

AASHTOWare Project Estimation Guide

Note: Please use the navigation pane to quickly find the section needed.

Project Estimation is web-based estimation software that can be accessed from any computer on our intranet system.

Internet Settings

Verify that the internet settings on your browser have been set correctly before proceeding.

1. Set Internet Explorer Setting
 - a. Open the Internet Explorer browser.
 - b. From the Tools menu (looks like a 'Gear'), select Internet Options. The browser displays the Internet Options dialog box.
 - c. Under Browsing History, click the Settings button. The browser displays the Temporary Internet Files and history Settings dialog box. .
 - d. For the Check for newer versions of stored pages setting, click the **'Every time I visit the webpage option'**.
 - e. Click OK.
 - f. In the Internet Options dialog box, select the Advanced tab.
 - g. In the Settings box, scroll down to the Security section, and ensure the option **'Enable DOM Storage'** is selected.
 - h. Click OK.

System Log-In

The following web address will take you to the log in screen for the system.

<https://mdtwebtransport.mdthq.mt.ads>

This link will take you to a screen that will look like the following.



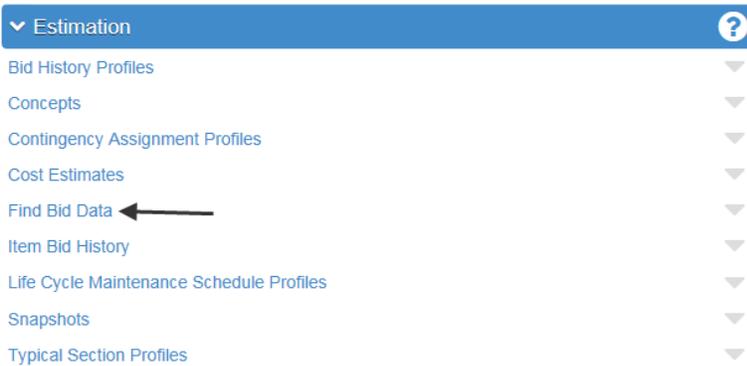
<input type="text"/>
<input type="password"/>
<input type="text" value="MDTHQ"/>
<input type="button" value="Log On"/>

v3.00.133.01

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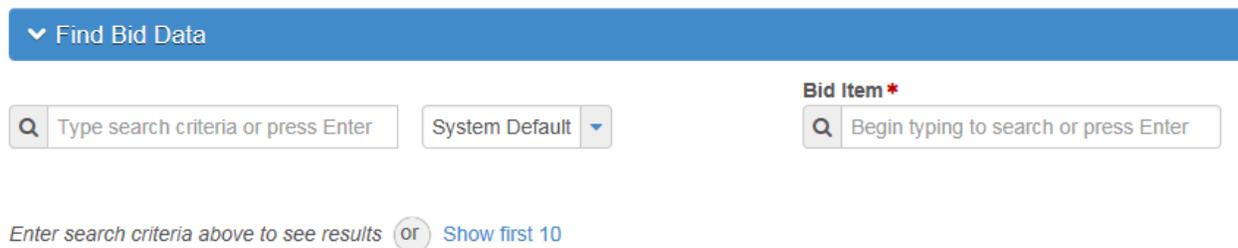
The username and password are the same as your windows log-in credentials. Enter your U-number and password to access the system.

Find Bid Data



Find Bid Data will replace the current practice of looking up bid history on Oracle. It functions much in the same way as Oracle where you look up individual bid items and view bid prices from individual projects. The dialog screen for Find Bid Data will look like the following.

Find Bid Data



Type the bid item number or the bid item description into the Bid Item dialog box, the system will search for all bid items related to your entry. You do not need to have the entire number entered or the entire name to get the results. If you are looking for “Unclassified Excavation” you can simply search for “excavation” and the system will find all bid items with excavation in the description.

Find Bid Data

Find Bid Data

Q Type search criteria or press Enter System Default Showing 0 of 143

Bid Item * Q excavation

Enter Contract # here for specific job.

Contract #

Pro...	Descr	Item	Descr	Quantity	Est Unit Pr...	Avg Unit P...
> 03809	MURPHY OX YOKE RANCH W...	203020100	EXCAVATION-UNCLASSIFIED			6.71300
> 15211	CLAGGET HILL SLIDE	203020100	EXCAVATION-UNCLASSIFIED			3.14000
> 19211	SF079 S&C TWLT-MT 40	203020100	EXCAVATION-UNCLASSIFIED			9.98750
> 01611	SUPERIOR - SE	203020100	EXCAVATION-UNCLASSIFIED			172.50000
> 01412	SF 099 EAST OF BOZEMAN	203020100	EXCAVATION-UNCLASSIFIED			18.62500
> 08811	SLIDE REPAIR - EAST OF LAM	203020100	EXCAVATION-UNCLASSIFIED			22.00000
> 16911	SLD RPR-3 M NE OF NASHUA/	203020100	EXCAVATION-UNCLASSIFIED	1,750.000	40.00000	39.80000

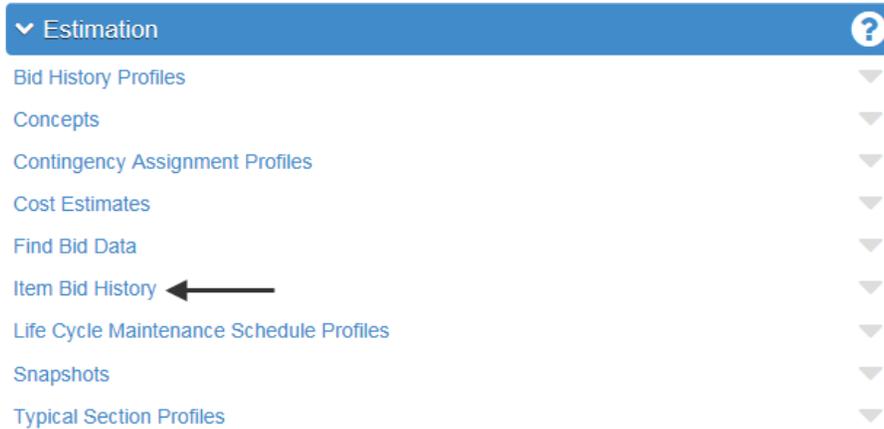
Showing 10 of 81

Clicking the item will expand the item to show the details for that contract.

> 10812	SLIDE REPAIR-13 MILES EAST	203020100	EXCAVATION-UNCLASSIFIED	08/23/2012	8,134.000	12.00000	15.88000
> 06C12	W OF CHESTNUT - SLIDE REP	203020100	EXCAVATION-UNCLASSIFIED	12/13/2012	200.000	18.00000	45.05167
> 01413	SF109-GUARDRAIL-SOUTH OF	203020100	EXCAVATION-UNCLASSIFIED	04/11/2013	35.000	50.00000	51.00000
▼ Pro...	Descr	Item	Descr	Letting D...	Quantity	Est Unit Pr...	Avg Unit P...
▼ 01413	SF 099 E OF PLAINS	203020100	EXCAVATION-UNCLASSIFIED	12/05/2013	1,492.000	20.00000	23.43857
Spec Book	06	Accordian list marker shows if the item is expanded or compressed.		District ID	1		
Unit of Measure	CUYD - Cubic Yards			Obsolete Item	No		
Proposal Item Line Number	0030			Alternate	No		
County ID	C045						
Bid Rank	Bidder			Awarded	Unit Price Bid		
1	2050			Yes	13.50000		
2	2362			No	20.96000		
3	2097			No	18.81000		
4	6390			No	24.20000		

Item Bid History

Item Bid History has the same functionality as Estimator to quickly calculate a bid-based price for a single bid item.



