Enhancement of DVRPC'S Travel Simulation Models

TRANSIT ASSIGNMENTS

PREPARED FOR DELAWARE VALLEY REGIONAL PLANNING COMMISSION

BY

BARTON-ASCHMAN ASSOCIATES, INC. AND CAMBRIDGE SYSTEMATICS, INC.

MARCH 1998

TASK 4

Delaware Valley Regional Planning Commission

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Delaware Valley Regional Planning Commission The Bourse Building 111 S. Independence Mall East Philadelphia, PA 19106-2515 This report has been prepared by Cambridge Systematics, Inc., in partial fulfillment of the contract between the Delaware Valley Regional Planning Commission and Cambridge Systematics, Inc. to enhance DVRPC's travel simulation models. The preparation of this report was funded through federal grants from the U.S. Department of Transportation's Federal Highway Administration (FHWA) and the Pennsylvania and New Jersey Departments of Transportation. Cambridge Systematics, Inc. however is solely responsible for its findings and conclusions, which may not represent the official views or policies of the funding agencies.

Created in 1965, the Delaware Valley Regional Planning Commission (DVRPC) is an interstate, intercounty, and intercity agency which provides continuing, comprehensive and coordinated planning for the orderly growth and development of the Delaware Valley region. The region includes Bucks, Chester, Delaware, and Montgomery counties, as well as the City of Philadelphia in Pennsylvania; and Burlington, Camden, Gloucester, and Mercer counties in New Jersey. The Commission is an advisory agency which divides its planning and service functions between the Office of the Executive Director, the Office of Public Affairs, and three line Divisions: Transportation Planning, Regional Planning, and Administration. DVRPC's mission for the 1990s is to emphasize technical assistance and services, and to conduct high priority studies for member state and local governments, while determining and meeting the needs of the private sector.



The DVRPC logo is adapted from the official seal of the Commission and is designed as a stylized image of the Delaware Valley. The outer ring symbolizes the region as a whole while the diagonal bar signifies the Delaware River flowing through it. The two adjoining crescents represent the Commonwealth of Pennsylvania and the State of New Jersey. The logo combines these elements to depict the areas served by DVRPC.

DELAWARE VALLEY REGIONAL PLANNING COMMISSION

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ABSTRACT

This report documents the recommended procedures for transit assignment and network skims in the DVRPC travel model system. Transit assignment routines were prepared for three different time periods: AM peak period, PM peak period, and the off-peak period and are implemented in TRANPLAN.

The report describes the procedures used to build the transit networks using the INET and DVFARE programs and the transit path building procedures for application of the mode choice models and for the development of the transit assignments. The results of the test of the transit assignment routines are presented, as well as the application procedures used to build the transit paths and assignments in TRANPLAN.

For More Information Contact:

Delaware Valley Regional Planning Commission Regional Information Services Center The Bourse Building **111 South Independence Mall East** Philadelphia, PA 19106-2515 Telephone: (215) 592-1800 FAX: (215) 592-9125

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Executive Summary

This report documents the recommended procedures and assumptions for transit assignment and skims for the DVRPC travel model system. This effort uses the new transit networks developed in Task 5 and provides procedures to assign the transit trips estimated from the new mode choice models developed in Task 3. Transit assignment routines were prepared for three different time periods: AM peak period, PM peak period and the off-peak period and are implemented in TRANPLAN.

The transit path building methodology used by DVRPC uses a standalone FORTRAN program, DVFARE, which calculates the cost impedance for each transit link. The TRANPLAN routine BUILD TRANSIT NETWORK is then applied to create binary format transit network files for the three different time periods. The transit networks can then be used to create transit path files and transit travel time and fare matrices.

The TRANPLAN routines used to build the transit paths and travel times from the built transit networks produce files used as inputs in the mode choice models. A number of different transit paths are created for the DVRPC models, depending on the trip purpose being modeled. For each path both peak and off-peak skims are built. Some specific elements of the transit path building routines include weights placed on the various components of the transit path, such as wait times, walk times and in-vehicle times, that affect the transit path being chosen by the tripmaker. In order to further ensure that only the submodes of access being modeled could be used by the origin-destination pair, mode to mode transfer prohibitions were specified.

The mode choice models are applied to trip tables which are outputs of the trip distribution process. Since these tables are in production to attraction format, no auto-egress paths are allowed in the transit path building routines for origin-destination pairs. This is a simplifying assumption that presumes that any tripmaker beginning the trip from home (the production end) would have a choice of walk-access or auto-access to transit, but at the non-home end of the trip (the attraction end), only walk-egress would be allowed. This rule was applied consistently to all three purposes of home-based work, home-based non-work and even non-home-based, although it was recognized that non-home-based trips do not have a home end.

The transit path building routines used for mode choice differ from those used in assignment. Because of the introduction of time of day into the model system, the approach devised for assignment must recognize that transit trips must be assigned in an origin-destination format, meaning that the home-end of the trip could be from either the origin or destination end of the trip. This means that all access modes of either walk or auto must be represented in the path building and assignment routines. One of the complicating factors in the development of the transit assignment routines is that three different time periods are to be modeled: AM peak period, PM peak period and an off-peak period. This means that a total of 42 home-based work assignments, 18 home-based non-

work and 18 non-home-based assignments must be run. The final routines add the individual loaded transit networks together to create a total AM, PM and off-peak loaded transit network.

In order to test the validity of the TRANPLAN assignment setups, the daily trips by mode were assigned to the various transit networks. Before the assignments, the production-attraction format trip tables were halved and then transposed. The trip direction was preserved for testing purposes, as the production to attraction and attraction to production trips were assigned separately to the transit networks. This test was primarily to ascertain if there was a large number of trips that could not be assigned to the networks due to a lack of a valid transit path. The results of the tests indicate that an average of 0.4 percent of trips are lost during the assignment process for the AM peak period and PM peak periods, and approximately 0.5 percent of the trips are lost for the off-peak period assignments.

As previously mentioned, the application procedures to create transit paths and assignments are implemented using TRANPLAN. The various TRANPLAN routines are initiated by running a series of command files. Three separate command files are used: one to create the transit networks, one to create the transit paths and skims for mode choice, and one to create the transit assignments.

1.0 Introduction

The purpose of this report is to describe the procedures used to develop the transit path building routines for the mode choice model and transit assignments for the DVRPC model. In Task 4, the TRANPLAN routines used to develop the transit paths and travel times skims for mode choice were refined and new transit assignment routines were developed.

The routines used to run the transit assignments are similar to those used to build the transit paths for mode choice, with the primary difference being that the routines for assignment needed to accept trips in origin-destination format, as opposed to the conventional production to attraction format used for mode choice. Transit assignment routines were prepared for three different time periods: AM peak period, PM peak period and the off-peak period.

This report contains five more sections. Section 2.0 describes the procedures used to build the transit networks using the INET and DVFARE programs. Section 3.0 describes the transit path building procedures for application of the mode choice models. Section 4.0 describes the transit path building procedures for the development of the transit assignments. Section 5.0 presents the results of the transit assignment routine tests, and finally, Section 6.0 describes the application procedures used to build the transit paths and assignments in TRANPLAN.

2.0 Transit Network Building Procedures

As described in the Task 5 report, the transit networks for DVRPC are built using the TRANPLAN utility program INET. INET provides the capability of using the results of the loaded highway assignment impedances in the input transit speeds. The transit path building methodology used by DVRPC requires the creation of a cost-based transit impedance, and the data used to develop this type of impedance is created using a standalone FORTRAN program, DVFARE. The DVFARE program calculates the cost impedance for each transit link, based on user coded data, and stores this value in the PM time variable field of the network data file.

Once the DVFARE program creates the transit network card image files, the TRANPLAN routine BUILD TRANSIT NETWORK is applied to create binary format transit network files for the three different time periods. The transit networks can then be used to create transit path files and transit travel time and fare matrices. Three different networks are processed using INET; the AM peak period network, PM peak period network and the off-peak period network. The output transit networks created by INET and DVFARE are subsequently used to develop the transit path and skims files used for mode choice and assignment. The setup files used to create the networks are described in Section 6.0 of this report, *Application Procedures*.

The TRANPLAN transit network building setup is shown in Appendix A.

3.0 Transit Path Building Procedures for Mode Choice

The TRANPLAN routines used to build the transit paths and travel times from the built transit networks produce files used as inputs in the mode choice models. A number of different transit paths are created for the DVRPC models, depending on the trip purpose being modeled. For the home-based work purpose, the following transit paths are developed:

- Regional rail with subway/elevated, bus/trolley-access modes;
- Regional rail with auto-access modes;
- Regional rail with walk-access modes;
- Subway/elevated with bus/trolley-access modes;
- Subway/elevated with auto-access modes;
- Subway/elevated with walk-access modes; and
- Bus/trolley with walk and auto-access modes.

For the home-based non-work and non-home-based purposes, the following transit paths are developed:

- Regional rail with all access modes;
- Subway/elevated with all access modes; and
- Bus/trolley with all access modes.

For each of the above paths, both peak and off-peak skims are built. Some specific elements of the transit path building routines are that they include weights placed on the various components of the transit path, such as wait times, walk times and in-vehicle times, that affect the transit path being chosen by the tripmaker. For example, in order to develop regional rail with subway/elevated and bus-access transit paths, the transit run times for the regional rail, subway/elevated and bus/trolley modes are multiplied by 0.1, or made 10 times as attractive as an unweighted mode. This allows the model to have a much higher probability of creating the correct path.

In order to further ensure that only the submodes of access being modeled could be used by the origin-destination pair, mode to mode transfer prohibitions were specified. As an example, for the regional rail trips with subway/elevated/bus-access, auto-access to regional rail was prohibited as an access mode in the path building routine. Walk-access to regional rail normally would also have been prohibited; however, this mode had to be allowed since walk access to the subway/elevated or bus mode had to be permitted. Only one walk connector mode (Mode 1) was coded for the entire network, whether or not the walk-connect was a centroid walk-access/egress link or a walk-transfer link.

Allowing the walk-access link connections complicated the path building for the regional rail with subway/elevated/bus-access and the subway with bus/trolley-access paths. There could be instances when a walk-access to rail path could be the best path even though paths are only to be built for rail with transit-access. To attempt to eliminate this behavior in the path building routines, the mode choice program was recoded to ensure that mode choice utilities would be calculated only if both transit in-vehicle times were present for both of the transit paths when a transit-access submode was used for the trip. This procedure, however, could not entirely eliminate a lower-level path choice in the highest level rail transit paths during the final transit assignments.

The mode choice models are applied to trip tables which are outputs of the trip distribution process. Since these tables are in production to attraction format, no auto-egress paths are allowed in the transit path building routines for origin-destination pairs. This is a simplifying assumption that presumes that any tripmaker beginning the trip from home (the production end) would have a choice of walk-access or auto-access to transit, but at the non-home end of the trip (the attraction end), only walk-egress would be allowed. This rule was applied consistently to all three purposes of home-based work, home-based non-work and even non-home-based, although it was recognized that non-home-based trips do not have a home end.

3.1 TRANPLAN Path Building Parameters for Mode Choice

The starting point for the development of the TRANPLAN routines for path building was the original DVRPC transit path building setups. The original setups were developed for a transit network with only single digit transit modes of modes four through eight, therefore, these setups were revised to include the additional transit modes of modes 9 through 15. The path building information for the new modes of 9 through 15 were translated from the old mode parameters. For example, the original transit mode of six represented subway/elevated transit modes, and the path attributes for mode six were used for the new modes 10 and 11. It should be noted that modes 9, 14 and 15 are defined as intercity transit modes and are not coded in the new DVRPC local transit networks. Therefore, no path attributes were coded in the TRANPLAN setup files for the modes of 9, 14 and 15. Table 3.1 summarizes the transit modes used in the DVRPC networks.

The TRANPLAN setup files used in path building contain parameters that affect the resulting path choices. These parameters are set specifically for the type of path being built. The following parameters were coded into the path building routines for mode choice.

Table 3.1Transit Modes

Mode	Code
Walk Connector	. 1
Auto Dummy Connector	2
Auto-access Connector	3
Local Bus – Pennsylvania	4,5
Local Bus – New Jersey	6
Express Bus – Pennsylvania	7
Express Bus – New Jersey	8
Intercity Bus (Not Coded)	9
Subway – Surface	10
Subway – Elevated	11
Regional Rail – SEPTA	12
Regional Rail – PATCO	13
NJ rail (Not Coded)	14
AMTRAK (Not Coded)	15

Mode Deletions

Specific modes can be deleted during TRANPLAN path building routines to ensure that the correct modes are traced during the process. This includes access modes, egress modes and transit link modes. The modes deleted during path building are shown in Table 3.2.

Transfer Prohibitions

Transfer prohibitions are parameters that prohibit trips from occurring between modes. The mode to mode transfers prohibited in the path choices are shown in Table 3.3.

Wait Time Penalties

Wait time penalties by default have been set at half the value of the combined frequencies of the routes serving the origin-destination pair. However, the wait times are set to a maximum of nine minutes of penalty for regional rail modes 12 and 13. This is consistent with the penalties used in the original DVRPC setups.

Run Time Factors

As previously discussed, run time penalties are set to favor the primary transit path. The transit modes being favored in the path have run time factors of 0.1 applied to the run time. A transit mode not favored has a transit run time factor of 1.0.

Transfer Penalties

Transfer penalties are minutes of delay assessed on the various transit modes. The transfer penalties are based on the original DVRPC transfer penalties, but applied to the new modes. Table 3.4 summarizes the transfer penalties.

The TRANPLAN transit path building setups used in mode choice for the peak and offpeak periods are included in Appendix B.

	D	eleted Modes	1
Path	Access	Egress	Transit
Regional Rail w/Transit access (HBW)	None	None	None
Regional Rail w/Auto-access (HBW)	1	None	4-11
Regional Rail w/Walk-access (HBW)	2,3	None	4-11
Subway w/Transit access (HBW)	None	None	12-13
Subway w/Auto-access (HBW)	1	None	4-8, 12-13
Subway w/Walk-access (HBW)	2, 3	None	4-8, 12-13
Regional Rail w/all access (HNW, NHB)	None	None	None
Subway w/all access (HNW, NHB)	None	None	12-13
Bus/Trolley w/all-access (All Purposes)	None	None	10-13

Table 3.2 Modes Deleted During TRANPLAN Path Building

Disallowed Mode to Mode Transfers	
From Mode	To Mode
1	3
3	1, 2, 3
3	12, 13
3	10, 11
	Disallowed Mode to From Mode

Table 3.3 Mode to Mode Prohibitions

Mode	Penalty (Minutes)
4	6.0
5	6.0
6	9.0
7	6.0
8	9.0
10	6.0
11	6.0
12	4.0
13	4.0

Table 3.4Transfer Penalties

4.0 Transit Path Building Routines for Assignments

The transit path building routines used for mode choice differ from those used in assignment. Because of the introduction of time of day into the model system, the approach devised for assignment must recognize that transit trips must be assigned in an origin-destination format, meaning that the home-end of the trip could be from either the origin or destination end of the trip. This means that all access modes of either walk or auto must be represented in the path building and assignment routines. One of the complicating factors in the development of the transit assignment routines is that three different time periods are to be modeled: AM peak period, PM peak period and an off-peak period. This means that a total of 42 home-based work assignments, 18 home-based non-work and 18 non-home-based assignments must be run. The final routines add the individual loaded transit networks together to create a total AM, PM and off-peak loaded transit network.

4.1 Transfer Prohibitions

To facilitate the assignment of transit trips in origin-destination format, new sets of transit paths and path building conventions were formulated which allow an auto-egress path during any of the three time periods. The only difference in the path building routines used in assignment is, depending on the direction of the trip and the time period being modeled, the availability of auto-access and auto-egress links. For example, in the AM peak period, trips assigned in the production to attraction direction are allowed auto and walk-access connections, but not auto-egress connections. Conversely, in the same time period, trips assigned in the attraction to production direction have only a walk-access connection, but have both walk-egress and auto-egress connections. All other path building parameters were the same as those used in the development of the mode choice transit paths. The TRANPLAN transit assignment setups are included in Appendix C.

