Chapter Nine: Contents

(Configuration File Keys – 15 January 2003 – LA-UR 00-1725 – TRANSIMS 3.0)

1. INTRODUCTION 1

1.1 EXAMPLES 1

2. VOLUME One (TECHNICAL OVERVIEW) 8

3. VOLUME TWO (NETWORKS AND VEHICLES) 9

3.1 NETWORK FILE CONFIGURATION FILE KEYS 9
3.2 DETECTOR DEFECT KEYS 10
3.3 TRANSIT FILE CONFIGURATION FILE KEYS 11
3.4 VEHICLE FILE CONFIGURATION FILE KEYS 11
3.5 VEHICLE PROTOTYPE FILE CONFIGURATION FILE KEYS 11

4. VOLUME THREE (*MODULES*), CHAPTER TWO (*POPULATION SYNTHESIZER*) 12

4.1 SYNTHETIC POPULATION CONFIGURATION FILE KEYS 12
4.2 BLOCKGROUPLOC CONFIGURATION FILE KEYS 13
4.3 VEHGEN CONFIGURATION FILE KEYS 14

5. VOLUME THREE (*MODULES*), CHAPTER THREE (*ACTIVITY GENERATOR*) 15

5.1 ACTIVITY REGENERATOR CONFIGURATION FILE KEYS 21
5.2 POPULATION CONVERTER CONFIGURATION FILE KEYS 21
5.3 TRIP TABLE ACTIVITY GENERATOR CONFIGURATION FILE KEYS 22

6. VOLUME THREE (*MODULES*), CHAPTER FOUR (*ROUTE PLANNER*) 24

6.1 ROUTE PLANNER FILE CONFIGURATION KEYS 24
6.2 PLAN FILE CONFIGURATION FILE KEYS 26

7. VOLUME THREE (*MODULES*), CHAPTER FIVE (*TRAFFIC MICROSIMULATOR*) 27

7.1 TRAFFIC MICROSIMULATOR CONFIGURATION FILE KEYS 27
7.2 CONFIGURATION FILE KEYS FOR SNAPSHOT OUTPUT 31
7.3 CONFIGURATION FILE KEYS FOR EVENT OUTPUT 31
7.4 CONFIGURATION FILE KEYS FOR SUMMARY OUTPUT 32
7.5 DEFAULT OUTPUT CONFIGURATION FILE KEYS 33

8. VOLUME THREE (*MODULES*), CHAPTER SIX (*SELECTORS/ITERATION DATABASES*) 35

8.1 ITERATION DATABASE GENERAL CONFIGURATION FILE KEYS 35
8.2 ITERATION DATABASE ACTIVITY CONFIGURATION FILE KEYS 36
8.3 ITERATION DATABASE MICROSIMULATION EVENT CONFIGURATION FILE KEYS 39
8.4 ITERATION DATABASE ROUTER/PLAN CONFIGURATION FILE KEYS 41
8.5 ITERATION DATABASE POPULATION CONFIGURATION FILE KEYS 43
8.6 ITERATION DATABASE STRATIFIER CONFIGURATION FILE KEYS 44
8.7 ITERATION DATABASE ALGORITHM CONFIGURATION FILE KEYS 45

9. VOLUME THREE (*MODULES*), CHAPTER SEVEN (*EMISSIONS ESTIMATOR*) 50

9.1 EMISSIONS ESTIMATOR CONFIGURATION FILE KEYS THAT MUST BE SET TO A SPECIFIC VALUE 53

10. VOLUME THREE (*MODULES*), CHAPTER EIGHT (*OUTPUT VISUALIZER*) 55

10.1 MANDATORY OUTPUT VISUALIZER CONFIGURATION FILE KEYS 55

10.2 OPTIONAL OUTPUT VISUALIZER CONFIGURATION FILE KEYS THAT MAY BE USED IN THE CONFIGURATION FILE 56

10.3 OUTPUT VISUALIZER CONFIGURATION FILE KEYS THAT MAY BE READ INTERACTIVELY 59

11. VOLUME FOUR (*CALIBRATIONS, SCENARIOS, AND TUTORIALS*) 67

12. VOLUME FIVE (*SOFTWARE: INTERFACE FUNCTIONS AND DATA STRUCTURES*) 68

13. VOLUME SIX (*INSTALLATION*) 69

CHAPTER NINE: INDEX 70

Chapter Nine—Configuration File Keys

1. INTRODUCTION

In an effort to help users who have become experienced with using TRANSIMS, we have collected all of the TRANSIMS configuration file keys into this section. The keys are labeled by volume and chapter. If a key is not in the current configuration file, the configuration file key `CONFIG_DEFAULT_FILE` specifies the name of a configuration file whose keys and values are to be used.

1.1 Examples

Figures 1 and 2 give examples of typical configuration and default configuration files, respectively. Note that when keys are duplicated in these files, the value in the non-default file takes precedence.

Fig. 1. Example configuration file.

```
CONFIG_DEFAULT_FILE /home/transims/allstr-run/default.config

NET_PROCESS_LINK_TABLE Process_Link.minimal.tbl

ROUTER_MAX_DEGREE 15

CA_BIN
/home/projects/transims/config/integration/bin/ARCH.PVM.SUN4SOL2/CA
CA_SIM_STEPS 7200
CA_MASTER_MESSAGE_LEVEL 1

PAR_COMMUNICATION   PVM
PAR_SLAVES 1
```

Fig. 2. Example default configuration file.

```
##################### GLOBAL PARAMETERS #####################

# The width of a lane in meters
# float
GBL_LANE_WIDTH 3.5

# The length of a cell in meters
# float
GBL_CELL_LENGTH 7.5


##################### NETWORK PARAMETERS ####################

NET_DIRECTORY                /home/transims/allstr-run/network/

NET_NODE_TABLE               Node.tbl
NET_LINK_TABLE               Link.tbl
NET_POCKET_LANE_TABLE        Pocket_Lane.tbl
====
NET_LANE_USE_TABLE           Lane_Use.tbl
NET_SPEED_TABLE              Speed.tbl
NET_LANE_CONNECTIVITY_TABLE  Lane_Connectivity.tbl
NET_TURN_PROHIBITION_TABLE   Turn_Prohibition.tbl
NET_UNSIGNALIZED_NODE_TABLE  Unsignalized_Node.tbl
NET_SIGNALIZED_NODE_TABLE    Signalized_Node.tbl
NET_PHASING_PLAN_TABLE       Phasing_Plan.tbl
NET_TIMING_PLAN_TABLE        Timing_Plan.tbl
NET_SIGNAL_COORDINATOR_TABLE Signal_Coordinator.tbl
NET_DETECTOR_TABLE           Detector.tbl
NET_BARRIER_TABLE            Barrier.tbl
NET_PARKING_TABLE            Parking.tbl
NET_TRANSIT_STOP_TABLE       Transit_Stop.tbl
NET_ACTIVITY_LOCATION_TABLE  Activity_Location.tbl
NET_PROCESS_LINK_TABLE       Process_Link.tbl
NET_STUDY_AREA_LINKS_TABLE   Study_Area_Link.tbl


##################### SYNTHETIC POPULATION PARAMETERS ####################

POP_NUMBER_HH           1000
POP_BASELINE_FILE       /home/transims/allstr-run/output/allstr.basepop
POP_LOCATED_FILE        /home/transims/allstr-run/output/allstr.locpop
POP_STARTING_VEHICLE_ID 100000
POP_STARTING_HH_ID      1
POP_STARTING_PERSON_ID  101


##################### ACTIVITY GENERATOR PARAMETERS ####################

ACT_FULL_OUTPUT          /home/transims/allstr-run/output/allstr.activities
ACT_PARTIAL_OUTPUT       /home/transims/allstr-run/output/allstr.partact
ACT_FEEDBACK_FILE        /home/transims/allstr-run/output/allstr.actfeed
ACT_WORK_LOC_ALPHA       1
ACT_WORK_LOC_BETA        1
ACT_WORK_LOC_GAMMA       1
ACT_TIME_ALPHA           1
ACT_TIME_BETA            1
ACT_MODE_ALPHA           1
ACT_MODE_BETA            1
ACT_WORK_LOCATION_OPTION 1
ACT_MODE_CHOICE_OPTION   4
ACT_HOME_HEADER          HOME
ACT_WORK_HEADER          WORK
ACT_ACCESS_HEADER        ACCESS


##################### OUTPUT PARAMETERS #####################
```

```
OUT_DIRECTORY               /home/transims/allstr-run/output

OUT_SNAPSHOT_NAME_1         allstr.snapshot
OUT_SNAPSHOT_BEGIN_TIME_1   0
OUT_SNAPSHOT_END_TIME_1     86400
OUT_SNAPSHOT_TIME_STEP_1    1
OUT_SNAPSHOT_EASTING_MIN_1  1
OUT_SNAPSHOT_EASTING_MAX_1  1000000
OUT_SNAPSHOT_NORTHING_MIN_1 1
OUT_SNAPSHOT_NORTHING_MAX_1 1000000
OUT_SNAPSHOT_NODES_1        /home/transims/allstr-run/data/allstr.nodes
OUT_SNAPSHOT_LINKS_1        /home/transims/allstr-run/data/allstr.links
OUT_SNAPSHOT_SUPPRESS_1
OUT_SNAPSHOT_FILTER_1

OUT_EVENT_NAME_1            allstr.event
OUT_EVENT_BEGIN_TIME_1      0
OUT_EVENT_END_TIME_1        86400
OUT_EVENT_TIME_STEP_1       1
OUT_EVENT_EASTING_MIN_1     1
OUT_EVENT_EASTING_MAX_1     1000000
OUT_EVENT_NORTHING_MIN_1    1
OUT_EVENT_NORTHING_MAX_1    1000000
OUT_EVENT_NODES_1           /home/transims/allstr-run/data/allstr.nodes
OUT_EVENT_LINKS_1           /home/transims/allstr-run/data/allstr.links
OUT_EVENT_SUPPRESS_1
OUT_EVENT_FILTER_1

OUT_SUMMARY_NAME_1          allstr.summary
OUT_SUMMARY_BEGIN_TIME_1    0
OUT_SUMMARY_END_TIME_1      86400
OUT_SUMMARY_TIME_STEP_1     900
OUT_SUMMARY_SAMPLE_TIME_1   60
OUT_SUMMARY_BOX_LENGTH_1    150
OUT_SUMMARY_EASTING_MIN_1   1
OUT_SUMMARY_EASTING_MAX_1   1000000
OUT_SUMMARY_NORTHING_MIN_1  1
OUT_SUMMARY_NORTHING_MAX_1  1000000
OUT_SUMMARY_NODES_1         /home/transims/allstr-run/data/allstr.nodes
OUT_SUMMARY_LINKS_1         /home/transims/allstr-run/data/allstr.links
OUT_SUMMARY_SUPPRESS_1
OUT_SUMMARY_FILTER_1

##################### SIMULATION PARAMETERS #################

# see IO/log.h for possible levels
CA_SLAVE_MESSAGE_LEVEL    0
CA_MASTER_MESSAGE_LEVEL   0

# name of executable (used by Msim.pl)
CA_BIN CA

# the max number of occupants of a bus
# int > 1
CA_BUS_CAPACITY   50

# the number of cells a bus occupies in a jam
# float > 0.0
CA_BUS_LENGTH     2.0

# the acceleration of a car, bus, etc.
# (in cells per timestep per timestep)
# float > 0.0
CA_MAXIMUM_ACCELERATION     0.4
CA_BUS_MAXIMUM_ACCELERATION    0.1

# the maximum speed of a car, bus, etc.
# (in cells per timestep)
# float > 0.0
CA_MAXIMUM_SPEED     4.5
```

```
CA_BUS_MAXIMUM_SPEED    2.5

# If nonzero, no attempt will be made to read in transit vehicles
# and transit passengers will not be simulated.
# int(?)
CA_NO_TRANSIT       1

# Some time after a vehicle becomes off plan, it will exit the simulation.
# the probability that a vehicle with speed >= 1 will decelerate by 1
# (also an increment added to the speed limit on a link)
# in the discrete version (not compiled with -DCONTINUOUS)
# float > 0 and < 1
CA_DECELERATION_PROBABILITY   0.2

# use to compute the number of cells that must be vacant in an acceptable gap
# (acceptable gap is speed of oncoming vehicle * Velocity Factor)
# float (> 1.0 ? )
CA_GAP_VELOCITY_FACTOR      3.0

# Probability of proceeding when interfering gap is not acceptable
# in cases of links with competing stop/yield signs
# float > 0 and < 1
CA_IGNORE_GAP_PROBABILITY      0.66

# The number of vehicles which can be buffered in each
# of an intersection's queues (One queue for each lane of each incoming link)
# int > 1
CA_INTERSECTION_CAPACITY     10

# Vehicles take at least this many timesteps to traverse an intersection
# int >= 0
CA_INTERSECTION_WAIT_TIME     1

# Can't change lanes if random variable drawn on each timestep for each vehicle
# is less than this
# float > 0 and < 1
CA_LANE_CHANGE_PROBABILITY     0.99

# number of cells ahead to look for deciding which lane is best upon entering a link
# int >= 0
CA_LOOK_AHEAD_CELLS       35

# If vehicle has not moved for this many timesteps,
# it becomes off-plan and chooses a different destination link, if possible.
# int >= 0
CA_MAX_WAITING_SECONDS       600

# The exit time is the minimum of the expected arrival time at the destination
# and the current time + OFF_PLAN_EXIT_TIME
# int >= 0
CA_OFF_PLAN_EXIT_TIME   1

# Determines, in a complicated way, whether lane changes for the
# sake of following a plan need to be considered
# int >= 0
CA_PLAN_FOLLOWING_CELLS   70

# specify start time for simulation
# int
CA_SIM_START_HOUR  0
CA_SIM_START_MINUTE  0
CA_SIM_START_SECOND  0

# number of timesteps to simulate
# int >= 0
CA_SIM_STEPS  3600

# send map of locations of all accessories to all slaves
CA_BROADCAST_ACC_CPN_MAP       0

# migrate travelers by broadcasting them
```

```
CA_BROADCAST_TRAVELERS         1

# number of time-steps to be executed before slaves synchronize with master
CA_SEQUENCE_LENGTH      1

# Initialize the random seed
# seed48 is called with a pointer to the first element of an array
# of these 3 unsigned shorts
# unsigned short
CA_RANDOM_SEED1  1
CA_RANDOM_SEED2  2
CA_RANDOM_SEED3  3

# Use the cached binary representation of the network database
# in the file specified by CA_NETWORK_FILE
# int
CA_USE_NETWORK_CACHE  0
# string
# CA_NETWORK_FILE

# The following delays model just the time it takes to walk up the steps or
# through the doors or whatever. They have nothing to do with the
# time spent waiting in the queue.

# The mean number of seconds it takes a traveler to board a transit vehicle.
# float >= 0.0
CA_ENTER_TRANSIT_DELAY   1.6

# The mean number of seconds it takes to disembark.
# float >= 0.0
CA_EXIT_TRANSIT_DELAY  1.8

# The number of seconds after a vehicle reaches the stop before
# passengers can start boarding
CA_TRANSIT_INITIAL_WAIT  5

# Name of a file containing TRANSIMS format vehicle information
# (locations, type, etc.)
CA_VEHICLE_FILE  /home/transims/allstr-run/output/allstr.vehicles

CA_USE_PARTITIONED_ROUTE_FILES  0

CA_LATE_BOUNDARY_RECEPTION     1
CA_PARALLEL_LOG                0

CA_PARALLEL_IO_TEST_MODE       0
CA_PARALLEL_IO_TEST_INTERVAL   30

CA_OUTPUT_BUFFER_COUNT         32

CA_RTM_SAMPLE_INTERVAL         0


##################### TRANSIT PARAMETERS ####################

# Name of a file containing TRANSIMS format transit route information
# (list of stops for each route)
# string
TRANSIT_ROUTE_FILE /home/transims/allstr-run/data/allstr.routes

# Name of a file containing TRANSIMS format transit schedule information
# (list of arrival time for each vehicle at each stop)
# string
TRANSIT_SCHEDULE_FILE  /home/transims/allstr-run/data/allstr.schedules

##################### PLAN PARAMETERS #######################

# Name of a file containing TRANSIMS format legs
# string
PLAN_FILE  /home/transims/allstr-run/output/allstr.plans
```

```
##################### ROUTER PARAMETERS ####################

ROUTER_OUTPUT_PLAN_FILE /home/transims/allstr-run/output/allstr.plans
ROUTER_ACTIVITY_FILE    /home/transims/allstr-run/output/allstr.activities
ROUTER_VEHICLE_FILE     /home/transims/allstr-run/output/allstr.vehicles
ROUTER_MODE_MAP_FILE    /home/transims/allstr-run/data/allstr.modes

ROUTER_MAXNFASIZE         5
ROUTER_MAX_DEGREE         15
ROUTER_INTERNAL_PLAN_SIZE 400
ROUTER_VERBOSE  2

# If length < corr_thresh * dist, adjust the length
# float
ROUTER_CORR  0.0

# ??
# float
ROUTER_OVERDO  3.0

# Backdating time of travel information ??
# int
ROUTER_ZERO_BACKD  0

##################### LOGGING PARAMETERS ####################

LOG_LOG_CONFIG        0
LOG_LOAD_NETWORK      1
LOG_PARTITIONING      1
LOG_DISTRIBUTION      1
LOG_RUNTIMEMONITOR    0
LOG_CONTROL           0
LOG_TIMING            1
LOG_BOUNDARIES        0
LOG_ROUTING           1
LOG_ROUTING_DETAIL    1
LOG_TIMESTEP          1
LOG_TIMESTEP_DETAIL   1
LOG_PARALLEL          0
LOG_VEHICLES          1
LOG_MIGRATION         1
LOG_MIGRATION_DETAIL  1
LOG_TRANSIT           1
LOG_EMISSIONS         1
LOG_IO_DETAIL         0

##################### VISUALIZER PARAMETERS #################

# int, will be single buffered if non-zero
VIS_SINGLE_BUFFERED  0

# Name of a file containing batch commands (unused)
# string
VIS_BATCH_FILE

# The length of a box in meters
# float
VIS_BOX_LENGTH          150.0

##################### PARTITIONING PARAMETERS ###############

PAR_PVM_ROOT                    /sw/Cvol/pvm3
PAR_PVM_ARCH                    SUN4SOL2
PAR_PVM_WAIT_FOR_DEAMON         20

PAR_MPI_ROOT                    /sw/Cvol/mpich
PAR_MPI_ARCH                    solaris
PAR_MPI_DEVICE                  ch_p4

PAR_MIN_CELLS_TO_SPLIT         10
PAR_SLAVES                      2
```

```
# if 1, use orthogonal bisection to distribute the network
# otherwise, use the METIS graph partitioning library
# int
PAR_USE_METIS_PARTITION         1
PAR_USE_OB_PARTITION            0

PAR_PARTITION_FILE              /tmp/partition
PAR_SAVE_PARTITION              0

# if 0 use (number of lanes) for edge weight, (length * number of lanes) for edge penalty
#       and 0 for node weights in the partitioning algorithm
# otherwise, use the file named in RTM_FEEDBACK_FILE and RTM_PENALTY_FACTOR.
# int
PAR_USE_RTM_FEEDBACK            0

# Filename for edge and node weights for partitioning
# File format is lines of the form:
# 0 Id Weight
# 1 Id Weight Penalty
# The first line sets a node weight
# the second line sets an edge weight: if penalty is -1, use current value *
RTM_PENALTY_FACTOR
#                                       otherwise use Penalty * RTM_PENALTY_FACTOR
# string
PAR_RTM_FEEDBACK_FILE           /tmp/rtm

# See above for RTM_FEEDBACK_FILE
# float > 0.0
PAR_RTM_PENALTY_FACTOR         100.0

PAR_REPORT_OUTGOING_LINK_TIME_ONLY    1
```

2. VOLUME One (TECHNICAL OVERVIEW)

3. Volume Two (Networks and Vehicles)

3.1 Network File Configuration File Keys

Configuration File Key	Description
NET_ACTIVITY_LOCATION_TABLE	The activity location table name.
NET_ACTUATED_ALGORITHM_B_BETA	The velocity factor for actuated algorithm B. Default = 1.0 meters/sec
NET_ACTUATED_ALGORITHM_B_DENSITY_CONST	The density factor for actuated algorithm B. Default = 0.0/meter
NET_ACTUATED_ALGORITHM_B_FLOW_CONST	The flow factor for actuated algorithm B. Default = 0.1/sec
NET_BARRIER_TABLE	The barrier table name.
NET_DETECTOR_PRESENCE_SAMPLE_TIME	The presence detector sampling frequency. Default = 1 sec
NET_DETECTOR_RETENTION_TIME	The retention time for detections. Detections are retained until all interested signals have examined them once or for NET_DETECTOR_RETENTION_TIME, whichever is longer. Default = 0 sec (i.e., cleared after used once)
NET_DETECTOR_TABLE	The detector table name.
NET_DIRECTORY	The directory where the network files reside.
NET_LANE_CONNECTIVITY_TABLE	The lane connectivity table name.
NET_LANE_USE_TABLE	The lane use table name.
NET_LANE_WIDTH	The default lane width (meters).
NET_LINK_MEDIAN_HALFWIDTH	The default half-width (meters) of the median between lanes on a link. To correspond with the current release of the Output Visualizer, this parameter must be assigned a value of 0.5 * NET_LANE_WIDTH.
NET_LINK_TABLE	The link table name.
NET_NODE_TABLE	The node table name.
NET_PARKING_TABLE	The parking table name.
NET_PHASING_PLAN_TABLE	The phasing plan table name.
NET_POCKET_LANE_TABLE	The pocket lane table name.
NET_PROCESS_LINK_TABLE	The process link table name.
NET_SIGNAL_COORDINATOR_TABLE	The signal coordinator table name.
NET_SIGNALIZED_NODE_TABLE	The signalized node table name.
NET_SPEED_TABLE	The speed table name.
NET_STUDY_AREA_LINKS_TABLE	The study area links table name.
NET_TIMING_PLAN_TABLE	The timing plan table name.

