

ITEM #4



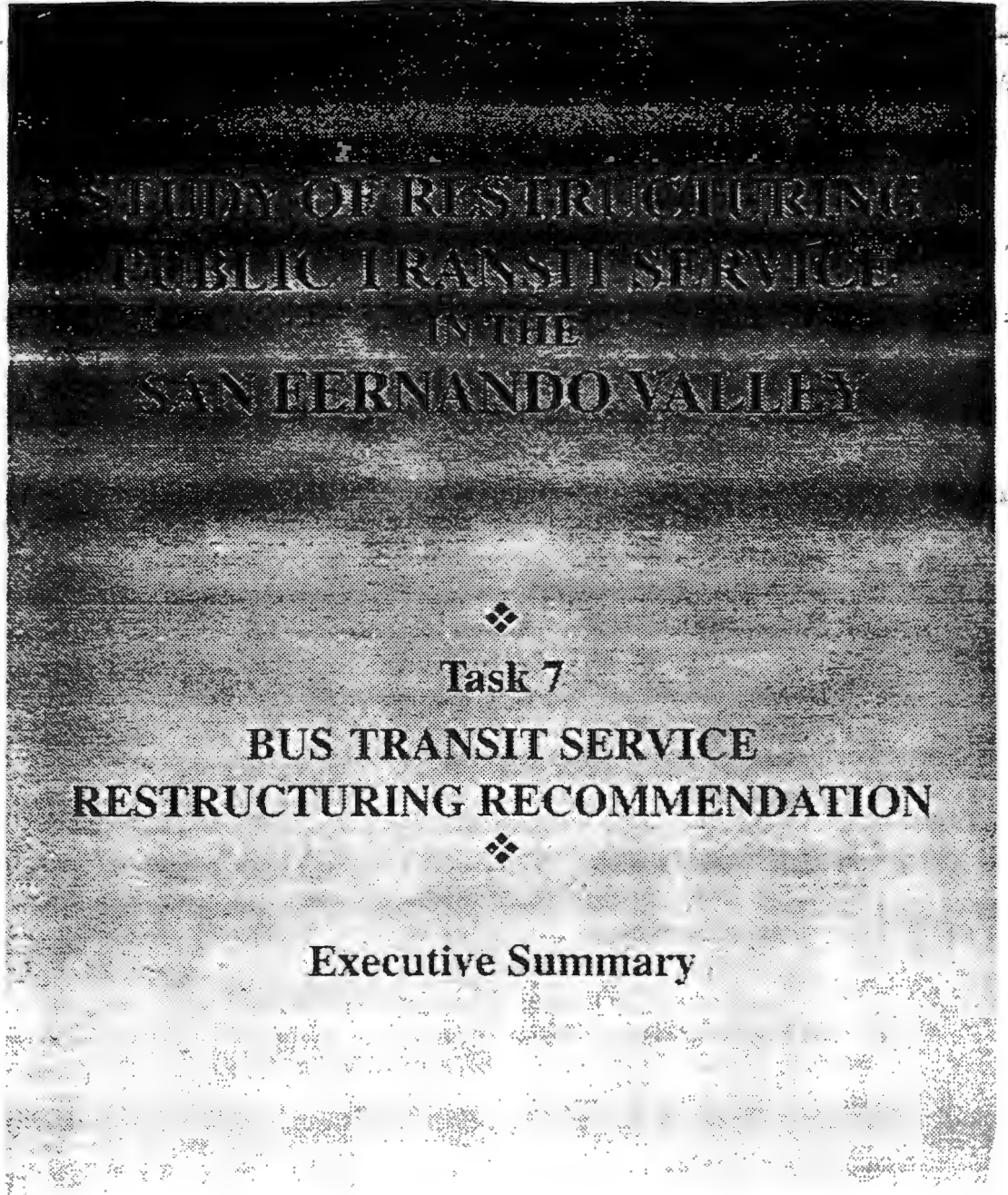
City of Los Angeles  
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# STUDY OF RESTRUCTURING PUBLIC TRANSIT SERVICE IN THE SAN BERNANDO VALLEY

❖  
Task 7

## BUS TRANSIT SERVICE RESTRUCTURING RECOMMENDATION

❖  
Executive Summary

Submitted by:  
**Crain & Associates, Inc.**

September 1994

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## Table of Contents

1.0 Introduction .....	1
2.0 Study Methodology and Restructuring Objectives .....	1
Study Methodology .....	1
Study Objectives .....	3
3.0 Recommended Service Restructuring Proposal .....	6
Network Overview .....	6
Individual Services .....	7
4.0 Facility Improvements .....	8
Transit Centers .....	8
Park-And-Ride Facilities .....	10
Enhanced Bus Stops .....	10
5.0 Financial Impacts .....	12
Operating Costs .....	12
Passenger and Revenue Impacts .....	13
Capital Costs .....	14
6.0 Related Policy Issues .....	14
MTA Consolidated Transit Service Policies .....	14
Service Definitions .....	15
Timed Transfer Impacts and Requirements .....	16
Unfunded Optional Local Community Services .....	16
ADA Service Area Issues .....	17
Appendix 1-Regional Summaries .....	19
Appendix 2-Area Maps .....	27
Appendix 3-Individual Line Recommendations .....	42
Appendix 4-Individual Line Service and Cost Impacts .....	56

## **Listing of Tables**

<b>Table 1 - Public Participation</b> .....	<b>2</b>
<b>Table 2 - Proposed Transit Centers</b> .....	<b>9</b>
<b>Table 3 - Major Street Boarding Locations</b> .....	<b>11</b>
<b>Table 4 - Estimated Operating Cost Impacts</b> .....	<b>12</b>
<b>Table 5 - Facility Cost Estimates</b> .....	<b>14</b>

# San Fernando Valley Transit Service Restructuring Study

## Recommended Service Restructuring

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### 1.0 INTRODUCTION

The San Fernando Valley Transit Service Restructuring Study was initiated in early 1993 by the Crain & Associates consulting team under contract to the City of Los Angeles Department of Transportation (LADOT). The consultant reported to a Technical Advisory Group (TAG) comprised of LADOT, the Los Angeles County Metropolitan Transportation Authority (MTA), and the County of Los Angeles Department of Public Works. The multi-agency focus presented restructuring opportunities that had not historically been available to the individual agencies. The recommended plan for restructuring bus transit services in the San Fernando Valley presented herein represents the culmination of this joint effort.

This executive summary is organized into several brief sections: study methodology and objectives, recommended service restructuring, facility requirements, financial impacts, policy issues, and an attached appendix.

### 2.0 STUDY METHODOLOGY AND RESTRUCTURING OBJECTIVES

#### STUDY METHODOLOGY

The study methodology focused on taking a "blank slate" approach to restructuring the bus transit system in the San Fernando Valley. This "blank slate" approach presented the opportunity to change any and all elements in the system, while at the same time placing a high priority on supporting existing customers and maintaining the successful components of the system. To accomplish this, several critical tasks were undertaken:

- Extensive public participation program;
- Detailed assessment of existing bus service; and
- Analysis of the existing and potential transit markets, including unmet transit needs.

**Public Participation.** The extensive public outreach program included four principal components: interviews with public officials<sup>1</sup>, meetings with key organizations and groups, a series of public workshops, and ongoing interaction with the *Summit Group*. Two rounds of public participation were conducted:

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<sup>1</sup> All public officials in the study area were provided with written study materials and advised of the opportunity to meet with the study team both in the initial and final outreach efforts.

1. **Initial Public Participation** sought input on key issues and concerns, potential service improvements, and unmet transit needs.
2. **Final Public Participation** presented the draft SFV service restructuring proposal for comment. The final service restructuring recommendations include modifications in the draft proposal resulting from comment received during this final phase of public participation.

The number of public official interviews, meetings with key organizations and groups, and public workshops are noted in the following table:

**Table 1  
Public Participation**

Event	Number Conducted in Initial Phase	Number Conducted in Final Phase
Public Official Interviews	17	11
Community Group Meetings	12	4
Public Workshops	16	12

The Technical Advisory Group and the consultant met with the *Summit Group* three times during the study. The first was at the study outset to secure initial input and guidance regarding goals and objectives. The second meeting was to report the findings of the analysis work and present specific service restructuring strategies. The final meeting was to present the draft service restructuring proposal. The 110-member *Summit Group* was composed of public officials, leaders in Valley organizations and groups, representatives of transit user groups, members of the senior and disabled communities, Transportation Management Associations, and other transportation oriented individuals and groups. All those wishing to participate were invited to become Summit Group members.

The public outreach comments have been documented and are available for review.

**Existing Bus Service Assessment.** The analysis of existing bus services included all bus services operating within the study area and was based on service and operating data for each service provider. The critical ridecheck data (passenger boarding/alighting activity by stop for all trips) was provided by MTA for both MTA and LADOT bus services. Based on this comprehensive ridecheck data, a performance assessment was undertaken for each line to determine both its current strengths and the opportunities for restructuring it to be more effective as an individual line and within the overall network of services. The performance assessment was augmented by considerable field investigation undertaken by the study team during both the dedicated on-site time and the ongoing public outreach events. In addition to the field work, the study team took the opportunity to meet with the staffs of Valley service providers, as well as their bus operators (both at the divisions and in the field), to hear their input. The findings are summarized in a *Service Assessment* report.

**Market and Unmet Transit Needs Analysis.** The analysis of existing and potential transit markets involved several tasks:

- Conduct of an on-board passenger survey of selected lines;
- Review additional on-board passenger survey data previously collected;
- Review the MTA *Market Management Study* findings; and
- Conduct of an unmet transit needs analysis.

The key findings were identified in two reports, *On-Board Survey Findings* and *Unmet Transit Needs Analysis*.

The findings of the public outreach, service assessment, and market/unmet transit needs analysis provided input into the development of the comprehensive service restructuring recommendation presented here for consideration. In addition, the findings also influenced the short term service recommendations for the San Fernando Valley that were prepared to address the MTA's operating budget deficit. A number of these recommendations were implemented with the June 1994 service modifications.

## STUDY OBJECTIVES

The central goals of the proposed service restructuring were finalized following the first Summit Group workshop and the initial public outreach program. Since that time the MTA has identified a large operating deficit that requires both short and long term consideration as part of this study. This has resulted in the re-emphasis of performance-related objectives such that current resources are deployed more efficiently and effectively. Based on both the original goals and the need to reduce the MTA operating deficit, the following service restructuring objectives were identified:

### Local Service Objectives

- **Improve Transfer Connectivity in Low Service Frequency Conditions.** As noted in previous study reports, the grid network is significantly less effective in providing transfer connections where infrequent services meet. In these circumstances three strategies were considered:
  - Consolidate services into corridors to build frequency to 15-minutes or better;
  - Link routes to minimize the need for transfer connections; and
  - Introduce timed transfer connections in a hub-and-spoke network.
- **Improve Internal Community Circulation.** One of the key issues identified by the public and community leaders was the need to improve local community circulation. This is more important in light of the latent demand findings that indicated that local circulation had one of the greatest potentials for increased transit use. In these "short hop" scenarios untimed transfer connections for low frequency routes are a significant deterrent to riding transit. The study team utilized the same three strategies as noted in the preceding discussion, but on a local versus regional scale.

- **Improve Travel Speeds.** The long travel times to complete journeys was identified as another key deterrent to increased transit use. Slow local bus travel speeds in conjunction with the previously mentioned difficulty in low frequency transfer connections, make local bus travel significantly less competitive from a travel time standpoint with private automobile travel. As a result, opportunities were investigated to introduce limited-stop and express-stop services where feasible. These include provision of overload relief for heavily patronized local routes (i.e., Lines 424/425) and where longer distance, inter-urban travel dominates a corridor (i.e., San Fernando Road).
- **Improve Service Coordination.** There are several different modes of service provided by different operators in the Valley. The restructuring effort sought to develop an integrated system by both improving coordination between modes and operators where there was a current connection and by increasing the number of connections where feasible.
- **Focus on Identified Target Markets.** During the analysis phase several target markets were identified for specific attention during the development of service restructuring options. These included such locations as Sylmar/San Fernando, Warner Center, Universal City, and West Valley. In addition, certain service linkages were identified that needed attention, including Glendale into the Valley and Sylmar/San Fernando to Chatsworth. In general, the development of restructuring options was intended to move the system toward a more market-based service network.
- **Address Poor Performing Services.** An extensive performance analysis was conducted for all services. Poorly performing line segments and time segments were identified for action during the development of restructuring options.
- **Address Service Quality.** Previous study work included a detailed analysis of passenger loads on the bus both throughout the service day and at various points along the routes. In some instances overcrowding was identified. However, in some cases the service frequencies for high demand services were significantly greater than those needed to meet the MTA's *Consolidated Transit Service Policies* loading standards. Where appropriate, service frequency adjustments were proposed.
- **Address Service Reliability.** Two areas were identified in the analysis and field work relating to service reliability: transfer connections and freeway traffic congestion impacts on long local lines. Transfer connection reliability was addressed through:
  - Link routes (through-route) to minimize the need for transfer connections;
  - Focus service into timed transfer hubs; and
  - Reemphasize protected or mandatory transfer connections (especially during the evening/owl service periods).

The freeway traffic congestion impacts can be addressed by deploying relief or schedule protection buses at strategic locations where service reliability for several lines can be assured at one time. One such location is in Universal City at the north end of the Cahuenga Pass.



- Address Metro Red Line and Burbank Airport LRT Introduction. The restructuring proposal considered the planned introduction of Metro Red Line service to Universal City and North Hollywood, as well as the cross-Valley alignment options. It also considered the impacts of the potential initiation of LRT service along the Glendale - Burbank - Burbank Airport corridor, including possible extensions to Sylmar and San Fernando.

### Express Service Objectives

The present express services in the Valley are widely scattered and specialized. Even if downtown Los Angeles was the only commute destination, the present resources would be inadequate to provide optimal express service to all parts of the valley. The need to also serve other employment destinations compounds the problem, spreading resources even thinner.

The central goal of the proposed improvements is to deploy express service in a way that is proportional to ridership potential, and that minimizes travel time for the largest possible number of residential origins. This overriding goal suggested the following specific approaches:

- Focus service where driving is least attractive. Commute destinations with high parking costs, such as downtown Los Angeles, but also many Wilshire corridor and West Los Angeles areas, will attract more express riders, who have been shown to be at least as sensitive to cost as to time. In addition, many existing and potential express riders consider driving hassles to be as big a disincentive as time. This means that express services can be attractive even in congested corridors without HOV lanes, where travel time will be no better than driving, but the time can be used in a more relaxing and/or productive way.
- Maximize park-and-ride access. Even in the eastern Valley, resources will not be sufficient to provide direct express service within walking distance of most homes. Park-and-ride access must be the predominant access mode, supplemented by local transit connections.
- Provide optimal travel times for park-and-ride access. If free to park-and-ride, commuters will typically choose the facility that provides the fastest express trip. Capacity constraints at these optimal facilities (such as the Encino facility at Hwy 101 and Hayvenhurst) risk forcing riders off of the express service entirely, since many will not be willing to use less attractive park-and-ride sites.
- Provide optimal travel times for walk and transfer access. Because walk and transfer access is more scattered, its express travel times will be less attractive than for park-and-ride. However, these times should still be optimized. The key to optimizing walk and transfer access is *limited stop operation* on major arterials. Stopping only at transfer points, typically every mile, means that service is still within walking distance of many residences, particularly since residential density tends to be higher closer to arterials. Limited stop operation also means that service can take advantage of signal timing, often achieving travel times that are comparable with congested freeway speeds. Finally, limited stop operation eliminates the current overlap between local and express services that occurs on streets such as Glenoaks and Foothill. This overlap currently causes some local passengers to ride the express bus because it happens to come first, slowing down express tripmaking. On the other hand, a limited-stop service can carry local trips without



being slowed down, because it makes only stops that it would make anyway. Limited-stop service on key arterials such as Sherman Way and Victory will be very attractive for many long intra-valley commutes, commutes that might never be attracted to local service.

- Eliminate competition with Metrolink. Although the fare differential between express buses and Metrolink is still a concern, operation of competing Metrolink and express bus service is not fiscally sound and contrary to development of an integrated transit system.

### 3.0 RECOMMENDED SERVICE RESTRUCTURING PROPOSAL

#### NETWORK OVERVIEW

The recommended transit service restructuring calls for continuation of the current grid-based route network in parts of the Valley and its replacement in others. The factors that influenced retention of the current grid network included:

- Where the predominant service frequencies make the untimed street intersection transfers required by the grid network relatively convenient (i.e., service operates every 20-minutes or better);
- Where travel patterns indicated disbursed trip-making without identifiable focal points or nodes; and
- Where topography and development patterns allow good grid network continuity.

This is generally the situation in most of the central and eastern portions of the Valley. Around the periphery of the Valley topography hampers effective grid network development. In the northern and western Valley sections, the prevailing service frequencies often fall below the 20-minute minimum level needed for effective grid network transfers. In several areas of the Valley focused travel patterns were identified, including such locations as Central Van Nuys/Panorama City, North Hollywood, Universal City, Burbank CBD and Media District, downtown San Fernando, Sherman Oaks, Sun Valley, downtown Glendale, and Warner Center.

In these areas where the grid-based service was less effective, several alternative service restructuring options were developed:

- Hub-and-spoke networks in which lines converge on a transit center where timed transfers take place. Six specific transit centers are being recommended:
  - Universal City (part of the planned Metro Red Line Station)
  - Downtown Burbank
  - Sylmar/San Fernando Metrolink Station
  - Northridge (CSUN/Northridge Fashion Plaza area)
  - Chatsworth Metrolink Station
  - Warner Center

- **Route linking** where east-west and north-south lines are joined to provide **continuous service** without transfer; and
- The introduction of **community-based services** to increase local service frequencies and minimize the need to transfer for short trips.

## INDIVIDUAL SERVICES

**Fixed-Route Service.** A variety of changes are proposed in individual routes to improve service effectiveness and efficiency, especially where the service is carrying few passengers or more desirable alignments are available. The following presents an overview of the key elements in the individual line recommendations. The detailed line-by-line service recommendations and budget impacts are found in Appendices 3 and 4, respectively with area maps in Appendix 2. Appendix 1 presents regional summaries of the recommended service changes.