5.0 Preliminary Transit Assignment Results

To test the validity of the TRANPLAN assignment setups, the daily trips by mode were assigned to the various transit networks. Before the assignments, the productionattraction format trip tables were halved and then transposed. The trip direction was preserved for testing purposes, as the production to attraction and attraction to production trips were assigned separately to the transit networks. This test was primarily to ascertain if there were a large number of trips that could not be assigned to the networks due to the lack of a valid transit path.

The first check of the assignment process was to see whether nearly all of the transit trips were assigned. This turned out to be the case, with approximately 99.6 percent of the trips assigned. It can be concluded that there are no major errors which result in paths not being found for valid transit trips. Ideally, all transit trips should be assigned to the transit networks; however, given that different networks, and therefore different paths, are used for mode choice (AM and off-peak networks only) and assignment (which uses all three networks), it is reasonable to expect that some paths would not be available for all three time periods. In fact, the results indicate that for the production to attraction direction in the AM peak period, all transit trips are assigned to the networks, since these same paths are used in mode choice. All other directions and time periods lose some amount of transit trips during assignment.

The next test was to compare the base-year assignment results to observed 1990 boardings by mode and operator, which were provided by DVRPC. The first result that may be noted is that the number of modeled boardings is low compared to the observed boardings. This means that either the mode choice model is not estimating enough transit trips or there are not enough transfers within trips. Table 5.1 shows that modeled transit trips are a little low compared to the survey, but not enough to account for most of the difference in total boardings. Further checking should be done to determine whether the modeled number of transit transfers per trip (about 0.07 per trip) is reasonable. If so, then there is an inconsistency between the survey results and the observed boardings, and DVRPC must decide which source to use in calibration.

Within each company, there are also discrepancies between the modeled results and the observed counts. In general, the rail and modeled urban transit trips are too low, and the other bus trips are too high. More calibration is needed and should be done with major participation from DVRPC.

Company	Trips	Count
SEPTA Urban Transit exc heavy rail	573,435	675,000
Broad & Market/Frankford	165,803	310,000
SEPTA Suburban Transit	62,042	42,705
SEPTA Frontier Transit	23,399	6,896
NJT Mercer	14,896	12,523
РАТСО	31,395	39,302
All other NJ Transit	75,991	27,542
Pottstown Urban Transit	871	907
SEPTA Regional Rail	60,178	103,389
Other	55	-
Total	1,008,065	1,218,264

Table 5.1Comparison of Transit Assignment Results to Observed
Boardings

6.0 Application Procedures and TRANPLAN Setup Files

As previously mentioned, the application procedures to create transit paths and assignments are implemented using TRANPLAN. The various TRANPLAN routines are initiated by running a series of command files. Three separate command files are used: one to create the transit networks, one to create the transit paths and skims for mode choice, and one to create the transit assignments. The command files and their contents are described in the following sections.

6.1 Transit Network Command Files

The command file used to initiate the creation of the transit networks is called INETALL.CMD. The code for this program is shown in Appendix A. This command file calls the INET and DVFARE programs to create the AM peak, PM peak and off-peak period transit networks. The names of the output files are HUDNETAM.DAT, HUDNETPM.DAT and HUDNETOF.DAT. The output network files are then used in the path building and assignment routines.

6.2 Transit Path Command Files

The command file used to initiate the creation of the transit paths and skims for mode choice is called TRPATH.CMD. This command file calls two files that contain the TRANPLAN setups, TSKIMALL.PK, which runs the peak transit paths and skims, and TSKIMALL.OPK, which runs the off-peak transit paths and skims. The code for the TRPATH.CMP and TSK1MALL.* programs is shown in Appendix B. The TRANPLAN routines BUILD TRANSIT PATHS and BUILD TRANSIT SKIMS are used to create peak (AM) and off-peak path and skim information for each of the purposes estimated in mode choice. A total of 26 total transit skims files are created, 13 path choices by two time periods. Only the final transit skims files used in mode choice are saved; the intermediate transit path files, of which there are 26 files, ranging in size from nine Mb to over 40 Mb, and are not required further in the model process. Therefore, they are deleted to conserve storage space. When running the command file, the transit networks must either reside in the subdirectory or be referenced in the setups. A description of the required input and resulting output files is summarized in Table 6.1.

Table 6.1 TRPATH.CMD Description

TRPATH.CMD - Transit path and skim building command file for Mode Choice

TSKIMALL.PK - Peak Paths and Skims TRANPLAN Setups

TSKIMALL.OPK - Off-Peak Paths and Skims TRANPLAN Setups

Input Files

	HUDNETAM.DAT	AM Peak Period Network (binary format)
	HUDNETOF.DAT	Off-Peak Period Network (binary format)
Output Files		
	SK90RST.PK, .OPK	Regional Rail/Transit-access Skims
	SK90RAT.PK,.OPK	Regional Rail/Auto-access Skims
	SK90RWT.PK,.OPK	Regional Rail/Walk-access Skims
	SK90SBT.PK, .OPK	Subway/Transit-access Skims
	SK90SAT.PK,.OPK	Subway/Auto-access Skims
	SK90SWT.PK,.OPK	Subway/Walk-access Skims
	SK90BTT.PK, .OPK	Bus/Trolley/All-access Skims
	SK90RTT.PK,.OPK	Regional Rail/All-access Skims
	SK90STT.PK,.OPK	Subway/All-access Skims

6.3 Transit Assignment Command Files

The command file used to create the transit assignments is called TRASSIGN.CMD. This command file runs the set of individual assignments by calling additional command files for the three time periods, totaling 78 separate runs and files, and eventually implements the utility program that adds the individual loaded transit assignment networks together. The TRASSIGN.CMD file runs seven files; TRLOD-AM.IN, TRLOD-PM.IN and TRLOD-OP.IN to run the assignments, ADD-AM.CMD, ADD-PM.CMD and ADD-OFF.CMD to run the TADLOD2 utility program to add all the transit loaded files together, and finally TRLODRPT.CMD to report the final loaded transit networks for the three time periods. The code for the TRASSIGN.CMD, TRLOD-??.IN, and ADD-??.CMP files is shown in Appendix C.

The TRANPLAN BUILD TRANSIT PATHS, LOAD TRANSIT NETWORKS, REPORT TRANSIT LOAD and TADLOD2 program modules are run with this set of command files. As with the path building routines for mode choice, the intermediate path files are not saved after they are used in the assignment process, as they consume a large amount of disk storage space. A description of the required input and resulting output files is summarized in Table 6.2.

Table 6.2 TRASSIGN.CMD Description

TRASSIGN.CMD – Transit assignment command file

TRLOD-AM.IN – AM Peak Period Transit Assignments TRANPLAN setup TRLOD-PM.IN – PM Peak Period Transit Assignments TRANPLAN setup TRLOD-OP.IN – Off Peak Period Transit Assignments TRANPLAN setup ADD-AM.CMD – AM Peak Period Assignment Addition Routine ADD-PM.CMD – PM Peak Period Assignment Addition Routine ADD-OP.CMD – AM Peak Period Assignment Addition Routine TRLODRPT.CMD – Report Final Transit Loaded Networks for 3 Time Periods

Input Files

HUDNETAM.DAT HUDNETPM.DAT HUDNETOF.DAT AMTR90PA.HBW AMTR90AP.HBW PMTR90PA.HBW PMTR90AP.HBW OPTR90PA.HBW OPTR90AP.HBW

AM Peak Period Network (binary format)
PM Peak Period Network (binary format)
Off-Peak Period Network (binary format)
AM Peak Period P to A Format Transit Trip Tables
AM Peak Period A to P Format Transit Trip Tables
PM Peak Period A to P Format Transit Trip Tables
Off Peak Period P to A Format Transit Trip Tables
Off Peak Period A to P Format Transit Trip Tables
Off Peak Period A to P Format Transit Trip Tables

Output Files (Created for AM, PM and OP Periods)

??90RST1.HBW Regional Rail/Transit-access P to A Loaded Network ??90RST2.HBW Regional Rail/Transit-access A to P Loaded Network ??90RAT1.HBW Regional Rail/Auto-access P to A Loaded Network ??90RAT2.HBW Regional Rail/Auto-access A to P Loaded Network ??90RWT1.HBW Regional Rail/Walk-access P to A Loaded Network ??90RWT2.HBW Regional Rail/Walk-access A to P Loaded Network ??90SBT1.HBW Subway/Transit-access P to A Loaded Network ??90SBT2.HBW Subway/Transit-access A to P Loaded Network ??90SAT1.HBW Subway/Auto-access P to A Loaded Network ??90SAT2.HBW Subway/Auto-access A to P Loaded Network ??90SWT1.HBW Subway/Walk-access P to A Loaded Network ??90SWT2.HBW Subway/Walk-access A to P Loaded Network

Table 6.2 TRASSIGN.CMD Description (continued)

Output Files (Created for AM, PM and OP Periods) (continued)			
??90BTT1.HBW	Bus-Trolley/All-access P to A Loaded Network		
??90BTT2.HBW	Bus-Trolley/All-access A to P Loaded Network		
??90RTT1.HBW	Regional Rail/All-access P to A Loaded Network		
??90RTT2.HBW	Regional Rail/All-access A to P Loaded Network		
??90STT1.HBW	Subway/All-access P to A Loaded Network		
??90STT2.HBW	Subway/All-access A to P Loaded Network		
??90TVOL.ALL	Total Transit Modes Loaded Network File		

Where: ?? = AM, PM or OP

7.0 Conclusions

A new set of procedures for transit assignment and skims in the DVRPC travel model system was implemented. These procedures use the new transit networks developed in Task 5 and assign the transit trips estimated from the new mode choice models developed in Task 3. Transit assignment routines were prepared for three different time periods: AM peak period, PM peak period and the off-peak period and are implemented in TRANPLAN.

The TRANPLAN routines used to build the transit paths and travel times from the built transit networks produce files used as inputs in the mode choice models. A number of different transit paths are created for the DVRPC models, depending on the trip purpose being modeled. For each path both peak and off-peak skims are built.

To test the validity of the TRANPLAN assignment setups, the trips by mode were assigned to the various transit networks. The modeled boardings by company were compared to observed counts. The results of this comparison showed that additional calibration, with the participation of DVRPC, is needed.

Appendix A

Transit Network Building Routines
PADAY BPPENT A

@echo off echo - Command File to Run INET and DVFARE Programs echo - to build DVRPC transit networks erase inet.out erase disk* copy tsysinam.tem tsysin.tem copy trouteam.tem troute.tem copy hnetam.tem hnet.tem call inet copy hudnetam.cor hudnet.cor copy railam.cor rail.cor copy hudnet.cor + rail.cor copy hudnetam.ctl hudnet.ctl copy hudnetam.far hudnet.far call dvfarelg copy hudnet.cds hudnetam.cds if exist hudnet.cds del hudnet.cds call tranplan hudnetam.cds erase inet.out erase disk* copy tsysinpm.tem tsysin.tem copy troutepm.tem troute.tem copy hnetpm.tem hnet.tem call inet copy hudnetpm.cor hudnet.cor copy railpm.cor rail.cor copy hudnetpm.ctl hudnet.ctl copy hudnetpm.far hudnet.far copy hudnet.cor + rail.cor call dvfarelg copy hudnet.cds hudnetpm.cds call tranplan hudnetpm.cds erase inet.out erase disk* copy tsysinop.tem tsysin.tem copy trouteop.tem troute.tem copy hnetop.tem hnet.tem call inet copy hudnetop.cor hudnet.cor copy railop.cor rail.cor copy hudnetop.ctl hudnet.ctl copy hudnetop.far hudnet.far copy hudnet.cor + rail.cor call dvfarelg copy hudnet.cds hudnetop.cds call tranplan hudnetop.cds

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Appendix **B**

Transit Path Building Routines

@echo off

echo echo - TRSKIM.CMD echo - Routines to Create Transit Paths and Skims for Mode Choice echo -CALL TRANPLAN TSKIMALL.PK

