AASHTOWare Project

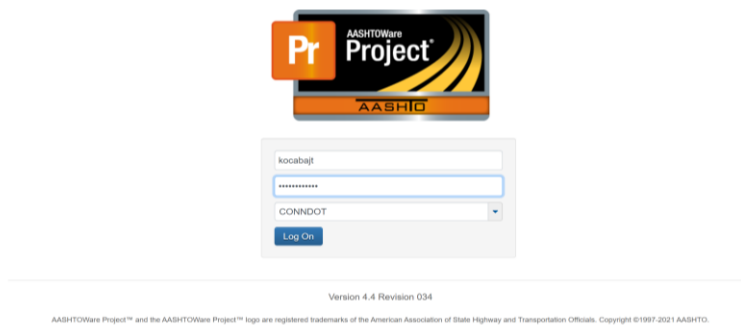# Consultant Cost Estimate User Guide

This guide provides CTDOT consultants with the steps to properly develop and modify an existing cost estimate in AASHTOWare project. A cost estimate must exist in the AASHTOWare Project system before any modifications can be initiated. If a particular cost estimate is unavailable, please reach out to the proper CTDOT project manager for assistance.
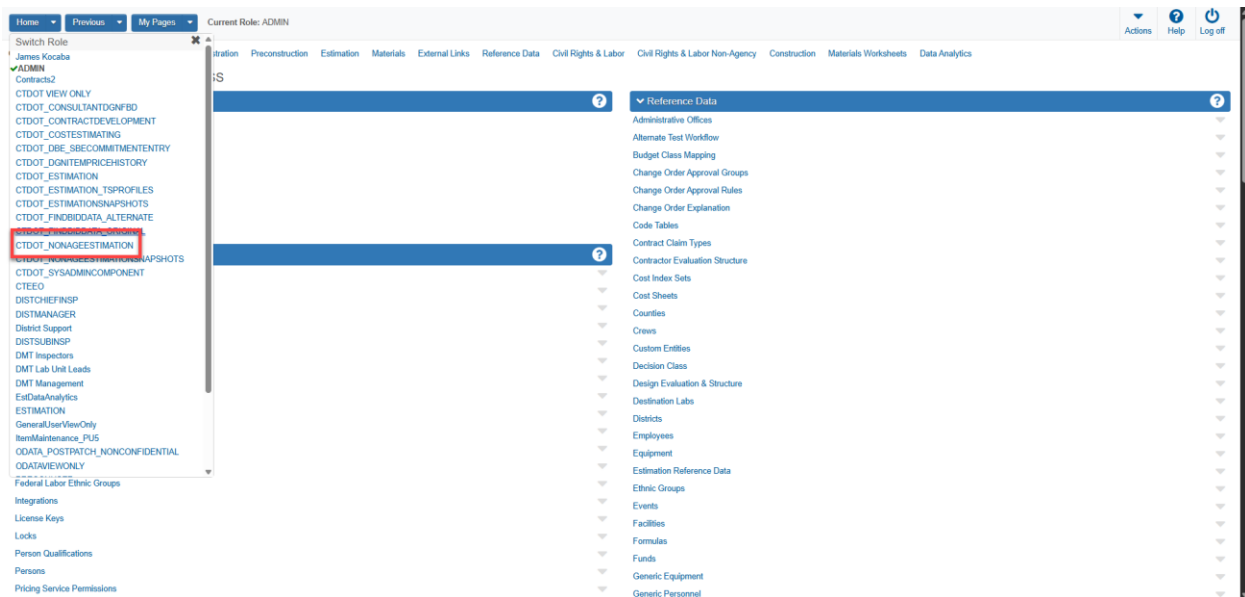
Steps

Log into AASHTOWare Project

1. Ensure that the proper url is selected: https://ctdot-pr-prod.infotechinc.com/Account/LogOn
2. Enter User name and password

Version 4.4 Revision 034

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3. Select the role CTDOT_NONAGEESTIMATION

Navigate to Assigned Cost Estimate

Once CTDOT_NONAGEESTIMATION is selected, navigate to the cost estimate overview screen.

1. Select Cost Estimates

2. Select cost estimate name. Only cost estimates assigned by CTDOT to the individual firm will be listed on the overview screen.

3. Cost Estimate summary screen will load

Add Individual Cost Estimate Items

After the cost estimate has been generated and proper asset categories added the user can begin to add cost estimate items.

1. Select and navigate to Item Pricing Worksheet

2. Select "New"

3. Select Category/Funding Source

4. Enter proper Item number or search for item description

5. Enter quantity

6. Double click on "Supp Descr" if required
7. Enter ** See Special Provisions ** (1)
8. Select Apply (2)
9. Please note that the text must match (two asterisks, space, See Special Provisions, space, two asterisks) exactly. Any other data in this field will generate an error. (3)
10. Select Save

Item Pricing Worksheet

▼ Item Pricing Worksheet   Save ▼ ?

