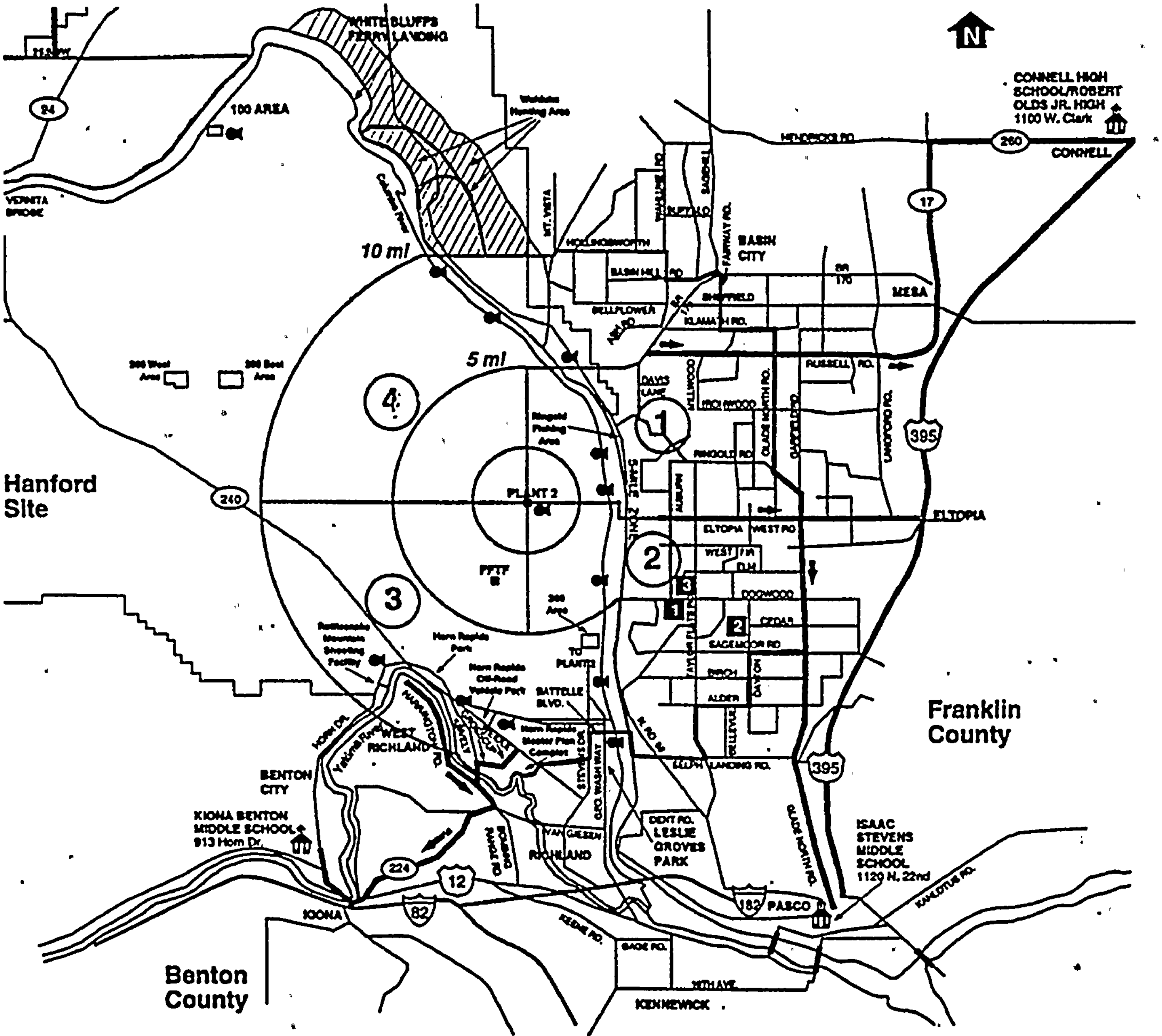
# WNP-2 TEN MILE EPZ EVACUATION TIME ESTIMATE STUDY

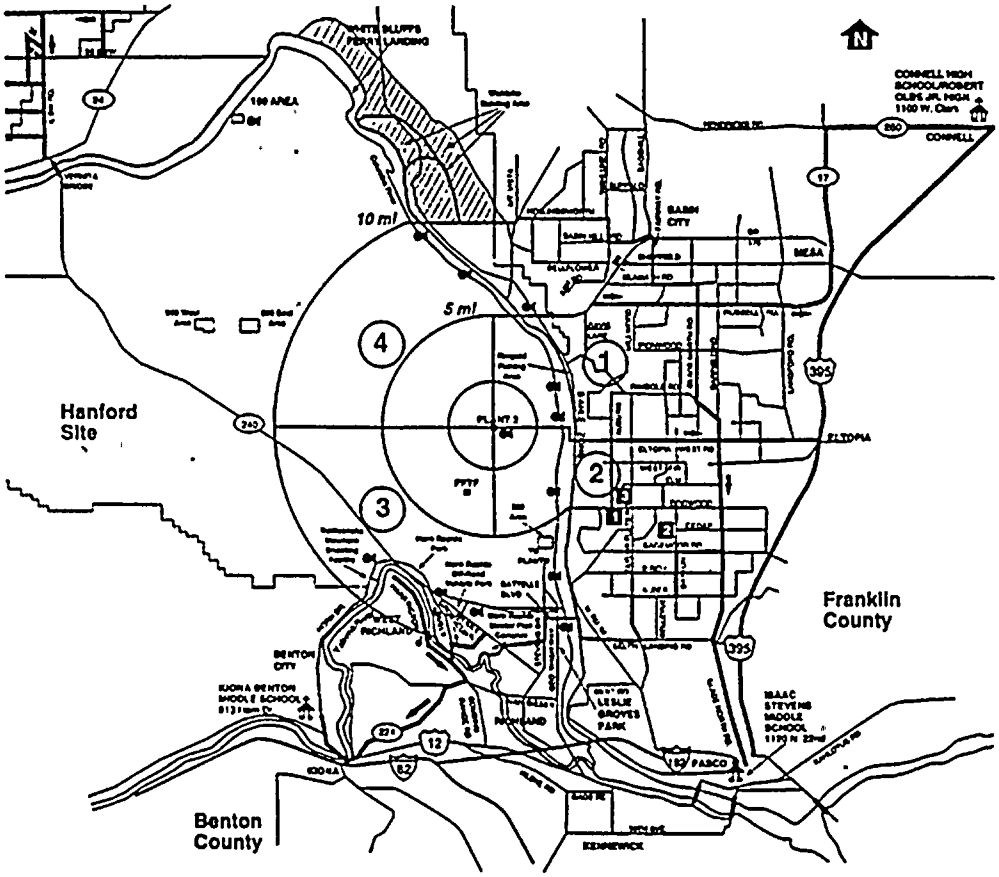



June 1996
Revision 3

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

9608060298 960730
PDR ADOCK 05000397
F PDR

# WNP-2 TEN MILE EPZ EVACUATION TIME ESTIMATE STUDY

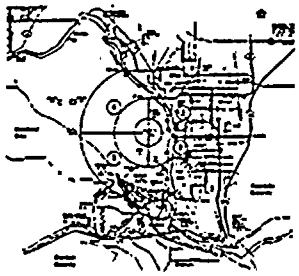



*Prepared by Kevin Galioto/Kevin P. Meehan*
*June 1996*
*Revision 3*

*Reviewed By:* ______________________ 7/8/96
*Lead, Offsite Emergency Planner* *Date*

*Approved By:* ______________________ 7/12/96
*Corporate Emergency Preparedness, Safety and Health Officer* *Date*

W A S H I N G T O N   P U B L I C   P O W E R   S U P P L Y   S Y S T E M



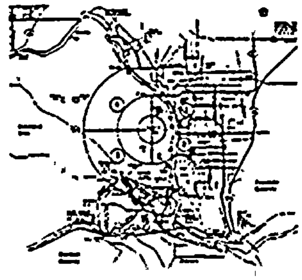
## DISTRIBUTION

| No. of Copies | Internal |
|---|---|
| 1 | Corporate EP, S & H Officer |
| 1 | Emergency Planner (Preparer) |
| 1 | Emergency Preparedness Library |
| 1 | Technical Support Center |
| 1 | Emergency Operations Facility |
| 1 | Meteorology & Unified Dose Assessment Center |
| 1 | WNP-2 Licensing |
| 7 | |
| | **External** |
| 4 | NRC Licensing - 4 copies<br>• 1 to Public Doc. Room<br>• 1 to Resident Inspector<br>• 2 to NRC Region IV |
| 2 | FEMA Region X |
| 2 | DOE - Richland |
| 2 | WA State Department of Emergency Management |
| 1 | Benton Co. Emergency Management Agency |
| 1 | Franklin Co. Emergency Management Agency |
| 12 | |
| == | ========================= |
| 19 | TOTAL |

## TABLE OF CONTENTS

## APPENDICES

### LIST OF FIGURES, TABLES, AND RESOURCES



## EXECUTIVE SUMMARY

This document provides the evacuation time estimates and other pertinent demographic data utilized in WNP-2's Emergency Plan (FSAR, Chapter 13.3). As part of the annual review of the WNP-2 Emergency Plan, population and roadway changes within the Ten-Mile Plume Exposure Pathway Emergency Planning Zone (EPZ) are assessed to determine if the potential exists to require modification of the evacuation routes or times.

The need for this current revision was based on guidance in NUREG/CR-4831; "...As a general rule, a 10 percent increase in population indicates a need to check evacuation times. An initial assessment would involve determining whether growth had taken place in areas constrained by roadway capacity...". Recent surveys indicated that a 25% increase of population in the emergency planning zone had occurred. Hence, this evacuation time estimate study was performed. Data analysis in this revision was accomplished using the latest release of the Oak Ridge Evacuation Modeling System (OREMS), version 2.0a, which is recommended by the Federal Emergency Management Agency.

To meet future review requirements the empirical data solicited during the annual 25% population poll of EBS radio holders will be examined. Further revisions will primarily be based on this annual review, however, revisions are not expected to be needed any more frequently than on a four year basis. By that time approximately 100% of the Ten-Mile EPZ will have been routinely surveyed and a decision will be made as to whether a reassessment will be necessary.

The location of WNP-2 on the Hanford Reservation assures a relatively low number of residents within the Ten-Mile EPZ. Also the regional climate affords protection from extreme weather conditions which would require a caveate to be added to the estimates for such severe natural phenomenon as a blizzard or hurricane. Thus because of the low population and the mild climate, the time it is calculated to take to evacuate the entire Ten-Mile EPZ in normal conditions is 2 hours and 15 minutes and for adverse conditions it is 2 hours and 30 minutes, which is much shorter than some plants that have a higher population density and who suffer from extremes in weather conditions. Figure 3, Evacuation Routes - Access Control Points, Traffic Control Points, and Assistance Centers, and Table 6, Summary of Results of Evacuation Times Analysis, presents the key findings and data useful in developing and implementing public protective actions for the WNP-2 site.

## SECTION I. - INTRODUCTION

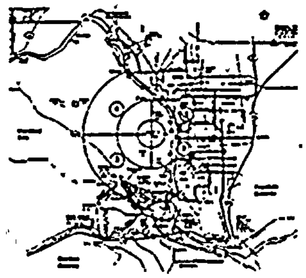
Even though the likelihood of an accident severe enough to warrant extensive off-site protective action is very small, should one occur, recommendations to shelter or evacuate large numbers of people could be significantly impeded by a lack of advance planning. Thus each nuclear power plant in the United States is required to ensure methods are in place to provide for the health and safety of the public in the event of an accident that impacts areas beyond their site boundaries. This study was performed to provide input into this process for the Washington Nuclear Project No. 2 (WNP-2).

### A. Site Location & Emergency Planning Zone (EPZ)

Washington Public Power Supply System leases 1089 acres of land north of Richland, Washington, on the Hanford Reservation. This land is under the control of Department of Energy, Richland (DOE-RL). The Supply System's portion is approximately 3 miles west of the Columbia River and 12 miles north of the populated area of Richland. Within the Supply System's exclusion area resides an operating nuclear power plant referred to as WNP-2 or Plant 2. Figure 1 shows the Ten-Mile Plume Exposure Pathway Emergency Planning Zone Map associated with WNP-2. This Emergency Planning Zone (EPZ) is the study area for which these evacuation time estimates have been made.

The DOE-RL is recognized as being responsible for the coordination of a Hanford site-wide evacuation. The Supply System, as company landlord for its specific area, is responsible for internal evacuation needs as well as recommending appropriate evacuation measures for the public in the event of an emergency at WNP-2. This evacuation plan has been discussed with DOE-RL and the Benton/Franklin County Emergency Management Agency emergency planning representatives.

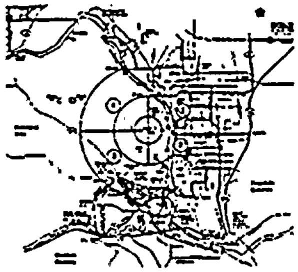
Because of the relative location of WNP-2 to the other DOE facilities on the Hanford Reservation, it is postulated that there would be no impact to the evacuation times of the general public to a Plant 2 emergency should there also be an emergency at one of the DOE facilities at the same time.



B. <u>General Assumptions</u>

The evacuation analysis is based on the following assumptions:

- Initial notification times, both Supply System-to-county and county-to-populace, through the early warning system generally equals a maximum of 30 minutes total (see Section IV.A).
- No permanent population resides on the Hanford Reservation.
- Evacuation is based on general radial dispersion by the populace. In Franklin County, personnel north of the plant will evacuate north toward Mesa/Connell and those south of the plant will evacuate south towards Kennewick/Pasco.
- Inner sections would evacuate simultaneously with the outer sections.
- Initial road vehicle population is free of traffic and set at zero.
- One hour loading period for all populations, even for site industrial workers (which would normally be much quicker).
- Occupancy loading was assumed to be 3 persons per vehicle for categories other than transient industrial, schools and the ORV Park.
- Based on the size of the average household, households will evacuate as a unit, using only one vehicle per family.
- Schools are part of the general population for purposes of evacuation time estimates.
- Buses to be used for school evacuation will be dispatched within the one-hour loading time frame.
- Vehicle occupancy of 35 persons per school bus.



- Evacuation is occurring on a weekday with school in session, during months (April-June) when an additional 100 children of migratory agricultural workers are present.

- Evacuation is occurring during the workday for areas with the high transient worker populations.

- Evacuation is occurring during the day on a weekend for areas with high numbers of transient recreationists.

- Evacuation is occurring when WNP-2 and nearby facilities are staffed at fully operational levels.

- All persons have transportation available to them.

- Adverse weather conditions reduce both free-flow speeds and roadway capacities by 30% each. (Snow conditions; roads open; side streets passable).

- Evacuation is occurring at night.

Confirmation time estimates were not calculated in the model but are estimated as a maximum of one hour (see Section V). The calculated evacuation time estimates by the model start at the time of the announcement over the EBS[1] (Emergency Broadcast System) to begin evacuation and runs until the evacuation is complete (last vehicle is out of the Ten-Mile EPZ or at an assembly area).

---

[1] EBS is currently being phased out and a new nationwide EAS (Emergency Alerting System) is being implemented. The Supply System has elected to maintain the EBS capability for WNP-2 until such time as the residents can be provided with radios that can utilize the new EAS digital signal.

## C. Methodology

This assessment was completed using the Oak Ridge Evacuation Modeling System (OREMS). Refer to the OREMS 2.0a users manual for a detailed description of the model.

The OREMS software required developing the Ten-Mile EPZ road network into link-node diagrams as shown in Figure 2. These link-nodes were utilized as evaluation schemes for data handling. The evacuation routes these schemes are depicting are shown on the map in Figure 3. The Ten-Mile EPZ center point is located midway between Washington Nuclear Projects #1, #2, and #4 (WNP-1, -2, -4). This center point is 2800 feet east of WNP-2 and has coordinates of longitude 119° 19'18" west, latitude 46° 28'19" north.

## SECTION II. - DEMAND ESTIMATION

The 10 mile EPZ population for 1996 is presented in Figure 4. This same information is also presented in Tables 1 through 4. Values within the EPZ were updated by data provided by the Benton County Department of Emergency Management and Franklin County Department of Emergency Management from their radio survey questionnaires. Additionally, updated data was provided by the DOE-RL or DOE-RL contractors for contractor facilities under DOE-RL jurisdiction on or near the Hanford Site.

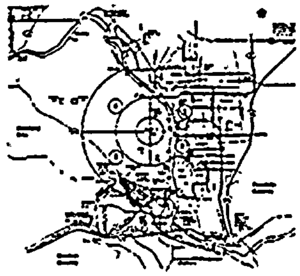
### A. Permanent Residents

Permanent residents included all people residing in the area, but excluded occupants of institutions (schools). The ten-mile radius around the site is shown in Figure 1. In 1996 an estimated 3,044 people were living within the Ten-Mile EPZ. The nearest inhabitants occupy farms which are located east of the Columbia River and are thinly spread through the EPZ. There are no permanent residents located within three miles of the site. Only about 274 persons reside between the three-mile and the five-mile radii; these are all located east of the Columbia River.

Of the 3,044 people residing in the Ten-Mile EPZ, about 2,186 live in Franklin County and about 858 in Benton County. None of the residents live in incorporated cities.

There are no significant changes in land use expected in Franklin County over the next several years and, as it is currently irrigated to about the maximum amount practicable, little population increase is foreseen. No significant change in land use on the Hanford Reservation is expected, and no foreseeable population will reside there. Over the next several years the Horn Rapids area in Benton County is predicted to steadily grow in population. Consequently, population assessments should include this area to ensure that proper steps are taken to assess their evacuation needs.

A partial survey (24 percent) of the permanent residents within the Ten-Mile EPZ indicated that all of those surveyed had transportation available to them. Transportation was via their own private vehicles, with neighbors providing an alternate means. The survey



was performed by the Benton County Department of Emergency Management and validated by the Benton/Franklin Government Conference.. During the annual 25% survey of the EPZ population, residents are queried about needing assistance during evacuation. The small number that answer yes are listed in the Benton/Franklin Emergency Operations Center (EOC) so that assistance may be immediately provided. In addition, the public information brochure and EPZ calendars provides telephone numbers for points of contact for those persons needing transportation assistance during an emergency. Also, the Benton and Franklin Counties Fixed Nuclear Facility Emergency Response Plan contains a procedure whereby, through a memorandum of understanding, the school administrations will provide school buses for general and specific evacuation purposes. For purposes of this study, it is therefore assumed that all permanent residents of the Ten-Mile EPZ have transportation available to them.

B. Transient Population

The transient population is divided into three main subgroups: 1) industrial employees, 2) migratory agricultural workers, and 3) recreationists. Figure 5 illustrates this population location graphically.

1. Industrial Employees

Industrial employees in the Ten-Mile EPZ total 7,926. Most are located in Benton County and form the main population to be evacuated in Benton County. About 11 percent of the industrial employees work at the WNP-2 site.

Industrial employment in the Ten-Mile EPZ includes:

| | |
|---|---|
| WNP-2 Plant (5/96 Operational Day Shift) | 728 |
| WNP-1 (5/96 Supply System and Non Supply Personnel) | 27 |
| BPA Ashe Substation (5/96) | 10 |
| WNP-2 Plant Engineering Center (5/96) | 246 |
| WNP-2 Plant Support Facility (5/96) | 122 |
| DOE 400 Area, Fast Flux Test Facility (5/96) | 454 |
| Siemens Power Corporation (5/96) | 800 |
| DOE 300 Area (5/96) | 1,671 |
| DOE 3000 Area, contractors in Port of Benton area (5/96) | 2,896 |
| Pacific Northwest National Laboratory (5/96) | 972 |
| Total | 7,926 |

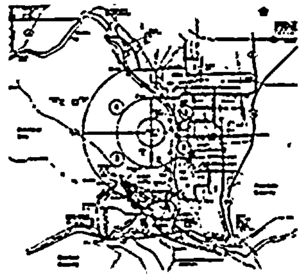
The majority of these employees work days but there may be some shift workers in the DOE-RL figures. Credit is not deducted from the population values due to emergency personnel remaining in place. Therefore, the planning figure of 7,926 to be evacuated is conservatively high.

2. Migratory Agricultural Workers

There may be up to approximately 4,244 migratory farm workers in the Ten-Mile EPZ. This figure may be high due to the possibility of double counting during the different harvest periods. The peak season for these workers is May and June; the next highest employment season is during the fall harvest. These workers consist of both permanent and temporary residents of the Tri-Cities area, some living within the Ten-Mile EPZ. The numbers shown on Figure 5 and Table 2 reflect their work locations in Franklin County within the Ten-Mile EPZ, not their residences. Most migrants who work in the Ten-Mile EPZ live in Pasco. The number of migrants living in the EPZ is minimal based on surveys in the area.

3. Recreationists

Recreationists, consisting of hunters, fishermen, and boaters, enjoy activities mainly along the east bank of the Columbia river. The primary fishing season is from June through November; the main hunting season being October through January. The heaviest use of the area by recreationists is on weekends and holidays in the early morning hours. On the average, 52 fishermen and 80 hunters are present in Franklin County during the weekdays. This increases to about 155 fishermen and 200 hunters on weekends and holidays. Recreationists also use the Yakima River with an estimated maximum of 42 at any time in this area. During peak fishing or hunting times, up to 1,275 fishing and hunting recreationists may be located within the Ten-Mile Emergency Planning Zone. Of these, 1,233 are assigned to Franklin County and 42 to Benton County.



The main concentration of recreationists consists of fishermen located just south of the Ringold Fish Hatchery spillway on the Franklin County side of the Columbia River. Hunting consists of both water fowl, hunted at the Wahluke Hunting Area on the Franklin County side of the Columbia River, and upland game birds, hunted inland on the farm land of Franklin County. Up to 600 recreationists may be located around the Ringold Fish Hatchery and the Wahluke Hunting Area and the rest distributed inland.

An additional recreation attraction is in the south section of the Ten-Mile Emergency Planning Zone in Benton County as an Off-Road Vehicle Park (ORV). As many as 1,500 participants and spectators may be present during an event. Thus, a maximum total of 2,775 recreationists may be located within the Ten-Mile Emergency Planning Zone. Additional provisions have been made for the Horn Rapids housing development and golf course.

An automobile occupancy factor of 3, the same as used for the transient industrial population, permanent residents and non-industrial transients, was used for most recreationists, except for the ORV Park where a factor of 2 was utilized.

C. Special Facility Population

There are no individuals within the Ten-Mile EPZ confined to institutions such as hospitals, nursing homes, or penal institutions. There are three schools all in sector 2; the Edwin Markham Elementary School, the County Haven Academy, and the Country Christian Center, with a total population of approximately 565 (students and faculty). Although most of those live within the Ten-Mile EPZ, the total amount was added to the general population for this study. Buses which would be used for the evacuation are located at the district bus lot in north Pasco.

## D. Emergency Planning Zone, Sub-Areas and Sectors

For assimilation of data and ease of determining protective action scenarios, the Ten-Mile EPZ was broken down into sub-areas and sectors. The sectors are the four divisions identified on Figure 1 that separate the area within the 2 to 10-mile radius for ease of protective action recommendation decision-making purposes. The sub-areas considered in this study were:

| Radius | Area |
|---|---|
| 0-2 miles | entire circumference |
| 0-5 miles | four approximately 90° sectors |
| 0-10 miles | four approximately 90° sectors |
| 0-10 miles | entire EPZ |

The 2-mile radius was not subdivided because it contains no residential population and the only general populations are industrial transients all working in sector 3, on contiguous Supply System properties. Only three of the four sectors were examined because the fourth sector, entirely on the Hanford Reservation, contains no residential, transient nor special populations. These sectors are numbered 1 through 4 and are graphically shown on Figures 1 and 3. The Columbia River, as a natural border between Benton and Franklin Counties, was used to form the division between sector 2 and sector 3. Franklin County was divided, approximately in half, as it was assumed that those north of the plant location would evacuate north toward Mesa/Connell and those in the opposite direction, south towards Pasco.

When making time estimates for the portions of outer sectors, it was modeled that the inner portions of the sector were being simultaneously evacuated.

## SECTION III. - TRAFFIC CAPACITY

Figure 3 illustrates the evacuation routes, access control points, traffic control points, and assistance centers for the Hanford Site. These routes have been designated as primary, and secondary, based on discussion with local traffic and emergency planning officials. These routes were identified as those over which the endangered population could be most expeditiously evacuated to the centers where they may be assisted.

In choosing the traffic flow direction for the computer model, as illustrated in Figures 2 and 3, populations were evacuated toward the closest primary, secondary or additional secondary road in decreasing priority that was headed radially away from the plant. The analyses were simplified due to the rural area and low population values.

### A. Evacuation Roadway Networks

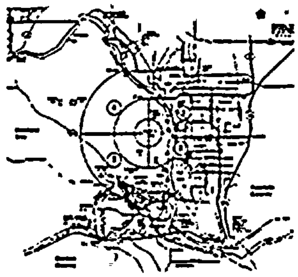
#### Sector 1 - All Traffic

The primary evacuation route is Russell Road, east to old State Road 17, and north into Mesa. From Mesa, evacuees may continue by:

- Taking State Highway 17 north to Hendricks, then east on Hendricks Road to Connell.
- Taking U.S. Highway 395 northeast to Connell.
- Taking U.S. Highway 395 south to Pasco.

The secondary evacuation route is Route 170 east through Basin City to Mesa. Additional Secondary Evacuation Routes are:

- Mountain Vista Road/Hollingsworth Road
- Klamath Road
- Ironwood Road
- Ringold Road
- Taylor Flats Road



Sector 2 - All Traffic

The primary evacuation route is Eltopia West Road to Glade North Road then south towards Pasco or east to Eltopia and Highway 395. Additional Secondary Evacuation Routes are:

- Elm Road
- Sagemoor Road
- Road 68
- Taylor Flats Road

Sector 3 - Residential Traffic

The primary evacuation route for the residents in this section is Harrington Road and Yakima River Drive or Grosscup Road, to Van Giesen and then west and south to Benton City via SR 224, then to Kiona-Benton Middle School.

The primary route for the residents of the Horn Rapids community is south and east on highway 240 to Van Giesen, then west and south on SR 224 to Benton City.

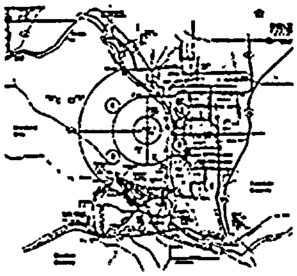
Some residents may travel to the assistance center at Isaac Stevens Middle School rather than traveling to Benton City.

The advantage of this route is that it provides direct movement from the Ten-Mile EPZ for residents and would avoid the traffic congestion created by industrial transients.

Secondary Evacuation Routes are:

- Highway 240 (either towards Benton City or Richland). This route's main disadvantage is that it initially leads deeper into the Ten-Mile EPZ.

- Van Giesen (towards Richland). This route's main disadvantage is that it leads directly into Highway 240 Bypass across traffic created by industrial transients.



Sector 3 - Transient Traffic

Two primary transient evacuation routes exist for this area - George Washington Way and Stevens Drive.

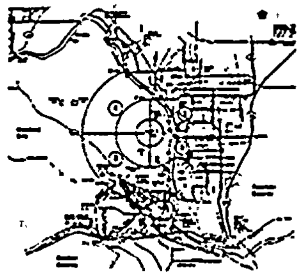
A portion of the normal daily traffic coming from the Hanford Reservation routinely uses Stevens Drive to the Richland Bypass Highway 240, and on to Highway 240/12 to Kennewick. The other often utilized route into Kennewick is George Washington Way south to the Richland Bypass Highway 240, and to Highway 240/12. These same routes would be used during an emergency evacuation.

Secondary Evacuation Routes are:

- Highway 240 (toward Richland or Yakima).
- Horn Rapids west to Highway 240, then northwest on Highway 240 to SR 225 then south on SR 225 to Kiona-Benton middle school (Seimens Power Corporation recommended to evacuate this direction to optimize evacuation time.)
- Van Giesen (towards Benton City).
- North on Route 4 South via the Wye Barricade then either north on Route 2 South or northwest on Route 4 south towards Yakima for WNP-1 and 2 and FFTF transients (possibly used if winds are from northeast to southwest with release imminent or occurring).
- FFTF Access Route west to Route 10 south, south on SR 225 to Benton City, (FFTF recommended to evacuate this direction vs. east to Route 4 South to optimize evacuation time.)

B. Roadway Segment Characteristics

Table 5 is page 1 of a 7 page report which lists the link-node characteristics used by the OREMS software for all roadway segments plotted in the evacuation assessment. Only page 1 is shown due to the inability of most individuals to interpret the data, however, the full report will remain on file for future reference and documentation purposes.



In the congested traffic environment which is characteristic of an evacuation process, travel time on a roadway section is, to a large extent, determined by the capacity of that section. Roadway capacities were based upon the type of roadway considered and the presence of traffic control. The following per-lane capacities were used:

| Roadway Type | Per-lane Capacity (Veh/hr) |
|---|---|
| Freeway | 1800 |
| Arterial/Rural Road | 1500 |
| Local Street | 1200 |

This study also required a set of baseline conditions. Included in these conditions is an assumed one-hour loading period. This loading period is considered to be a conservative estimate and includes preparation times.

## C. Assistance Centers

Emergency Worker/Assistance Centers (EWACs) have been selected by local emergency planning officials. Criteria for selection included that these locations be at least 15 miles from the plant, in the path of normal travel, having adequate facilities, and readily available. As indicated by the name, these facilities can be used by Emergency Workers as well as the evacuating members of the general public.

Residents evacuated from the Ten-Mile EPZ would be directed to the centers for registration and communicating with family or friends, first aid if needed, radiation monitoring and decontamination if needed, beverages, snacks and temporary lodging or assistance in obtaining meals and commercial lodging, social services and organized activities, and to receive updated information about the event.

The EWACs or Assistance Centers are arranged to accept evacuee flow from the evacuation "Sectors" indicated on Figure 1. There are four of them indicated in the figure by the large numbers 1 through 4 encased in circles.

The Assistance Centers are associated with the evacuation sectors as shown below.

Sector 1

- Connell High School, Connell

  This facility could be used as an assistance center for the northern area. The Connell High School is approximately 28 miles from the Hanford site. Adequate facilities and parking are available.

Sector 2

- Isaac Stevens Junior High School, Pasco

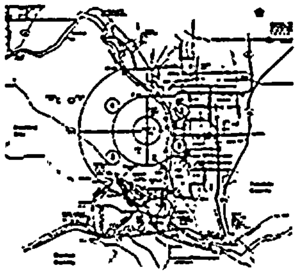
  Isaac Stevens Junior High School, located at 1120 North 22nd, Pasco, can be used as an assistant center for evacuees.

Sector 3

- Kiona-Benton Middle School, District No. 52, Benton City

  The school, located at 913 Horn Drive, can serve as an assistance center for evacuees. The school is situated in Benton City, approximately 16 miles from the Hanford site.

Sector 4 does not have an Assistance Center since the entire area of Sector 4 is government land known as the Hanford Reservation which is controlled by DOE-RL. No private home ownership or business exists in this area.



## SECTION IV. - ANALYSIS OF EVACUATION TIMES

### A. Time Estimates

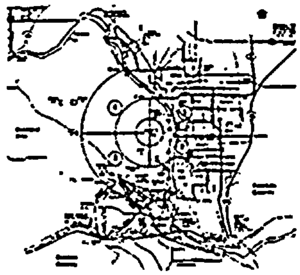
The Supply System has provided an early warning system capable of notifying the public within the Ten-Mile EPZ to take protective measures during an emergency. The early warning system includes EBS tone alert radios for all permanent residents within the Ten-Mile EPZ and a system of sirens located along the Yakima and Columbia Rivers, and near the Horn Rapids development tract and park, for notification of transient populations in those areas.

The early warning system was designed to enable the county to notify the public within 15 minutes from the time the decision to evacuate is made by county officials. The Supply System likewise has established procedures to notify the county officials within 15 minutes of an incident which would require protective actions to be taken by the public. Thus a total of 30 minutes was assumed to elapse during the notification of the general public within the Ten-Mile EPZ.

After a review and update of current population statistics and the completion of the traffic/roadway assignments, the simulation studies were begun. Three scenarios were developed for presentation:

| | |
|---|---|
| Case 1: | Daytime, one-hour loading period. |
| Case 2: | Nighttime, one-hour loading period. |
| Case 3: | Adverse weather, one-hour loading period. |

Table 6 presents the evacuation time estimate results for these three case studies. As shown in this table, during normal weather conditions it is estimated that it will take approximately 2 hours and 15 minutes to evacuate the populous within the Ten-Mile EPZ.

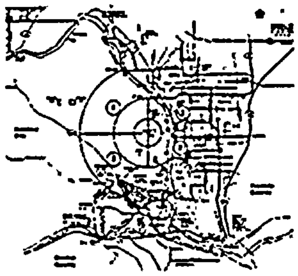


B. <u>Adverse Weather</u>

Severe weather conditions such as blizzards, heavy rain storms, flooding, fog, or high winds could hamper evacuation. However, historical records for the WNP-2 site indicate that severe conditions of this nature have rarely occurred in the past. Table 6 presents evacuation time estimates under three conditions; weekday daytime, nighttime and adverse weather. This table indicates that during adverse weather conditions it is estimated that it will take approximately 2 hours and 30 minutes to evacuate the populous within the Ten-Mile EPZ.

Because of the effect of weather on the capacity of roadway and the fact that capacity is a controlling factor in deriving evacuation times, it is necessary to adjust capacity figures to represent estimated road conditions during adverse weather. Based on limited empirical data, weather conditions such as heavy rain reduce the values of capacity for the highways utilized as evacuation routes by approximately 20 percent. For adverse conditions during the winter months, we have estimated capacity reductions and free-flow speed reductions of 30 percent each, relative to normal weather conditions.

It was assumed that only a few of the secondary routes were utilized at any one time. Inclusion of more of these secondary routes in the computer model could lower the evacuation time estimate.



## SECTION V. - OTHER REQUIREMENTS

### A. Recommendations

It was assumed that the road network was initially free of traffic in the areas of the evacuation. This would generally be true. If a Supply System evacuation was required during a shift change at DOE-RL facilities on the Hanford Site but outside the 10 Mile EPZ, this could place many additional vehicles vying for space on Route 4 south. DOE-RL has agreed not to send transient vehicles into the Ten-Mile EPZ during a Supply System evacuation situation. Vehicles could be re-directed at the Wye Barricade (or sooner).

- FFTF - For optimum time benefit, it is recommended that FFTF be directed to evacuate west to Route 10 South verses accessing Route 4 South. This decreases the loading through the 300 Area.

- DOE-RL 300 Area - Traffic control strategy suggests recommending an officer be stationed at the intersection of Route 4 South and the Main 300 Area Parking outlet onto Route 4 South to control traffic flow. DOE-RL has been advised to <u>balance</u> outlet traffic volume going onto Stevens Drive (Route 4 South) with traffic south out of the 300 Area onto George Washington Way.

- Siemens Power Corporation - To further decrease loading on Stevens Drive, it is recommended that this facility be directed to evacuate west on Horn Rapids and then back into Richland by heading southeast on Highway 240 versus accessing Stevens Drive.

- DOE-RL 3000 Area - Battelle and other DOE-RL contractors between George Washington Way and Stevens Drive should be directed to evacuate using Stevens Drive. All other contractors that lie east of George Washington Way are directed to evacuate using George Washington Way. The stationing of a traffic control officer is suggested at the Battelle Boulevard and Stevens Drive intersection.

During the evacuation process, non-emergency vehicles should be restricted from entering the Ten-Mile EPZ. This can be accomplished with the assistance of State and local law enforcement officials who will establish traffic control points along the effected areas perimeter. This function can be coordinated with the County Emergency Operations Center to ensure the appropriate areas are controlled. All of the assigned traffic control points will function to some extent as access control points to restrict unauthorized entry into the evacuated areas. Traffic control points along the evacuation routes will also serve to direct and aid the flow of outgoing evacuation traffic. Persons who staff the traffic control points will be considered emergency workers and should be trained and equipped to handle radiological emergency situations.

The evacuation routes and traffic/access control point concept as indicated in Figure 3 have not changed as a result of this study, hence the current plans, implementing procedures, and public education documents have the correct traffic flow guidance. The traffic/access control points shown in Figure 3 are layed out in a typical pattern for the Ten-Mile EPZ. The actual points utilized by local officials are identified in the Benton and Franklin County Radiological Emergency Preparedness Implementing Procedures.

## B. Review of Study by State and Local Officials

The prior revision to this study was reviewed by the principal state and local officials involved in emergency response for the site. Their comments were solicited and incorporated into the final draft. The methodology and evacuate routes were not modified as a result of this latest study and thus a formal review was not performed on this revision. However, the Supply System would like to thank the Planners at both Benton and Franklin County for their extensive assistance, including acquisition and support of the OREMS software, in helping to complete this report.

