

eTakeoff Bridge Training Guide

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Throughout the guide you will see this video symbol . Click it to view a short video on the subject. In addition, any [underlined text](#) is a link that will jump to another part of the Guide. Note also that while working in eTakeoff Bridge, the **F1** key is always available to access HELP. You will see “**eTakeoff Dimension**” referenced in this Guide. The original Takeoff program known as “eTakeoff” been renamed “Dimension”.

If you haven’t already done so, please view the 10 minute **Bridge Overview** video  before continuing to get a quick overview of the principles discussed in this guide.


OVERVIEW

Getting Started

eTakeoff Bridge is an innovative software product that integrates eTakeoff Dimension with Cost Estimating systems. Watch the 13 minute **Bridge Overview** video for a complete introduction to Bridge. 

The video introduces the major concepts as well as demonstrates the workflow used in integrating with cost estimating, using Sage Estimating as an example. This is the quickest way to get an understanding of Bridge’s capabilities and workflow.

Bridge includes many exclusive features not found in other integration efforts.

- 1 - You can use Bridge the day you install it. See [Basic Setup Mode](#).
- 2 - Bridge learns as you use it, further eliminating tedious setup. See the **How Does Bridge Work** video. 
- 3 - [Multiple workflows](#) are supported – from manual to fully automatic
- 4 - Bridge supports [true updates](#) to the estimate without affecting the existing estimate prices/factors/etc.
- 5 - Bridge has a unique [Review Mode](#) for visual verification of transfer status
- 6 - The [Drill Down](#) feature enables finding specific takeoff measurements to support quantities in the estimate.

How does Bridge Work?

Bridge is a separate program that runs between eTakeoff Dimension and the Estimating system to which it is integrated. When Bridge is started, it captures all the item and assembly information from the estimating system and presents it within the Bridge Main window. In its simplest use, the estimator simply drags an individual measurement from the drawing in eTakeoff Dimension and drops it onto the appropriate estimating item or assembly listed in the Bridge Window. Bridge then allows the estimator to “teach” it the proper relationship between the drawing measurement and the estimate item/assembly with a simple “drag & drop” mechanism, connecting the variables

(length/sqft/etc) between them, at which point the result is sent to the estimating system. Once Bridge has been taught a specific relationship, or “assignment”, between a drawing measurement and the correct item/assembly in estimating, it will recall the assignment every time that measurement & item/assembly are used again. Thus, as the estimator does more takeoff, Bridge becomes more “intelligent”, ultimately enabling the estimator to automate as much of the integration as they wish.

What is a bridge?

A Bridge is a link between a specific eTakeoff Project and a specific Estimate.

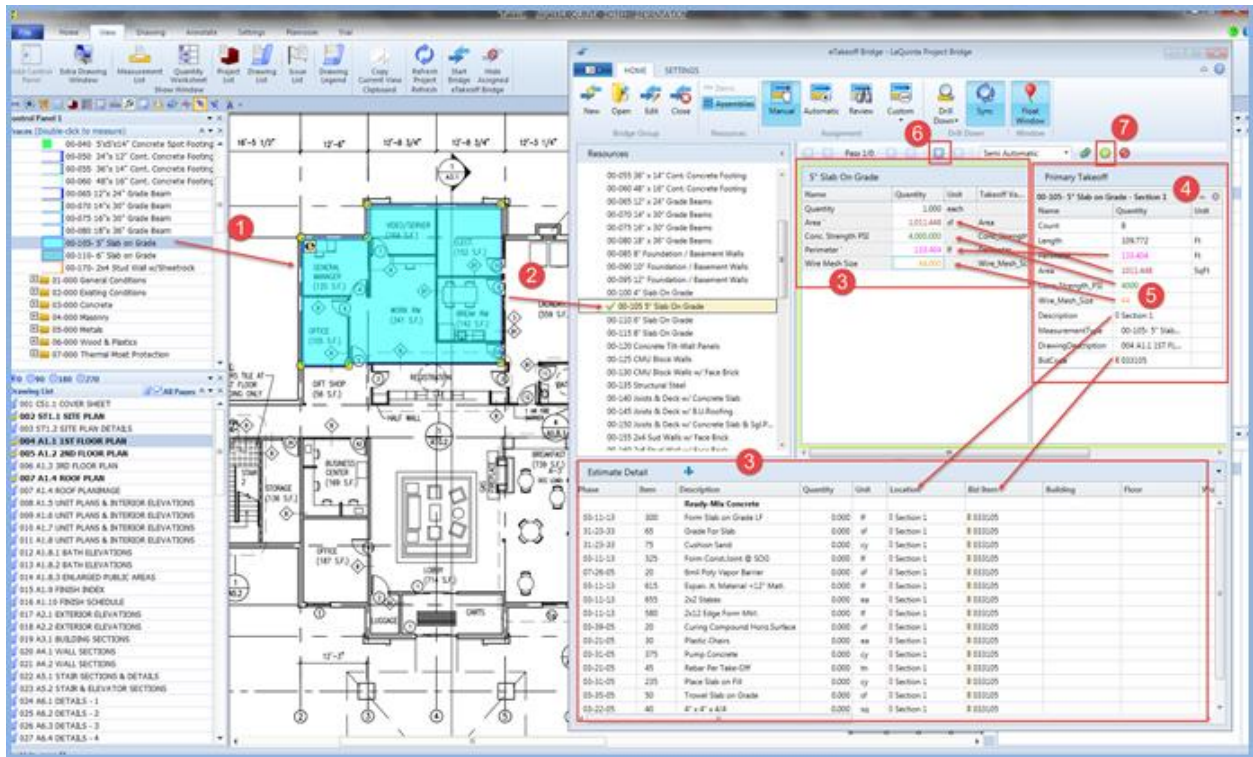
You create a Bridge for every Takeoff project that will be sending information to an estimate. All the measurement history between the takeoff project and the estimate is stored in the Bridge. See [Creating A New Bridge](#).

Bridges are stored in the Bridge Database. Along with each specific project Bridge, the Bridge Database stores all the Assignments and Mappings between the takeoff measurements and the estimating items/assemblies. The Bridge file is very important and should be backed up religiously! See [Backup](#).

The Bridge Database file is named “eTakeoffBridge.0Data.ctr” and is stored in the default location <System>:\ProgramData\eTakeoff\eTakeoffBridge. During Bridge installation you are allowed to specify a new location for the Bridge Database. If you do not use the default location, be sure to retain the location you specified and, again, back up the Bridge Database regularly.

Assignments and Mappings

An Assignment is a relationship between a specific takeoff object (measurement) and a specific estimating object (item/assembly). The Assignment links these two objects and specifies a mapping of the attributes (variables) between the two objects. This is done by dragging/dropping the variables from the measurement onto the variables needed in the estimating assembly/item. The first time an assignment is created, this mapping is done to “teach” Bridge the specific relationship. After the measurement is sent to the estimate, that action completes the assignment, and the next time the takeoff measurement is dropped on the same estimate object, Bridge will automatically use the “remembered” mappings.




Making a Bridge ASSIGNMENT: (Refer to the above illustration)

- 1 - Take off the Slab on Grade measurement
- 2 – Drag the measurement and drop it on the desired Estimating Assembly
- 3 – Bridge will then display the Estimating assembly input variables and detail items, and will also display:
- 4 – the eTakeoff measurement variables for the measurement used
- 5 – Drag each appropriate measurement variable to its related estimate variable, including Location and WBS codes.
- 6 – the ADD PASS button calculates all the estimate detail quantities. Passes also allow accumulating multiple “passes” of measurements so many measurements can be accumulated before sending to the estimate. Simply continue dragging/dropping measurements until complete.
- 7 – When finished, click the SEND TO ESTIMATE button to send the results to the Estimate.

Bridge now “remembers” this “assignment” and will automatically use this the next time this measurement is dropped on this estimating assembly.

The RULE for Mappings is simple: Bridge will always remember the LAST mapping used and will use that mapping the next time. This is important to remember. Do not permanently change mappings without specific reasons. There are options in Bridge

that allow you to override mappings for a one-time change. See [History Type](#). Use these options rather than permanently changing a mapping for a single occasion.

Watch the **How Does Bridge Work** video  for an overview of how an Assignment and Mappings are made in Bridge

Terms

There are a few terms to remember while using Bridge:

Resources

When you see the word “Resources”, this will always refer to ESTIMATING Resources such as an Item or Assembly.

Measurements

The Term “Measurements” will always refer to Takeoff Measurements on a drawing.

Assignments

An “Assignment” is the relationship between a specific takeoff object (measurement) and a specific estimating object (item/assembly). The Assignment links these two objects and specifies a mapping of the attributes (variables) between the two objects. See [What Is An Assignment](#) for more information.

[Passes](#)

Passes are used to aggregate many measurements into one estimating object to reduce the amount of detail sent to the estimating system. Each time a measurement is dropped on an estimating item/assembly, that constitutes one pass. You have the option to send that measurement to estimating at that time, OR you can drop more measurements onto the estimate item/assembly creating multiple passes. Although the information will be summarized to estimating, the individual pass detail is retained in Bridge and can be viewed later using the REVIEW TAB. See [Passes](#) for a detailed discussion.

The Bridge Workflow

Bridge integrates Takeoff and Cost Estimating. It is a separate program running between eTakeoff Dimension and Estimating which allows the estimator to transfer Takeoff to the cost estimate. There are several workflow methods (or modes) within Bridge. These workflow modes can be used interchangeably to accommodate the changing needs of the estimator and the project at hand. For instance, you can perform each takeoff measurement and immediately send it to the estimate as you work. Or you can do all your takeoff first, then selectively send measurements to the estimate at a later time. Bridge even has 2 modes that will help automate the transfer to the estimate.

Workflow Modes:

- 1 – Setup Mode - Bridge can be used immediately for transferring takeoff to estimating without massive setup requirements. Setup mode combines Takeoff Trace Library creation with the Manual Mode. Bridge can create the Takeoff Trace Library as a byproduct of performing your first Takeoff, or Setup

mode can be used as a setup tool alone. See [Setup Mode](#) for more information.

2 – Manual Mode – Manual mode is used to transfer takeoff measurements as you create them or after they have been created on the drawing. It consists of dragging and dropping the takeoff measurement onto the specific item or assembly in the Bridge Estimate Resource list (which is a list of all the estimating items and assemblies). If the measurement is being transferred to estimating for the first time, then Manual mode is also used to create the initial assignment and variable mappings. After that, the mappings are retained and performed automatically the next time the measurement is transferred to estimating. See [Manual Mode](#) for more information.

3 – Semi-Automatic Mode – After the initial assignment and mappings are completed in Manual Mode, Bridge now retains that information for each measurement and is recalled when that measurement is used in the future. However, since Bridge now knows the complete assignment and mappings that have been previously used, Bridge can save you some time. Instead of having to find each measurement and drag and drop it onto the appropriate item/assembly in the list of estimating items/assemblies, Semi-Automatic Mode can partially automate the process. In this mode, Bridge will find all drawing measurements that have assignment histories and present the list to you. For each measurement you will see any estimating items or assemblies that the measurement has been assigned to historically. You can then select the correct item or assembly for this particular measurement, review and then send to the estimate. See [Semi-Automatic Mode](#) for more information.

4 – Fully Automatic Mode – At the time an assignment is made you have the option to specify that this assignment should be categorized as FULLY AUTOMATIC. This is done in the History Type pull-down. In the Fully Automatic mode, Bridge will find all drawing measurements that have assignment histories AND are categorized as Fully Automatic. You can then choose to send all these pending measurements to the estimate in one automated step. See [Fully Automatic Mode](#) for more information.

Setup

Considerations

Bridge is integrating two different components of the estimating process – Quantity Takeoff and Cost Estimating. The existence of 2 systems dictates that both systems will need to define related construction objects. In eTakeoff Dimension this is done by creating various measurement types, called Traces. In Cost Estimating, this is usually accomplished with creation of items and assemblies.

The Measurement types (construction objects) in Takeoff represent the same construction objects (items/assemblies) in the estimating system. It would be reasonable to assume (but not required) that these Takeoff objects will have the same coding structure and nomenclature as their Estimating counterparts, so as to make it easier for the estimator to relate to both Takeoff and Estimating. Bridge's SETUP MODE will default to this behavior and will save a significant amount of setup time by automating much of the setup process.

There are 4 steps to making Bridge operational.

- 1 – Set up the Estimating System Items/Assemblies (construction objects). We suggest establishing the complete Estimating Library first to serve as the foundation for your estimating work.
- 2 – Create a Trace Library (measurement types) in eTakeoff Dimension that includes Traces that correlate to the items/assemblies in the Estimating system. Using Bridge's SETUP MODE, you can do this on-the-fly while you do takeoff by leveraging the already existing items/assemblies in estimating. Or you can use Setup Mode to build the complete Trace Library as a stand-alone effort.
- 3 – Create an Assignment for that Trace by first performing a takeoff measurement, then dragging/dropping the Takeoff measurement onto its respective Estimating item or assembly in Bridge. Then map the variables between the 2 systems. Bridge "Learns" these mappings as you build them. To complete the individual Assignment, you must SEND the measurement to Estimating. If you are not doing this on-the-fly, then use a temporary estimate to house the results.
- 4 – You can do steps 2-4 as you create each Trace in eTakeoff Dimension, OR you can do each step in its entirety for all traces before moving on.

Use Bridge to create eTakeoff Dimension Traces

Setup Mode

The best way to understand Bridge Setup Mode is to see it in action.

Basic Setup Mode.

This video will show you how to use Setup Mode in conjunction with a simple Manual Mode workflow. With this workflow you can use Bridge the day you get it and evolve to more automated workflows later.

Extension Setup Mode.

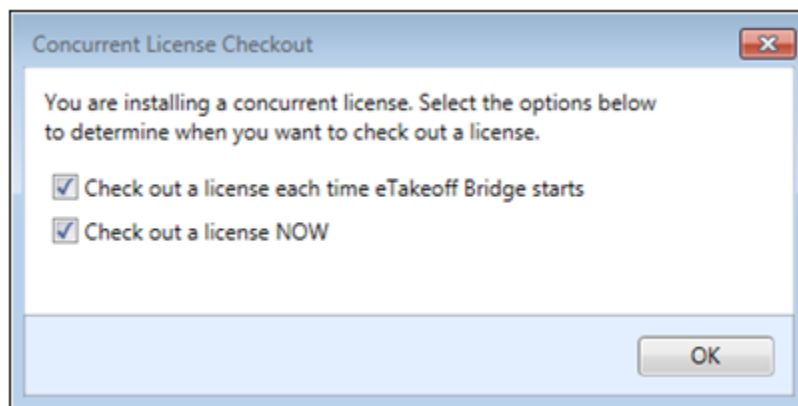
If you have Assemblies in your estimating system and would like Bridge to help create the Trace AND Extension Library to emulate the estimating system assemblies, then review the Extension Setup Mode. This will enable you to prompt for all your assembly variables during the Takeoff process, independent of the estimating system! NOTE:

eTakeoff

While Bridge will create the matching Extension as part of the Setup Mode, depending on the complexity of your estimating assemblies, there may be some additional extension editing required in eTakeoff Dimension.

Remember, Setup Mode can either be used in conjunction with Manual Mode to create Takeoff Traces while performing takeoff OR it can be used standalone as an aid to creating the Trace Library.

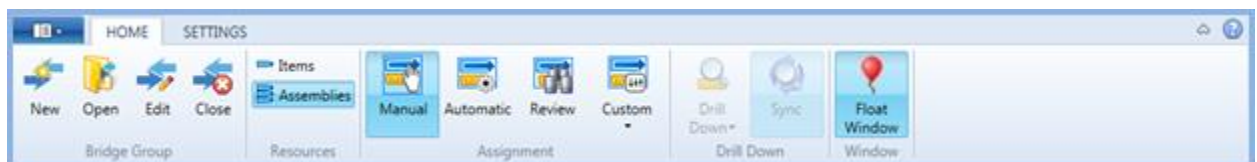
NOTE: If you have Concurrent Licensing, the first time you start eTakeoff Bridge after installation, you will See the Concurrent License Checkout Dialog.