- **Span of Service.** At this time no reduction in the time span of services is being proposed. In fact, several lines are being proposed for first time or resumed weekend or evening service, including Line 90 in Sylmar/San Fernando, Line 423 serving Calabasas and points west, and Line 670 providing a connection between the Burbank and Universal City late evening service corridors.
- **Service Frequencies.** Frequency adjustments are proposed for many lines with the changes ranging from minor to major. Even or "clock" service frequencies (e.g., 10, 12, 15, 20, 30, 60 minute intervals) have been recommended where possible, providing that schedule efficiency is not compromised. Where dictated by ridership and cost effectiveness, different service frequencies are recommended for different segments of long regional lines using single or double shortlines (e.g., Lines 92/93 and 420) and/or simple branching (Lines 233/561). In a few instances the recommended service frequencies are in violation of the MTA *Consolidated Transit Service Policies (CTSP)*. Some exceed the midday scheduled passenger load standards of 100% and 90% for 21-30 minute and over 30-minute service headways, respectively. In no circumstance do the recommendations involve more than 4-5 standees and only for short distances (this issue is more fully discussed in the later *Policy Issue* section). In one other case, the CTSP may be violated by the recommendation to operate a 120-minute midday service on Line 168, in lieu of discontinuing midday service.
- **Deviations to Off-Corridor Destinations.** Historically, the grid network has sought to achieve maximum directness within each corridor. In certain instances, this has resulted in key destinations missed by short distances, requiring passengers to transfer one more time. While direct service alignments have been recommended in most cases, the restructuring was also sensitive to minimizing travel time to key destinations. As a result, in some instances the recommended alignment includes an off-corridor movement. While most of these instances involve short runs to meet other lines at transit centers, others involve provision of direct service to key destinations or neighborhood penetration from difficult to access arterials. Examples of the former include Line 234 deviating to Sherman Oaks Fashion Square, while the deviation of Line 90 into Lake View Terrace is a latter example.

**Non-Traditional Service.** A number of non-traditional service options were explored for application in the Valley, such as community-based jitneys, "Smart" shuttles, dial-a-ride systems, "service routes," and taxis. In nearly all cases these service options carry passengers at significantly higher subsidies per passenger than traditional alternatives. As a result, new traditional fixed-route community-based shuttles (DASH-type) have been recommended, including Sylmar, North Hollywood, Van Nuys/Panorama City, Sherman Oaks/Encino, West Valley, Burbank, and Glendale.

The one option that is equally or more cost effective than traditional service in certain circumstances is "service routes." These are short distance fixed route services that are tailored to "micro" transit market needs with the routes and schedules varying by time of day and day of week. These have historically been effective at meeting the needs of senior citizens traveling from higher density residential areas to limited, regular destinations. In the case of seniors, their time of day travel flexibility makes it possible to optimize the efficiency and effectiveness of service route schedules. *The SFV study is recommending that the "service route" service option be tested in the Northeast Valley.* This area was selected as the test area for several reasons:

- The "service route" option is of greater value in the far Northeast Valley where the proposed community services are not supported by the underlying grid network;
- Public outreach has indicated that several lower volume ridership groups need available service, while not supporting full-time fixed route service (i.e. Juvenile Hall);
- The area has a variety of travel needs, including commuters, shoppers, medical trips, junior and senior high students, as well as recreational trips; and
- The "service route" can be anchored at the Sylmar/San Fernando Metrolink Station where a timed transfer with the regional services is proposed.

Depending on the outcome of the service test, there are a number of additional candidates in the Valley, especially in the peripheral Foothills of the Valley.

#### **4.0 FACILITY IMPROVEMENTS**

As noted above, the restructured system will need enhanced passenger facilities to function effectively. These facilities include three principal types:

- Transit Centers
- Park-and-Ride Facilities
- Enhancements at Major Bus Stops

##### **TRANSIT CENTERS**

The sections of the Valley where *hub-and-spoke* network operations are recommended will need facilities for the buses and other modes to stage simultaneously. The proposed timed transfer service operation calls for all or most of the routes to meet at a designated transit center at the same time in

order to facilitate transfer connections for customers. Table 2 below indicates the transit center location, size in terms of number of bus bays required, and the routes that will service the center.

**Table 2  
Proposed Transit Centers**

<b>Location</b>	<b>Size</b>	<b>Served by Routes:</b>
Universal City [Future Metro Red Line Station <sup>2</sup> ]	7 bays	152, 166, 420, 426, 424/425/522, 670, 680
Downtown Burbank	9 bays	92/92, 94/394, 96, 154, 164, 165, 234, 411, 670
Sylmar/San Fernando Metrolink Station	10 bays	90, 92/93, 94/394, 230, 234, 239, 561, 570, 631, 632
California State University at Northridge or Northridge Fashion Plaza area	5 bays	166, 167, 168, 239, 522
Chatsworth Metrolink Station	4 bays	158, 167, 168, 645
Warner Center	15 bays	152, 158, 163, 164, 166, 239, 411, 423/427, 424/425, 545, 575, 645, 668, 669

To facilitate passenger connections, transit centers require a number of attributes, but need not be ornate or expensive. The following attributes are recommended for consideration:

- Dedicated bus bays for simultaneous staging of all available services. These can be located either on-street or off-street. The larger sites like Warner Center with 15 bays will result in excessive walking distances or street crossing between buses if located on-street. However, smaller centers can be located on street. Three recommended locations are already or will be transit service sites: the two Metrolink Stations and the planned Metro Red Line Station. At the other locations a number of feasible sites, on-street and off-street, have been identified for further investigation.
- Enhanced passenger waiting amenities to support the larger passenger volumes that will be focused at the transit centers. These would include improved and larger shelters, seating, good lighting, possibly revenue-producing concessions at larger sites, and rest rooms. Regular cleaning and trash receptacle emptying needs also be considered as part of the daily operating plan.

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<sup>2</sup> The current Metro Red Line Station operations plan calls for 11 bus loading bays and 18 bus spaces for layover staging. Initial discussions with MTA regarding the interim use of the existing MTA park-and-ride area on Ventura Boulevard for the proposed Universal City Transit Center have not identified any significant issues or concerns.

- Enhanced service information aids, including both passive and active options. At a minimum full service schedules should be displayed. Active options include direct telephone lines to the information center and Smart Traveler kiosks.
- Security, active sites often do not need additional security due to passenger volumes during most days. However, during night and other lower passenger volumes periods, consideration should be given to providing some form of on-site security. Consideration of a joint-use site would mitigate some of this need.

## PARK-AND-RIDE FACILITIES

As noted previously, the express service must transition from a traditional walking/transfer access strategy to one focused around collecting commuters at park-and-ride facilities. At the same time, the current park-and-ride facility network is inadequate to support continuing growth of the express network. Many of the current sites are poorly located as effective interceptors of commuters or are located in areas with obvious security concerns. Those in more optimal locations are over-subscribed with full lots, including two key sites: Encino park-and-ride (Hwy 101 at Hayvenhurst) and the Granada Hills Lutheran Church (Chatsworth Street at Gaynor).

It is therefore recommended that an aggressive park-and-ride development program be initiated to support the express system, one with coordinated facility and express service development. The prime strategy should focus on development of joint-use sites to avoid the cost and limitations in acquiring land for exclusive use transit facilities. Likely joint use candidates include commercial sites that have downsized (e.g., aerospace industry), sites with compatible parking needs (e.g., movie theaters, churches, shopping malls), and businesses in need of "pollution credits." The specific areas of the Valley that need expanded park-and-ride opportunities as a result of the service restructuring recommendations include:

- Encino (at or near the current facility)
- West Valley near the Warner Center Transit Center
- Granada Hills (at or near the current facility)
- Calabasas (Las Virgenes/Lost Hills area)
- Sunland (Kmart area)
- Pacoima (more secure joint-use site along Foothill)
- Along the following corridors: Devonshire (Tampa to the east), Roscoe, Sherman Way (Laurel Canyon to the west), Victory, Balboa (Chatsworth to the south), and Foothill.

Two new park-and-ride facilities in development have been proposed for direct express service: east Glendale (served by Line 411) and La Cañada Flintridge (Verdugo at Hwy 2 served by Line 409).

## ENHANCED BUS STOPS

There are a number of locations in the Valley where transit centers are not recommended, but nevertheless serve large numbers of customers each day. In many ways the facility amenity needs of these riders are greater because the transfer connections are not timed, making their waits typically

longer. From the MTA ridecheck counts a listing of the top 20 Valley stops was compiled and is presented in Table 3.

**Table 3  
Major Street Boarding Locations**

	<b>Location</b>	<b>Total Weekday Passenger Boardings</b>	<b>Routes Serving Location</b>
1	Sherman Way and Van Nuys	3,274	163,167,413,420,426,560
2	Roscoe and Van Nuys	2,835	152,167,169,418,420,560
3	Sepulveda and Ventura	2,674	183,424/425,549,560
4	Victory and Van Nuys	2,375	164,420,426,560
5	Vanowen and Van Nuys	2,306	165,420,426,560
6	San Fernando and Van Nuys	1,929	94,560
7	Reseda and Ventura	1,804	154,240,424/425
8	Ventura and Vineland <sup>3</sup>	1,740	152,420,424/425
9	Olive and San Fernando <sup>3</sup>	1,695	92/93,94,96/97,152,154,163,164/165,410,413
10	Ventura and Van Nuys	1,427	97,424/425,560
11	Nordhoff and Van Nuys	1,343	166,560
12	Topanga Canyon and Ventura <sup>3</sup>	1,285	161,245,423,424/425
13	Roscoe and Sepulveda	1,223	152,234,418
14	San Fernando and Los Feliz	1,115	94,180/181
15	Glendale and Broadway	1,081	90/91,177,180/181
16	Laurel Canyon and Van Nuys	1,036	230,560
17	Sherman Way and Sepulveda	1,022	163,234,426
18	Broadway and Brand	980	92/93,177,180/181,201
19	San Fernando and Sunland	914	94,152,169
20	Sherman Way and Reseda	914	163,240

Since customer needs at these sites are little different from those at transit centers, a similar list of enhancements are proposed. Currently each individual city is responsible for provision of bus stop amenities. The Technical Advisory Group of this study should take a lead role implementing the proposed enhancements and in improving coordination among the individual cities.

<sup>3</sup> The major boarding activity at these sites may relocate to nearby proposed transit centers. If this is the case, the bus stop enhancements would be redirected to another high boarding site.

Capital costs for these facilities are discussed in the next section and include all twenty sites.

## 5.0 FINANCIAL IMPACTS

This section presents both operating and capital cost impacts resulting from the recommended service restructuring in the Valley.

### OPERATING COSTS

The San Fernando Valley Transit Service Restructuring Study has provided the first occasion to address all Valley transit services at one time. This has provided a major opportunity to propose an integrated system of services where service effectiveness and cost efficiency can be fully realized. The proposed service restructuring sought to optimize the deployment of transit resources among the various service options and within the overall network. This has resulted in significant savings:

**The total annual estimated net operating cost savings is \$6.8 million<sup>4</sup>**

These annual net savings are comprised of a combination of MTA service economies, \$12.4 million, and expansion in new community services, \$5.6 million. Table 4 below details the estimated revenue hour and cost savings in terms of what savings can be anticipated beyond those already planned for the October 2, 1994, shake-up.<sup>5</sup>

**Table 4  
Estimated Operating Cost Impacts**

Service Provider	Estimated Annual Savings Beyond Planned October 1994 Schedule	
	Revenue Hour Savings	Operating Cost Savings
MTA	(193,435)	(\$12,398,844)
Other Providers	154,649	\$5,568,943
Total	(38,786)	(\$6,829,901)

<sup>4</sup> This estimate is subject to confirmation using an MTA marginal cost model when available.

<sup>5</sup> Last June, MTA implemented a number of service changes to improve service efficiency and effectiveness system-wide. The June 1994 Valley service changes, a number of which resulted from early study findings, have already captured an initial \$2 million to \$3 million in operating cost savings. The service restructuring recommended here is expected to generate an additional \$6 million to \$7 million in annual operating cost savings.



The actual attainment of the estimated operating cost savings for the Valley is dependent upon the assignment of service operation to service provider. While the actual development of the restructured transit service recommendation was "blind" to who operated the service, the subsequent development of operating cost estimates is not. The specific assumptions that guided the operating cost estimation process were:

- New community services would be operated by "other providers."
- Portions of certain regional lines would be restructured into new community services and operated by "other providers."
- Where services of more than one service provider were consolidated into one service, the operator of the longer service retained the operation.

While it is recognized that the recent MTA collective bargaining agreements with its bus operators and maintenance staff may influence these assumptions, deviation from them will certainly impact the total estimated savings in operating costs.

Operating Cost Estimation Issues. A key concern was to ensure that realistic cost savings were identified. While this was relatively straight forward for the other service providers (the contracted unit costs were used), the lack of an approved *MTA marginal cost model* for this purpose required that an alternative strategy be employed. As a result, MTA operating cost savings were calculated using two approaches with the lower of the two cost saving estimates used on a line-by-line basis.

Method 1: The MTA cost allocation model utilizing the unit costs for hours, miles, and peak vehicles (weekday only) - the actual unit costs are from the MTA Line Performance Trends Report provided to the study team. This method estimated total annual cost savings of \$13.96 million based on the planned October 1994 service levels.

Method 2: The MTA Deloitte and Touche study non-administrative operations and maintenance costs per hour. Total annual operating cost savings using this approach were \$13.11 million.

Taking the lower of the two estimates on a line-by-line basis resulted in an overall estimate for MTA cost savings of \$12.4 million, significantly less optimistic than using either methodology exclusively. However, as noted earlier this \$12.4 million estimate is subject to confirmation using an MTA marginal cost model when available. The detailed line estimates by day of the week are presented Appendix 4.

## PASSENGER AND REVENUE IMPACTS

As part of the evaluation of the proposal against the current system of services, passenger impacts were considered. It is anticipated that revenue or ridership impacts will be minimal.<sup>6</sup> Service reductions were only proposed where ridership was minimal or where unnecessary capacity was being provided and are balanced by improvements in both community transit services and in network transfer

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<sup>6</sup> It should be noted that improvements in network connectivity will likely reduce the number of "unlinked" passenger trips - a single customer who transfers once is counted as two unlinked passenger trips.

connectivity. The recent fare increase and change in local fare media will likely influence ridership and revenue to a much greater degree.

## CAPITAL COSTS

The capital costs resulting from the restructuring recommendations are facility-related. It is not envisioned that new buses will be purchased to operate new services. Rather, it is the recommendation of this study that redeployment of available buses will provide the necessary equipment resources.

The strategy proposed in developing transit centers and bus stop enhancements is to use either on-street locations, currently owned sites, or joint-use sites where the land is provided without compensation. Thus, no land costs are included. Table 5 presents an estimate of the anticipated facility capital costs.

**Table 5**  
**Facility Cost Estimates<sup>7</sup>**

Facility	Total
Universal City TC	\$220,000
Burbank TC	\$265,000
Sylmar/San Fernando TC	\$275,000
Northridge TC	\$150,000
Chatsworth TC	\$115,000
Warner Center TC	\$400,000
Bus Stop Enhancements (20)	\$1,000,000
<b>Total Capital Cost</b>	<b>\$2,425,000</b>

## 6.0 RELATED POLICY ISSUES

The San Fernando Valley restructuring study has raised a number of policy issues that concern LADOT, MTA, and the County of Los Angeles. These issues are discussed in the following sections.

### MTA CONSOLIDATED TRANSIT SERVICE POLICIES (CTSP)

Loading Ratio. The transit service restructuring proposal for the Valley contains certain recommendations that are in violation of the MTA CTSP requirements regarding Loading Ratio,

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<sup>7</sup> The facility cost estimates were based on \$10,000 per bus bay, \$25,000 per shelter with lighting, \$25,000 for restrooms at selected sites, and an allowance of \$25,000 for enhanced information aids. Enhancements to major bus stops were budgeted at \$50,000 per site.

(scheduled maximum average passenger loads). The current CTSP standards in this area differentiate loading ratios by time of day and by service frequency with off-peak services and infrequent services having lower loading ratios. In general, this is a sound and easy practice to follow. However, in certain instances this policy results in the addition of a costly additional bus to address a loading ratio violation that is inconsistent with MTA's other financial policy guidelines. For instance, during midday periods services operating less than every 20-minutes may not have any standees scheduled. This means that a loading ratio of 110 percent, four standees, would necessitate the introduction of another bus and operator. Certain Valley service restructuring recommendations require loading ratios of between 101% and 110% for short distances where standard of 100% is prescribed.

The current policy has two other elements that also warrant reconsideration:

- Should less than seated capacity loads be scheduled as a matter of course, regardless of service frequency? The night loading ratio standard for services operating less than every 30-minutes is 75 percent of seated capacity.
- The time duration of the standee problem should also be considered. The ridechecks provide excellent insight as to whether the standee problem lasts 5-minutes or a half hour. The decision to incur the cost of an additional vehicle to mitigate the problem will benefit from this consideration.

It is therefore recommended that modifications to this policy be instituted to provide operations planners and schedulers with the flexibility to maintain cost effectiveness, while at the same time, continue to guarantee both passenger safety and comfort without unnecessary limitations.

Conflict Between Minimum Service Warrants and Financial Performance Standards. The CTSP has several policies that conflict with each other regarding the desire to maintain minimum levels of service to the public and at the time maintain a cost-efficient and cost-effective operating system. Section 3.5.3 of the CTSP places a higher priority on maintenance of minimum service levels, in fact stating "In other words, a minimum route and service level system will be maintained regardless of performance."

In transit, resolution of budget shortfalls is the "immovable object" and in such cases performance cannot be ignored. In MTA's case, the current budget problems have become the "immovable object." A number of transit systems throughout the country have recognized this inherent conflict and sought to rationalize the relationship between service levels and performance through development of an interactive set of service management policies that specifically address this conflict. Many systems, including San Diego and Houston, have moved to a policy of establishing a minimum level of service based on the "lifeline" philosophy and letting all other service management decisions, excepting safety, become dependent upon performance. It is recommended that MTA consider developing such a policy.