Configuration File Key	Description
NET_TRANSIT_STOP_TABLE	The transit stop table name.
NET_TURN_PROHIBITION_TABLE	The turn prohibition table name.
NET_UNSIGNALIZED_NODE_TABLE	The unsignalized node table name.

☛ *This feature is not implemented in this version.*

3.2 Detector Defect Keys

Configuration File Key	Description
NET_DETECTOR_ACCELERATION_NOISE_c	The standard deviation of random error in detection acceleration (meters/second/second).
NET_DETECTOR_ACCELERATION_OFFSET_c	The systematic error in detection acceleration (meters/second/second).
NET_DETECTOR_FAILURE_TIME_MEAN_c	The mean time (seconds) between detector catastrophic failures. A value of 0 indicates no failures.
NET_DETECTOR_FALSE_ALARM_PROBABILITY_c	The probability of counting the same detection twice.
NET_DETECTOR_FALSE_ALARM_TIME_MEAN_c	The mean time (seconds) between spontaneous false alarms (i.e., recording a detection when no vehicle was there). A value of 0 indicates no spontaneous false alarms.
NET_DETECTOR_INITIAL_FAILURE_PROBABILITY_c	The probability detector is broken at beginning of simulation.
NET_DETECTOR_MISS_ACCELERATION_PROBABILITY_C	The probability of missing the acceleration component of a detection.
NET_DETECTOR_MISS_POSITION_PROBABILITY_c	Probability of missing the position component of a detection.
NET_DETECTOR_MISS_PROBABILITY_c	Probability of detector missing a detection.
NET_DETECTOR_MISS_VELOCITY_PROBABILITY_c	Probability of missing the velocity component of a detection.
NET_DETECTOR_POSITION_NOISE_c	Standard deviation of random error in detection position (meters).
NET_DETECTOR_POSITION_OFFSET_c	Systematic error in detection position (meters).
NET_DETECTOR_VELOCITY_NOISE_c	Standard deviation of random error in detection velocity (meters/second).
NET_DETECTOR_VELOCITY_OFFSET_c	Systematic error in detection velocity (meters/second).

Configuration File Key	Description
NET-DETECTOR_REPAIR_TIME_MAX_c	Maximum time (seconds) until failed detector is repaired. A value of 0 indicates detector is immediately repaired. A value of -1 indicates no repair.

3.3 Transit File Configuration File Keys

Configuration File Key	Description
TRANSIT_ROUTE_FILE	The name of a transit route file whose format is described. Used as input by the Traffic Microsimulator and the Route Planner.
TRANSIT_SCHEDULE_FILE	The name of a transit schedule file whose format is described above. Used as input by the Route Planner.
TRANSIT_ZONE_FILE	The name of a transit zone file whose format is described above. Currently unused.

3.4 Vehicle File Configuration File Keys

Configuration File Key	Description
VEHICLE_FILE	The path of the vehicle file.

3.5 Vehicle Prototype File Configuration File Keys

Configuration File Key	Description
VEHICLE_PROTOTYPE_FILE	The path of the vehicle prototype file.

4. Volume Three (*Modules*), Chapter Two (*Population Synthesizer*)

4.1 Synthetic Population Configuration File Keys

Configuration File Key	Description
SYNPOP_BASE_DIRECTORY	*$TRANSIMS_HOME*
SYNPOP_BASE_PREFIX	The file name prefix for the base-synthesized population output files. No base-year output will be generated if this key is blank.
SYNPOP_FORECAST_PREFIX	The file name prefix for the forecast-synthesized population output files. No forecast output will be generated if this key is blank.
SYNPOP_HOUSEHOLD_DEMOGRAPHICS	The list of household PUMS fields to be placed in the population output files (separated by semicolons). See the file *$TRANSIMS_HOME/data/synpop/docs/pumsusdd.txt* for a complete of the possible fields.
SYNPOP_KEEP_TEMP_FILES	Whether to retain the working files after the population synthesis is complete (1 = yes, 0 = no).
SYNPOP_MABLE_FILE	The directory in which the MABLE output file is stored.
SYNPOP_MARGINALS_FILE	The location of the Forecast Marginals file.
SYNPOP_PERSON_DEMOGRAPHICS	The list of person PUMS fields to be placed in the population output files (separated by semicolons). See the file *$TRANSIMS_HOME/data/synpop/docs/pumsusdd.txt* for a complete list of the possible fields.
SYNPOP_PUMAS	The list of five-digit PUMA numbers to be processed (separated by semicolons).
SYNPOP_PUMS_DIRECTORY	The directory in which the PUMS data are stored.
SYNPOP_RANDOM_SEED	The random number seed (integer).
SYNPOP_STATE	The two-letter abbreviation (lowercase) of the state of interest.
SYNPOP_STF_DATA_DIRECTORY	The directory in which the STF3A dBase files are located.
SYNPOP_STF_INFO_DIRECTORY	*%TRANSIMS_HOME/data/synpop/Parep2/stf*
SYNPOP_TEMP_DIRECTORY	The directory in which temporary working files will be placed.

4.2 *BlockGroupLoc* Configuration File Keys

Configuration File Key	Description
ACT_BLOCKGROUP_HEADER	The user data column header in the network activity location file used to specify the block group. Default = BG
ACT_HOME_HEADER	The user data column header in the network activity location file used to specify single family home locations. Default = HOME
ACT_MULTI_FAMILY_HEADER	The user data column header in the network activity location file used to specify multifamily home locations. If not specified, multifamily user data from the activity location file is ignored.
ACT_TRACT_HEADER	The user data column header in the network activity location file used to specify the census tract. Default = TRACT
NET_ACTIVITY_LOCATION_TABLE*	The network activity location table name.
NET_DIRECTORY*	The directory where the network files reside.
NET_LINK_TABLE*	The network link table name.
NET_NODE_TABLE*	The network node table name.
POP_BASELINE_FILE*	The name of the file containing the baseline population.
POP_LOCATED_FILE*	The name of the file where the located population will be written.
POP_NEAREST_BG_FILE	The name of the Tract/Block Group Substitution file that contains information about the nearest tract/block group for block groups that have no activity locations on the transportation network.
POP_RANDOM_SEED	The random number seed (integer). Default = 985456379
POP_STARTING_HH_ID	The number from which the generated households will be sequentially numbered. Default = 1
POP_STARTING_PERSON_ID	The number from which the generated persons will be sequentially numbered. Default = 101

* Configuration file keys required for *BlockGroupLoc*. All others are optional and will use default values.

4.3 *Vehgen* Configuration File Keys

Configuration File Key	Description
POP_STARTING_VEHICLE_ID	The number from which the generated vehicles will be sequentially numbered. Default = 100
VEH_VEHICLE_TYPE	The TRANSIMS vehicle type that will be used for all generated vehicles. Must correspond to the types defined in the network in file *Id.h*. Default = 1 (auto)
VEH_VEHICLE_SUBTYPE	An integer value to specify a vehicle subtype that can be used to partition vehicles for emissions studies. Default = 0
VEH_GENERATE_FOR_DRIVERS	Boolean value that controls the method used by the vehicle generator to produce the vehicles for a household. Value = 1 generates a vehicle for every person in the household whose age is ≥ the value specified by the configuration file key VEH_DRIVER_MINIMUM_AGE. Value = 0 generates the number of vehicles as specified by the household demographics. Default = 0
VEH_DRIVER_MINIMUM_AGE	The minimum age of a driver. Used to determine the number of persons eligible for a vehicle. Default = 16
VEH_RANDOM_SEED	The seed for the random number stream. Default = 985456379
VEH_AGE_DEMOGRAPHIC	The header that denotes the age demographic in the population file. Default = AGE.
VEHICLE_FILE	The name of the TRANSIMS vehicle file for the population.

5. Volume Three (*Modules*), Chapter Three (*Activity Generator*)

Configuration File Key	Description
ACT_ACCESS_HEADER	The user data column header in the network activity location file used to specify access to transit.
ACT_ACTIVITY_TYPE	The activity types used by the Activity Generator. The base key must be followed with _n where n is an integer to indicate the nth specification of the activity type (non-negative integer).
ACT_ADJUST_ACTIVITY_TIMES	A control for adjusting survey activity times by considering the travel time between activities. Integer values 0 and 1: 0 = no adjustments 1 = adjust for travel time Default = 1
ACT_ANCHOR_ACTIVITY_TYPE	An activity type that will be considered an anchor activity when determining the locations on a traveler's tour. The base key must be followed by _n where n is an integer to indicate the nth specification of anchor activity type. If no anchor activity types are specified, home, work, and school types are used as anchor activities.
ACT_AUTOMOBILE_MODE*	A mode that will be considered a personal automobile mode by the Activity Generator. Automobile modes are used to determine shared rides and vehicle assignments. At least one mode must be specified. Park-and-ride modes can be specified as automobile modes in the Activity Generator.
ACT_BICYCLE_MODE	The number of the bicycle mode (wiw) (integer).
ACT_BLOCKGROUP_HEADER	The user data column header in the network activity location file used to specify block group.
ACT_DECISION_TREE_FILE	The name of the file containing the regression tree for the Activity Generator.
ACT_DEFAULT_CAR_SPEED	The default speed for automobiles in meters/second (floating-point number). Default = 15.0
ACT_DEFAULT_INTRAZONE_DISTANCE	The average distance, in meters, of a trip within a zone.
ACT_DEFAULT_TRANSIT_MODE	The number of the default transit mode (wtw) (integer).
ACT_DEFAULT_TRANSIT_SPEED	The default transit speed in meters/second (floating-point number). Default = 10.0

Configuration File Key	Description
ACT_END_OF_DAY_TIME_RANGE	The time range in hours for lower and upper bounds of start and end times for the end-of-day activity (positive floating-point number). Default = 0.75
ACT_HOME_ACTIVITY_TYPE	The number of the home activity type (non-negative integer).
ACT_HOME_DURING_DAY_TIME_RANGE	The time range in hours for lower and upper bounds of start and end times for non-work activities originating at home (positive floating-point number). Default = 0.75
ACT_HOME_HEADER	The user data column header in the network activity location file used to specify single family home locations.
ACT_HOUSEHOLD_FILE	The name of a file containing a list of household IDs from the synthetic population for which activities will be generated. Activities will be generated only for those households on the list. This key is optional and if not specified, activities will be generated for all households in the population (ACT_POPULATION_FILE).
ACT_INITIAL_HOME_TIME_RANGE	The time range in hours for lower and upper bounds of start and end times for the initial at-home activity (positive floating-point number). Default = 0.75
ACT_LOCATION_CHOICE_EXPONENT	The power to which the exponential function in the location choice algorithm will be raised. Floating-point value. Default – 1.0
ACT_LOCATION_HEADER	The header for the activity type for activity locations in the network activity location table. The headers must correspond to the activity types defined with the ACT_ACTIVITY_TYPE_n keys. The base key must be followed with _n where n is an integer to indicate the nth specification of the header.
ACT_LOG_FILE	The name of the logfile for the Activity Generator and Regenerator. Default = *ActivityGenerator.log*
ACT_MAGIC_MOVE_MODE	The number of the magic move mode (wkw) (integer).
ACT_MAX_END_TIME*	The maximum end time for an activity in hours past midnight on the starting day (positive floating-point number). Default = 24.0
ACT_MINIMUM_ADULT_AGE	The minimum age for an adult in years. Persons younger than this value will be considered children when matching synthetic households with survey households in the activity generator. Default = 16

Configuration File Key	Description
ACT_MODE_WEIGHT_FILE	The name of the file containing mode coefficients for the activity types. This must contain a coefficient for every mode and activity type.
ACT_MULTI_FAMILY_HEADER	The user data column header in the network activity location file used to specify multifamily home locations.
ACT_OUT_OF_HOME_TIME_RANGE	The time range in hours for lower and upper bounds of start and end times for non-work activities that do not originate at home (positive floating-point number). Default = 0.75
ACT_PERSON_DEMOG_AGE_HEADER	The name of the age demographic header for the persons in the population used by the Activity Generator.
ACT_PERSON_DEMOG_GENDER_HEADER	The name of the gender demographic header for the persons in the population used by the Activity Generator.
ACT_PERSON_DEMOG_RELATION_HEADER	The name of the relationship demographic header for the persons in the population used by the Activity Generator.
ACT_PERSON_DEMOG_WORKER_HEADER	The name of the worker demographic header for the persons in the population used by the Activity Generator.
ACT_POPULATION_FILE	The name of the file containing a located synthetic population with household and person demographics that exactly match the variables in the Activity Generator regression tree. This file is output from the population converter program.
ACT_PRIORITY*	The priority for the activity type. The priorities must correspond to the activity types defined with the ACT_ACTIVITY_TYPE_n configuration file keys. The base key must be followed with _n where n is an integer to indicate the nth specification of the priority. Defaults = work activity type 2 school activity type 3 home activity type 1 all other activity types 7
ACT_PROBLEM_FILE	The name of the file where information about problems that occurred during activity generation will be written. Default = *act.problems*
ACT_RANDOM_SEED	The random number seed used by activity generators.

Configuration File Key	Description
ACT_REQUIRED_HH_DEMOG	The required household demographics in the synthetic population used by the Activity Generator. The base key must be followed with _n where n is an integer to indicate the nth specification of required demographics. The demographics must exactly match and be ordered the same (1 - n) as the demographic variables in the Activity Generator's regression tree.
ACT_SCHOOL_ACTIVITY_TYPE	The number of the school activity type (non-negative integer).
ACT_SCHOOL_LOCATION_ATTRACTOR_VALUE	The value of the activity location attractor for the school activity type. The base key must be followed by _n where n is an integer to indicate the nth specification of the activity location attractor value. The specifications should be linked to the school age ranges specified. If no school activity location attractor values are specified, the activity location attractors for the school activity type are used as weights.
ACT_SCHOOL_LOWER_BOUND	The lower bound of a school age range. The base key must be followed by _n where n is an integer to indicate the nth specification of the school age range lower bound.
ACT_SCHOOL_UPPER_BOUND	The upper bound of a school age range. The base key must be followed by _n where n is an integer to indicate the nth specification of the school age range upper bound.
ACT_SCHOOL_ZONE_ATTRACTOR_VALUE	The value of the zone attractor for the school activity type. The base key must be followed by _n where n is an integer to indicate the nth specification of the zone attractor value. The specifications should be linked to the school age ranges specified. If no school zone attractor values are specified, the zone attractors for the school activity type are used as weights.
ACT_SHARED_RIDE_DISTANCE_RANGE*	The distance range in meters for matching activity locations for shared rides. Default = 10
ACT_SHARED_RIDE_TIME_RANGE_MAX*	The maximum time range in minutes for matching activities for shared rides. Default = 1
ACT_SHARED_RIDE_TIME_RANGE_MEDIUM	Medium time range in minutes for matching shared rides. Default = 1
ACT_SHARED_RIDE_TIME_RANGE_MIN*	The minimum time range in minutes for matching activities for shared rides. Default = 1

Configuration File Key	Description
ACT_SURVEY_ACTIVITY_FILE	The name of the file containing activity patterns for the survey households.
ACT_SURVEY_HOUSEHOLD_FILE	The name of the file containing the survey household population and demographics.
ACT_SURVEY_WEIGHTS_FILE	The name of the file containing the relative weights of the survey households.
ACT_TAZ_HEADER	The user data column header in the network activity location file used to specify traffic analysis zone.
ACT_TIME_PRIORITY*	Specifies time priority for the activity type. The time priorities must correspond to the activity types defined with the ACT_ACTIVITY_TYPE_n configuration file keys. The base key must be followed with _n where n is an integer to indicate the nth specification of the time priority. The allowed values of the time priority configuration file keys are described in Appendix A (*Field Activity Time Priority*). Defaults = work activity type 3 school activity type 3 home activity type 0 all other activity types 0
ACT_TRACT_HEADER	The user data column header in the network activity location file used to specify census tract.
ACT_TRAVEL_TIMES_FILE	The name of the file containing travel time information between zones.
ACT_TRAVEL_TIME_FILE_MODES	Specifies the modes where the travel time will be determined from the travel times file. Modes are specified as a semicolon-separated list of integer mode values. This key is optional and if not specified and a travel time file is specified (ACT_TRAVEL_TIMES_FILE), the Activity Generator will look for all modes in the travel times file. Example: ACT_TRAVEL_TIME_FILE_MODES 1;3;7
ACT_TRAVEL_TIME_INTERVALS_FILE	The file containing travel time interval information.
ACT_USER_FUNCTION_MODES	Specifies the modes for which the user function is valid. Modes are specified as a semicolon-separated list of integer mode values. Example: ACT_USER_FUNCTION_MODES 1;2;9

Configuration File Key	Description
ACT_USER_FUNCTION_PARAMETERS	Specifies the optional parameters to the user function. Parameters are specified as a semicolon-separated list of floating-point values. If specified, the floating-point values are passed into the user function as a vector of doubles. Example: ACT_USER_FUNCTION_PARAMETERS 0.2;4.1;-.00025
ACT_USER_FUNCTION_STRING_PARAMETERS	Specifies the optional user-defined string parameters to the user function. Parameters are specified as a semicolon-separated list of string values. If specified, the string values are passed into the user function as a vector of strings. String values must not contain whitespace. Example: ACT_USER_FUNCTION_STRING_PARAMETERS /usr/transims/data/data.1; transit_only;bridge_crossing
ACT_USER_FUNCTION_SHARED_OBJECT	Specifies the full path name of the shared object that contains the user function. If specified, the user function object is loaded at runtime and will be used in the location choice models for all modes specified by the ACT_USER_FUNCTION_MODES configuration file key. Example: ACT_USER_FUNCTION_SHARED_OBJECT /usr/transims/work/UserZoneFunction.o
ACT_USER_FUNCTION_NAME	Specifies the name of the user-defined function in the shared object specified by ACT_USER_FUNCTION_SHARED_OBJECT. Default value = *UserZoneFunction*
ACT_WALKING_MODE	The number of the walking mode (w) (integer).
ACT_WORK_ACTIVITY_TYPE	The number of the work activity type (non-negative integer).
ACT_WORK_HEADER	The user data column header in the network activity location file used to specify work locations.
ACT_WORK_TIME_RANGE	The time range in hours for lower and upper bounds of start and end times for work activities (positive floating-point number). Default = 0.25
ACT_ZONE_HEADER	Used to specify the header for the zone attractors, which must match the activity types (ACT_ACTIVITY_TYPE_n). The base key must be followed with _n where n is an integer to indicate the nth specification of the header.
ACT_ZONE_INFO_FILE	The name of the file containing zone attractor data by activity type for the Activity Generator.
ACTIVITY_FILE	The name of the TRANSIMS activity file for the household.
NET_ACTIVITY_LOCATION_TABLE	The network activity location table name.
NET_DIRECTORY	The directory where the network files reside.

