Appendix C:
RSMeans Online

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1 INTRODUCTION

RSMeans Online is web service that provides current costs based on project materials, labor rates, equipment rates, market variations and productivity information. This online database can be used to generate cost estimates for Work items generated in paragon. Cost estimates constructed in RSMeans according to the methods described below can be uploaded into the paragon software. Cost line items can also be manually entered into paragon.

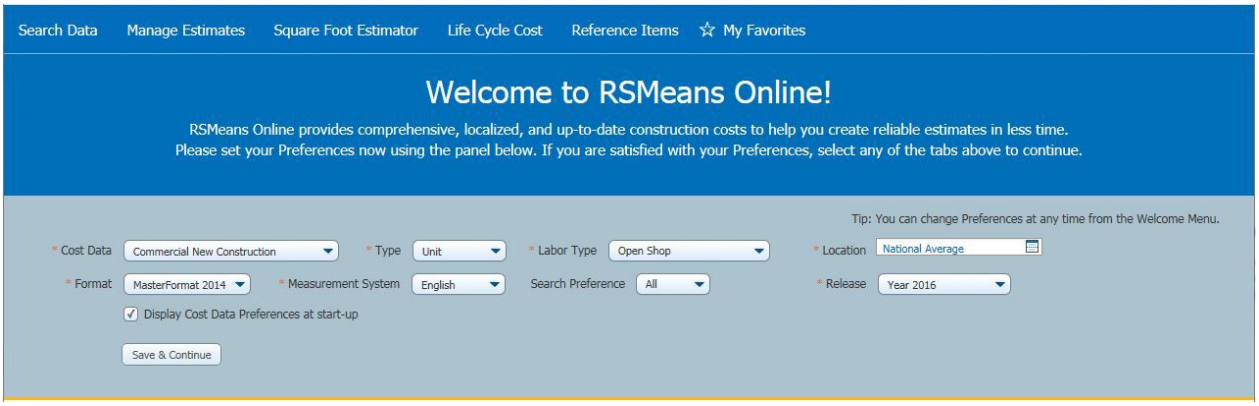


Figure 1: RSMeans Online Home Page

The RSMeans website is www.rsmeansonline.com.
NOTE: A valid subscription is required to obtain an account and to access the RSMeans Online data.

Using the "Quick Tour" and "Help" options located in a drop-down menu on the home screen are ways for users to become familiar with the RSMeans Online website.

Key Rules to remember when working with RSMeans Online (unless directed otherwise):

- Use "National Average" in Location field for geographic index.
- Use most current data release.
- Create a cost estimate file for each Work Item in paragon.
- Estimates exported to Excel must be saved as a .csv (comma delimited file).
- Costs are uploaded into paragon with 0% soft-cost mark-ups.

2 CREATING AN ESTIMATE

The sections below provide step-by-step guidance on how to generate a construction cost estimate using RSMeans Online in a manner that supports data upload to paragon. This User Guide is not intended to describe the full functionality of RSMeans Online, but rather is focused on the required steps to create an estimate file using the software, save it and upload it into paragon. See the full User guide documentation that is provided with RSMeans Online to learn more about its full capabilities.

Throughout this User Guide, screen captures are provided to assist the reader in visualizing screen layouts. Application controls are highlighted in **Blue** bold font.

2.1 Create Estimate Name and Cost Data Preferences

To create a new cost estimate, click on the **Search Data** tab to launch the Cost Book Search window.