## SERVICE DEFINITIONS

In light of the recently negotiated collective bargaining agreements between MTA and its operating staff, there is a need to develop definitions regarding service changes. For instance, when is a route new? What constitutes a change in service - are new limited-stop services part of the local line or new separate lines? Studies like this one exacerbate the problem by their multi-agency approach. Such studies instigate consolidation of multiple lines of different operators into a single coherent service and

**propose transfer of lines between different service providers where sound. Such issues have significant financial ramifications and place greater pressure on having clear service modification definitions.**

**The proposed San Fernando Valley restructuring recommends a variety of service modifications that are not easily defined. For instance, the consolidation of LADOT Line 423 with MTA Line 161 results in what from a collective bargaining agreement standpoint? Consequently it is recommended that MTA work with other participating agencies to develop a set of universal service modification definitions to assist the cost-effective implementation of recommended service changes.**

## **TIMED TRANSFER IMPACTS AND REQUIREMENTS**

**The development of a timed transfer hub-and-spoke network of services is considerably different than the past practice in Los Angeles where lines were optimized individually with only occasional limited schedule coordination between different lines of the same operator, let alone between different service providers. Further, the unrestricted development of timed transfer-based services can negatively impact service cost efficiency. As a result, the following is recommended:**

- 1. Develop a mechanism to coordinate shake-up dates and service schedules between the various regional service providers.**
- 2. Develop a hierarchy of services upon which to base schedule development with the regional multi-transit center lines at the top and community services feeding the regional network being scheduled last based on the regional service times. In some cases there will be legitimate prevailing local needs that are inconsistent with meeting the regional timed transfer requirements. These will need to be considered on a case-by-case basis.**
- 3. Review individual line timed transfer deployment decisions in light of cost efficiency and effectiveness. While timed transfer can be implemented cost efficiently in most cases, there will be instances where complete timed transfer implementation will require additional resources on an individual line. Depending on the importance of timed transfer to the individual line (and vice versa), the additional expense may or may not be warranted. Again, these will need to be considered on a case-by-case basis.**
- 4. Procure scheduling software that supports the development of timed transfer service. The existing MTA scheduling software is not timed transfer "friendly," and will handicap staff in optimizing such a network of services.**

## **UNFUNDED OPTIONAL LOCAL COMMUNITY SERVICES**

**During the study several community services were suggested for consideration during the study, but were not recommended for implementation. These services are noted below and if funded locally can be integrated in the restructured system with minimal effort.**

- 1. Service frequency improvement on Beeline 4 serving La Cañada Flintridge from hourly to every 30-minutes.**

2. **Community shuttles in Burbank: one operating between the Airport Terminal and the Media District via Buena Vista; other shuttles connecting with Glendale and providing circulation east of the downtown Burbank area have been suggested.**

3. **The officials for the city and the school district in Calabasas would like service extended to the Las Virgenes area and to serve Calabasas High School. Proposed Line 668 could be extended and/or Calabasas may wish to consider operation of a "Smart Shuttle" dial-a-ride service to address the significant street discontinuity and topography issues in the city.**

#### ADA SERVICE AREA ISSUES

The recommended service restructuring does not significantly impact service coverage due to MTA's previous excellent coverage of the study area. Only one new potential service may impact ADA requirements: the proposed full time Line 570 express between the Sylmar/San Fernando Station and Valencia/Magic Mountain. Considering that the line largely operates in express mode on the freeway, little new local operation is introduced.

APPENDICES follow in the next section.

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# **APPENDICES**

- 1. Recommended Service Restructuring Regional Summaries**
- 2. Area Maps**
- 3. Individual Line Recommendations**
- 4. Individual Line Service and Cost Impacts**

# APPENDIX 1

## Recommended Service Restructuring Regional Summaries



## REGIONAL SUMMARIES

The recommended transit service restructuring is broken down by region of the Valley for easier review. The regional summaries are followed by detailed line-by-line proposals.

### **NORTHEAST VALLEY - San Fernando, Pacoima, Sylmar, Mission Hills, Lake View Terrace, Palmdale, Lancaster, Santa Clarita**

- Proposed timed transfer hub-and-spoke network in the Sylmar/San Fernando area focused on the new Metrolink Station at San Fernando Road and Hubbard. Infrequent services will meet every 30 or 60 minutes for easy transfer connections.
- Existing regional MTA lines will be focused on Sylmar/San Fernando Station, including rerouting Lines 90 and 234 and shortening Line 94.
- Two new shuttle routes are proposed to serve Sylmar and San Fernando operating out of the Sylmar/SF hub; Lines 631 and 632. These are intended to replace the community service portions of regional Lines 90, 94, and 234.
- In Pacoima and Arleta, service connectivity has been strengthened by the linking of east-west Lines 166 and 167 to north-south arterial lines Line 228 on both Lankershim and Coldwater Canyon.
- The key Van Nuys Boulevard service has been modified to serve both Lake View Terrace (current Line 560, renumbered Line 233) and the Sylmar/SF Station timed transfer hub (Line 561).
- New higher speed *limited stop* services will be introduced along both the San Fernando Road (Line 394) and Van Nuys Boulevard (Line 561) corridors.
- New hourly regional service is proposed between the Sylmar/SF Station hub and Santa Clarita for weekdays and weekends with Line 570 *limited stop* service. Proposed destinations in Santa Clarita include Valencia Mall and Magic Mountain.
- Line 239 has been linked with the Line 243 Winnetka service, providing direct service to Granada Hills, CSUN main campus, Parthenia (between Reseda and Tampa), Northridge Fashion Center, Winnetka, and Warner Center.
- Continuation of the new Chatsworth "Highway Hummer" express service (Line 545) with a streamlined routing to Chatsworth and extension to Warner Center.
- Line 409 is proposed as the Foothill corridor express service, replacing slower Lines 406/407. Due to the availability of Metrolink service at the new Sylmar/SF Station, Line 409 is proposed to originate at Foothill & Maclay.

Individual line recommendations are found in the Appendix 3 Tables 1-Local Service and 2-Limited/Express Service and on Appendix 2 Figures 1 and 12.

**EAST AND SOUTHEAST VALLEY - Burbank, Glendale, Sun Valley, Sunland, Tujunga, La Crescenta, Montrose, La Cañada Flintridge, Pasadena**

- Proposed development of a timed transfer hub on First Street in downtown Burbank. The recent rerouting of service to the Metrolink Station and resulting route streamlining along First Street is recommended for interim operation until such time as the City of Burbank completes its proposed transit center along First Street. Operation of all lines through the Olive/First Street location will maintain convenient transfer connections until the permanent transit center is completed.
- New higher speed *limited stop* services will be introduced along both the San Fernando Road (Line 394) and Victory Boulevard (Line 411) corridors. Line 394 will operate peak, reverse direction service between downtown Los Angeles and Sylmar/SF Station via Glendale, Burbank, Sun Valley, and Pacoima. Line 411 will connect the Victory Boulevard corridor with Burbank, Glendale, Warner Center, and downtown Los Angeles during peak periods.
- Service to the Burbank Media District has been focused from several low frequency lines into one high frequency shuttle (Line 670) connecting Burbank Station, Burbank Transit Center, Burbank Media District, Toluca Lake, and the Universal City Transit Center (future Metro Red Line Station). This line replaces both existing Lines 96/97 and 152 in this area.
- The unproductive duplication of services caused by the narrowing of the street network east of Hollywood Way has been reduced. Line 163 Sherman Way has been rerouted from downtown Burbank to Hollywood, substituting for Line 212 on Hollywood Way and Barham. Existing connections with Line 212 and new direct connections with many other Hollywood lines will take place at Hollywood and Vine, eliminating the currently required low-frequency transfers at Burbank-Glendale-Pasadena Airport.
- In Sun Valley, service connectivity has been strengthened by the linking of east-west Line 166 Nordhoff with Line 228 Lankershim and new service along Canoga Avenue, and east-west Line 167 Plummer with north-south Line 228 Coldwater Canyon.
- Sun Valley service has been further augmented by the rerouting of Line 163 Sherman Way and Line 169 Saticoy to provide new cross-Valley services in the Vineland neighborhoods. Access to the Valley from Sunland has been enhanced by a direct routing from Sunland Boulevard to Vineland to Saticoy, eliminating the circle around Burbank-Glendale-Pasadena Airport. The intersection of Sunland Boulevard, San Fernando Road, and Vineland Avenue will become an even greater transfer point with connections between Lines 94/394, 152 163, and 169.
- New direct weekend direct service from the Foothill Boulevard corridor will be operated to the Pacoima, Lake View Terrace, San Fernando, Sylmar area with the seven day operation of Line 90 to the Sylmar/SF Station. With this realignment, the weekend connection from Sunland to Sun Valley will be discontinued.
- In Glendale, Montrose, La Crescenta, and La Cañada Flintridge there are several proposed replacements of regional lines with community shuttle services. Specific proposals include replacement of Line 177 and Line 183 regional service with Beelines 4 and 6 (new) and shortening

**Line 201 and allowing Beelines 4 and 6 to cover the key areas. One area of Line 183 has not been recommended for alternative service, northeast of downtown Burbank.**

- Pasadena service changes are minor with the Line 181 branch terminal alignment recommended for relocation to Pasadena City College.
- Several express service changes are proposed:
  - Line 409 is proposed as the Foothill corridor express service, replacing slower Lines 406/407, and operating *limited stop* on Foothill Boulevard. The existing Lowell and planned La Cañada Flintridge park-and-rides will be served.
  - New Line 411 is proposed, operating between downtown Los Angeles and Warner Center via Eagle Rock, downtown Glendale, downtown Burbank, and the Victory Boulevard corridor. This line replaces portions of existing Lines 410, 412, and 549.
  - Line 410 is proposed for elimination due to competition with both Metrolink and its companion local lines 92/93. Line 411 replaces it in Glendale.

Individual line recommendations are found in Appendix 3 Tables *1-Local Service* and *2-Limited/Express Service* and on Appendix 2 Figures 2, 3, 4, and 12.

### **SOUTH CENTRAL VALLEY - Sherman Oaks, Studio City, Universal City**

- Maintain basic grid network throughout South Central Valley.
- Enhance the grid network with development of timed transfer hubs at a proposed Universal City Transit Center, part of the future Metro Red Line Station site.
- Additional service capacity is proposed on Line 420 between the Universal City Transit Center and Hollywood in order to reduce overcrowding. The Universal City Transit Center will provide a secure, reliable location for transferring passengers. Lines 420 and 424/425/522 will travel through the center with Lines 152, 166, 670, and 680 terminating there. It is also proposed that a freeway stop be developed at Universal City Transit Center for bi-directional express Lines 423 and 426.
- Several lines will connect at Ventura and Van Nuys Boulevards, including lines currently connecting at Sepulveda and Ventura, as well as proposed new lines, including Lines 234, 424/425/522, 233 (current Line 560), 561, 650, and 680. Express Lines 423 and 427 will stop just north at the Ventura Freeway/Van Nuys exit.
- Several north-south lines have been combined with east-west lines to improve the connectivity of the grid network. These include east-west Lines 166-Nordhoff and 167-Plummer to the north-south arterial Line 228 on both Lankershim and Coldwater Canyon, respectively.
- It is proposed that current Burbank to Sherman Oaks regional service be consolidated into one route, Line 234-Magnolia (current Line 183). Service along Riverside will be provided via shuttle Line

680 operating from the Universal City Transit Center via Ventura - Tujunga - Riverside - Woodman - Ventura to Van Nuys Boulevard.

- The Van Nuys-Studio City DASH has been replaced by several smaller shuttle/circulator services. These include 640-Van Nuys/Panorama City, 650-Sherman Oaks/Encino, and 680-Riverside. Rather than provide additional service coverage by operating on the ½ mile grid service spacing like the current DASH, the new community services complement the longer distance regional services on major, high volume corridors. Line 650 will provide shuttle service between Sherman Oaks Fashion Square and Central Encino via Ventura Boulevard and Moorpark.
- Enhanced service to the Burbank Media District, Burbank Station, downtown Burbank, and Toluca Lake is proposed. Proposed Line 670 is a high frequency shuttle operating between the Universal City Transit Center and Burbank Station, replacing portions of existing Lines 96/97 and 152.

Individual line recommendations are found in Appendix 3 Tables 1-Local Service and 2-Limited/Express Service and on Appendix 2 Figures 5 and 12.

### **CENTRAL VALLEY - Van Nuys, North Hills, Panorama City, Arleta, North Hollywood, Valley Village**

- As in South Central Valley, the principal restructuring proposal is to maintain and strengthen the grid network.
- To minimize grid transfers, several east-west lines have been linked with north-south lines. These include Lines 163 Sherman Way and 212 Hollywood Way, Lines 166 Nordhoff and 228 Lankershim, and Lines 167 Plummer and 228 Coldwater Canyon.
- New higher speed *limited stop* services are proposed along both the Van Nuys Boulevard (Line 561) and Victory Boulevard (Line 411) corridors. Line 561 will operate between Sylmar/SF Station and LAX via San Fernando, Pacoima, Arleta, Panorama City, Van Nuys, Sherman Oaks, Westwood, West Los Angeles, Fox Hills, and Westchester. Line 411 will connect the Victory Boulevard corridor with Burbank, Glendale, Warner Center, and downtown Los Angeles during peak periods.
- It is proposed that current regional Lines 183-Magnolia and 97-Riverside be consolidated into Line 234 which serves the best of the Magnolia and Riverside corridors, while connecting to the Sepulveda corridor. Additional service along Riverside will be provided via shuttle Line 680 operating from the Universal City Transit Center via Ventura - Tujunga - Riverside - Woodman - Ventura to Van Nuys Boulevard.
- Line 96 has been shortened to the Burbank Transit Center. Service between downtown Burbank and the Media District is consolidated into proposed Line 670, while service along Lankershim has been replaced by upgraded Line 166 terminating at Universal City Transit Center.
- The Van Nuys-Studio City DASH has been replaced by several smaller shuttle/circulator services. These include 640-Van Nuys/Panorama City, 650-Sherman Oaks/Encino, and 680-Riverside. Rather than provide additional service coverage by operating on the ½ mile grid service spacing like the current DASH, the new community services complement the longer distance regional services on

major, high volume corridors. ~~Line 640~~ will provide circulator service along heavy ridership segments of Van Nuys, Sepulveda, and Victory Boulevards and Nordhoff Street, connecting the Van Nuys Government Center with Panorama City.

- Community circulation service is also proposed for North Hollywood. Line 630 will operate via Lankershim-Magnolia-Laurel Canyon-Vanowen.
- Express services have also been restructured:
  - Line 412 to downtown Los Angeles has been replaced by Line 411 along the Victory Boulevard corridor connecting downtowns Los Angeles, Glendale, and Burbank, and Warner Center and by Line 426 in downtown North Hollywood.
  - Line 413 has been replaced largely by restructuring Line 426, which is proposed to serve Sherman Way between Topanga Canyon and Laurel Canyon before operating south through North Hollywood.
  - Line 426 service on Victory has been replaced by the proposed Line 411 *limited stop* service between Warner Center and Burbank Transit Center.

Individual line recommendations are found in Appendix 3 Tables *1-Local Service* and *2-Limited/Express Service* and on Appendix 2 Figures 5, 6, and 12.

### **WESTWOOD/LAX**

- Improve connections between existing Valley Line 560 (proposed as Line 561 limited stop service) and West Los Angeles services operating along such corridors as Santa Monica, Olympic, and Pico Boulevards by modifying the alignment to operate south on Westwood Boulevard to Westside Pavilion. This should also provide greater access to Westwood/West LA's only direct LAX and Fox Hills Mall service and, as a result, generate increased ridership without increased cost.

Individual line recommendations are found in Appendix 3 Tables *1-Local Service* and *2-Limited/Express Service* and Appendix 2 Figures 7 and 13.

### **NORTHWEST VALLEY - Chatsworth, Northridge, Granada Hills, Simi Valley, Moorpark**

- Introduce a transit center at the Chatsworth Metrolink Station to serve as a focus for the northwest services. Operate a shuttle service (Line 645) along Topanga Canyon Boulevard between the Chatsworth Transit Center and one proposed in Warner Center.
- A second Transit Center is proposed in Northridge at CSUN or Northridge Fashion Center (the CSUN site is shown on the maps and in the route descriptions) where timed transfers will be scheduled between lines. Infrequent services will generally meet every 30 or 60 minutes for easy transfer connections. Several minor route alignment adjustments (Lines 166, 168, 239) are recommended to focus service at this location.

- **Strengthen the grid connections by combining north-south lines with east-west lines.** These line combinations include Line 243 De Soto with Line 158 Devonshire, Line 243 Winnetka with Line 239 Granada Hills-Sylmar, Line 166 Nordhoff with Line 228 Lankershim and new service on Canoga Avenue, and Line 167 Plummer with Line 228 Coldwater Canyon.
- **Improved coverage of the Chatsworth Industrial Area is provided by several lines, such as Lines 167 - Plummer, 545 - Sylmar Express, and 575 - Simi Valley Express.**
- Line 236 service to both the Balboa and Woodley corridors has been restructured, moving the linkage from Ventura Boulevard to Granada Hills and realigning the southern portion of the Woodley service from Sepulveda Basin to Victory-Van Nuys terminating at Ventura Boulevard (Moorpark). Weekday peak period service will operate over the entire alignment with only the Balboa corridor south of San Fernando Mission served at other times.
- New Line 545 express service from Sylmar will be continued and extended to Warner Center. Likewise, Line 575 from Simi Valley will be continued with an alignment change to improve access to the Chatsworth Industrial area. Lines 418 and 419 are proposed for rerouting: Line 419 to Porter Ranch to eliminate competition with Chatsworth Metrolink and Line 418 west on Roscoe to provide cross-Valley *limited stop* service.

Individual line recommendations are found in Appendix 3 Tables 1-Local Service and 2-Limited/Express Service and on Appendix 2 Figures 1, 8, and 11.

**WEST AND SOUTHWEST VALLEY - Canoga Park, Woodland Hills, Encino, Tarzana, Reseda, Winnetka, West Hills, Calabasas, Hidden Hills, Agoura Hills, Westlake Village, and Thousand Oaks.**

- The development of a timed transfer hub-and-spoke network focused on a Warner Center Transit Center is proposed with many regional lines rerouted to provide direct service. Along with new shuttle and express service, it is anticipated that some 15 lines will serve the transit center.
- To further minimize transfers, many east-west lines have been linked with north-south lines. These include Lines 424 Ventura and 240 Reseda (new 522), Lines 166 Nordhoff and new Canoga Avenue service, Lines 158 Devonshire and 243 De Soto, and Lines 239 Sylmar-Granada Hills and 243 Winnetka.
- To improve community circulation and provide feeders into the regional network focused at the Warner Center Transit Center, three services are proposed:
  - Line 645 connecting the Warner Center and Chatsworth Transit Centers along Topanga Canyon Boulevard, replacing Line 245.
  - Line 669, a bi-directional circulator service replacing the existing West Hills shuttle, Line 245, and Line 163 west of Owensmouth.
  - Line 668 serving Calabasas and the west end of Ventura Boulevard.

- **New faster transit services are also proposed:**

**Regional express Lines 411 and 423/427 also converge on the Warner Center Transit Center.** Line 411 from the Victory corridor, and downtowns Burbank, Glendale, and Los Angeles, Line 423 from both points west and east, and Line 427 from points east. Line 411 is a combination of fast limited-stop arterial service with freeway express operation, while Lines 423/427 make various freeway exit stops to further increase access to these express services.

- *Limited stop services along both Victory Boulevard to Burbank (new Line 411 above) and along Sherman Way to North Hollywood (Line 426).*
- Consolidation of Lines 161 and 423 into an all-day inter-urban express line serving key locations from downtown Los Angeles to Westlake Village is proposed. This will allow more flexible commuting and eliminate a transfer for many non-commute riders. The proposed Line 423 will also be further streamlined, replacing low ridership local operation with freeway exit stops at Chesebro, Lost Hills, and Parkway Calabasas. Parkway Calabasas is also served by proposed shuttle Line 668. Travel west of Westlake Village will be possible through connections with Thousand Oaks Transit Line 4 and the Ventura County Interconnect line. It is further proposed that Lines 423 and 427 operate a coordinated service from Warner Center east along the same alignment. This will provide more effective use of available capacity and presents a more flexible service to customers.