Click Item Bid History and the following dialog will display.

A screenshot of the 'Bid History Summary' dialog box. At the top, there is a green notification bar that says 'Calculation completed'. Below this is a blue header bar with 'Item Bid History' and a 'Price' dropdown menu. The main area is divided into two columns of input fields. The left column contains: 'Item*' with a search box containing '301020340' and a dropdown showing '06 CRUSHED AGGREGATE COURSE'; 'Spec Book' with the value '06'; 'Unit of Measure' with the value 'CUYD - Cubic Yards'; 'Quantity*' with a search box containing '12,500.000'; 'Bid History Profile*' with a search box containing '2 year-test' and a dropdown showing '2-year test'; and 'Let Date' with a calendar icon. The right column contains: 'Work Type' with a dropdown; 'Improvement Type' with a dropdown; 'Terrain' with a dropdown; 'Urban/Rural' with a dropdown; 'Highway Type' with a dropdown; and 'County' with a search box containing 'C011' and a dropdown showing 'Dawson'. At the bottom, there is a 'Results' section with a table showing 'Price' as 39.73807 and 'Regression' as true. A 'Comment' field below the table contains the text 'Regression price based on quantity and market area.'

Enter the bid item number or description and select the desired bid item.

Enter the desired quantity.

Select the desired bid history profile. These profiles determine the range of data to query and what variables to include in the analysis. We recommend using the default bid profiles for the particular items you are pricing.

The results tab displays the price and descriptors, "Regression" and "Comment". The regression tab tells you if there was enough data to develop a regression curve. In this case it did have enough data to develop a curve. The comment tab tells you what was used to develop the price.

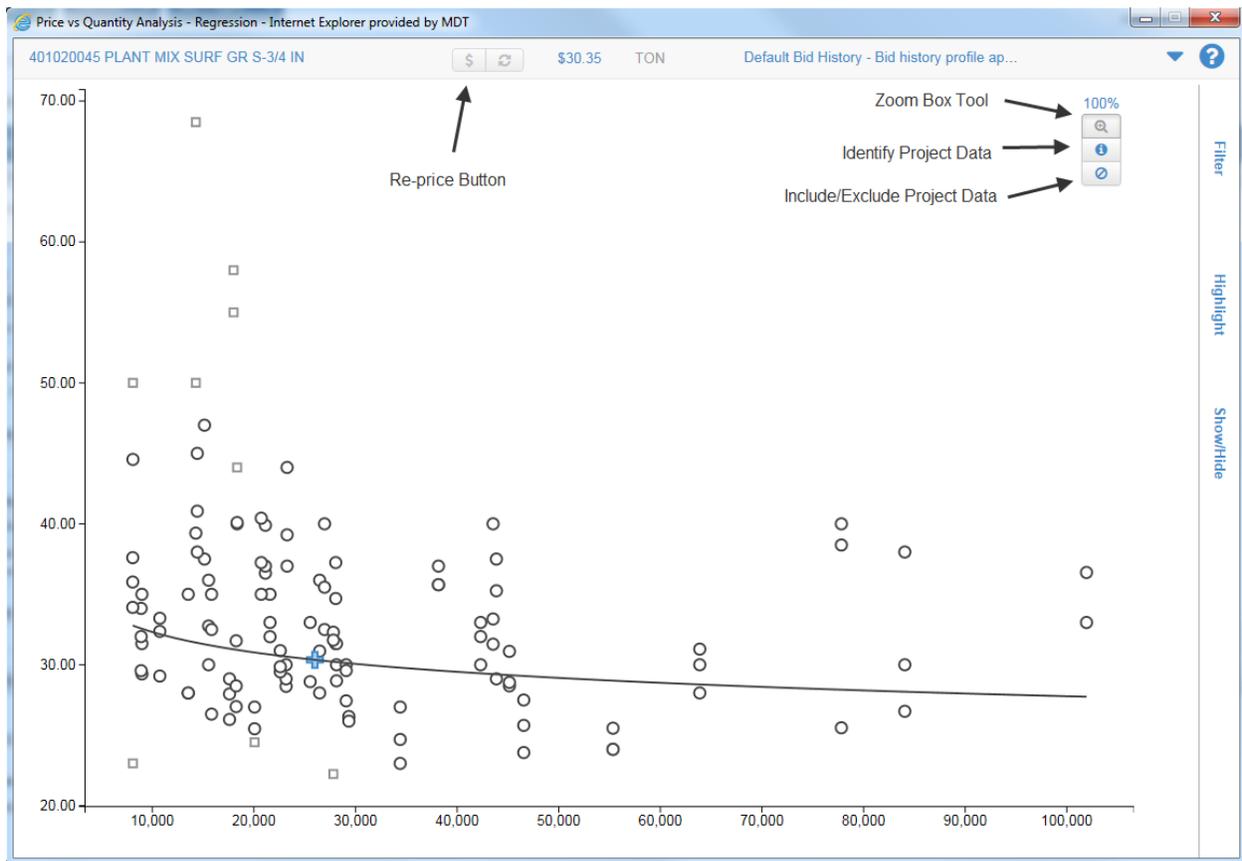
To view the price curves open the Actions menu next to the Calculate Price button and select Price vs Quantity Analysis.

Price vs Quantity Analysis Graph

The Price vs Quantity tool is available in the Item Bid History tool and the cost estimates. To access the tool in Item Bid History please see the help section for the Item Bid History tool.

The tool can also be used inside of the estimate to refine bid based prices. Please see the bid based task help for navigation to the Price vs Quantity tool.

The Price vs Quantity Analysis Tool will look similar to the figure below.



