INEIGHT

ESTIMATE ESSENTIALS USER GUIDE

ESTIMATE

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EXERCISES

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:

- Construct and modify cost estimates
- Calculate profit and finalize bid proposals

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 1	Estimating Core Concepts
Lesson 2	General Navigation
Lesson 3	Library Setup

Course Lessons	
Lesson 4	Project Setup
Lesson 5	Estimate Direct Costs
Lesson 6	Estimate Indirect Costs
Lesson 7	Finalize the Estimate

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.

> Tips are for important notes and information you want to remember.

> 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 1 – ESTIMATING CORE CONCEPTS

Lesson Duration: 30 Minutes

Lesson Objectives

After completing this lesson, you will be able to:

- Explain the estimating process in InEight Estimate
- Explain key terms and concepts

Lesson Topics

1.1 OVERVIEW OF THE ESTIMATING PROCESS

The estimating process typically progresses through the following five steps. If you are an Owner you may not take part in all five of these steps, but may instead do a few in an iterative process as you progress through stage gate approval phases.

1. Enter project details.

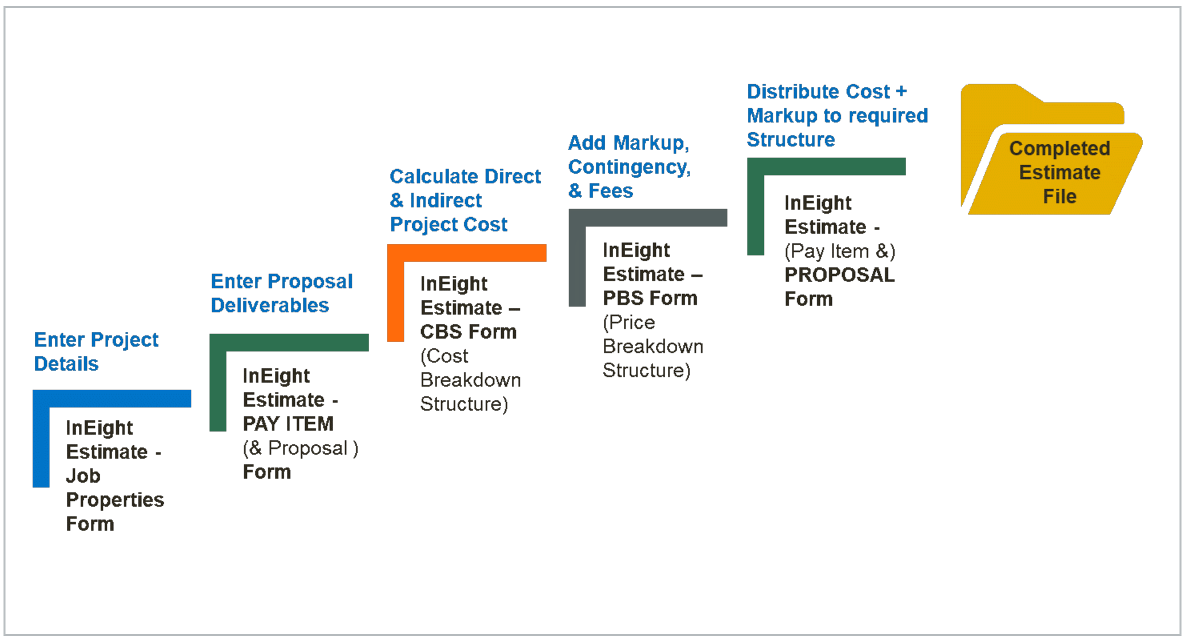
2. Enter proposal deliverables.

3. Calculate Direct & Indirect Project Cost.

4. Add Markup, Contingency, & Fees.

5. Distribute Cost + Markup to required structure.

The below table displays how these five steps correspond with specific forms in InEight Estimate:



Note the forms used in InEight Estimate to accomplish the steps above:

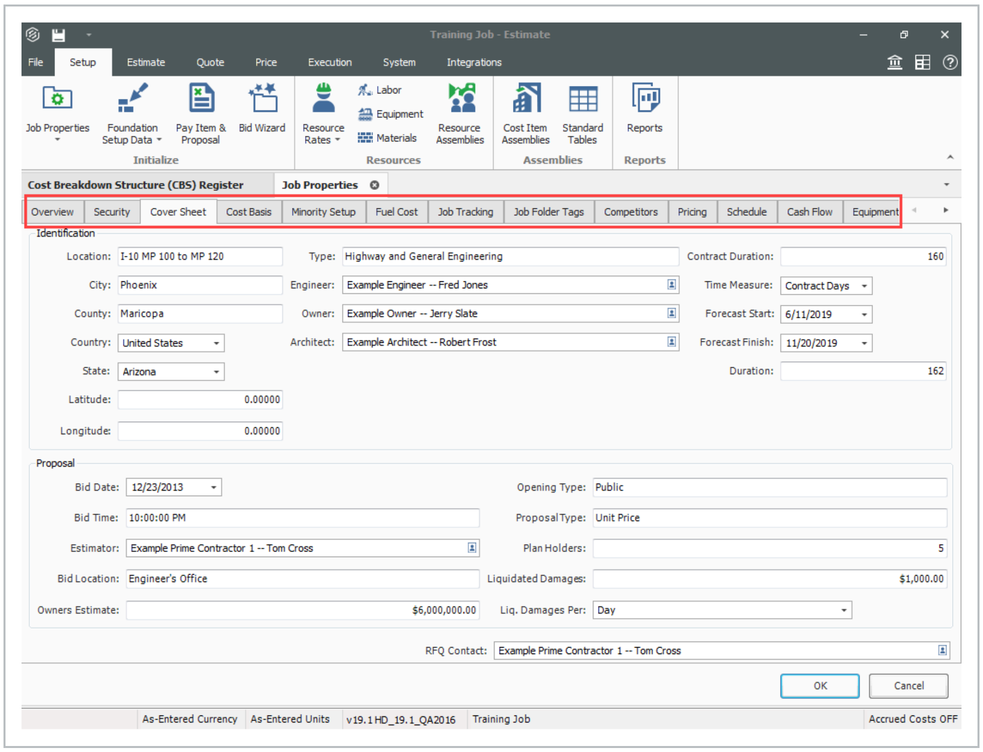
- Job Properties
- Pay Item & Proposal
- CBS (Cost Breakdown Structure)
- PBS (Price Breakdown Structure)

The rest of this section walks you through an overview of each step in the process and its corresponding form in InEight Estimate.

Step 1 - Enter Project Details

When you decide to estimate a new project, the first step is to create a new estimate and set it up with the general project details. In InEight Estimate, you'll enter basic information and project specific settings in the Job Properties form from the Setup tab.

The Job Properties form is organized into tabs to help you keep track of all the basic information and settings for the project. It begins with the Overview tab. You will move from left to right entering your project specific information and adjusting any settings that differ from the default.

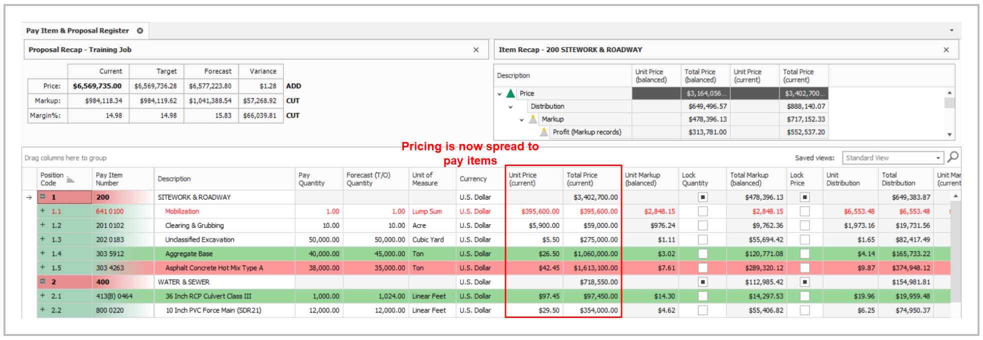


Step 2 - Enter Proposal Deliverables

For Contractors who are submitting a proposal to a client, this step enables you to enter the client provided deliverables clients are requesting pricing for. Most Owners will skip this step unless there is a need to track various funding sources or prepare for internal or external company billing.

In InEight Estimate this list of items is recorded in the Pay Item & Proposal Register on the Setup tab.

• Notice that your pay items have no pricing when first entered because you have yet to figure out costs. You will come back to this form later in the process to distribute your costs and markup.

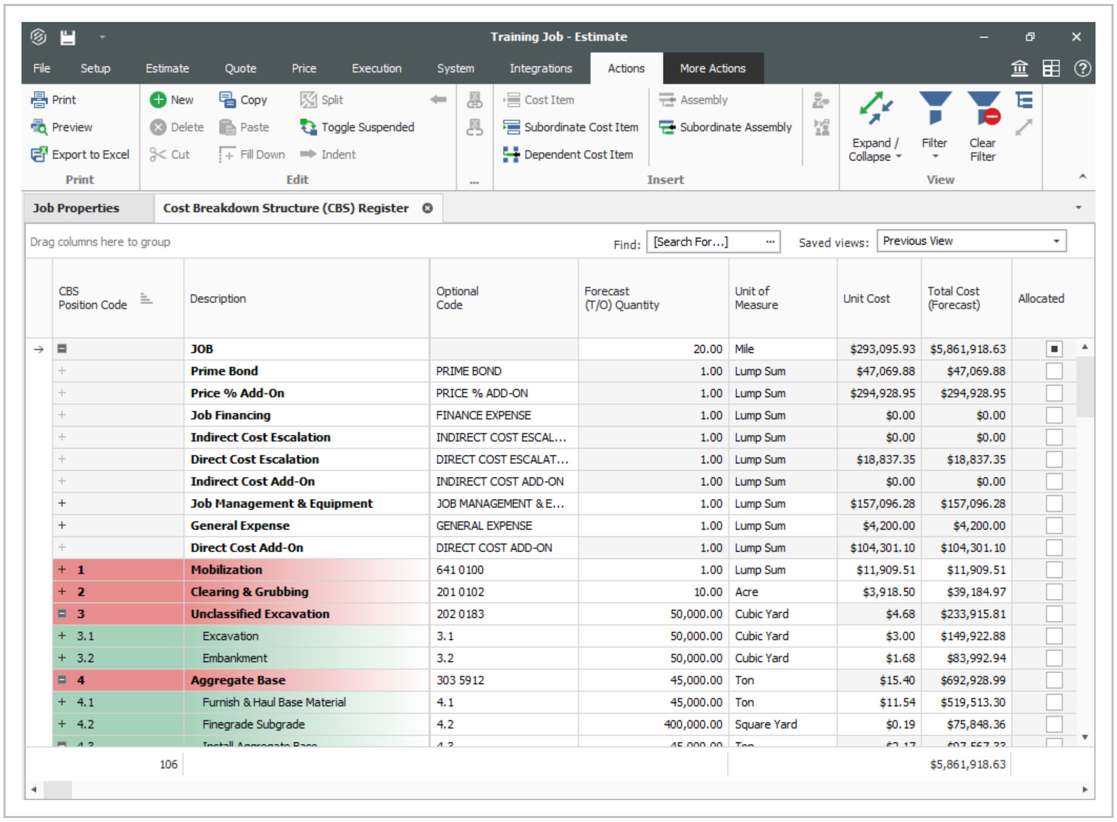


Step 3 - Calculate Direct & Indirect Project Cost

Once you’ve set up your estimate, you will perform take-offs and cost analysis to determine the total estimated cost to complete the entire scope of work.

The **Cost Breakdown Structure (CBS**) **Register** is the main form where you will do your cost estimating.

- It is the hierarchy of work activities that make up the estimate
- Each row in the CBS represents a work activity and is called a cost item



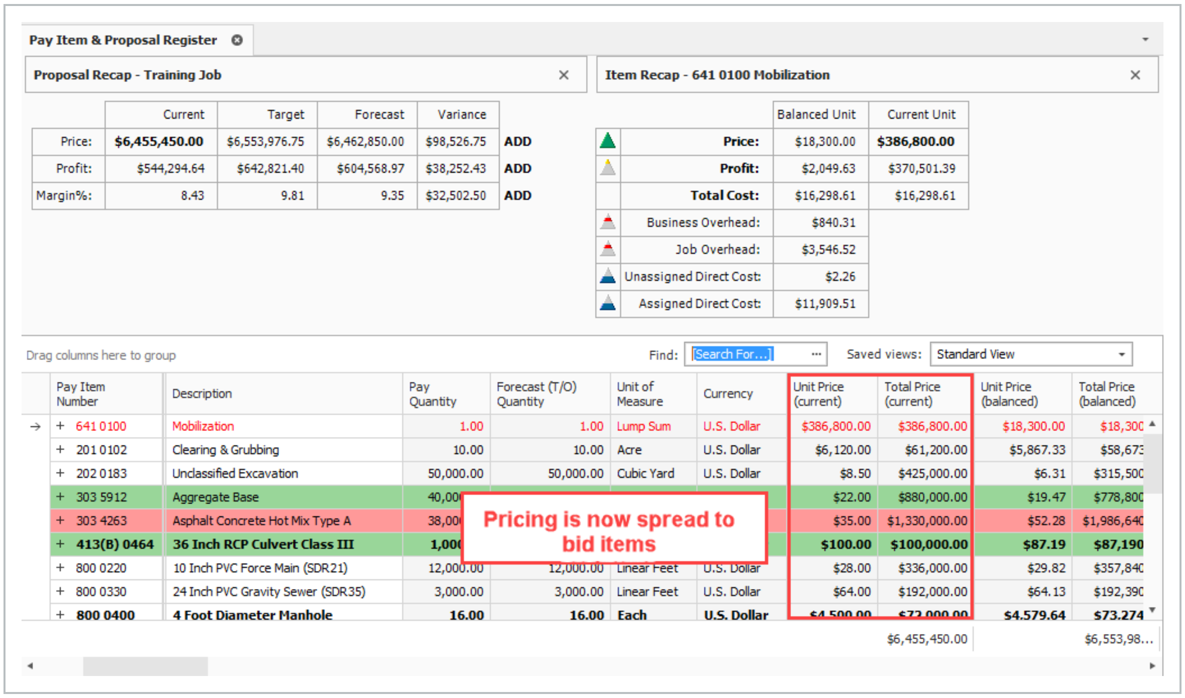
Step 4 - Add Markup, Contingency, & Fees

Once you have estimated all project costs, you may need to add markup, contingency or other fees and define the job’s profit in the Price Breakdown Structure form.

Description	Assigned	Unassigned	Total	% of Target
Price Breakdown Structure				
Target Price	$5,252,19...	$645,755.99	$5,897,950.68	100.00
Markup	$0.00	$315,692.95	$315,692.95	5.35
Target Profit		$0.00	$0.00	0.00
Indirect Cost Markup		$0.00	$0.00	0.00
Direct Cost Markup		$0.00	$0.00	0.00
Business Overhead	$0.00	$315,692.95	$315,692.95	5.35
Price % Add-On	$0.00	$265,407.78	$265,407.78	4.50
Job Financing	$0.00	$33,105.26	$33,105.26	0.56
Indirect Cost Escala...	$0.00	$2,131.11	$2,131.11	0.04
Direct Cost Escalation	$0.00	$15,048.80	$15,048.80	0.26
Business Overhead ...	$0.00	$0.00	$0.00	0.00
Total Cost	$5,252,19...	$330,063.05	$5,582,257.73	94.65
Indirect Cost	$0.00	$329,063.05	$329,063.05	5.58
Job Overhead	$0.00	$329,063.05	$329,063.05	5.58
Prime Bond	$0.00	$43,789.75	$43,789.75	0.74
Indirect Cost A...	$0.00	$5,888.67	$5,888.67	0.10
Direct Cost Add...	$0.00	$104,088.34	$104,088.34	1.76
Job Overhead I...	$0.00	$175,296.28	$175,296.28	2.97
Direct Cost	$5,252,19...	$1,000.00	$5,253,194.68	89.07
Direct Cost Items	$5,252,19...	$1,000.00	$5,253,194.68	89.07

Step 5 - Distribute Cost + Markup to required Structure

You now have a target price or total estimated value that you can spread to your required project deliverables, back in the Pay Item & Proposal form. InEight Estimate has tools within this form to help automatically distribute your cost, overhead and all markups to the listed items.



1.2 KEY CONCEPTS AND TERMS

To help you get started in InEight Estimate, you should know a few key terms:

- Job Folder
- Library
- Form
- Cost Item
- Pay Item
- Resource
- Assembly

1.2.1 Job Folder

Job folders hold all the information for an individual project estimate. It is possible to import master data into a job folder, but when you work in a job folder it is independent, meaning any activity performed in that folder will not affect any other jobs and will not affect the library.

> When moving back and forth between jobs, make sure to always double-check that you are in the right job.

1.2.2 Library

The Library is a storehouse for master data, such as:

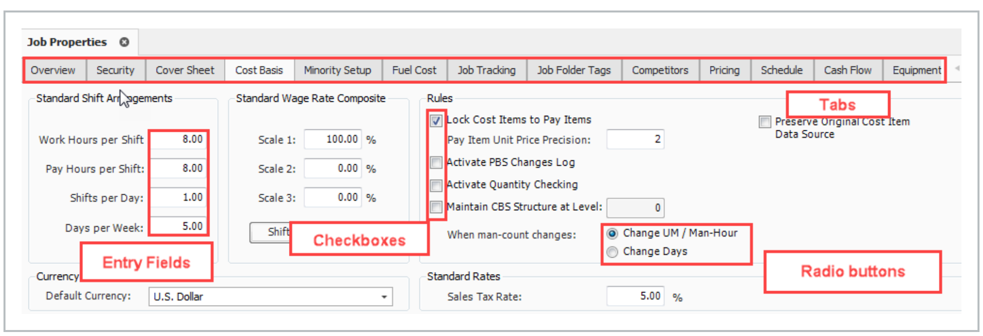
- Labor, equipment, and material unit cost rates
- Standard account codes
- Units of measure

When you create a new job from scratch, default data and settings copy from the Library into your new job folder, except for the resource rates. Multiple list of resource rates can be maintained in the library so you must select which rates to populate a new estimate with. Four tag fields are available to filter the resource rates you bring into an estimate from the master library. For example, you may select a subset of your labor rates based on the geographical location of the project.

1.2.3 Form

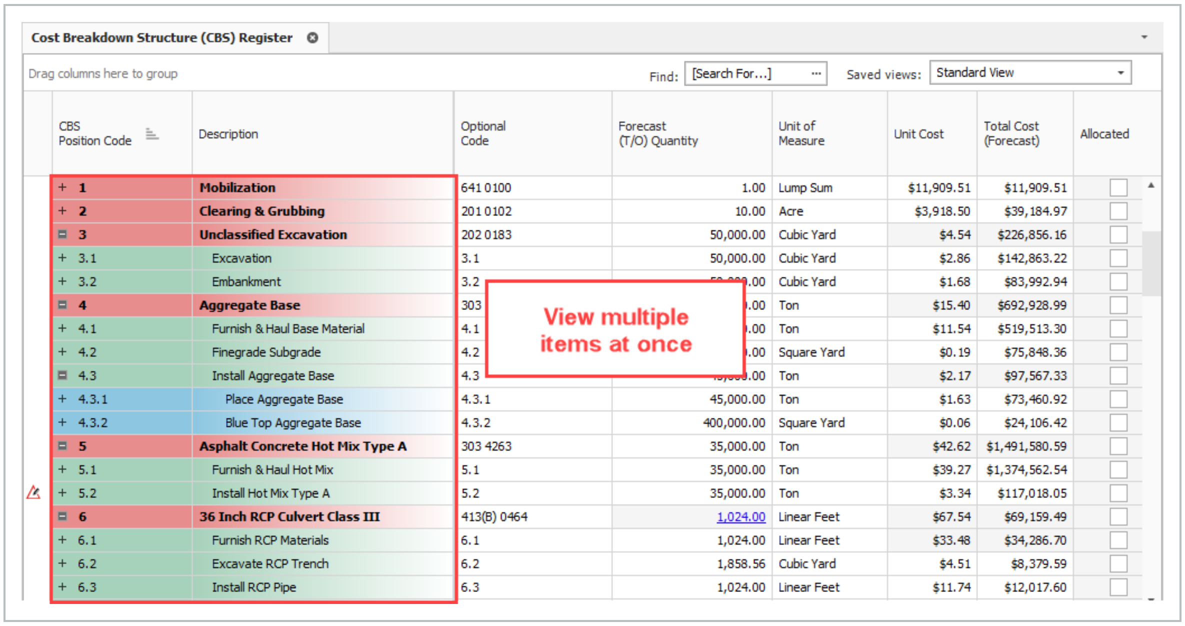
Any screen you open in InEight Estimate is considered a Form. There are three types of forms: Standard, Register, and Record forms.

Standard Forms resemble typical data entry forms with fields available to fill in key project information. They also may contain radio buttons or checkboxes to define settings for the job.



> InEight Estimate uses tabs to group and organize entry fields and settings in a logical way, so that the information is easy to access.

Register Forms have a grid format of rows and columns, giving it a spreadsheet look and feel. Register forms allow you to see information for multiple items at once. The Cost Breakdown Structure (CBS) Register is an example of a register form.

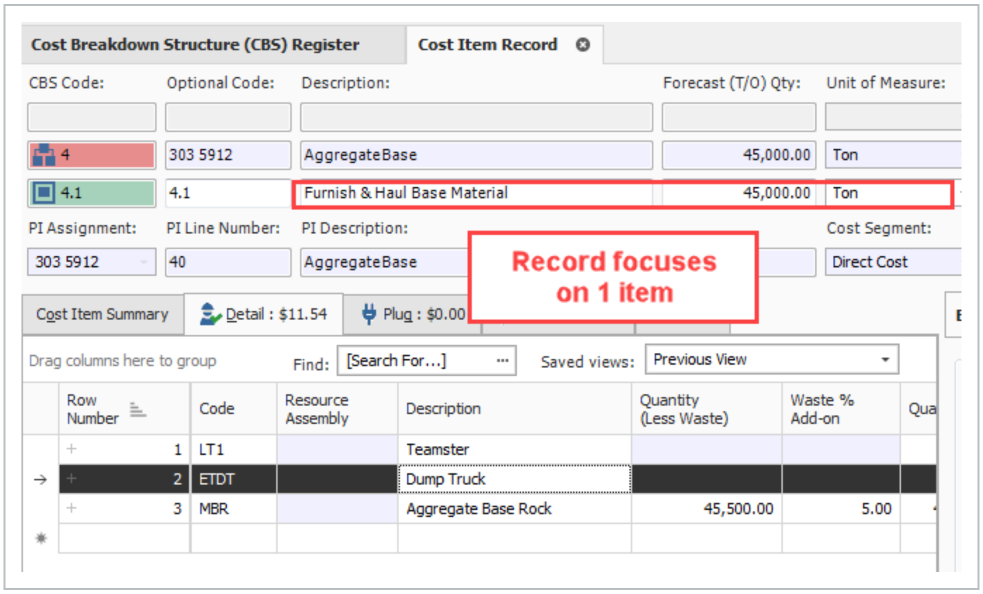


CBS Position Code	Description	Optional Code	Forecast (T/O) Quantity	Unit of Measure	Unit Cost	Total Cost (Forecast)	Allocated
1	**Mobilization**	641 0100	1.00	Lump Sum	$11,909.51	$11,909.51	
2	**Clearing & Grubbing**	201 0102	10.00	Acre	$3,918.50	$39,184.97	
3	**Unclassified Excavation**	202 0183	50,000.00	Cubic Yard	$4.54	$226,856.16	
3.1	Excavation	3.1	50,000.00	Cubic Yard	$2.86	$142,863.22	
3.2	Embankment	3.2	[illegible]	Cubic Yard	$1.68	$83,992.94	
4	**Aggregate Base**	303	[illegible]	Ton	$15.40	$692,928.99	
4.1	Furnish & Haul Base Material	4.1	[illegible]	Ton	$11.54	$519,513.30	
4.2	Finegrade Subgrade	4.2	[illegible]	Square Yard	$0.19	$75,848.36	
4.3	Install Aggregate Base	4.3	[illegible]	Ton	$2.17	$97,567.33	
4.3.1	Place Aggregate Base	4.3.1	45,000.00	Ton	$1.63	$73,460.92	
4.3.2	Blue Top Aggregate Base	4.3.2	400,000.00	Square Yard	$0.06	$24,106.42	
5	**Asphalt Concrete Hot Mix Type A**	303 4263	35,000.00	Ton	$42.62	$1,491,580.59	
5.1	Furnish & Haul Hot Mix	5.1	35,000.00	Ton	$39.27	$1,374,562.54	
5.2	Install Hot Mix Type A	5.2	35,000.00	Ton	$3.34	$117,018.05	
6	**36 Inch RCP Culvert Class III**	413(B) 0464	1,024.00	Linear Feet	$67.54	$69,159.49	
6.1	Furnish RCP Materials	6.1	1,024.00	Linear Feet	$33.48	$34,286.70	
6.2	Excavate RCP Trench	6.2	1,858.56	Cubic Yard	$4.51	$8,379.59	
6.3	Install RCP Pipe	6.3	1,024.00	Linear Feet	$11.74	$12,017.60	

In a register form, you can open a **Record** for individual items you want to drill into.

> The Tab key is the best way to move among fields in InEight Estimate (instead of the Enter key).

The below figure displays a Cost Item Record accessed by double clicking on that item on the Cost Breakdown Structure (CBS) Register.



1.2.4 Cost Item

Cost items are the individual cost-related activities that make up the project. Cost items are organized into a hierarchy in the Cost Breakdown Structure (CBS) Register. Each row in the CBS is considered a cost item.

CBS Position Code	Description	Optional Code	Forecast (T/O) Quantity	Unit of Measure	Unit Cost
+ **1**	**Mobilization**	641 0100	1.00	Lump Sum	$11,909.51
+ **2**	**Clearing & Grubbing**	201 0102	10.00	Acre	$3,918.50
− **3**	**Unclassified Excavation**	202 0183	50,000.00	Cubic Yard	$4.68
+ 3.1	Excavation	3.1	50,000.00	Cubic Yard	$3.00
+ 3.2	Embankment	3.2	50,000.00	Cubic Yard	$1.68
− **4**	**Aggregate Base**	303 5912	45,000.00	Ton	$15.40
+ 4.1	Furnish & Haul Base Material	4.1	45,000.00	Ton	$11.54
+ 4.2	Finegrade Subgrade	4.2	400,000.00	Square Yard	$0.19
− 4.3	Install Aggregate Base	4.3	45,000.00	Ton	$2.17
+ 4.3.1	Place Aggregate Base	4.3.1	45,000.00	Ton	$1.63
+ 4.3.2	Blue Top Aggregate Base	4.3.2	400,000.00	Square Yard	$0.06

1.2.5 Pay Item

Pay items typically represent the owner required deliverables a contractor must submit pricing for. Pay items are used to distribute the cost calculated in the Cost Breakdown Structure, with all markup, including any fees or contingencies calculated in the Price Breakdown Structure. This allows the total estimate value to be distributed to a structure that is different than the CBS. Pay Items are predominantly used by contractors to prepare a bid sheet. Owners may use pay items to identify funding sources or for various reporting needs.

Position Code	Pay Item Number	Description	Pay Quantity	Forecast (T/O) Quantity	Unit of Measure	Currency	Unit Price (current)	Total Price (current)
1	200	SITEWORK & ROADWAY				U.S. Dollar		$3,402,700.00
1.1	641 0100	Mobilization	1.00	1.00	Lump Sum	U.S. Dollar	$395,600.00	$395,600.00
1.2	201 0102	Clearing & Grubbing	10.00	10.00	Acre	U.S. Dollar	$5,900.00	$59,000.00
1.3	202 0183	Unclassified Excavation	50,000.00	50,000.00	Cubic Yard	U.S. Dollar	$5.50	$275,000.00
1.4	303 5912	Aggregate Base	40,000.00	45,000.00	Ton	U.S. Dollar	$26.50	$1,060,000.00
1.5	303 4263	Asphalt Concrete Hot Mix Type A	38,000.00	35,000.00	Ton	U.S. Dollar	$42.45	$1,613,100.00
2	400	WATER & SEWER				U.S. Dollar		$718,550.00
2.1	413(B) 0464	36 Inch RCP Culvert Class III	1,000.00	1,024.00	Linear Feet	U.S. Dollar	$97.45	$97,450.00
2.2	800 0220	10 Inch PVC Force Main (SDR21)	12,000.00	12,000.00	Linear Feet	U.S. Dollar	$29.50	$354,000.00

1.2.6 Resource

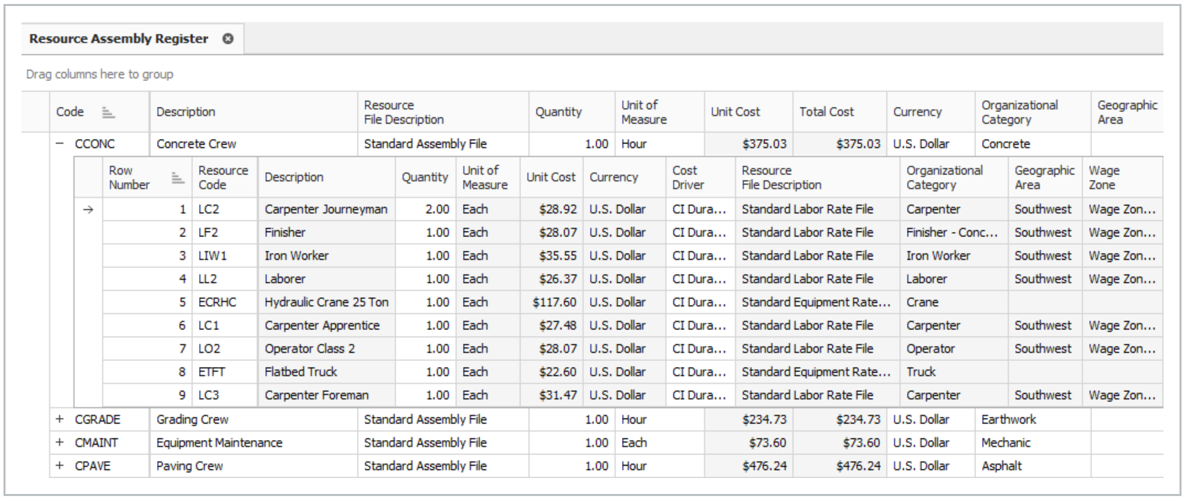
Resources are the building blocks of a detailed cost estimate.

Resources are the people, equipment, material, and supplies needed to complete the project. Resources are employed to cost items to develop an estimate, and are organized into seven categories or types:

1. Labor
2. Construction Equipment
3. Rented Construction Equipment
4. Installed Equipment
5. Installed Materials
6. Supplies
7. Unique

1.2.7 Resource Assembly

A **Resource Assembly** is a group of resources that are often used together. For example, for civil work, you may group together an operator foreman, operator, and laborer, along with a loader and excavator. When estimating, you can employ this assembly which includes all of the pre-selected resources.



Resource Assembly Register

Drag columns here to group

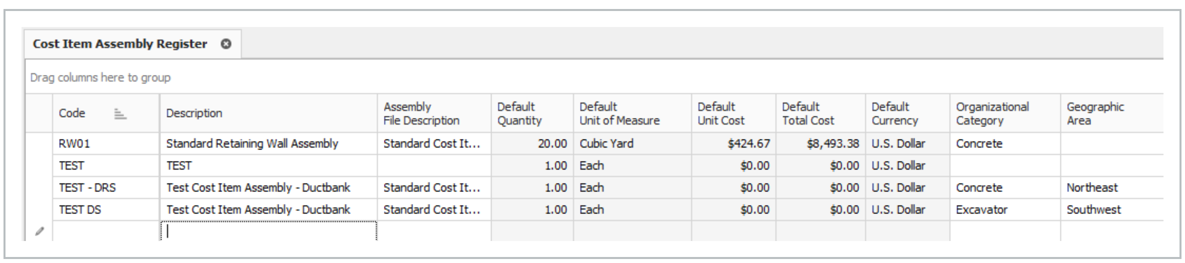
Code	Description	Resource File Description	Quantity	Unit of Measure	Unit Cost	Total Cost	Currency	Organizational Category	Geographic Area
− CCONC	Concrete Crew	Standard Assembly File	1.00	Hour	$375.03	$375.03	U.S. Dollar	Concrete	

Row Number	Resource Code	Description	Quantity	Unit of Measure	Unit Cost	Currency	Cost Driver	Resource File Description	Organizational Category	Geographic Area	Wage Zone
1	LC2	Carpenter Journeyman	2.00	Each	$28.92	U.S. Dollar	CI Dura…	Standard Labor Rate File	Carpenter	Southwest	Wage Zon…
2	LF2	Finisher	1.00	Each	$28.07	U.S. Dollar	CI Dura…	Standard Labor Rate File	Finisher - Conc…	Southwest	Wage Zon…
3	LIW1	Iron Worker	1.00	Each	$35.55	U.S. Dollar	CI Dura…	Standard Labor Rate File	Iron Worker	Southwest	Wage Zon…
4	LL2	Laborer	1.00	Each	$26.37	U.S. Dollar	CI Dura…	Standard Labor Rate File	Laborer	Southwest	Wage Zon…
5	ECRHC	Hydraulic Crane 25 Ton	1.00	Each	$117.60	U.S. Dollar	CI Dura…	Standard Equipment Rate…	Crane		
6	LC1	Carpenter Apprentice	1.00	Each	$27.48	U.S. Dollar	CI Dura…	Standard Labor Rate File	Carpenter	Southwest	Wage Zon…
7	LO2	Operator Class 2	1.00	Each	$28.07	U.S. Dollar	CI Dura…	Standard Labor Rate File	Operator	Southwest	Wage Zon…
8	ETFT	Flatbed Truck	1.00	Each	$22.60	U.S. Dollar	CI Dura…	Standard Equipment Rate…	Truck		
9	LC3	Carpenter Foreman	1.00	Each	$31.47	U.S. Dollar	CI Dura…	Standard Labor Rate File	Carpenter	Southwest	Wage Zon…

Code	Description	Resource File Description	Quantity	Unit of Measure	Unit Cost	Total Cost	Currency	Organizational Category	Geographic Area
+ CGRADE	Grading Crew	Standard Assembly File	1.00	Hour	$234.73	$234.73	U.S. Dollar	Earthwork	
+ CMAINT	Equipment Maintenance	Standard Assembly File	1.00	Each	$73.60	$73.60	U.S. Dollar	Mechanic	
+ CPAVE	Paving Crew	Standard Assembly File	1.00	Hour	$476.24	$476.24	U.S. Dollar	Asphalt	

1.2.8 Cost Item Assembly

A **Cost Item Assembly** is a predefined group of cost items that has cost based on estimator inputs to a set of questions. Cost item assemblies provide parameter-driven estimating and can also refer to reference tables. They allow companies to create intelligent construction systems to automatically estimate various scopes of work, based upon a user providing specification and dimension variables.



Cost Item Assembly Register

Drag columns here to group

Code	Description	Assembly File Description	Default Quantity	Default Unit of Measure	Default Unit Cost	Default Total Cost	Default Currency	Organizational Category	Geographic Area
RW01	Standard Retaining Wall Assembly	Standard Cost It…	20.00	Cubic Yard	$424.67	$8,493.38	U.S. Dollar	Concrete	
TEST	TEST		1.00	Each	$0.00	$0.00	U.S. Dollar		
TEST - DRS	Test Cost Item Assembly - Ductbank	Standard Cost It…	1.00	Each	$0.00	$0.00	U.S. Dollar	Concrete	Northeast
TEST DS	Test Cost Item Assembly - Ductbank	Standard Cost It…	1.00	Each	$0.00	$0.00	U.S. Dollar	Excavator	Southwest

Lesson 1 Review

1. Which InEight Estimate form is used to enter basic information about the job as well as define our cost basis?
    a. Pay Item & Proposal
    b. Job Properties
    c. Library
    d. Job Folder

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2. All default data and settings copy from the Library into your new job folder *except*:
    a. Labor rates
    b. Equipment rates
    c. Material rates
    d. All of the above

---

3. These are considered the “building blocks” of the job – you employ them to cost items to develop your estimate.
    a. Assemblies
    b. Pay Items
    c. Resources
    d. Forms

Lesson 1 Summary

As a result of this lesson, you can:

- Explain the estimating process in InEight Estimate
- Explain key terms and concepts

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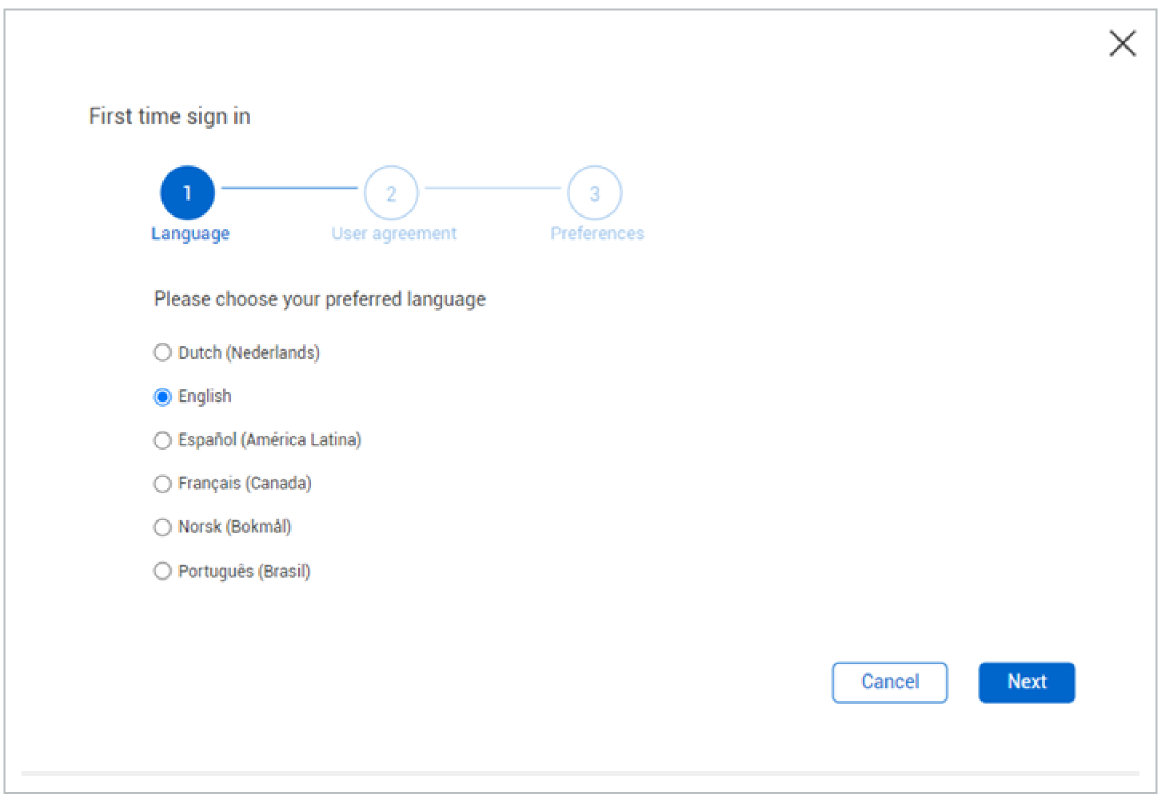
LESSON 2 – NAVIGATION

2.1 GENERAL NAVIGATION

As a new user to the InEight, the First-time sign in dialog box opens when you first sign in, and presents questions about your working environment in the Project Suite environment. Preferences are set for language, date, and number formats and the User Agreement, which you must accept before you begin. The First-time sign in dialog boxes only show for the initial sign-in to any of the InEight products.

Step by Step – Estimate preferences setup

1. Select your **preferred language**, and then click **Next**.



2. Scroll to the bottom of the user agreement, and then select the **check box** for the terms and conditions and privacy policy. **Click Next**.

> Make sure you have scrolled to the end of the user agreement

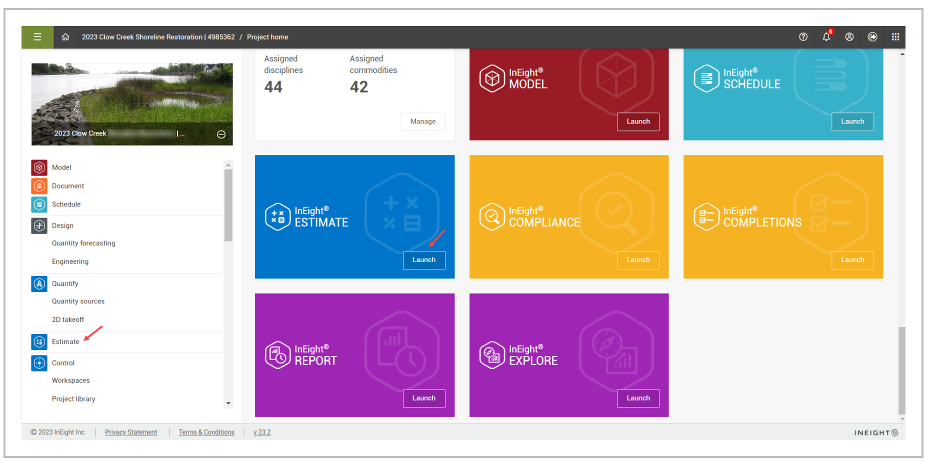
3. Select a **date format** and **number format**, and then click **Next**.

2.2 FIRST TIME ACCESS

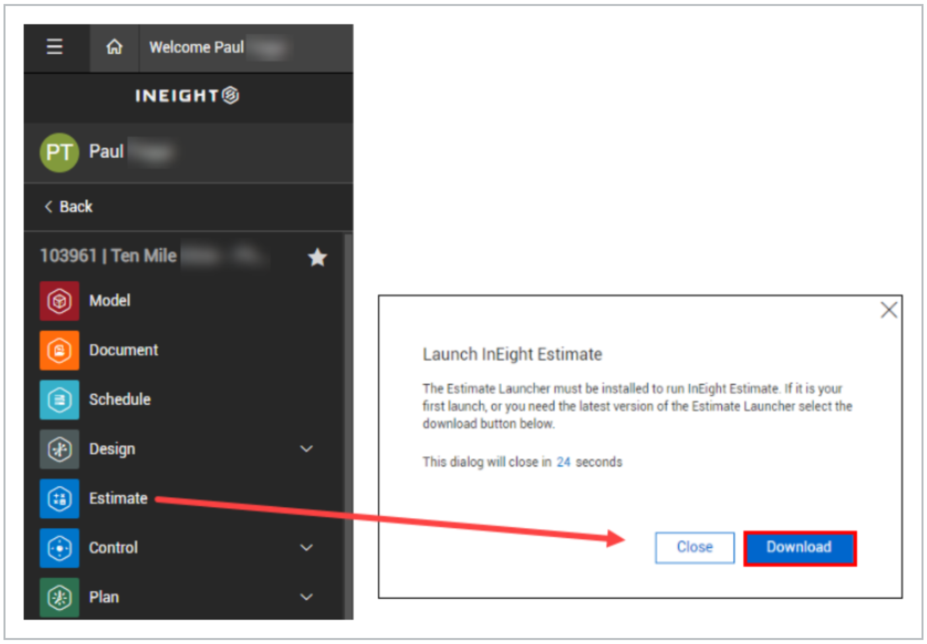
Platform's primary function lets you connect and share data between all Eight applications involved in managing a project. This allows project management workflows to pass between jobsite, field office, and front office seamlessly in a consistent and standardized user interface.

Step by Step – Launch Estimate

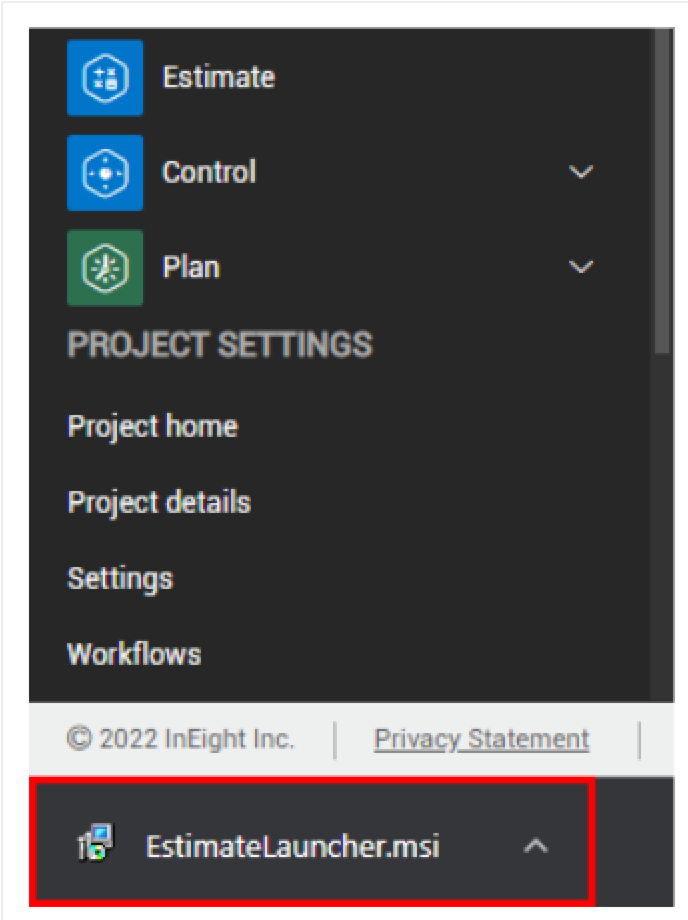
1. After selecting a project from the home page, you can access Estimate from the Main menu in Platform by selecting **Estimate**, or by clicking **Launch** on the **Estimate** tile.



2. When you select Estimate from the home page for the first time, you must click **Download** to access the Estimate Launcher file.

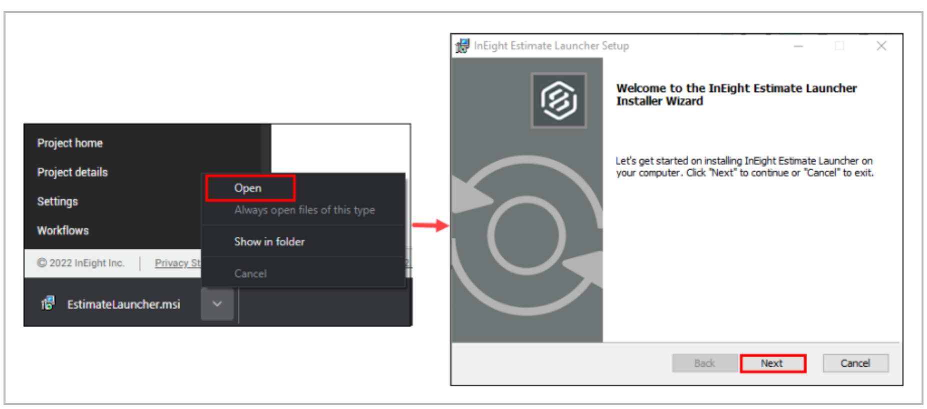


- The EstimateLauncher.msi file shows.

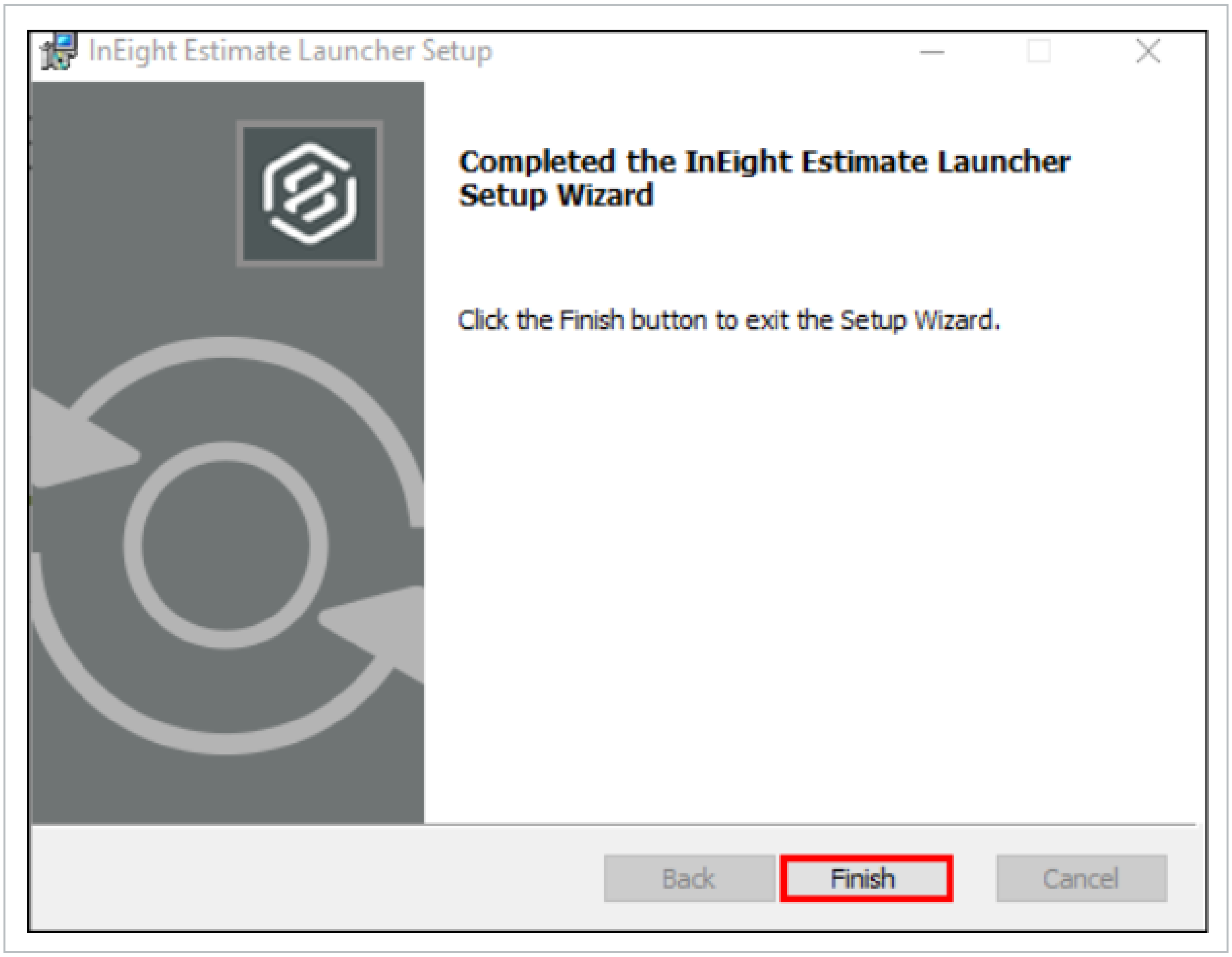


- Opening the EstimateLauncher.msi file opens the InEight Estimate Launcher Setup window.

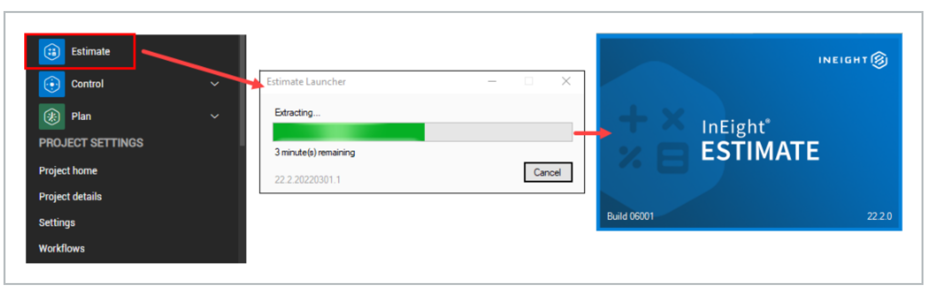
3. Select **Open**, and then click **Next** to start the one-time Estimate Launcher download. Afterwards, you will be able to open Estimate from the Main menu or the home page.



4. Click **Finish** to complete the Estimate Launcher Setup installation.



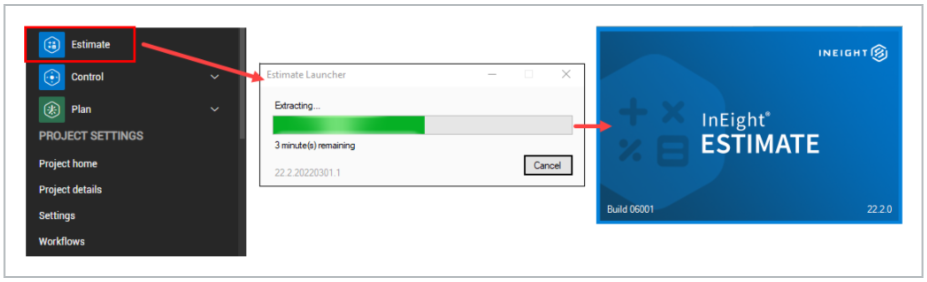
5. Select **Estimate** again to start the Estimate Launcher, which extracts the required files to launch the Estimate application.



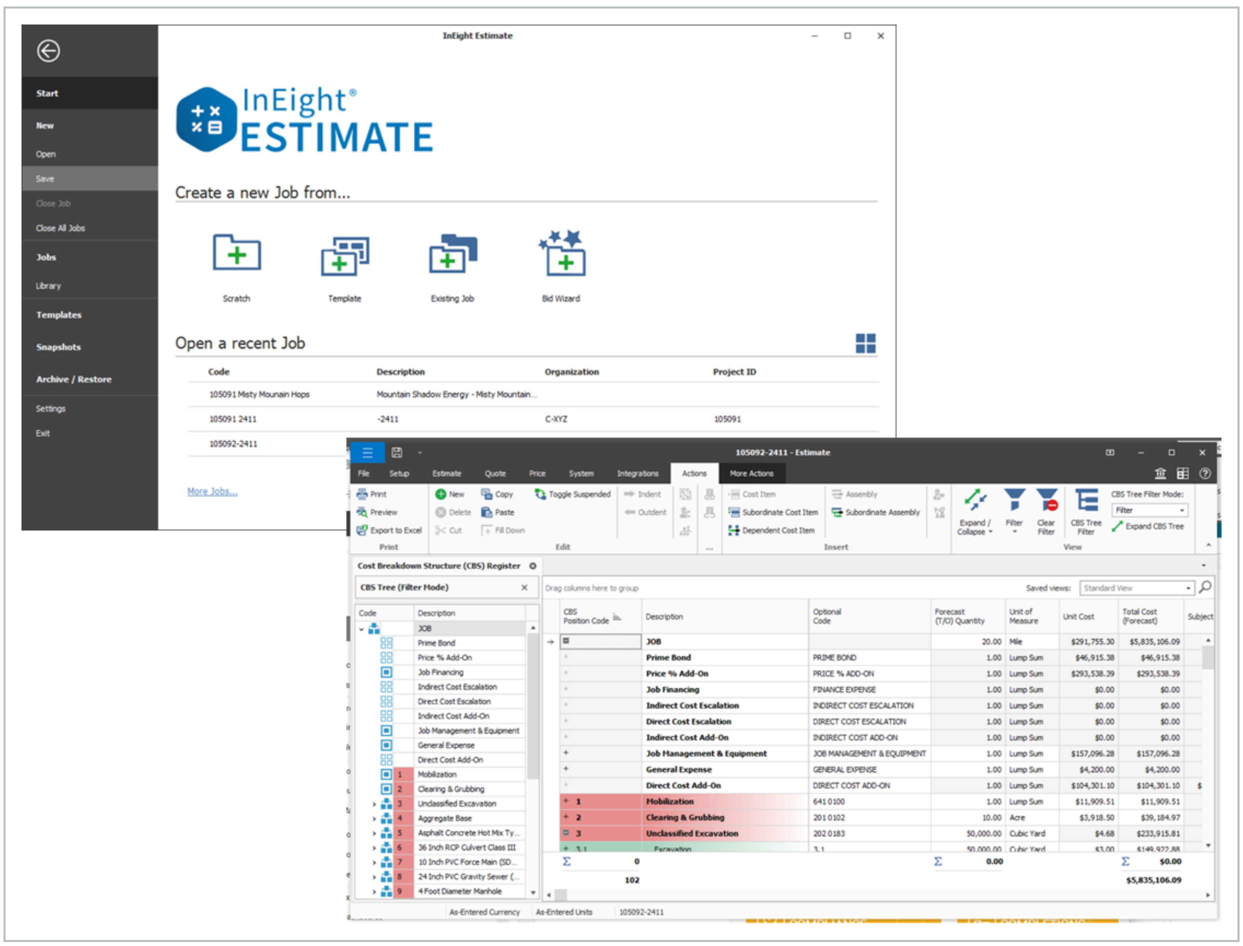
After setting up your Estimate preferences and installing the Estimate launcher, you can begin using Estimate.

Step by Step – Estimate subsequent use

1. Launch Estimate by selecting **Estimate** from the Main menu.



- Estimate in the cloud looks and functions much like the Estimate on-premise version. For example, opening a job from the landing page brings you to the Cost Breakdown Structure register, or the register designated as the start page in the application settings.

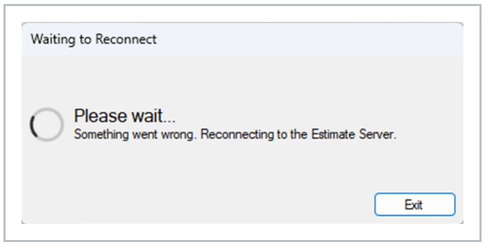


2.3 ESTIMATE RESILIENCY

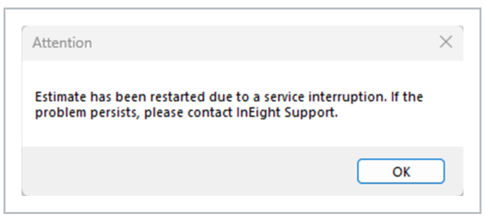
As a SaaS product, Estimate is sometimes made the casualty of server-side interruptions in service, which are out of Estimate’s control. The auto-save function makes attempts to save your data prior to Estimate shutting down.

When an unexpected disruption occurs in Estimate and causes it to shut down, notifications show alerting you of the restore process to minimize the impact on you when these interruptions occur:

- A Waiting to Reconnect notification box shows, alerting you that it is reconnecting to the server.

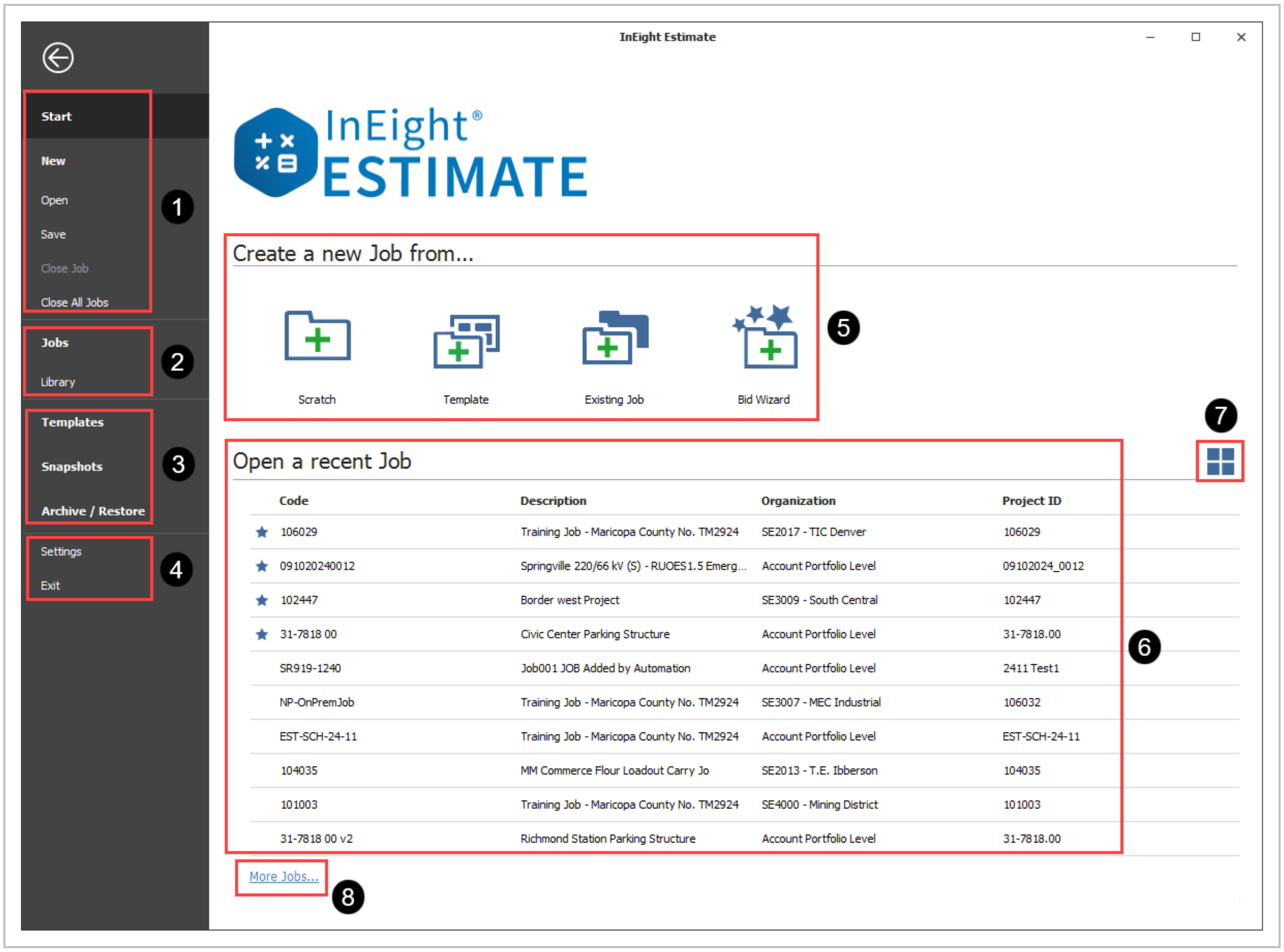


- When Estimate restarts, an Attention notification shows, alerting you that Estimate is being restarted due to a service interruption.



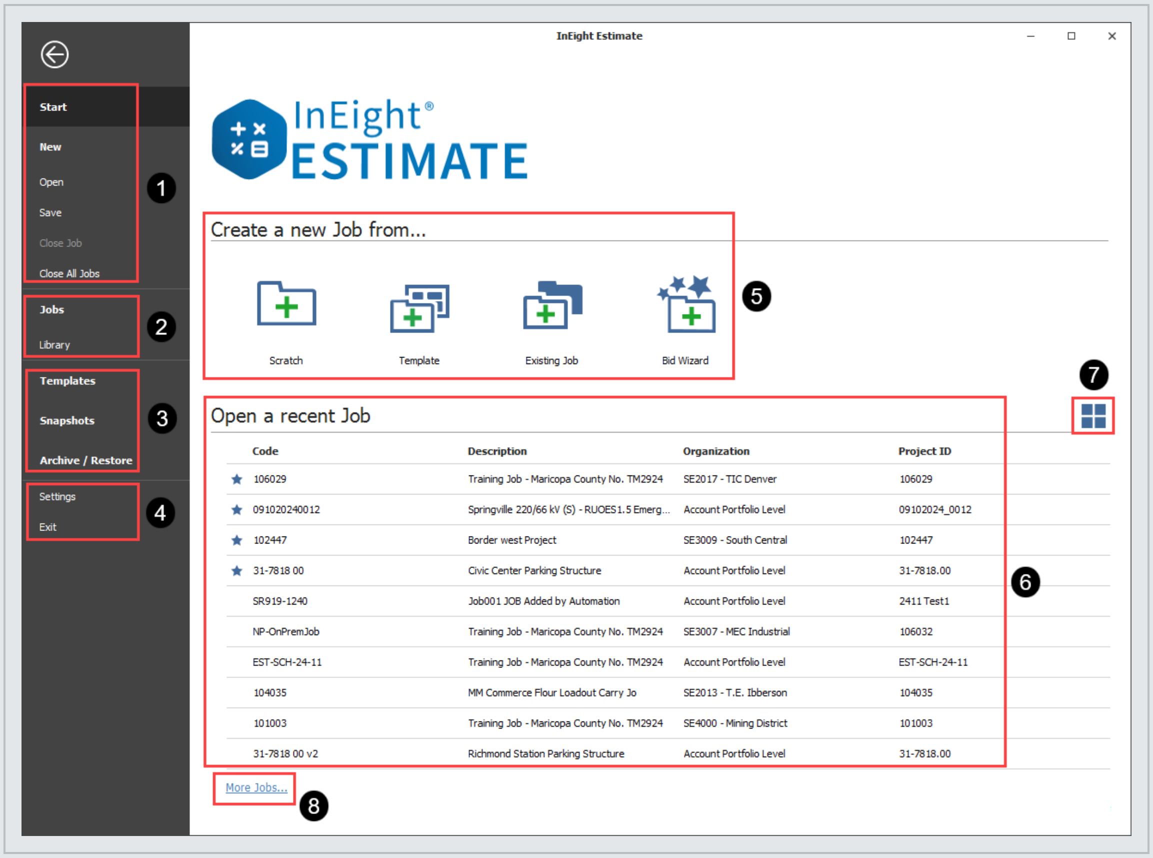
2.4 BACKSTAGE VIEW

When you open Estimate, you land in the Backstage view. You can also get to the Backstage view from other tabs, by selecting the File menu.



Section	Description
1	Create new jobs, open, save, or close opened jobs.
2	Access the library and open the Jobs page. In the Jobs page, you can access the following options: • **Job Register** • **Delete Job** • **Compare Jobs** • **Connected Analytics**
3	Access templates, snapshots, and archive or restore options. • **Templates** – Create job templates. • **Snapshots** – Open the Snapshots page where you can create job snapshots and open the Snapshot Register to access previously created snapshots. • **Archive / Restore** – Open the Archive / Restore page where you can access

Section	Description
	the following options: ◦ **Archive Job** ◦ **Restore job** ◦ **Merge Jobs with Archive** ◦ **Archive Template** ◦ **Restore Template**
4	Open the Settings page where you can access the following options: • **General** - Customize General, Title Bars, Navigation Bar, Job Startup, and Language options. • **Decimal Precision** - Manage decimal precision for various values in Estimate. • **Restore Defaults** - Click to restore default values for selected settings.
5	Create a new job from scratch, from a template, from an existing job, or by using the Bid Wizard..
6	View up to 10 recently opened jobs as a list or thumbnail tiles to quickly access recently opened jobs. You can click the **Favorites** icon to the left of the job code to label up to five jobs as favorites. The jobs labeled as favorites show at the top of the list.
7	Change between the list view or tile view using the **List-Tile view** icon at the top right of the section. The source for the thumbnail images in the tiles is from the estimate project in InEight Platform. The following image shows the tile view.

Section	Description
	
8	Open the Job Register where you can search and open jobs that do not show in Open a recent job list.

2.4.1 Archive / Restore

From the Backstage View, you can back up and restore your jobs using the Archive/Restore feature. For more information, see Archive and Restore Jobs in Estimate Data Management.

2.4.2 Settings

From the **Settings** in the Backstage view, you can adjust some system settings. For more information, see System Settings Options.

2.4.3 Prompt to save

An important setting to visit in the Tools menu is **Prompt to Save**. InEight Estimate does not automatically save your work. Instead, it will prompt you to save as often as you specify in the general settings.

2.4.4 Decimal precision

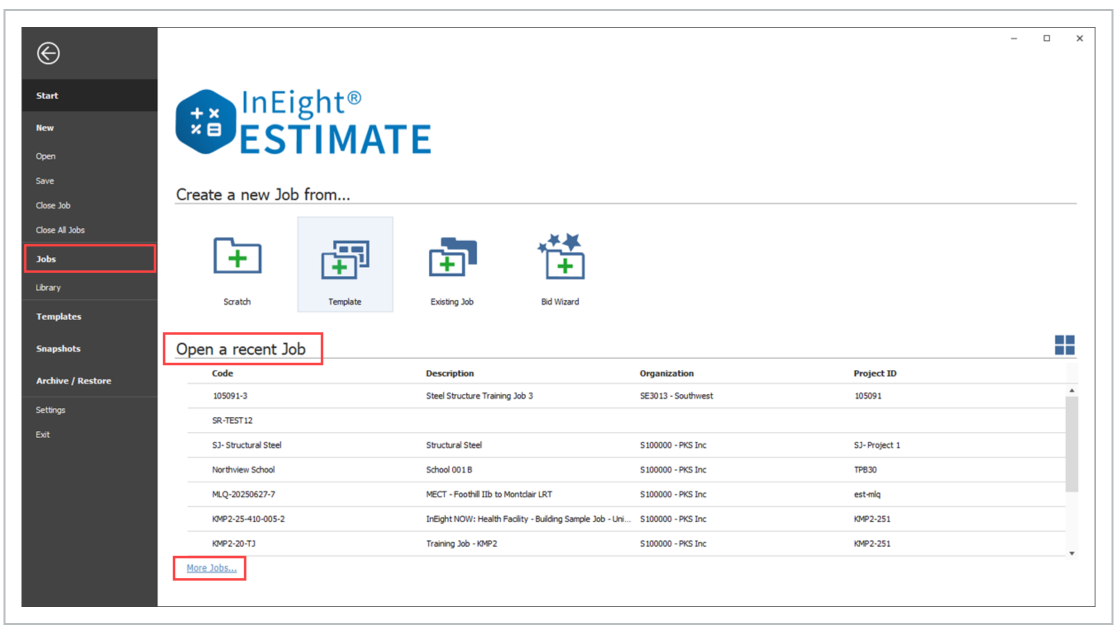
The **Decimal Precision** setting is also helpful. This is where you can specify the way your numbers display in the system. For example, you may want your costs to display to the hundredth decimal place (2), and your quantities to display as whole numbers with nothing to the right of the decimal (0).

