APPENDIX D

COMPARISON OF 1997 FORECAST TO 1987 FORECAST

COMPARISON OF 1997 FORECAST TO THE 1987 FORECAST

The current forecast work for the University Focused Transportation Study and the forecast work done for the 1990 University Community Plan Update, completed in 1987, differ in the forecast volumes assigned to the street network. **Figure D1** shows the buildout forecast daily traffic volumes for Alternative 1 of the University Focused Transportation Study and **Figure D2** shows the buildout forecast daily traffic volumes for the University Community Plan.

Figure 3 provides a visual comparison of where and the relative degree of increase or decrease in daily traffic volumes forecast in the two studies. Road segments with a higher forecast volume in 1997 are shown with a circle symbol and road segments with a lower forecast volume in 1997 are shown with a triangle symbol. Those road segments without symbols either had comparable forecast daily volumes or the segments were not reported for the 1987 forecast.

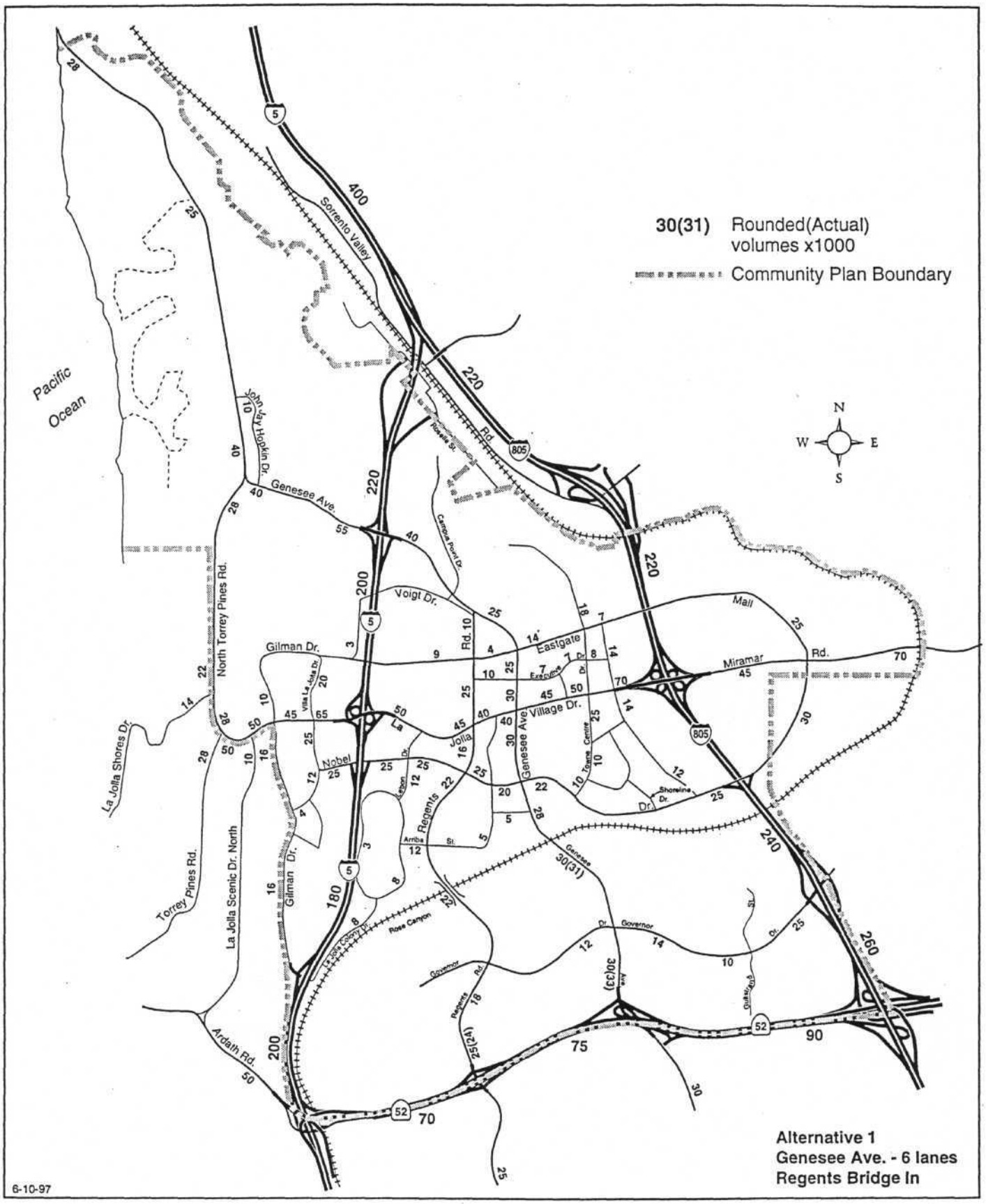
Table D1 shows a daily traffic and level-of-service comparison between the 1987 University Community Plan forecast and the 1997 Focused Transportation Study forecast for some selected street segments in the community. The chosen segments had the worst LOS in the 1987 forecast. Also included were the two segments of Genesee Avenue that were the focus of this study.

