Trafficware

Engineered by Naztec

TripGen 10

User Guide

TripGen, Version 10 User Guide

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Chapter 1 – Introduction

Introduction

TripGen 10 is a simple, easy-to-use tool for estimating the number of trips expected to travel to/from a development consisting of one or more land uses.

The analyst first configures the phasing of the proposed development. Land uses are then added by the analyst based on the desired independent variable and whether an average rate or equation should be used to calculate the number of trips. The analyst then enters the number of driveways that access the intersection to determine the distribution among the various driveways. Pass-by trips and internal capture trips for mixed-use developments are considered. Several reports are available for users to quickly review calculations. The resulting volumes can then be imported into Synchro's TIA module for analysis and optimization within Synchro and SimTraffic.

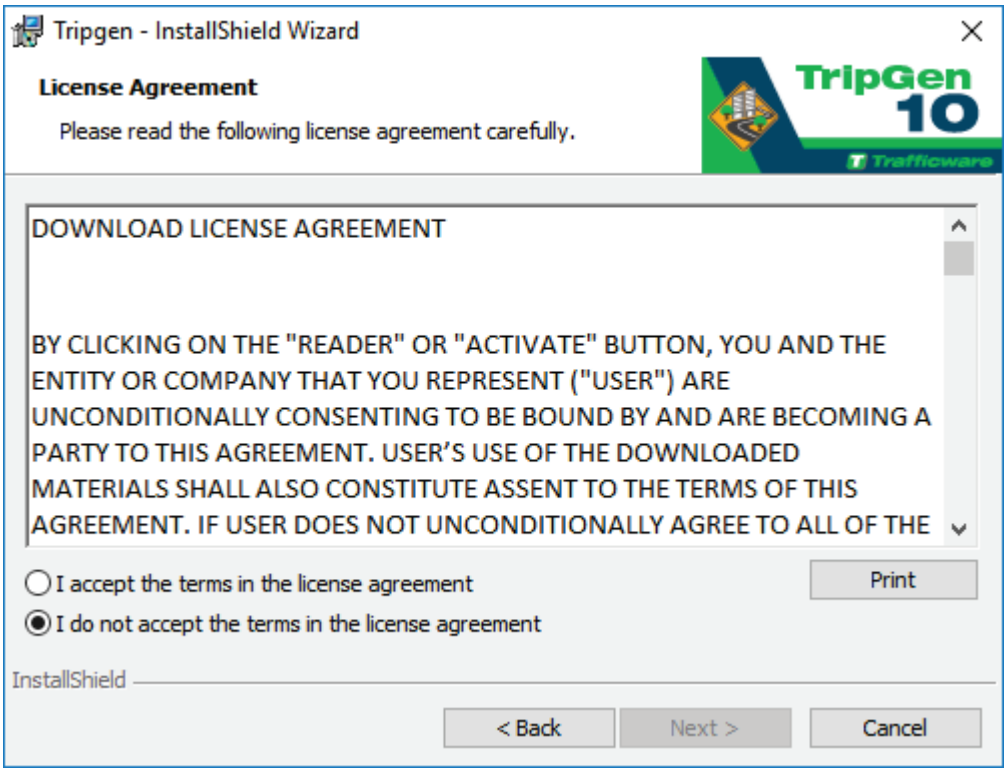
TripGen 10 Installation

Starting with TripGen 10.3, the TripGen installer is separate from the Synchro Studio installation file.

If you have downloaded TripGen installer, run the *setup.exe* file from your download directory.

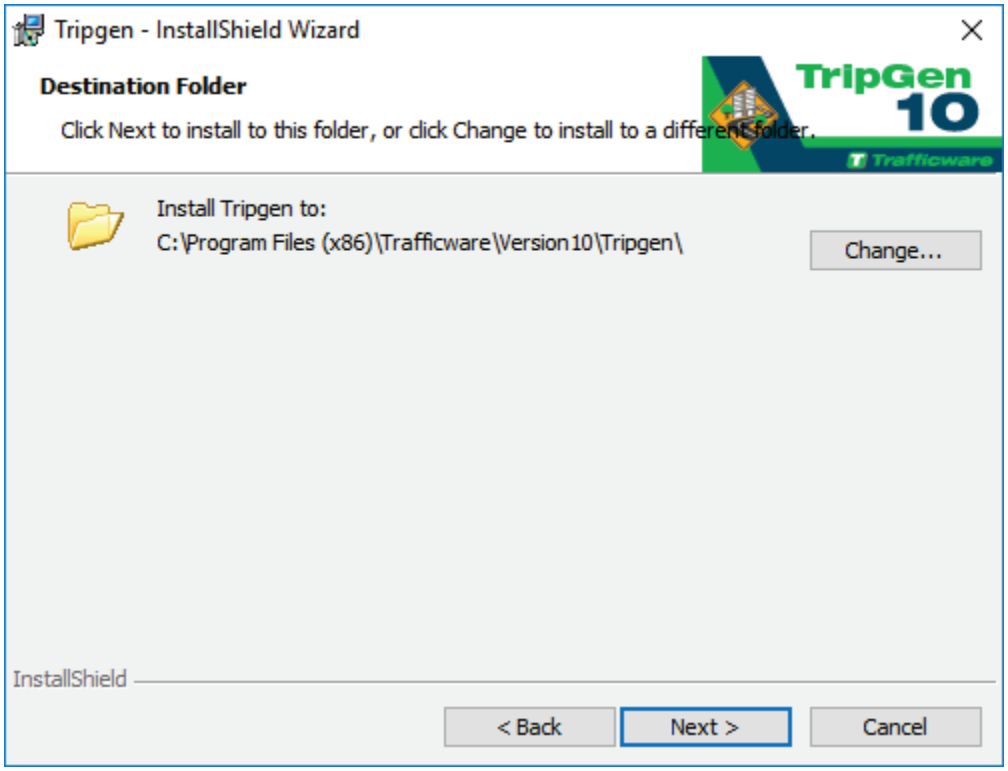
The Installation Wizard will guide you through the installation process.

1. Read the license agreement carefully.



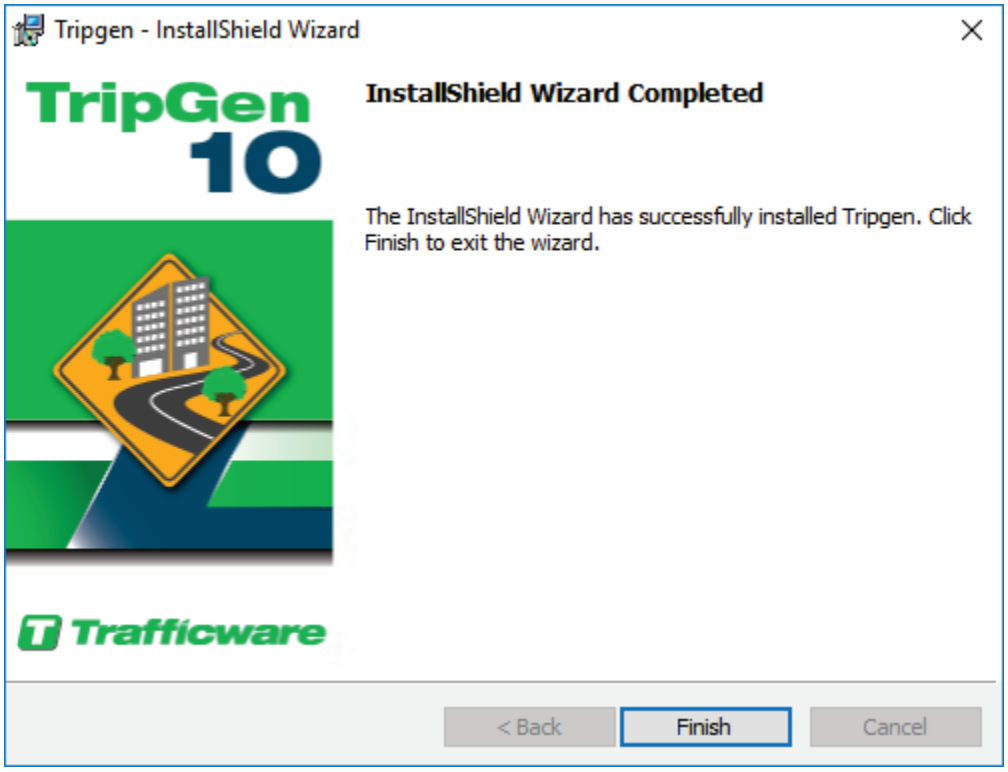
Select the [I Agree] button to accept the terms of the license agreement and proceed with the installation. You must accept the license agreement to install TripGen 10.

2. The Installation Wizard saves all files to the default directory *C:\Program Files(x86)\Trafficware\Version 10\Tripgen*.



3. TripGen is now ready to install. Select the [Install] button to install TripGen in the selected directory.

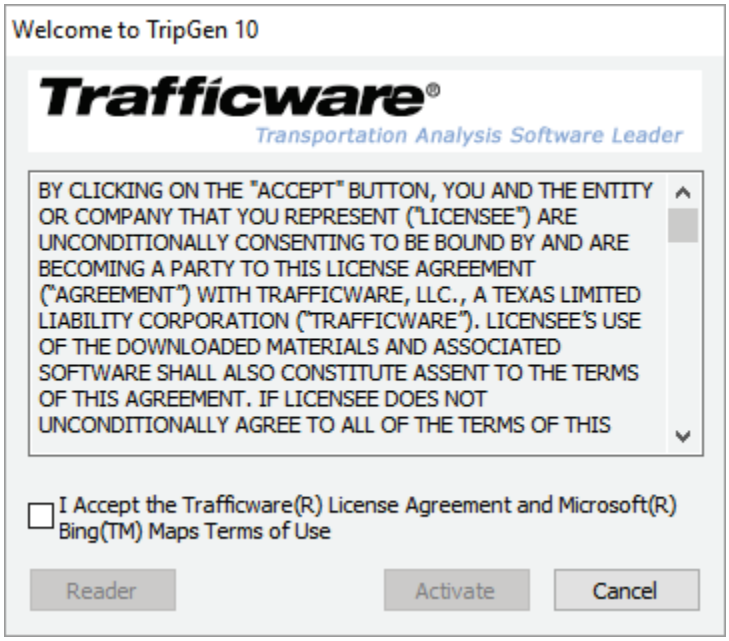
4. When the installation is complete, select the [Finish] button to exit the Installation Wizard.



To Activate TripGen

When you activate TripGen, activate under the user's profile on the PC. Log on to the laptop/PC as the User Profile of the individual that will be using TripGen.

1. Select the Start Menu, then choose **All Apps (Programs)→Trafficware→TripGen 10** or double-click on the shortcut from your desktop.
2. Read the license agreement carefully.

