U.S. Department of Transportation
Federal Highway Administration

Library Management Participant Guide

Contents

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2. Introduction to Using the Participant Guide

The Participant Guide helps you get started with the process of setting up library catalogs. These catalogs help you in defining, storing, and managing reusable data to provide standard data sources to complete forms and information fields in the application.

The options selected for use in this guide are for instructional purposes to showcase the process of managing library content. Field selections, other than the ones used in this guide, could lead to a varied project workflow, and may not be covered in this guide. For additional information on the application, refer to Masterworks Online Help available with the application.

Note: You may notice screenshots containing information added throughout the document, even in places where a new empty screen would typically be displayed. This practice eliminates the need for multiple images, allowing a single screenshot to convey the essential details required to proceed with the work effectively.

3. Library Management

The Masterworks Library module serves as a collection of catalogs to manage reusable information. In catalogs, you create, define, and store reusable information that is used while creating a record. This ensures consistency in the available information and provides a standardization factor to ensure the integrity of the information.

The process of adding, editing, viewing, and deleting items from the library catalogs follows a mostly similar procedure throughout the application. However, certain catalogs, like the Document Folder Structure and Document Properties catalogs, operate differently.

The following topics describe the various catalogs and functions you can perform to manage library information:

- 3.1. Standard Library Functions
- 3.2. Library Catalogs

Library Catalog Permission Matrix

This section provides information on the roles and corresponding permissions for the respective catalogs.

Note: The **Table 1 – Library Catalog** provides roles and permission information for all library catalogs except the **Standard Items Table, Measurement Unit Crosswalk,** and **Standard Items Conversion Crosswalk** catalog.

Table 1: Table 1 – Library Catalog

Role	Create	Edit	View	Delete	Audit Log
Administrator	Yes	Yes	Yes	Yes	Yes
A/E Support Tools	–	–	Yes	–	–
Project Viewer	–	–	Yes	–	–
Design Component Lead	–	–	Yes	–	–
Designer	–	–	Yes	–	–
Lead Designer	–	–	Yes	–	–
Design QA/QC	–	–	Yes	–	–
Highway Design Manager	–	–	Yes	–	–
Project Manager	–	–	Yes	–	–
A/E Designer	–	–	Yes	–	–
A/E Lead Designer	–	–	Yes	–	–
A/E Manager	–	–	Yes	–	–
Acquisitions	–	–	Yes	–	–
Construction Component Lead	Yes	Yes	Yes	Yes	Yes

Role	Create	Edit	View	Delete	Audit Log
Construction Admin Staff	–	–	Yes	–	–
Construction Engineer	–	–	Yes	–	–
Construction Operations Engineer	–	–	Yes	–	–
Assistant Project Engineer	–	–	Yes	–	–
Project Engineer	–	–	Yes	–	–
Regional Engineer	–	–	Yes	–	–
Assistant Project Engineer A&E	–	–	Yes	–	–
Project Engineer A&E	–	–	Yes	–	–

Note: The **Table 2 – Library Catalog** table provides roles and permission information for only **Standard Items Table, Measurement Unit Crosswalk**, and **Standard Items Conversion Crosswalk** catalogs.

Table 2: Table 2 – Library Catalog

Role	Create	Edit	View	Delete	Audit Log
Administrator	Yes	Yes	Yes	Yes	Yes
Pay Item Team	Yes	Yes	Yes	Yes	Yes
A/E Support Tools	–	–	Yes	–	–
Project Viewer	–	–	Yes	–	–
Design Component Lead	–	–	Yes	–	–
Designer	–	–	Yes	–	–
Lead Designer	–	–	Yes	–	–
Design QA/QC	–	–	Yes	–	–
Highway Design Manager	–	–	Yes	–	–
Project Manager	–	–	Yes	–	–
A/E Designer	–	–	Yes	–	–
A/E Lead Designer	–	–	Yes	–	–
A/E Manager	–	–	Yes	–	–
Acquisitions	–	–	Yes	–	–
Construction Component Lead	–	–	Yes	–	–

Role	Create	Edit	View	Delete	Audit Log
Construction Admin Staff	–	–	Yes	–	–
Construction Engineer	–	–	Yes	–	–
Highway Construction Manager/QA QC	–	–	Yes	–	–
Construction Operations Engineer	–	–	Yes	–	–
Inspector	–	–	Yes	–	–
Assistant Project Engineer	–	–	Yes	–	–
Project Engineer	–	–	Yes	–	–
Regional Engineer	–	–	Yes	–	–
Construction Inspection A&E Manager	–	–	Yes	–	–
Inspector A&E	–	–	Yes	–	–
Assistant Project Engineer A&E	–	–	Yes	–	–
Project Engineer A&E	–	–	Yes	–	–

3.1. Standard Library Functions

The following library item-related tasks are common in procedure for most of the library catalogs:

- 3.1.1. Adding an Item to a Catalog
- 3.1.2. Editing Item Details in a Catalog
- 3.1.3. Viewing Details of an Item in a Catalog
- 3.1.4. Deleting an Item from a Catalog

3.1.1. Adding Library Items

Prerequisites

The role of the logged-in user must be one of the following:

- Administrator
- Pay Item Team
- Construction Component Lead
  For more information on role-specific permissions, refer to Table 1 or Table 2 Library Catalog Permission Matrix

Overview

You can add library items to a catalog individually. Alternatively, you can concurrently import multiple library items into a catalog using a predefined Microsoft Excel workbook template.

To import multiple library items, you must download the template from the application to your local hard drive, fill in the required information, and then import the updated Microsoft Excel workbook to the catalog. For more information on uploading multiple items, refer to Section 4.2. Importing Form Details from an Excel Workbook.

The **Contact Type** library catalog is used as an example to demonstrate how to add, edit, and delete library items.

Steps

1. In the module menu, click **Library**.
   The **LIBRARY MANAGEMENT** page is displayed.

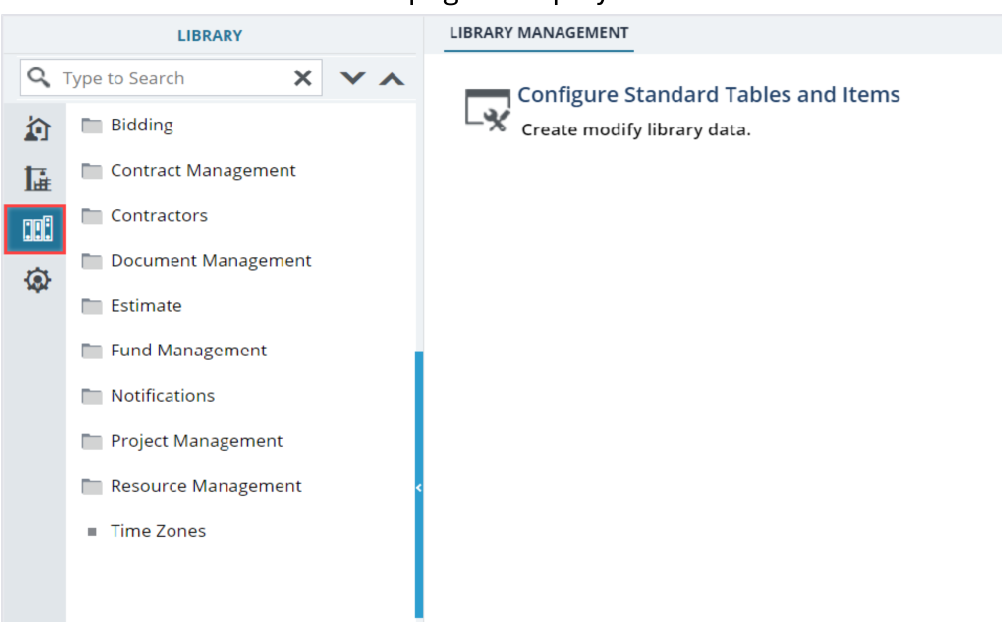


Figure 1: Library Management

2. In the navigation pane, click a library catalog.
   The items in the selected catalog are displayed.

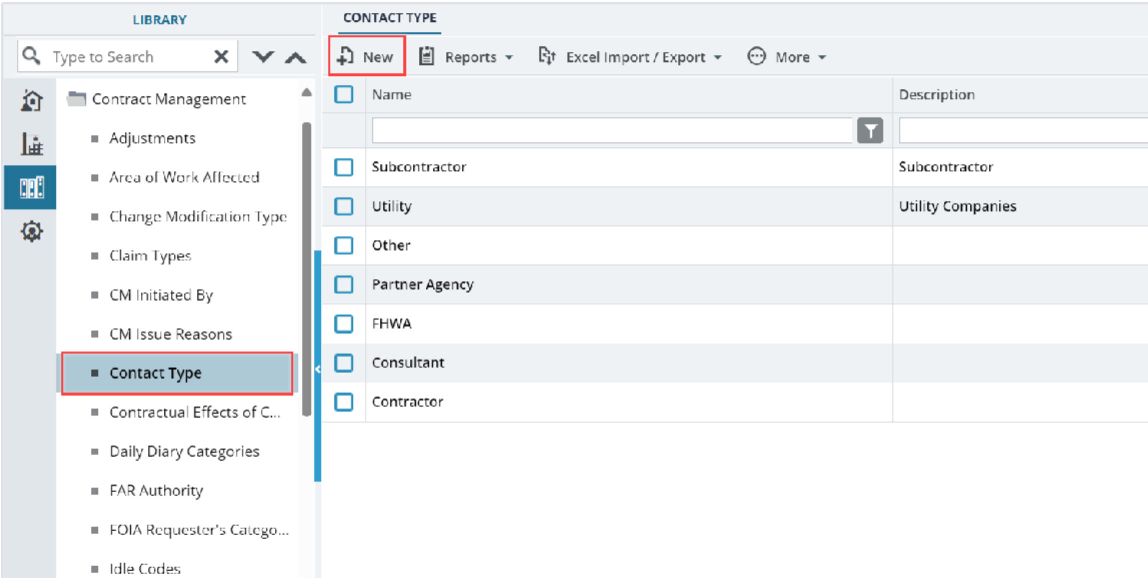


Figure 2: List Page of Contact Type Form

3. Click **New**.
   The page to create a new item is displayed.

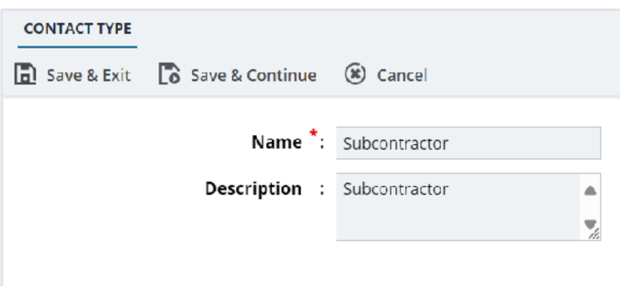


Figure 3: Contact Type Details Page

4. Enter the appropriate information for the item.
5. Click **Save & Exit** to save the record and return to the list page. Optionally, click **Save & Continue** to save the record and continue on the same page. Click **Cancel** to discard the added information and exit the page.

3.1.2. Editing Item Details

Prerequisites

The role of the logged-in user must be one of the following:

- Administrator
- Pay Item Team
- Construction Component Lead
  For more information on role-specific permissions, refer to Table 1 or Table 2 Library Catalog Permission Matrix

Overview

Updating the information for a library item does not update the records where the library item has been used previously. However, the updated library item is available for use in new records.

You can also update information for multiple library items in a library catalog using a predefined Microsoft Excel workbook template. You can download the Microsoft Excel workbook to your local hard drive, update the appropriate information in the workbook, and then import the updated Microsoft Excel workbook to the catalog. For information on updating or uploading multiple items, refer to Section 4.2. Importing Form Details from an Excel Workbook.

The **Contact Type** library catalog is used as an example to demonstrate how to add, edit, and delete library items.

Steps

1. In the module menu, click **Library**.
   The **LIBRARY MANAGEMENT** page is displayed.

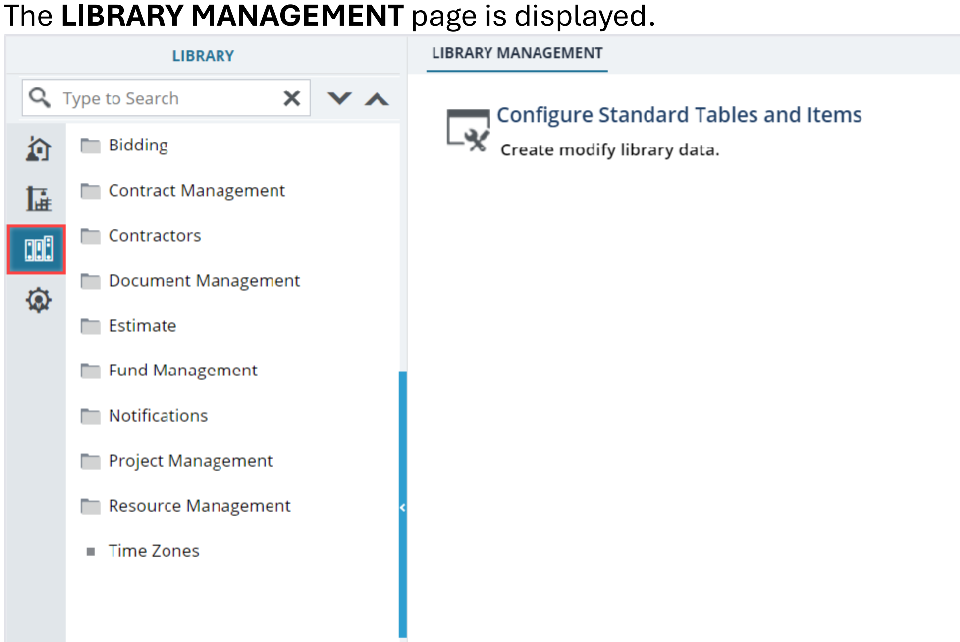


Figure 4: Library Management

2. In the navigation pane, click a library catalog.
   The items in the selected library catalog are displayed.

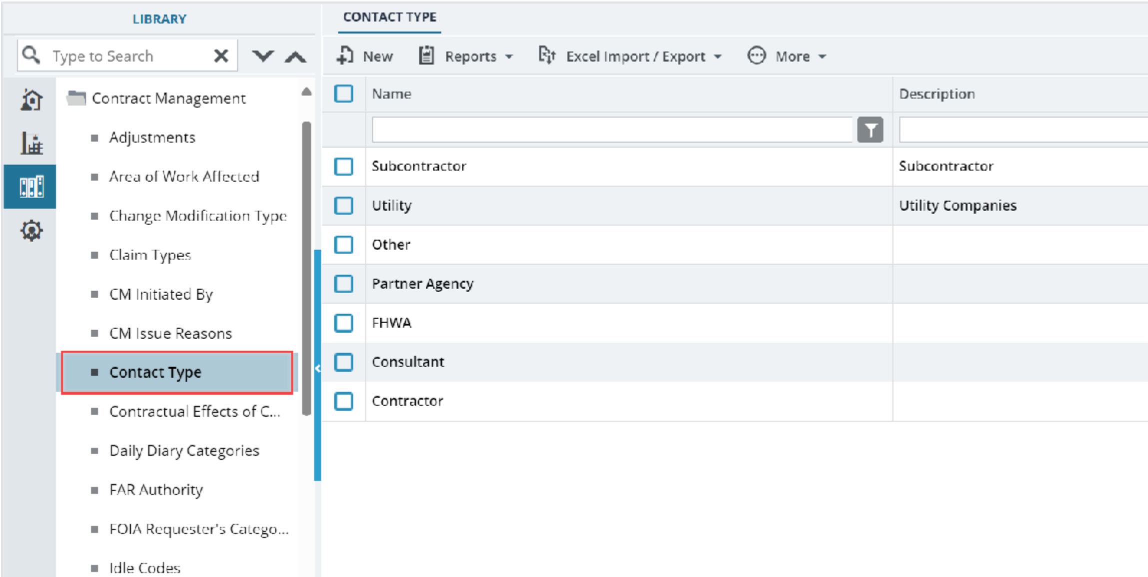


Figure 5: List Page of Contact Type Form

3. Select the appropriate item from the list page, and click **Edit**.

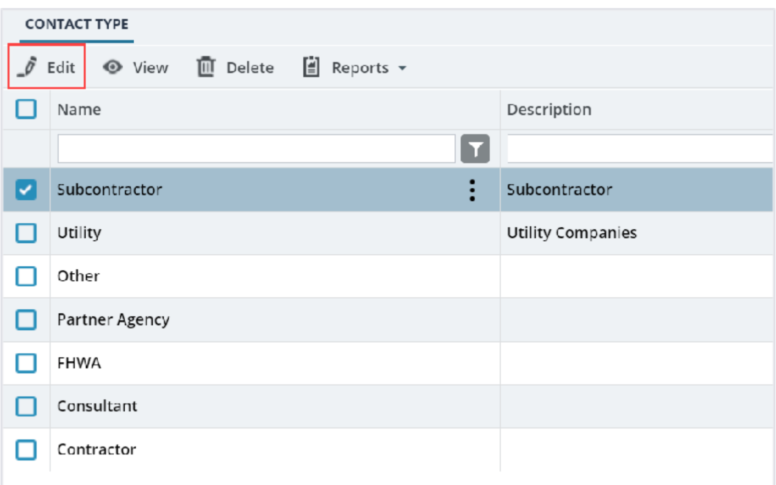


Figure 6: Edit Option

4. Edit the necessary information.

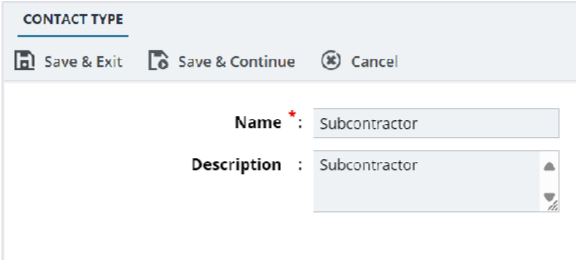


Figure 7: Modify the Details

5. Click **Save & Exit** to save the record and return to the list page. Optionally, click **Save & Continue** to save the record and continue on the same page. Click **Cancel** to discard the added information and exit the page.

3.1.3. Viewing Details of a Library Item

You can view a summary of item details or all the details of a selected item on the application, or you can download item information to an Excel workbook.

You can perform the following tasks:

- 3.1.3.1. View information of a library item
- 3.1.3.2. Download information of multiple library items

3.1.3.1. Viewing Information of a Library Item

Prerequisites

The role of the logged-in user must be one of the following:

- Administrator
- Pay Item Team
- Construction Component Lead
- A/E Support Tools
- Project Viewer
- Design Component Lead
- Designer
- Lead Designer
- Design QA/QC
- Highway Design Manager
- Project Manager
- A/E Designer

- A/E Lead Designer
- A/E Manager
- Acquisitions
- Construction Component Lead
- Construction Admin Staff
- Construction Engineer
- Highway Construction Manager/QA QC
- Construction Operations Engineer
- Inspector
- Assistant Project Engineer
- Project Engineer
- Regional Engineer
- Construction Inspection A&E Manager
- Inspector A&E
- Assistant Project Engineer A&E
- Project Engineer A&E

  For more information on role-specific permissions, refer to Table 1 or Table 2 Library Catalog Permission Matrix

Steps

1. In the module menu, click **Library**.
   The **LIBRARY MANAGEMENT** page is displayed.

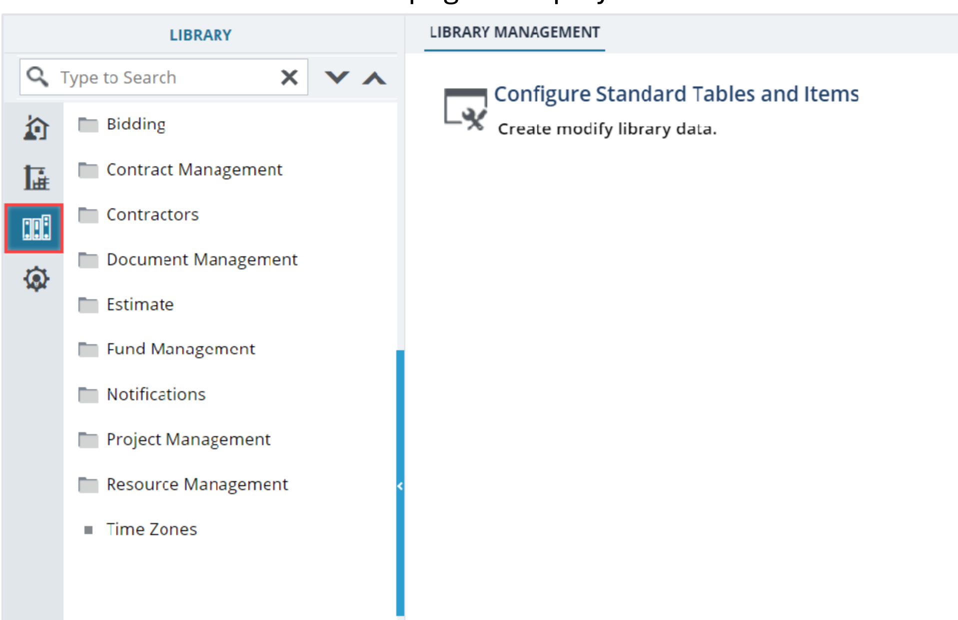


Figure 8: Library Management

2. In the navigation pane, click a library catalog.
   The items in the selected library catalog are displayed.

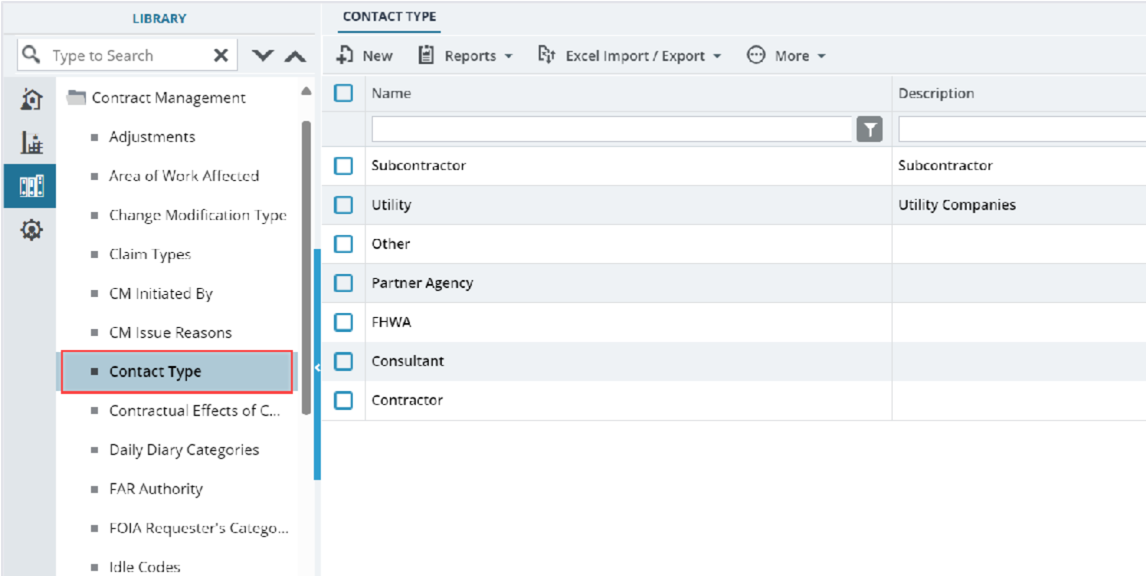


Figure 9: List Page of Contact Type Form

3. To view complete details of a selected item, select the appropriate item from the list page, and click **View**.

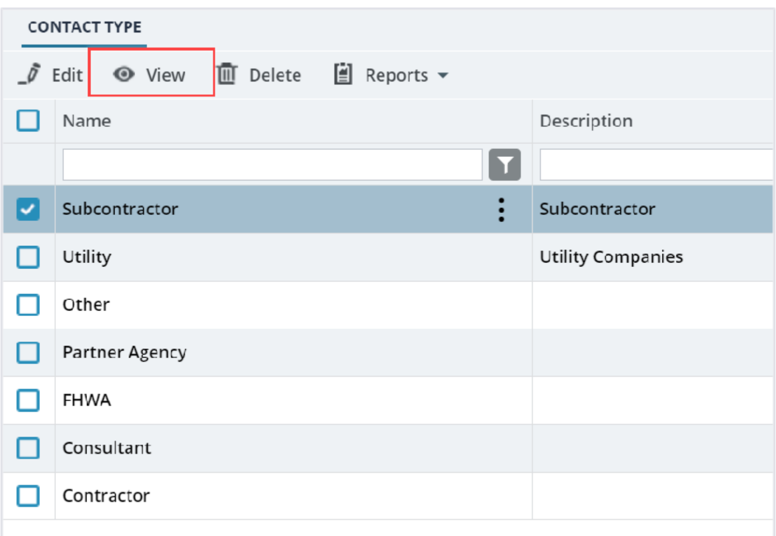


Figure 10: View Option

The **CONTACT TYPE** page is displayed.

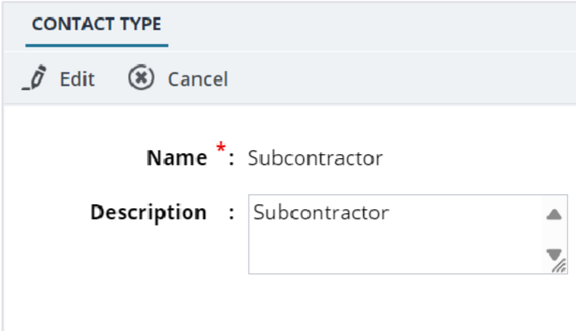


Figure 11: Contact Type Details Page

3.2.3.2. Downloading Information of Multiple Library Items Steps

Steps

1. In the module menu, click **Library**.
   The **LIBRARY MANAGEMENT** page is displayed.

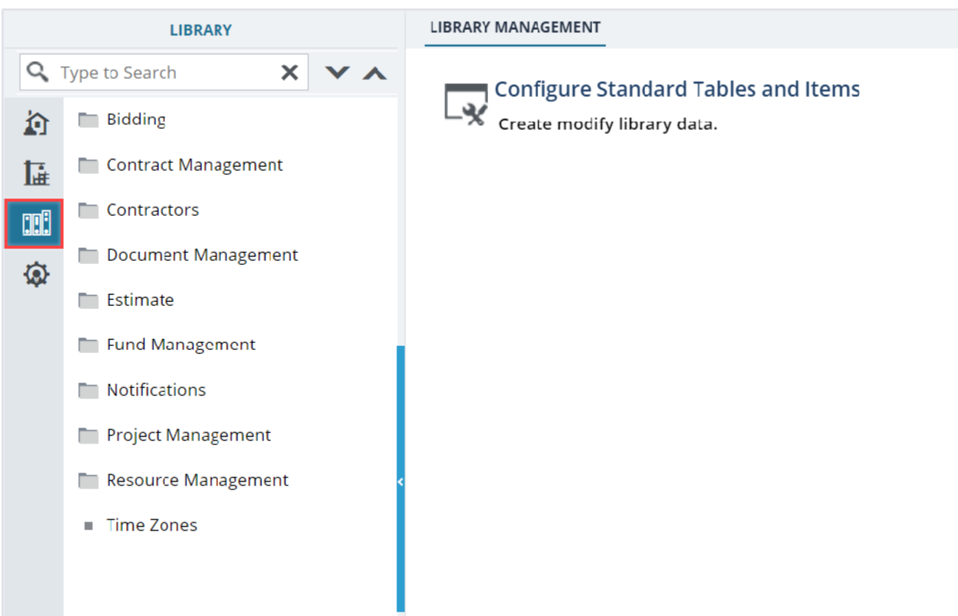


Figure 12: Library Management

2. In the navigation pane, click a library catalog.

   The items in the selected library catalog are displayed.

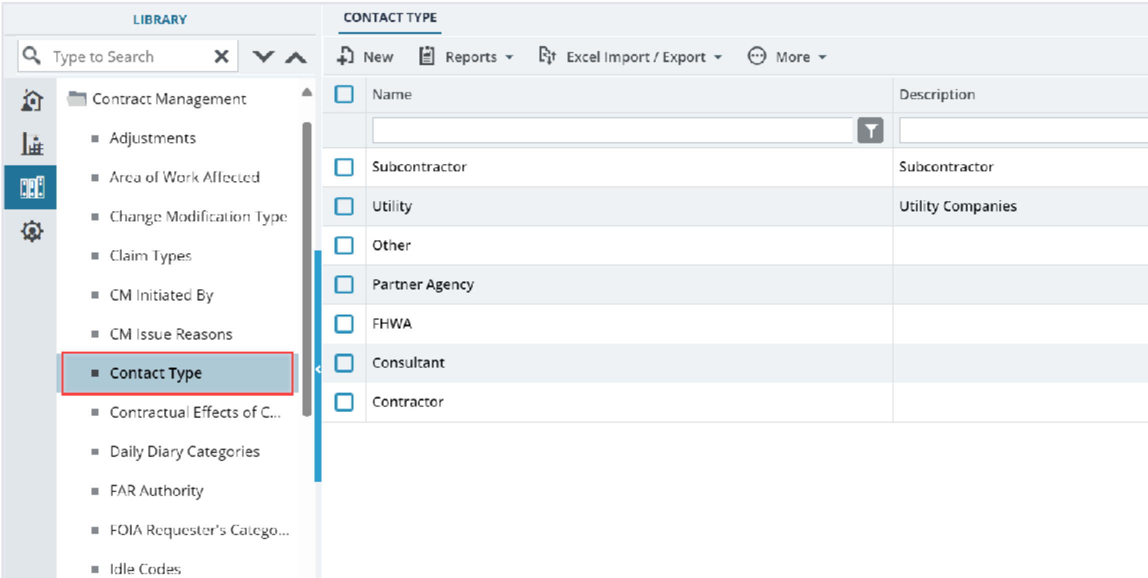


Figure 13: List Page of Contact Type Form

3. In the item list page, click **Excel Import / Export**, and then select **Excel Export**.

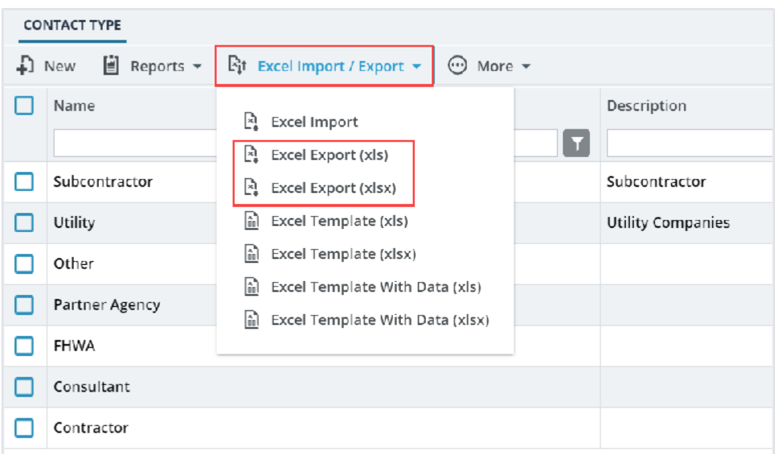


Figure 14: Excel Export

The items in the catalog with all details are downloaded to an Excel workbook and saved in the local hard drive.

Note: If you have filtered records, then only the records that match the filter criteria is available in the downloaded file.

3.1.4. Deleting an Item

Prerequisites

The role of the logged-in user must be one of the following:

- Administrator
- Pay Item Team
- Construction Component Lead
  For more information on role-specific permissions, refer to Table 1 or Table 2 Library Catalog Permission Matrix

Overview

Deleting a library item from a catalog does not delete the information from records that have used the library item. However, the library item will not available for use in new records being created.

The **Contact Type** library catalog is used as an example to demonstrate how to add, edit, and delete library items.

Steps

1. In the module menu, click **Library**.
   The **LIBRARY MANAGEMENT** page is displayed.

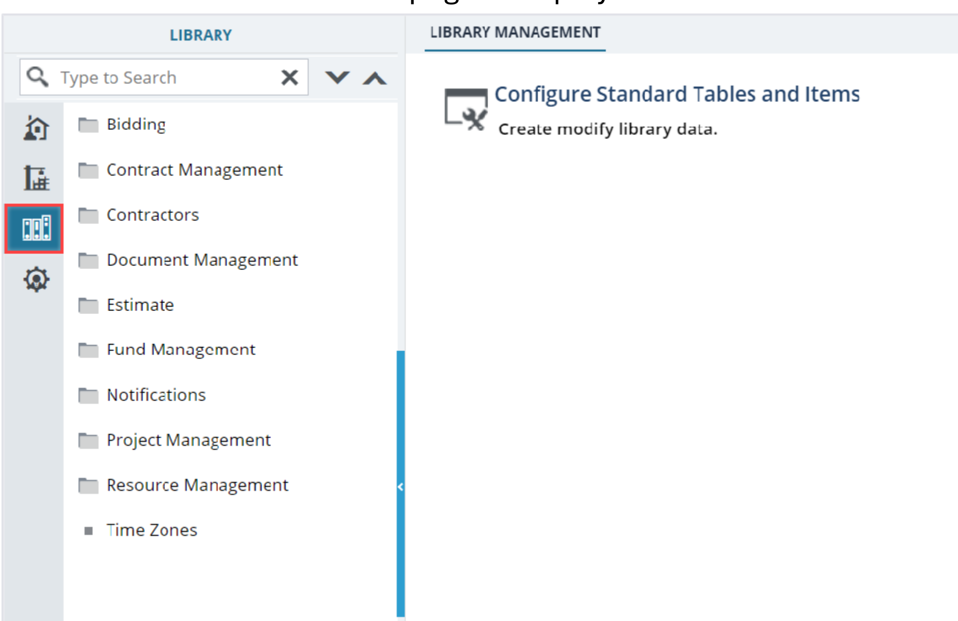


Figure 15: Library Management

2. In the navigation pane, click a library catalog.

   The items in the selected catalog are displayed.

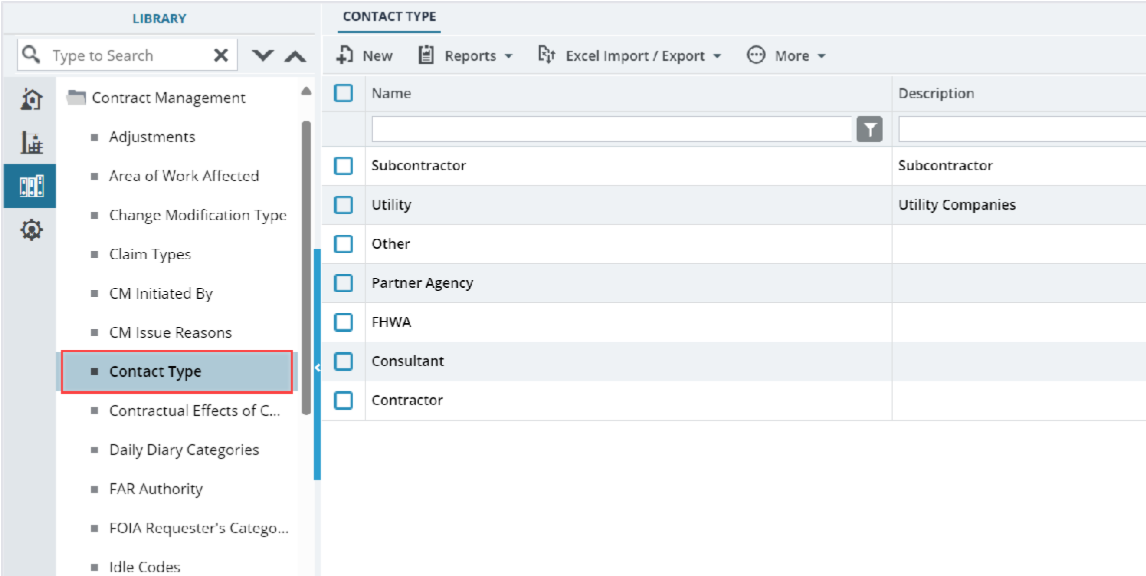


Figure 16: List Page of Contact Type Form

3. Select the required items from the list page, and click **Delete**.

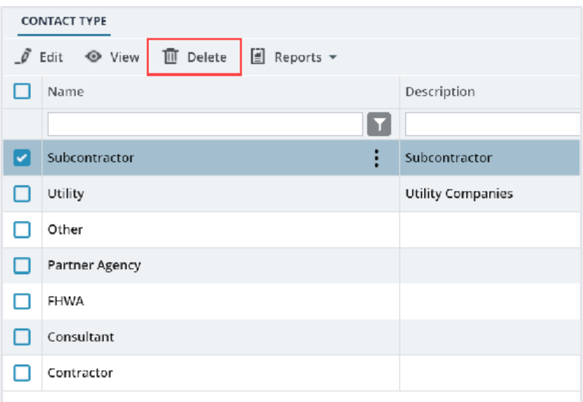


Figure 17: Delete Option

A confirmatory message is displayed, and the item is deleted from the list page.

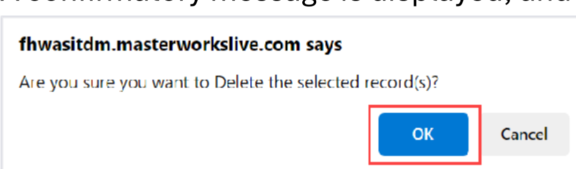


Figure 18: Confirmation Message

3.2 Standard Library Catalogs

3.2.1. Library Catalogs

The procedure for adding, viewing, editing and deleting items in a library catalog, remains consistent across most parts of the application. For example, in library catalogs such as Contact Type, Business Types, Skies, Fund Type, Terrain, etc.

To learn how to configure library information in a simple catalog, refer to Standard Library Functions.

Specific library catalogs such as the Standard Items Table, Document Folder Structure, and Document Properties differ in their handling.

To learn how to configure library information in catalogs other than the simple ones, refer to the following topics:

- 3.2.2. Contract Management
  - 3.2.2.1. Specification Section
  - 3.2.2.2. Submittal Response
- 3.2.3. Contractors
  - 3.2.3.1. Contractor Details
- 3.2.4. Document Management
  - 3.2.4.1. Document Folder Structure
  - 3.2.4.2. Document Properties
  - 3.2.4.3. Associating Document Property Templates to Folders in a Folder Structure
- 3.2.5. Estimate
  - 3.2.5.1. Construction Inflation Indices
- 3.2.6. Notifications
  - 3.2.6.1. Mail Merge Process
- 3.2.7. Project Management
  - 3.2.7.1. Additional Permissions Setup
  - 3.2.7.2. Calendar
  - 3.2.7.3. Measurement Systems
  - 3.2.7.4. Measurement Unit Crosswalk
  - 3.2.7.5. Standard Items Tables
  - 3.2.7.6. Standard Items Conversion Crosswalk

3.2.2. Contract Management

3.2.2.1. Specification Section

Prerequisites

The role of the logged-in user must be one of the following:

- Administrator
- Construction Component Lead
  For more information on role-specific permissions, refer to Table 1 – Library Catalog Permission Matrix

Overview

The **Specification Section** form enables you to define the specification section and associate it with the standard items table.

The specification sections defined in the library are used in the **Submittals** form of the contract.

Steps

1. In the module menu, click **Library**.
   The **LIBRARY MANAGEMENT** page is displayed.

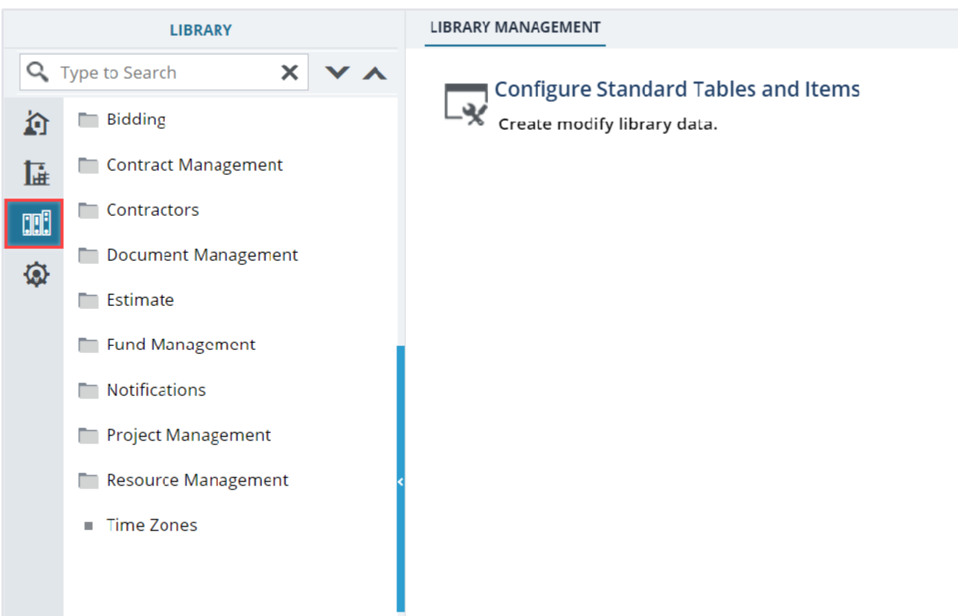


Figure 19: Library Management

2. In the navigation pane, expand **Contract Management**, and then click **Specification Section**.

   The **SPECIFICATION SECTION** list page is displayed.

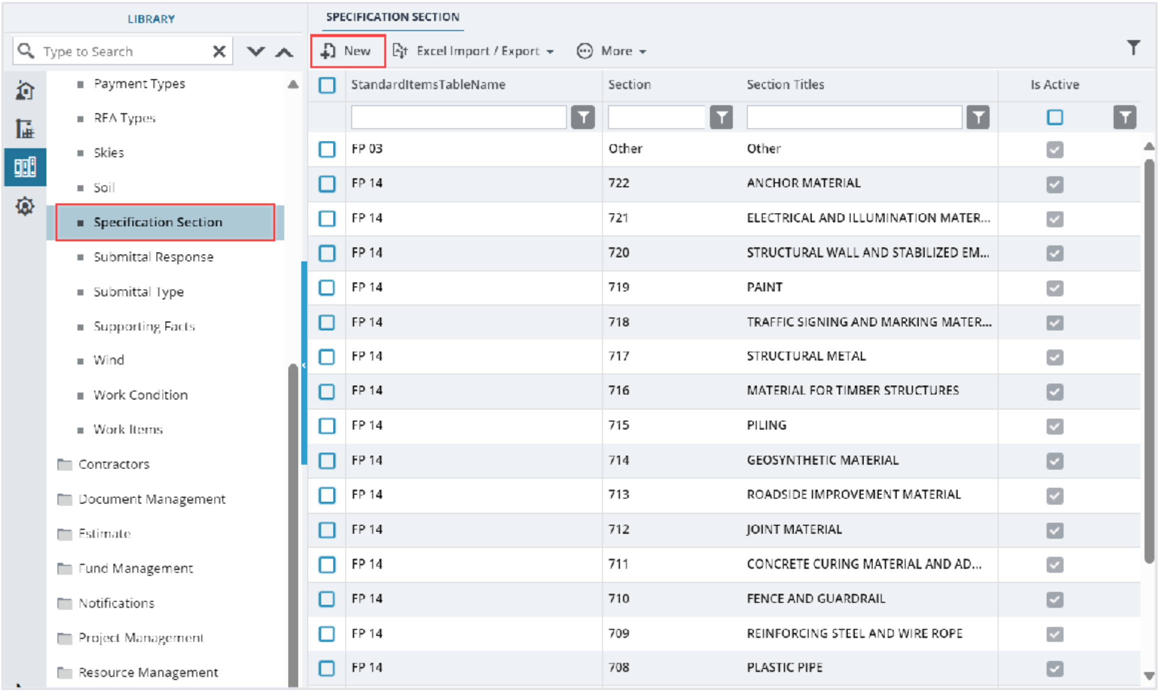


Figure 20: List page of Specification Section Form

3. Click **New**.

   The **SPECIFICATION SECTION** page is displayed.

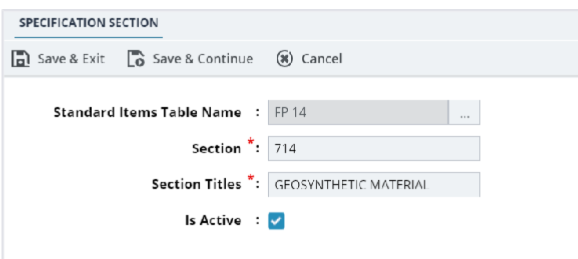
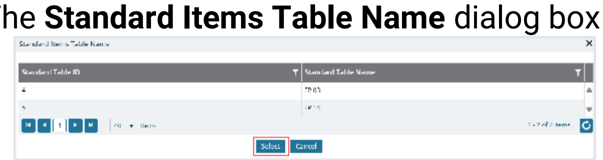


Figure 21: Specification Section Details Page

4. Provide the appropriate information in the fields, as described in the following table:

Field Name	Description
Standard Items Table Name	To associate the standard items table with the specification section, perform the following steps: a. Click ... . The **Standard Items Table Name** dialog box is displayed.  *Figure 22: : Standard Items Table Name Dialog Box* b. Click the appropriate table and click **Select**.

