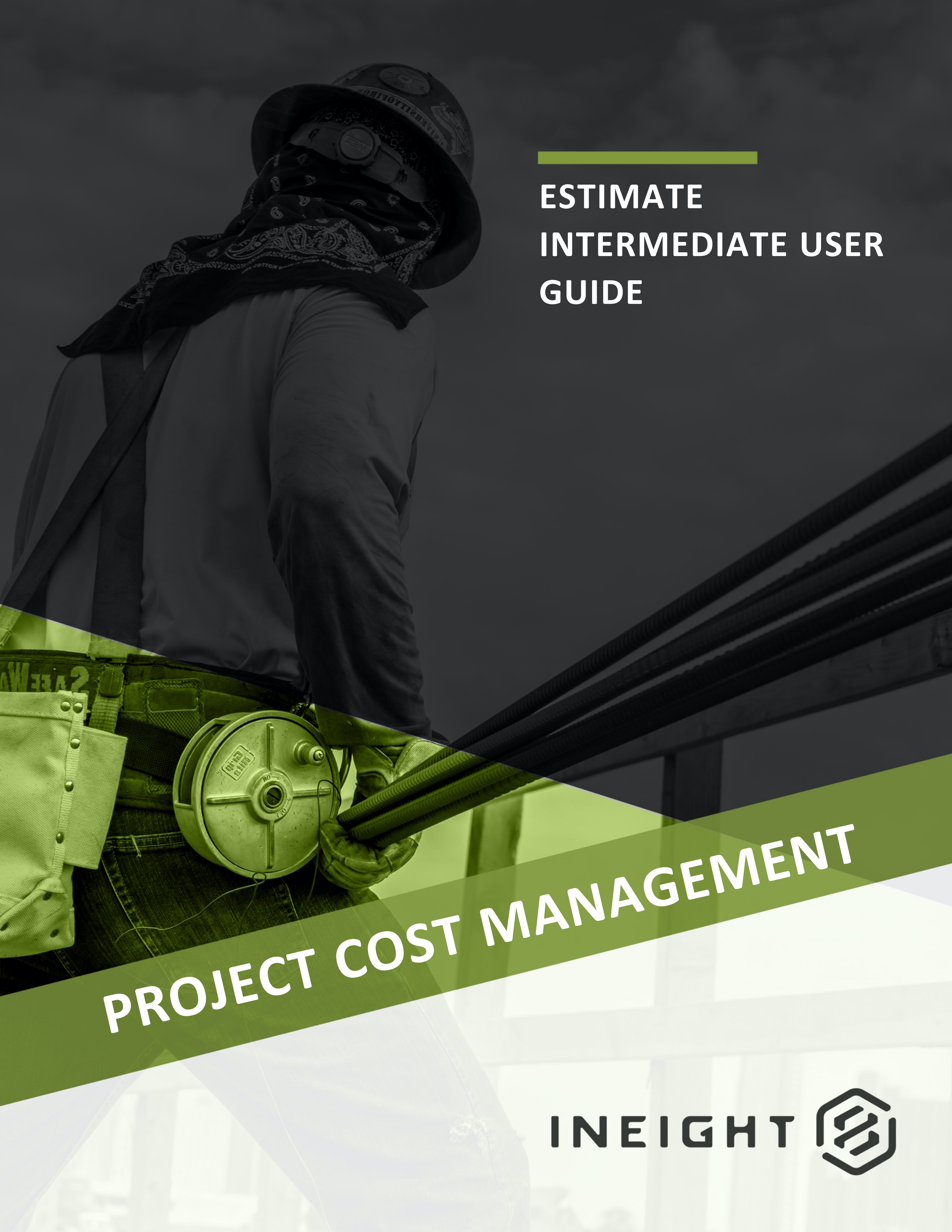

# ESTIMATE INTERMEDIATE USER GUIDE

## PROJECT COST MANAGEMENT

INEIGHT

Information in this document is subject to change without notice. Companies, names and data used in examples are fictitious.



Release 24.7
Last Updated: 07 August 2024

# CONTENTS

# STEP-BY-STEP PROCEDURES

# EXERCISES

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# INTERMEDIATE INTRODUCTION

## Course Description

This course covers the concepts and functionality you need to know in order to use the InEight Estimate software successfully. As a result, you will be able to build cost estimates and bid proposals with precision and efficiency.

## Course Objectives

As a result of this course, you will be able to use the InEight Estimate software to:

- Review and report on project information
- Integrate with MS Excel and scheduling software (MS Project or Oracle Primavera)
- Manage quotes and use additional time-saving tools

## How to Use this Manual

This training manual serves as the working guide during the *E101 Essentials of Project Modeling and Estimating* instructor-led course. The first seven lessons of this document follow a natural progression of putting an estimate together, from set up of a project to finalization of a bid. The remaining lessons cover additional functionality that will help you build and review your project estimate more effectively.

## Lessons

The following lessons are covered in this course:

| Course Lessons | |
|---|---|
| Lesson | Topic |
| Lesson 8 | Quote Management |
| Lesson 9 | Reporting |
| Lesson 10 | Data Reproduction |
| Lesson 11 | Excel Integration |
| Lesson 12 | Schedule Integration |
| Lesson 13 | Cash Flow |
| Lesson 14 | InEight Estimate Calculators |
| Lesson 15 | Cost Item Assemblies |

## Lesson Format

This manual is designed to be a “hands on” learning guide. As such, each lesson is organized into sections:

| Section | Description |
|---|---|
| Objectives | Specify what you will learn in each lesson. |
| Topics | Organize the subject matter, with explanations of key concepts and terms. |
| Step by Steps | Walk you through the “mechanics” of how to perform specific functions in the software. For each step by step, you will use the Training Job that comes pre-loaded in the InEight Estimate Estimating software. |
| Exercises | Allow you to practice and reinforce what you learn. For each exercise, you will use the Training Job that comes pre-loaded in the InEight Estimate Estimating software. |
| Review | Asks you questions to check what you have learned within each lesson. |

## Call-Outs

Throughout the document, you will also find important call-out banners.

| | |
|---|---|
| TIP | Tips are for important notes and information you want to remember. |
| NOTE | Notes are for critical information you need to know. |

## Ongoing Use

This manual is also designed to be a comprehensive reference guide you can use outside of the classroom and revisit as needed. Each lesson is compartmentalized so that you can refer back to each lesson as needed.

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# LESSON 2 – REPORTING

## Lesson Duration: 30 Minutes

## Lesson Objectives

After completing this lesson, you will be able to:

- Run reports from the Reports menu
- Create and run reports from register forms

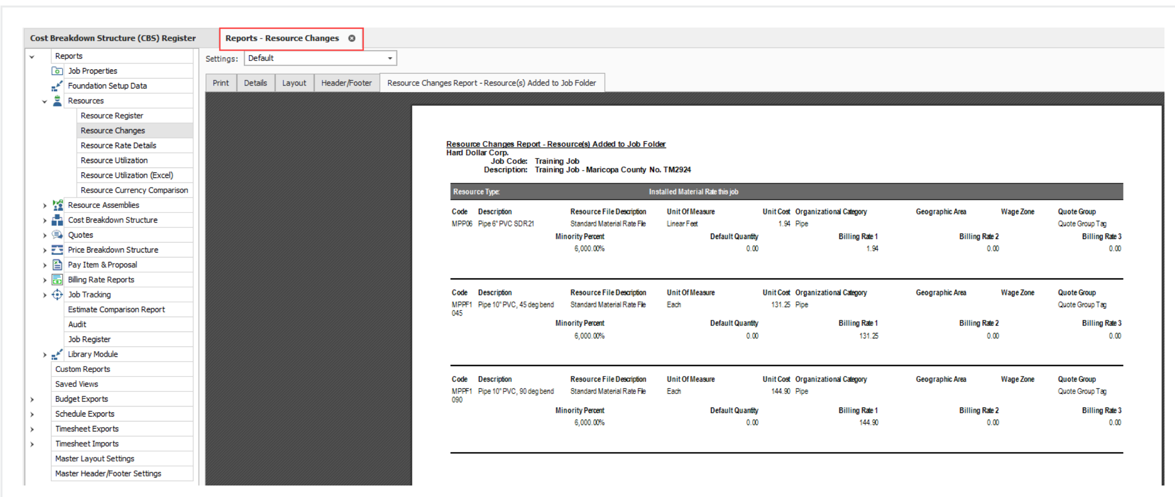
## Lesson Topics

# 2.1 REPORTS MENU

InEight Estimate provides a lot of out of the box reports, referred to as “canned” or “system” reports, that can help you review and analyze your estimate.

## 2.1.1 Non-Modal Report dialog box

The Reports dialog is docked along with the other forms and registers. You can continue to work with your estimate without being forced to close the Reports dialog box.




If the report becomes undocked, the job code shows in the reports dialog box header.

## 2.1.2 Adjustable Reports

Most of the reports within InEight Estimate can be adjusted to output the specific data and reporting format you need. Each report has its own set of output settings for configuring and formatting the report.

All InEight Estimate adjustable reports are accessed from the Reports menu. You may even run the same report multiple times and choose different output settings based on what you want to see or who the intended audience is.

For example, you may choose to run the CBS Details Report several times to satisfy different needs or for different audiences, and include or exclude specific data depending on what you or the report recipients want to see.

- For a group of *estimators*, you may want to run a CBS Details Report that shows all cost and productivity data for a job
- For *field personnel,* you may want to run a CBS Details Report that shows no cost data, but all production and resource data
- Finally, for *executive management*, you may want to run a CBS Details Report that shows summary level information only

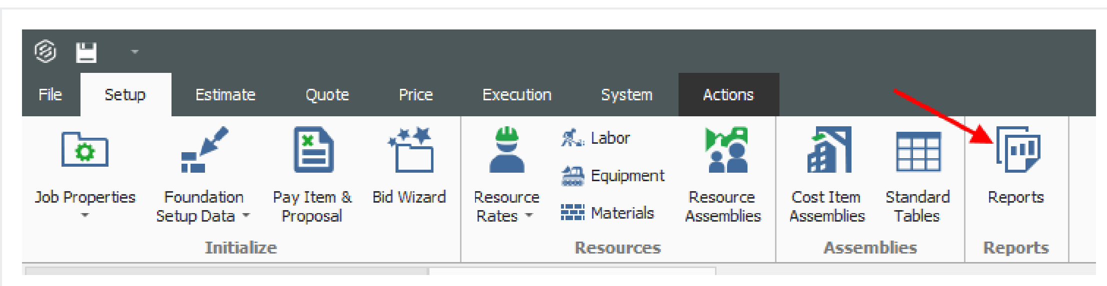
The following steps take you through a brief overview of the Reports menu and how you can access it.

## Step by Step — Getting to the Reports menu

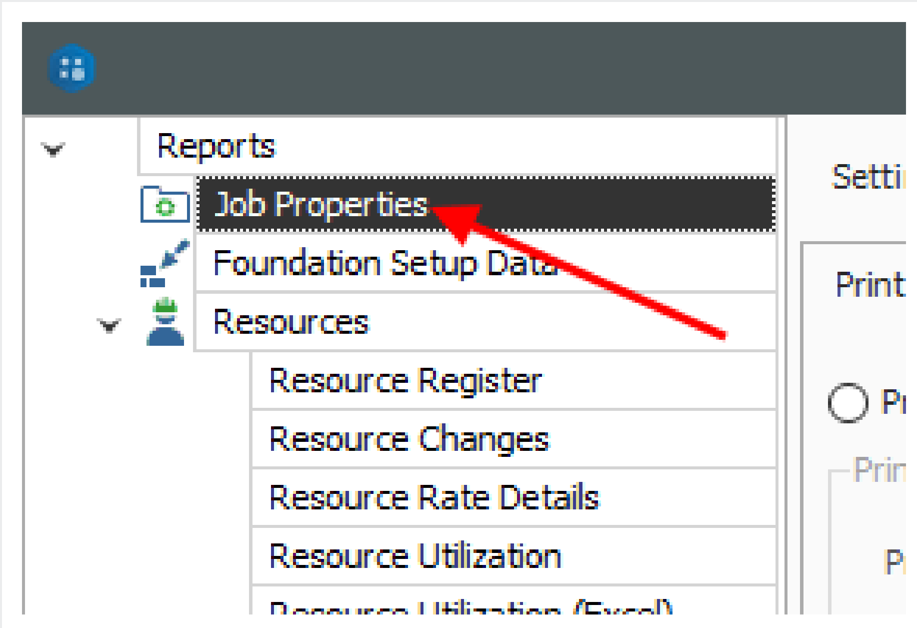
1. Open the **Training Job**, and select **Setup** tab.
   - You access the Reports menu by clicking on the Reports icon

   **TIP** You can access the Reports menu from the Setup, Estimate, Quote, Price, and Execution tabs.

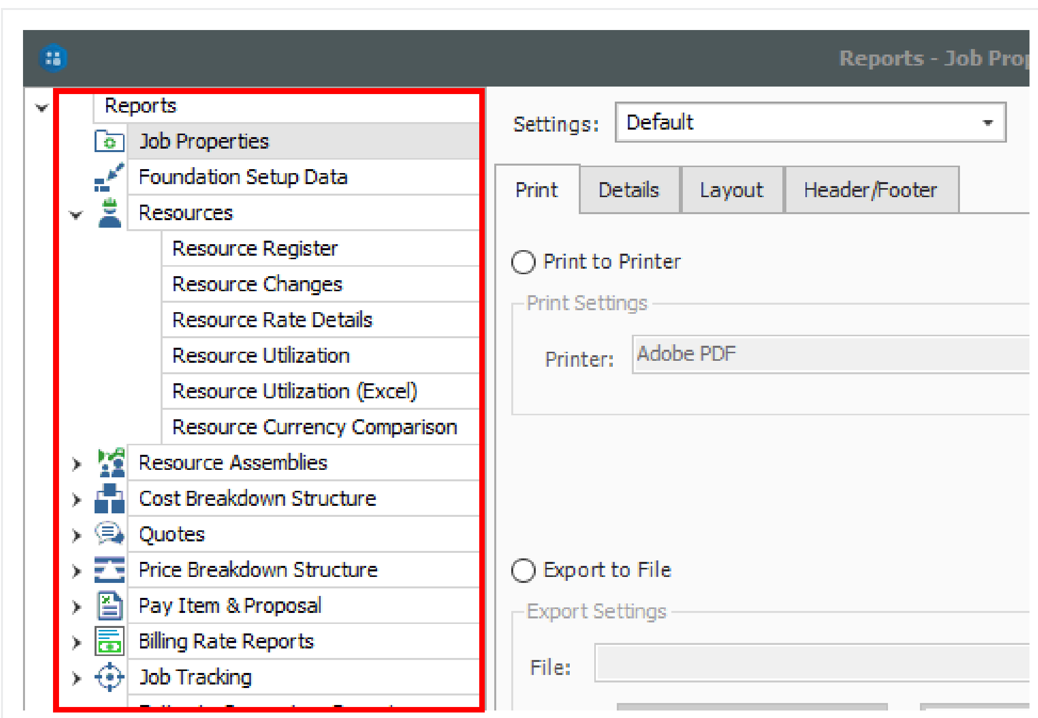
2. Select **Reports**.



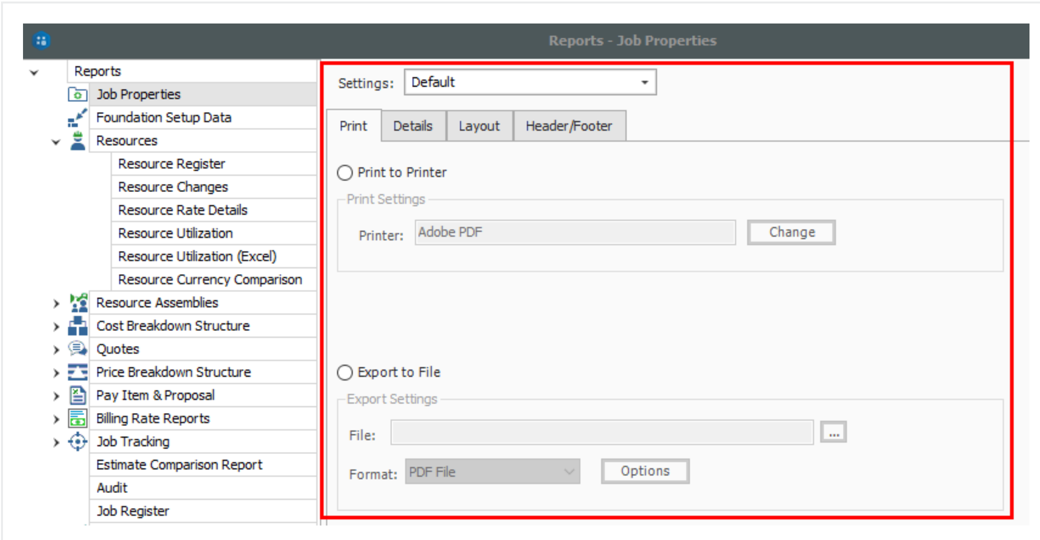

3. Here you select the Report of your choice. For this example, select the first option, **Job Properties**.



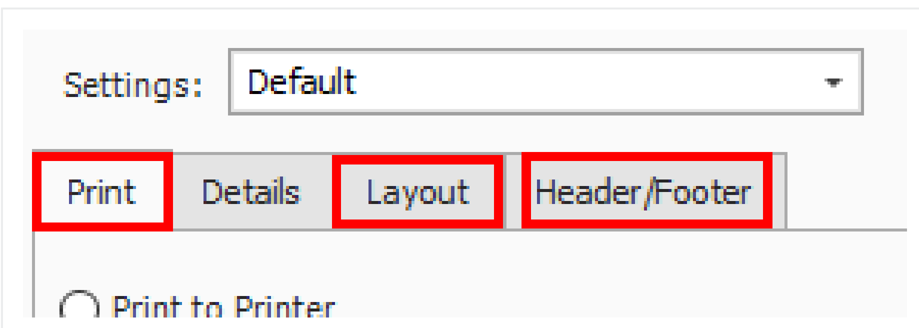

- You will see a split screen with the reports available on the left side bar
- The side bar on the left of the Reports form contains a “tree” of all InEight Estimate adjustable reports



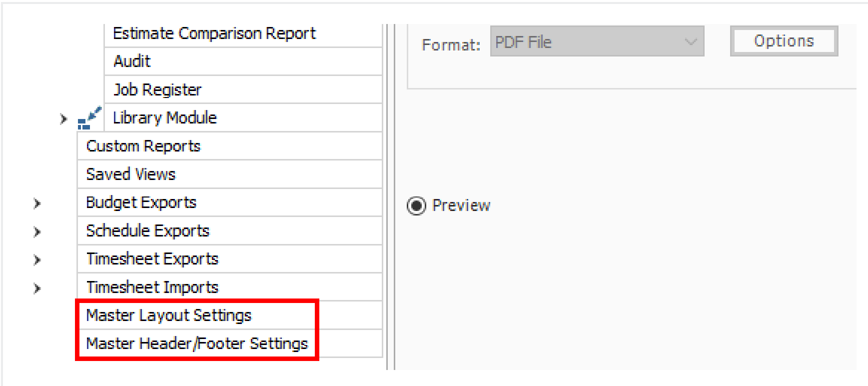
- On the right, when you select a report node on the left, note that it displays the Output Settings on the right side of the form, from which the report settings can be adjusted and the report can then be run




4. Each report has a Print tab, a Layout tab and a Header/ Footer tab specific to that report.




- There are also Master Layout Settings and Master Header/Footer Settings located at the bottom of the left-hand side bar tree. Here you can define settings that will apply to all reports




## 2.1.3 Output Settings

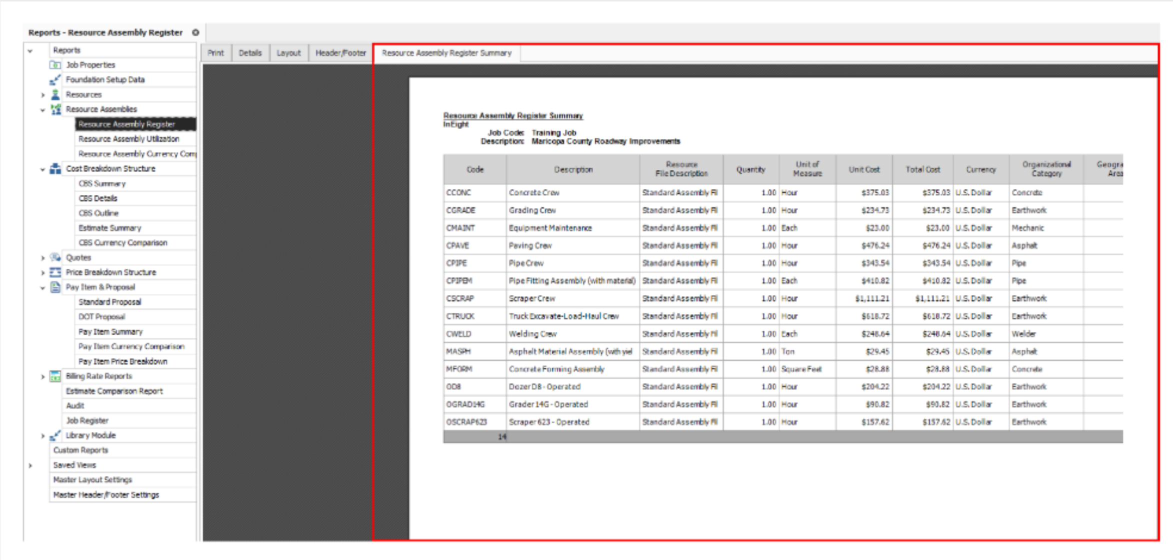
This section provides a more detailed explanation of the output setting tabs.

### 2.1.3.1 Report Printing Options

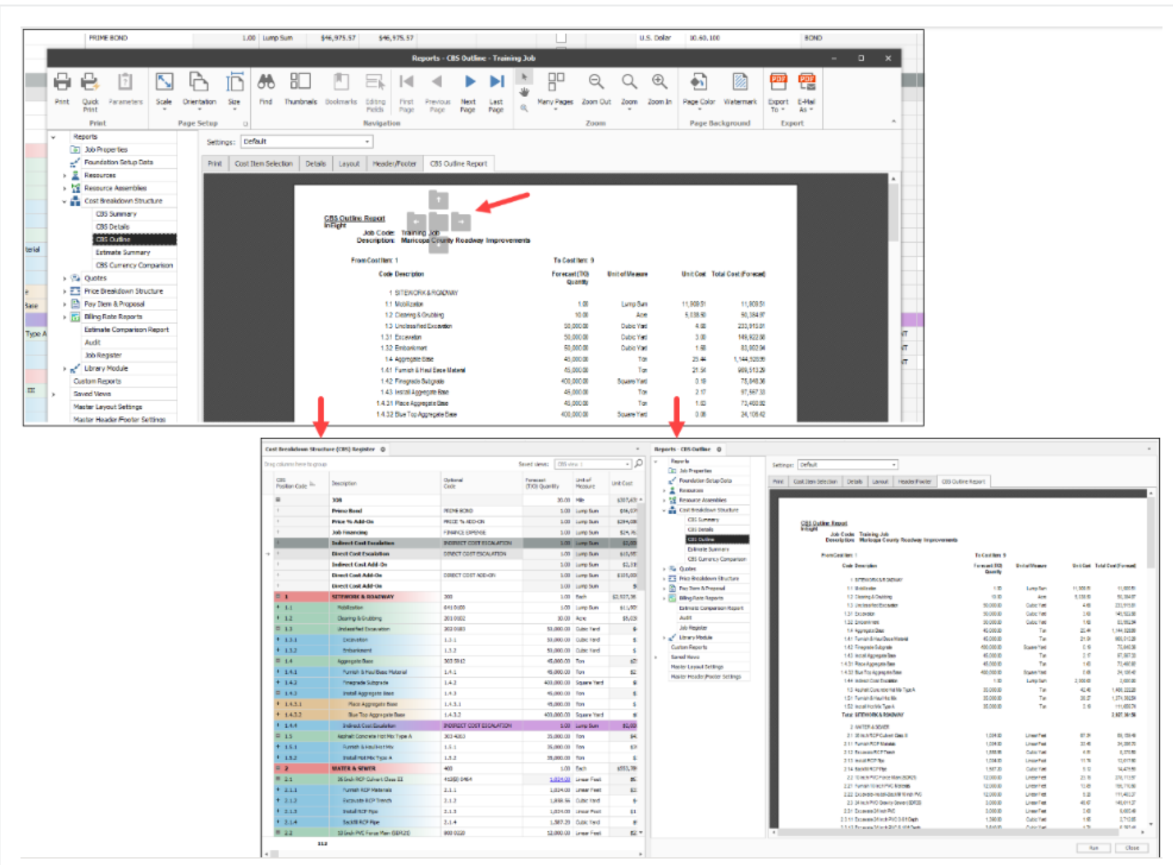
The Print tab includes three options for printing output: Print to Printer, Export to File, and Preview. Export file outputs include PDF, Excel, text, and more.

#### Print Preview

The Reports print previews opens in its own tab in the Report Dialog. This lets you keep the report open while continuing to use other parts of the application.

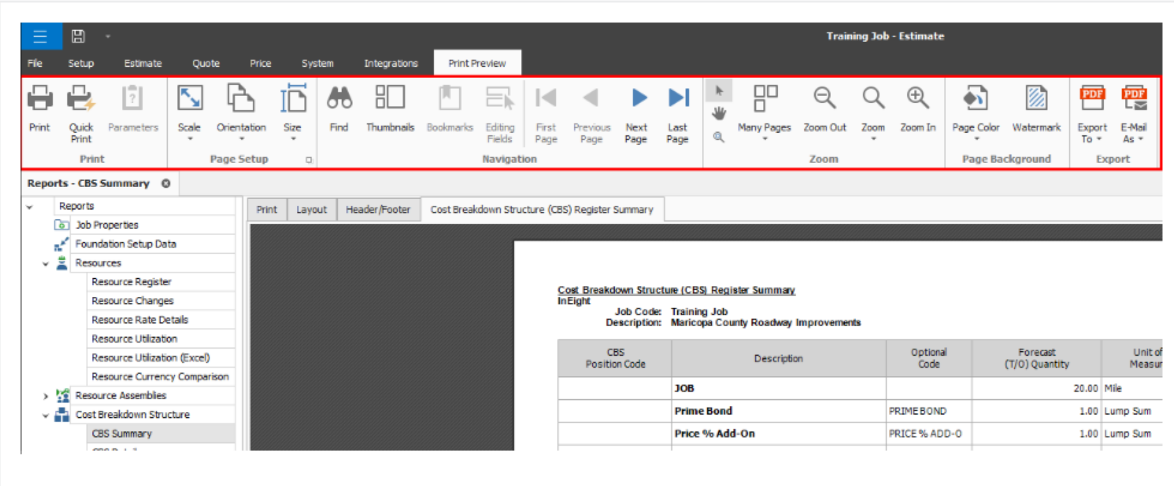


You can also undock and float a report on a different form, or you can tile it side by side with another register to view and compare them.



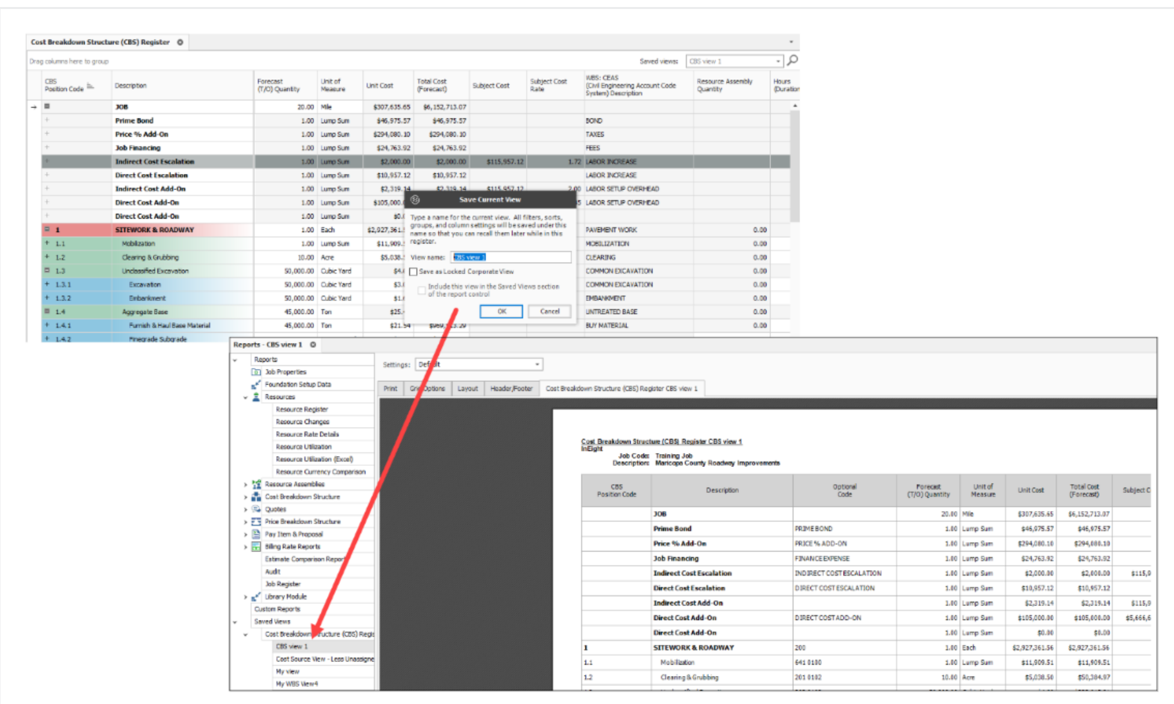
## Print Preview Ribbon

The Print Preview menu is displayed on its own ribbon. Menu commands are shown in the ribbon as a contextual Print Preview menu when navigating to Reports > Print > Preview > **Run**.

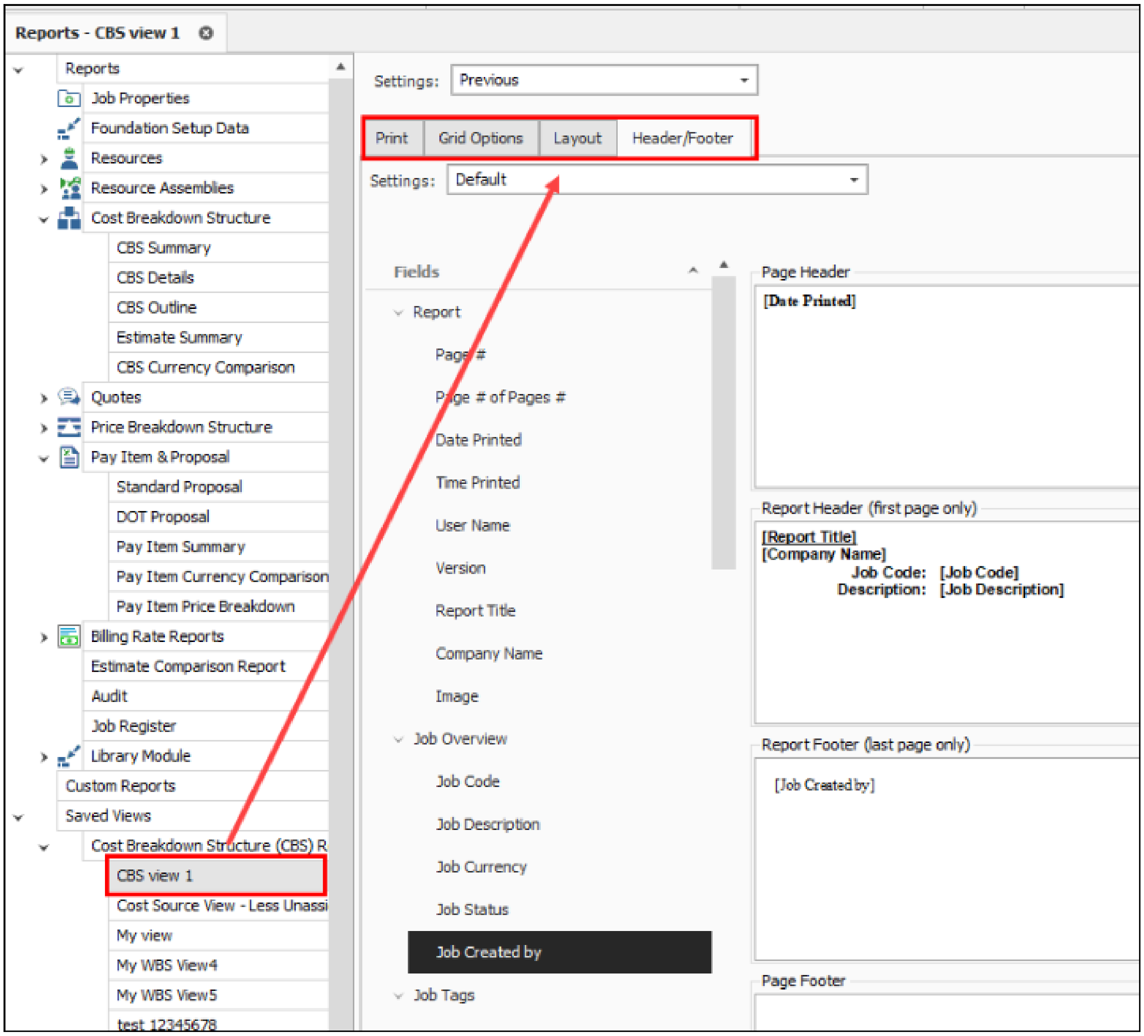



## 2.1.3.2 Apply custom Layouts and Headers/Footers to register reports

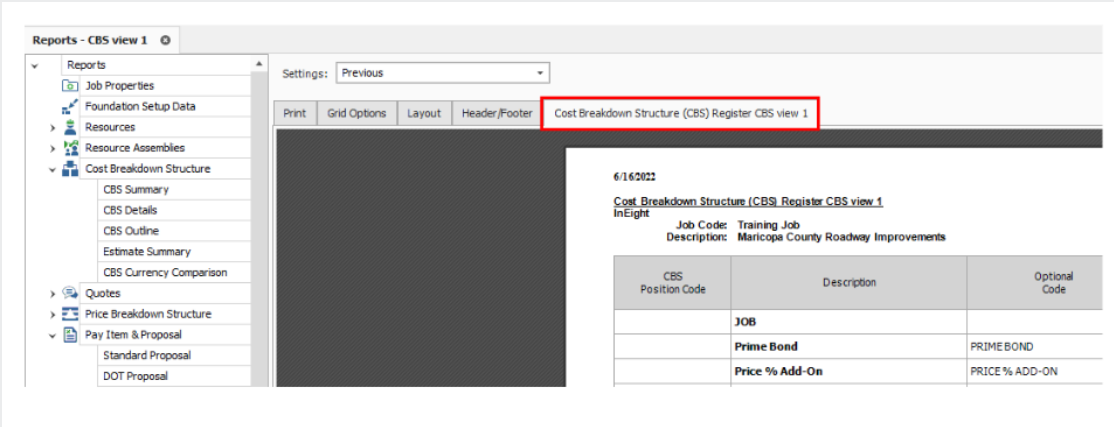
You can apply custom Layouts and header/footers to register based reports. Upon saving a view in any register, select the option to save it as a corporate view and include the view in the reports dialog box.



When selecting a Saved View from the Reports register you can use the Print tab to customize the printing preferences, use the Grid Options tab to change the font type/size, use the Layout tab to modify the design style, and use the Header/Footer tab to insert a header and footer to your report.

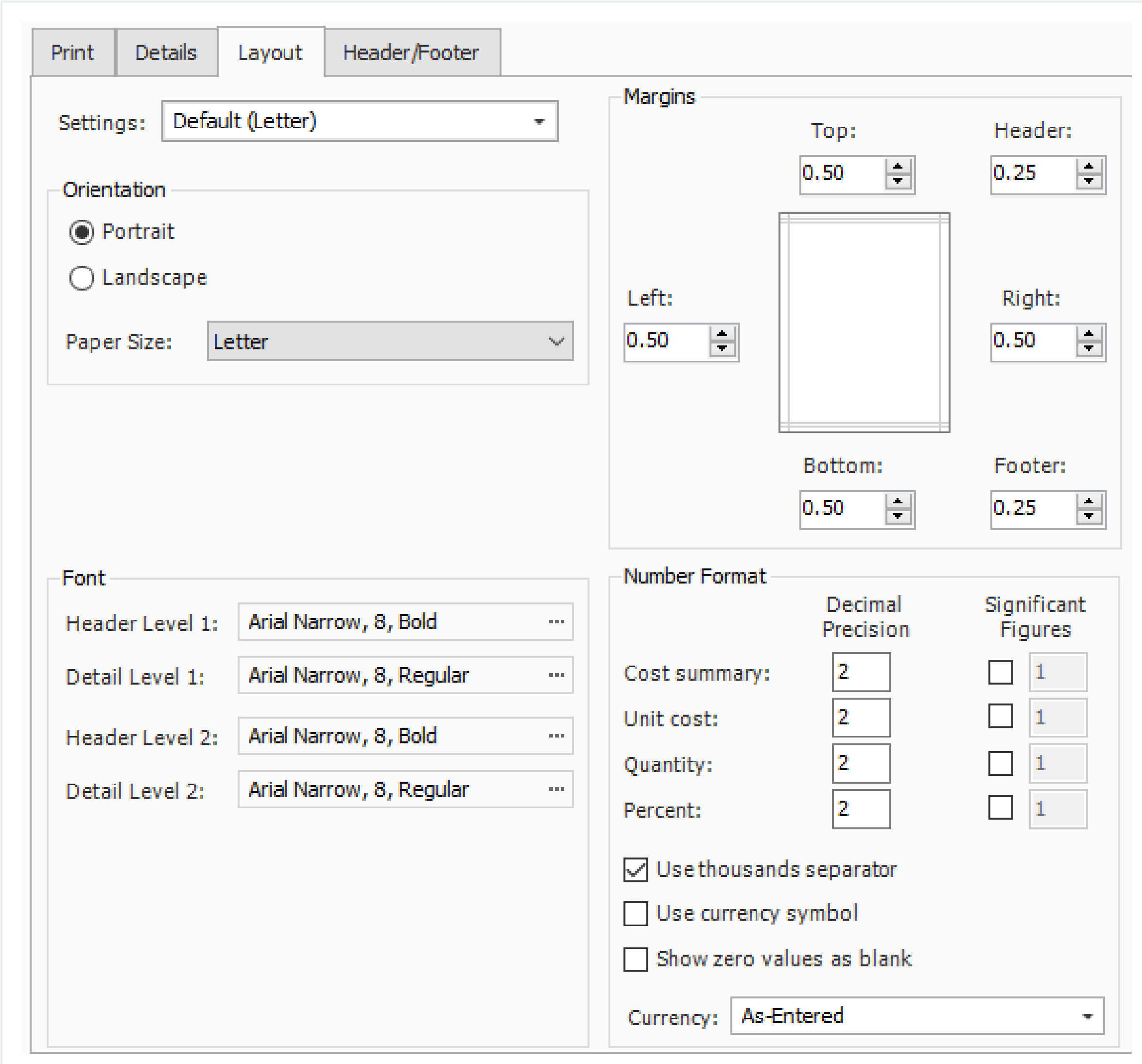



When you click on the Run button it will create a new register-style report. You can modify the layout or header/footer directly in this register. You can also toggle between any of the four other tabs to make modifications and see the changes on the saved view report.




## 2.1.3.3 Report Layout Settings

Many of the InEight Estimate adjustable reports include formatting options for the general layout of the report, located under the Layout tab of the report's output settings. Settings for the report include: Orientation, Margins, Font, and Number Format.

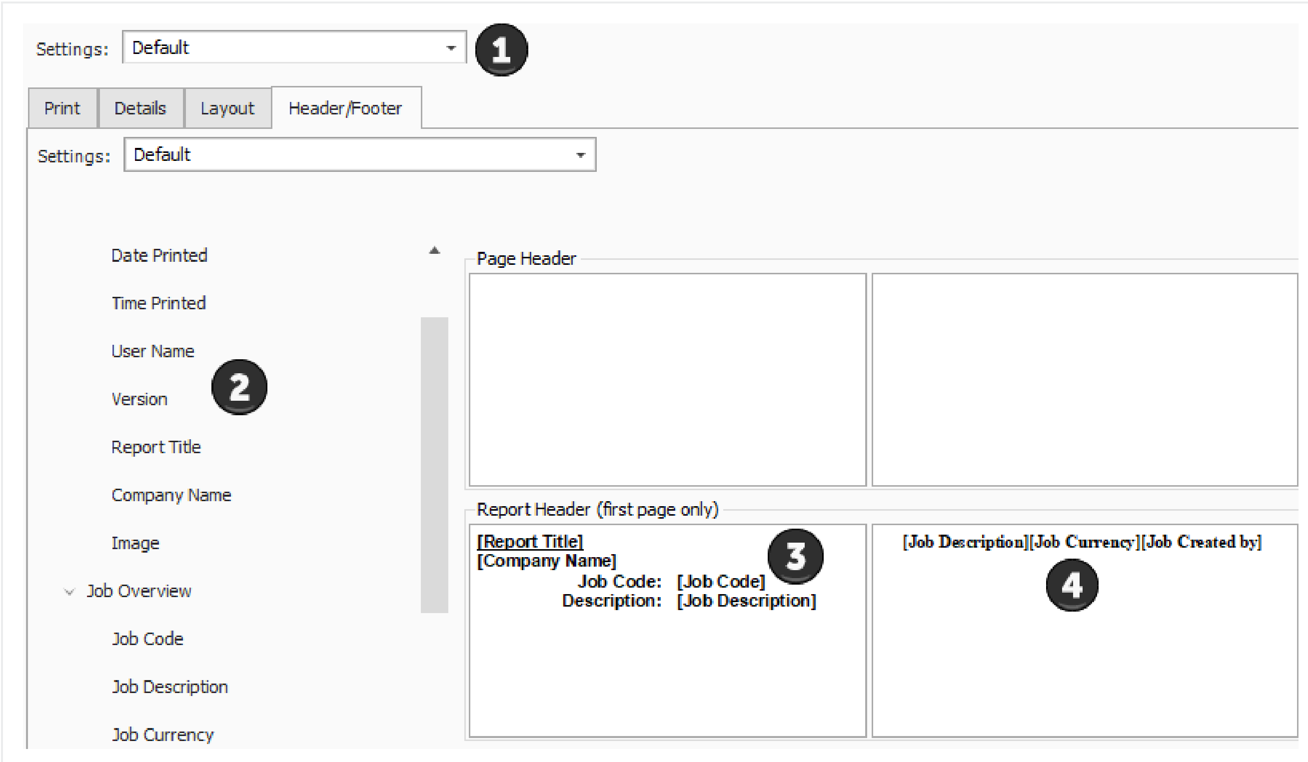



### 2.1.3.4 Report Header/Footer Settings

Many of the InEight Estimate adjustable reports include the option to define and insert headers and footers into the report. You can add information to the left, middle, or right of the header and footer sections of the report.

1. Once you define headers and footers, you can save them for use on other reports.
2. You can add page, time, and date stamps as needed, as well as images (e.g., company logo).
3. You can also use brackets to have it “stamp” the report with the Job Code and Job Description.

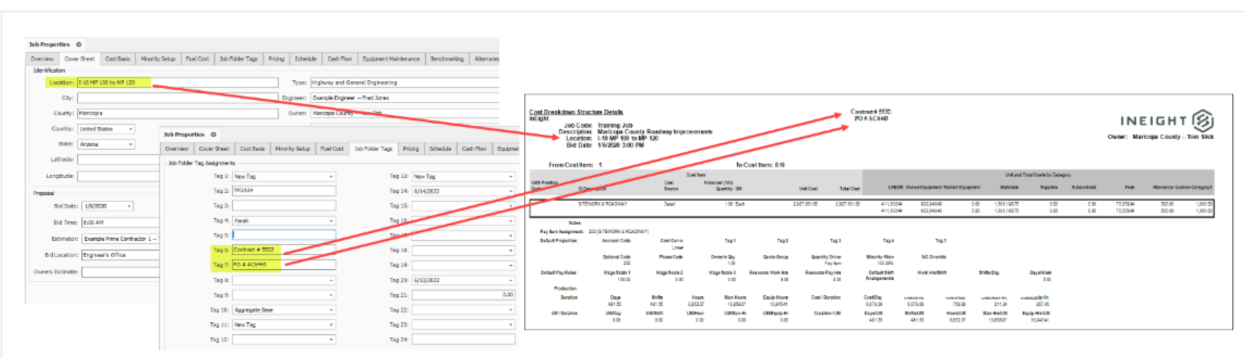
4. You can enter your own information as desired.



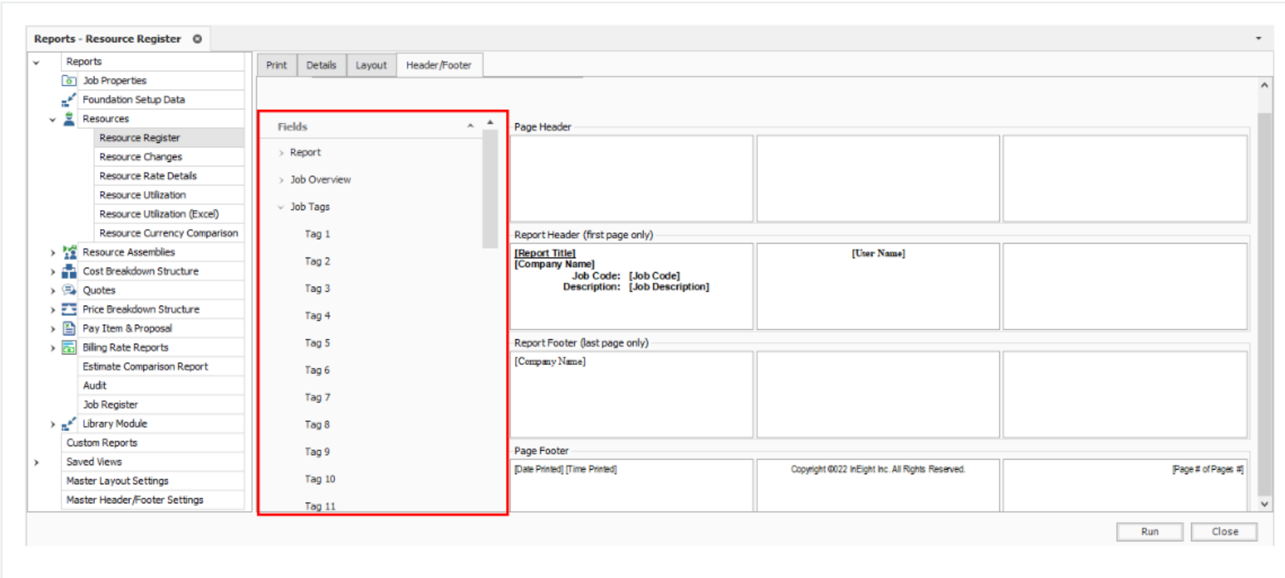

## Cover Sheet fields and Job folder tags

In addition to the existing job code and job description tags in Job Properties, you can use the Cover Sheet fields and Job Folder tags for your headers and footers in all standard reports.

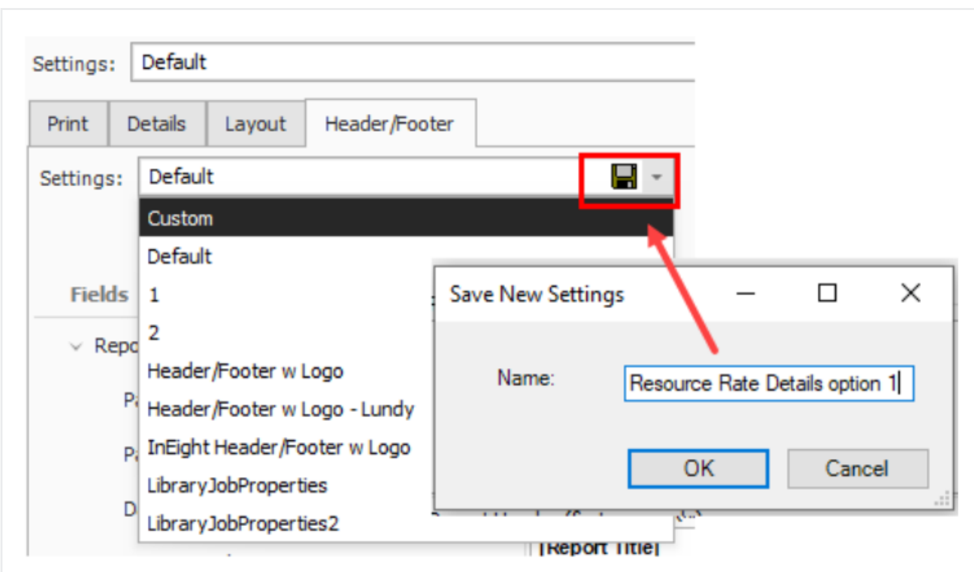
Additional tag values such as contract numbers, work order numbers, PO numbers, company logos, or any other tag fields can also be included. These additions help you customize headers and footers to give the recipients more transparency in the reports.



A Header and Footer field menu exists to the left of the Page Header and Page Footer grid, for all standard reports. This lets you choose which fields from Job Folder Tags and the Cover sheet to include in your report.

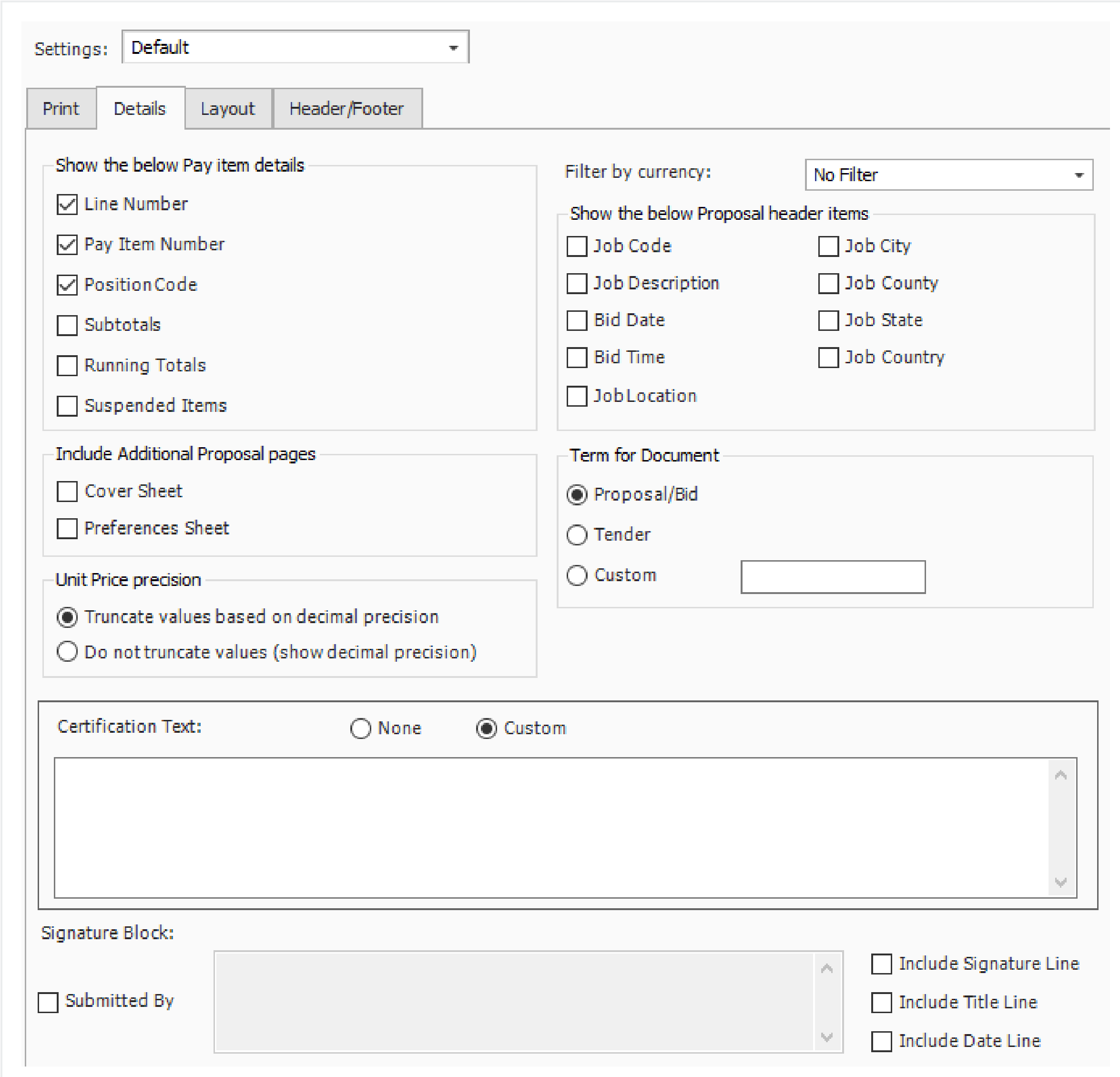



You can customize your header and footer layout settings, save them, and re-use them in other reports.



