



Estimate Integration to Cloud Platform





Changelog

This changelog contains only significant or other notable changes to the document revision. Editorial or minor changes that do not affect the context of the document are not included in the changelog.

Rev	Date	Description
1.0	30-AUG-2021	Initial publication.
2.0	08-SEP-2021	Cloud Platform naming schema changes throughout document.
3.0	27-SEP-2021	Additional content added to Data Included and Excluded from Estimate.
4.0	31-May-2022	Verbiage added to tags in Estimate and CE Mhr calculations.
5.0	10-MAY-2023	Removed unique resources to a cost item verbiage. Added schedule id, start date, finish date to Considerations under CBS cost items, in Data Included and Excluded from Estimate. Added cost items with cost source of detail, pay hours are used for current estimate manhours, and not work hours.
6.0	31-MAY-2023	Added verbiage about Platform phase must be in Execution when publishing.
7.0	10-AUG-2033	Added verbiage about Country and State fields for Cloud are not editable.
8.0	21-Feb-2024	Added a 'Note' to page 9 for On-Premise full import active status projects.

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Introduction

This document provides guidance and requirements for the settings in the Estimate job file, the Cloud Platform and Control product to successfully publish data to Cloud Platform and Control. Details are included for both the Publish to a New Project and Publish to an Active Project (Selective Import) processes. It is important to note that some settings will produce an error on import if improperly configured and others may result in a partial import. Validation of the imported data in Cloud Platform and Control is always recommended prior to budget lock or setting the project as active in Control.

Summary of required integration components

Prerequisites

The following components are required for installation when setting up the Project Suite integration.

Project Suite AAD Application IDs:

- AAD Native App Client ID
- AAD Web App Client ID
- AAD Tenant ID
- HD API
- HD API Web Service
- HD Data Provider

The user installing these applications must have System Administrator privileges.

Install Estimate Services

The following services must be installed and running.

InEight HD version 18.2:

- BID-BUILD Server
- BID-BUILD HD Data Provider
- BID-BUILD API Server
- BID-BUILD Web Server

InEight Estimate version 19.1 and newer:

- InEight Estimate Server
- InEight Estimate Data Provider
- InEight Estimate API Server
- InEight Estimate Web Server



Configure Estimate

The following attributes are required to be populated for the Conformed Budget workflow.

• BidBuildServer.exe.config

Budget Load from Estimate to Control -

HDWebServiceHost.exe.config

The files must be updated to configure the link between Estimate and Cloud Platform.

They can be foundin the installation directory for Estimate. Depending on your version, this is the default installation folder:

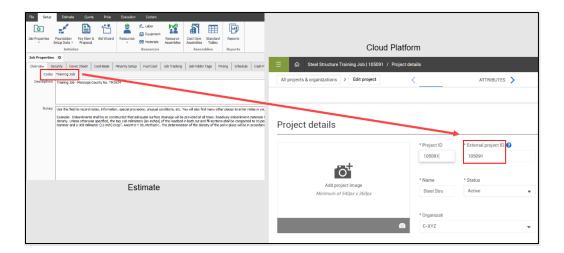
- 18.2 and prior: C:\Program Files (x86)\BIDBUILD
- 19.1 and newer: C:\Program Files\InEight\InEight Estimate

Estimate Setup Requirements

The use of this interface has requirements and validations that are required to setup, prior to sending a job to Cloud Platform and Control.

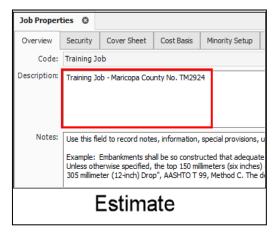
Job Properties Overview Tab

In the Job Properties Overview tab, the Job Code in Estimate *must* match the Cloud Platform External Project ID. Check for a case-sensitive name in the Code field.





In the Job Properties Overview tab, the Job Description field must be filled out.