Field Name	Description
Section	Enter the section number.
Section Titles	Enter the name of the section.
Is Active	Ensure the check box is selected to make the specification section active for use in the **Submittals** form.

5. Click **Save & Exit** to save the record and return to the list page. Optionally, click **Save & Continue** to save the record and continue on the same page. Click **Cancel** to discard the added information and exit the page.

3.2.2.2. Submittal Response

Prerequisites

The role of the logged-in user must be one of the following:

- Administrator
- Construction Component Lead

For more information on role-specific permissions, refer to Table 1 – Library Catalog Permission Matrix

Overview

You can create a submittal response and set it to work in either of the following ways in a submittal form:

- Create a copy of the submittal for revision
- Close the submittal

For information on the **Submittal** form, refer to **Submittals** section in the **Construction Participant Guide - Part C**.

Steps

1. In the module menu, click **Library**.
   The **LIBRARY MANAGEMENT** page is displayed.

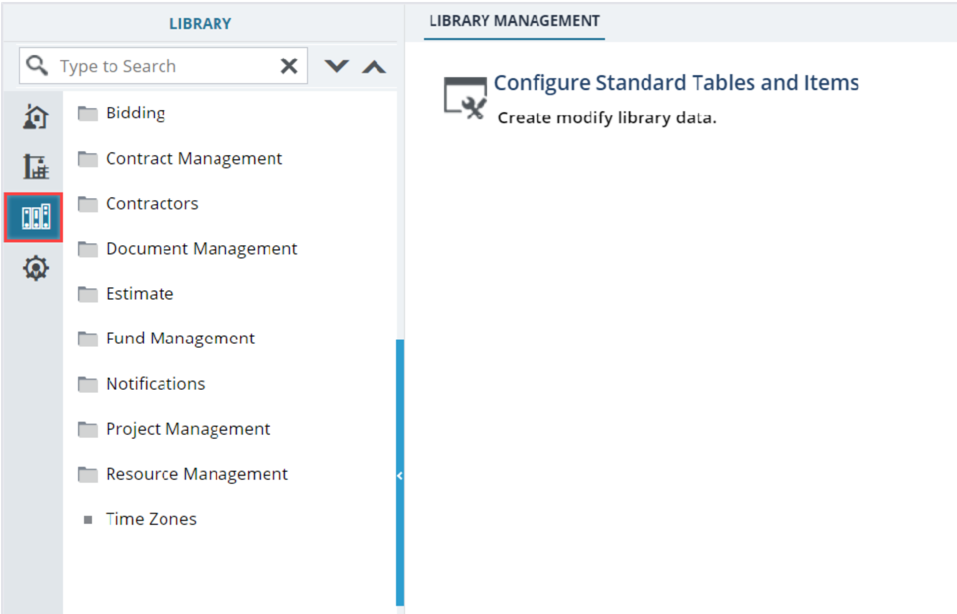


Figure 23: Library Management

2. In the navigation pane, expand **Contract Management**, and then click **Submittal Response**.
   The **SUBMITTAL RESPONSE** list page is displayed.

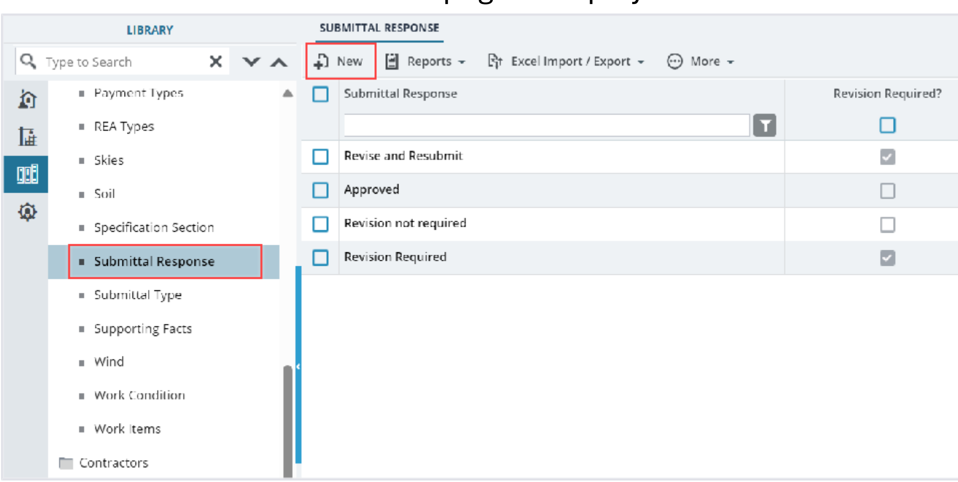


Figure 24: List Page of Submittal Response Form

3. Click **New**.

   The **SUBMITTAL RESPONSE** page is displayed.

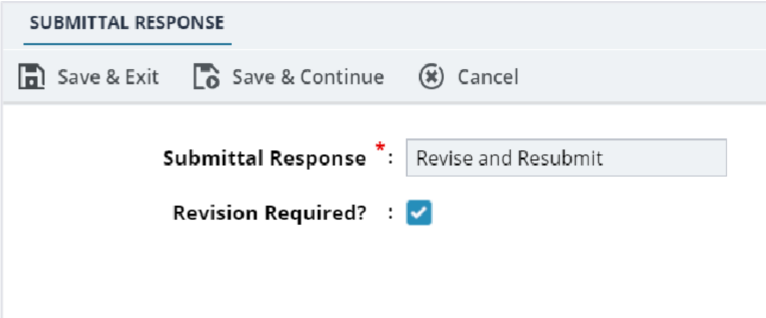


Figure 25: Submittal Response Details Page

4. In the **Submittal Response** box, enter submittal response.
5. To create a revision of a submittal, select the **Revision Required** check box.
6. Click **Save & Exit** to save the record and return to the list page. Optionally, click **Save & Continue** to save the record and continue on the same page. Click **Cancel** to discard the added information and exit the page.

3.2.3. Contractors

3.2.3.1. Contractor Details

Prerequisites

The role of the logged-in user must be one of the following:

- Administrator
- Construction Component Lead

  For more information on role-specific permissions, refer to Table 1 – Library Catalog Permission Matrix

Overview

The **Contractor Details** catalog comprises a list of contractors. It enables you to define and manage details of a contractor, such as the UEI number, address, and phone number.

Steps

1. In the module menu, click **Library**.
   The **LIBRARY MANAGEMENT** page is displayed.

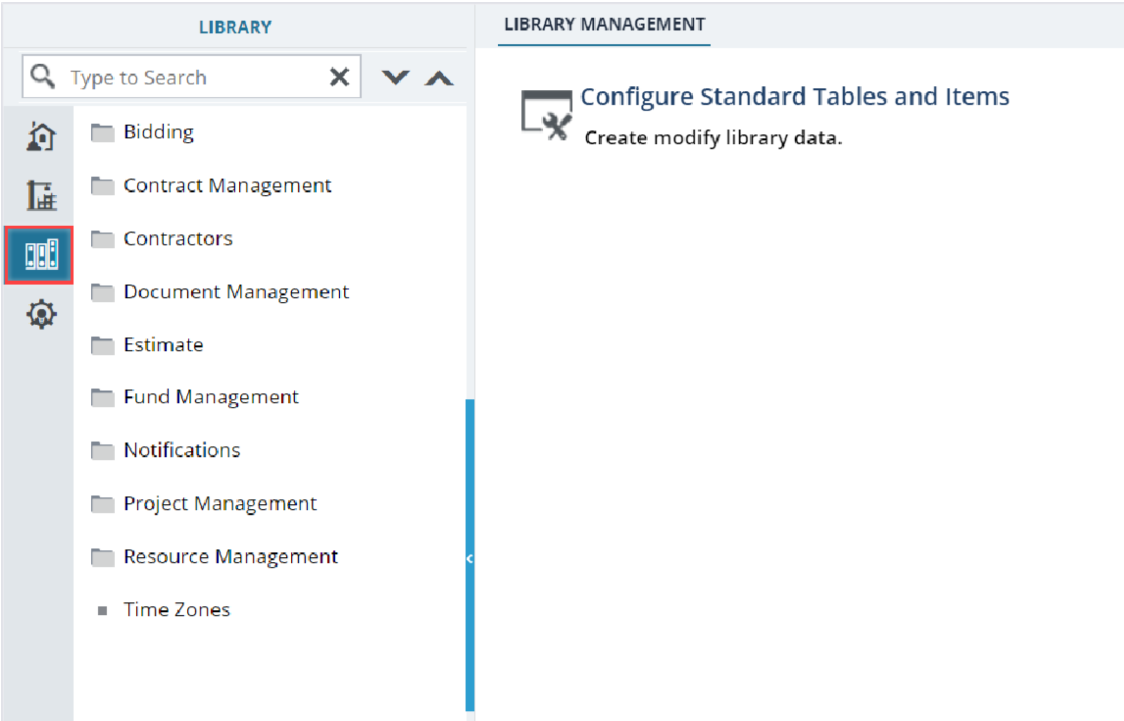


Figure 26: Library Management

2. In the navigation pane, expand **Contractors**, and then click **Contractor Details**.
   The **CONTRACTOR DETAILS** list page is displayed.

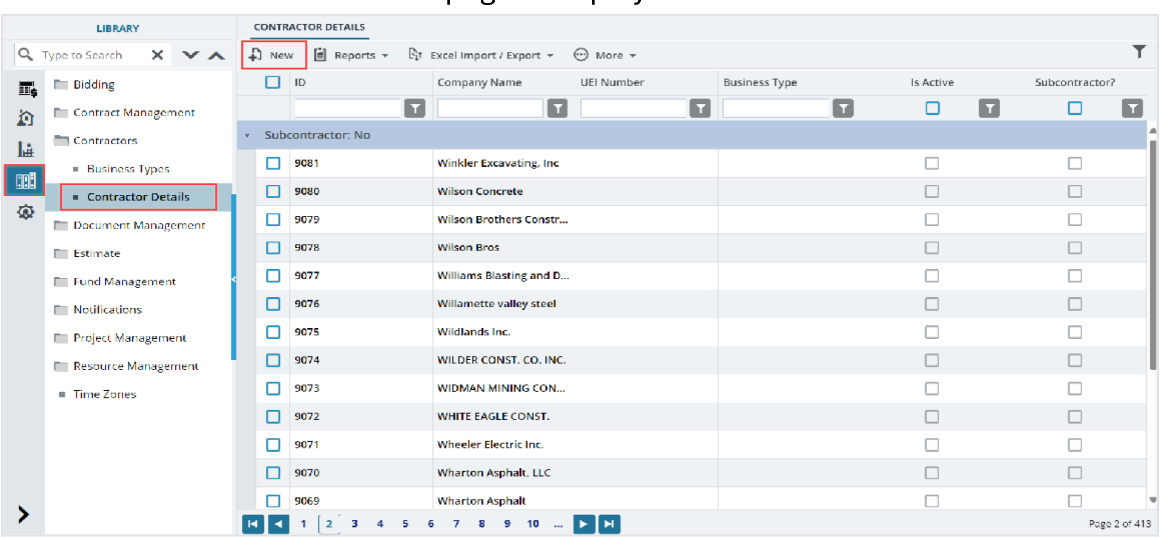


Figure 27: List Page of Contractor Details Form

3. Click **New**.

   The **CONTRACTOR DETAILS** page is displayed.

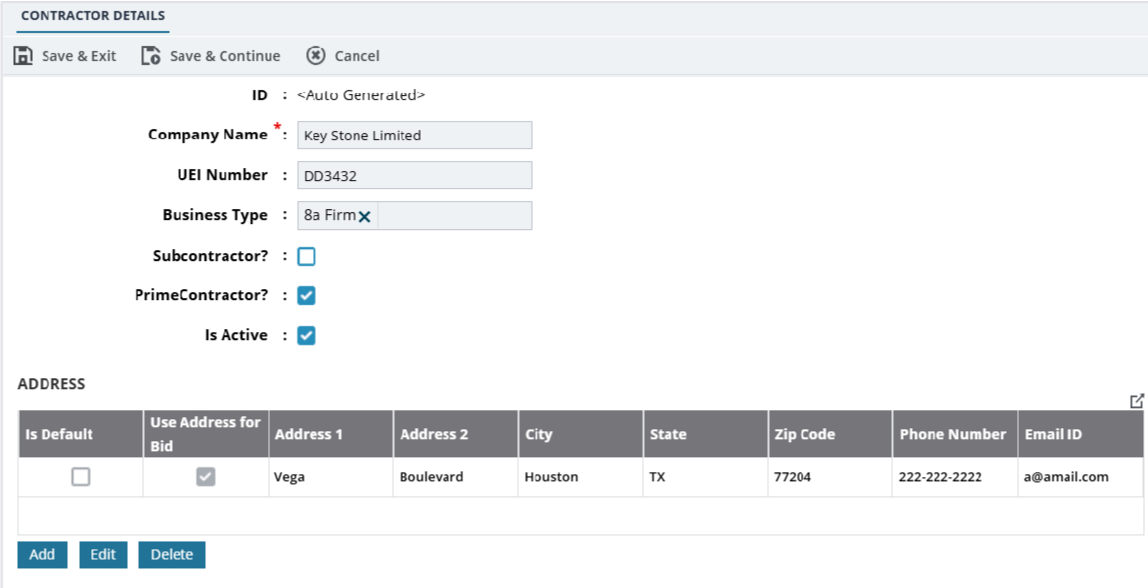


Figure 28: Contractor Details Page

4. Provide the appropriate information in the fields, as described in the following table:

Field Name	Description
ID	On saving the record, a unique identification number for the record is automatically generated.
Company Name	Enter the name of the company.
UEI Number	Enter the UEI number of the contractor.
Business Type	From the drop-down list, select the business type of the contractor. Available options are **8a Firm, Women Owned Business**, etc. The drop-down list displays active business types defined in the **Business Types** catalog of the library.
Subcontractor?	Select the check box to ensure the details entered belong to the subcontractor.
PrimeContractor?	Select the check box to ensure the details entered belong to the prime contractor. **Note:** Any new company registering through New Bidder Registration is considered as a Prime Contractor.
Is Active	Ensure the check box is selected to make the contractor active and available for use.

5. In the **ADDRESS** section, perform the following steps:
    a. Click **Add**.
    The **New Address** dialog box is displayed.

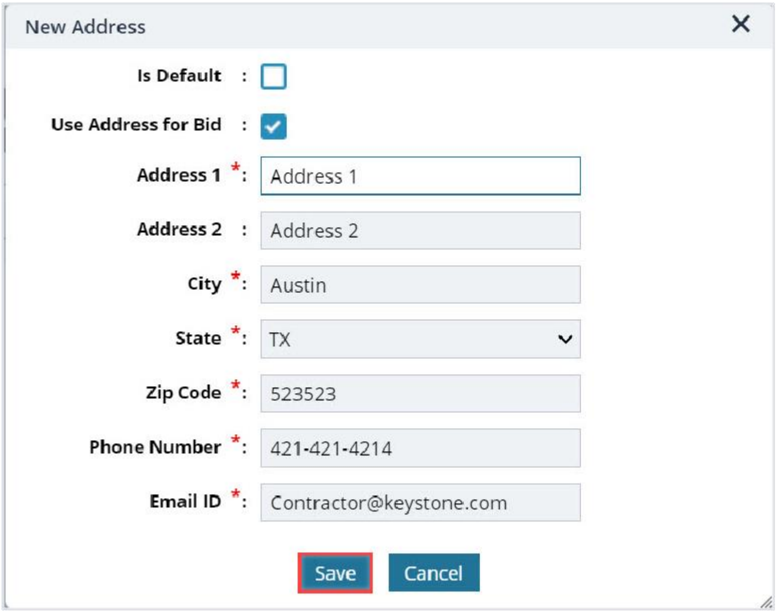


Figure 29: New Address Dialog Box

    b. Provide the appropriate information in the fields, as described in the following table:

Field Name	Description
Is Default	Select the checkbox to ensure the address is marked as default address for the contractor or subcontractor, as applicable.
Use Address for Bid	Ensure the check box is selected to use the address for bidding. Optionally, clear the check box to ensure the address is not used for bidding.
Address 1 Address 2	Enter the address of the contractor or subcontractor, as applicable.
City	Enter the name of the city of the contractor or subcontractor, as applicable.
State	Enter the name of the state of the contractor or subcontractor, as applicable.
Zip Code	Enter the zip code of the contractor or subcontractor, as applicable.
Email ID	Enter the email address of the contractor or subcontractor, as applicable.

    c. Click **Save**.
    The address is added to the **ADDRESS** section.

d. Optionally, perform the following steps, as applicable:

- To edit an address, perform the following steps:
  - Select the appropriate entry, and then click **Edit**.
    The **Edit Address** dialog box is displayed.

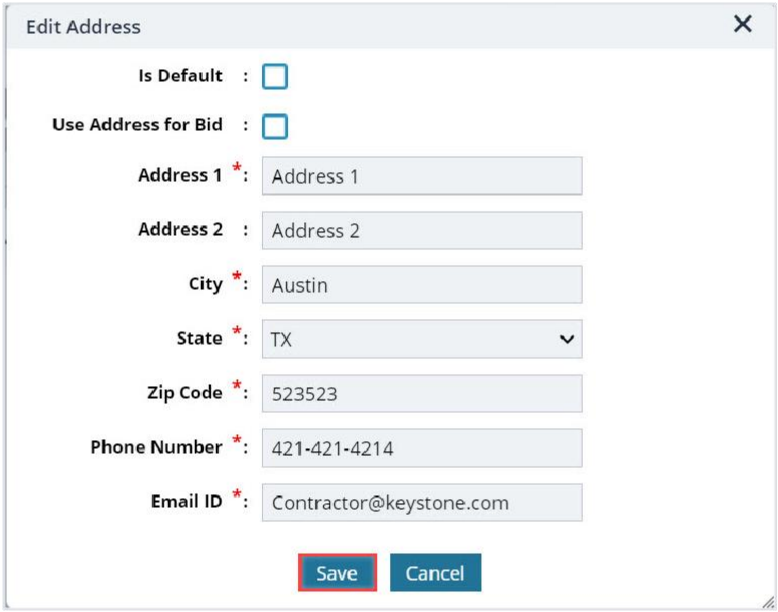


Figure 30: Edit Address Dialog Box

  - Make the necessary changes, and then click **Save**.
- To delete an address, select the appropriate entry, click **Delete**, and then click **OK**.

6. Click **Save & Exit** to save the record and return to the list page. Optionally, click **Save & Continue** to save the record and continue on the same page. Click **Cancel** to discard the added information and exit the page.

3.2.4. Document Management

3.2.4.1. Document Folder Structure

Prerequisites

The role of the logged-in user must be one of the following:

- Administrator
- Construction Component Lead

  For more information on role-specific permissions, refer to Table 1 – Library Catalog Permission Matrix

Overview

The **Document Folder Structure** catalog in the library enables you to create predefined folder structures and save them as templates. You can also add files to folders in these templates. Upon selecting a document template when creating a project or a contract, the folder structure and files as defined in the selected template are automatically created in the **Documents** module of the Prerequisites project or contract. You can also assign permissions and associate a workflow to each of the folders in the template that are effective when the folder structure is created automatically in a project or a contract.

You can create multiple folder structures and save these templates in the library. Each of the templates can be structured differently and can be used for various types of projects and contracts.

Steps

1. In the module menu, click **Library**.
   The **LIBRARY MANAGEMENT** page is displayed.

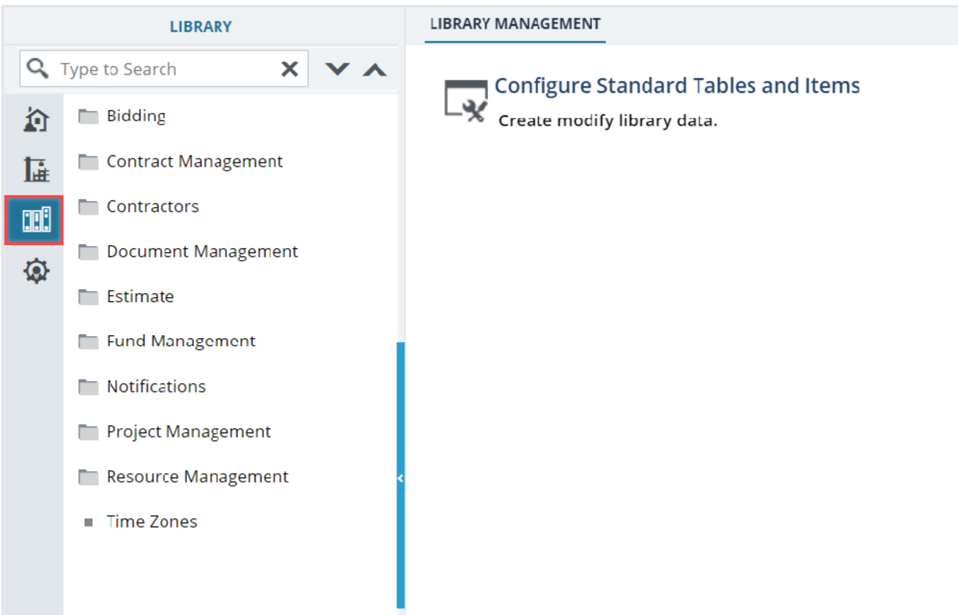


Figure 31: Library Management

2. In the navigation pane, expand **Document Management**, and then click **Document Folder Structure**.
   The **DOCUMENT FOLDER STRUCTURE** list page is displayed.

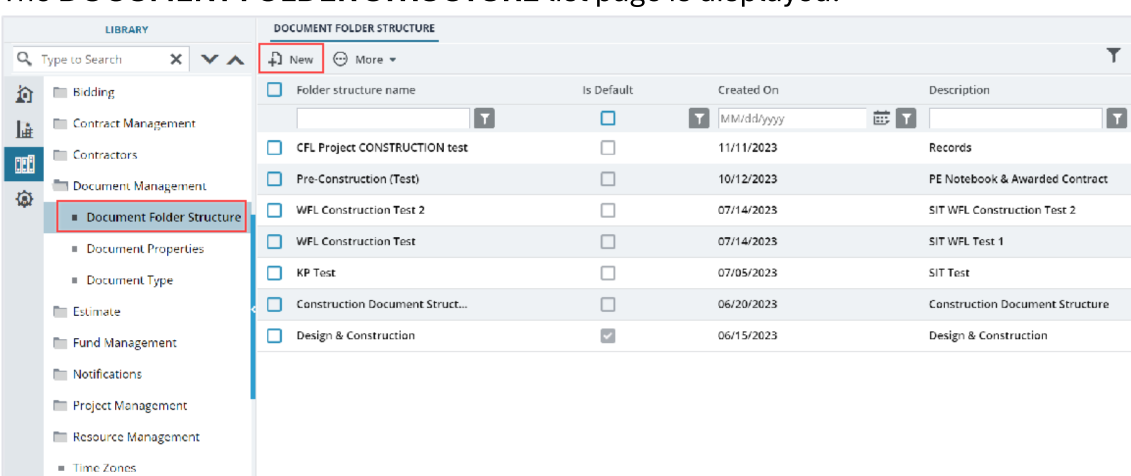


Figure 32: List page of Document Folder Structure Form

3. Click **New**.

   The **DOCUMENT FOLDER STRUCTURE** page is displayed.

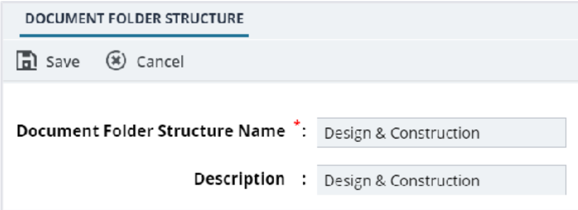


Figure 33: Document Folder Structure Details Page

4. In the **Document Folder Structure Name** box, enter the name of the template.
5. In the **Description** box, enter the description for the folder structure.
6. Click **Save**.
7. To define the folder structure for the template, perform the following steps:
   a. In the **DOCUMENT FOLDER STRUCTURE** list page, select a document template, and then click **Settings**.

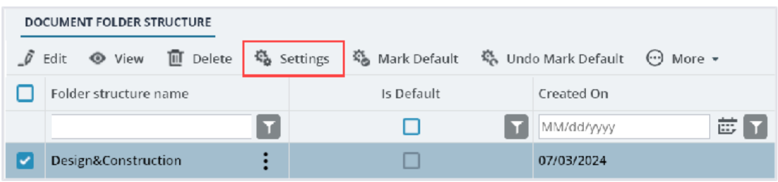


Figure 34: Settings Option

   The **Configure Document Folder Structure** page is displayed.

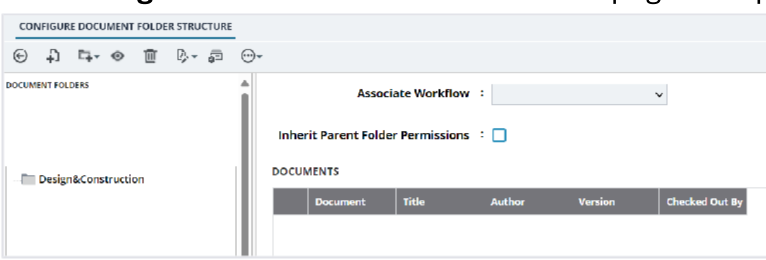


Figure 35: Configure Document Folder Structure Page

   b. In the **DOCUMENT FOLDERS** pane, click a folder to create a folder within the selected folder.

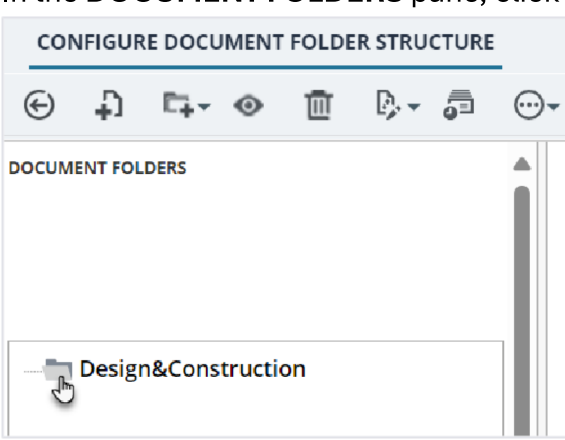


Figure 36: Open the Folder

c. Click **Folder**, and then click **New Folder** to add a new folder to the document template.

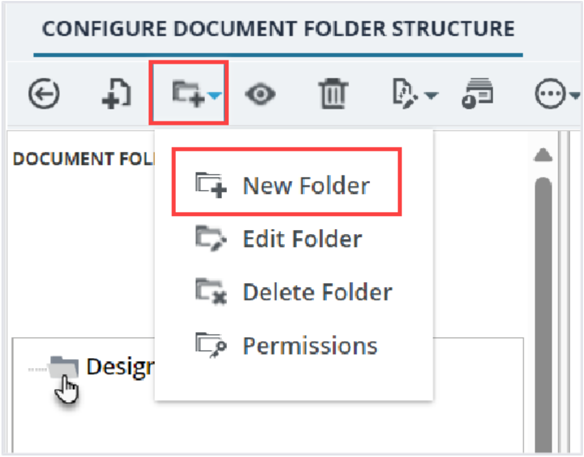


Figure 37: New Folder

The added folder is displayed in the **DOCUMENT FOLDERS** pane.

d. In the **DOCUMENT FOLDERS** pane, enter a name for the folder.

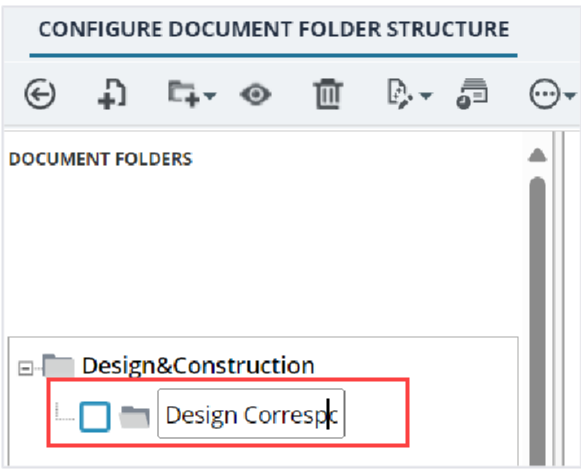


Figure 38: Name the Folder

Note: You cannot duplicate folder names at the same level of hierarchy.

e. To edit a folder name, or delete a folder, click the required folder, click **Folder**, and then click **Edit Folder** or **Delete Folder**.

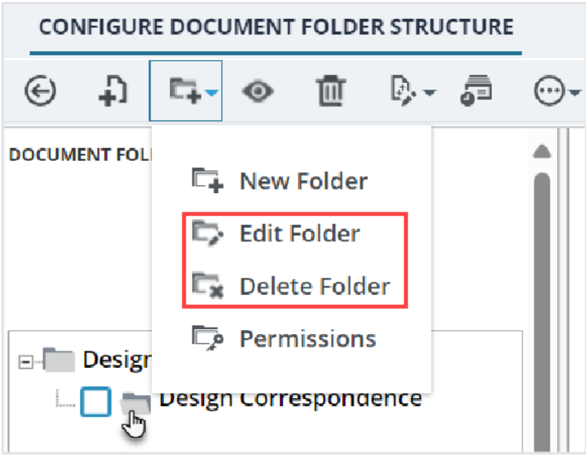


Figure 39: Edit or Delete the Folder

8. To assign a workflow to a folder, perform the following steps:
   a. In the **DOCUMENT FOLDERS** pane, click the appropriate folder.
   b. From the **Associate Workflow** drop-down list, select the appropriate workflow to associate with the folder.

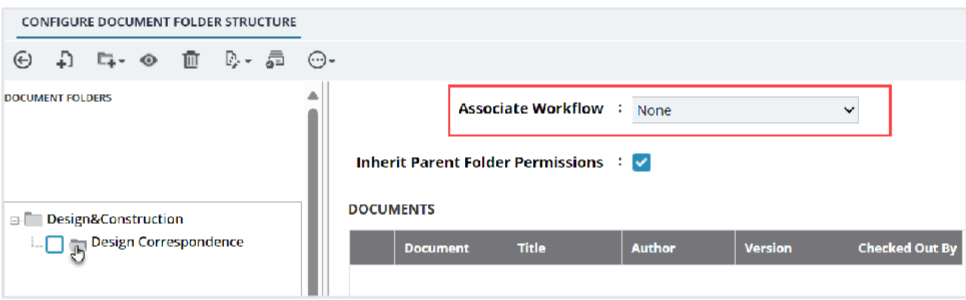


Figure 40: Associate Workflow

Available options are workflows defined for the document management module.

9. To define permissions on a folder, perform the following steps:
   a. In the **DOCUMENT FOLDERS** pane, select the appropriate folder.

b. Perform either of the following steps:

- To inherit permissions from the parent folder, select the **Inherit Parent Folder Permissions** check box.
- Alternatively, to define permissions, perform the following steps:

    i. Click **Folder**, and then click **Permissions**.

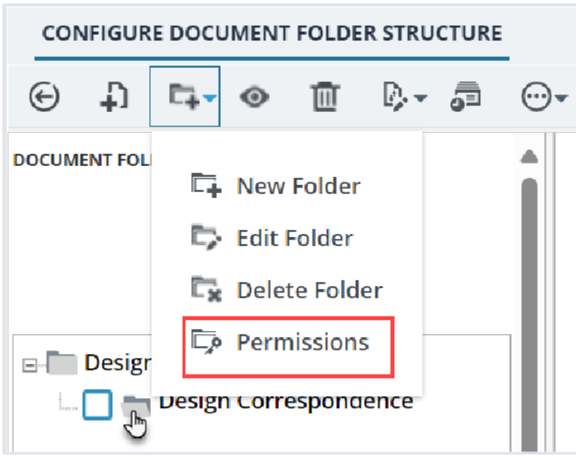


Figure 41: Folder Permissions

The **FOLDER PERMISSIONS** page is displayed.

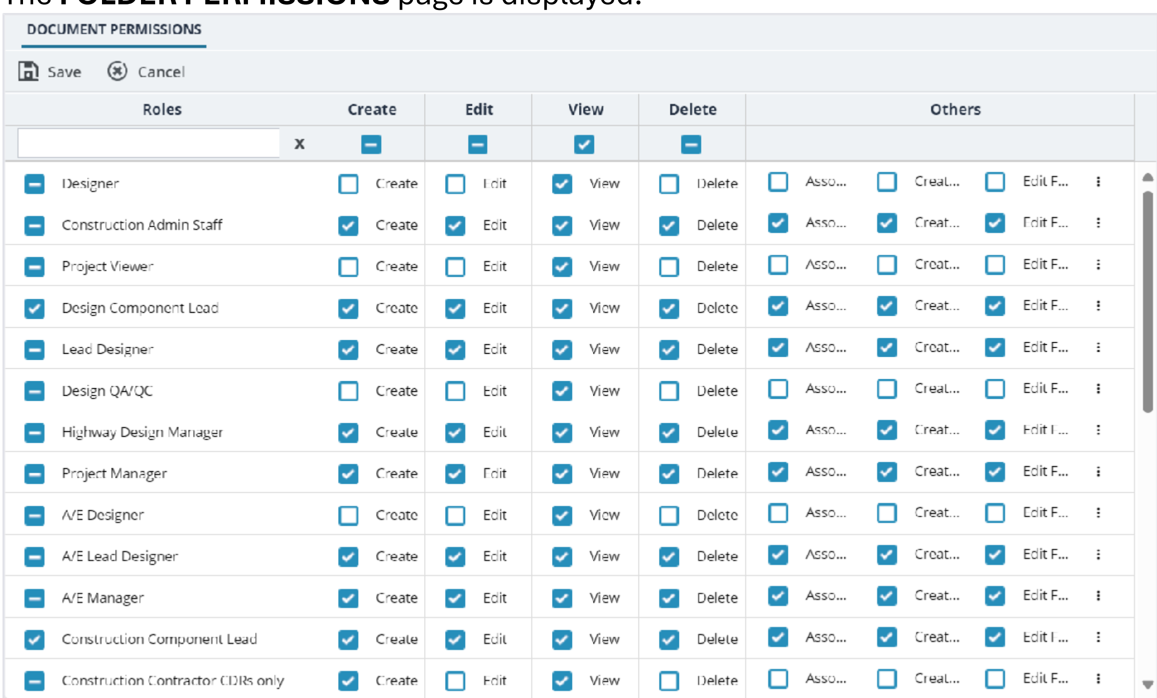


Figure 42: Document Permissions Matrix

Roles are available as rows, and permissions as columns.

ii. Corresponding to each role, select the required check boxes to grant permissions specified in the columns.

iii. Click **Save**.

10. To add documents to the folder structure, perform the following steps:
    a. In the **DOCUMENT FOLDER** section, click the folder to which you want to add a file.

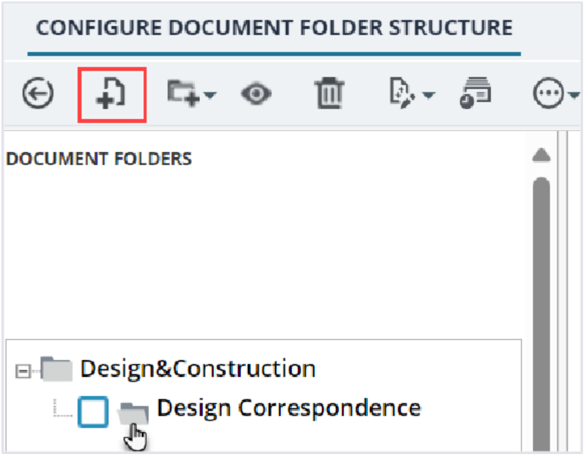


Figure 43: Add New Document

    b. Click **New** to add a file to the selected folder.
    The **Masterworks** dialog box is displayed.

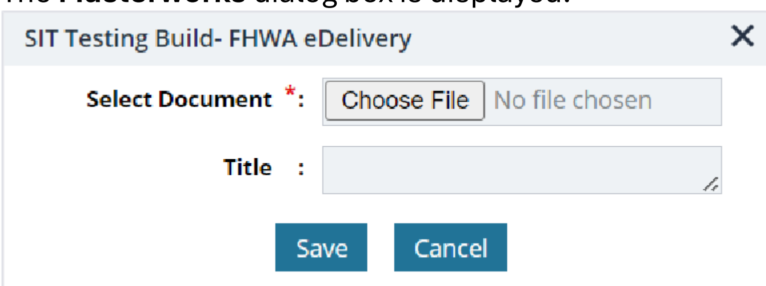


Figure 44: Masterworks Dialog Box

    c. Click **Choose File** to select the file to upload.
    The **Open** dialog box is displayed.
    d. Click the required file, and then click **Open**.
    e. In the **Title** box, enter the name of the file.
    f. Click **Save**.

3.2.4.2. Document Properties

Prerequisites

The role of the logged-in user must be one of the following:

- Administrator
- Construction Component Lead
  For more information on role-specific permissions, refer to Table 1 – Library Catalog Permission Matrix

Overview

You can create custom document properties templates that is displayed in the **New Document** page to define additional information pertaining to documents that are managed in a project or contract.

The **Document Properties** form enables you to add attributes when uploading a document. These document attributes are used in the **Document Search** form to search for documents.

You can create multiple document properties templates with varied specifications for use in different project types. For example, a design project may require document properties that refer to the architect numbering scheme to simplify communication, while a construction project may require document properties to identify the vendor who provided the document.

You can associate a document property template to a folder in the **Documents** module and also associate document property templates to folders defined in a folder structure. The document properties as defined in the template that is selected for a folder are displayed when uploading documents to that folder.

The document properties template specification can comprise library items (stored lists), text, numbers and various other information. Additionally, you can mark fields as mandatory or optional.

You can select a document properties template when creating a project or contract, or until a document is uploaded to the **Documents** module. The document properties as defined in the template that is selected for a project or contract is displayed when uploading documents to the **Documents** module.

Characteristics of metadata specifications include:

- The **Document Properties** template selected for a project or contract cannot be changed after the first document is uploaded in a project.
- The **Document Properties** template is not applicable to attachments in forms or workflows.
- The **Document Properties** template selected for a project or contract is consistently used across the project or contract.

Defining a document properties template is similar to the functionalities available with the

Form Builder utility in the **Administration** module.

The following procedure describes the steps to create a sample document properties template that is displayed when uploading a document. The sample document properties template consists of a text box to enter the document number, and a radio-button control to select the type of document.

Steps

1. In the module menu, click **Library**.
   The **LIBRARY MANAGEMENT** page is displayed.

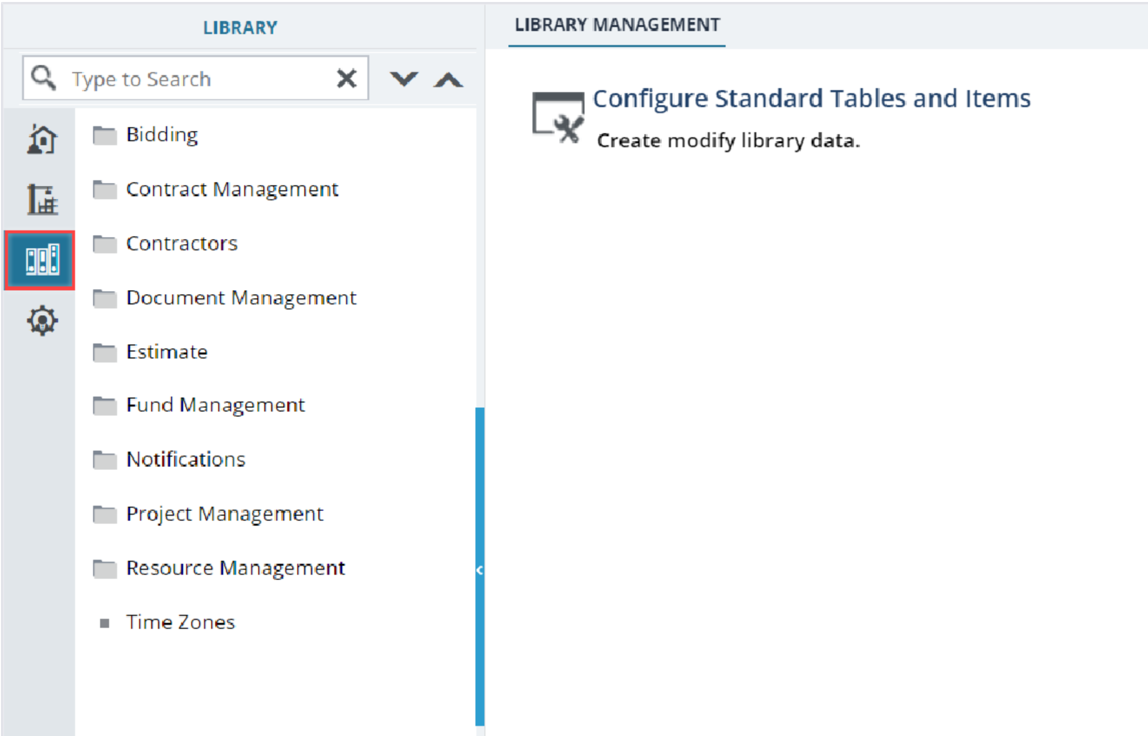


Figure 45: Library Management

2. In the navigation pane, expand **Document Management**, and then click **Document Properties**.
   The **DOCUMENT PROPERTIES** list page is displayed.

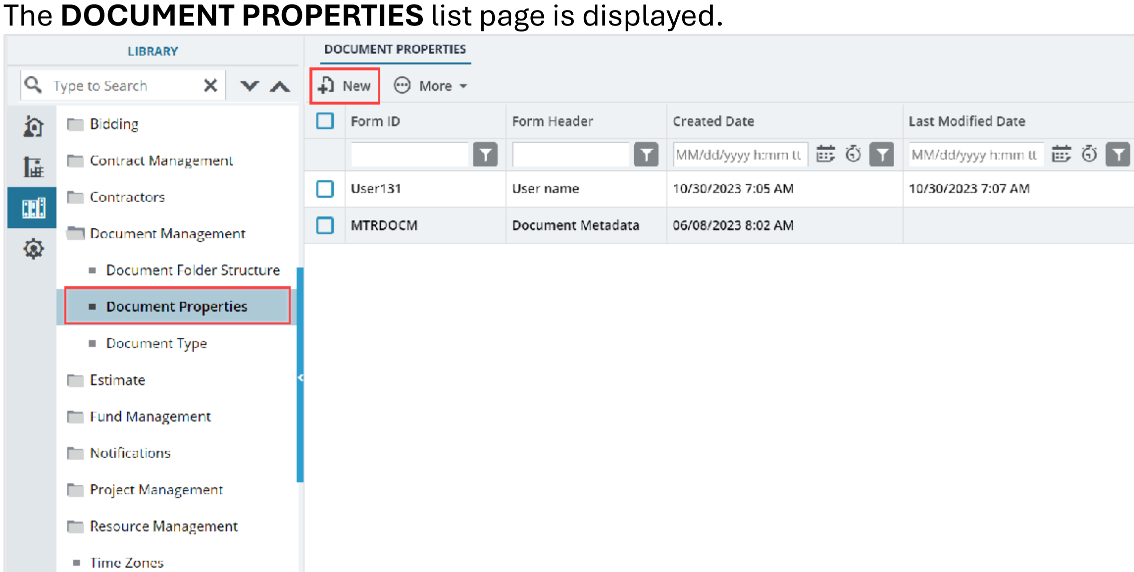


Figure 46: List Page of Document Properties Form

3. Click **New**.
   The **GENERAL** and **DESIGN** tabs for the document properties template are displayed.

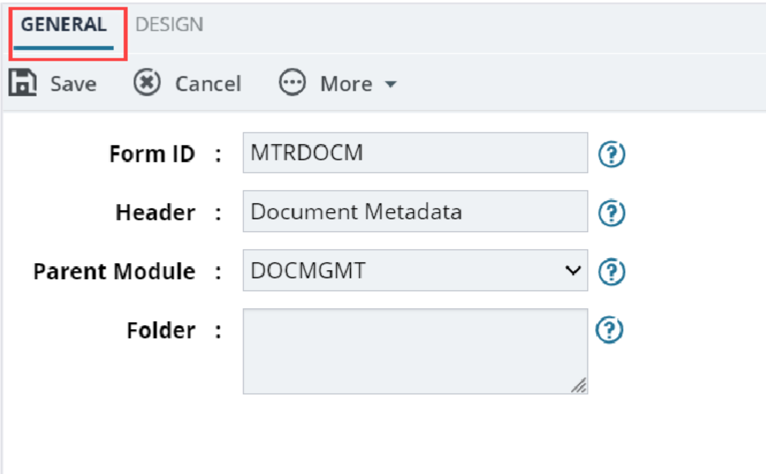


Figure 47: General and Design Tabs

4. To modify the form settings, in the **GENERAL** tab, perform the following steps:
   a. In the **Form ID** box, a unique number to identify the form is displayed. Modify the form ID as required.
      The form ID should contain seven alphanumeric characters.
   b. In the **Header** box, the name of the form is displayed. Modify the header information as required. Header is displayed only after you publish a form.
   c. From the **Parent Module** drop-down list, select the module in which the XML form will be placed.
   d. In the **Folder** box, enter the folder location where the form will be placed in the navigation tree.
      Type the complete path of the folder using the '/' separator.
      If the folder exists, then the form will be available under the existing folder.
      Otherwise, a new folder will be created, and the form will be placed under that folder.
5. To design the layout of the form, first create a section. A section provides a boundary in the design area to add controls.
   a. Click the **DESIGN** tab.