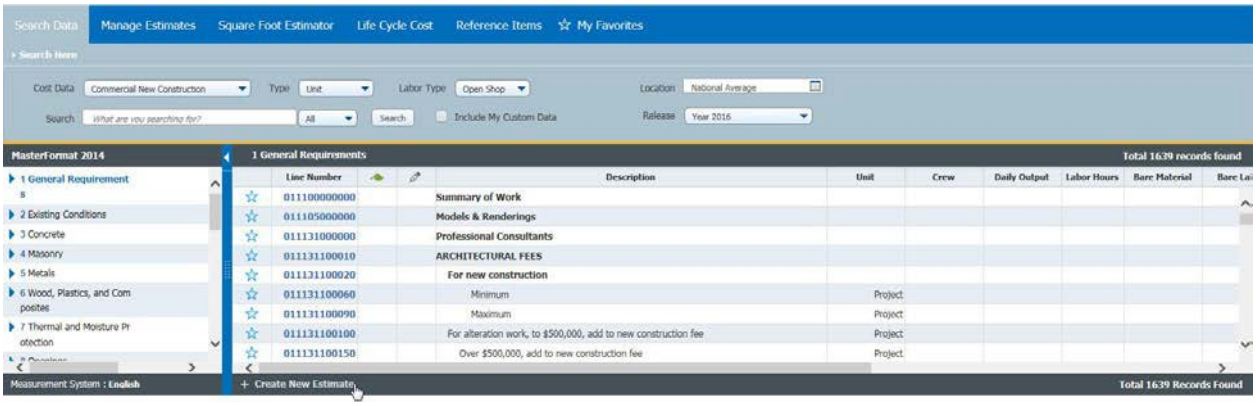


Figure 2: Cost Book Search Window

Click on the **Create New Estimate** button + Create New Estimate located on the bottom left of the window footer. This launches a blank form that the User must populate to define the cost estimate.

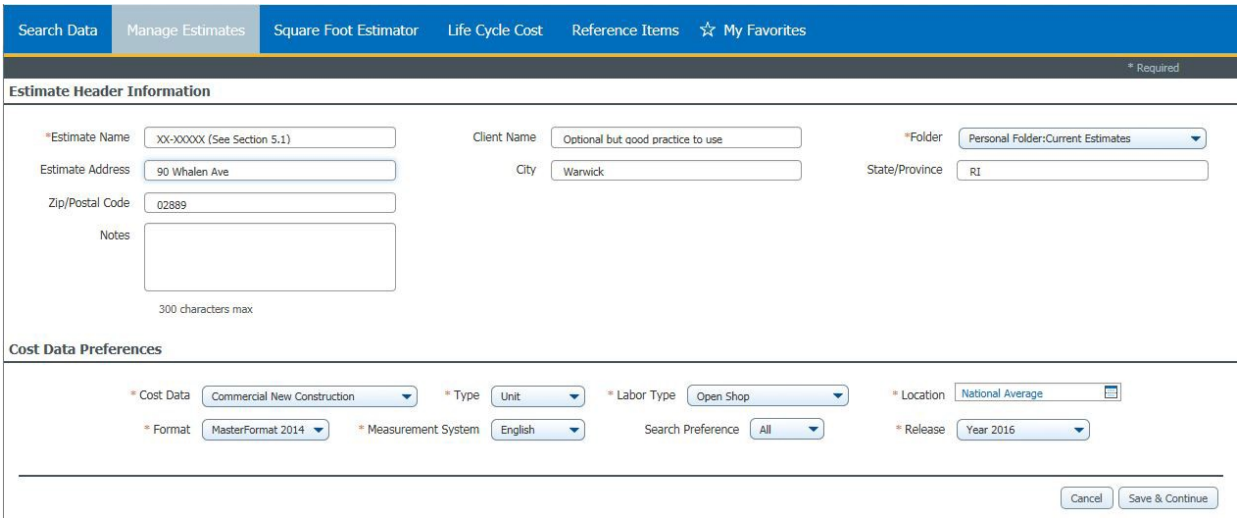


Figure 3: New Cost Estimate Form

The **Cost Estimate** form is divided into two main frames: **Estimate Header Information** and **Cost Data Preferences.** Details describing each frame, and descriptions of data entry fields are documented in the sub-sections that follow.

Field names are displayed below in **Bold** font. Fields marked on-screen (and in this document) with a red asterisk (*) are Must-Fill fields, and require data entry in order to Save the record. Other fields are important to create a thorough data record, but are not required.

