2015

Septic Assistant

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[NH SEPTIC ASSISTANT HELP]

These pages contain screen shots of various Dialog Boxes and give a brief description of each, in an effort to answer any operability questions that may arise. Feel free to email me if you have any specific issues that you cannot resolve. Some Dialog Boxes may have been up-dated since the screen shot was created, having no effect on the operation.

https://sites.google.com/site/septicassistantnh/

Getting Started

First things first, please follow the simple sequence of events listed below to start a new plan. Whenever I mention the MENU I am referring to the "Septic Assistant-[State]" drop down MENU.

1. Initialize Septic Assistant by Selecting the Appropriate Desktop ICON.
2. Either Import a CSV point file, or enter the field data manually with the appropriate entry method in the "Field Note Data Entry" section of the MENU.
3. Adjust Points as required using the Adjust Elevation Function, points may be adjusted by individual selection or by selecting all.
4. Run the Existing Contour Generator to create Contours & TIN, you can select whether to Label, Smoothing Factor & Contour Colors as well as the Interval. Please note the actual points displayed on the screen are BLOCKS, you need to select the "BLOCKS" radio button (set by default) when creating Contours off the Imported Data.
5. Once the points and contours are in place you can enter the deed description data to generate the lot configuration. You will need to rotate the contours into place to match up with your lot lines.
6. At this point you need to align the "Model" with the "Paper Space V-Port Window", to do this simply;
    a. Select the "Adjust Vport" Menu option.
    b. Select the V-port to adjust (SA has turned off the border layer to expose the edges of the V-port window.).
    c. Enter the Scale Factor for the V-port window, for the main window enter "1".
    d. Select the center of the site plan to be located in the center of the V-port window.
7. You are now ready to get on with the business of designing the system, once you have done this a few times it will become a rather quick process. (Especially if you are downloading CSV files from a data collector).
8. Proceed to choose which EDA type you wish to use and follow all prompts and answer all Dialog Box questions.

The rest of the process should be pretty much self-explanatory, just select MENU items and follow prompts. (See menu below)

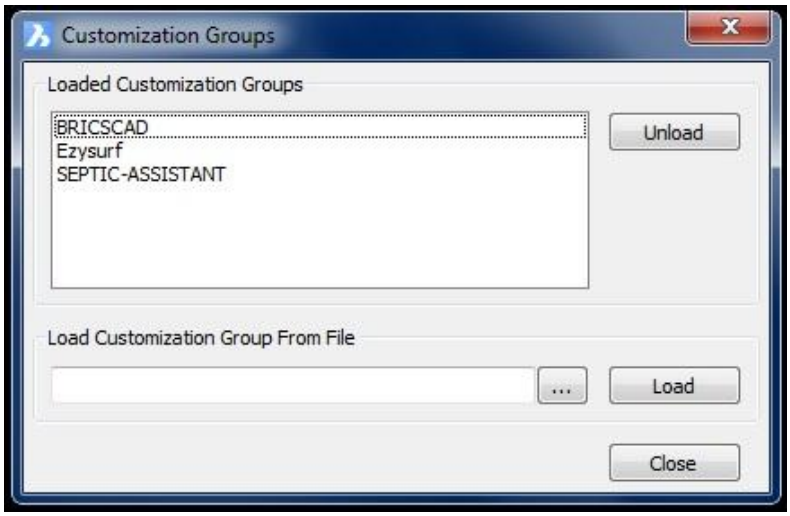
Menu Loading (the hard way)

Pictured above is the initial screen menu, the items with arrows have submenu items associated with them. (Hover your mouse over the items to expose the submenus) There are brief descriptions and recommend uses listed below for most of the available menu items.

If this menu does not appear on your current “Main Menu” bar you will need to load it per the following instructions.

For Bricscad do the following;

- Type “menuload” at the command prompt, the following dialog should appear.

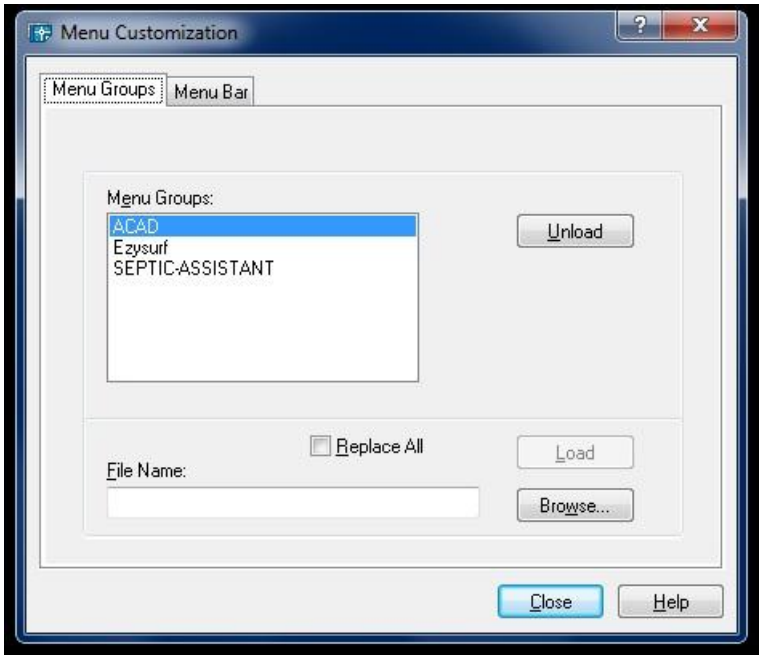


- Select the “…” button to browse to the “c:\program files\septic assistant\<your state>\support\” folder, select the “Septic Assistant<your state>.mnu” file. *
- Select the “Load” button.
- Select the “Close” button.

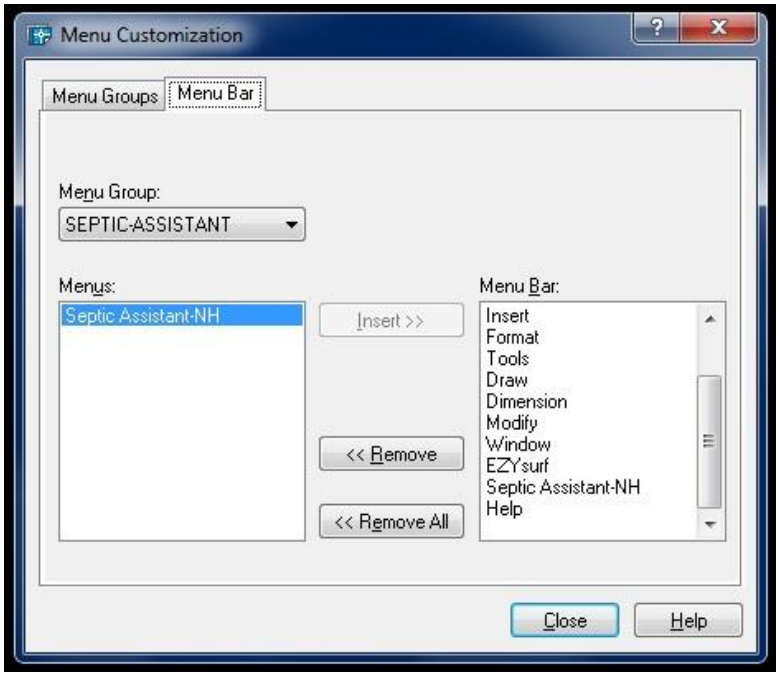
**-In the browser window select the *.mnu option in the “Files of Type” drop down selection.*

For Autocad do the following;
(Your version may be slightly different)

- Type “menuload” at the command prompt, the following dialog should appear.



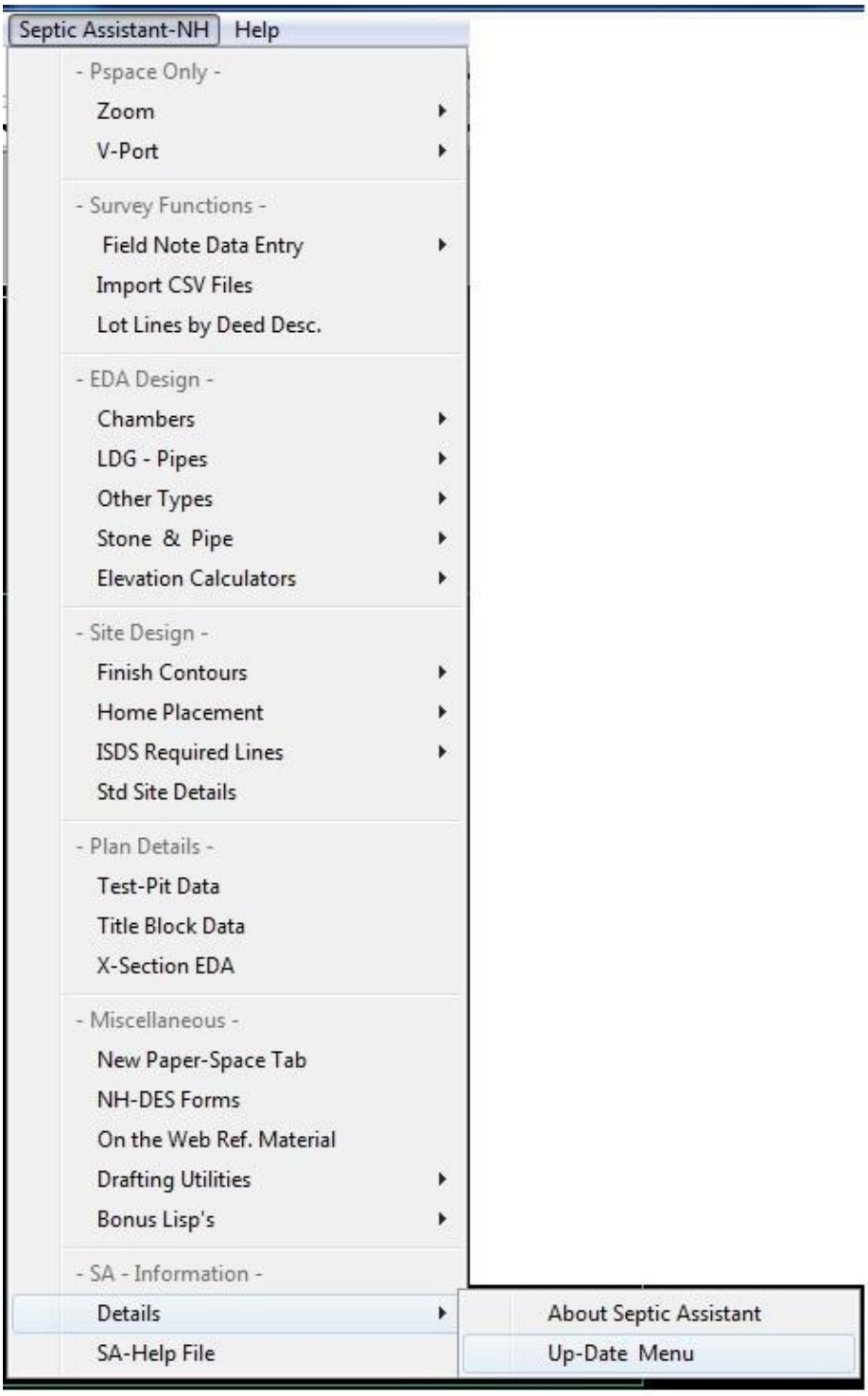
- Select the “Browse” button to browse to the “c:\program files\septic assistant\<your state>\support\” folder, select the “Septic Assistant<your state>.mnu” file. *
- Select the “Load” button.
- Select the “Menu Bar” tab at the top of the dialog. (make sure Septic-Assistant is BLUE prior to selecting the tab)



- Make sure the menu item is again BLUE as shown above, then select the menu item on the “Menu Bar” that Septic Assistant is to be placed ABOVE. In the above example I selected the “Help” menu then the “Insert” button.
- Select the “Close” button and the Septic Assistant menu should appear on your “Main Menu Bar”.

**-In the browser window select the *.mnu option in the “Files of Type” drop down selection.*

Menu Loading (the easy way)



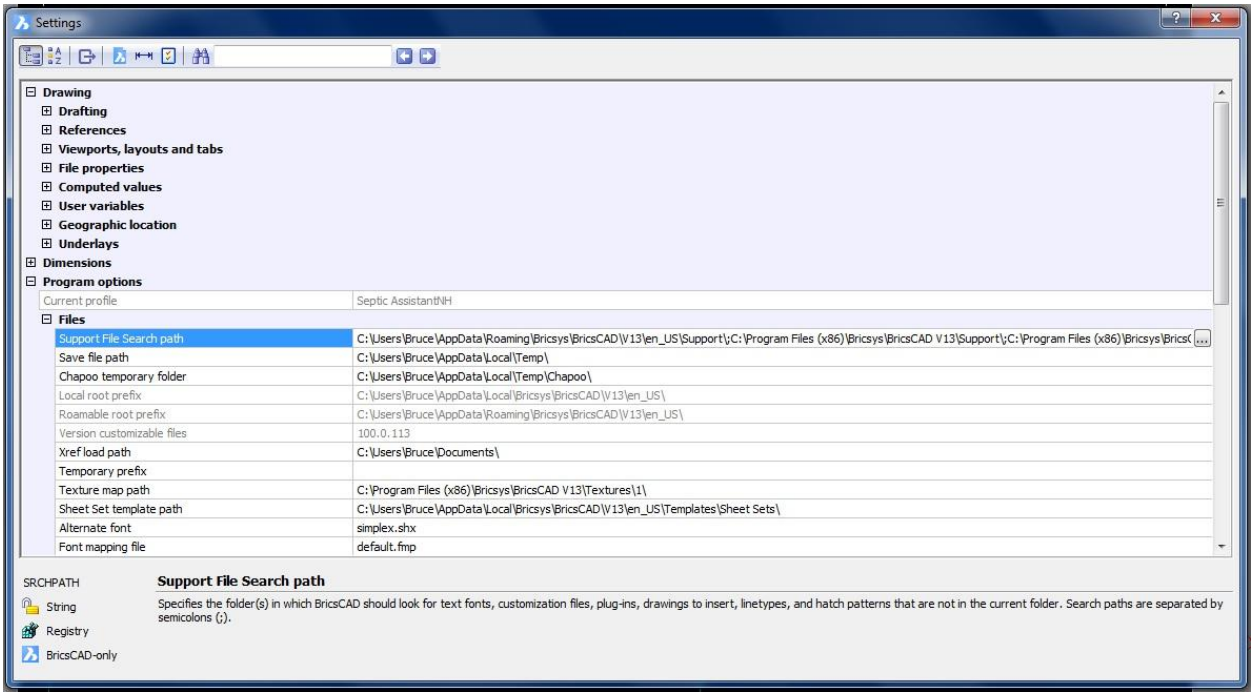
Select the "Up-Date Menu" Option shown here, and the Septic Assistant Menu will be automatically unloaded and the Newer Version will be loaded. Once this Menu item is loaded this option will be available in the future.