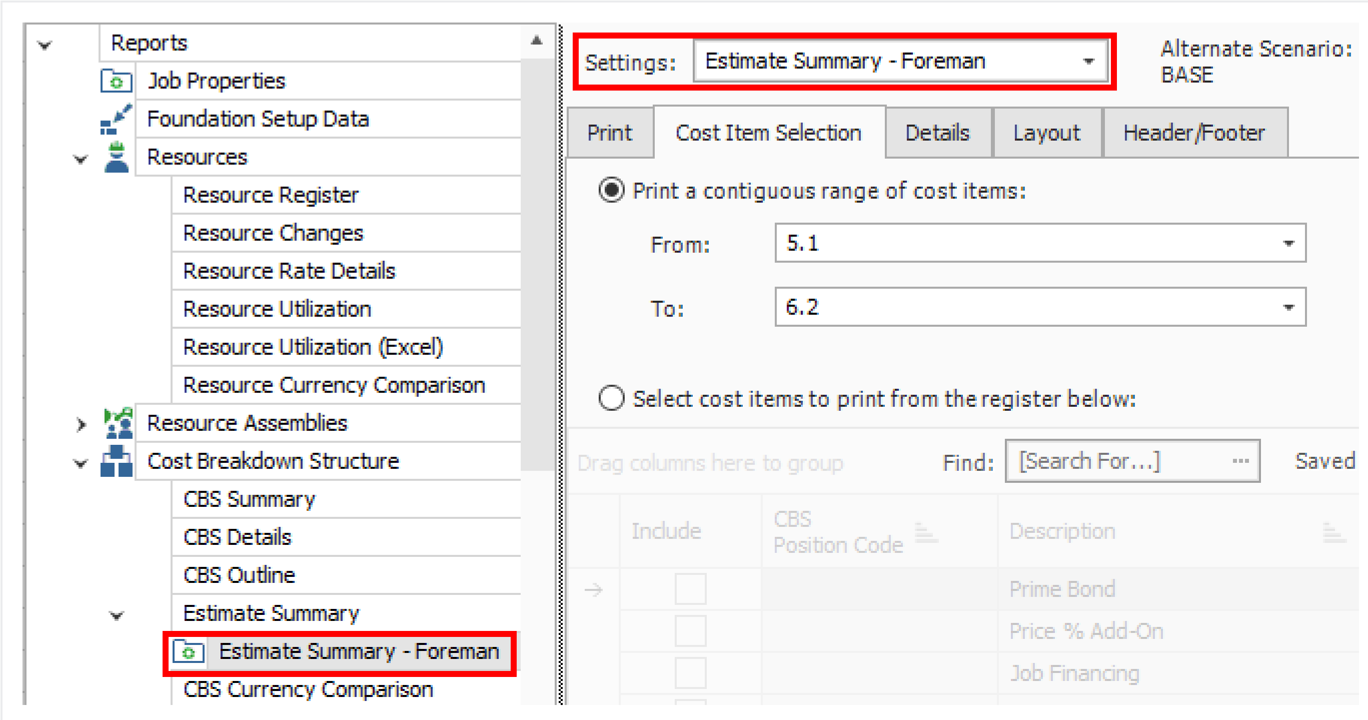

## 2.1.3.5 Report Detail Settings

Most reports have a Details tab with various options to configure what information is included on the report.




## 2.1.3.6 Save Output Settings

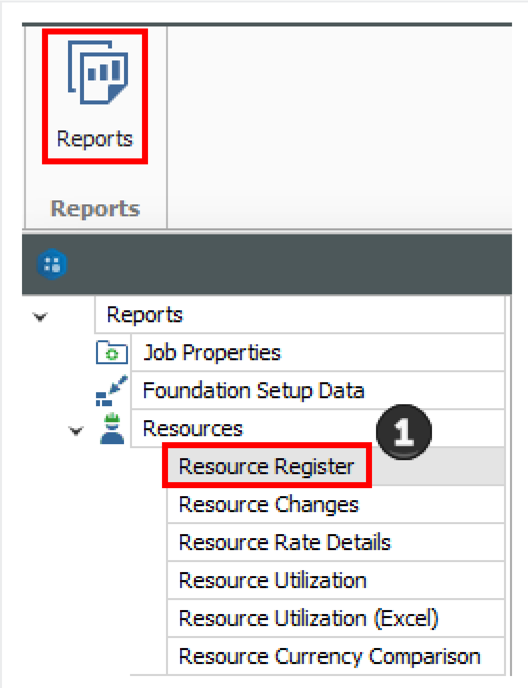
Once you've configured your settings for the report, you can save them as a custom version of that report.



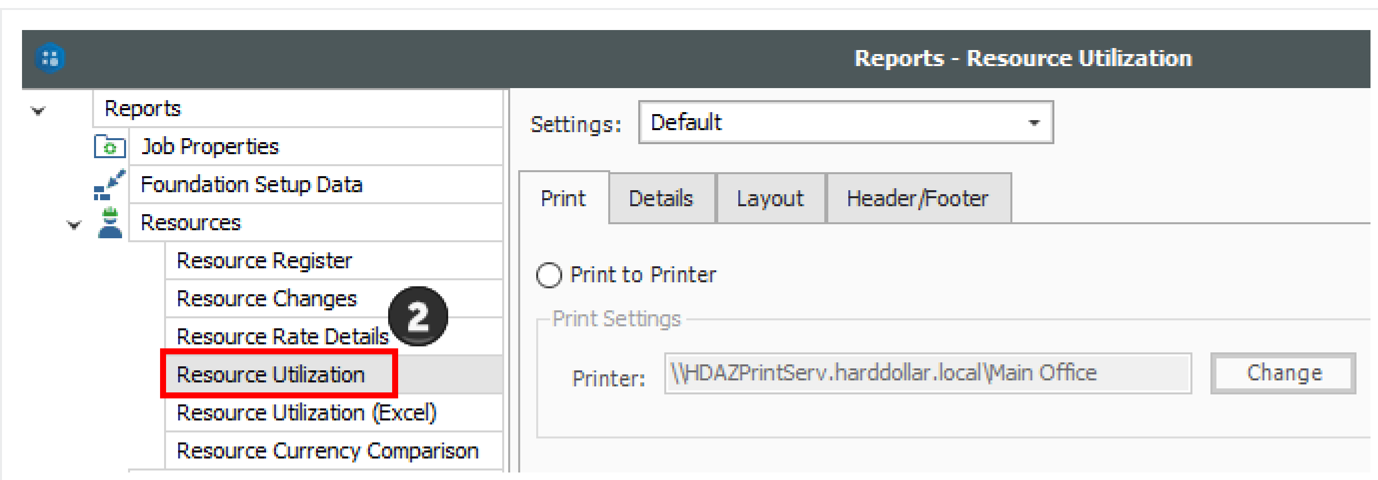

The following steps walk you through configuring the settings and formatting for two different reports.

## Step by Step — Configure Report Output Settings (Report 1)

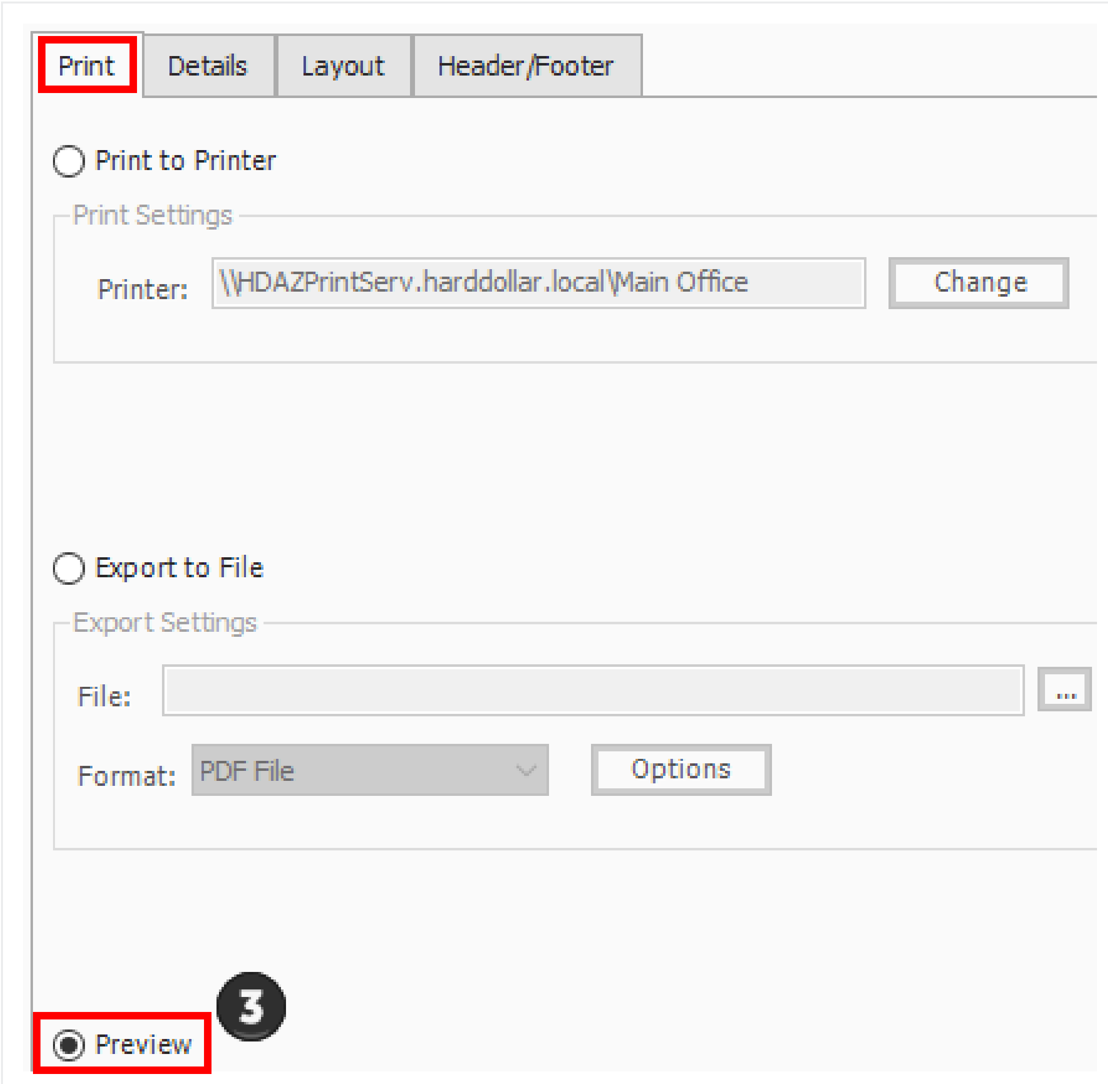
1. Open the **Training Job** and select **Setup >Report>Resources**.



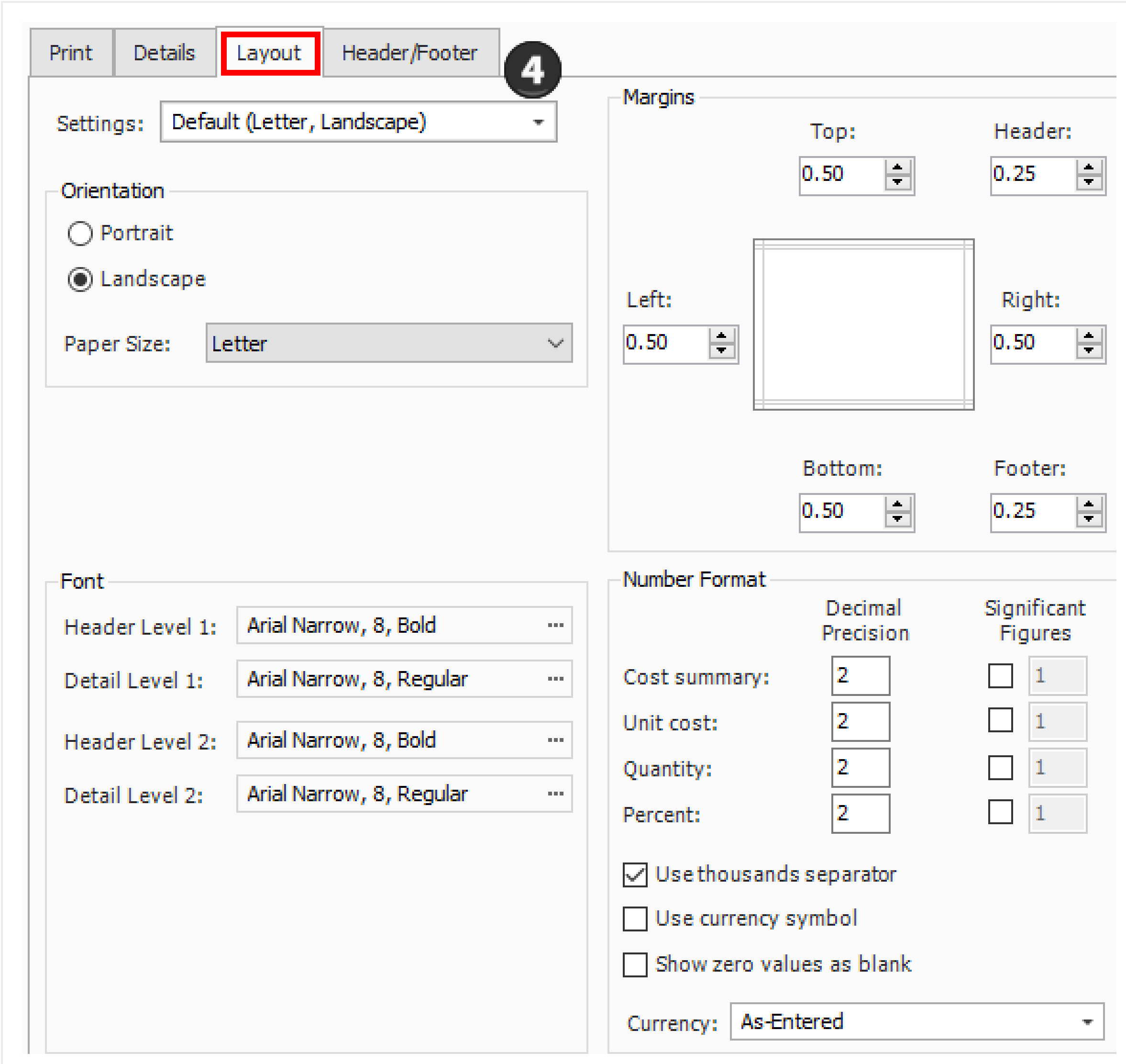

2. Under Resources on the left side bar**,** select **Resource Utilization**.



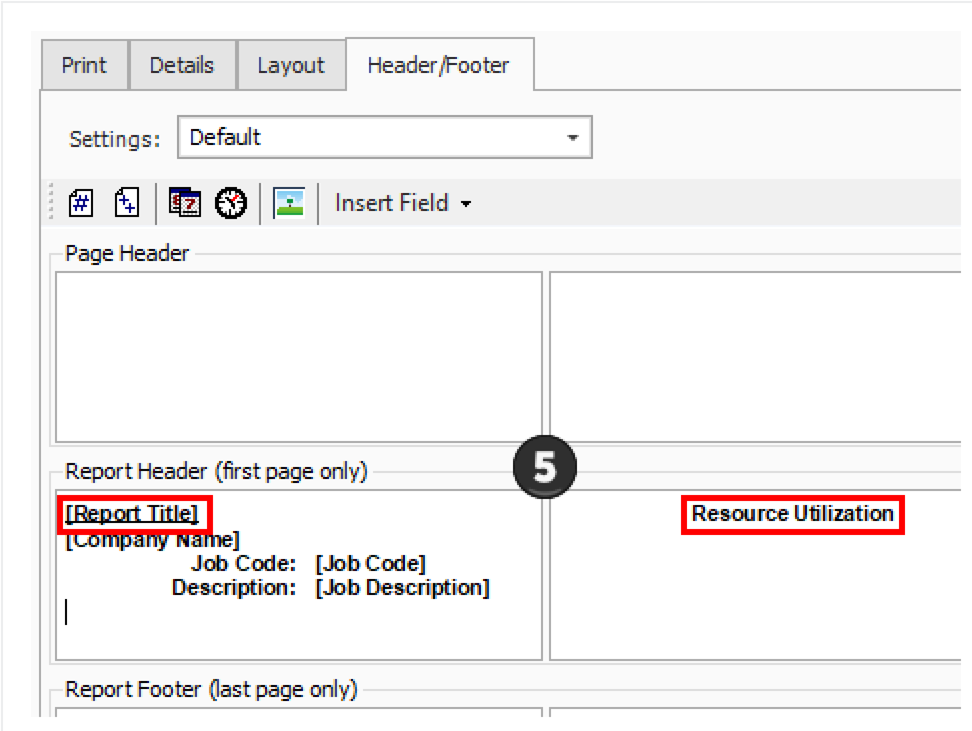
3. On the Print tab there are three options. A best practice is to always set to **Preview** so you can review before printing.



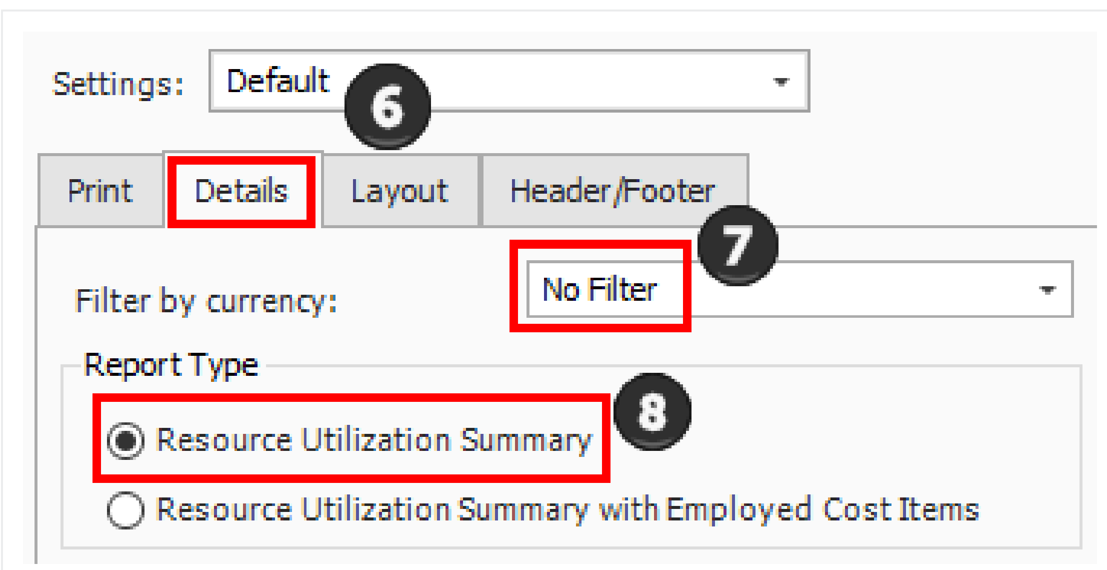

4. On the Layout tab you can make adjustments based on your preferences.



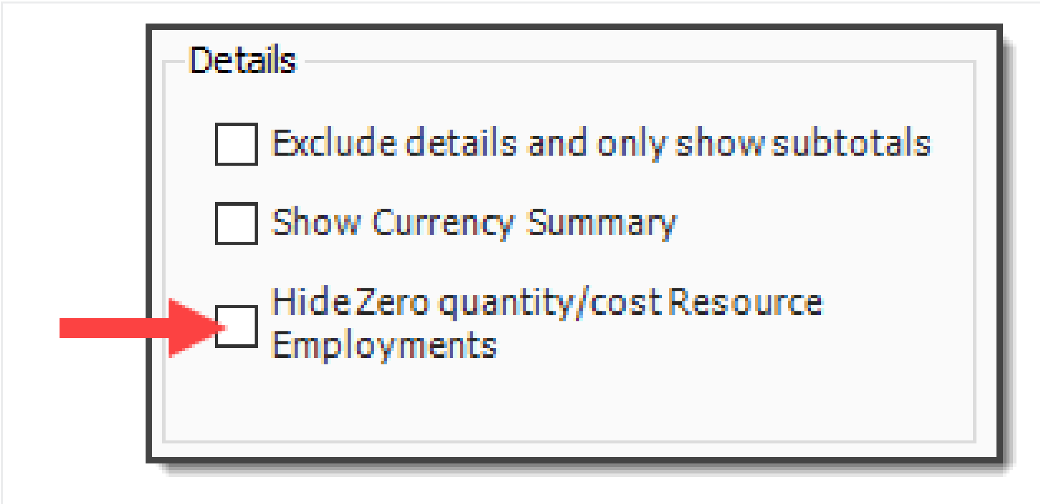

5. Move to the Header / Footer tab. Remove the default **Report Title** from the first page Header only and enter **Resource Utilization** in the center Report Header box as a title that will appear on the first page only.




6. Go to the **Details** tab, and you can see the details and options you can select to customize and adjust the report.
7. For this navigation, you will not Filter by currency; leave the selection as **No Filter**.
8. Under Report Type, choose the first option, **Resource Utilization Summary**.



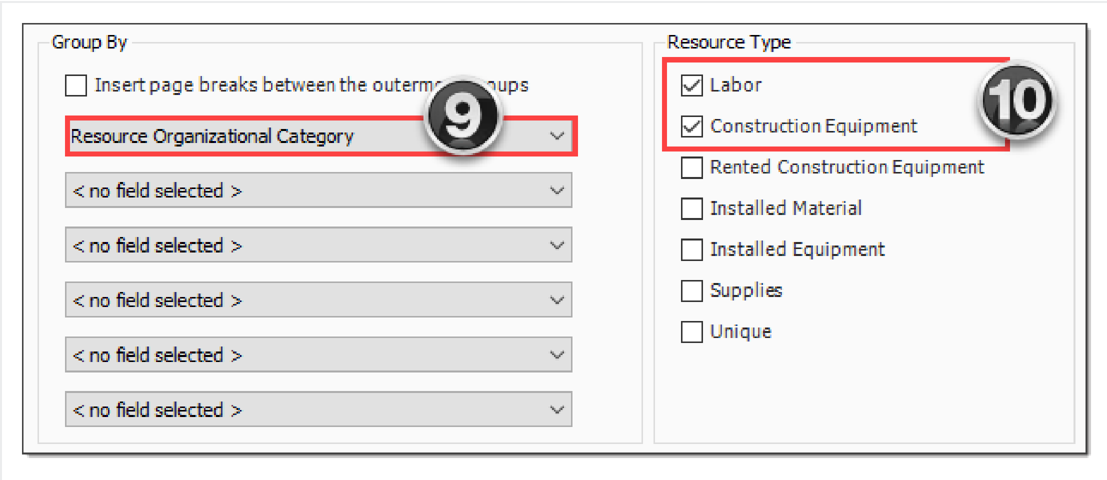
- You can choose to select the Hide Zero quantity/cost Resources Employments Details box if you prefer to have your printed report not show any resources that have a dollar value of zero



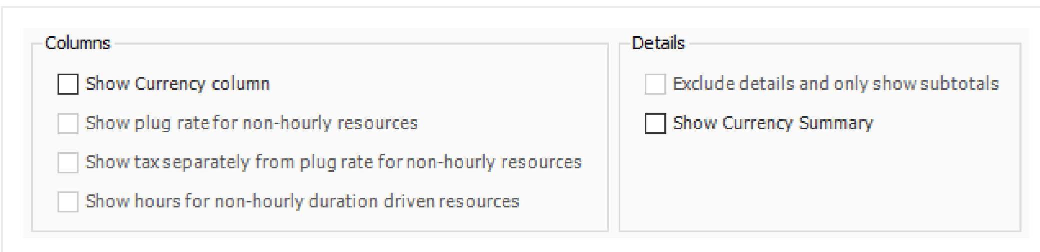

- You can choose if you want the report at a summary level, or if you want it to reference your cost items when you are looking at a resource
- If you choose Resource Utilization Summary with Employed Cost Items, it adds CBS position to the structure of the report
- You would select this if you wanted to see cost items and resources by the cost item

| TIP | The Details settings are “sticky” features, meaning they default to what was selected the last time. |
|---|---|

9. You can use grouping to group by different tags and user-defined fields. Most of them are related to the Resource Rate Register, for example: Geographic Area, Organizational Category, Wage Zone, etc. For this example, group by **Resource Organizational Category**.
10. Next, you can choose the resources you want to see. For this example, select the **Labor** and **Construction Equipment** Resource Types.




- For this example, you will not make any selections under Columns or Details

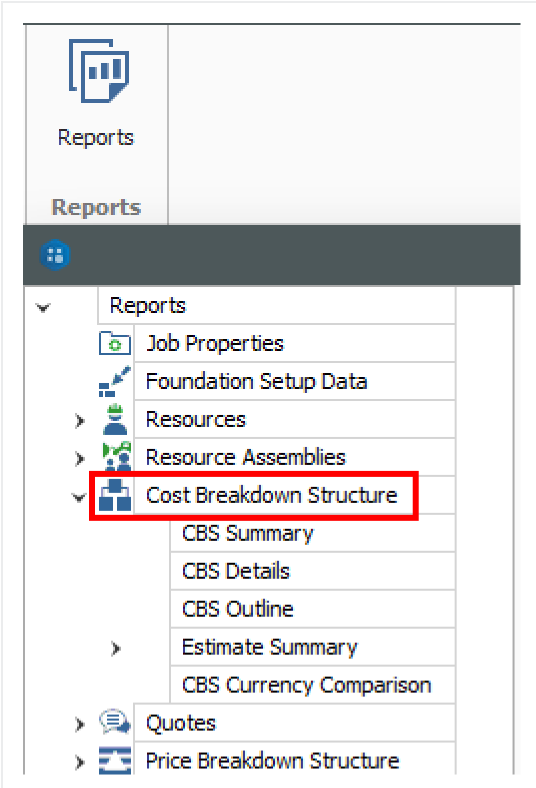



  - This is just one of many ways to organize and adjust your report.

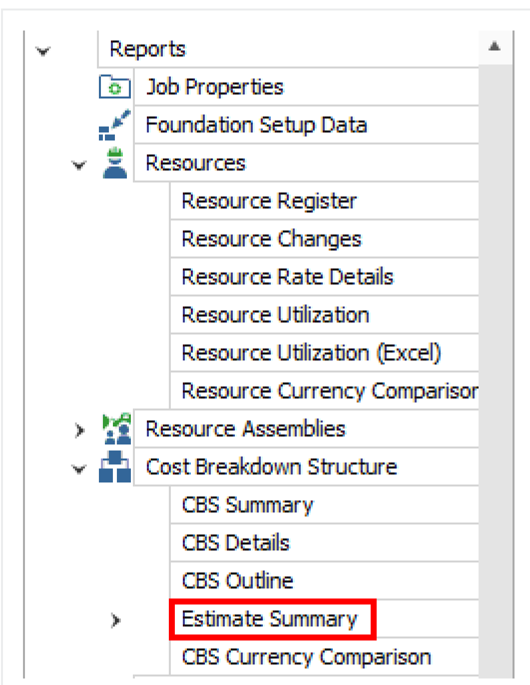
11. Click **Run** to run the report.
    - This report can be helpful for seeing your utilization hours, broken down by regular time and overtime hours
12. Click the red **X** to close this page and open the Construction Equipment page.
13. Click the red **X** to close the Construction Equipment report.

## Step by Step — Configure Report Output Settings (Report 2)

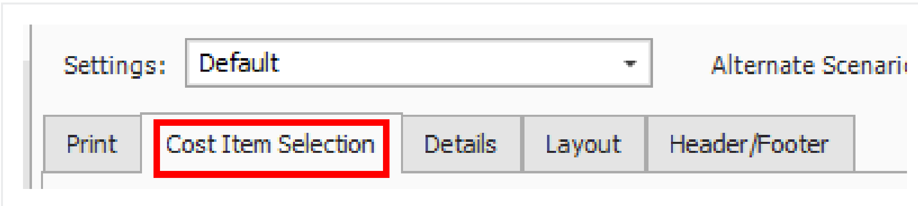
1. Open the **Training Job** and select **Setup >Reports**, then expand the **Cost Breakdown Structure** node.



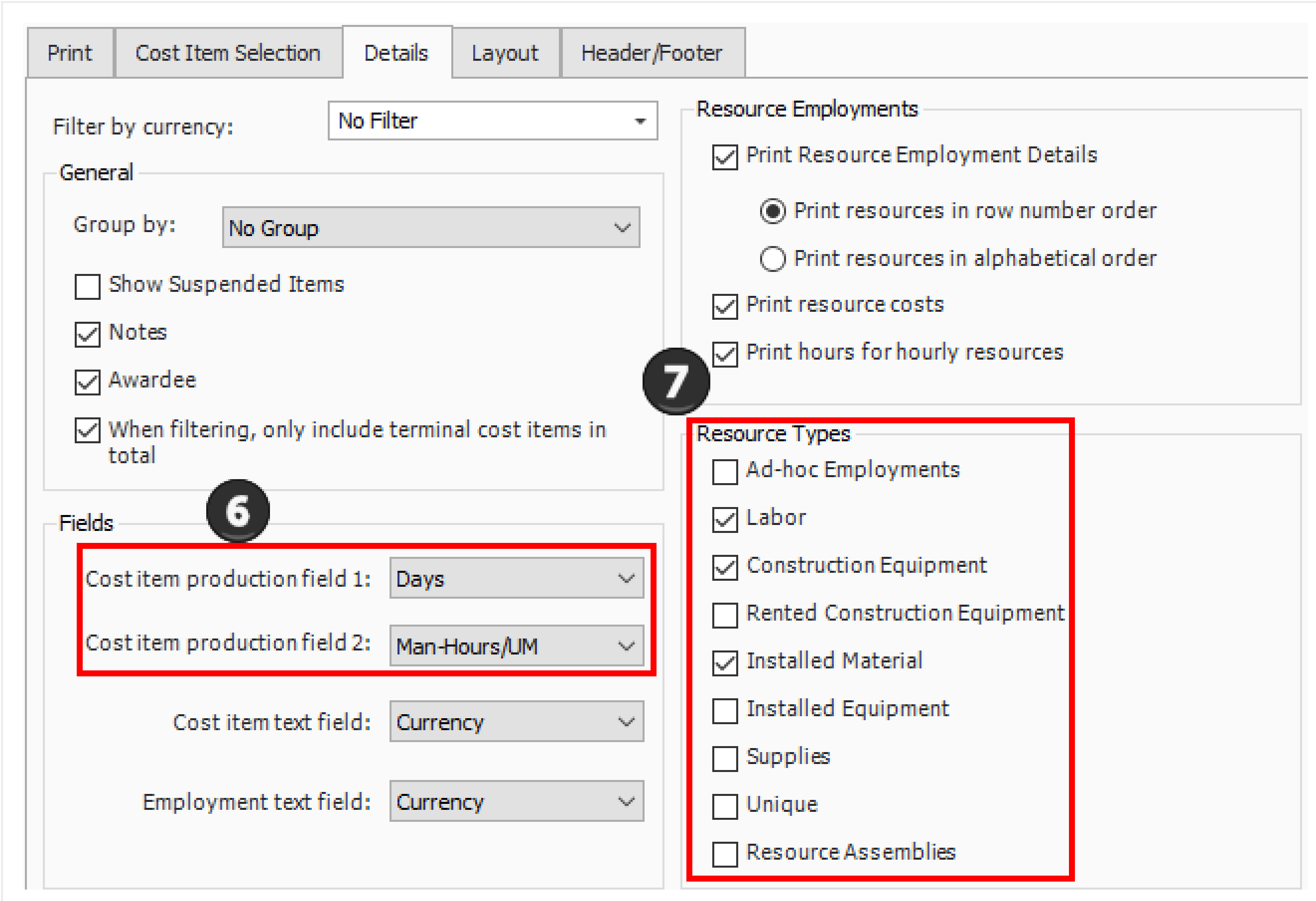

2. Under Cost Breakdown Structure on the left side bar, select **Estimate Summary**.



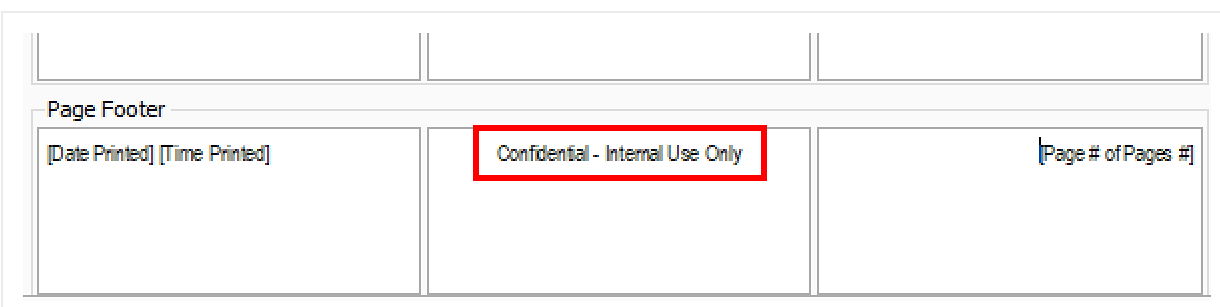
3. Along with the Print, Details, Layout, and Header / Footer tabs, there is an additional tab called **Cost Item Selection**. Select this tab.



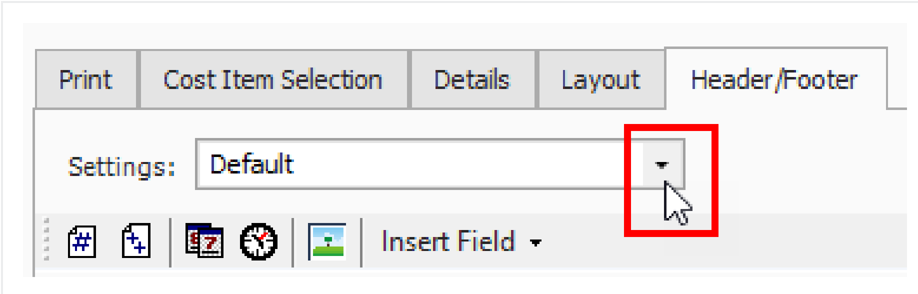

4. The Cost Item Selection tab allows you to report on a selection of cost items:
   - Print a contiguous range of cost items:  Allows you to print a series of cost items in a row. In this case, print just items: select 4.1 in the From field and 4.3.2 in the To field.
   - Select cost items to print from the register below:  Allows you to use column filters to select the cost items to include in the report; leave this button unselected.
5. You can roll up your cost items to a certain CBS level for the report as well, depending on the level of detail you need.
6. On the **Details** tab, select **Days** for Cost item production field 1, and **Man-Hours / UM** for Cost item production field 2 (this report allows you to report on two production values).
7. Under **Resource Types**, uncheck all of the boxes except **Labor**, **ConstructionEquipment**, and **Installed Material**.




8. Leave the rest of the settings at their defaults, then select the **Header / Footer** tab.
9. In the center **Page Footer** field delete the existing text, then type **Confidential –Internal Use Only**.

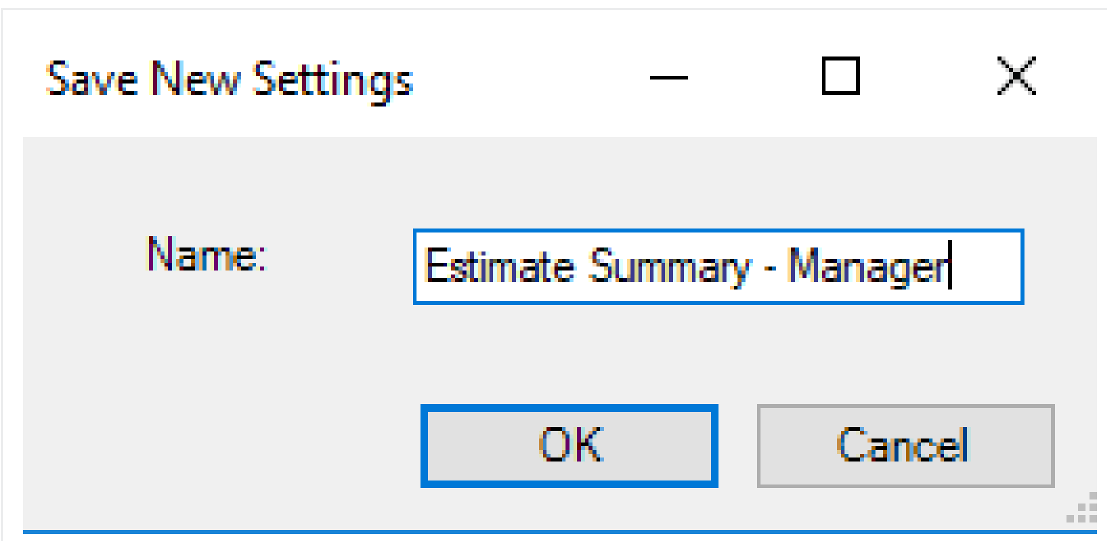



10. To save the settings you've configured, click on the **Settings** drop-down arrow above the output setting tabs.

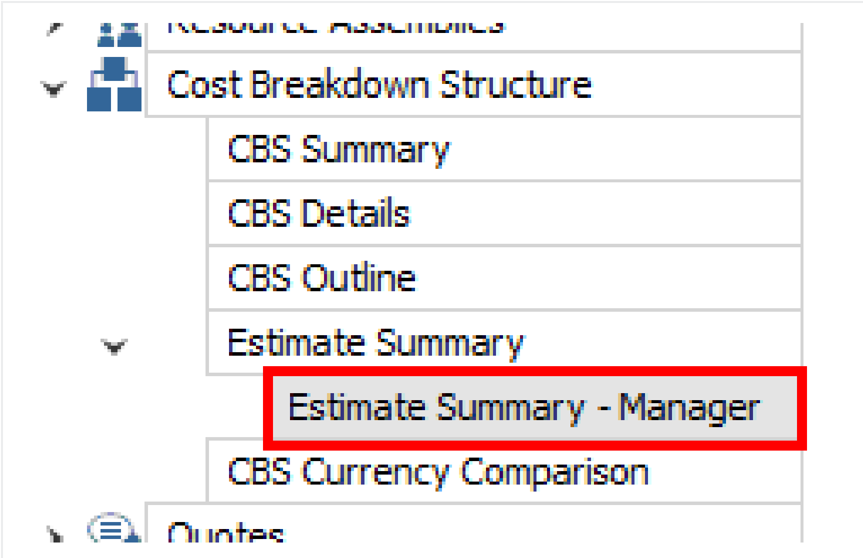



11. Select the **Save disk** icon to save the new settings.


12. Type **Estimate Summary – Manager.**
13. Click **OK**.




- Notice that a custom version of the report now displays under Estimate Summary on the Reports tree on the left




## 2.1.4 Helpful Reports

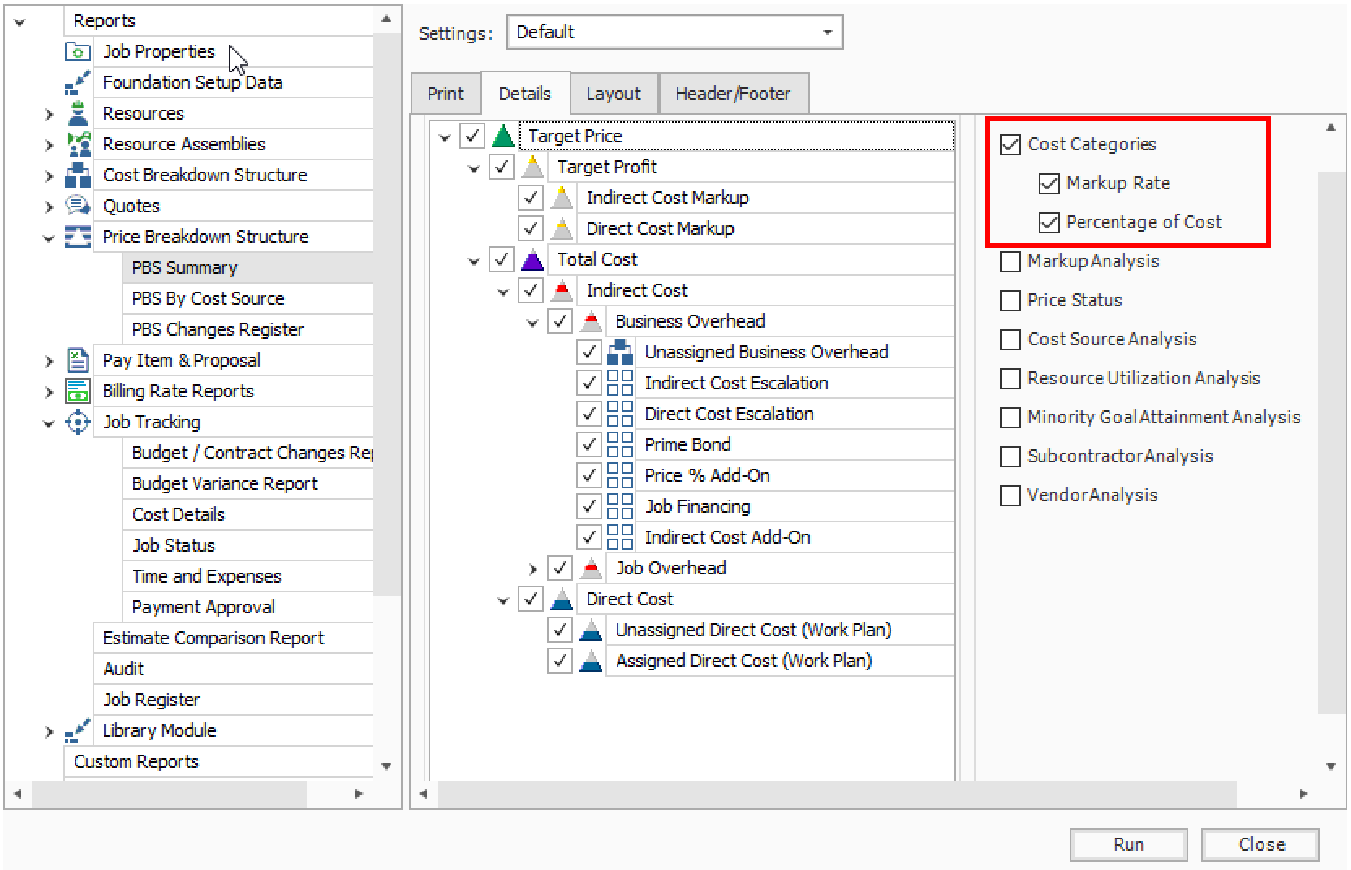
### 2.1.4.7 PBS Summary

Under the Price Breakdown Structure Report node, the PBS Summary Report gives a good overview of how your price breaks down by cost category. This provides a high-level overview that is cost category driven, providing information based on the total value of the project.

When selecting your settings on the Details tab, a best practice is to select and include:

- Cost Categories
- Markup Rate
- Percentage of Cost

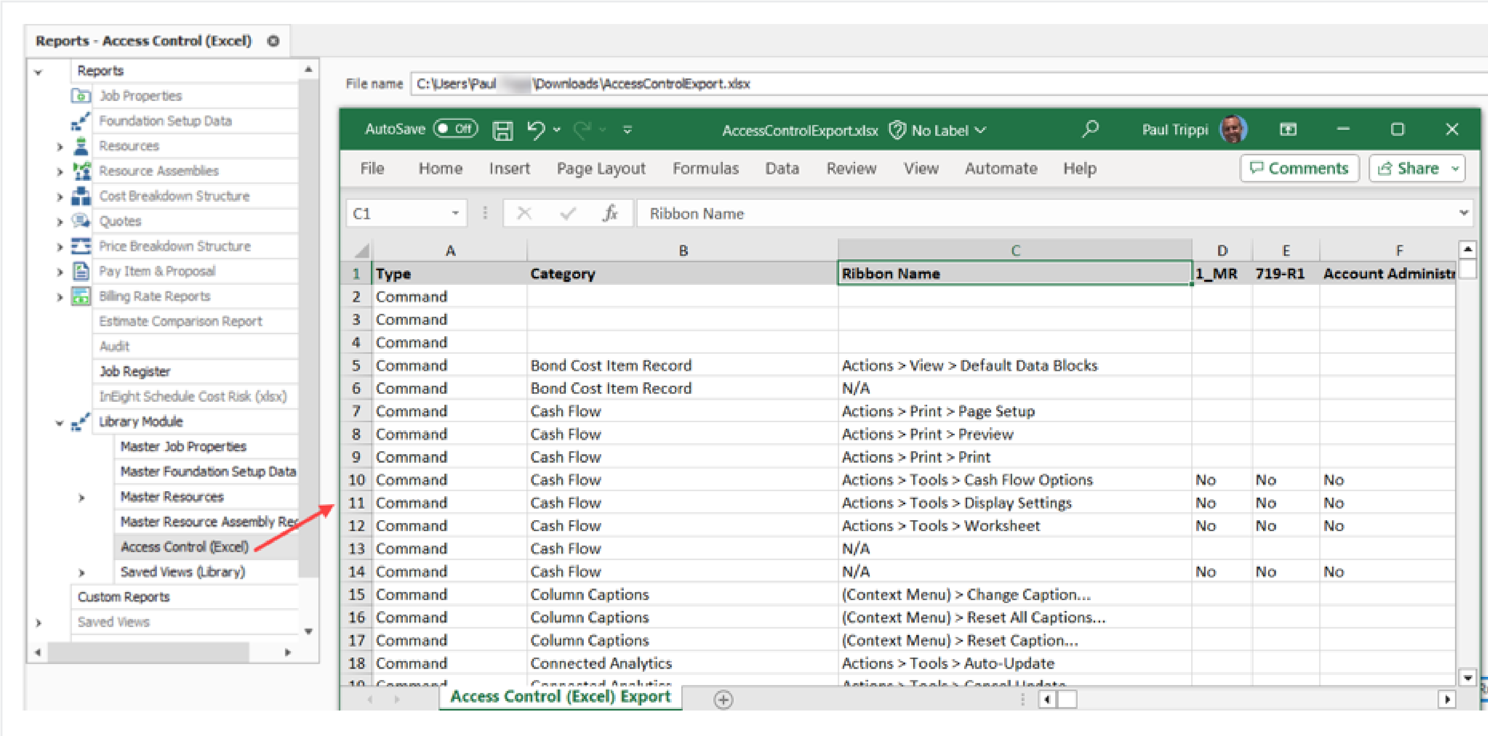
This allows you to see your costs and markup broken out by cost category.




TIP You can also select to show markup rate and what percentage the markup is of your cost.

## 2.1.5 Access Control

You can use the Access Control report to audit user permissions, command access, and various restrictions without having to search through the Access Control register for this information.




## 2.1.6 Standard Proposal

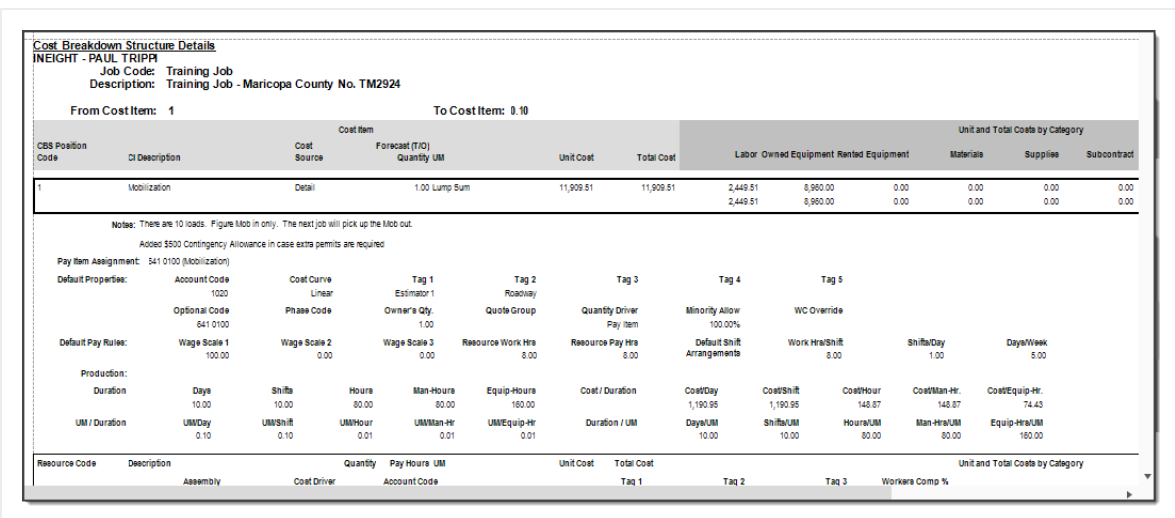
Located under the Pay Item & Proposal report node, the Standard Proposal report can be used for contractors required to submit a pricing proposal to a client. It lists all the pay items with the client provided quantities and your final pricing. You can include subtotals (defined on the Pay Item & Proposal Register), cover sheet information, and a signature block.

**Proposal**
**ACME Company**
Job Code: Training Job
Description: Training Job - Maricopa County No. TM2924

| Position Code | Line No. | Pay Item No. | Description / Subtotal Description | Quantity | Unit of Measure | Unit Price | Total Price |
|---|---|---|---|---|---|---|---|
| 1 | 22 | 200 | SITEWORK & ROADWAY | | | | 3,402,700.00 |
| 1.1 | 10 | 641 0100 | Mobilization | 1.00 | Lump Sum | 395,600 | 395,600.00 |
| 1.2 | 20 | 201 0102 | Clearing & Grubbing | 10.00 | Acre | 5,900.00 | 59,000.00 |
| 1.3 | 30 | 202 0183 | Unclassified Excavation | 50,000.00 | Cubic Yard | 5.50 | 275,000.00 |
| 1.4 | 40 | 303 5912 | Aggregate Base | 40,000.00 | Ton | 26.50 | 1,060,000.00 |
| 1.5 | 50 | 303 4263 | Asphalt Concrete Hot Mix Type A | 38,000.00 | Ton | 42.45 | 1,613,100.00 |
| 2 | 18 | 400 | WATER & SEWER | | | | 718,550.00 |
| 2.1 | 60 | 413(B) 0464 | 36 Inch RCP Culvert Class III | 1,000.00 | Linear Feet | 97.45 | 97,450.00 |
| 2.2 | 70 | 800 0220 | 10 Inch PVC Force Main (SDR21) | 12,000.00 | Linear Feet | 29.50 | 354,000.00 |
| 2.3 | 80 | 800 0330 | 24 Inch PVC Gravity Sewer (SDR35) | 3,000.00 | Linear Feet | 64.50 | 193,500.00 |
| 2.4 | 90 | 800 0400 | 4 Foot Diameter Manhole | 16.00 | Each | 4,600.00 | 73,600.00 |

## 2.1.7 CBS Details

Under the Cost Breakdown Structure report node, the CBS Details report can be a helpful report for bid review. On the Details tab you can include or not include any of the information contained in the CBS Register, including cost items with production, costs by category, shift arrangements, resources, and notes.



