



Project Cost Estimate Basics

Additional Estimation Quick Reference Guides, training documents, and the Preconstruction User Guide are available from CDOT.

Background:

- Upon importing a file from the Systems, Applications, and Products (SAP) software used by CDOT, AASHTOWare Project Estimation will create a project header and cost estimate. The initially created cost estimate will include categories and a default bid history profile.
- A cost estimate enables you to estimate the anticipated costs of a project and includes all the settings, pricing information, and estimated costs of a planned improvement.
- You can add additional cost estimates to the project manually for estimating alternatives.

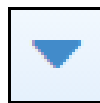
Key to Actions Buttons:



Global **Actions** menu
(At the top of the screen)



Component **Actions**
menu (On the heading)



Row **Actions** menu
(On the row)

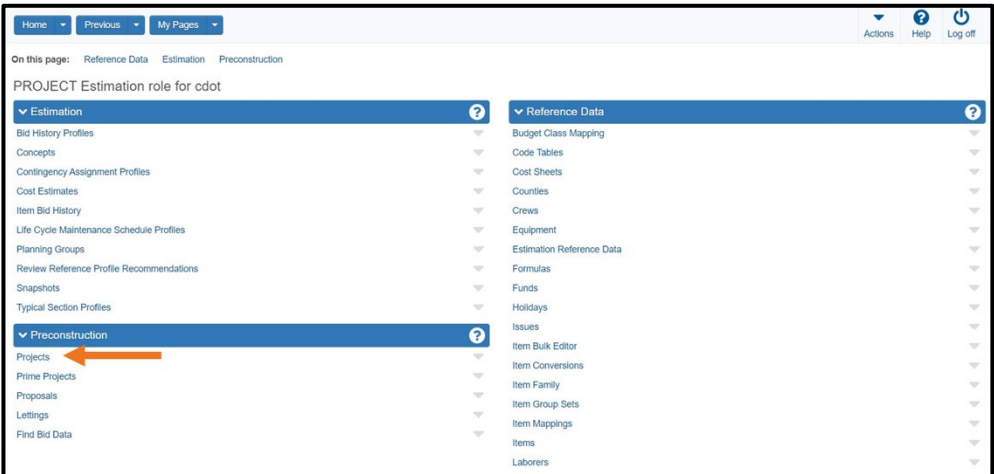


Project Cost Estimate Basics



Access a Project Cost Estimate:

1. Log on to AASHTOWare Project Estimation.
2. Click the Expand Home button (drop-down arrow next to Home) and select **ESTIMATION-CDOT** to switch to the Estimation role.
3. In the **Preconstruction** component, click the **Projects** link.





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4. Search for and open your project.

Control Number	Type	Project Name	Phase
55510-BID	05 - RESURFACING	US50 TEXAS CREEK TO COALDALE	Create & Estimate
55510-NONBID	05 - RESURFACING	US50 TEXAS CREEK TO COALDALE	Create & Estimate
55551-ALTBID1	05 - RESURFACING	US50 TEXAS CREEK TO COALDALE	Create & Estimate
55551-BID	05 - RESURFACING	US50 TEXAS CREEK TO COALDALE	Create & Estimate
55551-NONBID	05 - RESURFACING	US50 TEXAS CREEK TO COALDALE	Create & Estimate

5. Click the **Cost Estimate** quick link at the top of the Project Summary component.

Overview | Categories and Items | **Cost Estimate** | Fund Package Overview | Funding | Assign to Items | Item Alternate Summary | Item Pricing | Item Worksheet

Project Summary

Project: 19499R-BID - WADSWORTH RIGHT TURN LANE EXTENSION

Proposal:

General	Control Number 19499R-BID	Controlling Project <input type="checkbox"/>
Counties	Alternate Project ID <input type="text"/>	Terrain Type R - ROLLING
Regions	Project Number C1211-082	Project Status <input type="text"/>
Lat/Long	Project Name * WADSWORTH RIGHT TURN LANE EXTENSION	Construction Eng. Pct <input type="text"/>
Road Segments		Project Work Type *
Bridge Segments		
Workflow		
Agency Views		

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6. Click the **Cost Estimate** tab on the left side to display the cost estimates associated with your project.
7. Click the **Cost Estimate** that you would like to review.
 - **Note:** You can also navigate to the Cost Estimate via the Estimation component by clicking the **Cost Estimates** link and then searching for and opening a cost estimate on the overview.

The screenshot shows the 'Project Cost Estimate Summary' page in the AASHTOWare Project Estimation software. The project name is '19499R-BID - WADSWORTH RIGHT TURN LANE EXTENSION'. On the left sidebar, the 'Cost Estimates' tab is selected and highlighted with an orange box. The main content area displays a table with one row of data. An orange arrow points to the 'Cost Estimate Name' column, which contains the value '19499R-BID'.