2.1.1 Estimate Header Information

***Estimate Name** - The estimate name should clearly identify the estimate and its relationship to a specific Work Item assigned to a specific facility component at a specific Asset. The data entered in this fields is populated automatically in cell A1 of the Excel cost estimate workbook.

In paragon, each Work Item ID is unique. A paragon Work Item ID is in the format XXX-XXXXX, where the first three digits include the Level 2 Inventory Classification code of component linked to the Work Item (A10, C20, etc.) and the last five digits are a unique number issued in sequential order. Let's use A10-12345 as an example Work Item ID.

Client Name - Use this section to describe the Work Item. This will make it easier to identify Work Items displayed in the Manage Estimates List based on a description of the Work Item in addition to its ID. This field is optional; however, it may help the user identify and select a specific Work Item from a list.

***Folder** - The name of the folder where the estimate is to be stored.

Estimate Address – Use this field to record the Asset Name that the Work Item is assigned. This will help group Work Items by Asset so that they may be filtered and sorted in the Manage Estimate grid (See Section 2.5).

City – Use this field to enter the City in which the Asset is located. This may help differentiate between Assets with the same name in different locations. This is an optional field.

State/Province - This is an optional field. You may use this to add any information that helps identify and differentiate one Work item from another in a list.

Zip/Postal Code - This is an optional field.

Notes – May be used to provide a brief description of the cost estimate.

2.1.2 Cost Data Preferences

***Cost Data** – Defines the various cost books provided in RSMeans Online for different types of work. For the majority of component repair and replacement work, we recommend using either the Facilities or Commercial Renovation or Facilities Maintenance and Repair cost books.

If you are generating a cost estimate for new construction, or for a new addition to an existing building, you would likely use the Commercial New Construction cost book. This cost book should not be used for generating costs estimates for sustainment of an existing facility.

The Square Foot cost book is not useful in generating cost estimates for upload into paragon.

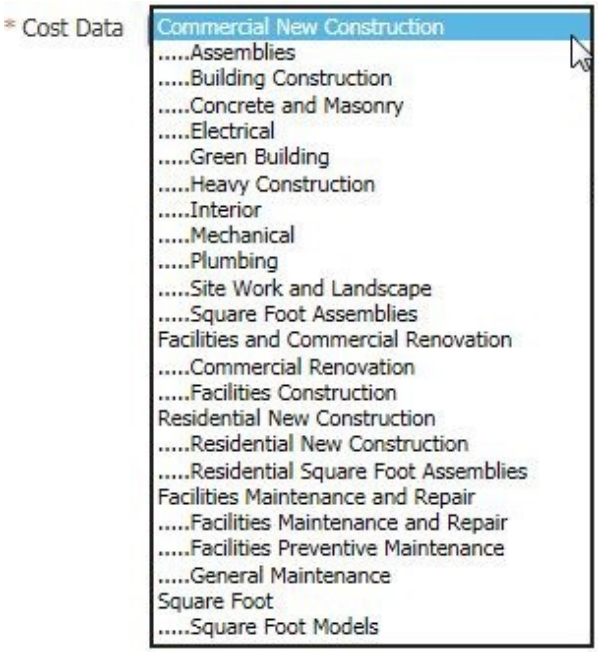


Figure 4: Cost Data Books

***Type** - RSMeans Online allows for three different ways to estimate a project: Unit Cost, Assembly Cost and Square Footage Cost.

- **Unit Cost** - Each individual cost line item of a project must be selected by the user. Individual materials, as well as the cost of equipment rental and crew rates must be entered. This is the most detailed estimating option, and will render the most line items from which to select.
- **Assembly Cost** - The task as a whole is selected by the user. RSMeans Online has predefined tasks which are made up of typical unit costs. This data type will enable the estimator to build estimates quickly, but details of the assembly may differ from the exact specifications of the work. The number of line item options to choose from will also be greatly reduced.

