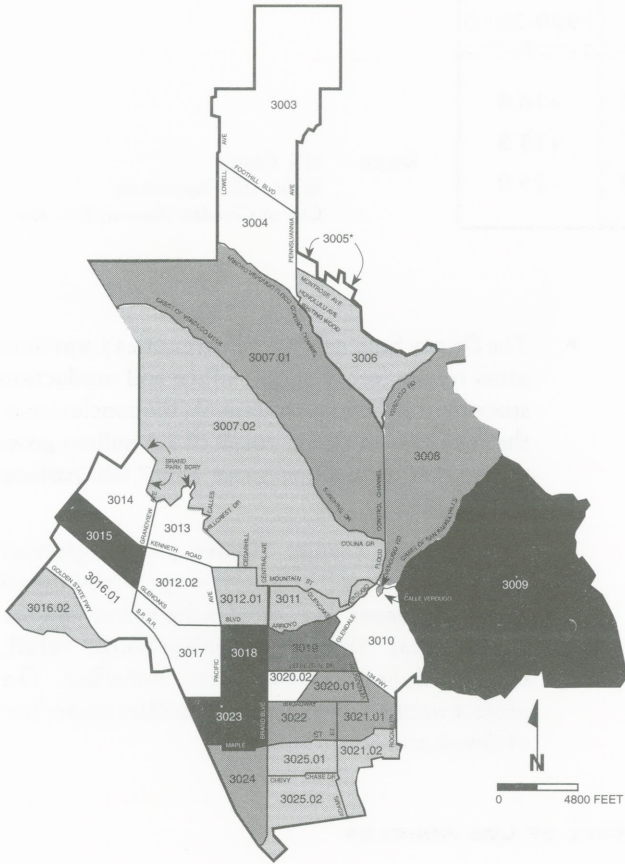
COUNTY OF LOS ANGELES

- Universal Studios in Universal City is seeking to expand by approximately 3.3 million square feet of office, entertainment, restaurants, studio and hotel to an existing development.

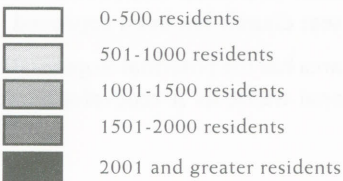
CITY OF SOUTH PASADENA

- The connection of Interstate 710 to Interstate 210 would bring more truck traffic to Interstate 210 and may create spillover effects on Foothill Boulevard.

EXHIBIT 3-3 1990-2010 POPULATION GROWTH BY CENSUS TRACT



* Portion of Census Tract in City

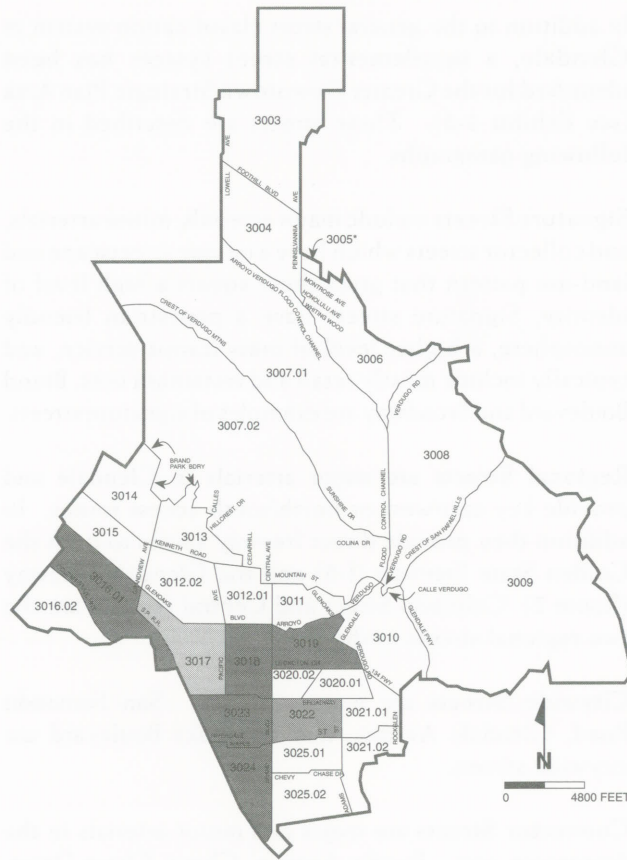


Source: U.S. Census
 SCAG 1994 projections
 City of Glendale Planning Division

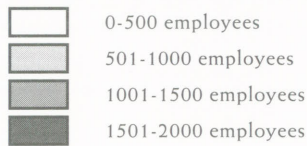
Census Tract	1990 Population	2010 Population	Change 1990-2010
3003	6,009	6,248	239
3004	5,211	5,542	331
3005	1,629	1,784	155
3006	6,080	6,773	693
3007.01	5,609	6,887	1,278
3007.02	5,459	6,139	680
3008	6,668	7,889	1,221
3009	6,800	10,649	3,849
3010	4,845	5,192	347
3011	5,844	6,546	702
3012.01	7,654	8,282	628
3012.02	7,005	7,365	360
3013	1,974	1,974	0
3014	3,606	3,606	0
3015	8,133	11,286	3,153
3016.01	6,633	7,123	490
3016.02	4,034	5,020	986
3017	7,891	8,103	212
3018	6,969	9,572	2,603
3019	6,123	8,075	1,952
3020.01	7,287	8,460	1,173
3020.02	3,102	3,576	474
3021.01	9,290	10,649	1,359
3021.02	6,572	7,338	766
3022	8,791	10,063	1,272
3023	9,256	11,794	2,538
3024	5,477	6,889	1,412
3025.01	8,966	9,724	758
3025.02	7,101	7,688	587
4607	20	20	0
TOTAL	180,038	210,256	30,218



EXHIBIT 3-4 1990-2010 EMPLOYMENT GROWTH BY CENSUS TRACT



* Portion of Census Tract in City



Source: SCAG 1994 projections
U.S. Census
City of Glendale Planning Division

Census Tract	1990 Employment	2010 Employment	Change 1990-2010
3003	1,292	1,383	91
3004	1,516	1,617	101
3005	1,244	1,244	0
3006	3,311	3,504	193
3007.01	563	563	0
3007.02	715	715	0
3008	3,174	3,275	101
3009	620	620	0
3010	1,984	2,156	172
3011	1,375	1,507	132
3012.01	1,504	1,666	162
3012.02	1,434	1,480	46
3013	111	111	0
3014	493	513	20
3015	1,591	1,682	91
3016.01	12,592	16,337	3,745
3016.02	1,966	2,046	80
3017	3,085	3,681	596
3018	10,744	19,900	9,156
3019	4,466	6,457	1,991
3020.01	1,385	1,436	51
3020.02	7,075	7,380	305
3021.01	2,050	2,394	344
3021.02	608	643	35
3022	5,139	6,401	1,262
3023	6,473	8,387	1,914
3024	7,383	9,127	1,744
3025.01	1,227	1,399	172
3025.02	3,028	3,398	370
4607	0	0	0
TOTAL	88,148	111,022	22,874

3.2 GLENDALE'S STREET SYSTEM

STREET CLASSIFICATIONS

The classification of Glendale's 900 streets totalling almost 370 miles has historically been based on the volume of traffic and the nature of the trips for which they have been planned. The 1995 supplement to the Circulation Element defined five different classifications. Glendale's classification system has been defined in a hierarchal (i.e., lower order streets directly serve the next higher order street) and pyramidal (i.e., the higher the order of classification, the fewer the number of streets in the category) manner. These 1995 roadway types were defined in the following manner:

Freeways are arterial roadways having limited or controlled access, separation of grades at intersections, and the physical displacement of traffic to carry as much as three times the traffic of city streets.

Major and Minor arterials are characteristically the widest of urban streets and carry the heaviest volumes--about 75 percent of all Glendale's non-freeway traffic. Major arterials generally give motorists the best route of travel through the city and provide service to freeways by leading to and from freeway ramps throughout the City. Minor arterials form a network of streets between and a convenient route to major arterials and provide for trips of intermediate distance within densely developed areas and to lend access to regional traffic generators.

Collector streets serve individual neighborhoods of the City and they are responsible for collecting traffic from local streets and providing connections to arterial streets. They carry a lower level of traffic and provide access to residential, commercial, and industrial streets.

Local Streets are the lowest order in the street classification system. Consequently, they provide the lowest level of mobility. Their most important function is to provide direct access to abutting land and connect to collector streets.

The classification system in this element (Chapter 2) expands the definitions within each classification and subdivides the collector streets into the separate categories: urban collectors, community collectors, and neighborhood collectors, in order to address differing policy needs of these collector streets. These expanded definitions will improve the ability of the streets to meet future needs by providing more precise policy direction.

GREATER DOWNTOWN STRATEGIC PLAN CLASSIFICATIONS

In addition to the general street classification system in Glendale, a supplemental street system has been identified for the Greater Downtown Strategic Plan Area (see Exhibit 3-5). These streets are described in the following paragraphs.

Signature Streets include major arterials, minor arterials, and collector streets which have a unique streetscape and land-use pattern that gives these streets a high level of identity. Signature streets have a pedestrian friendly atmosphere, a higher level of mass transit service, and typically include mostly retail and restaurant uses. Brand Boulevard and Broadway are examples of signature streets.

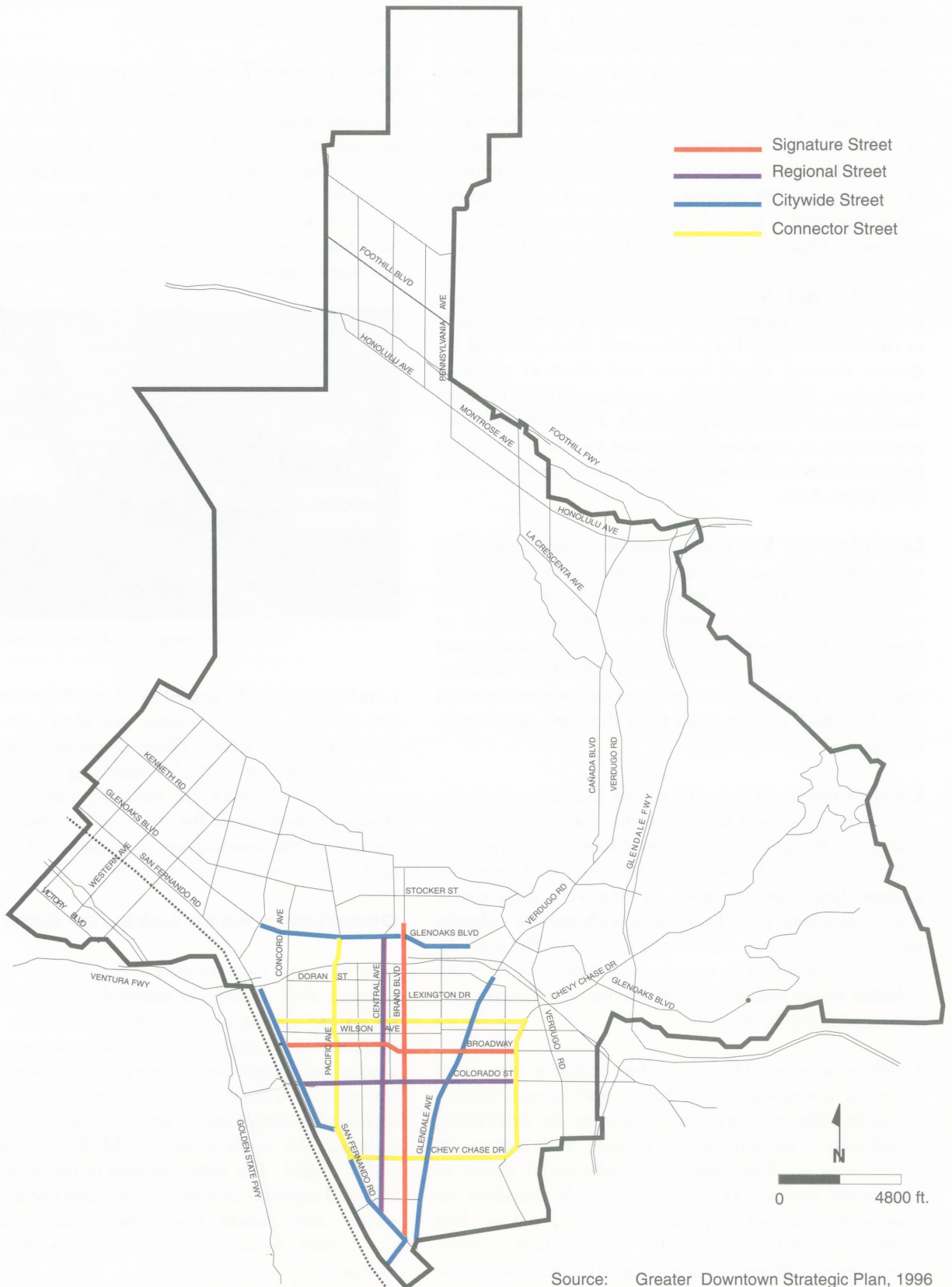
Regional Streets are major arterials in Glendale and provide key east/west or north/south access routes. In addition they provide direct freeway access to both the Golden State Freeway (I-5) and the Glendale Freeway (Route 2). Colorado Street and Central Avenue are the two regional streets in the city.

Citywide Streets are major arterials. San Fernando Road, Glendale Avenue, and Glenoaks Boulevard are citywide streets.

Connector Streets are major and minor arterials in the downtown area. Pacific Avenue, Chevy Chase Drive, and California Avenue are classified as connector streets.



EXHIBIT 3-5 GREATER DOWNTOWN STRATEGIC PLAN STREET CLASSIFICATION



Source: Greater Downtown Strategic Plan, 1996

LEVEL OF SERVICE

Level of Service is a measurement of the ability of a street or intersection to accommodate its traffic. In order that a street provide an acceptable level of service to the driver, it is necessary that arterial or collector street service volume be considerably lower than the capacity of the street. A street's level of service is determined by (1) the vehicular speed and travel, (2) traffic interruptions or restrictions, (3) freedom to maneuver, (4) safety, and (5) driving comfort and convenience. These five criteria are tied to the street's congestion or its volume-to-capacity ratio. There are six levels of service:

Level of service "A" describes a condition of free flowing traffic with low volumes and high speeds. Traffic density at this level is very low, and speeds are controlled by drivers desires, speed limits, and physical roadway conditions. All signal cycles are clear with no vehicles waiting more than one signal cycle. There are few or no restrictions in maneuverability due to the presence of other vehicles, and drivers can maintain their speeds with little or no delay.

Level of service "B" is represented by a stable traffic flow with operating speeds beginning to be somewhat restricted by traffic condition. Drivers still have reasonable freedom to select their speed and lane of operation. Reductions in speed are not unreasonable, and there is a probability of some stifled traffic flow. Between one and ten percent of the signal cycles have one or more vehicles which wait through more than one signal cycle during peak traffic periods.

Level of service "C" is still within the range of stable flow, but speeds and maneuverability are more closely controlled by the higher volumes. More of the drivers are restricted in their freedom to select their own speed, to change lanes, and to pass. A relatively satisfactory operating speed is still obtained with service volumes perhaps suitable for urban design practice. Between 11 and 30 percent of the signal cycles have one or more vehicles which wait through more than one signal cycle during peak traffic periods.

Level of service "D" approaches unstable flow with tolerable operating speeds being maintained, though considerably affected by changes in operating conditions. Fluctuations in volume and temporary restrictions to flow may cause substantial drops in operating speeds. Drivers have little freedom to maneuver-comfort and convenience are low, but conditions can be tolerated for short periods of time. Thirty-one to 70 percent of the signal cycles have one or

more vehicles which wait through more than one signal cycle during peak traffic periods.

Level of service "E" has operating speeds lower than level "D" with volumes at the capacity of the street. At capacity, maximum speeds are typically, but not always, around 30 miles per hour. Level E allows the maximum traffic volumes an intersection can accommodate. Flow is unstable, and there may be stoppages of momentary duration. Seventy-one to 100 percent of the signal cycles have one or more vehicles which wait through more than one signal cycle during peak traffic periods.



Intersection congestion during afternoon rush hour

Level of service "F" describes a forced flow operation at low speeds where volumes are above the designed capacity of the street. These conditions usually result from queues of vehicles backing up from other restrictions. Speeds are reduced substantially, and stoppages may occur for short or long periods of time because of the downstream congestion. In the extreme, both speed and volume can drop to zero.

DOWNTOWN AREA LEVEL OF SERVICE

In 1996, the City prepared the Greater Downtown Strategic Plan. Under the adopted implementation plan, 70 critical intersections were evaluated for potential project-related impacts in the downtown area, requiring a variety of mitigation measures, many of which would be financed by a traffic impact fee program. In addition, technical transportation analysis has been conducted utilizing the city's existing EMME/2 software-based traffic model. The 2010 version of the model included assumed regional, as well as local, land use growth based on the city's future development plans and Southern California Association of Governments growth forecasts.