## SECTION VI. - REFERENCES

1. WNP-2 Emergency Plan, Revision 16, November 1995.

2. Benton and Franklin County Radiological Emergency Preparedness Implementing Procedures, 1995.

3. Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparation and Preparedness in Support of Nuclear Power Plants, NUREG-0654, FEMA-REP-1, Rev. 1, November 1980, Appendix 4.

4. Oak Ridge Evacuation Modeling System (OREMS) User's Manual.

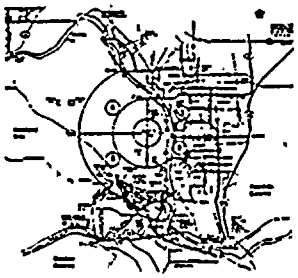
5. WNP-2 Environmental Report--Operating License Stage Amendment #5, July 17, 1981.

6. State of the Art in Evacuation Time Estimate Studies for Nuclear Power Plants, NUREG/CR-4831, PNL-7776, March 1992.

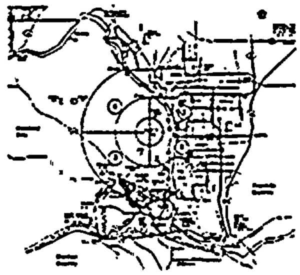
7. Acceptance Criteria for Evacuation Plans, FEMA Guidance Memoranda GM-21.

8. Planning Concepts And Decision Criteria For Sheltering And Evacuation in a Nuclear Power Plant Emergency, AIF/NESP-031, June 1985.

9. Identification and Analysis of Factors Affecting Emergency Evacuations, NUMARC/NESP-004, February 1989.

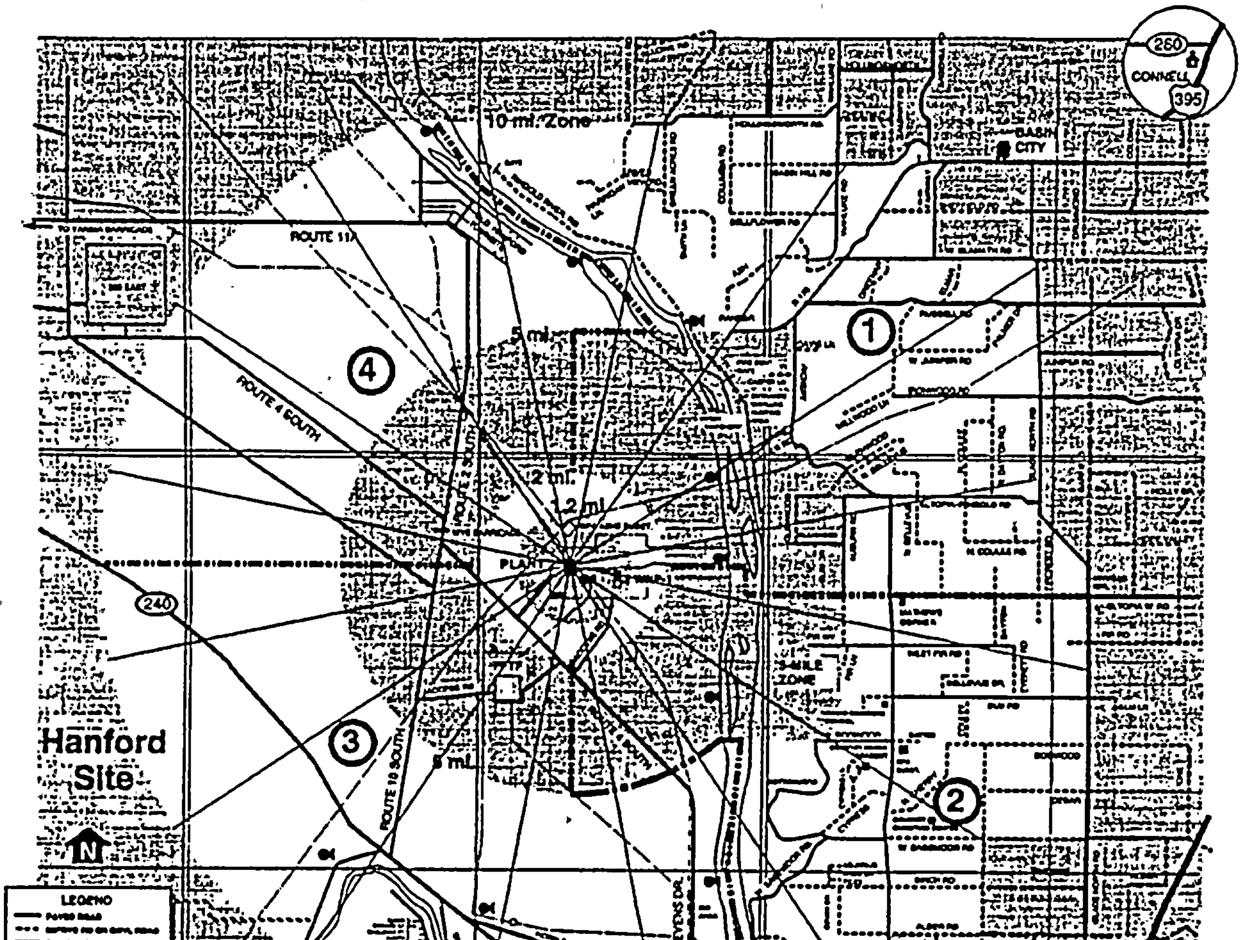


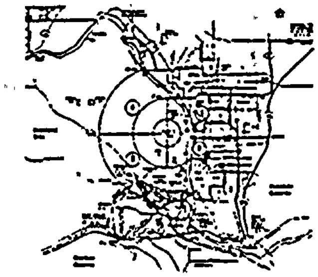
# APPENDICES



## FIGURE 1

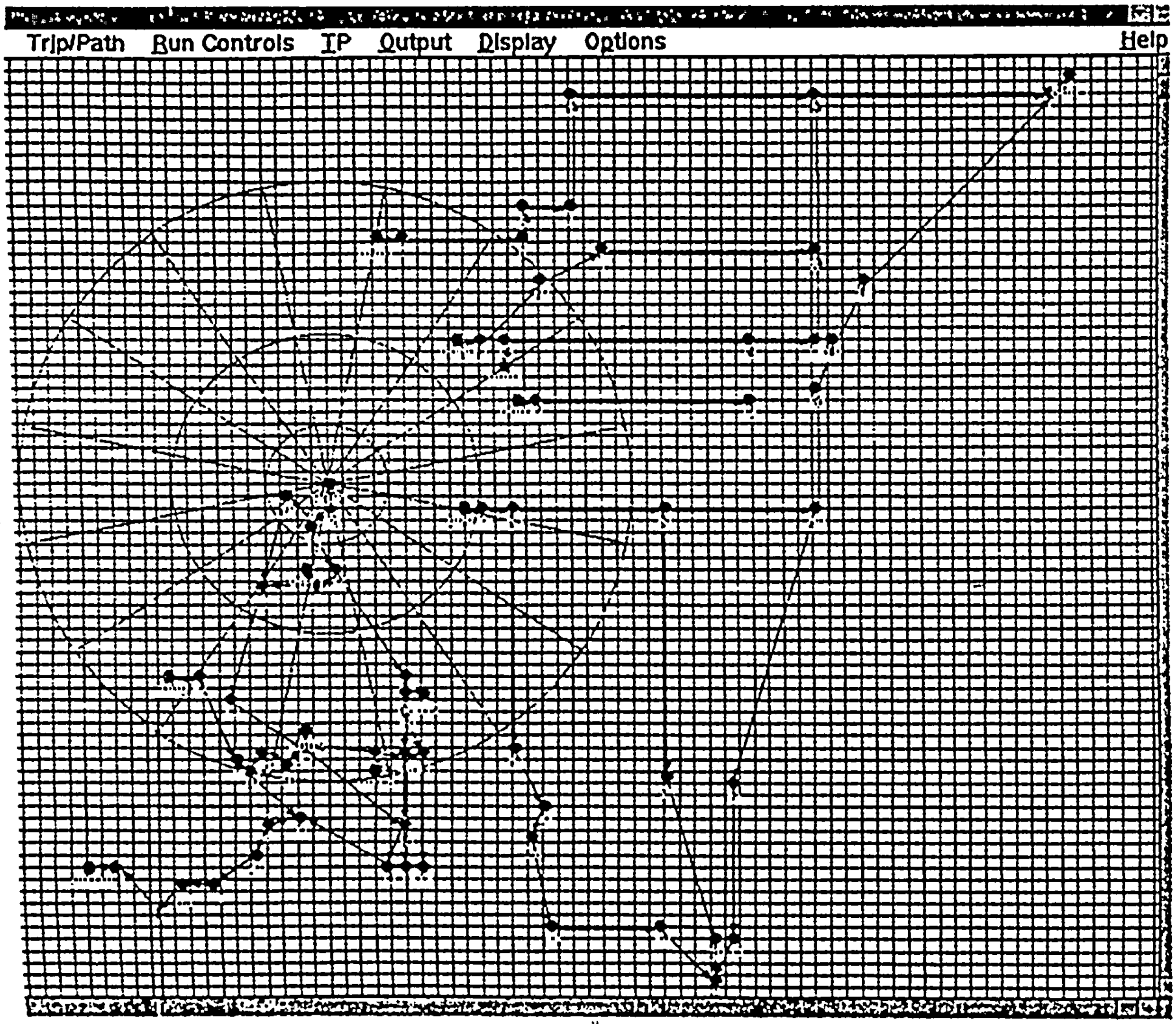
## TEN-MILE EMERGENCY PLANNING ZONE





## FIGURE 2

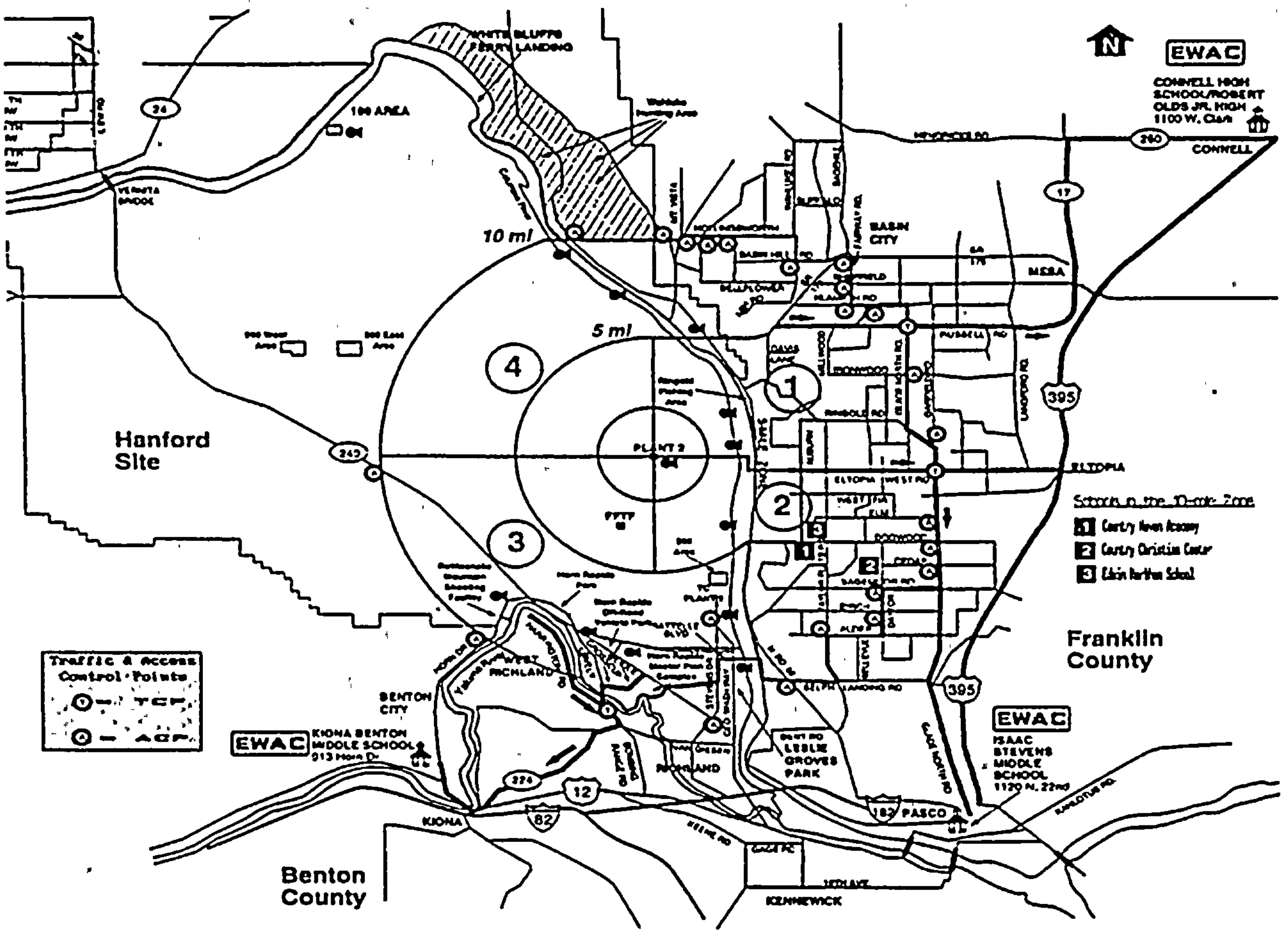
## LINK NODE MAPS

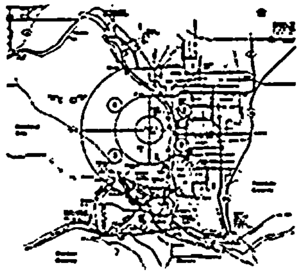


# FIGURE 3

## EVACUATION ROUTES

(Access Control Points, Traffic Control Points, and Assistance Centers)

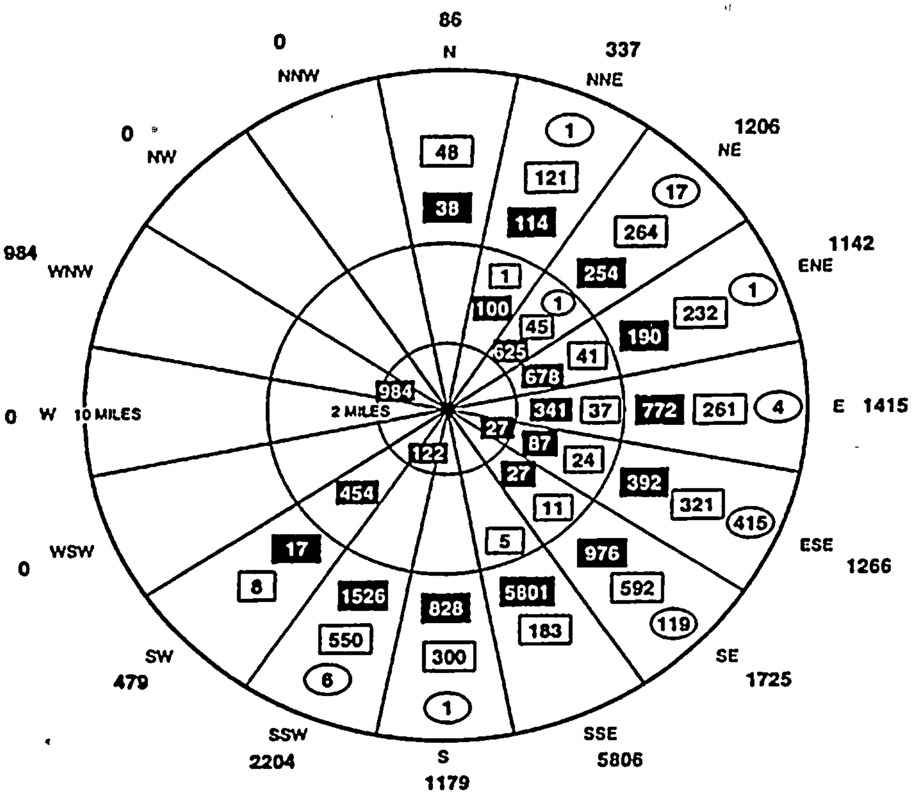




## FIGURE 4

## TOTAL POPULATION IN THE TEN-MILE EPZ

### (Broken Down Into Classifications)




17,829 TOTAL SEGMENT POPULATION 0 TO 10 MILES

| POPULATION TOTALS - PERMANENT | | | |
|---|---|---|---|
| RING MILES | RING POPULATION | TOTAL MILES | CUMULATIVE POPULATION |
| 0-2 | 0 | 0-2 | 0 |
| 2-5 | 164 | 0-5 | 164 |
| 5-10 | 2880 | 0-10 | 3044 |

| POPULATION TOTALS - TRANSIENT | | | |
|---|---|---|---|
| RING MILES | RING POPULATION | TOTAL MILES | CUMULATIVE POPULATION |
| 0-2 | 1133 | 0-2 | 1133 |
| 2-5 | 2312 | 0-5 | 3445 |
| 5-10 | 10,775 | 0-10 | 14,220 |

| POPULATION TOTALS - SPECIAL | | | |
|---|---|---|---|
| RING MILES | RING POPULATION | TOTAL MILES | CUMULATIVE POPULATION |
| 0-2 | 0 | 0-2 | 0 |
| 2-5 | 1 | 0-5 | 1 |
| 5-10 | 564 | 0-10 | 565 |

| POPULATION TOTALS | | | |
|---|---|---|---|
| RING MILES | RING POPULATION | TOTAL MILES | CUMULATIVE POPULATION |
| 0-2 | 1133 | 0-2 | 1133 |
| 2-5 | 2477 | 0-5 | 3610 |
| 5-10 | 14,219 | 0-10 | 17,829 |

870747.8
June 1996
Rev 18

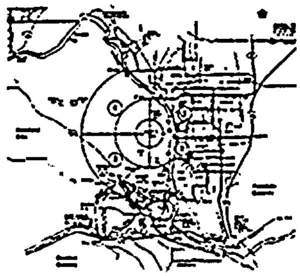
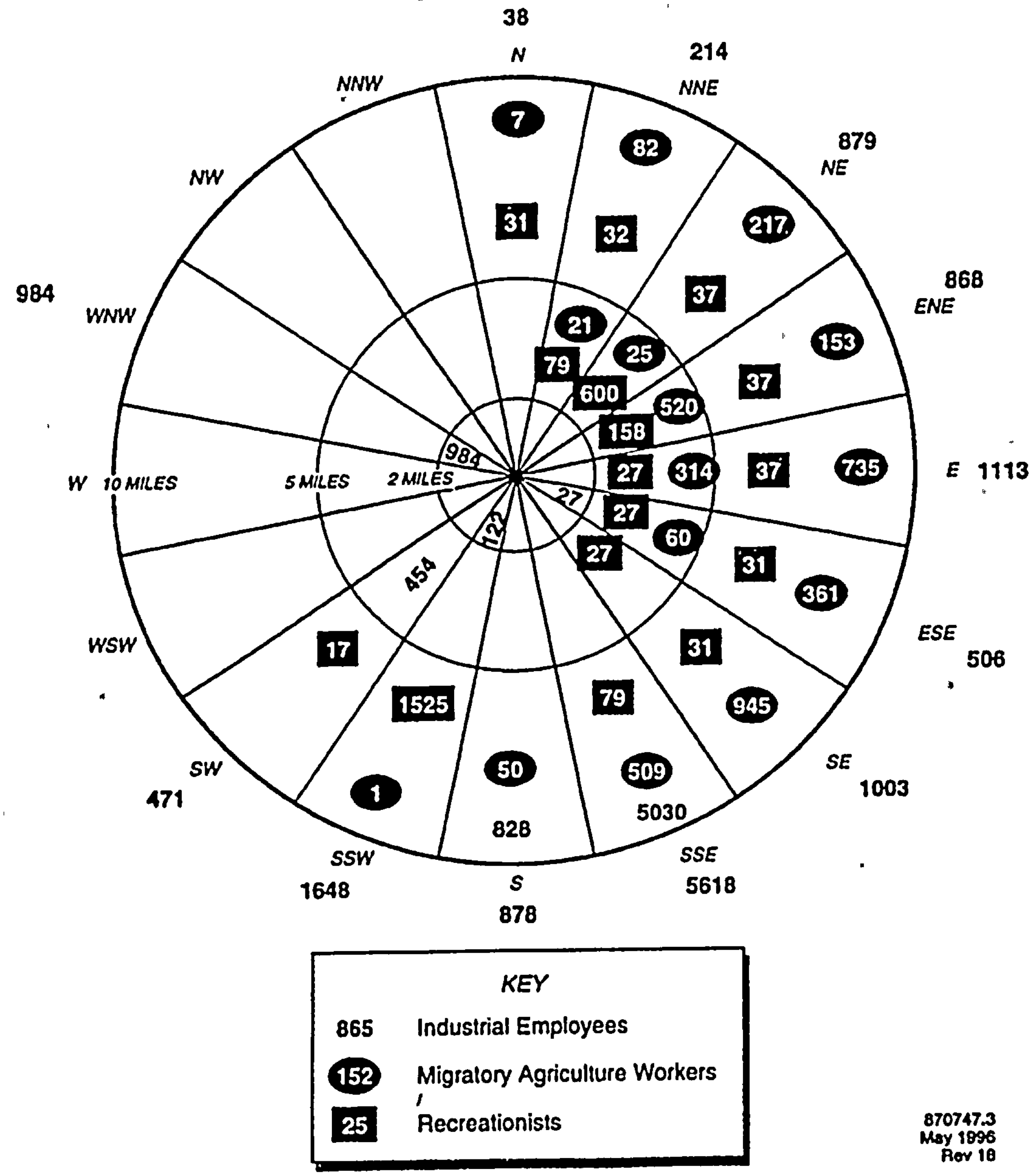


**FIGURE 5**

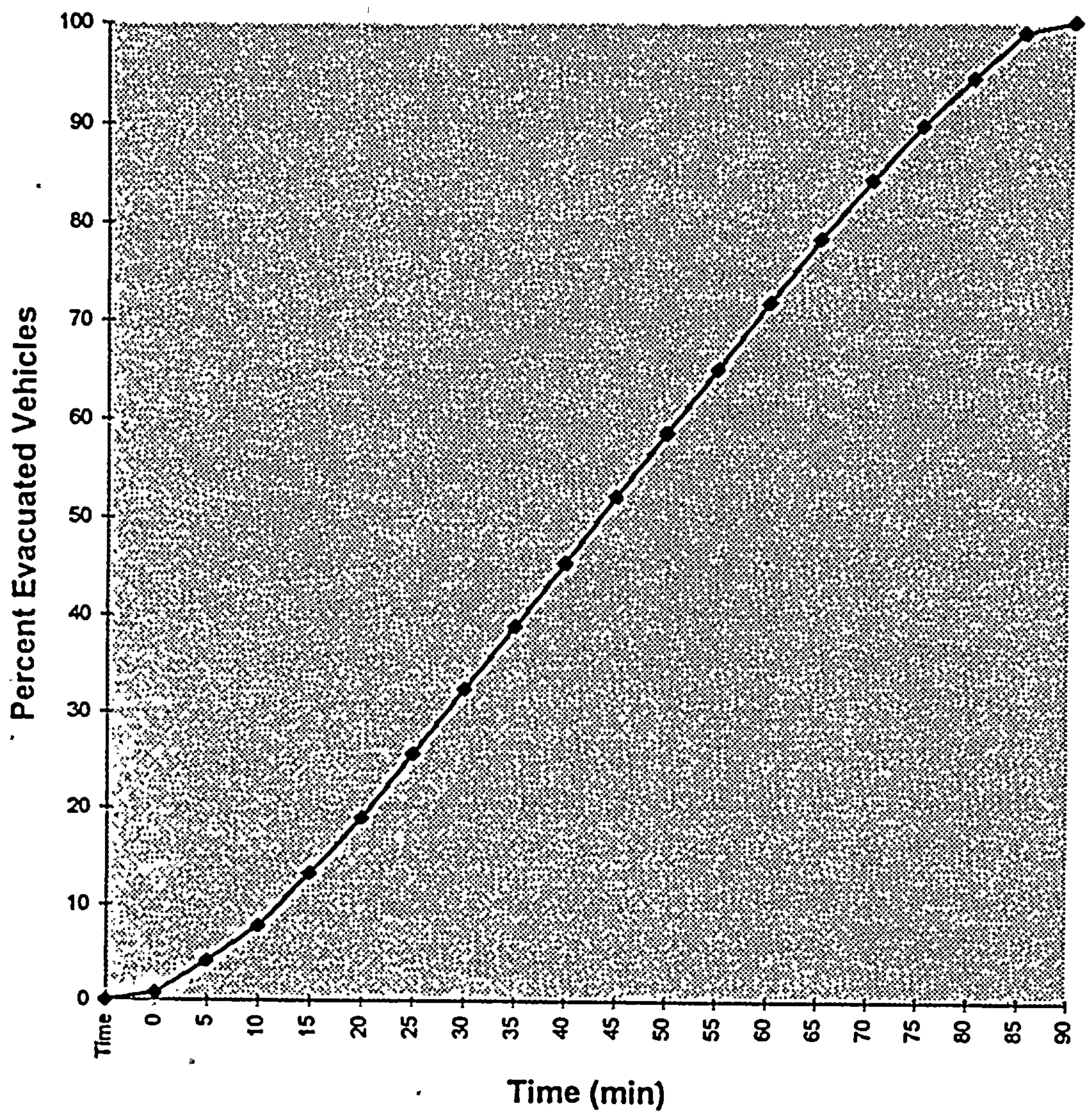
**DISTRIBUTION OF TRANSIENT POPULATION IN THE TEN-MILE EPZ**

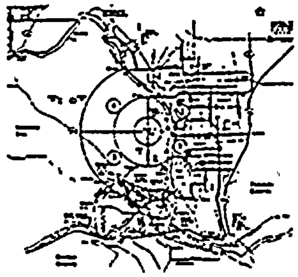



870747.3
May 1996
Rev 18

## FIGURE 6A

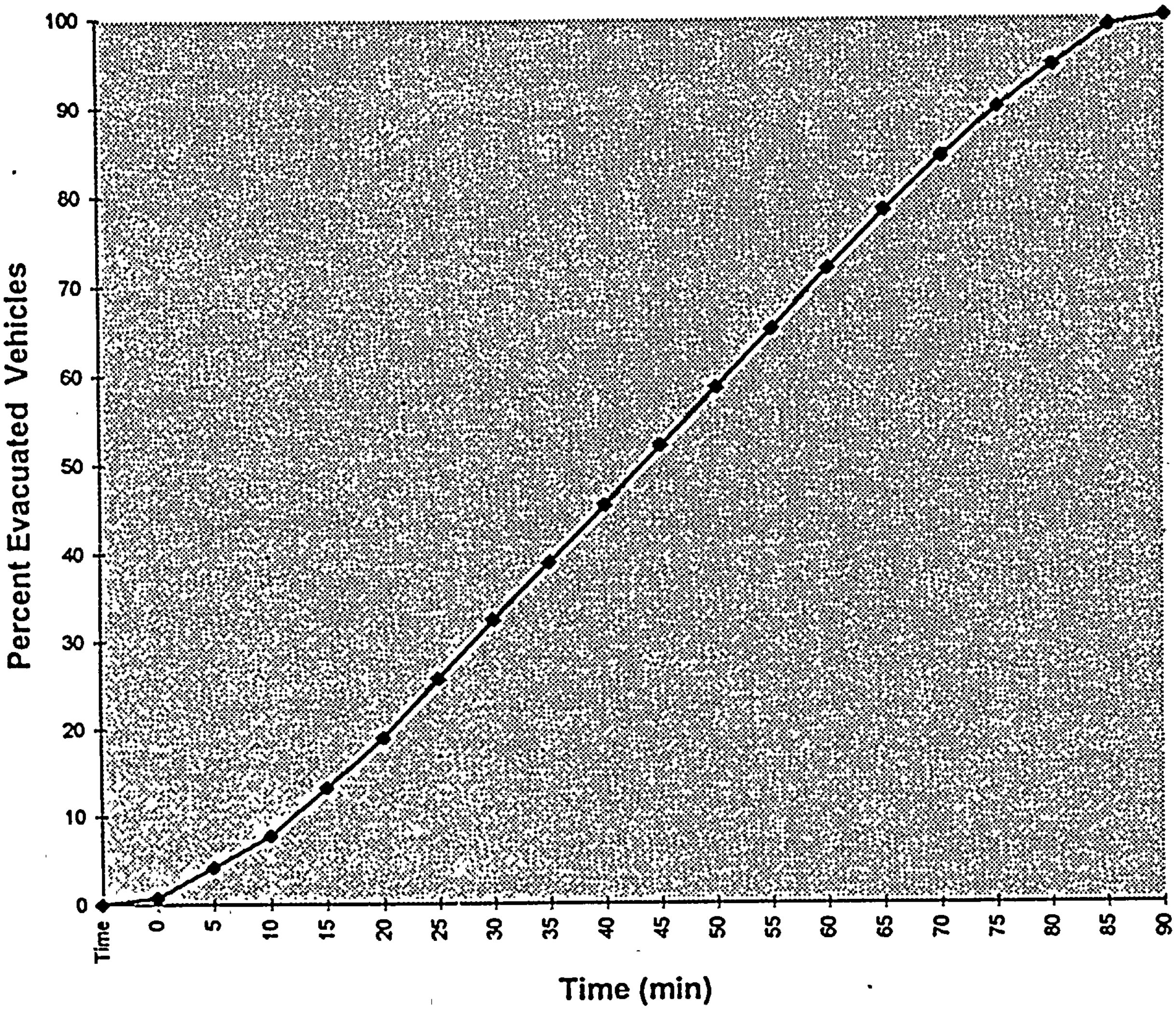
## PERMANENT POPULATION - NORMAL CONDITIONS





## FIGURE 6B

### PERMANENT POPULATION - ADVERSE CONDITIONS



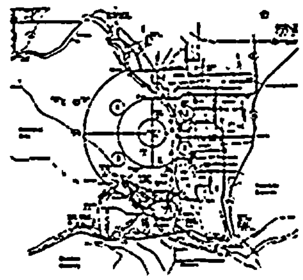
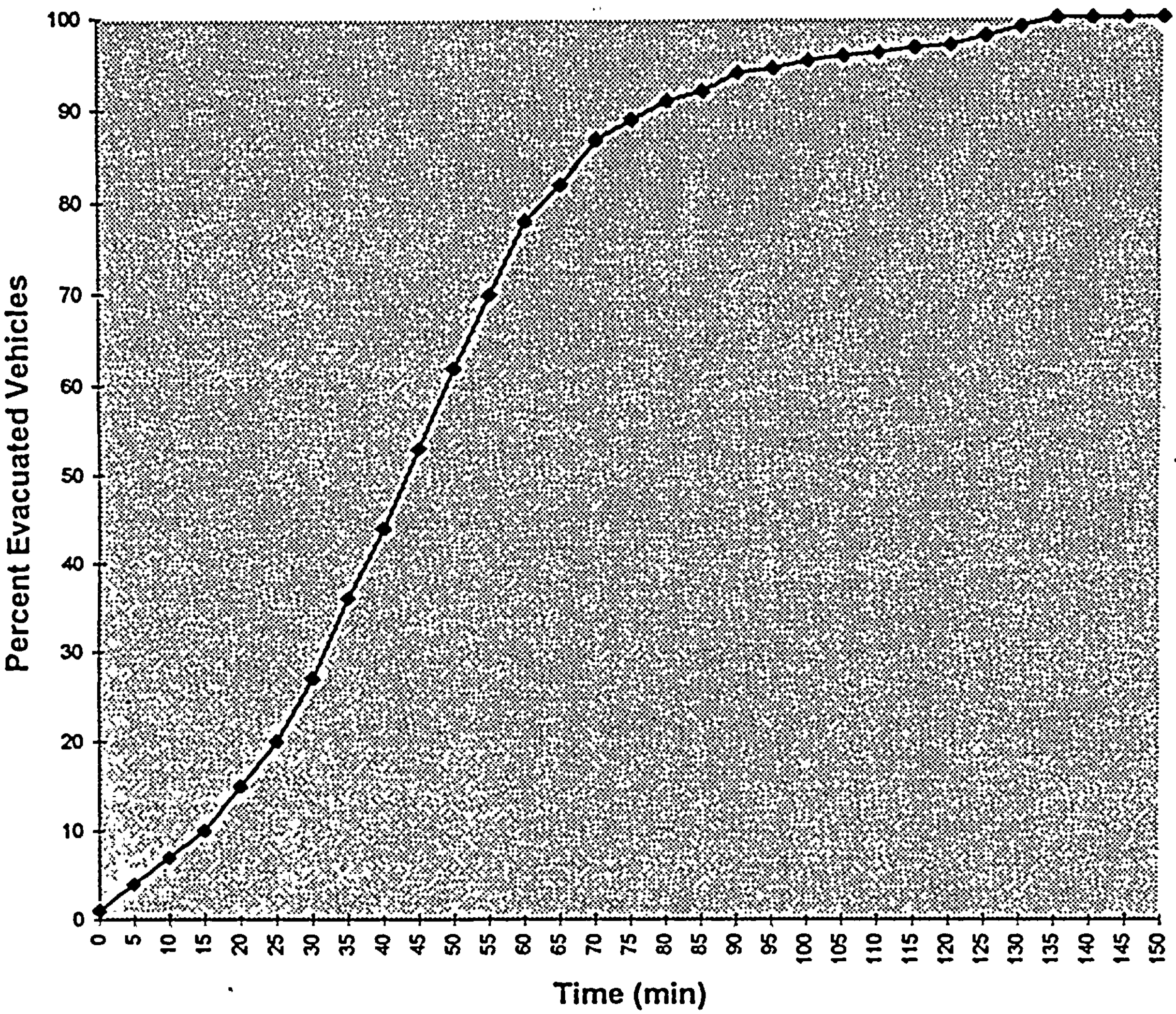


FIGURE 6C

GENERAL POPULATION - NORMAL CONDITIONS



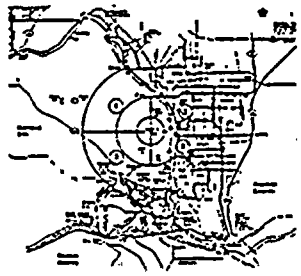
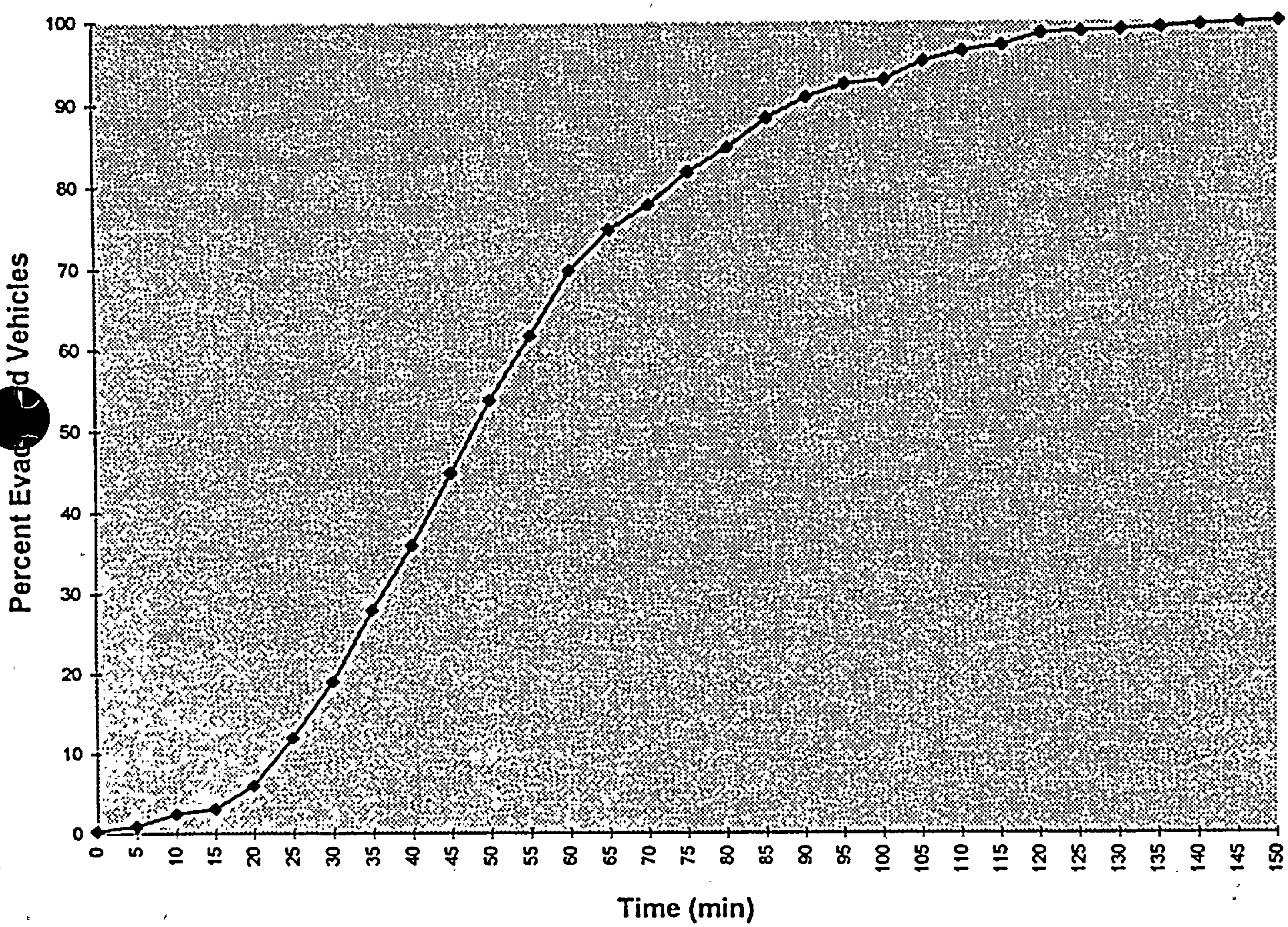
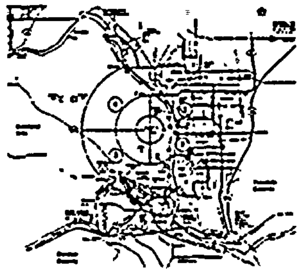