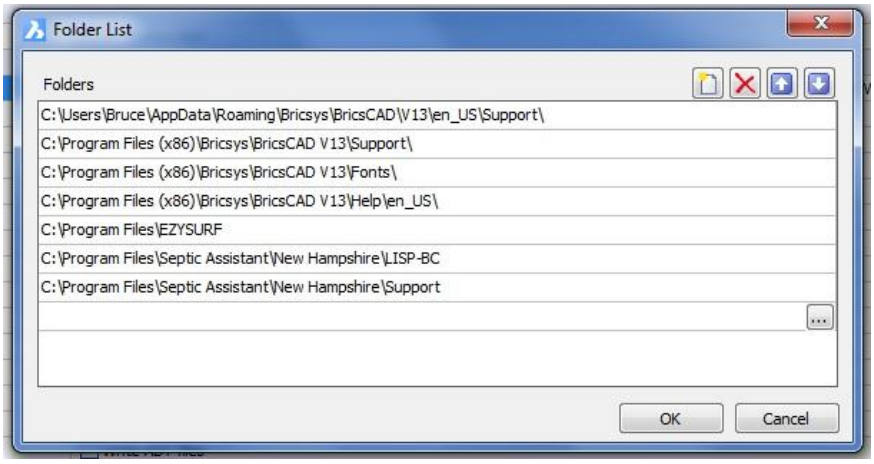
Support Directories (the hard way)

There is the requirement that a couple of Septic Assistant folders be listed as support directories within the CAD program you are using. Following is the method used to accomplish this task for each.

Bricscad Method;

- Type “Settings” at the command prompt, the dialog below will appear
- Select the Program Options, Files, Support Path options, as shown in BLUE below.
- Select the “…” button on the far right on the “Support Searchpath” line.





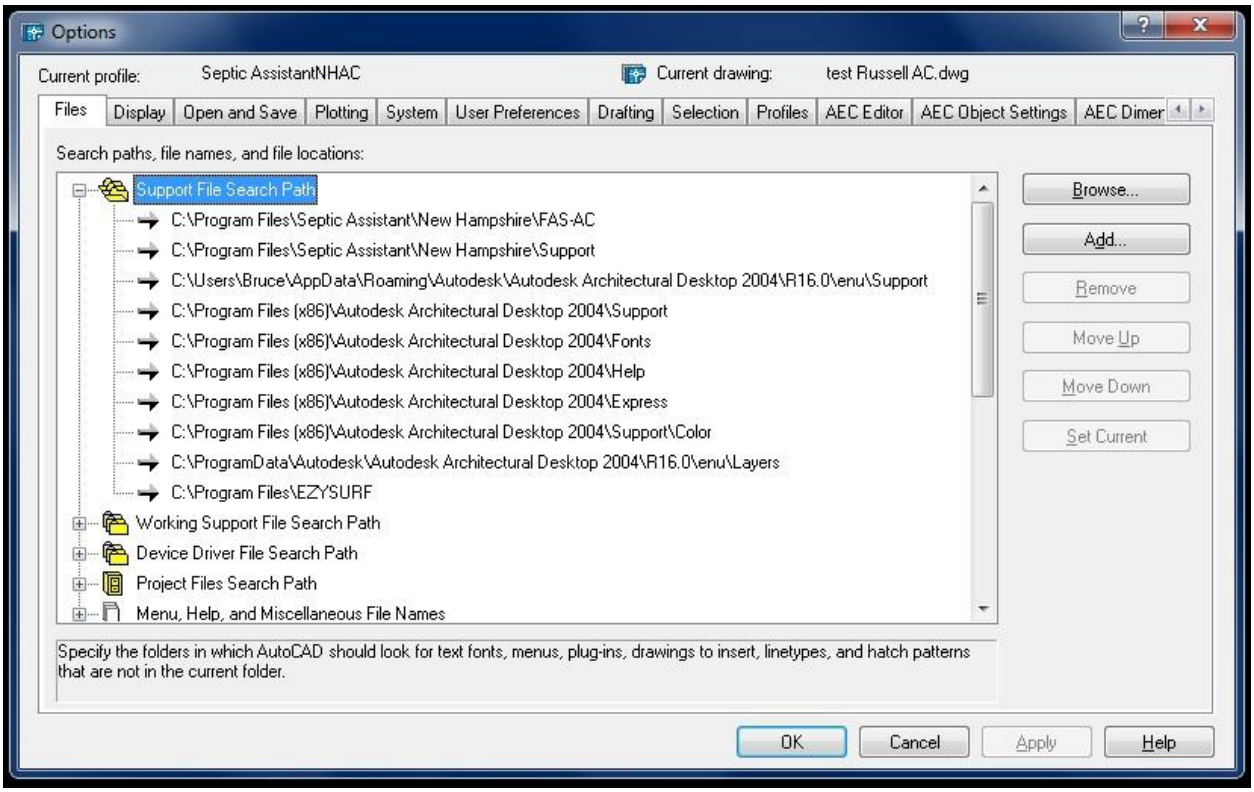
- Select the LEFT button at the top of the Dialog (looks like a piece of paper)

- Select the "…" button at the bottom and browse to the "c:\program files\septic assistant…." Folders to select the two folders shown at the bottom of the dialog above. (LISP-BC & Support)
- Select the "OK" button then the RED X in the upper right corner of the original dialog to close.

If you ever get an error message saying the search path or support directories are not properly set, you will need to perform this task. If you are using EZSurf for a contour generator you will also need to add that to the support path as pictured above.

AutoCad Method;

- Type "Preferences" at the command prompt.



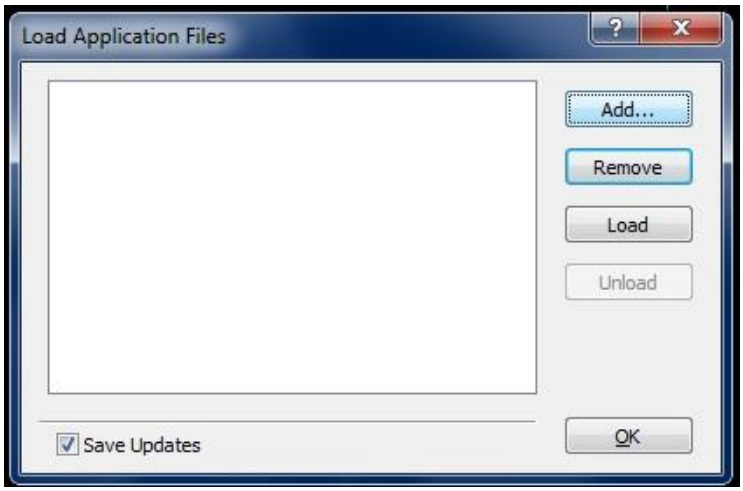
- Select the "Files" tab and the "Support File Search Path" as shown above.
- Select the "ADD" button.
- Select the "BROWSE" button.
- Browse to the 2-folders "Fas-AC & Support" as shown in the 1st two lines above.
- Select the "OK" button.

If you ever get an error message saying the search path or support directories are not properly set, you will need to perform this task. If you are using EZSurf for a contour generator you will also need to add that to the support path as pictured above.

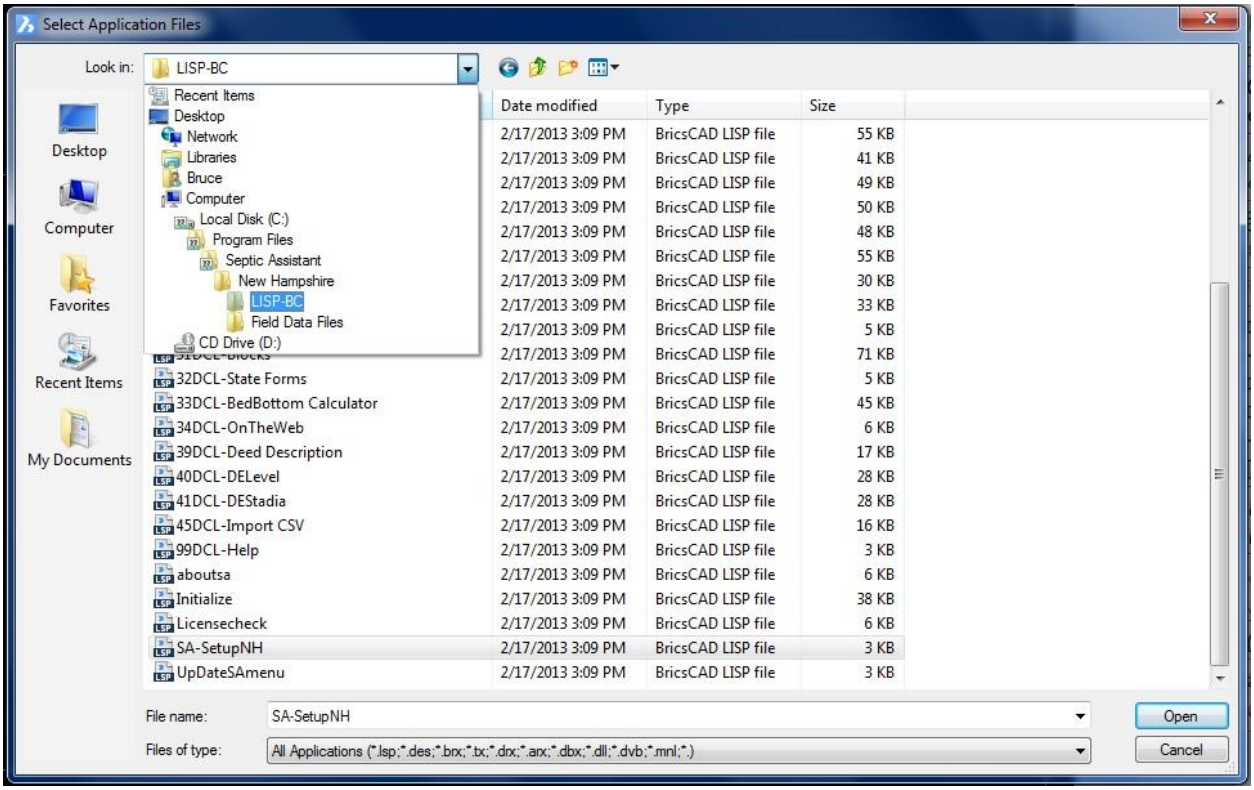
Support Directories (the easy way)

This method will update the SEARCH Path and load the Septic Assistant Menu for the Initial Load. Just follow the simple 3-step process listed below.

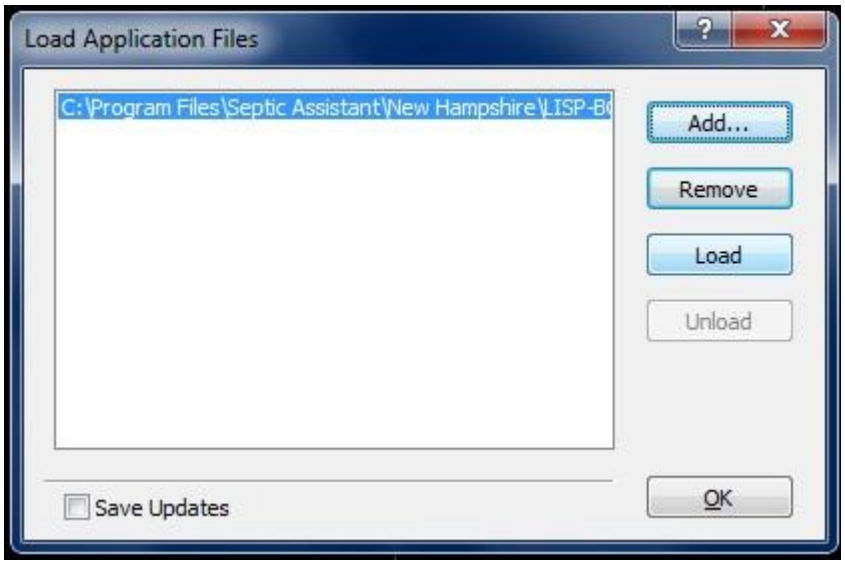
1. Entering "APPLOAD" at the command prompt you will next see this Dialog Box. Select the "Add…" button to proceed.



2. You will see the Dialog Box shown below, you need to browse to the LISP-BC or FAS-AC folder as shown below, than select the "SA-Setup [Your State]" file, select the "Open" button.

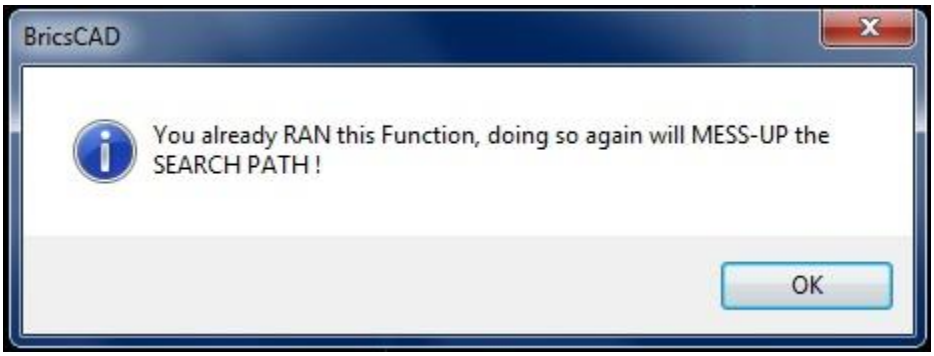


3. The file will now appear in the 1st Dialog box as shown below, select the “Load” Button.



That’s all there is to it. The SEARCH Path will now be updated and the Septic Assistant Dropdown menu will now appear at the top of the screen.

Should you get the Dialog Box shown below, that means you have already run the Setup Utility and cannot run it again.



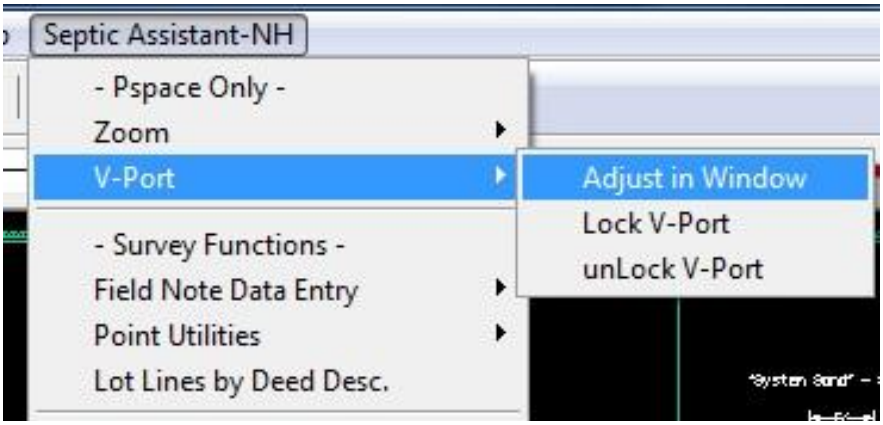
If you are running the Set-Up function because you somehow lost the Septic Assistant Menu, than you have 2-options to retrieve it.

1. Use the Load Menu file (the hard way) as shown above.

2. Delete the two Septic Assistant items from the SEARCH Path as shown in the SUPPORT Directories (the hard way) shown above. Once this is done the Set-Up Function will now run again.

(CHEAT METHOD; Open BRICSCAD or ACAD, make the window smaller than full screen, in Windows, browse to the “SA-SetUp” folder then drag and drop right into the CAD window. The function is now loaded and has been run. (Cautionary note; DRAG and DROP is not the same as CUT & PASTE.)