Both models are constructed by determining the buildout land uses and buildout road system in the community planning area and then merging this data with a different SANDAG's Regional Transportation Model for San Diego County which is part of their regional demographic data base. The SANDAG model has land use, population and employment data estimated for a specific target year in the future. The Regional Transportation Network expected to be in place is also included in the model. Twenty years is usually the target time frame. SANDAG revises their data base every three to five years to reflect updated demographic and roadway completion estimates. Each major revision to the SANDAG demographic data base is referred to as a "Series" (e.g. Series 5, Series 6, etc.). Listed below are some potential reasons for the projected traffic volume differences between the 1987 (adopted University Community) travel forecast and the current 1997 University Focused Transportation Study.

1. Target Year

   The model for the University community conducted in 1987, used SANDAG's Series 5 and 6 as its base. Series 6 had year 2005 as the target year for the population and employment projections.

   The current modeling work for University uses SANDAG's Series 8 as its base.



Year 2015 Model Daily Traffic Volumes (x1000)

University Focused Transportation Study

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figure **D1**

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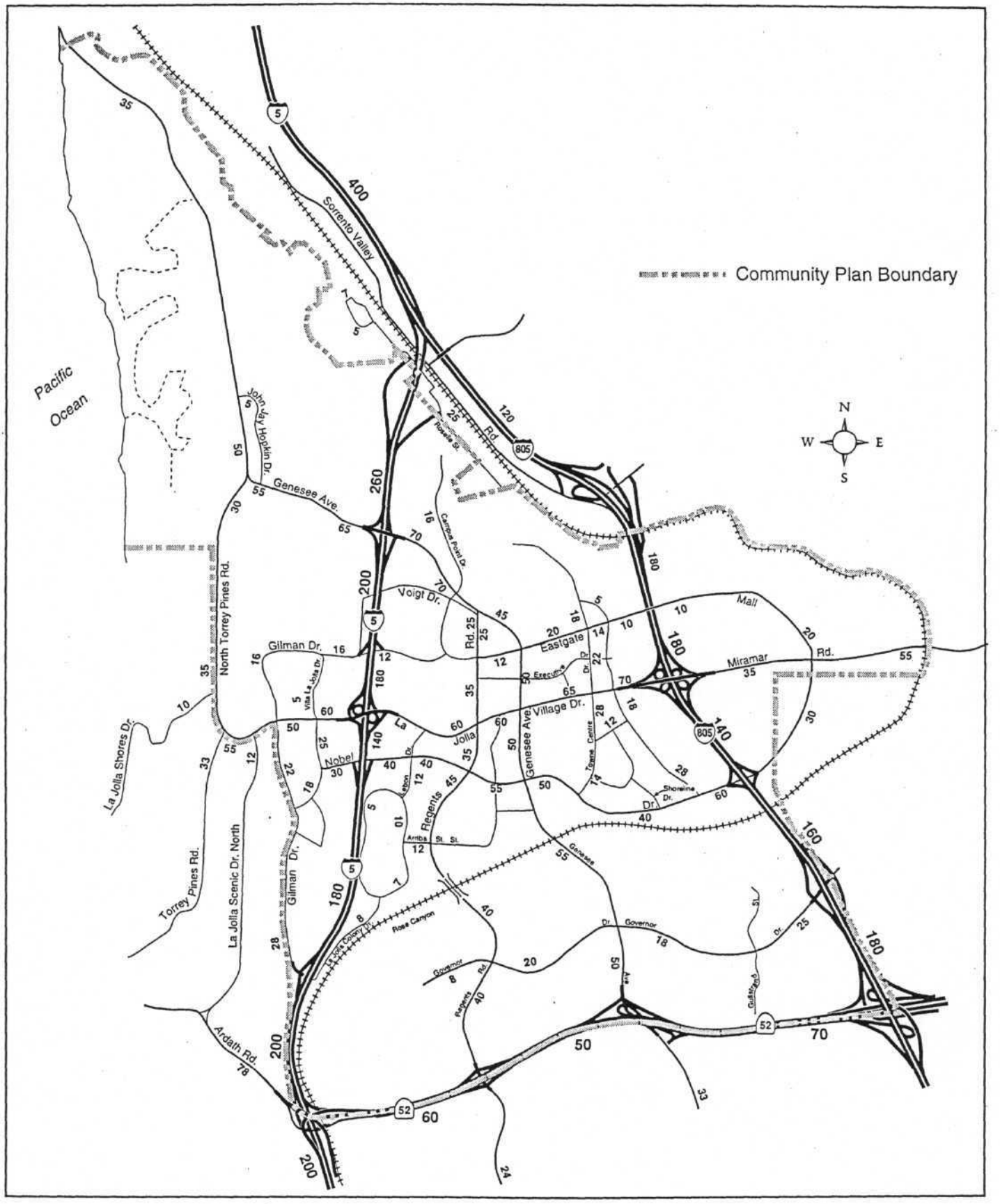

Daily Traffic Volumes at Buildout (x1000)

University Community Plan (1987)