> Changing decimal precision does not affect the way your numbers are calculated.

2.5 LOAD A JOB

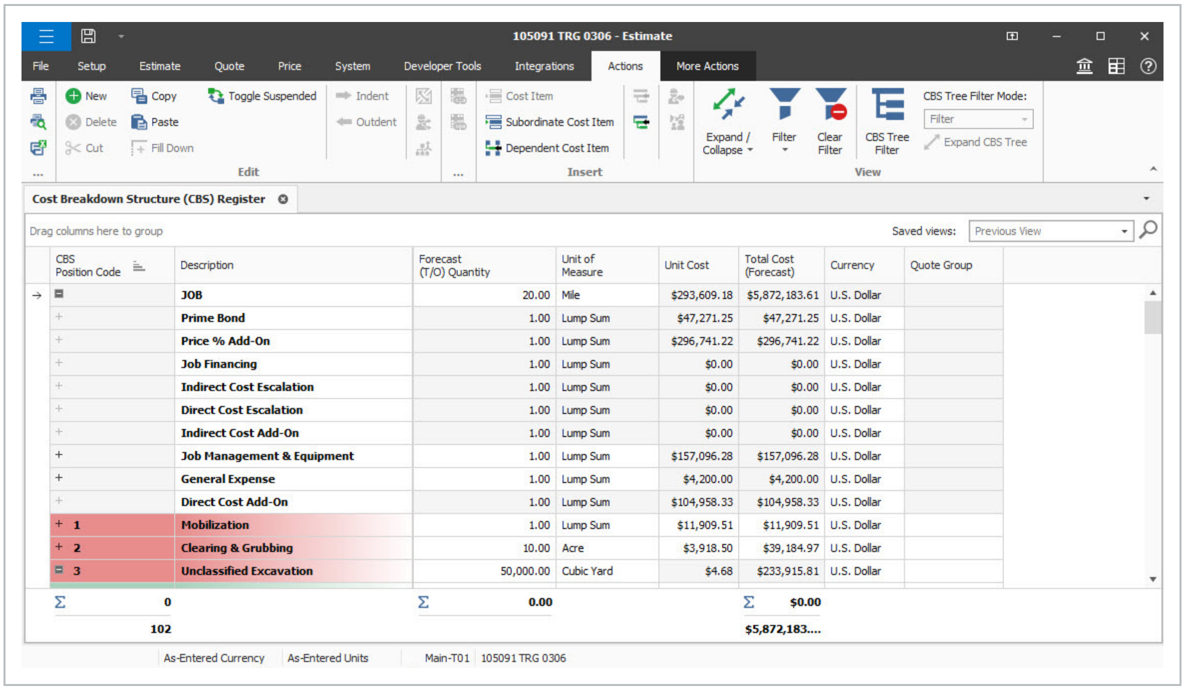
From the Backstage view, you can load a job by:

- Selecting a job from the Open a recent Job section.
- Clicking **More Jobs** to select from the Job Register.
- Clicking **Jobs** from the left menu and then clicking **Job Register**.

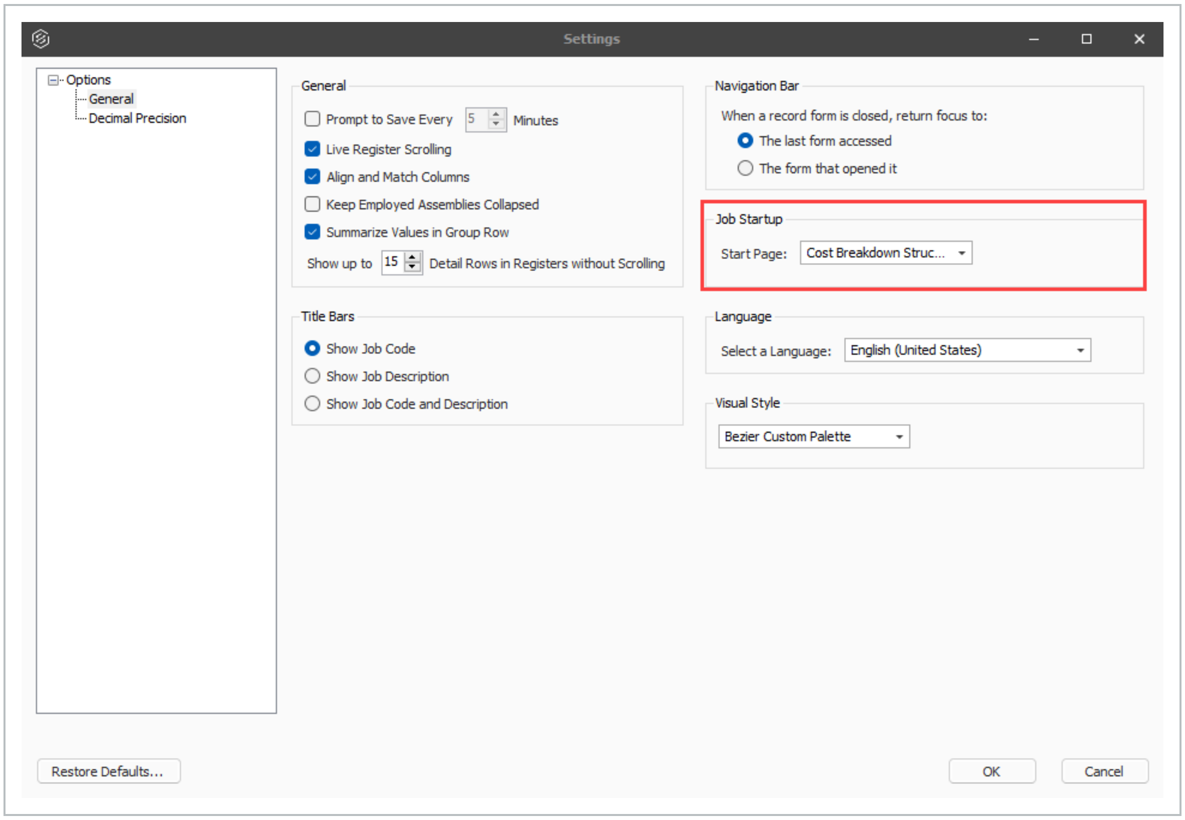


There are multiple ways to load a job from the Job Register. For more information, see [Manage jobs from the Job Register].

When you load a job, it loads into the Cost Breakdown Structure Register by default.



You can change the default form that opens when you load a job in Backstage view > Settings > Options > **General**. In the Job Startup section, select a form from the Start Page drop-down list.



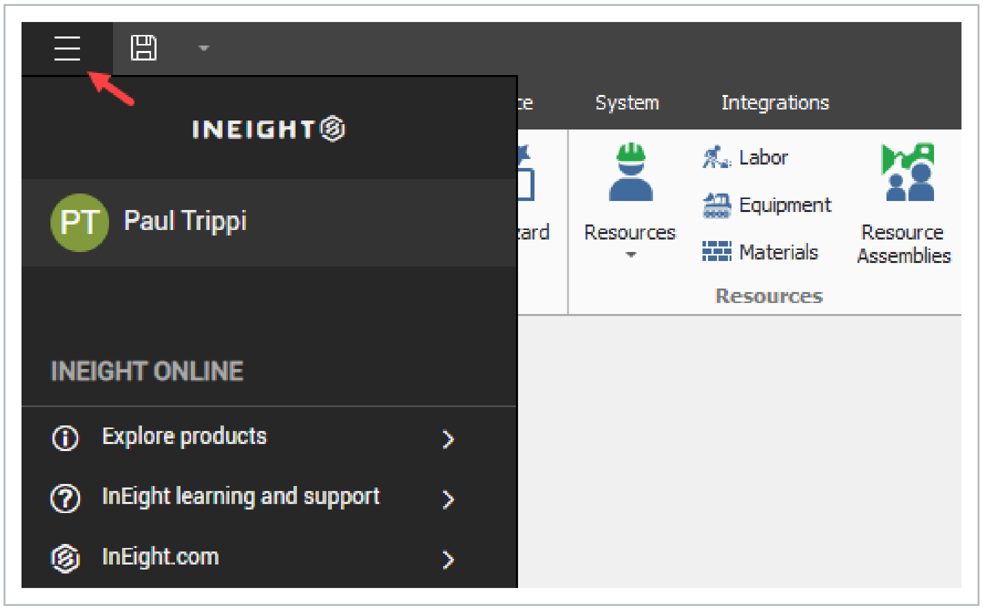
In the Job Register, you can easily access a job's properties. For more information, see Open a job's properties from the Job Register.

For more information about job properties, see Job Properties.

2.6 COMMON NAVIGATION

Access the common navigation slide-out panel by selecting the main menu located on the top left side of the Estimate page. This feature provides a common navigation user experience that is shared amongst all InEight products. The primary intent of this navigation menu is to provide a consistent InEight product experience, with similar Project Suite graphical interfaces, while working within multiple InEight products.

Estimate's on-premise software is authenticated by your Windows login credentials, which is shown below the main menu.



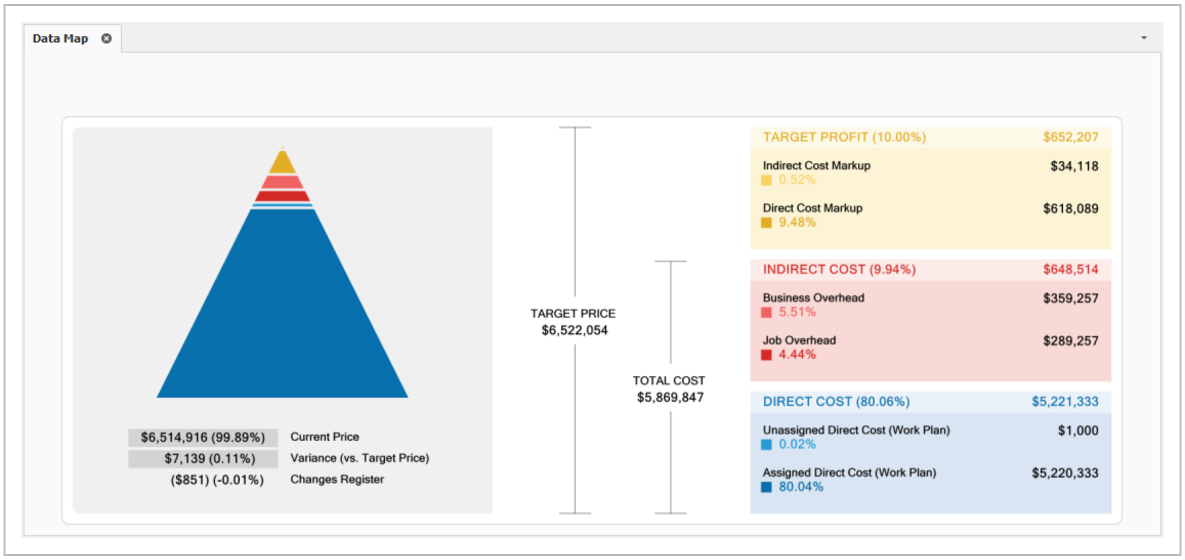
2.6.1 Help Bubbles

Help bubbles appear at various times in InEight Estimate, including the first time you open InEight Estimate. These messages contain important information to clarify key functions in the system.

You can dismiss the message until the next time by closing it with the X in the corner or dismiss it permanently by clicking the **Never offer this help again** link.

2.6.2 Data Map

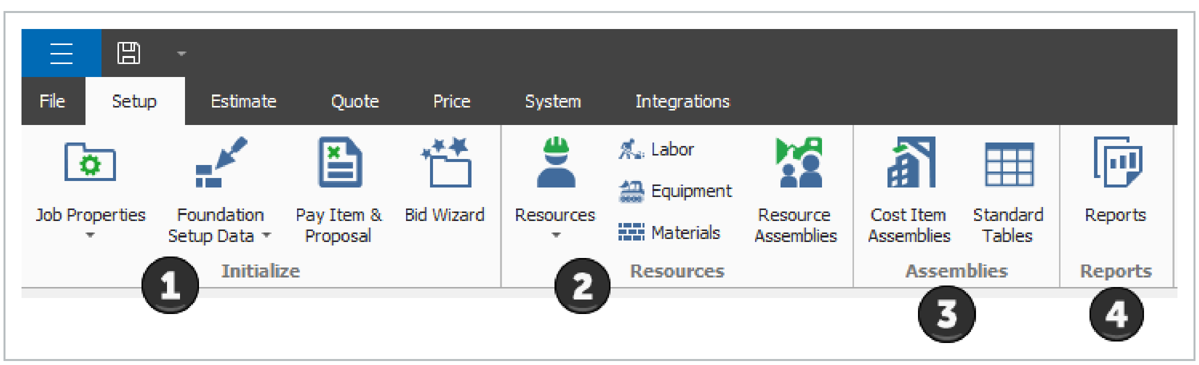
Found in the Price tab, the Data Map is a great way to view a high level summary of your estimate and can be accessed at any time during the estimating process. You can see totals of direct costs, indirect costs, profit, and overall bid price.



2.7 INEIGHT ESTIMATE LAYOUT

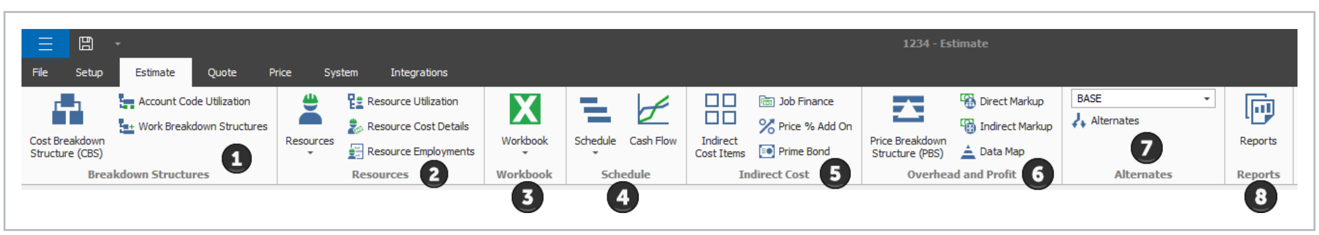
The layout of InEight Estimate is workflow based. You will move from left to right on the tabs as you enter your data for the project and work on developing your estimate.

2.7.1 Setup Tab Overview



Section		Description
1	Initialize	From the initialize section, you can access the following registers. Job Properties is where you enter the basic project details. Foundation Setup Data is where you populate all account codes and validated fields. The Pay item & Proposal Register provides an alternate structure to distribute estimated values. Bid Wizard helps automate the process of setting up estimates by copying information that already exists in other jobs.
2	Resources	In the Resources section, Resource Rates opens the Resource Rate Register, where detail costs for labor, equipment and material is stored. The Resource Assemblies opens the Resource Assembly Register, where you create a combination of resources as an assembly and reuse it as needed in multiple cost items.
3	Assemblies	You can create a Cost Item Assembly to automatically estimate different scopes of work based on input values. Standard tables - allow you to create tables of reference data that can be accessed in any cost item assembly.
4	Reports	The Reports section is available from any tab. Depending on the tab you access it from will bring you to reports specific to that tabs data. Here you will find reports on resources such as Resources Changes, Resource Utilization, and Resource Cost Details.

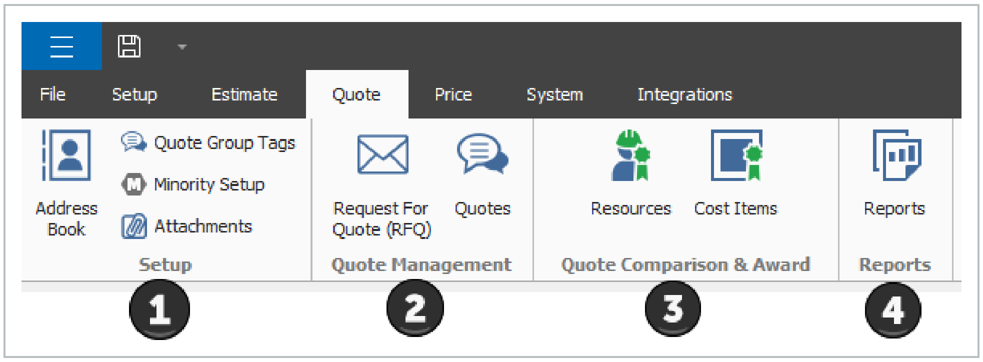
2.7.2 Estimate Tab Overview



Section		Description
1	**Quantity Takeoff**	Import and manage quantity takeoff data using the Quantity Item Sources, Quantity Item, and Quantity Item Employments registers.
2	**Breakdown**	Access the Cost Breakdown Structure (CBS) Register, Account Code

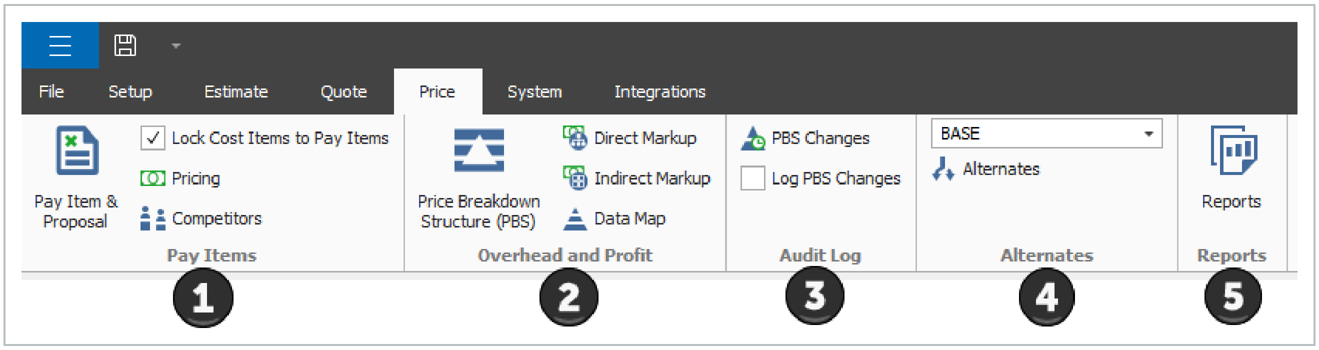
Section		Description
	Structures	Utilization Register, and Work Breakdown Structures (WBS) Register.
3	**Resources**	Resource Rate Register is where you create or modify the rate charged for labor, material and equipment resources. Different views of the Resource Rate register such as Resource Utilization and Resource Cost Details are available from the Resources section.
4	**Workbook**	InEight Estimate's integration with Microsoft Excel is a two-way integration that allows you to update register fields in Estimate with data contained in an Excel workbook, and update Excel cells with data contained in a register field in Estimate. This is where you open the embed excel workbook which is maintained as part of the estimate job folder and where you preform the sync functions to send values back and forth.
5	**Schedule**	Access bi-directional integration with Microsoft Project and Oracle Primavera. The Cash Flow graph displays the projected cash flow of your project, along with the job financing expense, individual cost category costs and resource utilization.
6	**Indirect Cost**	Indirect Cost Items filters the CBS register to display cost items that contain overhead costs that are not directly associated with any particular deliverable items. Clicking on % Price Add on or Prime Bond opens up these individual records.
7	**Overhead and Profit**	Price Breakdown Structure (PBS) Register is a visual run-down of the costs and profit that make up your Target Price. You can access the Direct and Indirect Markup records or see totals of direct costs, indirect costs, profit and overall bid price summarized in a Data Map.
8	**Alternates**	Alternates are used to define alternate scenarios in order to assess the impact of those scenarios.
9	**Reports**	Run reports on CBS Summary, CBS Details, CBS Outline, CBS Estimate Summary, CBS Currency Comparison.

2.7.3 Quote Tab Overview



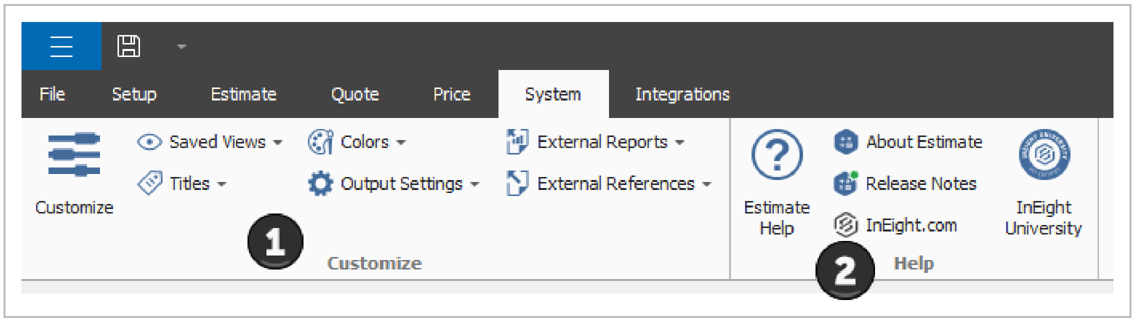
Section		Description
1	Setup	Quotes are organized using Address book, Quote Group Tags, Minority Setup and attachments in the Setup section. Address book stores and maintains all information pertaining to subcontractors, vendors, architects/engineers, etc. that you work with regularly. The Minority Setup tab within Job Properties stores information about the agency that authorizes the status of Minority Enterprises along with their different types. You can use Quote Group Tags to group together multiple resources or cost items that will be sent in a single request for quote package to solicited contractors or vendors..
2	Quote Management	Quote Management allows you to access the Requests for Quote (RFQs) register and Quotes. Request for Quotes (RFQs) are invitations to sellers, requesting that they submit pricing to provide services, equipment or material based on the line items and resources included in your estimate. The Quote Register stores all of the quote responses you receive for that job.
3	Quote Comparison & Award	The Quote Comparison & Award section allows you to perform comparative analysis across all the quotes you've received. You can view a comparison of submitted pricing by resources or cost items.
4	Reports	From the Reports section in Quotes you can run reports on Quote Summary, Quote Record, Compare & Award, and Minority Participation.

2.7.4 Price Tab Overview



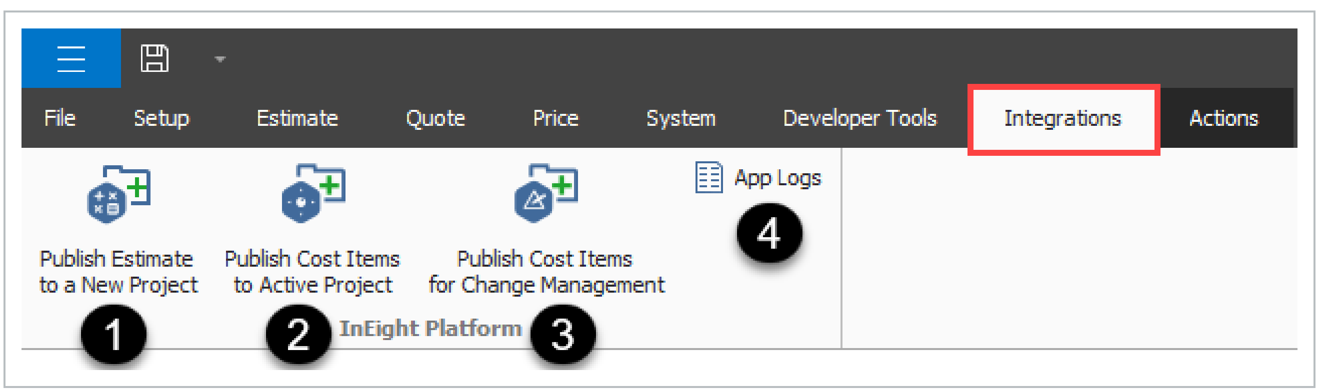
Section		Description
1	Pay Items	From the Pay Items section you can lock Cost items to Pay items and access the Pay item & Proposal register. Under Pricing in Job Properties, you can set up how the tool calculates profit and spreads pricing to your pay items. In the Competitors section, you can keep track of companies that have submitted bids as well as record and track competitor bid prices.
2	Overhead and Profit	The Price Breakdown Structure (PBS) Register is a visual run-down of the costs and profit that make up your Target Price. You can access the Direct and Indirect Markup records or see totals of direct costs, indirect costs, profit and overall bid price summarized in a Data Map.
3	Audit Log	You can access the PBS Changes register (which logs any changes that effect the Target Price) and turn on/off logging PBS changes..
4	Alternates	Alternates are used to define alternate scenarios in order to assess the impact of those scenarios on the total estimate value.
5	Reports	From the Reports section in the Price tab, you can generate reports for Standard Proposal, DOT Proposal, Pay Item Summary, Pay Item Currency Comparison, Pay Item Price Breakdown.

2.7.5 System Tab Overview



Section		Description
1	Custom	You can customize the titles and colors for different fields. You can export and import saved Views, Titles, Colors and Output Settings. You can customize reports generated by Estimate using External reports. External References allows you to open external programs with Estimate.
2	Help	You can access a comprehensive help system from the Help menu. You can get information about the Estimate Version and all new updates about the different versions.

2.7.6 Integrations Tab Overview



	Section	Description
1	**Publish Estimate to a New Project**	Sends job data to InEight Platform Integration. You can continue using Estimate during the publish and will be notified after the data

	Section	Description
		has been sent successfully.
2	**Publish Cost Items to Active Project**	Sends cost items to the active project.
3	**Publish Cost Items for Change Management**	Sends cost items to InEight Platform Integration to import to InEight Change.
4	**App Logs**	Shows a list of InEight Project Suite application logs that you can export to Excel.

2.7.7 Library

Click on the Library icon and the Library opens in its own window.

Users with sufficient security can access master information available in the Library.

> *The Library is covered in greater detail in 3.1 Library Overview on page 84*

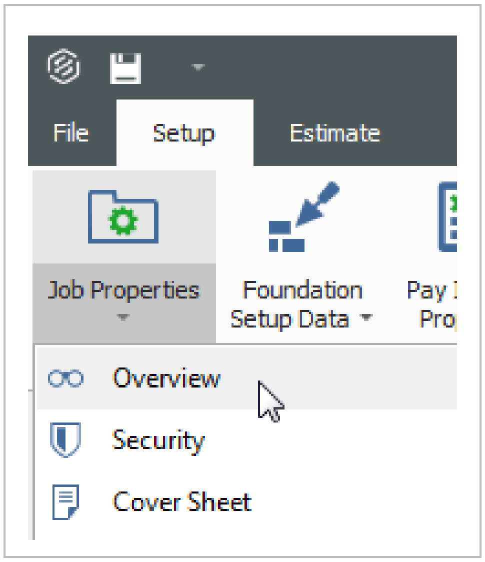
2.7.8 Open Forms

The following steps assume you already opened the Training Job.

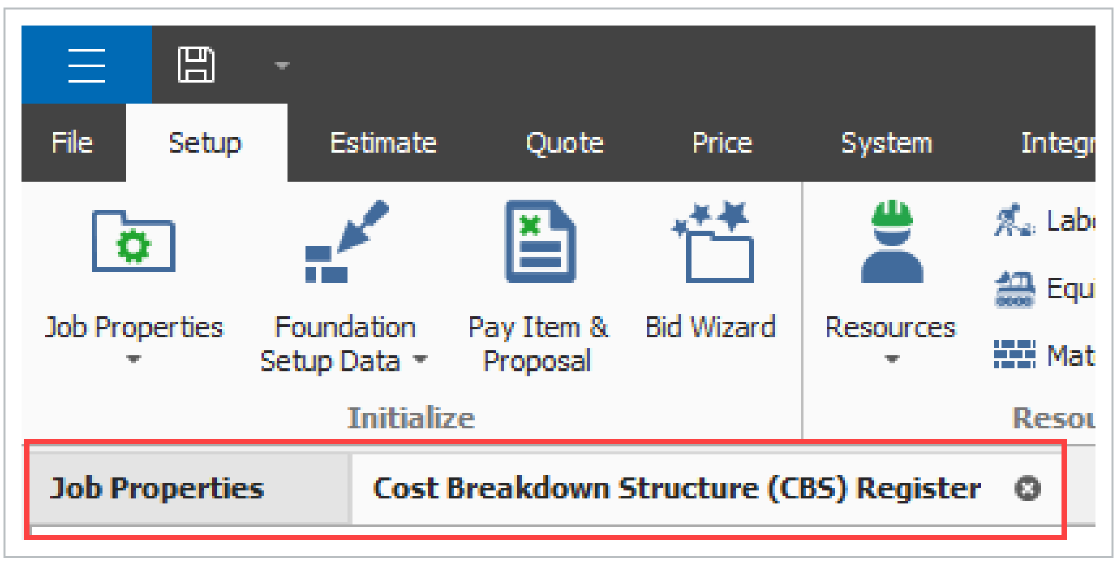
Step by Step – Open Forms

1. Click on the **Setup** tab.
2. In the Initialize section of the Setup tab, click on the **drop-down menu** for Job Properties.

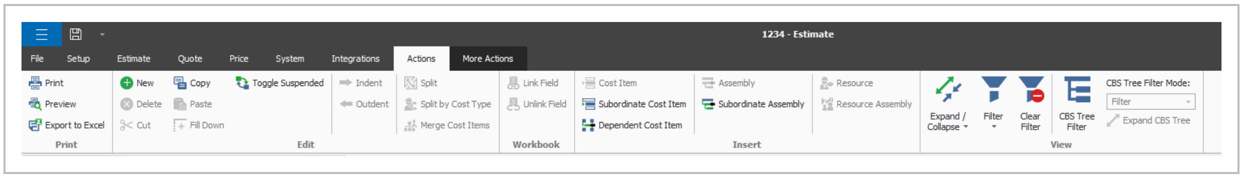
3. Select **Overview** to open the Job Properties form.

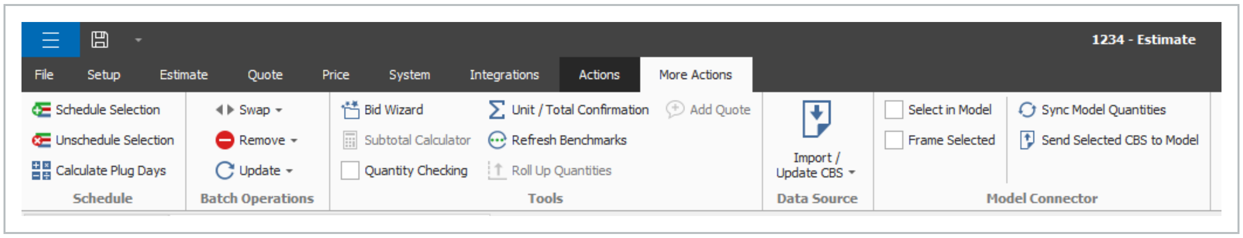


- Notice that each form opens in its own tab within the active job folder



- You can tab between these forms as you are working in InEight Estimate
- Once you are in a register, the Actions and More Actions tabs are available to you. The options available are contextual to that register



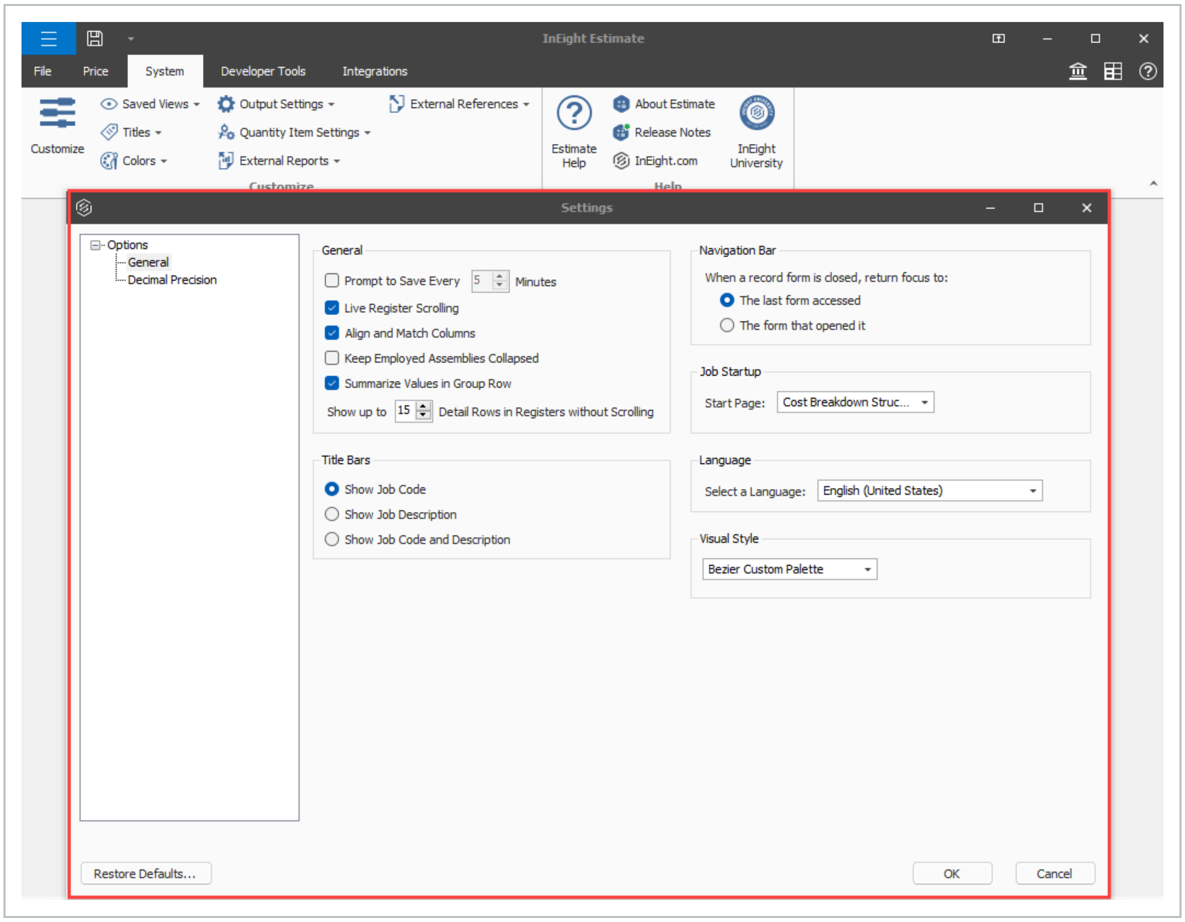


2.8 SYSTEM SETTINGS OPTIONS

From the Backstage View, you can access system settings. System settings contain options and settings that effect the entire InEight Estimate system. These settings include:

- General settings (options)
- Title Bars
- Navigation Bar
- Job Startup
- Language
- Visual Style

All of the settings under the Options branch are user-level settings.

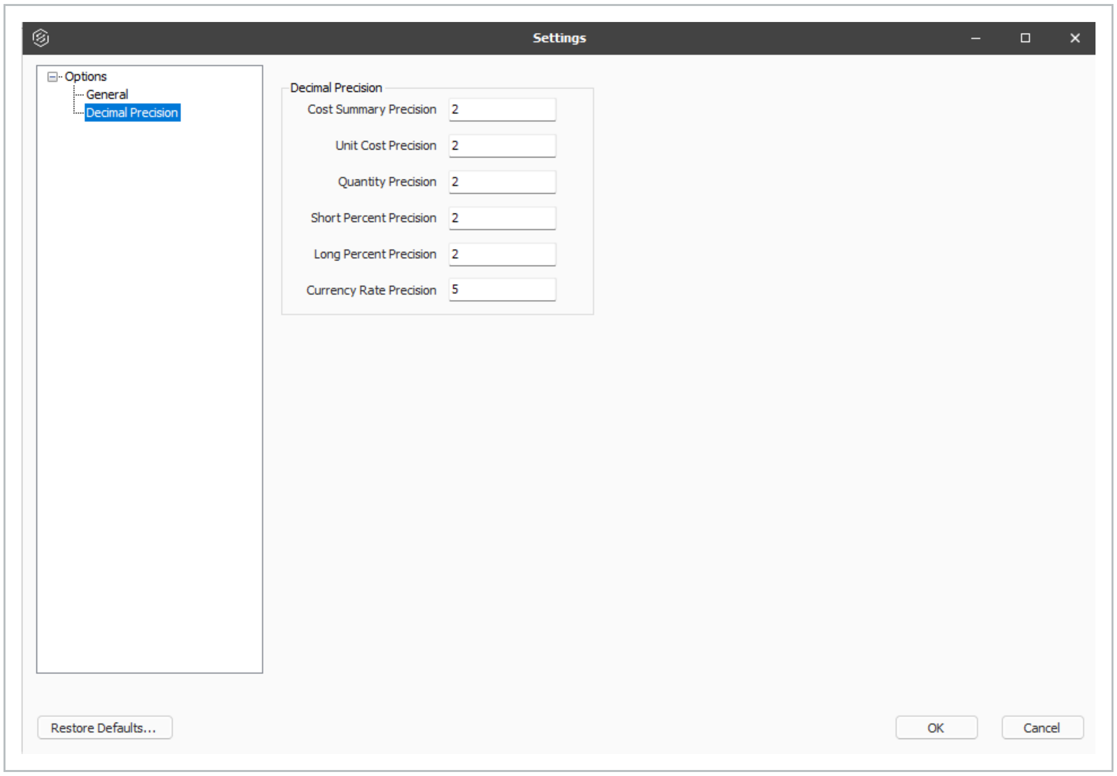


The following step by step walks you through configuring general settings (options).

Step by Step – Decimal Precision

1. With InEight Estimate open, click on the **File** tab to go to the Backstage view.
2. Select **Settings**.
3. Select **General** under Options in the node tree on the left.
4. To activate Prompt to Save, select the **Prompt to Save** checkbox.
5. Select how often you want to be prompted (in minutes).
6. Select **Decimal Precision** in the tree on the left.
7. Review the default settings.

> Units of Measure will default to English, and Currency will default to U.S. Dollar.



2.9 COLUMNS

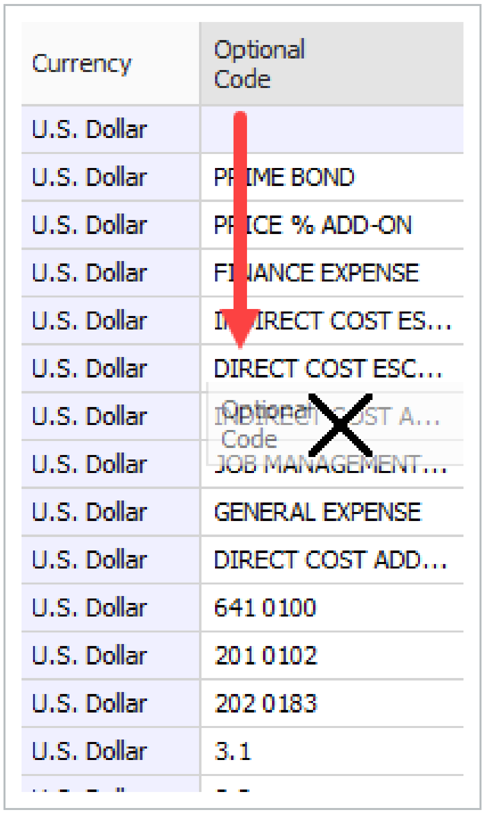
Within each register, you can move, sort, filter and group your columns to view the information the way you need to see it.

2.9.1 Move Columns

You can move columns by selecting a column header and using drag-and-drop. If there are columns on the register that you don't use, you can hide and unhide them from view, as needed.

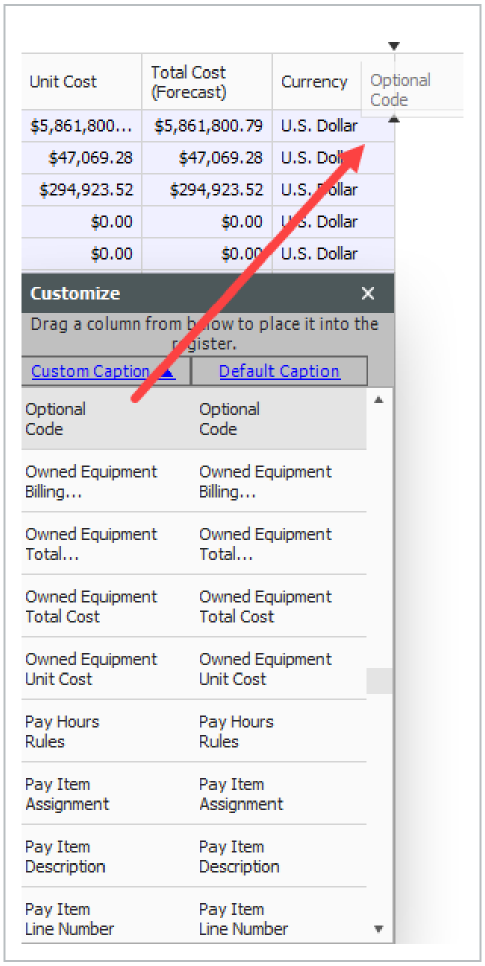
Step by Step – Move Columns

1. In the CBS, click on the **Currency** column header and drag the column to the left, dropping it to the right of the Description column.
2. Hide the **Optional Code** column by dragging the Optional Code column header down until a black X appears, then let go.



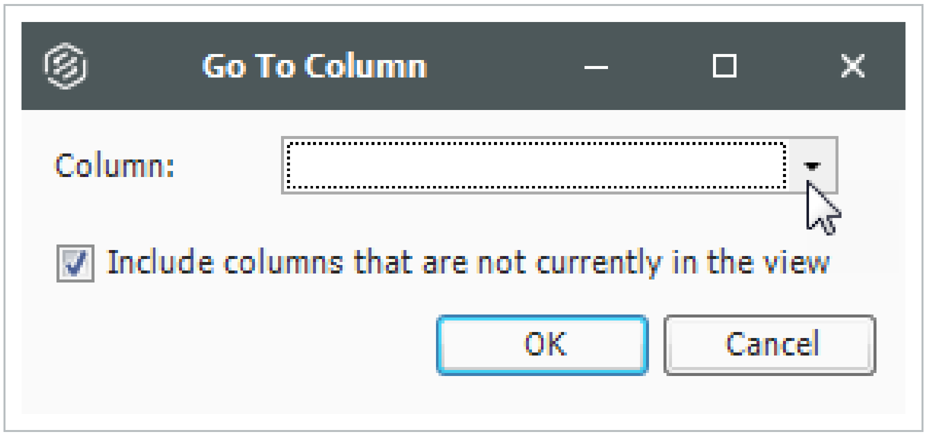
- The Optional Code is now hidden from view
- To unhide a column, right click on any column header and select **Column Chooser**; a Customization window appears, which contains all the hidden columns in that register

3. Find the **column** you want to unhide and drag-and-drop it to the location where you want it to go.



- You can also unhide a column using the Go To Column feature

4. Right click on a **column** header and select **Go To Column**.
5. Click on the **drop-down menu** and select the column you want to unhide.



6. Click **OK**.

2.9.2 Sort and Filter Columns

You can sort and filter your columns to drill down to specific information.

Step by Step – Sort Columns

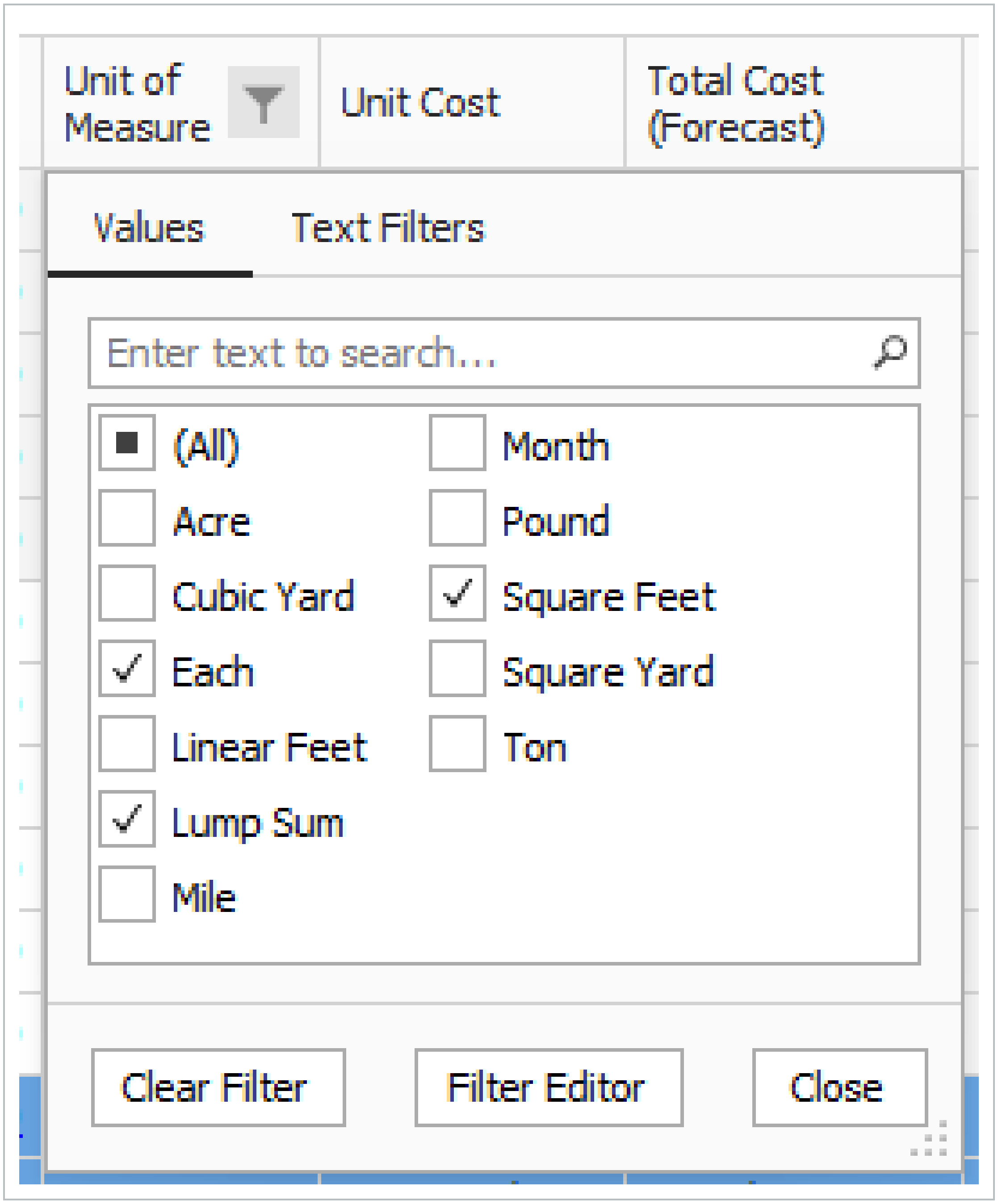
You can sort on any column by clicking once on the column header.

1. In the CBS Register, click on the **Total Cost (Forecast)** column to sort the column in ascending order (e.g., 1 to 10, A to Z).
2. Click the **Total Cost (Forecast)** column a second time to sort in descending order (e.g.,10 to 1, Z to A).

> Use Ctrl-click to unsort a column and reset it to its original state.

Step by Step – Filter Columns

1. In the CBS, hover over the **Unit of Measure** column header for the filter icon to appear.
2. Click on the **filter** icon in the Unit of Measure column to select a filter value.
   - From the filter list, you can select any of the values defined for that column or you can use one of the predefined values (Custom, Blanks, Non blanks).



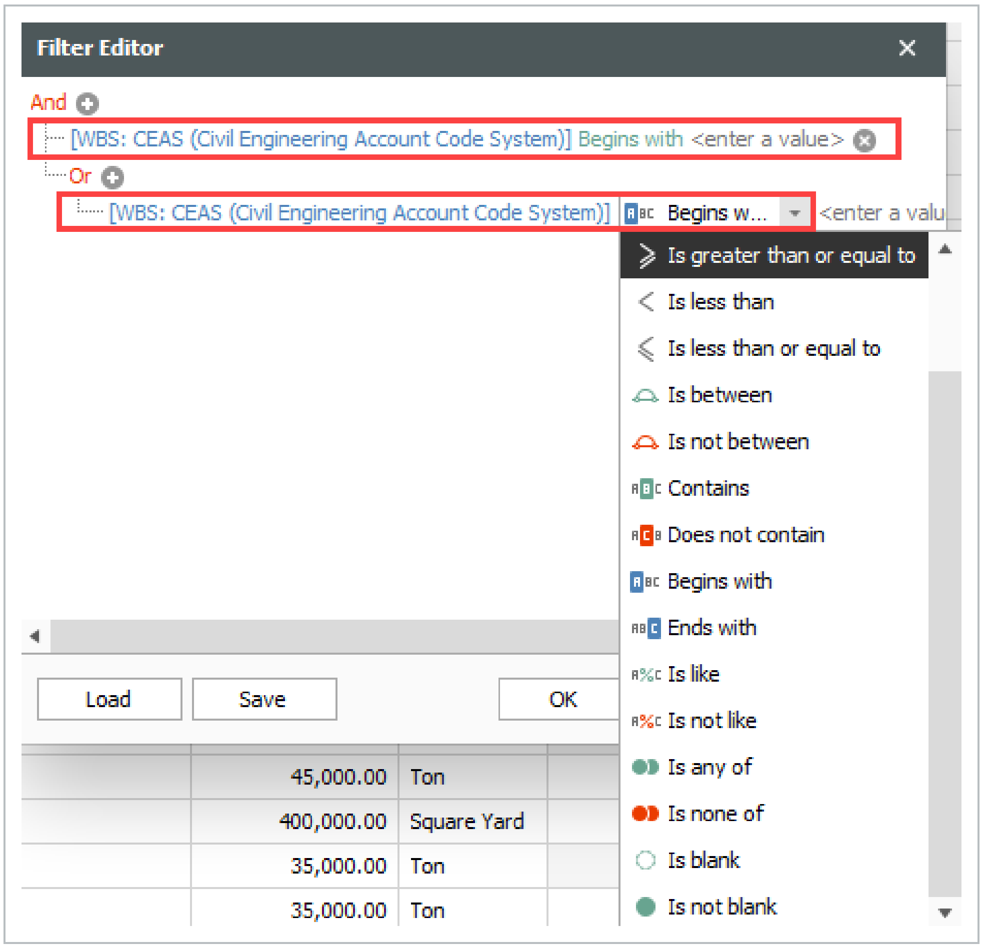
3. Make your selection, then click **Close**.
4. To clear the filter, click on the **red X** at the bottom of the form or click on the filter icon on the header of the column you filtered and select **(All)**, then click **OK**.

2.9.2.1 Filter Editor Overview

Column filters can be managed on individual columns or for the entire register using the Filter Editor. The Filter Editor tool lets work with all the column filters for a register view in one place as well as creating more complex filters through the use of grouping and applying And/Or statements.

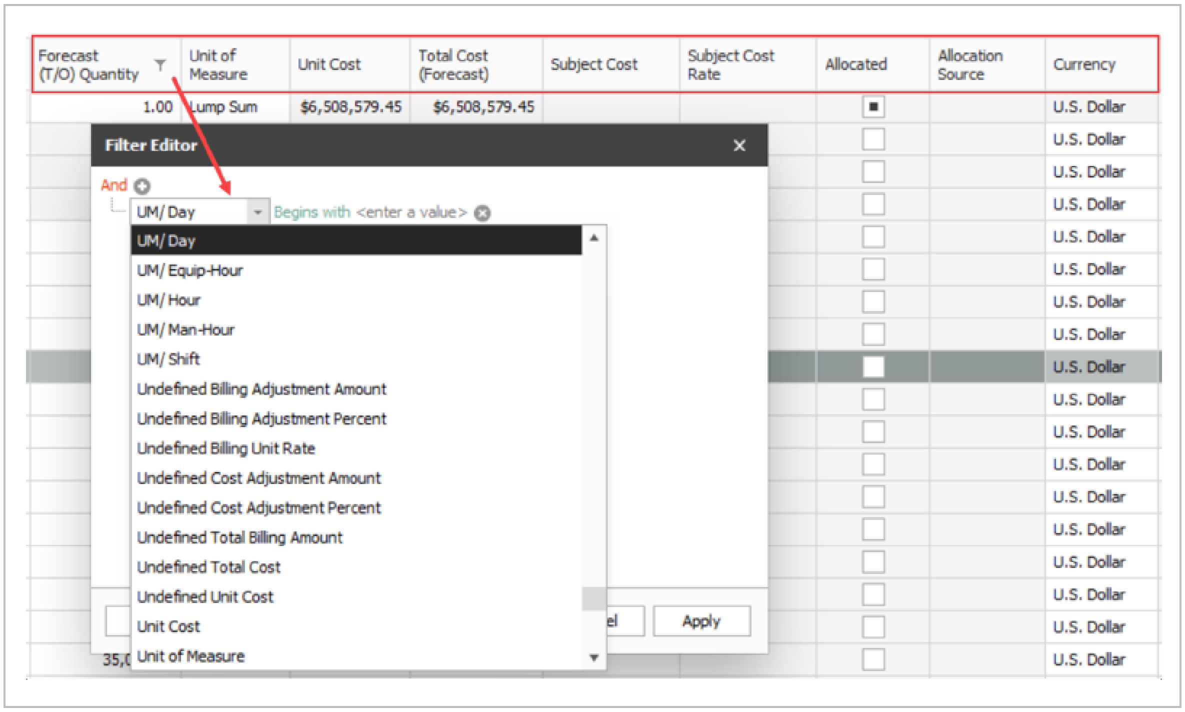
When you add a new Group, a new Condition is automatically added to that Group.

With each additional Condition statement, you need to select an operator and a value in order for your customized filter to take effect on your chosen column. Many new comparison operators have been added to this version as shown below:

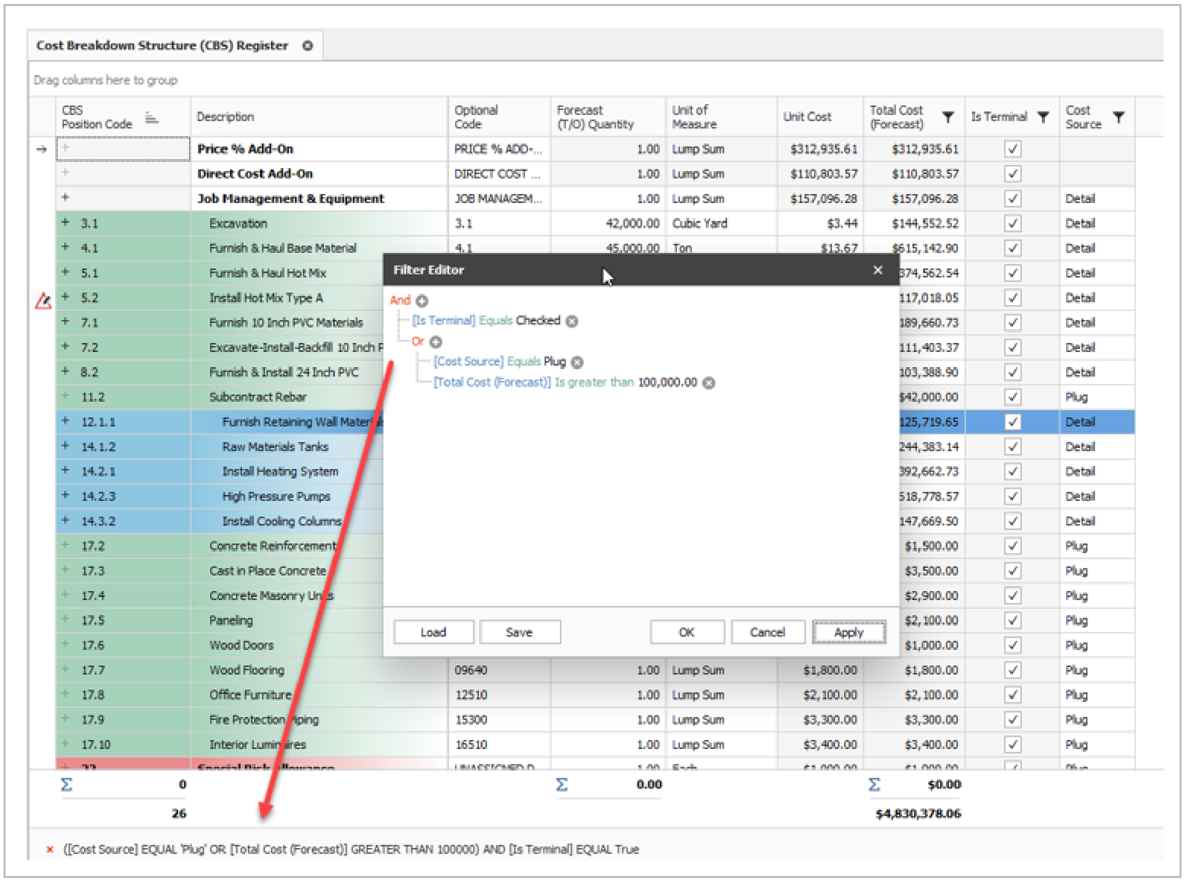


Creating complex filters using the Filter Editor

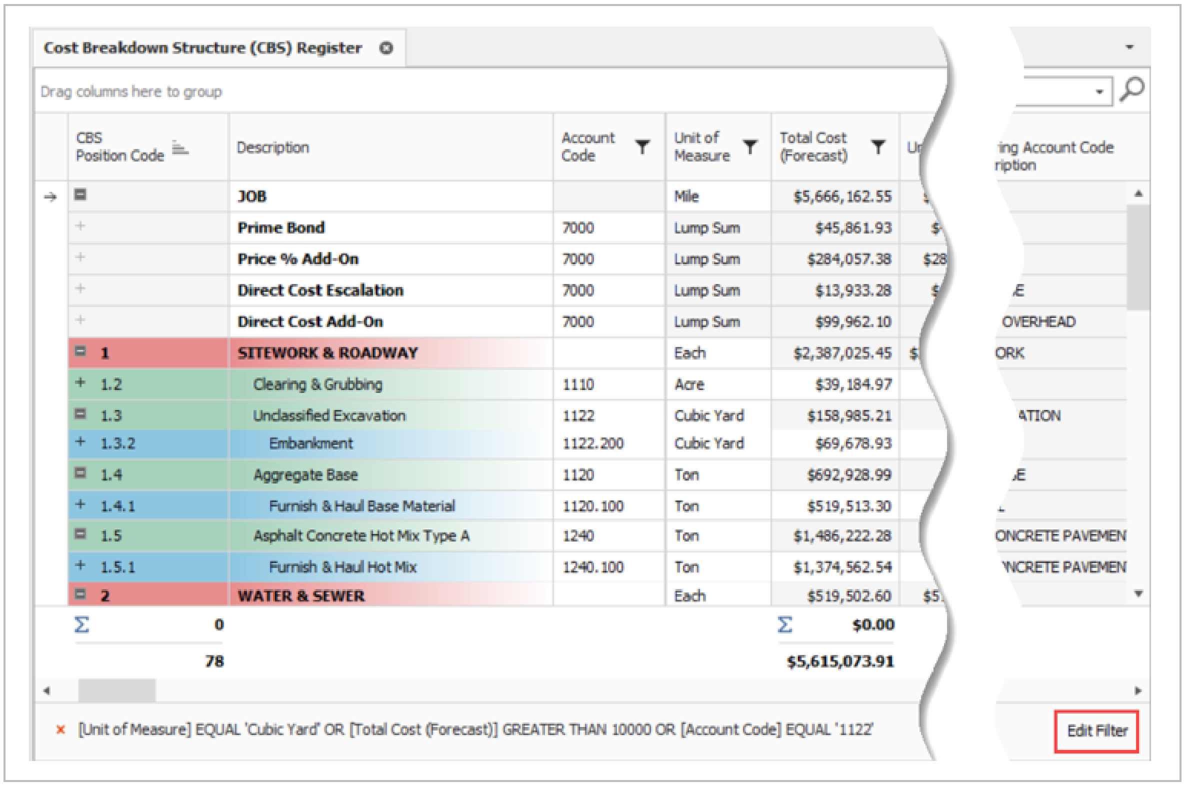
You can define filters across any of the columns available in the CBS register. You can also open the Filter Editor using the button in the column filter drop-down, but regardless of how you access it, the Filter Editor dialog permits defining a filter for the entire register and not just the selected column.



Because all the register fields are available, more complex filters can be created by using Grouping and Or operators. In the following example, a filter has been defined to return all Terminal Cost Items that either have a cost source of Plug, or exceed $100,000 of Total Cost (Forecast).

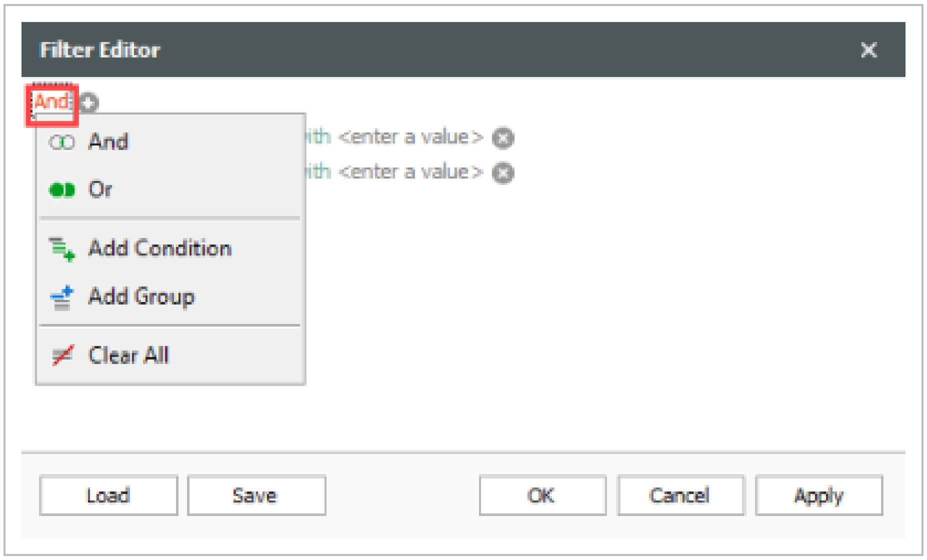


When modifying a filter, the Filter Editor can be invoked by clicking the Edit Filter button located on the bottom right of the CBS page.



Step by Step – Filter Editor

1. In the CBS, hover over the **Unit of Measure** column header for the filter icon to appear.
2. Click the **Filter** icon in the Unit of Measure column to select a filter value; select the desired UoM.
3. Select the **Filter Editor** button, and the Filter Editor data box appears.
   - By default, an **And** statement is created with a **Begins with** operator and a blank value.
4. Select your preferred operator and enter in your preferred value.
5. To add additional **And/Or** statements, select the word **And** in the top left corner. A drop-down appears.



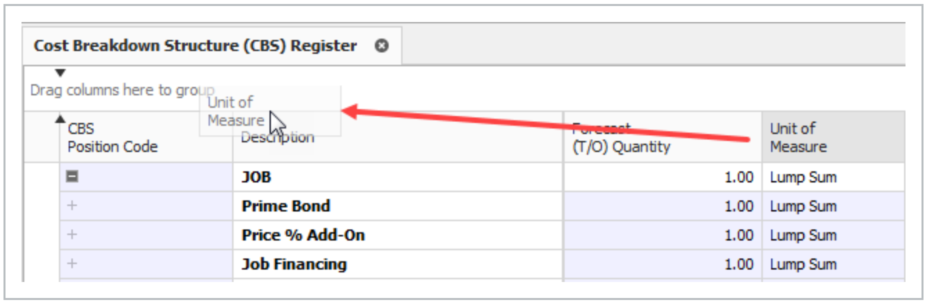
6. Choose which **And/Or** statement to add and then select the **Preferred Operator**.
7. Enter in your **Preferred Value** to complete your additional statement.
8. Click **OK**.
   - Select the **X** to delete a single statement.
9. Select the **And** statement in the top left corner to begin clearing all And/Or statements.
10. From the drop-down, select the option **Clear All**.
11. Once done, select **Apply** and then click **OK**.

2.9.3 Group Columns

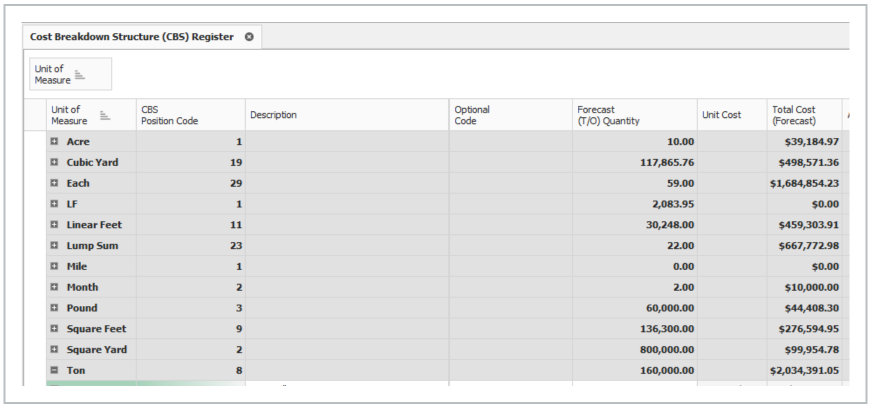
Sometimes you may want to organize your information into groups. Instead of filtering your information down to one value (e.g., unit of measure = Ton), you can look at your information with a separate group for each value (e.g., a group for Tons, a group for Cubic Feet, etc.).

Step by Step – Group Columns

1. From the CBS register, group the Unit of Measure column by dragging it into the grouping area (where it says “Drag columns here to group”).



- Notice that the cost items in the register are now grouped together by their units of measure, and each group of cost items is subtotalled by costs, hours, quantities, etc.



2. To ungroup, right click in the grouping area and select **Clear Grouping**
   - The column returns to its original location

> You can group by more than one column to have multiple grouping levels.

2.9.4 Saved Views

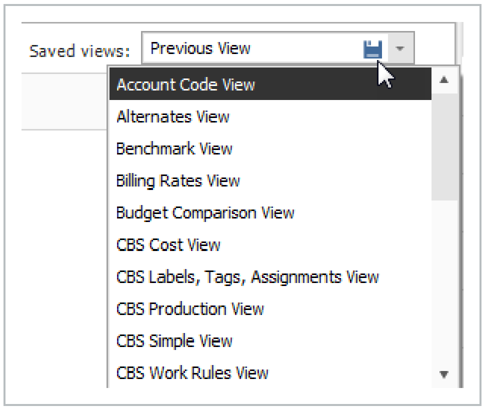
Once you have set up a view the way you like it, you can save the view so you won't have to configure it again later. InEight Estimate also comes with some pre-built views to help you organize the screen the way you want to see it.

Views are accessed from the **Saved Views** menu in the top right portion of a register.

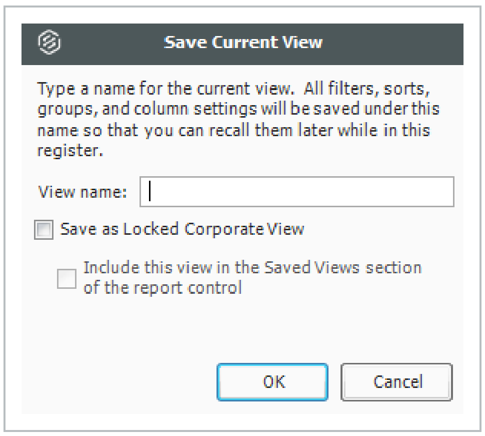
The following steps assume you have made changes to your register view and want to save it for future use.

Step by Step – Create a Saved View

1. In the CBS register, click on the **Saved Views** drop-down menu and the Save disc icon appears.



2. Click on the **Save disc** icon.
   - The Save Current View window appears

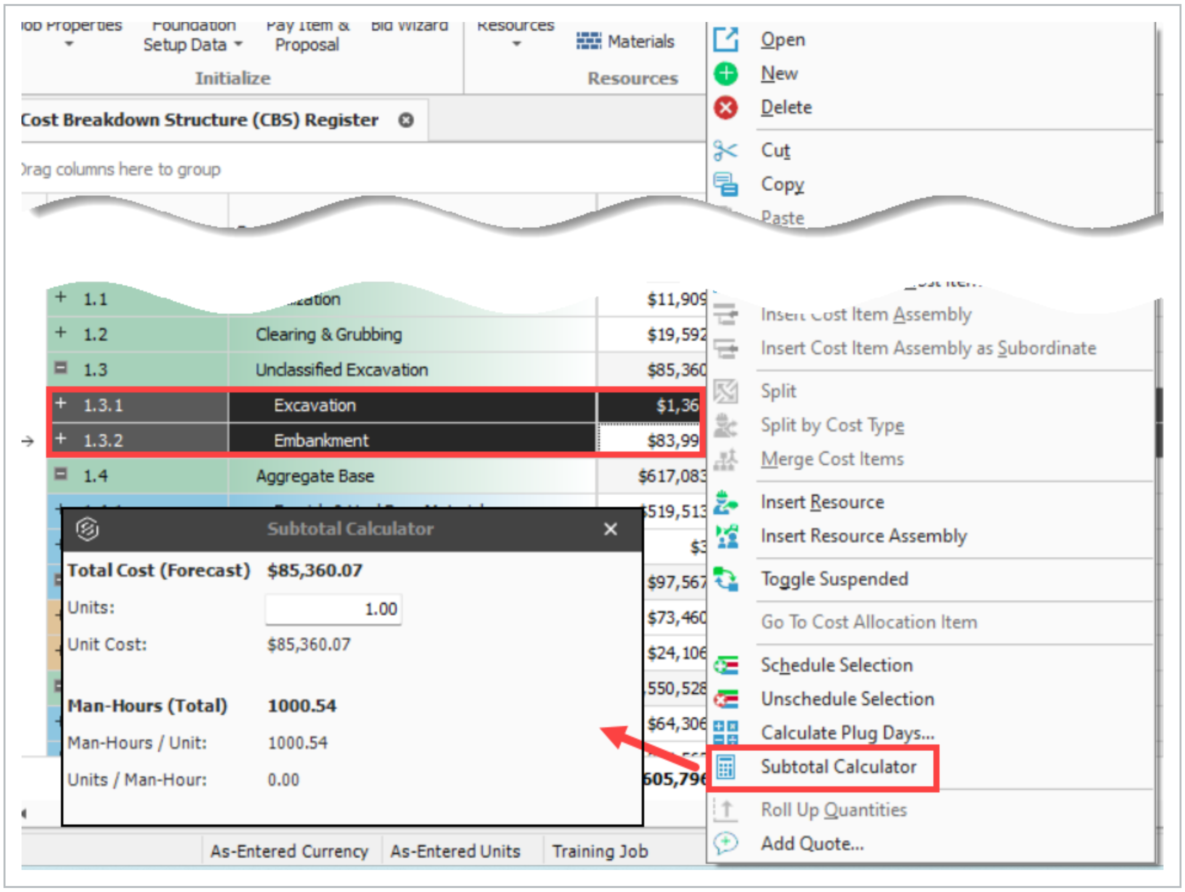


3. Enter the **View Name**, then select **OK**.
   - The new view displays in the drop-down menu

Saved views are user-specific; you will only see your own saved views when you are logged in.