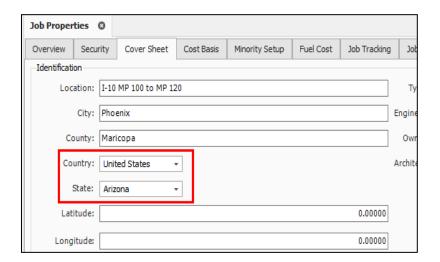


Job Properties Cover Sheet Tab

In the Job Properties Cover Sheet tab, Country and State fields must be entered using the two-letter ISOcode for the country and state/region in question (for example, US/AZ).

NOTE:

You cannot use the Estimate default of United States. For Country, you must enter US. For State, you must enter the two-letter abbreviation for the state in question.



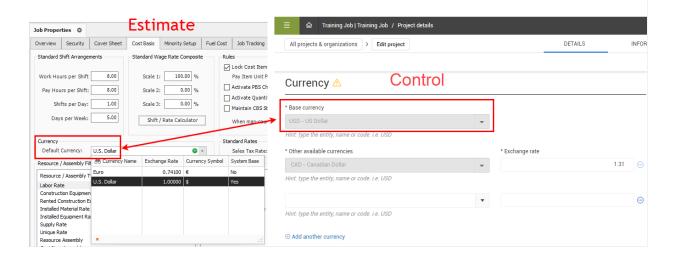
NOTE:

The Country and State fields for Estimate in the Cloud are not editable, as this data is maintained in InEight Platform.



Job Properties Cost Basis Tab

In the Job Properties Cost Basis tab, under the Currency section, check the default currency. The default currency must match the project base currency for the project in Cloud Platform. Make sure the currency symbol descriptions match in both Estimate and Control. If the currency symbol is in AUS dollars in Estimate, in must be in AUS dollars in Control and not U.S. dollars.





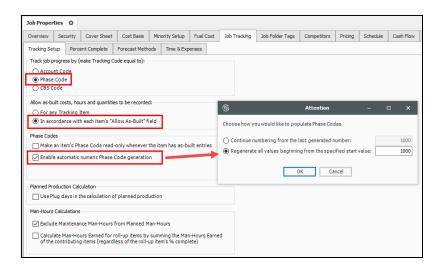
Job Properties Job Tracking Tab

1. Enable Job Tracking for Phase Code.

NOTE:

Project Suite only allows the tracking of progress by Phase Code. The Phase Code column will need to be populated with the required codes for progress tracking.

2. Select the radio button to enable In Accordance with each item's "Allow As Built" field.

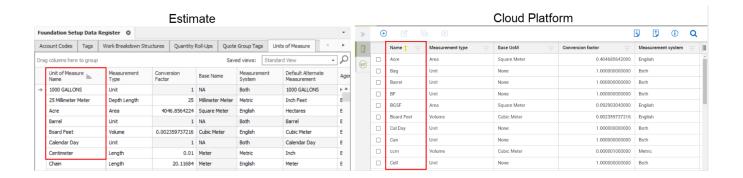


Foundation Setup Data Register

Unit of Measure Names must exist in both Estimate and Cloud Platform.

NOTE:

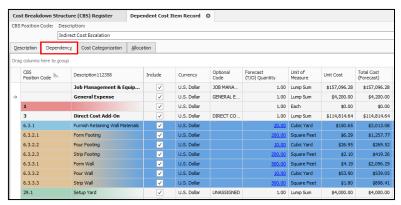
You must be mindful with syntax. The UOM Names in Estimate must match the UOM Names in Cloud Platform. A mismatch on the account code's UOM will cause the job publish to fail.





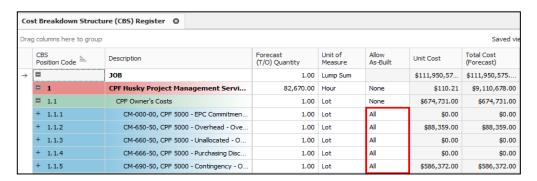
Cost Breakdown Structure Register

1. Remove Dependent cost items (cost items that depend on other costs, prices, or hours).



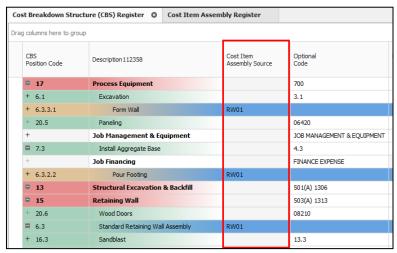
<u>Click here</u> for more information on dependent cost items on learn.ineight.com.

