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GENERAL PLANNING CONSULTANT
TECHNICAL MEMORANDUM 89.3.4
1980 INET NETWORK DOCUMENTATION

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Prepared for:
Southern California Rapid Transit District

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1. INTRODUCTION

This memorandum documents the base 1980 INET transit network prepared by the General Planning Consultant (GPC) to the Southern California Rapid Transit District. The following sections briefly present the motivation behind implementing INET, the development of the 1980 network, basic characteristics of that network, and INET analysis procedures.

2. REASON FOR IMPLEMENTING INET

The long-term goal in implementing INET is to improve the accuracy and realism of the travel demand forecasting procedures used by the Southern California Rapid Transit District. Until now, standard practice at the District (and indeed in most other transportation agencies in the country) has been to maintain separate networks for highway and transit assignment purposes. That is, bus and rail lines are coded with a separate set of nodes and links from the highway network, even though buses use the same streets that cars do. These two different networks are built through UTPS programs HNET (for highways) and UNET (for transit).

The practical implication of having separate networks is that conditions on the highway network are not reflected in the transit network when transit assignment is being carried out, and conversely. In particular, both highway and transit assignments are typically performed using input link speeds which in many cases differ considerably from the speeds actually experienced on the congested highway system. Because these input speeds do not faithfully reflect congestion, the current modeling process fails to completely capture the competitive advantage an exclusive-guideway mode (such as rail or bus-on-busway) has over highway-based modes such as single-occupant auto or local bus -- an advantage that increases as congestion increases.

As the name suggests, INET (Integrated NETWORK) enables the user to build a single, integrated, highway and transit network, which explicitly permits information such as congested speeds and volumes to be shared between highway and transit assignments.

3. DEVELOPMENT OF THE 1980 INET NETWORK

A base INET network was needed for two reasons: (i) to serve as a test case for developing the mode choice and assignment steps of UTPS in an INET environment; and (ii) to use in recalibrating the mode choice model (see General Planning Consultant Technical Memorandum 89.3.5, INET-Related Mode Choice Recalibration). For the first purpose, a network from any year could be used. For the second purpose, however, it was desirable to develop a network as close as possible to the year of the calibration data base, 1980.

Caltrans District 7 had several years ago created a 1980 INET network for its own modeling purposes. A binary version of this network was obtained from Caltrans archives and translated into ASCII format. This network served as the basis for the District 1980 INET. A number of modifications were needed before the network could be used, however.

First, the network as it was delivered by Caltrans was missing a number of links. That is, in many instances, the node sequence for a given route indicated the existence of a link which was not found in the links files. In these cases, it was possible to supply the missing links from 1984 HNET and INET files, on the assumption that the link attributes remained essentially unchanged between 1980 and 1984.

Second, it was necessary to generate a new set of transit access links (modes 1-3) for the network. Because Caltrans has a different underlying zone structure than the District, the Caltrans access links could not be used. Park-and-ride, kiss-and-ride, and walk zone connectors to transit nodes were created by executing the BLDCON2I program. Only the 14 official park-and-ride lots existing in 1980 were used to generate PNR and KNR links. That is, no unofficial PNR or KNR activity was modeled in the calibration run.

The Los Angeles and Long Beach CBD walk networks in use at the District were essentially manually copied from a UNET network to the INET setting.

Another important modification to the original Caltrans INET network was the development of fare links. In another element of the 1988-89 work program, the GPC had assisted the District in refining its modeling process by incorporating fare parameters into the path building process (see General Planning Consultant Technical Memoranda 89.3.1, 89.3.2). That is, the best path between an origin and destination was selected based on time and cost considerations instead of time only. This procedure is both more realistic behaviorally and more consistent with the mode choice component of the modeling process.

Incorporating fare into the path building process is straightforward for local buses: there is a one-time boarding fare and a constant transfer fare. Express buses (mode 5), however, have a more complex fare structure: besides the boarding and transfer fares, the total cost increases with each fare zone crossed. To reflect this, it is necessary to identify those express bus links which cross fare zone boundaries, and to associate a fare increase with those links.

Coding fare links, then, was done manually, by plotting the network and identifying from a set of 1980 schedules those express bus links which crossed fare zone boundaries. Incorporating fare links raised a couple of other issues, however, which were discovered in the path-building (UPATH) stage.

First, express bus routes will normally be coded as a sequence of highway nodes, not all of which will be stop nodes or transfer points. The non-stop nodes are useful for producing realistic plots, but are not used at all in path-building. In fact, before creating paths, INET drops all non-stop nodes from the sequence and creates new links joining only stop nodes. The attributes of these new links are derived from the old, shorter links they represent. These new links are referred to as "long links"; the original set of links containing non-stop nodes are called "short links".

Because of this link consolidation step in INET, a fare link cannot be a "short link". That is, both nodes of a fare link must be stop nodes. There was no natural way to do this for the original route sequence: ultimately, the simplest solution was to remove all non-stop nodes from express bus routes before executing INET at all.

The second issue raised by incorporating fare links was a size limitation of the input data records to the UPATH program. The same problem was previously encountered by District staff in the course of implementing fare links for a UNET network. In that instance, it was determined that fare links could be successfully used with up to 1245 zones, but no more. This necessitated squeezing the existing 1628-zone structure into 1245 zones. This was accomplished (following the structure already established by District staff) by retaining the existing zone system for Los Angeles County, and consolidating zones in the outlying counties. This required a parallel restructuring of other input data, including highway skims, trip tables, and socioeconomic data. It also required generating access links (via BLDCON2I) for 1245 zones instead of 1628.

4. CHARACTERISTICS OF THE 1980 INET NETWORK

The files comprising the 1980 INET network are all members of the data set MRP.NETWORK.I80Z1245.DATA. Conceptually, the four kinds of data files needed to build and plot the network are: nodes, highway links, optional transit links, and routes. These four categories are described briefly below.

The NODES member contains the X-and Y-coordinates (in hundredths of miles) of each node in the network. There are 10,349 nodes in all, including the 30 cordon points around the perimeter of the region. By contrast, the FAR82VAL (1982) UNET base network has only 6,990 nodes (and 8,191 is the maximum number of nodes allowed in UNET). Thus, the INET network is more dense than a comparable UNET network. This is largely because the INET network contains highway nodes and links whether they are served by transit or not.

The HLINKS member contains all the highway links in the 1980 network. There is a total of 27,246 one-way links (thus, a two-way street segment is represented by two one-way links).

Optional transit links include anything that is not a highway link, including transit access links, CBD walk networks, fare links for express bus routes (mode 5), and (in future-year networks) rail and other exclusive guideway links and mini-walk networks around rail stations. For this network, optional transit links are found in the following seven mutually exclusive members:

- o PNRCON (365 links): park-and-ride connectors, generated by executing the BLDCON2I program;
- o KNRCON (243 links): kiss-and-ride connectors, generated through BLDCON2I;
- o WALK1245 (2777 links): walk connectors, generated by BLDCON2I;
- o LACBD (228 links): the walk network for downtown Los Angeles, manually created for INET from a UNET base network;
- o LBCBD (24 links): the walk network for downtown Long Beach, also manually created;
- o FARELINK (61 links): links of express bus routes that cross fare zone boundaries; and
- o OPTLS (179 links): "long links" (other than fare links) for express bus routes (see Section 3).

Thus, there are a total of 3877 optional transit links.

The ROUTES member of MRP.NETWORK.I80Z1245.DATA contains the original INET routes. The LINELNG member contains the same set of routes that short links have been replaced with long links for mode 5. There are 486 routes in the file, compared to 500 for the FAR82VAL UNET network. This difference is due both to actual differences in transit service between 1980 and 1982, and also to minor subjective variations in the way the same set of routes was coded. The identifier for each route is given in Appendix A.

5. INET ANALYSIS PROCEDURES

Figure 1 is a conceptual representation of the 1980 INET implementation process. Table 1 contains a directory of the data sets needed to conduct the INET analysis. Note that for 1980, the procedure differs from the conventional UNET version mainly in two respects: (i) the creation of the highway Z-file in step 6, and its incorporation into the transit network in step 7; and (ii) the iterative recalibration of the mode choice bias coefficients in steps 12 and 13 (see GPC Technical Memorandum 89.3.5. INET-Related Mode-Choice Recalibration).

The procedure outlined in Figure 1 does not explicitly incorporate the effect of highway congestion on transit mode choice. The reason for this is two-fold. First, all transit modes (except in the case of the El Monte Busway) use the same congested network that cars do, so there is no differential advantage from one mode to another. Second, highway congestion is implicitly accounted for in the existing bus schedule: the "elapsed time" (ET) parameter in each route definition governs the transit link speeds for a passenger using that route, and elapsed time is based on actual highway conditions.

In future-year analyses, however, the impact of highway congestion on transit should be explicitly addressed in the modeling procedure. One conceptual approach for accomplishing this is shown by the flowchart in Figure 2. In this method, the travel forecasting process up through highway and transit assignment is conducted based on assumed link speeds (e.g., from a look-up table). The transit and auto volumes are combined (possibly equating buses to more than one car through the TVCE parameter) for each link in the highway network. New link speeds are computed as a function of the combined assigned volumes. Then, new highway and transit skims (travel times for each O-D pair) are generated based on the congested speeds. The mode choice model is run again, then another highway and transit assignment.

Even if the process is stopped after this second iteration, it represents a theoretical improvement over existing procedures. However, it is possible to keep cycling back through until, say, mode shares do not change appreciably from one iteration to the next. It is not known how many iterations this will take; in practice it may be necessary to limit the process to a small number of cycles.