2.9.5 Subtotal Calculator

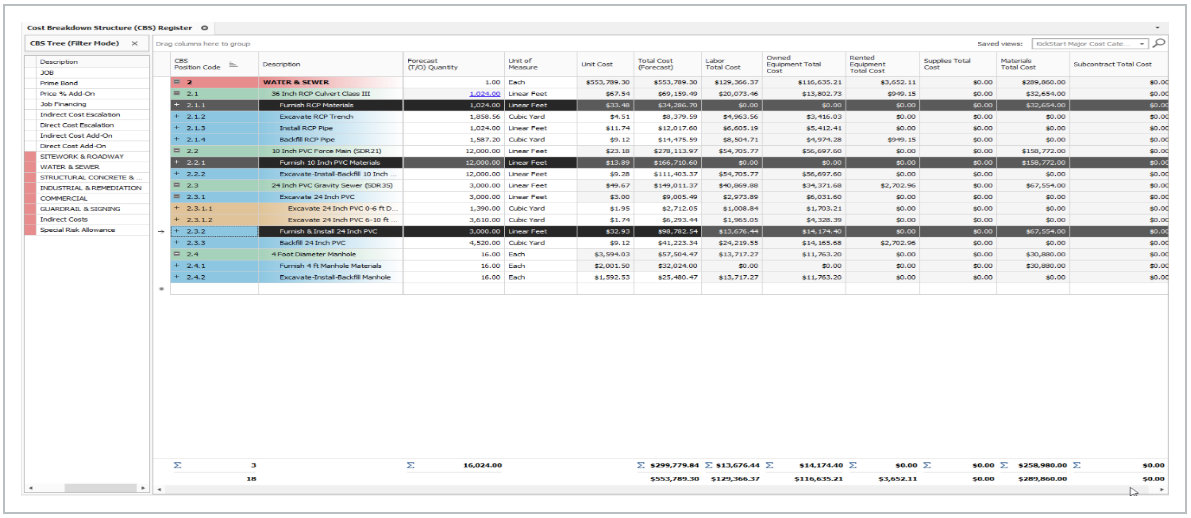
You can select multiple cost items and use the Subtotal Calculator to summarize and display Unit Cost, Man-Hours/Unit and Units/Man-Hour. Highlight a cost item in the CBS and right click on a Total Cost column (e.g., Total Cost (Forecast), Labor Total Cost, Owned Equipment Total Cost, etc.). Select **Subtotal Calculator** from the right click menu, and enter the number of units to use in your calculation.



2.9.6 Register Running Totals

You can select multiple rows in a register and see the sum total amount at the bottom of the register.

For example, you can hold down the CTRL key and multi-select cost items 2.1.1, 2.2.1, and 2.3.2 in the CBS register, you can see the sum of the three selected cost items toward the bottom row of the register.



Estimate calculates subtotals for quantities when the UOMs match. Superior cost items are not included in the subtotals to avoid any double counting in the subtotal.

It is not necessary to export data to Microsoft Excel and run separate calculations to better understand costs of multiple items. The sigma symbol shows in the subtotaled row to indicate it is the total of the selected rows.

2.10 FIND FEATURE

The Find feature lets you search across all columns in the register with a single operation. The matching results are then highlighted in yellow. A scroll bar annotation is provided to indicate the rows in the grid containing matches. This lets you easily navigate to the search results in the register.

The Find feature also includes the flexibility to perform more precise searches using various syntax in the search bar. The Find search bar shows the currently selected and total number of search results.

> If you type in two words, such as **total cost**, the grid considers them as individual conditions and selects records that contain either **total** or **cost**.

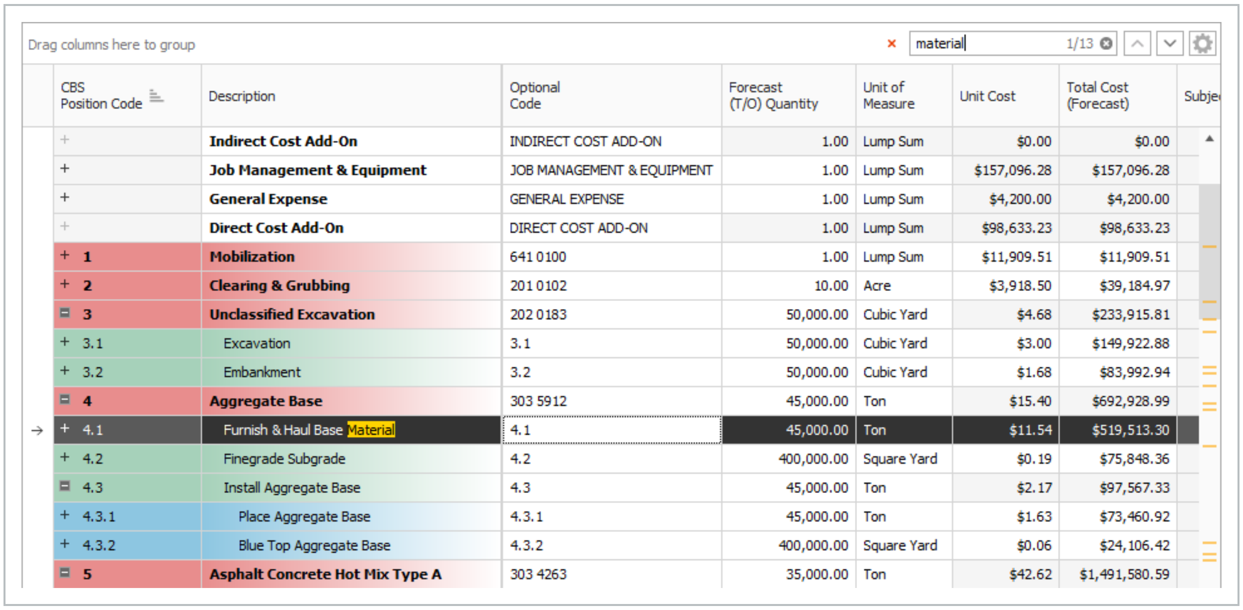
Search Syntax	Example
+	To find records that contain both search terms like **total cost**, type **+** before the second word. For example: **total +cost**.

Search Syntax	Example
-	Type **-** to exclude records that contain a specific word, for example: **total-cost**. You can combine different operators. Use **+** and **-** to select records that contain both **pay** and **item**, excluding records that contain **assignment**. For example: **pay +item -assignment**.
"quotes"	To search for a string that contains a space character, you need to enclose this string in quotation marks. For example: **"total cost"**.
:	To search against a specific column, type the first letters of the column's display name plus a colon character. For example: **optional: unassigned**. Now the grid displays records containing **unassigned** in the **optional code** column.

If you add another column-specific condition, the grid joins them using the **+** logical operator. Then the record shows the result that matches both options. The same happens when you join a column-specific condition with the one applied to all columns. An example of this search criteria looks like this: **optional: unassigned +"pay item"**.

Step by Step – Find Feature

1. From the Cost Breakdown Structure (CBS) Register, bring up the Find feature using **CTRL+F**.
2. In the search bar, type in **Materials**.
3. When all the searches are highlighted in yellow, use the **up** or **down** arrows to the right of the search bar to navigate to the next search result in the register.



Drag columns here to group

material 1/13

CBS Position Code	Description	Optional Code	Forecast (T/O) Quantity	Unit of Measure	Unit Cost	Total Cost (Forecast)	Subje
	Indirect Cost Add-On	INDIRECT COST ADD-ON	1.00	Lump Sum	$0.00	$0.00	
	Job Management & Equipment	JOB MANAGEMENT & EQUIPMENT	1.00	Lump Sum	$157,096.28	$157,096.28	
	General Expense	GENERAL EXPENSE	1.00	Lump Sum	$4,200.00	$4,200.00	
	Direct Cost Add-On	DIRECT COST ADD-ON	1.00	Lump Sum	$98,633.23	$98,633.23	
1	Mobilization	641 0100	1.00	Lump Sum	$11,909.51	$11,909.51	
2	Clearing & Grubbing	201 0102	10.00	Acre	$3,918.50	$39,184.97	
3	Unclassified Excavation	202 0183	50,000.00	Cubic Yard	$4.68	$233,915.81	
3.1	Excavation	3.1	50,000.00	Cubic Yard	$3.00	$149,922.88	
3.2	Embankment	3.2	50,000.00	Cubic Yard	$1.68	$83,992.94	
4	Aggregate Base	303 5912	45,000.00	Ton	$15.40	$692,928.99	
4.1	Furnish & Haul Base Material	4.1	45,000.00	Ton	$11.54	$519,513.30	
4.2	Finegrade Subgrade	4.2	400,000.00	Square Yard	$0.19	$75,848.36	
4.3	Install Aggregate Base	4.3	45,000.00	Ton	$2.17	$97,567.33	
4.3.1	Place Aggregate Base	4.3.1	45,000.00	Ton	$1.63	$73,460.92	
4.3.2	Blue Top Aggregate Base	4.3.2	400,000.00	Square Yard	$0.06	$24,106.42	
5	Asphalt Concrete Hot Mix Type A	303 4263	35,000.00	Ton	$42.62	$1,491,580.59	

4. To add the Find feature to the register functions header, select the **Options** icon to the far right of the search bar. Then select **Always Expanded**.
5. To search in a specific column only, select the **Options** icon to the far right of the search bar. Then select **Search in Selected Column Only**. Search a specific term in your selected column.
6. To close the Find functionality, click the **Close** icon to the left of the search bar. You can also hold down the **Shift** key and then select the **F3** key to use this feature.

> A drop-down can be used to see a list of previous searches.

2.11 KEYBOARD SHORTCUTS

2.11.1 Navigating in a register

Press	To
Arrow keys	Move one cell up, down, left, or right
Tab	Move to the next cell in the same row
SHIFT+Tab	Move to the previous cell in the same row

Press	To
Home	Move to the beginning of the cell
End	Move to the end of the cell
Page Down	Move to the last row in the register
ALT+Down Arrow	Shows the contents of drop-down list choices for applicable fields
Numpad *	Expands the subordinate leaves of a tree structure for the currently highlighted branch
Numpad + key	Expands the currently highlighted section to display subordinate sections
Numpad - key	Collapses the currently highlighted section to remove the display of subordinate sections
CTRL+Spacebar	Selects and Deselects a row
CTRL+Tab	Toggles the display of open windows
ALT	Activates form menus
ALT+F4	Closes active form
CTRL+G	Opens the Go To Column navigator

2.11.2 Navigating in a record

Press	To
Left and right arrow keys	Move one character left or right in an editable field
TAB	Move to the next editable field in the record
SHIFT+TAB	Move to the previous editable field in the record
Home	Move to the beginning of the field
End	Move to the end of the field
ALT+Down Arrow	Shows the contents of drop-down list choices for applicable fields
F4	Shows the contents of drop-down list choices for applicable fields

Press	To
CTRL+Spacebar	Selects and deselects a row
CTRL+TAB	Toggles the display of open windows
ALT	Activates form menus
ALT+F4	Closes active form
CTRL+G	Opens the Go To Column navigator

2.11.3 Menu and keystroke commands

All forms have their own set of commands specific to the form. Commands for a form show in the ribbon on contextual tabs (Actions and More Actions) when it is open and the form is active. Click a command on the tab to order it. Some routine commands can be ordered using the standard Windows keystroke combinations (e.g., Ctrl+C, Ctrl+V) or right-click with the mouse when the field is selected.

2.11.4 Function keys in Estimate

Key	Function
F1	Open to the Help
F2 (grid)	Edit cell value: Enter edit mode for cells that are editable on the grid
F2 (tree list)	Edit cell value: Enter edit mode for cells that are editable on the tree list
F3	Find next: Finds the next value based on the search criteria
F4 (grid)	Show selection register or options in the drop down
F5	Refresh, wherever available
F5	Collapse subordinate Items
F6	Expand subordinate Items

In the Account Code Utilization Register, F5 can either refresh or collapse subordinates based on whether an account code is selected.

Lesson 2 Review

1. The _________ is a great way to get a summary view of your bid. You can see totals of direct costs, indirect costs, profit and the overall bid price.
   a. Job Folder
   b. Data Map
   c. System tab
   d. Resource Rate Register

---

2. You can group by more than one column to have multiple grouping levels.
   1. True
   2. False

---

3. Display settings for Units of Measure, Currency, and Colors can be adjusted from the _______ tab.
   a. Setup
   b. Estimate
   c. System
   d. Help

Lesson 2 Summary

As a result of this lesson, you can:

- Navigate the InEight Estimate system interface
- Navigate system settings
- Manage columns in InEight Estimate registers

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LESSON 3 – LIBRARY SETUP

Lesson Duration: 60 minutes

Lesson Objectives

After completing this lesson, you will be able to use the following forms and explain their purpose:

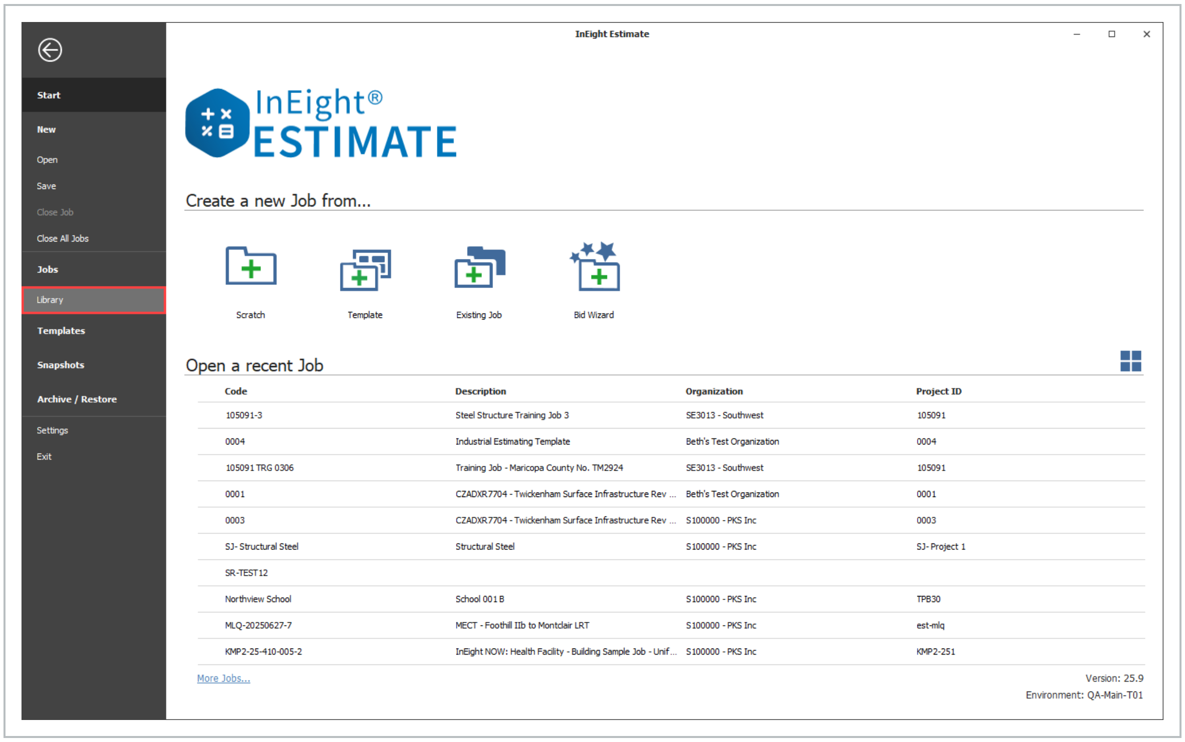
- Library Job Properties
- Library Foundation Setup Data Register
- Library Resource Rate Register
- Library Assembly Register

Lesson Topics

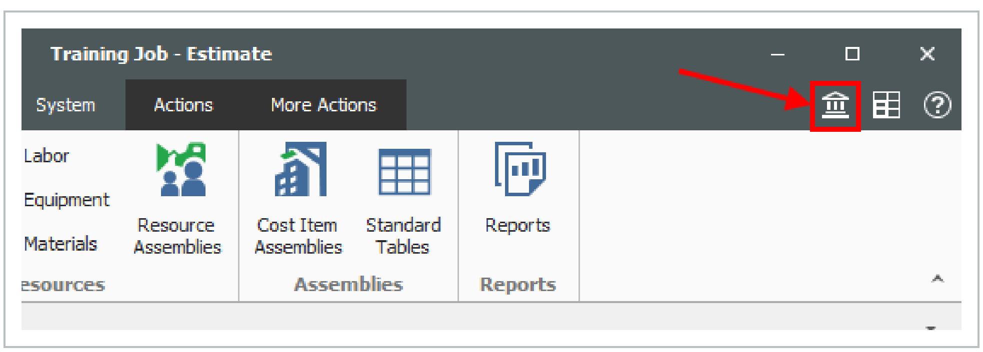
3.1 LIBRARY OVERVIEW

The Library is where you set up and maintain master information that imports into your projects, including resource rates, tags, units of measure, cost item assemblies, and master breakdown structures. It is also where security roles and permissions are configured.

You access the Library from the Backstage view in Estimate. Click the **Library** button to open.



You can also access the Library by clicking on the Library icon, when on the InEight Estimate landing page.



When the Library opens, you see ribbons available under the main menu tabs. Each menu tab has unique sections which hold the necessary forms.

3.1.1 Library Tabs

The Library has four tabs which organizes the forms under sections:

- Setup
- Estimate
- System
- Integrations

The Actions and More Actions tabs show when you open a register and contain functions for the register you have active.

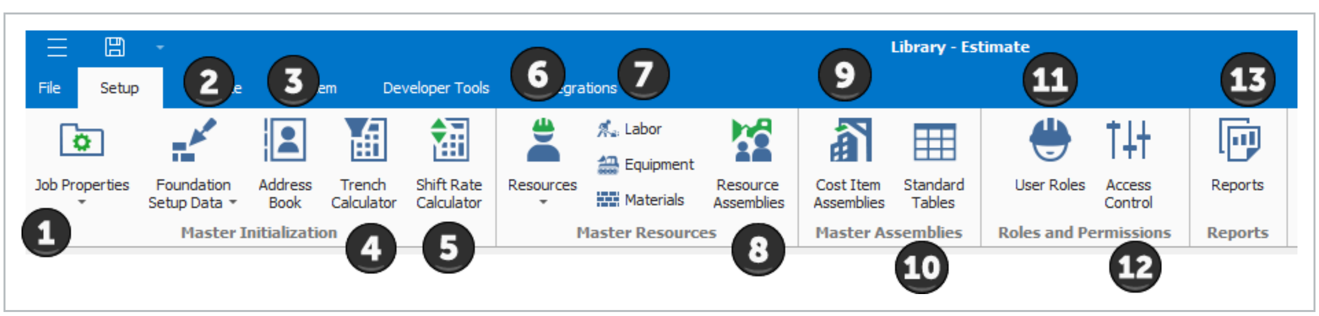
3.1.1.1 Setup Tab

Overview - Setup Tab

Name		Description
1	**Job Properties**	The job properties maintained in the library will serve as the default settings for any new estimate that is created from scratch. When creating a new job it will inherit all the job properties set in the master library.
2	**Foundation Setup Data**	A master set of account codes, tags, and units of measure. When a new folder is created, the master set is automatically copied from the Library to the new folder.
3	**Address Book**	Used to store and maintain all information pertaining to the companies with whom you work and contact regularly (subcontractors, vendors, architects, etc.).
4	**Trench Calculator**	Stores and maintains common trench configurations that are used from project to project.
5	**Shift Rate**	Allows you to set up shift rate configurations that you can access at the

Overview - Setup Tab (continued)

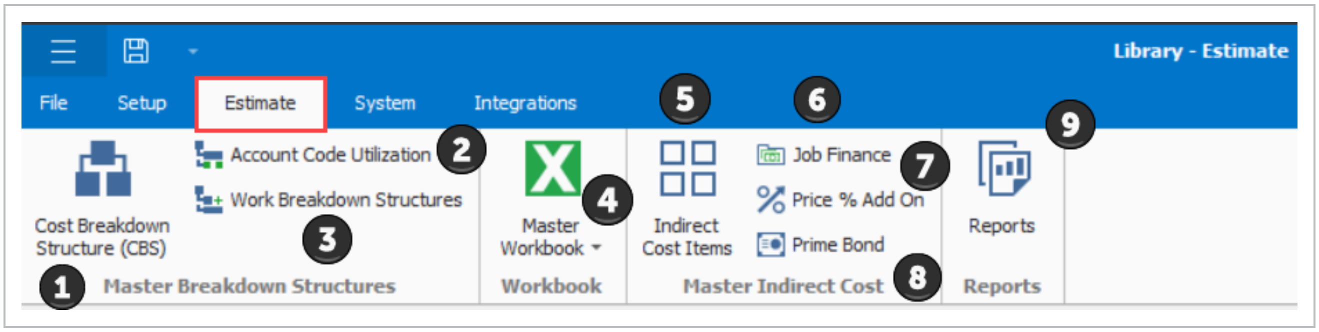
Name		Description
	Calculator	project level.
6	**Resources**	Opens the Library Resource Rate Register where you can create and edit all resources and resource cost details available for import into your projects.
7	**Most Used Resources**	For quick access to the Labor, Equipment and Materials tabs of the Master Resource Rate Register.
8	**Resource Assemblies**	Takes you to the Library Resource Assembly Register where you can set up resource assemblies to import into individual projects.
9	**Cost Item Assemblies**	Cost Item Assemblies are predictive models to quickly and accurately estimate elements of a job that can be repetitive in nature on the job or from job to job.
10	**Standard Tables**	The Standard Tables are used to create and/or list job-level table data that is accessible by any of the Cost Item Assemblies that exist in a job. The Standard Table Record allows the user to create and or modify a Table record. The Standard Table Register lists all the job level tables created / available in the project.
11	**User Roles**	Opens the User Roles Register that shows user role names and their description which you can use in the Access Control Register.
12	**Access Control**	Allows you to customize your system permissions by restricting destinations or commands that only designated roles should have access to.
13	**Reports**	Opens the Reports window, where you can access all system reports and configure the default report settings.



3.1.1.2 Estimate Tab

Overview - Estimate Tab

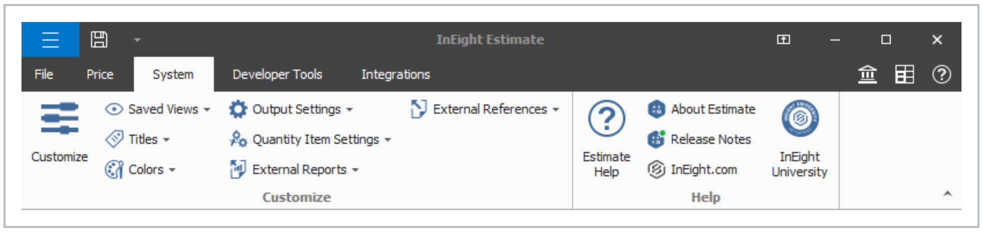
Name		Description
1	**Cost Breakdown Structure (CBS)**	Opens the Library Cost Break Structure register, where you can define the CBS that will automatically import when a new project is created.
2	**Account Code Utilization**	Used to roll estimate line items into an account code hierarchy and benchmark against historical projects in a way that is consistent across projects.
3	**Work Breakdown Structures**	Opens the Library Work Breakdown Structure register, where you can define additional Work Breakdown Structures that will automatically import when a new project is created.
4	**Master Workbook**	Opens the master Microsoft Excel template which will be embed into each new estimate job folder. The cells in the embed excel workbook can be linked to send information to or from InEight Estimate Fields.
5	**Indirect Cost Items**	Takes you to the Library Cost Breakdown Structure Register where you can edit and define indirect cost items.
6	**Job Finance**	Takes you to the Library Cost Breakdown Structure Register where you can edit the Job Financing cost item.
7	**Price % Add On**	Takes you to the Price % Add On record, where you can define the price % add to be included in the Library CBS.
8	**Prime Bond**	Opens to the Library Prime Bond record where you can define the bond tables that will import automatically when a new project is created.
9	**Reports**	Opens the Reports window, where you can access all system reports and configure their report settings.



3.1.1.3 System Tab

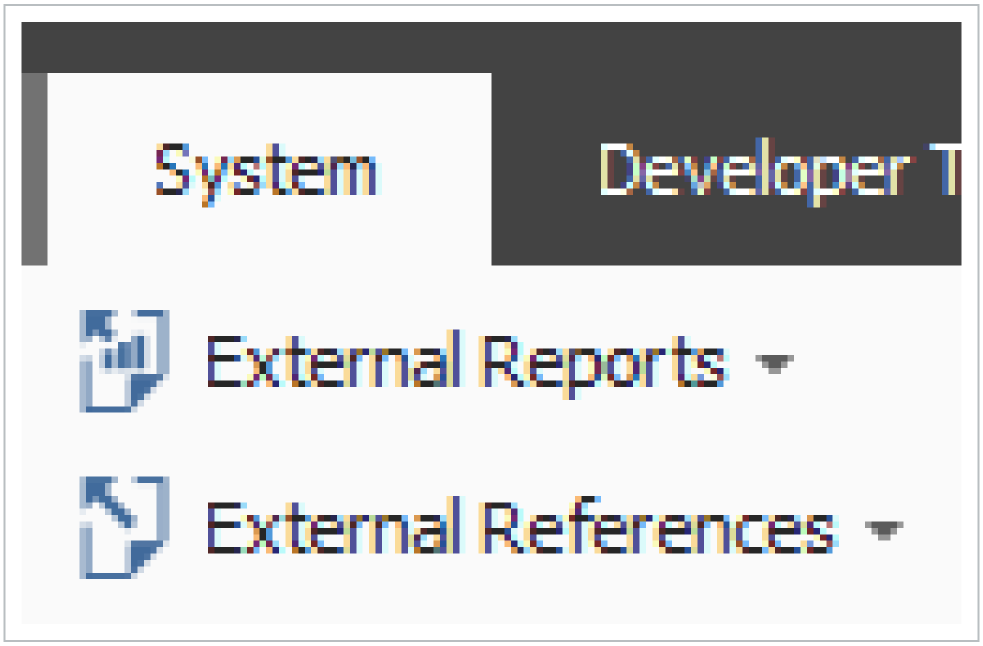
Overview - System Tab

Name		Description
1	**Customize**	Window to customize the field titles that are displayed throughout various screens in the system, including all cost category titles, user-defined Tags, and more.
2	**Saved Views**	Allows you to save your views onto a disk or load from a disk.
3	**Titles**	Allows you to save titles onto a disk or load from a disk.
4	**Colors**	Allows you to save your colors onto a disk or load from a disk.
5	**Output Settings**	Allows you to save your output settings onto a disk or load from a disk.
6	**Quantity Item Settings**	Save your mapped quantity item source settings to your computer. You can then load the saved mapped settings into your Quantity Item Sources Register.
7	**External Reports**	Menu to not only generate reports created by Estimate, but also to open programs, folders, documents, reports, or Internet resources with the associated program.
8	**External References**	Allows you to open programs, folders, documents, reports, or Internet resources with the associated program.
9	**Help Section**	Offers you links to Estimate’s general Help menu, information about Estimate (i.e., version number, system information, tech support, etc.), What’s New in the new version, and InEight’s external website.

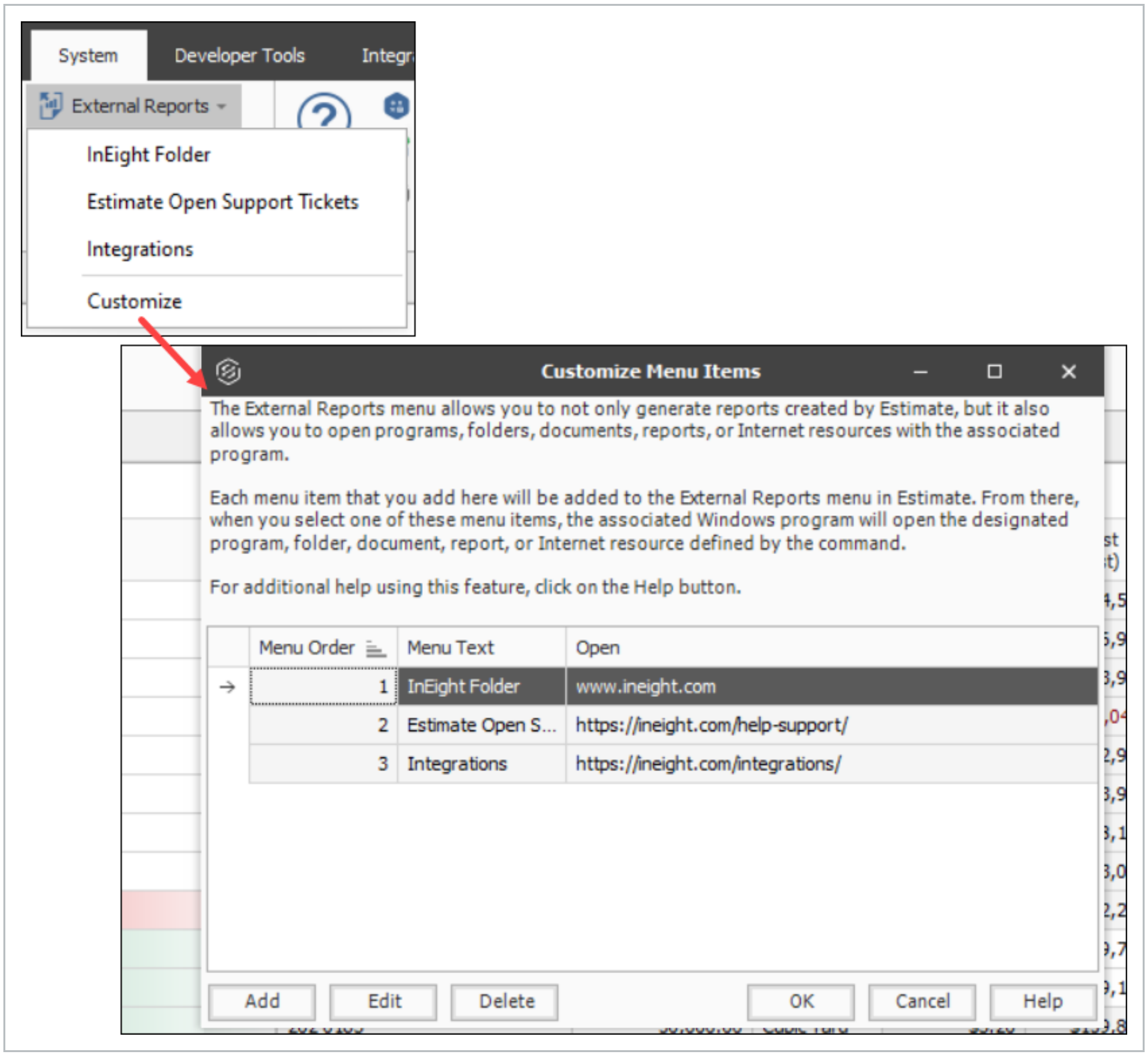


External Reports

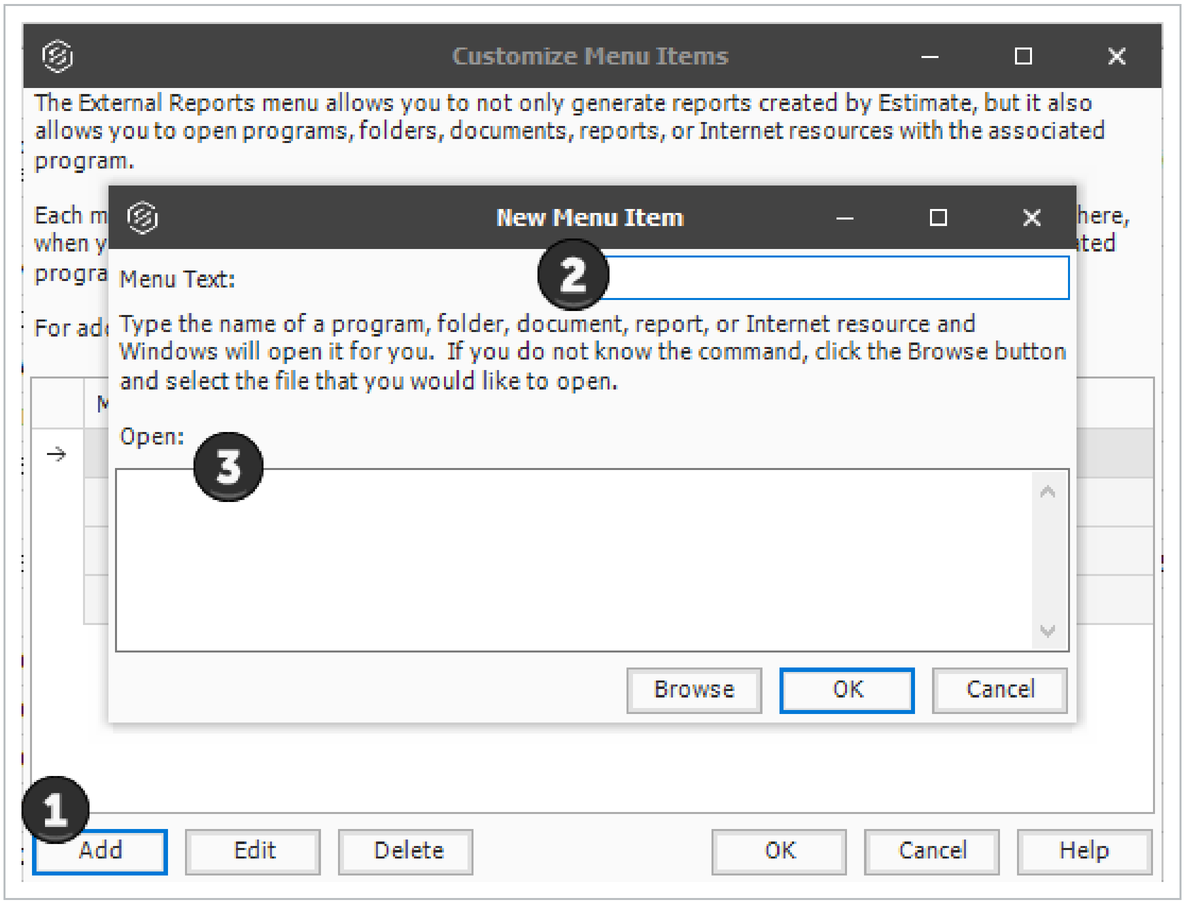
The External Reports menu lets you generate reports created by Estimate, and also lets you open program files, folders, documents, or other internet resources.



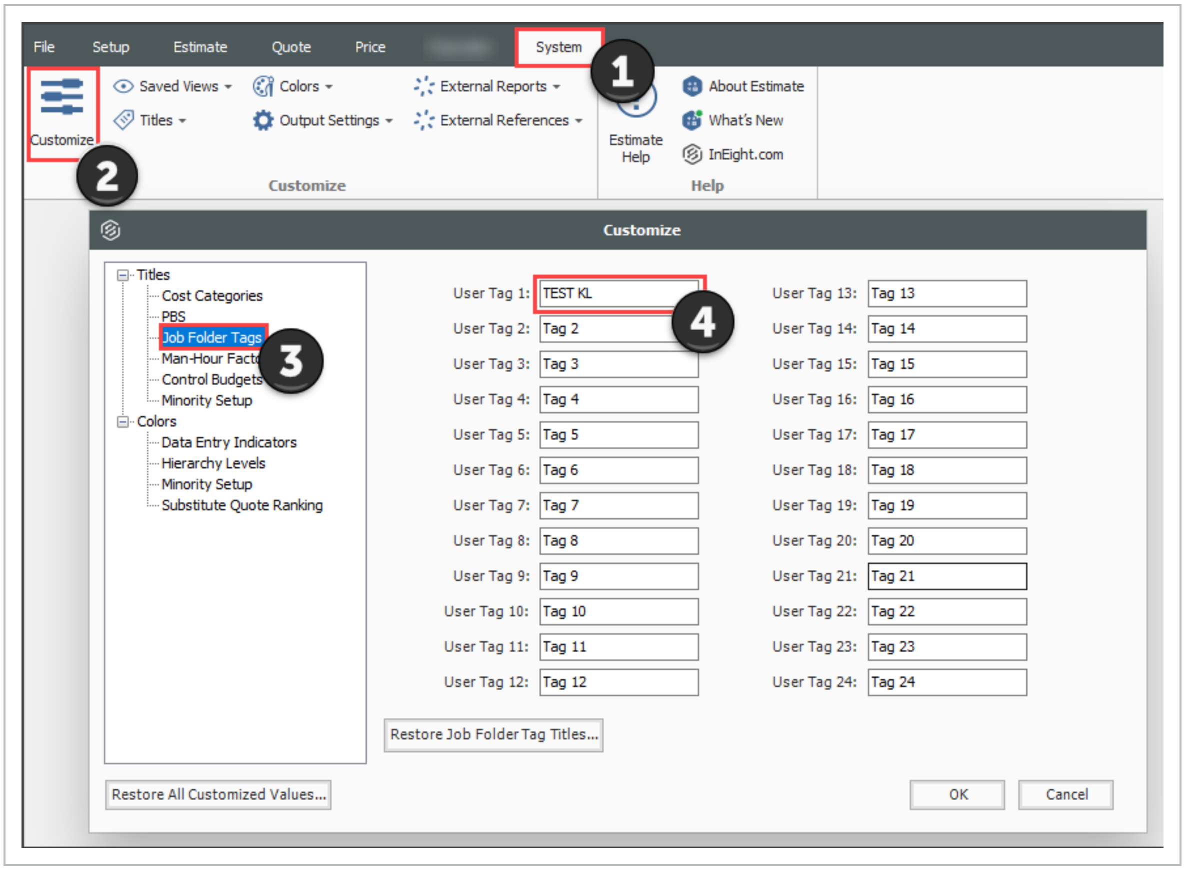
Each menu item can be added to the External Reports menu. Upon selecting one of the menu items, the associated program, file, folder document or URL will open, as defined by the command entered in the Open column.

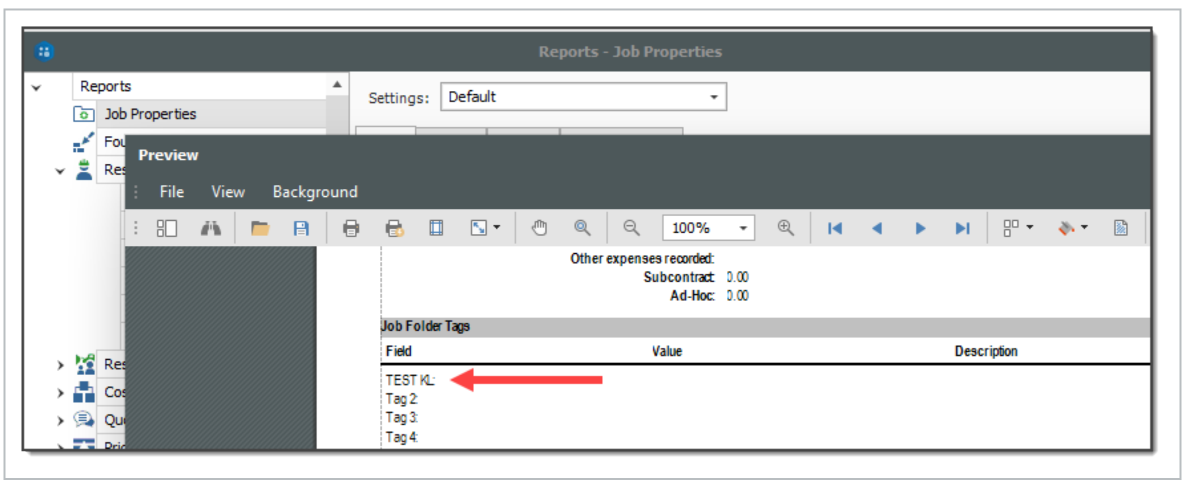


To add a new menu text, first select the **Add** button and enter a name in the **Menu Text field**, and then type in the location of the new Menu text under the Open field.



Customized Job Folder Tags match the view of the fields in the Job Properties form.

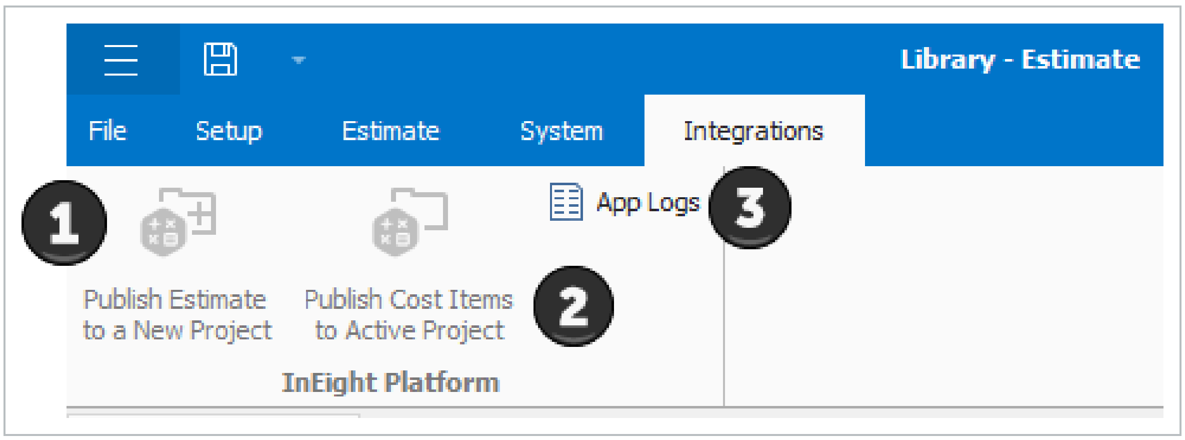

File
Setup
Estimate
Quote
Price
System
1
Customize
2
Saved Views
Titles
Colors
Output Settings
External Reports
External References
Customize
Estimate Help
About Estimate
What's New
InEight.com
Help
Customize
Titles
Cost Categories
PBS
Job Folder Tags
3
Man-Hour Facto
Control Budgets
Minority Setup
Colors
Data Entry Indicators
Hierarchy Levels
Minority Setup
Substitute Quote Ranking
User Tag 1: TEST KL
4
User Tag 2: Tag 2
User Tag 3: Tag 3
User Tag 4: Tag 4
User Tag 5: Tag 5
User Tag 6: Tag 6
User Tag 7: Tag 7
User Tag 8: Tag 8
User Tag 9: Tag 9
User Tag 10: Tag 10
User Tag 11: Tag 11
User Tag 12: Tag 12
User Tag 13: Tag 13
User Tag 14: Tag 14
User Tag 15: Tag 15
User Tag 16: Tag 16
User Tag 17: Tag 17
User Tag 18: Tag 18
User Tag 19: Tag 19
User Tag 20: Tag 20
User Tag 21: Tag 21
User Tag 22: Tag 22
User Tag 23: Tag 23
User Tag 24: Tag 24
Restore Job Folder Tag Titles...
Restore All Customized Values...
OK
Cancel


Reports - Job Properties
Reports
Job Properties
Settings: Default
Preview
File
View
Background
100%
Other expenses recorded:
Subcontract: 0.00
Ad-Hoc: 0.00
Job Folder Tags
Field
Value
Description
TEST KL:
Tag 2:
Tag 3:
Tag 4:

3.1.1.4 Integrations

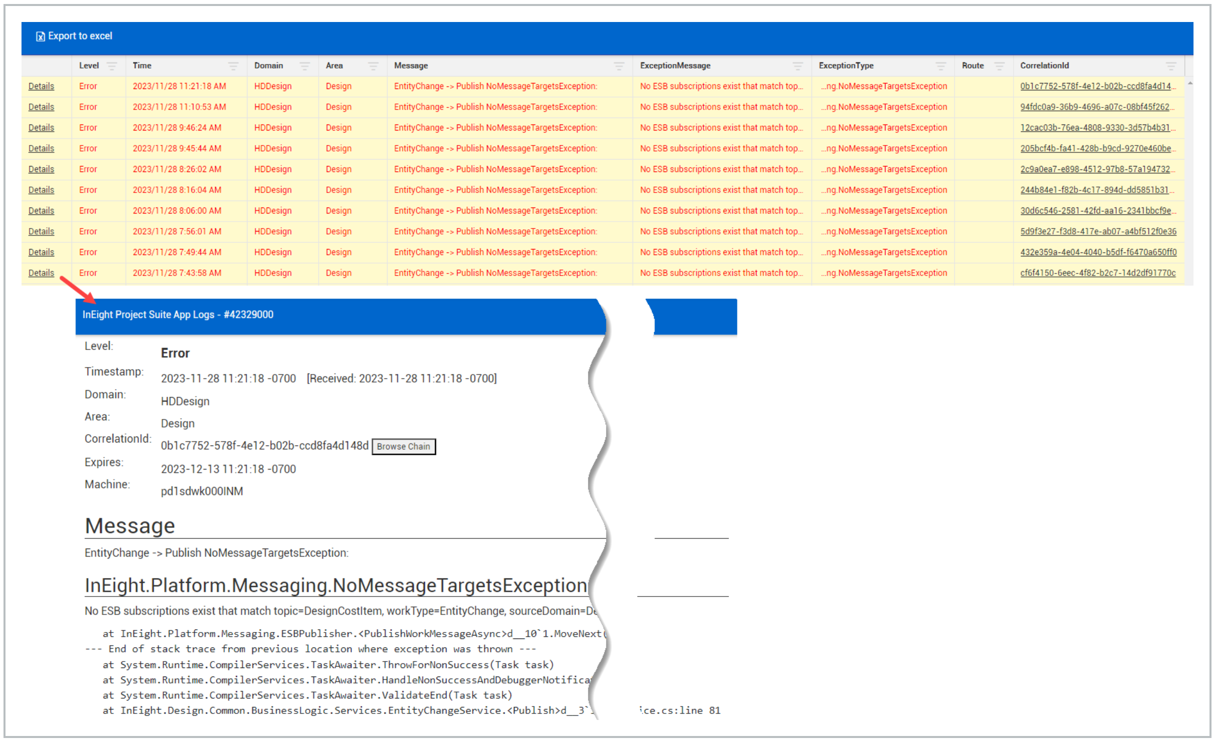
Overview - Integrations Tab

Name		Description
1	**Publish Estimate to a New Project**	Lets you publish an estimate job to a new project. This requires the installation of the data provider plug-in.
2	**Publish Cost Items to Active Project**	Lets you publish cost items to an active project. This requires the installation of the data provider plug-in.
3	**App Logs**	Lets you open the Estimate application logs in Project Suite, view log details, and export to Excel.



App Logs

The InEight Project Suite App Log lets you drill down to the Detail level which helps you find, analyze and solve application errors.



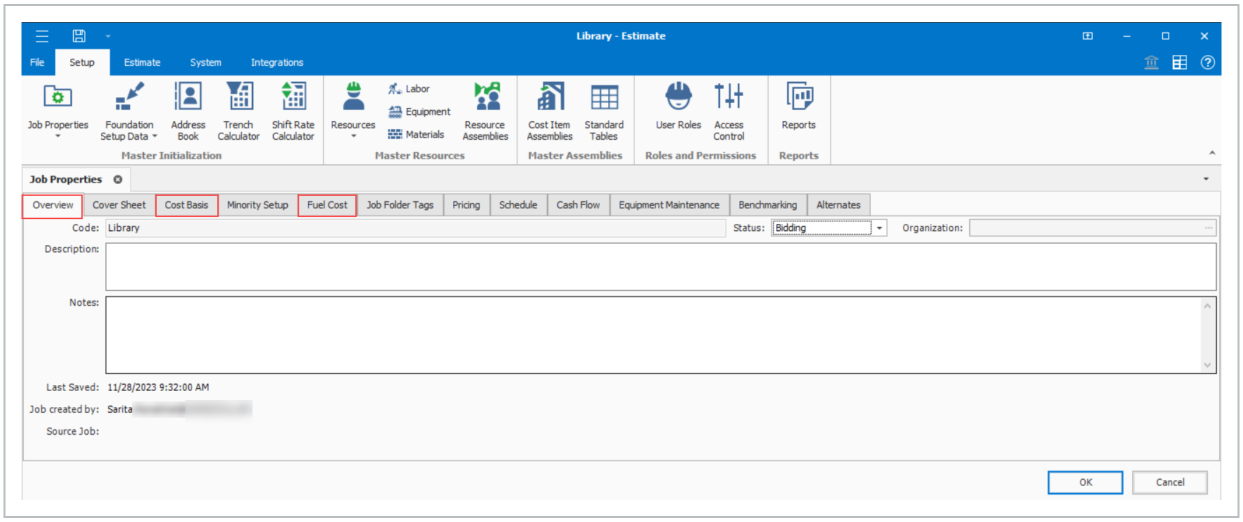
3.2 LIBRARY JOB PROPERTIES

The Library Job Properties form serves as a template for new jobs. Some of the tabs on the Library Job Properties form hold basic settings that will require a default selection which will apply to all new jobs created from scratch. Time can be saved when utilizing Library Job Properties, because the data and settings you fill out will be automatically imported into a new job. Once imported, these settings can be changed at the job level if necessary.

It may be helpful to complete the following tabs / fields at the Library level:

- **Overview Tab Notes Field**: Filling out the Notes section at the Library level would be helpful for any instructions or reminders that you want to display on all projects' Job Properties form. For example, "Always double check currency exchange rates"
- **Cost Basis Tab**: Shift arrangements may or may not be standard across all projects, as well as wage rates and scales. The cost basis default rules should be established within the library.
- **Fuel Cost Tab**: Entering a default fuel cost here will factor with the utilization of your equipment

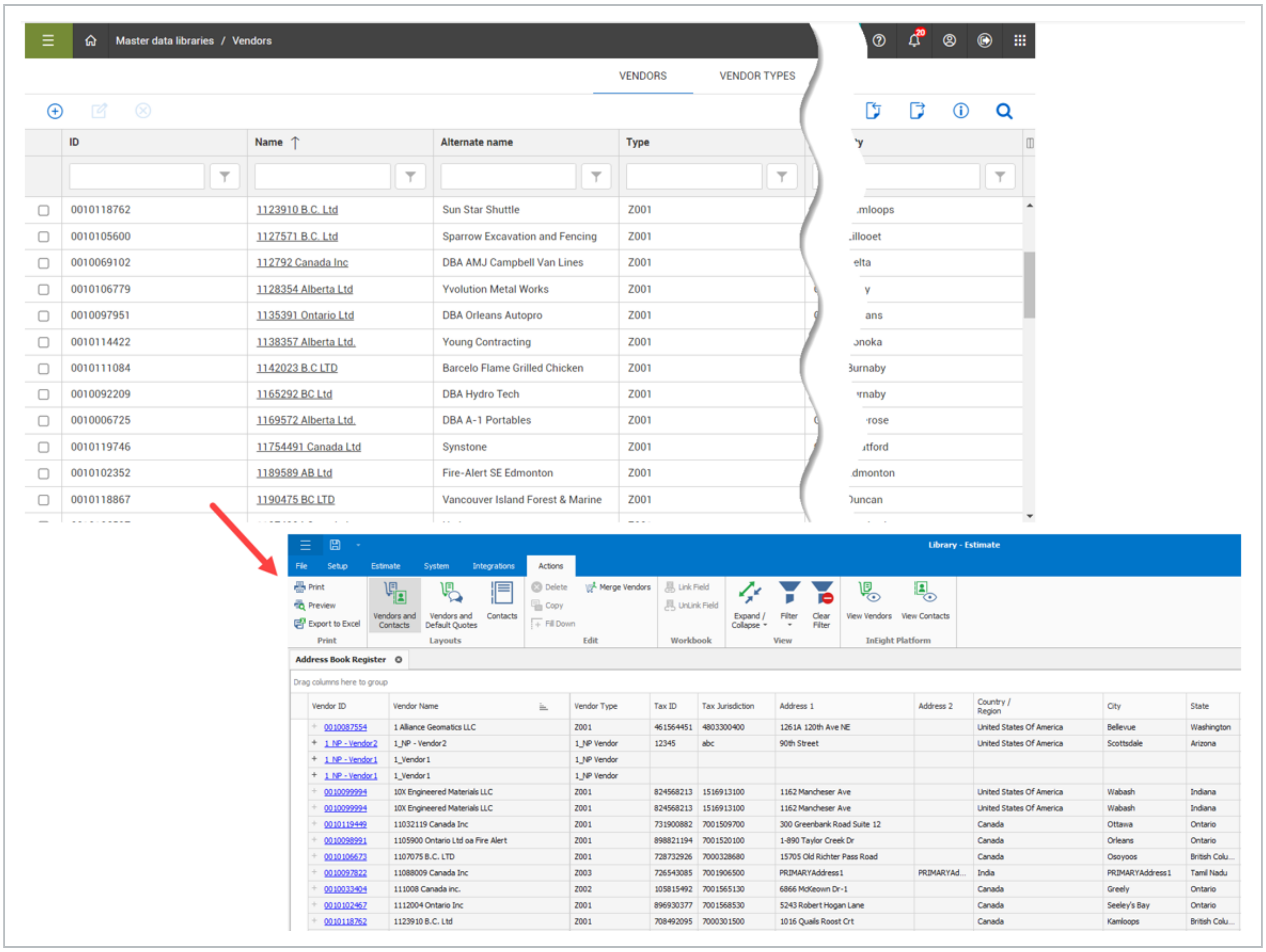
to be included in your equipment rates



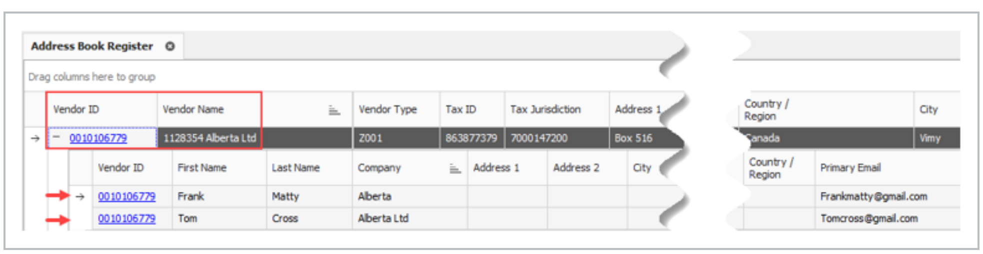
3.3 LIBRARY ADDRESS BOOK

Estimate's vendor and contact information in the address book register integrate with InEight Platform's vendor and contact master data libraries.

Vendors and contacts are created and maintained in Platform's master data library as a single source repository of vendor and contact data.

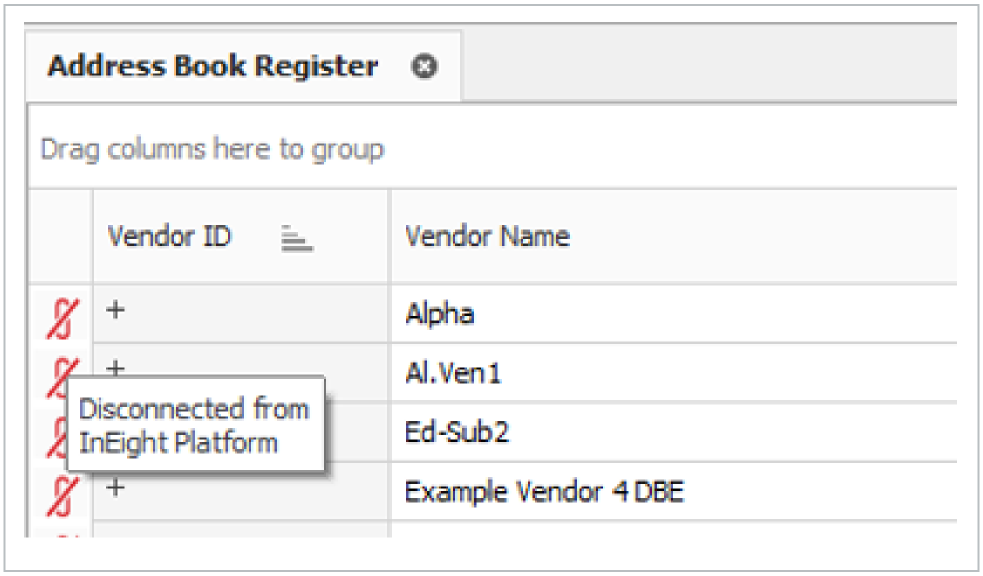


The vendor and contact data structure shows a new hierarchy where multiple contacts can be assigned to one vendor.



3.3.1 Pre-existing Estimate data

Upon upgrading to version 23.6, address book records show a combined list of both pre-existing Estimate Address Book records and Platform vendors and contacts. Pre-existing Estimate Address Book records are still editable, but Platform records are not. The pre-existing disconnected vendors and contacts show a red glyph to the left of the Vendor ID column which shows that these records are disconnected from Platform.

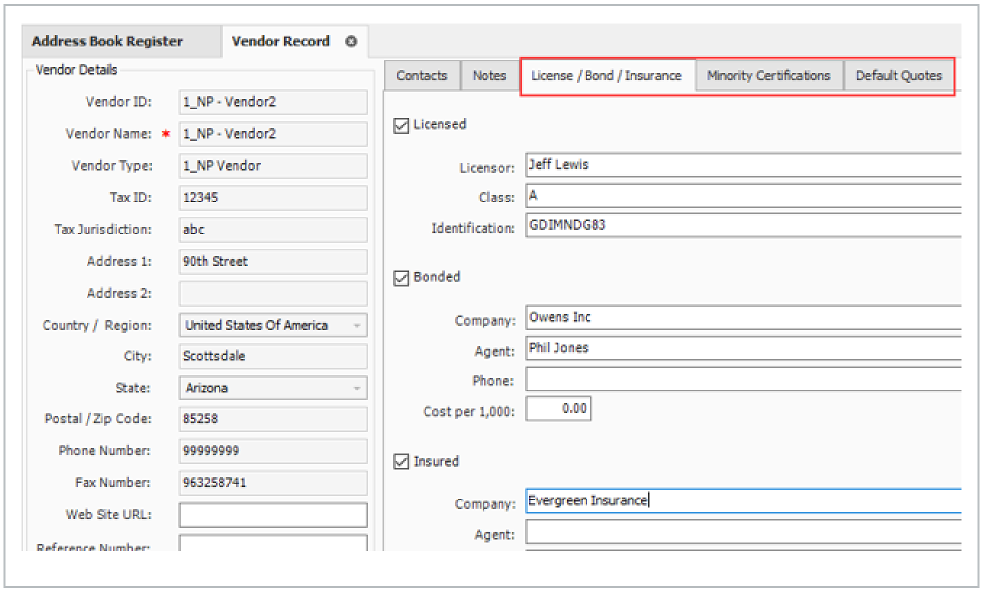


The existing contact records also have a vendor record associated with it. New vendors and contacts must be added via Platform, and changes to any Platform originated records must be modified in Platform. This promotes the use of Platform as the single source of creation and maintenance for vendor master data.

3.3.2 Estimate specific data

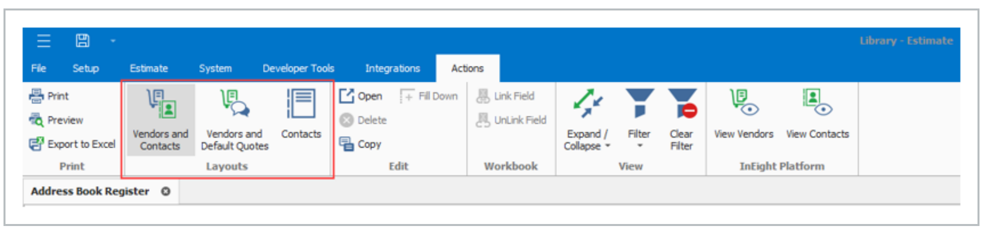
Certain vendor affiliated qualification information required for estimating purposes such as licensed, bonded and insured data, or minority participation, is maintained directly in Estimate only rather than in Platform.

There can be other Estimate vendor and contact data that only exist in Estimate and not in Platform, such as License, Bond, Insurance and Minority Certifications, and Default Quotes.



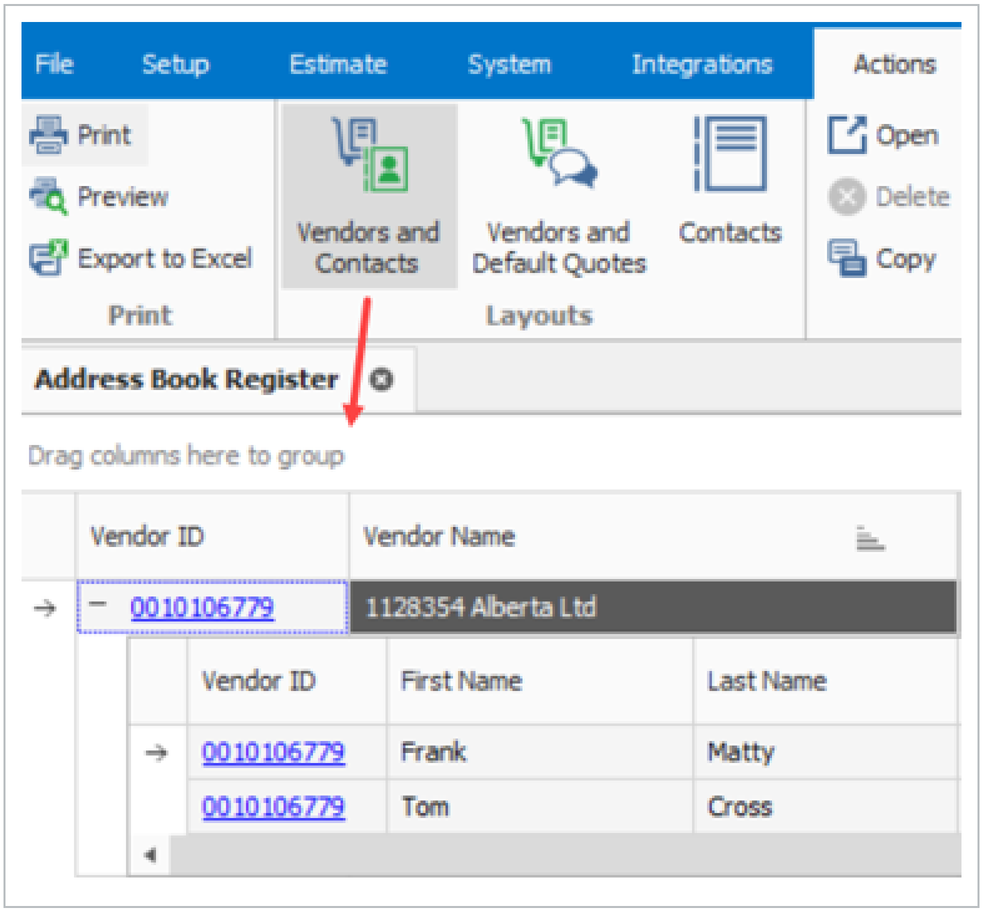
3.3.3 Address Book layouts

You can choose between three address book page arrangements, vendors and contacts, vendors and default quotes, and contacts.



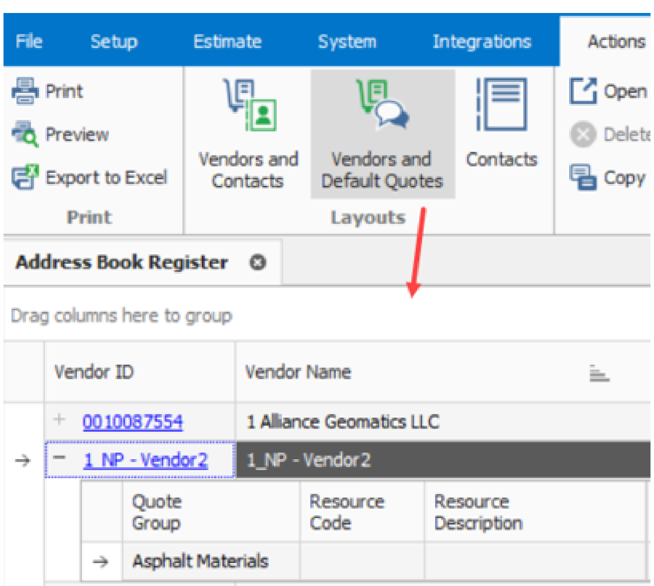
3.3.3.1 Vendors and Contacts

Vendors and Contacts are arranged where the vendor is the primary record in the register, and the contacts associated with the vendor are shown as secondary detail records.



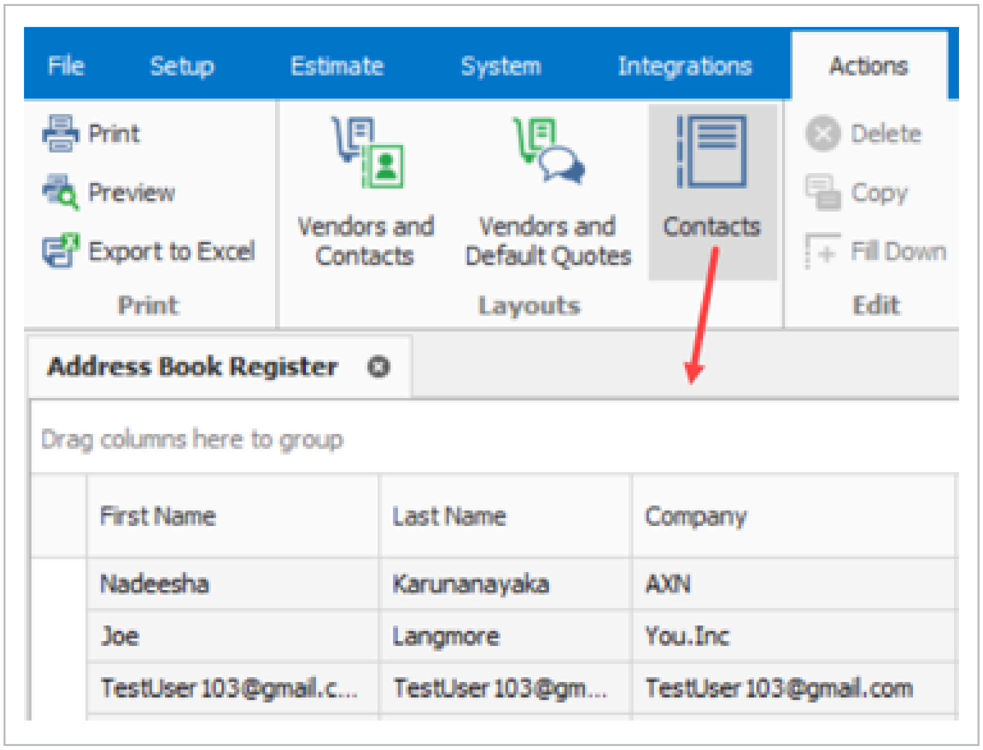
3.3.3.2 Vendors and Default Quotes

Vendors and default quotes are arranged where the vendor is the primary record in the register, and the default quote group assignments for the vendor are shown as secondary detail records.