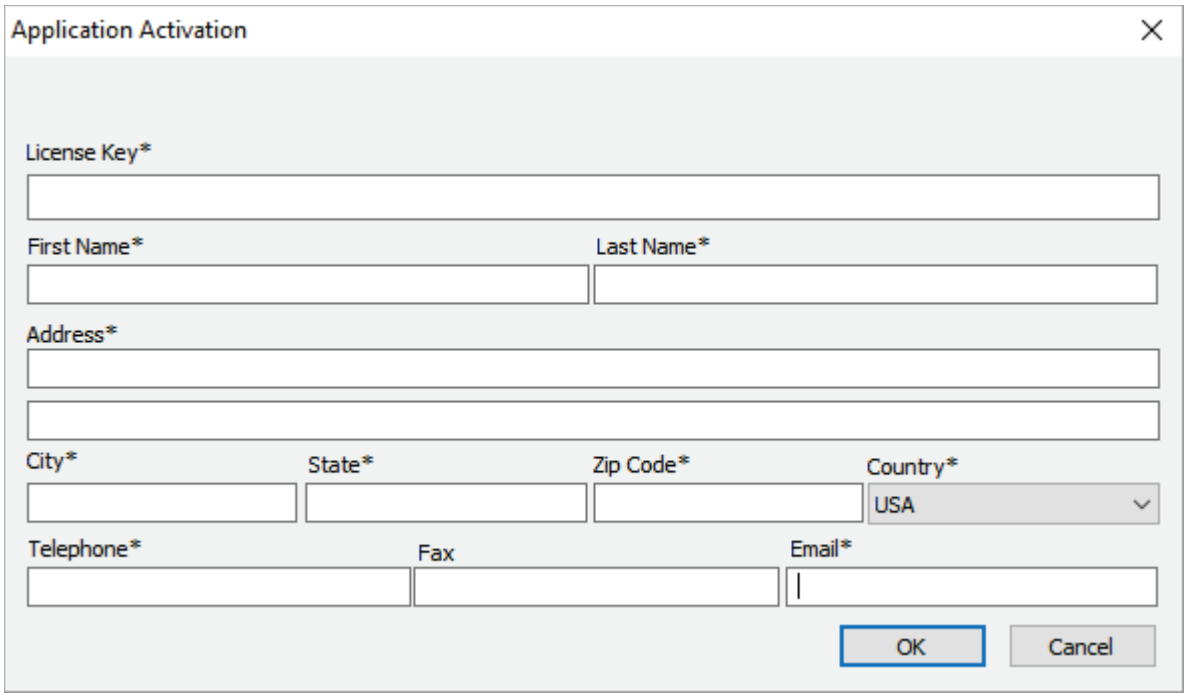


Check the 'I Accept the Trafficware® License Agreement and Microsoft® Bing™ Maps Terms of Use' box to proceed.

Select [Activate] to proceed with the activation. Press [Reader] if you want to use the Read Only version. The demo version will allow you to try out the features by viewing a sample file. The sample file is located in the sample files directory where TripGen 10 is installed. You can not create or edit your own file within Reader mode. Within Reader mode, the number of land uses are limited.

3. The first time using TripGen, you are asked to activate your software. Enter the requested information on the Application Activation dialog shown here.

The information entered in the Application Activation dialog is used to setup the profile for online support with Trafficware. Be sure to enter the information for the individual that will be using the software.



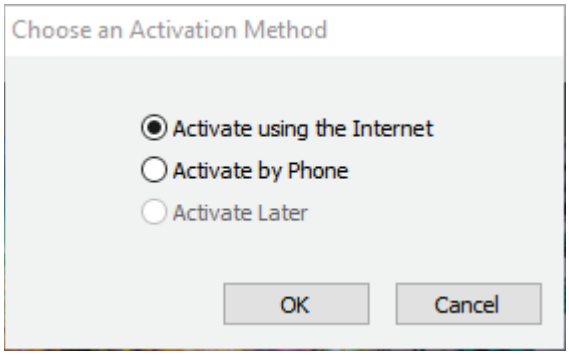
The License Key is provided by Trafficware and is sent via email with your order. The License Key is in the format (Serial Number / Company Name - Product Key).

To ensure accurate entry into the Application Activation dialog, copy the entire string from your email message and paste into the License Key box.

The entries with the asterisk "*" are required to activate TripGen.

After entering the necessary information, select [OK].

4. The next dialog gives you two options to activate and an option to activate later.



'Activate using the Internet' is the preferred method for activating your software. Choose this option and select [OK] to automatically and quickly activate your software.

If you do not have an internet connection, use the 'Activate by Phone' option and press [OK]. Follow the instructions on the Phone Activation dialog. Before calling, make sure your invoice is paid and your license key is available. Trafficware staff will ask for the Machine Key listed in the Phone Activation dialog. With this information, an Activation Code is provided.

To View the Sample Files

TripGen comes with two sample files so that you can see how land uses are displayed. To view the sample files:

1. Within TripGen, choose the **File→Open** command.
2. Navigate to the C:\Users\Public\Documents\Trafficware\TripGen 10\Sample Files folder.
3. Select the appropriate sample file from the list.

Getting Help

Trafficware offers a variety of options for you to learn **TripGen** as presented in this section.

TripGen Digital User Guide

The **Digital User Guide** (online manual) is designed to open in the Adobe® Acrobat® Reader. If you do not have the Acrobat Reader, you can download the application from:

http://www.adobe.com/products/acrobat/readstep2.html.

To load the TripGen Digital User Guide file within TripGen press [F1].

In the Acrobat window, select the **Bookmarks** tab to show the contents of the Help. You can click the plus/minus icon to the left to expand or collapse the outline. Use the Acrobat **Search** feature to search for words in the Help system and locate topics containing those words. Type the word in the text box and click Search. The results list displays the titles of all topics in which the search word appears, listed in the order that they appear within the document.

Contacting Trafficware

Before contacting Trafficware, you can find answers to many of your questions in the User Guide. Additional sources of information are also available on the Trafficware web site.

Online Support

TripGen 10 support is available by going to https://trafficware.zendesk.com and logging into the support system. You can also get to the support center by using the command Help→ Support. Submit your question and the necessary TripGen (*.tgf) file to the support ticket. Trafficware will be happy to answer your technical question, usually within a 24-hour period.

Technical Articles

Read articles regarding Trafficware products on our Resources Page of our website (www.trafficware.com).

Build History

Check out Trafficware Software's History on our Resources Page.

Use the command **Help→Check for Updates**. A dialog box appears that will indicate if your build is up to date. The version check is made over the internet with HTTP protocol. This communication should pass through most firewalls.

Training Classes

View our current classes being offered on our training website, www.trafficwareuniversity.com.

Keeping Up to Date

To keep this information up to date, Trafficware might issue new printings of this manual. New printings reflect minor changes and technical corrections. You can keep this information up to date

by installing the latest revision of the Trafficware software; the **TripgGen 10 User Guide** is replicated in the Help Menu of the program.

System Requirements

TripGen has the following requirements for the computer.

- CPU: Pentium 4 or higher
- Operating System: Windows 7, or 8, or 10
- Mouse: Required
- Memory: 512M RAM minimum, 1GB recommended
- Hard Disk: 50M Free Space
- Monitor: Accelerated graphics adapter recommended

Chapter 2 – Getting Started

This section provides an overview of **TripGen**, introducing you to some of the main features. To launch **TripGen, Version 10**, Select the Start Menu, then choose **Programs→Trafficware→TripGen 10** or double click on the **TripGen 10** shortcut from your desktop.

Getting Started

1. Select an existing File or enter a File Name via the **File→New** command to start a new file.
2. Next, select the appropriate **ITE Data Version** that will be used for this project. TripGen 10 includes land use rates from the10th, 9th, and 8th Editions of ITE's Trip Generation Manuals.
3. By default, TripGen 10 will automatically create a generic project tree containing *Alternative 1* and *Phase 1*. The labels can be renamed by selecting "**Options**" and then selecting either Alternative or Phase. Additional Alternatives and/or Phases can also be added by selecting this command.

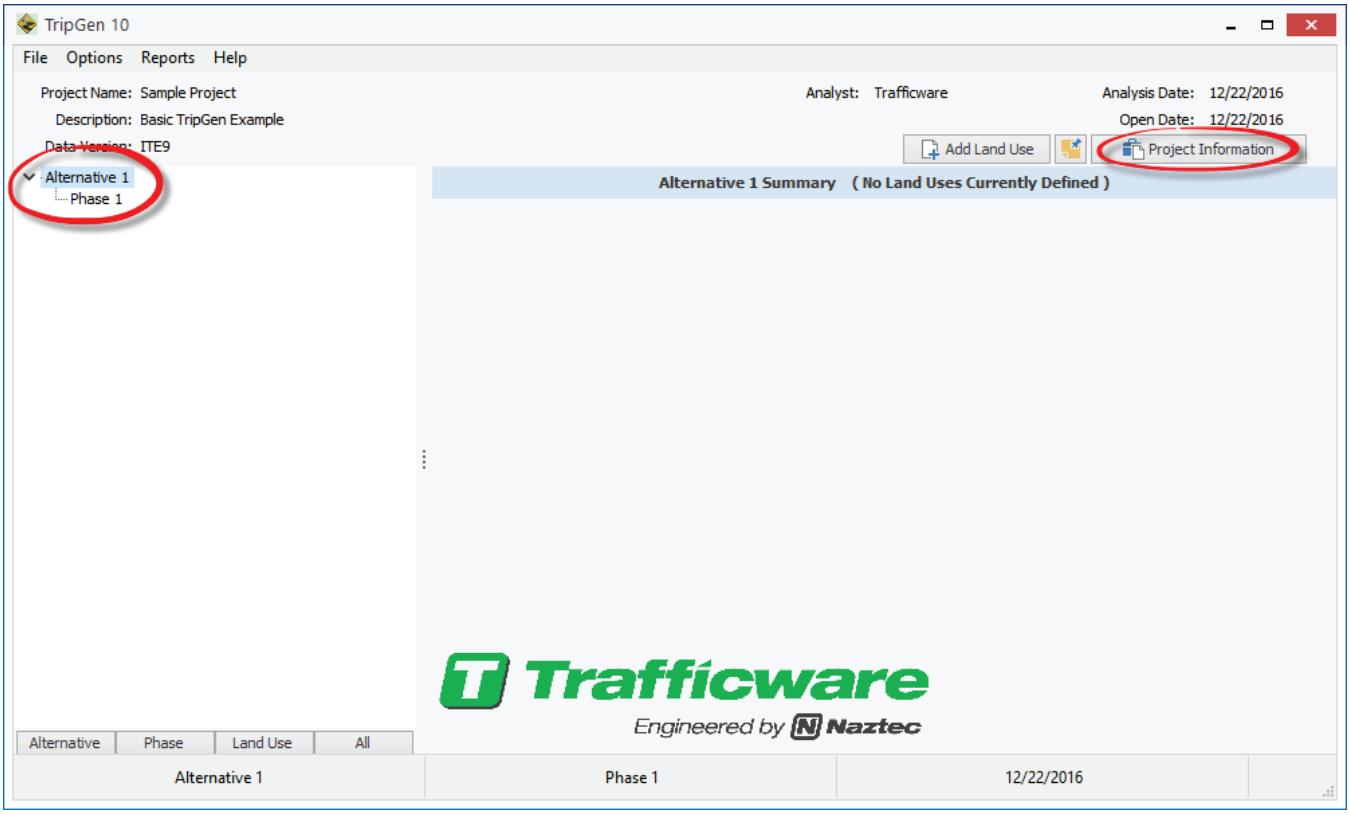


Figure 1: TripGen Main Screen

4. Click the "**Project Information**" or "**Notebook**" icons to enter Project Name, Project Description, Analyst, Open Date, and Analysis Date as desired.
5. To add a land use, simply select the **Add Land Use** button or select Phase 1 and press the right mouse button and choose "**Add Land Use**".