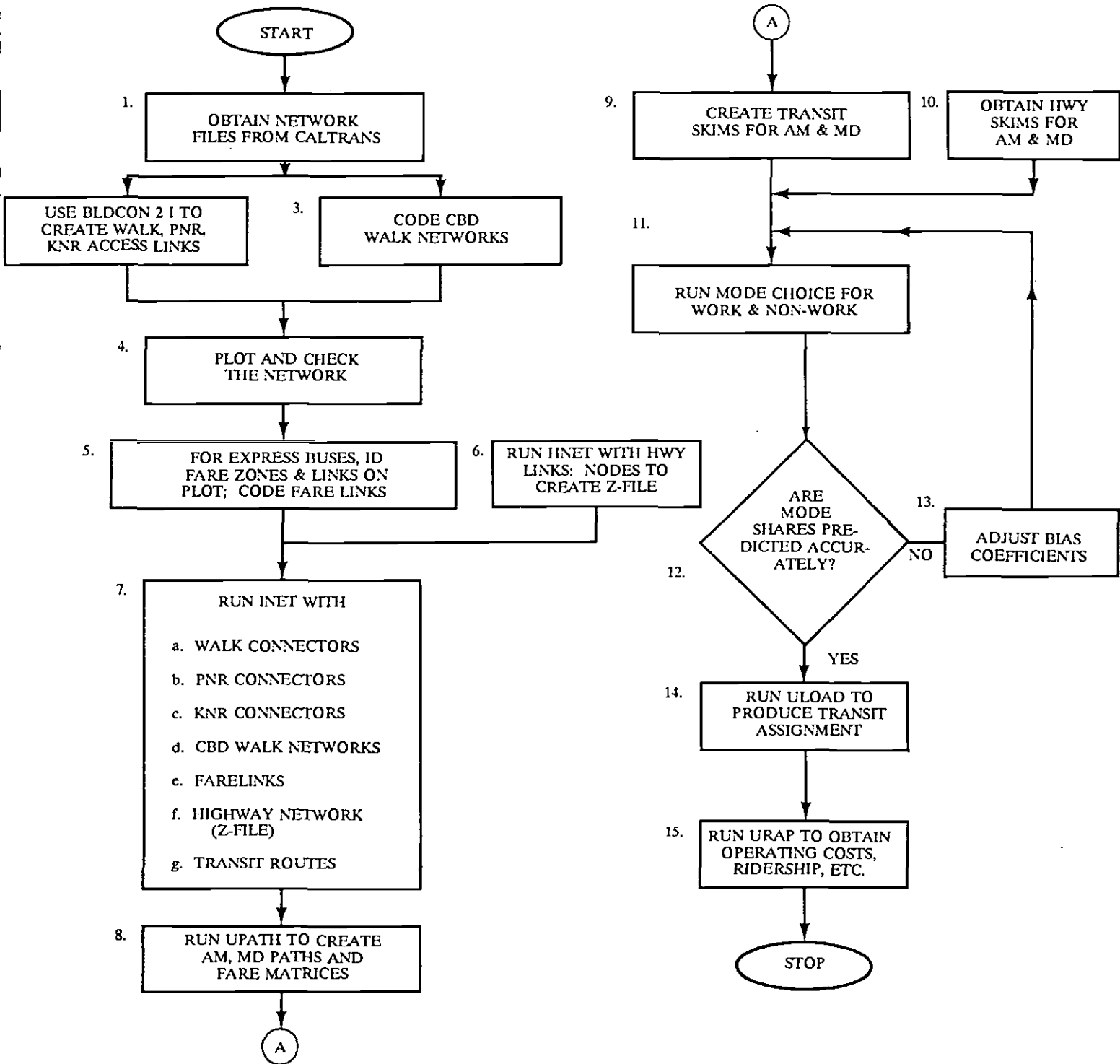


FIGURE 1

1980 INET IMPLEMENTATION PROCESS

TABLE 1 : DATASET DIRECTORY FOR THE 1980 VALIDATION NETWORK

NETWORK : I80Z1245

STEP NAME	DATASET	COMMENTS	TAPE/VOL	
INET	(I) MRP.NETWORK.I80Z1245.DATA(WALK1245)	LINES FILE	PLAN01	
	MRP.NETWORK.I80Z1245.DATA(PNRCON)	LINES FILE	PLAN01	
	MRP.NETWORK.I80Z1245.DATA(KNRCON)	LINES FILE	PLAN01	
	MRP.NETWORK.I80Z1245.DATA(LACBD)	LINES FILE	PLAN01	
	MRP.NETWORK.I80Z1245.DATA(LBCBD)	LINES FILE	PLAN01	
	MRP.NETWORK.I80Z1245.DATA(FARELINK)	LINES FILE	PLAN01	
	MRP.NETWORK.I80Z1245.DATA(LINELNG)	LINES FILE	PLAN01	
	MRP.I80Z1245.ZZ1	HWY Z-FILE	PLAN01	
	(O) MRP.TNET.I80Z1245.DL1.DATA	NETWK FILE	PLAN02	
	MRP.TNET.I80Z1245.DL2.DATA	NETWK FILE	PLAN02	
	MRP.TNET.I80Z1245.DL3.DATA	NETWK FILE	PLAN02	
	MRP.TNET.I80Z1245.DL4.DATA	NETWK FILE	PLAN02	
	MDWLKSKM(I)	MRP.TNET.I80Z1245.DL1.DATA	NETWK FILE	PLAN03
		MRP.TNET.I80Z1245.DL1.DATA	NETWK FILE	PLAN03
MRP.TNET.I80Z1245.DL3.DATA		NETWK FILE	PLAN03	
MRP.TNET.I80Z1245.DL4.DATA		NETWK FILE	PLAN03	
(O) MRP.I80Z1245.MPTH		MIDDAY PATHS	1433	
MRP.I80Z1245.MD10		MIDDAY SKIMS	1433	
MRP.I80Z1245.MDY5		MIDDAY SKIMS	1433	
MRP.FARE.I80Z1245.MD.DATA		MD FARES	3737	
AMWLKSKM(I)	MRP.TNET.I80Z1245.DL1.DATA	NETWK FILE	PLAN03	
	MRP.TNET.I80Z1245.DL1.DATA	NETWK FILE	PLAN03	
	MRP.TNET.I80Z1245.DL3.DATA	NETWK FILE	PLAN03	
	MRP.TNET.I80Z1245.DL4.DATA	NETWK FILE	PLAN03	
	(O) MRP.I80Z1245.WPTH	WALK PATHS	1605	
	MRP.I80Z1245.WK10	MALK SKIMS	1605	
	MRP.I80Z1245.FAREWLK	AM WALK FARE	8963	
AMPNRSKM(I)	MRP.TNET.I80Z1245.DL1.DATA	NETWK FILE	PLAN03	
	MRP.TNET.I80Z1245.DL1.DATA	NETWK FILE	PLAN03	
	MRP.TNET.I80Z1245.DL3.DATA	NETWK FILE	PLAN03	
	MRP.TNET.I80Z1245.DL4.DATA	NETWK FILE	PLAN03	
	(O) MRP.I80Z1245.PPTH	PNR PATHS	1403	
	MRP.I80Z1245.PR10	PNR SKIMS	1403	
MRP.I80Z1245.FAREPNR	AM PNR FARE	0482		
AMKNRSKM(I)	MRP.TNET.I80Z1245.DL1.DATA	NETWK FILE	PLAN03	
	MRP.TNET.I80Z1245.DL1.DATA	NETWK FILE	PLAN03	
	MRP.TNET.I80Z1245.DL3.DATA	NETWK FILE	PLAN03	
	MRP.TNET.I80Z1245.DL4.DATA	NETWK FILE	PLAN03	

TABLE 1 : DATASET DIRECTORY FOR THE 1980 VALIDATION NETWORK (CONTD.)

NETWORK : I80Z1245

STEP NAME	DATASET	COMMENTS	TAPE/VOL
	(O) MRP.I80Z1245.KPTH	KNR PATHS	1300
	MRP.I80Z1245.KR10	KNR SKIMS	1300
	MRP.I80Z1245.FAREKNR	AM KNR FARE	0880
AMSKMSUM(I)	MRP.I80Z1245.WK10	WLK SKIMS	1403
	MRP.I80Z1245.PR10	PNR SKIMS	1433
	MRP.I80Z1245.KR10	KNR SKIMS	1300
	(O) MRP.I80Z1245.AM17	MERGED SKIMS (17 TABLES)	3760
MRGFARE (I)	MRP.I80Z1245.FAREWLK	AM WLK FARE	8963
	MRP.I80Z1245.FAREPNR	AM PNR FARE	0482
	MRP.I80Z1245.FAREKNR	AM KNR FARE	0880
	(O) MRP.FARE.I80Z1245.AM.DATA	AM FARES	3737
MCHWORK (I)	MRP.Y80Z1245.UMTRX84.H8	HWY SKIMS	010908
	MRP.TT.Y80PA5.AZ1245.GPC.DATA	PERSON TT	PLAN02
	MRP.I80Z1245.AM17	MERGED SKIMS	3760
	MRP.FARE.I80Z1245.AM.DATA	MD FARES	3737
	MRP.AZ1245.MCH.MOA.SCAG80B.DATA	TRIP END	MRP001
	(O) MRP.I80Z1245.TT14	WORK TRIPS	4048
MCHNWRK (I)	MRP.Y80Z1245.UMTRX84.H8	HWY SKIMS	010908
	MRP.TT.Y80PA5.AZ1245.GPC.DATA	PERSON TT	PLAN02
	MRP.I80Z1245.MDY5	MERGED SKIMS	13255
	MRP.FARE.I80Z1245.MD.DATA	MD FARES	3737
	MRP.AZ1245.MCH.MOA.SCAG80B.DATA	TRIP END	MRP001
	(O) MRP.I80Z1245.TT12	WORK TRIPS	4434
ELD3R (I)	MRP.I80Z1245.TT14	AM/24HR TRIPS	4048
	MRP.I80Z1245.TT12	MD/24HR TRIPS	4434
	MRP.TNET.I80Z1245.DL1.DATA	NETWK FILE	PLAN02
	MRP.TNET.I80Z1245.DL2.DATA	NETWK FILE	PLAN02
	MRP.TNET.I80Z1245.DL3.DATA	NETWK FILE	PLAN02
	MRP.TNET.I80Z1245.DL4.DATA	NETWK FILE	PLAN02
	MRP.I80Z1245.WPTH	WALK PATHS	1605
	MRP.I80Z1245.PPTH	PNR PATHS	1403
	MRP.I80Z1245.KPTH	KNR PATHS	1300
	MRP.I80Z1245.MPTH	MIDDAY PATHS	1433
	(O) MRP.LL.I80Z1245.HPK.DATA	AM LOADS	PLAN03
	MRP.LL.I80Z1245.HBS.DATA	MD LOADS	PLAN03
	MRP.I80Z1245.AM.PRASOUT	AM BOARDING	PLAN02
	MRP.I80Z1245.MD.PRASOUT	MD BOARDING	PLAN02
	MRP.I80Z1245.URAPOUT	RT ANALYSIS	PLAN02