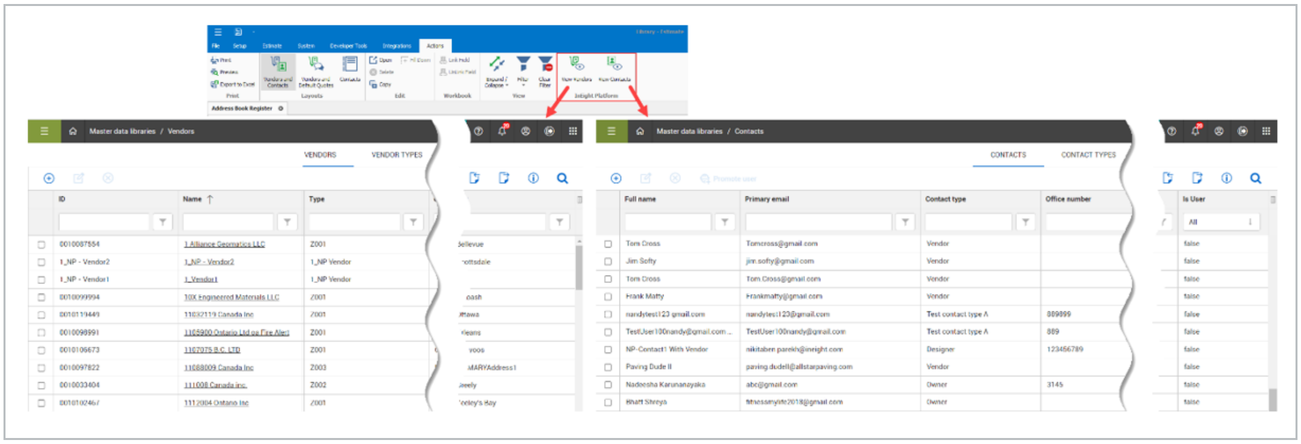
3.3.3.3 Contacts

Contacts are arranged where the contacts are shown in a flat list and are not secondary detail records under the Vendor. This layout can be used to search more easily for contacts regardless of their vendor assignment.

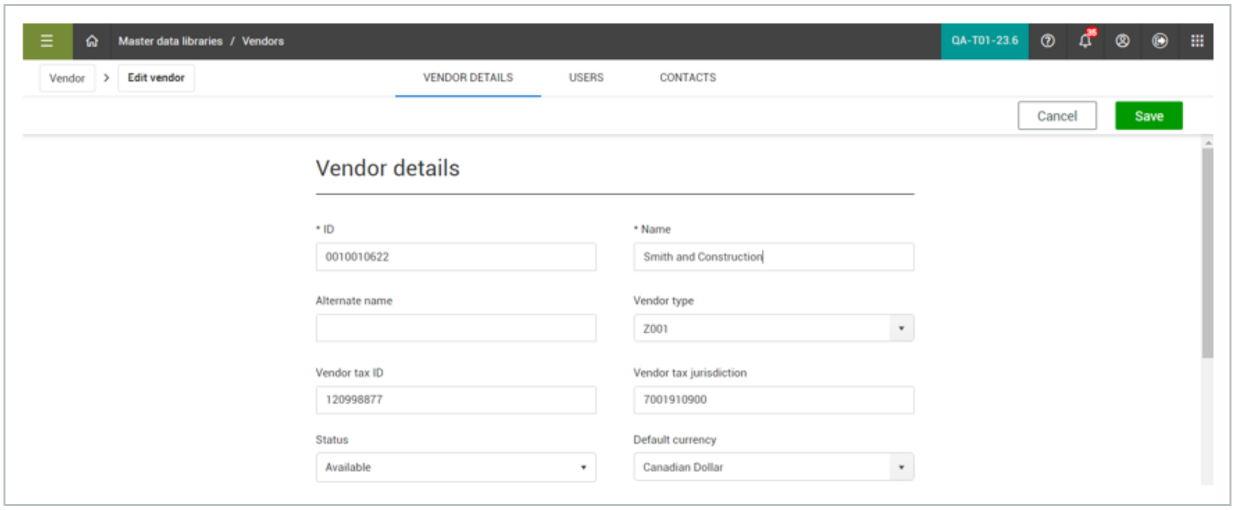


3.3.4 View Vendors and Contacts in InEight Platform

Select View Vendors or View Contacts to open a new InEight Platform master data vendors and contacts browser.



To view or edit a vendor, click the Vendor ID. The Platform Edit vendor > **Vendor Details** page opens.

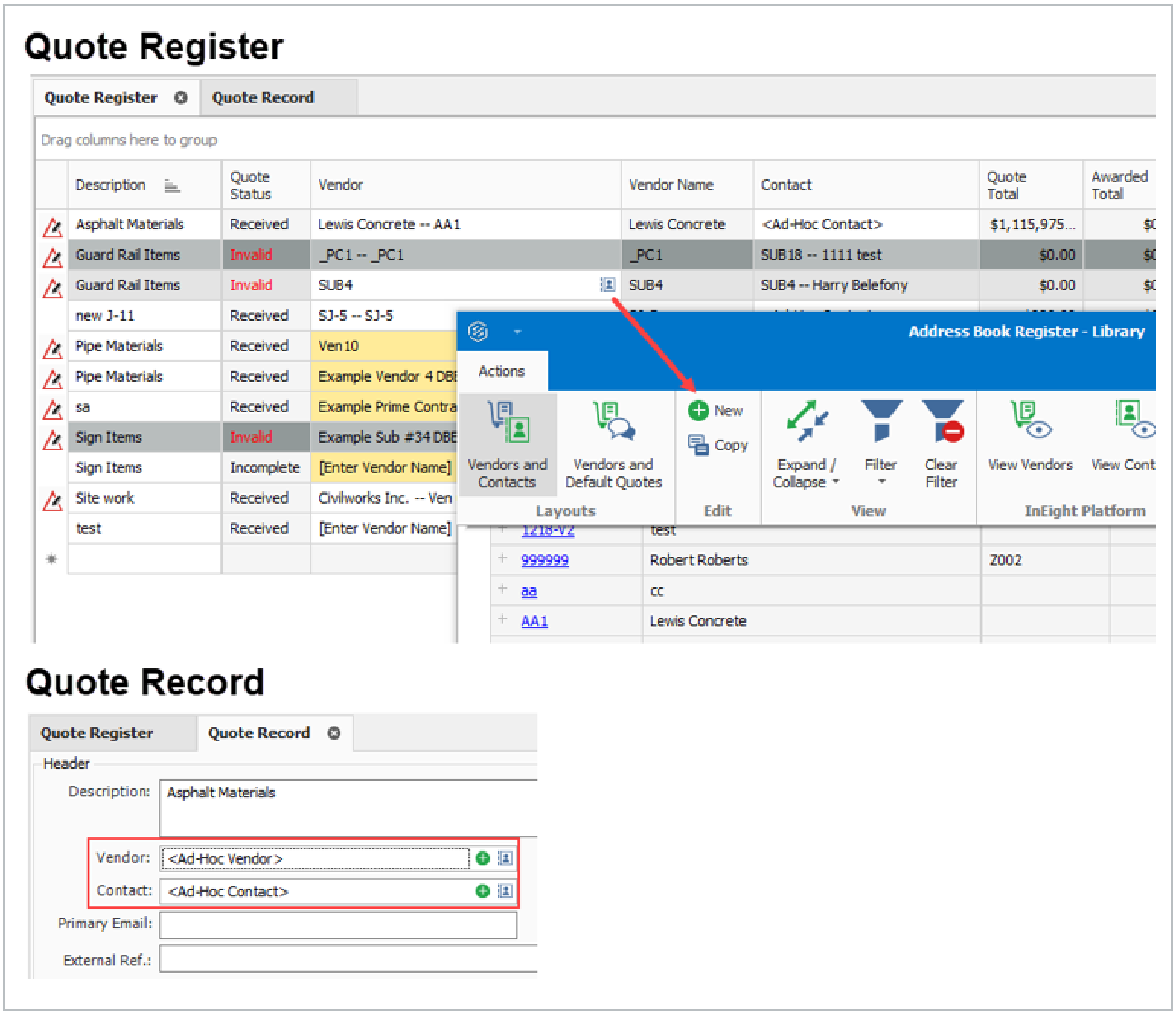


3.3.5 Vendor and contact creation

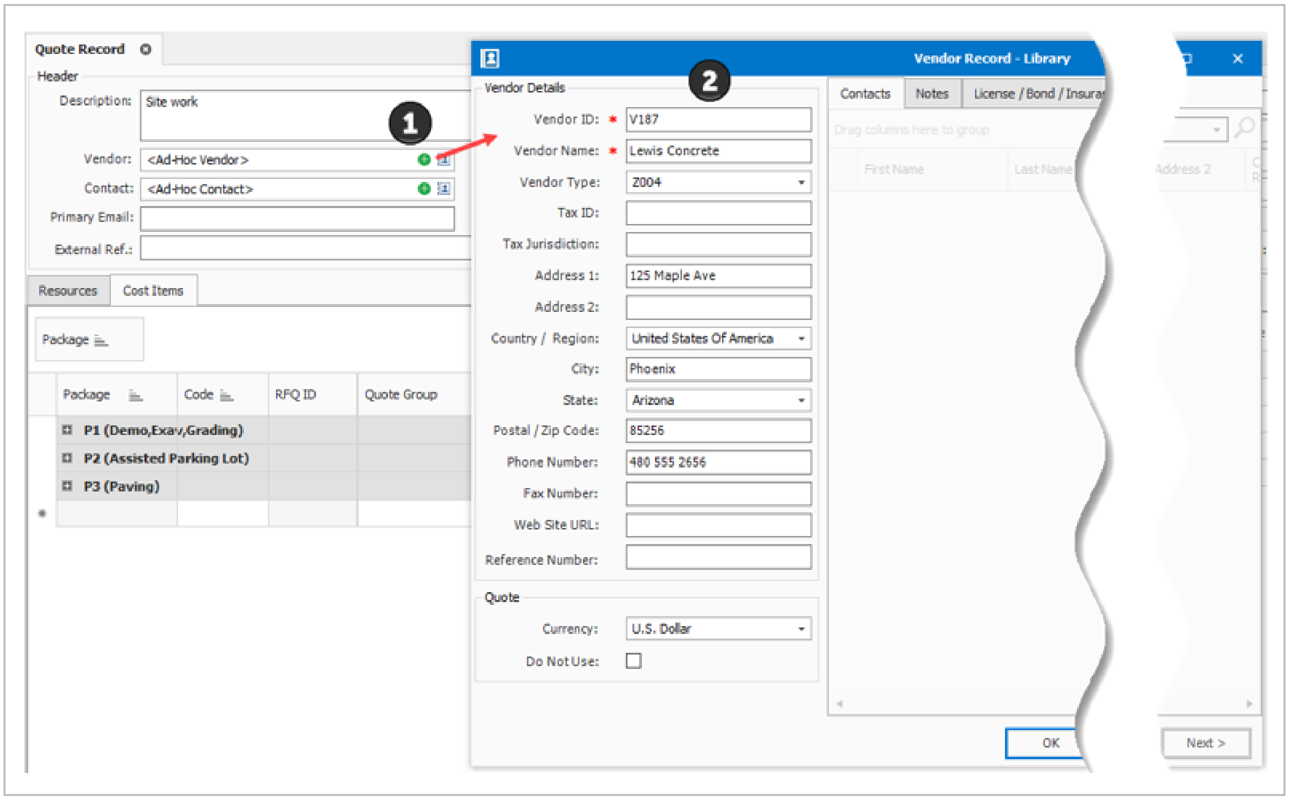
You can quickly create ad hoc vendors and contacts via the Quote Register and Record forms.

After you receive vendor quotes and you are ready to enter quote information, it can be an optimal moment to create new vendors and contacts if they are not currently in the Address Book. Creating vendors and contacts on the fly while the vendor quote information is readily available, and then entering the quote information is more expedient than leaving the quote to create the vendor and contact in Platform. This is especially useful when you have multiple new vendor quotes.

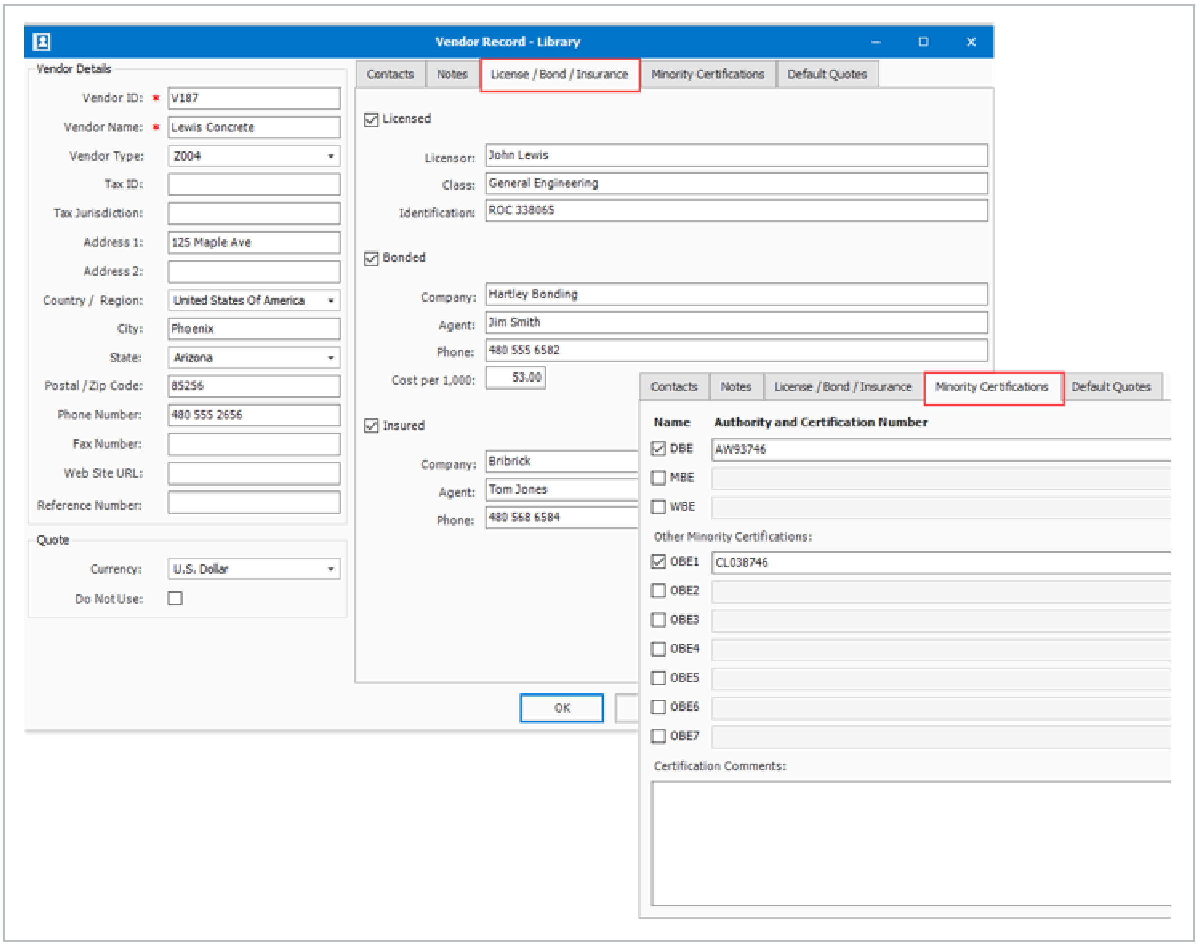
You can create vendors and contacts on the fly in both the Quote Register > **Address Book Register Library** and directly from the Quote record.



For example, when you are in a quote record and need to quickly create a new vendor because the vendor you received a quote from does not yet exist, you can select the **Vendor Quick Add** button, and then enter in the vendor details in the Vendor Record – Library form.

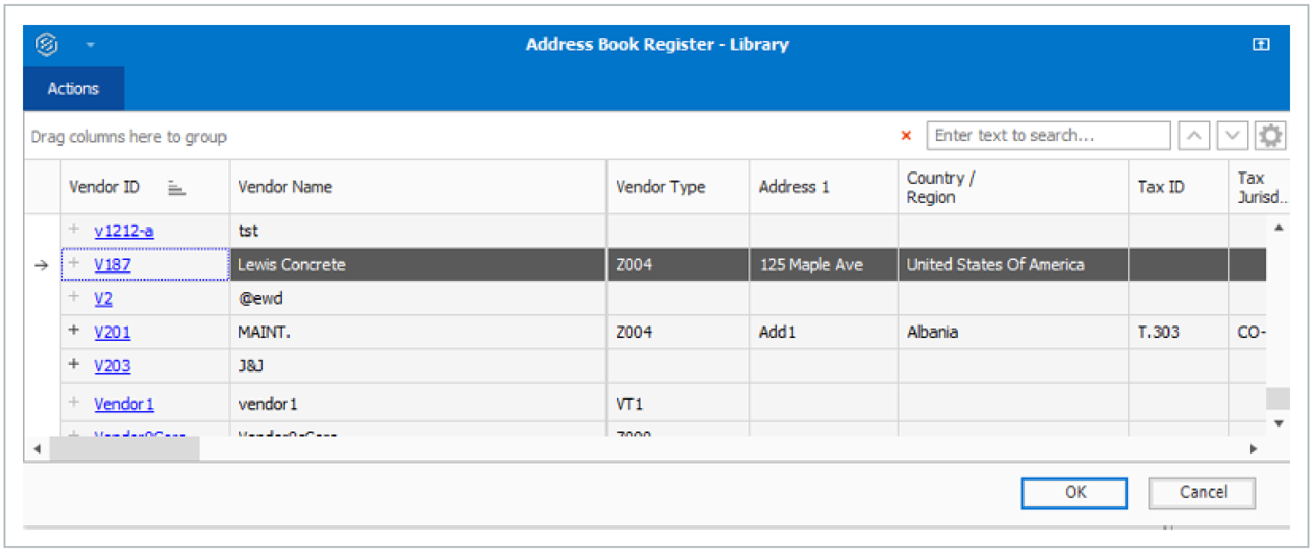


You can also add additional qualification information in the License/Bond/Insurance and Minority Certifications tabs.

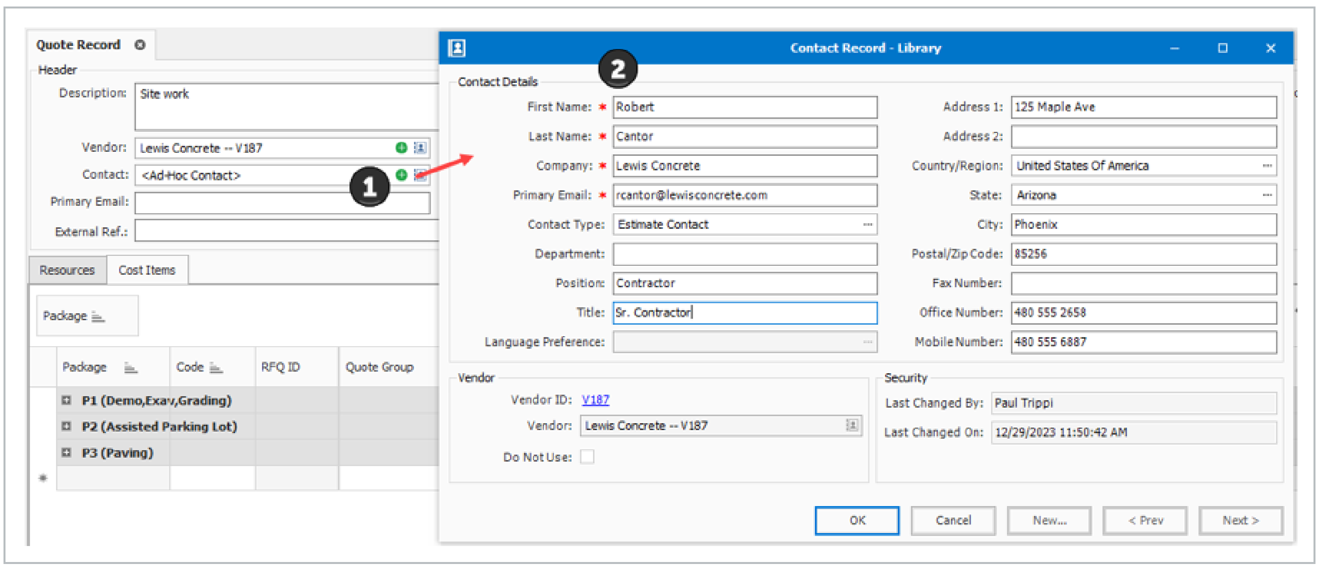


> The additional qualification information is added and maintained in Estimate and cannot be added to the vendor record when creating vendors directly in Platform.

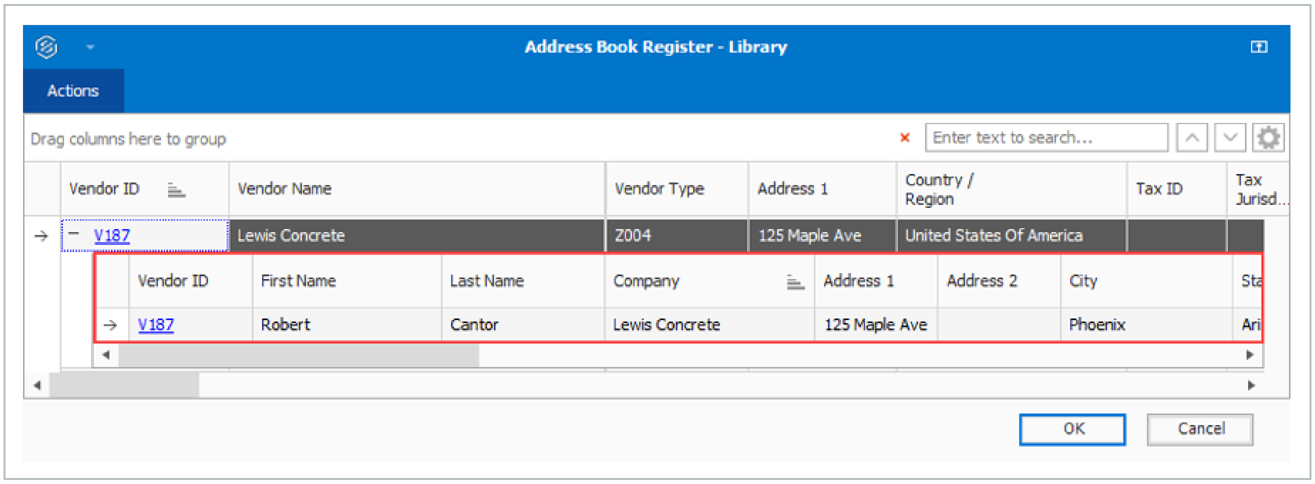
After the vendor is created, it is included in the Library Address Book and can be chosen as a vendor to be used on a quote.



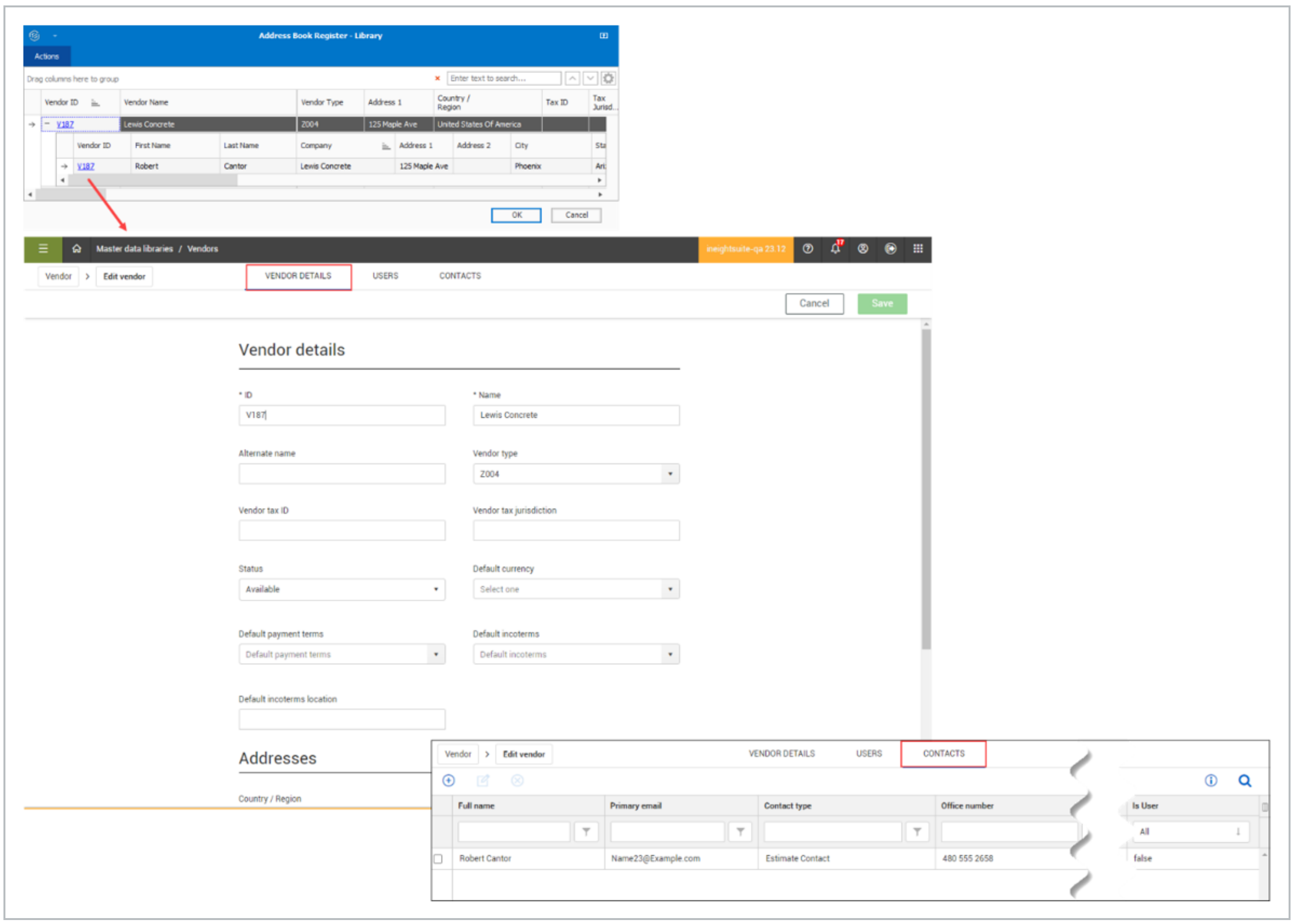
If you have a new contact to add, you can select the **Contact Quick Add** button, and then enter the contact information.



After the contact is created, it becomes associated with the newly created vendor in the Library Address Book.



The vendor and contact information are stored in Platform where it can be easily accessed by selecting one of the vendor ID links in the Library Address Book. The vendor can also be used by other Platform applications.

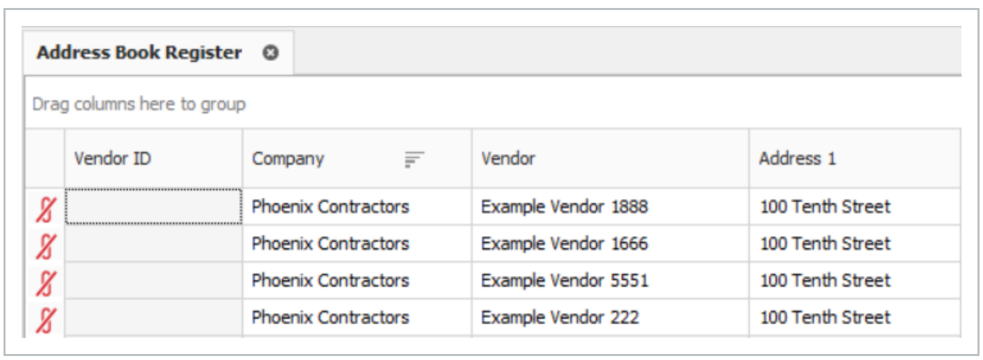


3.3.6 Merge and Upload Contacts and Vendors into Platform

You can manage and retain all vendor information in the Estimate Address Book that are not linked (disconnected) with Platform, including contacts and companies that are referenced in multiple estimates, quotes and RFQs.

Disconnected Vendors and Contacts can be merged with existing Platform vendors and contacts, or they can be uploaded to create new Platform vendors and contacts by navigating to the Library > Setup > **Address Book**. You can also upload new Estimate vendors and contacts into Platform's master data repository.

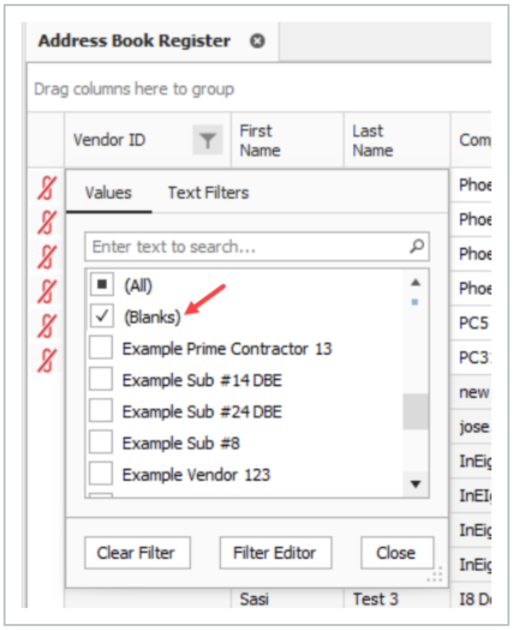
Estimate's process of uploading contacts and vendors into Platform's master data library (as a means for all InEight products to access as a source system of contact and vendor data) not only lets you send this information to Platform, but it provides you with a mechanism to clean up and simplify existing Estimate Address Book data. For example, your current Estimate Address Book might contain many duplicate contacts containing the same first and last name, but with different addresses, emails, or mobile numbers. Merging these records helps administer customer data better so that you can eventually only maintain a single contact or vendor that has the most up to date and most accurate information.



3.3.6.4 Disconnected Contacts and Vendors

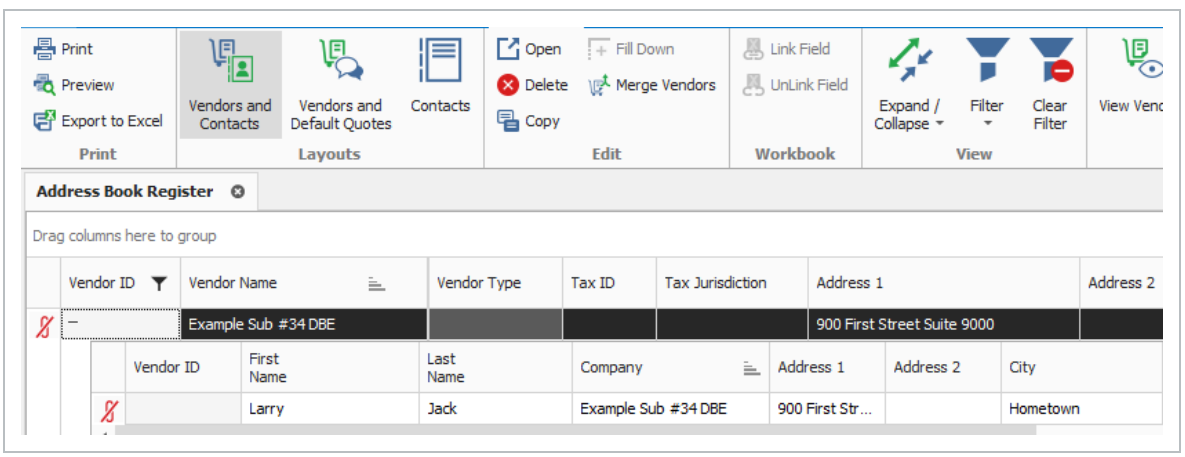
Pre-existing Estimate vendors and contacts that are disconnected from Platform show a red glyph to the left of the Vendor ID column, and only exist in Estimate at this time. To only show the disconnected records, click the column filter in the Vendor ID column, and then select (Blanks). You can either delete the disconnected records or choose to merge or upload them into Platform.

Showing only the disconnected vendors or contacts helps you see the vendors and contacts that are not connected with Platform.



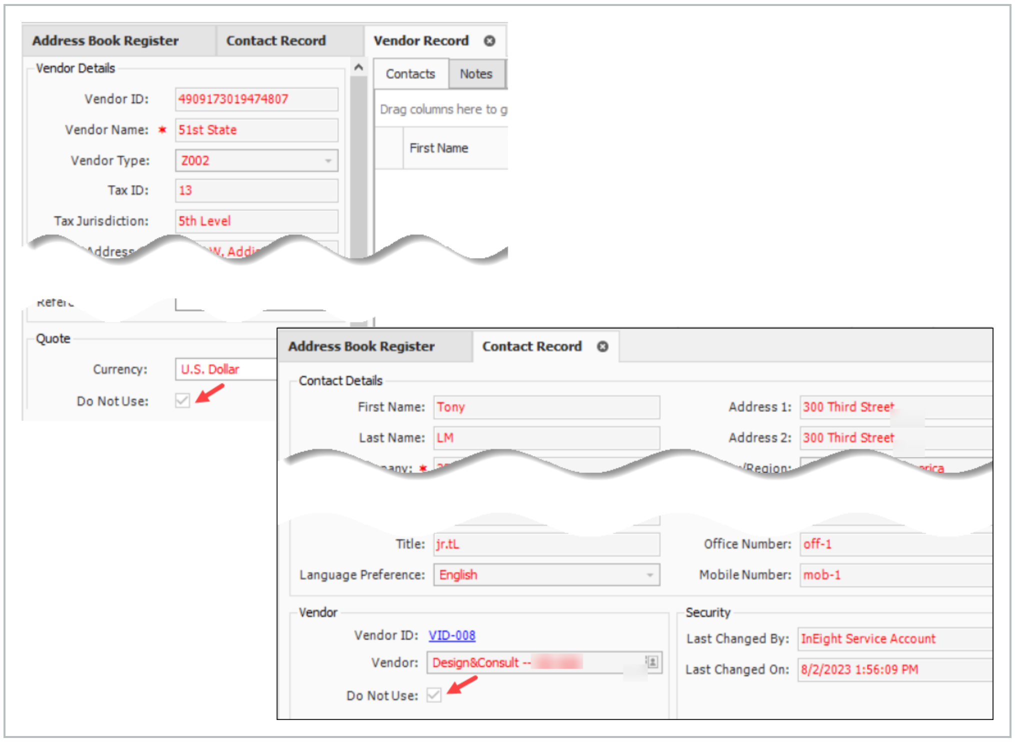
All new library address book records must be created in Platform.

Vendor and contact ID's that show a blank do not currently have an associated Platform vendor association, as these vendors were originally created in Estimate. These vendors have not been merged into Platform, and therefore have no association with the vendor master data that resides in Platform.

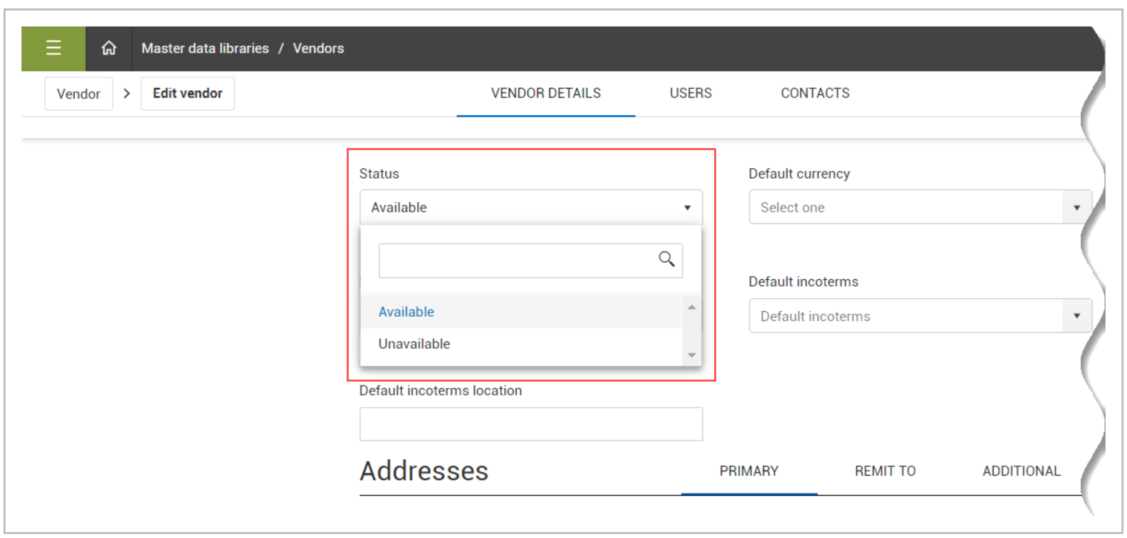


Inactive Contacts and Vendors

You can mark a vendor as *Do Not Use* in a contact record, which indicates the status of the contacts associated vendor, and can only be set in Estimate when vendors are disconnected from Platform. The record changes to red to signify it is inactive and cannot be used, but is not deleted from the system.

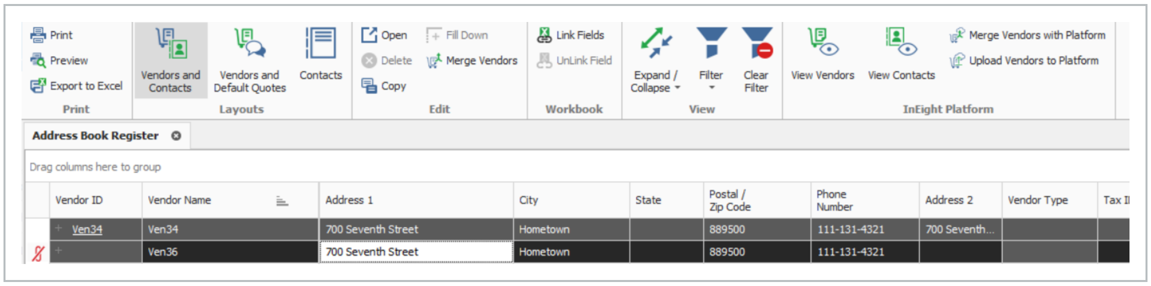


To change the *Do Not Use* status, select the Vendor ID Platform link for the vendor record in Estimate. In Platform, the *Do Not Use* flag can be maintained by selecting the Status field in Master Data Libraries > **Vendors**, and automatically integrates with Estimate.



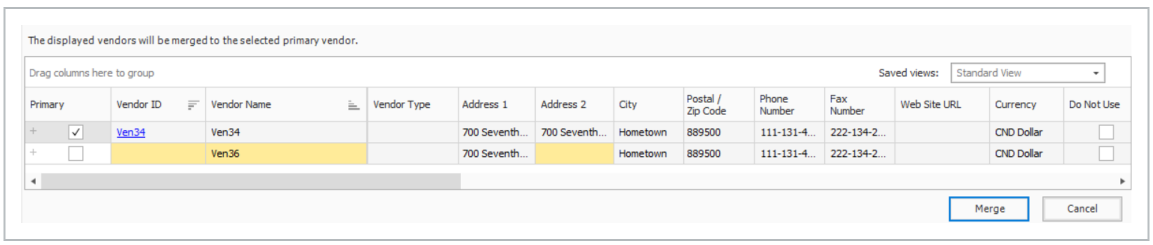
Step by Step – Merge Estimate Vendors to Platform

1. Choose one connected and disconnected vendor, then select **Merge Vendors with Platform**.



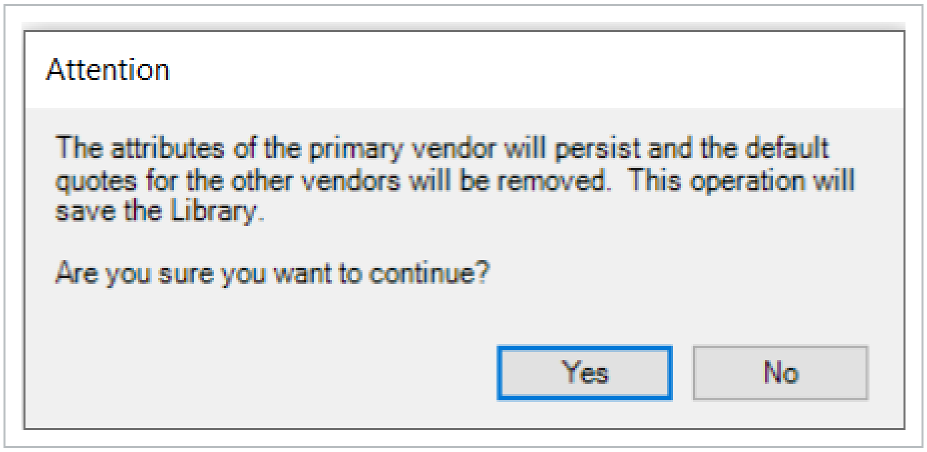
- Note that the connected Estimate vendor previously exists in Platform, prior to the merge of the two vendor records.

2. Select **Merge**.



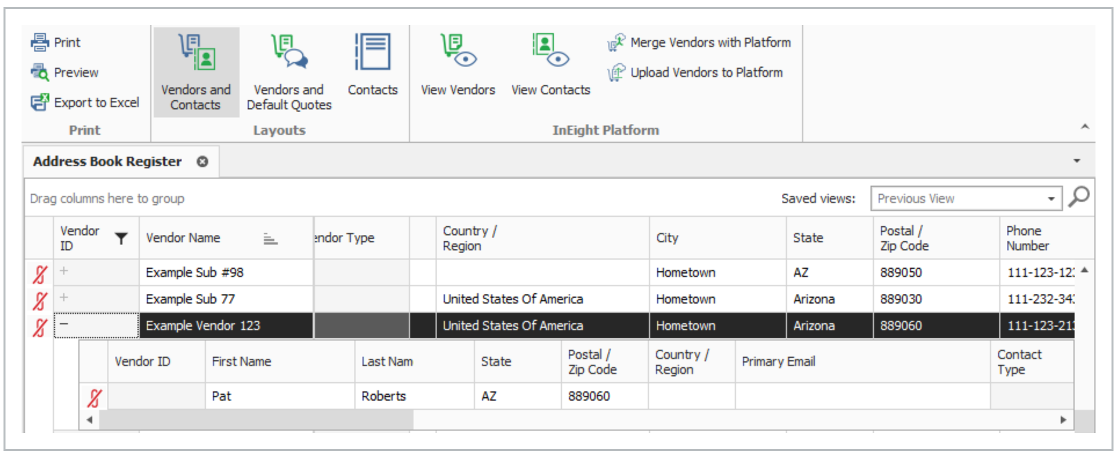
- Notice that the primary vendor is checked, as this record already exists in Platform.
- Other records where the Primary field is not checked are records to be merged into the primary record.
- Fields in yellow for the non-primary records are deltas. These deltas will not be merged, and differences will be lost once they are merged, as the data that exists in Platform takes precedence. If you want any of the disconnected data to exist in Platform, you need to manually change the data in Platform. The advantage for this is to allow for the disconnected Estimate vendors to become associated with an already existing Platform vendor, which lets the contact to still be keyed in areas it was used in Estimate, such as in Quotes and RFQs.

3. Select **Yes** in the Attention dialogue box to acknowledge that the attributes of the primary contact will exist.

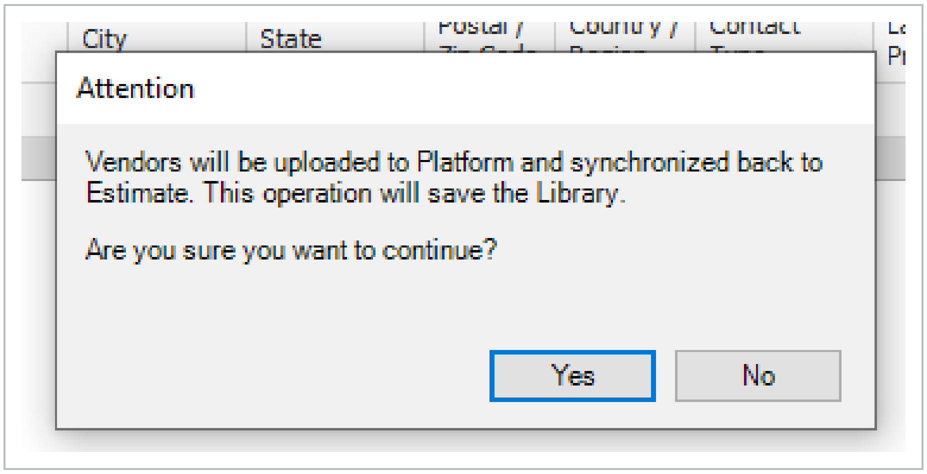


Step by Step – Upload Estimate Vendors to Platform

1. Choose a disconnected vendor with an associated contact, and then select **Upload Vendors to Platform**.

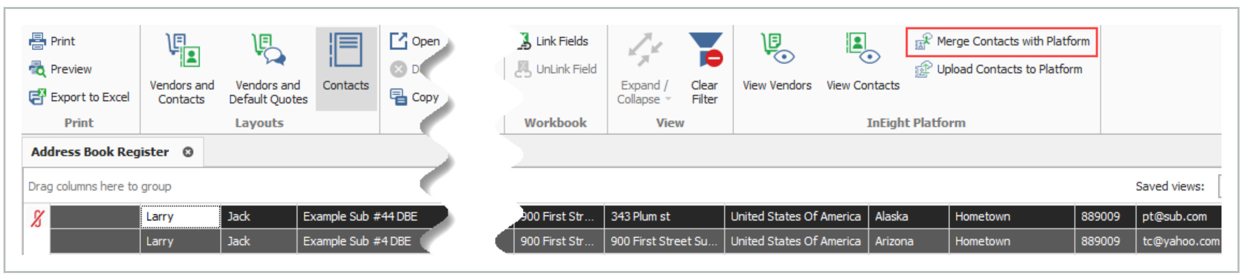


2. Click the **+ symbol** to the left of the Vendor ID to expand all the records. Select **Upload** to sync the vendor shown with the contact in this window to Platform.
   - The preview dialog box opens.
3. Select **Yes** in the Attention dialogue box to confirm that the vendor will be uploaded to Platform and synchronized back to the Estimate Address Book library.

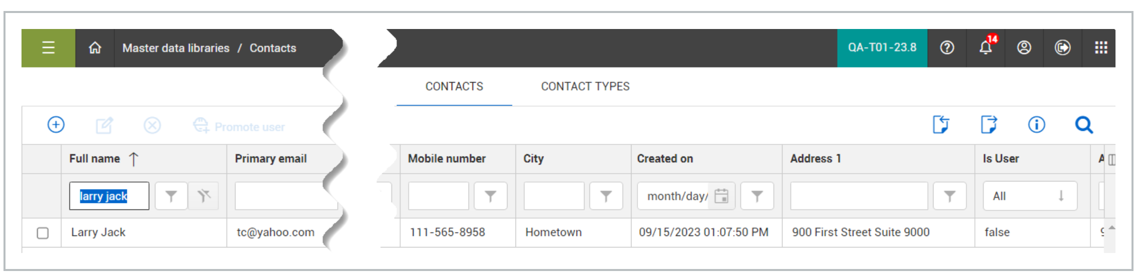


Step by Step – Merge Contacts to Platform

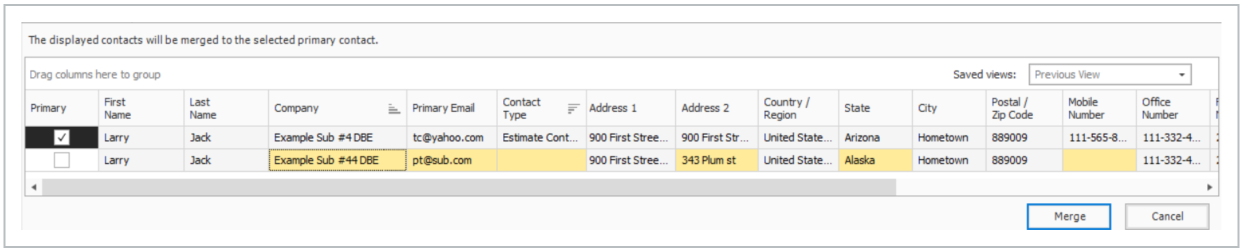
1. Choose one connected and one disconnected contact, and then select **Merge Contacts with Platform**.



- Prior to the merge, note that the connected Estimate contact previously exists in Platform, prior to the merge of the two contact records.

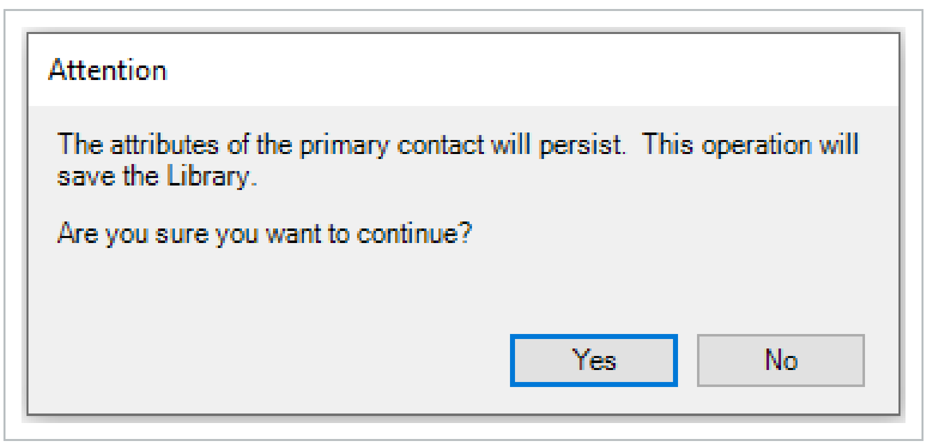


2. Select **Merge**.

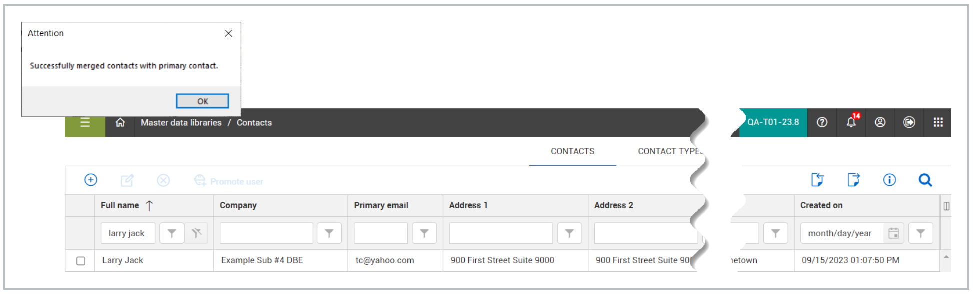


- Notice that the primary contact is checked, as this record already exists in Platform.
- Other records where the Primary field is not checked are records to merge into the primary record.
- Fields in yellow for the non-primary records are deltas. These deltas will not be merged, and differences will be lost after they are merged, as the data that exists in Platform takes precedence. If you want any of the disconnected data to exist in Platform, you need to manually change the data in Platform. The advantage for this is to allow for the disconnected Estimate contact to become associated with an already existing Platform contact, which lets the contact to still be keyed in areas it was used in Estimate, such as in Quotes and RFQs.

3. Select **Yes** in the Attention dialogue box to acknowledge that the attributes of the primary contact will exist.

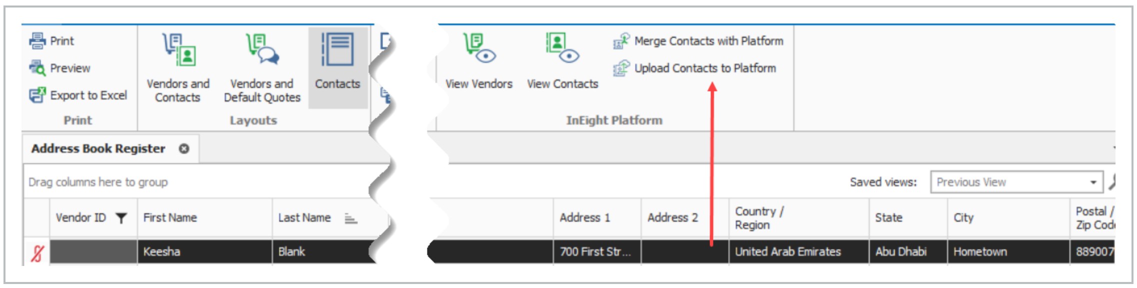


- A message shows it was successful, and the entry is created in Platform.



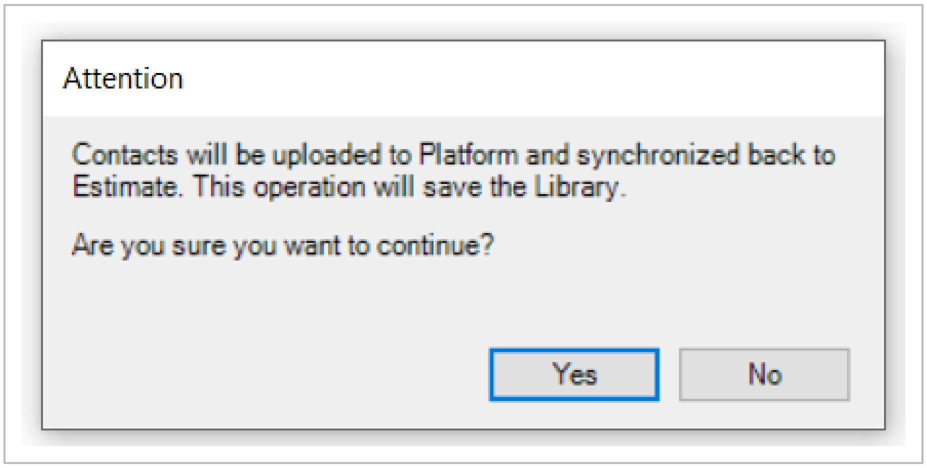
Step by Step – Upload Contacts to Platform

1. Choose a disconnected contact, and then select **Upload Contacts to Platform**.

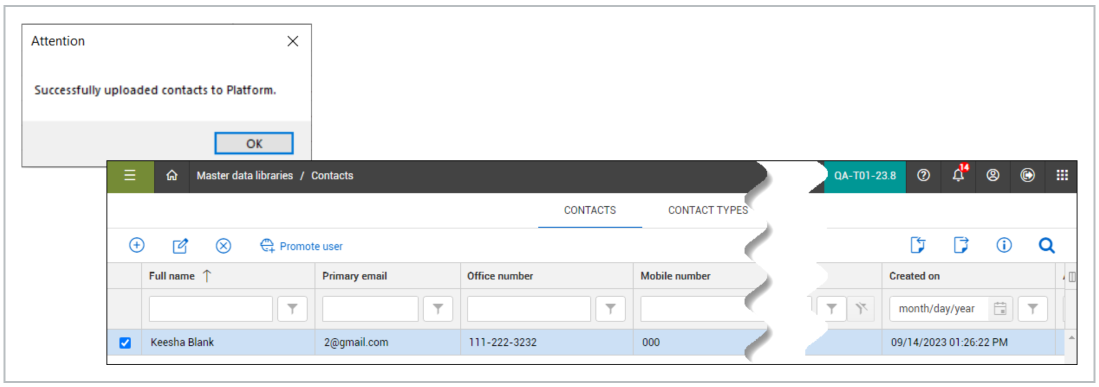


2. Select **Upload** to send the contact shown in this window to Platform.
   - The purpose of the preview dialog is to let you see what will be created in Platform, and to correct any issues before completing the operation.

3. Select **Yes** in the Attention dialogue box to upload the contact to Platform, synchronize back to Estimate, and save to the library.

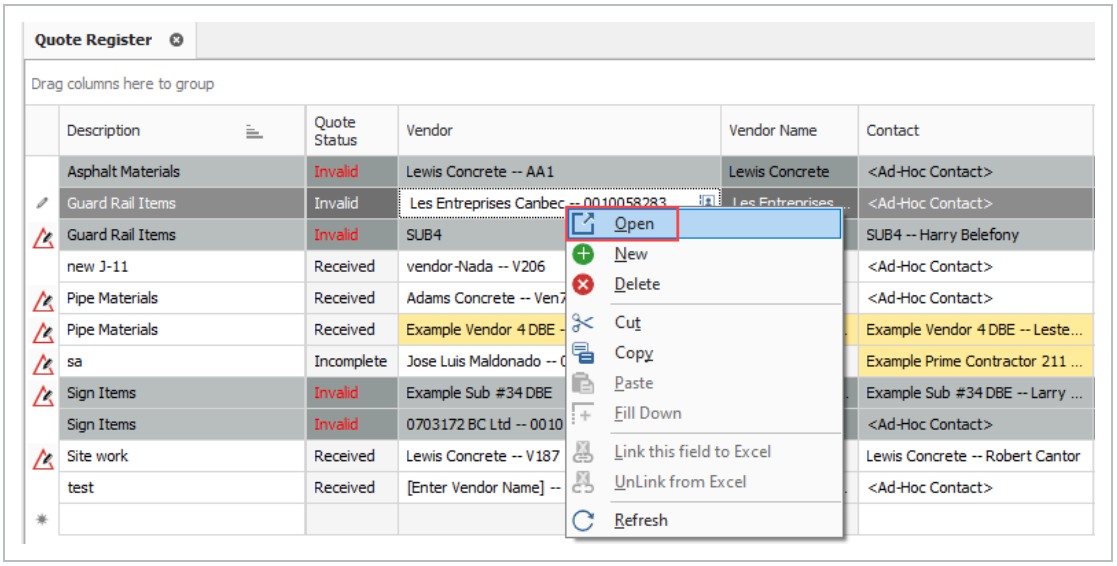


- A message shows it was successful, and the entry is created in Platform.

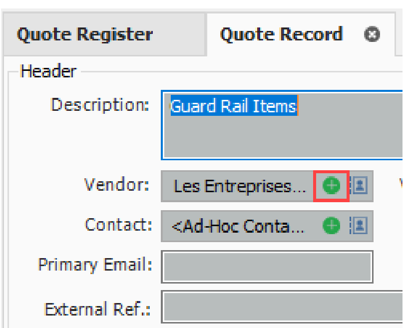


Step by Step – Create Vendors and Contacts via Quote Record

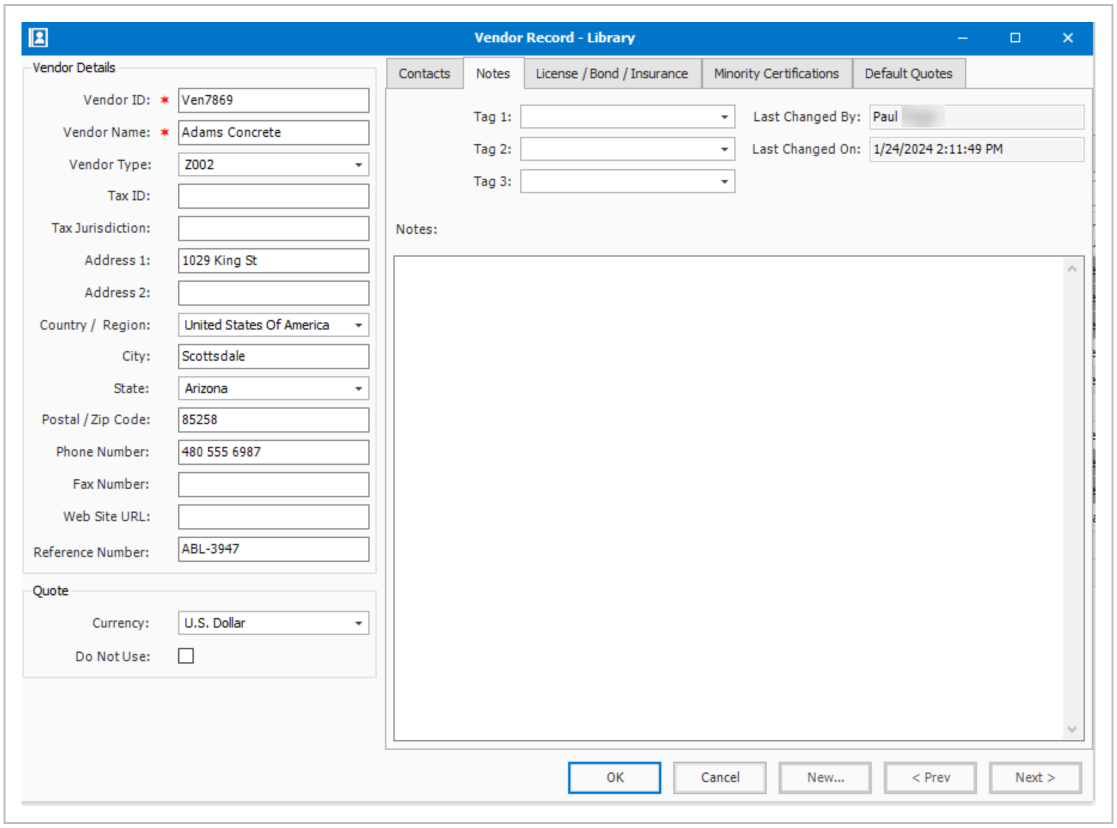
1. Navigate to the Quote register and open an existing quote.



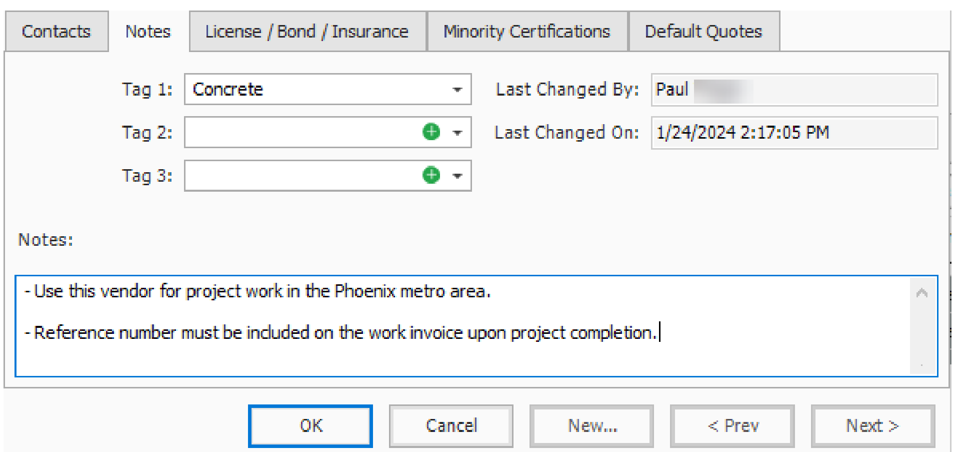
2. Click the **Vendor Quick Add** icon in the Quote Record register.



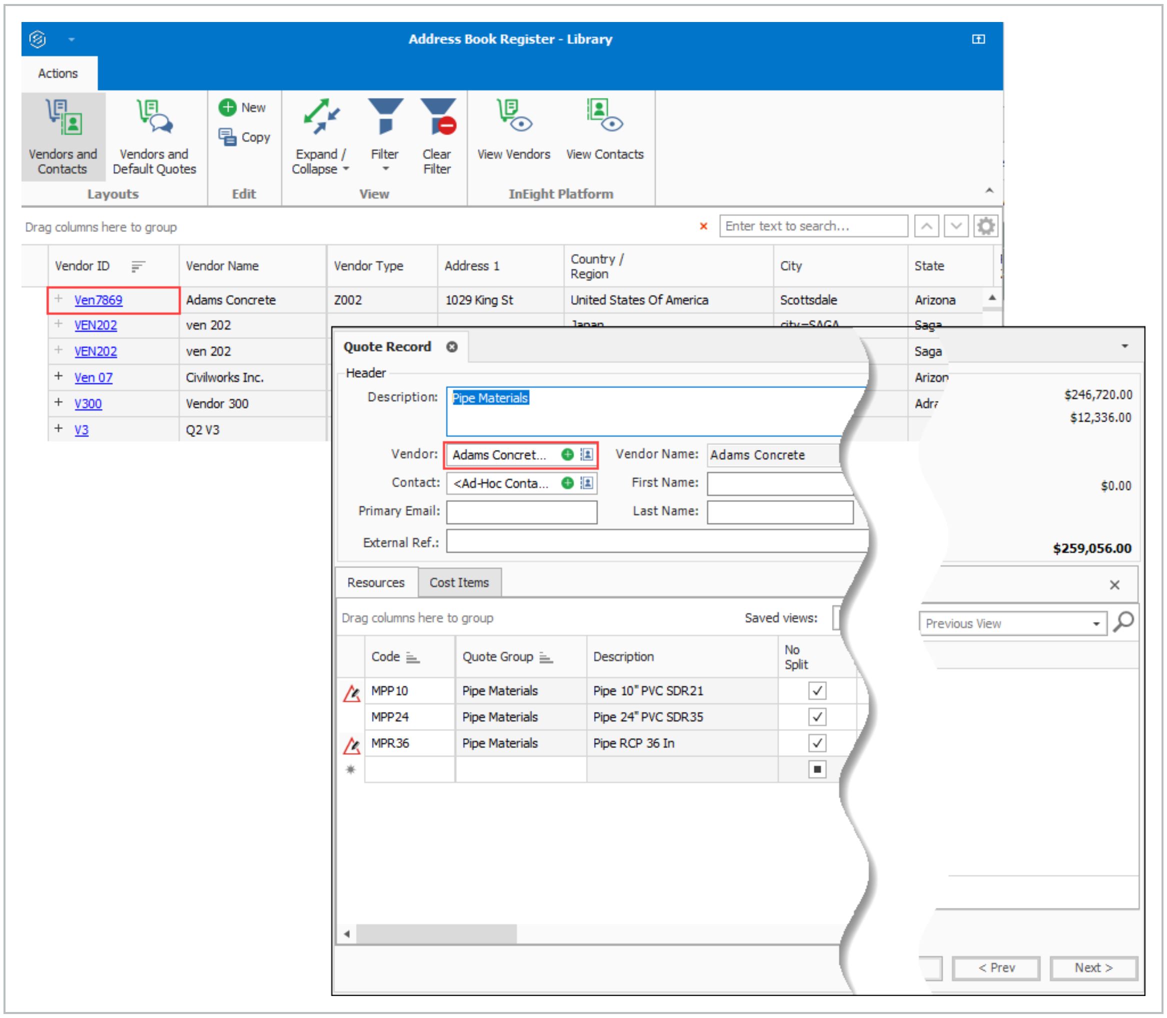
3. In the Vendor Record - Library window, enter a new **Vendor ID** and **Vendor Name**. Under the Vendor Name field, enter in the other non-required information such as the Address and Phone Number.



4. On the right side of the window, enter any relevant information in the tabs, such as vendor notes and license, bond and insurance information, and then click **OK**.

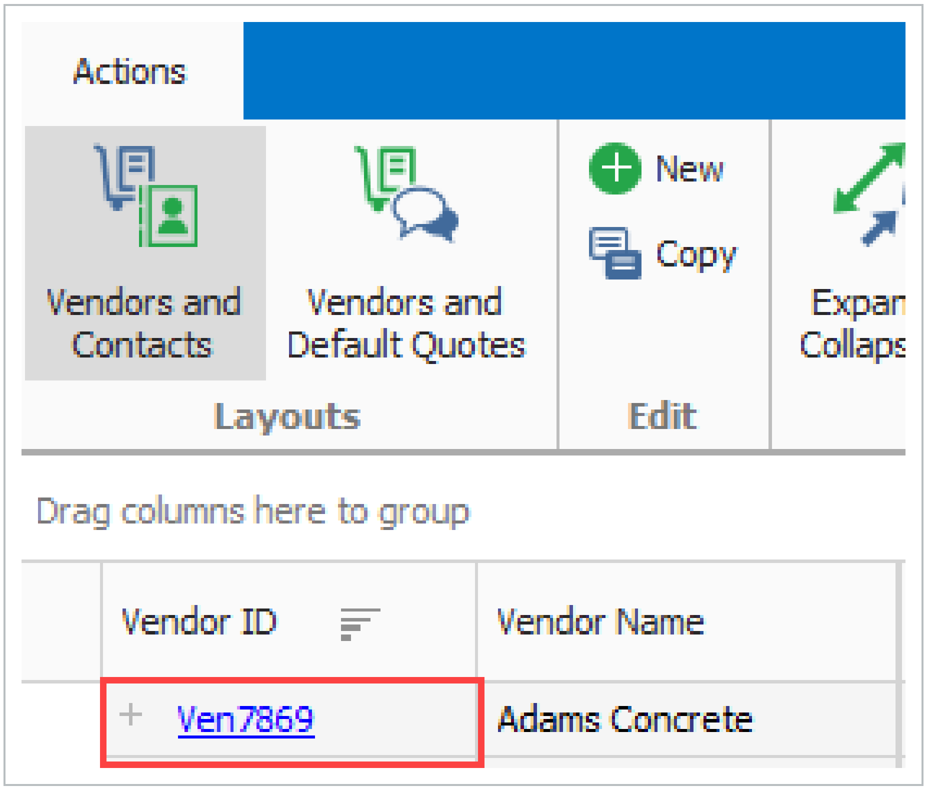


The new vendor is now added to the Estimate Address Book Register - Library.