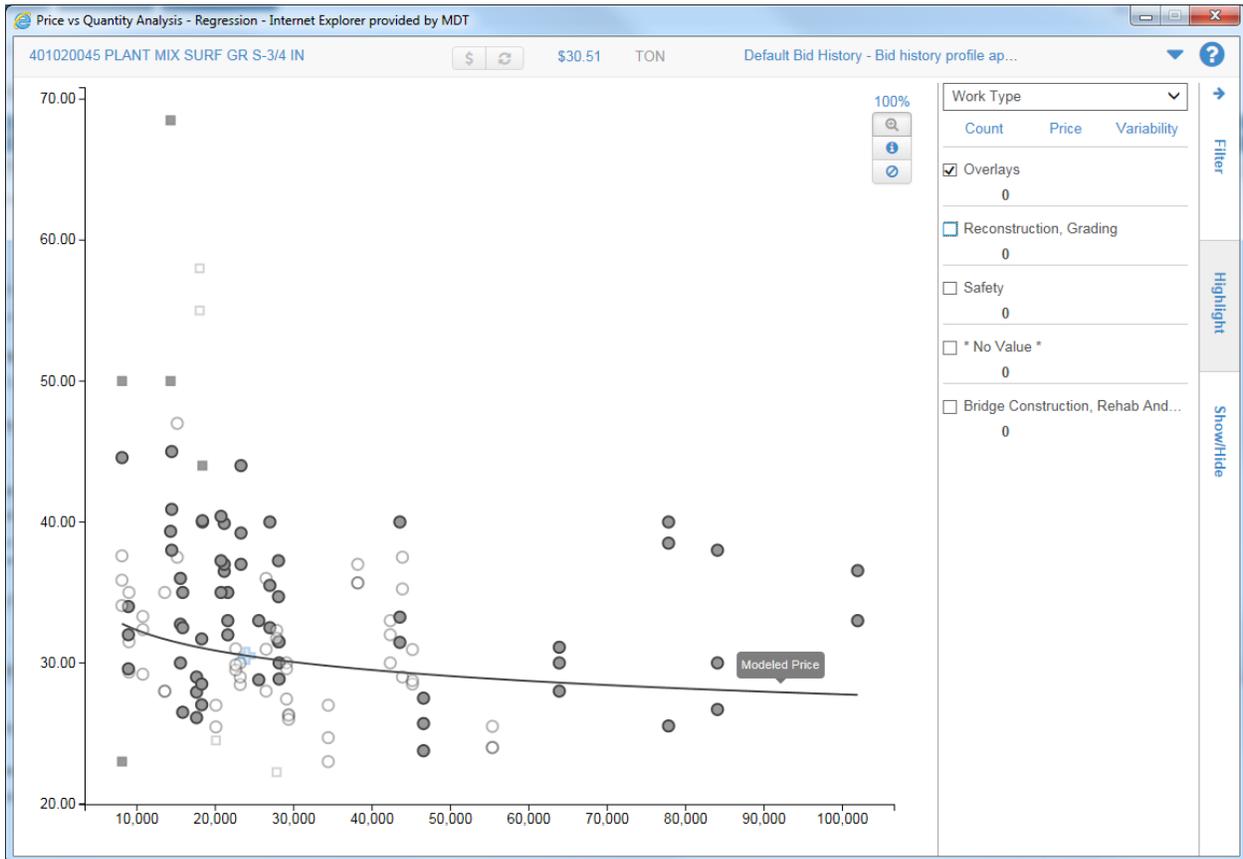
Identify Project Data- Use this tool to select data points on the screen and view point attributes such as contractor, project description, district, total contract price, etc.

Include/Exclude Project Data- Allows user to include or exclude data points by selecting the points to customize the graph.

Re-price Button- Once the user has modified the chart with the Include/Exclude button, use the re-price button to recalculate the price.

Highlight Data Points

Data points can be highlighted on the chart for specific attributes that the user chooses. The image below shows highlighted points for the overlay work type.



Create a Concept

- Estimation 
- Bid History Profiles
- Concepts 
- Contingency Assignment Profiles
- Cost Estimates
- Find Bid Data
- Item Bid History
- Life Cycle Maintenance Schedule Profiles
- Snapshots
- Typical Section Profiles

Click "Concepts" to open the dialog. This will take you to the following screen.

Concept Overview

Concept Overview Save 

Advanced Click Actions Menu, select Add 

0 marked for deletion | 0 changed

Enter search criteria above to see results  Show first 10

Click on the Actions drop down menu and select Add. This will take you to the following screen.

Add Concept

Add Concept Save 

General **Locations**

Concept ID * <input type="text"/>	Improvement Type <input type="text"/>
Concept Description * <input type="text"/>	Work Type <input type="text"/>
Spec Book * <input type="text"/>	Highway Type <input type="text"/>
Unit System * <input type="text"/>	Urban/Rural <input type="text"/>
Scope Definition <input type="text"/>	Terrain <input type="text"/>
Primary County ID <input type="text"/>	Season <input type="text"/>
Primary District ID <input type="text"/>	Construction Year <input type="text"/>
Status Indicator <input type="text"/>	Let Date <input type="text"/>
Budget Class <input type="text"/>	Vendor Access <input type="text"/>
Grouping Code <input type="text"/>	Project ID <input type="text"/>

Concept ID- The concept ID will be the seven digit UPN number for the project you are working on, for example, 6138000.

Concept Description- This is the project name and description on the plans.

Spec Book- The system will default to the current spec book edition.

Unit System- English or metric project units.

Fill out the remaining project information for Primary County ID, Primary District ID, Improvement Type and Work Type. These project traits will help refine the prices the system will calculate. For consistency, use the project traits that are programmed into PPMS.

Once the data has been entered, use the save button in the top right corner to save the information and create the concept.

Create Cost Estimate

Once the Concept has been saved it will look like the screen shown below. Select the Cost Estimates tab on the left side to add an estimate.

[Overview](#) [Cost Estimate Snapshots](#)

Concept Summary

Save Complete

▼ Concept: 6138000 - STPS 203-1(16)4 North of Stevensville-North

Save



General

Locations

Cost Estimates



Concept ID *

6138000

Concept Description *

STPS 203-1(16)4
North of Stevensville-North

Spec Book

14

Unit System *

English

Scope Definition

Primary County ID

C041
Ravalli

Primary District ID

1
Missoula

Status Indicator

Programmed - Programmed

Budget Class

Grouping Code

Improvement Type

140 - Reconstruction-without added capacity

Work Type

RCST - RECONSTRUCTION, GRADING

Highway Type

2LA - 2 LANE ASPHALT

Urban/Rural

R - Rural

Terrain

Rolling - Rolling

Season

Construction Year

Let Date

Vendor Access

Begin typing to search or press Enter

Copied Project Name

Transition To Project

Transition To Project Date

Create Estimate from Profile

General

Locations

Cost Estimates

Q | Type search criteria or press Enter Advanced

Select Cost Estimates ▼

Click on the Select Cost Estimates button to create an estimate from a profile.

Select Cost Estimate

New Cost Estimate Name* Enter new cost estimate name

Q | Advanced

Enter search criteria above to see results or Show first 10

Show Profiles Only Select Show Profiles Only

0 selected

Add to Concept...

Select Show first 10 and select a profile from the list.

Cost Estimate Name- The cost estimate name will follow the same naming convention used for DMS, for example 6138000RDEST001. Currently each area will still create their own estimate similar to the method currently in use for the Excel sheet.

Once you have selected the profile you would like to create your estimate from click the Add to Concept button. This will copy everything in the selected profile into your new estimate.

This will take you to the general cost estimate information tab.

Cost Estimate Summary

▼ Cost Estimate: 6138RDEST120 - test for training 9/18

Concept: 6138000

General

- Cost Summary
- Categories
- Cost Estimate Items
- Variables
- Adhoc Pricing
- Non-Construction Costs
- Markups

▼ Parent Attributes

Associated Type Concept	Unit System English
Entity 6138000	Improvement Type 140 - Reconstruction-without added capacity
Entity Description STPS 203-1(16)4 North of Stevensville-North	Work Type RCST - RECONSTRUCTION, GRADING
Spec Book 14	

▼ Estimate Information

Cost Estimate Name * 6138RDEST120	Design Build <input type="checkbox"/>
Cost Estimate Descr test for training 9/18	Profile No
Estimate Phase SOW - Scope of Work	Project Length (miles) <input type="text"/>
Estimated By U3817 Richards Chad	Vendor Access <input type="text"/>
Cost Estimate Total 4,002,536.29	Snapshot Tracking Percentage <input type="text"/>
Previous Snapshot Total 0.00	Active Yes

Cost Estimate Description- The cost estimate description is a general description of the scope of the project, this can be especially useful when developing cost estimates for project cost comparisons such as steel vs concrete bridge designs.