**Cost Breakdown Structure Details**
**INEIGHT - PAUL TRIPPI**
Job Code: Training Job
Description: Training Job - Maricopa County No. TM2924

From Cost Item: 1 To Cost Item: 0.10

| CBS Position Code | CI Description | Cost Source | Forecast (T/O) Quantity | UM | Unit Cost | Total Cost | Labor | Owned Equipment | Rented Equipment | Materials | Supplies | Subcontract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Mobilization | Detail | 1.00 | Lump Sum | 11,909.51 | 11,909.51 | 2,449.51 | 8,960.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | | | | | | | 2,449.51 | 8,960.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Notes: There are 10 loads. Figure Mob in only. The next job will pick up the Mob out.
Added $500 Contingency Allowance in case extra permits are required

Pay Item Assignment: 641 0100 (Mobilization)

Default Properties: Account Code 1020; Cost Curve Linear; Tag 1 Estimator 1; Tag 2 Roadway; Tag 3; Tag 4; Tag 5
Optional Code 641 0100; Phase Code; Owner's Qty. 1.00; Quote Group; Quantity Driver Pay Item; Minority Allow 100.00%; WC Override

Default Pay Rules: Wage Scale 1 100.00; Wage Scale 2 0.00; Wage Scale 3 0.00; Resource Work Hrs 8.00; Resource Pay Hrs 8.00; Default Shift Arrangements; Work Hrs/Shift 8.00; Shifts/Day 1.00; Days/Week 5.00

Production:

| | Days | Shifts | Hours | Man-Hours | Equip-Hours | Cost / Duration | Cost/Day | Cost/Shift | Cost/Hour | Cost/Man-Hr. | Cost/Equip-Hr. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Duration | 10.00 | 10.00 | 80.00 | 80.00 | 160.00 | | 1,190.95 | 1,190.95 | 148.87 | 148.87 | 74.43 |

| | UM/Day | UM/Shift | UM/Hour | UM/Man-Hr | UM/Equip-Hr | Duration / UM | Days/UM | Shifts/UM | Hours/UM | Man-Hrs/UM | Equip-Hrs/UM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| UM / Duration | 0.10 | 0.10 | 0.01 | 0.01 | 0.01 | | 10.00 | 10.00 | 80.00 | 80.00 | 160.00 |

Resource Code | Description | Quantity | Pay Hours | UM | Unit Cost | Total Cost | Unit and Total Costs by Category
Assembly | Cost Driver | Account Code | Tag 1 | Tag 2 | Tag 3 | Workers Comp %

## 2.1.8 Audit

Under the Job Tracking node, the Audit Report is a very important report to run during estimate review to make sure you didn’t leave anything out of the estimate. It checks for a number of potential errors in the estimate, including:

- Zero Price Pay Items
- Zero-value cost items
- Pay items without Cost Items assigned
- Resources with a quantity of zero

## Exercise 2.1 — Run a System Report

You can adjust InEight Estimate system reports to report on the particular information you need. Complete the following steps to configure and run the Pay Item Summary report, using the Training Job:

1. From the Reports window, expand the **Pay Item & Proposal** report node.
2. On the Reports tree, select **Pay Item Summary**.
3. On the Details tab, select a **Pay Item Range from 303 4263 – 800 0220**.
4. Choose to **Include Assigned Cost Items**.
5. Show Costs As: **Unit**.
6. Include **Profit Analysis** columns and **Include Pay Item Price** columns
7. Run the report.

## You should end up with the following results

ABC Contractors
Job Code: Training Job
Description: Training Job - Maricopa County No. TM2924

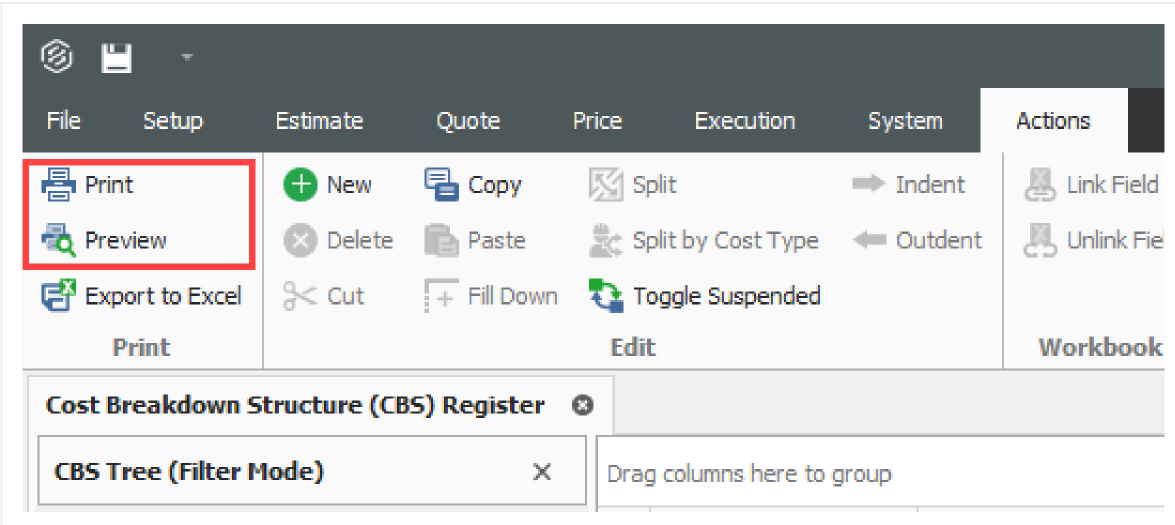
From Item: 303 4263 To Item: 800 0220

| Pay/Cost Item | | | | Unit Cost by Category | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Code | Description | Quantity | UM | Assigned Direct Cost | Labor | Owned Equipment | Rented Equipment | Materials | Supplies | Subcontract | Fees | Allowance |
| 303 4263 | Asphalt Concrete Hot Mix Type A | 38,000.00 | Ton | 42.62 | 3.11 | 6.43 | 0.00 | 31.50 | 0.00 | 0.00 | 1.58 | 0.00 |
| | 5 Asphalt Concrete Hot Mix Type A | 38,000.00 | Ton | 1,619,430.35 | 3.11 | 6.43 | 0.00 | 31.50 | 0.00 | 0.00 | 1.58 | 0.00 |
| | 5.1 Furnish & Haul Hot Mix | 38,000.00 | Ton | 1,492,382.18 | 1.43 | 4.77 | 0.00 | 31.50 | 0.00 | 0.00 | 1.58 | 0.00 |
| | 5.2 Install Hot Mix Type A | 38,000.00 | Ton | 127,048.17 | 1.68 | 1.66 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 413(B) 0464 | 36 Inch RCP Culvert Class III | 1,000.00 | Linear Feet | 66.42 | 19.60 | 13.48 | 0.93 | 30.82 | 0.00 | 0.00 | 1.59 | 0.00 |
| | 6 36 Inch RCP Culvert Class III | 1,000.00 | Linear Feet | 66,416.79 | 19.60 | 13.48 | 0.93 | 30.82 | 0.00 | 0.00 | 1.59 | 0.00 |
| | 6.1 Furnish RCP Materials | 1,000.00 | Linear Feet | 32,361.33 | 0.00 | 0.00 | 0.00 | 30.82 | 0.00 | 0.00 | 1.54 | 0.00 |
| | 6.2 Excavate RCP Trench | 1,815.00 | Cubic Yard | 8,183.20 | 4.85 | 3.34 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6.3 Install RCP Pipe | 1,000.00 | Linear Feet | 11,735.94 | 6.45 | 5.29 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 6.4 Backfill RCP Pipe | 1,550.00 | Cubic Yard | 14,136.32 | 8.31 | 4.86 | 0.93 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 |
| | SUBTOTAL: SITEWORK & ROADWAY | | | 1,685,847.14 | 137,894.00 | 257,768.56 | 926.90 | 1,227,820.31 | 0.00 | 0.00 | 61,437.36 | 0.00 |
| 800 0220 | 10 Inch PVC Force Main (SDR21) | 12,000.00 | Linear Feet | 22.51 | 4.56 | 4.72 | 0.00 | 12.60 | 0.00 | 0.00 | 0.63 | 0.00 |
| | 7 10 Inch PVC Force Main (SDR21) | 12,000.00 | Linear Feet | 270,163.37 | 4.56 | 4.72 | 0.00 | 12.60 | 0.00 | 0.00 | 0.63 | 0.00 |
| | 7.1 Furnish 10 Inch PVC Materials | 12,000.00 | Linear Feet | 158,760.00 | 0.00 | 0.00 | 0.00 | 12.60 | 0.00 | 0.00 | 0.63 | 0.00 |
| | 7.2 Excavate-Install-Backfill 10 Inch PVC | 12,000.00 | Linear Feet | 111,403.37 | 4.56 | 4.72 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | **Extended Totals By Category** | | | 1,956,010.51 | 192,599.77 | 314,466.16 | 926.90 | 1,379,020.31 | 0.00 | 0.00 | 68,997.36 | 0.00 |

**Congratulations, you have completed this exercise!**

# 2.2 REGISTER REPORTS

At any time, you can print a report of the data in the currently displayed register using the Print or Preview option available from the Actions tab for the register you are in.



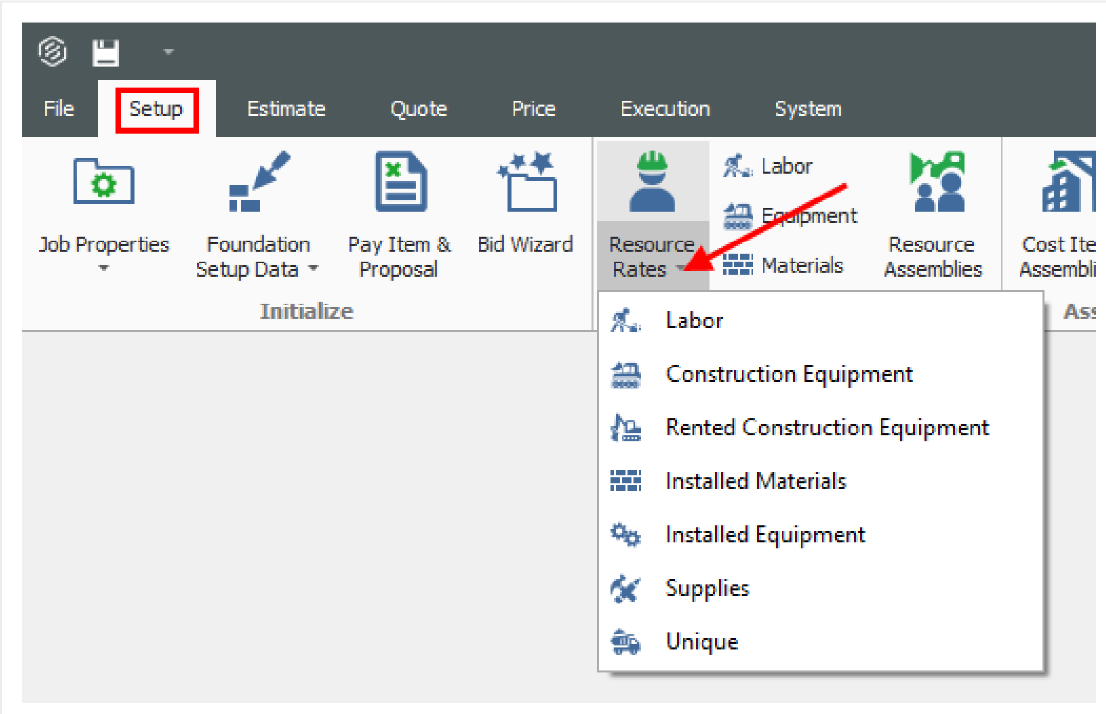

The data that prints is the data currently displayed on the register form. The report will print whatever columns are displayed on the register; if you have customized the display in the register, the report prints that data. In other words, register reports are entirely customizable.

By creating Saved Views, you can report the data on a register form in several different variations.

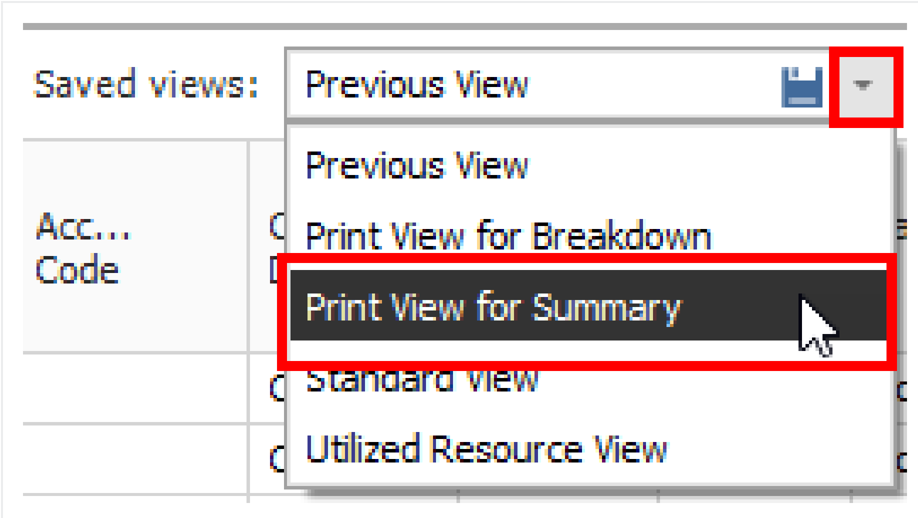
The following step by step example will walk you through creating a custom register report on resource utilization and saving it as a Saved View.

## Step by Step — Create a Register Report

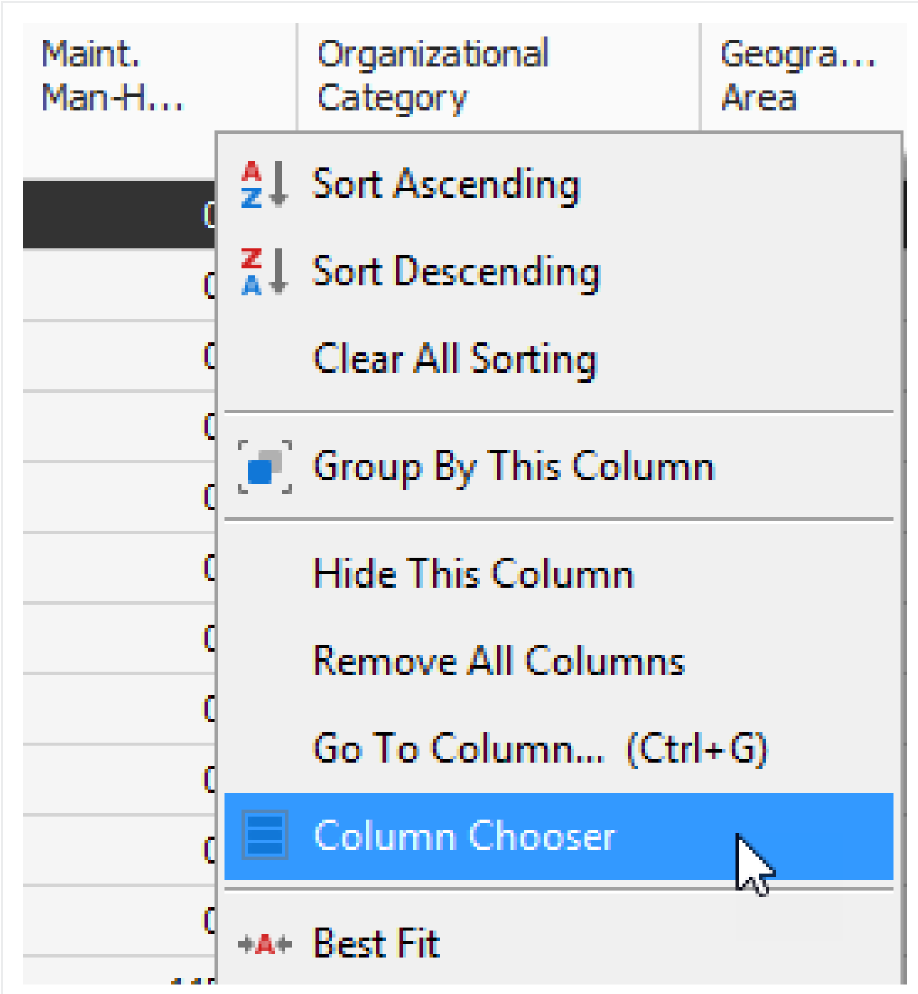
1. Open the **Training Job** and select **Setup** tab, then select the **Resource Rates** drop-down list.




2. From the drop-down list, select **Labor**.
3. From your Saved Views drop down menu on the Resource Rate Register, select the **Print View for Summary** view.




4. Notice this view includes utilization hours
5. Right-click on a column header and select **Column Chooser**.




6. From the Customization window, drag-and-drop the **Minority Percent, Unique Sales Tax, (Scale 2)**, and **Maint. Man-Hour Factor** columns into the register.
7. Close the Customize window.
8. Sort the **Utilization Count** column by clicking on the column header twice so that you see the bars descending.

- This sorts your items so the most utilized resources are at the top

| Resource Code | Utilization Count | Maint. Man-H... | Organizational Category |
|---|---|---|---|
| + LL2 | 8,946.59 | 0.00 | Laborer |
| + LO2 | 4,734.02 | 0.00 | Operator |
| + LT1 | 3,611.05 | 0.00 | Truck Driver - Team... |
| + LO1 | 1,640.00 | 0.00 | Operator |
| + LO4 | 1,484.63 | 0.00 | Operator |
| + LC2 | 1,188.73 | 0.00 | Carpenter |
| + LO3 | 889.33 | 0.00 | Operator |
| + LSSUPT | 800.00 | 0.00 | Supervision |
| + LSSEC | 800.00 | 0.00 | Supervision |
| + LSPE | 800.00 | 0.00 | Supervision |
| + LL3 | 721.33 | 0.00 | Laborer |
| + LIW1 | 594.37 | 0.00 | Iron Worker |

9. Click on the **Saved Views** drop-down menu and select the **Save disc** icon to save the view.
10. Name the view **Labor Utilization View**, and then click **OK** to save the customized view.
11. From the **Actions** menu, select **Preview** to review the report before printing.

**Labor Register**

**INEIGHT - PAUL TRIPPI**
**E101 - Training Job KL--Sample Training Job**

| Resource Code | Description | Utilization Count | Unit of Measure | Unique Sales Tax | Minority Percent | Maint. Man-Hour Factor |
|---|---|---|---|---|---|---|
| LO1 | Operator Class 1 | 680.00 | Hour | 0.00 | 0.00 | 0.00 |
| LL2 | Laborer | 590.00 | Hour | 0.00 | 0.00 | 0.00 |
| LSSUPT | Project Superintendent | 560.00 | Hour | 0.00 | 0.00 | 0.00 |
| LSSEC | Secretary | 560.00 | Hour | 0.00 | 0.00 | 0.00 |
| LO3 | Operator Class 3 | 220.00 | Hour | 0.00 | 0.00 | 0.00 |
| LL3 | Labor Foreman | 200.00 | Hour | 0.00 | 0.00 | 0.00 |
| LO4 | Operator Foreman | 110.00 | Hour | 0.00 | 0.00 | 0.00 |
| LT1 | Teamster | 100.00 | Hour | 0.00 | 0.00 | 0.00 |

## 2.2.1 Register Report Output Settings

Within the Preview for a register report, there are several options to choose from to configure the output of your report.

### 2.2.1.1 Page Setup

While in the Preview mode, selecting **File > Page Setup** provides setup options for the page format:

- Page Size (legal, letter, etc.)
- Paper Width & Height
- Orientation (portrait or landscape)
- Page Margins (left, right, top, bottom)

### 2.2.1.2 Exporting to Document

Using the Export function allows you to identify a Print range, Image quality, Password Security, and more. Selecting **File > Export Document** prints an Adobe Acrobat (*.pdf) report.

# Exercise 2.2 — Create a Custom Register Report

You can configure the columns in your registers for reporting and run your own custom reports. Complete the following steps to configure and run a report from the CBS Register, using the Training Job:

1. Select **Estimate>Cost Breakdown Structure (CBS)**.
2. Under Saved Views, Select **CBS Simple View**.
3. Hide the **Optional Code column**.
4. Add back in the **Man-Hours (Total)** and **Man-Hours / UM** columns.
5. Now add back in the **Labor Total Cost, Owned Equipment Total Cost, and Materials Total Cost** categories for reviewing the estimate.
6. Save the View (create your own name for the view).
7. Select **Preview** to view the report.

## You should end up with the following results

Cost Breakdown Structure (CBS) Register

ABC Contracting Inc
Training Job--Training Job - Maricopa County No. TM2924

| CBS Position Code | Description | Forecast (T/O) Quantity | Unit of Measure | Man-Hours (Total) | Unit Cost | Labor Total Cost | Total Cost (Forecast) | Man-Hours otal incl. Maintenan | ied Equipment Total | Man-Hours/ UM | Materials Total Cost | Currency |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **JOB** | 20.00 | Mile | 27,993.15 | $306,883.14 | $907,442.76 | $6,137,662.81 | 28,438.44 | $1,062,750.40 | | $3,393,700.70 | U.S. Dollar |
| | **Prime Bond** | 1.00 | Lump Sum | | $48,686.14 | $0.00 | $48,686.14 | | $0.00 | | $0.00 | U.S. Dollar |
| | **Price % Add-On** | 1.00 | Lump Sum | | $309,475.27 | $0.00 | $309,475.27 | | $0.00 | | $0.00 | U.S. Dollar |
| | **Job Financing** | 1.00 | Lump Sum | | $0.00 | $0.00 | $0.00 | | $0.00 | | $0.00 | U.S. Dollar |
| | **Indirect Cost Escalation** | 1.00 | Lump Sum | | $0.00 | $0.00 | $0.00 | | $0.00 | | $0.00 | U.S. Dollar |
| | **Direct Cost Escalation** | 1.00 | Lump Sum | | $11,026.79 | $12,026.79 | $11,026.79 | | $0.00 | | ($1,000.00) | U.S. Dollar |
| | **Indirect Cost Add-On** | 1.00 | Lump Sum | | $0.00 | $0.00 | $0.00 | | $0.00 | | $0.00 | U.S. Dollar |
| | **Job Management & Equipment** | 1.00 | Lump Sum | 2,400.00 | $157,096.28 | $91,176.28 | $157,096.28 | 2,400.00 | $65,920.00 | 2,400.00 | $0.00 | U.S. Dollar |
| | **General Expense** | 1.00 | Lump Sum | 0.00 | $4,200.00 | $0.00 | $4,200.00 | 0.00 | $0.00 | 0.00 | $0.00 | U.S. Dollar |
| | **Direct Cost Add-On** | 1.00 | Lump Sum | | $109,544.08 | $15,676.56 | $109,544.08 | | $19,450.89 | | $66,546.70 | U.S. Dollar |
| **1** | **Mobilization** | 1.00 | Lump Sum | 0.00 | $75,000.00 | $50,000.00 | $75,000.00 | 0.00 | $0.00 | 0.00 | $25,000.00 | U.S. Dollar |
| **2** | **Clearing & Grubbing** | 10.00 | Acre | 0.00 | $0.00 | $0.00 | $0.00 | 0.00 | $0.00 | 0.00 | $0.00 | U.S. Dollar |
| **3** | **Unclassified Excavation** | 50,000.00 | Cubic Yard | 3,964.29 | $9.95 | $110,467.00 | $497,466.56 | 4,115.48 | $302,999.56 | 0.08 | $0.00 | U.S. Dollar |
| 3.1 | Excavation, scrapers | 50,000.00 | Cubic Yard | 1,250.00 | $3.00 | $33,170.48 | $149,922.88 | 1,325.00 | $116,752.40 | 0.03 | $0.00 | U.S. Dollar |

## Congratulations, you have completed this exercise!

## Lesson 2 Review

1. The ___________ Report gives a good overview of how your price breakdowns by cost category.
   a. Estimate Summary
   b. PBS Summary
   c. Audit

---

2. The ___________ Report is a very important report to run during bid review to make sure you didn't leave anything out of the estimate.
   a. CBS Details
   b. Audit
   c. Pay Item Summary

---

3. A best practice is to always set your Print output setting to **Preview** so you can review before printing.
   a. True
   b. False

---

## Lesson 2 Summary

As a result of this lesson, you can:

- Run reports from the Report menu
- Create and run reports from register forms

# LESSON 3 – DATA REPRODUCTION

## Lesson Duration: 20 Minutes

## Lesson Objectives

After completing this lesson, you will be able to:

- Create a job from an existing job or template
- Create a template
- Reproduce estimate data using the Bid Wizard
- Reproduce estimate data using copy/paste
- Add cost items to a job using the CBS Bid Wizard
- Utilize the Snapshot function

## Lesson Topics

# 3.1 COPY AN EXISTING JOB

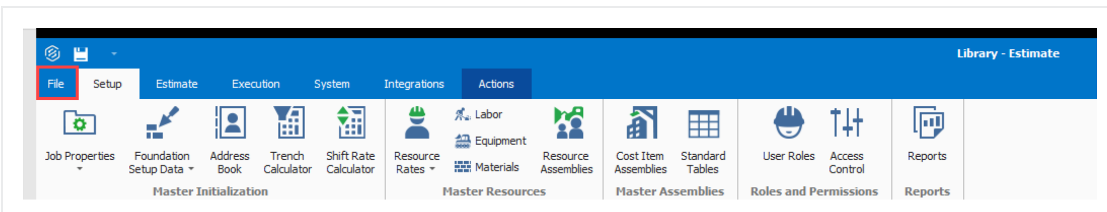
As you build an estimate, you may want to reuse pay items, cost items, or resources from a previous estimate. When you plan to reuse the majority of content within a job, you can simply make a copy of the existing job.

Using the **Create a new Job from... Existing Job** option on the Backstage View creates an exact replica of the existing job, including the job's properties, pay items, cost items, and resources.

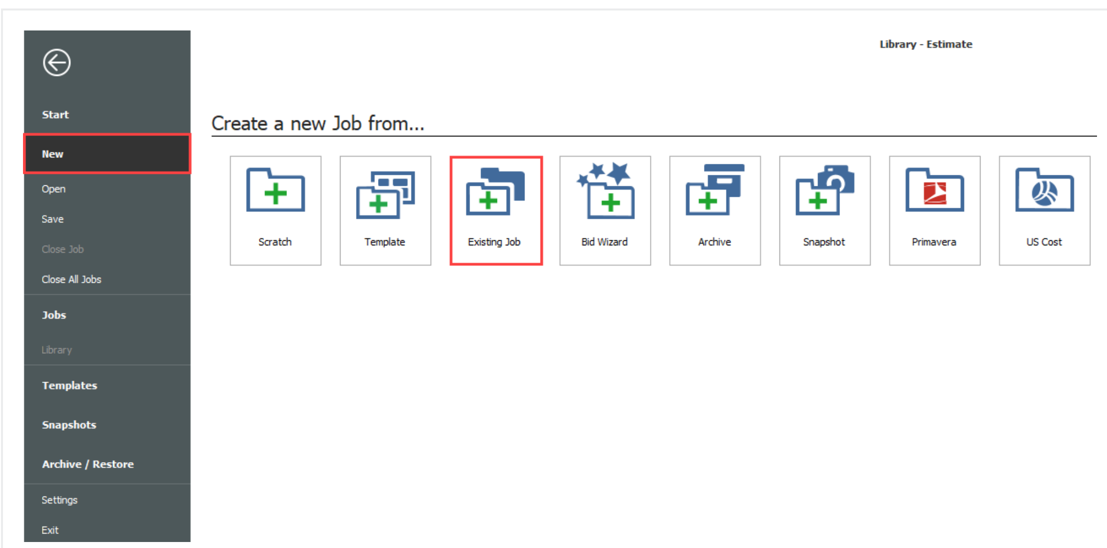
The following Step by Step walks you through how to make a copy of an existing job.

## Step by Step — Copy an Existing Job

1. Click the **File** tab on the **Estimate** landing page.

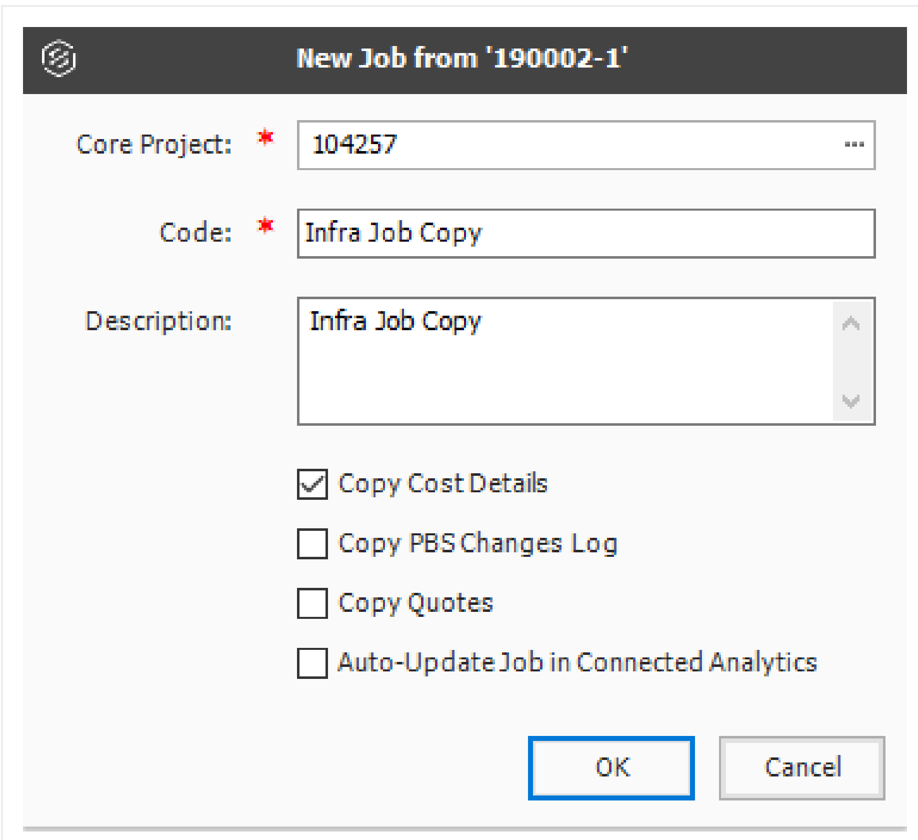



2. From the left side panel, select **New,** then select **Existing Job**.




3. The Job Register displays a list of your existing projects; select the Training Job and click **OK**.

4. On the New Job dialog, click the **ellipses** and select a Core Project.
5. In the Code field, type **Infra Job Copy** with your initials.
6. To copy the cost details from the existing job to the new job, verify that the **Copy Cost Details** checkbox is selected
   - If you wanted to copy just the cost item structure without cost details, you would uncheck the box.
7. Uncheck the check for copying the PBS Changes Log, Copy Quotes and Auto-Update Job in Connected Analytics.
8. Click **OK** to create the new job.




The new job opens with the Job Properties form active, so you can begin to modify the new job as needed. If you look through the tabs on the Job Properties form, you will find that it looks exactly like the job from which it was copied. Other forms, such as the Pay Item & Proposal Register and the CBS Register, also look the same in both jobs until you make modifications in one job or the other.

This is a very easy method for creating a new job, and it is a good choice if you want to copy an entire job. However, if you want to pick and choose which parts of a job to duplicate, the Bid Wizard is a better choice.

# 3.2 TEMPLATES

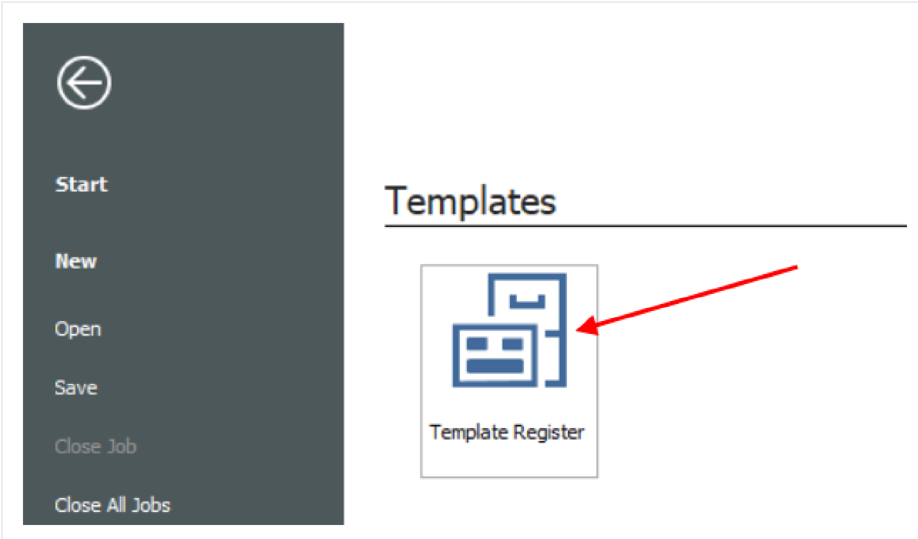
Job Templates provide you the ability to maintain a list of template jobs that can be used to create new jobs. As your company grows and increases the number of projects, the need to standardize the estimating process increases to ensure consistency and reduce the chance of information being overlooked.

In InEight Estimate you can create job folders and store them in a separate register as templates. This allows you to store cost items in master templates separate from the jobs in your Job Register.

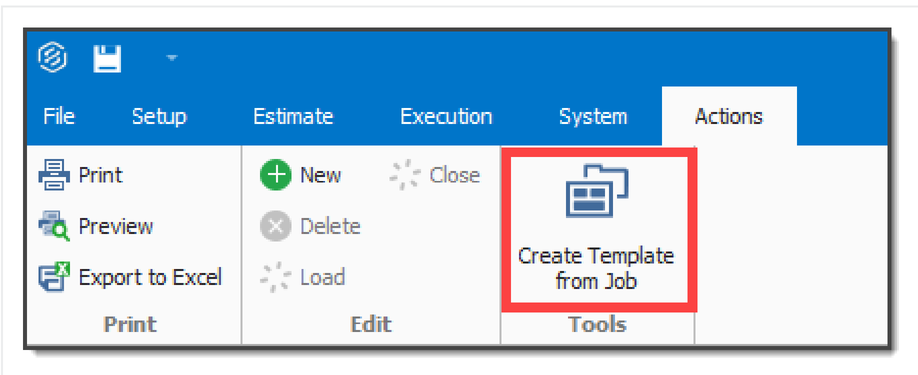
You can create templates from scratch or from existing job folders. The following steps walk you through how to create a new template from an existing job folder.

## Step by Step — Create a Template

1. Click the **File** tab on the Estimate landing page.
2. From the left side panel, select **Templates**.
3. Under Templates, select the **Template Register.**

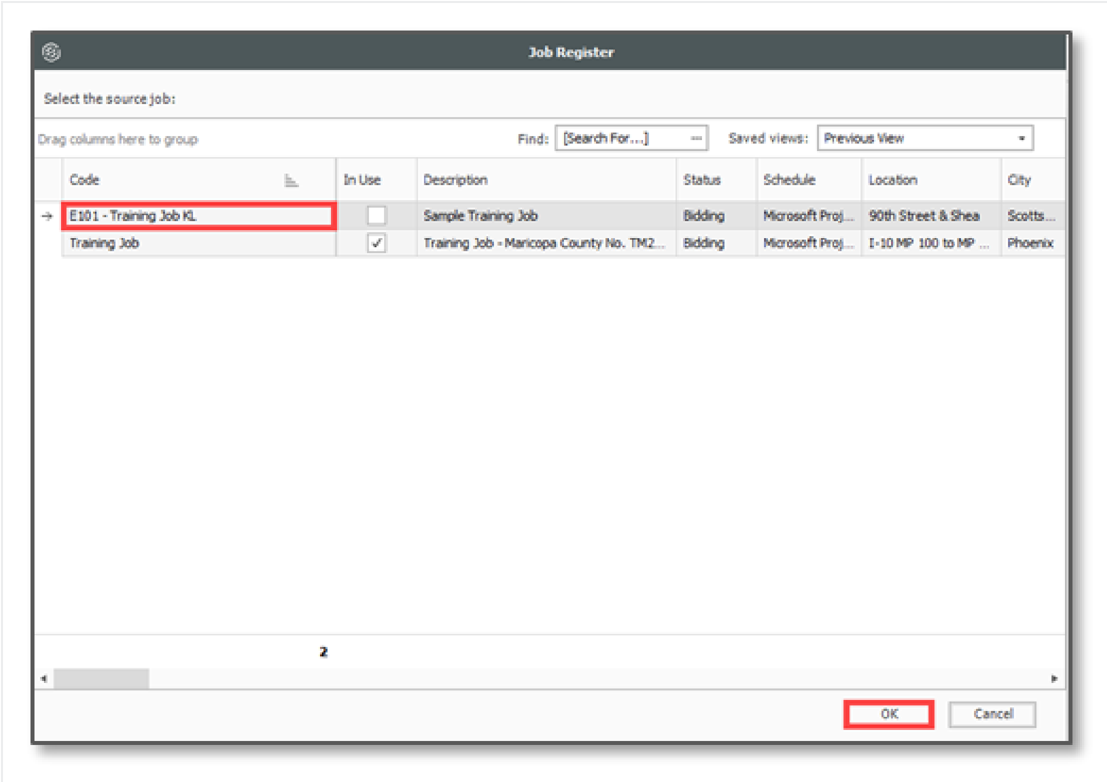



4. From the Actions tab, select **Create Template from Job**.



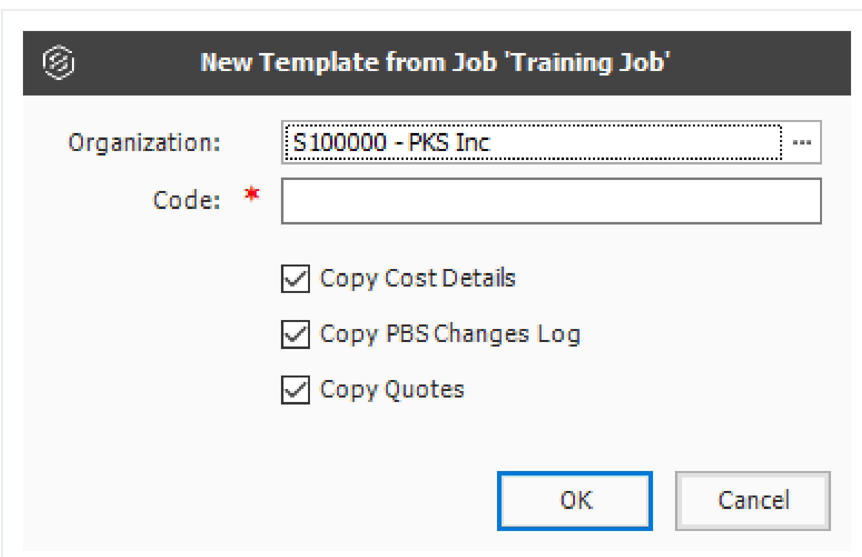

- The Job Register opens for you to select the source job for the template
- Assume that you want to make a template from your E101 Training Job

5. Select the **E101 Training Job with your initials**, then click **OK**.

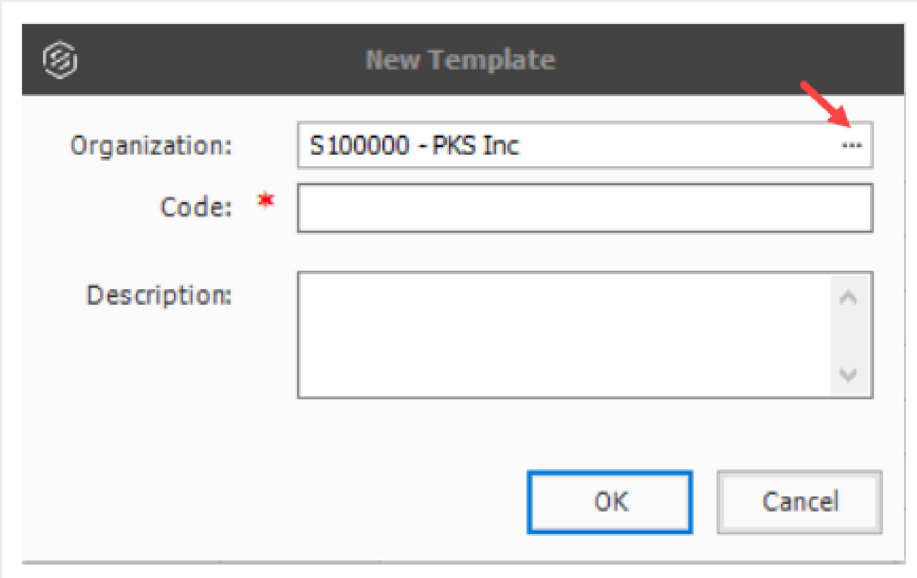



NOTE You cannot create templates from jobs that are published to Job Tracking.

- The New Template From Job 'Training Job' with your initials prompt appears.

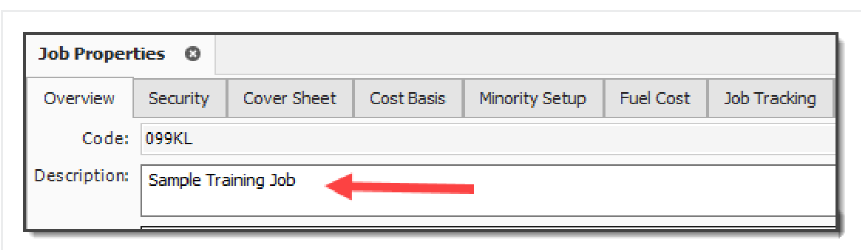


6. Click the ellipsis to the right of the Organization field.

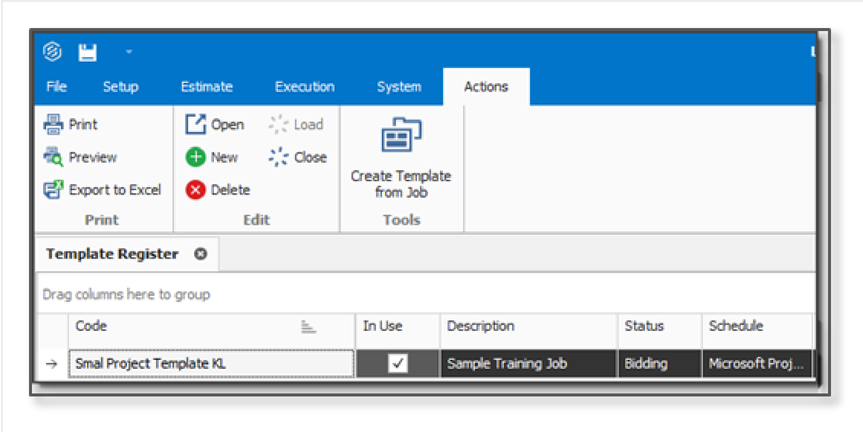



The Organization Register Library opens.

7. In the Organization Register Library, select an **organization** and then click **OK**.
8. In the Code field, type **Small Project Template[your initials]**.
   - Leave Copy Cost Details and Copy PBS Changes Log checked
9. Click **OK**.
   - The new template is created and opens to the Job Properties form
   - You can add the description in addition to the code for any new job you are creating from a template. This description is later added to the Overview tab of the new job on the Job Properties form



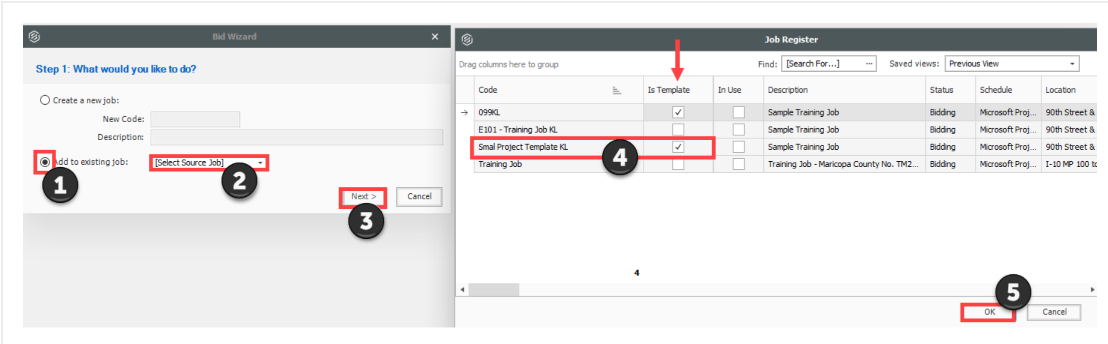

   - Back in the Templates Register, you can see the new template created




- Similar to copying an existing job, you can create a new job from a template from the New menu in the Backstage View.

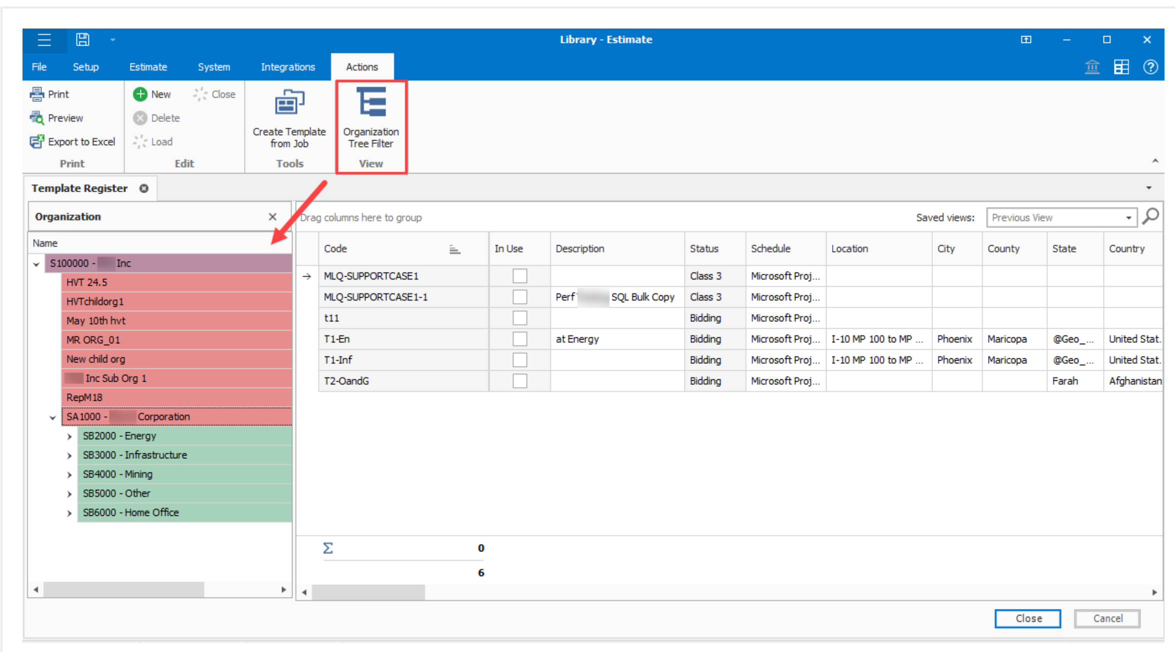

- You can also create a new job from a template from the New menu in the Bid Wizard.


10. Select **Add to existing job**
11. From Select Source Job, click the **dropdown** arrow
12. Click **Next**
13. Select a job that is shown as having a Template
14. Click **OK**

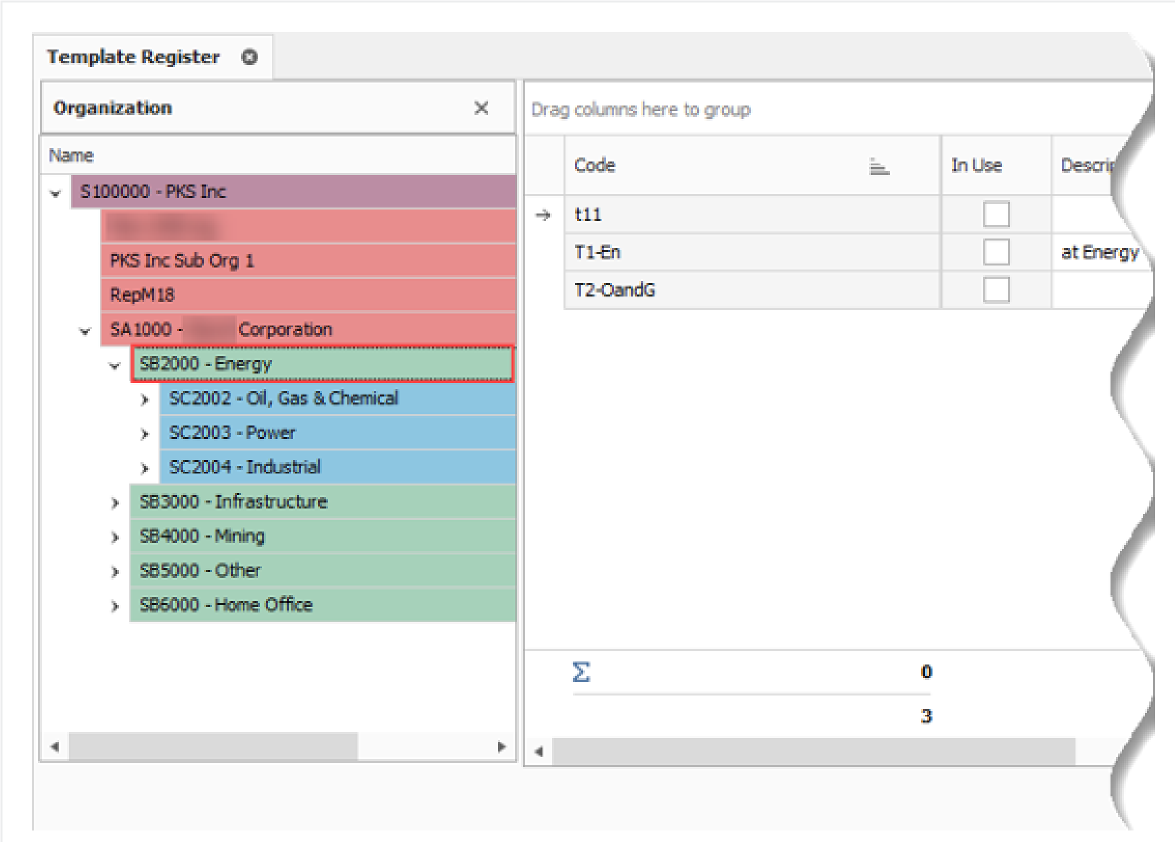



## 3.2.1 OBS filter tree

The Template register's organization tree filter shows the templates assigned to a selected organization.




Just like the job register, the list of templates is filtered based on the selected organization. The primary difference between the OBS tree filter in the job and template registers is that estimates are associated with projects in the job register, and projects belong to an organization. In the template register, templates belong to an organization.