Exhibit 3-6 compares existing and 2010 levels of service in the afternoon peak hour at intersections along major arterials in the downtown Glendale area. The transportation modeling analysis indicated that traffic added due to the plan would result in several intersection level deficiencies. The number of intersections operating at LOS E or F would increase due to the land use growth and resulting vehicle trip generation. Out of 35 major arterial intersections in the downtown area, 12 intersections are projected to be level of Service E-F.

CITYWIDE TRAFFIC PROJECTIONS

Using population, housing, and employment projections from Section 3-1, traffic volumes on major streets in Glendale were evaluated for the present and the year 2010. Exhibits 3-7 and 3-8 shows present and projected 2010 traffic volumes. The greatest increases of traffic are projected in the downtown area and along the San Fernando Road corridor. This is related to employment growth in these areas. The residential areas are expected to have moderate increases in traffic volumes, as growth in these areas is not expected to be substantial. Major arterials in the City will have increases related to land use development both within Glendale and in surrounding cities.

Based on 2010 traffic forecasts and the changes to the Land Use Element in 1986 and 1990 reducing General Plan "buildout" population of Glendale from 375,000 to 225,000, many of the minor arterials extending into the residential areas are not needed to carry future projected traffic volumes, and reclassification of some of these streets to collector would be appropriate to address future needs. Other streets, such as south Verdugo Road, are needed to carry additional traffic beyond their existing classification. Raising the classification is appropriate where it is consistent with other goals of this element. Exhibit 3-9 shows the changes of this plan from street classifications in 1995.

NARROW STREETS

Many streets in the city do not meet the minimum desirable widths of the current street design standards listed in this element.

- **Major Arterials-** Nineteen of the 27 major arterials contain some segments below both the desirable right-of-way and roadway width standards. Only six out of 27 streets meet both the desired street right-of-way and roadway width listed in the street classification chart.

- **Minor Arterials-** Fifty-four of 61 minor arterials contain some segments below both the desirable right-of-way and roadway width standards. Only two streets meet both the desired street right-of-way and roadway width classification.
- **Collector Streets-** Sixty-two out of 93 collector streets are below both the desired right-of-way and roadway width standards (one street is not developed). Only 15 out of the 93 collector streets meet both the desirable right-of-way and roadway width standard.

Many of these streets could not be widened to meet plan standards without expensive dedications and demolition of buildings. A number of these streets would comply with the design standards for the street classification recommended in this plan, particularly streets changing in classification from a minor arterial to a collector. In order to address future street needs, a Master Plan of Streets is recommended in this element to detail approaches for streets to meet the planned needs in a technically and fiscally feasible manner.

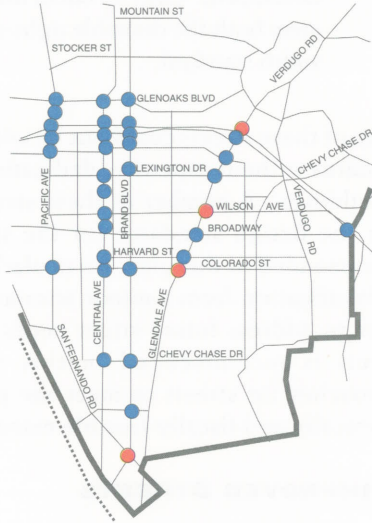
UNIMPROVED STREETS

The City of Glendale Public Works Division has identified several unimproved streets. Unimproved streets are those streets or street segments that are not fully developed. Unimproved streets are categorized in two ways: unpaved streets and "paper" streets. Twenty-five streets are currently unpaved with a total of 1.7 miles. Some of the parcels around the unpaved roads have been developed but the streets have not yet been developed for various reasons. Once the parcels or lots around the streets are fully developed, the unpaved streets are expected to be fully improved.

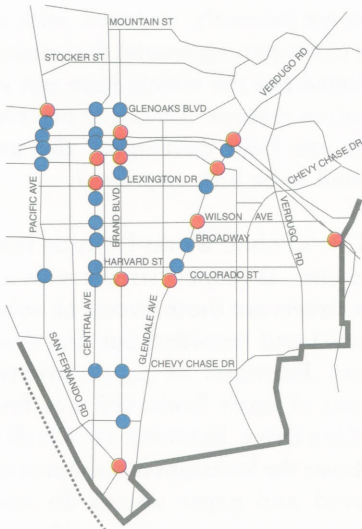
The City's Public Works Division lists thirty-one streets in the city as "paper" streets with a total of 7.3 miles. Paper streets are those streets in subdivisions that were approved and recorded but not developed for various reasons. Examples of paper streets are Carla Drive, portions of Sparr Boulevard, Los Encinos Avenue, and Pasa Glen Drive. Exhibit 3-10 lists all unimproved streets and shows the locations of unimproved streets in the city. Unpaved and paper streets do not present a major concern in meeting existing and future circulation needs.

EXHIBIT 3-6

EXISTING AND 2010 LEVEL OF SERVICE AT INTERSECTIONS ON MAJOR ARTERIALS (PM PEAK HOUR) IN DOWNTOWN GLENDALE

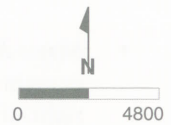


Existing



2010

- Level of Service D or better
- Level of Service E-F



Source: Greater Downtown Strategic Plan Master EIR, 1996



EXHIBIT 3-7A EXISTING TRAFFIC VOLUMES ON MAJOR STREETS



EXHIBIT 3-7B 2010 PROJECTED TRAFFIC VOLUMES ON MAJOR STREETS





**EXHIBIT 3-8 COMPARISON OF EXISTING AND PROJECTED 2010 TRAFFIC VOLUMES
ON SELECTED STREETS**

Street	Segment	1994 ADT	2010 ADT	% Increase
Brand Boulevard	Colorado Street to Chevy Chase Drive	29,000	31,900	10%
Broadway	Brand Boulevard to Glendale Avenue	18,900	24,500	30%
California Avenue	Brand Boulevard to Glendale Avenue	7,700	9,600	25%
Canada Boulevard	Opechee Way to Verdugo Road (s)	36,200	41,600	15%
Central Avenue	134 Freeway to California Avenue	38,700	48,400	25%
Chevy Chase Drive	San Fernando Road to Glendale Avenue	17,100	21,400	25%
Chevy Chase Drive	Harvey Drive to Golf Club Drive	15,200	18,200	20%
Colorado Street	Glendale Avenue to Chevy Chase Drive	30,000	33,000	10%
Foothill Boulevard	Pennsylvania Avenue to New York Avenue	36,800	45,800	25%
Glendale Avenue	134 Freeway to Doran Street	43,200	49,700	15%
Glenoaks Boulevard	Pacific Avenue to Concord Street	32,600	34,800	7%
Kenneth Road	Pacific Avenue to Highland Avenue	9,100	10,900	20%
La Crescenta Avenue	Roselawn Avenue to Verdugo Road	22,300	26,700	20%
Los Feliz Road	San Fernando Road to Glendale Avenue	20,700	22,600	9%
Montrose Avenue	La Crescenta Avenue to Ramsdell Avenue	11,100	14,400	30%
Pacific Avenue	134 Freeway to California Avenue	13,500	18,200	35%
San Fernando Road	Highland Avenue to 134 Freeway	32,800	35,400	8%
Verdugo Road	Colorado Street to Windsor Road	25,000	27,500	10%
Western Avenue	San Fernando Road to 5 Freeway	28,400	32,600	15%

Source: City of Glendale Public Works Division



EXHIBIT 3-10 UNPAVED AND "PAPER" STREETS

UNPAVED STREETS

Street Name	Segment	Length (in feet)
Allen Avenue	Riverside Drive to S'ly City limit	280
Barnett Drive	S'ly Terminus to E'ly Terminus	2,196
Camulos Avenue	Verdugo Court to W'ly Terminus	130
Corlington Road	Edwards Place to Sleepy Hollow Place	1,313
Glenoaks Blvd.	3rd Gate to Edison power lines	2,000
Glenoaks Blvd.	Edison power lines to E'ly city limits	1,600
Lockwood Road	Oak Glen Road to Marcia Road	100
Menlo Drive	El Tovar Drive to Glencoe Way	500
Outlook Lane	Barnett Drive to S'ly Terminus	336
Ramsay Drive	Barnett Drive to Cascadia Drive	584
Verdugo Court	Opechee Way to Camulos Avenue	240
	Total	9,179

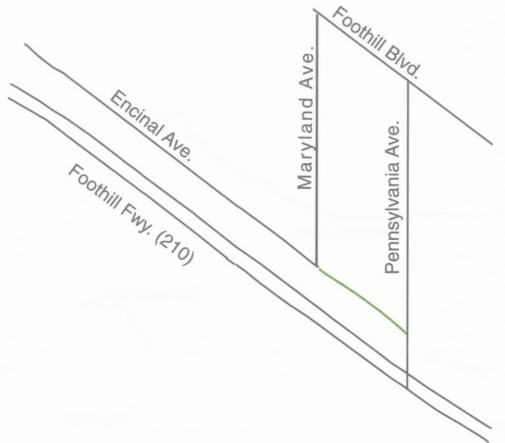
"PAPER" STREETS

Street Name	Segment	Length (in feet)
Alpha Road	Glendale Freeway to E'ly Terminus	280
Amarillo Drive	El Arbolita Drive to N'ly Terminus	800
Asbury Place	W'ly Terminus to Paddington Road	103
Bayberry Drive	Oak Glen Road to El Arbolita Drive	1,133
Blackmore Drive	W'ly Terminus to Glenoaks Boulevard	926
Cardigan Avenue	NW'ly Terminus to 1451 feet S'ly	1,451
Carla Drive	N'ly Terminus to S'ly Terminus	279
Chancery Lane	Olympic Drive to E'ly Terminus	128
Chiquita Place	Verdugo Road to Sparr Boulevard	171
Edmonton Road	Chevy Chase Drive to Golf Club Drive	1,000
Edwards Place	Corlington Road to Sleepy Hollow Place	826
Emburns Place	W'ly Terminus to Pasa Glen Drive	2,042
Encinal Avenue	Maryland Avenue to Pennsylvania Avenue	830
Fremont Place	El Rito Avenue to N'ly Terminus	120
Greengrove Drive	W'ly Terminus to Bywood Drive	1,413
Greenwich Drive	Chevy Chase Drive to S'ly Terminus	1,526
Guava Place	Chevy Chase Drive to N'ly Terminus	100
Harlow Drive	Southwood Drive to S'ly Terminus	302
Hill Drive	Harvey Drive to Wilson Terrace	200
Hillside Drive	Glendale Freeway to Oakmont Drive	600
Ilamae Place	N'ly Terminus to Pasa Glen Drive	712
Los Encinos Avenue	E'ly Terminus to W'ly Terminus	913
Mac Dowell Drive	Glendale Freeway to E'ly Terminus	180
Oak Glen Road	Bayberry Drive to Lockwood Road	621
Oakmont Drive	Glendale Freeway to Hillside Drive	500
Olympic Drive	Chevy Chase Drive to W'ly Terminus	747
Omega Way	W'ly Terminus to E'ly Terminus	284
Pasa Glen Drive	Mira Vista Drive to E'ly Terminus	4,877
Rafael Terrace	El Arbolita Drive to W'ly Terminus	1,023
Rainey Place	Los Encinos Ave. to Vista Del Verde Drive	445
Saint Martin Lane	Leith Road to N'ly Terminus	150
Sleepy Hollow Drive	Sleepy Hollow Place to Valle Vista Dr.	600
Sleepy Hollow Place	Glenoaks Bl. to Valle Vista Drive	2,849
Somerset Road	Cascadia Drive to N'ly Terminus	200
Trammell Road	Chevy Chase Drive to S'ly Terminus	1,389
Valle Vista Drive	Sleepy Hollow Pl. to Sleepy Hollow Drive	1,600
Southwood Drive	W'ly Terminus to Harlow Drive	464
Sparr Boulevard	Clifton Place to El Cino Place	1,299
Sunview Drive	Verdugo Road to Sparr Boulevard	135
Teodora Place	W'ly Terminus to Los Encinos Avenue	387
Victory Truck Blvd	Paula Avenue to E'ly Terminus	1,500
Vista Del Verde Drive	Mira Vista Drive to N'ly Terminus	3,456
Whitehall Court	W'ly Terminus to Greenwich Road	203
Wyndale Plac	Corlington Road to S'ly Terminus	522
	Total	38,561



EXHIBIT 3-10 (CONT'D) DETAIL MAPS OF UNPAVED AND "PAPER" STREETS

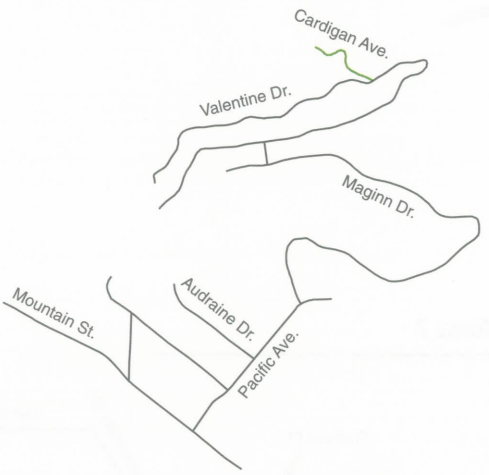
Area 1



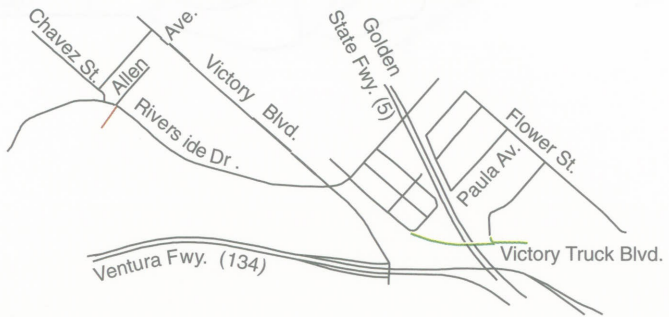
Area 2



Area 3



Area 4



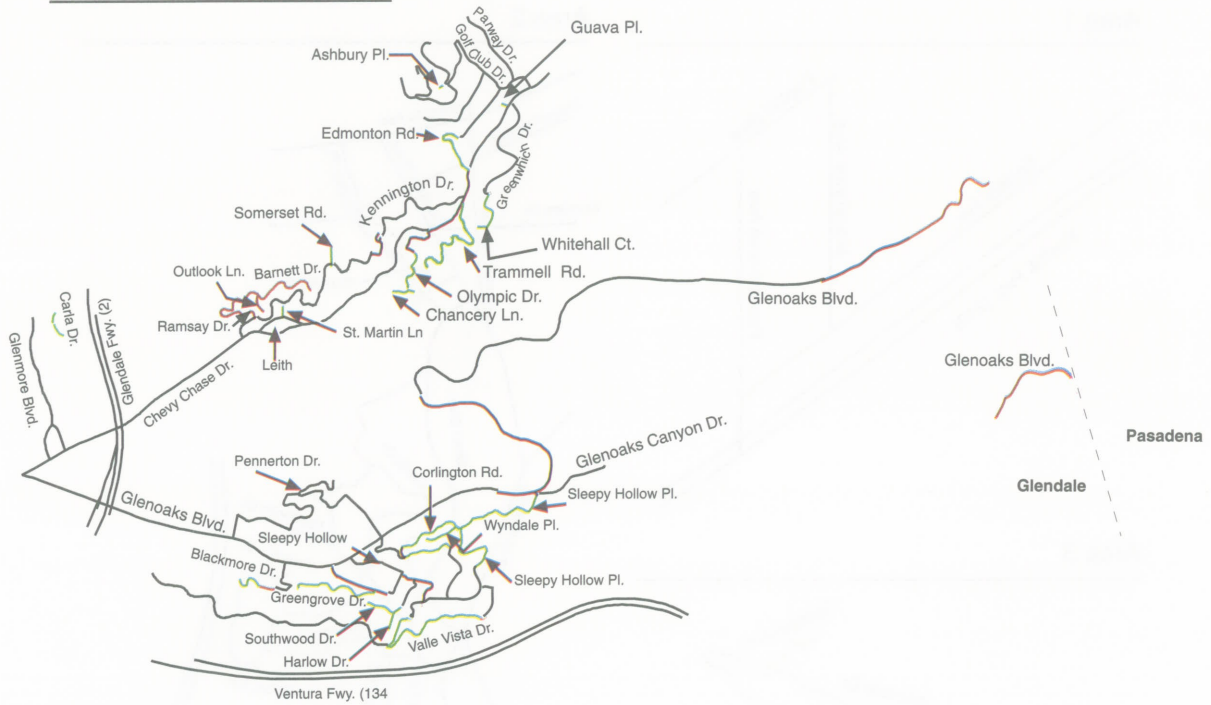
- Paper Streets
- Dirt Streets
- Paved



Not To Scale

EXHIBIT 3-10 (CONT'D) DETAIL MAPS OF UNPAVED AND "PAPER" STREETS

Area 5



Area 6



Area 7



— Paper Streets — Paved
— Dirt Streets


 N
 Not To Scale

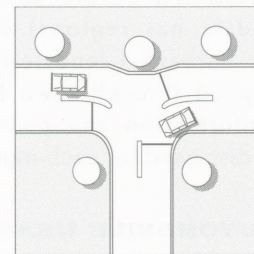


TRAFFIC CALMING

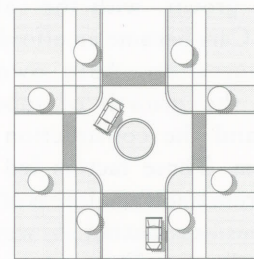
Traffic calming is an approach to reduce commercial cut-through traffic and slow through traffic in residential neighborhoods. This is accomplished through the use of devices and techniques that reduce traffic volume and speed in neighborhoods while maintaining maximum access. Traffic calming also attempts to make drivers aware of the fact that they are sharing the space of a street with other users. Some examples of traffic calming are included in Exhibit 3-11).