Individual line recommendations are found in Appendix 3 Tables 1-Local Service and 2-Limited/Express Service and on Appendix 2 Figures 9, 10, and 11.

## **DOWNTOWN LOS ANGELES**

- Consolidate Valley express services along a single successful downtown Los Angeles alignment that serves all key commute markets in a timely fashion, rather than each line operating via its own routing. The recommended alignment is *southbound* via Spring to First to Flower to Seventh to Spring; *northbound* routing is via Spring to Eighth to Figueroa to Fourth to Flower to First to Spring.
- Reduce unnecessary downtown Los Angeles service miles and hours by terminating selected lines at Olympic, rather than Location 28.

Individual line recommendations are found in Appendix 3 Tables 1-Local Service and 2-Limited/Express Service and on Appendix Figure 14.









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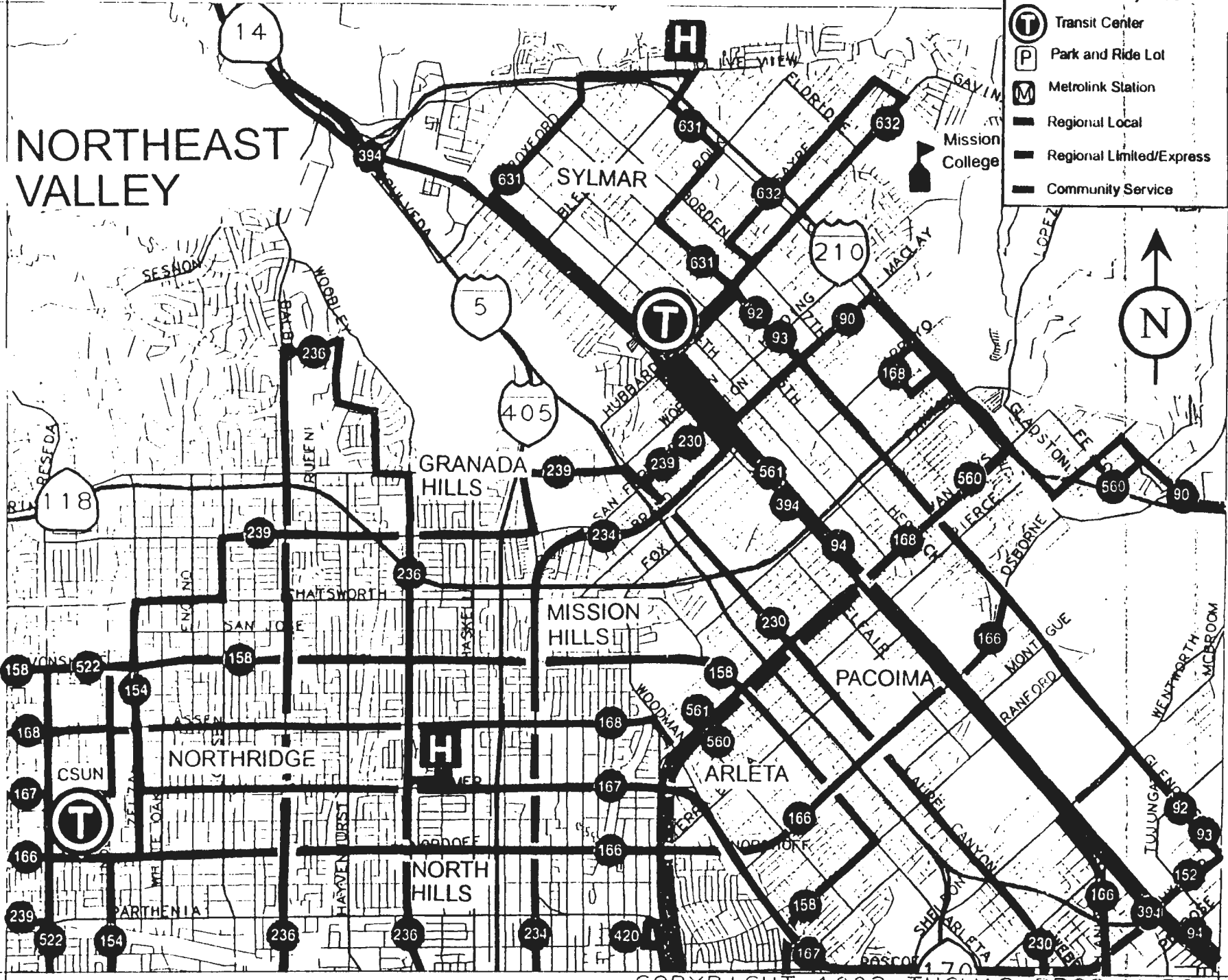
## **APPENDIX 2**

### **Recommended Service Restructuring Area Maps**

# NORTHEAST VALLEY

### Guide to Symbols

-  Transit Center
-  Park and Ride Lot
-  Metrolink Station
-  Regional Local
-  Regional Limited/Express
-  Community Service



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Figure 1

# EAST VALLEY

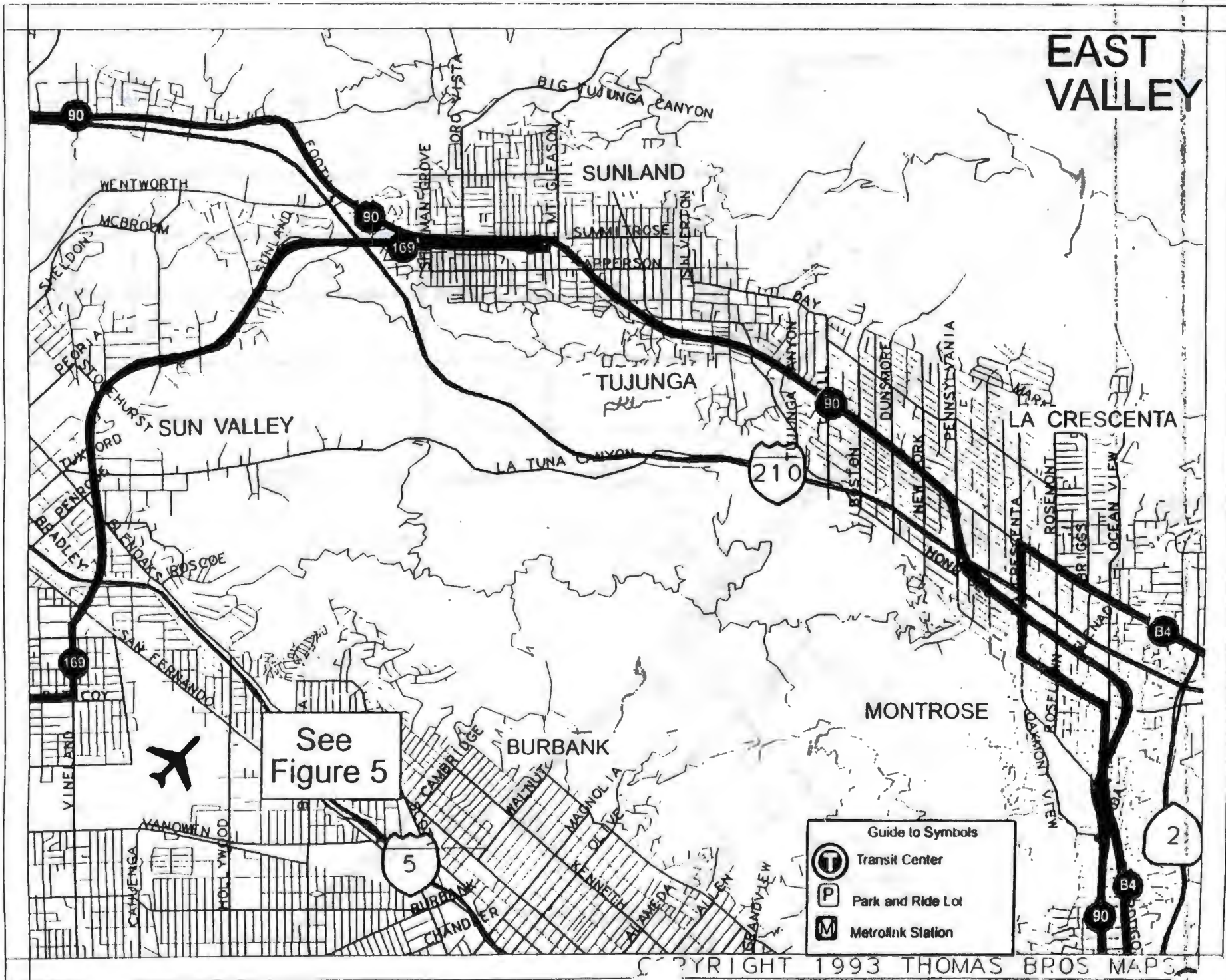


Figure 2

Guide to Symbols

- Transit Center
- Park and Ride Lot
- MetroInk Station

# BURBANK GLENDALE LA CANADA- FLINTRIDGE

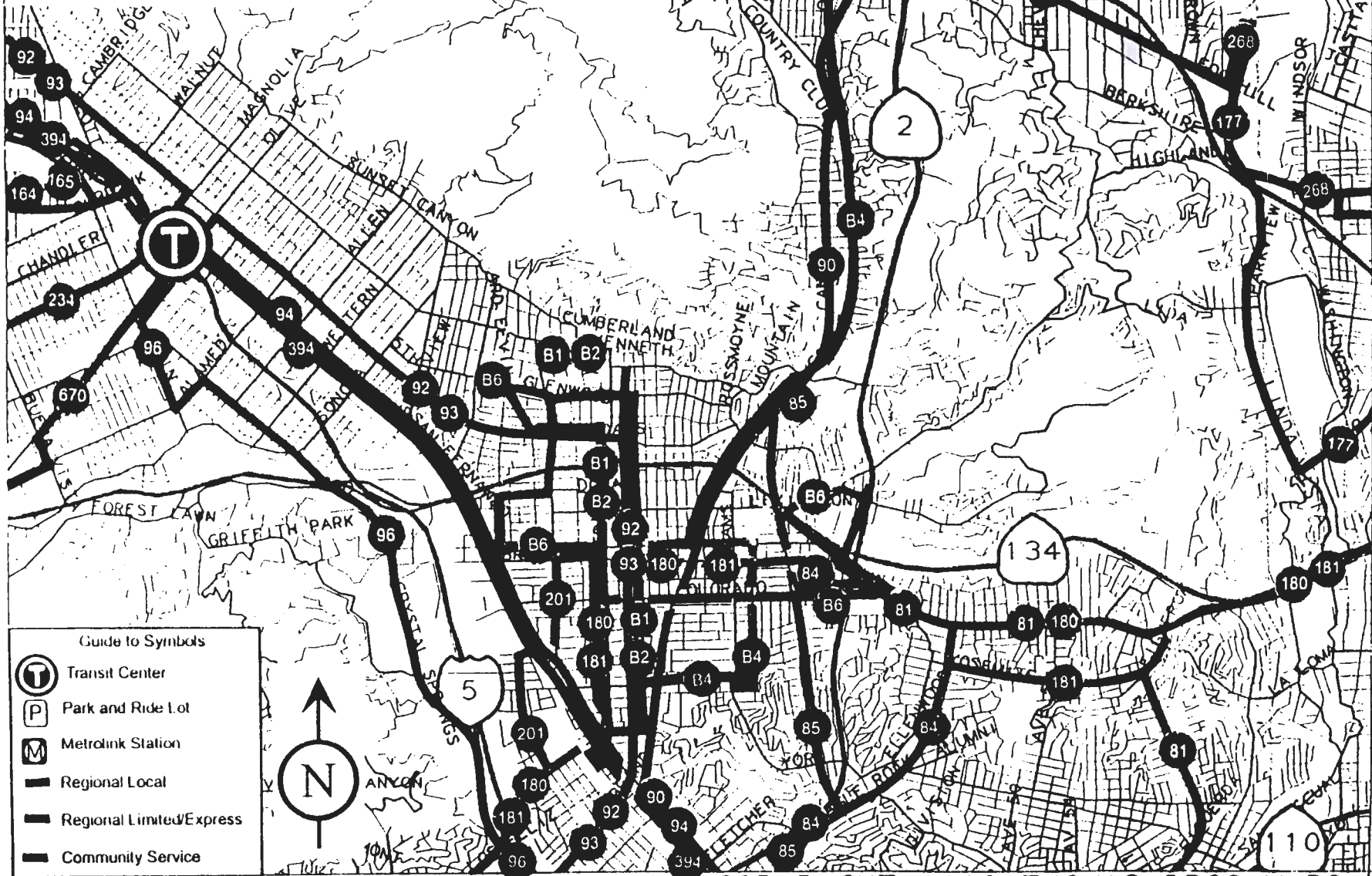


Figure 3



# PASADENA

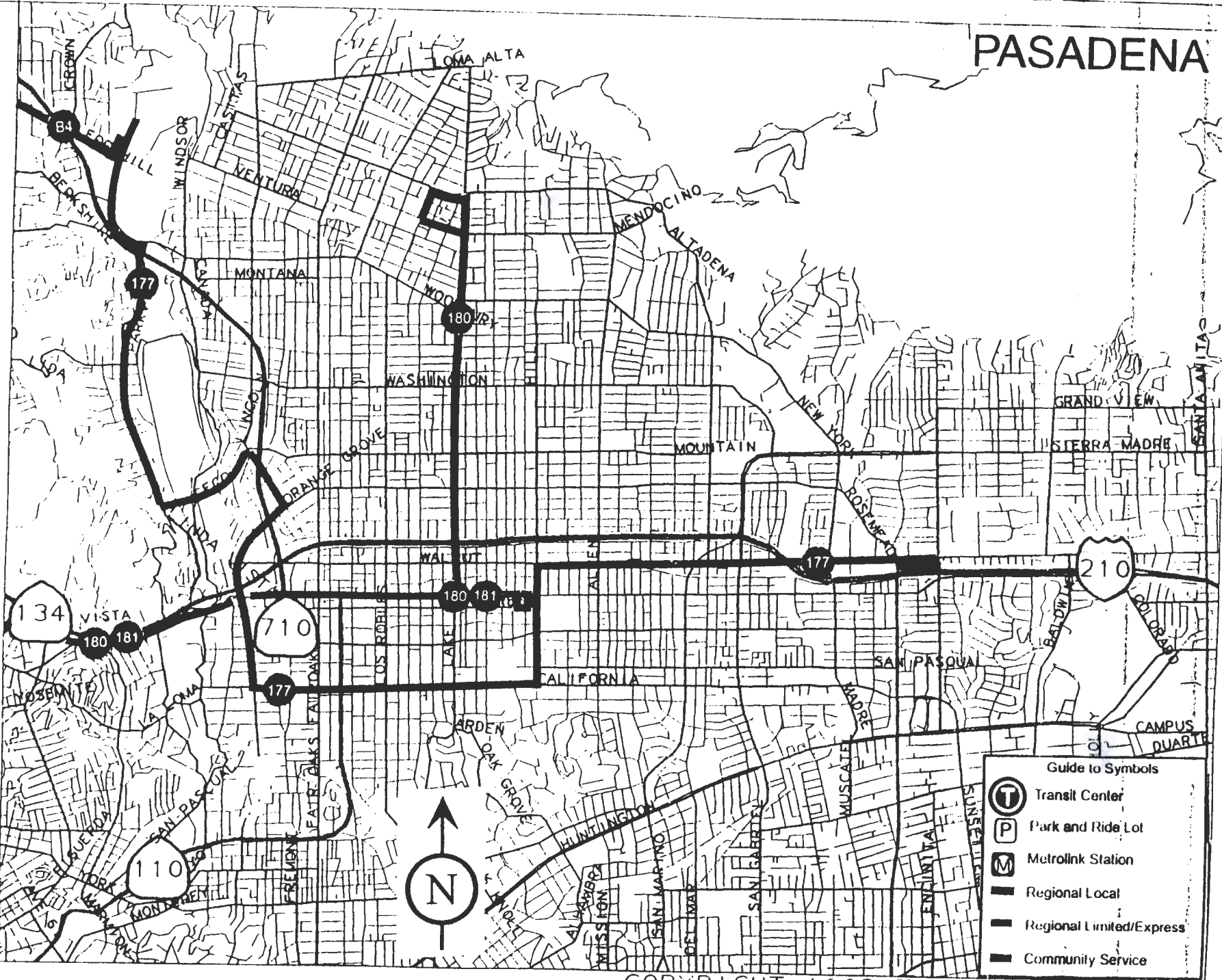
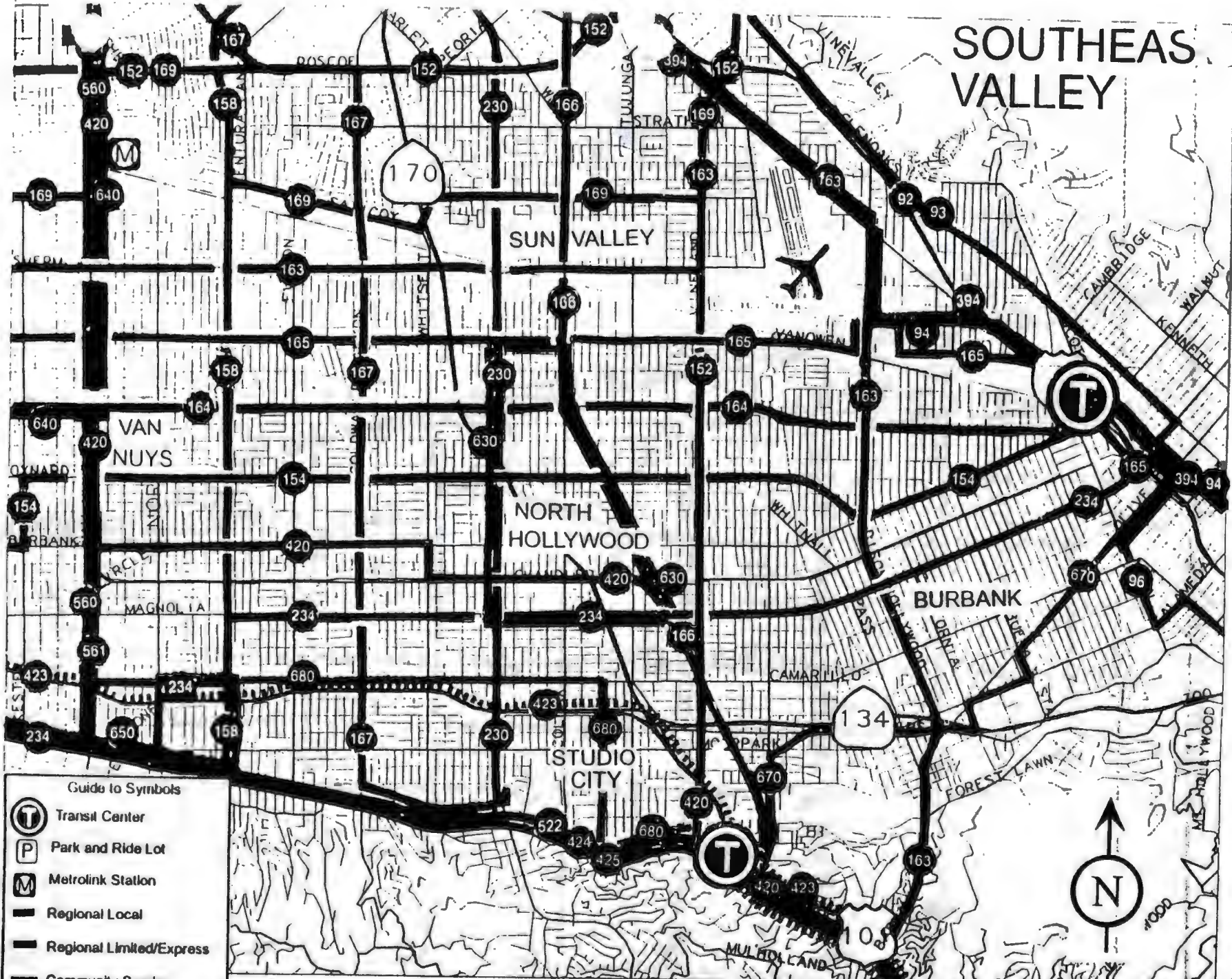


