PlanCompare

Version 5.0.13

Revision History

May 2013 - Created by Volpe Center

The **PlanCompare** program is used to:

1. Compares two plan files and selects plans that have significantly different travel times.

2. Generate convergence statistics and distribution charts by time of day.

3. Includes walk and wait time in the transit travel time comparisons.

4. Includes options to only compare drive legs.

5. Compares plan files generated on different networks.

6. Compares plan files for specified time periods.

Syntax is PlanCompare [-flag] [control\_file]

The control\_file is the file name of an ASCII file that contains the control strings expected by the program. The control\_file is optional. If a file name is not provided, the program will prompt the user to enter a file name. The flag parameters are also optional. Any combination of the following flag parameters can be included on the command line:

Optional Flags:

-Q[uiet] = execute without screen messages

-H[elp] = show program syntax and control keys

-C[ontrol] = create/update a default control file

-K[eyCheck] = list unrecognized control file keys

-P[ause] = pause before exiting

-N[oPause] = never pause before exiting

-D[etail] = execute with detailed status messages

-X[ML] = write an XML file with control keys

The program automatically creates a printout file based on the control file name. If the filename includes an extension (e.g., “.ctl”), the extension is replaced with “.prn”. The printout file will be created in the current working directory and will overwrite an existing file with the same name.

# Version 5 Features

NEW\_TRIP\_MATCH\_FILE and NEW\_TRIP\_MATCH\_FORMAT keys were added to write a selection file based on a trip ID match between the input plan file and the compare plan file.

# Control Key List

The list of control file keys appears in the tables below:

* Req / Opt indicates whether the key is **req**uired or **opt**ional
* The types include **Text**, Input **File**name, **New** file, **Bool**ean, **Path** (to a file), **Time**, **Int**eger, **Dec**imal, and **List** of items
* The Default is the default value, used if the key does not appear in the control file.
* I/O/P indicates Input, Output or Parameter.

For a more detailed description of the Parameter control keys, refer to the Parameter Reference. For a more detailed description of the Input or Output control keys, refer to the File Reference. These two documents also provide the possible values or range of values allowed for each control key listed below. For instance, files can usually be output to numerous formats beyond TAB\_DELIMITED for additional post-processing / file manipulation actions.

## Configuration Keys

| **Control File Keys:** | **Req/Opt** | **Type** | **Default** | **I/O/P** |
| --- | --- | --- | --- | --- |
| TITLE | Opt | Text |  | P |
| REPORT\_DIRECTORY | Opt | Path |  | O |
| REPORT\_FILE | Opt | New |  | P |
| REPORT\_FLAG | Opt | Bool | FALSE | P |
| PAGE\_LENGTH | Opt | Int. | 65 | P |
| PROJECT\_DIRECTORY | Opt | Path |  | P |
| DEFAULT\_FILE\_FORMAT | Opt | Text | TAB\_DELIMITED | P |
| TIME\_OF\_DAY\_FORMAT | Opt | Text | DAY\_TIME | P |
| MODEL\_START\_TIME | Opt | Time | 0:00 | P |
| MODEL\_END\_TIME | Opt | Time | 24:00:00 | P |
| MODEL\_TIME\_INCREMENT | Opt | Time | 15 minutes | P |
| UNITS\_OF\_MEASURE | Opt | Text | METRIC | P |
| RANDOM\_NUMBER\_SEED | Opt | Int. | 0 | P |
| MAX\_WARNING\_MESSAGES | Opt | Int. | 100000 | P |
| MAX\_WARNING\_EXIT\_FLAG | Opt | Bool | TRUE | P |
| MAX\_PROBLEM\_COUNT | Opt | Int. | 0 | P |
| NUMBER\_OF\_THREADS | Opt | Int. | 1 | P |