Estimate Phase- Select the current estimate phase from the pull down menu.

Lanemiles- Enter the total lane miles for the project.

Estimated By- Start typing your name and the system will search for your name.

Once all of these fields have been entered, save your entry. Saving will create the estimate and return you to the cost estimates tab of the concept. Select the hyperlink with the name of your newly created estimate.

Create Estimate from Existing Estimate

An alternative to using a profile to create an estimate is to use an existing estimate to create an estimate. This is especially useful for safety or pavement preservation projects with many projects with like items.

Select Cost Estimate

New Cost Estimate Name *

Enter new cost estimate name

Enter UPN to search estimates to use for profile

Q 6138

Advanced

Showing 9 of 9

Show Profiles Only

Select Estimate to use and click Add to Concept

	Cost Estimate Name	Concept ID	Project	Proposal	Associated Type
✓	6138000RDEST009	6138000			Concept
	6138000RDEST012	6138000			Concept
	6138000RDEST013	6138000			Concept
	6138000RDEST100	6138000			Concept
	6138000RDEST200	6138000			Concept
	6138000rdest008	6138000			Concept
	6138000rdest010	6138000			Concept
	6138000rdest011	6138000			Concept
	6138RDEST120	6138000			Concept

Add Bid Items

Bid items can be added in two locations, in the Cost Estimate Items tab or in the Cost Estimate Item Pricing Worksheet. **The preferred method is using the item pricing worksheet, it is easier to navigate and looks like an excel sheet.**

Cost Estimate Summary

Save Complete

Cost Estimate: 6138000RDEST002 - Test Save ?

- General
- Cost Summary
- Categories
- Cost Estimate Items
- Variables
- Adhoc Pricing
- Non-Construction Costs
- Markups
- Annualization

Parent Attributes

Entity
6138000

Unit System
English

Entity Description
STPS 203-1(16)4 North of Stevensville-North

Work Type
RCST - RECONSTRUCTION, GRADING

Spec Book
14

Improvement Type
140 - Reconstruction-without added capacity

Estimate Information

Cost Estimate Name *
6138000RDEST002

Design Build

Cost Estimate Descr
Test

Profile
No

Estimate Phase
AGR - Alignment and Grade Review

Budget Class
[Dropdown]

Estimated By
U3817
Chad Richards

Lanemiles
5.90

Estimate Type
[Dropdown]

Cost Estimate Total
5,604,647.16

Vendor Access
Begin typing to search or press Enter

Previous Snapshot Total

Snapshot Tracking Percentage
[Input]

Select the Cost Estimate Item Pricing Worksheet to open.

Cat ID	Line	Item *	Descr	Unit	Quantity	Unit Price	Ext Amt	Supp Descr	Active
	10	104030010	MISCELLANEOUS WORK	UNIT	20,000.000	1.00000	20,000.00		Yes
	20	109200005	MOBILIZATION	LS	1.000	391,650.54000	391,650.54		Yes
	30	201130000	CLEARING AND GRUBBING	LS	1.000	30,000.00000	30,000.00		Yes
	40	203020100	EXCAVATION-UNCLASSIFIED	CUYD	235,000.000	4.26128	1,001,400.80		Yes
	50	203020200	EXCAVATION-UNCLASS BORROW	CUYD	35,000.000	3.98340	139,419.00		Yes
	70	203080100	TOPSOIL-SALVAGING AND PLACING	CUYD	12,000.000	4.92167	59,060.04		Yes
	80	208010150	TEMPORARY EROSION CONTROL - LS	LS	1.000	55,000.00000	55,000.00		Yes
	100	301020340	CRUSHED AGGREGATE COURSE	CUYD	26,500.000	23.47346	622,046.69		Yes
	110	401020021	COMMERCIAL MIX-PG 70-28	TON	9,500.000	108.75000	1,033,125.00		Yes
	120	409000010	COVER-TYPE 1	SQYD	45,000.000	0.98206	44,192.70		Yes
	130	603010040	DRAINAGE PIPE 18 IN	LNFT	2,200.000	42.66235	93,857.17		Yes
	140	603010048	DRAINAGE PIPE 24 IN	LNFT	800.000	65.02118	52,016.94		Yes
	150	603010066	DRAINAGE PIPE 36 IN	LNFT	450.000	82.74787	37,236.54		Yes
	160	603013296	REIN CONC BOX 19 X 7	LNFT	150.000	2,250.00000	337,500.00		Yes
	170	P60700000	PRELIMINARY FENCING	STA	311.500				Yes
	180	P61900100	PRELIMINARY SIGNING	STA	311.500				Yes

New Item Select Items... Add Multiple Bid Items

Add Single Bid Item

Showing 16 of 16

Use Select Items to enter single or multiple bid items as shown above.

Select Items

Search keywords or bid item numbers here.

Q excavation Advanced Showing 13 of 13

Select: All None 1 selected

Item	Descr	Unit
203020100	EXCAVATION-UNCLASSIFIED	CUYD - Cubic Yards
203020175	EXCAVATION-UNCLASS CHANNEL	CUYD - Cubic Yards
203020200	EXCAVATION-UNCLASS BORROW	CUYD - Cubic Yards
✓ 203020225	EXCAVATION-STREET	CUYD - Cubic Yards
203020250	SPECIAL BORROW-EXCAVATION	CUYD - Cubic Yards
203020275	EXCAVATION-MUCK	CUYD - Cubic Yards
203020278	EXCAVATION-DIGOUTS	CUYD - Cubic Yards
203030117	EXPLORATORY EXCAVATION	HOUR - Hour
209010100	STRUCTURE EXCAVATION TYPE 1	CUYD - Cubic Yards
209010125	STRUCTURE EXCAVATION TYPE 2	CUYD - Cubic Yards
999203034	UNCLASSIFIED EXCAVATION	LS - Lump Sum
999203035	UNCLASSIFIED EXCAVATION	CUYD - Cubic Yards
999203045	BUILDING EXCAVATION, BACKFILL	LS - Lump Sum

Click on bid items, green check will indicate which bid items have been selected.

Once all bid items have been selected, select Add to Cost Estimate Item.

Add to Cost Estimate Item

Once the bid items have been selected and added to the cost estimate, place quantities on the bid items. This can be quickly done in the Item Pricing Worksheet.

Calculate Bid Based Prices

Bid Items that are set up to calculate bid based prices by default can all be calculated in one operation once quantities have been entered. This can be done directly from the Item Pricing Worksheet.

Save ?