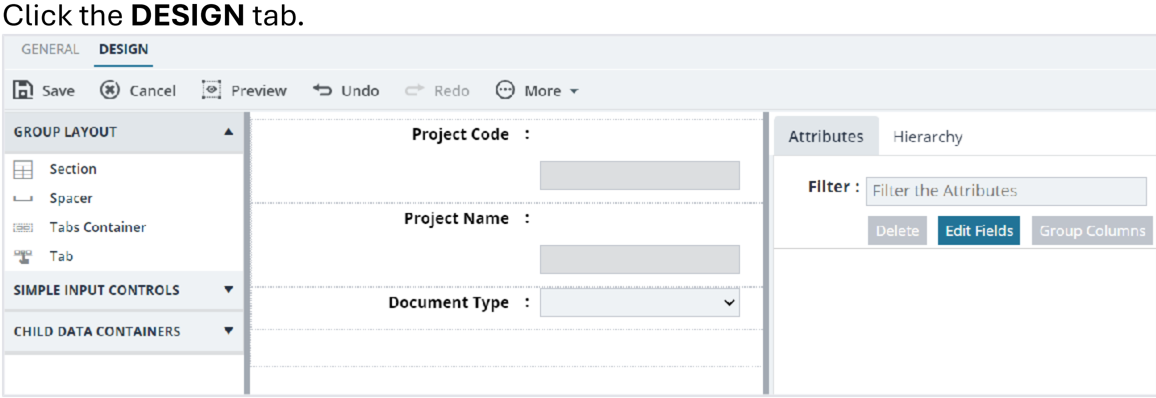


Figure 48: Design Tab

b. In the controls pane, expand **GROUP LAYOUT**, and then drag and drop **Section** to the design area.

The label **SECTION <number>** is displayed in the design area.

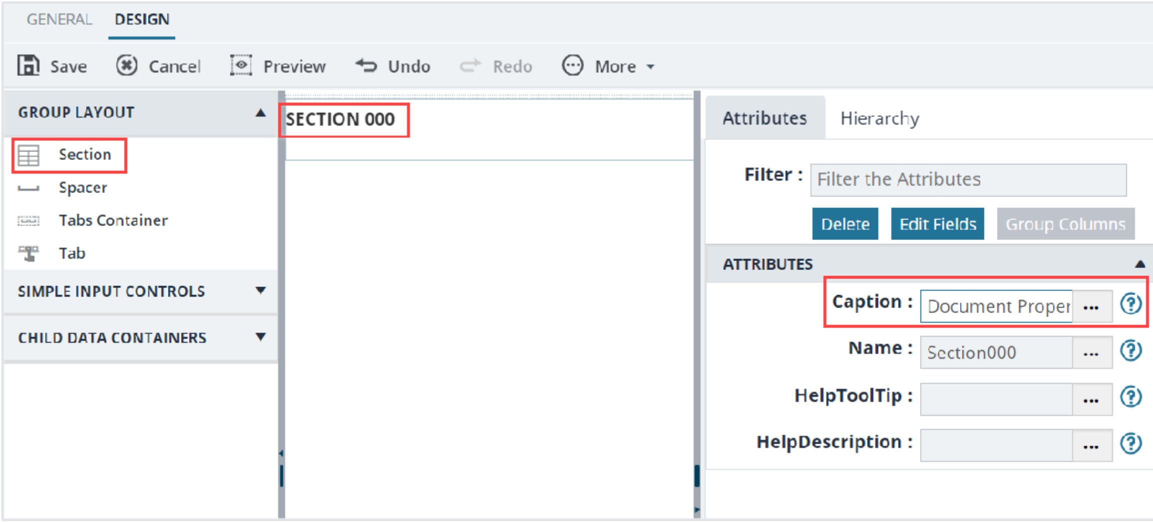


Figure 49: Adding a Section

c. In the design area, click **SECTION <number>**.

The control attributes pane displays the attributes for **SECTION <number>**.

d. To define the attributes of the section, enter information in the **COMMON ATTRIBUTES** section, as described in the following table.

Attribute	Description
Caption	This denotes the display name of the section. In the Caption box, enter Document Properties.
Name	This is an automatically generated name to identify the section, and need not be modified. This is also the name of the column in the database, and is used to derive the name of the HTML item that is rendered.
HelpToolTip	Enter the tool tip that should be displayed on mouse hover on the Help ('?') icon.
HelpDescription	Enter the title that should be displayed when the Help ('?') icon is clicked.

6. To add a text box control, perform the following steps:

a. In the controls pane, click **SIMPLE INPUT CONTROLS**, and then drag and drop **Multi Line Text** into the **DOCUMENT PROPERTIES** section.

Note: Drop a control within the confines of the section for the control to be displayed in the design area.

b. Double-click **TextBox <number>** and enter **Document Properties**.

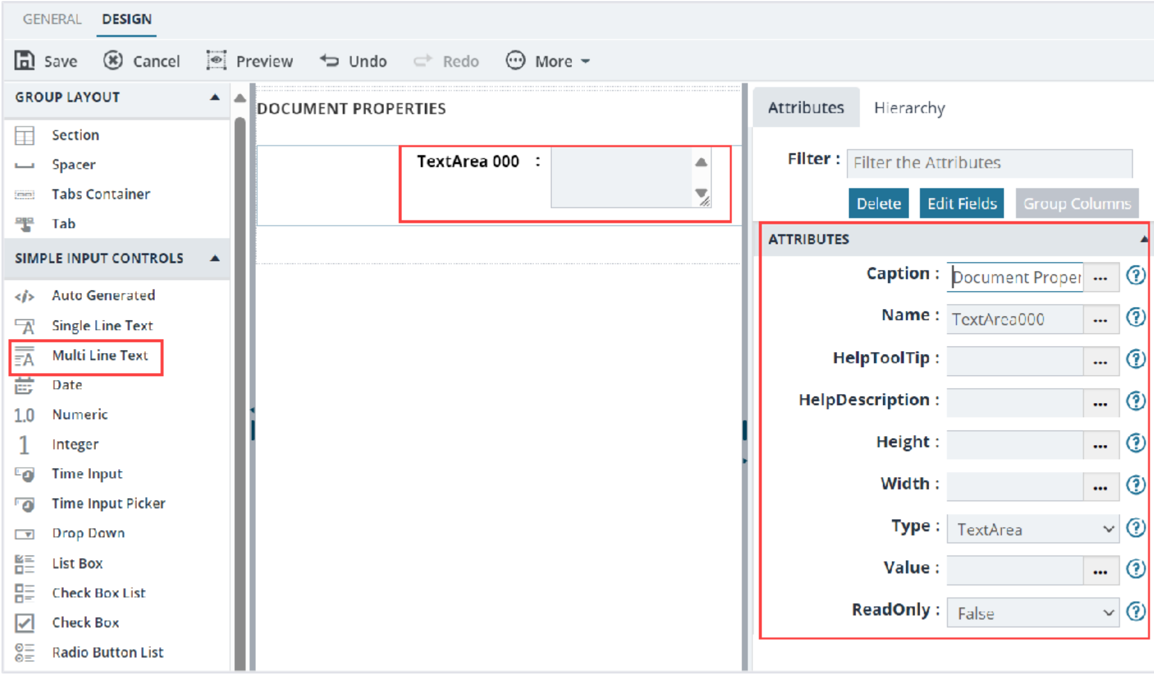


Figure 50: Adding a Simple Input Control

The various attributes of the control are listed below:

Attribute	Description
Caption	This denotes the display name of the control. The name to render on the display surface. If the caption is not set, then the default caption is set to the **Name** attribute of the control. To set a control with no title, delete the caption. Enter **Document Properties**.
Name	This is a system generated name to denote the control. You need not modify this field; however, normally a form designer provides names that represent the meaning of the data in the field. Name attributes should not have spaces in them, and they must be unique throughout the form. The name field is used to create the underlying database column name and to derive the name of the rendered HTML item.
HelpToolTip	You can enter the tool tip that should be displayed on mouse hover on the Help ('?') icon.
HelpDescription	You can enter the title that should be displayed when the Help ('?') icon is clicked.
Width	This is used to set the width of a control in the user interface.
Type	This determines the options to select the type of control required in the form. For example, you can add a text box to a section and later change it to a drop-down list.
Value	You can specify a default value to be displayed in the control. Also, you can also use the Value field to retrieve system level information during display processing. The supported format values include the following: {CURRENTUSER} - Displays the user name of the logged in user. {CURRENTUSERNAME} - Displays the first name of the logged in user. {CURRENTDATE} - Displays the current date. {CURRENTDATETIME} - Displays the current date and time. {CURRENTTIME} - Displays the current time. {PROJECTNAME} - Displays the name of the project. {PROJECTCODE} - Displays the project code. {CONTRACTNAME} - Displays the name of the contract {CONTRACTCODE} - Displays the contract code. {PRIMECONTRACTOR} - Displays the prime contractor of the project. {_FORMULA: formula} {_REQUEST: state info field} {_DB: db expression} {_Picker: [name Of The picker that is defined in this xml]} "any static text" - Displays the text entered here.
ReadOnly	If set to true, the data in the form is made read only. That is, the data cannot be modified by the end user.

Attribute	Description
MaxLength	Sets the maximum number of characters that can be entered in the text box.

7. To specify the document type in the properties template, perform the following steps:
   a. In the controls pane, click **SIMPLE INPUT CONTROLS**, and then drag and drop **Radio Button List** into the **DOCUMENT PROPERTIES** section.
   b. Click the **Radio Button List** group.
   The attribute pane displays the radio button control attributes.

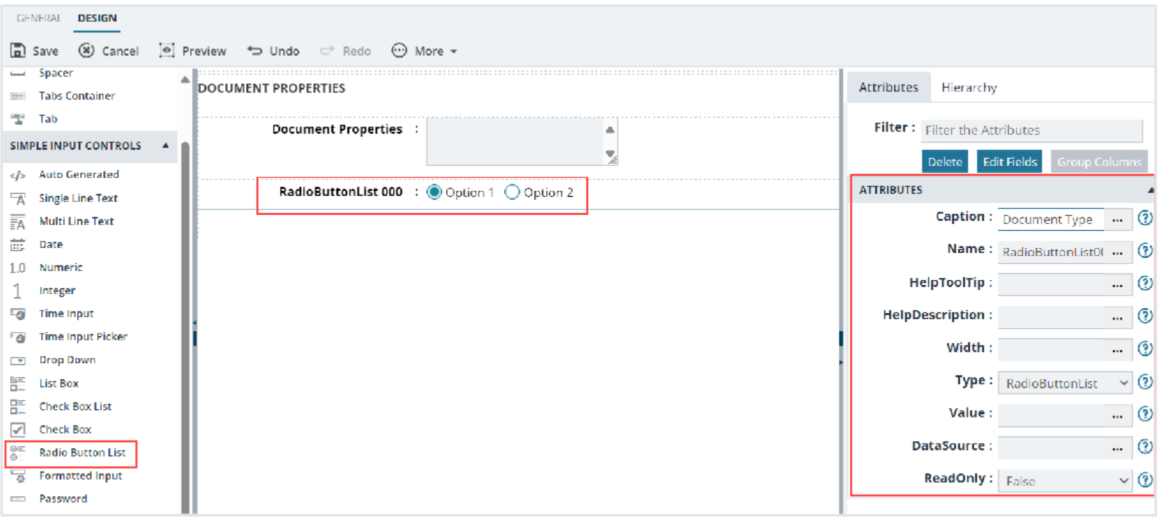


Figure 51: Adding a Radio Button

   c. In the **Attributes** pane, in the **Caption** attribute, type **Document Type**.
   d. In the **Attributes** pane, in the **DataSource**, click ... .
   The **Data Source Editor** dialog box is displayed.
      i. In the **ListItems** box, for an additional radio button, click **Add**.

ii. In the **Display** column, enter **Specifications** for **Option 1, Design** for **Option 2**, and **Contract** for **Option 3**.

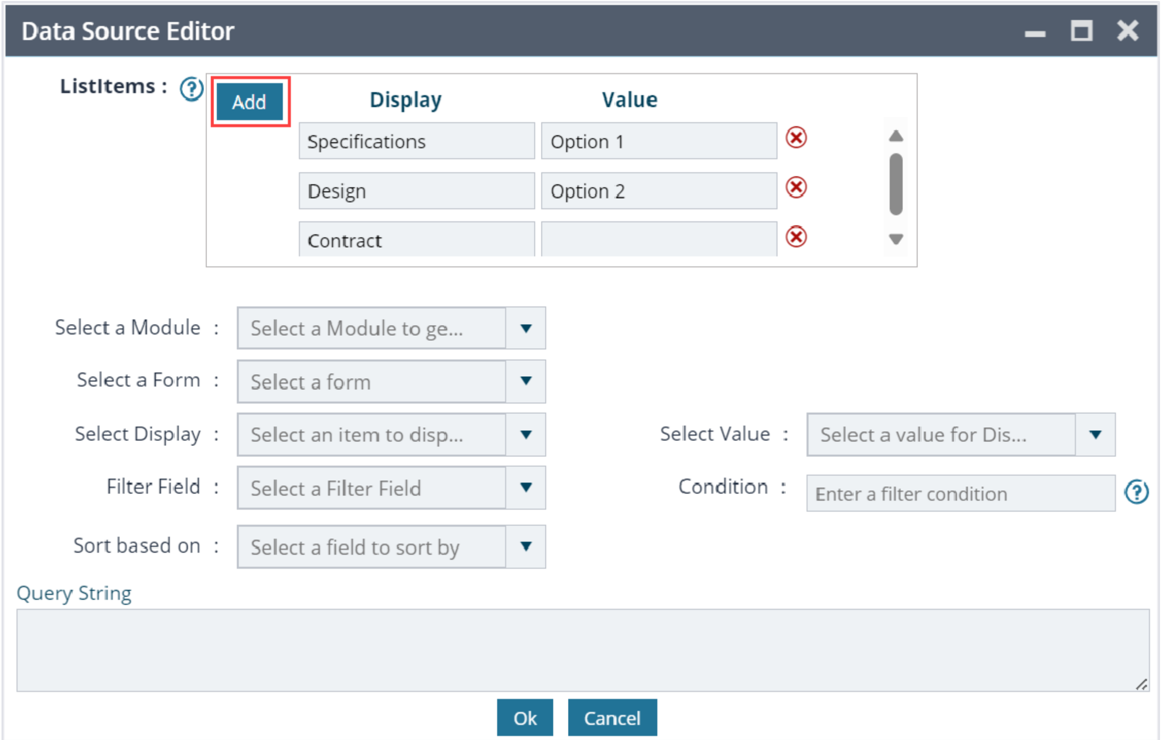


Figure 52:Defining Display Values

Note: For newly added radio buttons, you must enter both the Display and Value.

iii. Click **OK**.

8. Click **Save**.

   The **DOCUMENT PROPERTIES** list page is displayed.

9. You must publish the properties template to make it available for selection in projects and contracts. To publish the template, perform the following steps:

   a. In the list page, select the properties template to be published.

   b. Click **Publish**.

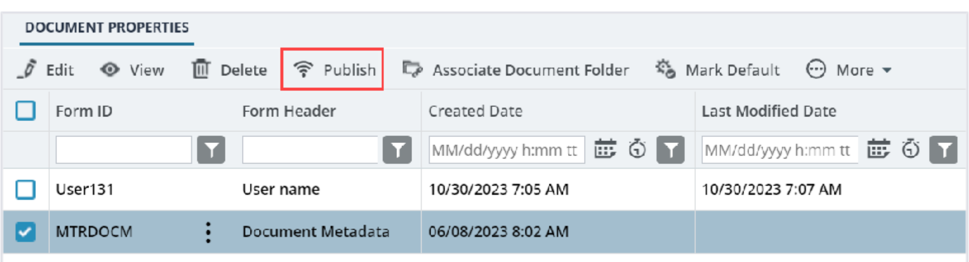


Figure 52: Publish the Document Property

A confirmation message is displayed.

On creating a new project, the published document properties template can be selected. When adding a new document to the project, the properties template is displayed.

3.2.4.3. Associating Document Property Templates to Folders in a Folder Structure

Prerequisites

The role of the logged-in user must be one of the following:

- Administrator
- Construction Component Lead
  For more information on role-specific permissions, refer to Table 1 – Library Catalog Permission Matrix

Overview

You can associate a document property template to folders defined in a folder structure.

Steps

1. In the module menu, click **Library**.
   The **LIBRARY MANAGEMENT** page is displayed.

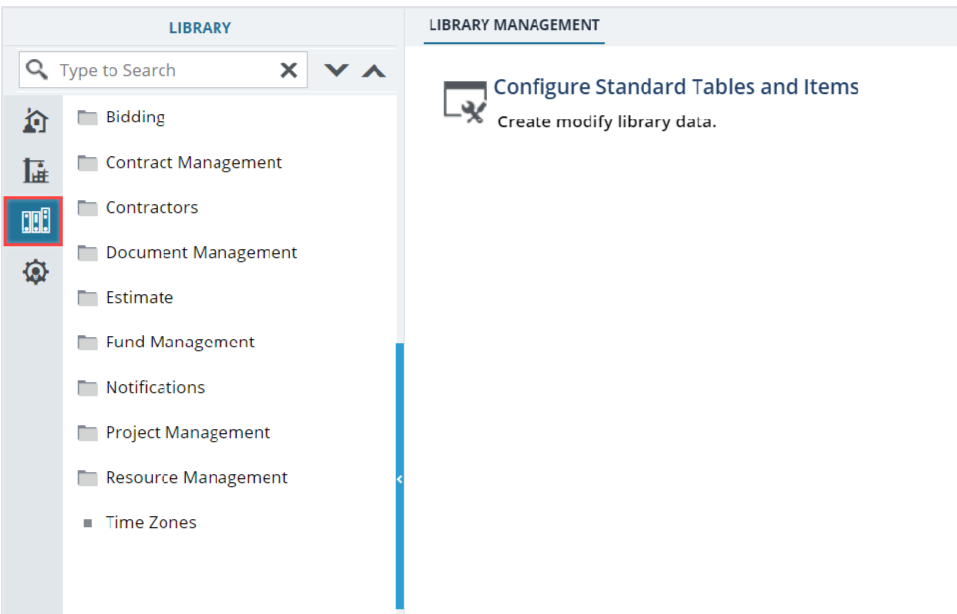


Figure 53: Library Management

2. In the navigation pane, expand **Document Management**, and then click **Document Properties**. The **DOCUMENT PROPERTIES** list page is displayed.

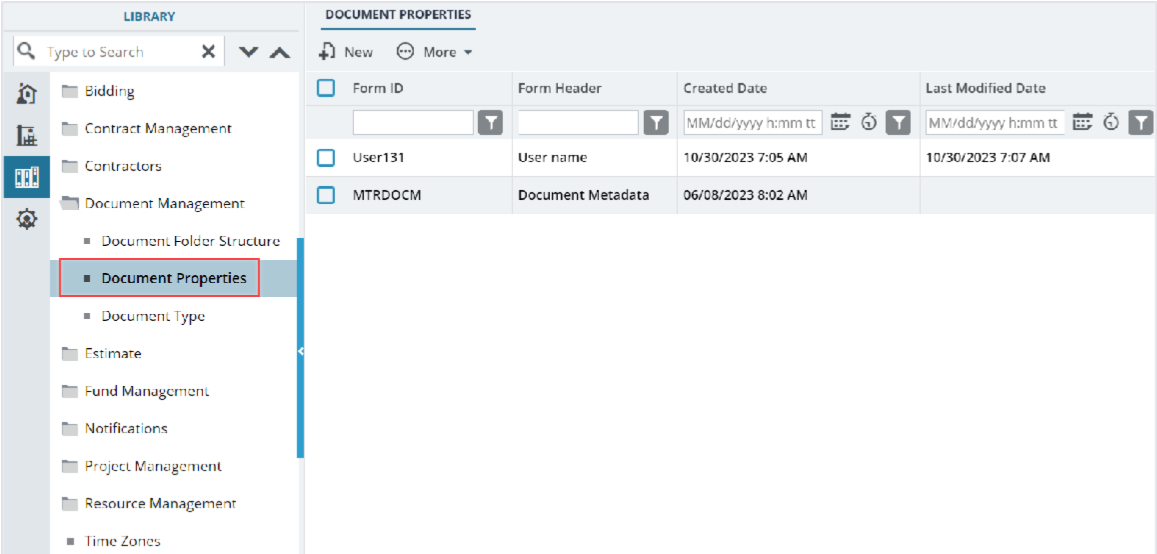


Figure 54: List Page of Document Properties Form

3. Select the required document property, and then click **Associate Document Folder**.

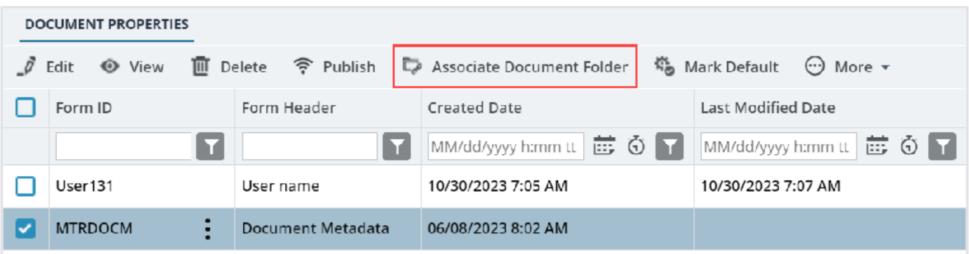


Figure 55: Selecting Document Folder

The **Associate Document Folder** dialog box is displayed.

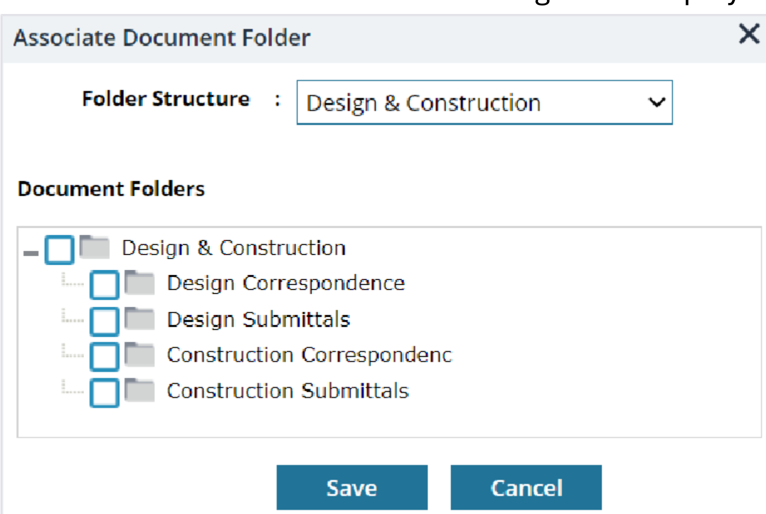


Figure 56: Associate Document Folder Dialog Box

4. From the **Folder Structure** drop-down list, select the folder structure to associate the selected document property template.
   Available options are folder structures defined in the **Document Folder Structure** catalog of the library.
   The folders defined in the selected document folder structure is displayed in the **Document Folders** section.
5. Select the required folders to associate the selected folder property template.
6. Click **Save**.
   You must publish the properties template to make it available for selection in projects and contracts.
7. In the **DOCUMENT PROPERTIES** list page, select the properties template form to be published.
8. Click **Publish**.

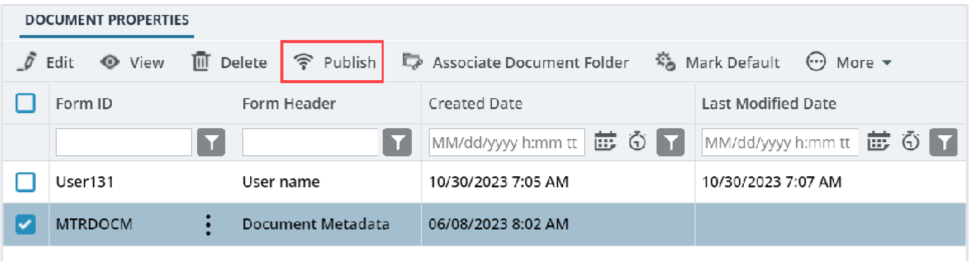


Figure 57: Publish the Document Property

A confirmation message is displayed.
You can choose the applicable **Document Folder Structure** when creating a project or contract.
You need to enter all the metadata information at the time of document upload to a folder that has been associated to a **Document Properties** template.

3.2.5. Estimate

3.2.5.1. Construction Inflation Indices

Prerequisites

The role of the logged-in user must be one of the following:

- Administrator
- Construction Component Lead
  For more information on role-specific permissions, refer to Table 1 – Library Catalog Permission Matrix

Overview

The **Construction Inflation Indices** catalog enables you to define distinct inflation indices.

The defined inflation index is used to calculate the inflation percentage (%) in the **Unit Price Search** utility.

Steps

1. In the module menu, click **Library**.
   The **LIBRARY MANAGEMENT** page is displayed.

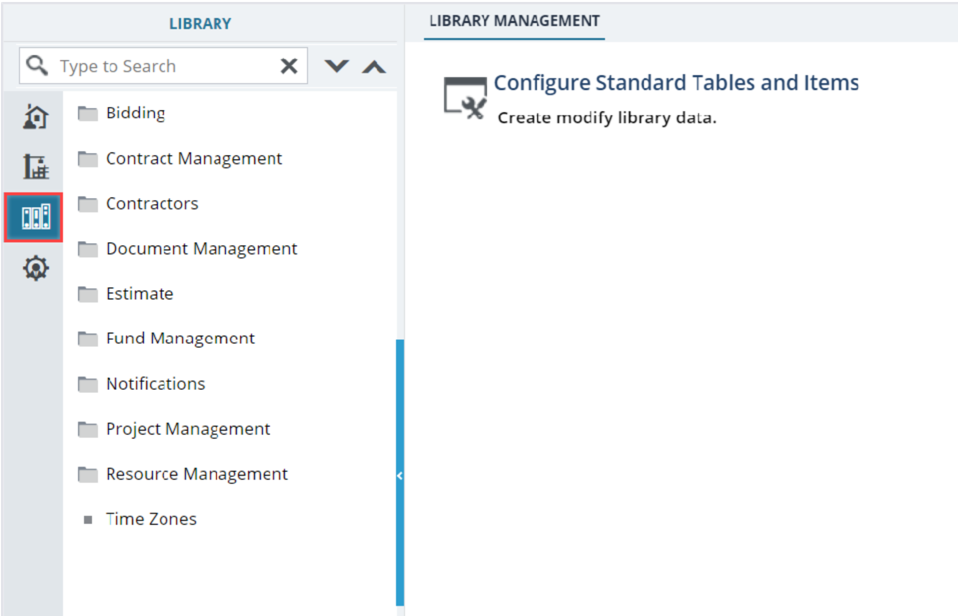


Figure 58: Library Management

2. In the navigation pane, expand **Estimate**, and then click **Construction Inflation Indices**.
   The **CONSTRUCTION INFLATION INDICES** list page is displayed.

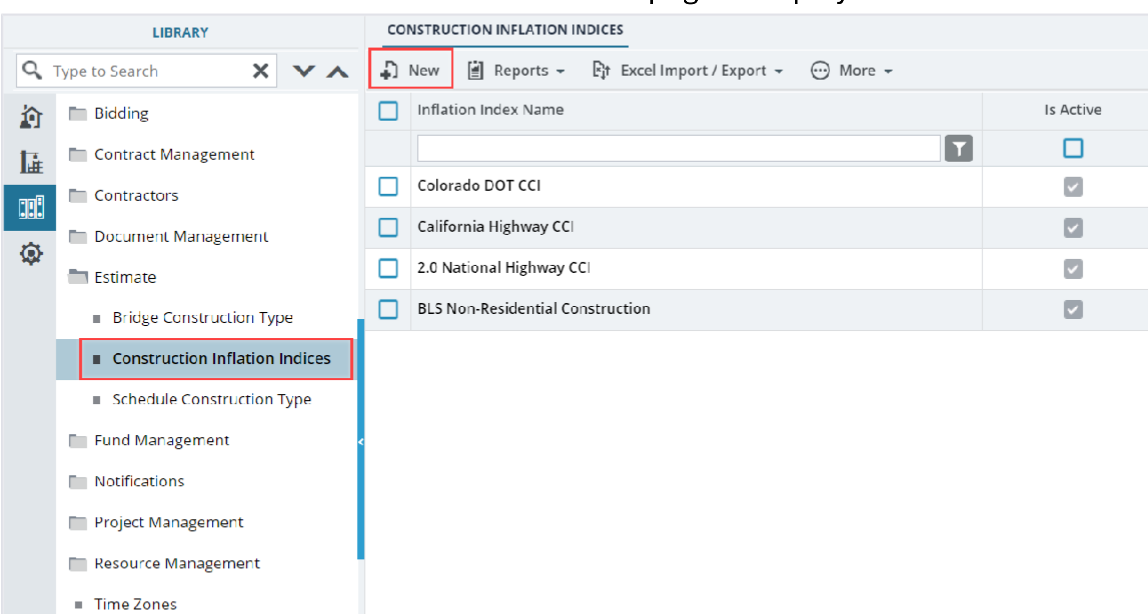


Figure 59: List Page of Construction Inflation Indices Form

3. Click **New**.

   The **CONSTRUCTION INFLATION INDICES** page is displayed.

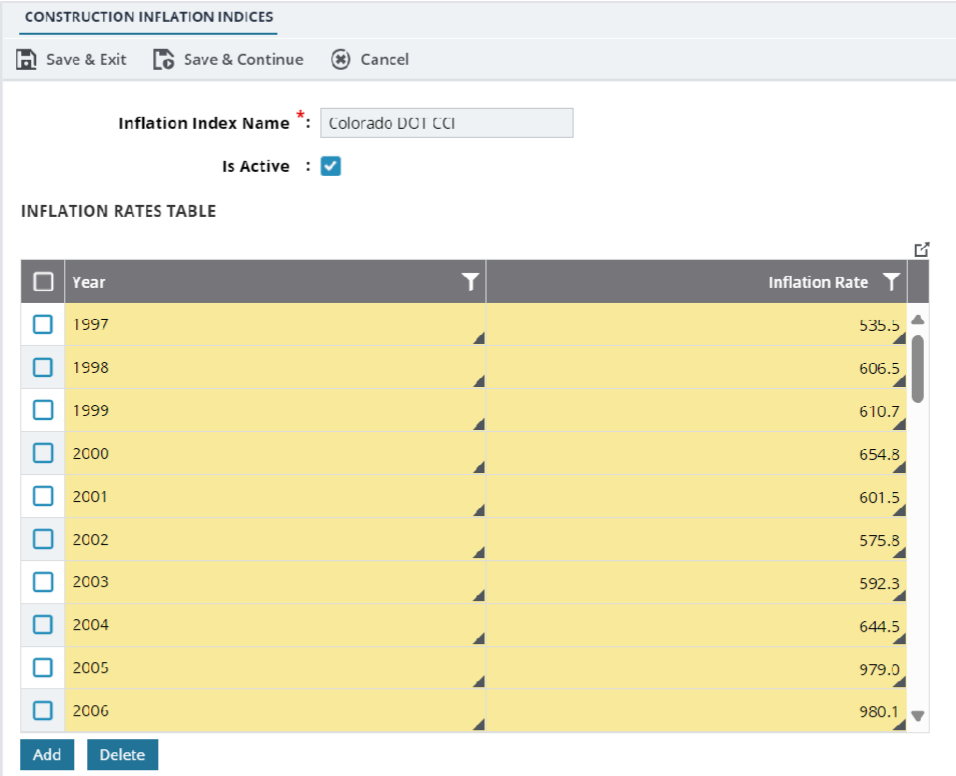


Figure 60: Construction Inflation Indices Details Page

4. Provide the appropriate information in the fields, as described in the following table:

Field Name	Description
Inflation Index Name	Enter the name of the inflation index.
Is Active	Ensure the check box is selected to make the inflation index active and available for use in project.

5. To add an inflation rate, in the INFLATION RATES TABLE section, perform the following steps:

   a. Click **Add**.

      A row is added to the table.

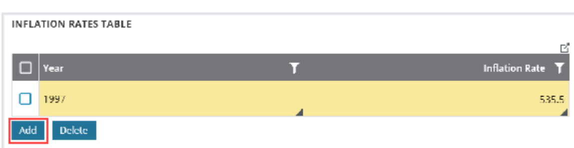


Figure 61: Inflation Rates Table

   b. Provide the appropriate information in the fields, as described in the following table:

Column Name	Description
Year	From the drop-down list, click and select the appropriate year. Available years are from 1995 to 2024

Column Name	Description
Inflation Rate	Enter the rate of inflation. Optionally, use the button to increase or decrease the value entered. **Note:** To enter negative inflation rate, prefix the value with a - sign.

6. Optionally, to delete an inflation rate, in the **INFLATION RATES TABLE** section, perform the following steps:
    a. Select the check box adjacent to the appropriate entry.
    b. Click **Delete**, and then click **OK**.
7. Click **Save & Exit** to save the record and return to the list page. Optionally, click **Save & Continue** to save the record and continue on the same page. Click **Cancel** to discard the added information and exit the page.

3.2.6. Notifications

3.2.6.1. Mail Merge Process

The **Mail Merge** feature enables you to use the information available in a form into a predefined document template to create documents with dynamic values.

You can design a mail merge document and create mail merge templates and email body templates.

You can design a mail merge document in Microsoft Word format with objects that are placeholders to include specific form information.

You can then create a mail merge template by uploading the designed mail merge document. The mail merge template is configured for a form by mapping the objects in the mail merge document with the fields in the form.

When the mail merge document is sent to the configured recipients, the mapped objects are replaced with the actual field values defined in the selected record of the form. The mail merge document is sent as an email attachment to the recipients. You can also attach the mail merge document to a record of the associated form.

You can also design an email body template by defining the subject and message for the email notifications. These mail body templates are used when sending emails to recipients.

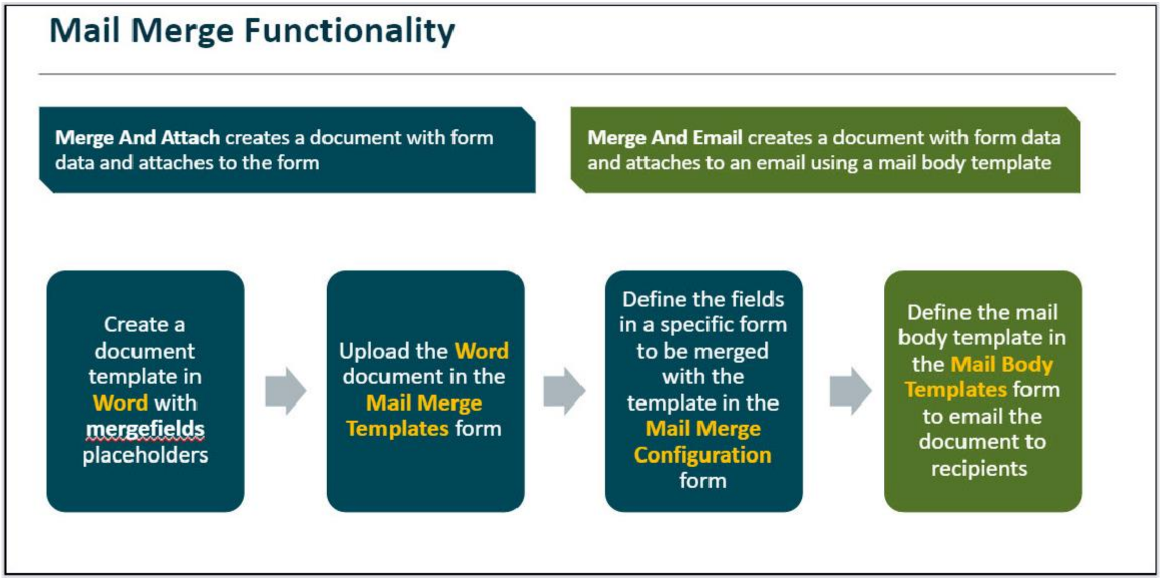


Figure 63: Mail Merge Process Overview

The functional flow for mail merge is as follows:

1. 3.2.6.2. Create mail merge documents with objects
2. 3.2.6.3. Create mail merge templates
3. 3.2.6.4. Configure mail merge for a form
4. 3.2.6.5. Create mail body templates

3.2.6.2. Creating Mail Merge Documents

Overview

A mail merge document is created in Microsoft Word format with objects that are placeholders to include specific information of a record of a form. This document is then associated with a mail merge template, configured for a record of a form, and sent as an email attachment to the recipients.

Steps

1. Open a new document in Microsoft Word.
2. Enter the appropriate content for the mail merge document.
3. Place the cursor where you want to insert an object as a placeholder for the actual content of the form.

4. On the **Insert** tab, in the **Text** group, click **Quick Parts**, and then click **Field**.

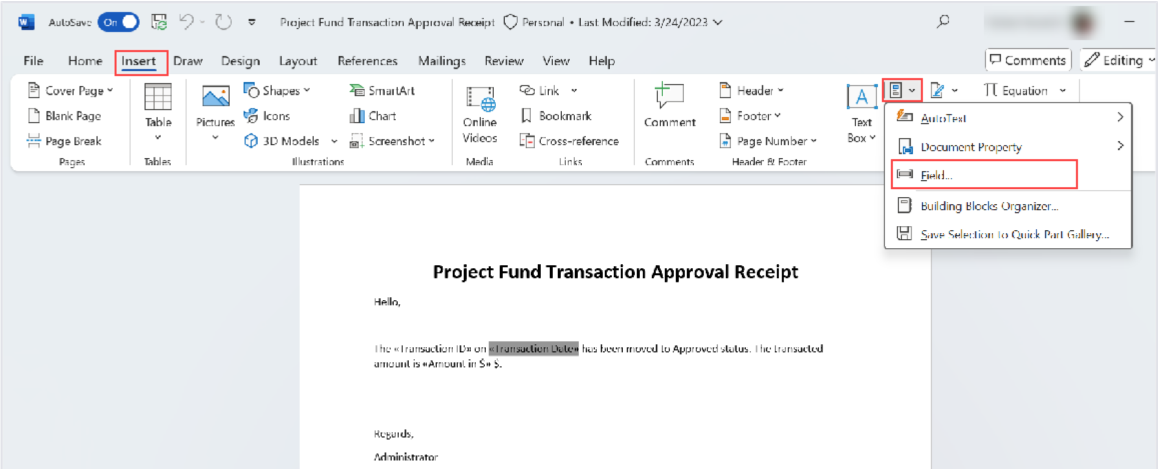


Figure 62: Adding Field

The **Field** dialog box is displayed.

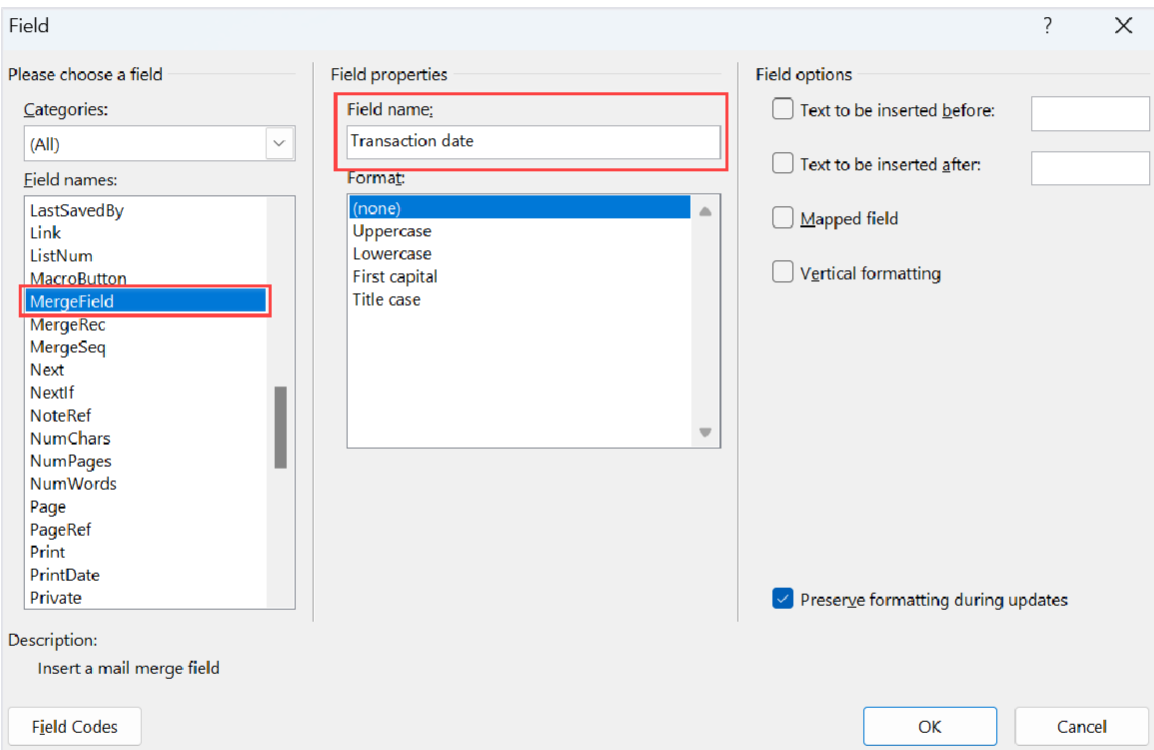


Figure 63: Field Dialog Box

5. In the **FieldNames** list, click **MergeField**.
6. In the **Field name** field, enter the name of the object.
7. Click **OK**.

   The object is inserted in the document.
8. Click **Save**.

3.2.6.3. Mail Merge Templates

Prerequisites

- The role of the logged-in user must be one of the following:
    - Administrator
    - Construction Component Lead

    For more information on role-specific permissions, refer to Table 1 – Library Catalog Permission Matrix
- Mail merge document in the Word format is available.

Overview

A mail merge template is created by uploading the Word format of the mail merge document.

Steps

1. In the module menu, click **Library**.
   The **LIBRARY MANAGEMENT** page is displayed.

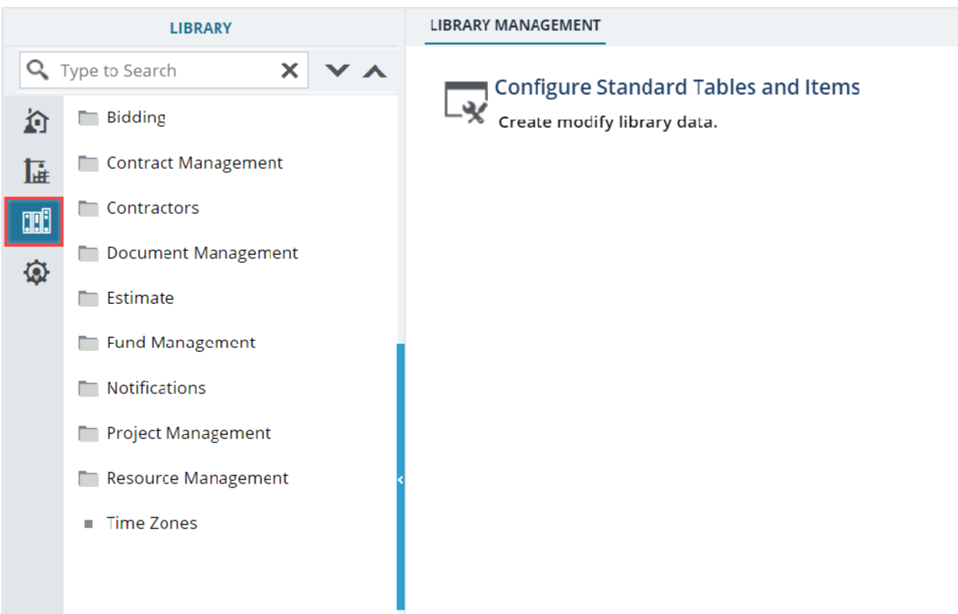


Figure 64: Library Management

2. In the navigation pane, expand Notifications, and then click **Mail Merge Templates**.
   The **MAIL MERGE TEMPLATES** list page is displayed.