## System File Keys

| **Control File Keys:** | **Req/Opt** | **Type** | **Default** | **I/O/P** |
| --- | --- | --- | --- | --- |
| PLAN\_FILE | Req | File |  | I |
| PLAN\_FORMAT | Opt | Text | TAB\_DELIMITED | P |
| SELECTION\_FILE | Opt | File |  | O |
| SELECTION\_FORMAT | Opt | Text | TAB\_DELIMITED | P |
| NEW\_SELECTION\_FILE | Opt | New |  | I |
| NEW\_SELECTION\_FORMAT | Opt | Text | TAB\_DELIMITED | P |
| NEW\_PLAN\_FILE | Opt | New |  | O |
| NEW\_PLAN\_FORMAT | Opt | Text | TAB\_DELIMITED | P |

## Data Service Keys

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Control File Keys:** | **Req/Opt** | **Type** | **Default** | **I/O/P** |
| DAILY\_WRAP\_FLAG | Opt | Bool | FALSE | P |
| SUMMARY\_TIME\_RANGES | Opt | Text | ALL | P |
| SUMMARY\_TIME\_INCREMENT | Opt | Time | 15 minutes | P |
| PERIOD\_CONTROL\_POINT | Opt | Text | MID-TRIP | P |

## Select Service Keys

| **Control File Keys:** | **Req/Opt** | **Type** | **Default** | **I/O/P** |
| --- | --- | --- | --- | --- |
| SELECT\_HOUSEHOLDS | Opt | List | ALL | P |
| SELECT\_MODES | Opt | List | ALL | P |
| SELECT\_PURPOSES | Opt | List | ALL | P |
| SELECT\_START\_TIMES | Opt | List | ALL | P |
| SELECT\_END\_TIMES | Opt | List | ALL | P |
| SELECT\_ORIGINS | Opt | List | ALL | P |
| SELECT\_DESTINATIONS | Opt | List | ALL | P |
| SELECT\_TRAVELER\_TYPES | Opt | List | ALL | P |
| SELECT\_LINKS\_\* | Opt | List | ALL | P |
| SELECT\_NODES\_\* | Opt | List | ALL | P |
| SELECT\_SUBAREA\_POLYGON | Opt | File |  | P |
| PERCENT\_TIME\_DIFFERENCE | Opt | Dec. | 0.0 percent | P |
| MINIMUM\_TIME\_DIFFERENCE | Opt | Time | 1 minutes | P |
| MAXIMUM\_TIME\_DIFFERENCE | Opt | Time | 60 minutes | P |
| PERCENT\_COST\_DIFFERENCE | Opt | Dec. | 0.0 percent | P |
| MINIMUM\_COST\_DIFFERENCE | Opt | Dec. | 10 impedance | P |
| MAXIMUM\_COST\_DIFFERENCE | Opt | Dec. | 1000 impedance | P |
| SELECTION\_PERCENTAGE | Opt | Dec. | 100.0 percent | P |
| MAXIMUM\_PERCENT\_SELECTED | Opt | Dec. | 100.0 percent | P |
| DELETION\_FILE | Opt | File |  | I |
| DELETION\_FORMAT | Opt | Text | TAB\_DELIMITED | I |
| DELETE\_HOUSEHOLDS | Opt | List | NONE | P |
| DELETE\_MODES | Opt | List | NONE | P |
| DELETE\_TRAVELER\_TYPES | Opt | List | NONE | P |

## Control Keys

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Control File Keys:** | **Req/Opt** | **Type** | **Default** | **I/O/P** |
| COMPARE\_PLAN\_FILE | Req | File |  | I |
| COMPARE\_PLAN\_FORMAT | Opt | Text | TAB\_DELIMITED | P |
| COMPARE\_GENERALIZED\_COSTS | Opt | Bool | FALSE | P |
| SELECTION\_METHOD | Opt | Text | RANDOM | P |
| MERGE\_PLAN\_FILES | Opt | Bool | FALSE | P |
| NEW\_TIME\_DISTRIBUTION\_FILE | Opt | New |  | P |
| NEW\_COST\_DISTRIBUTION\_FILE | Opt | New |  | P |
| NEW\_TRIP\_TIME\_GAP\_FILE | Opt | New |  | P |
| NEW\_TRIP\_COST\_GAP\_FILE | Opt | New |  | P |
| NEW\_TRIP\_MATCH\_FILE | Opt | New |  | P |
| NEW\_TRIP\_MATCH\_FORMAT | Opt | Text | TAB\_DELIMITED | P |
| PLANCOMPARE\_REPORT\_# | Opt | Text |  | P |

