

TRANSIMS Version 5

Parameter Reference

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AB_SPEED_FIELD_NAME

LinkData Control Keys (blank)

AB_VOLUME_FIELD_NAME

LinkData Control Keys (blank)

ACCESS_FORMAT

See File Formats.

ACTIVITY_DURATION_*

ConvertTrips Control Keys (blank)

ACTIVITY_DURATION_* 0.0 hours //---- 0.0, 0.25..24.0 hours

ADD_PASSENGER_CIRCLE_SIZE

ArcSnapshot Control Keys Boolean

ADD_PASSENGER_SQUARE_SIZE

ArcSnapshot Control Keys Boolean

ADD_UTURN_TO_DEAD_END_LINKS

TransimsNet Control Keys Boolean

This is an optional key with a default value of FALSE. The **TransimsNet** program can optionally add U-Turns to dead-end links in the network during the network synthesis process by setting this control key to TRUE.

ADDITIONAL_TRAVEL_TIME

ConvertTrips Control Keys

This is an optional key with a default value of 0 minutes (range of 0 – 30 minutes). The **ConvertTrips** program estimates the travel time between the trip origin and destination using the user provided average speed by trip group and the straight line distance between the origin and destination activity locations. A constant value is added to this result to account for vehicle access, parking, and overall uncertainty in the travel time estimate. This key is used to define the additional travel time added to each trip.

ADJUST_ACTIVITY_SCHEDULE

In version 5.0.37 of the Router, ADJUST_ACTIVITY_SCHEDULE and IGNORE_ACTIVITY_DURATION keys were added to globally control how early and late arrivals are handled. If a trip's travel time is less than expected, the schedule adjust key will permit the activity to move forward in time, but keep the activity duration the same. If a trip's travel time is greater than expected, the ignore durations key will permit the activity duration to be reduced to as little as one minute to enable the next trip to start as close to the original time schedule as possible. The ignore durations key also drops activity records from the output plan file. These keys can be applied separately or in combination.

ARCPLAN_REPORT_*

ArcPlan Control Keys (blank)

AREA_TYPE_INDEX_FIELD

NetPrep Control Keys Text

AVERAGE_TRAVEL_SPEED_*

ConvertTrips Control Keys

This is an optional key that is used to estimate the travel time between activity locations. The straight-line distance between the coordinates of the two points is divided by the average travel speed to estimate the travel time. The additional travel time value is added to the estimated travel time to calculate the trip duration. Default value for this key is 10 meters per second (about 22 mph). This calculation is used if a SKIM_FILE is not provided or the origin-destination cell in this matrix is zero.

BA_SPEED_FIELD_NAME

LinkData Control Keys (blank)

BA_VOLUME_FIELD_NAME

LinkData Control Keys (blank)

BANDWIDTH_SCALING_FACTOR

Draw Service Keys Decimal

The bandwidth scaling factor is used to convert the number of selected vehicles on a link to the width of the bandwidth polygon in meters. The inside edges of the polygon follows the shape of the link centerline. The outside edge is offset from the centerline by this value. The default width factor is 1.0 meters per vehicle. The accepted range is between 0.01 and 100,000 meters.

BICYCLE_SPEED

The bicycle speed is optional and when provided specifies the bicycling speed in meters per second. The value can range from 1.0 to 10.0 meters per second. The default value is 4.0. Link lengths are divided by this value to convert distance into bicycle time.

BICYCLE_TIME_VALUES_*

The bicycle time value key is optional and when provided specifies the impedance values for time the traveler spends bicycling. The values can range from zero to 1000.0. The default value is 15.0 impedance units / second. This value is multiplied by the time spent bicycling on network links. If household types are defined, this key can include a list of values corresponding to each household type. For example, 15, 20, 25 can be specified to define the bicycle time value for household types 1, 2 and 3+, respectively

BUS_BIAS_CONSTANTS_*

The bus bias constant is optional. When provided, the total impedance value for each local or express bus segment of a transit trip is adjusted by this value. The value must be greater than zero and is applied after the bus bias factor is applied. If household types are defined, this key can include a list of impedance values corresponding to each household type. The default value is 0.

BUS_BIAS_FACTORS_*

The bus bias factors are optional and when provided factors up the total impedance value for each segment of a transit trip that uses a local or express bus. The value can range from 1.0 to 3.0. The default value is 1.0. If household types are defined, this key can include a list of factors corresponding to each household type.

CELL_SIZE

ArcSnapshot Control Keys	(blank)
Flow-Time Service Keys	Decimal

This cell size key is optional. This key defaults to 7.5 meters when the value is not provided. The value can range from 4.5 to 9.0 meters. Note that the cell size must be less than or equal to the specified minimum link length.

CENTER_ONEWAY_LINKS

Draw Service Keys	Boolean
--------------------------	---------

This key controls the way that links are drawn and has a default value of FALSE. If the key is FALSE, one-way links are drawn relative to a centerline on the left side of the direction of travel (i.e., like the centerline of a two-way street). If the first character of the key is "O", "N", "n", "F", or "f", the key is

interpreted as FALSE. Anything else is interpreted as TRUE. If this key is true, the centerline is interpreted as the center of the one-way pavement. This affects how lane lines and link direction offsets are drawn. It has no effect on links drawn with a single centerline.

CIRCULAR_GROUP_FLAG

Simulation Service Keys

Boolean

The CIRCULAR_GROUP_FLAG is used by LinkDelay to determine how the end time periods are smoothed. If TRUE (the default) the volumes and speeds are smoothed across the first and last time periods. In other words, 0:00 and 0:15 are smoothed with 23:45 and 24:00.

CLEAR_INPUT_FLOW_RATES

Flow-Time Service Keys

Boolean

This optional key is disabled (FALSE) by default. In the router, it is used to indicate whether flows are cleared before creating new plans and link delay files. If the key is TRUE, existing flows are ignored.

COLLAPSE_DIVIDED_ARTERIALS

NetPrep Control Keys

Boolean

This key is optional and is disabled/FALSE by default. The purpose of this key is to allow the user to either (A) maintain divided arterials and multi-node signals at signalized intersections (if key is set to FALSE or omitted from the control file) or (B) collapse divided arterials in the raw GIS network data input to NetPrep (e.g., data obtained from an MPO often includes parallel links for divided arterials) and replace multi-node signalized intersections with single nodes. Using this key (set to TRUE) is not required and may even be undesirable in certain scenarios, but in general, it is recommended to collapse divided arterials. TRANSIMS Version 5 does support modeling of both divided and collapsed arterials. However, divided arterials and specifically multi-node signalized intersections are more complicated to code and simulate. Using single-node intersections will make the network easier to edit and simulate. The link file contains a DIVIDED field which is used to model link access such as parallel roadways. An illustration of the collapsing process at a multi-node intersection is shown below (Figure 1):

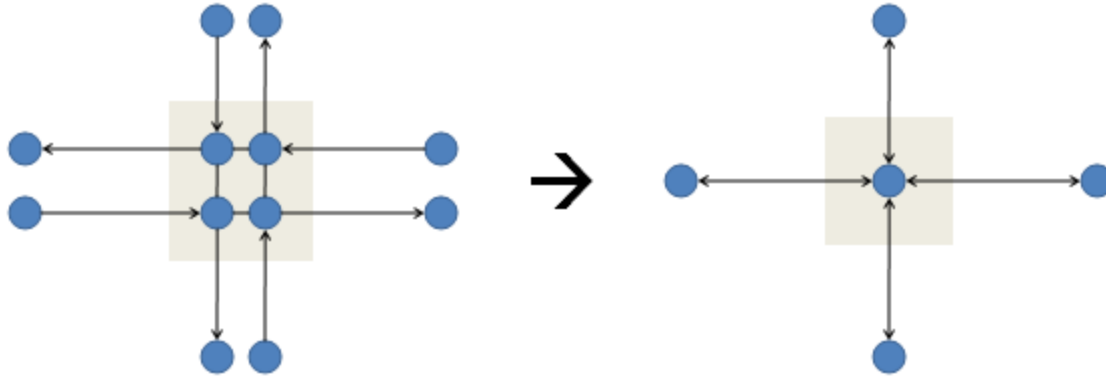


Figure 1 Divided Arterials

COLLAPSE_SHAPE_NODES

NetPrep Control Keys

Boolean

The COLLAPSE_SHAPE_NODES parameter is optional. The default value is False, and possible values are TRUE/FALSE, YES/NO, 1/0, T/F, Y/N. This key was previously referred to as COLLAPSE_NODES_FLAG in TransimsNet V4. It indicates whether extra nodes that are used as shape points should be eliminated.

COMPARE_GENERALIZED_COSTS

PlanCompare Control Keys

Boolean

COMPARE_PERFORMANCE_FORMAT

See File Formats.

LinkSum Control Keys

FILE_FORMAT

COMPARE_PLAN_FORMAT

See File Formats.

PlanCompare Control Keys

FILE_FORMAT

CONGESTED_TIME_RATIO

Data Service Keys

(blank)

CONNECTION_FORMAT

See File Formats.

System File Keys

FILE_FORMAT

CONTOUR_DISTANCE_INCREMENTS

ArcPlan Control Keys

List

The contour distance increments are required when the ArcView Distance Contour file is requested. The process assumes that the input plan file is generated by a one to many path-building application of the Router. Travel distance contours are constructed by tracing the paths from a selected origin location to all destination locations. The distance along the path is calculated from the link lengths.

What the contour distance increments do is determine where breakpoints in the path trip length are generated. The key includes a comma-separated list of one or more distances in meters. If the last value is preceded by a "*", the value is interpreted as a distance increment that is added to the last value in the list until the cumulative trip length reaches 1,000,000 meters. For example, "1000, 2000, 5000, *10000" generates a trip length value at 1,000 meters, 2,000 meters, 5,000 meters, and every 10,000 meter increment after 5,000 meters (i.e., 15,000 meters, 25,000 meters, etc.). A value of "*1000" will generate a distance point every 1,000 meters.

As each link is processed on the path, it is assigned to one of the distance ranges. If the distance range entering the link is different from the distance range exiting the link, the link is split into two (or more) link segments based on the interpolated point where the distance ranges change. This makes it possible to display the distance range value for each link segment with a different color and visualize the trip length contours. Note that each link is only processed once, so paths that enter a link from both ends will only show the segments from the first path.

CONTOUR_TIME_INCREMENTS

ArcPlan Control Keys

Time

The contour time increments are required when the ArcView Time Contour file is requested. The process assumes that the input plan file is generated by a one to many path-building application of the Router. Travel time contours are constructed by tracing the paths from a selected origin location to all destination locations. The travel time along the path is estimated using an input link delay file or free-flow travel time. If the link delay file includes turn delays and a lane connectivity file is provided, the turning delays are considered in the travel time estimate.

What the contour time increments do is determine where breakpoints in the path travel times are generated. The key includes a comma-separated list of one or more travel times in seconds. If the last value is preceded by a "*", the value is interpreted as a time increment that is added to the last value in the list until the cumulative time points reach midnight. For example, "120, 300, 600, 900, *1800" generates a time point after 2 minutes, 5 minutes, 10 minutes, 15 minutes, and every 30 minute increment after 15 minutes (i.e., 45 minutes, 75 minutes, etc.). A value of "*900" will generate a time point every 15 minutes.

As each link is processed on the path, it is assigned to one of the time point ranges. If the time point range entering the link is different from the time point range exiting the link, the link is split into two (or

more) link segments based on the interpolated point where the time ranges change. This makes it possible to display the time range value for each link segment with a different color and visualize the travel time contours. Note that each link is only processed once, so paths that enter a link from both ends will only show the segments from the first path.

CONVERTTRIPS_REPORT_*

ConvertTrips Control Keys (blank)

COORDINATE_RESOLUTION

NetPrep Control Keys Decimal
COORDINATE_RESOLUTION 1.0 meters 0..30 meters

COPY_EXISTING_FIELDS

NewFormat Control Key

Indicates whether existing fields in the location file are copied to the new file. Defaults to FALSE. Possible values are {true/false/yes/no/1/0}. If existing fields are not copied, only the basic activity location fields are included (LOCATION, NODE, LINK, OFFSET, X_COORD, Y_COORD, and ZONE)

COPY_LOCATION_FIELDS

LinkSum Control Keys (blank)

COST_VALUES_*

The cost values key are optional and when provided specifies the impedance values for travel cost. The values can range from zero to 1000.0. The default value is 0.0 impedance units / cent. This value is multiplied by the cost value on Process Links, parking lots, and the transit fare. The program also looks for a "COST" field on the Link file. If household types are defined, this key can include a list of values corresponding to each household type. For example, 0, 5, 10 can be specified to define the cost value for household types 1, 2 and 3+, respectively.

COUNT_PROBLEM_WARNINGS

Flow-Time Service Keys Boolean

CURVED_CONNECTION_FLAG

Draw Service Keys Boolean

The default value for this control key is FALSE. Possible values are TRUE/FALSE, YES/NO, 1/0, T/F, Y/N. This flag indicates whether connections (formerly, lane_connectivity) or phasing plans should be drawn as curved lines on the network. In most cases, setting the flag to TRUE will result in network intersections that are less confusing when displayed in a GIS.

DAILY_WRAP_FLAG

IntControl Control Keys	Boolean
Data Service Control Keys	

The default value for this control key is FALSE. Possible values are TRUE/FALSE, YES/NO, 1/0, T/F, Y/N. This flag should be set to TRUE when the model end time is before the model start time. This may occur, for instance, when the model start time is 7:00PM (19:00) and the model end time is 4:00AM (04:00 or 4:00). In such a case, setting the flag to TRUE allows this to occur while a FALSE setting generates a run-time error.

DATA_FORMAT_*

This key specifies the format for the file defined by the DATA_FILE key used by the LocationData program. The format defaults to TAB_DELIMITED, but numerous formats are supported. See File Formats.

FileFormat Control Keys	FILE_FORMAT
LocationData Control Keys	FILE_FORMAT

DATA_JOIN_FIELD_*

The name of the field in the DATA_FILE (refer to the LocationData 5.0 program reference examples) that identifies the zone.

DEBUG_LINK_LIST

Microsimulator Control Keys	(blank)
------------------------------------	---------

DEBUG_TIME_RANGE

Microsimulator Control Keys	(blank)
------------------------------------	---------

DEBUG_VEHICLE_LIST

Microsimulator Control Keys	(blank)
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DEFAULT_FILE_FORMAT

Execution Service Keys

Text

This control key is optional and can be used to change the default file format. By default, TRANSIMS creates new files in TAB_DELIMITED format. Other options include BINARY, DBASE, COMMA_DELIMITED, SPACE_DELIMITED, FIXED_COLUMN and SQLITE3.

DEFAULT_LINK_SETBACK

TransimsNet Control Keys

Decimal

This key is optional and has a default value of 7.5 meters and a valid range of 0..30 meters.

DEFAULT_LOCATION_SETBACK

TransimsNet Control Keys

Decimal

DEFAULT_PARKING_DURATION

This key is optional and has a default value of 0.0 hours.

DELETE_LINK_RANGE

NetPrep Control Keys

List

The delete link range is optional and if specified defines a series of link numbers where the pocket lanes, activity locations (locations in V5), parking lots (parking in V5), process links (access links in V5) and link are deleted. The lane connectivity (connection in V5) at both ends of the link is also updated. The range is a comma separated list of link ranges. A link range is specified using two period (e.g., 1, 2, 4..10, 100..200, 300).

DELETE_NODE_RANGE

NetPrep Control Keys

List

The delete node range is optional and if specified defines a series of node numbers where the lane connections, traffic control warrants, and the node are deleted. The range is a comma separated list of node ranges or a continuous node range. A continuous node range is specified using two periods (e.g., 1, 2, 4..10, 100..200, 300).

DESTINATION_LOCATIONS_PER_ZONE

PathSkim Control Keys

(blank)

This number is used by PathSkim to determine the number of locations in a destination zone that will be used for calculating skim. The number of destination locations per zone can range from 0 to 100. The default is 0, and it indicates that all locations should be used. TRANSIMS actually calculates Location – Location travel times, and this parameter specifies the number of locations that should be used to determine an average travel time to a zone.

DESTINATION_WEIGHT_FIELD_*

ConvertTrips Control Keys (blank)

DETECTOR_FORMAT

System File Keys FILE_FORMAT

See File Formats.

DIRECTIONAL_DATA_FORMAT

LinkData Control Keys FILE_FORMAT

See File Formats.

DISTANCE_VALUES_*

The distance value keys are optional and when provided specify the impedance values for the distance traveled in a driving trip. The values can range from zero to 1000.0. The default value is 0.0 impedance units / meter. This value is multiplied by the length of the each link. It is only used for driving trips. If household types are defined, this key can include a list of values corresponding to each household type. For example, 0, 5, 10 can be specified to define the distance value for household types 1, 2 and 3+, respectively.

DISTANCE_WEIGHT_FLAG_*

ConvertTrips Control Keys Boolean

DRAW_AB_DIRECTION

Draw Service Keys Boolean

DRAW_NETWORK_LANES

Draw Service Keys Boolean

This key controls the way that links are drawn. If the key is FALSE, links are drawn as a single centerline or as two parallel shapes if the link direction offset is non-zero. If the first character of the key is "0",

“N”, “n”, “F”, or “f”, the key is interpreted as “false.” Anything else is interpreted as “true.” If this key is true, each thru traffic lane is drawn as a parallel shape and appropriate space is provided for the right and left side pocket lanes. The width between the lane lines is controlled by the lane width parameter. If the link is a one-way link, the relationship of the lane lines to the centerline is controlled by the center one-way links key.

DRAW_ONEWAY_ARROWS

Draw Service Keys Boolean

Direction of travel arrows will be drawn at the end of each link or lane if this key is TRUE. The default is FALSE. The size and shape of the arrow is controlled by the one-way arrow length and side offset keys. Since the arrow points are added to the link shape, a shape file that includes arrows cannot be used in NetPrep to create a TRANSIMS shape file.

DRAW_VEHICLE_SHAPES

Draw Service Keys Boolean

The default value for this parameter is FALSE. When this parameter is set to FALSE, simple points are drawn to represent vehicles instead of directional polygons. When set to TRUE, this parameter allows for the creation of small polygons representing the vehicles and pointing into the direction of travel. This is useful when analyzing network problems graphically such as when using this key in conjunction with ArcProblem plus ArcNet (and a GIS tool). The result is a more realistic visualization of traffic (specifically vehicles) that has been loaded onto the network.

DRIVER_REACTION_TIME_*

Flow-Time Service Keys (blank)

DROP_DEAD_END_LINKS

NetPrep Control Keys Integer

The drop dead end links key is optional. This key defaults to 0 meters when the value is not provided. This key specifies an integer value in ranging from 0 meters to 2000 meters. Dead end links that are shorter than the length specified are dropped from the output link file. Note that TransimsNet 5 also has an ADD_UTURN_TO_DEAD_END_LINKS key (TRUE, FALSE; DEFAULT = FALSE; Boolean).

DROP_SHORT_LINKS

NetPrep Control Keys Decimal

The drop short links key is optional. This key defaults to 37.5 meters when the value is not provided. This key specifies the minimum length of the network links. When the network link length is less than this value, the link is dropped. The value can range from 7.5 to 100 meters. Note that TRANSIMS requires a link to be at least as long as the longest vehicle that can use the link. Vehicle sizes are defined in the vehicle prototype file and are defined as multiples of TRANSIMS cells (7.5 meters).