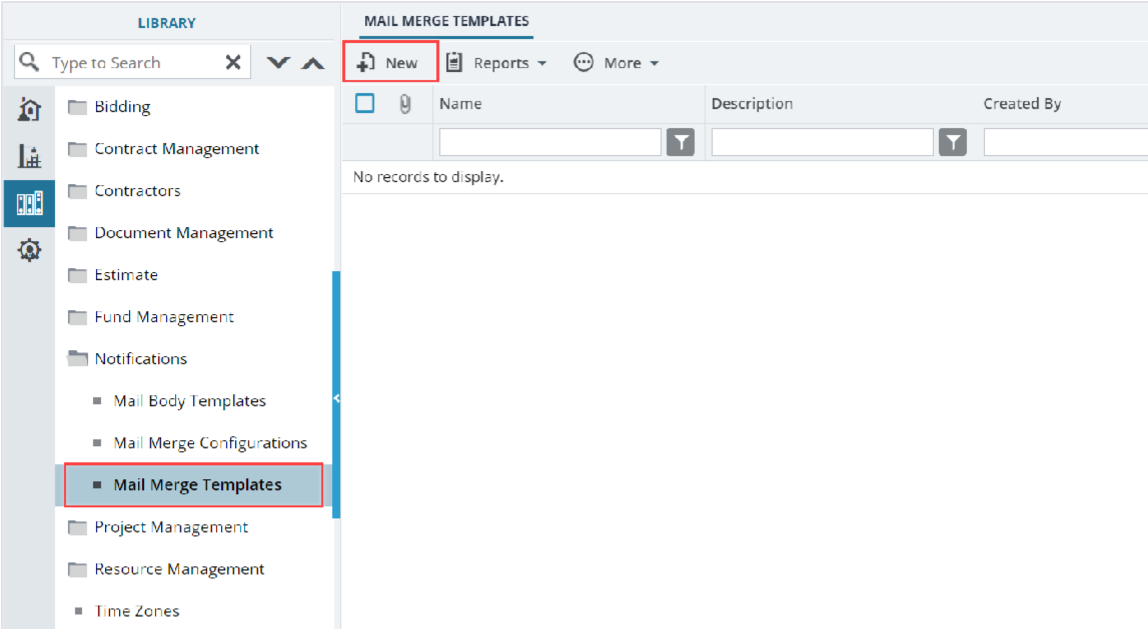


Figure 65: List page of Mail Merge Templates Form

3. Click **New**.
   The **MAIL MERGE TEMPLATES** details page is displayed.

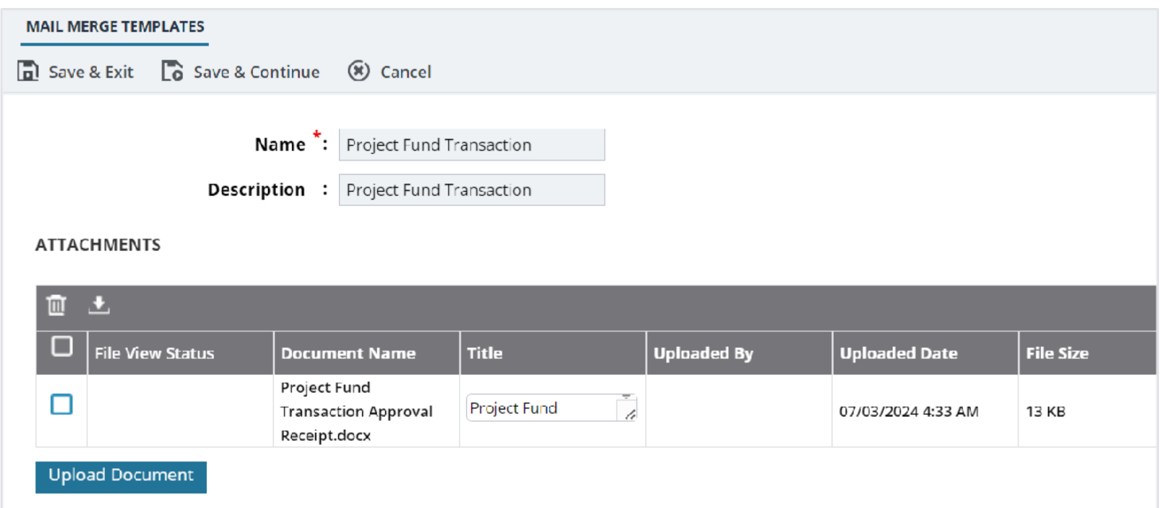


Figure 66: Mail Merge Templates Details Page

4. In the **Name** field, enter the name of the mail merge template.
5. In the **Description** field, enter the description about the mail merge template.
6. In the **ATTACHMENTS** section, upload the mail merge document. For information on attachments, refer to Section 4.1. Attachments.
7. Click **Save & Exit** to save the record and return to the list page. Optionally, click **Save & Continue** to save the record and continue on the same page. Click **Cancel** to discard the added information and exit the page.

3.2.6.4. Mail Merge Configuration

Prerequisites

- Mail merge templates for a form are available in the Mail Merge Templates catalog of the library.
- The role of the logged-in user must be one of the following:
  - Administrator
  - Construction Component Lead

    For more information on role-specific permissions, refer to Table 1 – Library Catalog Permission Matrix
- The logged-in user should be invited to the project and assigned with the edit permission.

Overview

You can configure **Mail Merge** for a form by associating the required fields of the form with the objects of the mail merge template.

When email notifications are sent, the mail merge document is sent as an attachment. In the attachment, the mapped objects in the mail merge template are replaced with the actual field values defined in the selected record of the form.

Steps

1. In the module menu, click **Library**.
   The **LIBRARY MANAGEMENT** page is displayed.

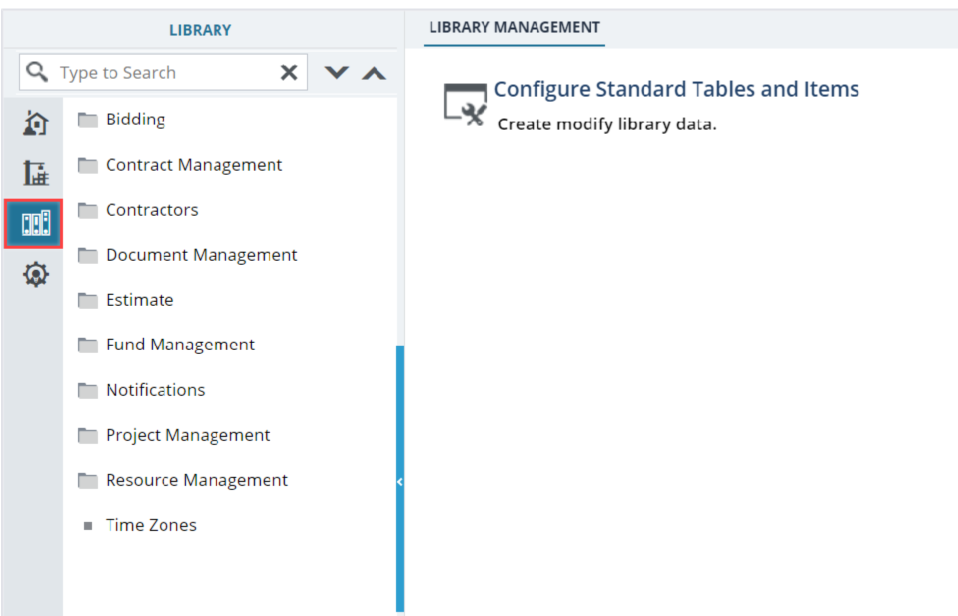


Figure 67: Library Management

2. In the navigation pane, expand **Notifications**, and then click **Mail Merge Configuration**.
   The **MAIL MERGE CONFIGURATION** list page is displayed.

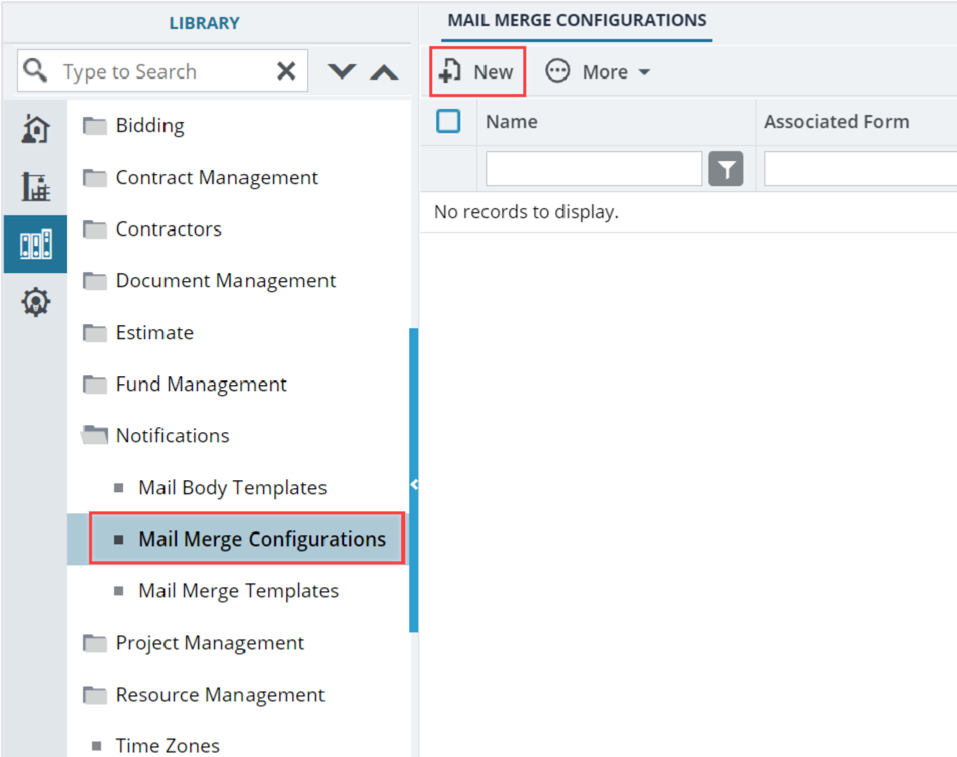


Figure 68: List Page of Mail Merge Configuration Form

3. Click **New**.
   The **MAIL MERGE CONFIGURATION** page is displayed.

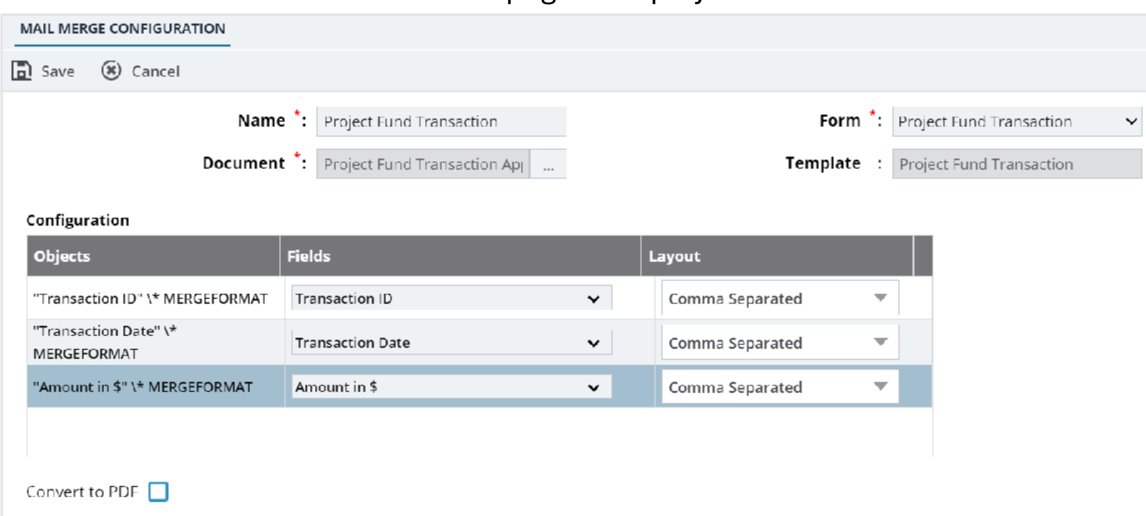


Figure 69: Mail Merge Configuration Details Page

4. In the **Name** box, enter the name for the configuration.

5. Corresponding to the **Document** box, perform the following steps to associate a mail merge template:
   a. Click .
      The **Select a template** dialog box is displayed.

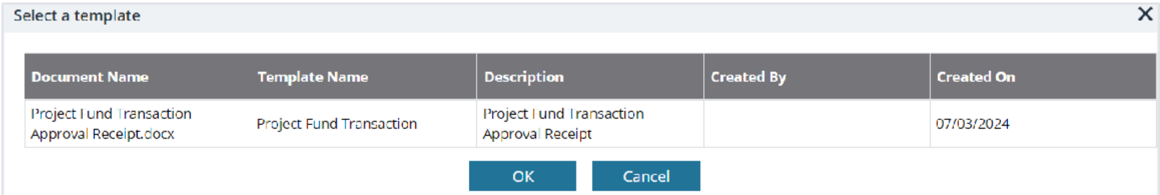


Figure 70: Select a Template

      Available options are mail merge documents defined in mail merge templates in the **Mail Merge Templates** catalog of the library.
   b. Click the required template, and then click **OK**.
      The template name associated with the selected mail merge document is displayed in the **Template** box, and the objects in selected mail merge document are listed in the **Configuration** section.
6. From the **Form** drop-down list, select the form for which you want to configure mail merge.
7. To configure the data source for mail merge, in the **Source** field, perform either of the following steps:
   - Configure mail merge for a single form:
     a. Click **Form** (By default, the option **Form** is selected).
        In the **Configuration** section, all the fields associated with the form selected in the **Form** field are listed.
   - Configure mail merge for a multiple form:
     a. Click **View**.
        The **View** field is displayed.
     b. From the **View** drop-down list, select the view for which you want to configure mail merge.
        Views are predefined in the system that fetches information from multiple forms.
        Available options are views pertaining to the selected form.
        In the **Configuration** section, all the fields of the forms defined in the selected **View** and the fields associated with the form selected in the **Form** field are listed.
8. In the **Configuration** section, all the objects associated with the selected mail merge template are listed. To define the fields and layouts for the objects, perform the following steps:
   a. Corresponding to the row of the required object, click in the **Fields** column, and from the drop-down list, select the required field to map the objects with the fields of the form.
   b. Corresponding to the row of the required object, click in the **Layout** column, and from the drop-down list, select the required option to separate the objects in the mail merge document.
9. To send the mail merge document as a PDF, select the **Convert to PDF** check box. If the check box is cleared, then the mail merge document is sent in the Word format.
10. Click **Save**.

3.2.6.5. Mail Body Templates

Prerequisites

The role of the logged-in user must be one of the following:

- Administrator
- Construction Component Lead
  For more information on role-specific permissions, refer to Table 1 – Library Catalog Permission Matrix

Overview

You can configure email messages that are sent from forms, and save the templates in the **Mail Body Templates catalog** of the library.

You can configure the content of the subject and the body of the email. Also, you can add fields of the associated form as placeholders to the subject and body of the email. The content of these placeholders is replaced with the actual values from the form when the mail merge, workflow, or Ball in Court notification from the form is sent to configured users.

Steps

1. In the module menu, click **Library**.
   The **LIBRARY MANAGEMENT** page is displayed.

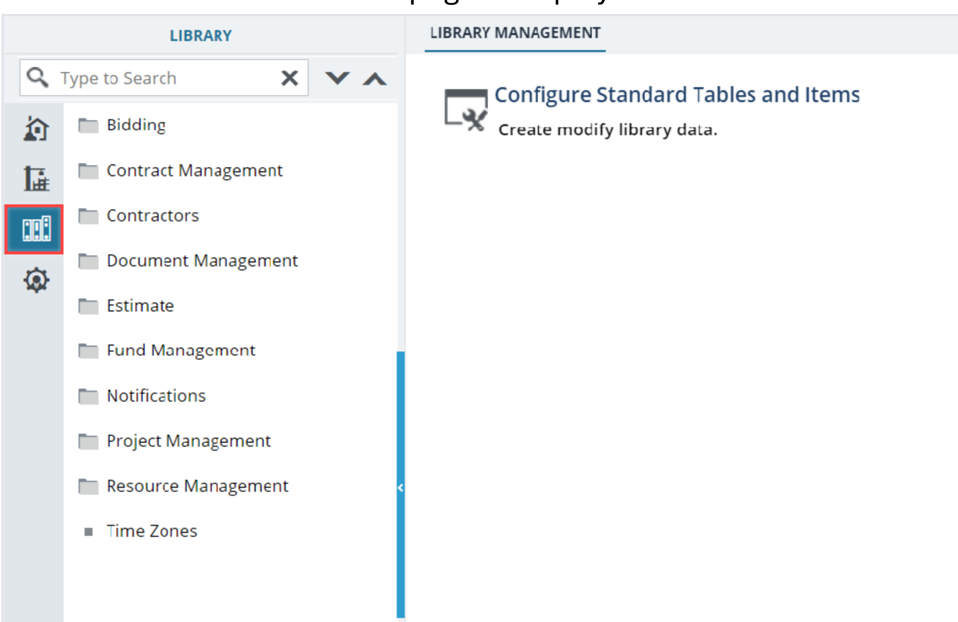


Figure 71: Library Management

2. In the navigation pane, expand **Notifications**, and then click **Mail Body Templates**.
   The **MAIL BODY TEMPLATES** list page is displayed.

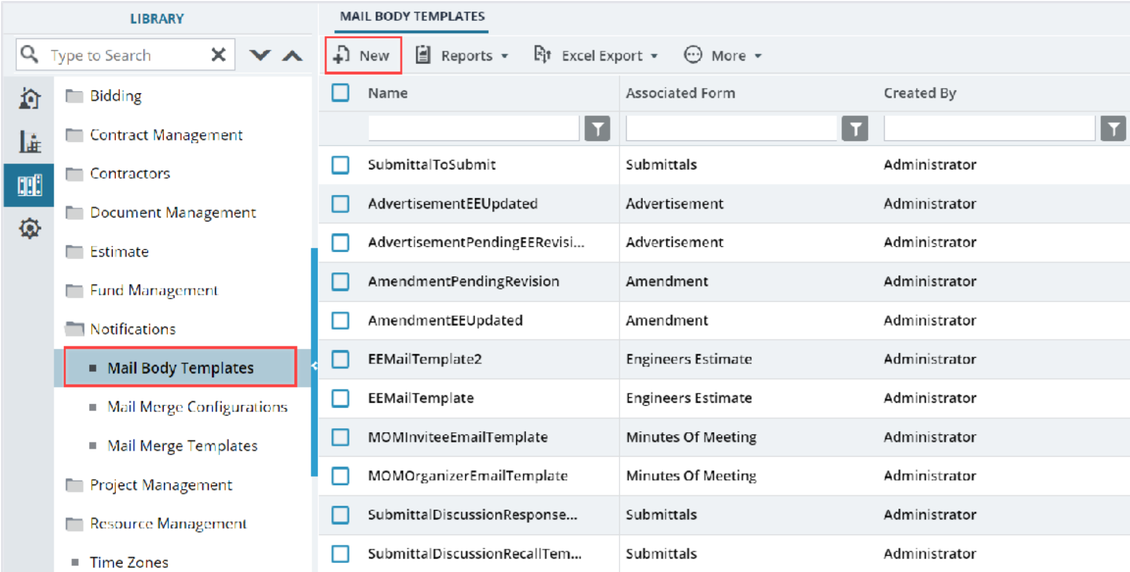


Figure 72: List Page of Mail Body Templates Form

3. Click **New**.
   The **MAIL BODY TEMPLATES** details page is displayed.

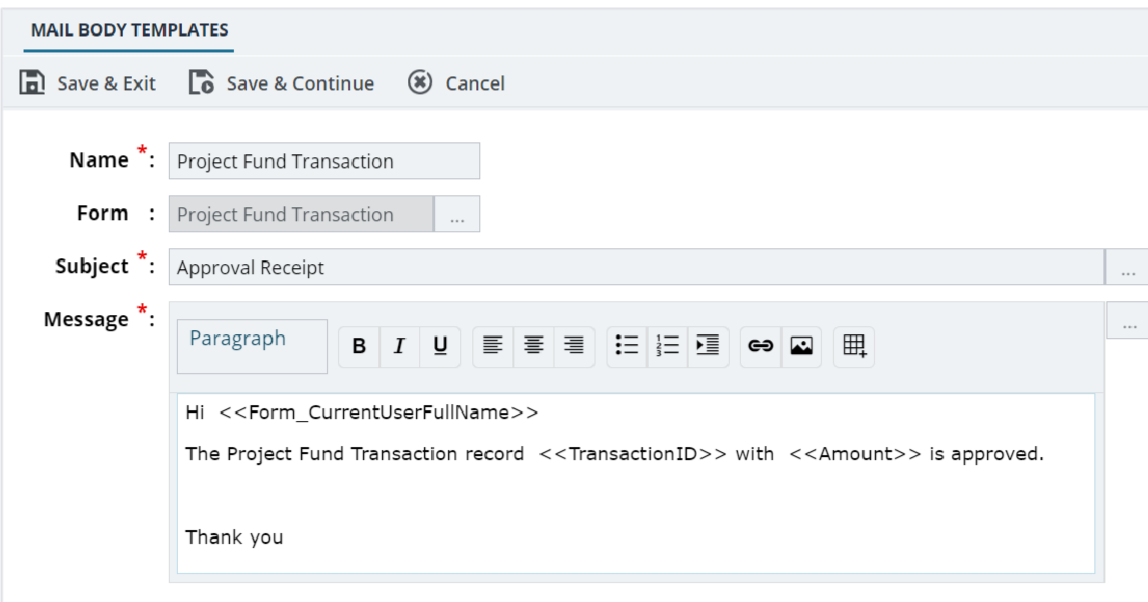


Figure 73: Mail Body Templates Details Page

4. In the **Name** field, enter the name of the email body template.

5. In the **Forms** field, perform the following steps to select the form for which the email body template is being created.
   a. Click .

   The **Forms Picker** dialog box is displayed listing all the forms in the application.

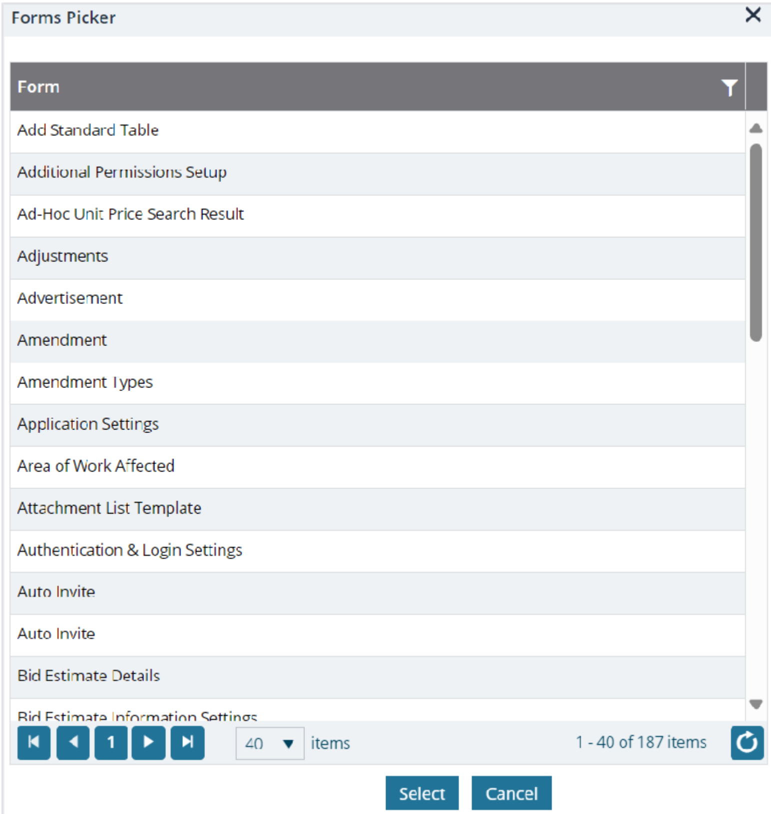


Figure 74: Forms Picker Dialog Box

   b. Select the required form.
   c. Click **Select**.

6. In the **Subject** box, enter the subject of the email body template.
   You can also add fields from the selected form to the subject line as placeholders. The field placeholders are later replaced with actual values from the form when notifications are sent from the form. To add field placeholders, perform the following steps:
   a. Click .
      The **Fields Picker** dialog box is displayed.

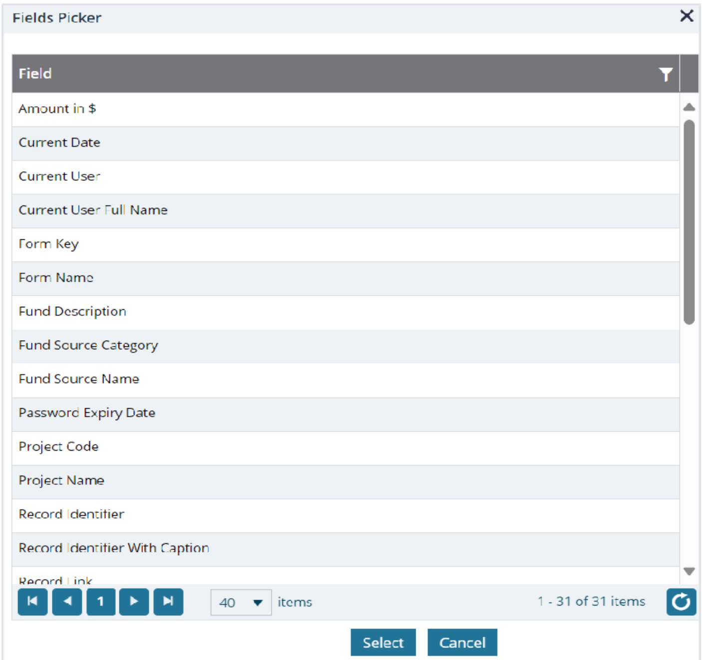


Figure 75: Field Picker Dialog Box

      Available options are fields of the selected form.
   b. Click the required field, and then click **Select**.
      The selected field is added to the Subject line.
      When a notification email is sent from the selected form, the field placeholders are replaced with the actual field values of the selected form.

7. In the **Message** box, enter the content of the email body for the template.
   You can also format the message using the formatting tool bar available in the box.
   You can also add fields from the selected form to the message body as placeholders. The field placeholders are later replaced with actual values from the form when notifications are sent from the form. To add field placeholders, perform the following steps:
   a. Click .
      The **Fields Picker** dialog box is displayed.

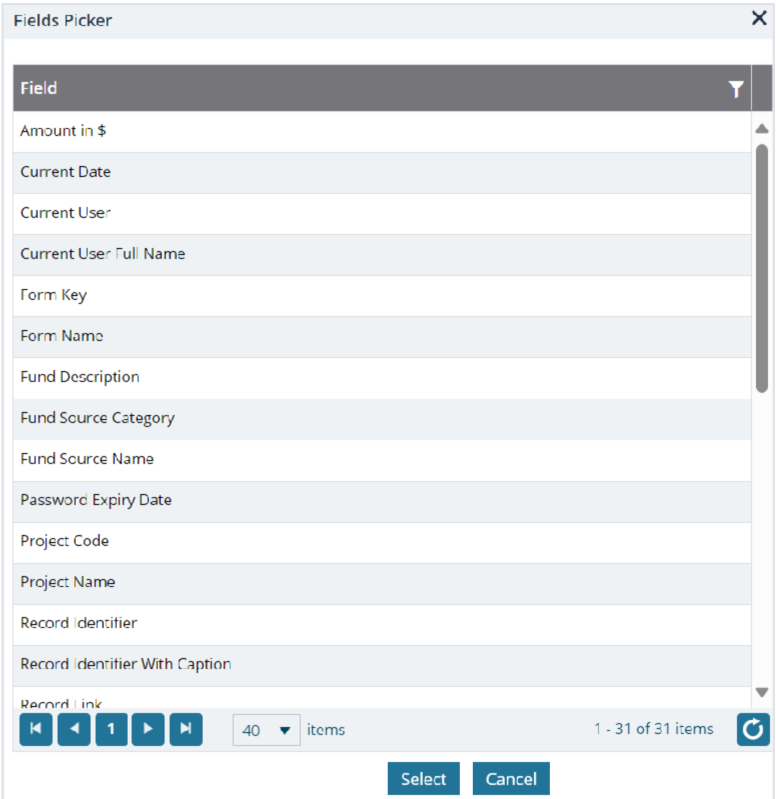


Figure 76: Field Picker Dialog Box

      Available options are fields of the selected form.
   b. Click the required field, and then click **Select**.
      The selected field is added to the message of the email.
      When a notification email is sent from the selected form, the field placeholders are replaced with the actual field values of the selected form.
8. Click **Save & Exit** to save the record and return to the list page. Optionally, click **Save & Continue** to save the record and continue on the same page. Click **Cancel** to discard the added information and exit the page.

3.2.7. Project Management

3.2.7.1. Additional Permissions Setup

Prerequisites

The role of the logged-in user must be one of the following:

- Administrator
- Construction Component Lead
  For more information on role-specific permissions, refer to Table 1 – Library Catalog Permission Matrix

Overview

The **Additional Permissions Setup** catalog enables you to provide permissions to only certain roles for editing and viewing specific information about the project.

By providing additional permissions to certain roles for viewing details such as probables, funding summary, private bids, and editing project-related details, confidentiality pertaining to specific information about the project is maintained.

Steps

1. In the module menu, click **Library**.
   The **LIBRARY MANAGEMENT** page is displayed.

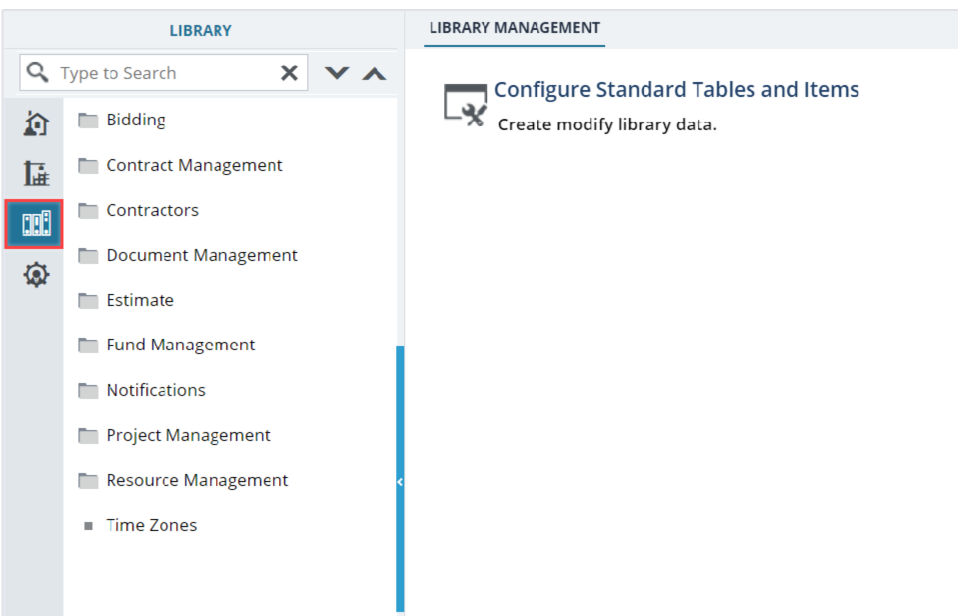


Figure 77: Library Management

2. In the navigation pane, expand **Project Management**, and then click **Additional Permissions Setup**. The **ADDITIONAL PERMISSIONS SETUP** page is displayed.

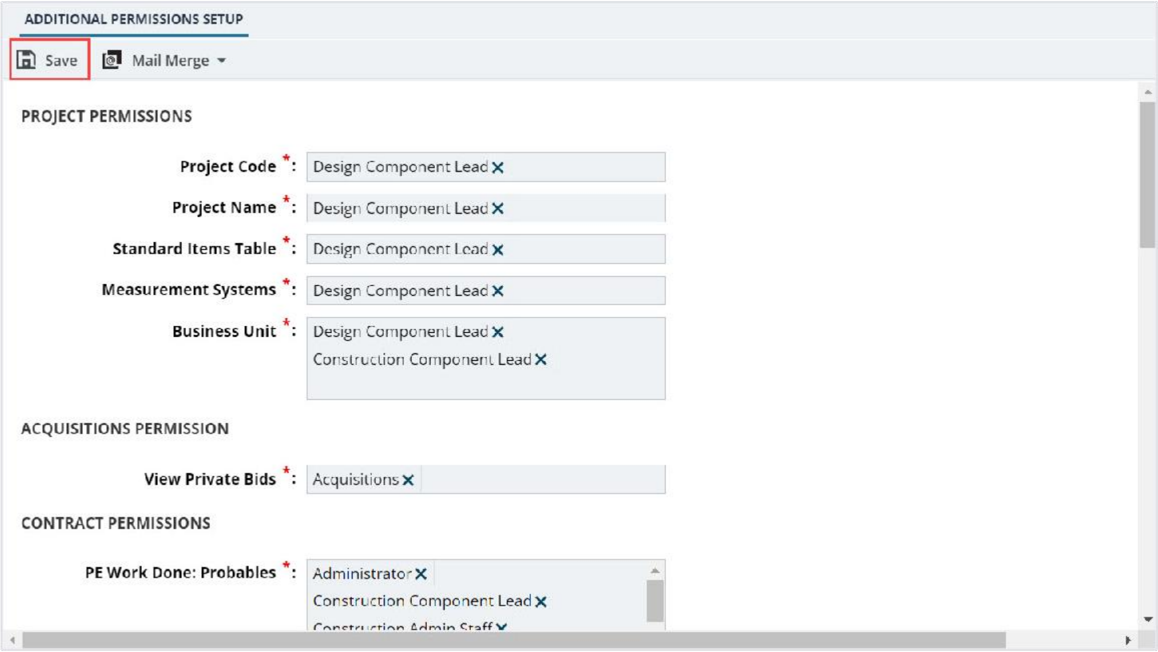


Figure 78: Additional Permissions Setup Page

3. Provide the appropriate information in the fields, as described in the following table:

Section	Field Name	Description
PROJECT PERMISSIONS	Project Code Project Name Standard Items Table Measurement Systems Business Unit	To provide permissions to edit project-specific details, select the appropriate role. Available options are roles with **Edit** permissions defined for the respective form in the **Permissions** matrix of the **Administration** module.
ACQUISITIONS PERMISSION	View Private Bids	To provide permissions to view private bids, select the appropriate role. Available options are roles with view permissions defined for the respective form in the Permissions matrix of the Administration module.
CONTRACT PERMISSIONS	PE Work Done: Probables Pay Estimates Adjustment: Probables Contract Items: Is Complete Item Posting : Measured By Item Posting: Contractor Representative	To provide permissions to view contract specific details, select the appropriate role. Available options are roles with view permissions defined for the respective form in the **Permissions** matrix of the **Administration** module.

Section	Field Name	Description
	Item Posting : FHWA Verified By	
	Pay Estimates: Funding Summary	
	Contract Items: Probables	
REPORT PERMISSIONS	Pay Note Report: Probables	To provide permissions to view report specific details, select the appropriate role. Available options are roles with view permissions defined for the respective form in the **Permissions** matrix of the **Administration** module.
	Pay Note Summary Report: Probables	
	Grand Pay Item Summary Dashboard: Probables	
	Progress Payment Report: Probables	
	Pay Note Summary Report: Probables	

4. Click **Save**.
   Permissions are successfully saved.

3.2.7.2. Calendar

Prerequisites

The role of the logged-in user must be one of the following:

- Administrator
- Construction Component Lead
  For more information on role-specific permissions, refer to Table 1 – Library Catalog Permission Matrix

Overview

The **Calendar** library catalog enables you to define the working days of the organization. You can also define non-working days and holidays for the organization in a calendar.

During project or contract creation when a calendar is selected, the number of working days of the project or contract is calculated based on the calendar selected.

Steps

1. In the module menu, click **Library**.
   The **LIBRARY MANAGEMENT** page is displayed.

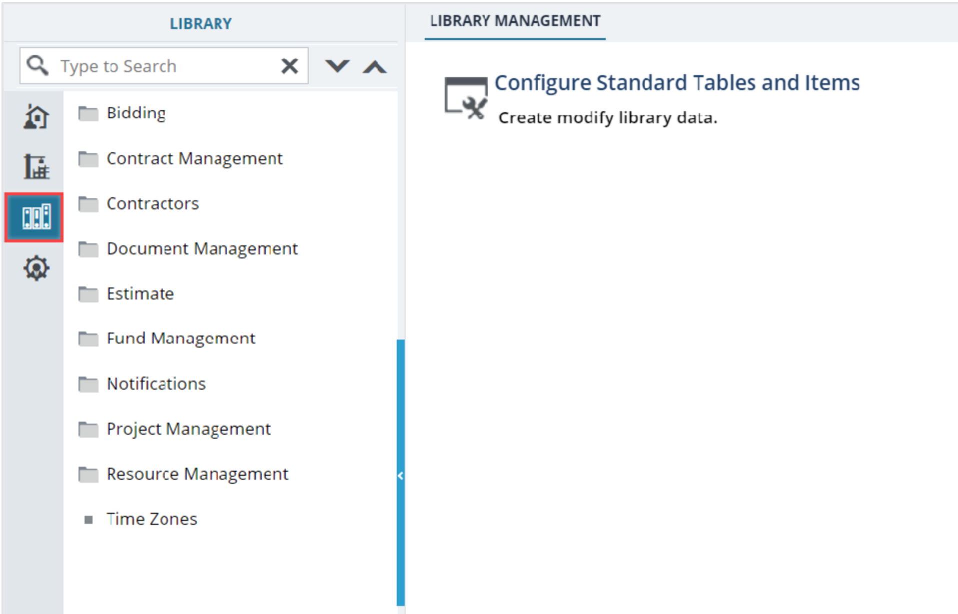


Figure 79: Library Management

2. In the navigation pane, expand **Project Management**, and then click **Calendar**.
   The **CALENDAR** list page is displayed.

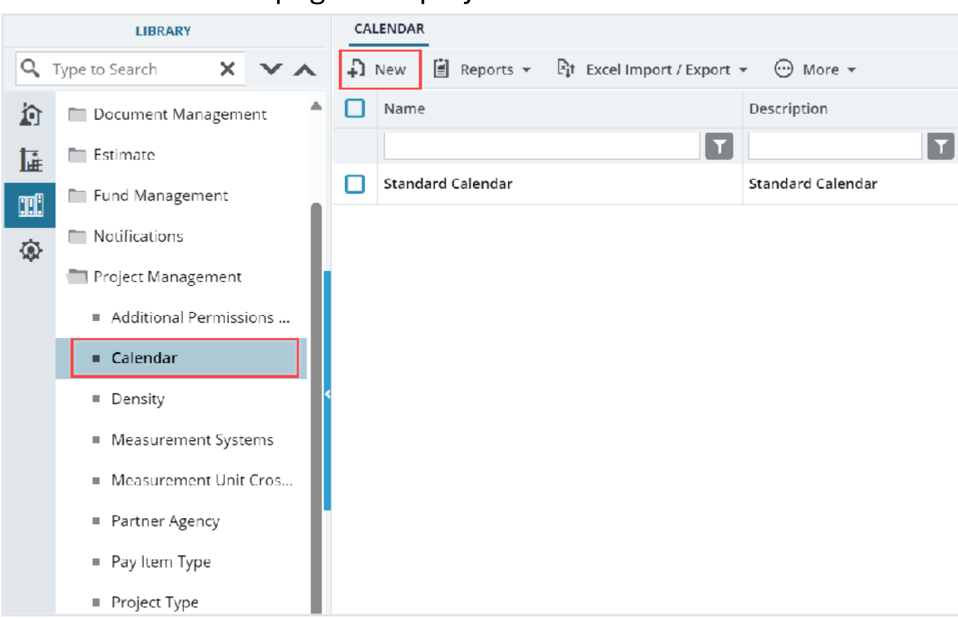


Figure 80: List Page of Calendar Form

3. Click **New**.

   The **CALENDAR** page is displayed.

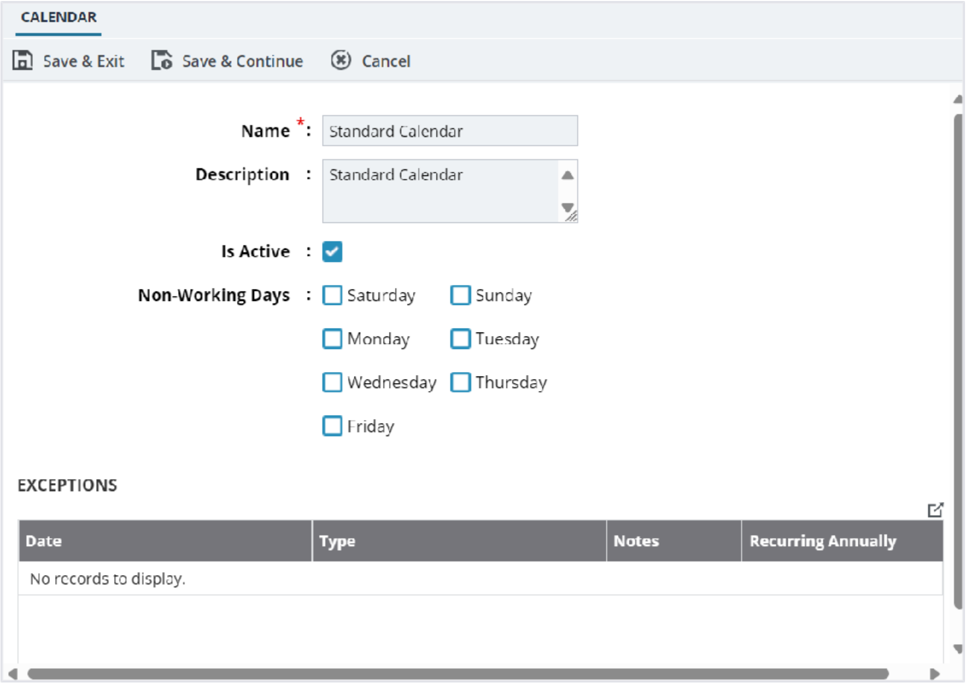


Figure 81: Calendar Details Page

4. In the **Name** box, enter a name for the calendar.
5. In the **Description** box, enter a description for the calendar.
6. To make the calendar unavailable for selection in projects or contracts, clear the **Is Active** check box.
7. From the **Non-Working Days** check box options, select the non-working days in a week.
8. To define exceptions to the calendar, that is, to change a specific non-working day to a working day or contrariwise, in the **EXCEPTIONS** section, perform the following steps:
   a. Click **Add**.

      The New Exceptions dialog box is displayed.

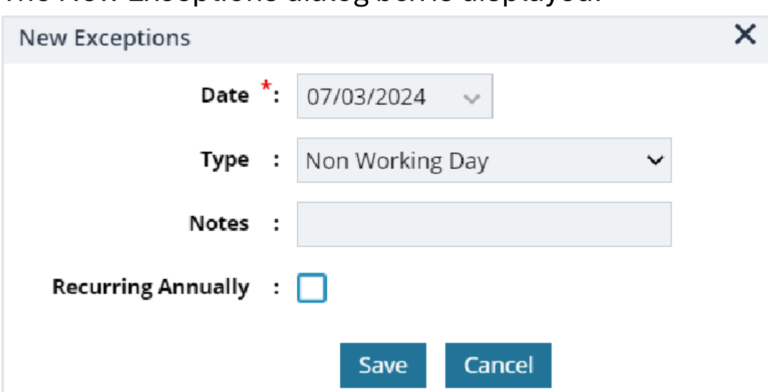


Figure 82: New Exceptions Dialog Box

b. Provide the required information in the fields, as described in the following table.