DEL TR90PATH.DAT COPY TRNPLN.OUT TSKIMPK.RPT

CALL TRANPLAN TSKIMALL.OPK DEL TR90PATH.DAT COPY TRNPLN.OUT TSKIMOPK.RPT

echo - echo - Transit Paths and Skims Complete echo -

```
$BUILD TRANSIT PATHS
SFILE
  INPUT FILE = TRNET, USER ID = $HUDNETOF.DAT$
  OUTPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
SHEADERS
  DVRPC MODEL DEVELOPMENT PROJECT
  BUILD TRANSIT PATHS REGIONAL RAIL TRANSIT-ACCESS
  OFF PEAK PERIOD
$OPTIONS
  BUILD PATHS
$PARAMETERS
  NETWORK = PM
   SELECTED ZONES = 1-1510
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
  RUN TIME FACTORS = (12, 0.1) (13, 0.1)
  TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 3-2, 3-3, 3-12, 3-13
$END TP FUNCTION
$TRANSIT SELECTED SUMMATION
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
   OUTPUT FILE = TRSKIM, USER ID = $SK90RST.OPK$
$HEADERS
  DVRPC MODEL DEVELOPMENT PROJECT
  REGIONAL RAIL - TRANSIT-ACCESS SKIMS
  OFF PEAK PERIOD NETWORK
$OPTION
  FREQUENCY REPORT
ŚDАТА
  TABLE 1 = MODE 1 TIME
  TABLE 2 = MODE 3 TIME
  TABLE 3 = FIRST WAIT + SECOND WAIT
   TABLE 4 = MODE12TIME+MODE13TIME+MODE14TIME+MODE15TIME
  TABLE 5 = MODE4TIME+MODE5TIME+MODE6TIME+MODE7TIME+MODE8TIME+
             MODE9TIME+MODE10TIME+MODE11TIME
  TABLE 6 = \text{TRANSFERS}
SEND TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETOF.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS REGIONAL RAIL AUTO-ACCESS
   OFF PEAK PERIOD
$OPTIONS
  BUILD PATHS
$PARAMETERS
  NETWORK = PM
   SELECTED ZONES = 1-1510
  DELETE MODES = 4, 5, 6, 7, 8, 9, 10, 11
  DELETE ACCESS MODE = 1
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
  RUN TIME FACTORS = (3, 0.1) (12, 0.1) (13, 0.1)
  TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
```

```
(9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
$TRANSIT SELECTED SUMMATION
SFILES
   INPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
   OUTPUT FILE = TRSKIM, USER ID = $SK90RAT.OPK$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   REGIONAL RAIL - AUTO-ACCESS SKIMS
   OFF PEAK PERIOD NETWORK
$OPTION
   FREQUENCY REPORT
$DATA
   TABLE 1 = MODE 1 TIME
   TABLE 2 = MODE 3 TIME
   TABLE 3 = FIRST WAIT+SECOND WAIT
   TABLE 4 = MODE12TIME+MODE13TIME+MODE14TIME+MODE15TIME
   TABLE 5 = MODE4TIME+MODE5TIME+MODE6TIME+MODE7TIME+MODE8TIME+
             MODE9TIME+MODE10TIME+MODE11TIME
   TABLE 6 = TRANSFERS
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETOF.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
SHEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS REGIONAL RAIL WALK-ACCESS
   OFF PEAK PERIOD
SOPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 4, 5, 6, 7, 8, 9, 10, 11
   DELETE ACCESS MODE = 2,3
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (1, 0.1) (12, 0.1) (13, 0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
SEND TP FUNCTION
$TRANSIT SELECTED SUMMATION
SFILES
   INPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
   OUTPUT FILE = TRSKIM, USER ID = $SK90RWT.OPK$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   REGIONAL RAIL - WALK-ACCESS SKIMS
   OFF PEAK PERIOD NETWORK
$OPTION
   FREQUENCY REPORT
$DATA
   TABLE 1 = MODE 1 TIME
   TABLE 2 = MODE 3 TIME
```

```
TABLE 3 = FIRST WAIT+SECOND WAIT
  TABLE 4 = MODE12TIME+MODE13TIME+MODE14TIME+MODE15TIME
  TABLE 5 = MODE4TIME+MODE5TIME+MODE6TIME+MODE7TIME+MODE8TIME+
            MODE9TIME+MODE10TIME+MODE11TIME
  TABLE 6 = \text{TRANSFERS}
$END TP FUNCTION
$BUILD TRANSIT PATHS
SFILE
  INPUT FILE = TRNET, USER ID = $HUDNETOF.DAT$
  OUTPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
$HEADERS
  DVRPC MODEL DEVELOPMENT PROJECT
  BUILD TRANSIT PATHS SUBWAY/ELEVATED BUS TRANSIT-ACCESS
  OFF PEAK PERIOD
SOPTIONS
  BUILD PATHS
$PARAMETERS
  NETWORK = PM
   SELECTED ZONES = 1-1510
  DELETE MODES = 12, 13
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
  RUN TIME FACTORS = (10, 0.1) (11, 0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 3-2, 3-3, 3-10, 3-11
SEND TP FUNCTION
$TRANSIT SELECTED SUMMATION
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
   OUTPUT FILE = TRSKIM, USER ID = $SK90SBT.OPK$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   SUBWAY/ELEVATED - TRANSIT-ACCESS SKIMS
   OFF PEAK PERIOD NETWORK
$OPTION
   FREQUENCY REPORT
$DATA
   TABLE 1 = MODE 1 TIME
   TABLE 2 = MODE 3 TIME
   TABLE 3 = FIRST WAIT + SECOND WAIT
   TABLE 4 = MODE10TIME+MODE11TIME
   TABLE 5 = MODE4TIME+MODE5TIME+MODE6TIME+MODE7TIME+MODE8TIME+
             MODE9TIME+MODE12TIME+MODE13TIME+MODE14TIME+MODE15TIME
   TABLE 6 = TRANSFERS
$END TP FUNCTION
$BUILD TRANSIT PATHS
SFILE
   INPUT FILE = TRNET, USER ID = $HUDNETOF.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
SHEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS SUBWAY/ELEVATED AUTO-ACCESS
   OFF PEAK PERIOD
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
```

```
SELECTED ZONES = 1-1510
  DELETE MODES = 4, 5, 6, 7, 8, 9, 12, 13
  DELETE ACCESS MODE = 1
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
  RUN TIME FACTORS = (3, 0.1) (10, 0.1) (11, 0.1)
  TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
$TRANSIT SELECTED SUMMATION
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
  OUTPUT FILE = TRSKIM, USER ID = $SK90SAT.OPK$
$HEADERS
  DVRPC MODEL DEVELOPMENT PROJECT
   SUBWAY/ELEVATED - AUTO-ACCESS SKIMS
  OFF PEAK PERIOD NETWORK
$OPTION
  FREQUENCY REPORT
$DATA
  TABLE 1 = MODE 1 TIME
   TABLE 2 = MODE 3 TIME
  TABLE 3 = FIRST WAIT+SECOND WAIT
  TABLE 4 = MODE10TIME+MODE11TIME
  TABLE 5 = MODE4TIME+MODE5TIME+MODE6TIME+MODE7TIME+MODE8TIME+
             MODE9TIME+MODE12TIME+MODE13TIME+MODE14TIME+MODE15TIME
  TABLE 6 = \text{TRANSFERS}
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETOF.DAT$
  OUTPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
SHEADERS
  DVRPC MODEL DEVELOPMENT PROJECT
  BUILD TRANSIT PATHS SUBWAY/ELEVATED WALK-ACCESS
  OFF PEAK PERIOD
SOPTIONS
  BUILD PATHS
$PARAMETERS
  NETWORK = PM
  SELECTED ZONES = 1-1510
  DELETE MODES = 4, 5, 6, 7, 8, 9, 12, 13
  DELETE ACCESS MODE = 2,3
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
  RUN TIME FACTORS = (1, 0.1) (10, 0.1) (11, 0.1)
  TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
SEND TP FUNCTION
$TRANSIT SELECTED SUMMATION
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
   OUTPUT FILE = TRSKIM, USER ID = $SK90SWT.OPK$
$HEADERS
  DVRPC MODEL DEVELOPMENT PROJECT
```

```
SUBWAY/ELEVATED - WALK-ACCESS SKIMS
   OFF PEAK PERIOD NETWORK
$OPTION
  FREQUENCY REPORT
$DATA
   TABLE 1 = MODE 1 TIME
   TABLE 2 = MODE 3 TIME
   TABLE 3 = FIRST WAIT+SECOND WAIT
   TABLE 4 = MODE10TIME+MODE11TIME
   TABLE 5 = MODE4TIME+MODE5TIME+MODE6TIME+MODE7TIME+MODE8TIME+
             MODE9TIME+MODE12TIME+MODE13TIME+MODE14TIME+MODE15TIME
   TABLE 6 = \text{TRANSFERS}
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETOF.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS BUS/TROLLEY ALL-ACCESS
   OFF PEAK PERIOD
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 10, 11, 12, 13
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (4, 0.1) (5, 0.1) (6, 0.1) (7, 0.1)
                       (8,0.1) (9,0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
$TRANSIT SELECTED SUMMATION
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
   OUTPUT FILE = TRSKIM, USER ID = $SK90BTT.OPK$
SHEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUS/TROLLEY ALL-ACCESS SKIMS
   OFF PEAK PERIOD NETWORK
SOPTION
   FREQUENCY REPORT
ŠDATA
   TABLE 1 = MODE 1 TIME
   TABLE 2 = MODE 3 TIME
   TABLE 3 = FIRST WAIT+SECOND WAIT
   TABLE 4 = MODE4TIME+MODE5TIME+MODE6TIME+MODE7TIME+MODE8TIME+
             MODE9TIME
   TABLE 5 = MODE10TIME+MODE11TIME+MODE12TIME+MODE13TIME+
             MODE14TIME+MODE15TIME
   TABLE 6 = \text{TRANSFERS}
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETOF.DAT$
```

```
OUTPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
SHEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS REGIONAL RAIL
   OFF PEAK PERIOD
SOPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (12, 0.1) (13, 0.1)
   TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
$TRANSIT SELECTED SUMMATION
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
   OUTPUT FILE = TRSKIM, USER ID = $SK90RTT.OPK$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   REGIONAL RAIL - ALL-ACCESS SKIMS
   OFF PEAK PERIOD NETWORK
SOPTION
   FREQUENCY REPORT
$DATA
   TABLE 1 = MODE 1 TIME
   TABLE 2 = MODE 3 TIME
   TABLE 3 = FIRST WAIT + SECOND WAIT
   TABLE 4 = MODE12TIME+MODE13TIME+MODE14TIME+MODE15TIME
   TABLE 5 = MODE4TIME+MODE5TIME+MODE6TIME+MODE7TIME+MODE8TIME+
             MODE9TIME+MODE10TIME+MODE11TIME
   TABLE 6 = \text{TRANSFERS}
SEND TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETOF.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS SUBWAY/ELEVATED ALL-ACCESS
   OFF PEAK PERIOD
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 12, 13
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (10, 0.1) (11, 0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
```

```
$TRANSIT SELECTED SUMMATION
$FILES
  INPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
  OUTPUT FILE = TRSKIM, USER ID = $SK90STT.OPK$
$HEADERS
  DVRPC MODEL DEVELOPMENT PROJECT
   SUBWAY/ELEVATED - ALL-ACCESS SKIMS
  OFF PEAK PERIOD NETWORK
$OPTION
  FREQUENCY REPORT
$DATA
   TABLE 1 = MODE 1 TIME
   TABLE 2 = MODE 3 TIME
   TABLE 3 = FIRST WAIT + SECOND WAIT
   TABLE 4 = MODE10TIME+MODE11TIME
   TABLE 5 = MODE4TIME+MODE5TIME+MODE6TIME+MODE7TIME+MODE8TIME+
            MODE9TIME+MODE12TIME+MODE13TIME+MODE14TIME+MODE15TIME
  TABLE 6 = TRANSFERS
$END TP FUNCTION
```

```
SBUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
  OUTPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
SHEADERS
  DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS REGIONAL RAIL TRANSIT-ACCESS
  AM PEAK PERIOD
$OPTIONS
  BUILD PATHS
$PARAMETERS
  NETWORK = PM
   SELECTED ZONES = 1-1510
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (12, 0.1) (13, 0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 3-2, 3-3, 3-12, 3-13
SEND TP FUNCTION
$TRANSIT SELECTED SUMMATION
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
   OUTPUT FILE = TRSKIM, USER ID = $SK90RST.PK$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   REGIONAL RAIL - TRANSIT-ACCESS SKIMS
   AM PEAK PERIOD NETWORK
$OPTION
   FREQUENCY REPORT
$DATA
   TABLE 1 = MODE 1 TIME
   TABLE 2 = MODE 3 TIME
   TABLE 3 = FIRST WAIT + SECOND WAIT
   TABLE 4 = MODE12TIME+MODE13TIME+MODE14TIME+MODE15TIME
   TABLE 5 = MODE4TIME+MODE5TIME+MODE6TIME+MODE7TIME+MODE8TIME+
             MODE9TIME+MODE10TIME+MODE11TIME
   TABLE 6 = TRANSFERS
SEND TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
SHEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS REGIONAL RAIL AUTO-ACCESS
   AM PEAK PERIOD
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 4, 5, 6, 7, 8, 9, 10, 11
   DELETE ACCESS MODE = 1
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (3, 0.1) (12, 0.1) (13, 0.1)
   TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
```

```
(9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
$TRANSIT SELECTED SUMMATION
SFILES
   INPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
   OUTPUT FILE = TRSKIM, USER ID = $SK90RAT.PK$
SHEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   REGIONAL RAIL - AUTO-ACCESS SKIMS
   AM PEAK PERIOD NETWORK
SOPTION
  FREOUENCY REPORT
$DATA
   TABLE 1 = MODE 1 TIME
   TABLE 2 = MODE 3 TIME
   TABLE 3 = FIRST WAIT+SECOND WAIT
   TABLE 4 = MODE12TIME+MODE13TIME+MODE14TIME+MODE15TIME
   TABLE 5 = MODE4TIME+MODE5TIME+MODE6TIME+MODE7TIME+MODE8TIME+
             MODE9TIME+MODE10TIME+MODE11TIME
   TABLE 6 = \text{TRANSFERS}
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS REGIONAL RAIL WALK-ACCESS
   AM PEAK PERIOD
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 4,5,6,7,8,9,10,11
   DELETE ACCESS MODE = 2,3
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (1, 0.1) (12, 0.1) (13, 0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
SEND TP FUNCTION
$TRANSIT SELECTED SUMMATION
SFILES
   INPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
   OUTPUT FILE = TRSKIM, USER ID = $SK90RWT.PK$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   REGIONAL RAIL - WALK-ACCESS SKIMS
   AM PEAK PERIOD NETWORK
$OPTION
   FREQUENCY REPORT
$DATA
   TABLE 1 = MODE 1 TIME
   TABLE 2 = MODE 3 TIME
```

```
TABLE 3 = FIRST WAIT+SECOND WAIT
  TABLE 4 = MODE12TIME+MODE13TIME+MODE14TIME+MODE15TIME
  TABLE 5 = MODE4TIME+MODE5TIME+MODE6TIME+MODE7TIME+MODE8TIME+
            MODE9TIME+MODE10TIME+MODE11TIME
  TABLE 6 = TRANSFERS
$END TP FUNCTION
SBUILD TRANSIT PATHS
SFILE
  INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
  OUTPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
SHEADERS
  DVRPC MODEL DEVELOPMENT PROJECT
  BUILD TRANSIT PATHS SUBWAY/ELEVATED BUS TRANSIT-ACCESS
  AM PEAK PERIOD
$OPTIONS
  BUILD PATHS
$PARAMETERS
  NETWORK = PM
   SELECTED ZONES = 1-1510
  DELETE MODES = 12, 13
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
  RUN TIME FACTORS = (10, 0.1) (11, 0.1)
  TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 3-2, 3-3, 3-10, 3-11
$END TP FUNCTION
STRANSIT SELECTED SUMMATION
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
  OUTPUT FILE = TRSKIM, USER ID = $SK90SBT.PK$
SHEADERS
  DVRPC MODEL DEVELOPMENT PROJECT
   SUBWAY/ELEVATED - TRANSIT-ACCESS SKIMS
  AM PEAK PERIOD NETWORK
SOPTION
  FREQUENCY REPORT
SDATA
  TABLE 1 = MODE 1 TIME
   TABLE 2 = MODE 3 TIME
   TABLE 3 = FIRST WAIT + SECOND WAIT
   TABLE 4 = MODE10TIME+MODE11TIME
   TABLE 5 = MODE4TIME+MODE5TIME+MODE6TIME+MODE7TIME+MODE8TIME+
            MODE9TIME+MODE12TIME+MODE13TIME+MODE14TIME+MODE15TIME
   TABLE 6 = \text{TRANSFERS}
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
$HEADERS
  DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS SUBWAY/ELEVATED AUTO-ACCESS
   AM PEAK PERIOD
$OPTIONS
  BUILD PATHS
$PARAMETERS
  NETWORK = PM
```

```
SELECTED ZONES = 1-1510
   DELETE MODES = 4, 5, 6, 7, 8, 9, 12, 13
   DELETE ACCESS MODE = 1
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (3, 0.1) (10, 0.1) (11, 0.1)
   TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
$TRANSIT SELECTED SUMMATION
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
   OUTPUT FILE = TRSKIM, USER ID = $SK90SAT.PK$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   SUBWAY/ELEVATED - AUTO-ACCESS SKIMS
   AM PEAK PERIOD NETWORK
$OPTION
   FREQUENCY REPORT
$DATA
   TABLE 1 = MODE 1 TIME
   TABLE 2 = MODE 3 TIME
   TABLE 3 = FIRST WAIT+SECOND WAIT
   TABLE 4 = MODE10TIME+MODE11TIME
   TABLE 5 = MODE4TIME+MODE5TIME+MODE6TIME+MODE7TIME+MODE8TIME+
             MODE9TIME+MODE12TIME+MODE13TIME+MODE14TIME+MODE15TIME
   TABLE 6 = \text{TRANSFERS}
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS SUBWAY/ELEVATED WALK-ACCESS
   AM PEAK PERIOD
SOPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 4, 5, 6, 7, 8, 9, 12, 13
   DELETE ACCESS MODE = 2,3
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (1, 0.1) (10, 0.1) (11, 0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
$TRANSIT SELECTED SUMMATION
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
   OUTPUT FILE = TRSKIM, USER ID = $SK90SWT.PK$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
```

```
SUBWAY/ELEVATED - WALK-ACCESS SKIMS
  AM PEAK PERIOD NETWORK
$OPTION
  FREQUENCY REPORT
$DATA
  TABLE 1 = MODE 1 TIME
  TABLE 2 = MODE 3 TIME
  TABLE 3 = FIRST WAIT+SECOND WAIT
  TABLE 4 = MODE10TIME+MODE11TIME
  TABLE 5 = MODE4TIME+MODE5TIME+MODE6TIME+MODE7TIME+MODE8TIME+
             MODE9TIME+MODE12TIME+MODE13TIME+MODE14TIME+MODE15TIME
  TABLE 6 = \text{TRANSFERS}
SEND TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS BUS/TROLLEY ALL-ACCESS
   AM PEAK PERIOD
$OPTIONS
   BUILD PATHS
$PARAMETERS
  NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 10, 11, 12, 13
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (4, 0.1) (5, 0.1) (6, 0.1) (7, 0.1)
                       (8,0.1) (9,0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
SEND TP FUNCTION
$TRANSIT SELECTED SUMMATION
SFILES
   INPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
   OUTPUT FILE = TRSKIM, USER ID = $SK90BTT.PK$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUS/TROLLEY ALL-ACCESS SKIMS
   AM PEAK PERIOD NETWORK
$OPTION
   FREQUENCY REPORT
$DATA
   TABLE 1 = MODE 1 TIME
   TABLE 2 = MODE 3 TIME
   TABLE 3 = FIRST WAIT+SECOND WAIT
   TABLE 4 = MODE4TIME+MODE5TIME+MODE6TIME+MODE7TIME+MODE8TIME+
             MODE9TIME
   TABLE 5 = MODE10TIME+MODE11TIME+MODE12TIME+MODE13TIME+
             MODE14TIME+MODE15TIME
   TABLE 6 = \text{TRANSFERS}
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
```

```
OUTPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS REGIONAL RAIL
   AM PEAK PERIOD
SOPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (12, 0.1) (13, 0.1)
   TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
$TRANSIT SELECTED SUMMATION
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
   OUTPUT FILE = TRSKIM, USER ID = $SK90RTT.PK$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   REGIONAL RAIL - ALL-ACCESS SKIMS
   AM PEAK PERIOD NETWORK
SOPTION
   FREQUENCY REPORT
$DATA
   TABLE 1 = MODE 1 TIME
   TABLE 2 = MODE 3 TIME
   TABLE 3 = FIRST WAIT + SECOND WAIT
   TABLE 4 = MODE12TIME+MODE13TIME+MODE14TIME+MODE15TIME
   TABLE 5 = MODE4TIME+MODE5TIME+MODE6TIME+MODE7TIME+MODE8TIME+
             MODE9TIME+MODE10TIME+MODE11TIME
   TABLE 6 = TRANSFERS
SEND TP FUNCTION
SBUILD TRANSIT PATHS
SFILE
   INPUT FILE = TRNET, USER ID = SHUDNETAM.DATS
   OUTPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS SUBWAY/ELEVATED ALL-ACCESS
   AM PEAK PERIOD
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 12, 13
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (10, 0.1) (11, 0.1)
   TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
```

```
$TRANSIT SELECTED SUMMATION
$FILES
  INPUT FILE = TRPATH, USER ID = $TR90PATH.DAT$
  OUTPUT FILE = TRSKIM, USER ID = $SK90STT.PK$
$HEADERS
  DVRPC MODEL DEVELOPMENT PROJECT
  SUBWAY/ELEVATED - ALL-ACCESS SKIMS
  AM PEAK PERIOD NETWORK
$OPTION
  FREQUENCY REPORT
$DATA
  TABLE 1 = MODE 1 TIME
  TABLE 2 = MODE 3 TIME
  TABLE 3 = FIRST WAIT + SECOND WAIT
  TABLE 4 = MODE10TIME+MODE11TIME
  TABLE 5 = MODE4TIME+MODE5TIME+MODE6TIME+MODE7TIME+MODE8TIME+
            MODE9TIME+MODE12TIME+MODE13TIME+MODE14TIME+MODE15TIME
  TABLE 6 = TRANSFERS
$END TP FUNCTION
```