END_TIME_CONSTRAINT

The end time constraint is optional and only applied if the IGNORE_TIME_CONSTRAINTS key is FALSE. This parameter enables the user to add a time buffer to the end time of the trip to limit the time constraint errors to those instances where the travel exceeds the end time plus the end time constraint. The parameter is defined in minutes. The default is zero.

ENFORCE_PARKING_LANES

Flow-Time Service Keys

Boolean

This is used in the simulator. For parking lots on standard arterials (i.e., not boundary parking lots), the simulation will attempt to move the vehicle to the side of the street where the parking lot is coded prior to exiting the simulation. If the vehicle is unable to move to within two lanes of the parking location before needing to exit, a parking problem is encountered. This parameter can be used to define what happens under these conditions. If the value is YES or TRUE, the vehicle will stop and continue to attempt lane changes until it is in the appropriate exit lane. If the value is NO or FALSE, a problem message is generated and the vehicle is immediately moved to the parking lot. The default value is NO.

EQUATION_PARAMETERS_*

The equation parameters key is optional. A volume-delay equation is used by the link delay updates. The “x” at the end of the key refers to the facility type. For example, EQUATION_PARAMETERS_* specifies the volume-delay equation used for Freeways. If an equation is not provided for a given facility type, the program uses the equation from a lower facility type code. Each key requires four values. The first is the functional type code. The only code that is currently implemented is “BPR.” This is followed by the three BPR parameters as floating point numbers separated by a comma. The default values are 0.15, 4.0, and 0.75. The BPR equation for computing the link travel time is:

$$t = t0 (1 + \alpha(\text{Volume}/\text{Capacity})^{\text{Beta}})$$

Where

t = Loaded Travel Time in seconds

t0 = Base Travel Time in seconds

alpha = BPR “A” parameter (default 0.15)

Beta = BPR “B” parameter (default 4.00)

Volume = Volume on the link in a given time period
Capacity = Adjusted Capacity of a link in a given time period

Capacity of the link for a given time period is estimated as follows:

$$\text{Capacity} = \text{BPRFactor} \times \text{HourlyCapacity} \times (\text{TimeIncrement} / 3600)$$

Where

BPRFactor = BPR "C" parameter (default 0.75)

TimeIncrement = TimePeriod (in seconds)

Figure 2 shows the behavior of the BPR equation with an hourly capacity of 1000, a time increment of 3600 seconds, and the following parameters:

- Alpha = 0.15 (default)
- Beta = 4 (default)
- Capacity = 750 (the adjusted capacity using the default BPR Factor of 0.75)

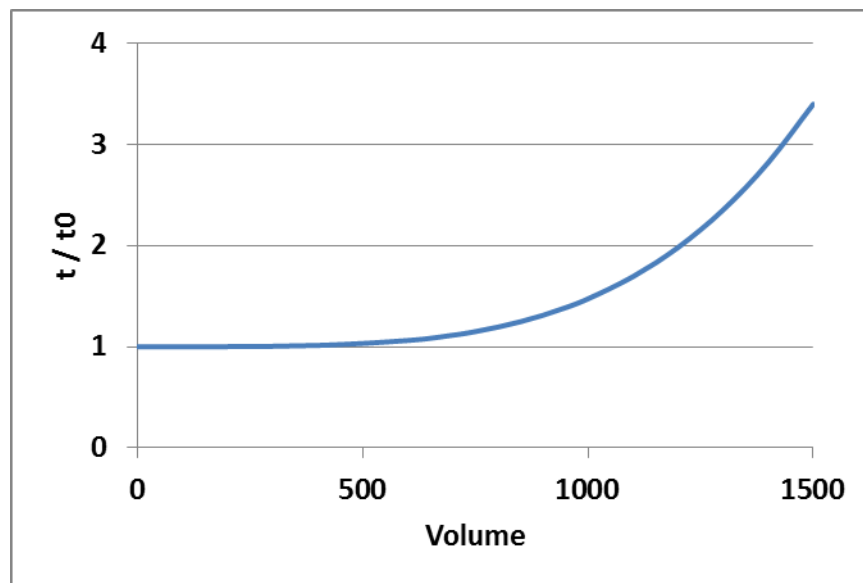


Figure 2 Behavior of BPR Function with Default Values (Hourly Capacity = 1000)

EXPRESSWAY_BIAS_FACTORS_*

Path Building Service Keys

In the Router, this replaces the version 4 FACILITY_BIAS_FACTORS_. This is a list of impedance adjustment factors for expressways. It is optional and defaults to 1. Its valid range is 0.5 to 2.0.

EXTENDED_GREEN_FACTOR_*

IntControl Control Keys

List

The EXTENDED_GREEN_FACTOR_* key is optional and specifies the weighting factor for the extended green time. The default value is 0.5, and the possible values range between 0.0 and 1.0.

The EXTENDED_GREEN_FACTOR_* key is part of the group that defines how a timing plan is developed for each phase. This group includes MINIMUM_PHASE_TIME_*, YELLOW_PHASE_TIME_*, RED_CLEAR_PHASE_TIME_*, and EXTENDED_GREEN_FACTOR_*. These parameters define how the minimum, maximum, and extended green times are computed for fixed-timed and demand-actuated phases.

The '*' is a placeholder for the first number (default is 1; range is 1..100). This is for the purpose of grouping related parameters. Thus, up to 100 parameter groups for this control key are allowed.

EXTERNAL_STATION_OFFSET

TransimsNet Control Keys

Decimal

The EXTERNAL_STATION_OFFSET parameter control key is a new addition to TransimsNet 5.0. This parameter is hardcoded with a value of 30 meters in TransimsNet 4.0. This key has a default value of 30 meters in TRANSIMS 5.0. The range of possible values for this key is 0..100.

EXTERNAL_ZONE_RANGE

TransimsNet Control Keys

List, Integer

This key is optional and replaces FIRST_EXTERNAL_ZONE_NUMBER from Version 4. The external zone range in TransimsNet Version 5 is used to define the list of nodes where zone connectors need to be converted to network links and special activity locations are generated. This list is specified using a range of external zones which consists of two zone numbers separated by two periods (e.g., 74..85). The default value for this parameter is zero and the range of possible values is 0..10000.

FACILITY_ACCESS_WARRANT_*

TransimsNet Control Keys

Text

The facility access warrant control key parameter has been updated significantly in TRANSIMS Version 5 relative to its implementation in TRANSIMS Version 4. In Version 5, a single, multi-data field record takes the place of four parameters required in Version 4 in order to specify a facility access warrant.

Figure 3 illustrates the functionality in Version 4:

ACTIVITY_LOCATION_SIDE_OFFSET	15
MINIMUM_SPLIT_LENGTHS	60, 60, 60, 60, 60, 60, 60, 60
MAXIMUM_ACCESS_POINTS	3
FACILITY_TYPE_ACCESS_FLAGS	0, 0, 1

Figure 3 FACILITY_ACCESS_WARRANT in TRANSIMS Version 4

Figure 4 illustrates the functionality in Version 5:

FACILITY_ACCESS_WARRANT_1	PRINCIPAL..LOCAL, ALL, 15 meters, 60 meters, 3
---------------------------	--

Figure 4 FACILITY_ACCESS_WARRANT_* in TRANSIMS Version 5

The multi-data fields in the above record are type, at, setback, min_len, and max_pts, and are defined as follows:

- Type – The facility type range
- At – The area type range
- Setback – The activity location setback distance (i.e., side offset)
- Min_len – The minimum split length
- Max_len – The maximum number of access points per link

The ‘*’ is a placeholder and indicates that this parameter is part of a group of related parameters. The ‘*’ is simply replaced with a number (1..100) to indicate the group number (for grouping related parameters and/or enabling by time of day warrant groups) following the example below:

FACILITY_ACCESS_WARRANT_1 PRINCIPAL..LOCAL, ALL, 15, 60, 3

FACILITY_BIAS_FACTORS_*

FACILITY_INDEX_FIELD

NetPrep Control Keys (blank)

FARE_CLASS_DISTRIBUTION

FARE_CLASS_DISTRIBUTION 0

FILE_FORMATS

The file format keys include DEFAULT_FILE_FORMAT, NODE_FORMAT, ZONE_FORMAT, SHAPE_FORMAT, LINK_FORMAT, POCKET_FORMAT, LANE_USE_FORMAT, LOCATION_FORMAT, PARKING_FORMAT, ACCESS_FORMAT, CONNECTION_FORMAT, TURN_PENALTY_FORMAT,

SIGN_FORMAT, SIGNAL_FORMAT, TIMING_PLAN_FORMAT, PHASING_PLAN_FORMAT, DETECTOR_FORMAT, TRANSIT_STOP_FORMAT, TRANSIT_ROUTE_FORMAT, TRANSIT_SCHEDULE_FORMAT, TRANSIT_DRIVER_FORMAT, ROUTE_NODES_FORMAT, VEHICLE_TYPE_FORMAT, HOUSEHOLD_FORMAT, SELECTION_FORMAT, TRIP_FORMAT, LINK_DELAY_FORMAT, VEHICLE_FORMAT, PLAN_FORMAT, NEW_PLAN_FORMAT, NEW_PROBLEM_FORMAT, NEW_LINK_DELAY_FORMAT.

These keys are optional. The default value is TAB_DELIMITED, and other values include TEXT, BINARY, FIXED_COLUMN, COMMA_DELIMITED, SPACE_DELIMITED, TAB_DELIMITED, CSV_DELIMITED, DBASE, SQLITE3, VERSION3.

In the previous version of TRANSIMS (v4), the default value was VERSION3. It is now TAB_DELIMITED.

TRANSIMS applies file formats in the following order, using the first file format that is found:

1. If a .def file is provided, the format given in the first line of that file is used. Note that in cases where the file has nested fields (for example, the SHAPE file), a .def file must be provided. Otherwise it is optional.
2. If a specific file format was given in the control file (e.g. NODE_FORMAT, CSV_DELIMITED), then the file format given in the control file is used.
3. If the DEFAULT_FILE_FORMAT is given in the control file, it is used.
4. If the DEFAULT_FILE_FORMAT is specified in the TRANSIMS config.txt file, it is used.
5. Otherwise, the default value of TAB_DELIMITED is assumed.

FIRST_HOUSEHOLD_NUMBER

ConvertTrips Control Keys

This was the STARTING_HOUSEHOLD_ID in Version 4. This optional key specifies the integer number used to begin the household ID numbering. The default value is one or the highest household ID in the input household file. If the results of this application are to be combined with the results of other **ConvertTrips** applications, the user must define an appropriate offset to ensure unique Household IDs in the combined file.

FIRST_LINK_NUMBER

NetPrep Control Keys

Integer

This optional key specifies the integer value of the first link number. If after copying the field name and applying the conversion script, the link and/or node numbers are not defined, the program will automatically create link and/or node numbers starting from the specified first values. If not specified, the first link number defaults to 1. The possible range of values is from one (1) to 1000000000 (one billion).

FIRST_NODE_NUMBER

NetPrep Control Keys

Integer

This optional key specifies the integer value of the first node number. If after copying the field name and applying the conversion script, the link and/or node numbers are not defined, the program will automatically create link and/or node numbers starting from the specified first values. If not specified, the first node number defaults to 1. The possible range of values is from one (1) to 1000000000 (one billion).

FIRST_WAIT_VALUES_*

The first wait values key are optional and when provided specifies the impedance values for time the traveler spends waiting for the first transit vehicle. The values can range from zero to 1000.0. The default value is 20.0 impedance units / second. This value is multiplied by the difference between the time of day when the traveler arrives at a transit stop and the time when the next transit vehicle is scheduled to leave that stop. If household types are defined, this key can include a list of values corresponding to each household type. For example, 20, 25, 30 can be specified to define the first wait time value for household types 1, 2 and 3+, respectively.

FIX_VEHICLE_LOCATIONS

Flow-Time Service Keys

Boolean

FLATTEN_OUTPUT_FLAG

NewFormat Control Keys

Boolean

Defaults to FALSE. If set to TRUE, nested data files are flattened. This key applies to the following new files produced by NewFormat: SHAPE, PARKING, SIGNAL, TIMING_PLAN, PHASING_PLAN, TRANSIT_SCHEDULE, TRANSIT_DRIVER, ROUTE_NODES, HOUSEHOLD, LINK_DELAY, PERFORMANCE, PLAN.

To see the impact of this flag consider the following example.

New_Shape file with FLATTEN_OUTPUT_FLAG set to FALSE:

LINK	POINTS	NOTES
X_COORD	Y_COORD	
4206	2	
179794.6	4768278.6	
179548.5	4768013.4	
4207	3	
180318.7	4768736.6	
180445.2	4768817.6	
180607.3	4768932.9	

New_Shape file with FLATTEN_OUTPUT_FLAG set to TRUE:

LINK	POINTS	NOTES	X_COORD	Y_COORD
4206	2		179794.6	4768278.6
4206	2		179548.5	4768013.4
4207	3		180318.7	4768736.6
4207	3		180445.2	4768817.6
4207	3		180607.3	4768932.9

FLOW_UNITS

System File Keys (blank)

FREEWAY_BIAS_FACTORS_*

Path Building Service Keys

In the Router, this replaces the version 4 FACILITY_BIAS_FACTORS_. This is a list of impedance adjustment factors for freeways. It is optional and defaults to 1. Its valid range is 0.5 to 2.0.

FROM_NODE_FIELD_NAME

LinkData Control Keys (blank)

GENERAL_GREEN_FACTOR_*

IntControl Control Keys List

The GENERAL_GREEN_FACTOR_* key is optional. This key specifies the weighting factor for the general green time. The default value for this key is 1.0. The value for this key can range between 0.5 and 1.0.

The GENERAL_GREEN_FACTOR_* key is part of the group that determines how the total cycle length is allocated to different phases. This group includes POCKET_LANE_FACTOR_*, GENERAL_GREEN_FACTOR_*, SIGNAL_SPLIT_METHOD_*, MINIMUM_LANE_CAPACITY_*, and MAXIMUM_LANE_CAPACITY_*. These parameters define how the number of lanes or lane capacity assigned to one phase is balanced against similar values from other phases to allocate a share of the total cycle time to each phase.

The '*' is a placeholder for the first number (default is 1; range is 1..100). This is for the purpose of grouping related parameters. Thus, up to 100 parameter groups for this control key are allowed.

HOUSEHOLD_FORMAT

System File Keys FILE_FORMAT

See File Formats.

IGNORE_ACTIVITY_DURATION

In version 5.0.37 of the Router, ADJUST_ACTIVITY_SCHEDULE and IGNORE_ACTIVITY_DURATION keys were added to globally control how early and late arrivals are handled. If a trip's travel time is less than expected, the schedule adjust key will permit the activity to move forward in time, but keep the activity duration the same. If a trip's travel time is greater than expected, the ignore durations key will permit the activity duration to be reduced to as little as one minute to enable the next trip to start as close to the original time schedule as possible. The ignore durations key also drops activity records from the output plan file. These keys can be applied separately or in combination.

IGNORE_ROUTING_PROBLEMS

IGNORE_ROUTING_PROBLEMS	FALSE	//---- TRUE/FALSE, YES/NO, 1/0, T/F, Y/N
-------------------------	-------	--

IGNORE_TIME_CONSTRAINTS

The ignore time constraints key is optional and when provided controls how the activity start time impacts path building. The key is FALSE by default. This means that the trip must be completed before the upper bound of the activity start time. If the trip takes too long, a time schedule error is registered in the problem file. If the key is "true", the program will continue building the path without consideration of the activity schedule. The start time of the next trip will be the arrival time of the previous trip plus the duration of the activity. If the first character of the key is "0", "N", "n", "F", or "f", the key is interpreted as FALSE. Anything else is interpreted as TRUE.

IGNORE_VEHICLE_ID

The vehicle file processing is made optional based on this key value. If TRUE, the vehicle file is not processed and the location of the vehicle is assumed connected to the parking lot attached to the origin and destination activity locations. The default value is FALSE. This implies that the vehicle file is read and the location of the vehicles is check and repositioned based on the path building result. Setting this key to TRUE can save processing time, but it is primarily used to build drive plans for transit trips as input to a PlanSum process to generate travel time skims for a model choice model.

IMPEDANCE_SORT_METHOD

Path Building Service Keys	Boolean
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LINK_CONVERGENCE_CRITERIA

Router Control Keys

When the Router is used in a multiple-iteration (as opposed to shortest path) mode, this indicates a link_gap based stopping criteria. The default is 0.0, which means that a link_gap stopping criterion is NOT used. Valid values range from 0.0 to 10.0.

TRIP_CONVERGENCE_CRITERIA

Router Control Keys

When the Router is used in a multiple-iteration (as opposed to shortest path) mode, this indicates a trip_gap based stopping criteria. The default is 0.0, which means that a trip_gap stopping criterion is NOT used. Valid values range from 0.0 to 10.0.

INITIAL_WEIGHTING_FACTOR

Router Control Keys

When the Router is used in a multiple-iteration (as opposed to shortest path) mode, this indicates the initial weighting factor to use in a method of successive averages weighting scheme. The default is 1.0, and permissible values include 0 (no weighting), and anything greater than or equal to 0.5.

ITERATION_WEIGHTING_INCREMENT

Router Control Keys

When the Router is used in a multiple-iteration (as opposed to shortest path) mode, this indicates the increment to be used for the weighting factor for successive runs. That is, if the initial weighting factor is 1.0 and the increment is 1.0, the second weighting factor would be 2.0. The default is 1.0 and permissible values range between 0.0 and 5.0.

MAXIMUM_WEIGHTING_FACTOR

Router Control Keys

When the Router is used in a multiple-iteration (as opposed to shortest path) mode, this indicates the maximum weighting factor to be used. The default is 20.0, and permissible values include 0 (no weighting), and anything greater than or equal to 2.0.

INPUT_COORDINATE_ADJUSTMENT

Simulation Service Keys

List

The input coordinate adjustment key enables the user to manipulate the coordinates before they are sent to the input coordinate conversion calculation. This key is optional. It is only needed if the coordinates are not in the units expected by the conversion algorithm. By default, TRANSIMS data files

store coordinate data in meters that don't require any adjustments. The adjustment command includes four floating-point numbers separated by commas (X Offset, Y Offset, X Factor, Y Factor). The first two numbers are the X and Y offsets. The last two numbers are X and Y adjustment factors. The process adds the offset value to the coordinate and then applies the adjustment factor. In other words:

$$X = (\text{EASTING} + X_offset) * X_factor$$

$$Y = (\text{NORTHING} + Y_offset) * Y_factor$$

INPUT_COORDINATE_SYSTEM

Simulation Service Keys

List

This key has a CSV list format and is optional. The input coordinate command may include up to three comma-separated parts (e.g., UTM, 15N, meters; or LATLONG). The first part is the coordinate system description. The options include STATEPLANE, UTM, and LATLONG. The second part identified the code number within the coordinate system that relates to the local conversion parameters. For UTM coordinates these codes range from 1N to 23N. Stateplane coordinates are defined using four digit FIPS codes (e.g., Oregon North = 3601). A code is not needed for the Latitude/Longitude system. The third parameter defines the coordinate units. By default, UTM is in meters, Stateplane is in feet, and Latitude/Longitude is in degrees. The user can override these assumptions using the following keywords: FEET, METERS, MILES, KILOMETERS, DEGREES, and MILLION_DEGREES.