Type search criteria or press Enter   System Default ▼

Total Cost Estimate Items

1 added   0 marked for deletion   0 changed

✎ Cat ID ▼	Line	✎ Item ●	Descr	Unit	✎ Quantity	✎ Unit Price	Ext Amt	Supp Descr	Active
		0201001	CLEARING AND GRUBBING	LS		1.000			

New   Select Items...

Showing 0 of 0

Supp Descr   ✕

① ** See Special Provisions **|

② Apply

Item Pricing Worksheet

Save Complete   ✕

▼ Cost Estimate: 0001-1111-01 - NONAGE TEST   Save ▼ ?

Project: 0001-1111

Type search criteria or press Enter   System Default ▼   Showing 7 of 7

Total Cost Estimate Items

1,314,287.09

0001 - 80FED20STE	1	0520038	ASPHALTIC PLUG EXPANSION JOINT SYSTEM	c.f.	2,500.000	467.31000	1,168,275.00	Regression		
✎ Cat ID ▼	Line	✎ Item ● ▼	Descr	Unit	✎ Quantity ▼	✎ Unit Price ▼	Ext Amt	✎ Price Source ▼	✎ Supp Descr ▼	✎ Active
0001 - 80FED20STE	2	0707001	MEMBRANE WATERPROOFING (WOVEN GLASS FABRIC)	s.y.	102.000	139.19000	14,197.38	Regression	**** See Special Provisions ***	Yes
0001 - 80FED20STE	3	0406172	HMA S0.375	ton	90.000	324.35000	29,191.50	Regression		Yes
0001 - 80FED20STE	4	0406312	GUTTER LINE SEALING FOR BRIDGES	l.f.	1,000.000	14.58000	14,580.00	Regression		Yes
0001 - 80FED20STE	5	0406238	MATERIAL FOR TACK COAT	gal	16.500	35.53000	586.24	Regression		Yes
0001 - 80FED20STE	6	0409005	REMOVAL OF EXISTING WEARING SURFACE	s.y.	333.500	71.82000	23,951.97	Regression		Yes
0001 - 80FED20STE	7	0520041	PREFORMED JOINT SEAL	l.f.	500.000	127.01000	63,505.00	Regression		Yes

0 added   0 marked for deletion   1 changed

③

New   Select Items...

Showing 7 of 7

Add Multiple Cost Estimate Items

1. Scroll to the bottom of the estimate and Click "Select Items"

2. Search for item description (1) , item number (2) or portion of an item number (3)
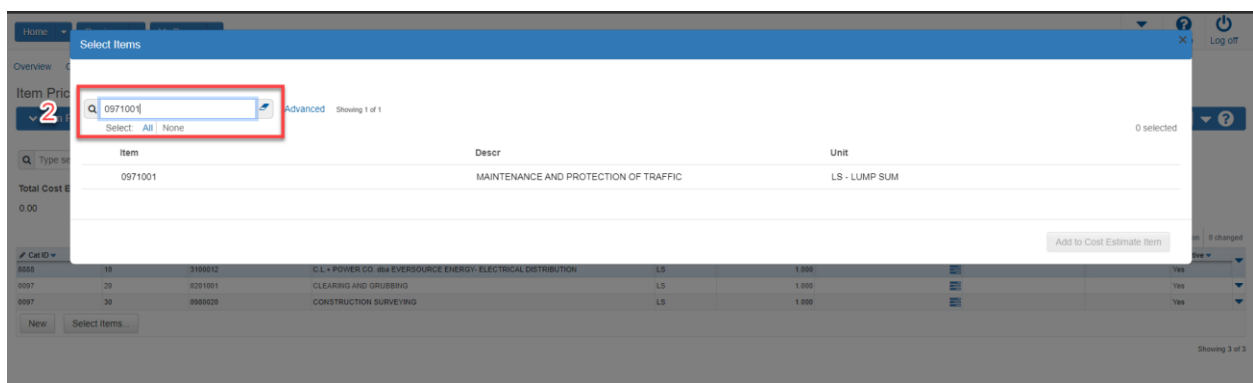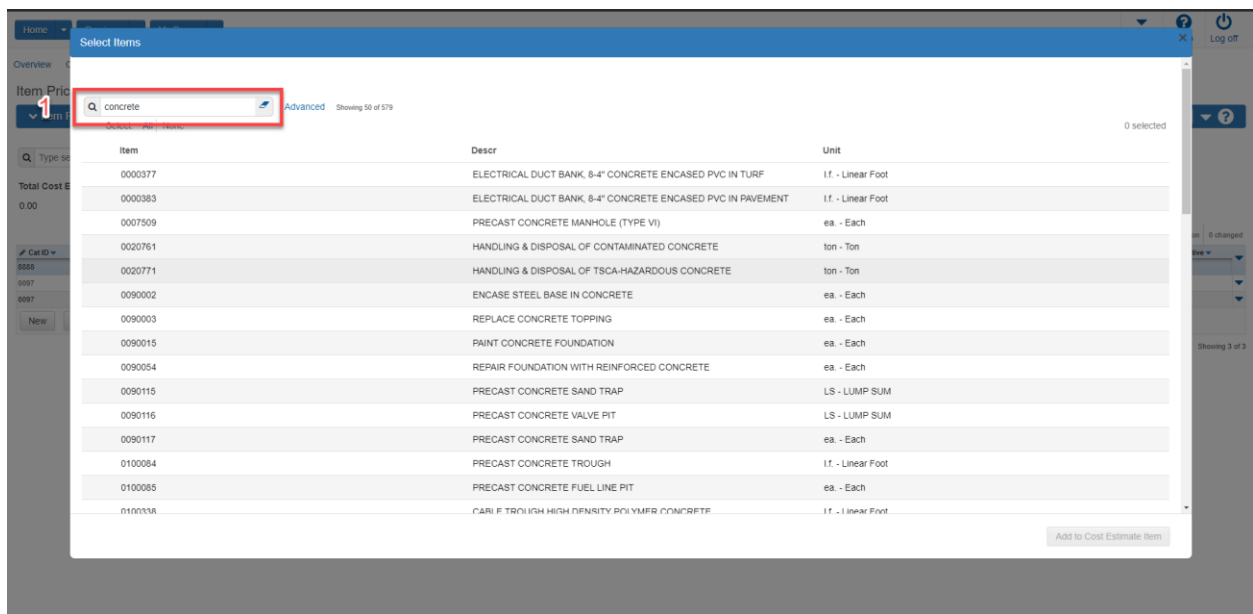
3. Users can also search for groups of items using filter functions