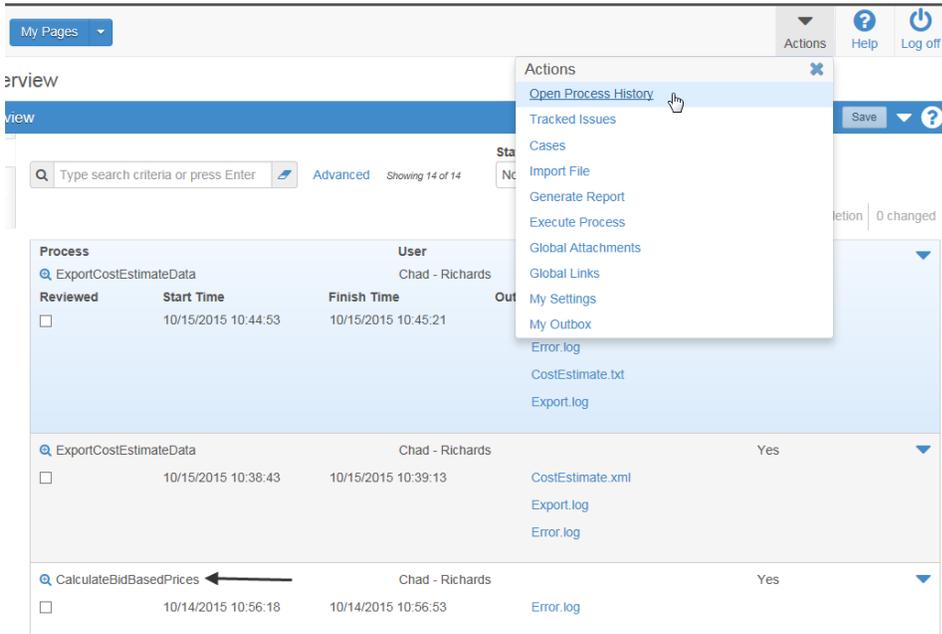
Actions

- Calculate Bid Based Prices
- Tasks
- Export Cost Estimates
- Preliminary Estimate
- Views
- Attachments
- Issues
- Links
- Reports
 - Cost Estimate Budget Class Report
 - Cost Estimate Contingency Report
 - Cost Estimate Formula Information Report
 - Cost Estimate Scope Tracking Report
 - Cost Estimate Summary Report
 - Design Build Estimate Report
 - Prequalification Work Type Report

	Ext Amt	Supp De
30	20,000.00	
13	29,908.45	
30	374,103.27	
29	844,775.75	
30	60,000.00	
99	202,188.56	
30	806,000.00	
75	1,312,035.45	

Select the drop-down arrow next to Save and select Calculate Bid Based Prices. This will start the pricing operation, which depending on the size of the estimate could take 5-10 minutes. This will be performed in the background and you can continue working in the system as normal. The system will not inform

you when it has completed the task. To verify that the task is completed, click on the Actions drop down menu at the top of the screen next to the Help and Log Off buttons. Select Open Process History.

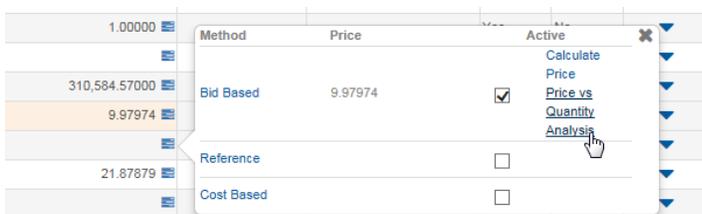


The figure above shows several processes that have been run. Calculate Bid Based Prices is shown at the bottom of the figure, you can see the start and finish times for the process and the “Yes” indicates that the process was completed successfully. **Note: This window is static, you will need to refresh the screen to see if the process has completed.**

Return to the cost estimate pricing spreadsheet and review the bid items to see if any have not generated a price. You will likely have blanks in your estimate, if there is not enough data to generate a bid price, the system will leave the item blank. The system also will not price lump sum items, you need to generate prices for lump sum items. The Price Tasks help below will assist in how to assign prices to these bid items.

Price vs Quantity Analysis Tool

Once the Bid-Based price has been calculated as shown above, the user can view and modify the curves used to develop the price. Click the blue pricing box inside of the Unit Price column of the Item Pricing Worksheet. Please see the Price vs Quantity Analysis Graph chapter for further help using this tool.



▼ Task Detail

Task*

Task Description*

Task Bid History Profile

Alternate Item

Task Group

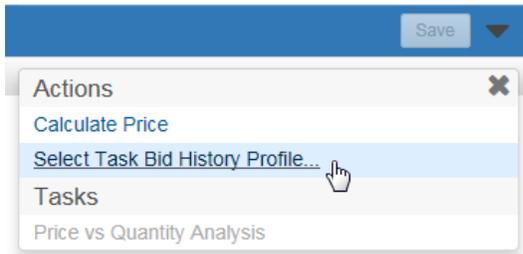
Active
 No

Rolled Up Quantity

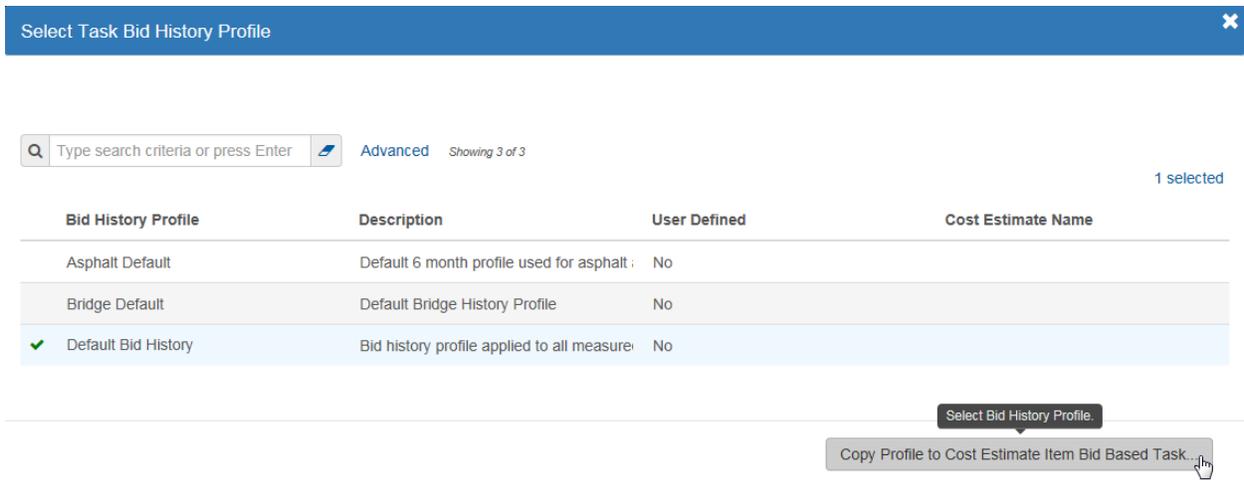
Alternate Quantity

▼ Results

Once you have saved, select the drop down next to Save and click Select Task Bid History Profile.



Select the appropriate Bid History profile for the bid item you are calculating a price for.



Now you can see the Bid History Profile has been applied to your bid task.