Field Name	Description
Date	Select the date to define an exception.
Type	Select the required option. • If the selected option is **Working Day**, the date is considered when calculating the number of working days in projects. • If the selected option is **Non Working Day**, the date is not considered when calculating the number of working days in projects. For example, in the **Non-Working Days** field, if **Saturday** is selected as a non-working day, and if a particular Saturday needs to be a working day, the exception can be defined here, and the Saturday is considered when calculating the number of working days in the project.
Notes	Enter any appropriate notes for the exception.
Recurring Annually	Select the check box to consider the exception across years when calculating the number of working days in a project.

c. Click **Save**.

9. Click **Save & Exit** to save the record and return to the list page. Optionally, click **Save & Continue** to save the record and continue on the same page. Click **Cancel** to discard the added information and exit the page.

3.2.7.3. Measurement Systems

Prerequisites

The role of the logged-in user must be one of the following:

- Administrator
- Construction Component Lead

  For more information on role-specific permissions, refer to Table 1 – Library Catalog Permission Matrix

Overview

Every item in a project or in a contract is associated with a measurement unit to quantify the item. The **Measurement Systems** catalog enables you to define measurement systems and the related units of measure.

Steps

1. In the module menu, click **Library**.
   The **LIBRARY MANAGEMENT** page is displayed.

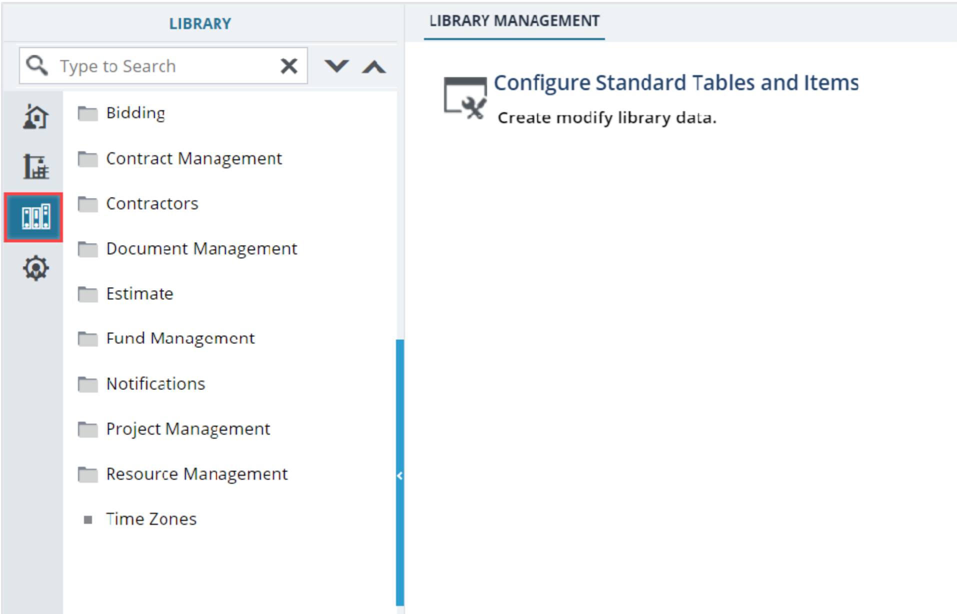


Figure 83: Library Management

2. In the navigation pane, expand **Project Management**, and then click **Measurement Systems**.
   The **MEASUREMENT SYSTEMS** list page is displayed.

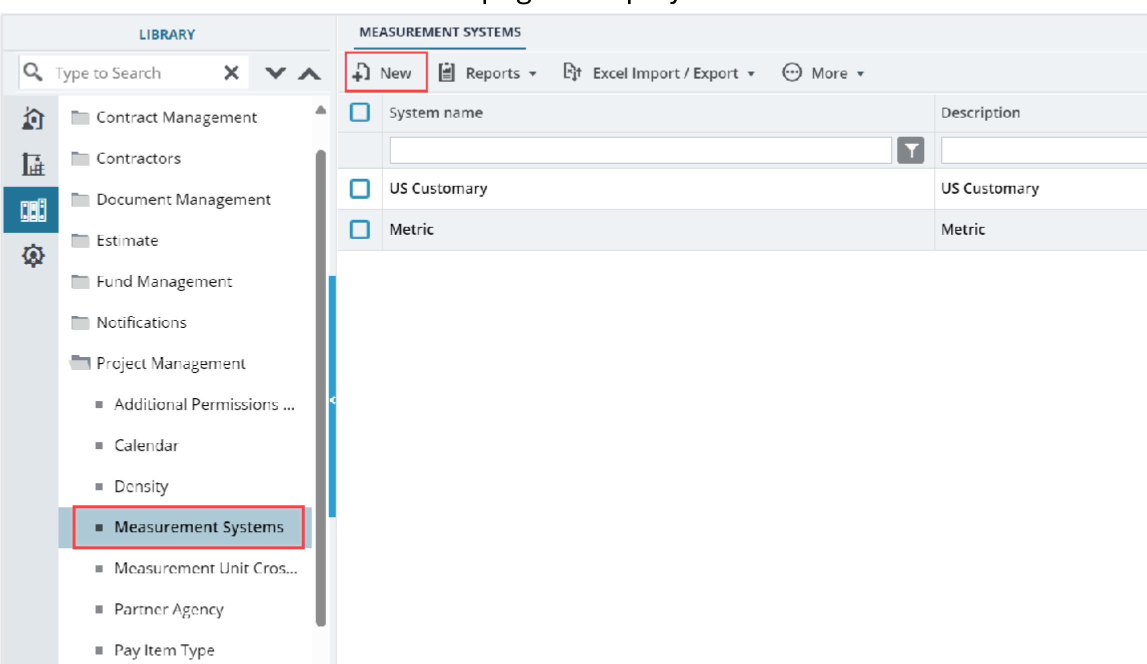


Figure 84: List Page of Measurement Systems

3. Click **New**.

   The **MEASUREMENT SYSTEMS** page is displayed.

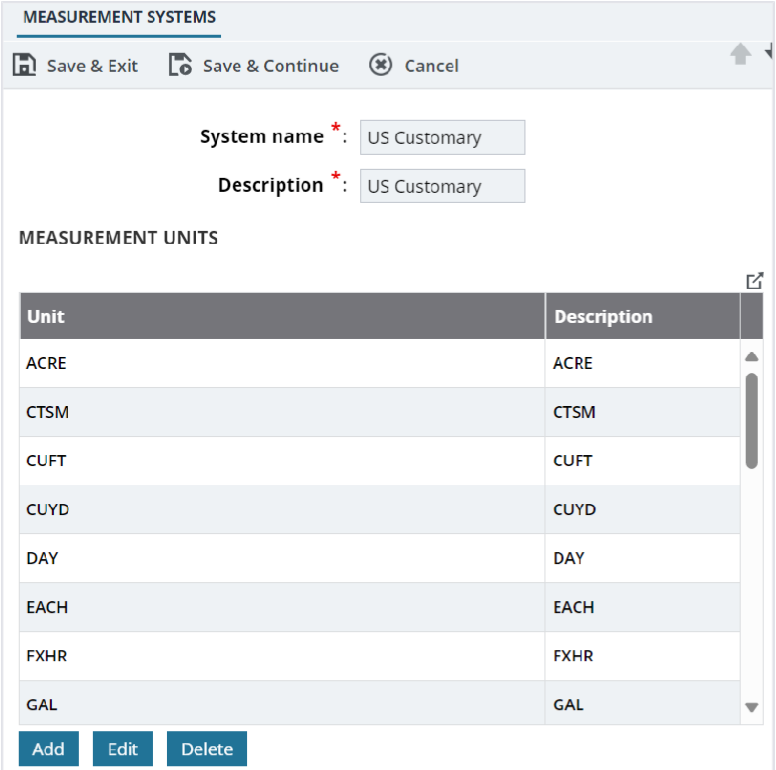


Figure 85: Measurement Systems Details Page

4. In the **System Name** box, enter the name for the measurement system.
5. In the **Description** box, enter the description for the measurement system.
6. To associate a unit with the measurement system, in the **MEASUREMENT UNITS** section, perform the following steps:
   a. Click **Add**.

      The **New Measurement Units** dialog box is displayed.

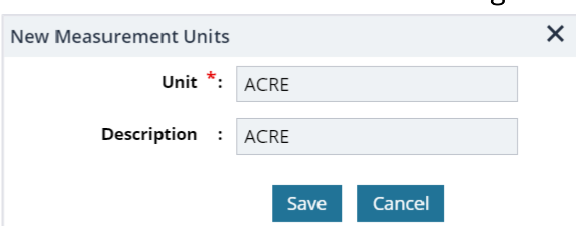


Figure 86: New Measurement Units Dialog Box

   b. In the **Unit** box, enter the name of the unit.
   c. In the **Description** box, enter a description for the measurement unit.
   d. Click **Save**.

      The unit is added to the **MEASUREMENT UNITS** section.

7. Click **Save & Exit** to save the record and return to the list page. Optionally, click **Save & Continue** to save the record and continue on the same page. Click **Cancel** to discard the added information and exit the page.

3.2.7.4. Measurement Unit Crosswalk

Prerequisites

The role of the logged-in user must be one of the following:

- Administrator
- Pay Item Team
  For more information on role-specific permissions, refer to Table 2 – Library Catalog Permission Matrix

Overview

The **Measurement Unit Crosswalk** catalog enables you to provide the conversion factor to convert the historic unit prices to the currently used unit based on the selected measurement system. This aids in using the **Unit Price Search** utility.

Steps

1. In the module menu, click **Library**.
   The **LIBRARY MANAGEMENT** page is displayed.

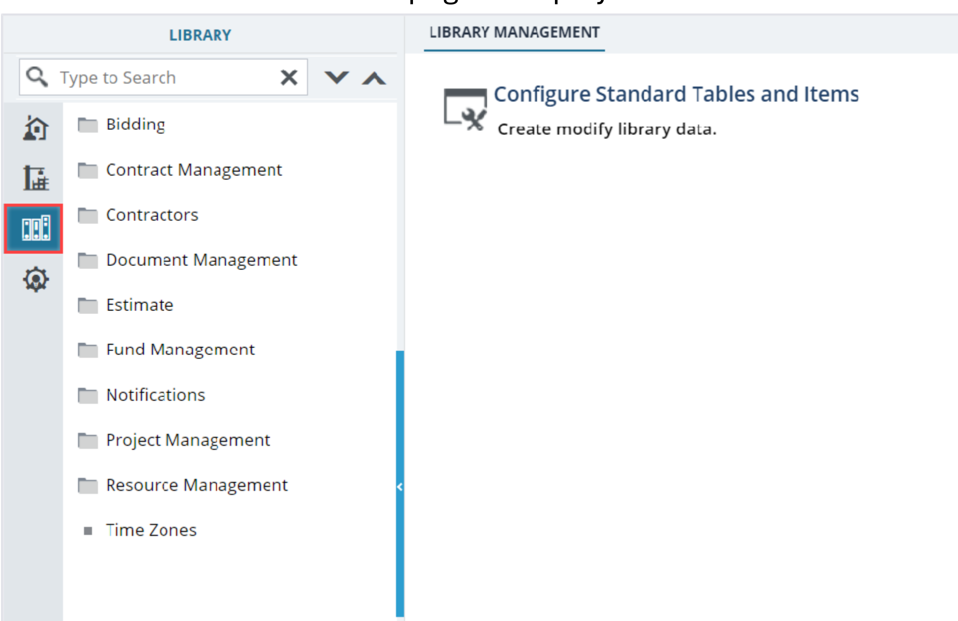


Figure 89: Library Management

2. In the navigation pane, expand **Project Management**, and then click **Measurement Unit Crosswalk**.
   The **MEASUREMENT UNIT CROSSWALK** list page is displayed.

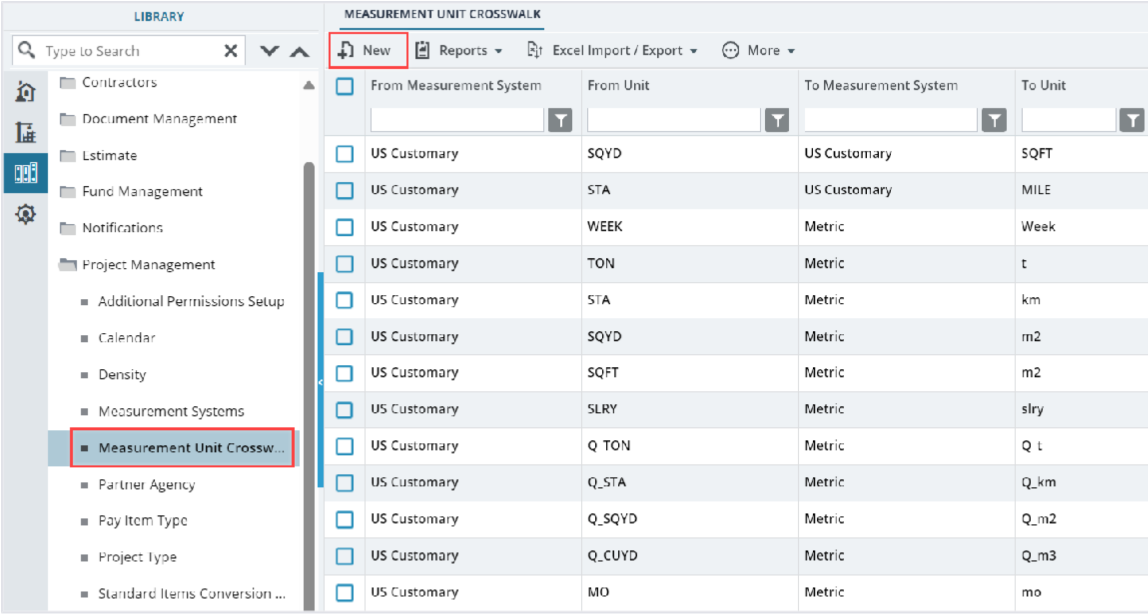


Figure 87: List Page of Measurement Unit Crosswalk Form

3. Click **New**.
   The **MEASUREMENT UNIT CROSSWALK** page is displayed.

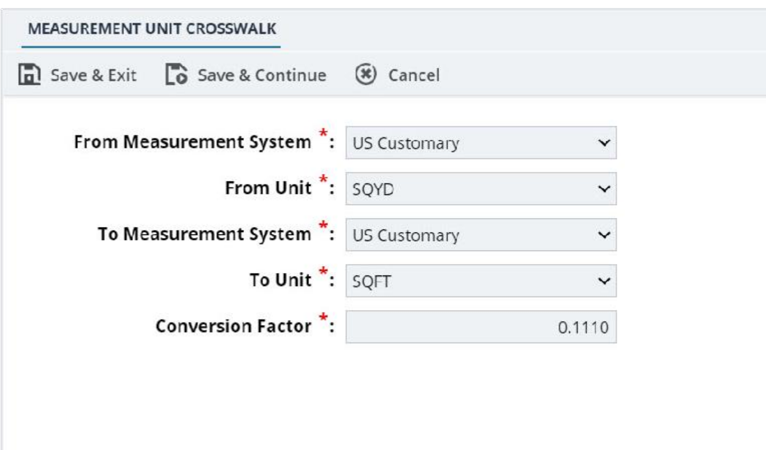


Figure 88: Measurement Unit Crosswalk Details Page

4. Provide the appropriate information in the fields, as described in the following table:

Field Name	Description
From Measurement System	From the drop-down list, select the measurement system. Available options are **Metric** and **US Customary**. The drop-down list displays measurement systems defined in the **Measurement Systems** catalog of the library. For more information on measurement systems, refer to Section 3.2.7.3 Measurement Systems.
From Unit	From the drop-down list, select the measurement unit. Available options are **Day, Each, Hour, Kg**, etc.

Field Name	Description
	The drop-down list displays measurement units defined for the respective measurement system in the **Measurement Systems** catalog of the library. For more information on measurement systems, refer to 3.2.7.3. Measurement Systems.
To Measurement System	From the drop-down list, select the measurement system. Available options are **Metric** or **US Customary**. The measurement system selected in the **From Measurement System** field is not available for selection. The drop-down list displays measurement systems defined in the **Measurement Systems** catalog of the library. For more information on measurement systems, refer to Section 3.2.7.3 Measurement Systems.
To Unit	From the drop-down list, select the measurement unit. Available options are **ACRE, CTSM, CUFT, CUYD**, etc. The drop-down list displays measurement units defined for the respective measurement system in the Measurement Systems catalog of the library. For more information on measurement systems, refer to 3.2.7.4. Measurement Systems.
Conversion Factor	Enter the appropriate conversion factor.

5. Click **Save & Exit** to save the record and return to the list page. Optionally, click **Save & Continue** to save the record and continue on the same page. Click **Cancel** to discard the added information and exit the page.

3.2.7.5. Standard Items Tables

The **Standard Items Table** catalog is a collection of standard tables comprising commonly used items and their related information such as their units of measure, estimated cost, and so on. In the **Standard Items Table** catalog, you can group items into containers. This enables you to easily categorize items into specific containers for easy access and classification of work. You can create multiple such standard items tables and store them in the library for use in multiple projects across the application.

You can perform the following standard items table related activities:

- 3.2.7.5.1. Create a Standard Items Table
- 3.2.7.5.2. Access items of a Standard Items Table
- 3.2.7.5.3. Add Item to a Standard Items Table
- 3.2.7.5.4. Copy items from Standard Items Table
- 3.2.7.5.5. Import item details in bulk

3.2.7.5.1. Creating a Standard Items Table

Prerequisites

The role of the logged-in user must be one of the following:

- Administrator
- Pay Item Team
  For more information on role-specific permissions, refer to Table 2 – Library Catalog Permission Matrix

Overview

A standard table is a collection of items and containers. For categorization of items, items can be saved into containers.

Steps

1. In the module menu, click **Library**.
   The **LIBRARY MANAGEMENT** page is displayed.

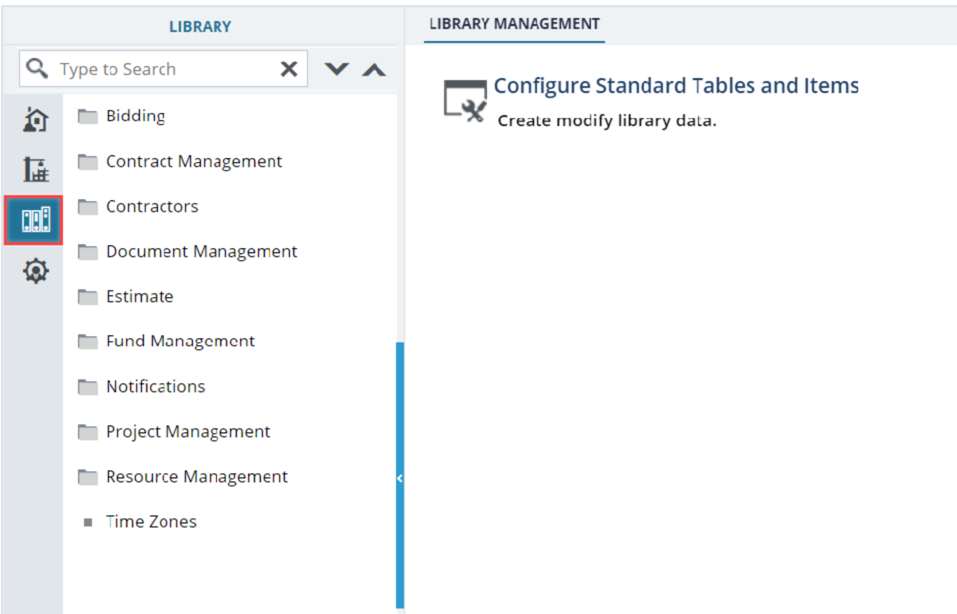


Figure 89: Library Management

2. In the navigation pane, expand **Project Management**, and then click **Standard Items Table**.

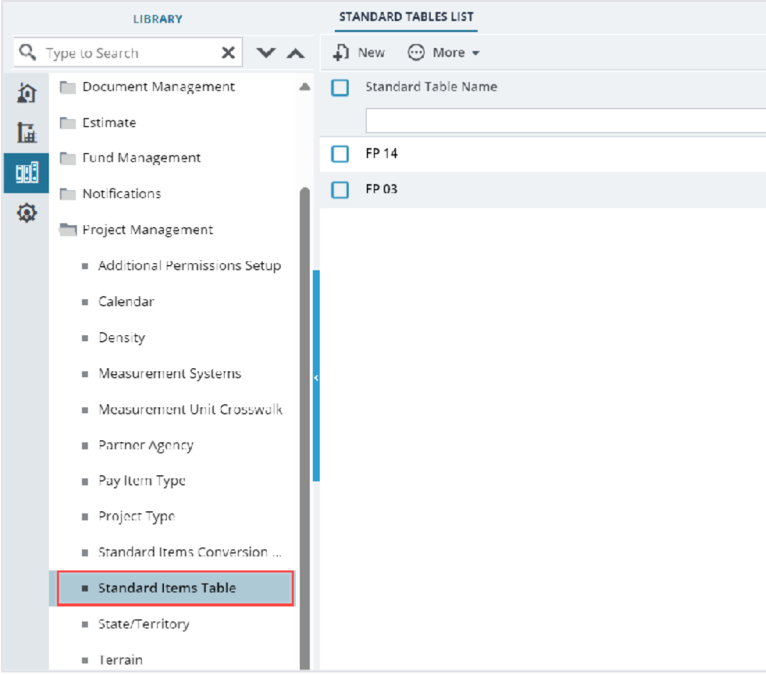


Figure 90: List Page of Standard Items Table Form

3. Click **New**.
   The **NEW STANDARD TABLE** page is displayed.

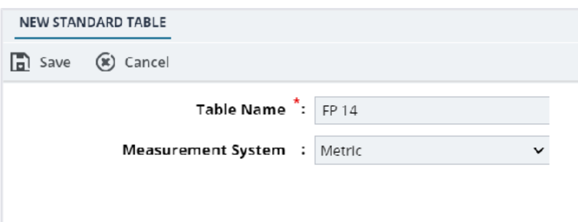


Figure 91: New Standard Table Page

4. In the **Table Name** box, type a name for the table.
5. From the **Measurement System** drop-down list, select a measurement system. Available options are **Metric** and **US Customary**.
   The drop-down list displays measurement systems defined in the **Measurement Systems** catalog of the library. For information on measurement systems, refer to Section 3.2.7.3. Measurement Systems.
6. Click **Save**.
   You can now add items to the table. For information on adding standard items, refer to Section 3.2.7.5.3. Adding Items to a Standard Items Table.

3.2.7.5.2. Accessing Items of a Standard Items Table

Prerequisites

The role of the logged-in user must be one of the following:

- Administrator
- Pay Item Team
- A/E Support Tools
- Project Viewer
- Design Component Lead
- Designer
- Lead Designer
- Design QA/QC
- Highway Design Manager
- Project Manager
- A/E Designer
- A/E Lead Designer
- A/E Manager
- Acquisitions
- Construction Component Lead
- Construction Admin Staff
- Construction Engineer
- Highway Construction Manager/QA QC
- Construction Operations Engineer
- Inspector
- Assistant Project Engineer
- Project Engineer
- Regional Engineer
- Construction Inspection A&E Manager
- Inspector A&E
- Assistant Project Engineer A&E
- Project Engineer A&E
  For more information on role-specific permissions, refer to Table 2 – Library Catalog Permission Matrix

Overview

You can access items and containers of a standard table to edit, view, or delete containers and items.

Steps

1. In the module menu, click **Library**.
   The **LIBRARY MANAGEMENT** page is displayed.

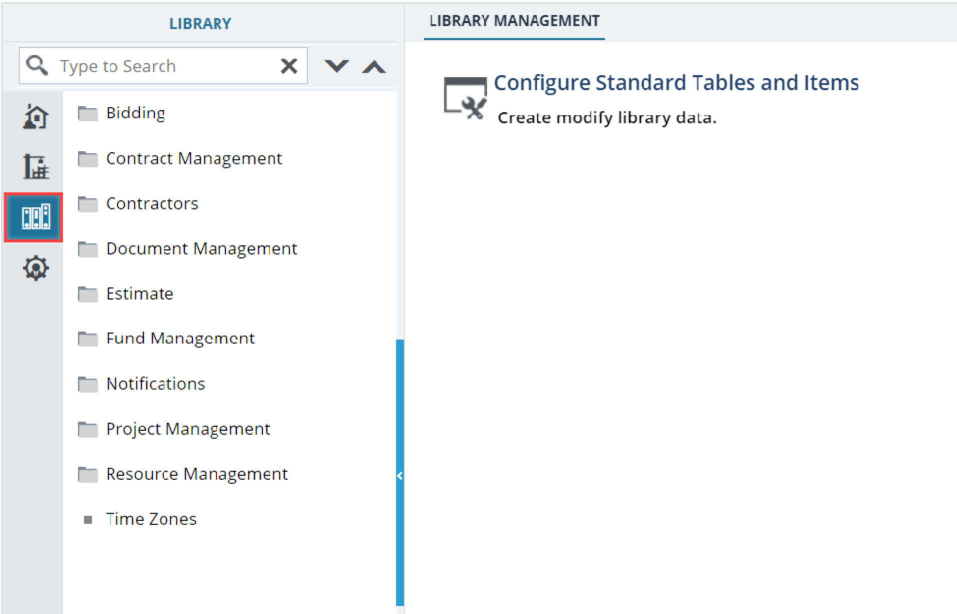


Figure 92: Library Management

2. In the navigation pane, expand **Project Management**, and then click **Standard Items Table**.

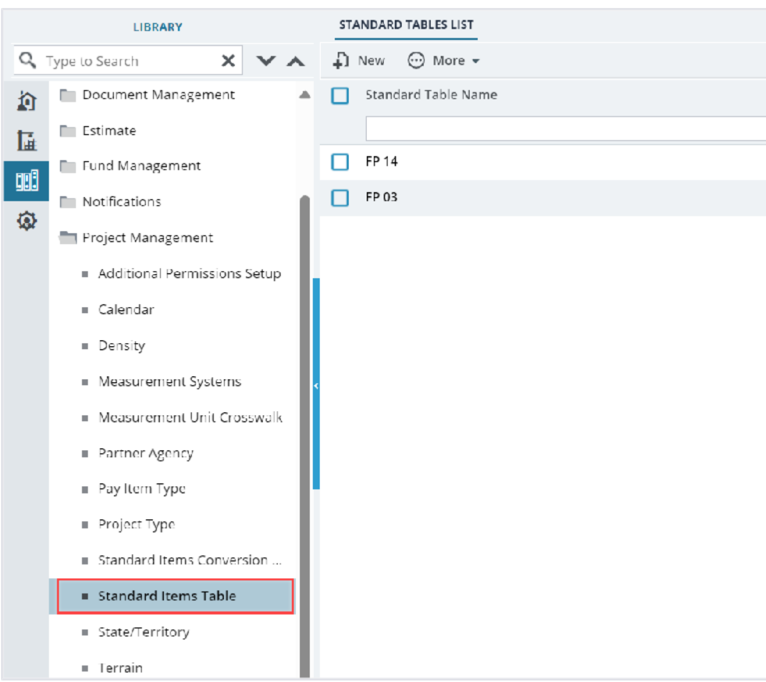


Figure 93: List Page of Standard Items Table Form

3. Select the appropriate standard items table, click **Standard Items**.

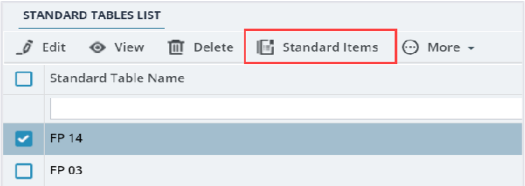
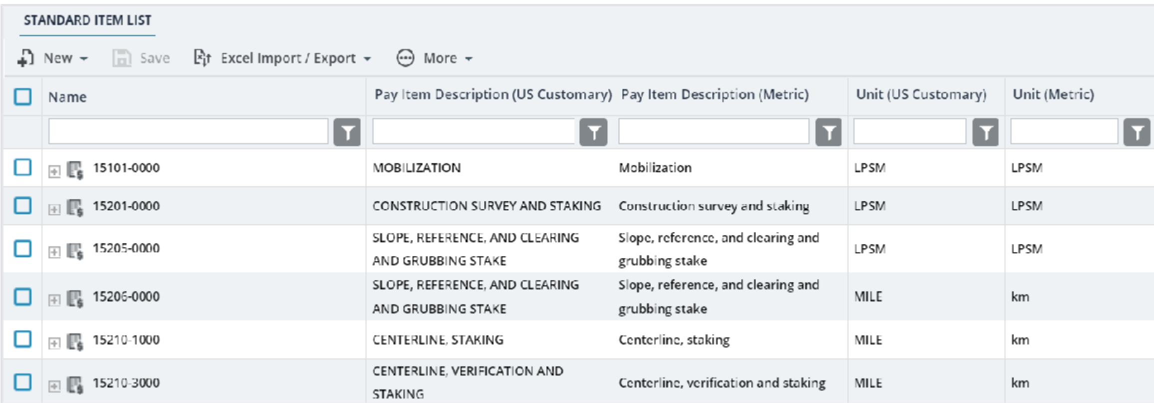


Figure 94: Selecting Standard Items

The **STANDARD ITEM LIST** page is displayed.



STANDARD ITEM LIST

New | Save | Excel Import / Export | More

Name	Pay Item Description (US Customary)	Pay Item Description (Metric)	Unit (US Customary)	Unit (Metric)
15101-0000	MOBILIZATION	Mobilization	LPSM	LPSM
15201-0000	CONSTRUCTION SURVEY AND STAKING	Construction survey and staking	LPSM	LPSM
15205-0000	SLOPE, REFERENCE, AND CLEARING AND GRUBBING STAKE	Slope, reference, and clearing and grubbing stake	LPSM	LPSM
15206-0000	SLOPE, REFERENCE, AND CLEARING AND GRUBBING STAKE	Slope, reference, and clearing and grubbing stake	MILE	km
15210-1000	CENTERLINE, STAKING	Centerline, staking	MILE	km
15210-3000	CENTERLINE, VERIFICATION AND STAKING	Centerline, verification and staking	MILE	km

Figure 95: Standard Item List

3.2.7.5.3. Adding Items to a Standard Items Table

Prerequisites

The role of the logged-in user must be one of the following:

- Administrator
- Pay Item Team

  For more information on role-specific permissions, refer to Table 2 – Library Catalog Permission Matrix

Overview

Items must be added to the standard table to complete the process of creating standard tables so that they can be used across the application.

Steps

1. In the module menu, click **Library**.
   The **LIBRARY MANAGEMENT** page is displayed.

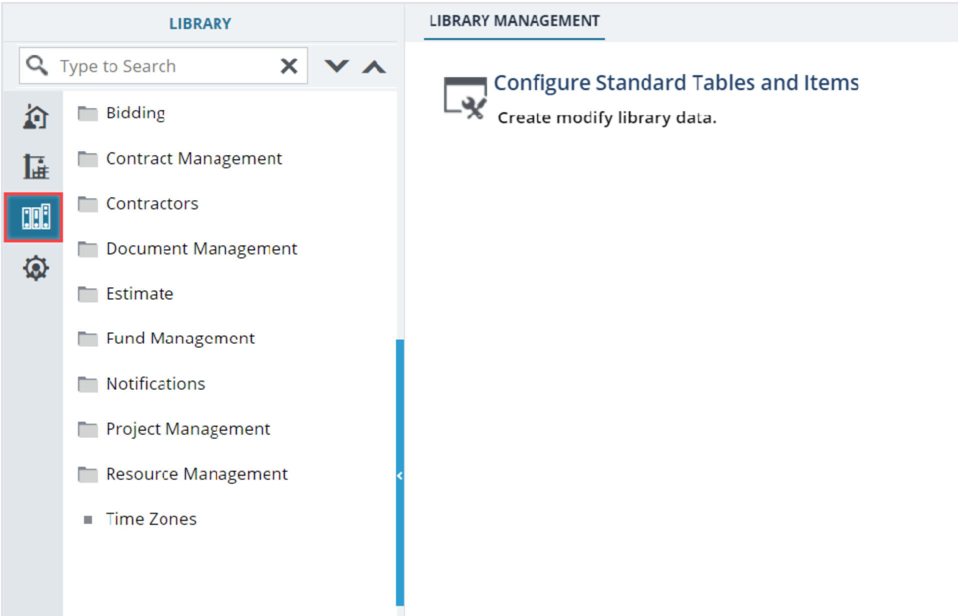


Figure 96: Library Management

2. In the navigation pane, expand **Project Management**, and then click **Standard Items Table**.

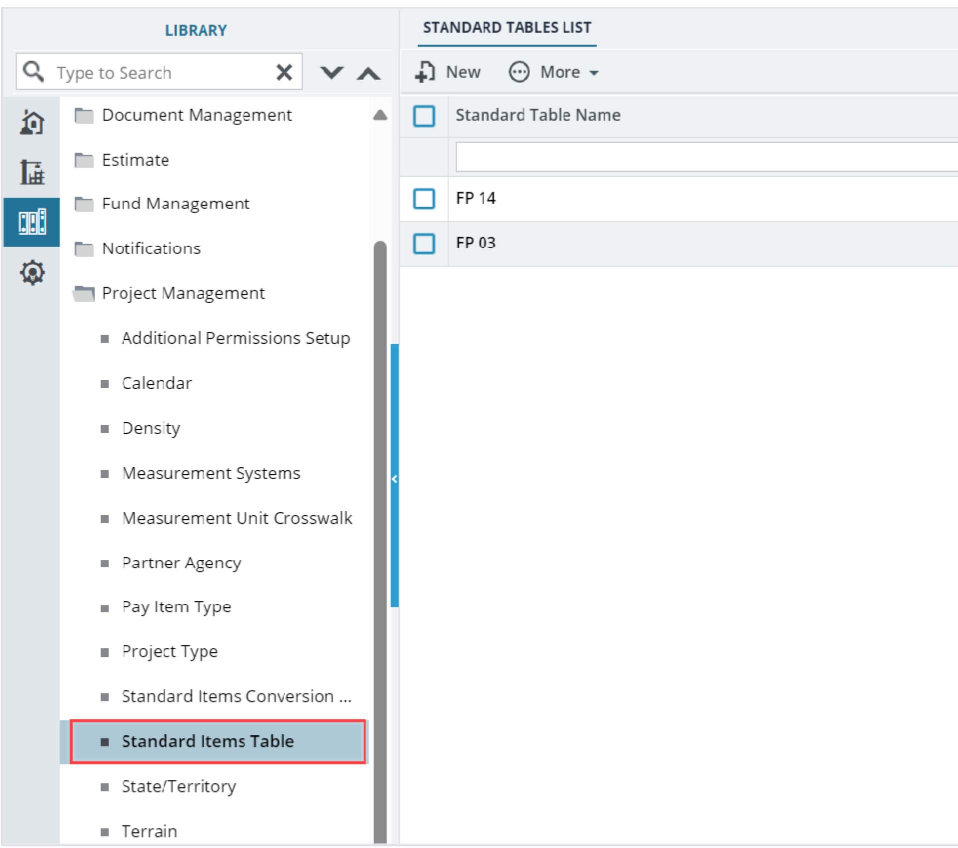


Figure 97: List Page of Standard Items Table Form

3. Select the appropriate standard items table, and then click **Standard Items**.

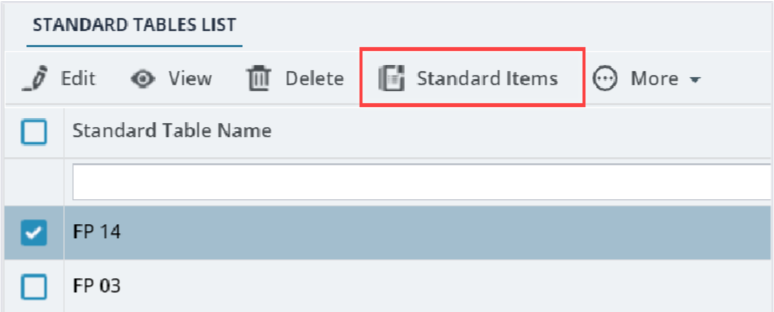


Figure 98: Selecting Standard Items

The **STANDARD ITEM LIST** page is displayed.

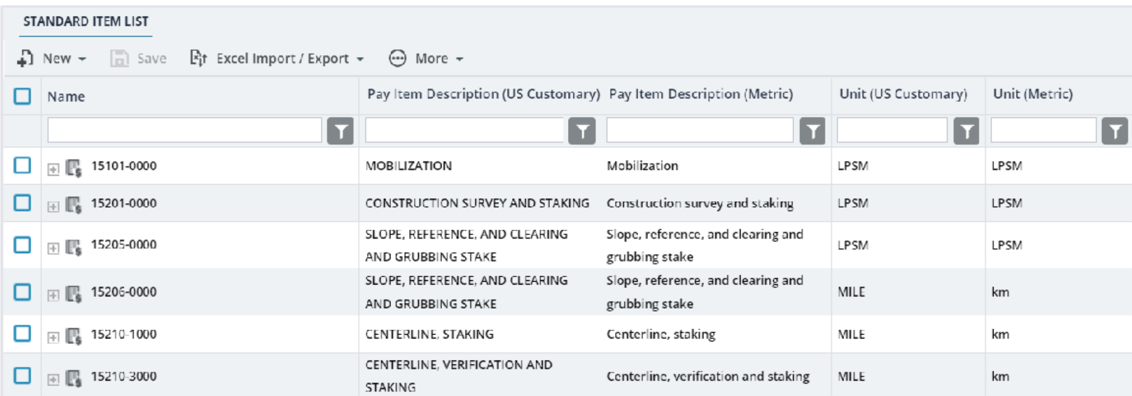


Figure 99: Standard Item List

4. To add an item, perform the following steps:
   a. Click **New**, and then click **New**.

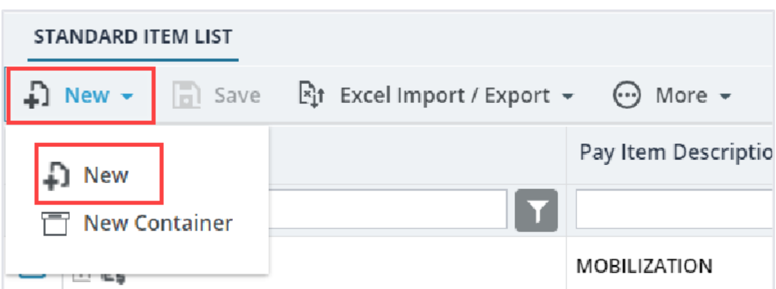


Figure 100: Add New Item

The **NEW STANDARD ITEM** page is displayed.

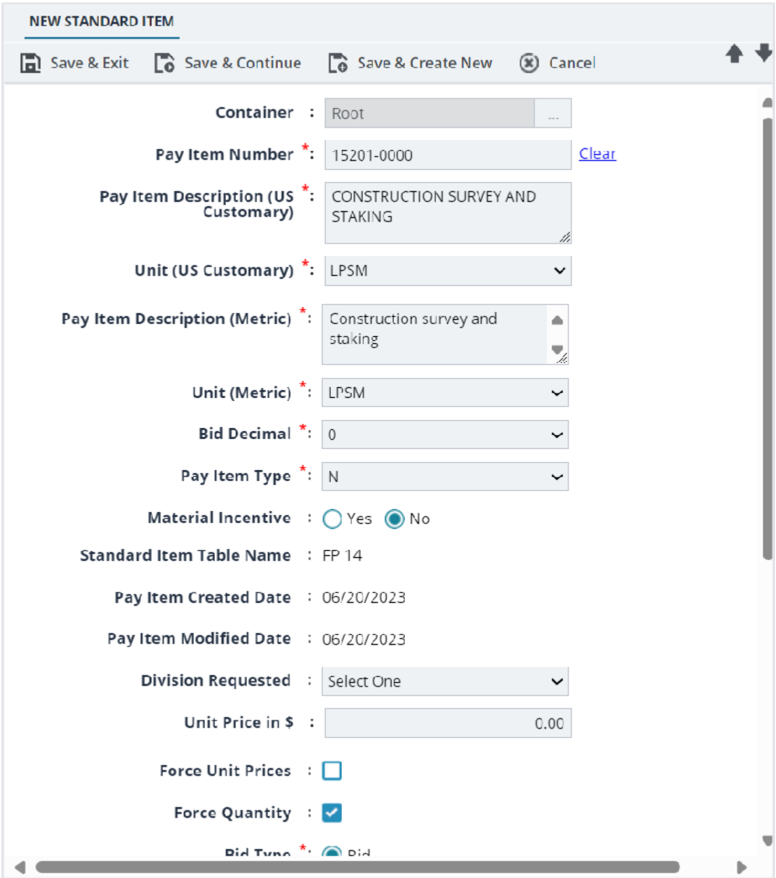


Figure 101: New Standard Item Page

The following information is displayed:

Field Name	Description
Container	The name of the container, if any.
Standard Item Table Name	The name as defined while creating the standard table.
Pay Item Created Date	The date on which the pay item is created.
Pay Item Modified Date	The date on which the pay item is modified.

b. Provide the appropriate information in the fields, as described in the following table:

Field Name	Description
Pay Item Number	Enter the item number.
Pay Item Description (US Customary)	Enter the description of the item for the measurement system – US Customary.
Unit (US Customary)	From the drop-down list, select the unit of measure for the item. Available options are **ACRE, CTSM, CUFT, CUYD, MILE**, etc. The drop-down list displays the measurement units defined for the US Customary record in the **Measurement System** catalog of the

Field Name	Description
	Library. For more information on measurement systems, refer to 3.2.7.3. Measurement Systems.
Pay Item Description (Metric)	Enter the description of the item for the measurement system – Metric.
Unit (Metric)	From the drop-down list, select the unit of measure for the item. Available options are **CTSM, Day, Each, Hour, KG**, etc. The drop-down list displays the measurement units defined for the Metric record in the **Measurement System** catalog of the Library. For more information on measurement systems, refer to 3.2.7.3. Measurement Systems.
Bid Decimal	From the drop-down list, select the appropriate bid decimal value for the item. Available options are 0, 1, 2, 3.
Pay Item Type	From the drop-down list, select the type of pay item. Available options are **N, NM, NR, NS, QM**, etc. The drop-down list displays the active pay item types defined in the Pay Item Type catalog of the library.
Material Incentive	Click the appropriate option.
Division Requested	From the drop-down list, select the appropriate division requested. Available options are **Federal Land Highways, Eastern Federal Lands, Central Federal Lands**, and **Western Federal Lands**. The drop-down list displays the active business units defined in the **Business Unit** form of the **Administration** module.
Unit Price in $	Enter the cost per unit.
Force Unit Prices	Select the check box to ensure the unit price for the item is non-editable in the **e-Bidding** module.
Force Quantity	Select the check box to ensure the quantity for the item is non-editable in the **e-Bidding** module.
Bid Type	Click the appropriate option.
Mobilization	Select the check box to ensure the item is considered as a mobilization item. It enables the user to add the unit price as a percentage (%) of Schedule Amount in the engineer's estimate.
Is Active	Ensure the check box is selected to make the standard items table active.
Notes/Remarks	Enter any notes for the item.

5. Optionally, in the **ATTACHMENTS** section, upload or link related files.
   For information on attachments, refer to Section 4.1. Attachments.

6. To save the item, perform any of the following steps, as applicable:
    - Click **Save & Exit** to return to the item list page.
    - Click **Save & Continue** to save the item and continue on the same page.
    - Click **Save & Create New** to save the current item and continue creating new items. Click **Cancel** to discard the added information and exit the page.

3.2.7.5.4. Copying Items from Standard Items Table

Prerequisites

- The role of the logged-in user must be one of the following:
    - Administrator
    - Pay Item Team

    For more information on role-specific permissions, refer to Table 2 – Library Catalog Permission Matrix
- An item exists in the standard items table.

Overview

You can copy and paste items from a container to a different container.