Appendix C

Transit Assignment Routines

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@echo off echo echo - TRASSIGN.CMD echo - DVRPC Transit Assignment Routines to Create echo - AM, PM and Off-Peak Transit Assignments echo echo - Run AM Peak Period Assignments call TRANPLAN TRLOD-AM.IN echo - Add All AM Peak Period Assignments Together call ADD-AM.CMD echo - Run PM Peak Period Assignments call TRANPLAN TRLOD-PM.IN echo - Add All PM Peak Period Assignments Together call ADD-PM.CMD echo - Run Off Peak Period Assignments call TRANPLAN TRLOD-OP.IN echo - Add All Off Peak Period Assignments Together call ADD-OFF.CMD echo - Report AM, PM and Off Peak Period Assignments call TRLODRPT.CMD echo echo - Transit Assignments Completed echo -

```
$BUILD TRANSIT PATHS
SFILE
  INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
  OUTPUT FILE = TRPATH, USER ID = $TR90-PA.RST$
SHEADERS
  1990 DVRPC MODEL DEVELOPMENT PROJECT
  BUILD TRANSIT PATHS FOR REGIONAL RAIL WITH TRANSIT-ACCESS
  AM PEAK PERIOD, PROD TO ATTR DIRECTION
SOPTIONS
  BUILD PATHS
$PARAMETERS
  NETWORK = AM
   SELECTED ZONES = 1-1510
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
  RUN TIME FACTORS = (12, 0.1) (13, 0.1)
  TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                         (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                         (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 3-2, 3-3, 3-12, 3-13
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.RST$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $AM90RST1.HBW$
  OUTPUT FILE = WLKDATA, USER ID = $AM90RST1.WLK$
$HEADERS
  LOAD 1990 AM PEAK PERIOD TRANSIT NETWORK
  LOAD TRANSIT NETWORK -- HEADER NO. 2
  LOAD TRANSIT NETWORK -- HEADER NO. 3
SOPTIONS
  LOAD TRANSIT LINES
  LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = AM
   SELECTED PURPOSE = 1
SEND TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   INPUT FILE = TRLDATA, USER ID = $AM90RST1.HBW$
SHEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
  AM LENGTH = 2
  NETWORK = AM
SEND TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.RST$
$HEADERS
```

```
DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR REGIONAL RAIL WITH TRANSIT-ACCESS
  AM PEAK PERIOD, ATTR TO PROD DIRECTION
$OPTIONS
  BUILD PATHS
$PARAMETERS
  NETWORK = AM
   SELECTED ZONES = 1-1510
  MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (12, 0.1) (13, 0.1)
   TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                         (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 2-3, 3-3, 3-12, 3-13
SEND TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.RST$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $AM90RST2.HBW$
   OUTPUT FILE = WLKDATA, USER ID = $AM90RST2.WLK$
$HEADERS
   LOAD 1990 AM PEAK PERIOD TRANSIT NETWORK
   LOAD TRANSIT NETWORK -- HEADER NO. 2
   LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = AM
   SELECTED PURPOSE = 1
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   INPUT FILE = TRLDATA, USER ID = $AM90RST2.HBW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
SOPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   AM LENGTH = 2
   NETWORK = AM
$END TP FUNCTION
$BUILD TRANSIT PATHS
SFTLE
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-PA.RAT$
$HEADERS
   1990 DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR REGIONAL RAIL WITH AUTO-ACCESS
   AM PEAK PERIOD, PROD TO ATTR DIRECTION
$OPTIONS
```

```
BUILD PATHS
$PARAMETERS
  NETWORK = AM
   SELECTED ZONES = 1-1510
  DELETE MODES = 4, 5, 6, 7, 8, 9, 10, 11
  DELETE ACCESS MODE = 1
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
  RUN TIME FACTORS = (3, 0.1) (12, 0.1) (13, 0.1)
  TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                           (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                           (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
SEND TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.RAT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.HBW$
INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $AM90RAT1.HBW$
   OUTPUT FILE = WLKDATA, USER ID = $AM90RAT1.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = AM
   SELECTED PURPOSE = 2
SEND TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   INPUT FILE = TRLDATA, USER ID = $AM90RAT1.HBW$
SHEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
  AM LENGTH = 2
  NETWORK = AM
SEND TP FUNCTION
SBUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.RAT$
SHEADERS
   1990 DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR REGIONAL RAIL WITH AUTO-ACCESS
   AM PEAK PERIOD, ATTR TO PROD DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
  NETWORK = AM
```

```
SELECTED ZONES = 1-1510
  DELETE MODES = 4, 5, 6, 7, 8, 9, 10, 11
  DELETE EGRESS MODE = 1
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
  RUN TIME FACTORS = (3, 0.1) (12, 0.1) (13, 0.1)
  TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 2-3, 3-3
SEND TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.RAT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $AM90RAT2.HBW$
   OUTPUT FILE = WLKDATA, USER ID = $AM90RAT2.WLK$
SHEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
   NETWORK = AM
   SELECTED PURPOSE = 2
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   INPUT FILE = TRLDATA, USER ID = $AM90RAT2.HBW$
SHEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
SOPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   AM LENGTH = 2
   NETWORK = AM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-PA.RWT$
$HEADERS
   1990 DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR REGIONAL RAIL WALK-ACCESS
   AM PEAK PERIOD, PROD TO ATTR DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = AM
   SELECTED ZONES = 1-1510
   DELETE MODES = 4, 5, 6, 7, 8, 9, 10, 11
```

```
DELETE ACCESS MODE = 2,3
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
  RUN TIME FACTORS = (1,0.1) (12,0.1) (13,0.1)
  TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.RWT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $AM90RWT1.HBW$
   OUTPUT FILE = WLKDATA, USER ID = $AM90RWT1.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
   NETWORK = AM
   SELECTED PURPOSE = 3
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   INPUT FILE = TRLDATA, USER ID = $AM90RWT1.HBW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
SOPTIONS
   PRINT ALL LINE LOADS
SPARAMETERS
   AM LENGTH = 2
   NETWORK = AM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.RWT$
SHEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR REGIONAL RAIL WALK-ACCESS
   AM PEAK PERIOD, ATTR TO PROD DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = AM
   SELECTED ZONES = 1-1510
   DELETE MODES = 4, 5, 6, 7, 8, 9, 10, 11
   DELETE EGRESS MODE = 2,3
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
```

```
RUN TIME FACTORS = (1, 0.1) (12, 0.1) (13, 0.1)
  TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 2-3, 3-3
SEND TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.RWT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
  OUTPUT FILE = TRLDATA, USER ID = $AM90RWT2.HBW$
  OUTPUT FILE = WLKDATA, USER ID = $AM90RWT2.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
  LOAD TRANSIT LINES
  LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = AM
   SELECTED PURPOSE = 3
$END TP FUNCTION
$REPORT TRANSIT LOAD
SFILES
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   INPUT FILE = TRLDATA, USER ID = $AM90RWT2.HBW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
SOPTIONS
  PRINT ALL LINE LOADS
$PARAMETERS
  AM LENGTH = 2
  NETWORK = AM
SEND TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-PA.SBT$
SHEADERS
   1990 DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR SUBWAY/ELEVATED BUS TRANSIT-ACCESS
   AM PEAK PERIOD, PROD TO ATTR DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = AM
   SELECTED ZONES = 1-1510
   DELETE MODES = 12, 13, 14, 15
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
  RUN TIME FACTORS = (10, 0.1) (11, 0.1)
  TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
```

```
(13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 3-2, 3-3, 3-10, 3-11
SEND TP FUNCTION
SLOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.SBT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $AM90SBT1.HBW$
   OUTPUT FILE = WLKDATA, USER ID = $AM90SBT1.WLK$
SHEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
   NETWORK = AM
   SELECTED PURPOSE = 4
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   INPUT FILE = TRLDATA, USER ID = $AM90SBT1.HBW$
SHEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
SOPTIONS
   PRINT ALL LINE LOADS
SPARAMETERS
   AM LENGTH = 2
   NETWORK = AM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.SBT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR SUBWAY/ELEVATED BUS TRANSIT-ACCESS
   AM PEAK PERIOD, ATTR TO PROD DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = AM
   SELECTED ZONES = 1-1510
   DELETE MODES = 12, 13, 14, 15
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (10, 0.1) (11, 0.1)
   TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 2-3, 3-3, 3-10, 3-11
$END TP FUNCTION
$LOAD TRANSIT NETWORK
```

```
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.SBT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $AM90SBT2.HBW$
   OUTPUT FILE = WLKDATA, USER ID = $AM90SBT2.WLK$
SHEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
   NETWORK = AM
   SELECTED PURPOSE = 4
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   INPUT FILE = TRLDATA, USER ID = $AM90SBT2.HBW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   AM LENGTH = 2
   NETWORK = AM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-PA.SAT$
SHEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR SUBWAY/ELEVATED AUTO-ACCESS
   AM PEAK PERIOD, PROD TO ATTR DIRECTION
SOPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = AM
   SELECTED ZONES = 1-1510
   DELETE MODES = 4, 5, 6, 7, 8, 9, 12, 13, 14, 15
   DELETE ACCESS MODE = 1
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (3, 0.1) (10, 0.1) (11, 0.1)
   TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.SAT$
```

```
INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $AM90SAT1.HBW$
   OUTPUT FILE = WLKDATA, USER ID = $AM90SAT1.WLK$
SHEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
   NETWORK = AM
   SELECTED PURPOSE = 5
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   INPUT FILE = TRLDATA, USER ID = $AM90SAT1.HBW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
SOPTIONS
   PRINT ALL LINE LOADS
SPARAMETERS
  AM LENGTH = 2
   NETWORK = AM
SEND TP FUNCTION
$BUILD TRANSIT PATHS
SETLE
   INPUT FILE = TRNET, USER ID = SHUDNETAM.DATS
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.SAT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR SUBWAY/ELEVATED AUTO-ACCESS
   AM PEAK PERIOD, ATTR TO PROD DIRECTION
SOPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = AM
   SELECTED ZONES = 1-1510
   DELETE MODES = 4, 5, 6, 7, 8, 9, 12, 13, 14, 15
   DELETE EGRESS MODE = 1
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (3, 0.1) (10, 0.1) (11, 0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 2-3, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.SAT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $AM90SAT2.HBW$
```

```
OUTPUT FILE = WLKDATA, USER ID = $AM90SAT2.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
  LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = AM
   SELECTED PURPOSE = 5
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   INPUT FILE = TRLDATA, USER ID = $AM90SAT2.HBW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   AM LENGTH = 2
   NETWORK = AM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-PA.SWT$
SHEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR SUBWAY/ELEVATED WALK-ACCESS
   AM PEAK PERIOD, PROD TO ATTR DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = AM
   SELECTED ZONES = 1-1510
   DELETE MODES = 4, 5, 6, 7, 8, 9, 12, 13
   DELETE ACCESS MODE = 2,3
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (1, 0.1) (10, 0.1) (11, 0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.SWT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $AM90SWT1.HBW$
   OUTPUT FILE = WLKDATA, USER ID = $AM90SWT1.WLK$
$HEADERS
```
```
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
   NETWORK = AM
   SELECTED PURPOSE = 6
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   INPUT FILE = TRLDATA, USER ID = $AM90SWT1.HBW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
SOPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   AM LENGTH = 2
   NETWORK = AM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.SWT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR SUBWAY/ELEVATED WALK-ACCESS
   AM PEAK PERIOD, ATTR TO PROD DIRECTION
SOPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = AM
   SELECTED ZONES = 1-1510
   DELETE MODES = 4, 5, 6, 7, 8, 9, 12, 13
   DELETE EGRESS MODE = 2,3
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (1, 0.1) (10, 0.1) (11, 0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 2-3, 3-3
SEND TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.SWT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $AM90SWT2.HBW$
   OUTPUT FILE = WLKDATA, USER ID = $AM90SWT2.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
```

```
$OPTIONS
  LOAD TRANSIT LINES
  LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
SPARAMETERS
  NETWORK = AM
  SELECTED PURPOSE = 6
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
  INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
  INPUT FILE = TRLDATA, USER ID = $AM90SWT2.HBW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
  PRINT ALL LINE LOADS
$PARAMETERS
  AM LENGTH = 2
  NETWORK = AM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-PA.BTT$
$HEADERS
  DVRPC MODEL DEVELOPMENT PROJECT
  BUILD TRANSIT PATHS BUS/TROLLEY ALL-ACCESS
  AM PEAK PERIOD
SOPTIONS
  BUILD PATHS
$PARAMETERS
  NETWORK = AM
  SELECTED ZONES = 1-1510
  DELETE MODES = 10, 11, 12, 13
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
  RUN TIME FACTORS = (4, 0.1) (5, 0.1) (6, 0.1) (7, 0.1)
                       (8,0.1) (9,0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
SEND TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.BTT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $AM90BTT1.HBW$
   OUTPUT FILE = WLKDATA, USER ID = $AM90BTT1.WLK$
SHEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
  LOAD TRANSIT LINES
```

```
LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = AM
  SELECTED PURPOSE = 7