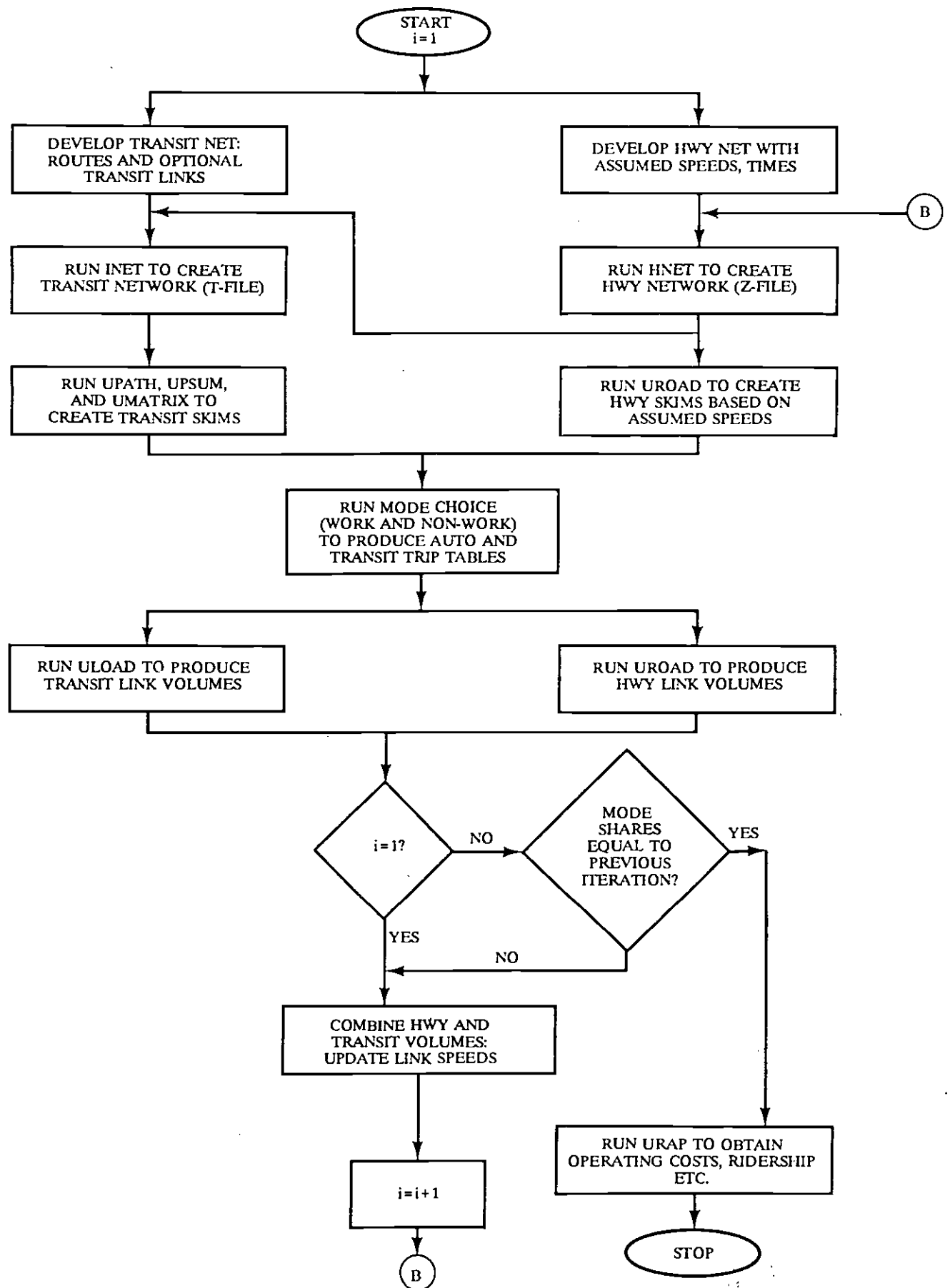


FIGURE 2

APPENDIX A
ROUTE IDENTIFIERS
FOR 1980 INET NETWORK

&ROUTE M=4, L=1, C=1, H=20, ID='2-GREENLEAF-RAMONA', ONEWAY=T,
 &ROUTE M=4, L=2, C=1, H=11, ID='2-EASTERN AVE-CENTRAL AVE', ONEWAY=T,
 &ROUTE M=4, L=3, C=1, H=7, ID='3 ALDEN & SAN VICENTE TO WILLOWBROOK',
 &ROUTE M=4, L=4, C=1, H=10, ID='3-MANCHESTER-ALDEN DR',
 &ROUTE M=4, L=5, C=1, H=8, ID='4A-CNTRY CTY-LACBD-W.HLLYWD',
 &ROUTE M=4, L=6, C=1, H=10, ID='4B-SNT MONICA-LACBD-W.HLLYWD',
 &ROUTE M=4, L=8, C=1, H=5, ID='5-HAWTHORNE-LA JAIL',
 &ROUTE M=4, L=9, C=1, H=5, ID='6-HIGHLAND PARK TO VERMONT AVE',
 &ROUTE M=4, L=10, C=1, H=15, ID='7-EAGLE ROCK-S. PEDRO&ROSECRANS',
 &ROUTE M=4, L=11, C=1, H=15, ID='7-VERDUGO RD-EAGLE ROCK PLAZA',
 &ROUTE M=4, L=12, C=1, H=15, ID='8-54TH ST-N. MAIN ST',
 &ROUTE M=4, L=13, C=1, H=12, ID='9A HOLLYDALE TO LA CIENEGA',
 &ROUTE M=4, L=14, C=1, H=12, ID='9-LYNWOOD TO LA CIENEGA',
 &ROUTE M=4, L=15, C=1, H=15, ID='10 ADAMS TO PRAIRIE',
 &ROUTE M=4, L=16, C=1, H=8, ID='12-EAGLE ROCK-LA-CBD',
 &ROUTE M=4, L=17, C=1, H=20, ID='14-BOYLEAVE-STATESTREET',
 &ROUTE M=4, L=18, C=1, H=20, ID='15-ROWAN AVE',
 &ROUTE M=4, L=19, C=1, H=40, ID='16-BELL GRDNS-ALHMBRA',
 &ROUTE M=4, L=20, C=1, H=30, ID='17-SOUTH GATE-EL SERENO',
 &ROUTE M=4, L=21, C=1, H=10, ID='18-COLISEUM-E. JEFFERSON BLVD',
 &ROUTE M=4, L=22, C=1, H=30, ID='20-E GLENOAKS-KENNETH RD',
 &ROUTE M=4, L=23, C=1, H=40, ID='22-ATWATER-E. COLORADO',
 &ROUTE M=4, L=25, C=1, H=23, ID='24-SYLMAR-LA',
 &ROUTE M=4, L=26, C=1, H=30, ID='24-SAN FERNANDO-LA CBD',
 &ROUTE M=4, L=27, C=1, H=15, ID='25-N.FIGUEROA-LA CBD',
 &ROUTE M=4, L=28, C=1, H=6, ID='26-W-PICO-ATLANTIC BLVD',
 &ROUTE M=4, L=29, C=1, H=6, ID='26A-WPICO-ATLNTC-1ST ST',
 &ROUTE M=4, L=30, C=1, H=7, ID='27-LA CIENEGA-VERNON',
 &ROUTE M=4, L=31, C=1, H=6, ID='28-W.3RD ST.-WHITTIER BLVD',
 &ROUTE M=4, L=32, C=1, H=6, ID='29 SAN PEDRO ST TO WEST SEVENTH ST',
 &ROUTE M=4, L=33, C=1, H=22, ID='32-WSHTN BLVD-CAL STATE LA BUS STN',
 &ROUTE M=4, L=34, C=1, H=20, ID='33-WILMINGTON-LA CBD',
 &ROUTE M=4, L=35, C=1, H=30, ID='34L-LA CBD-PARAMOUNT',
 &ROUTE M=4, L=36, C=1, H=24, ID='39 -BURBANK-LA CBD',
 &ROUTE M=4, L=37, C=1, H=22, ID='39A-GLENDALE-LA CBD',
 &ROUTE M=4, L=38, C=1, H=12, ID='41-ALVARADO ST',
 &ROUTE M=4, L=39, C=1, H=12, ID='42-SUNSETBLVD-TEMPLEST',
 &ROUTE M=4, L=40, H=8, ID='44 -BEVERLY-WEST HOLLYWOOD', ONEWAY=T,
 &ROUTE M=4, L=41, C=1, H=13, ID='44-W.HLLYWD-BEVERLY', ONEWAY=T,
 &ROUTE M=4, L=42, C=1, H=7, ID='47-EASTOLYMPICBLVD-W8TH',
 &ROUTE M=4, L=43, C=1, H=12, ID='49-S FIGUEROA-SN PDRO ST',
 &ROUTE M=4, L=44, H=10, ID='50-FLORENCE AVE TO SOTO STREET',
 &ROUTE M=4, L=45, C=1, H=30, ID='56L-SUNLAND-LA CBD',
 &ROUTE M=4, L=46, C=1, H=30, ID='65 SILVERLAKEBL-RIVERSIDEDR',
 &ROUTE M=4, L=47, C=1, H=15, ID='73 VAN NESS AVE ARLINGTON',
 &ROUTE M=4, L=48, C=1, H=6, ID='75-VENICE BLVD-ECHO PARK',
 &ROUTE M=4, L=49, C=1, H=40, ID='76-PACIFIC PAL-BEV HILLS',
 &ROUTE M=4, L=50, C=1, H=16, ID='78-TALMADGE ST-HYPERION-AVE',
 &ROUTE M=4, L=51, C=1, H=20, ID='81-WOODLAND HILLS-HOLLYWOOD',
 &ROUTE M=4, L=52, C=1, H=5, ID='83LW-SANTA MONICA-LACBD',