- **Square Footage Cost** - This data type creates estimates based on building type and square footage. This cannot be used for the purposes of cost uploads into paragon because the square foot estimator does not include estimate specifics fordeficiencies.

***Labor Type** - Available selections for this field will be determined by the selection made in the Cost Data field. Select the labor type that is likely to be used to carry out the work associated with the cost estimate.

***Location** - This option can be used to adjust costs to local cost trends. It is recommended to leave this at the National Average and account for any geographical markups in paragon. Make sure to click on **Save and Continue** to save this selection.

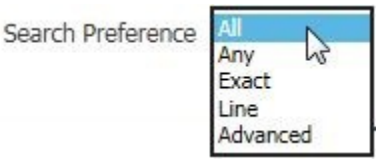
Figure 5: Location Selector

***Format** - Select between either MasterFormat 1995 (organized by

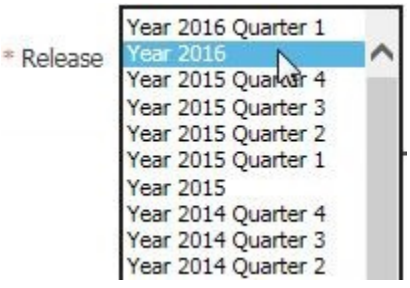
16 divisions) or MasterFormat 2014 (organized by 48 divisions) for Unit Costs. If Assembly is selected in the Type field, then UNIFORMAT II will be the only selection available for this field.

***Measurement System** – Depending on the standard system of measurement you use in managing your facilities, select either English or Metric.

Search Preference – Select from available values in the drop-down field. Select **All** to be the most inclusive.



Release - Choose the most recent data release for the most up to date data.



When all the required data fields are populated, hit the **Save and Continue** button at the bottom right side of the screen to open the new estimate screen.

2.2 Building an Estimate

Unit and Assembly cost estimates are created in the same manner. After the estimate is created it can be managed by selecting Manage Estimates and by clicking on the desired cost estimate.

The main window (screen) for building new estimates is divided into three sub-windows, or frames.