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   INPUT FILE = TRLDATA, USER ID = $AM90BTT1.HBW$
SHEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
  PRINT ALL LINE LOADS
$PARAMETERS
  AM LENGTH = 2
  NETWORK = AM
$END TP FUNCTION
$BUILD TRANSIT PATHS
SFILE
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.BTT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS BUS/TROLLEY ALL-ACCESS
  AM PEAK PERIOD, ATTR TO PROD DIRECTION
SOPTIONS
   BUILD PATHS
$PARAMETERS
  NETWORK = AM
   SELECTED ZONES = 1-1510
  DELETE MODES = 10, 11, 12, 13
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
  RUN TIME FACTORS = (4, 0.1) (5, 0.1) (6, 0.1) (7, 0.1)
                       (8,0.1) (9,0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 2-3, 3-3
SEND TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.BTT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $AM90BTT2.HBW$
   OUTPUT FILE = WLKDATA, USER ID = $AM90BTT2.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
```

```
NETWORK = AM
  SELECTED PURPOSE = 7
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
  INPUT FILE = TRLDATA, USER ID = $AM90BTT2.HBW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
SOPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
  AM LENGTH = 2
  NETWORK = AM
$END TP FUNCTION
$BUILD TRANSIT PATHS
SFILE
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
  OUTPUT FILE = TRPATH, USER ID = $TR90-PA.RTT$
SHEADERS
  DVRPC MODEL DEVELOPMENT PROJECT
  BUILD TRANSIT PATHS FOR REGIONAL RAIL
  AM PEAK PERIOD, PROD TO ATTR DIRECTION
SOPTIONS
  BUILD PATHS
$PARAMETERS
  NETWORK = AM
   SELECTED ZONES = 1-1510
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
  RUN TIME FACTORS = (12, 0.1) (13, 0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
SEND TP FUNCTION
SLOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.RTT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.HNW$
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $AM90RTT1.HNW$
   OUTPUT FILE = WLKDATA, USER ID = $AM90RTT1.WLK$
SHEADERS
   LOAD 1990 AM PEAK PERIOD TRANSIT NETWORK
   LOAD TRANSIT NETWORK -- HEADER NO. 2
   LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = AM
   SELECTED PURPOSE = 1
$END TP FUNCTION
$REPORT TRANSIT LOAD
```

```
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   INPUT FILE = TRLDATA, USER ID = $AM90RTT1.HNW$
SHEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
  AM LENGTH = 2
   NETWORK = AM
SEND TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.RTT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR REGIONAL RAIL
   AM PEAK PERIOD, ATTR TO PROD DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = AM
   SELECTED ZONES = 1-1510
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (12, 0.1) (13, 0.1)
   TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 2-3, 3-3
SEND TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.RTT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.HNW$
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $AM90RTT2.HNW$
   OUTPUT FILE = WLKDATA, USER ID = $AM90RTT2.WLK$
$HEADERS
   LOAD 1990 AM PEAK PERIOD TRANSIT NETWORK
   LOAD TRANSIT NETWORK -- HEADER NO. 2
   LOAD TRANSIT NETWORK -- HEADER NO. 3
SOPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
   NETWORK = AM
   SELECTED PURPOSE = 1
SEND TP FUNCTION
SREPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   INPUT FILE = TRLDATA, USER ID = $AM90RTT2.HNW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
```

```
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
  PRINT ALL LINE LOADS
$PARAMETERS
  AM LENGTH = 2
  NETWORK = AM
$END TP FUNCTION
SBUILD TRANSIT PATHS
ŚFILE
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-PA.STT$
SHEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR SUBWAY/ELEVATED ALL-ACCESS
   AM PEAK PERIOD, PROD TO ATTR DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = AM
   SELECTED ZONES = 1-1510
   DELETE MODES = 12, 13
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (10, 0.1) (11, 0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.STT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.HNW$
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $AM90STT1.HNW$
   OUTPUT FILE = WLKDATA, USER ID = $AM90STT1.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
SOPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
SPARAMETERS
   NETWORK = AM
   SELECTED PURPOSE = 2
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   INPUT FILE = TRLDATA, USER ID = $AM90STT1.HNW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
```

```
PRINT ALL LINE LOADS
SPARAMETERS
  AM LENGTH = 2
  NETWORK = AM
$END TP FUNCTION
SBUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.STT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR SUBWAY/ELEVATED ALL-ACCESS
   AM PEAK PERIOD, ATTR TO PROD DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
  NETWORK = AM
   SELECTED ZONES = 1-1510
   DELETE MODES = 12, 13
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (10, 0.1) (11, 0.1)
   TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 2-3, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.STT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.HNW$
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $AM90STT2.HNW$
   OUTPUT FILE = WLKDATA, USER ID = $AM90STT2.WLK$
SHEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
   NETWORK = AM
   SELECTED PURPOSE = 2
SEND TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   INPUT FILE = TRLDATA, USER ID = $AM90STT2.HNW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   AM LENGTH = 2
   NETWORK = AM
```

```
$END TP FUNCTION
SBUILD TRANSIT PATHS
ŚFILE
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-PA.BTT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS BUS/TROLLEY ALL-ACCESS
   AM PEAK PERIOD
SOPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = AM
   SELECTED ZONES = 1-1510
   DELETE MODES = 10, 11, 12, 13
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (4, 0.1) (5, 0.1) (6, 0.1) (7, 0.1)
                       (8,0.1) (9,0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.BTT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.HNW$
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $AM90BTT1.HNW$
   OUTPUT FILE = WLKDATA, USER ID = $AM90BTT2.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
SOPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
   NETWORK = AM
   SELECTED PURPOSE = 3
$END TP FUNCTION
$REPORT TRANSIT LOAD
SFILES
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   INPUT FILE = TRLDATA, USER ID = $AM90BTT1.HNW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   AM LENGTH = 2
   NETWORK = AM
$END TP FUNCTION
```

```
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.BTT$
SHEADERS
  DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS BUS/TROLLEY ALL-ACCESS
  AM PEAK PERIOD, ATTR TO PROD DIRECTION
SOPTIONS
  BUILD PATHS
$PARAMETERS
  NETWORK = AM
   SELECTED ZONES = 1-1510
   DELETE MODES = 10, 11, 12, 13
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (4, 0.1) (5, 0.1) (6, 0.1) (7, 0.1)
                       (8,0.1) (9,0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 2-3, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.BTT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.HNW$
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $AM90BTT2.HNW$
   OUTPUT FILE = WLKDATA, USER ID = $AM90BTT4.WLK$
SHEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
   NETWORK = AM
   SELECTED PURPOSE = 3
$END TP FUNCTION
$REPORT TRANSIT LOAD
SFILES
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   INPUT FILE = TRLDATA, USER ID = $AM90BTT2.HNW$
SHEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   AM LENGTH = 2
   NETWORK = AM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
```

```
INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
  OUTPUT FILE = TRPATH, USER ID = $TR90-PA.RTT$
SHEADERS
   1990 DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR REGIONAL RAIL NHB
  AM PEAK PERIOD, PROD TO ATTR DIRECTION
$OPTIONS
  BUILD PATHS
$PARAMETERS
  NETWORK = AM
   SELECTED ZONES = 1-1510
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (12, 0.1) (13, 0.1)
   TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.RTT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.NHB$
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $AM90RTT1.NHB$
   OUTPUT FILE = WLKDATA, USER ID = $AM90RTT1.WLK$
SHEADERS
   LOAD 1990 AM PEAK PERIOD TRANSIT NETWORK NHB
   REGIONAL RAIL
  LOAD TRANSIT NETWORK -- HEADER NO. 3
SOPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
$PARAMETERS
   NETWORK = AM
   SELECTED PURPOSE = 1
$END TP FUNCTION
$REPORT TRANSIT LOAD
SFILES
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   INPUT FILE = TRLDATA, USER ID = $AM90RTT1.NHB$
SHEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
SOPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   AM LENGTH = 2
   NETWORK = AM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.RTT$
$HEADERS
   1990 DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR REGIONAL RAIL NHB
```

```
AM PEAK PERIOD, ATTR TO PROD DIRECTION
$OPTIONS
  BUILD PATHS
$PARAMETERS
  NETWORK = AM
   SELECTED ZONES = 1-1510
   MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (12, 0.1) (13, 0.1)
   TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 2-3, 3-3
SEND TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.RTT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.NHB$
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $AM90RTT2.NHB$
   OUTPUT FILE = WLKDATA, USER ID = $AM90RTT2.WLK$
$HEADERS
   LOAD 1990 AM PEAK PERIOD TRANSIT NETWORK
   LOAD TRANSIT NETWORK -- HEADER NO. 2
   LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = AM
   SELECTED PURPOSE = 1
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   INPUT FILE = TRLDATA, USER ID = $AM90RTT2.NHB$
SHEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
SOPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   AM LENGTH = 2
   NETWORK = AM
SEND TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-PA.STT$
SHEADERS
   1990 DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR SUBWAY/ELEVATED ALL-ACCESS NHB
   AM PEAK PERIOD, PROD TO ATTR DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
```

```
NETWORK = AM
  SELECTED ZONES = 1-1510
  DELETE MODES = 12, 13
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
  RUN TIME FACTORS = (10, 0.1) (11, 0.1)
  TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                         (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                         (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
SEND TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
  INPUT FILE = TRPATH, USER ID = $TR90-PA.STT$
  INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.NHB$
  INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
  OUTPUT FILE = TRLDATA, USER ID = $AM90STT1.NHB$
  OUTPUT FILE = WLKDATA, USER ID = $AM90STT1.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
  LOAD TRANSIT LINES
  LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = AM
  SELECTED PURPOSE = 2
$END TP FUNCTION
$REPORT TRANSIT LOAD
SFILES
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   INPUT FILE = TRLDATA, USER ID = $AM90STT1.NHB$
SHEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
SOPTIONS
  PRINT ALL LINE LOADS
$PARAMETERS
  AM LENGTH = 2
  NETWORK = AM
$END TP FUNCTION
$BUILD TRANSIT PATHS
SFILE
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.STT$
$HEADERS
   1990 DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR SUBWAY/ELEVATED ALL-ACCESS NHB
  AM PEAK PERIOD, ATTR TO PROD DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
  NETWORK = AM
   SELECTED ZONES = 1-1510
  DELETE MODES = 12, 13
  MAXIMUM TRANSFER = 15
```

```
MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
  RUN TIME FACTORS = (10, 0.1) (11, 0.1)
  TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 2-3, 3-3
SEND TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.STT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.NHB$
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $AM90STT2.NHB$
   OUTPUT FILE = WLKDATA, USER ID = $AM90STT2.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = AM
   SELECTED PURPOSE = 2
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   INPUT FILE = TRLDATA, USER ID = $AM90STT2.NHB$
SHEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
  AM LENGTH = 2
  NETWORK = AM
SEND TP FUNCTION
$BUILD TRANSIT PATHS
SFILE
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-PA.BTT$
$HEADERS
   1990 DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS BUS/TROLLEY ALL-ACCESS NHB
   AM PEAK PERIOD, PROD TO ATTR DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = AM
   SELECTED ZONES = 1-1510
   DELETE MODES = 10, 11, 12, 13
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (4, 0.1) (5, 0.1) (6, 0.1) (7, 0.1)
```

```
(8,0.1) (9,0.1)
   TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.BTT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.NHB$
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $AM90BTT1.NHB$
   OUTPUT FILE = WLKDATA, USER ID = $AM90BTT5.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
SOPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = AM
   SELECTED PURPOSE = 3
SEND TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   INPUT FILE = TRLDATA, USER ID = $AM90BTT1.NHB$
SHEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   AM LENGTH = 2
   NETWORK = AM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.BTT$
$HEADERS
   1990 DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS BUS/TROLLEY ALL-ACCESS NHB
   AM PEAK PERIOD, ATTR TO PROD DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = AM
   SELECTED ZONES = 1-1510
   DELETE MODES = 10, 11, 12, 13
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (4, 0.1) (5, 0.1) (6, 0.1) (7, 0.1)
                       (8,0.1) (9,0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
```

```
(13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 2-3, 3-3
$END TP FUNCTION
SLOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.BTT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.NHB$
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $AM90BTT2.NHB$
   OUTPUT FILE = WLKDATA, USER ID = $AM90BTT6.WLK$
SHEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
   NETWORK = AM
   SELECTED PURPOSE = 3
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETAM.DAT$
   INPUT FILE = TRLDATA, USER ID = $AM90BTT2.NHB$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   AM LENGTH = 2
   NETWORK = AM
$END TP FUNCTION
```