INPUT_LINK_FORMAT

NetPrep Control Keys

FILE_FORMAT

See File Formats.

INPUT_NODE_FORMAT

NetPrep Control Keys

FILE_FORMAT

See File Formats.

INPUT_SPDCAP_FORMAT

NetPrep Control Keys

FILE_FORMAT

See File Formats.

INPUT_UNITS_OF_MEASURE

NetPrep Control Keys

Text

This key is optional and defaults to METRIC. Possible values are ENGLISH (feet) or METRIC (meters). The default distance and speed units included in data files or control keys are assumed to be in METRIC units. This key can be used to specify the units of measure as ENGLISH or METRIC. If a particular key value includes data units, the program will automatically convert the value to the specified units of measure. The standard data files created by the TRANSIMS Version 5 software identify the units associated with each data field in the definition file (*.def). For example, a link.txt.def file, where the units are METRIC, is as follows (KPH = kilometers per hour, VPH = vehicles per hour):

```
TRANSIMS50, TAB_DELIMITED, 1
LINK, INTEGER, 1, 10
NAME, STRING, 2, 40
NODE_A, INTEGER, 3, 10
NODE_B, INTEGER, 4, 10
LENGTH, DOUBLE, 5, 8.1, METERS
SETBACK_A, DOUBLE, 6, 5.1, METERS
SETBACK_B, DOUBLE, 7, 5.1, METERS
BEARING_A, INTEGER, 8, 4, DEGREES
BEARING_B, INTEGER, 9, 4, DEGREES
TYPE, STRING, 10, 12, FACILITY_TYPE
DIVIDED, UNSIGNED, 11, 1
AREA_TYPE, UNSIGNED, 12, 3
GRADE, DOUBLE, 13, 5.1, PERCENT
LANES_AB, UNSIGNED, 14, 2
SPEED_AB, DOUBLE, 15, 5.1, KPH
FSPD_AB, DOUBLE, 16, 5.1, KPH
CAP_AB, UNSIGNED, 17, 8, VPH
LANES_BA, UNSIGNED, 18, 2
SPEED_BA, DOUBLE, 19, 5.1, KPH
FSPD_BA, DOUBLE, 20, 5.1, KPH
CAP_BA, UNSIGNED, 21, 8, VPH
USE, STRING, 22, 128, USE_TYPE
NOTES, STRING, 23, 128
```

INPUT_ZONE_FORMAT

NetPrep Control Keys

FILE_FORMAT

See File Formats.

INTCONTROL_REPORT_*

IntControl Control Keys

Text. Boolean

This optional key is used to generate a SIGNAL_TIMING_UPDATES report for each corresponding signal parameter group in the IntControl control file. It defaults to a value of FALSE. The * allows for

independent creation of SIGNAL_TIMING_UPDATES reports for each corresponding signal parameter group specified.

INTERNAL_ZONE_RANGE

NetPrep Control Keys

List

The internal zone range key is optional. This parameter defines the range of node numbers that represent internal zones so the connectors to these nodes can be deleted. Internal zone connectors are/should be deleted during the NetPrep process. NetPrep Version 5 supports zone numbering systems that start with low values as external stations as well as the more traditional arrangement where external zones are at the end of the zone list. This key has a possible value range of 0..10000 and is turned off by default (i.e., assigned a '0' value).

INTERPOLATE_LINK_DELAYS

This router control key is optional, and defaults to FALSE. It enables the interpolation of the link travel time based on the time of day the path enters the link and the mid-points of the two closest time periods in the link delay file.

KEEP_LINK_RANGE

NetPrep Control Keys

List

The keep link range key is optional and if specified defines a series of link numbers where the pocket lanes, activity locations, parking lots, processing links and link are not deleted by TRANSIMS programmatically. The lane connectivity at both ends of the link is also updated. The range is a comma separated list of link ranges. A link range is specified using two periods (e.g., 1, 2, 4..10, 100..200, 300).

KEEP_NODE_RANGE

NetPrep Control Keys

List

The keep node range is optional and if specified defines a series of node numbers where the lane connectivity, traffic control warrants, and the node are not to be deleted by TRANSIMS programmatically. The range is a comma separated list of node ranges. A node range is specified using two periods (e.g., 1, 2, 4..10, 100..200, 300).

KISS_RIDE_STOP_TYPES

KISS_RIDE_STOP_TYPES

EXTERNAL

KISS_RIDE_TIME_FACTOR_*

KISS_RIDE_TIME_FACTOR_* 2.5 //---- 1.0..4.4

LANE_USE_FORMAT

System File Keys

FILE_FORMAT

See File Formats.

LANE_WIDTH

Draw Service Keys

Decimal

The lane width parameter defines the space between lane lines on links and for lane connectivity at intersections. The default value is 1.0, which means that lane lines will be drawn one meter apart. Values between zero and 25.0 meters are permitted unless the draw network lanes key is true. In this case the value must be greater than 0.0.

LEFT_TURN_PENALTIES_*

The left turn penalty keys are optional and when provided specifies an additional impedance value for lane connections identified as left turns. The values can range from zero to 10000.0. The default value is 0.0 impedance units. This value is added to the impedance of the departure link of a drive path. If household types are defined, this key can include a list of values corresponding to each household type. For example, 0, 100, 200 can be specified to define the left turn penalty for household types 1, 2 and 3+, respectively.

LIMIT_PARKING_ACCESS

The limit parking access key is optional and when provided controls the way vehicles are associated with locations. The key is TRUE by default. This means that the vehicle must be parked at a parking lot directly associated with the location. If the key is FALSE, the program will build a walk path between the activity location and the vehicle. If the first character of the key is "0", "N", "n", "F", or "f", the key is interpreted as FALSE.

LINK_DELAY_FLOW_FACTOR

This weighting key is optional, and defaults to 1.0. Similar to the version 4 LINK_DELAY_VOL_FACTOR, it scales the input flows by a scaling factor before performing the volume / capacity calculations. Its range is 1 to 100000.

The following paragraphs need to be checked, and the user is advised to be careful about using a LINK_DELAY_FLOW_FACTOR other than 1.0:

The link delay volume factor can be used in partitioned applications to provide the **Router** with a better approximation of the volume-to-capacity ratio during travel time updates. Since each **Router** in a partitioned application assigns a percentage of the total trips to the network, the volume on assigned to each link does not reflect the total traffic from all trips. This key permits the modeler to multiply the volume loaded by each partition by a factor that reflects the number of other **Router** applications that are loaded traffic to the network at the same time. The factor is only applied when the volume-delay functions update the travel times. The factored volume is not saved to the network or the plan file.

The default volume factor is 1.0. The program accepts any value greater than 1.0. Normally the factor would be set equal to the number of partitions.

LINK_DELAY_FORMAT

System File Keys

FILE_FORMAT

See File Formats.

LINK_DELAY_UPDATE_RATE

The link delay update rate key is optional. The value can range from zero to 1,000,000 trips. The default value of zero disables link delay updates. If the key is one or greater, the program will use the BPR volume-delay function to calculate the travel times on each link based on the current volumes in each time period. Time periods are defined by the input link delay file or default to 15 minutes if a link delay file is not provided. This parameter defines the number of trips that are loaded between travel time updates.

Note that this parameter should only be used for initial incremental loading. This parameter should be zero if the input link delay file was generated by the TRANSIMS Simulator. Microsimulator delays can be significantly different from volume to capacity based delays. If link delay updates are enabled, the delays from the Microsimulator are destroyed by the first update cycle.

LINK_DIRECTION_OFFSET

Draw Service Keys

Decimal

If the draw network lanes key is true, this key is ignored. If it is FALSE, the link direction offset key determines how paths on two way links are drawn. The default value is 0.0, which means that the link centerline is used to draw the path (written to the ArcView Link file). If the value is greater than 0.0, it represents the number of meters to the right or left that a path on a two way link is drawn. In this case, one shape and dBase records are saved in the ArcView Link file. However, the shape will have two parts. Each part is drawn in the direction of travel. If the link is a one-way link, only one shape record is draw using the centerline of the roadway in the direction of travel. This parameter is used to draw non-transit modes.

LINK_FORMAT

System File Keys

FILE_FORMAT

See File Formats.

LINK_USE_FLAG_TYPES_*

LocationData Control Keys

(blank)

Any combination of use codes separated by a slash (/) {ANY, WALK, BICYCLE, AUTO, TRUCK, BUS, RAIL, SOV, HOV2, HOV3, HOV4, LIGHTTRUCK, HEAVYTRUCK, RESTRICTED, CAR, BIKE, TAXI, TROLLEY, STREETCAR, LIGHTRAIL, RAPIDRAIL, REGIONRAIL}. Defaults to ANY.

LINKSUM_REPORT_*

LinkSum Control Keys

(blank)

LOCAL_ACCESS_DISTANCE

Router

This parameter is optional. The default value is 2000 meters, and valid values range from 100 to 7500 meters. If the LOCAL_FACILITY_TYPE key is not EXTERNAL, drive paths are restricted to higher facility types when more than the value of this parameter away from their trip origin or destination.

LOCAL_FACILITY_TYPE

Router

This parameter is optional. The default value is EXTERNAL which disables the local facility restrictions for drive paths. Other values include MAJOR, MINOR, COLLECTOR, and LOCAL. When one of these values is provided, drive paths will be restricted to higher facility types when more than the LOCAL_ACCESS_DISTANCE away from their trip origin or destination. This parameter defines the upper end of the facility type restriction. The lower end is always defined as LOCAL. In other words, if the parameter is MINOR, no link with facility types MINOR, COLLECTOR, or LOCAL will be available for the line-haul portion of the trip.

LOCAL_IMPEDANCE_FACTOR

Router

This optional parameter defaults to 0.0, and has valid values ranging from 0.0 to 25.0

LOCAL_SELECTION_SPACING_*

NetPrep Control Keys

List

This key is optional and defaults to one (1) and selects representative local streets from an all-streets network for inclusion in the TRANSIMS network. '*' is the first area type value in the list. This key supports up to 100 area types.

Example:

LOCAL_SELECTION_SPACING = 100, 200, 300, 400

LOCAL_SELECTION_SPACING_1 = 100, 200, 300, 400

LOCAL_SELECTION_SPACING_2 = 200

LOCAL_SELECTION_SPACING_10 = 1000, 1100, 1200

Result = 100, 200, 300, 400, 400, 400, 400, 400, 400, 1000, 1100, 1200

LOCAL_THRU_SEGMENT_LENGTHS_*

NetPrep Control Keys

List

This key is optional and, if specified, assigns local streets to the new Local-Thru facility type based on the length of a series of local links.

LOCATION_FORMAT

System File Keys

FILE_FORMAT

See File Formats.

LOCATION_JOIN_FIELD_*

LocationData Control Keys

Text

This key specifies the name of the field in the Location file that identifies the zone.

LOCATION_SELECTION_METHOD

PathSkim Control Keys

(blank)

When PathSkim calculates zone-to-zone skims, it is actually calculating skims for selected locations within the origin and destination zones. The number of locations selected per zone is given by DESTINATION_LOCATIONS_PER_ZONE and ORIGIN_LOCATIONS_PER_ZONE. In cases where PathSkim is not using all of the locations in a zone, this parameter determines how the locations are selected. Valid values include:

RANDOM (the default): random locations are selected

CENTROID: locations are selected near the zone centroid

DISTRIBUTED: locations are spatially distributed around the zone.

USER: user specified (See ORIGIN_LOCATION_FILE and DESTINATION_LOCATION_FILE)

LOCATION_SIDE_OFFSET

Draw Service Keys

Decimal

The location side offset is used to display the origin and destination location for a travel plan. The default value is 15.0 meters. In this case, the location is draw fifteen meters to the right or left of the centerline of the link shape at the appropriate offset.

LOCATIONDATA_REPORT_*

Type of optional report produced by the LocationData program. Options include:

CONVERSION_SCRIPT

CONVERSION_STACK

CHECK_ZONE_COVERAGE

LOOK_AHEAD_DISTANCE

Flow-Time Service Keys

(blank)

LOOK_AHEAD_LANE_FACTOR

Flow-Time Service Keys

(blank)

MACROSCOPIC_SUBAREAS

Flow-Time Service Keys

(blank)

MAX_ARRIVAL_TIME_VARIANCE

Flow-Time Service Keys

(blank)

MAX_BICYCLE_DISTANCES_*

The maximum bicycle distance keys are optional. It defines the maximum cumulative bike distance for a given trip. If the value is zero, no bicycle limitations are imposed. Otherwise the value can range from 100 to 20,000 meters, with a default of 10,000 meters. If household types are defined, this key can include a list of values corresponding to each household type. For example, 4000, 3000, 2000 can be specified to define the maximum walk distance for household types 1, 2 and 3+, respectively.

MAX_CIRCUITY_DISTANCE

The maximum circuitry distance key is optional. The value can range from zero to 100,000 meters. The default value is 20,000 meters. This value is used in conjunction with the maximum circuitry ratio to focus the path-building algorithm on links that are generally located between the trip origin and destination. If the origin and destination locations are far apart, the ratio calculation has little impact on the number of nodes that are considered by the path-building algorithm. This parameter is designed to help narrow the focus of long distance trips to more direct paths. The algorithm uses the minimum of the straight-line distance between the origin and destination multiplied by the circuitry ratio and the maximum circuitry distance to determine if a node is out of range. For example, this parameter will limit the trip distance to 20,000 meters longer than the straight-line distance between the origin and destination.

MAX_CIRCUITY_RATIO

The maximum circuitry ratio key is optional. The value can be zero or between 1.0 and 10.0. The default value is zero (no circuitry checks are made). This key defines the maximum permissible ratio between the sum of the distance a path node is from the trip origin and destination and the straight-line distance between the trip origin and destination. If the value is zero, no circuitry checks are made. A value of 2.0 implies that the length of the travel path is limited to approximately twice the straight-line distance between the origin and the destination.

This parameter is designed to reduce the processing time of the **Router**. By focusing the path-building algorithm on links that are generally between the origin and the destination, the program can avoid wasting computational time considering paths in the wrong direction.

MAX_COMFORTABLE_SPEED_*

Flow-Time Service Keys (blank)

MAX_DEPARTURE_TIME_VARIANCE

Flow-Time Service Keys (blank)

MAX_KISS_RIDE_DROPOFF_WALK

Optional key giving the maximum walking distance after a kiss & ride drop off. The range is 10 to 500 meters, with a default of 100 meters.

MAX_KISS_RIDE_PERCENTS_*

The maximum kiss-&-ride percentage key is optional. It defines the maximum percentage of the total trip length that can be used to access an auto drop off area at a transit stop. The length is calculated as the straight-line distance between the trip origin and the drop-off area and the drop-off area and the

trip destination. The lots with the 10 shortest total trip lengths are selected for consideration by a kiss-&-ride trip. The value can range from 1 to 100 percent. The default value is 25 percent.

MAX_LEGS_PER_PATH

The maximum number of legs in a path is optional. The range is 10 to 10000, with a default value of 1000.

MAX_NUMBER_OF_PATHS_*

This key specifies the maximum number of paths. The range is 1 to 10, with a default of 4.

MAX_NUMBER_OF_TRANSFERS_*

The maximum number of transfers key is optional. It defines the maximum number of time the traveler can transfer between transit routes during a given trip. The value can range from zero to 10 transfers. The default value is 3 transfers.

MAX_PARK_RIDE_PERCENTS_*

The maximum park-&-ride percentage key is optional. It defines the maximum percentage of the total trip length that can be used to access a park-&-ride lot. The length is calculated as the straight-line distance between the trip origin and the park-&-ride lot and the park-&-ride lot and the trip destination. The lots with the 10 shortest total trip lengths are selected for consideration by a park-&-ride trip. The value can range from 1 to 100 percent. The default value is 50 percent.

MAX_PROBLEM_COUNT

Execution Service Keys

Integer

The maximum number of problems key is optional and can be any non-negative integer (i.e., ≥ 0). The maximum problem count defines the number of modeling problems that are permitted before the problem terminates execution. The default value of zero disables this feature. It defaults to 0 (no limitation).

MAX_SUBZONE_DISTANCE_*

LocationData Control Keys

(blank)

Maximum distance between a location and subzone centroid. The valid range is 10 to 10,000 meters, with a default of 1,000 meters.

MAX_TRAVEL_TIME_RATIO

LinkDelay Control Keys

(blank)

MAX_WAIT_TIMES_*

The maximum wait time key is optional. It defines the maximum time a person will consider waiting at each transit stop to board a vehicle. If the value is zero, no wait time limitations are imposed. Otherwise the value can range from 5 to 200 minutes. The default value is 60 minutes.

MAX_WALK_DISTANCE

The new walk access field and maximum walk distance keys are used to calculate the relative accessibility of a given activity location to near-by transit stops. This calculation requires the link, node, process link, and transit network files. The number of runs at each stop and the distance between the stop and the activity location determine the accessibility weight. Max_Walk_Distance defaults to 1000 meters, with a range of 10 to 3000 meters.

MAX_WALK_DISTANCES_*

The maximum walk distance keys are optional. It defines the maximum cumulative walk distance for a given trip. This includes walks to and from the vehicle and any walks required by transfers. If the value is zero, no walk limitations are imposed. Otherwise the value can range from 100 to 10,000 meters. The default value is 2,000 meters. If household types are defined, this key can include a list of values corresponding to each household type. For example, 4000, 3000, 2000 can be specified to define the maximum walk distance for household types 1, 2 and 3+, respectively.

MAX_WARNING_EXIT_FLAG

Execution Service Keys

Boolean

If the maximum number of warning messages is exceeded, this flag directs the program in what to do. If the flag is TRUE (the default), the program is terminated with an error message about the warning messages. If the flag is FALSE, the program continues execution, but no additional warning messages are sent to the screen or written to the printout file. The warning message counter continues to count the messages and reports the total at the end of the execution. Possible values include TRUE/FALSE, YES/NO, 1/0, T/F, Y/N, and the default is TRUE.

MAX_WARNING_MESSAGES

Execution Service Keys

Integer

This key is optional and defaults to 100000 if a value is not specified. When the program generates a warning message, a counter is incremented and the total number of warning messages is reported and a

warning return coded (2) is set at the end of the execution. By default the program prints up to 100,000 warning messages to the printout file. If more than 100,000 warning messages are sent, the program stops printing additional messages to the file or terminates the program with an error message based on the MAX_WARNING_EXIT_FLAG. This parameter enables the user to modify the default warning limit. Valid values are non-negative integers (i.e., >= 0).

MAXIMUM_BANDWIDTH_SIZE

Draw Service Keys (blank)

MAXIMUM_CONNECTION_ANGLE

TransimsNet Control Keys Integer

This key is optional and has a default value of 120 degrees. The acceptable range of values for this parameter is 90..180 degrees. This key specifies the maximum connection angle that TransimsNet will employ while generating the synthetic link and node network. Link connection angles that exceed this value will not be constructed by TRANSIMS.

MAXIMUM_COST_DIFFERENCE

Select Service Keys (blank)

MAXIMUM_GREEN_FACTOR_*

IntControl Control Keys Decimal

The MAXIMUM_GREEN_FACTOR_* key is optional and specifies the weighting factor for the maximum green time. This key has a default value of 2.0. The '*' is a placeholder for the first number (default is 1; range is 1..100). This is for the purpose of grouping related parameters. Thus, up to 100 parameter groups for this control key are allowed.