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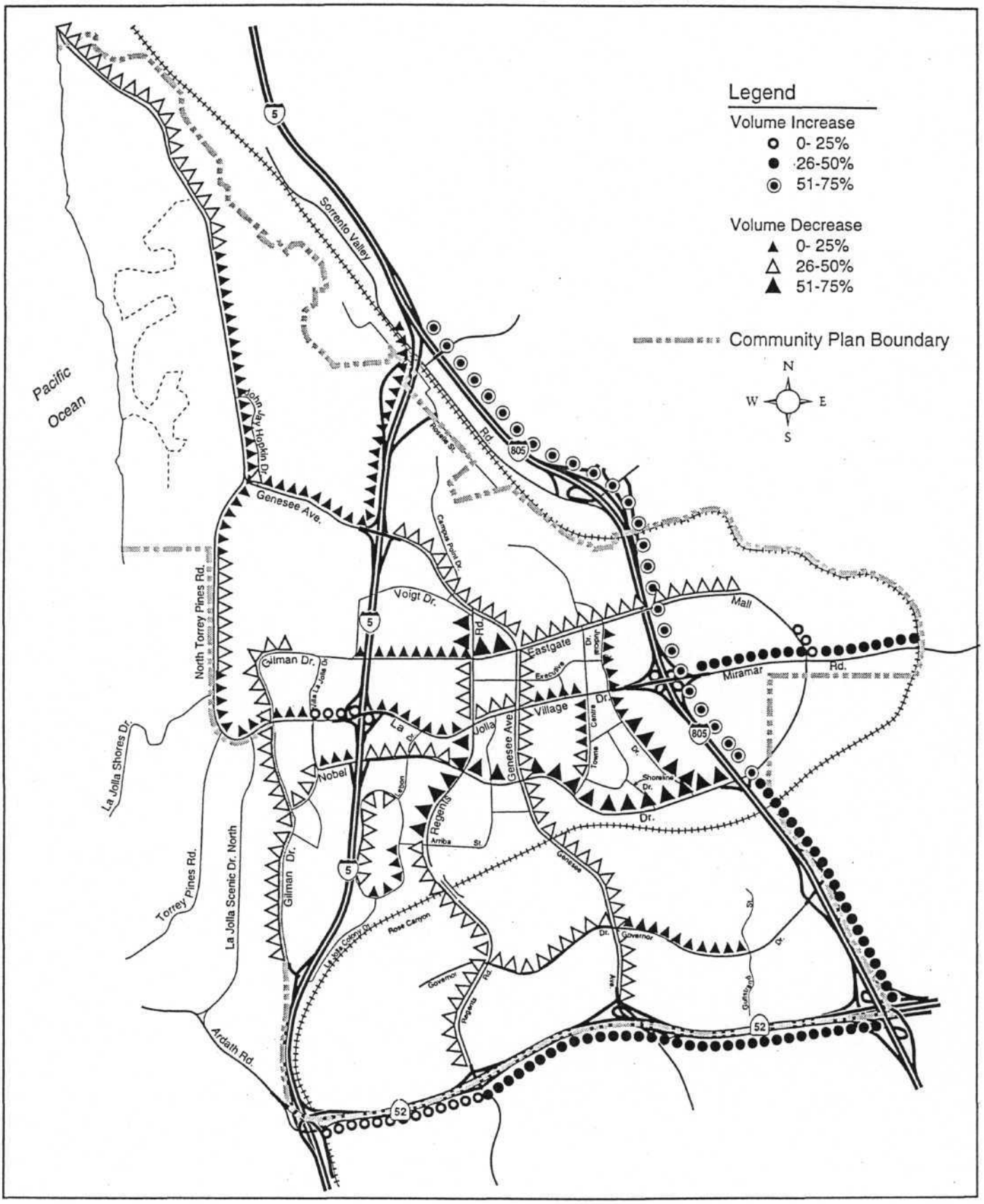

Future Volume Comparison

Alternative 1(1997) vs. Community Plan(1987)

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TABLE D1

ADT AND LOS COMPARISON
1987 Community Plan vs. 1997 Focused Transportation Study
for Selected University Street Segments at Buildout

STREET SEGMENT	LIMITS	1987 COMMUNITY PLAN FORECAST		1997 FOCUSED TRANSPORTATION STUDY (Alternative 1)[1]	
		ADT (x1000)	LOS	ADT (x1000)	LOS
Regents Road	Arriba Drive to Nobel Drive	45	F	22	C
Nobel Drive	Regents Road to Genesee Avenue	55	F	25	B
La Jolla Village Drive	Genesee Avenue to Towne Centre Drive	65	F	50	C/D
Genesee Avenue	I-5 to Campus Point Drive	70	F	40	C
Genesee Avenue	John Jay Hopkins Drive to I-5	65	F	55	D/E
Regents Road	SR-52 to Governor Drive	40	E/F	25	C
Regents Road	Governor Drive to Arriba Drive	40	E/F	22	C
La Jolla Village Drive	I-5 to Lebon Drive	60	E/F	50	C/D
La Jolla Village Drive	Lebon Drive to Regents Road	60	E/F	45	C
La Jolla Village Drive	Regents Road to Genesee Avenue	60	E/F	40	C
Genesee Avenue	Eastgate Mall to Nobel Drive	50	E/F	30	C
Genesee Avenue[2]	Nobel Drive to Governor Drive	55	D/E	30	C
Genesee Avenue[2]	Governor Drive to SR-52	50	C/D	30	C

[1]Alternative 1: Genesee Avenue - 6 lanes, Regents Bridge - In
[2]For comparison purposes

The target year is 2015 for the population and employment projections.