Cost Estimate Name	Estimate Type	Cost Estimate Total	Active	Price Control
19499R-BID		0.00	Yes	<input checked="" type="checkbox"/>



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Add Items via Cost Estimate Items Tab

1. On the Cost Estimate Summary, click the **Cost Estimate Items** tab.

The screenshot shows the AASHTOWare Project Estimation software interface. At the top, there are navigation tabs: Home, Previous, and My Pages. On the right, there are icons for Actions, Help, and Log off. Below the navigation, there is a breadcrumb trail: Overview > Contingency Assignment > Funding: Assign to Items > Fund Package Overview > Life Cycle Costs > Typical Sections > Item Pricing Worksheet. The main content area is titled 'Cost Estimate Summary' and shows a dropdown menu for 'Cost Estimate: 19499R-BID - WADSWORTH RIGHT TURN LANE EXTENSION'. On the left, there is a sidebar with a list of tabs: General, Cost Summary, Categories, Cost Estimate Items (highlighted with an orange box), Variables, Adhoc Pricing, Non-Construction Costs, Markups, and Annualization. The main content area is divided into two sections: 'Parent Attributes' and 'Estimate Information'. The 'Parent Attributes' section contains the following fields: Associated Type (Project), Entity (19499R-BID), Entity Description (WADSWORTH RIGHT TURN LANE EXTENSION), Spec Book (05), Unit System (English), and Improvement Type (005 - SAFETY). The 'Estimate Information' section contains the following fields: Cost Estimate Name (19499R-BID) and Design Build (checkbox).



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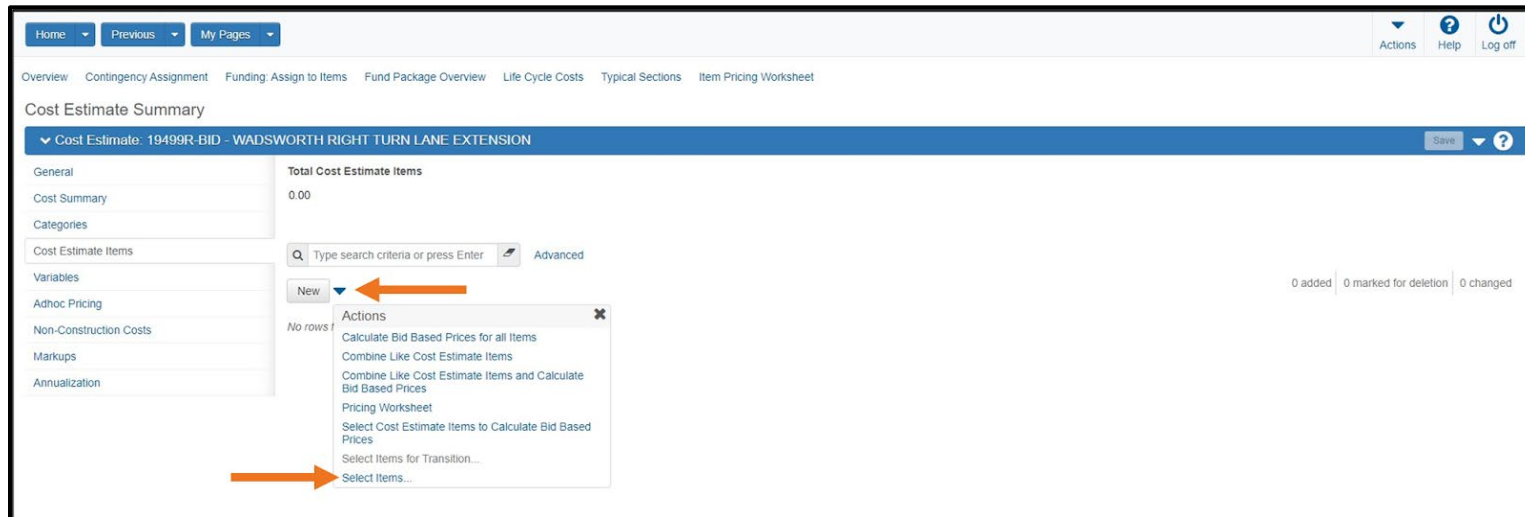
- To add a single item, select the **New** button. This adds a single item row to the list and allows you to search for the item using the autocomplete field. You can also add other item details like quantity and category.

The screenshot displays the 'Cost Estimate Summary' page for project '19499R-BID - WADSWORTH RIGHT TURN LANE EXTENSION'. The 'Total Cost Estimate Items' is 0.00. A 'New' button is highlighted with an orange arrow. Below it, a 'New Cost Estimate Item' form is open, with the 'Item' dropdown menu highlighted by an orange box. The form includes fields for 'Supplemental Description', 'Price Source', 'Price Summary' (Quantity, Price, Ext Amt), and various checkboxes and dropdowns for 'Contribute to Total Construction Cost', 'Exclude from Reference Price Calculation', 'Nonbid', 'Preliminary Engineering', 'Budget Class', and 'Prequalification Work Type'.

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- To add one or more items using the item selectin modal window, click the **Actions** menu next to the **New** button and choose **Select Items**.
- In the modal window that opens, you can use the **Quick Find** search box to search for an item using the item number or description.