Report Options:

TOTAL\_TIME\_DISTRIBUTION

PERIOD\_TIME\_DISTRIBUTIONS

TOTAL\_TIME\_SUMMARY

PERIOD\_TIME\_SUMMARY

TOTAL\_COST\_DISTRIBUTION

PERIOD\_COST\_DISTRIBUTIONS

TOTAL\_COST\_SUMMARY

PERIOD\_COST\_SUMMARY

TRIP\_TIME\_GAP\_REPORT

TRIP\_COST\_GAP\_REPORT

#### Notes

Each '\_FILE' key has a corresponding '\_FORMAT' key. The following file formats can be used for input and ouput files:

TEXT, BINARY, FIXED\_COLUMN, COMMA\_DELIMITED, SPACE\_DELIMITED, TAB\_DELIMITED, CSV\_DELIMITED, DBASE, SQLITE3, VERSION3

# Control Key Changes in PlanCompare Version 5

A number of keys have changed from V4 to V5. Refer to the File Reference and Parameter Reference documents for additional details. Some specific examples include the following control key and file name changes (V4 🡪 V5):

* INPUT\_PLAN\_FILE -> PLAN\_FILE
* HOUSEHOLD\_LIST -> SELECTION\_FILE
* OUTPUT\_PLAN\_FILE-> NEW\_PLAN\_FILE
* SELECT\_TIME\_PERIODS-> SELECT\_START\_TIMES and SELECT\_END\_TIMES
* NEW\_DISTRIBUTION\_FILE->NEW\_TIME\_DISTRIBUTION\_FILE

The following keys, used in version 4, are not used in version 5:

* NODE\_LIST\_PATHS
* TRAVELER\_SCALING\_FACTOR
* SELECT\_TRAVELERS
* SELECT\_BY\_PERCENT\_DIFFERENCE
* SELECT\_BY\_RELATIVE\_GAP
* IGNORE\_LOCATION\_DIFFERENCES
* INDEX\_BY\_COMPARE\_LOCATION
* ONLY\_COMPARE\_DRIVE\_LEGS
* NEW\_DIFFERENCE\_FILE
* NEW\_TRIP\_TIME\_FILE
* NEW\_START\_DIFFERENCE\_FILE
* NEW\_END\_DIFFERENCE\_FILE

New keys in version 5 include

* REPORT\_DIRECTORY
* PAGE\_LENGTH
* MODEL\_START\_TIME
* MODEL\_END\_TIME
* MODEL\_TIME\_INCREMENT
* UNITS\_OF\_MEASURE
* MAX\_PROBLEM\_COUNT
* NUMBER\_OF\_THREADS
* SELECTION\_FILE
* NEW\_SELECTION\_FILE
* DAILY\_WRAP\_FLAG
* SELECT\_HOUSEHOLDS
* SELECT\_MODES
* SELECT\_PURPOSES
* SELECT\_START\_TIMES
* SELECT\_END\_TIMES
* SELECT\_ORIGINS
* SELECT\_DESTINATIONS
* SELECT\_TRAVELER\_TYPES
* SELECT\_LINKS\_\*
* SELECT\_NODES\_\*
* SELECT\_SUBAREA\_POLYGON
* DELETION\_FILE
* DELETION\_FORMAT
* DELETE\_HOUSEHOLDS
* DELETE\_MODES
* DELETE\_TRAVELER\_TYPES
* SELECTION\_METHOD
* MERGE\_PLAN\_FILES
* NEW\_COST\_DISTRIBUTION\_FILE
* NEW\_TRIP\_TIME\_GAP\_FILE
* NEW\_TRIP\_COST\_GAP\_FILE
* NEW\_TRIP\_MATCH\_FILE
* NEW\_TRIP\_MATCH\_FORMAT