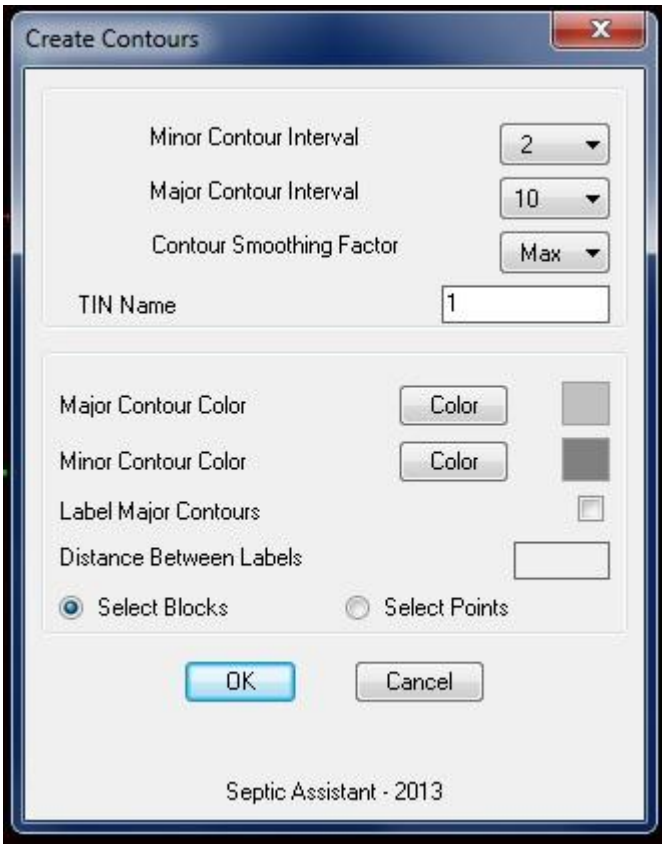
Adjust V-Port Window



Make the menu selection as shown in Blue above then follow prompts carefully. The only input needed from the user is to "Select Objects" – means select the edge of the viewport to center into. Then enter the scale on the V-Port = 1, finally select the point of the Site to be placed in the center of the V-Port.

Note, this works on any viewports, should you decide to create additional v-ports for details or other reasons you can use this centering tool. Please note selecting a scale of 1= 1"=20' on the plotted plan, so if you entered a scale of 0.5 = 1"=40' on the plotted plan.

Contours Existing Selection Box



This is the contour generator selection box for existing grade contours this function is very easily completed by making the desired selections in the Dialog Box, then selecting Blocks/Points to contour.

The Contour Layers will be created by the function, they will be named to match the TIN name you entered. The colors will be set per the colors you select in the Dialog.

You may automatically label the Major Contours ONLY, once the Label TOGGLE is selected then the Distance Option between labels becomes available. This is pre-set at 75', you may change this if desired or accept the 75' preset.

Depending on what the Entities consist of that you wish to contour, you may select Blocks or Points, Septic Assistant is assuming you are contouring the "Shot" blocks that are entered VIA previous functions, either importing points or entering field notes. You can however elect to contour Points, if you require.

Once prompted on the command line you can window around the entities, select each one individually or window be crossing method. That's about it, once you hit the enter key all contours/labels and TIN lines are created on screen.

Lot-Line by Deed Description

Here is another survey function that is required to put the finishing touches on your plan. Keep in mind this plan is not intended to be a survey plan, and you should have a note stipulating such on the plan. This function is simply a tool for the designer to locate the lot lines on the plan. Some basic knowledge of surveying methods is required to ensure any sort of accuracy. It is recommended that should any portion of the design be located close to the required setbacks precautions be taken to ensure compliance with all regulations, rules and ordinances.

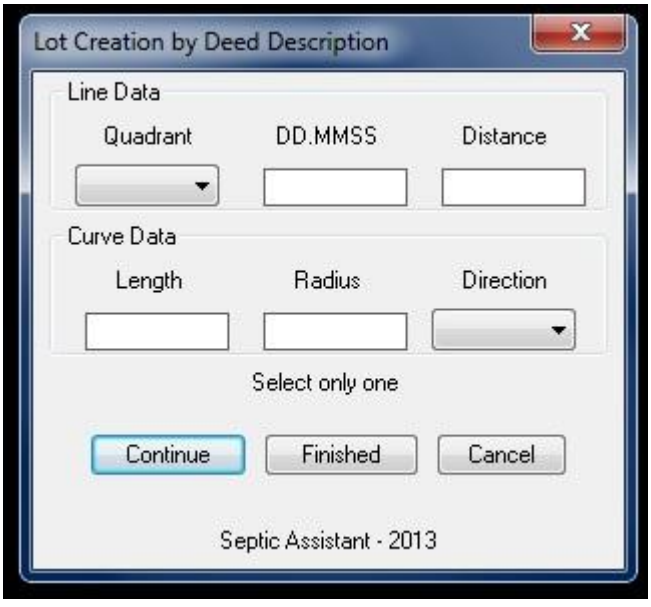
Lot Line Input Straight Lines;

Given the nature of deeds and recorded plans, not all lot line bearings are 100% accurate. It is quite common to have lines shown on plans with the bearings 180degs off from the direction required to close a lot. (e.g. N…E instead of S…W) To successfully utilize this function you need to be capable of recognizing this, and making the proper adjustments on data input.

Lot Line Input Curved Lines;

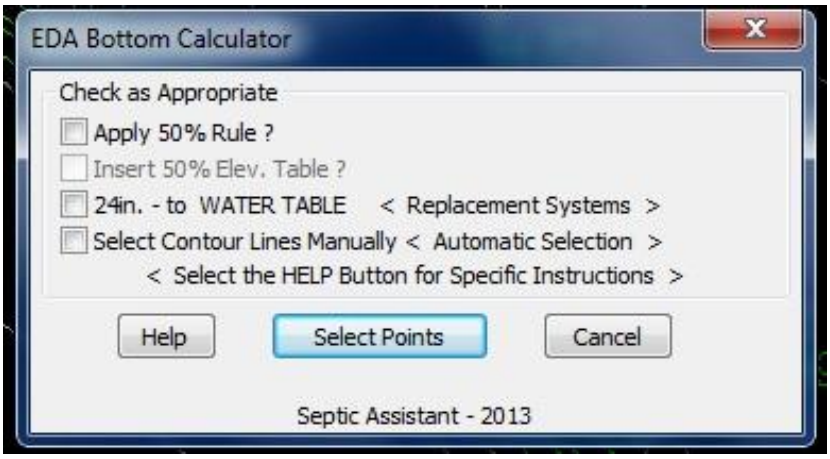
Curves are a little easier to interpret sometimes than the bearings on line segments, however they still require some basic survey knowledge. The required information Length (arc) and Radius are the simplest values to understand and are 99.9% of the time the information contained on deeds and plans. The one bit of data not always in the deed is the direction of the curve, this is always shown graphically on the plan. SA requires this information to generate any given curve, Left=CCW Right=CW.

In addition to the above quirks you also **cannot** start a Deed Description with a curve as the direction (cord bearing) is unknown, likewise you **cannot** create a non-tangent curve for the same reason. All curves are assumed to be tangent to the previous line or curve generated.



Simply start by screen selecting a starting point, hopefully a known shot you acquired in the field data collection process, enter the required data, then when completed rotate into your points.

Bed Bottom Calculator



This selection box is used for bed bottom input to determine the proper elevation of the bed bottom. There is not much data input here however you must follow the screen prompts carefully, you may need to scroll (zoom) in and out to properly pick the required lines.

Data Entry Box;

As Required per Local Code – Allows you to enter a number in decimal feet for additional separation as may be required locally, for example if you need additional separation due to the local code being more stringent then state regulations.

Toggles;

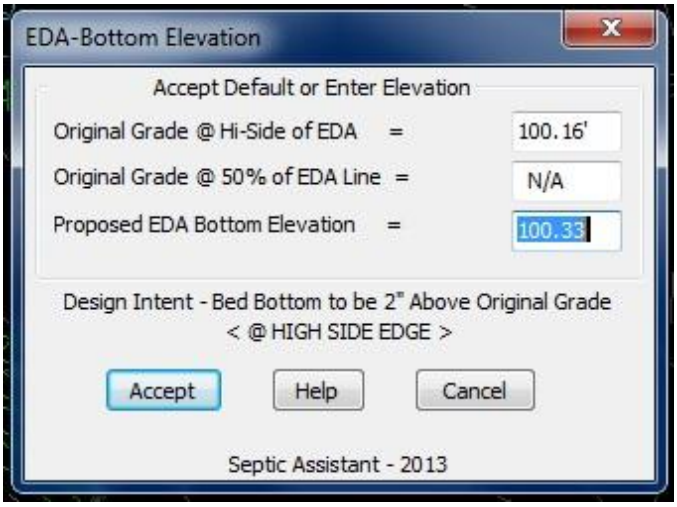
Apply 50% Rule – You need to select this box if you are utilizing the 50% rule, you may then optionally select the "Insert Table" option. You will need to have a line drawn through the EDA that represents the 50% line. (Follows the contours and 50% of the EDA is on each side of the line) The easiest way to draw this line is to draw a line from the midpoint of one end to the midpoint of the other end, then rotate the line about its midpoint to be parallel to the contours.

There is also a 24" the Water Table option in the event you are designing a replacement system. This will automatically calculate the 24" separation regardless of the system type.

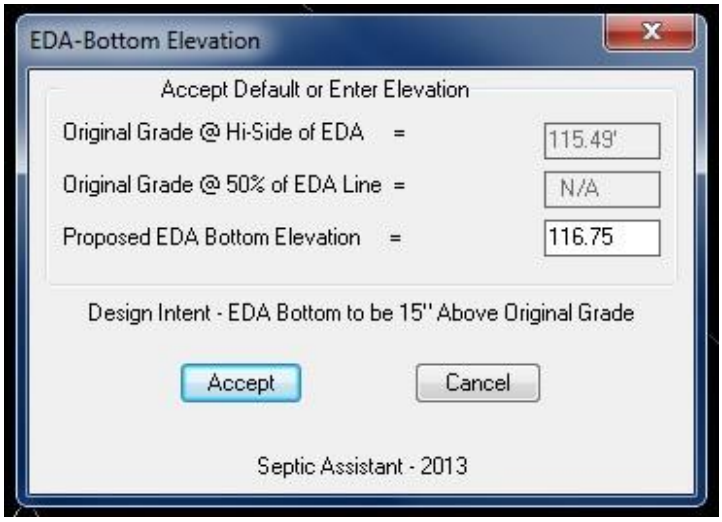
This function also has a "Help" button, if selected a secondary Dialog will appear with some tips or directions, depending on the function. Once the Help is canceled you will be back to the original Dialog.

Once you hit the "Select Points" Button just follow the command line prompts. Upon completion the next Selection Box will appear for further input.

One issues that arises with this function is if the EDA block is not at "0.0" elevation. This happens if you move it or insert it by snapping to another object, like a contour line or 3D point. To correct high-lite the EDA then in the properties box on the right side of the screen set the elevation to 0.0.



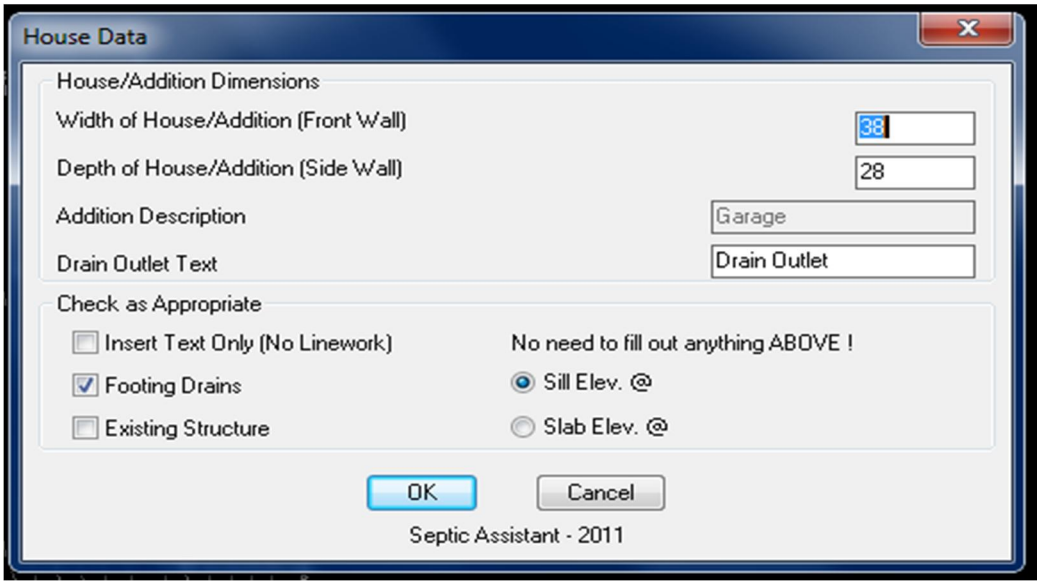
This selection box allows the user to adjust the bed bottom to their specifications; you may want to round up to a single decimal place or to whatever suits the individual's style. Note there is an information line that states the design intent so the Designer is aware of it, and can make adjustments accordingly.



This is the same EDA after changing the "Proposed EDA Bottom" elevation, notice the Design Intent has changed to correspond with the updated EDA Bottom.

Should you enter a lower EDA Bottom elevation than the calculated value, you will get an "Alert" notifying you of the need for a Waiver. The function and all subsequent functions will work normally.

House Generator Selection Box



This one selection box is used to enter the data for the house generation and for placing additions/ porches/ garages on the house block should the need arise. In the addition generator application there will be some data boxes that are not useable, this is intentional and there is no operational issue.

Data Entry Box;

- Width of House/Addition - this box defaults to 36' the input needs to be an integer (no decimal places)Depth of House/Addition - this box defaults to 36' the input needs to be an integer (no decimal places)
- Addition Description – Text input required for a brief description (not available for House Generation.
- Drain Outlet Text – Enter a brief description for outlet line (will be inseted along line at creation)

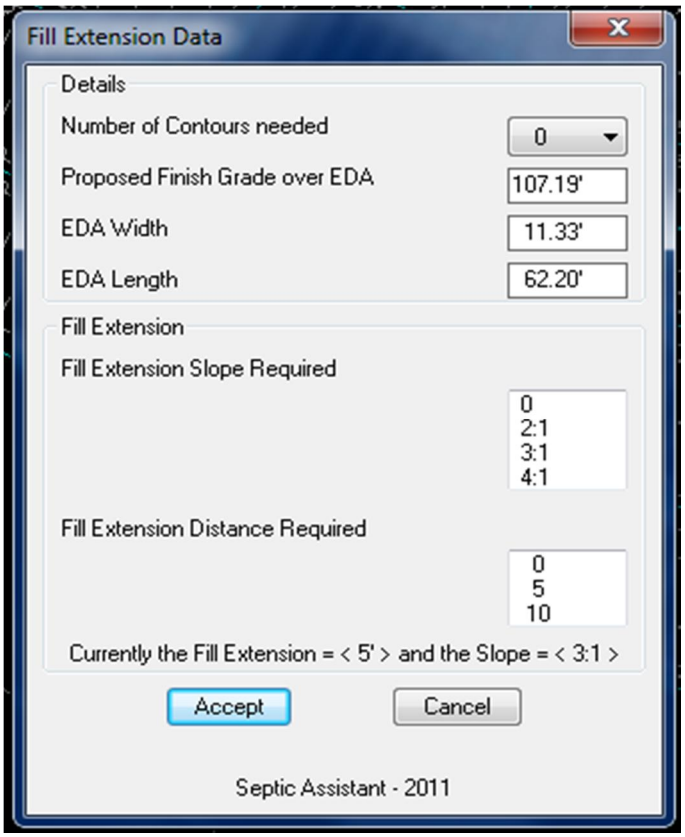
Toggles;

- Insert Text only – Will not draw the house footprint, it is used when you have an irregular shaped house that you draft separately, you need to place this text in it for the program to function correctly.
- Footing Drains – Check this toggle if you want footing drains installed, leaving blank will not generate footing drains.

Radio Buttons;

- Sill Elev. @ - Default, assumes full foundation or frost walls, height to be selected during Profile Elevation Generation.
- Slab Elev. @ - Draws slab instead of foundation in the profile section.