2. In the CBS Register, filter to the Terminal Cost Items.



Set the Allow as-Built column to the values required for progress tracking in Control.

- 3. You must break all cost item assembly links.
 - Resource Assemblies will not come over to Control.
 - Add Organization Categories.



• This is not required, but it is an option to add Labor Resource



Resource Rate Register

Estimate refers to labor, equipment and material items as resources. Resources are the basic building blocks used to detail the costs in your estimates.

Estimate organizes resources into seven types:

Name		Description	
1	Labor	The human resources that perform direct or indirect work. Direct labor is typically classified by trade (e.g., pipefitters, electricians, iron workers) and title (e.g., foreman, journeyman, laborer).	
2	Construction Equipment	Owned construction equipment.	
3	Rented Construction Equipment	Construction equipment rented from a third party.	
4	Installed Materials	Materials that will remain installed on site after the project is completed, (e.g., concrete, piping, aggregate).	
5	Installed Equipment	Equipment that will remain installed on site after the project is completed, (e.g., boilers, heat exchangers, vessels, cooling towers).	
6	Supplies	Expendable items that will not be permanently installed (e.g., small tools, consumables).	

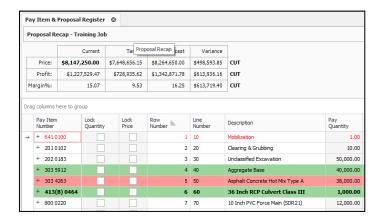


7	Unique	Resources that are of a "unique" nature and do not fit well into the other types (e.g., dump fees, hauling charges and equipment rented by the month).

Optional Estimate Setups

Pay Item and Proposal Register

This is not required, but you have the option to set up pay items from Estimate if preferred.



Job Properties Tab

If Phase Code values are not set by external systems for progress tracking **Enable automatic numeric Phase Code generation** can be used to generate codes within Estimate. When an attention box appears, choose how you would like to populate Phase Codes (For example, 1000).

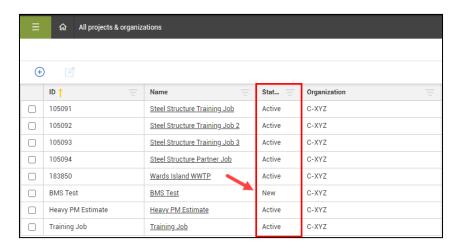
Account Codes

Verify that the Account Code structure in Estimate has been finalized. This is critical as any Account codes used in the Estimate file are required to be established in Control prior to publish. Account Code use is optional but if account codes are used that are not in Cloud Platform the publish will fail.

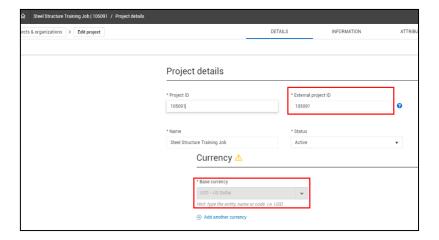


Cloud Platform Setup Requirements

1. In Cloud platform, project status must be set to **New** before importing.



- 2. The External Project ID must be same as the Estimate Job ID.
- 3. Currency in Cloud Platform must match with Estimate currency.



NOTE:

For Estimate On-Premise it is not recommended to complete a full import on projects in the active status as this can cause complications with the existing items in your project.

NOTE

It is not required to have the account codes in Estimate. The account codes can be applied to the WBS items in Control after the publish.