2. Regional Transportation Network

The transportation network for Series 6 did not include several freeway improvements that have a definite impact on travel behavior in our study area.

a. Series 6 did not include State Route 56 between I-5 and I-15. Therefore, the east-west traffic in this part of the County had to use Miramar Road and Mira Mesa Boulevard.

b. State Route 52 was not expected to be complete all the way through to State Route 67 by 2005. This forced many East County travelers to use I-8 and I-805 to get to the University Community. Similarly, travelers in North County inland had to use SR-78 and I-5 to reach the study area.

c. The widening of I-5 north of the I-805 junction was not included in the transportation network for Series 6. Since the model projected severe congestion in this area, traffic was diverted on some of the surface streets which had the path of least resistance, including Genesee Avenue and Regents Road.

d. Series 8 included SR-56 completed between I-5 and I-15, SR-52 completed to SR-67, and the "dual freeway project" to widen I-5 north of the I-805 junction.

3. Land Use in Series 8

In Series 8, the population and employment demographics assumed that the western, northern and mid-county residential areas would be built-out prior to the year 2015. The eastern portion of the county is envisioned to have much of the remaining residential development.

4. Modeling Procedures

The Series 6 transportation model for 2005 only considered the western third of the county in detail. There were 737 traffic analysis zones (TAZ) covering that area.

Series 8 transportation model included the entire county in detail. There are 4,545 TAZs covering the county and each are smaller in size. This allows the traffic to be loaded onto the roadway network in a more even distribution.

In the calibration process for Series 6, SANDAG found that too many trips were trying to use the freeways. To compensate for this, penalties were added to the freeway on-ramps throughout the system. While this resulted in an enhancement to the overall modeling effort, it caused the surface streets to carry more of the traffic in the network system, especially for shorter trips.

For Series 8, there was not a need to penalize trips trying to use the freeways to achieve calibration. In addition, the total freeway system is expected to be completed by 2015. This results in the freeways have less delay in the future and more trips favoring the freeway system over the surface streets.

5. Differences in Total Trip Ends

The traffic model for the University community in 1987 had a total of approximately 788,000 trip ends for the community at buildout. The present traffic model has a total of approximately 764,000 trip ends for the community at buildout. This is a difference of 24,000 trip ends (about 3%). While this is a small percentage of the total trips and makes very little difference in the overall number of trips assigned to the community, it can make a significant difference on one or two particular street traffic volumes that are part of the egress/ingress to the community.

The reduction of trips in the current traffic model occurs for a variety of reasons. Projects that were future in 1987 have since been built, some at a lower traffic generation intensity than previously assumed. Traffic generation rates for some land uses may now be lower. The assumed development intensity in some areas may also be lower than assumed in 1987.

6. Better Modeling Techniques

The modeling techniques available to us today are far superior to those of ten years ago. The routines for trip table building, trip distribution and assignment are more refined. In general, since the art of traffic modeling is relatively new (about 30 years old), as time goes by, we gain more knowledge and insight.

The 1987 University Community Traffic Model was constructed by using the City's old Federal Highway Administration PLANPACK transportation modeling package for the subarea level, which was merged into SANDAG's regional TRANPLAN transportation modeling package. In 1997, the traffic model for both the subarea and the region used the same TRANPLAN package.