&ROUTE M=4, L=53, C=1, H=25, ID='83B-S.MONICA-LACBD VIA BRNTWD',
 &ROUTE M=4, L=54, C=1, H=14, ID='83-UCLA-LACBD',
 &ROUTE M=4, L=56, C=1, H=5, ID='84-WESTERN AVENUE',
 &ROUTE M=4, L=57, C=1, H=8, ID='85 CRENSHAW, VINE, LA BREA',
 &ROUTE M=4, L=58, C=1, H=10, ID='86-VAN-NUYS-LA',
 &ROUTE M=4, L=59, C=1, H=20, ID='87-EUCLID AVE-EVERGREEN AVE',
 &ROUTE M=4, L=60, C=1, H=24, ID='89-ADAMS BLVD-ST ANDREWS PL',
 &ROUTE M=4, L=61, C=1, H=12, ID='89-ADAMS BLVD-WESTSHIRE',
 &ROUTE M=4, L=62, C=1, H=10, ID='91S-LACBD-BEVERLY DR ', ONEWAY=T,
 &ROUTE M=4, L=63, C=1, H=5, ID='91 CENTURY CITY-LA CBD', ONEWAY=T,
 &ROUTE M=4, L=64, C=1, H=15, ID='92-WATTS TO SIERRA VISTA',
 &ROUTE M=4, L=67, C=1, H=8, ID='94-SANTA MONICA BLVD',
 &ROUTE M=4, L=68, C=1, H=6, ID='95-120TH ST-HLLYWD BLVD',
 &ROUTE M=4, L=69, C=1, H=20, ID='66-GARDENA TO HOLLYWOOD',
 &ROUTE M=4, L=70, C=1, H=30, ID='114 CARSON TO CMPTN LYNWOOD',
 &ROUTE M=4, L=71, C=1, H=30, ID='142-120TH ST TO CNTY HOSPTL',
 &ROUTE M=4, L=72, C=1, H=30, ID='151-TOPANGA-MULHOLLAND',
 &ROUTE M=4, L=73, C=1, H=20, ID='152-FALLBROOK-ROSCOE',
 &ROUTE M=4, L=74, C=1, H=30, ID='153-DESOTO-VENTURA-WINNETKA',
 &ROUTE M=4, L=75, C=1, H=30, ID='154-TAMPA-BURBANK-OXNARD',
 &ROUTE M=4, L=76, C=1, H=30, ID='155-WHITE-OAK-RINALDI',
 &ROUTE M=4, L=77, C=1, H=30, ID='156-BALBOA-WOODLEY',
 &ROUTE M=4, L=78, C=1, H=25, ID='157-SEPULVDA-BRAND BLVD',
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 &ROUTE M=4, L=81, C=1, H=30, ID='160-LAUREL-CANYON-BLVD',
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 &ROUTE M=4, L=85, C=1, H=20, ID='164-VICTORY BLVD',
 &ROUTE M=4, L=86, C=1, H=22, ID='165-VANOWEN-BURBANK AIRPORT',
 &ROUTE M=4, L=87, C=1, H=20, ID='166-NORDHOFF-OSBORNE',
 &ROUTE M=4, L=88, C=1, H=20, ID='168-LASSEN-STREET',
 &ROUTE M=4, L=89, C=1, H=30, ID='169-CANOGA PARK-SUNLAND',
 &ROUTE M=4, L=90, C=1, H=50, ID='175-TRANCAS CYN-SANTA MONICA',
 &ROUTE M=4, L=91, C=1, H=15, ID='176-S LA-PACIFIC PAL', ONEWAY=T,
 &ROUTE M=4, L=95, C=1, H=60, ID='306-CNTRL-MNCHSTR-WLMNGTN & CMPTN',
 &ROUTE M=4, L=96, C=1, H=20, ID='353-VERMONT AVE',
 &ROUTE M=4, L=97, C=1, H=30, ID='354-54TH ST', PERIOD=(0550,1900),
 &ROUTE M=4, L=98, C=1, H=30, ID='356-GAGE AVE', PERIOD=(0600,1923),
 &ROUTE M=4, L=99, C=1, H=30, ID='359-108TH ST',
 &ROUTE M=4, L=100, C=1, H=20, ID='420-LA-ALHAM VIA BROKLYN GARFELD',
 &ROUTE M=4, L=101, H=21, ID='422-EL MONTE-LA CBD',
 &ROUTE M=4, L=102, C=1, H=60, ID='423-LONG BEACH TO PASADENA',
 &ROUTE M=4, L=103, C=1, H=30, ID='423-MAYWOOD-PASADENA',
 &ROUTE M=4, L=104, C=1, H=30, ID='424-EL MNT-STN-CAL ST LA', ONEWAY=T,
 &ROUTE M=4, L=105, C=1, H=20, ID='425-COMMERCE-ALTADENA',
 &ROUTE M=4, L=106, C=1, H=106, ID='426 LACBD TO EL MONTE',
 &ROUTE M=4, L=107, C=1, H=10, ID='428-LA-ALHAM-ARCAD VIALASTUNAS',
 &ROUTE M=4, L=108, C=1, H=30, ID='430-GLASSEL PARK-EL MONTE',
 &ROUTE M=4, L=109, C=1, H=30, ID='431-ALTADENA-ROSEMEAD',

&ROUTE M=4, L=110, C=1, H=20, ID='432-ARCADIA-LA CBD',
 &ROUTE M=4, L=111, C=1, H=30, ID='433-ALTADENA-EL MONTE',
 &ROUTE M=4, L=112, C=1, H=30, ID='434-DUARTE-GLENDALE',
 &ROUTE M=4, L=113, C=1, H=30, ID='435-ALTADENA-EL MONTE',
 &ROUTE M=4, L=114, C=1, H=30, ID='436-ALTADENA-HOLLYWOOD',
 &ROUTE M=4, L=115, C=1, H=30, ID='436-PASADENA-HOLLYWOOD',
 &ROUTE M=4, L=116, C=1, H=30, ID='438-DUARTE-ALTADENA',
 &ROUTE M=4, L=117, C=1, H=30, ID='440-POMONA-PASADENA',
 &ROUTE M=4, L=118, C=1, H=60, ID='441-GLENDORA-BASSET',
 &ROUTE M=4, L=119, C=1, H=60, ID='443-SAN DIMAS-LA PUENTE',
 &ROUTE M=4, L=120, C=1, H=60, ID='445-MONTCLAIR-HACIENDA HTS',
 &ROUTE M=4, L=121, C=1, H=60, ID='446-POMONA-EL MONTE',
 &ROUTE M=4, L=122, C=1, H=30, ID='447-AZUSA-CITY OF INDUSTRY',
 &ROUTE M=4, L=123, C=1, H=30, ID='451-FOOTHILL BLVD-GAREY AVE',
 &ROUTE M=4, L=124, C=1, H=30, ID='452-SAN BRNRDN-AVE-ARROYO AVE',
 &ROUTE M=4, L=125, C=1, H=30, ID='453-INDIAN HILL BLVD-RESERVOIR ST',
 &ROUTE M=4, L=126, C=1, H=30, ID='454-ARROW HWY-W 9TH ST',
 &ROUTE M=4, L=127, C=1, H=60, ID='493-MONROVIA TO ELMONTE',
 &ROUTE M=4, L=128, C=1, H=20, ID='820 PUENTE HILLS MLL TO LACBD',
 &ROUTE M=4, L=129, C=1, H=20, ID='820 BREA MALL TO LACBD',
 &ROUTE M=4, L=130, C=1, H=60, ID='821-CERRITOS-PICO RIVERA',
 &ROUTE M=4, L=131, C=1, H=60, ID='822 LA WHITTIER LA MIRADA',
 &ROUTE M=4, L=132, C=1, H=60, ID='825-HAWAIIAN GARDENS TO WHITTIER',
 &ROUTE M=4, L=133, C=1, H=30, ID='826 HUNTINTON PARK TO DOWNEY',
 &ROUTE M=4, L=134, C=1, H=40, ID='827 EL MONTE CERRITOS, SEAL BEACH',
 &ROUTE M=4, L=135, C=1, H=30, ID='828-MARINA DEL REY-WHITTIER',
 &ROUTE M=4, L=136, C=1, H=30, ID='828-CULVER CITY TO CUDAHY',
 &ROUTE M=4, L=137, C=1, H=30, ID='828-MARINA DEL REY-CUDAHY',
 &ROUTE M=4, L=138, C=1, H=30, ID='829-SEAL BEACH TO PASADENA',
 &ROUTE M=4, L=139, C=1, H=60, ID='831-LKWD MALL-BEV & DURF',
 &ROUTE M=4, L=140, C=1, H=30, ID='832-PLAYA DEL REY-NORWALK',
 &ROUTE M=4, L=141, C=1, H=30, ID='832A-PLAYA DEL REY-NORWALK',
 &ROUTE M=4, L=142, C=1, H=30, ID='834-CENTURY BLVD',
 &ROUTE M=4, L=143, C=1, H=30, ID='836-IMPERIAL HIGHWAY',
 &ROUTE M=4, L=144, C=1, H=30, ID='838-EL SEGUNDO BLVD',
 &ROUTE M=4, L=145, C=1, H=30, ID='840-ROSECRANS AVE',
 &ROUTE M=4, L=146, C=1, H=30, ID='841-SAN PEDRO TO HUNTINGTON PARK',
 &ROUTE M=4, L=147, C=1, H=60, ID='842-COMPTON BLVD-BELLFLOWER',
 &ROUTE M=4, L=148, C=1, H=40, ID='844-COMPTON-LA MIRADA',
 &ROUTE M=4, L=149, C=1, H=60, ID='846-ARTESIA BLVD-KNOTT',
 &ROUTE M=4, L=150, C=1, H=30, ID='849 -SAN PEDRO TO HARBOR CITY',
 &ROUTE M=4, L=151, C=1, H=45, ID='861-MANHATTAN BEACH BLVD',
 &ROUTE M=4, L=152, C=1, H=60, ID='867 INGLEWOOD AVE',
 &ROUTE M=4, L=153, C=1, H=70, ID='869 -PALOS VERDES TO INGLEWOOD',
 &ROUTE M=4, L=154, C=4, H=63, ID='869A-PLS VERDES-INGLWD VIA PV DR',
 &ROUTE M=4, L=156, C=1, H=20, ID='871 LOS ANGELES TO REDONDO BEACH',
 &ROUTE M=4, L=157, C=1, H=30, ID='872-BARTON HILL TO PK WESTRN PLZ',
 &ROUTE M=4, L=158, C=1, H=60, ID='873-LAX TERMINAL-OCEAN&LOCUST',
 &ROUTE M=4, L=159, C=1, H=30, ID='874-PORTS O CALL', ONEWAY=T,
 &ROUTE M=4, L=160, C=1, H=60, ID='877 HOLLYWOOD-LAX',