FIGURE 6D

GENERAL POPULATION - ADVERSE CONDITIONS

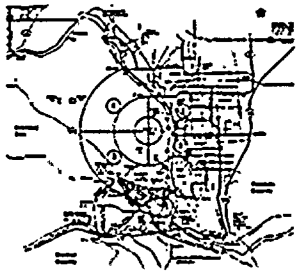




## TABLE 1

## PERMANENT POPULATION DISTRIBUTION

| WNP-2 ETE STUDY DATA | | | | |
|---|---|---|---|---|
| SECTORS - MILES | 0-2 Miles | 2-5 Miles | 5-10 Miles | Sector Totals |
| N | 0 | 0 | 48 | 48 |
| NNE | 0 | 1 | 121 | 122 |
| NE | 0 | 45 | 264 | 309 |
| ENE | 0 | 41 | 232 | 273 |
| E | 0 | 37 | 261 | 298 |
| ESE | 0 | 24 | 321 | 345 |
| SE | 0 | 11 | 592 | 603 |
| SSE | 0 | 5 | 183 | 188 |
| S | 0 | 0 | 300 | 300 |
| SSW | 0 | 0 | 550 | 550 |
| SW | 0 | 0 | 8 | 8 |
| WSW | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 |
| WNW | 0 | 0 | 0 | 0 |
| NW | 0 | 0 | 0 | 0 |
| NNW | 0 | 0 | 0 | 0 |
| RADIUS TOTALS | 0 | 164 | 2880 | |
| EPZ TOTAL | | | | 3044 |

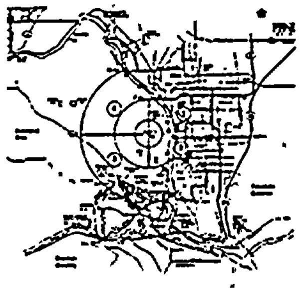


## TABLE 2

## TRANSIENT POPULATION DISTRIBUTION

| WNP-2 ETE STUDY DATA | | | | |
|---|---|---|---|---|
| SECTORS - MILES | 0-2 Miles | 2-5 Miles | 5-10 Miles | Sector Totals |
| N | 0 | 0 | 38 | 38 |
| NNE | 0 | 100 | 114 | 214 |
| NE | 0 | 625 | 254 | 879 |
| ENE | 0 | 678 | 190 | 868 |
| E | 0 | 341 | 772 | 1113 |
| ESE | 27 | 87 | 392 | 506 |
| SE | 0 | 27 | 976 | 1003 |
| SSE | 0 | 0 | 5618 | 5618 |
| S | 0 | 0 | 878 | 878 |
| SSW | 122 | 0 | 1526 | 1648 |
| SW | 0 | 454 | 17 | 471 |
| WSW | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 |
| WNW | 984 | 0 | 0 | 984 |
| NW | 0 | 0 | 0 | 0 |
| NNW | 0 | 0 | 0 | 0 |
| RADIUS TOTALS | 1133 | 2312<br>3445[1] | 10775 | |
| EPZ TOTAL | | | | 14220 |

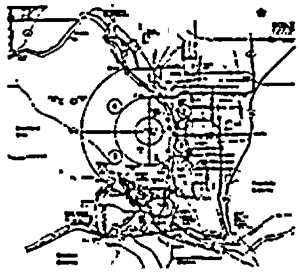
[1] 0-5 Miles Accumulated Total



## TABLE 3

## SPECIAL FACILITY POPULATION DISTRIBUTION

| WNP-2 ETE STUDY DATA | | | | |
|---|---|---|---|---|
| SECTORS - MILES | 0-2 Miles | 2-5 Miles | 5-10 Miles | Sector Totals |
| N | 0 | 0 | 0 | 0 |
| NNE | 0 | 0 | 1 | 1 |
| NE | 0 | 1 | 17 | 18 |
| ENE | 0 | 0 | 1 | 1 |
| E | 0 | 0 | 4 | 4 |
| ESE | 0 | 0 | 415 | 415 |
| SE | 0 | 0 | 119 | 119 |
| SSE | 0 | 0 | 0 | 0 |
| S | 0 | 0 | 1 | 1 |
| SSW | 0 | 0 | 6 | 6 |
| SW | 0 | 0 | 0 | 0 |
| WSW | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 |
| WNW | 0 | 0 | 0 | 0 |
| NW | 0 | 0 | 0 | 0 |
| NNW | 0 | 0 | 0 | 0 |
| RADIUS TOTALS | 0 | 1 | 564 | |
| EPZ TOTAL | | | | 565 |

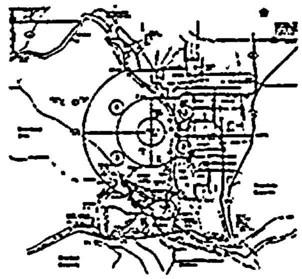


## TABLE 4

## MAXIMUM POPULATION DISTRIBUTION

| WNP-2 ETE STUDY DATA | | | | |
|---|---|---|---|---|
| SECTORS - MILES | 0-2 Miles | 2-5 Miles | 5-10 Miles | Sector Totals |
| N | 0 | 0 | 86 | 86 |
| NNE | 0 | 101 | 235 | 336 |
| NE | 0 | 671 | 535 | 1206 |
| ENE | 0 | 719 | 422 | 1141 |
| E | 0 | 378 | 1037 | 1415 |
| ESE | 27 | 111 | 1128 | 1266 |
| SE | 0 | 38 | 1687 | 1725 |
| SSE | 0 | 5 | 5801 | 5806 |
| S | 0 | 0 | 1179 | 1179 |
| SSW | 122 | 0 | 2082 | 2204 |
| SW | 0 | 454 | 25 | 479 |
| WSW | 0 | 0 | 0 | 0 |
| W | 0 | 0 | 0 | 0 |
| WNW | 984 | 0 | 0 | 984 |
| NW | 0 | 0 | 0 | 0 |
| NNW | 0 | 0 | 0 | 0 |
| RADIUS TOTALS | 1133 | 2477<br>3610[1] | 14217 | |
| EPZ TOTAL | | | | 17827 |

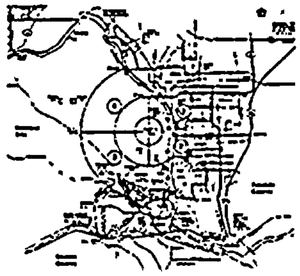
[1] 0-5 Miles Accumulated Total



## TABLE 5

## ROADWAY CHARACTERISTICS

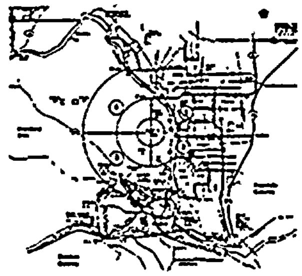
| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OREMS 2.0 | | | | | | | | | | | 00 |
| Kevin Galioto | | | | 5 | 22 | 96Washington Public Power | | | | 2 | 01 |
| | | | 10 100 | | | 0 | 1200 | | | | 02 |
| 150 150 150 | | | | | | | | | | | 03 |
| | | | 60 | | | | | | | | 04 |
| 5 | | | | | | | | | | | 05 |
| 000000000 | | | 000000000 | | | | | | | | 06 |
| 8001 | 7 | 0 | 2 | | 6 | | | | | | 11 |
| 7 | 6 | 400 | 2 | 5 | | | 25 | 24 | 30 | 1 | 11 |
| 6 | 5 | 100 | 2 | | | 4 | 25 | 24 | 30 | 1 | 11 |
| 5 | 4 | 160 | 2 | 3 | | | 25 | 24 | 30 | 1 | 11 |
| 4 | 3 | 360 | 2 | | | 2 | 25 | 24 | 30 | 1 | 11 |
| 3 | 2 | 799 | 2 | | 1 | | 25 | 24 | 30 | 1 | 11 |
| 2 | 1 | 761 | 2 | | 8003 | | 25 | 24 | 55 | 1 | 11 |
| 8000 | 11 | 0 | 2 | | 10 | | | | | | 11 |
| 11 | 10 | 282 | 2 | | 9 | | 25 | 24 | 55 | 1 | 11 |
| 10 | 9 | 222 | 2 | | 8 | | 25 | 24 | 55 | 1 | 11 |
| 9 | 8 | 701 | 2 | 2 | | | 25 | 24 | 55 | 1 | 11 |
| 8 | 2 | 500 | 2 | | | 1 | 25 | 24 | 55 | 1 | 11 |
| 8005 | 13 | 0 | 2 | | | 14 | | | | | 11 |
| 13 | 14 | 800 | 2 | | 12 | | 25 | 24 | 30 | 1 | 11 |
| 14 | 12 | 220 | 2 | 8 | | | 25 | 24 | 55 | 1 | 11 |
| 12 | 8 | 300 | 2 | | 2 | | 25 | 24 | 55 | 1 | 11 |
| 8002 | 16 | 0 | 2 | | 15 | | | | | | 11 |
| 16 | 15 | 700 | 2 | 14 | | | 25 | 24 | 30 | 1 | 11 |
| 15 | 14 | 200 | 2 | | | 12 | 25 | 24 | 30 | 1 | 11 |
| 32 | 35 | 84 | 2 | 36 | | 38 | 25 | 24 | 30 | 1 | 11 |
| 35 | 38 | 128 | 4 | 55 | | | 25 | 24 | 55 | 1 | 11 |
| 38 | 55 | 310 | 2 | | 54 | | 25 | 24 | 55 | 1 | 11 |
| 35 | 36 | 161 | 4 | | 37 | | 25 | 24 | 55 | 1 | 11 |
| 52 | 36 | 84 | 2 | | | 37 | 25 | 24 | 30 | 1 | 11 |
| 52 | 55 | 179 | 2 | | 54 | | 25 | 24 | 30 | 1 | 11 |
| 36 | 37 | 422 | 2 | | 66 | | 25 | 24 | 55 | 1 | 11 |
| 39 | 41 | 151 | 4 | | 42 | | 25 | 24 | 35 | 1 | 11 |
| 39 | 40 | 139 | 4 | 41 | 45 | | 25 | 24 | 55 | 1 | 11 |
| 53 | 40 | 99 | 2 | | 41 | 45 | 25 | 24 | 30 | 1 | 11 |
| 40 | 41 | 60 | 2 | | | 42 | 25 | 24 | 30 | 1 | 11 |
| 53 | 51 | 221 | 2 | 45 | 50 | | 25 | 24 | 30 | 1 | 11 |
| 51 | 50 | 82 | 2 | | | 49 | 25 | 24 | 30 | 1 | 11 |
| 50 | 49 | 82 | 2 | 48 | | | 25 | 24 | 30 | 1 | 11 |
| 54 | 51 | 287 | 2 | | 50 | 45 | 25 | 24 | 55 | 1 | 11 |
| 51 | 45 | 413 | 2 | | 43 | 44 | 25 | 24 | 55 | 1 | 11 |
| 40 | 45 | 241 | 4 | | 43 | 44 | 25 | 24 | 35 | 1 | 11 |
| 41 | 42 | 381 | 4 | | | 43 | 25 | 24 | 35 | 1 | 11 |
| 42 | 43 | 60 | 2 | | 44 | | 25 | 24 | 30 | 1 | 11 |
| 43 | 44 | 60 | 2 | | 46 | | 25 | 24 | 30 | 1 | 11 |
| 45 | 43 | 140 | 2 | | | 44 | 25 | 24 | 30 | 1 | 11 |
| 45 | 44 | 152 | 2 | | | 46 | 25 | 24 | 30 | 1 | 11 |
| 49 | 48 | 102 | 2 | | 46 | | 25 | 24 | 30 | 1 | 11 |
| 47 | 48 | 84 | 2 | | 46 | | 25 | 24 | 35 | 1 | 11 |
| 44 | 46 | 260 | 2 | | 57 | | 25 | 24 | 55 | 1 | 11 |
| 48 | 46 | 197 | 2 | | | 57 | 25 | 24 | 35 | 1 | 11 |
| 8009 | 51 | 0 | 2 | 45 | 50 | | | | | | 11 |
| 8013 | 53 | 0 | 2 | 51 | | 40 | | | | | 11 |
| 37 | 66 | 60 | 2 | | 39 | | 25 | 24 | 55 | 1 | 11 |
| 66 | 39 | 60 | 4 | 41 | 40 | | 25 | 24 | 55 | 1 | 11 |
| 8012 | 66 | 0 | 2 | 39 | | | | | | | 11 |



## TABLE 6

## SUMMARY OF RESULTS OF EVACUATION TIME ANALYSIS

| DESCRIPTION | Total Within 2 Miles | Areas Within 5 Miles | | | | Areas Within 10 Miles | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | Total | 1 | 2 | 3 | Total |
| Permanent Population | - | 124 | 40 | - | **164** | 1050 | 1136 | 858 | **3044** |
| Perm. Population Vehicles | - | 41 | 13 | - | **54** | 347 | 380 | 286 | **1013** |
| Transient Population | 1133 | 1744 | 141 | 1560 | **3445** | 1571 | 7154 | 3931 | **12656** |
| Trans. Population Vehicles | 971 | 581 | 64 | 964 | **2580** | 5763 | 2636 | 2944 | **6102** |
| General Population | 1133 | 1868 | 181 | 1560 | **3609** | 2621 | 8290 | 4789 | **15700** |
| Total Vehicles | 971 | 622 | 77 | 964 | **2634** | 870 | 3016 | 3230 | **7115** |
| Notification Time (Minutes) | 15 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| Permanent Population Evac. Time - Normal Conditions (Hours:Minutes) | - | 1:00 | 1:00 | - | **1:00** | 1:30 | 1:30 | 1:30 | **1:30** |
| General Population Evac. Time - Normal Conditions (Hours:Minutes) | 1:00 | 1:00 | 1:00 | 1:30 | **1:30** | 1:30 | 1:20 | 2:15 | **2:15** |
| Permanent Population Evac. Time - Adverse Conditions (Hours:Minutes) | - | 1:00 | 1:00 | - | **1:00** | 1:30 | 1:30 | 1:30 | **1:30** |
| General Population Evac. Time - Adverse Conditions (Hours:Minutes) | 1:30 | 1:00 | 1:00 | 2:00 | **2:00** | 1:30 | 1:30 | 2:30 | **2:30** |
| Confirmation Time (Minutes) | 30 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 |



## RESOURCE 1

## EXAMPLE COMPUTER RUN

The following is a copy of a computer run produced by the Oak Ridge Evacuation Modeling System (OREMS) software which was used to calculate the time estimates. This is provided for general review and informational purposes only.

1 ESIM SIMULATION MODEL
(ADAPTED FROM CORFLO OF TRAF)

DEVELOPED FOR

FEDERAL EMERGENCY MANAGEMENT AGENCY

0*****************************************************************************************************

START OF CASE 1

*****************************************************************************************************

1 MODIFIED CARD FILE LIST

```
0SEQ.# :----+----1----+----2----+----3----+----4----+----5----+----6----+----7----+----8

  1 :OREMS 2.0 Alpha Case Study: Trip Dist. + Traffic Assignment + Simulation    00
  2 :                                                    00
  3 :Oscar FRANZESE                    3 15 95ORNL                1 01
  4 :          10                0    1600                02
  5 : 150 150 150                                            03
  6 :           60                                        04
  7 :  5                                        1        05
  8 :8001  1   0       2           2  3                      0 11
  9 :  1   3 1000      2 1          4              40 35 40 1    0 11
 10 :  3   1 1000      2  1              2          40 35 40 0    0 11
 11 :8003   3   0       2              1  4                   0 11
 12 :  3   4 1000      2 1 1        2  58004         30 25 40 0    0 11
 13 :  4   3 1000      2 1 1             1         30 25 40 0    0 11
 14 :  4   5 1000      2             8005            30 25 40 0    0 11
 15 :  5   4 1000      2 1 1       8004  3  2        30 25 40 0    0 11
 16 :  4   2 1000      2             8002          40 35 40 0    0 11
 17 :  2   4 1000      2 1 1       58004  3          40 35 40 0    0 11
 18 :  1   2 1000      2          8002      4        30 25 25 1    0 11
 19 :  1   8001   3   0   0   0                                  35
 20 :  3  50   18003  4  0  0  15  3  2  15  3  2  10  3  2  0  0  0  35
 21 :  4      3  5  2  0  0                                      35
 22 :  5      4  0  0  0  0                                      35
 23 :  2      4  1  0  0  0                                      35
 24 :  1 00                                        150  300  36
 25 :  3 123  020  222  192  002  222  223  220  222  000  000  000   150  200  36
 26 :  4 555                                       250  200  36
 27 :  5 1                                         350  200  36
 28 :  2 55                                        250  300  36
 29 : 130                                               52
 30 :                                                170
 31 :  0  0  0  0  0  0  0  0  0  0  0  0  0  0                 175
 32 :2001   4  3                                      177
 33 :800430008005300080023000  0  0  0  0  0  0  0  0  0  0  0  0   178
 34 :8001          14008004   8005   8002                      179
 35 :8003          24008005   8004   8002                      179
 36 :2001          1608004   8002                         179
 37 :8001     150     350                                  195
 38 :  1      150     300                                 195
 39 :  3      150     200                                 195
 40 :8003     150     150                                  195
 41 :  4      250 ,   200                                 195
 42 :8004     250     150                                  195
 43 :  5      350     200                                 195
 44 :8005     400     200                                  195
 45 :  2      250     300                                 195
 46 :8002     250     350                                  195
 47 :  0  8  1                                        210
 48 : 130                                               52
 49 :                                                170
 50 :  0  0  0  0  0  0  0  0  0  0  0  0  0  0                 175
0SEQ.# :----+----1----+----2----+----3----+----4----+----5----+----6----+----7----+----8
```

1 MODIFIED CARD FILE LIST (CONT.)

```
0SEQ.# :----+----1----+----2----+----3----+----4----+----5----+----6----+----7----+----8

  51 :2001   4  3                                          177
  52 :8001        10008004   8005   8002                            179
  53 :8003        12008005   8004   8002                            179
  54 :2001         808004   8002                                179
  55 :  0  8  1                                          210
  56 : 130                                               52
  57 :                                                 170
  58 :  0  0  0  0  0  0  0  0  0  0  0  0  0                  175
  59 :2001   4  3                                          177
  60 :8001         2008004   8005   8002                          179
  61 :8003        10008005   8004   8002                            179
  62 :2001          18004   8002                                179
  63 :  1  1                                               210
0SEQ.# :----+----1----+----2----+----3----+----4----+----5----+----6----+----7----+----8

1                                 EVACUATION SIMULATION MODEL

                                     DEVELOPED FOR                             FEDERAL EMERGENCY
MANAGEMENT AGENCY


0                   OREMS 2.0 Alpha Case Study: Trip Dist. + Traffic Assignment + Simulation
0
1                                  RUN CONTROL DATA


               VALUE                    RUN PARAMETERS AND OPTIONS

0                  0    RUN IDENTIFICATION NUMBER
0                  3    RUN TYPE CODE = (1, 2, 3) TO RUN (SIMULATION, ASSIGNMENT, BOTH)
                                  (-1,-2,-3) TO CHECK (SIMULATION, ASSIGNMENT, BOTH) ONLY

0                  0    INPUT  UNITS CODE = (0,1) IF INPUT IS IN (ENGLISH, METRIC) UNITS
                   0    OUTPUT UNITS CODE = (0,1,2,3) IF OUTPUT IS IN (SAME AS INPUT, ENGLISH, METRIC, BOTH)
UNITS
0               1600    CLOCK TIME AT START OF SIMULATION (HHMM)
                 900*   DURATION (SEC) OF TIME PERIOD NO. 1
                 900*   DURATION (SEC) OF TIME PERIOD NO. 2
                 900*   DURATION (SEC) OF TIME PERIOD NO. 3
0                 60*   LENGTH OF A TIME INTERVAL, SECONDS
0                 10*   MAXIMUM INITIALIZATION TIME, NUMBER OF TIME INTERVALS
0                300    NUMBER OF TIME INTERVALS BETWEEN SUCCESSIVE STANDARD OUTPUTS
0                   *  VALUES ASSERTED BY THE MODEL FOR THE FOLLOWING REASONS -
1*********************************************************************************************

                                 TIME PERIOD   1 - ESIM DATA

**********************************************************************************************
1                                      ESIM    LINKS


0                     -LANES-     -CHANNEL-

                       F          C
                       U          U                        LOST  Q DIS  FREE
                LENGTH     L PKT  GRD   R        DESTINATION NODE      OPP.   TIME  HDWY.  SPEED    RTOR PED
        LINK     FT / M    L L R  PCT  B23456    LEFT THRU RGHT DIAG   NODE    SEC   SEC   MPH/KMPH  CODE
CODE

     (8001,  1)     0/  0  2 0 0   0   000000      2    3    0    0     0   2.5*  2.2*   0/ 0    0   0
     (  1,  3) 52800/****  2 1 0   0   000000      4    0    0    0     0   4.0   3.5   40/ 64   1   0
     (  3,  1) 52800/****  2 0 1   0   000000      0    0    2    0     0   4.0   3.5   40/ 64   0   0
     (8003,  3)     0/  0  2 0 0   0   000000      0    1    4    0     0   2.5*  2.2*   0/ 0    0   0
     (  3,  4) 52800/****  2 1 1   0   000000      2    5 8004    0     0   3.0   2.5   40/ 64   0   0
     (  4,  3) 52800/****  2 1 1   0   000000      0    0    1    0     0   3.0   2.5   40/ 64   0   0
     (  4,  5) 52800/****  2 0 0   0   000000      0 8005    0    0     0   3.0   2.5   40/ 64   0   0
     (  5,  4) 52800/****  2 1 1   0   000000   8004    3    2    0     0   3.0   2.5   40/ 64   0   0
```

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ( 4, 2) | 52800/**** | 2 0 0 | 0 | 000000 | 0 8002 | 0 | 0 | 0 | 4.0 | 3.5 | 40/ 64 | 0 | 0 |
| ( 2, 4) | 52800/**** | 2 1 1 | 0 | 000000 | 5 8004 | 3 | 0 | 0 | 4.0 | 3.5 | 40/ 64 | 0 | 0 |
| ( 1, 2) | 52800/**** | 2 0 0 | 0 | 000000 | 8002 0 | 4 | 0 | 0 | 3.0 | 2.5 | 25/ 40 | 1 | 0 |

* INDICATES A DEFAULT VALUE, ASSIGNED INTERNALLY BY THE MODEL

| LANE CHANNELIZATION CODES | RTOR CODES | PEDESTRIAN CODES |
|---|---|---|
| 0 UNRESTRICTED | 0 RTOR PERMITTED | 0 NO PEDESTRIANS |
| 1 LEFT TURNS ONLY | 1 RTOR PROHIBITED | 1 LIGHT |
| 2 BUSES ONLY | | 2 MODERATE |
| 3 CLOSED | | 3 HEAVY |
| 4 RIGHT TURNS ONLY | | |
| 5 CAR - POOLS | | |
| 6 CAR - POOLS + BUSES | | |

1

ESIM TURNING MOVEMENT DATA

TURN MOVEMENT PERCENTAGES TURN MOVEMENT POSSIBLE BLOCKAGE POCKET LENGTH (FEET/METERS)

| LINK | LEFT | THROUGH | RIGHT | DIAGONAL | LEFT | THROUGH | RIGHT | DIAGONAL | (PCT) | (SECS) | LEFT | RIGHT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (8001, 1) | 0 | 0 | 0 | 0 | YES | YES | NO | NO | 0 | 0 | 0/ 0 | 0/ 0 |
| ( 1, 3) | 0 | 0 | 0 | 0 | YES | NO | NO | NO | 0 | 0 | 60/ 18 | 0/ 0 |
| ( 3, 1) | 0 | 0 | 0 | 0 | NO | NO | YES | NO | 0 | 0 | 0/ 0 | 60/ 18 |
| (8003, 3) | 0 | 0 | 0 | 0 | NO | YES | YES | NO | 0 | 0 | 0/ 0 | 0/ 0 |
| ( 3, 4) | 0 | 0 | 0 | 0 | YES | YES | YES | NO | 0 | 0 | 60/ 18 | 60/ 18 |
| ( 4, 3) | 0 | 0 | 0 | 0 | NO | NO | YES | NO | 0 | 0 | 60/ 18 | 60/ 18 |
| ( 4, 5) | 0 | 0 | 0 | 0 | NO | YES | NO | NO | 0 | 0 | 0/ 0 | 0/ 0 |
| ( 5, 4) | 0 | 0 | 0 | 0 | YES | YES | YES | NO | 0 | 0 | 60/ 18 | 60/ 18 |
| ( 4, 2) | 0 | 0 | 0 | 0 | NO | YES | NO | NO | 0 | 0 | 0/ 0 | 0/ 0 |
| ( 2, 4) | 0 | 0 | 0 | 0 | YES | YES | YES | NO | 0 | 0 | 60/ 18 | 60/ 18 |
| ( 1, 2) | 0 | 0 | 0 | 0 | YES | NO | YES | NO | 0 | 0 | 0/ 0 | 0/ 0 |

1

FREEWAY SUBNETWORK PARAMETERS

RELAXATION TIME COEFFICIENT 75 SECONDS/MILE OR 46 SECONDS/KM

ANTICIPATION COEFFICIENT (EE-2) 50 MILES**2/HOUR OR 129 KM**2/HOUR

TIME SLICE DURATION 3 SECONDS

JAM DENSITY 180 (VEH/LANE-MILE) OR 112 (VEH/LANE-KM)

COEFFICIENTS FOR SPEED-DENSITY RELATIONSHIP

RELATIONSHIP 1

COEFFICIENT 1 107 (MILES/HOUR) OR 172 (KM/HOUR)
COEFFICIENT 2 -231 (MILES/HOUR) (LANE-MILE/VEH) OR -598 (KM/HOUR) (LANE-KM/VEH)
COEFFICIENT 3 215 (MILES/HOUR) (LANE-MILE/VEH)**2 OR 896 (KM/HOUR) (LANE-KM/VEH)**2
COEFFICIENT 4 -74 (MILES/HOUR) (LANE-MILE/VEH)**3 OR -496 (KM/HOUR) (LANE-KM/VEH)**3

RELATIONSHIP 2

COEFFICIENT 1 80 (HOURS/MILE) OR 49 (HOURS/KM)
COEFFICIENT 2 474 (HOURS/MILE) (LANE-MILE/VEH) OR 474 (HOURS/KM) (LANE-KM/VEH)

```
          COEFFICIENT 3   -591 (HOURS/MILE) (LANE-MILE/VEH)**2  OR      -951 (HOURS/KM) (LANE-
KM/VEH)**2
          COEFFICIENT 4    466 (HOURS/MILE) (LANE-MILE/VEH)**3  OR      1206 (HOURS/KM) (LANE-
KM/VEH)**3

      RELATIONSHIP 3

          COEFFICIENT 1    25. (VEH/LANE-MILE)          OR      16 (VEH/LANE-KM)
          COEFFICIENT 2    50. (VEH/LANE-MILE)          OR      31 (VEH/LANE-KM)
          COEFFICIENT 3    35. (MILES/HOUR)            OR     56 (KM/HOUR)
          COEFFICIENT 4    40. (MILES/HOUR)            OR     64 (KM/HOUR)
          COEFFICIENT 5     2. (DIMENSIONLESS)          OR       2 (DIMENSIONLESS)


                      NO TYPE 34 CARD WAS INPUT, ALL VALUES ARE
                      DEFAULTS, ASSIGNED INTERNALLY BY THE MODEL
1                  SPECIFIED FIXED-TIME SIGNAL CONTROL, AND SIGN CONTROL, CODES
0                         NODE    1 IS UNDER SIGN CONTROL
0        INTERVAL   DURATION   +---------------APPROACHES---------------+
         NUMBER   (SEC) (PCT)  (8001,  1)   (  3,  1)
            1      0   100       0           0
0                         NODE    2 IS UNDER SIGN CONTROL
0        INTERVAL   DURATION   +---------------APPROACHES---------------+
         NUMBER   (SEC) (PCT)  (  4,  2)   (  1,  2)
            1      0   100       5           5
0                               NODE    3
              OFFSET  50 SEC                       CYCLE LENGTH  55 SEC
0        INTERVAL   DURATION   +---------------APPROACHES---------------+
         NUMBER   (SEC) (PCT)  (  1,  3)   (8003,  3)   (  4,  3)
            1     15    27       1           2           3
            2      3     5       0           2           0
            3      2     4       2           2           2
            4     15    27       1           9           2
            5      3     5       0           0           2
            6      2     4       2           2           2
            7     10    18       2           2           3
            8      3     5       2           2           0
            9      2     4       2           2           2
0                         NODE    4 IS UNDER SIGN CONTROL
0        INTERVAL   DURATION   +---------------APPROACHES---------------+
         NUMBER   (SEC) (PCT)  (  3,  4)   (  5,  4)   (  2,  4)
            1      0   100       5           5           5
0                         NODE    5 IS UNDER SIGN CONTROL
0        INTERVAL   DURATION   +---------------APPROACHES---------------+
         NUMBER   (SEC) (PCT)  (  4,  5)
            1      0   100       1
1                          INTERPRETATION OF SIGNAL CODES

                       0      YIELD OR AMBER

                       1      GREEN

                       2      RED

                       3      RED WITH GREEN RIGHT ARROW

                       4      RED WITH GREEN LEFT ARROW

                       5      STOP

                       6      RED WITH GREEN DIAGONAL ARROW

                       7      NO TURNS-GREEN THRU ARROW
```

8 RED WITH LEFT AND RIGHT GREEN ARROW

9 NO LEFT TURN-GREEN THRU AND RIGHT

1 TRAFFIC CONTROL TABLE - SIGNS AND FIXED TIME SIGNALS

```
 CONTROL CODES  GO   = PROTECTED
          NOGO = NOT PERMITTED
          PERM = PERMITTED NOT.PROTECTED
          PROT = PROTECTED
          STOP = STOP SIGN
          YLD  = YIELD SIGN


 NODE   1    SIGN CONTROL

PHASE DURATION  ------------------------  APPROACHES  ------------------------
            (8001,  1)      ( 3,  1)
          LEFT THRU RITE DIAG  LEFT THRU RITE DIAG  LEFT THRU RITE DIAG  LEFT THRU RITE DIAG  LEFT
THRU RITE DIAG
  1     0    YLD  YLD            YLD


 NODE   2    SIGN CONTROL

PHASE DURATION  ------------------------  APPROACHES  ------------------------
            ( 4,  2)        ( 1,  2)
          LEFT THRU RITE DIAG  LEFT THRU RITE DIAG  LEFT THRU RITE DIAG  LEFT THRU RITE DIAG  LEFT
THRU RITE DIAG
  1     0       STOP          STOP     STOP


 NODE   3    FIXED TIME CONTROL    OFFSET =  50 SECONDS    CYCLE LENGTH =  55 SECONDS

PHASE DURATION  ------------------------  APPROACHES  ------------------------
            ( 1,  3)      (8003,  3)      ( 4,  3)
          LEFT THRU RITE DIAG  LEFT THRU RITE DIAG  LEFT THRU RITE DIAG  LEFT THRU RITE DIAG  LEFT
THRU RITE DIAG
  1    20    PROT              NOGO NOGO            GO
  2    20    PROT               GO   GO         NOGO
  3    15    NOGO               NOGO NOGO            GO


 NODE   4    SIGN CONTROL

PHASE DURATION  ------------------------  APPROACHES  ------------------------
            ( 3,  4)        ( 5,  4)        ( 2,  4)
          LEFT THRU RITE DIAG  LEFT THRU RITE DIAG  LEFT THRU RITE DIAG  LEFT THRU RITE DIAG  LEFT
THRU RITE DIAG
  1     0   STOP STOP STOP     STOP STOP STOP     STOP STOP STOP
1


 NODE   5    SIGN CONTROL

PHASE DURATION  ------------------------  APPROACHES  ------------------------
            ( 4,  5)
          LEFT THRU RITE DIAG  LEFT THRU RITE DIAG  LEFT THRU RITE DIAG  LEFT THRU RITE DIAG  LEFT
THRU RITE DIAG
  1     0      GO
0***** WARNING  - MESSAGE NUMBER  622, ROUTINE CHKPH2, PARAMETER(S) - P1 =     0,  P2 =     4,  P3 =
3
1                       AVERAGE VEHICLE OCCUPANCIES
                       (HUNDREDTHS-OF-A-PERSON / VEHICLE)
```

AUTOS CAR-POOLS TRUCKS BUSES
130 350 120 250

1 TRAFFIC ASSIGNMENT PARAMETERS

EPSILON (OBJ.FUNC.THRESHOLD VALUE) = 1.0 % +

LINE SEARCH ACCURACY OF OBJ.FUNCION = 1.0 % +

MAX.NUMBER OF ASSIGNMENT ITERATIONS = 15

MAX.NUMBER OF CAPACITY CALIBRATIONS = 1 +

TYPE OF OBJECTIVE FUNCTION
(0:USER OPTIMAL, 1:SYSTEM OPTIMAL)= 0 +

IMPEDANCE FUNCTION PARAMETERS:
ALPHA = 60/100 +
BETA = 40/ 10 +

TYPE (0:FHWA, 1:MODIFIED DAVIDSON)= 0 +

(+) :INDICATES DEFAULT VALUE

REQUESTED INTERMEDIATE OUTPUT CODE = 4
0: NO INTERMEDIATE OUTPUT
1: PATH ASSIGNMENTS
2: TREE CONSTRUCTS
3: DETAILED O-D TREES
4: ALL OUTPUTS 1,2 AND 3

1 TRIP TABLE

FOR EACH ORIGIN NODE, TABLE PROVIDES LISTING OF CANDIDATE DESTINATION NODES

ORIGIN NODE (8001) 8004 8005 8002

ORIGIN NODE (8003) 8005 8004 8002

ORIGIN NODE (2001) 8004 8002
0***** WARNING - MESSAGE NUMBER 920, ROUTINE RDF179, PARAMETER(S) - P1 = 8001
0***** WARNING - MESSAGE NUMBER 920, ROUTINE RDF179, PARAMETER(S) - P1 = 8004
0***** WARNING - MESSAGE NUMBER 920, ROUTINE RDF179, PARAMETER(S) - P1 = 8005
0***** WARNING - MESSAGE NUMBER 920, ROUTINE RDF179, PARAMETER(S) - P1 = 8002
0***** WARNING - MESSAGE NUMBER 920, ROUTINE RDF179, PARAMETER(S) - P1 = 8003
0***** WARNING - MESSAGE NUMBER 920, ROUTINE RDF179, PARAMETER(S) - P1 = 2001
1 INTERNAL CENTROIDS

| CENTROID | LINK |
|---|---|
| 2001 | ( 4, 3) |

1 TRAFFIC ASSIGNMENT :SOURCE VOLUMES

| ORIGIN NODE | VOLUME (VPH) |
|---|---|
| 8001 | 9000 |
| 8003 | 9000 |
| 2001 | 6000 |

1 TRAFFIC ASSIGNMENT :SINK VOLUMES

| DESTINATION NODE | VOLUME (VPH) |
|---|---|
| 8002 | 9000 |
| 8004 | 9000 |
| 8005 | 6000 |

1 DESTINATION TRIP TABLE

FOR EACH DESTINATION NODE, TABLE PROVIDES LISTING OF DATA PAIRS: ORIGIN NODE/VOLUME

DESTINATION (8002) 8001/3000 8003/3000 2001/3000

DESTINATION (8004) 8001/3000 8003/3000 2001/3000

DESTINATION (8005) 8001/3000 8003/3000

1**************************************************************************************************************