# Example

## Demonstrating the reports and output files

The following .prn file is used

TITLE PlanCompare Test

PLAN\_FILE demand/3AON.plans.\*

COMPARE\_PLAN\_FILE demand/1.plans.\*

NEW\_PLAN\_FILE demand/3DIF.plans.\*

SUMMARY\_TIME\_RANGES 7:00..7:15, 8:00..8:15

NEW\_TIME\_DISTRIBUTION\_FILE results/timedist.txt

NEW\_COST\_DISTRIBUTION\_FILE results/costdist.txt

NEW\_TRIP\_TIME\_GAP\_FILE results/ttimegap.txt

NEW\_TRIP\_COST\_GAP\_FILE results/tcostgap.txt

NEW\_TRIP\_MATCH\_FILE results/tmatch.txt

PLANCOMPARE\_REPORT\_1 TOTAL\_TIME\_DISTRIBUTION

PLANCOMPARE\_REPORT\_2 PERIOD\_TIME\_DISTRIBUTIONS

PLANCOMPARE\_REPORT\_3 TOTAL\_TIME\_SUMMARY

PLANCOMPARE\_REPORT\_4 PERIOD\_TIME\_SUMMARY

PLANCOMPARE\_REPORT\_5 TOTAL\_COST\_DISTRIBUTION

PLANCOMPARE\_REPORT\_6 PERIOD\_COST\_DISTRIBUTIONS

PLANCOMPARE\_REPORT\_7 TOTAL\_COST\_SUMMARY

PLANCOMPARE\_REPORT\_8 PERIOD\_COST\_SUMMARY

PLANCOMPARE\_REPORT\_9 TRIP\_TIME\_GAP\_REPORT

PLANCOMPARE\_REPORT\_10 TRIP\_COST\_GAP\_REPORT

It produces the following .prn file (Headers were added to the reports to improve readability of this document):

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

| |

| PlanCompare - Version 5.0.13 |

| Copyright 2012 by TRANSIMS Open-Source |

| Tue May 28 16:08:21 2013 |

| |

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Control File = PlanCompare.ctl

Report File = PlanCompare.prn (Create)

PlanCompare Test

Project Directory = ../

Default File Format = TAB\_DELIMITED

Time of Day Format = HOUR\_CLOCK

Model Start Time = 6:00

Model End Time = 10:00

Units of Measure = ENGLISH

Random Number Seed = 1369771701

Number of Threads = 2

Warning: PlanCompare is Not Thread Enabled

Input System Demand Files:

Plan File = ../demand/3AON.plans.\* (2 partitions)

Output System Demand Files:

New Plan File = ../demand/3DIF.plans.\*

Data Service Controls:

Summary Time Ranges = 7:00..7:15, 8:00..8:15

Number of Time Periods = 2

Select Service Controls:

PlanCompare Control Keys:

Compare Plan File = ../demand/1.plans.\*

New Time Distribution File = ../results/timedist.txt

New Cost Distribution File = ../results/costdist.txt

New Time Trip Gap File = ../results/ttimegap.txt

New Cost Trip Gap File = ../results/tcostgap.txt

New Trip Match File = ../results/tmatch.txt

PlanCompare Reports: 1. TOTAL\_TIME\_DISTRIBUTION

2. PERIOD\_TIME\_DISTRIBUTIONS

3. TOTAL\_TIME\_SUMMARY

4. PERIOD\_TIME\_SUMMARY

5. TOTAL\_COST\_DISTRIBUTION

6. PERIOD\_COST\_DISTRIBUTIONS

7. TOTAL\_COST\_SUMMARY

8. PERIOD\_COST\_SUMMARY

9. TRIP\_TIME\_GAP\_REPORT

10. TRIP\_COST\_GAP\_REPORT

New Trip Match File Records = 28251

Number of Plan File Partitions = 2

Number of Plan File Records = 308344

Number of Plan File Households = 28251

Number of Plan File Persons = 28251

Number of Plan File Tours = 28251

Number of Plan File Trips = 28251

Number of Compare Plan File Partitions = 2

Number of Compare Plan File Records = 309775

Number of Compare Plan File Households = 28251

Number of Compare Plan File Persons = 28251

Number of Compare Plan File Tours = 28251

Number of Compare Plan File Trips = 28251

Total Number of Trips = 28251

Number of Trips Selected = 28251 (100.0%)