Check both boxes to indicate that you would like to check out a license each time Bridge Starts, as well as check out a license NOW to start this Bridge session

MAIN WINDOW

Home Tab



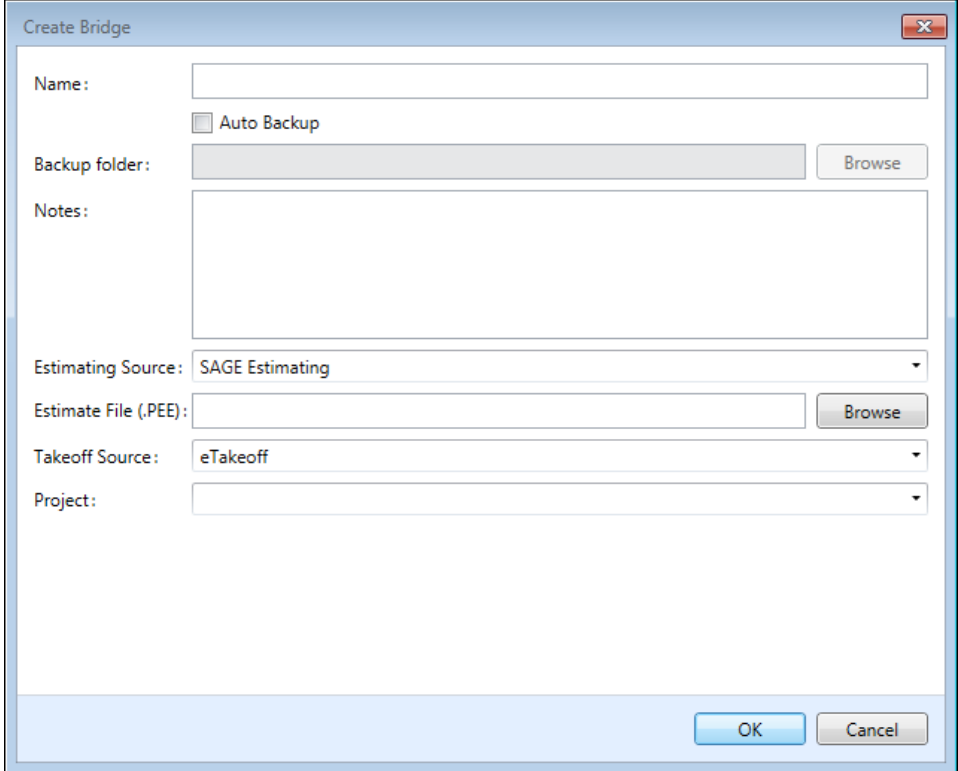
The Home Tab Ribbon Bar contains most of the functions needed during normal workflow.

Bridge Group

The Bridge Group contains the functions needed to create, edit, delete, or close Bridges.

New – The New button will open the Create Bridge Dialog. 

When creating a new Bridge linking a takeoff project and an estimate, remember to create the estimate file before creating the Bridge. Bridge assumes the existence of an estimate in order for the link to be created.



The 'Create Bridge' dialog box is a standard Windows-style window with a title bar and a close button. It contains several input fields and buttons. The 'Name' field is at the top. Below it is a checkbox for 'Auto Backup'. The 'Backup folder' field has a 'Browse' button next to it. The 'Notes' field is a large text area. The 'Estimating Source' is a dropdown menu currently set to 'SAGE Estimating'. The 'Estimate File (.PEE)' field has a 'Browse' button next to it. The 'Takeoff Source' is a dropdown menu currently set to 'eTakeoff'. The 'Project' field is a dropdown menu. At the bottom right are 'OK' and 'Cancel' buttons.

Name – Enter the Name of this BRIDGE FILE.

Auto Backup/Backup Folder - Checking the Auto Backup button will create a backup Bridge File in the specified location every time you change a Bridge and Leave it. Backing up will provide you a safety net so that you can roll back your work to a previous time. The file is named [Bridge Name]_AutoExport_Thu.bexp". In this example the day of the week was appended to the file name. See [Backup](#) for more information on Backup Default settings.

Notes – Notes added here will be visible in the Select Bridge dialog (see below) when opening a Bridge File.

Estimating Source – Select your Estimating System.

Estimate File – Browse to the Estimate File you would like to Link to in this Bridge

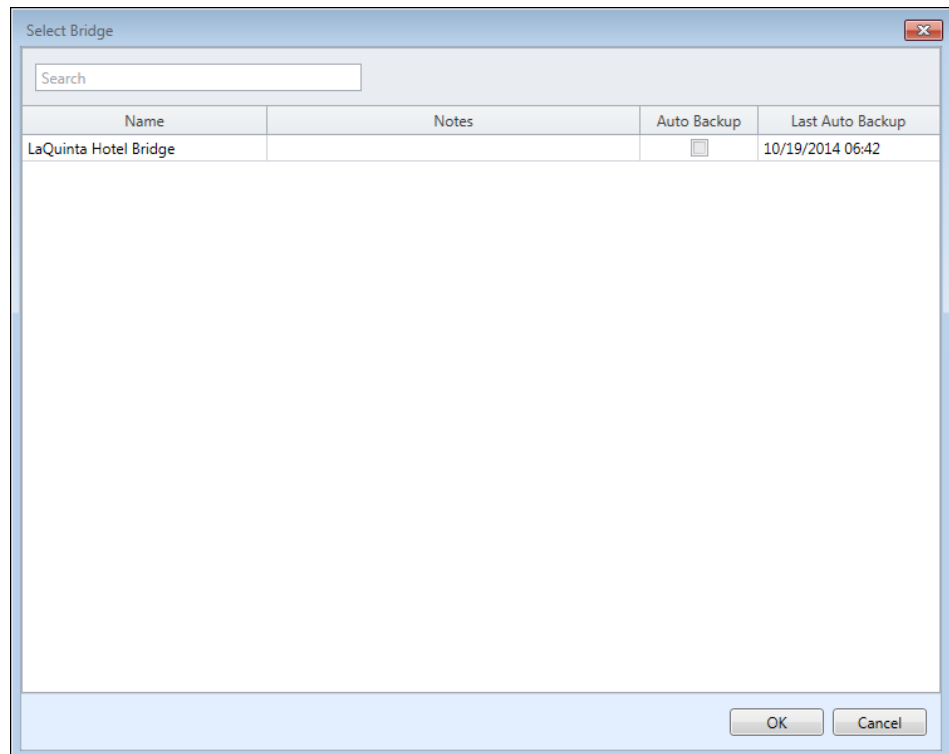
Takeoff Source – This is defaulted to eTakeoff Dimension

Project – Select the eTakeoff Dimension Project to link with this Bridge.

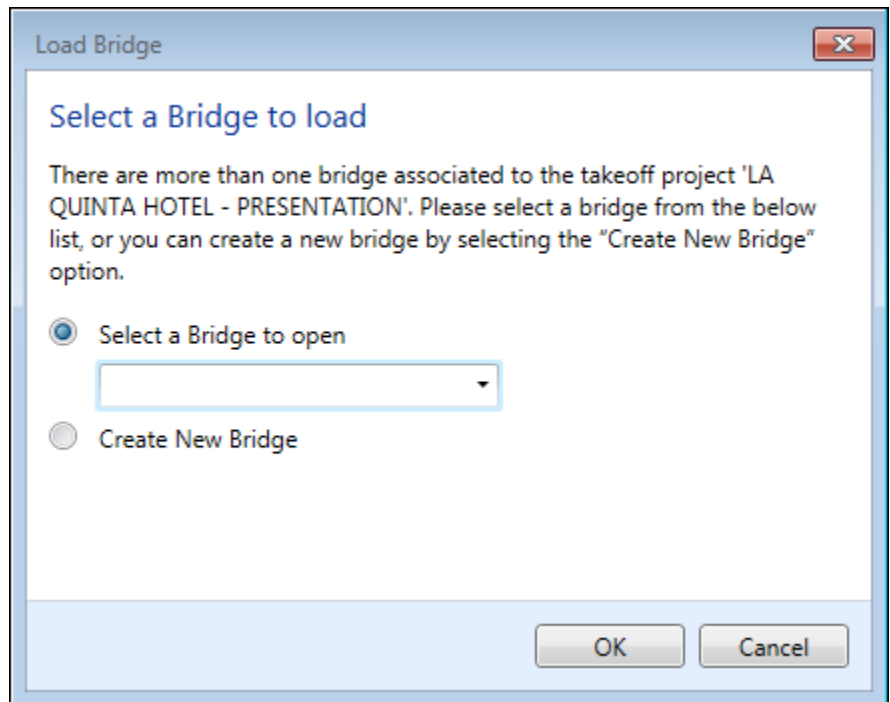
If you start Bridge from the "START BRIDGE" button on the eTakeoff Dimension VIEW TAB, Bridge will prefill the current project name here.

Open – The Open button will Open the Select Bridge Dialog.

Select the bridge you wish to open and click OK (or Double-click).



Note: If you start eTakeoff Bridge from a Takeoff application, such as eTakeoff Dimension, and there are multiple bridges associated with the Takeoff project you will see this message:



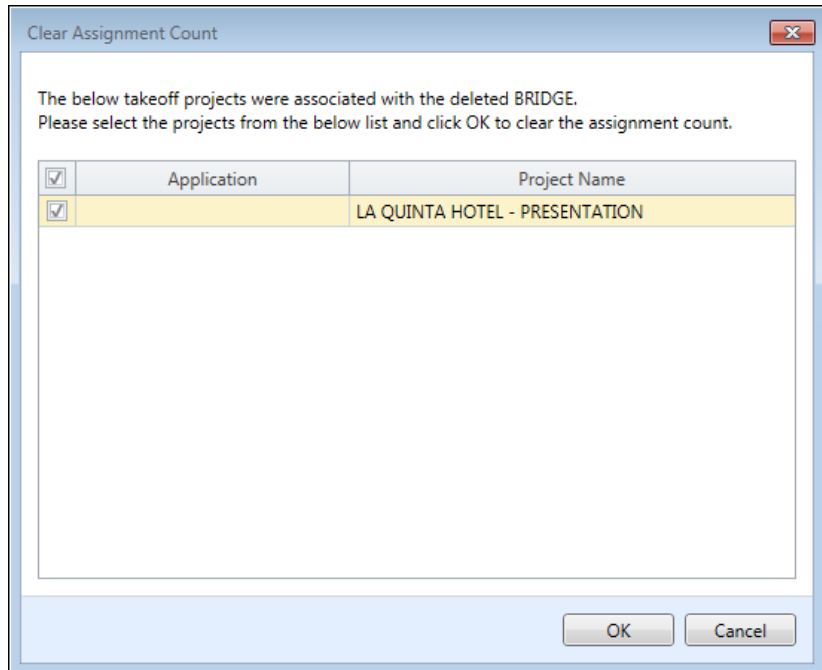
You can either:

- 1 – Select the proper Bridge to open for this session. The drop down list will include all Bridges that are associated with this Takeoff project.
- 2 – Create another Bridge for this Project.

Edit –

The Edit button will open the Edit Bridge Dialog. You can edit the fields using the same parameters described in the NEW button above. Note the DELETE button in the lower left corner. This will enable you to delete the current Bridge file.

Note – when deleting a bridge, the Clear Assignment Count dialog will open, asking if you would also like to clear the Assignment Counts from the associated Takeoff Project.



The Assignment Count is used to enable the [HIDE ASSIGNED button](#) (in eTakeoff Dimension) to function properly. Each time a takeoff is used in an assignment, Bridge tells the takeoff application so it can keep an assignment count for each takeoff. The takeoff application can use this to show or hide assigned measurements. If you have deleted the bridge, but intend to use the takeoff project again to send measurements to a new estimate, then you should clear the Assignment Count so the HIDE button will accurately reflect the status of the measurements as they are sent to the new estimate file.

Edit Bridge

Name: LaQuinta Hotel Bridge

☐ Auto Backup

Backup folder: Browse

Notes:

Estimating Source: SAGE Estimating

Estimate File (.PEE): D:\Sage Pervasive Company Folder\PEE FILES\LaQuinta Project.PEE

Estimate Name: LaQuinta Project
Database Path: d:\sage pervasive company folder\linebaugh gc data iii\gc data mf04

Takeoff Source: eTakeoff

Project: LA QUINTA HOTEL - PRESENTATION

Delete OK Cancel

Close – The Close button will immediately CLOSE THE CURRENTLY OPEN BRIDGE. This function is useful if your estimating system does not allow multi-user access to the estimating file. If the estimate file cannot be accessed while Bridge is open, then use the CLOSE function to release the estimate and related Bridge Files. Note that Bridge always runs in the background unless it is explicitly directed to close. To close the Bridge Program entirely, go to the FILE TAB and select EXIT.

Resources

The Resources group contains the Items and Assemblies buttons. These buttons control the contents of the Resources panel in the Main Window. In the MANUAL mode you can select either items or assemblies to display. In the other modes there will be checkboxes that will allow you to select BOTH if you wish. In these modes, the display of items and assemblies is for a different purpose and as such you can filter the display to show just items or assemblies, or the combination.

Assignment

The Assignment group contains the MODE buttons which determine the Bridge workflow. Manual – [Manual Mode](#) is used to assign takeoff measurements to Estimating items or assemblies. Also, any initial assignments with variable mapping are done in Manual mode. Manual mode will give you complete control over any individual assignment to estimating. See Manual Mode in Managing Bridges for a full explanation.

Automatic – There are two Automatic Modes – Semi-Automatic and Fully Automatic. Both modes will automate the sending of assignments to Estimating to different degrees. Each is dependent on the status of the [History Type](#) pull-

down in the Assignment Pane. See [Semi-Automatic](#) and [Fully Automatic](#) Modes in Managing Bridges for a full explanation.

Review – [Review Mode](#) is used to review all assignments that HAVE BEEN SENT TO ESTIMATING. You can drill down to find the measurement on the drawing as well as review all the detail that was sent to estimating. You can also do minor editing and send the revisions to estimating. See Review Mode in Managing Bridges for a full explanation.

Custom – [Custom Mode](#) isn't really a workflow, as much as it is a way to combine the other 3 modes into one customized workplace. It allows you to customize the various ways data is presented in the Assignments by Takeoff/Resource pane. Normally the filters and data presentation in this pane is controlled by the MODE you are in. For example...Automatic Modes only allow viewing pending measurements yet to be sent to the estimate, while Review Mode only shows measurements that are already in the estimate. Custom Mode, however, lets you combine and filter these modes to define your own views of the data and store the views for recall. For instance, the Custom Mode comes pre-set with a view named Audit. The Audit view will instantly list only those measurements that have CHANGED since they were last sent to the estimate. See [Filters in Custom Mode](#) for more information

Drill Down - The Drill Down button is used to display the matching drawing measurement in Takeoff. Pressing the button will cause Takeoff to show the selected drawing and measurement.

Sync - If the Sync button is on, then Takeoff will automatically highlight the measurement as you move through Bridge.

Window

Float – Pressing the Float button will “float” Bridge to the front of all windows. If you are using a single monitor, then you must use the Float button or you will not be able to drag/drop across overlapping windows.

Resource, Assignment and Estimate Detail Panes

There are 3 panes below the Ribbon Bar that make up the Main Window. The contents and function of these vary based on which ASSIGNMENT BUTTON in the Ribbon Bar is selected.

Resources Pane OR Assignment List Pane

In MANUAL mode, this is the Resource Pane, which lists all the ESTIMATE RESOURCES. This is a list of all the items or assemblies in the Estimating system. The content of the list is controlled by clicking on the Item or Assembly button in the RESOURCE group in the Ribbon Bar.

In AUTO/REVIEW/CUSTOM modes, this becomes the Assignment List Pane and is used to display lists of measurements that are either pending Automatic assignment or review of assignments already sent to the Estimate.

Assignment Panes


The Assignment panes consist of the Resource Assignment pane to the left, and the Primary Takeoff pane(s) to the right. The Resource Assignment pane (to the left) contains the


Estimating system input variables for the selected item or assembly. The Primary Takeoff Pane contains the variables (Length, Area, etc.) from Takeoff.

See [Assignment Workflow](#) for a complete description

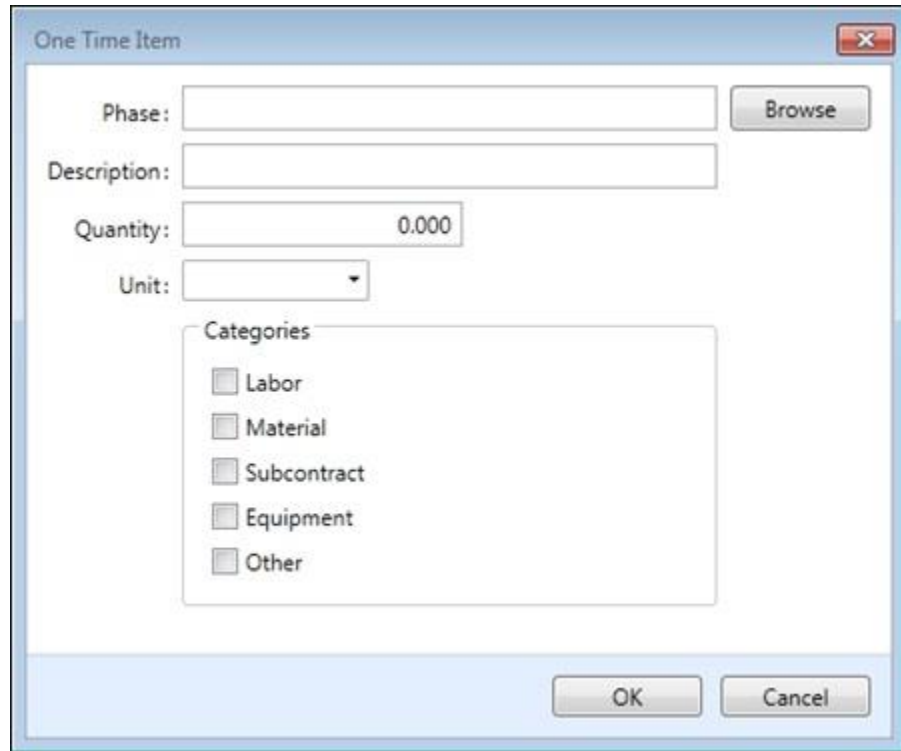
Estimate Detail Pane

The [Estimate Detail Pane](#) lists all the items associated with an estimating assembly. It can also be used to group individual Estimating items selected from the Resource List. Additionally, the Detail pane will allow posting Location Codes and WBS codes if your estimating system supports them. The Measurement Description from eTakeoff Dimension can be mapped as the Location Code in the Detail Window by Dragging and Dropping on the Column header or individual Cells. Any other Primary Takeoff fields can also be mapped to the Location or WBS columns.