.

```
$BUILD TRANSIT PATHS
SFILE
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-PA.RST$
SHEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR REGIONAL RAIL WITH TRANSIT-ACCESS
   PM PEAK PERIOD, PROD TO ATTR DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
  NETWORK = PM
   SELECTED ZONES = 1-1510
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
  RUN TIME FACTORS = (12, 0.1) (13, 0.1)
   TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 3-2, 3-3, 3-12, 3-13
SEND TP FUNCTION
$LOAD TRANSIT NETWORK
ŚFILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.RST$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $PM90RST1.HBW$
   OUTPUT FILE = WLKDATA, USER ID = $PM90RST1.WLK$
$HEADERS
   LOAD 1990 PM PEAK PERIOD TRANSIT NETWORK
   LOAD TRANSIT NETWORK -- HEADER NO. 2
   LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
   NETWORK = PM
   SELECTED PURPOSE = 1
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   INPUT FILE = TRLDATA, USER ID = $PM90RST1.HBW$
SHEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
   NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.RST$
SHEADERS
```

```
DVRPC MODEL DEVELOPMENT PROJECT
  BUILD TRANSIT PATHS FOR REGIONAL RAIL WITH TRANSIT-ACCESS
  PM PEAK PERIOD, ATTR TO PROD DIRECTION
$OPTIONS
  BUILD PATHS
$PARAMETERS
  NETWORK = PM
   SELECTED ZONES = 1-1510
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
  RUN TIME FACTORS = (12, 0.1) (13, 0.1)
  TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                         (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                         (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 2-3, 3-3, 3-12, 3-13
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.RST$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $PM90RST2.HBW$
   OUTPUT FILE = WLKDATA, USER ID = $PM90RST2.WLK$
$HEADERS
  LOAD 1990 PM PEAK PERIOD TRANSIT NETWORK
   LOAD TRANSIT NETWORK -- HEADER NO. 2
  LOAD TRANSIT NETWORK -- HEADER NO. 3
SOPTIONS
  LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
SPARAMETERS
  NETWORK = PM
   SELECTED PURPOSE = 1
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   INPUT FILE = TRLDATA, USER ID = $PM90RST2.HBW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
SOPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
   NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-PA.RAT$
SHEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR REGIONAL RAIL WITH AUTO-ACCESS
   PM PEAK PERIOD, PROD TO ATTR DIRECTION
SOPTIONS
```

```
BUILD PATHS
$PARAMETERS
  NETWORK = PM
  SELECTED ZONES = 1-1510
  DELETE MODES = 4, 5, 6, 7, 8, 9, 10, 11
  DELETE ACCESS MODE = 1
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
  RUN TIME FACTORS = (3, 0.1) (12, 0.1) (13, 0.1)
  TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.RAT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
  OUTPUT FILE = TRLDATA, USER ID = $PM90RAT1.HBW$
  OUTPUT FILE = WLKDATA, USER ID = $PM90RAT1.WLK$
SHEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
  LOAD TRANSIT LINES
  LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = PM
   SELECTED PURPOSE = 2
SEND TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   INPUT FILE = TRLDATA, USER ID = $PM90RAT1.HBW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
   NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.RAT$
SHEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR REGIONAL RAIL WITH AUTO-ACCESS
   PM PEAK PERIOD, ATTR TO PROD DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
```

```
SELECTED ZONES = 1-1510
   DELETE MODES = 4, 5, 6, 7, 8, 9, 10, 11
   DELETE EGRESS MODE = 1
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (3, 0.1) (12, 0.1) (13, 0.1)
   TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 2-3, 3-3
SEND TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.RAT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $PM90RAT2.HBW$
   OUTPUT FILE = WLKDATA, USER ID = $PM90RAT2.WLK$
SHEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
SOPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
   NETWORK = PM
   SELECTED PURPOSE = 2
$END TP FUNCTION
$REPORT TRANSIT LOAD
SFILES
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   INPUT FILE = TRLDATA, USER ID = $PM90RAT2.HBW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
SOPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
   NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-PA.RWT$
SHEADERS
   1990 DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR REGIONAL RAIL WALK-ACCESS
   PM PEAK PERIOD, PROD TO ATTR DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 4, 5, 6, 7, 8, 9, 10, 11
```

```
DELETE ACCESS MODE = 2,3
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (1, 0.1) (12, 0.1) (13, 0.1)
   TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.RWT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $PM90RWT1.HBW$
   OUTPUT FILE = WLKDATA, USER ID = $PM90RWT1.WLK$
SHEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
SOPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
   NETWORK = PM
   SELECTED PURPOSE = 3
$END TP FUNCTION
$REPORT TRANSIT LOAD
SFILES
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   INPUT FILE = TRLDATA, USER ID = $PM90RWT1.HBW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
   NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.RWT$
SHEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR REGIONAL RAIL WALK-ACCESS
   PM PEAK PERIOD, ATTR TO PROD DIRECTION
SOPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 4, 5, 6, 7, 8, 9, 10, 11
   DELETE EGRESS MODE = 2,3
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
```

```
RUN TIME FACTORS = (1,0.1) (12,0.1) (13,0.1)
  TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 2-3, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.RWT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $PM90RWT2.HBW$
   OUTPUT FILE = WLKDATA, USER ID = $PM90RWT2.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
SOPTIONS
  LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = PM
   SELECTED PURPOSE = 3
SEND TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   INPUT FILE = TRLDATA, USER ID = $PM90RWT2.HBW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
   NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-PA.SBT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR SUBWAY/ELEVATED BUS TRANSIT-ACCESS
   PM PEAK PERIOD, PROD TO ATTR DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 12, 13
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (10, 0.1) (11, 0.1)
   TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
```

```
(13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 3-2, 3-3, 3-10, 3-11
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.SBT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $PM90SBT1.HBW$
  OUTPUT FILE = WLKDATA, USER ID = $PM90SBT1.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
  LOAD TRANSIT LINES
  LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
SPARAMETERS
  NETWORK = PM
   SELECTED PURPOSE = 4
SEND TP FUNCTION
SREPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = SHUDNETPM.DATS
   INPUT FILE = TRLDATA, USER ID = $PM90SBT1.HBW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
SOPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
   NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.SBT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR SUBWAY/ELEVATED BUS TRANSIT-ACCESS
   PM PEAK PERIOD, ATTR TO PROD DIRECTION
SOPTIONS
   BUILD PATHS
$PARAMETERS
  NETWORK = PM
   SELECTED ZONES = 1-1510
  DELETE MODES = 12, 13
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
  RUN TIME FACTORS = (10, 0.1) (11, 0.1)
   TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 2-3, 3-3, 3-10, 3-11
SEND TP FUNCTION
$LOAD TRANSIT NETWORK
```

```
$FILES
  INPUT FILE = TRPATH, USER ID = $TR90-AP.SBT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.HBW$
  INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
  OUTPUT FILE = TRLDATA, USER ID = $PM90SBT2.HBW$
  OUTPUT FILE = WLKDATA, USER ID = $PM90SBT2.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = PM
   SELECTED PURPOSE = 4
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   INPUT FILE = TRLDATA, USER ID = $PM90SBT2.HBW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
  NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-PA.SAT$
SHEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR SUBWAY/ELEVATED AUTO-ACCESS
   PM PEAK PERIOD, PROD TO ATTR DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 4, 5, 6, 7, 8, 9, 12, 13
   DELETE ACCESS MODE = 1
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (3, 0.1) (10, 0.1) (11, 0.1)
   TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.SAT$
```

```
INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $PM90SAT1.HBW$
   OUTPUT FILE = WLKDATA, USER ID = $PM90SAT1.WLK$
SHEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = PM
   SELECTED PURPOSE = 5
$END TP FUNCTION
$REPORT TRANSIT LOAD
SFILES
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   INPUT FILE = TRLDATA, USER ID = $PM90SAT1.HBW$
SHEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
SOPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
   NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
SFILE
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.SAT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR SUBWAY/ELEVATED AUTO-ACCESS
   PM PEAK PERIOD, ATTR TO PROD DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 4, 5, 6, 7, 8, 9, 12, 13
   DELETE EGRESS MODE = 1
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (3, 0.1) (10, 0.1) (11, 0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 2-3, 3-3
SEND TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.SAT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $PM90SAT2.HBW$
```

```
OUTPUT FILE = WLKDATA, USER ID = $PM90SAT2.WLK$
SHEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
  LOAD TRANSIT LINES
  LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = PM
   SELECTED PURPOSE = 5
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   INPUT FILE = TRLDATA, USER ID = $PM90SAT2.HBW$
SHEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
SOPTIONS
   PRINT ALL LINE LOADS
SPARAMETERS
   PM LENGTH = 2
  NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-PA.SWT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR SUBWAY/ELEVATED WALK-ACCESS
   PM PEAK PERIOD, PROD TO ATTR DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 4, 5, 6, 7, 8, 9, 12, 13
   DELETE ACCESS MODE = 2,3
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (1, 0.1) (10, 0.1) (11, 0.1)
   TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.SWT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $PM90SWT1.HBW$
   OUTPUT FILE = WLKDATA, USER ID = $PM90SWT1.WLK$
SHEADERS
```

```
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
   NETWORK = PM
   SELECTED PURPOSE = 6
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   INPUT FILE = TRLDATA, USER ID = $PM90SWT1.HBW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
   NETWORK = PM
SEND TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.SWT$
SHEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR SUBWAY/ELEVATED WALK-ACCESS
   PM PEAK PERIOD, ATTR TO PROD DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 4, 5, 6, 7, 8, 9, 12, 13
   DELETE EGRESS MODE = 2,3
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (1, 0.1) (10, 0.1) (11, 0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 2-3, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.SWT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $PM90SWT2.HBW$
   OUTPUT FILE = WLKDATA, USER ID = $PM90SWT2.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
```

```
SOPTIONS
  LOAD TRANSIT LINES
  LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = PM
   SELECTED PURPOSE = 6
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   INPUT FILE = TRLDATA, USER ID = $PM90SWT2.HBW$
SHEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
  NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-PA.BTT$
SHEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS BUS/TROLLEY ALL-ACCESS
   PM PEAK PERIOD
SOPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 10, 11, 12, 13
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (4, 0.1) (5, 0.1) (6, 0.1) (7, 0.1)
                       (8,0.1) (9,0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
SEND TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.BTT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $PM90BTT1.HBW$
   OUTPUT FILE = WLKDATA, USER ID = $PM90BTT1.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
SOPTIONS
   LOAD TRANSIT LINES
```

```
LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = PM
   SELECTED PURPOSE = 7
SEND TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   INPUT FILE = TRLDATA, USER ID = $PM90BTT1.HBW$
SHEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
   NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
SFILE
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.BTT$
SHEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS BUS/TROLLEY ALL-ACCESS
   PM PEAK PERIOD, ATTR TO PROD DIRECTION
SOPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 10, 11, 12, 13
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (4, 0.1) (5, 0.1) (6, 0.1) (7, 0.1)
                       (8,0.1) (9,0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 2-3, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
SFILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.BTT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $PM90BTT2.HBW$
   OUTPUT FILE = WLKDATA, USER ID = $PM90BTT2.WLK$
SHEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
SPARAMETERS
```

```
NETWORK = PM
  SELECTED PURPOSE = 7
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   INPUT FILE = TRLDATA, USER ID = $PM90BTT2.HBW$
SHEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
   NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
ŚFILE
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-PA.RTT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR REGIONAL RAIL
   PM PEAK PERIOD, PROD TO ATTR DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (12, 0.1) (13, 0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
SEND TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.RTT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.HNW$
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $PM90RTT1.HNW$
   OUTPUT FILE = WLKDATA, USER ID = $PM90RTT1.WLK$
$HEADERS
   LOAD 1990 PM PEAK PERIOD TRANSIT NETWORK
   LOAD TRANSIT NETWORK -- HEADER NO. 2
   LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
   NETWORK = PM
   SELECTED PURPOSE = 1
$END TP FUNCTION
$REPORT TRANSIT LOAD
```

```
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   INPUT FILE = TRLDATA, USER ID = $PM90RTT1.HNW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
  NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.RTT$
SHEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR REGIONAL RAIL
   PM PEAK PERIOD, ATTR TO PROD DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (12, 0.1) (13, 0.1)
   TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 2-3, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.RTT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.HNW$
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $PM90RTT2.HNW$
   OUTPUT FILE = WLKDATA, USER ID = $PM90RTT2.WLK$
$HEADERS
   LOAD 1990 PM PEAK PERIOD TRANSIT NETWORK
   LOAD TRANSIT NETWORK -- HEADER NO. 2
   LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
   NETWORK = PM
   SELECTED PURPOSE = 1
SEND TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   INPUT FILE = TRLDATA, USER ID = $PM90RTT2.HNW$
SHEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
```

```
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
  NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-PA.STT$
SHEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR SUBWAY/ELEVATED ALL-ACCESS
   PM PEAK PERIOD, PROD TO ATTR DIRECTION
SOPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 12, 13
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (10, 0.1) (11, 0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.STT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.HNW$
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $PM90STT1.HNW$
   OUTPUT FILE = WLKDATA, USER ID = $PM90STT1.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
SOPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
   NETWORK = PM
   SELECTED PURPOSE = 2
SEND TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   INPUT FILE = TRLDATA, USER ID = $PM90STT1.HNW$
SHEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
```

```
PRINT ALL LINE LOADS
$PARAMETERS
  PM LENGTH = 2
  NETWORK = PM
SEND TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
  OUTPUT FILE = TRPATH, USER ID = $TR90-AP.STT$
$HEADERS
  DVRPC MODEL DEVELOPMENT PROJECT
  BUILD TRANSIT PATHS FOR SUBWAY/ELEVATED ALL-ACCESS
  PM PEAK PERIOD, ATTR TO PROD DIRECTION
$OPTIONS
  BUILD PATHS
$PARAMETERS
  NETWORK = PM
   SELECTED ZONES = 1-1510
  DELETE MODES = 12, 13
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
  RUN TIME FACTORS = (10, 0.1) (11, 0.1)
  TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 2-3, 3-3
SEND TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.STT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.HNW$
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $PM90STT2.HNW$
   OUTPUT FILE = WLKDATA, USER ID = $PM90STT2.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
SOPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
   NETWORK = PM
   SELECTED PURPOSE = 2
$END TP FUNCTION
SREPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   INPUT FILE = TRLDATA, USER ID = $PM90STT2.HNW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
   NETWORK = PM
```

```
$END TP FUNCTION
$BUILD TRANSIT PATHS
SFILE
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-PA.BTT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS BUS/TROLLEY ALL-ACCESS
   PM PEAK PERIOD
SOPTIONS
   BUILD PATHS
$PARAMETERS
  NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 10, 11, 12, 13
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (4, 0.1) (5, 0.1) (6, 0.1) (7, 0.1)
                       (8, 0.1) (9, 0.1)
   TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.BTT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.HNW$
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $PM90BTT1.HNW$
   OUTPUT FILE = WLKDATA, USER ID = $PM90BTT3.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
   NETWORK = PM
   SELECTED PURPOSE = 3
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   INPUT FILE = TRLDATA, USER ID = $PM90BTT1.HNW$
SHEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
SOPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
   NETWORK = PM
$END TP FUNCTION
```

```
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.BTT$
SHEADERS
  DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS BUS/TROLLEY ALL-ACCESS
   PM PEAK PERIOD, ATTR TO PROD DIRECTION
$OPTIONS
  BUILD PATHS
$PARAMETERS
  NETWORK = PM
   SELECTED ZONES = 1-1510
  DELETE MODES = 10, 11, 12, 13
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
  RUN TIME FACTORS = (4, 0.1) (5, 0.1) (6, 0.1) (7, 0.1)
                      (8,0.1) (9,0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 2-3, 3-3
SEND TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.BTT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.HNW$
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $PM90BTT2.HNW$
   OUTPUT FILE = WLKDATA, USER ID = $PM90BTT4.WLK$
SHEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
   NETWORK = PM
   SELECTED PURPOSE = 3
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   INPUT FILE = TRLDATA, USER ID = $PM90BTT2.HNW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
SOPTIONS
   PRINT ALL LINE LOADS
SPARAMETERS
   PM LENGTH = 2
   NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
SFILE
```

```
INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
  OUTPUT FILE = TRPATH, USER ID = $TR90-PA.RTT$
SHEADERS
  DVRPC MODEL DEVELOPMENT PROJECT
  BUILD TRANSIT PATHS FOR REGIONAL RAIL
  PM PEAK PERIOD, PROD TO ATTR DIRECTION
$OPTIONS
  BUILD PATHS
$PARAMETERS
  NETWORK = PM
  SELECTED ZONES = 1-1510
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
  RUN TIME FACTORS = (12, 0.1) (13, 0.1)
  TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                         (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                         (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
SEND TP FUNCTION
$LOAD TRANSIT NETWORK
SFILES
  INPUT FILE = TRPATH, USER ID = $TR90-PA.RTT$
  INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.NHB$
  INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
  OUTPUT FILE = TRLDATA, USER ID = $PM90RTT1.NHB$
  OUTPUT FILE = WLKDATA, USER ID = $PM90RTT1.WLK$
$HEADERS
  LOAD 1990 PM PEAK PERIOD TRANSIT NETWORK
  LOAD TRANSIT NETWORK -- HEADER NO. 2
  LOAD TRANSIT NETWORK -- HEADER NO. 3
SOPTIONS
  LOAD TRANSIT LINES
  LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = PM
   SELECTED PURPOSE = 1
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   INPUT FILE = TRLDATA, USER ID = $PM90RTT1.NHB$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
  PM LENGTH = 2
  NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
SFILE
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.RTT$
SHEADERS
  DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR REGIONAL RAIL
```
```
PM PEAK PERIOD, ATTR TO PROD DIRECTION
$OPTIONS
  BUILD PATHS
$PARAMETERS
  NETWORK = PM
   SELECTED ZONES = 1-1510
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (12, 0.1) (13, 0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 2-3, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.RTT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.NHB$
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $PM90RTT2.NHB$
   OUTPUT FILE = WLKDATA, USER ID = $PM90RTT2.WLK$
SHEADERS
   LOAD 1990 PM PEAK PERIOD TRANSIT NETWORK
   LOAD TRANSIT NETWORK -- HEADER NO. 2
   LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
$PARAMETERS
   NETWORK = PM
   SELECTED PURPOSE = 1
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   INPUT FILE = TRLDATA, USER ID = $PM90RTT2.NHB$
SHEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
   NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
ŚFILE
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-PA.STT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR SUBWAY/ELEVATED ALL-ACCESS
   PM PEAK PERIOD, PROD TO ATTR DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
```

```
NETWORK = PM
  SELECTED ZONES = 1-1510
  DELETE MODES = 12, 13
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
  RUN TIME FACTORS = (10, 0.1) (11, 0.1)
  TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                         (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.STT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.NHB$
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
  OUTPUT FILE = TRLDATA, USER ID = $PM90STT1.NHB$
  OUTPUT FILE = WLKDATA, USER ID = $PM90STT1.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
  LOAD TRANSIT LINES
  LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = PM
   SELECTED PURPOSE = 2
SEND TP FUNCTION
SREPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   INPUT FILE = TRLDATA, USER ID = $PM90STT1.NHB$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
   NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
SFILE
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.STT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR SUBWAY/ELEVATED ALL-ACCESS
   PM PEAK PERIOD, ATTR TO PROD DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 12, 13
   MAXIMUM TRANSFER = 15
```

```
MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
  RUN TIME FACTORS = (10, 0.1) (11, 0.1)
  TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 2-3, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.STT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.NHB$
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $PM90STT2.NHB$
  OUTPUT FILE = WLKDATA, USER ID = $PM90STT2.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
  LOAD TRANSIT LINES
  LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = PM
   SELECTED PURPOSE = 2
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   INPUT FILE = TRLDATA, USER ID = $PM90STT2.NHB$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
  PM LENGTH = 2
  NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-PA.BTT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS BUS/TROLLEY ALL-ACCESS
   PM PEAK PERIOD, PROD TO ATTR DIRECTION
SOPTIONS
   BUILD PATHS
$PARAMETERS
  NETWORK = PM
   SELECTED ZONES = 1-1510
  DELETE MODES = 10, 11, 12, 13
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
  RUN TIME FACTORS = (4, 0.1) (5, 0.1) (6, 0.1) (7, 0.1)
```

```
(8,0.1) (9,0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.BTT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.NHB$
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $PM90BTT1.NHB$
   OUTPUT FILE = WLKDATA, USER ID = $PM90BTT5.WLK$
SHEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
SOPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = PM
   SELECTED PURPOSE = 3
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   INPUT FILE = TRLDATA, USER ID = $PM90BTT1.NHB$
SHEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
   NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.BTT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS BUS/TROLLEY ALL-ACCESS
   PM PEAK PERIOD, ATTR TO PROD DIRECTION
SOPTIONS
   BUILD PATHS
SPARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 10, 11, 12, 13
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (4, 0.1) (5, 0.1) (6, 0.1) (7, 0.1)
                       (8,0.1) (9,0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
```

```
(13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 2-3, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.BTT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.NHB$
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $PM90BTT2.NHB$
   OUTPUT FILE = WLKDATA, USER ID = $PM90BTT6.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = PM
   SELECTED PURPOSE = 3
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETPM.DAT$
   INPUT FILE = TRLDATA, USER ID = $PM90BTT2.NHB$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
   NETWORK = PM
$END TP FUNCTION
```