## 3.2.2 Archive and Restore Templates

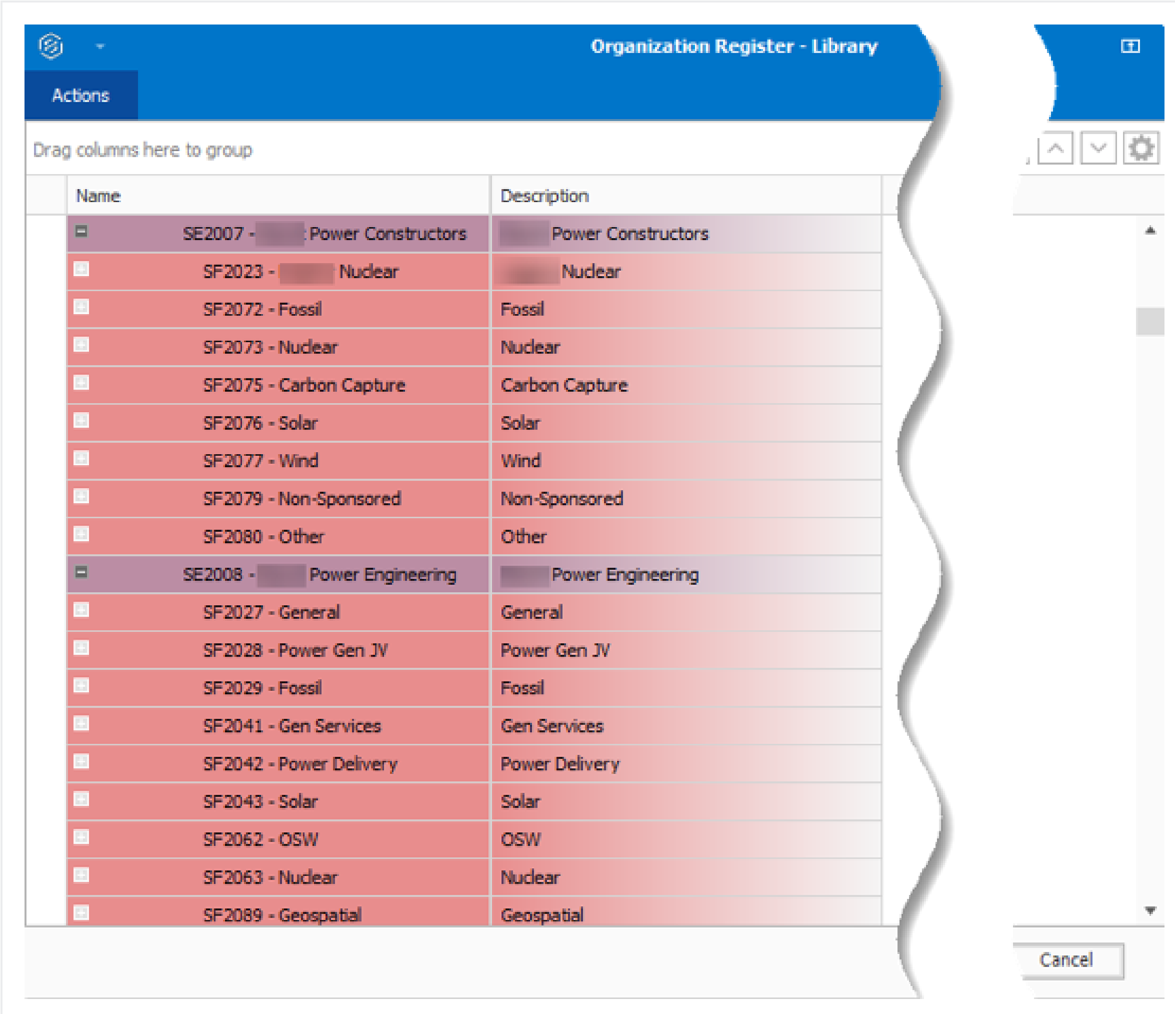
The templates feature gives you the ability to archive and restore templates, enabling templates to become portable. You can move templates between different environments. You can also backup the templates similarly to the Jobs Archive and Restore function.

### Step by Step — Archive and Restore a Template

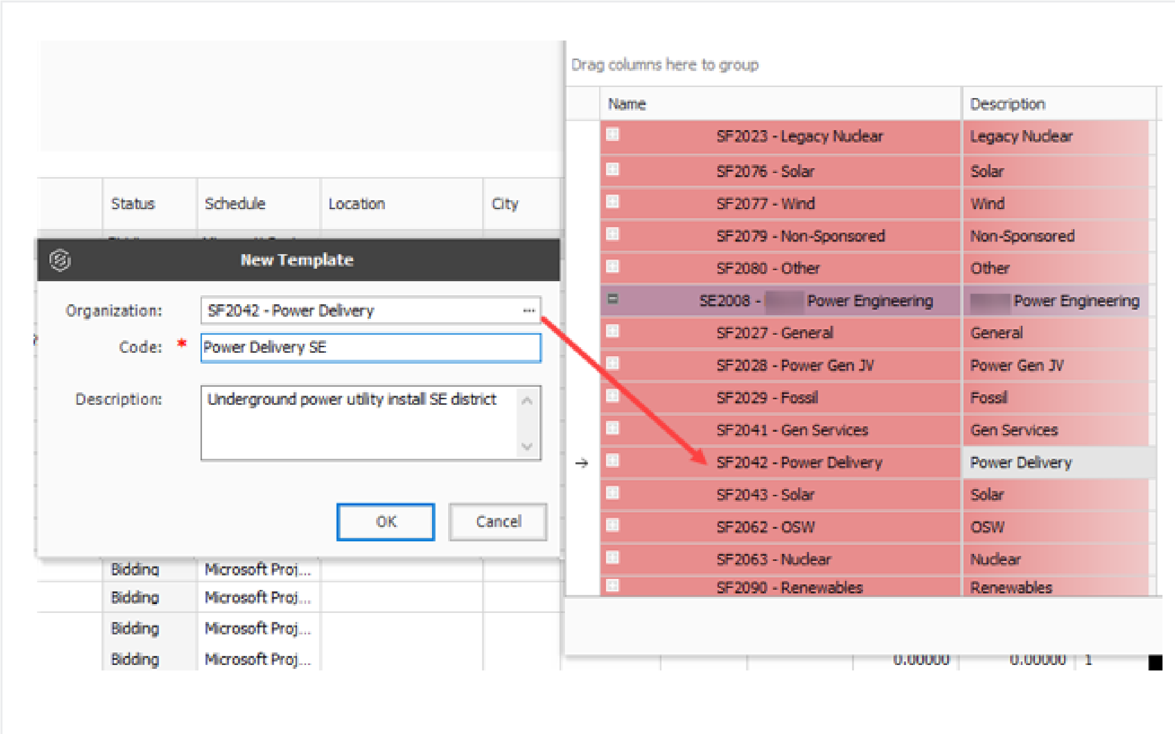
1. Click **File** to open the Backstage View.
2. Select **Archive / Restore**.
   - Several options appear for archiving and restoring your jobs, templates, and library
3. Select **Archive Template**.
   - The Template Register appears
4. Select the **Small Project Template [your initials]** template you previously made, then click **OK**.

5. When prompted to include attachments, click **Yes**.
    - The Save As window appears
6. Browse to where you want to save the job, then click **Save**.
7. Select **Restore Template** from the Archive / Restore page of the Backstage View to begin restoring the template.
8. Browse to the archived template and select it.
9. Click **Open**.
    - If the template already exists, a prompt will appear asking if you want to overwrite it
        - To overwrite it, select **Yes**
        - If you select **No**, you will be prompted to save it under a new Template Code

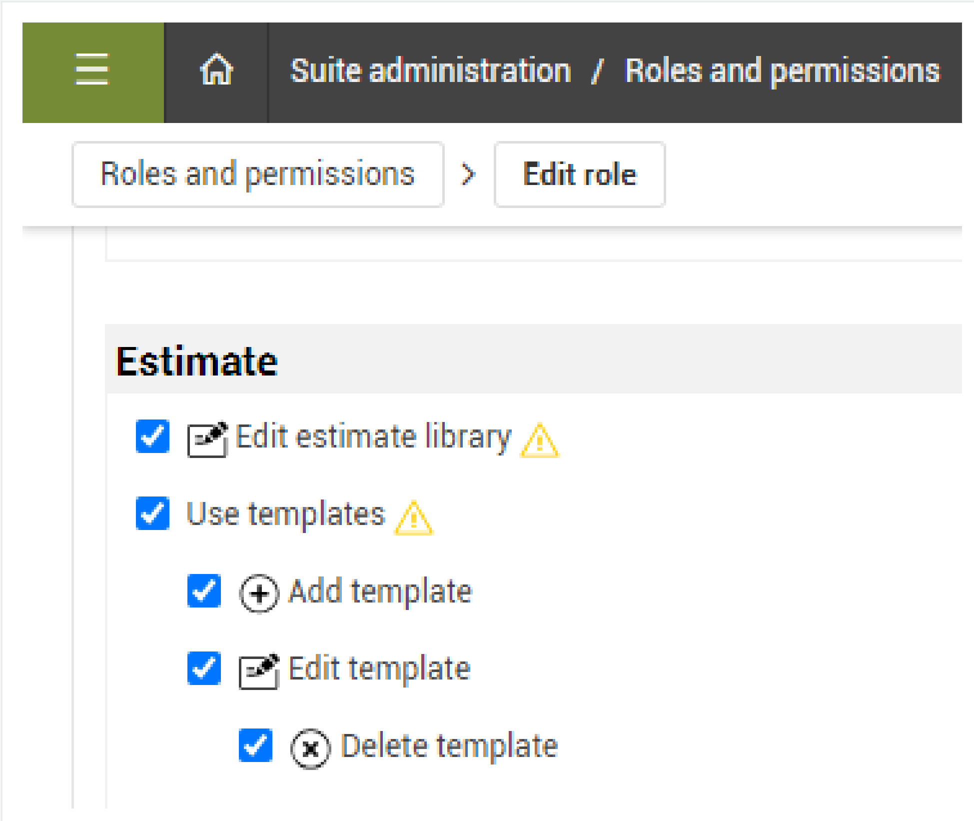
You can assign templates to specific organizational nodes in the OBS, grant permissions, and control user access for templates.




For example, you can assign a template to a specific node level in the OBS that is specific to Power Delivery. The OBS node structure assignment is useful for assigning estimators access to designated templates as determined by an Estimate administrator.

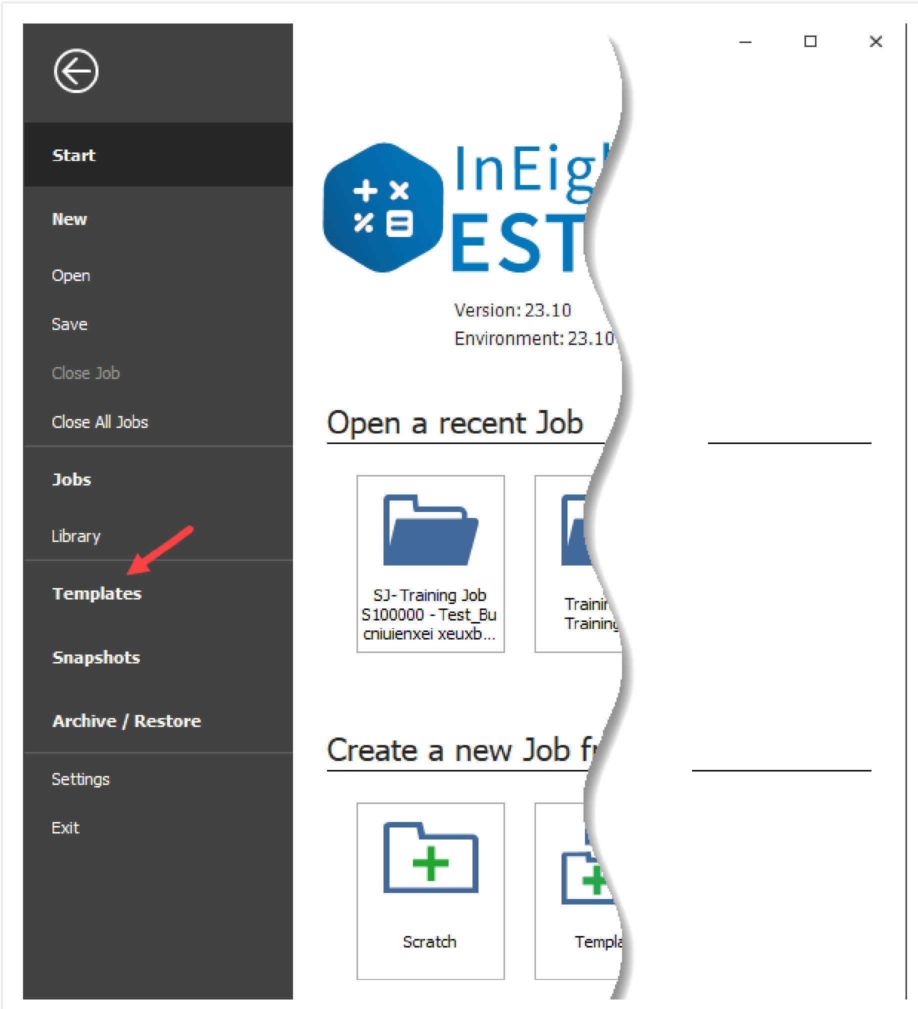



Estimators with the appropriate Estimate/template permissions in Suite Administration > Roles and Permissions > Master Data Libraries > **Estimate**, can use the templates in which they are assigned to in their designated OBS node.

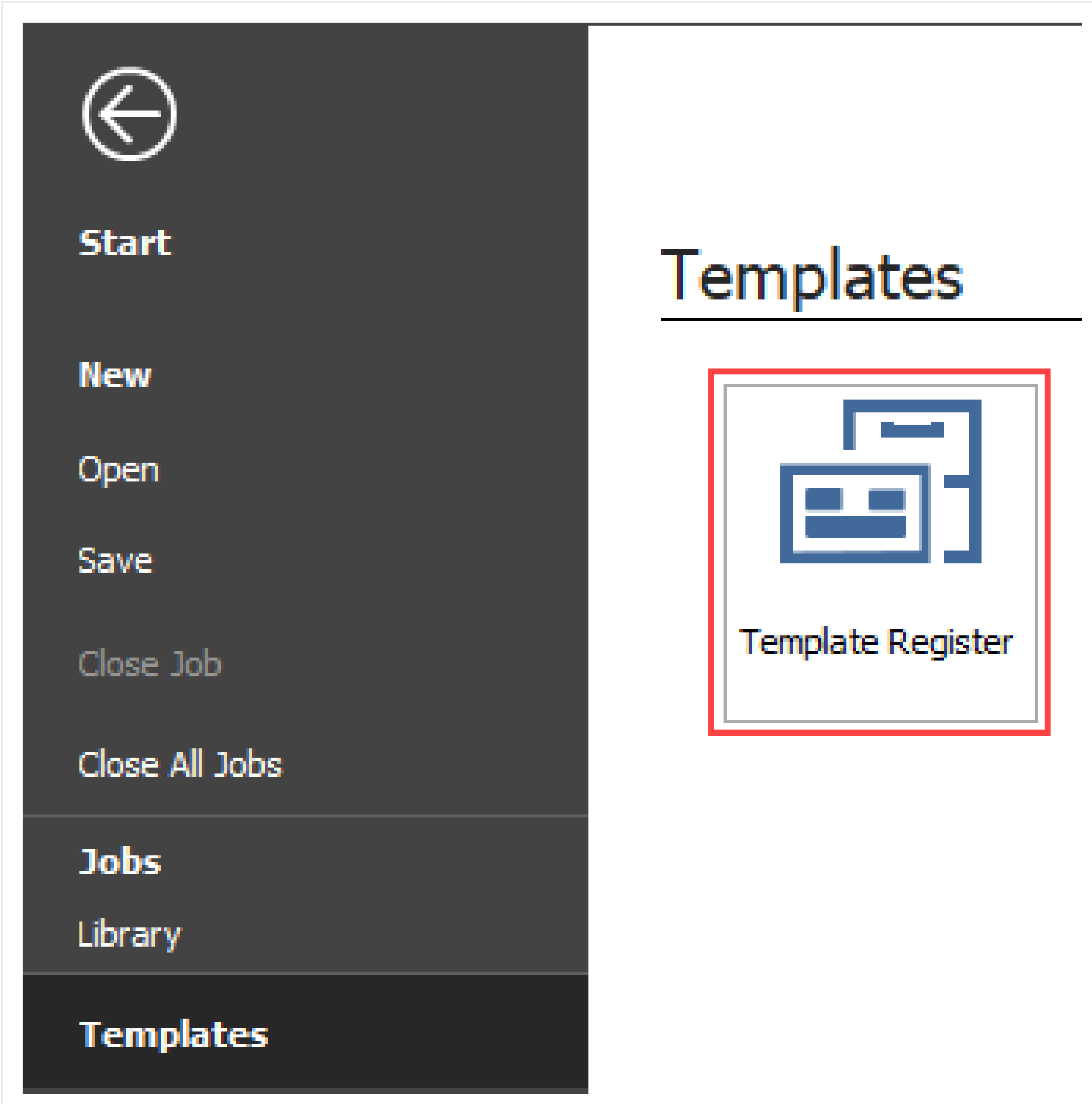

Suite administration / Roles and permissions
Roles and permissions
Edit role
Estimate
Edit estimate library
Use templates
Add template
Edit template
Delete template

## Step by Step — Assign Template to OBS

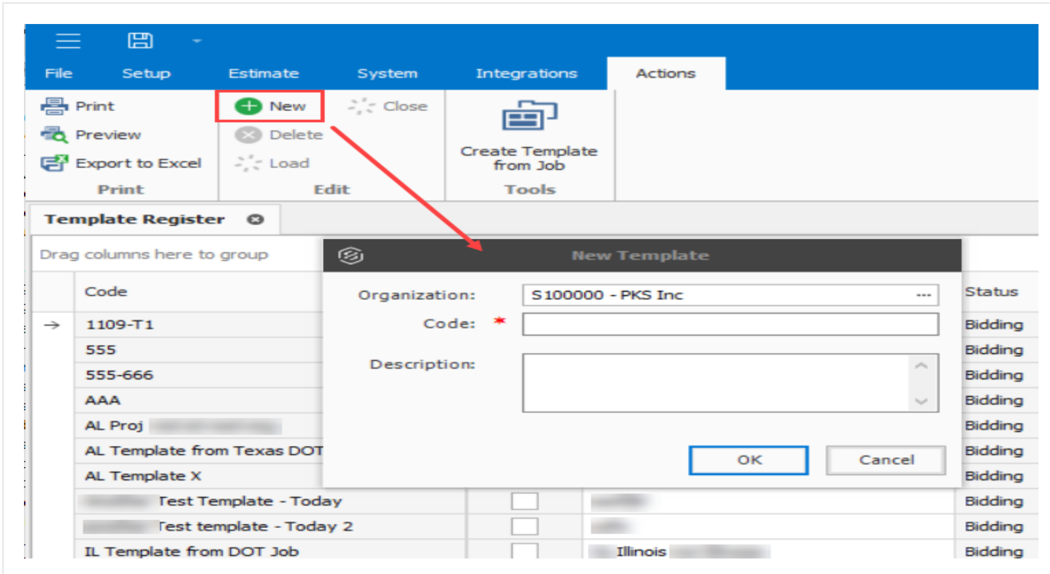
1. Open the **Training Job**, then select the **Templates**.



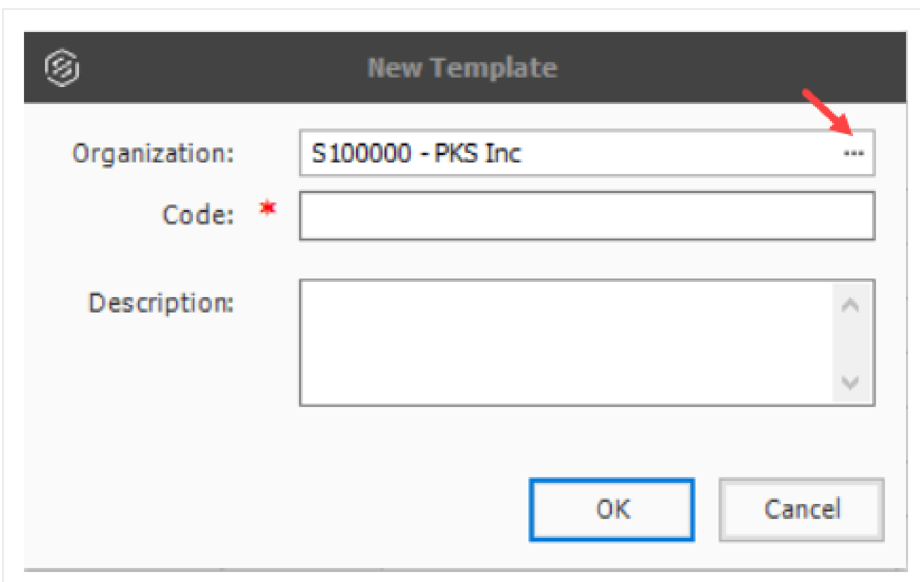

2. Select **Template Register**.


Start
New
Open
Save
Close Job
Close All Jobs
Jobs
Library
Templates
Templates
Template Register

3. Select **New**.

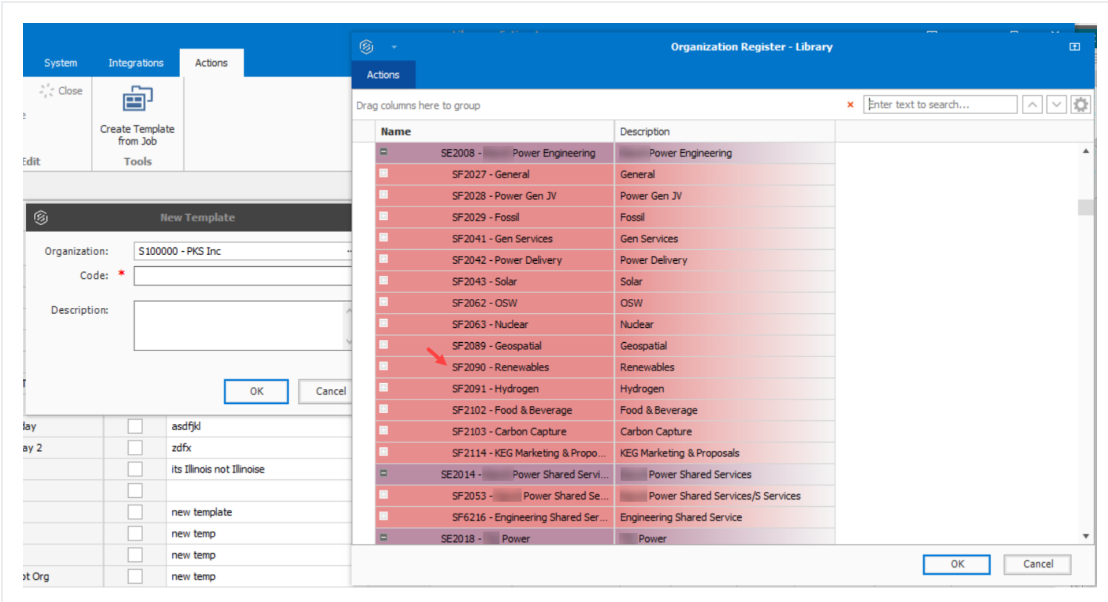



4. Click the **ellipsis** to the right of the Organization field.



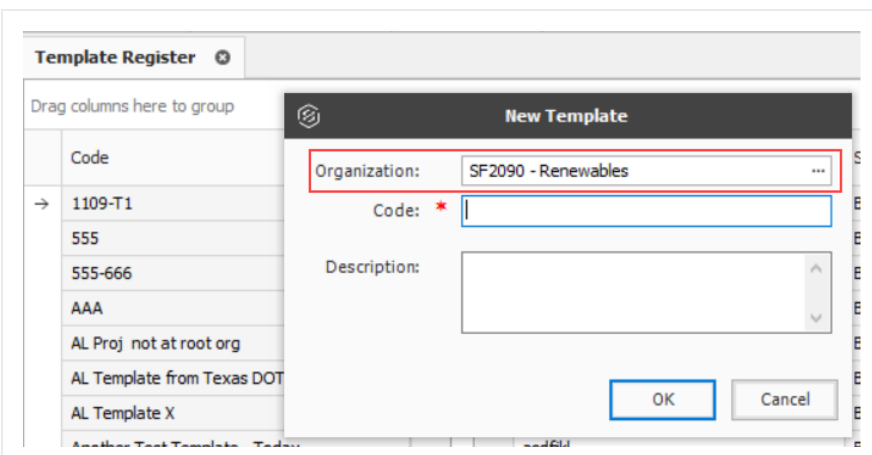

The Organization Register Library opens.

5. In the Organization Register Library, select **SF2090-Renewables**, and then click **OK**.




The new template will be set at the SF2090-Renewables node in the OBS. Users assigned to the SF2090-Renewables level or above in the OBS will be permitted to use this template when creating estimates.

6. The next step will be to create a new template code and a description to complete the new template creation process.




What's next: After the template is created you can start to create estimates using a template.

# 3.3 BID WIZARD

InEight Estimate's Bid Wizard is a powerful tool that can help automate the process of setting up estimates by copying information that already exists in other InEight Estimate job folders. The Bid Wizard can be used to create new projects, create a new job from an existing template, or to add to projects that are already underway.

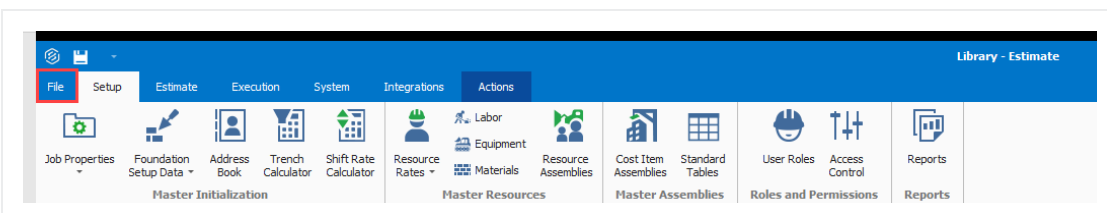
Rather than copying every part of an existing job, the Bid Wizard gives you more flexibility and control over which parts of a job you want to duplicate, e.g., pay items or cost items or both.

In most cases you will be copying cost items, but if you have a project with pay items that are commonly used, you can copy them into a new project. If you select pay items, you will be able to select cost items as well.

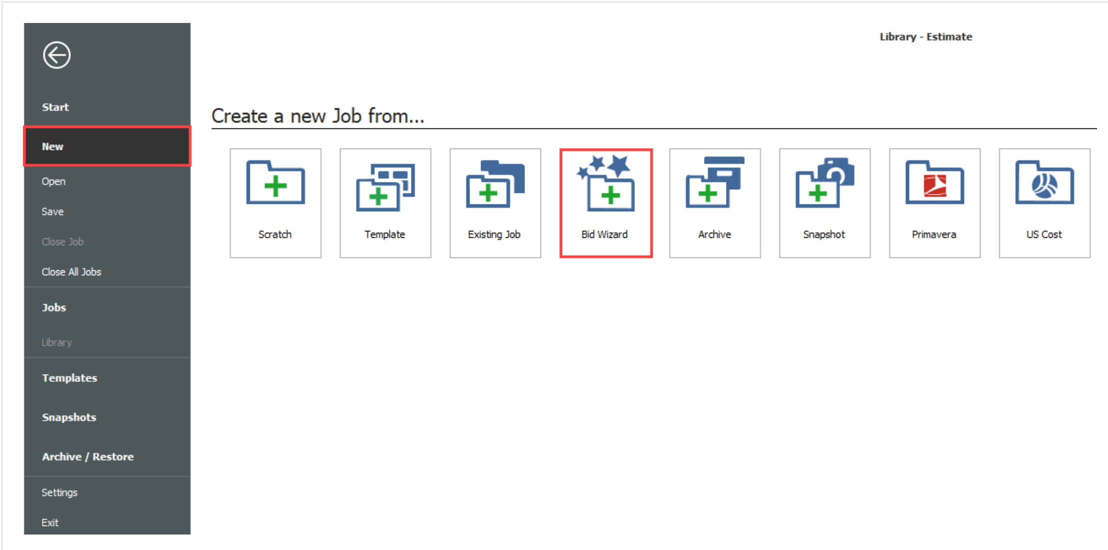
The following Step by Step walks you through how you can use the Bid Wizard to create a new job by importing pay items and their associated costs from an existing job.

## Step by Step — Use the Bid Wizard

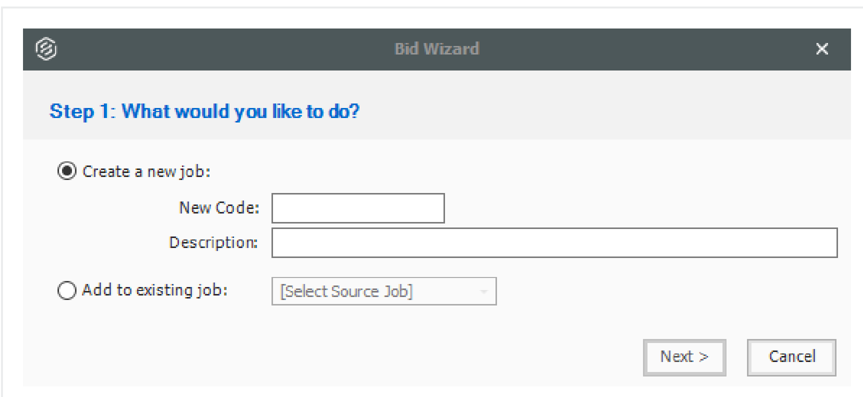
1. To open the Bid Wizard, click the **File** tab on the Estimate landing page.




2. From the left side panel, select **New**, then select **Bid Wizard**.

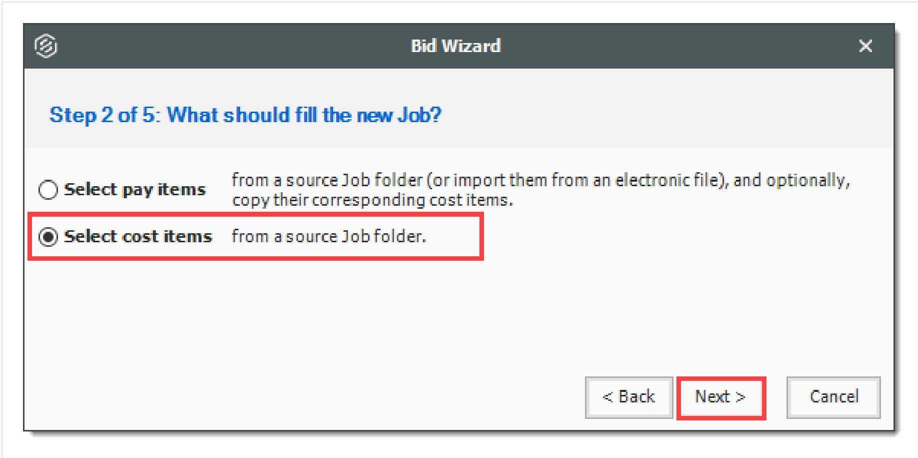



- The Bid Wizard – Step 1 dialog displays



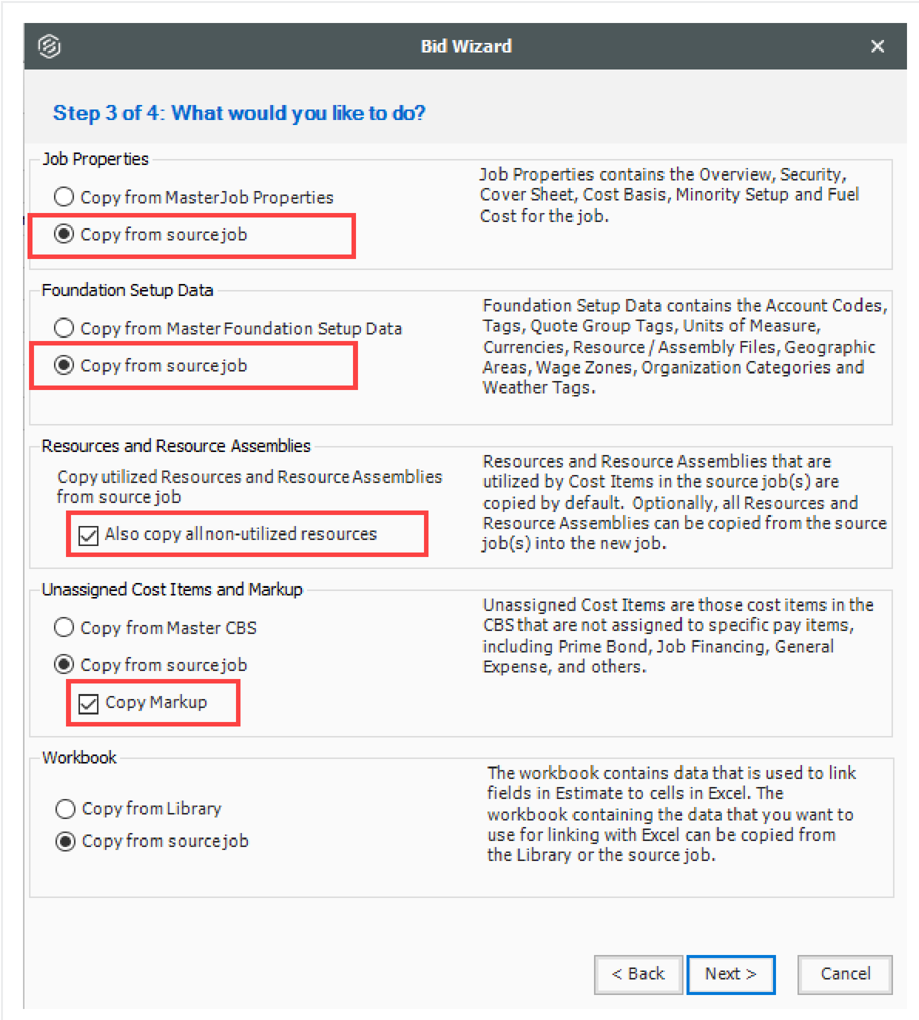

| TIP | Notice that you can either create a new project or add to an existing project. |
|---|---|

3. Type **E101 Bid Wizard** (with your initials) in the New Code field.
4. Type **Bid Wizard Example** in the Description field.
5. Click the **Next** button.
    - The Bid Wizard – Step 2 dialog displays
6. Choose **Select cost items** and click **Next**.

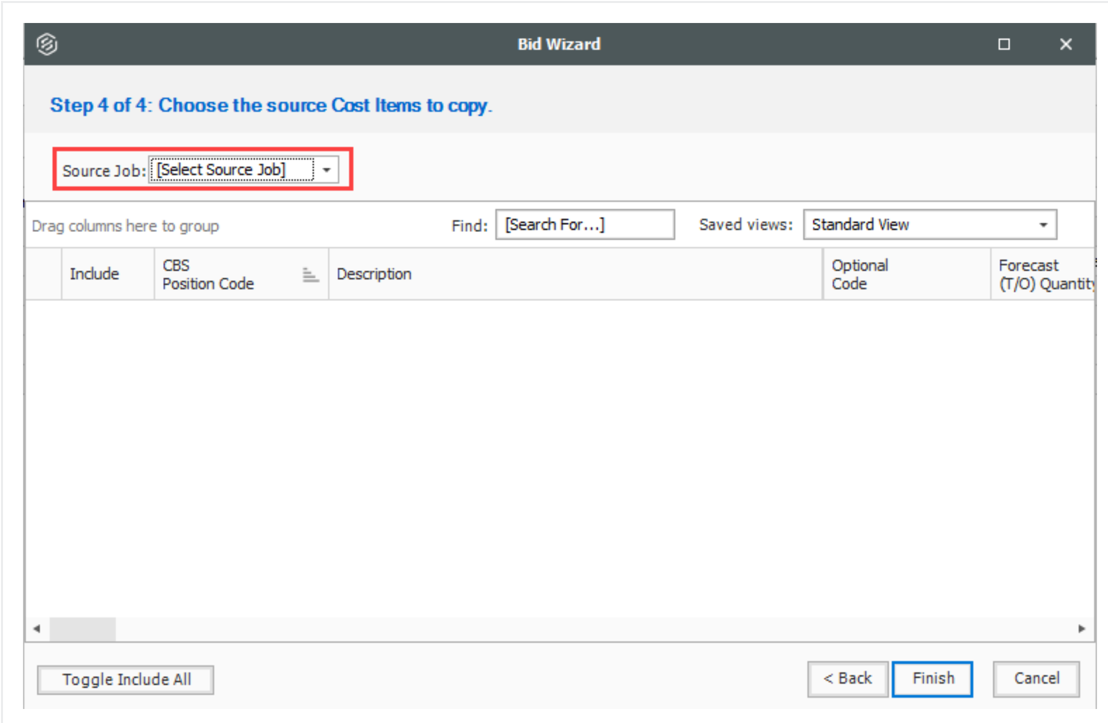



- The Bid Wizard – Step 3 of 4 dialog displays
- You use this step to indicate which source you want to pull your setup data from (the library or your source job)

7. For all selections, select **Copy from source job**.
8. Check the **Also copy all non-utilized resources** checkbox.
9. Select **Copy from source job** under Unassigned Cost Items and Markup, and the **Copy Markup** box is automatically selected.

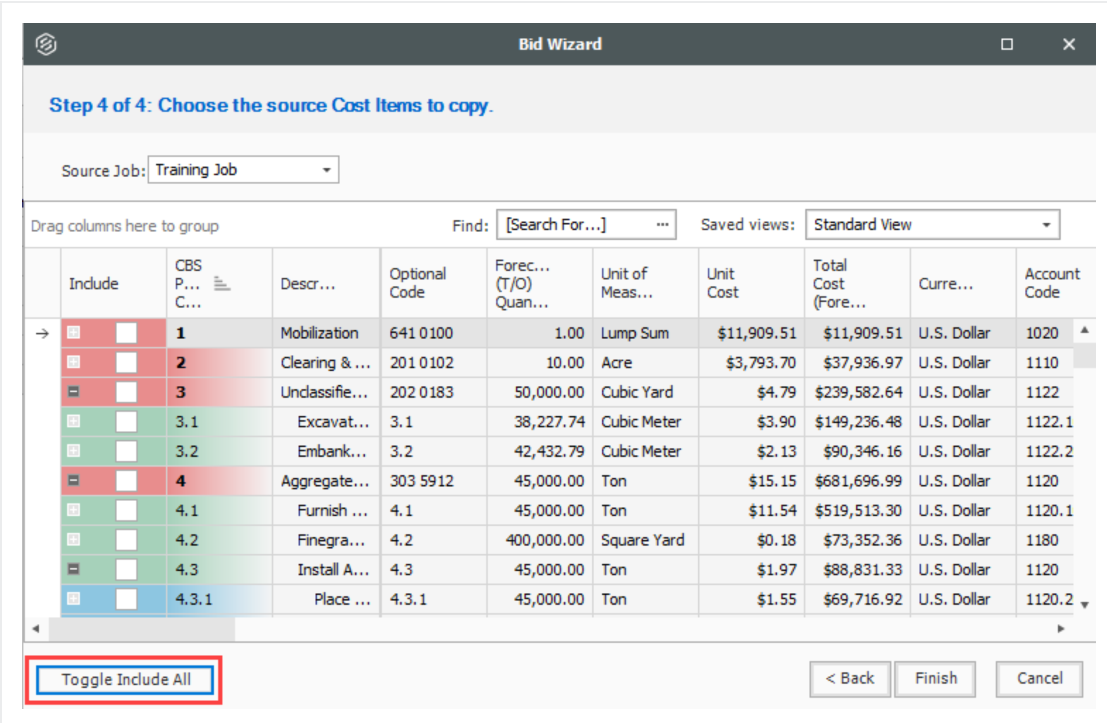



10. Click **Next**.
    - The Bid Wizard – Step 4 of 4 dialog displays
11. Click the **Source Job** drop-down arrow.

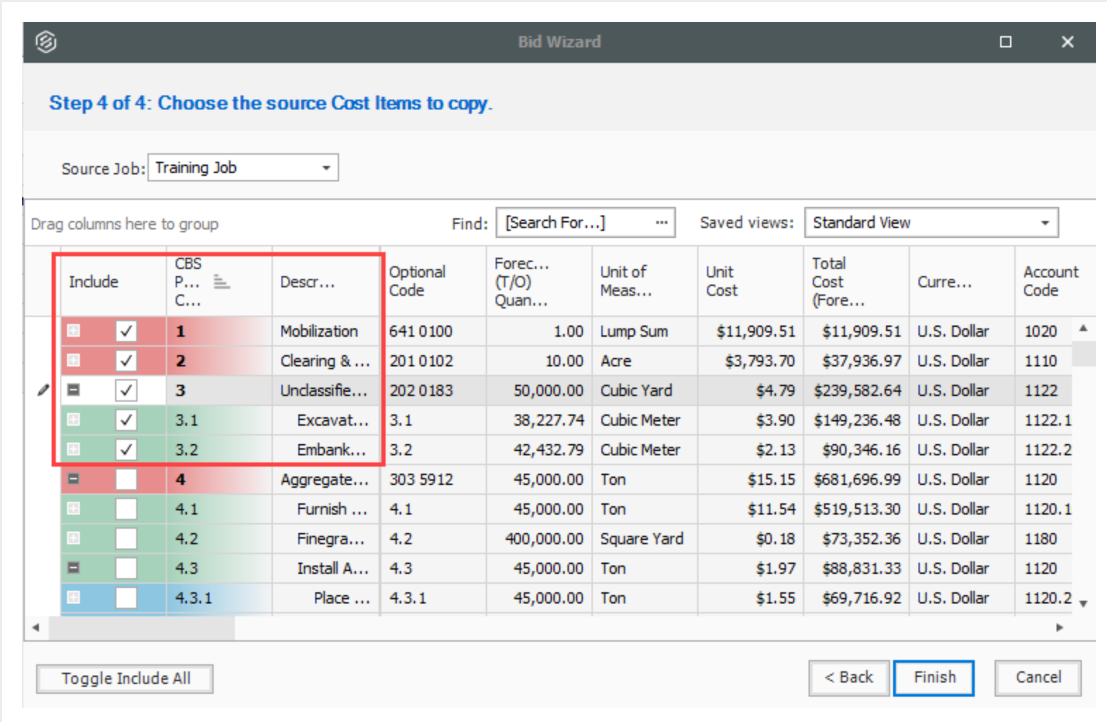



- The Job Register opens

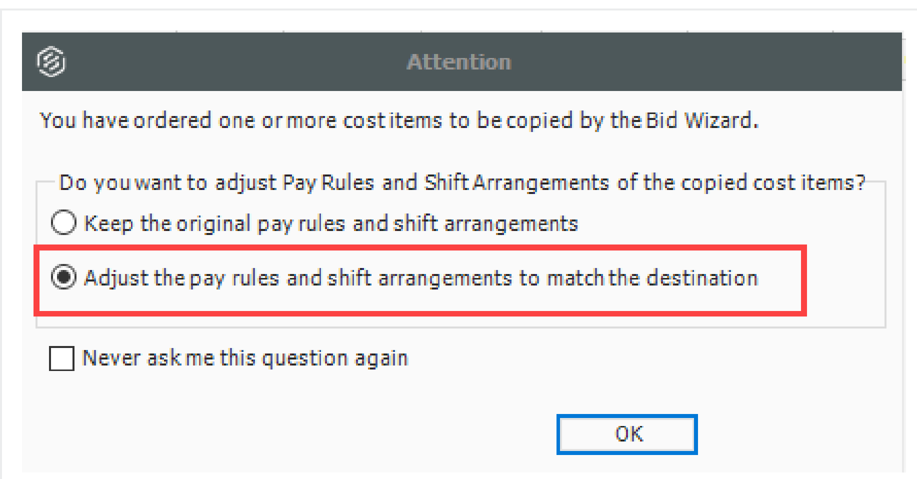
12. Find and select **Training Job.**
13. Click **OK**.
    - This screen displays the cost items of the source job (Training Job). All items are automatically selected
14. Use the **Toggle Include All** button to exclude all selections.



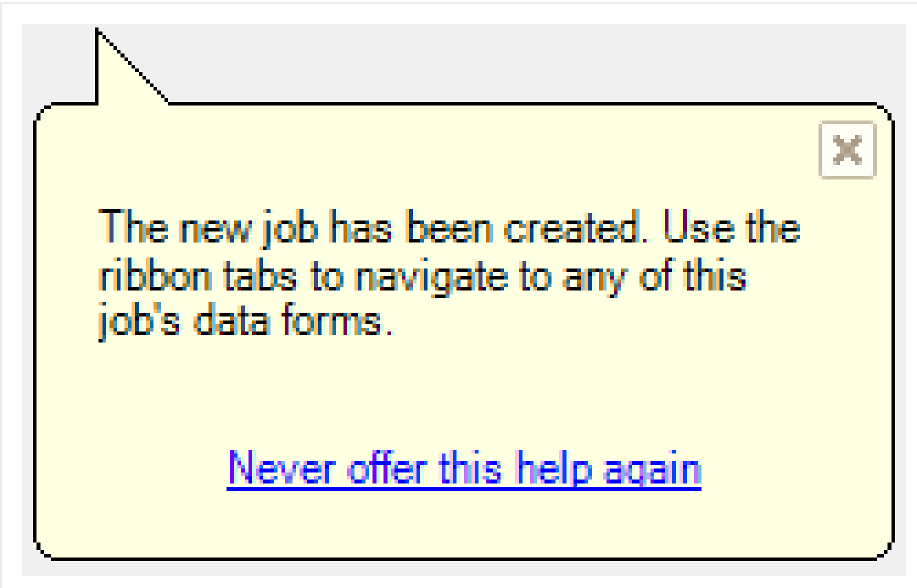

15. Select the checkboxes to include **Mobilization**, **Clearing & Grubbing**, and **Unclassified Excavation**.
16. Notice that when selecting Unclassified Excavation, that cost item's subordinates are automatically selected



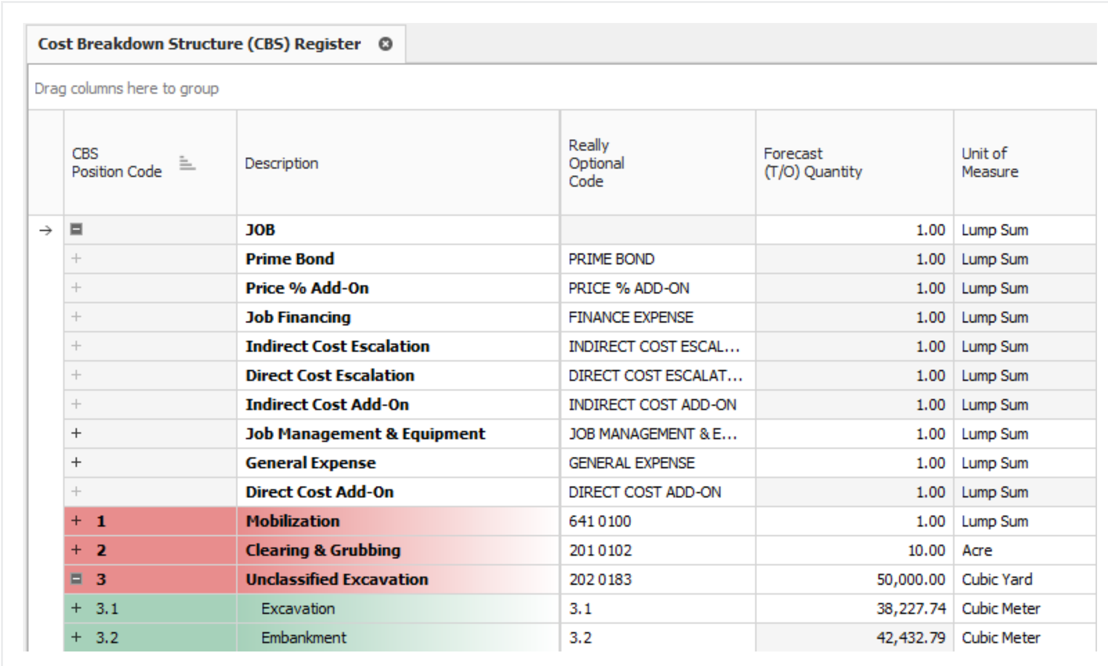

17. Click **Finish** to add the new job.
    - An Attention prompt appears asking, "Do you want to adjust Pay Rules and Shift Arrangements of the copied cost items?"
    - Typically, you will want to use the shifts and payment rules of your new destination job.
18. Select **Adjust the pay rules and shift arrangements to match the destination**.



19. Click **OK**.
    - A help bubble appears letting you know the job has been created, and that you can use the ribbon tabs on the Estimate landing page to open any form
20. Close the help bubble by selecting the **X** in the upper right corner.




21. Open the **Estimate > CBS** to see the three cost items that were brought in.



Cost Breakdown Structure (CBS) Register

Drag columns here to group

| CBS Position Code | Description | Really Optional Code | Forecast (T/O) Quantity | Unit of Measure |
|---|---|---|---|---|
| | **JOB** | | 1.00 | Lump Sum |
| | **Prime Bond** | PRIME BOND | 1.00 | Lump Sum |
| | **Price % Add-On** | PRICE % ADD-ON | 1.00 | Lump Sum |
| | **Job Financing** | FINANCE EXPENSE | 1.00 | Lump Sum |
| | **Indirect Cost Escalation** | INDIRECT COST ESCAL... | 1.00 | Lump Sum |
| | **Direct Cost Escalation** | DIRECT COST ESCALAT... | 1.00 | Lump Sum |
| | **Indirect Cost Add-On** | INDIRECT COST ADD-ON | 1.00 | Lump Sum |
| | **Job Management & Equipment** | JOB MANAGEMENT & E... | 1.00 | Lump Sum |
| | **General Expense** | GENERAL EXPENSE | 1.00 | Lump Sum |
| | **Direct Cost Add-On** | DIRECT COST ADD-ON | 1.00 | Lump Sum |
| **1** | **Mobilization** | 641 0100 | 1.00 | Lump Sum |
| **2** | **Clearing & Grubbing** | 201 0102 | 10.00 | Acre |
| **3** | **Unclassified Excavation** | 202 0183 | 50,000.00 | Cubic Yard |
| 3.1 | Excavation | 3.1 | 38,227.74 | Cubic Meter |
| 3.2 | Embankment | 3.2 | 42,432.79 | Cubic Meter |

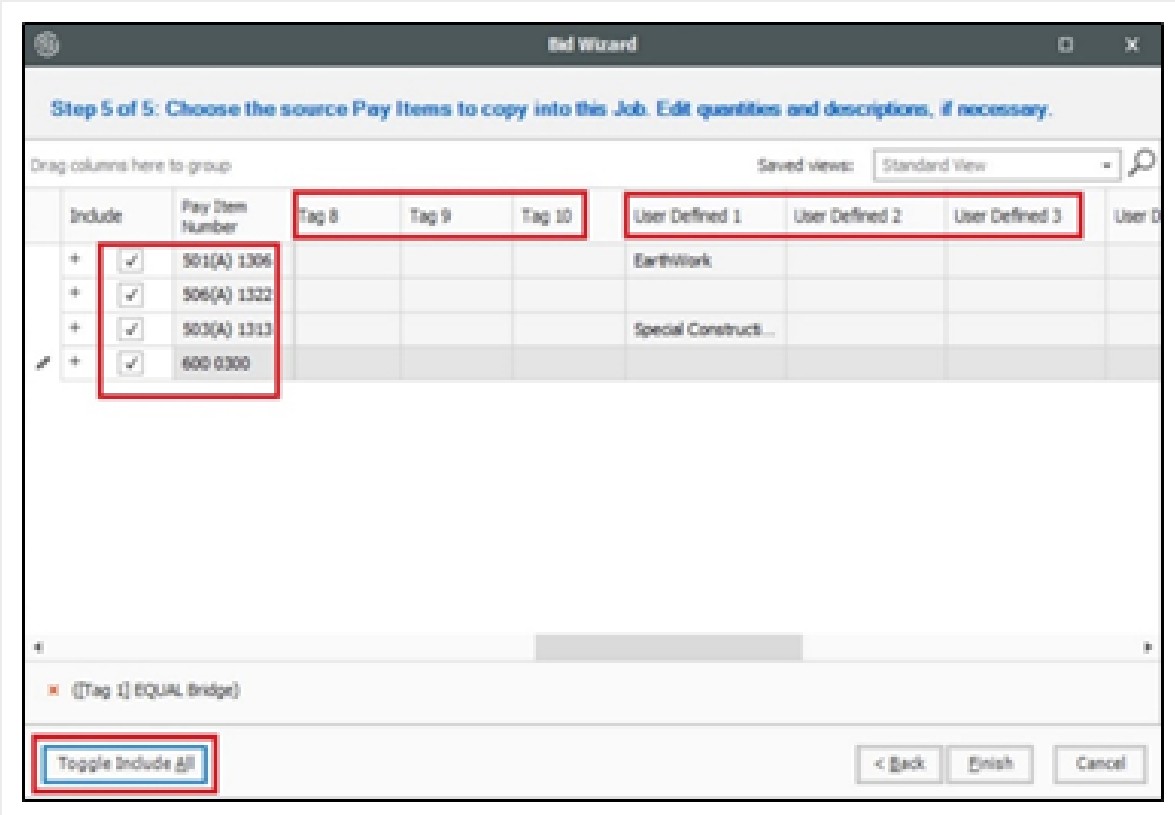
## 3.3.1 Bid Wizard Updates

While using the Bid Wizard, the Include option is left unchecked by default. A filter is applied to bring in pay items when using the Bid Wizard. The Toggle Include All button only selects the filtered list of items instead of all items.

When the filter criteria is modified, the selected items remain checked even if some of the items might not be visible in the view. When the view is changed, the selected items remain checked.