MAXIMUM_LANE_CAPACITY_*

IntControl Control Keys Integer

The MAXIMUM_LANE_CAPACITY_* key is optional. This key specifies the maximum capacity of a lane. This key is not used when the SIGNAL_SPLIT_METHOD key is set as LANES. The default value for this key is 1500 vphpl (vehicles per hour per lane) and the value specified should be greater than the value specified for the MINIMUM_LANE_CAPACITY field.

The MAXIMUM_LANE_CAPACITY_* key is part of the group that determines how the total cycle length is allocated to different phases. This group includes POCKET_LANE_FACTOR_*, GENERAL_GREEN_FACTOR_*, SIGNAL_SPLIT_METHOD_*, MINIMUM_LANE_CAPACITY_*, and MAXIMUM_LANE_CAPACITY_*. These parameters define how the number of lanes or lane capacity

assigned to one phase is balanced against similar values from other phases to allocate a share of the total cycle time to each phase.

The ‘*’ is a placeholder for the first number (default is 1; range is 1..100). This is for the purpose of grouping related parameters. Thus, up to 100 parameter groups for this control key are allowed.

MAXIMUM_LENGTH_TO_XY_RATIO

NetPrep Control Keys

Decimal

The maximum length to X-Y ratio key is optional. This key defaults to 1.2 when the value is not specified. This key is used to compare the link length in the input network file to the straight-line distance between the coordinates of the nodes at either end of the link and any shape points that are provided. If the length is less than the coordinate-based length, the output length is set equal to the coordinate-based length. If the ratio between the length and the coordinate-based length is greater than the value specified by this key, the program reduces the link length to the ratio times the coordinate-based length. For example, if the length field indicates the link is 1.3 miles long and the straight-line distance between the nodes is 1.0 miles, and the maximum ratio is 1.2, the program will reset the link length to 1.2 miles. The output printout file reports the number of links that were changed as a result of the distance checks.

MAXIMUM_LOADING_TIME

Flow-Time Service Keys

(blank)

MAXIMUM_NUMBER_OF_ITERATIONS

This optional key is used by the Router to implement multiple iterations within a single call to the Router, to attain link or trip-based convergence. The default of 0 means to NOT use multiple iterations. Valid values range from 0 to 100.

MAXIMUM_PERCENT_SELECTED

The maximum percent selected is optional. If a value is not provided, all of the plans selected by the selection criteria will be written to the household ID file. If a value is provided, it specifies the maximum percentage of the total households within the each plan file that can be selected for output. If the number of selected households exceeds this percentage, the random probability function is used to determine which of the selected households will be written to the output file.

MAXIMUM_RIDERSHIP_SIZE

ArcPlan Control Keys

Decimal

The maximum ridership size determines the maximum width in meters of the bandwidth regardless of the number of riders on the link. The default maximum size is 1000 meters. The accepted range is between 1.0 and 10,000 meters.

MAXIMUM_SHAPE_ANGLE

ArcPlan Control Keys

Integer

The maximum shape angle is used to smooth the link shapes as they are offset from the centerline of the link. Smoothing helps to minimize distortions created by small imperfections in the link shape that become exaggerated when large offsets are applied. The default maximum shape angle is 45 degrees. The acceptable range is 5 to 120 degrees. If the edge of the polygon includes angle greater than this value, shape points are removed or added to smooth out the shape transitions.

NetPrep Control Keys

Integer

This optional key specifies the maximum angle permitted in the output shape file. This key defaults to 90 degrees (NetPrep 5) if a value is not provided. The possible values range is {0, 5..120}.

MAXIMUM_SORT_SIZE

Used in PlanPrep and TripPrep

The default is 0 (unlimited sort size) and valid values are either 0, or a value of 100,000 or higher.

MAXIMUM_SPEED_DIFFERENCE

Flow-Time Service Keys

(blank)

MAXIMUM_SWAPPING_SPEED

Flow-Time Service Keys

(blank)

MAXIMUM_TIME_DIFFERENCE

The maximum time difference key is used in conjunction with the link delay file to determine which plans are selected for output. If the difference between the calculated travel time and the plan duration is greater than this value (in minutes), the plan is always considered for output even if the percent difference is less than the select time ratios key. The default value for this parameter is 60 minutes.

MAXIMUM_WAITING_TIME

Flow-Time Service Keys

(blank)

MERGE_LINK_DELAY_FORMAT

LinkDelay Control Keys

FILE_FORMAT

See File Formats.

MERGE_PLAN_FILES

PlanCompare Control Keys

Boolean

MERGE_PLAN_FORMAT

PlanPrep Control Keys

FILE_FORMAT

See File Formats.

MERGE_TIME_PERIODS

System File Keys

Boolean

Default value is FALSE. Valid values include TRUE/FALSE, YES/NO, 1/0, T/F, Y/N

MERGE_TRIP_FORMAT

TripPrep Control Keys

FILE_FORMAT

See File Formats.

MERGE_WEIGHTING_FACTOR

LinkDelay Control Keys

(blank)

The MERGE_WEIGHTING_FACTOR, which takes the place of the PREVIOUS_WEIGHTING_FACTOR in version 4, indicates how values in the LINK_DELAY_FILE and the MERGE_LINK_DELAY_FILE are merged. The default value is 1.0, and valid values are either 0.0, or a value at least equal to 0.5. Let:

MERGE_VAL = value in the Merge_Link_Delay_File

CURR_VAL = value in the Link_Delay_File

MERGE_FACTOR = Merge_Weighting_Factor

NEW_VAL = value in the New_Link_Delay_File

In the absence of time smoothing:

$$NEW_VAL = (MERGE_VAL * MERGE_FACTOR + CURR_VAL) / (MERGE_FACTOR + 1)$$

MESOSCOPIC_SUBAREAS

Flow-Time Service Keys (blank)

MICROSCOPIC_SUBAREAS

Flow-Time Service Keys (blank)

MICROSIMULATOR_REPORT_*

Microsimulator Control Keys (blank)

MIN_CIRCUITY_DISTANCE

The minimum circuitry distance key is optional. The value can range from zero to 10,000 meters. The default value is 2,000 meters. This value is used in conjunction with the maximum circuitry ratio to focus the path-building algorithm on links that are generally located between the trip origin and destination. If the origin and destination locations are relatively close from a straight-line distance perspective, but not as close from a network perspective, the ratio algorithm can limit the path building in illogical ways. This parameter is designed to help avoid this problem by permitting the algorithm to consider all nodes that are within a minimum distance of the origin and destination. For example, this parameter can allow the algorithm to consider nodes that are up to 2,000 meters away when the trip origin and destination are close to each other but on different streets.

MIN_WAIT_TIMES_*

0 seconds //---- 0..3600 seconds

MINIMUM_BANDWIDTH_SIZE

Draw Service Keys Decimal

The minimum bandwidth size determines the minimum width in meters of the bandwidth regardless of the number of vehicles (greater than or equal to the minimum value) on the link. The default minimum size is 0.01 meters. The accepted range is between 0.001 and 10.0 meters.

MINIMUM_BANDWIDTH_VALUE

Draw Service Keys Integer

The minimum bandwidth value determines the fewest number of vehicles for which a bandwidth polygon is drawn. The default value is zero which means the polygon is drawn if the link has one or more vehicles. The accepted range is between zero and 100,000 vehicles.

MINIMUM_COST_DIFFERENCE

Select Service Keys (blank)

MINIMUM_LANE_CAPACITY_*

IntControl Control Keys Integer

The MINIMUM_LANE_CAPACITY_* key is optional. This key specifies the minimum capacity of a lane. This key is not used when the SIGNAL_SPLIT_METHOD key is set as LANES. The default value for this key is 500 vphpl (vehicles per hour per lane).

The MINIMUM_LANE_CAPACITY_* key is part of the group that determines how the total cycle length is allocated to different phases. This group includes POCKET_LANE_FACTOR_*, GENERAL_GREEN_FACTOR_*, SIGNAL_SPLIT_METHOD_*, MINIMUM_LANE_CAPACITY_*, and MAXIMUM_LANE_CAPACITY_*. These parameters define how the number of lanes or lane capacity assigned to one phase is balanced against similar values from other phases to allocate a share of the total cycle time to each phase.

The '*' is a placeholder for the first number (default is 1; range is 1..100). This is for the purpose of grouping related parameters. Thus, up to 100 parameter groups for this control key are allowed.

MINIMUM_LINK_FLOW

LinkSum Control Keys (blank)

MINIMUM_LINK_LENGTH

TransimsNet Control Keys (blank)

The MINIMUM_LINK_LENGTH parameter control key is not implemented in TransimsNet 5.0. See DROP_SHORT_LINKS.

MINIMUM_PHASE_TIME_*

IntControl Control Keys List

The MINIMUM_PHASE_TIME_* key is optional and defines the minimum time for a phase of a signalized intersection. The default value for this key is 5 seconds. The minimum phase time should be at least 1 second and the value should not be greater than half the value of signal cycle length.

The MINIMUM_PHASE_TIME_* key is part of the group that defines how a timing plan is developed for each phase. This group includes MINIMUM_PHASE_TIME_*, YELLOW_PHASE_TIME_*, RED_CLEAR_PHASE_TIME_*, and EXTENDED_GREEN_FACTOR_*. These parameters define how the

minimum, maximum, and extended green times are computed for fixed-timed and demand-actuated phases.

The ‘*’ is a placeholder for the first number (default is 1; range is 1..100). This is for the purpose of grouping related parameters. Thus, up to 100 parameter groups for this control key are allowed.

MINIMUM_RIDERSHIP_SIZE

ArcPlan Control Keys

Decimal

The minimum ridership size determines the minimum width in meters of the bandwidth regardless of the number of riders (greater than or equal to the minimum value) on the link. The default minimum size is 0.01 meters. The accepted range is between 0.001 and 10.0 meters.

MINIMUM_RIDERSHIP_VALUE

ArcPlan Control Keys

Integer

The minimum ridership value determines the fewest number of riders for which a bandwidth polygon is drawn. The default value is zero which means the polygon is draw if the link has one or more riders. The accepted range is between zero and 100,000 riders.

MINIMUM_SHAPE_LENGTH

ArcPlan Control Keys

Integer

NetPrep Control Keys

Integer

This key is optional and sets the value for the minimum shape length permitted in the output shape file. If no value is provided, this defaults to 10 meters (NetPrep 5) with a range of (0..50}. The minimum shape length is used to smooth the link shapes as they are offset from the centerline of the link. Smoothing helps to minimize distortions created by small imperfections in the link shape that become exaggerated when large offsets are applied. The default minimum shape length is 5 meters. The acceptable range is 1 to 50 meters. If the edge of the polygon includes distances between shape points that are less than this value, shape points are removed from the edge until the minimum length is met.

MINIMUM_TIME_DIFFERENCE

The minimum time difference key is used in conjunction with the link delay file to determine which plans are selected for output. If the difference between the calculated travel time and the plan duration is less than this value (in minutes), the plan is not considered for output even if the percent difference is greater than the PERCENT_TIME_DIFFERENCE key. The default value for this parameter is one minute.

MINIMUM_ZONE_LOCATIONS

LocationData Control Keys

Integer

This key is an integer, with a default value of 4, and a valid range of 2 to 20. It indicates the minimum number of locations that should be associated with each zone. It is used with the NEW_ZONE_LOCATION_MAP_FILE key to suggest additional location assignment to those zones that are currently assigned to fewer than **the number specified for MINIMUM_ZONE_LOCATIONS**.

MODEL_END_TIME

Execution Service Keys

Time

The model end time defines the time-of-day at the end of the modeling process. The default value is 24:00. Since there tends to be a significant number of trips that start near midnight and may take some time to reach their destination, the model end time is often increased to a value such as 27:00 to ensure that all trips are completed. Other applications may wish to model travel over multiple days (e.g., hurricane evacuation studies). In this case, this control key can be set to 48:00 or 72:00. Valid values are times greater than the MODEL_START_TIME.

MODEL_START_TIME

Execution Service Keys

Time

The model start time defines the time-of-day at the beginning of the modeling process. The default value is 0:00 or midnight. Many activity-based models consider the start of the day to be 3:00 AM when most people are at home in bed. Valid values are times greater than or equal to 0 [seconds], 0.0 [hours], 0:00.

MODEL_TIME_INCREMENT

Execution Service Keys

Time

This is an optional key and defaults to a value of 15 minutes if not specified. The model time increment defines the standard time period resolution used for dynamic assignments. The combination of time increments and model start and end times establishes the number of time periods used for defining link travel times and speeds. For example, the default parameters create 96 different travel time values for each link. The time increment used for routing and link delay processing. Valid values are from two to 240 (2..240) minutes.

NEAREST_NEIGHBOR_FACTOR

System File Keys

(blank)

Adjusts skim values for intra-zonal skims. Default value is 0.5. Valid values range from 0.0 to 1.0. (See output_skims.cpp)

NETPREP_REPORT_#

NetPrep Control Keys

Text

This is an optional key for NetPrep, and if used, the “#” is replaced by the number one (1) or two (2). Neither, one, or both of the following could be included in the control file if the user desires to see the associated report(s) appended to the output PRN file:

NETPREP_REPORT_1	CONVERSION_SCRIPT
NETPREP_REPORT_2	CONVERSION_STACK

The CONVERSION_SCRIPT report, if included, will append the conversion script used with NetPrep (assuming one has been used) to the end of the PRN file. The CONVERSION_STACK report, if included, will append a numeric list of the computations used, in order, to process the conversion script file. One use of this report would be to review the computational processing associated with the conversion script to ensure that values were correctly assigned to and compared with other values, in the correct order, etc. If errors are discovered, the conversion script could simply be edited and NetPrep re-run.

NEW_AB_SPEED_FIELD_NAME

LinkData Control Keys (blank)

NEW_AB_VOLUME_FIELD_NAME

LinkData Control Keys (blank)

NEW_ACCESS_FORMAT

System File Keys

FILE_FORMAT

See File Formats.

NEW_BA_SPEED_FIELD_NAME

LinkData Control Keys (blank)

NEW_BA_VOLUME_FIELD_NAME

LinkData Control Keys (blank)

NEW_CONNECTION_FORMAT

System File Keys FILE_FORMAT

See File Formats.

NEW_DATA_FORMAT_*

FileFormat Control Keys FILE_FORMAT

See File Formats.

NEW_DETECTOR_FORMAT

System File Keys FILE_FORMAT

See File Formats.

NEW_DIRECTIONAL_DATA_FORMAT

LinkData Control Keys FILE_FORMAT

See File Formats.

NEW_EVENT_COORDINATES_*

Turn Volume Output Keys (blank)

NEW_EVENT_FILTER_*

Turn Volume Output Keys (blank)

NEW_EVENT_FORMAT_*

Turn Volume Output Keys FILE_FORMAT

See File Formats.

NEW_EVENT_LINK_RANGE_*

Turn Volume Output Keys (blank)

NEW_EVENT_MODE_RANGE_*

Turn Volume Output Keys (blank)

NEW_EVENT_SUBAREA_RANGE_*

Turn Volume Output Keys (blank)

NEW_EVENT_TIME_FORMAT_*

Turn Volume Output Keys FILE_FORMAT

See File Formats.

NEW_EVENT_TIME_RANGE_*

Turn Volume Output Keys (blank)

NEW_EVENT_TYPE_RANGE_*

Turn Volume Output Keys (blank)

NEW_GROUP_TRAVEL_FORMAT

LinkSum Control Keys FILE_FORMAT

See File Formats.

NEW_HOUSEHOLD_FORMAT

System File Keys FILE_FORMAT

See File Formats.

NEW_LANE_USE_FORMAT

System File Keys FILE_FORMAT

See File Formats.

NEW_LINK_ACTIVITY_FORMAT

LinkSum Control Keys FILE_FORMAT

See File Formats.

NEW_LINK_DATA_FIELD_*

LinkSum Control Keys (blank)

NEW_LINK_DATA_FORMAT

LinkData Control Keys FILE_FORMAT

See File Formats.

NEW_LINK_DATA_FORMAT_*

LinkSum Control Keys FILE_FORMAT

See File Formats.

NEW_LINK_DELAY_COORDINATES_*

Link Delay Output Keys (blank)

NEW_LINK_DELAY_FLOW_TYPE_*

Link Delay Output Keys (blank)

NEW_LINK_DELAY_FORMAT

System File Keys FILE_FORMAT

See File Formats.

NEW_LINK_DELAY_FORMAT_*

Link Delay Output Keys FILE_FORMAT

See File Formats.

NEW_LINK_DELAY_INCREMENT_*

Link Delay Output Keys (blank)

NEW_LINK_DELAY_LINK_RANGE_*

Link Delay Output Keys (blank)

NEW_LINK_DELAY_SUBAREA_RANGE_*

Link Delay Output Keys (blank)

NEW_LINK_DELAY_TIME_FORMAT_*

Link Delay Output Keys (blank)

See File Formats.

NEW_LINK_DELAY_TIME_RANGE_*

Link Delay Output Keys (blank)

NEW_LINK_DELAY_TURN_FLAG_*

Link Delay Output Keys Boolean

NEW_LINK_DELAY_VEH_TYPES_*

Link Delay Output Keys (blank)

NEW_LINK_DIRECTION_FIELD_*

LinkSum Control Keys (blank)

NEW_LINK_DIRECTION_FORMAT_*

LinkSum Control Keys FILE_FORMAT

See File Formats.

NEW_LINK_DIRECTION_INDEX_*

LinkSum Control Keys (blank)

NEW_LINK_FORMAT

System File Keys FILE_FORMAT

See File Formats.

NEW_LINK_SUMMARY_FORMAT

ArcSnapshot Control Keys FILE_FORMAT

See File Formats.

NEW_LOCATION_FIELD, NEW_LOCATION_FIELD_*

LocationData Control Keys

List

This key defines new fields to add to the location file (The latter was formerly the activity location file in TRANSIMS 4.0). The values assigned to these fields are initialized to zero or blank and are typically set using a conversion script. The key can include up to three comma separated values. The first is the field name. This is followed by the field type and the field size. The type options include integer (default, I, INTEGER), floating point (R, REAL, D, DOUBLE), or string (S, STRING, C, CHARACTER). The default size is 10. Floating point fields can be defined with decimal points (e.g., 10.2). Two decimal points are assumed by default.

NEW_LOCATION_FORMAT

System File Keys

FILE_FORMAT

See File Formats.

NEW_NODE_FORMAT

System File Keys

FILE_FORMAT

See File Formats.

NEW_OCCUPANCY_COORDINATES_*

Turn Volume Output Keys

(blank)

NEW_OCCUPANCY_FORMAT_*

Turn Volume Output Keys

FILE_FORMAT

See File Formats.

NEW_OCCUPANCY_INCREMENT_*

Turn Volume Output Keys

(blank)

NEW_OCCUPANCY_LINK_RANGE_*

Turn Volume Output Keys

(blank)

NEW_OCCUPANCY_MAX_FLAG_*

Turn Volume Output Keys

Boolean

NEW_OCCUPANCY_SUBAREA_RANGE_*

Turn Volume Output Keys (blank)

NEW_OCCUPANCY_TIME_FORMAT_*

Turn Volume Output Keys FILE_FORMAT

See File Formats.