In September 1996, the Glendale City Council adopted the Neighborhood Traffic Calming Program which identified a number of traffic control measures and roadway design features developed to discourage non-local traffic, reduce travel speeds, and minimize accident potential on neighborhood streets. The report also established a unique process to evaluate and implement these techniques throughout the community. The tools of traffic calming have been created primarily for local and collector streets, where through traffic should be discouraged. This element recommends the continued application of traffic calming programs to address cut-through traffic concerns on local and collector streets.

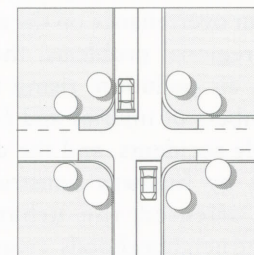
EXHIBIT 3-11 EXAMPLES OF TRAFFIC CALMING TECHNIQUES



Modified Intersection



Traffic Circle



Bulbout Intersection

3.3 TRANSPORTATION MODES

The Circulation Element must consider all transportation methods used in Glendale. Commuters and shoppers use the automobile, bus, train, and bicycle. Pedestrians are prevalent in many areas, especially downtown and in neighborhoods around schools. Horses are used for recreation in the area around the Equestrian Center. Glendale has regional links to airports, especially the Burbank-Glendale-Pasadena Airport. Goods are shipped through town by truck and rail. Background information and projections of future conditions are discussed for each mode.

PRIVATE AUTOMOBILE USAGE

The automobile has become the overwhelming vehicle of choice for American transportation needs. Auto ownership has grown with the affluence following World War II. Cars became an affordable alternative to public transportation. Auto ownership was also promoted by the growth of suburban residential development and the construction of the interstate highway system. These factors led to a dispersal of workers away from traditional areas of employment, such as the central business district. As workers moved to the suburbs, jobs followed. This pattern of flight from the urban core represents the growth of suburbia.

Although we have derived many benefits from the use of automobiles, our overreliance on the automobile has also created many regional problems: the abandonment of the inner city, air pollution, rising traffic congestion, significant numbers of injuries and fatalities associated with automobile accidents, and the disruption of many neighborhoods by highway construction. It has also significantly affected the urban design of our communities and neighborhoods, creating patterns which are difficult to serve by other transportation modes.

Cars are considered a necessity for many people to go to work and school and to take care of daily errands. The fact that we prefer the automobile to other modes of transportation is illustrated in Exhibit 3-12 and 3-13. Almost 88% of Glendale workers commute to work by automobile.

The percentage of people who commute by automobile is not projected to change significantly in the near future. Nor is significant change expected in the percentage of people who use public transit or walk to work. The trend toward working at home is expected to increase along with the number of people who carpool: average vehicle ridership is expected to rise from 1.1 to 1.4 by 2010.

PUBLIC TRANSPORTATION SYSTEM

Even though the automobile is used for most trips, public transportation still plays an important role in the movement of people. According to the 1990 Census, approximately 4.1% of commuters who reside in Glendale (approximately 3,484 people) use public transportation (see Exhibit 3-13). An even greater number of people outside the work force (i.e. retired, children) use public transportations. In Glendale, public transportation is mainly provided by buses, with regional transportation supplemented by trains (in the form of Metrolink and Amtrak).

Public transportation has several advantages over automobiles. Buses carry up to 60 people at a time, trains many times this number. This represents a nearly equal number of cars removed from the road. Since driving alone represents 73% of all means of travel to work, public transit offers an opportunity to remove a substantial number of cars from the road. This not only reduces congestion on the streets but also relieves the parking congestion experienced in many commercial areas. Buses and trains also burn less fuel per passenger mile compared to cars. The annual cost of using a bus to commute to work is substantially less than for a car when insurance, registration, maintenance, as well as fuel expenses, are all considered. Public transportation creates far less air pollution per rider compared to automobiles. Use of public transit also reduces the number of automobile engine starts, a significant source of air pollution.

The most significant problems associated with public transportation are insufficient routes and an insufficient number of buses on those routes to meet commuter's needs. Perceptions of safety, cleanliness and general comfort are also important factors which affect ridership. Providing additional routes is difficult because the dispersed, suburban pattern of development makes it hard to attract a sufficient number of riders to make the route cost-effective. Furthermore, in Glendale, topography also serves as an obstacle for public transit. Given the relative affluence of many Glendale residents, low density development, and dispersed land use, it is easy to see why the automobile remains the preferred commuting option.

Despite the problems associated with public transit, it must remain an important part of any future circulation strategy as a tool to deal with rising traffic congestion and excessive air pollution generated primarily by the single-occupant automobile.



EXHIBIT 3-12 MODE OF TRANSPORTATION TO WORK IN THE REGION IN 1990

TYPE OF TRANSPORTATION	Glendale	Percent of Total	Burbank	Percent of Total	Pasadena	Percent of Total	City of Los Angeles	Percent of Total	La Canada Flintridge	Percent of Total	Los Angeles County	Percent of Total
Private Automobile												
Drive Alone	62,421	73.2	37,722	76.8	43,294	67.2	1,061,714	65.2	8,082	85	2,884,615	70.1
Carpool	12,524	14.7	5,936	12.1	9,815	15.2	250,334	15.4	719	7.6	639,570	15.5
Total	74,945	87.9	43,658	88.9	53,109	82.4	1,312,048	80.6	8,801	92.6	3,524,185	85.6
Public Transportation												
Bus	3,387	4.0	1,527	3.1	3,355	5.2	170,014	10.4	20	0.02	264,052	6.4
Other	97	0.1	30	0.1	122	0.2	1,732	0.1	0	0	4,479	0.1
Walked	3,488	4.1	1,636	3.3	4,405	6.8	63,885	3.9	112	1.2	133,927	3.3
Other Means	1,222	1.4	1,004	2.0	1,687	2.6	30,954	1.9	93	1.0	77,129	1.9
Work At Home	2,091	2.5	1,263	2.6	1,787	2.8	50,463	3.1	429	4.5	112,797	2.7
Total Workers	85,230	100	49,118	100	64,465	100	1,629,096	100	9,455	100	4,115,248	100

Source: 1990 U. S. Census Data

**EXHIBIT 3-13 MODE OF TRANSPORTATION TO WORK BY CENSUS TRACT IN 1990
(WORKERS 16 YEARS AND OLDER)**

Census Tract	Private Automobile		Public Transportation		Walk		Other		Work At Home	
	Number of Workers	Percent of Worker	Number of Workers	Percent of Worker	Number of Workers	Percent of Worker	Number of Workers	Percent of Worker	Number of Workers	Percent of Worker
3003	2,996	90.51	51	1.54	42	1.27	41	1.24	180	5.44
3004	2,662	91.76	34	1.17	30	1.03	62	2.14	113	3.90
3005	802	94.24	0	0	24	2.82	0	0	25	2.94
3006	2,635	89.72	50	1.70	61	2.08	101	3.44	90	3.06
3007.01	2,572	94.46	9	0.33	17	0.62	11	0.40	114	4.19
3007.02	2,537	94.45	32	1.19	26	0.97	0	0	91	3.39
3008	3,348	93.68	53	1.48	7	0.20	32	0.90	134	3.75
3009	3,563	94.53	45	1.19	26	0.69	28	0.74	107	2.84
3010	2,079	84.58	22	0.90	277	11.27	7	0.29	73	2.94
3011	2,744	95.38	38	1.32	40	1.39	20	0.70	35	1.22
3012.01	3,602	91.91	104	2.63	130	3.29	0	0	114	2.89
3012.02	2,846	90.64	154	4.90	55	1.75	59	1.88	26	0.83
3013	873	93.37	7	0.75	6	0.64	6	0.64	43	4.60
3014	1,513	93.63	13	0.80	31	1.92	38	2.35	21	1.30
3015	3,484	90.92	78	2.04	97	2.53	76	1.98	97	2.53
3016.01	2,488	82.93	191	6.37	243	8.10	54	1.80	24	0.80
3016.02	1,700	85.69	110	5.54	80	4.03	82	4.13	12	0.60
3017	2,935	86.48	142	4.18	174	5.13	87	2.56	56	1.65
3018	3,083	86.75	67	1.89	283	7.96	52	1.46	69	1.94
3019	2,817	86.84	189	5.83	131	4.04	26	0.80	81	2.50
3020.01	2,723	84.99	234	7.30	152	4.74	25	0.78	70	2.19
3020.02	1,472	86.64	74	4.36	67	3.94	31	1.83	55	3.24
3021.01	3,544	85.17	357	8.58	175	4.21	61	1.47	24	0.58
3021.02	2,654	89.09	158	5.30	58	1.95	38	1.28	71	2.38
3022	2,700	81.03	375	11.26	155	4.65	39	1.17	63	1.89
3023	3,320	80.86	282	6.87	370	9.01	75	1.83	59	1.44
3024	1,962	77.24	229	9.02	250	9.84	62	2.44	37	1.46
3025.01	2,917	84.90	168	4.89	181	5.27	60	1.75	110	3.20
3025.02	2,374	78.14	218	7.18	300	9.88	49	1.61	97	1.46
City Total	74,945	87.93	3,484	4.09	3,488	4.09	1,222	1.43	2,091	2.45

See Exhibits 3-14 through 3-18 for Census Tract Maps
Source: 1990 U. S. Census Data

In addition to the environmental benefits, public transportation is also essential for those people who are dependent on it for their transportation needs. Many people don't own an automobile or have children who need the bus for transportation, or are elderly and may no longer be able to drive. Public transportation fulfills a vital role in the lives of many people who don't use automobiles.

As can be seen from the maps shown in Exhibits 3-14 through 3-18, many people who are likely to use the bus are concentrated in the south part of the City. In order to adequately serve this significant population of bus patrons, most of the bus routes in the City pass through

or are concentrated in this area (see Exhibit 3-19). Many areas in the City (Chevy Chase Canyon, the La Crescenta area and northwest Glendale) are more than 1/4 mile from a bus route. It is difficult to extend public transportation to these areas because of their low housing densities.

The regional Los Angeles Metropolitan Transit Authority (Metro) system provides bus service both within the City and to the region. The Beeline system consists of 3 fixed routes serving only Glendale and 2 express routes with service from the Glendale Transportation Center to downtown Glendale as well as to Grand Central Business District. The Beeline system



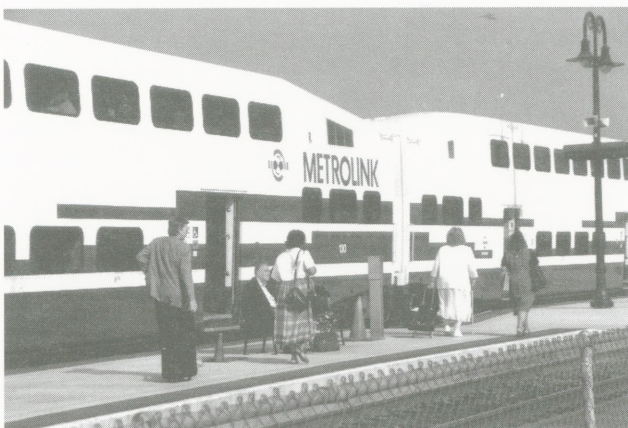
Glendale Residents and Employees Boarding Beeline Bus

provides greater service frequency on the most heavily used local streets. Exhibit 3-19 and 3-20 identify existing routes and headways (time between buses) in the city. In addition to these fixed-route bus systems, the Greater Downtown Strategic Plan anticipates the creation of a special shuttle bus service to provide more frequent transit service in the downtown core.

The City also provides a Dial-A-Ride service using 4 vans and 2 taxis. Service is citywide and by contract also serves La Canada Flintridge and unincorporated La Crescenta. Seniors (aged 60 or over), the handicapped and people with a note from their doctor stating that they need transportation assistance are eligible for the service. The vans are equipped with wheelchair lifts.

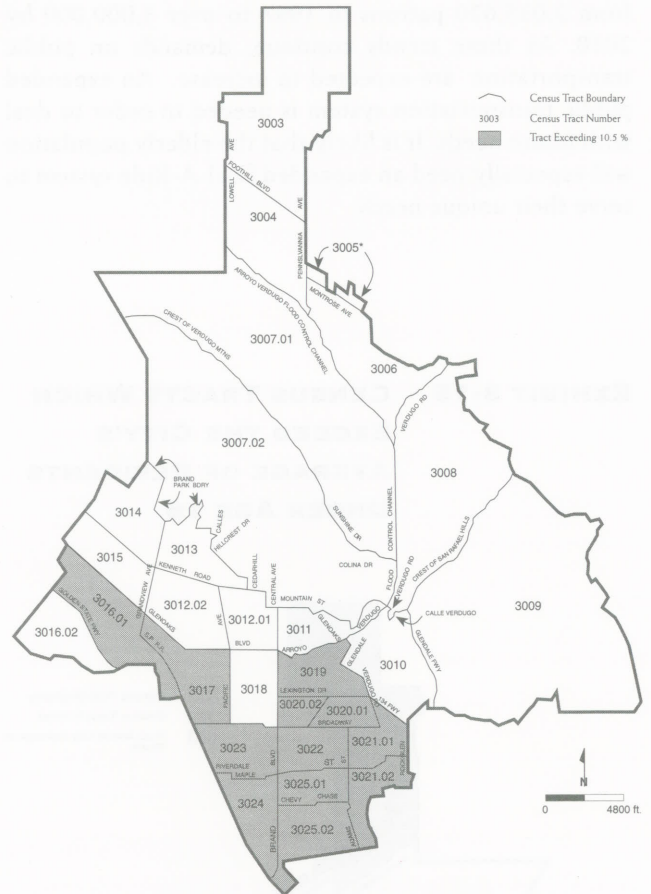
Bus service outside the region is provided by Greyhound. There are also special shuttles to the airports.

The Glendale Transportation Center serves as a link between the various transportation modes (rail to bus, car to rail, etc.) and between intercity and intracity trips. Metrolink trains stop at the City's Transportation Center on their way to and from downtown Los Angeles.



Glendale Employees Boarding Metrolink

EXHIBIT 3-14 CENSUS TRACTS WHICH EXCEED THE CITY'S AVERAGE OF HOUSEHOLDS WITHOUT AN AUTOMOBILE



The trains carry a significant number of commuters and ridership continues to grow. Metrolink provided an important transportation alternative for the region when many freeways were disrupted following the 1994 Northridge earthquake. The Metro also plans eventually to extend some form of light-rail service from downtown Los Angeles to the Burbank-Glendale-Pasadena Airport along the current railroad right-of-way adjacent to San Fernando Road.

FUTURE NEEDS AND SERVICES

Projections indicate that the City's population and employment will continue to rise. Congestion on streets and highways is likely to rise accordingly. Statistically, nationwide the population will continue to age, so a greater proportion of the public will be unable to drive and therefore, will rely on some form of public transportation. The Beeline Service is projected to grow from 2,035,620 patrons in 1997 to over 3,000,000 by 2010. As these trends continue, demands on public transportation are expected to increase. An expanded public transportation system is needed in order to deal with future needs. It is likely that the elderly population will especially need an expanded Dial-A-Ride system to serve their unique needs.