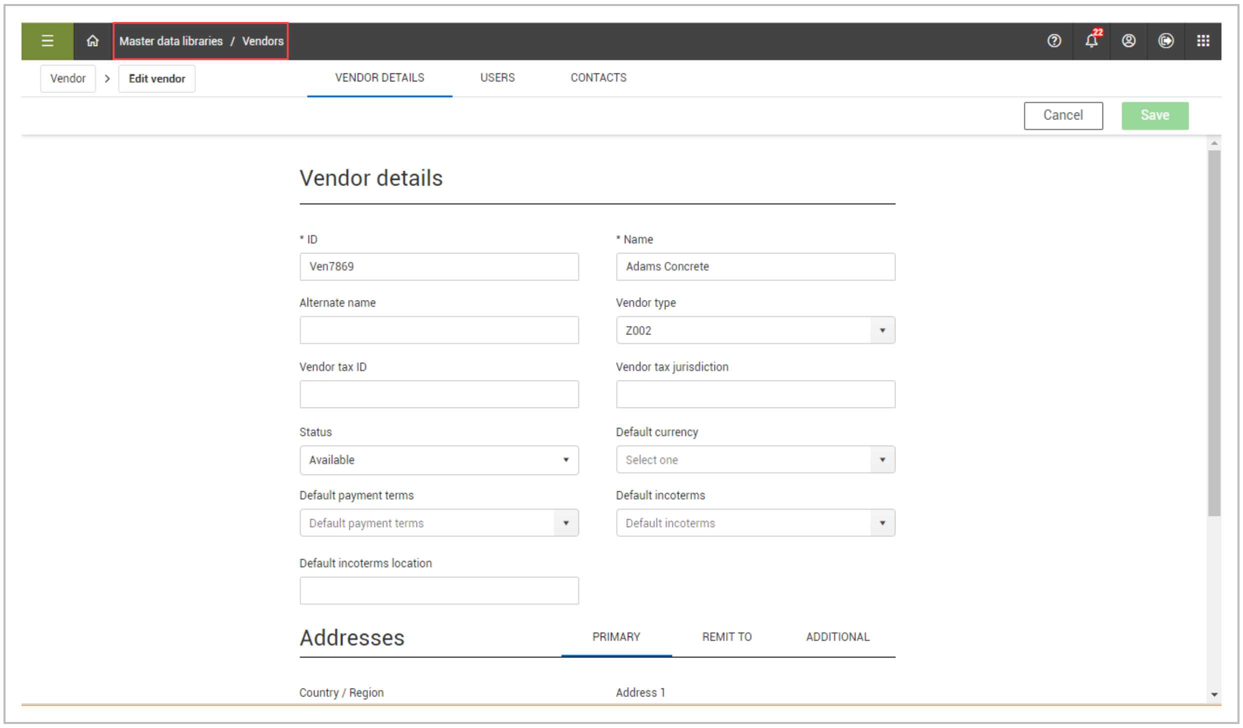


The following steps help to confirm that the vendor was created correctly, and that it can be used to update or maintain the vendor after it has already been created, including steps to create a new contact on the fly.

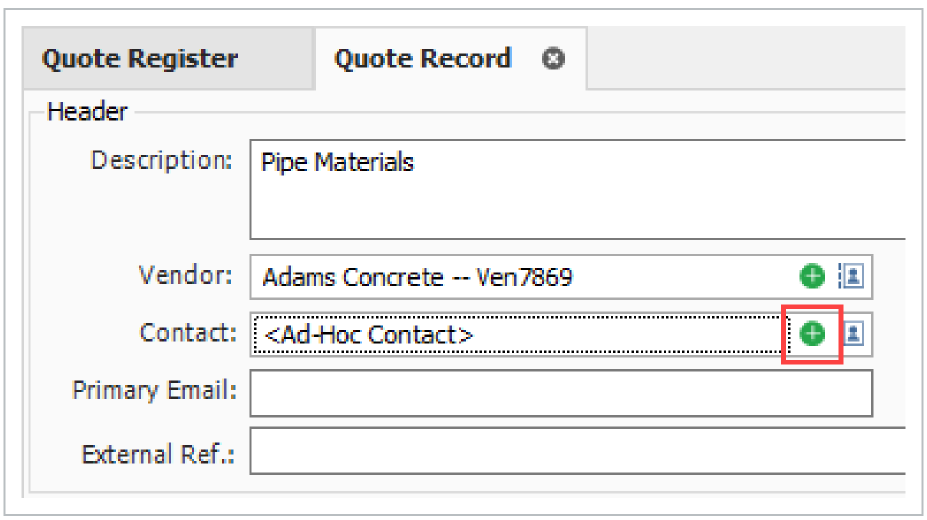
5. Click the new **Vendor ID** in the Estimate Address Book Register - Library.



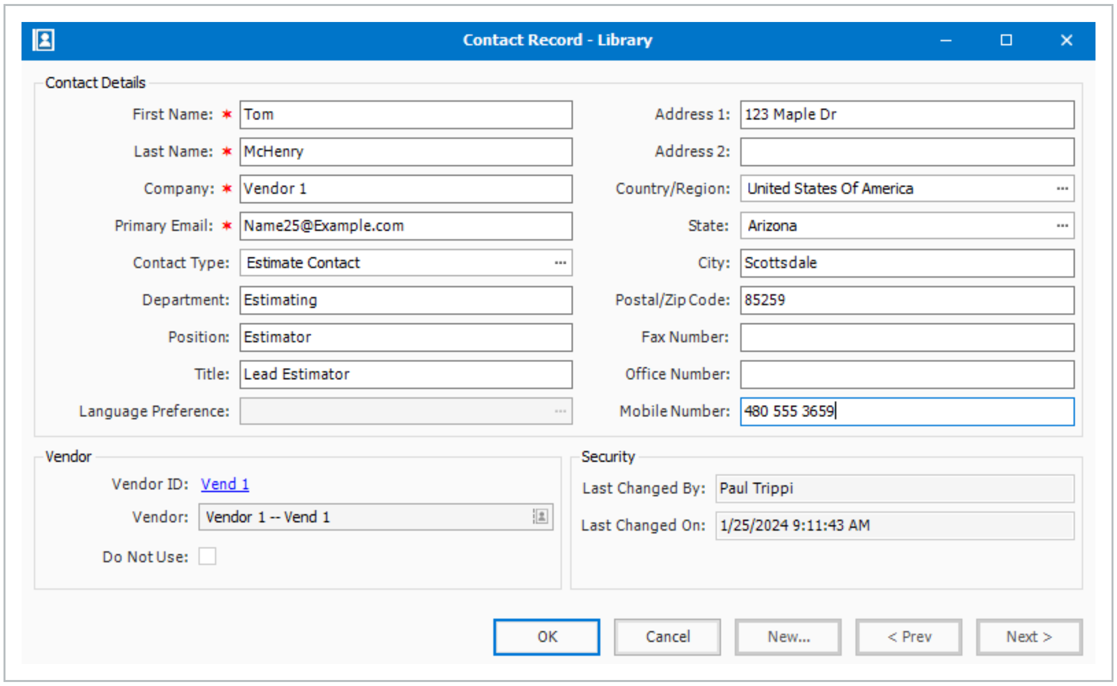
The new vendor opens in Project Suite > Master data libraries > **Vendors**.



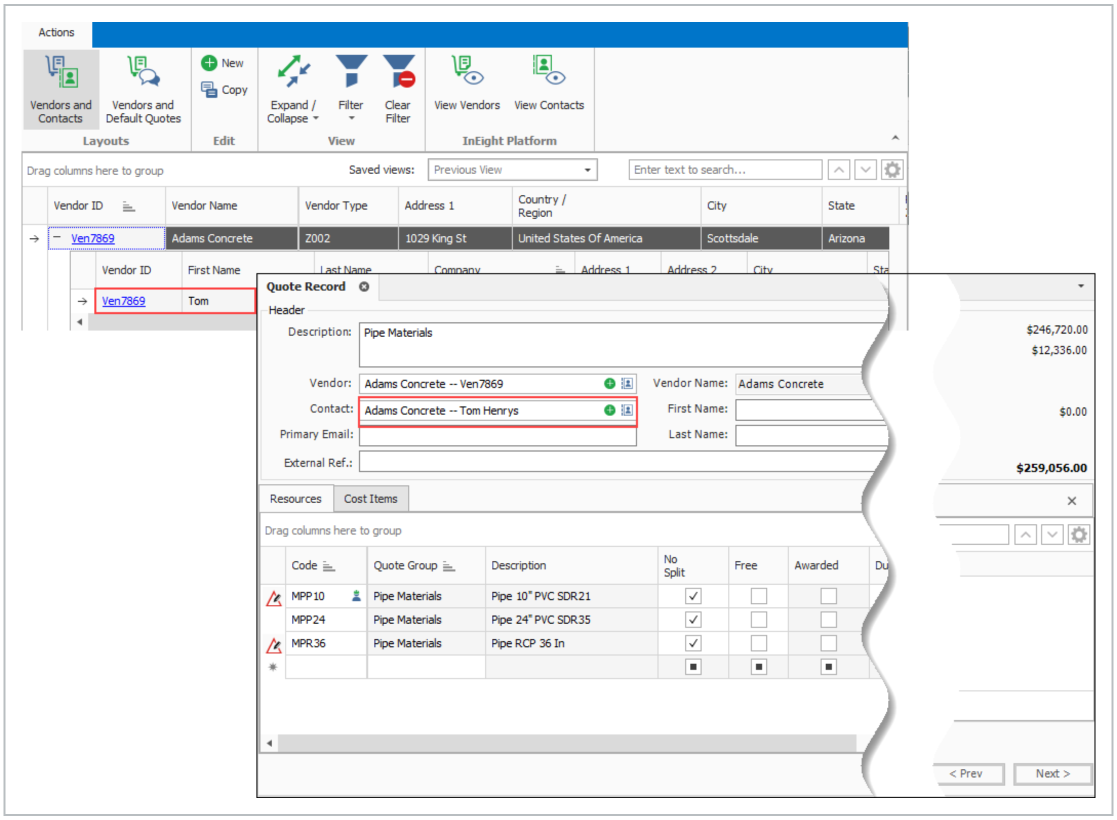
6. Click the **Contact Quick Add** icon in the Quote Record register.



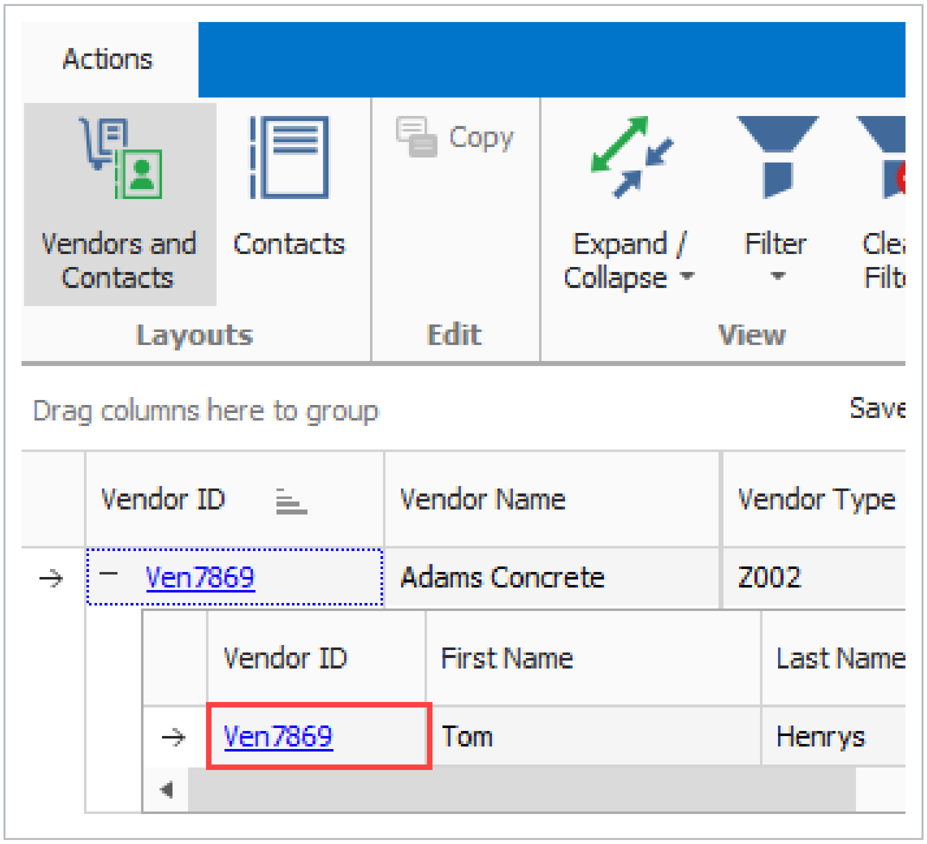
7. In the Contact Record - Library window, enter the **First Name**, **Last Name**, **Company**, and **Primary Email**. Under the Primary Email field, enter in the other non-required information such as the Address and Phone Number, and then click **OK**.



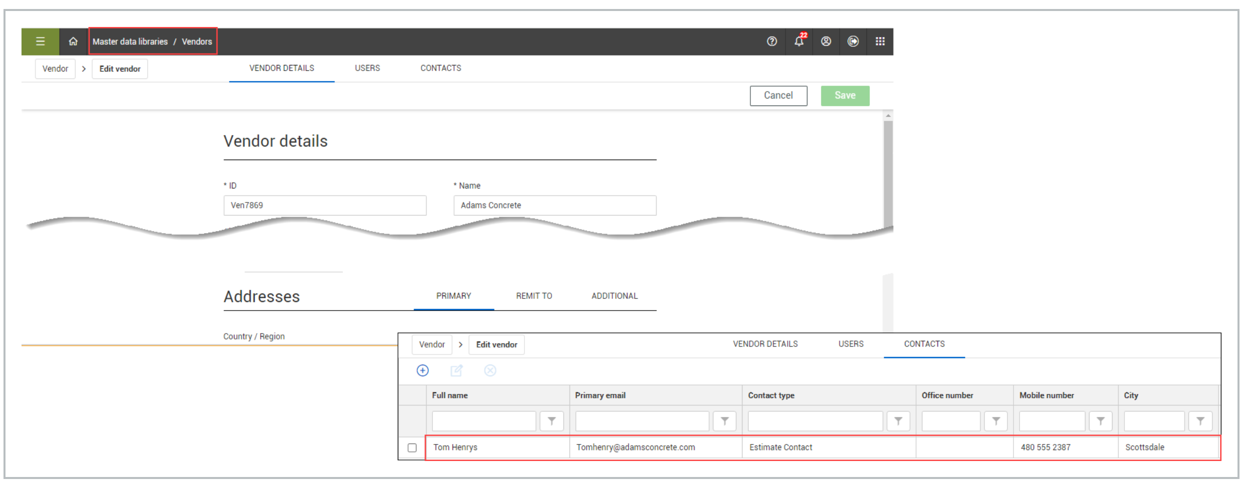
The new contact is now added to the Estimate Address Book Register - Library.



8. Click the new contact **Vendor ID** in the Estimate Address Book Register - Library.



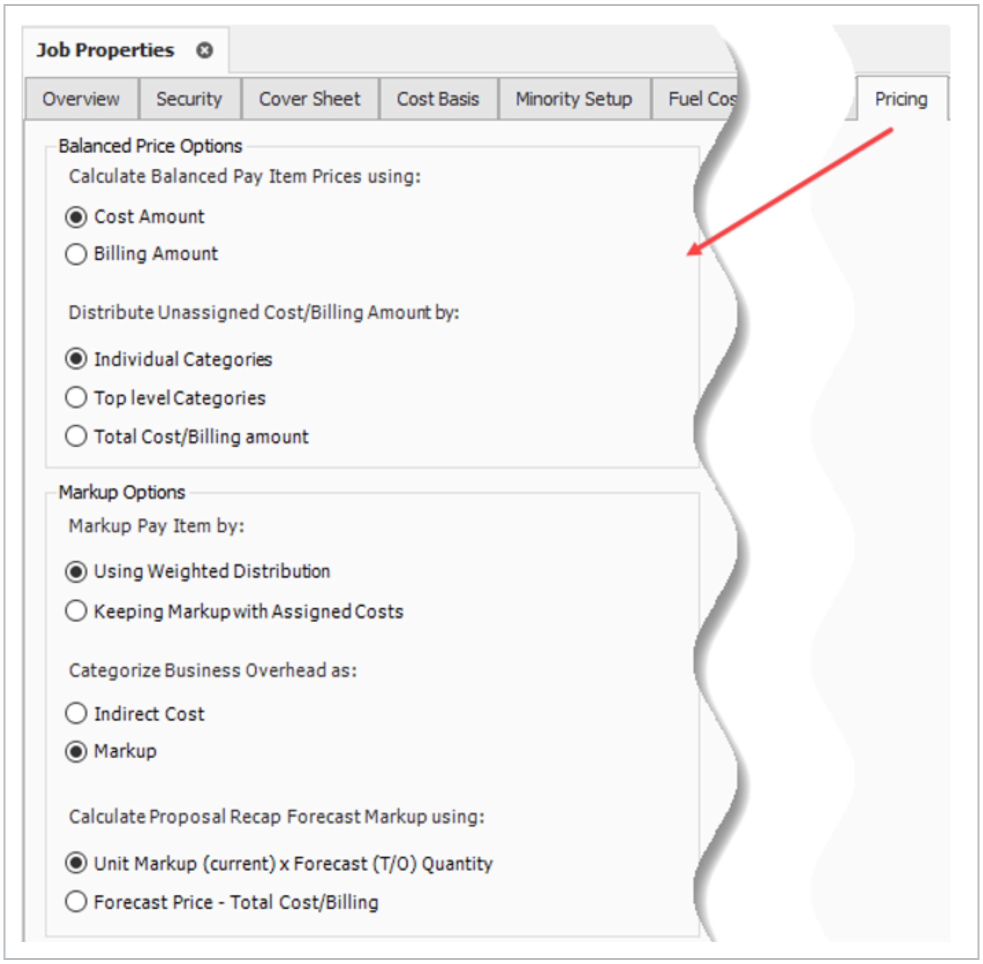
The vendor opens in Project Suite > Master data libraries > **Vendors**, and includes the new contact.



3.4 LIBRARY JOB PROPERTIES PRICING

3.4.1 Job Properties Overview

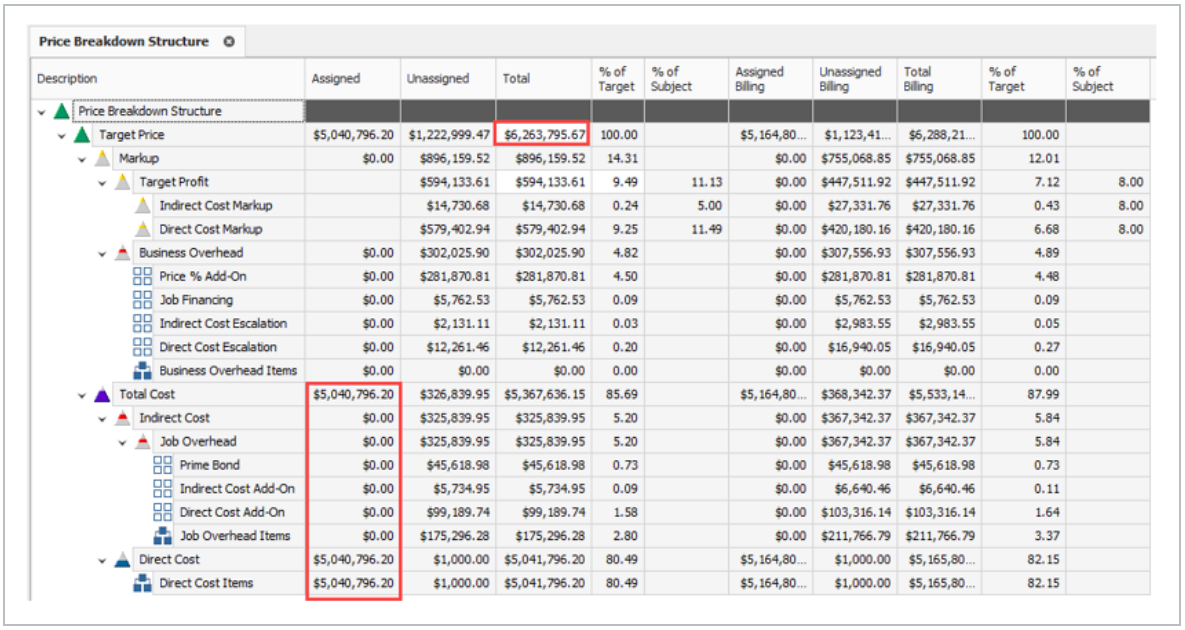
In Job Properties Overview > **Pricing**, there are balanced price and markup options in the bid pricing area which lets you categorize costs, markup various costs in an estimate, and distribute that markup throughout the bid which establishes balanced bid prices.



3.4.2 Balanced Price Options

This option determines if a pay item will use the cost or billing amount values of the assigned cost items as the basis for determining a balanced bid price. This also determines if the AutoPrice command will use the cost or billing amount values.

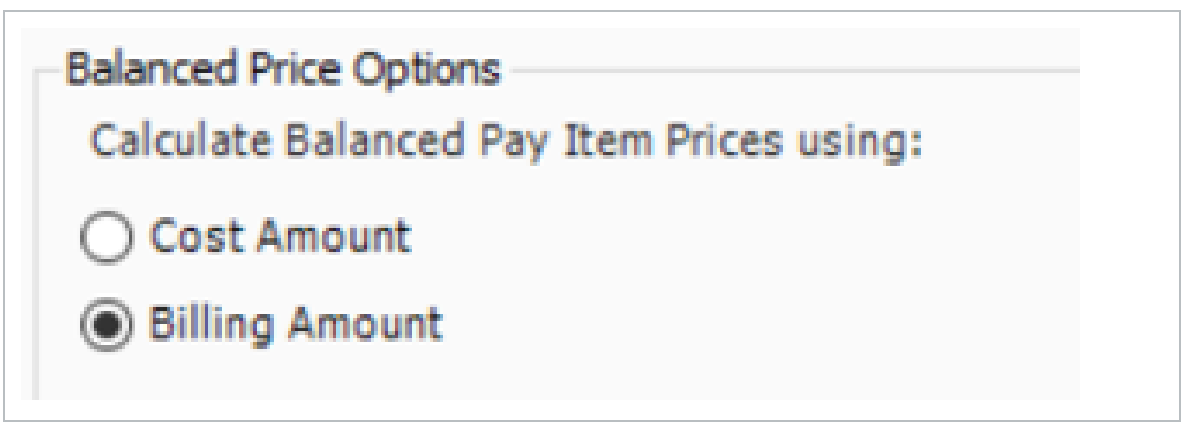
3.4.2.1 Calculate Balanced Pay Item Prices using Cost Amount:



Price Breakdown Structure

Description	Assigned	Unassigned	Total	% of Target	% of Subject	Assigned Billing	Unassigned Billing	Total Billing	% of Target	% of Subject
Price Breakdown Structure										
Target Price	$5,040,796.20	$1,222,999.47	$6,263,795.67	100.00		$5,164,80...	$1,123,41...	$6,288,21...	100.00	
Markup	$0.00	$896,159.52	$896,159.52	14.31		$0.00	$755,068.85	$755,068.85	12.01	
Target Profit		$594,133.61	$594,133.61	9.49	11.13	$0.00	$447,511.92	$447,511.92	7.12	8.00
Indirect Cost Markup		$14,730.68	$14,730.68	0.24	5.00	$0.00	$27,331.76	$27,331.76	0.43	8.00
Direct Cost Markup		$579,402.94	$579,402.94	9.25	11.49	$0.00	$420,180.16	$420,180.16	6.68	8.00
Business Overhead	$0.00	$302,025.90	$302,025.90	4.82		$0.00	$307,556.93	$307,556.93	4.89	
Price % Add-On	$0.00	$281,870.81	$281,870.81	4.50		$0.00	$281,870.81	$281,870.81	4.48	
Job Financing	$0.00	$5,762.53	$5,762.53	0.09		$0.00	$5,762.53	$5,762.53	0.09	
Indirect Cost Escalation	$0.00	$2,131.11	$2,131.11	0.03		$0.00	$2,983.55	$2,983.55	0.05	
Direct Cost Escalation	$0.00	$12,261.46	$12,261.46	0.20		$0.00	$16,940.05	$16,940.05	0.27	
Business Overhead Items	$0.00	$0.00	$0.00	0.00		$0.00	$0.00	$0.00	0.00	
Total Cost	$5,040,796.20	$326,839.95	$5,367,636.15	85.69		$5,164,80...	$368,342.37	$5,533,14...	87.99	
Indirect Cost	$0.00	$325,839.95	$325,839.95	5.20		$0.00	$367,342.37	$367,342.37	5.84	
Job Overhead	$0.00	$325,839.95	$325,839.95	5.20		$0.00	$367,342.37	$367,342.37	5.84	
Prime Bond	$0.00	$45,618.98	$45,618.98	0.73		$0.00	$45,618.98	$45,618.98	0.73	
Indirect Cost Add-On	$0.00	$5,734.95	$5,734.95	0.09		$0.00	$6,640.46	$6,640.46	0.11	
Direct Cost Add-On	$0.00	$99,189.74	$99,189.74	1.58		$0.00	$103,316.14	$103,316.14	1.64	
Job Overhead Items	$0.00	$175,296.28	$175,296.28	2.80		$0.00	$211,766.79	$211,766.79	3.37	
Direct Cost	$5,040,796.20	$1,000.00	$5,041,796.20	80.49		$5,164,80...	$1,000.00	$5,165,80...	82.15	
Direct Cost Items	$5,040,796.20	$1,000.00	$5,041,796.20	80.49		$5,164,80...	$1,000.00	$5,165,80...	82.15	

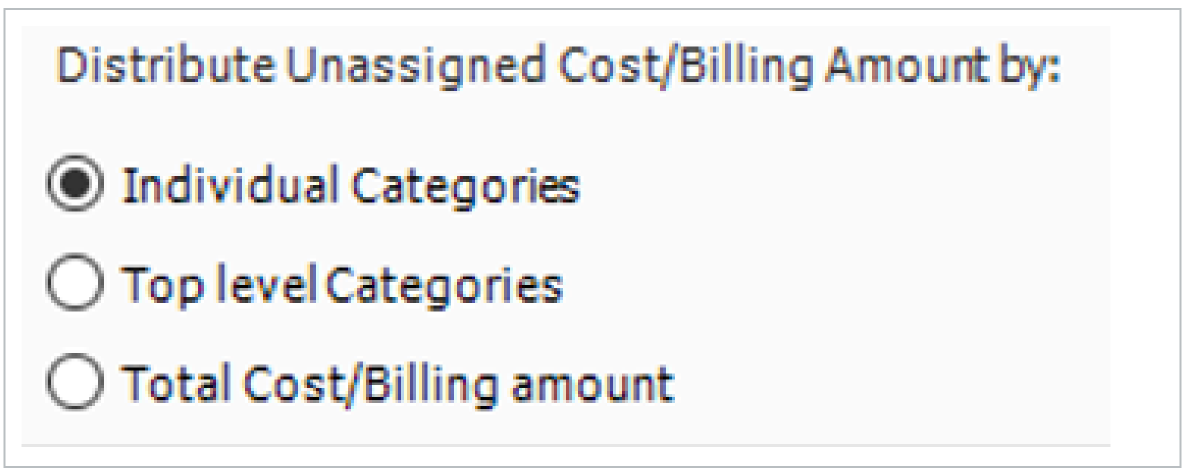
3.4.2.2 Calculate Balanced Pay Item Prices using Billing Amount:



Price Breakdown Structure

Description	Assigned	Unassigned	Total	% of Target	% of Subject	Assigned Billing	Unassigned Billing	Total Billing	% of Target	% of Subject
Price Breakdown Structure										
Target Price	$5,040,796.20	$1,222,999.47	$6,263,795.67	100.00		$5,164,80...	$1,123,41...	$6,288,21...	100.00	
Markup	$0.00	$896,159.52	$896,159.52	14.31		$0.00	$755,068.85	$755,068.85	12.01	
Target Profit		$594,133.61	$594,133.61	9.49	11.13	$0.00	$447,511.92	$447,511.92	7.12	8.00
Indirect Cost Markup		$14,730.68	$14,730.68	0.24	5.00	$0.00	$27,331.76	$27,331.76	0.43	8.00
Direct Cost Markup		$579,402.94	$579,402.94	9.25	11.49	$0.00	$420,180.16	$420,180.16	6.68	8.00
Business Overhead	$0.00	$302,025.90	$302,025.90	4.82		$0.00	$307,556.93	$307,556.93	4.89	
Price % Add-On	$0.00	$281,870.81	$281,870.81	4.50		$0.00	$281,870.81	$281,870.81	4.48	
Job Financing	$0.00	$5,762.53	$5,762.53	0.09		$0.00	$5,762.53	$5,762.53	0.09	
Indirect Cost Escalation	$0.00	$2,131.11	$2,131.11	0.03		$0.00	$2,983.55	$2,983.55	0.05	
Direct Cost Escalation	$0.00	$12,261.46	$12,261.46	0.20		$0.00	$16,940.05	$16,940.05	0.27	
Business Overhead Items	$0.00	$0.00	$0.00	0.00		$0.00	$0.00	$0.00	0.00	
Total Cost	$5,040,796.20	$326,839.95	$5,367,636.15	85.69		$5,164,80...	$368,342.37	$5,533,14...	87.99	
Indirect Cost	$0.00	$325,839.95	$325,839.95	5.20		$0.00	$367,342.37	$367,342.37	5.84	
Job Overhead	$0.00	$325,839.95	$325,839.95	5.20		$0.00	$367,342.37	$367,342.37	5.84	
Prime Bond	$0.00	$45,618.98	$45,618.98	0.73		$0.00	$45,618.98	$45,618.98	0.73	
Indirect Cost Add-On	$0.00	$5,734.95	$5,734.95	0.09		$0.00	$6,640.46	$6,640.46	0.11	
Direct Cost Add-On	$0.00	$99,189.74	$99,189.74	1.58		$0.00	$103,316.14	$103,316.14	1.64	
Job Overhead Items	$0.00	$175,296.28	$175,296.28	2.80		$0.00	$211,766.79	$211,766.79	3.37	
Direct Cost	$5,040,796.20	$1,000.00	$5,041,796.20	80.49		$5,164,80...	$1,000.00	$5,165,80...	82.15	
Direct Cost Items	$5,040,796.20	$1,000.00	$5,041,796.20	80.49		$5,164,80...	$1,000.00	$5,165,80...	82.15	

3.4.2.3 Distribution of Unassigned Costs/Billing Amount by Individual Categories



Any costs in the estimate not assigned to a pay item needs to be proportionally spread back to all pay items to determine a balanced bid price. This option lets the user choose the basis for calculating the weighted distribution of any unassigned costs plus markup.

- Individual Categories - this option uses each individual cost categories as the basis for establishing the weighted distribution amounts.

			Labor									...	
			Gross Wages			Taxes			Fringes			...	Balanced
Pay Item	Description	Total Cost	Cost	Weight	Distribution	Cost	Weight	Distribution	Cost	Weight	Distribution	...	Price
641 0100	Mobilization	$13,106	$1,763	0.9%	$949	$588	0.9%	$290	$294	0.9%	$145	...	...
201 0102	Clearing & Grubbing	$41,346	$9,994	5.0%	$5,379	$3,331	5.0%	$1,643	$1,666	5.0%	$822	...	...
202 0183	Unclassified Excavation	$90,455	$20,923	10.4%	$11,260	$6,974	10.4%	$3,441	$3,487	10.4%	$1,720	...	...
303 5912	Aggregate Base	$646,910	$68,717	34.2%	$36,981	$22,906	34.2%	$11,300	$11,453	34.2%	$5,650	...	...
303 4263	Asphalt Concrete Hot Mix Type A	$1,756,802	$85,169	42.4%	$45,835	$28,390	42.4%	$14,005	$14,195	42.4%	$7,003	...	...
413(B) 0464	36 Inch RCP Culvert Class III	$73,220	$14,114	7.0%	$7,596	$4,705	7.0%	$2,321	$2,352	7.0%	$1,160	...	...
	Total Direct Costs	$2,621,839	$200,681		$108,000	$66,894		$33,000	$33,447		$16,500	...	$2,966,839
	Unassigned Cost	$300,000	$90,000			$30,000			$15,000				
	Markup	$45,000	$18,000			$3,000			$1,500				
	Total Distribution	$345,000	$108,000			$33,000			$16,500				
	Target Price	$2,966,839											

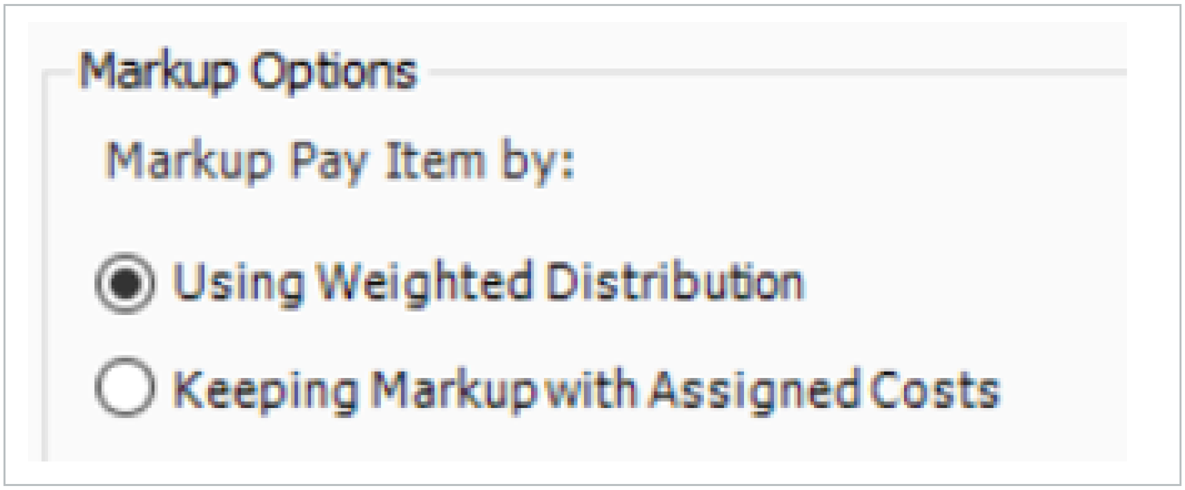
- Top Level Cost Categories - This option uses the ten top level cost categories (labor, owned equipment, rented equipment, supplies, materials, etc.) as the basis for establishing the weighted distribution amounts.

			Labor			Owned Equipment			Materials			Balanced
Pay Item	Description	Total Cost	Cost	Weight	Distribution	Cost	Weight	Distribution	Cost	Weight	Distribution	Price
641 0100	Mobilization	$13,106	$2,939	0.9%	$1,582	$9,642	2.1%	$2,332	$0	0.0%	$0	$17,020
201 0102	Clearing & Grubbing	$41,346	$16,657	5.0%	$8,964	$23,587	5.2%	$5,705	$0	0.0%	$0	$56,015
202 0183	Unclassified Excavation	$90,455	$34,872	10.4%	$18,767	$55,583	12.2%	$13,443	$0	0.0%	$0	$122,665
303 5912	Aggregate Base	$646,910	$114,528	34.2%	$61,635	$118,815	26.1%	$28,736	$394,728	22.6%	$12,431	$749,712
303 4263	Asphalt Concrete Hot Mix Type A	$1,756,802	$141,949	42.4%	$76,392	$235,310	51.7%	$56,911	$1,316,700	75.4%	$41,465	$1,931,570
413(B) 0464	36 Inch RCP Culvert Class III	$73,220	$23,524	7.0%	$12,660	$11,877	2.6%	$2,873	$35,078	2.0%	$1,105	$89,857
	Total Direct Costs	$2,621,839	$334,469		$180,000	$454,814		$110,000	$1,746,506		$55,000	$2,966,839
	Unassigned Cost	$300,000	$150,000			$100,000			$50,000			
	Markup	$45,000	$30,000			$10,000			$5,000			
	Total Distribution	$345,000	$180,000			$110,000			$55,000			
	Target Price	$2,966,839										

- Total Cost[/Billing Amount] - This option uses Total Cost as the basis for establishing the weighted distribution amounts.

Pay Item	Description	Total Cost	Weight	Distribution	Balanced Price
641 0100	Mobilization	$13,106	0.5%	$1,725	$14,831
201 0102	Clearing & Grubbing	$41,346	1.6%	$5,441	$46,787
202 0183	Unclassified Excavation	$90,455	3.5%	$11,903	$102,358
303 5912	Aggregate Base	$646,910	24.7%	$85,125	$732,035
303 4263	Asphalt Concrete Hot Mix Type A	$1,756,802	67.0%	$231,172	$1,987,974
413(B) 0464	36 Inch RCP Culvert Class III	$73,220	2.8%	$9,635	$82,855
	Total Direct Costs	$2,621,839		$345,000	$2,966,839
	Unassigned Cost	$300,000			
	Markup	$45,000			
	Total Distribution	$345,000			
	Target Price	$2,966,839			

3.4.2.4 Markup Options



This option determines how markup is applied to pay items when establishing a balanced bid price.

- Using Weighted Distribution. Marking up Pay Items using weighted distribution takes the total markup and proportionally spreads the amount using the chosen weighted distribution method.

		Total Cost						Balanced
Pay Item	**Description**	**Labor**	**Equipment**	**Material**	**Total**	**Weight**	**Distribution**	**Price**
201 0102	Clearing & Grubbing	$14,000	$24,000	$0	$38,000	4.0%	$4,556	$42,556
202 0183	Unclassified Excavation	$62,000	$172,000	$0	$234,000	24.8%	$28,055	$262,055
303 5912	Aggregate Base	$112,000	$157,000	$404,000	$673,000	71.2%	$80,689	$753,689
	Total Direct Costs	$188,000	$353,000	$404,000	$945,000		$113,300	$1,058,300
	Markup							
	Markup Percent	20%	10%	10%				
	Markup Amount	$37,600	$35,300	$40,400	$113,300			
	Target Price				$1,058,300			

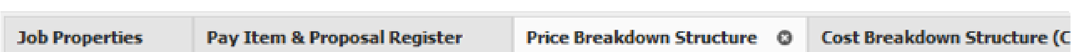
- Keeping Markup rates to Assigned Costs. This option uses the cost category amounts of all assigned cost items and calculates the markup by applying markup percentages as defined in the direct and indirect cost markup records. Excluding cost items from the dependency tab of the markup record precludes the application of that markup percentage to the assigned costs on that pay item.

		Labor			Equipment			Material			Total		
Pay Item	Description	Cost	Markup	Price	Cost	Markup	Price	Cost	Markup	Price	Cost	Markup	Price
201 0102	Clearing & Grubbing	$14,000	$2,800	$16,800	$24,000	$2,400	$26,400	$0	$0	$0	$38,000	$5,200	$43,200
202 0183	Unclassified Excavation	$62,000	$12,400	$74,400	$172,000	$17,200	$189,200	$0	$0	$0	$234,000	$29,600	$263,600
303 5912	Aggregate Base	$112,000	$22,400	$134,400	$157,000	$15,700	$172,700	$404,000	$40,400	$444,400	$673,000	$78,500	$751,500
	Total Direct Costs	$188,000	$37,600	$225,600	$353,000	$35,300	$388,300	$404,000	$40,400	$444,400	$945,000	$113,300	$1,058,300
	Markup Percentages												
	Labor	20%											
	Equipment	10%											
	Material	10%											

3.4.2.5 Categorize Business Overhead as Indirect Cost

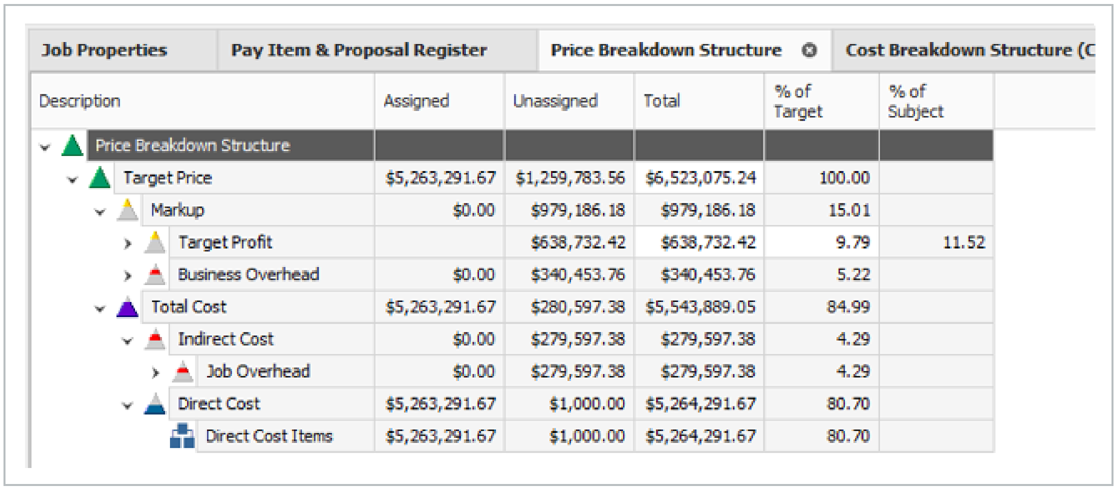
This option controls where cost Items with a cost segment of business overhead appear in the PBS.

- Indirect Cost - Business Overhead is included as a subcategory of indirect costs in the PBS.



Description	Assigned	Unassigned	Total	% of Target	% of Subject
Price Breakdown Structure					
Target Price	$5,263,291.67	$1,259,783.56	$6,523,075.24	100.00	
Markup	$0.00	$638,732.42	$638,732.42	9.79	
Target Profit		$638,732.42	$638,732.42	9.79	11.52
Total Cost	$5,263,291.67	$621,051.14	$5,884,342.81	90.21	
Indirect Cost	$0.00	$620,051.14	$620,051.14	9.51	
Business Overhead	$0.00	$340,453.76	$340,453.76	5.22	
Job Overhead	$0.00	$279,597.38	$279,597.38	4.29	
Direct Cost	$5,263,291.67	$1,000.00	$5,264,291.67	80.70	
Direct Cost Items	$5,263,291.67	$1,000.00	$5,264,291.67	80.70	

- Markup - Business Overhead is included as a subcategory of Markup in the PBS.

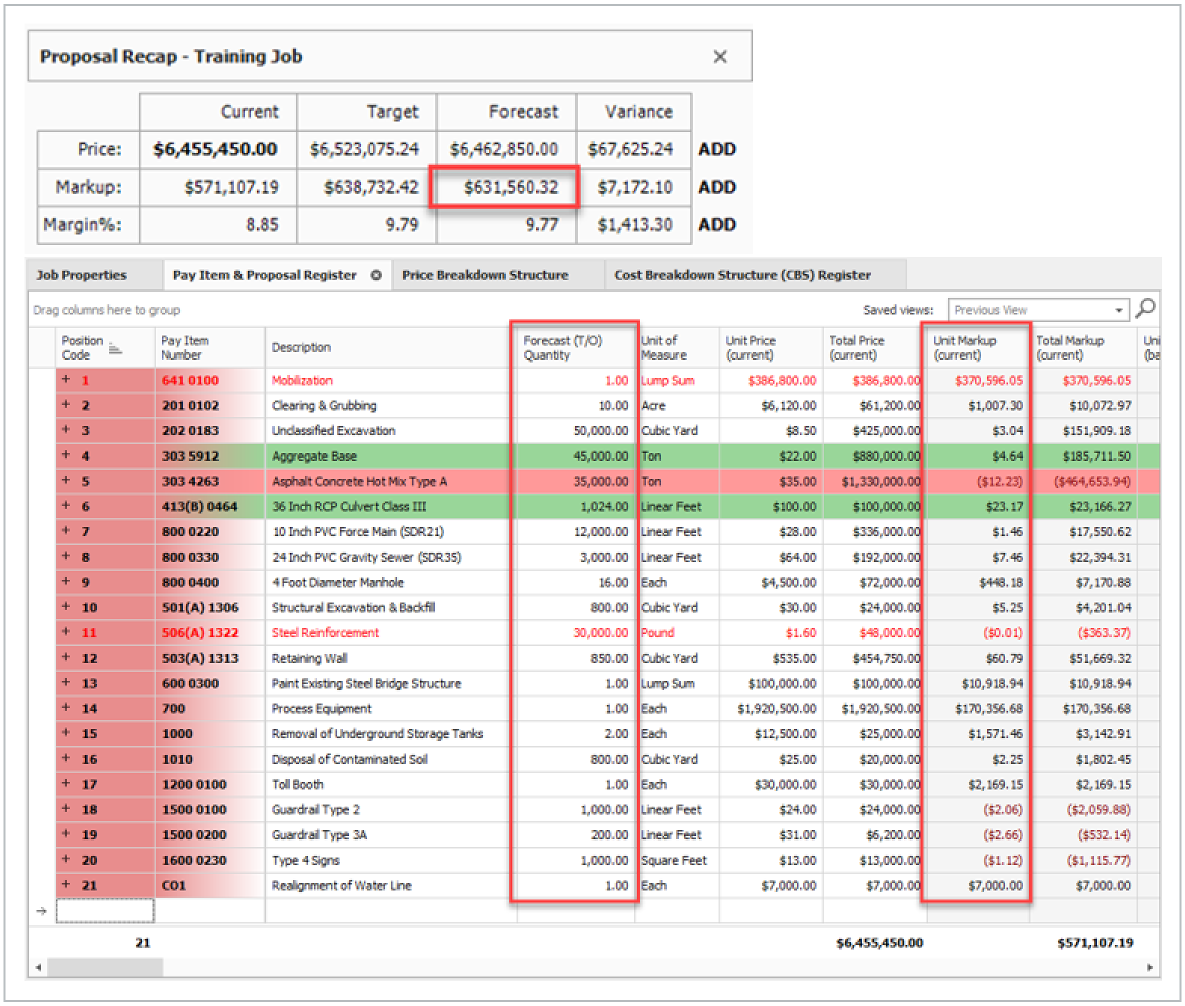


Description	Assigned	Unassigned	Total	% of Target	% of Subject
Price Breakdown Structure					
Target Price	$5,263,291.67	$1,259,783.56	$6,523,075.24	100.00	
Markup	$0.00	$979,186.18	$979,186.18	15.01	
Target Profit		$638,732.42	$638,732.42	9.79	11.52
Business Overhead	$0.00	$340,453.76	$340,453.76	5.22	
Total Cost	$5,263,291.67	$280,597.38	$5,543,889.05	84.99	
Indirect Cost	$0.00	$279,597.38	$279,597.38	4.29	
Job Overhead	$0.00	$279,597.38	$279,597.38	4.29	
Direct Cost	$5,263,291.67	$1,000.00	$5,264,291.67	80.70	
Direct Cost Items	$5,263,291.67	$1,000.00	$5,264,291.67	80.70	

3.4.2.6 Calculate Proposal Recap Forecast Markup

This option determines how the Markup is determined in the Forecast column of the Proposal Recap data block on the Pay Item & Proposal form.

- Unit Markup (current) × Forecast (T/O) Quantity - The Forecast Markup amount is determined as the sum of each Pay Items Unit Markup (current) multiplied by the Pay Items Forecast (T/O) Quantity.



Proposal Recap - Training Job ×

	Current	Target	Forecast	Variance	
Price:	**$6,455,450.00**	$6,523,075.24	$6,462,850.00	$67,625.24	**ADD**
Markup:	$571,107.19	$638,732.42	$631,560.32	$7,172.10	**ADD**
Margin%:	8.85	9.79	9.77	$1,413.30	**ADD**

Job Properties | Pay Item & Proposal Register | Price Breakdown Structure | Cost Breakdown Structure (CBS) Register

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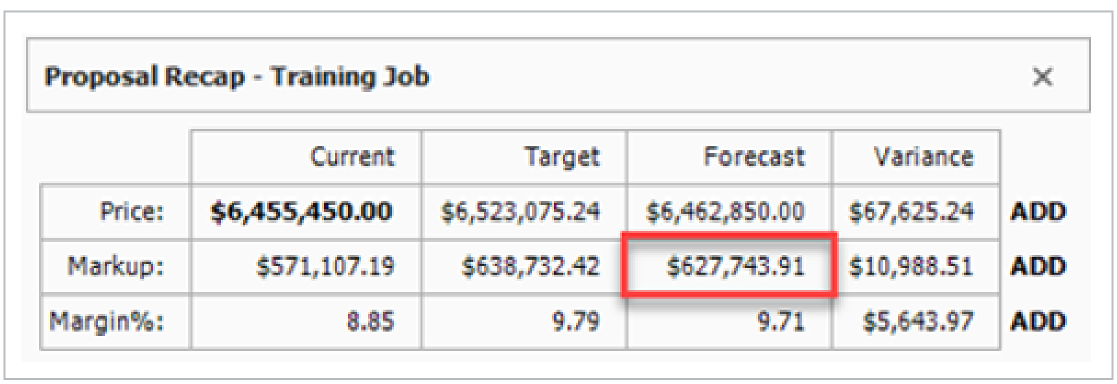
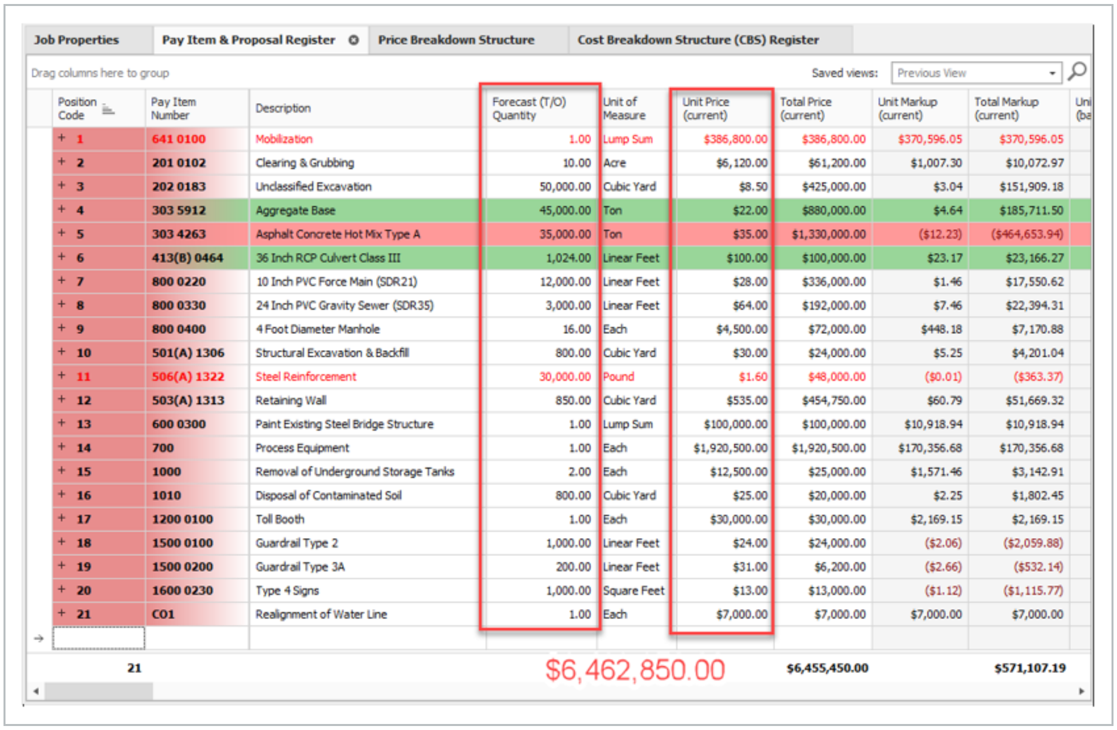
Position Code	Pay Item Number	Description	Forecast (T/O) Quantity	Unit of Measure	Unit Price (current)	Total Price (current)	Unit Markup (current)	Total Markup (current)	Uni (ba
+ 1	641 0100	Mobilization	1.00	Lump Sum	$386,800.00	$386,800.00	$370,596.05	$370,596.05	
+ 2	201 0102	Clearing & Grubbing	10.00	Acre	$6,120.00	$61,200.00	$1,007.30	$10,072.97	
+ 3	202 0183	Unclassified Excavation	50,000.00	Cubic Yard	$8.50	$425,000.00	$3.04	$151,909.18	
+ 4	303 5912	Aggregate Base	45,000.00	Ton	$22.00	$880,000.00	$4.64	$185,711.50	
+ 5	303 4263	Asphalt Concrete Hot Mix Type A	35,000.00	Ton	$35.00	$1,330,000.00	($12.23)	($464,653.94)	
+ 6	413(B) 0464	36 Inch RCP Culvert Class III	1,024.00	Linear Feet	$100.00	$100,000.00	$23.17	$23,166.27	
+ 7	800 0220	10 Inch PVC Force Main (SDR21)	12,000.00	Linear Feet	$28.00	$336,000.00	$1.46	$17,550.62	
+ 8	800 0330	24 Inch PVC Gravity Sewer (SDR35)	3,000.00	Linear Feet	$64.00	$192,000.00	$7.46	$22,394.31	
+ 9	800 0400	4 Foot Diameter Manhole	16.00	Each	$4,500.00	$72,000.00	$448.18	$7,170.88	
+ 10	501(A) 1306	Structural Excavation & Backfill	800.00	Cubic Yard	$30.00	$24,000.00	$5.25	$4,201.04	
+ 11	506(A) 1322	Steel Reinforcement	30,000.00	Pound	$1.60	$48,000.00	($0.01)	($363.37)	
+ 12	503(A) 1313	Retaining Wall	850.00	Cubic Yard	$535.00	$454,750.00	$60.79	$51,669.32	
+ 13	600 0300	Paint Existing Steel Bridge Structure	1.00	Lump Sum	$100,000.00	$100,000.00	$10,918.94	$10,918.94	
+ 14	700	Process Equipment	1.00	Each	$1,920,500.00	$1,920,500.00	$170,356.68	$170,356.68	
+ 15	1000	Removal of Underground Storage Tanks	2.00	Each	$12,500.00	$25,000.00	$1,571.46	$3,142.91	
+ 16	1010	Disposal of Contaminated Soil	800.00	Cubic Yard	$25.00	$20,000.00	$2.25	$1,802.45	
+ 17	1200 0100	Toll Booth	1.00	Each	$30,000.00	$30,000.00	$2,169.15	$2,169.15	
+ 18	1500 0100	Guardrail Type 2	1,000.00	Linear Feet	$24.00	$24,000.00	($2.06)	($2,059.88)	
+ 19	1500 0200	Guardrail Type 3A	200.00	Linear Feet	$31.00	$6,200.00	($2.66)	($532.14)	
+ 20	1600 0230	Type 4 Signs	1,000.00	Square Feet	$13.00	$13,000.00	($1.12)	($1,115.77)	
+ 21	CO1	Realignment of Water Line	1.00	Each	$7,000.00	$7,000.00	$7,000.00	$7,000.00	
21						$6,455,450.00		$571,107.19	

- Forecast Price Total Price - Total Cost/Billing. The markup amount is determined by subtracting the sum of the total jobs cost based on forecast (T/O) quantities from the forecast bid price, which is the sum of all pay item current unit prices multiplied by the pay items forecast (T/O quantity).



Proposal Recap - Training Job ×

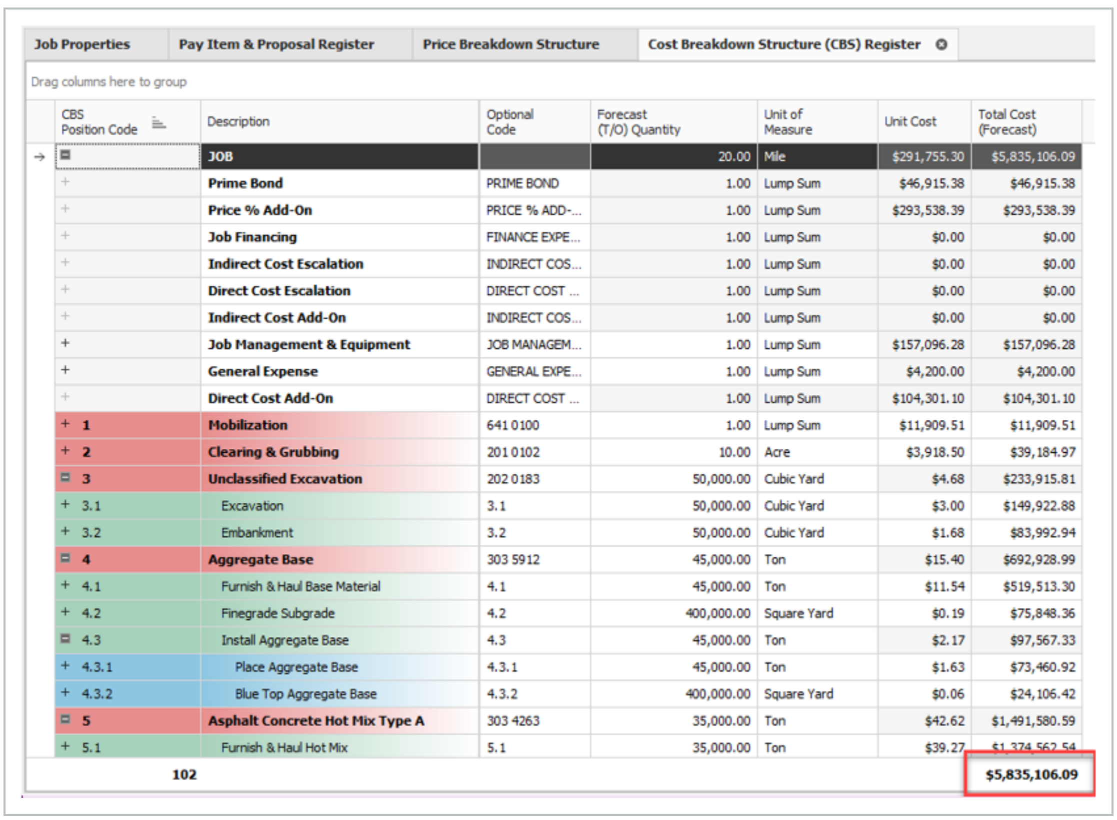
	Current	Target	Forecast	Variance	
Price:	**$6,455,450.00**	$6,523,075.24	$6,462,850.00	$67,625.24	**ADD**
Markup:	$571,107.19	$638,732.42	$627,743.91	$10,988.51	**ADD**
Margin%:	8.85	9.79	9.71	$5,643.97	**ADD**



Job Properties | Pay Item & Proposal Register | Price Breakdown Structure | Cost Breakdown Structure (CBS) Register

Drag columns here to group — Saved views: Previous View

Position Code	Pay Item Number	Description	Forecast (T/O) Quantity	Unit of Measure	Unit Price (current)	Total Price (current)	Unit Markup (current)	Total Markup (current)
1	641 0100	Mobilization	1.00	Lump Sum	$386,800.00	$386,800.00	$370,596.05	$370,596.05
2	201 0102	Clearing & Grubbing	10.00	Acre	$6,120.00	$61,200.00	$1,007.30	$10,072.97
3	202 0183	Unclassified Excavation	50,000.00	Cubic Yard	$8.50	$425,000.00	$3.04	$151,909.18
4	303 5912	Aggregate Base	45,000.00	Ton	$22.00	$880,000.00	$4.64	$185,711.50
5	303 4263	Asphalt Concrete Hot Mix Type A	35,000.00	Ton	$35.00	$1,330,000.00	($12.23)	($464,653.94)
6	413(B) 0464	36 Inch RCP Culvert Class III	1,024.00	Linear Feet	$100.00	$100,000.00	$23.17	$23,166.27
7	800 0220	10 Inch PVC Force Main (SDR21)	12,000.00	Linear Feet	$28.00	$336,000.00	$1.46	$17,550.62
8	800 0330	24 Inch PVC Gravity Sewer (SDR35)	3,000.00	Linear Feet	$64.00	$192,000.00	$7.46	$22,394.31
9	800 0400	4 Foot Diameter Manhole	16.00	Each	$4,500.00	$72,000.00	$448.18	$7,170.88
10	501(A) 1306	Structural Excavation & Backfill	800.00	Cubic Yard	$30.00	$24,000.00	$5.25	$4,201.04
11	506(A) 1322	Steel Reinforcement	30,000.00	Pound	$1.60	$48,000.00	($0.01)	($363.37)
12	503(A) 1313	Retaining Wall	850.00	Cubic Yard	$535.00	$454,750.00	$60.79	$51,669.32
13	600 0300	Paint Existing Steel Bridge Structure	1.00	Lump Sum	$100,000.00	$100,000.00	$10,918.94	$10,918.94
14	700	Process Equipment	1.00	Each	$1,920,500.00	$1,920,500.00	$170,356.68	$170,356.68
15	1000	Removal of Underground Storage Tanks	2.00	Each	$12,500.00	$25,000.00	$1,571.46	$3,142.91
16	1010	Disposal of Contaminated Soil	800.00	Cubic Yard	$25.00	$20,000.00	$2.25	$1,802.45
17	1200 0100	Toll Booth	1.00	Each	$30,000.00	$30,000.00	$2,169.15	$2,169.15
18	1500 0100	Guardrail Type 2	1,000.00	Linear Feet	$24.00	$24,000.00	($2.06)	($2,059.88)
19	1500 0200	Guardrail Type 3A	200.00	Linear Feet	$31.00	$6,200.00	($2.66)	($532.14)
20	1600 0230	Type 4 Signs	1,000.00	Square Feet	$13.00	$13,000.00	($1.12)	($1,115.77)
21	CO1	Realignment of Water Line	1.00	Each	$7,000.00	$7,000.00	$7,000.00	$7,000.00
21				$6,462,850.00		$6,455,450.00		$571,107.19



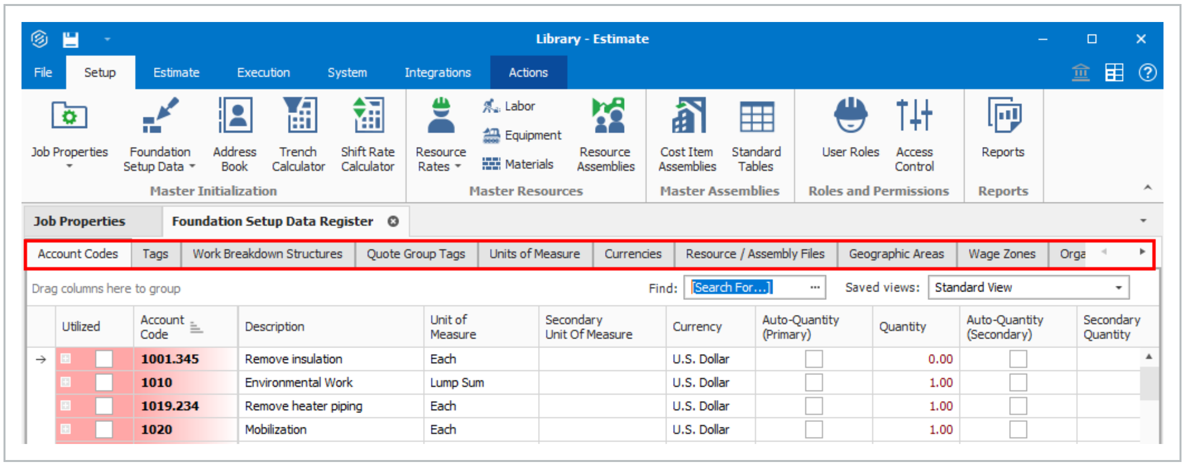
Job Properties | Pay Item & Proposal Register | Price Breakdown Structure | Cost Breakdown Structure (CBS) Register

Drag columns here to group

CBS Position Code	Description	Optional Code	Forecast (T/O) Quantity	Unit of Measure	Unit Cost	Total Cost (Forecast)
	JOB		20.00	Mile	$291,755.30	$5,835,106.09
	Prime Bond	PRIME BOND	1.00	Lump Sum	$46,915.38	$46,915.38
	Price % Add-On	PRICE % ADD-...	1.00	Lump Sum	$293,538.39	$293,538.39
	Job Financing	FINANCE EXPE...	1.00	Lump Sum	$0.00	$0.00
	Indirect Cost Escalation	INDIRECT COS...	1.00	Lump Sum	$0.00	$0.00
	Direct Cost Escalation	DIRECT COST ...	1.00	Lump Sum	$0.00	$0.00
	Indirect Cost Add-On	INDIRECT COS...	1.00	Lump Sum	$0.00	$0.00
	Job Management & Equipment	JOB MANAGEM...	1.00	Lump Sum	$157,096.28	$157,096.28
	General Expense	GENERAL EXPE...	1.00	Lump Sum	$4,200.00	$4,200.00
	Direct Cost Add-On	DIRECT COST ...	1.00	Lump Sum	$104,301.10	$104,301.10
1	Mobilization	641 0100	1.00	Lump Sum	$11,909.51	$11,909.51
2	Clearing & Grubbing	201 0102	10.00	Acre	$3,918.50	$39,184.97
3	Unclassified Excavation	202 0183	50,000.00	Cubic Yard	$4.68	$233,915.81
3.1	Excavation	3.1	50,000.00	Cubic Yard	$3.00	$149,922.88
3.2	Embankment	3.2	50,000.00	Cubic Yard	$1.68	$83,992.94
4	Aggregate Base	303 5912	45,000.00	Ton	$15.40	$692,928.99
4.1	Furnish & Haul Base Material	4.1	45,000.00	Ton	$11.54	$519,513.30
4.2	Finegrade Subgrade	4.2	400,000.00	Square Yard	$0.19	$75,848.36
4.3	Install Aggregate Base	4.3	45,000.00	Ton	$2.17	$97,567.33
4.3.1	Place Aggregate Base	4.3.1	45,000.00	Ton	$1.63	$73,460.92
4.3.2	Blue Top Aggregate Base	4.3.2	400,000.00	Square Yard	$0.06	$24,106.42
5	Asphalt Concrete Hot Mix Type A	303 4263	35,000.00	Ton	$42.62	$1,491,580.59
5.1	Furnish & Haul Hot Mix	5.1	35,000.00	Ton	$39.27	$1,374,562.54
102						$5,835,106.09

3.5 LIBRARY FOUNDATION SETUP DATA

Foundation Setup Data is where all drop-down options within Estimate fields are stored. These can serve as category labels, alternate structures or validated tag fields. The different validated fields are organized into tabs on this form.



You should be aware of these category labels:

Category Labels	
Name	Definition
Account Codes	These codes will be set up on the back end and will help you compare your cost and production rates to similar cost items in past projects.
Tags	Some tags are already set up for you. Additional tags can be created and used to group and filter your items.
Work Breakdown Structures	Use this format when you need to have multiple variations and summary reports of an estimate. WBS retains the same relationships between items as in the original estimate and only changes the view and how items are arranged in hierarchy.
Units of Measure	These are standardized to relate to one another by a conversion factor. If you need to create a new unit of measure, you will need to reference it to a base unit of measure and can include a conversion factor to allow you to convert back and forth between English and Metric.
Currencies	The default currency is set to U.S. Dollar, but you can also enter the exchange rate for other currencies (such as Canadian) so you can estimate with

Category Labels	
	whatever currency you need. Multiple currencies can be used in the same project. The system base currency can be changed from USD in the backstage view settings, but is a global change for the entire estimate environment.

Currency Name	Exchange Rate	Currency Symbol	Positive Currency Format	Negative Currency Format	Decimal Symbol
CND Dollar	1.00000	$	$1.1	($1.1)	Period (.)
U.S. Dollar	1.00000	$	$1.1	($1.1)	Period (.)

When you create a new job folder, all category labels defined in the Library Foundation Setup Data Register will be copied to the new job folder automatically.

3.6 RESOURCES

InEight Estimate refers to labor, equipment and material items as Resources. You will use these resources as the basic building blocks used to detail the costs in your estimates.

InEight Estimate organizes resources into seven types:

Resources	
Name	Description
Labor	The human resources that perform direct or indirect work. Direct labor is typically classified by trade (e.g., pipefitters, electricians, iron workers) and title (e.g., foreman, journeyman, laborer).
Construction Equipment	Owned construction equipment.
Rented Construction Equipment	Construction equipment rented from a third party.
Installed Materials	Materials that will remain installed on site after the project is completed, (e.g., concrete, piping, aggregate).
Installed	Equipment that will remain installed on site after the project is completed,

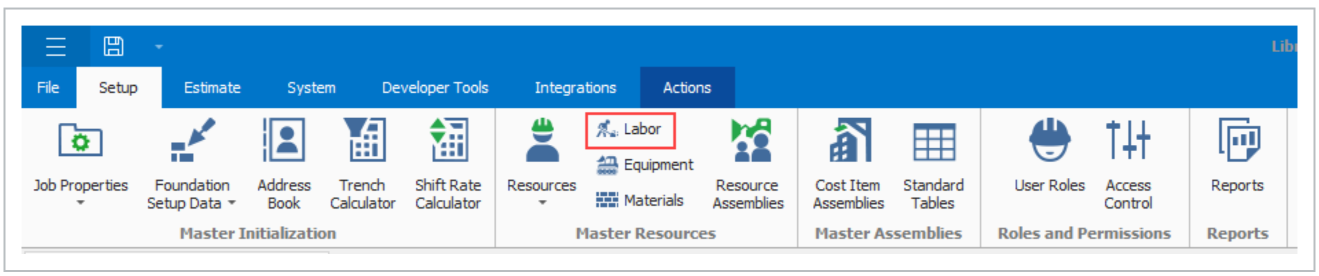
Resources	
Equipment	(e.g., boilers, heat exchangers, vessels, cooling towers).
Supplies	Expendable items that will not be permanently installed (e.g., small tools, consumables).
Unique	Resources that are of a “unique” nature and do not fit well into the other types (e.g., dump fees, hauling charges and equipment rented by the month).

After creating a new job folder, you can import a filtered set of resources from the Library into the new project. This is done on the Cost Basis tab of the Job Properties form.

In the following section, you will learn more about the resources stored in your Library in the Library Resource Rate Register.