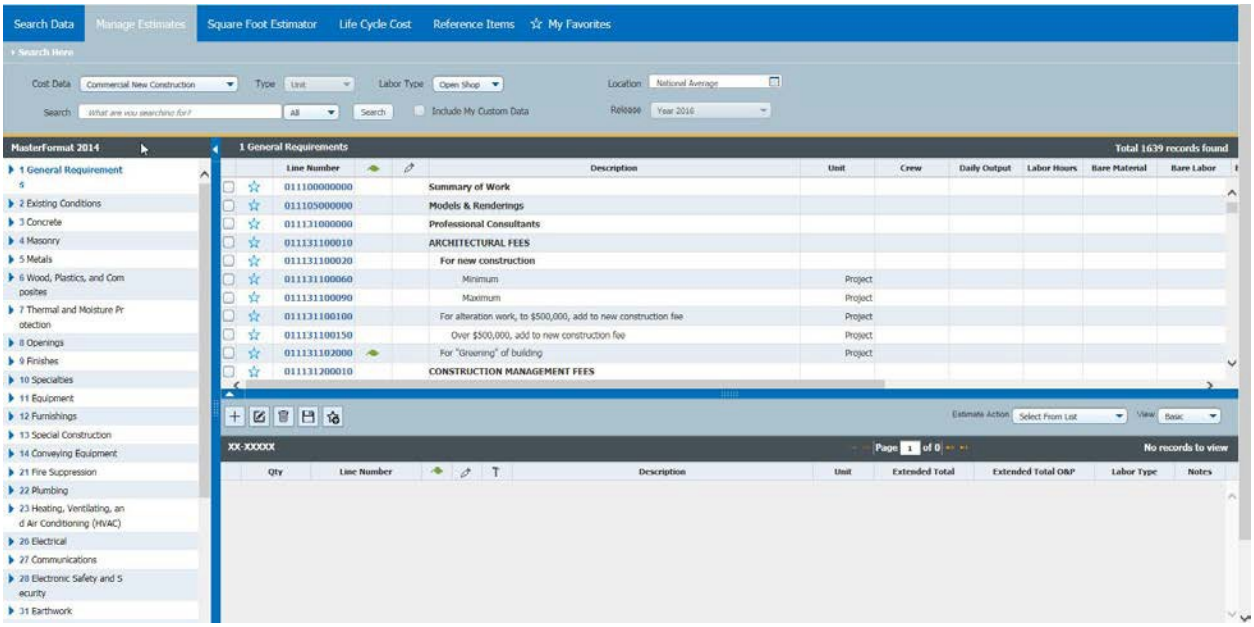


Figure 6: New Estimate Window

The far left frame includes the Cost Catalog displayed in a hierarchy tree control that corresponds to the Cost Data and Format selections made in the Cost Data Preferences frame. In the example screen capture above, the selection was MasterFormat 2014.

Each line item of a cost estimate must be selected from the Cost Catalog. You may search for a particular line item by name using the Search control in the screen header, or you may use the drill-down functions in the hierarchy tree to locate the line item you want.

Clicking on a Cost Catalog value in the hierarchy tree will display more detailed tasks in the tree, and will position the data in the grid list on the user's last selection. Drill down in the hierarchy until the data displayed in the grid includes the line item you are looking for.

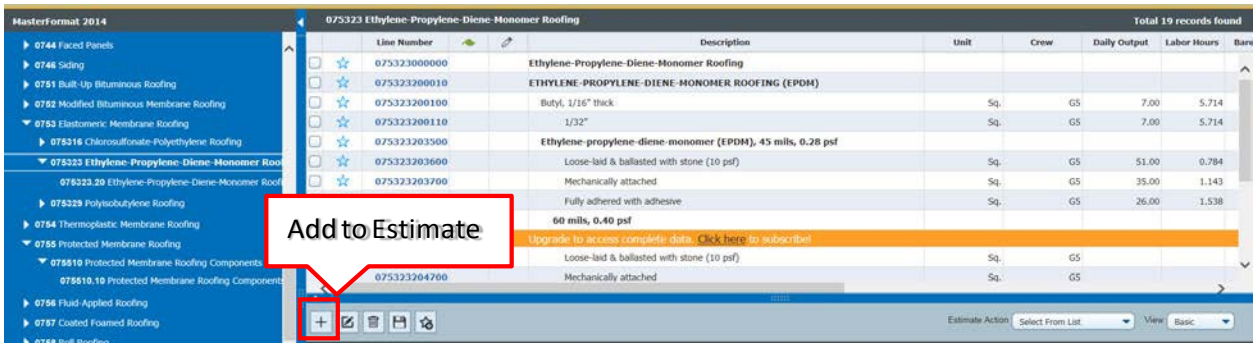


Figure 7: Cost Catalog Tree Control Showing Drill-Down Results

Once found, click on the check box in the left-most column in the grid, and hit the **Add to Estimate** control to add the line item to the estimate.