TIME PERIOD 2 - ESIM DATA

**************************************************************************************************************

1

ESIM TURNING MOVEMENT DATA

| LINK | TURN MOVEMENT PERCENTAGES LEFT | THROUGH | RIGHT | DIAGONAL | TURN MOVEMENT POSSIBLE LEFT | THROUGH | RIGHT | DIAGONAL | BLOCKAGE (PCT) | (SECS) |
|---|---|---|---|---|---|---|---|---|---|---|
| (8001, 1) | 0 | 0 | 0 | 0 | YES | YES | NO | NO | 0 | 0 |
| ( 1, 3) | 0 | 0 | 0 | 0 | YES | NO | NO | NO | 0 | 0 |
| ( 3, 1) | 0 | 0 | 0 | 0 | NO | NO | YES | NO | 0 | 0 |
| (8003, 3) | 0 | 0 | 0 | 0 | NO | YES | YES | NO | 0 | 0 |
| ( 3, 4) | 0 | 0 | 0 | 0 | YES | YES | YES | NO | 0 | 0 |
| ( 4, 3) | 0 | 0 | 0 | 0 | NO | NO | YES | NO | 0 | 0 |
| ( 4, 5) | 0 | 0 | 0 | 0 | NO | YES | NO | NO | 0 | 0 |
| ( 5, 4) | 0 | 0 | 0 | 0 | YES | YES | YES | NO | 0 | 0 |
| ( 4, 2) | 0 | 0 | 0 | 0 | NO | YES | NO | NO | 0 | 0 |
| ( 2, 4) | 0 | 0 | 0 | 0 | YES | YES | YES | NO | 0 | 0 |
| ( 1, 2) | 0 | 0 | 0 | 0 | YES | NO | YES | NO | 0 | 0 |

0***** WARNING - MESSAGE NUMBER 622, ROUTINE CHKPH2, PARAMETER(S) - P1 = 0, P2 = 4, P3 =
3

1 AVERAGE VEHICLE OCCUPANCIES
(HUNDREDTHS-OF-A-PERSON / VEHICLE)

| AUTOS | CAR-POOLS | TRUCKS | BUSES |
|---|---|---|---|
| 130 | 350 | 120 | 250 |

1 TRAFFIC ASSIGNMENT PARAMETERS

EPSILON (OBJ.FUNC.THRESHOLD VALUE) = 1.0 % +

LINE SEARCH ACCURACY OF OBJ.FUNCION = 1.0 % +

MAX.NUMBER OF ASSIGNMENT ITERATIONS = 15

MAX.NUMBER OF CAPACITY CALIBRATIONS = 1 +

TYPE OF OBJECTIVE FUNCTION
(0:USER OPTIMAL, 1:SYSTEM OPTIMAL)= 0 +

IMPEDANCE FUNCTION PARAMETERS:
ALPHA = 60/100 +
BETA = 40/ 10 +

TYPE (0:FHWA, 1:MODIFIED DAVIDSON)= 0 +

(+) :INDICATES DEFAULT VALUE

REQUESTED INTERMEDIATE OUTPUT CODE = 4
0: NO INTERMEDIATE OUTPUT
1: PATH ASSIGNMENTS
2: TREE CONSTRUCTS
3: DETAILED O-D TREES
4: ALL OUTPUTS 1,2 AND 3

1 TRIP TABLE

FOR EACH ORIGIN NODE, TABLE PROVIDES LISTING OF CANDIDATE DESTINATION NODES

ORIGIN NODE (8001) 8004 8005 8002

ORIGIN NODE (8003) 8005 8004 8002

ORIGIN NODE (2001) 8004 8002
0***** WARNING - MESSAGE NUMBER 920, ROUTINE RDF179, PARAMETER(S) - P1 = 8001
0***** WARNING - MESSAGE NUMBER 920, ROUTINE RDF179, PARAMETER(S) - P1 = 8004
0***** WARNING - MESSAGE NUMBER 920, ROUTINE RDF179, PARAMETER(S) - P1 = 8005
0***** WARNING - MESSAGE NUMBER 920, ROUTINE RDF179, PARAMETER(S) - P1 = 8002
0***** WARNING - MESSAGE NUMBER 920, ROUTINE RDF179, PARAMETER(S) - P1 = 8003
0***** WARNING - MESSAGE NUMBER 920, ROUTINE RDF179, PARAMETER(S) - P1 = 2001
1 INTERNAL CENTROIDS

| CENTROID | LINK |
|---|---|
| 2001 | ( 4, 3) |

1 TRAFFIC ASSIGNMENT :SOURCE VOLUMES

| ORIGIN NODE | VOLUME (VPH) |
|---|---|
| 8001 | 9000 |
| 8003 | 9000 |
| 2001 | 6000 |

1 TRAFFIC ASSIGNMENT :SINK VOLUMES

| DESTINATION NODE | VOLUME (VPH) |
|---|---|
| 8002 | 9000 |
| 8004 | 9000 |
| 8005 | 6000 |

1 DESTINATION TRIP TABLE

FOR EACH DESTINATION NODE, TABLE PROVIDES LISTING OF DATA PAIRS: ORIGIN NODE/VOLUME

DESTINATION (8002) 8001/3000 8003/3000 2001/3000

DESTINATION (8004) 8001/3000 8003/3000 2001/3000

DESTINATION (8005) 8001/3000 8003/3000
1*******************************************************************************************************************

TIME PERIOD 3 - ESIM DATA

*******************************************************************************************************************

1

ESIM TURNING MOVEMENT DATA

| LINK | TURN MOVEMENT PERCENTAGES LEFT | THROUGH | RIGHT | DIAGONAL | TURN MOVEMENT POSSIBLE LEFT | THROUGH | RIGHT | DIAGONAL | BLOCKAGE (PCT) | (SECS) |
|---|---|---|---|---|---|---|---|---|---|---|
| (8001, 1) | 0 | 0 | 0 | 0 | YES | YES | NO | NO | 0 | 0 |
| ( 1, 3) | 0 | 0 | 0 | 0 | YES | NO | NO | NO | 0 | 0 |
| ( 3, 1) | 0 | 0 | 0 | 0 | NO | NO | YES | NO | 0 | 0 |
| (8003, 3) | 0 | 0 | 0 | 0 | NO | YES | YES | NO | 0 | 0 |
| ( 3, 4) | 0 | 0 | 0 | 0 | YES | YES | YES | NO | 0 | 0 |
| ( 4, 3) | 0 | 0 | 0 | 0 | NO | NO | YES | NO | 0 | 0 |
| ( 4, 5) | 0 | 0 | 0 | 0 | NO | YES | NO | NO | 0 | 0 |
| ( 5, 4) | 0 | 0 | 0 | 0 | YES | YES | YES | NO | 0 | 0 |
| ( 4, 2) | 0 | 0 | 0 | 0 | NO | YES | NO | NO | 0 | 0 |
| ( 2, 4) | 0 | 0 | 0 | 0 | YES | YES | YES | NO | 0 | 0 |
| ( 1, 2) | 0 | 0 | 0 | 0 | YES | NO | YES | NO | 0 | 0 |

0***** WARNING - MESSAGE NUMBER 622, ROUTINE CHKPH2, PARAMETER(S) - P1 = 0, P2 = 4, P3 =
3
1 AVERAGE VEHICLE OCCUPANCIES
(HUNDREDTHS-OF-A-PERSON / VEHICLE)

AUTOS CAR-POOLS TRUCKS BUSES
130 350 120 250

1 TRAFFIC ASSIGNMENT PARAMETERS

EPSILON (OBJ.FUNC.THRESHOLD VALUE) = 1.0 % +

LINE SEARCH ACCURACY OF OBJ.FUNCION = 1.0 % +

MAX.NUMBER OF ASSIGNMENT ITERATIONS = 15

MAX.NUMBER OF CAPACITY CALIBRATIONS = 1 +

TYPE OF OBJECTIVE FUNCTION
(0:USER OPTIMAL, 1:SYSTEM OPTIMAL)= 0 +

IMPEDANCE FUNCTION PARAMETERS:
ALPHA = 60/100 +
BETA = 40/ 10 +

TYPE (0:FHWA, 1:MODIFIED DAVIDSON)= 0 +

(+) :INDICATES DEFAULT VALUE

REQUESTED INTERMEDIATE OUTPUT CODE = 4
0: NO INTERMEDIATE OUTPUT
1: PATH ASSIGNMENTS
2: TREE CONSTRUCTS
3: DETAILED O-D TREES
4: ALL OUTPUTS 1,2 AND 3

1 TRIP TABLE

FOR EACH ORIGIN NODE, TABLE PROVIDES LISTING OF CANDIDATE DESTINATION NODES

ORIGIN NODE (8001) 8004 8005 8002

ORIGIN NODE (8003) 8005 8004 8002

ORIGIN NODE (2001) 8004 8002
0***** WARNING - MESSAGE NUMBER 920, ROUTINE RDF179, PARAMETER(S) - P1 = 8001
0***** WARNING - MESSAGE NUMBER 920, ROUTINE RDF179, PARAMETER(S) - P1 = 8004
0***** WARNING - MESSAGE NUMBER 920, ROUTINE RDF179, PARAMETER(S) - P1 = 8005
0***** WARNING - MESSAGE NUMBER 920, ROUTINE RDF179, PARAMETER(S) - P1 = 8002
0***** WARNING - MESSAGE NUMBER 920, ROUTINE RDF179, PARAMETER(S) - P1 = 8003
0***** WARNING - MESSAGE NUMBER 920, ROUTINE RDF179, PARAMETER(S) - P1 = 2001

1 INTERNAL CENTROIDS

| CENTROID | LINK |
|---|---|
| 2001 | ( 4, 3) |

1 TRAFFIC ASSIGNMENT :SOURCE VOLUMES

| ORIGIN NODE | VOLUME (VPH) |
|---|---|
| 8001 | 9000 |
| 8003 | 9000 |
| 2001 | 6000 |

1 TRAFFIC ASSIGNMENT :SINK VOLUMES

| DESTINATION NODE | VOLUME (VPH) |
|---|---|
| 8002 | 9000 |
| 8004 | 9000 |
| 8005 | 6000 |

1 DESTINATION TRIP TABLE

FOR EACH DESTINATION NODE, TABLE PROVIDES LISTING OF DATA PAIRS: ORIGIN NODE/VOLUME

DESTINATION (8002) 8001/3000 8003/3000 2001/3000

DESTINATION (8004) 8001/3000 8003/3000 2001/3000

DESTINATION (8005) 8001/3000 8003/3000

1 EVACUATION SIMULATION MODEL

DEVELOPED FOR FEDERAL EMERGENCY MANAGEMENT AGENCY

0 OREMS 2.0 Alpha Case Study: Trip Dist. + Traffic Assignment + Simulation

0

1 RUN CONTROL DATA

| | VALUE | RUN PARAMETERS AND OPTIONS |
|---|---|---|
| 0 | 0 | RUN IDENTIFICATION NUMBER |
| 0 | 3 | RUN TYPE CODE = (1, 2, 3) TO RUN (SIMULATION, ASSIGNMENT, BOTH)<br>(-1,-2,-3) TO CHECK (SIMULATION, ASSIGNMENT, BOTH) ONLY |
| 0 | 0 | INPUT UNITS CODE = (0,1) IF INPUT IS IN (ENGLISH, METRIC) UNITS |
| | 0 | OUTPUT UNITS CODE = (0,1,2,3) IF OUTPUT IS IN (SAME AS INPUT, ENGLISH, METRIC, BOTH) UNITS |
| 0 | 1600 | CLOCK TIME AT START OF SIMULATION (HHMM) |
| | 900* | DURATION (SEC) OF TIME PERIOD NO. 1 |
| | 900* | DURATION (SEC) OF TIME PERIOD NO. 2 |
| | 900* | DURATION (SEC) OF TIME PERIOD NO. 3 |
| 0 | 60* | LENGTH OF A TIME INTERVAL, SECONDS |
| 0 | 10* | MAXIMUM INITIALIZATION TIME, NUMBER OF TIME INTERVALS |
| 0 | 300 | NUMBER OF TIME INTERVALS BETWEEN SUCCESSIVE STANDARD OUTPUTS |
| 0 | | * VALUES ASSERTED BY THE MODEL FOR THE FOLLOWING REASONS - |

1************************************************************************************************

TIME PERIOD 1 - ESIM DATA

************************************************************************************************

1 ESIM LINKS

0 -LANES- -CHANNEL-

| LINK | LENGTH FT/M | LANES FUL | LANES L PKT L | LANES L PKT R | GRD PCT | CHANNEL CUR B23456 | DESTINATION NODE LEFT | DESTINATION NODE THRU | DESTINATION NODE RGHT | DESTINATION NODE DIAG | OPP. NODE | LOST TIME SEC | Q DIS HDWY. SEC | FREE SPEED MPH/KMPH | RTOR CODE | PED CODE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (8001, 1) | 0/ 0 | 2 | 0 | 0 | 0 | 000000 | 2 | 3 | 0 | 0 | 0 | 2.5* | 2.2* | 0/ 0 | 0 | 0 |
| ( 1, 3) | 52800/**** | 2 | 1 | 0 | 0 | 000000 | 4 | 0 | 0 | 0 | 0 | 4.0 | 3.5 | 40/ 64 | 1 | 0 |
| ( 3, 1) | 52800/**** | 2 | 0 | 1 | 0 | 000000 | 0 | 0 | 2 | 0 | 0 | 4.0 | 3.5 | 40/ 64 | 0 | 0 |
| (8003, 3) | 0/ 0 | 2 | 0 | 0 | 0 | 000000 | 0 | 1 | 4 | 0 | 0 | 2.5* | 2.2* | 0/ 0 | 0 | 0 |
| ( 3, 4) | 52800/**** | 2 | 1 | 1 | 0 | 000000 | 2 | 5 | 8004 | 0 | 0 | 3.0 | 2.5 | 40/ 64 | 0 | 0 |
| ( 4, 3) | 52800/**** | 2 | 1 | 1 | 0 | 000000 | 0 | 0 | 1 | 0 | 0 | 3.0 | 2.5 | 40/ 64 | 0 | 0 |
| ( 4, 5) | 52800/**** | 2 | 0 | 0 | 0 | 000000 | 0 | 8005 | 0 | 0 | 0 | 3.0 | 2.5 | 40/ 64 | 0 | 0 |
| ( 5, 4) | 52800/**** | 2 | 1 | 1 | 0 | 000000 | 8004 | 3 | 2 | 0 | 0 | 3.0 | 2.5 | 40/ 64 | 0 | 0 |
| ( 4, 2) | 52800/**** | 2 | 0 | 0 | 0 | 000000 | 0 | 8002 | 0 | 0 | 0 | 4.0 | 3.5 | 40/ 64 | 0 | 0 |
| ( 2, 4) | 52800/**** | 2 | 1 | 1 | 0 | 000000 | 5 | 8004 | 3 | 0 | 0 | 4.0 | 3.5 | 40/ 64 | 0 | 0 |
| ( 1, 2) | 52800/**** | 2 | 0 | 0 | 0 | 000000 | 8002 | 0 | 4 | 0 | 0 | 3.0 | 2.5 | 25/ 40 | 1 | 0 |

* INDICATES A DEFAULT VALUE, ASSIGNED INTERNALLY BY THE MODEL

| LANE CHANNELIZATION CODES | RTOR CODES | PEDESTRIAN CODES |
|---|---|---|
| 0 UNRESTRICTED | 0 RTOR PERMITTED | 0 NO PEDESTRIANS |
| 1 LEFT TURNS ONLY | 1 RTOR PROHIBITED | 1 LIGHT |
| 2 BUSES ONLY | | 2 MODERATE |
| 3 CLOSED | | 3 HEAVY |
| 4 RIGHT TURNS ONLY | | |
| 5 CAR - POOLS | | |
| 6 CAR - POOLS + BUSES | | |

1

ESIM TURNING MOVEMENT DATA

| LINK | TURN MOVEMENT PERCENTAGES LEFT | THROUGH | RIGHT | DIAGONAL | TURN MOVEMENT POSSIBLE LEFT | THROUGH | RIGHT | DIAGONAL | BLOCKAGE (PCT) | (SECS) | POCKET LENGTH (FEET/METERS) LEFT | RIGHT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (8001, 1) | 0 | 0 | 0 | 0 | YES | YES | NO | NO | 0 | 0 | 0/ 0 | 0/ 0 |
| ( 1, 3) | 0 | 0 | 0 | 0 | YES | NO | NO | NO | 0 | 0 | 60/ 18 | 0/ 0 |
| ( 3, 1) | 0 | 0 | 0 | 0 | NO | NO | YES | NO | 0 | 0 | 0/ 0 | 60/ 18 |
| (8003, 3) | 0 | 0 | 0 | 0 | NO | YES | YES | NO | 0 | 0 | 0/ 0 | 0/ 0 |
| ( 3, 4) | 0 | 0 | 0 | 0 | YES | YES | YES | NO | 0 | 0 | 60/ 18 | 60/ 18 |
| ( 4, 3) | 0 | 0 | 0 | 0 | NO | NO | YES | NO | 0 | 0 | 60/ 18 | 60/ 18 |
| ( 4, 5) | 0 | 0 | 0 | 0 | NO | YES | NO | NO | 0 | 0 | 0/ 0 | 0/ 0 |
| ( 5, 4) | 0 | 0 | 0 | 0 | YES | YES | YES | NO | 0 | 0 | 60/ 18 | 60/ 18 |
| ( 4, 2) | 0 | 0 | 0 | 0 | NO | YES | NO | NO | 0 | 0 | 0/ 0 | 0/ 0 |
| ( 2, 4) | 0 | 0 | 0 | 0 | YES | YES | YES | NO | 0 | 0 | 60/ 18 | 60/ 18 |
| ( 1, 2) | 0 | 0 | 0 | 0 | YES | NO | YES | NO | 0 | 0 | 0/ 0 | 0/ 0 |

1 FREEWAY SUBNETWORK PARAMETERS

RELAXATION TIME COEFFICIENT 75 SECONDS/MILE OR 46 SECONDS/KM

ANTICIPATION COEFFICIENT (EE-2) 50 MILES**2/HOUR OR 129 KM**2/HOUR

TIME SLICE DURATION 3 SECONDS

JAM DENSITY 180 (VEH/LANE-MILE) OR 112 (VEH/LANE-KM)

COEFFICIENTS FOR SPEED-DENSITY RELATIONSHIP

RELATIONSHIP 1

COEFFICIENT 1 107 (MILES/HOUR) OR 172 (KM/HOUR)
COEFFICIENT 2 -231 (MILES/HOUR) (LANE-MILE/VEH) OR -598 (KM/HOUR) (LANE-KM/VEH)
COEFFICIENT 3 215 (MILES/HOUR) (LANE-MILE/VEH)**2 OR 896 (KM/HOUR) (LANE-KM/VEH)**2
COEFFICIENT 4 -74 (MILES/HOUR) (LANE-MILE/VEH)**3 OR -496 (KM/HOUR) (LANE-KM/VEH)**3

RELATIONSHIP 2

COEFFICIENT 1 80 (HOURS/MILE) OR 49 (HOURS/KM)
COEFFICIENT 2 474 (HOURS/MILE) (LANE-MILE/VEH) OR 474 (HOURS/KM) (LANE-KM/VEH)
COEFFICIENT 3 -591 (HOURS/MILE) (LANE-MILE/VEH)**2 OR -951 (HOURS/KM) (LANE-KM/VEH)**2
COEFFICIENT 4 466 (HOURS/MILE) (LANE-MILE/VEH)**3 OR 1206 (HOURS/KM) (LANE-KM/VEH)**3

RELATIONSHIP 3

COEFFICIENT 1 25. (VEH/LANE-MILE) OR 16 (VEH/LANE-KM)
COEFFICIENT 2 50. (VEH/LANE-MILE) OR 31 (VEH/LANE-KM)

```
          COEFFICIENT 3   35. (MILES/HOUR)          OR     56 (KM/HOUR)
          COEFFICIENT 4   40. (MILES/HOUR)          OR     64 (KM/HOUR)
          COEFFICIENT 5    2. (DIMENSIONLESS)        OR       2 (DIMENSIONLESS)

1             SPECIFIED FIXED-TIME SIGNAL CONTROL, AND SIGN CONTROL, CODES
0                         NODE   1 IS UNDER SIGN CONTROL
0       INTERVAL   DURATION   +---------------APPROACHES---------------+
        NUMBER   (SEC) (PCT)  (8001,  1)  (  3,  1)
         1    0  100     0        0
0                         NODE   2 IS UNDER SIGN CONTROL
0       INTERVAL   DURATION   +---------------APPROACHES---------------+
        NUMBER   (SEC) (PCT)  (  4,  2)  (  1,  2)
         1    0  100     5        5
0                                NODE   3
            OFFSET  50 SEC                        CYCLE LENGTH  55 SEC
0       INTERVAL   DURATION   +---------------APPROACHES---------------+
        NUMBER   (SEC) (PCT)  (  1,  3)  (8003,  3)  (  4,  3)
         1   15   27     1        2          3
         2    3    5     0        2          0
         3    2    4     2        2          2
         4   15   27     1        9          2
         5    3    5     0        0          2
         6    2    4     2        2          2
         7   10   18     2        2          3
         8    3    5     2        2          0
         9    2    4     2        2          2
0                         NODE   4 IS UNDER SIGN CONTROL
0       INTERVAL   DURATION   +---------------APPROACHES---------------+
        NUMBER   (SEC) (PCT)  (  3,  4)  (  5,  4)  (  2,  4)
         1    0  100     5        5          5
0                         NODE   5 IS UNDER SIGN CONTROL
0       INTERVAL   DURATION   +---------------APPROACHES---------------+
        NUMBER   (SEC) (PCT)  (  4,  5)
         1    0  100     1
1                          INTERPRETATION OF SIGNAL CODES

                      0      YIELD OR AMBER

                      1      GREEN

                      2      RED

                      3      RED WITH GREEN RIGHT ARROW

                      4      RED WITH GREEN LEFT ARROW

                      5      STOP

                      6      RED WITH GREEN DIAGONAL ARROW

                      7      NO TURNS-GREEN THRU ARROW

                      8      RED WITH LEFT AND RIGHT GREEN ARROW

                      9      NO LEFT TURN-GREEN THRU AND RIGHT
1                  TRAFFIC CONTROL TABLE - SIGNS AND FIXED TIME SIGNALS

    CONTROL CODES  GO   = PROTECTED
             NOGO = NOT PERMITTED
             PERM = PERMITTED NOT PROTECTED
             PROT = PROTECTED
             STOP = STOP SIGN
             YLD  = YIELD SIGN


    NODE    1     SIGN CONTROL
```

```
PHASE DURATION  ------------------------ APPROACHES ------------------------
              (8001,  1)      ( 3,  1)
           LEFT THRU RITE DIAG  LEFT THRU RITE DIAG  LEFT THRU RITE DIAG  LEFT THRU RITE DIAG  LEFT
THRU RITE DIAG
  1    0    YLD  YLD              YLD


   NODE   2    SIGN CONTROL

PHASE DURATION  ------------------------ APPROACHES ------------------------
              ( 4,  2)      ( 1,  2)
           LEFT THRU RITE DIAG  LEFT THRU RITE DIAG  LEFT THRU RITE DIAG  LEFT THRU RITE DIAG  LEFT
THRU RITE DIAG
  1    0       STOP        STOP     STOP


   NODE   3    FIXED TIME CONTROL     OFFSET =  50 SECONDS    CYCLE LENGTH =  55 SECONDS

PHASE DURATION  ------------------------ APPROACHES ------------------------
              ( 1,  3)      (8003,  3)      ( 4,  3)
           LEFT THRU RITE DIAG  LEFT THRU RITE DIAG  LEFT THRU RITE DIAG  LEFT THRU RITE DIAG  LEFT
THRU RITE DIAG
  1    20   PROT             NOGO NOGO          GO
  2    20   PROT              GO  GO          NOGO
  3    15   NOGO              NOGO NOGO          GO


   NODE   4    SIGN CONTROL

PHASE DURATION  ------------------------ APPROACHES ------------------------
              ( 3,  4)      ( 5,  4)      ( 2,  4)
           LEFT THRU RITE DIAG  LEFT THRU RITE DIAG  LEFT THRU RITE DIAG  LEFT THRU RITE DIAG  LEFT
THRU RITE DIAG
  1    0    STOP STOP STOP     STOP STOP STOP     STOP STOP STOP
1


   NODE   5    SIGN CONTROL

PHASE DURATION  ------------------------ APPROACHES ------------------------
              ( 4,  5)
           LEFT THRU RITE DIAG  LEFT THRU RITE DIAG  LEFT THRU RITE DIAG  LEFT THRU RITE DIAG  LEFT
THRU RITE DIAG
  1    0      GO
0***** WARNING  - MESSAGE NUMBER  622, ROUTINE CHKPH2, PARAMETER(S) - P1 =      0,  P2 =      4,  P3 =
3
1                         AVERAGE VEHICLE OCCUPANCIES
                        (HUNDREDTHS-OF-A-PERSON / VEHICLE)

                      AUTOS   CAR-POOLS   TRUCKS   BUSES
                       130      350      120      250
1                         TRAFFIC ASSIGNMENT PARAMETERS


                  EPSILON (OBJ.FUNC.THRESHOLD VALUE)  =  1.0 %  +

                  LINE SEARCH ACCURACY OF OBJ.FUNCION =  1.0 %  +

                  MAX.NUMBER OF ASSIGNMENT ITERATIONS = 15

                  MAX.NUMBER OF CAPACITY CALIBRATIONS =  1     +

                  TYPE OF OBJECTIVE FUNCTION
                   (0:USER OPTIMAL, 1:SYSTEM OPTIMAL)=  0    +
```

```
IMPEDANCE FUNCTION PARAMETERS:
                ALPHA = 60/100 +
                BETA  = 40/ 10 +

 TYPE (0:FHWA, 1:MODIFIED DAVIDSON)= 0    +


    (+) :INDICATES DEFAULT VALUE

REQUESTED INTERMEDIATE OUTPUT CODE = 4
   0: NO INTERMEDIATE OUTPUT
   1: PATH ASSIGNMENTS
   2: TREE CONSTRUCTS
   3: DETAILED O-D TREES
   4: ALL OUTPUTS 1,2 AND 3

1                          TRIP TABLE

         FOR EACH ORIGIN NODE, TABLE PROVIDES LISTING OF CANDIDATE DESTINATION NODES

ORIGIN NODE (8001)   8004    8005    8002

ORIGIN NODE (8003)   8005    8004    8002

ORIGIN NODE (2001)   8004    8002
0***** WARNING  - MESSAGE NUMBER  920, ROUTINE RDF179, PARAMETER(S) - P1 =   8001
0***** WARNING  - MESSAGE NUMBER  920, ROUTINE RDF179, PARAMETER(S) - P1 =   8004
0***** WARNING  - MESSAGE NUMBER  920, ROUTINE RDF179, PARAMETER(S) - P1 =   8005
0***** WARNING  - MESSAGE NUMBER  920, ROUTINE RDF179, PARAMETER(S) - P1 =   8002
0***** WARNING  - MESSAGE NUMBER  920, ROUTINE RDF179, PARAMETER(S) - P1 =   8003
0***** WARNING  - MESSAGE NUMBER  920, ROUTINE RDF179, PARAMETER(S) - P1 =   2001
1                        INTERNAL CENTROIDS

                       CENTROID      LINK

                        2001      ( 4,  3)
1                    TRAFFIC ASSIGNMENT  :SOURCE VOLUMES

                      ORIGIN NODE   VOLUME (VPH)

                         8001      9000
                         8003      9000
                         2001      6000
1                    TRAFFIC ASSIGNMENT :SINK VOLUMES

                    DESTINATION NODE   VOLUME (VPH)

                         8002      9000
                         8004      9000
                         8005      6000
1                         DESTINATION TRIP TABLE

         FOR EACH DESTINATION NODE, TABLE PROVIDES LISTING OF DATA PAIRS: ORIGIN NODE/VOLUME

 DESTINATION (8002)   8001/3000  8003/3000  2001/3000

 DESTINATION (8004)   8001/3000  8003/3000  2001/3000

 DESTINATION (8005)   8001/3000  8003/3000
1                     MINIMUM PATH CONSTRUCTS FOR  ITERATION:  1

                 LIST OF LABELLED INTERNAL LINKS FOR EACH ORIGIN NODE

0ORIGIN:8001 (  1,  2)
0ORIGIN:8003 (  3,  4)
0ORIGIN:2001 (  3,  1) (  1,  2) (  4,  3)
1 TRAFFIC DISTRIBUTION ASSIGNMENT RESULTS AT       ITERATION :  1 CAPACITY ITERATION:  1
```

```
GEOMETRIC  PATH-LINK LENGTH  FREE-FLOW  TRAVEL CAPACITY VOLUME  SPEED TURN RECEIVER
 LINK    RECEIVER   FEET   TIME(SEC) TIME(SEC)   VPH     VPH   (MPH) TYPE  TYPE
                 ON-LINK TOTAL
(8001,  1) (  1,  3)    0    0    7.0    7.0   1085      0    0.0  T   INT
          (  1,  2)              8.0  813.3    389   1400    0.0  L   INT V>C
(8003,  3) (  3,  4)    0    0    6.0  927.6    417   2400    0.0  R   INT V>C
          (  3,  1)              9.0    9.0    894      0    0.0  T   INT
(  3,  1) (  1,  2) 52800  895  901.0  901.1   1598    160   40.0  R   INT
(  1,  3) (  3,  4) 52800  895  897.0  897.0   1337      0   40.1  L   INT
(  3,  4) (  4,8004) 52800  895  903.0139603.8   570   2400    0.3  R   EXIT V>C
          (  4,  5)            905.0  905.0   1000      0   39.8  T   INT
          (  4,  2)            906.0  906.0    460      0   39.7  L   INT
(  1,  2) (  2,  4) 52800 1427 1435.0 1435.0    661      0   25.1  R   INT
          (  2,8002)          1438.0 64752.0   533   1560    0.6  L   EXIT V>C
(  2,  4) (  4,  3) 52800  895  903.0  903.0    570      0   39.9  R   INT
          (  4,8004)           905.0  905.0   1000      0   39.8  T   EXIT
          (  4,  5)            906.0  906.0    460      0   39.7  L   INT
(  4,  5) (  5,8005) 52800  895  895.0  895.0   2880      0   40.2  T   EXIT
(  5,  4) (  4,  2) 52800  895  903.0  903.0    570      0   39.9  R   INT
          (  4,  3)            905.0  905.0   1000      0   39.8  T   INT
          (  4,8004)           906.0  906.0    460      0   39.7  L   EXIT
(  4,  3) (  3,  1) 52800  895  895.0  895.0   3110    160   40.2  R   INT
          (  3,2001)             0.0    0.0   1800      0   40.2      SINK
(  4,  2) (  2,8002) 52800  895  905.0  905.0   1000      0   39.8  T   EXIT
```

0TURN TYPE: R=RIGHT, T=THROUGH, D=DIAGONAL, L=LEFT;    RECEIVER: INT = INTERNAL LINK

NETWORK HOURLY ESTIMATES: VEHICLE-MILES= 42800.00    VEHICLE-HOURS= 122142.91    AVERAGE SPEED(MPH)= 0.35

1    MINIMUM PATH CONSTRUCTS FOR ITERATION: 2

LIST OF LABELLED INTERNAL LINKS FOR EACH ORIGIN NODE

```
0ORIGIN:8001 (  1,  3) (  3,  4) (  4,  5)
0ORIGIN:8003 (  3,  4) (  4,  5)
0ORIGIN:2001 (  3,  1) (  1,  2) (  2,  4) (  4,  3)
1 TRAFFIC DISTRIBUTION ASSIGNMENT RESULTS AT        ITERATION : 2 CAPACITY ITERATION: 1
```

```
GEOMETRIC  PATH-LINK LENGTH  FREE-FLOW  TRAVEL CAPACITY VOLUME  SPEED TURN RECEIVER
 LINK    RECEIVER   FEET   TIME(SEC) TIME(SEC)   VPH     VPH   (MPH) TYPE  TYPE
                 ON-LINK TOTAL
(8001,  1) (  1,  3)    0    0    7.0    7.7   1085    702    0.0  T   INT
          (  1,  2)              8.0   57.7    389    698    0.0  L   INT V>C
(8003,  3) (  3,  4)    0    0    6.0  927.6    417   2400    0.0  R   INT V>C
          (  3,  1)              9.0    9.0    894      0    0.0  T   INT
(  3,  1) (  1,  2) 52800  895  901.0  901.1   1598    160   40.0  R   INT
(  1,  3) (  3,  4) 52800  895  897.0  937.9   1337    702   38.4  L   INT
(  3,  4) (  4,8004) 52800  895  903.0 11414.5   570   1196    3.2  R   EXIT V>C
          (  4,  5)            905.0 8069.7   1000   1906    4.5  T   INT V>C
          (  4,  2)            906.0  906.0    460      0   39.7  L   INT
(  1,  2) (  2,  4) 52800 1427 1435.0 1435.2    661     80   25.1  R   INT
          (  2,8002)          1438.0 5346.2    533    778    6.7  L   EXIT V>C
(  2,  4) (  4,  3) 52800  895  903.0  903.0    570      0   39.9  R   INT
          (  4,8004)           905.0  905.0   1000     80   39.8  T   EXIT
          (  4,  5)            906.0  906.0    460      0   39.7  L   INT
(  4,  5) (  5,8005) 52800  895  895.0  998.0   2880   1906   36.1  T   EXIT
(  5,  4) (  4,  2) 52800  895  903.0  903.0    570      0   39.9  R   INT
          (  4,  3)            905.0  905.0   1000      0   39.8  T   INT
          (  4,8004)           906.0  906.0    460      0   39.7  L   EXIT
(  4,  3) (  3,  1) 52800  895  895.0  895.0   3110    160   40.2  R   INT
          (  3,2001)             0.0    0.0   1800      0   40.2      SINK
(  4,  2) (  2,8002) 52800  895  905.0  905.0   1000      0   39.8  T   EXIT
```