3.6.1 Library Resources Register

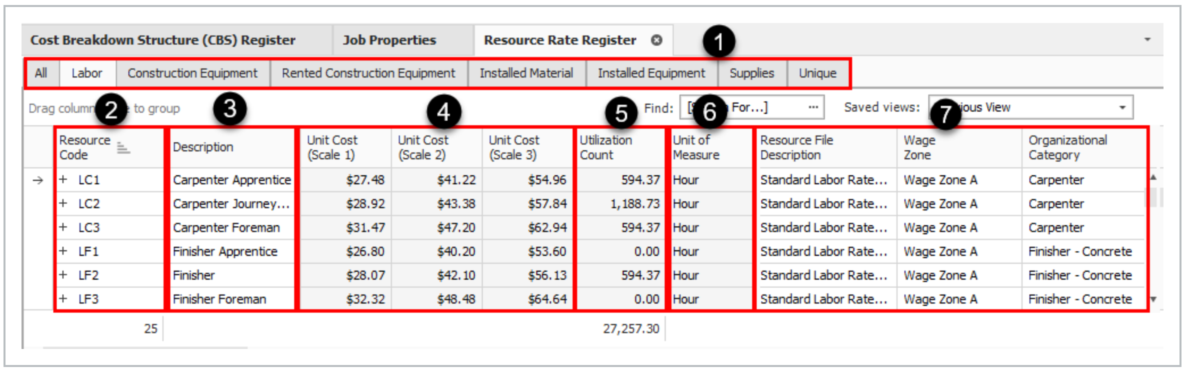
To open the Library Resources Register, select **Labor** from the **Master Resources** ribbon.



Overview - Library Resource Rate Register

Name		Description
1	Tabs	There are tabs along the top of the form for each of the seven resource types, in addition to an *All* tab that holds the resources of all types. • Notice that you are on the Labor Tab
2	Resource Code	Each record (or row in the register) represents a single resource.
3	Description	The Description provides more detail about the resource.
4	Resource	This is the resource cost per unit.

	Name	Description
	Rate per Unit	
5	Utilization Count	Tells you how many units of that resource are being used in the job.
6	Unit of Measure	Each resource is defined with a Unit of Measure.
7	Register	This register includes columns for the resource attribute categories so you can filter and group your resources.

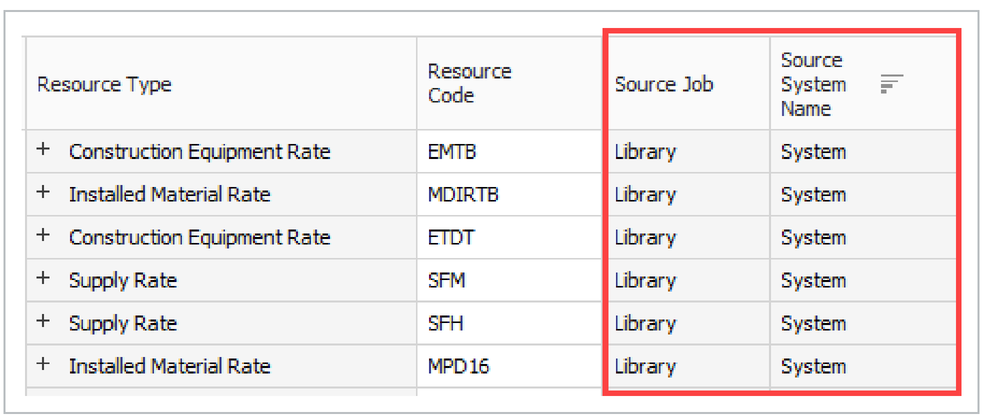


Resource Code	Description	Unit Cost (Scale 1)	Unit Cost (Scale 2)	Unit Cost (Scale 3)	Utilization Count	Unit of Measure	Resource File Description	Wage Zone	Organizational Category
+ LC1	Carpenter Apprentice	$27.48	$41.22	$54.96	594.37	Hour	Standard Labor Rate...	Wage Zone A	Carpenter
+ LC2	Carpenter Journey...	$28.92	$43.38	$57.84	1,188.73	Hour	Standard Labor Rate...	Wage Zone A	Carpenter
+ LC3	Carpenter Foreman	$31.47	$47.20	$62.94	594.37	Hour	Standard Labor Rate...	Wage Zone A	Carpenter
+ LF1	Finisher Apprentice	$26.80	$40.20	$53.60	0.00	Hour	Standard Labor Rate...	Wage Zone A	Finisher - Concrete
+ LF2	Finisher	$28.07	$42.10	$56.13	594.37	Hour	Standard Labor Rate...	Wage Zone A	Finisher - Concrete
+ LF3	Finisher Foreman	$32.32	$48.48	$64.64	0.00	Hour	Standard Labor Rate...	Wage Zone A	Finisher - Concrete
25					27,257.30				

Source Job and Source System name fields

The Source Job field provides visibility into the jobs from which the data may have originated from.

The Source System Name helps to see the source of the data when integrating with other systems.



Resource Type	Resource Code	Source Job	Source System Name
+ Construction Equipment Rate	EMTB	Library	System
+ Installed Material Rate	MDIRTB	Library	System
+ Construction Equipment Rate	ETDT	Library	System
+ Supply Rate	SFM	Library	System
+ Supply Rate	SFH	Library	System
+ Installed Material Rate	MPD16	Library	System

Resource rate add and search tips:

- You cannot add new resources on the All tab.
- You can search for resources in the Resource Rate Register using the ‘Find’ field.

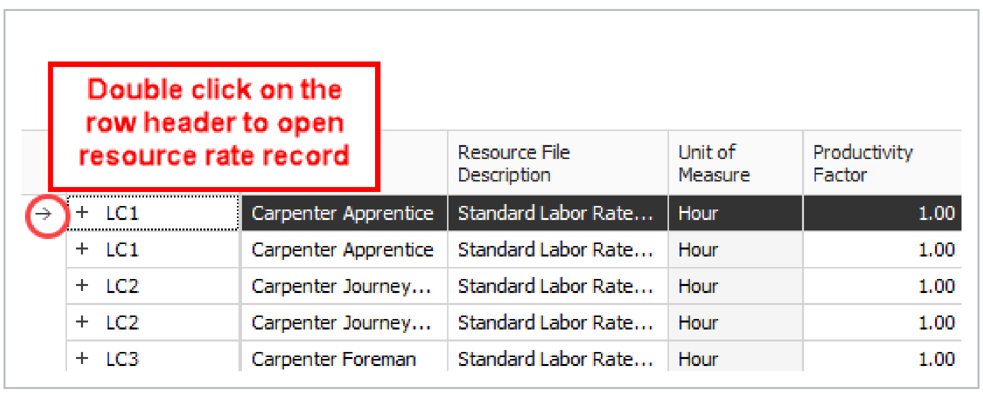
Next you will take a look at the different types of resources and how they differ when we drill into resource rate records from each category.

3.6.2 Labor Resources

Looking at your Labor resources more closely, you will see all the Resource Codes for the Labor resources begin with an L. This is a best practice for naming and organizing your resources, but you can also use another organizational method of your choice.

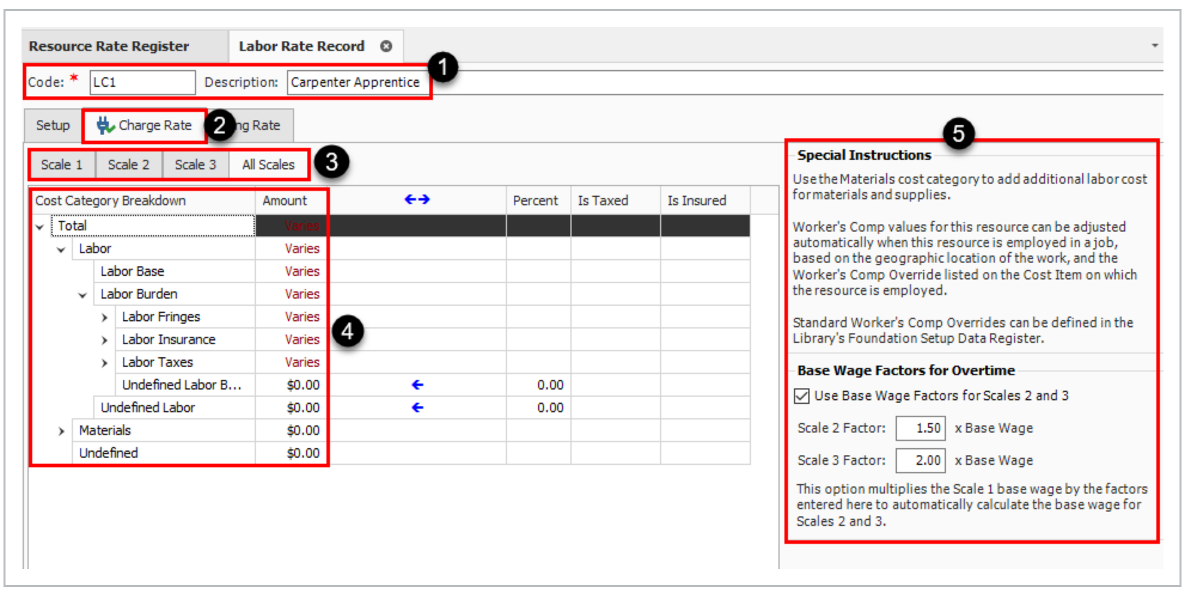
3.6.3 Resource Rate Record

If you need to add cost to a resource, adjust a rate, or just view a more detailed breakdown, you can open the resource’s rate record. From the Library Resource Rate Register, double click on the row header for the resource you need to view in greater detail.



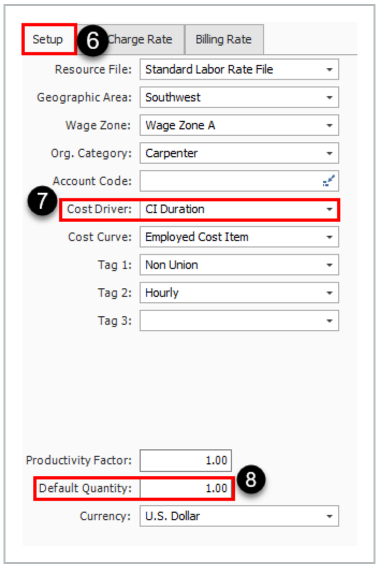
Overview - Resource Rate Record

Name		Description
1	Record	The record references the resource you are editing.
2	Charge Rate	The Charge Rate tab is the tab the record defaults to and is where you define the cost of the resource.
3	Scale Buttons	The Scale buttons only show up on labor resources. They are used for defining regular time, overtime and double time rates for the resource.
4	Cost Category Breakdown	The Cost Category Breakdown is where you enter the costs for the resource. The categories will depend on what type of resource it is (e.g., equipment resources will have equipment cost categories and materials will have material cost categories).
5	Special Instructions / Base Wage Factors	The right side of the record will have additional options to help you define the rate. These options change depending on what type of resource it is.



Name		Description
6	Setup	There is also a Setup tab where you can define the resource's attributes, plus other settings. These attributes are used for filtering which resource rates to

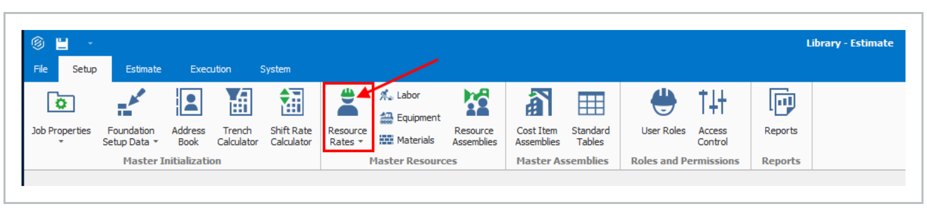
Name		Description
		load into a new estimate.
7	Cost Driver	Labor resources default Cost Driver is CI Duration which means their costs are driven by time.
8	Default Quantity	The Default Quantity is typically set to 1 for most cases if you are bringing in the resource you are using at least one.



The following steps walk you through how to create a new labor resource.

Step by Step – Create a Labor Resource

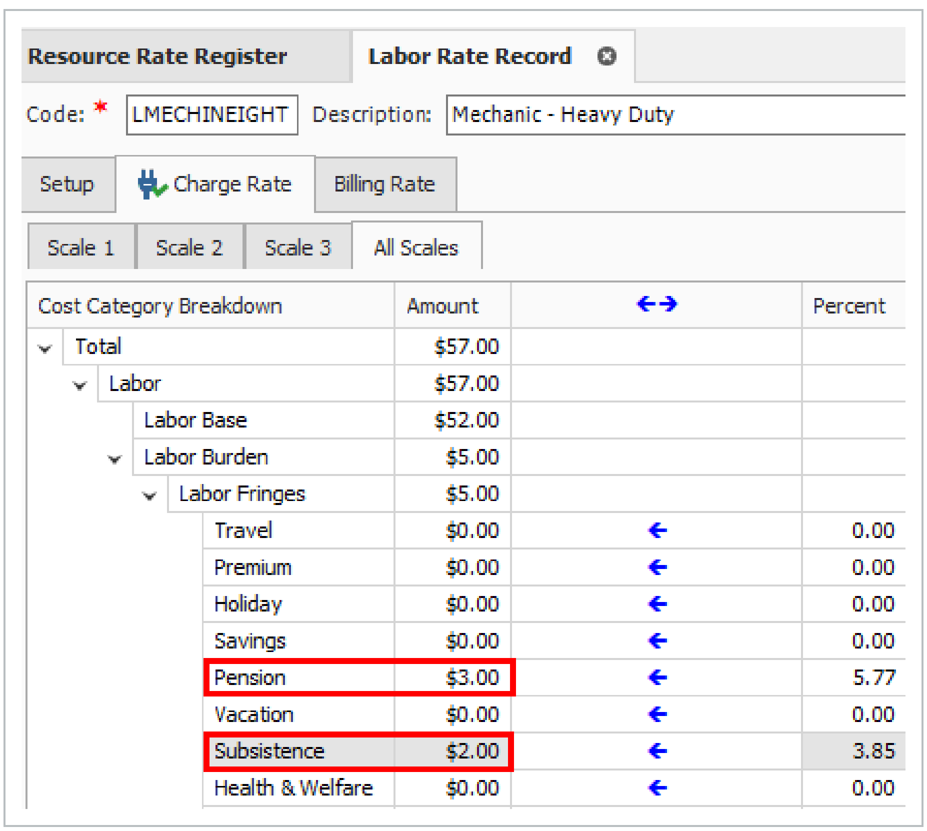
1. From the Library landing page, on the Setup tab, click on **Resource Rates** from the Master Resources section.



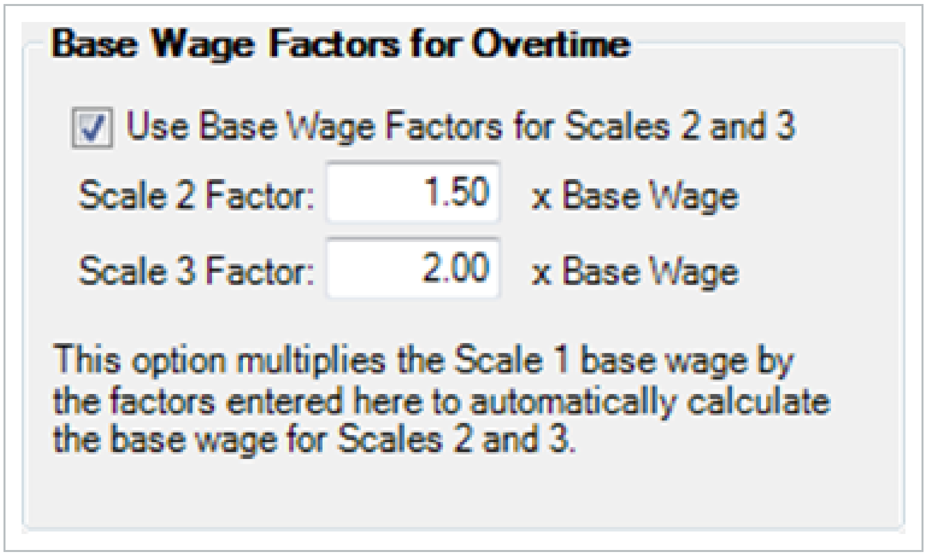
- The Library Resource Rate Register opens

2. Select the **Labor** tab.

3. Right click on any row header and select **New**.
    - A new Labor Rate Record displays
4. In the Code field, type **L + [your initials]**.
5. Press the **Tab** key.
6. Fill in the Description field.
7. Click on the resource's **Setup** tab and select **Standard Labor Rate File** from the Resource File drop-down list.
8. Select a **location** for the Geographic Area.
9. Select **Wage Zone** A for Wage Zone.
10. Select a **labor type** for the Organizational Category.
11. For Tag 1, select a **code**.
12. For Tag 2, select a **code**.
13. On the Charge Rate tab, enter a **dollar value** for your Labor Base.
14. Expand Labor Burden and under Labor Fringes, type in a **dollar value** for Pension and Subsistence.



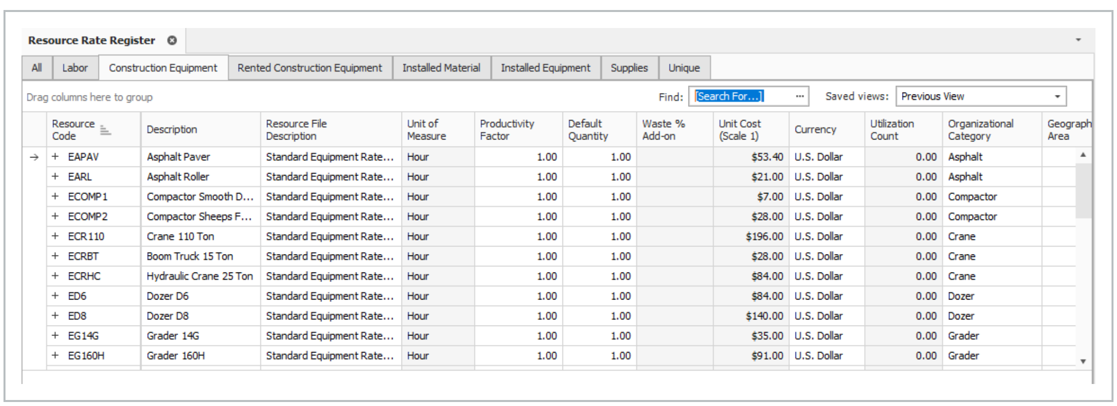
15. Define an overtime and double-time rate for the resource. Select the **checkbox** for Use Base Wage Factors for Scales 2 and 3.
16. Set the Scale 2 Factor to **1.50** x Base Wage and Scale 3 Factor to **2.00** x Base Wage.



17. Click **OK**, to close the record.

3.6.4 Construction Equipment Resources

- Similar to Labor Resources, Construction Equipment Resources are also duration driven resources by default
- They contain cost categories for ownership and operation costs


Resource Rate Register

All | Labor | Construction Equipment | Rented Construction Equipment | Installed Material | Installed Equipment | Supplies | Unique

Drag columns here to group Find: [Search For...] Saved views: Previous View

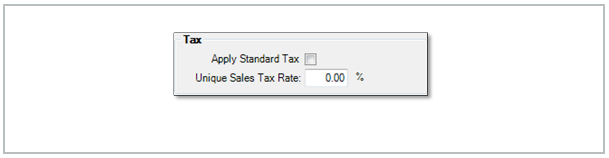
Resource Code	Description	Resource File Description	Unit of Measure	Productivity Factor	Default Quantity	Waste % Add-on	Unit Cost (Scale 1)	Currency	Utilization Count	Organizational Category	Geograph Area
EAPAV	Asphalt Paver	Standard Equipment Rate...	Hour	1.00	1.00		$53.40	U.S. Dollar	0.00	Asphalt	
EARL	Asphalt Roller	Standard Equipment Rate...	Hour	1.00	1.00		$21.00	U.S. Dollar	0.00	Asphalt	
ECOMP1	Compactor Smooth D...	Standard Equipment Rate...	Hour	1.00	1.00		$7.00	U.S. Dollar	0.00	Compactor	
ECOMP2	Compactor Sheeps F...	Standard Equipment Rate...	Hour	1.00	1.00		$28.00	U.S. Dollar	0.00	Compactor	
ECR110	Crane 110 Ton	Standard Equipment Rate...	Hour	1.00	1.00		$196.00	U.S. Dollar	0.00	Crane	
ECRBT	Boom Truck 15 Ton	Standard Equipment Rate...	Hour	1.00	1.00		$28.00	U.S. Dollar	0.00	Crane	
ECRHC	Hydraulic Crane 25 Ton	Standard Equipment Rate...	Hour	1.00	1.00		$84.00	U.S. Dollar	0.00	Crane	
ED6	Dozer D6	Standard Equipment Rate...	Hour	1.00	1.00		$84.00	U.S. Dollar	0.00	Dozer	
ED8	Dozer D8	Standard Equipment Rate...	Hour	1.00	1.00		$140.00	U.S. Dollar	0.00	Dozer	
EG14G	Grader 14G	Standard Equipment Rate...	Hour	1.00	1.00		$35.00	U.S. Dollar	0.00	Grader	
EG160H	Grader 160H	Standard Equipment Rate...	Hour	1.00	1.00		$91.00	U.S. Dollar	0.00	Grader	

These resources are the fleet of construction equipment that you own.

3.6.5 Rented Equipment Resources

These resources represent the construction equipment that you rent.

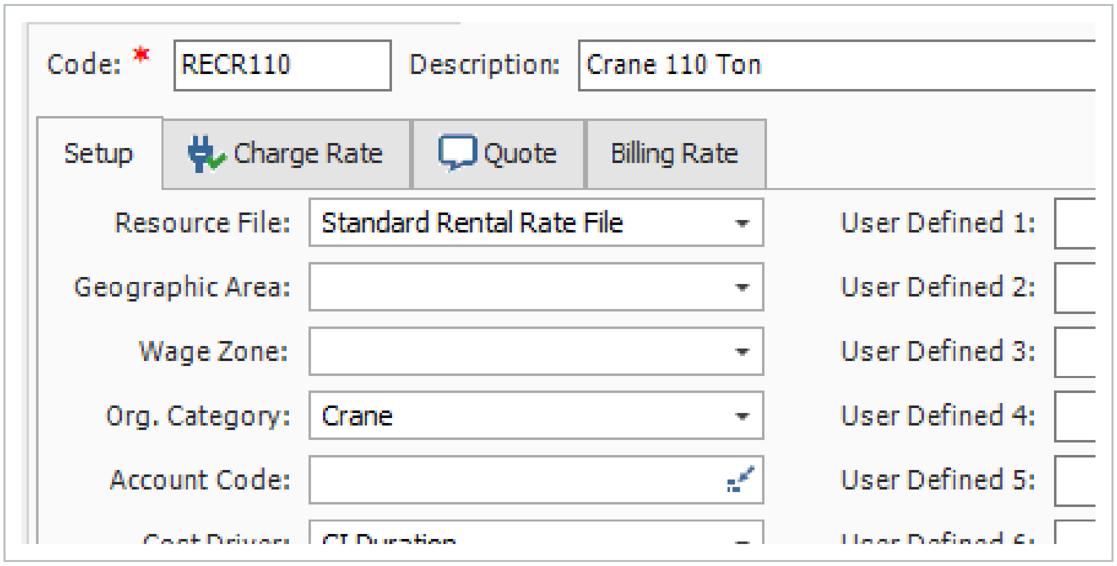
- Rented Equipment Resources are also duration driven resources by default
- Contain cost categories for rental and operation cost as well as additional fees
- On the Rental Construction Equipment Record, you will notice a new tab named Quote
    - Quotes will be discussed in detail in *Lesson 8 – Quote Management*
- You will also note the Tax section. You can check the box to Apply Standard Tax, which pulls the Sales Tax percentage defined on the Cost Basis tab in Job Properties, or you can manually specify a unique sales tax rate



Step by Step – Create a Rental Equipment Resource

1. Open the Library Resource Rates Register.
2. Select the **Rented Construction Equipment** tab.
3. Right click on any row header and choose **New**; a new Installed Rented Equipment Rate Record displays.
4. In the Code field, type **RECR + [your initials]**, then press **Tab**.
5. In the Description field, type **Crane 110 Ton**.
6. Click on the resource's **Setup** tab and select **Standard Rental Rate File** from the Resource File drop-down list.

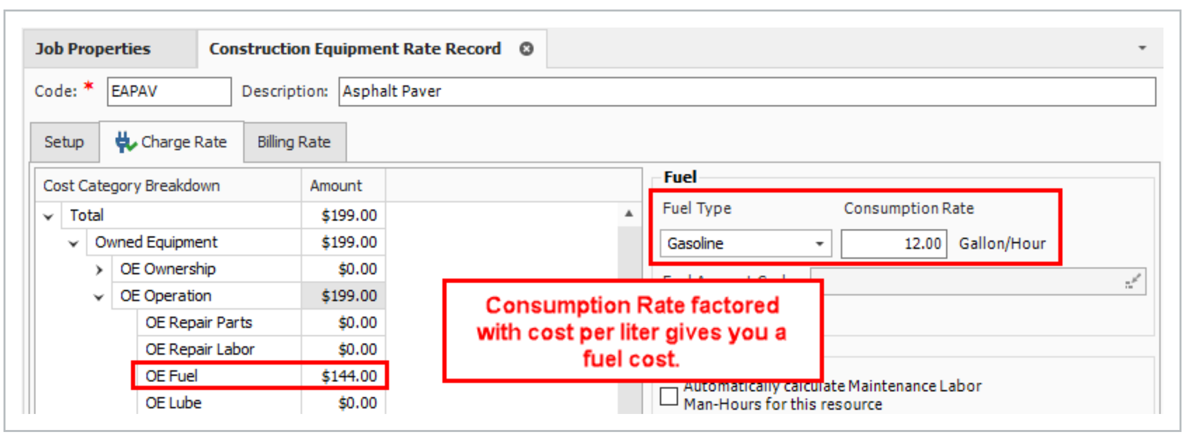
7. Select a **resource** from the Organizational Category drop-down list.



8. Move back to the Charge Rate tab to follow the step by step on the next page.

3.6.6 Equipment Consumption Rates

The Construction Equipment and Rented Construction Equipment Resource Rate Records include consumption rates that will factor with the fuel cost you define on the **Library Job Properties** > **Fuel Cost** tab to give a fuel cost for your equipment rate.



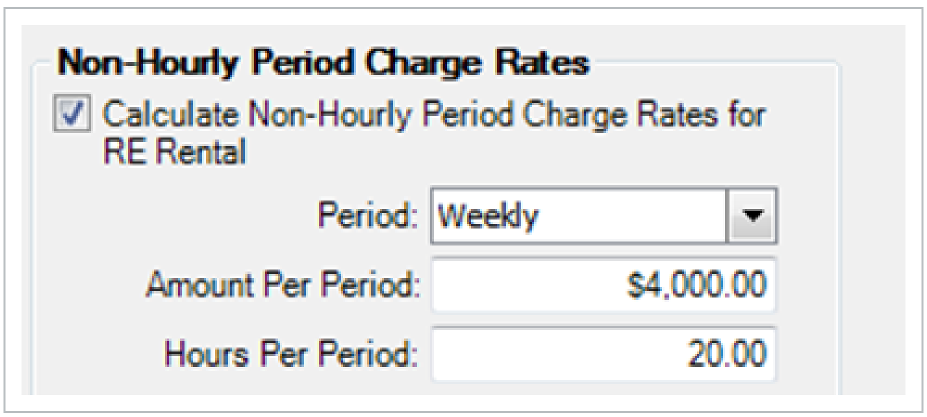
The below figure shows where consumption rates are defined on the Construction Equipment Resource Rate Record.

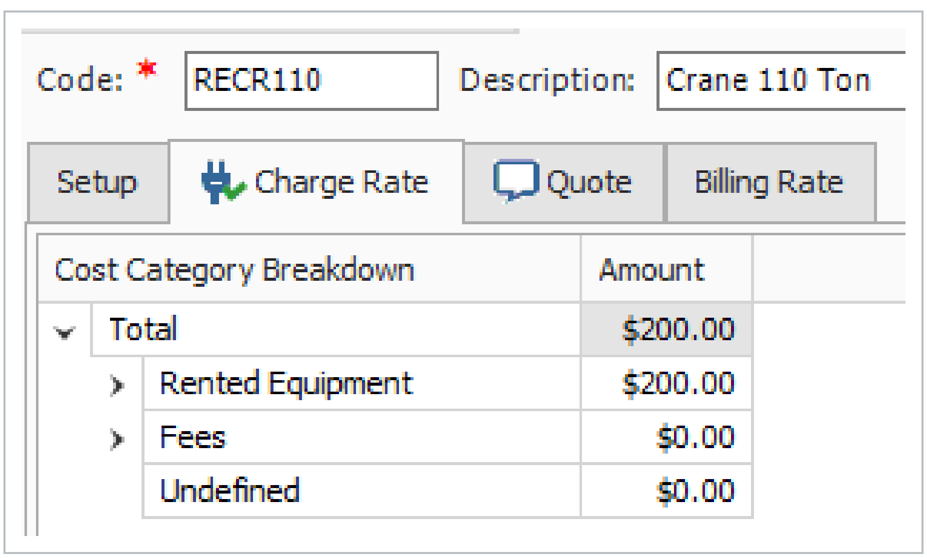
3.6.7 Non-Hourly Rate Calculator

For owned and rented construction equipment, the rate entered must be hourly. If your rate is weekly or monthly, you can use the Non-Hourly Rate Calculator on the Construction Equipment Resource Record to come up with the hourly rate.

Step by Step – Non-Hourly Rate Calculator

1. Refer back to your last entry's rate amount. Under Non-Hourly Period Charge Rates on the right, check the **Calculate Non-Hourly Period Charge Rates** checkbox.
2. On the resulting prompt, click **OK**.
3. In the Period field, select **Weekly**.
4. In the Amount Per Period field, type in a **number value**.
5. Type in a **number of hours** in the Hours Per Period field.

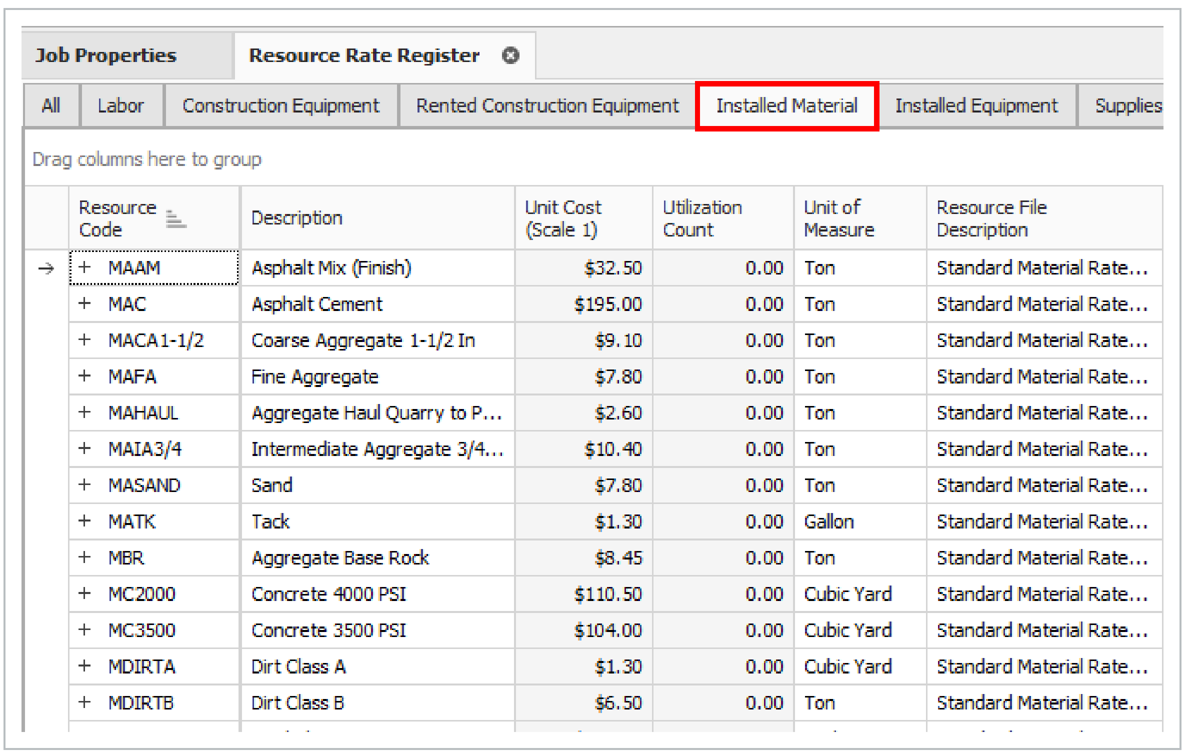




6. Click **OK** to close the record.

3.6.8 Installed Materials, Installed Equipment & Supplies Resources

- Comparing the Installed Material & Equipment resources to those covered so far, you will note that the unit of measure is not Hour for materials, but it is specific to the kind of material. It is a quantity-driven resource, as opposed to duration-driven like your labor and equipment resources
- You will also note the tax field can pull your standard tax settings from the Cost Basis tab in Job Properties, or a unique sales tax rate can be manually entered in each record
- On record for these resource types, you will notice a new tab named Quote. This tab shows up here because you may have to shop around and get quotes for these resources
    - Quotes will be discussed in detail in *Lesson 8 – Quote Management*
- In the Setup tab you will see a field named Waste % Add-on. Here you can account for approximate waste percentages
- Cost categories will differ on each type of resource record



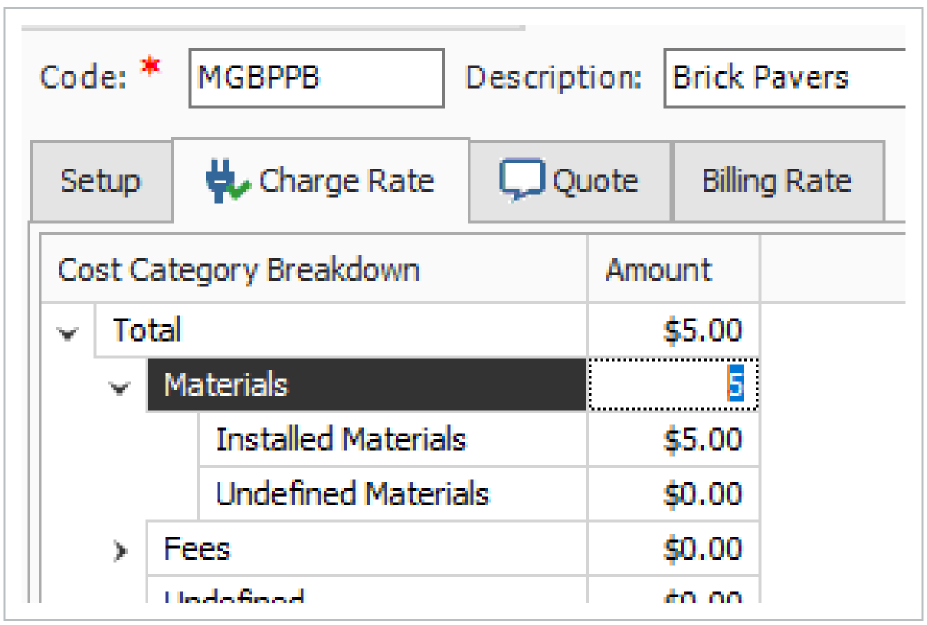
Resource Code	Description	Unit Cost (Scale 1)	Utilization Count	Unit of Measure	Resource File Description
MAAM	Asphalt Mix (Finish)	$32.50	0.00	Ton	Standard Material Rate...
MAC	Asphalt Cement	$195.00	0.00	Ton	Standard Material Rate...
MACA1-1/2	Coarse Aggregate 1-1/2 In	$9.10	0.00	Ton	Standard Material Rate...
MAFA	Fine Aggregate	$7.80	0.00	Ton	Standard Material Rate...
MAHAUL	Aggregate Haul Quarry to P...	$2.60	0.00	Ton	Standard Material Rate...
MAIA3/4	Intermediate Aggregate 3/4...	$10.40	0.00	Ton	Standard Material Rate...
MASAND	Sand	$7.80	0.00	Ton	Standard Material Rate...
MATK	Tack	$1.30	0.00	Gallon	Standard Material Rate...
MBR	Aggregate Base Rock	$8.45	0.00	Ton	Standard Material Rate...
MC2000	Concrete 4000 PSI	$110.50	0.00	Cubic Yard	Standard Material Rate...
MC3500	Concrete 3500 PSI	$104.00	0.00	Cubic Yard	Standard Material Rate...
MDIRTA	Dirt Class A	$1.30	0.00	Cubic Yard	Standard Material Rate...
MDIRTB	Dirt Class B	$6.50	0.00	Ton	Standard Material Rate...

Above is an example of the Installed Material tab in the Library Resource Rate Register.

The following steps walk you through how to create a new material resource in InEight Estimate.

Step by Step – Create an Installed Material Resource

1. Select **Resource Rates** from the Library landing page.
   - The Resource Rate Register displays
2. Select the **Installed Material** tab.
3. Right click on any row header and select **New** from the drop-down menu.
   - A new Installed Material Rate Record displays
4. In the Code field, type **MGBP + [your initials],** then press **Tab.**
5. In the Description field, type **Brick Pavers**.
6. Select a **unit of measure** from the Unit of Measure drop-down list.
7. On the resource's Setup tab, under Resource File select **Standard Material Rate File**.
8. On the Charge Rate tab, expand Materials and enter a **number value**in the Installed Materials Amount field.

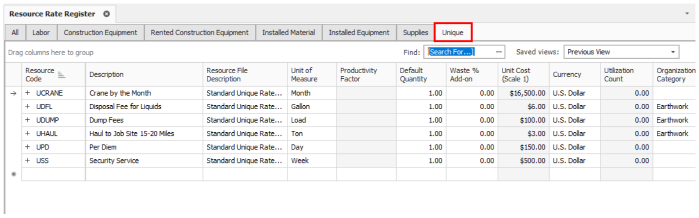


9. Click **OK** to finish adding this resource.

3.6.9 Unique Resources

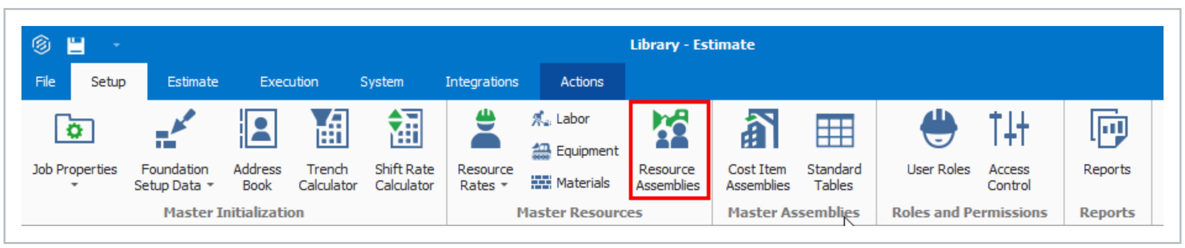
The Unique resource type is a catch-all and can be used for anything from dump fees and security to creating subcontractors as a resource.

- The Unique resources are the only resources that have all cost categories available, as well as all units of measure
- You will also note the tax field which can pull your standard tax settings from the Cost Basis tab in Job Properties, or a unique sales tax rate can be manually entered in each record
- Quotes will be discussed in detail in *Lesson 8 – Quote Management*



3.7 RESOURCE ASSEMBLIES

A Resource Assembly is a group of resources. You can create an assembly once and then reuse it as needed in multiple cost items whenever the same combination of resources is needed.



The most common use for an assembly is to group labor resources into crews (e.g., Pipe Crew, Concrete Crew); however, any resource (equipment, materials, etc.) may be grouped into an assembly. Utilizing assemblies allows you to estimate faster, since you can add and manage an entire group of resources at once.

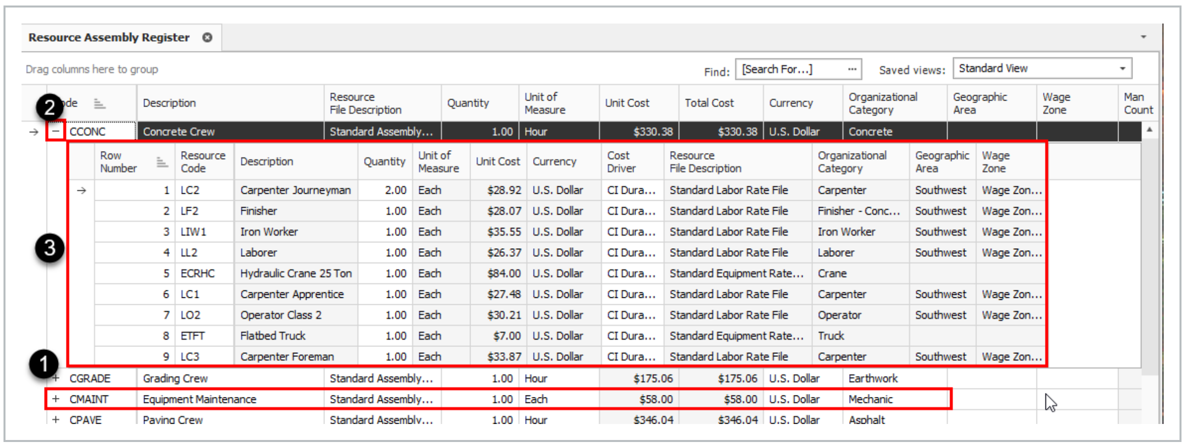
You can create assemblies in the Library and import them into job folders the same way you import resources.

3.7.1 Library Resource Assembly Register

To open the Library Resource Assembly Register, select the **Library** icon, then select **Resource Assemblies** from the Master Resources section of the Setup tab.

Overview - Library Resource Assembly Register

Section	Description
1	Each row in the register represents a single resource assembly and is defined with an Assembly Code and Assembly Description.
2	Each assembly can be expanded by clicking the plus ⊞ icon next to its Assembly Code.
3	Expanding an assembly reveals the list of resources that make up that assembly. • Best practice for creating Assembly codes is to use C for Crew Assemblies, M for Material Assemblies, etc., however you can have labor, equipment, and materials in the same assembly



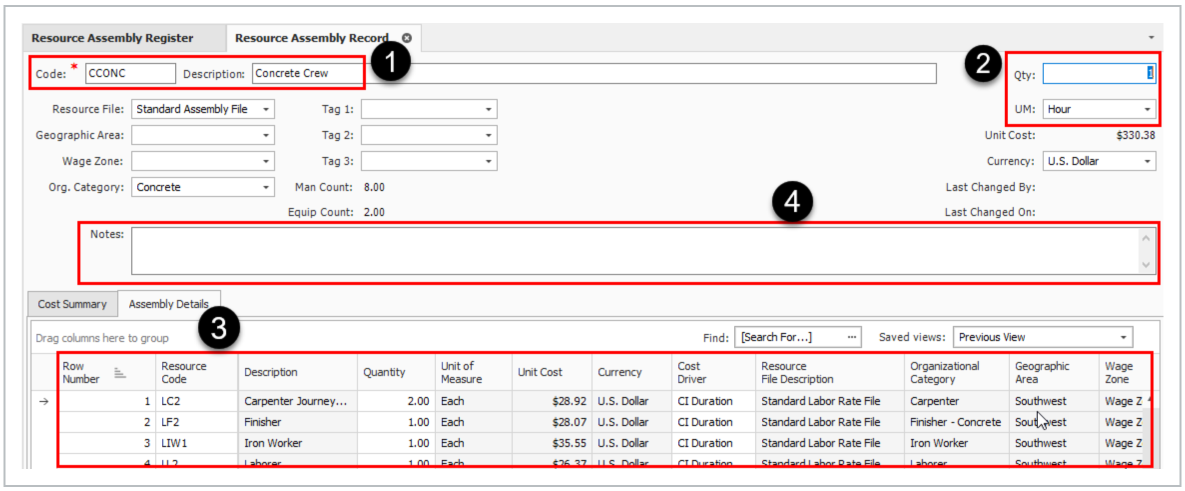
3.7.2 Resource Assembly Record

To open an existing Resource Assembly Record, right click on the row header of an assembly (row) on the Resource Assembly Register and select Open.

Overview - Resource Assembly Record

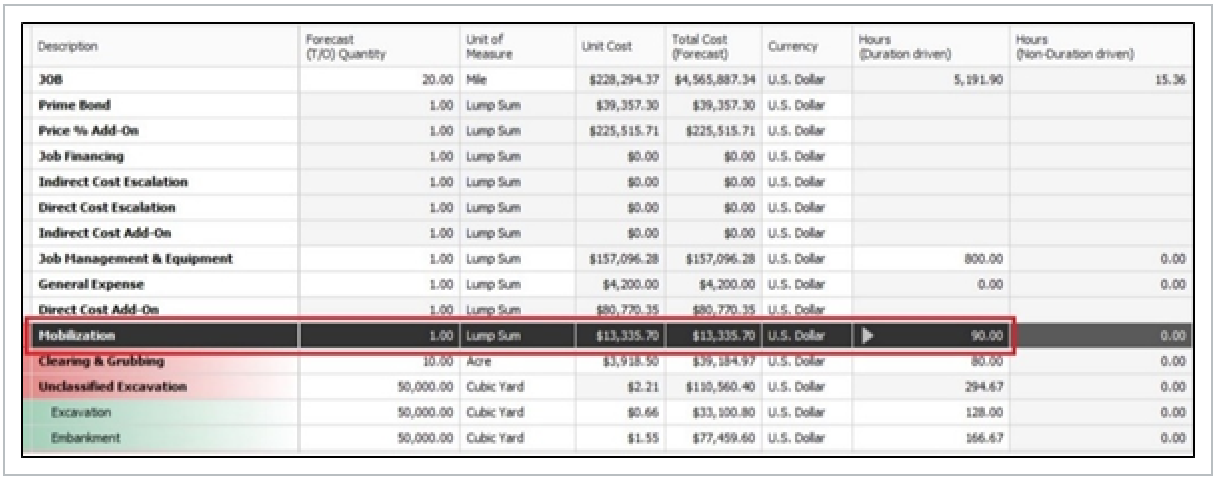
	Name	Description
1	Assembly Code and Description	Each assembly is defined with an assembly Code and an assembly Description.

Name		Description
2	Quantity and Unit of Measure	Each assembly has a quantity and unit of measure. The default is 1 EA. For crew assemblies with all hourly duration driven resources, it is a best practice to change the Qty to Hour, so that when used on a cost item, it will show you the assembly's unit cost per hour.
3	Assembly Details	The rows in the Assembly Details register represent the resources that make up the resource assembly.
4	Notes	An area where the estimators make notes for records related to the resource assemblies for work orders which is commonly performed by a type of crew.



3.7.2.1 Productivity Rate Indicator in the CBS Register

The Productivity Indicator shows the field that contains the as-entered value and is driving the estimate for that cost item. This appears as an arrow aligned to the left of the cell as shown below.



Description	Forecast (T/O) Quantity	Unit of Measure	Unit Cost	Total Cost (Forecast)	Currency	Hours (Duration driven)	Hours (Non-Duration driven)
JOB	20.00	Mile	$228,294.37	$4,565,887.34	U.S. Dollar	5,191.90	15.36
Prime Bond	1.00	Lump Sum	$39,357.30	$39,357.30	U.S. Dollar		
Price % Add-On	1.00	Lump Sum	$225,515.71	$225,515.71	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	800.00	0.00
General Expense	1.00	Lump Sum	$4,200.00	$4,200.00	U.S. Dollar	0.00	0.00
Direct Cost Add-On	1.00	Lump Sum	$80,770.35	$80,770.35	U.S. Dollar		
Mobilization	1.00	Lump Sum	$13,335.70	$13,335.70	U.S. Dollar	90.00	0.00
Clearing & Grubbing	10.00	Acre	$3,918.50	$39,184.97	U.S. Dollar	80.00	0.00
Unclassified Excavation	50,000.00	Cubic Yard	$2.21	$110,560.40	U.S. Dollar	294.67	0.00
Excavation	50,000.00	Cubic Yard	$0.66	$33,100.80	U.S. Dollar	128.00	0.00
Embankment	50,000.00	Cubic Yard	$1.55	$77,459.60	U.S. Dollar	166.67	0.00

Being able to see productivity drivers on the CBS register makes it easier to review and modify the estimate as a whole while reducing the potential to accidentally overwrite a manually entered data.

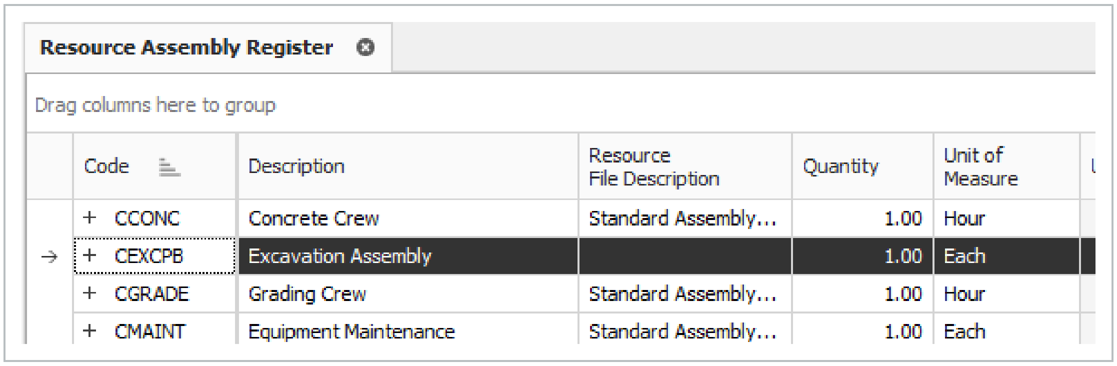
Follow the step by step below to create a Resource Assembly.

Step by Step — Create a Resource Assembly

1. From the Library landing page, under the Master Resources section of the Setup tab, select **Resource Assemblies**.
   - The Resource Assembly Register is shown.
2. Right click on any **row header** and select **New** from the drop-down menu.
   - A new Resource Assembly Record is shown.
3. In the Code field, type **CEXC + [your initials]** as the unique code for the assembly.
4. Add a **description** in the Description field.
5. In the Assembly Details register at the bottom of the screen, click in the **Resource Code** column in the first blank row, and then select the **Resource** icon that appears in the cell.
6. On the Labor tab of the resulting register, select the resource with the Description: **LL2Laborer** and click **OK** to add this resource to the assembly.
7. Add two additional resources.

> You can use the Ctrl and Shift keys to select multiple resources at once.

8. Click **OK** to save and close the new assembly.



Resource Assembly Register

Drag columns here to group

Code	Description	Resource File Description	Quantity	Unit of Measure
+ CCONC	Concrete Crew	Standard Assembly...	1.00	Hour
+ CEXCPB	Excavation Assembly		1.00	Each
+ CGRADE	Grading Crew	Standard Assembly...	1.00	Hour
+ CMAINT	Equipment Maintenance	Standard Assembly...	1.00	Each

Exercise 3.1 – Create Resources & Resource Assemblies

In this exercise, you will practice creating resources and assemblies in the InEight Estimate Library. In the Library Resource Rate Register, create resources with the following variables:

Labor Resource

Resource Code	LSFA	**Wage Zone**	Wage Zone A
Resource Description	Field Administrator	**Organizational Category**	Supervision
Geographic Area	Southwest	**Scale 1 Labor Base**	$33.45
Scale 1 Premium	2 percent	**Scale 1 Subsistence**	$0.47
Resource File		Standard Labor Rate File	

Select the checkbox for **Use Base Wage Factors for Scales 2 and 3**.
Scale 2 Factor: 1.50 x Base Wage. **Scale 3 Factor:** 2.00 x Base Wage.

Rented Construction Equipment Resources

Rented Construction Equipment Resource			
Resource Code	RPW3000	**RE Rental Amount**	$3.40
Resource Description	Pressure Washer 3000 PSI	**Organizational Category**	Clean & Inspect
Resource File		Standard Rental Rate File	
Installed Material Resource			
Resource Code	MCCB	**Installed Materials Amount**	$300.00
Resource Description	Pre-Cast Concrete Catch Basin	**Organizational Category**	Concrete
Resource File		Standard Material Rate File	
Unit of Measure		Each	

Uncheck the box for **Apply Standard Tax** and enter a **Unique Sales Tax Rate:** 6%

In the Library Resource Assembly Rate Register, create resource assemblies with the following codes, descriptions, and resources.

Assembly #1

Assembly Code	CBRIDGE	
Assembly Description	Bridge Crew	
Resource File	Standard Assembly File	
Unit of Measure	Hour	
Select **Wage Zone A Labor** Resources for this Assembly.		
Resources on Assembly	**Resource Description**	**Resource Quantity**
LC3	Carpenter Foreman	1
LL2	Laborer	2
LF2	Finisher	1
LC2	Carpenter Journeyman	2

Assembly #2

Assembly Code	CRIPRAP	
Assembly Description	Rip Rap Replacement Crew	
Resource File	Standard Assembly File	
Unite of Measure	Hour	
Select **Wage Zone A Labor** Resources for this Assembly.		
Resources on Assembly	**Resource Description**	**Resource Quantity**
LT2	Teamster Foreman	.5
LO3	Operator Class 3	1
LL2	Laborer	2
EX510	Backhoe JD 510	1
ETPU	Pickup	1
EL950	Loader 950	1

You should end up with similar results:

Resource Code	Resource File Description	Organizational Category	Geographic Area	Wage Zone	Description	Unit of Measure
LSFA	Standard Labor Rate File	Supervision	Southwest		Field Administrator	Hour

Scale	Total	Labor	Labor Base	Labor Burden	Labor Fringes
1	$33.92	$33.92	$33.45	$0.47	$0.47
2	$50.18	$50.18	$50.18	$0.00	$0.00
3	$66.90	$66.90	$66.90	$0.00	$0.00

Resource Code	Description	Resource File Description	Unit of Measure	Unit Cost (Scale 1)	Currency	Organizational Category
RPW3000	Pressure Washer 3000 PSI	Standard Rental Rate File	Hour	$3.40	U.S. Dollar	Clean & Inspect

Total	Rented Equipment	RE Rental	RE Rent Expense	RE Overhead	RE Finance Expense	RE Insurance	RE License	RE
$3.40	$3.40	$3.40	$0.00	$0.00	$0.00	$0.00	$0.00	

Resource Code	Description	Resource File Description	Unit of Measure	Unit Cost (Scale 1)	Currency	Organizational Category
MCCB	Pre-Cast Concrete Catch Basin	Standard Material Rate File	Each	$318.00	U.S. Dollar	Concrete

Total	Materials	Installed Materials	Undefined Materials	Fees	Sales Taxes	Undefined Fees	Undefined	Billing Rate	Billing Marku
$318.00	$300.00	$0.00	$300.00	$18.00	$18.00	$0.00	$0.00	$318.00	

Drag columns here to group Find: [Search For...] Saved views: Previous View

Assembly Code	Assembly Description	Resource File Description	Quantity	Unit of Measure	Unit Cost	Total Cost	Currency	Organizational Category	Geographic Area	Wa Zo
CBRIDGE	Bridge Crew	Standard Assembly File	1.00	Hour	$170.11	$170.11	U.S. Dollar			

Row Number	Resource Code	Description	Quantity	Unit of Measure	Unit Cost	Currency	Cost Driver	Resource File Description	Organizational Category	Geographic Area	Wage Zone
1	LC2	Carpenter Journeyman	2.00	Each	$28.92	U.S. Dollar	CI Duration	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A
2	LC3	Carpenter Foreman	1.00	Each	$31.47	U.S. Dollar	CI Duration	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A
3	LF2	Finisher	1.00	Each	$28.07	U.S. Dollar	CI Duration	Standard Labor Rate File	Finisher - Concrete	Southwest	Wage Zone A
4	LL2	Laborer	2.00	Each	$26.37	U.S. Dollar	CI Duration	Standard Labor Rate File	Laborer	Southwest	Wage Zone A

Code	Description	Resource File Description	Quantity	Unit of Measure	Unit Cost	Total Cost	Currency	Organizational Category	Geographic Area	Wage Zone
CRIPRAP	Rip Rap Replacement Crew	Standard Assembly...	1.00	Hour	$152.89	$152.89	U.S. Dollar			

Row Number	Resource Code	Description	Quantity	Unit of Measure	Unit Cost	Currency	Cost Driver	Resource File Description	Organizational Category	Geographic Area	Wage Zone
1	LL2	Laborer	2.00	Each	$26.37	U.S. Dollar	CI Duration	Standard Labor Rate File	Laborer	Southwest	Wage Zon...
2	LO3	Operator Class 3	1.00	Each	$30.62	U.S. Dollar	CI Duration	Standard Labor Rate File	Operator	Southwest	Wage Zon...
3	LT2	Teamster Foreman	0.50	Each	$32.32	U.S. Dollar	CI Duration	Standard Labor Rate File	Truck Driver - Teamster	Southwest	Wage Zon...
4	EL950	Loader 950	1.00	Each	$14.18	U.S. Dollar	CI Duration	Standard Equipment Rate...	Loader		
5	ETPU	Pickup	1.00	Each	$4.20	U.S. Dollar	CI Duration	Standard Equipment Rate...	Truck		
6	EX510	Backhoe JD 510	1.00	Each	$35.00	U.S. Dollar	CI Duration	Standard Equipment Rate...	Excavator		

Congratulations, you have completed this exercise!

3.8 IMPORTING RESOURCES

The following procedures inform you how to setup resources in InEight Estimate from an excel sheet.

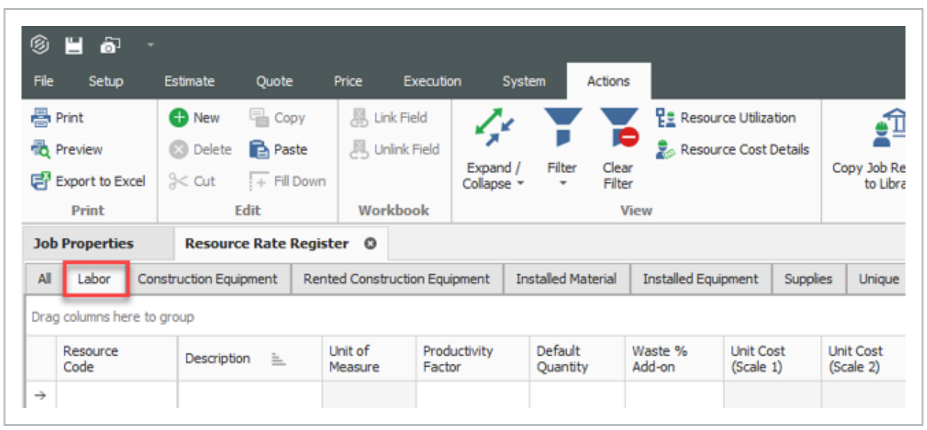
Use of this lesson will draw from other sections of InEight Estimating Manual. Basic understanding of the Sort, Group, Filter, Excel integration functionality in InEight Estimate is required.

3.8.1 Open Resource Rate Register

You can create resources within the Resource Rate Register. This is the location to build out the structure of those resources.

Step by Step – Opening the Labor tab

1. Open the Job Folder or Library that you're going to be working in.
2. From the Ribbon, select the **Setup** tab.
3. Under the Resources section, select **Resource Rates**. The Resource Rate Register opens.
4. Select the tab you want to add resources to.



The layout of this register and excel file is up to the organization and the decisions that are made during the detail design phase. A basic excel file will be provided to your organization as a starting point to work from. If that can't be located, you can easily build one utilizing the views within InEight Estimate.

3.8.1.1 Creating A Labor Saved View - Resource Rate Register

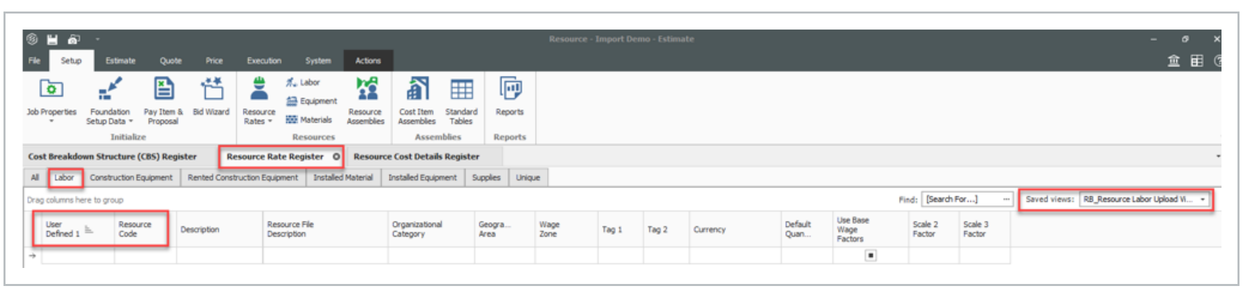
You can create a view to mirror both the register and excel sheets to easily bring information back and forth from the two applications.

Example of columns:

- User Defined 1
- Resource Code
- Description
- Resource File Description - Validated field
- Geographic Area - Validated field
- Wage Zone - Validated field
- Organizational Category - Validated field
- Tag 1 - Validated field
- Tag 2 - Validated field
- Currency - Validated field
- Default Quantity
- Use Base Wage Factors - Scale Factors
- Scale Factor 2 - Scale Factors
- Scale Factor 3 - Scale Factors

> For more information on Validated Tags field, see Validated Tags topic. Scale Factors aren't required if you are manually applying rates to each cost category scale.

The view should appear as shown below with **User Defined 1** in the first column. This field is used for sorting and arranging data accurately moving between Estimate and Excel. You are not limited to UDF 1 and can choose to utilize a field of their choice for sorting.



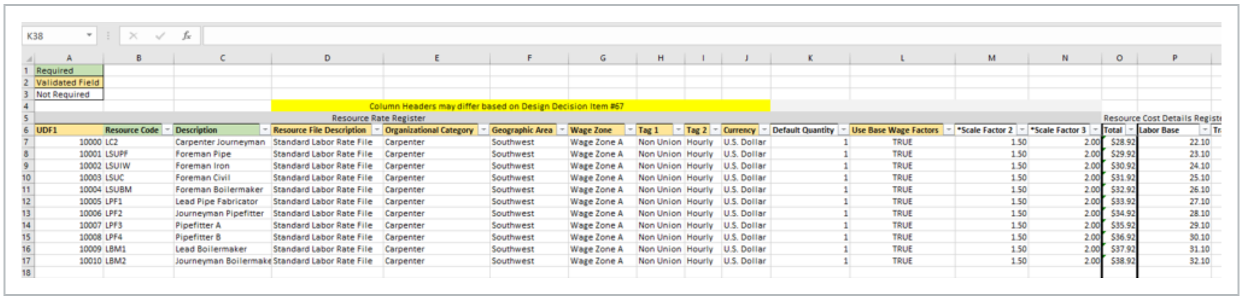
3.8.2 Setting up the excel file

Go to the Excel sheet and make sure the information in the columns shown in the screenshot are filled out. Basic concepts to keep in mind regarding the excel file:

Sort Code - This column needs to have a high sequential number such as **10000**. This is very important to assign as it will help us authenticate all the labor rates.

Resource Code - A unique Naming convention to be assigned to every labor resource. In this example we have all labor resource starting with a **L** followed by the letters that represent the resource description.

Labor Base - The base wage of the labor resource is entered here. Estimate does not allow **$** sign to be pasted, which is why the cells for the Base column are formatted to **Number**.



Required
Validated Field
Not Required

Column Headers may differ based on Design Decision Item #67

Resource Rate Register | Resource Cost Details Register

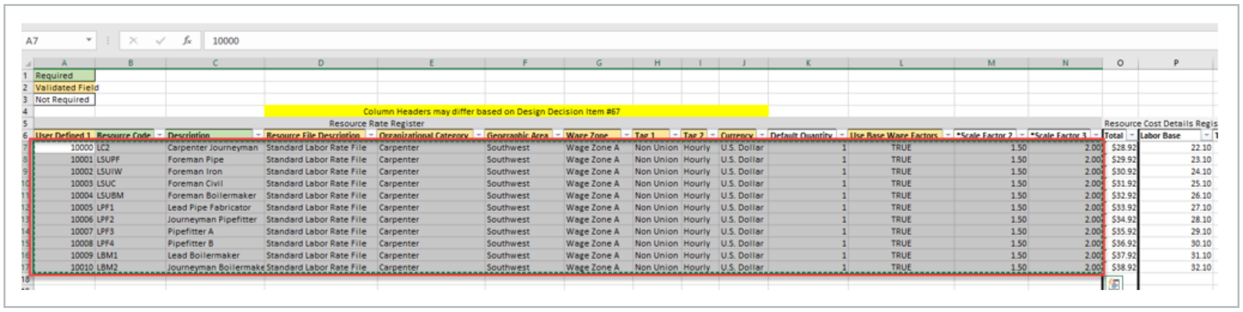
UDF1	Resource Code	Description	Resource File Description	Organizational Category	Geographic Area	Wage Zone	Tag 1	Tag 2	Currency	Default Quantity	Use Base Wage Factors	*Scale Factor 2	*Scale Factor 3	Total	Labor Base
10000	LC2	Carpenter Journeyman	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A	Non Union	Hourly	U.S. Dollar	1	TRUE	1.50	2.00	$28.92	22.10
10001	LSUPF	Foreman Pipe	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A	Non Union	Hourly	U.S. Dollar	1	TRUE	1.50	2.00	$29.92	23.10
10002	LSUIW	Foreman Iron	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A	Non Union	Hourly	U.S. Dollar	1	TRUE	1.50	2.00	$30.92	24.10
10003	LSUC	Foreman Civil	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A	Non Union	Hourly	U.S. Dollar	1	TRUE	1.50	2.00	$31.92	25.10
10004	LSUBM	Foreman Boilermaker	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A	Non Union	Hourly	U.S. Dollar	1	TRUE	1.50	2.00	$32.92	26.10
10005	LPF1	Lead Pipe Fabricator	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A	Non Union	Hourly	U.S. Dollar	1	TRUE	1.50	2.00	$33.92	27.10
10006	LPF2	Journeyman Pipefitter	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A	Non Union	Hourly	U.S. Dollar	1	TRUE	1.50	2.00	$34.92	28.10
10007	LPF3	Pipefitter A	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A	Non Union	Hourly	U.S. Dollar	1	TRUE	1.50	2.00	$35.92	29.10
10008	LPF4	Pipefitter B	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A	Non Union	Hourly	U.S. Dollar	1	TRUE	1.50	2.00	$36.92	30.10
10009	LBM1	Lead Boilermaker	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A	Non Union	Hourly	U.S. Dollar	1	TRUE	1.50	2.00	$37.92	31.10
10010	LBM2	Journeyman Boilermake	Standard Labor Rate File	Carpenter	Southwest	Wage Zone A	Non Union	Hourly	U.S. Dollar	1	TRUE	1.50	2.00	$38.92	32.10

3.8.2.2 Creating the resource

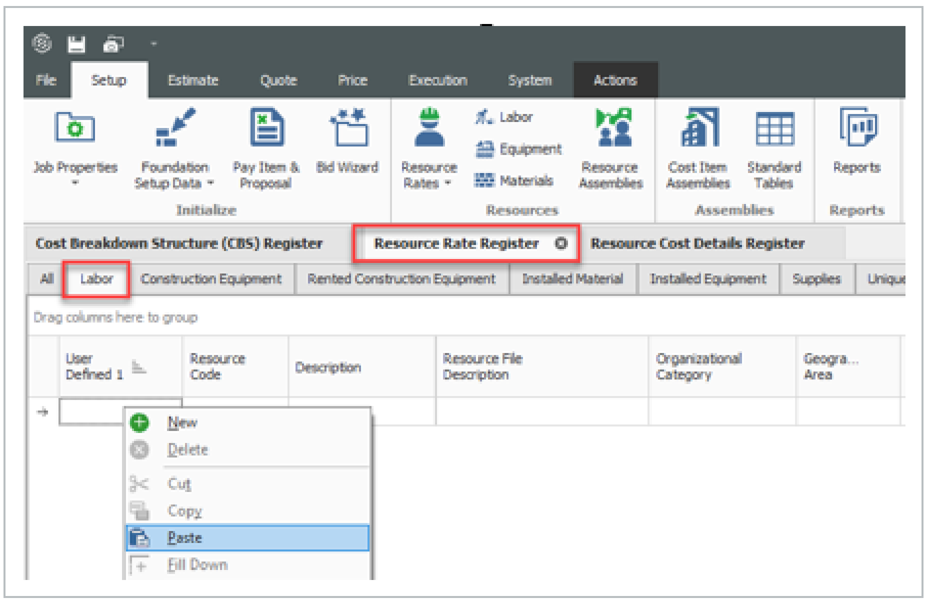
Follow this procedure once you have information filled out in excel.

Step by Step – Creating the Resource

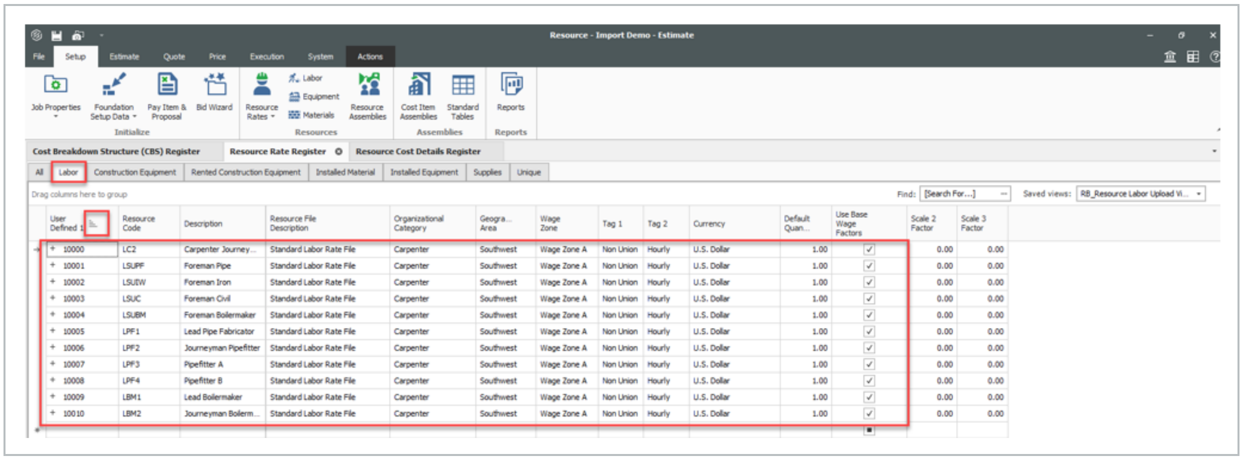
1. Open the excel file.
2. Sort the sheet by sequential number in the **Sort Code** field.
3. Highlight the cells you want to bring into the estimate.
4. Copy the cells using right click and selecting **Copy** from the context menu.