.

```
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
  OUTPUT FILE = TRPATH, USER ID = $TR90-PA.RST$
SHEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR REGIONAL RAIL WITH TRANSIT-ACCESS
   OFF PEAK PERIOD, PROD TO ATTR DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
  NETWORK = PM
   SELECTED ZONES = 1-1510
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (12, 0.1) (13, 0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 3-2, 3-3, 3-12, 3-13
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.RST$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $OP90RST1.HBW$
   OUTPUT FILE = WLKDATA, USER ID = $OP90RST1.WLK$
$HEADERS
   LOAD 1990 OFF PEAK PERIOD TRANSIT NETWORK
   LOAD TRANSIT NETWORK -- HEADER NO. 2
   LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
   NETWORK = PM
   SELECTED PURPOSE = 1
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   INPUT FILE = TRLDATA, USER ID = $OP90RST1.HBW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
   NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.RST$
SHEADERS
```

```
DVRPC MODEL DEVELOOFFENT PROJECT
  BUILD TRANSIT PATHS FOR REGIONAL RAIL WITH TRANSIT-ACCESS
  OFF PEAK PERIOD, ATTR TO PROD DIRECTION
SOPTIONS
  BUILD PATHS
$PARAMETERS
  NETWORK = PM
  SELECTED ZONES = 1-1510
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
  RUN TIME FACTORS = (12, 0.1) (13, 0.1)
  TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 2-3, 3-3, 3-12, 3-13
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
  INPUT FILE = TRPATH, USER ID = $TR90-AP.RST$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.HBW$
  INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
  OUTPUT FILE = TRLDATA, USER ID = $OP90RST2.HBW$
  OUTPUT FILE = WLKDATA, USER ID = $OP90RST2.WLK$
SHEADERS
  LOAD 1990 OFF PEAK PERIOD TRANSIT NETWORK
  LOAD TRANSIT NETWORK -- HEADER NO. 2
  LOAD TRANSIT NETWORK -- HEADER NO. 3
SOPTIONS
  LOAD TRANSIT LINES
  LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = PM
   SELECTED PURPOSE = 1
SEND TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   INPUT FILE = TRLDATA, USER ID = $OP90RST2.HBW$
SHEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
  NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
SFILE
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-PA.RAT$
$HEADERS
  DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR REGIONAL RAIL WITH AUTO-ACCESS
  OFF PEAK PERIOD, PROD TO ATTR DIRECTION
SOPTIONS
```

```
BUILD PATHS
$PARAMETERS
  NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 4, 5, 6, 7, 8, 9, 10, 11
   DELETE ACCESS MODE = 1
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (3, 0.1) (12, 0.1) (13, 0.1)
   TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.RAT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $OP90RAT1.HBW$
   OUTPUT FILE = WLKDATA, USER ID = $OP90RAT1.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
SOPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
   NETWORK = PM
   SELECTED PURPOSE = 2
SEND TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   INPUT FILE = TRLDATA, USER ID = $OP90RAT1.HBW$
SHEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
   NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.RAT$
SHEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR REGIONAL RAIL WITH AUTO-ACCESS
   OFF PEAK PERIOD, ATTR TO PROD DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
```

```
SELECTED ZONES = 1-1510
  DELETE MODES = 4, 5, 6, 7, 8, 9, 10, 11
  DELETE EGRESS MODE = 1
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
  RUN TIME FACTORS = (3, 0.1) (12, 0.1) (13, 0.1)
  TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 2-3, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.RAT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
  OUTPUT FILE = TRLDATA, USER ID = $OP90RAT2.HBW$
  OUTPUT FILE = WLKDATA, USER ID = $OP90RAT2.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
SOPTIONS
  LOAD TRANSIT LINES
  LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = PM
   SELECTED PURPOSE = 2
SEND TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   INPUT FILE = TRLDATA, USER ID = $OP90RAT2.HBW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
SOPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
  NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-PA.RWT$
$HEADERS
   1990 DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR REGIONAL RAIL WALK-ACCESS
   OFF PEAK PERIOD, PROD TO ATTR DIRECTION
$OPTIONS
  BUILD PATHS
$PARAMETERS
  NETWORK = PM
  SELECTED ZONES = 1-1510
  DELETE MODES = 4, 5, 6, 7, 8, 9, 10, 11
```

```
DELETE ACCESS MODE = 2,3
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
  RUN TIME FACTORS = (1, 0.1) (12, 0.1) (13, 0.1)
  TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.RWT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.HBW$
  INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
  OUTPUT FILE = TRLDATA, USER ID = $OP90RWT1.HBW$
  OUTPUT FILE = WLKDATA, USER ID = $OP90RWT1.WLK$
SHEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
SOPTIONS
  LOAD TRANSIT LINES
  LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = PM
   SELECTED PURPOSE = 3
$END TP FUNCTION
$REPORT TRANSIT LOAD
SFILES
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   INPUT FILE = TRLDATA, USER ID = $OP90RWT1.HBW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
   NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
SFILE
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.RWT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR REGIONAL RAIL WALK-ACCESS
   OFF PEAK PERIOD, ATTR TO PROD DIRECTION
SOPTIONS
   BUILD PATHS
$PARAMETERS
  NETWORK = PM
   SELECTED ZONES = 1-1510
  DELETE MODES = 4, 5, 6, 7, 8, 9, 10, 11
  DELETE EGRESS MODE = 2,3
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
```

```
RUN TIME FACTORS = (1, 0.1) (12, 0.1) (13, 0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 2-3, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.RWT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $OP90RWT2.HBW$
   OUTPUT FILE = WLKDATA, USER ID = $OP90RWT2.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
SOPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
   NETWORK = PM
   SELECTED PURPOSE = 3
SEND TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   INPUT FILE = TRLDATA, USER ID = $OP90RWT2.HBW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
   NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-PA.SBT$
SHEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR SUBWAY/ELEVATED BUS TRANSIT-ACCESS
   OFF PEAK PERIOD, PROD TO ATTR DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 12, 13
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (10, 0.1) (11, 0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
```

```
(13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 3-2, 3-3, 3-10, 3-11
SEND TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.SBT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $OP90SBT1.HBW$
   OUTPUT FILE = WLKDATA, USER ID = $OP90SBT1.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
   NETWORK = PM
   SELECTED PURPOSE = 4
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   INPUT FILE = TRLDATA, USER ID = $OP90SBT1.HBW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
SOPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
   NETWORK = PM
SEND TP FUNCTION
$BUILD TRANSIT PATHS
SFTLE
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.SBT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR SUBWAY/ELEVATED BUS TRANSIT-ACCESS
   OFF PEAK PERIOD, ATTR TO PROD DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 12, 13
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (10, 0.1) (11, 0.1)
   TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 2-3, 3-3, 3-10, 3-11
$END TP FUNCTION
$LOAD TRANSIT NETWORK
```

```
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.SBT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
  OUTPUT FILE = TRLDATA, USER ID = $OP90SBT2.HBW$
  OUTPUT FILE = WLKDATA, USER ID = $OP90SBT2.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
  LOAD TRANSIT LINES
  LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = PM
  SELECTED PURPOSE = 4
SEND TP FUNCTION
SREPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   INPUT FILE = TRLDATA, USER ID = $OP90SBT2.HBW$
SHEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
  NETWORK = PM
SEND TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-PA.SAT$
$HEADERS
  DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR SUBWAY/ELEVATED AUTO-ACCESS
   OFF PEAK PERIOD, PROD TO ATTR DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
  NETWORK = PM
   SELECTED ZONES = 1-1510
  DELETE MODES = 4, 5, 6, 7, 8, 9, 12, 13
  DELETE ACCESS MODE = 1
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
  RUN TIME FACTORS = (3, 0.1) (10, 0.1) (11, 0.1)
  TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
SFILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.SAT$
```

```
INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
  OUTPUT FILE = TRLDATA, USER ID = $OP90SAT1.HBW$
OUTPUT FILE = WLKDATA, USER ID = $OP90SAT1.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
   NETWORK = PM
   SELECTED PURPOSE = 5
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   INPUT FILE = TRLDATA, USER ID = $OP90SAT1.HBW$
SHEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
SOPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
   NETWORK = PM
SEND TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.SAT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR SUBWAY/ELEVATED AUTO-ACCESS
   OFF PEAK PERIOD, ATTR TO PROD DIRECTION
SOPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 4, 5, 6, 7, 8, 9, 12, 13
   DELETE EGRESS MODE = 1
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (3, 0.1) (10, 0.1) (11, 0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                           (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                           (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 2-3, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.SAT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $OP90SAT2.HBW$
```

```
OUTPUT FILE = WLKDATA, USER ID = $OP90SAT2.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = PM
   SELECTED PURPOSE = 5
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   INPUT FILE = TRLDATA, USER ID = $OP90SAT2.HBW$
SHEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
   NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-PA.SWT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR SUBWAY/ELEVATED WALK-ACCESS
   OFF PEAK PERIOD, PROD TO ATTR DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 4, 5, 6, 7, 8, 9, 12, 13
   DELETE ACCESS MODE = 2,3
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (1, 0.1) (10, 0.1) (11, 0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.SWT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $OP90SWT1.HBW$
   OUTPUT FILE = WLKDATA, USER ID = $OP90SWT1.WLK$
$HEADERS
```

```
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
SOPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = PM
   SELECTED PURPOSE = 6
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   INPUT FILE = TRLDATA, USER ID = $OP90SWT1.HBW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
SOPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
   NETWORK = PM
SEND TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.SWT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR SUBWAY/ELEVATED WALK-ACCESS
   OFF PEAK PERIOD, ATTR TO PROD DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 4, 5, 6, 7, 8, 9, 12, 13
   DELETE EGRESS MODE = 2,3
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (1, 0.1) (10, 0.1) (11, 0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 2-3, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.SWT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $OP90SWT2.HBW$
   OUTPUT FILE = WLKDATA, USER ID = $OP90SWT2.WLK$
SHEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
```

```
SOPTIONS
  LOAD TRANSIT LINES
  LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = PM
   SELECTED PURPOSE = 6
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   INPUT FILE = TRLDATA, USER ID = $OP90SWT2.HBW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
  NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-PA.BTT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS BUS/TROLLEY ALL-ACCESS
   OFF PEAK PERIOD
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 10, 11, 12, 13
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (4, 0.1) (5, 0.1) (6, 0.1) (7, 0.1)
                       (8,0.1) (9,0.1)
   TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.BTT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $OP90BTT1.HBW$
   OUTPUT FILE = WLKDATA, USER ID = $OP90BTT1.WLK$
SHEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
```

```
LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = PM
   SELECTED PURPOSE = 7
$END TP FUNCTION
SREPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   INPUT FILE = TRLDATA, USER ID = $OP90BTT1.HBW$
SHEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
SOPTIONS
   PRINT ALL LINE LOADS
SPARAMETERS
   PM LENGTH = 2
   NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.BTT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS BUS/TROLLEY ALL-ACCESS
   OFF PEAK PERIOD, ATTR TO PROD DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 10, 11, 12, 13
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (4, 0.1) (5, 0.1) (6, 0.1) (7, 0.1)
                       (8,0.1) (9,0.1)
   TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 2-3, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.BTT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.HBW$
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $OP90BTT2.HBW$
   OUTPUT FILE = WLKDATA, USER ID = $OP90BTT2.WLK$
SHEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
```

```
NETWORK = PM
  SELECTED PURPOSE = 7
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   INPUT FILE = TRLDATA, USER ID = $OP90BTT2.HBW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
  PRINT ALL LINE LOADS
$PARAMETERS
  PM LENGTH = 2
  NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-PA.RTT$
$HEADERS
  DVRPC MODEL DEVELOPMENT PROJECT
  BUILD TRANSIT PATHS FOR REGIONAL RAIL
  OFF PEAK PERIOD, PROD TO ATTR DIRECTION
$OPTIONS
  BUILD PATHS
$PARAMETERS
  NETWORK = PM
   SELECTED ZONES = 1-1510
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (12, 0.1) (13, 0.1)
  TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
SEND TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.RTT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.HNW$
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $OP90RTT1.HNW$
   OUTPUT FILE = WLKDATA, USER ID = $OP90RTT1.WLK$
$HEADERS
  LOAD 1990 OFF PEAK PERIOD TRANSIT NETWORK
  LOAD TRANSIT NETWORK -- HEADER NO. 2
  LOAD TRANSIT NETWORK -- HEADER NO. 3
SOPTIONS
  LOAD TRANSIT LINES
  LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = PM
  SELECTED PURPOSE = 1
$END TP FUNCTION
$REPORT TRANSIT LOAD
```

```
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   INPUT FILE = TRLDATA, USER ID = $OP90RTT1.HNW$
SHEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
   NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.RTT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR REGIONAL RAIL
   OFF PEAK PERIOD, ATTR TO PROD DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (12, 0.1) (13, 0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 2-3, 3-3
SEND TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.RTT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.HNW$
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $OP90RTT2.HNW$
   OUTPUT FILE = WLKDATA, USER ID = $OP90RTT2.WLK$
$HEADERS
   LOAD 1990 OFF PEAK PERIOD TRANSIT NETWORK
   LOAD TRANSIT NETWORK -- HEADER NO. 2
   LOAD TRANSIT NETWORK -- HEADER NO. 3
SOPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
   NETWORK = PM
   SELECTED PURPOSE = 1
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   INPUT FILE = TRLDATA, USER ID = $OP90RTT2.HNW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
```

```
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
  NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-PA.STT$
SHEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR SUBWAY/ELEVATED ALL-ACCESS
   OFF PEAK PERIOD, PROD TO ATTR DIRECTION
SOPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 12, 13
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (10, 0.1) (11, 0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.STT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.HNW$
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $OP90STT1.HNW$
   OUTPUT FILE = WLKDATA, USER ID = $OP90STT1.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
   NETWORK = PM
   SELECTED PURPOSE = 2
$END TP FUNCTION
$REPORT TRANSIT LOAD
SFILES
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   INPUT FILE = TRLDATA, USER ID = $OP90STT1.HNW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
SOPTIONS
```

```
PRINT ALL LINE LOADS
$PARAMETERS
  PM LENGTH = 2
  NETWORK = PM
$END TP FUNCTION
SBUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.STT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR SUBWAY/ELEVATED ALL-ACCESS
   OFF PEAK PERIOD, ATTR TO PROD DIRECTION
$OPTIONS
  BUILD PATHS
$PARAMETERS
  NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 12, 13
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (10, 0.1) (11, 0.1)
   TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 2-3, 3-3
SEND TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.STT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.HNW$
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $OP90STT2.HNW$
   OUTPUT FILE = WLKDATA, USER ID = $OP90STT2.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
SOPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
   NETWORK = PM
   SELECTED PURPOSE = 2
                                               .
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   INPUT FILE = TRLDATA, USER ID = $0P90STT2.HNW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
   NETWORK = PM
```

```
SEND TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-PA.BTT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS BUS/TROLLEY ALL-ACCESS
   OFF PEAK PERIOD
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 10, 11, 12, 13
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (4, 0.1) (5, 0.1) (6, 0.1) (7, 0.1)
                       (8,0.1) (9,0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.BTT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.HNW$
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $OP90BTT1.HNW$
   OUTPUT FILE = WLKDATA, USER ID = $OP90BTT3.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
   NETWORK = PM
   SELECTED PURPOSE = 3
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   INPUT FILE = TRLDATA, USER ID = $OP90BTT1.HNW$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
   NETWORK = PM
SEND TP FUNCTION
```

```
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.BTT$
SHEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS BUS/TROLLEY ALL-ACCESS
   OFF PEAK PERIOD, ATTR TO PROD DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 10, 11, 12, 13
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (4, 0.1) (5, 0.1) (6, 0.1) (7, 0.1)
                       (8,0.1) (9,0.1)
   TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
   NO TRANSFERS = 3-1, 1-3, 2-3, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.BTT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.HNW$
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $OP90BTT2.HNW$
   OUTPUT FILE = WLKDATA, USER ID = $OP90BTT4.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
   NETWORK = PM
   SELECTED PURPOSE = 3
$END TP FUNCTION
$REPORT TRANSIT LOAD
SFILES
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   INPUT FILE = TRLDATA, USER ID = $OP90BTT2.HNW$
SHEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
   NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
```

```
INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
  OUTPUT FILE = TRPATH, USER ID = $TR90-PA.RTT$
SHEADERS
  DVRPC MODEL DEVELOPMENT PROJECT
  BUILD TRANSIT PATHS FOR REGIONAL RAIL
  OFF PEAK PERIOD, PROD TO ATTR DIRECTION
$OPTIONS
  BUILD PATHS
$PARAMETERS
  NETWORK = PM
  SELECTED ZONES = 1-1510
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
  RUN TIME FACTORS = (12, 0.1) (13, 0.1)
  TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.RTT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.NHB$
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
  OUTPUT FILE = TRLDATA, USER ID = $OP90RTT1.NHB$
  OUTPUT FILE = WLKDATA, USER ID = $OP90RTT1.WLK$
$HEADERS
  LOAD 1990 OFF PEAK PERIOD TRANSIT NETWORK
  LOAD TRANSIT NETWORK -- HEADER NO. 2
  LOAD TRANSIT NETWORK -- HEADER NO. 3
SOPTIONS
  LOAD TRANSIT LINES
  LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = PM
   SELECTED PURPOSE = 1
SEND TP FUNCTION
$REPORT TRANSIT LOAD
SFILES
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   INPUT FILE = TRLDATA, USER ID = $OP90RTT1.NHB$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
  NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
SFILE
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.RTT$
SHEADERS
  DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR REGIONAL RAIL
```

```
OFF PEAK PERIOD, ATTR TO PROD DIRECTION
$OPTIONS
  BUILD PATHS
$PARAMETERS
  NETWORK = PM
  SELECTED ZONES = 1-1510
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
  RUN TIME FACTORS = (12, 0.1) (13, 0.1)
  TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 2-3, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.RTT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.NHB$
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
  OUTPUT FILE = TRLDATA, USER ID = $OP90RTT2.NHB$
  OUTPUT FILE = WLKDATA, USER ID = $OP90RTT2.WLK$
SHEADERS
  LOAD 1990 OFF PEAK PERIOD TRANSIT NETWORK
  LOAD TRANSIT NETWORK -- HEADER NO. 2
  LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
  LOAD TRANSIT LINES
  LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = PM
   SELECTED PURPOSE = 1
SEND TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   INPUT FILE = TRLDATA, USER ID = $OP90RTT2.NHB$
SHEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
  PM LENGTH = 2
  NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-PA.STT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR SUBWAY/ELEVATED ALL-ACCESS
   OFF PEAK PERIOD, PROD TO ATTR DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
```

```
NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 12, 13
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (10, 0.1) (11, 0.1)
   TRANSFER PENALITIES = (4,6.0) (5,6.0) (6,9.0) (7,6.0) (8,9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.STT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.NHB$
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $OP90STT1.NHB$
   OUTPUT FILE = WLKDATA, USER ID = $OP90STT1.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
SOPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
$PARAMETERS
   NETWORK = PM
   SELECTED PURPOSE = 2
SEND TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   INPUT FILE = TRLDATA, USER ID = $OP90STT1.NHB$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
   NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.STT$
SHEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS FOR SUBWAY/ELEVATED ALL-ACCESS
   PM PEAK PERIOD, ATTR TO PROD DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 12, 13
   MAXIMUM TRANSFER = 15
```

```
MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
  RUN TIME FACTORS = (10, 0.1) (11, 0.1)
  TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 2-3, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.STT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.NHB$
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
  OUTPUT FILE = TRLDATA, USER ID = $OP90STT2.NHB$
  OUTPUT FILE = WLKDATA, USER ID = $OP90STT2.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
  LOAD TRANSIT LINES
  LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = PM
   SELECTED PURPOSE = 2
SEND TP FUNCTION
$REPORT TRANSIT LOAD
SFILES
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   INPUT FILE = TRLDATA, USER ID = $OP90STT2.NHB$
SHEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
   NETWORK = PM
$END TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-PA.BTT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS BUS/TROLLEY ALL-ACCESS
   OFF PEAK PERIOD, PROD TO ATTR DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 10, 11, 12, 13
   MAXIMUM TRANSFER = 15
   MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
   RUN TIME FACTORS = (4, 0.1) (5, 0.1) (6, 0.1) (7, 0.1)
                       (8,0.1) (9,0.1)
```

```
TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
  NO TRANSFERS = 3-1, 1-3, 3-2, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-PA.BTT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90PA.NHB$
  INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
  OUTPUT FILE = TRLDATA, USER ID = $OP90BTT1.NHB$
  OUTPUT FILE = WLKDATA, USER ID = $OP90BTT5.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
SOPTIONS
  LOAD TRANSIT LINES
  LOAD NON TRANSIT LINKS
  NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = PM
  SELECTED PURPOSE = 3
SEND TP FUNCTION
SREPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   INPUT FILE = TRLDATA, USER ID = $OP90BTT1.NHB$
SHEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
  NETWORK = PM
SEND TP FUNCTION
$BUILD TRANSIT PATHS
$FILE
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRPATH, USER ID = $TR90-AP.BTT$
$HEADERS
   DVRPC MODEL DEVELOPMENT PROJECT
   BUILD TRANSIT PATHS BUS/TROLLEY ALL-ACCESS
   OFF PEAK PERIOD, ATTR TO PROD DIRECTION
$OPTIONS
   BUILD PATHS
$PARAMETERS
   NETWORK = PM
   SELECTED ZONES = 1-1510
   DELETE MODES = 10, 11, 12, 13
  MAXIMUM TRANSFER = 15
  MAXIMUM WAIT PENALTIES = (12, 9.0) (13, 9.0)
  RUN TIME FACTORS = (4, 0.1) (5, 0.1) (6, 0.1) (7, 0.1)
                       (8,0.1) (9,0.1)
   TRANSFER PENALITIES = (4, 6.0) (5, 6.0) (6, 9.0) (7, 6.0) (8, 9.0)
                          (9,9.0) (10,6.0) (11,6.0) (12,4.0)
                          (13, 4.0)
```

```
NO TRANSFERS = 3-1, 1-3, 2-3, 3-3
$END TP FUNCTION
$LOAD TRANSIT NETWORK
$FILES
   INPUT FILE = TRPATH, USER ID = $TR90-AP.BTT$
   INPUT FILE = TRVOL, USER ID = $\DVRPC\MCHOICE\TRIP90AP.NHB$
INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   OUTPUT FILE = TRLDATA, USER ID = $OP90BTT2.NHB$
   OUTPUT FILE = WLKDATA, USER ID = $OP90BTT6.WLK$
$HEADERS
LOAD 1990 CENSUS TRANSIT NETWORK -- recalibrated GM NO. 1
LOAD TRANSIT NETWORK -- HEADER NO. 2
LOAD TRANSIT NETWORK -- HEADER NO. 3
$OPTIONS
   LOAD TRANSIT LINES
   LOAD NON TRANSIT LINKS
   NON TRANSIT DATA FILE
$PARAMETERS
  NETWORK = PM
   SELECTED PURPOSE = 3
$END TP FUNCTION
$REPORT TRANSIT LOAD
$FILES
   INPUT FILE = TRNET, USER ID = $HUDNETOP.DAT$
   INPUT FILE = TRLDATA, USER ID = $OP90BTT2.NHB$
$HEADERS
REPORT TRANSIT LOAD TEST1 1990-- HEADER NO. 1
REPORT TRANSIT LOAD -- HEADER NO. 2
REPORT TRANSIT LOAD -- HEADER NO. 3
$OPTIONS
   PRINT ALL LINE LOADS
$PARAMETERS
   PM LENGTH = 2
   NETWORK = PM
$END TP FUNCTION
```