The One-Time Item button  on the Estimate Detail Pane header can be used to add items to the estimate on-the-fly.

Estimate Detail 					
Phase	Item	Description	Quantity	Unit	Location
		Ready-Mix Concrete			
03-31-05	40	3000 PSI HR	31.262	cy	Section 2
03-31-05	50	4000 PSI HR	21.168	cy	Section 2
03-11-13	300	Form Slab on Grade LF	196.615	lf	Section 2
31-23-33	65	Grade For Slab	3,276.913	sf	Section 2
31-23-33	75	Cushion Sand	58.984	cy	Section 2

One-time items can be added during Manual Assignment. The One-Time Item button is located on the header of the Estimate Detail Pane (outlined in red). Pressing this button will open the One-Time Item Dialog.



The image shows a software dialog box titled "One Time Item". It contains several input fields and a list of categories. The "Phase" field has a "Browse" button next to it. The "Quantity" field is pre-filled with "0.000". The "Unit" field is a dropdown menu. Below these fields is a section titled "Categories" with five checkboxes: "Labor", "Material", "Subcontract", "Equipment", and "Other". At the bottom of the dialog are "OK" and "Cancel" buttons.

Field	Value / Options
Phase	[Empty] (with Browse button)
Description	[Empty]
Quantity	0.000
Unit	[Dropdown]
Categories	<ul style="list-style-type: none"><input type="checkbox"/> Labor<input type="checkbox"/> Material<input type="checkbox"/> Subcontract<input type="checkbox"/> Equipment<input type="checkbox"/> Other

You can create new Estimate items on-the-fly with this dialog.

Phase: Use the Browse button to select the appropriate Phase Code from the Estimating System. If you click on one of the phase numbers in the Estimate Detail list, that phase will pre-fill the Phase field.

Description: Enter the Description of the Item.

Quantity: Enter the Quantity for the Item.

Unit: Enter the unit Description for the Item

Categories: Select the Categories that apply to this Item.

MANAGING BRIDGES

Creating a new Bridge

Each Bridge is stored in the Bridge database as a separate link between a Takeoff Project and an estimate. When creating a new Bridge linking a takeoff project and an estimate, remember to create the estimate file before creating the Bridge. Bridge assumes the existence of an estimate in order for the link to be created.

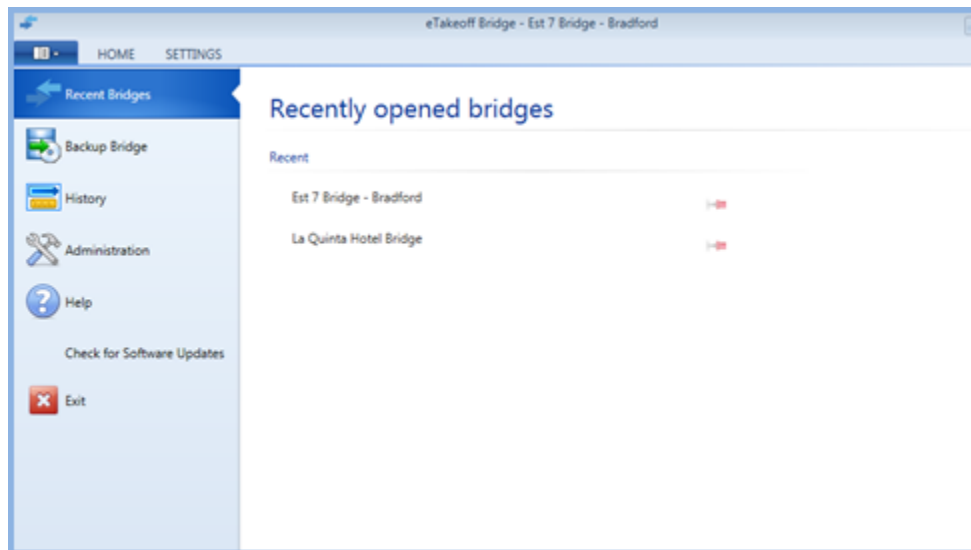
See the NEW BRIDGE button on the Home Tab.

Editing a Bridge

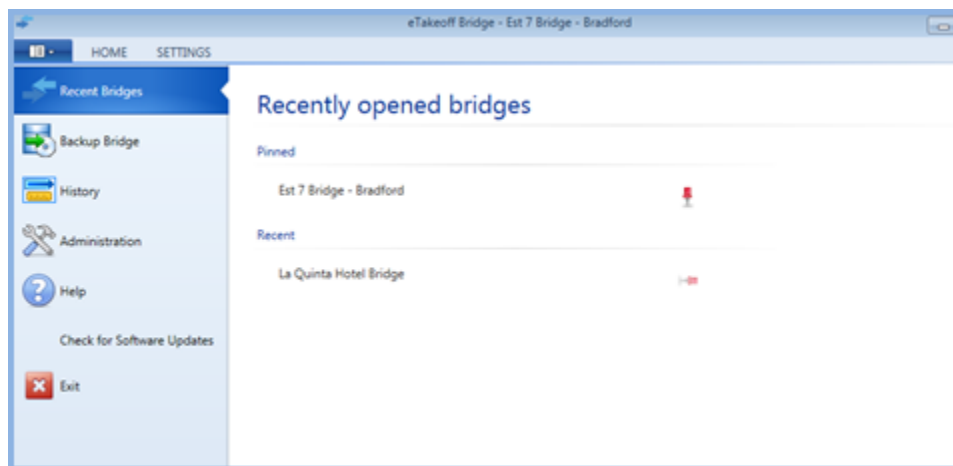
See the [EDIT BRIDGE](#) button on the Home Tab.

Recent Bridge List

The Recent Bridge List is a convenient way to quickly review recent Bridge use. Normally the 8 most recently opened Bridges are listed here. You can quickly open any Bridge by clicking on the name.




If you wish to always keep a Bridge in the list, click on the pin icon to the right. The list will then expand into 2 sections...Pinned and Recent. That Bridge will then be kept in the Pinned list until you unpin it.



ASSIGNMENT WORKFLOW

What is an Assignment

Watch the **How Does Bridge Work** video  to get an overview of the Assignment Workflow. An "Assignment" is the relationship between a specific takeoff object (measurement) and a specific estimating object (item/assembly). The Assignment links these two objects and specifies a mapping of the attributes (variables) between the two objects. When you drag a takeoff measurement onto an estimating item or assembly in Bridge, you create an assignment linking that measurement with that item/assembly. You can then map the input variables between takeoff and estimating and complete the assignment. Bridge will remember this assignment, or relationship, between these two specific objects. The next

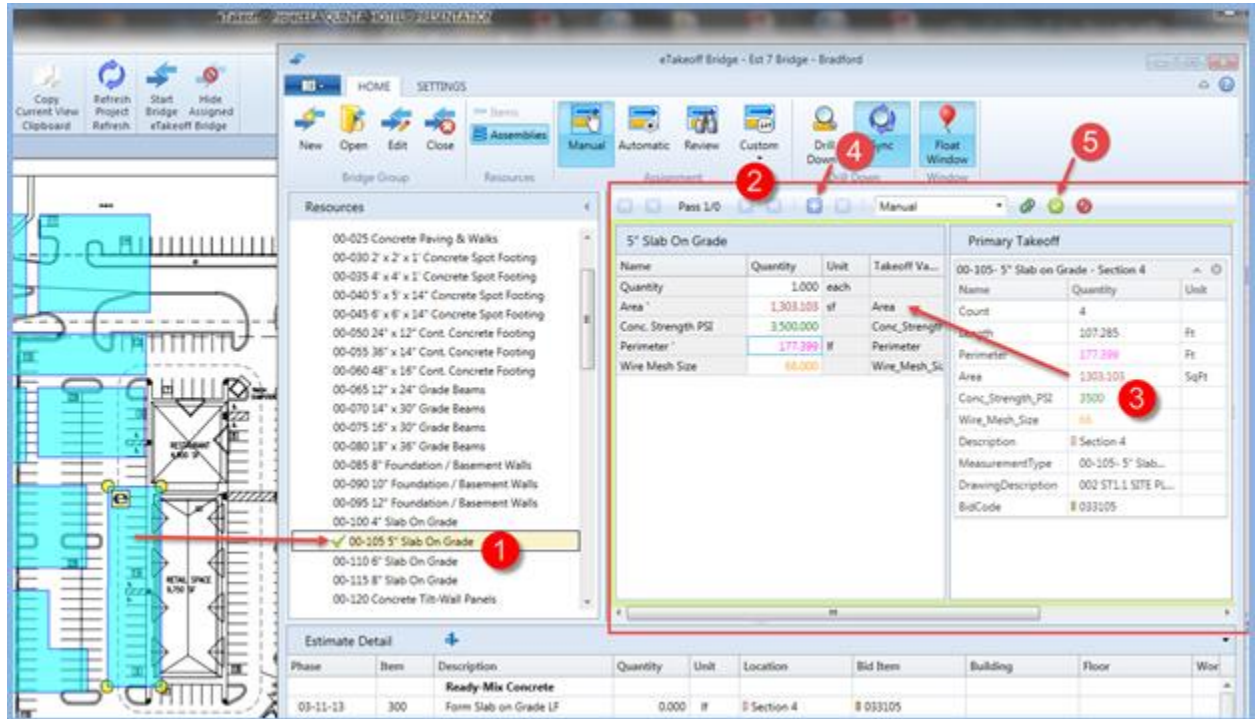
time you drop that type of takeoff measurement onto the same estimating item/assembly, Bridge will display the previously used mappings. You can review the information and immediately send it to the estimate. Once Bridge has learned an assignment, it can use the Semi-Automatic and Fully Automatic modes to save you time and work in the future. See [Assignments and Mappings](#) for a complete discussion.

Assignment Panes

The first time you drag a takeoff measurement onto the item or assembly list in Bridge, the Assignment Panes are used to establish the relationship between the takeoff measurement and the specific item or assembly you are using in Estimating. You use the Assignment Panes to map the variables from the takeoff measurement to the estimating item/assembly. Bridge remembers this mapping and automatically applies it the next time this measurement type is dropped on the same estimating item/assembly. After that relationship is done once and sent to the estimate, it becomes part of Bridge's Assignment History and can later be used in the Automated modes to speed up your work.

The Estimating Resource Assignment pane (the left pane) contains the Estimating system input variables for the selected item or assembly. The Primary Takeoff Pane contains the variables (Length, Area, etc.) from Takeoff.

A Takeoff Measurement can be dropped on the item/assembly in the Resource list, at which time Bridge will open the Assignment Panes, displaying the estimate variables on the left and displaying the Takeoff measurement variables on the right. You can also drop the measurement directly into the Primary Takeoff pane, and THEN drag the Estimating item or assembly into the Estimate Resource Assignment pane.



The Assignment Panes:

- 1 – Drag the Measurement onto the appropriate Estimating item or assembly in the Resource List
- 2 – The Assignment Panes will open.
- 3 – Drag the Takeoff variables to their matching Estimating variables
- 4 – Add the Pass to calculate the estimate quantities
- 5 – Complete the Assignment by pressing the SEND TO ESTIMATE button.

Note that you can also drag measurements from the eTakeoff Dimension MEASUREMENT LIST. This is useful since the Measurement List can be reorganized to display all similar measurements across all drawings or other formats that simplify gathering measurements.

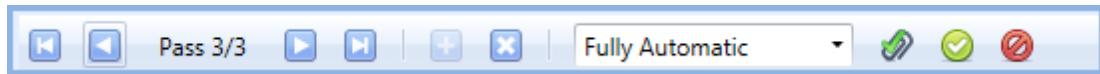
Finally, you can select MULTIPLE measurements to drop into Bridge by either using the shift-click option in the Measurement List, or using the Multiple Select button on the Dimension Ribbon Bar. When you drop multiple measurements into Bridge, the Pass Count in the Assignment Pane Header will queue all the measurements. See [Assignment Pane Header](#) below for further explanation of the Pass Buttons.

In either case, once the variables from the estimate and the takeoff measurement are displayed, you can drag any variable from the Takeoff pane to the appropriate variable in the Estimate Assignment pane OR to any Location/WBS column/cell in the Estimate Detail pane. An Assignment is completed when the ADD PASS button is pressed to calculate the quantities in the Estimate Detail Pane, and then followed by pressing the SEND TO ESTIMATE button.

Note that the window boundary to the right of the Primary Takeoff Pane can be extended to display a secondary Takeoff Pane. This is useful if you have 2 measurements from the same or different drawings (e.g., a plan view area and an elevation height). You can drag the first measurement into the primary takeoff pane, and then drag the second measurement into the secondary Takeoff pane. Then drag/drop the appropriate variables from BOTH windows into the appropriate Estimating Assignment Pane variables.

NOTE: When using the secondary Takeoff Pane, MAPPINGS FROM THE SECONDARY PANE ARE NOT RETAINED as part of an assignment history. The Assignment History can only retain one Primary mapping per measurement. The next time you use the primary measurement, it will ONLY retain the last mappings from the Primary Pane.

Assignment Pane Header

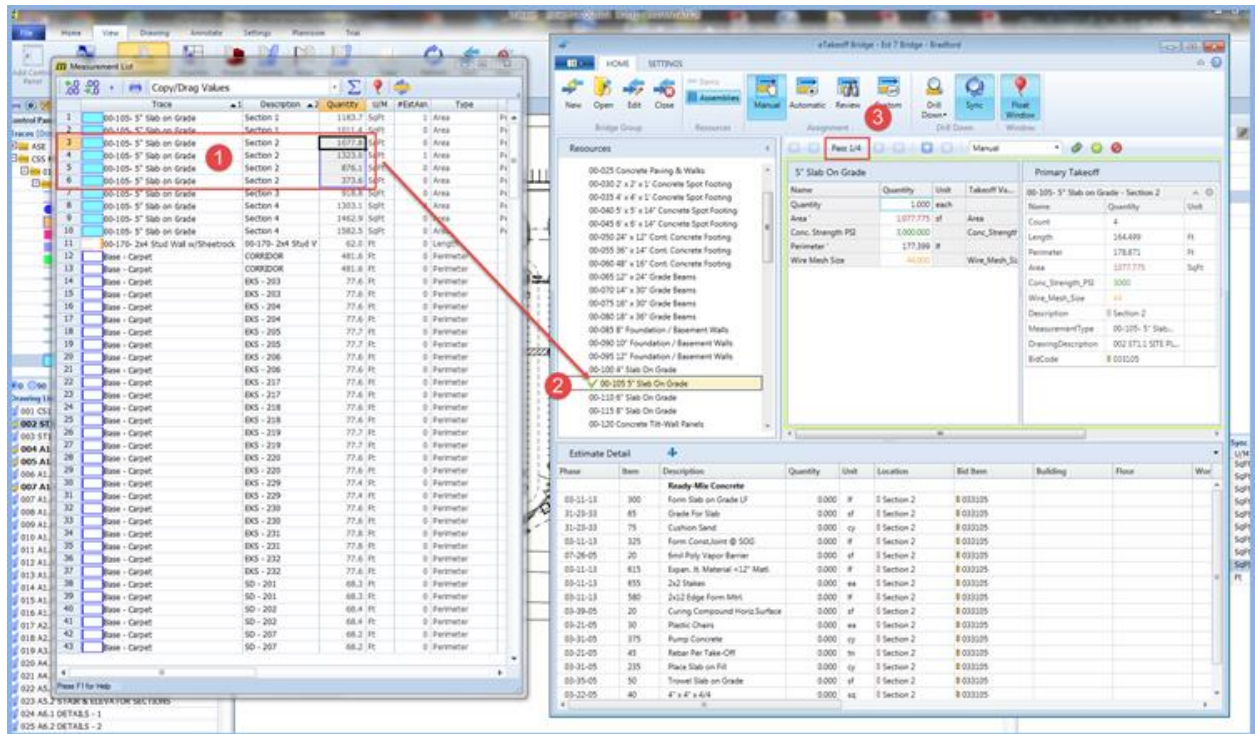


The Assignment Pane header consists of several controls which are used during the Assignment process to manage Passes and calculate the item/assembly quantities before sending the assignment to the Estimate. Each of the Workflow Modes discussed below will utilize these functions. Since the various Workflow Modes have different operational requirements, not all the controls will be active in all Modes. If a control is active, it will be highlighted.