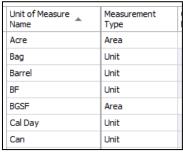


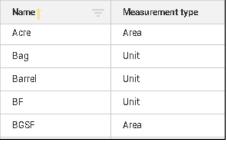
Prerequisites for Cloud Platform before publishing

- 1. Create a new project.
 - a. Project ID enter the Project ID
 - b. External Project ID enter the External Project ID (must match the Job ID in Estimate)
 - c. Project Name does not have to match the ID, or the project name in Estimate
 - d. Status set to **New**
 - e. Phase The phase status must be in **Execution** phase prior to publishing
 - f. Organization select an organization from the list



- g. Currency set the project currency to match the currency set for the job in Estimate.
- 2. Click **Save** to create the project.
 - a. You must create a project, and the External Project ID in Cloud Platform must match the Job Code in Estimate.
 - b. All the units of measure assigned to cost items and resources must match the units of measure in Cloud Platform. It is recommended that you open the Job's Foundation and Setup Data register and check, line by line, the units of measure in both systems.





c. The project must have a status of New.



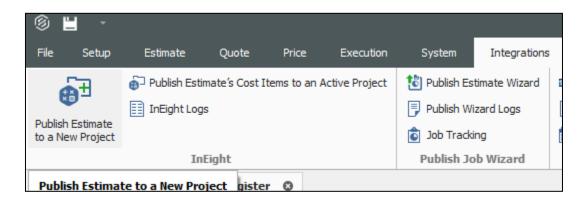


Publishing to Cloud Platform Process

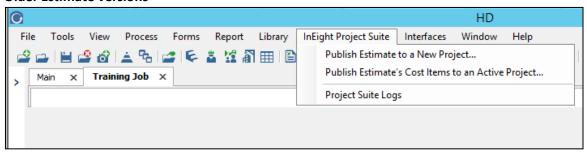
Use the following step-by-step to publish a job to Cloud Platform.

- 1. In Estimate, open the job you want to publish.
- 2. Select the Integrations ribbon tab, and then select Publish Estimate to a New Project.

Newer Estimate versions



Older Estimate versions



3. If the send is successful, a pop-up dialog box appears stating the data has been sent.



NOTE:

There's no validation during the send operation from Estimate. if the job is successfully received by Cloud Platform, you will receive the above message.



- 4. Once the job is processed, you should receive an email from Cloud Platform. This email should, indicating whether the upload was successful or not.
 - a. You can also check the Import History in Cloud Platform. Detailed steps listed in the Troubleshooting Import History section.



Data Included and Excluded from Estimate

Purpose

Checking the status of the XML import file in Cloud Platform.

Summary

The status of the full import shows if the import is successful, pending, or failed.

Considerations

The full import will not import everything in Estimate. The full import will import your current estimate information. The Estimate XML import will bring over the following information:

- · CBS cost items
 - Control uses pay hours and not work hours when populating current estimate man-hour values, as pay hours drive current estimate costs. You may see differences in current estimate man-hours if pay hour and work hours rules are not aligned. Control uses pay hours to populate current estimate man-hours
 - Forecast takeoff quantity and Current estimate values
 - All attributes on a cost item including:
 - Tags
 - User defined fields
 - Account codes
 - Schedule ID
 - Start Date
 - Finish Date
 - WBS phase code
 - Resources associated to a cost item their attributes and cost
 - CBS hierarchy
 - This includes all cost items in the Cost Breakdown Structure organized in the same order before the import is activated.



- Pay items
- Attributes
 - Tags
 - User Defined
 - Billing Method
- Total Price
- Pay Quantity
- Unit Price
- Forecast T/O Qty
- Estimate Resources
 - Type
 - Billing Rates
 - Costs
 - Attributes
- Master data
 - Tag options
 - Fuel

These attributes will import without an issue if you have the attributes set up correctly in both Estimate, Cloud Platformand Control.

NOTE:

You need to have a project in Cloud Platform set up with the same naming conventions as you havein the Estimate project file you want to import.

The Estimate XML import will not bring over the following information:

- Current budget
- For cost items with a cost source type of detail, the pay hours will be used for the current estimate manhours, not the work hours
- Forecast information
 - Manual If you manually forecast a cost item, the import will not bring over the forecast information to Control. The forecast information in Control will default to the default set in the settings of Control.
 - Non-default forecast methods
- Locked budget
 - o If you have your budget locked in Estimate, the full import does not import your locked budget. Locking your budget is a functionality within Control itself.
- Depending on the version of Estimate and Control you are on, if you have suspended cost items in Estimate may ormay not be handled. In older versions, it is suggested to remove all suspended cost items from Estimate. However, in more recent versions, Control will ignore the suspended and it will not cause an issue with the import.
- If a tag in Estimate is not assigned a register and a specific field, and is also assigned as an option, it will not be brought into Cloud Platform as there is no specific tag to assign the option to.