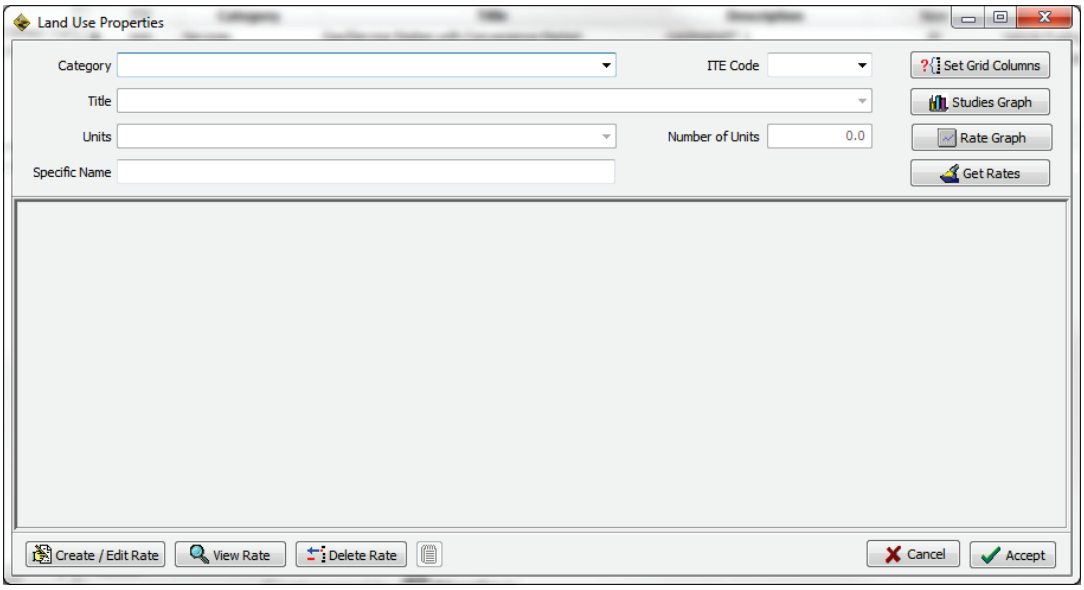


Figure 2: Land Use Properties

6. From the *Category* drop down menu, select the appropriate land use or use the *ITE Code* drop down menu to select the appropriate ITE land use number.
7. Choose the appropriate land use description from the *Title* drop down menu.
8. Next, select the specific *Units* (independent variable) from the drop down menus.
9. Within the *Number of Units* box, enter the appropriate value based on the units selected.
10. Now you are ready to select the **Get Rates** icon. The lower half of the screen will populate with a list of the available rates based on the selected land use. By default, the *Selected Column* for all available land uses will display *True* and the *Use Equation* column will display *False*. The user should click the *True* selections and turn them to *False* for time periods that do not need to be included in the analysis. The average trip rate will be used within the calculations, unless the user clicks *False* within the *Use Equation* column. Once the appropriate time periods and trip rates have been selected, the user should press **Accept**.

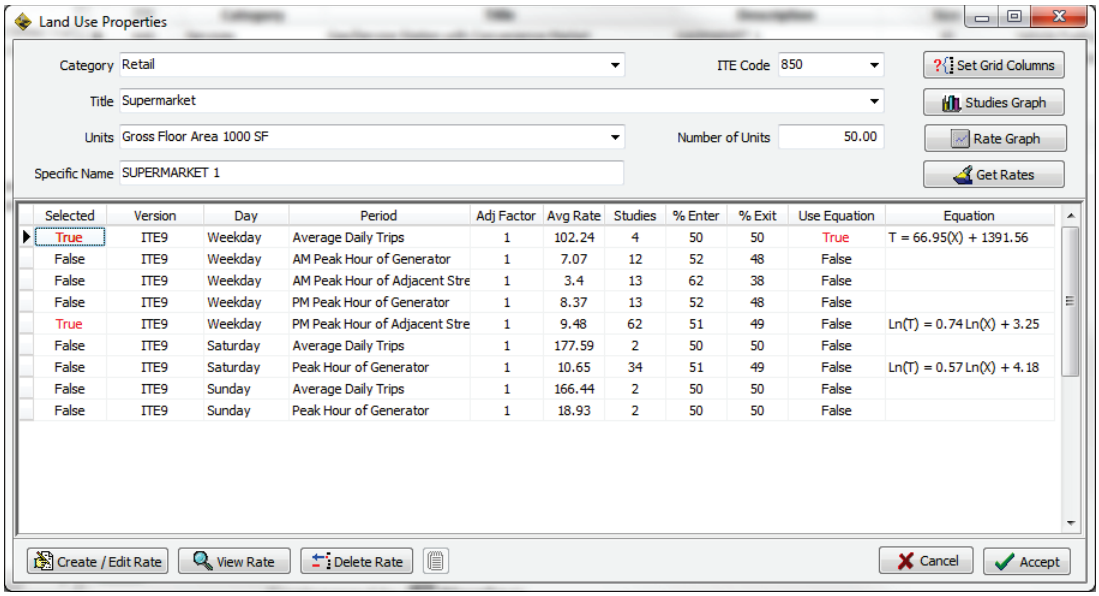


Figure 3: Land Use with available rates

11. The screen (Home) displaying the project tree will then be displayed. The expected number of trips for each of the time periods selected in the previous step will be calculated and displayed in the **Land Use Detail** Screen. If additional land uses need to be added, be sure to add them within the appropriate Alternative or Phase.

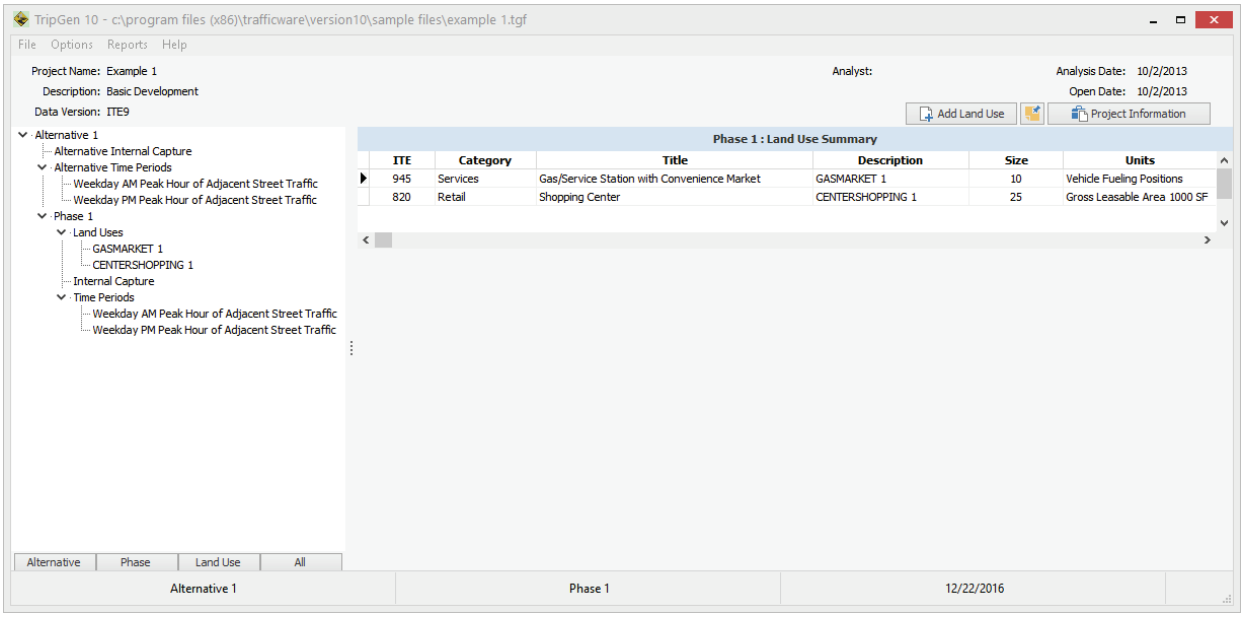


Figure 4: Phase Summary

12. If desired, users can select an **Alternative** or **Phase** within the project tree to view a summary of the expected number of trips. A summary for each time period that has been added within the file can be viewed.