Tags and UDF fields are included in the **Bid Wizard Selection** register for the cost items and Pay Item & Proposal selection registers. This lets you filter the list of cost items based on a tag or UDF.

When you select the **Toggle Select All** button, only filtered items are included which allow you to include scopes of work relevant to your estimate without having to manually select all items needed.




# 3.4 COPY ESTIMATE DATA USING EDIT COMMANDS

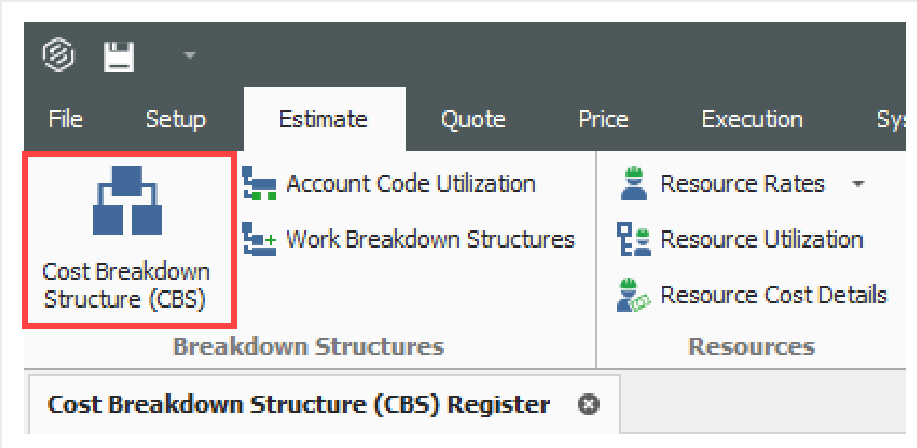
While the Bid Wizard is an efficient way to copy cost history into new projects, you may prefer to use edit commands such as copy and paste to bring cost history into your estimate.

To copy and paste cost history from one job to another, it is beneficial to see the jobs side by side. The following steps walk you through the process.

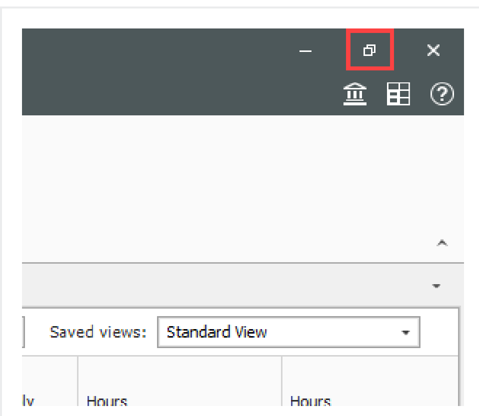
## Step by Step — Copy Estimate Data Using Edit Commands

1. Click the **File** tab from the Estimate landing page and open the **E101 Bid Wizard** job you just created.
2. Open the **Training Job** (if you do not still have it open).

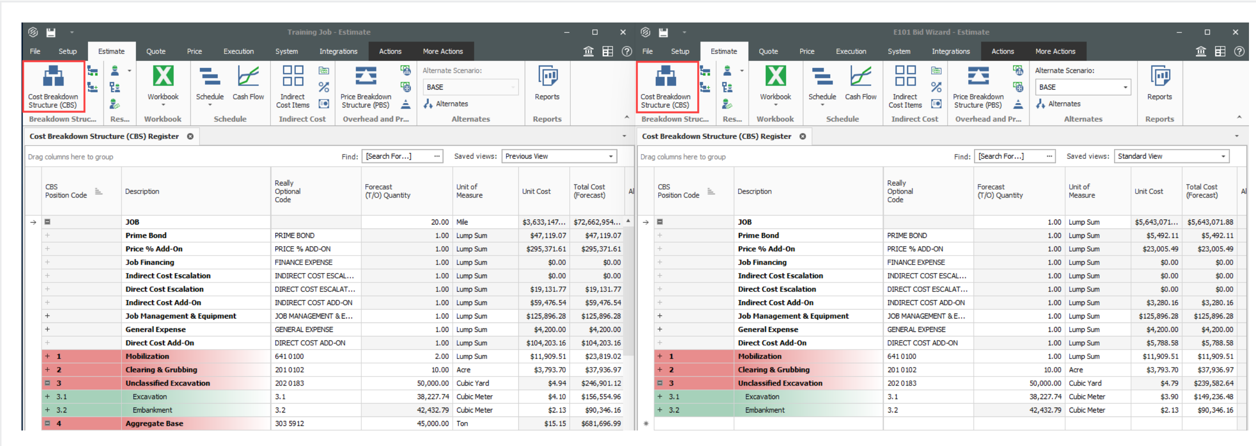
3. Make sure the CBS is open for both jobs by going to the Estimate menu and selecting **Cost Breakdown Structure (CBS)**.



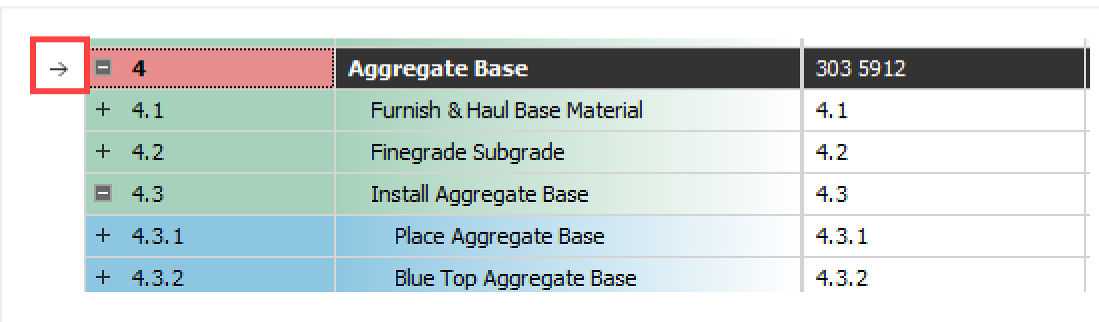

4. Since you have both jobs open and they are in their own application window, align them to be side by side by using the **minimize icons** of each job or utilizing Windows align functionality.



- Note that the window caption identifies the CBS Register for each job

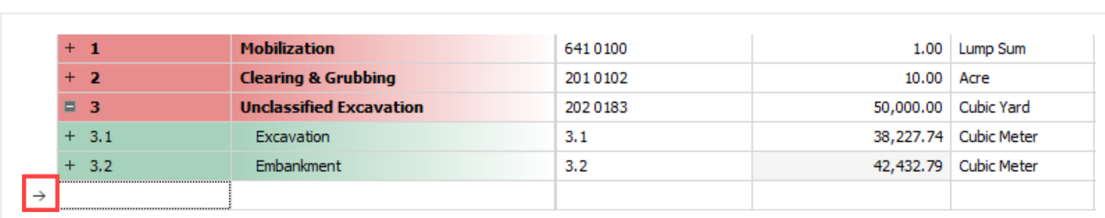


5. On the CBS of the Training Job, click the row header on cost item **4 – Aggregate Base** and press **Ctrl+C** to copy the cost item.

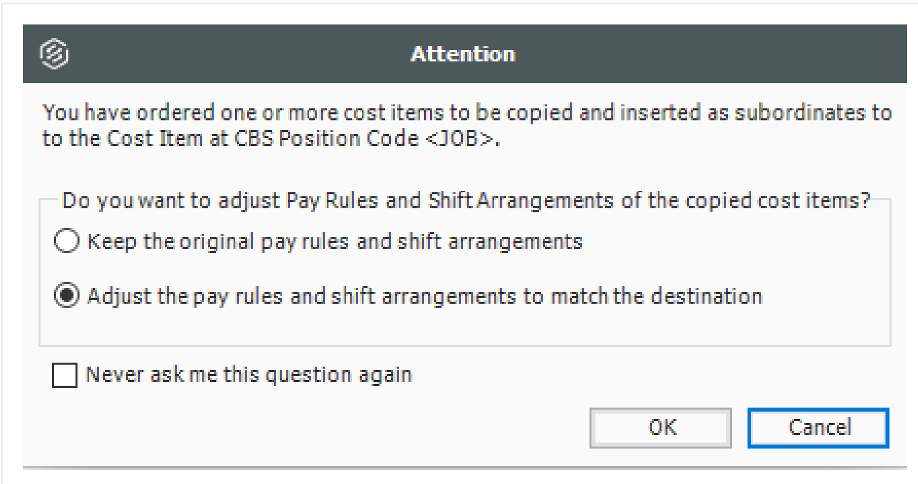



TIP When you copy a superior cost item, all of its subordinates are automatically copied.

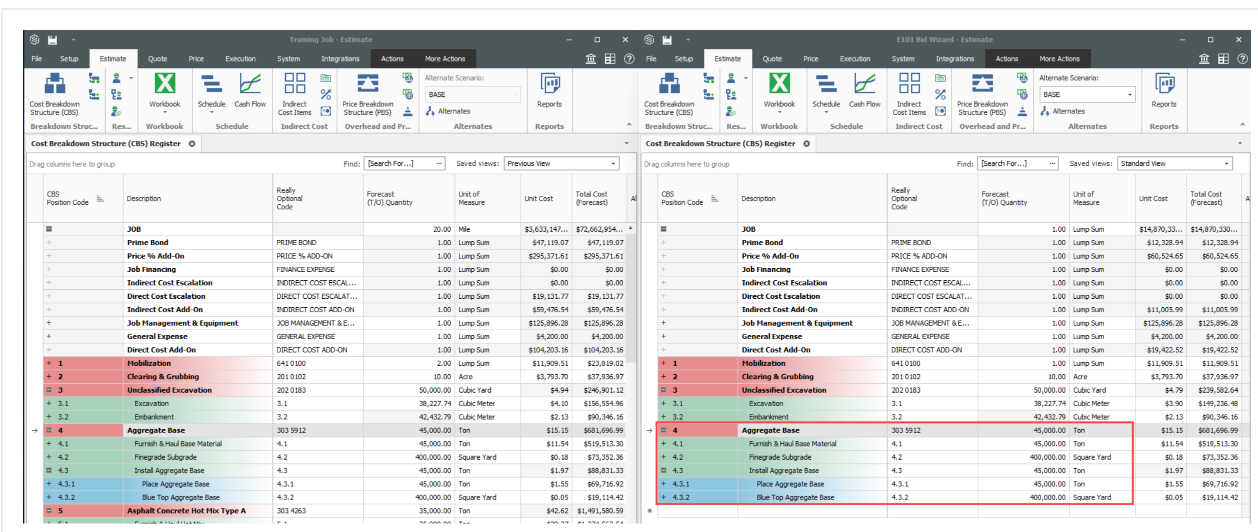
6. On the CBS of the E101 Bid Wizard job, click the row header on the first blank register row, and press **Ctrl+V** to paste the cost item.



7. On the Attention dialog, select **Adjust the pay rules and shift arrangements to match the destination** and click **OK**.



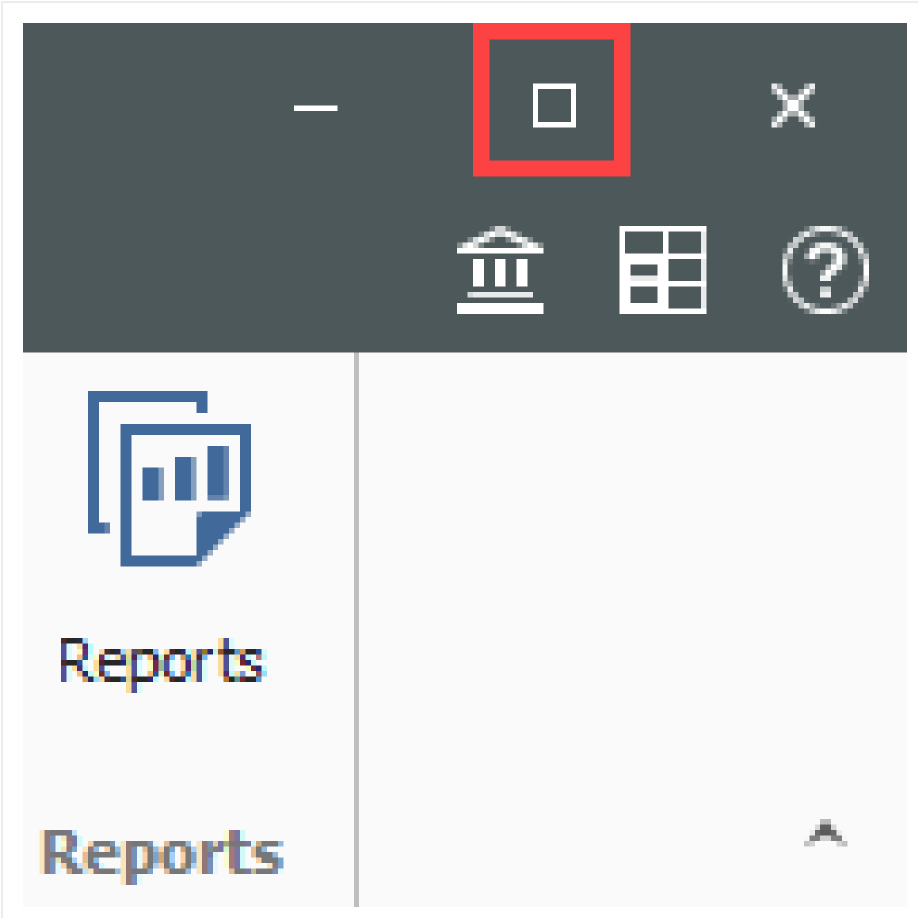

- You can see in the destination job's CBS that you've added the Aggregate Base cost item, along with its subordinate cost items and all cost and productivity detail



| TIP | You can also drag and drop cost items from one CBS to another instead of copying and pasting. |
|---|---|

| TIP | Copied cost items are considered Job Overhead until they are assigned to a pay item |
|---|---|

8. To go back to your full screen view of the E101 Bid Wizard job, select the maximize icon.

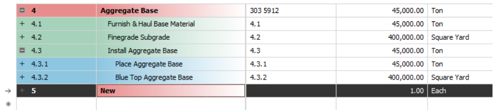



# 3.5 CBS BID WIZARD

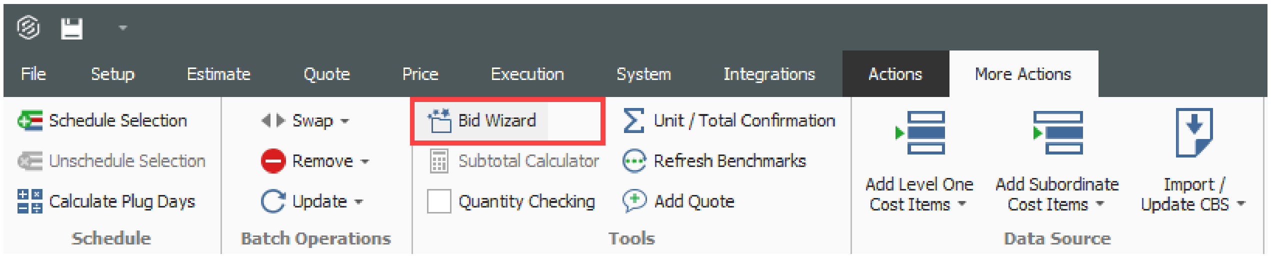
You can also use the Bid Wizard to add cost items while you are in the CBS Register. The following steps walk through using the CBS Bid Wizard.

## Step by Step — Use the CBS Bid Wizard

1. Click the **File** tab from the Estimate landing page and open the **E101 Bid Wizard** job you created.
2. From the **Estimate** tab, select **Cost Breakdown Structure (CBS)**.
3. Create a new cost item by typing **New** in the Description column on the bottom row of the CBS
4. Highlight the **New** row.

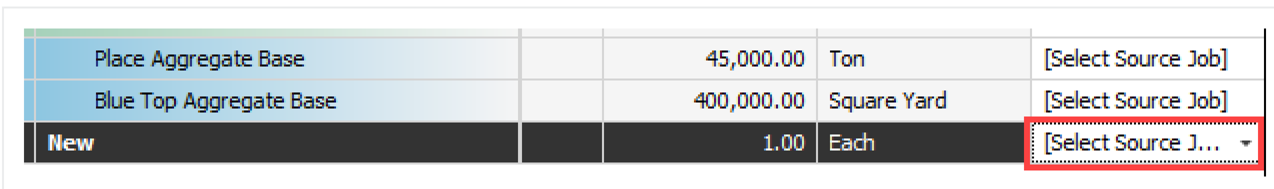


5. To open the CBS Bid Wizard, click the **Bid Wizard** icon on the **More Actions** tab.




- The Bid Wizard window opens

6. Click in the **Source Job** column on the New cost item row.

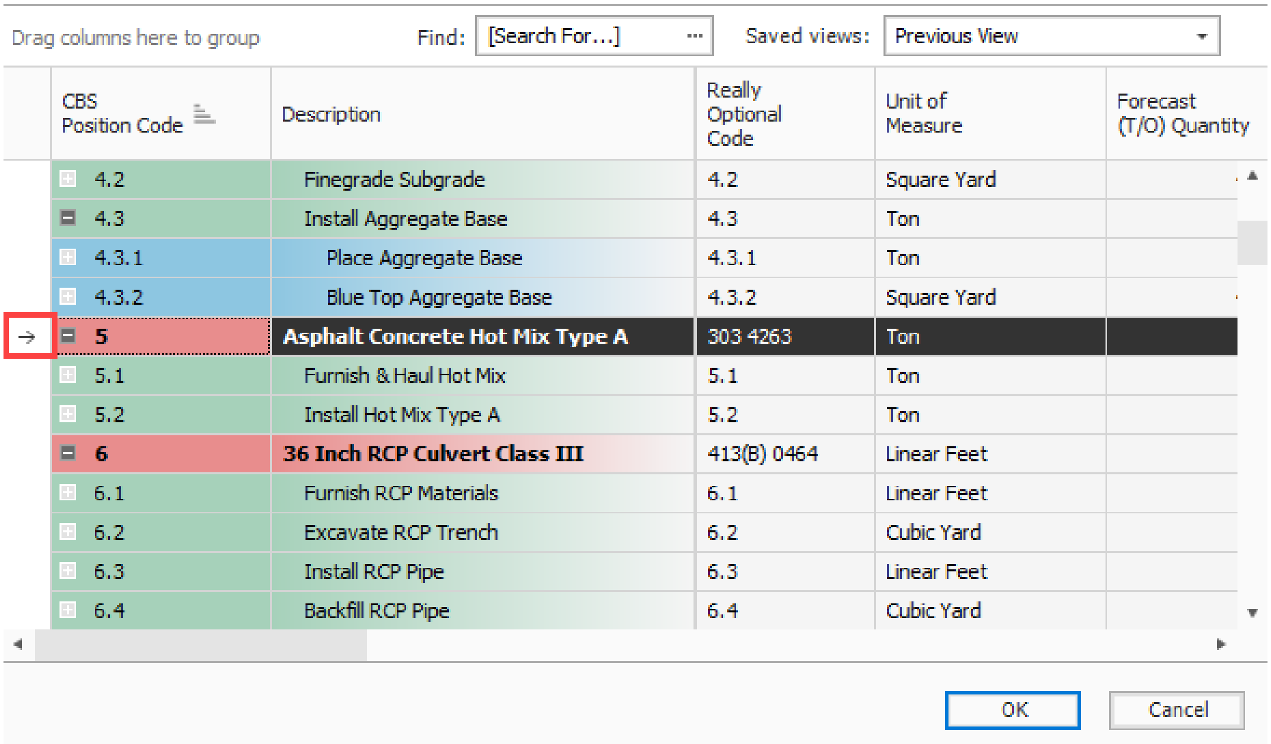



7. From the Source Job drop-down list, select **Training Job**.

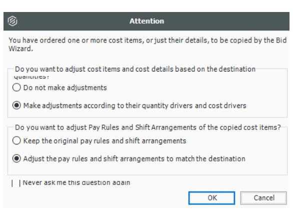
8. Scroll to the right of the Source Job column and click in the **Source CBS Position Code** column on the New Cost item row.

   - A source CBS Register window appears

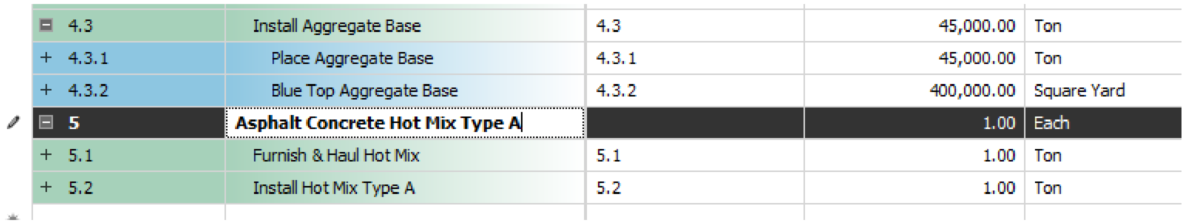
9. Select CBS position code **5 – Asphalt Concrete Hot Mix Type A** from the register.




10. Click **OK**.
11. Click **Finish** on the Bid Wizard.
    - An Attention prompt displays, asking if you want to make adjustments
    - Keep the default options selected: **Make Adjustments according to their quantity drivers and cost drivers** and **Adjust the pay rules and shift arrangements to match the destination**
12. Click **OK**.




    - You can see that cost item 5 and its subordinates are now imported into your existing job.
    - You could choose a new name for the cost item, or name it **Asphalt Concrete Hot Mix Type A** to match the original cost item



| | | | | |
|---|---|---|---|---|
| 4.3 | Install Aggregate Base | 4.3 | 45,000.00 | Ton |
| 4.3.1 | Place Aggregate Base | 4.3.1 | 45,000.00 | Ton |
| 4.3.2 | Blue Top Aggregate Base | 4.3.2 | 400,000.00 | Square Yard |
| 5 | Asphalt Concrete Hot Mix Type A | | 1.00 | Each |
| 5.1 | Furnish & Haul Hot Mix | 5.1 | 1.00 | Ton |
| 5.2 | Install Hot Mix Type A | 5.2 | 1.00 | Ton |

# 3.6 SNAPSHOTS

A job snapshot is a copy of an estimate that provides read-only access to the job as it existed at a specific point in time. You can now filter the Snapshot register to jobs containing snapshots.

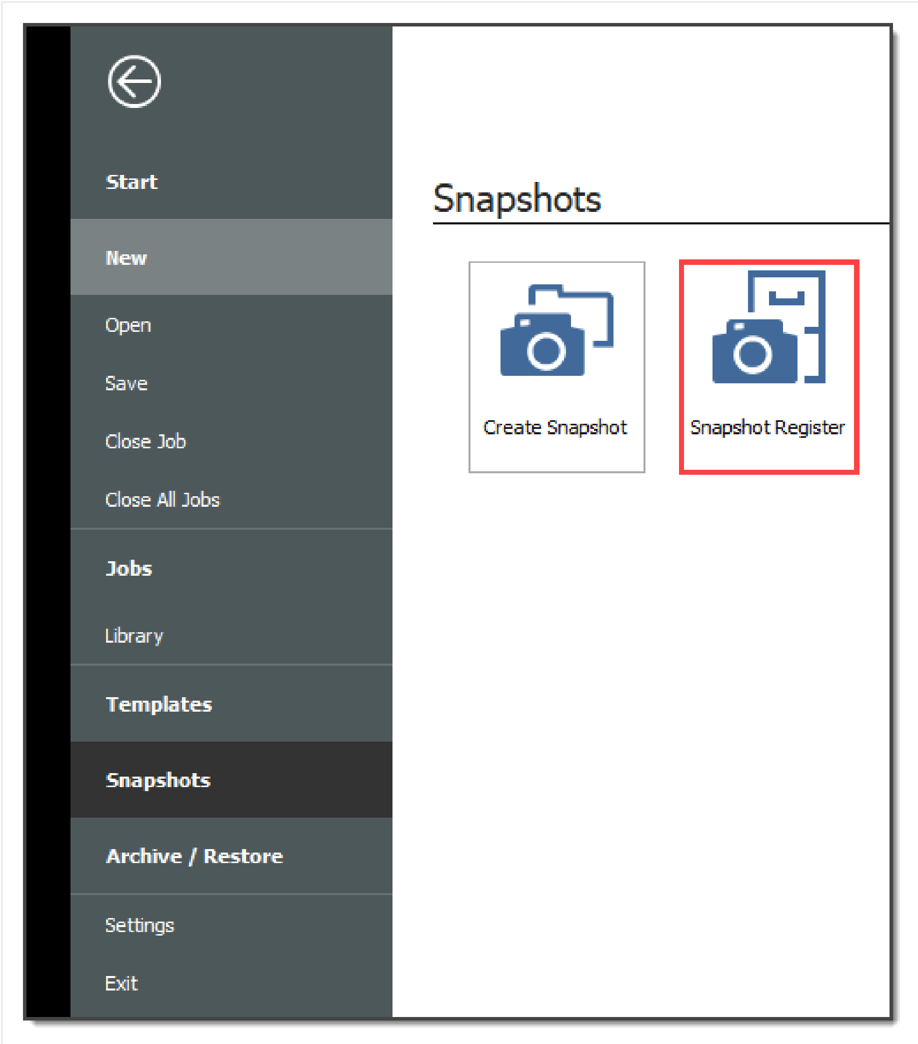
The Snapshot register has some additional columns as well. In addition to the Code, Description, Last Saved, and Version column, the Snapshot register contains all fields that are present on the Jobs register that provides you with an easier way to group, sort, filter, and find the jobs you need.

## 3.6.1 Snapshot Register

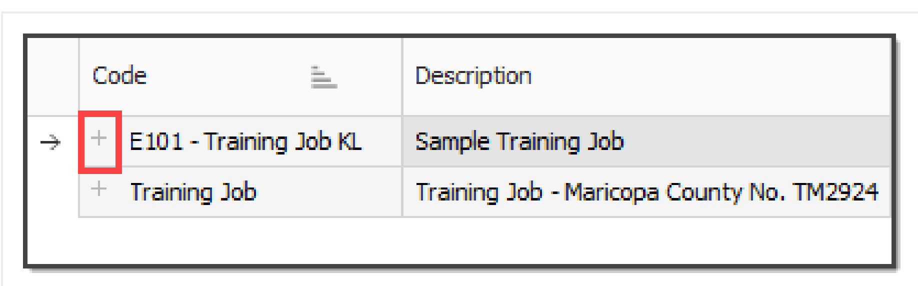
The Snapshot Register is where you will view individual snapshots for specific jobs.

### Step by Step — Snapshot Register

1. Click the**File** tab to open the Backstage View. In the panel, select **Snapshots**.
2. From the Snapshots form, select the **Snapshot Register** tab.




3. To view individual snapshots for specific jobs, click the icon next to the desired job to display the list of snapshots.

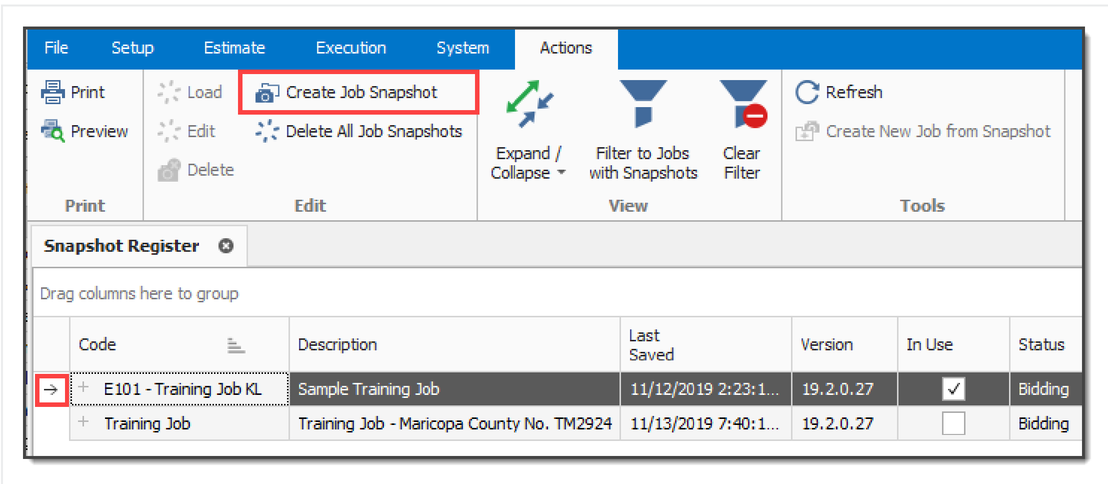


## 3.6.2 Creating a New Job Snapshot

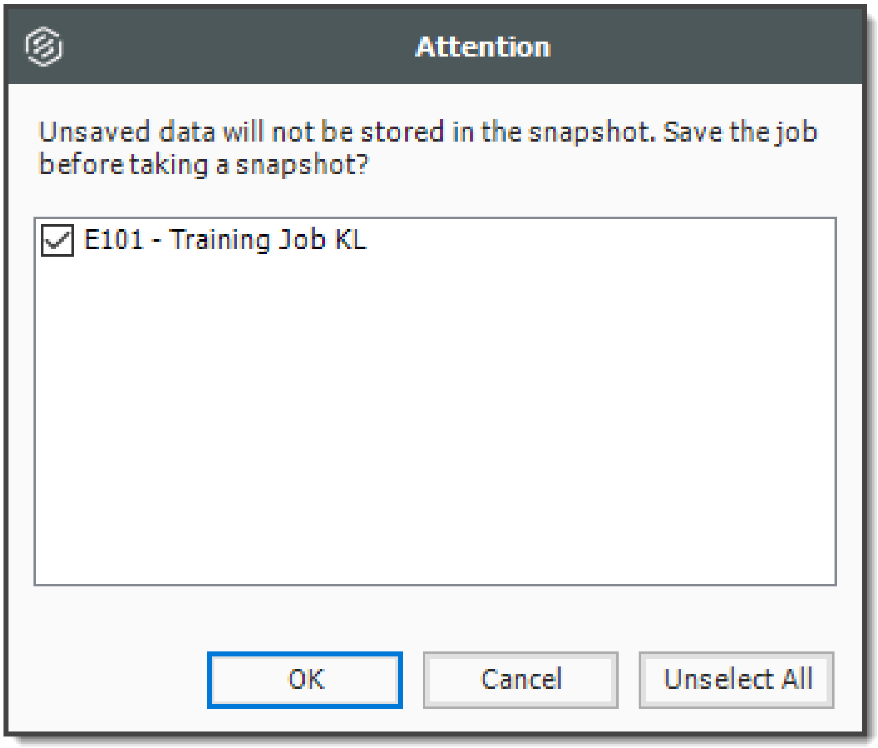
### Step by Step — Create a New Job Snapshot

You can create a Job Snapshot from an existing Job.

1. From the Snapshots form, select the **Create Snapshot** tab.

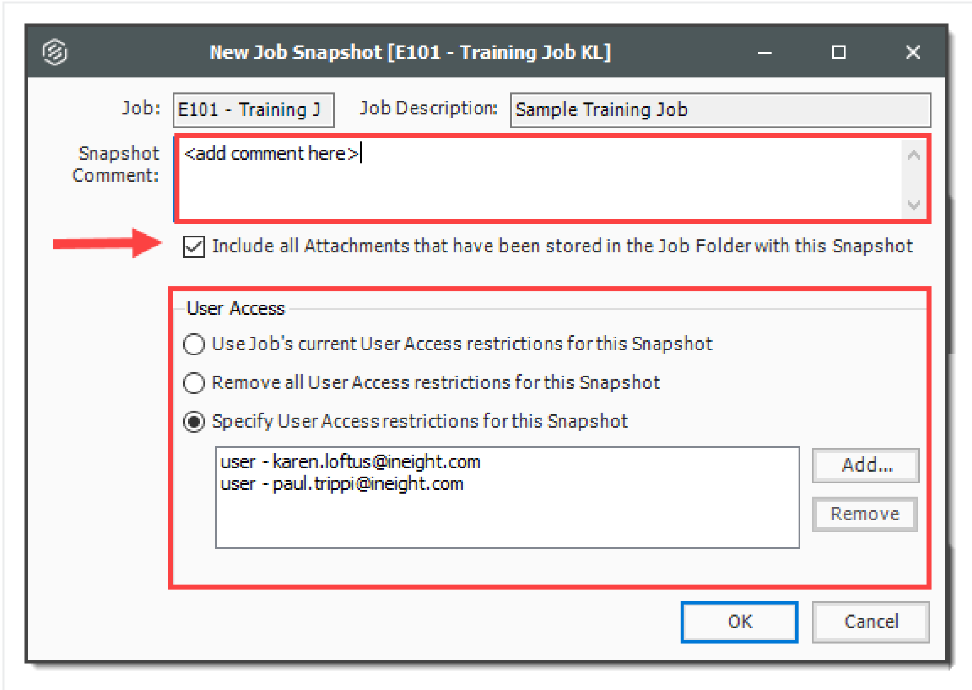



2. If an existing job is open select **Save**, if you haven't already done so.

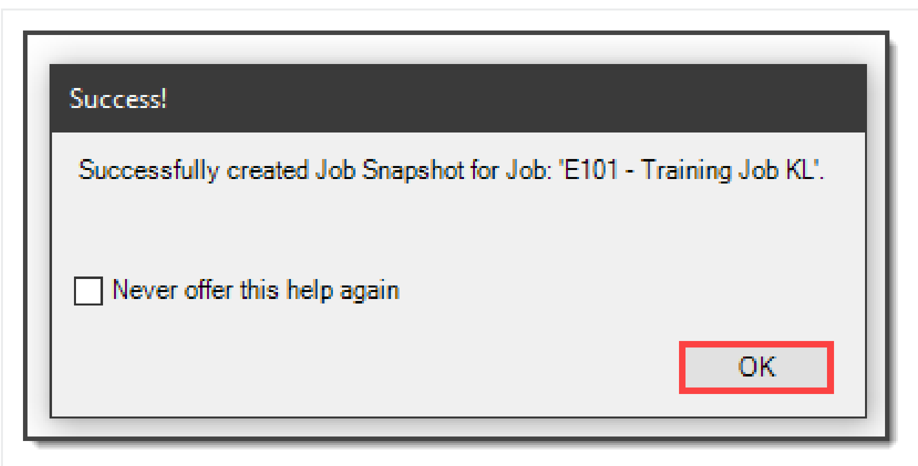



3. A New Job Snapshot [Job Code Here] dialog box appears. From there, you can add a Snapshot comment.
   - If you want to Include all Attachments that have been stored in the Job Folder with this Snapshot, select the check box, otherwise uncheck the box.
   - If you want to Use Job's current User Access restrictions for this Snapshot, select this radio button.
   - If you want to Remove User Access restrictions for this Snapshot and allow read-only access to all users, select this radio button
   - If you want to Specify User Access restrictions for this Snapshot (default selection), select this option
     - Then use the Add and Remove buttons to specify user access using Active Directory.

(Users with current access to the job default onto the list.)



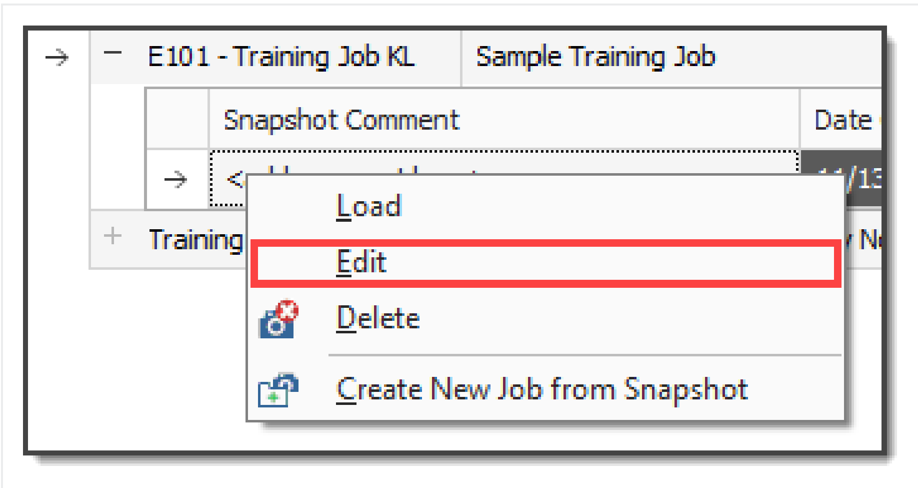

4. Click OK to create the snapshot.
5. A pop-up indicates when the snapshot has been created.



## 3.6.3 Editing a Job Snapshot

### Step by Step — Edit a Job Snapshot

1. From the Snapshot Register, click the icon next to the desired job to display snapshots.
2. Right-click on the individual snapshot you want to edit and select **Edit**.

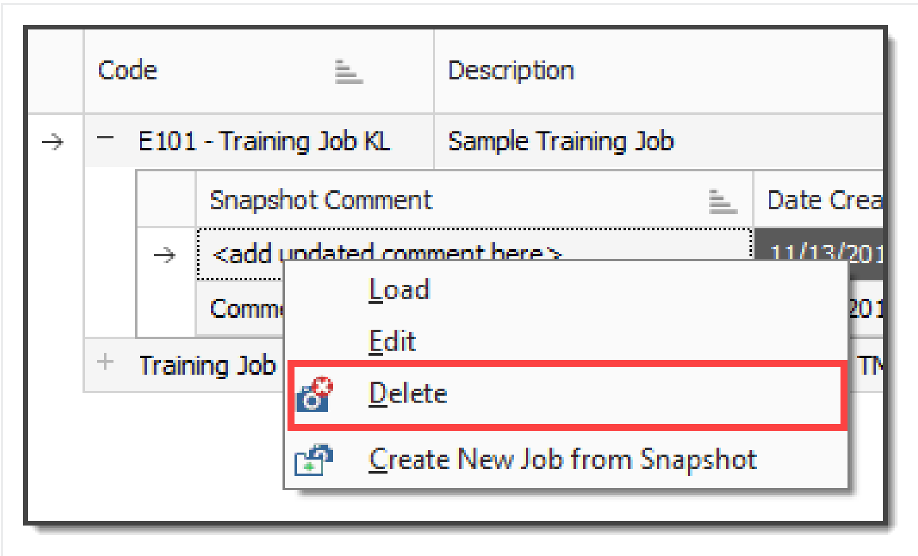



3. The same sort of dialog box opens up as when you created the Snapshot. In this case, from the Edit Job Snapshot [Job Code Here] dialog box, modify the Snapshot Comment and the User Access options as needed.
   - If you want to Include all Attachments that have been stored in the Job Folder with this Snapshot, select the check box. Otherwise, uncheck the box
   - If you want to Use Job's current User Access restrictions for this Snapshot, select this radio button
   - If you want to Remove User Access restrictions for this Snapshot and allow read-only access to all users, select this radio button
   - If you want to Specify User Access restrictions for this Snapshot (default selection), select this option
     - Then use the Add and Remove buttons to specify user access using Active Directory. (Users with current access to the job default onto the list.)
4. Click **OK** to update the snapshot.

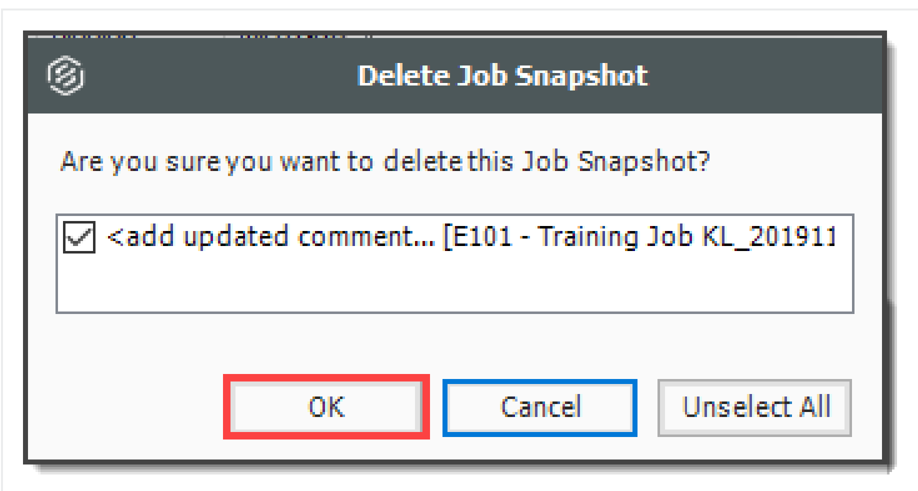
## 3.6.4 Deleting a Job Snapshot

### Step by Step — Delete a Job Snapshot

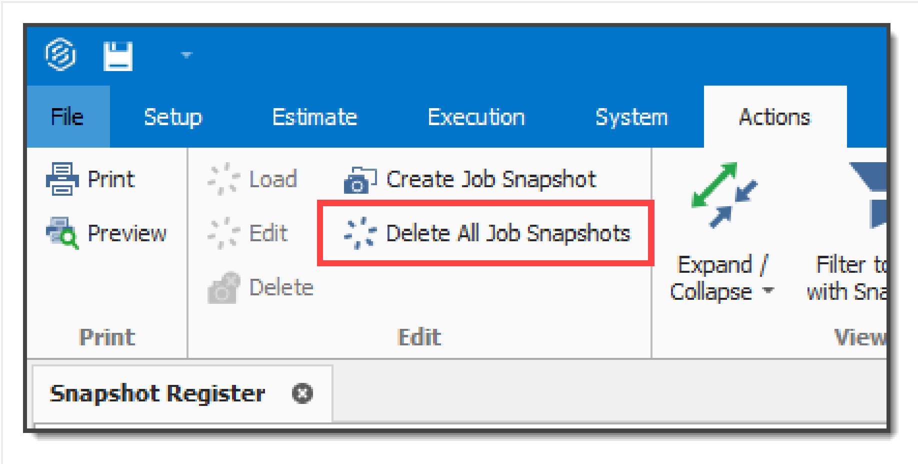
1. From the Snapshot Register, click the icon next to the desired job to display snapshots.
2. Right-click on the individual snapshot you want to delete snapshots from and select **Delete**.




3. Click **OK**




Alternatively, you can delete all Job Snapshots by clicking **Delete All Job Snapshots** from the Actions tab.

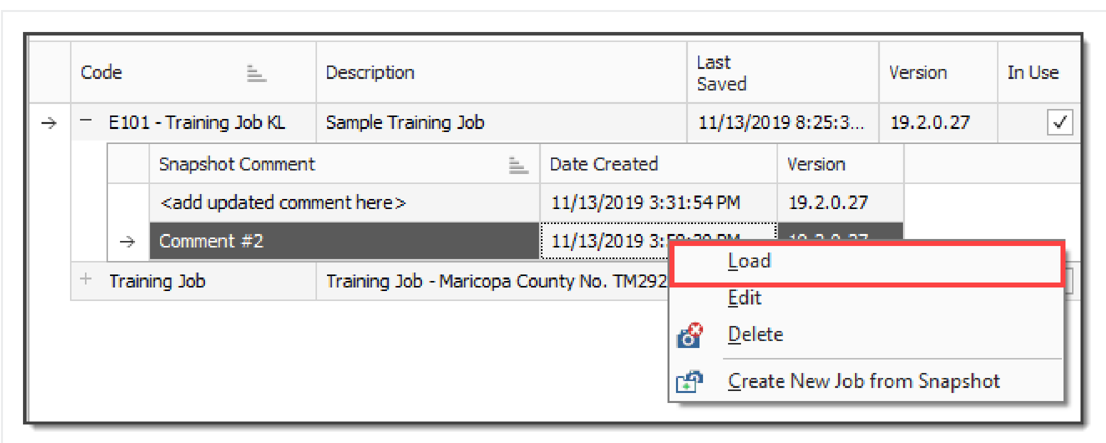



## 3.6.5 Loading a Job Snapshot

When you load an existing Snapshot, it loads into Estimate as any other job.

### Step by Step — Load a Job Snapshot

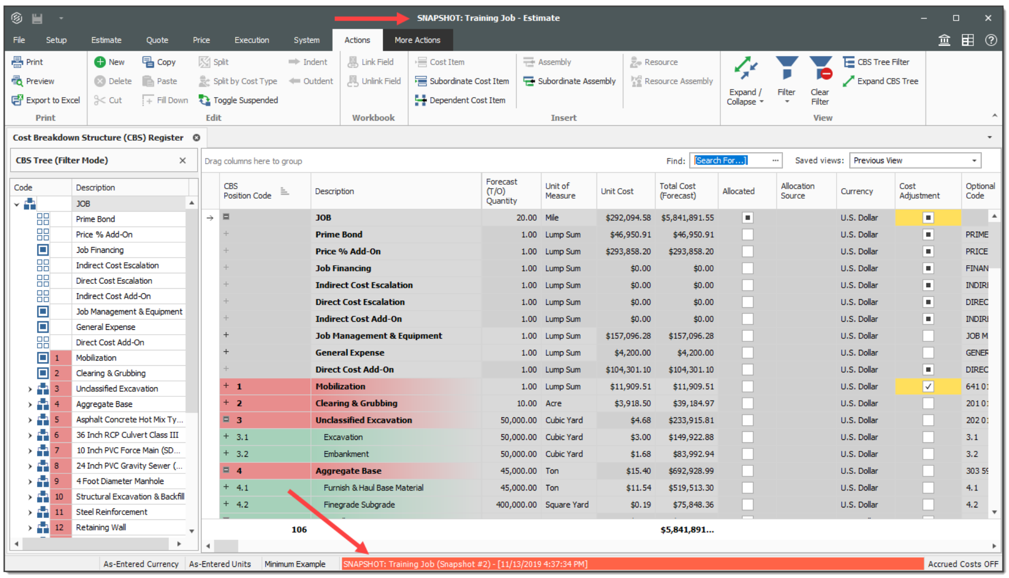
1. Click the File tab to open the Backstage View, then select **Snapshots**.
2. From the Snapshots form, select the **Snapshot Register** tab.
3. On the Snapshot Register, click the icon next to the desired job to display the list of snapshots.
4. Right-click on the individual snapshot you want to load and select **Load**.



To identify a snapshot in Estimate as a read-only snapshot:

- The job name is preceded by the label SNAPSHOT: centered on the top of the toolbar
- A red banner shows the specific snapshot information at the bottom of the screen

NOTE A snapshot can be modified, but it cannot be saved as it is read-only.



## Exercise 3.1 — Data Reproduction

Now that you have learned how to utilize the Bid Wizard, complete the following steps using the Bid Wizard and Copy & Paste features.

1. Open the Bid Wizard by clicking the **Bid Wizard** icon from the **More Actions** tab.
2. Choose the **Create a new job** radio button.
3. Type **BW Exercise** (with your initials) in the **New Code** field and type **Exercise** in the Description field.
4. Choose **Select cost items.**
5. For all selections, choose **Copy from source job**.
6. Select the **Also copy all non-utilized resources** checkbox.
7. Select **Copy from source job** under Unassigned Cost Items and Markup, and the Copy Markup box is automatically selected.
8. Find and select **Training Job** and click **OK**.
9. Use the **Toggle Include All** button to exclude all selections.
10. Select the checkboxes to include **Cost Items 4-7**.
11. Click **Finish** to add the new job.
12. Select **Adjust the pay rules and shift arrangements to match the destination**.
13. Open the **CBS** to see the cost items that were brought in.

14. Open the **Infra Job Copy** with your initials that you created earlier in this lesson.

15. Copy **Cost items 8 and 9** and paste them into the BW Exercise job.

## You should end up with the following results

| CBS Position Code | Description | Optional Code | Forecast (T/O) Quantity | Unit of Measure |
|---|---|---|---|---|
| + | **Indirect Cost Escalation** | INDIRECT COST ESCAL... | 1.00 | Lump Sum |
| + | **Direct Cost Escalation** | DIRECT COST ESCALAT... | 1.00 | Lump Sum |
| + | **Indirect Cost Add-On** | INDIRECT COST ADD-ON | 1.00 | Lump Sum |
| + | **Job Management & Equipment** | JOB MANAGEMENT & E... | 1.00 | Lump Sum |
| + | **General Expense** | GENERAL EXPENSE | 1.00 | Lump Sum |
| + | **Direct Cost Add-On** | DIRECT COST ADD-ON | 1.00 | Lump Sum |
| **1** | **Aggregate Base** | 303 5912 | 45,000.00 | Ton |
| 1.1 | Furnish & Haul Base Material | 4.1 | 45,000.00 | Ton |
| 1.2 | Finegrade Subgrade | 4.2 | 400,000.00 | Square Yard |
| 1.3 | Install Aggregate Base | 4.3 | 45,000.00 | Ton |
| 1.3.1 | Place Aggregate Base | 4.3.1 | 45,000.00 | Ton |
| 1.3.2 | Blue Top Aggregate Base | 4.3.2 | 400,000.00 | Square Yard |
| **2** | **Asphalt Concrete Hot Mix Type A** | 303 4263 | 35,000.00 | Ton |
| 2.1 | Furnish & Haul Hot Mix | 5.1 | 35,000.00 | Ton |
| 2.2 | Install Hot Mix Type A | 5.2 | 35,000.00 | Ton |
| **3** | **36 Inch RCP Culvert Class III** | 413(B) 0464 | 1,024.00 | Linear Feet |
| 3.1 | Furnish RCP Materials | 6.1 | 1,024.00 | Linear Feet |
| 3.2 | Excavate RCP Trench | 6.2 | 1,858.56 | Cubic Yard |
| 3.3 | Install RCP Pipe | 6.3 | 1,024.00 | Linear Feet |
| 3.4 | Backfill RCP Pipe | 6.4 | 1,587.20 | Cubic Yard |
| **4** | **10 Inch PVC Force Main (SDR21)** | 800 0220 | 12,000.00 | Linear Feet |
| 4.1 | Furnish 10 Inch PVC Materials | 7.1 | 12,000.00 | Linear Feet |
| 4.2 | Excavate-Install-Backfill 10 Inch PVC | 7.2 | 12,000.00 | Linear Feet |
| **5** | **24 Inch PVC Gravity Sewer (SDR35)** | 800 0330 | 3,000.00 | Linear Feet |
| 5.1 | Excavate 24 Inch PVC | 8.1 | 3,000.00 | Linear Feet |
| 5.1.1 | Excavate 24 Inch PVC 0-6 ft Depth | 8.1.1 | 1,390.00 | Cubic Yard |
| 5.1.2 | Excavate 24 Inch PVC 6-10 ft Depth | 8.1.2 | 3,610.00 | Cubic Yard |
| 5.2 | Furnish & Install 24 Inch PVC | 8.2 | 3,000.00 | Linear Feet |
| 5.3 | Backfill 24 Inch PVC | 8.3 | 4,520.00 | Cubic Yard |
| **6** | **4 Foot Diameter Manhole** | 800 0400 | 16.00 | Each |
| 6.1 | Furnish 4 ft Manhole Materials | 9.1 | 16.00 | Each |
| 6.2 | Excavate-Install-Backfill Manhole | 9.2 | 16.00 | Each |

## Congratulations, you have completed this exercise!

## Lesson 3 Review

1. From the New option on the Backstage View, which of the following options are available for creating a new job? (Select all that apply)
    a. Scratch
    b. Template
    c. Import
    d. Existing Job
    e. Historic
    f. Bid Wizard

---

2. Which of the following job reproduction options lets you pick and choose which cost items you want to import into your new job?
    a. Template
    b. Bid Wizard
    c. Existing Job
    d. Archive

---

3. Which of the following options allows you to add cost items from another project when working in the CBS Register?
    a. Bid Wizard
    b. CBS Bid Wizard
    c. Template
    d. Existing Job

---

## Lesson 3 Summary

As a result of this lesson, you can:

- Create a job from an existing job or template
- Create a template

- Reproduce estimate data using the Bid Wizard
- Reproduce estimate data using copy/paste
- Add cost items to a job using the CBS Bid Wizard
- Utilize the Snapshot function

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# LESSON 4 – EXCEL INTEGRATION

### Lesson Duration: 20 Minutes

### Lesson Objectives

After completing this lesson, you will be able to:

- Export data from InEight Estimate to Excel
- Link a field in InEight Estimate to Excel
- Update a linked InEight Estimate field with Excel data

### Lesson Topics

## 4.1 EXPORT TO EXCEL

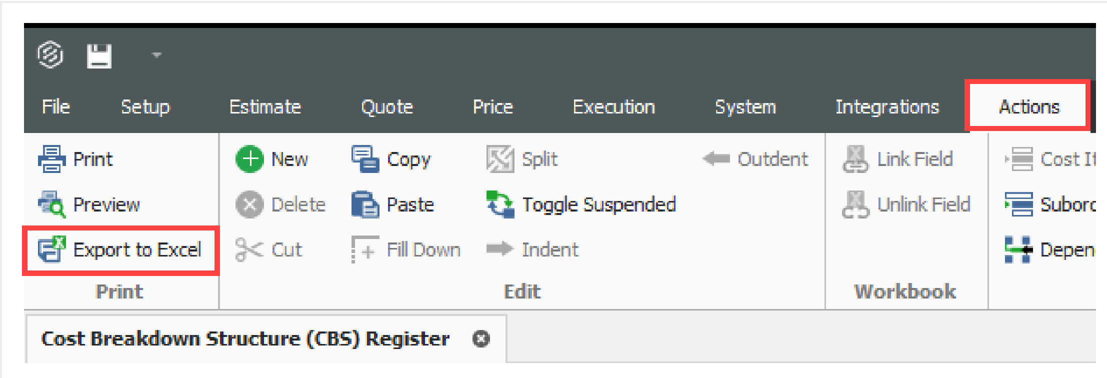
InEight Estimate's integration with Microsoft Excel includes a two-way integration that allows you to update register fields in InEight Estimate with data contained in an Excel workbook, and update Excel cells with data contained in a register column in InEight Estimate.