Task Detail

Task *

Task Description *

Task Bid History Profile
 Default Bid History

Alternate Item

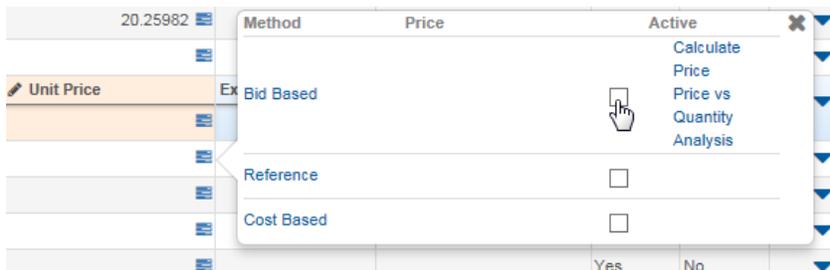
Task Group

Active
 No

Rolled Up Quantity

Alternate Quantity

Now you can return to the Item Pricing Worksheet and when you click the blue pricing box, you can see that now you can see the Calculate Price and Price Vs Quantity Analysis links. Select the Active check box to activate the Bid Based task and save the page. Now you can recalculate the price for that bid item with the Calculate Price link inside the same box.



Reference-Based Price Task

A reference based price task is used when a percentage of bid (used for mobilization) or a known price, such as a previous bid tab price will be used.

Add Reference-Based Price Task

Check the Active box for the Reference method, then select Reference.

Quantity	Unit Price	Ex	Method	Price	Active
1,000.000	6.43776	Ex	Bid Based		<input type="checkbox"/>
1.000			Reference		<input type="checkbox"/>
30,000.000	1.00000			30,000.00	Yes No
2.000					Yes No
63,500.000	0.48971			31,096.58	Yes No
3,500.000	1.00000			3,500.00	Yes No

This will take you to the Reference Price Task Summary window.

Reference Price Task Summary

Cost Estimate: 6138000rdest004 - Save ?

Item Information

Line	Quantity
200	1.000
Item	Unit of Measure
109200005 MOBILIZATION	LS - Lump Sum
Supplemental Description	Price

Q [] Advanced

New

0 added | 0 marked for deletion | 0 changed

List has no rows.

Click the New button to add a new reference price task.

Price Task	Description	Active	Type	Task Unit Price
Price Task	Mobilization of 10%	Yes		
Price Task			Use Historical Price	<input type="checkbox"/>
Reference Price *			Amount	<input type="text"/>
Description *	Mobilization of 10%		Percent of	<input type="text" value="10.00"/>
Item ID			Percent on top	<input type="text"/>
Spec Book			Active	<input checked="" type="checkbox"/>
Cost Estimate Task Group Id				<input type="text"/>

Fill out the required information and enter the unit price or use a percent of estimate, click the Active button and save once completed. **Note: For mobilization, use the percent on top calculation to match our current mobilization calculation method.**

Ad-Hoc Pricing

Ad-Hoc pricing is used to add estimated costs as lump sum amounts developed outside of the software to the estimate during preliminary design stages. For example, the Ad-Hoc pricing would also be used to add the bridge cost to a road design estimate.

Cost Estimate Summary

Cost Estimate: 6138000rdest003 - Test Save ?

General

Cost Summary

Categories

Cost Estimate Items

Variables

Adhoc Pricing

Non-Construction Costs

Markups

Annualization

Total AdHoc Pricing
250,000.00

New 0 added | 0 marked for deletion | 0 changed

Name *	Description	Cost *	Active
Approaches	Public road approaches	250,000.00	<input checked="" type="checkbox"/>

Non-Construction Costs

Construction Engineering and IDC costs are entered in the Non-Construction Costs tab of the Cost Estimate Summary. If the estimate has been created from a profile the non-construction costs should be set up, if they have not been created or additional costs are needed they can be added as shown below.

Cost Estimate Summary

Cost Estimate: 2019000RDEST001 - Save ?

General

Cost Summary

Categories

Cost Estimate Items

Variables

Adhoc Pricing

Non-Construction Costs

Markups

Annualization

Parent Attributes

Associated Type	Concept	Unit System	English
Entity	2019000	Improvement Type	140 - Reconstruction-without added capacity
Entity Description	STPP 69-1(24)32Boulder-South	Work Type	
Spec Book	14		

0 added | 0 marked for deletion | 0 changed

Name	Description	Calculated Amount	Active
Construction Engineering		1,160,204.63	Yes
Non Construction Cost Name * <input type="text" value="Construction Engineering"/>		Percent of Total Estimate <input type="text" value="10.00"/>	
Non Construction Cost Description <input type="text"/>		Non Construction Cost Amount <input type="text"/>	
Non Construction Cost Type <input type="text" value="CE - Construction Engineering"/>		Calculated Amount 1,160,204.63	Active <input checked="" type="checkbox"/>
Non Construction Cost Group <input type="text"/>			
▶ IDC Construction	Indirect Cost (IDC)-Construction	1,203,132.20	Yes
▶ IDC Construction Engineering		1,160.20	Yes

Select the New button and fill in the cost name, cost amount and select the Active check box.

Project Contingency

Select the Contingency Assignment link along the top of the screen to set up the project contingency.

Overview [Contingency Assignment](#) [Life Cycle Costs](#) [Typical Sections](#) [Cost Estimate Item Pricing Worksheet](#)

Cost Estimate Summary

Cost Estimate: 6138000rdest002 - Save ?

General	Parent Attributes	
Cost Summary	Associated Type	Unit System
Categories	Project	English
Cost Estimate Items	Entity	Improvement Type
Variables	6138000	130 - Reconstruction- with added capacity
Adhoc Pricing	Entity Description	Work Type
Non-Construction Costs	North of Stevensville-North	RCST - RECONSTRUCTION, GRADING
Markups	Spec Book	
Annualization	06	

Select the dropdown arrow next to Add and click on Select Contingency Assignment Profile.

Cost Estimate Contingency Assignment Overview

Cost Estimate: 6138000rdest002 - Save ?

[Advanced](#)

Add ▼ 0 marked for deletion | 0 changed

List has no rows.

Select the profile to use based on the complexity of the project and click Add to Cost Estimate. The system will copy the contingency profile to your cost estimate.

Select Contingency Assignment Profile

Search: [] Advanced Showing 3 of 3

Select: All | None 0 selected

Profile Name	Profile Description
High	High Complexity Project
Medium	Moderate Complexity Project
Low	Low Complexity Project

Add To Cost Estimate

Select the hyperlink for the Contingency profile once the system has copied it into your cost estimate.

Cost Estimate Contingency Assignment Overview

Cost Estimate: 6138000RDEST001 - Full reconstruction estimate. Save ?

Search: [] Advanced Showing 1 of 1

Add 0 marked for deletion | 0 changed

Profile Name	Profile Description
Medium	Moderate Complexity Project

Click on the Phase Ranges tab on the left side of the screen.

Overview Cost Estimate

Cost Estimate Contingency Assignment Summary

Cost Estimate: 6138000rdest010 - test test

General	Profile Name *	Contingency Profile Cost
Phase Ranges ←	Low	0.00
Risk Factors	Profile Description *	Current Estimate Phase
Items	Low Complexity Project	SOW - Scope of Work

Spec Book

14

Enter the Contingency percentage into each design phase field. Consider the recommended contingency range and use judgement based on the project to determine the appropriate contingency rates.