Number of Trips Written = 28251 (100.0%)

Number of New Plan File Partitions = 2

Number of New Plan File Records = 308344

Number of New Plan File Households = 28251

Number of New Plan File Persons = 28251

Number of New Plan File Tours = 28251

Number of New Plan File Trips = 28251

Number of New Time Distribution File Records = 8

Number of New Cost Distribution File Records = 28

Number of New Time Trip Gap File Records = 3

Number of New Cost Trip Gap File Records = 3

### Time Difference Distribution for All Time Periods

Difference ----------------- Percent of Total Trips -------------------

(minutes) Trips Percent 6 12 17 23 29 35 41 46 52 58 64 70

-2 15 0.2

-1 17 0.2

0 >= 290 3.8--\*\*\*

1 == 5348 69.6 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

2 <= 1546 20.1 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

3 173 2.3 \*\*

4 256 3.3 \*\*\*

5 36 0.5

Time Difference Distribution for 7:00..7:15

Difference ----------------- Percent of Total Trips -------------------

(minutes) Trips Percent 8 15 23 30 38 46 53 61 69 76 84 91

0 >= 209 7.6--\*\*\*\*\*

1 == 2510 91.4 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

2 26 0.9 \*

3 1 0.0

Time Difference Distribution for 8:00..8:15

Difference ----------------- Percent of Total Trips -------------------

(minutes) Trips Percent 5 10 14 19 24 29 34 38 43 48 53 58

-2 15 0.3

-1 17 0.3

0 >= 81 1.6--\*\*

1 == 2838 57.5 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

2 1520 30.8 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

3 <= 172 3.5 \*\*\*\*

4 256 5.2 \*\*\*\*\*

5 36 0.7 \*

Number of Trips Compared = 7681

Average Input Travel Time = 4.87 minutes

Average Compare Travel Time = 4.20 minutes

Average Travel Time Difference = 0.67 minutes (16.02%)

Average Absolute Difference = 0.68 minutes (16.23%)