Steps

1. In the module menu, click **Library**.
   The **LIBRARY MANAGEMENT** page is displayed.

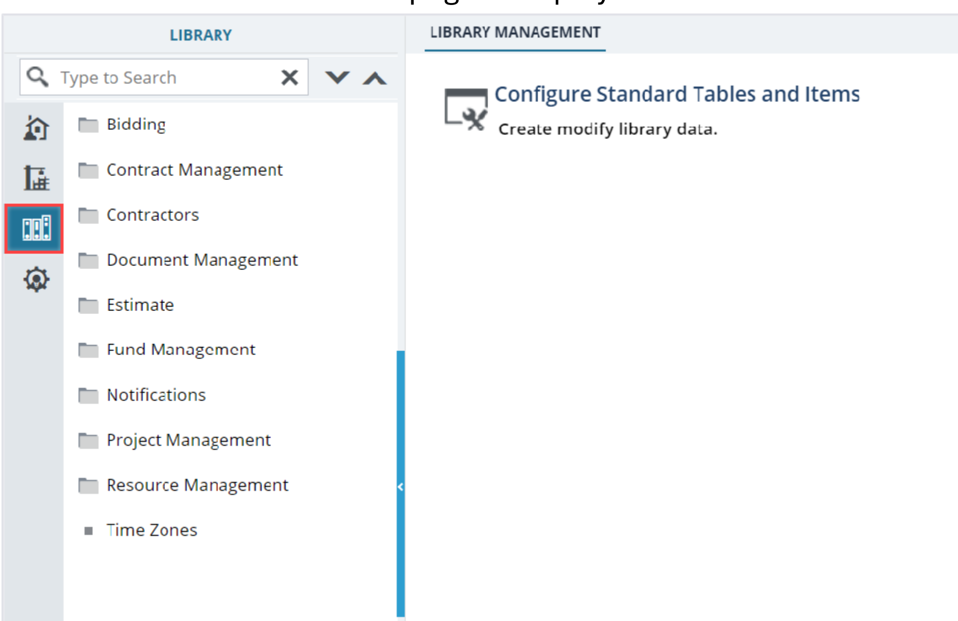


Figure 102: Library Management

2. In the navigation pane, expand **Project Management**, and then click **Standard Items Table**.

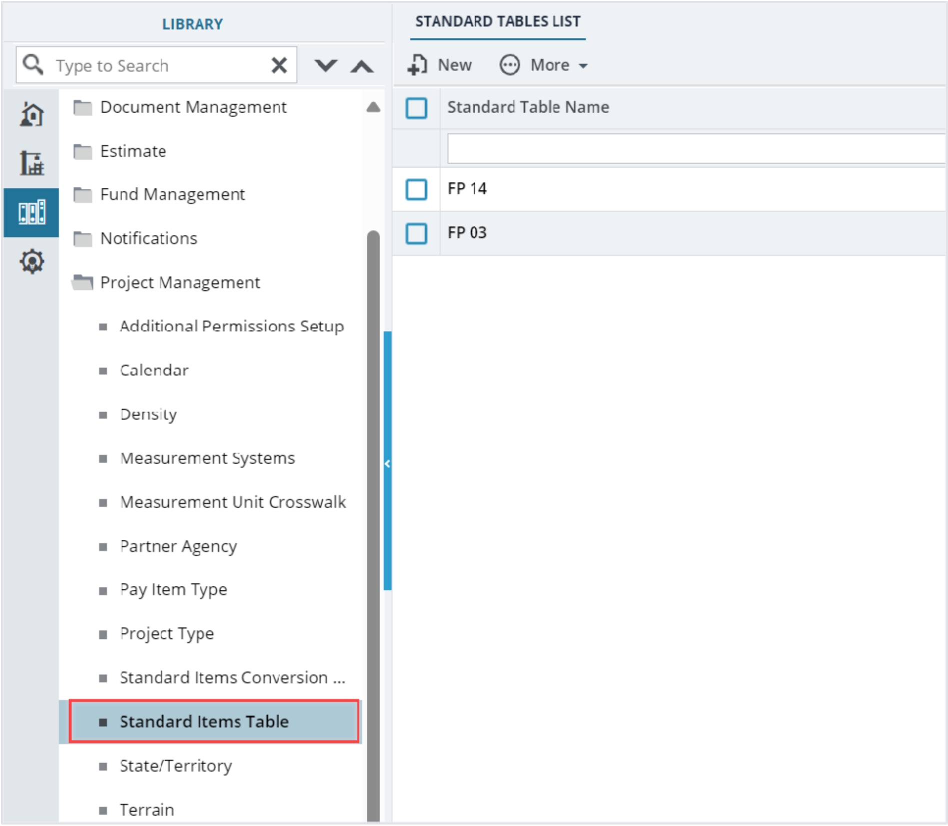


Figure 103: List Page of Standard Items Table Form

3. Select the appropriate standard items table, click **Standard Items**.

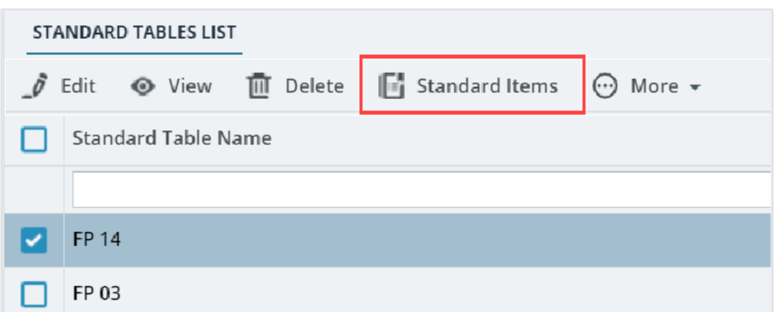


Figure 104: Selecting Standard Items

The **STANDARD ITEM LIST** page is displayed.

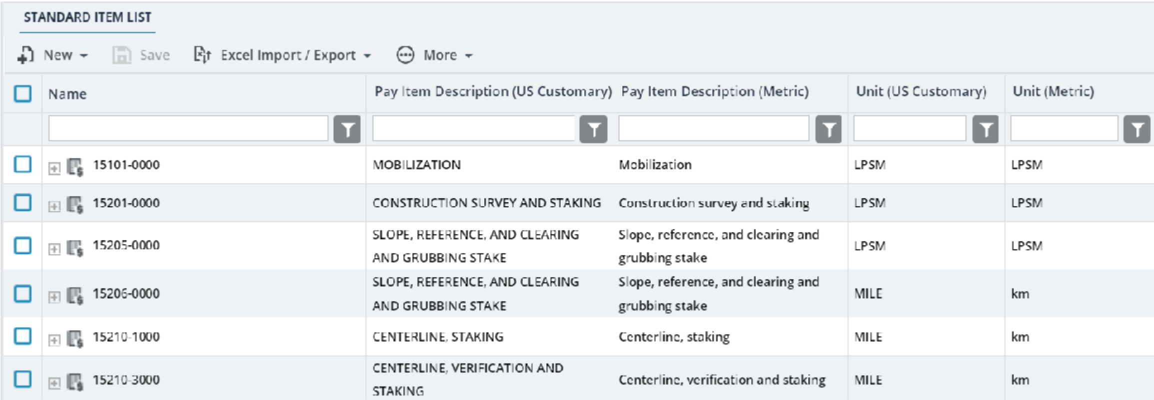


Figure 105: Standard Item List

4. Select the appropriate items, click **Actions**, and then click **Copy Items**.

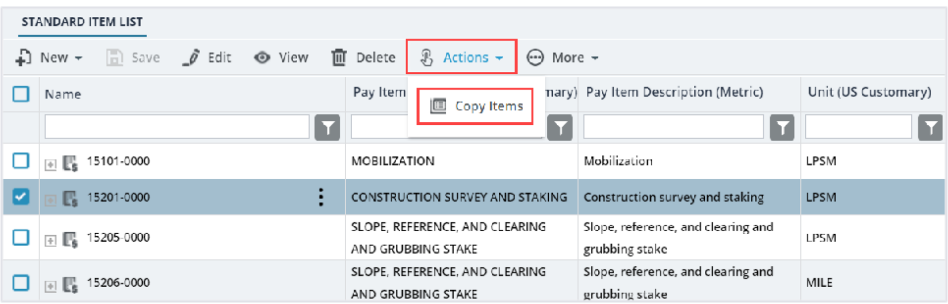


Figure 106: Copy Items

5. Select the appropriate container, click **Actions**, and then click **Paste Items**.

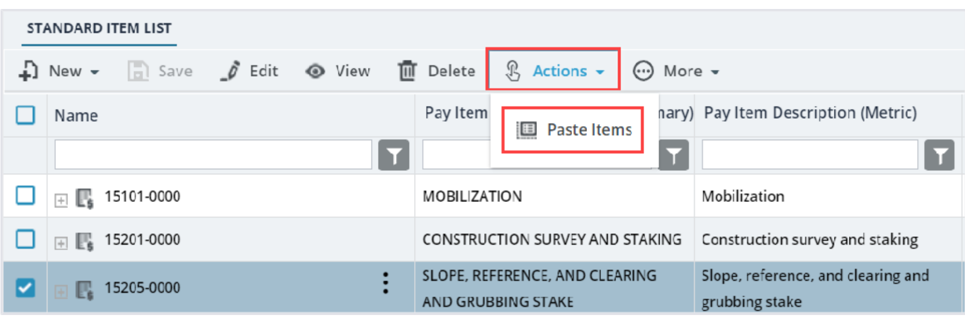


Figure 107: Paste Items

The item is added to the container.

3.2.7.5.5. Import Item Details to Standard Items Tables in Bulk

Prerequisites

The role of the logged-in user must be one of the following:

- Administrator
- Pay Item Team
  For more information on role-specific permissions, refer to Table 2 – Library Catalog Permission Matrix

Overview

The **Excel Import / Export** feature enables you to upload and update standard item details in bulk.

The high-level process of uploading or updating details of standard items in bulk is as follows:

1. Export the template workbook.
2. Add or update item information in the template workbook.
3. Import the updated workbook.

> **Note:** You cannot delete records or upload attachments using an Excel workbook

Steps

1. In the module menu, click **Library**.
   The **LIBRARY MANAGEMENT** page is displayed.

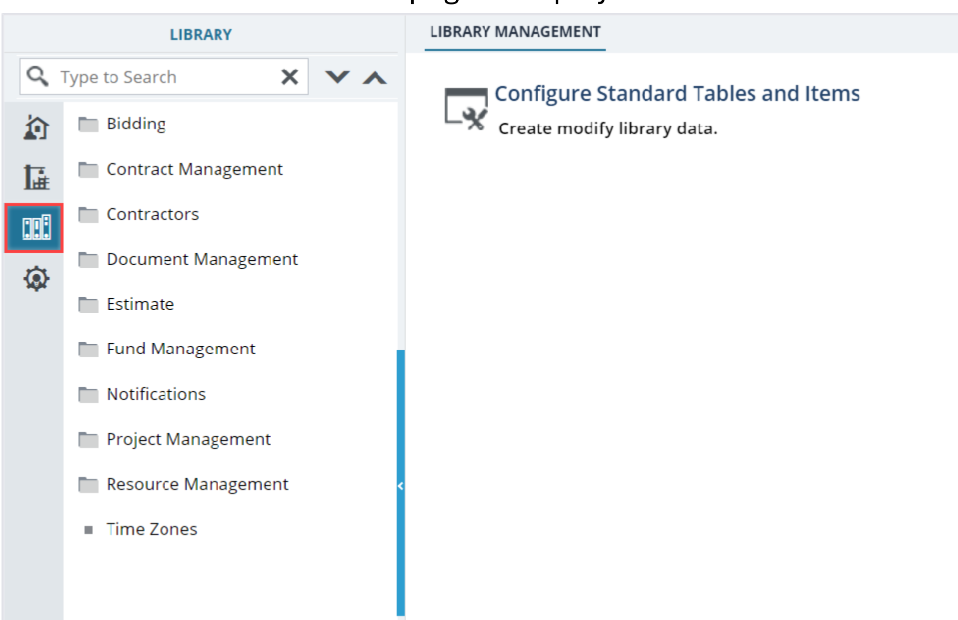


Figure 108: Library Management

2. In the navigation pane, expand **Project Management**, and then click **Standard Items Table**.

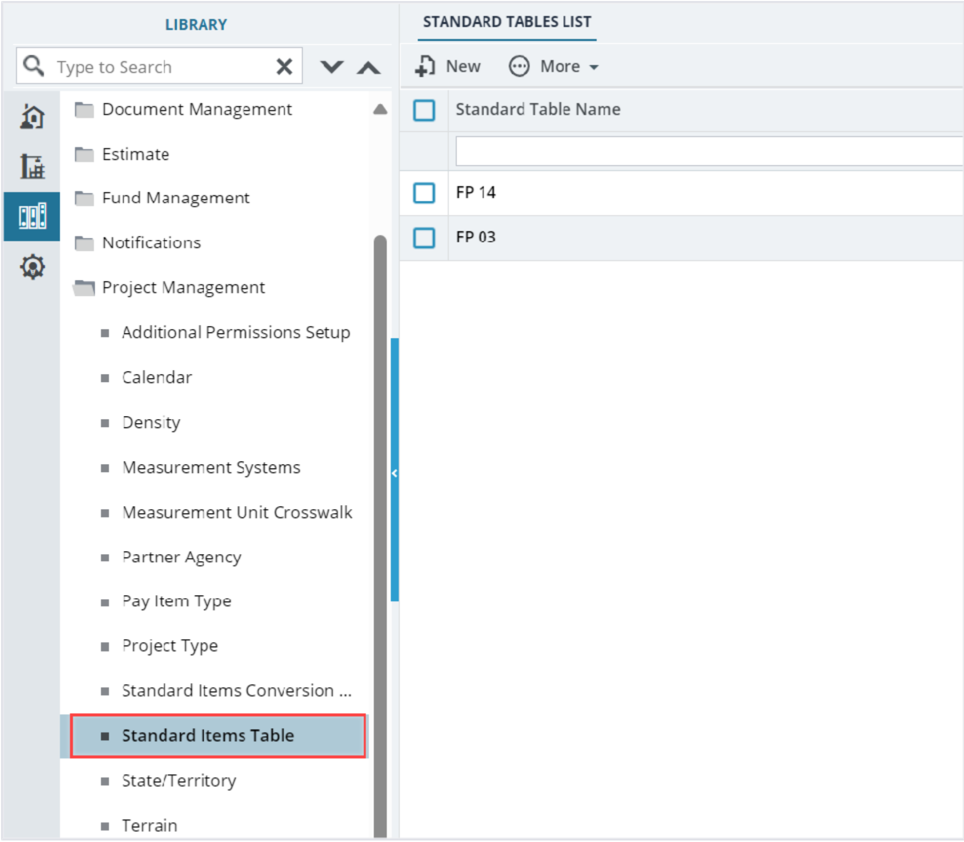


Figure 109: List Page of Standard Items Table Form

3. Select the appropriate standard items table, click **Standard Items**.

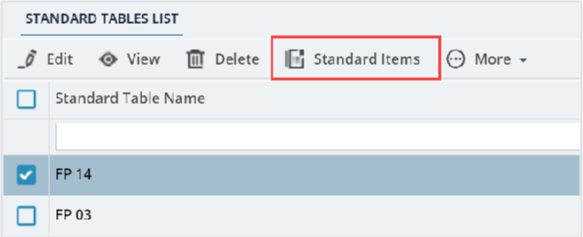


Figure 110: Selecting Standard Items

The **STANDARD ITEM LIST** page is displayed.

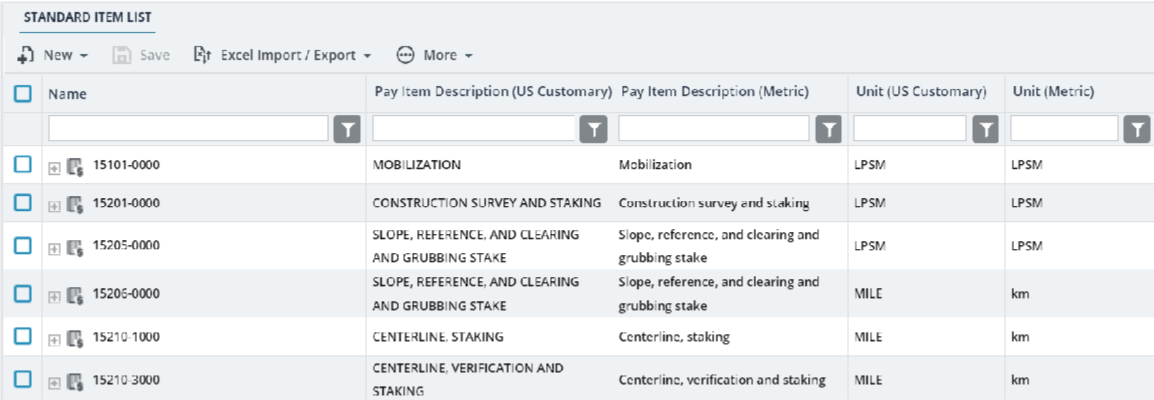


Figure 111: Standard Item List Page

4. To export details of new items, in the toolbar, click **Excel Import / Export**, and then click **Excel Template** or **Excel Template With Data**.

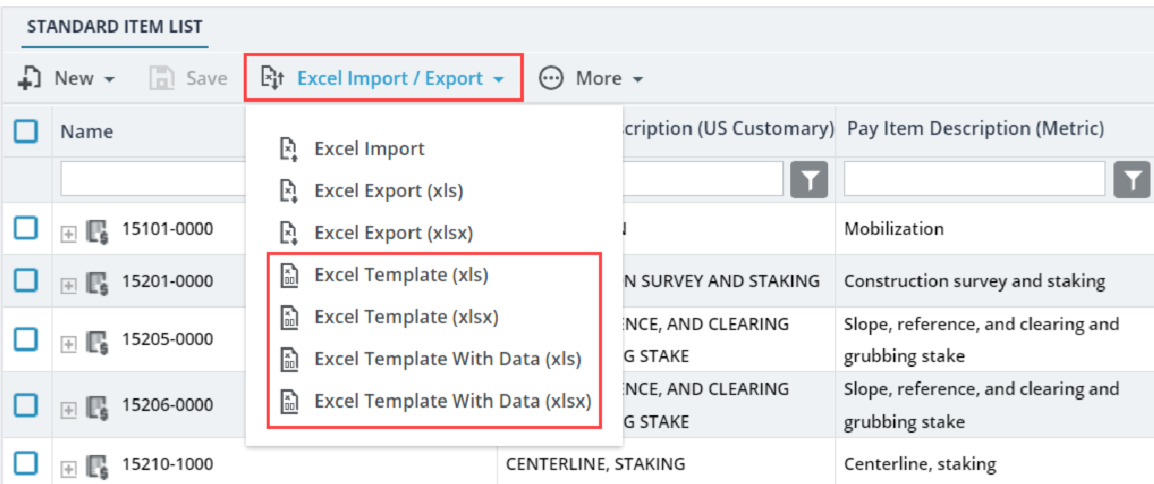


Figure 112: Excel Import / Export Option

The Excel workbook template is downloaded to the local hard drive.

Note: It is recommended to download the template with data. To download the template workbook with data, ensure a **Standard Items Table** record is created and the appropriate details are added.

5. Open the saved Excel workbook template.

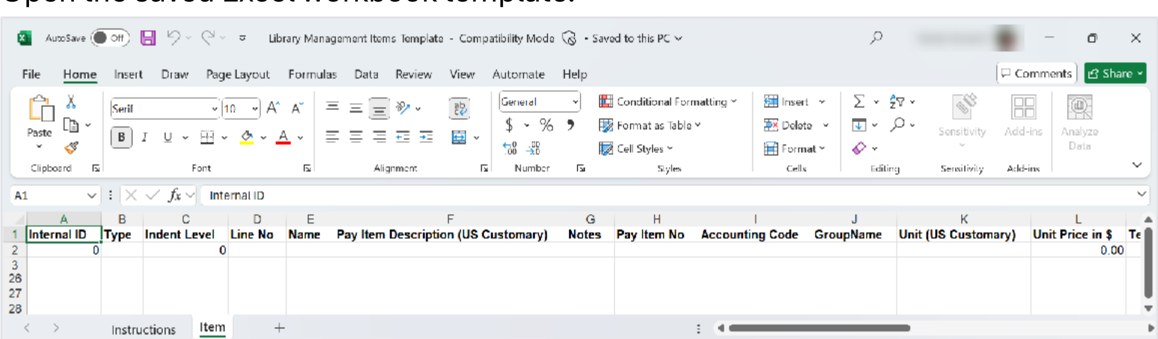


Figure 113: Excel Template

The template workbook contains the following sheets:

- **Instructions** sheet – This sheet provides instructions to enter details of the standard items table.
- **Item** sheet – This sheet enables you to provide accurate information about the items in respective columns of this sheet.

6. In the Excel workbook, perform either of the following steps as applicable:
   - To upload new items, refer to Upload New Items.
   - To update the existing **Standard Items Table** record, refer to Update the existing items.

Note: The following pointers enable you to upload or update item information correctly:

- For lists and selection options, ensure the correct spelling of the option is entered
- For updating item information, ensure the InternalID refers correctly to the intended item
- You cannot delete items using an Excel workbook
- For Yes/No options, enter Yes or No in the relevant columns
- For True/False options, enter True or False in the relevant columns
- Fields that provides the automatically calculated value are not available in the template

7. To import the template workbook with item details to the application, perform the following steps:
   a. In the **STANDARD ITEM LIST** page, click **Excel Import / Export**, and then click **Excel Import**.

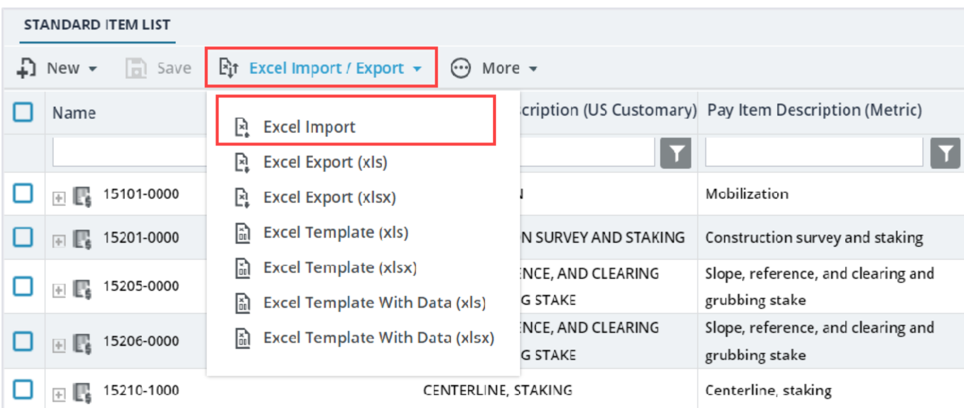


Figure 114: Excel Import Option

The **IMPORT DETAILS FROM EXCEL FILE** page is displayed.

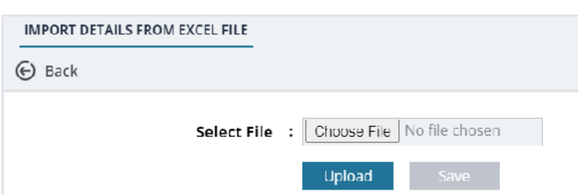


Figure 115: Import Details From Excel File

b. Click **Choose File** to select the workbook with updated details.
   The **Open** dialog box is displayed.

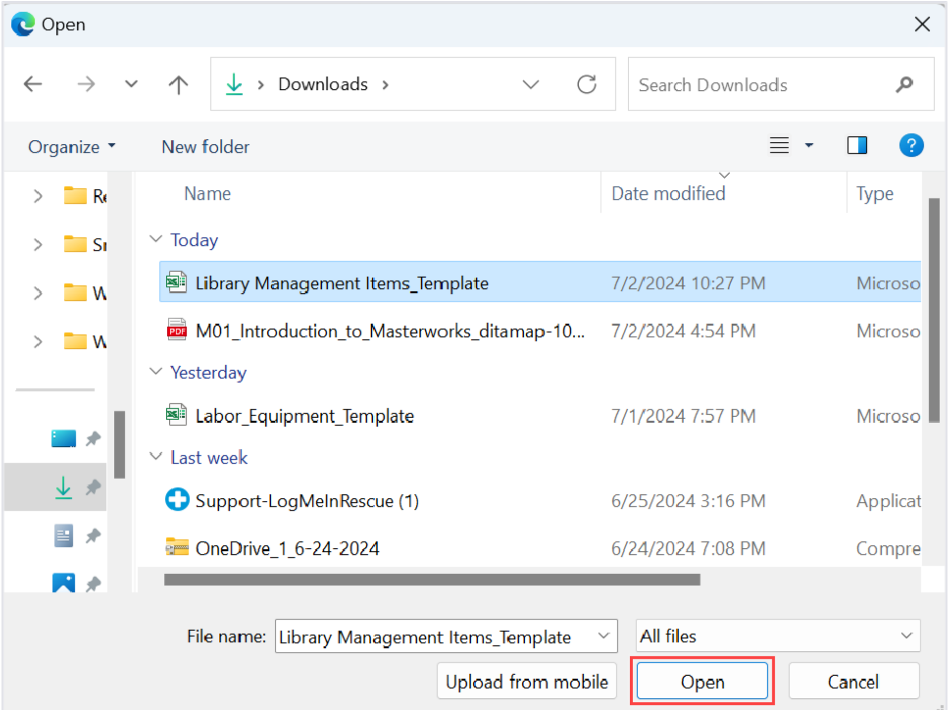


Figure 116: Open Dialog Box

c. Select the appropriate workbook, and then click **Open**.
d. Click **Upload** to import form information from the Excel workbook to the form.

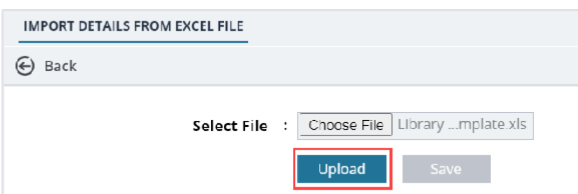


Figure 117: Upload Items from Excel

   On successful import, the success message is displayed.

e. On encountering errors while importing an Excel workbook, perform the following steps:
   i. In the toolbar, click **Error Log**.

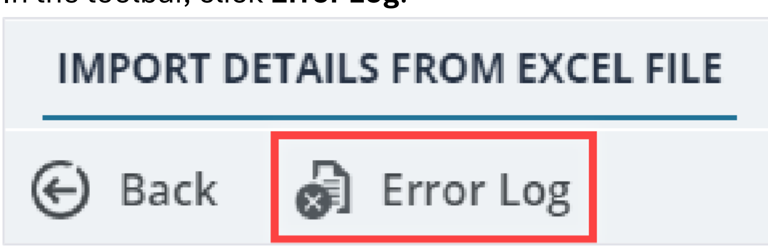


Figure 118: Error Log Option

   The error log workbook is downloaded to your local storage.

ii. Open the workbook to view the errors in the various columns.
Error messages in the cells are highlighted in red. Tabs in the workbook are also highlighted to indicate the presence of errors.
iii. Open the Excel workbook with form information and modify form details. Optionally, you can make relevant corrections in the error log workbook and upload it.
iv. Save and upload the Excel workbook to import the updated information.

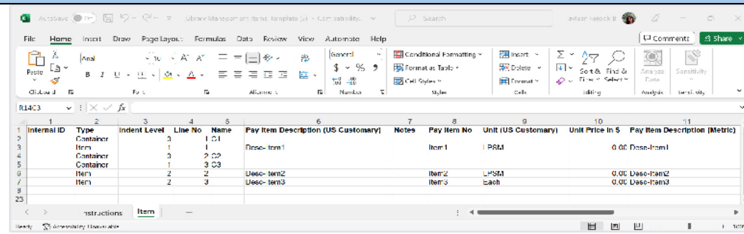
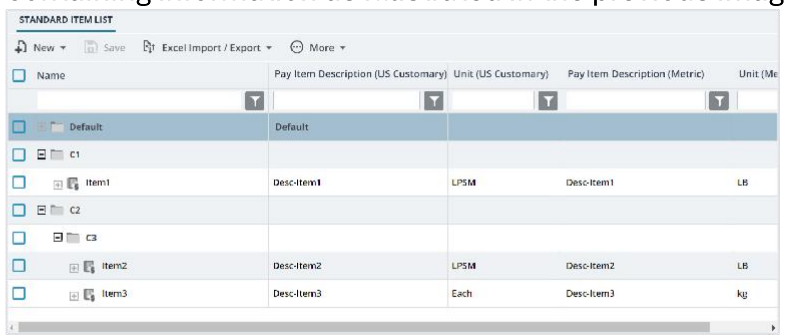
f. Click **Save**.
g. Click **Back**.
The item details in the Excel workbook are uploaded to the **STANDARD ITEM LIST** page.

3.2.7.5.5.1. Upload Item Information

Steps

1. Enter the appropriate details in the worksheet, as described in the following table:

Column	Description
Internal ID	To upload details of new items, do not enter any details in the Internal ID column.
Type	Select the type of item being defined. • To create a container, select **Container**. • To create an item, select **Item**.
Indent Level	Defines the line number of the parent container to group the current container or item into the parent container. Mandatory field; information must be provided. Specify 0 for first level containers or items, 1 for second level containers or items, and so on. For example, consider two containers, CONT1 and CONT2. To define CONT2 under CONT1, if Indent Level for CONT1 is set to n then Indent Level of CONT2 must be set to n+1. Similarly for items, to define an item in CONT2, Indent Level of the item must be set to n+2. The hierarchy of containers and items in containers must be defined sequentially in the Excel worksheet. For example, to define an item Item3 in a container C3 that is at indent level 0, the item must be defined with indent level 1 after the row with details of container C3. The following image illustrates three containers C1, C2, and C3. Container C3 is within C2. Items Item1 is in C1, Item2 is in C2, and Item3 is in C3. Note the indent levels defined in the Microsoft Excel template.

Column	Description
	 *Figure 122: Items and Containers Illustrated in Excel Workbook* The following image illustrates the items and containers imported to Masterworks using the Excel workbook containing information as illustrated in the previous image:  *Figure 123: Items and Containers Import List*
Line No	Enter the appropriate line number of the item.
Name	Enter the name of the container or item. That is, if **Type** is selected as **Container**, then in the **Name** column, enter the name of the container.
Pay Item Description (US Customary)	Enter the description of the item for the measurement system – US Customary.
Notes	Enter the notes for the container or item.
Pay Item Number	Enter the pay item number that uniquely identifies the item. Mandatory field; information must be provided.
Unit (US Customary)	Enter the acronym of the unit of measure for the item. The unit of measure entered here must match the unit of measure defined in the US Customary record in the **Measurement Systems** library catalog. For example, ACRE, CTSM, CUFT, CUYD, etc. Mandatory field; information must be provided002E
Unit Price in $	Enter the cost of each of the item, as applicable.
Pay Item Description (Metric)	Enter the description of the item for the measurement system – Metric. Mandatory field; information must be provided.
Unit (Metric)	Enter the acronym of the unit of measure for the item. The unit of measure entered here must match the unit of measure defined in the Metric record in the **Measurement Systems** library catalog. For example, CTSM, Day, Each, Hour, Kg etc. Mandatory field; information must be provided.

Column	Description
Bid Decimal	Enter the appropriate bid decimal value for the item. You can enter decimal value from 0 to 3. Mandatory field; information must be provided.
Pay Item Type	Enter the type of pay item. The type of pay item must match the pay items defined in the **Pay Item Type** library catalog. For example, N, NM, NR, NS, QM, etc. Mandatory field; information must be provided.
Material Incentive	Enter **Yes** if the item is a material incentive. Otherwise, enter **No**.
Division Requested	Enter the appropriate division requested. The division requested must match the active business units defined in the **Business Unit** form of the **Administration** module. For example, Federal Land Highways, Eastern Federal Lands, Central Federal Lands, or Western Federal Lands.
Force Unit Prices	Enter **True** to ensure the unit price for the item is non-editable in the **e-Bidding** module. Otherwise, enter **False**.
Force Quantity	Enter **True** to ensure the quantity for the item is non-editable in the **e-Bidding** module. Otherwise, enter **False**.
Bid Type	Enter either **Bid** or **Ancillary**. Mandatory field; information must be provided.
Mobilization	Enter **True** to ensure mobilization is available for the item. Otherwise, enter **False**.
Is Active	Enter **True** to ensure the standard items table is active in the application. Otherwise, enter **False**.

2. Save the workbook.

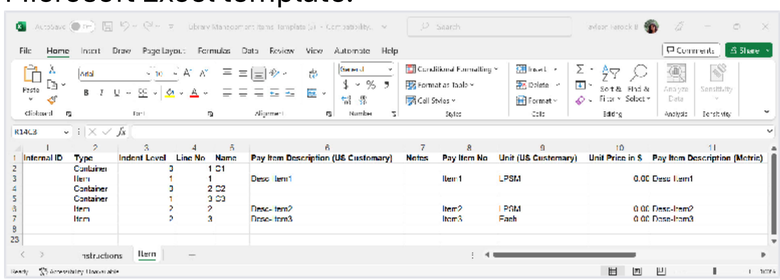
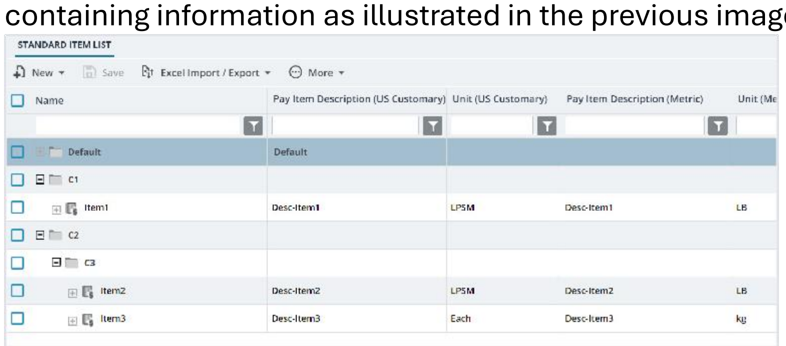
3.2.7.5.5.2. Updating Item Details in Bulk

Steps

1. Update the appropriate details in the worksheet, as described in the following table:

   Note: Deleting an item from the Excel workbook does not delete the item in the standard items table.

Column	Description
Internal ID	Do not edit. Retain the value in this column.
Type	Update the type of item being defined. • To create a container, select **Container**. • To create an item, select **Item**.
Indent Level	Defines the line number of the parent container to group the current container or item into the parent container. Mandatory field; information must be provided.

Column	Description
	Specify 0 for first level containers or items, 1 for second level containers or items, and so on. For example, consider two containers, CONT1 and CONT2. To define CONT2 under CONT1, if Indent Level for CONT1 is set to n then Indent Level of CONT2 must be set to n+1. Similarly for items, to define an item in CONT2, Indent Level of the item must be set to n+2. The hierarchy of containers and items in containers must be defined sequentially in the Excel worksheet. For example, to define an item Item3 in a container C3 that is at indent level 0, the item must be defined with indent level 1 after the row with details of container C3. The following image illustrates three containers C1, C2, and C3. Container C3 is within C2. Items Item1 is in C1, Item2 is in C2, and Item3 is in C3. Note the indent levels defined in the Microsoft Excel template.  *Figure 124: Items and Containers Illustrated in Excel Workbook* The following image illustrates the items and containers imported to Masterworks using the Excel workbook containing information as illustrated in the previous image:  *Figure 125: Items and Containers Import List*
Line No	Update the appropriate line number of the item.
Name	Update the name of the container or item. That is, if Type is selected as Container, then in the Name column, enter the name of the container.
Pay Item Description (US Customary)	Update the description of the item for the measurement system – US Customary.
Notes	Update the notes for the container or item.

Column	Description
Pay Item Number	Update the pay item number that uniquely identifies the item. Mandatory field; information must be provided.
Unit (US Customary)	Update the acronym of the unit of measure for the item. The unit of measure entered here must match the unit of measure defined in the US Customary record in the Measurement Systems library catalog. For example, ACRE, CTSM, CUFT, CUYD, etc. Mandatory field; information must be provided.
Unit Price in $	Update the cost of each of the item. Mandatory field; information must be provided.
Pay Item Description (Metric)	Update the description of the item for the measurement system – Metric. Mandatory field; information must be provided.
Unit (Metric)	Update the acronym of the unit of measure for the item. The unit of measure entered here must match the unit of measure defined in the Metric record in the **Measurement Systems** library catalog. For example, CTSM, Day, Each, Hour, Kg etc. Mandatory field; information must be provided.
Bid Decimal	Update the appropriate bid decimal value for the item. You can enter decimal value from 0 to 3. Mandatory field; information must be provided.
Pay Item Type	Update the type of pay item. The type of pay item must match the pay items defined in the **Pay Item Type** library catalog. For example, N, NM, NR, NS, QM, etc. Mandatory field; information must be provided.
Material Incentive	Update Yes if the item is a material incentive. Otherwise, enter **No**.
Division Requested	Update the appropriate division requested. The division requested must match the active business units defined in the **Business Unit** form of the **Administration** module. For example, Federal Land Highways, Eastern Federal Lands, Central Federal Lands, or Western Federal Lands.
Force Unit Prices	Update **True** to ensure the unit price for the item is non-editable in the **e-Bidding** module. Otherwise, enter **False**.
Force Quantity	Update **True** to ensure the quantity for the item is non-editable in the **e-Bidding** module. Otherwise, enter **False**.
Bid Type	Update either **Bid** or **Ancillary**. Mandatory field; information must be provided.
Mobilization	Update **True** to ensure mobilization is available for the item. Otherwise, enter **False**.

Column	Description
Is Active	Update **True** to ensure the standard items table is active in the application. Otherwise, enter **False**.

3.2.7.6. Standard Items Conversion Crosswalk

Prerequisites

The role of the logged-in user must be one of the following:

- Administrator
- Pay Item Team

  For more information on role-specific permissions, refer to Table 2 – Library Catalog Permission Matrix

Overview

The **Standard Items Conversion Crosswalk** catalog enables you to map the same items from different standard items tables to aid in the **Unit Price Search** utility.

Steps

1. In the module menu, click **Library**.
   The **LIBRARY MANAGEMENT** page is displayed.

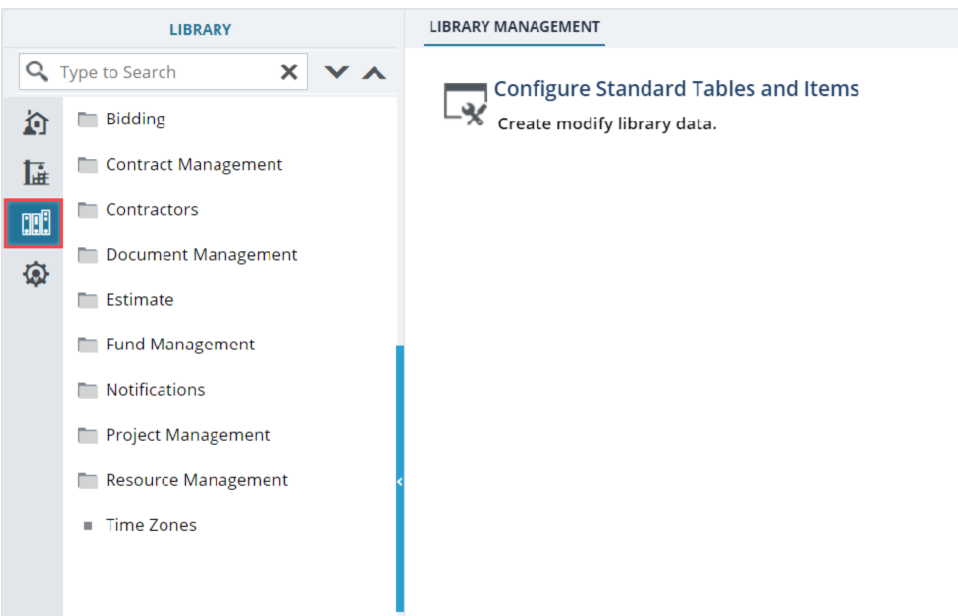


Figure 119: Library Management

2. In the navigation pane, expand **Project Management**, and then click **Standard Items Conversion Crosswalk**.

The **STANDARD ITEMS CONVERSION CROSSWALK** list page is displayed.

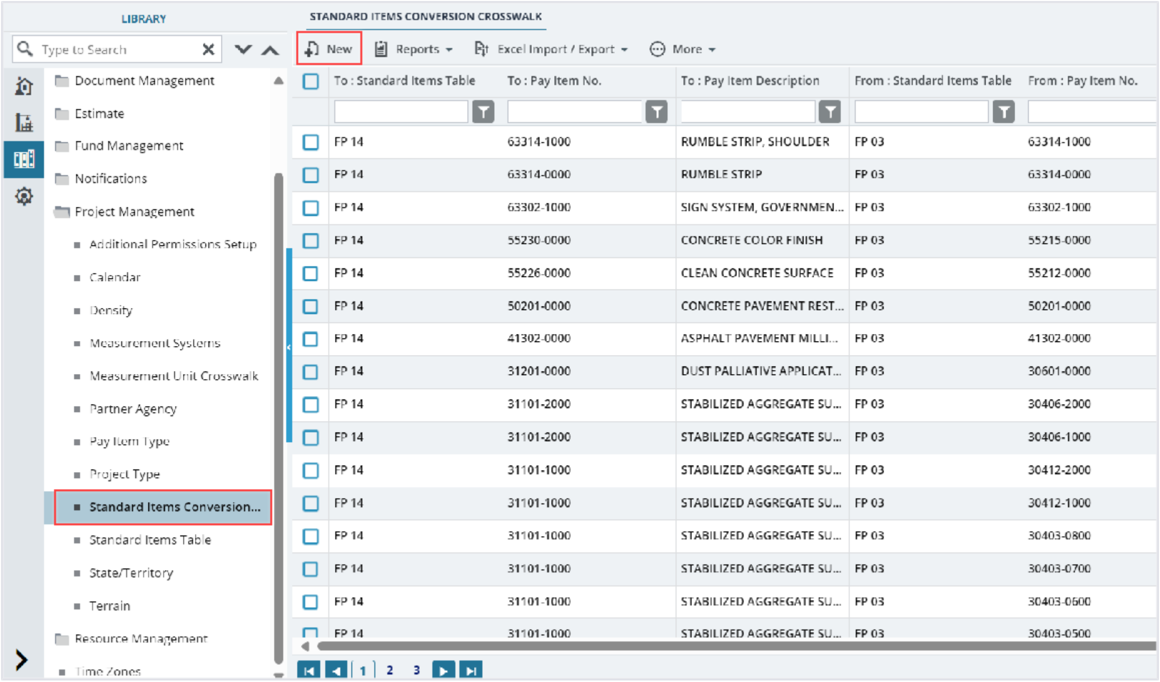


Figure 120: List Page of Standard Items Conversion Crosswalk Form

3. Click **New**.

   The **STANDARD ITEMS CONVERSION CROSSWALK** page is displayed.

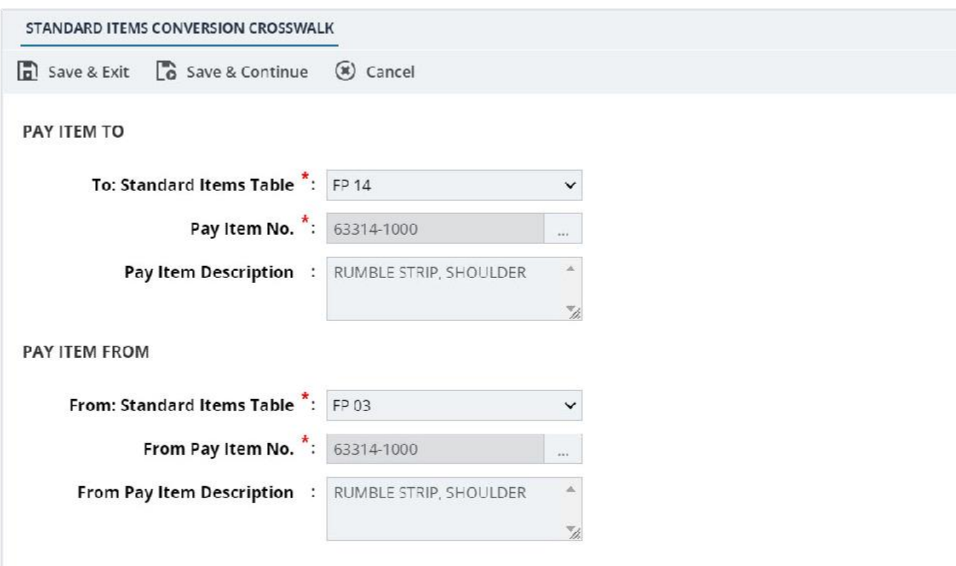
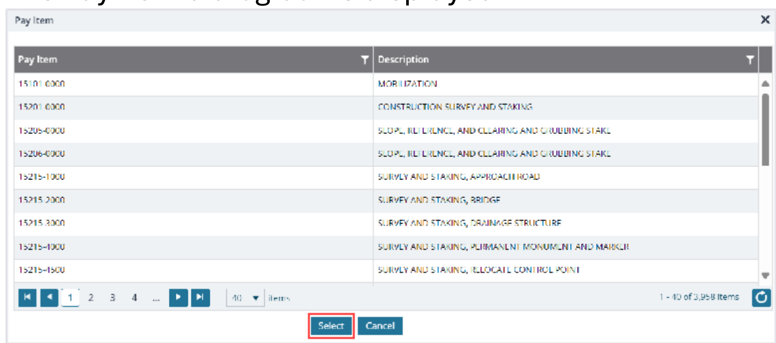


Figure 121: Standard Items Conversion Crosswalk Details Page

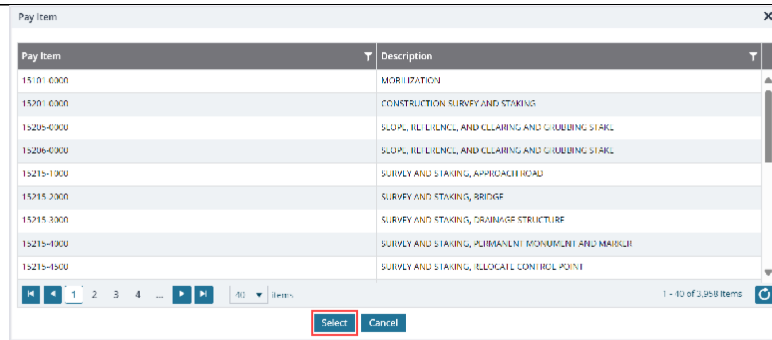
4. In the **PAY ITEM TO** section, provide the appropriate information in the fields, as described in the following table:

   Note: The standard items table selected in the **To: Standard Items Table** and **From: Standard Items Table** fields cannot be same.