InEight Estimate includes a worksheet export that makes it easy to transfer data out of InEight Estimate register forms to Microsoft Excel spreadsheets. This feature makes it faster and easier to send data from an InEight Estimate register to a spreadsheet, analyze it, modify it, and customize it for any other uses.

The Export to Excel feature is available on all register forms in the system and allows you to export the data currently displayed on a register form to an Excel worksheet.

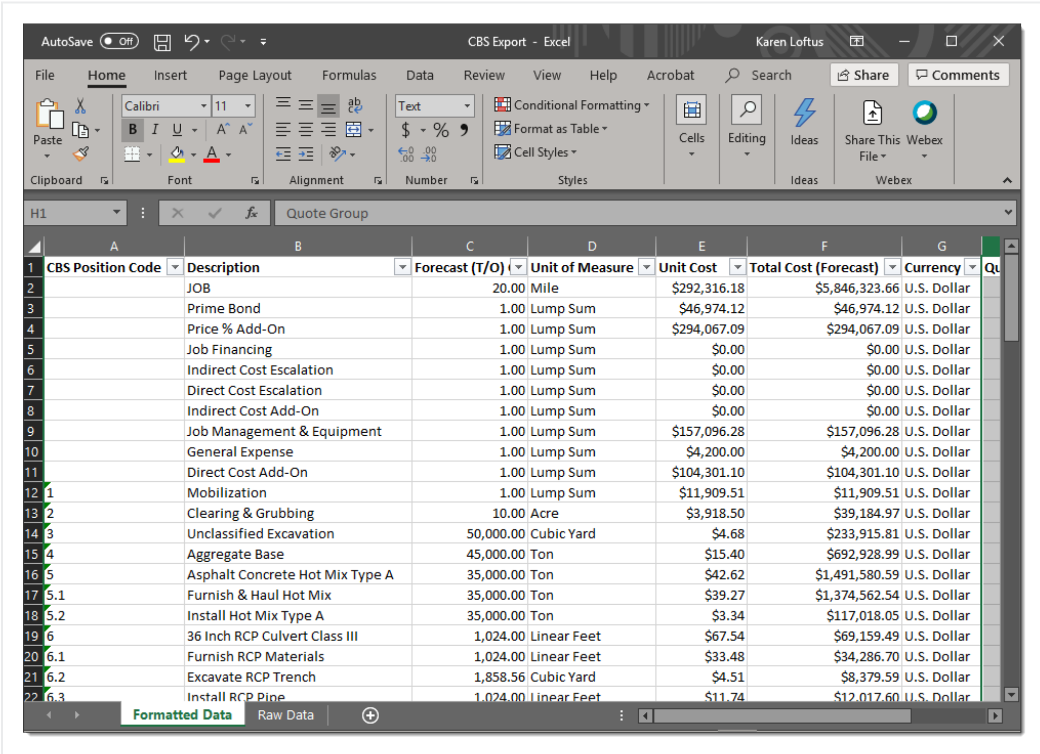
## Step by Step — Export Data to an Excel Workbook

1. Open the **Training** Job and from the Estimate tab, open the **CBS Register**.
2. From the Actions tab, select **Export to Excel**.




3. On the Export spreadsheet to... dialog, browse to the location (folder) in your system where you want to save the workbook, enter **CBS Export** in the File name field, and click **Save**.
   - The workbook is saved to that location with the specified file name, and Excel automatically launches and displays the workbook

- Notice that the columns are formatted, with column headers and filtering turned on



| CBS Position Code | Description | Forecast (T/O) | Unit of Measure | Unit Cost | Total Cost (Forecast) | Currency |
|---|---|---|---|---|---|---|
| | JOB | 20.00 | Mile | $292,316.18 | $5,846,323.66 | U.S. Dollar |
| | Prime Bond | 1.00 | Lump Sum | $46,974.12 | $46,974.12 | U.S. Dollar |
| | Price % Add-On | 1.00 | Lump Sum | $294,067.09 | $294,067.09 | U.S. Dollar |
| | Job Financing | 1.00 | Lump Sum | $0.00 | $0.00 | U.S. Dollar |
| | Indirect Cost Escalation | 1.00 | Lump Sum | $0.00 | $0.00 | U.S. Dollar |
| | Direct Cost Escalation | 1.00 | Lump Sum | $0.00 | $0.00 | U.S. Dollar |
| | Indirect Cost Add-On | 1.00 | Lump Sum | $0.00 | $0.00 | U.S. Dollar |
| | Job Management & Equipment | 1.00 | Lump Sum | $157,096.28 | $157,096.28 | U.S. Dollar |
| | General Expense | 1.00 | Lump Sum | $4,200.00 | $4,200.00 | U.S. Dollar |
| | Direct Cost Add-On | 1.00 | Lump Sum | $104,301.10 | $104,301.10 | U.S. Dollar |
| 1 | Mobilization | 1.00 | Lump Sum | $11,909.51 | $11,909.51 | U.S. Dollar |
| 2 | Clearing & Grubbing | 10.00 | Acre | $3,918.50 | $39,184.97 | U.S. Dollar |
| 3 | Unclassified Excavation | 50,000.00 | Cubic Yard | $4.68 | $233,915.81 | U.S. Dollar |
| 4 | Aggregate Base | 45,000.00 | Ton | $15.40 | $692,928.99 | U.S. Dollar |
| 5 | Asphalt Concrete Hot Mix Type A | 35,000.00 | Ton | $42.62 | $1,491,580.59 | U.S. Dollar |
| 5.1 | Furnish & Haul Hot Mix | 35,000.00 | Ton | $39.27 | $1,374,562.54 | U.S. Dollar |
| 5.2 | Install Hot Mix Type A | 35,000.00 | Ton | $3.34 | $117,018.05 | U.S. Dollar |
| 6 | 36 Inch RCP Culvert Class III | 1,024.00 | Linear Feet | $67.54 | $69,159.49 | U.S. Dollar |
| 6.1 | Furnish RCP Materials | 1,024.00 | Linear Feet | $33.48 | $34,286.70 | U.S. Dollar |
| 6.2 | Excavate RCP Trench | 1,858.56 | Cubic Yard | $4.51 | $8,379.59 | U.S. Dollar |
| 6.3 | Install RCP Pipe | 1,024.00 | Linear Feet | $11.74 | $12,017.60 | U.S. Dollar |

## 4.1.1 Cell Select

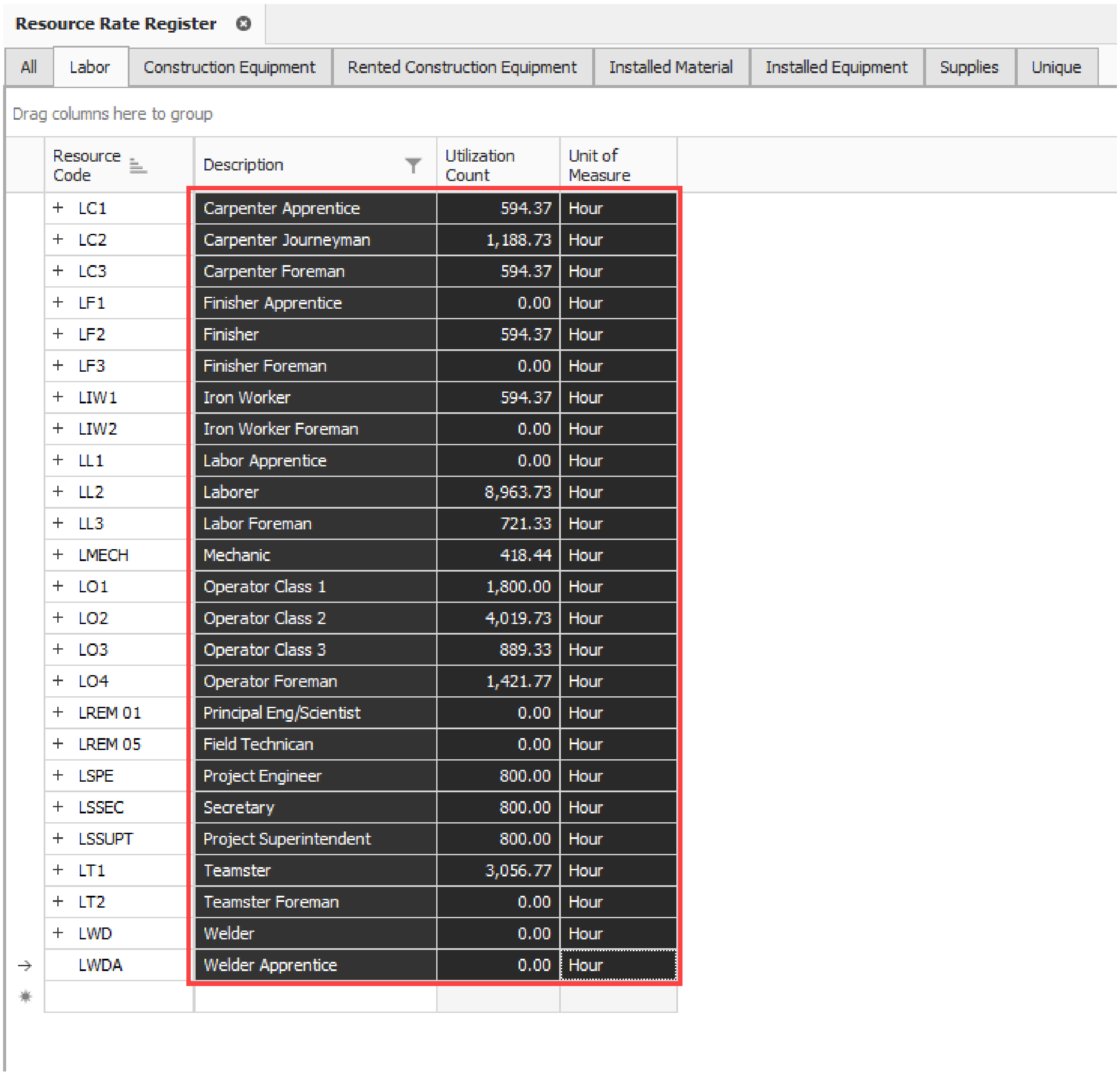
To copy and paste data in InEight Estimate or to Excel, you can use a feature called Cell Select. Walk through the following steps to learn how to copy specific fields in InEight Estimate to an Excel Spreadsheet.

### Step by Step — Cell Select

1. Open the **Training** Job and from the Setup tab, open the **Resource Rate Register**.
2. Select the **Labor** tab.
3. Select **Print View for Summary** from your Saved Views drop-down menu.
4. From the top-right corner, select the **Cell Select** icon, (next to the Help icon).

- This puts you in "cell-select" mode, so you can select cells to copy in the same way you would in Excel.

5. With the Cell Select icon active, highlight all information in the **Description**, **Utilization Count** and **Unit of Measurecolumns** for all Labor resources.



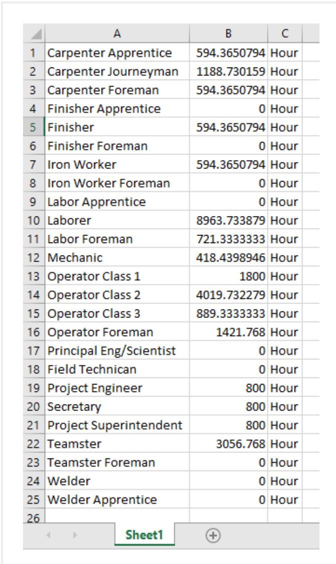

| Resource Code | Description | Utilization Count | Unit of Measure |
|---|---|---|---|
| LC1 | Carpenter Apprentice | 594.37 | Hour |
| LC2 | Carpenter Journeyman | 1,188.73 | Hour |
| LC3 | Carpenter Foreman | 594.37 | Hour |
| LF1 | Finisher Apprentice | 0.00 | Hour |
| LF2 | Finisher | 594.37 | Hour |
| LF3 | Finisher Foreman | 0.00 | Hour |
| LIW1 | Iron Worker | 594.37 | Hour |
| LIW2 | Iron Worker Foreman | 0.00 | Hour |
| LL1 | Labor Apprentice | 0.00 | Hour |
| LL2 | Laborer | 8,963.73 | Hour |
| LL3 | Labor Foreman | 721.33 | Hour |
| LMECH | Mechanic | 418.44 | Hour |
| LO1 | Operator Class 1 | 1,800.00 | Hour |
| LO2 | Operator Class 2 | 4,019.73 | Hour |
| LO3 | Operator Class 3 | 889.33 | Hour |
| LO4 | Operator Foreman | 1,421.77 | Hour |
| LREM 01 | Principal Eng/Scientist | 0.00 | Hour |
| LREM 05 | Field Technican | 0.00 | Hour |
| LSPE | Project Engineer | 800.00 | Hour |
| LSSEC | Secretary | 800.00 | Hour |
| LSSUPT | Project Superintendent | 800.00 | Hour |
| LT1 | Teamster | 3,056.77 | Hour |
| LT2 | Teamster Foreman | 0.00 | Hour |
| LWD | Welder | 0.00 | Hour |
| LWDA | Welder Apprentice | 0.00 | Hour |

6. Right click on the selection and select **Copy**.

7. Open an Excel spreadsheet, right click in the **A1** field and select **Paste Special,** choosing **CSV** as the Source.

8. Click **OK**.

   - The fields you copied from InEight Estimate paste into the spreadsheet



| | A | B | C |
|---|---|---|---|
| 1 | Carpenter Apprentice | 594.3650794 | Hour |
| 2 | Carpenter Journeyman | 1188.730159 | Hour |
| 3 | Carpenter Foreman | 594.3650794 | Hour |
| 4 | Finisher Apprentice | 0 | Hour |
| 5 | Finisher | 594.3650794 | Hour |
| 6 | Finisher Foreman | 0 | Hour |
| 7 | Iron Worker | 594.3650794 | Hour |
| 8 | Iron Worker Foreman | 0 | Hour |
| 9 | Labor Apprentice | 0 | Hour |
| 10 | Laborer | 8963.733879 | Hour |
| 11 | Labor Foreman | 721.3333333 | Hour |
| 12 | Mechanic | 418.4398946 | Hour |
| 13 | Operator Class 1 | 1800 | Hour |
| 14 | Operator Class 2 | 4019.732279 | Hour |
| 15 | Operator Class 3 | 889.3333333 | Hour |
| 16 | Operator Foreman | 1421.768 | Hour |
| 17 | Principal Eng/Scientist | 0 | Hour |
| 18 | Field Technican | 0 | Hour |
| 19 | Project Engineer | 800 | Hour |
| 20 | Secretary | 800 | Hour |
| 21 | Project Superintendent | 800 | Hour |
| 22 | Teamster | 3056.768 | Hour |
| 23 | Teamster Foreman | 0 | Hour |
| 24 | Welder | 0 | Hour |
| 25 | Welder Apprentice | 0 | Hour |
| 26 | | | |



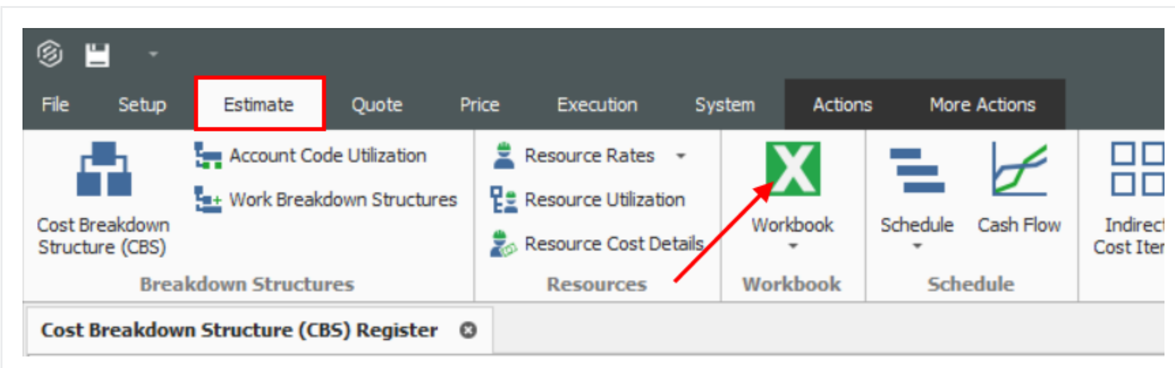
   - To turn off the Cell Select, simply click the Cell Select Icon again and it deselects

# 4.2 LINKING TO EXCEL

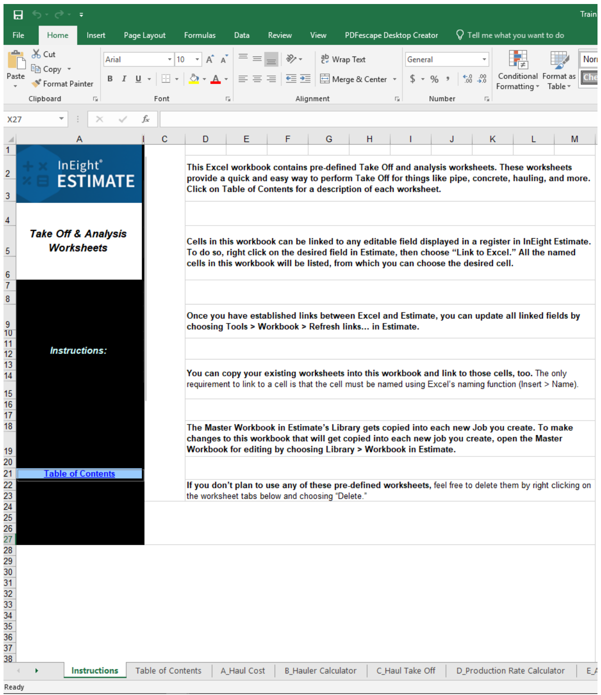
## 4.2.1 InEight Estimate Workbook

Every job has its own Excel workbook embedded within it for doing side calculations and take-offs. You can link your calculations to fields in InEight Estimate to automatically update them into your estimate. When you create a new job from scratch, the Library Master Workbook is copied to create a new embedded Excel workbook for the job.

The workbook comes with some pre-defined take-off and analysis worksheets, or you can create your own. Simply open the appropriate worksheet, plug in your values, and Excel will calculate your results. To open your job's workbook, select the Estimate tab, then click on the Workbook icon under the Workbook section.



- The embedded Excel workbook for the job opens.




## 4.2.2 Linking to and from Excel

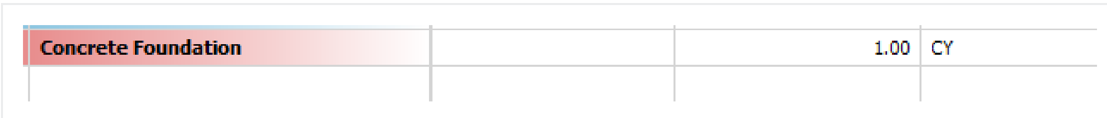
InEight Estimate's linking capabilities with Excel can be done in one of two ways. A field in InEight Estimate can be populated with a value from Excel, or a cell in Excel can be populated with the data from an InEight Estimate field. This two-way linking functionality allows you to make quick work of complex chores to perform spreadsheet-based take-off or formula-driven analysis.

| | | | | |
|---|---|---|---|---|
| − 6 | **36 Inch RCP Culvert Class III** | 413(B) 0464 | 1,024.00 | Linear Feet |
| + 6.1 | Furnish RCP Materials | 6.1 | 1,024.00 | Linear Feet |
| + 6.2 | Excavate RCP Trench | 6.2 | 1,858.56 | Cubic Yard |

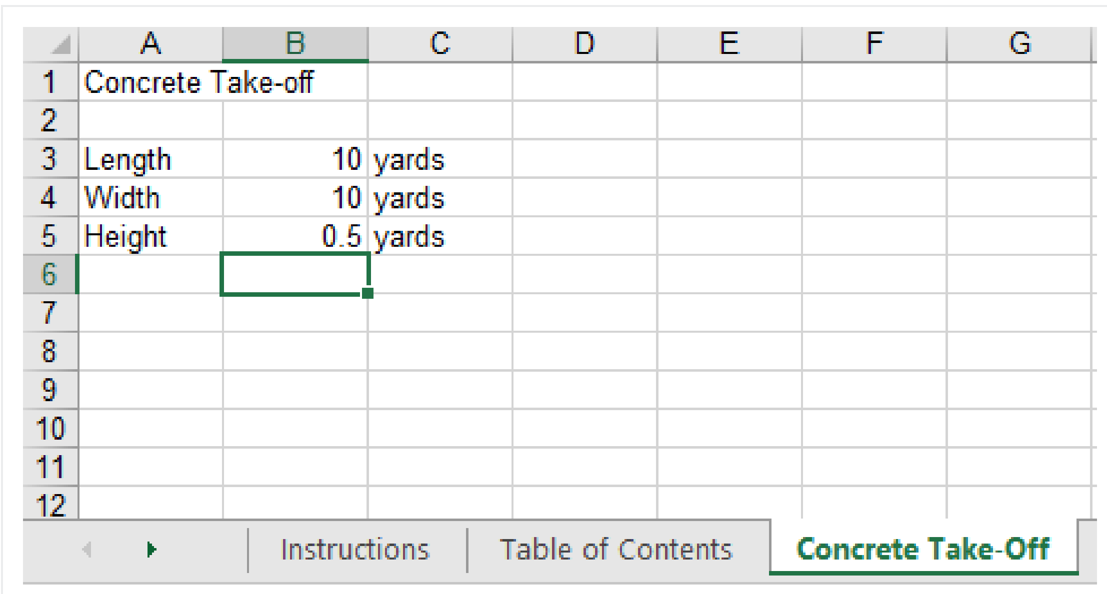
The following example walks through how to link a simple take-off calculation into InEight Estimate from Excel. It is a take-off to determine the size of a concrete foundation.

## Step by Step — Link Estimate to Excel

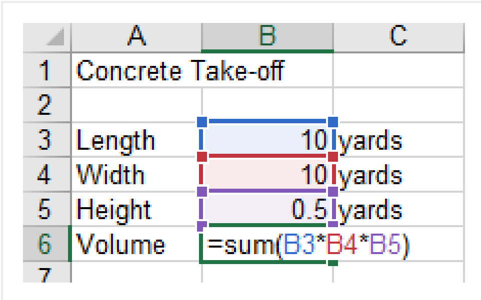
1. Open the **Training** Job and from the Estimate tab, open the **CBS Register**.
2. For this example, create a new cost item in the blank row at the bottom of the CBS register and name it **Concrete Foundation**.



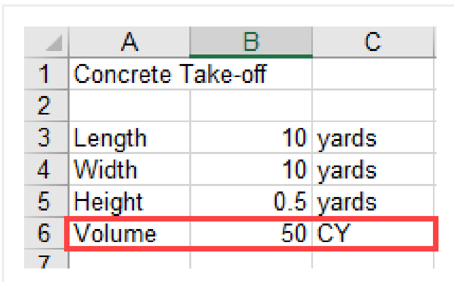

3. Open the job's Excel workbook from the Estimate tab, by selecting the Workbook icon.
4. In the workbook, create a new worksheet named **Concrete Take-off** and enter the following fields:



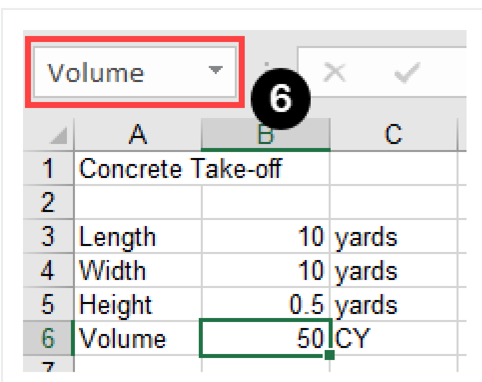

5. Create a new row to calculate the total cubic yards by factoring the length, width, and height quantities.



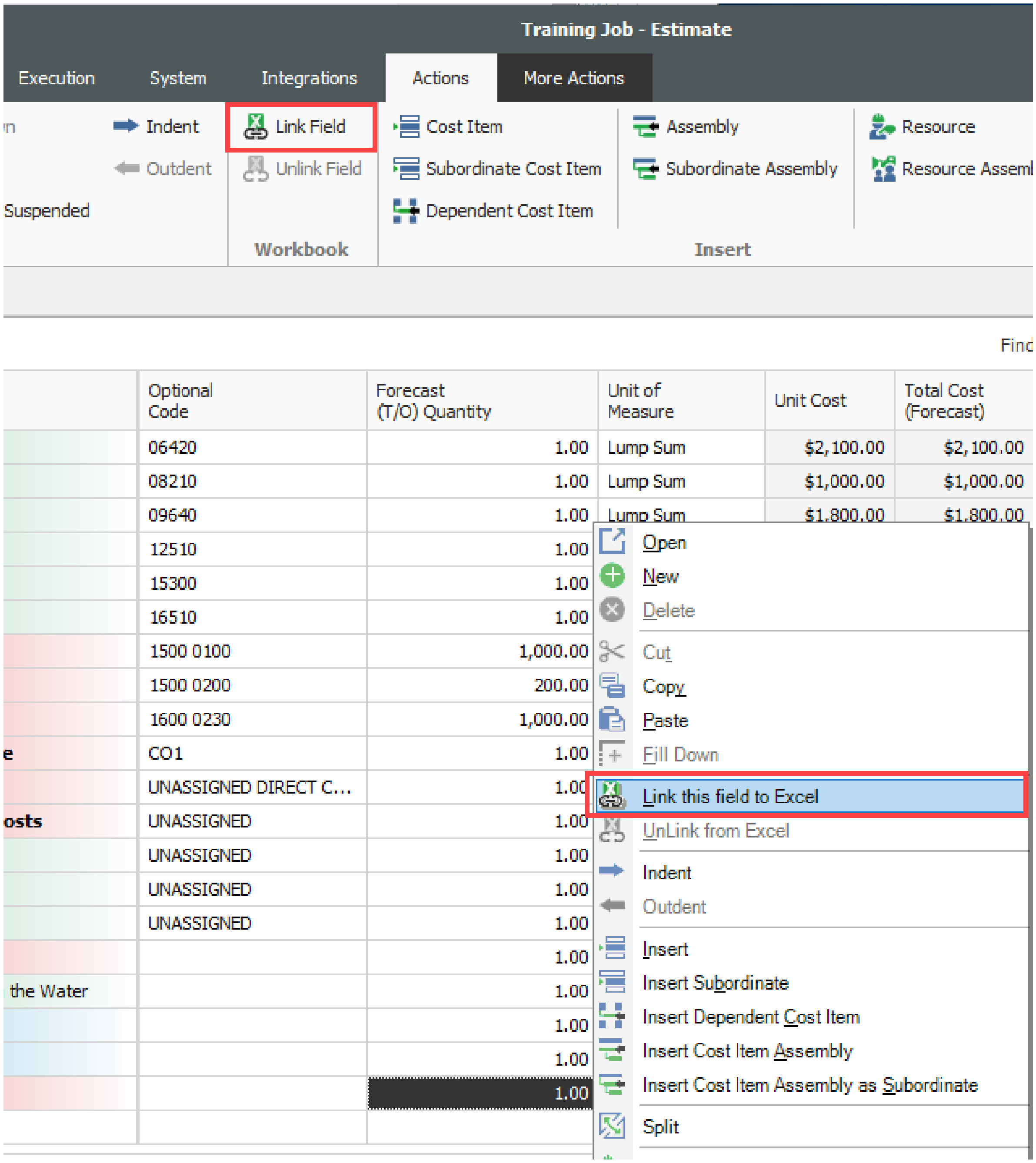

- Your Volume Total should be 50 cubic yards



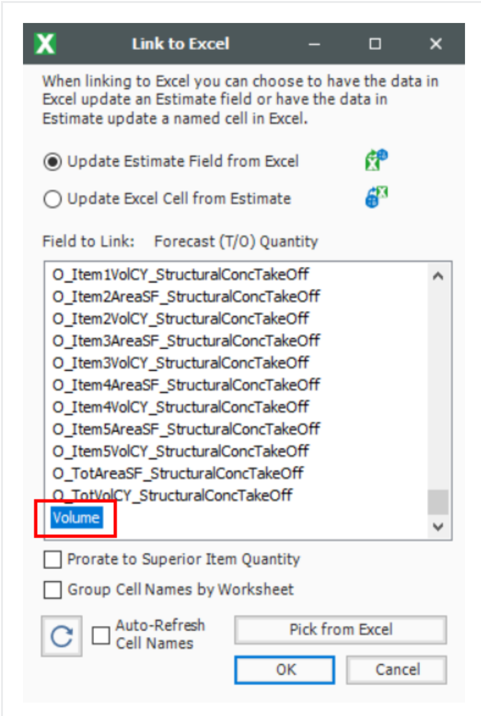

6. InEight Estimate will only link to named fields in Excel. Click in the field you want to name (B6), then click in the Field Name window and type **Volume**.




7. Go back to the CBS Register and right click on the Concrete Foundation cost item **Forecast (T/O) Quantity** field.
8. From the resulting right click menu, select **Link this field to Excel**.
   - You can also link the field by selecting the field and then selecting Link Field from the Actions tab

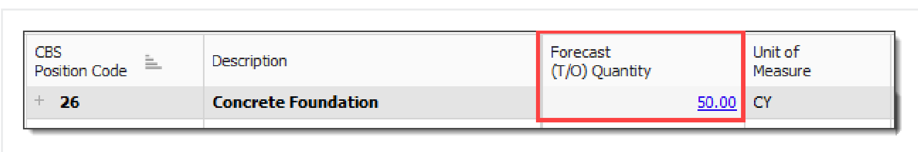



9. On the Link to Excel dialog, select the **Update InEight Estimate field from Excel** radio button.
10. In the Field to link window, select **Volume** (you may need to click the Refresh button for the field name to display).



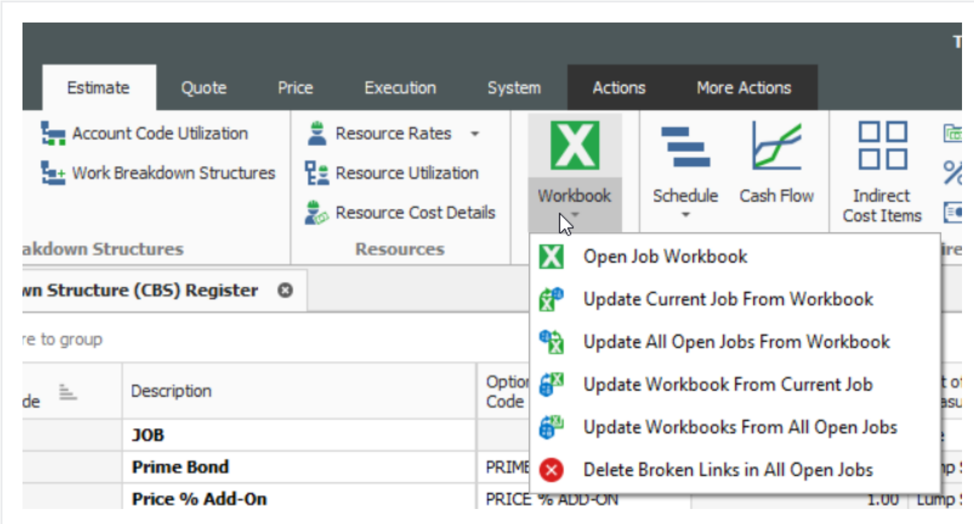

11. Click **OK**.

    - The Forecast Quantity field for Concrete now is linked to the Volume field in Excel and populates with the take-off quantity (50)




## 4.2.3 Update Links

When data in InEight Estimate or Excel changes, you can quickly update all links, in just the currently active job or in all open jobs.  Simply select one of the following options from the Workbook drop-down list on the Estimate tab.


Estimate
Quote
Price
Execution
System
Actions
More Actions
Account Code Utilization
Work Breakdown Structures
Resource Rates
Resource Utilization
Resource Cost Details
Workbook
Schedule
Cash Flow
Indirect Cost Items
akdown Structures
Resources
wn Structure (CBS) Register
Open Job Workbook
Update Current Job From Workbook
Update All Open Jobs From Workbook
Update Workbook From Current Job
Update Workbooks From All Open Jobs
Delete Broken Links in All Open Jobs
Description
JOB
Prime Bond
Price % Add-On

## Lesson 4 Review

1. The Export to Excel feature is available on all register forms in the system and allows you to export the data currently displayed on a register form to an Excel worksheet.
   a. True
   b. False

---

2. In order to link an Excel field to InEight Estimate, the Excel field must be:
   a. Named
   b. Highlighted
   c. Tagged
   d. Selected

---

## Lesson 4 Summary

As a result of this lesson, you can:

- Export data from InEight Estimate to Excel
- Link a field in InEight Estimate to Excel
- Update a linked InEight Estimate field with Excel data

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# LESSON 5 – SCHEDULE INTEGRATION

## Lesson Duration: 45 minutes

## Lesson Objectives

After completing this lesson, you will be able to:

- Set up scheduling options
- Update schedule from InEight Estimate
- Update InEight Estimate from schedule
- Manage changes between estimate and schedule

## Lesson Topics

# 5.1 MICROSOFT PROJECT

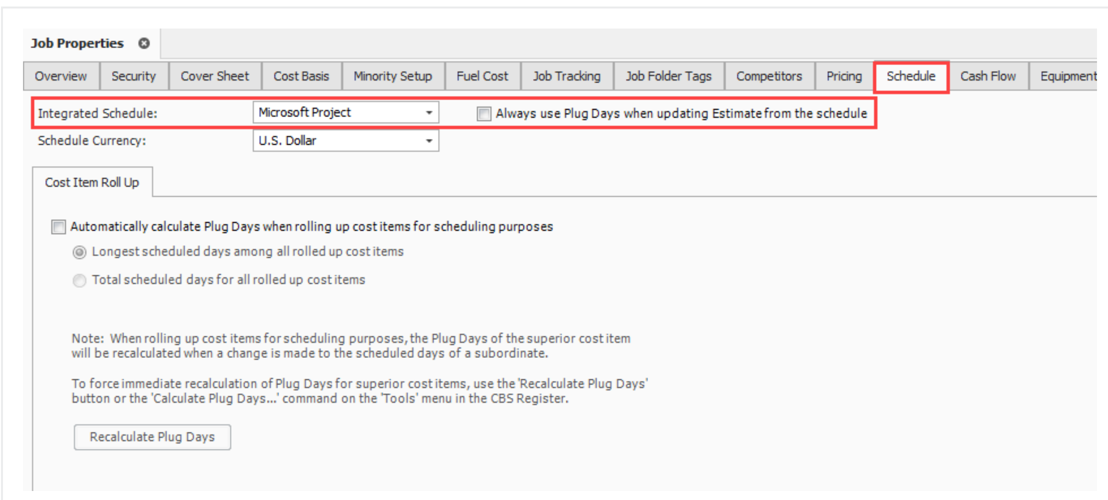
## 5.1.1 Set Up Scheduling Options

Prior to sending information from InEight Estimate to Microsoft Project, you need to make sure the proper settings are in place.

### 5.1.1.1 Job Properties Schedule Tab

Microsoft Project scheduling options are configured on the Schedule tab of the Job Properties form.

- At the top of the Schedule tab, the Integrated Schedule must be set to **Microsoft Project**
- As a default, the **Always use Plug Days when updating InEight Estimate from the schedule** checkbox is not selected (on a job by job basis, this box can be checked later for jobs in which an estimator does not want updates from Microsoft Project to change the duration and therefore the cost of your cost items in InEight Estimate)




## 5.1.2 Schedule Cost Items

Before you can integrate with Microsoft Project, your cost items need to be marked as Scheduled in InEight Estimate. This is done on the Cost Breakdown Structure (CBS) Register. From your Saved Views drop-down list in the CBS, the Schedule Setup View displays all of your schedule-related columns. There are a couple to keep in mind when you schedule your items:

- **Scheduled**: This column tells you which of your items are selected to be included in your Primavera schedule
- **Roll Up Schedule**: This column lets you check a box to roll up your estimate to the selected level when it imports into Primavera

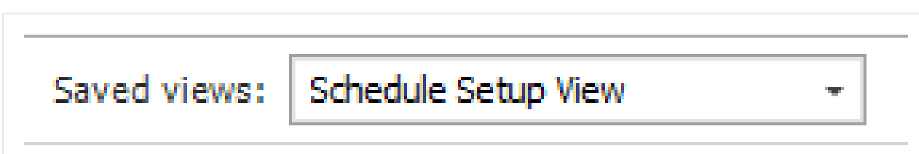
In the below example, notice that all of the cost items are scheduled, but the subordinates for Unclassified Excavation will be rolled up to the superior level.

| CBS Position Code | Description | Scheduled | Roll Up Schedule |
|---|---|---|---|
| + **1** | **Mobilization** | ✓ | ☐ |
| + **2** | **Clearing & Grubbing** | ✓ | ☐ |
| ⊟ **3** | **Unclassified Excavation** | ✓ | ✓ |
| + 3.1 | Excavation | ■ | ☐ |
| + 3.2 | Embankment | ■ | ☐ |
| ⊟ **4** | **Aggregate Base** | ✓ | ☐ |
| + 4.1 | Furnish & Haul Base Material | ✓ | ☐ |
| + 4.2 | Finegrade Subgrade | ✓ | ☐ |
| ⊟ 4.3 | Install Aggregate Base | ✓ | ☐ |

The following steps walk you through scheduling your cost items.

## Step by Step — Schedule a Cost Item in InEight Estimate

1. In the **Training Job**, from the Estimate tab, select **Cost Breakdown Structure**.
2. In the Saved Views drop-down list, select **Schedule Setup View**.




- In the Scheduled column, you can select the checkbox for each cost item that you want to schedule
- If a cost item has subordinate cost items below it, you will only be able to check the superior cost item, which will automatically schedule the subordinate cost items along with it

3. Select the **Mobilization**, **Clearing & Grubbing**, and **Unclassified Excavation** cost items, then press **Tab**.

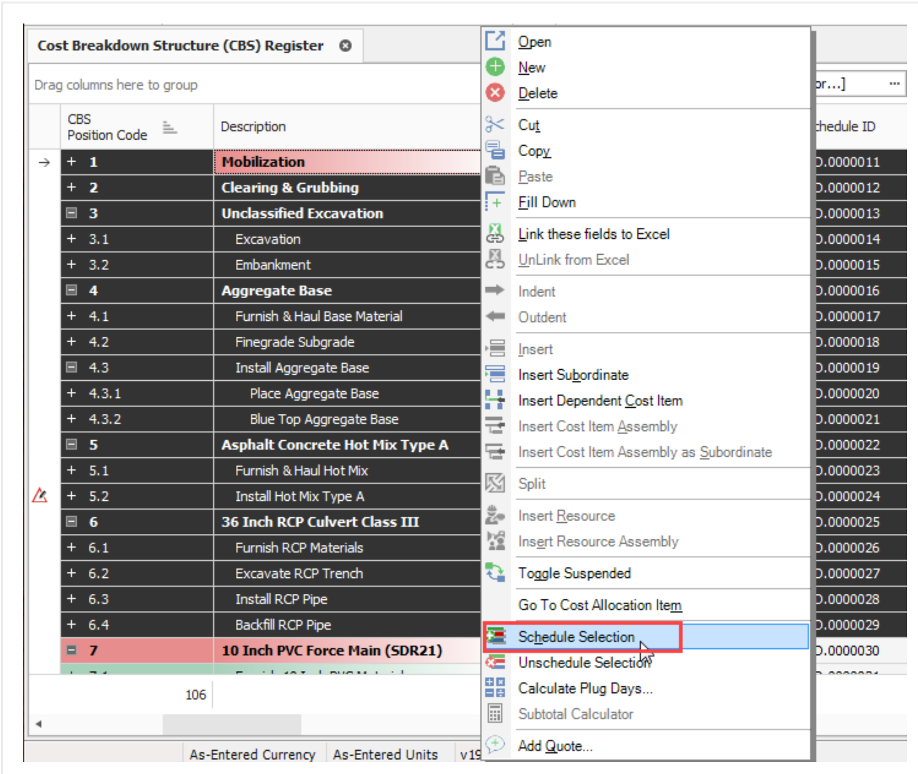
| CBS Position Code | Description | Scheduled | Roll Up Schedule |
|---|---|---|---|
| | JOB | ✓ | |
| | Prime Bond | | |
| | Price % Add-On | | |
| | Job Financing | | |
| | Indirect Cost Escalation | | |
| | Direct Cost Escalation | | |
| | Indirect Cost Add-On | | |
| | Job Management & Equipment | | |
| | General Expense | | |
| | Direct Cost Add-On | | |
| 1 | Mobilization | ✓ | |
| 2 | Clearing & Grubbing | ✓ | |
| 3 | Unclassified Excavation | ✓ | |
| 3.1 | Excavation | ✓ | |
| 3.2 | Embankment | ✓ | |
| 4 | Aggregate Base | | |
| 4.1 | Furnish & Haul Base Material | | |
| 4.2 | Finegrade Subgrade | | |

## Step by Step — Schedule a Group of Cost Items in InEight Estimate

1. In the **Training Job**, from the Estimate tab, select **Cost Breakdown Structure**.
2. From the Saved Views drop-down list, select **Schedule Setup View**.
   - To schedule multiple cost items, you can highlight the row for each cost item that you want to schedule, using the Shift and Ctrl keys to select multiple rows.
3. Select additional cost items **4-Aggregate base**, **5- Asphalt Concrete Hot Mix**, and **6- 36-inch RCP Culvert Class.**

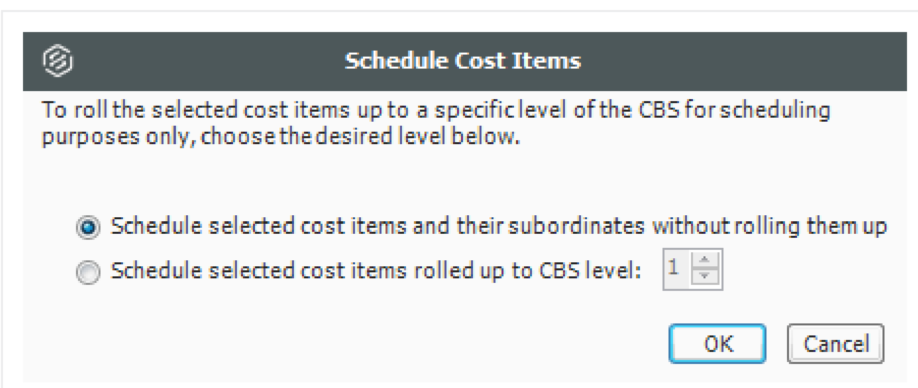
| TIP | To schedule all cost items, highlight the JOB row |
|---|---|

4. Right click on the selected rows and select **Schedule Selection**.




- On the Schedule Cost Items dialog, you can select whether or not you want to roll up the selected cost items to a specific level of the CBS for scheduling purposes

5. Select **Schedule selected cost items and their subordinates without rolling them up**, then click **OK**.




- Your scheduled cost items will import into Primavera the next time you update Primavera from InEight Estimate.

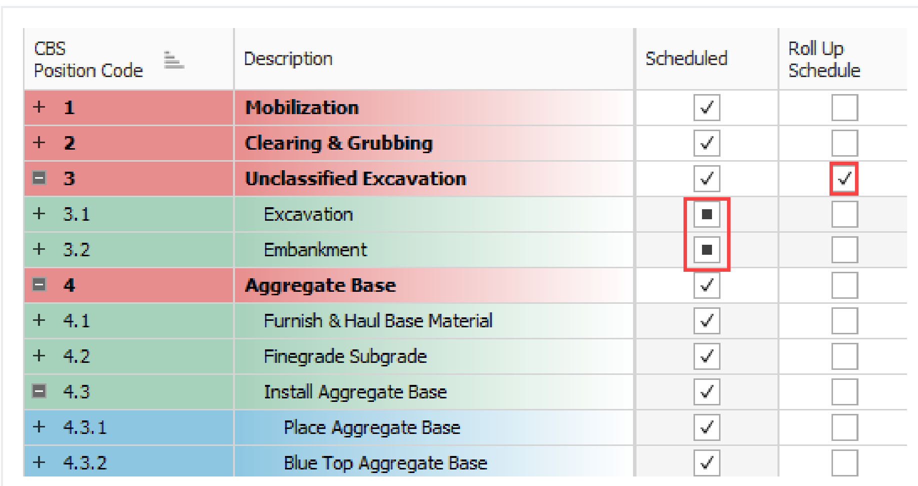
### 5.1.2.2 Roll Up Schedule

For cost item 3 – Unclassified Excavation, your scheduler does not need all of your estimate details and wants to roll up your cost items to a higher level when they import into the Primavera schedule.

Follow the steps below to learn how to roll up your cost items for the schedule.

## Step by Step — Roll Up Schedule

1. In the **Training Job**, from the Estimate tab select **Cost Breakdown Structure**.
2. From the Saved Views drop-down list, select **Schedule Setup View**.
   - Review your cost items to decide which cost items need to be rolled up
3. Select the **Roll Up Schedule** checkbox on the Unclassified Excavation cost item.



| CBS Position Code | Description | Scheduled | Roll Up Schedule |
|---|---|---|---|
| + 1 | **Mobilization** | ✓ | ☐ |
| + 2 | **Clearing & Grubbing** | ✓ | ☐ |
| ⊟ 3 | **Unclassified Excavation** | ✓ | ✓ |
| + 3.1 | Excavation | ■ | ☐ |
| + 3.2 | Embankment | ■ | ☐ |
| ⊟ 4 | **Aggregate Base** | ✓ | ☐ |
| + 4.1 | Furnish & Haul Base Material | ✓ | ☐ |
| + 4.2 | Finegrade Subgrade | ✓ | ☐ |
| ⊟ 4.3 | Install Aggregate Base | ✓ | ☐ |
| + 4.3.1 | Place Aggregate Base | ✓ | ☐ |
| + 4.3.2 | Blue Top Aggregate Base | ✓ | ☐ |

## 5.1.3 Update Microsoft Project from InEight Estimate

Now that you have set up your schedule to integrate with Microsoft Project in Job Properties and scheduled your cost items in the CBS, you are ready to send your project information to Microsoft Project.

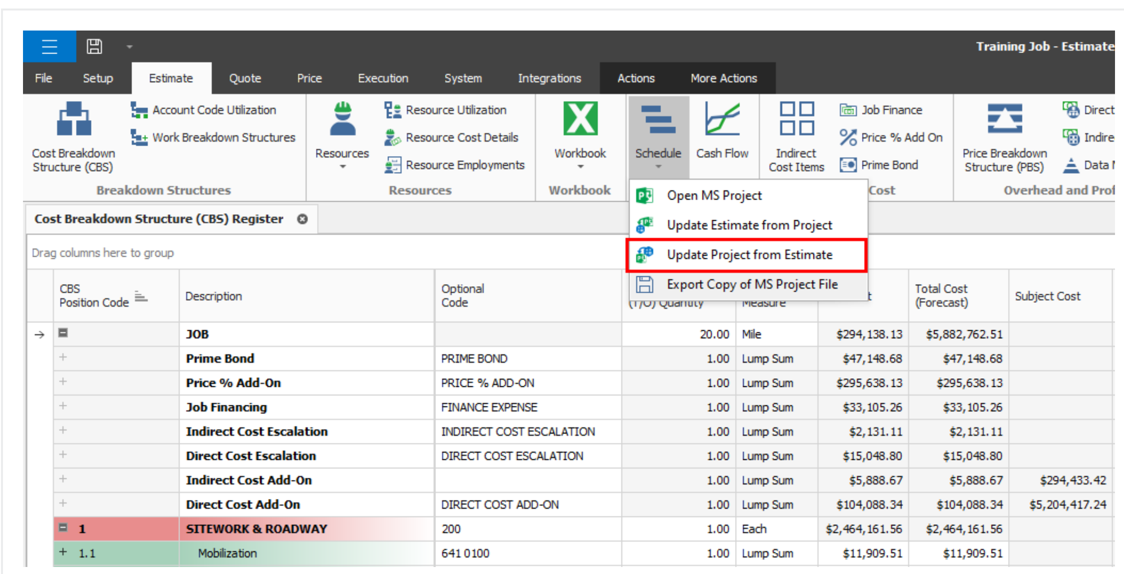
When you first update Microsoft Project from InEight Estimate, Microsoft Project will create a new project automatically and load it with the following information from InEight Estimate:

| Data Sent from InEight Estimate to Microsoft Project | | |
|---|---|---|
| Data Type | InEight Estimate | Microsoft Project |
| Project Data | Job Code | Project Name |
| Activity Data | CBS Position Code | 01 - CBS Position Code |
| | Description | Description |
| | Days (Duration Driven) | Duration |
| Cost Data | Cost Category Total Cost | Cost Category (custom text columns) |

The following steps walk you through updating Microsoft Project from InEight Estimate to create a new schedule.