EXHIBIT 3-16 CENSUS TRACTS WHICH EXCEED THE CITY'S AVERAGE OF RESIDENTS OVER AGE 65

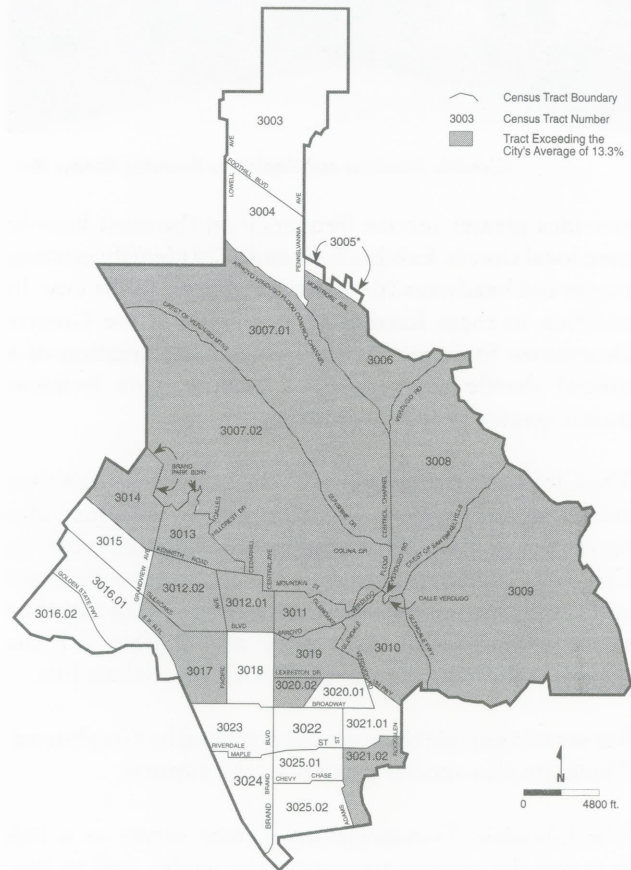


EXHIBIT 3-15 CENSUS TRACTS WHICH EXCEED THE CITY'S AVERAGE OF RESIDENTS UNDER AGE 16

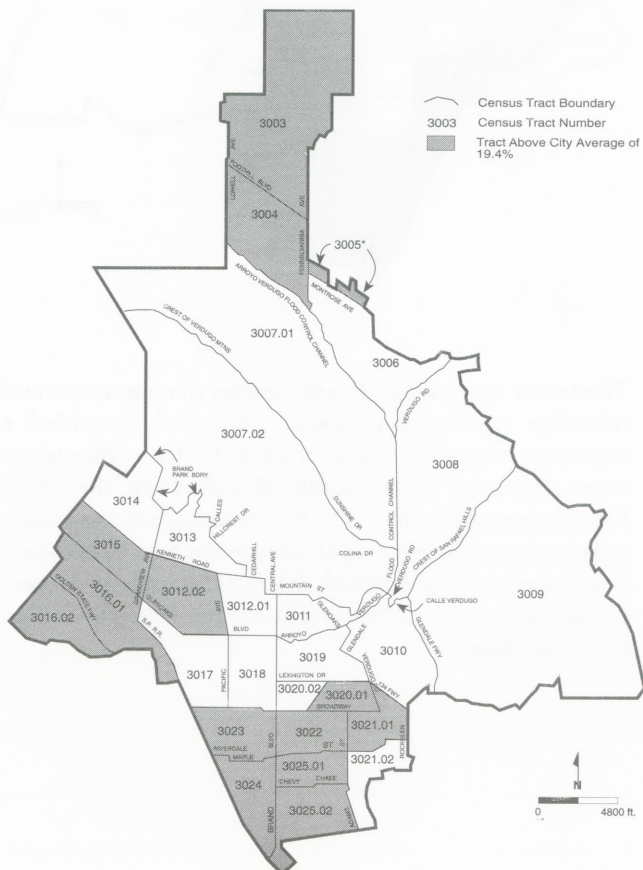




EXHIBIT 3-17 CENSUS TRACTS WITH MEDIAN HOUSEHOLD INCOMES BELOW CITYWIDE MEDIAN INCOMES

EXHIBIT 3-18 PERCENTAGE OF WORKFORCE BY CENSUS TRACT USING PUBLIC TRANSPORTATION TO COMMUTE

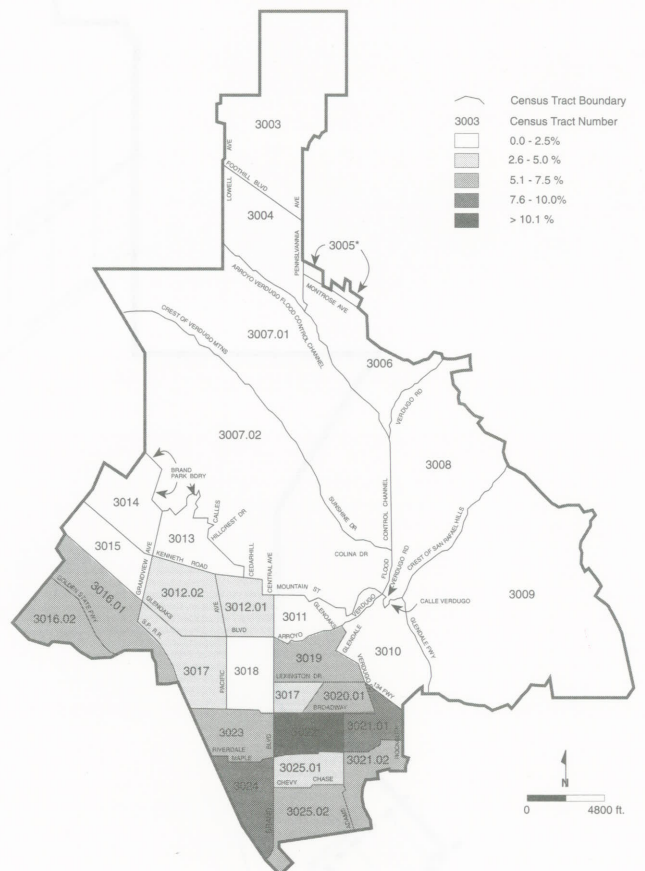
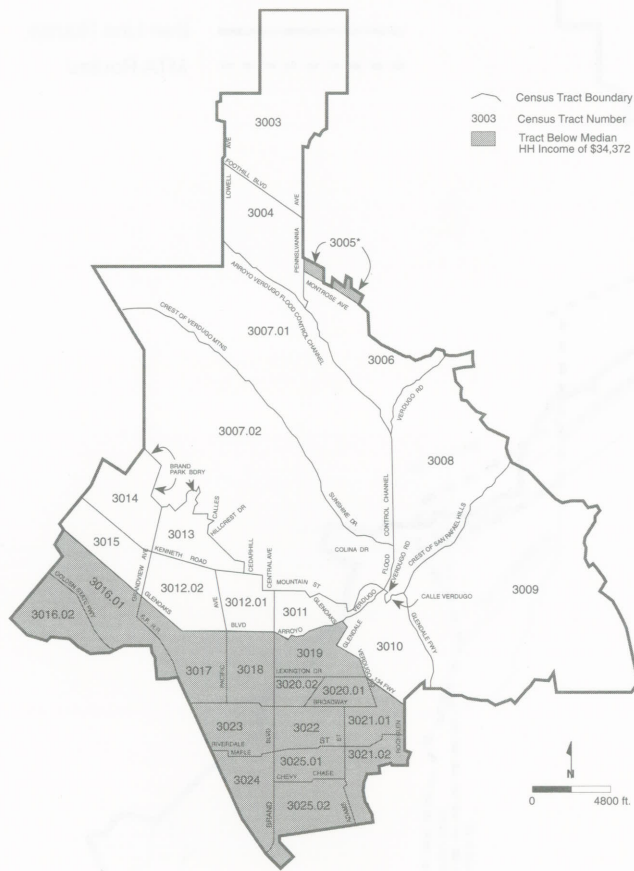


EXHIBIT 3-19 CITY BUS ROUTES

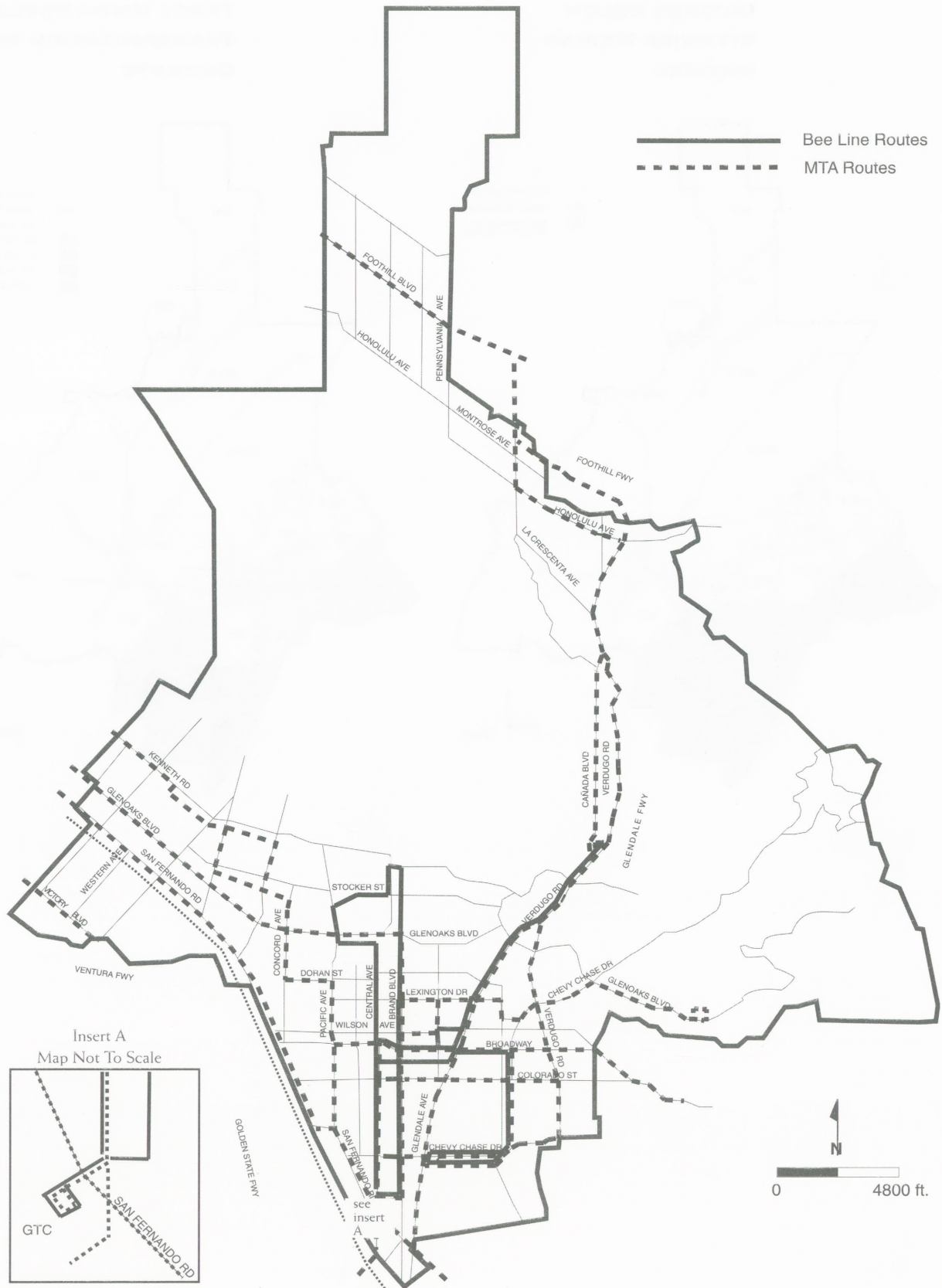



EXHIBIT 3-20 BUS ROUTES: ORIGINS, DESTINATIONS, AND HEADWAYS

Bus Route	Origin*	Destination*	Peak Hour Headways (mins.)	Non-Peak Hour Headways (mins.)
Metro 84	Verdugo & Towne	Olympic & Figueroa--LA	12-19	32
" 85	Colorado & Eagle Dale--Eagle Rock	Olympic & Figueroa--LA	10-26	22-32
" 90	Olive View Medical Center--Sylmar	Main & 11th--LA	35-45 (17-20**)	60 (30**)
" 91	Olive View Medical Center--Sylmar	Main & 11th--LA	34-45 (17-20**)	60 (30**)
" 92	Sylmar/San Fernando Metro Station	Main & Venice--LA	23-29	22-31
" 93	Sylmar/San Fernando Metro Station	Main & Venice--LA	22-26	30-45
" 94	Olive View Med. Center--Sylmar	Main & Venice--LA	11-16	9-17
" 177	City of Hope--Duarte	Harvard & Central--Glendale	60	55-60
" 180	Altadena & Lake--Altadena	Hawthorn & La Brea--Hlywd	8-22	25
" 181	Altadena & Lake--Altadena	Hawthorn & La Brea--Hlywd	21-26	23-24
" 183	Glendale Transportation Center	Sepulveda & Ventura--Sh. Oaks	29-64	49-51
" 201	Gardner & Glenoaks--Glendale	Wilshire & Vermont Stn.--LA	29-35	49-50
" 410	Sylmar/San Fernando Metro Station	Main & Venice--LA	30	---***
Beeline 1	Glendale Transit Center	Brand & Chevy Chase	10-12	10-12
" 2	Glendale Transit Center	Central & Chevy Chase	10-12	10-12
" 4	Palmer Park	Chevy Chase & Carlton	20	20

* Metro routes and the Beeline 4 route have service in both directions. Beeline 1 and 2 routes are loop systems.

** Headways on most of these routes are the smaller numbers since both routes are almost identical, therefore the buses for one route also provide service for the other route.

*** This line only runs during rush hours.

BICYCLE, PEDESTRIAN AND EQUESTRIAN TRANSPORTATION

BIKEWAYS AND OTHER BICYCLE FACILITIES

Creating a system of bikeways is one of the most important steps a community can take to become bicycle friendly. Bikeways are classified based on the degree of safety and separation from traffic they provide. The California Bikeways Act defines three classes of bikeways:

- Class I provides a completely separate right-of-way design designated for the exclusive use of non-motorized transportation.
- Class II provides for a right-of-way which is semi-exclusive for bicycles, such as bike lanes on roadways.
- Class III provides a route designated by sign only with no restricted right-of-way.

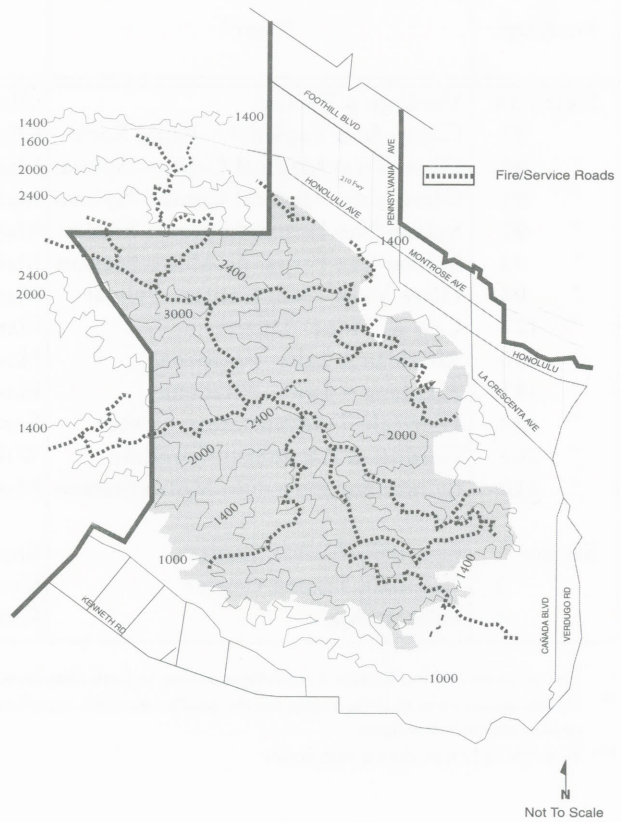
Currently in Glendale, there are approximately four miles of Class II bikeways. The current bikeways are located on Riverside Drive (Western City Limit to Sonora Avenue), La Crescenta Avenue (Country Club Drive to Canada Boulevard), Canada Boulevard (La Crescenta Avenue to Santa Maria Avenue), Glenoaks Boulevard (Coutin Lane to eastern terminus), and on Riverdale Drive (San Fernando Road to Central Avenue (see Exhibit 3-21). With only five bikeways in Glendale, there are great opportunities to expand the system.

In addition to the surface street bikeways, the city also has fire roads in the Verdugo Mountains used for recreational bicycle riding (see Exhibit 3-22). Some of the fire roads are on private land and have posted signs which prohibit trespassing and are not accessible.

EXHIBIT 3-21 EXISTING AND PROPOSED BIKEWAYS



EXHIBIT 3-22 FIRE ROADS IN THE VERDUGO MOUNTAINS



The City adopted a Bikeway Master Plan for the expansion of the city's bikeways. Phase One of the plan includes short range projects aimed at establishing a bikeway network in the city. These phase one bikeways are primarily Class III, with Class II on portions of Central Avenue, Columbus Avenue, Glenoaks Boulevard, and Verdugo Road (see Exhibit 3-23).

Phase two of the Bikeway Master Plan involves converting some Class III routes into Class II routes. This includes the remainder of Glenoaks Boulevard, Verdugo Road, and portions of Wilson Avenue.

Further expansion of the bikeways should include consideration of Class II lanes along major corridors leading to popular destinations and employment centers.

This could include schools and parks that are major destinations for bicycle users. Primary emphasis should be placed on providing bikeways with destinations in mind, and on recreation loops, where appropriate.

Bicycle parking facilities should also be provided based on the primary use. Schools, employment places, and other long term parking places should have bike lockers or other covered, secured facilities. Stores and other short term uses require no more than common "ribbon" racks.