NEW_OCCUPANCY_TIME_RANGE_*

Turn Volume Output Keys (blank)

NEW_PARKING_FORMAT

System File Keys FILE_FORMAT

See File Formats.

NEW_PERFORMANCE_COORDINATES_*

Performance Output Keys (blank)

NEW_PERFORMANCE_DATA_FORMAT

LinkSum Control Keys FILE_FORMAT

See File Formats.

NEW_PERFORMANCE_FLOW_TYPE_*

Performance Output Keys (blank)

NEW_PERFORMANCE_FORMAT

System File Keys FILE_FORMAT

See File Formats.

NEW_PERFORMANCE_FORMAT_*

Performance Output Keys FILE_FORMAT

See File Formats.

NEW_PERFORMANCE_INCREMENT_*

Performance Output Keys (blank)

NEW_PERFORMANCE_LINK_RANGE_*

Performance Output Keys (blank)

NEW_PERFORMANCE_SUBAREA_RANGE_*

Performance Output Keys (blank)

NEW_PERFORMANCE_TIME_FORMAT_*

Performance Output Keys FILE_FORMAT

See File Formats.

NEW_PERFORMANCE_TIME_RANGE_*

Performance Output Keys (blank)

NEW_PERFORMANCE_TURN_FLAG_*

Performance Output Keys Boolean

NEW_PERFORMANCE_VEH_TYPES_*

Performance Output Keys (blank)

NEW_PHASING_PLAN_FORMAT

System File Keys FILE_FORMAT

See File Formats.

NEW_PLAN_FORMAT

System File Keys FILE_FORMAT

See File Formats.

NEW_POCKET_FORMAT

System File Keys FILE_FORMAT

See File Formats.

NEW_PROBLEM_FORMAT

System File Keys FILE_FORMAT

See File Formats.

NEW_RIDERSHIP_ALL_STOPS_*

Ridership Output Keys Boolean

NEW_RIDERSHIP_FORMAT

System File Keys FILE_FORMAT

See File Formats.

NEW_RIDERSHIP_FORMAT_*

Ridership Output Keys FILE_FORMAT

See File Formats.

NEW_RIDERSHIP_ROUTE_RANGE_*

Ridership Output Keys (blank)

NEW_RIDERSHIP_TIME_FORMAT_*

Ridership Output Keys FILE_FORMAT

See File Formats.

NEW_RIDERSHIP_TIME_RANGE_*

Ridership Output Keys (blank)

NEW_ROUTE_NODES_FORMAT

System File Keys FILE_FORMAT

See File Formats.

NEW_SELECTION_FORMAT

System File Keys

FILE_FORMAT

See File Formats.

NEW_SHAPE_FORMAT

System File Keys

FILE_FORMAT

See File Formats.

NEW_SIGN_FORMAT

System File Keys

FILE_FORMAT

See File Formats.

NEW_SIGNAL_FORMAT

System File Keys

FILE_FORMAT

See File Formats.

NEW_SKIM_FORMAT

System File Keys

FILE_FORMAT

See File Formats.

NEW_SNAPSHOT_CELL_FLAG_*

Simulation Service Keys

Boolean

NEW_SNAPSHOT_COMPRESSION

NewFormat Control Keys

Boolean

Defaults to FALSE. Indicates whether a new snapshot file produced by NewFormat should be compressed for use in the Version 5 visualizer.

NEW_SNAPSHOT_COMPRESSION_*

Simulation Service Keys

Boolean

Defaults to FALSE. Indicates whether a new snapshot file produced by the Simulator should be compressed for use in the Version 5 visualizer.

NEW_SNAPSHOT_COORDINATES_*

Simulation Service Keys (blank)

NEW_SNAPSHOT_FORMAT

ArcSnapshot Control Keys FILE_FORMAT

NewFormat Control Keys FILE_FORMAT

See File Formats.

NEW_SNAPSHOT_FORMAT_*

Simulation Service Keys FILE_FORMAT

See File Formats.

NEW_SNAPSHOT_INCREMENT_*

Simulation Service Keys (blank)

NEW_SNAPSHOT_LINK_RANGE_*

Simulation Service Keys (blank)

NEW_SNAPSHOT_LOCATION_FLAG_*

Simulation Service Keys Boolean

NEW_SNAPSHOT_MAX_SIZE_*

Simulation Service Keys (blank)

NEW_SNAPSHOT_STATUS_FLAG_*

Simulation Service Keys Boolean

NEW_SNAPSHOT_SUBAREA_RANGE_*

Simulation Service Keys (blank)

NEW_SNAPSHOT_TIME_FORMAT_*

Simulation Service Keys

FILE_FORMAT

See File Formats.

NEW_SNAPSHOT_TIME_RANGE_*

Simulation Service Keys

(blank)

NEW_SUBZONE_FIELD_*

LocationData Control Keys

(blank)

From Version 4: Each subzone key group consists of up to five keys. The new subzone field will include an activity location weight based on the proximity of the activity location to the subzone centroid found in the subzone file and the value of the subzone field. The average of the weights to the two best subzone centroids is saved to the new activity location field. This option is typically used to assign trip distribution weights to activity locations based on subzone population or employment data.

NEW_TIMING_PLAN_FORMAT

System File Keys

FILE_FORMAT

See File Formats.

NEW_TRANSIT_DRIVER_FORMAT

System File Keys

FILE_FORMAT

See File Formats.

NEW_TRANSIT_FARE_FORMAT

System File Keys

FILE_FORMAT

See File Formats.

NEW_TRANSIT_ROUTE_FORMAT

System File Keys

FILE_FORMAT

See File Formats.

NEW_TRANSIT_SCHEDULE_FORMAT

System File Keys FILE_FORMAT

See File Formats.

NEW_TRANSIT_STOP_FORMAT

System File Keys FILE_FORMAT

See File Formats.

NEW_TRIP_FORMAT

System File Keys FILE_FORMAT

See File Formats.

NEW_TURN_PENALTY_FORMAT

System File Keys FILE_FORMAT

See File Formats.

NEW_TURN_VOLUME_FILTER_*

Turn Volume Output Keys (blank)

NEW_TURN_VOLUME_FORMAT

LinkSum Control Keys FILE_FORMAT

See File Formats.

NEW_TURN_VOLUME_FORMAT_*

Turn Volume Output Keys FILE_FORMAT

See File Formats.

NEW_TURN_VOLUME_INCREMENT_*

Turn Volume Output Keys (blank)

NEW_TURN_VOLUME_NODE_RANGE_*

Turn Volume Output Keys (blank)

NEW_TURN_VOLUME_SUBAREA_RANGE_*

Turn Volume Output Keys (blank)

NEW_TURN_VOLUME_TIME_FORMAT_*

Turn Volume Output Keys FILE_FORMAT

See File Formats.

NEW_TURN_VOLUME_TIME_RANGE_*

Turn Volume Output Keys (blank)

NEW_USE_FLAG_FIELD_*

LocationData Control Keys (blank)

NEW_VEHICLE_FORMAT

System File Keys FILE_FORMAT

See File Formats.

NEW_VEHICLE_TYPE_FORMAT

System File Keys FILE_FORMAT

See File Formats.

NEW_WALK_ACCESS_FIELD

LocationData Control Keys (blank)

This is a field name. The new walk access field and maximum walk distance keys are used to calculate the relative accessibility of a given activity location to near-by transit stops. This calculation requires the link, node, process link, and transit network files. The number of runs at each stop and the distance between the stop and the activity location determine the accessibility weight. [definition to be revisited]

NEW_ZONE_FORMAT

System File Keys FILE_FORMAT

See File Formats.

NEW_ZONE_LOCATION_MAP_FILE

This is the name of a file that contains a list of zones along with nearby activity locations that are not currently assigned to the zones. The zones that are listed include those zones that are currently assigned to fewer activity locations than the number specified in MINIMUM_ZONE_LOCATIONS. For each such zone, one or more locations, near to but not currently assigned to the zone, are listed. An example appears below. Note that “activity locations” are called “locations” in TRANSIMS Version 5.0.

ZONE	LOCATIONS
2	48 , 9
5	46
10	13 , 56
11	57 , 14
12	51 , 1
13	29 , 37
14	58 , 41

NEW_ZONE_TRAVEL_FORMAT

LinkSum Control Keys

FILE_FORMAT

See File Formats.

NODE_FORMAT

System File Keys

FILE_FORMAT

See File Formats.

NODE_LIST_PATHS

NewFormat Control Keys

Boolean

ArcPlan Control Keys

Boolean

The node list paths key is optional and specifies the way the path is identified in the Version 4 input plan file. The key is TRUE by default. This means that the input plans will include a list of the node ID numbers along the travel path. If the key is FALSE, the program interprets the path as a list of link ID numbers. If the first character of the key is “0”, “N”, “n”, “F”, or “f”, the key is interpreted as FALSE.

This key is only used with version 4 plans: version 5 plans are always defined by links.

NOTES_AND_NAME_FIELDS

System File Keys

Boolean

This Boolean key defaults to FALSE, and specifies whether a NOTES field is added to an output file. Possible values include TRUE/FALSE, YES/NO, 1/0, T/F, Y/N.

NUMBER_OF_ITERATIONS

Simulation Service Keys

(blank)

The Number_of_Iterations is used by LinkDelay to define how many times the moving average process is applied to the full set of time periods (default is 3). The range is 1 to 25.

Table 1 illustrates the effects of several values (1, 3 and 7) of NUMBER_OF_ITERATIONS on a single link.

Table 1 NUMBER_OF_ITERATIONS: Effect on link time and flow

Time	Input	Results			Input	Results		
	Flow	1	3	7	Time	1	3	7
7:00				3				14.9
7:15			8	16			14.9	14.9
7:30			79	67			14.7	14.7
7:45		194	324	188		14.3	13.9	14.4
8:00	971	811	714	399	11.9	12.5	12.9	13.8
8:15	1141	1105	1000	651	12.0	12	12.2	13.1
8:30	1131	1132	1056	845	12.0	12	12	12.5
8:45	1125	998	886	891	12.1	12	11.9	12.1
9:00	486	525	546	775	11.5	11.5	11.8	12
9:15	43	123	222	549	10.8	11.8	12.4	12.2
9:30		9	55	312		14.1	13.6	12.7
9:45			7	139			14.6	13.5
10:00				48				14.2
10:15				12				14.6
10:30				2				14.8

NUMBER_OF_PARTITIONS

RandomSelect Control Keys

(blank)

The number of partitions created in the selection file produced by RandomSelect. The default is 8, and valid values range from 1 to 999.

NUMBER_OF_RINGS_*

IntControl Control Keys

List

The NUMBER_OF_RINGS_* control key is optional and has a default value of 1. The possible value range for this key is between 1 and 4. This key is used to specify the number of signal rings for each signalized intersection by area type.

The '*' is a placeholder for the first area type value in the list. It is optional and defaults to 1 and represents area type or jurisdiction type for the purpose of grouping related parameters. A maximum of 100 area types are supported.

NUMBER_OF_THREADS

Execution Service Keys

Integer

This parameter is only used for programs where multi-thread processing is enabled. TRANSIMS uses the Boost library to implement processing threads. The software can be compiled with or without this library. If the library is included and the program is thread enabled, the number of threads key instructs the program on the number of CPUs that will be used for parallel data processing. The key value can range from 1 to 64. The user can disable the multi-thread processing by setting this key to 1. If the key value is greater than one and the particular program or compiled executable does not support multi-threading, a warning message is written to the screen. The default value is 1.

OCCUPANCY_FORMAT

ArcSnapshot Control Keys

FILE_FORMAT

See File Formats.

ONEWAY_ARROW_LENGTH

Draw Service Keys

Decimal

This key specifies the length of the arrow symbol drawn at the end of one-way links in meters. The default is two times the lane width key. Arrows are only drawn if the draw one-way arrows key is TRUE.

ONEWAY_ARROW_SIDE_OFFSET

Draw Service Keys

Decimal

This key specifies the width of the arrow symbol drawn at the end of one-way links in meters. The default is one half the lane-width key. Arrows are only drawn if the draw one-way arrows key is TRUE.

ORIGIN_LOCATIONS_PER_ZONE

PathSkim Control Keys

(blank)

This number is used by PathSkim to determine the number of locations in an origin zone that will be used for calculating skims. The number of origin locations per zone can range from 0 to 100. The default is 0, and it indicates that all locations should be used. TRANSIMS actually calculates Location –

Location travel times, and this parameter specifies the number of locations that should be used to determine an average travel time from a zone.

ORIGIN_WEIGHT_FIELD_*

ConvertTrips Control Keys (blank)

OUTPUT_COORDINATE_ADJUSTMENT

Simulation Service Keys List

The output coordinate adjustment enables the user to manipulate the coordinates after they are returned from the output coordinate conversion calculation. This key is optional. It is only needed if the output coordinates should be in units that are different from the conversion algorithm. By default, TRANSIMS data files store coordinate data in meters that don't require any adjustments. The adjustment command includes four floating-point numbers separated by commas. The first two numbers are the X and Y offsets. The last two numbers are X and Y adjustment factors. The process adds the offset value to the coordinate and then applies the adjustment factor. In other words:

$$X = (X + X_offset) * X_factor$$

$$Y = (Y + Y_offset) * Y_factor$$

OUTPUT_COORDINATE_SYSTEM

Simulation Service Keys List

This key has a CSV list format and is optional. The output coordinate system determines how the locations from the input shape file are converted into X-Y coordinates in the output Node, Link, and Shape files. This key is only needed if coordinate conversions are desired.

The output coordinate command includes three parts separated by a comma. The first part is the coordinate system description. The options include UTM, STATEPLANE, and LATLONG. The second part identifies the code number within the coordinate system that relates to the local conversion parameters. For UTM coordinates in the U.S, these codes range from 1 to 20. Stateplane coordinates are defined using four digit FIPS codes (e.g., Oregon North = 3601). A code is not needed for the Latitude/Longitude system. The third parameter defines the coordinate units. By default, UTM is in meters, Stateplane is in feet, and Latitude/Longitude is in degrees. The user can override these assumptions using the following keywords: FEET, METERS, MILES, KILOMETERS, DEGREES, and MILLION_DEGREES. Figure 5 shows the UTM coordinate zones for the U.S. (Public domain illustration downloaded from <http://en.wikipedia.org/wiki/File:Utm-zones.jpg>)



Figure 5 UTM Coordinate Zones for the U.S.

OUTPUT_XYM_SHAPES

Simulation Service Keys

Boolean

By default, this key is FALSE, and the output files will use X and Y coordinates. If the key is TRUE, the output file will have X, Y and M (measure) coordinates. Possible values are TRUE/FALSE, YES/NO, 1/0, T/F, Y/N.

OUTPUT_XYZ_SHAPES

Simulation Service Keys

Boolean

By default, this key is FALSE, and the output files will use X and Y coordinates. If the key is TRUE, the output file will have X, Y and Z coordinates. Possible values are TRUE/FALSE, YES/NO, 1/0, T/F, Y/N.

PAD_FILE_TIME_LABEL

ArcSnapshot Control Keys

Boolean

PARKING_DETAIL_WARRANT_*

TransimsNet Control Keys

List

The parking detail warrant parameter is a new addition to the TRANSIMS toolbox starting with Version 5 of the software. This key has an '*' suffix as with the other warrant control key. This enables the user to specify warrants that are grouped by time of day. The '*' is replaced by a number when the key is used (1..100). The functionality that this key provides is the ability to add cost and time to parking lots by time

of day. To this end, multi-data field records are used (at, time, use, in, out, hourly, daily). These fields are defined below:

- At – This specifies the area type range (this can be a single area type as well)
- Time – This specifies the time of day range
- Use – This specifies the vehicle use type
- In – This specifies the time required to park the vehicle
- Out – This specifies the time required to move the vehicle out of the parking lot
- Hourly – This specifies the hourly parking cost
- Daily – This specifies the daily parking cost

Figure 6 is a simple example of this key with all fields populated:

PARKING_DETAIL_WARRANT_1 1..2, 10:00..15:00, AUTO, 20 seconds, 60 seconds, 200 cents, 400 cents

Figure 6 PARKING_DETAIL_WARRANT_* Example

PARKING_FORMAT

System File Keys

FILE_FORMAT

See File Formats.

PARKING_SIDE_OFFSET

Draw Service Keys

Decimal

The parking side offset is used to display the origin and destination parking location for a drive plan. The default value is 5.0 meters. In this case, the parking lot is drawn five meters to the right or left of the centerline of the link shape at the appropriate offset.

PARKING_TIME_VALUES_*

Path Building Service Keys

(blank)

PATHSKIM_REPORT_*

PathSkim Control Keys

(blank)

PERCENT_COST_DIFFERENCE

Select Service Keys

(blank)

PERCENT_MOVED_BACKWARD

Simulation Service Keys

(blank)

Used in LinkDelay to indicate the percentage of current period flows and travel times that are moved backwards or forward. The Percent_Moved_Backward defines the percentage of the current period volume that is added to the previous time period. It defaults to 20 percent. The range is 0..(100 – 50 / [smooth group size])

Table 2 illustrates the impacts of several values of PERCENT_MOVED_FORWARD and PERCENT_MOVED_BACKWARD on a single link. The values used are

- 20% FORWARD and 20% BACKWARD (the default), labeled as 20_20
- 5% FORWARD and 5% BACKWARD, labeled as 5_5
- 0% FORWARD and 20% BACKWARD , labeled as 0_20

Table 2 PERCENT_MOVED_BACKWARD / FORWARD: Effect of various values

Time	Input	Results			Input	Results		
	Flow	20_20	5_5	0_20		20_20	5_5	0_20
7:15		8		8		14.9		14.9
7:30		79	7	102		14.7	14.9	14.6
7:45		324	126	492		13.9	14.5	13.4
8:00	971	714	868	1052	11.9	12.9	12.3	11.9
8:15	1141	1000	1111	1131	12.0	12.2	12	12
8:30	1131	1056	1126	1058	12.0	12	12	12
8:45	1125	886	1040	767	12.1	11.9	12	11.8
9:00	486	546	511	265	11.5	11.8	11.5	11.6

PERCENT_MOVED_FORWARD

Simulation Service Keys

(blank)

Used in LinkDelay to indicate the percentage of current period flows and travel times that are moved backwards or forward. The Percent_Moved_Forward defines the percentage of the current period volume that is added to the next time period. It defaults to 20 percent. The range is 0..(100 – 50 / [smooth group size]). See PERCENT_MOVED_BACKWARD for an example.

PERCENT_RANDOM_IMPEDANCE

The percent random impedance key is optional and specifies the amount of random impedance effects. The key can range from zero to 100 percent. The default value is zero. Zero implies that all travelers perceive the impedance on a given link in exactly the same way. Non-zero parameters cause the program to randomly adjust the link impedance each time it is considered by the path-building

algorithm. A value of 20 means that the impedance perceived by the traveler may be as much as 10 percent less or 10 percent more than the “actual” impedance.

PERCENT_TIME_DIFFERENCE

The percent time difference key is used in conjunction with the link delay file to determine which plans have a computed travel time that is significantly different from the plan duration. The program uses the link delay information by time period to calculate the travel time using the plan links. This value is subtracted from and divided by the plan duration to estimate the percent difference. If the percent difference for a given plan is greater than the percent time difference key, the household is selected for output to the household ID file. The default value for this parameter is 0.