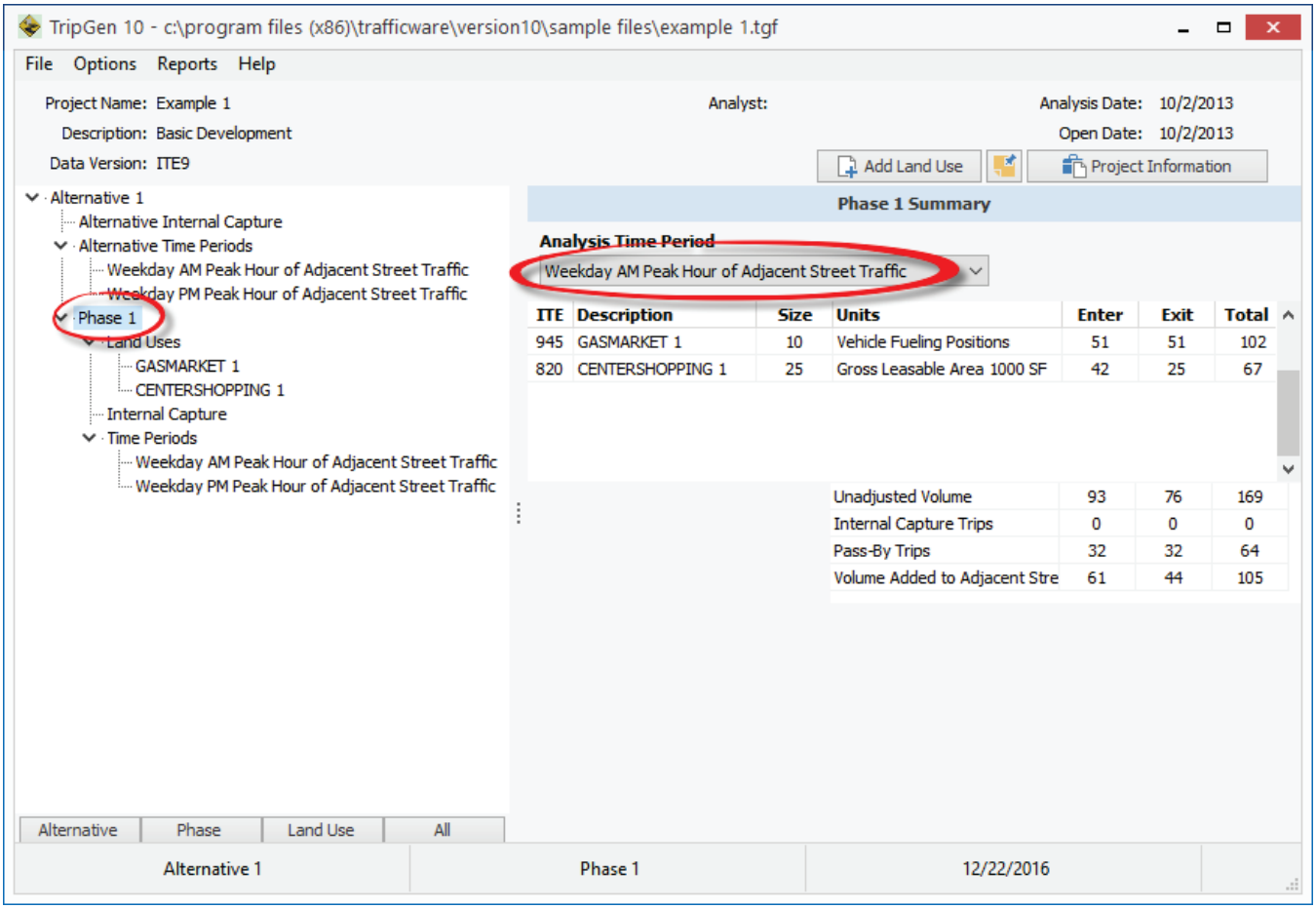


Figure 5: TripGen Main Screen with Phases

13. To view a report, select the appropriate Phase or Alternative desired, then press the right mouse button and select the report of your choice. Reports can also be selected by choosing **Reports** along the menu bar.

Two sample TripGen 10 files are located in the 'C:\Users\Public\Documents\Trafficware\TripGen 10\Sample Files' directory. The table below provides a brief description of what each example file inlcudes.

Sample File Name	Description	Notes
Example 1	Basic Development	This example highlights the minimum number of steps required to calculate trips.
Example 2	Development with multiple phases	This example includes the steps necessary to code a development with multiple phases. The creation of a custom rate is also highlighted.

TripGen Layout

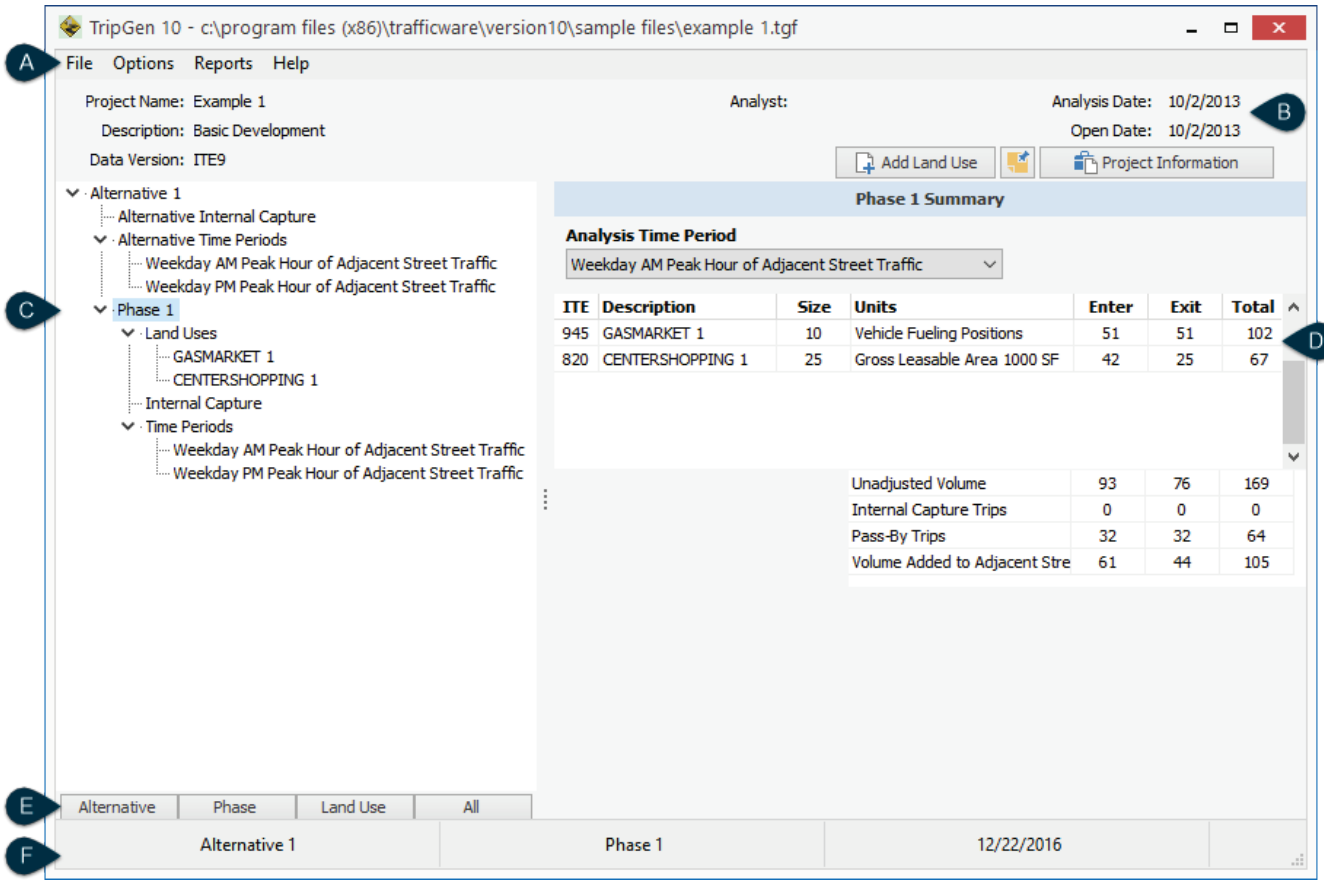


Figure 6: TripGen Layout

In **Figure 6**,

A is the Menu bar. Various selections related to configuring the development and viewing reports can be accessed here.

B shows the project information entered by the user. Project Information can be entered by pressing the **Project Information** button. Notes regarding the project can also be added to the file by pressing the **Notebook** button (located to the immediate left of the **Project Information** button).

In addition, users can select the **Add Land Use** button to quickly add a land use.

C is the location where the various Alternatives and Phases are displayed. Land uses can be added, edited, and/or deleted with a click of the right mouse button.

D provides a summary screen based on the selection highlighted in Section C. Upon pressing the right mouse button, a series of additional actions are available to the user.

E is a short-cut for the user to expand or collapse the project tree displayed in Section C.

F displays the current Alternative and Phase being viewed by the user.

Summary of Menu Commands

TripGen 10 has a variety of commands that can be accessed with button clicks, left mouse-click commands, or menu commands. This section will summarize the available commands (listed in order shown in the menu commands).

Table 1: File Commands

Menu Command	Action
File→New	Starts a new file
File→Open	Opens an existing file
File→Save	Save current file
File→Save As	Saves current file based on users input
File→Exit	Exits the program

Table 2: Options Commands

Menu Command	Action
Options→Alternatives	Use to add or remove Alternatives to project tree
Options→Phases	Use to add or remove Phases to project tree
Options→Internal Capture Settings	Use to view/adjust the ITE or NCHRP internal capture rates
Options→Driveway Distribution	Use to input driveway characteristics
Options→Custom Rate Version Source	Use to create Custom Rates
Options→Import Custom Rates	Use to import Custom Rates
Options→Export Custom Rates	Use to export Custom Rates
Options→Export to CSV	Use to export Total Trips by Alternative to CSV file

Table 3: Reports Commands

Menu Command	Action
Reports→ Summary Reports	Use to view a variety of standard or custom summary reports
Reports→Land Use Detail Report→	Use to view report of land use characteristics
Reports→Driveway Report	Use to view summary report of driveways
Reports→Internal Capture Settings	Use to view internal capture rates used for calculating internal trips
Reports→IC Proximity/Occupancy Report	Use to view the proximity and occupancy parameters used for calculating internal trips
Project Note Report	Use to view summary report of project notes

Table 4: Help Commands

Menu Command	Action
Help→Trip Generation Help	Open the Help file
Help→Check for Updates	Will inform you if a new update is available
Help→Support	Opens the Trafficware support site
Help→License Key	Shows your Product Key
Help→About TripGen	Shows the current version, build and copyright

Chapter 3 – Trip Generation Rates

This chapter provides an overview of the Trip Generation Rate options available to the user within **TripGen, Version 10**. **TripGen, Version 10** includes land use data based on ITE's Trip Generation Manual,10th, 9th, and 8th Editions. Users have the option to select from a list of typical land use categories or simply enter ITE's Land Use Number. The user is then provided with all of the available trip generation characteristics for the selected land use. The following is a sample of the available trip generation data;

- Average Weekday 2-Way Trips (Daily)
- AM Peak Hour of Adjacent Street Traffic
- PM Peak Hour of Adjacent Street Traffic
- AM Peak Hour of Generator
- PM Peak Hour of Generator
- Saturday Average 2-Way Trips (Daily)
- Saturday Peak Hour
- Sunday Average 2-Way Trips (Daily)
- Sunday Peak Hour

Adding land uses to the TripGen file is simple. Once the file is configured for the appropriate Alternatives and Phases, the user should select one of the phases and press the right mouse button. **Figure 7** illustrates the menu that is displayed. To add a land use, press **Add Land Use**. A new menu screen is displayed to allow the user to enter all of the necessary land use information (**Figure 4**). Once a land use is created, the user then edits the land use characteristics by selecting the appropriate land use and pressing the right mouse button. Error! Reference source not found. illustrates the menu options that are displayed.