&ROUTE M=4, L=161, C=1, H=60, ID='838A-EL SGND-LYNWOOD',
 &ROUTE M=4, L=162, C=1, H=6, ID='95-VERMONT-ATLANTIC',
 &ROUTE M=4, L=164, C=1, H=30, ID='114-CARSON TO COMPTON LYNWOOD',
 &ROUTE M=4, L=165, C=1, H=30, ID='826-HUNTINGTON PARK TO DOWNEY',
 &ROUTE M=4, L=166, C=1, H=30, ID='826-HUNTINGTON PARK TO DOWNEY',
 &ROUTE M=4, L=169, C=1, H=15, ID='29-SAN PEDRO ST TO WEST SEVENTH ST',
 &ROUTE M=4, L=170, C=1, H=15, ID='7-TEMPLE&SPRING-EL SEGUNDO BLVD.',
 &ROUTE M=4, L=176, C=1, H=10, ID='2-RAMONA GREENLEAF', ONEWAY=T,
 &ROUTE M=4, L=177, C=1, H=8, ID='91W-LACBD-CENTURY CITY', ONEWAY=T,
 &ROUTE M=4, L=179, C=1, H=30, ID='424-CAL ST LA-EL MNTE STN', ONEWAY=T,
 &ROUTE M=4, L=180, C=1, H=7, ID='27-LA CIENEGA-SANTA BARBARA',
 &ROUTE M=4, L=181, C=1, H=58, ID='493E-EL MONTE-MONROVIA', ONEWAY=T,
 &ROUTE M=4, L=182, C=1, H=10, ID='42-FOUNTAIN TEMPLE',
 &ROUTE M=5, L=1, C=1, H=10, ID='5F-HAWTHORNE-LA CNTY JAIL', ONEWAY=T,
 &ROUTE M=5, L=3, C=1, H=180, ID='34FN-BELLFLOWER-LA CBD', ONEWAY=T,
 &ROUTE M=5, L=4, C=1, H=30, ID='737-SAN PEDRO-LA CBD', ONEWAY=T,
 &ROUTE M=5, L=5, C=1, H=7, ID='35F-NORTHRIDGE-LA CBD',
 &ROUTE M=5, L=6, C=1, H=11, ID='36-LONG BEACH-LACBD VIA 7 FWY',
 &ROUTE M=5, L=7, C=1, H=20, ID='42FE-SUNSET BLVD-LA CBD', ONEWAY=T,
 &ROUTE M=5, L=9, H=15, ID='44F-BEVERLY-W HLLYWD', ONEWAY=T,
 &ROUTE M=5, L=11, C=1, H=23, ID='56F-SUNLAND-LA CBD', ONEWAY=T,
 &ROUTE M=5, L=13, C=1, H=30, ID='86F-VAN NUYS-LA CBD', ONEWAY=T,
 &ROUTE M=5, L=15, C=1, H=30, ID='88-LAKEVIEW TR-WESTCHESTER',
 &ROUTE M=5, L=16, C=1, H=30, ID='88 LAKEVIEW TER. WESTCHESTER',
 &ROUTE M=5, L=17, C=1, H=12, ID='91FE- BEVERLY DR-LA CBD', ONEWAY=T,
 &ROUTE M=5, L=19, C=1, H=15, ID='93F-PANORAMA CTY-LA CBD', ONEWAY=T,
 &ROUTE M=5, L=20, C=1, H=20, ID='93A-VAN NUYS-LA CBD', ONEWAY=T,
 &ROUTE M=5, L=22, C=1, H=30, ID='93WA-LA CBD-VAN NUYS', ONEWAY=T,
 &ROUTE M=5, L=23, C=1, H=15, ID='121F-VAN NUYS-LA CBD', ONEWAY=T,
 &ROUTE M=5, L=24, C=1, H=8, ID='480W-POMONA-UNION&WILSHIRE', ONEWAY=T,
 &ROUTE M=5, L=25, C=1, H=20, ID='122-VAN NUYS-LA CBD',
 &ROUTE M=5, L=26, C=1, H=8, ID='144-RESEDA-LACBD', ONEWAY=T,
 &ROUTE M=5, L=27, C=1, H=20, ID='480E-UNION & WILSHIRE-POMONA', ONEWAY=T,
 &ROUTE M=5, L=28, C=1, H=15, ID='482W-POMONA-LA CBD', ONEWAY=T,
 &ROUTE M=5, L=29, C=1, H=30, ID='482E-LA CBD-POMONA', ONEWAY=T,
 &ROUTE M=5, L=30, C=1, H=15, ID='483-ALTADENA-LA CBD',
 &ROUTE M=5, L=32, C=1, H=60, ID='484W-ONTARIO ARPRT-LACBD',
 &ROUTE M=5, L=34, C=1, H=50, ID='484EP-LA CBD-POMONA', ONEWAY=T,
 &ROUTE M=5, L=35, C=1, H=10, ID='484WP-POMONA-LA CBD', ONEWAY=T,
 &ROUTE M=5, L=36, C=1, H=15, ID='485-ALTADENA-LA CBD',
 &ROUTE M=5, L=38, C=1, H=14, ID='486W-PNT HLS MLL-LACBD', ONEWAY=T,
 &ROUTE M=5, L=40, C=1, H=30, ID='486E-EL MONTE-PUENTE HS', ONEWAY=T,
 &ROUTE M=5, L=42, C=1, H=14, ID='488W-GLENDORA-LACBD', ONEWAY=T,
 &ROUTE M=5, L=43, C=1, H=30, ID='488E-LA CBD-GLENDORA', ONEWAY=T,
 &ROUTE M=5, L=46, C=1, H=7, ID='490W-BREA MALL-LA CBD', ONEWAY=T,
 &ROUTE M=5, L=47, C=1, H=15, ID='490E-LA CBD-BREA MALL', ONEWAY=T,
 &ROUTE M=5, L=48, C=1, H=16, ID='492W-SAN DIMAS-UNION AVE', ONEWAY=T,
 &ROUTE M=5, L=50, C=1, H=40, ID='493-MONROVIATOLACBD', ONEWAY=T,
 &ROUTE M=5, L=52, C=1, H=20, ID='494W-GLENDORA-UNION AVE', ONEWAY=T,
 &ROUTE M=5, L=54, C=1, H=60, ID='496-SANBERN TO LACBD',