Configuration File Key	Description
NET_LINK_TABLE	The network link table name.
NET_NODE_TABLE	The network node table name.
ROUTER_BIKING_SPEED	The approximate speed in meters/second for bicycles.
ROUTER_WALKING_SPEED	The approximate speed in meters/second for walking trips.
VEHICLE_FILE	The name of the TRANSIMS vehicle file for the population.

* These keys are optional.

5.1 Activity Regenerator Configuration File Keys

Configuration File Key	Description
ACT_FEEDBACK_FILE	The file containing a list of travelers and associated commands for activity regeneration.
ACT_PARTIAL_OUTPUT	The name of the file that will be output from partial regeneration of activities.

5.2 Population Converter Configuration File Keys

Configuration File Key	Description
ACT_HHDENSITY_HEADER	The column header of the household density values in the network activity location tables.
ACT_POPULATION_FILE	The name of the file containing a located synthetic population with household and person demographics that exactly match the variables in the Activity Generator regression tree. This file is output from the Population Converter program.
POP_LOCATED_FILE	The name of the file containing the located population.

5.3 Trip Table Activity Generator Configuration File Keys

Configuration File Key	Description
ACT_HOME_ACTIVITY_TYPE	The number of the home activity type. Non-negative integer. Default = 1
ACT_MAX_END_TIME*	The maximum end time for an activity in hours past midnight on the starting day (positive floating-point number). Default = 24.0
ACT_RAND0M_SEED	The seed for the random number system.
ACT_TAZ_HEADER*	The column header in the network activity location file that contains the zone information. Default = TAZ
ACT_TRIP_TABLE_OUTPUT*	The name of the activity file that will be output from the Trip Table Activity Generator.
ACT_TRIP_TABLE_VEHICLE_FILE	The name of the vehicle file that will be output from the Trip Table Activity Generator.
ACT_TRIPTABLE_DESTINATION_ATTRACTOR_HEADER	The column header in the network activity location file for the location attractor for the origin of trips generated using trip tables.
ACT_TRIPTABLE_FILE	The name of the file containing the trip table matrix.
ACT_TRIPTABLE_ORIGIN_ATTRACTOR_HEADER	The column header in the network activity location file for the location attractor for the origin of trips generated using trip tables.
ACT_TRIPTABLE_STARTING_HH_ID*	The starting household ID for households generated from trip table matrices. Default = 1
ACT_TRIPTABLE_STARTING_PERSON_ID*	The starting person ID for travelers generated from trip table matrices. Default = 1
ACT_TRIPTABLE_STARTING_VEHICLE_ID*	The starting vehicle ID for vehicles generator from trip table matrices. Default = 1
ACT_TRIPTIME_FILE	The name of the file containing the time of day trip table data.
ACT_WORK_ACTIVITY_TYPE*	The number of the work activity type. Non-negative integer. Default = 2
MODE_MAP_FILE	The file containing mapping between mode strings and integer values. The string "*wcw*" must be in this file.
NET_ACTIVITY_LOCATION_TABLE	The network activity location table. Must contain a column that has the zone number for the activity locations.
NET_DIRECTORY	The directory where the network tables reside.
NET_LINK_TABLE	The network link table.
NET_NODE_TABLE	The network node table.
NET_PARKING_TABLE	The network parking table.
NET_PROCESS_LINK_TABLE	The network process link table.
NET_TRANSIT_STOP_TABLE	The network transit stop table (may be an empty table).

Configuration File Key	Description
POP_TRIPTABLE_FILE	The name of the population file that will be output from the trip table activity generator.
VEH_VEHICLE_SUBTYPE*	The subtype of the vehicle fleet will be generated. Default = 0
VEH_VEHICLE_TYPE*	The type of vehicles that will be generated. Default value is assigned from a type enumeration in the TRANSIMS Network = 1 (kAuto).

* Optional configuration file keys. If not specified, will use default values.

6. Volume Three (*Modules*), Chapter Four (*Route Planner*)

6.1 Route Planner File Configuration Keys

Configuration File Key	Description
ACTIVITY_FILE*	Path to a TRANSIMS activity file.
LOG_ROUTING	Turn on Route Planner logging. This produces information about the status and progress of the Route Planner. Default = 0
LOG_ROUTING_DETAIL	Turn on detailed Route Planner logging. Produces many messages. Default = 0.
MODE_MAP_FILE*	Path to a mode file.
PLAN_FILE*	Name of the file where plans should be written. (Overwrites an existing file.)
ROUTER_BIKING_SPEED	Speed to use when computing delays for walk links traversed by bicycle (meters/second). Default = 4.0
ROUTER_CORR	Floating-point number, between 0 and 1. The Route Planner will change the reported length of a link to be equal to its Euclidean length whenever the ratio of the two is less than this value. This is done in order to avoid problems when the Sedgewick-Vitter heuristic is used. Default = 0.0
ROUTER_DELAY_NOISE	Percentage of noise to add to link delays. Default = 0
ROUTER_DEPENDENT_HOUSEHOLD_FILE	File containing a list of household Ids per line that have shared rides in common.
ROUTER_DISPLAY_PATHS	If set to 1, list all of the nodes for each leg planned. Note: This produces large amounts of output.
ROUTER_FILTER_EXCLUDE_MODE	Plan modes not include in plan file. Default it to include no modes. Only one of INCLUDE_MODE and EXCLUDE_MODE may be specified.
ROUTER_FILTER_EXCLUDE_VEHICLE	Plan vehicle types not to include in plan file. Default is to include no vehicle types. Only one of INCLUDE_VEHICLE and EXCLUDE_VEHICLE can be specified.
ROUTER_FILTER_INCLUDE_MODE	Plan modes to include in plan file. Default is to include all modes.
ROUTER_FILTER_INCLUDE_VEHICLE	Plan vehicle types to include in plan file. Default is to include all vehicle types.
ROUTER_GET_OFF_TRANSIT_DELAY	Delay encountered when exiting a transit vehicle. Default = 4 seconds

Configuration File Key	Description
ROUTER_GET_ON_TRANSIT_DELAY	Delay encountered when boarding a transit vehicle. Default = 3 seconds
ROUTER_HOUSEHOLD_FILE	Path to a file containing a list of integer IDs for householders to be planned.
ROUTER_INCLUDE_WALK_PLAN_NODES	Include node list in walk plans.
ROUTER_INTERNAL_PLAN_SIZE	Positive integer. Should be enough to accommodate the length (in number of nodes) of the shortest path between any two nodes in the network (and may need to be quite large when multimodal plans are used). Default = 400
ROUTER_LINK_DELAY_FILE	Feedback file from which to read link delays. If the configuration file key is not present or the file does not exist, the free speed delays are used.
ROUTER_LINK_DELAY_MIN_COUNT	Minimum `count` in link delay file to include data in link delay calculations.
ROUTER_LINK_DELAY_MIN_VCOUNT	Minimum `vcount` in link delay file to include data in link delay calculations.
ROUTER_MAX_NODES_EXAMINED	Maximum number of nodes examined before the Router Planner will conclude that no path exists. Useful mostly for large networks. Default = 400,000
ROUTER_MESSAGE_LEVEL	Level of warning messages to produce: -2 (`ERROR`) -1 (`PRINT`) 0 (`SEVERE WARNING`) 1 (`WARNING`). Produces information about possible anomalies the Route Planner has encountered. Default = 1
ROUTER_NUMBER_THREADS	Positive integer. Number of worker threads to be used. A value of 0 means no threads will be used. Default = 0
ROUTER_OVERDO	Non-negative floating-point number. If set to 0, no adjustment is made to the distance estimates. If positive, the search for the shortest path to the origin will be biased in the direction of a straight line to the destination. This will produce non-optimal paths. The paths will still be reasonable, but the heuristic may cause relatively small congestion on links to be ignored, and this can break the iterative relaxation mechanism. Default = 0.0
ROUTER_PROBLEM_FILE*	Path name to a file in which activities with anomalies identified by the Route Planner are written.
ROUTER_SEED	Seed to use for random number generator. If the configuration file key is set to 0, use process ID. Default = 0

Configuration File Key	Description
ROUTER_WALKING_SPEED	Speed to use when computing delays for walk links (meters/second). Default = 1.0
ROUTER_RETIME_PLANS	File containing plans of retimed travelers.
ROUTER_RETIME_TRAVELER_FILE	File containing traveler IDs of travelers to be retimed.
ROUTER_RETIME_MODES	File containing modes to be retimed.
ROUTER_COMPLETED_HOUSEHOLD_FILE	File containing household IDs for plans that have been written to the household file.
TRANSIT_ROUTE_FILE	File containing route of transit vehicles.
TRANSIT_SCHEDULE_FILE	File containing schedules of transit vehicles.
ROUTER_TIME_REPORT_INTERVAL	Defines how often to report routing speed. 0 = never report
VEHICLE_FILE*	Path to a TRANSIMS vehicle file.

*Required.

6.2 Plan File Configuration File Keys

Configuration File Key	Description
CA_USE_PARTITIONED_ROUTE_FILES	If this configuration file key is set, the Traffic Microsimulator expects to find separate indexes into a plan file for each slave. These can be produced using a partition file and the *DistributePlans* utility.
PLAN_FILE	Location of a file containing plans, or the base name of an index that points to plan files. Used by the Route Planner for output and the Traffic Microsimulator and Selector/Iteration Database for input.

7. Volume Three (*Modules*), Chapter Five (*Traffic Microsimulator*)

7.1 Traffic Microsimulator Configuration File Keys

Configuration File Key	Description
CA_BROADCAST_ACC_CPN_MAP CA_BROADCAST_TRAVELERS	If `Broadcast Travelers` is set, migrating travelers are broadcast to every CPU. Because only one CPU will eventually make use of the traveler, this is inefficient. If `Broadcast Acc CPN Map` is set, each CPU knows which CPU is associated with every accessory, so traveler migration messages can be targeted to only the single CPU that needs them. If the CPN Map is not broadcast, travelers must be broadcast.
CA_DECELERATION_PROBABILITY	To enhance traffic variation, each automobile driver randomly decides whether to decelerate for no apparent reason at each timestep. The probability of decelerating is a value in the range 0.0 to 1.0. Default = 0.2
CA_ENTER_TRANSIT_DELAY CA_EXIT_TRANSIT_DELAY	These keys specify the mean number of timesteps it takes for a single traveler to enter or exit a transit vehicle.
CA_GAP_VELOCITY_FACTOR	At unsignalized intersections and during protected movements at signalized intersections, drivers wait for a suitable gap in cross traffic before proceeding through the intersection. The number of empty cells in a suitable gap is based on the speed of the cross traffic and the gap velocity factor. The suitable gap is calculated for each lane of the cross traffic. `Gap = Speed of Oncoming Vehicle * Gap Velocity Factor` The gap velocity factor must be greater than 0.0. The default value is 3.0. Note that vehicles with a speed of 0 result in a suitable gap size of 0, which improves traffic flow in congested conditions.
CA_IGNORE_GAP_PROBABILITY	Drivers at unsignalized intersections wait for a suitable gap in cross traffic before proceeding through the intersection. Allowing each driver to ignore the gap constraint with some probability prevents the deadlock that would take place when vehicles are waiting for each other at multiway stop/yield signs. The probability that the drivers at multiway stop/yield signs will ignore the constraint is a value in the range of 0.0 to 1.0. Default = 0.66
CA_INTERSECTION_CAPACITY	`Intersection Capacity` determines the number of vehicles that can be held by each intersection's buffers.
CA_INTERSECTION_WAIT_TIME	`Intersection Wait Time` specifies the number of seconds that a vehicle requires to pass through a signalized intersection. A vehicle resides in an intersection-queued buffer for this amount of time and is then placed on the next link if the first cell on that link is unoccupied. It will remain in the intersection for a longer time if entry to the next link is blocked by another vehicle. Valid values are positive. Default = 1 second

Configuration File Key	Description
CA_LANE_CHANGE_PROBABILITY	Variation in traffic is reduced by not allowing every driver who would change lanes based on vehicle speed and gaps in the traffic to do so at each timestep. This is done to prevent *lane hopping*. The probability that a driver will change lanes when speed and gaps permit is a value in the range of 0.0 to 1.0. Default = 0.99
CA_LATE_BOUNDARY_RECEPTION	If `Late Boundary` Reception is set, the simulation will try to overlap computation and communication.
CA_LONG_SOAK_TIME	The boundary (in seconds) between medium and long soak times for energy output. Default = 9000
CA_LOOK_AHEAD_CELLS	The preferred lane for a vehicle to be in as it approaches an intersection depends on the connectivity from the current link to the next link in the plan. In some situations, it is advantageous for the driver to look beyond the next link to subsequent links in the plan when deciding the preferred lane. Look Ahead Cells controls how far ahead the driver will look. A value of 0 indicates that the driver will not look beyond the next link. A positive value indicates that the driver will look at least one additional step beyond the next step in the plan. The number of additional links considered is determined by the lengths of the subsequent links, with link lengths being summed until the accumulated distance is greater than or equal to Look Ahead Cells. Valid values are positive or zero. Default = 35 cells
CA_MAX_WAITING_SECONDS	`Max Waiting Seconds` determines the number of seconds that a vehicle will try to enter an intersection. If the vehicle has not moved from the link into or through the intersection in `Max Waiting Seconds`, the vehicle abandons its plan and tries an alternative movement through the intersection (if one exists). `Max Waiting Seconds` must be > 0 and should be greater than the longest red phase of the traffic controls in the simulation. Default = 600 seconds
CA_MEDIUM_SOAK_TIME	The boundary (in seconds) between short and medium soak times for energy output. Default = 1800 seconds
CA_NO_TRANSIT	If this flag is set, travelers whose plans originate or end at a transit stop are removed from the simulation. None of their remaining legs are used. (The transit driver plans do not fall into this category, thus transit vehicles can still be present in the simulation, but no passengers will use them.)
CA_OFF_PLAN_EXIT_TIME	`Off Plan Exit Time` specifies the number of seconds a vehicle is allowed to deviate from its plan before being removed from the simulation. This prevents off-plan vehicles from wandering on the transportation network. Valid values are positive. Default = 1 second

Configuration File Key	Description
CA_PLAN_FOLLOWING_CELLS	`Plan Following Cells` specifies a count of the number of cells preceding the intersection within which a vehicle will make lane changes to get in an appropriate lane and thus transition to the next link in its plan. Beyond this distance, lane-changing decisions are based only on vehicle speed and gaps in the traffic. Within this distance, the lane required by the vehicle's plan is also taken into account. As the vehicle nears the intersection, the bias to be in the lane required to stay on plan is increased. Valid values are positive or zero. Default = 70 cells
CA_RANDOM_SEED1 CA_RANDOM_SEED2 CA_RANDOM_SEED3	These three values are combined to initialize the random number generator. Note that the actual sequence of random numbers generated on a slave also depends on the number of slaves and the partitioning in general.
CA_SHORT_SOAK_TIME	The boundary (in seconds) between negligible and short soak times for energy output. Default = 600 seconds
CA_SEQUENCE_LENGTH	The slaves are implicitly synchronized among themselves by the actions of passing boundaries and migrating vehicles. They are also explicitly synchronized by the master every Sequence Length timestep. It may be more efficient to allow the implicit synchronization to control the simulation.
CA_SIM_START_HOUR CA_SIM_START_MINUTE CA_SIM_START_SECOND	These values are combined to calculate the simulation's starting time. Plans whose estimated arrival time is before the start time are not executed.
CA_SIM_STEPS	The simulation executes Sim Steps timesteps before exiting.
CA_SLAVE_MESSAGE_LEVEL CA_MASTER_MESSAGE_LEVEL	Only warning messages whose severity is at least as high as `Message Level` will be written to the master or slave log file.
CA_SLAVE_PRINT_MASK CA_MASTER_PRINT_MASK	These variables control which logging messages to ignore. They are code set within the code based on the values of the `LOG_` configuration file keys and should not be set directly.
CA_TRANSIT_INITIAL_WAIT	`Transit Initial Wait` specifies the number of timesteps a transit vehicle must be present at a transit stop before any passengers get on or off.
CA_USE_NETWORK_CACHE	If set, use a cached binary representation of the network. This representation would have been created by a prior run of the simulation.
CA_USE_PARTITIONED_ROUTE_FILES	It is more efficient for slaves to read only those plans that start in the part of the network for which they are responsible. If the partitioning to be used by the simulation is available (for example, from a prior run of the simulation), the *DistributePlans* utility will create a separate pair of indexes for each slave into one common plan file. If `Use Partitioned Route Files` is set, the slaves will look for these slave-specific indexes. If they do not exist, the simulation will fall back to using a single global pair of indexes.
CA_USE_ROMIO_FOR_OUTPUT	If `Use Romio For Output` is set, and the executable was compiled with the `USE_ROMIO` and `USE_MPI` flags defined, the parallel output system will use ROMIO files instead of Unix files.
PAR_HOST_COUNT	The number of distinct machines that make up the parallel machine environment.

Configuration File Key	Description
PAR_HOST_I PAR_HOST_CPUS_I PAR_HOST_SPEED_I	These variables describe the parallel machine environment to the simulation. There should be one set of these three variables, with I replaced by an integer from 0 to the value of PAR_HOST_COUNT – 1, for each host. Host should be a string containing the name of the machine. Host CPUs should give the number of CPUs available for use on the machine. Host Speed should give the relative speeds of the different machines in arbitrary units. The sum of all the values of Host CPUs must be at least one larger than the number of slaves requested.
PAR_RTM_INPUT_FILE RTM_FEEDBACK_FILE RTM_SAMPLE_INTERVAL PAR_RTM_PENALTY_FACTOR	The partitioning algorithms try to find the partition that spreads the computation associated with nodes and links evenly while simultaneously trying to minimize the communication costs associated with split links. The costs for each node and link can be estimated using run time costs from prior runs. These costs are sampled at the interval defined by RTM Sampling Interval and written out to the file named by RTM File. They are read in from the file found in the directory named by OUTPUT_DIRECTORY.
PAR_SLAVES	This key sets the number of slave processes to spawn. It must be smaller than the number of host CPUs available (to allow one process for the master).
PLAN_FILE	The plan file specifies the name of the file in which plans reside or a string to which *.tim.idx* and *.trv.idx* can be appended to find the time-sorted and traveler-id-sorted indexes into a plan file(s). The plans should include all travelers; for example, plans created by the Route Planner, transit driver plans, freight plans, etc. The name should be given as an absolute path name because the slave executables are not always run from the current working directory.
VEHICLE_FILE	The vehicle file specifies the name in which vehicles reside or a string to which *.veh.idx* can be appended to find the vehicle-id-sorted index into a vehicle file(s). The vehicle file must include all vehicles to be used in the simulation.
VEHICLE_PROTOTYPE_FILE	The vehicle prototype file must include information about every vehicle type used in the simulation.