Field Name	Description
To: Standard Items Table	From the drop-down list, select the appropriate standard items table. Available options are FP 03 and FP 14. The drop-down list displays tables defined in the Standard Items Table catalog of the library. For more information on standard items table, refer to Section 3.2.7.5. Standard Items Tables.
Pay Item No.	To select the pay item number, perform the following steps: a. Click .... The Pay Item dialog box is displayed.  *Figure 122: Pay Item Dialog Box* Available options are based on the standard items table selected in the **To: Standard Items Table** field. b. Click the appropriate pay item, and then click **Select**. **Note:** Based on the Pay Item No. selected, the Pay Item Description field displays the description of the pay item as defined in the Standard Items Table catalog of the library. For more information on standard items table, refer to 3.2.7.5. Standard Items Tables on page 79.

5. In the **PAY ITEM FROM** section, provide the appropriate information in the fields, as described in the following table:

Field Name	Description
From: Standard Items Table	From the drop-down list, select the appropriate standard items table. Available options are FP 03 and FP 14. The drop-down list displays tables defined in the Standard Items Table catalog of the library. For more information on standard items table, refer to Section 3.2.7.5. Standard Items Tables on page 79
From Pay Item No.	To select the pay item number, perform the following steps: a. Click .... The Pay Item dialog box is displayed.

	 *Figure 123: Pay Item Dialog Box* Available options are based on the standard items table selected in the From: Standard Items Table field. b. Click the appropriate pay item, and then click **Select**. **Note:** Based on the From Pay Item No. selected, the From Pay Item Description field displays the description of the pay item as defined in the Standard Items Table catalog of the library. For more information on standard items table, refer to Section 3.2.7.5. Standard Items Tables.

6. Click **Save & Exit** to save the record and return to the list page. Optionally, click **Save & Continue** to save the record and continue on the same page. Click **Cancel** to discard the added information and exit the page.

4. Appendix

4.1. Attachments

You can upload or link files in the **Documents** folders to every record. You can also upload any number of attachments, regardless of size, to a record or while performing workflow actions for a record.

The following sections explain how to upload or link, access, and download attachments in a form or workflow:

4.1.1. Attaching a File to a Form

4.1.2. Accessing and Downloading Attached Files

4.1.3. Deleting Attached Files

You can annotate and delete attachments.

4.1.1. Attaching a File to a Form

You can upload files to a form and link a file in the **Documents** folders of a form.

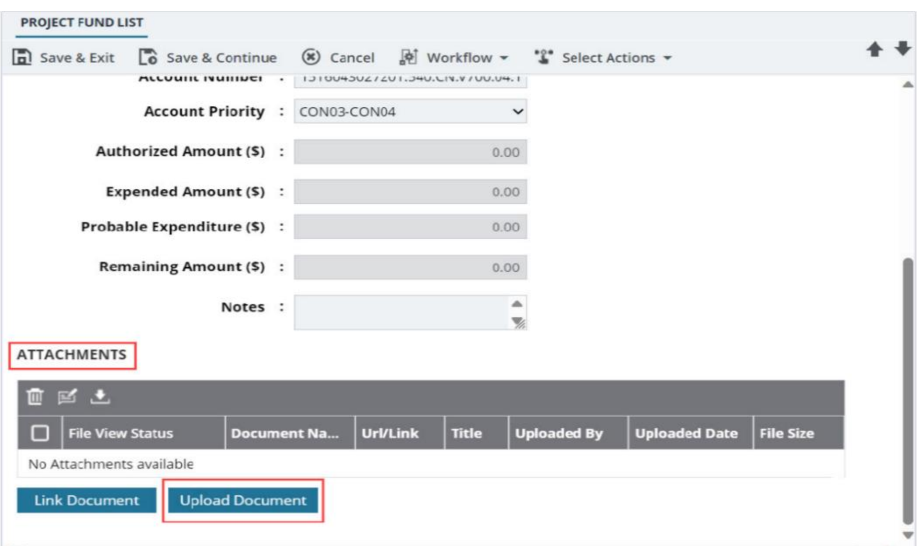
Note: The **Upload and Link New Document** option is the most preferred and used method to link files to a form by the FLH team.

The **Project Fund List** form is used for illustration purposes.

Uploading Files to a Form

To upload files, perform the following steps in the **ATTACHMENTS** section:

1. Click **Upload Document**.



The **Open** dialog box is displayed.

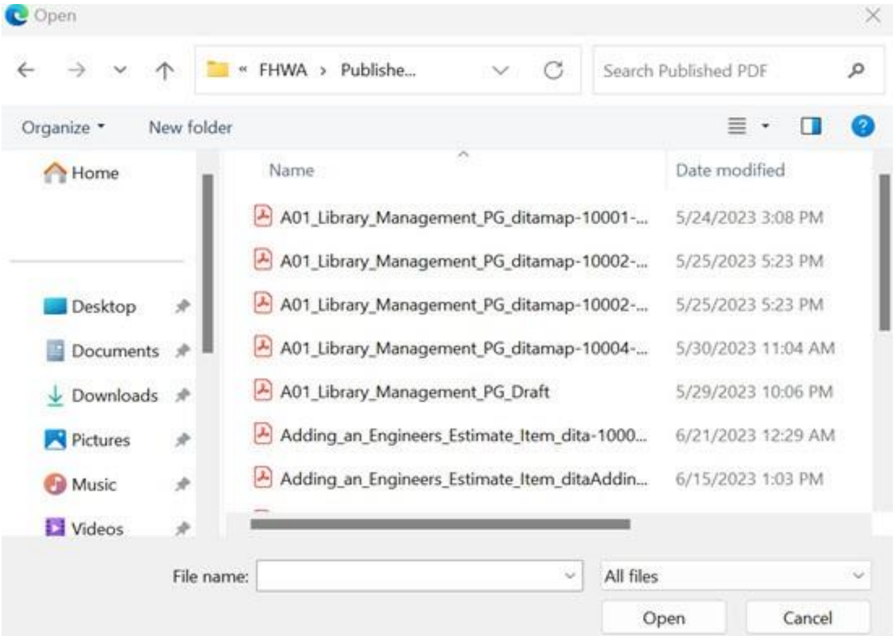


Figure 124: Open Dialog Box

2. To upload a single file, click the appropriate file.
   Optionally, to upload multiple files, press and hold **CTRL**, and then click the appropriate files.
3. Click **Open**.

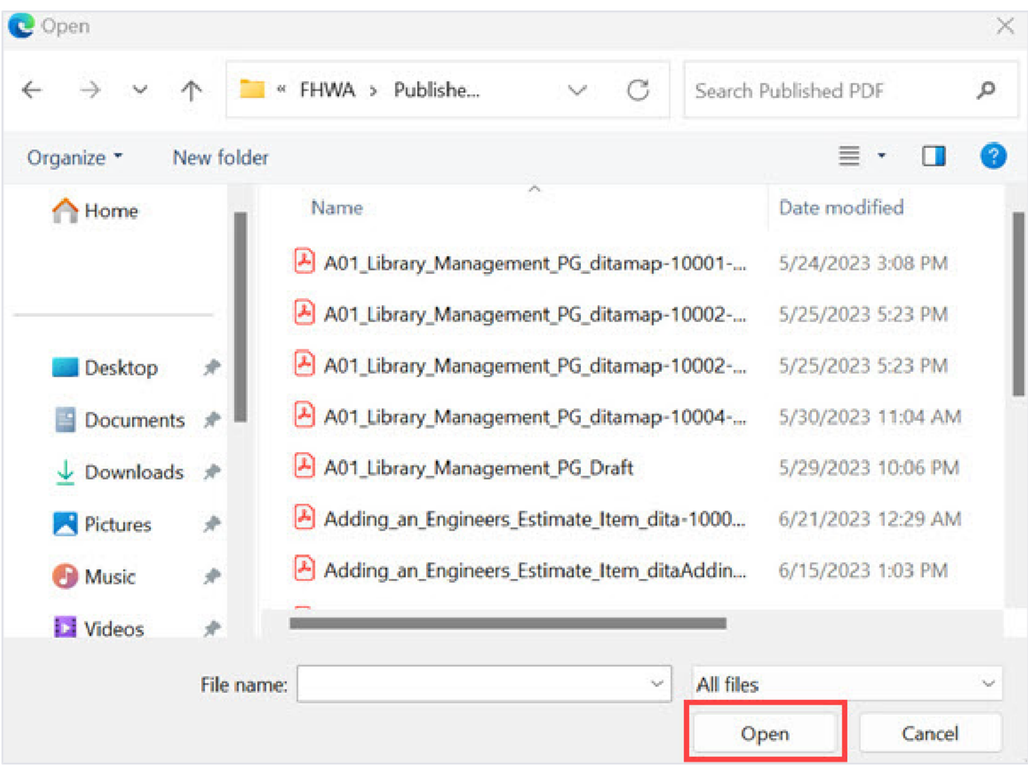


Figure 125: Open Option

The files are uploaded to the form and displayed in the **ATTACHMENTS** section.

4. The name of the file is updated in the **Title** column.

   Optionally, in the **Title** column, enter the tiles for the files attached.

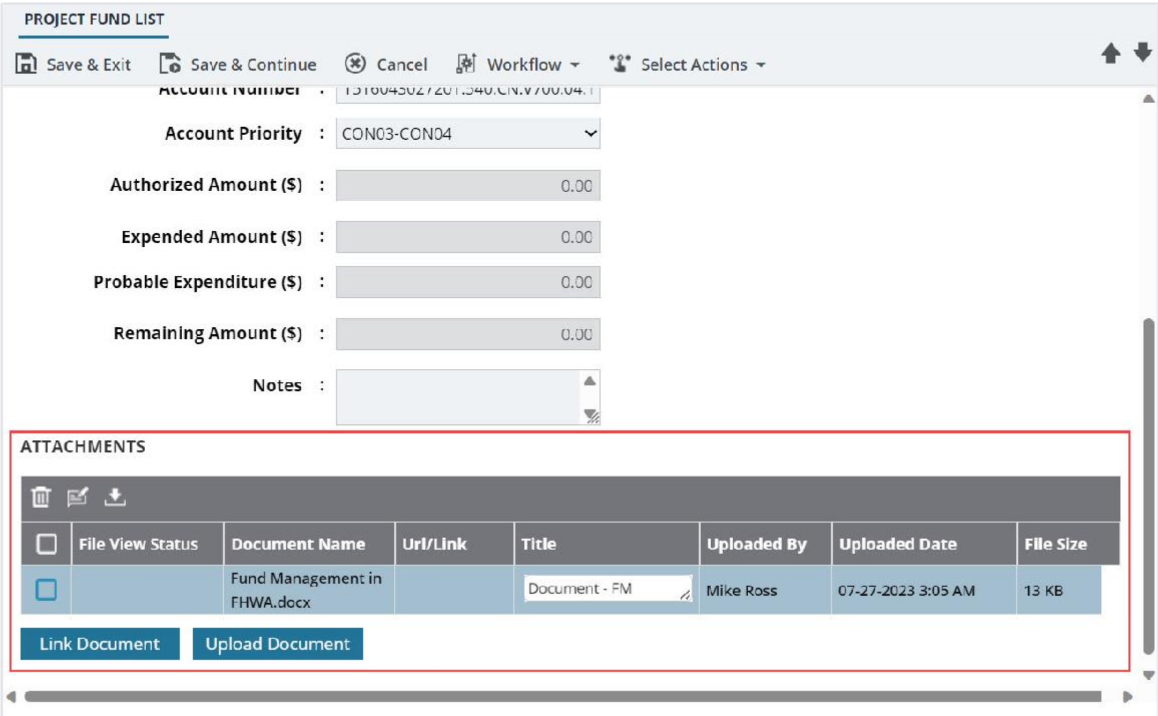


Figure 126: Uploaded File

Linking a File to a Form

You can link a file to a form using any of the following options:

- **Masterworks Document:** This option enables you to link files available in the document folders of a project or contract. The document folders are available based on the selected document folder structure in the **PROJECT DETAILS** page.
  Note: This option helps users avoid uploading the same files multiple times in a project.

- **Upload and Link New Document:** This option enables you to upload new files to the document folders of a project or contract and link them to the respective form. The document folders are available based on the selected document folder structure in the PROJECT DETAILS page.
  Note: This option helps users upload new files into the document folder structure from the respective form without navigating to the document folder.

  Note: The **Upload and Link New Document** option is the most preferred and used method to link files to a form by the FLH team.

- **External Document:** This option enables you to link files from an external location.

Linking a File to a Form – Masterworks Document Option

To link a file available in the Documents folders, perform the following steps:

1. In the **ATTACHMENTS** section, click **Link Document**.

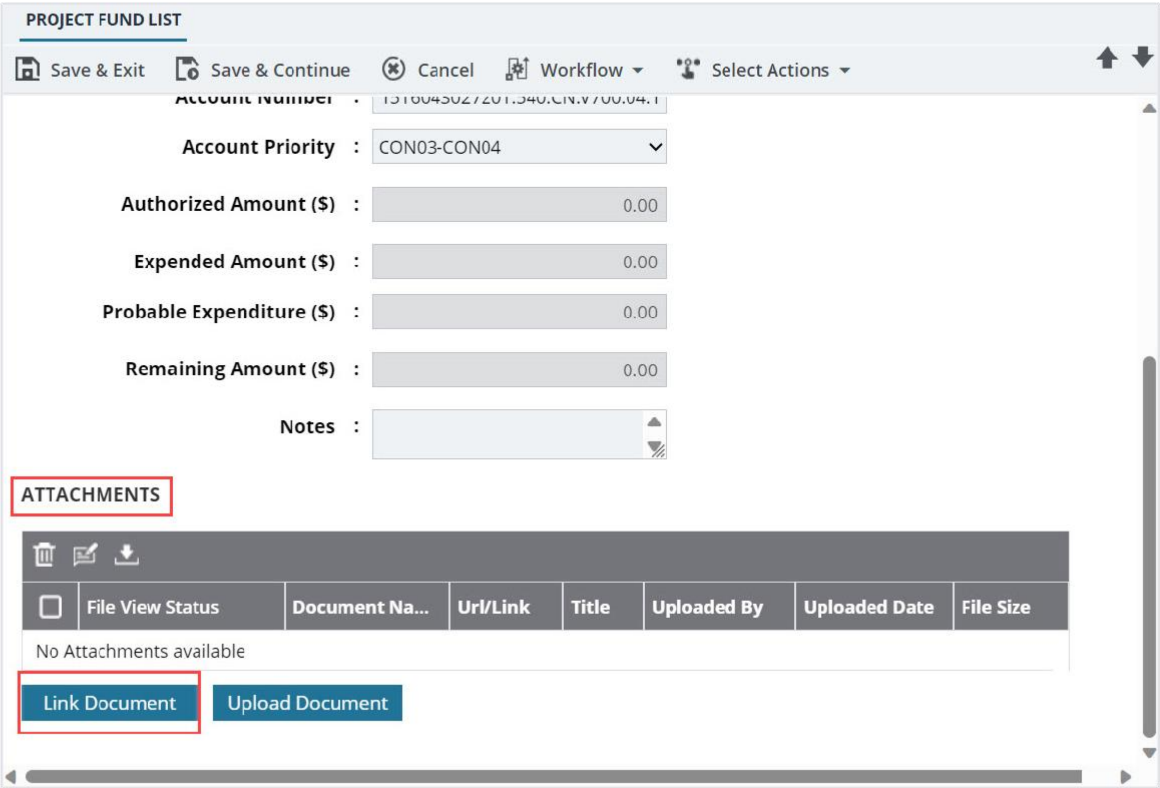


Figure 127: Using Link Document Option

The **Link Document** dialog box is displayed.

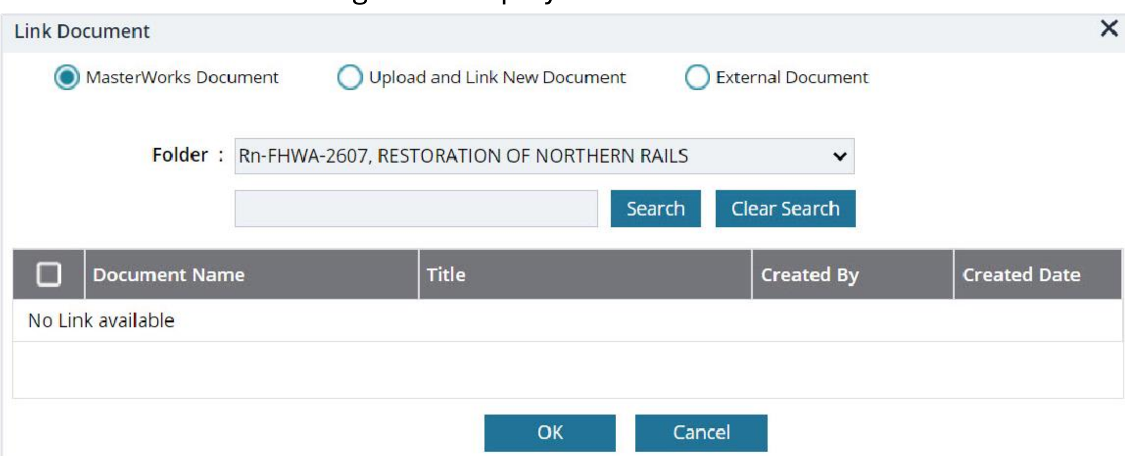


Figure 128: Link Document Dialog Box

2. Click **Masterworks Document**.

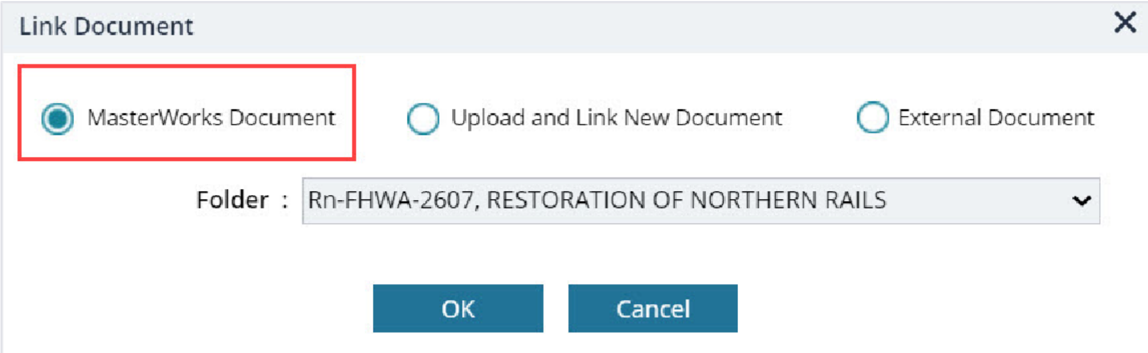


Figure 129: Using Masterworks Document Option

3. In the **Folder** drop-down list, select the appropriate document folder where the files exist. The list of files in that folder is displayed.

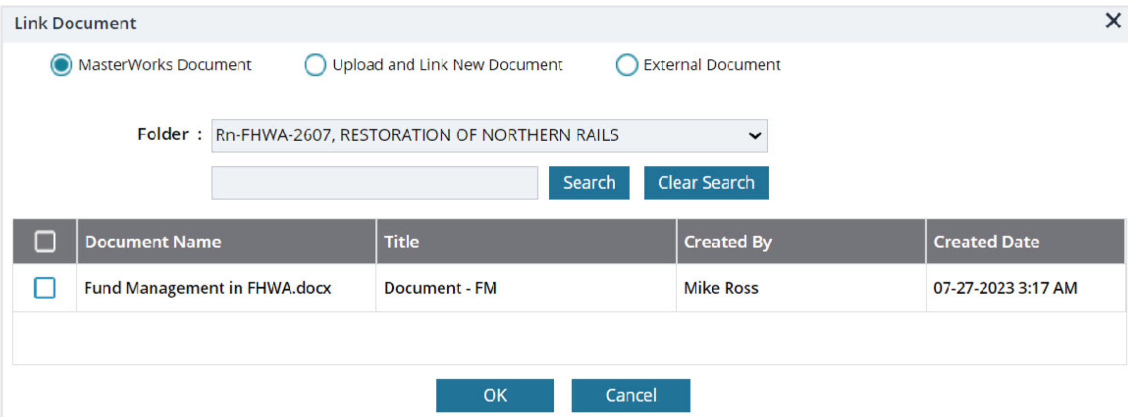


Figure 130: List of Documents

4. Perform any of the following steps, as applicable:

    - From the list of files, select the appropriate files.
    - To search for a file, in the box, enter any search criteria for the file, click **Search**, and then select the appropriate files.

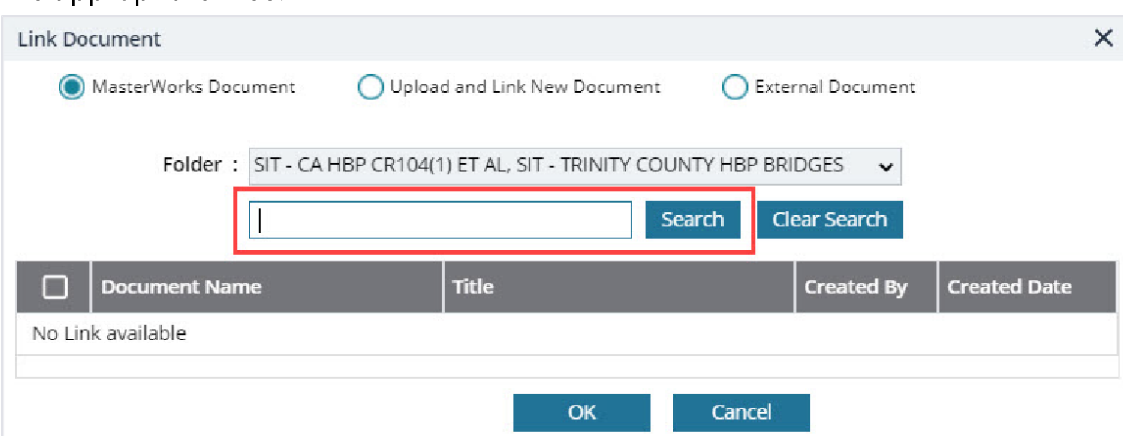


Figure 131: Using Search Option

You can specify search criteria such as the extension of the file type, the date or time the file was uploaded, the name or title of the file, or the username of the user who uploaded the file.

- Optionally, to view all the files in the selected folder, click **Clear Search**.

5. Click **OK**.
   The files are linked to the form and are displayed in the **ATTACHMENTS** section.

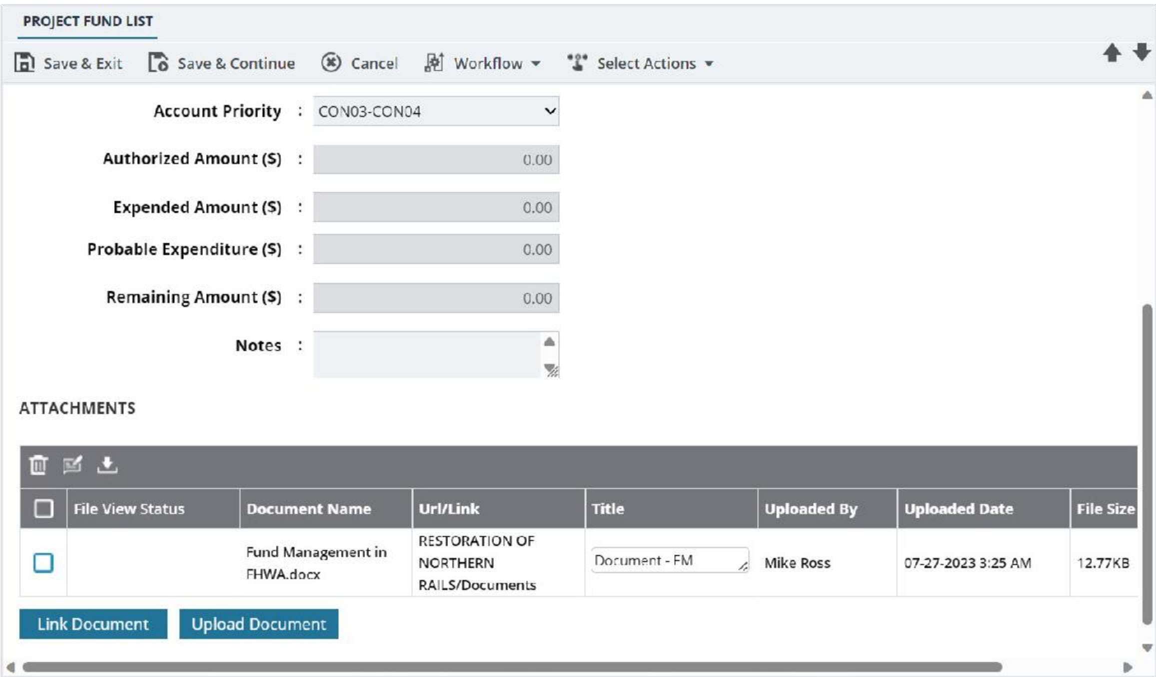


Figure 132: Linked Document

Note: The **Url/Link** column displays the path to the folder where the document is available. You can click the folder path to open the folder.

6. In the **Title** column, enter the titles for the linked files.

Linking a File to a Form – Upload and Link New Document Option

To upload a file to a folder in the Documents folder structure and link the file to the respective form, perform the following steps:

Note: The **Upload and Link New Document** option is the most preferred and used method to link files to a form by the FLH team.

1. In the **ATTACHMENTS** section, click **Link Document**.

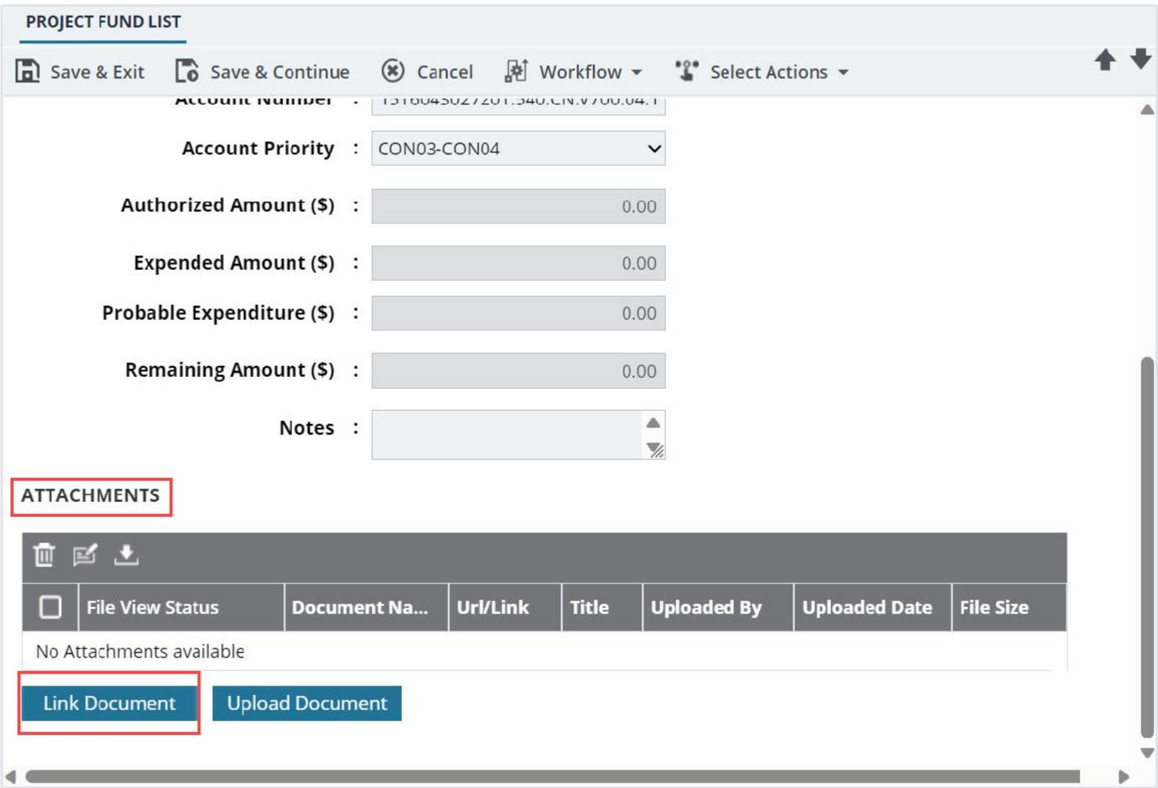


Figure 133: Using Link Document Option

The **Link Document** dialog box is displayed.

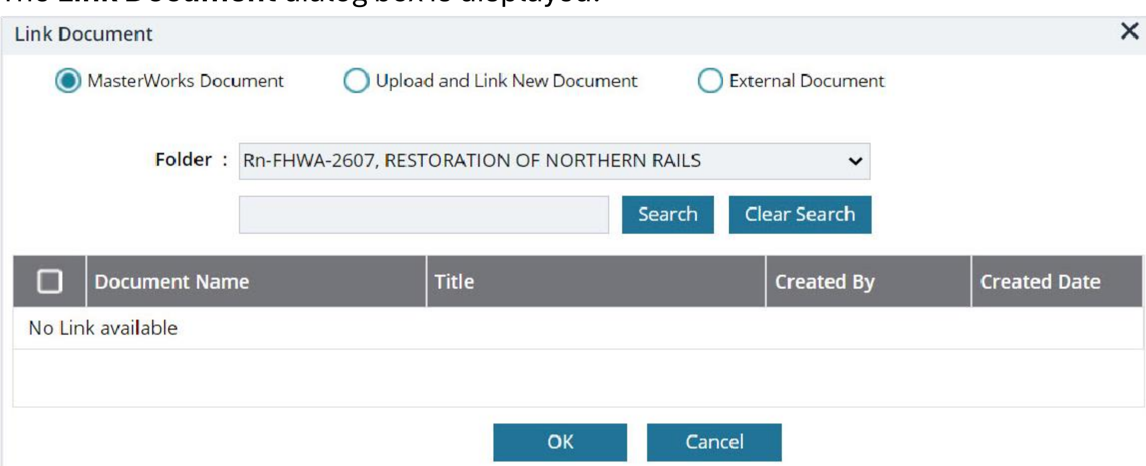


Figure 134: Link Document Dialog Box

2. Click **Upload and Link New Document**.

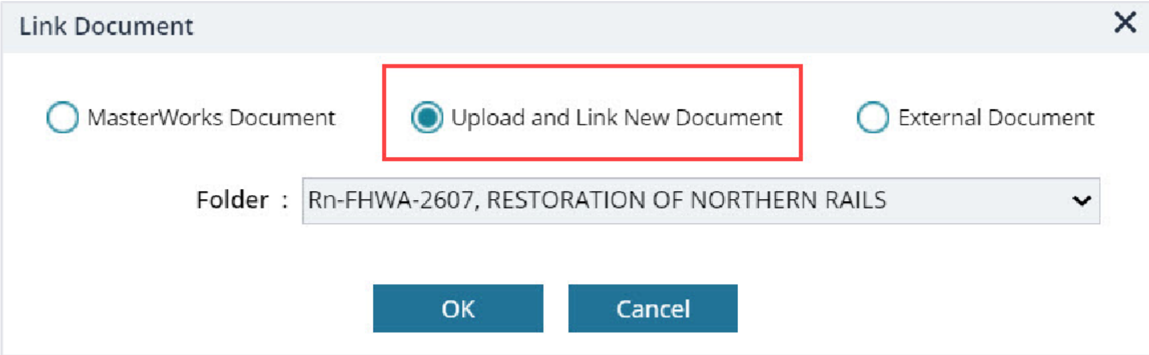


Figure 135: Using Upload and Link New Document Option

3. In the **Folder** drop-down list, select the appropriate folder to upload files.
4. Click **OK**.
   A confirmation dialog box is displayed.
5. Click **OK**.
   The **NEW DOCUMENT** page is displayed.

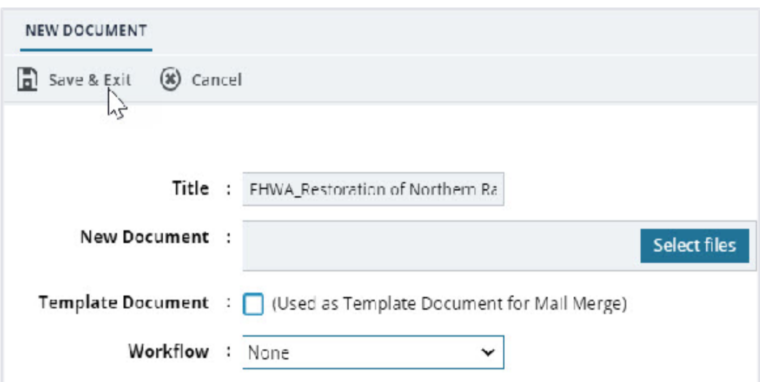


Figure 136: New Document Page

6. To upload files, in the **New Document** section, drag and drop the appropriate files.
   On uploading and saving the files, the files are uploaded to the selected folder in the Folder drop-down list and linked to the respective form.
7. In the **Title** column, enter the titles for the linked files.

Linking a File to a Form – External Document Option

To link a file to an external storage system, perform the following steps:

1. In the **ATTACHMENTS** section, click **Link Document**.

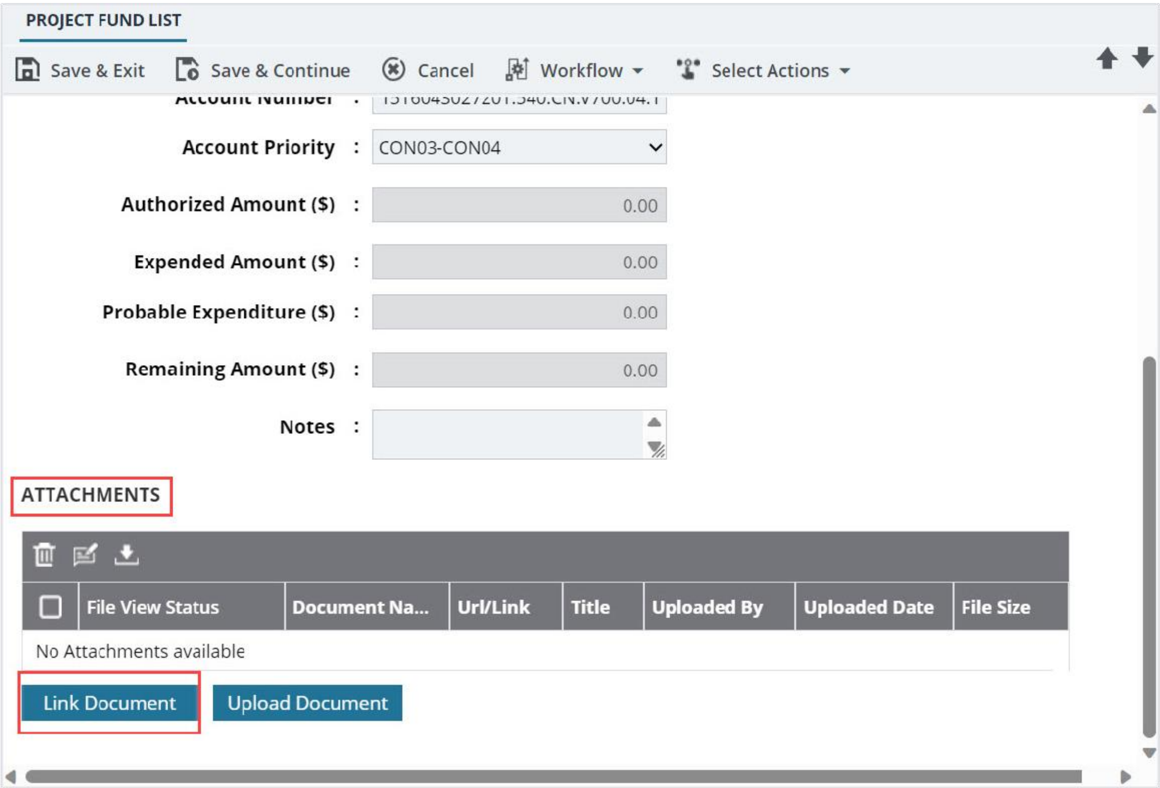


Figure 137: Using Link Document Option

2. Click **External Document**.

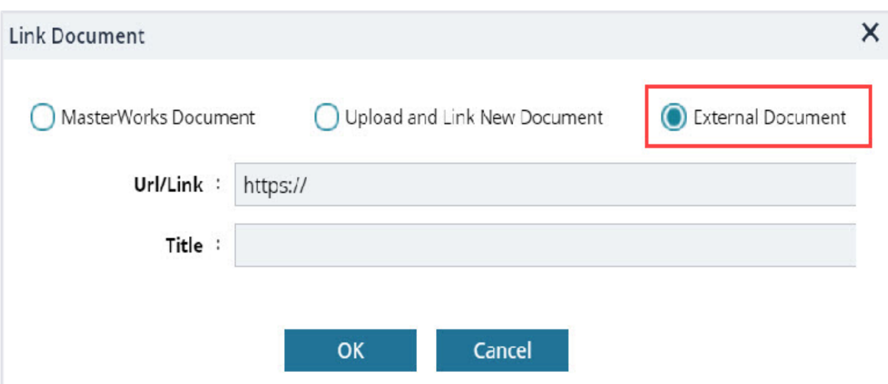


Figure 138: Using External Document Option

3. In the **URL/Link** box, enter the URL to the file in the external storage system.
4. In the **Title** box, enter the title for the linked file.
5. Click **OK**.

   The file is linked to the form and is displayed in the **ATTACHMENTS** section.

4.1.2. Accessing and Downloading Attached Files

You can access files that are attached to forms and workflows. The **Project Fund List** form is used for illustration purposes.

- To access files attached to a form (from the list page):

1. In the navigation pane, click the required form.
   The form list page is displayed.

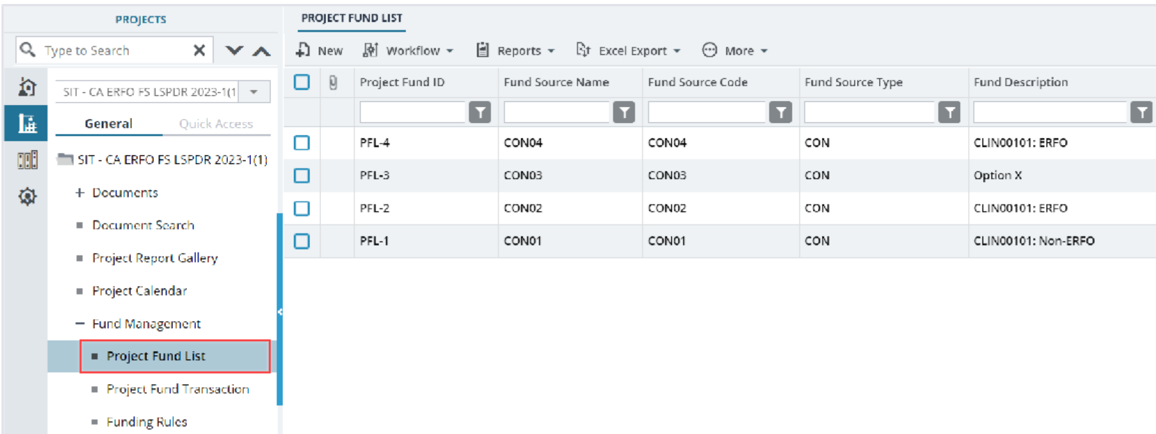


Figure 139: Project Fund List Page

2. Click **More**, and then click **Attachments**.

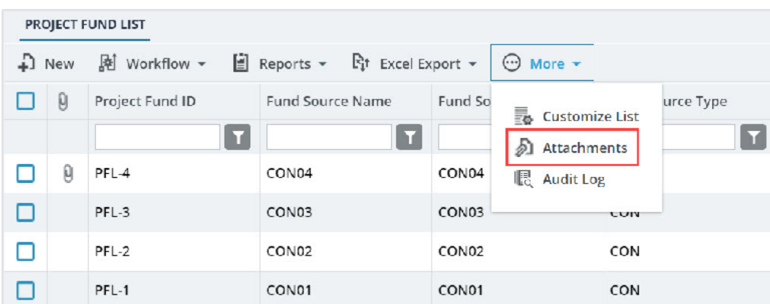


Figure 140: Using Attachments Option

The attachments of all the records are listed.

Figure 141: List of Attachments

Optionally, to view files attached to a record, select the appropriate record and then click **Attachments**.

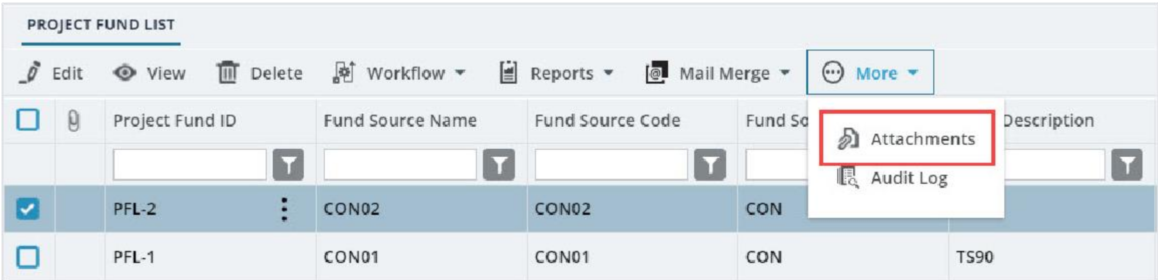


Figure 142: Viewing Files Attached to a Record

- To access and download files attached to a record (from the details page):

1. In the navigation pane, click the appropriate form.
   The form list page is displayed.

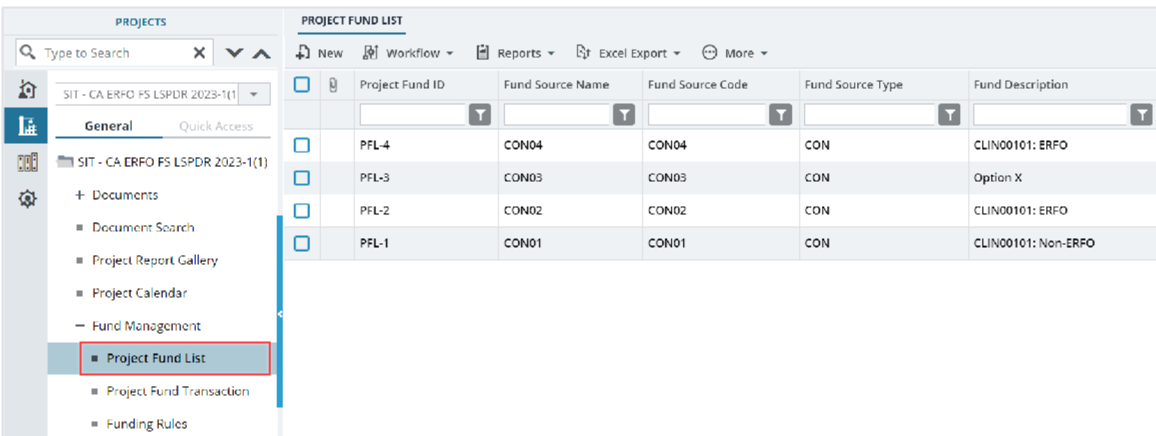


Figure 143: Project Fund List Page

2. In the list page, select the appropriate record, and then click **View**.

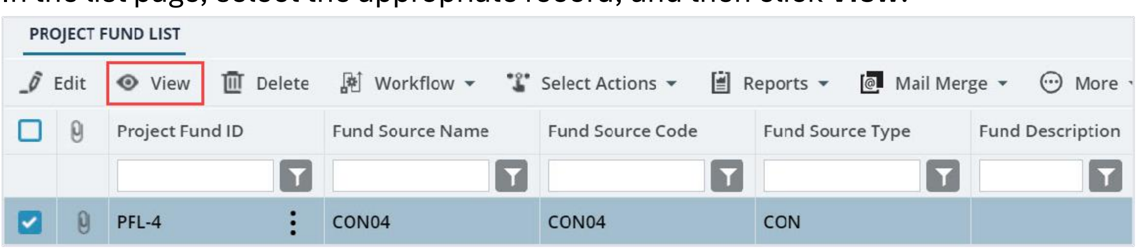


Figure 144: Using View Option

The form details page is displayed.