Phase*	Recommendation	Expl. Req.	Factor*
PFR - Preliminary Field Review	15.00 - 45.00	Yes	25.00
Explanation			
AGR - Alignment and Grade Re...	15.00 - 30.00	Yes	20.00
SOW - Scope of Work	10.00 - 20.00	Yes	15.00
PIH - Plan In Hand Review	5.00 - 20.00	Yes	10.00
FPR - Final Plan Review	3.00 - 10.00	Yes	5.00

Snapshots

Snapshots are a static estimate saved in Estimation to provide a reference for all design phases and track the price changes as the project evolves through the design phases.

Snapshots will automatically be saved when the design phase is changed in the system. The downfall to the automatic snapshot is that it will save the snapshot with whatever design phase you change it to. For example, if you complete AGR and are moving to SOW and change the design phase to SOW, it will automatically save the snapshot and will show SOW.

Manual Snapshot

The user can save a snapshot manually if desired, for example a second AGR meeting is needed and a new estimate is distributed and used for the final AGR estimate, a new snapshot can be created to capture this.

From the Cost Estimate Summary page, select the Actions drop down menu next to Save, select the Create Snapshot link.

Cost Estimate Summary

The screenshot shows the 'Cost Estimate Summary' page for 'Cost Estimate: 6138000RDEST013 - test estimate for glendive district'. The 'Save' button is visible in the top right. The 'Parent Attributes' section is expanded, showing details for 'Associated Type', 'Entity', and 'Entity Description'. The 'Actions' dropdown menu is open, and the 'Create Snapshot' option is highlighted by the mouse cursor.

Parent Attributes	Unit System	Improvement Ty	Work Type
Concept	English	140 - Reconstruct	RCST - RECONS
Entity			
6138000			
Entity Description			
STPS 203-1(16)4 North of Stevensville-North			
Spec Book			
14			

Fill out the description for the Snapshot and select Save.

▼ Add Cost Estimate Snapshot Save

Entity 6138000	Cost Estimate Name 6138000RDEST013
Description * <input type="text" value="Pre AGR meeting"/>	Snapshot Type Manual
	Snapshot Reason <input type="text"/>

▼ Remarks

Type *	Remark *
<input type="text"/>	<input type="text"/>

← Not Needed →

Typical Sections

Typical Sections are used to generate average quantities and bid prices for bid items that are not currently known. These are typically used during preliminary design or planning. Typical sections can be built for the entire road section or broken down into multiple typical sections for different bid item groups. Average bid item quantities for commonly known quantities such as Station or Square Yard are developed from historical averages or average plan quantities.

Add Typical Section Bid History Profile

Before the Typical Sections can be added to the estimate, the Bid History Profile need to be set for the Typical Sections, the system does not use the bid history profiles that are associated with the individual bid items for the typical sections.

Scroll to the bottom of the Cost Estimate Summary screen. Under the Additional Information panel you will see a search box labeled Typical Section Bid History Profile. Click in this box and begin typing "Default Bid History", the system will search and return a search list of profiles, select the Default Bid History profile.

Additional Information

Bid Based

Bid History Profile

Default Bid History

Typical Section Bid History Profile

Q Default Bid History

Bid history profile applied to all measured quantity bid items by default.

Add Typical Sections

While in the Cost Estimate Summary, select the Typical Sections link along the top of the screen as shown in the figure below.

Overview Contingency Assignment Life Cycle Costs **Typical Sections** Cost Estimate Item Pricing Worksheet

Cost Estimate Summary

Cost Estimate: 6138000RDEST001 - Full reconstruction estimate.

General	Parent Attributes	
Cost Summary	Associated Type Concept	Unit System English
Categories	Entity 6138000	Improvement Type 140 - Reconstruction-without added capacity
Cost Estimate Items	Entity Description STPS 203-1(16)4 North of Stevensville-North	Work Type RCST - RECONSTRUCTION, GRADING
Variables	Spec Book 14	
Adhoc Pricing	Estimate Information	
Non-Construction Costs		
Markups		
Annualization		

The Cost Estimate Typical Section Profile Overview will show all the typical sections associated with the cost estimate. To add a Typical Section, select the drop down arrow next to save and select Copy Typical Section Profiles.

Home Recent My Pages Actions Help

Cost Estimate

Cost Estimate Typical Section Profile Overview

Cost Estimate 6138000RDEST001 - Full reconstruction estimate Save

Type search criteria or press Enter Advanced Showing 3 of 3

Line	Active	Typical Section Profile	Description	Qty *	Unit of Measure
001	<input checked="" type="checkbox"/>	Fencing	Preliminary Fencing by Statik	31.000	STA - Station
002	<input checked="" type="checkbox"/>	Signing		31.000	STA - Station
003	<input checked="" type="checkbox"/>	Striping		31.000	STA - Station

Actions

- Add
- Copy Cost Estimate Typical Section Profiles...
- Copy Typical Section Profiles...

Tasks

- Export Cost Estimates
- Transition Typical Sections to Detail Items...

Views

- Attachments
- Issues
- Links

Select the typical sections that you would like to add to your estimate and select Copy to Cost Estimate.

Copy Typical Section Profiles

Type search criteria or press Enter Advanced Showing 3 of 3

Select: All None 1 selected

Profile Name	Profile Description
<input checked="" type="checkbox"/> Fencing	Preliminary Fencing by Station
<input type="checkbox"/> Signing	
<input type="checkbox"/> Striping	

Copy to Cost Estimate

Once the Typical sections are copied into the estimate, enter the quantities and select Save.

Transition Typical Sections

Once quantities can be reasonable determined for bid items that are included in a typical section, the typical section can be transitioned into normal bid items. This saves time from having to select all the bid items from the bid item list.

For example, if you have the typical section included for fencing. You have completed the fencing layout for your project and now have fence quantities, you can transition the typical section to fencing bid items.

Home Recent My Pages Actions Help Log

Cost Estimate

Cost Estimate Typical Section Profile Overview

Cost Estimate 6138000RDEST001 - Full reconstruction estimate. Save

Type search criteria or press Enter Advanced Showing 3 of 3

Line	Active	Typical Section Profile	Description	Qty*	Unit of Measure
001	<input checked="" type="checkbox"/>	Fencing	Preliminary Fencing by Statir	31.000	STA - Station
002	<input checked="" type="checkbox"/>	Signing		31.000	STA - Station
003	<input checked="" type="checkbox"/>	Striping		31.000	STA - Station

Actions

Add

Copy Cost Estimate Typical Section Profiles...

Copy Typical Section Profiles...

Tasks

Export Cost Estimates

Transition Typical Sections to Detail Items...

Views

Attachments

Issues

Links

From the Typical Section Overview, select the actions drop down menu next to the save button and select the Transition Typical Sections to Detail Items link.

Transition Cost Estimate to Detail Items

Type search criteria or press Enter Advanced Showing 3 of 3

Select: All None 1 selected

Typical Section Profile	Description	Qty	Total	User Defined
<input checked="" type="checkbox"/> Fencing	Preliminary Fencing by Station	31.000	9,885.11	No
<input type="checkbox"/> Signing		31.000	4,355.86	No
<input type="checkbox"/> Striping		31.000	6,972.03	No

Add to Cost Estimate

Select the Typical Section you would like to transition and select Add to Cost Estimate.

Estimate Report

The estimate report is a PDF report that looks like the traditional Excel estimate sheet used by MDT.

Naming Convention: Be sure to name the estimate report the same as the name of the estimate on AASHTOWare. This name will be used by contract plans to pull the estimate from AASHTOWare.