7.2 Configuration File Keys for Snapshot Output

Configuration File Key	Description
OUT_SNAPSHOT_BEGIN_TIME_n	The first time (in seconds from the midnight before simulation start) at which to collect data.
OUT_SNAPSHOT_END_TIME_n	The last time (in seconds from the midnight before simulation start) at which to collect data.
OUT_SNAPSHOT_FILTER_n	The list of expressions (where each expression has the form FIELD OPERATOR VALUE and multiple expressions are separated by semicolons) for filtering records. Valid values for FIELD are found in Tables 3-5, and values for OPERATOR are found in Table 12.
OUT_SNAPSHOT_LINKS_n	The path of the link specification (described in Table 11).
OUT_SNAPSHOT_NAME_n	The file name for snapshot output.
OUT_SNAPSHOT_NODES_n	The path of the node specification (described in Table 10).
OUT_SNAPSHOT_SUPPRESS_n	The list of fields (separated by semicolons) not to include in the output file.
OUT_SNAPSHOT_TIME_STEP_n	The frequency (in seconds) at which to report data (i.e., write it to disk).
OUT_SNAPSHOT_TYPE_n	The types of snapshot output to collect (separated by semicolons) permissible values are VEHICLE; INTERSECTION; SIGNAL.

7.3 Configuration File Keys for Event Output

Configuration File Key	Description
OUT_EVENT_BEGIN_TIME_n	The first time (in seconds from the midnight before simulation start) at which to collect data.
OUT_EVENT_END_TIME_n	The last time (in seconds from the midnight before simulation start) at which to collect data.
OUT_EVENT_FILTER_n	The list of expressions (where each expression has the form FIELD OPERATOR VALUE and multiple expressions are separated by semicolons) for filtering records. Valid values for FIELD are found in Table 2, and values for OPERATOR are found in Table 12. Valid values for VALUE must be expressed in decimal notation (not hexadecimal).
OUT_EVENT_NAME_n	The file name for event output.
OUT_EVENT_SUPPRESS_n	The list of fields (separated by semicolons) not to include in the output file.

Configuration File Key	Description
OUT_EVENT_TYPE_n	The types of event output to collect permissible value is TRAVELER.

7.4 Configuration File Keys for Summary Output

Configuration File Key	Description
OUT_SUMMARY_BEGIN_TIME_n	The first time (in seconds from the midnight before simulation start) at which to collect data.
OUT_SUMMARY_BOX_LENGTH_n	The length of the boxes (in meters).
OUT_SUMMARY_END_TIME_n	The last time (in seconds from the midnight before simulation start) at which to collect data.
OUT_SUMMARY_ENERGY_BINS_n	The number of bins used to cover the range of the energy histogram.
OUT_SUMMARY_ENERGY_MAX_n	The maximum energy in the energy histogram.
OUT_SUMMARY_ENERGY_SOAK_n	The single value specifying the soak time for which to collect energy data. Permissible values are NEGLIGIBLE; SHORT; MEDIUM; or LONG. If a key is not specified, all soak times are included in the energy output.
OUT_SUMMARY_FILTER_n	The list of expressions (where each expression has the form FIELD OPERATOR VALUE and multiple expressions are separated by semicolons) for filtering records. Valid values for FIELD are found in Tables 6-9, and values for OPERATOR are found in **Error! Reference source not found.**.
OUT_SUMMARY_LINKS_n	The path of the link specification file (described in Table 11).
OUT_SUMMARY_NAME_n	The file name for summary output.
OUT_SUMMARY_SAMPLE_TIME_n	The frequency (in seconds) at which to accumulate data.
OUT_SUMMARY_SUPPRESS_n	The list of fields (separated by semicolons) not to include in the output file.
OUT_SUMMARY_TIME_STEP_n	The frequency (in seconds) at which to report data (i.e., write it to disk).
OUT_SUMMARY_TYPE_n	The types of summary output to collect (separated by semicolons) permissible values are DENSITY; TIME; VELOCITY; or ENERGY.

Configuration File Key	Description
OUT_SUMMARY_VEHICLE_TYPE_n	The vehicle type and subtype (separated by colon) for which to collect velocity data. If subtype is zero or not specified, data for all subtypes of type will be included in the velocity output. If key is not specified, all vehicle types will be included in the velocity output.
OUT_SUMMARY_VELOCITY_BINS_n	The number of bins used to cover the range of the velocity histogram (in meters/second).
OUT_SUMMARY_VELOCITY_MAX_n	The maximum velocity in the velocity histogram (in meters/second).

7.5 Default Output Configuration File Keys

Configuration File Key	Description
OUT_BEGIN_TIME_DEFAULT	The first time (in seconds from the midnight before simulation start) at which to collect data.
OUT_END_TIME_DEFAULT	The last time (in seconds from the midnight before simulation start) at which to collect data.
OUT_EVENT_FILTER_DEFAULT	The list of expressions (of the form FIELD; OPERATOR; VALUE; — separated by semicolons) for filtering event records.
OUT_EVENT_SUPPRESS_DEFAULT	The list of fields (separated by semicolons) not to include in the event output file.
OUT_LINKS_DEFAULT	The path of the link specification file.
OUT_NODES_DEFAULT	The path of the node specification file.
OUT_SNAPSHOT_FILTER_DEFAULT	The list of expressions (of the form FIELD; OPERATOR; VALUE; — separated by semicolons) for filtering snapshot records.
OUT_SNAPSHOT_SUPPRESS_DEFAULT	The list of fields (separated by semicolons) not to include in the snapshot output file.
OUT_SNAPSHOT_TIME_STEP_DEFAULT	The frequency (in seconds) at which to report snapshot data (i.e., write it to disk).
OUT_SUMMARY_BOX_LENGTH_DEFAULT	The length of the summary data boxes (in meters).
OUT_SUMMARY_ENERGY_BINS_DEFAULT	The number of bins used to cover the range of the energy summary histogram.
OUT_SUMMARY_ENERGY_MAX_DEFAULT	The maximum energy in the energy histogram (in cells-squared per second-squared).
OUT_SUMMARY_FILTER_DEFAULT	The list of expressions (of the form FIELD; OPERATOR; VALUE; — separated by semicolons0 for filtering summary records.
OUT_SUMMARY_SAMPLE_TIME_DEFAULT	The frequency (in seconds) at which to accumulate summary data.

Configuration File Key	Description
`OUT_SUMMARY_SUPPRESS_DEFAULT`	The list of fields (separated by semicolons) not to include in the summary output file.
`OUT_SUMMARY_TIME_STEP_DEFAULT`	The frequency (in seconds) at which to report summary data (i.e., write it to disk).
`OUT_SUMMARY_VELOCITY_BINS_DEFAULT`	The number of bins used to cover the range of the velocity summary histogram.
`OUT_SUMMARY_VELOCITY_MAX_DEFAULT`	The maximum velocity in the velocity histogram (in meters per second).

8. Volume Three (*Modules*), Chapter Six (*Selectors/Iteration Databases*)

8.1 Iteration Database General Configuration File Keys

Configuration File Key	Description
ROUTER_IGNORABLE_PRIORITIES	See the Route Planner documentation.
ACT_HOME_ACTIVITY_TYPE	The number of the home activity type (non-negative integer). This key should be specified if an activity file is specified.
ACT_SCHOOL_ACTIVITY_TYPE	The number of the school sctivity type (non-negative integer). This key should be specified if an activity file is specified.
ACT_WORK_ACTIVITY_TYPE	The number of the work activity (non-negative integer). This key should be specified if an activity file is specified.
NET_ACTIVITY_LOCATION_TABLE	The activity location table name. This key is required.
NET_DIRECTORY	The directory where the network files reside. This key is required.
NET_LINK_TABLE	The link table name. This key is required.
NET_NODE_TABLE	The node table name. This key is required.
NET_PARKING_TABLE	The parking table name. This key is required.
NET_PROCESS_LINK_TABLE	The process link table name. This key is required.
NET_TRANSIT_STOP_TABLE	The transit stop table name. This key is required.
SEL_ACTIVITY_FILE SEL_EVENT_FILE	The activity file for use by the Collator. If not present, the ACTIVITY_FILE configuration file key is used. Either SEL_ACTIVITY_FILE or ACTIVITY_FILE must be specified. The event file for use by the Collator.
SEL_ITDB_FILE	The full pathname of the output Iteration Database file generated by the Selector Collator. An iteration number extension is automatically added to the end of this name.
SEL_MESSAGE_LEVEL	Sets the message level for the Collator, stratifier, and Selector modules. Message levels range from –1 to 4 with the higher numbers reporting more.
SEL_PLAN_FILE	The plan file for use by the Collator. If not present, the PLAN_FILE configuration file key is used.
SEL_POPULATION_FILE	The population file for use by the Collator. If not present, the ACT_POPULATION_FILE configuration file key is used. Either SEL_POPULATION_FILE or ACT_POPULATION_FILE must be specified.

Configuration File Key	Description
SEL_STRAT_OUT_FILE	The full pathname for the output Iteration Database created by the Stratifier. There may be several of these for each Collator run. Default = strat
SEL_UAZ_FILE_n	The full pathname of the polygon file specifying User Analysis Zone(s) n, where n is an integer starting at 1.

8.2 Iteration Database Activity Configuration File Keys

Configuration File Key	Description
SEL_USE_ACT_HH_ID	If set, directs the Collator to add the household ID from the activity file for the ending activity for the trip to the output Iteration Database
SEL_USE_ACT_LAST_OK_ITER	If set, directs the Collator to add a field containing the number of the last iteration on which no problems were reported for this household in the Activity Generator or Regenerator's Problem File. A value of -1 indicates there has been a problem reported on every iteration.
SEL_USE_ACT_PERSON_ID	If set, directs the Collator to add the person ID from the activity file for the ending activity for the trip to the output Iteration Database
SEL_USE_END_ACT_GROUP_NUM	If set, directs the Collator to add the activity group number from the activity file for the ending activity for the trip to the output Iteration Database
SEL_USE_END_ACT_ID	If set, directs the Collator to add the activity ID from the activity file for the starting activity for the trip to the output Iteration Database
SEL_USE_END_ACT_LOCATION	If set, directs the Collator to add the first of the possible locations from the activity file for the ending activity for the trip to the output Iteration Database
SEL_USE_END_ACT_TYPE	If set, directs the Collator to add the activity type from the activity file for the ending activity for the trip to the output Iteration Database
SEL_USE_END_DUR_LB	If set, directs the Collator to add the duration lower bound from the activity file for the ending activity for the trip to the output Iteration Database. The value is converted from fractional hours to seconds.
SEL_USE_END_DUR_UB	If set, directs the Collator to add the duration upper bound from the activity file for the ending activity for the trip to the output Iteration Database. The value is converted from fractional hours to seconds.

Configuration File Key	Description
SEL_USE_END_TIME_LB	If set, directs the Collator to add the end time lower bound from the activity file for the ending activity for the trip to the output Iteration Database.
SEL_USE_END_TIME_UB	If set, directs the Collator to add the end time upper bound from the activity file for the ending activity for the trip to the output Iteration Database.
SEL_USE_END_MODE_PREF	If set, directs the Collator to add the mode preference from the activity file for the ending activity for the trip to the output Iteration Database
SEL_USE_END_OTHER_PARTICIPANTS	If set, directs the Collator to add the number of other participants from the activity file for the ending activity for the trip to the output Iteration Database
SEL_USE_END_POSS_LOC	If set, directs the Collator to add the number of possible locations from the activity file for the ending activity for the trip to the output Iteration Database
SEL_USE_END_PRIORITY	If set, directs the Collator to add the activity priority from the activity file for the ending activity for the trip to the output Iteration Database
SEL_USE_END_START_TIME_LB	If set, directs the Collator to add the start time lower bound from the activity file for the ending activity for the trip to the output Iteration Database
SEL_USE_END_START_TIME_UB	If set, directs the Collator to add the start time upper bound from the activity file for the ending activity for the trip to the output Iteration Database
SEL_USE_END_VEHICLE_ID	If set, directs the Collator to add the vehicle ID from the activity file for the ending activity for the trip to the output Iteration Database
SEL_USE_START_ACT_GROUP_NUM	If set, directs the Collator to add the activity group number from the activity file for the starting activity for the trip to the output Iteration Database.
SEL_USE_START_ACT_ID	If set, directs the Collator to add the activity ID from the activity file for the starting activity for the trip to the output Iteration Database.
SEL_USE_START_ACT_LOCATION	If set, directs the Collator to add the first of the possible locations from the activity file for the starting activity for the trip to the output Iteration Database.
SEL_USE_START_ACT_TYPE	If set, directs the Collator to add the activity type from the activity file for the starting activity for the trip to the output Iteration Database.
SEL_USE_START_DUR_LB	If set, directs the Collator to add the duration lower bound from the activity file for the starting activity for the trip to the output Iteration Database. The value is converted from fractional hours to seconds.

Configuration File Key	Description
SEL_USE_START_DUR_UB	If set, directs the Collator to add the duration upper bound from the activity file for the starting activity for the trip to the output Iteration Database. The value is converted from fractional hours to seconds.
SEL_USE_START_END_TIME_LB	If set, directs the Collator to add the end time lower bound from the activity file for the starting activity for the trip to the output Iteration Database. The value is converted from fractional hours to seconds.
SEL_USE_START_END_TIME_UB	If set, directs the Collator to add the end time upper bound from the activity file for the starting activity for the trip to the output Iteration Database. The value is converted from fractional hours to seconds.
SEL_USE_START_MODE_PREF	If set, directs the Collator to add the mode preference from the activity file for the starting activity for the trip to the output Iteration Database.
SEL_USE_START_OTHER_PARTICIPANTS	If set, directs the Collator to add the number of other participants from the activity file for the starting activity for the trip to the output Iteration Database.
SEL_USE_START_POSS_LOC	If set, directs the Collator to add the number of possible locations from the activity file for the starting activity for the trip to the output Iteration Database.
SEL_USE_START_PRIORITY	If set, directs the Collator to add the activity priority from the activity file for the ending activity for the trip to the output Iteration Database.
SEL_USE_START_START_TIME_LB	If set, directs the Collator to add the start time lower bound from the activity file for the starting activity for the trip to the output Iteration Database.
SEL_USE_START_START_TIME_UB	If set, directs the Collator to add the start time upper bound from the activity file for the starting activity for the trip to the output Iteration Database.
SEL_USE_START_VEHICLE_ID	If set, directs the Collator to add the vehicle ID from the activity file for the starting activity for the trip to the output Iteration Database.

8.3 Iteration Database Microsimulation Event Configuration File Keys

Configuration File Key	Description
SEL_USE_ACCELS	If set, directs the Collator to add the ACCELS field from the Traffic Microsimulator event output data to the output Iteration Database. This value is summed across events from every leg of the trip.
SEL_USE_ANOMALY	If set, directs the Collator to add the ANOMALY field from the Traffic Microsimulator event output data to the output Iteration Database. Note that this gives only the value for the last event of the trip.
SEL_USE_DISTANCE_SUM	If set, directs the Collator to add the DISTANCE_SUM field from the Traffic Microsimulator event output data to the output Iteration Database. This value is summed across events from every leg of the trip.
SEL_USE_EVENT_LEG_ID	If set, directs the Collator to add the LEG field from the Traffic Microsimulator event output data to the output Iteration Database. Only the value for the first event of each trip is reported.
SEL_USE_EVENT_PERSON_ID	If set, directs the Collator to add the TRAVELER field from the Traffic Microsimulator event output data to the output Iteration Database.
SEL_USE_EVENT_TRIP_ID	If set, directs the Collator to add the TRIP field from the Traffic Microsimulator event output data to the output Iteration Database.
SEL_USE_EVENT_USER	If set, directs the Collator to add the USER field from the Traffic Microsimulator event output data to the output Iteration Database.
SEL_USE_EVENT_VEHICLE_ID	If set, directs the Collator to add the VEHICLE field from the Traffic Microsimulator event output data to the output Iteration Database. Only the value for the first event of each trip is reported.
SEL_USE_LINK	If set, directs the Collator to add the LINK field from the Traffic Microsimulator event output data to the output Iteration Database. Note that this gives only the value for the last event of the trip.
SEL_USE_LOCATION	If set, directs the Collator to add the LOCATION field from the Traffic Microsimulator event output data to the output Iteration Database. Note that this gives only the value for the last event of the trip.
SEL_USE_NODE	If set, directs the Collator to add the NODE field from the Traffic Microsimulator event output data to the output Iteration Database. Note that this gives only the value for the last event of the trip.

Configuration File Key	Description
SEL_USE_ROUTE	If set, directs the Collator to add the ROUTE field from the Traffic Microsimulator event output data to the output Iteration Database. Only the value for the first event of each trip is reported.
SEL_USE_SIGNALS	If set, directs the Collator to add the SIGNALS field from the Traffic Microsimulator event output data to the output Iteration Database. This value is summed across events from every leg of the trip.
SEL_USE_STATUS	If set, directs the Collator to add the STATUS field from the Traffic Microsimulator event output data to the output Iteration Database. Note that this gives only the value for the last event of the trip.
SEL_USE_STOPPED	If set, directs the Collator to add the STOPPED field from the Traffic Microsimulator event output data to the output Iteration Database. This value is summed across events from every leg of the trip.
SEL_USE_STOPS	If set, directs the Collator to add the STOPS field from the Traffic Microsimulator event output data to the output Iteration Database. This value is summed across events from every leg of the trip.
SEL_USE_TIME	If set, directs the Collator to add the TIME field from the Traffic Microsimulator event output data to the output Iteration Database. Only the value for the last event of each trip is reported.
SEL_USE_TIME_SUM	If set, directs the Collator to add the TIME_SUM field from the Traffic Microsimulator event output data to the output Iteration Database. This value is summed across events from every leg of the trip.
SEL_USE_TURN	If set, directs the Collator to add the TURN field from the Traffic Microsimulator event output data to the output Iteration Database. Note that this gives only the value for the last event of the trip.
SEL_USE_VEH_SUBTYPE	If set, directs the Collator to add the VSUBTYPE field from the Traffic Microsimulator event output data to the output Iteration Database. Only the value for the first event of each trip is reported.
SEL_USE_VEH_TYPE	If set, directs the Collator to add the VEHTYPE field from the Traffic Microsimulator event output data to the output Iteration Database.
SEL_USE_YIELDS	If set, directs the Collator to add the YIELDS field from the Traffic Microsimulator event output data to the output Iteration Database. This value is summed across events from every leg of the trip.

8.4 Iteration Database Router/Plan Configuration File Keys

Configuration File Key	Description
SEL_USE_COST	If set, directs the Collator to add the cost from the Plan file for the trip to the output Iteration Database. Note that there are multiple legs in a trip, each of which contains a value for this field. The Collator will use the sum over all legs.
SEL_USE_DEP_TIME	If set, directs the Collator to add the departure time from the Plan file for the trip to the output Iteration Database. Note that there are multiple legs in a trip, each of which contains a value for this field. The Collator will use the first leg.
SEL_USE_DRIVER	If set, directs the Collator to add the driver flag from the Plan file for the trip to the output Iteration Database. The Collator will fill this field with NA, since there are multiple possible values per trip.
SEL_USE_DURATION	If set, directs the Collator to add the (expected) duration from the Plan file for the trip to the output Iteration Database. Note that there are multiple legs in a trip, each of which contains a value for this field. The Collator will use the sum over all legs.
SEL_USE_END_ACC	If set, directs the Collator to add the ending accessory ID from the Plan file for the trip to the output Iteration Database. Note that there are multiple legs in a trip, each of which contains a value for this field. The Collator will use the last leg.
SEL_USE_END_ACC_TYPE	If set, directs the Collator to add the ending accessory type from the Plan file for the trip to the output Iteration Database. Note that there are multiple legs in a trip, each of which contains a value for this field. The Collator will use the last leg.
SEL_USE_GCF	If set, directs the Collator to add the generalized cost function from the Plan file for the trip to the output Iteration Database. Note that there are multiple legs in a trip, each of which contains a value for this field. The Collator will use the sum over all legs.
SEL_USE_LEG_ID	If set, directs the Collator to add the leg ID from the Plan file for the trip to the output Iteration Database. The Collator will fill this field with "NA", since there are multiple legs for each trip.