Pass Buttons

The pass buttons display and manage multiple measurements that may have been added to the assignment. Passes are used to aggregate many measurements into one estimating object to reduce the amount of detail sent to the estimating system. Each time a measurement is dropped on an estimating item or assembly it constitutes one pass. You have the option to send that measurement to estimating at that time, OR you can drop more measurements onto the estimate item/assembly creating multiple passes. Although the information will be summarized to estimating, the individual pass detail is retained in Bridge and can be viewed later using the REVIEW TAB.

You can select MULTIPLE measurements to drop into Bridge by either using the shift-click option in the Measurement List, or using the Multiple Select button on the Dimension Ribbon Bar. When you drop multiple measurements into Bridge, the Pass Count in the Assignment Pane Header will queue all the measurements.



Drag multiple measurements from the eTakeoff Dimension Measurement List:

- 1 – Shift-Click to select a group of measurements. The Measurement List can be sorted to display measurements of the same type across all drawings, making it easier to find measurements for transfer to Estimating.
- 2 – Drop the group of 4 measurements onto the appropriate Estimate item or assembly.
- 3 – The Assignment Panes will open. Note the Pass Count –1/4. 4 measurements have been queued, waiting for review. The right digit (4) indicates there are 4 measurements pending. The left digit (1) indicates that you are viewing the first measurement. When you've added all the passes, the aggregate total of these 4 measurements will be sent to the estimate as one item or assembly.

The Row of Pass Buttons (starting at the far left of the pane):

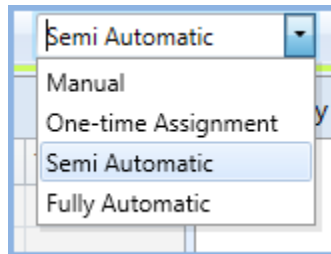
- Display the first of the added passes
- Display the previous added pass
- Pass 3/3** Pass number/Count
- Display the next added pass
- Display the last of the added passes
- Add Pass
- Delete Pass

First, Previous, Pass Count, Next, Last. The next section contains the ADD PASS and DELETE buttons. When multiple measurements are dropped into an assignment, they are queued for review. The left digit of the Pass Count designates which pass you are currently viewing or affecting, while the right digit signifies how many passes currently exist in the item or assembly.

For example, dropping 5 measurements into an assembly would result in a Pass Count of 1/5; 5 Passes are queued, and you are positioned and viewing pass 1.

Add, Delete Pass - After pressing the ADD PASS button, the quantities for the items in the Estimate Detail window will be calculated, and the pass count would advance to 2/5. After reviewing and ADDING the remaining passes, you would find the Pass Count to have advanced to 6/5, meaning there are 5 passes that you've added and calculated, and are positioned at the 6th pass, ready to add another measurement if you wish. You can also Delete any existing Passes. Otherwise you are ready to send the results to the Estimate. **Note that you can press the CTRL Key while clicking on the ADD PASS button to automatically add and calculate all the passes at one time.**

History Type



The History Type is a very important control. It determines how Bridge will treat this assignment (and variable mappings) now and in future assignments to estimating. You can make the pull-down selection at any point while in the Assignment Pane, but the selection will only be registered AFTER YOU PRESS THE SEND TO ESTIMATE BUTTON! If you CANCEL the Assignment, the History Type will revert back to the original state. There are 4 History Types:

Manual – Manual is to be used when you do NOT want Bridge to “learn” or create an Assignment History for this assignment. Bridge will simply pass this through to estimating and will not remember the takeoff measurement and item/assembly relationship for future use. No variable mappings will be retained, and this assignment will never appear in any of the Bridge Automatic Modes. It can also be used to override and delete an existing assignment.

One-Time Assignment – Use One-time Assignment if there is already an existing Semi-Automatic or Fully Automatic History type and you intend to enter manual dimensions or otherwise override the variable mappings THIS TIME ONLY. Remember, Bridge always remembers the LAST mappings used. If you do not want Bridge to remember any manual overrides you make in this measurement assignment, then select the One-Time Assignment type before you Send to Estimate. The next

eTakeoff

time you use this assignment, it will revert back to the original state of the variable mappings/etc.

Semi-Automatic - All Assignments **default** to Semi-Automatic type upon creation. This means that this assignment will be included in the Semi-Automatic Mode workflow. In [Semi-Automatic Mode](#), Bridge will save you time by automatically finding any future occurrence of this assignment (this particular takeoff measurement dropped on this same estimating item or assembly) so you don't have to physically find the measurement on the drawing and drag/drop it onto the appropriate estimating item/assembly. It will allow you to quickly review the assignment and send to the estimate.

Fully Automatic – [Fully Automatic Mode](#) is similar to Semi-Automatic, but in addition to automatically finding this assignment in the future, Bridge will allow you to send all Fully Automatic assignments directly to the estimate with the push of a button. You can bypass any review options if you wish. The Fully Automatic mode is very powerful, but care must be taken in its application. Only use the Fully Automatic History Type for those assignments that will ALWAYS be sent to the estimate without further review.

Notes - If your estimating system supports assembly notes, you can enter assembly notes here for later display in the assembly in estimating. If there are notes that exist in the assembly database, they will also appear here when you first open the assignment. You can then change these notes if you wish.

Send to Estimate – The SEND TO ESTIMATE button will send this Assignment to the Estimating system. It will also store the Assignment as it was used in the Assignment History.

Cancel – Use the Cancel button to cancel this assignment.

Assembly Description – The Assembly Description isn't technically part of the Assignment Pane header, but it includes an important function. It's located just below the Assignment Pane header and actually is the header for the Estimating Assignment Pane. If your estimating system supports changing the Assembly Description, then you can double-click in this field and edit the Assembly Description to add clarity to this takeoff in Estimating.

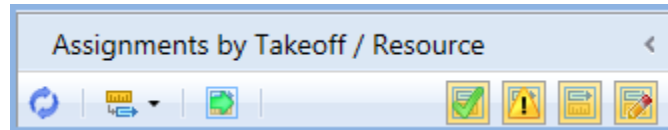
5" Slab On Grade				Primary Takeoff	
Name	Quantity	Unit	Takeoff Va...	00-105- 5" Slab on Grade - Section 4	
Quantity	1.000	each		Name	Quantity

Assembly Description

Assignment List Pane – In the Manual mode, the far left pane is called The Resource List pane. However in the Automatic, Review and Custom modes, this pane becomes the Assignment List Pane and will include its own header functions (See [Assignment List Header](#) below). In the Semi-Automatic mode, the list will contain current Takeoff Measurements that have NOT been sent to the Estimate, with suggested Estimating item/assembly assignments based on your previous assignment histories. In Fully

Automatic Mode, the list will contain all Measurements NOT sent to the estimate that are Fully Automatic Assignments. These are pending being sent to the Estimate. In Review Mode, the list will contain all measurement assignments that HAVE been sent to the Estimate.

Assignment List Header The Assignment List Header contains functions which are used by the Automatic, Review and Custom Modes.

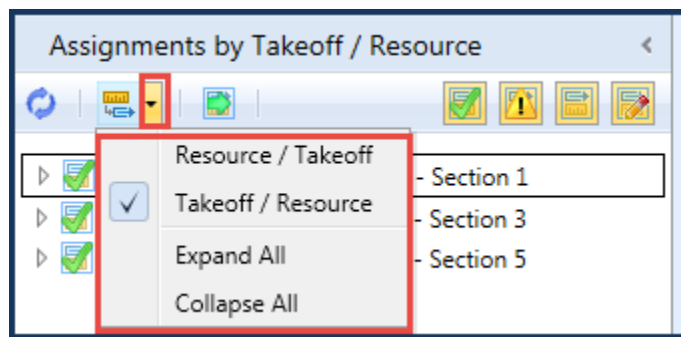


The Mode you are in will determine which functions are available. Available functions will be highlighted.

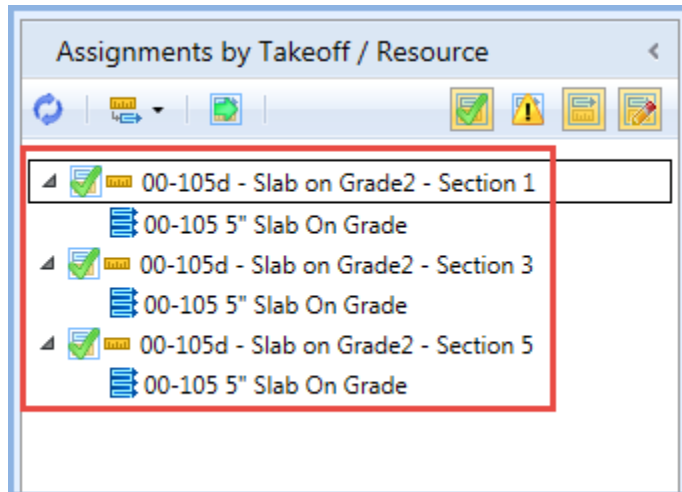
Each function, from left to right, is discussed below:

Refresh – Some of the modes can contain significant numbers of entries which could take some time to display. Also, you may perform a task that affects the mode and list you are currently viewing. The mode is not aware of the change you have made, so the REFRESH button can be used to refresh the entire list to provide the most current status of the mode.

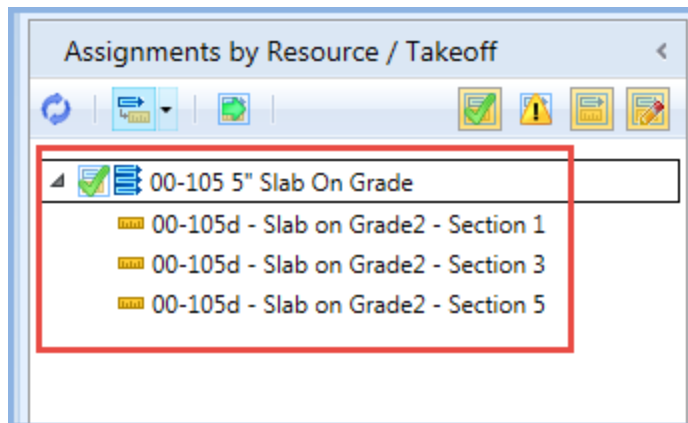
Review Item Hierarchy – Review Item Hierarchy will allow you to expand/contract the list elements, as well as reverse the order of the list. You can press the button to do this, or right click and open the context menu.



The sequences are either Resource/Takeoff, or Takeoff/Resource. Takeoff/Resource results in a list of Takeoff measurements with each Estimate item or Assembly to which it is assigned. Resource/Takeoff results in a list of Estimate Items or Assemblies and each of the Takeoff Measurements that are assigned to it.



In Takeoff/Resource order. Each measurement lists the assembly (the same, in this case) to which it was assigned.



The same list, but in Resource/Takeoff order. Note now that the single Assembly is listed, with each Takeoff measurement that was assigned to it.

Submit Fully Automatic Assignments – In Automatic Mode, if the list includes Fully Automatic Assignments then this button will be activated. Pressing the button will immediately send all the Fully Automatic Assignments in the list to the Estimate.

List Filters – The next four buttons are filters that will affect the contents of the list.

Note that each filter icon is used in front of items in the list to designate their status.

The filters is ON when highlighted. It can be pressed again to turn it OFF. It will remain in that state until pressed again. Note that some Combinations of Filters will result in nothing appearing in the list. This is normal, based on the filters selected!

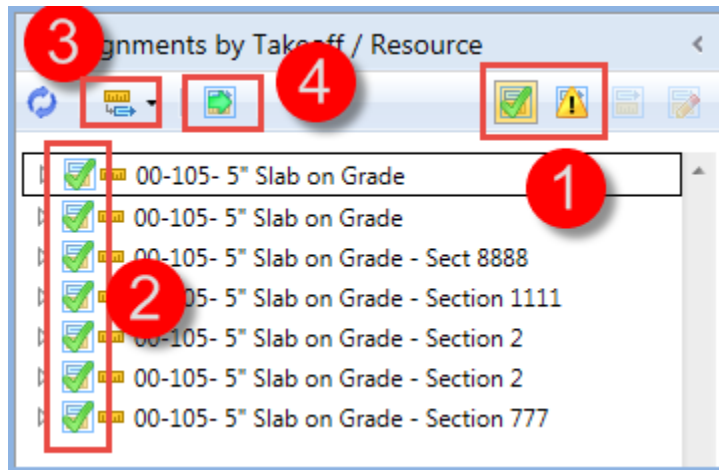


Fully Automatic –  The FULLY AUTOMATIC icon designates that this item in the list is a

Fully Automatic Assignment. The Submit Fully Automatic Assignments button will then be highlighted. You can either double click on the entry to review the details in the Assignment Panes, or you can press the Fully Automatic button to start the process of sending all Fully Automatic Assignments in the list to the Estimate.

Submit Fully Automatic Assignment Process –

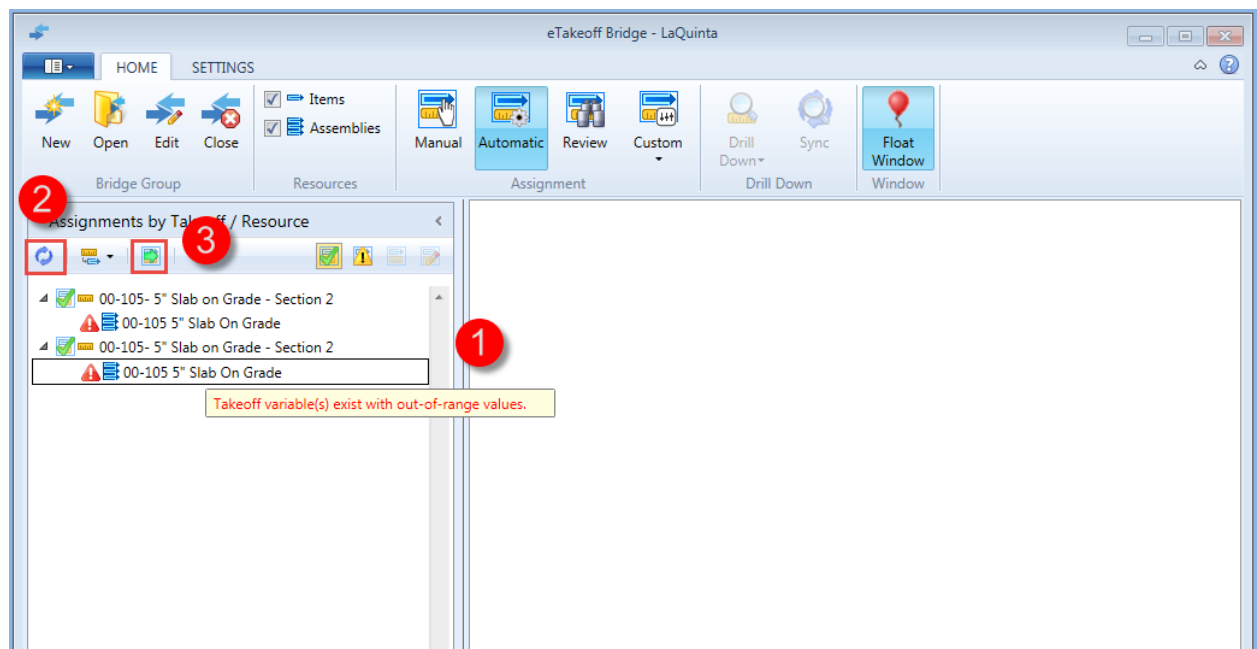
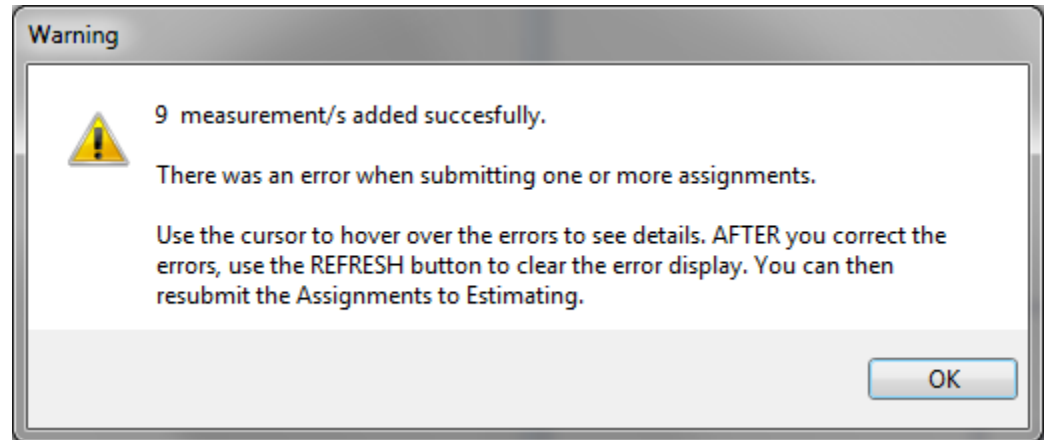
To send all the Fully Automatic Assignments to Estimating:



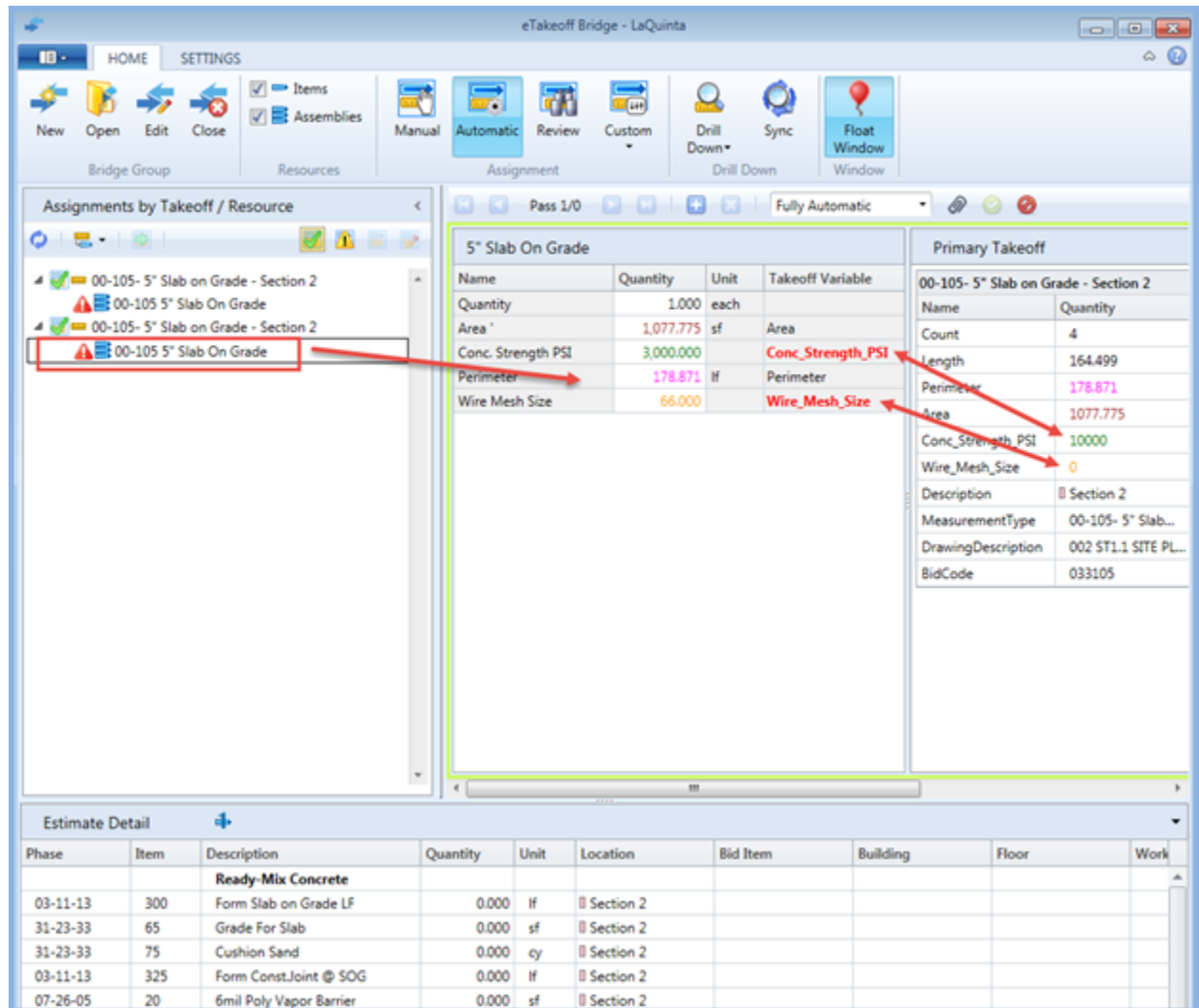
- 1 – Verify that the Fully Automatic List Filter is highlighted (ON). Then turn OFF the Semi-Automatic Filter to limit the list to only those assignments that will be included in the Full Auto Submission.
- 2 – You will see the Fully Automatic icon next to the Assignments. This list contains all Fully Automatic Assignments that Bridge has found.
- 3 – You can press the Review Item Hierarchy button to re-sequence the list or expand it. You can even double click on an individual assignment to review the details.
- 4 – When you wish to start the submission process press the Submit Fully Automatic Assignments button. Bridge will begin sending all Fully Automatic Assignments in the list to Estimating. There will be a progress count so you can judge how long the process will take.

Error Management – As the Fully Automatic Assignments are processed, Bridge will check for errors. These will consist of variable values that are out of range of the Estimate min/max values, or Takeoff variables that were left incomplete at the time of creating the measurement.

If there are errors, Bridge will display an error message at the end of the process:



- 1 - As the error message suggests, after clicking OK you can hover over the line(s) with the error icon(s) to review the type of error that exists. Correct the Takeoff measurement errors.
- 2 – After the errors have been corrected, press the REFRESH button to clear the error icons. You cannot resubmit the Assignments until the error icons have been cleared.
- 3 – You can now press the Submit Fully Automatic Assignment button to resubmit the Assignments. Depending on the type of error, it is possible to still have additional errors appear as the Fully Automatic Mode processes. Repeat steps 1-3 in each case.



The screenshot displays the eTakeoff Bridge - LaQuinta software interface. The top menu bar includes 'HOME' and 'SETTINGS'. Below this is a toolbar with icons for 'New', 'Open', 'Edit', 'Close', 'Bridge Group', 'Resources', 'Assignment', 'Drill Down', 'Sync', and 'Float Window'. The main workspace is divided into three panes:


- Assignments by Takeoff / Resource:** A list of items on the left. The item '00-105- 5" Slab On Grade' is highlighted with a red box and a red arrow pointing to the '5" Slab On Grade' pane.
- 5" Slab On Grade:** A table showing takeoff variables for the selected item. The variables are:

Name	Quantity	Unit	Takeoff Variable
Quantity	1.000	each	
Area	1,077.775	sf	
Conc. Strength PSI	3,000.000		Conc_Strength_PSI
Perimeter	178.871	lf	Perimeter
Wire Mesh Size	66.000		Wire_Mesh_Size
- Primary Takeoff:** A table showing the primary takeoff variables for the selected item. The variables are:


Name	Quantity
Count	4
Length	164.499
Perimeter	178.871
Area	1077.775
Conc_Strength_PSI	10000
Wire_Mesh_Size	0
Description	Section 2
MeasurementType	00-105- 5" Slab...
DrawingDescription	002 ST1.1 SITE PL...
BidCode	033105


At the bottom of the interface is the 'Estimate Detail' pane, which shows a table of items with columns for Phase, Item, Description, Quantity, Unit, Location, Bid Item, Building, Floor, and Work.

Variables which are incomplete must be corrected in the original measurement. Out-of-Range errors, however, allow double-clicking on the line to open the Assignment Panes. Here you will see the invalid Takeoff Variable description highlighted. You can then check the Primary Takeoff Pane to see the Takeoff variables that need correction. You cannot make changes to the takeoff variables here. You must go back to the original measurement and make the appropriate changes there.

Semi-Automatic –  The SEMI-AUTOMATIC icon designates that this item is a Semi-Automatic Assignment. Under it will be listed all the Assignment Histories that have

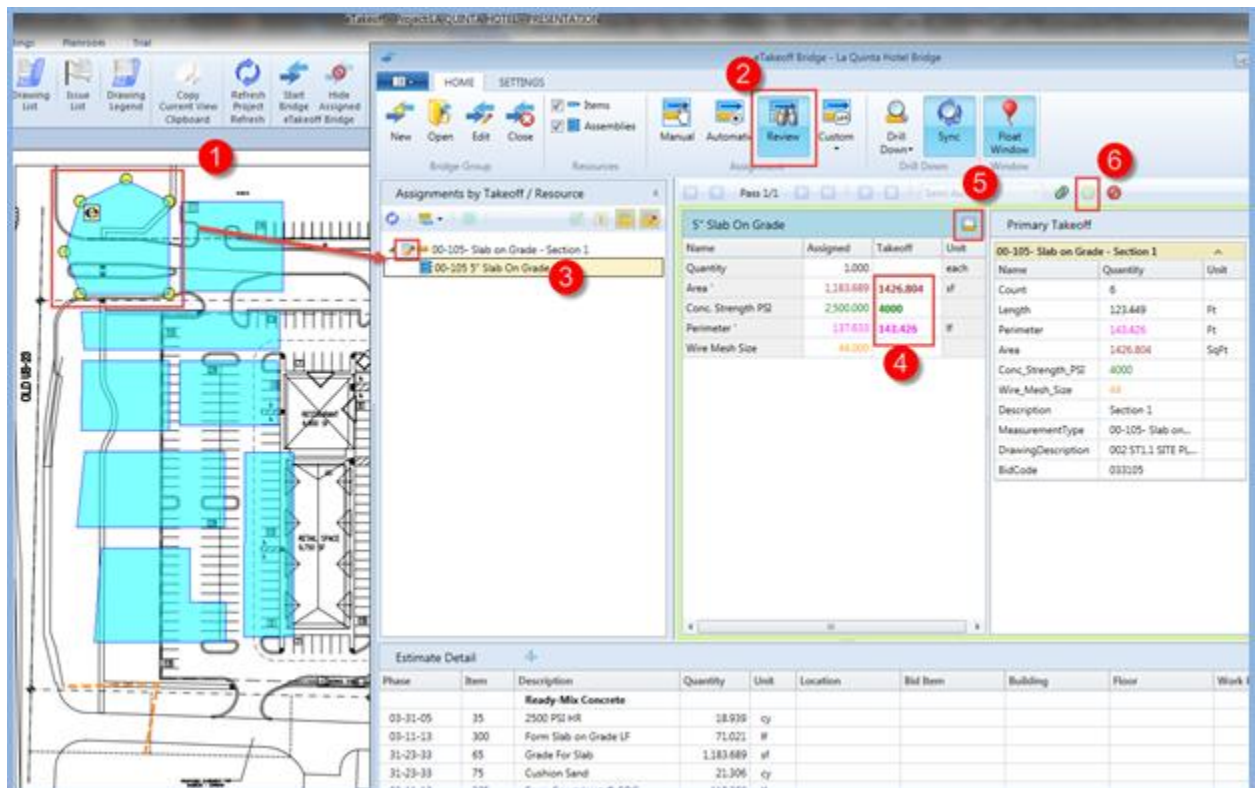
been used with this measurement. You can select the appropriate item/assembly and double-click or drag to open the Assignment Panes. From there you can review the contents of the measurement and then Send to the Estimate.

Unchanged –  In REVIEW MODE, Items will be listed that have already been sent to the estimate. This is indicated by the presence of the UNCHANGED icon. They are designated as Unchanged because no subsequent changes have been made to the Takeoff measurements since they were sent to the estimate.

Changed -  The CHANGED icon designates that this Takeoff measurement has been changed in a way that affects the estimate, SINCE IT WAS LAST SENT TO THE ESTIMATE. The change could be any change to the measurement variables or a changed Measurement Description, if that was used as a Location Code in Estimating.

You can double-click or drag the entry to open the Assignment Panes. The Assignment Panes will show the original data as sent to the estimate, as well as the changed data for comparison purposes. You can accept the modifications and re-submit to the estimate.

Review the following Example:



The screenshot displays the eTakeoff software interface. On the left is a drawing of a bridge structure. A red box labeled '1' highlights a specific slab area. In the center, the 'Assignments by Takeoff / Resource' pane shows a list of items. A red box labeled '3' highlights an item, and a red box labeled '4' highlights a 'CHANGED' icon next to it. On the right, the 'Primary Takeoff' pane shows a table of measurements. A red box labeled '5' highlights the table, and a red box labeled '6' highlights an 'UNCHANGED' icon. At the top, a red box labeled '2' highlights the 'Review' button in the toolbar.

Name	Assigned	Takeoff	Unit
Quantity	1.000		each
Area	1,183.689	1426.804	sf
Conc. Strength PSI	2500.000	4000	
Perimeter	137.633	148.426	ft
Wire Mesh Size	48.000		

Name	Quantity	Unit
Count	6	
Length	123.649	ft
Perimeter	143.426	ft
Area	1426.804	SqFt
Conc. Strength PSI	4000	
Wire Mesh Size	48	
Description	Section 1	
MeasurementType	00-105- Slab on...	
DrawingDescription	002-571.1 SITE PL...	
BidCode	033205	

Phase	Item	Description	Quantity	Unit	Location	Bid Item	Building	Floor	Work
03-31-05	35	Ready-Mix Concrete	28.936	cy					
03-11-13	300	Form Slab on Grade LF	71.021	lf					
31-23-33	65	Grade For Slab	1,183.689	sf					
31-23-33	75	Cushion Sand	21.306	cy					

1 – The Selected Slab had already been sent to the Estimate. Later it was modified in eTakeoff Dimension by extending the sides as well as changing the concrete spec to 4000psi.

2 – When the Review Mode button was pressed, the CHANGED icon appeared in front

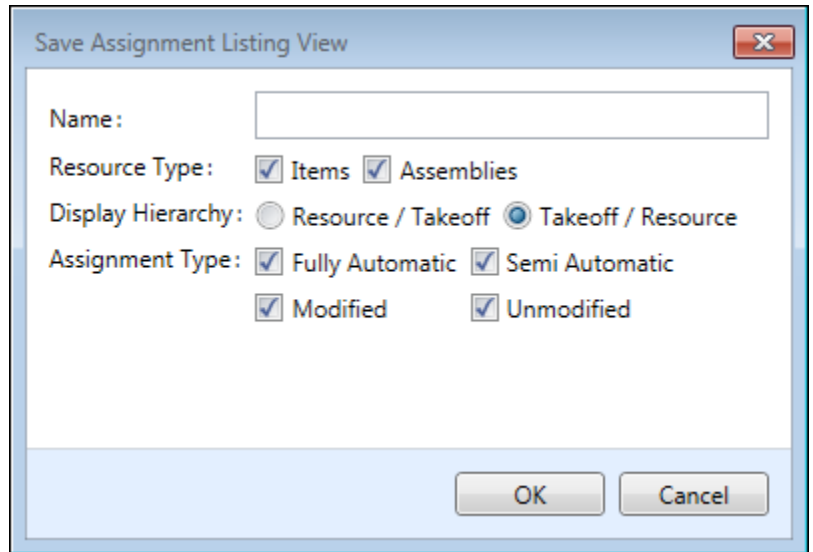
of the Measurement in the Assignment List Pane (note that you may need to press the REFRESH button to make the changed measurement appear).

- 3 – The Assignment List shows the Measurement as well as the Estimating Assembly Assignment. Double clicking on the assignment will open the Assignment Panes.
- 4 – Note that the NEW CHANGES (Quantities and Spec change) now appear next to the values that are in the estimate.
- 5 – The APPLY CHANGES button is now activated. Simply Press the button to accept all the new values. The Quantities in the Estimate Detail pane will recalculate.
- 6 – The Send to Estimate button will then Activate, and you can press it to send the updated assignment to the estimate. **Bridge will UPDATE the existing Estimating information WITHOUT modifying any of the pre-existing information in the estimate. Any price changes, waste factors, productivity, crews and other attributes are retained for that item or Assembly!**

Filters in CUSTOM Mode - Custom Mode allows you to create your own views in the Assignment List window.



- 1 – Note that in the CUSTOM Mode, all 4 Filters will be highlighted. This is the default view.
- 2 – You can press the bottom half of the Custom button to open a selection menu. The top portion will list any Custom View configurations you’ve saved (Audit is a pre-configured example). The Save Current Configuration will open the Save Assignment Listing View to allow you to select the specific settings for this view and then save it for future reference.



The image shows a Windows-style dialog box titled "Save Assignment Listing View". It has a standard title bar with a close button (X) in the top right corner. The dialog contains several configuration options:

- Name:** A text input field for naming the custom view.
- Resource Type:** Two checked checkboxes for "Items" and "Assemblies".
- Display Hierarchy:** Two radio buttons; "Takeoff / Resource" is selected, while "Resource / Takeoff" is unselected.
- Assignment Type:** Four checked checkboxes for "Fully Automatic", "Semi Automatic", "Modified", and "Unmodified".

At the bottom right of the dialog are two buttons: "OK" and "Cancel".

Name: Enter a name for the Custom View. This will be displayed when you click on the bottom half of the Custom Mode button.

Resource Type: Check whether this view will contain items, assemblies or both.