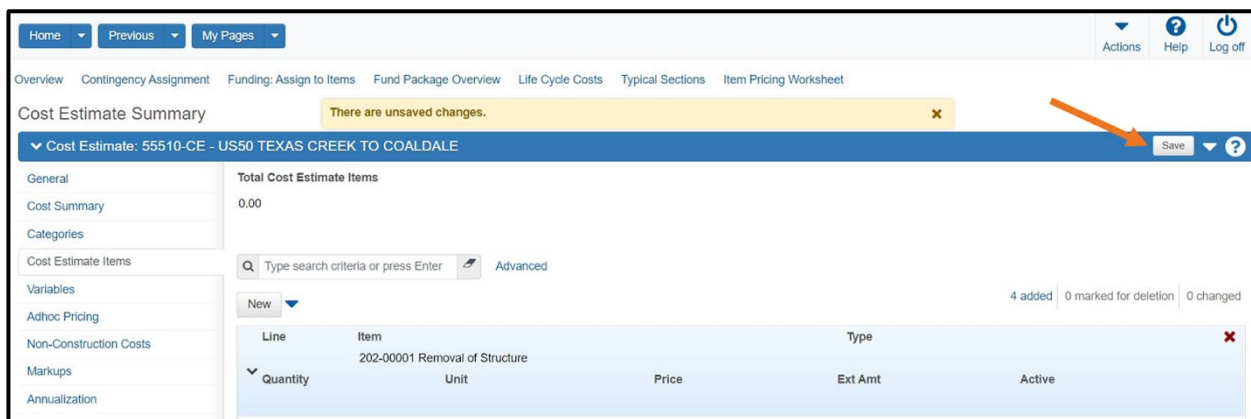
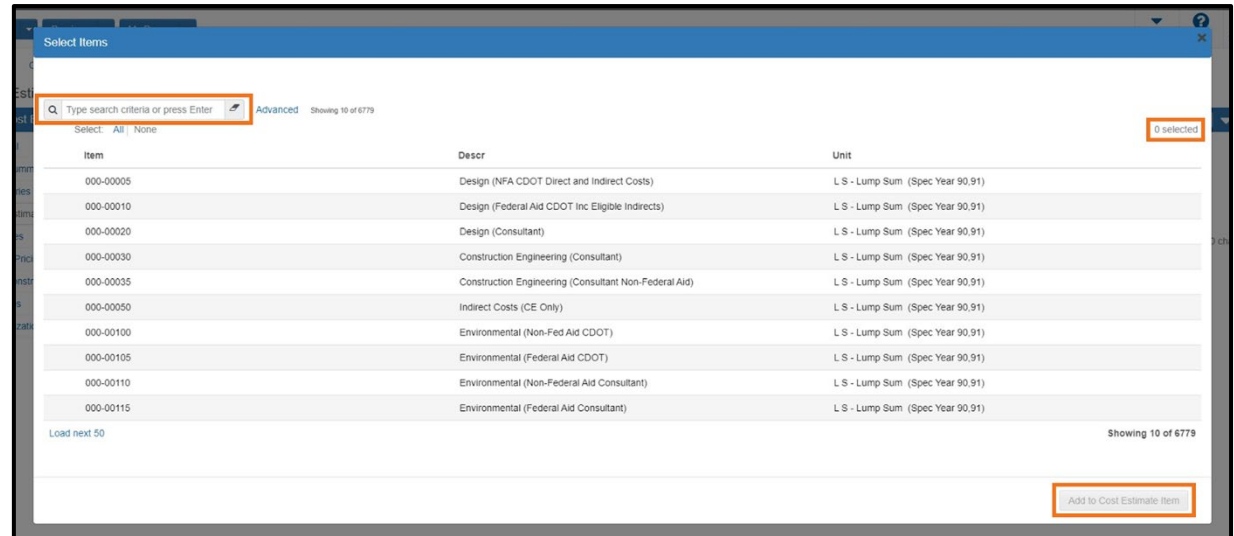
- Click the row or select multiple rows for the items you want to select. The system adds a check mark at the beginning of each row to indicate it is selected. You can click the row again to deselect it.
- To filter your view to just the items currently included in your selection, click the **# selected** link in the upper right. Click this link again to return to your search results.



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- Once you have selected all the items you want to add, click **the Add to Cost Estimate Item** button.
- Enter quantities and assign categories to your items.
- If any of your chosen items requires a **Supplemental Description**, expand the item row, and add the description to the field as needed.
- Click the **Save** button to finish adding the items to your cost estimate.