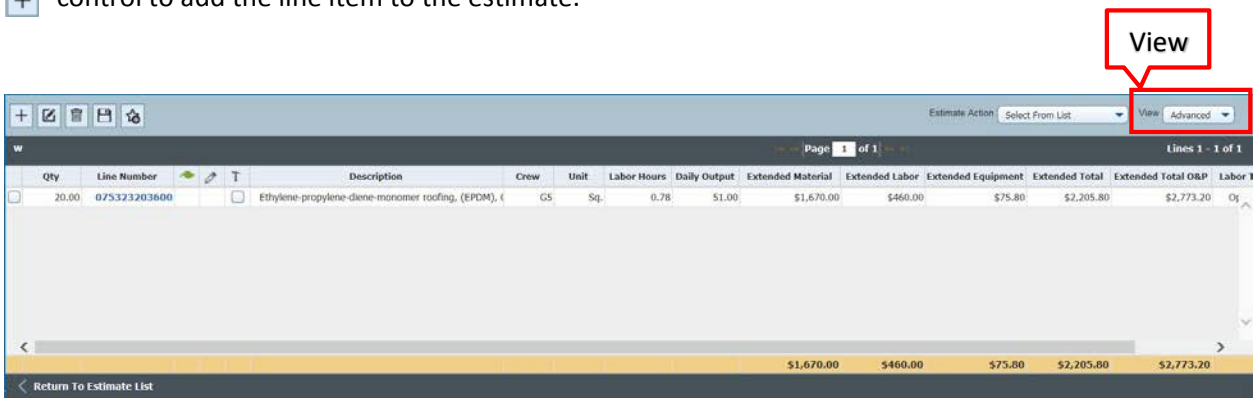


Figure 8: Line Item Detail Cost Estimate Grid

The line item will now appear in the bottom frame. This frame lists each of the line items as they are added to the estimate. The estimate totals are shown along the bottom of the frame as each new line item is added. The user must enter the quantity in each line item in the data field labeled Qty.

The user may select either Basic or Advanced view to determine the grid columns displayed in the cost estimate frame. The screen capture above shows the Advanced View.

Use the controls in the frame header as required. The controls include (from left to right):

Add to Estimate | Insert Custom Line | Remove from Estimate

Save Estimate | Add Favorites

When the user has finished adding the line items needed to complete the Work Item estimate, click on **Save Estimate**. To return to the list of previously saved estimates, click on **Return to Estimate List** located on the left side of the frame footer.

2.3 Exporting an Estimate

After a cost estimate is complete, the user should select "**Export to Excel**" under the **Estimate Action** pull down menu.

Figure 9: Exporting a Cost Estimate to Excel

The user will be prompted to open or save the document. Select "open" to open a local copy of the estimate in Excel. Select Save to save the file in your default sub-directory for file downloads.

Figure 10: Windows Open-Save-Cancel Dialog Box

Select "**Save As**..." to save the cost estimate in a sub-directory of the user's choice.

Important: The file must be saved as a "CSV (comma delimited) (*.csv)" file format for paragon to read the file after it is imported.

Note: We strongly suggest that users create a sub-directory structure to save Excel cost estimate files that groups the Work Item cost estimates in directory structure that mimics the Asset hierarchy structure in paragon. This will make finding the Work item cost estimate files easier and more intuitive.

Note that RSMeans Online saves cost estimate files with the Estimate Name followed by an 18-digit unique ID number. The file can be saved with the given filename, or can be renamed during the Save As process to a filename that is more recognizable to the User. We strongly encourage the user to retain the Work Item ID somewhere in the file name so as not to lose the ability to link the upload to the proper Work item.

2.4 Uploading RSMeans Cost Estimates into paragon

Cost estimates generated using RSMeans online can be uploaded into paragon in two ways: (1) from a Work Item grid or (2) directly from the Work Item detail form.

2.4.1 Uploading RSMeans Cost Estimates from a Work Item Grid

Click on the **Work Items** tab to launch a Work Item grid at a location hierarchy level that includes the Work Item you wish to link to the cost estimate. Click on the **Cost Upload** control on the row that corresponds to the Work Item you wish to link to the estimate. This will launch a sub-form that operates in the same manner as if the user was located on a Work Item detail form.