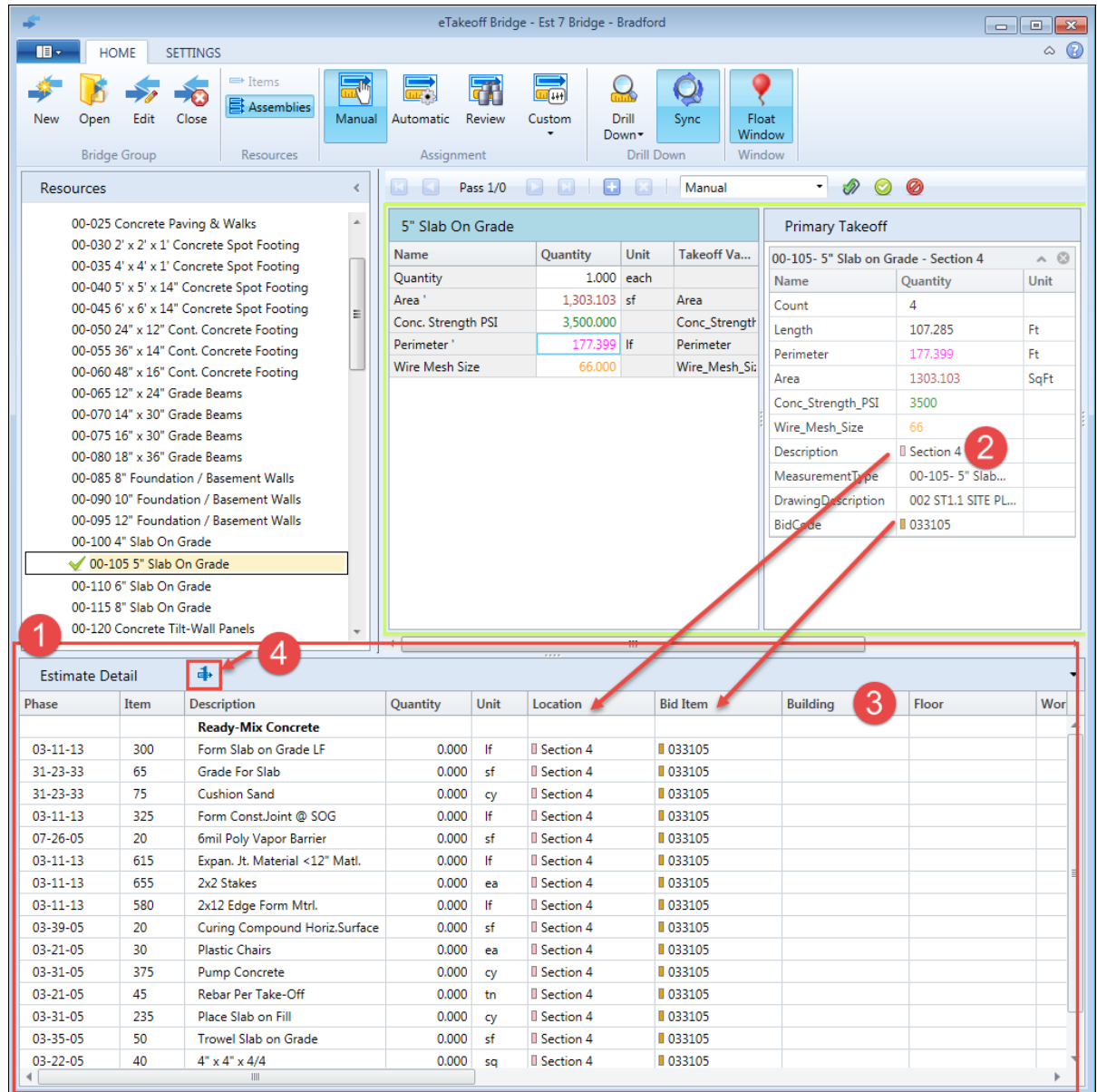
Display Hierarchy: Check the display sequence desired for this view. Remember, "Resource" is Estimate resource, while "Takeoff" is Takeoff Measurement.

Assignment Type: You can select any combination of filters to apply to the list.

3 – You can also Edit and Delete Custom Assignments from this context menu.

Estimate Detail Pane

The Estimate Detail Pane is used to display the item or items associated with the estimating object. When taking off individual items, the Detail Pane will list the item being taken off and display the input variables needed to generate the item in the Estimate side of the Assignment Pane. When using an assembly, all the items in the assembly will be listed, with all the variables needed for the assembly displayed in the Estimating Assignment Pane. When the ADD PASS button is pressed on the Assignment Pane Header, the calculated quantities for the item(s) will appear in the Quantity Field.



The screenshot displays the eTakeoff Bridge software interface. The top menu bar includes 'HOME' and 'SETTINGS'. Below the menu is a toolbar with icons for 'New', 'Open', 'Edit', 'Close', 'Assemblies', 'Manual', 'Automatic', 'Review', 'Custom', 'Drill Down', 'Sync', and 'Float Window'. The main window is divided into several panes:

- Resources Pane (Left):** Lists various construction items, including concrete paving, footings, beams, and slabs. The item '00-105 5" Slab On Grade' is highlighted.
- 5" Slab On Grade Pane (Center):** Displays a table of variables for the selected item.

Name	Quantity	Unit	Takeoff Va...
Quantity	1.000	each	
Area'	1,303.103	sf	Area
Conc. Strength PSI	3,500.000		Conc_Strength
Perimeter'	177.399	lf	Perimeter
Wire Mesh Size	66.000		Wire_Mesh_Si
- Primary Takeoff Pane (Right):** Displays a table of variables for the selected item.

Name	Quantity	Unit
Count	4	
Length	107.285	Ft
Perimeter	177.399	Ft
Area	1303.103	SqFt
Conc_Strength_PSI	3500	
Wire_Mesh_Size	66	
Description	Section 4	
MeasurementType	00-105- 5" Slab...	
DrawingDescription	002 ST1.1 SITE PL...	
BidCode	033105	
- Estimate Detail Pane (Bottom):** A table showing the breakdown of the selected item.

Phase	Item	Description	Quantity	Unit	Location	Bid Item	Building	Floor	Wor
Ready-Mix Concrete									
03-11-13	300	Form Slab on Grade LF	0.000	lf	Section 4	033105			
31-23-33	65	Grade For Slab	0.000	sf	Section 4	033105			
31-23-33	75	Cushion Sand	0.000	cy	Section 4	033105			
03-11-13	325	Form Const.Joint @ SOG	0.000	lf	Section 4	033105			
07-26-05	20	6mil Poly Vapor Barrier	0.000	sf	Section 4	033105			
03-11-13	615	Expan. Jt. Material <12" Matl.	0.000	lf	Section 4	033105			
03-11-13	655	2x2 Stakes	0.000	ea	Section 4	033105			
03-11-13	580	2x12 Edge Form Mtrl.	0.000	lf	Section 4	033105			
03-39-05	20	Curing Compound Horiz.Surface	0.000	sf	Section 4	033105			
03-21-05	30	Plastic Chairs	0.000	ea	Section 4	033105			
03-31-05	375	Pump Concrete	0.000	cy	Section 4	033105			
03-21-05	45	Rebar Per Take-Off	0.000	tn	Section 4	033105			
03-31-05	235	Place Slab on Fill	0.000	cy	Section 4	033105			
03-35-05	50	Trowel Slab on Grade	0.000	sf	Section 4	033105			
03-22-05	40	4" x 4" x 4/4	0.000	sq	Section 4	033105			

Red arrows and numbers indicate key features:

- 1:** Points to the 'Estimate Detail' button in the bottom toolbar.
- 2:** Points to the 'Primary Takeoff' pane.
- 3:** Points to the 'Location' and 'WBS Code' columns in the 'Estimate Detail' table.
- 4:** Points to the 'One-Time Item' button in the bottom toolbar.

The Estimate Detail Pane

- 1 – The Estimate Detail Pane resides at the bottom of the Bridge window when the Assignment buttons are being used.
- 2 – You can drop any of the Primary Takeoff variables onto any of the Location or WBS Columns to create new variable mappings.
- 3 – The Location and WBS Code columns will appear if your estimating system supports them.
- 4 – The One-Time Item button can be used to add miscellaneous items to the Detail Pane on-the-fly.

In the columns to the right of the item detail, the Detail pane will allow posting Location Codes and WBS codes if your estimating system supports them. These columns can either be filled in manually, or you can drag any of the Primary Takeoff variables to the Column header or individual cell creating a new variable MAPPING for the column. For instance, the Measurement Description from the Primary Takeoff Pane can be mapped as the Location Code in the Detail Window by dragging it onto the Location Code column header. These mappings will be treated in the same manner as the Takeoff-to-Estimating variable mappings and will be retained as part of the measurement Assignment History. These will be applied each time the assignment is used in the future. Also, if your estimating system has WBS Code default values for estimate items in the estimating database, those default values will automatically be filled in for the appropriate WBS columns.

If you fill in the Location or WBS cells manually, a drop-down list of previously entered Location or WBS codes will appear in each cell. You can also right-click on the column header and open a context menu that will allow you to fill the **entire column** with manually entered values or pick from a list of previous entries. You can also Clear the column values from the context menu.

If you manually fill in Location or WBS values in the Detail Pane, Bridge will remember the previously entered values and pre-fill the values as last stored in memory. This is done so you do not have to continually fill in the values repetitively as you work in a particular location or WBS coding section. You can use the right-click context menu on the column header to quickly fill or clear column contents. You must always review the Location/WBS columns to ensure that the contents are correct before the assignment is sent to Estimating.

Since the Location/WBS columns can be pre-filled from several sources (mappings, item database defaults and memory), there are a few simple rules to help you understand the hierarchy of the Location/WBS field contents:


- 1 – The last used manually entered Loc/WBS values that are stored in MEMORY will always be filled first when the next assignment is made. These are lowest priority.
- 2 – Next in Priority are the Item Default values from the Estimating Item Database. These values will always override any stored memory values in Step 1.
- 3 – Any MAPPED variables from the Primary Takeoff Pane will always override all other values from step 1 & 2. MAPPED variables are highest priority.

Workflow - Modes

There are several workflow methods (or modes) within Bridge – Manual, Semi-Automatic, Fully Automatic, Review and Custom Mode. These workflow modes can be used interchangeably to accommodate the changing needs of the estimator and the project at hand. For instance, you can perform each takeoff measurement and immediately send it to the estimate as you work. Or you can do all your takeoff first, and then selectively send measurements to the estimate at a later time, either manually or automatically.

Manual Mode

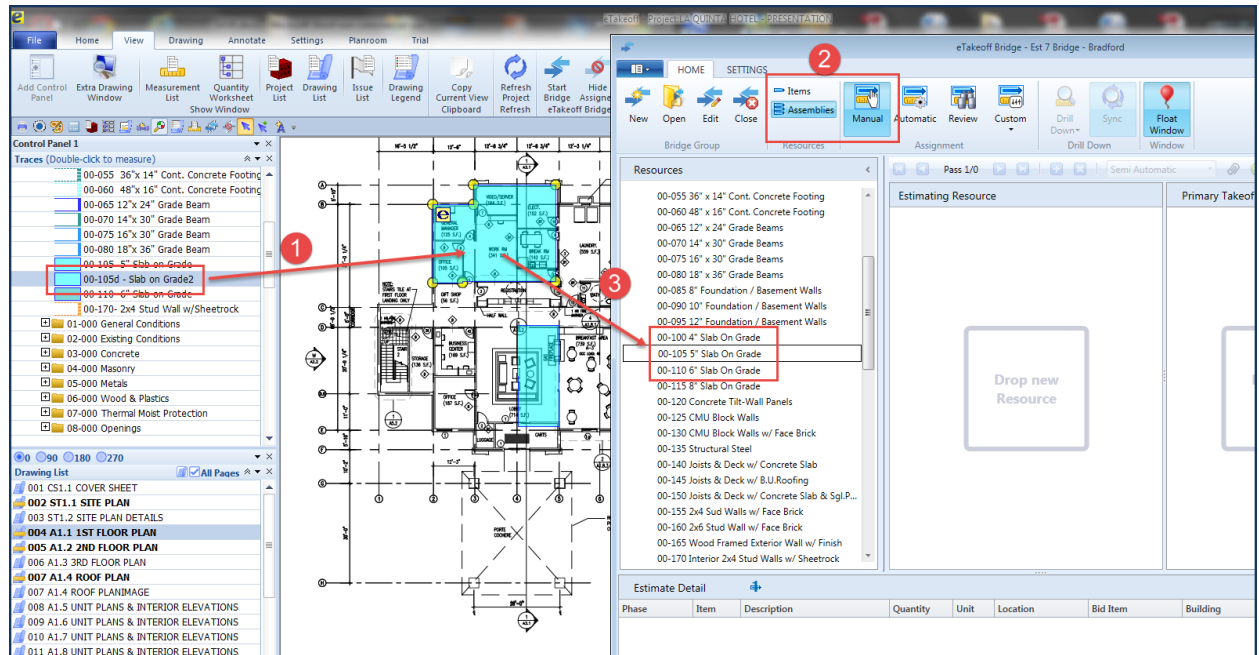
Manual mode is the primary method to create initial measurement assignments. It is used to transfer takeoff measurements as you create them or after they have been created on the drawing. It consists of dragging and dropping the takeoff measurement onto the specific item or assembly in the Bridge Estimate Resource list (which is a list of all the estimating items and assemblies). If the measurement is being transferred to estimating for the first time, then Manual mode is also used to create the initial assignment and variable mappings. The variable mapping is done to “teach” Bridge how the specific dimensions and other spec input in Takeoff relate to the input variables needed by the Estimating system. After that, the mappings are retained and performed automatically the next time the measurement is transferred to estimating. The variable mapping in Manual Mode is done with the Assignment Panes.

If you perform individual item takeoff, Manual Mode also supports a very powerful way to assign a measurement to several estimating items at once. This is called Multiple Item Assignment. The easiest way to introduce this is to view the **Multiple Item Takeoff** Video. 

Semi-Automatic Mode

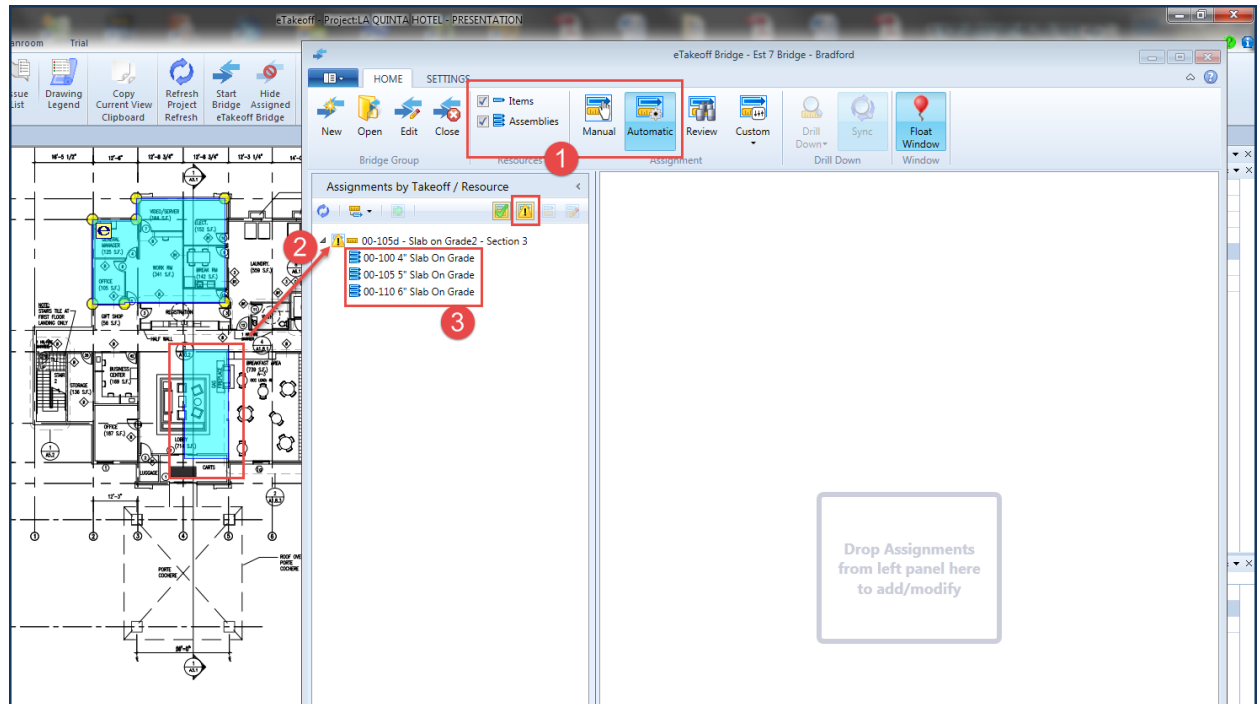
After the initial assignment and mappings are completed in Manual Mode, Bridge now retains that information for each measurement and is recalled when that measurement is used in the future. However, since Bridge now knows the complete assignment and mappings that have been previously used, Bridge can save you some time. Instead of having to find each measurement and drag and drop it onto the appropriate item/assembly in the list of estimating items/assemblies, Semi-Automatic Mode can partially automate the process. In this mode, Bridge will find all drawing measurements across the entire project that have assignment histories and present the list of measurements to you. For each measurement you will see any estimating items or assemblies that the measurement has been assigned to historically. You can then select the correct item or assembly for this particular measurement, double-click it to open the assignment panes to add the pass, review the details and then send to the estimate. See the [Assignment List Pane](#) for a discussion of the Assignment List Pane functions available in this Mode.