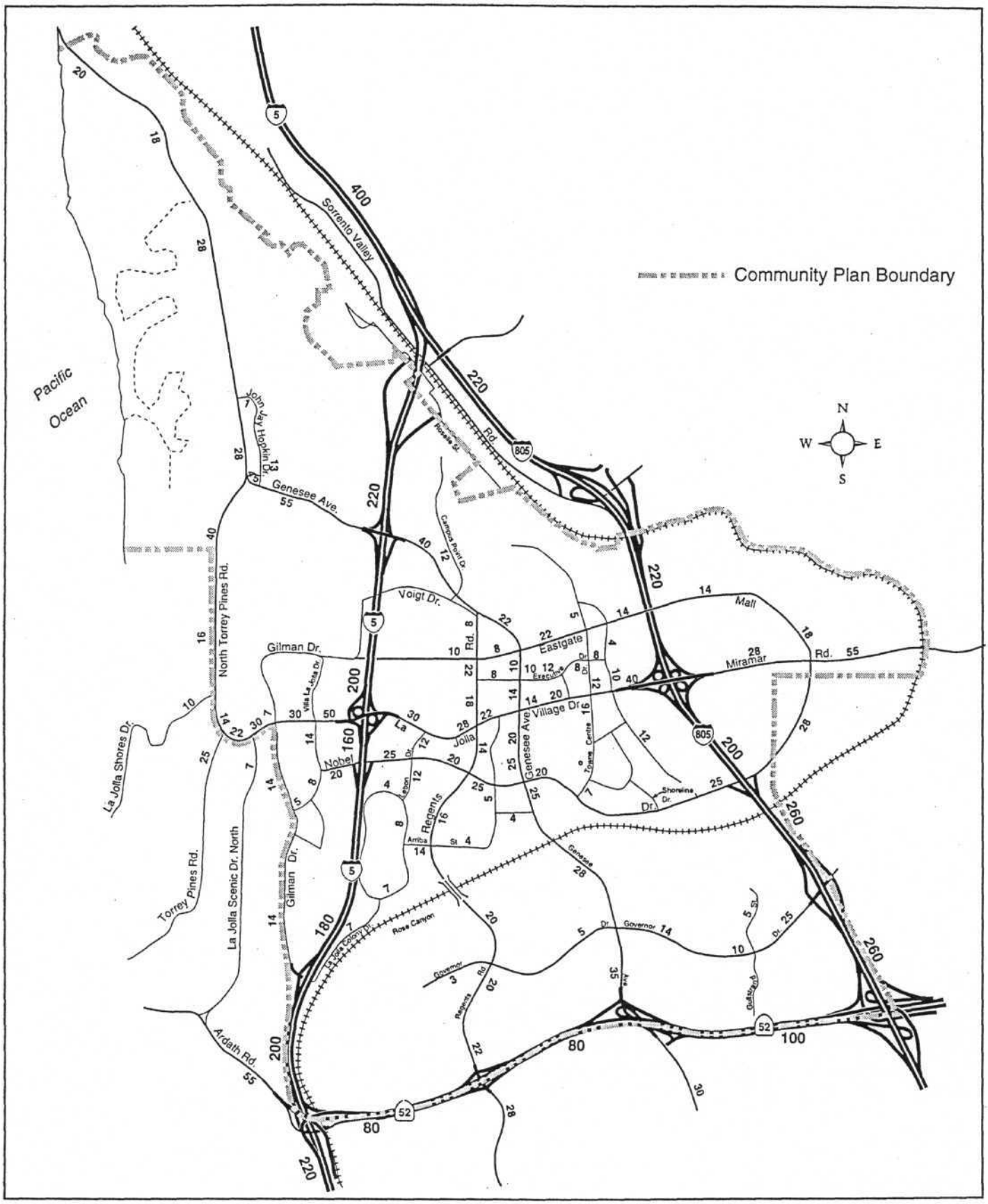
By using a uniform traffic model throughout, we were able to achieve a finer

degree of base year calibration, which made our model simulated traffic volumes very close to the actual existing traffic volumes.

7. Development Levels

In 1987, the University community generated 280,720 trips, while the target build out was at 788,000 trips. The community was only built at about 36%. In 1997, the community generates 623,684 trips, while the target build out is at 764,444 trips. Thus, the community is built at about 82%. The small level of development remaining to reach the future build out levels can help us achieve a more accurate forecast in 1997.

The forecast daily traffic volumes resulting from SANDAG's Series 8 Regional Transportation Model are shown in **Figure D4**. The freeway volumes compare favorable to the freeway volumes in the University Focused Transportation Study.



SERIES 8 (1995)

Year 2015 Daily Traffic Volumes (x1000) - Unadjusted

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figure **D4**

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