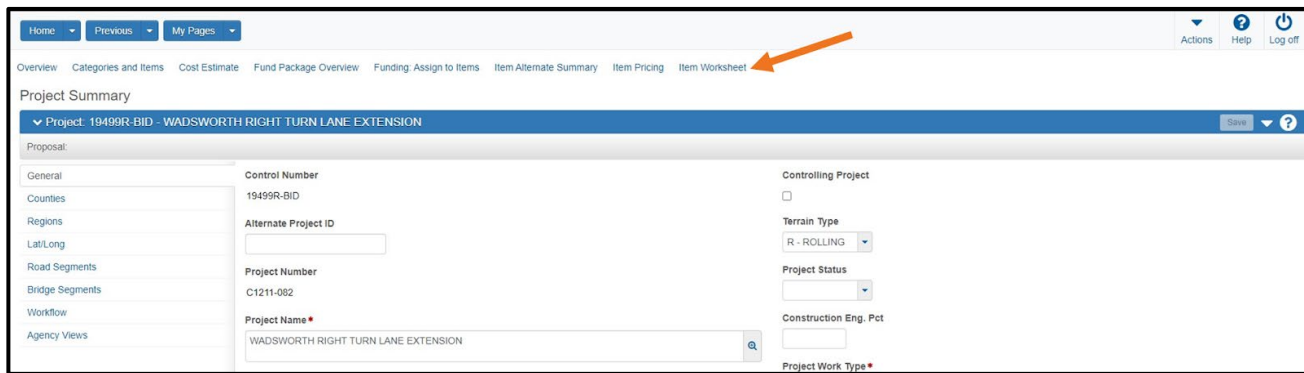


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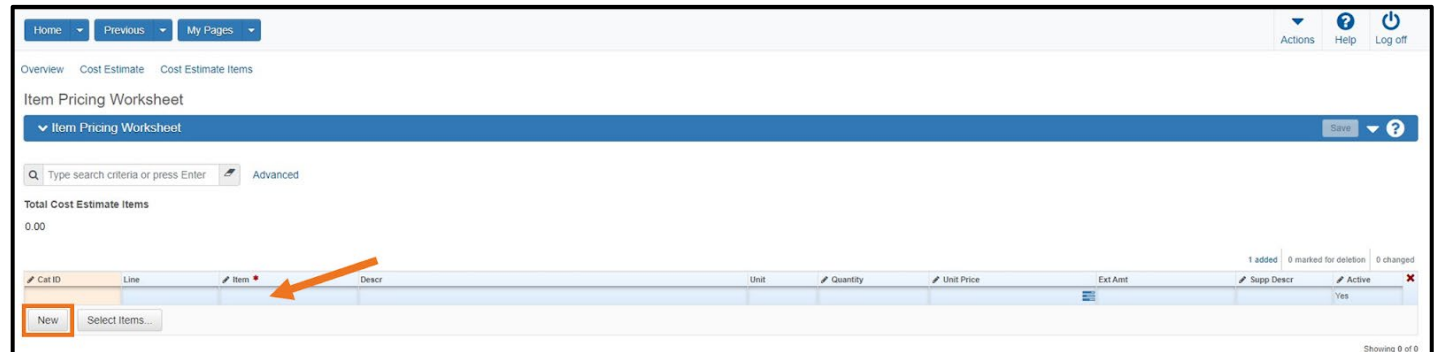


Add Items via Item Pricing Worksheet

1. On the Cost Estimate Summary, click the **Item Pricing Worksheet** quick link at the top of the component.



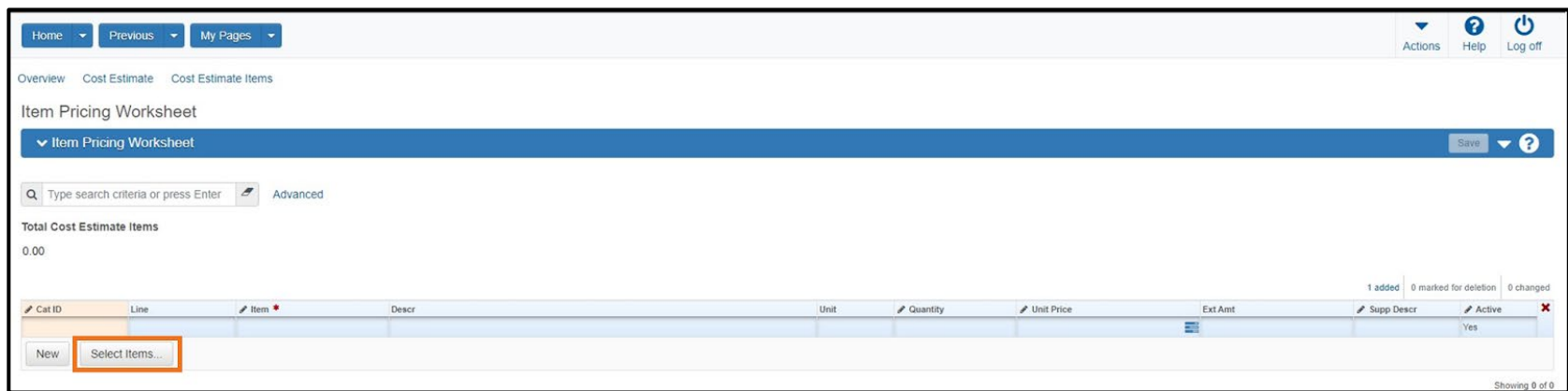
2. To add a single item, select the **New** button. This adds a single item row to the list and allows you to search for the item using the autocomplete field. You can also add other item details such as quantity and category.



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- To add one or more items using the item selectin modal window, choose the **Select Items** button.