0TURN TYPE: R=RIGHT, T=THROUGH, D=DIAGONAL, L=LEFT;    RECEIVER: INT = INTERNAL LINK

NETWORK HOURLY ESTIMATES: VEHICLE-MILES= 69683.17    VEHICLE-HOURS= 10694.38    AVERAGE SPEED(MPH)= 6.52

```
1                        MINIMUM PATH CONSTRUCTS FOR  ITERATION:  3

                      LIST OF LABELLED INTERNAL LINKS FOR EACH ORIGIN NODE

0ORIGIN:8001 (  1,  2) (  2,  4)
0ORIGIN:8003 (  3,  4) (  4,  2)
0ORIGIN:2001 (  3,  1) (  1,  2) (  2,  4) (  4,  3)
1 TRAFFIC DISTRIBUTION ASSIGNMENT RESULTS AT        ITERATION : 3 CAPACITY ITERATION: 1

 GEOMETRIC  PATH-LINK LENGTH  FREE-FLOW  TRAVEL CAPACITY VOLUME  SPEED TURN RECEIVER
  LINK    RECEIVER   FEET   TIME(SEC) TIME(SEC)    VPH     VPH   (MPH) TYPE  TYPE
                   ON-LINK TOTAL
(8001,  1) (  1,  3)    0     0    7.0    7.2   1085    507    0.0  T   INT
           (  1,  2)               8.0  141.6    389    893    0.0  L   INT V>C
(8003,  3) (  3,  4)    0     0    6.0  927.6    417   2400    0.0  R   INT V>C
           (  3,  1)               9.0    9.0    894      0    0.0  T   INT
(  3,  1) (  1,  2) 52800  895   901.0  901.1   1598    160   40.0  R   INT
(  1,  3) (  3,  4) 52800  895   897.0  908.1   1337    507   39.6  L   INT
(  3,  4) (  4,8004) 52800  895  903.0 3749.2    570    863    9.6  R   EXIT V>C
          (  4,  5)             905.0 2845.0   1000   1375   12.7  T   INT V>C
          (  4,  2)             906.0 3334.1    460    669   10.8  L   INT V>C
(  1,  2) (  2,  4) 52800 1427  1435.0 1700.5    661    493   21.2  R   INT
          (  2,8002)           1438.0 2496.2    533    561   14.4  L   EXIT V>C
(  2,  4) (  4,  3) 52800  895   903.0  903.0    570      0   39.9  R   INT
          (  4,8004)            905.0  937.0   1000    493   38.4  T   EXIT
          (  4,  5)             906.0  906.0    460      0   39.7  L   INT
(  4,  5) (  5,8005) 52800  895  895.0  922.9   2880   1375   39.0  T   EXIT
(  5,  4) (  4,  2) 52800  895   903.0  903.0    570      0   39.9  R   INT
          (  4,  3)             905.0  905.0   1000      0   39.8  T   INT
          (  4,8004)            906.0  906.0    460      0   39.7  L   EXIT
(  4,  3) (  3,  1) 52800  895   895.0  895.0   3110    160   40.2  R   INT
          (  3,2001)              0.0    0.0   1800      0   40.2      SINK
(  4,  2) (  2,8002) 52800  895  905.0 1013.6   1000    669   35.5  T   EXIT

0TURN TYPE: R=RIGHT, T=THROUGH, D=DIAGONAL, L=LEFT;    RECEIVER:  INT = INTERNAL LINK


 NETWORK HOURLY ESTIMATES:  VEHICLE-MILES=  73226.59    VEHICLE-HOURS=   4757.27     AVERAGE
 SPEED(MPH)=  15.39
1                        MINIMUM PATH CONSTRUCTS FOR  ITERATION:  4

                      LIST OF LABELLED INTERNAL LINKS FOR EACH ORIGIN NODE

0ORIGIN:8001 (  1,  2)
0ORIGIN:8003 (  3,  1) (  1,  2)
0ORIGIN:2001 (  3,  1) (  1,  2) (  4,  3)
1 TRAFFIC DISTRIBUTION ASSIGNMENT RESULTS AT        ITERATION : 4 CAPACITY ITERATION: 1

 GEOMETRIC  PATH-LINK LENGTH  FREE-FLOW  TRAVEL CAPACITY VOLUME  SPEED TURN RECEIVER
  LINK    RECEIVER   FEET   TIME(SEC) TIME(SEC)    VPH     VPH   (MPH) TYPE  TYPE
                   ON-LINK TOTAL
(8001,  1) (  1,  3)    0     0    7.0    7.2   1085    496    0.0  T   INT
           (  1,  2)               8.0  148.2    389    904    0.0  L   INT V>C
(8003,  3) (  3,  4)    0     0    6.0  927.6    417   2349    0.0  R   INT V>C
           (  3,  1)               9.0    9.0    894     51    0.0  T   INT
(  3,  1) (  1,  2) 52800  895   901.0  901.2   1598    211   39.9  R   INT
(  1,  3) (  3,  4) 52800  895   897.0  907.2   1337    496   39.7  L   INT
(  3,  4) (  4,8004) 52800  895  903.0 3514.5    570    845   10.2  R   EXIT V>C
          (  4,  5)             905.0 2685.0   1000   1346   13.4  T   INT V>C
          (  4,  2)             906.0 3133.9    460    655   11.5  L   INT V>C
(  1,  2) (  2,  4) 52800 1427  1435.0 1678.6    661    482   21.4  R   INT
          (  2,8002)           1438.0 3157.3    533    633   11.4  L   EXIT V>C
(  2,  4) (  4,  3) 52800  895   903.0  903.0    570      0   39.9  R   INT
          (  4,8004)            905.0  934.3   1000    482   38.5  T   EXIT
          (  4,  5)             906.0  906.0    460      0   39.7  L   INT
(  4,  5) (  5,8005) 52800  895  895.0  920.6   2880   1346   39.1  T   EXIT
(  5,  4) (  4,  2) 52800  895   903.0  903.0    570      0   39.9  R   INT
          (  4,  3)             905.0  905.0   1000      0   39.8  T   INT
          (  4,8004)            906.0  906.0    460      0   39.7  L   EXIT
```

```
( 4, 3) ( 3, 1) 52800  895  895.0  895.0  3110  160  40.2  R  INT
        ( 3,2001)           0.0    0.0  1800    0  40.2     SINK
( 4, 2) ( 2,8002) 52800  895  905.0 1004.6  1000  655.  35.8  T  EXIT

0TURN TYPE: R=RIGHT, T=THROUGH, D=DIAGONAL, L=LEFT;    RECEIVER: INT = INTERNAL LINK


NETWORK HOURLY ESTIMATES: VEHICLE-MILES= 73089.80   VEHICLE-HOURS= 4691.01   AVERAGE
SPEED(MPH)= 15.58
1                    MINIMUM PATH CONSTRUCTS FOR ITERATION: 5

              LIST OF LABELLED INTERNAL LINKS FOR EACH ORIGIN NODE

0ORIGIN:8001 ( 1, 2) ( 2, 4)
0ORIGIN:8003 ( 3, 1) ( 1, 2) ( 2, 4)
0ORIGIN:2001 ( 3, 1) ( 1, 2) ( 2, 4) ( 4, 3)
1 TRAFFIC DISTRIBUTION ASSIGNMENT RESULTS AT        ITERATION : 5 CAPACITY ITERATION: 1

 GEOMETRIC  PATH-LINK  LENGTH  FREE-FLOW  TRAVEL  CAPACITY  VOLUME  SPEED TURN RECEIVER
   LINK     RECEIVER   FEET   TIME(SEC) TIME(SEC)   VPH      VPH   (MPH) TYPE  TYPE
                     ON-LINK TOTAL
(8001, 1) ( 1, 3)   0    0    7.0    7.2   1085   480   0.0  T  INT
          ( 1, 2)             8.0  158.4    389   920   0.0  L  INT V>C
(8003, 3) ( 3, 4)   0    0    6.0  927.6    417  2273   0.0  R  INT V>C
          ( 3, 1)             9.0    9.0    894   127   0.0  T  INT
( 3, 1) ( 1, 2) 52800  895  901.0  901.6   1598   287  39.9  R  INT
( 1, 3) ( 3, 4) 52800  895  897.0  905.9   1337   480  39.7  L  INT
( 3, 4) ( 4,8004) 52800  895  903.0 3191.0   570   817  11.3  R  EXIT V>C
          ( 4, 5)           905.0 2464.5   1000  1302  14.6  T  INT V>C
          ( 4, 2)           906.0 2857.9    460   633  12.6  L  INT V>C
( 1, 2) ( 2, 4) 52800 1427 1435.0 2001.0   661   595  18.0  R  INT
          ( 2,8002)        1438.0 2944.3    533   613  12.2  L  EXIT V>C
( 2, 4) ( 4, 3) 52800  895  903.0  903.0   570     0  39.9  R  INT
          ( 4,8004)         905.0  973.1   1000   595  37.0  T  EXIT
          ( 4, 5)           906.0  906.0    460     0  39.7  L  INT
( 4, 5) ( 5,8005) 52800  895  895.0  917.4  2880  1302  39.2  T  EXIT
( 5, 4) ( 4, 2) 52800  895  903.0  903.0   570     0  39.9  R  INT
          ( 4, 3)           905.0  905.0   1000     0  39.8  T  INT
          ( 4,8004)         906.0  906.0    460     0  39.7  L  EXIT
( 4, 3) ( 3, 1) 52800  895  895.0  895.0  3110   160  40.2  R  INT
          ( 3,2001)           0.0    0.0  1800     0  40.2     SINK
( 4, 2) ( 2,8002) 52800  895  905.0  992.3  1000   633  36.3  T  EXIT

0TURN TYPE: R=RIGHT, T=THROUGH, D=DIAGONAL, L=LEFT;    RECEIVER: INT = INTERNAL LINK


NETWORK HOURLY ESTIMATES: VEHICLE-MILES= 74173.14   VEHICLE-HOURS= 4477.05   AVERAGE
SPEED(MPH)= 16.57
1                    MINIMUM PATH CONSTRUCTS FOR ITERATION: 6

              LIST OF LABELLED INTERNAL LINKS FOR EACH ORIGIN NODE

0ORIGIN:8001 ( 1, 2)
0ORIGIN:8003 ( 3, 1) ( 1, 2)
0ORIGIN:2001 ( 3, 1) ( 1, 2) ( 4, 3)
1 TRAFFIC DISTRIBUTION ASSIGNMENT RESULTS AT        ITERATION : 6 CAPACITY ITERATION: 1

 GEOMETRIC  PATH-LINK  LENGTH  FREE-FLOW  TRAVEL  CAPACITY  VOLUME  SPEED TURN RECEIVER
   LINK     RECEIVER   FEET   TIME(SEC) TIME(SEC)   VPH      VPH   (MPH) TYPE  TYPE
                     ON-LINK TOTAL
(8001, 1) ( 1, 3)   0    0    7.0    7.2   1085   478   0.0  T  INT
          ( 1, 2)             8.0  159.4    389   922   0.0  L  INT V>C
(8003, 3) ( 3, 4)   0    0    6.0  927.6    417  2265   0.0  R  INT V>C
          ( 3, 1)             9.0    9.0    894   135   0.0  T  INT
( 3, 1) ( 1, 2) 52800  895  901.0  901.6   1598   295  39.9  R  INT
( 1, 3) ( 3, 4) 52800  895  897.0  905.8   1337   478  39.7  L  INT
( 3, 4) ( 4,8004) 52800  895  903.0 3162.7   570   815  11.4  R  EXIT V>C
          ( 4, 5)           905.0 2445.2   1000  1298  14.7  T  INT V>C
          ( 4, 2)           906.0 2833.8    460   631  12.7  L  INT V>C
```

```
( 1, 2) ( 2, 4) 52800 1427 1435.0 1994.0  661  593  18.1 R  INT
        ( 2,8002)          1438.0 3049.2  533  623  11.8 L  EXIT V>C
( 2, 4) ( 4, 3) 52800  895  903.0  903.0  570    0  39.9 R  INT
        ( 4,8004)           905.0  972.3 1000  593  37.0 T  EXIT
        ( 4, 5)             906.0  906.0  460    0  39.7 L  INT
( 4, 5) ( 5,8005) 52800  895  895.0  917.1 2880 1298  39.3 T  EXIT
( 5, 4) ( 4, 2) 52800  895  903.0  903.0  570    0  39.9 R  INT
        ( 4, 3)             905.0  905.0 1000    0  39.8 T  INT
        ( 4,8004)           906.0  906.0  460    0  39.7 L  EXIT
( 4, 3) ( 3, 1) 52800  895  895.0  895.0 3110  160  40.2 R  INT
        ( 3,2001)             0.0    0.0 1800    0  40.2    SINK
( 4, 2) ( 2,8002) 52800  895  905.0  991.2 1000  631  36.3 T  EXIT

0TURN TYPE: R=RIGHT, T=THROUGH, D=DIAGONAL, L=LEFT;   RECEIVER: INT = INTERNAL LINK


NETWORK HOURLY ESTIMATES: VEHICLE-MILES=  74150.24   VEHICLE-HOURS=  4474.76   AVERAGE
SPEED(MPH)=  16.57
1                    MINIMUM PATH CONSTRUCTS FOR ITERATION:  7

               LIST OF LABELLED INTERNAL LINKS FOR EACH ORIGIN NODE

0ORIGIN:8001 ( 1, 2) ( 2, 4)
0ORIGIN:8003 ( 3, 1) ( 1, 2) ( 2, 4)
0ORIGIN:2001 ( 3, 1) ( 1, 2) ( 2, 4) ( 4, 3)
1 TRAFFIC DISTRIBUTION ASSIGNMENT RESULTS AT      ITERATION : 7 CAPACITY ITERATION: 1

 GEOMETRIC  PATH-LINK LENGTH  FREE-FLOW  TRAVEL CAPACITY VOLUME  SPEED TURN RECEIVER
   LINK     RECEIVER   FEET  TIME(SEC) TIME(SEC)  VPH     VPH   (MPH) TYPE  TYPE
                      ON-LINK  TOTAL
(8001, 1) ( 1, 3)     0    0    7.0    7.2 1085  477   0.0 T  INT
          ( 1, 2)               8.0  160.4  389  923   0.0 L  INT V>C
(8003, 3) ( 3, 4)     0    0    6.0  927.6  417 2258   0.0 R  INT V>C
          ( 3, 1)               9.0    9.0  894  142   0.0 T  INT
( 3, 1) ( 1, 2) 52800  895  901.0  901.7 1598  302  39.9 R  INT
( 1, 3) ( 3, 4) 52800  895  897.0  905.7 1337  477  39.7 L  INT
( 3, 4) ( 4,8004) 52800  895  903.0 3134.8  570  812  11.5 R  EXIT V>C
        ( 4, 5)             905.0 2426.2 1000 1294  14.8 T  INT V>C
        ( 4, 2)             906.0 2809.9  460  629  12.8 L  INT V>C
( 1, 2) ( 2, 4) 52800 1427 1435.0 2034.5  661  604  17.7 R  INT
        ( 2,8002)          1438.0 3029.3  533  621  11.9 L  EXIT V>C
( 2, 4) ( 4, 3) 52800  895  903.0  903.0  570    0  39.9 R  INT
        ( 4,8004)           905.0  977.2 1000  604  36.8 T  EXIT
        ( 4, 5)             906.0  906.0  460    0  39.7 L  INT
( 4, 5) ( 5,8005) 52800  895  895.0  916.9 2880 1294  39.3 T  EXIT
( 5, 4) ( 4, 2) 52800  895  903.0  903.0  570    0  39.9 R  INT
        ( 4, 3)             905.0  905.0 1000    0  39.8 T  INT
        ( 4,8004)           906.0  906.0  460    0  39.7 L  EXIT
( 4, 3) ( 3, 1) 52800  895  895.0  895.0 3110  160  40.2 R  INT
        ( 3,2001)             0.0    0.0 1800    0  40.2    SINK
( 4, 2) ( 2,8002) 52800  895  905.0  990.2 1000  629  36.4 T  EXIT

0TURN TYPE: R=RIGHT, T=THROUGH, D=DIAGONAL, L=LEFT;   RECEIVER: INT = INTERNAL LINK


NETWORK HOURLY ESTIMATES: VEHICLE-MILES=  74250.41   VEHICLE-HOURS=  4460.13   AVERAGE
SPEED(MPH)=  16.65
1                    MINIMUM PATH CONSTRUCTS FOR ITERATION:  8

               LIST OF LABELLED INTERNAL LINKS FOR EACH ORIGIN NODE

0ORIGIN:8001 ( 1, 2) ( 2, 4)
0ORIGIN:8003 ( 3, 1) ( 1, 2) ( 2, 4)
0ORIGIN:2001 ( 3, 1) ( 1, 2) ( 2, 4) ( 4, 3)
1 TRAFFIC DISTRIBUTION ASSIGNMENT RESULTS AT      ITERATION : 8 CAPACITY ITERATION: 1

 GEOMETRIC  PATH-LINK LENGTH  FREE-FLOW  TRAVEL CAPACITY VOLUME  SPEED TURN RECEIVER
   LINK     RECEIVER   FEET  TIME(SEC) TIME(SEC)  VPH     VPH   (MPH) TYPE  TYPE
                      ON-LINK  TOTAL
```

```
(8001,  1) (  1,  3)   0    0   7.0   7.2   1085   475    0.0  T   INT
       (  1,  2)               8.0  161.4   389    925    0.0  L   INT V>C
(8003,  3) (  3,  4)   0    0   6.0  927.6   417   2251    0.0  R   INT V>C
       (  3,  1)               9.0    9.0   894    149    0.0  T   INT
(  3,  1) (  1,  2) 52800  895  901.0  901.8  1598   309   39.9  R   INT
(  1,  3) (  3,  4) 52800  895  897.0  905.6  1337   475   39.8  L   INT
(  3,  4) (  4,8004) 52800  895  903.0 3107.2   570   810   11.6  R   EXIT V>C
       (  4,  5)            905.0 2407.4  1000  1290   15.0  T   INT V>C
       (  4,  2)            906.0 2786.4   460   627   12.9  L   INT V>C
(  1,  2) (  2,  4) 52800 1427 1435.0 2077.0   661   614   17.3  R   INT
       (  2,8002)          1438.0 3009.6   533   619   12.0  L   EXIT V>C
(  2,  4) (  4,  3) 52800  895  903.0  903.0   570     0   39.9  R   INT
       (  4,8004)           905.0  982.3  1000   614   36.6  T   EXIT
       (  4,  5)            906.0  906.0   460     0   39.7  L   INT
(  4,  5) (  5,8005) 52800  895  895.0  916.6  2880  1290   39.3  T   EXIT
(  5,  4) (  4,  2) 52800  895  903.0  903.0   570     0   39.9  R   INT
       (  4,  3)            905.0  905.0  1000     0   39.8  T   INT
       (  4,8004)           906.0  906.0   460     0   39.7  L   EXIT
(  4,  3) (  3,  1) 52800  895  895.0  895.0  3110   160   40.2  R   INT
       (  3,2001)             0.0    0.0  1800     0   40.2      SINK
(  4,  2) (  2,8002) 52800  895  905.0  989.1  1000   627   36.4  T   EXIT

0TURN TYPE: R=RIGHT, T=THROUGH, D=DIAGONAL, L=LEFT;    RECEIVER:  INT = INTERNAL LINK


NETWORK HOURLY ESTIMATES:  VEHICLE-MILES=  74350.26    VEHICLE-HOURS=   4446.54    AVERAGE
SPEED(MPH)=  16.72
1                         MINIMUM PATH CONSTRUCTS FOR  ITERATION:  9

                    LIST OF LABELLED INTERNAL LINKS FOR EACH ORIGIN NODE

0ORIGIN:8001 (  1,  2)
0ORIGIN:8003 (  3,  1) (  1,  2)
0ORIGIN:2001 (  3,  1) (  1,  2) (  4,  3)
1 TRAFFIC DISTRIBUTION ASSIGNMENT RESULTS AT         ITERATION :  9 CAPACITY ITERATION:  1

 GEOMETRIC  PATH-LINK  LENGTH  FREE-FLOW  TRAVEL  CAPACITY  VOLUME  SPEED TURN RECEIVER
  LINK     RECEIVER   FEET   TIME(SEC) TIME(SEC)   VPH      VPH   (MPH) TYPE  TYPE
                  ON-LINK  TOTAL
(8001,  1) (  1,  3)   0    0   7.0   7.2   1085   474    0.0  T   INT
       (  1,  2)               8.0  162.3   389    926    0.0  L   INT V>C
(8003,  3) (  3,  4)   0    0   6.0  927.6   417   2244    0.0  R   INT V>C
       (  3,  1)               9.0    9.0   894    156    0.0  T   INT
(  3,  1) (  1,  2) 52800  895  901.0  901.8  1598   316   39.9  R   INT
(  1,  3) (  3,  4) 52800  895  897.0  905.5  1337   474   39.8  L   INT
(  3,  4) (  4,8004) 52800  895  903.0 3079.9   570   807   11.7  R   EXIT V>C
       (  4,  5)            905.0 2388.8  1000  1286   15.1  T   INT V>C
       (  4,  2)            906.0 2763.1   460   625   13.0  L   INT V>C
(  1,  2) (  2,  4) 52800 1427 1435.0 2069.0   661   612   17.4  R   INT
       (  2,8002)          1438.0 3117.6   533   630   11.5  L   EXIT V>C
(  2,  4) (  4,  3) 52800  895  903.0  903.0   570     0   39.9  R   INT
       (  4,8004)           905.0  981.3  1000   612   36.7  T   EXIT
       (  4,  5)            906.0  906.0   460     0   39.7  L   INT
(  4,  5) (  5,8005) 52800  895  895.0  916.3  2880  1286   39.3  T   EXIT
(  5,  4) (  4,  2) 52800  895  903.0  903.0   570     0   39.9  R   INT
       (  4,  3)            905.0  905.0  1000     0   39.8  T   INT
       (  4,8004)           906.0  906.0   460     0   39.7  L   EXIT
(  4,  3) (  3,  1) 52800  895  895.0  895.0  3110   160   40.2  R   INT
       (  3,2001)             0.0    0.0  1800     0   40.2      SINK
(  4,  2) (  2,8002) 52800  895  905.0  988.1  1000   625   36.4  T   EXIT

0TURN TYPE: R=RIGHT, T=THROUGH, D=DIAGONAL, L=LEFT;    RECEIVER:  INT = INTERNAL LINK


NETWORK HOURLY ESTIMATES:  VEHICLE-MILES=  74326.81    VEHICLE-HOURS=   4445.90    AVERAGE
SPEED(MPH)=  16.72
1                         MINIMUM PATH CONSTRUCTS FOR  ITERATION:  10

                    LIST OF LABELLED INTERNAL LINKS FOR EACH ORIGIN NODE
```

```
0ORIGIN:8001 (  1,  2) (  2,  4)
0ORIGIN:8003 (  3,  1) (  1,  2) (  2,  4)
0ORIGIN:2001 (  3,  1) (  1,  2) (  2,  4) (  4,  3)
1 TRAFFIC DISTRIBUTION ASSIGNMENT RESULTS AT        ITERATION : 10 CAPACITY ITERATION:  1

 GEOMETRIC  PATH-LINK LENGTH  FREE-FLOW  TRAVEL CAPACITY VOLUME  SPEED TURN RECEIVER
  LINK     RECEIVER  FEET   TIME(SEC) TIME(SEC)   VPH     VPH   (MPH) TYPE  TYPE
                  ON-LINK TOTAL
(8001,  1) (  1,  3)    0     0    7.0    7.2  1085   472    0.0  T   INT
           (  1,  2)               8.0  163.3   389   928    0.0  L   INT V>C
(8003,  3) (  3,  4)    0     0    6.0  927.6   417  2237    0.0  R   INT V>C
           (  3,  1)               9.0    9.0   894   163    0.0  T   INT
(  3,  1) (  1,  2) 52800  895  901.0  901.9  1598   323   39.9  R   INT
(  1,  3) (  3,  4) 52800  895  897.0  905.4  1337   472   39.8  L   INT
(  3,  4) (  4,8004) 52800  895  903.0 3053.0   570   804   11.8  R   EXIT V>C
          (  4,  5)             905.0 2370.4  1000  1282   15.2  T   INT V>C
          (  4,  2)             906.0 2740.2   460   623   13.1  L   INT V>C
(  1,  2) (  2,  4) 52800 1427 1435.0 2113.2   661   623   17.0  R   INT
          (  2,8002)           1438.0 3096.8   533   628   11.6  L   EXIT V>C
(  2,  4) (  4,  3) 52800  895  903.0  903.0   570     0   39.9  R   INT
          (  4,8004)            905.0  986.7  1000   623   36.5  T   EXIT
          (  4,  5)             906.0  906.0   460     0   39.7  L   INT
(  4,  5) (  5,8005) 52800  895  895.0  916.1  2880  1282   39.3  T   EXIT
(  5,  4) (  4,  2) 52800  895  903.0  903.0   570     0   39.9  R   INT
          (  4,  3)             905.0  905.0  1000     0   39.8  T   INT
          (  4,8004)            906.0  906.0   460     0   39.7  L   EXIT
(  4,  3) (  3,  1) 52800  895  895.0  895.0  3110   160   40.2  R   INT
          (  3,2001)              0.0    0.0  1800     0   40.2      SINK
(  4,  2) (  2,8002) 52800  895  905.0  987.0  1000   623   36.5  T   EXIT

0TURN TYPE: R=RIGHT, T=THROUGH, D=DIAGONAL, L=LEFT;    RECEIVER:  INT = INTERNAL LINK

 NETWORK HOURLY ESTIMATES: VEHICLE-MILES=  74426.43    VEHICLE-HOURS=   4433.24    AVERAGE
SPEED(MPH)=  16.79
1                          MINIMUM PATH CONSTRUCTS FOR  ITERATION:  11

                        LIST OF LABELLED INTERNAL LINKS FOR EACH ORIGIN NODE

0ORIGIN:8001 (  1,  2)
0ORIGIN:8003 (  3,  4)
0ORIGIN:2001 (  3,  1) (  1,  2) (  4,  3)
1 TRAFFIC DISTRIBUTION ASSIGNMENT RESULTS AT        ITERATION : 11 CAPACITY ITERATION:  1

 GEOMETRIC  PATH-LINK LENGTH  FREE-FLOW  TRAVEL CAPACITY VOLUME  SPEED TURN RECEIVER
  LINK     RECEIVER  FEET   TIME(SEC) TIME(SEC)   VPH     VPH   (MPH) TYPE  TYPE
                  ON-LINK TOTAL
(8001,  1) (  1,  3)    0     0    7.0    7.1  1085   461    0.0  T   INT
           (  1,  2)               8.0  170.8   389   939    0.0  L   INT V>C
(8003,  3) (  3,  4)    0     0    6.0  927.6   417  2241    0.0  R   INT V>C
           (  3,  1)               9.0    9.0   894   159    0.0  T   INT
(  3,  1) (  1,  2) 52800  895  901.0  901.9  1598   319   39.9  R   INT
(  1,  3) (  3,  4) 52800  895  897.0  904.6  1337   461   39.8  L   INT
(  3,  4) (  4,8004) 52800  895  903.0 3477.0   570   842   10.4  R   EXIT V>C
          (  4,  5)             905.0 2239.1  1000  1252   16.1  T   INT V>C
          (  4,  2)             906.0 2575.7   460   609   14.0  L   INT V>C
(  1,  2) (  2,  4) 52800 1427 1435.0 2052.4   661   608   17.5  R   INT
          (  2,8002)           1438.0 3337.7   533   649   10.8  L   EXIT V>C
(  2,  4) (  4,  3) 52800  895  903.0  903.0   570     0   39.9  R   INT
          (  4,8004)            905.0  979.3  1000   608   36.8  T   EXIT
          (  4,  5)             906.0  906.0   460     0   39.7  L   INT
(  4,  5) (  5,8005) 52800  895  895.0  914.2  2880  1252   39.4  T   EXIT
(  5,  4) (  4,  2) 52800  895  903.0  903.0   570     0   39.9  R   INT
          (  4,  3)             905.0  905.0  1000     0   39.8  T   INT
          (  4,8004)            906.0  906.0   460     0   39.7  L   EXIT
(  4,  3) (  3,  1) 52800  895  895.0  895.0  3110   160   40.2  R   INT
          (  3,2001)              0.0    0.0  1800     0   40.2      SINK
(  4,  2) (  2,8002) 52800  895  905.0  979.7  1000   609   36.7  T   EXIT
```

```
0TURN TYPE: R=RIGHT, T=THROUGH, D=DIAGONAL, L=LEFT;    RECEIVER:  INT = INTERNAL LINK


 NETWORK HOURLY ESTIMATES:  VEHICLE-MILES=  73692.54    VEHICLE-HOURS=   4483.89    AVERAGE
SPEED(MPH)=  16.43
1                           MINIMUM PATH CONSTRUCTS FOR  ITERATION:  12

                       LIST OF LABELLED INTERNAL LINKS FOR EACH ORIGIN NODE

0ORIGIN:8001 (  1,  2) (  2,  4)
0ORIGIN:8003 (  3,  1) (  1,  2) (  2,  4)
0ORIGIN:2001 (  3,  1) (  1,  2) (  2,  4) (  4,  3)
1 TRAFFIC DISTRIBUTION ASSIGNMENT RESULTS AT         ITERATION : 12 CAPACITY ITERATION:  1

 GEOMETRIC  PATH-LINK LENGTH  FREE-FLOW  TRAVEL CAPACITY VOLUME  SPEED TURN RECEIVER
  LINK    RECEIVER   FEET   TIME(SEC) TIME(SEC)   VPH     VPH   (MPH) TYPE  TYPE
                            ON-LINK TOTAL
(8001,  1) (  1,  3)    0     0    7.0    7.1   1085    460     0.0  T   INT
           (  1,  2)               8.0  171.8    389    940     0.0  L   INT V>C
(8003,  3) (  3,  4)    0     0    6.0  927.6    417   2234     0.0  R   INT V>C
           (  3,  1)               9.0    9.0    894    166     0.0  T   INT
(  3,  1) (  1,  2) 52800   895  901.0  901.9   1598    326    39.9  R   INT
(  1,  3) (  3,  4) 52800   895  897.0  904.5   1337    460    39.8  L   INT
(  3,  4) (  4,8004) 52800  895  903.0 3445.1    570    839    10.4  R   EXIT V>C
           (  4,  5)             905.0 2222.6   1000   1248    16.2  T   INT V>C
           (  4,  2)             906.0 2555.1    460    607    14.1  L   INT V>C
(  1,  2) (  2,  4) 52800  1427 1435.0 2095.8    661    619    17.2  R   INT
           (  2,8002)           1438.0 3314.2    533    647    10.9  L   EXIT V>C
(  2,  4) (  4,  3) 52800   895  903.0  903.0    570      0    39.9  R   INT
           (  4,8004)            905.0  984.6   1000    619    36.6  T   EXIT
           (  4,  5)             906.0  906.0    460      0    39.7  L   INT
(  4,  5) (  5,8005) 52800  895  895.0  913.9   2880   1248    39.4  T   EXIT
(  5,  4) (  4,  2) 52800   895  903.0  903.0    570      0    39.9  R   INT
           (  4,  3)             905.0  905.0   1000      0    39.8  T   INT
           (  4,8004)            906.0  906.0    460      0    39.7  L   EXIT
(  4,  3) (  3,  1) 52800   895  895.0  895.0   3110    160    40.2  R   INT
           (  3,2001)              0.0    0.0   1800      0    40.2      SINK
(  4,  2) (  2,8002) 52800  895  905.0  978.8   1000    607    36.8  T   EXIT

0TURN TYPE: R=RIGHT, T=THROUGH, D=DIAGONAL, L=LEFT;    RECEIVER:  INT = INTERNAL LINK


 NETWORK HOURLY ESTIMATES:  VEHICLE-MILES=  73794.11    VEHICLE-HOURS=   4470.18    AVERAGE
SPEED(MPH)=  16.51
1                           MINIMUM PATH CONSTRUCTS FOR  ITERATION:  13

                       LIST OF LABELLED INTERNAL LINKS FOR EACH ORIGIN NODE

0ORIGIN:8001 (  1,  2) (  2,  4)
0ORIGIN:8003 (  3,  1) (  1,  2) (  2,  4)
0ORIGIN:2001 (  3,  1) (  1,  2) (  2,  4) (  4,  3)
1 TRAFFIC DISTRIBUTION ASSIGNMENT RESULTS AT         ITERATION : 13 CAPACITY ITERATION:  1

 GEOMETRIC  PATH-LINK LENGTH  FREE-FLOW  TRAVEL CAPACITY VOLUME  SPEED TURN RECEIVER
  LINK    RECEIVER   FEET   TIME(SEC) TIME(SEC)   VPH     VPH   (MPH) TYPE  TYPE
                            ON-LINK TOTAL
(8001,  1) (  1,  3)    0     0    7.0    7.1   1085    458     0.0  T   INT
           (  1,  2)               8.0  172.8    389    942     0.0  L   INT V>C
(8003,  3) (  3,  4)    0     0    6.0  927.6    417   2227     0.0  R   INT V>C
           (  3,  1)               9.0    9.0    894    173     0.0  T   INT
(  3,  1) (  1,  2) 52800   895  901.0  902.0   1598    333    39.9  R   INT
(  1,  3) (  3,  4) 52800   895  897.0  904.4   1337    458    39.8  L   INT
(  3,  4) (  4,8004) 52800  895  903.0 3413.7    570    836    10.5  R   EXIT V>C
           (  4,  5)             905.0 2206.3   1000   1244    16.3  T   INT V>C
           (  4,  2)             906.0 2534.7    460    605    14.2  L   INT V>C
(  1,  2) (  2,  4) 52800  1427 1435.0 2141.2    661    629    16.8  R   INT
           (  2,8002)           1438.0 3291.0    533    645    10.9  L   EXIT V>C
(  2,  4) (  4,  3) 52800   895  903.0  903.0    570      0    39.9  R   INT
```

```
        ( 4,8004)          905.0  990.0  1000   629   36.4  T  EXIT
        ( 4,  5)         906.0  906.0   460     0   39.7  L  INT
( 4,  5) ( 5,8005) 52800  895  895.0  913.7  2880  1244   39.4  T  EXIT
( 5,  4) ( 4,  2) 52800  895  903.0  903.0   570     0   39.9  R  INT
        ( 4,  3)         905.0  905.0  1000     0   39.8  T  INT
        ( 4,8004)          906.0  906.0   460     0   39.7  L  EXIT
( 4,  3) ( 3,  1) 52800  895  895.0  895.0  3110   160   40.2  R  INT
        ( 3,2001)          0.0    0.0  1800     0   40.2     SINK
( 4,  2) ( 2,8002) 52800  895  905.0  977.8  1000   605   36.8  T  EXIT

0TURN TYPE: R=RIGHT, T=THROUGH, D=DIAGONAL, L=LEFT;    RECEIVER:  INT = INTERNAL LINK


NETWORK HOURLY ESTIMATES:  VEHICLE-MILES=  73895.39    VEHICLE-HOURS=   4457.57    AVERAGE
SPEED(MPH)=  16.58
1                         MINIMUM PATH CONSTRUCTS FOR  ITERATION:  14

                    LIST OF LABELLED INTERNAL LINKS FOR EACH ORIGIN NODE

0ORIGIN:8001 (  1,  2) (  2,  4)
0ORIGIN:8003 (  3,  1) (  1,  2) (  2,  4)
0ORIGIN:2001 (  3,  1) (  1,  2) (  2,  4) (  4,  3)
1 TRAFFIC DISTRIBUTION ASSIGNMENT RESULTS AT        ITERATION : 14 CAPACITY ITERATION:  1

 GEOMETRIC  PATH-LINK  LENGTH  FREE-FLOW  TRAVEL  CAPACITY  VOLUME  SPEED TURN RECEIVER
   LINK      RECEIVER   FEET   TIME(SEC)  TIME(SEC)   VPH      VPH   (MPH) TYPE  TYPE
                  ON-LINK  TOTAL
(8001,  1) (  1,  3)    0     0    7.0     7.1  1085   457    0.0  T  INT
         (  1,  2)              8.0   173.8   389   943    0.0  L  INT V>C
(8003,  3) (  3,  4)    0     0    6.0   927.6   417  2220    0.0  R  INT V>C
         (  3,  1)              9.0     9.0   894   180    0.0  T  INT
(  3,  1) (  1,  2) 52800  895  901.0   902.1  1598   340   39.9  R  INT
(  1,  3) (  3,  4) 52800  895  897.0   904.3  1337   457   39.8  L  INT
(  3,  4) (  4,8004) 52800  895  903.0  3382.6   570   834   10.6  R  EXIT V>C
         (  4,  5)           905.0  2190.2  1000  1240   16.4  T  INT V>C
         (  4,  2)           906.0  2514.6   460   603   14.3  L  INT V>C
(  1,  2) (  2,  4) 52800 1427 1435.0  2188.9   661   639   16.4  R  INT
         (  2,8002)          1438.0  3268.1   533   643   11.0  L  EXIT V>C
(  2,  4) (  4,  3) 52800  895  903.0   903.0   570     0   39.9  R  INT
         (  4,8004)           905.0   995.8  1000   639   36.2  T  EXIT
         (  4,  5)           906.0   906.0   460     0   39.7  L  INT
(  4,  5) (  5,8005) 52800  895  895.0   913.5  2880  1240   39.4  T  EXIT
(  5,  4) (  4,  2) 52800  895  903.0   903.0   570     0   39.9  R  INT
         (  4,  3)           905.0   905.0  1000     0   39.8  T  INT
         (  4,8004)           906.0   906.0   460     0   39.7  L  EXIT
(  4,  3) (  3,  1) 52800  895  895.0   895.0  3110   160   40.2  R  INT
         (  3,2001)             0.0     0.0  1800     0   40.2     SINK
(  4,  2) (  2,8002) 52800  895  905.0   976.9  1000   603   36.8  T  EXIT

0TURN TYPE: R=RIGHT, T=THROUGH, D=DIAGONAL, L=LEFT;    RECEIVER:  INT = INTERNAL LINK


NETWORK HOURLY ESTIMATES:  VEHICLE-MILES=  73996.34    VEHICLE-HOURS=   4446.06    AVERAGE
SPEED(MPH)=  16.64
1                         MINIMUM PATH CONSTRUCTS FOR  ITERATION:  15

                    LIST OF LABELLED INTERNAL LINKS FOR EACH ORIGIN NODE

0ORIGIN:8001 (  1,  2) (  2,  4)
0ORIGIN:8003 (  3,  4) (  4,  5)
0ORIGIN:2001 (  3,  1) (  1,  2) (  2,  4) (  4,  3)
1 TRAFFIC DISTRIBUTION ASSIGNMENT RESULTS AT        ITERATION : 15 CAPACITY ITERATION:  1

 GEOMETRIC  PATH-LINK  LENGTH  FREE-FLOW  TRAVEL  CAPACITY  VOLUME  SPEED TURN RECEIVER
   LINK      RECEIVER   FEET   TIME(SEC)  TIME(SEC)   VPH      VPH   (MPH) TYPE  TYPE
                  ON-LINK  TOTAL
(8001,  1) (  1,  3)    0     0    7.0     7.1  1085   441    0.0  T  INT
         (  1,  2)              8.0   185.1   389   959    0.0  L  INT V>C
(8003,  3) (  3,  4)    0     0    6.0   927.6   417  2227    0.0  R  INT V>C
```

```
          ( 3, 1)          9.0   9.0   894   173    0.0  T  INT
( 3, 1) ( 1, 2) 52800  895  901.0  902.0  1598   333   39.9  R  INT
( 1, 3) ( 3, 4) 52800  895  897.0  903.4  1337   441  -39.9  L  INT
( 3, 4) ( 4,8004) 52800  895  903.0 3058.3   570   805   11.8  R  EXIT V>C
        ( 4, 5)         905.0 2363.9  1000  1280   15.2  T  INT V>C
        ( 4, 2)         906.0 2304.1   460   583   15.6  L  INT V>C
( 1, 2) ( 2, 4) 52800 1427 1435.0 2349.9   661   671   15.3  R  INT V>C
        ( 2,8002)       1438.0 3028.7   533   621   11.9  L  EXIT V>C
( 2, 4) ( 4, 3) 52800  895  903.0  903.0   570     0   39.9  R  INT
        ( 4,8004)        905.0 1015.1  1000   671   35.5  T  EXIT
        ( 4, 5)          906.0  906.0   460     0   39.7  L  INT
( 4, 5) ( 5,8005) 52800  895  895.0  916.0  2880  1280   39.3  T  EXIT
( 5, 4) ( 4, 2) 52800  895  903.0  903.0   570     0   39.9  R  INT
        ( 4, 3)          905.0  905.0  1000     0   39.8  T  INT
        ( 4,8004)        906.0  906.0   460     0   39.7  L  EXIT
( 4, 3) ( 3, 1) 52800  895  895.0  895.0  3110   160   40.2  R  INT
        ( 3,2001)          0.0    0.0  1800     0   40.2     SINK
( 4, 2) ( 2,8002) 52800  895  905.0  967.5  1000   583   37.2  T  EXIT
```