In order to increase the safety of bicyclists, traffic calming techniques could be employed. Traffic calming is used to help automobiles, bicycles, and pedestrians have more equitable use of the roadway. This


EXHIBIT 3-23 PHASE 1 AND 2 BIKEWAY IMPROVEMENTS

Route	Limits	Recommended Bikeway Improvements		
		Phase 1 (short term)	Phase 2 (long term)	
Arden Avenue	Columbus Avenue - Central Avenue	Class 3	Convert to Class 2	
Broadview Drive	Roselawn Avenue - Verdugo Road	Class 3		
Central Avenue	Chevy Chase Drive - Los Feliz Road	Class 2	Convert to Class 2	
Central Avenue	Los Feliz Road - San Fernando Road	Class 2		
Central Avenue	San Fernando Road - Transportation Center	Class 2		
Central Avenue	Arden Avenue - Glenoaks Boulevard	Class 3		
Chevy Chase Drive	Wilson Avenue - Colorado Street	Class 3		
Chevy Chase Drive	Colorado Street - Acacia Avenue	Class 3		
Chevy Chase Drive	Acacia Avenue - Glendale Avenue	Class 3		
Chevy Chase Drive	Glendale Avenue - Central Avenue	Class 3		
Chevy Chase Drive	Central Avenue - Columbus Avenue	Class 3		
Columbus Avenue	North end of street - Broadway	Class 3		
Columbus Avenue	Broadway - Colorado Street	Class 2		
Columbus Avenue	Colorado Street - Vine Street	Class 3		
Columbus Avenue	Vine Street - Maple Street	Class 3		
Columbus Avenue	Maple Street - Windsor Road	Class 3		
Columbus Avenue	Windsor Road - Chevy Chase Drive	Class 3		
Columbus Avenue	Freeway - Arden Avenue	Class 3		
Dunsmore Avenue	Markridge Road - Foothill Boulevard	Class 3		Convert to Class 2
Dunsmore Avenue	Foothill Boulevard - Honolulu Avenue	Class 3		
Flower Street	L.A. River Path - Grandview Avenue	Class 3		
		Class 2, investigate potential easement for connection to river path		
Flower Street	Grandview Avenue - Sonora Avenue	Class 2		
Foothill Boulevard	Lowell Avenue - Pennsylvania Avenue	Class 2		
Glenoaks Boulevard	Western City Limit - Highland Avenue	Class 2		
Glenoaks Boulevard	Highland Avenue - Concord Street	Class 2		
Glenoaks Boulevard	Concord Street - Pacific Avenue	Class 2		
Glenoaks Boulevard	Pacific Avenue - Central Avenue	Class 2		
Glenoaks Boulevard	Central Avenue - Brand Boulevard	Class 2		
Glenoaks Boulevard	Brand Boulevard - Geneva Street	Class 3	Convert to Class 2	
Glenoaks Boulevard	Geneva Street - Coronado Drive	Class 3		
Glenoaks Boulevard	Coronado Drive - Glendale Avenue	Class 3		
Glenoaks Boulevard	Glendale Avenue - Verdugo Road	Class 3		
Glenoaks Boulevard	Verdugo Road - Scholl Drive	Class 3		
Glenoaks Boulevard	Scholl Drive - Coutin Lane	Class 3		
Grandview Avenue	Mountain Street - Cumberland Road	Class 3		
Grandview Avenue	Cumberland Road - Glenoaks Boulevard	Class 3		
Grandview Avenue	Glenoaks Boulevard - San Fernando Road	Class 3		
Grandview Avenue	San Fernando Road - Flower Street	Class 2		
Highland Avenue	Kenneth Road - Glenoaks Boulevard	Class 3		
Honolulu Avenue	Western City Limit to Boston Avenue	Class 3		
Honolulu Avenue	Boston Avenue - Lauderdale Avenue	Class 3		
Honolulu Avenue	Lauderdale Avenue - Dunsmore Avenue	Class 3		
Honolulu Avenue	Dunsmore Avenue - Frederick Street	Class 3		
Honolulu Avenue	Frederick Street - New York Avenue	Class 3		
Honolulu Avenue	New York Avenue - Pennsylvania Avenue	Class 3		
Honolulu Avenue	Pennsylvania Avenue - Whiting Woods Road	Class 3		
Honolulu Avenue	Whiting Woods Road - Ramsdell Avenue	Class 3		
Honolulu Avenue	Ramsdell Avenue - La Crescenta Avenue	Class 3		
Honolulu Avenue	La Crescenta Avenue - Rosemont Avenue	Class 3		

Source: 1995 Glendale Bikeway Master Plan

EXHIBIT 3-23 PHASE 1 AND 2 BIKEWAY IMPROVEMENTS (CONT'D)

Route	Limits	Recommended Bikeway Improvements	
		Phase 1 (short term)	Phase 2 (long term)
Kenneth Road	Western City Limit - Allen Avenue	Class 3	
Kenneth Road	Allen Avenue - Thompson Avenue	Class 3	
Kenneth Road	Thompson Avenue - Montgomery Avenue	Class 3	
Kenneth Road	Montgomery Avenue - Pacific Avenue	Class 3	
Kenneth Road	Pacific Avenue - Merriman Drive	Class 3	
Kenneth Road	Merriman Drive - Valley View Road	Class 3	
Kenneth Road	Valley View Road - Central Avenue	Class 3	
Kenneth Road	Central Avenue - Maryland Avenue	Class 3	
La Cresenta Avenue	Existing bike lane - Honolulu Avenue	Class 3	
Louise Street	Mountain Street - Glenoaks Boulevard	Class 3	Convert to Class 2
Louise Street	Glenoaks Boulevard - Colorado Street	Class 3	
Louise Street	Colorado Street - Maple Street	Class 3	
Mountain Street	Alameda Avenue - Thompson Avenue	Class 3	
Mountain Street	Thompson Avenue - Western Avenue	Class 3	
Mountain Street	Western Avenue - El Miradero Avenue	Class 3	
Mountain Street	Maryland Avenue - Cavanagh Road	Class 3	
Mountain Street	Cavanagh Road - Ethel Street	Class 3	
Mountain Street	Ethel Street - Verdugo Road	Class 3	
Maple Street	Central Avenue - Glendale Avenue	Class 3	
Pennsylvania Avenue	Pennsylvania Avenue - Mills Avenue	Class 3	
Pennsylvania Avenue	Mills Avenue - Honolulu Avenue	Class 3	
Riverdale Drive	San Fernando Road - Columbus Avenue	Class 2	
Riverdale Drive	Columbus Avenue - Central Avenue	Class 2	
Roselawn Avenue	Rosemont Avenue - Broadview Drive	Class 3	
Rosemont Avenue	Honolulu Avenue - Roselawn Avenue	Class 3	Convert to Class 2
Sonora Avenue	Glenoaks Boulevard - San Fernando Road	Class 3	Convert to Class 2
Sonora Avenue	San Fernando Road - Victory Boulevard	Class 3	
Verdugo Boulevard	Verdugo Road - Park Place	Class 2	
Verdugo Boulevard	Park Place - Easterly city limit	Class 2	
Verdugo Road	Verdugo Boulevard - Oceanview Boulevard	Class 3	Convert to Class 2
Verdugo Road	Oceanview Boulevard - Triangle Place	Class 3	Convert to Class 2
Verdugo Road	Triangle Place - La Cresenta Avenue	Class 3	
Verdugo Road	Menlo Drive - Alpha Road	Class 2 with removal of parking on west side	
Verdugo Road	Alpha Road - Wabasso Way	Class 2 with removal of parking on west side	
Verdugo Road	Wabasso Way - Sherer Lane	Class 2 with removal of parking on west side	
Verdugo Road	Sherer Lane - Canada Boulevard	Class 3	
Verdugo Road	Canada Boulevard - Mountain Street	Class 3	
Verdugo Road	Mountain Street - Glendale Avenue	Class 3	
Verdugo Road	Glendale Avenue - Monterey Road	Class 3	
Verdugo Road	Monterey Road - Lexington Drive	Class 3	
Verdugo Road	Lexington Drive - Stanley Avenue	Class 3	
Verdugo Road	Stanley Avenue - Wilson Avenue	Class 3	Convert to Class 2
Wilson Avenue	Columbus Avenue - Central Avenue	Class 3	Convert to Class 2
Wilson Avenue	Central Avenue - Glendale Avenue	Class 3	
Wilson Avenue	Glendale Avenue - Chevy Chase Drive	Class 2	
Wilson Avenue	Chevy Chase Drive - Sinclair Avenue	Class 2	
Wilson Avenue	Sinclair Avenue - Broadway	Class 2	
Riverside Drive (City of Los Angeles)	Victory Blvd. - Zoo Dr.	Work with City of Los Angeles to implement this gap	



is accomplished by slowing traffic and diverting it away from pedestrian and bicycle paths. Other benefits of traffic calming include added space for landscaping and streetscaping. Bicycle lanes themselves could be developed as traffic calming tools if they narrow the appearance of the automobile lanes, encouraging drivers to travel at a slower pace.

Street lighting and the type of traffic signal sensors should also be considered when trying to improve the bicycling environment. Street lighting should adequately illuminate a bicyclist. In-pavement sensors to activate traffic signals should be placed and adjusted so that they are sensitive enough to detect the weight of a typical bicycle. When this is not possible or too costly, bikeway push button triggers, like those used for pedestrian crossings, could be installed.

Employment centers should provide specific facilities for bicycle commuters. The most important of these should be a secure parking facilities with a covered parking area. Shower and locker facilities should be incorporated into the design of new employment centers because they are essential to encourage bicycling for commuting by improving the cyclist's comfort.

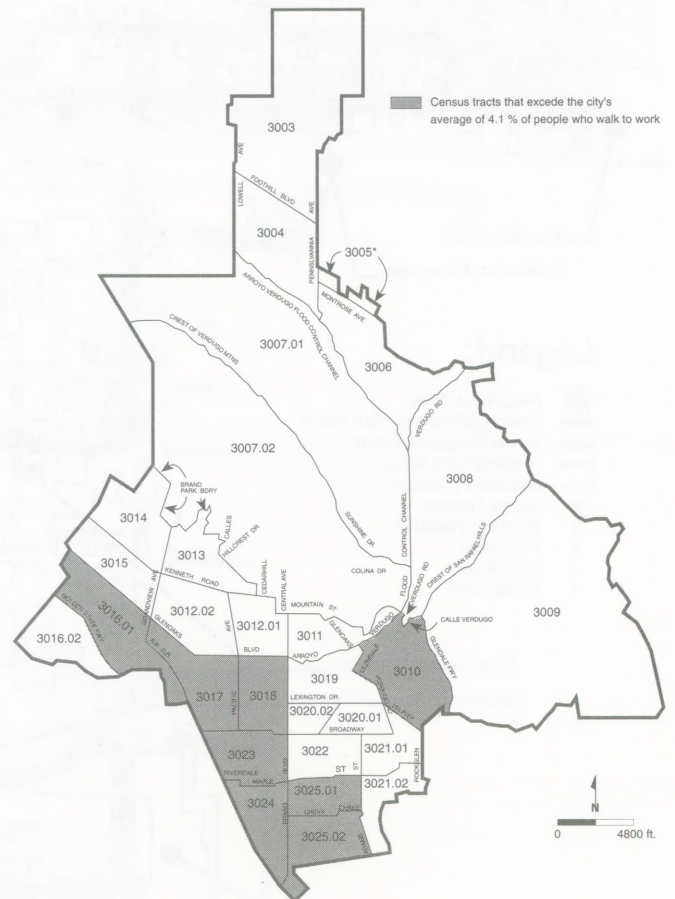
PEDESTRIAN ACTIVITY

Walking and running are a common leisure and recreational activity as well as a means to get around town. According to the 1990 Census, 4.1 percent of residents reported walking to work on a regular basis. Exhibit 3-24 shows concentrations of pedestrian commuters.



Busy Sidewalks in Downtown Glendale

EXHIBIT 3-24 CONCENTRATIONS OF PEDESTRIAN COMMUTERS



THE URBAN HIKEWAY

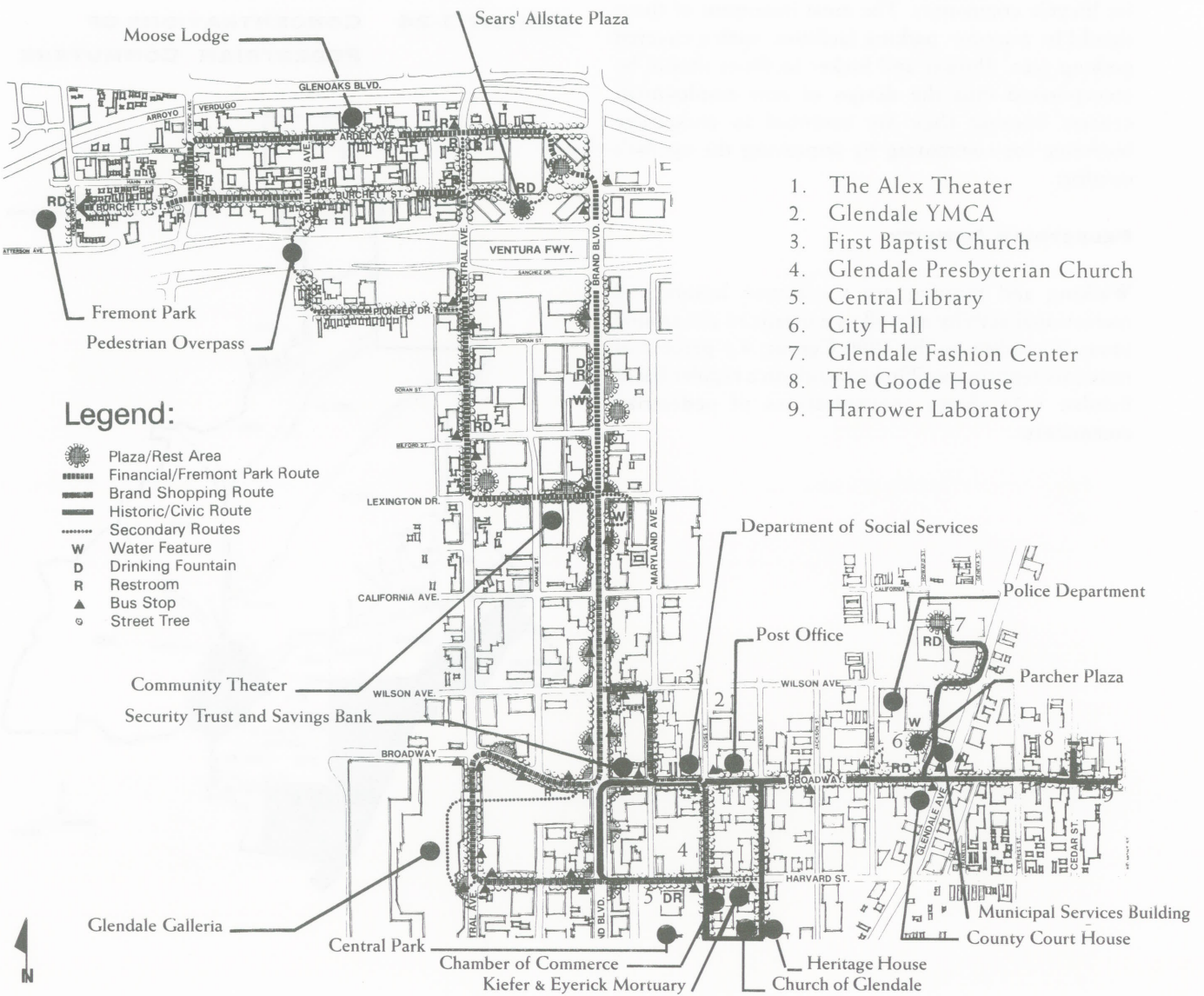
Several urban hikeaways have been designated in the downtown area to promote pedestrian activity as shown in Exhibit 3-25. The Historic/Civic Route is 2 1/2 miles in length and encompasses the historic center of the city, primarily along Broadway. This route passes by City Hall, the Goode House, and Harrower Laboratory, as well as by the Galleria, Exchange and newer Marketplace development. On this route one can appreciate how the physical character of the City has changed over the past century.

The Brand shopping route follows the lower density one and two-story structures of retail specialty stores and restaurants along Brand Boulevard. This route is among

the most frequently used by downtown workers to travel from the financial/office district to lunch time dining locations. This route passes by historic structures such as the Alex Theatre and store fronts reminiscent of the 1950s. Contrasting the northern part of the route, the southern section travels around the Glendale Galleria with its tall brick walls. Also along this route is the modern Exchange retail/movie complex. This structure has a red brick outer wall which continues an architectural theme of many structures in the area.

The Financial/Fremont route travels from residential areas to the heart of downtown Glendale's skyscrapers. This route encompasses the corporate and financial districts along Brand Boulevard and Central Avenue.

EXHIBIT 3-25 THE URBAN HIKEWAY





EQUESTRIAN USE OF STREETS

Horses are used for recreation in the southwestern corner of the city near the Los Angeles River and the border with Burbank. The Los Angeles Equestrian Center is located near this neighborhood and provides extensive facilities for boarding horses, for shows and for pleasure riding. Trails are available on the grounds of this facility which link to trails along the river and into Griffith Park.