Configuration File Key	Description
SEL_USE_MAX_TIME	If set, directs the Collator to add the max time flag from the Plan file for the trip to the output Iteration Database. Note that there are multiple legs in a trip, each of which contains a value for this field. The Collator will use the last leg.
SEL_USE_MODE	If set, directs the Collator to add the mode from the Plan file for the trip to the output Iteration Database. The Collator will fill this field with NA, since there are multiple possible values per trip.
SEL_USE_PLAN_PERSON_ID	If set, directs the Collator to add the person ID from the Plan file for the trip to the output Iteration Database.
SEL_USE_PLAN_USER	If set, directs the Collator to add the person ID from the Plan file for the trip to the output Iteration Database. Note that there are multiple legs in a trip, each of which contains a value for this field. The Collator will use the first leg.
SEL_USE_ROUTER_LAST_OK_ITER	If set, directs the Collator to add a field containing the number of the last iteration on which no problems were reported for this traveler in the Router's Problem File. A value of `-1` indicates there has been a problem reported on every iteration.
SEL_USE_START_ACC	If set, directs the Collator to add the starting accessory from the Plan file for the trip to the output Iteration Database. Note that there are multiple legs in a trip, each of which contains a value for this field. The Collator will use the first leg.
SEL_USE_START_ACC_TYPE	If set, directs the Collator to add the starting accessory type from the Plan file for the trip to the output Iteration Database. Note that there are multiple legs in a trip, each of which contains a value for this field. The Collator will use the first leg.
SEL_USE_STOP_TIME	If set, directs the Collator to add the (expected) arrival time from the Plan file for the trip to the output Iteration Database. Note that there are multiple legs in a trip, each of which contains a value for this field. The Collator will use the last leg.
SEL_USE_TRIP_ID	If set, directs the Collator to add the value in the user field from the Plan file for the trip to the output Iteration Database.

8.5 Iteration Database Population Configuration File Keys

Configuration File Key	Description
SEL_USE_<pop_file header field>	If set, directs the Collator to add the corresponding demographic variable from the population file to the output Iteration Database.
SEL_USE_BLOCK_GROUP	If set, directs the Collator to add the BLOCK_GROUP field from the population file to the output Iteration Database.
SEL_USE_HH_ID	If set, directs the Collator to add the HH_ID field from the population file to the output Iteration Database.
SEL_USE_HOME_LOCATION	If set, directs the Collator to add the HOME_LOCATION field from the population file to the output Iteration Database.
SEL_USE_NUMBER_PERSONS	If set, directs the Collator to add the NUMBER_PERSONS field from the population file to the output Iteration Database.
SEL_USE_NUMBER_VEHICLES	If set, directs the Collator to add the NUMBER_VEHICLES field from the population file to the output Iteration Database.
SEL_USE_PERSON_ID	If set, directs the Collator to add the PERSON_ID field from the population file to the output Iteration Database.
SEL_USE_TRACT	If set, directs the Collator to add the TRACT field from the population file to the output Iteration Database.

8.6 Iteration Database Stratifier Configuration File Keys

Configuration File Key	Description
SEL_ALGORITHM	A comma- or semicolon-separated list of names of algorithms used to select travelers. Currently, the allowed values are: HI_VAR, LO_VAR, HI_RANGE, LO_RANGE, HI_MEAN, LO_MEAN, HI_SIGMA, and LO_SIGMA. These values instruct the Selector to pick the cell with the highest or lowest variance, range, mean, or ratio of mean to standard deviation, respectively. In addition, it is possible to pick a cell by index using the argument PICK_CELL <n>, where <n> is an integer. If the k binnings that make up a cell have n_0, n_1, …, n_k bins each, a set of indexes into each binning of the form $(i_0, i_1, \ldots, i_k)$ is equivalent to the cell index $i_k + n_{(k-1)} * (i_{(k-1)} + \ldots + * (i_2 + n_1 * (i_0))\ldots)$. One algorithm must be supplied for each name in the SEL_COST argument.
SEL_ALGORITHM	A comma- or semicolon-separated list of names of algorithms used to select travelers. Currently, the allowed values are: HI_VAR, LO_VAR, HI_RANGE, LO_RANGE, HI_MEAN, LO_MEAN, HI_SIGMA, and LO_SIGMA. One algorithm must be supplied for each name in the SEL_COST argument.
SEL_BIN_BOUNDS_n	If specified, the bin boundaries used for binning n. The argument is a comma- or semicolon-separated list of values. Bins will be created extending from the smallest value to - infinity and from the largest value to + infinity. Over-ridden if SEL_BINS_NUMBINS_n is present.
SEL_BIN_FIELD_n	The column name of the input Iteration Database used for creating binning n.
SEL_BIN_NAME_n	The column name for binning n in the output Iteration Database. n must start at 0.
SEL_BIN_NUMBINS_n	If specified, the number of bins to create for binning n. Bin boundaries will be chosen to create bins with equal numbers of elements. The number of bins may be adjusted within the code if the distribution of elements is concentrated on a few values.

Configuration File Key	Description
SEL_BIN_SEL_ALGO	A semicolon-separated list of names of algorithms to use in selecting trips from within the chosen cell of the stratification. Possible values are: RANDOM, TAIL, or ALL. There must be one algorithm supplied for each name in the SEL_COST argument. The RANDOM value takes two optional parameters: the first is the fraction of elements to select; the second is the absolute number of elements to select, which overrides the first if it is smaller. For example: RANDOM, 0.2, 100; TAIL takes one required and three optional arguments. The first is 0 if the lowest cost tail is to be selected and non-zero otherwise; the second is the fraction of trips to select; the third is an absolute threshold to apply; and the last is an absolute number of elements to select.
SEL_COST	A comma- or semicolon-separated list of names of columns in the input Iteration Database to associate with stratifications for use by the Selector in selecting trips. One selected set will be created for each name.
SEL_GOAL	The Activity Regenerator command to be associated with the selected set of trips. One goal must be supplied for each name in the SEL_COST argument. The entire goal string is written to the Activity Generator feedback file after each selected traveler ID.
SEL_STRAT_BINS	A semicolon-separated list of comma-separated strings specifying the names of binnings in the Iteration Database to be used in stratifying the data.
SEL_USE_STRATIFICATION	Each semi-colon separated list in the value of SEL_STRAT_BINS creates one stratification, indexed beginning with 0. One stratification must be supplied for each name in the SEL_COST argument.

8.7 Iteration Database Algorithm Configuration File Keys

Configuration File Key	Description
SEL_USE_AND	Directs the Collator to include a field (for each pair) which is the logical AND between the values of the two fields. The argument is a semicolon separated list of comma-separated Iteration Database field names.

Configuration File Key	Description
SEL_USE_CROSS_BOUND	Adds a field to the output Iteration Database which is true if the starting and ending activity locations for the trip are in different polygons. The argument is a comma-separated list of UAZ ID, as above, but without the polygon identifier. The value of this field is true if the starting and ending activity locations for the trip are in different polygons.
SEL_USE_DIFF	Directs the Collator to include a field (for each pair) which is the difference between the values of the two fields. The argument is a semicolon-separated list of comma-separated Iteration Database field names.
SEL_USE_DRIVES_PASSENGER	Directs the Collator to include a field which is true if, on any leg of the trip, the Plan file specifies that the traveler drives a vehicle with passengers. Does not apply to transit vehicle drivers.
SEL_USE_EFFSPEED	Directs the Collator to include a field giving the ratio of the Euclidean distance between start and end activities to the total time (as calculated for SEL_USE_T_TOTAL).
SEL_USE_END_ACT_USER_DATA	Directs the Collator to include a field giving the value of any user-specified field in the Activity Location network table for the activity location at the end of the trip. The argument is a semicolon-separated list of field names.
SEL_USE_END_IN_REGION	See SEL_USE_START_IN_REGION. The value of this field will be true if the ending activity location is inside the polygon.
SEL_USE_END_REGION	The number (n) of the User Analysis Zone specified by the configuration file key SEL_UAZ_FILE_n. The value of the field in the iteration database is the number of the polygon in the UAZ that contains the ending activity location or –1 if not in any defined polygon.
SEL_USE_EUCLID	Directs the Collator to include a field giving the Euclidean distance between the starting and ending activity locations, in the same units the network tables use.
SEL_USE_FINISH_TRIP	Directs the Collator to include a field that is true if an "end trip" event is found for this trip in the event output file.

Configuration File Key	Description
SEL_USE_MODE_LEG_COUNT	Directs the Collator to include a field giving the number of legs on the trip using the specified mode. The argument is a comma-separated list of modes. Currently, only the following modes are distinguished: w - walk i - bicycle t, l, or b - transit c - non-transit vehicle (as driver or passenger) a - activity
SEL_USE_MODE_STRING	Directs the Collator to include a field reflecting the modes used on every leg of this trip. The value is a string with one letter for each leg, starting from the left. Information comes from the Plan file, which does not know about as many modes as the activity file. Currently the letters used and their meanings are: c - driving a vehicle p - passenger in a non-transit vehicle t - transit w - walk i - bicycle a - activity (no transportation)
SEL_USE_NUMLEGS	Directs the Collator to include a field giving the number of legs in this trip, as found in the Plan file.
SEL_USE_OR	Directs the Collator to include a field (for each pair) which is the logical OR between the values of the two fields. The argument is a semicolon-separated list of comma-separated Iteration Database field names.
SEL_USE_PRODUCT	Directs the Collator to include a field (for each pair) which is the product of the values of the two fields. The argument is a semicolon-separated list of comma-separated Iteration Database field names.
SEL_USE_RATIO	Directs the Collator to include a field (for each pair) which is the ratio between the values of the two fields. The argument is a semicolon-separated list of comma separated Iteration Database field names.
SEL_USE_RELDIFF	Directs the Collator to include a field (for each pair) which is the relative difference between the values of the two fields. The argument is a semicolon-separated list of comma-separated Iteration Database field names. SEL_USE_RELDIFF A, B creates a field with values (A - B) / B.

Configuration File Key	Description
SEL_USE_START_ACT_USER_DATA	Directs the Collator to include a field giving the value of any user-specified field in the Activity Location network table for the activity location at the beginning of the trip. The argument is a semicolon-separated list of field names.
SEL_USE_START_IN_REGION	Adds a field to the Iteration Database which has the value true if the starting activity location is in the specified polygon. The argument is a semicolon-separated list of UAZ region identifiers. Each region identifier is of the form <UAZ_ID>, <polygon id>; where <UAZ_ID> is an integer referring to a User Analysis Zone file specified by the UAZ_FILE_NAME configuration file key and <polygon id> is the ID of a polygon contained within that file. The Iteration Database column will be named START_IN_REGION_<UAZ_ID>_<polygon ID>. Its value will be a boolean, which is true if the starting activity location for the trip is inside the polygon.
SEL_USE_START_REGION	The number (n) of the User Analysis Zone specified by the configuration file key SEL_UAZ_FILE_n. The value of the field in the iteration database is the number of the polygon in the UAZ that contains the starting activity location or –1 if not in any defined polygon.
SEL_USE_SUM	Directs the Collator to include a field (for each pair) which is the sum of the values of the two fields. The argument is a semicolon-separated list of comma-separated Iteration Database field names.
SEL_USE_T_MODE	Directs the Collator to include a field giving the total time (in seconds) spent in a particular mode on this trip, as found from the expected duration of those legs in the Plan file. See SEL_USE_MODE_LEG_COUNT for a list of the modes that can be distinguished. The argument should be a semicolon-separated list of mode characters.
SEL_USE_T_TOTAL	Directs the Collator to include a field giving the total time spent on this trip as found from the difference in the TIME field between the last and first events for this trip. The event output file should capture events with "change on trip" status.

Configuration File Key	Description
SEL_USE_T_WAIT	Directs the Collator to include a field giving the total time spent waiting as found by summing over the times between "begin waiting" and "end waiting" events in the event output file. The event output file must capture these events and must not filter out the TIME field.
SEL_USE_T_WALK	Directs the Collator to include a field giving the total time (in seconds) spent walking on this trip, as found from the expected duration of walk legs in the Plan file.
SEL_USE_TRAVERSE_REGION	The number (n) of the User Analysis Zone specified by the configuration file key SEL_UAZ_FILE_n. The value of the field in the iteration database is true if one of the start/end activity locations is in the specified UAZ and the other is outside the UAZ.
SEL_USE_XOR	Directs the Collator to include a field (for each pair) which is the logical exclusive OR between the values of the two fields. The argument is a semicolon-separated list of comma-separated Iteration Database Field names.

9. Volume Three (*Modules*), Chapter Seven (*Emissions Estimator*)

Note: Avoid using the percent (%) character when namin ginput and output files. This will cause problems with the logging system and output of warning and error messages.

Configuration File Key	Description
`EMISSION_RATIOS_LONG_SOAK_FILE`	Multipliers representing ratios of the different emissions by eight power levels for long soaks. Default = *longSoakRatios*

`EMISSIONS_ARRAY_PARAMETERS_FILE`
or
`EMISSIONS_HDV_ARRAY_PARAMETERS_FILE`
	The parameters describing the number of records and increments used in composite input files.
	Default = *ARRAYP.INP* or *ARRAY_HDV.INP*

`EMISSIONS_COMPOSITE_DIFF_INPUT_FILE`	The composite emissions for the differences in emissions and fuel consumption for current versus last timestep for road grades < 1% or downhill. Default = *arraypd.out*
`EMISSIONS_COMPOSITE_DIFF2P_INPUT_FILE`	The composite emissions for the differences for road grades between 1% and 3%. Default = *arraypd2p.out*
`EMISSIONS_COMPOSITE_DIFF4P_INPUT_FILE`	The composite emissions for the differences for road grades between 3% and 5%. Default = *arraypd4p.out*
`EMISSIONS_COMPOSITE_DIFF6P_INPUT_FILE`	The composite emissions for the differences for road grades above 5%. Default = *arraypd6p.out*
`EMISSIONS_COMPOSITE_HDV_INPUT_FILE`	The composite vehicle emissions in 4-mph speed bins and four power bins. Default = *catruck.acc*
`EMISSIONS_COMPOSITE_INPUT_FILE`	The composite vehicle emissions in 4-mph speed bins and 20-mph squared per second power bins for road grades < 1% or downhill. Default = *arrayp.out*
`EMISSIONS_COMPOSITE_TYPE_DIFF_INPUT_FILE`	The composite emissions for the difference in emissions and fuel consumption versus last timestep for 23 LDV subtypes. Default = *batchtotpd*
`EMISSIONS_COMPOSITE_TYPE_INPUT_FILE`	The composite emissions for 20 speeds, 34 power levels, and 23 LDV types. Default = *batchtotpc*

Configuration File Key	Description
EMISSIONS_COMPOSITE2P_INPUT_FILE	The composite vehicle emissions or road grades between 1% and 3%. Default = *arrayp2p.out*
EMISSIONS_COMPOSITE4P_INPUT_FILE	The composite vehicle emissions or road grades between 3% and 5%. Default = *arrayp4p.out*
EMISSIONS_COMPOSITE6P_INPUT_FILE	The composite vehicle emissions or road grades above 5%. Default = *arrayp6p.out*
EMISSIONS_DEBUG1_FILE or EMISSIONS_DEBUG1_HDV_FILE	First debugging file. Default = *debug.ldv.out* or *debug.hdv.out*
EMISSIONS_DEBUG2_FILE or EMISSIONS_DEBUG2_HDV_FILE	Second debugging file. Default = *calcsum.ldv* or *calcsum.hdv*
EMISSIONS_ENR_LONG_SOAK_FILE	The filename of the postprocessed energy file for the long soak vehicles. Created by the *ConvertENRfile* program. Default = *energy.long.out*
EMISSIONS_ENR_MEDIUM_SOAK_FILE	The filename of the postprocessed energy file for the medium soak vehicles. Created by the *ConvertENRfile* program. Default = *energy.medium.out*
EMISSIONS_ENR_NO_SOAK_FILE	The filename of the postprocessed energy file for the negligible soak vehicles. Created by the *ConvertENRfile* program. Default = *energy.no.out*
EMISSIONS_ENR_SHORT_SOAK_FILE	The filename of the postprocessed energy file for the short soak vehicles. Created by the *ConvertENRfile* program. Default = *energy.short.out*
EMISSIONS_EVAP_CITY_FILE	The name of the file containing city-specific data such as temperature distribution and vehicle data. Default = *evapCityData*
EMISSIONS_EVAP_COEF_FILE	The name of the file containing running loss coefficients. Default = *EMISSIONS_MATRICES.dat*
EMISSIONS_EVAP_DEBUG_FILENAME	The name of the Evaporative Emissions debugging file. Default – *debug.dat*
EMISSIONS_EVAP_OPERATING_OUTFILENAME	The name of the file to which operating loss emissions are written. Default = *Operating EvapEmis.dat*
EMISSIONS_EVAP_STATIONARY_OUTFILENAME	The name of the file to which stationary loss emissions are written. Default = *StationaryEvapEmis.dat*

Configuration File Key	Description
EMISSIONS_LDV_OUTPUT_FILE or EMISSIONS_HDV_OUTPUT_FILE	The filenames of the final output from the Tailpipe Emissions Estimator. Default = *emissions.ldv.out* or *emissions.hdv.out*
EMISSIONS_LDV_VELOCITY_FILE or EMISSIONS_HDV_VELOCITY_FILE	The filename for the reformatted Traffic Microsimulator velocity output. These files are created by the ConvertVELfile utility program. Default = *velocity.ldv.out* or *velocity.hdv.out*
EMISSIONS_MICROSIM_ENR_LONG_SOAK_FILE	The filename of the Traffic Microsimulator energy file containing energies for long soak vehicles. Default = *summary.long.enr*
EMISSIONS_MICROSIM_ENR_MEDIUM_SOAK_FILE	The filename of the Traffic Microsimulator energy file containing energies for medium soak vehicles. Default = *summary.medium.enr*
EMISSIONS_MICROSIM_ENR_NO_SOAK_FILE	The filename of the Traffic Microsimulator energy file containing energies for negligible soak vehicles. Default = *summary.no.enr*
EMISSIONS_MICROSIM_ENR_SHORT_SOAK_FILE	The filename of the Traffic Microsimulator energy file containing energies for short soak vehicles. Default = *summary.short.enr*
EMISSIONS_MICROSIM_LDV_VELOCITY_FILE or EMISSIONS_MICROSIM_HDV_VELOCITY_FILE	The filenames for the Traffic Microsimulator velocity output data. Default = *summary.ldv.vel* or *summary.hdv.vel*
EMISSIONS_MICROSIM_TRAVELER_FILE	The filename of the Traffic Microsimulator traveler event file. Default = *event.trv*
EMISSIONS_PA_OUTPUT_FILE	The filename of the parking output file from *ConvertTRVfile*. Default = *pa.out*
EMISSIONS_RATIOS_MEDIUM_SOAK_FILE	Multipliers representing ratios of the different emissions by eight power levels for medium soaks. Default = *mediumSoakRatios*
EMISSIONS_RATIOS_SHORT_SOAK_FILE	Multipliers representing ratios of the different emissions by eight power levels for short soaks. Default = *shortSoakRatios*
EMISSIONS_SUBTYPE_OUTPUT_FILE	The filename of the vehicle subtype output file from *ConvertTRVfile*. Default = *sub.out*
EMISSIONS_VEHICLE_TYPE_DISTRIBUTION	The distributions by 23 LDV types. Default = *vehdist*
EMISSIONS_WRITE_DEBUG_OUTPUT	Whether to create the two debug files or not Default = 0 (not to write out)

9.1 Emissions Estimator Configuration File Keys That Must Be Set to a Specific Value

Configuration File Key	Description
CA_CELL_LENGTH	The length of a cell that a vehicle occupies (in meters). Must be set to 7.5.
CA_LONG_SOAK_TIME	Time where medium vs. long soak is determined (in seconds). Must be set to 9000.
CA_MEDIUM_SOAK_TIME	Time where short vs. medium soak is determined (in seconds). Must be set to 1800.
CA_SHORT_SOAK_TIME	Time where negligible vs. short soak is determined (in seconds). Must be set to 600.
NET_ACTIVITY_LOCATION_TABLE	The activity location table name.
NET_DIRECTORY	The full path name to the directory containing the network tables.
NET_LINK_TABLE	The name of the link table.
NET_NODE_TABLE	The name of network's node table.
NET_PARKING_TABLE	The parking table name.
NET_PROCESS_LINK_TABLE	The process link table name.
NET_TRANSIT_STOP_TABLE	The transit stop table name.
OUT_SUMMARY_BOX_LENGTH_n or OUT_SUMMARY_BOX_LENGTH_DEFAULT	The length of the roadway used to collect summary data (in meters). Must be set to 30.
OUT_SUMMARY_ENERGY_BINS_n or OUT_SUMMARY_ENERGY_BINS_DEFAULT	The number of bins to cover the range of energy histograms. Must be set to 7.
OUT_SUMMARY_ENERGY_MAX_n or OUT_SUMMARY_ENERGY_MAX_DEFAULT	The maximum energy for the range of energies found in energy histograms. Must be set to 105.
OUT_SUMMARY_ENERGY_SOAK_n	The type of energy soak data to collect. There must be four file specifications (one for each soak type): NEGLIGIBLE, SHORT, MEDIUM, and LONG.
OUT_SUMMARY_SAMPLE_TIME_n or OUT_SUMMARY_SAMPLE_TIME_DEFAULT	The frequency (in seconds) at which to accumulate velocity data. Must be set to 1.
OUT_SUMMARY_TIME_STEP_n or OUT_SUMMARY_TIME_STEP_DEFAULT	The frequency (in seconds) at which to report velocity and energy data. Must be set to 3600 (except for summary time data set to 900).