0TURN TYPE: R=RIGHT, T=THROUGH, D=DIAGONAL, L=LEFT;   RECEIVER: INT = INTERNAL LINK

NETWORK HOURLY ESTIMATES: VEHICLE-MILES= 74285.78   VEHICLE-HOURS= 4387.89   AVERAGE SPEED(MPH)= 16.93

TRAFFIC DISTRIBUTION ASSIGNMENT EVALUATION

| ITERATION | OBJECTIVE FUNCTION VALUE (VEH-SEC) | BOUND GAP(%) | LAMBDA | CONTRIBUTION(%) |
|---|---|---|---|---|
| 1 | 0.9213080800E+08 | 100.000000 | 1.000000 | 31.321474 |
| 2 | 0.1350734500E+08 | 100.000000 | 0.501552 | 31.516478 |
| 3 | 0.9575877000E+07 | 100.000000 | 0.278641 | 24.272505 |
| 4 | 0.9544929000E+07 | 47.593208 | 0.021286 | 1.894586 |
| 5 | 0.9508969000E+07 | 40.226360 | 0.032523 | 2.992013 |
| 6 | 0.9509339000E+07 | 18.568750 | 0.003106 | 0.286625 |
| 7 | 0.9509713000E+07 | 17.501295 | 0.003106 | 0.287518 |
| 8 | 0.9510807000E+07 | 15.047194 | 0.003106 | 0.288413 |
| 9 | 0.9512299000E+07 | 14.654764 | 0.003106 | 0.289312 |
| 10 | 0.9514013000E+07 | 12.865901 | 0.003106 | 0.290213 |
| 11 | 0.9500724000E+07 | 10.996099 | 0.023205 | 2.219784 |
| 12 | 0.9501816000E+07 | 11.006328 | 0.003106 | 0.298034 |
| 13 | 0.9503658000E+07 | 11.023577 | 0.003106 | 0.298962 |
| 14 | 0.9506268000E+07 | 9.784460 | 0.003106 | 0.299894 |
| 15 | 0.9489179000E+07 | 8.585958 | 0.034442 | 3.444183 |

1 DETAILED LIST OF O-D MINIMUM PATHS

THE FOLLOWING LISTING PROVIDES THE ASSIGNED VOLUME AND THE SEQUENCE OF INTERNAL NODE NUMBERS FOR EACH O-D MININIMUM PATH.
TOTAL DEMANDIS PRINTED FOLLOWING ALL PATHS FOR EACH O-D PAIR.
NOTE THAT CUMULATIVE TRAVEL TIME (SEC) FOR THE O-D PATH IS PRINTED FOLLOWING THE NODE LIST.

```
 O-D      VOLUME   PATH ROUTE

8001-8004  454.0    1,  2,  4
(SEC):        185.1,2535.0,3550.2
       454 VPH

8001-8005  441.0    1,  3,  4,  5
(SEC):          7.1, 910.5,3274.4,4190.4
       441 VPH

8001-8002  504.0    1,  2
(SEC):        185.1,3213.8
```

504 VPH

8003-8005 839.0 3, 4, 5
(SEC): 927.6,3291.5,4207.5
839 VPH

8003-8004 804.9 3, 4
(SEC): 927.6,3985.9

8003-8004 114.1 3, 1, 2, 4
(SEC): 9.0, 911.0,3260.9,4276.1
919 VPH

8003-8002 581.8 3, 4, 2
(SEC): 927.6,3231.7,4199.3

8003-8002 59.2 3, 1, 2
(SEC): 9.0, 911.0,3939.7
641 VPH

2001-8004 102.0 4, 3, 1, 2, 4
(SEC): 0.0, 895.0,1797.0,4146.9,5162.1
102 VPH

2001-8002 57.0 4, 3, 1, 2
(SEC): 0.0, 895.0,1797.0,4825.7
57 VPH

1 TRAFFIC ASSIGNMENT RESULTS

ESIM SUBNETWORK

| LINK | INTERNAL CENTROID | RIGHT TURN VOL. VPH | RIGHT TURN PCT. | THRU VOL. VPH | THRU PCT. | LEFT TURN VOL. VPH | LEFT TURN PCT. | DIAGONAL VOL. | DIAGONAL PCT. | SOURCE FLOW VPH | SINK FLOW VPH | DISCHARGE VOLUME VPH | SPEED ESTIMATE MPH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (8001, 1) | 0 | 0 | 0 | 441 | 32 | 959 | 68 | 0 | 0 | 0 | 0 | 1400 | |
| ( 1, 3) | 0 | 0 | 0 | 0 | 0 | 441 | 100 | 0 | 0 | 0 | 0 | 441 | 39.8 |
| ( 3, 1) | 0 | 333 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 333 | 39.9 |
| (8003, 3) | 0 | 2227 | 93 | 173 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 2400 | |
| ( 3, 4) | 0 | 805 | 30 | 1280 | 48 | 583 | 22 | 0 | 0 | 0 | 0 | 2668 | 14.0 |
| ( 4, 3) | 2001 | 160 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 160 | 0 | 160 | 40.2 |
| ( 4, 5) | 0 | 0 | 0 | 1280 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 1280 | 39.3 |
| ( 5, 4) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| ( 4, 2) | 0 | 0 | 0 | 583 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 583 | 37.2 |
| ( 2, 4) | 0 | 0 | 0 | 671 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 671 | 35.4 |
| ( 1, 2) | 0 | 671 | 52 | 0 | 0 | 621 | 48 | 0 | 0 | 0 | 0 | 1292 | 13.4 |

1 TRAFFIC ASSIGNMENT

ESIM ENTRY LINK VOLUMES

| LINK | FLOW RATE (VEH/HOUR) | TRUCKS (PERCENT) |
|---|---|---|
| (8001, 1) | 1400 | 0 |
| (8003, 3) | 2400 | 0 |

1********************************************************************************************

TIME PERIOD 2 - ESIM DATA

********************************************************************************************

1

ESIM TURNING MOVEMENT DATA

TURN MOVEMENT PERCENTAGES TURN MOVEMENT POSSIBLE BLOCKAGE

LINK LEFT THROUGH RIGHT DIAGONAL LEFT THROUGH RIGHT DIAGONAL (PCT)
(SECS)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| (8001, 1) | 0 | 0 | 0 | 0 | NO | NO | NO | NO | 0 | 0 |
| ( 1, 3) | 0 | 0 | 0 | 0 | NO | NO | NO | NO | 0 | 0 |
| ( 3, 1) | 0 | 0 | 0 | 0 | NO | NO | NO | NO | 0 | 0 |
| (8003, 3) | 0 | 0 | 0 | 0 | NO | NO | NO | NO | 0 | 0 |
| ( 3, 4) | 0 | 0 | 0 | 0 | NO | NO | NO | NO | 0 | 0 |
| ( 4, 3) | 0 | 0 | 0 | 0 | NO | NO | NO | NO | 0 | 0 |
| ( 4, 5) | 0 | 0 | 0 | 0 | NO | NO | NO | NO | 0 | 0 |
| ( 5, 4) | 0 | 0 | 0 | 0 | YES | NO | YES | NO | 0 | 0 |
| ( 4, 2) | 0 | 0 | 0 | 0 | NO | NO | NO | NO | 0 | 0 |
| ( 2, 4) | 0 | 0 | 0 | 0 | YES | NO | YES | NO | 0 | 0 |
| ( 1, 2) | 0 | 0 | 0 | 0 | NO | NO | NO | NO | 0 | 0 |

0***** WARNING - MESSAGE NUMBER 622, ROUTINE CHKPH2, PARAMETER(S) - P1 = 0, P2 = 4, P3 =
3
1 AVERAGE VEHICLE OCCUPANCIES
(HUNDREDTHS-OF-A-PERSON / VEHICLE)

| AUTOS | CAR-POOLS | TRUCKS | BUSES |
|---|---|---|---|
| 130 | 350 | 120 | 250 |

1 TRAFFIC ASSIGNMENT PARAMETERS

EPSILON (OBJ.FUNC.THRESHOLD VALUE) = 1.0 % +

LINE SEARCH ACCURACY OF OBJ.FUNCION = 1.0 % +

MAX.NUMBER OF ASSIGNMENT ITERATIONS = 15

MAX.NUMBER OF CAPACITY CALIBRATIONS = 1 +

TYPE OF OBJECTIVE FUNCTION
(0:USER OPTIMAL, 1:SYSTEM OPTIMAL)= 0 +

IMPEDANCE FUNCTION PARAMETERS:
ALPHA = 60/100 +
BETA = 40/10 +

TYPE (0:FHWA, 1:MODIFIED DAVIDSON)= 0 +

(+) :INDICATES DEFAULT VALUE

REQUESTED INTERMEDIATE OUTPUT CODE = 4
0: NO INTERMEDIATE OUTPUT
1: PATH ASSIGNMENTS
2: TREE CONSTRUCTS
3: DETAILED O-D TREES
4: ALL OUTPUTS 1,2 AND 3

1 TRIP TABLE

FOR EACH ORIGIN NODE, TABLE PROVIDES LISTING OF CANDIDATE DESTINATION NODES

ORIGIN NODE (8001) 8004 8005 8002

ORIGIN NODE (8003) 8005 8004 8002

ORIGIN NODE (2001) 8004 8002
0***** WARNING - MESSAGE NUMBER 920, ROUTINE RDF179, PARAMETER(S) - P1 = 8001
0***** WARNING - MESSAGE NUMBER 920, ROUTINE RDF179, PARAMETER(S) - P1 = 8004
0***** WARNING - MESSAGE NUMBER 920, ROUTINE RDF179, PARAMETER(S) - P1 = 8005
0***** WARNING - MESSAGE NUMBER 920, ROUTINE RDF179, PARAMETER(S) - P1 = 8002
0***** WARNING - MESSAGE NUMBER 920, ROUTINE RDF179, PARAMETER(S) - P1 = 8003
0***** WARNING - MESSAGE NUMBER 920, ROUTINE RDF179, PARAMETER(S) - P1 = 2001
1 INTERNAL CENTROIDS

CENTROID LINK

2001 ( 4, 3)

1 TRAFFIC ASSIGNMENT :SOURCE VOLUMES

| ORIGIN NODE | VOLUME (VPH) |
|---|---|
| 8001 | 9000 |
| 8003 | 9000 |
| 2001 | 6000 |

1 TRAFFIC ASSIGNMENT :SINK VOLUMES

| DESTINATION NODE | VOLUME (VPH) |
|---|---|
| 8002 | 9000 |
| 8004 | 9000 |
| 8005 | 6000 |

1 DESTINATION TRIP TABLE

FOR EACH DESTINATION NODE, TABLE PROVIDES LISTING OF DATA PAIRS: ORIGIN NODE/VOLUME

DESTINATION (8002) 8001/3000 8003/3000 2001/3000

DESTINATION (8004) 8001/3000 8003/3000 2001/3000

DESTINATION (8005) 8001/3000 8003/3000

1 MINIMUM PATH CONSTRUCTS FOR ITERATION: 1

LIST OF LABELLED INTERNAL LINKS FOR EACH ORIGIN NODE

0ORIGIN:8001 ( 1, 2)
0ORIGIN:8003 ( 3, 4)
0ORIGIN:2001 ( 3, 1) ( 1, 2) ( 4, 3)

1 TRAFFIC DISTRIBUTION ASSIGNMENT RESULTS AT ITERATION : 1 CAPACITY ITERATION: 1

| GEOMETRIC LINK | PATH-LINK RECEIVER | LENGTH FEET | FREE-FLOW TIME(SEC) | TRAVEL TIME(SEC) ON-LINK | TOTAL | CAPACITY VPH | VOLUME VPH | SPEED (MPH) | TURN TYPE | RECEIVER TYPE |
|---|---|---|---|---|---|---|---|---|---|---|
| (8001, 1) | ( 1, 3) | 0 | 0 | 7.0 | 7.0 | 1085 | 0 | 0.0 | T | INT |
| | ( 1, 2) | | | 8.0 | 217.6 | 389 | 1000 | 0.0 | L | INT V>C |
| (8003, 3) | ( 3, 4) | 0 | 0 | 6.0 | 252.9 | 417 | 1200 | 0.0 | R | INT V>C |
| | ( 3, 1) | | | 9.0 | 9.0 | 894 | 0 | 0.0 | T | INT |
| ( 3, 1) | ( 1, 2) | 52800 | 895 | 901.0 | 901.0 | 1598 | 80 | 40.0 | R | INT |
| ( 1, 3) | ( 3, 4) | 52800 | 895 | 897.0 | 897.0 | 1337 | 0 | 40.1 | L | INT |
| ( 3, 4) | ( 4,8004) | 52800 | 895 | 903.0 | 11546.0 | 570 | 1200 | 3.1 | R | EXIT V>C |
| | ( 4, 5) | | | 905.0 | 905.0 | 1000 | 0 | 39.8 | T | INT |
| | ( 4, 2) | | | 906.0 | 906.0 | 460 | 0 | 39.7 | L | INT |
| ( 1, 2) | ( 2, 4) | 52800 | 1427 | 1435.0 | 1435.0 | 661 | 0 | 25.1 | R | INT |
| | ( 2,8002) | | | 1438.0 | 15982.4 | 533 | 1080 | 2.3 | L | EXIT V>C |
| ( 2, 4) | ( 4, 3) | 52800 | 895 | 903.0 | 903.0 | 570 | 0 | 39.9 | R | INT |
| | ( 4,8004) | | | 905.0 | 905.0 | 1000 | 0 | 39.8 | T | EXIT |
| | ( 4, 5) | | | 906.0 | 906.0 | 460 | 0 | 39.7 | L | INT |
| ( 4, 5) | ( 5,8005) | 52800 | 895 | 895.0 | 895.0 | 2880 | 0 | 40.2 | T | EXIT |
| ( 5, 4) | ( 4, 2) | 52800 | 895 | 903.0 | 903.0 | 570 | 0 | 39.9 | R | INT |
| | ( 4, 3) | | | 905.0 | 905.0 | 1000 | 0 | 39.8 | T | INT |
| | ( 4,8004) | | | 906.0 | 906.0 | 460 | 0 | 39.7 | L | EXIT |
| ( 4, 3) | ( 3, 1) | 52800 | 895 | 895.0 | 895.0 | 3110 | 80 | 40.2 | R | INT |
| | ( 3,2001) | | | 0.0 | 0.0 | 1800 | 0 | 40.2 | | SINK |
| ( 4, 2) | ( 2,8002) | 52800 | 895 | 905.0 | 905.0 | 1000 | 0 | 39.8 | T | EXIT |

0TURN TYPE: R=RIGHT, T=THROUGH, D=DIAGONAL, L=LEFT; RECEIVER: INT = INTERNAL LINK

NETWORK HOURLY ESTIMATES: VEHICLE-MILES= 24400.00 VEHICLE-HOURS= 8828.05 AVERAGE SPEED(MPH)= 2.76

1 MINIMUM PATH CONSTRUCTS FOR ITERATION: 2

LIST OF LABELLED INTERNAL LINKS FOR EACH ORIGIN NODE

0ORIGIN:8001 ( 1, 2) ( 2, 4)

```
0ORIGIN:8003 ( 3, 4) ( 4, 5)
0ORIGIN:2001 ( 3, 1) ( 1, 2) ( 2, 4) ( 4, 3)
1 TRAFFIC DISTRIBUTION ASSIGNMENT RESULTS AT        ITERATION : 2 CAPACITY ITERATION: 1

 GEOMETRIC  PATH-LINK LENGTH  FREE-FLOW  TRAVEL  CAPACITY VOLUME  SPEED TURN RECEIVER
   LINK     RECEIVER   FEET   TIME(SEC) TIME(SEC)   VPH     VPH   (MPH) TYPE  TYPE
                            ON-LINK  TOTAL
(8001, 1) ( 1, 3)    0     0    7.0     7.0   1085     0    0.0  T   INT
          ( 1, 2)               8.0   217.6    389  1000    0.0  L   INT V>C
(8003, 3) ( 3, 4)    0     0    6.0   252.9    417  1200    0.0  R   INT V>C
          ( 3, 1)               9.0     9.0    894     0    0.0  T   INT
( 3, 1) ( 1, 2) 52800  895    901.0   901.0   1598    80   40.0  R   INT
( 1, 3) ( 3, 4) 52800  895    897.0   897.0   1337     0   40.1  L   INT
( 3, 4) ( 4,8004) 52800 895   903.0  1814.8    570   649   19.8  R   EXIT V>C
        ( 4, 5)               905.0   955.0   1000   551   37.7  T   INT
        ( 4, 2)               906.0   906.0    460     0   39.7  L   INT
( 1, 2) ( 2, 4) 52800 1427   1435.0  1707.3    661   496   21.1  R   INT
        ( 2,8002)            1438.0  2684.1    533   584   13.4  L   EXIT V>C
( 2, 4) ( 4, 3) 52800  895    903.0   903.0    570     0   39.9  R   INT
        ( 4,8004)             905.0   937.8   1000   496   38.4  T   EXIT
        ( 4, 5)               906.0   906.0    460     0   39.7  L   INT
( 4, 5) ( 5,8005) 52800 895   895.0   895.7   2880   551   40.2  T   EXIT
( 5, 4) ( 4, 2) 52800  895    903.0   903.0    570     0   39.9  R   INT
        ( 4, 3)               905.0   905.0   1000     0   39.8  T   INT
        ( 4,8004)             906.0   906.0    460     0   39.7  L   EXIT
( 4, 3) ( 3, 1) 52800  895    895.0   895.0   3110    80   40.2  R   INT
        ( 3,2001)               0.0     0.0   1800     0   40.2      SINK
( 4, 2) ( 2,8002) 52800 895   905.0   905.0   1000     0   39.8  T   EXIT

0TURN TYPE: R=RIGHT, T=THROUGH, D=DIAGONAL, L=LEFT;    RECEIVER: INT = INTERNAL LINK


 NETWORK HOURLY ESTIMATES: VEHICLE-MILES=  34864.75    VEHICLE-HOURS=   1594.94    AVERAGE
SPEED(MPH)=  21.86
1                          MINIMUM PATH CONSTRUCTS FOR ITERATION:  3

                       LIST OF LABELLED INTERNAL LINKS FOR EACH ORIGIN NODE

0ORIGIN:8001 ( 1, 3) ( 3, 4) ( 4, 2)
0ORIGIN:8003 ( 3, 4) ( 4, 2)
0ORIGIN:2001 ( 3, 1) ( 1, 2) ( 2, 4) ( 4, 3)
1 TRAFFIC DISTRIBUTION ASSIGNMENT RESULTS AT        ITERATION : 3 CAPACITY ITERATION: 1

 GEOMETRIC  PATH-LINK LENGTH  FREE-FLOW  TRAVEL  CAPACITY VOLUME  SPEED TURN RECEIVER
   LINK     RECEIVER   FEET   TIME(SEC) TIME(SEC)   VPH     VPH   (MPH) TYPE  TYPE
                            ON-LINK  TOTAL
(8001, 1) ( 1, 3)    0     0    7.0     7.0   1085    31    0.0  T   INT
          ( 1, 2)               8.0   192.6    389   969    0.0  L   INT V>C
(8003, 3) ( 3, 4)    0     0    6.0   252.9    417  1200    0.0  R   INT V>C
          ( 3, 1)               9.0     9.0    894     0    0.0  T   INT
( 3, 1) ( 1, 2) 52800  895    901.0   901.0   1598    80   40.0  R   INT
( 1, 3) ( 3, 4) 52800  895    897.0   897.0   1337    31   40.1  L   INT
( 3, 4) ( 4,8004) 52800 895   903.0  1705.8    570   629   21.1  R   EXIT V>C
        ( 4, 5)               905.0   949.0   1000   534   37.9  T   INT
        ( 4, 2)               906.0   906.3    460    69   39.7  L   INT
( 1, 2) ( 2, 4) 52800 1427   1435.0  1679.8    661   483   21.4  R   INT
        ( 2,8002)            1438.0  2535.1    533   566   14.2  L   EXIT V>C
( 2, 4) ( 4, 3) 52800  895    903.0   903.0    570     0   39.9  R   INT
        ( 4,8004)             905.0   934.5   1000   483   38.5  T   EXIT
        ( 4, 5)               906.0   906.0    460     0   39.7  L   INT
( 4, 5) ( 5,8005) 52800 895   895.0   895.6   2880   534   40.2  T   EXIT
( 5, 4) ( 4, 2) 52800  895    903.0   903.0    570     0   39.9  R   INT
        ( 4, 3)               905.0   905.0   1000     0   39.8  T   INT
        ( 4,8004)             906.0   906.0    460     0   39.7  L   EXIT
( 4, 3) ( 3, 1) 52800  895    895.0   895.0   3110    80   40.2  R   INT
        ( 3,2001)               0.0     0.0   1800     0   40.2      SINK
( 4, 2) ( 2,8002) 52800 895   905.0   905.0   1000    69   39.8  T   EXIT

0TURN TYPE: R=RIGHT, T=THROUGH, D=DIAGONAL, L=LEFT;    RECEIVER: INT = INTERNAL LINK
```

```
NETWORK HOURLY ESTIMATES: VEHICLE-MILES= 35564.65    VEHICLE-HOURS= 1539.00    AVERAGE
SPEED(MPH)= 23.11
1                    MINIMUM PATH CONSTRUCTS FOR ITERATION: 4

              LIST OF LABELLED INTERNAL LINKS FOR EACH ORIGIN NODE

0ORIGIN:8001 ( 1, 3) ( 3, 4)
0ORIGIN:8003 ( 3, 4)
0ORIGIN:2001 ( 3, 1) ( 1, 2) ( 4, 3)
1 TRAFFIC DISTRIBUTION ASSIGNMENT RESULTS AT       ITERATION : 4 CAPACITY ITERATION: 1

 GEOMETRIC  PATH-LINK LENGTH  FREE-FLOW  TRAVEL  CAPACITY VOLUME  SPEED TURN RECEIVER
  LINK      RECEIVER   FEET  TIME(SEC) TIME(SEC)   VPH      VPH  (MPH) TYPE  TYPE
                  ON-LINK TOTAL
(8001, 1) ( 1, 3)    0    0    7.0    7.0   1085    44    0.0  T  INT
          ( 1, 2)              8.0  183.0    389   956    0.0  L  INT V>C
(8003, 3) ( 3, 4)    0    0    6.0  252.9    417  1200    0.0  R  INT V>C
          ( 3, 1)              9.0    9.0    894     0    0.0  T  INT
( 3, 1) ( 1, 2) 52800  895   901.0  901.0   1598    80   40.0  R  INT
( 1, 3) ( 3, 4) 52800  895   897.0  897.0   1337    44   40.1  L  INT
( 3, 4) ( 4,8004) 52800  895 903.0 1816.7    570   650   19.8  R  EXIT V>C
          ( 4, 5)            905.0  946.7   1000   526   38.0  T  INT
          ( 4, 2)            906.0  906.3    460    68   39.7  L  INT
( 1, 2) ( 2, 4) 52800 1427  1435.0 1667.2    661   476   21.6  R  INT
          ( 2,8002)          1438.0 2486.3   533   560   14.5  L  EXIT V>C
( 2, 4) ( 4, 3) 52800  895   903.0  903.0    570     0   39.9  R  INT
          ( 4,8004)          905.0  933.0   1000   476   38.6  T  EXIT
          ( 4, 5)            906.0  906.0    460     0   39.7  L  INT
( 4, 5) ( 5,8005) 52800  895 895.0  895.6   2880   526   40.2  T  EXIT
( 5, 4) ( 4, 2) 52800  895   903.0  903.0    570     0   39.9  R  INT
          ( 4, 3)            905.0  905.0   1000     0   39.8  T  INT
          ( 4,8004)          906.0  906.0    460     0   39.7  L  EXIT
( 4, 3) ( 3, 1) 52800  895   895.0  895.0   3110    80   40.2  R  INT
          ( 3,2001)            0.0    0.0   1800     0   40.2     SINK
( 4, 2) ( 2,8002) 52800  895 905.0  905.0   1000    68   39.8  T  EXIT

0TURN TYPE: R=RIGHT, T=THROUGH, D=DIAGONAL, L=LEFT;    RECEIVER: INT = INTERNAL LINK

NETWORK HOURLY ESTIMATES: VEHICLE-MILES= 35549.33    VEHICLE-HOURS= 1545.84    AVERAGE
SPEED(MPH)= 23.00
1                    MINIMUM PATH CONSTRUCTS FOR ITERATION: 5

              LIST OF LABELLED INTERNAL LINKS FOR EACH ORIGIN NODE

0ORIGIN:8001 ( 1, 2)
0ORIGIN:8003 ( 3, 4) ( 4, 2)
0ORIGIN:2001 ( 3, 1) ( 1, 2) ( 4, 3)
1 TRAFFIC DISTRIBUTION ASSIGNMENT RESULTS AT       ITERATION : 5 CAPACITY ITERATION: 1

 GEOMETRIC  PATH-LINK LENGTH  FREE-FLOW  TRAVEL  CAPACITY VOLUME  SPEED TURN RECEIVER
  LINK      RECEIVER   FEET  TIME(SEC) TIME(SEC)   VPH      VPH  (MPH) TYPE  TYPE
                  ON-LINK TOTAL
(8001, 1) ( 1, 3)    0    0    7.0    7.0   1085    43    0.0  T  INT
          ( 1, 2)              8.0  183.6    389   957    0.0  L  INT V>C
(8003, 3) ( 3, 4)    0    0    6.0  252.9    417  1200    0.0  R  INT V>C
          ( 3, 1)              9.0    9.0    894     0    0.0  T  INT
( 3, 1) ( 1, 2) 52800  895   901.0  901.0   1598    80   40.0  R  INT
( 1, 3) ( 3, 4) 52800  895   897.0  897.0   1337    43   40.1  L  INT
( 3, 4) ( 4,8004) 52800  895 903.0 1758.7    570   639   20.5  R  EXIT V>C
          ( 4, 5)            905.0  944.1   1000   518   38.1  T  INT
          ( 4, 2)            906.0  906.7    460    86   39.7  L  INT
( 1, 2) ( 2, 4) 52800 1427  1435.0 1652.4    661   469   21.8  R  INT
          ( 2,8002)          1438.0 2551.2   533   568   14.1  L  EXIT V>C
( 2, 4) ( 4, 3) 52800  895   903.0  903.0    570     0   39.9  R  INT
          ( 4,8004)          905.0  931.2   1000   469   38.7  T  EXIT
          ( 4, 5)            906.0  906.0    460     0   39.7  L  INT
```

```
( 4, 5) ( 5,8005) 52800  895  895.0  895.6   2880   518   40.2  T  EXIT
( 5, 4) ( 4, 2) 52800  895  903.0  903.0   570    0   39.9  R   INT
        ( 4, 3)          905.0  905.0  1000     0   39.8  T.  INT
        ( 4,8004)          906.0  906.0   460     0   39.7  L  EXIT
( 4, 3) ( 3, 1) 52800  895  895.0  895.0  3110    80   40.2  R   INT
        ( 3,2001)            0.0    0.0  1800     0  40.2     SINK
( 4, 2) ( 2,8002) 52800  895  905.0  905.0  1000    86   39.8  T  EXIT

0TURN TYPE: R=RIGHT, T=THROUGH, D=DIAGONAL, L=LEFT;    RECEIVER:  INT = INTERNAL LINK


NETWORK HOURLY ESTIMATES:  VEHICLE-MILES=  35563.16     VEHICLE-HOURS=    1543.05     AVERAGE
SPEED(MPH)=  23.05
1                             MINIMUM PATH CONSTRUCTS FOR  ITERATION:  6

                          LIST OF LABELLED INTERNAL LINKS FOR EACH ORIGIN NODE

0ORIGIN:8001 (  1,  3) (  3,  4)
0ORIGIN:8003 (  3,  4)
0ORIGIN:2001 (  3,  1) (  1,  2) (  4,  3)
1 TRAFFIC DISTRIBUTION ASSIGNMENT RESULTS AT          ITERATION :  6 CAPACITY ITERATION:  1

 GEOMETRIC  PATH-LINK  LENGTH  FREE-FLOW  TRAVEL  CAPACITY  VOLUME  SPEED TURN RECEIVER
   LINK     RECEIVER   FEET   TIME(SEC) TIME(SEC)   VPH      VPH   (MPH) TYPE  TYPE
                    ON-LINK TOTAL
(8001,  1) (  1,  3)    0     0    7.0    7.0   1085    51    0.0  T   INT
           (  1,  2)               8.0  177.9    389   949    0.0  L   INT V>C
(8003,  3) (  3,  4)    0     0    6.0  252.9    417  1200    0.0  R   INT V>C
           (  3,  1)               9.0    9.0    894     0    0.0  T   INT
(  3,  1) (  1,  2) 52800  895  901.0  901.0   1598    80   40.0  R   INT
(  1,  3) (  3,  4) 52800  895  897.0  897.0   1337    51   40.1  L   INT
(  3,  4) (  4,8004) 52800  895  903.0 1828.7    570   652   19.7  R  EXIT V>C
           (  4,  5)             905.0  942.8   1000   514   38.2  T   INT
           (  4,  2)             906.0  906.7    460    86   39.7  L   INT
(  1,  2) (  2,  4) 52800 1427 1435.0 1645.4    661   465   21.9  R   INT
           (  2,8002)            1438.0 2520.4    533   564   14.3  L  EXIT V>C
(  2,  4) (  4,  3) 52800  895  903.0  903.0    570     0   39.9  R   INT
           (  4,8004)            905.0  930.3   1000   465   38.7  T  EXIT
           (  4,  5)             906.0  906.0    460     0   39.7  L   INT
(  4,  5) (  5,8005) 52800  895  895.0  895.5   2880   514   40.2  T  EXIT
(  5,  4) (  4,  2) 52800  895  903.0  903.0    570     0   39.9  R   INT
           (  4,  3)             905.0  905.0   1000     0   39.8  T   INT
           (  4,8004)            906.0  906.0    460     0   39.7  L  EXIT
(  4,  3) (  3,  1) 52800  895  895.0  895.0   3110    80   40.2  R   INT
           (  3,2001)              0.0    0.0   1800     0   40.2     SINK
(  4,  2) (  2,8002) 52800  895  905.0  905.0   1000    86   39.8  T  EXIT

0TURN TYPE: R=RIGHT, T=THROUGH, D=DIAGONAL, L=LEFT;    RECEIVER:  INT = INTERNAL LINK


NETWORK HOURLY ESTIMATES:  VEHICLE-MILES=  35553.71     VEHICLE-HOURS=    1547.93     AVERAGE
SPEED(MPH)=  22.97
1                             MINIMUM PATH CONSTRUCTS FOR  ITERATION:  7

                          LIST OF LABELLED INTERNAL LINKS FOR EACH ORIGIN NODE

0ORIGIN:8001 (  1,  2)
0ORIGIN:8003 (  3,  4) (  4,  2)
0ORIGIN:2001 (  3,  1) (  1,  2) (  4,  3)
1 TRAFFIC DISTRIBUTION ASSIGNMENT RESULTS AT          ITERATION :  7 CAPACITY ITERATION:  1

 GEOMETRIC  PATH-LINK  LENGTH  FREE-FLOW  TRAVEL  CAPACITY  VOLUME  SPEED TURN RECEIVER
   LINK     RECEIVER   FEET   TIME(SEC) TIME(SEC)   VPH      VPH   (MPH) TYPE  TYPE
                    ON-LINK TOTAL
(8001,  1) (  1,  3)    0     0    7.0    7.0   1085    51    0.0  T   INT
           (  1,  2)               8.0  178.3    389   949    0.0  L   INT V>C
(8003,  3) (  3,  4)    0     0    6.0  252.9    417  1200    0.0  R   INT V>C
           (  3,  1)               9.0    9.0    894     0    0.0  T   INT
(  3,  1) (  1,  2) 52800  895  901.0  901.0   1598    80   40.0  R   INT
```

```
( 1, 3) ( 3, 4) 52800  895  897.0  897.0  1337   51   40.1  L  INT
( 3, 4) ( 4,8004) 52800  895  903.0 1792.0  570   645   20.1  R  EXIT V>C
        ( 4, 5)              905.0  941.3  1000   509   38.2  T  INT
        ( 4, 2)              906.0  907.1   460    97   39.7  L  INT
( 1, 2) ( 2, 4) 52800 1427 1435.0 1637.1   661   460   22.0  R  INT
        ( 2,8002)           1438.0 2560.8   533   569   14.1  L  EXIT V>C
( 2, 4) ( 4, 3) 52800  895  903.0  903.0   570     0   39.9  R  INT
        ( 4,8004)            905.0  929.3  1000   460   38.7  T  EXIT
        ( 4, 5)              906.0  906.0   460     0   39.7  L  INT
( 4, 5) ( 5,8005) 52800  895  895.0  895.5  2880   509   40.2  T  EXIT
( 5, 4) ( 4, 2) 52800  895  903.0  903.0   570     0   39.9  R  INT
        ( 4, 3)              905.0  905.0  1000     0   39.8  T  INT
        ( 4,8004)            906.0  906.0   460     0   39.7  L  EXIT
( 4, 3) ( 3, 1) 52800  895  895.0  895.0  3110    80   40.2  R  INT
        ( 3,2001)              0.0    0.0  1800     0   40.2     SINK
( 4, 2) ( 2,8002) 52800  895  905.0  905.0  1000    97   39.8  T  EXIT

0TURN TYPE: R=RIGHT, T=THROUGH, D=DIAGONAL, L=LEFT;    RECEIVER: INT = INTERNAL LINK


NETWORK HOURLY ESTIMATES: VEHICLE-MILES=  35562.21    VEHICLE-HOURS=  1546.30    AVERAGE
SPEED(MPH)= 23.00
1                      MINIMUM PATH CONSTRUCTS FOR  ITERATION:  8

                     LIST OF LABELLED INTERNAL LINKS FOR EACH ORIGIN NODE

0ORIGIN:8001 ( 1, 3) ( 3, 4)
0ORIGIN:8003 ( 3, 4)
0ORIGIN:2001 ( 3, 1) ( 1, 2) ( 4, 3)
1 TRAFFIC DISTRIBUTION ASSIGNMENT RESULTS AT        ITERATION : 8 CAPACITY ITERATION: 1

 GEOMETRIC  PATH-LINK  LENGTH  FREE-FLOW  TRAVEL  CAPACITY  VOLUME  SPEED TURN RECEIVER
   LINK     RECEIVER    FEET   TIME(SEC) TIME(SEC)   VPH      VPH   (MPH) TYPE  TYPE
                    ON-LINK TOTAL
(8001, 1) ( 1, 3)    0     0    7.0    7.0  1085    54    0.0  T  INT
          ( 1, 2)               8.0  176.2   389   946    0.0  L  INT V>C
(8003, 3) ( 3, 4)    0     0    6.0  252.9   417  1200    0.0  R. INT V>C
          ( 3, 1)               9.0    9.0   894     0    0.0  T  INT
( 3, 1) ( 1, 2) 52800  895  901.0  901.0  1598    80   40.0  R  INT
( 1, 3) ( 3, 4) 52800  895  897.0  897.0  1337    54   40.1  L  INT
( 3, 4) ( 4,8004) 52800  895  903.0 1819.0  570   650   19.8  R  EXIT V>C
        ( 4, 5)              905.0  940.9  1000   507   38.3  T  INT
        ( 4, 2)              906.0  907.1   460    97   39.7  L  INT
( 1, 2) ( 2, 4) 52800 1427 1435.0 1634.6   661   459   22.0  R  INT
        ( 2,8002)           1438.0 2548.8   533   568   14.1  L  EXIT V>C
( 2, 4) ( 4, 3) 52800  895  903.0  903.0   570     0   39.9  R  INT
        ( 4,8004)            905.0  929.0  1000   459   38.8  T  EXIT
        ( 4, 5)              906.0  906.0   460     0   39.7  L  INT
( 4, 5) ( 5,8005) 52800  895  895.0  895.5  2880   507   40.2  T  EXIT
( 5, 4) ( 4, 2) 52800  895  903.0  903.0   570     0   39.9  R  INT
        ( 4, 3)              905.0  905.0  1000     0   39.8  T  INT
        ( 4,8004)            906.0  906.0   460     0   39.7  L  EXIT
( 4, 3) ( 3, 1) 52800  895  895.0  895.0  3110    80   40.2  R  INT
        ( 3,2001)              0.0    0.0  1800     0   40.2     SINK
( 4, 2) ( 2,8002) 52800  895  905.0  905.0  1000    97   39.8  T  EXIT

0TURN TYPE: R=RIGHT, T=THROUGH, D=DIAGONAL, L=LEFT;    RECEIVER: INT = INTERNAL LINK


NETWORK HOURLY ESTIMATES: VEHICLE-MILES=  35558.60    VEHICLE-HOURS=  1548.24    AVERAGE
SPEED(MPH)= 22.97
1                      MINIMUM PATH CONSTRUCTS FOR  ITERATION:  9

                     LIST OF LABELLED INTERNAL LINKS FOR EACH ORIGIN NODE

0ORIGIN:8001 ( 1, 3) ( 3, 4) ( 4, 2)
0ORIGIN:8003 ( 3, 4) ( 4, 2)
0ORIGIN:2001 ( 3, 1) ( 1, 2) ( 4, 3)
1 TRAFFIC DISTRIBUTION ASSIGNMENT RESULTS AT        ITERATION : 9 CAPACITY ITERATION: 1
```

```
GEOMETRIC  PATH-LINK LENGTH  FREE-FLOW  TRAVEL  CAPACITY VOLUME  SPEED TURN RECEIVER
  LINK    RECEIVER   FEET   TIME(SEC) TIME(SEC)   VPH     VPH   (MPH) TYPE  TYPE
                  ON-LINK TOTAL
(8001, 1) ( 1, 3)   0    0    7.0    7.0   1085    58    0.0  T  INT
          ( 1, 2)             8.0  172.8    389   942    0.0  L  INT V>C
(8003, 3) ( 3, 4)   0    0    6.0  252.9    417  1200    0.0  R  INT V>C
          ( 3, 1)             9.0    9.0    894     0    0.0  T  INT
( 3, 1) ( 1, 2) 52800  895  901.0  901.0   1598    80   40.0  R  INT
( 1, 3) ( 3, 4) 52800  895  897.0  897.0   1337    58   40.1  L  INT
( 3, 4) ( 4,8004) 52800  895  903.0 1800.7  570   647   20.0  R  EXIT V>C
        ( 4, 5)             905.0  940.2   1000   504   38.3  T  INT
        ( 4, 2)             906.0  907.6    460   107   39.7  L  INT
( 1, 2) ( 2, 4) 52800 1427 1435.0 1630.6    661   456   22.1  R  INT
        ( 2,8002)          1438.0 2529.8    533   565   14.2  L  EXIT V>C
( 2, 4) ( 4, 3) 52800  895  903.0  903.0    570     0   39.9  R  INT
        ( 4,8004)           905.0  928.6   1000   456   38.8  T  EXIT
        ( 4, 5)             906.0  906.0    460     0   39.7  L  INT
( 4, 5) ( 5,8005) 52800  895  895.0  895.5  2880   504   40.2  T  EXIT
( 5, 4) ( 4, 2) 52800  895  903.0  903.0    570     0   39.9  R  INT
        ( 4, 3)             905.0  905.0   1000     0   39.8  T  INT
        ( 4,8004)           906.0  906.0    460     0   39.7  L  EXIT
( 4, 3) ( 3, 1) 52800  895  895.0  895.0   3110    80   40.2  R  INT
        ( 3,2001)             0.0    0.0   1800     0   40.2     SINK
( 4, 2) ( 2,8002) 52800  895  905.0  905.1  1000   107   39.8  T  EXIT
```