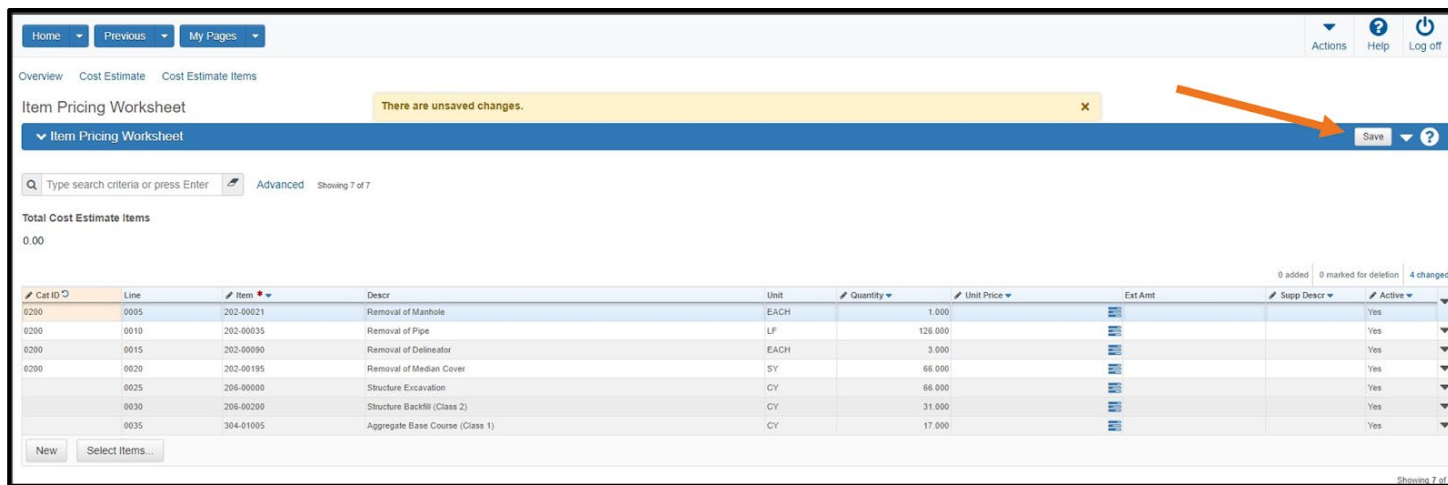
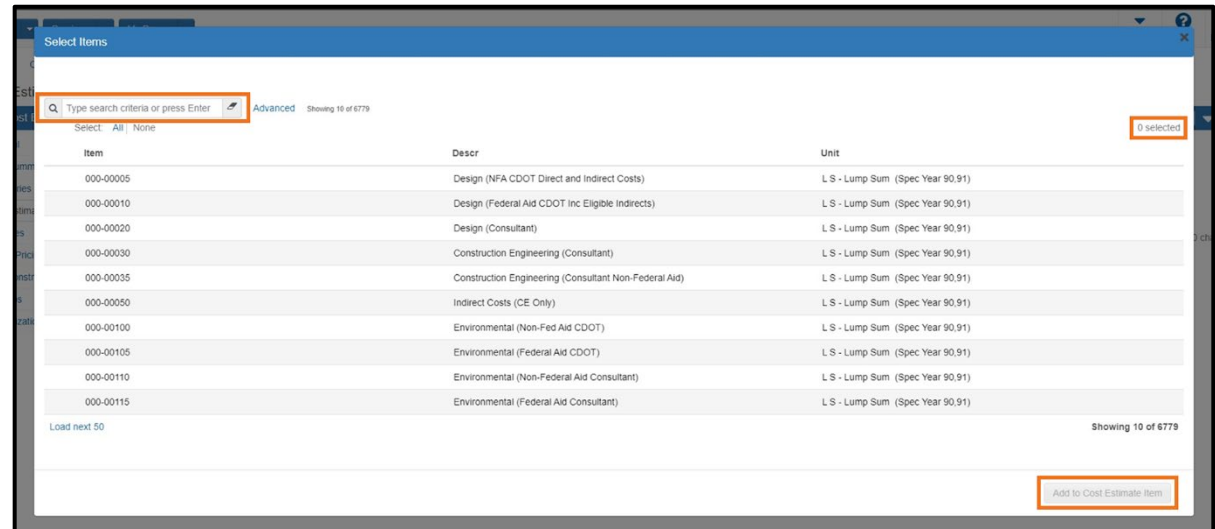


- In the modal window that opens, you can use the **Quick Find** search box to search for an item using the item number or description.
- Click the row or select multiple rows for the items you want to select. The system adds a check mark at the beginning of each row to indicate it is selected. You can click the row again to deselect it.
- To filter your view to just the items currently included in your selection, click the **# selected** link in the upper right. Click this link again to return to your search results.
- Once you have selected all the items you want to add, click the **Add to Cost Estimate Item** button.

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8. Enter quantities and assign categories to your items.
9. If any of your chosen items requires a **Supplemental Description**, expand the item row, and add the description to the field as needed.
10. Click the **Save** button to finish adding the items to your cost estimate.





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Item Price Tasks:

Note: When you add items to the cost estimate, any pricing tasks that are associated to a reference item are automatically assigned to the cost estimate item.