For example, if Tag 10 was assigned to a tag on the cost item or pay item, it will not display in Cloud Platform, and will not be associated to the cost item or pay item in Control.



• If there are maintenance manhours included from the Estimate to Cloud Platform push, the maintenance manhours may not be included in some of the CE Mhr calculations in Estimate. However, they would be included in CE Mhr calculations in Control.



• If an estimate resource of type rented construction has maintenance against it, the maintenance cost is displayed in the construction equipment cost category in Control. In Estimate it is in the rented equipment cost category.

NOTE:

Some configuration needs to be done on the Estimate side to point to your Project Suite environment. Usually Professional Services configures this.

Troubleshooting Import History

Purpose

Reviewing failed import information.

Summary

The Estimate import can fail. The Cloud Platform Import details show exactly what failed in the Estimate fullimport.

Considerations

On a resource, many failures could be observed if a resource has more than 11 characters in front of the decimal. Cloud Platform only accepts 11,11 for decimal values/numeric values.



A full import could also fail due to an account code assigned in Estimate that is not in the corporate list in project suite. The full import might fail because there is nothing to roll up into the account code.

Quick Steps

- 1. If the full import failed, select the line item with the **project title** of the failed Estimate import.
 - The Import logs appear.
- 2. In the Log level column, select the **inverted pyramid**.
- 3. In the drop down, select **Contains**.
- 4. Type in **Error** in the empty text box to filter down to only errors from the failed import.
 - You can view the full error description in the Exception message column.
 - o In the Import details tab, you can see where the import failed.

NOTE:

An email is sent to you that informs you if the import succeeds or fails based on the email address from your user login information.

- 5. Go to the Descriptor column to see a summarized description of the failed imported item.
- 6. Go to the Status column to see which step Completed or Failed.
- 7. Hover over the **details** in the Message column to see the full description of the failed imported item.

What's Next

See also the selective import topics for more information on importing Estimate cost items to Control.

Troubleshooting AppLogs

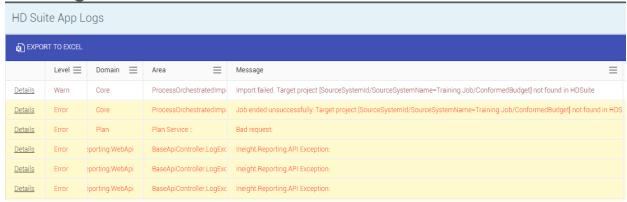
To troubleshoot the send, go to the AppLogs page in Project Suite. You can navigate to the AppLogs based off of the URL in the email you get.

NOTE:

You will need the DevOps Admin role to access the applogs.

In the applogs, you're looking for **Error** level messages (**Warn** level messages can be ignored). The **message** field should indicate the problem:





Job was not created in Suite:



UOM does not exist:

CostitemResource [Plug] referenced Unit of Measure [LT] that was not found in supported Units of measure CostitemResource [Plug]

For account codes and UOMs, clicking on **Details** will open the details page which will list all the missing items:

Message

Job ended unsuccessfully. CostItemResource [Plug] referenced Unit of Measure [LT] that was not found in supported Units of measure CostItemResource [Pluq] referenced Unit of Measure [CF] that was not found in supported Units of measure CostItemResource [Plug] referenced Unit of Measure [TN] that was not found in supported Units of measure CostItemResource [Plug] referenced Unit of Measure [TN] that was not found in supported Units of measure CostItemResource [Plug] referenced Unit of Measure [TN] that was not found in supported Units of measure CostItemResource [Plug] referenced Unit of Measure [TN] that was not found in supported Units of measure CostItemResource [Plug] referenced Unit of Measure [TN] that was not found in supported Units of measure CostItemResource [Plug] referenced Unit of Measure [TN] that was not found in supported Units of measure CostItemResource [Plug] referenced Unit of Measure [TN] that was not found in supported Units of measure CostItemDetail [bd5263578407496f97f472728c2ec73d] referenced Unit of Measure [LT] that was not found in supported Units of measure CostitemDetail [bd5263578407496f97f472728c2ec73d] referenced Unit of Measure [LT] that was not found in supported Units of measure CostItemDetail [bd5263578407496f97f472728c2ec73d] referenced Unit of Measure [LT] that was not found in supported Units of measure CostItemDetail [cd534af7a6cc45ee93d64ed12082e2d9] referenced Unit of Measure [CF] that was not found in supported Units of measure $Cost Item Detail \ [cd534af7a6cc45ee93d64ed12082e2d9] \ referenced \ Unit of \ Measure \ [CF] \ that \ was \ not \ found \ in \ supported \ Units \ of \ measure$ CostItemDetail [cd534af7a6cc45ee93d64ed12082e2d9] referenced Unit of Measure [CF] that was not found in supported Units of measure CostitemDetail [4543dac4f7bd4bd29ae076ce63dc9272] referenced Unit of Measure [TN] that was not found in supported Units of measure

Selective Import Process

- 1. In Estimate, on the main ribbon select the **Integrations** tab.
- 2. Select the **Publish Cost Items to Active Project** button.
 - a. This option activates the selective import from Estimate to Control.
 - b. After selecting this option, the InEight Cloud Integration dialog box appears.
- 3. Select an active project using the **Browse** button.



- a. Selecting browse will generate a list of projects that are active and project that you can actively push anything to.
- b. The project ID from Estimate to Control do not have to match in a selective import.
- 4. Select the headers to order the columns alphabetically by the names of project ID or Project Name.
- 5. Select the project name you want to import to Control.
- 6. Then, select Publish.
 - a. After some time, a dialog box appears stating **Job data sent to InEight Cloud Integration** (Control).
- 7. Click **OK** to close the dialog box.
 - a. The project name from the list will then appear in your Import history as the top line item. Most likely the project is still in a pending status at this point in the import.
 - b. The selective import brings in only new cost items.

NOTE:

We cannot guarantee that the CBS position code in Estimate is the same CBS position code your cost item will occupy in Control. We do keep the same type of hierarchy structure.

For example, if you were importing every cost item from CBS position code 1.2 and below, you would still see that hierarchy. However, it would be placed under the lowest position available in Control. You can then move it around to your desired CBS position.

If you had cost item codes of 1, 2, 3, and 4 in Control and you wanted to import the cost item code 1.2, that cost item would most likely go to a CBS position of 5 unless your settings specified that you cannot create a new level 1 cost item CBS position code.

Data Included and Excluded from Estimate

Purpose

Importing information from Estimate to Control using the selective import option.

Summary

The selective import from Estimate imports your current estimate information into Control. You would activate a selective import to price out a large change order. You would use Estimate to complete the initial estimating and then import some or all the cost items into Control for executing that large change order.



Considerations

The selective import will not import everything in Estimate. This import will import the same attribute information from cost items that the full import brings in. The selective import will bring over the following information:

- Cost item Unit of measure
- Forecast takeoff quantity
- Description
- Resources associated to a cost item
- Tags
- User defined fields
- CBS tag number option
 - As long as you had a valid option in both Estimate and Control, this attribute will be mapped correctly.
- Current Estimate information

The selective import will not bring over the following information:

- CBS position
- WBS phase code if it is auto numbered if it turned off, then it comes over
 - If you have the WBS phase code set to auto numbering, Estimate imports the next WBS phase code in line.
- Current budget will require a budget move or contract adjustment if you want it included
- Forecast method defaults to current estimate

Current budget is not imported as that information requires a contract adjustment or budget move to fill that in unless your budget was still unlocked. Then after you lock your budget, your current budget would be populated. For Forecast and forecast method, Control would default forecast information to current estimate if it is a terminal, roll up, or it is a parent item. Manually forecasted items in Estimate are not imported into Control. The reason is because if you are bringing over your project initially, the expectation is that your forecasting is completed in Control. The expectation for the selective import is that you finished estimating and imported in the information for project execution.