4. Select multiple items as needed

Item Grouping by Design Unit Owner

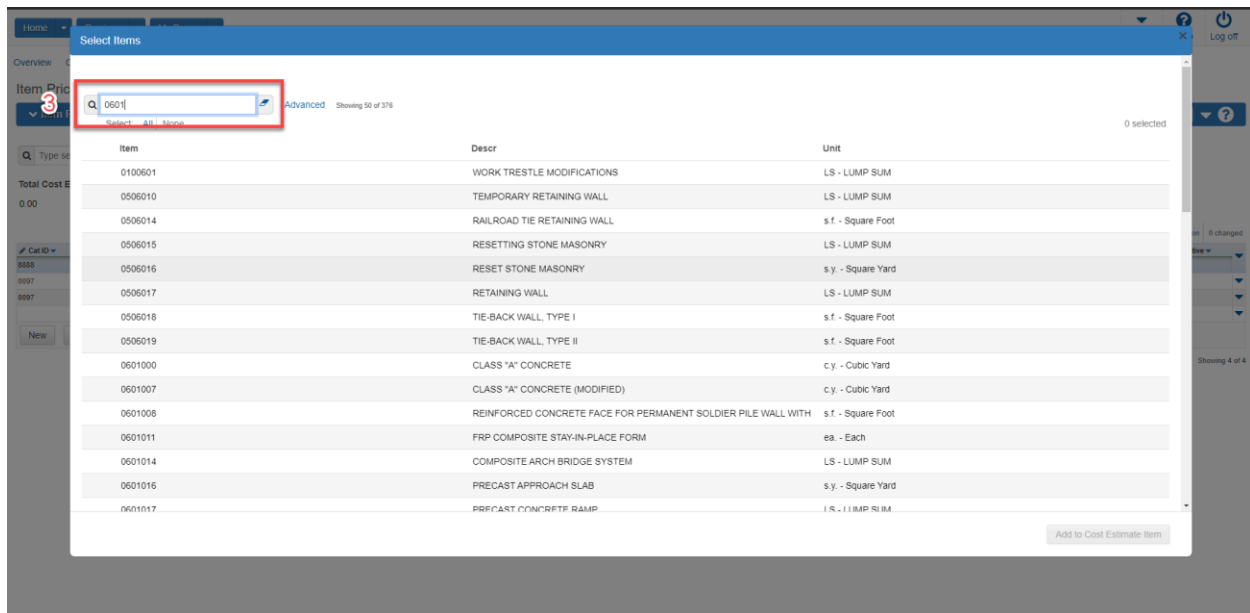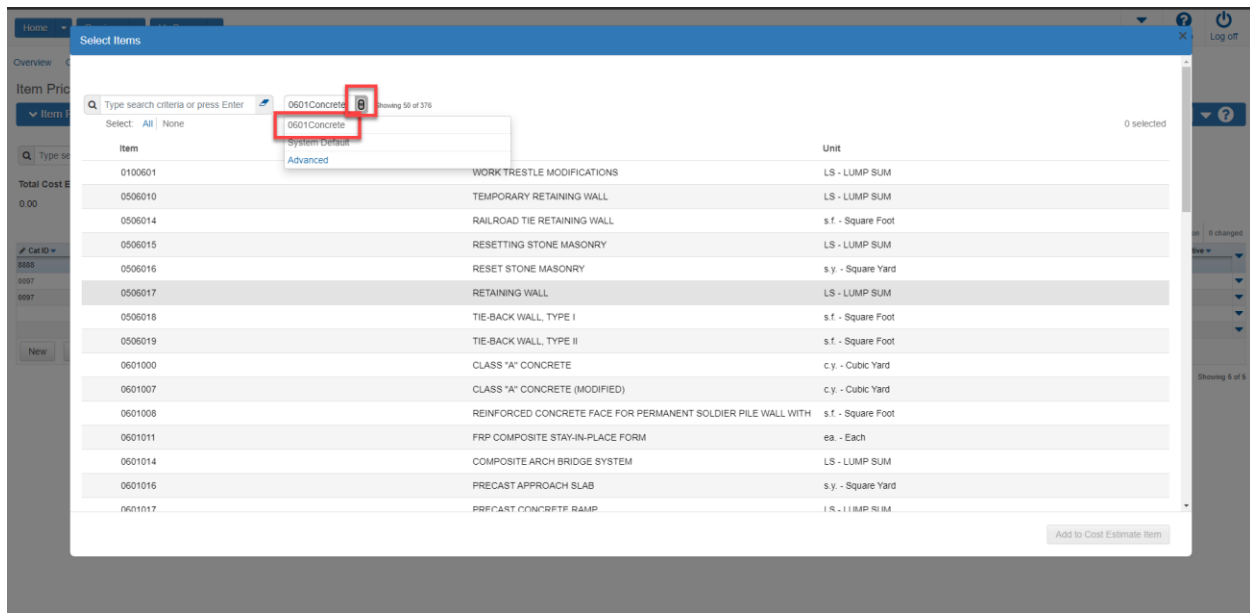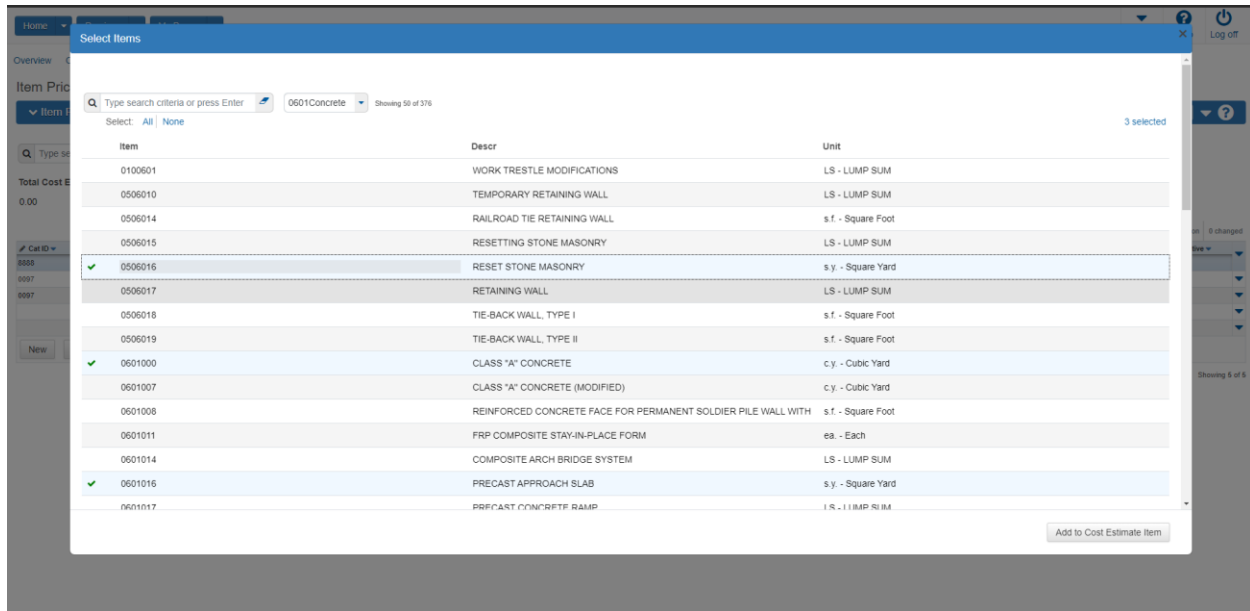Cost estimates may contain items from separate design units. Estimation allows designers to classify estimate item ownership using the "Design Unit Owner" field in the Cost Estimate Items tab. After assignment, items can be filtered and identified by design unit ownership.