Minimum Time Difference = -1.38 minutes

Maximum Time Difference = 4.43 minutes

85th Percentile Range = 0.00 to 0.93 minutes

Total Absolute Difference = 87.2231 hours

Total User Benefit = 86.1103 hours

### Time Period Summary (Minutes)

Number --Travel Time-- ------- Time Difference ------- -- 85% Range --

Time Period Trips Current Base Average Percent Absolute Percent Low High

7:00..7:15 2746 4.24 4.11 0.12 3.02 0.12 3.02 0.00 0.93

8:00..8:15 4935 5.23 4.25 0.98 23.02 0.99 23.34 0.09 2.55

Total 7681 4.87 4.20 0.67 16.02 0.68 16.23 0.05 1.93

### Cost Difference Distribution for All Time Periods

Difference ----------------- Percent of Total Trips -------------------

(dollars) Trips Percent 3 6 9 12 15 18 21 24 27 30 32 35

0 >= 132 1.7--\*\*\*

1 2720 35.4 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

2 == 1049 13.7 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

3 680 8.9 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

4 441 5.7 \*\*\*\*\*\*\*\*\*\*

5 372 4.8 \*\*\*\*\*\*\*\*

6 409 5.3 \*\*\*\*\*\*\*\*\*

7 328 4.3 \*\*\*\*\*\*\*

8 325 4.2 \*\*\*\*\*\*\*

9 329 4.3 \*\*\*\*\*\*\*

10 152 2.0 \*\*\*

11 <= 247 3.2 \*\*\*\*\*

12 61 0.8 \*

13 78 1.0 \*\*

14 19 0.2

15 7 0.1

16 4 0.1

17 29 0.4 \*

18 3 0.0

19 8 0.1

20 2 0.0

21 106 1.4 \*\*

22 55 0.7 \*

23 78 1.0 \*\*

24 31 0.4 \*

25 12 0.2

26 2 0.0

27 2 0.0

Cost Difference Distribution for 7:00..7:15

Difference ----------------- Percent of Total Trips -------------------

(dollars) Trips Percent 7 13 20 26 33 39 46 52 59 65 72 79

0 >= 105 3.8--\*\*\*

1 == 2157 78.6 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

2 <= 430 15.7 \*\*\*\*\*\*\*\*\*\*\*\*

3 30 1.1 \*

4 2 0.1

5 2 0.1

6 11 0.4

7 6 0.2

8 3 0.1

Cost Difference Distribution for 8:00..8:15

Difference ----------------- Percent of Total Trips -------------------

(dollars) Trips Percent 1 2 3 4 5 7 8 9 10 11 12 13

0 27 0.5--\*\*

1 >= 563 11.4 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

2 619 12.5 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

3 650 13.2 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

4 439 8.9 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

5 == 370 7.5 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

6 398 8.1 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

7 322 6.5 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

8 322 6.5 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

9 329 6.7 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

10 152 3.1 \*\*\*\*\*\*\*\*\*\*\*\*\*\*

11 247 5.0 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

12 61 1.2 \*\*\*\*\*\*

13 <= 78 1.6 \*\*\*\*\*\*\*

14 19 0.4 \*\*

15 7 0.1 \*

16 4 0.1

17 29 0.6 \*\*\*

18 3 0.1

19 8 0.2 \*

20 2 0.0

21 106 2.1 \*\*\*\*\*\*\*\*\*\*

22 55 1.1 \*\*\*\*\*

23 78 1.6 \*\*\*\*\*\*\*

24 31 0.6 \*\*\*

25 12 0.2 \*

26 2 0.0

27 2 0.0

Number of Trips Compared = 7681

Average Input Travel Cost = 206.69 dollars

Average Compare Travel Cost = 202.75 dollars

Average Travel Cost Difference = 3.94 dollars (1.94%)

Average Absolute Difference = 3.94 dollars (1.94%)

Minimum Cost Difference = 0.00 dollars

Maximum Cost Difference = 26.68 dollars

85th Percentile Range = 0.05 to 1.65 dollars

Total Absolute Difference = 30237.8 dollars

Total User Benefit = 30237.8 dollars

### Time Period Summary (Dollars)

Number --Travel Cost-- ------- Cost Difference ------- -- 85% Range --

Time Period Trips Current Base Average Percent Absolute Percent Low High

7:00..7:15 2746 198.96 198.34 0.62 0.31 0.62 0.31 0.05 1.65

8:00..8:15 4935 210.99 205.21 5.78 2.82 5.78 2.82 0.61 12.85

Total 7681 206.69 202.75 3.94 1.94 3.94 1.94 0.16 10.68

### Trip Gap Report (Minutes)

Number ---------- Travel Time (minutes) ----------

Time Period Trips Input Compare Difference Trip Gap

7:00..7:15 2746 11631 11289 341 0.030228

8:00..8:15 4935 25788 20963 4892 0.233374

Trip Gap Report (Minutes)

Number ---------- Travel Time (minutes) ----------

Time Period Trips Input Compare Difference Trip Gap

Total 7681 37419 32252 5233 0.162265

### Trip Gap Report (Dollars)

Number ---------- Travel Cost (dollars) ----------

Time Period Trips Input Compare Difference Trip Gap

7:00..7:15 2746 546338 544649 1689 0.003101

8:00..8:15 4935 1041239 1012690 28549 0.028191

Total 7681 1587577 1557339 30238 0.019416

Tue May 28 16:08:30 2013 -- Process Complete with 1 Warning (0:00:09)