Configuration File Key	Description
OUT_SUMMARY_TYPE_n	The type of summary output to collect. Specifications are needed for VELOCITY and ENERGY.
OUT_SUMMARY_VEHICLE_TYPE_n	The type of velocity summary data to collect. Set to AUTO to collect LDV data, and either TRUCK or BUS for HDV data.
OUT_SUMMARY_VELOCITY_BINS_n or OUT_SUMMARY_VELOCITY_BINS_DEFAULT	The number of bins used to cover the range of the velocity histogram. Must be set to 5.
OUT_SUMMARY_VELOCITY_MAX_n or OUT_SUMMARY_VELOCITY_MAX_DEFAULT	The maximum velocity for range of velocities found in velocity histograms. Must be set to 37.5.

10. Volume Three (*Modules*), Chapter Eight (*Output Visualizer*)

10.1 Mandatory Output Visualizer Configuration File Keys

Configuration File Key	Description
CA_CELL_LENGTH	The length of a cell in meters. Default = 7.5
NET_ACTIVITY_LOCATION_TABLE	The name of the network activity location table or an empty activity location table.
NET_BARRIER_TABLE	The name of a network barrier table or an empty barrier table.
NET_DIRECTORY	The name of the directory containing the network tables.
NET_LANE_WIDTH	The width of a lane in meters. Default = 3.5 Note: The settings for NET_LANE_WIDTH used by the Output Visualizer must be the same as those used by the output system for the vehicles to be placed properly on the network.
NET_LINK_MEDIAN_HALFWIDTH	The distance that the links are offset from the node; must be set to ½ of NET_LANE_WIDTH. Note: this key must be the same for collecting output and running the Output Visualizer; otherwise, vehicles will not be centered properly in lanes.
NET_LINK_TABLE	The name of the network link table.
NET_NODE_TABLE	The name of the network node table.
NET_PARKING_TABLE	The name of the network parking table or an empty parking table.
NET_POCKET_LANE_TABLE	The name of the network pocket lane table or an empty pocket lane table.
NET_TRANSIT_STOP_TABLE	The name of network transit stop table or an empty transit stop table .
OUT_SNAPSHOT_SUPPRESS_1	These keys determine what fields to suppress in the snapshot output file. Nothing needs to be suppressed, but the text vehicle evolution file size will be reduced if the key is set to: ACCELER;DRIVER;USER;LANE;NODE;DISTANCE.
VIS_BOX_LENGTH	The summary box length in meters; should be 150 (meters).

10.2 Optional Output Visualizer Configuration File Keys That May Be Used in the Configuration File

These configuration file keys are read from the configuration file that is used in running the Output Visualizer. They are fewer in number than those that can be read/set after the Output Visualizer is running (see Appendix D).

Configuration File Key	Description
VIS_BACKGROUND_ALPHA	The alpha color value for the viewing area background, 0.0 to 1.0. Not used at this time.
VIS_BACKGROUND_BLUE	The blue color value for the viewing area background, 0.0 to 1.0.
VIS_BACKGROUND_GREEN	The green color value for the viewing area background, 0.0 to 1.0.
VIS_BACKGROUND_RED	The red color value for the viewing area background, 0.0 to 1.0.
VIS_COLORMAPS	The full path and file name of a set of colormaps produced with the *mkallbinmaps* utility to use in the Output Visualizer.
VIS_NETWORK_ACTIVITY_LOCATION_POINTSIZE	The size of an activity location point, 0.0 to 10.0.
VIS_NETWORK_BARRIER_POINTSIZE	The size of a barrier point, 0.0 to 10.0..
VIS_NETWORK_DETECTOR_POINTSIZE	The size of a detector point, 0.0 to 10.0
VIS_NETWORK_NODE_POINTSIZE	The size of a node point, 0.0 to 10.0.
VIS_NETWORK_PARKING_POINTSIZE	The size of a parking accessory point, 0.5 to 10.0.
VIS_NETWORK_TRANSIT_POINTSIZE	The size of a transit stop point, 0.0 to 10.0.
VIS_NETWORK_VIEW_ACTIVITY_LOCATIONS	The toggle to view activity locations. 0 – Do not view activity locations 1 – View activity locations
VIS_NETWORK_VIEW_BARRIERS	The toggle to view barriers. 0 – Do not view barriers 1 – View barriers
VIS_NETWORK_VIEW_BOXES	The toggle to view boxes. 0 – Do not view boxes 1 – View boxes
VIS_NETWORK_VIEW_DETECTORS	The toggle to view detectors. 0 –Do not view detectors 1 – View detectors

Configuration File Key	Description
VIS_NETWORK_VIEW_LANE_DIVIDERS	The toggle to view lane dividers. 0 – Do not view lane dividers 1 – View lane dividers
VIS_NETWORK_VIEW_LINKS	The toggle to view links. 0 – Do not view links 1 – View links
VIS_NETWORK_VIEW_NODES	The toggle to view nodes. 0 – Do not view nodes 1 – View nodes
VIS_NETWORK_VIEW_PARKING	The toggle to view parking. 0 – Do not view parking 1 – View parking
VIS_NETWORK_VIEW_TRANSIT	The toggle to view transit stops. 0 – Do not view transit stops 1 – View transit stops
VIS_SINGLE_BUFFERED	The toggle for double or single buffered. 0 – Double buffered (default) 1 – Single buffered The value should always be 0 unless the video adapter will not allow double buffering.
VIS_SLIDER_SCALE	The initial scale, 1.0 and larger. Default = 1.0
VIS_SLIDER_SPEED	The initial speed, 0.005 to 1.0. Default = 1.0
VIS_SLIDER_THRESHOLD	The initial threshold, 0.005 to 1.0 Default = 1.0
VIS_SLIDER_XROT	The initial X rotation, 0.0 to 360.0. Default = 0.0
VIS_SLIDER_YROT	The initial Y rotation, 0.0 to 360.0. Default = 0.0
VIS_SLIDER_ZROT	The initial Z rotation, 0.0 to 360.0. Default = 0.0
VIS_UNDERLAYFILE	The name of a file to be read in and drawn underneath the network. This file must be of the Underlay file format. This can be used to add objects to the network that are visible at all times.
VIS_VEHICLE_DRAW3D	The toggle for 2D or 3D vehicles. 0 – 2D vehicles 1 – 3D vehicles

Configuration File Key	Description
`VIS_VEHICLE_DRAWMODE`	The coloring method for vehicles, 0 to 0 – Same color mode 1 – Color by Type mode 2 – Color by Passengers mode 3 – Color by Velocity mode 4 – Random coloring by vehicle ID 5 – Color by User field mode
`VIS_VEHICLE_POINTSIZE`	The size of a vehicle when it is a point, 0.0 to 10.0.
`VIS_XSLIDER_360DEFAULT`	The toggle for default X rotation. 0 – Default X rotation of 0.0 1 – Default X rotation of 360.0
`VIZ_EXECUTE_BATCHFILE`	The full path name and filename of the Output Visualizer Batch Command file to execute upon startup of the Output Visualizer.

10.3 Output Visualizer Configuration File Keys That May Be Read Interactively

Configuration File Key	Description
`#Latest Keys start here...`	An optional comment line that may be included in the file for bookkeeping purposes.
`NET_LANE_WIDTH`	The network lane width. Default = 3.5
`VIS_ACTIVITIES_COLOR_BLUE`	The blue color value for drawing activity locations, 0.0 to 1.0.
`VIS_ACTIVITIES_COLOR_GREEN`	The green color value for drawing activity locations, 0.0 to 1.0.
`VIS_ACTIVITIES_COLOR_RED`	The red color value for drawing activity locations, 0.0 to 1.0.
`VIS_BACKGROUND_ALPHA`	The alpha color value for the viewing area background, 0.0 to 1.0. Not used at this time.
`VIS_BACKGROUND_BLUE`	The blue color value for the viewing area background, 0.0 to 1.0.
`VIS_BACKGROUND_GREEN`	The green color value for the viewing area background, 0.0 to 1.0.
`VIS_BACKGROUND_RED`	The red color value for the viewing area background, 0.0 to 1.0.
`VIS_BARRIERS_COLOR_BLUE`	The blue color value for drawing barriers, 0.0 to 1.0.
`VIS_BARRIERS_COLOR_GREEN`	The green color value for drawing barriers, 0.0 to 1.0.
`VIS_BARRIERS_COLOR_RED`	The red color value for drawing barriers, 0.0 to 1.0.
`VIS_BOXES_COLOR_BLUE`	The blue color value for drawing boxes, 0.0 to 1.0.
`VIS_BOXES_COLOR_GREEN`	The green color value for drawing boxes, 0.0 to 1.0.
`VIS_BOXES_COLOR_RED`	The red color value for drawing boxes, 0.0 to 1.0.
`VIS_BOXESDRAWMODE`	The toggle to select how boxes are drawn. 0 – Boxes are drawn as solid polygons 1 – Boxes are drawn with lines tracing the box edges 2 – Boxes are drawn as solid polygons and the edges outlined (default)
`VIS_DETECTORS_COLOR_BLUE`	The blue color value for drawing detectors, 0.0 to 1.0.
`VIS_DETECTORS_COLOR_GREEN`	The green color value for drawing detectors, 0.0 to 1.0.

Configuration File Key	Description
VIS_DETECTORS_COLOR_RED	The red color value for drawing detectors, 0.0 to 1.0.
VIS_FVTRANSLATEMODE	The toggle to determine whether the Follow Vehicle mode is on or off, 0 – Follow Vehicle mode is off (default) 1 – Follow Vehicle mode is on
VIS_INITIAL_TRANSLATE_X	The X translation in utm coordinates.
VIS_INITIAL_TRANSLATE_Y	The Y translation in utm coordinates.
VIS_INITIAL_TRANSLATE_Z	The Z translation in utm coordinates.
VIS_LABELMODE	The toggle to determine whether labels are shown. 0 – Do not show labels (default) 1 – Show labels
VIS_LABELS_COLOR_BLUE	The blue color value for drawing labels, 0.0 to 1.0.
VIS_LABELS_COLOR_GREEN	The green color value for drawing labels, 0.0 to 1.0.
VIS_LABELS_COLOR_RED	The red color value for drawing labels, 0.0 to 1.0.
VIS_LEGENDMODE	The toggle to determine whether a legend is shown. 0 – Do not show a legend (default) 1 – Show a legend
VIS_LIGHTSMODE	The toggle to determine whether the lighting model is on or off, 0 – Lighting model is off (default) 1 – Lighting model is on
VIS_LINKS_COLOR_BLUE	The blue color value for drawing links, 0.0 to 1.0.
VIS_LINKS_COLOR_GREEN	The green color value for drawing links, 0.0 to 1.0.
VIS_LINKS_COLOR_RED	The red color value for drawing links, 0.0 to 1.0.
VIS_NETFEATURE_BAR_COLUMN	Indicates which data column is used to calculate the height of the 3D Bars. It can be 0 to 9 and must be an integer (default 0). This setting applies to viewing network features, point, and regional polygon data.
VIS_NETFEATURE_BAR_THREEDSF	Indicates the amount to multiply the data value from the specified data column to determine the height of the 3D Bars to draw. It can be any number, but negative numbers should be avoided if the data column is non-negative (negative heights will be difficult to interpret). This setting applies to viewing network features, point, and regional polygon data.

Configuration File Key	Description
VIS_NETFEATURE_BARMMODE	The toggle to create 3D bar graphs from the data when viewing network features, point, and regional polygon data. 1 – Use 3D bar graphs (default) 0 – Do not use 3D bar graphs
VIS_NETFEATURE_COLORMAP_COLUMN	Indicates which data column is used for single color mapping; it can be 0 to 9 and must be an integer (default 1). This setting applies to viewing network feature, point and regional polygon data.
VIS_NETFEATURE_COLORMAP_MAX	The maximum value to use for the colormap when a single colormap is used. It can be any number. This setting applies to viewing network features, point, and regional polygon data.
VIS_NETFEATURE_COLORMAP_MIN	The minimum value to use for the colormap when a single colormap is used. It can be any number. This setting applies to viewing network features, point, and regional polygon data.
VIS_NETFEATURE_COLORMODE	The toggle to use single color mapping of the data when viewing network features, point, and regional polygon data. 1 – Use single color mapping (default) 0 – Do not use single color mapping
VIS_NETFEATURE_TRANSMODE	The toggle to use transparency filtering of the data when viewing network features, point, and regional polygon data. 1 – Use transparency 0 – Do not use transparency
VIS_NETFEATURE_TWOMAP1_COLORMODE	The toggle to define which color scheme to use for the first colormap when two-color mapping is used. 0 – Black to Red is used (default) 1 – Black to Green is used 2 – Black to Blue is used This setting applies to viewing network feature, point, and regional polygon data.
VIS_NETFEATURE_TWOMAP1_COLUMN	Indicates which data column is used for two-color mapping for the first colormap; it can be 0 to 9 and must be an integer (default 1). This setting applies to viewing network feature, point and regional polygon data.
VIS_NETFEATURE_TWOMAP1MAP_MAX	The maximum value to use for the first colormap when a two-colormap is used. It can be any number. This setting applies to viewing network features, point, and regional polygon data.

Configuration File Key	Description
VIS_NETFEATURE_TWOMAP1MAP_MIN	The minimum value to use for the first colormap when a two-colormap is used. It can be any number. This setting applies to viewing network features, point, and regional polygon data.
VIS_NETFEATURE_TWOMAP2_COLORMODE	The toggle to define which color scheme to use for the second colormap when two-color mapping is used. 0 – Left to Right is used (default) 1 – Right to Left to Green is used This means that if the VIS_SUMMARY_TWOMAP1_COLORMODE is 0, a value of 0 would produce a Green to Blue colormap, whereas a value of 1 would produce a Blue to Green colormap. This setting applies to viewing network feature, point, and regional polygon data.
VIS_NETFEATURE_TWOMAP2_COLUMN	Indicates which data column is used for two-color mapping for the second colormap; it can be 0 to 9 and must be an integer (default 1). This setting applies to viewing network feature, point, and regional polygon data.
VIS_NETFEATURE_TWOMAP2MAP_MAX	The maximum value to use for the second colormap when a two-colormap is used. It can be any number. This setting applies to viewing network features, point, and regional polygon data.
VIS_NETFEATURE_TWOMAP2MAP_MIN	The minimum value to use for the second colormap when a two-colormap is used. It can be any number. This setting applies to viewing network features, point, and regional polygon data.
VIS_NETFEATURE_TWOMAPMODE	The toggle to use two-color mapping of the data when viewing network features, point, and regional polygon data. 1 – Use two-color mapping 0 – Do not use two-color mapping (default)
VIS_NETWORK_ACTIVITY_LOCATION_POINTSIZE	The size of an activity location point, 0.0 to 10.0.
VIS_NETWORK_BARRIER_POINTSIZE	The size of a barrier point, 0.0 to 10.0.
VIS_NETWORK_DETECTOR_POINTSIZE	The size of a detector point, 0.0 to 10.0.
VIS_NETWORK_NODE_POINTSIZE	The size of a node point, 0.0 to 10.0.
VIS_NETWORK_PARKING_POINTSIZE	The size of a parking point, 0.0 to 10.0.
VIS_NETWORK_TRANSIT_POINTSIZE	The size of a transit stop point, 0.0 to 10.0.
VIS_NETWORK_VIEW_ACTIVITY_LOCATIONS	The toggle to view activity locations. 0 – Do not view activity locations 1 – View activity locations

Configuration File Key	Description
VIS_NETWORK_VIEW_BARRIERS	The toggle to view barriers. 0 – Do not view barriers 1 – View barriers
VIS_NETWORK_VIEW_BOXES	The toggle to view boxes. 0 – Do not view boxes 1 – View boxes
VIS_NETWORK_VIEW_DETECTORS	The toggle to view detectors. 0 – Do not view detectors 1 – View detectors
VIS_NETWORK_VIEW_LINKS	The toggle to view links. 0 – Do not view links 1 – View links
VIS_NETWORK_VIEW_NODES	The toggle to view nodes. 0 – Do not view nodes 1 – View nodes
VIS_NETWORK_VIEW_PARKING	The toggle to view parking. 0 – Do not view parking 1 – View parking
VIS_NETWORK_VIEW_TRANSIT	The toggle to view transit stops. 0 – Do not view transit stops 1 – View transit stops
VIS_NODES_COLOR_BLUE	The blue color value for drawing nodes, 0.0 to 1.0.
VIS_NODES_COLOR_GREEN	The green color value for drawing nodes, 0.0 to 1.0.
VIS_NODES_COLOR_RED	The red color value for drawing nodes, 0.0 to 1.0.
VIS_OVERLAYMODE	The toggle to determine whether the Overlay mode is `on` or `off`. 0 – Overlay mode is `off` (default) 1 – Overlay mode is `on`
VIS_PARKINGS_COLOR_BLUE	The blue color value for drawing parking accessories, 0.0 to 1.0.
VIS_PARKINGS_COLOR_GREEN	The green color value for drawing parking accessories, 0.0 to 1.0.
VIS_PARKINGS_COLOR_RED	The red color value for drawing parking accessories, 0.0 to 1.0.
VIS_RIDEINVEHICLEMODE	The toggle to determine whether the Ride In Vehicle mode is `on` or `off`, 0 – Ride In Vehicle mode is `off` (default) 1 – Ride In Vehicle mode is `on`
VIS_SET_VEHICLE_ID	The ID of the vehicle to use for either the Follow Vehicle Mode or the Ride In Vehicle Mode. The value can be any vehicle ID.
VIS_SLIDER_SCALE	The scale, 1.0 and larger; Default = 1.0

Configuration File Key	Description
VIS_SLIDER_SPEED	The speed, 0.005 to 1.0; Default = 1.0
VIS_SLIDER_THRESHOLD	The threshold, 0.005 to 1.0; Default = 1.0
VIS_SLIDER_XROT	The X rotation, 0.0 to 360.0; Default = 0.0
VIS_SLIDER_YROT	The Y rotation, 0.0 to 360.0; Default = 0.0
VIS_SLIDER_ZROT	The Z rotation, 0.0 to 360.0; Default = 0.0
VIS_SUMMARY_BAR_COLUMN	Indicates which data column is used to calculate the height of the 3D Bars; it can be 0 to 9 and must be an integer (default 0). This setting applies to viewing link space summary, variable size box, and link data.
VIS_SUMMARY_BAR_THREEDSF	Indicates the amount to multiply the data value from the specified data column to determine the height of the 3D Bars to draw. It can be any number, but negative numbers should be avoided if the data column is non-negative (negative heights will be difficult to interpret).
VIS_SUMMARY_BARMMODE	The toggle to create 3D bar graphs from the data when viewing link space summary, variable size box, and link data. 1 – Use 3D bar graphs (default) 0 – Do not use 3D bar graphs
VIS_SUMMARY_COLORMAP_COLUMN	Indicates which data column is used for single color mapping; it can be 0 to 9 and must be an integer (default 1). This setting applies to viewing link space summary, variable size box, and link data.
VIS_SUMMARY_COLORMAP_MAX	The maximum value to use for the colormap when a single colormap is used. It can be any number. This setting applies to viewing link space summary, variable size box, and link data.
VIS_SUMMARY_COLORMAP_MIN	The minimum value to use for the colormap when a single colormap is used. It can be any number. This setting applies to viewing link space summary, variable size box, and link data.
VIS_SUMMARY_COLORMODE	The toggle to use single color mapping of the data when viewing link space summary, variable size box, and link data. 1 – Use single color mapping (default) 0 – Do not use single color mapping
VIS_SUMMARY_TRANSMODE	The toggle to use transparency filtering of the data when viewing link space summary, variable size box, and link data. 1 – Use transparency 0 – Do not use transparency (default)

Configuration File Key	Description
VIS_SUMMARY_TWOMAP1_COLORMODE	The toggle to define which color scheme to use for the first colormap when two color mapping is used. 0 – Black to Red is used (default) 1 – Black to Green is used 2 – Black to Blue is used This setting applies to viewing link space summary, variable size box, and link data.
VIS_SUMMARY_TWOMAP1_COLUMN	Indicates which data column is used for two-color mapping for the first colormap; it can be 0 to 9 and must be an integer (default 1). This setting applies to viewing link space summary, variable size box, and link data.
VIS_SUMMARY_TWOMAP1MAP_MAX	The maximum value to use for the first colormap when two-color mapping is used. It can be any number. This setting applies to viewing link space summary, variable size box, and link data.
VIS_SUMMARY_TWOMAP1MAP_MIN	The minimum value to use for the first colormap when two-color mapping is used. It can be any number. This setting applies to viewing link space summary, variable size box, and link data.
VIS_SUMMARY_TWOMAP2_COLORMODE	The toggle to define which color scheme to use for the second colormap when two-color mapping is used. 0 – Left to Right is used (default) 1 – Right to Left to Green is used This means that if the VIS_SUMMARY_TWOMAP1_COLORMODE is 0, a value of 0 would produce a Green to Blue colormap, whereas a value of 1 would produce a Blue to Green colormap. This setting applies to viewing link space summary, variable size box, and link data.
VIS_SUMMARY_TWOMAP2_COLUMN	Indicates which data column is used for two-color mapping for the second colormap, can be 0 to 9 and must be an integer (default 1). This setting applies to viewing link space summary, variable size box, and link data.
VIS_SUMMARY_TWOMAP2MAP_MAX	The maximum value to use for the second colormap when two-color mapping is used. It can be any number. This setting applies to viewing link space summary, variable size box, and link data.