PERFORMANCE_FORMAT

System File Keys

FILE_FORMAT

See File Formats.

PERIOD_CONTROL_POINT

Data Service Keys

(blank)

PERMISSION_PROBABILITY_*

Flow-Time Service Keys

(blank)

PERMITTED_LEFT_FACTOR_*

IntControl Control Keys

List

The PERMITTED_LEFT_FACTOR_* control key is optional and has a default value of 0.5. The possible value range for this key is 0.2 to 1.0.

The ‘*’ is a placeholder for the first area type value in the list. It is optional and defaults to 1 and represents area type or jurisdiction type for the purpose of grouping related parameters. A maximum of 100 area types are supported.

PHASING_PLAN_FORMAT

System File Keys

FILE_FORMAT

See File Formats.

PLAN_FOLLOWING_DISTANCE

Flow-Time Service Keys (blank)

PLAN_FORMAT

System File Keys FILE_FORMAT

See File Formats.

PLAN_SORT_TYPE

Data Service Keys (blank)

PLANCOMPARE_REPORT_*

PlanCompare Control Keys (blank)

PLANSUM_REPORT_*

PlanSum Control Keys (blank)

POCKET_FORMAT

System File Keys FILE_FORMAT

See File Formats.

POCKET_LANE_FACTOR_*

IntControl Control Keys List

The POCKET_LANE_FACTOR_* key is optional. This key specifies the weighting factor for the length of the pocket lane. The default value for this key is 0.5. The value for this key can range between 0.0 and 1.0.

The POCKET_LANE_FACTOR_* key is part of the group that determines how the total cycle length is allocated to different phases. This group includes POCKET_LANE_FACTOR_*, GENERAL_GREEN_FACTOR_*, SIGNAL_SPLIT_METHOD_*, MINIMUM_LANE_CAPACITY_*, and MAXIMUM_LANE_CAPACITY_*. These parameters define how the number of lanes or lane capacity assigned to one phase is balanced against similar values from other phases to allocate a share of the total cycle time to each phase.

The '*' is a placeholder for the first area type value in the list. It is optional and defaults to 1 and represents area type or jurisdiction type for the purpose of grouping related parameters. A maximum of 100 area types are supported.

POCKET_LANE_WARRANT_*

TransimsNet Control Keys

List

The POCKET_LANE_WARRANT_* control key in TransimsNet 5 replaces the Version 4 control key POCKET_LENGTHS_FOR_FACILITY_# and adds multiple data fields. Version 5 supports records with multiple data fields, specifically the following: |from | to | at | type | length | lanes|. This list of data fields is further defined below. In addition, the * allows for logical grouping of parameters using an iterative approach, which is show below as well.

New Data Fields

- From - Approach facility type (e.g., PRINCIPAL) or range of types (e.g., FREEWAY..EXPRESSWAY)
- To - Departure facility type or range of types
- At - Area type or range of types
- Type - Pocket lane type (left/right turn, left/right merge, etc.)
- Length - default units are meters
- Lanes - Number of lanes

Figure 7 shows the data fields for TRANSIMS Version 4.

POCKET_LENGTHS_FOR_FACILITY_1	100, 150, 150, 150, 300, 350, 400, 500
-------------------------------	--

Figure 7 POCKET_LANE_WARRANT_# in TRANSIMS Version 4

Figure 8 shows the data fields for TRANSIMS Version 5.

POCKET_LANE_WARRANT_1	FREEWAY..EXPRESSWAY, RAMP, 1..2, RIGHT, 100 feet, 1
-----------------------	---

Figure 8 POCKET_LANE_WARRANT_* in TRANSIMS Version 5

The following example depicts multiple pocket lane warrants in TRANSIMS Version 5:

POCKET_LANE_WARRANT_1	FREEWAY, ALL, 1, RIGHT, 100 meters, 1
POCKET_LANE_WARRANT_2	FREEWAY, ALL, 2, RIGHT, 200 meters, 1
POCKET_LANE_WARRANT_3	FREEWAY, ALL, 3, RIGHT, 300 meters, 1
POCKET_LANE_WARRANT_4	FREEWAY, ALL, 4, RIGHT, 400 meters, 1
POCKET_LANE_WARRANT_5	EXPRESSWAY, ALL, 1, RIGHT, 75 meters, 1
POCKET_LANE_WARRANT_6	EXPRESSWAY, ALL, 2, RIGHT, 150 meters, 1
POCKET_LANE_WARRANT_7	EXPRESSWAY, ALL, 3, RIGHT, 200 meters, 1
POCKET_LANE_WARRANT_8	EXPRESSWAY, ALL, 4, RIGHT, 250 meters, 1
POCKET_LANE_WARRANT_9	PRINCIPAL, ALL, 1, LEFT, 50 meters, 1
POCKET_LANE_WARRANT_10	PRINCIPAL, ALL, 2, LEFT, 100 meters, 1
POCKET_LANE_WARRANT_11	PRINCIPAL, ALL, 3, LEFT, 150 meters, 1
POCKET_LANE_WARRANT_12	PRINCIPAL, ALL, 4, LEFT, 200 meters, 1
POCKET_LANE_WARRANT_13	MAJOR, ALL, 1, LEFT, 25 meters, 1
POCKET_LANE_WARRANT_14	MAJOR, ALL, 2, LEFT, 50 meters, 1
POCKET_LANE_WARRANT_15	MAJOR, ALL, 3, LEFT, 100 meters, 1

POCKET_LANE_WARRANT_16	MAJOR, ALL, 4, LEFT, 150 meters, 1
POCKET_LANE_WARRANT_17	RAMP, ALL, 1, LEFT, 50 meters, 1
POCKET_LANE_WARRANT_18	RAMP, ALL, 2, LEFT, 100 meters, 1
POCKET_LANE_WARRANT_19	RAMP, ALL, 3, LEFT, 150 meters, 1
POCKET_LANE_WARRANT_20	RAMP, ALL, 4, LEFT, 200 meters, 1

POCKET_SIDE_OFFSET

Draw Service Keys	Decimal
-------------------	---------

PRINT_MERGE_WARNINGS

IntControl Control Keys	Boolean
-------------------------	---------

The PRINT_MERGE_WARNINGS key is optional and set to FALSE by default. Possible values for this key are as follows: TRUE/FALSE, YES/NO, 1/0, T/F, Y/N.

PRINT_PROBLEM_MESSAGES

Flow-Time Service Keys	Boolean
------------------------	---------

PRINT_SIGN_WARNINGS

IntControl Control Keys	Boolean
-------------------------	---------

The PRINT_SIGN_WARNINGS control key is optional and set to FALSE by default. Possible values for this key are as follows: TRUE/FALSE, YES/NO, 1/0, T/F, Y/N.

PRINT_UPDATE_WARNINGS

The PRINT_UPDATE_WARNINGS control key is optional and set to FALSE by default. Possible values for this key are as follows: TRUE/FALSE, YES/NO, 1/0, T/F, Y/N

PRIORITY_LOADING_TIME

Flow-Time Service Keys	(blank)
------------------------	---------

PRIORITY_WAITING_TIME

Flow-Time Service Keys	(blank)
------------------------	---------

PROBLEM_FORMAT

System File Keys	FILE_FORMAT
------------------	-------------

See File Formats.

PROCESSING_METHOD

LinkDelay Control Keys

(blank)

Possible values are WEIGHTED_AVERAGE, REPLACE_LINKS, SIMPLE_AVERAGE, and REPLACE_OR_AVERAGE

WEIGHTED_AVERAGE uses the merge weighting factor (above) to produce a weighted average between values in the merge link delay file and the current link delay file. If a link exists in the merge file but not in the current, a value of 0 will be assumed for the current volume, and free-flow speed will be assumed for the current speed.

SIMPLE_AVERAGE uses a simple average (like WEIGHTED_AVERAGE with MERGE_WEIGHTING_FACTOR = 1)

REPLACE_LINKS simply uses the values in the current link delay file, when they are available, and only uses values from links in the merge link delay file that don't exist in the current link delay file.

REPLACE_OR_AVERAGE uses the average values when they are available, but if a value is not available in the MERGE_LINK_DELAY file, it simply uses the value in the LINK_DELAY file.

Table 3 shows the impacts of these processing methods on flows. The inputs are 15-minute flows for some link in two link delay files (current and previous). The results are the new volumes for that link. The following cases are illustrated: REPLACE_LINKS, WEIGHTED_AVERAGE with weight of 1 (same as SIMPLE_AVERAGE), and WEIGHTED_AVERAGE with weight of 2. In this example, time smoothing is turned off (SMOOTH_GROUP_SIZE = 0).

Table 3 PROCESSING_METHOD: Effect on LinkDelay file

Time	Inputs		Results			
	Link_Delay	Merge	Replace	Replace or Average	Weight = 1	Weight = 2
7:00	4	8	4	6	6	6.67
7:15	3.2	MISSING	3.2	1.6	1.6	1.07
7:30	2.8	9	2.8	5.9	5.9	6.93
7:45	MISSING	13	13	13	6.5	8.67
8:00	5.4	15	5.4	10.2	10.2	11.8

Note that the missing current volume for the 7:45 time slot causes link delay to assume zero volume when simple or weighted averaging is performed. This behavior may not be desirable when performing user equilibrium using link delays from a subarea. Since the subarea is by definition a subset of the links

in the network, volumes for all links outside the subarea will be averaged with zero, and speeds will be averaged with free-flow.

To properly combine link delays from the subarea and the full network:

1. Run LinkDelay with the following parameters

PROCESSING_METHOD	REPLACE_LINKS	the subarea delays as the
LINK_DELAY_FILE	subarea_linkdelay.txt	
MERGE_LINK_DELAY_FILE	fullnetwork_linkdelay.txt	
NEW_LINK_DELAY_FILE	updatednetwork_linkdelay.txt	

The result of this step is a single link delay file for the entire network, with the new microsimulator delays for the subarea and the previous iteration delays for the rest of the network. No averaging has been performed yet.

2. Run LinkDelay again with the following parameters

PROCESSING_METHOD	WEIGHTED_AVERAGE
LINK_DELAY_FILE	updatednetwork_linkdelay.txt
MERGE_LINK_DELAY_FILE	fullnetwork_linkdelay.txt
NEW_LINK_DELAY_FILE	nre_linkdelay.txt

The result of this step is a file of weighted-average link delays from the current iteration and the previous iteration, including the current microsimulator delays for the subarea.

PROJECT_DIRECTORY

Execution Service Keys

Text

The project directory key is optional. If the project directory key is specified, it is added to all file names referenced by the program. If it is not specified, all file names should fully specify the file path relative to the current directory. This key can be specified in a config.txt file (as a global value), in any or all of the control files, or both. If a control file specifies a different directory than the config.txt file, then the control file specification overrides the config.txt file specification.

RAIL_BIAS_CONSTANTS_*

The rail bias constants are optional, and have a default of 0. When provided, the total impedance value for each rail segment of a transit trip is adjusted by this value. The value should be negative impedance units. It is applied after the rail bias factor is applied. The resulting impedance will not be less than zero. Rail is defined as any transit mode other than bus (i.e., TROLLEY, STREETCAR, LIGHTRAIL, RAPIDRAIL, REGIONRAIL). If household types are defined, this key can include a list of factors corresponding to each household type. For example, -300, -400, -500 can be specified to define the rail bias constant for household types 1, 2 and 3+, respectively.

RAIL_BIAS_FACTORS_*

The rail bias factors are optional and when provided factors down the total impedance value for each segment of a transit trip that uses rail. The value can range from 0.1 to 1.0. The default value is 1.0. This value factors the impedance of rail legs. Rail is defined as any transit mode other than bus (i.e., TROLLEY, STREETCAR, LIGHTRAIL, RAPIDRAIL, REGIONRAIL). If household types are defined, this key can include a list of factors corresponding to each household type. For example, 1.0, 0.9, 0.8 can be specified to define the rail bias factor for household types 1, 2 and 3+, respectively.

RANDOM_NUMBER_SEED

Execution Service Keys

Integer

This key is optional. The random number seed key specifies the starting point for a list of random numbers and is used for random impedance calculations. Any non-negative integer (i.e., ≥ 0) can be specified. If the value is zero or if no key is provided, the program uses the computer clock to set the random number seed. The selected seed value is written to the printout report to enable the user to re-run the model using the same random number sequence.

RED_CLEAR_PHASE_TIME_*

IntControl Control Keys

List

The RED_CLEAR_PHASE_TIME_* key is optional. This key defines the length of the red clearance interval in seconds. The default value for this key is 1 second. The minimum and the maximum values that can be specified for this key are 1 and 5 seconds respectively. The '*' is a placeholder for the first area type value in the list. It is optional and defaults to 1 and represents area type or jurisdiction type for the purpose of grouping related parameters. A maximum of 100 area types are supported. The RED_CLEAR_PHASE_TIME_* key is part of the group that defines how a timing plan is developed for each phase. This group includes MINIMUM_PHASE_TIME_*, YELLOW_PHASE_TIME_*, RED_CLEAR_PHASE_TIME_*, and EXTENDED_GREEN_FACTOR_*. These parameters define how the minimum, maximum, and extended green times are computed for fixed-timed and demand-actuated phases.

RELOAD_CAPACITY_PROBLEMS

Flow-Time Service Keys

Boolean

REPORT_DIRECTORY

Execution Service Keys

Text

This is an optional key that specifies the report directory path if provided. If the report directory key is specified, it is added to the report file name specified by the Report File key or the default report file name derived from the control file name. By default, the report file is created in the same directory as

the control file. If the control file name includes path information, the path string is removed and replaced by the report directory string.

REPORT_FLAG

Execution Service Keys

Text

The report flag key is optional. Possible values are TRUE/FALSE, YES/NO, 1/0, T/F, Y/N, and the default is FALSE. If the report flag key is YES or TRUE, the report file or default printout file will open in “Append” mode rather than “Create” mode. This permits the user to consolidate the output of several programs into a single report file.

REROUTE_FROM_TIME_POINT

This router key is optional, and defaults to 0:00. When the router is used with existing plans, this key allows plans to be re-routed starting at a specified point in time.

RETURN_TRIP_FLAG_*

ConvertTrips Control Keys

Boolean

RIDERSHIP_FORMAT

System File Keys

FILE_FORMAT

See File Formats.

RIDERSHIP_SCALING_FACTOR

ArcPlan Control Keys

Decimal

The ridership scaling factor is used to convert the number of transit ridership on a link segment to the width of the bandwidth polygon in meters. The inside edge of the polygon follows the shape of the link centerline. The outside edge is offset from the centerline by this value. The default width factor is 0.0 meters per ridership which means that the link segment will be drawn as a polyline rather than a polygon. The accepted range is between 0.01 and 100,000 meters.

RIGHT_TURN_PENALTIES_*

The right turn penalty keys are optional and when provided specifies an additional impedance value for lane connections identified as right turns. The values can range from zero to 10000.0. The default value is 0.0 impedance units. This value is added to the impedance of the departure link of a drive path. If household types are defined, this key can include a list of values corresponding to each household type. For example, 0, 100, 200 can be specified to define the right turn penalty for household types 1, 2 and 3+, respectively.

ROUTE_AT_SPECIFIED_TIMES

PathSkim Control Keys (blank)

Either this key or the ROUTE_BY_TIME_INCREMENT key is used to determine the time intervals for which PathSkim should calculate skims. The default is ALL, but this may be any time interval, or set of multiple time intervals. Examples of valid values might be

ALL
0..97200 seconds
0.0..27.0 hours
0:00..27:00
6:00..6:30, 8:00..8:15, 8:15..8:30

ROUTE_BY_TIME_INCREMENT

PathSkim Control Keys (blank)

Either this key or the ROUTE_AT_SPECIFIED_TIMES key is used to determine the time intervals for which PathSkim should calculate skims. The default is 0 (e.g., look at ROUTE_AT_SPECIFIED_TIMES). Valid non-zero values range from 2 to 240 minutes. For example, if 15 minutes is used, it will calculate skims for 0:00..0:15, 0:15..0:30, 0:30..0:45, 0:45..1:00, 1:00..1:15, and so on.

ROUTE_FROM_SPECIFIED_LOCATIONS

PathSkim Control Keys (blank)

In PathSkim, limits routing to a specified list of origin locations. The default is ALL locations.

ROUTE_FROM_SPECIFIED_ZONES

PathSkim Control Keys (blank)

In PathSkim, limits routing to a specified list of origin zones. The default is ALL zones.

ROUTE_NODES_FORMAT

System File Keys FILE_FORMAT

See File Formats.

ROUTE_TO_SPECIFIED_LOCATIONS

PathSkim Control Keys (blank)

In PathSkim, this key limits routing to a specified list of destination locations. The default is ALL locations.

ROUTE_TO_SPECIFIED_ZONES

PathSkim Control Keys (blank)

In PathSkim, this key limits routing to a specified list of destination zones. The default is ALL zones.

ROUTE_WITH_SPECIFIED_MODE

PathSkim Control Keys (blank)

Routes with a specific travel mode. The default is DRIVE, and valid values include WALK, BIKE, DRIVE, RIDE, TRANSIT, PNR_OUT, PNR_IN, KNR_OUT, KNR_IN, TAXI, OTHER, HOV2, HOV3, HOV4.

ROUTE_WITH_USE_RESTRICTION

PathSkim Control Keys (blank)

This key indicates a particular use to be used for PathSkim routing. The default is “CAR”, and valid values include ANY, WALK, BIKE, CAR, TRUCK, BUS, RAIL, SOV, HOV2, HOV3, HOV4, LIGHTTRUCK, HEAVYTRUCK, TAXI, RESTRICTED, NONE.

In earlier versions of PathSkim (prior to 5.0.13) this parameter was named “ROUTE_WITH_SPECIFIED_USE_TYPE.”

ROUTE_WITH_TIME_CONSTRAINT

PathSkim Control Keys (blank)

This key indicates the time constraint to be used for routing in PathSkim. The default is START_TIME, and valid values include NONE, START, ARRIVE, FIXED, DURATION, PASSENGER.

ROUTER_REPORT_*

Router Control Keys (blank)

SAVE_ONLY_SKIMS

Path Building Service Keys Boolean

SELECT_BY_LINK_GROUP

LinkSum Control Keys

Boolean

SELECT_DESTINATION_ZONES

Select Service Keys

(blank)

The select zones parameter enables the user to specify the destination zones that are considered for processing. This parameter is optional. If it is not provided, all destination zones will be considered by the selection process. The zone parameter is interpreted as a comma-delimited list of zones or zone number ranges. The Plan is selected if the destination of the path is included in the zone list.

SELECT_DESTINATIONS

The select locations parameter enables the user to specify the destination locations that are considered for processing. This parameter is optional. If it is not provided, all destination locations will be considered by the selection process. The location parameter is interpreted as a comma-delimited list of activity location numbers or activity location number ranges. A sequential range of activity locations are specified by providing the first activity location number in the range and the last activity location number in the range separated by two periods (e.g., 47..78). The Plan is selected if the destination of the path is included in the activity location list.

SELECT_END_TIMES

Select Service Keys

(blank)

The select end times parameter enables the user to specify the end times of plans that are considered for processing. This parameter is optional. If it is not provided, all end times will be considered by the selection process. It is expressed as a range, or a set of ranges, e.g., 8:00..8:15.