Finish Contours Selection Box



This is the contour generator selection box, please note the contour generator function is not fully automated as it does not trim off the final grading contours to the existing grade contours. There is one function that incorporates both sloped system contours and level system contours, no input is required from the designer to determine between which one is required.

Data Box Selection;

- The proposed finish grade is for information purposes only.
- EDA Width – This selection is adjustable as it may be advantageous to use this same function to generate contours around the House, in such cases you can set the numbers to whatever suits the conditions. The Default shown is the actual EDA size, and should not be changed for contouring around the EDA.
- EDA Length – See the Width description above.
- Fill Ext Slope Required- this selection changes based on Level or Sloped requirements. You need to make a selection here, the results are displayed just above the "Accept" – "Cancel" buttons.
- Fill Extension Distance – Same as Fill Ext Slope Above.

Please pay close attention to the command line prompts when inserting these contours, as the direction changes based on level or sloped requirements.

Contour Labeling Selection Box

The contour labeling is a simple selection process, please note the label text is inserted at the angle of the line it is referencing. The line selection order is not important, as the function recognizes each lines elevation and labels accordingly. There is an Explode Option in the LABELING Dialog, do not do this unless you are confident the EDA is where it belongs. Should you move the EDA you need to run the Bed Bottom Calculator, Create Contours and Contour Labeling again, as the relation to the bed bottom and underlying original grade will change.

When the contours were generated you will notice a dashed contour line at the top of the EDA, this contour line is finished grade and will not likely be an even two foot contour interval line. If you choose to label this line you will want to select the "Precision = 0.00" box, otherwise you will get a truncated contour interval displayed which is incorrect. Of course you can select the "Precision" box at any time, however the text is much tighter if no decimals are shown for the even two foot interval contours.

There is a wipeout mask under each contour label, and each label is a block. Should you choose to explode these blocks the mask may be placed over the label, making the label appear invisible. I suggest not exploding these labels, there is little benefit to doing so as exploding any blocks actually make the drawing file size larger.

You can use this same function for Labeling Finish Grade contours as well as Existing Grade Contours.

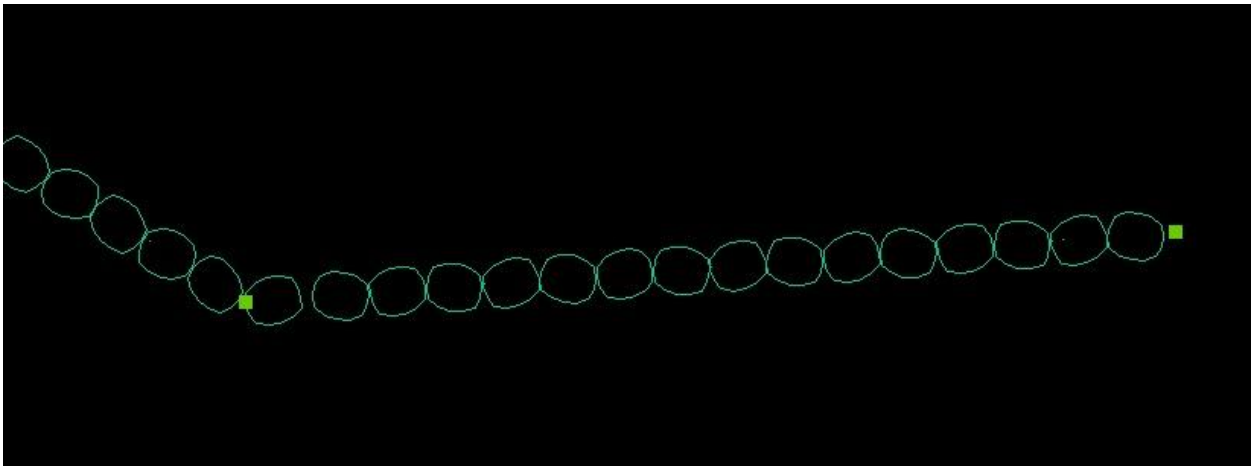
Trim & Label Selection Box

The contour TRIMMING is a simple one click process, simply select the “Trim EDA Contours” option as shown above. The EDA contours will be trimmed with their respective Existing Grade Contours.

Should you get unexpected results, you can “Undo” one step at a time by simply entering the “U” command at the command prompt. The uppermost EDA contour will be restored to its original shape, and so on down the slope. You can undo until the suspect contour is reached, then trim manually.

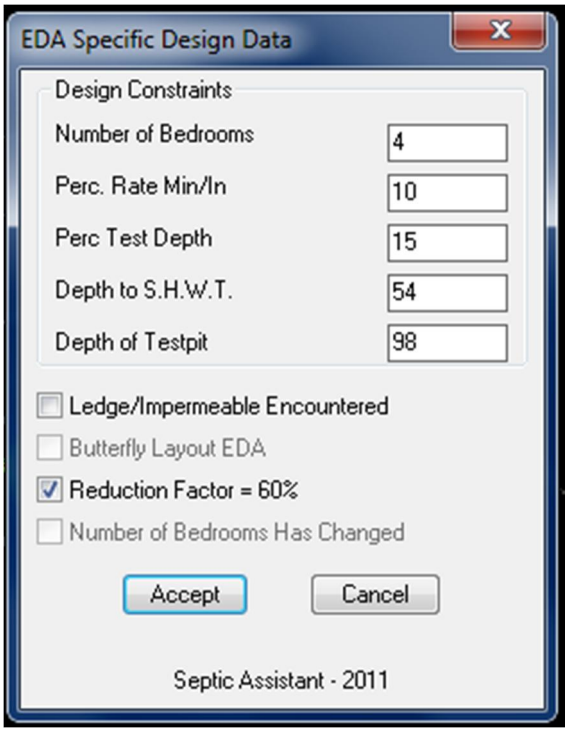
Custom Line Types

In addition to all of the standard line-types available in the CAD program, Septic Assistant includes a couple of customized lines. See selection available above, these line-types are real lines and may be selected from the ends and moved/stretches & rotated just like other line-types.



Once a line is hi-lited as shown above, you can simply select one of the green squares and drag it around the screen to re-locate the end of the line. Should there be a gap between the 1st & 2nd stones as shown above simply shorten the line slightly and the gap will get smaller.

EDA Generator Selection Box



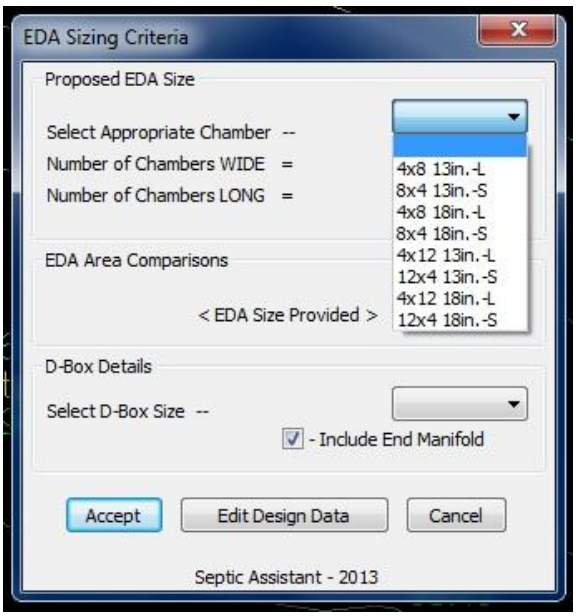
This is the same selection box you will see at the start of every EDA generator function, all information contained in it is stored within the drawing, so once you fill it out it will reappear as completed in successive EDA generations for the same job.

Depending on the EDA selected the different toggles may or may not be available for selection. Not all systems are able to be completed in a butterfly configuration at this time, and only chamber systems can have the reduction factor applied.

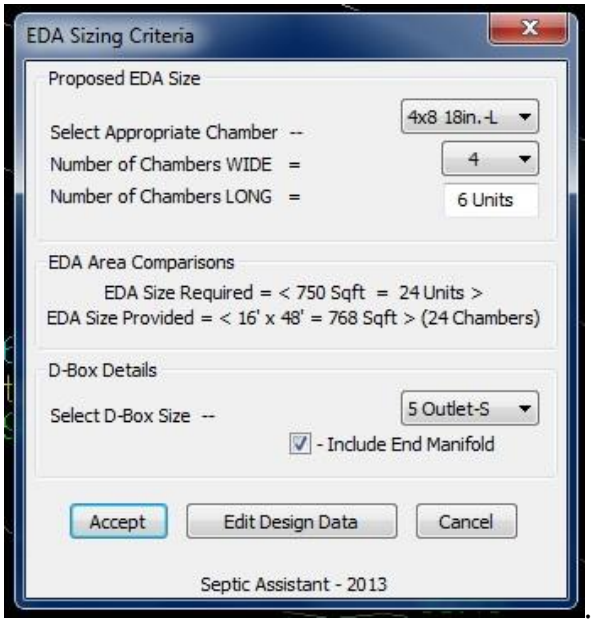
The other data boxes are pretty much self-explanatory, with the exception that this is one of the few data entry boxes that utilize inches instead of feet. All data entered is to be in inch format whole numbers only (integers, no decimal places), except for the Number of Bedrooms which is simply that in whole numbers only.

(Reasoning; I use a standard Stanley tape measure when logging test-pits and they are in inches. Since the perc rate in in Min/In. it seems reasonable to keep the same units in this Dialog)

Concrete EDA Calculator



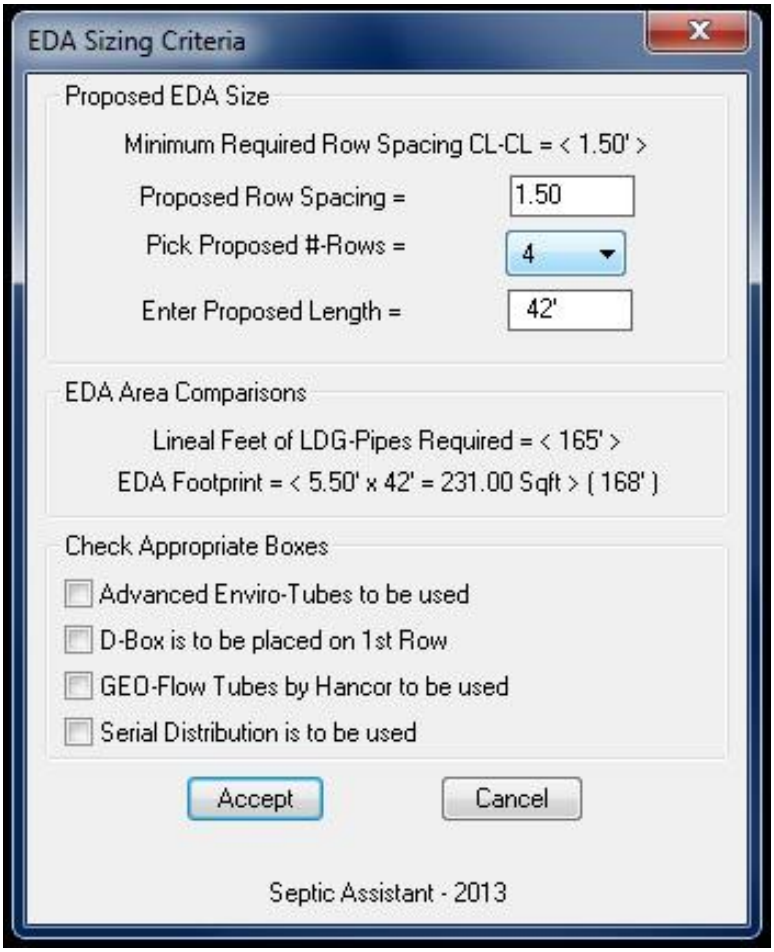
The Concrete EDA Generator consists of a single selection box, as shown above. Available chambers are listed in the drop-down box as shown above. Simply select the desired chamber configuration, than proceed with the rest of the selections.



Above is pictured the final selection box that appears in similar form for all EDA generations, this is the EDA size Calculator. You can try different numbers in the Width and Length boxes and the results are listed in the Area Comparisons section of the box. The widths are limited to the selections in the drop down list, the lengths are not limited until you get to maximum allowed lengths by Rule.

Enviro-Septic / Geo-Flow Calculator

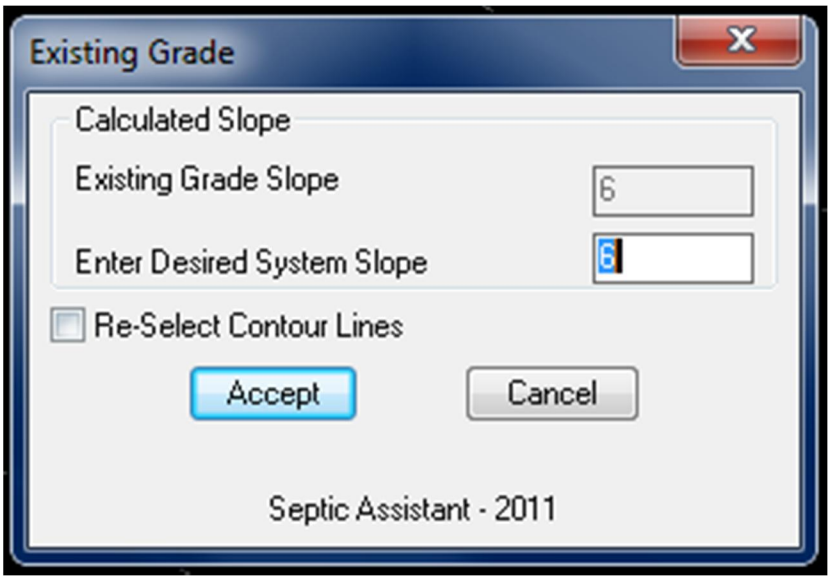
Prior to this box appearing you need to select contour lines in the EDA area to determine the existing site slope, once that is completed this selection box appears to finish the design process. See the next page for the Slope Selector Box.



This selection is similar to the other EDA calculators, as you can experiment with different combinations of Length and Widths to get the desired results. This one also has the Row spacing selection box, the default is per the manufacturers requirements, and input is accepted by the Designer to alter this measurement. In the "Appropriate Boxes" section there are 4-options shown, however there are actually 5-options, by leaving the "D-Box" & "Serial Dist." options unchecked a standard D-Box & Manifold are drawn on the inlet end of the EDA.

The toggles are self-explanatory, standard enviro-tubes are the default to use Advanced Tubes you need to select the toggle. All elevation calculations are based on this selection at this stage of the design process.

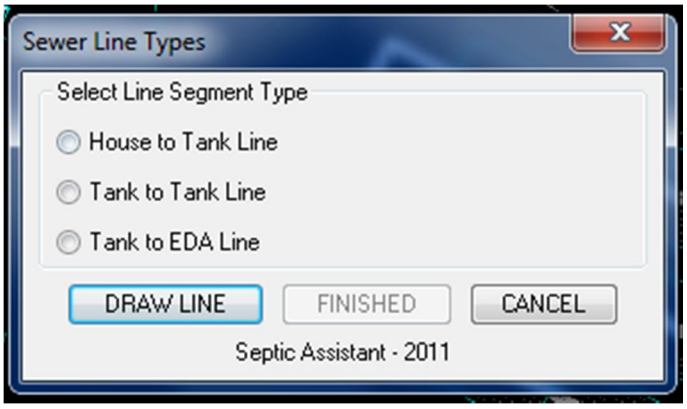
Slope Selector Box



This is the slope selector box that appears after selecting the contour lines, should you select lines that do not have an elevation (Z) you will get bad results, you can simply check the Re-Select option and try again.