Configuration File Key	Description
VIS_SUMMARY_TWOMAP2MAP_MIN	The minimum value to use for the second colormap when two-color mapping is used. It can be any number. This setting applies to viewing link space summary, variable size box, and link data.
VIS_SUMMARY_TWOMAPMODE	The toggle to use two-color mapping of the data when viewing link space summary, variable size box, and link data. 1 – Use two color mapping 0 – Do not use two color mapping (default)
VIS_THREEDBARMODE	The toggle to determine whether the 3D Bars are displayed or just 2D color-filled rectangles will be displayed. 0 2D – Color-filled rectangles will be displayed 1 3D – Bars will be displayed (default) Note: This switch only applies to Variable Size Box Data, and it overrides the VIS_SUMMARY_BARMODE configuration file key.
VIS_THREEDNETMODE	The toggle to determine whether the 3D Network mode is on or off. 0 – 3D Network mode is off (default) 1 – 3D Network mode is on
VIS_TRANSITS_COLOR_BLUE	The blue color value for drawing transit stops, 0.0 to 1.0.
VIS_TRANSITS_COLOR_GREEN	The green color value for drawing transit stops, 0.0 to 1.0.
VIS_TRANSITS_COLOR_RED	The red color value for drawing transit stops, 0.0 to 1.0.
VIS_VEHICLE_DRAW3D	The toggle for 2D or 3D vehicles. 0 – 2D vehicles 1 – 3D vehicles
VIS_VEHICLE_DRAWMODE	The coloring method for vehicles, 0 to 0 – Same color mode 1 – Color by Type mode 2 – Color by Passengers mode 3 – Color by Velocity mode 4 – Random coloring by vehicle ID 5 – Color by User field mode
VIS_VEHICLE_POINTSIZE	The size of a vehicle when it is a point, 0.0 to 10.0

11. VOLUME FOUR (*CALIBRATIONS, SCENARIOS, AND TUTORIALS*)

12. Volume Five (*Software: Interface Functions and Data Structures*)

13. VOLUME SIX (*INSTALLATION*)

Chapter Nine: Index

#Latest Keys start here..., *59*
ACT_ACCESS_HEADER, *15*
ACT_ACTIVITY_TYPE, *15*, 16, 17, 19, 20
ACT_ADJUST_ACTIVITY_TIMES, *15*
ACT_ANCHOR_ACTIVITY_TYPE, *15*
ACT_AUTOMOBILE_MODE*, *15*
ACT_BICYCLE_MODE, *15*
ACT_BLOCKGROUP_HEADER, *13*, *15*
ACT_DECISION_TREE_FILE, *15*
ACT_DEFAULT_CAR_SPEED, *15*
ACT_DEFAULT_INTRAZONE_DISTANCE, *15*
ACT_DEFAULT_TRANSIT_MODE, *15*
ACT_DEFAULT_TRANSIT_SPEED, *15*
ACT_END_OF_DAY_TIME_RANGE, *16*
ACT_FEEDBACK_FILE, *21*
ACT_HHDENSITY_HEADER, *21*
ACT_HOME_ACTIVITY_TYPE, *16*, *22*, *35*
ACT_HOME_DURING_DAY_TIME_RANGE, *16*
ACT_HOME_HEADER, *13*, *16*
ACT_HOUSEHOLD_FILE, *16*
ACT_INITIAL_HOME_TIME_RANGE, *16*
ACT_LOCATION_CHOICE_EXPONENT, *16*
ACT_LOCATION_HEADER, *16*
ACT_LOG_FILE, *16*
ACT_MAGIC_MOVE_MODE, *16*
ACT_MAX_END_TIME, *16*, *22*
ACT_MINIMUM_ADULT_AGE, *16*
ACT_MODE_WEIGHT_FILE, *17*
ACT_MULTI_FAMILY_HEADER, *13*, *17*
ACT_OUT_OF_HOME_TIME_RANGE, 17
ACT_PARTIAL_OUTPUT, *21*
ACT_PERSON_DEMOG_AGE_HEADER, *17*
ACT_PERSON_DEMOG_GENDER_HEADER, *17*
ACT_PERSON_DEMOG_RELATION_HEADER, *17*
ACT_PERSON_DEMOG_WORKER_HEADER, *17*
ACT_POPULATION_FILE, *16*, *17*, *21*, *35*
ACT_PRIORITY, *17*
ACT_PROBLEM_FILE, *17*
ACT_RAND0M_SEED, *22*
ACT_RANDOM_SEED, *17*
ACT_REQUIRED_HH_DEMOG, *18*
ACT_SCHOOL_ACTIVITY_TYPE, *18*, *35*
ACT_SCHOOL_LOCATION_ATTRACTOR_VALUE, *18*
ACT_SCHOOL_LOWER_BOUND, *18*
ACT_SCHOOL_UPPER_BOUND, *18*
ACT_SCHOOL_ZONE_ATTRACTOR_VALUE, *18*
ACT_SHARED_RIDE_DISTANCE_RANGE, *18*
ACT_SHARED_RIDE_TIME_RANGE_MAX, *18*
ACT_SHARED_RIDE_TIME_RANGE_MEDIUM, 18
ACT_SHARED_RIDE_TIME_RANGE_MIN, *18*
ACT_SURVEY_ACTIVITY_FILE, *19*
ACT_SURVEY_HOUSEHOLD_FILE, *19*
ACT_SURVEY_WEIGHTS_FILE, *19*
ACT_TAZ_HEADER, *19*, *22*
ACT_TIME_PRIORITY, *19*
ACT_TRACT_HEADER, *13*, *19*
ACT_TRAVEL_TIME_FILE, *19*
ACT_TRAVEL_TIME_FILE_MODES, *19*
ACT_TRAVEL_TIME_INTERVALS_FILE, 19
ACT_TRIP_TABLE_OUTPUT, *22*
ACT_TRIPTABLE_DESTINATION_ATTRACTOR_HEADER, *22*
ACT_TRIPTABLE_FILE, *22*
ACT_TRIPTABLE_ORIGIN_ATTRACTOR_HEADER, *22*
ACT_TRIPTABLE_STARTING_HH_ID, *22*
ACT_TRIPTABLE_STARTING_PERSON_ID, *22*
ACT_TRIPTABLE_STARTING_VEHICLE_ID, *22*
ACT_TRIPTIME_FILE, *22*
ACT_WALKING_MODE, *20*
ACT_WORK_ACTIVITY_TYPE, *20*, *22*, *35*
ACT_WORK_HEADER, *20*
ACT_WORK_TIME_RANGE, *20*
ACT_ZONE_HEADER, *20*

ACT_ZONE_INFO_FILE, *20*
Activity file, *20*, *22*
Activity Generator, *15*, *17*, *18*, *20*
Activity location, *15*, *16*
Activity location file, *17*, *19*, *22*
Activity location table, *16*, *20*, *22*
ACTIVITY_FILE, *20*, *24*, *35*
ARRAYP.INP, *50*
arrayp.out, *51*
arraypd.out, *50*
arraypd2%.out, *50*
arraypd4%.out, *50*
arraypd6%.out, *50*
batchtotpc, *50*
batchtotpd, *50*
BOX_LENGTH, *32*, *33*
CA_BROADCAST_ACC_CPN_MAP, *27*
CA_BROADCAST_TRAVELERS, *27*
CA_CELL_LENGTH, *53*, *55*
CA_DECELERATION_PROBABILITY, *27*
CA_ENTER_TRANSIT_DELAY, *27*
CA_EXIT_TRANSIT_DELAY, *27*
CA_GAP_VELOCITY_FACTOR, *27*
CA_IGNORE_GAP_PROBABILITY, *27*
CA_INTERSECTION_CAPACITY, *27*
CA_INTERSECTION_WAIT_TIME, *27*
CA_LANE_CHANGE_PROBABILITY, *28*
CA_LATE_BOUNDARY_RECEPTION, *28*
CA_LONG_SOAK_TIME, *28*
CA_LOOK_AHEAD_CELLS, *28*
CA_MASTER_MESSAGE_LEVEL, *29*
CA_MAX_WAITING_SECONDS, *28*
CA_MEDIUM_SOAK_TIME, *28*
CA_NO_TRANSIT, *28*
CA_OFF_PLAN_EXIT_TIME, *28*
CA_PLAN_FOLLOWING_CELLS, *29*
CA_RANDOM_SEED1, *29*
CA_RANDOM_SEED2, *29*
CA_RANDOM_SEED3, *29*
CA_SEQUENCE_LENGTH, *29*
CA_SHORT_LONG_TIME, *53*
CA_SHORT_MEDIUM_TIME, *53*
CA_SHORT_SOAK_TIME, *29*, *53*
CA_SIM_START_HOUR, *29*
CA_SIM_START_MINUTE, *29*
CA_SIM_START_SECOND, *29*
CA_SIM_STEPS, *29*
CA_SLAVE_MESSAGE_LEVEL, *29*
CA_TRANSIT_INITIAL_WAIT, *29*
CA_USE_NETWORK_CACHE, *29*
CA_USE_PARTITIONED_ROUTE_FILES, *26*, *29*
CA_USE_ROMIO_FOR_OUTPUT, *29*
calcsum.hdv, *51*
calcsum.ldv, *51*
catruck.acc, *50*
Colormaps, *56*
Configuration file key, *17*, *19*, *23*
ConvertENRfile, *51*
ConvertTRVfile, *52*
ConvertVELfile, *52*
debug.hdv.out, *51*
debug.ldv.out, *51*
EMISSION_RATIOS_LONG_SOAK_FILE, *50*
emissions.hdv.out, *52*
emissions.ldv.out, *52*
EMISSIONS_ARRAY_PARAMETERS_FILE, *50*
EMISSIONS_COMPOSITE_DIFF_INPUT_FILE, *50*
EMISSIONS_COMPOSITE_DIFF2P_INPUT_FILE, *50*
EMISSIONS_COMPOSITE_DIFF4P_INPUT_FILE, *50*
EMISSIONS_COMPOSITE_DIFF6P_INPUT_FILE, *50*
EMISSIONS_COMPOSITE_HDV_INPUT_FILE, *50*
EMISSIONS_COMPOSITE_TYPE_DIFF_INPUT_FILE, *50*
EMISSIONS_COMPOSITE_TYPE_INPUT_FILE, *50*
EMISSIONS_COMPOSITE2P_INPUT_FILE, *51*
EMISSIONS_COMPOSITE4P_INPUT_FILE, *51*
EMISSIONS_COMPOSITE6P_INPUT_FILE, *51*
EMISSIONS_DEBUG1_FILE, *51*
EMISSIONS_DEBUG1_HDV_FILE, *51*
EMISSIONS_DEBUG2_FILE, *51*
EMISSIONS_DEBUG2_HDV_FILE, *51*
EMISSIONS_ENR_LONG_SOAK_FILE, *51*
EMISSIONS_ENR_MEDIUM_SOAK_FILE, *51*

EMISSIONS_ENR_NO_SOAK_FILE, *51*
EMISSIONS_ENR_SHORT_SOAK_FILE, *51*
EMISSIONS_EVAP_CITY_FILE, *51*
EMISSIONS_EVAP_COEF_FILE, *51*
EMISSIONS_EVAP_DEBUG_FILENAME, *51*
EMISSIONS_EVAP_OPERATING_OUTFILENAME, *51*
EMISSIONS_EVAP_STATIONARY_OUTFILENAME, *51*
EMISSIONS_HDV_OUTPUT_FILE, *52*
EMISSIONS_HDV_VELOCITY_FILE, *52*
EMISSIONS_LDV_OUTPUT_FILE, *52*
EMISSIONS_LDV_VELOCITY_FILE, *52*
EMISSIONS_MICROSIM_ENR_LONG_SOAK_FILE, *52*
EMISSIONS_MICROSIM_ENR_MEDIUM_SOAK_FILE, *52*
EMISSIONS_MICROSIM_ENR_NO_SOAK_FILE, *52*
EMISSIONS_MICROSIM_ENR_SHORT_SOAK_FILE, *52*
EMISSIONS_MICROSIM_HDV_VELOCITY_FILE, *52*
EMISSIONS_MICROSIM_LDV_VELOCITY_FILE, *52*
EMISSIONS_MICROSIM_TRAVELER_FILE, *52*
EMISSIONS_PA_OUTPUT_FILE, *52*
EMISSIONS_RATIOS_MEDIUM_SOAK_FILE, *52*
EMISSIONS_RATIOS_SHORT_SOAK_FILE, *52*
EMISSIONS_SUBTYPE_OUTPUT_FILE, *52*
EMISSIONS_VEHICLE_TYPE_DISTRIBUTION, *52*
EMISSIONS_WRITE_DEBUG_OUTPUT, *52*
energy.long.out, *51*
energy.medium.out, *51*
energy.no.out, *51*
energy.short.out, *51*
ENERGY_BINS, *32*, *33*
ENERGY_MAX, *32*, *33*
ENERGY_SOAK, *32*
event.trv, *52*
File menu, *56*
Household, *20*
Household demographics, *18*
LDV, *50*
LOG_ROUTING, *24*
LOG_ROUTING_DETAIL, *24*
longSoakRatios, *50*
mediumSoakRatios, *52*
mkallbinmaps utility, *56*
MODE_MAP_FILE, *22*, *24*
NET_ACTIVITY_LOCATION_TABLE, *9*, *13*, *20*, *22*, *35*, *53*, *55*
NET_ACTUATED_ALGORITHM_B_BETA, *9*
NET_ACTUATED_ALGORITHM_B_DENSITY_CONST, *9*
NET_ACTUATED_ALGORITHM_B_FLOW_CONST, *9*
NET_BARRIER_TABLE, *9*, *55*
NET_DETECTOR_ACCELERATION_NOISE, *10*
NET_DETECTOR_ACCELERATION_OFFSET_c, *10*
NET_DETECTOR_FAILURE_TIME_MEAN_c, *10*
NET_DETECTOR_FALSE_ALARM_PROBABILITY_c, *10*
NET_DETECTOR_FALSE_ALARM_TIME_MEAN_c, *10*
NET_DETECTOR_INITIAL_FAILURE_PROBABILITY_c, *10*
NET_DETECTOR_MISS_ACCELERATION_PROBABILITY_c, *10*
NET_DETECTOR_MISS_POSITION_PROBABILITY_c, *10*
NET_DETECTOR_MISS_PROBABILITY_c, *10*
NET_DETECTOR_MISS_VELOCITY_PROBABILITY_c, *10*
NET_DETECTOR_POSITION_NOISE_c, *10*
NET_DETECTOR_POSITION_OFFSET_c, *10*
NET_DETECTOR_PRESENCE_SAMPLE_TIME, *9*
NET_DETECTOR_RETENTION_TIME, *9*
NET_DETECTOR_TABLE, *9*
NET_DETECTOR_VELOCITY_NOISE_c, *10*

NET_DETECTOR_VELOCITY_OFFSET_c, *10*
NET_DIRECTORY, *9*, *13*, *20*, *22*, *35*, *53*, *55*
NET_LANE_CONNECTIVITY_TABLE, *9*
NET_LANE_USE_TABLE, *9*
NET_LANE_WIDTH, *9*, *55*, *59*
NET_LINK_MEDIAN_HALFWIDTH, *9*, *55*
NET_LINK_TABLE, *9*, *13*, *21*, *22*, *35*, *53*, *55*
NET_NODE_TABLE, *9*, *13*, *21*, *22*, *35*, *53*, *55*
NET_PARKING_TABLE, *9*, *22*, *35*, *55*
NET_PHASING_PLAN_TABLE, *9*
NET_POCKET_LANE_TABLE, *9*, *55*
NET_PROCESS_LINK_TABLE, *9*, *22*, *35*
NET_SIGNAL_COORDINATOR_TABLE, *9*
NET_SIGNALIZED_NODE_TABLE, *9*
NET_SPEED_TABLE, *9*
NET_STUDY_AREA_LINKS_TABLE, *9*
NET_TIMING_PLAN_TABLE, *9*
NET_TRANSIT_STOP_TABLE, *10*, *22*, *35*, *55*
NET_TURN_PROHIBITION_TABLE, *10*
NET_UNSIGNALIZED_NODE_TABLE, *10*
NET-DETECTOR_REPAIR_TIME_MAX_c, *11*
Network link table, *55*
Network node table, *55*
Network parking table, *55*
Network pocket lane table, *55*
Network transit stop table, *55*
OUT_BEGIN_TIME_DEFAULT, *33*
OUT_END_TIME_DEFAULT, *33*
OUT_EVENT_BEGIN_TIME_n, *31*
OUT_EVENT_END_TIME_n, *31*
OUT_EVENT_FILTER_DEFAULT, *33*
OUT_EVENT_FILTER_n, *31*
OUT_EVENT_NAME_n, *31*
OUT_EVENT_SUPPRESS_DEFAULT, *33*
OUT_EVENT_SUPPRESS_n, *31*
OUT_EVENT_TYPE_n, *32*
OUT_LINKS_DEFAULT, *33*
OUT_NODES_DEFAULT, *33*
OUT_SNAPSHOT_BEGIN_TIME_n, *31*
OUT_SNAPSHOT_END_TIME_n, *31*
OUT_SNAPSHOT_FILTER_DEFAULT, *33*
OUT_SNAPSHOT_FILTER_n, *31*
OUT_SNAPSHOT_LINKS_n, *31*
OUT_SNAPSHOT_NAME_n, *31*
OUT_SNAPSHOT_NODES_n, *31*
OUT_SNAPSHOT_SUPPRESS_1, *55*
OUT_SNAPSHOT_SUPPRESS_DEFAULT, *33*
OUT_SNAPSHOT_SUPPRESS_n, *31*
OUT_SNAPSHOT_TIME_STEP_DEFAULT, *33*
OUT_SNAPSHOT_TIME_STEP_n, *31*
OUT_SNAPSHOT_TYPE_n, *31*
OUT_SUMMARY_BEGIN_TIME_n, *32*
OUT_SUMMARY_BOX_LENGTH, *53*
OUT_SUMMARY_BOX_LENGTH_DEFAULT, *33*, *53*
OUT_SUMMARY_BOX_LENGTH_n, *32*, *53*
OUT_SUMMARY_END_TIME_n, *32*
OUT_SUMMARY_ENERGY_BINS, *53*
OUT_SUMMARY_ENERGY_BINS_DEFAULT, *33*
OUT_SUMMARY_ENERGY_BINS_n, *32*
OUT_SUMMARY_ENERGY_MAX, *53*
OUT_SUMMARY_ENERGY_MAX_DEFAULT, *33*, *53*
OUT_SUMMARY_ENERGY_MAX_n, *32*
OUT_SUMMARY_ENERGY_SOAK_n, *32*, *53*
OUT_SUMMARY_FILTER_DEFAULT, *33*
OUT_SUMMARY_FILTER_n, *32*
OUT_SUMMARY_LINKS_n, *32*
OUT_SUMMARY_NAME_n, *32*
OUT_SUMMARY_SAMPLE_TIME_DEFAULT, *33*, *53*
OUT_SUMMARY_SAMPLE_TIME_n, *32*, *53*
OUT_SUMMARY_SUPPRESS_DEFAULT, *34*
OUT_SUMMARY_SUPPRESS_n, *32*
OUT_SUMMARY_TIME_STEP_DEFAULT, *34*, *53*
OUT_SUMMARY_TIME_STEP_n, *32*, *53*
OUT_SUMMARY_TYPE, *54*
OUT_SUMMARY_TYPE_n, *32*, *54*
OUT_SUMMARY_VEHICLE_TYPE_n, *33*, *54*
OUT_SUMMARY_VELOCITY_BINS, *54*
OUT_SUMMARY_VELOCITY_BINS_DEFAULT, *34*