In support of horse owners, the city has several zoning categories which allow the keeping of horses. These are all currently located in the area around the Equestrian Center. Approximately 53 acres of residential land are zoned to allow for the keeping of horses, and approximately 5 acres are zoned for horse supportive commercial uses. Equestrians use the public streets in these areas to access the Equestrian Center. Streets in this area need special consideration to provide for safe use by equestrians.

AIR TRANSPORTATION

Air transportation within Glendale consists primarily of police, fire and emergency helicopter operations. Helipads are located throughout the City, with many in the hillsides for use in fire fighting operations and others on downtown high rise buildings for emergency evacuation. The Glendale Adventist Medical Center and Verdugo Hills Hospital also have emergency helipads.

Commercial air service is provided at the Burbank Glendale-Pasadena Airport, approximately nine miles to the northwest of downtown Glendale, and at Los Angeles International Airport, approximately 35 miles to the southwest of downtown Glendale. These facilities are expected to meet the City's future air transportation needs.

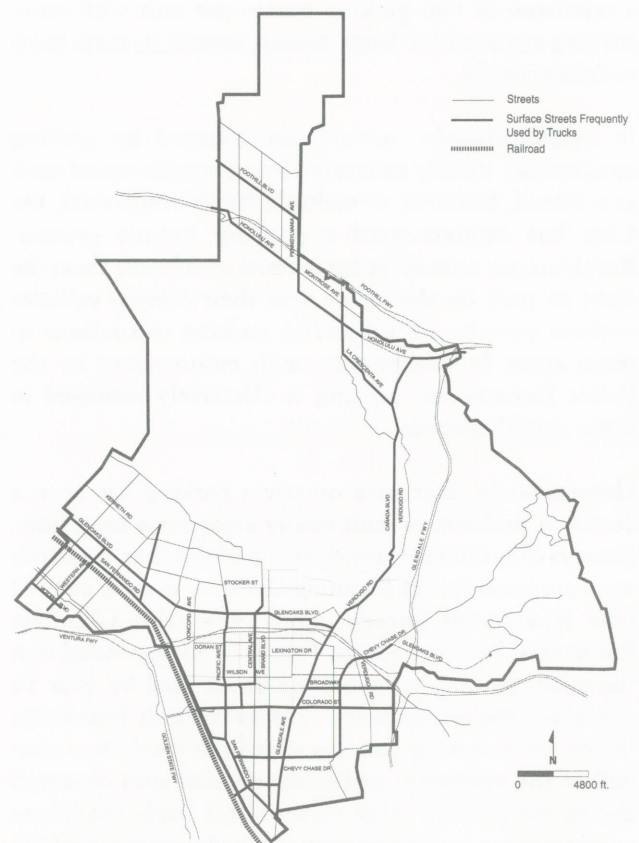
Given the developed character of the City and the hilly terrain of the undeveloped areas, there are no prospects for construction of an airport within the City limits.

FREIGHT TRANSPORTATION BY TRUCK AND TRAIN

A healthy economy is based not only on the ability to move people but also to move goods. Trucks and trains are the most important means of moving goods within Southern California. Freight is transported through Glendale by both trucks and train. The primary rail line through the City parallels Interstate 5 and San Fernando Road and connects to the interstate rail network. This line, owned and operated by Union Pacific (formerly

Southern Pacific), does not have any active spurs in Glendale. The development of new spur lines on an adjacent property or the use of adjacent tracks for loading and unloading freight would have to be arranged with the railroad owner. Although there are no designated truck routes in the City, trucks use a number of local streets for deliveries, such as San Fernando Road, Glendale Avenue and Foothill Boulevard (see Exhibit 3-26). The identification of a formal truck route network would discourage truck drivers from using inappropriate streets.

EXHIBIT 3-26 RAIL LINES AND STREETS FREQUENTLY USED BY TRUCKS



3.4 PARKING

The City involves itself in parking issues by requiring parking for private development, by providing public parking, both within the street right-of-way and off the street in surface lots and parking structures, and by managing public parking through pricing and time restrictions. Glendale has required parking for industrial and residential development since 1952. Parking for commercial uses was first required with the creation of the C2 zone in 1963 and not required for commercial uses in general until 1972. The consequences of not requiring off-street parking can be seen in development which predates City standards. Areas of older development frequently suffer from congestion caused in part by inadequate off-street parking.

RESIDENTIAL PARKING

Parking in single-family neighborhoods is generally adequate in Glendale and parking congestion does not appear to be a problem. Current standards, which require a minimum of two parking spaces per unit with more parking required for large houses, appear to meet most residents needs.

In neighborhoods which are affected by parking congestion, usually generated by an outside sound such as a school, business, or multiple family residential, the City has implemented a parking permit system. Residents pay a small fee for permits which give them the right to park on the street near their homes; vehicles without permits are subject to parking restrictions in these areas. In combination with enforcement by the Police Department, parking is effectively managed in these neighborhoods.

Unfortunately, extensive on-street parking has been a common problem in multifamily areas for a long time. Surveys of multifamily residential parking characteristics were prepared for the Planning Division as early as 1973 (the Apartment Survey) and 1979 (the Glendale Residential Parking Study). The 1973 Survey found that "on-street parking is frequently being used by over 11 percent of the respondents." The 1979 Study found that "heavy curb parking conditions exist at more than one-half of the apartment and condominium sites observed during the parking usage survey." It is likely that these conditions are "caused by both the inadequacy of parking facilities and the underutilization of existing tenant parking." In order to combat this problem, multifamily parking ratios have been increased over the years. Apartments and condominiums are required to have at

least two off-street parking spaces per unit. Guest parking is also required whenever there are more than 3 units on a lot. These newer standards will address parking needs of new construction.

COMMERCIAL PARKING

It is important to provide adequate parking in commercial areas to promote the economic vitality of commercial areas; shoppers avoid places with inadequate parking.

In order to ensure that an adequate parking supply is available, the City has adopted commercial parking ratios based on the type of activity. The ratios for commercial uses range from 2 to 29 spaces per 1,000 square feet of building floor area. Representative examples include:

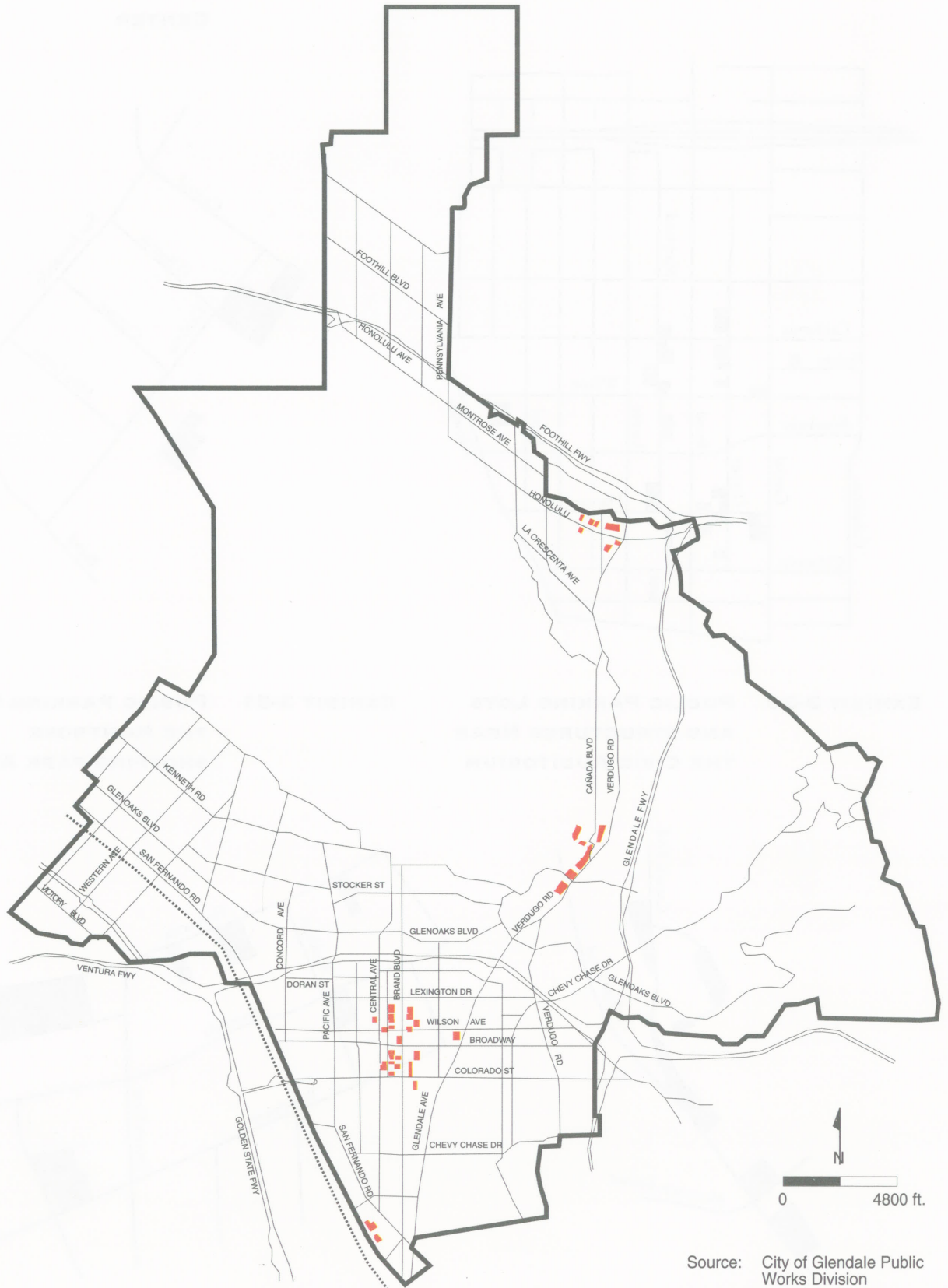
Offices	3 spaces per 1,000 square feet of floor area (Based on 90% of floor area)
Fast Food	12.5 spaces per 1,000 square feet
Retail	4-5 spaces per 1,000 square feet

Parking demand can be met by a combination of onsite and offsite parking. Offsite parking is generally provided by public and private lots and structures. Exhibit 3-27 shows the location of each existing public parking facility located in Glendale. Exhibits 3-28 through 3-31 show detail for the central business district, Transportation Center, Civic Auditorium and the Montrose Shopping Park areas. Within and adjacent to the Downtown Redevelopment Area, there are over 20 publicly owned lots with over 13,000 parking spaces. Parking demand will grow with the implementation of the Greater Downtown Strategic Plan (GDSP), however, the use of the "park once" development/land use philosophy would help reduce the demand.

There are several other ways to reduce demand for new spaces. Instead of building dedicated parking for each business or use, certain businesses may be able to share common parking facilities. For example, religious institutions may be able to share parking with nearby commercial or industrial facilities if they don't operate at the same times. Theaters may share parking with commercial uses not only because they frequently don't have common peak activity periods but also because of the synergy which is created when theaters locate near other businesses. Another possibility is shared unused capacity. Certain private lots have excess capacity. It



EXHIBIT 3-27 PUBLIC PARKING LOTS AND STRUCTURES IN THE CITY



Source: City of Glendale Public Works Division

EXHIBIT 3-28 PUBLIC PARKING LOTS AND STRUCTURES IN THE DOWNTOWN AREA



EXHIBIT 3-29 PUBLIC PARKING LOTS NEAR THE TRANSPORTATION CENTER

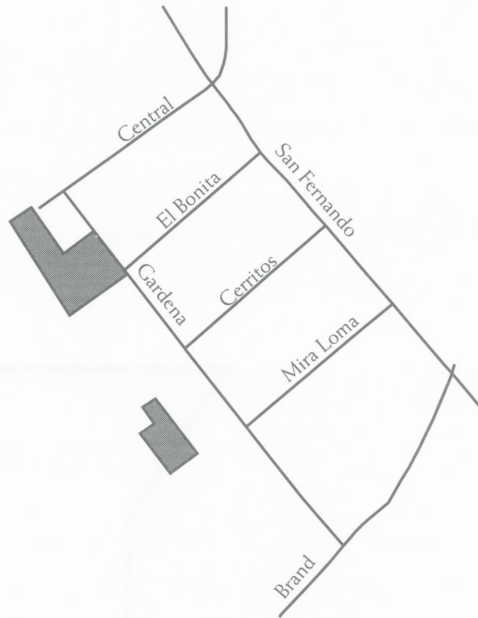


EXHIBIT 3-30 PUBLIC PARKING LOTS AND STRUCTURES NEAR THE CIVIC AUDITORIUM

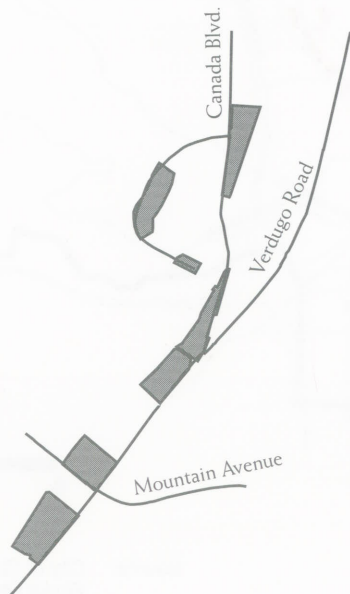


EXHIBIT 3-31 PUBLIC PARKING LOTS IN THE MONTROSE SHOPPING PARK AREA





may be possible for the City to negotiate the public use of those spaces by offering lot owners various incentives. Obstacles to this include uncertainty about the level of excess capacity, the difficulty of assigning spaces and liability issues.

Curbside parking is important in traditional commercial areas, such as Brand Boulevard, where it adds to the character of the area and is a great convenience to customers. Street parking is not allowed to fulfill code required parking requirements but it is considered in development plans for the downtown area where significant on-street parking and public parking lots exist. Street parking is an important resource in more traditional commercial areas which lack adequate off-street parking. Metering helps ensure that curbside parking is available for short-term users. Angled stalls allow more cars to use curbside parking than parallel parking and may have a traffic calming effect by narrowing the effective width of the street, thereby forcing traffic to deal with drivers backing out of parking spaces (drivers recognize this potential and drive slower accordingly). Angled parking also increases the distance between pedestrians on the sidewalk and moving traffic, a benefit to pedestrians. Angled parking, however, may lead to more congestion compared to parallel parking. Each design is appropriate depending on the particular circumstances encountered.

The need for street parking conflicts with the need to provide sufficient street lane capacity to move vehicles efficiently. One option for moving more vehicles on Brand Boulevard, identified in the Traffic Analysis prepared for the GDSP, is to convert angled parking to parallel parking to allow enough width for a third traffic lane. This would only be necessary if warranted by peak hour traffic. It would result in the loss of approximately 12 parking spaces per affected block.

It is sometimes appropriate to prohibit street parking. An example would be on major arterials where traffic volumes are high and there are limited street level businesses providing daily services or where they are already served by off-street parking. Not all major arterials may meet this criteria, therefore the issue should be addressed block by block.

Reducing both traffic congestion and air pollution are issues related to parking which must also be considered, especially in commercial and industrial areas. In the past, planning often focused on moving the maximum amount of people and goods through the City. This approach gives insufficient weight to quality of life issues such as air quality, traffic congestion and the attractiveness of

the pedestrian environment. Providing abundant inexpensive parking makes it easier for people to drive by themselves to get to work, to conduct business and to shop. Unfortunately, this results in traffic congestion and excessive air pollution. A balance must be achieved that provides people an opportunity to perform their daily tasks without necessarily relying on the single-occupant automobile. Parking policies could encourage pedestrian travel, the use of ridesharing and public transit. Such policies are reflected in the Town Center District Plan of the Glendale Downtown Strategic Plan. For example, pedestrian travel will be promoted by creating functional, attractive and safe streetscapes with adequate paths between destinations.

INDUSTRIAL PARKING

As in the other cases, the City has adopted industrial parking ratios based on the type of activity. The ratios for industrial uses range from 1 space per 1,000 square feet for warehouses to 3 spaces per 1,000 square feet based on 90% of floor area for research and development operations. These ratios are consistent with modern municipal standards and therefore should be adequate for new development. The situation will improve in older areas of the City as they redevelop over time.

3.5 TRANSPORTATION SYSTEMS MANAGEMENT

In the late 1970s the U.S. Department of Transportation introduced the concept called Transportation Systems Management (TSM). Mandated in 1975 as a set of regulations issued jointly by the department's Federal Highways Administration (FHWA) and the Urban Mass Transportation Administration (UMTA), TSM was conceived as a short-range planning process for improving both road and transit system performance. The primary objective of the Transportation Systems Management (TSM) policy is to increase the efficiency of the existing street system through management practices that utilize computer and information technology.

Because of significant population growth in the last two decades as well as new commercial development in the downtown area and increased densities in residential neighborhoods, Glendale has experienced an increase in traffic volumes and subsequent traffic congestion. Realizing Glendale's street system capacity is limited to a great extent by the physical characteristics of the city, the use of TSM strategies must play a significant role in minimizing the impact of increased traffic on the Glendale street system.