When designing sloped systems you also have the ability to adjust the system slope to something other than the Existing Grade Slope.

Effluent Line Generator

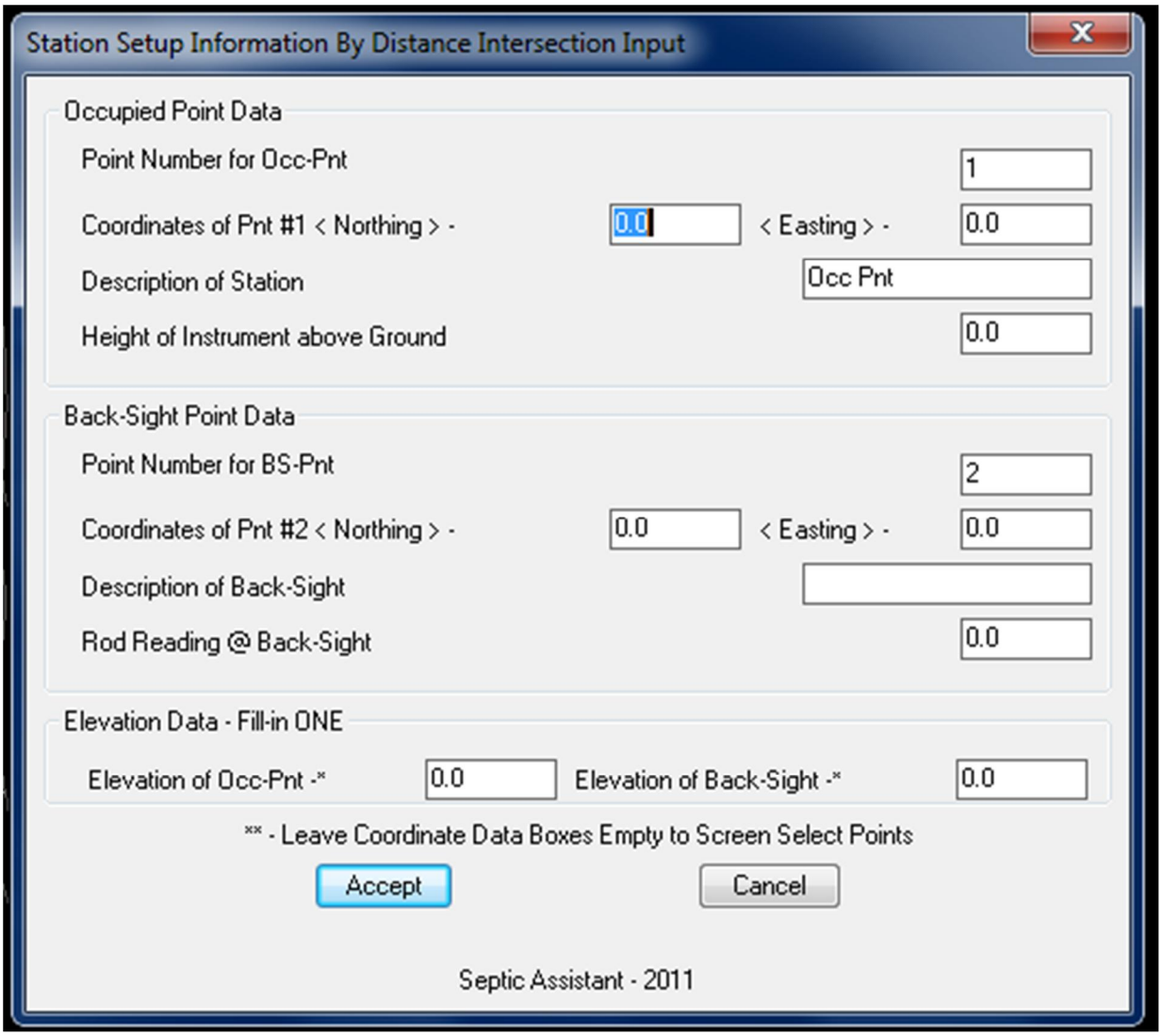


Some of the functions in Septic Assistant are to assist in the drafting process and you do not necessarily need to utilize them, however this is one function that you must use for other functions to complete their task successfully.

It is also imperative that the lines drawn are in the correct location within the system, for example you cannot draw the "House to Tank Line" between the Septic Tank and the EDA. This will give improper results in other functions. These line lengths are stored in an external data file depending on their location and as a dimension style within the DWG file.

Also do not draw a "Tank to Tank Line" any place else as this line tells Septic Assistant that you are utilizing two septic tanks in the design. Alternatively if you do not utilize the Tank to Tank line Septic Assistant will not know there are two Tanks in the Design.

Field Note Data Entry



This Dialog is for entering field note data into the Drawing as points, for use to generate contours and to depict site conditions. This is the Lazer/Level Dialog entry option, you need to have a Sta. Pnt #1 (where instrument is stationed) and a Back Sight Pnt #2 (typically a Benchmark or Foundation Corner).

There are two methods to start this process;

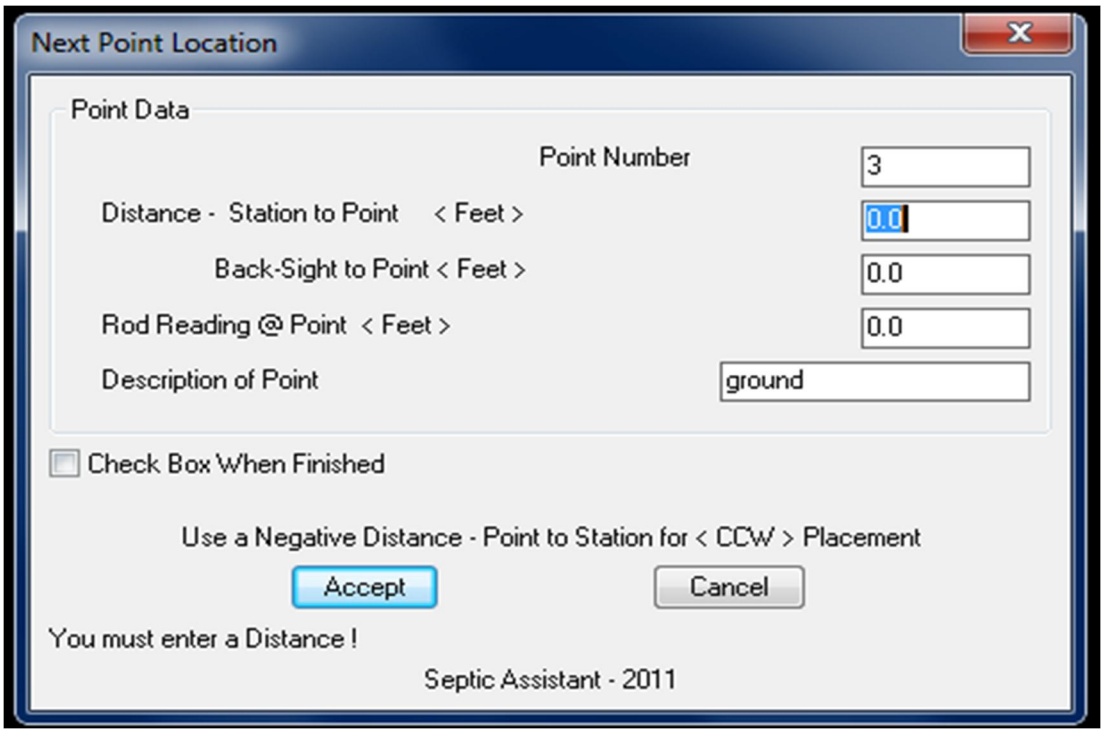
1. First draw a line that represents the distance between the two points in Model View. (prior to initializing the Data Input Dialog) Then leave the Coordinates Data Fields as is with no Data Entered. (0.0)

2. Enter coordinates that represent the distance between the two points. Septic Assistant will default to Model Space automatically.

You need to complete the Height if Instrument and the Rod Reading @ Back Sight Data Fields. You only need to fill out one of the Elevation Data Fields, typically if your Back Sight is the reference starting Elevation you would enter Data in that field (ie. 100.00) or whatever elevation you choose. Septic Assistant will then calculate the Height at the Instrument.

If however you have the instrument set up at the starting reference elevation, for example over a property corner monument you want to use as a reference elevation, then you would enter the elevation in the "Elevation of Occ-Pnt" Data Field.

Once you accept this Data another Dialog Box will appear as shown below.



This Dialog Box is used for entering Data for successive points. All Data fields need to be completed, the Point Number will automatically index to the next point number, there is no need to change unless you wish to change the numbering scheme.

The description Data Field will retain the same description from the previous point, update as required.

The method used to locate the points is by determining the intersection points of two circles. There are two correct answers to the intersections utilizing this method. To determine which

intersection to use you need to stipulate either a negative or positive number in the Station to Point Distance Data Field.

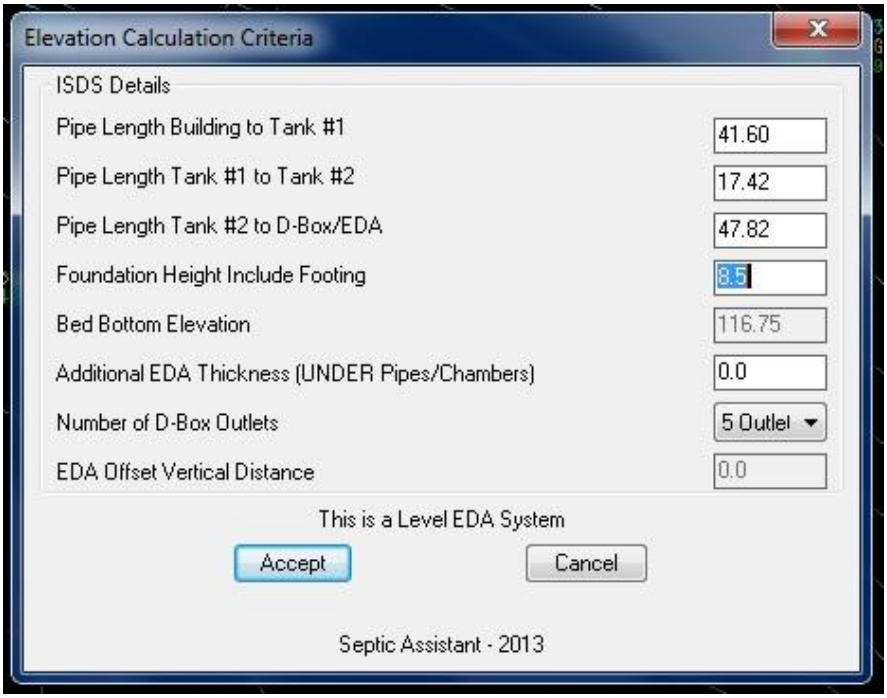
If you are standing on the Occ-Pnt and looking at the Backsight Pnt, positive distances (ie; 123.32) will indicate the correct intersection is to your right (clockwise) and a negative distance (ie; -123.32) will indicate the correct intersection is to your left (counter clockwise).

An error message will appear at the bottom of the Dialog box indicating that you did not completely enter all the required data, or whether or not the circles actually meet. If the circles do not meet you will need to enter proper data to continue.

Once you have entered the Field Data for the last point then check the "Check Box when Finished" toggle. This will end the Data Entry function and you should see your points on the screen.

Since there is no way of knowing where on the earth your points are located you will need to utilize the following method to center your data in the Model Window on the Paper Space Tab.

EDA Profile/Elevation Calculator



The profile/ elevation Generator calculates all ISDS required elevations based on input received throughout the Design process. To accept the minimum Code allowed elevations you could just hit Enter at all prompts, additionally the Number of outlets in the D-Box appears due to the varying inverts of different size D-Boxes this must be accurate.

You will notice that each Data Field is editable with the exception of the Bed Bottom Elevation, which should have been adjusted as required in the Bed Bottom Calculator.

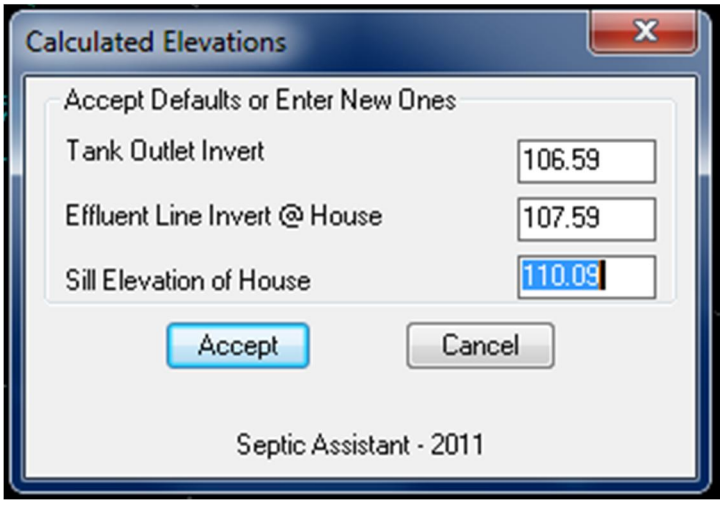
You must make any adjustments starting from the top and working your way down the list, so that Septic Assistant can make all necessary adjustments to successive elevations.

The pipe lengths shown are totals of the segments of each line drawn on the plan utilizing the ISDS (OWTS) Required Lines Menu item. If you did not draw your sewer lines in this manner you will need to enter the information manually.

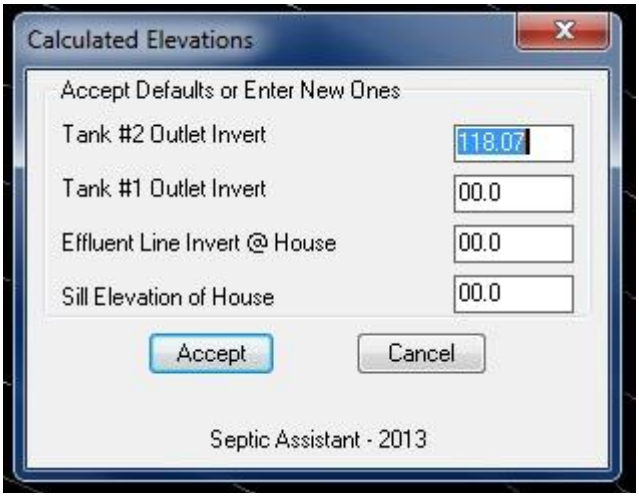
The Foundation Height Data Field defaults to 8.5 if you selected “Sill Elev. @” when inserting the house information, or to 1.5 if you selected “Slab Elev. @” when inserting the house. This is completely adjustable however should you choose a number less than 2.5 Septic Assistant will assume a Slab, otherwise a Foundation will be assumed.

The bottom Data field is for the Offset distance on Multi-Level EDA’s only and will not be editable for other types of systems.

Once this Data Box is completed and you select the “Accept” Button the next Dialog will appear.



If you are using a single tank system, this Dialog will now appear, should you be using two tanks, you will see the below Dialog Box suitable for two tanks.