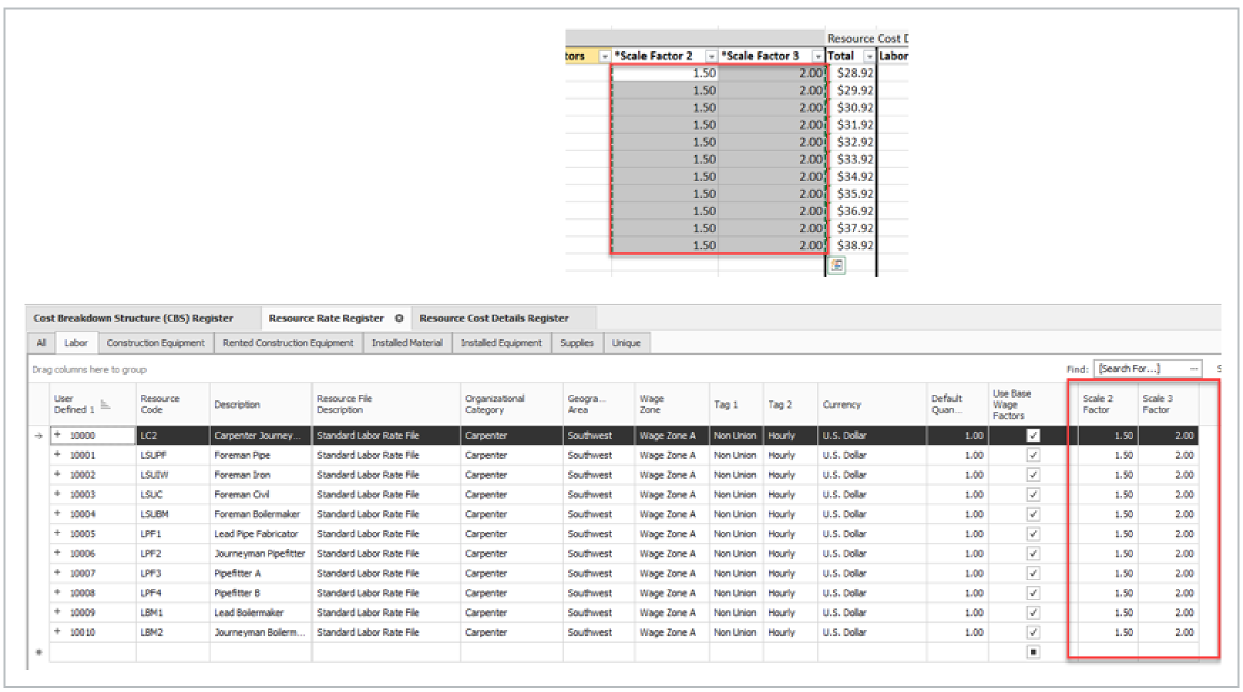
5. Open Estimate to the **Resource Rate Register**.
6. Select the **User Defined 1** column in the Labor tab of the Resource Rate Register.



7. Right click the empty cell and select **Paste** from the context menu. A pop up will appear asking **Are you sure you want to insert the selected values?**
8. Select **Yes** to confirm inserting the selected values.
9. The cells you copied from the excel sheet are now copied into the Resource Rate Register. The Sort code data is pasted in the User defined 1 column. Resource Code & Resource description data is pasted as well.



10. For Make sure the sorting is on User Defined 1 column. This allows us to see the information being sorted similar to our data in excel file. Base Wage Factors need to be flagged to turn on with the check box. Your first copy and paste should have activated them. You need to copy and paste again in order to apply the factors.

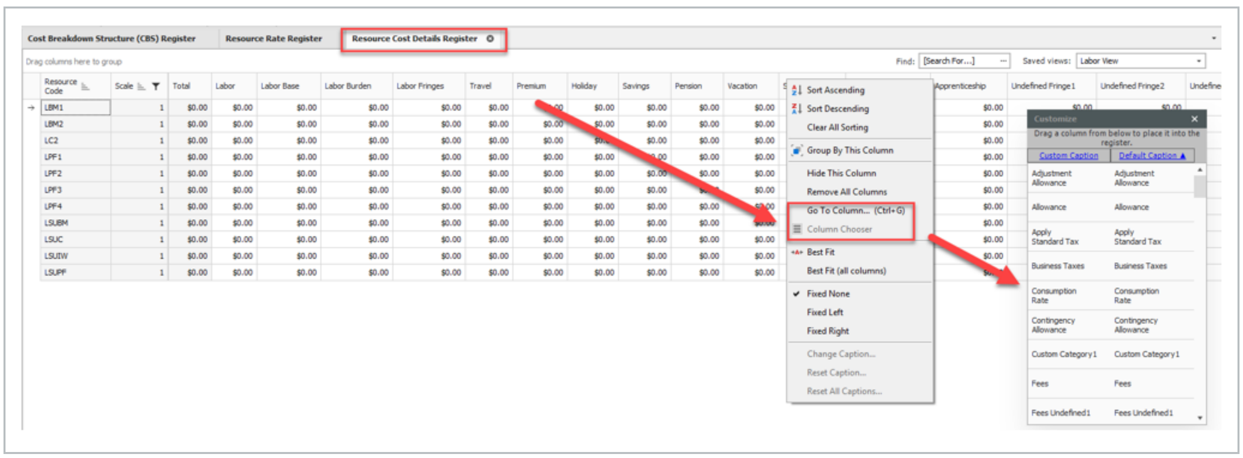


3.8.2.3 Resource Cost Details

Labor resources are now in the system a user can apply rates to those resources.

Step by Step – Resource Cost Detail

1. From the Ribbon, select the **Actions** tab.
2. Under the View section, select the Resource **Cost Details** option. The **Resource Cost Details Register** opens.
3. Create a view to mirror the accompanying excel sheet or create one to bring in the associated resource cost in the details register.
4. From the Saved views drop down, select the **Labor** view to filter down to only labor resources.
5. Right click a column header and select **Column Chooser**.
6. Drag and drop the columns into the view identified below.



Example of columns – The level of detail and utilization of specific cost categories is a decision for each organization:

- User Defined 1 - Non editable fields from resource rates register
- Resource Code - Non editable fields from resource rates register
- Description - Non editable fields from resource rates register
- Resource File Description - Non editable fields from resource rates register
- Geographic Area - Non editable fields from resource rates register
- Wage Zone - Non editable fields from resource rates register
- Organizational Category - Non editable fields from resource rates register

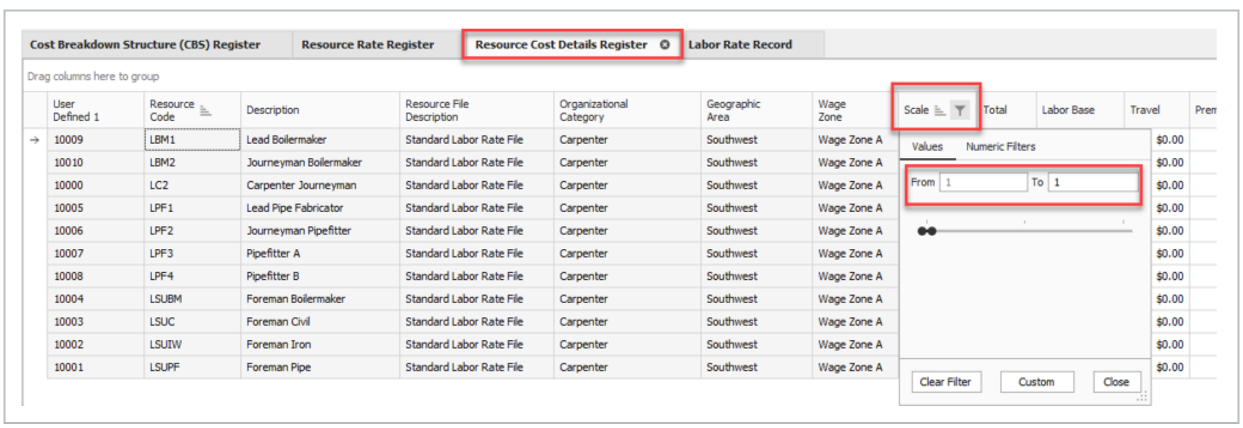
- Scale - Non editable fields from resource rates register
- Labor Base
- Travel
- Premium
- Holiday
- Savings
- Pension
- Vacation
- Subsistence
- Health & Welfare
- Apprenticeship
- Undefined Fringe 1
- Undefined Fringe 2
- Undefined Labor Fringes
- Bodily Injury & Property Damage
- Workers Compensation
- Undefined Insurance1
- Undefined Insurance2
- Undefined Labor Insurance
- FICA
- FUTA
- SUTA
- Undefined Tax1
- Undefined Labor Taxes
- Undefined Labor Burden
- Undefined Labor
- Construction Supplies
- Undefined Materials
- Undefined
- Billing Rate
- Billing Rate Markup
- Billing Rate Markup %

3.8.3 Filter/Sort/Paste - Resource Cost Details Register

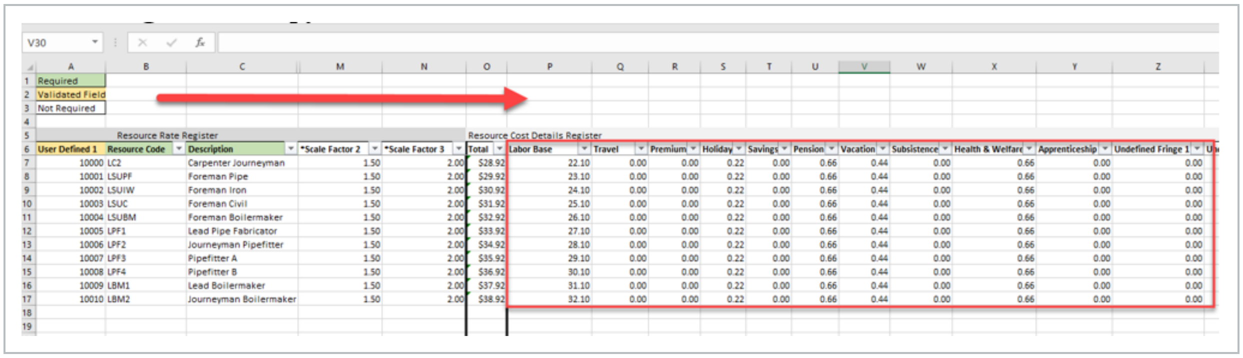
The Labor upload view brings in the columns required to enter Labor base, burdens etc. Every Labor resource has three rows created with Scales 1,2,3. The Scale Column is used to setup Straight time, Over time, Double time.

Step by Step — Filter Resource Cost Detail Register

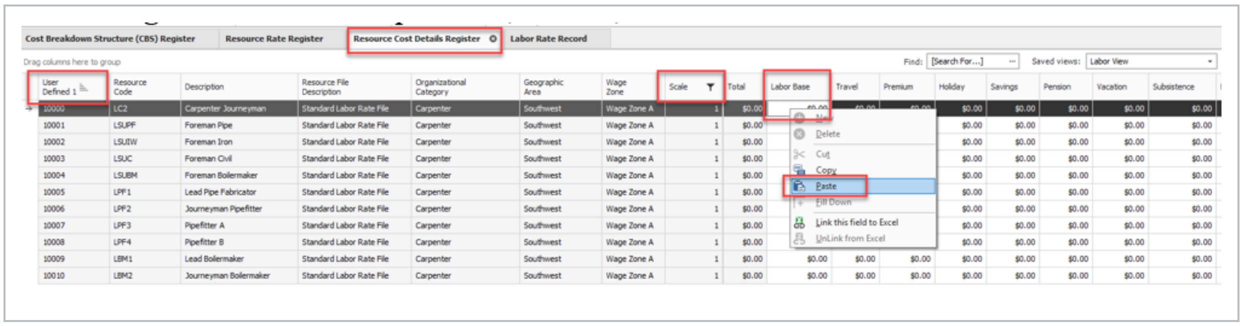
1. From the Scale column header, click the filter icon..
2. Set the From and To values to **1**.



3. Back on the excel spreadsheet, highlight the base rates to bring in.
4. Right click and select **Copy** in the context menu.



5. Go to Estimate. Right click and select **Paste** from the context menu.



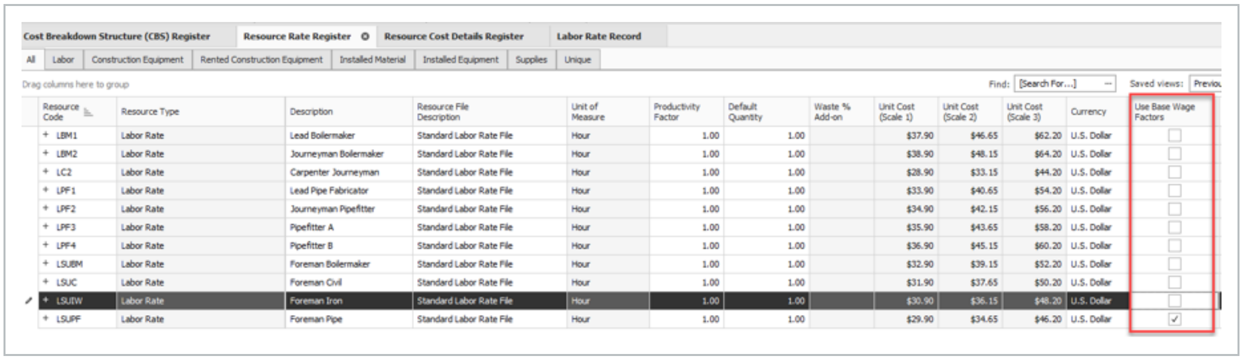
6. You will be prompted with a **Are you sure you want to insert these values?** message as before. Select **Yes** to continue.

3.8.4 Manual Set-Up of Scales 2 & 3 - Optional

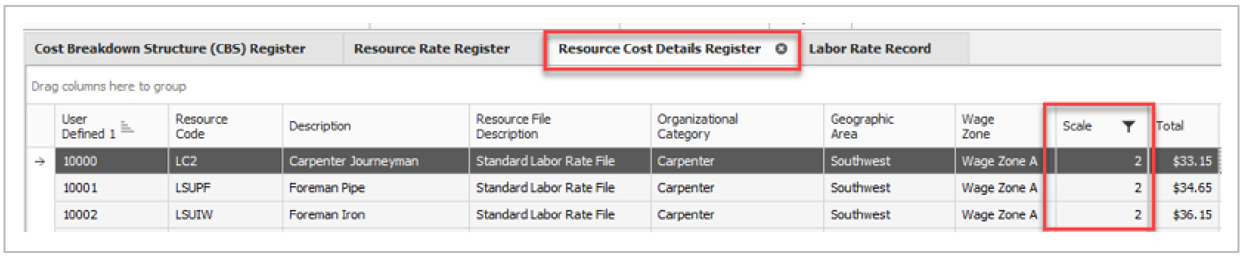
If the organization wants to have more in-depth cost details for each scale rather than using scale factors the same procedure will be utilized to copy Labor burden, fringes, and other add-ons to setup Scale 2 & Scale 3.

> For Base Wage Factor Columns will not be active if your organization is using method 2.

3.8.4.4 Resource Rate Register

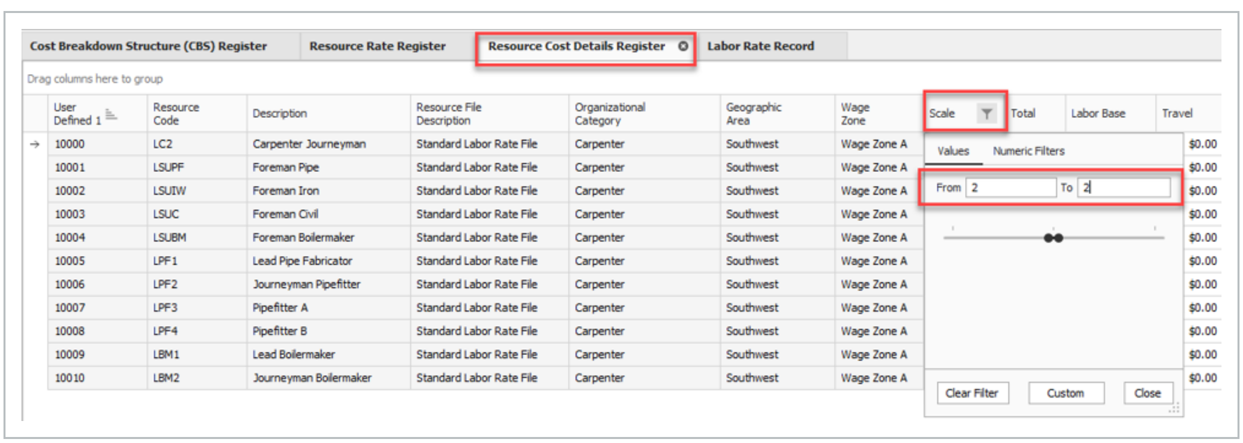


3.8.4.5 Resource Cost Details Register

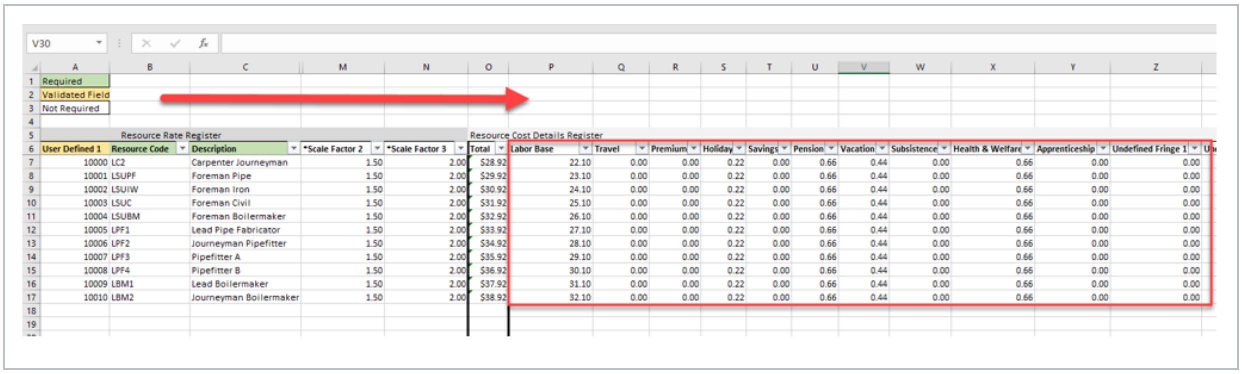


Step by Step — Manual Setup of Scales

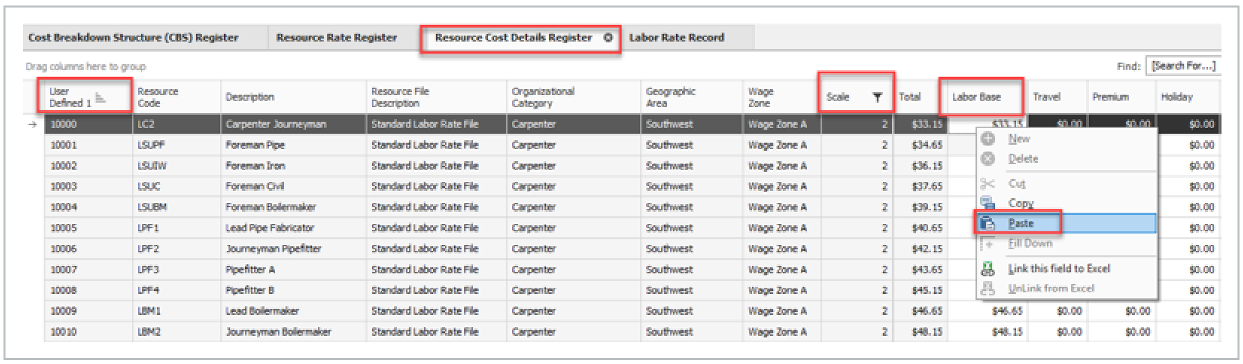
1. From the Scale column header, click the filter icon..
2. Set the From and To values to **2**.



3. Back on the excel spreadsheet, highlight the base rates to bring in.
4. Right click and select **Copy** in the context menu.



5. Go to Estimate. Right click and select **Paste** from the context menu.



6. You will be prompted with a **Are you sure you want to insert these values?** message as before. Select **Yes** to continue.
7. Follow the same procedure for scale 3.

3.8.4.6 Non Labor Resource Setup

The same principles can be applied for the other resource types within InEight Estimate. This procedure covers installed material, but can also be used for the other six resource types.

3.8.5 Creating A Materials Saved View - Resource Rate Register

Create a view to mirror both the register and excel sheets to easily bring information back and forth from the two applications.

Example of columns

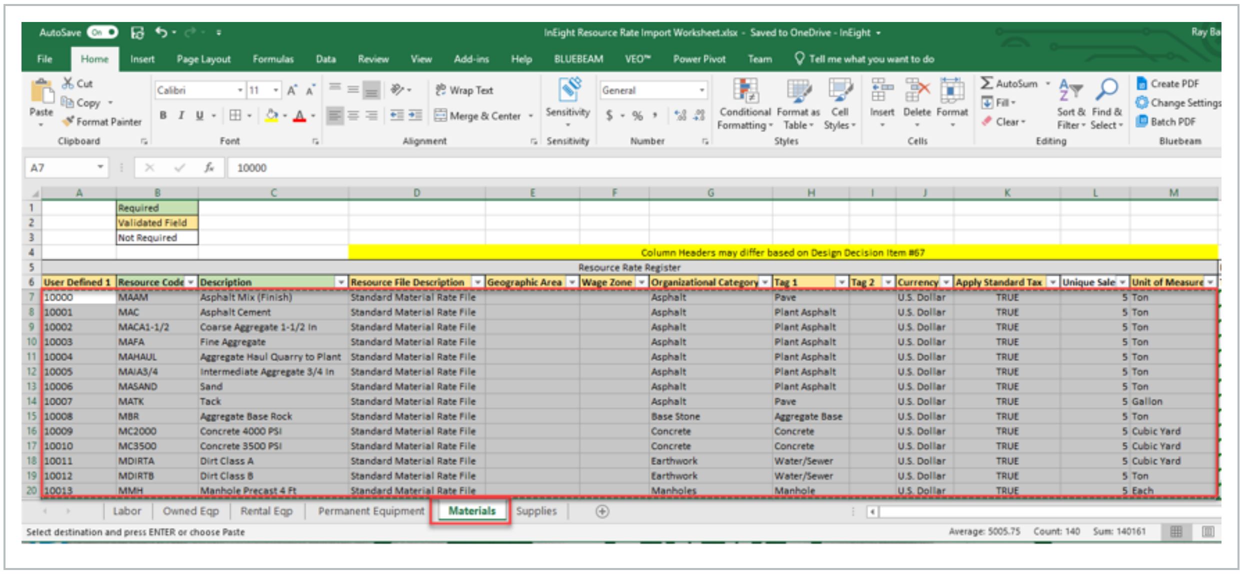
- User Defined 1
- Resource Code
- Description
- Resource File Description - Validated Tag field
- Geographic Area - Validated Tag field
- Wage Zone - Validated Tag field
- Organizational Category - Validated Tag field
- Tag 1 - Validated Tag field
- Tag 2 - Validated Tag field
- Currency - Validated Tag field
- Apply Standard Tax - Validated Tag field
- Unique Sales Tax
- Unit of Measure - Validated Tag field

3.8.6 Creating A Material Resource

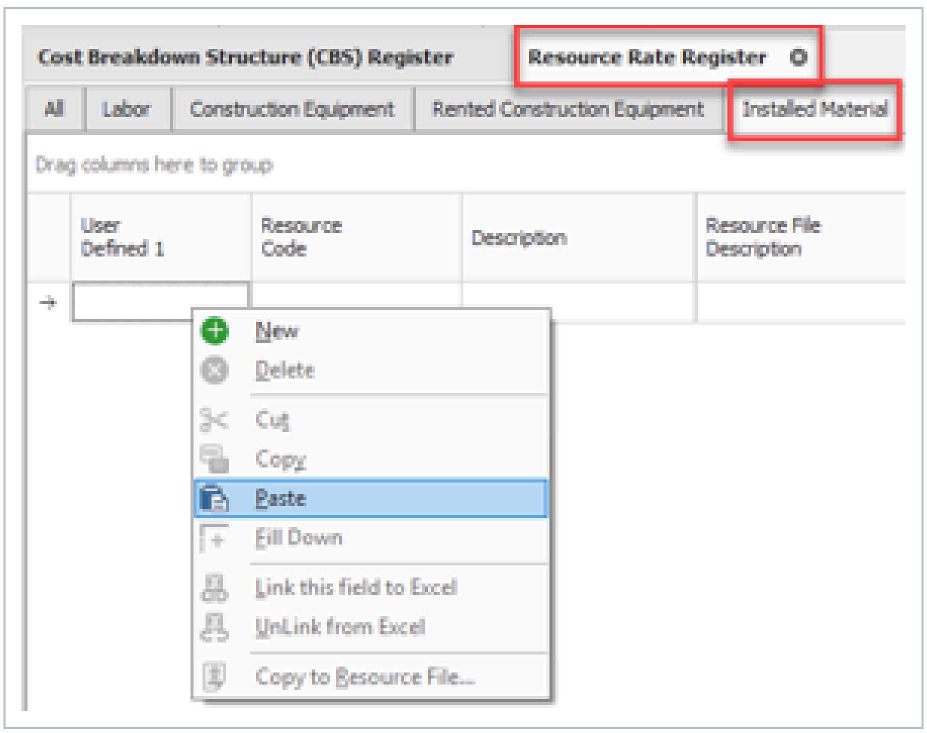
Follow the step by step once you have information filled out in excel.

Step by Step – Creating the Resource

1. Open the excel file.
2. Sort the sheet by sequential number in the **Sort Code** field.
3. Highlight the cells you want to bring into the estimate.
4. Copy the cells using right click and selecting **Copy** from the context menu.



5. Open Estimate to the **Resource Rate Register**.
6. Select the **User Defined 1** column in the Installed Material tab of the Resource Rate Register.



7. Right click the empty cell and select **Paste** from the context menu. A pop up will appear asking **Are you sure you want to insert the selected values?**

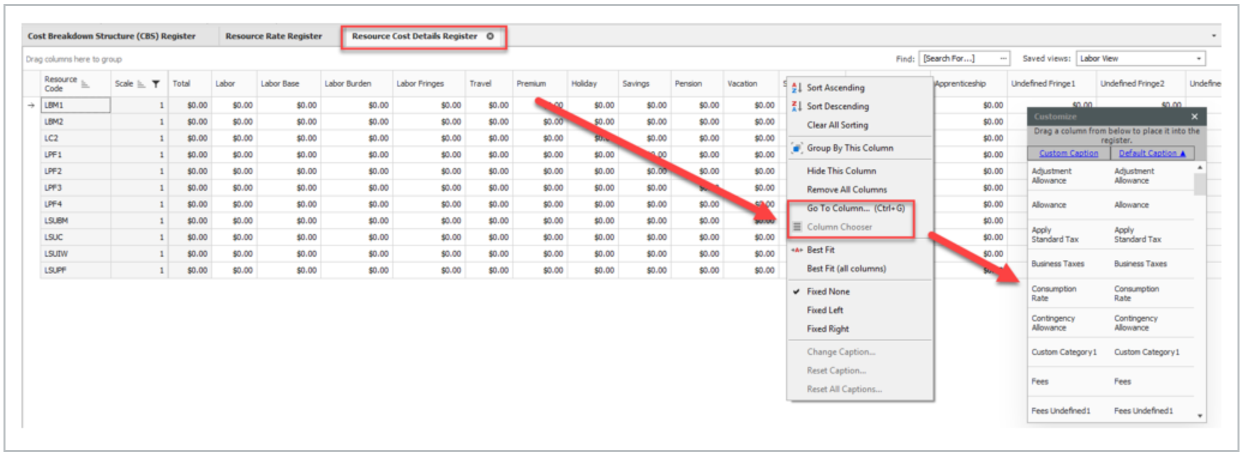
8. You will be prompted with a **Are you sure you want to insert these values?** message. Click **Yes** to continue.

3.8.7 Create A Material Saved View - Resource Cost Details Register

Installed Material Resources are now in the system. You can apply rates to those resources. Create a view to mirror the accompanying excel sheet or create one to bring in the associated resource cost in the details register.

Step by Step — Material Saved View

1. From the Ribbon, select the **Actions** tab.
2. Under the View section, select the Resource **Cost Details** option. The **Resource Cost Details Register** opens.
3. > Create a view to mirror the accompanying excel sheet or create one to bring in the associated resource cost in the details register.
4. From the Saved views drop down, select the **Installed material** view to filter down to only material resources.
5. Right click a column header and select **Column Chooser**.
6. Drag and drop the columns into the view identified below.



Example of columns – The level of detail and utilization of specific cost categories is a decision for each organization:

- User Defined 1 - Non editable fields from resource rates register
- Resource Code - Non editable fields from resource rates register
- Description - Non editable fields from resource rates register
- Resource File Description - Non editable fields from resource rates register
- Geographic Area - Non editable fields from resource rates register
- Wage Zone - Non editable fields from resource rates register
- Organizational Category - Non editable fields from resource rates register
- Unit of Measure - Non editable fields from resource rates register
- Currency - Non editable fields from resource rates register
- Total - Non editable fields from resource rates register
- Installed Materials
- Undefined Materials
- Sales Taxes
- Undefined Fees
- Undefined
- Billing Rate
- Billing Rate Markup
- Billing Rate Markup %

3.9 QUANTITY CHECKING

The Quantity Checking feature allows you to compare the quantity of a superior cost item to the sum of its relevant subordinate cost item quantities. This setting enables the use of the **Quantity Check** and **Quantity Warning** columns in the Cost Breakdown Structure. The use of these columns can assist in confirming whether or not your quantities are correct.

> The subordinate cost item quantities need to have the same unit of measure as the superior cost item before you are able to choose the Quantity Check column.

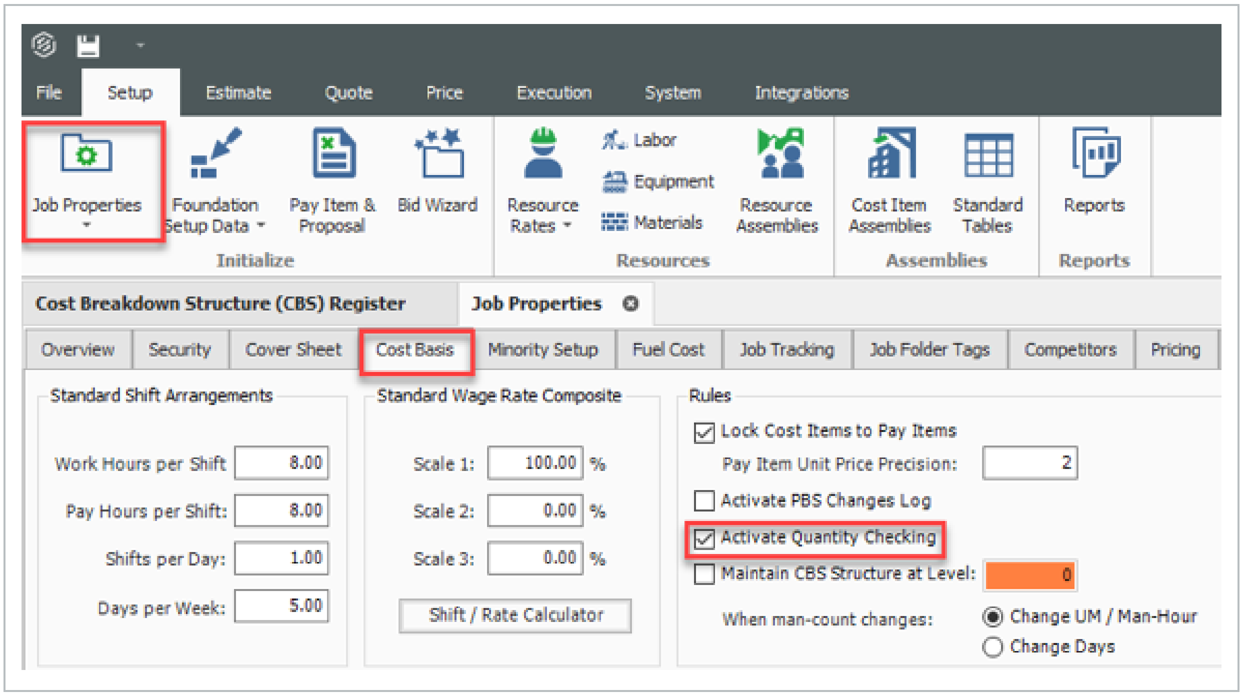
In the example below, break a concrete pour cost item into four subordinate parts. The Forecast (T/O) Quantity of the superior item will be 156875.00 tons of concrete. Start by dividing each of the four parts into 35000.00 tons each. Once you have broken out this concrete pour, determine if you need a fifth pour or if you should distribute the remaining quantity to the four pours. The factors you keep in mind are the trips and time involved in the extra pour vs capacity of equipment.

Step by Step – Quantity Checking

1. From the Ribbon, select the **Setup** tab.
2. Under the section Initialize, select **Job Properties**. Then select the **Cost Basis** tab.

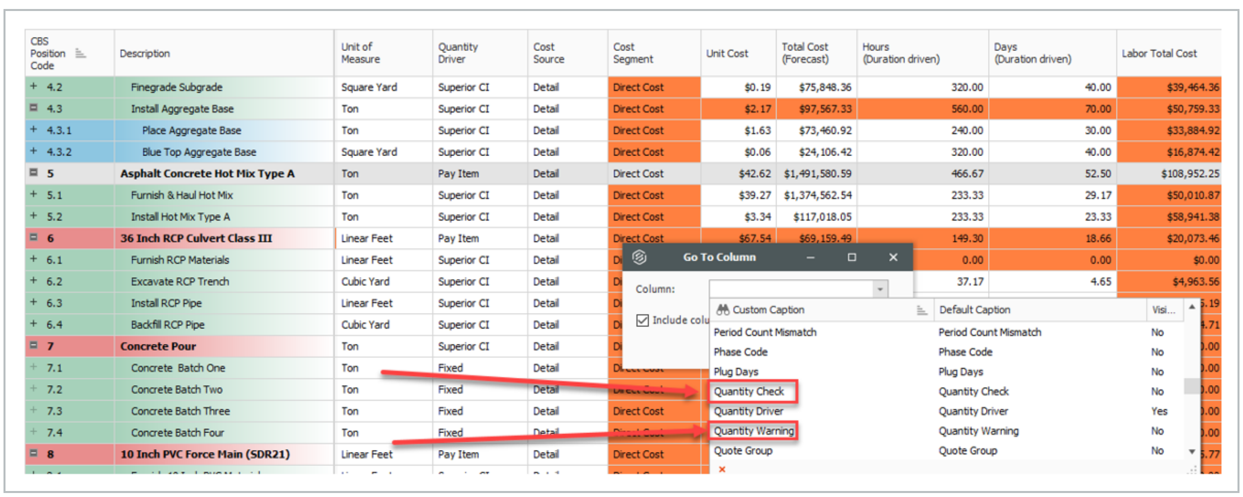
   > Quantity checking starts by turning the feature on in the Job Properties. If you want to have quantity checking turned on for all jobs in Estimate, then this setting needs to be turned on in the **Master Job Properties**. The Master Job Properties is located in the **Library**.

3. From the Rules data box, select the **Activate Quantity Checking** check box.



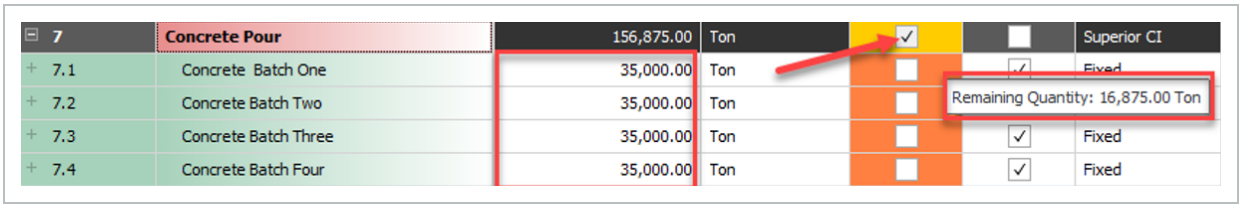
4. Next bring a couple of columns into your view on the Cost Breakdown Structure (CBS) Register. Right click on the column header and choose **Go To Column**.

5. The Go To Column dialog box appears. Have the **Include columns that are not currently in the view** check box selected.



6. Click **OK** when you have selected your preferred columns.

Next, toggle the check box for the **Quantity Check** column.



7. As you check Quantity Check for the four batches of Concrete, the superior cost item Quantity Warning turns yellow. This is indicating a quantity warning. Hover your mouse over the superior cost item Quantity Warning column. Then, an overlay message appears showing the quantity discrepancy. Apply this discrepancy to the Subordinate cost items. That way, the superior cost item with be the sum of the parts.

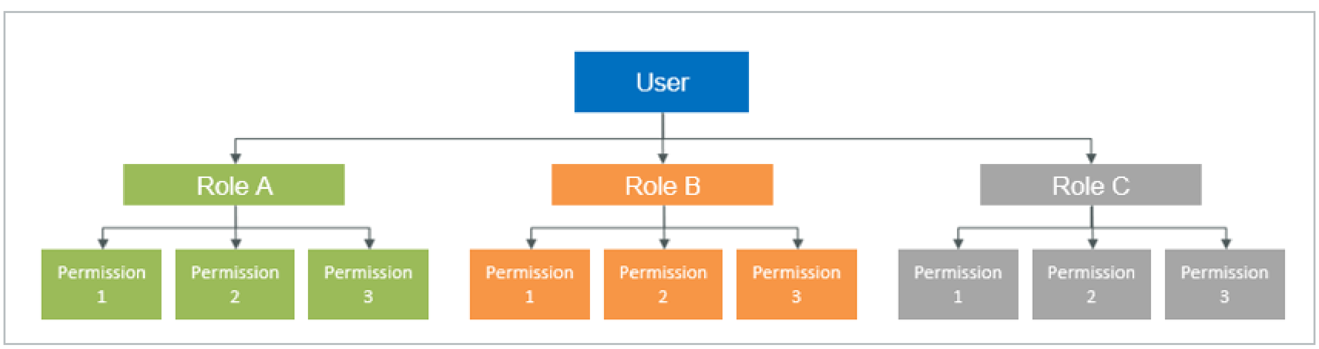
8. The remaining quantity is 16875.00 tons which does not warrant a fifth pour.

3.10 SECURITY IN ESTIMATE

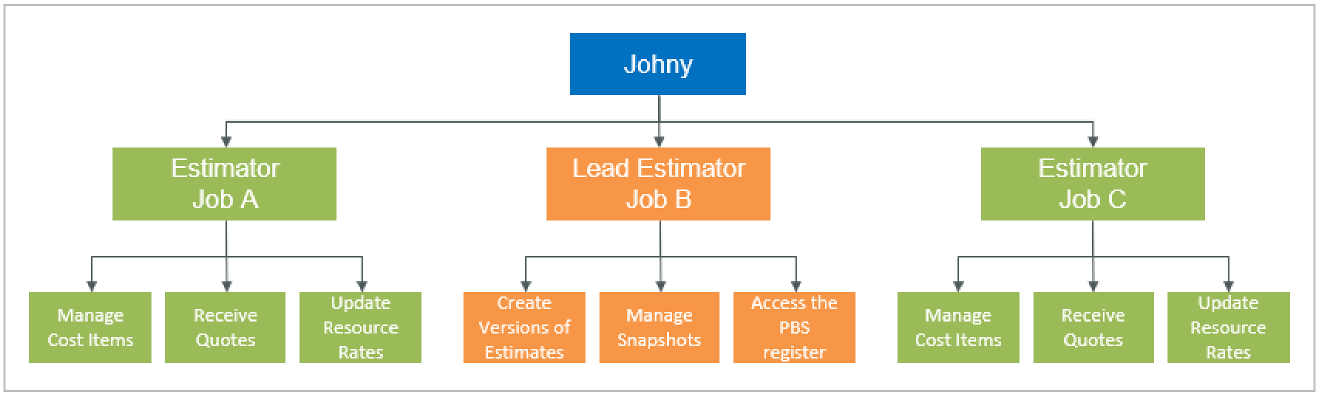
3.10.1 Role based permissions

Estimate uses a role-based security model, where users can be assigned to a role on a project. A role identifies if a user has been granted access for various permissions to perform defined functions in Estimate.

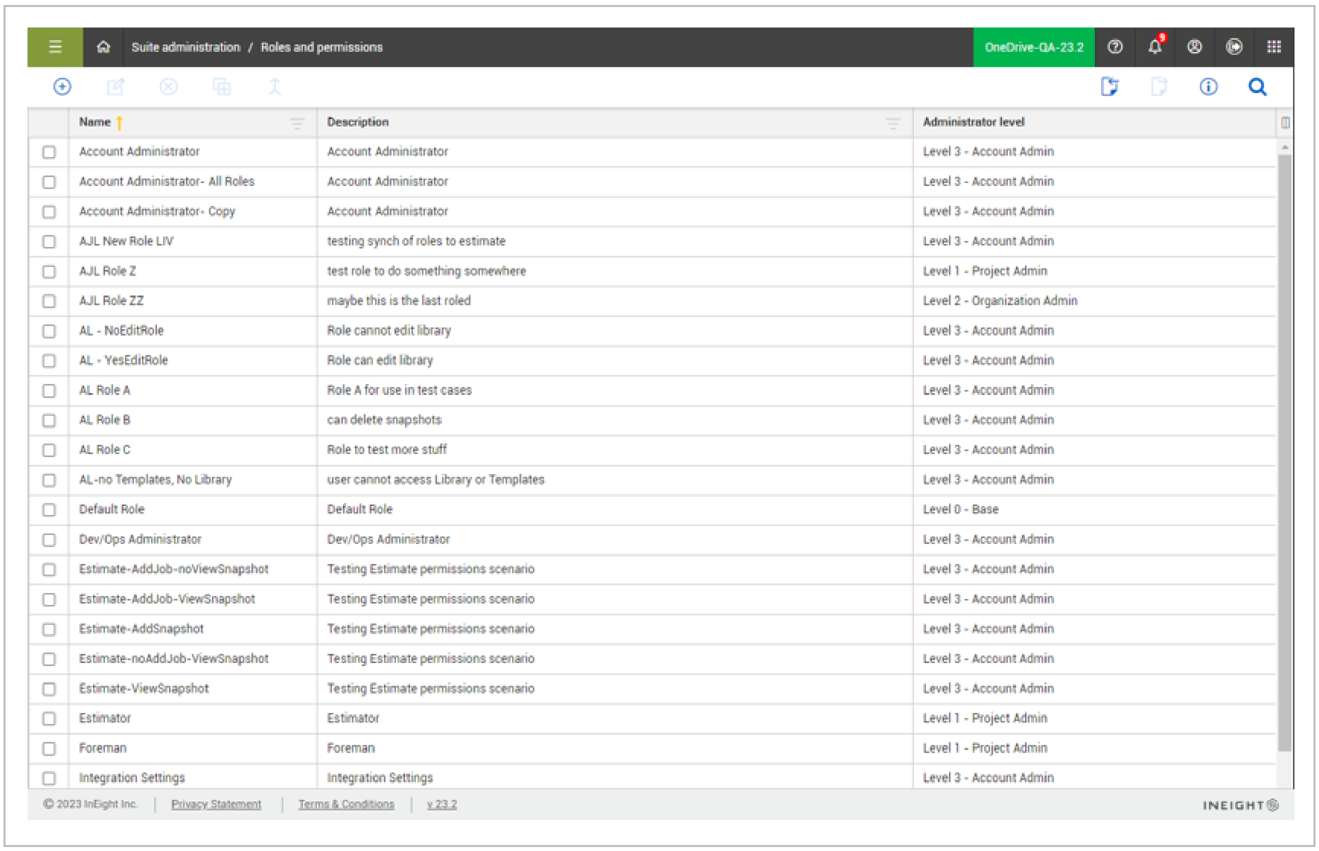
A role is a collection of permissions that defines a user's responsibilities on a project or in an organization.



For example, Johny can be an Estimator on Job A and a Lead Estimator on Job B, giving him elevated permissions to perform actions that a less responsible estimator may not permitted to perform.

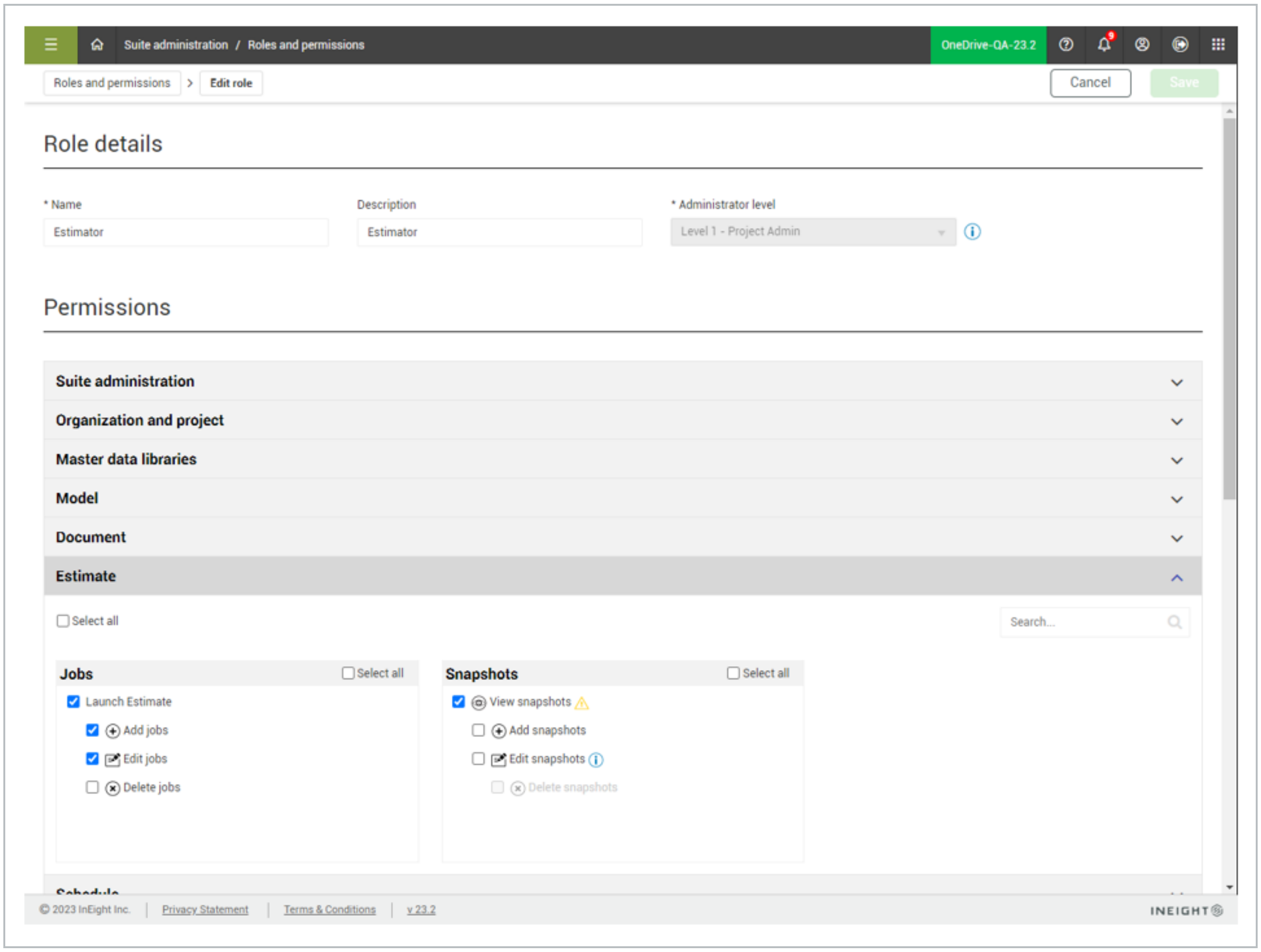


Roles are created and managed in the Roles and Permissions page in the Suite Administration section of InEight Platform (Suite Administration > **Roles and permissions**).



Name	Description	Administrator level
Account Administrator	Account Administrator	Level 3 - Account Admin
Account Administrator- All Roles	Account Administrator	Level 3 - Account Admin
Account Administrator- Copy	Account Administrator	Level 3 - Account Admin
AJL New Role LIV	testing synch of roles to estimate	Level 3 - Account Admin
AJL Role Z	test role to do something somewhere	Level 1 - Project Admin
AJL Role ZZ	maybe this is the last roled	Level 2 - Organization Admin
AL - NoEditRole	Role cannot edit library	Level 3 - Account Admin
AL - YesEditRole	Role can edit library	Level 3 - Account Admin
AL Role A	Role A for use in test cases	Level 3 - Account Admin
AL Role B	can delete snapshots	Level 3 - Account Admin
AL Role C	Role to test more stuff	Level 3 - Account Admin
AL-no Templates, No Library	user cannot access Library or Templates	Level 3 - Account Admin
Default Role	Default Role	Level 0 - Base
Dev/Ops Administrator	Dev/Ops Administrator	Level 3 - Account Admin
Estimate-AddJob-noViewSnapshot	Testing Estimate permissions scenario	Level 3 - Account Admin
Estimate-AddJob-ViewSnapshot	Testing Estimate permissions scenario	Level 3 - Account Admin
Estimate-AddSnapshot	Testing Estimate permissions scenario	Level 3 - Account Admin
Estimate-noAddJob-ViewSnapshot	Testing Estimate permissions scenario	Level 3 - Account Admin
Estimate-ViewSnapshot	Testing Estimate permissions scenario	Level 3 - Account Admin
Estimator	Estimator	Level 1 - Project Admin
Foreman	Foreman	Level 1 - Project Admin
Integration Settings	Integration Settings	Level 3 - Account Admin

The following image shows how the Estimator role has been defined with permissions to launch Estimate, add and edit jobs, and view snapshots, but it does not have permissions to delete jobs or add and edit snapshots.



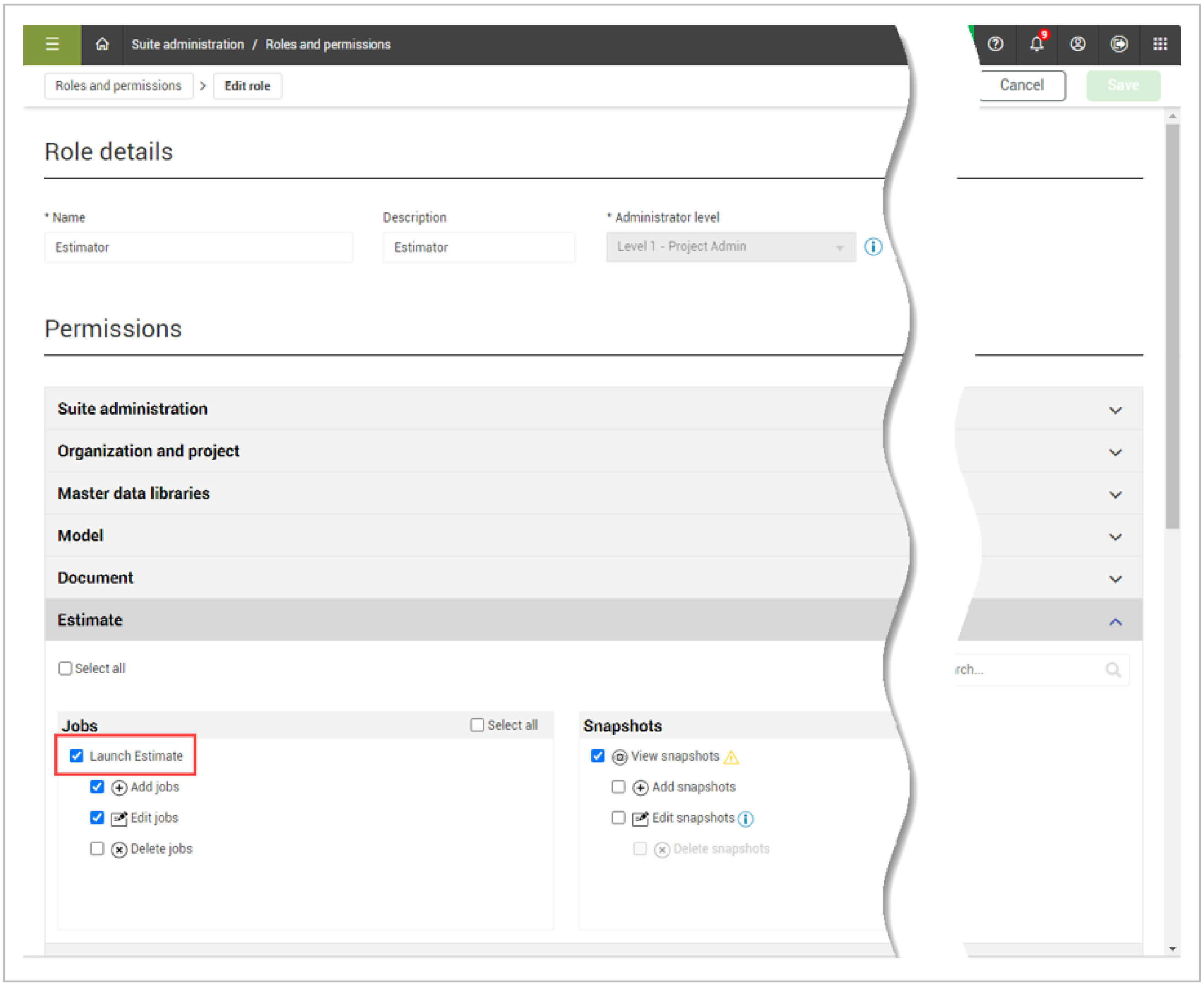
For more information on setting up roles in InEight Platform, see Roles & Permissions in the Knowledge Library.

3.10.2 Security in Estimate

The capacity to grant permissions in a job and what can be performed is accomplished with a combination of permissions that exist in both Platform and Estimate.

Generally, permissions managed in Platform determine which users can launch Estimate and who can manage jobs, snapshots, templates and access the Estimate library. Permissions managed in the Estimate determine which users are granted permissions to specific commands and destinations solely in Estimate.

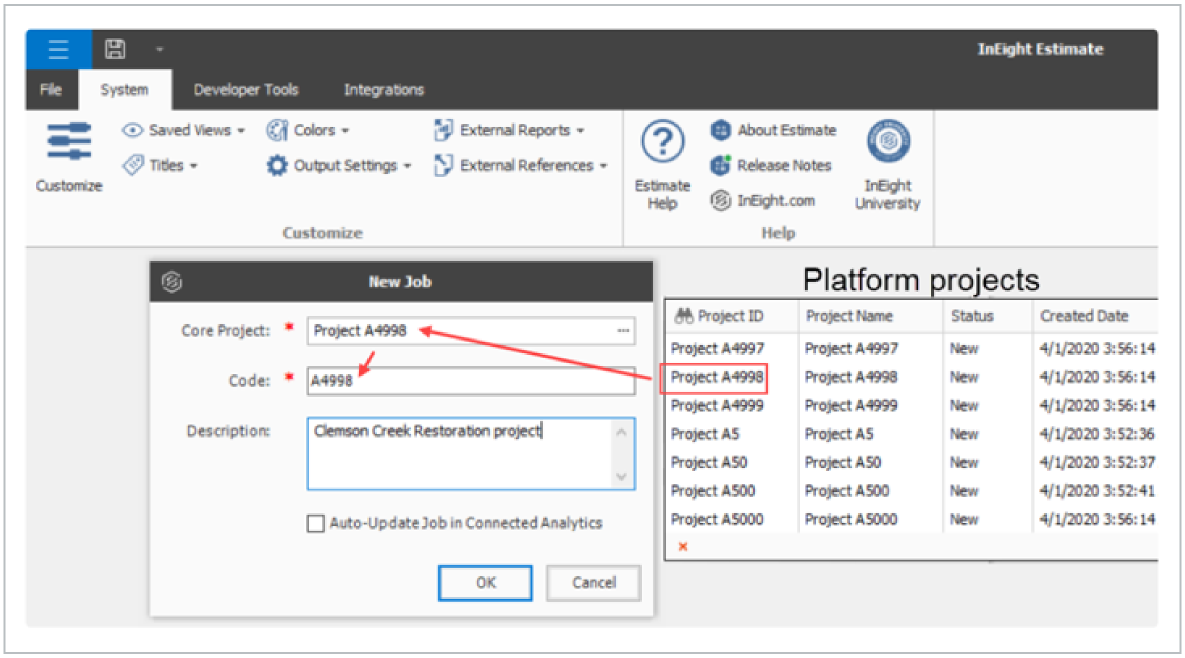
For any user to use Estimate, they need to have a role that has been granted the Launch Estimate permission, which is found in the Estimate blade of the Roles and permissions page when editing the details of a role.



3.10.3 Granting permissions to access Jobs and Snapshots

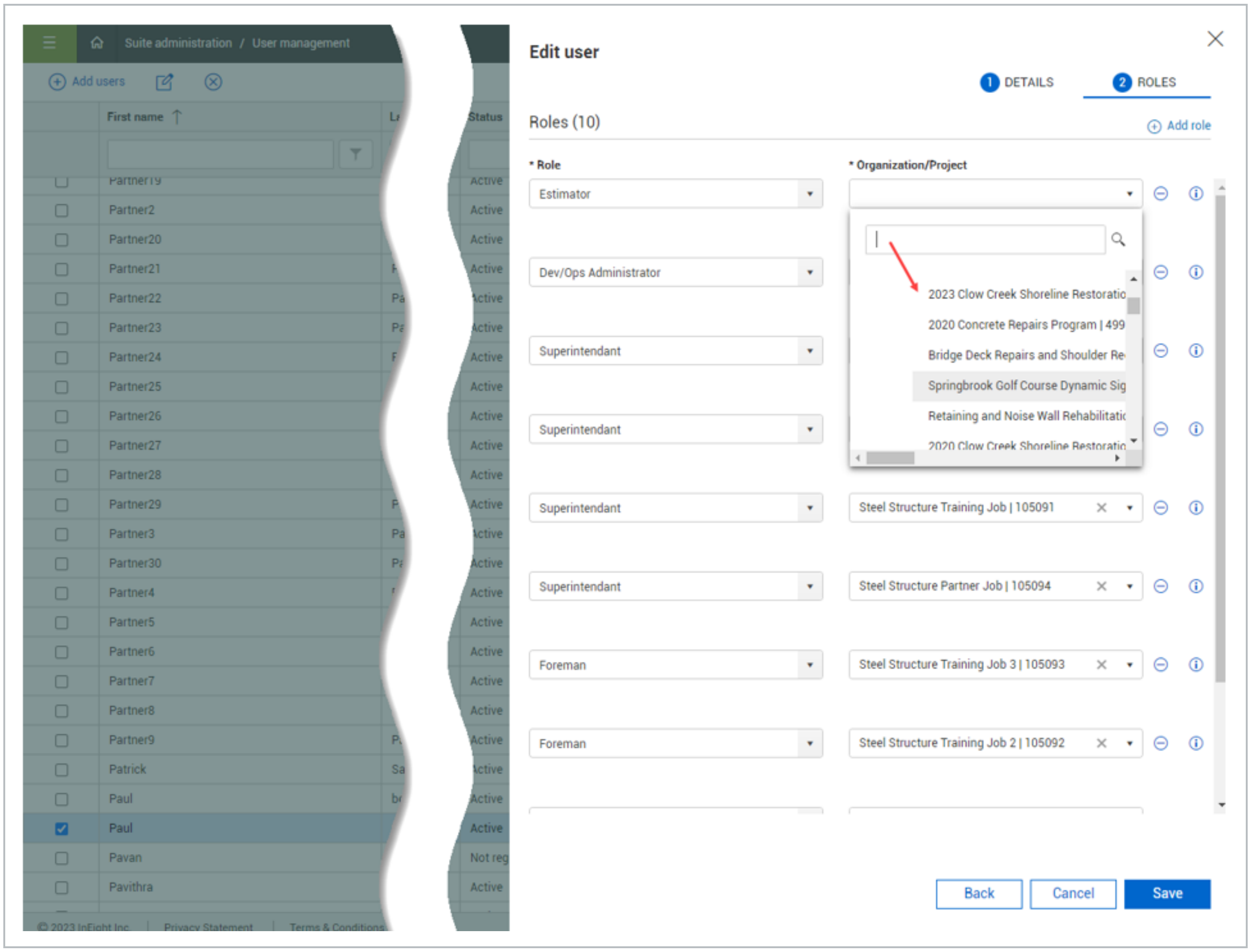
When creating jobs in Estimate, it is required to associate new estimates with existing Platform projects and all the related OBS contents.

> Multiple estimates can be assigned to a single Platform project. In this case, permissions granted to users on a project will be the same permissions for all the estimates belonging to that project.



This Platform project is used to assign roles for the purposes of granting various permissions.

To grant permissions to a particular user on a Job, go to the User Management page in InEight Platform, edit the user, and then assign the user a role on a project on the Roles tab of the Add or Edit User slide-out panel.



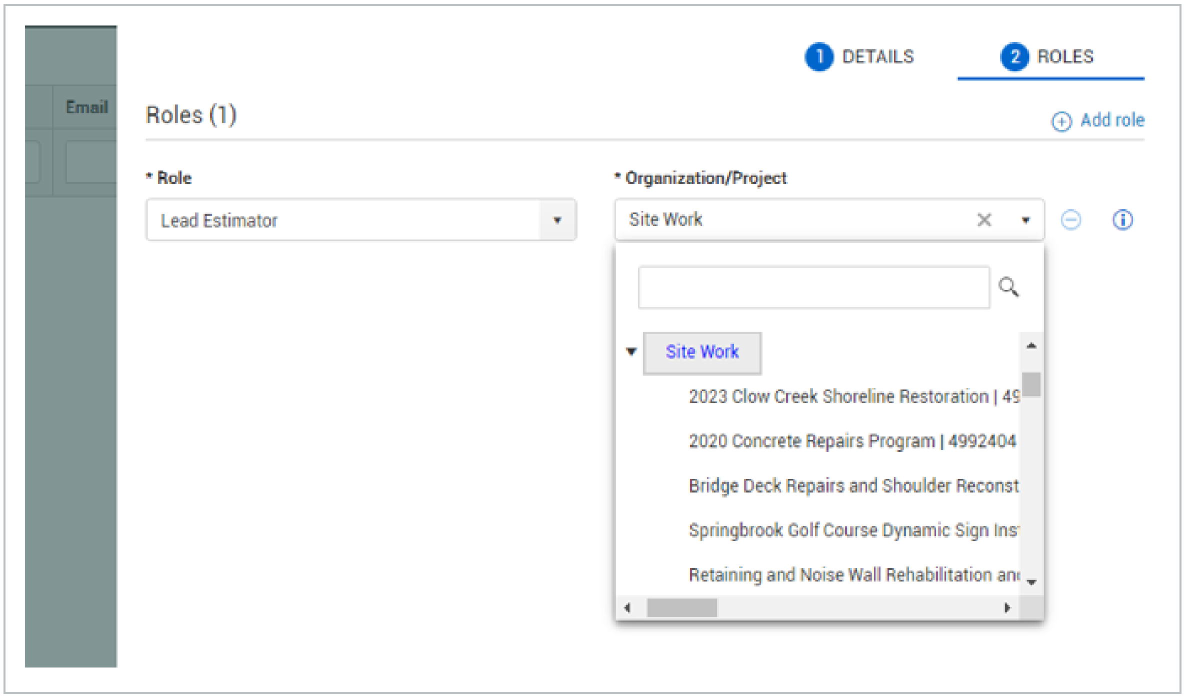
For more information on managing users, see the User Management section in Roles & Permissions in the Knowledge Library.

> In Estimate on-premise, roles are created and managed in the User Roles register. After the role is created, users can be assigned to the role from the list in the Windows Active Directory Users and Groups in Estimate. The Users assigned role as determined by the currently logged in user is used to grant permissions at the application level. Because Estimate on-premise uses the computer's logged in user in determining the user's role, roles cannot be segregated by job. To enforce job-level security in Estimate on-premise, populate the list of users allowed in the job on the Security tab of the Job Properties form.

3.10.3.1 Organizational Breakdown Structure

Projects in Platform are required to have an Organizational Breakdown Structure (OBS) assignment. The OBS assignments can be utilized for assigning roles and granting permissions to all jobs belonging to a node in the OBS.

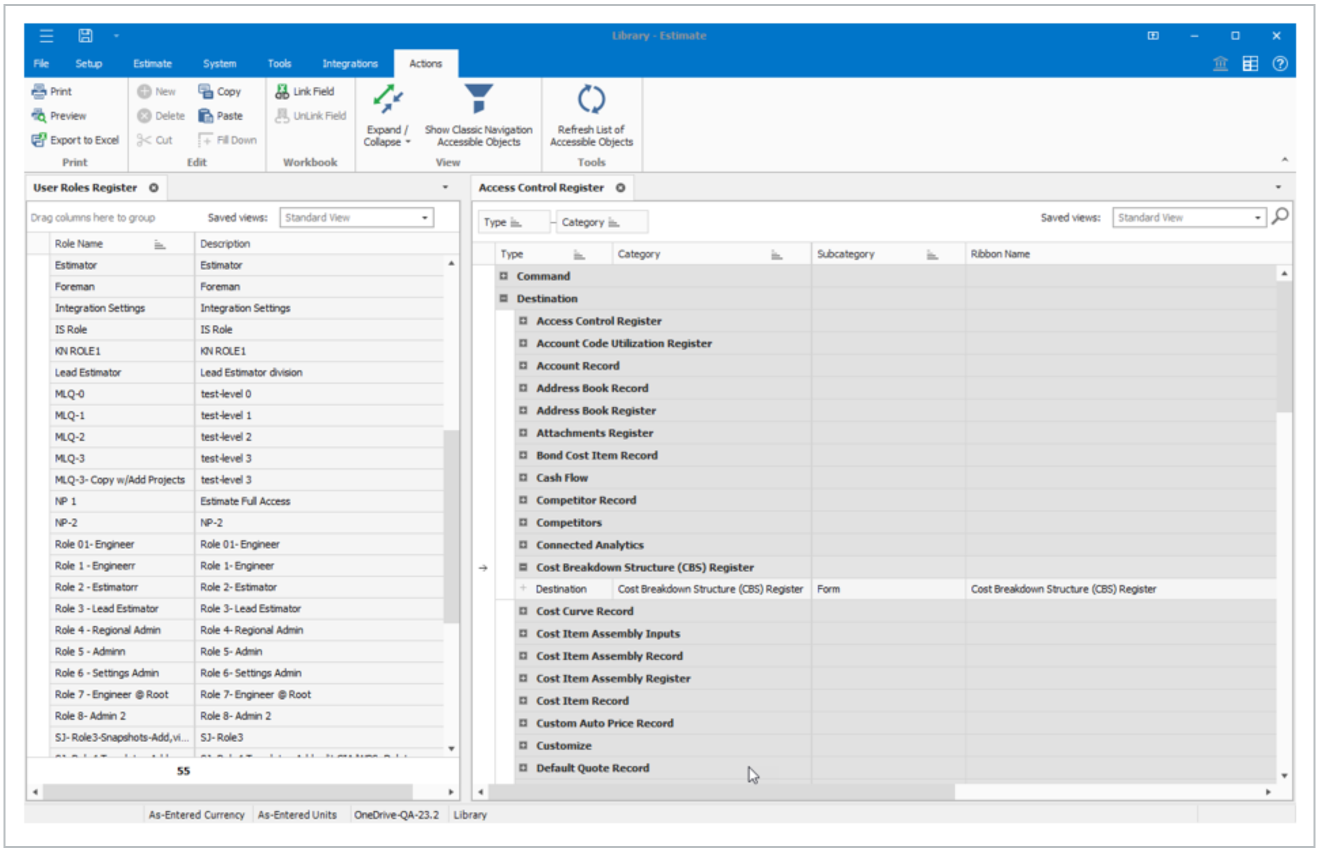
In the following example, Johny has been assigned as the Lead Estimator for the Site Work node of the OBS, which grants him the permissions assigned to the Lead Estimator role for every estimate created that belongs to the Site Work node in the OBS.



> Permissions are cumulative, so if a user is assigned multiple roles on a single project, the role with the most permissions is applied when attempting to access various functions.