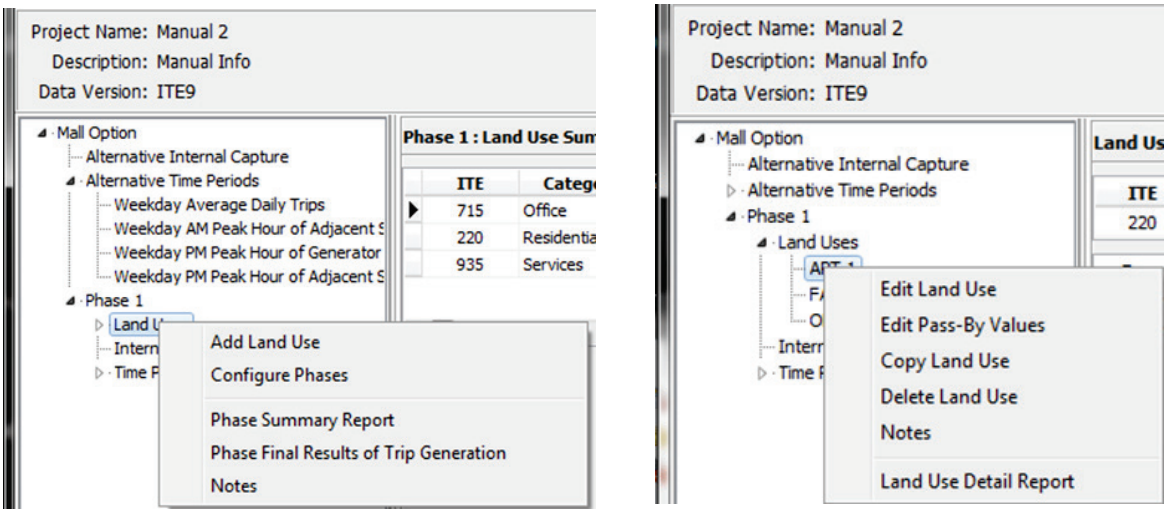


Figure 7: Land Use Pop-Up Menu Options

In addition to the typical data requirements for a land use, several additional parameters related to the studies that were conducted in developing the various trip generation rates are also available for review by the user (**Figure 8**). The following is a sample of the available data;

- Minimum Rate/Maximum Rate
- Standard Deviation
- Number of Studies
- % Enter and % Exit

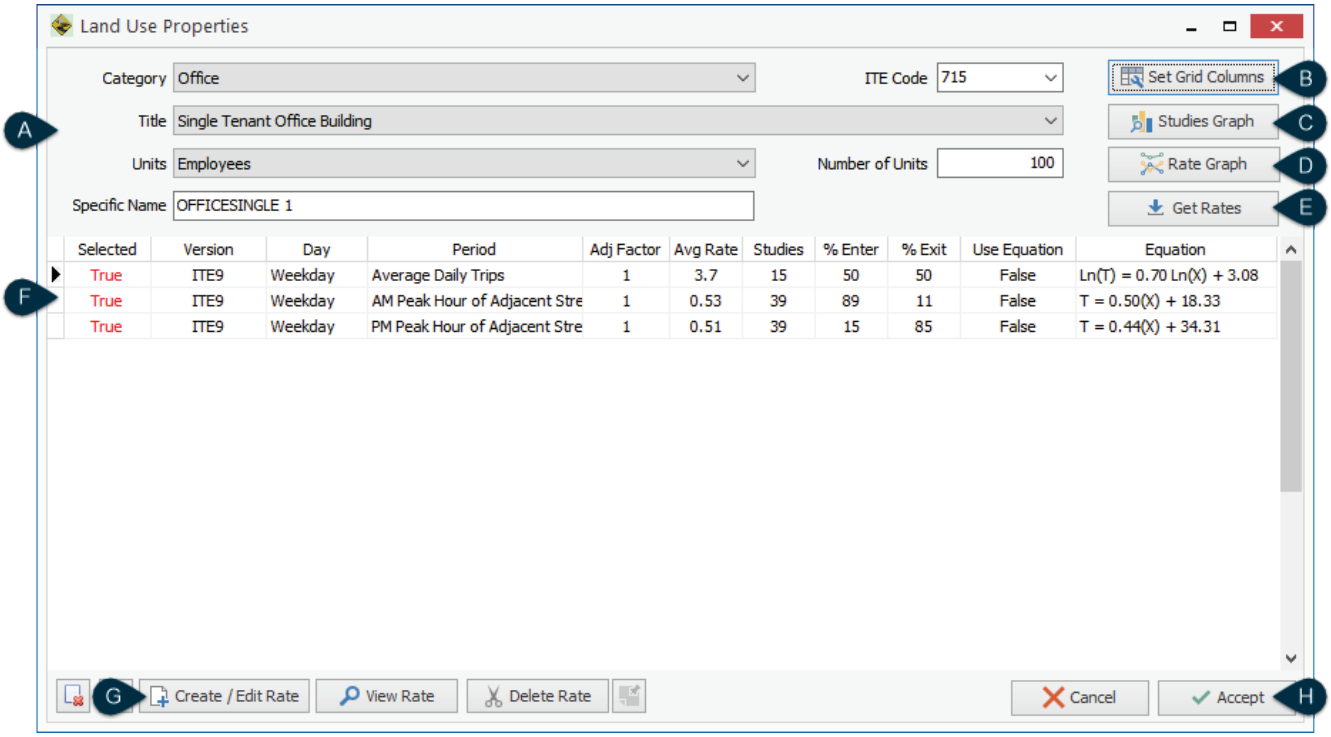


Figure 8: Land Use Properties Screen

In Figure 8, **A** includes the various land use input data required by the user.

B allows the user to select which trip generation attributes are displayed in Section F. Refer to page 22 for additional details.

C provides a summary graph of the number of studies used in developing the trip generation data.

D provides a graph displaying the calculated number of trips based on the selected independent variable using the average trip rate versus the equation (if one exists).

E is the icon used to obtain the available land use rates that will be displayed in Section **F**.

F displays the available ITE rates based for the selected land use. The user should select the rates that will be used in the analysis. The data displayed within this screen is customizable by the user. See page 22 for more details

G displays the icons used for Creating Custom Rates. Refer to Chapter 4 for additional details.

H allows the User to Cancel or Accept edits and return to the Main screen.

ITE Rates

During the creation of the TripGen file, the user must select trip rates from the 10th, 9th, or 8th Edition of the ITE Trip Generation Manual. Once the user enters the appropriate land use information, the available trip generation rate data will be displayed. The *average trip rate* will be used for all calculations unless the user selects *use equation*. Once the **Accept** button has been selected, the Land Use information will be saved and be displayed in the Main Screen. [Rate] designates that the calculated trips will be based on the average rate.

ITE Equations

Click *False* within the *Use Equation* column to use ITE's Trip Generation Manual, 8th or 9th Edition equation to calculate the expected number of trips. Each equation is based on either of the two mathematical relationships;

- Linear relationship – $T = aX + b$
- Logarithmic relationship – $T = a \ln(X) + b$

where T = expected number of trips

X = the independent variable

a & b = constants derived from the raw data

Once the **Accept** button has been selected, the Land Use information will be saved and be displayed in the Main Screen. [Equation] designates that the calculated trips will be based on the equation.

Custom Rates

Users have the option of creating Custom Trip Generation Rates for use in calculating the expected number of trips. Chapter 4 outlines the necessary steps required to create custom rates.

Pass-By Rates

The calculation of pass-by trips should be considered when calculating the total number of new trips generated by a particular land use. Pass-By Trips are defined as trips that are generated by a particular land use but are not considered "additional or new" trips that should be added to the roadway. This type of trip is defined as a driver (for example) that was already on the roadway during the time period being analyzed and decided to visit the land use. Rather than adding a new vehicle to the network, this type of trip only affects the turn type at the intersection or driveway. **Table 5** provides a summary of the ITE land uses that have pass-by trip data. Refer to ITE's 2nd Edition of the Trip Generation Handbook for more detailed information.

Land Use Description	ITE Land Use Number
Free-Standing Discount Superstore	813
Free-Standing Discount Store	815
Hardware / Paint Store	816
Shopping Center	820
Automobile Parts Sales	843
Tire Store	848
Supermarket	850
Convenience Market (Open 24 Hours)	851
Convenience Market with Gasoline Pumps	853
Discount Supermarket	854
Home Improvement Superstore	862
Electronics Superstore	863
Pharmacy/Drugstore without Drive-Thru	880
Pharmacy/Drugstore with Drive-Thru	881
Furniture Store	890
Drive-In Bank	912
Quality Restaurant	931
High Turnover (Sit-Down) Restaurant	932
Fast-Food Restaurant with Drive-Thru Window	934
Fast-Food Restaurant with Drive-Thru Window and No Indoor Seating	935
Gasoline Service Station	944
Service Station with Convenience Market	945

Table 5: ITE Land Uses with Pass-By Percentages

Pass-By trips are automatically displayed when an individual Time Period is selected by the user. In addition, pass-by trips will also display within the Alternative or Phase Summary screens. Custom pass-by rates can be created by the user for any land use. Refer to Chapter 4 for more details.

Internal Capture Rates

Another key element of determining the total number of new trips expected by a development is the number of internal trips expected between certain combinations of land uses within the development.

When using trip rates from the 9th or 8th Edition of the ITE Trip Generation Manual, TripGen 10 provides the user with three options for calculating internal trips. The first is based on ITE's internal captures rates, while the second is based on data from NCHRP Project 08-51 (documented in NCHRP 684 - Enhancing Internal Trip Capture Estimation for Mixed-Use Developments). The third is allowing the user to enter custom rates (Refer to Chapter 4 for more details).

When using trip rates from the 10th Edition of the ITE Trip Generation Manual, TripGen 10 provides the user with two options for calculating internal trips. The first is based on ITE's internal captures rates. The second is allowing the user to enter custom rates (Refer to Chapter 4 for more details).

ITE's Trip Generation, 10th Edition adopts NCHRP 684 internal capture rates, so there is no longer a need to list this option separately.

The procedure for calculating internal trips is based on ITE's recommended procedure as outlined in ITE's Trip Generation Handbook. Users can view the various parameters related to the calculation of internal trips by selecting **Options→Internal Capture Settings.** Users are encouraged to review the data within each of the three tabs.

Internal trips are automatically displayed within the Project for each Alternative and Phase included within the file.

Chapter 4 – Customization

Users have the ability to customize several trip generation parameters within TripGen 10, including land use labels, average trips rates, pass-by rates, and internal capture rates. This chapter highlights the various attributes that users can customize.

Notes

The user can input **Notes** to document various attributes of the project file. Notes can be added to a file by selecting the **Notebook** located on the **Home Screen** next to the **Project Information** button. Figure 9 illustrates the **TripGen** Notes screen. Notes can be added to a project file at the Project, Alternative, Phase, or Land Use level.