# Output Files

### NEW\_TIME\_DISTRIBUTION\_FILE

The NEW\_TIME\_DISTRIBUTION\_FILE replaces the NEW\_DISTRIBUTION\_FILE from version 4. The difference in travel times (MINUTES) is the Plan travel time minus the Compare\_Plan travel time. This file presents the data for a histogram of this difference, by one-minute increments. -2 minutes means between -1 and -2 minutes. Information is presented for both the whole day and for specified time intervals (see SUMMARY\_TIME\_RANGES). An example file appears below:

|  |  |  |  |
| --- | --- | --- | --- |
| MINUTES | TOTAL | P700\_715 | P800\_815 |
| -2 | 15 | 0 | 15 |
| -1 | 17 | 0 | 17 |
| 0 | 290 | 209 | 81 |
| 1 | 5348 | 2510 | 2838 |
| 2 | 1546 | 26 | 1520 |
| 3 | 173 | 1 | 172 |
| 4 | 256 | 0 | 256 |
| 5 | 36 | 0 | 36 |

### **NEW\_COST\_DISTRIBUTION\_FILE**

This file, which has the same name in version 4, presents the differences in generalized cost (Input\_Plan cost minus the Compare\_Plan cost). This file presents the data for a histogram of this difference, by one-dollar increments. -5 dollars means between 4 and 5 dollars. Information is presented for both the whole day and for specified time intervals (see SUMMARY\_TIME\_PERIODS). An example file appears below:

|  |  |  |  |
| --- | --- | --- | --- |
| DOLLARS | TOTAL | P700\_715 | P800\_815 |
| 0 | 132 | 105 | 27 |
| 1 | 2720 | 2157 | 563 |
| 2 | 1049 | 430 | 619 |
| 3 | 680 | 30 | 650 |
| 4 | 441 | 2 | 439 |
| 5 | 372 | 2 | 370 |
| 6 | 409 | 11 | 398 |
| 7 | 328 | 6 | 322 |
| 8 | 325 | 3 | 322 |
| 9 | 329 | 0 | 329 |
| 10 | 152 | 0 | 152 |
| 11 | 247 | 0 | 247 |
| 12 | 61 | 0 | 61 |
| 13 | 78 | 0 | 78 |
| 14 | 19 | 0 | 19 |
| 15 | 7 | 0 | 7 |
| 16 | 4 | 0 | 4 |
| 17 | 29 | 0 | 29 |
| 18 | 3 | 0 | 3 |
| 19 | 8 | 0 | 8 |
| 20 | 2 | 0 | 2 |
| 21 | 106 | 0 | 106 |
| 22 | 55 | 0 | 55 |
| 23 | 78 | 0 | 78 |
| 24 | 31 | 0 | 31 |
| 25 | 12 | 0 | 12 |
| 26 | 2 | 0 | 2 |
| 27 | 2 | 0 | 2 |

### **NEW\_TRIP\_TIME\_GAP\_FILE**

The NEW\_TRIP\_TIME\_GAP\_FILE, which is similar to the version 4 NEW\_TRIP\_TIME\_FILE, compares trip times between the two plans.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| PERIOD | COUNT | INPUT\_TIME | COMPARE\_TIME | DIFFERENCE | TRIP\_GAP |
| 7:00..7:15 | 2746 | 11630.63 | 11289.38 | 341.25 | 0.030228 |
| 8:00..8:15 | 4935 | 25788.00 | 20962.63 | 4892.13 | 0.233374 |
| Total | 7681 | 37418.63 | 32252.02 | 5233.38 | 0.162265 |

### **NEW\_TRIP\_COST\_GAP\_FILE**

The NEW\_TRIP\_COST\_GAP\_FILE compares generalized costs.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| PERIOD | COUNT | INPUT\_COST | COMPARE\_COST | DIFFERENCE | TRIP\_GAP |
| 7:00..7:15 | 2746 | 546338.07 | 544649.13 | 1688.94 | 0.003101 |
| 8:00..8:15 | 4935 | 1041239.19 | 1012690.30 | 28548.89 | 0.028191 |
| Total | 7681 | 1587577.26 | 1557339.43 | 30237.83 | 0.019416 |

### **NEW\_TRIP\_MATCH\_FILE**

The NEW\_TRIP\_MATCH\_FILE is a selection file that is based on a trip ID match between the input plan file and the compare plan file. Fields in this selection file include HHOLD, PERSON, TOUR, TRIP, and PARTITION.