&ROUTE M=5, L=55, C=1, H=40, ID='601F-CSTLLMMR-LCBD',ONEWAY=T,
 &ROUTE M=5, L=56, C=1, H=20, ID='601F-LACBD-CSTLLMMR', ONEWAY=T,
 &ROUTE M=5, L=57, C=1, H=35, ID='602F-W. LOS ANGELES-LACBD',
 &ROUTE M=5, L=58, C=5,H=30,ID='16-LOS CERRITOS VIA LONG BEACH FWY',
 &ROUTE M=5, L=59, C=1, H=12, ID='604-VENICE-LACBD', ONEWAY=T,
 &ROUTE M=5, L=61,C=1, H=12,ID='605-MARINA DEL REY EXPRESS',ONEWAY=T, ,
 &ROUTE M=5, L=62, C=1, H=60, ID='605-LACBD-MARINA DEL REY',ONEWAY=T,
 &ROUTE M=5, L=63, C=1, H=30, ID='606FE-HERMOSA BCH-LA CBD', ONEWAY=T,
 &ROUTE M=5, L=65, C=1, H=20, ID='607FW-TORRANCE-LA CBD',ONEWAY=T,
 &ROUTE M=5, L=66, C=1, H=30, ID='607-FS-LA CBD-TORRANCE',ONEWAY=T,
 &ROUTE M=5, L=67, C=1, H=30, ID='608-MALIBU-LACBD',ONEWAY=T,
 &ROUTE M=5, L=70, C=1, H=20, ID='716-CANOGA PARK TO LACBD',ONEWAY=T,
 &ROUTE M=5, L=72, C=1, H=20, ID='721-NORTHRIDGE-LACBD',ONEWAY=T,
 &ROUTE M=5, L=76,C=1, H=10, ID='755-SEAL BCH-LA CBD AM PK', ONEWAY=T,
 &ROUTE M=5, L=78, C=1, H=6, ID='757-FLLRTN PNR-LA CBD', ONEWAY=T,
 &ROUTE M=5, L=80, C=1, H=15, ID='758-LA MIRADA-LA CBD',ONEWAY=T,
 &ROUTE M=5, L=82,C=1,H=8,ID='760A-CITRUS COLLEGE-WESTERN',ONEWAY=T,
 &ROUTE M=5, L=84, C=1, H=14, ID='764W-MONTCLAIR-WESTERN AVE', ONEWAY=T,
 &ROUTE M=5, L=86, C=1, H=15,ID='770-ALTADENA-LA CBD', ONEWAY=T,
 &ROUTE M=5, L=87, C=1, H=35, ID='770FN-LA CBD-ALTADENA',ONEWAY=T,
 &ROUTE M=5, L=88, C=1, H=10, ID='802-LA-NRWLK-KNTTS-DISNEYLAND',
 &ROUTE M=5, L=89, C=1, H=15, ID='801 LACBD TO NORWALK',
 &ROUTE M=5, L=90, C=1, H=30, ID='800-LA-NORWALK-SANTA ANA-KNOTTS',
 &ROUTE M=5, L=91, C=1, H=11, ID='810FN-SAN PEDRO-UNION STN', ONEWAY=T,
 &ROUTE M=5, L=92,C=1, H=13, ID='810S-UNION STN-SAN PEDRO', ONEWAY=T,
 &ROUTE M=5, L=93, C=1, H=25, ID='813-PALOS VERDES-UNION STN',
 &ROUTE M=5, L=94, C=1, H=15, ID='814FN-PLS VRDES-UN STN',ONEWAY=T,
 &ROUTE M=5, L=95,C=1,H=60,ID='814FS-UNION STN-PLS VRDES',ONEWAY=T,
 &ROUTE M=5, L=96, C=1, H=180,ID='860E-LNG BCH-RIVERSIDE',
 &ROUTE M=5, L=98, C=1, H=60, ID='860AE-LONG BCH-DISNEYLAND',
 &ROUTE M=5, L=100, C=1, H=15, ID='93-NORTHRIDGE TO LA CBD',
 &ROUTE M=5, L=101,C=1,H=8, ID='762W-DIAMOND BAR-WESTERN',ONEWAY=T,
 &ROUTE M=5, L=103, C=1, H=60, ID='161-CANOGA PARK-WESTLAKE',
 &ROUTE M=5, L=104, C=1, H=7, ID='490AW-COVINA-LA CBD',ONEWAY=T,
 &ROUTE M=5, L=105, C=1, H=30, ID='482-EL MONTE-POMONA',ONEWAY=T,
 &ROUTE M=5, L=106, C=1, H=15, ID='490AE-LA CBD-W. COVINA',ONEWAY=T,
 &ROUTE M=5, L=108, C=1, H=15, ID='770A-PASADENA-LA CBD',ONEWAY=T,
 &ROUTE M=5, L=109, C=1, H=30, ID='770-LA CBD-PASADENA',ONEWAY=T,
 &ROUTE M=5, L=110,C=1,H=30,ID='800A-SNT FE SPRNGS-LA CBD',ONEWAY=T,
 &ROUTE M=5, L=112, C=1, H=15, ID='39F-GLENDALE-LA CBD', ONEWAY=T,
 &ROUTE M=5, L=113, C=1, H=180, ID='123-WESTLAKE-LA CBD',
 &ROUTE M=5, L=115, C=1, H=14, ID='764A-POMONA FAIR-WESTERN',ONEWAY=T,,
 &ROUTE M=5, L=116,C=10,ID='201-SAN CLMNT-FLLRTN',
 &ROUTE M=5, L=117,C=10,ID='203-SAN CLMNT-LNG BCH',
 &ROUTE M=5, L=118,C=10,ID='204-FLLRTN-NWPRT BCH',
 &ROUTE M=5, L=119,C=10,ID='209-SAN CLMNT-ANAHEIM',
 &ROUTE M=5, L=120,C=10,ID='291-SAN CLMNT-SNT ANA',
 &ROUTE M=5, L=121,C= 4,ID='1-GARDENA-LOS ANGELES',
 &ROUTE M=5, L=122, C=1, H=9, ID='481-W COVINA-WILSHIRE&WESTERN',
 &ROUTE M=5, L=130,C= 8,ID='10-BLUE DIAMOND EXP EBD',

&ROUTE M=5, L=131,C= 8,ID='10-BLUE DIAMOND EXP WBD',
 &ROUTE M=5, L=132,C= 8,ID='10A-BLUE DIAMOND EXP EBD',
 &ROUTE M=5, L=133,C= 8,ID='10A-BLUE DIAMOND EXP WBD',
 &ROUTE M=5, L=135,C=9,H=60,ID='1-FASHION SQ TO LACBD',ONEWAY=T,
 &ROUTE M=5, L=136,C=9,H=60,ID='1-LACBD-FASHION SQ S/BD',ONEWAY=T,
 &ROUTE M=5, L=137,C=9,H=60,ID='2-L A VIA S BAY CT',ONEWAY=T,
 &ROUTE M=5, L=138,C=9,H=60,ID='2-FSHN SQ VIA S BAY CTR',ONEWAY=T,
 &ROUTE M=5, L=255,C=16,ID='THOUSAND OAKS-VENTURA',
 &ROUTE M=8, L= 1,C=10,ID='1-LONG BEACH-SAN CLEMENTE',
 &ROUTE M=8, L= 2,C=10,ID='21-SUNSET BEACH TO FULLERTON',
 &ROUTE M=8, L= 3,C=10,ID='25-FULLERTON TO HUNTINGTON BEACH',
 &ROUTE M=8, L= 4,C=10,ID='29-HUNTINGTON BCH TO LA HABRA',
 &ROUTE M=8, L= 5,C=10,ID='30-CERRITOS TO ORANGE',
 &ROUTE M=8, L= 6,C=10,ID='33-FULLERTON PNR-HUNTINGTON BEACH',
 &ROUTE M=8, L=7, C= 3,ID='1-WASHINGTON BLVD',
 &ROUTE M=8, L=8, C= 3,ID='2-SUNKIST PK NBD',
 &ROUTE M=8, L=9, C= 3,ID='2-SUNKIDT PK SBD',
 &ROUTE M=8, L= 10,C= 3,ID='3-CROSSTOWN',
 &ROUTE M=8, L= 11,C= 3,ID='4-FOX HILLS-WLA JC',
 &ROUTE M=8, L= 12,C= 3,ID='5-BRADDOCK DR',
 &ROUTE M=8, L= 13,C= 3,ID='6-SEPULVEDA BLVD',
 &ROUTE M=8, L= 24,C= 4,ID='2A WESTERN LOCAL CLK',
 &ROUTE M=8, L= 26,C= 4,ID='2B WESTERN LOCAL COUNCLK',
 &ROUTE M=8, L= 27,C= 4,ID='3 COM GARD. S. BAY CT',
 &ROUTE M=8, L= 28,C= 4,ID='4 GARD HOLPK-ELCAM',
 &ROUTE M=8, L= 31,C= 5, ID='1-NAVAL HOSP PCH & EASY AV',
 &ROUTE M=8, L=32, C=5,H=30,ID='1-LOS CERRITOS CTR-PCH-EASY AVE',
 &ROUTE M=8, L=33, C=5,H=30,ID='2-SANTA FE-CHERRY TO ALONDRA',
 &ROUTE M=8, L=34, C=5,H=30,ID='2-ALONDRA-DOWNEY-CHERRY-SANTE FE',
 &ROUTE M=8, L=36, C=5,H=20,ID='4-WARDLOW-MGNLIA-ATHERTON-DTDBLR',
 &ROUTE M=8, L=37, C=5,H=30,ID='4-WARDLOW-MAGNOLIA-ANAHEIM/PCH',
 &ROUTE M=8, L=38, C=5,H=30,ID='5-LNG BCH-GRNLEAF-SEAL BCH SHP CTR',
 &ROUTE M=8, L=39, C=5,H=30,ID='5-LNG BCH-GRNLEAF-OCEAN-72ND PLACE',
 &ROUTE M=8, L=40, C=5,H=15,ID='6-ALONDRA BLVD-LB CDB VIA ATLANTIC',
 &ROUTE M=8, L=41, C=5,H=30,ID='7-ROSECRANS-LB CBD VIA ORANGE AVE',
 &ROUTE M=8, L=42, C=5,H=30,ID='8-TOLEDO&CLAREMONT-QUEEN MARY',
 &ROUTE M=8, L=43, C=5,H=60,ID='9-BLLFLWR & ALNDRA-LONG BEACH CBD',
 &ROUTE M=8, L=44, C=5,H=30,ID='9-WOODRUFF&ALONDRA-7TH ST',
 &ROUTE M=8, L=45, C=5,H=60,ID='9-BLLFLWER & LKWD CTR TO 7TH ST',
 &ROUTE M=8, L=47, C=5,H=30,ID='10-SANTA FE&WILLOW TO LAKEWOOD CTR',
 &ROUTE M=8, L=48, C=5,H=30,ID='10-LAKEWOOD CTR-NAVY HOSPITAL',
 &ROUTE M=8, L=49, C=5,H=60,ID='11-LKWOOD SHOPPING CTR-QUEENS WAY',
 &ROUTE M=8, L=50, C=5,H=60,ID='11-HRVRD & BLLFLWR TO QUEENS WAY',
 &ROUTE M=8, L=51, C=5,H=60,ID='11-LKWD CNTR-PCFC&OCEAN VIA LKWD',
 &ROUTE M=8, L=52, C=5,H=60,ID='11-LKWD CTR-PCFC&OCEAN VIA CLARK',
 &ROUTE M=8, L=53, C=5,H=30,ID='13-PACIFIC&WARDLOW-CSU LONG BCH',
 &ROUTE M=8, L=54, C=5,H=60,ID='13-PACIFIC&SPRING-2ND&PARK',
 &ROUTE M=8, L=55, C=5,H=30,ID='14-PORTS O CALL-LEISURE WORLD',
 &ROUTE M=8, L=56, C=5,H=30,ID='14-PORTS O CALL-BRDWY&PINE',
 &ROUTE M=8, L=57, C=5,H=30,ID='15-DEL AMO BLVD',