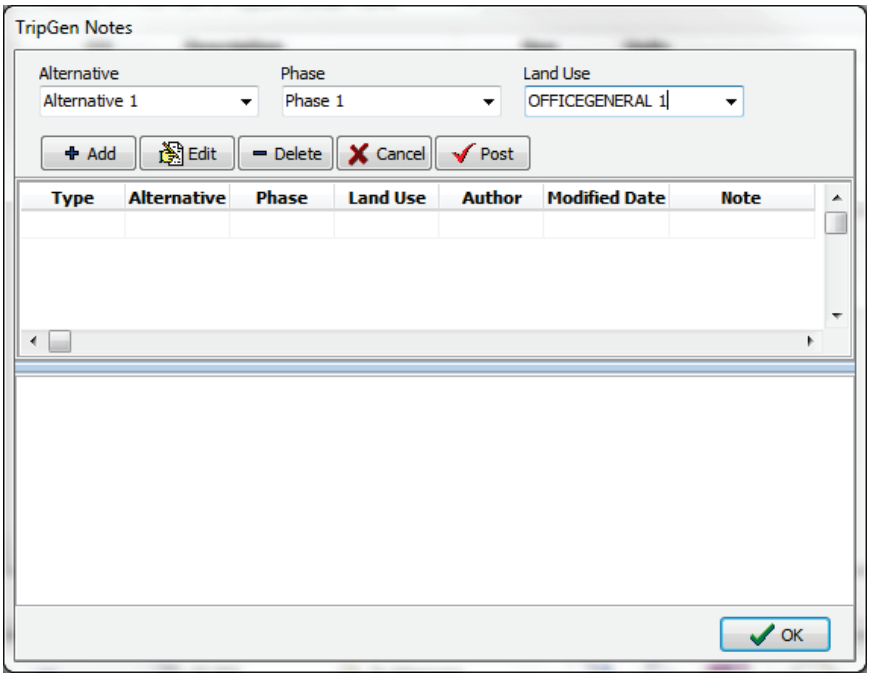


Figure 9: TripGen Notes

The user should first determine the Type (level) of **Note** that will be entered. Select the appropriate *Alternative*, *Phase*, or *Land Use* from the pull-down menus. If the **Note** button is pressed after a particular *Alternative* and/or *Phase* has been selected, these pull-down menus will automatically be populated. If a note is entered when <none> is visible in each of the drop-down menus, the note will be assigned at the Project level.

To add a note, first press **+ Add** and then enter an **Author** in the dialogue box that is displayed. Within the lower half of the window, enter text as desired. Now, press **Post** to create a Note entry. Press **OK** to return to home screen.

Columns

Users can also customize which parameters are visible within the Land Use Properties screen. Once the Land Use Properties screen has been selected, users should press the Set Grid Columns button. Figure 10 illustrates the various parameters that are available for display within the Land Use Properties screen. The width of the columns can also be adjusted by selecting one of the edge lines and moving to the edge to the left or right.

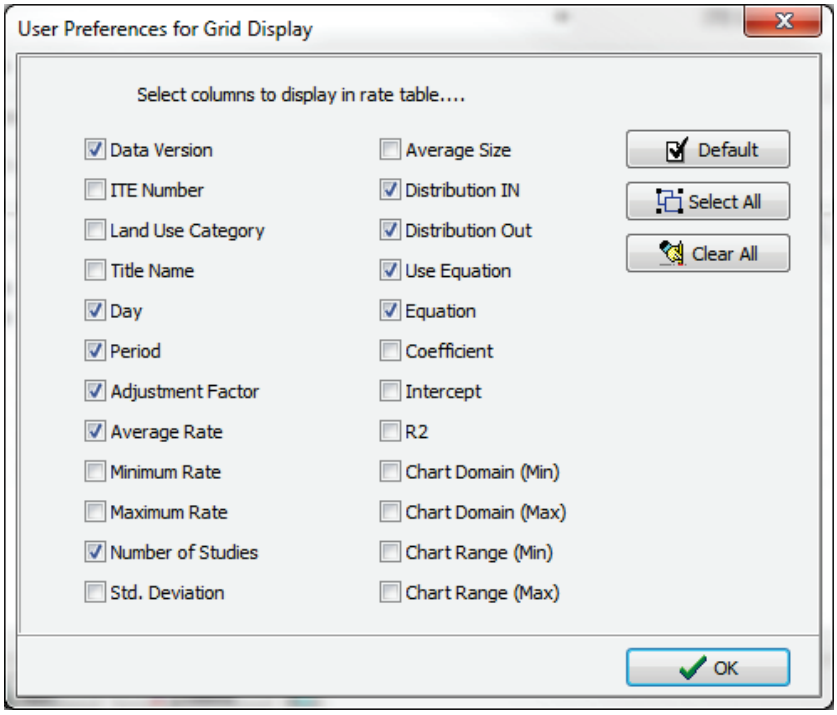


Figure 10: User Preference for Grid Display

Labels

The user can edit the name or description of an Alternative, Phase, or Land Use. Alternative and Phase names can be modified by selecting **Options→Alternatives** or **Options→Phases** or by pressing the right mouse button when an Alternative or Phase is selected within the project tree. A pop-up menu will then be displayed for the user to edit.

Custom Sources

If custom rates are being considered for use within TripGen, it is recommended that the user first create a source that the rates can be assigned to. This will provide the user the ability to use custom rates for any TripGen project file. The First step is to select **Options→Custom Rate Version Source** or press the right mouse button when an Alternative or Phase is selected within the project tree. Figure 12 illustrates the pop-up menu that will be displayed. Next, press **Create New Version Source** and enter the appropriate title to be used. The title will then appear within the left window pane for future use.

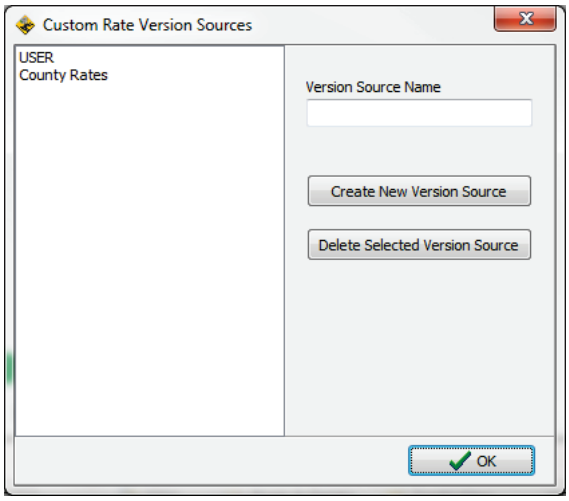


Figure 11: Custom Rate Version Sources Screen

Land Use Parameters

Users have the ability to customize any of the available land use parameters listed within the Create Custom Rate screen. Typically, only a few parameters should be edited unless a new land use is being created. Once a Custom Source has been created, users have two options to create custom rates within TripGen 10.

The first option is at the completion of adding a land use within the *Land Use Properties* screen once the **Get Rates** button has been pressed. Now place the selector arrow at the appropriate time period that you wish the custom rate to be associated with. This will permit the ITE rates to populate once the **Create/Edit** button is pressed.

The second option is creating the custom rate after it has been added to the Project Tree. Simply select the land use that you desire and press the right mouse button and choose **Edit Land Use**. The *Land Use Properties* screen will appear. Now place the selector arrow at the appropriate time period that you wish to associate the custom rate with. This will permit the ITE rates to populate once the **Create/Edit** button is pressed.

Once the **Create/Edit** button is pressed, a new menu will be displayed for users to enter the custom data (**Figure 12)**. The user must select a Data Version Source to allow the rates to be saved appropriately. Once the data has been entered and confirmed, press **Create/Update Rate** to save the entered rates. [Custom] designates that the calculated trips will be based on the Custom Rates data entered. It should be noted that the *Day of the Week* and *Period* parameters must match for trips to be combined with each other. **Figure 13** illustrates the *Land Use Properties* screen after a custom rate has been added.