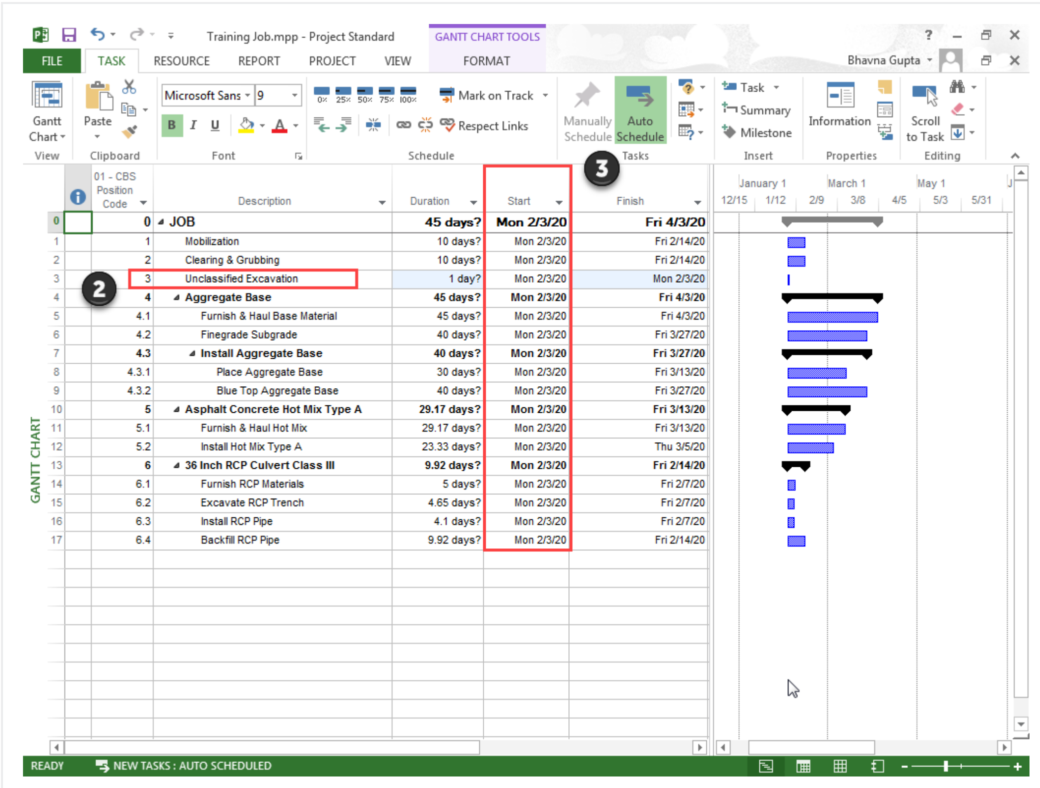
## Step by Step — Update MS Project from InEight Estimate

1. From the Estimate tab, select **Schedule>Update Project from InEight Estimate**.




- Your job automatically opens in Microsoft Project
- The Work Breakdown Structure Layout displays for the project

- You can see the breakdown structure imported from InEight Estimate with durations, rolled up as specified by the Roll Up Schedule option in InEight Estimate
- Initially, the start date for your activities is the start date defined on the Job Properties > Cover Sheet tab (these will change as activity relationships are defined)




## 5.1.4 Update InEight Estimate from Microsoft Project

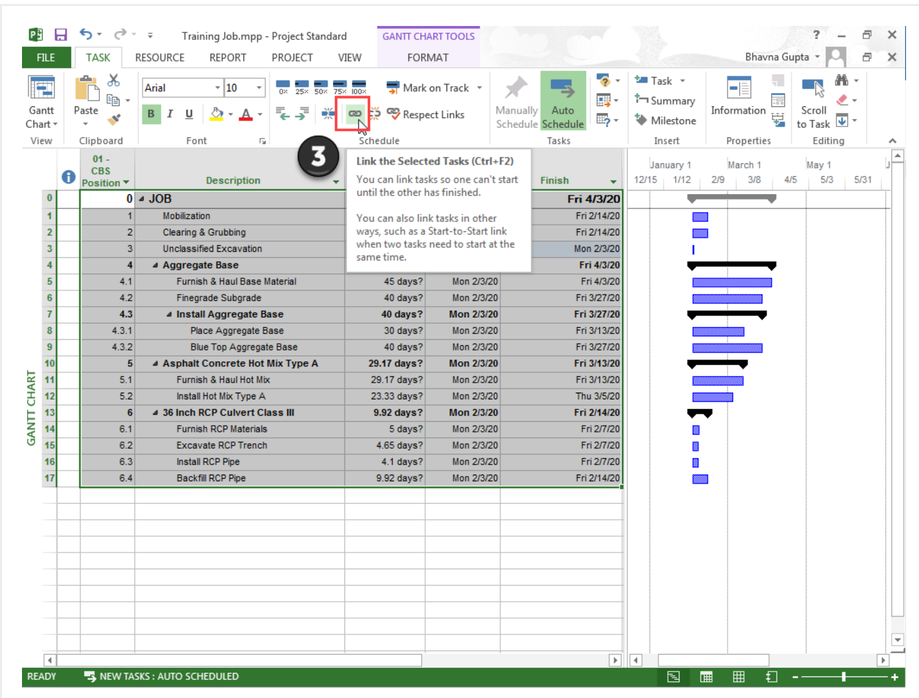
You can also bring information back from Microsoft Project into InEight Estimate. When you update InEight Estimate from Microsoft Project, the following information updates:

| Update InEight Estimate from Microsoft Project | | |
|---|---|---|
| Data Type | Microsoft Project | InEight Estimate |
| Activity Data | Start Dates | Start Dates |
| | Finish Dates | Finish Dates |
| | Hours | Hours |

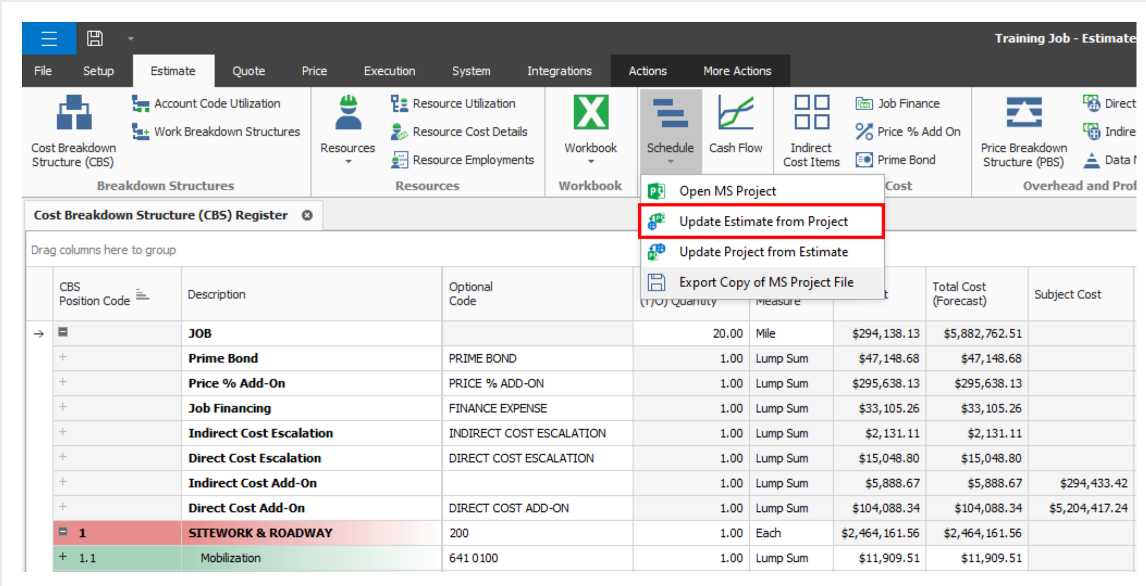
Walk through the following steps to practice updating InEight Estimate from Microsoft Project. You will create a scheduling relationship in Microsoft Project and then import the updated dates and relationships into InEight Estimate.

## Step by Step — Update InEight Estimate from MS Project

1. Open your version of the **Training Job** project in Microsoft Project.
   - In the real world, it is likely that you would have overlapping activities or your activities would be out of order, however for this example you will link all activities from finish to start
2. Click on the **Link Tasks** icon to link all activities.

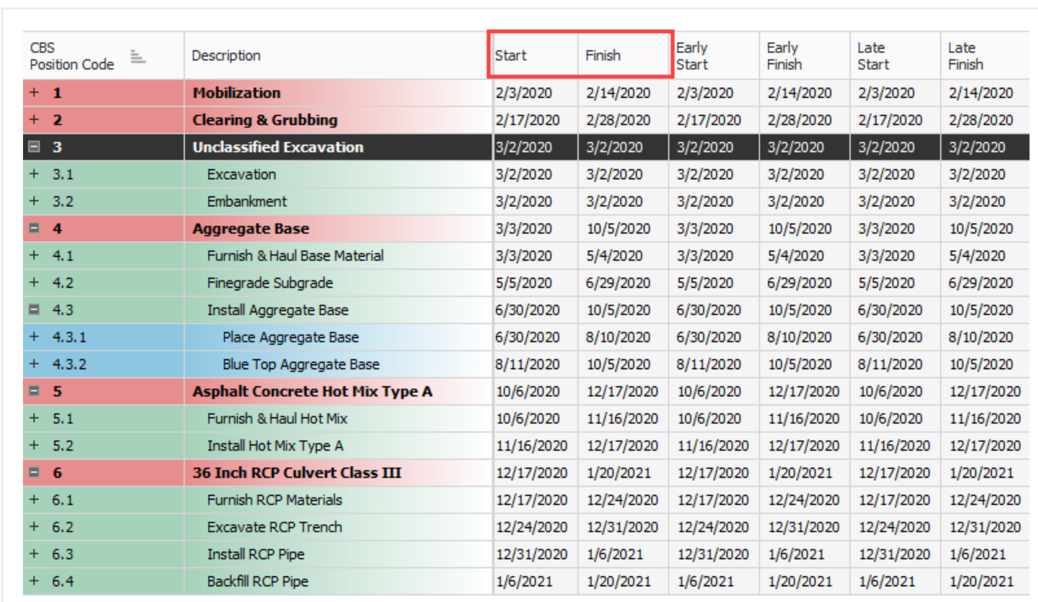



   - Ensure the **Auto Schedule** button is selected
3. To update InEight Estimate with this change, go back to InEight Estimate and from the Estimate tab, select **Schedule>Update InEight Estimate from Project**.




| CBS Position Code | Description | Optional Code | (T/O) Quantity | Measure | | Total Cost (Forecast) | Subject Cost |
|---|---|---|---|---|---|---|---|
| | JOB | | 20.00 | Mile | $294,138.13 | $5,882,762.51 | |
| | Prime Bond | PRIME BOND | 1.00 | Lump Sum | $47,148.68 | $47,148.68 | |
| | Price % Add-On | PRICE % ADD-ON | 1.00 | Lump Sum | $295,638.13 | $295,638.13 | |
| | Job Financing | FINANCE EXPENSE | 1.00 | Lump Sum | $33,105.26 | $33,105.26 | |
| | Indirect Cost Escalation | INDIRECT COST ESCALATION | 1.00 | Lump Sum | $2,131.11 | $2,131.11 | |
| | Direct Cost Escalation | DIRECT COST ESCALATION | 1.00 | Lump Sum | $15,048.80 | $15,048.80 | |
| | Indirect Cost Add-On | | 1.00 | Lump Sum | $5,888.67 | $5,888.67 | $294,433.42 |
| | Direct Cost Add-On | DIRECT COST ADD-ON | 1.00 | Lump Sum | $104,088.34 | $104,088.34 | $5,204,417.24 |
| 1 | SITEWORK & ROADWAY | 200 | 1.00 | Each | $2,464,161.56 | $2,464,161.56 | |
| 1.1 | Mobilization | 641 0100 | 1.00 | Lump Sum | $11,909.51 | $11,909.51 | |

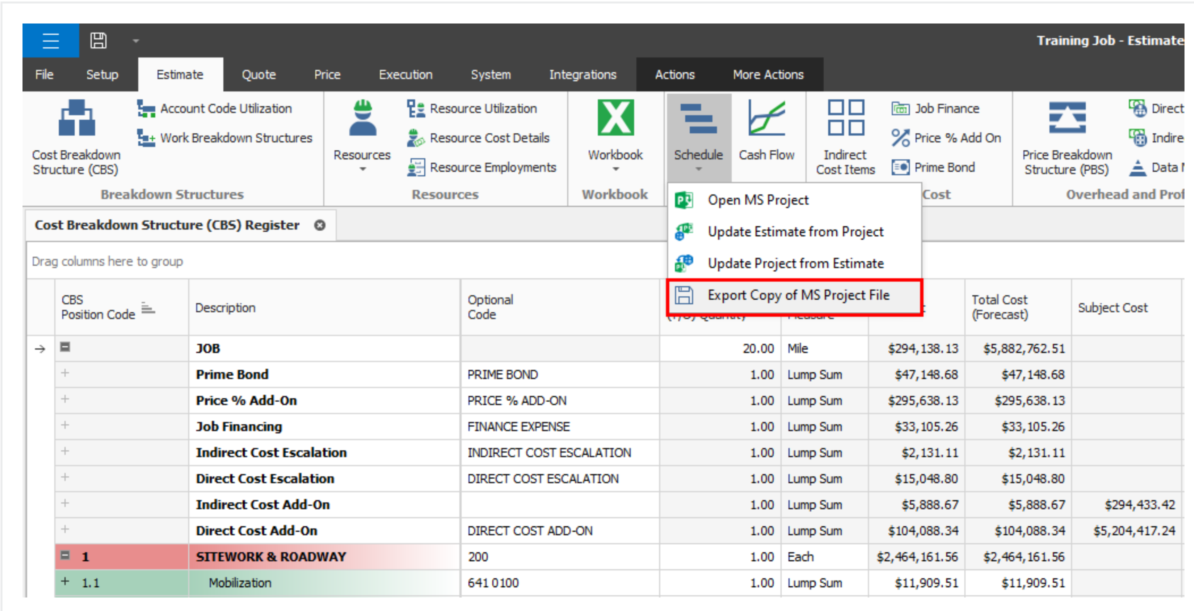
- On the Schedule Setup View, you can see the Start and Finish dates updated from MS Project.



| CBS Position Code | Description | Start | Finish | Early Start | Early Finish | Late Start | Late Finish |
|---|---|---|---|---|---|---|---|
| 1 | Mobilization | 2/3/2020 | 2/14/2020 | 2/3/2020 | 2/14/2020 | 2/3/2020 | 2/14/2020 |
| 2 | Clearing & Grubbing | 2/17/2020 | 2/28/2020 | 2/17/2020 | 2/28/2020 | 2/17/2020 | 2/28/2020 |
| 3 | Unclassified Excavation | 3/2/2020 | 3/2/2020 | 3/2/2020 | 3/2/2020 | 3/2/2020 | 3/2/2020 |
| 3.1 | Excavation | 3/2/2020 | 3/2/2020 | 3/2/2020 | 3/2/2020 | 3/2/2020 | 3/2/2020 |
| 3.2 | Embankment | 3/2/2020 | 3/2/2020 | 3/2/2020 | 3/2/2020 | 3/2/2020 | 3/2/2020 |
| 4 | Aggregate Base | 3/3/2020 | 10/5/2020 | 3/3/2020 | 10/5/2020 | 3/3/2020 | 10/5/2020 |
| 4.1 | Furnish & Haul Base Material | 3/3/2020 | 5/4/2020 | 3/3/2020 | 5/4/2020 | 3/3/2020 | 5/4/2020 |
| 4.2 | Finegrade Subgrade | 5/5/2020 | 6/29/2020 | 5/5/2020 | 6/29/2020 | 5/5/2020 | 6/29/2020 |
| 4.3 | Install Aggregate Base | 6/30/2020 | 10/5/2020 | 6/30/2020 | 10/5/2020 | 6/30/2020 | 10/5/2020 |
| 4.3.1 | Place Aggregate Base | 6/30/2020 | 8/10/2020 | 6/30/2020 | 8/10/2020 | 6/30/2020 | 8/10/2020 |
| 4.3.2 | Blue Top Aggregate Base | 8/11/2020 | 10/5/2020 | 8/11/2020 | 10/5/2020 | 8/11/2020 | 10/5/2020 |
| 5 | Asphalt Concrete Hot Mix Type A | 10/6/2020 | 12/17/2020 | 10/6/2020 | 12/17/2020 | 10/6/2020 | 12/17/2020 |
| 5.1 | Furnish & Haul Hot Mix | 10/6/2020 | 11/16/2020 | 10/6/2020 | 11/16/2020 | 10/6/2020 | 11/16/2020 |
| 5.2 | Install Hot Mix Type A | 11/16/2020 | 12/17/2020 | 11/16/2020 | 12/17/2020 | 11/16/2020 | 12/17/2020 |
| 6 | 36 Inch RCP Culvert Class III | 12/17/2020 | 1/20/2021 | 12/17/2020 | 1/20/2021 | 12/17/2020 | 1/20/2021 |
| 6.1 | Furnish RCP Materials | 12/17/2020 | 12/24/2020 | 12/17/2020 | 12/24/2020 | 12/17/2020 | 12/24/2020 |
| 6.2 | Excavate RCP Trench | 12/24/2020 | 12/31/2020 | 12/24/2020 | 12/31/2020 | 12/24/2020 | 12/31/2020 |
| 6.3 | Install RCP Pipe | 12/31/2020 | 1/6/2021 | 12/31/2020 | 1/6/2021 | 12/31/2020 | 1/6/2021 |
| 6.4 | Backfill RCP Pipe | 1/6/2021 | 1/20/2021 | 1/6/2021 | 1/20/2021 | 1/6/2021 | 1/20/2021 |

## 5.1.5 Export Copy of MS Project File

If your project’s schedule is integrated with MS Project, you can export a copy of your MS Project file. This can be advantageous if a preliminary schedule is needed for a starting point schedule, as the project goes into execution. Recreating the schedule from scratch can be time consuming and error prone, as the existing schedule details might not be properly captured in the beginning stages.



## 5.1.6 Manage Changes Between Estimate and Schedule

As changes to scope, resources, and costs come up in your estimate, and changes to relationships and dates occur in the schedule, you can continue updating your estimate and schedule as needed.

### 5.1.6.3 Plug Days

The Schedule Plug Days option allows you to define the duration in the schedule separate from the duration defined for your cost items on the Production tab. For example, your 10” PVC Pipe activity may have extra days in the schedule due to the delivery date of the pipe material, but you don’t want those extra days to drive the costs in your estimate, since your crews won’t be working on the activity on those extra days.

| TIP | All superior cost items are hard-coded to use Schedule Plug Days. |
|---|---|

## Step by Step — Schedule Plug Days

1. Look at the Days (Duration driven) column in the CBS where it shows 4.65 days for Excavate RCP Trench.
2. Make sure the **Schedule Plug Days** checkbox is selected on the Excavate RCP Trench cost item, and then enter a Plug Days duration for the number of days the item will be scheduled in Primavera (**7** days).

| CBS Position Code | Description | Days (Duration driven) | Schedule Plug Days | Plug Days |
|---|---|---|---|---|
| ⊟ 6 | **36 Inch RCP Culvert Class III** | 18.66 | ☑ | 26.01 |
| + 6.1 | Furnish RCP Materials | 0.00 | ☑ | 5.00 |
| + 6.2 | Excavate RCP Trench | 4.65 | ☑ | 7.00 |
| + 6.3 | Install RCP Pipe | 4.10 | ☐ | 4.10 |
| + 6.4 | Backfill RCP Pipe | 9.92 | ☐ | 9.92 |

- This allows you to maintain your duration of 4.65 days in the estimate and 7 days in the schedule.

  Any duration changes made in Project will import into InEight Estimate as Plug Days automatically so that they can be reviewed by the estimator before making any changes to production in InEight Estimate.

### 5.1.6.4 Update Microsoft Project with InEight Estimate Changes

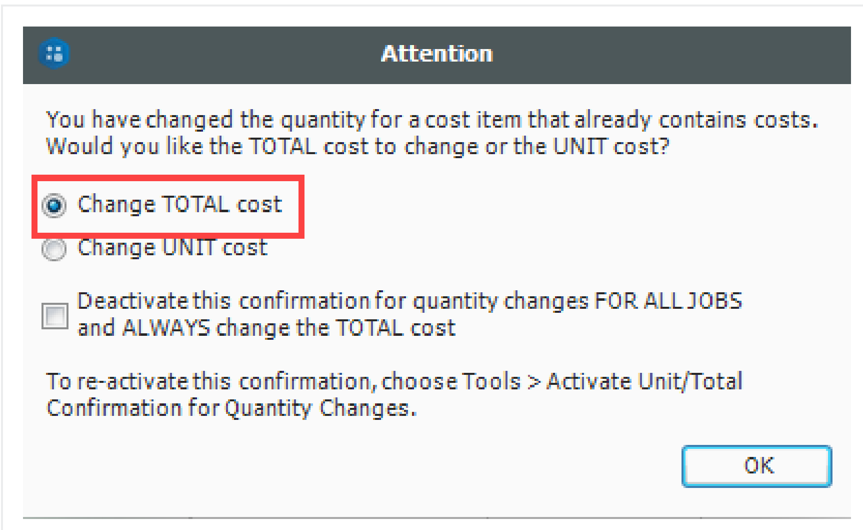
The following steps will walk you through updating the schedule with a scope change in your estimate.

## Step by Step — Update MS Project with InEight Estimate Changes

1. In the InEight Estimate **Training Job**, from the Estimate tab, select **Cost Breakdown Structure**.
   - In this scenario, there is a scope change for your Excavation requiring you to change all of your quantities
2. Change the quantity in the Forecast (T/O) Quantity field in the CBS as specified below.

| Quantity Change for Cost Item | | | |
|---|---|---|---|
| CBS Code | Description | Old Quantity | New Quantity |
| 5 | Asphalt Concrete Hot Mix Type A | 35,000 | 25,000 |

- As you make your changes, take note of how your duration changes in the **Days (Duration driven)** column for these items.
- If prompted about changing Total or Unit Cost, select **Change TOTAL cost**, so that your unit costs stay intact




3. From the Estimate tab, select **Schedule>Update Projectfrom InEight Estimate** to send the changed hours to Microsoft Project.
4. Go back to the **Training Job** in Microsoft Project.
   - The Microsoft Project scheduled duration should have changed from 4.65 days to 7 days to match the updated duration in InEight Estimate for Excavate RCP Trench
   - You can also see that the days for Asphalt Concrete Hot Mix Type A and its subordinates

adjusted because you adjusted the Forecast T/O Quantity in InEight Estimate

| | | 01 - CBS Position Code | Description | Duration | Start | Finish |
|---|---|---|---|---|---|---|
| 0 | | 0 | JOB | 239.51 days? | Mon 2/3/20 | Fri 1/1/21 |
| 1 | | 1 | Mobilization | 10 days? | Mon 2/3/20 | Fri 2/14/20 |
| 2 | | 2 | Clearing & Grubbing | 10 days? | Mon 2/17/20 | Fri 2/28/20 |
| 3 | | 3 | Unclassified Excavation | 1 day? | Mon 3/2/20 | Mon 3/2/20 |
| 4 | | 4 | Aggregate Base | 155 days? | Tue 3/3/20 | Mon 10/5/20 |
| 5 | | 4.1 | Furnish & Haul Base Material | 45 days? | Tue 3/3/20 | Mon 5/4/20 |
| 6 | | 4.2 | Finegrade Subgrade | 40 days? | Tue 5/5/20 | Mon 6/29/20 |
| 7 | | 4.3 | Install Aggregate Base | 70 days? | Tue 6/30/20 | Mon 10/5/20 |
| 8 | | 4.3.1 | Place Aggregate Base | 30 days? | Tue 6/30/20 | Mon 8/10/20 |
| 9 | | 4.3.2 | Blue Top Aggregate Base | 40 days? | Tue 8/11/20 | Mon 10/5/20 |
| 10 | | 5 | Asphalt Concrete Hot Mix Type A | 37.5 days? | Tue 10/6/20 | Thu 11/26/20 |
| 11 | | 5.1 | Furnish & Haul Hot Mix | 20.83 days? | Tue 10/6/20 | Tue 11/3/20 |
| 12 | | 5.2 | Install Hot Mix Type A | 16.67 days? | Tue 11/3/20 | Thu 11/26/20 |
| 13 | | 6 | 36 Inch RCP Culvert Class III | 26.01 days? | Thu 11/26/20 | Fri 1/1/21 |
| 14 | | 6.1 | Furnish RCP Materials | 5 days? | Thu 11/26/20 | Thu 12/3/20 |
| 15 | | 6.2 | Excavate RCP Trench | 7 days? | Thu 12/3/20 | Mon 12/14/20 |
| 16 | | 6.3 | Install RCP Pipe | 4.1 days? | Mon 12/14/20 | Fri 12/18/20 |
| 17 | | 6.4 | Backfill RCP Pipe | 9.92 days? | Fri 12/18/20 | Fri 1/1/21 |

5. Your Start and Finish dates are different now. In InEight Estimate, from the Estimate tab, select **Schedule >Update InEight Estimate from Project** to update InEight Estimate with the new dates.

| CBS Position Code | Description | Start | Finish | Early Start | Early Finish | Late Start | Late Finish |
|---|---|---|---|---|---|---|---|
| 2 | Clearing & Grubbing | 2/17/2020 | 2/28/2020 | 2/17/2020 | 2/28/2020 | 2/17/2020 | 2/28/2020 |
| 3 | Unclassified Excavation | 3/2/2020 | 3/2/2020 | 3/2/2020 | 3/2/2020 | 3/2/2020 | 3/2/2020 |
| 3.1 | Excavation | 3/2/2020 | 3/2/2020 | 3/2/2020 | 3/2/2020 | 3/2/2020 | 3/2/2020 |
| 3.2 | Embankment | 3/2/2020 | 3/2/2020 | 3/2/2020 | 3/2/2020 | 3/2/2020 | 3/2/2020 |
| 4 | Aggregate Base | 3/3/2020 | 10/5/2020 | 3/3/2020 | 10/5/2020 | 3/3/2020 | 10/5/2020 |
| 4.1 | Furnish & Haul Base Material | 3/3/2020 | 5/4/2020 | 3/3/2020 | 5/4/2020 | 3/3/2020 | 5/4/2020 |
| 4.2 | Finegrade Subgrade | 5/5/2020 | 6/29/2020 | 5/5/2020 | 6/29/2020 | 5/5/2020 | 6/29/2020 |
| 4.3 | Install Aggregate Base | 6/30/2020 | 10/5/2020 | 6/30/2020 | 10/5/2020 | 6/30/2020 | 10/5/2020 |
| 4.3.1 | Place Aggregate Base | 6/30/2020 | 8/10/2020 | 6/30/2020 | 8/10/2020 | 6/30/2020 | 8/10/2020 |
| 4.3.2 | Blue Top Aggregate Base | 8/11/2020 | 10/5/2020 | 8/11/2020 | 10/5/2020 | 8/11/2020 | 10/5/2020 |
| 5 | Asphalt Concrete Hot Mix Type A | 10/6/2020 | 11/26/2020 | 10/6/2020 | 11/26/2020 | 10/6/2020 | 11/26/2020 |
| 5.1 | Furnish & Haul Hot Mix | 10/6/2020 | 11/3/2020 | 10/6/2020 | 11/3/2020 | 10/6/2020 | 11/3/2020 |
| 5.2 | Install Hot Mix Type A | 11/3/2020 | 11/26/2020 | 11/3/2020 | 11/26/2020 | 11/3/2020 | 11/26/2020 |
| 6 | 36 Inch RCP Culvert Class III | 11/26/2020 | 1/1/2021 | 11/26/2020 | 1/1/2021 | 11/26/2020 | 1/1/2021 |
| 6.1 | Furnish RCP Materials | 11/26/2020 | 12/3/2020 | 11/26/2020 | 12/3/2020 | 11/26/2020 | 12/3/2020 |
| 6.2 | Excavate RCP Trench | 12/3/2020 | 12/14/2020 | 12/3/2020 | 12/14/2020 | 12/3/2020 | 12/14/2020 |
| 6.3 | Install RCP Pipe | 12/14/2020 | 12/18/2020 | 12/14/2020 | 12/18/2020 | 12/14/2020 | 12/18/2020 |
| 6.4 | Backfill RCP Pipe | 12/18/2020 | 1/1/2021 | 12/18/2020 | 1/1/2021 | 12/18/2020 | 1/1/2021 |

## Lesson 5 Review

1. Under the Job Properties > Schedule tab, which setting can be enabled to account for plugged costs (e.g., for subcontractors)?
   a. Resource price/unit
   b. Expense Costs
   c. Schedule ID
   d. Actuals

---

2. For InEight Estimate schedule integration with Primavera, which of the following can be sent from your estimate to the schedule? (Select all that apply)
   a. Activity data
   b. Cash Flow graphs
   c. Resource data
   d. Cost data
   e. Price data

---

3. The Schedule Plug Days option allows you to define the duration in the schedule separate from the duration defined for your cost items on the Production tab.
   a. True
   b. False

---

## Lesson 5 Summary

As a result of this lesson, you can:

- Set up scheduling options
- Update Schedule from InEight Estimate
- Update InEight Estimate from Schedule
- Manage changes between estimate and schedule

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# LESSON 6 – CASH FLOW

## Lesson Duration: 25 Minutes

## Lesson Objectives

After completing this lesson, you will be able to:

- Interpret cash flow and resource utilization on the Cash Flow graph
- Select Cash Flow Options
- Change Cash Flow Display Settings

## Lesson Topics

# 6.1 CASH FLOW OVERVIEW

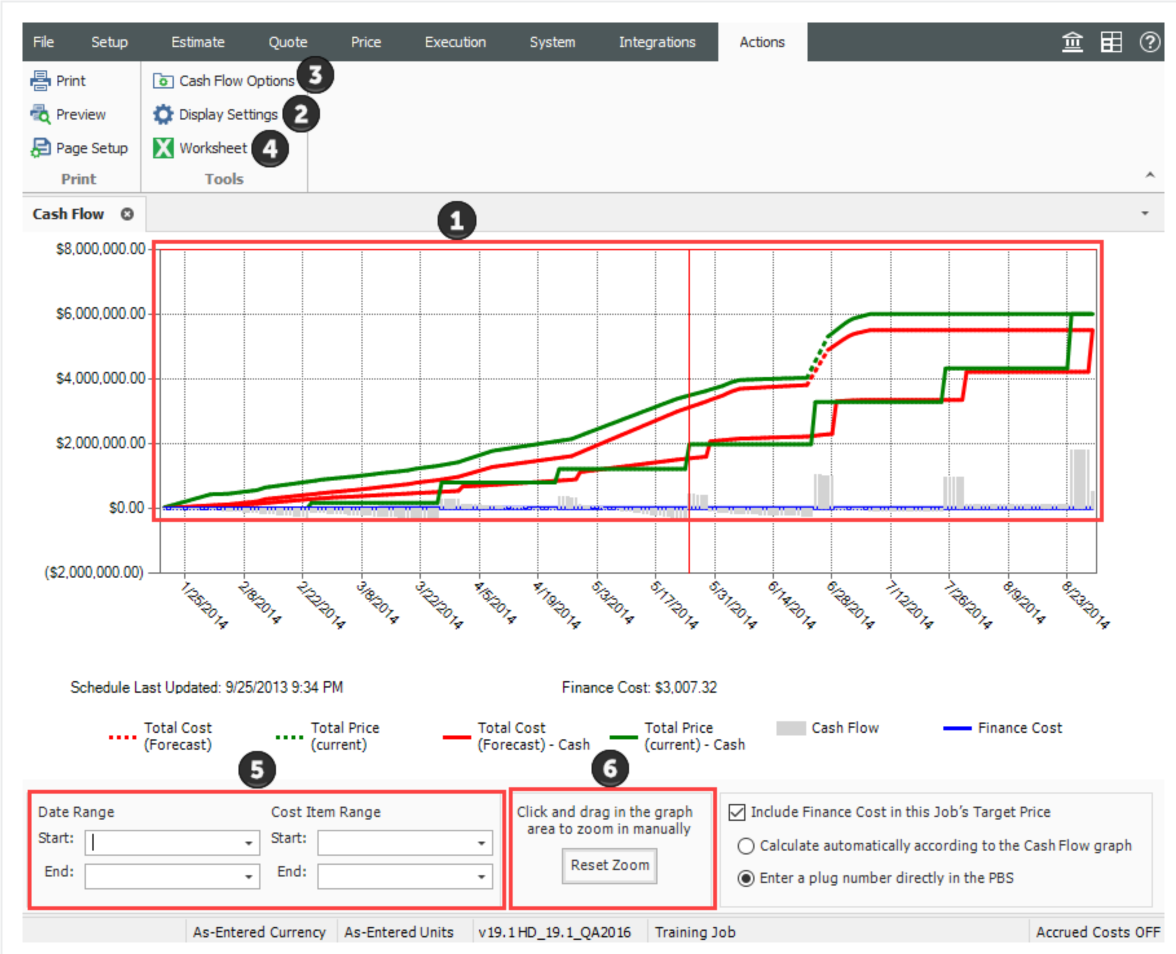
The Cash Flow form provides a graphical representation of the cash flow and resource utilization of your project, so you can quickly assess financing and resource needs.

You can open the Cash Flow form by selecting the **Estimate** tab from the Estimate landing page, then selecting **Cash Flow** from the Schedule section.

In order to generate a cash flow curve the estimate must be populated with schedule dates either directly from integration with Primavera, Microsoft project, or input manually.

### Overview – Cash Flow Form

| Section | Description |
|---|---|
| 1 | The graph displays the projected cash flow of your project, along with job financing expense, individual cost category costs and resource utilization.<br>• The x-axis measures time<br>• The left y-axis measures amounts<br>• The right y-axis measures quantities (when resource utilization is displayed)<br>• All graphs depicted on the Cash Flow form can be displayed based on Pay Quantity or Forecast (T/O) Quantity |
| 2 | Click on the **Display Settings** icon to indicate what to display on the graph.<br>• You can display total costs and price or specific cost categories<br>• You can also set the display settings to report on Resource Utilization |
| 3 | Click on the **Cash Flow Options** icon to specify revenue timing, cost timing, and cost of money. |
| 4 | Click the **Excel** icon to export the numerical data represented on the graph into an Excel spreadsheet where you can run additional analysis. |
| 5 | You can filter the Cash Flow graph by date range or by a range of cost items. |
| 6 | Click and drag over the graph to zoom in on a particular section. Click the **Reset Zoom** button to restore the graph to its original state. |




# 6.2 CASH FLOW OPTIONS

The Cash Flow Options are used to define the cash flow rules (revenue timing, cost timing, cost of money, and quantities) needed to calculate the finance expense and cash flow for your project.

Cash flow rules (revenue timing, cost timing, cost of money, and quantities) describe how cash flow occurs between a contractor and a client, and between contractors or owners and vendors/subcontractors. Cash flow is then calculated based on both the earning and payment terms you specify, and the job's schedule and pay item prices.

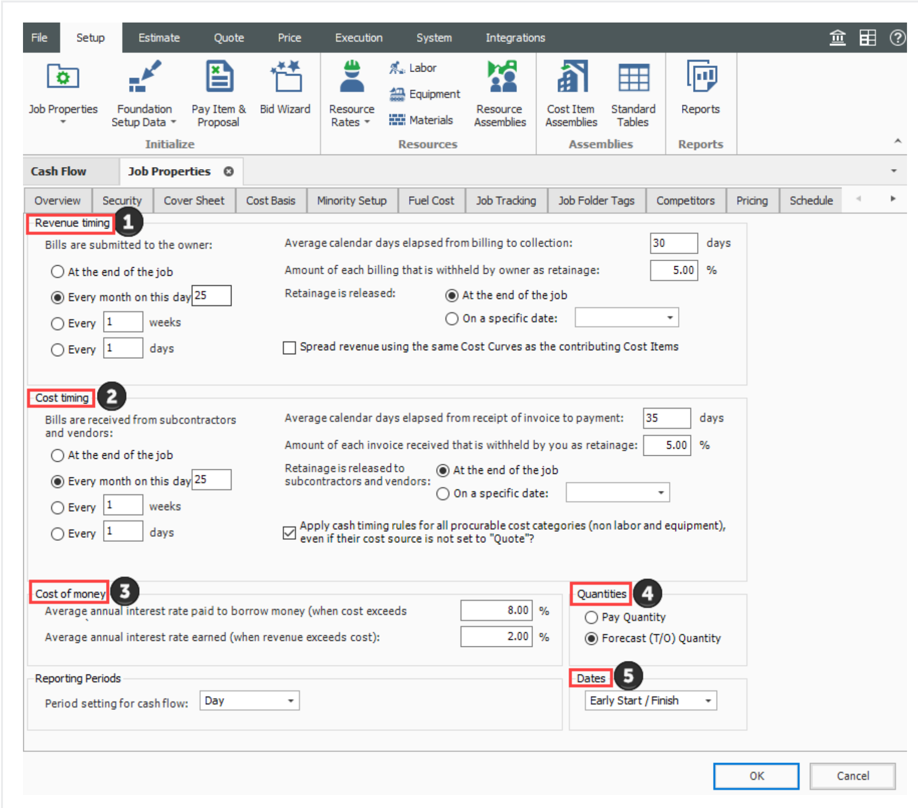
To open the Cash Flow Options, click on the **Cash Flow Options** icon in the Tools section of the Actions tab.

| | |
|---|---|
| TIP | You can also access Cash Flow Options from the Setup > Job Properties > Cash Flow tab. |

1. **Revenue timing**: Revenue is the amount of money actually paid to a contractor by the client for the completion of project deliverables. This section contains options to specify when and how often payment is recieved.
2. **Cost Timing**: Cost is the amount of money expended to complete the scope of the project. This section contains options to specify when and how often you pay contractors, subcontractors and vendors.

   NOTE To include any of your costs in your cash flow (including indirect costs), they need to be scheduled

3. **Cost of Money:** Represents the financing cost to fund the project. This section contains fields to specify interest rates you pay for the money you borrow, and interest rates you earn for money invested, to determine a total Finance Cost.
4. **Quantities:** Allows you to calculate cash flow based on pay quantities or forecast (T/O) quantities.
5. **Dates:** By default, the scheduled Early Start and Early Finish dates of each cost item (and its resource employments) as listed in the CBS Register, provide the timing of the expenses, revenue, and costs that show up on the Cash Flow graph. You have the option to base cash flow timing on Start/Finish dates or Late Start/Finish dates.

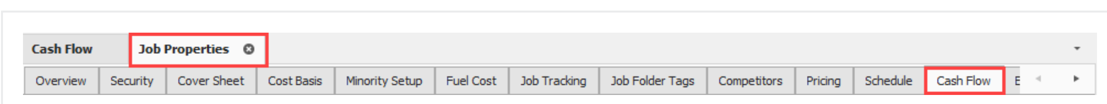



## 6.2.0.1 Cash Flow Options Set Up

The following steps walk you defining settings on the Cash Flow Options form.

## Step by Step — Cash Flow Options Setup

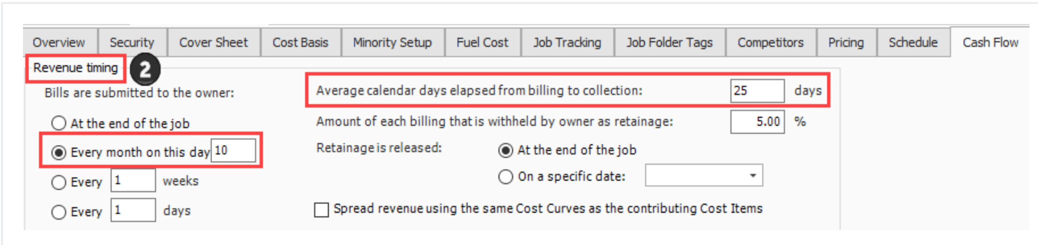
1. In the **E101 – Training Job**, from the Estimate tab, select **Setup >Job Properties >Cash Flow**.



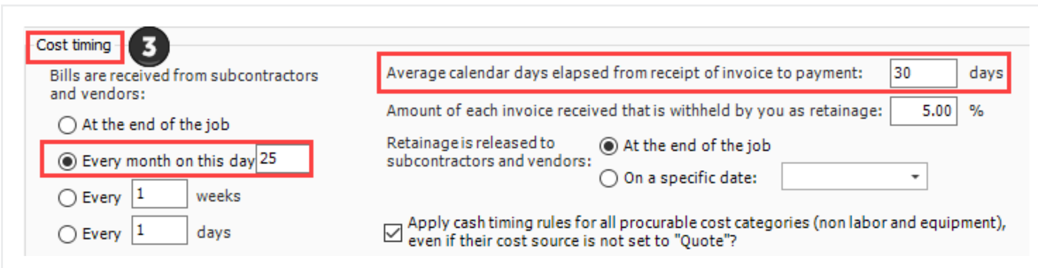

   - You will see the default options already there
   - You will adjust a few of those options

2. Change your Revenue timing to **Every month on the 10th**.

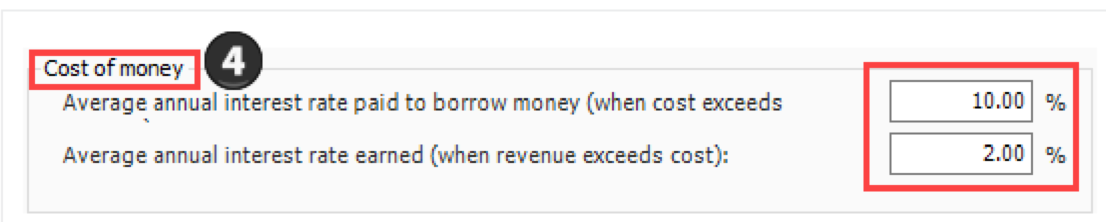
- The average calendar days from billing to collection should be set to 25 days




3. For Cost timing, bills are received from subcontractors and vendors **Every month on the 25th.**
    - Average calendar days elapsed from receipt of invoice to payment should be set to 30 days




4. For Cost of money, enter **10%** for the Average annual interest rate paid to borrow money (when cost exceeds revenue) and **2%** for Average annual interest rate earned (when revenue exceeds cost).




5. Leave all remaining options as originally defaulted.

# 6.3 CASH FLOW DISPLAY SETTINGS

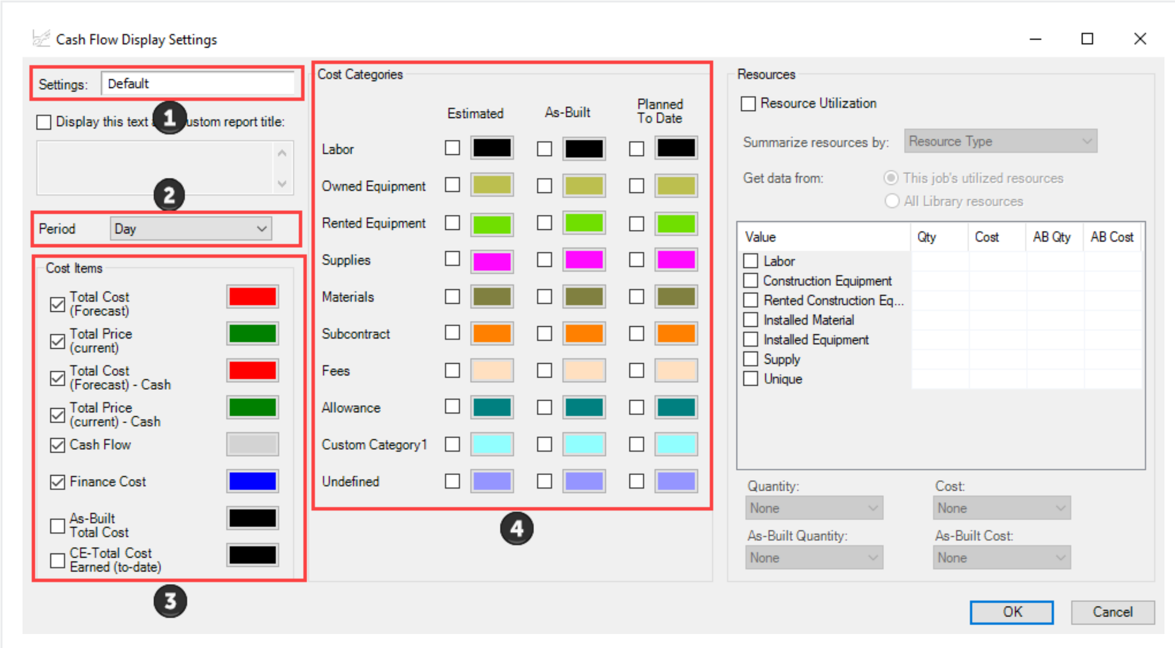
## 6.3.1

## 6.3.2 Cost Items and Cost Categories

The Cash Flow Display Settings allow you to control what information displays on the Cash Flow graph. To open the Display Settings click on the **Actions > Display Settings** icon in the Tools section.

### Overview – Cash Flow Display Settings – Cost Items and Cost Categories

| Section | Description |
|---|---|
| 1 | You can save your display settings for future use. |
| 2 | Select how the graph measures the timing of your cash flow. Options include: Day, Week, Month, Quarter, and Year. |
| 3 | Under the Cost Items section, you can select:<br>• **Total Cost (Forecast)**: The total cost of your scheduled cost items, based on when your costs are accrued (when your cost items are scheduled). This is displayed as a dashed line on the graph<br>• **Total Price (current)**: The total revenue of your pay items, based on when the revenue is earned (when your cost items are scheduled). This is displayed as a dashed line on the graph<br>• **Total Cost (Forecast) - Cash**: The total cost of your scheduled cost items, reflecting the cost timing you specify in the Cash Flow Options. This is displayed as a solid line on the graph<br>• **Total Price (current) - Cash**: The total revenue of the pay items, reflecting the revenue timing you specify in the Cash Flow Options. This is displayed as a solid line on the graph<br>• **Cash Flow**: Displays the difference between your Total Cost - Cash and Total Price - Cash values, so you can see if you are making or losing money<br>• **Finance Cost**: Displays the Cost of Money amount calculated from the settings you specify in the Cash Flow Options |
| 4 | You can check the Estimated box for any specific cost categories you need to display.<br>• The other check boxes are used for InEight Estimate Performance |



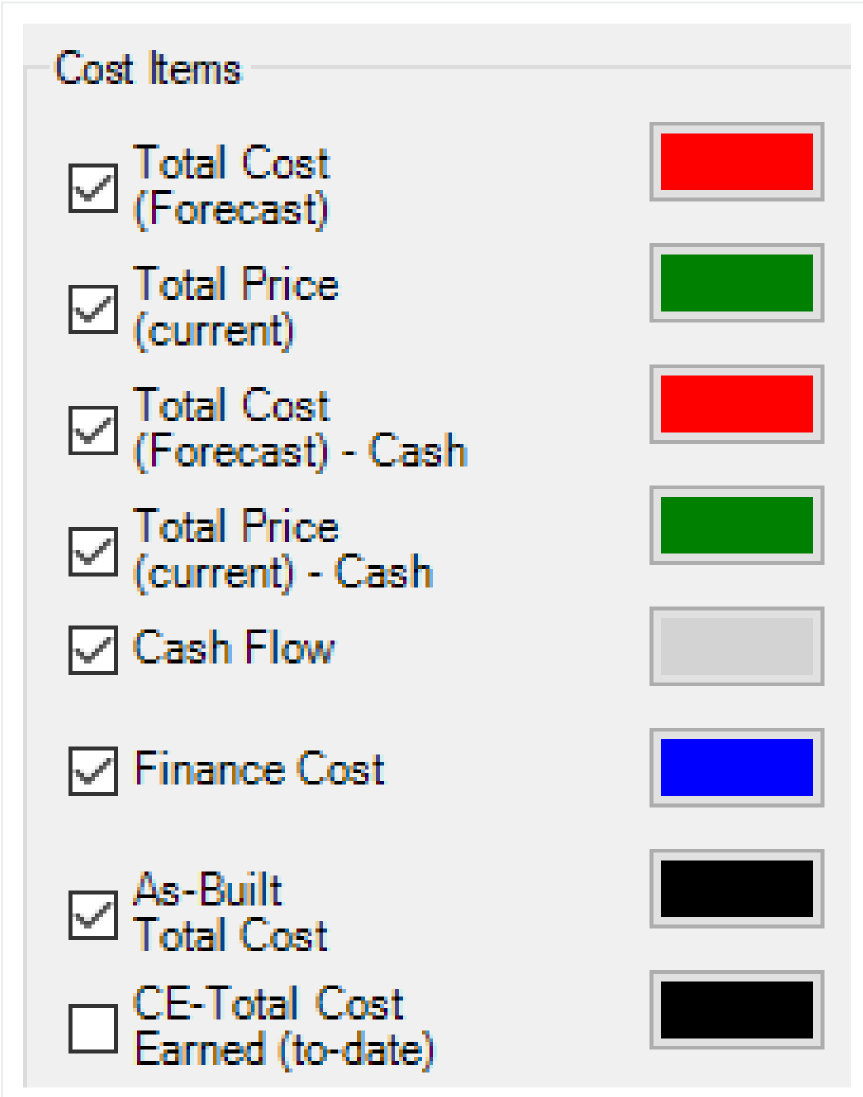

## 6.3.2.1 Cash Flow Display Set Up

The following steps walk you through setting up your Cash Flow Display Settings.

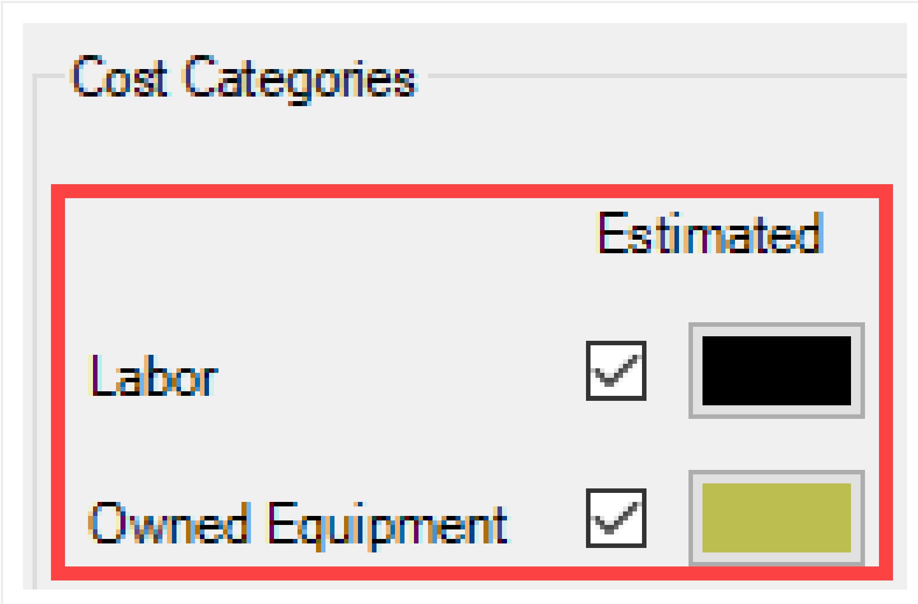
## Step by Step — Cash Flow Display Settings Set Up

1. In the **E101 – Training Job**, from the Estimate tab, select **Cash Flow** from the Schedule section.
2. On the **Actions** tab, select **Display Settings** to open the Display Settings window**.**
3. From the Period drop-down list, select **Week**.
4. Under the Cost Items section, make sure the following are selected:
   - Total Cost (Forecast)
   - Total Price (Forecast)
   - Total Cost (Forecast) – Cash
   - Total Price (Forecast) – Cash
   - Cash Flow

- Finance Cost

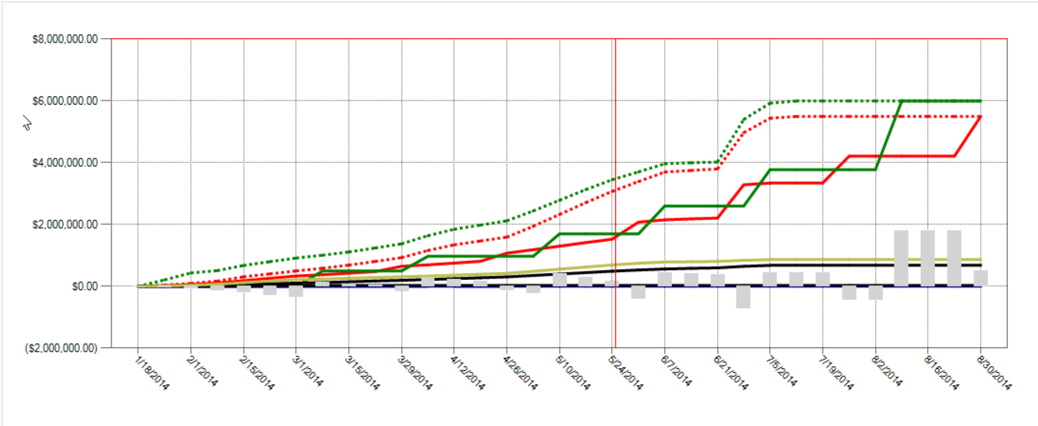



5. Under the **Cost Categories** section, check the **Estimated** checkbox for the Labor and Owned Equipment categories.

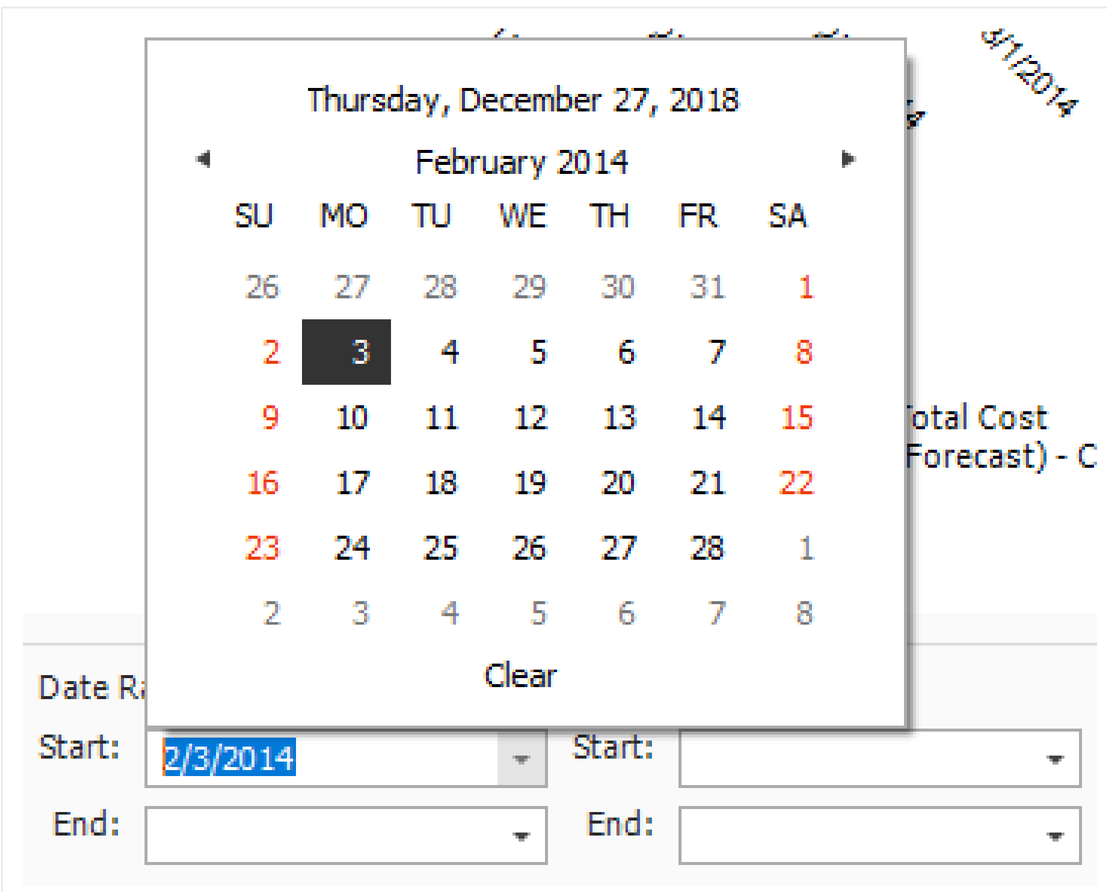



6. Click **OK** to close the Display Settings window.
   - Your Total Cost (Forecast) displays as a dashed red line, indicating your accrued costs based on when your cost items are scheduled and the assigned cost curves for each cost item.
   - Your Total Price (current) displays as a dashed green line, indicating the revenue you've earned, based on the timing of your pay items
   - Your Total Cost (Forecast) – Cash displays as a solid red line, indicating your costs, based on when your cost items are scheduled *and* the cost timing defined in Cash Flow Options
   - Your Total Price (current) – Cash displays as a solid green line, indicating your revenue, based on the timing of your pay items *and* the revenue timing defined in Cash Flow Options
   - Your Cash Flow displays grey bars indicating when your cash flow is negative or positive

- Your Finance Cost displays as a blue line on the graph




7. To filter your graph by date range, click on the **Start** drop-down arrow and select a start date of your date range filter.