Figure 4

# SOUTHEAS VALLEY



**Guide to Symbols**

- Transit Center
- Park and Ride Lot
- Metrolink Station
- Regional Local
- Regional Limited/Express
- Community Service



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Figure 5



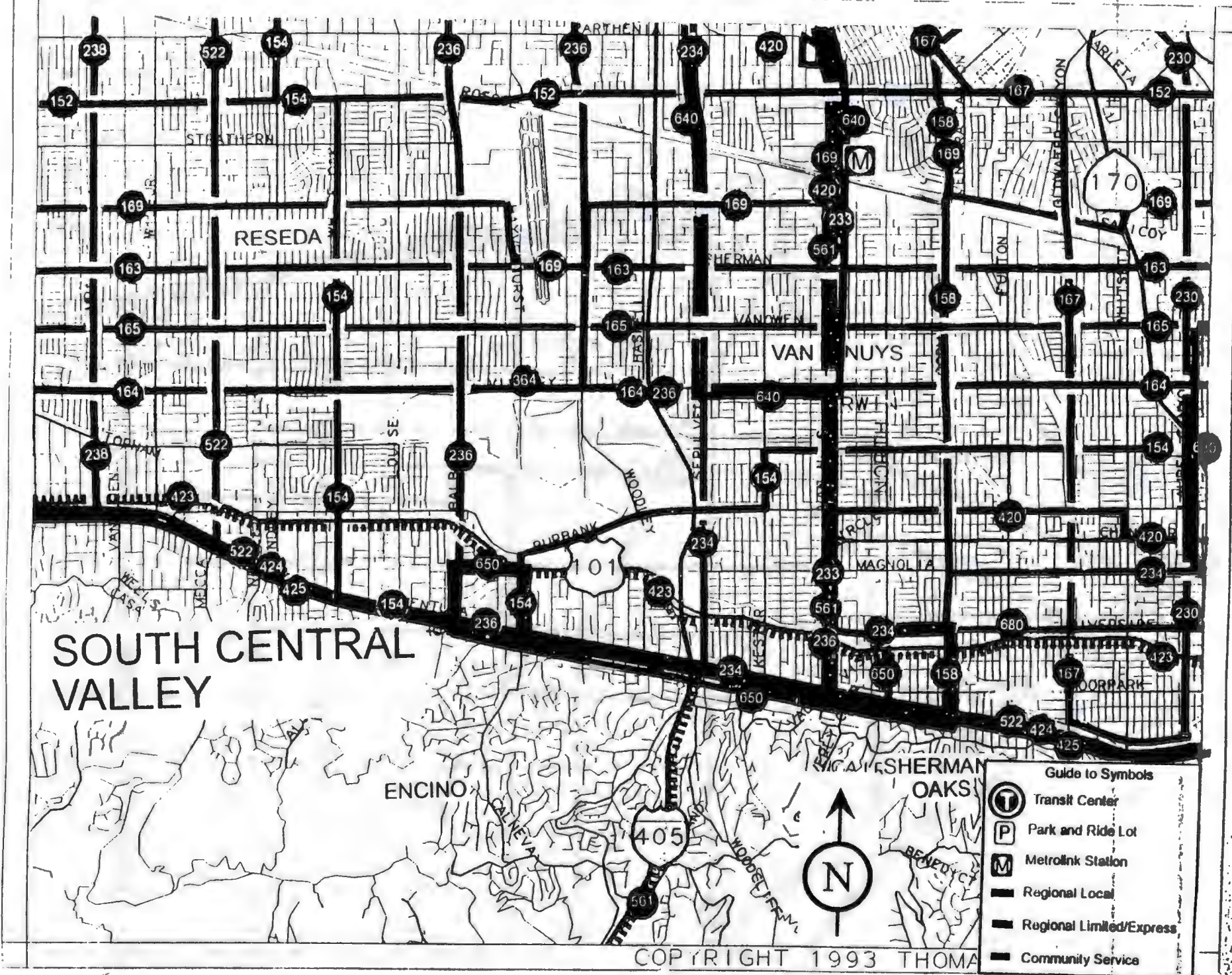


Figure 6









Figure 7



COPYRIGHT 1993 THOMAS BROS. MAPS

# NORTHWEST VALLEY

Guide to Symbols

-  Transit Center
-  Park and Ride Lot
-  Metrolink Station
-  Regional Local
-  Regional Limited/Express
-  Community Service

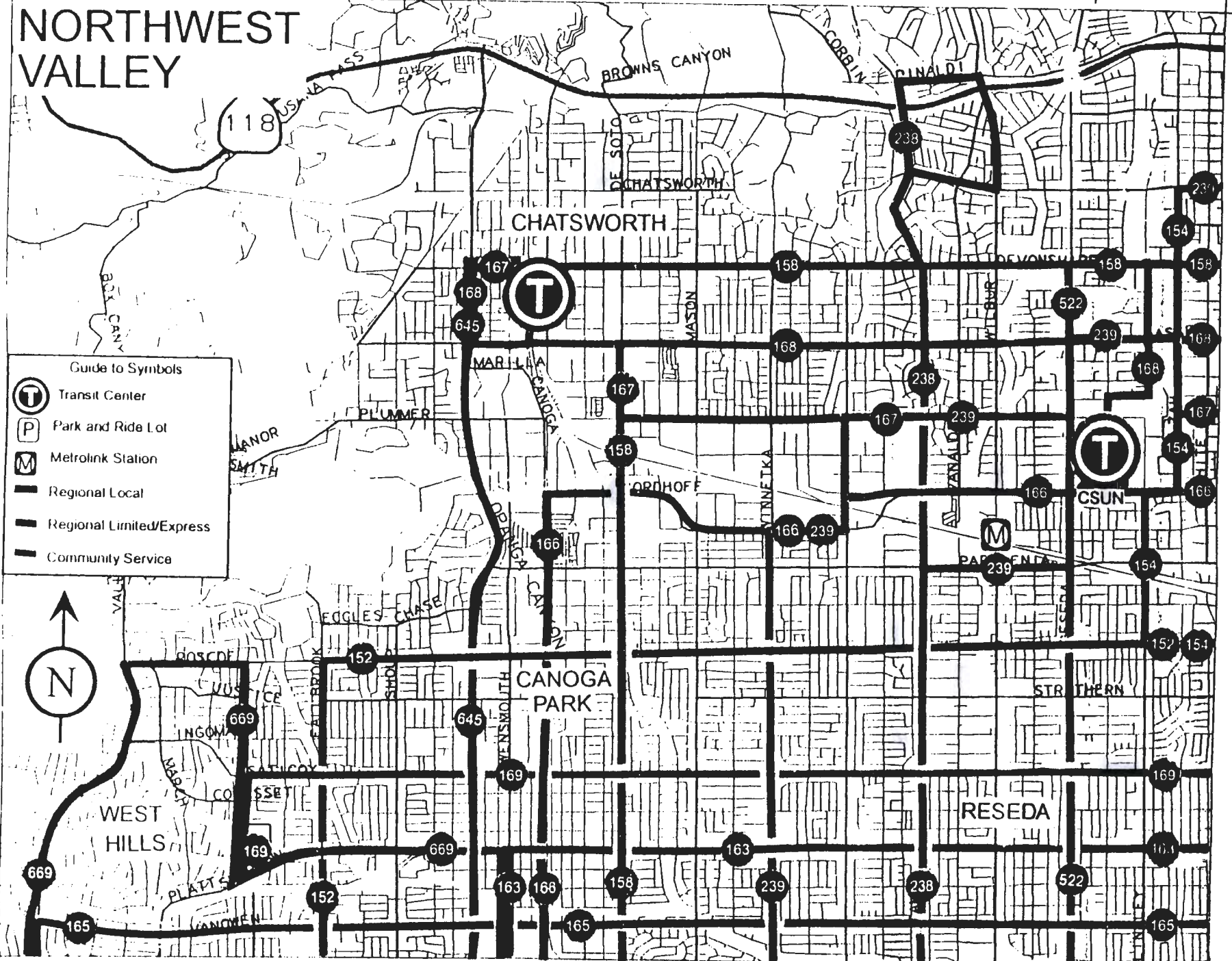
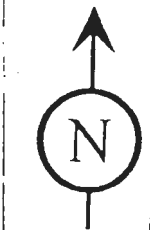


Figure 8

# SOUTHWEST VALLEY

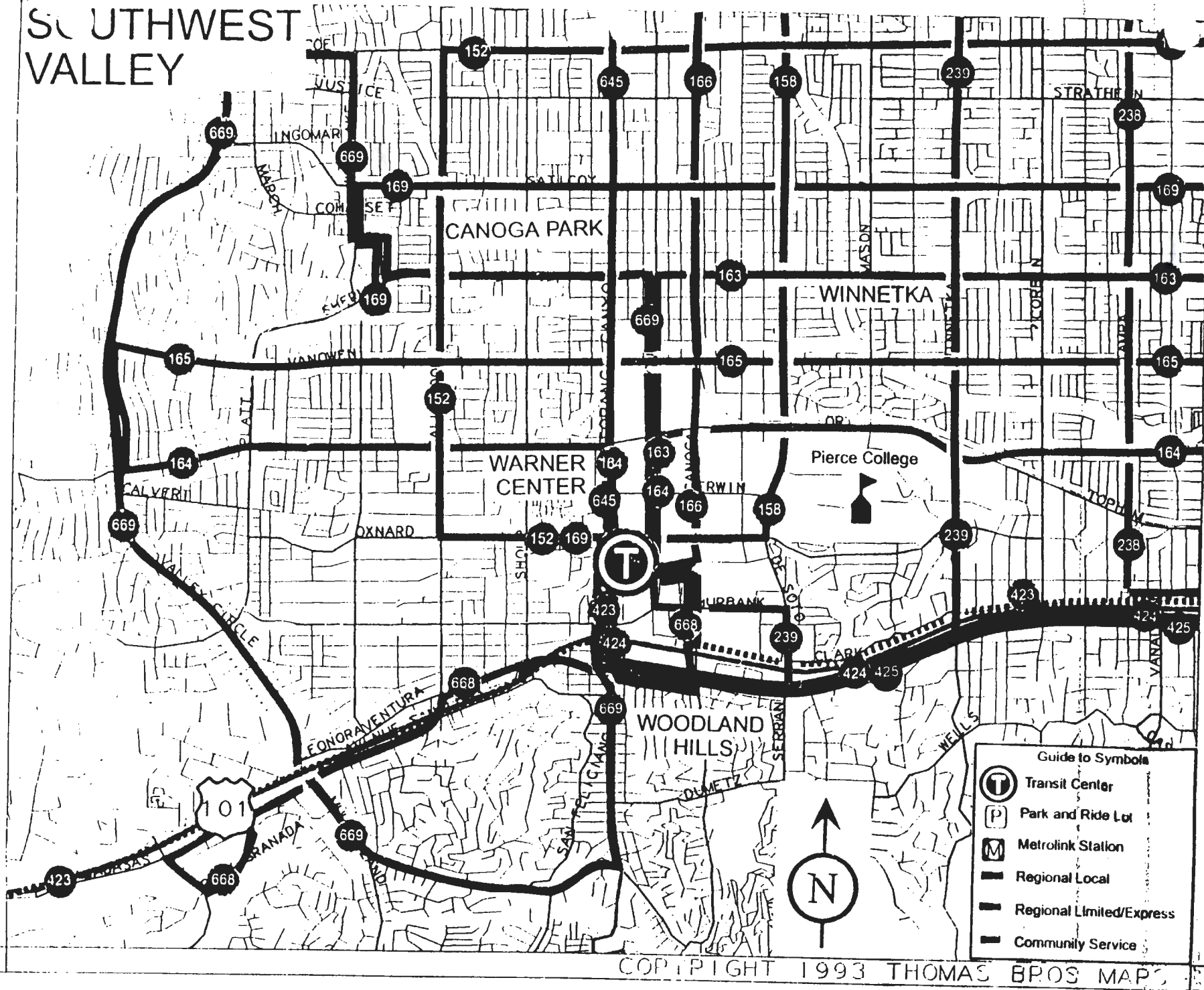
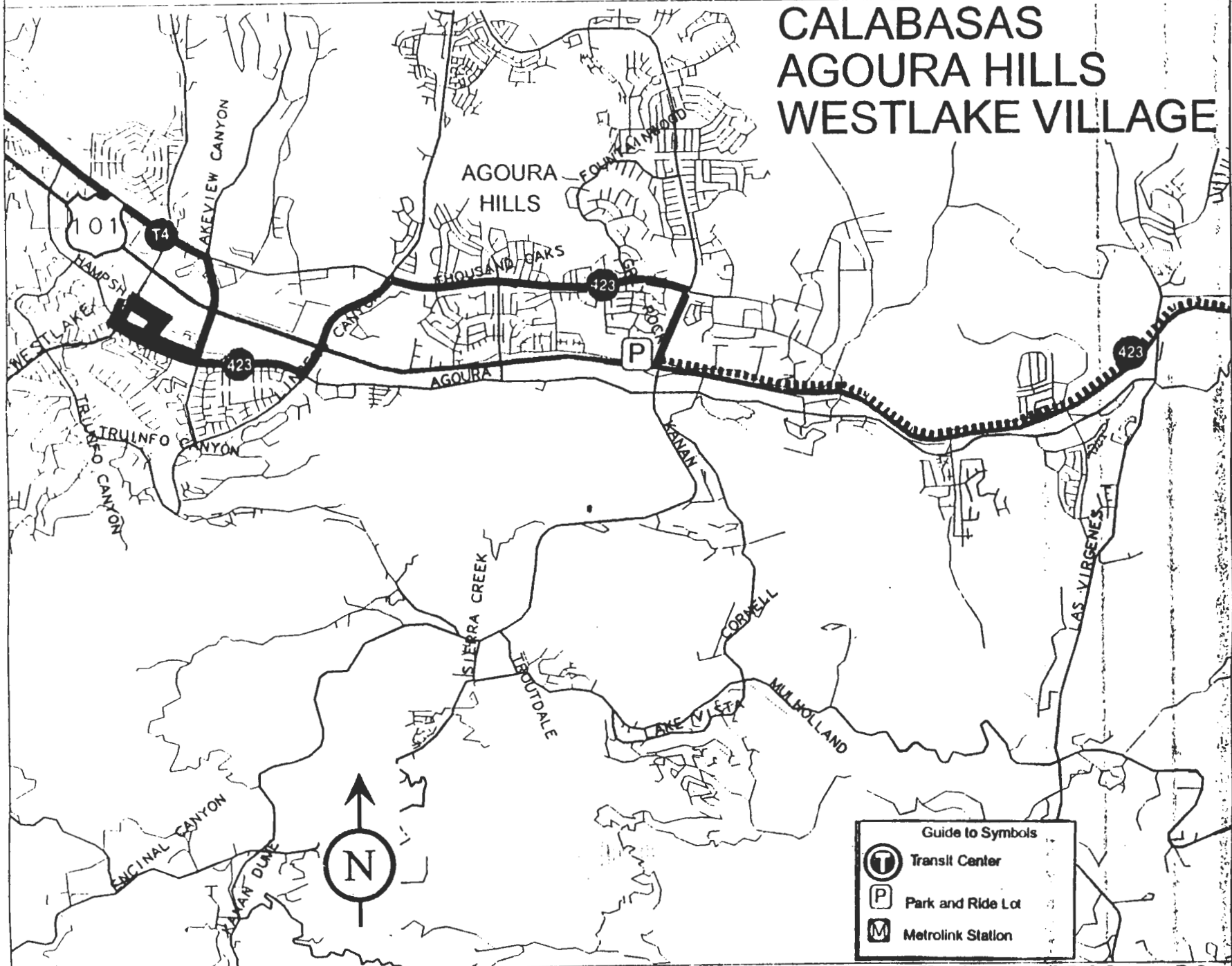