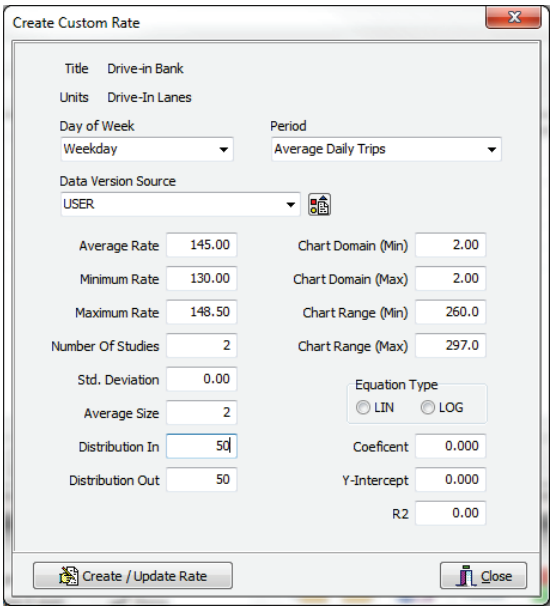


Figure 12: Create Custom Rate Screen

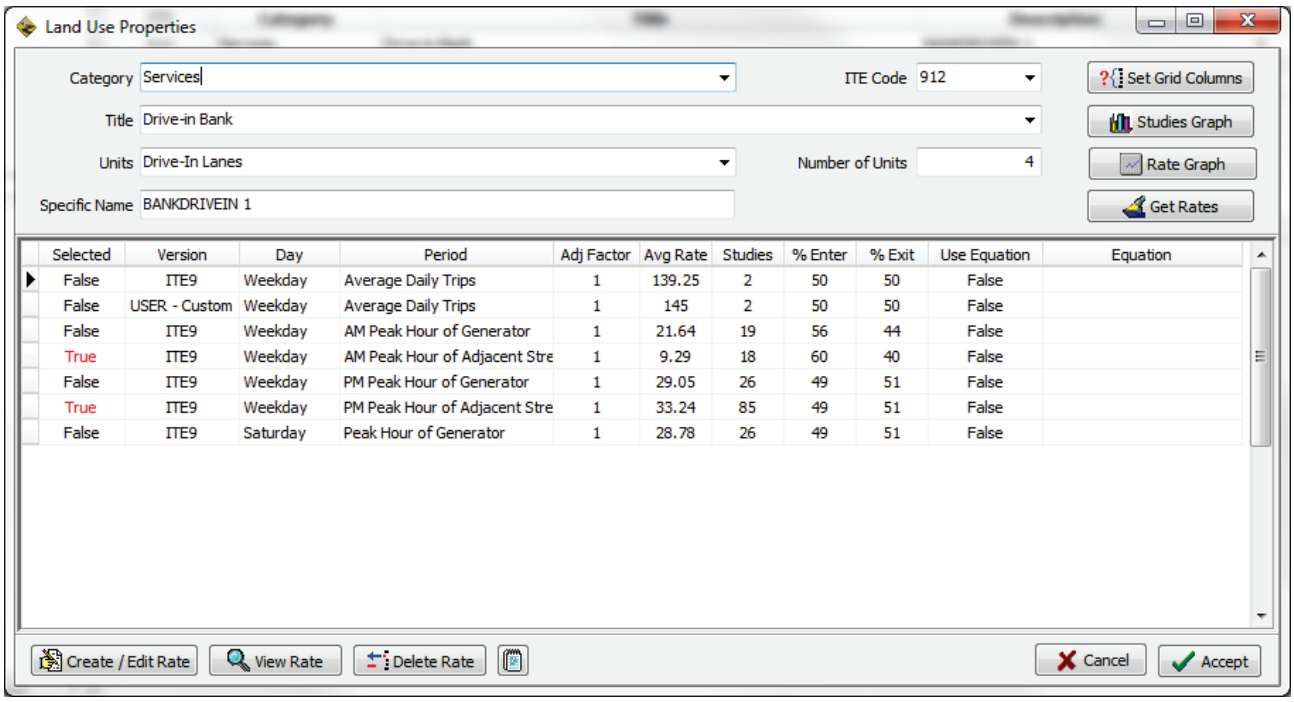


Figure 13: Custom Rate Displayed Within Land Use Properties Screen

Import/Export Custom Rates

Both of these features can be accessed by selecting **Options** on the main menu. These features allow users to import and export custom rates that have been created within TripGen. Once a custom rate has been created, users can *Export* the custom rate data to a .TGX file, if desired. This file can then be emailed to other TripGen users to allow them to add the rate data to the TripGen database. The .TGX file can be imported into other users of TripGen. The custom rate data will be added to their TripGen database so they can access the new custom rate data.

Pass-By Trip Rates

Custom pass-by rates can also be created. Users simply highlight a particular land use within the project tree and press the right mouse button and select **Edit Pass-By Values**. Upon pressing this button, the Selected Pass-By Values screen will appear. Users should then press the **Create Pass-By Rate** icon located in the lower left corner. A new menu will then be displayed for users to enter the necessary custom pass-by data. The user must select a Data Version Source to allow the rates to be saved appropriately.

Internal Capture Trip Rates

TripGen 10 also allows users to the ability to enter custom internal capture rates. The first step is to select **Options→Internal Capture Settings** to open the Internal Capture Configuration screen (**Figure 14**). Users can then select Custom from the *Source* pull-down menu for the specific time period that is selected from the *Time* pull-down menu. Users can then enter the custom rates based on the various combinations of land uses. The custom rates will only be available within the working project file in which they were entered.

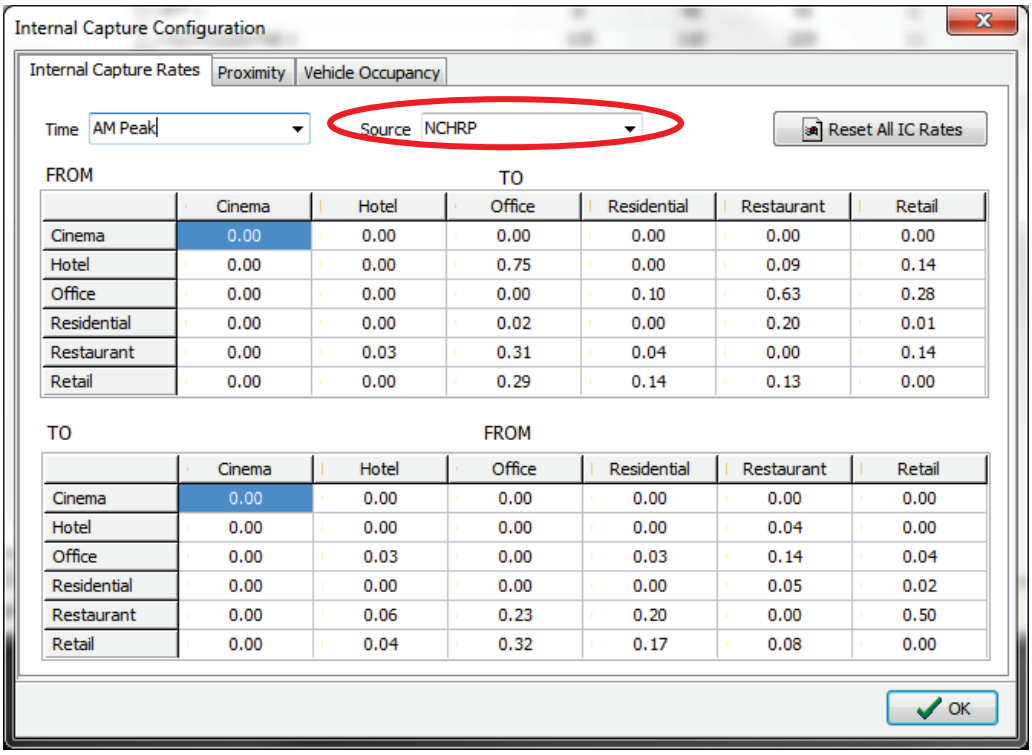


Figure 14: Internal Capture Configuration Screen

Proximity

This tab includes site-specific information regarding the relative distance between the various land uses within the mixed-use development being analyzed. If the user wishes to include proximity effects, the user simply enters the distance between the appropriate land uses in the *Enter Proximity Distance (feet)* field. TripGen calculates the *Proximity Adjustment Factor* that will then be used in calculating the internal capture rates. Users should input average distances when multiple land uses of the same type are located within the same development.

Vehicle Occupancy

The **Vehicle Occupancy** tab includes data for determining the number of person trips based on the number of vehicle trips. Users should enter the appropriate value in the *Persons per Vehicle* field.

Chapter 5 – Driveway Volume Distribution

Users have the ability to enter the number of driveways within a development and calculate the number of entering and exiting trips for each driveway. This feature can be accessed by selecting Configure→Driveway Distribution. **Figure 15** illustrates the Driveway Volume Distribution screen.

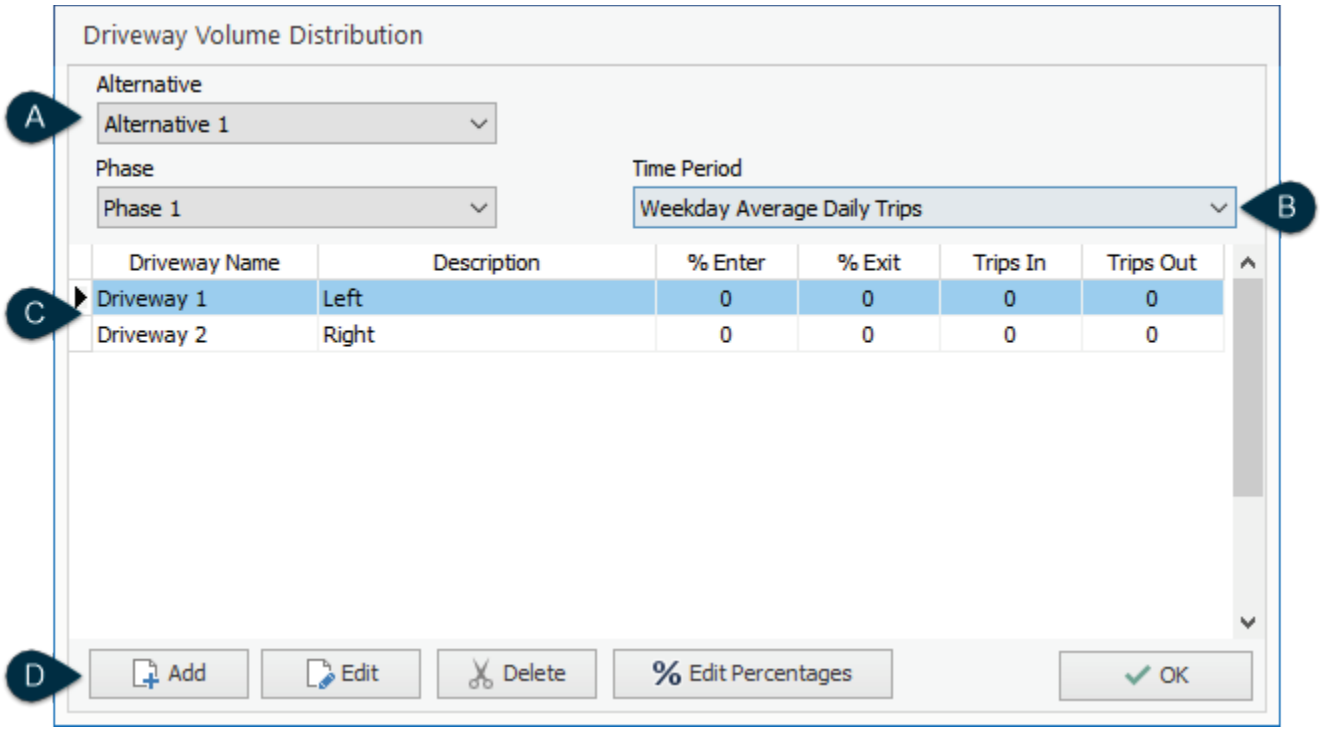


Figure 15: Driveway Volume Distribution Screen

In Figure 15,

A allows the user to specify the *Alternative* & *Phase* for which driveway volumes will be calculated.

B displays the Analysis Time Period that will be displayed in window panes **C** & **D**.

C displays the driveway entered by the user along with the *%Enter* and *%Exit* values required to calculate driveway volumes. The calculated number of trips entering and exiting each driveway are also displayed.

D includes buttons to **Add** or **Delete** driveways that access the development site. **Edit Percentages** can be used to adjust the entering and exiting %'s of the driveways configured.

Chapter 6 – Exporting Data and Reports

In addition to exporting custom rates as described in Chapter 4, users can also export the total number of trips to a csv file within TripGen 10. TripGen 10 also includes additional quick report options. Users can create reports from the main Reports Menu or from within the Project Tree. The reports available within the Project Tree are dependent upon the selected element within the Project Tree. The following sections highlight the various reports that are available.

Export to CSV

This feature allows users to create a CSV file that includes the total number of trips calculated at the alternative level. First, select **Options→Export to CSV** from the main menu, and then the appropriate Alternative and Time Period desired. Figure 16 illustrates the various time periods that can be selected.