1. Navigate to Cost Estimate Summary screen
2. Select Cost Estimate Items (1)
3. Select Item (2)
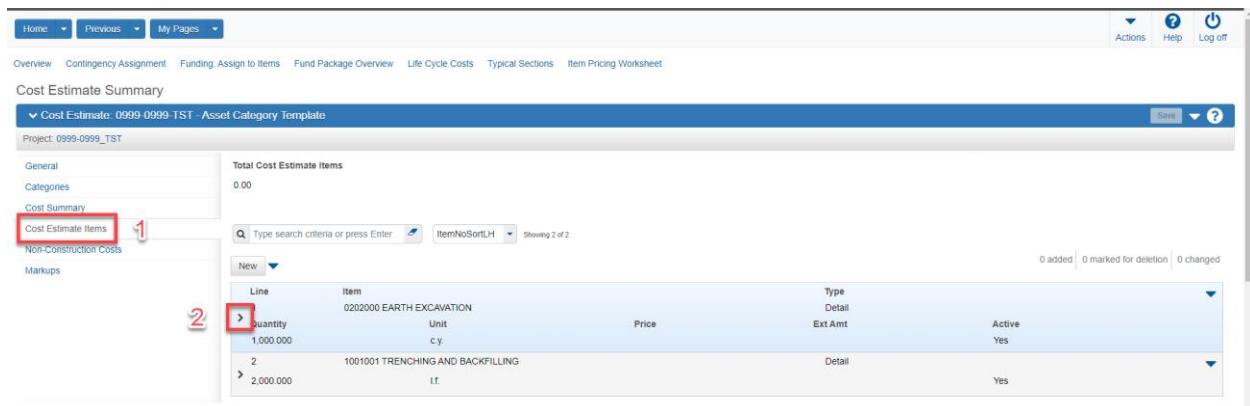
4. Select Design Unit Owner field dropdown arrow (1)
5. Select proper design unit owner (2)
6. Select Save (3)

Users can activate cost estimate "Design Unit Owner" item filters by following these simple procedures:

1. Select dropdown adjacent to search field (1)
2. Select proper "Design Unit Owner" (2)
3. System will display only items assigned to the filter selected.

Users can also apply the "Design Unit Owner" item assignment to multiple items at time by following the steps below:

1. Select item accordion arrow to active dropdown (1)
2. Select action item arrow adjacent to "Design Unit Owner" field (2)

3. Select the number of rows (down or up), all displayed rows, or all rows (1)
4. Click Save (2)

Non-Bid Items – Utilities, State Police and Work by State Forces

All non-bid items that are added to the estimate must not contribute to the total construction costs. Prior to building project items, the "Contribute to Total Construction Costs" checkbox must be unselected and the "Exclude from Reference Price Calculation" activated for all non-bid items.

1. Navigate to "Cost Estimate Items"

2. Filter Non-Bid Items by selecting dropdown arrow (1)
3. Select 8888 items (2)

4. Remove "Contribute to Total Construction Cost" checkmark. (1)
5. Activate "Exclude from Reference Price Calculation" (2)
6. Ensure "Nonbid" checkbox is activated (3)
7. Click Save (4)

Home ▼   Previous ▼   My Pages ▼

There are unsaved changes.   ✕

Actions   Help   Log off

Overview   Contingency Assignment   Funding: Assign to Items   Fund Package Overview   Life Cycle Costs   Typical Sections   Item Pricing Worksheet

Cost Estimate Summary

∨ Cost Estimate: PP08-8888-TEST - Test Proof of Concept - Cost Estimate...Please do not delete....JTK Sept 12, 2024   ④   Save ▼ ❓

Concept: PP08-8888-TEST

General
Cost Summary
Cost Estimate Items
Item Pricing Worksheet
Incidentals and Contingencies
Markups
Categories

Total Cost Estimate Items

1,110,470.30

🔍 Type search criteria or press Enter ✐   8888Items ▼   Showing 1 of 1

New ▼   0 added   0 marked for deletion   1 changed

Line	Item		Type
7	3100012 C.L.+ POWER CO. dba EVERSOURCE ENERGY- ELECTRICAL DISTRIBUTION		Detail
Quantity	Unit	Price	Ext Amt	Active
1.000	LS	50,000.00000	50,000.00	Yes

Item * ▼   Unit of Measure

🔍 3100012   LS

C.L.+ POWER CO. dba EVERSOURCE
ENERGY- ELECTRICAL DISTRIBUTION

Supplemental Description ▼

[   ] 🔍

Price Source   Active ▼

Ad Hoc   ☑

Price Summary ▼

Quantity ▼		Price ▼		Ext Amt
1.000 Σ	×	50,000.00000 Σ	Details =	50,000.00

Contribute to Total Construction Cost ▼   Preliminary Engineering ▼
① ☐   ☐

Exclude from Reference Price Calculation ▼   Design Unit Owner ▼
② ☑   [▼]

Nonbid ▼   Prequalification Work Type ▼
③ ☑   [▼]

Design Build   Parent Parametric Item ▼
No   🔍 Begin typing to search or press Enter

Lump Sum   Parent Typical Section
Yes

Bid as Lump Sum   Item Alternate Set ▼
Yes   [   ]

Cost Estimate Category ID ▼   Item Alternate Member ▼
🔍 8888   [   ]
Non-Contract Items
                                                   Low Cost
                                                   Yes

∨ Remarks

Type *   Remark *

[▼]   [   ] 🔍

Common Lump Sum Items

All common lump sum items that are added to the estimate must contribute to the total construction costs. Prior to building project items, the "Contribute to Total Construction Costs" and "Exclude from Reference Price Calculation" checkbox must be activated.