Study the following example:



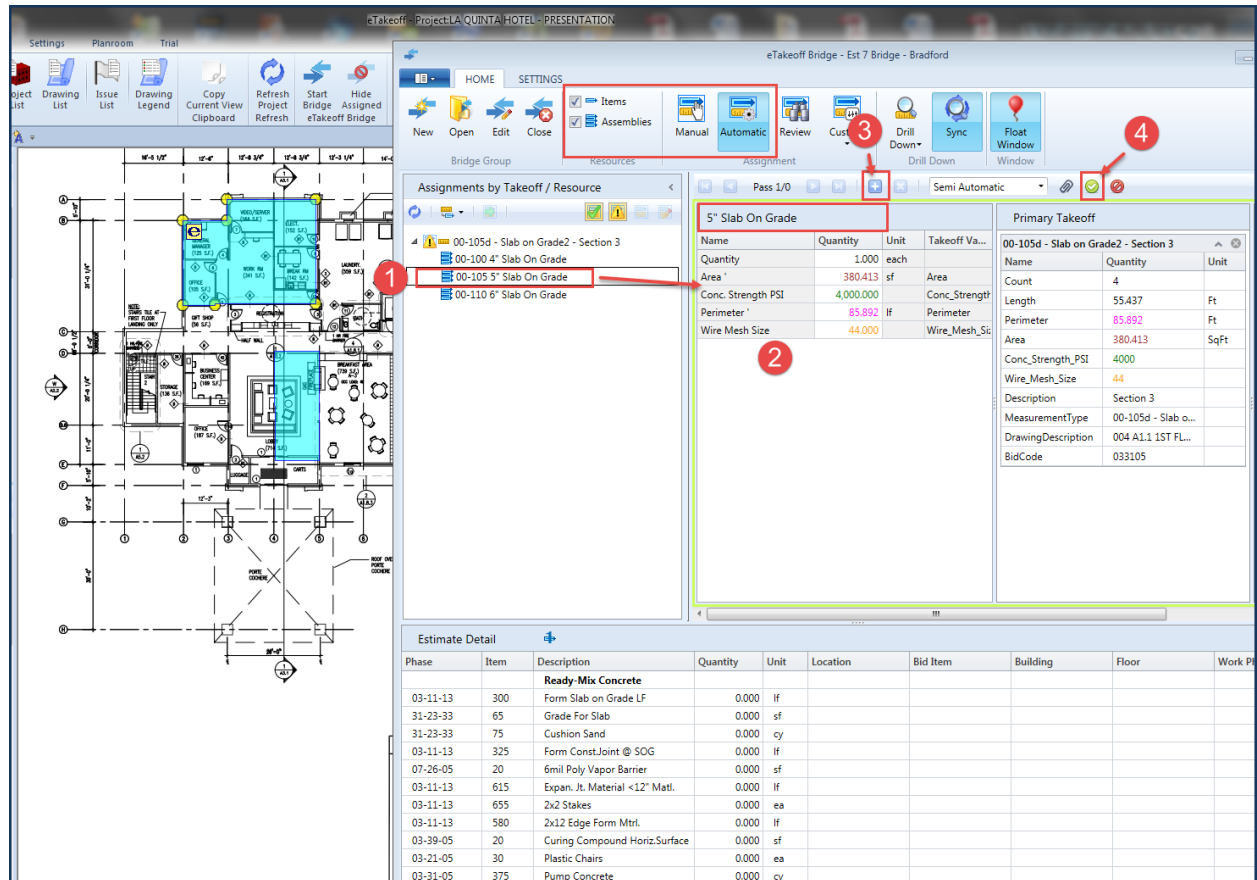
- 1 - On past projects you have used Takeoff to create many #105-Slab On Grade measurements.
- 2 – In each case, you have opened Bridge in MANUAL MODE, listing the Estimating Assemblies.
- 3 – You’ve then dragged the Slab measurements onto the 4”, 5” and 6” Estimating Slab assemblies, whichever was appropriate for the particular project.

Bridge has now “learned” each of these different assignments for the #105 Slab On Grade measurement types.



Now, instead of continuing to find all the #105 Slab On Grade measurements in the project and repeatedly dragging them onto the appropriate Slab Assembly in the Estimating Assembly list, you can use the Semi-Automatic mode to save time. There's still a remaining Slab measurement on this project.

- 1 – Press the AUTOMATIC MODE button and ensure that the Assemblies option is checked in the Resource Group. Also ensure that the Semi-Automatic Filter on the Assignment List header is selected so all Semi-Automatic assignments will be listed.
- 2 – By selecting the Semi-Automatic Mode, Bridge will find all Takeoff measurements across the entire project that have an assignment history and will list them for you in the Assignment List pane. In this example, there is just the one slab measurement to be found.
- 3 – Step 3 shows the Slab Measurement expanded. Note that the Semi-Automatic Mode is now listing all the previous Assemblies to which you've assigned this measurement in the past. At this point you can simply double-click the appropriate Assembly to use in this instance (or drag the selected assembly into the Assignment Pane).



- 1 – In this example the 5" Slab was selected.
- 2 - Bridge now opens the Assignment Panes and shows you the variable mappings.
- 3 – After reviewing, you can press the ADD PASS button to calculate the quantities
- 4 – Then press the SEND TO ESTIMATE button to send this assignment to Estimating.

Note that this measurement IS NOW COMPLETE AND WILL BE DELETED FROM THE SEMI-AUTO MODE LIST. Bridge removes the measurement from the list to minimize confusion since it has been matched with an Estimating resource.

As you can see, while the manual mode is still very effective for transferring individual measurements to the Estimate, it does require you to manually find the Takeoff measurements and drag them onto the appropriate item or assembly in the Estimate Resource List. After using the Manual Mode to do the first assignment and "teaching" Bridge the relationship between the Takeoff and Estimating objects, the Semi-Automatic mode can streamline the process significantly after that.

Fully Automatic Mode -

The Fully Automatic mode is similar to the Semi-Automatic mode except that it will enable an assignment to be sent to the estimate without the review step required in the Semi-Automatic mode. At the time an assignment is made you can specify that the assignment

is FULLY AUTOMATIC. This is done in the History Type pull-down in the Assignment Panes. In the Fully Automatic mode, Bridge will find all drawing measurements that have assignment histories AND are categorized as Fully Automatic. It will display these in the Assignment List Pane. You can then choose to send all these pending measurements to the estimate in one automated step. This can streamline the entire process of transferring Takeoff to Estimating.

The Fully Automatic mode should be used with care! The Fully Automatic mode is based on 2 premises:

- 1 – You can enter all the variables necessary for the generation of the item or assembly within Takeoff. There is no need to open the assignment in Bridge to enter any additional variables or make any other modifications.
- 2 – There is only ONE associated assignment to the Takeoff Measurement, and it is the ONLY assignment ever needed. For example; for any Trace in eTakeoff Dimension, there is ONE and ONLY ONE associated item or assembly in Estimating. Any time you use that Trace, it will always be associated with that particular item or assembly in Estimating. This ONE-TO-ONE relationship is what makes the automatic transfer possible. Whereas the Semi-Automatic mode will present a Trace measurement along with a list of previous assignments to choose from, the Fully Automatic Mode assumes that you will always use the Takeoff Trace in conjunction with the same estimating object. In this case, while you CAN review any Automatic Assignment before generation to Estimating, there is generally no need to do so since all the input necessary for estimating has already been done when the measurement was created in Takeoff.

WBS Codes – Bridge will only send MAPPED WBS codes and ITEM DEFAULT WBS codes from the item database. Obviously no Manual Entries are allowed during the automated transfer, and any manual WBS codes in memory will be ignored. You CAN double-click on a particular Full Auto measurement in the Assignment List Pane and manually enter WBS information, and then send the assignment manually to the Estimate.

Note that if you ever create another assignment for one already designated as Fully Automatic, the earlier assignment will be lost.

See the [Assignment List Pane](#) for a discussion of the Assignment List Pane functions available in this Mode.

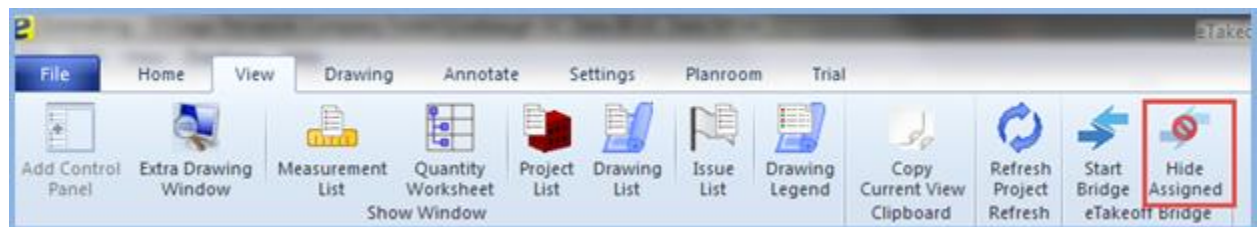
Review Mode -

Review Mode is used to review all assignments that HAVE BEEN SENT to the Estimate. You can drill down to find the measurement on the drawing as well as review all the detail that was sent to estimating. You can also do minor editing and send the revisions to

estimating. See the [Assignment List Pane](#) for a discussion of the Assignment List Pane functions available in this Mode.

Review Mode also supports [Change Management](#). Review mode will list any measurement with variable changes (dimensional and spec) made in Takeoff that would affect the measurement after it was sent to Estimating. Review mode will let you review the changes and submit the revised assignment to the Estimate **while maintaining the integrity of any pricing, productivity, waste, and other attributes of the item or assembly**.

Review Mode can also be used in conjunction with the **HIDE ASSIGNED** button in eTakeoff Dimension. This is found on the VIEW Tab in the eTakeoff Bridge group. The Review mode will show all measurements that have been sent to the Estimate. The Hide Assigned button will HIDE all measurements that have been sent and leave ONLY the measurements that have NOT been sent to the estimate. Thus the two views together can present a complete picture of what has been sent and what is remaining to be sent to the estimate.



Note also, the Measurement List Window in eTakeoff Dimension can also be used to highlight what has/has not been sent to the estimate. There is a user-selectable column called #EstASN – Number of Estimating Assignments. Each measurement in the Measurement List will have an assignment count which will designate how many times that measurement has been assigned in Bridge. Any value = 0 indicates a measurement that has NOT been sent to the Estimate. All other values > 0 indicate a measurement that HAS been assigned in Bridge. You can configure and save Measurement List views that can help you in determining your takeoff measurements status.

Custom Mode -

Custom Mode isn't really a workflow, as much as it is a way to combine the other 3 modes into one customized workplace. It allows you to customize the various ways data is presented in the [Assignment List Pane](#). Normally the filters and data presented in this pane are controlled by the MODE you are in. For example...Automatic Modes only allow viewing of pending measurements yet to be sent to the estimate, while Review Mode only shows measurements that are already in the estimate. Custom Mode, however, lets you combine and filter these modes to define your own views of the data and store the views for recall. For instance, the Custom Mode comes pre-set with a view named Audit. The Audit view will instantly list only those measurements that have CHANGED since they were last sent to the estimate.

See the [Assignment List Pane](#) for a discussion of the Assignment List Pane functions available in this Mode.

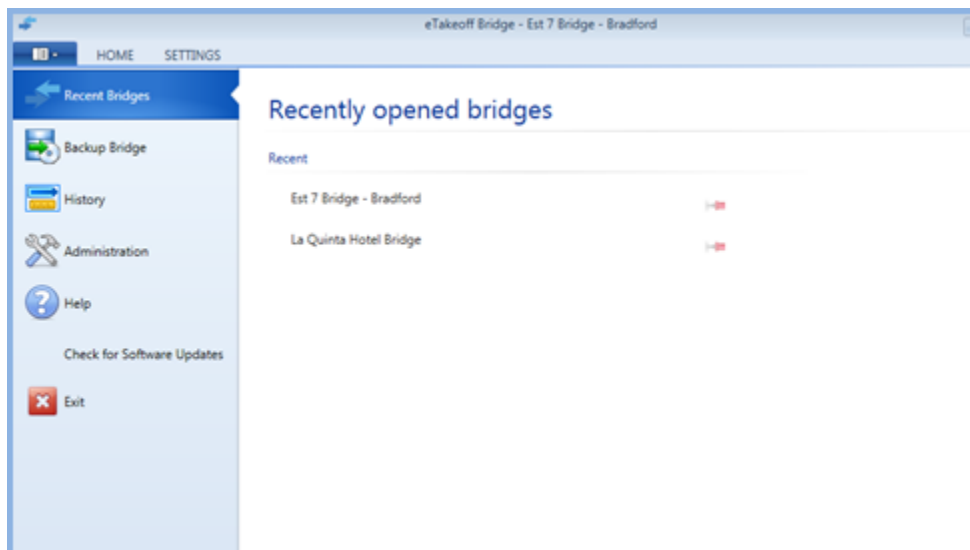
MISCELLANEOUS

File Tab

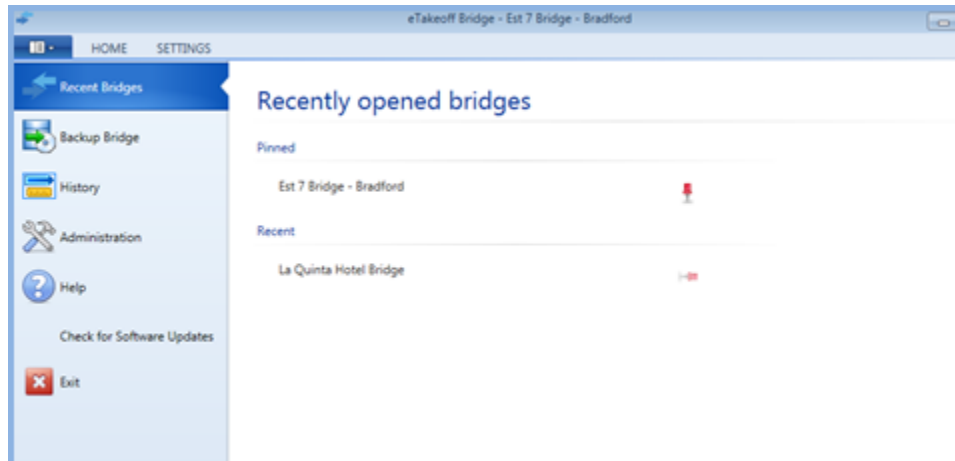
The file Tab is the first TAB on the Ribbon Bar

Recent Bridges

The Recent Bridge Menu is a convenient way to quickly review recent Bridge use. Normally the 8 most recently opened Bridges are listed here. You can quickly open any Bridge by clicking on the name.



If you wish to always keep a Bridge in the list, click on the pin icon to the right. The list will then expand into 2 sections...Pinned and Recent. That Bridge will then be kept in the Pinned list until you unpin it.



Backup Bridge


Backup Bridge – The Backup Bridge menu backs up the current bridge to an external .bpx file. You can also use this to share the bridge with other users.

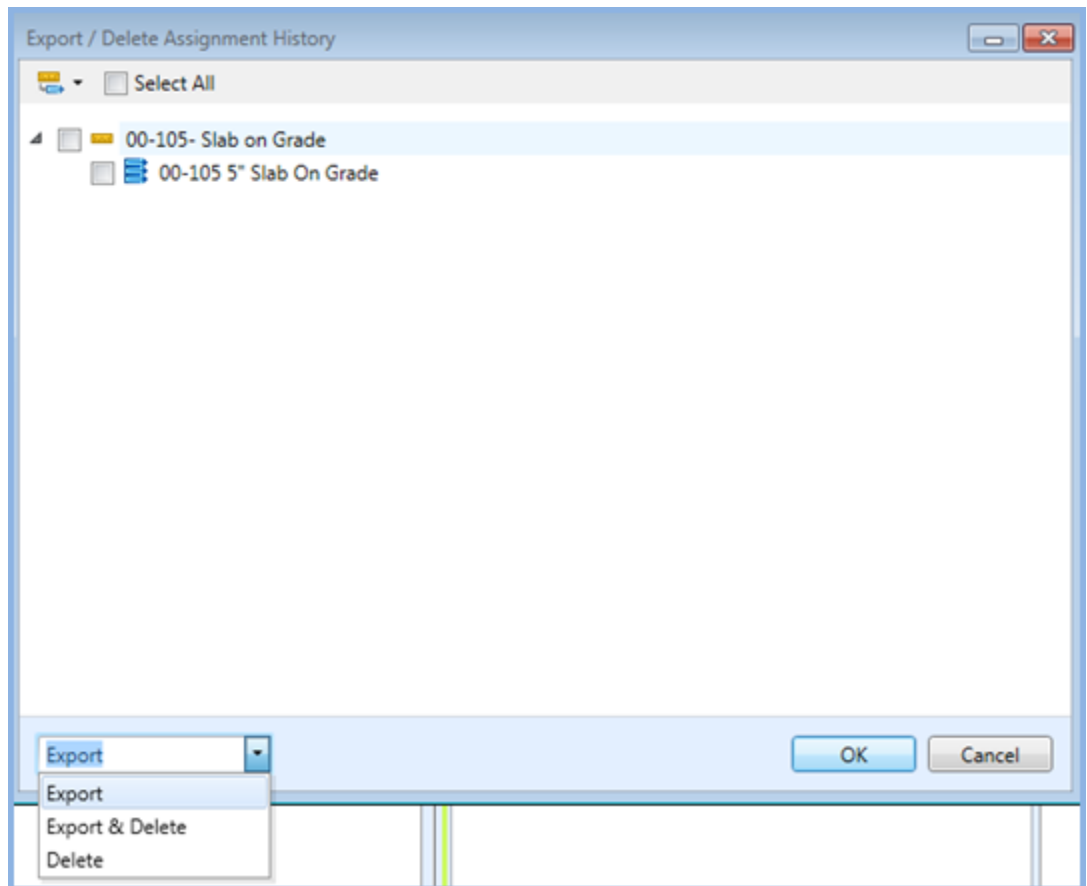
Restore Bridge – Press this button to restore a bridge that was previously backed up.