&ROUTE M=8, L= 58,C=10,ID='35-FULLERTON PNR-HUNTINGTON BEACH',
 &ROUTE M=8, L= 59,C=10,ID='37-LA HABRA TO HUNTINGTION BEACH',
 &ROUTE M=8, L= 60,C=10,ID='38-CERRITOS TO ORANGE',
 &ROUTE M=8, L= 61,C=10,ID='41-NEWPORT BEACH TO LA HABRA',
 &ROUTE M=8, L= 62,C=10,ID='42-SEAL BEACH TO ORANGE',
 &ROUTE M=8, L= 63,C=10,ID='43-NEWPORT BEACH TO BREA',
 &ROUTE M=8, L= 64,C=10,ID='47-FULLERTON TO SANTA ANA',
 &ROUTE M=8, L= 65,C=10,ID='49-SANTA ANA TO LA HABRA',
 &ROUTE M=8, L= 66,C=10,ID='50-LONG BEACH TO ORANGE',
 &ROUTE M=8, L= 67,C=10,ID='51-BALBOA TO ORANGE VIA RED HILL',
 &ROUTE M=8, L= 68,C=10,ID='53-BALBOA TO ORANGE',
 &ROUTE M=8, L= 69,C=10,ID='43A-NEWPORT BEACH TO BREA',
 &ROUTE M=8, L= 70,C=10,ID='54-HUNTINGTON BEACH TO EL MODENA',
 &ROUTE M=8, L= 71,C=10,ID='56-SEAL BEACH TO SANTA ANA',
 &ROUTE M=8, L= 72,C=10,ID='57-LAGUNA HILLS TO SANTA ANA',
 &ROUTE M=8, L= 73,C=10,ID='60-SEAL BEACH TO SANTA ANA',
 &ROUTE M=8, L= 74,C=10,ID='60A-LONG BEACH TO TUSTIN',
 &ROUTE M=8, L=75,C=7,H=30,ID='1-RIO HONDO-BELLFLOWER SB',ONEWAY=T,
 &ROUTE M=8, L=76,C=7,H=30,ID='1-BELLFLOWER-RIO HONDO NB',ONEWAY=T,
 &ROUTE M=8, L=77, C=7, H=30,ID='2-STUDEBAKER RD',
 &ROUTE M=8, L=78, C=5,H=30,ID='3-SHOEMAKER AVE',
 &ROUTE M=8, L= 80,C= 8,ID='1-SANTA MONICA BLVD',
 &ROUTE M=8, L= 81,C= 8,ID='2-WILSHIRE-VICTORIA',
 &ROUTE M=8, L= 82,C= 8,ID='3-LAX-UCLA',
 &ROUTE M=8, L= 83,C= 8,ID='5-VA HOSP-WLA',
 &ROUTE M=8, L= 84,C= 8,ID='7-PICO BLVD',
 &ROUTE M=8, L= 85,C= 8,ID='8-OCEAN PK-CARLYLE',
 &ROUTE M=8, L= 86,C= 8,ID='8A-4TH SM-UCLA',
 &ROUTE M=8, L= 87,C= 8,ID='9-PACIFIC PALIS-OLYM & SAWTELLE',
 &ROUTE M=8, L= 89,C= 8,ID='11-14TH-20TH STS LOOP',
 &ROUTE M=8, L= 90,C= 8,ID='12-ROBERTSON BLVD',
 &ROUTE M=8, L= 92,C= 8,ID='13-AIRDROME CHEVIOT HILLS',
 &ROUTE M=8, L= 93,C= 8,ID='14-BUNDY DR-CENTINELA AVE',
 &ROUTE M=8, L=95, C=9,H=30,ID='3-LONG BEACH',
 &ROUTE M=8, L=96, C=9,H=60,ID='4-DEL AMO CT-HOLLYWOOD RIV',
 &ROUTE M=8, L=97, C=9,H=60,ID='4-HOLLYWOOD-DEL MONTE CT',
 &ROUTE M=8, L=98, C=9,H=60,ID='5-MANHATTAN BCH BLVD-PCH VIA CREN',
 &ROUTE M=8, L=99, C=9,H=60,ID='5-MANHATTAN BCH BLVD-PCH VIA TRRNC',
 &ROUTE M=8, L=100,C=9,H=30,ID='7-SEPULVEDA BLVD',
 &ROUTE M=8, L=101,C=9,H=30,ID='8-HAWTHORNE BLVD',
 &ROUTE M=8, L=102,C=9,H=60,ID='9-LOMITA',
 &ROUTE M=8, L=103,C=11,ID='1-MAGNOLIA AVE.',
 &ROUTE M=8, L=104,C=11,ID='1-MAGNOLIA 7TH ST.',
 &ROUTE M=8, L=105,C=11,ID='1-MAGNOLIA TYLER MALL',
 &ROUTE M=8, L=106,C=11,ID='12-CALIFORNIA',
 &ROUTE M=8, L=107,C=11,ID='13-ARLANZA',
 &ROUTE M=8, L=108,C=11,ID='14-CASA BLANCA',
 &ROUTE M=8, L=109,C=11,ID='15-ARLINGTON AVE.',
 &ROUTE M=8, L=110,C=11,ID='16-UNIVERSITY AVE.',
 &ROUTE M=8, L=111,C=11,ID='16-UNIVERSITY AVE. MARKET'

&ROUTE M=8, L=112,C=11,ID='21-JURUPA LOOP MISSION
 &ROUTE M=8, L=113,C=11,ID='21-JUROPA LOOP ETIWANDA
 &ROUTE M=8, L=114,C=11,ID='21-JUROPA LOOP PEDLEY
 &ROUTE M=8, L=115,C=11,ID='22-PERRIS RIVERSIDE
 &ROUTE M=8, L=116,C=11,ID='24-PERRIS TYLER MALL
 &ROUTE M=8, L=117,C=11,ID='25-HIGHGROVE
 &ROUTE M=8, L=118,C=11,ID='26-LAKE ELSINORE VIA CORONA
 &ROUTE M=8, L=119,C=11,ID='27-SAN JACINTO, HEMET, SUN CITY
 &ROUTE M=8, L=120,C=11,ID='28-SUN CITY-PERRIS-RIVERSIDE
 &ROUTE M=8, L=122,C=12,ID='2-COLTON-11TH&O ST
 &ROUTE M=8, L=123,C=12,ID='1-COLTON-LA CADENA-H ST
 &ROUTE M=8, L=124,C=12,ID='1-40TH ST VIA WATERMAN
 &ROUTE M=8, L=125,C=12,ID='2-40TH ST VIA D ST
 &ROUTE M=8, L=126,C=12,ID='3-STCOLLEGE VIA E ST
 &ROUTE M=8, L=127,C=12,ID='5-ST COLLEGE VIA SIERRA
 &ROUTE M=8, L=128,C=12,ID='4-MUSCOTT OUTBD
 &ROUTE M=8, L=129,C=12,ID='4-MUSCOTT INBD
 &ROUTE M=8, L=130,C=12,ID='6-NORTON AIR BASE
 &ROUTE M=8, L=131,C=12,ID='7-VICTORIA ST
 &ROUTE M=8, L=132,C=12,ID='8-INLAND CENTER
 &ROUTE M=8, L=133,C=12,ID='9-BLOOMINGTON
 &ROUTE M=8, L=134,C=12,ID='10-DELROSA OUTBD
 &ROUTE M=8, L=135,C=12,ID='10-DELROSA OUTBD
 &ROUTE M=8, L=136,C=12,ID='10-DELROSA INBD
 &ROUTE M=8, L=137,C=12,ID='10-DELROSA INBD
 &ROUTE M=8, L=138,C=12,ID='11-HIGHLAND PATTON OUTBD
 &ROUTE M=8, L=139,C=12,ID='11-HIGHLAND PATTON INBD
 &ROUTE M=8, L=140,C=12,ID='11-HIGHLAND PATTON OUTBD
 &ROUTE M=8, L=141,C=12,ID='11-HIGHLAND PATTON INBD
 &ROUTE M=8, L=142,C=12,ID='12-STERLING INBD
 &ROUTE M=8, L=143,C=12,ID='12-STERLING OUTBD
 &ROUTE M=8, L=144,C=12,ID='13-WEST COLTON OUTBD
 &ROUTE M=8, L=145,C=12,ID='13-WEST COLTON INBD
 &ROUTE M=8, L=146,C=12,ID='14-MONTCLAIR-YUCAIPA
 &ROUTE M=8, L=147,C=12,ID='15-SHANDIN HILLS "G"ST
 &ROUTE M=8, L=148,C=12,ID='16-SHANDIN HILLS MASS ST
 &ROUTE M=8, L=149,C=12,ID='17-LOMA LINDA
 &ROUTE M=8, L=150,C=12,ID='20-N FONTANA N LOOP
 &ROUTE M=8, L=151,C=12,ID='20-N FONTANA S LOOP
 &ROUTE M=8, L=152,C=12,ID='21-S. FONTANA N.LOOP
 &ROUTE M=8, L=153,C=12,ID='21-S. FONTANA S.LOOP OUT
 &ROUTE M=8, L=154,C=12,ID='21-S. FONTANA S.LOOP INBD
 &ROUTE M=8, L=155,C=12,ID='22-N. RIALTO
 &ROUTE M=8, L=156,C=12,ID='22-S. RIALTO
 &ROUTE M=8, L=157,C=12,ID='23-BLOOMINGTON N
 &ROUTE M=8, L=158,C=12,ID='23-BLOOMINGTON S
 &ROUTE M=8, L=159,C=12,ID='24-HIGHLAND
 &ROUTE M=8, L=160,C=12,ID='30-MENTONE VIA COLTON A
 &ROUTE M=8, L=161,C=12,ID='30-MENTONE VIA BROCTON
 &ROUTE M=8, L=162,C=12,ID='30-REDLANDS