0TURN TYPE: R=RIGHT, T=THROUGH, D=DIAGONAL, L=LEFT;    RECEIVER: INT = INTERNAL LINK

NETWORK HOURLY ESTIMATES: VEHICLE-MILES= 35663.32    VEHICLE-HOURS= 1540.40    AVERAGE SPEED(MPH)= 23.15

TRAFFIC DISTRIBUTION ASSIGNMENT EVALUATION

| ITERATION | OBJECTIVE FUNCTION VALUE (VEH-SEC) | BOUND GAP(%) | LAMBDA | CONTRIBUTION(%) |
|---|---|---|---|---|
| 1 | 0.8821199000E+07 | 100.000000 | 1.000000 | 49.549995 |
| 2 | 0.4366017500E+07 | 100.000000 | 0.458981 | 42.036346 |
| 3 | 0.4363048000E+07 | 4.426641 | 0.031336 | 2.962784 |
| 4 | 0.4361387000E+07 | 4.390243 | 0.013156 | 1.260427 |
| 5 | 0.4360793000E+07 | 1.757719 | 0.016261 | 1.583757 |
| 6 | 0.4360280500E+07 | 1.746172 | 0.008131 | 0.798370 |
| 7 | 0.4360006500E+07 | 1.197865 | 0.010050 | 0.996809 |
| 8 | 0.4359877500E+07 | 1.194942 | 0.003106 | 0.309030 |
| 9 | 0.4359782000E+07 | 0.755542 | 0.005025 | 0.502482 |

1 DETAILED LIST OF O-D MINIMUM PATHS

THE FOLLOWING LISTING PROVIDES THE ASSIGNED VOLUME AND THE SEQUENCE OF INTERNAL NODE NUMBERS FOR EACH O-D MININIMUM PATH.
TOTAL DEMANDIS PRINTED FOLLOWING ALL PATHS FOR EACH O-D PAIR.
NOTE THAT CUMULATIVE TRAVEL TIME (SEC) FOR THE O-D PATH IS PRINTED FOLLOWING THE NODE LIST.

```
O-D        VOLUME   PATH ROUTE

8001-8004  420.3     1,   2,   4
(SEC):          172.8,1803.5,2732.0

8001-8004  23.7      1,   3,   4
(SEC):            7.0, 904.0,2704.7
       444 VPH
         0 VPH

8001-8002  520.4     1,   2
```

(SEC): 172.8,2702.6

8001-8002 34.6 1, 3, 4, 2
(SEC): 7.0, 904.0,1811.6,2716.7
555 VPH

8003-8005 504.0 3, 4, 5
(SEC): 252.9,1193.0,2088.5
504 VPH

8003-8004 623.0 3, 4
(SEC): 252.9,2053.6
623 VPH

8003-8002 72.0 3, 4, 2
(SEC): 252.9,1160.5,2065.6
72 VPH

2001-8004 35.0 4, 3, 1, 2, 4
(SEC): 0.0, 895.0,1796.0,3426.6,4355.2
35 VPH

2001-8002 44.0 4, 3, 1, 2
(SEC): 0.0, 895.0,1796.0,4325.8
44 VPH

1

TRAFFIC ASSIGNMENT RESULTS

ESIM SUBNETWORK

| LINK | INTERNAL CENTROID | RIGHT TURN VOL. VPH | RIGHT TURN PCT. | THRU VOL. VPH | THRU PCT. | LEFT TURN VOL. VPH | LEFT TURN PCT. | DIAGONAL VOL. VPH | DIAGONAL PCT. | SOURCE FLOW VPH | SINK FLOW VPH | DISCHARGE VOLUME VPH | SPEED ESTIMATE MPH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (8001, 1) | 0 | 0 | 0 | 58 | 6 | 942 | 94 | 0 | 0 | 0 | 0 | 1000 | |
| ( 1, 3) | 0 | 0 | 0 | 0 | 0 | 58 | 100 | 0 | 0 | 0 | 0 | 58 | 40.1 |
| ( 3, 1) | 0 | 80 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 80 | 39.9 |
| (8003, 3) | 0 | 1200 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1200 | |
| ( 3, 4) | 0 | 647 | 51 | 504 | 40 | 107 | 9 | 0 | 0 | 0 | 0 | 1258 | 26.0 |
| ( 4, 3) | 2001 | 80 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 80 | 0 | 80 | 40.2 |
| ( 4, 5) | 0 | 0 | 0 | 504 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 504 | 40.2 |
| ( 5, 4) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| ( 4, 2) | 0 | 0 | 0 | 107 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 107 | 39.7 |
| ( 2, 4) | 0 | 0 | 0 | 456 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 456 | 38.7 |
| ( 1, 2) | 0 | 456 | 45 | 0 | 0 | 565 | 55 | 0 | 0 | 0 | 0 | 1021 | 16.9 |

1

TRAFFIC ASSIGNMENT

ESIM ENTRY LINK VOLUMES

| LINK | FLOW RATE (VEH/HOUR) | TRUCKS (PERCENT) |
|---|---|---|
| (8001, 1) | 1000 | 0 |
| (8003, 3) | 1200 | 0 |

1*****************************************************************************************

TIME PERIOD 3 - ESIM DATA

*****************************************************************************************

1

ESIM TURNING MOVEMENT DATA

| LINK | TURN MOVEMENT PERCENTAGES LEFT THROUGH RIGHT DIAGONAL | TURN MOVEMENT POSSIBLE LEFT THROUGH RIGHT DIAGONAL | BLOCKAGE (PCT) (SECS) |
|---|---|---|---|

```
(8001,  1)    0  0  0  0     NO  NO  NO  NO    0  0
( 1,  3)      0  0  0  0     NO  NO  NO  NO    0  0
( 3,  1)      0  0  0  0     NO  NO  NO  NO    0  0
(8003,  3)    0  0  0  0     NO  YES NO  NO    0  0
( 3,  4)      0  0  0  0     NO  NO  NO  NO    0  0
( 4,  3)      0  0  0  0     NO  NO  NO  NO    0  0
( 4,  5)      0  0  0  0     NO  NO  NO  NO    0  0
( 5,  4)      0  0  0  0     YES NO  YES NO    0  0
( 4,  2)      0  0  0  0     NO  NO  NO  NO    0  0
( 2,  4)      0  0  0  0     YES NO  YES NO    0  0
( 1,  2)      0  0  0  0     NO  NO  NO  NO    0  0
0***** WARNING  - MESSAGE NUMBER. 622, ROUTINE CHKPH2, PARAMETER(S) - P1 =      0,  P2 =      4,  P3 =
3
1                    AVERAGE VEHICLE OCCUPANCIES
                   (HUNDREDTHS-OF-A-PERSON / VEHICLE)

                  AUTOS  CAR-POOLS  TRUCKS  BUSES
                   130     350      120     250
1                    TRAFFIC ASSIGNMENT PARAMETERS


                EPSILON (OBJ.FUNC.THRESHOLD VALUE)  =  1.0 %  +

                LINE SEARCH ACCURACY OF OBJ.FUNCION =  1.0 %  +

                MAX.NUMBER OF ASSIGNMENT ITERATIONS = 15

                MAX.NUMBER OF CAPACITY CALIBRATIONS = 1    +

                TYPE OF OBJECTIVE FUNCTION
                 (0:USER OPTIMAL, 1:SYSTEM OPTIMAL)=  0    +

                IMPEDANCE FUNCTION PARAMETERS:
                          ALPHA = 60/100  +
                          BETA  = 40/ 10  +

                 TYPE (0:FHWA, 1:MODIFIED DAVIDSON)=  0    +


                  (+) :INDICATES DEFAULT VALUE

                REQUESTED INTERMEDIATE OUTPUT CODE  =  4
                   0: NO INTERMEDIATE OUTPUT
                   1: PATH ASSIGNMENTS
                   2: TREE CONSTRUCTS
                   3: DETAILED O-D TREES
                   4: ALL OUTPUTS 1,2 AND 3

1                          TRIP TABLE

        FOR EACH ORIGIN NODE, TABLE PROVIDES LISTING OF CANDIDATE DESTINATION NODES

 ORIGIN NODE (8001)   8004     8005     8002

 ORIGIN NODE (8003)   8005     8004     8002

 ORIGIN NODE (2001)   8004     8002
0***** WARNING  - MESSAGE NUMBER  920, ROUTINE RDF179, PARAMETER(S) - P1 =    8001
0***** WARNING  - MESSAGE NUMBER  920, ROUTINE RDF179, PARAMETER(S) - P1 =    8004
0***** WARNING  - MESSAGE NUMBER  920, ROUTINE RDF179, PARAMETER(S) - P1 =    8005
0***** WARNING  - MESSAGE NUMBER  920, ROUTINE RDF179, PARAMETER(S) - P1 =    8002
0***** WARNING  - MESSAGE NUMBER  920, ROUTINE RDF179, PARAMETER(S) - P1 =    8003
0***** WARNING  - MESSAGE NUMBER  920, ROUTINE RDF179, PARAMETER(S) - P1 =    2001
1                       INTERNAL CENTROIDS

                       CENTROID       LINK

                        2001       ( 4,  3)
1                  TRAFFIC ASSIGNMENT  :SOURCE VOLUMES
```

ORIGIN NODE VOLUME (VPH)

| | |
|---|---|
| 8001 | 9000 |
| 8003 | 9000 |
| 2001 | 6000 |

1 TRAFFIC ASSIGNMENT :SINK VOLUMES

DESTINATION NODE VOLUME (VPH)

| | |
|---|---|
| 8002 | 9000 |
| 8004 | 9000 |
| 8005 | 6000 |

1 DESTINATION TRIP TABLE

FOR EACH DESTINATION NODE, TABLE PROVIDES LISTING OF DATA PAIRS: ORIGIN NODE/VOLUME

DESTINATION (8002) 8001/3000 8003/3000 2001/3000

DESTINATION (8004) 8001/3000 8003/3000 2001/3000

DESTINATION (8005) 8001/3000 8003/3000

1 MINIMUM PATH CONSTRUCTS FOR ITERATION: 1

LIST OF LABELLED INTERNAL LINKS FOR EACH ORIGIN NODE

0ORIGIN:8001 ( 1, 2)
0ORIGIN:8003 ( 3, 4)
0ORIGIN:2001 ( 3, 1) ( 1, 2) ( 4, 3)

1 TRAFFIC DISTRIBUTION ASSIGNMENT RESULTS AT ITERATION : 1 CAPACITY ITERATION: 1

| GEOMETRIC LINK | PATH-LINK RECEIVER | LENGTH FEET | FREE-FLOW TIME(SEC) | TRAVEL TIME(SEC) ON-LINK | TOTAL | CAPACITY VPH | VOLUME VPH | SPEED (MPH) | TURN TYPE | RECEIVER TYPE | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (8001, 1) | ( 1, 3) | 0 | 0 | 7.0 | 7.0 | 1085 | 0 | 0.0 | T | INT | |
| | ( 1, 2) | | | 8.0 | 8.3 | 389 | 200 | 0.0 | L | INT | |
| (8003, 3) | ( 3, 4) | 0 | 0 | 6.0 | 125.1 | 417 | 1000 | 0.0 | R | INT | V>C |
| | ( 3, 1) | | | 9.0 | 9.0 | 894 | 0 | 0.0 | T | INT | |
| ( 3, 1) | ( 1, 2) | 52800 | 895 | 901.0 | 901.0 | 1598 | 1 | 40.0 | R | INT | |
| ( 1, 3) | ( 3, 4) | 52800 | 895 | 897.0 | 897.0 | 1337 | 0 | 40.1 | L | INT | |
| ( 3, 4) | ( 4,8004) | 52800 | 895 | 903.0 | 6035.6 | 570 | 1000 | 6.0 | R | EXIT | V>C |
| | ( 4, 5) | | | 905.0 | 905.0 | 1000 | 0 | 39.8 | T | INT | |
| | ( 4, 2) | | | 906.0 | 906.0 | 460 | 0 | 39.7 | L | INT | |
| ( 1, 2) | ( 2, 4) | 52800 | 1427 | 1435.0 | 1435.0 | 661 | 0 | 25.1 | R | INT | |
| | ( 2,8002) | | | 1438.0 | 1455.4 | 533 | 201 | 24.7 | L | EXIT | |
| ( 2, 4) | ( 4, 3) | 52800 | 895 | 903.0 | 903.0 | 570 | 0 | 39.9 | R | INT | |
| | ( 4,8004) | | | 905.0 | 905.0 | 1000 | 0 | 39.8 | T | EXIT | |
| | ( 4, 5) | | | 906.0 | 906.0 | 460 | 0 | 39.7 | L | INT | |
| ( 4, 5) | ( 5,8005) | 52800 | 895 | 895.0 | 895.0 | 2880 | 0 | 40.2 | T | EXIT | |
| ( 5, 4) | ( 4, 2) | 52800 | 895 | 903.0 | 903.0 | 570 | 0 | 39.9 | R | INT | |
| | ( 4, 3) | | | 905.0 | 905.0 | 1000 | 0 | 39.8 | T | INT | |
| | ( 4,8004) | | | 906.0 | 906.0 | 460 | 0 | 39.7 | L | EXIT | |
| ( 4, 3) | ( 3, 1) | 52800 | 895 | 895.0 | 895.0 | 3110 | 1 | 40.2 | R | INT | |
| | ( 3,2001) | | | 0.0 | 0.0 | 1800 | 0 | 40.2 | | SINK | |
| ( 4, 2) | ( 2,8002) | 52800 | 895 | 905.0 | 905.0 | 1000 | 0 | 39.8 | T | EXIT | |

0TURN TYPE: R=RIGHT, T=THROUGH, D=DIAGONAL, L=LEFT; RECEIVER: INT = INTERNAL LINK

NETWORK HOURLY ESTIMATES: VEHICLE-MILES= 12030.00 VEHICLE-HOURS= 1793.53 AVERAGE SPEED(MPH)= 6.71

1 MINIMUM PATH CONSTRUCTS FOR ITERATION: 2

LIST OF LABELLED INTERNAL LINKS FOR EACH ORIGIN NODE

0ORIGIN:8001 ( 1, 2)
0ORIGIN:8003 ( 3, 4) ( 4, 5)
0ORIGIN:2001 ( 3, 1) ( 1, 2) ( 4, 3)

1 TRAFFIC DISTRIBUTION ASSIGNMENT RESULTS AT ITERATION : 2 CAPACITY ITERATION: 1

```
GEOMETRIC  PATH-LINK LENGTH  FREE-FLOW  TRAVEL CAPACITY VOLUME  SPEED TURN RECEIVER
  LINK    RECEIVER   FEET   TIME(SEC) TIME(SEC)   VPH     VPH   (MPH) TYPE  TYPE
                  ON-LINK TOTAL
(8001,  1) (  1,  3)    0    0    7.0    7.0   1085      0    0.0  T   INT
           (  1,  2)                 8.0    8.3    389    200    0.0  L   INT
(8003,  3) (  3,  4)    0    0    6.0  125.1    417   1000    0.0  R   INT V>C
           (  3,  1)                 9.0    9.0    894      0    0.0  T   INT
(  3,  1) (  1,  2) 52800  895  901.0  901.0   1598      1   40.0  R   INT
(  1,  3) (  3,  4) 52800  895  897.0  897.0   1337      0   40.1  L   INT
(  3,  4) (  4,8004) 52800  895  903.0 1804.9   570    647   19.9  R   EXIT V>C
           (  4,  5)            905.0  913.4   1000    353   39.4  T   INT
           (  4,  2)            906.0  906.0    460      0   39.7  L   INT
(  1,  2) (  2,  4) 52800 1427 1435.0 1435.0    661      0   25.1  R   INT
           (  2,8002)          1438.0 1455.4    533    201   24.7  L   EXIT
(  2,  4) (  4,  3) 52800  895  903.0  903.0    570      0   39.9  R   INT
           (  4,8004)           905.0  905.0   1000      0   39.8  T   EXIT
           (  4,  5)            906.0  906.0    460      0   39.7  L   INT
(  4,  5) (  5,8005) 52800  895  895.0  895.1   2880    353   40.2  T   EXIT
(  5,  4) (  4,  2) 52800  895  903.0  903.0    570      0   39.9  R   INT
           (  4,  3)            905.0  905.0   1000      0   39.8  T   INT
           (  4,8004)           906.0  906.0    460      0   39.7  L   EXIT
(  4,  3) (  3,  1) 52800  895  895.0  895.0   3110      1   40.2  R   INT
           (  3,2001)             0.0    0.0   1800      0   40.2      SINK
(  4,  2) (  2,8002) 52800  895  905.0  905.0   1000      0   39.8  T   EXIT

0TURN TYPE: R=RIGHT, T=THROUGH, D=DIAGONAL, L=LEFT;    RECEIVER:  INT = INTERNAL LINK


NETWORK HOURLY ESTIMATES:  VEHICLE-MILES=  15555.49    VEHICLE-HOURS=   618.68    AVERAGE
SPEED(MPH)=  25.14
1                          MINIMUM PATH CONSTRUCTS FOR  ITERATION:  3

                         LIST OF LABELLED INTERNAL LINKS FOR EACH ORIGIN NODE

0ORIGIN:8001 (  1,  2)
0ORIGIN:8003 (  3,  4)
0ORIGIN:2001 (  3,  1) (  1,  2) (  4,  3)
1 TRAFFIC DISTRIBUTION ASSIGNMENT RESULTS AT        ITERATION :  3 CAPACITY ITERATION:  1

GEOMETRIC  PATH-LINK LENGTH  FREE-FLOW  TRAVEL CAPACITY VOLUME  SPEED TURN RECEIVER
  LINK    RECEIVER   FEET   TIME(SEC) TIME(SEC)   VPH     VPH   (MPH) TYPE  TYPE
                  ON-LINK TOTAL
(8001,  1) (  1,  3)    0    0    7.0    7.0   1085      0    0.0  T   INT
           (  1,  2)                 8.0    8.3    389    200    0.0  L   INT
(8003,  3) (  3,  4)    0    0    6.0  125.1    417   1000    0.0  R   INT V>C
           (  3,  1)                 9.0    9.0    894      0    0.0  T   INT
(  3,  1) (  1,  2) 52800  895  901.0  901.0   1598      1   40.0  R   INT
(  1,  3) (  3,  4) 52800  895  897.0  897.0   1337      0   40.1  L   INT
(  3,  4) (  4,8004) 52800  895  903.0 1811.0   570    649   19.9  R   EXIT V>C
           (  4,  5)            905.0  913.3   1000    351   39.4  T   INT
           (  4,  2)            906.0  906.0    460      0   39.7  L   INT
(  1,  2) (  2,  4) 52800 1427 1435.0 1435.0    661      0   25.1  R   INT
           (  2,8002)          1438.0 1455.4    533    201   24.7  L   EXIT
(  2,  4) (  4,  3) 52800  895  903.0  903.0    570      0   39.9  R   INT
           (  4,8004)           905.0  905.0   1000      0   39.8  T   EXIT
           (  4,  5)            906.0  906.0    460      0   39.7  L   INT
(  4,  5) (  5,8005) 52800  895  895.0  895.1   2880    351   40.2  T   EXIT
(  5,  4) (  4,  2) 52800  895  903.0  903.0    570      0   39.9  R   INT
           (  4,  3)            905.0  905.0   1000      0   39.8  T   INT
           (  4,8004)           906.0  906.0    460      0   39.7  L   EXIT
(  4,  3) (  3,  1) 52800  895  895.0  895.0   3110      1   40.2  R   INT
           (  3,2001)             0.0    0.0   1800      0   40.2      SINK
(  4,  2) (  2,8002) 52800  895  905.0  905.0   1000      0   39.8  T   EXIT

0TURN TYPE: R=RIGHT, T=THROUGH, D=DIAGONAL, L=LEFT;    RECEIVER:  INT = INTERNAL LINK
```

NETWORK HOURLY ESTIMATES: VEHICLE-MILES= 15544.54 VEHICLE-HOURS= 619.77 AVERAGE SPEED(MPH)= 25.08

## TRAFFIC DISTRIBUTION ASSIGNMENT EVALUATION

| ITERATION | OBJECTIVE FUNCTION VALUE (VEH-SEC) | BOUND GAP(%) | LAMBDA | CONTRIBUTION(%) |
|---|---|---|---|---|
| 1 | 0.2372733750E+07 | 100.000000 | 1.000000 | 64.544006 |
| 2 | 0.1779704250E+07 | 100.000000 | 0.352549 | 35.145401 |
| 3 | 0.1779703750E+07 | 0.068747 | 0.003106 | 0.310591 |

1 DETAILED LIST OF O-D MINIMUM PATHS

THE FOLLOWING LISTING PROVIDES THE ASSIGNED VOLUME AND THE SEQUENCE OF INTERNAL NODE NUMBERS FOR EACH O-D MININIMUM PATH.
TOTAL DEMANDIS PRINTED FOLLOWING ALL PATHS FOR EACH O-D PAIR.
NOTE THAT CUMULATIVE TRAVEL TIME (SEC) FOR THE O-D PATH IS PRINTED FOLLOWING THE NODE LIST.

```
  O-D     VOLUME    PATH ROUTE

        0 VPH
        0 VPH

8001-8002  200.0    1,   2
(SEC):          8.3,1463.8
       200 VPH

8003-8005  351.0    3,   4,   5
(SEC):          125.1,1038.3,1933.5
       351 VPH

8003-8004  648.0    3,   4
(SEC):          125.1,1936.1
       648 VPH
        0 VPH
        0 VPH

2001-8002   1.0    4,   3,   1,   2
(SEC):           0.0, 895.0,1796.0,3251.4
        1 VPH
```

1 TRAFFIC ASSIGNMENT RESULTS

## ESIM SUBNETWORK

| LINK | INTERNAL CENTROID | RIGHT TURN VOL. VPH | RIGHT TURN PCT. | THRU VOL. VPH | THRU PCT. | LEFT TURN VOL. VPH | LEFT TURN PCT. | DIAGONAL VOL. VPH | DIAGONAL PCT. | SOURCE FLOW VPH | SINK FLOW VPH | DISCHARGE VOLUME VPH | SPEED ESTIMATE MPH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (8001, 1) | 0 | 0 | 0 | 0 | 0 | 200 | 100 | 0 | 0 | 0 | 0 | 200 | |
| ( 1, 3) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| ( 3, 1) | 0 | 1 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 39.9 |
| (8003, 3) | 0 | 1000 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1000 | |
| ( 3, 4) | 0 | 649 | 65 | 351 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 1000 | 24.0 |
| ( 4, 3) | 2001 | 1 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 40.2 |
| ( 4, 5) | 0 | 0 | 0 | 351 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 351 | 40.2 |
| ( 5, 4) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| ( 4, 2) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| ( 2, 4) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| ( 1, 2) | 0 | 0 | 0 | 0 | 0 | 201 | 100 | 0 | 0 | 0 | 0 | 201 | 24.7 |

1 TRAFFIC ASSIGNMENT

## ESIM ENTRY LINK VOLUMES

| LINK | FLOW RATE (VEH/HOUR) | TRUCKS (PERCENT) |
|---|---|---|
| (8001, 1) | 200 | 0 |
| (8003, 3) | 1000 | 0 |

1 CUMULATIVE ESIM STATISTICS AT TIME 16: 5: 0

ELAPSED TIME IS 0: 5: 0 ( 300 SECONDS), TIME PERIOD 1 ELAPSED TIME IS 300 SECONDS

LINK STATISTICS

| LINK | VEHICLE MILES | VEHICLE TRIPS | VEHICLE HOURS MOVE TIME | VEHICLE HOURS DELAY TIME | VEHICLE HOURS TOTAL TIME | RATIO MOVE/ TOTAL | MINUTES/MILE TOTAL TIME | MINUTES/MILE DELAY TIME | SECONDS/VEHICLE TOTAL TIME | SECONDS/VEHICLE DELAY TIME | AVERAGE VALUES CNTNT | AVERAGE VALUES VOLUME VPH | SPEED MPH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (8001, 1) | | 117 | | | | | | | 1400 | | | | |
| (8003, 3) | | 94 | | | | | | | 1126 | | | | |
| ( 3, 1) | 134.30 | 13 | 3.36 | 0.02 | 3.38 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 69 | 161 | 39.8 |
| ( 1, 3) | 177.77 | 18 | 4.44 | 0.03 | 4.47 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 92 | 213 | 39.8 |
| ( 3, 4) | 380.38 | 38 | 9.51 | 0.05 | 9.56 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 219 | 456 | 39.8 |
| ( 1, 2) | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0 | 0 | 0.0 |
| ( 2, 4) | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0 | 0 | 0.0 |
| ( 4, 5) | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0 | 0 | 0.0 |
| ( 5, 4) | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0 | 0 | 0.0 |
| ( 4, 3) | 133.33 | 13 | 3.33 | 0.02 | 3.35 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 0 | 160 | 39.8 |
| ( 4, 2) | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0 | 0 | 0.0 |
| 0 NETWORK= | 825.78 | 1 | 20.64 | 0.12 | 20.76 | 0.99 | 1.51 | 0.01 | 905.55 | 5.09 | 381.5 | | 39.8 |

1 CUMULATIVE ESIM STATISTICS AT TIME 16:10: 0

ELAPSED TIME IS 0:10: 0 ( 600 SECONDS), TIME PERIOD 1 ELAPSED TIME IS 600 SECONDS

LINK STATISTICS

| LINK | VEHICLE MILES | VEHICLE TRIPS | VEHICLE HOURS MOVE TIME | VEHICLE HOURS DELAY TIME | VEHICLE HOURS TOTAL TIME | RATIO MOVE/ TOTAL | MINUTES/MILE TOTAL TIME | MINUTES/MILE DELAY TIME | SECONDS/VEHICLE TOTAL TIME | SECONDS/VEHICLE DELAY TIME | AVERAGE VALUES CNTNT | AVERAGE VALUES VOLUME VPH | SPEED MPH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (8001, 1) | | 233 | | | | | | | 1399 | | | | |
| (8003, 3) | | 189 | | | | | | | 1135 | | | | |
| ( 3, 1) | 412.13 | 41 | 10.30 | 0.06 | 10.36 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 69 | 247 | 39.8 |
| ( 1, 3) | 545.53 | 55 | 13.64 | 0.08 | 13.72 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 92 | 327 | 39.8 |
| ( 3, 4) | 1193.11 | 119 | 29.83 | 0.17 | 30.00 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 255 | 715 | 39.8 |
| ( 1, 2) | 58.03 | 6 | 1.16 | 0.00 | 1.16 | 1.00 | 1.20 | 0.00 | 720.0 | 0.0 | 354 | 34 | 25.2 |
| ( 2, 4) | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0 | 0 | 0.0 |
| ( 4, 5) | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0 | 0 | 0.0 |
| ( 5, 4) | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0 | 0 | 0.0 |
| ( 4, 3) | 266.67 | 27 | 6.67 | 0.04 | 6.70 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 0 | 159 | 39.8 |
| ( 4, 2) | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0 | 0 | 0.0 |
| 0 NETWORK= | 2475.47 | 5 | 61.60 | 0.34 | 61.94 | 0.99 | 1.50 | 0.01 | 804.38 | 4.43 | 773.0 | | 40.0 |

1 CUMULATIVE ESIM STATISTICS AT TIME 16:15: 0

ELAPSED TIME IS 0:15: 0 ( 900 SECONDS), TIME PERIOD 1 ELAPSED TIME IS 900 SECONDS

LINK STATISTICS

| LINK | VEHICLE MILES | VEHICLE TRIPS | VEHICLE HOURS MOVE TIME | VEHICLE HOURS DELAY TIME | VEHICLE HOURS TOTAL TIME | RATIO MOVE/ TOTAL | MINUTES/MILE TOTAL TIME | MINUTES/MILE DELAY TIME | SECONDS/VEHICLE TOTAL TIME | SECONDS/VEHICLE DELAY TIME | AVERAGE VALUES CNTNT | AVERAGE VALUES VOLUME VPH | SPEED MPH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (8001, 1) | | 350 | | | | | | | 1400 | | | | |
| (8003, 3) | | 282 | | | | | | | 1127 | | | | |
| ( 3, 1) | 689.96 | 69 | 17.25 | 0.10 | 17.35 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 69 | 275 | 39.8 |
| ( 1, 3) | 913.30 | 91 | 22.83 | 0.13 | 22.96 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 92 | 365 | 39.8 |
| ( 3, 4) | 2004.11 | 200 | 50.10 | 0.28 | 50.39 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 289 | 801 | 39.8 |
| ( 1, 2) | 824.01 | 82 | 32.96 | 0.30 | 33.26 | 0.99 | 2.42 | 0.02 | 1453.0 | 13.0 | 386 | 329 | 24.8 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ( 2, 4) | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0 | 0 | 0.0 |
| ( 4, 5) | 17.08 | 2 | 0.14 | 0.00 | 0.14 | 1.00 | 0.50 | 0.00 | 300.0 | 0.0 | 75 | 6 | 40.2 |
| ( 5, 4) | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0 | 0 | 0.0 |
| ( 4, 3) | 400.00 | 40 | 10.00 | 0.06 | 10.06 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 0 | 160 | 39.8 |
| ( 4, 2) | 11.84 | 1 | 0.10 | 0.00 | 0.10 | 1.00 | 0.50 | 0.00 | 300.0 | 0.0 | 50 | 4 | 40.2 |
| 0 NETWORK= | 4860.28 | 12 | 133.39 | 0.86 | 134.25 | 0.99 | 1.66 | 0.01 | 682.83 | 4.39 | | 963.8 | 36.2 |

1 CUMULATIVE ESIM STATISTICS AT TIME 16:20: 0

ELAPSED TIME IS 0:20: 0 ( 1200 SECONDS), TIME PERIOD 2 ELAPSED TIME IS 300 SECONDS

LINK STATISTICS

| LINK | VEHICLE MILES | TRIPS | VEHICLE HOURS MOVE TIME | DELAY TIME | TOTAL TIME | RATIO MOVE/ TOTAL | MINUTES/MILE TOTAL TIME | DELAY TIME | SECONDS/VEHICLE TOTAL TIME | DELAY TIME | AVERAGE VALUES CNTNT | VOLUME VPH | SPEED MPH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (8001, 1) | | 433 | | | | | | | 1300 | | | | |
| (8003, 3) | | 364 | | | | | | | 1090 | | | | |
| ( 3, 1) | 967.78 | 97 | 24.19 | 0.14 | 24.33 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 48 | 290 | 39.8 |
| ( 1, 3) | 1281.06 | 128 | 32.03 | 0.18 | 32.21 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 60 | 384 | 39.8 |
| ( 3, 4) | 3146.30 | 315 | 78.66 | 0.44 | 79.10 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 293 | 943 | 39.8 |
| ( 1, 2) | 1622.91 | 162 | 64.92 | 0.58 | 65.50 | 0.99 | 2.42 | 0.02 | 1453.0 | 13.0 | 412 | 486 | 24.8 |
| ( 2, 4) | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0 | 0 | 0.0 |
| ( 4, 5) | 291.49 | 29 | 7.29 | 0.04 | 7.33 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 111 | 87 | 39.8 |
| ( 5, 4) | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0 | 0 | 0.0 |
| ( 4, 3) | 466.67 | 47 | 11.67 | 0.07 | 11.73 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 0 | 139 | 39.8 |
| ( 4, 2) | 202.13 | 20 | 5.05 | 0.03 | 5.08 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 52 | 60 | 39.8 |
| 0 NETWORK= | 7978.34 | 24 | 223.80 | 1.48 | 225.28 | 0.99 | 1.69 | 0.01 | 573.57 | 3.77 | | 979.9 | 35.4 |

1 CUMULATIVE ESIM STATISTICS AT TIME 16:25: 0

ELAPSED TIME IS 0:25: 0 ( 1500 SECONDS), TIME PERIOD 2 ELAPSED TIME IS 600 SECONDS

LINK STATISTICS

| LINK | VEHICLE MILES | TRIPS | VEHICLE HOURS MOVE TIME | DELAY TIME | TOTAL TIME | RATIO MOVE/ TOTAL | MINUTES/MILE TOTAL TIME | DELAY TIME | SECONDS/VEHICLE TOTAL TIME | DELAY TIME | AVERAGE VALUES CNTNT | VOLUME VPH | SPEED MPH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (8001, 1) | | 517 | | | | | | | 1240 | | | | |
| (8003, 3) | | 443 | | | | | | | 1062 | | | | |
| ( 3, 1) | 1245.61 | 125 | 31.14 | 0.18 | 31.32 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 27 | 298 | 39.8 |
| ( 1, 3) | 1648.82 | 165 | 41.22 | 0.23 | 41.45 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 28 | 395 | 39.8 |
| ( 3, 4) | 4305.59 | 431 | 107.64 | 0.61 | 108.25 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 293 | 1033 | 39.8 |
| ( 1, 2) | 2564.84 | 256 | 102.59 | 0.92 | 103.52 | 0.99 | 2.42 | 0.02 | 1453.0 | 13.0 | 424 | 615 | 24.8 |
| ( 2, 4) | 194.91 | 19 | 0.97 | 0.00 | 0.97 | 1.00 | 0.30 | 0.00 | 180.0 | 0.0 | 104 | 46 | 40.2 |
| ( 4, 5) | 593.46 | 59 | 14.84 | 0.08 | 14.92 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 148 | 142 | 39.8 |
| ( 5, 4) | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0 | 0 | 0.0 |
| ( 4, 3) | 533.33 | 53 | 13.33 | 0.08 | 13.41 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 0 | 127 | 39.8 |
| ( 4, 2) | 411.52 | 41 | 10.29 | 0.06 | 10.35 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 52 | 98 | 39.8 |
| 0 NETWORK= | 11498.09 | 38 | 322.03 | 2.16 | 324.19 | 0.99 | 1.69 | 0.01 | 509.26 | 3.39 | | 1079.5 | 35.5 |