As a consequence, the City of Glendale developed a strategy which involves using technology to help improve the flow of traffic through better monitoring of street systems by providing up-to-date information to the motorist concerning the street system condition, e.g., accidents, construction, etc., and by providing service enhancements, such as a computerized signal synchronization for entire corridors or an area. This strategy is commonly referred to as Intelligent Transportation Systems (ITS).

ITS is composed of the following elements:

- Smart Traffic Control Systems
- Incident Management Programs
- Emergency Response
- Railroad Grade Crossing System Integration
- Traveler Information Systems
- Transit Management Systems

A number of traffic-related projects are underway in Glendale which are utilizing advanced technologies and ITS. Two of the most significant projects include the upgrading/modification of traffic signals and the development of the transportation management center.

TRAFFIC SIGNAL UPGRADES

In the last five years approximately 100 traffic signals have been upgraded and modified in the City of Glendale. The remaining traffic signals are planned to be upgraded and modified in the next seven years. Benefits of traffic signal upgrade projects include an increase in the operational efficiency of traffic signals and the improvement of public safety.

THE GLENDALE TRANSPORTATION MANAGEMENT CENTER

Glendale's Transportation Management Center (GTMC) will provide the platforms and the integration through which the different technologies are joined. For example, a traffic signal control system and an automatic vehicle location system together can form a transit priority system. While the GTMC will not include every ITS technology immediately, the City has been fortunate in securing grant funds that will eventually lead to the inclusion of the appropriate systems.

The primary system in the GTMC, the Advanced Traffic Management System will provide a system for monitoring, maintenance and management of traffic signal operations. This system will play a role in easing the City of Glendale's growing and inevitable traffic congestion, providing increased safety and efficiency. Other cities that have implemented similar ITS projects have experienced a 10 percent to 40 percent reduction in travel time, along with reduced stops and delays, and air pollution. Similar results are expected for the City of Glendale's major streets as a result of this project.

According to the SCAG 1997 Regional Transportation Plan, transportation improvements resulting from ITS technology will improve roadway capacity by 5 percent by the year 2010. Given this assumption in consideration of Glendale's on-going ITS programs, a similar increase in street capacity on the major streets in Glendale is reasonably expected.



3.6 TRANSPORTATION DEMAND MANAGEMENT

The California Government Code requires Los Angeles County to develop a Congestion Management Program (CMP) to address regional congestion by linking transportation, land use, and air quality decisions. The first CMP for Los Angeles County was adopted in November, 1992. It consisted of a designated highway system with level of service standards, transit analysis, transportation demand management (TDM), land use analysis, a capital improvement program, and a countywide transportation model.

The greatest TDM emphasis has been on reducing the home-to-work commute. Outreach and public education by rideshare agencies and transit providers has also significantly increased throughout the region. The goal of TDM is to modify travel behavior through the following efforts: increasing the use of transit, carpooling and vanpooling, bicycling and walking, shortening trips, and avoiding trips altogether by telecommuting.

CONGESTION MANAGEMENT PROGRAM

The purpose of the CMP is to bring together all cities in Los Angeles County to address regional congestion through linkage and coordination of land use, transportation, and air quality decisions. All cities must comply with the CMP in order to continue receiving state gas taxes and to preserve their eligibility for other state and federal transportation funds.

For compliance with CMP mandates, the City of Glendale was required to implement the four local programs described below:

- A Trip Reduction Ordinance adopted in March 1993;
- A Land Use Analysis Program developed and adopted in March 1993. This program allows the city to review new developments that impact the county's CMP road system and impose mitigation measures;
- Countywide Deficiency Plan tracking and reporting of new development activities in the city to determine annual mitigation goals; and
- An annual Self-Certificate Resolution and local CMP Implementation Report.

The City's Trip Reduction ordinance requires new commercial development of 25,000 square feet or more to provide various TDM-related amenities and services

including bulletin boards, displays, maps, routes, schedules, referrals, rideshare information, bike route information and other information. Under the ordinance, development projects of 50,000 square feet or more shall provide the items listed above and must designate not less than three percent of the available parking in commercial projects, 8.5 percent in office/professional projects and nine percent in industrial projects for vanpool/carpool vehicles. In addition, there are various other provisions related to rideshare amenities for projects over 100,000 square feet.

The City also included various TDM concepts in the Greater Downtown Strategic Plan. The goal of the coordinated transit, parking and ridesharing program will be to increase Average Vehicle Ridership (AVR), or persons per vehicle. An increase in the number of persons per vehicle would result in greater carrying capacity for the transportation system as a whole. A target goal of 1.5 AVR, or 1.5 people per vehicle on average, has been set in the downtown plan. To meet targeted Average Vehicle Ridership (AVR) goals, the current TDM ordinance should include a specific AVR goal of 1.5 person per vehicle for all new office/professional/industrial developments in the downtown area.

The SCAG 1997 Regional Transportation Plan has assumed a 7.9 percent trip reduction as a result of TDM strategies of the Arroyo Verdugo Subregion. This includes 1.1 percent of non-motorized transportation, 4.1 percent for commuters, and 2.7 percent for telecommuting.

TDM strategies are important factors in reducing car trips and promoting travel using alternative modes of transportation. Ideally, when housing, jobs, daily needs, and other activities are located within easy walking distance of each other, many trips can be eliminated through a mix of land-use configurations. Therefore, land use planning and zoning that permits a mixture of land uses can significantly reduce the number of trips. This concept has been implemented in the Greater Downtown Strategic Plan. The plan emphasizes mixed land use and transit-and pedestrian-oriented environments. In addition, an Average Vehicle ridership of 1.5 people is required in this plan.

RULE 2202

On December 8, 1995, South Coast Air Quality Management District Rule 2202 went into effect. The

purpose of this rule, which replaced Rule 1501, is to provide employers with various options to reduce mobile source emissions generated from employee commutes and to comply with federal and state Clean Air Act requirements. Rule 2202, like Rule 1501, continues to allow for compliance by implementation of employer-based commute reduction programs, however the rule allows for emission reduction options.

A key component of this legislation is that as of January 1, 1997, the threshold for which employers must provide these programs was increased from 100 to 250 employees for a trial period of one year. Following the trial period, the threshold could have been raised to 500 employees if the Air Resources Board had determined that voluntary ridesharing and other replacement measures have fully achieved the emissions reductions that would have been achieved by the employers with less than 250 employees. The result of the voluntary and other replacement measures were that equivalent emission reductions were not met and the threshold went back to companies with 100 or more employees. Legislative action (SB 432) passed and was signed by the governor in June 1998 that permanently exempted companies with 100 to 249 employees. The South Coast Air Quality Management District is now required to provide additional measures to meet the clean air standard.

Approximately 22 companies in Glendale have more than 250 employees and, therefore, are required to comply with Rule 2202, in comparison to 63 companies that had more than 100 employees that were required to comply with Rule 1501.

The 1980s saw a movement toward establishing specialized, nonprofit organizations to facilitate private involvement in resolving transportation problems. Transportation Management Associations (TMAs) were created by businesses to organize areawide employers and developers in a search for solutions to local transportation problems. To help change the travel behavior of more workers, many TMAs try to involve as many existing and new employers as possible in ride-sharing and transit promotional efforts. In addition, TMAs can pool member resources and provide services like rideshare matching or shuttles and area circulator transit that individual developers and employers often find too expensive to sponsor themselves.

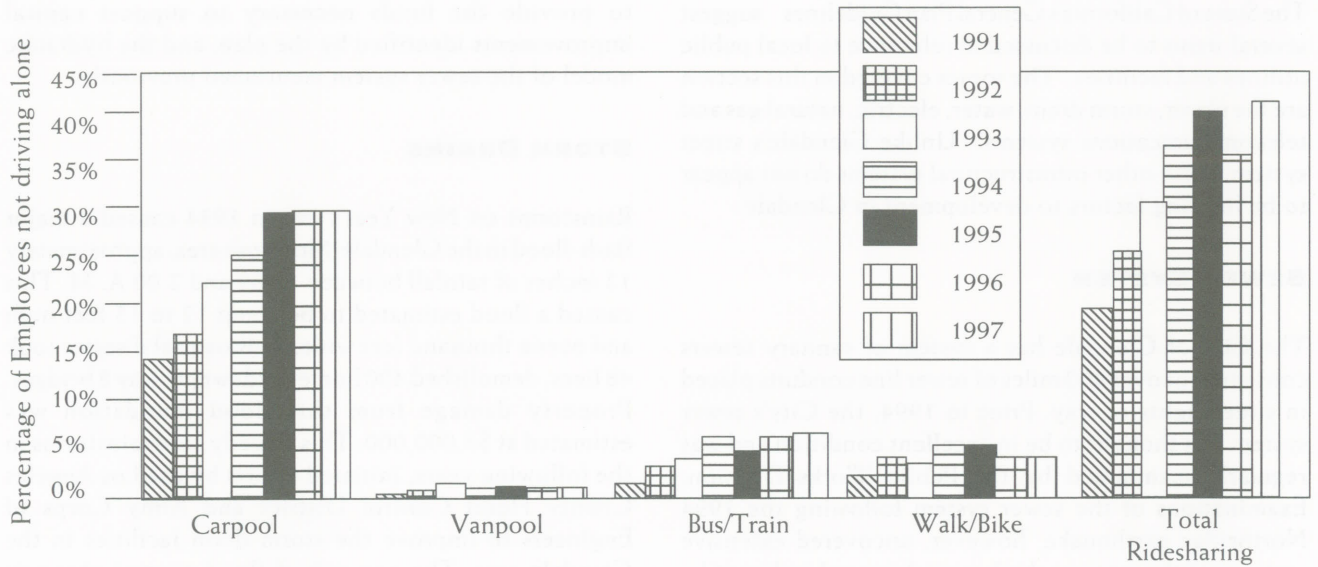
In addition to the trip reduction ordinance, Glendale is served by the Glendale Transportation Management Association which provides ride-matching and other services to employees of the downtown area. The mission of the Glendale Transportation Management

Associates, Inc. (GTMA) is to : "provide professional expertise and advocacy working as a strategic partner with the public and private sectors and regulatory agencies to reduce traffic congestion, improve accessibility, mobility, and air quality resulting in Glendale being a livable community." Currently, 16 companies in Glendale voluntarily belong and participate in the programs offered by the GTMA. Through the work with the member companies, the GTMA during the last 18 months has been able to increase vanpools arriving in Glendale from 14 to 21 and increase use of the MTA buses and Metrolink trains. Since 1991 the rideshare participation by members of the Association have increased by over 100 percent. Approximately 40 percent of member employees use alternatives to driving alone. Exhibit 3-30 shows this growth from 1991 to 1997.

TDM strategies are important factors in reducing car trips and promoting travel using alternative modes of transportation. Ideally, when housing, jobs, daily needs, and other activities are located within easy walking distance of each other, many trips can be eliminated through a mix of land-use configurations. Therefore, land use planning and zoning that permits a mixture of land uses can significantly reduce the number of trips. This concept has been included in the Greater Downtown Strategic Plan. The plan emphasizes mixed land use and transit and pedestrian-oriented environments. In addition, an Average Vehicle Ridership (AVR) of 1.5 people per car is needed in the implementation of this plan to avoid unacceptable congestion.



EXHIBIT 3-32 GLENDALE TMA RIDESHARE PARTICIPATION (1991-1997)



Number of Employees Not Driving Alone (Percentage)

	Carpool	Vanpool	Bus/Train	Walk/Bike	Total Ridesharing
1991	14.40%	0.20%	1.60%	2.30%	19.10%
1992	17.50%	0.70%	3.00%	3.90%	25.70%
1993	22.40%	1.60%	3.60%	2.90%	30.50%
1994	25.00%	1.00%	6.00%	5.00%	37.00%
1995	29.00%	1.50%	4.50%	5.00%	40.00%
1996	29.15%	1.20%	6.00%	3.80%	36.90%
1997	29.15%	1.50%	6.50%	3.67%	40.82%

Source: Glendale TMA, 1997

3.7 OTHER LOCAL PUBLIC INFRASTRUCTURE

The State of California's General Plan Guidelines suggest several items to be discussed in reference to local public utilities and facilities. The topics covered in this section are the sewer, storm drain, water, electric, natural gas and telecommunications systems. Unlike Glendale's street system, these other infrastructural systems do not appear to be limiting factors to development in Glendale.

SEWER SYSTEM

The City of Glendale has a system of sanitary sewers consisting of over 400 miles of sewer line conduits placed in street rights-of-way. Prior to 1994, the City's sewer system was thought to be in excellent condition and was regularly maintained by the Public Works Division. Examinations of the sewer system following the 1994 Northridge earthquake, however, uncovered extensive sections of the system which were damaged and must be repaired. Financial assistance has been offered by the Federal Emergency Management Agency (FEMA) to assist with those repairs.

The existing sewer system capacity is adequate to handle current and future sewage quantities. Sewer maintenance crews routinely check the sewers for available capacity, and the City is developing a hydraulic model verifying capacity. When demand begins to reach the capacity, the necessary improvements are made.

Part of the wastewater generated in Glendale is treated at the Glendale-Los Angeles Water Reclamation Plant. Of the 20 million gallons of wastewater treated daily at the plant, half are from Glendale and half from Los Angeles. A small amount of Glendale's portion comes from the Crescenta Valley Water District. The plant is a tertiary treatment facility which extracts recycled water from wastewater. This water is primarily used for irrigation purposes throughout the city. The remaining sludge from the reclaimed water process is combined with Glendale wastewater in the North Outfall Sewer for treatment at the Hyperion Wastewater Treatment Plant. Glendale owns approximately 29 million gallons per day of the Hyperion system's capacity and currently treats approximately 17 million gallons per day.

The City has hired a consultant to develop a Sewer Master Plan. The Plan is being prepared as part of a periodic update of the City's infrastructure plans and maintenance responsibilities. The Plan includes creation of a sewer database in the City's geographic information system (GIS), a revenue program including fee structures

to provide the funds necessary to support capital improvements identified by the plan, and the hydraulic model of the sewer system mentioned previously.

STORM DRAINS

Rainstorms on New Year's eve in 1934 caused a major flash-flood in the Glendale-Montrose area; approximately 13 inches of rainfall between 12:09 and 2:00 A. M. This caused a flood estimated to be about 12 to 15 feet high and over a thousand feet wide. This natural disaster took 48 lives, demolished 400 homes and swept away 8 bridges. Property damage from this flood inundation was estimated at \$5,000,000. This tragedy, and rainstorms in the following years, initiated efforts by the Los Angeles County Flood Control District and Army Corps of Engineers to improve the storm drain facilities in the Glendale area. The network of flood control channels constructed during the 1930s can now adequately handle most major rainstorms. In general, most developed portions of the City of Glendale are not significantly threatened by widespread hazards resulting from flash floods.

The Los Angeles County Flood Control District maintains several channels, numerous debris basins, and dams in the City. Minor maintenance and construction is done by the City of Glendale's Public Works Division. There are 379.19 acres of flood control channels in Glendale, of which Los Angeles County owns 333 acres and has easements for an additional 46 acres.

Flood control channels direct runoff from the San Gabriel Mountains, Verdugo Mountains, San Rafael Hills, and across the flatter areas of Glendale to the Los Angeles River, and eventually to the Pacific Ocean (see Exhibit 3-33).

WATER

Glendale's main source of water is purchased from the Metropolitan Water District (MWD) supplemented by local groundwater and recycled water. For the past twenty years approximately 80 to 90 percent of the City's potable water needs have been met by the MWD. Although primary usage involves potable water, the City is working to increase use of reclaimed water. The City has also undertaken vigorous water conservation efforts to reduce consumption in Glendale. Glendale furnishes water for domestic consumption, irrigation, and fire protection purposes, and operates its own wells,



EXHIBIT 3-33 FLOOD CONTROL SYSTEM

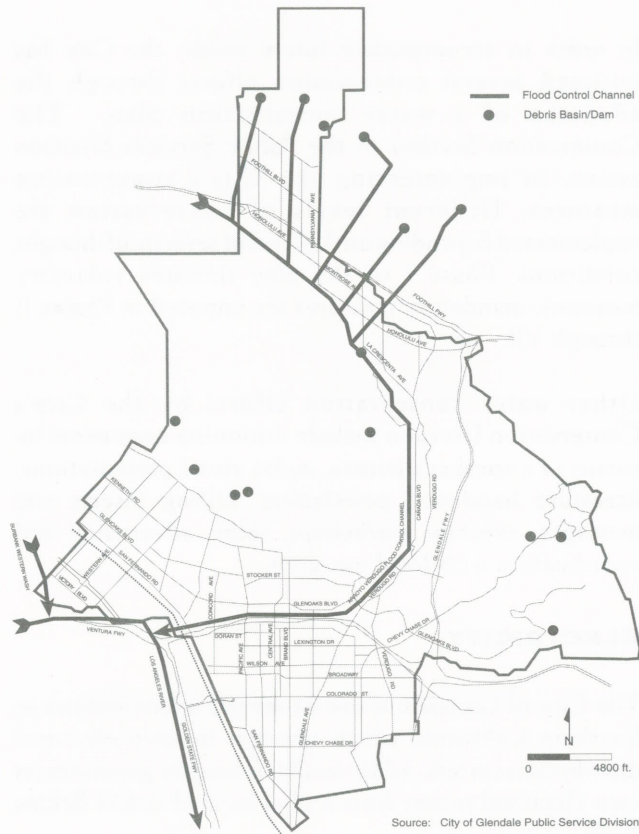


EXHIBIT 3-34 WATER SYSTEM



reservoirs and storage tanks, pump stations, treatment plants and distribution systems.