.

@echo off echo -

echo - ADD-AM.CMD echo - Add AM Transit Assignment Files Together echo -IF EXIST TEMP* DEL TEMP* IF EXIST AM90TVOL.HBW DEL AM90TVOL.HBW IF EXIST AM90TVOL.HNW DEL AM90TVOL.HNW IF EXIST AM90TVOL.NHB DEL AM90TVOL.NHB IF EXIST AM90TVOL.ALL DEL AM90TVOL.ALL CALL TADLOD2 <ADDHBW1.AM CALL TADLOD2 <ADDHBW2.AM CALL TADLOD2 <ADDHBW3.AM CALL TADLOD2 <ADDHBW4.AM CALL TADLOD2 <ADDHBW5.AM CALL TADLOD2 <ADDHBW6.AM CALL TADLOD2 <ADDHBW7.AM CALL TADLOD2 <ADDHBW8.AM CALL TADLOD2 <ADDHBW9.AM CALL TADLOD2 <ADDHBW10.AM CALL TADLOD2 <ADDHBW11.AM CALL TADLOD2 <ADDHBW12.AM CALL TADLOD2 <ADDHBW13.AM IF EXIST TEMP* DEL TEMP* CALL TADLOD2 <ADDHNW1.AM CALL TADLOD2 <ADDHNW2.AM CALL TADLOD2 < ADDHNW3.AM CALL TADLOD2 <ADDHNW4.AM CALL TADLOD2 <ADDHNW5.AM IF EXIST TEMP* DEL TEMP* CALL TADLOD2 < ADDNHB1.AM CALL TADLOD2 <ADDNHB2.AM CALL TADLOD2 <ADDNHB3.AM CALL TADLOD2 <ADDNHB4.AM CALL TADLOD2 <ADDNHB5.AM IF EXIST TEMP* DEL TEMP* CALL TADLOD2 <ADDALL1.AM CALL TADLOD2 <ADDALL2.AM

@echo off echo echo - ADD-OFF.CMD echo - Add Off Peak Transit Assignments echo -IF EXIST TEMP* DEL TEMP* IF EXIST OP90TVOL.HBW DEL OP90TVOL.HBW IF EXIST OP90TVOL.HNW DEL OP90TVOL.HNW IF EXIST OP90TVOL.NHB DEL OP90TVOL.NHB IF EXIST OP90TVOL.ALL DEL OP90TVOL.ALL CALL TADLOD2 <ADDHBW1.OP CALL TADLOD2 <ADDHBW2.OP CALL TADLOD2 <ADDHBW3.OP CALL TADLOD2 <ADDHBW4.OP CALL TADLOD2 <ADDHBW5.OP CALL TADLOD2 <ADDHBW6.OP CALL TADLOD2 <ADDHBW7.OP CALL TADLOD2 <ADDHBW8.OP CALL TADLOD2 <ADDHBW9.OP CALL TADLOD2 <ADDHBW10.0P CALL TADLOD2 <ADDHBW11.OP CALL TADLOD2 <ADDHBW12.OP CALL TADLOD2 <ADDHBW13.OP IF EXIST TEMP* DEL TEMP* CALL TADLOD2 <ADDHNW1.OP CALL TADLOD2 <ADDHNW2.OP CALL TADLOD2 <ADDHNW3.OP CALL TADLOD2 <ADDHNW4.OP CALL TADLOD2 <ADDHNW5.OP IF EXIST TEMP* DEL TEMP* CALL TADLOD2 <ADDNHB1.OP CALL TADLOD2 <ADDNHB2.OP CALL TADLOD2 <ADDNHB3.OP CALL TADLOD2 <ADDNHB4.OP CALL TADLOD2 <ADDNHB5.OP IF EXIST TEMP* DEL TEMP* CALL TADLOD2 <ADDALL1.OP CALL TADLOD2 <ADDALL2.OP
@echo off echo echo - ADD-PM.CMD echo - Add PM Transit Assignments echo -IF EXIST TEMP* DEL TEMP* IF EXIST PM90TVOL.HBW DEL PM90TVOL.HBW IF EXIST PM90TVOL.HNW DEL PM90TVOL.HNW IF EXIST PM90TVOL.NHB DEL PM90TVOL.NHB IF EXIST PM90TVOL.ALL DEL PM90TVOL.ALL CALL TADLOD2 <ADDHBW1.PM CALL TADLOD2 <ADDHBW2.PM CALL TADLOD2 <ADDHBW3.PM CALL TADLOD2 <ADDHBW4.PM CALL TADLOD2 <ADDHBW5.PM CALL TADLOD2 <ADDHBW6.PM CALL TADLOD2 <ADDHBW7.PM CALL TADLOD2 <ADDHBW8.PM CALL TADLOD2 <ADDHBW9.PM CALL TADLOD2 <ADDHBW10.PM CALL TADLOD2 <ADDHBW11.PM CALL TADLOD2 <ADDHBW12.PM CALL TADLOD2 <ADDHBW13.PM IF EXIST TEMP* DEL TEMP* CALL TADLOD2 <ADDHNW1.PM CALL TADLOD2 <ADDHNW2.PM CALL TADLOD2 < ADDHNW3.PM CALL TADLOD2 < ADDHNW4.PM CALL TADLOD2 <ADDHNW5.PM IF EXIST TEMP* DEL TEMP* CALL TADLOD2 < ADDNHB1.PM CALL TADLOD2 <ADDNHB2.PM CALL TADLOD2 <ADDNHB3.PM CALL TADLOD2 <ADDNHB4.PM CALL TADLOD2 <ADDNHB5.PM IF EXIST TEMP* DEL TEMP* CALL TADLOD2 <ADDALL1.PM CALL TADLOD2 <ADDALL2.PM