Figure 9



# CALABAS AGOORA HILLS WESTLAKE VILLAGE



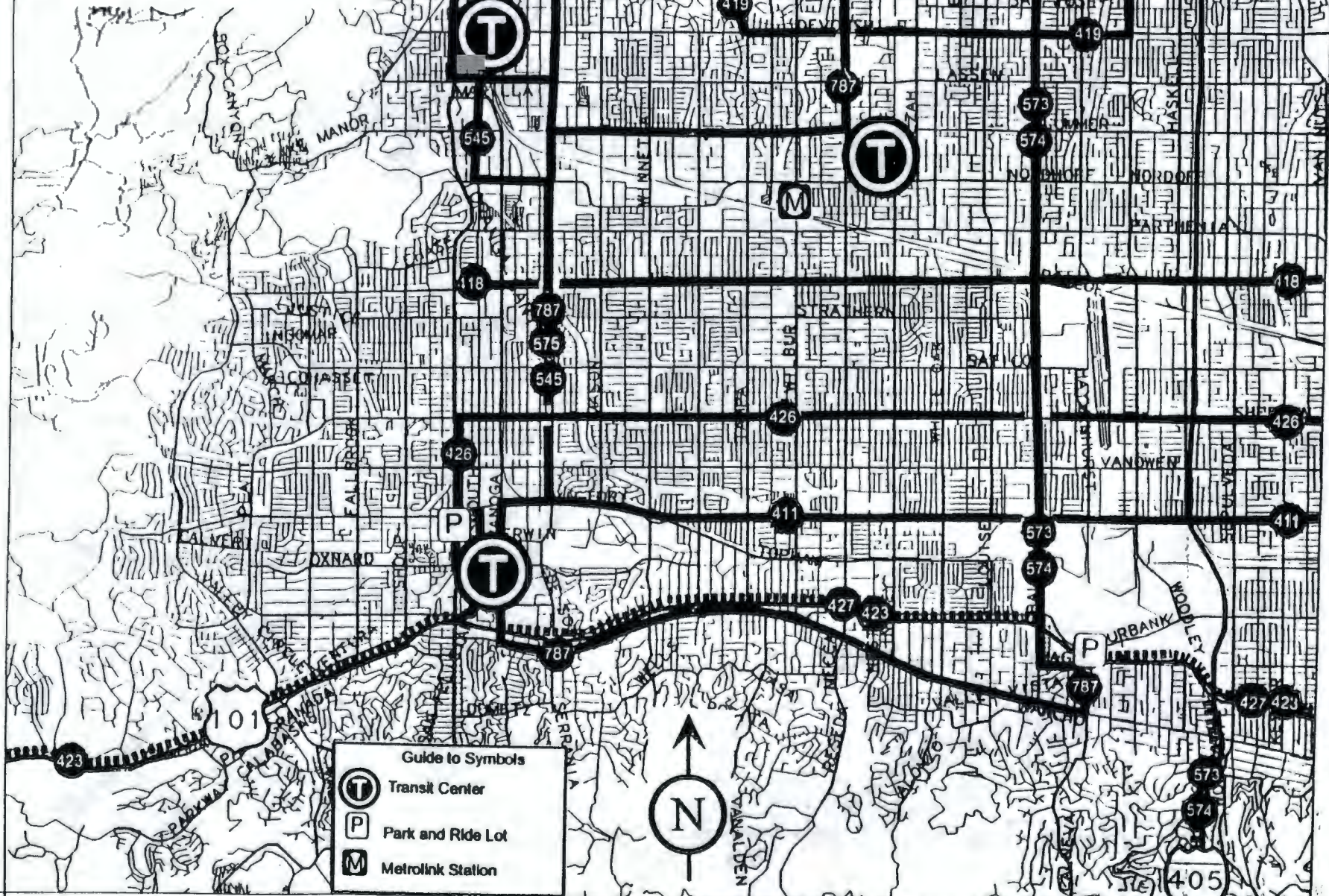
Guide to Symbols

- Transit Center
- Park and Ride Lot
- Metrolink Station

Figure 10



# WEST VALLEY COMMUTER EXPRESS



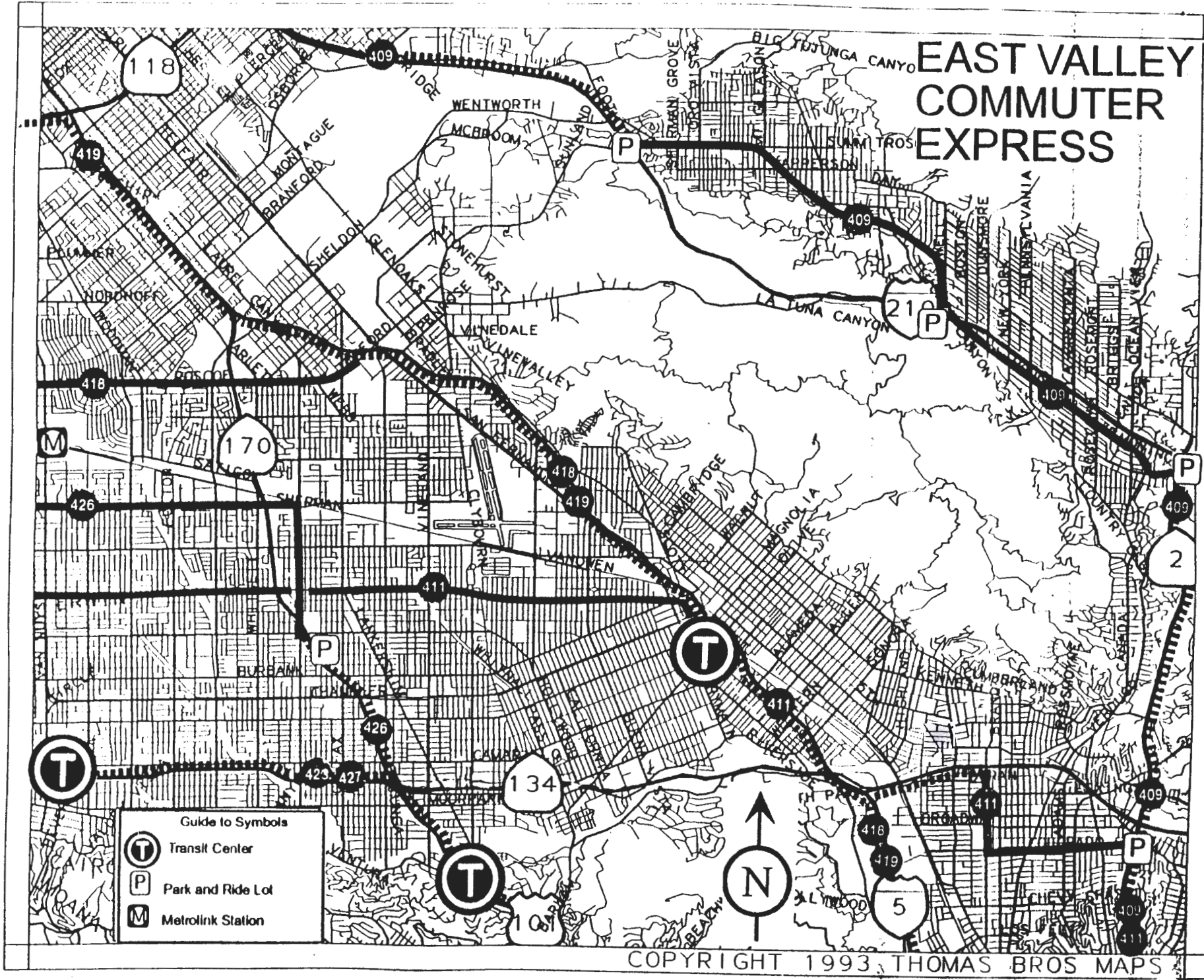
**Guide to Symbols**

- Transit Center
- Park and Ride Lot
- Metrolink Station

Figure 11



# EAST VALLEY COMMUTER EXPRESS



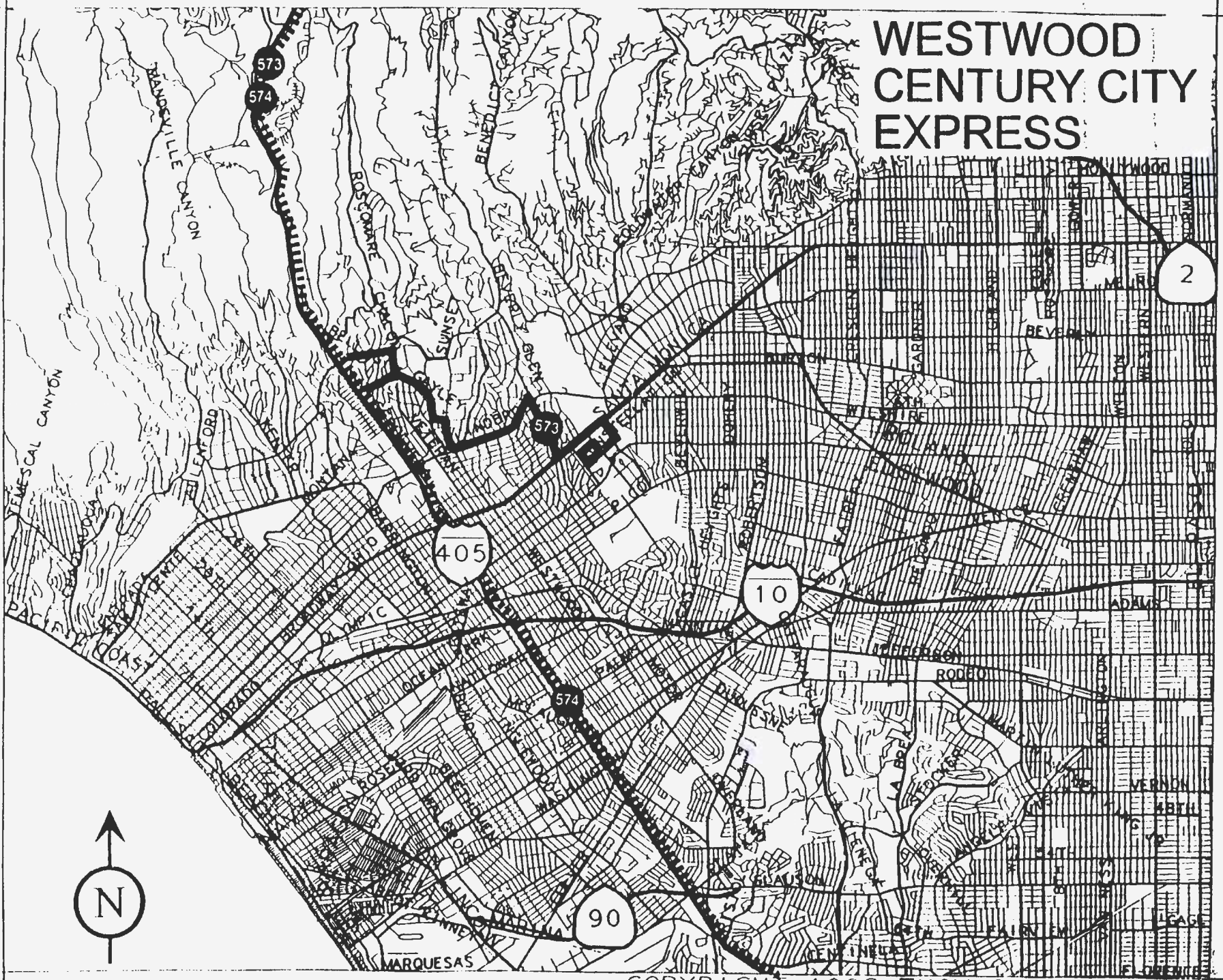
Guide to Symbols

- Transit Center
- Park and Ride Lot
- Metrolink Station

Figure 12



# WESTWOOD CENTURY CITY EXPRESS



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Figure 13

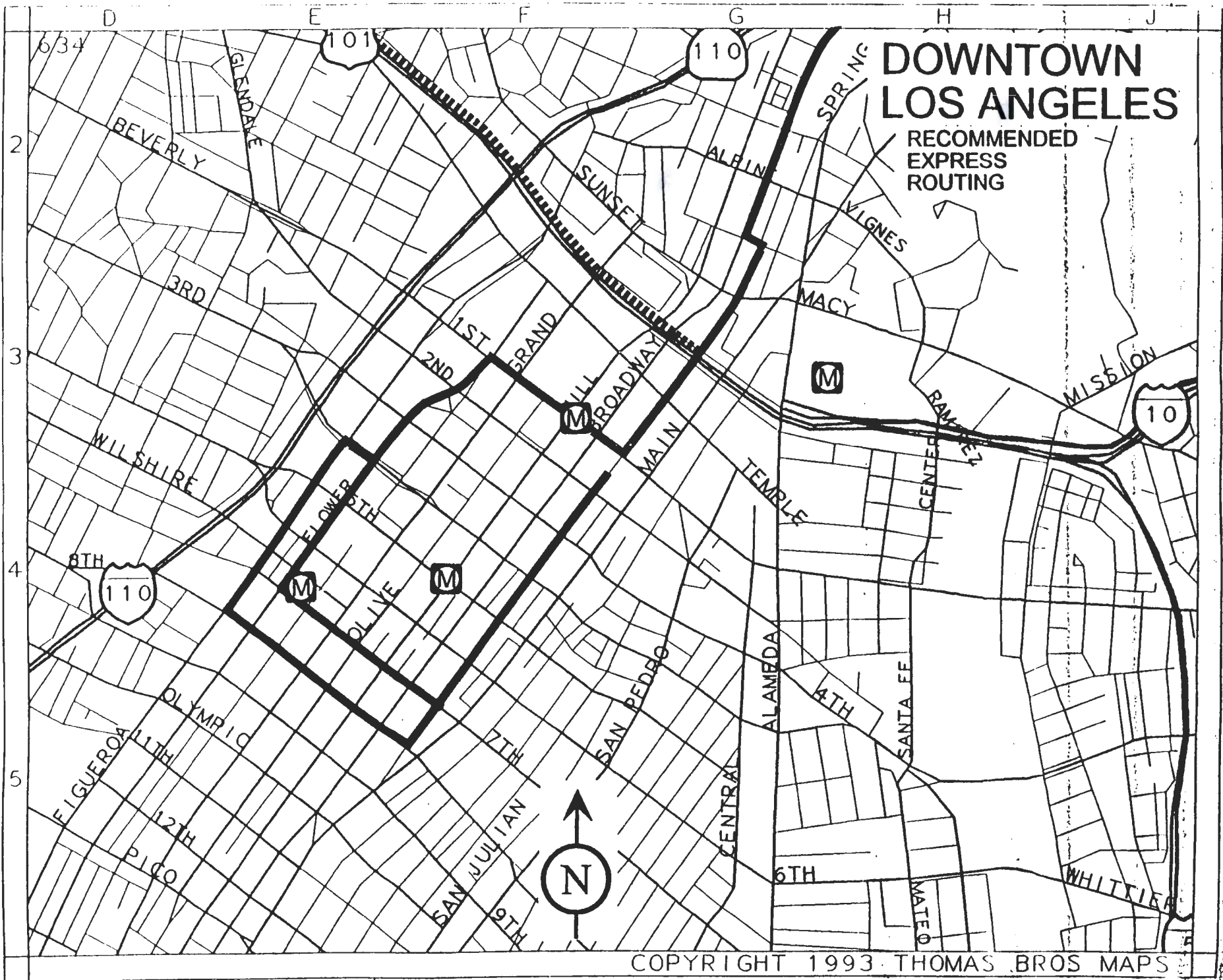


Figure 14



## **APPENDIX 3**

### **Individual Line Recommendations**

5

**Table 6**  
**Recommended Individual Line Restructuring Proposals**  
**Local and Limited-Stop Service**

Route	Alignment	Schedule
<p>90 Foothill-Sunland-Sylmar/San Fernando Station</p>	<p>Lines 90/91 consolidated in Montrose on Line 90 routing via Pennsylvania and Montrose Avenues; Glendale Beeline 4 on Honolulu and La Crescenta.</p> <p>Routing in Sylmar/San Fernando modified to connect to the proposed transit hub at the Metrolink Station. Operate from the Sylmar/San Fernando Station via 1st or Truman to Maclay to Foothill to Terra Bella to Eldridge into Osborne to the regular Foothill Boulevard routing of Line 90.</p>	<p>Downtown LA to Montrose service frequency 30-min on weekdays and weekends with special 15-minute weekday peak service between downtown LA and Glendale [Broadway]</p> <p>Montrose to Sylmar/San Fernando Station service frequency is 30-min weekday and 60-minute on weekends.</p>
<p>92/93 Glenoaks</p>	<p>The Brand/Mountain deviation on continuing trips to Sylmar proposed for discontinuation.</p> <p>The downtown LA terminal would be relocated from Venice to Olympic.</p>	<p>Weekday peak service between downtown LA and Burbank TC 15-minute with 30-minute continuing to Sylmar/San Fernando Station with 5 additional trippers between Atwater and downtown LA.</p> <p>Weekday midday and Saturday service every 15-minutes from downtown LA to Brand/Mountain with 30-minute service to Sylmar/SF Station.</p> <p>Current Sunday 20-minute service on the entire line is unchanged.</p>
<p>94 San Fernando Road 394 San Fernando Limited (New)</p>	<p>Line 94 to terminate at Sylmar/SF Station; service to Olive View provided by Line 631; regular service to Juvenile Hall discontinued; downtown Burbank alignment streamlined via San Fernando to 1st to Olive to San Fernando; B-G-P Airport alignment also streamlined via Hollywood Way - Thornton - Lincoln; downtown LA terminal relocated to Olympic.</p> <p><u>New Line 394 limited-stop</u> interurban proposed from downtown LA to Sylmar/SF Station follows same route as Line 94.</p>	<p>Line 94 service 15-min all-day weekdays and Saturdays; 20-min on Sundays.</p> <p>Line 394 limited-stop weekday peak service: 4 outbound AM and 4 inbound PM trips.</p>
<p>96 Riverside-Zoo</p>	<p>Major line restructuring: Line 96 terminated at Burbank TC/Metrolink and Line 97 replaced by redesigned Lines 234 &amp; 680. Line 96 from downtown LA to Burbank routing slightly modified via current route to Riverside into Victory to Alameda to Main to Olive to San Fernando to Verdugo to Front to the Burbank Station.</p>	<p>Service is every 15-minutes during AM peak; 20-minutes during PM peak; and 30-minutes during weekday midday and on weekends.</p>

**Table 6**  
**Recommended Individual Line Restructuring Proposals**  
**Local and Limited-Stop Service**

Route	Alignment	Schedule
152 Fallbrook-Roscoe-Vineland	Service from Universal City to Burbank replaced by Line 670; western terminal relocated from Fallbrook & Ventura to Warner Center Transit Center via Oxnard.	Service 30-min all week with special 15-minute weekday peak service along just Roscoe.
154 Burbank-Oxnard-White Oak	Proposed that Line 154 Burbank-Oxnard is separated from Tampa and linked with White Oak via Burbank to Hayvenhurst to Ventura to White Oak; line continues via the present Line 239 routing to Zelzah/Chatsworth in Granada Hills.	60-min service on weekdays and Saturdays. No service operated on Sundays.
158 Woodman-Devonshire-DeSoto	Line 158 and Line 243 De Soto have been combined via Devonshire to Chatsworth Metrolink to Lassen to De Soto to Oxnard to Owensmouth to Warner Center Transit Center.	30-min weekday peak and 60-min weekday midday and weekend service.
161 Westlake Village-Agoura Hills-Calabasas-Canoga Park	Line 161 will be discontinued as a separate line; service will be consolidated into Line 423 (serving areas west of Calabasas Pkwy) and Line 668 (Calabasas Shuttle).	Service replaced by Lines 423 and 668.
163 Sherman Way-Sun Valley-Hollywood Way-Hollywood	<p>Line 163 has been reconfigured at both ends:</p> <p>East end alignment from Sherman Way is proposed via Vineland to San Fernando Road to Hollywood Way; then continuing as a replacement for Line 212 to Hollywood &amp; Vine via Olive to Barham to Cahuenga to Yucca to Vine. Discontinued alignment to downtown Burbank is fully serviced by Line 165.</p> <p>West end alignment is proposed via Sherman Way to Owensmouth to the Warner Center Transit Center. Current west end alignment will be served by proposed Line 669.</p>	<p>Proposed weekday service levels are 20-minute weekday peak with 30-minute during weekday middays.</p> <p>Weekend service is 30-min between Warner Center Transit Center and Sun Valley with 60-min service to Burbank Airport and Hollywood.</p>
164 Victory Blvd 411 Victory Blvd-Burbank-Glendale-downtown LA Limited/Express (New)	<p>Line 164 remains linked with Line 165 Vanowen; adjustment in Burbank to permanently operate via 1st to Verdugo to Front to Burbank Station; short deviation proposed to provide direct service to Warner Center Transit Center via Topanga Canyon to Oxnard to Owensmouth.</p> <p>New Line 411 <i>limited-stop</i> service proposed between Warner Center Transit Center and Burbank TC via Line 164 alignment from Canoga; Line 411 continues via I-5/Hwy 134 to Glendale; then via Hwy 2/I-5 to downtown LA.</p>	<p>Line 164 service 15/30-min peak with 30-min midday; Saturdays remain at 30-min and Sundays at 40-min.</p> <p>Line 411 <i>limited-stop</i> service along Victory is proposed at 30-min during weekday peak periods only.</p>