Home Previous My Pages Actions Help Log off

Overview Cost Estimate Cost Estimate Items

Item Pricing Worksheet

Item Pricing Worksheet Save ?

Q Type search criteria or press Enter Advanced Showing 7 of 7

Total Cost Estimate Items
20,885.73

Cat ID	Line	Item	Descr	Unit	Quantity	Unit Price	Ext
0200	0005	202-00021	Removal of Manhole	EACH	1.000	2,096.76511	
0200	0010	202-00035	Removal of Pipe	LF	128.000	43.42635	
0200	0015	202-00090	Removal of Delineator	EACH	3.000	20.75065	
0200	0020	202-00195	Removal of Median Cover	SY	66.000	42.80919	
0300	0025	206-00000	Structure Excavation	CY	66.000	58.39004	
0300	0030	206-00200	Structure Backfill (Class 2)	CY	31.000	97.14151	
0300	0035	304-01005	Aggregate Base Course (Class 1)	CY	17.000	209.67380	

New Select Items...

Method	Price	Active
Bid Based	2,096.76511	<input checked="" type="checkbox"/>
Reference		<input type="checkbox"/>
Cost Based		<input type="checkbox"/>
Maintain Item Price		<input type="checkbox"/>
Task		<input type="checkbox"/>

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1. To view the price tasks for a particular item on either the **Item Pricing Worksheet** or the **Cost Estimate Items** tab, locate the item row and click the **Details** button to open the details overlay. Active tasks are marked with a checkmark in the **Active** field.
2. Select a price task link (**Bid Based**, **Reference**, or **Cost Based**) to view, add, or modify the details for a specific price task.
 - **Note:** You can click the **Maintain Item Price Task** link on the details overlay to access all the price tasks associated with the item on one page rather than having to access each individually.

Line	Item	Type
0005	202-00010 Removal of Tree	Detail

Quantity	Unit	Price	Ext Amt	Active
25.000	EACH			Yes

Item: 202-00010
Unit of Measure: EACH
Removal of Tree

Supplemental Description

Price Source: Active Yes

Price Summary

Quantity	Price
25.000	x []

Contribute to Total Construction Cost: Yes

Exclude from Reference Price Calculation: No

Nonbid: No

Design Build: No

Preliminary Engineering: No

Budget Class

Prequalification Work

Parent Parametric Item

Method | Price | Active

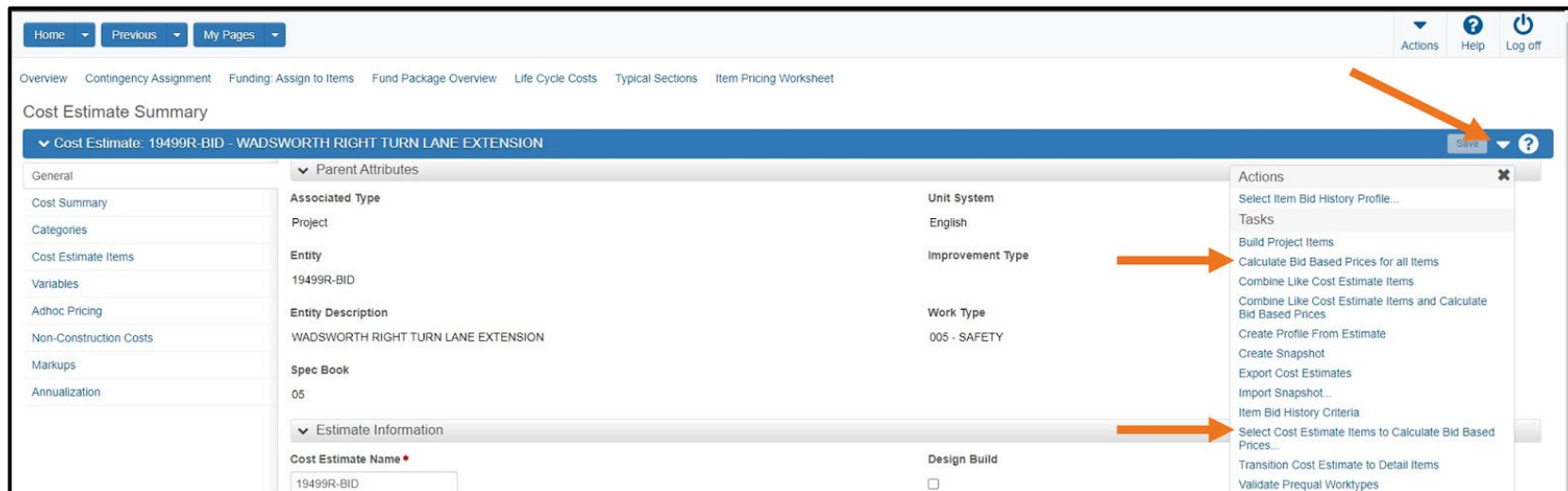
- Calculate
- Price
- Bid Based Price vs
- Quantity
- Analysis
- Reference
- Cost Based
- Maintain Item
- Price Task

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Price Cost Estimate Items with Bid Based Tasks