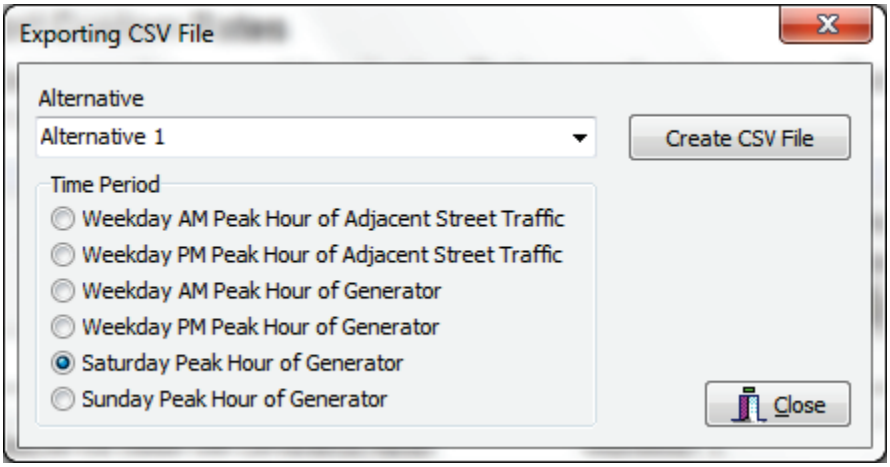


Figure 16: Export to CSV

Reports Menu

Each of these reports provides trip generation characteristics, including ADT, Weekday AM/PM Peak Hour of Adjacent Street Traffic, Weekday AM/PM Peak Hour of Generator, etc. The following reports can be created using this option.

Summary Reports

The Summary Reports panel allows the user flexibility to configure the Alternative and Phase Reports to their needs.

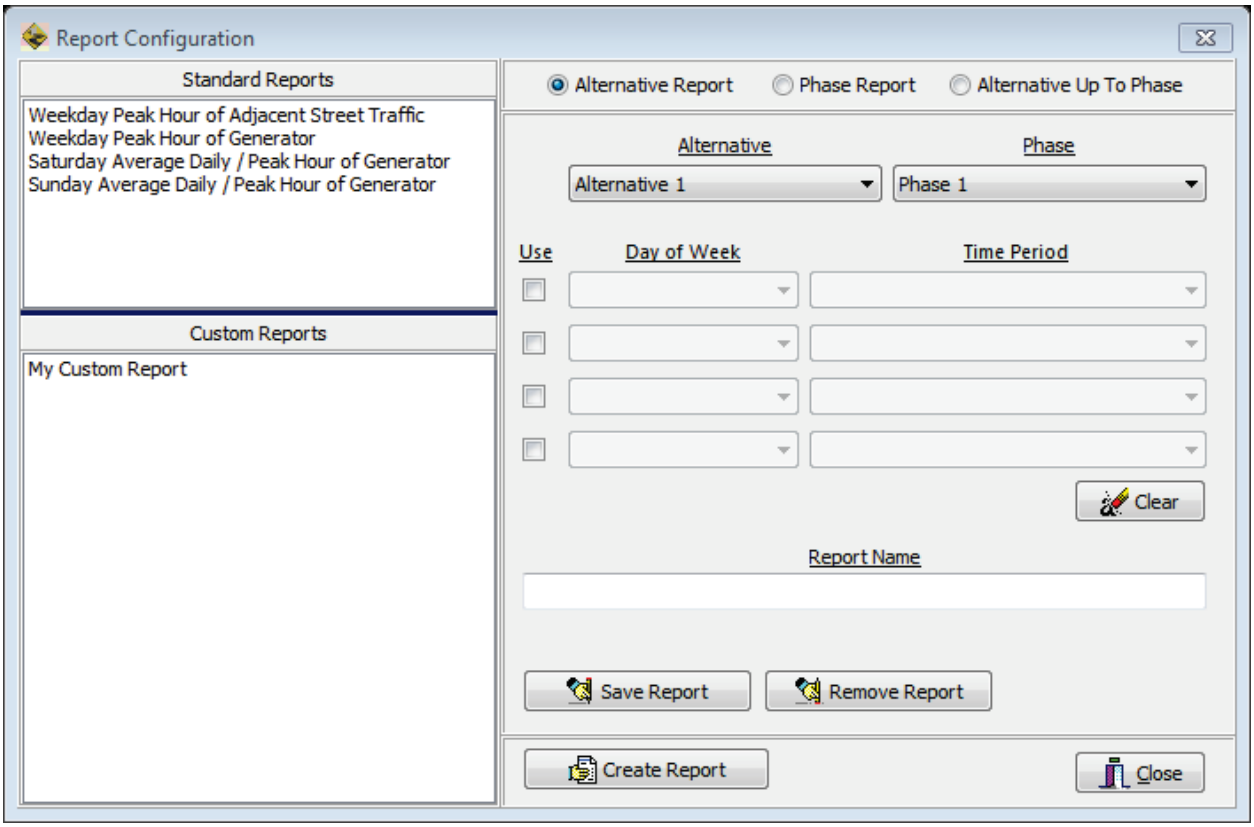


Figure 17: Report Configuration Screen

1. A user can choose from four standard reports that provide a summary for each Phase included within the file.
    a. The following Standard Reports are available:
        i. Weekday AM/PM Peak Hour of Adjacent Street Traffic
        ii. Weekday AM/PM Peak Hour of Generator
        iii. Saturday Average Daily/Peak Hour of Generator
        iv. Sunday Average Daily/Peak Hour of Generator
    b. Click the "Create Report" button at the bottom of the panel.
2. A user can choose to configure a report from an array of options:
    a. User can choose a type of report: Alternative, Phase, or Alternative Up to Phase Report.
    b. For "Alternative Report" select the respective Radio button
        i. Select the Alternative for the report by making the selection from the Alternative pulldown menu.
        ii. Select the Day of Week and Time Period for the report (the user can select up to four combinations)

c. For the "Phase Report" select the respective radio button.
    i. Select the Alternative for the report by making the selection from the Alternative pulldown menu.
    ii. Select the Phase for the report by making the selection from the Phase pulldown menu
    iii. Select the Day of Week and Time Period for the report (the user can select up to four combinations)
d. For the "Alternative Up To Phase" report (allows selection only if three or more phases in the respective alternative has been defined)
    i. Select the Alternative for the report by making the selection from the Alternative pulldown menu.
    ii. Select the last Phase to be used by the report by a selection from the Phase pulldown menu. Report will include selected phase and all previous phases, based on completion date.
    iii. Select the Day of Week and Time Period for the report (the user can select up to four combinations)
e. The user can also save the selections they have configured as a Custom Report that can be run again later.
    i. Enter the report name in the Report Name field.
    ii. Click on the "Save Report" button
f. Click the "Create Report" button at the bottom of the panel.

3. A user can run a Custom Report.
    a. Select a report to run from the "Custom Reports" list on the left side of the Report Configuration panel.
    b. Click the "Create Report" button at the bottom of the panel

Land Use Detail Report

This report provides a summary of the trip generation characteristics for each land use included within the project file. In addition to the average rate, the minimum/maximum rates, and the number of studies are just a few of the characteristics that are included.

Internal Capture Report

This report provides a summary of the various internal capture rates used for the calculation of internal trips. The parameters printed are based on *Source* selected within **Options→Internal Capture Settings** screen.

Driveway Report

This report provides a summary of trips entering and exiting driveways that have been created within the project file.

Project Note Report

This report provides a summary of the notes that have been added within the project file.

Internal Capture Settings Report

This report provides a summary of the various internal capture rate parameters used for the calculation of internal trips. The parameters printed are based on *Source* selected within **Options→Internal Capture Settings** screen.

IC Proximity/Occupancy Report

This report provides a summary of the Proximity and Occupancy parameters used for the calculation of internal trips. The parameters printed are based on *Source* selected within **Options→Internal Capture Settings** screen.

Project Tree Reports

The user has several reports that can be created based on the User's selection from within the Project Tree. To view a report, select the appropriate row and press the right mouse button. **Figure 18** illustrates the various reports that are available from within the Project Tree. A summary table displaying the expected number of trips based on the User's selection is also provided within this screen.

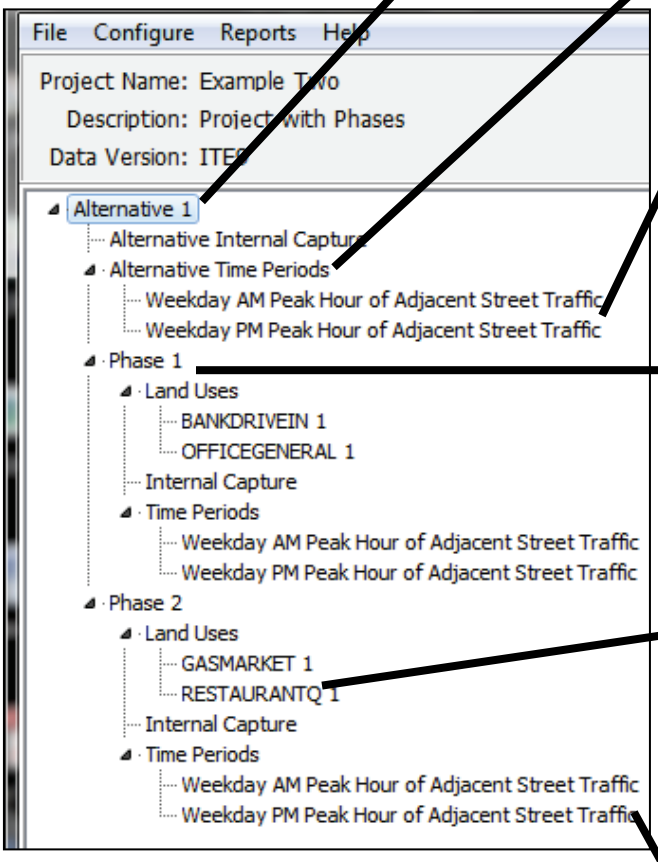


Figure 18: Available Reports via Project Tree

Alternative

The *Alternative Summary Report, Alternative Driveway,* and *Notes* reports are available to the user when this row is selected. The first two reports are defined within the Reports Menu section located above. The *Notes* report includes a summary of all notes added within the file.

Alternative Time Periods

The *Time Specific Land Use* report provides a summary of the trips calculated for ***all*** time periods & land uses included the Alternative selected.

Specific Alternative Time Periods

The *Time Specific Land Use* report provides a summary of the trips calculated for all land uses associated with the selected time.

Phase

The *Phase Summary, Phase Driveway,* and *Notes* reports are available to the user when this row is selected. The first two reports are defined within the Reports Menu section located above. The *Notes* report includes a summary of all notes added within the file.

Specific Land Use

The *Land Use Detail* report provides a summary of the trip generation characteristics for the selected land use. In addition to the average rate, the minimum/maximum rates, and the number of studies are just a few of the characteristics that are included.

Specific Phase Time Periods

The *Time Specific Land Use* report provides a summary of the trips calculated for all land uses associated with the selected time.