OUT_SUMMARY_VELOCITY_BINS_n, *33*, *54*
OUT_SUMMARY_VELOCITY_MAX_DEFAULT, *34*, *54*
OUT_SUMMARY_VELOCITY_MAX_n, *33*, *54*
Output Visualizer, *56*
pa.out, *52*
PAR_HOST_COUNT, *29*
PAR_HOST_CPUS_I, *30*
PAR_HOST_I, *30*
PAR_HOST_SPEED_I, *30*
PAR_RTM_PENALTY_FACTOR, *30*
PAR_SLAVES, *30*
PLAN_FILE, *24*, *26*, *30*, *35*
POP_BASELINE_FILE, *13*
POP_LOCATED_FILE, *13*, *21*
POP_NEAREST_BG_FILE, *13*
POP_RANDOM_SEED, 13
POP_STARTING_HH_ID, *13*
POP_STARTING_PERSON_ID, *13*
POP_STARTING_VEHICLE_ID, 2, 14
POP_TRIPTABLE_FILE, *23*
Population converter, 17
Regression tree, *15*, *17*, *18*
ROUTER_BIKING_SPEED, *21*, *24*
ROUTER_COMPLETED_HOUSEHOLD_FILE, *26*
ROUTER_CORR, *24*
ROUTER_DELAY_NOISE, *24*
ROUTER_DEPENDENT_HOUSEHOLD_FILE, *24*
ROUTER_DISPLAY_PATHS, *24*
ROUTER_FILTER_EXCLUDE_MODE, *24*
ROUTER_FILTER_EXCLUDE_VEHICLE, *24*
ROUTER_FILTER_INCLUDE_MODE, *24*
ROUTER_FILTER_INCLUDE_VEHICLE, *24*
ROUTER_GET_OFF_TRANSIT, *24*
ROUTER_GET_OFF_TRANSIT_DELAY, *24*
ROUTER_GET_ON_TRANSIT, *25*
ROUTER_GET_ON_TRANSIT_DELAY, *25*
ROUTER_HOUSEHOLD_FILE, *25*
ROUTER_IGNORABLE_PRIORITIES, *35*
ROUTER_INCLUDE_WALK_PLAN_NODES, *25*
ROUTER_INTERNAL_PLAN_SIZE, *25*
ROUTER_LINK_DELAY_FILE, *25*
ROUTER_LINK_DELAY_MIN_COUNT, *25*
ROUTER_MAX_NODES_EXAMINED, *25*
ROUTER_MESSAGE_LEVEL, *25*
ROUTER_NUMBER_THREADS, *25*
ROUTER_OVERDO, *25*
ROUTER_PROBLEM_FILE, *25*
ROUTER_RETIME_MODES, *26*
ROUTER_RETIME_PLANS, *26*
ROUTER_RETIME_TRAVELER_FILE, *26*
ROUTER_SEED, *25*
ROUTER_TIME_REPORT_INTERVAL, 26
ROUTER_WALKING_SPEED, *21*, *26*
ROUTER_ZERO_BACKD, *26*
RTM_FEEDBACK_FILE, *30*
SAMPLE_TIME, *32*, *33*
SEL_ACTIVITY_FILE, *35*
SEL_ALGORITHM, *44*
SEL_BIN_BOUNDS_n, *44*
SEL_BIN_FIELD_n, *44*
SEL_BIN_NAME_n, *44*
SEL_BIN_NUMBINS_n, *44*
SEL_BIN_SEL_ALGO, *45*
SEL_BINS_NUMBINS_n, *44*
SEL_COST, *44*, *45*
SEL_EVENT_FILE, *35*
SEL_GOAL, *45*
SEL_ITDB_FILE, *35*
SEL_MESSAGE_LEVEL, *35*
SEL_PLAN_FILE, *35*
SEL_POPULATION_FILE, *35*
SEL_STRAT_BINS, *45*
SEL_STRAT_OUT_FILE, *36*
SEL_UAZ_FILE_n, *36*, *46*, *48*, *49*
SEL_USE_<pop_file header field>, *43*
SEL_USE_ACCELS, *39*
SEL_USE_ACT_GROUP_NUM, *36*
SEL_USE_ACT_HH_ID, *36*
SEL_USE_ACT_ID, *36*
SEL_USE_ACT_LAST_OK_ITER, *36*
SEL_USE_ACT_LOCATION, *36*
SEL_USE_ACT_PESON_ID, *36*
SEL_USE_ACT_TYPE, *36*
SEL_USE_AND, *45*
SEL_USE_ANOMALY, *39*

SEL_USE_BLOCK_GROUP, *43*
SEL_USE_COST, *41*
SEL_USE_CROSS_BOUND, *46*
SEL_USE_DEP_TIME, *41*
SEL_USE_DIFF, *46*
SEL_USE_DISTANCE_SUM, *39*
SEL_USE_DRIVER, *41*
SEL_USE_DRIVES_PASSENGER, *46*
SEL_USE_DURATION, *41*
SEL_USE_EFFSPEED, *46*
SEL_USE_END_ACC, *41*
SEL_USE_END_ACC_TYPE, *41*
SEL_USE_END_ACT_USER_DATA, *46*
SEL_USE_END_DUR_LB, *36*
SEL_USE_END_DUR_UB, *36*
SEL_USE_END_IN_REGION, *46*
SEL_USE_END_REGION, *46*
SEL_USE_END_TIME_LB, *37*
SEL_USE_END_TIME_UB, *37*
SEL_USE_EUCLID, *46*
SEL_USE_EVENT_LEG_ID, *39*
SEL_USE_EVENT_PERSON_ID, *39*
SEL_USE_EVENT_TRIP_ID, *39*
SEL_USE_EVENT_USER, *39*
SEL_USE_EVENT_VEHICLE_ID, *39*
SEL_USE_FINISH_TRIP, *46*
SEL_USE_GCF, *41*
SEL_USE_HH_ID, *43*
SEL_USE_HOME_LOCATION, *43*
SEL_USE_LEG_ID, *41*
SEL_USE_LINK, *39*
SEL_USE_LOCATION, *39*
SEL_USE_MAX_TIME, *42*
SEL_USE_MODE, *42*
SEL_USE_MODE_LEG_COUNT, *47*, *48*
SEL_USE_MODE_PREF, *37*
SEL_USE_MODE_STRING, *47*
SEL_USE_NODE, *39*
SEL_USE_NUMBER_PERSONS, *43*
SEL_USE_NUMBER_VEHICLES, *43*
SEL_USE_NUMLEGS, *47*
SEL_USE_OR, *47*
SEL_USE_OTHER_PARTICIPANTS, *37*
SEL_USE_PERSON_ID, *43*
SEL_USE_PLAN_PERSON_ID, *42*
SEL_USE_PLAN_USER, *42*
SEL_USE_POSS_LOC, *37*
SEL_USE_PRIORITY, *37*
SEL_USE_PRODUCT, *47*
SEL_USE_RATIO, *47*
SEL_USE_RELDIFF, *47*
SEL_USE_ROUTE, *40*
SEL_USE_ROUTER_LAST_OK_ITER, *42*
SEL_USE_SIGNALS, *40*
SEL_USE_START_ACC, *42*
SEL_USE_START_ACC_TYPE, *42*
SEL_USE_START_ACT_GROUP_NUM, *37*
SEL_USE_START_ACT_ID, *37*
SEL_USE_START_ACT_LOCATION, *37*
SEL_USE_START_ACT_TYPE, *37*
SEL_USE_START_ACT_USER_DATA, *48*
SEL_USE_START_DUR_LB, *37*
SEL_USE_START_DUR_UB, *38*
SEL_USE_START_END_TIME_LB, *38*
SEL_USE_START_END_TIME_UB, *38*
SEL_USE_START_IN_REGION, *46*, *48*
SEL_USE_START_MODE_PREF, *38*
SEL_USE_START_OTHER_PARTICIPANTS, *38*
SEL_USE_START_POSS_LOC, *38*
SEL_USE_START_PRIORITY, *38*
SEL_USE_START_REGION, *48*
SEL_USE_START_START_TIME_LB, *38*
SEL_USE_START_START_TIME_UB, *38*
SEL_USE_START_TIME_LB, *37*
SEL_USE_START_TIME_UB, *37*
SEL_USE_START_VEHICLE_ID, *38*
SEL_USE_STATUS, *40*
SEL_USE_STOP_TIME, *42*
SEL_USE_STOPPED, *40*
SEL_USE_STOPS, *40*
SEL_USE_STRATIFICATION, *45*
SEL_USE_SUM, *48*
SEL_USE_T_MODE, *48*
SEL_USE_T_TOTAL, *46*, *48*
SEL_USE_T_WAIT, *49*
SEL_USE_T_WALK, *49*
SEL_USE_TIME, *40*
SEL_USE_TIME_SUM, *40*
SEL_USE_TRACT, *43*
SEL_USE_TRAVERSE_REGION, *49*
SEL_USE_TRIP_ID, *42*
SEL_USE_TURN, *40*
SEL_USE_VEH_SUBTYPE, *40*

SEL_USE_VEH_TYPE, *40*
SEL_USE_VEHICLE_ID, *37*
SEL_USE_XOR, *49*
SEL_USE_YIELDS, *40*
Shared rides, *18*
shortSoakRatios, *52*
summary.hdv.out, *52*
summary.long.enr, *52*
summary.medium.enr, *52*
summary.no.enr, *52*
summary.short.enr, *52*
Survey households, *19*
SYNPOP_BASE_DIRECTORY, *12*
SYNPOP_BASE_PREFIX, *12*
SYNPOP_FORECAST_PREFIX, *12*
SYNPOP_HOUSEHOLD_DEMOGRAPHICS, *12*
SYNPOP_KEEP_TEMP_FILES, *12*
SYNPOP_MABLE_FILE, *12*
SYNPOP_MARGINALS_FILE, *12*
SYNPOP_PERSON_DEMOGRAPHICS, *12*
SYNPOP_PUMAS, *12*
SYNPOP_PUMS_DIRECTORY, *12*
SYNPOP_RANDOM_SEED, *12*
SYNPOP_STATE, *12*
SYNPOP_STF_DATA_DIRECTORY, *12*
SYNPOP_STF_INFO_DIRECTORY, *12*
SYNPOP_TEMP_DIRECTORY, *12*
Synthetic population, *17*, *18*
TAZ, *19*, *22*
TIME_STEP, *31*, *32*, *33*, *34*
TRANSIT_ROUTE_FILE, *26*
TRANSIT_SCHEDULE_FILE, *26*
Trip Table Activity Generator, *22*
VEH_AGE_DEMOGRAPHIC, *14*
VEH_DRIVER_MINIMUM_AGE, *14*
VEH_GENERATE_FOR_DRIVERS, *14*
VEH_RANDOM_SEED, *14*
VEH_VEHICLE_SUBTYPE, *14*, *23*
VEH_VEHICLE_TYPE, *14*, *23*
vehdist, *52*
Vehicle, *58*, *66*
VEHICLE_FILE, 5, 6, 11, 14, *21*, 22, *26*, *30*
VEHICLE_PROTOTYPE_FILE, *30*
VEHICLE_TYPE, *33*
velocity.hdv.out, *52*
velocity.ldv.out, *52*
VELOCITY_BINS, *33*, *34*
VELOCITY_MAX, *33*, *34*
VIS_ACTIVITIES_COLOR_BLUE, *59*
VIS_ACTIVITIES_COLOR_GREEN, *59*
VIS_ACTIVITIES_COLOR_RED, *59*
VIS_BACKGROUND_ALPHA, *56*, *59*
VIS_BACKGROUND_BLUE, *56*, *59*
VIS_BACKGROUND_GREEN, *56*, *59*
VIS_BACKGROUND_RED, *56*, *59*
VIS_BARRIERS_COLOR_BLUE, *59*
VIS_BARRIERS_COLOR_GREEN, *59*
VIS_BARRIERS_COLOR_RED, *59*
VIS_BOX_LENGTH, *55*
VIS_BOXES_COLOR_BLUE, *59*
VIS_BOXES_COLOR_GREEN, *59*
VIS_BOXES_COLOR_RED, *59*
VIS_BOXESDRAWMODE, *59*
VIS_COLORMAPS, *56*
VIS_DETECTORS_COLOR_BLUE, *59*
VIS_DETECTORS_COLOR_GREEN, *59*
VIS_DETECTORS_COLOR_RED, *60*
VIS_FVTRANSLATEMODE, *60*
VIS_INITIAL_TRANSLATE_X, *60*
VIS_INITIAL_TRANSLATE_Y, *60*
VIS_INITIAL_TRANSLATE_Z, *60*
VIS_LABELMODE, *60*
VIS_LABELS_COLOR_BLUE, *60*
VIS_LABELS_COLOR_GREEN, *60*
VIS_LABELS_COLOR_RED, *60*
VIS_LEGENDMODE, *60*
VIS_LIGHTSMODE, *60*
VIS_LINKS_COLOR_BLUE, *60*
VIS_LINKS_COLOR_GREEN, *60*
VIS_LINKS_COLOR_RED, *60*
VIS_NETFEATURE_BAR_COLUMN, *60*
VIS_NETFEATURE_BAR_THREEDSF, *60*
VIS_NETFEATURE_BARMMODE, *61*
VIS_NETFEATURE_COLORMAP_COLUMN, *61*
VIS_NETFEATURE_COLORMAP_MAX, *61*
VIS_NETFEATURE_COLORMAP_MIN, *61*
VIS_NETFEATURE_COLORMODE, *61*
VIS_NETFEATURE_TRANSMODE, *61*
VIS_NETFEATURE_TWOMAP1_COLORMODE, *61*
VIS_NETFEATURE_TWOMAP1_COLUMN, *61*

VIS_NETFEATURE_TWOMAP1MAP_MAX, *61*
VIS_NETFEATURE_TWOMAP1MAP_MIN, *62*
VIS_NETFEATURE_TWOMAP2_COLORMODE, *62*
VIS_NETFEATURE_TWOMAP2_COLUMN, *62*
VIS_NETFEATURE_TWOMAP2MAP_MAX, *62*
VIS_NETFEATURE_TWOMAP2MAP_MIN, *62*
VIS_NETFEATURE_TWOMAPMODE, *62*
VIS_NETWORK_ACTIVITY_LOCATION_POINTSIZE, *56*, *62*
VIS_NETWORK_BARRIER_POINTSIZE, *56*, *62*
VIS_NETWORK_DETECTOR_POINTSIZE, *56*, *62*
VIS_NETWORK_NODE_POINTSIZE, *56*, *62*
VIS_NETWORK_PARKING_POINTSIZE, *56*, *62*
VIS_NETWORK_TRANSIT_POINTSIZE, *56*, *62*
VIS_NETWORK_VIEW_ACTIVITY_LOCATIONS, *56*, *62*
VIS_NETWORK_VIEW_BARRIERS, *56*, *63*
VIS_NETWORK_VIEW_BOXES, *56*, *63*
VIS_NETWORK_VIEW_DETECTORS, *56*, *63*
VIS_NETWORK_VIEW_LANE_DIVIDERS, *57*
VIS_NETWORK_VIEW_LINKS, *57*, *63*
VIS_NETWORK_VIEW_NODES, *57*, *63*
VIS_NETWORK_VIEW_PARKING, *57*, *63*
VIS_NETWORK_VIEW_TRANSIT, *57*, *63*
VIS_NODES_COLOR_BLUE, *63*
VIS_NODES_COLOR_GREEN, *63*
VIS_NODES_COLOR_RED, *63*
VIS_OVERLAYMODE, *63*
VIS_PARKINGS_COLOR_BLUE, *63*
VIS_PARKINGS_COLOR_GREEN, *63*
VIS_PARKINGS_COLOR_RED, *63*
VIS_RIDEINVEHICLEMODE, *63*
VIS_SET_VEHICLE_ID, *63*
VIS_SINGLE_BUFFERED, *57*
VIS_SLIDER_SCALE, *57*, *63*
VIS_SLIDER_SPEED, *57*, *64*
VIS_SLIDER_THRESHOLD, *57*, *64*
VIS_SLIDER_XROT, *57*, *64*
VIS_SLIDER_YROT, *57*, *64*
VIS_SLIDER_ZROT, *57*, *64*
VIS_SUMMARY_BAR_COLUMN, *64*
VIS_SUMMARY_BAR_THREEDSF, *64*
VIS_SUMMARY_BARMMODE, *64*
VIS_SUMMARY_COLORMAP_COLUMN, *64*
VIS_SUMMARY_COLORMAP_MAX, *64*
VIS_SUMMARY_COLORMAP_MIN, *64*
VIS_SUMMARY_COLORMODE, *64*
VIS_SUMMARY_TRANSMODE, *64*
VIS_SUMMARY_TWOMAP1_COLORMODE, *62*, *65*
VIS_SUMMARY_TWOMAP1_COLUMN, *65*
VIS_SUMMARY_TWOMAP1MAP_MAX, *65*
VIS_SUMMARY_TWOMAP1MAP_MIN, *65*
VIS_SUMMARY_TWOMAP2_COLORMODE, *65*
VIS_SUMMARY_TWOMAP2_COLUMN, *65*
VIS_SUMMARY_TWOMAP2MAP_MAX, *65*
VIS_SUMMARY_TWOMAP2MAP_MIN, *66*
VIS_SUMMARY_TWOMAPMODE, *66*
VIS_THREEDBARMODE, *66*
VIS_THREEDNETMODE, *66*
VIS_TRANSITS_COLOR_BLUE, *66*
VIS_TRANSITS_COLOR_GREEN, *66*
VIS_TRANSITS_COLOR_RED, *66*
VIS_UNDERLAYFILE, *57*
VIS_VEHICLE_DRAW3D, *57*, *66*
VIS_VEHICLE_DRAWMODE, *58*, *66*
VIS_VEHICLE_POINTSIZE, *58*, *66*
VIS_XSLIDER_360DEFAULT, *58*
VIZ_EXECUTE_BATCHFILE, *58*