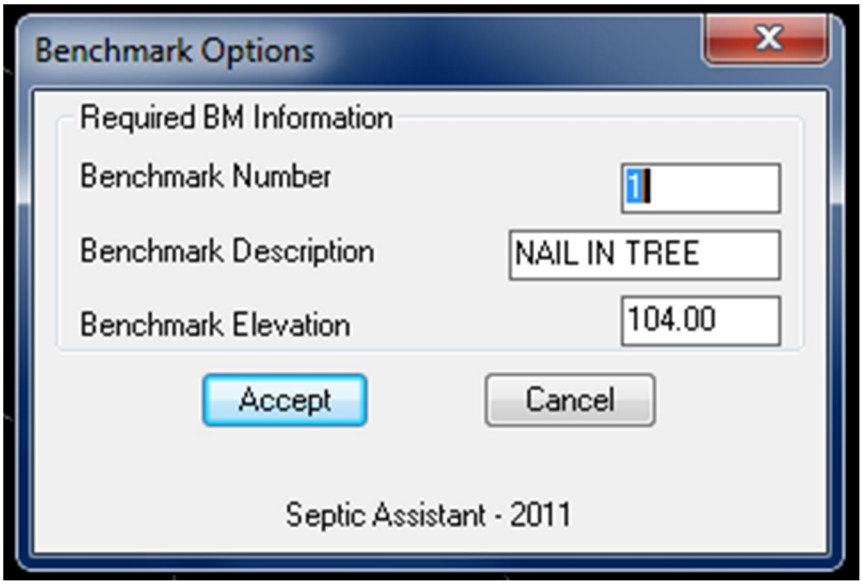


Again all Data Fields default to the minimum allowed by code and can be edited to suit your requirements.

The distance between the Sill Elevation and the Effluent Line Invert @ House is assumed to be 2.5’, however you can set the Sill Elevation at the elevation of your choosing. Altering the Sill elevation will also adjust the footing elevation, based on the Foundation height specified on the previous selection box.

WARNING;
Septic Assistant utilizes data from CSV files located in the “Support” folder to retrieve actual D-Box and Septic Tank information, in-accurate information in those files will result in in-accurate information on the plan.

Benchmark Insertion Tool



When you select the Insert Benchmark from the Site Details Menu, you will be prompted to select an insertion point. If you select a point or object with an elevation coordinate, the Benchmark Elevation shown in the Data Box will be taken from your selection point. There will be no need to modify in that case. Otherwise you can change according to your requirements.

The other Data fields can be changed to you specifications.

Locus Insertion Tool

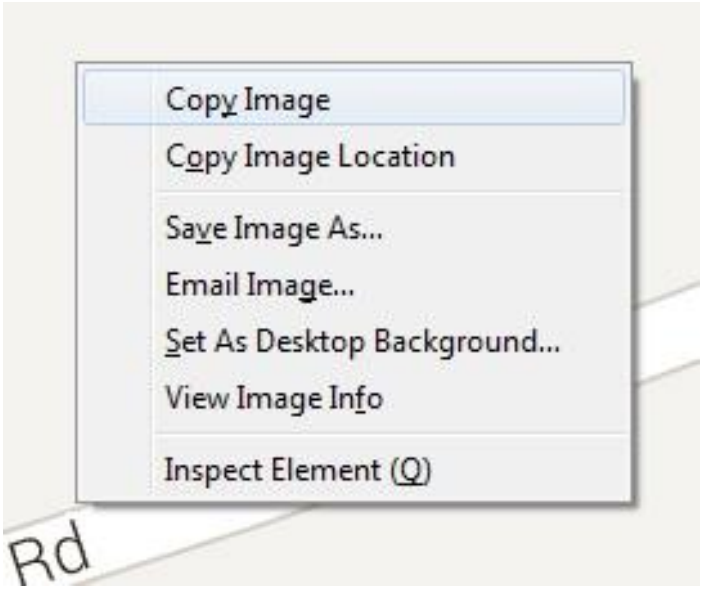
Upon selection of the "Insert Locus" toggle in the "Title Block" dialog, you will be presented with the above Dialog. By Default the "Marker" is on, to disable you must select the toggle. (Terrain & Satellite options require the Marker be on) You can enter either a Street – Town address as shown, the State is automatic (it is assumed the system is being Designed for the State you are using SA for) or you may enter GPS Coordinates. (the street & town are automatically filled in from data entered in the Title Block function)

The coordinate entry is sort of a hybrid type of system. You need to enter the data as follows;

- Set Output of GPS to - DD MM.MMMM (utilizes a space & decimal point)
- Enter as - DD.MMMMMM (using 1-decimal point with no space)

The coordinate method is more reliable and tends to have greater accuracy in the more remote areas. The coordinate method will place the Marker at the coordinates specified, the street method places the Marker on the street at the street number entered.

Once the “Get Map” button is selected you will be directed to a URL (internet location) displaying the map you requested. This map will be the only thing shown on the page you are on, simply < Right Click > your mouse and select the “Copy Image” option as shown below.



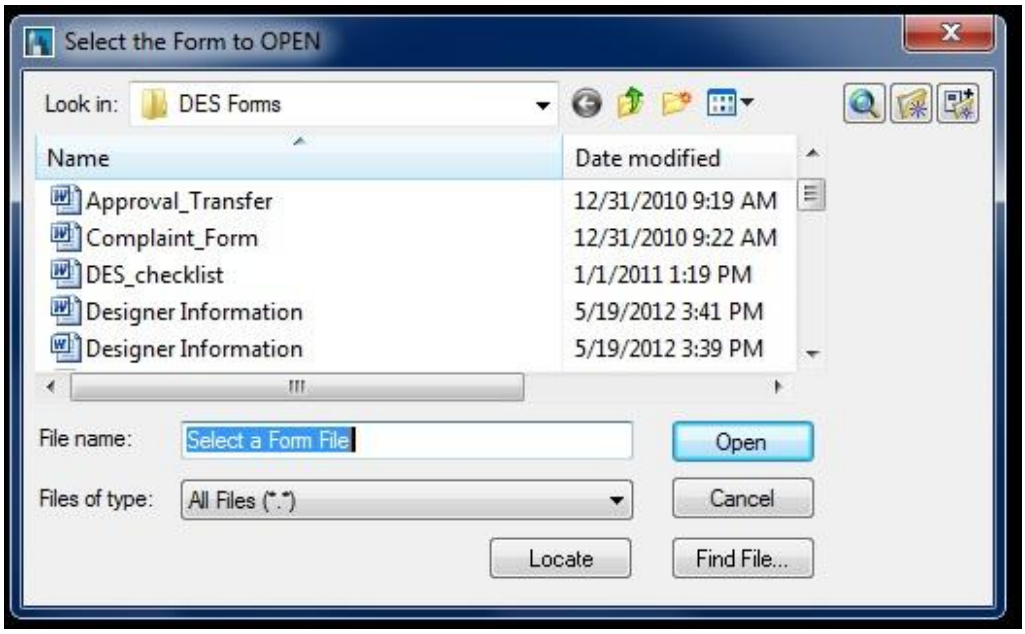
You can close your “Browser” window by clicking the RED-X upper right corner. You should now be back to the original Dialog, simply select the “Accept” button. The Locus Map should now appear in the Locus Map place in the Plan Title Block.

If you get a message saying Map Not Selected or you get something else totally different in the Locus Map location you did not perform the “Copy Image” properly. Please try again.

This method cannot be revised due to Microsoft Security Issues, if it were possible to automatically paste files to the buffer from the internet it would be near impossible to stop MALWARE from destroying your computer.

NH-DES Forms

(RI-DEM) (MA-DEP)

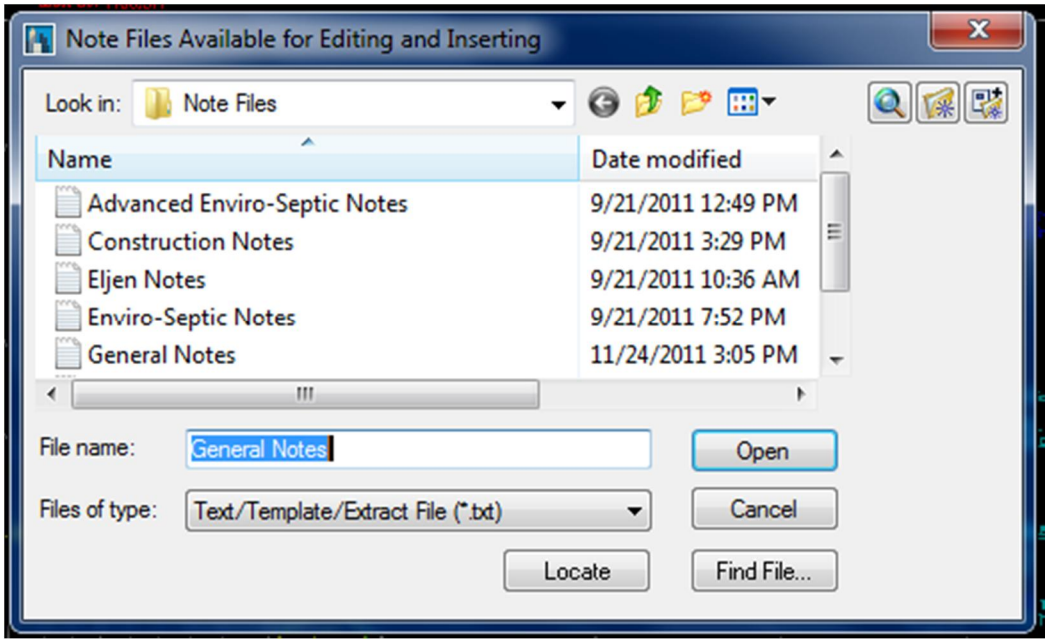


These are the standard forms currently used by your Regulatory Agency; they are located in the Forms directory. All files in the folder are listed however SA will only try to open DOC, PDF & TXT documents with the appropriate editor. To add forms just place them in the "…Forms" folder.

You will need to have Adobe Reader, Windows Word and Note-Pad placed in their default folders by the software suppliers. You may not get dependable results should they not be located there.

*.- You need to select the "Save to File" toggle on the Title Block Data Dialog to enable this feature. As time goes on I may enable more forms to do this.

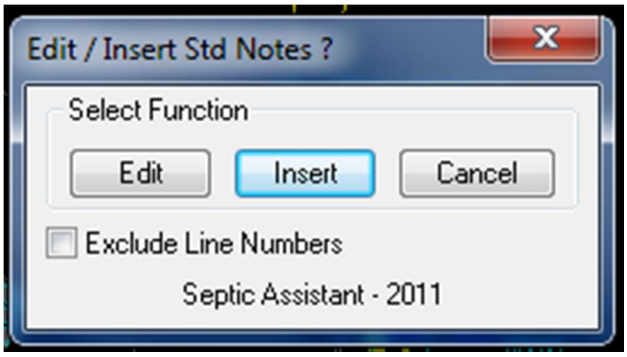
Note Editor / Insert



In an effort to enable Designers to customize Septic Assistant to suit their individual styles and criteria I thought it best to enable full Standard Note editing/creating. I have included some standard notes in the "c:\program files\septic assistant\new Hampshire\note files\" directory for your use. These are all ASCII files created with NOTEPAD, and need to retain that format for your CAD program to insert them as text lines.

You can edit, create, rename or delete these files at will. When you select the Std. Note Editor /Insert Button in the Std. Site Details Dialog Box the Dialog Box above will appear.

You need to select a file, than select the "Open" Button, the following Dialog Box will then appear.



If you select the “Edit” Button the Note file will open (provided you have note-pad installed on your computer).
The first line of the file is the Width of the text field that your CAD program will use for inserting the text. If you experiment with different numbers here you will see the function of it.

The second line is the Note Heading, the “%%U xxxx %%U” format underlines the heading in your CAD Text Line.

Continue each Note line as one line of text, do not select the ENTER Key until you reach the end of the line.

You can select the SAVE or SAVE AS option to keep any changes made.

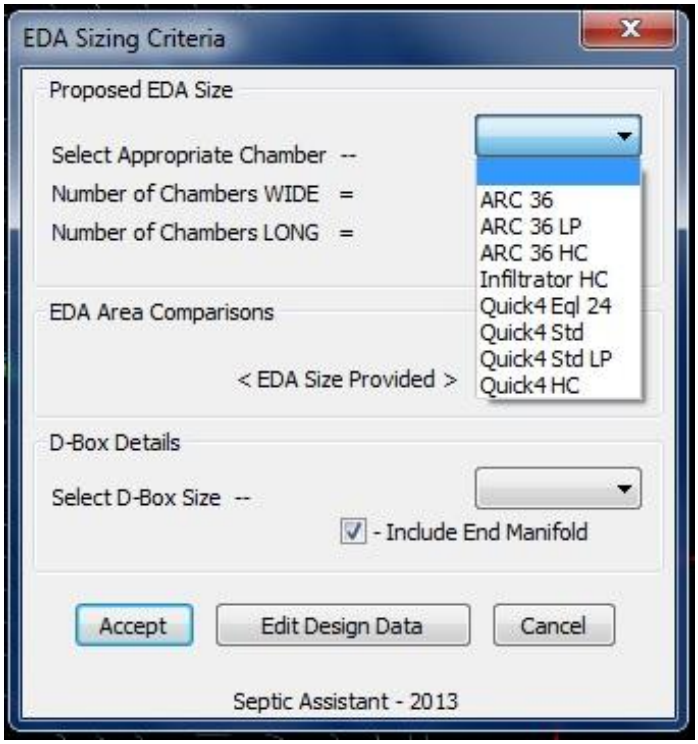
You will now be back to the Previous Dialog Box. To exclude line numbers select the “Exclude Line Numbers” toggle, then select “Insert.

You will now be prompted for an insert point at the command prompt. (Select the upper left corner) The note is inserted as text lines not a block, so you can edit again as you see fit.

As you can see this will give you maximum flexibility in creating your own set of custom notes for you application.

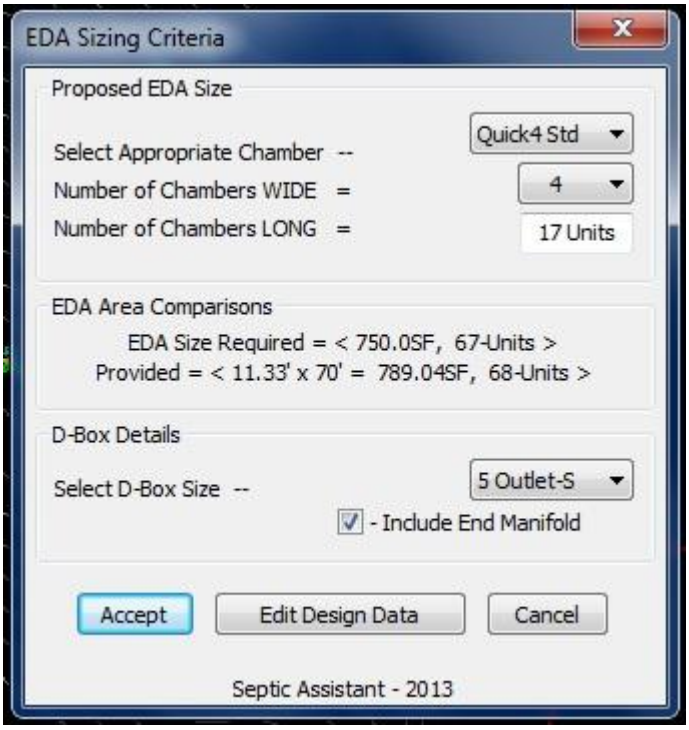
Plastic EDA Calculator

Once you either complete the standard Design Constraints Dialog Box or enter the "Accept" Button common to all EDA Functions, you will see the following similar Dialog Box.