SELECT_FACILITY_TYPES

Select Service Keys

(blank)

SELECT_HOUSEHOLDS

Select Service Keys

(blank)

SELECT_LINKS_#

The select links parameters enable the user to provide a list of link numbers the plan must include before it is processed. This parameter is optional. If it is not provided, the selection process will consider all plan legs. The '#' at the end of the keyword represents a selection set number (e.g.,

SELECT_LINKS_1). Any number of selection sets can be specified. If a path satisfies any one of the selection sets, the plan is included.

Each link parameter is interpreted as a comma-delimited list of link numbers or link number ranges. A sequential range of links are specified by providing the first node number in the range and the last link number in the range separated by two periods (e.g., 1000..1010). The path must include all of the links in the list in sequential order in order to be selected. The path may include other links between links included in the list, but it must travel through all of the links in the order specified

SELECT_MODES

This parameter permits the user to select the modes on the trip file to be routed. The key is a comma separated list of the mode codes used in the activity file (1..9). All modes will be routed if the key is "1,2,3,4,5,6,7,8,9." Only transit trips are routed if the key is "3"

SELECT_NODES_#

The select nodes parameters enable the user to provide a list of node numbers the plan must include before it is processed. This parameter is optional. If it is not provided, the selection process will consider all plan legs. The '#' at the end of the keyword represents a selection set number (e.g., SELECT_NODES_1). Any number of selection sets can be specified. If a path satisfies any one of the selection sets, the plan is included.

Each node parameter is interpreted as a comma-delimited list of node numbers or node number ranges. A sequential range of nodes are specified by providing the first node number in the range and the last node number in the range separated by two periods (e.g., 1000..1010). The path must include all of the nodes in the list in sequential order in order to be selected. The path may include other nodes between nodes included in the list, but it must travel through all of the nodes in the order specified.

SELECT_ORIGIN_ZONES

Select Service Keys (blank)

The select zones parameter enables the user to specify the origin zones that are considered for processing. This parameter is optional. If it is not provided, all origin zones will be considered by the selection process. The zone parameter is interpreted as a comma-delimited list of zones or zone number ranges. The Plan is selected if the origin of the path is included in the zone list.

SELECT_ORIGINS

The select locations parameter enables the user to specify the origin locations that are considered for processing. This parameter is optional. If it is not provided, all origin locations will be considered by the selection process. The location parameter is interpreted as a comma-delimited list of activity location

numbers or activity location number ranges. A sequential range of activity locations are specified by providing the first activity location number in the range and the last activity location number in the range separated by two periods (e.g., 47..78). The Plan is selected if the origin of the path is included in the activity location list.

SELECT_PARKING_LOTS

PlanSelect Control Keys	(blank)
ArcPlan Control Keys	(blank)

The select parking lots parameter enables the user to specify the parking lots that are considered for processing. This parameter is optional. If it is not provided, all parking lots will be considered by the selection process. The parking lots parameter is interpreted as a comma-delimited list of parking lot numbers or parking lot number ranges. A sequential range of parking lots are specified by providing the first parking lot number in the range and the last parking lot number in the range separated by two periods (e.g., 47..78). The Plan leg is selected if the drive path is included in the parking lot list.

SELECT_PROBLEM_TYPES

The select problem types key enables the user to select travelers with specified problems from the plan file. This parameter is optional. If it is not provided, the problem types will not be used by the selection process. The types parameter is interpreted as a comma-delimited list of problem type labels. The label options include: PATH_BUILDING, TIME_SCHEDULE, ZERO_NODE, VEHICLE_TYPE, PATH_CIRCUITY, TRAVEL_MODE, VEHICLE_ACCESS, WALK_DISTANCE, WAIT_TIME, WALK_ACCESS, PATH_SIZE, PARK-&-RIDE_LOT, BIKE_DISTANCE, DEPARTURE_TIME, ARRIVAL_TIME, LINK_ACCESS, LANE_CONNECTIVITY, PARKING_ACCESS, LANE_MERGING, LANE_CHANGING, TURNING_SPEED, POCKET_MERGE, VEHICLE_SPACING, TRAFFIC_CONTROL, and ACCESS_RESTRICTION.

SELECT_PURPOSES

Select Service Keys	(blank)
---------------------	---------

SELECT_START_TIMES

Select Service Keys	(blank)
---------------------	---------

The select start times parameter enables the user to specify the start times that are considered for processing. This parameter is optional. If it is not provided, all start times will be considered by the selection process. It is expressed as a range, or a set of ranges, e.g., 8:00..8:15.

SELECT_TIME

ArcNet Control Keys	(blank)
---------------------	---------

SELECT_TIME_RATIOS

The total travel time recorded in the plan file is compared with the cumulative travel time represented by the current link travel times to determine if a household is eligible for re-routing. In essence, the program “re-skims” the travel path for each traveler using the latest link travel times. If the absolute difference is greater than the user-specified criteria (e.g., SELECT_TIME_RATIOS 2), the household is eligible for re-routing.

SELECT_TRAVELER_TYPES

Select Service Keys (blank)

SELECT_VC_RATIOS

A household is eligible for re-routing if one or more of the household members travel through a link with a 15-minute volume-to-capacity ratio greater than the specified criterion (e.g., SELECT_VC_RATIOS 1.2).

SELECT_VEHICLE_TYPES

Select Service Keys (blank)

SELECTION_FORMAT

System File Keys FILE_FORMAT

See File Formats.

SELECTION_METHOD

PlanCompare Control Keys (blank)

SELECTION_PERCENTAGE

The selection percentage is optional. If a value is not provided, all of the plans selected by the selection criteria will be considered for output to the household ID file. If a value is provided, it specifies the percentage of the selected households that will be output to the household ID file. A random probability function is used to determine which of the selected households will be written to the output file.

SHAPE_FORMAT

System File Keys FILE_FORMAT

See File Formats.

SHARED_LANE_FACTOR_*

IntControl Control Keys

List

The SHARED_LANE_FACTOR_* control key is optional and defaults to a value of 0.5 if not specified. Possible values for this key range from 0.2 to 1.0.

The '*' is a placeholder for the first area type value in the list. It is optional and defaults to 1 and represents area type or jurisdiction type for the purpose of grouping related parameters. A maximum of 100 area types are supported.

SIGN_FORMAT

System File Keys

FILE_FORMAT

See File Formats.

SIGN_SETBACK

Draw Service Keys

Decimal

The sign setback is used to display signs on the right side of the street. The default value is 25.0 meters. In this case the sign is draw twenty five meters from the end of the link to the right of the centerline of the link shape at the offset specified by the SIGN_SIDE_OFFSET key.

SIGN_SIDE_OFFSET

Draw Service Keys

Decimal

The sign side offset is used to display signs on the right side of the street. The default value is 10.0 meters. In this case, the sign is drawn ten meters to the right of the centerline of the link shape at the offset specified by the SIGN_SETBACK key.

SIGNAL_CYCLE_LENGTH_*

IntControl Control Keys

List

The SIGNAL_CYCLE_LENGTH_* key is optional and defines the cycle length of a signal. The default value for this key is 60 seconds. The minimum and the maximum values that can be defined for this key are 30 seconds and 240 seconds, respectively.

The '*' is a placeholder for the first area type value in the list. It is optional and defaults to 1 and represents area type or jurisdiction type for the purpose of grouping related parameters. A maximum of 100 area types are supported.

SIGNAL_DETECTOR_LENGTH_*

IntControl Control Keys

Decimal

The SIGNAL_DETECTOR_LENGTH_* key is optional. This key specifies length of the detectors in meters. The default value for the detector length is 20 meters. The minimum and the maximum values that can be specified for this key are 5 and 50 meters respectively.

The '*' is a placeholder for the first area type value in the list. It is optional and defaults to 1 and represents area type or jurisdiction type for the purpose of grouping related parameters. A maximum of 100 area types are supported.

SIGNAL_FORMAT

System File Keys

FILE_FORMAT

See File Formats.

SIGNAL_ID_AS_NODE_ID

TransimsNet Control Keys

Boolean

SIGNAL_SPLIT_METHOD_*

IntControl Control Keys

List

The signal split method key is optional. The accepted values for this key are CAPACITY and LANES. The default split method used by the IntControl program for generating the timing plans of signalized intersections is the CAPACITY method. This group includes MINIMUM_PHASE_TIME_*, YELLOW_PHASE_TIME_*, RED_CLEAR_PHASE_TIME_*, and EXTENDED_GREEN_FACTOR_*. These parameters define how the minimum, maximum, and extended green times are computed for fixed-timed and demand-actuated phases.

The SIGNAL_SPLIT_METHOD_* key is part of the group that determines how the total cycle length is allocated to different phases. This group includes POCKET_LANE_FACTOR_*, GENERAL_GREEN_FACTOR_*, SIGNAL_SPLIT_METHOD_*, MINIMUM_LANE_CAPACITY_*, and MAXIMUM_LANE_CAPACITY_*. These parameters define how the number of lanes or lane capacity assigned to one phase is balanced against similar values from other phases to allocate a share of the total cycle time to each phase.

The '*' is a placeholder for the first area type value in the list. It is optional and defaults to 1 and represents area type or jurisdiction type for the purpose of grouping related parameters. A maximum of 100 area types are supported.

SIGNAL_TIME_BREAKS_*

IntControl Control Keys

List

The SIGNAL_TIME_BREAKS_* control key is optional and has a default value of NONE. The format and some examples of the possible values for this key are as follows: NONE, 6:00, 10:00, 16:00 (etc.)

The '*' is a placeholder for the first area type value in the list. It is optional and defaults to 1 and represents area type or jurisdiction type for the purpose of grouping related parameters. A maximum of 100 area types are supported.

SIGNAL_TYPE_CODE_*

IntControl Control Keys

List

The SIGNAL_TYPE_CODE_* control key is optional and defaults to ACTUATED. The possible values for this key are ACTUATED and TIMED. Fixed-time signals and/or signal groups are specified using the TIMED key value.

The '*' is a placeholder for the first area type value in the list. It is optional and defaults to 1 and represents area type or jurisdiction type for the purpose of grouping related parameters. A maximum of 100 area types are supported.

SIMULATION_END_TIME

Flow-Time Service Keys

(blank)

SIMULATION_START_TIME

Flow-Time Service Keys

(blank)

SKIM_FORMAT

System File Keys

FILE_FORMAT

See File Formats.

SKIM_OD_UNITS

System File Keys

(blank)

For PathSkim, this is the type of origin or destination. The default is ZONE, and valid values include DISTRICT, ZONE, LOCATION

SKIM_TIME_INCREMENT

System File Keys

(blank)

Either this key or the SKIM_TIME_PERIODS key is used to determine the time intervals for which PathSkim should output skims. The default is 0 (i.e., look at SKIM_TIME_PERIODS). Valid non-zero values range from 5 to 240 minutes. For example, if 15 minutes is used, it will output skims for 0:00..0:15, 0:15..0:30, 0:30..0:45, 0:45..1:00, 1:00..1:15, and so on.

SKIM_TIME_PERIODS

System File Keys

(blank)

Either this key or the SKIM_TIME_INCREMENT key is used to determine the time intervals for which PathSkim should output skims. The default is ALL, but this may be any time interval, or set of multiple time intervals. Examples of valid values might be

ALL

0..97200 seconds

0.0..27.0 hours

0:00..27:00

6:00..6:30, 8:00..8:15, 8:15..8:30

SKIM_TOTAL_TIME_FLAG

System File Keys

Boolean

Default value is FALSE. Valid values include TRUE/FALSE, YES/NO, 1/0, T/F, Y/N

SKIM_TRAVEL_TIME_FORMAT

System File Keys

Specifies the units of travel time in PathSkim. Default value is SECONDS. Valid values include SECONDS, MINUTES, HOURS, HOUR_CLOCK, DAY_TIME, TIME_CODE

SKIM_TRIP_LENGTH_FORMAT

System File Keys

Specifies the units of length in PathSkim. Default value is METERS. Valid values include FEET, MILES, METERS, KILOMETERS

SLOW_DOWN_PERCENTAGE_*

Flow-Time Service Keys

(blank)

SLOW_DOWN_PROBABILITY_*

Flow-Time Service Keys

(blank)

SMOOTH_GROUP_SIZE

Simulation Service Keys

(blank)

Used in LinkDelay to smooth flows and times among time periods

Smooth_Group_Size is the number of time periods included in a moving average smoothing process. 3 is normally used for 15 minute time periods (i.e., +1 and -1 period). Possible values are 0, 3, 5, 7, 9, with a default of 3. If a value of 0 is used, time-based smoothing is disabled. Table 4 illustrates the impact of various parameters (0, 3, and 5) for SMOOTH_GROUP_SIZE on a single link with 15-minute volumes and travel-times. Note that a single LINK_DELAY input file is used in this case. Time-based smoothing can also be used in conjunction with the use of two link delay input files.

Table 4 SMOOTH_GROUP_SIZE: Effect on link time and flow

Time	Inputs	Results			Input	Results		
	Flow	0	3	5	Time	0	3	5
6:45				2				14.9
7:00				14				14.9
7:15			8	51			14.9	14.8
7:30			79	165			14.7	14.4
7:45			324	364			13.9	13.9
8:00	971	971	714	680	11.9	11.9	12.9	13
8:15	1141	1141	1000	882	12.0	12.0	12.2	12.4
8:30	1131	1131	1056	931	12.0	12.0	12	12.1
8:45	1125	1125	886	810	12.1	12.1	11.9	12
9:00	486	486	546	545	11.5	11.5	11.8	12.1
9:15	43	43	222	285	10.8	10.8	12.4	12.6
9:30			55	119			13.6	13.6
9:45			7	38			14.6	14.3
10:00				9				14.7
10:15				2				14.8

SNAPSHOT_FORMAT

ArcSnapshot Control Keys

FILE_FORMAT

See File Formats.

SPEED_DATA_FIELD_NAME

LinkData Control Keys (blank)

SPEED_FACTOR_BY_FACILITY

NetPrep Control Keys (blank)

SPEED_ROUNDING_INCREMENT

NetPrep Control Keys (blank)

SPLIT_LARGE_LOOPS

NetPrep Control Keys Integer

This control key is optional and is disabled by default. The purpose of this key is to resolve a-node = b-node type issues in a network by splitting these loops into two links and adding a node so that vehicles can be loaded onto the links. The value for this key is the distance in meters that represents the minimum loop size to be split. If a value greater than zero is specified for this key, and the loop length is less than this value, the loop is deleted rather than split. In order for this key to work properly, a shape file key must be specified in the control file and the shape file must be located in the corresponding directory location specified by the user or NetPrep will return an error message.

STATION_WAITING_PENALTIES_*

The station waiting penalty is similar to a transfer penalty, but applies to all boardings at a transit stop coded with the "STATION" type. This is typically used to distinguish boardings at a rail station from boardings at a bus stop. The default value is 0.0. The values can range from zero to 100,000 impedance units. If household types are defined, the key can include a list of values corresponding to each household type.

STOP_WAITING_PENALTIES_*

The stop waiting penalty is similar to a transfer penalty, but applies to all boardings at a transit stop coded with the "STOP" type. This is typically used to distinguish boardings at bus stops from boardings at rail stations. The default value is 0.0 impedance units. The values can range from zero to 100,000 impedance units. If household types are defined, this key can include a list of values corresponding to each household type.

STREET_PARKING_WARRANT_*

TransimsNet Control Keys List

The street parking warrant file control key is a new addition to TRANSIMS 5. Like the other warrant files, multiple groups can be defined. This key adds the functionality of parking lane use restrictions by time of day and supports multi-data field records (type, at, time). “Type” refers to the facility type range, “at” refers to the area type range, and “time” refers to the time of day range. Figure 9 is an example of a warrant control key with representative data:

STREET_PARKING_WARRANT_1	MINOR..LOCAL, 2..3, 10:00..15:00
--------------------------	----------------------------------

Figure 9 STREET_PARKING_WARRANT_* in TRANSIMS Version 5

SUBZONE_DATA_FIELD_*

LocationData Control Keys (blank)

SUBZONE_DATA_FORMAT_*

LocationData Control Keys FILE_FORMAT

See File Formats.

SUBZONE_ZONE_FIELD_*

LocationData Control Keys (blank)

SUMMARY_TIME_INCREMENT

IntControl Control Keys; Others Time

Used for summarizing link delay and other outputs. The default time increment is 15 minutes (900 seconds), with a range of 0, or 2 to 240 minutes. This value can be specified in minutes. The time increment specifies the size of the summary time period. This key was formerly known as OUTPUT_SUMMARY_INCREMENT in Version 4.

SUMMARY_TIME_RANGES

IntControl Control Keys Text

Others

Used for summarizing link delay and other outputs. The default time range is ALL (i.e., 0:00..24:00). A range is a comma separated list of start and end time pairs. The time values in each pair are separated by two periods (e.g., 6:30..9:00, 0..97200 seconds, 0.0..27.0 hours, 0:00..27:00). This was formerly known as OUTPUT_SUMMARY_TIME_RANGE in Version 4.

TIME_DISTRIBUTION_FIELD_*

ConvertTrips Control Keys

This key replaces TRIP_TIME_FIELD_* from Version 4. The trip time field is optional and is only processed when a trip time script is not provided. By default, the program selects the third field in the trip time file as the diurnal distribution values for a given trip group. The user may, however, include multiple diurnal distribution fields in a given trip time file. This key enables the user to specify the field name that contains the diurnal distribution values used for this trip group.

TIME_DISTRIBUTION_FORMAT_*

ConvertTrips Control Keys

FILE_FORMAT

See File Formats.

TIME_DISTRIBUTION_TYPE_*

ConvertTrips Control Keys

This key replaces TIME_CONTROL_POINT_# from Version 4. This is an optional parameter with a default value of TRIP_START.

The diurnal distribution produced by the trip time file is used to define the probability that a given trip will take place at a given time. The time assigned to a trip is based on the offset of a random number within the cumulative probability distribution. By default, this time value (in seconds) is assumed to be the time at the origin of the trip. This key enables the user to specify how the time value is applied. The options include “TRIP_START”, “TRIP_END”, and “MID_TRIP.”

If “TRIP_END” is selected, the program interprets the diurnal distribution as an arrival time distribution. The start time for the trip is then calculated by subtracting the estimated travel time from the selected arrival time. If “MID-TRIP” is selected, the program interprets the diurnal distribution as a time-in-motion distribution. The start time and the end time for the trip are calculated by subtracting and adding one half of the estimated travel time from the selected mid-trip time. The time control point is saved in the CONSTRAINTS field in the output trip file. The constraint codes are:

- 0 TRIP_START
- 1 TRIP_END
- 2 MID_TRIP

TIME_OF_DAY_FORMAT

Execution Service Keys

Text

The time of day format key is optional. The time of day format defines how the time data are written to the output files and reports. The default format will display values in DAY_TIME format (e.g., 0:00:00 to 1@3:00:00 refers to midnight to 3:00 AM the next day). The format options include SECONDS, MINUTES, HOURS, HOUR_CLOCK (e.g., 0:00 to 27:00), DAY_TIME, and TIME_CODE. Time codes combine a day code with an hour clock (e.g. TUE08:00). Day code options include SUN, MON, TUE, WED, THU, FRI, SAT, WKE, WKD, and ALL.