1. Navigate to "Cost Estimate Items"

2. Locate Common Lump Sum Items
3. Ensure "Contribute to Total Construction Cost" is activated (1)
4. Activate "Exclude from Reference Price Calculation" (2)
5. Select "Save" (3)

Overview   Contingency Assignment   Funding: Assign to Items   Fund Package Overview   Life Cycle Costs   Typical Sections   Item Pricing Worksheet

Cost Estimate Summary

▾ Cost Estimate: PP08-8888-TEST - Test Proof of Concept - Cost Estimate...Please do not delete....JTK Sept 12, 2024   ③   Save ▾ ❓

Concept: PP08-8888-TEST

General	**Total Cost Estimate Items**
Cost Summary	1,110,470.30
Cost Estimate Items	
Item Pricing Worksheet	
Incidentals and Contingencies	
Markups	
Categories	

🔍 Type search criteria or press Enter   🖌   System Default ▾   Showing 7 of 7

New ▾   0 added   0 marked for deletion   0 changed

1	0603061 STRUCTURAL STEEL (SITE NO. 1)			Detail	▼
> 1.000	LS	250,000.00000	250,000.00	Yes	
2	0503001 REMOVAL OF SUPERSTRUCTURE			Detail	▼
> 1.000	LS	150,000.00000	150,000.00	Yes	
3	0020801 ASBESTOS ABATEMENT			Detail	▼
> 1.000	LS	50,000.00000	50,000.00	Yes	
4	0602030 DEFORMED STEEL BARS - GALVANIZED			Detail	▼
> 2,000.000	lb.	2.45000	4,900.00	Yes	
5	0601318 PARTIAL DEPTH PATCH			Detail	▼
> 330.000	c.f.	319.91000	105,570.30	Yes	

Line	Item		Type		▼
6	0975004 MOBILIZATION AND PROJECT CLOSEOUT		Detail		
∨ Quantity	Unit	Price	Ext Amt	Active	
1.000	LS	500,000.00000	500,000.00	Yes	

Item • ▾   **Unit of Measure**

🔍 0975004   LS
   MOBILIZATION AND PROJECT CLOSEOUT

Supplemental Description ▾

[   ] 🔍

Price Source   **Active** ▾

Ad Hoc   ☑

Price Summary ▾

Quantity ▾		Price ▾			Ext Amt
1.000 Σ	×	500,000.00000 Σ	Details	=	500,000.00

Contribute to Total Construction Cost ▾   **Preliminary Engineering** ▾

① ☑   ☐

Exclude from Reference Price Calculation ▾   **Design Unit Owner** ▾

② ☑   [▾]

Nonbid ▾   **Prequalification Work Type** ▾

☐   [▾]

Design Build   **Parent Parametric Item** ▾

No   🔍 Begin typing to search or press Enter

Lump Sum   **Parent Typical Section**

Yes

Bid as Lump Sum   **Item Alternate Set** ▾

Yes   [   ]

Cost Estimate Category ID ▾   **Item Alternate Member** ▾

🔍 Begin typing to search or press Enter   [   ]

                                                     Low Cost

                                                     Yes

∨ **Remarks**

Type *   **Remark** *

[▾]   [   ] 🔍

7	3100012 C.L. + POWER CO. dba EVERSOURCE ENERGY- ELECTRICAL DI			Detail	▼
> 1.000	LS	50,000.00000	50,000.00	Yes	

Add Common Lump Sum Item Reference Price

1. Navigate to the Item Pricing Worksheet

2. Select the three blue bar icon in the unit price field of the common lump sum item (1)
3. Select the "Reference Hyperlink" (2)

4. Select New (1)
5. Enter reference description. For example 8% of total estimate (2)
6. Enter percentage in the "Percent on top" field. Use of this field will exclude all other percentage based items from the calculation, such as M&PT, Mobilization and Construction Surveying (3)
7. Select the "Active" checkbox (4)

8. Click Save (5)

9. Price is calculated.

Calculate Bid Based Unit Prices for All Items

There are several methods to price items in Estimation. Items can be priced individually, or the entire estimate can be priced all at once. It is recommended that all item prices be updated every six months or at every milestone cost estimate. After an entire cost estimate price refresh, it is also recommended that a snapshot be created and saved for historical purposes. The snapshot description should contain both a reason and date. See Snapshots and Cost Estimate Phase Transition topic for more details. AASHTOWare Project Estimation calculates all item pricing based upon current bid history values. When a letting is more than a year from when the estimate is prepared, an inflation adjustment should be included. Please see the Inflation topic for more details.