8. Click on the **End** drop-down arrow and select an end date of your date range filter.

- Your graph now only includes your cost items that fall within the specified date range

9. To remove the filter, click in the **Start** field and press the **Backspace** key.
10. Do the same for the End field.

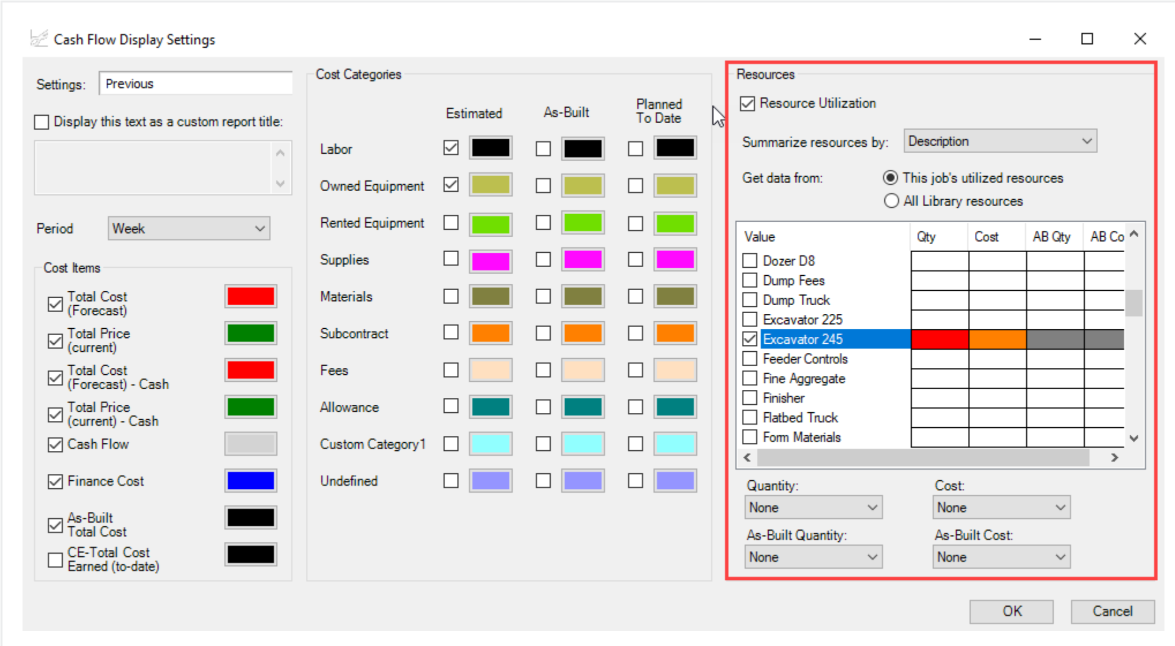
## 6.3.3 Resource Utilization

You can also use the Cash Flow graph to report on resource utilization. For example, you may want to run a report that displays a work hours curve for a particular labor trade or to see the peak usage times for a particular piece of heavy equipment.

You can run resource utilization graphs based off of any of the following:

- Resource Type
- Resource Code
- Description
- Organizational Category
- Tag 1, 2, and 3
- Quote Group
- Account Code and Cost Item Account Code
- Fuel Type

You set up your resource utilization settings from the same Display Settings window you use for setting up Cash Flow, **Display Settings** in the Tools section of the Actions menu.

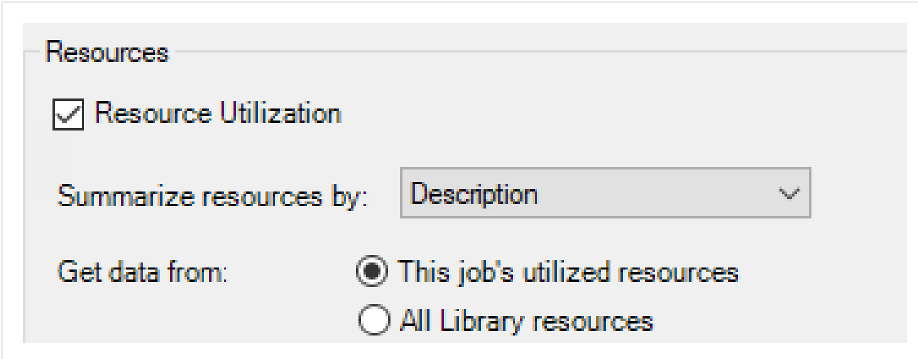



## 6.3.3.2 Resource Utilization Display Set Up

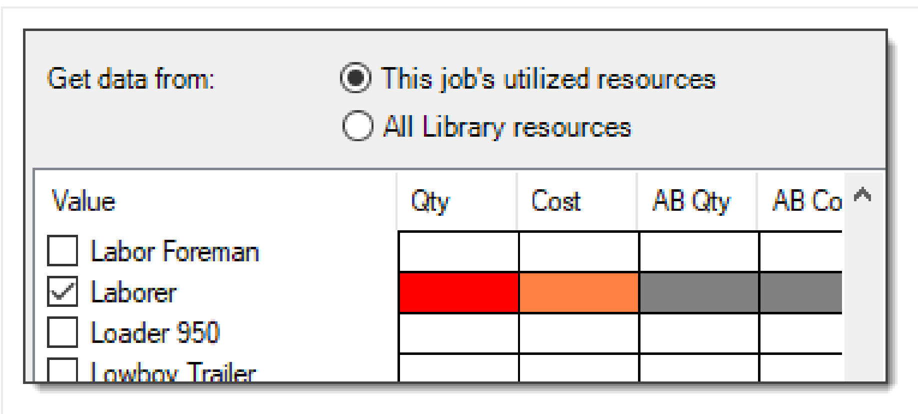
The following steps walk you through setting up your Cash Flow graph to report on Resource Utilization.

## Step by Step — Resource Utilization Display Setup

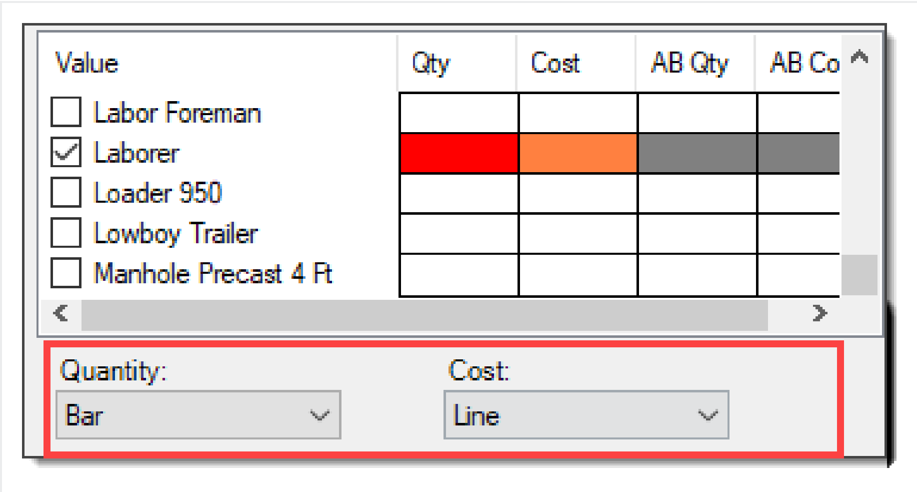
1. In the **E101 – Training Job**, from the Estimate tab, select **CashFlow** from the Schedule section.
2. On the Actions tab, select **Display Settings** to open the Display Settings window**.**
3. Make sure the all checkboxes are unchecked under the Cost Items and Cost Categories sections.
4. Under the Resources section, check the **Resource Utilization** checkbox.
5. From the Summarize resources by drop-down list, select **Description**.




6. From the resulting list of Values, select **Laborer**.
7. Click in the **Qty** field for the selected value and select a color of your choice.
   - In this case the Qty represents the work hours for your Laborer resource
8. Click in the **Cost** field for the selected value and select a different color of your choice.

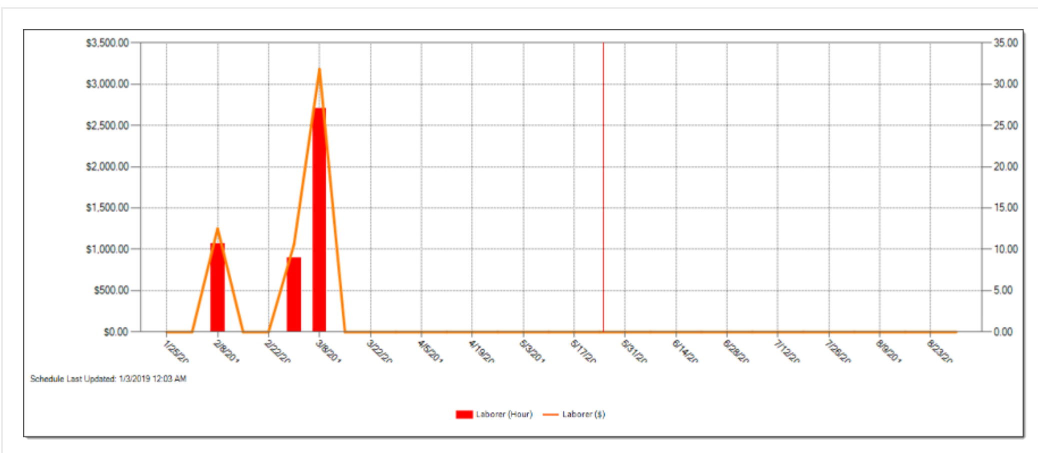



9. From the **Quantity and Cost** drop down lists, you can select how your quantities and costs will display on the graph. In this case select the Quantity to display as a **Bar** and Cost to display as a **Line**.




10. Click **OK** to close the Display Settings window.

- The graph now displays the utilization of your Laborer resource, showing the work hours and costs used over time




The graphs displayed on the Cash Flow form are based on the estimated cost of each cost item and its resource employments (in the case of resource utilization).

## Lesson 6 Review

1. Under what cash flow form can you set up your revenue and cost timing?
   a. Cash Flow Options
   b. Display Settings
   c. Worksheet
   d. Page Setup

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2. By default, the red dashed line on the Cash Flow graph represents the:
   a. Total Cost (Forecast)
   b. Total Price (current)
   c. Total Cost (Forecast) – Cash
   d. Total Price (current) - Cash

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3. In the Cash Flow Display Settings, Resource Utilization allows you to view a graphical summarization of your resources by which of the following? (Select all that apply)
   a. Resource File Description
   b. Resource Type
   c. Resource Code
   d. Description
   e. Wage Zone
   f. Organizational Category

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## Lesson 6 Summary

As a result of this lesson, you can:

- Interpret cash flow and resource utilization on the Cash Flow graph
- Select Cash Flow Options
- Change Cash Flow Display Settings

# LESSON 7 – INEIGHT ESTIMATE CALCULATORS

### Lesson Duration: 20 Minutes

### Lesson Objectives

After completing this lesson, you will be able to:

- Use the Haul Calculator
- Use the Trench Calculator
- Use the In-Field Calculator

### Lesson Topics

# 7.1 HAUL CALCULATOR

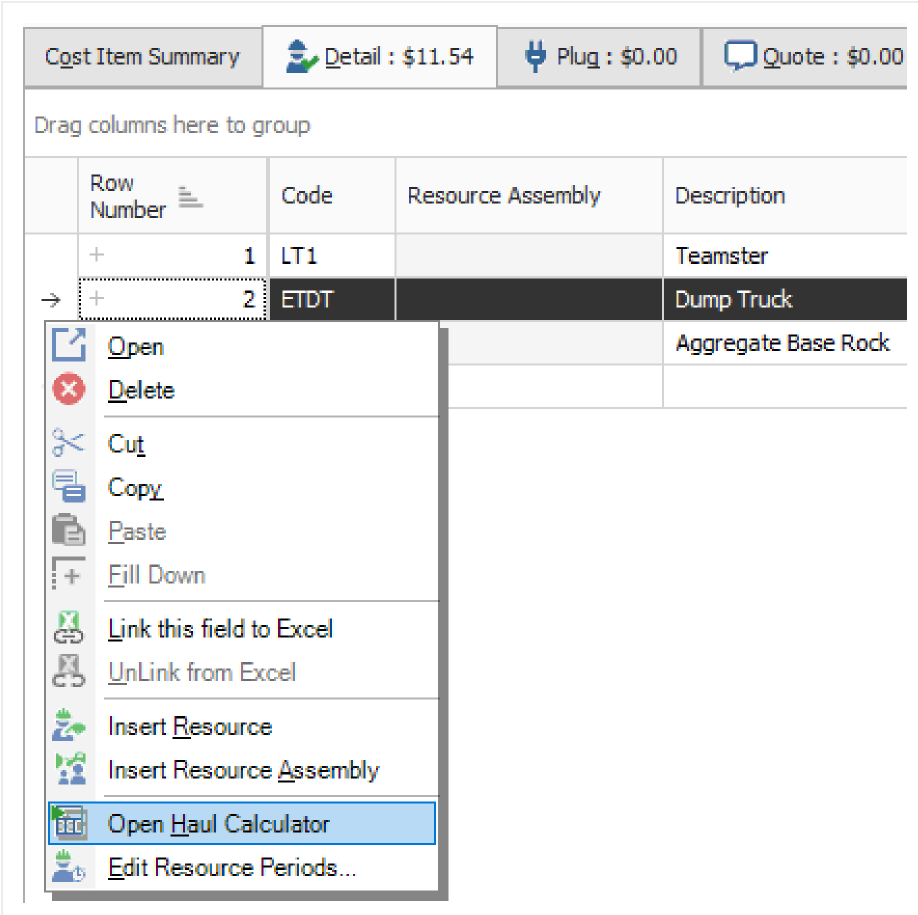
The **Haul Calculator** allows you to enter the specifics of up to three haul routes (distance, travel speed, etc.). Once entered, you can either:

- Calculate the number of trucks required to complete the haul in a set amount of time, or
- Calculate how long it will take to complete the haul with a set number of trucks

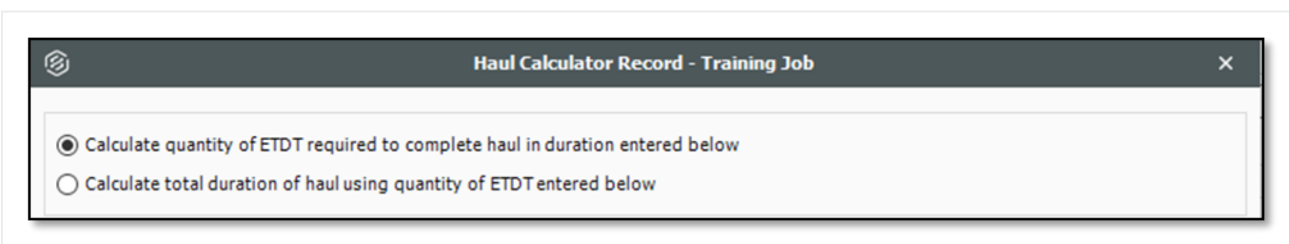
The following activity walks step by step through using the Haul Calculator to calculate the number of trucks needed for a cost item.

## Step by Step — Haul Calculator – Calculate Quantity of Trucks

1. Open the **Training Job** and from the Estimate tab, select **Cost Breakdown Structure**.
2. Open cost item **4.1 – Furnish & Haul Base Material**.
3. On the Cost Item Record, click the **Detail tab**.
4. Right click on the **ETDT – Dump Truck** row header and select **Open Haul Calculator**.




5. On the Haul Calculator, select the **Calculate quantity of ETDT required to complete haul in duration entered below** radio button. (ETDT is the resource code for the Dump Truck you selected.)

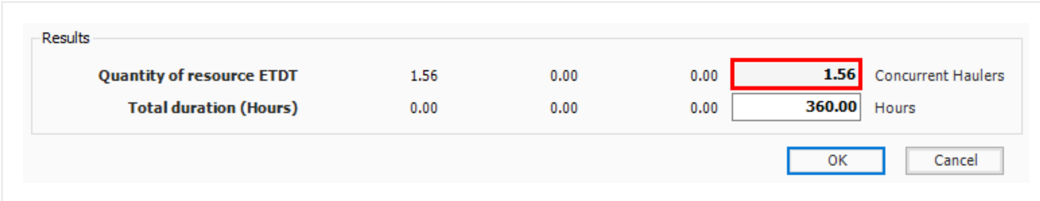



6. For the **Haul Distance**, type **5**.
7. Enter an **Average Payload (Ton)** of **30**.
8. For **Load Time (Minutes)**, type **3**.
9. Enter a **Travel Speed Full** of **35** Mile/Hour.

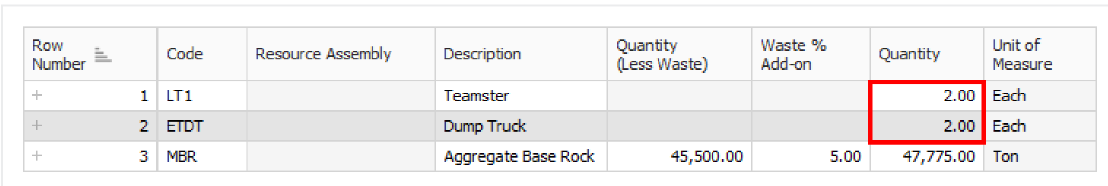
10. For **Dump Time (Minutes)**, type **2**.
11. Enter a **Travel Speed Empty** of **45** Mile/Hour. Notice this calculates a cycle time of 20.24.
12. Enter a **Work Efficiency** of **90 percent**.

| | Route 1 |
|---|---|
| Quantity (Ton) | 45,000.00 |
| Haul Distance - One Way (Mile) | 5.00 |
| Average Payload (Ton) | 30.00 |
| Total Loads | 1,500.00 |
| Load Time (Minutes) | 3.00 |
| Travel Speed Full (Mile/Hour) | 35.00 |
| Dump Time (Minutes) | 2.00 |
| Travel Speed Empty (Mile/Hour) | 45.00 |
| Cycle Time (Minutes) | 20.24 |
| Work Efficiency (%) | 90.00 |
| Total Hauler Hours | 562.17 |
| Hours Per Shift | 8.00 |

- The calculator shows a result of 1.56 concurrent haulers



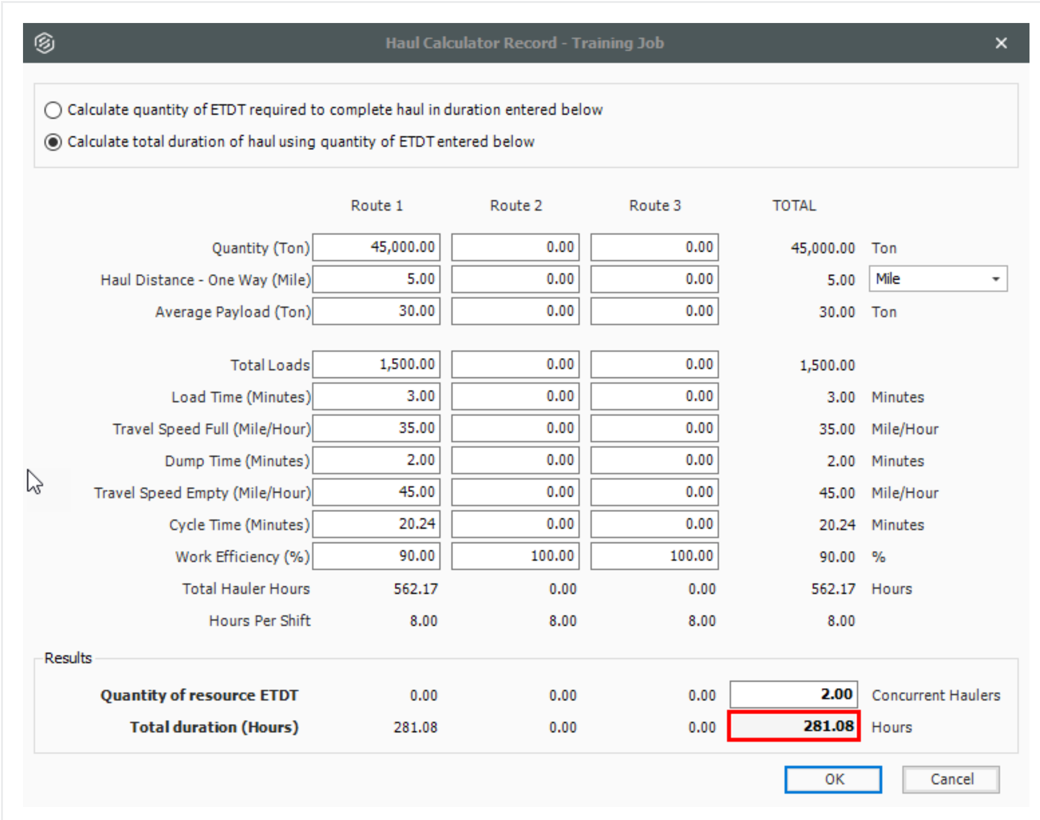

13. Click **OK**.
14. Your cost item now shows a quantity of 1.56. Round up the Quantity to **2**. Also, adjust the Teamster Quantity to **2** (if needed).



| Row Number | Code | Resource Assembly | Description | Quantity (Less Waste) | Waste % Add-on | Quantity | Unit of Measure |
|---|---|---|---|---|---|---|---|
| 1 | LT1 | | Teamster | | | 2.00 | Each |
| 2 | ETDT | | Dump Truck | | | 2.00 | Each |
| 3 | MBR | | Aggregate Base Rock | 45,500.00 | 5.00 | 47,775.00 | Ton |

## Step by Step — Haul Calculator – Calculate Total Duration

1. Open the **Training Job** and from the Estimate tab, select **Cost Breakdown Structure**.
2. Open cost item **4.1 – Furnish & Haul Base Material**.
3. On the Cost Item Record, click the **Detail** tab.
4. Change your Teamster and Dump Truck quantities back to **2 each**.
5. Right click on the **ETDT – Dump Truck** row header and select **Open Haul Calculator**.
6. On the Haul Calculator, select the **Calculate total duration of haul using quantity of ETDT entered below** radio button.
    - With the previous information you entered still there, the calculator calculates a total duration of 281.08 hours




7. Click **OK**.
   - The Hours field on the Production tab updated to 281.08
   - Your ETDT Dump Truck quantity remains at 2

# 7.2 TRENCH CALCULATOR

The **Trench Calculator** allows you to quickly calculate trench, pipe, and bedding values. You can perform pipe-related take-off by defining the details of the trench (e.g., length, depth, width, hinge elevation, backslope, and swell factor), the pipe (diameter, elevation, and waste factor), and up to four beddings.

With this information, the Trench Calculator can automatically calculate:

- Total excavation volume (neat-line)
- Total excavation volume (including swell/shrinkage)

- Total pipe to purchase
- Lift Volume (for up to four beddings)
- Lift Weight (for up to four beddings)

You can use these calculations to define certain cost item setup data:

- You can use the Total Excavation Volume that is calculated as the quantity of the cost item
- You can use the Total pipe to purchase calculation as the quantity of a resource (e.g., pipe) that has been employed to the cost item
- You can use the Lift Volume or Lift Weight that is calculated as the quantity of a resource employed to the cost item in either cubic yards or tons
- You can click the Toggle English / Metric button at the bottom of the dialog to switch between the English and Metric systems for entering data

TIP You can access the Trench Calculator from the Actions tab of a Cost Item Record

NOTE When copying cost items in a job or from job to job, the Trench Calculator variable data is included with the data being copied. When a cost item is copied to the clipboard, Trench Calculator variable data is also included.

## 7.2.1 Trench Calculator – Trench Tab

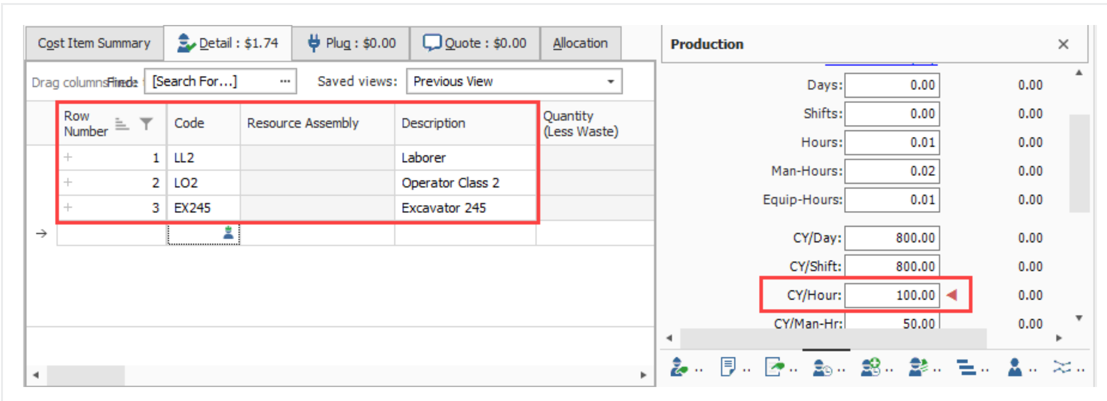
The following steps walk through using the Trench Calculator to take-off excavation volume.

### Step by Step — Trench Calculator – Trench

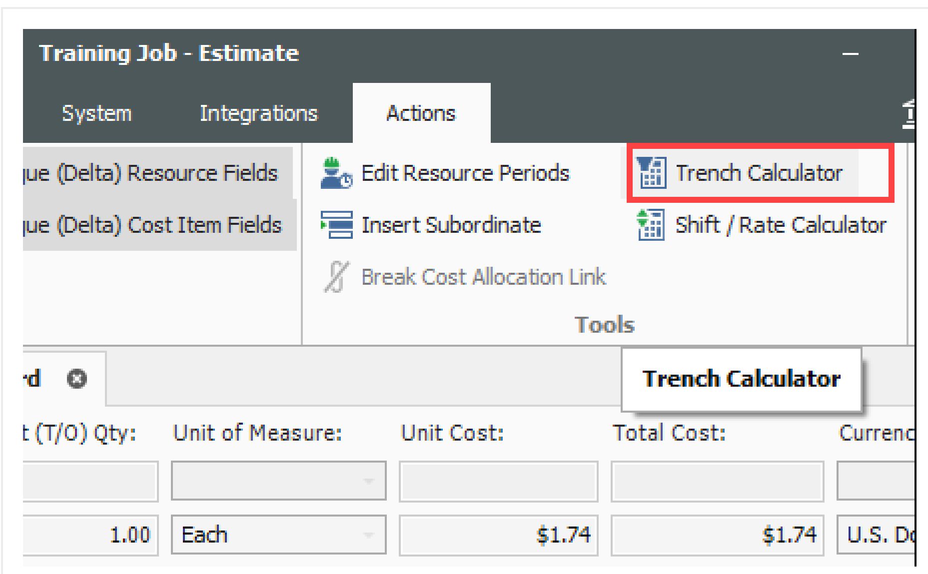
1. Open the **Training Job** and from the Estimate tab, select **Cost Breakdown Structure**.
2. Create a new cost item from the bottom row of your CBS and call it **24” Pipe**.
3. Add the following three subordinates and update their Units of Measure:
    - Excavate Trench: **CY**
    - Install Pipe: **LF**
    - Backfill Trench: **CY**
4. Open the **Excavate Trench** Cost Item Record. Add the following resources:

- **LL2 Laborer – 1**
- **LO2 Operator Class 2 – 1**
- **EX245 Excavator 245 – 1**

5. Adjust the Production to: **100 CY/Hour**.

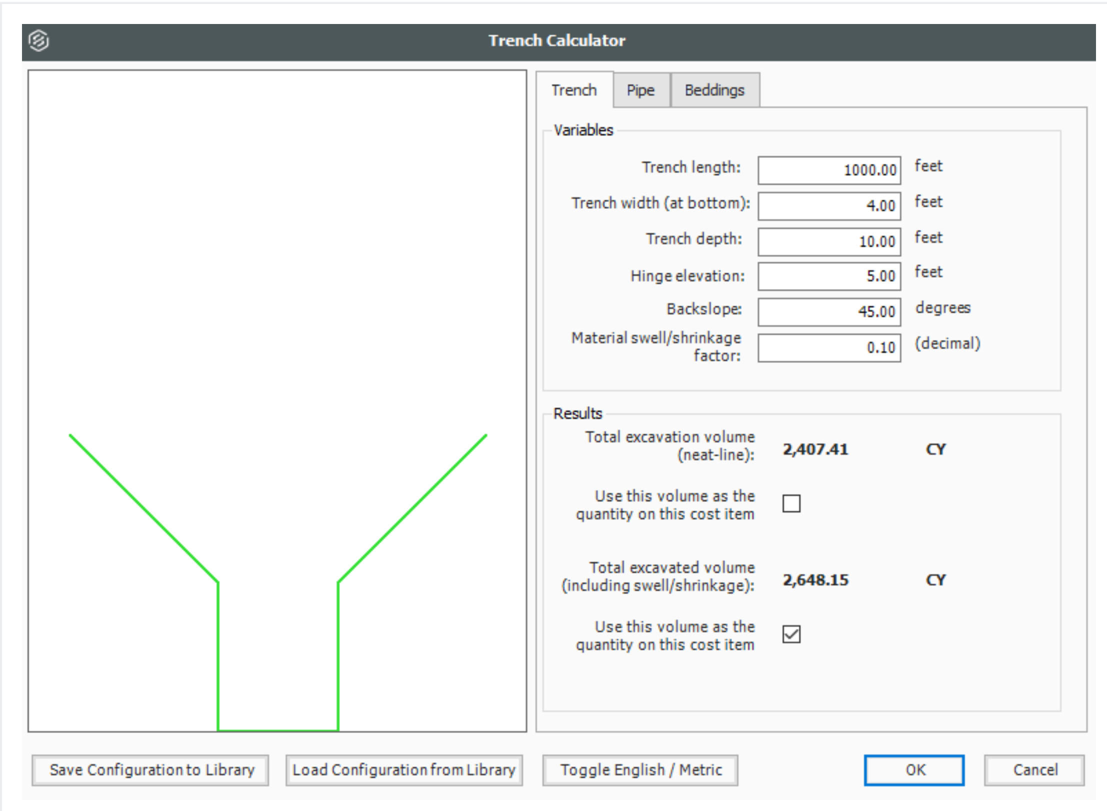



6. On the Cost Item Record's Actions tab, select **Trench Calculator**.




7. For **Trench Length**, type **1000.00** feet.
8. For **Trench Width** (at the bottom) type **4.00** feet.
9. Enter a **Trench Depth** of **10.00** feet.
10. Enter a **Hinge Elevation** of **5.00** feet.

11. Enter a **Backslope** of **45** degrees.
12. Define the **Material Swell/Shrinkage Factor** (fraction expressed as a decimal) at **.10**.
    - You can select either a "neat-line" total volume or include swell/shrinkage
13. Select the "Total excavated volume (including swell/shrinkage)" checkbox.



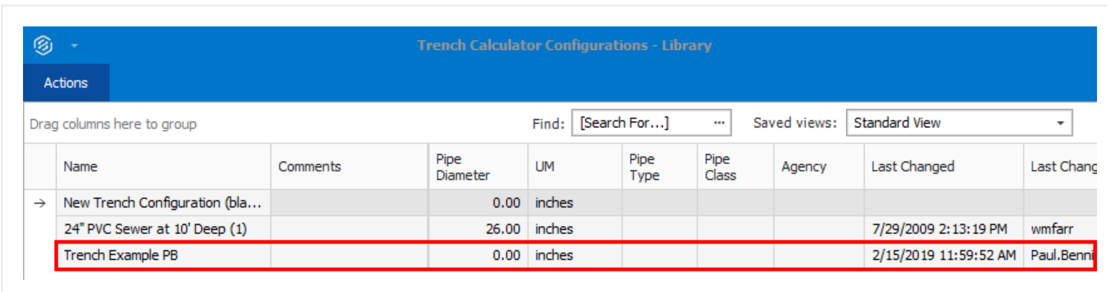

14. Click **Save Configuration to Library** and save the Trench calculator as **Trench Example** with your initials.
15. Click **OK**.

## 7.2.2 Trench Calculator – Pipe Tab

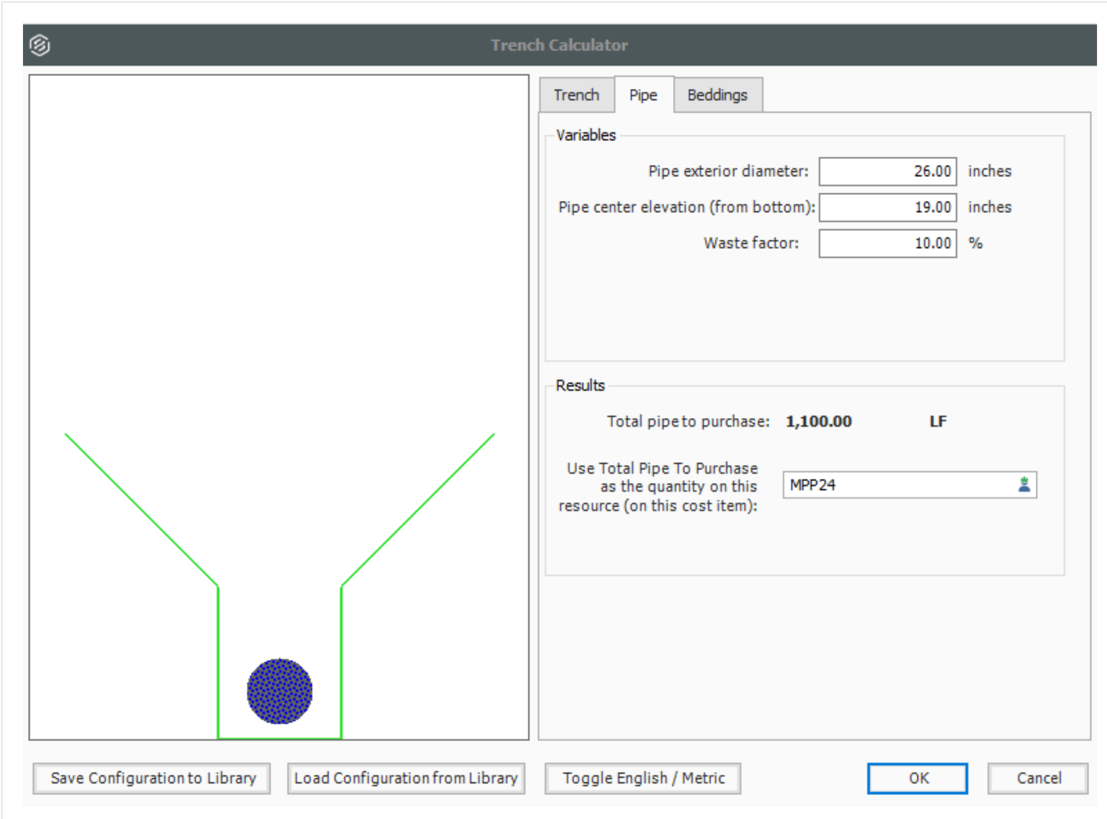
You can also use the Trench Calculator to take off how much piping and bedding you need for the trench.

## Step by Step — Trench Calculator – Pipe

1. On the CBS Register, adjust the Forecast T/O Quantity for the Install Pipe cost item to **1000** LF.
   - Assume this quantity is based off manual take-off calculations you already did
2. Open the **Install Pipe** Cost Item Record.
3. Add the Resource Assembly of **CPIPE - Pipe Crew** and adjust the production to **300** LF / Day.
4. On the Cost Item Record's Actions tab, select **Trench Calculator**.
5. Select **Load Configuration from Library**.
6. Select **Trench Example** (with your initials).




7. Click **OK**.
8. On the Trench Calculator, select the **Pipe** tab.
9. Enter the following for the size and position of the pipe:
   - Pipe exterior diameter: **26.00** inches
   - Pipe center elevation (from bottom): **19.00** inches
   - Waste factor: **10**%
10. Click on the resource icon to pull up the Resource Rate Register.
11. Select the Installed Material tab.
12. Select **MPP24 Pipe 24" PVC SDR35**, then click **OK**.
    - The Pipe variables you entered should match the following image:




13. Click **Save Configuration to Library** and save the Trench calculator as **Trench Example** with your initials.
14. When prompted to overwrite the existing saved file, click **Yes**.
15. Click **OK** to close the Trench Calculator.

## 7.2.3 Trench Calculator – Beddings Tab

The following steps walk you using the Trench Calculator to calculate bedding take-offs.

### Step by Step — Trench Calculator – Beddings

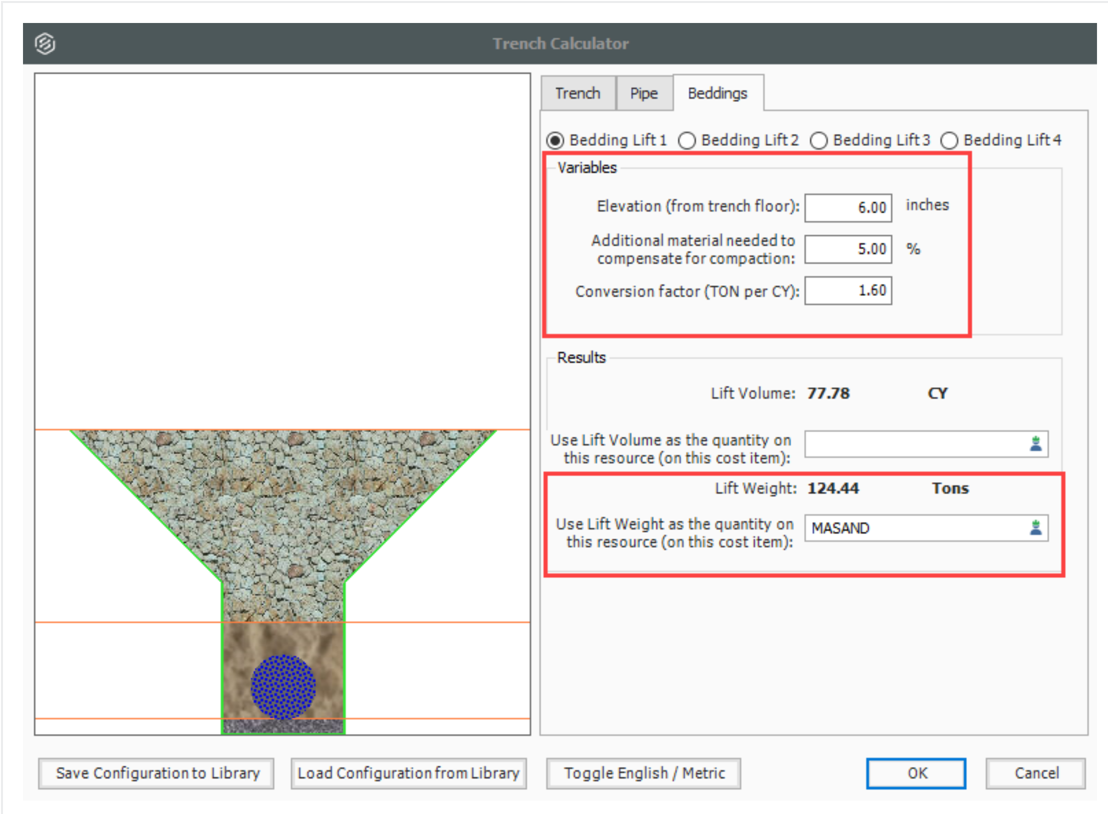
1. Back on the CBS Register, adjust the Forecast T/O Quantity for **Backfill Trench** to **2300** CY, based on manual calculations.
2. Open the **Backfill Trench** Cost Item Record.

3. Add the following resources:
    - **LL2 Laborer** – **3**
    - **LO2 Operator Class 2** – **1**
    - **RPC Plate Compactor** – **1**
    - **EL950 Loader 950 – 1**
4. Adjust the Production to **160** CY/Day.
5. From the Cost Item Record's Actions tab, select **Trench Calculator**.
6. Select **Load Configuration from Library**
7. Select **Trench Example** (with your initials), then click **OK**.
8. On the Trench Calculator, select the **Beddings** tab.
9. On the Beddings tab, you can define up to four beddings to backfill the trench
    - The variables you enter will determine how much bedding you need
10. Enter the following variables for each bedding:

| | Bedding Lift 1 | Bedding Lift 2 | Bedding Lift 3 |
|---|---|---|---|
| Elevation (from trench floor) | 6.00 | 38.00 | 76.00 |
| Additional material needed | 5.00 | 5.00 | 5.00 |
| Conversion factor | 1.60 | 1.70 | 1.60 |

    - Under Results, you can match each of the Bedding Lifts with a material resource, by selecting the **resource** icon and selecting the resource you want to employ from the Material tab
11. Selecting the resource from the Tons selection field, select the following materials for each bedding:

| | Resource Code | Resource Description |
|---|---|---|
| Bedding Lift 1 | MASAND | Sand |
| Bedding Lift 2 | MAFA | Fine Aggregate |
| Bedding Lift 3 | MACA1-1/2 | Coarse Aggregate |




12. Click **OK**.

- Note that the pipe and bedding materials are added to the cost item with their quantities

| Row Number | Code | Resource Assembly | Description | Quantity (Less Waste) | Waste % Add-on | Quantity | Unit of Measure |
|---|---|---|---|---|---|---|---|
| 1 | LL2 | | Laborer | | | 3.00 | Each |
| 2 | LO2 | | Operator Class 2 | | | 1.00 | Each |
| 3 | RPC | | Plate Compactor | | | 1.00 | Each |
| 4 | EL950 | | Loader 950 | | | 1.00 | Each |
| 5 | MASAND | | Sand | 124.44 | 0.00 | 124.44 | Ton |
| 6 | MAFA | | Fine Aggregate | 593.66 | 0.00 | 593.66 | Ton |
| 7 | MACA1... | | Coarse Aggregate ... | 3,327.59 | 0.00 | 3,327.59 | Ton |

## Exercise 7.1 — Trench Calculator

In this exercise, you will practice using the Trench Calculator to take-off piping and bedding materials. Complete the following steps:

1. In the **Training Job**, create a new cost item called **Underground Pipe**.
2. Give the cost item a quantity and unit of measure of **1640 Linear Feet**.
3. Open the new cost item and open the **Trench Calculator**.
4. On the **Trench tab**, enter the variables for the trench:

| Trench length | 1000 feet |
|---|---|
| Trench width (at bottom) | 4 feet |
| Trench depth | 10 feet |
| Hinge elevation | 5 feet |
| Backslope | 45 degrees |
| Material swell/shrinkage factor | 0.10 (decimal) |

   - Do NOT check the box to bring in volume shrinkage.
5. Select the **MPR36** material resource from the drop-down Results list.
6. On the **Beddings** tab, enter bedding variables.

| Bedding lift 1 | |
|---|---|
| Elevation (from trench floor) | 6 inches |
| Additional material needed to compensate for compaction | 5.00% |
| Conversions factor (Ton per CY) | 1.3 |

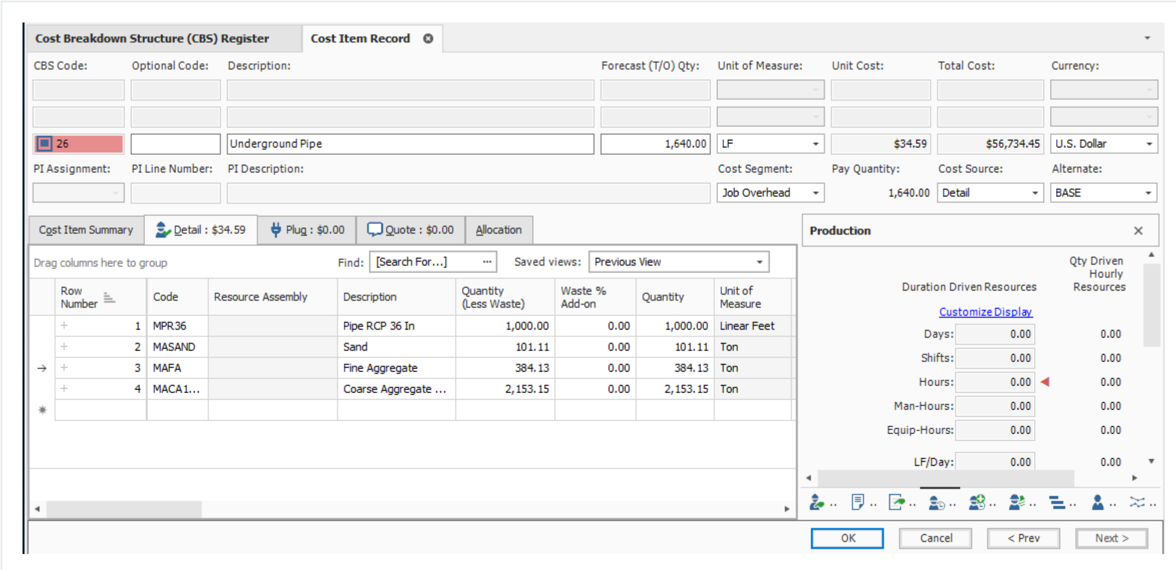
| Bedding lift 1 | |
|---|---|
| Bedding material resource (Tons) | MASAND |

| Bedding lift 2 | |
|---|---|
| Elevation (from trench floor) | 38 inches |
| Additional material needed to compensate for compaction | 5.00% |
| Conversions factor (Ton per CY) | 1.1 |
| Bedding material resource (Tons) | MAFA |

| Bedding lift 3 | |
|---|---|
| Elevation (from trench floor) | 76 inches |
| Additional material needed to compensate for compaction | 5.00% |
| Conversions factor (Ton per CY) | 1.1 |
| Bedding material resource (Tons) | MACA1-1/2 |

7. Select **OK** and confirm that the pipe material and bedding materials populated the cost item.

## You should end up with the following results




**Congratulations, you have completed this exercise!**

# 7.3 IN-FIELD CALCULATOR

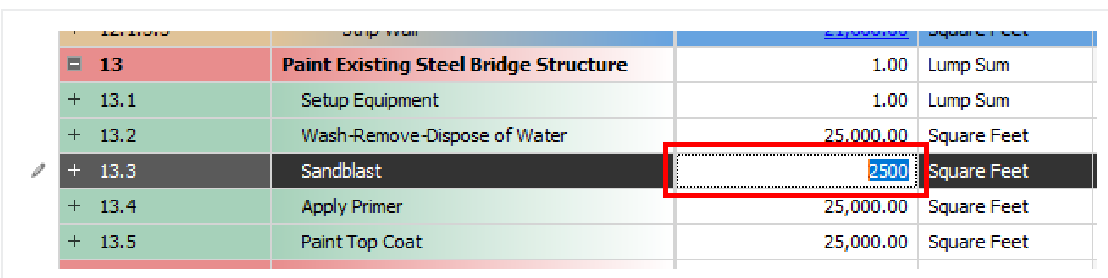
You can use the In-field Calculator to do simple mathematical calculations in any numeric field on records, registers, and tree lists. You use this calculator much like an Excel workbook field, by inserting the cursor in the field where you want to perform a calculation, then pressing the "=" key, followed by a valid arithmetic expression. To display the calculated result, you press the tab key. The resulting value is stored without the arithmetic expression used to calculate the value.

The following steps walk through using the In-field Calculator to calculate the area of how much sandblasting is needed for painting the steel bridge structure specified in the Training Job.

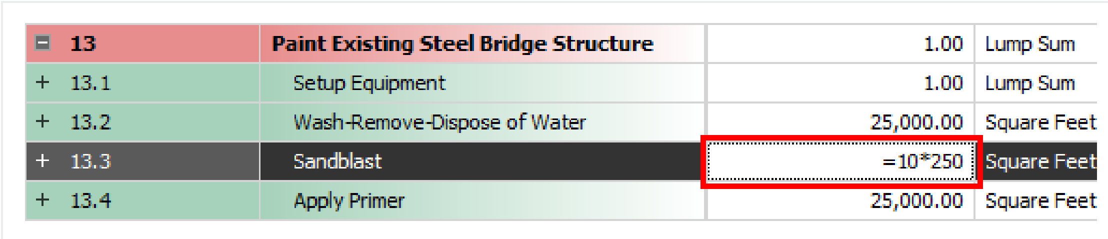
| NOTE | The resulting field value is stored without the arithmetic expression used to calculate the value. |
|---|---|

## Step by Step — In-Field Calculator

1. Open the **Training Job** and from the Estimate tab, select **Cost Breakdown Structure**.
2. Scroll to find cost item **13.3 Sandblast**.
3. Click in the **Forecast (T/O) Quantity** field.




4. Press the = key, then type **10*250**.




5. Press the **Tab** key and it calculates the result.

## Lesson 7 Review

1. The Haul calculator allows you to:
   a. Calculate the number of trucks required to complete the haul in a set amount of time
   b. Calculate how long it will take to complete the haul with a set number of trucks
   c. Neither
   d. Both

---

2. The Trench Calculator allows you to quickly calculate ____________ values.
   a. Trench
   b. Pipe
   c. Bedding
   d. All of the above

---

3. For the in-field calculator, what symbol needs to be at the beginning of the math equation for it to calculate?
   a. +
   b. –
   c. =
   d. (

---

## Lesson 7 Summary

As a result of this lesson, you can:

- Use the Haul Calculator
- Use the Trench Calculator
- Use the In-Field Calculator