&ROUTE M=8, L=163,C=12,ID='30-N YUCAIPA
 &ROUTE M=8, L=164,C=12,ID='30-N YUCAIPA
 &ROUTE M=8, L=165,C=12,ID='34-W YUCAIPA OUTBD
 &ROUTE M=8, L=166,C=12,ID='34-W YUCAIPA INBD
 &ROUTE M=8, L=167,C=12,ID='35-CALIMESA OUTBD
 &ROUTE M=8, L=168,C=12,ID='35-CALIMESA INBD
 &ROUTE M=8, L=169,C=12,ID='36-S YUCAIPA E OUTBD
 &ROUTE M=8, L=170,C=12,ID='36-S YUCAIPA E INBD
 &ROUTE M=8, L=171,C=12,ID='36-S YUCAIPA W
 &ROUTE M=8, L=172,C=12,ID='50-RANCHO CUCAMONGA N
 &ROUTE M=8, L=173,C=12,ID='50-RANCHO CUCAMONGA S
 &ROUTE M=8, L=174,C=12,ID='51-UPLAND VIA FOOTHILL
 &ROUTE M=8, L=175,C=12,ID='51-UPLAND VIA 7TH ST
 &ROUTE M=8, L=176,C=12,ID='52-NORTH UPLAND
 &ROUTE M=8, L=177,C=12,ID='53-MONTCLAIR-ORCHARD
 &ROUTE M=8, L=178,C=12,ID='53-MONTCLAIR-KINGSLEY
 &ROUTE M=8, L=179,C=12,ID='54-WEST CHINO OUTBD
 &ROUTE M=8, L=180,C=12,ID='54-EAST CHINO INBD
 &ROUTE M=8, L=181,C=12,ID='55-CHINO-LOS SERRANOS
 &ROUTE M=8, L=182,C=12,ID='56-NW ONTARIO VIA "G" ST
 &ROUTE M=8, L=183,C=12,ID='56-NW ONTARIO VIA 7TH ST
 &ROUTE M=8, L=184,C=12,ID='57-NE ONTARIO
 &ROUTE M=8, L=185,C=12,ID='58-SE ONTARIO-VINE
 &ROUTE M=8, L=186,C=12,ID='58-SE ONTARIO-SAN ANT.
 &ROUTE M=8, L=187,C=12,ID='59-SE ONTARIO CNTR CLCK
 &ROUTE M=8, L=188,C=12,ID='58-SE ONTARIO CLCK
 &ROUTE M=8, L=189,C=12,ID='60-CHAFFEY COLLEGE
 &ROUTE M=8, L=192,C=13,ID='1-VEN.-MAIN ST.
 &ROUTE M=8, L=193,C=13,ID='1-WELLS CT VIA TELEPH
 &ROUTE M=8, L=194,C=13,ID='1-WELLS CT VIA BRISTOL
 &ROUTE M=8, L=195,C=13,ID='2-TELEGRAPH/SATICOY EBD
 &ROUTE M=8, L=196,C=13,ID='2-TELEGRAPH/SATICOY WBD
 &ROUTE M=8, L=197,C=13,ID='3-LOMA VISTA EBD
 &ROUTE M=8, L=198,C=13,ID='3-LOMA VISTA WBD
 &ROUTE M=8, L=199,C=13,ID='3-PIERPONT SBD
 &ROUTE M=8, L=200,C=13,ID='3-PIERPONT NBD
 &ROUTE M=8, L=201,C=13,ID='4-OJAI THOMPSON BLVD.
 &ROUTE M=8, L=202,C=13,ID='5-VENTURA-OXNARD EBD
 &ROUTE M=8, L=203,C=13,ID='5-OXNARD-VENTURA WBD
 &ROUTE M=8, L=204,C=13,ID='6-WELLS CT-SANTA PAULA
 &ROUTE M=8, L=205,C=13,ID='6-SANTA PAULA-WELLS CT
 &ROUTE M=8, L=206,C=13,ID='6-SANTA PAULA
 &ROUTE M=8, L=207,C=13,ID='7A-OXNARD-COLONIA
 &ROUTE M=8, L=208,C=13,ID='7B-OXNARD SOUTHSIDE
 &ROUTE M=8, L=209,C=13,ID='8A-OXNARD NORTHSIDE
 &ROUTE M=8, L=210,C=13,ID='8B-OXNARD-PKWEST OBD
 &ROUTE M=8, L=211,C=13,ID='8B-OXNARD-PKWEST INBD
 &ROUTE M=8, L=212,C=13,ID='9-OXNARD-HUENEME OUTBD
 &ROUTE M=8, L=213,C=13,ID='9-OXNARD-HUENEME INBD
 &ROUTE M=8, L=214,C=13,ID='10A-OXNARD PLEASANT VAL

&ROUTE M=8, L=215,C=13,ID='10B-OXNARD-BEACH
 &ROUTE M=8, L=216,C=13,ID='11A-PLAZA-PLEASANT VAL
 &ROUTE M=8, L=217,C=13,ID='11B-PLAZA-PLEASANT VAL
 &ROUTE M=8, L=218,C=13,ID='12-ESPLANADE NORTHMONT
 &ROUTE M=8, L=219,C=13,ID='12-ESPLANADA-EL RIO
 &ROUTE M=8, L=220,C=14,ID='SIMI A EBD
 &ROUTE M=8, L=221,C=14,ID='SIMI A WBD
 &ROUTE M=8, L=222,C=14,ID='SIMI B EBD
 &ROUTE M=8, L=223,C=14,ID='SIMI B WBD
 &ROUTE M=8, L=224,C=14,ID='SIMI SAN FER VAL-C
 &ROUTE M=8, L=225,C=14,ID='SIMI-MOORPARK-D
 &ROUTE M=8, L=227,C=15,ID='THOUSAND OAKS WESTLAKE
 &ROUTE M=8, L=228,C=15,ID='THOUSAND OAKS WESTLAKE
 &ROUTE M=8, L=229,C=15,ID='B-THOUSAND OAKS INBD
 &ROUTE M=8, L=230,C=15,ID='B-THOUSAND OAKS OUTBD
 &ROUTE M=8, L=231,C=15,ID='C-THOUSAND OAKS INBD
 &ROUTE M=8, L=232,C=15,ID='C-THOUSAND OAKS OUTBD
 &ROUTE M=8, L=233,C=10,ID='61-NEWPORT BEACH-SANTA ANA
 &ROUTE M=8, L=234,C=10,ID='64-LONG BEACH TO SANTA ANA
 &ROUTE M=8, L=235,C=10,ID='49A-SANTA ANA TO LA HABRA
 &ROUTE M=8, L=236,C=10,ID='65-BALBOA TO SANTA ANA
 &ROUTE M=8, L=237,C=10,ID='69-SANTA ANA TO YORBA LINDA
 &ROUTE M=8, L=238,C=10,ID='70-SUNSET BEACH TO SANTA ANA
 &ROUTE M=8, L=239,C=10,ID='71-IRVINE TO ORANGE
 &ROUTE M=8, L=240,C=10,ID='75-LAGUNA HILLS TO SANTA ANA
 &ROUTE M=8, L=241,C=10,ID='76-HUNTINGTON BEACH TO IRVINE
 &ROUTE M=8, L=242,C=10,ID='82-WEST NEWPORT TO IRVINE
 &ROUTE M=8, L=243,C=10,ID='85-SAN CLEMENTE TO SANTA ANA
 &ROUTE M=8, L=244,C=10,ID='91-LAGUNA HILLS-SAN CLEMENTE PIER
 &ROUTE M=8, L=245,C=10,ID='132-CYPRESS TO ANAHEIM
 &ROUTE M=8, L=246,C=10,ID='143-SANTA ANA TO TUSTIN VIA 17
 &ROUTE M=8, L=247,C=10,ID='144-SANTA ANA TO TUSTIN
 &ROUTE M=8, L=248,C=10,ID='145-SOUTH FLOWER
 &ROUTE M=8, L=249,C=10,ID='146-SANTA ANA TO COSTA MESA
 &ROUTE M=8, L=250,C=10,ID='158-SUNSET BEACH TO TUSTIN
 &ROUTE M=8, L=251,C=10,ID='46-CERRITOS TO ORANGE