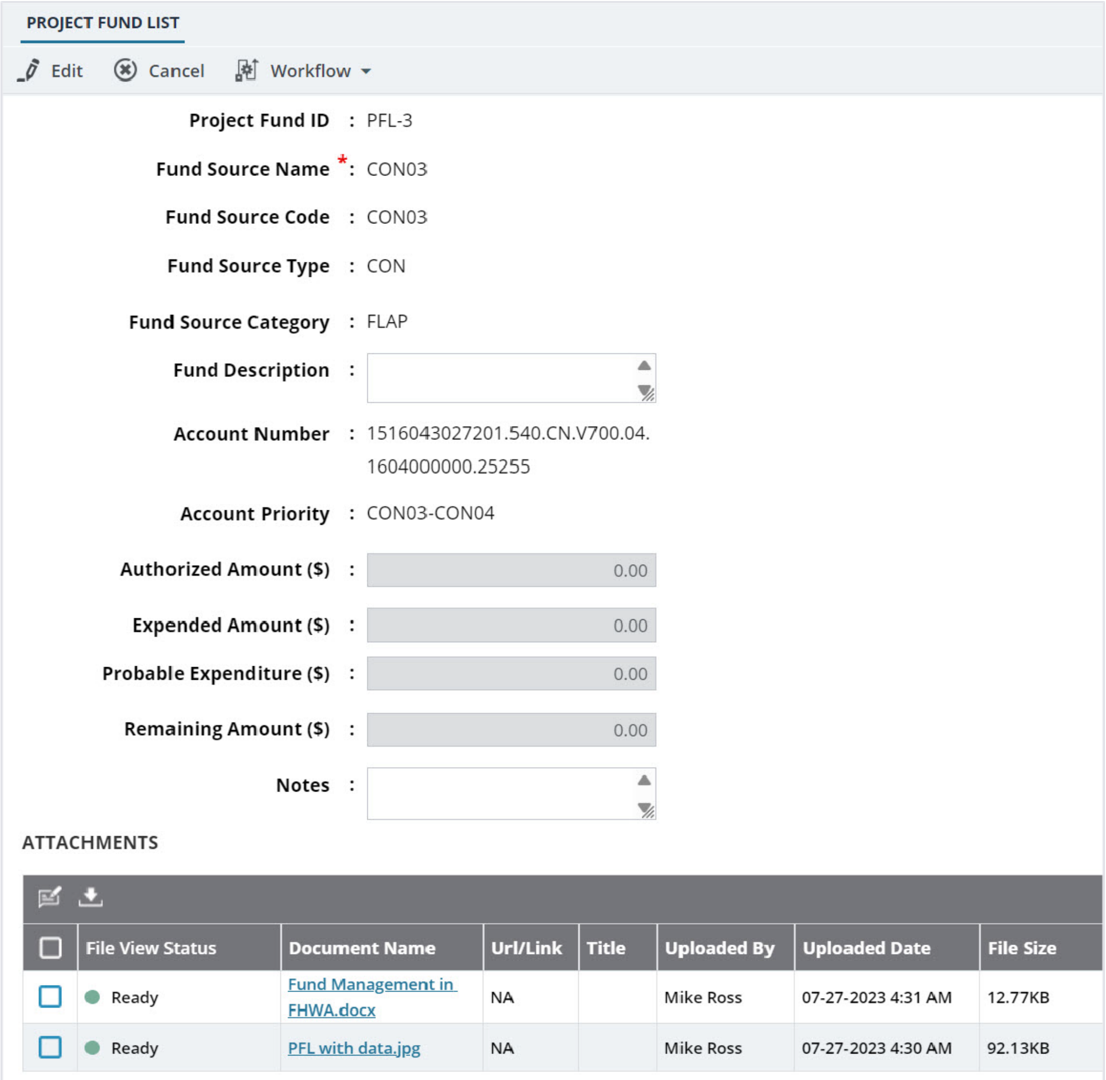


Figure 145: Project Fund List Page in View Mode

3. In the **ATTACHMENTS** section, select the appropriate files, and then click .

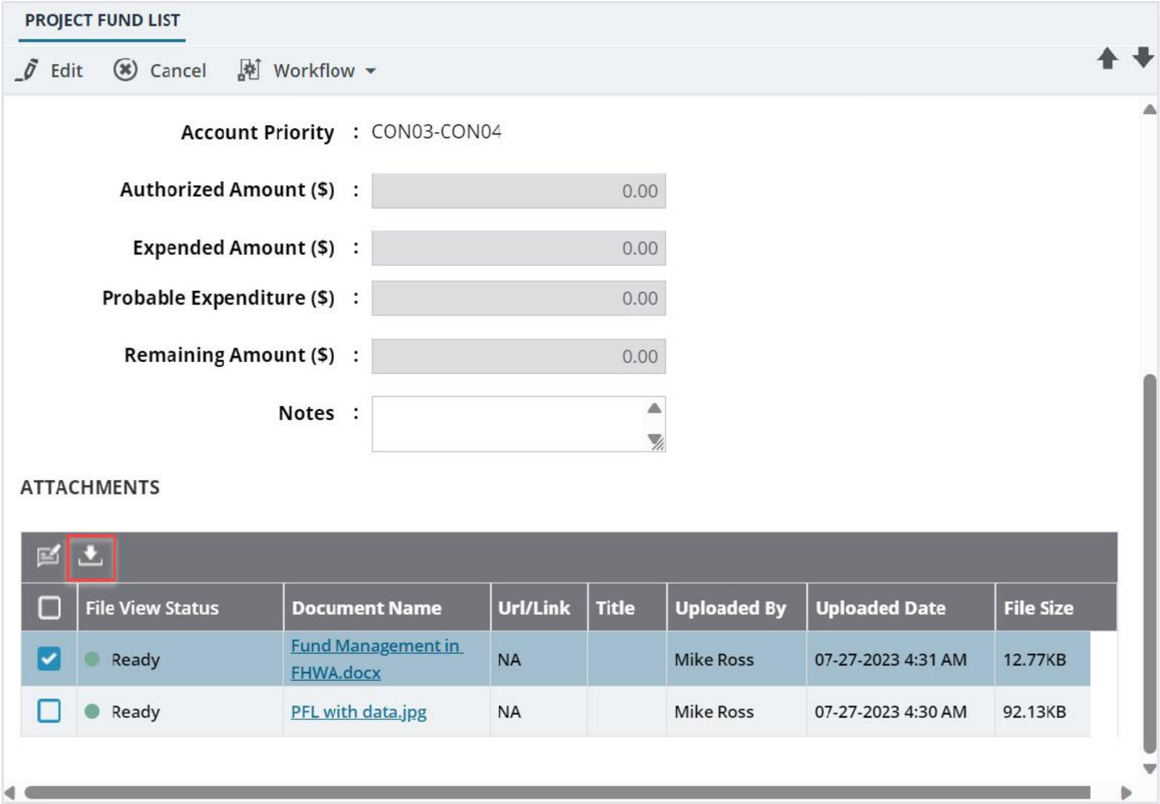


Figure 146: Using Download Option

- To access and download files attached to a workflow:
  1. In the navigation pane, click the appropriate form.

     The form list page is displayed.

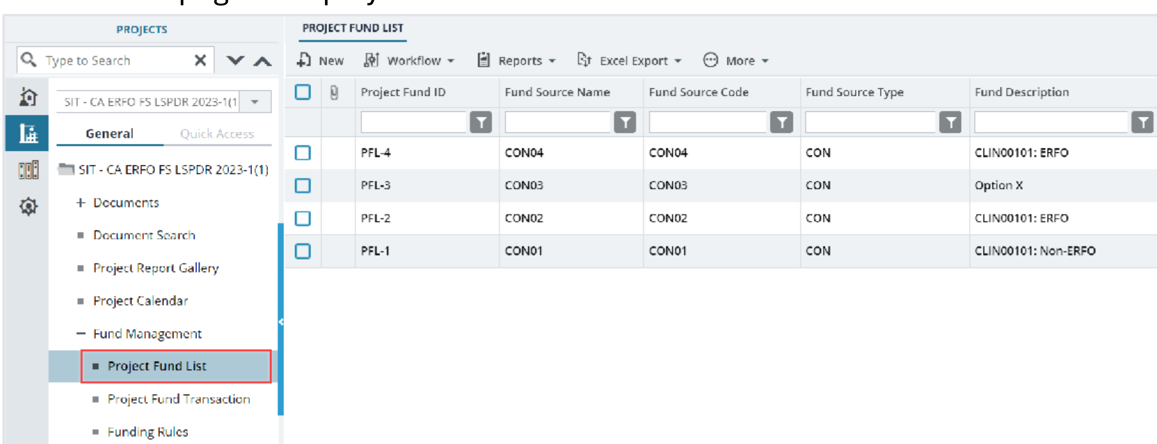


Figure 147: Project Fund List Page

2. In the list page, select the appropriate record.
3. In the **WORKFLOW** group, click **History**.

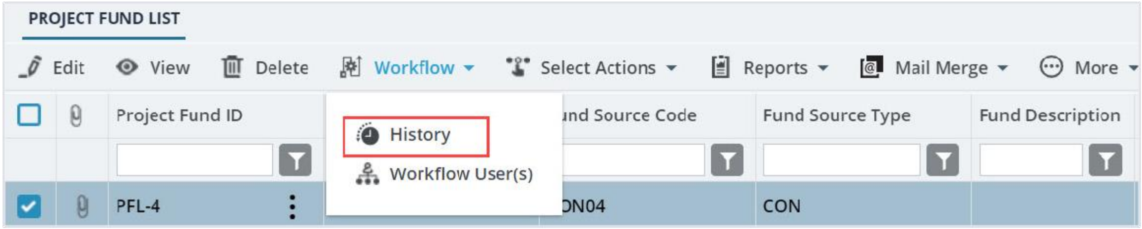


Figure 148: Using History Option

The **Workflow Status & History** dialog box is displayed.

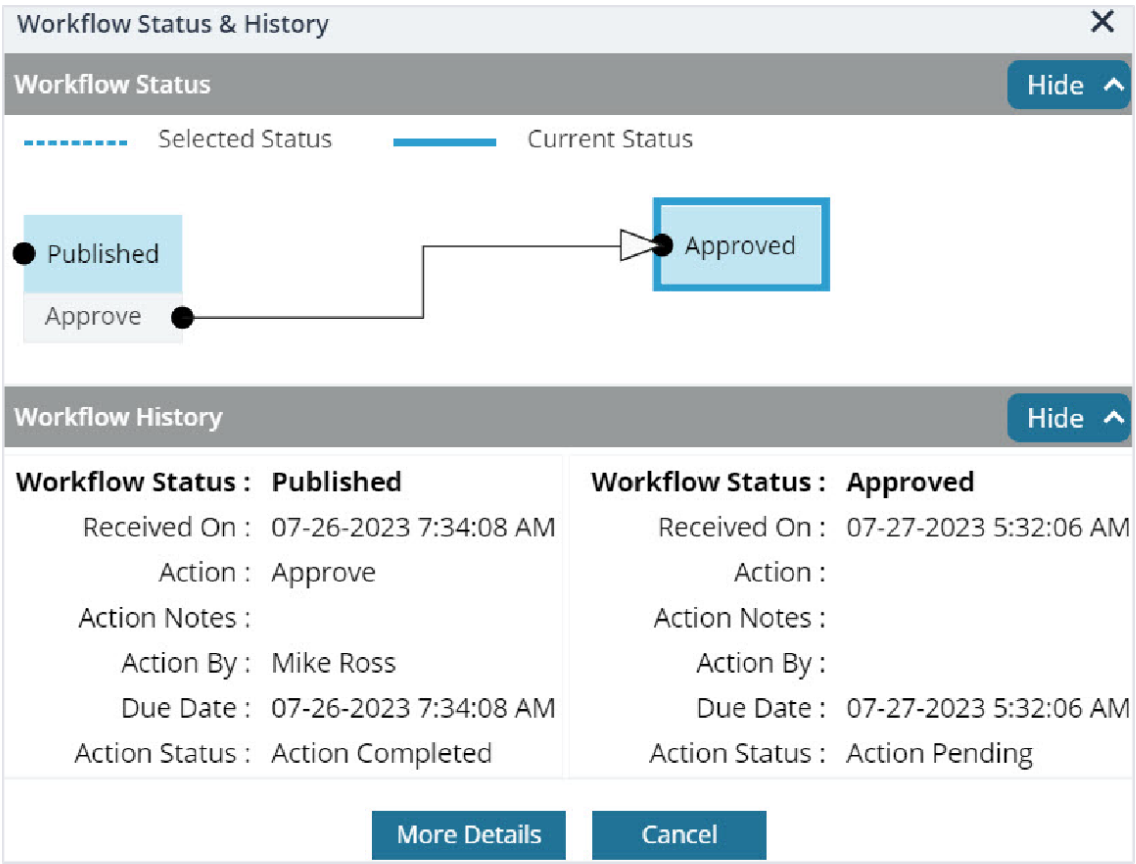


Figure 149: Workflow Status & History Dialog Box

4. To view all the attachments and complete workflow history, click **More Details**.

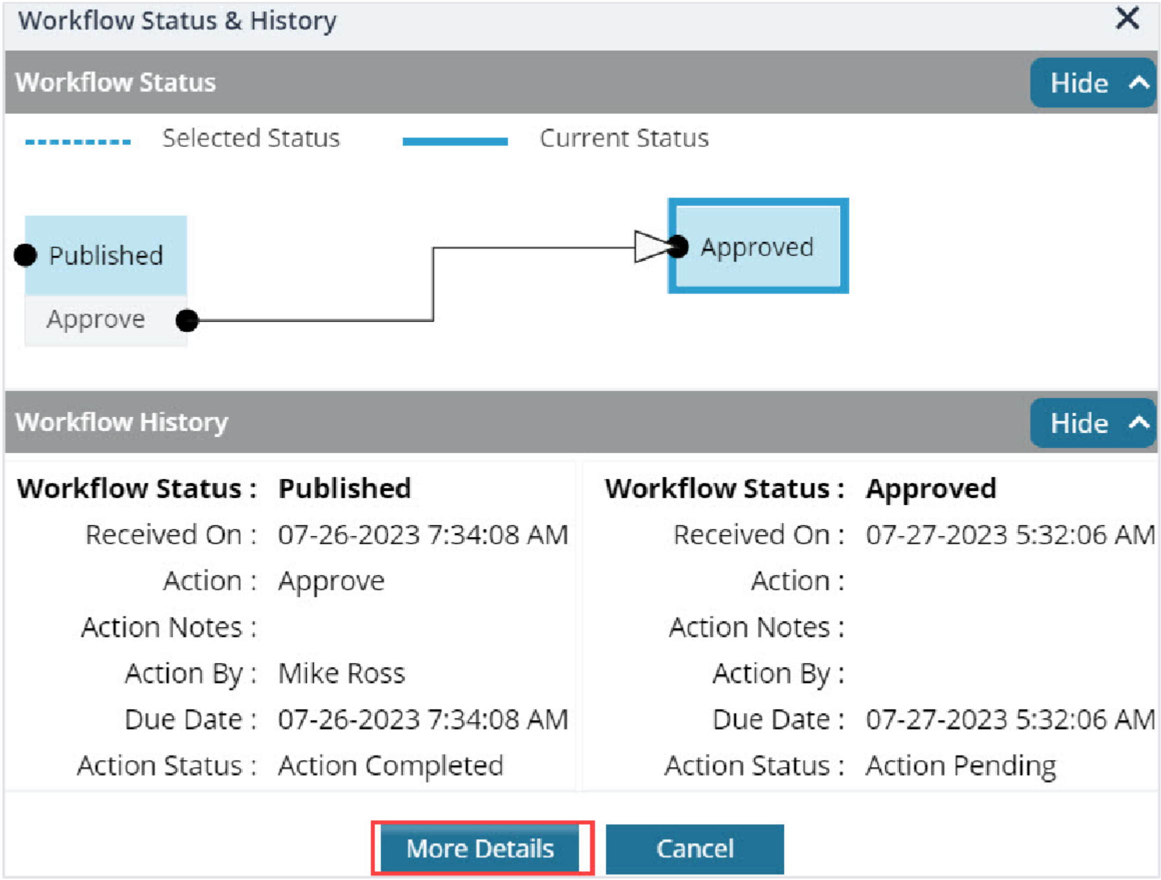


Figure 150: Using More Details Option

The **History** page is displayed.

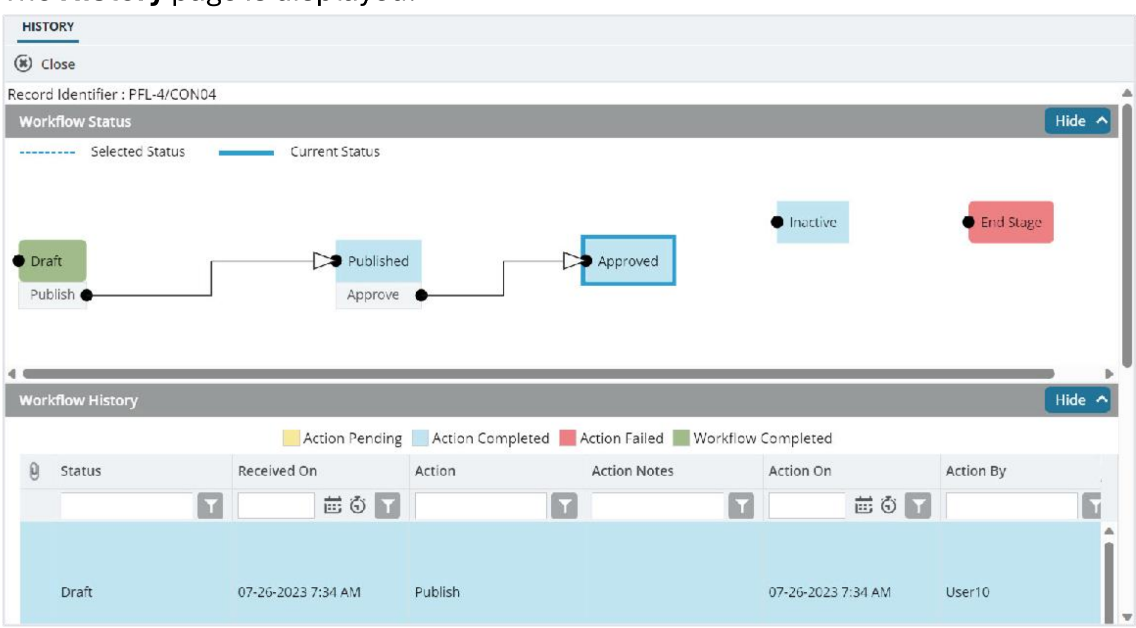


Figure 151: History Page

5. In the **ATTACHMENTS** section, select the appropriate documents, and then click .

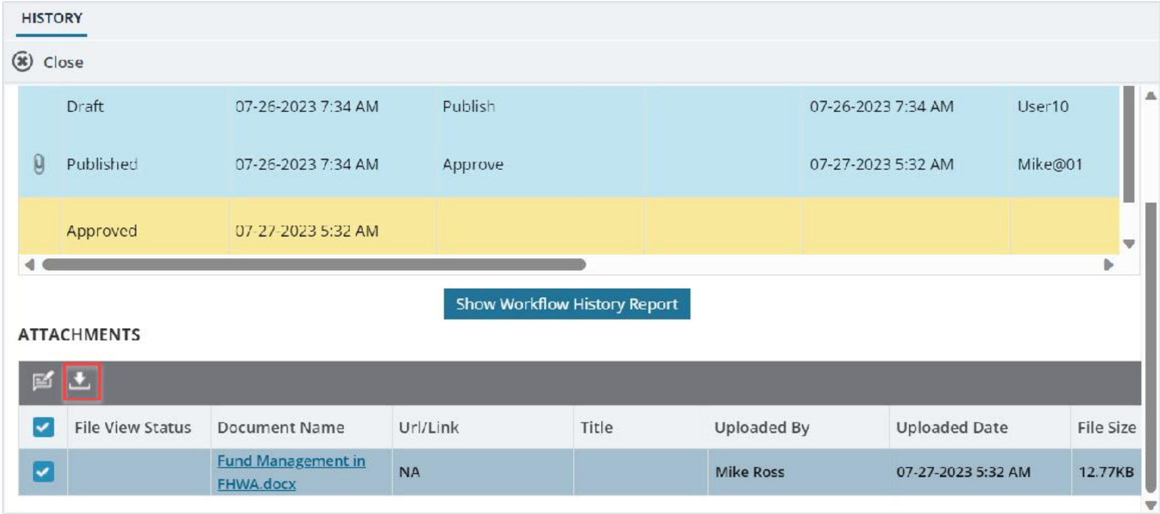


Figure 152: Using Download Option

4.1.3. Deleting Attached Files

Prerequisites

You can delete a file only if you have attached it.

Overview

You can delete files that are attached to forms. You cannot delete files that are attached while performing a workflow action.

The **Project Fund List** form is used for illustration purposes.

Steps

1. To access the appropriate file attached to a form to be deleted, perform the following steps:
    a. In the navigation pane, click the appropriate form.
    The form list page is displayed.

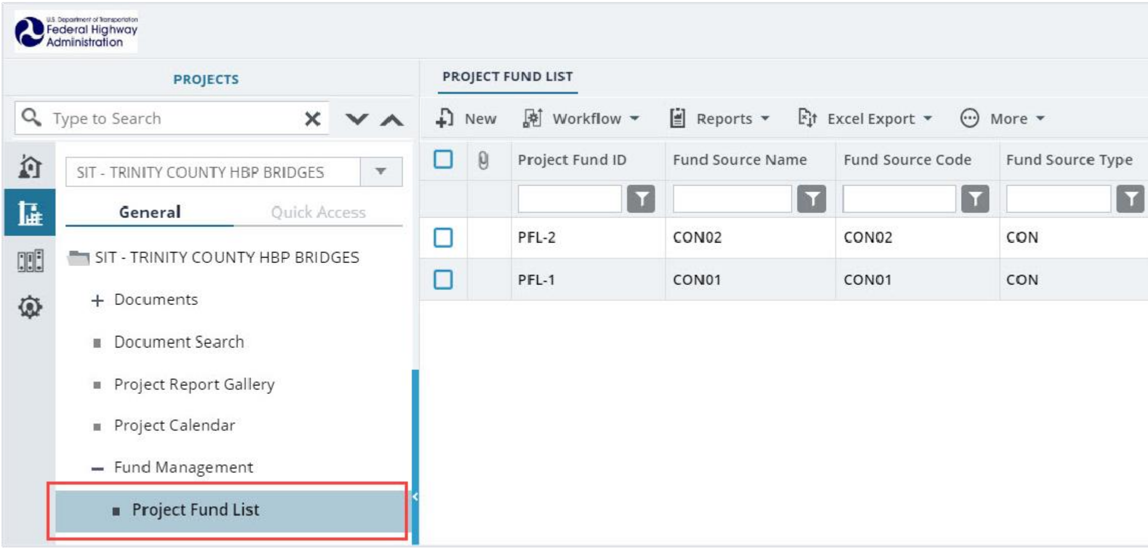


Figure 153: Project Fund List Page

    b. Click **More**, and then click **Attachments**.
    The attachments of all the records are listed.

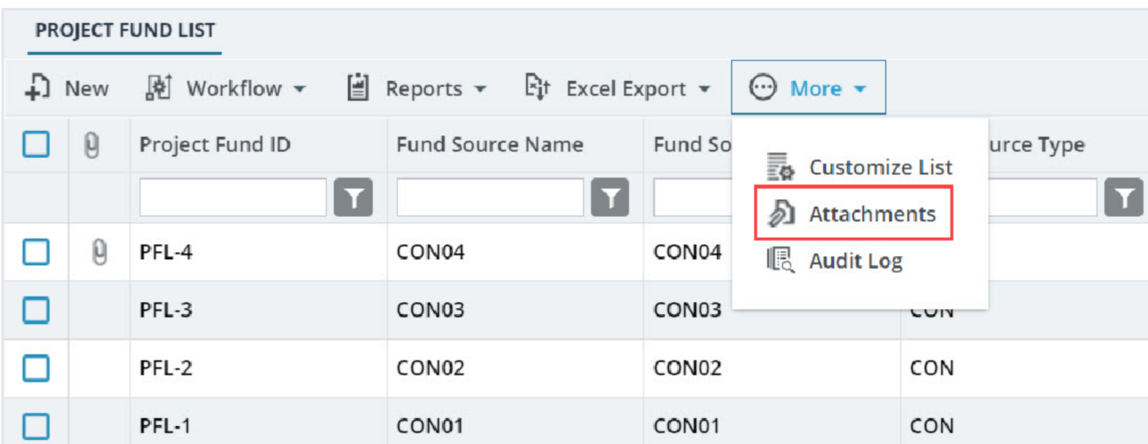


Figure 154: Using Attachments Option

Various document management features are available for attachments.

Figure 155: List of Attachments

2. To delete an attachment, select the appropriate file, and then click .

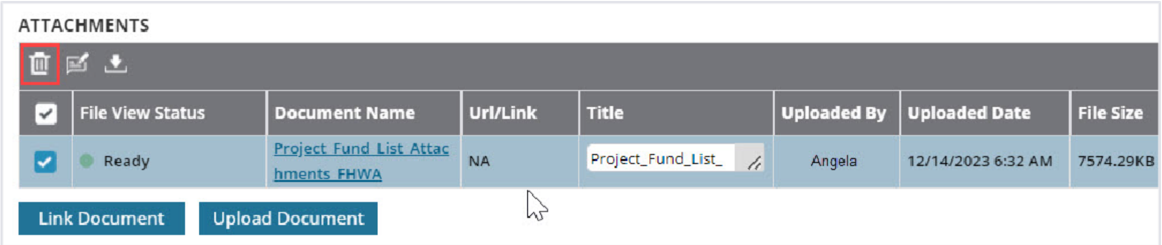


Figure 156: Using Delete Option

4.2. Importing Form Details from an Excel Workbook

You can perform the following tasks using a Microsoft Excel workbook:

- 4.2.1. Create multiple records simultaneously.
  You can create multiple form records by importing form information from a Microsoft Excel workbook to the form.
- 4.2.2. Update details of multiple records simultaneously.
  You can update form information of multiple records simultaneously by importing form information from a Microsoft Excel workbook to the form.

The template to upload or update information of multiple records to a form is downloaded as a Microsoft Excel workbook from the list page of the form. The Excel template workbook is updated with the form information and is uploaded back to the form.

The **Instructions** tab in the Microsoft Excel workbook template provides information on updating the template for uploading multiple records.

Note: The following pointers enable you to upload or update form information correctly:

- For lists and selection options, ensure the correct spelling of the option as defined in the application is entered
- For Yes/No options, enter Yes or No in the relevant columns
- For updating form information, ensure the Internal ID refers correctly to the intended record
- You cannot delete records or upload attachments using an Excel workbook
- Calculated fields will not be available in the template
- Validation rules for data entered in the template and the values entered in the form are the same

4.2.1. Uploading Form Details in Bulk

Steps

1. In the navigation pane, click a form.
   The selected form list page is displayed.

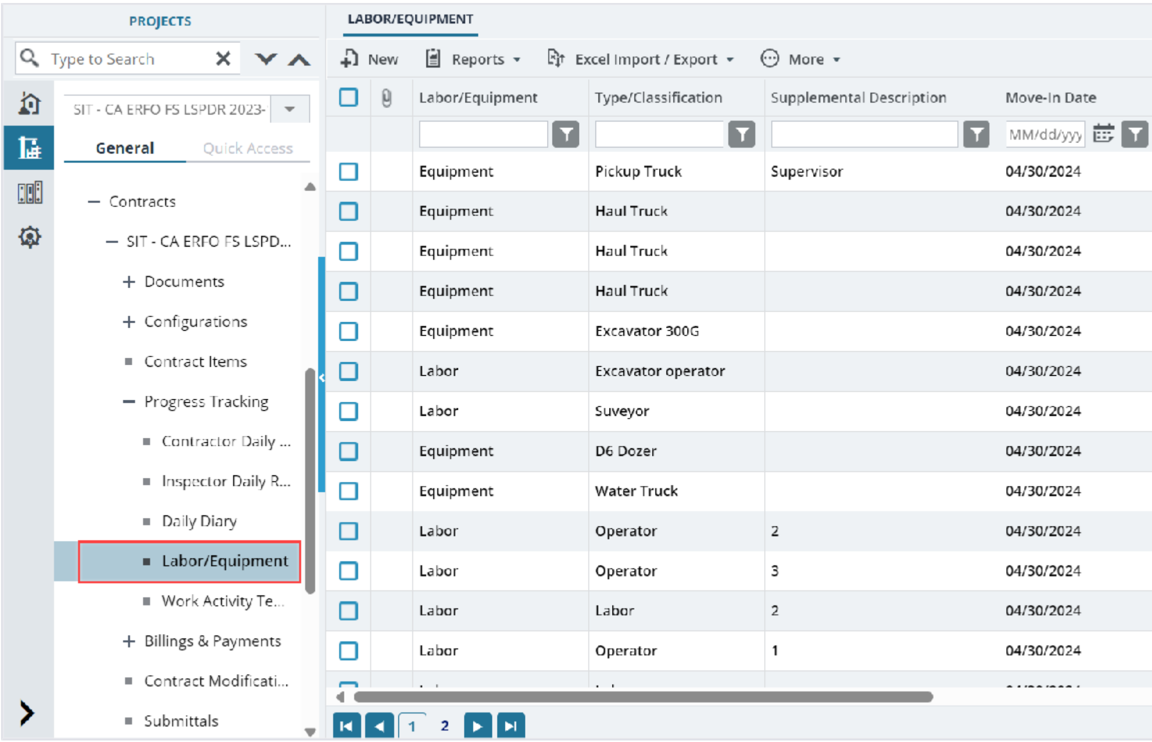


Figure 157: List Page

2. In the tool bar, click **Excel Import / Export**.

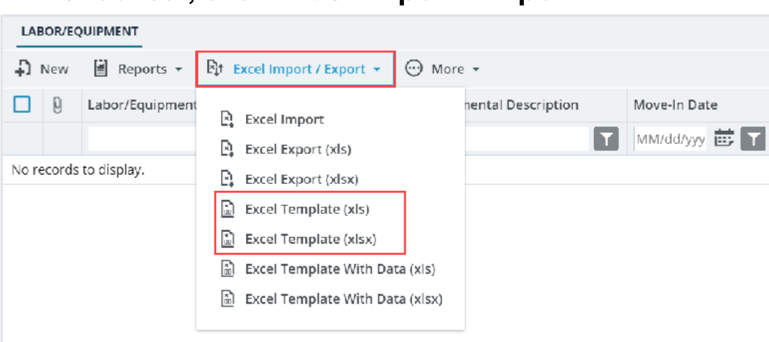


Figure 158: Excel Import / Export

3. To export the form template to an Excel workbook, click **Excel Template**.
   The Excel workbook template is downloaded to the local storage.
4. Open the saved Excel workbook template, enter form details in the various columns, and save the updated Excel workbook. For information on column details, refer to the corresponding topic on creation of the form.
   Note: The first column with the heading **Internal ID** must not be filled in.

5. In the list page, click **Excel Import / Export**, and then click **Excel Import**.

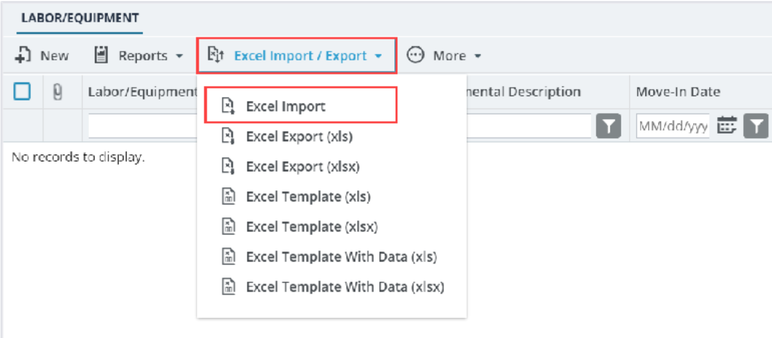


Figure 159: Excel Import

The **IMPORT DETAILS FROM EXCEL FILE** page is displayed.

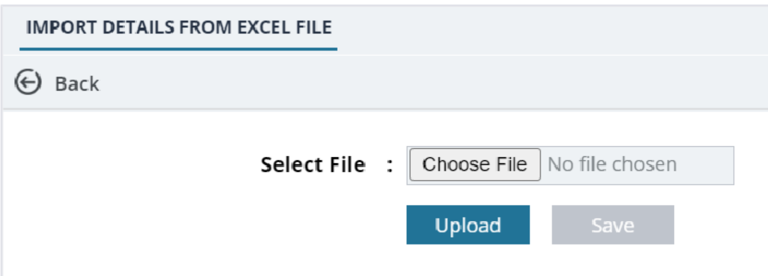


Figure 160: Import Details From Excel File

6. Click **Choose File** to select the workbook with updated form information.
   The **Choose File to Upload** dialog box is displayed.

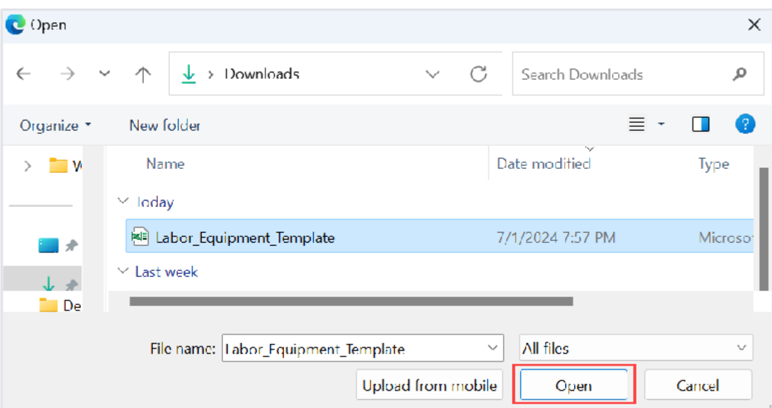


Figure 161: File to Upload

7. Select the required workbook, and then click **Open**.

8. Click **Upload** to import form information from the Excel workbook to the form.

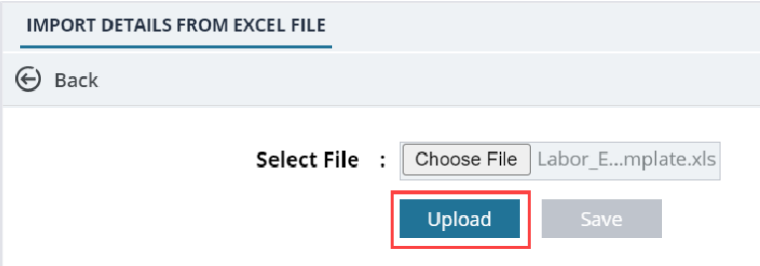


Figure 162: Upload the Excel

On successful import, the success message is displayed.

9. On encountering errors while importing an Excel workbook, perform the following steps:
   a. In the toolbar, click **Error Log**.

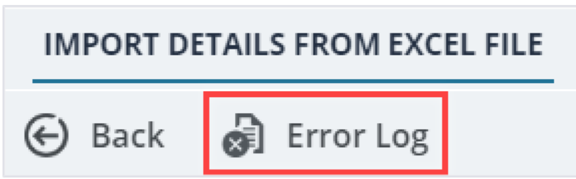


Figure 163: Error Log Option

   The error log workbook is downloaded to your local storage.

   b. Open the workbook to view the errors in the various columns.
   Error messages in the cells are highlighted in red. Tabs in the workbook are also highlighted to indicate the presence of errors.
   c. Open the Excel workbook with form information and modify form details.
   Optionally, you can make relevant corrections in the error log workbook and upload it.
   d. Save and upload the Excel workbook to import the updated information.
10. Click **Save**.
   The items in the Excel workbook are uploaded to the list page.

4.2.2. Updating Form Details in Bulk

Steps

1. In the navigation pane, click a form.
   The selected form list page is displayed.

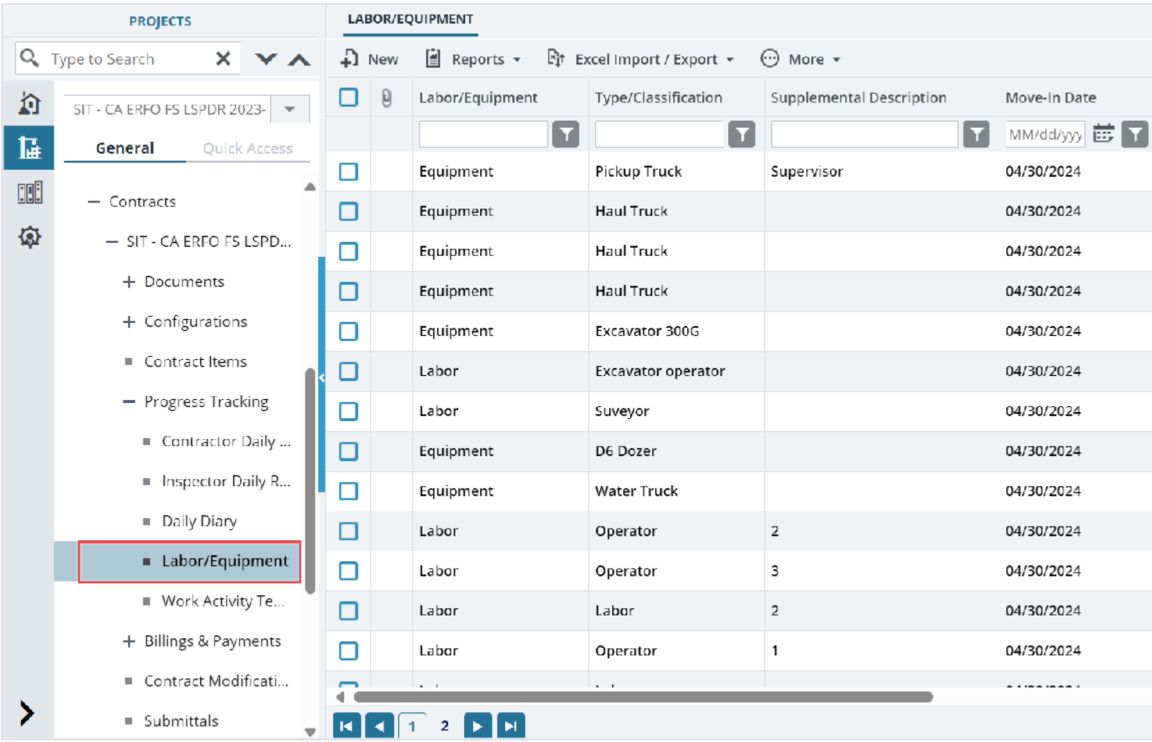


Figure 164: List Page

2. In the tool bar, click **Excel Import / Export**.

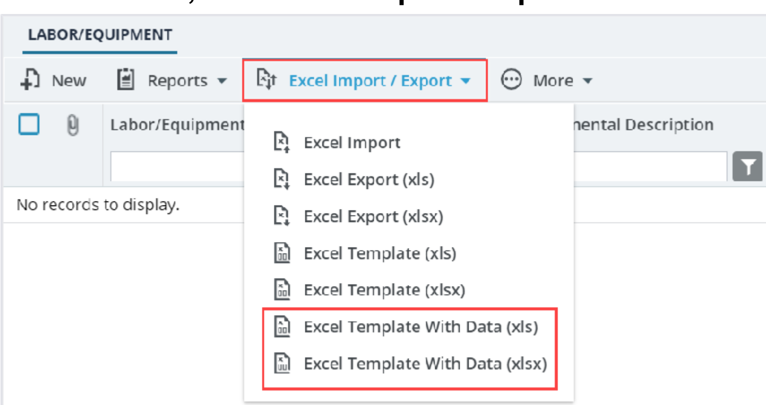


Figure 165: Excel Template With data

3. Click **Excel Template With Data (xls)** or **Excel Template With Data (xlsx)** to export the form details to an Excel workbook.
   The Excel workbook template is downloaded to the local storage.
4. To update existing information, perform the following steps:
   a. Open the saved Excel workbook.

The first column named **InternalID** displays the unique identification code for the corresponding record of the form.

b. Update form details in the various columns, and delete the records that need not be updated. For information on column details, refer the corresponding topic on creation of the form.

Note: Deleting a record from the Excel workbook does not delete the record in the form.

c. Save the updated Excel workbook.

Note: To create new form records, in the same Excel workbook, do not enter information in the **Internal ID** column, and enter all other required and mandatory columns.

5. In the list page, click **Excel Import / Export**, and then click **Excel Import**.

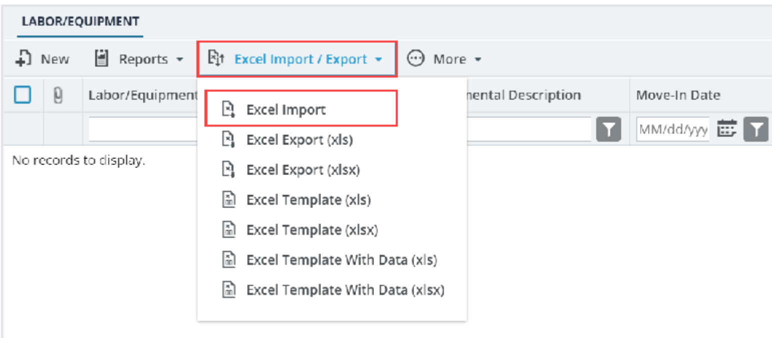


Figure 166: Excel Import

The **IMPORT DETAILS FROM EXCEL FILE** page is displayed.

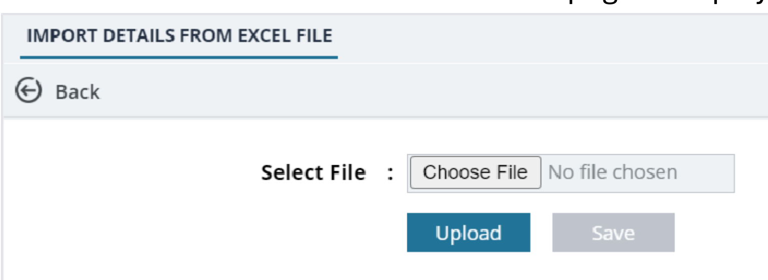


Figure 167: Import Details from Excel File

6. Click **Choose File** to select the workbook with updated form information.
   The **Choose File to Upload** dialog box is displayed.
7. Select the required workbook, and then click **Open**.
8. Click **Upload** to import form information from the Excel workbook to the form.
   On successful import, the success message is displayed.
9. On encountering errors while importing an Excel workbook, perform the following steps:
   a. In the toolbar, click **Error Log**.

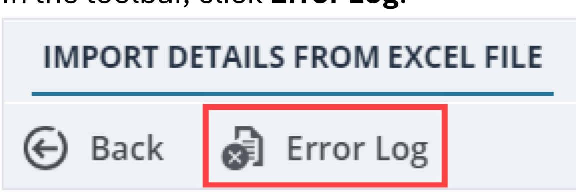


Figure 168: Error Log Option

The error log workbook is downloaded to your local storage.

b. Open the workbook to view the errors in the various columns.

Error messages in the cells are highlighted in red. Tabs in the workbook are also highlighted to indicate the presence of errors.

c. Open the Excel workbook with form information and modify form details.
Optionally, you can make relevant corrections in the error log workbook and upload it.
d. Save and upload the Excel workbook to import the updated information.

10. Click **Save**.
The items in the uploaded Excel workbook are uploaded to the list page.