1. Navigate to the item pricing worksheet from the Cost Estimate summary page

2. Pricing all estimate items can be accomplished selecting the action arrow to the right of the save button (1)
3. Select "Calculate Bid Based Prices for all items" (2)

4. Calculate Bid-Based Prices operation will begin. Please be patient with this step in the process. Large estimates may require 10 to 15 minutes to complete item pricing calculations.

5. Non-lump sum items will be priced automatically. Users may refresh the browser to view item pricing progress.

Item Pricing Worksheet

✔ Item Pricing Worksheet   Save ▼ ❓

🔍 Type search criteria or press Enter ✎   ItemNumLH ▼   Showing 8 of 8

Total Cost Estimate Items

1,139,339.64

0 added   0 marked for deletion   0 changed

✎ Cat ID ▼	Line	✎ Item ✱ ▼	Descr	Unit	✎ Quantity ▼	✎ Unit Price ▼	Ext Amt	✎ Supp Descr ▼	✎ Pri... ▼
0001	3	0020801	ASBESTOS ABATEMENT	LS	1.000	50,000.00000 📊	50,000.00		Ad Hoc
0001	2	0503001	REMOVAL OF SUPERSTRUCTURE	LS	1.000	351,000.00000 📊	351,000.00		Ad Hoc ▼
0001	6	0503151	REMOVAL OF SUPERSTRUCTURE (SITE NO. 1)	LS	1.000	5,000.00000 📊	5,000.00		Ad Hoc ▼
0001	7	0601318	PARTIAL DEPTH PATCH	c.f.	330.000	325.25000 📊	107,332.50		Regre... ▼
0001	8	0602030	DEFORMED STEEL BARS - GALVANIZED	lb.	2,000.000	5.27000 📊	10,540.00		Regre... ▼
0001	1	0603061	STRUCTURAL STEEL (SITE NO. 1)	LS	1.000	250,000.00000 📊	250,000.00		Ad Hoc ▼
0001	4	0975004	MOBILIZATION AND PROJECT CLOSEOUT	LS	1.000	315,467.14000 📊	315,467.14		Refere... ▼
8888	5	3100012	C.L. + POWER CO. dba EVERSOURCE ENERGY- ELECTRICAL DISTRIBUTION	LS	1.000	50,000.00000 📊	50,000.00		Ad Hoc ▼

New   Select Items...

Showing 8 of 8

Calculate Bid Based Unit Prices for Individual Items

Single items added in between bi-annual or milestone estimate updates can be priced individually. Please follow the steps below for item pricing procedures.

1. Navigate to the item pricing worksheet from the Cost Estimate summary page

Home ▼ Previous ▼ My Pages ▼

Actions Help Log off

Overview   Contingency Assignment   Funding: Assign to Items   Fund Package Overview   Life Cycle Costs   Typical Sections   Item Pricing Worksheet

Cost Estimate Summary

✔ Cost Estimate: 0999-0999-TST - Cost Estimate for Training. Created 8/3/23 by James Kocaba. Please do not delete.   Save ▼ ❓

Project: 0999-0999-TST

General	✔ **Parent Attributes**
Categories	**Associated Type** **Unit System**
Cost Summary	Project English
Cost Estimate Items	**Entity** **Improvement Type**
Non-Construction Costs	0999-0999-TST
Markups	**Entity Description** **Work Type**
	Test project created by James Kocaba for Estimation training
	Spec Book
	11

✔ **Estimate Information**

Cost Estimate Name ✱   **Design Build**
0999-0999-TST   ☐

Cost Estimate Descr   **Profile**
Cost Estimate for Training. Created 8/3/23 by James Kocaba. Please do not delete. 🔍   No

Estimate Phase   **Budget Class**
01 - Programming ▼   [▼]

Estimated By   **Lanemiles**
🔍 CONNDOT\kocabajt   [Σ]
    Kocaba James

                                                              Estimate Type
Cost Estimate Total   [▼]

                                                              Vendor Access

2. Pricing individual estimate items can be accomplished selecting the three staked blue bars in the item unit price field (1)
3. Ensure the active checkmark box is active (2)
4. Select calculate price (3)

5. Select "Save"

6. Save is complete and item price is established

Add Contingency Percentage

Contingency is an element of estimated cost included to account for uncertainty and risk. The designer is responsible for ensuring that the proper percentage is entered based upon cost estimate phase.

1. Select Non-Construction Costs (1)
2. Select New (2)
3. Enter "Contingency" for name (3)
4. Enter "Contingency" for description (4)
5. Enter Percentage (5)
6. Select "Active" (6)
7. Select "Save" (7)

Add Incidental Percentage

The Non-Construction Cost tab can be used to enter incidental cost values. The cost of Construction Engineering (CENG), which consists of the various activities required to administer the construction contract, including inspection, materials testing, construction phase design support and other functions. It includes state and consultant forces, when applicable. For state-awarded construction contracts, this "Incidental Cost" is estimated using a sliding scale percentage of the contract cost as shown in the Incidental Cost Percentage Chart. Please refer to the cost estimating guide for contract price ranges and the associated values.