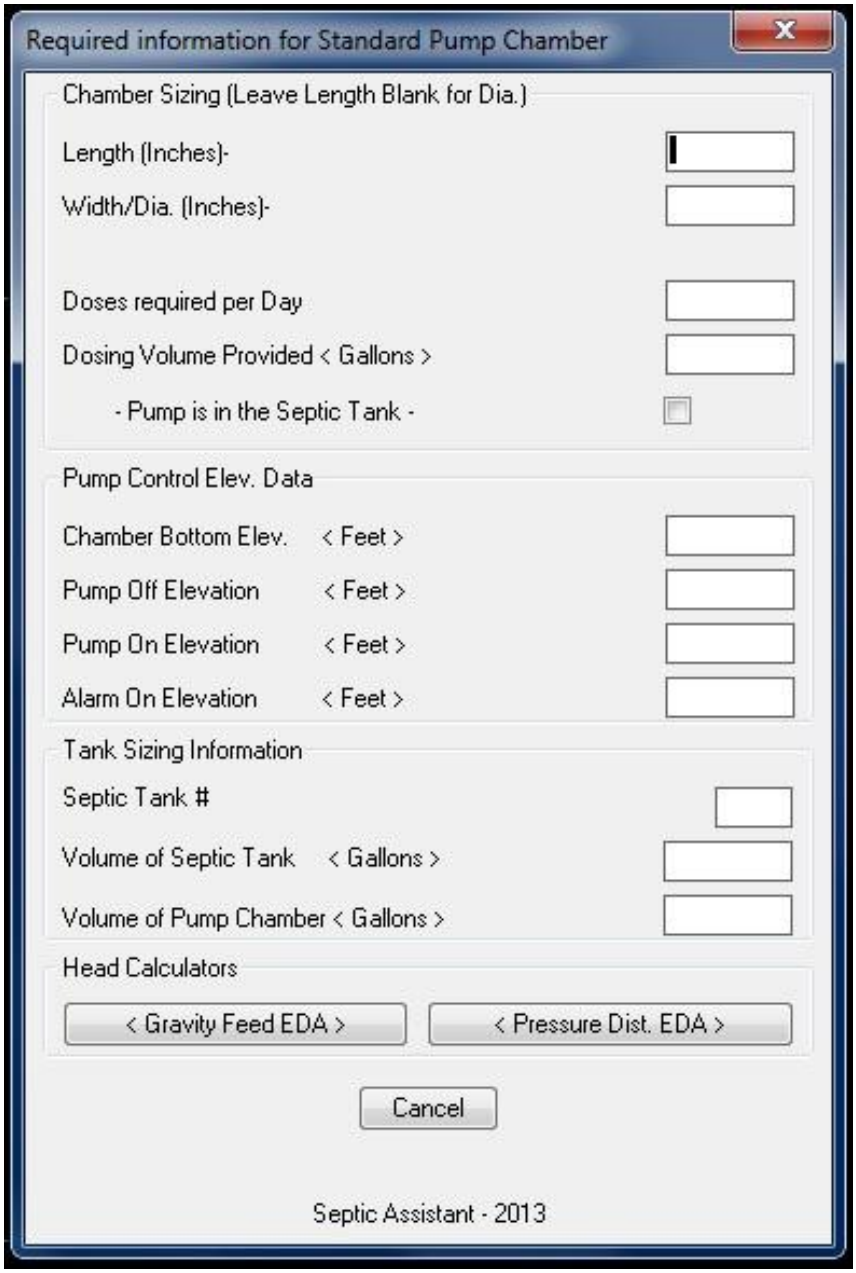
All chambers listed are in the Plastic-Chamber CSV file in the support folder. This file is completely editable by the user, so that locally available products and their dimensions can be used in Septic Assistant. The 8-most popular chambers used in NH are currently listed as shown above. Simply select the product you would like to use, than complete the balance of the items to create the EDA to your desired specifications.

You can select to not use an "End Manifold" at opposite end from D-Box, and you can select the D-Box size. See below completed Dialog.



If the area calculation seems like it does not add up, the end cap area when allowed is calculated into the final EDA area. Since the program has no way of knowing how many rows the EDA is to be there is no allowance for this End Cap area in the EDA Size Required calculation in figuring the # of Units Required. It is entirely possible to meet the minimum area requirement and not have the number of units shown as being required.

Pump Chamber Calculations / Insert



This is one of the more technical functions built into Septic Assistant. Once you have indicated the TANK outlet invert is lower than the D-Box or EDA Inlet Invert during the "Profile Generator" function, this function is automatically launched. Above is the opening Dialog containing the Pump Chamber Specific Data. The dimensions listed at the top are based on the Pump Chamber or Tank selected. Once you get down to the "Head Calculator" buttons, select the appropriate button, the next Dialog below will then appear. Should you select the "Pump is

in Tank" option, all elevation calculations will then be based on the outlet invert instead of Tank Bottom. (Since this type of system assumes the entire tank volume is being pumped)

Doses required per day are completely at the Designers discretion the default is 3.

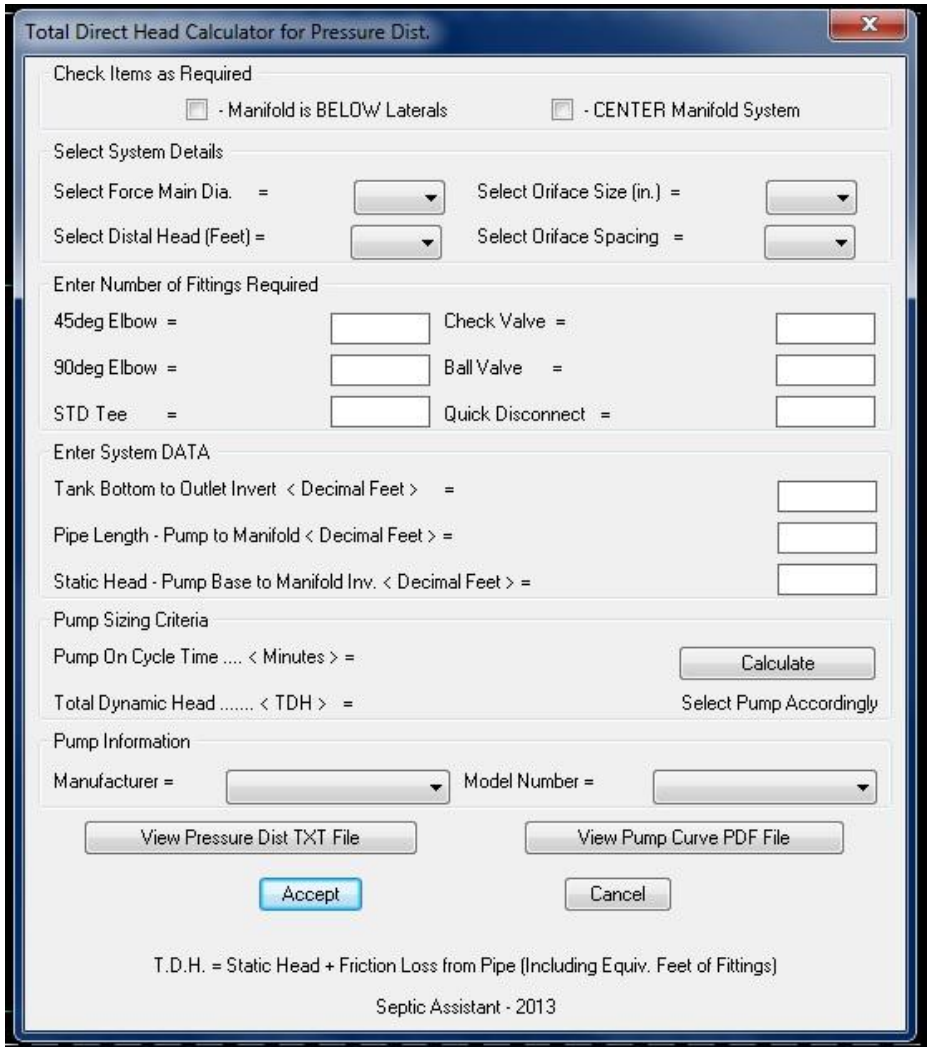
Total Direct Head, is calculated using all of the information input into this Dialog using the HAZEN WILLIAMS formula for friction losses. You can run through the Dialog several times iterating the flow rate to achieve a result that matches with the pump you have selected.

You can view the pump curve of the actual Mfg. & Model selected in the drop down selection sets. You will need to close this curve file then either choose "Accept" or chose a different pump. In doing this several times and making small changes to the input data you will be able to match a pump to the Design Data.

All Fields that can be calculated are done so is you proceed done the Dialog, just complete as required. You may use decimal places in the elevation data fields.

Once you select the “Accept” Button you will be prompted for a location for the pump chamber on your drawing. If you have actually reviewed a pump curve then the curve will also be inserted into the plan, if you did not view the curve then no curve will be inserted. (Without reviewing the curve how do you know it is acceptable?)

For pressure distribution systems the below dialog is now open on the screen.



This is a fairly technical dialog, and the user will need some familiarity with pressure distribution systems to successfully utilize it fully. The function will determine lateral sizing, manifold design (telescoping type) as well as required pump specifications, it is critical to system performance that the proper pump be selected. As part of the system design process you should adjust the “Force Main” size to match the manifold size, there is no need to have the force main larger than the manifold. Once completed the user can select the “View TXT File” option, a report detailing the system components and required pump specifications are listed. You can save this report to the location of your choosing, note; each time you select the calculate button a new report is generated, you will need to close the existing report prior to selecting the “Calculate” button.

Std. Site Details Menu Item

This is a shot of the standard site details menu item. You will notice the lack of an "Accept" Button here, as you will see there is no need for one, as an item is selected you will be brought right to the particular function. (the pump buttons are not activated)

Most of these are self-explanatory, some of them are described in more detail in these help pages.

Septic Tank Placement

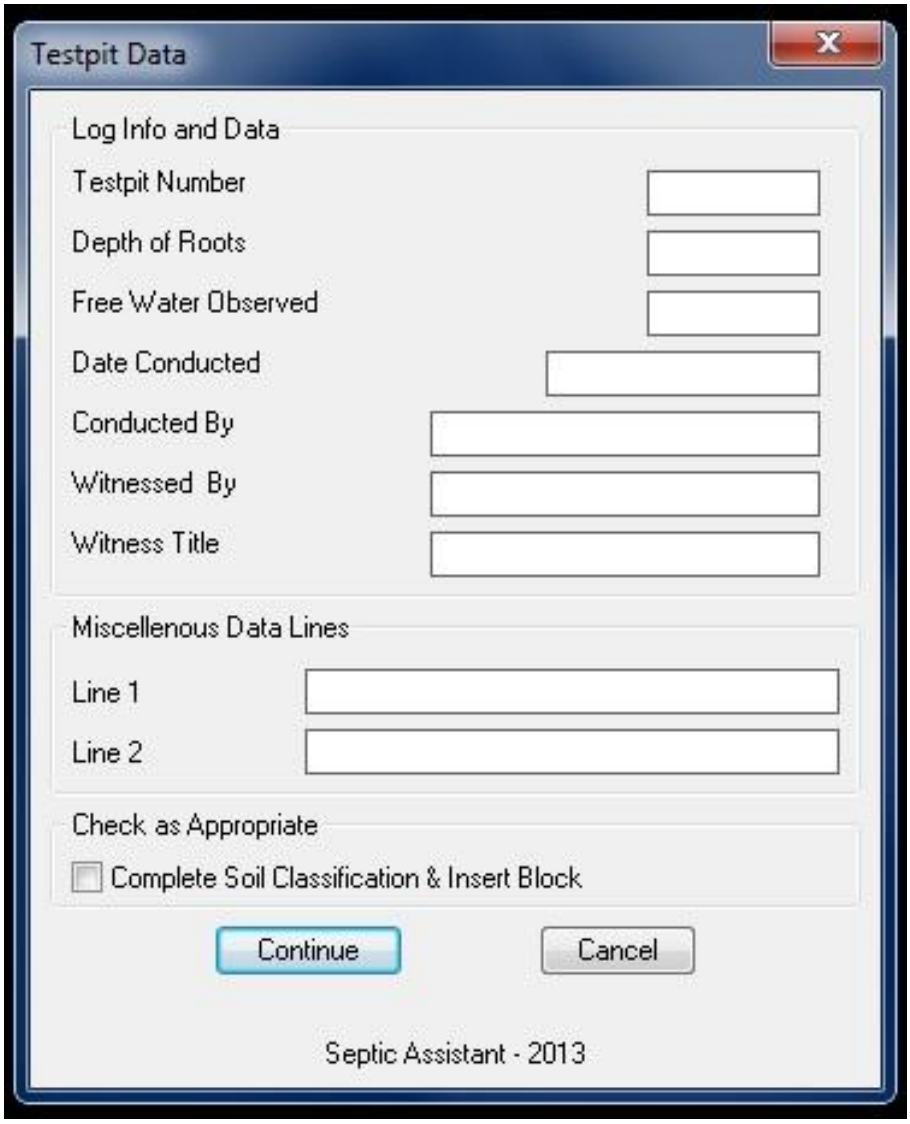
This sounds and seems like a simple enough task, and with a few precautions is a very easily accomplished task. Please follow the guidelines listed below;

- The 1st tank to receive effluent is the #1 tank.
- Always insert the #1 septic tank first.
- The inserted order must remain the actual tank order (Do not move tank #2 to the 1st position).
- Do not rename the Tank block names.
- Do not EXPLODE the Tanks, all attributes can be edited by double clicking.
- Septic Assistant is designed to accept two tanks only, do not utilize two tanks then a pump chamber, if you need to do this please utilize a 2-compartment tank for one of the tanks.

Above is the "Calculated Tank" dialog, the list shown is generated from the Septic Tank.CSV file in the support directory. To add tanks to this list simply edit the CSV file accordingly. Since SA searches this list in descending order (top to bottom) for acceptable tank sizes please make sure the smaller tanks are at the top. And is you can see above I would also recommend the Ledge Tanks be placed immediately after the equivalent non-ledge tank.

Both 1st and 2nd tanks can be selected here simultaneously and will be inserted into the plan successively.

Test-pit Log and Soil Data Dialogs



This first Dialog is pretty self-explanatory, the "Complete Soil Classification & Insert Block" toggle refers to the SCS Soil type and map location, and can be excluded without affecting the test-pit log portion.

The Designer name will default to the registered Designer, this field will accept user input if required.

Then "Witness" options can be left blank if none is required, do not enter spaces here as you will get a couple of lines with short dashes in the Test-Pit log when doing so.

Once "Continue" is selected the following Dialog appears.

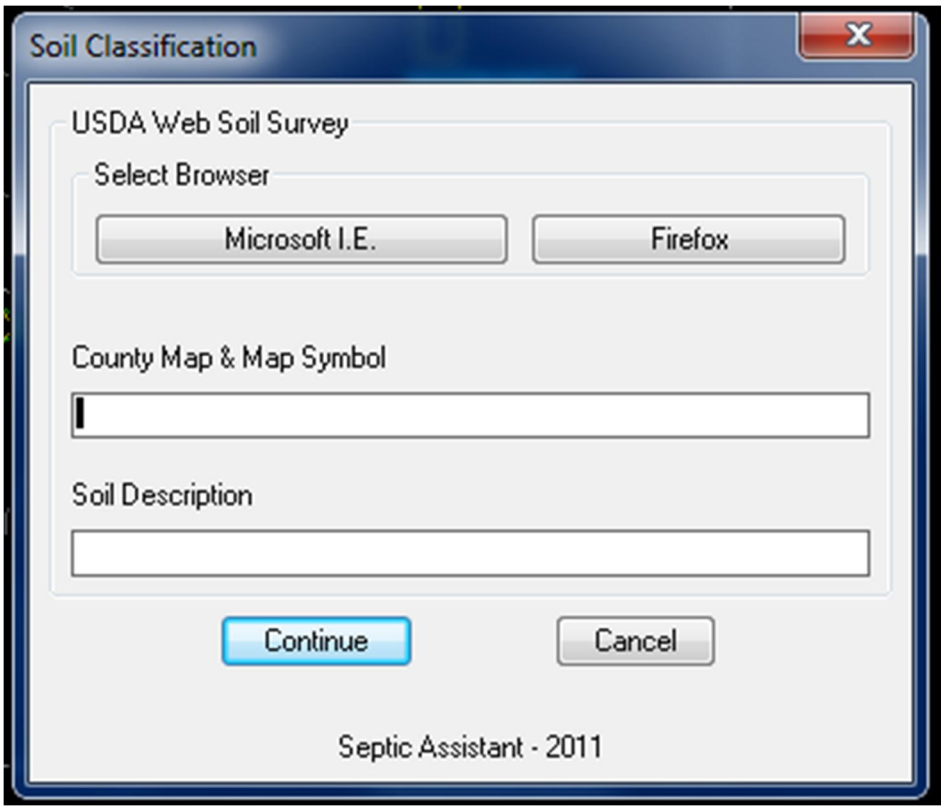
This is the individual soil horizon description Dialog and needs to be completed for each horizon. Instead of prompting for the number of Horizons you require (limit 6) you simply toggle the "UNCHECK when finished" box.