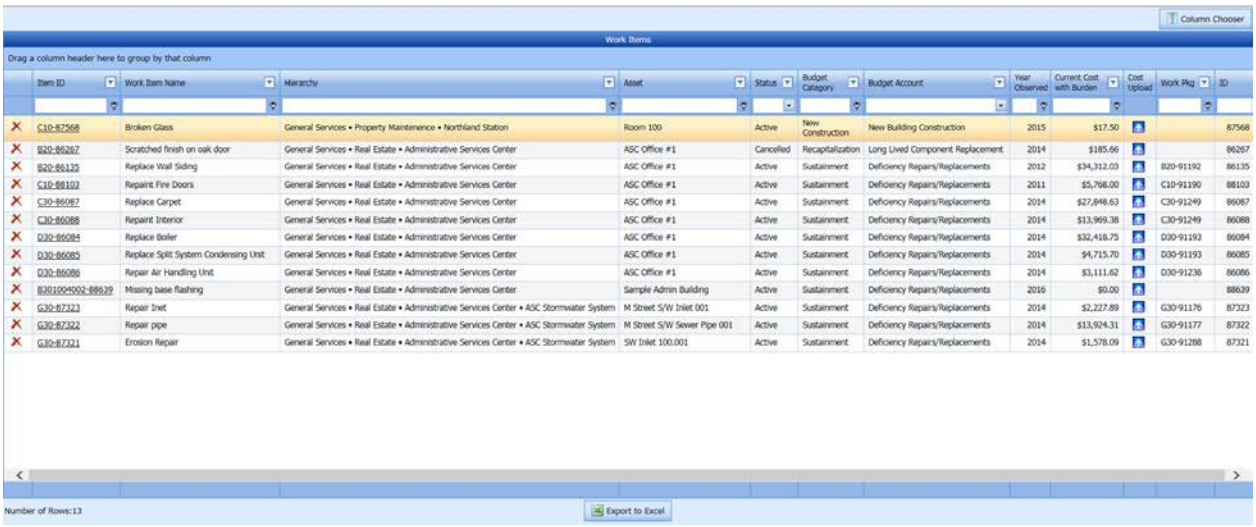


Figure 11: paragon Work item Grid

On the sub-form, the user clicks on the **Browse** control and navigates through his/her Windows directories to locate the file to be uploaded. Once found, click on the file and hit **Save** in the Windows browser to select the file for upload. Finally, click on the **Upload** control on the paragon sub-form to initiate the file upload.

2.4.2 Uploading RSMeans Cost Estimates from a Work Item Detail Form

Navigate to the Work Item detail form that you wish to link to an RSMeans cost estimate. In the Estimate Details frame, the user must click on the **Browse** control and navigate through his/her Windows directories to locate the file to be uploaded. Once found, click on the file and hit **Save** in the Windows browser to select the file for upload. Finally, click on the **Upload** control to initiate the file upload.

Figure 12: Estimate Details Frame in Work Item Detail Form

2.4.3 Updating Previously Uploaded Cost Estimates

Note that paragon will automatically archive the CSV cost estimate file in the Work Item File Attachment frame.

If an additional estimate is uploaded, its costs will be added to the costs from any estimate previously uploaded to the Work Item. If you need to update a cost estimate after one has already been uploaded, the existing estimate should first be deleted from both the Cost Details frame and the File Attachment frame before uploading the revised file.

2.4.4 How Mark-Ups are Handled

RSMeans Online applies Overhead, Profit and a Geographic cost factor to extended raw costs in its estimates based on the selection made in the Location field in the Cost Data Preferences frame at the bottom of the Create New estimate window (see Section 2.1.2). Users should select National Average in the location field to establish the raw costs at the national average baseline.

Soft-cost mark-ups are managed in paragon through the use of burden factors which are set up in the System Configuration files. The cost estimate upload procedures encoded in paragon only use the line item quantity and the raw costs for labor, material and equipment from the RSMeans Excel export file. The upload process ignores all data columns that include overhead and profit.

2.5 Manage Estimates

The user must select **Manage Estimates** to view all previously saved estimates. The window on the left side of the screen displays the directory of folders that are available to store cost estimate files. The main window on the right side of the screen displays a list of stored estimates based on the selected folder.