1 CUMULATIVE ESIM STATISTICS AT TIME 16:30: 0

ELAPSED TIME IS 0:30: 0 ( 1800 SECONDS), TIME PERIOD 2 ELAPSED TIME IS 900 SECONDS

LINK STATISTICS

| LINK | VEHICLE MILES | TRIPS | VEHICLE HOURS MOVE TIME | DELAY TIME | TOTAL TIME | RATIO MOVE/ TOTAL | MINUTES/MILE TOTAL TIME | DELAY TIME | SECONDS/VEHICLE TOTAL TIME | DELAY TIME | AVERAGE VALUES CNTNT | VOLUME VPH | SPEED MPH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (8001, 1) | | 600 | | | | | | | 1200 | | | | |
| (8003, 3) | | 524 | | | | | | | 1047 | | | | |
| ( 3, 1) | 1421.37 | 142 | 35.53 | 0.20 | 35.74 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 16 | 284 | 39.8 |
| ( 1, 3) | 1862.31 | 186 | 46.56 | 0.26 | 46.82 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 12 | 372 | 39.8 |
| ( 3, 4) | 5476.76 | 548 | 136.92 | 0.77 | 137.69 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 278 | 1095 | 39.8 |
| ( 1, 2) | 3641.58 | 364 | 145.66 | 1.31 | 146.98 | 0.99 | 2.42 | 0.02 | 1453.0 | 13.0 | 412 | 728 | 24.8 |

```
( 2, 4) 573.51   57  14.34  0.08  14.42  0.99  1.51  0.01  905.1  5.1  122  114  39.8
( 4, 5) 1058.97  106  26.47  0.15  26.62  0.99  1.51  0.01  905.1  5.1  168  211  39.8
( 5, 4)   0.00    0  0.00  0.00  0.00  0.00  0.00  0.00  0.0  0.0  0  0  0.0
( 4, 3) 600.00   60  15.00  0.08  15.08  0.99  1.51  0.01  905.1  5.1  0  119  39.8
( 4, 2) 618.70   62  15.47  0.09  15.55  0.99  1.51  0.01  905.1  5.1  52  123  39.8
0 NETWORK= 15253.19  57  435.95  2.95  438.91  0.99  1.73  0.01  463.73  3.12  1064.5      34.8
1                      CUMULATIVE ESIM STATISTICS AT TIME 16:35: 0

          ELAPSED TIME IS 0:35: 0 ( 2100 SECONDS),   TIME PERIOD 3 ELAPSED TIME IS 300 SECONDS

                                LINK STATISTICS

                    VEHICLE HOURS    RATIO  MINUTES/MILE  SECONDS/VEHICLE  AVERAGE VALUES
             VEHICLE    MOVE  DELAY  TOTAL  MOVE/  TOTAL  DELAY  TOTAL  DELAY  CNTNT  VOLUME
SPEED
 LINK     MILES  TRIPS   TIME   TIME   TIME  TOTAL   TIME   TIME   TIME   TIME         VPH   MPH
 ---      ------  ----------  ---  ------  ------  ----------
(8001, 1)           617                                          1057
(8003, 3)           603                                          1032
( 3, 1) 1488.04  149  37.20  0.21  37.41  0.99  1.51  0.01  905.1  5.1  10  255  39.8
( 1, 3) 1910.92  191  47.77  0.27  48.04  0.99  1.51  0.01  905.1  5.1  7  327  39.8
( 3, 4) 6640.67  664  166.02  0.94  166.95  0.99  1.51  0.01  905.1  5.1  246  1138  39.8
( 1, 2) 4717.28  472  188.69  1.70  190.39  0.99  2.42  0.02  1453.0  13.0  328  808  24.8
( 2, 4) 968.93   97  24.22  0.14  24.36  0.99  1.51  0.01  905.1  5.1  138  166  39.8
( 4, 5) 1730.24  173  43.26  0.24  43.50  0.99  1.51  0.01  905.1  5.1  168  296  39.8
( 5, 4)   0.00    0  0.00  0.00  0.00  0.00  0.00  0.00  0.0  0.0  0  0  0.0
( 4, 3) 600.83   60  15.02  0.08  15.11  0.99  1.51  0.01  905.1  5.1  0  102  39.8
( 4, 2) 829.98   83  20.75  0.12  20.87  0.99  1.51  0.01  905.1  5.1  52  142  39.8
0 NETWORK= 18886.89  78  542.93  3.70  546.63  0.99  1.74  0.01  422.48  2.86  951.8      34.6
1                      CUMULATIVE ESIM STATISTICS AT TIME 16:40: 0

          ELAPSED TIME IS 0:40: 0 ( 2400 SECONDS),   TIME PERIOD 3 ELAPSED TIME IS 600 SECONDS

                                LINK STATISTICS

                    VEHICLE HOURS    RATIO  MINUTES/MILE  SECONDS/VEHICLE  AVERAGE VALUES
             VEHICLE    MOVE  DELAY  TOTAL  MOVE/  TOTAL  DELAY  TOTAL  DELAY  CNTNT  VOLUME
SPEED
 LINK     MILES  TRIPS   TIME   TIME   TIME  TOTAL   TIME   TIME   TIME   TIME         VPH   MPH
 ---      ------  ----------  ---  ------  ------  ----------
(8001, 1)           633                                          949
(8003, 3)           683                                          1024
( 3, 1) 1554.70  155  38.87  0.22  39.09  0.99  1.51  0.01  905.1  5.1  3  233  39.8
( 1, 3) 1959.52  196  48.99  0.28  49.26  0.99  1.51  0.01  905.1  5.1  2  293  39.8
( 3, 4) 7786.54  779  194.66  1.10  195.76  0.99  1.51  0.01  905.1  5.1  217  1167  39.8
( 1, 2) 5780.42  578  231.22  2.08  233.30  0.99  2.42  0.02  1453.0  13.0  245  867  24.8
( 2, 4) 1511.05  151  37.78  0.21  37.99  0.99  1.51  0.01  905.1  5.1  137  226  39.8
( 4, 5) 2395.15  240  59.88  0.34  60.22  0.99  1.51  0.01  905.1  5.1  166  359  39.8
( 5, 4)   0.00    0  0.00  0.00  0.00  0.00  0.00  0.00  0.0  0.0  0  0  0.0
( 4, 3) 601.67   60  15.04  0.08  15.13  0.99  1.51  0.01  905.1  5.1  0  90  39.8
( 4, 2) 1036.03  104  25.90  0.15  26.05  0.99  1.51  0.01  905.1  5.1  52  155  39.8
0 NETWORK= 22625.08  100  652.33  4.46  656.80  0.99  1.74  0.01  394.23  2.68  826.0      34.4
1                      CUMULATIVE ESIM STATISTICS AT TIME 16:45: 0

          ELAPSED TIME IS 0:45: 0 ( 2700 SECONDS),   TIME PERIOD 3 ELAPSED TIME IS 900 SECONDS

                                LINK STATISTICS

                    VEHICLE HOURS    RATIO  MINUTES/MILE  SECONDS/VEHICLE  AVERAGE VALUES
             VEHICLE    MOVE  DELAY  TOTAL  MOVE/  TOTAL  DELAY  TOTAL  DELAY  CNTNT  VOLUME
SPEED
 LINK     MILES  TRIPS   TIME   TIME   TIME  TOTAL   TIME   TIME   TIME   TIME         VPH   MPH
 ---      ------  ----------  ---  ------  ------  ----------
(8001, 1)           650                                          866
(8003, 3)           762                                          1016
( 3, 1) 1589.81  159  39.75  0.22  39.97  0.99  1.51  0.01  905.1  5.1  0  211  39.8
( 1, 3) 1984.63  198  49.62  0.28  49.90  0.99  1.51  0.01  905.1  5.1  0  264  39.8
( 3, 4) 8668.50  867  216.71  1.22  217.94  0.99  1.51  0.01  905.1  5.1  210  1155  39.8
( 1, 2) 6842.97  684  273.72  2.47  276.18  0.99  2.42  0.02  1453.0  13.0  159  912  24.8
```

```
( 2, 4) 2070.32  207  51.76  0.29  52.05  0.99  1.51  0.01  905.1  5.1  135  276  39.8
( 4, 5) 3068.95  307  76.72  0.43  77.16  0.99  1.51  0.01  905.1  5.1  132  409  39.8
( 5, 4)    0.00    0   0.00  0.00   0.00  0.00  0.00  0.00    0.0  0.0    0    0   0.0
( 4, 3)  602.50   60  15.06  0.09  15.15  0.99  1.51  0.01  905.1  5.1    0   80  39.8
( 4, 2) 1248.25  125  31.21  0.18  31.38  0.99  1.51  0.01  905.1  5.1   55  166  39.8
0 NETWORK= 26075.94  123 754.54  5.18 759.73  0.99  1.75  0.01 371.15  2.53  693.3      34.3
1                     CUMULATIVE ESIM STATISTICS AT TIME 16:50: 0

          ELAPSED TIME IS  0:50: 0 ( 3000 SECONDS),   TIME PERIOD  3 ELAPSED TIME IS 1200 SECONDS

                                LINK STATISTICS

                    VEHICLE HOURS     RATIO  MINUTES/MILE  SECONDS/VEHICLE   AVERAGE VALUES
          VEHICLE      MOVE  DELAY  TOTAL MOVE/  TOTAL  DELAY  TOTAL  DELAY  CNTNT  VOLUME
SPEED
 LINK      MILES TRIPS  TIME   TIME   TIME TOTAL  TIME   TIME   TIME   TIME         VPH   MPH
 ---      ------ ----- ------ ----  ------ -----  ------ -----------

(8001, 1)          650                                   779
(8003, 3)          843                                   1011
( 3, 1) 1590.64  159  39.77  0.22  39.99  0.99  1.51  0.01  905.1  5.1    0  190  39.8
( 1, 3) 1984.63  198  49.62  0.28  49.90  0.99  1.51  0.01  905.1  5.1    0  238  39.8
( 3, 4) 9506.39  951 237.66  1.34 239.00  0.99  1.51  0.01  905.1  5.1  206 1140  39.8
( 1, 2) 7751.93  775 310.08  2.79 312.87  0.99  2.42  0.02 1453.0 13.0   68  930  24.8
( 2, 4) 2615.18  262  65.38  0.37  65.75  0.99  1.51  0.01  905.1  5.1  123  313  39.8
( 4, 5) 3733.84  373  93.35  0.53  93.87  0.99  1.51  0.01  905.1  5.1   95  448  39.8
( 5, 4)    0.00    0   0.00  0.00   0.00  0.00  0.00  0.00    0.0  0.0    0    0   0.0
( 4, 3)  605.50   61  15.14  0.09  15.22  0.99  1.51  0.01  905.1  5.1    0   72  39.8
( 4, 2) 1454.29  145  36.36  0.21  36.56  0.99  1.51  0.01  905.1  5.1   58  174  39.8
0 NETWORK= 29242.40  145 847.34  5.83 853.17  0.99  1.75  0.01 353.44  2.41  553.5      34.3
1                     CUMULATIVE ESIM STATISTICS AT TIME 16:55: 0

          ELAPSED TIME IS  0:55: 0 ( 3300 SECONDS),   TIME PERIOD  3 ELAPSED TIME IS 1500 SECONDS

                                LINK STATISTICS

                    VEHICLE HOURS     RATIO  MINUTES/MILE  SECONDS/VEHICLE   AVERAGE VALUES
          VEHICLE      MOVE  DELAY  TOTAL MOVE/  TOTAL  DELAY  TOTAL  DELAY  CNTNT  VOLUME
SPEED
 LINK      MILES TRIPS  TIME   TIME   TIME TOTAL  TIME   TIME   TIME   TIME         VPH   MPH
 ---      ------ ----- ------ ----  ------ -----  ------ -----------

(8001, 1)          650                                   709
(8003, 3)          922                                   1006
( 3, 1) 1591.48  159  39.79  0.22  40.01  0.99  1.51  0.01  905.1  5.1    0  173  39.8
( 1, 3) 1984.63  198  49.62  0.28  49.90  0.99  1.51  0.01  905.1  5.1    0  216  39.8
( 3, 4)10364.50 1036 259.11  1.46 260.58  0.99  1.51  0.01  905.1  5.1  200 1130  39.8
( 1, 2) 8010.74  801 320.43  2.89 323.32  0.99  2.42  0.02 1453.0 13.0   42  873  24.8
( 2, 4) 3146.47  315  78.66  0.44  79.11  0.99  1.51  0.01  905.1  5.1   74  343  39.8
( 4, 5) 4240.13  424 106.00  0.60 106.60  0.99  1.51  0.01  905.1  5.1   75  462  39.8
( 5, 4)    0.00    0   0.00  0.00   0.00  0.00  0.00  0.00    0.0  0.0    0    0   0.0
( 4, 3)  608.50   61  15.21  0.09  15.30  0.99  1.51  0.01  905.1  5.1    0   66  39.8
( 4, 2) 1679.04  168  41.98  0.24  42.21  0.99  1.51  0.01  905.1  5.1   59  183  39.8
0 NETWORK= 31625.49  163 910.80  6.22 917.02  0.99  1.74  0.01 338.11  2.29  454.7      34.5
1                     CUMULATIVE ESIM STATISTICS AT TIME 17: 0: 0

          ELAPSED TIME IS  1: 0: 0 ( 3600 SECONDS),   TIME PERIOD  3 ELAPSED TIME IS 1800 SECONDS

                                LINK STATISTICS

                    VEHICLE HOURS     RATIO  MINUTES/MILE  SECONDS/VEHICLE   AVERAGE VALUES
          VEHICLE      MOVE  DELAY  TOTAL MOVE/  TOTAL  DELAY  TOTAL  DELAY  CNTNT  VOLUME
SPEED
 LINK      MILES TRIPS  TIME   TIME   TIME TOTAL  TIME   TIME   TIME   TIME         VPH   MPH
 ---      ------ ----- ------ ----  ------ -----  ------ -----------

(8001, 1)          650                                   649
(8003, 3)         1002                                   1001
( 3, 1) 1594.04  159  39.85  0.23  40.08  0.99  1.51  0.01  905.1  5.1    0  159  39.8
( 1, 3) 1984.63  198  49.62  0.28  49.90  0.99  1.51  0.01  905.1  5.1    0  198  39.8
( 3, 4)11155.01 1116 278.88  1.58 280.45  0.99  1.51  0.01  905.1  5.1  201 1115  39.8
( 1, 2) 8244.07  824 329.76  2.97 332.73  0.99  2.42  0.02 1453.0 13.0   19  824  24.8
```

```
( 2, 4) 3663.68   366  91.59  0.52  92.11  0.99  1.51  0.01  905.1   5.1   25  366  39.8
( 4, 5) 4539.60   454 113.49  0.64 114.13  0.99  1.51  0.01  905.1   5.1   75  453  39.8
( 5, 4)    0.00     0   0.00  0.00   0.00  0.00  0.00  0.00    0.0   0.0    0    0   0.0
( 4, 3)  611.50    61  15.29  0.09  15.37  0.99  1.51  0.01  905.1   5.1    0   61  39.8
( 4, 2) 1914.64   191  47.87  0.27  48.14  0.99  1.51  0.01  905.1   5.1   56  191  39.8
0 NETWORK= 33707.18   178 966.34  6.57 972.91  0.99  1.73  0.01  327.66  2.21  380.2     34.6
1                      CUMULATIVE ESIM STATISTICS AT TIME 17: 5: 0

        ELAPSED TIME IS  1: 5: 0 ( 3900 SECONDS),   TIME PERIOD  3 ELAPSED TIME IS 2100 SECONDS

                              LINK STATISTICS

                 VEHICLE HOURS     RATIO   MINUTES/MILE  SECONDS/VEHICLE   AVERAGE VALUES
          VEHICLE     MOVE  DELAY  TOTAL  MOVE/  TOTAL  DELAY  TOTAL  DELAY  CNTNT  VOLUME
SPEED
 LINK      MILES TRIPS  TIME   TIME   TIME  TOTAL   TIME   TIME   TIME   TIME        VPH   MPH

(8001, 1)        650                                      599
(8003, 3)       1083                                      999
( 3, 1) 1597.04   160  39.93  0.23  40.15  0.99  1.51  0.01  905.1   5.1    0  147  39.8
( 1, 3) 1984.63   198  49.62  0.28  49.90  0.99  1.51  0.01  905.1   5.1    0  183  39.8
( 3, 4)11967.74  1197 299.19  1.69 300.88  0.99  1.51  0.01  905.1   5.1  200 1104  39.8
( 1, 2) 8431.78   843 337.27  3.04 340.31  0.99  2.42  0.02 1453.0  13.0    1  778  24.8
( 2, 4) 3877.94   388  96.95  0.55  97.50  0.99  1.51  0.01  905.1   5.1    5  357  39.8
( 4, 5) 4842.98   484 121.07  0.68 121.76  0.99  1.51  0.01  905.1   5.1   78  447  39.8
( 5, 4)    0.00     0   0.00  0.00   0.00  0.00  0.00  0.00    0.0   0.0    0    0   0.0
( 4, 3)  614.50    61  15.36  0.09  15.45  0.99  1.51  0.01  905.1   5.1    0   56  39.8
( 4, 2) 2153.87   215  53.85  0.30  54.15  0.99  1.51  0.01  905.1   5.1   40  198  39.8
0 NETWORK= 35470.48   192 1013.24  6.86 1020.10  0.99  1.73  0.01  319.60  2.15  327.9     34.8
1                      CUMULATIVE ESIM STATISTICS AT TIME 17:10: 0

        ELAPSED TIME IS  1:10: 0 ( 4200 SECONDS),   TIME PERIOD  3 ELAPSED TIME IS 2400 SECONDS

                              LINK STATISTICS

                 VEHICLE HOURS     RATIO   MINUTES/MILE  SECONDS/VEHICLE   AVERAGE VALUES
          VEHICLE     MOVE  DELAY  TOTAL  MOVE/  TOTAL  DELAY  TOTAL  DELAY  CNTNT  VOLUME
SPEED
 LINK      MILES TRIPS  TIME   TIME   TIME  TOTAL   TIME   TIME   TIME   TIME        VPH   MPH

(8001, 1)        650                                      557
(8003, 3)       1161                                      995
( 3, 1) 1600.04   160  40.00  0.23  40.23  0.99  1.51  0.01  905.1   5.1    0  137  39.8
( 1, 3) 1984.63   198  49.62  0.28  49.90  0.99  1.51  0.01  905.1   5.1    0  170  39.8
( 3, 4)12757.85  1276 318.95  1.80 320.75  0.99  1.51  0.01  905.1   5.1  200 1093  39.8
( 1, 2) 8439.51   844 337.58  3.04 340.62  0.99  2.42  0.02 1453.0  13.0    0  723  24.8
( 2, 4) 3907.47   391  97.69  0.55  98.24  0.99  1.51  0.01  905.1   5.1    2  334  39.8
( 4, 5) 5142.54   514 128.56  0.73 129.29  0.99  1.51  0.01  905.1   5.1   82  440  39.8
( 5, 4)    0.00     0   0.00  0.00   0.00  0.00  0.00  0.00    0.0   0.0    0    0   0.0
( 4, 3)  617.50    62  15.44  0.09  15.52  0.99  1.51  0.01  905.1   5.1    0   52  39.8
( 4, 2) 2377.37   238  59.43  0.34  59.77  0.99  1.51  0.01  905.1   5.1   22  203  39.8
0 NETWORK= 36826.93   201 1047.27  7.05 1054.32  0.99  1.72  0.01  314.38  2.10  309.4     34.9
1                      CUMULATIVE ESIM STATISTICS AT TIME 17:15: 0

        ELAPSED TIME IS  1:15: 0 ( 4500 SECONDS),   TIME PERIOD  3 ELAPSED TIME IS 2700 SECONDS

                              LINK STATISTICS

                 VEHICLE HOURS     RATIO   MINUTES/MILE  SECONDS/VEHICLE   AVERAGE VALUES
          VEHICLE     MOVE  DELAY  TOTAL  MOVE/  TOTAL  DELAY  TOTAL  DELAY  CNTNT  VOLUME
SPEED
 LINK      MILES TRIPS  TIME   TIME   TIME  TOTAL   TIME   TIME   TIME   TIME        VPH   MPH

(8001, 1)        650                                      519
(8003, 3)       1243                                      994
( 3, 1) 1603.04   160  40.08  0.23  40.30  0.99  1.51  0.01  905.1   5.1    0  128  39.8
( 1, 3) 1984.63   198  49.62  0.28  49.90  0.99  1.51  0.01  905.1   5.1    0  158  39.8
( 3, 4)13565.39  1357 339.13  1.92 341.05  0.99  1.51  0.01  905.1   5.1  201 1085  39.8
( 1, 2) 8440.35   844 337.61  3.04 340.66  0.99  2.42  0.02 1453.0  13.0    1  675  24.8
```

| LINK | VEHICLE MILES | TRIPS | VEHICLE HOURS MOVE TIME | DELAY TIME | TOTAL TIME | RATIO MOVE/ TOTAL | MINUTES/MILE TOTAL TIME | DELAY TIME | SECONDS/VEHICLE TOTAL TIME | DELAY TIME | AVERAGE VALUES CNTNT | VOLUME VPH | SPEED MPH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ( 2, 4) | 3936.67 | 394 | 98.42 | 0.56 | 98.97 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 0 | 314 | 39.8 |
| ( 4, 5) | 5456.37 | 546 | 136.41 | 0.77 | 137.18 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 84 | 436 | 39.8 |
| ( 5, 4) | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0 | 0 | 0.0 |
| ( 4, 3) | 620.50 | 62 | 15.51 | 0.09 | 15.60 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 0 | 49 | 39.8 |
| ( 4, 2) | 2528.13 | 253 | 63.20 | 0.36 | 63.56 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 12 | 202 | 39.8 |
| 0 NETWORK= | 38135.08 | 210 | 1079.98 | 7.24 | 1087.22 | 0.99 | 1.71 | 0.01 | 310.10 | 2.06 | | 299.9 | 35.1 |

1 CUMULATIVE ESIM STATISTICS AT TIME 17:20: 0

ELAPSED TIME IS 1:20: 0 ( 4800 SECONDS), TIME PERIOD 3 ELAPSED TIME IS 3000 SECONDS

LINK STATISTICS

| LINK | VEHICLE MILES | TRIPS | VEHICLE HOURS MOVE TIME | DELAY TIME | TOTAL TIME | RATIO MOVE/ TOTAL | MINUTES/MILE TOTAL TIME | DELAY TIME | SECONDS/VEHICLE TOTAL TIME | DELAY TIME | AVERAGE VALUES CNTNT | VOLUME VPH | SPEED MPH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (8001, 1) | | 650 | | | | | | | 487 | | | | |
| (8003, 3) | | 1322 | | | | | | | 991 | | | | |
| ( 3, 1) | 1606.04 | 161 | 40.15 | 0.23 | 40.38 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 0 | 120 | 39.8 |
| ( 1, 3) | 1984.63 | 198 | 49.62 | 0.28 | 49.90 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 0 | 148 | 39.8 |
| ( 3, 4) | 14356.92 | 1436 | 358.92 | 2.03 | 360.95 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 200 | 1076 | 39.8 |
| ( 1, 2) | 8443.35 | 844 | 337.73 | 3.04 | 340.78 | 0.99 | 2.42 | 0.02 | 1453.0 | 13.0 | 1 | 633 | 24.8 |
| ( 2, 4) | 3936.80 | 394 | 98.42 | 0.56 | 98.98 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 0 | 295 | 39.8 |
| ( 4, 5) | 5792.93 | 579 | 144.82 | 0.82 | 145.64 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 83 | 434 | 39.8 |
| ( 5, 4) | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0 | 0 | 0.0 |
| ( 4, 3) | 623.50 | 62 | 15.59 | 0.09 | 15.68 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 0 | 46 | 39.8 |
| ( 4, 2) | 2576.94 | 258 | 64.42 | 0.36 | 64.79 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 11 | 193 | 39.8 |
| 0 NETWORK= | 39321.12 | 218 | 1109.68 | 7.40 | 1117.08 | 0.99 | 1.70 | 0.01 | 306.75 | 2.03 | | 297.8 | 35.2 |

1 CUMULATIVE ESIM STATISTICS AT TIME 17:25: 0

ELAPSED TIME IS 1:25: 0 ( 5100 SECONDS), TIME PERIOD 3 ELAPSED TIME IS 3300 SECONDS

LINK STATISTICS

| LINK | VEHICLE MILES | TRIPS | VEHICLE HOURS MOVE TIME | DELAY TIME | TOTAL TIME | RATIO MOVE/ TOTAL | MINUTES/MILE TOTAL TIME | DELAY TIME | SECONDS/VEHICLE TOTAL TIME | DELAY TIME | AVERAGE VALUES CNTNT | VOLUME VPH | SPEED MPH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (8001, 1) | | 650 | | | | | | | 458 | | | | |
| (8003, 3) | | 1361 | | | | | | | 960 | | | | |
| ( 3, 1) | 1609.04 | 161 | 40.23 | 0.23 | 40.45 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 0 | 113 | 39.8 |
| ( 1, 3) | 1984.63 | 198 | 49.62 | 0.28 | 49.90 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 0 | 140 | 39.8 |
| ( 3, 4) | 15160.32 | 1516 | 379.01 | 2.14 | 381.15 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 160 | 1070 | 39.8 |
| ( 1, 2) | 8446.35 | 845 | 337.85 | 3.04 | 340.90 | 0.99 | 2.42 | 0.02 | 1453.0 | 13.0 | 1 | 596 | 24.8 |
| ( 2, 4) | 3936.80 | 394 | 98.42 | 0.56 | 98.98 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 0 | 277 | 39.8 |
| ( 4, 5) | 6126.10 | 613 | 153.15 | 0.87 | 154.02 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 78 | 432 | 39.8 |
| ( 5, 4) | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0 | 0 | 0.0 |
| ( 4, 3) | 626.50 | 63 | 15.66 | 0.09 | 15.75 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 0 | 44 | 39.8 |
| ( 4, 2) | 2624.54 | 262 | 65.61 | 0.37 | 65.98 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 6 | 185 | 39.8 |
| 0 NETWORK= | 40514.29 | 228 | 1139.55 | 7.57 | 1147.13 | 0.99 | 1.70 | 0.01 | 302.50 | 2.00 | | 247.4 | 35.3 |

1 CUMULATIVE ESIM STATISTICS AT TIME 17:30: 0

ELAPSED TIME IS 1:30: 0 ( 5400 SECONDS), TIME PERIOD 3 ELAPSED TIME IS 3600 SECONDS

LINK STATISTICS

| LINK | VEHICLE MILES | TRIPS | VEHICLE HOURS MOVE TIME | DELAY TIME | TOTAL TIME | RATIO MOVE/ TOTAL | MINUTES/MILE TOTAL TIME | DELAY TIME | SECONDS/VEHICLE TOTAL TIME | DELAY TIME | AVERAGE VALUES CNTNT | VOLUME VPH | SPEED MPH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (8001, 1) | | 650 | | | | | | | 433 | | | | |
| (8003, 3) | | 1361 | | | | | | | 907 | | | | |
| ( 3, 1) | 1612.04 | 161 | 40.30 | 0.23 | 40.53 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 0 | 107 | 39.8 |
| ( 1, 3) | 1984.63 | 198 | 49.62 | 0.28 | 49.90 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 0 | 132 | 39.8 |
| ( 3, 4) | 15956.47 | 1596 | 398.91 | 2.25 | 401.17 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 80 | 1063 | 39.8 |
| ( 1, 2) | 8449.35 | 845 | 337.97 | 3.04 | 341.02 | 0.99 | 2.42 | 0.02 | 1453.0 | 13.0 | 1 | 563 | 24.8 |

```
( 2, 4) 3936.80  394  98.42  0.56  98.98  0.99  1.51  0.01  905.1  5.1   0  262  39.8
( 4, 5) 6465.85  647 161.65  0.91 162.56  0.99  1.51  0.01  905.1  5.1  72  431  39.8
( 5, 4)    0.00    0   0.00  0.00   0.00  0.00  0.00  0.00    0.0  0.0   0    0   0.0
( 4, 3)  629.50   63  15.74  0.09  15.83  0.99  1.51  0.01  905.1  5.1   0   41  39.8
( 4, 2) 2673.06  267  66.83  0.38  67.20  0.99  1.51  0.01  905.1  5.1   1  178  39.8
0 NETWORK= 41707.70  237 1169.43  7.74 1177.18  0.99  1.69  0.01  298.52  1.96  156.9    35.4
1                    CUMULATIVE ESIM STATISTICS AT TIME 17:35: 0

        ELAPSED TIME IS  1:35: 0 ( 5700 SECONDS),   TIME PERIOD  3 ELAPSED TIME IS 3900 SECONDS

                              LINK STATISTICS

                  VEHICLE HOURS    RATIO  MINUTES/MILE  SECONDS/VEHICLE   AVERAGE VALUES
          VEHICLE     MOVE  DELAY  TOTAL MOVE/  TOTAL  DELAY  TOTAL  DELAY  CNTNT  VOLUME
SPEED
 LINK      MILES TRIPS  TIME  TIME   TIME TOTAL  TIME  TIME   TIME   TIME        VPH   MPH

(8001, 1)         650                                  410
(8003, 3)        1361                                  859
( 3, 1) 1615.04  162  40.38  0.23  40.60  0.99  1.51  0.01  905.1  5.1   0  102  39.8
( 1, 3) 1984.63  198  49.62  0.28  49.90  0.99  1.51  0.01  905.1  5.1   0  125  39.8
( 3, 4)16706.10 1671 417.65  2.36 420.01  0.99  1.51  0.01  905.1  5.1   5 1055  39.8
( 1, 2) 8452.35  845 338.09  3.05 341.14  0.99  2.42  0.02 1453.0 13.0   1  533  24.8
( 2, 4) 3936.80  394  98.42  0.56  98.98  0.99  1.51  0.01  905.1  5.1   0  248  39.8
( 4, 5) 6764.37  676 169.11  0.96 170.06  0.99  1.51  0.01  905.1  5.1  69  427  39.8
( 5, 4)    0.00    0   0.00  0.00   0.00  0.00  0.00  0.00    0.0  0.0   0    0   0.0
( 4, 3)  632.50   63  15.81  0.09  15.90  0.99  1.51  0.01  905.1  5.1   0   39  39.8
( 4, 2) 2691.83  269  67.30  0.38  67.68  0.99  1.51  0.01  905.1  5.1   0  170  39.8
0 NETWORK= 42783.63  245 1196.38  7.89 1204.27  0.99  1.69  0.01  295.32  1.94  76.6    35.5
1                    CUMULATIVE ESIM STATISTICS AT TIME 17:40: 0

        ELAPSED TIME IS  1:40: 0 ( 6000 SECONDS),   TIME PERIOD  3 ELAPSED TIME IS 4200 SECONDS

                              LINK STATISTICS

                  VEHICLE HOURS    RATIO  MINUTES/MILE  SECONDS/VEHICLE   AVERAGE VALUES
          VEHICLE     MOVE  DELAY  TOTAL MOVE/  TOTAL  DELAY  TOTAL  DELAY  CNTNT  VOLUME
SPEED
 LINK      MILES TRIPS  TIME  TIME   TIME TOTAL  TIME  TIME   TIME   TIME        VPH   MPH

(8001, 1)         650                                  389
(8003, 3)        1361                                  816
( 3, 1) 1618.04  162  40.45  0.23  40.68  0.99  1.51  0.01  905.1  5.1   0   97  39.8
( 1, 3) 1984.63  198  49.62  0.28  49.90  0.99  1.51  0.01  905.1  5.1   0  119  39.8
( 3, 4)16762.15 1676 419.05  2.37 421.42  0.99  1.51  0.01  905.1  5.1   0 1005  39.8
( 1, 2) 8455.35  846 338.21  3.05 341.26  0.99  2.42  0.02 1453.0 13.0   1  507  24.8
( 2, 4) 3936.80  394  98.42  0.56  98.98  0.99  1.51  0.01  905.1  5.1   0  236  39.8
( 4, 5) 7049.62  705 176.24  1.00 177.24  0.99  1.51  0.01  905.1  5.1  42  422  39.8
( 5, 4)    0.00    0   0.00  0.00   0.00  0.00  0.00  0.00    0.0  0.0   0    0   0.0
( 4, 3)  635.50   64  15.89  0.09  15.98  0.99  1.51  0.01  905.1  5.1   0   38  39.8
( 4, 2) 2691.83  269  67.30  0.38  67.68  0.99  1.51  0.01  905.1  5.1   0  161  39.8
0 NETWORK= 43133.92  248 1205.18  7.95 1213.12  0.99  1.69  0.01  293.60  1.92  44.4    35.6
1                    CUMULATIVE ESIM STATISTICS AT TIME 17:45: 0

        ELAPSED TIME IS  1:45: 0 ( 6300 SECONDS),   TIME PERIOD  3 ELAPSED TIME IS 4500 SECONDS

                              LINK STATISTICS

                  VEHICLE HOURS    RATIO  MINUTES/MILE  SECONDS/VEHICLE   AVERAGE VALUES
          VEHICLE     MOVE  DELAY  TOTAL MOVE/  TOTAL  DELAY  TOTAL  DELAY  CNTNT  VOLUME
SPEED
 LINK      MILES TRIPS  TIME  TIME   TIME TOTAL  TIME  TIME   TIME   TIME        VPH   MPH

(8001, 1)         650                                  371
(8003, 3)        1361                                  777
( 3, 1) 1621.04  162  40.53  0.23  40.76  0.99  1.51  0.01  905.1  5.1   0   92  39.8
( 1, 3) 1984.63  198  49.62  0.28  49.90  0.99  1.51  0.01  905.1  5.1   0  113  39.8
( 3, 4)16762.15 1676 419.05  2.37 421.42  0.99  1.51  0.01  905.1  5.1   0  957  39.8
( 1, 2) 8458.35  846 338.33  3.05 341.38  0.99  2.42  0.02 1453.0 13.0   1  483  24.8
```

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ( 2, 4) | 3936.80 | 394 | 98.42 | 0.56 | 98.98 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 0 | 224 | 39.8 |
| ( 4, 5) | 7326.56 | 733 | 183.16 | 1.03 | 184.20 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 14 | 418 | 39.8 |
| ( 5, 4) | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0 | 0 | 0.0 |
| ( 4, 3) | 638.50 | 64 | 15.96 | 0.09 | 16.05 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 0 | 36 | 39.8 |
| ( 4, 2) | 2691.83 | 269 | 67.30 | 0.38 | 67.68 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 0 | 153 | 39.8 |
| 0 NETWORK= | 43419.86 | 251 | 1212.37 | 7.99 | 1220.36 | 0.99 | 1.69 | 0.01 | 292.05 | 1.91 | 16.7 | | 35.6 |

1 CUMULATIVE ESIM STATISTICS AT TIME 17:48: 0

ELAPSED TIME IS 1:48: 0 ( 6480 SECONDS), TIME PERIOD 3 ELAPSED TIME IS-4680 SECONDS

LINK STATISTICS

| LINK | VEHICLE MILES | TRIPS | VEHICLE HOURS MOVE TIME | DELAY TIME | TOTAL TIME | RATIO MOVE/ TOTAL | MINUTES/MILE TOTAL TIME | DELAY TIME | SECONDS/VEHICLE TOTAL TIME | DELAY TIME | AVERAGE VALUES CNTNT | VOLUME VPH | SPEED MPH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (8001, 1) | | 650 | | | | | | 361 | | | | | |
| (8003, 3) | | 1361 | | | | | | 756 | | | | | |
| ( 3, 1) | 1622.84 | 162 | 40.57 | 0.23 | 40.80 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 0 | 90 | 39.8 |
| ( 1, 3) | 1984.63 | 198 | 49.62 | 0.28 | 49.90 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 0 | 110 | 39.8 |
| ( 3, 4) | 16762.15 | 1676 | 419.05 | 2.37 | 421.42 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 0 | 931 | 39.8 |
| ( 1, 2) | 8460.15 | 846 | 338.41 | 3.05 | 341.45 | 0.99 | 2.42 | 0.02 | 1453.0 | 13.0 | 1 | 470 | 24.8 |
| ( 2, 4) | 3936.80 | 394 | 98.42 | 0.56 | 98.98 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 0 | 218 | 39.8 |
| ( 4, 5) | 7462.94 | 746 | 186.57 | 1.05 | 187.63 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 1 | 414 | 39.8 |
| ( 5, 4) | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0 | 0 | 0.0 |
| ( 4, 3) | 640.30 | 64 | 16.01 | 0.09 | 16.10 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 0 | 35 | 39.8 |
| ( 4, 2) | 2691.83 | 269 | 67.30 | 0.38 | 67.68 | 0.99 | 1.51 | 0.01 | 905.1 | 5.1 | 0 | 149 | 39.8 |
| 0 NETWORK= | 43561.64 | 252 | 1215.94 | 8.01 | 1223.95 | 0.99 | 1.69 | 0.01 | 291.30 | 1.91 | 3.1 | | 35.6 |

MAX. CONTENT DURING EVACUATION 1

EVACUATION TIME 1: 48