What's Next

See the Checking selective import status topic to view if the import completed, is pending, or failed.

Troubleshooting the Selective Import

Purpose

Checking the selective import status in Control.



Summary

After activating the selective import from Estimate, you can check the status of the import in Control.

Considerations

While an import is in process, you will not be able to add any cost items in the CBS.

Quick Steps

- 1. In Control, select the **Audit Log** tab.
- 2. Then, select **Import history** in the left pane.
 - a. A new entry shows as the top line item. The file name recently imported should include the label .xml at the end of the name as it was an XML file you imported into Control.
 - b. The line item shows a status of Pending and has not updated anything in the CBS yet.
- 3. Select the **Pending** status for the newly imported line item.
 - a. A new data box shows all the cost items in the imported Estimate job.
- 4. Select the cost items you want to keep in Control. If you decided you want to select only a few cost items, select the **check box** next to your desired cost items.
- 5. Then select **Import**. You can also select all using the check box just underneath the Import Columns data box title.
- 6. When a selective import is still pending and you attempt to make those changes, a dialog box appears stating **This project is currently locked due to an import in process**.
 - a. You are prohibited from going into the CBS to add new cost items or activate any syncs because Control is still processing where those cost items can be placed in the hierarchy.
- 7. Go to the Import history to view the import in process.
 - a. The Import history does not refresh automatically. You have to manually refresh your screen to see what the updated process is.

NOTE:

An email is sent to you that informs you if the import succeeds or fails based on the email address from your user login information.

What's Next

See the topic Adjusting the CBS Position to adjust the position of cost items in the CBS hierarchy structure.



Optional Selective Import - Adjusting the CBS Position

Purpose

Adjust the CBS position of cost items from the selective import.

Summary

In the selective import, you can adjust your CBS cost item positions and move your structure around. This is the last step before the import is complete.

Considerations

Some adjustment of the CBS is required as we cannot guarantee that the cost items brought over will show in the same CBS position code numerical order as it was in Estimate. However, it will be structured the same. For example, a level 1 and a level 2 cost items will not change switch the order in which they were organized. Even if those cost items turn into level 3 and level 4 cost items after being imported into Control, they will still appear with the same data order as level 1 and level 2 cost items had in Estimate.

The selective import lets you choose which cost items you want to import to Control. You can see the selective import process in the Import history.

Quick Steps

- After the selective import has completed successfully, a dialog box appears stating Import complete. Would you like to adjust the CBS position for the updated and/or newly imported cost items?
- 2. Select Adjust CBS position.
 - a. If you selected to **Close**, the cost item will instead appear at the bottom of your hierarchy structure.
- 3. A window appears. Drag and drop your cost items to your desired CBS position in the hierarchy structure.
- 4. Select **Save** in the upper right to save the CBS cost item position changes.

What's Next

After the selective import, if they didn't want those cost items, they would have to delete them in Control.



Selective Import Hierarchy Settings

Purpose

Configure CBS position hierarchy settings.

Summary

There is a setting in Control, similar to Estimate, where you can decide the level you want to have a cost item start after an import has been activated.

Considerations

This setting can be used if you do not want anyone else to create any more level 1 cost items in the hierarchy.

Quick Steps

- 1. In Control, go to the Suite Administration drop down and select your current project name.
- 2. Under the Project sub-section, select **Settings**.
- 3. Under the Control settings, go to the sub-section **Tasks**.
- 4. Go to the Maintain CBS Structure at a specific level slider bar.
- 5. Switch the slider bar to **Yes**.
- 6. Then under the section Level to Maintain CBS Structure at, enter the number to maintain.
 - a. If you enter in the number 1, then the cost item phase code can no longer be created at a level one when you do a selective import. It can then only be created at a level 2 which is at the lowest level available for the hierarchy.
- 7. If the slider is switched to **No**, then the cost item will be created at a level 1.

What's Next

Move around your cost items in the hierarchy if they do not show in the same order as they were in Estimate.