I believe that I have included every color currently available in the 2009 Munsell Soil-Color Charts, including the including the GLEY & WHITE optional pages. There was a lot of data here so if you get any bad results, it is very possible I missed something, just let me know and I will make the necessary corrections.

The USDA-NRCS Soil Properties section are values for the "Structure", "Texture" & "Consistency" right out of the USDA-NRCS Fieldbook for describing and sampling soils Version 2 2002. A copy of which is in the Rules & Regulatory Directory of Septic Assistant.

I have created a check list for recording test-pit data located in the DES Forms directory of Septic Assistant, utilizing this log makes data entry much smoother and quicker, as all Information is in the proper format already.

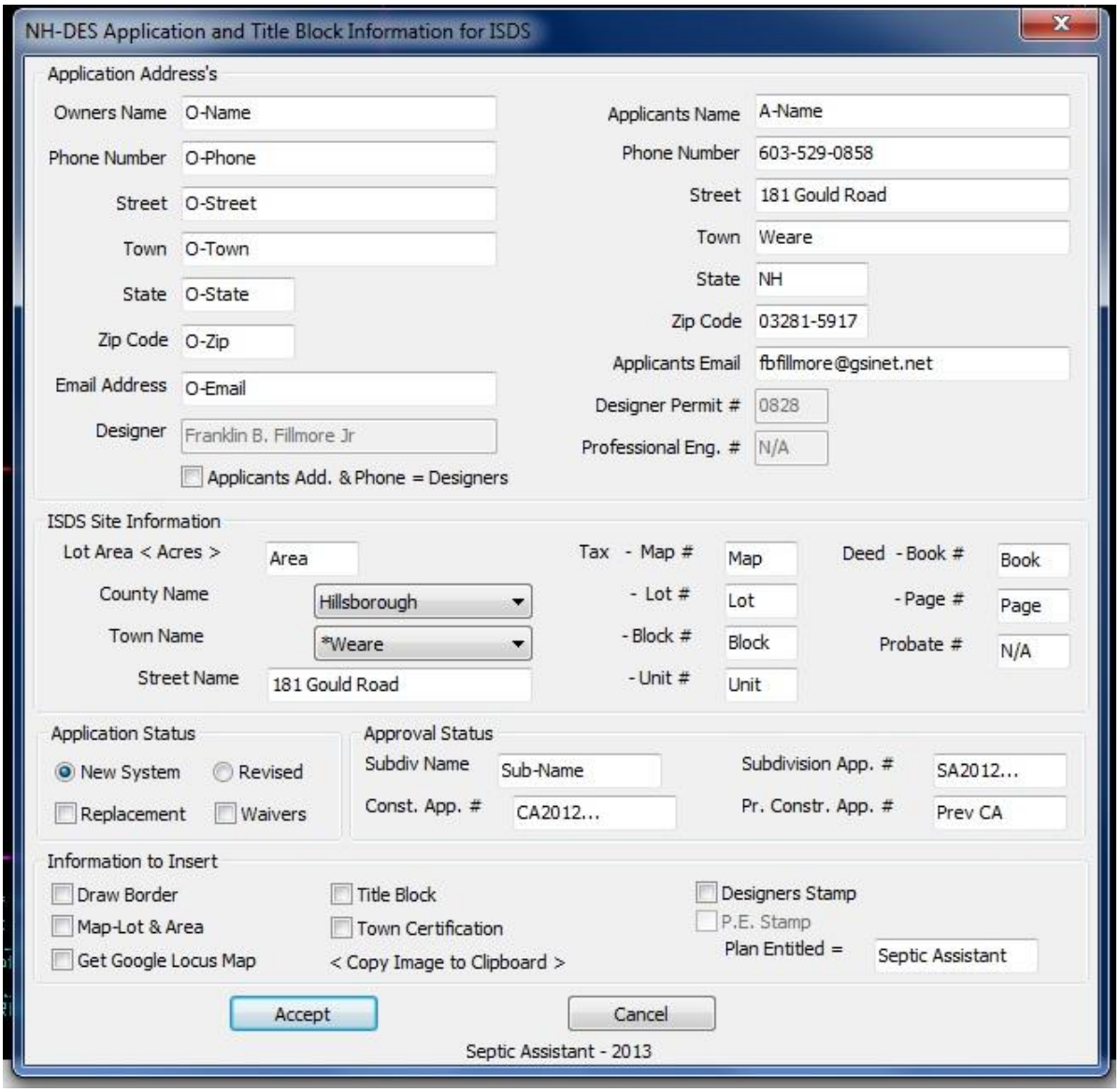
Once that portion of the test-pit logging is completed and you elected to fill in the "Soil Classification" data, the following Dialog Appears.



You can either go online (by selecting "Microsoft" or "Firefox") to the USDA Web Soil Survey site to retrieve the data, and just cut and paste to these fields, or you can enter the data directly. (Obviously you will need internet service to go on line, the USDA site can be slow)

Upon selecting "Continue" here you will be prompted first for a location to place your test-pit on the plan, then for a location for the "Soil Classification" Block.

Title Block Data



There is a lot of information on this one Dialog box, it is not required that you fill it out all at once as all of the information here is saved internally within the drawing, for retrieval and reference. Each time you make changes to the data fields here they are saved/updated so the next time you call this function you will also see the last data entered.

When you purchased Septic Assistant you were sent a Designer File that is encrypted and is read by this function, if you check the "Applicants Address & Phone same as Designers" the data from that Designers File will fill the appropriate fields.

In the Site Information area the Town Name is listed, Towns preceded by the * symbol require some sort of pre-approval, please check with the local authorities for the extent of their pre-approval requirements.

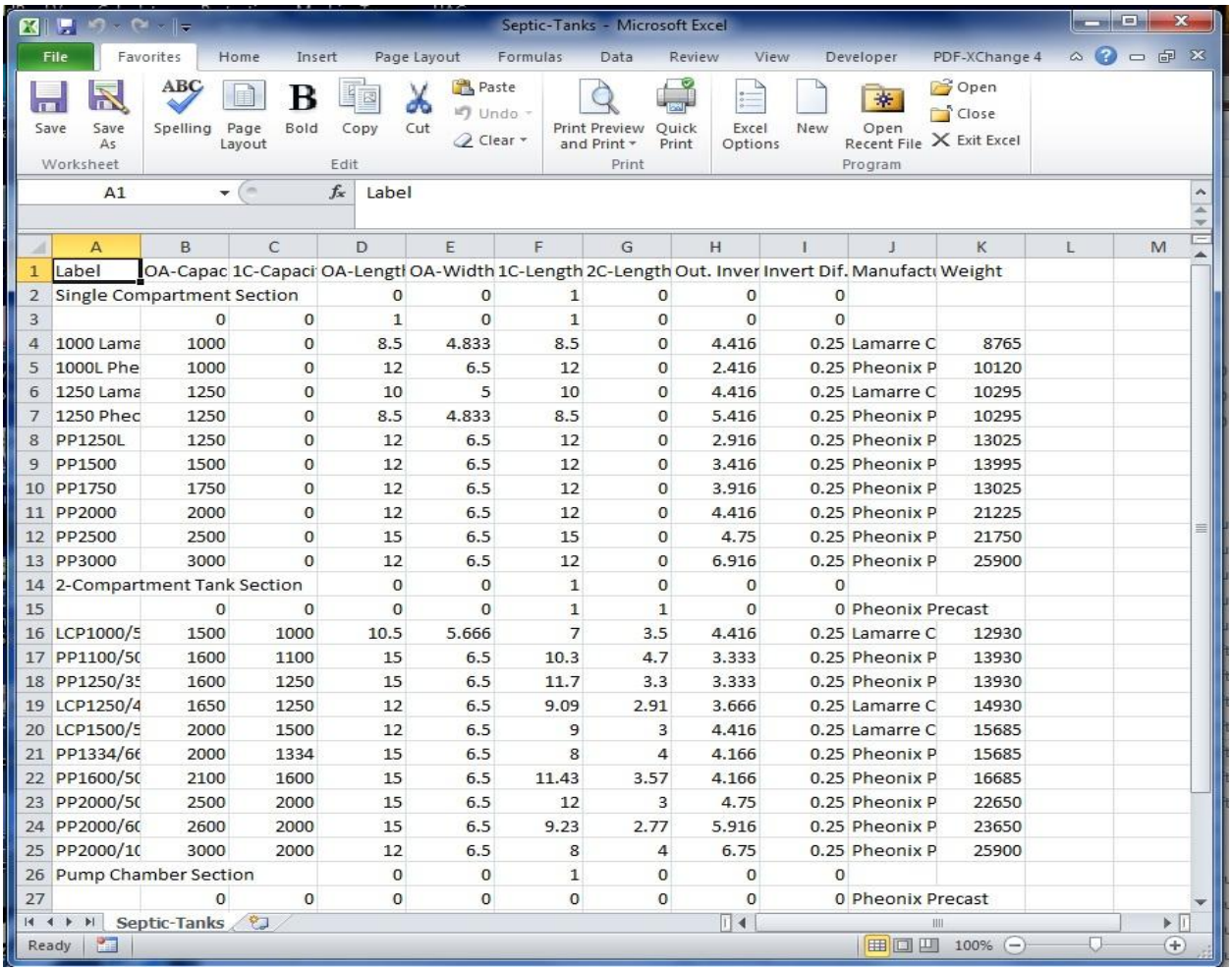
Editing the CSV Files

There are several CSV files included with Septic Assistant.

These files consist of the following;

- Distribution_Boxs.CSV
- Septic-Tanks.CSV
- Concrete-Chambers.CSV
- Plastic-Chambers.CSV
- Effluent-Pumps.CSV

These files can be edited by the USER to include components available in their local area.



	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Label	OA-Capac	1C-Capaci	OA-Length	OA-Width	1C-Length	2C-Length	Out. Inver	Invert Dif.	Manufact	Weight		
2	Single Compartment Section			0	0	1	0	0	0				
3		0	0	1	0	1	0	0	0				
4	1000 Lama	1000	0	8.5	4.833	8.5	0	4.416	0.25	Lamarre C	8765		
5	1000L Phe	1000	0	12	6.5	12	0	2.416	0.25	Pheonix P	10120		
6	1250 Lama	1250	0	10	5	10	0	4.416	0.25	Lamarre C	10295		
7	1250 Phec	1250	0	8.5	4.833	8.5	0	5.416	0.25	Pheonix P	10295		
8	PP1250L	1250	0	12	6.5	12	0	2.916	0.25	Pheonix P	13025		
9	PP1500	1500	0	12	6.5	12	0	3.416	0.25	Pheonix P	13995		
10	PP1750	1750	0	12	6.5	12	0	3.916	0.25	Pheonix P	13025		
11	PP2000	2000	0	12	6.5	12	0	4.416	0.25	Pheonix P	21225		
12	PP2500	2500	0	15	6.5	15	0	4.75	0.25	Pheonix P	21750		
13	PP3000	3000	0	12	6.5	12	0	6.916	0.25	Pheonix P	25900		
14	2-Compartment Tank Section			0	0	1	0	0	0				
15		0	0	0	0	1	1	0	0	Pheonix Precast			
16	LCP1000/5	1500	1000	10.5	5.666	7	3.5	4.416	0.25	Lamarre C	12930		
17	PP1100/5(	1600	1100	15	6.5	10.3	4.7	3.333	0.25	Pheonix P	13930		
18	PP1250/3:	1600	1250	15	6.5	11.7	3.3	3.333	0.25	Pheonix P	13930		
19	LCP1250/4	1650	1250	12	6.5	9.09	2.91	3.666	0.25	Lamarre C	14930		
20	LCP1500/5	2000	1500	12	6.5	9	3	4.416	0.25	Lamarre C	15685		
21	PP1334/66	2000	1334	15	6.5	8	4	4.166	0.25	Pheonix P	15685		
22	PP1600/5(	2100	1600	15	6.5	11.43	3.57	4.166	0.25	Pheonix P	16685		
23	PP2000/5(	2500	2000	15	6.5	12	3	4.75	0.25	Pheonix P	22650		
24	PP2000/6(	2600	2000	15	6.5	9.23	2.77	5.916	0.25	Pheonix P	23650		
25	PP2000/1(	3000	2000	12	6.5	8	4	6.75	0.25	Pheonix P	25900		
26	Pump Chamber Section			0	0	1	0	0	0				
27		0	0	0	0	0	0	0	0	Pheonix Precast			

Please do not change the lines directly above the component description lines as it will interfere with Septic Assistants ability to read the files for proper operation. These files must be saved in PURE CSV format once edited.
The information in these files is what appears in the Drop-Down Dialog Boxes as the program is running.

Reference Websites

I've put this in Septic Assistant just to make looking something up that is Septic System related a little easier. A couple things to know are Septic Assistant defaults to Firefox as the browser, should you wish to use IE Explorer then you need to select that radio button.

I found the easiest way to get TOPO maps is from the NHF&G website, they are free and not huge files. You can easily cut and paste directly to the Septic Assistant Drawing or create an X-Ref to use in multiple Septic Design Files.

Additional Resources

You – Tube Video's

Lesson 1 http://www.youtube.com/watch?v=4HtZWG70TJk
Starting a New Drawing, Importing Point File & Contours.

Lesson 2 http://www.youtube.com/watch?v=6gaq2T2F9jE
Creating a LDGP system with finish contours.

Lesson 3 http://www.youtube.com/watch?v=uYlAvVUmEv4
Creating a Concrete Chamber system with finish contours.

Lesson 4 http://www.youtube.com/watch?v=ExX--I0n2w8
Creating a House, Septic Tank & effluent lines.

Lesson 5 http://www.youtube.com/watch?v=YL5j9VvaGaY
Detailing Site-plan, benchmarks, tie lines, well & tree lines.

Lesson 6 http://www.youtube.com/watch?v=8nA47RJzIwk
Completing Title Block and Locus Plan.

Lesson 7 http://www.youtube.com/watch?v=fx9NipwDzn0
Inserting Standard Notes and plan Details.

Lesson 8 http://www.youtube.com/watch?v=DI46ZVUjkTw
Test-pit Logging Details.

Lesson 9 http://www.youtube.com/watch?v=i80dZaByKBQ
Finalizing the plan.

Lesson 10 http://www.youtube.com/watch?v=4lxdtngaeyc
Exporting to create a PDF with BricsCAD Export Function.

Septic Assistant Website

https://sites.google.com/site/septicassistantnh/