**Table 6**  
**Recommended Individual Line Restructuring Proposals**  
**Local and Limited-Stop Service**

Route	Alignment	Schedule
165 Vanowen Blvd	No alignment changes are proposed.	Line 165 service 15/30-min peak with 30-min midday; Saturdays remain at 30-min and Sundays at 40-min.
166 Canoga-Nordhoff-Lankershim	<p>Line 166 service combined with Line 228 Lankershim; provides service from Universal City to Warner Center via Lankershim to San Fernando Road to Sheldon to Glenoaks to Osborne to Nordhoff to Canoga to Victory to Owensmouth to Warner Center Transit Center.</p> <p>Service on Osborne east of Glenoaks Boulevard would be discontinued.</p>	Weekday 30-min peak and 60-min midday with 7 additional trippers during peak periods; 60-min weekend service.
167 Plummer-Coldwater Canyon	<p>Line 167 service linked with Line 228 Coldwater Canyon to provide through service between Studio City and Chatsworth via Coldwater Canyon to Roscoe to Woodman to Plummer (into VA Hospital) to Zelzah to Nordhoff to Reseda into CSUN TC; then via Reseda to Plummer to De Soto to Lassen to Topanga Canyon to Devonshire to Chatsworth Metrolink Station.</p> <p>Service west on Chase to Panorama City and Van Nuys would be realigned to Coldwater Canyon.</p>	Weekday 30-min peak and 60-min midday with 2 additional trippers during peak periods; 60-min weekend service.
168 Lassen	Line is significantly restructured to operate from current east terminal at Arroyo in Pacoima via Foothill - Van Nuys - Woodman - Lassen - Lindley - Halsted - Etiwanda to CSUN TC; then via Reseda to Lassen to Chatsworth TC.	Weekday peak service every 60-minutes with 120-minute [2-hour] midday service. No weekend service is proposed.
169 Saticoy-Sunland-West Hills	<p>The eastern service alignment for Line 169 would be modified via Saticoy - Vineland - Sunland Blvd. - Foothill to Mt. Gleason terminal.</p> <p>Connections with Lines 94 and 163 [to 212 in Hollywood] will made in Sun Valley. Direct connection with discontinued.</p>	60-min service on weekdays with 2 additional peak trippers. No weekend service is currently provided on Saticoy and no change is proposed. Weekend service to Sunland is recommended for discontinuation.

**Table 6**  
**Recommended Individual Line Restructuring Proposals**  
**Local and Limited-Stop Service**

Route	Alignment	Schedule
<p>177 La Cañada Flintridge-Pasadena</p>	<p>It is proposed that Line 177 be broken into three route segments:</p> <p><u>Beeline 4</u>. Glendale to La Cañada Flintridge (JPL) via largely the current alignment with minor streamlining of the deviation to Verdugo Hills Hospital and operation in Montrose via Honolulu &amp; La Crescenta. This service is proposed as an extension of the Beeline 4 service.</p> <p><u>Line 177</u>. JPL to Pasadena (Hastings Ranch) via the current alignment.</p> <p><u>Foothill</u>. Hastings Ranch to Duarte (City of Hope) via the current alignment. Possible operation by Foothill Transit.</p>	<p><u>Beeline 4</u> weekday and Saturday service levels are proposed at 30-min to Montrose with 60-min service to La Cañada Flintridge. Option to increase La Cañada Flintridge service to every 30-minutes with local funding. No Sunday service is proposed.</p> <p><u>Line 177</u> from JPL to Pasadena is proposed at 60-min on weekdays.</p> <p><u>Foothill</u> service from Pasadena to City of Hope in Duarte is proposed at 60-min on weekdays only, the current practice.</p>
<p>180/181 Hollywood-Glendale-Pasadena-Altadena</p>	<p>Minor route alignment change to relocate the Line 181 terminal in Pasadena to Pasadena City College; institute shortline from Hollywood to Glendale.</p>	<p>Weekday and weekend 15-min service levels from Hollywood to Colorado &amp; Lake with 30-min service to the two branches: Cal Tech and Altadena. Additional weekday peak trippers added between Hollywood and Glendale.</p>
<p>183 Magnolia-Burbank-Glendale</p>	<p>Line 183 is replaced by:</p> <p><u>Line 234</u> between Sepulveda and Burbank Station; minor changes make the proposed routing from the Burbank via Front to Verdugo to 1st to Magnolia to Woodman to Riverside to Van Nuys to Ventura to current Line 234 route on Sepulveda.</p> <p>Proposed Glendale <u>Beeline 6</u> operating from Glenwood/Concord via Kenilworth - Glenoaks - Pacific - Doran - Concord - Wilson - Central - Colorado - Broadway - Sinclair - Chevy Chase - Glenoaks - Harvey [Adventist Hospital].</p> <p>Operate <u>Beeline 4</u> between downtown Glendale and Glendale Transportation Center (Metrolink Station) by extending Beeline 4 from Palmer Park to GTC via Glendale Ave - Los Feliz - Central.</p> <p>Present Line 183 service between Burbank and Glenwood/Highland in Glendale would be discontinued unless served by a locally funded route.</p>	<p>Reference the replacement service descriptions for proposed service levels.</p>

**Table 6**  
**Recommended Individual Line Restructuring Proposals**  
**Local and Limited-Stop Service**

Route	Alignment	Schedule
201 Silverlake	Line 201 routing changes call for shortening the line to terminate at Broadway and Brand in downtown Glendale. Service east of downtown Glendale provided by Beelines 4 [weekdays and Saturdays] and 6 [weekdays].	Weekday service every 35-min; weekends every 45-min.
212 La Brea	Service north of Hollywood and Vine is replaced by Line 163 service. Lines 163 and 212 will connect at Hollywood & Vine.	No changes proposed on remaining route.
228 Tujunga-Lankershim-Coldwater Canyon	<p>Major restructuring with Line 228 split and linked with cross-Valley services:</p> <p>Line 228 Lankershim combined with Line 166 Nordhoff - Canoga.</p> <p>Line 228 Coldwater Canyon combined with Line 167 Plummer.</p> <p>Refer to Lines 166 and 167 for detailed alignment proposals.</p>	Refer to Lines 166 and 167 for detailed schedule proposals.
230 Laurel Canyon	No alignment changes recommended; route link with Line 239 discontinued.	20-min peak and 30-min midday or weekdays; 30-min weekend service. Four weekday peak trippers also retained.
234 Sepulveda	<p>Rerouting of service in San Fernando/Sylmar to Sylmar/SF Station via Truman - Hubbard. Service along existing Line 234 alignment east of San Fernando Road provided by combination of Lines 90, 631, and 632.</p> <p>Maintain linkage with Line 183 to provide continuous service east of Sepulveda to Burbank under Line 234 designation. From Sepulveda and Ventura service would operate via Ventura to Van Nuys to Riverside to Woodman to Magnolia to 1st to Verdugo to Front terminating at Burbank Station.</p>	<p>From Ventura/Van Nuys to Sylmar Station: 15-min peak with 30-min midday service on weekdays and all day on weekends.</p> <p>From Ventura/Van Nuys to Burbank Station: 30-min peak with 60-min midday on weekdays and 60-min on weekends.</p>

**Table 6**  
**Recommended Individual Line Restructuring Proposals**  
**Local and Limited-Stop Service**

Route	Alignment	Schedule
236 Balboa	<p>Major line restructuring with the Balboa/Woodley linkage relocated from Ventura to Granada Hills.</p> <p>The proposed alignment is: from Ventura terminal north on Balboa to Pineridge - Knollwood - Shamhart - Gothic - Rinaldi - Woodley - Victory - Van Nuys to Moorpark terminal.</p> <p>Service would be provided along the full alignment only during weekday peak periods. Service at other times would operate only between Ventura and San Fernando Mission on Balboa.</p>	<p>Weekday service is 30-minute between Ventura and San Fernando Mission along Balboa with weekend service every 60-minutes.</p> <p>Service north of SF Mission through onto Woodley Ave. is every 60-minutes during weekday peak periods only.</p>
238 Tampa (New)	<p><u>New Line 238</u> is proposed to serve the Tampa portion of existing Line 154, the Burbank Boulevard section of which was linked with the White Oak portion of Line 239.</p> <p>The proposed weekday peak alignment for Line 238 from the Reseda/Ventura terminal to Rinaldi is unchanged from the current.</p> <p>The weekday midday and Saturday alignment terminates short at Plummer.</p>	<p>Weekday 40-min peak service to Rinaldi with 60-min midday and Saturday service to Plummer [Northridge Fashion Plaza].</p> <p>No Sunday service is currently provided and no change is proposed.</p>
239 Sylmar-Granada Hills-Northridge-Winnetka-Warner Center	<p>Major line reconfiguration: Line 239 from Granada Hills to Sylmar combined with Line 243 Winnetka: Sylmar/SF Station via Truman to San Fernando Mission to Laurel Canyon to Rinaldi to Sepulveda to San Fernando Mission to Louise to Chatsworth to Zelzah to Lassen to Reseda into CSUN TC; then via Reseda to Parthenia to Tampa to Nordhoff Place to Corbin to Nordhoff to Winnetka to Ventura to De Soto to Burbank to Owensmouth to Warner Center Transit Center.</p> <p>Line 239 White Oak between Granada Hills and Ventura Boulevard combined with Line 154 Burbank Boulevard. Refer to Line 154 for a detailed alignment.</p>	<p>Service levels are 30-min peak and 60-min weekday midday and weekend.</p>

**Table 6  
Recommended Individual Line Restructuring Proposals  
Local and Limited-Stop Service**

Route	Alignment	Schedule
<p>240 Reseda Boulevard renamed 522 Ventura-Reseda (New) (see Line 424/522)</p>	<p>Line 240 extended to serve Ventura Boulevard and Hollywood Freeway; combined with Line 424 Ventura Boulevard and <u>renumbered Line 522</u>.</p> <p>Service to operate from LA City College on Vermont via Vermont - Melrose - Hoover - Bellevue - Silverlake - Hollywood Freeway; then via Line 424 alignment to Reseda; then north to <b>modified terminal loop via Reseda - Devonshire - Lindley - Lassen - Reseda.</b></p>	<p>Please refer to Line 424/522.</p>
<p>243 De Soto-Winnetka</p>	<p>Major restructuring with Line 243 split and recombined with cross-Valley services:</p> <p>Line 243 De Soto combined with Line 158 Devonshire-Woodman.</p> <p>Line 243 Winnetka combined with Line 239 Granada Hills-Sylmar.</p> <p>Refer to Lines 158 and 239 for detailed alignment proposals.</p>	<p>Refer to Lines 158 and 239 for detailed schedule proposals.</p>
<p>245 Topanga Canyon- Mulholland-Valley Circle</p>	<p>Line 245 has been replaced by a new Line 669 that provides bi-directional service through the proposed Warner Center Transit Center and by Line 645 serving Topanga Canyon Boulevard.</p>	<p>Please refer to Lines 645 and 669 for details.</p>
<p>420 Van Nuys-Panorama City</p>	<p>No alignment changes are proposed.</p>	<p><u>Weekday service:</u> Between Panorama City &amp; Universal City Transit Center and between Highland/Hollywood &amp; downtown LA: 10-min peak and 12-min midday;</p> <p>Between Universal City Transit Center &amp; Highland/Hollywood: 5-min peak and 6-min midday.</p> <p><u>Weekend service:</u> Between Panorama City &amp; Santa Monica/Western: 10-min Saturday and 12-min Sunday;</p> <p>Between Santa Monica/Western &amp; downtown LA: 20-min Saturday and 24-min Sunday.</p>



**Table 6**  
**Recommended Individual Line Restructuring Proposals**  
**Local and Limited-Stop Service**

Route	Alignment	Schedule
<p>424 Ventura Blvd-Warner Center            425 Ventura Blvd -Warner Center Limited            522 Ventura Blvd-Reseda (New extension of Line 240)</p>	<p>Four alignment changes are proposed for Ventura Boulevard service:</p> <ol style="list-style-type: none"> <li>1. Relocate the western line terminus from Topanga Canyon and Sherman Way to the proposed Warner Center Transit Center operating via Ventura to Topanga Canyon to Oxnard. Service north of WCTC on Topanga Canyon will be provided by Line 645.</li> <li>2. Operate the western portion as a two branch line both to Warner Center TC (Line 424) and to Reseda Boulevard (currently Line 240 - proposed Line 522) with service approximately split between the two. Line 425 limited-stop service continues to serve just the Warner Center branch.</li> <li>3. Reduce unnecessary service capacity to Downtown LA by shortlining approximately half of the service after serving the Vermont Hwy 101 freeway stop by using a Silverlake turnaround via Beverly - Virgil - Melrose to LA City College. These trips would be routed to the Line 522 Reseda branch. All Line 425 limited-stop service would continue to operate to downtown LA.</li> <li>4. Shorten the Downtown LA alignment by terminating at Olympic.</li> </ol>	<p>Service levels on the core trunk line between the Vermont freeway stop and Ventura west to Reseda are 7½-min peak and 10-min midday on weekdays and Saturdays; 10-min peak and 15-min midday on Sundays.</p> <p>Service levels to the Warner Center and Reseda branches, as well as Downtown LA are 15-min peak and 20-min midday on weekdays and Saturdays; 20-min peak and 30-min midday on Sundays.</p> <p>An additional 23 Line 425 limited stop trippers would be operated during weekday and Saturday peak periods.</p>
<p>233 Sherman Oaks-Van Nuys-Lake View Terrace            561 Sylmar-Van Nuys-Sherman Oaks-Westwood-LAX Limited (New)</p>	<p>Line restructuring creates two lines serving Van Nuys Boulevard:</p> <p><u>Line 233:</u> Current Line 560 local service via current alignment from Lake View Terrace to the new Sherman Oaks Transit Center at Van Nuys &amp; Ventura.</p> <p><u>Line 561:</u> <u>new limited-stop service</u> from Sylmar/SF Station via San Fernando to Van Nuys Boulevard, continuing via current route to Westwood. Westwood alignment extended south on Westwood Boulevard to Westside Pavilion on Pico; continuing via Westwood to National to I-405 and current routing to LAX Transit Center.</p>	<p>Line 233: 15-min all day weekday service; 20-min Saturday; 30-min Sunday.</p> <p>Line 561 <i>limited stop</i> service from Sylmar to Westwood/LAX: 30-min peak and 30-min midday on weekdays; 30-min service on weekends. An additional 4 southbound AM and 4 northbound PM weekday trippers operated.</p>

**Table 6**  
**Recommended Individual Line Restructuring Proposals**  
**Local and Limited-Stop Service**

Route	Alignment	Schedule
631 Sylmar Circulator (New)	Operates bi-directionally from Sylmar/San Fernando Metrolink Station via San Fernando to Roxford to Olive View to Bledsoe to Foothill to Polk to Glenoaks to Hubbard returning to Sylmar Station.  Principal candidate for "service route" or route deviation operation.	15/30-min weekday peak and 30-min midday on weekdays and all day on weekends.
632 Hubbard-Sayre Shuttle (New)	Operates from Sylmar/SF Station via Hubbard to Simshaw to Sayre to Borden to Hubbard.	30-min service on weekdays and weekends.
630 North Hollywood Circulator (New)	Operates from the planned North Hollywood Metro Red Line Station via Lankershim - Vanowen - Laurel Canyon - Magnolia - Lankershim.	30-minute service on weekdays and weekends.
640 Van Nuys-Panorama City Circulator (New)	Operates via Van Nuys - Nordhoff - Sepulveda - Victory - Van Nuys - Sylvan - Tyrone - Delano - Van Nuys.	30-min service on weekdays and weekends.
645 Topanga Canyon Shuttle (New)	Operates shuttle service between Warner Center Transit Center and Chatsworth Transit Center via Oxnard - Topanga Canyon - Devonshire.	30-min service on weekdays and weekends.
650 Sherman Oaks-Encino Shuttle (New)	Shuttle service operating between Sherman Oaks Fashion Square and Encino Park & Ride via Woodman - Ventura - Moorpark - Van Nuys - Ventura - Balboa - Magnolia - Hayvenhurst; returning via Ventura - Van Nuys - Moorpark - Hazeltine - Riverside.	30-min service on weekdays and weekends.
668 Calabasas-Warner Center Shuttle (New)	New service operates from Warner Center Transit Center via Califa/Oxnard to Canoga to Ventura to Fallbrook to Avd San Luis to Calabasas Road to Park Granada Blvd to Pkwy Calabasas to Calabasas Road; connects with revised Line 423 at Pkwy Calabasas freeway stop. Replaces Line 161 in Calabasas.	Weekday peak service 30-min with 60-min weekday midday and weekend service.
669 Warner Center-Mulholland-Valley Circle Circulator (New)	Replacement for portions of Line 245; operates bi-directionally from Warner Center Transit Center via Oxnard to Topanga Canyon to Mulholland to Valley Circle to Roscoe to Woodlake through West Hills Medical Center to Sherman Way to Owensmouth to Warner Center TC.	Weekday service 30-min peak with weekday midday and weekend service 60-min.