1. Select Non-Construction Costs from the Cost Estimate Summary (1)
2. Select "New" (2)
3. Enter Non-Construction Cost Name (3)
4. Enter Non-Construction Cost Description (4)
5. Enter proper percentage (5)
6. Select the "Active" checkbox (6)
7. Click "Save" (7)

Add Inflation

A cost estimate with a letting date more than one year from when the estimate is prepared should include an inflation adjustment. Inflation values progressively decrease as contracts move from programming to semi-final design and are removed entirely at the final design phase. The Inflation Parametric Item (005PARA) can be used to enter direct future inflation values. The steps for calculating and entering inflation values ad-hoc (manually) or as a reference percentage are shown below.

Except for contracts with durations of three years or more, the inflation adjustment factor is computed by determining the number of years between the estimate date (when estimate is prepared) and scheduled bid opening and multiplying this number by the annual inflation factor. For contracts with durations of three years or longer, compute the number of years from the estimate date to the mid-point of construction. An annual inflation rate of 6.5 percent per year (simple, not compound) should be used for 2023 and subsequent years. Inflation costs decrease as the cost estimate phases advance toward semi-final design and eventually are eliminated at final design. Example computations and process for AWP cost estimate incorporation to follow:

Inflation Example 1 (construction duration less than 3 years)
Estimate date: January 15, 2023
Scheduled bid opening (letting) date: November 15, 2024
Duration of construction contract: 2 years (midpoint: April 2026)
Estimated cost: $1,500,000
Inflation: 6.5 percent
Estimated future/inflated cost = $1,500,000 x (1.83x0.065) = $178,425

Inflation Example 2 (construction duration more than 3 years)
Estimate date: January 15, 2023
Scheduled bid opening (letting) date: December 13, 2024
Duration of construction contract: 4 years (midpoint: April 2027)
Estimated cost: $15,000,000
Inflation: 6.5 percent

Estimated future/inflated cost = $15,000,000 x (4.25x0.065) = $4,143,750

Ad Hoc (Manual):

1. Navigate to the Cost Estimate Summary screen
2. Select Item Pricing work sheet

3. Select New

4. Click in the Cat ID field (1)
5. Select the appropriate funding category

6. Double click the item field
7. Enter "PARA"
8. Select item 0005PARA

9. Enter a lump Sum quanity of 1.0

10. Enter the manually calculated lump sum unit price (1)
11. Click Save (2)

Reference Percentage

Adding a reference based percentage will automatically adjust inflation values based upon the total of all the bid items. Properly identified non-bid item values will not be included in this calculation.

1. Add new 0005PARA INFLATION PARAMETRIC ITEM and a lump sum quanity of 1.0 as shown in the steps above.
2. Navigate to the blue hamburger button (1)
3. Click the "Reference" hyperlink

4. Click the "New" button (1)
5. Enter Description that details the pereentage calculation (2)
6. Enter calculated percentage in the "Perect of" field (3)
7. Click the "Active" checkbox (4)
8. Click "Save" (5)

Sub-Consultant Cost Estimate Handoff

If sub-consultants are responsible for developing and maintaining a portion cost estimate, the lead consultant designer must handoff the cost estimate to the sub-consultant by modifying the vendor access field. This task will transfer the cost estimate assignment to the sub-consultant design team. Once a sub-consultant vendor is selected and saved the previous consultant designer will no longer have access to the cost estimate. When complete, the sub-consultant will transfer vendor access back to the lead design team using the same process. Please note: the sub-consultant vendor and associated users must be registered and added to AWP for proper system functionality.

1. Navigate to the cost estimate summary screen

2. Search and select sub-consultant in the Vendor Access field

3. Click Save

Snapshots and Cost Estimate Phase Transition

After a cost estimate has been completed and is ready to transition to the next project development milestone several actions must be completed. First, users must generate a cost estimate phase snapshot. A snapshot is required for PowerBi reporting and audit purposes as well as tracking scope creep. After a snapshot is created the cost estimate phase can be transitioned and saved.

1. Navigate to the Cost Estimate Summary
2. Select the action arrow adjacent to the save button (1)
3. Select "Create Snapshot" (2)

4. Enter a detailed description of the cost estimate phase (1)
5. Select the proper snapshot reason (2)
6. Select "Save" (3)

7. Snapshot has been successfully saved
8. Users can navigate back to snapshot overview

9. Navigate back to the current cost estimate

10. Modify Cost Estimate phase
    a. Select Cost Estimate Phase drop down arrow (1)
    b. Select next cost estimate phase (2)
    c. Click Save (3)

11. Quick link to cost estimate snapshots is located here:
    a. Select action item arrow adjacent to the save button (1)
    b. Select the "Snapshots" hyperlink (2)