Navigate to the General tab of the cost estimate, as shown in the screenshot below, place a checkmark in the Send Email box then select Save. This will generate the PDF and email it to the user identified in the Estimated By window.

Make sure to fill out the Estimated By window otherwise you will not receive your estimate.

The screenshot shows a web interface for a cost estimate. At the top, there is a blue header bar with the text "Cost Estimate: 6138000RDEST015 - test estimate" and a "Save" button. Below the header, there is a "Concept:" field. On the left side, there is a vertical navigation menu with the following items: General, Cost Summary, Categories, Cost Estimate Items, Variables, Adhoc Pricing, Non-Construction Costs, Markups, and Annualization. The "General" tab is selected. The main content area is titled "Parent Attributes" and contains several fields:

Field Name	Value
Associated Type	Concept
Entity	6138000
Entity Description	STPS 203-1(16)4 North of Stevensville-North
Spec Book	14
Unit System	English
Improvement Type	140 - Reconstruction-without added capacity
Work Type	RCST - RECONSTRUCTION, GRADING
Send Email	<input type="checkbox"/>

A purple arrow points to the "Send Email" checkbox, which is currently unchecked.

Alternatively, estimate reports are available through the Jasper Reporting tool, from the home screen, click on the link for Jasper Reports.

PROJECT MDT Designer

The screenshot shows the navigation menu for the PROJECT MDT Designer. It consists of two main sections, each with a blue header bar and a question mark icon:

- Estimation**: This section contains the following links: Concepts, Cost Estimates, Find Bid Data, Item Bid History, Planning Groups, Review Reference Profile Recommendations, and Snapshots.
- External Links**: This section contains the following links: Cloverleaf, Jasper Reports, AASHTO Transportation Construction Community, and MDT Jasper Reports.

A black arrow points to the "Jasper Reports" link in the External Links section.

This will open a new tab in Windows Explorer with the Jasper home screen, log in to the system using your Windows credentials. Once you have logged in you will be at the home screen. Once you have used the new estimate report it will show up in the Recently Viewed Items section.

MDT JasperReports PROD

Home Library View Create

Home

Recently Viewed Items

Cost Estimating Mob	Ad Hoc view
Test Cost Adhoc	Ad Hoc view
Test Cost Adhoc Report	Report
Preliminary Estimate	Report
Traffic Control Percentage	Ad Hoc view
Mobilization Percentage	Ad Hoc view
Percentage Bid Item Check	Ad Hoc view

If the report does not show up in the Recently Viewed Items, click on the Library link at the top of the page. Click in the Search bar at the top of the Library and search Preliminary Estimate.

MDT JasperReports PROD

Library View Create

Library Preliminary Estimate X Q

Name	Description
Preliminary Design Build Estimate	AASHTOEST002
Preliminary Estimate	AASHTOEST001

Select the Preliminary Estimate. This will take you to the report, along the left side there is an Options tab called Cost Estimate, click in this drop down.

MDT JasperReports PROD

Library View Create

Options Preliminary Estimate

Back [Save] [Print]

* Cost Estimate

1233001RDEST001 | South of Seeley Lake-

Once you click in the drop down, you can search for your project by the UPN number.

MDT JasperReports PROD Library View Create

Options **Preliminary Estimate**

* Cost Estimate

1233001RDEST001 | South of Seeley Lake-South

6138

6138000RDEST009 | STPS 6138000RDEST015 | STPS 203-1(16)4 North of Stevensville-North

6138000RDEST012 | STPS

6138000RDEST013 | STPS 203-1(16)4 North...

6138000RDEST015 | STPS 203-1(16)4 North...

6138000RDEST100 | STPS 203-1(16)4 North...

6138000rdest010 | STPS 203-1(16)4 North of...

6138000rdest011 | STPS 203-1(16)4 North of...

Select the estimate that you want to run a report for and click the Apply button at the bottom of the page. Now your estimate will be displayed on the screen, if it is blank, there are missing data fields in the estimate somewhere. Now you can export the report as a PDF.

Preliminary Estimate Data refreshed 2018-07-02 at 08:16:55

Back [Icons] 100% search report

PDF
Excel (Paginated)
Excel
CSV
DOCX
RTF
ODT
ODS
XLSX (Paginated)
XLSX
PPTX

Montana Department of Transportation
AASHTOWare Project Estimation
Preliminary Estimate

STPS 203-1(16)4
North of Stevensville-North
6138000
Alignment and Grade Review

Prepared By: Chad Richards
Date: 07-02-2018
County: Ravalli
District: Missoula
Work Type: RECONSTRUCTION, GRADING

Contact Information
CSS Help Desk
Phone: 1-877-406-4338
Report Name:
AASHTOEST001

Quantity	Description	Unit	Unit Price	Amount
1.000	MOBILIZATION	LS	\$183,995.41000	\$183,995.41
15,000.000	PLANT MIX SURF GR S-1/2 IN	TON	\$30.66703	\$460,005.45
2,500.000	ASPHALT CEMENT PG 70-28	TON	\$498.05995	\$1,245,149.88
125,000.000	COVER-TYPE 1	SQYD	\$0.59842	\$74,802.50
125,000.000	TRAFFIC CONTROL DEVICES CB	UNIT	\$0.47997	\$59,996.25
1.000	Profile for mill/fill or overlay	LS		\$464,951.77

	GMatch Total	\$0.00
	Non GMatch Total	\$2,488,901.26
	Subtotal	\$2,488,901.26
20.00%	Contingency	\$497,780.25
	Construction Total	\$2,986,681.51
10.00%	Construction Engineering	\$298,668.15
	Total	\$3,285,349.66
10.96%	Indirect Cost (IDC) - Construction	\$327,340.29
	Total Construction w/ IDC	\$3,314,021.81
10.96%	Indirect Cost (IDC) - Construction Engineering	\$32,734.03
	Total Construction Engineering w/ IDC	\$331,402.18
	Total w/ IDC	\$3,645,423.99

Hover over the Export drop down and then select the PDF option, this will generate the pdf and open it in a new tab in Windows Explorer. Now you can save the pdf.

Consultant Design Specifics

These are specifics for Consultant Design staff.

Setting Vendor Access

Consultant Design staff will need to create the Concept for the overall project and an estimate for each consultant working on the project if there is more than one.

Create the Concept, set the concept attributes, and set the Vendor Access. Search the name of the consultant and select the appropriate consultant from the list.

Scope Definition

Reconstruction

Primary County ID

C032
Missoula

Primary District ID

1
Missoula

Urban/Rural

Work Type

RCST - RECONSTRUCTION, GRADING

Vendor Access

Begin typing to search or press Enter

Copied Project Name

Search name and select consultant from list

Once the Vendor Access has been set, the estimate can be created. Consultant Design will create an estimate for the consultant to use. Once the Cost Estimate has been created, fill out the Cost Estimate information, then set the Vendor Access for the Cost Estimate like above.

Cost Estimate Name *

1233001RDEST001

Cost Estimate Descr

Pre AGR

Estimate Phase

AGR - Alignment and Grade Review

Estimated By

U3817
Richards Chad

Design Build

Profile

No

Lanemiles

8.20

Vendor Access

Begin typing to search or press Enter

Snapshot Tracking Percentage