History

Import Assignment History – The Assignment History (all relationships between Takeoff measurements and Estimate items and Assemblies) is stored in the Bridge Database. These Assignment Histories can be imported from other users through the import of the .bpx file. Pressing this button will open the Import Assignment History Dialog.

Export/Delete Assignment History - The Export/Delete dialog allows you to Export or Delete selected Assignment histories. If you export, it creates the .bpx Export file. The pulldown list at the bottom left corner will let you designate whether you wish to Export, Delete or Export AND Delete in this pass. If you delete, the selected Assignments will be deleted from the Bridge Database.

You can select the sequence of the list with the Item Hierarchy button  as well as expand or compress the list. The check boxes will allow you to select all or specific Assignments to import.



Administration

Set User ID – This is the same function found in eTakeoff Dimension. The use of User ID's should be coordinated between Takeoff and Bridge. See the "eTakeoff Dimension User ID Window" HELP topic in eTakeoff Dimension for an overview of User ID's.

Install Software License

Press this button to review or uninstall your eTakeoff Bridge Licenses

See eTakeoff Dimension HELP. The installation process is identical to eTakeoff Dimension

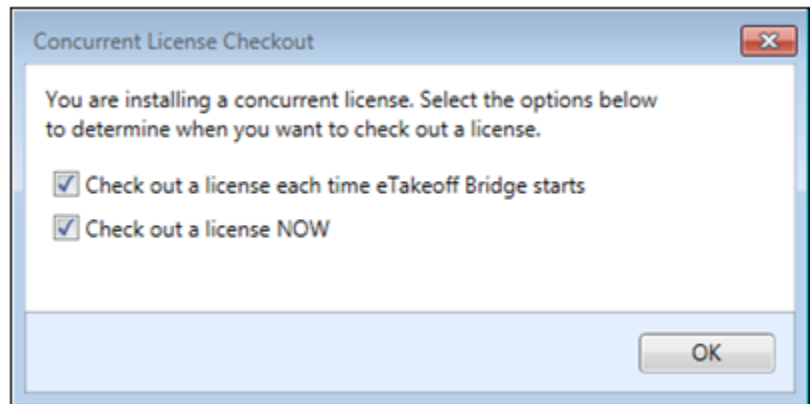
Check Out Current License –

Press this button to review or change the concurrent licenses you are using.

See eTakeoff Dimension HELP. The Concurrent License process is identical to eTakeoff Dimension.

If you have Concurrent Licensing, the first time you start eTakeoff Bridge after installation, you will see the Concurrent License Checkout Dialog.

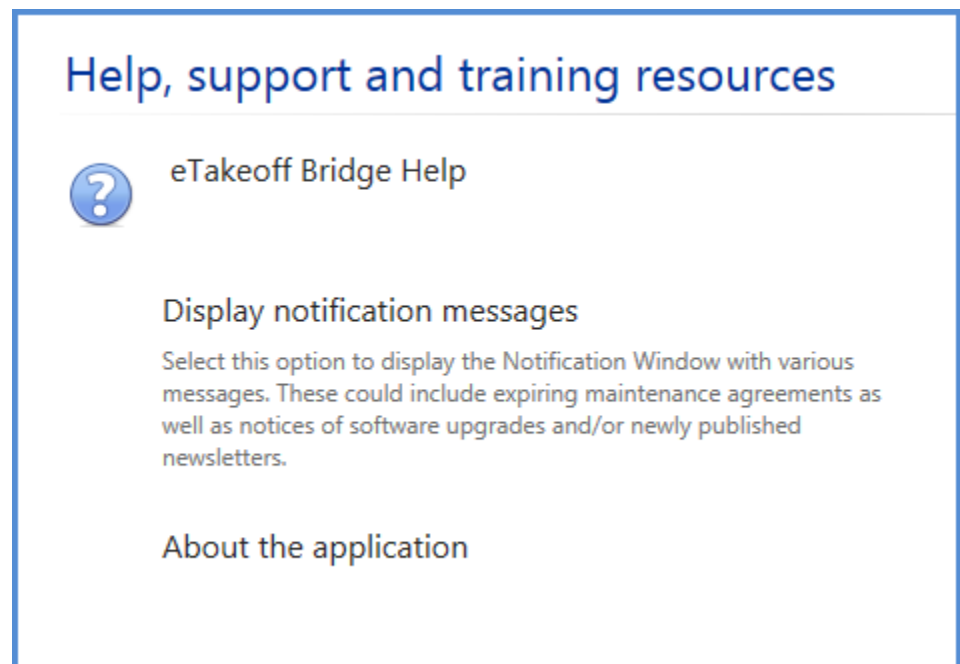
eTakeoff



Check both boxes to indicate that you would like to check out a license each time Bridge Starts, as well as check out a license NOW to start this Bridge session

Help

This option will open the Bridge Help System. You will be able to view the table of contents and index, as well as search for topics of interest.



eTakeoff Bridge Help - The HELP menu option will open the eTakeoff Bridge HELP Sub-Menu.

Display notification Messages – This option will display the Notification Window with various messages. These could include expiring maintenance agreements as well as notices of software upgrades and/or newly published newsletters.

About the Application – This option will display the current installed version number of eTakeoff Bridge.

Check for Software Updates

This option will check to see if you are running the latest version of eTakeoff Bridge. If there is a later version, you will be able to download the updated install file. After downloading, you can double-click the Install File and the new version will be installed over the current version. Be sure to close Estimating and eTakeoff Dimension before running the Install.

Note that eTakeoff Bridge will also check to see if any updates exist when you start Bridge, as well as at 24 hour intervals while Bridge is running.

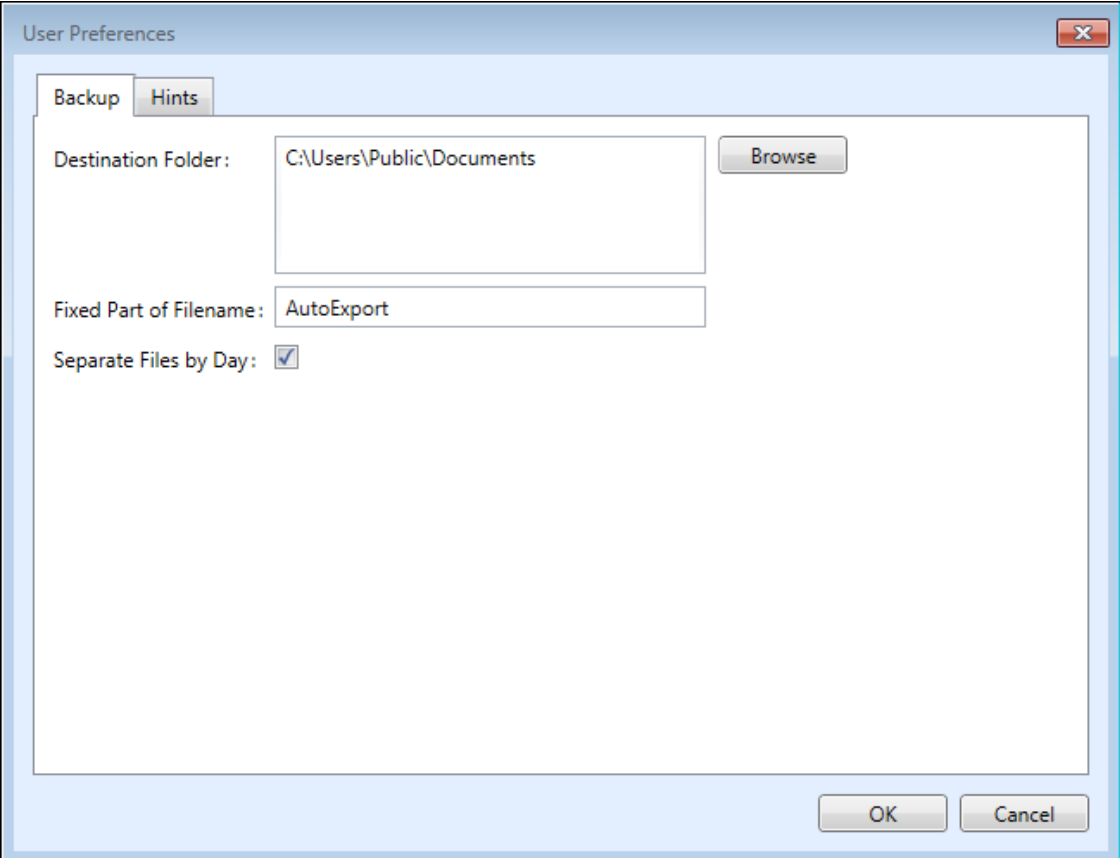
Exit

Once started, Bridge runs in the Background in your System Tray. It will continue to run in the background until you specifically Terminate Bridge using this EXIT option.

Settings Tab

User Preferences

Backup – The Backup Dialog allows you to specify the default parameters when a Bridge is created with Backup specified.



The image shows a 'User Preferences' dialog box with a 'Backup' tab selected. The 'Hints' tab is also visible. The 'Destination Folder' is set to 'C:\Users\Public\Documents' with a 'Browse' button next to it. The 'Fixed Part of Filename' is set to 'AutoExport'. The 'Separate Files by Day' checkbox is checked. The dialog has 'OK' and 'Cancel' buttons at the bottom right.

Tab	Destination Folder	Fixed Part of Filename	Separate Files by Day
Backup	C:\Users\Public\Documents	AutoExport	<input checked="" type="checkbox"/>
Hints			

Destination Folder – Browse to a specific folder you will use as the default Backup Location. When you create a new Bridge, this location will be pre-filled in the Backup prompt.

Fixed Part of Filename – The auto-backup filename is of the form:
[BridgeName]_AutoExport.bexp.

An example would be "ApplebeesRestaurant_AutoExport.bexp". The "AutoExport" part is considered the "fixed" part of the filename because it doesn't change based on the project. In the scenario where multiple users are doing auto-backup to a shared folder, two users backing up the same Bridge might overwrite each other's backup. To avoid this, each user can change the fixed part of the filename. We suggest you add your initials to the end so you can easily see who backed up the Bridge.

Separate Files by Day – Using just the file naming above, there is only one backup file (or one per user). But it might be useful to have a series of backup files for recent times. We partially accommodate this with the Separate Files by Day option. If you select this option, the backup filename will include the name of the day of the week it was made. Using the example above for a backup file made on Wednesday, the filename would be

"ApplebeesRestaurant_AutoExport_Wed.bexp".

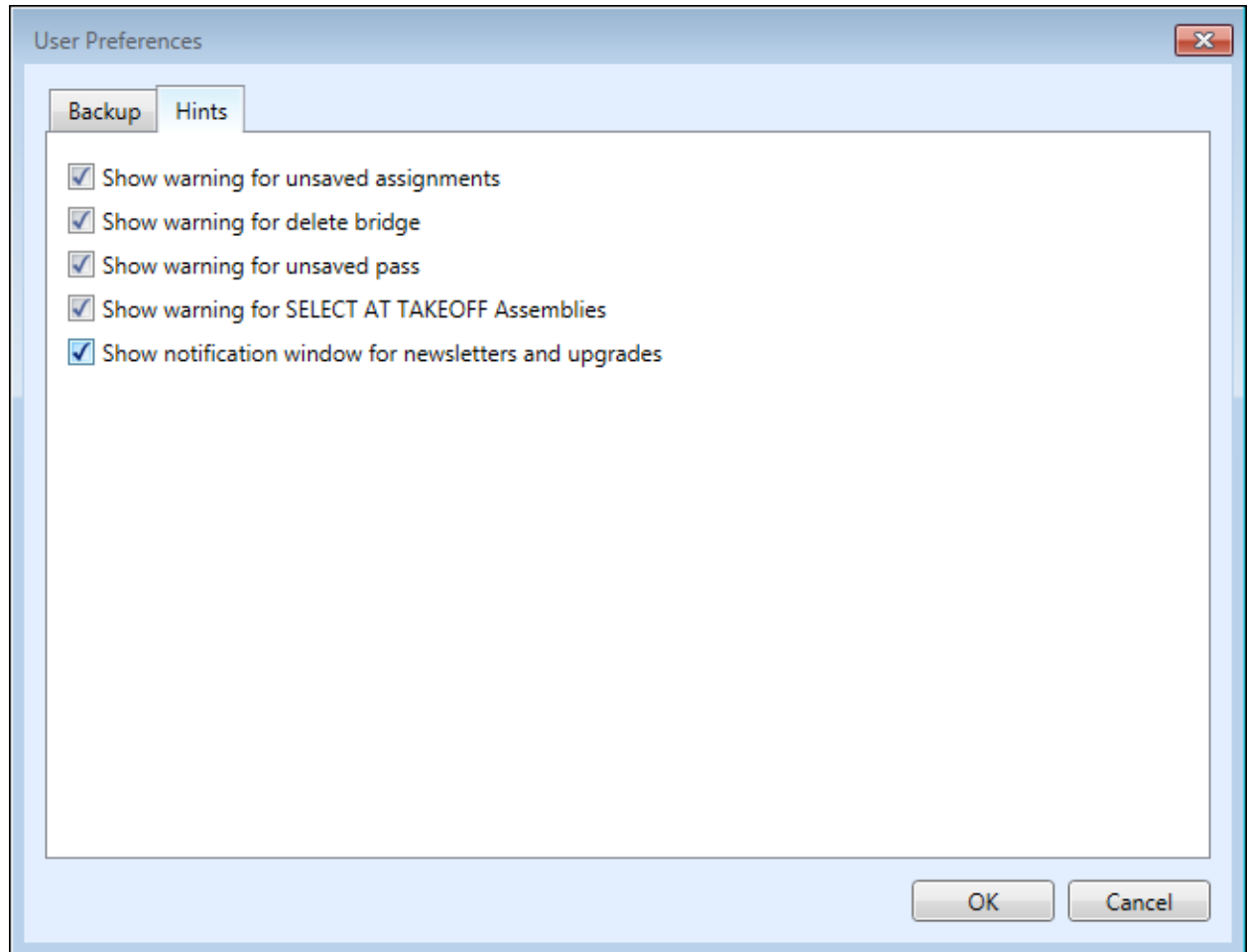
This will provide a series of backups over the last week or so. For a Bridge that's worked on every day, you would have five different backup files (seven if you work weekends). The oldest would be six days old.

WARNING: This technique is not foolproof. If you do all your takeoff on Mondays, there will only be one backup file.

Hints

The Hint Windows in Bridge are actually WARNINGS rather than Hints. Each of these

is designed to keep you from making unexpected errors. The suggestion is to leave them on, but if you become so accustomed to the operation of Bridge that they become intrusive, then you can turn them off in this dialog.



Show warning for unsaved assignments – When a user tries to EXIT the assignment without saving, the warning message “Save changes to Bridge XXX?” is shown.

Show Warning for delete bridge – When you delete a BRIDGE a confirmation message “Are you SURE you want to delete this bridge?” is shown.

Show warning for unsaved pass – If you try to leave the Assignment Panes without resolving or saving all the passes, this warning message is shown - “There are one or more passes which have not been added to the Estimate Detail. Do you want to exclude the pass and continue?”

Show warning for SELECT AT TAKEOFF assemblies – Select at Takeoff Assemblies are not able to be processed through the Estimating Interface. There will be a warning message indicating such if you create an assignment with a Select at Takeoff assembly. If the assembly uses ITEM DEFAULTS in the Select items, then Bridge can process the

assembly, generating the default items. You can then go to Estimating and modify the assembly later.

Show notification window for newsletters and upgrades – Bridge will display a notification dialog notifying you of software update versions or if a newsletter or other information is available.