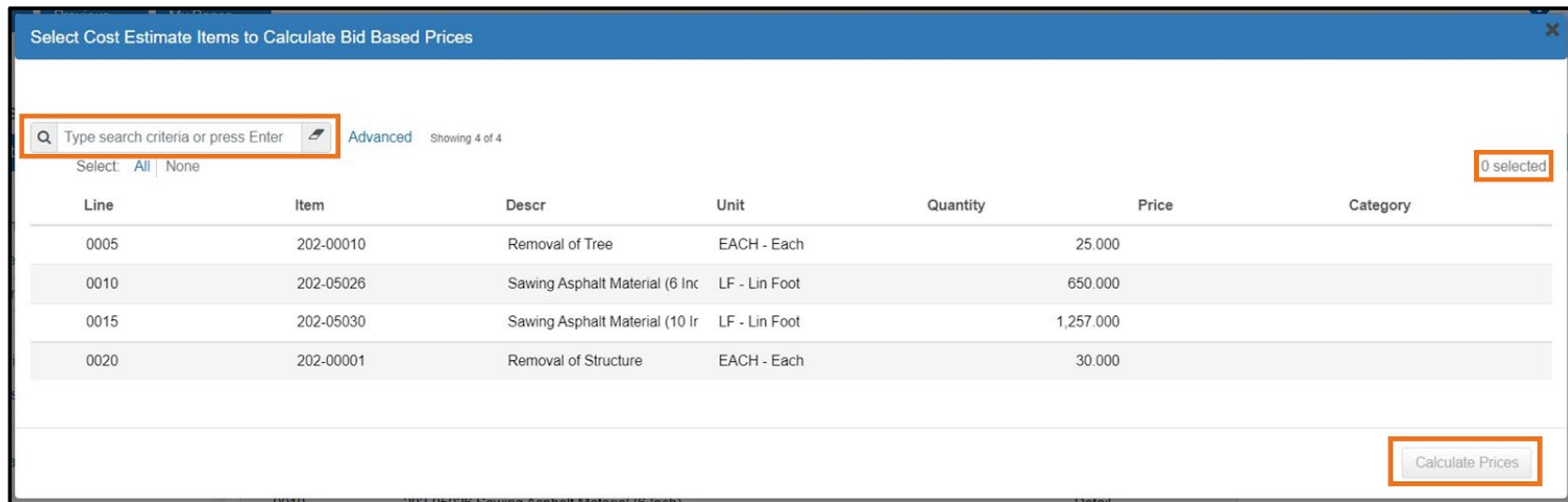
1. Navigate to the desired cost estimate. (Estimation component → Cost Estimates link → search for and open a Cost Estimate)
2. Click the component **Actions** menu next to the **Save** button.
3. There are two processes that can be used to calculate bid-based prices:
 - a. To calculate bid-based prices for all detail items in the cost estimate, choose **Calculate Bid Based Prices for All Items**.
The system submits a process to sequentially calculate the bid-based price for each detail item in the cost estimate that has an active bid-based task.