Examples of each format are as follows:

```
DAY_TIME:          1@09:39:24.3
SECONDS:           34764.3
MINUTES:           579.4
HOURS:             9.66
HOUR_CLOCK:        09:39
TIME_CODE:         TUE08:00
```

Internally, the DTIME data object is used, with a resolution of tenths of a second. In binary files, this is stored as a 2 or 4 byte integer, in text files, as a character string with approximately 12 characters.

TIME_PERIOD_RANGE_*

ConvertTrips Control Keys (blank)

TIME_PROCESSING_METHOD

ArcSnapshot Control Keys (blank)

TIME_SCHEDULE_CONSTRAINT_*

ConvertTrips Control Keys (blank)

TIME_STEPS_PER_SECOND

Flow-Time Service Keys (blank)

TIMING_PLAN_FORMAT

System File Keys FILE_FORMAT

TITLE

Execution Service Keys Text

This key is optional. Any text string can be used on this line. This text is printed on the top of each output page.

TO_NODE_FIELD_NAME

LinkData Control Keys (blank)

TOUR_HOUSEHOLD_FIELD

The tour household field key is optional. It is the column header (field name) for the household number in the Tour table. A typical value might be HHOLD.

TOUR_PERSON_FIELD

The tour person field key is optional. It is the column header (field name) for the person number in the Tour table. A typical value might be PERSON.

TOUR_NUMBER_FIELD

The tour number field key is optional. It is the column header (field name) for the tour number in the Tour table. A typical value might be TOUR. A person in a household might have several tours over the course of a day. For example, she might travel to work, return home, and then travel again for evening activities.

TOUR_PURPOSE_FIELD

The tour purpose field key is optional. It is the column header (field name) for the tour purpose in the Tour table. A typical value might be PURPOSE.

TOUR_MODE_FIELD

The tour mode field key is optional. It is the column header (field name) for the tour mode in the Tour table. A typical value might be MODE. See the definition of TRAVEL_MODE_CODE_* for a list of mode codes.

TOUR_ORIGIN_FIELD

The tour origin field key is optional. It is the column header (field name) for the zone where the tour originates in the Tour table. A typical value might be ORIG. ConvertTrips takes this zone, and assigns an activity location within the zone as both the starting and return point of the tour.

TOUR_DESTINATION_FIELD

The tour destination field key is optional. It is the column header (field name) for the zone of the primary destination in the Tour table. A typical value might be DEST.

TOUR_STOP_OUT_FIELD

The tour stop out field key is optional. It is the column header (field name) for the zone of the outbound stop in the Tour between origin and destination. A typical value might be STOP_OUT. Within the column, 0 is used if there is no outbound stop.

TOUR_STOP_IN_FIELD

The tour stop out field key is optional. It is the column header (field name) for the zone of the inbound stop in the Tour between destination and origin. A typical value might be STOP_IN. Within the column, 0 is used if there is no inbound stop.

TOUR_START_FIELD

The tour start field key is optional. It is the column header (field name) for the starting hour of the tour. A typical value might be START_HR.

TOUR_RETURN_FIELD

The tour return field key is optional. It is the column header (field name) for the ending hour of the tour. A typical value might be END_HR.

TOUR_GROUP_FIELD

The tour group field key is optional.

TRAFFIC_CONTROL_WARRANT_*

TransimsNet Control Keys

List

The traffic control warrant key has been updated significantly in TRANSIMS Version 5 and can be used in place of the TRANSIMS Version 4 sign and signal warrant keys to define traffic controls.

In Version 4, the stop sign and signal warrants are specified for area types and by node facility types (Figure 10).

STOP_WARRANT_FOR_AREA_TYPE_1	LOCAL
SIGNAL_WARRANT_FOR_AREA_TYPE_1	COLLECTOR, LOCAL, TIMED

Figure 10 Stop and Signal Warrants in TRANSIMS Version 4

In Version 5, the traffic control warrant key supports time of day grouping using the ‘*’ group parameter, and also adds multi-data field records (defined below):

- Multi-data field records (main, cross, at, type, setback, group)
 - Main – This specifies the main street facility type range
 - Cross – This represents the cross street facility type range
 - At – This specifies the area type range
 - Type – This refers to the intersection control type (two-way/all-way stop, signal, etc.)
 - Setback – This field refers to the intersection setback distance
 - Group – This field specifies the signal group. Signal groups are used in IntControl as input parameters for generating the timing and phasing plans.

Figure 11 is a basic example of the updated method of traffic control warrant specification in Version 5:

TRAFFIC_CONTROL_WARRANT_1	LOCAL, LOCAL, 1, ALL_STOP, 20 feet
TRAFFIC_CONTROL_WARRANT_2	MAJOR, MINOR, 2, SIGNAL, 25 feet, 1

Figure 11 TRAFFIC_CONTROL_WARRANT_* in TRANSIMS Version 5

Below is an example of an actual dataset of traffic control warrants:

TRAFFIC_CONTROL_WARRANT_1	LOCAL, LOCAL, 1, ALL_STOP, 7.5
TRAFFIC_CONTROL_WARRANT_2	COLLECTOR, COLLECTOR, 2..5, ALL_STOP, 7.5
TRAFFIC_CONTROL_WARRANT_3	PRINCIPAL..COLLECTOR, PRINCIPAL..LOCAL, 1, SIGNAL, 7.5, 1
TRAFFIC_CONTROL_WARRANT_4	PRINCIPAL..COLLECTOR, PRINCIPAL..COLLECTOR, 2, SIGNAL, 15,
1	
TRAFFIC_CONTROL_WARRANT_5	PRINCIPAL..MINOR, PRINCIPAL..COLLECTOR, 3, SIGNAL, 15, 2
TRAFFIC_CONTROL_WARRANT_6	PRINCIPAL..COLLECTOR, PRINCIPAL..COLLECTOR, 4, SIGNAL, 15,
2	
TRAFFIC_CONTROL_WARRANT_7	PRINCIPAL..MAJOR, PRINCIPAL..MINOR, 5, SIGNAL, 15, 2
TRAFFIC_CONTROL_WARRANT_8	PRINCIPAL..MAJOR, PRINCIPAL..MAJOR, 6, SIGNAL, 15, 2
TRAFFIC_CONTROL_WARRANT_9	PRINCIPAL, PRINCIPAL..MAJOR, 7, SIGNAL, 15, 2
TRAFFIC_CONTROL_WARRANT_10	PRINCIPAL, PRINCIPAL, 8, SIGNAL, 15, 2

TRANSFER_PENALTIES_*

The transfer penalty key is optional and when provided specifies an additional impedance value for transferring from one transit route to another. The value can range from zero to 10000.0. The default value is 0.0. This value is added to the impedance of the access link to the second, third, etc., transit boarding stop.

TRANSFER_WAIT_VALUES_*

The transfer wait value key is optional and when provided specifies the impedance values for time the traveler spends waiting to transfer to another transit vehicle. The values can range from zero to 1000.0. The default value is 20.0 impedance units / second. This value is multiplied by the difference between the time of day when the traveler arrives at a transit stop and the time when the next transit vehicle is scheduled to leave that stop. If household types are defined, this key can include a list of values corresponding to each household type. For example, 20, 25, 30 can be specified to define the transfer wait time value for household types 1, 2 and 3+, respectively.

TRANSIMSNET_REPORT_*

TransimsNet Control Keys (blank)

TRANSIT_DIRECTION_OFFSET

Draw Service Keys

Decimal

The transit direction offset determines how the transit routes used by a transit plans are drawn on two way links. The default value is 0.0, which means that the route is drawn on the centerline of the link. If the value is greater than 0.0, it represents the number of meters to the right of a two way link the transit route is drawn. If the link is a one-way link, the route is drawn on the centerline of the roadway in the direction of travel.

TRANSIT_DRIVER_FORMAT

System File Keys

FILE_FORMAT

See File Formats.

TRANSIT_FARE_FORMAT

System File Keys

FILE_FORMAT

See File Formats.

TRANSIT_OVERLAP_FLAG

Draw Service Keys

Boolean

TRANSIT_ROUTE_FORMAT

System File Keys

FILE_FORMAT

See File Formats.

TRANSIT_SCHEDULE_FORMAT

System File Keys

FILE_FORMAT

See File Formats.

TRANSIT_STOP_FORMAT

System File Keys

FILE_FORMAT

See File Formats.

TRANSIT_STOP_SIDE_OFFSET

Draw Service Keys

Decimal

The transit stop side offset is used to display the boarding and alighting transit stops for transit plans. The default value is 5.0 meters. In this case the transit stop is draw five meters to the right of the centerline of the link shape at the appropriate offset.

TRANSIT_TIME_PERIODS

ArcNet Control Keys

(blank)

TRAVEL_MODE_CODE_*

ConvertTrips Control Keys

(blank)

Table 5 lists the travel mode in words (e.g., DRIVE), for the trip.

Table 5 Travel Mode Codes

Code	Code (in words)	Travel Mode
0	WAIT	Wait (transit stops or activities)
1	WALK	Walk
2	BIKE	Bicycle
3	DRIVE	Drive
4	RIDE	Ride (auto passenger)
5	TRANSIT	Transit
6	PNR_OUT	Park-&-ride outbound
7	PNR_IN	Park-&-ride inbound
8	KNR_OUT	Kiss-&-ride outbound
9	KNR_IN	Kiss-&-ride inbound
10	TAXI	Taxi
11	OTHER	Other (magic move, etc.)
12	HOV2	2 person carpool (HOV2)
13	HOV3	3 person carpool (HOV3)
14	HOV4	4+ person carpool (HOV4)

TRAVELER_SCALING_FACTOR

NewFormat Control Keys

(blank)

Defaults to 100, and has a valid range from 2 to 100. Indicates the scaling factor that was used in the old plan.

TRAVELER_TYPE_CODE_*

ConvertTrips Control Keys

(blank)

TRAVELER_TYPE_FACTORS_*

Flow-Time Service Keys (blank)

TRIP_FACTOR_FORMAT_*

ConvertTrips Control Keys FILE_FORMAT

See File Formats.

TRIP_FORMAT

System File Keys FILE_FORMAT

See File Formats.

TRIP_PRIORITY_CODE_*

ConvertTrips Control Keys (blank)

TRIP_PURPOSE_CODE_*

ConvertTrips Control Keys

The trip purpose code is optional. Any value between 0 and 100 can be specified. The default value is 1. In some applications this value is used to define the relative priority and scheduling flexibility of a given activity. The original TRANSIMS documentation includes the following suggested trip purposes or activity types (Table 6).

Table 6 Suggested Trip Purpose Codes

Code	Trip Purpose
0	Home
1	Work
2	Shop
3	Visit
4	Social/Recreation
5	Other
6	Serve Passenger
7	School
8	College

TRIP_SCALING_FACTOR_*

ConvertTrips Control Keys

The optional trip scaling factor key enables the user to factor the input trips by a scaling factor. This could be used to select of subset of the full trip table or grow the trips to a future year estimate. The

factor is a floating point number, but the result of applying the factor will be an integer number of trips for each origin-destination pair. A bucket rounding process is applied to minimize the impact of integer rounding as much as possible. The default value is 1.0.

TRIP_SORT_TYPE

Data Service Keys (blank)

TRIP_TABLE_FORMAT_*

ConvertTrips Control Keys FILE_FORMAT

See File Formats.

TRIPPREP_REPORT_*

TripPrep Control Keys (blank)

TURN_MOVEMENT_FACTOR_*

IntControl Control Keys Decimal

The TURN_MOVEMENT_FACTOR_* control key has a default value of 0.9. Possible values for this key range from 0.2 to 1.0.

The '*' is a placeholder for the first area type value in the list. It is optional and defaults to 1 and represents area type or jurisdiction type for the purpose of grouping related parameters. A maximum of 100 area types are supported.

TURN_NODE_RANGE

LinkSum Control Keys (blank)

TURN_PENALTY_FORMAT

System File Keys FILE_FORMAT

See File Formats.

TURN_POCKET_FACTOR

Flow-Time Service Keys (blank)

U_TURN_PENALTIES_*

The U turn penalty keys are optional and when provided specifies an additional impedance value for lane connections identified as U turns. The values can range from zero to 10000.0. The default value is 0.0 impedance units. This value is added to the impedance of the departure link of a drive path. If household types are defined, this key can include a list of values corresponding to each household type. For example, 0, 100, 200 can be specified to define the U turn penalty for household types 1, 2 and 3+, respectively.

UNITS_OF_MEASURE

Execution Service Keys

Text

This key is optional and defaults to METRIC. Possible values are ENGLISH (feet) or METRIC (meters). The default distance and speed units included in data files or control keys are assumed to be in METRIC units. This key can be used to specify the units of measure as ENGLISH or METRIC. If a particular key value includes data units, the program will automatically convert the value to the specified units of measure. The standard data files created by the TRANSIMS Version 5 software identify the units associated with each data field in the definition file (*.def).

UNSIMULATED_SUBAREAS

Flow-Time Service Keys

(blank)

UPDATE_FLOW_RATES

Flow-Time Service Keys

(blank)

This Boolean key has a default value of FALSE. It is used in the Router, PlanSum and PathSkim to indicate if new flows in a new link delay file should be computed. //---- TRUE/FALSE, YES/NO, 1/0, T/F, Y/N

UPDATE_LINK_RANGE

TransimsNet Control Keys

List

The update link range is optional and if specified defines a series of link numbers. The range is a comma separated list of link ranges. A link range is specified using two periods (e.g., 100..200). In update mode, the program reads existing network files and deletes the existing records for the link and adds new records at the end of the file.

UPDATE_NODE_RANGE

TransimsNet Control Keys

List

The update node range is optional and if specified defines a series of node numbers where the lane connectivity and traffic control warrants are recalculated. The range is a comma separated list of node ranges. A node range is specified using two periods (e.g., 100..200). In update mode, the program reads existing network files and deletes the existing records for the node and adds new records at the end of the file.

UPDATE_PLAN_RECORDS

Router

The update plan records key is optional. The default value is “false.” If true, the program reskins the travel time and impedance components of existing plan records while building paths for other records. In other words, the generalized cost is updated for all the output plan records based on the current specifications. The plan update can be executed without a household list or an input trip and/or activity file. The print file includes a message about the number of updates that were made.

UPDATE_TRAVEL_TIMES

Flow Time Service Keys

This Boolean key has a default value of FALSE. It is used by the Router, PathSkim and Plan Sum to indicate whether travel times should be updated.

UPDATE_TRAVELER_TYPE

TripPrep Control Keys	Boolean
-----------------------	---------

UPDATE_TRIP_PARTITIONS

TripPrep Control Keys	Boolean
-----------------------	---------

UPDATE_TURNING_MOVEMENTS

This optional flag defaults to FALSE. Possible values are (TRUE/FALSE, YES/NO, 1/0, T/F, Y/N). When true, turning movements are added to the output link delay file when the input link delay file does not include turning movements.

VEHICLE_FORMAT

System File Keys	FILE_FORMAT
------------------	-------------

See File Formats.

VEHICLE_PASSENGERS_*

ConvertTrips Control Keys (blank)

VEHICLE_TIME_VALUES_*

The vehicle time value key is optional and when provided specifies the impedance values for time the traveler spends in a vehicle. The values can range from zero to 1000.0. The default value is 10.0 impedance units / second. This value is multiplied by the travel time on each link at the time of day when the traveler's path enters the link or the difference in the schedule time between the boarding and alighting transit stops. If household types are defined, this key can include a list of values corresponding to each household type. For example, 10, 15, 20 can be specified to define the in vehicle time value for household types 1, 2 and 3+, respectively.

The '*' is a placeholder for the first area type value in the list. It is optional and defaults to 1 and represents area type or jurisdiction type for the purpose of grouping related parameters. A maximum of 100 area types are supported.

Example:

```
VEHICLE_TIME_VALUES_1    10
VEHICLE_TIME_VALUES_2    15
VEHICLE_TIME_VALUES_3    20
...
```

VEHICLE_TYPE_CODE_*

ConvertTrips Control Keys (blank)

VEHICLE_TYPE_FORMAT

System File Keys FILE_FORMAT

See File Formats.

VERSION4_PLAN_FORMAT

NewFormat Control Keys FILE_FORMAT

The format of the input Version 4 plan file. It defaults to VERSION3, and the other possible value is BINARY.

VERSION4_TIME_FORMAT

NewFormat Control Keys FILE_FORMAT

VERSION4_TIME_FORMAT key can be used to override the default time conversion in Trip and Activity files from seconds to some other units. It defaults to SECONDS. Possible values include SECONDS, MINUTES, HOURS, HOUR_CLOCK, DAY_TIME, TIME_CODE.

VOLUME_DATA_FIELD_NAME

LinkData Control Keys (blank)

WALK_ACCESS_TIME_RANGE

LocationData Control Keys (blank)

Defaults to 0..24:00. The time ranges can be used to create multiple transit weights for different times of day. They are expressed as 0:00..6:00, 18:00..23:00, etc.

WALK_PATH_DETAILS

This is an optional key that indicates whether details of the walking path are written and provided. The default value is FALSE. Possible values are TRUE/FALSE, YES/NO, 1/0, T/F, Y/N.

WALK_SPEED

The walk speed is optional and when provided specifies the walking speed in meters per second. The value can range from 0.5 to 10.0 meters per second. The default value is 1.0. Link lengths are divided by this value to convert distance into walk time.

WALK_TIME_VALUES_*

The walk time value key is optional and when provided specifies the impedance value for time the traveler spends walking. The value can range from zero to 1000.0. The default value is 20.0 impedance units / second. This value is multiplied by the time spent walking on network and process links. If household types are defined, this key can include a list of values corresponding to each household type. For example, 15, 20, 25 can be specified to define the bicycle time value for household types 1, 2 and 3+, respectively.

The '*' is a placeholder for the first area type value in the list. It is optional and defaults to 1 and represents area type or jurisdiction type for the purpose of grouping related parameters. A maximum of 100 area types are supported.

Example:

WALK_TIME_VALUES_1 15

WALK_TIME_VALUES_2 20

WALK_TIME_VALUES_3 25

...

YELLOW_PHASE_TIME_*

IntControl Control Keys Integer

The YELLOW_PHASE_TIME_* key is optional. This key defines the length of the yellow interval in seconds. The default value for this key is 3 seconds. The minimum and the maximum values that can be specified for this key are 1 and 5 seconds respectively.

The YELLOW_PHASE_TIME_* key is part of the group that defines how a timing plan is developed for each phase. This group includes MINIMUM_PHASE_TIME_*, YELLOW_PHASE_TIME_*, RED_CLEAR_PHASE_TIME_*, and EXTENDED_GREEN_FACTOR_*. These parameters define how the minimum, maximum, and extended green times are computed for fixed-timed and demand-actuated phases.

The '*' is a placeholder for the first area type value in the list. It is optional and defaults to 1 and represents area type or jurisdiction type for the purpose of grouping related parameters. A maximum of 100 area types are supported.

ZONE_FIELD_NAME

LocationData Control Keys (blank)

TransimsNet Control Keys (blank)

The name of the field that contains the zone number, e.g., TAZ

ZONE_FORMAT

System File Keys FILE_FORMAT

See File Formats.

ZONE_UPDATE_RANGE

LocationData Control Keys (blank)

The range of zone numbers are defined as a comma separated list (e.g., 1000..1200, 3000..3100). Default is ALL.