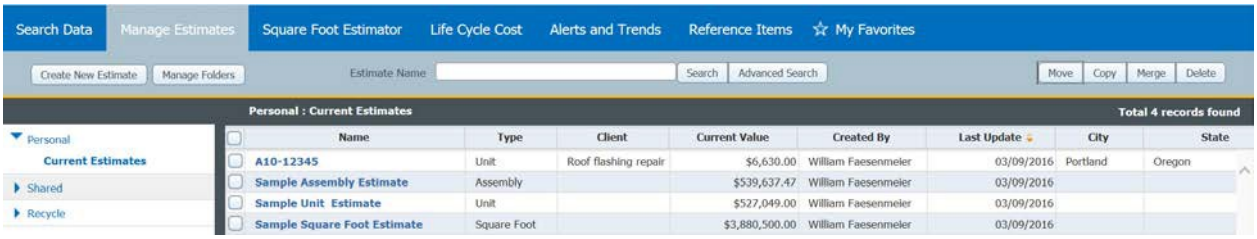


Figure 13: Current Estimates List

2.5.1 Folders

The system is configured with three folder types: Personal, Shared and Recycle. Users may define specific sub-folders under the Personal and Recycle folder types. Estimates can moved, copied, deleted, and merged between Personal folders.

To add a new folder, click on the Manage Folders control on the Manage Estimates List form. Then click on Add Folder in the Manage Folders screen, shown below.

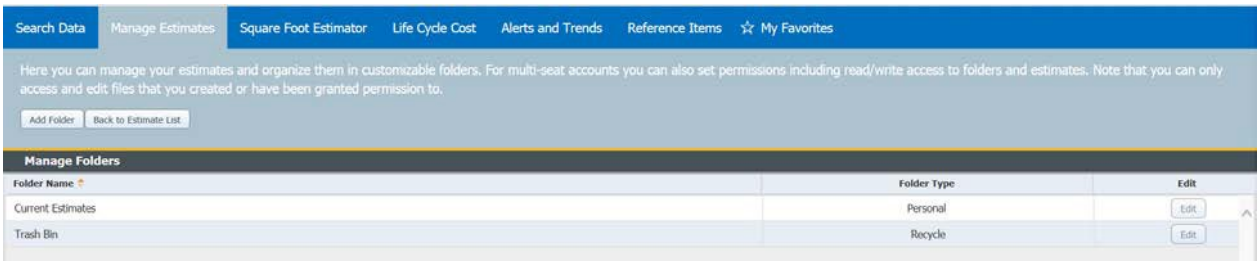


Figure 14: Manage Folders List

Users with administrative rights can add folders as both Personal and Shared folder types. However, users without administrative rights can only add folders under the Personal type.

To add a new folder, enter its name in the Folder name field and use the radio buttons to select between Personal and Shared folder types. Hit **Save** to complete your work.

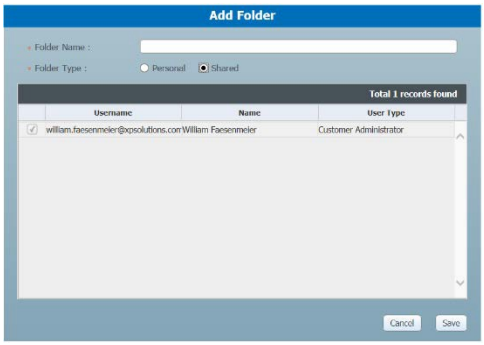


Figure 15: Add Folder Sub-Form

The Shared Folder provides access to the folders that can be shared among other users within the same group. Access to the shared folders is controlled by a designated administrator. The administrator can provide access to other users as well as add user accounts.

2.6 Updating Cost Data

The costs for selected line item entries in the RSMeans Cost catalog are updated on a quarterly basis. When new cost data is released, an estimate can be updated using the current cost data. Open the estimate as if you are going to add more line items, navigate to the middle of the screen where you see a drop down titled Estimate Action and select "**Change Cost Data**". Select "**Go**" and the Data Release can be updated/changed.

Figure 16: Change Cost Data