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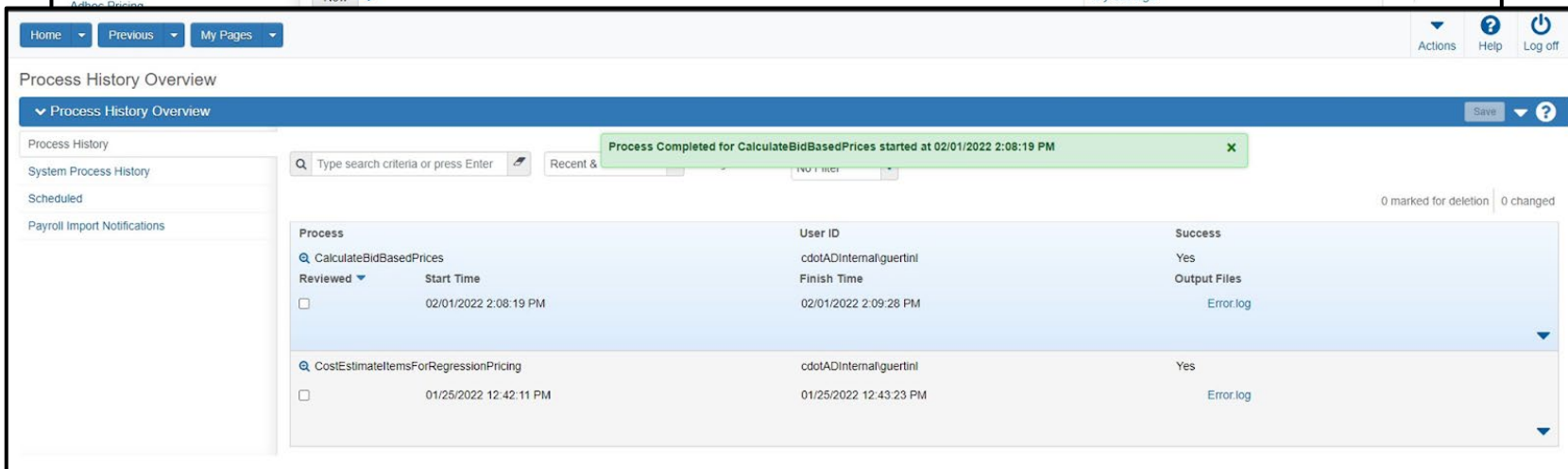
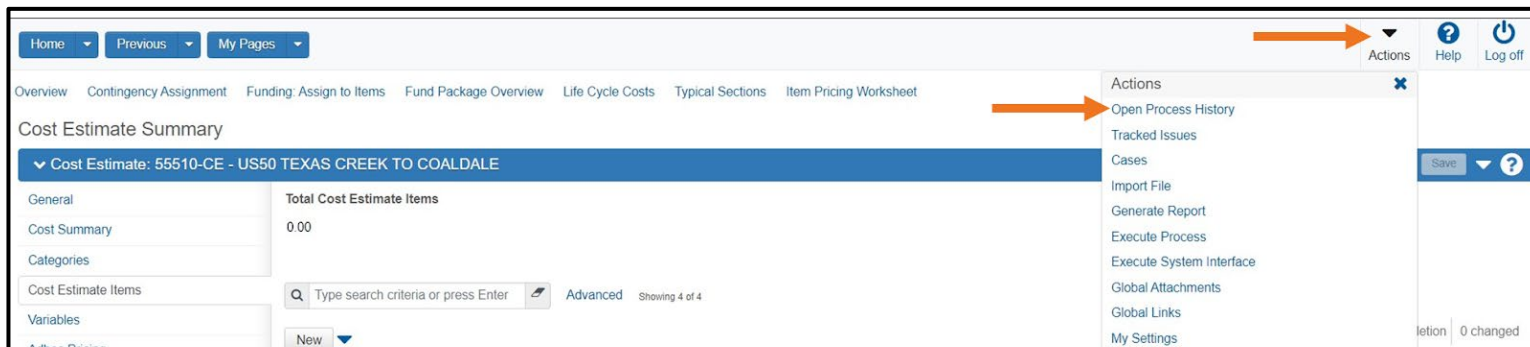
- b. If you would prefer to only calculate bid-based prices for a selection of items, choose **Select Cost Estimate Items to Calculate Bid Based Prices**.
 - i. The system displays a modal window that lists all the cost estimate items with an active bid-based price task. You can find a specific item by typing criteria in the Quick Find search box.
 - ii. Click the row or select multiple rows for the items you want to select. The system adds a check mark at the beginning of each row to indicate it is selected. You can click the row again to deselect it.
 - iii. Click the **Calculate Prices** button.
 - iv. The system displays a message that prices are being calculated and closes the modal window.



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- c. **Note:** Depending on the number of items involved, this process will take some time to complete. To view the results of the calculation process, select **Open Process History** for the **Actions** menu on the Menu bar. Open the Error.log file for the Calculate Bid Based Prices for all Items process to view a list of error messages for items that failed to calculate a bid-based price. Navigate back to and refresh the **Cost Estimate Items** tab to view the updated prices for the items.





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- To calculate a bid-based price for an individual item on either the Item Pricing Worksheet or the **Cost Estimate Items tab**, choose **Calculate Price** on the details overlay for the item.
- To further refine your prices, you can also access the **Price Versus Quantity Analysis** tool on the details overlay or the bid-based pricing task for the item, which you can access on either the Item Pricing Worksheet or the **Cost Estimate Items tab**. Refer to *CDOT Quick Reference Guide | Pricing Items and PVQ* for more information.

The screenshot displays the 'Item Pricing Worksheet' interface. At the top, there are navigation tabs for 'Home', 'Previous', and 'My Pages'. Below this, the 'Overview' section shows 'Cost Estimate' and 'Cost Estimate Items'. The main area is titled 'Item Pricing Worksheet' and includes a search bar and a 'Save' button. A table lists 'Total Cost Estimate Items' with columns for Cat ID, Line, Item, Descr, Unit, Quantity, and Unit Price. An orange arrow points to the 'Ext.' column of the table. A details overlay is open on the right, showing a 'Method' dropdown set to 'Bid Based', a 'Price' field with the value '2,096.76511', and an 'Active' section with radio buttons for 'Calculate Price', 'Price vs Quantity Analysis', and 'Reference'. The 'Calculate Price' option is selected.

Cat ID	Line	Item	Descr	Unit	Quantity	Unit Price	Ext.
0200	0005	202-00021	Removal of Manhole	EACH	1.000	2,096.76511	
0200	0010	202-00035	Removal of Pipe	LF	126.000	43.42635	
0200	0015	202-00090	Removal of Delineator	EACH	3.000	20.75065	
0200	0020	202-00195	Removal of Median Cover	SY	66.000	42.89919	
0300	0025	206-00000	Structure Excavation	CY	66.000	58.39004	
0300	0030	206-00200	Structure Backfill (Class 2)	CY	31.000	97.14151	
0300	0035	304-01005	Aggregate Base Course (Class 1)	CY	17.000	209.67380	

Next Steps:

- Continue refining the cost estimate. Consider of using additional cost estimates to analyze alternatives would be appropriate.