**Table 6**  
**Recommended Individual Line Restructuring Proposals**  
**Local and Limited-Stop Service**

Route	Alignment	Schedule
670 Universal City-Burbank Media District-Burbank Metrolink Shuttle (New)	Proposed shuttle service connecting Burbank Station with Universal City Transit Center, via the Burbank Media District; operates from UCTC via Lankershim to Cahuenga to Riverside to California to Alameda to Buena Vista to Olive to 1st to Verdugo to Front to Burbank Station. Replaces Line 152 and portions of both Lines 96/97 and the Burbank Media District Shuttle.	Weekday peak service 10-min; midday 15-min; weekend 30-min.
680 Riverside Shuttle (New)	Proposed shuttle operating from Universal City TC via Ventura - Tujunga - Riverside - Woodman - Moorpark to Van Nuys.	Proposed service is every 60-minutes on weekdays only.
Beeline 1-2	No changes proposed.	No changes proposed.
Beeline 4	<p>Two extensions of Beeline 4 are proposed:</p> <p>Extend the line south from Palmer Park to the Glendale Transportation Center [Metrolink Station] via Glendale Avenue to Los Feliz to Central to GTC. This extension replaces current Line 183.</p> <p>Replace Line 177 by extending Beeline 4 north from Glendale Community College to Montrose and La Cañada Flintridge via Verdugo to Ocean View to Honolulu to La Crescenta to Foothill Blvd to Alta Canyon to Verdugo into Verdugo Hills Hospital; continue east on Verdugo to Foothill to JPL where it will meet the shortened Line 177 to Pasadena.</p>	<p>Proposed Beeline 4 service levels are 30-min to Montrose with 60-min service to La Cañada Flintridge/JPL on weekdays and Saturdays.</p> <p>No Sunday service is currently operated or proposed.</p>
Beeline 6 (New)	Proposed Glendale <u>Beeline 6</u> operating from Glenwood/Concord via Kenilworth - Glenoaks - Pacific - Doran - Concord - Wilson - Central - Colorado - Broadway - Sinclair - Chevy Chase - Glenoaks - Harvey [Adventist Hospital].	The proposed weekday and Saturday service frequency is 30-min.
Van Nuys-Studio City DASH	Replaced by Lines 640, 650, and 680.	Refer to replacement lines.

**Table 7  
Express Service  
Transit System Restructuring Summary**

Route	Alignment	Schedule
406/407 Foothill Express	Lines 406/407 are proposed for replacement by existing Line 409 operating along a similar alignment, but providing faster limited-stop service with additional park-and-ride options. Line 90 provides local service in the same area.	See Line 409.
409 Sylmar-LA Express	Restructuring of Line 409 proposed:  Start at Maclay and operate <i>limited-stop</i> via Foothill Boulevard serving Paxton park-and-ride onto I-210 at Osborne; off in Sunland and operate <i>limited-stop</i> along Foothill to Lowell; south to park-and-ride; then continue on Honolulu through Montrose to planned park-and-ride at Verdugo & Hwy 2; then via Hwy 2 and I-5 to downtown LA. Downtown LA routing adjusted to operate via Broadway to Ord to Spring to First to Flower to Seventh to Spring; northbound routing is via Spring to Eighth to Figueroa to Fourth to Flower to First to Spring.	Same trips continued with <b>minor scheduling</b> adjustments.
410 LA-Glendale-Burbank-San Fernando Express	It is proposed that Line 410 be replaced by Metrolink service from Sylmar/San Fernando, Burbank, and Glendale. See Line 411 for new east Glendale express service.	Replaced by Metrolink.
411 Warner Center-Victory Limited-Burbank-Glendale-Downtown LA (New)	New Line 411 replaces portions of Line 410 (in Glendale), Line 412 (in North Hollywood), and Line 549 (between Glendale and Encino).  The proposed routing for Line 411 is: Bi-directional service between Warner Center Transit Center and downtown LA via Canoga to Victory Boulevard; operate limited stop to Burbank TC; then via I-5/Hwy 134 to Brand - Broadway (serving new East Glendale park-and-ride) or Colorado (serving Eagle Rock Plaza); then via Hwy 2/I-5 to downtown LA. Downtown LA routing operates via Broadway to Ord to Spring to First to Flower to Seventh to Spring; northbound routing is via Spring to Eighth to Figueroa to Fourth to Flower to First to Spring.	Bi-directional weekday peak service operating 30-minute service levels. This service level meets or exceeds that currently operated on Lines 410, 412, or 549.  ↓ ↓ ↓
412 LA-Burbank-North Hollywood-Valley Plaza Express	Replacement of Line 412 with Line 411 is proposed. This maintains service to downtown LA from North Hollywood, while also providing direct service to downtown Glendale.	See Line 411.
413 Victory Boulevard-Sherman Way Express	Line 413 has been restructured in combination with Line 426 and new Line 411 to provide more direct cross-Valley <i>limited-stop</i> service. Refer to these lines for detailed route alignments.	Both Lines 411 and 426 provide only <b>weekday peak</b> services. Please refer to these line schedules for details.

**Table 7**  
**Express Service**  
**Transit System Restructuring Summary**

Route	Alignment	Schedule
418 Roscoe Express	<p>Proposed adjustment in Line 418's western Valley routing. New Northridge Metrolink Station replaces Line 418 north of Roscoe.</p> <p>Reduce number of limited stops, increasing service speed.</p> <p>Proposed routing is to continue service west of Tampa on Roscoe to Topanga Canyon, thus also providing cross-Valley <i>limited-stop</i> service. A change in the downtown LA routing is also proposed: Broadway to Ord to Spring to First to Flower to Seventh to Spring; northbound routing is via Spring to Eighth to Figueroa to Fourth to Flower to First to Spring.</p>	No schedule changes proposed.
419 Devonshire Express	<p>Like Line 418 above, changes are proposed in the west Valley routing of Line 419. Metrolink service replaces Line 419 west of Tampa.</p> <p>Proposed routing for Line 419 is from Rinaldi &amp; Tampa south on Tampa to Devonshire; then via the current alignment to downtown LA. Like the changes on several other express lines, the proposed downtown LA alignment is via Broadway to Ord to Spring to First to Flower to Seventh to Spring; northbound routing is via Spring to Eighth to Figueroa to Fourth to Flower to First to Spring.</p>	No schedule changes are proposed.
423 LA-Ventura Freeway Express	<p>Several changes are proposed for Line 423:</p> <ol style="list-style-type: none"> <li>1. Consolidate service with Line 161 by providing bi-directional all-day weekday service on Line 423 between Westlake Village and downtown LA. Weekend service will only operate between Warner Center TC and Westlake Village.</li> <li>2. Service west of Westlake Village is not continued with coverage provided by Thousand Oaks Transit. The Las Virgenes service is accessed only by the Lost Hills freeway stop and Calabasas by a Parkway Calabasas freeway stop; direct Calabasas service provided by proposed Line 668.</li> <li>3. The route is also proposed to directly serve the Warner Center Transit Center before returning to Ventura Freeway and stopping at the Encino park-and-ride; service continues via the current alignment to downtown LA. Downtown LA service will operate via Broadway - Ord - Spring - First - Flower - Seventh - Spring; northbound routing is via Spring to Eighth to Figueroa to Fourth to Flower to First to Spring.</li> <li>4. Service will be coordinated with Line 427 which will operate along the same alignment between Warner Center and downtown LA., while additionally serving a park-and-ride in Canoga Park.</li> </ol>	<p>Proposed service levels are:</p> <p><u>Weekday</u>  Between downtown LA and Westlake Village: 30-min peak with 60-min midday. [Note: combined peak service with Line 427 is every 15-minutes from Warner Center east].</p> <p><u>Weekend</u>  Between Warner Center and Westlake Village: 120-min.</p>

**Table 7  
Express Service  
Transit System Restructuring Summary**

Route	Alignment	Schedule
426 Sherman Way-Wilshire Boulevard-Express	<p>Line 426 has been restructured in combination with Line 413 to provide more direct cross-Valley <i>limited-stop</i> service. It is proposed that Line 413 be replaced by new Line 411 (see Line 413 discussion above) with the following modifications proposed for Line 426:</p> <p>Operate Line 426 <i>limited-stop</i> service between Warner Center Transit Center and North Hollywood via Topanga Canyon and Sherman Way to Laurel Canyon; then via Oxnard (serving the park-and-ride there) onto the Hollywood Freeway. The bus will make a freeway exit stop at/near the Universal City Transit Center and then operate via the current alignment to the terminal at the MacArthur Park Metro Red Line Station in Westlake.</p>	Current Line 426 service levels will be maintained.
427 West Hills Express	Service is to be coordinated with Line 423; operating the same routing between Warner Center and downtown LA. It is also recommended that the line serve a new park-and-ride in the Canoga Park area.	Bi-directional service will be operated every 30-minutes during weekday peak periods.
545 Highway Hummer [Sylmar-Chatsworth]	Current Line 545 is operating via an earthquake alignment. Proposed permanent routing is Sylmar Station via Hubbard to Laurel Canyon to Rinaldi to I-405 to Hwy 118 off at De Soto; bus continues south on De Soto to Victory to Canoga to Warner Center Transit Center.	Four morning and four afternoon trips are proposed for continued operation.
549 SFV-Burbank Media District-Glendale-Pasadena Express	Line 549 is replaced indirectly by Line 411. Service east of Glendale to Pasadena will no longer be provided directly by Lines 549 or 411, but available through connections in Glendale with Lines 180/181. Future extension of Foothill Line 690 west to Glendale should be considered.	Line 549 is replaced by Line 411.
573 Balboa-Westwood-Century City Express	No alignment changes proposed.	Some consolidation of trips proposed with current span of service maintained.
574 Balboa-El Segundo Express	No alignment changes proposed.	Some consolidation of trips proposed with current span of service maintained.
575 Simi Valley-Warner Center Express	Line 575 alignment modified in west SF Valley to better serve the commercial/industrial areas of Chatsworth, Canoga Park, and Woodland Hills. Route to operate via Topanga Canyon to Lassen to De Soto to Victory to Owensmouth to Burbank to Kaiser.	Current service maintained: 4 AM eastbound and 4 PM westbound trips.
787 Antelope Valley to San Fernando Valley Express	One minor alignment change proposed: extend the line east to the Encino park-and-ride and connect with Westwood and El Segundo service.	No schedule changes proposed.

Alvarado + Wilshire

## APPENDIX 4

### Individual Line Service and Cost Impacts

AM

PM

10:00 AM

10:00 AM

10:30 AM

10:30 AM

11:00 AM

11:00 AM

11:30 AM

12:00 PM

12:30 PM

**Table 7**  
**Proposed Service Restructuring**  
**Weekday Service**

Line	Revenue	Vehicles Required			Cost
	Hours	AM Peak	Midday	PM Peak	Savings
90/91/406/407	(10.0)	(4)	1	(3)	(\$177,378)
92/93/410	(15.0)	(6)	1	(6)	(\$266,067)
94/394	(42.0)	(7)	(3)	(4)	(\$744,988)
96/97/412	(83.0)	(8)	(4)	(10)	(\$1,472,237)
152	(18.0)	(2)		(4)	(\$319,280)
154	(12.0)	(1)	(1)	(1)	(\$212,485)
158	15.5	3		3	\$335,628
161	(48.8)	(9)	(3)	(5)	(\$865,605)
163	(2.0)	2	(1)		(\$29,447)
164/165	10.0	1	1	1	\$183,039
166	15.0	3	1		\$266,067
167	14.0	(1)	1	2	\$277,738
168	(9.0)		(1)		(\$132,509)
169	(10.5)	(1)	(1)	(2)	(\$186,247)
177 Pasadena Segment	(51.9)	(4)	(3)	(5)	(\$920,592)
177 East Segment	12.0	1	1	1	\$141,311
180/181	(16.0)	(2)		(4)	(\$283,805)
201	(12.0)	(1)	(1)	(1)	(\$212,485)
212	(31.0)	(2)	(2)	(2)	(\$528,033)
228	(51.5)	(7)	(3)	(7)	(\$913,497)
230	(33.1)	(3)	(2)	(4)	(\$587,121)
234/183	(52.5)	(5)	(5)	(3)	(\$880,389)
236	(20.0)	(2)	(2)	(2)	(\$354,756)
238	20.0	2	1	2	\$366,077
239	51.0	5	3	5	\$929,916
240/522	Included in 424/425/522 Calculations				
243	(52.3)	(7)	(3)	(6)	(\$927,687)
245	(49.6)	(4)	(2)	(5)	(\$879,795)
409	N/C				
411	51.0	8		9	\$575,705
413	(15.0)	(5)		(5)	(\$169,325)
418	N/C				
419	(2.0)				(\$22,577)
420	(45.0)	(8)	1	(12)	(\$798,201)
423	27.0	(1)	4	(4)	\$304,785
424/425/522	(70.0)	(12)	(5)	(11)	(\$1,241,646)
426	N/C				



**Table 7**  
**Proposed Service Restructuring**  
**Weekday Service**

Line	Revenue	Vehicles Required			Cost
	Hours	AM Peak	Midday	PM Peak	Savings
427	(3.0)	(1)		(2)	(\$53,213)
545	8.0	4		4	\$141,902
549	(15.3)	(5)		(5)	(\$172,712)
561/233 (560)	(12.0)	1	(2)	(1)	(\$212,485)
570	14.5	1	1	1	\$163,681
573	(14.5)	(2)		(2)	(\$257,198)
574	N/C				
575	N/C				
630	32.0	2	2	2	\$301,022
631	46.0	3	2	4	\$432,720
632	24.5	2	1	2	\$230,470
640	58.0	4	4	4	\$545,603
645	29.5	2	2	2	\$277,505
650	27.0	2	2	2	\$253,988
668	28.0	2	1	2	\$263,395
669	44.0	4	2	4	\$413,906
670	83.0	6	4	6	\$780,777
680	13.0	1	1	1	\$122,290
Van Nuys/SC DASH	(27.0)	(3)	(3)	(3)	(\$253,988)
Beeline 1-2	N/C				
Beeline 4	26.0	2	2	2	\$211,497
Beeline 6	24.0	2	2	2	\$195,228
<b>Total Weekday</b>	<b>(151.0)</b>	<b>(50)</b>	<b>(6)</b>	<b>(58)</b>	
<b>Total Annual</b>	<b>(38,505)</b>				<b>(\$6,361,496)</b>

N9/C No change in the current service parameters.

C

**Table 8**  
**Proposed Service Restructuring**  
**Saturday Service**

Line	Revenue	Vehicles Required			Cost Savings
	Hours	AM Peak	Midday	PM Peak	
90/91	(13.9)	(1)	(1)	(2)	(\$41,733)
92/93	(12.0)	(1)	(1)	(1)	(\$36,029)
94	(57.0)	(3)	(5)	(6)	(\$171,136)
96/97	(44.0)	(3)	(3)	(3)	(\$132,105)
152	(12.0)	(1)	(1)	(1)	(\$36,029)
154	N/C				
158	N/C				
161	(13.3)	(1)	(1)	(1)	(\$39,932)
163	N/C				
164/165	10.0	1	1	1	\$36,171
166	21.0	1	2	2	\$75,960
167	26.0	1	1	1	\$94,045
168	(23.3)	(2)	(2)	(2)	(\$69,956)
180/181	(28.0)		(4)	(4)	(\$84,067)
201					
212	(18.0)	(1)	(1)	(1)	(\$54,043)
228	(28.2)	(2)	(2)	(2)	(\$84,667)
230	(24.0)	(2)	(2)	(2)	(\$72,057)
234/183	(37.3)	(3)	(3)	(3)	(\$111,989)
236	(38.0)	(3)	(3)	(3)	(\$114,091)
238	14.0	1	1	1	\$50,640
239	32.0	3	3	3	\$115,748
240/522	Included in 424/425/522 Calculations				
245	(27.5)	(2)	(2)	(2)	(\$82,566)
420	(24.0)	(3)	(1)	(5)	(\$72,057)
423	13.0	1	1	1	\$29,925
424/425/522	(53.5)	(5)	(4)	(8)	(\$160,628)
561/233 (560)	(24.0)	(2)	(2)	(2)	(\$72,057)
570	12.0	1	1	1	\$23,019
630	32.0	2	2	2	\$61,385
631	35.0	2	2	2	\$67,140
632	16.5	1	1	1	\$31,652
640	46.0	2	2	2	\$88,241
645	16.0	1	1	1	\$30,692
650	15.0	2	2	2	\$28,774
668	13.0	1	1	1	\$24,938
669	26.0	2	2	2	\$49,875
670	32.0	2	2	2	\$61,385

**Table 8  
Proposed Service Restructuring  
Saturday Service**

Line	Revenue	Vehicles Required			Cost
	Hours	AM Peak	Midday	PM Peak	Savings
Van Nuys/SC DASH	(22.0)	(3)	(3)	(3)	(\$42,202)
Beeline 1-2	N/C				
Beeline 4	26.0	2	2	2	\$43,129
Beeline 6	24.0	2	2	2	\$39,811
Total Saturday	(90.5)	(10)	(12)	(22)	
Total Annual	(4,706)				(\$524,814)

*N/C No change in the current service parameters.*

**Table 9**  
**Proposed Service Restructuring**  
**Sunday Service**

Line	Revenue	Vehicles Required			Cost
	Hours	AM Peak	Midday	PM Peak	Savings
90/91	14.0	2	1	1	\$56,483
92/93	N/C				
94	(9.0)	1	(1)	(2)	(\$30,139)
96/97	(35.0)	(1)	(3)	(3)	(\$117,209)
152	11.0	1	1	1	\$44,379
158	N/C				
161	(13.3)	(1)	(1)	(1)	(\$44,539)
163	3.0	1			\$12,103
164/165	N/C				
166	22.0	2	2	2	\$88,759
167	26.0	1	1	1	\$104,896
180/181	(13.0)		(2)	(3)	(\$43,535)
201					
212	(13.0)	(1)	(1)	(1)	(\$43,535)
228	(24.1)	(2)	(2)	(2)	(\$80,707)
230	(15.8)	(2)	(2)	(2)	(\$52,911)
234/183	(35.5)	(3)	(3)	(3)	(\$118,883)
236	(8.9)	(1)	(1)	(1)	(\$29,804)
239	32.0	3	3	3	\$129,103
240/522	Included in 424/425/522 Calculations				
245	(23.6)	(2)	(2)	(2)	(\$79,032)
420	(18.0)	(1)	(2)	(1)	(\$60,279)
423	13.0	1	1	1	\$33,378
424/425/522	(29.0)	(2)	(4)		(\$97,116)
561/233 (560)	(24.0)	(2)	(2)	(2)	(\$80,372)
570	12.0	1	1	1	\$25,675
630	24.0	2	2	2	\$51,351
631	35.0	2	2	2	\$74,887
632	16.5	1	1	1	\$35,304
640	46.0	2	2	2	\$98,423
645	13.0	1	1	1	\$27,815
668	13.0	1	1	1	\$27,815
669	26.0	2	2	2	\$55,630
670	32.0	2	2	2	\$68,468
Total Sunday	76.3	8	(3)		
Total Annual	4,425				\$56,409

N/C No change in the current service parameters.

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