The water distribution system is comprised of underground pipes, reservoirs and above ground tanks. The 348 miles of water pipelines carry up to 43 million gallons per day to Glendale's residential, commercial, and industrial customers during the hot, dry periods of the year. The Public Service Division maintains a total of twenty-seven reservoirs designed for both domestic service and fire protection in hillside areas. The total capacity of all reservoirs in the City is 540 acre feet of water. Tanks and hydrants in the Verdugo mountains and San Rafael hills are maintained by the City for fire suppression purposes (see Exhibit 3-34.)

The MWD imports water from the Colorado River and from northern California via the State Water Project. Glendale's water consumption is about 30,000 acre feet per year (AFY). Potable water supplied to Glendale is obtained from the Joseph Jensen Filtration Plant in

Granada Hills or the Weymouth Filtration Plant in La Verne.

Between 10% and 15% of the City's water demands are filled by the City's Grandview Wells in the San Fernando groundwater basin, the Glorietta Wells in the Verdugo Basin and recycled water. The Verdugo Park Water Treatment Plant is designed to treat water from two new wells as well as from a new ground water infiltration system at Verdugo Park. This facility will provide an additional 1,150 gallon per minute to supplement production from the three existing wells in the Verdugo Basin. According to the Public Service Division, the Verdugo Basin will eventually fill about 12 percent, or 3360 AFY, of the City's water needs.

Glendale has implemented a broad range of water conservation and distribution management programs in coordination with programs at the Federal, State and regional levels. The City maintains a major reclamation facility in partnership with the City of Los Angeles. The

Glendale/Los Angeles Reclamation plant delivers treated waste water to various public and private users. Since 1978, the Reclamation Plant has been providing reclaimed water to CalTrans for landscape irrigation along the Ventura and Golden State Freeways. Reclaimed water has also been delivered to the Glendale Power Plant for use in cooling towers. Recently, the City began delivering reclaimed water to Forest Lawn Memorial Park.

Glendale recently completed a \$20 million program to construct a "backbone" reclaimed water system to deliver reclaimed water to many other sites in the city for irrigation of landscaped areas. The Glendale Reclaimed Water Master Plan facilities are serving or will serve CalTrans, the Cities of Pasadena and Los Angeles, Brand Park, Scholl Canyon Landfill and golf course, Oakmont Country Club, and many city park and school sites (see Water Resource Plan, Exhibit 3-35.)

In the near future, Glendale will only require a small increase in the amount of water needed. To accommodate increasing water needs, a 10-30-60 Water Resource Plan has been adopted to reduce the City's dependence on outside sources of water. Under this plan, 30% of the City's water demand will be fulfilled by ground water, 60% will be purchased from the MWD and the remaining 10% will be furnished by recycled water.

Glendale is working with public and private agencies to correct water quality problems in the local groundwater basins. In 1999, the Superfund Water Resource Plan facilities are expected to treat the San Fernando groundwater basin supplies. The San Fernando Valley Groundwater Treatment Plant could produce over 7,000 AFY of potable water, meeting 20% of City demands. Combined, the San Fernando Basin facility and the Verdugo Basin could supply about 30% of City water needs.

In most areas of Glendale, arterial water mains, pumping and storage facilities are adequate to meet existing needs. Future development could however require extensive expansion of water transmission lines. In areas of high density residential development, water distribution mains often have to be replaced with larger mains or cleaned and lined in order to meet increased water demands, primarily for fire protection needs. In the hillside region, developers must provide pump stations, transmission mains and storage reservoirs for any new subdivision.

As an ongoing program the Public Service Division continuously replaces existing four inch water mains with larger diameter pipelines having larger water carrying capacity. Four areas in the City have been the

focus of this project, with a special emphasis south of the Ventura freeway, where two sections have been designated as high priority areas (see Exhibit 3-36.)

In order to accommodate future needs, the City has initiated several conservation efforts through the adoption of a water conservation plan. The Conservation Section of the Public Services Division assists in implementing the City's conservation measures. Different levels of conservation are implemented depending on the level of severity of drought conditions. Phase I of the plan initiates voluntary measures; mandatory measures are imposed in Phases II through VII.

Other water conservation efforts by the City's Conservation Division include informing consumers by means of a speaker's bureau, audio visual presentations, literature handouts, newsletters, billing inserts and messages, exhibits, workshops, tours, advertising and coordination with local nurseries.

ELECTRICITY

The City of Glendale is one of several municipalities in Southern California which operates its own electrical distribution system; additionally, Glendale generates its own electrical power from a plant located at 634 Bekins Way.

Glendale's local power plant consists of units built over the period of 1940 to 1977. The plant is capable of supplying all of the power needs of the City on most days, but for economic reasons approximately 85% of the electrical power requirements are met with imported power from purchases or from out of state plants owned by the City. The out of state power plants range from hydroelectric to coal fueled to nuclear, and their locations range from Canada to Utah to New Mexico. The local power plant is fueled by natural gas but can burn low sulfur oil in emergencies.

The imported or locally generated electricity is transmitted at 69,000 or 34,500 volts to thirteen substations around the City (see Exhibit 3-37). From these substations the power is further distributed by 4,000 and 12,000 volt circuits either overhead or underground. At customer locations distribution transformers lower the voltage to the appropriate level for customer use (usually 120/240 volts). The developer is required to pay for the cost of new or upgraded electrical facilities which are primarily installed underground. Since 1958 all new subdivisions have been required to have underground electrical distribution. Approximately 60% of

EXHIBIT 3-36 4" MAINS REPLACEMENT PLAN BY PRIORITY AREA

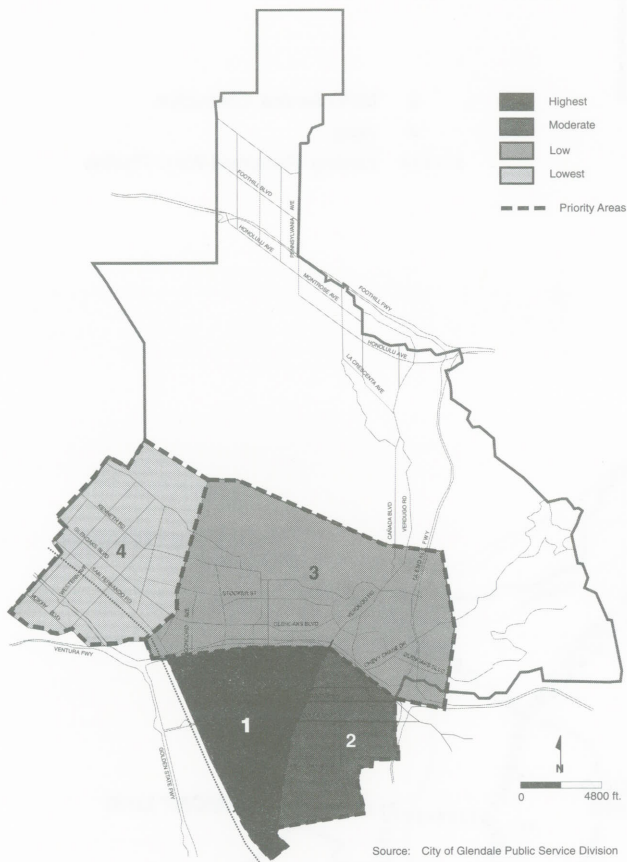


EXHIBIT 3-37 MAJOR ELECTRICAL LINES



the distribution circuits are overhead and 40% are underground.

The condition and capacity of the electrical system are continually monitored and the necessary levels of capital improvements and operation and maintenance expenses are provided for in the annual budget process.

NATURAL GAS PIPELINES

Natural gas is supplied in Glendale by The Gas Company. The Gas Company serves an area which encompasses the international border, San Gabriel Mountains, Pacific Ocean and Visalia/San Luis Obispo. Glendale is serviced by Field Operation units from the Glendale District operating base, which envelopes Glendale, La Crescenta, La Canada Flintridge and parts of Los Angeles (including Chinatown, Eagle Rock, and El Sereno).

Natural gas is distributed throughout Glendale by a matrix of pipeline systems that consists of transmission, supply, and distribution lines. Out-of-state natural gas comes from as far as Canada and the Midwestern United States. It is transported, from the supplier, through three high pressure pipelines to the California border at North Needles, South Needles and Blythe Stations. As the gas is transported to its destination, the pressure is maintained with the assistance of compressors. The gas is then received at a storage field (underground holding tanks) and redistributed through another series of transmission lines. A small portion of gas is also purchased from offshore and small producers within our operating area.

Natural gas is distributed throughout Glendale by a system of transmission, supply, distribution, and service lines. As the pipeline transitions from a transmission line to a lateral supply line, the natural gas is regulated down



EXHIBIT 3-38 NATURAL GAS PIPELINES

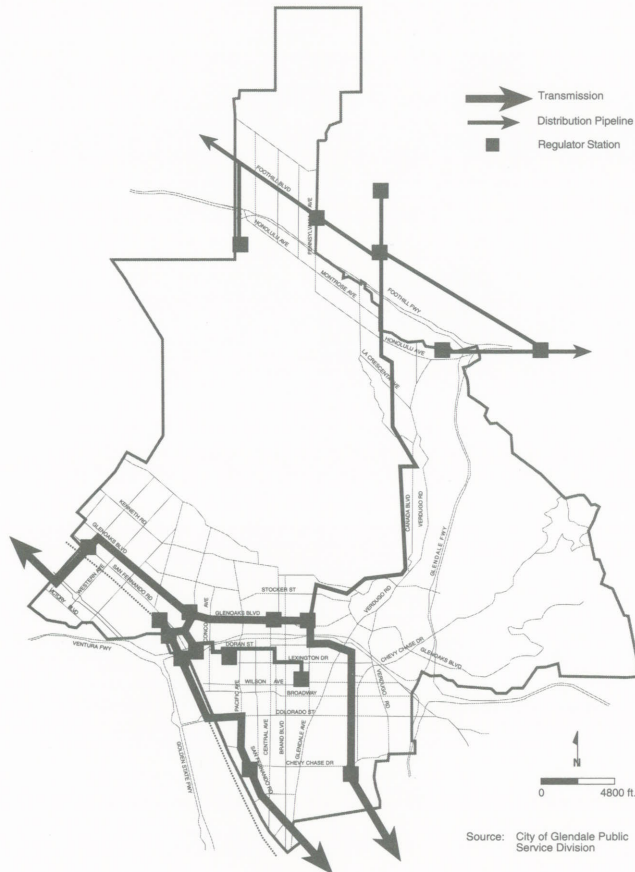
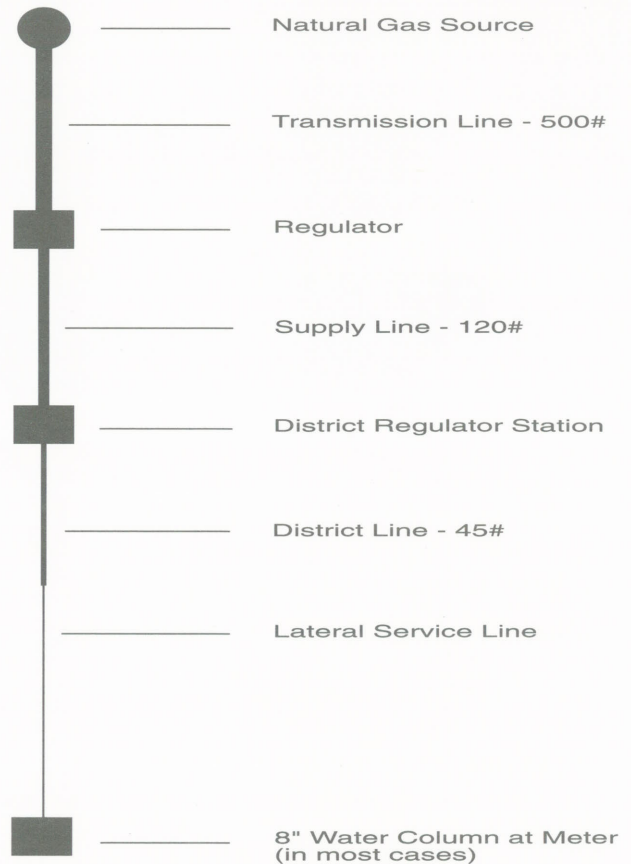


EXHIBIT 3-39 NATURAL GAS DISTRIBUTION SYSTEM



to the most efficient level of pressure for the consumer. Seven major pipelines which serve Glendale consumers are located throughout the City (see Exhibit 3-38). The Gas Company maintains the infrastructure up to the outlet of the metering device. The Gas Company continuously upgrades the pipeline infrastructure to meet current and future needs. Usually, replacement pipes are aligned parallel to the older ones in the same right of way. Exhibit 3-39 illustrates the hierarchy of the gas pipeline distribution system.

The current natural gas system appears to be adequate to serve present needs. Current estimates of natural gas usage versus supplies for the United States indicate that there will be adequate supplies for many decades.

TELECOMMUNICATIONS

Local telephone service is provided by Pacific Bell. The

telephone company has a number of business offices, employment centers, and equipment sites in the City. Over 50 companies provide long distance telephone service to Glendale residents. AT&T, MCI, and Sprint are the three main long distance providers. Because telecommunications technology is advancing at such a rapid pace, long term needs are still unpredictable. There will be competing systems in the near future, with traditional wired telephony competing with wireless services--analog, digital and satellite systems--for the market share. Demand for telecommunication services, especially in personal communication, is expected to grow as can be seen with the proliferation of area codes in the metropolitan area. Several cellular communications companies have installed satellite antenna sites throughout the city, with more planned. The City has adopted an ordinance to address the installation of such antennas in residential zones in order to ensure that they remain compatible with the surrounding neighborhood.



GLOSSARY

Average Daily Traffic (ADT)	The average number of vehicles passing a specified point in one or both directions during a 24-hour period.
Air Quality Management Plan(AQMP)	A Plan for attaining federal and state air quality standards as required by the Federal Clean Air Act and California Clean Air Act. It is adopted by air quality districts and subject to approval by the California Resources Board.
Average Vehicle Ridership (AVR)	The number of employees who report to a worksite divided by the number of vehicles driven by those employees, typically averaged over an established time period.
California Environmental Quality Act (CEQA)	A statute that requires all jurisdiction in the State of California to evaluate the extent of environmental degradation posed by proposed development or project.
Congestion Management Program (CMP)	A statewide program which addresses congestion problems at the county level.
GDSP	Glendale Downtown Strategic Plan
GTMC	Glendale Transportation Management Center
GTMA	Glendale Transportation Management Association
Intermodal Surface Transportation Efficiency Act (ISTEA)	Federal legislation that provides funding for multi-modal transportation programs.
Level of Service (LOS)	A qualitative measure describing operational conditions within a traffic stream, generally described in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety.
LACMTA	Los Angeles County Metropolitan Transportation Agency (LACMTA)
MWD	Metropolitan Water District
RCP & Guide	Regional Comprehensive Plan and Guide prepared by the Southern California Association of Governments.
Regional Transportation Plan (RTP)	A comprehensive 20 year plan for the region, updated every two years by the regional transportation planning agency. The RTP includes goals, objectives, and policies, and recommends specific transportation improvements.

Southern California Association of Governments (SCAG)

The Metropolitan Planning Organization (MPO) for Ventura, Los Angeles, Orange, San Bernardino, Riverside and Imperial counties.

South Coast Air Quality Management District (SCAQMD)

The agency responsible for preparing the Air Quality Management Plan (AQMP) for the South Coast Air Basin.

Transportation Demand Management (TDM)

Demand based techniques for reducing traffic congestion, such as ridesharing programs and flexible work schedules enabling employees to commute to and from work outside of peak hours.

Transportation Management Association (TMA)/ Organization (TMO)

A private/nonprofit association that has a financial dues structure joined together in a legal agreement for the purpose of achieving mobility and air quality goals and objectives within a designated area. There are fourteen operating TMA/TMOs in Los Angeles County.

Transportation System Management (TSM)

That part of the urban transportation process undertaken to improve the efficiency of the existing transportation system. The intent is to make better use of the existing transportation system by using short-term, low capital transportation improvements that generally cost less and can be implemented more quickly than system development actions.

Vehicle Miles of Travel (VMT)

A measurement of the total miles traveled in all vehicles in the area for a specified time period. It is calculated by the number of vehicles multiplied by the miles traveled in a given area or on a given highway during the time period.

Vehicle Trip

A one-way movement of a vehicle between two points.



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