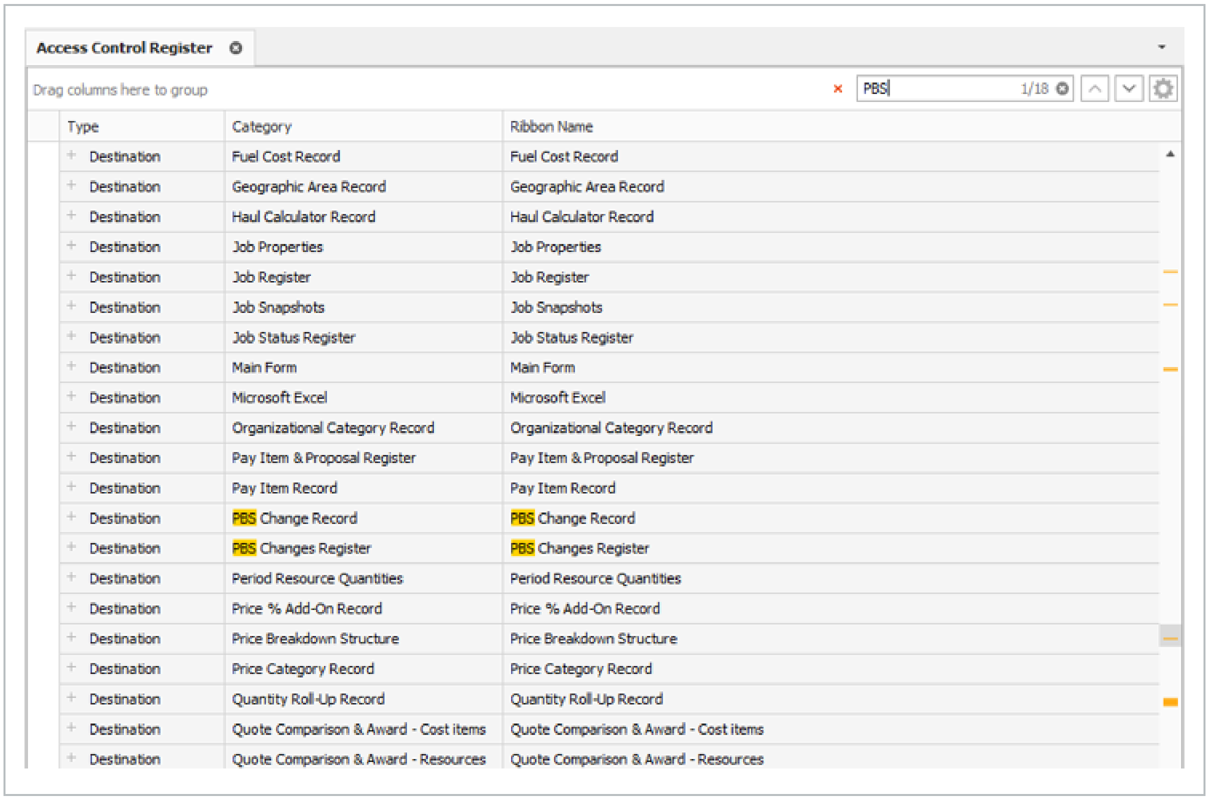
3.10.4 Granting permissions to destinations and commands

Estimate can grant permissions at a deep-rooted level by assigning which roles can access specific forms. You can also assign certain roles that can perform specific commands or actions that can be performed within those forms.



Permissions are managed in the Access Control Register in the Setup tab of the Library.

This register is a list of accessible objects, which can be used to grant or restrict permissions to various roles. By default, the register is organized by type, then by category. Removing the grouping lets you search for key words using the search capabilities of the register.



Type	Category	Ribbon Name
Destination	Fuel Cost Record	Fuel Cost Record
Destination	Geographic Area Record	Geographic Area Record
Destination	Haul Calculator Record	Haul Calculator Record
Destination	Job Properties	Job Properties
Destination	Job Register	Job Register
Destination	Job Snapshots	Job Snapshots
Destination	Job Status Register	Job Status Register
Destination	Main Form	Main Form
Destination	Microsoft Excel	Microsoft Excel
Destination	Organizational Category Record	Organizational Category Record
Destination	Pay Item & Proposal Register	Pay Item & Proposal Register
Destination	Pay Item Record	Pay Item Record
Destination	PBS Change Record	PBS Change Record
Destination	PBS Changes Register	PBS Changes Register
Destination	Period Resource Quantities	Period Resource Quantities
Destination	Price % Add-On Record	Price % Add-On Record
Destination	Price Breakdown Structure	Price Breakdown Structure
Destination	Price Category Record	Price Category Record
Destination	Quantity Roll-Up Record	Quantity Roll-Up Record
Destination	Quote Comparison & Award - Cost items	Quote Comparison & Award - Cost items
Destination	Quote Comparison & Award - Resources	Quote Comparison & Award - Resources

The Type of the accessible object is one of the following:

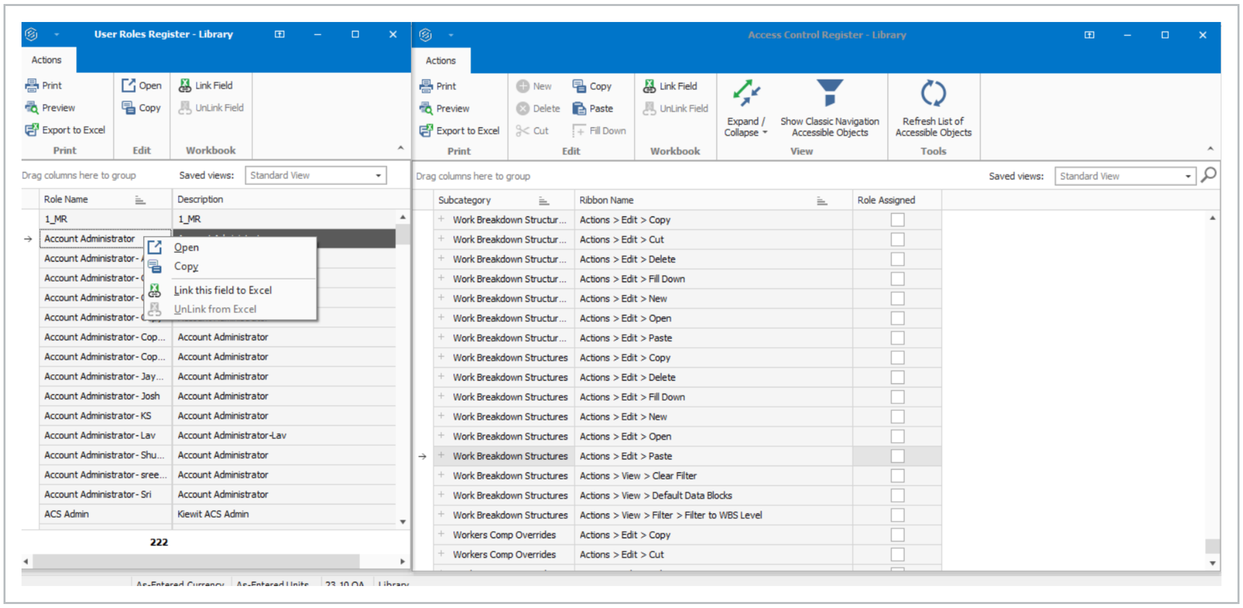
- **Command:** Actions that are in the main ribbon navigation.
- **Destination:** A form or location within the application. Restricting this type of permission means that all the actions that are available in the form are unavailable.
- **Register Command:** These are the commands that appear for the specified register and are commonly accessed either by using the actions menu in the navigation ribbon when the register is active or using the right-click context menu commands on the records in a register.

Categories and subcategories can be used to further group and identify various accessible objects.

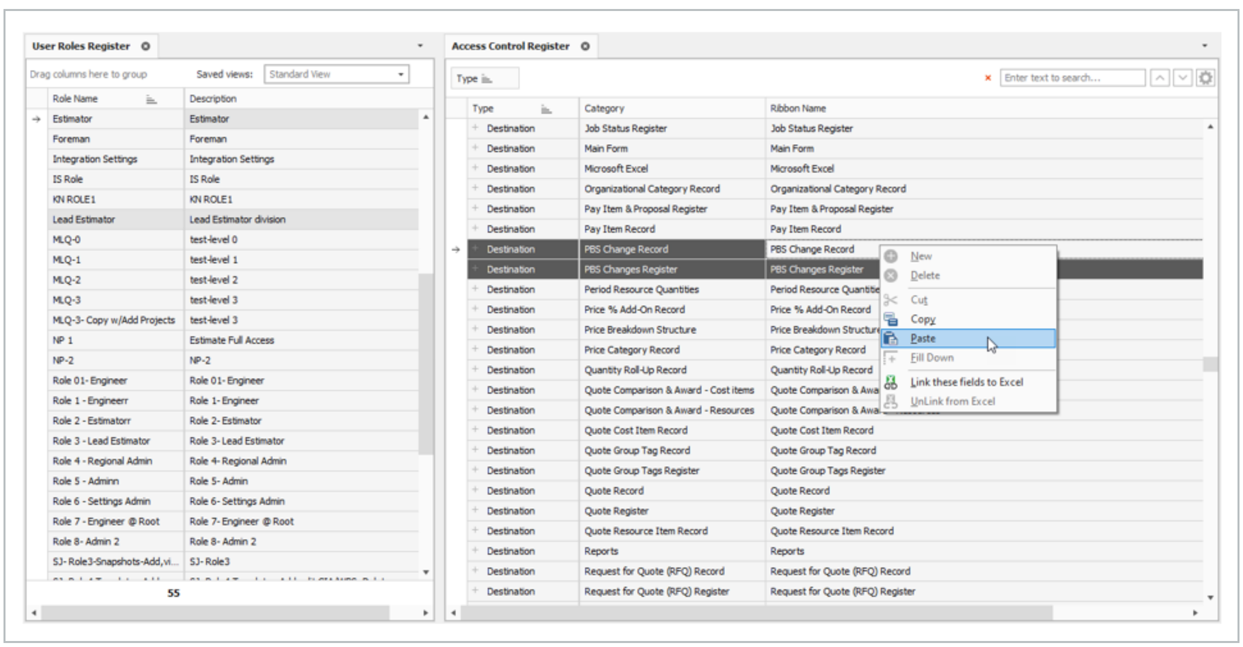
The Ribbon Name column provides the navigation path and name of the object as it appears in the ribbon navigation. The Show Classic Navigation Accessible Objects button on the Actions tab of the Access Control register can be used to identify accessible objects as they might have existed in the legacy version of Estimate, and are still available to assist users who may have set up Access Control prior to the newer ribbon navigation.

Follow these steps to set up Access Control on an Accessible object:

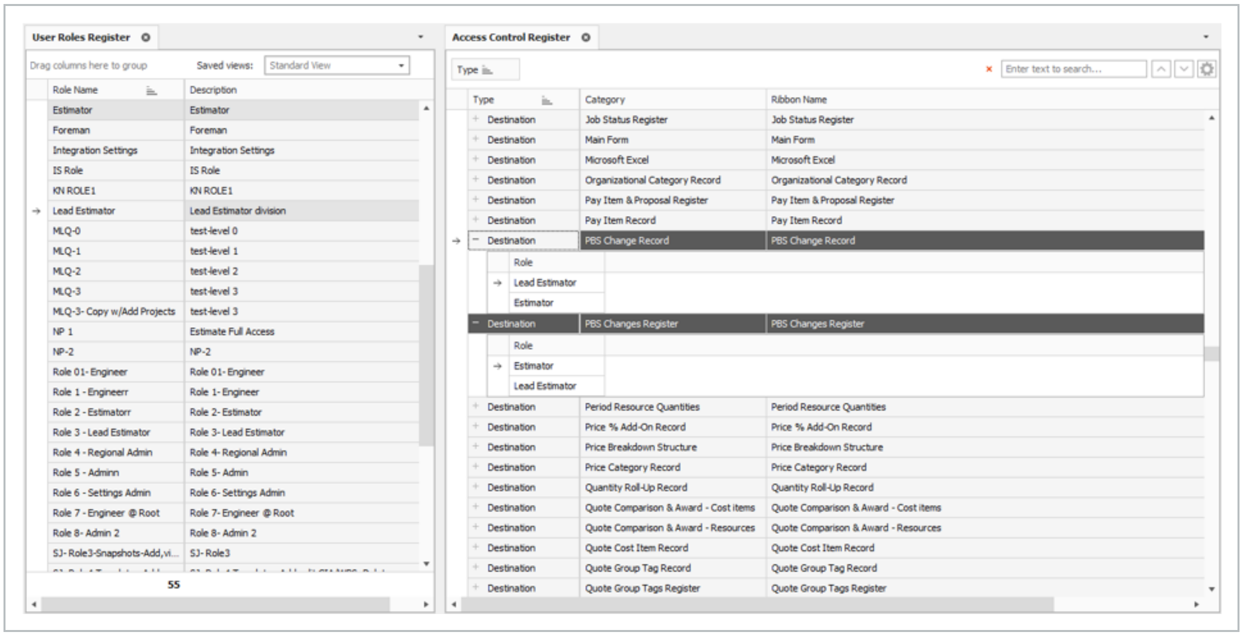
1. Identify the role or roles in the User Roles register, then right-click to copy.
   - In the Access Control register, you can filter on the Role Assigned field to help you see the associated roles with Access Controllable objects.



2. Select one or more accessible objects in the Access Control register and right-click to paste.



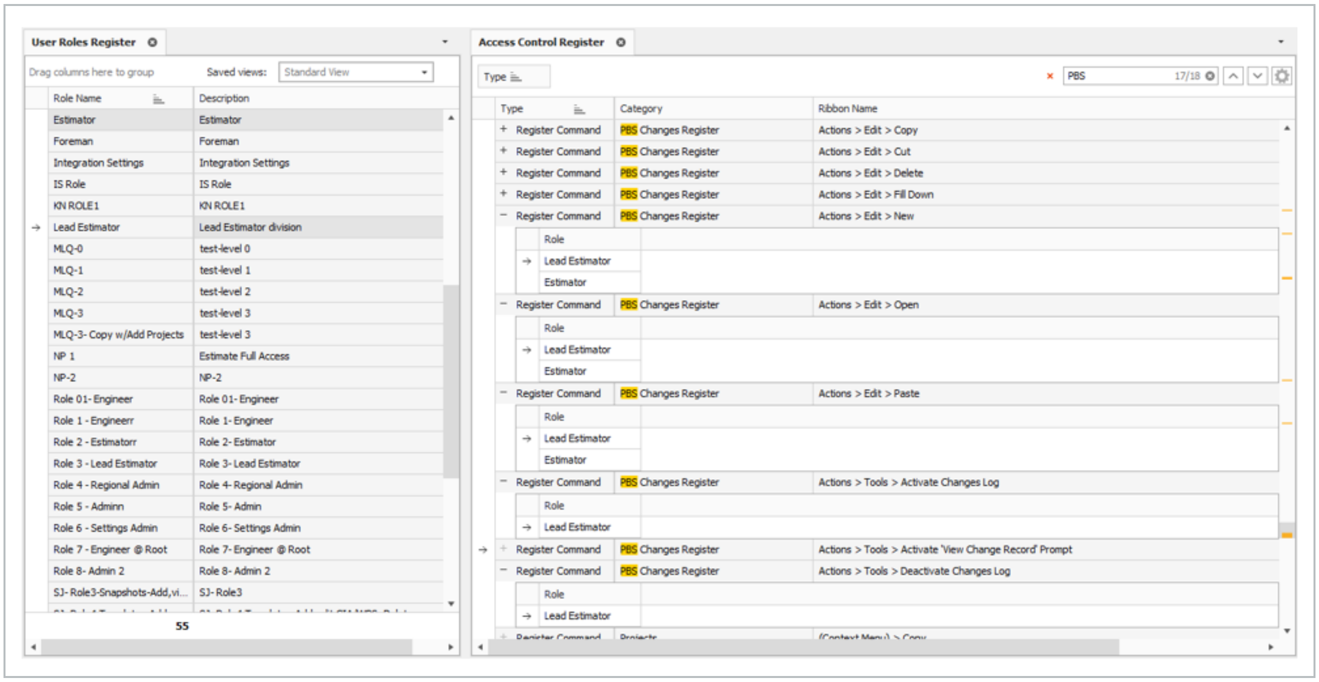
3. Expand the detail records of the accessible objects to verify the role assignments have been correctly made.



> You can drag and drop the Roles onto the accessible objects in these two registers.

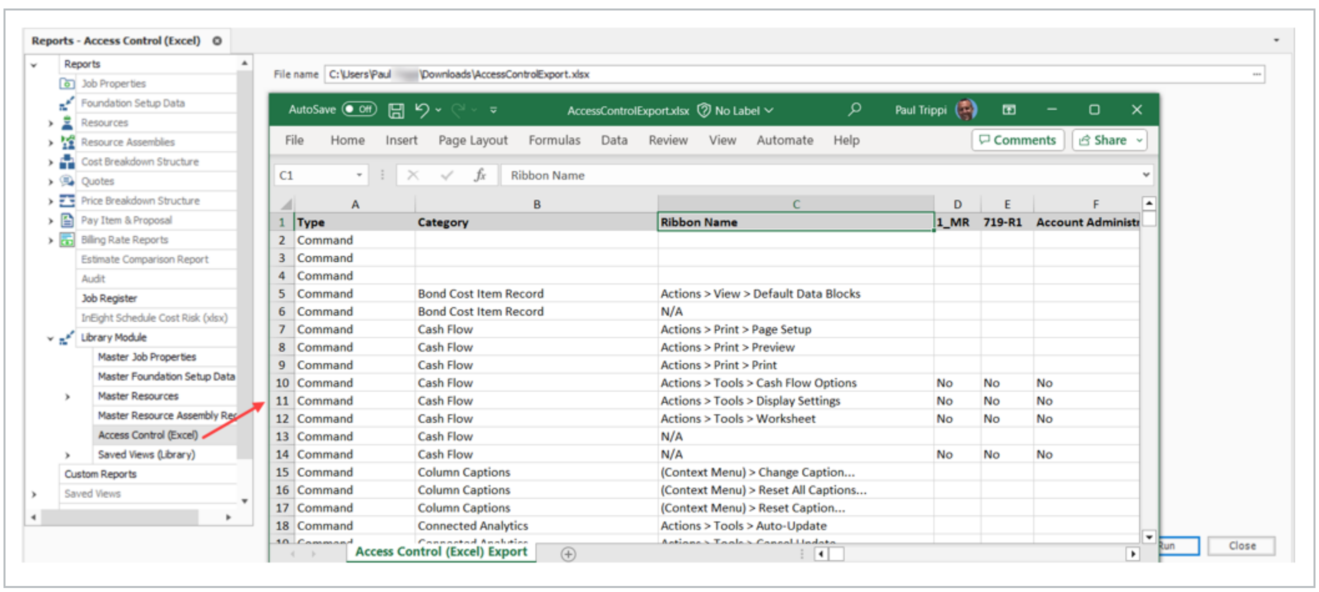
If no roles are assigned to an accessible object, no restrictions are applied to the accessible object, and anyone with access to the application will be able to access that destination or command. When setting up Access Control, be sure to identify the commands and destinations in Estimate that you want to restrict permissions to, and then assign the roles to explicitly grant permissions to those accessible objects.

In the following example, both Estimators and Lead Estimators are permitted to invoke any of the actions on the records in the PBS Changes Register, but only the Lead Estimator is permitted to activate or deactivate the PBS Changes Log. Because no roles have been assigned to the *Activate 'View Change Record'* prompt, anyone with access to the application will be able to perform that action.



3.10.4.2 Access Control Report

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.



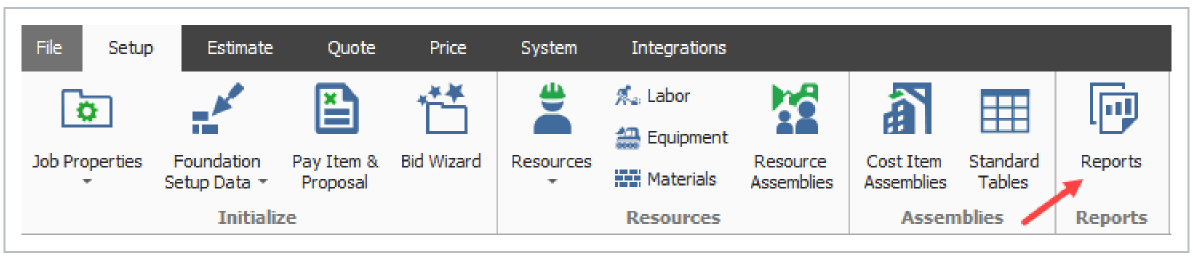
The report makes it easier to find the role names along with their associated Yes and No access permissions to each form in Estimate.

	A	B	C	D	E	F	G	H
1	Type	Category	Ribbon Name	Account Administrator	Account Administrator-All permission	Design - Eng - Admin	Design - Eng - Project Admin	Design - Eng - Project Team
2	Command							
3	Command							
4	Command							
5	Command	Bond Cost Item Record	Actions > View > Default Data Blocks					
6	Command	Bond Cost Item Record	N/A					
7	Command	Cash Flow	Actions > Print > Page Setup					
8	Command	Cash Flow	Actions > Print > Preview					
9	Command	Cash Flow	Actions > Print > Print					
10	Command	Cash Flow	Actions > Tools > Cash Flow Options	No	No	Yes	No	No
11	Command	Cash Flow	Actions > Tools > Display Settings	No	No	Yes	No	No
12	Command	Cash Flow	Actions > Tools > Worksheet	No	No	Yes	No	No
13	Command	Cash Flow	N/A					
14	Command	Cash Flow	N/A	No	No	No	No	No

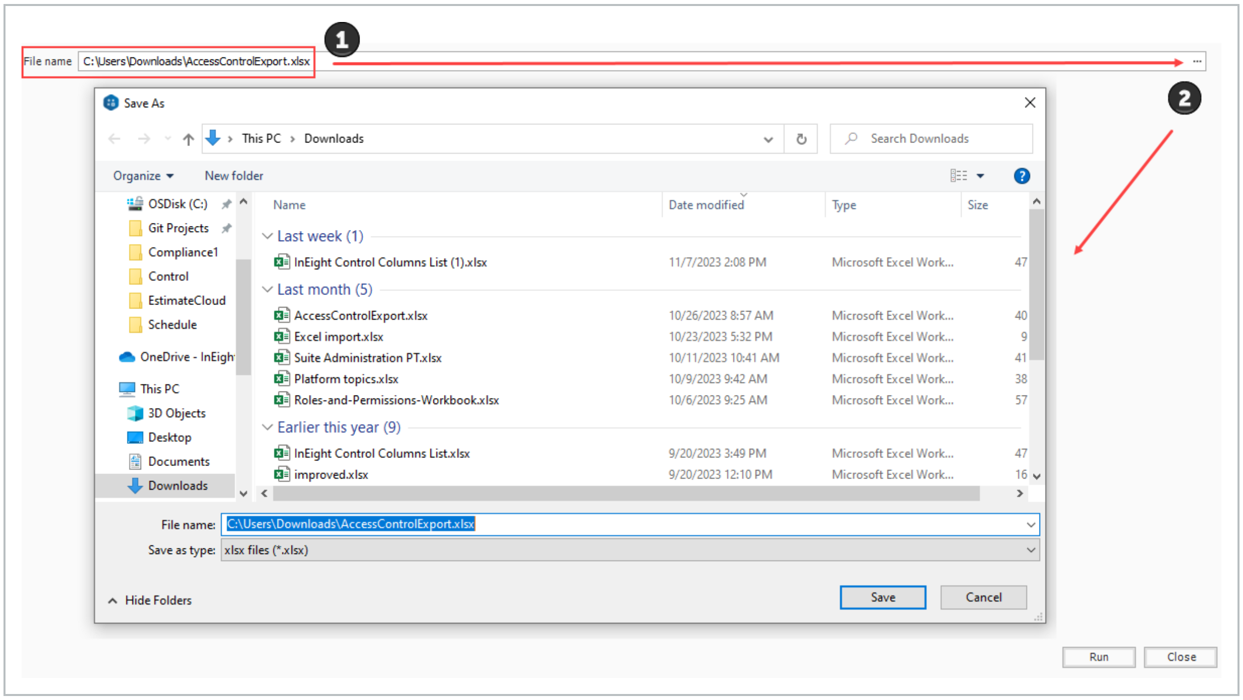
Step by Step – Access Control Report

1. Open a job, and then select the **Setup** tab.
2. Click the **Reports** icon.

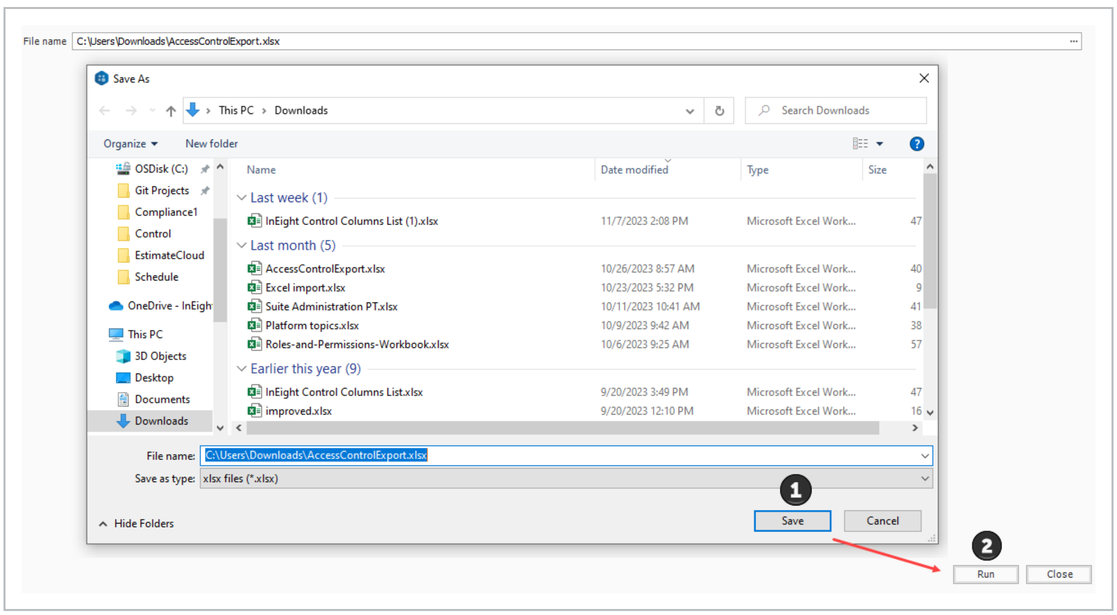
> You can access the Reports menu from the Setup, Estimate, Quote, Price, and Execution tabs.



3. Expand Library Module, and then select **Access Control (Excel)**.
4. Select a **file name**, or choose another file name path.



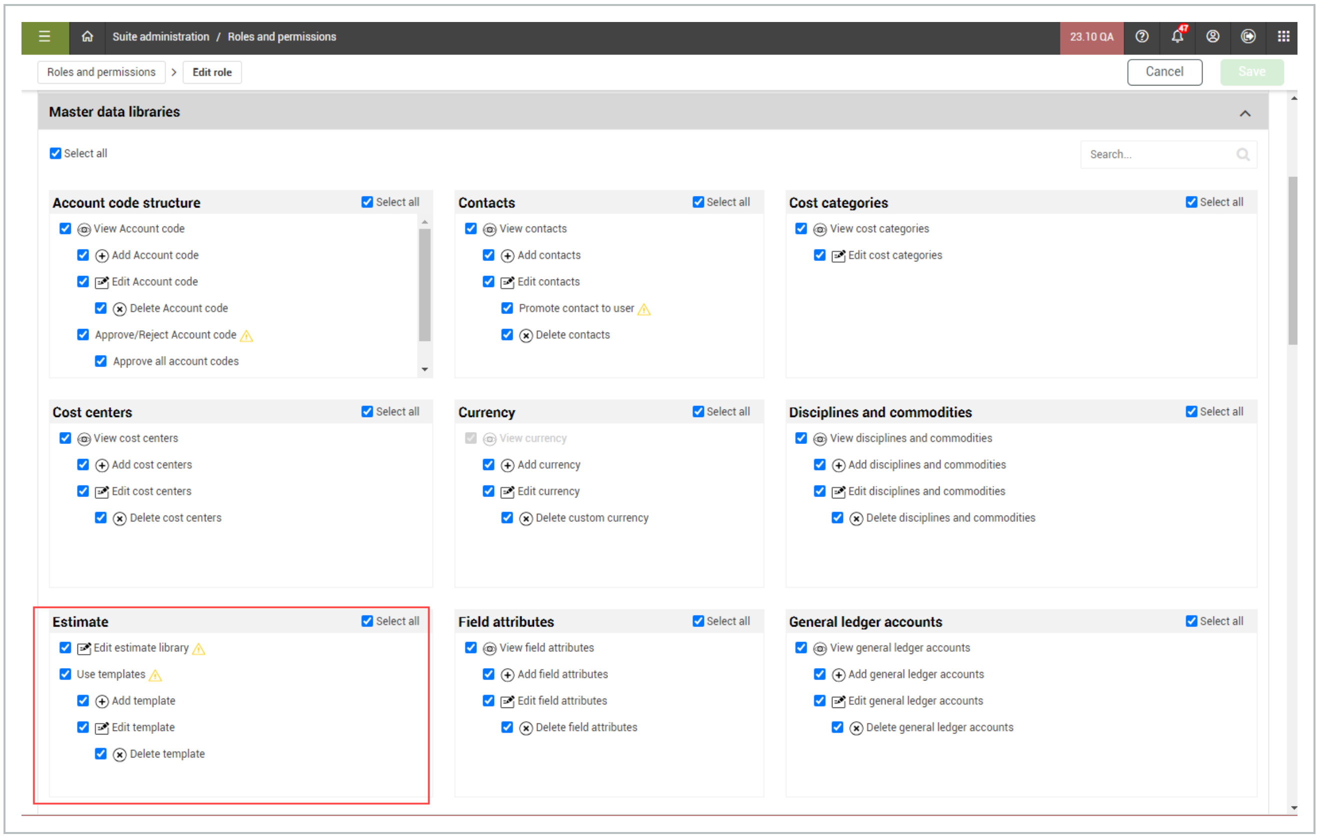
5. Click **Save**, and then click **Run**.



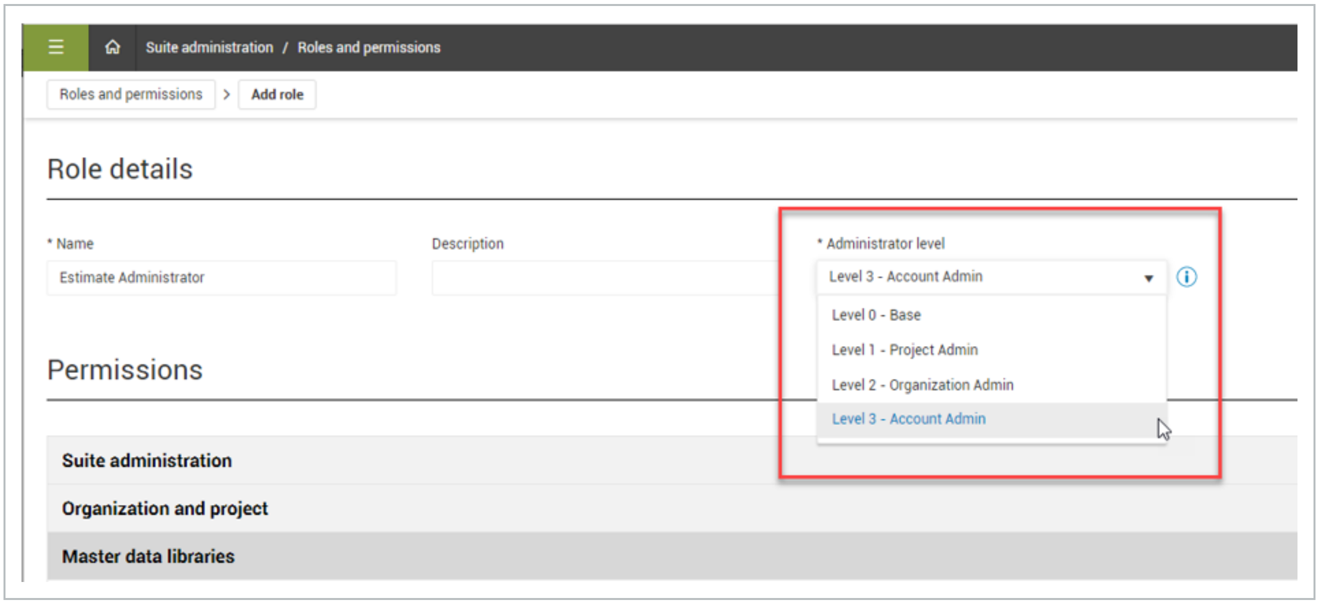
What's Next: Open the Access Control Excel file to filter, sort, or perform any type of audit to help you determine user or role access.

3.10.5 Granting permissions to the Estimate Library

In Platform, permissions relating to the Estimate library are found in the Master data libraries permission section.



To grant Estimate library permissions to a role, the role must be an Administrator Level 3 - Account Admin. If not, the permissions are not selectable on the Add/Edit Role setup page.



The Master data libraries permission section is also where the permissions controlling which roles can manage templates are found.

3.10.6 Common roles used when securing an Estimate

The process of creating an estimate for a bidding opportunity commonly requires unrestricted access to the capabilities of Estimate so that estimators can work efficiently. However, depending on the level of data governance within an organization, you might want to preclude certain users from accessing some of the more sensitive parts of Estimate. If changes were made, either accidentally or otherwise, it could impose detrimental impacts on the organization.

Estimate’s security model is very detailed and robust. When designing a security model that restricts certain features and functionality of Estimate, each company must weigh the benefit of the protection of such restrictions which could bring unwanted or uncontrolled changes and negatively impact the productivity of the estimating process. While it is possible to create a very detailed and robust security model with many different roles for individuals within an organization, it is not necessary to set up and maintain roles for all of Estimates accessible objects. It is likely a company can effectively secure their sensitive data with no more than a couple roles granting permissions to a few commands and destinations.

A common way to implement security on the Estimate application is to restrict access to certain system level settings, such as who can modify data in the library, or who can change any company specified custom column captions.

The following are some of the more common Roles a company may set up, describing the purpose of the role and typical permissions:

- **Lead Estimator**: Lead Estimators are commonly assigned to estimates based on their knowledge and experience. They may be precluded from creating or deleting estimates themselves or changing any system level settings, but commonly have full access to all the capabilities needed to create and maintain the estimates they are assigned to.
- **Estimate Manager:** Estimate Managers are commonly responsible for identifying bidding opportunities and determining which opportunities to pursue. Once it has been determined that the company will pursue an opportunity, the Estimate Manager creates the estimate and assign it to a Lead Estimator based on resource availability relative to all the bidding opportunities the company will be pursuing. These roles manage the creation of estimates and assist in ensuring all the necessary supporting data is available, such as assigning appropriate project attributes or including needed resource libraries.
- **Administrator**: Administrators ensure accessibility and availability of the solutions utilized by estimators. Typically, they control system level settings and activities that would affect company standards, such as changing column captions, ability to define corporate views, list of job statuses and ribbon settings. Other typical permissions restricted to only the Administrator level roles are the ability to access the User Roles register and the Access Control register.

Lesson 3 Review

1. When you create a new job folder, all category labels defined in the Library Foundation Setup Data Register will be copied to the new job folder automatically.
    a. True
    b. False
2. This resource type is a catch-all and can be used for anything from dump fees and security to creating subcontractors as a resource.
    a. Installed Materials
    b. Unique
    c. Labor
    d. Construction Equipment
3. The Construction Equipment and Rented Construction Equipment Resource Rate Records include consumption rates that will factor with the fuel cost you define where?
    a. Library Foundation Setup Data
    b. Library Resource Rates
    c. Job Properties
    d. Cost Breakdown Structure

Lesson 3 Summary

As a result of this lesson, you can define, adjust and explain:

- Library Job Properties
- Library Foundation Setup Data Register
- Library Resource Rate Register
- Library Assembly Register

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LESSON 4 – PROJECT SETUP

Lesson Duration: 45 minutes

Lesson Objectives

After completing this lesson, you will be able to:

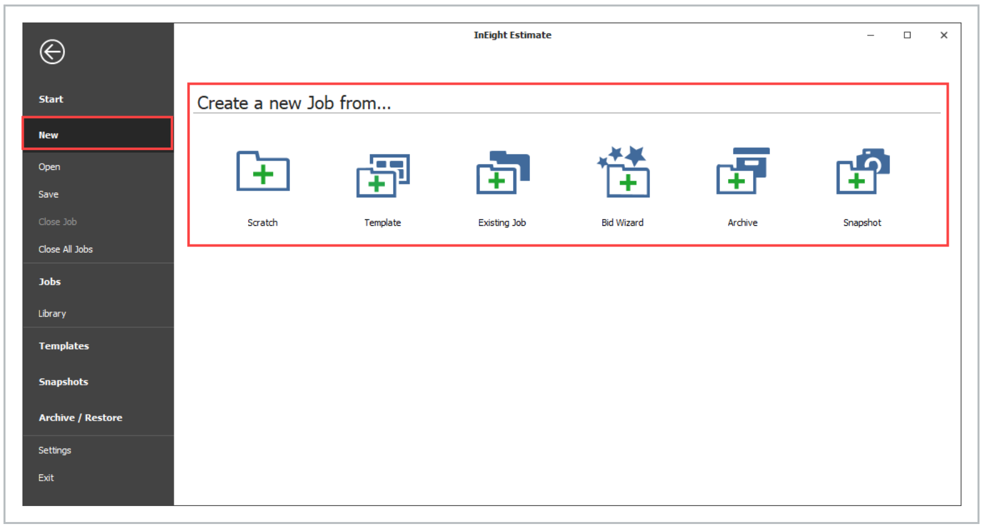
- Create a new project
- Enter Job Properties
- Create pay items in the Pay Item & Proposal Register

Lesson Topics

4.1 JOB CREATION

In InEight Estimate, a job represents the *folder* containing your estimate (or version of your estimate), including its related bid items, cost breakdown structure, resources, quotes, and change logs. All the jobs in your organization are stored in the Job Register Overview.

To create a new job, you can choose from multiple options available when selecting **New** in the InEight Estimate Backstage view. The image and table below show the available options.



Option	Description
Scratch	Creates a new job folder from scratch that is empty, containing no existing data.
Template	Creates a job from an existing template, selected from the Template Register. For more information, see Templates.
Existing Job	Creates a job from an existing job, selected from the Job Register. For more information, see Copy an Existing Job.
Bid Wizard	Uses a wizard tool to create a new job by selecting pay items and/or cost items from an existing source job. For more information, see Bid Wizard.
Archive	Creates a new job from an Estimate Job Archive (.est) File. For more information on creating and using job archives, see Archive and Restore Jobs.
Snapshot	Creates a new job from a register containing snapshots for all jobs. You can filter the register of snapshots to find the snapshot you need. For more information, see Snapshots.

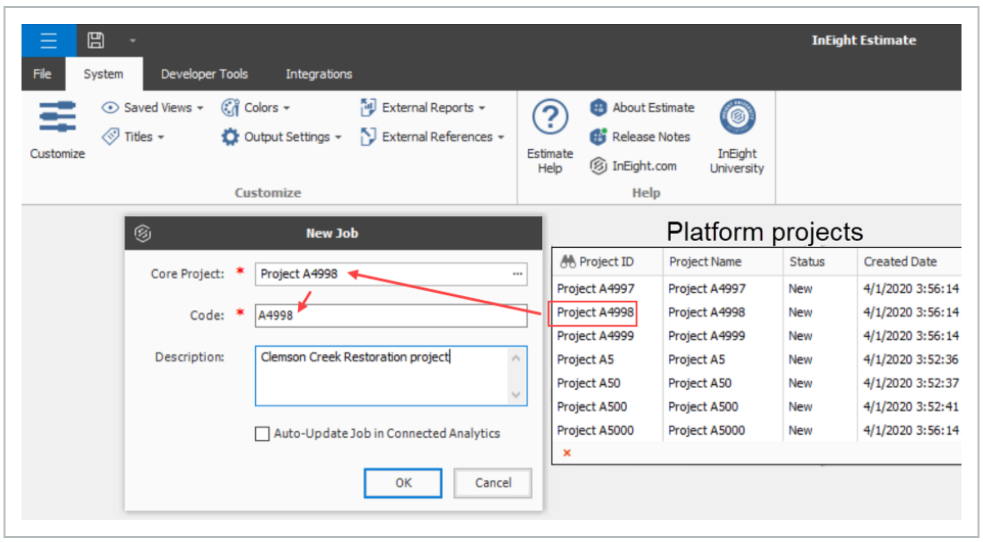
4.1.1 Create a Job from Scratch

When you need a clean estimating environment that is not based on any past work, select the create a new job from **Scratch** option. Creating a job from scratch gives you complete flexibility and ensures no assumptions are carried over from past estimates.

4.1.2 Platform Project association to job

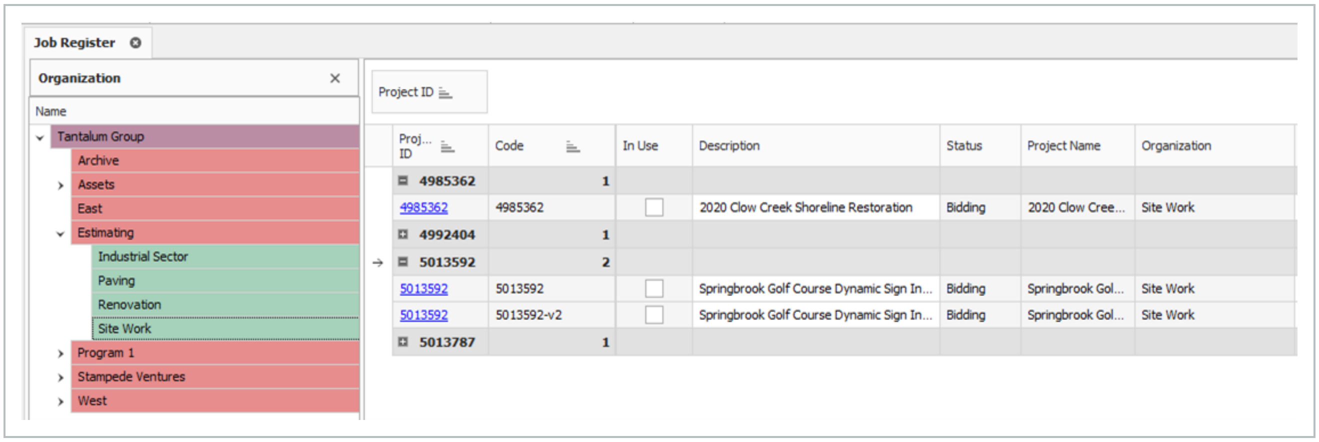
In Estimate, you create a job that represents your project estimate and all the information associated with it. This job must be associated with a project in InEight Platform that represents the overall construction project being managed by your organization, from planning to execution and turnover.

When you select to create a new job, in the New Job window, select a project in the Core Project field drop-down list to associate to your job in Estimate. Core project refers to a project in Platform.



Because projects in Platform are organized in an Organizational Breakdown Structure, associating your job (estimate) to a project in Platform allows your estimates to be included in that organizational structure.

After the job you create is associated to a Platform project, in the Job Register, you can view the job in the context of your organization breakdown structure. In the example below, the job register is filtered to the Tantalum Group > Estimating > **Site Work** level of the organization. Under project ID number 5013592, you can see two jobs, the original estimate and a second version.



For more information, see Job Register Overview.

Create a new job from scratch

1. From the Backstage view, select to create a new job from **scratch**.
2. In the New Job dialog box, click in the **Core Project** field to select a Platform job from the list.
3. Modify the **Code** field as needed.
4. Enter a description of the job in the Description field.
5. Determine if you want to select the **Auto-Update Job in Connected Analytics** check box.
6. Click **OK** to create the new project.

4.2 PROJECT CREATION

You can create new projects in InEight Platform's root and sub-organizations to which you can then associate Estimates jobs. For example, you can create new projects in a node of the organization dedicated to estimating, permitting estimators to create and manage projects for the opportunities they are pursuing while allowing the rest of the organization to maintain a higher level of security over active projects.

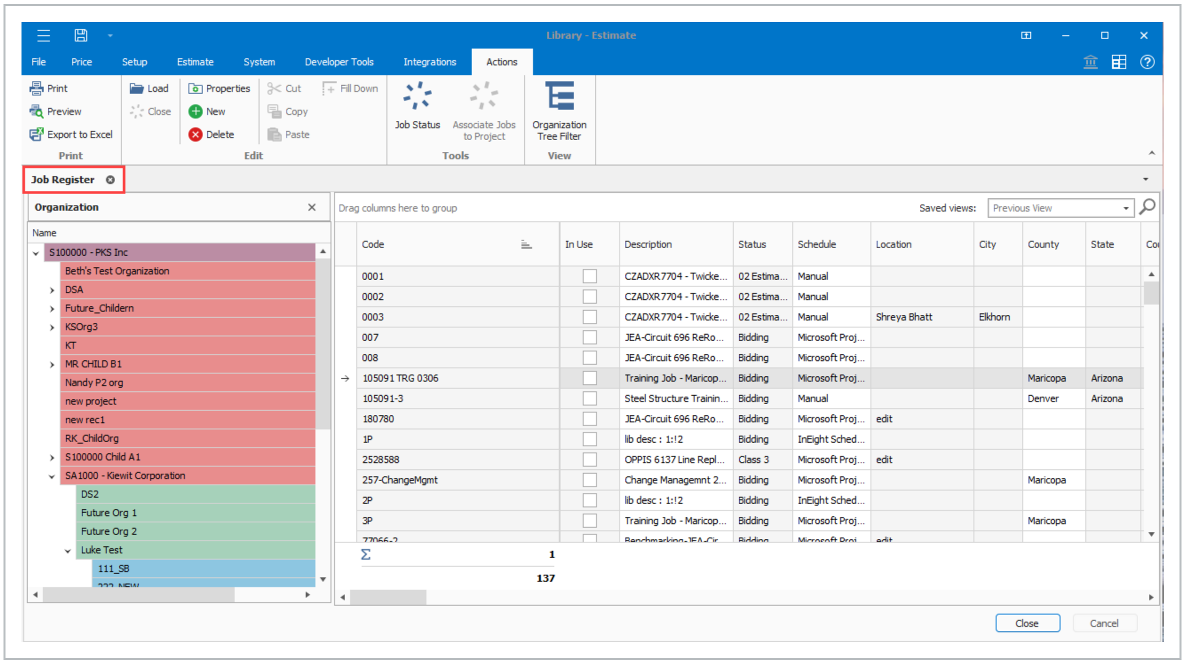
For more information about project creation, see Project Initiation in Platform.

4.2.1 Considerations

You must have a Level 3-Account Admin role or the Add projects permission in your role.

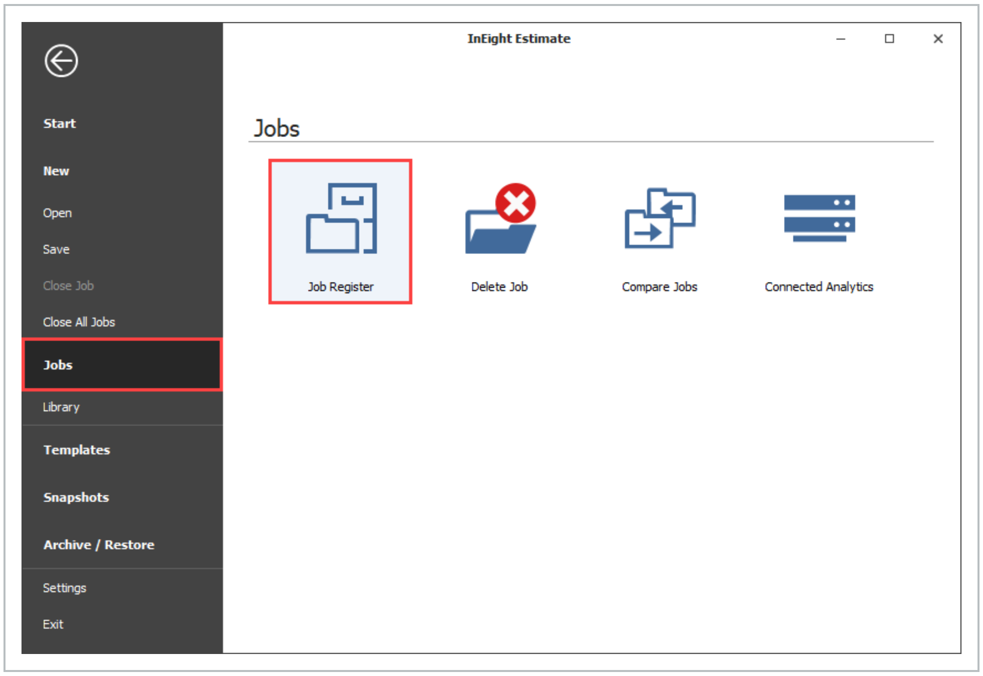
4.3 JOB REGISTER OVERVIEW

The Job Register contains all the jobs created by your organization and includes columns showing job properties and other job details to make it easy to view, group by, and filter job information for job management and reporting purposes.

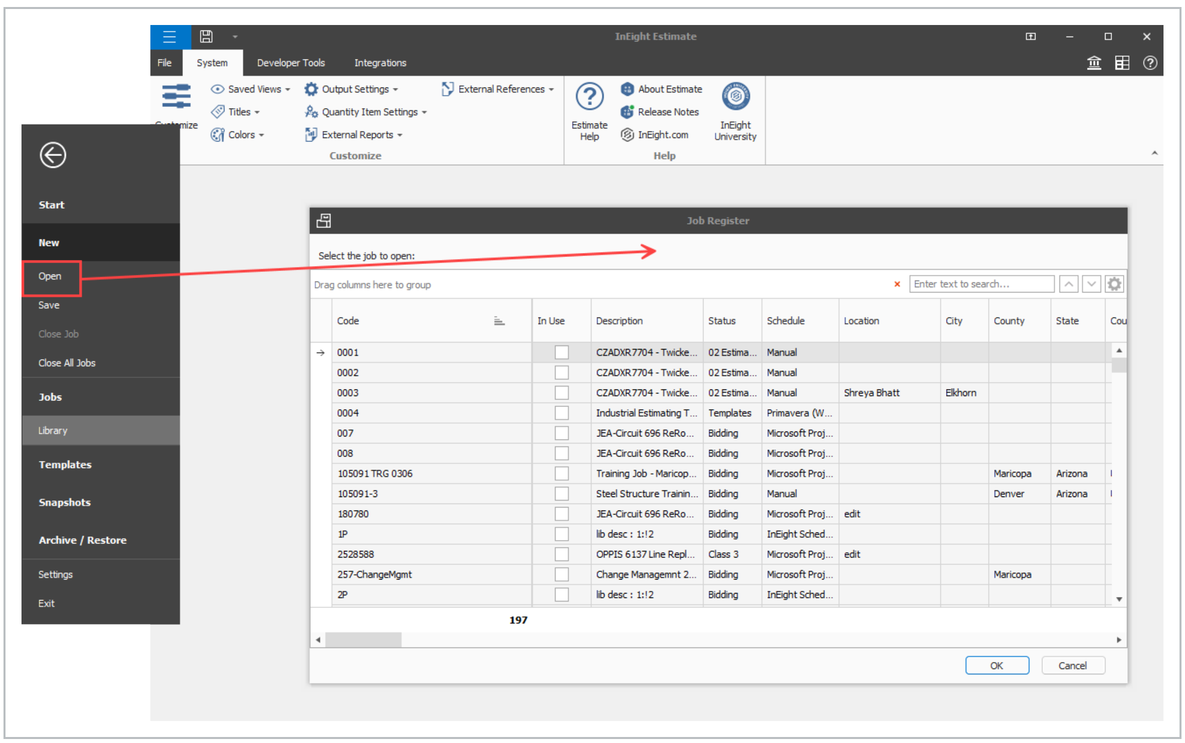


4.3.1 Open the Job Register

You can access the Job Register from the Backstage view by selecting File > Jobs > **Job Register**.



A non-editable version of the Job Register opens where you can select a job to open. Click File > **Open** to open the non-editable Job Register.



4.4 MANAGE JOBS FROM THE JOB REGISTER

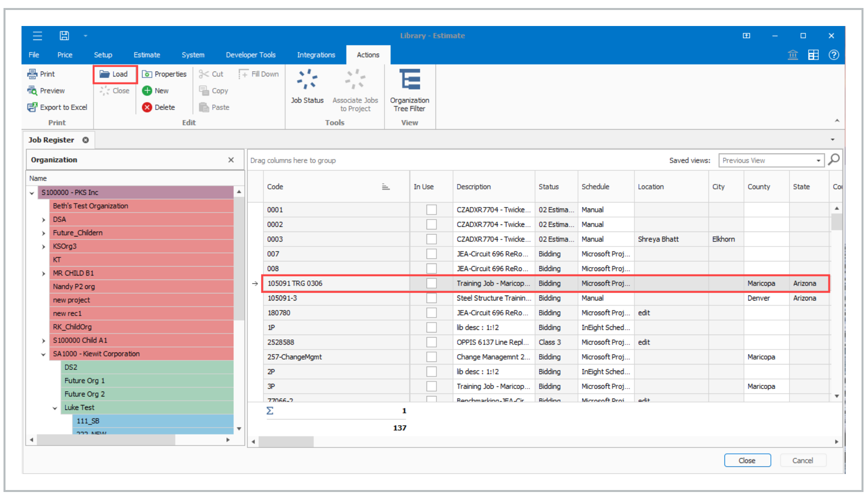
The Job Register lets you perform many tasks to manage your jobs. You can perform tasks such as:

- Load jobs.
- Edit job details
- Open and edit a job's properties.
- Use the columns to group jobs.
- View and upgrade data versions.

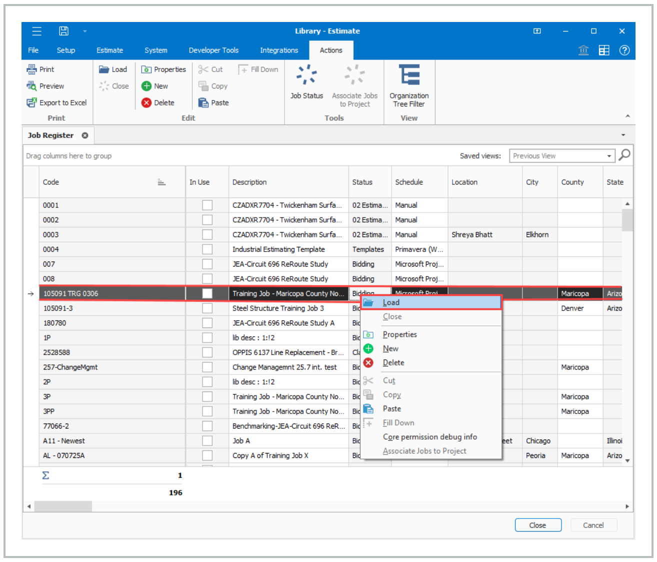
4.4.1 Load a job from the Job Register

You can load (open) a job from the Job Register by:

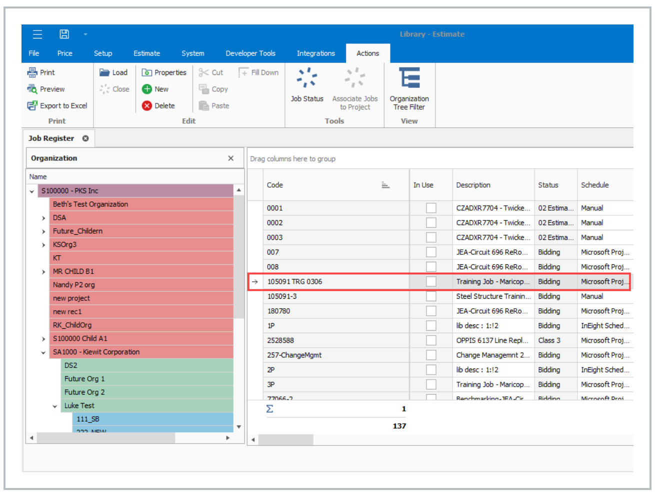
- Selecting a job, and then clicking **Load** from the **Actions** tab.



- Righ-clicking on a job's row header, and then selecting **Load**.



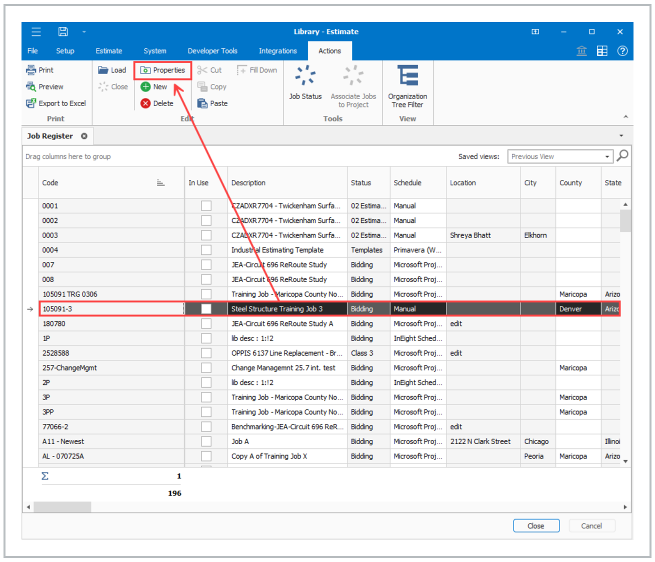
- Double-clicking the row header of a job.



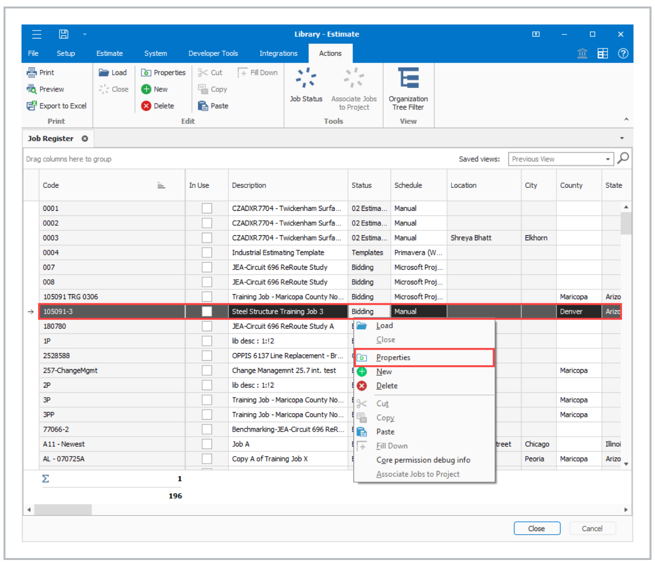
4.4.2 Open a job’s properties from the Job Register

You can also open the Job Properties form of a job from the Job Register by:

- Selecting a job, and then clicking **Properties** from the **Actions** tab.



- Right-clicking a job’s row header, and then selecting **Properties**.



4.4.3 Edit job details

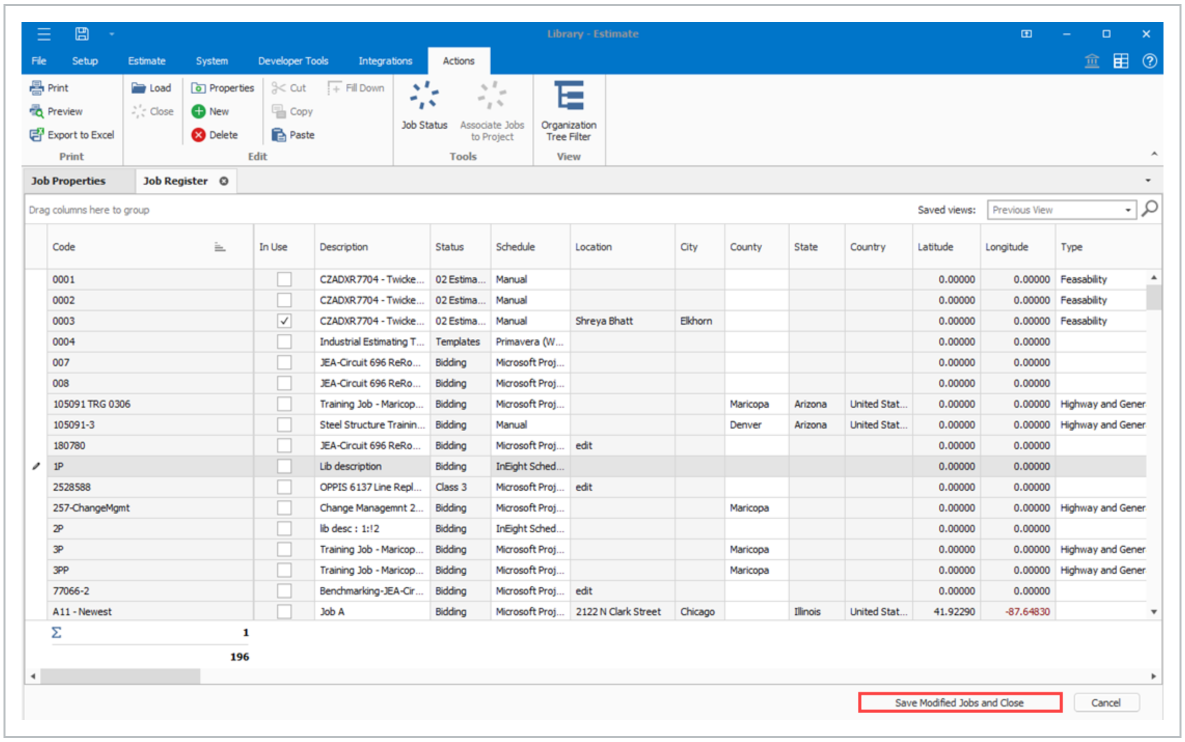
Many fields in the Job Register are editable, so you can make changes to job details directly in the register without needing to open the job and its job properties.

The table below summarizes key columns available in the Job Register and indicates which of them are editable.

Columns	Description	Editable from Register
Job Properties Cover Sheet related columns	Columns such as job status, location, city, state, country, engineer, owner, architect, estimator, contract duration, forecast start and finish dates, and liquidated damages.	Yes, for fields that only exist in Estimate. No, for fields that come from the associated Platform project.
Quote Management	Quote information including Request for Quote (RFQ) contact and minority info.	Yes
Job Folder Tags	Custom tags defined by your organization for organizing and managing jobs.	Yes
Project/Organization	The Project ID, Project Name, and Organization level associated with each job.	No. The Project ID fields contain links that take you to the project's details within Platform.
Notes	General notes entered for the job.	Yes
Project Notes	Notes entered in the project's details in Platform.	No
Last Saved	The date and time the job was last saved.	No
Job Created By	The name of the user that created the job.	No
Source Job	The source job or template the job was created from (if it wasn't created from scratch).	No
Upgrade Required	The column check box is selected if the job was created in a previous release of Estimate and therefore needs to be upgraded to the latest release.	No

You can make changes in the register by clicking in any editable field and editing the content. This includes free-form text fields and validated fields with drop-down lists.

When changes are made, the register's *Close* button changes to the *Save Modified Jobs and Close* button, which you can select to save changes and close the register.

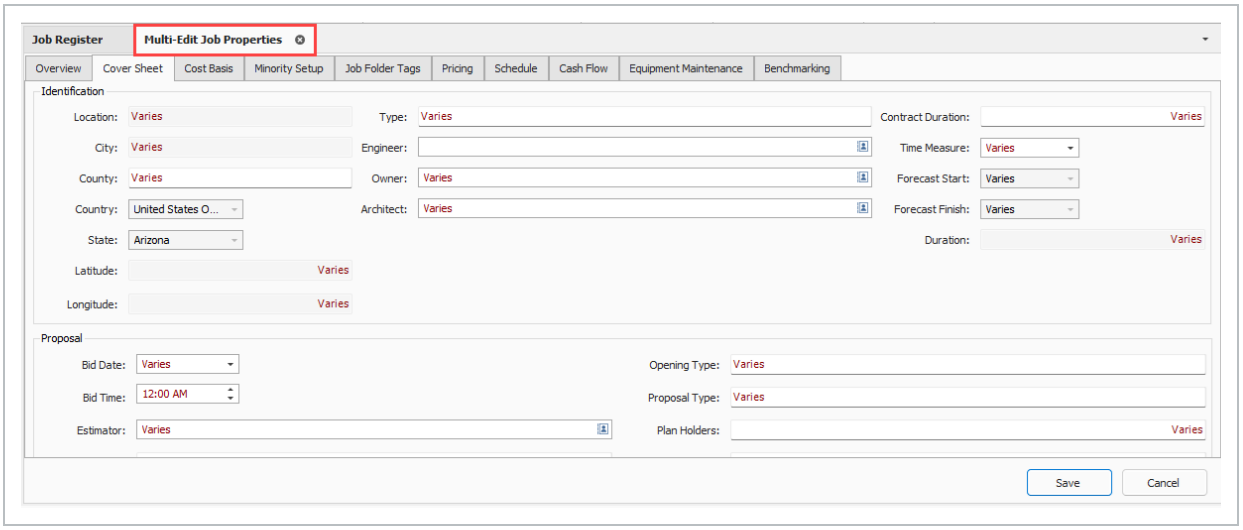


4.4.4 Edit jobs in bulk

The Job Register includes functionality to make edits to the job properties of multiple jobs in bulk.

Edit Job Properties of Multiple Jobs

1. From the Job Register, select multiple jobs by selecting the row headers of multiple jobs while holding down the CTRL or Shift key.
2. Right-click the selection, and then select **Properties**. This opens the Multi-Edit Job Properties form. Items in red can be edited.

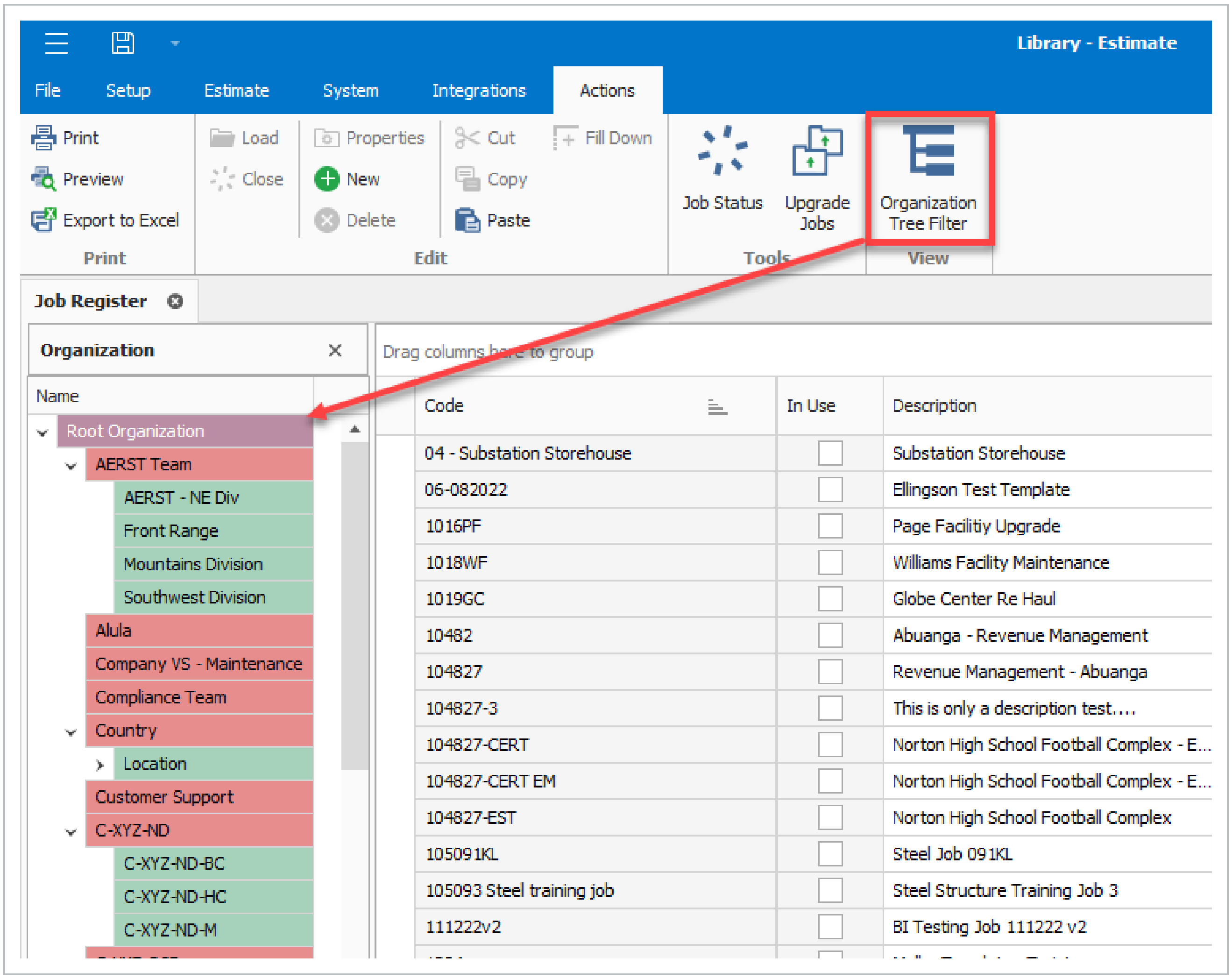


3. Edit fields in Job Properties as needed, and then click **Save**. The changed properties are updated in the Job Register.

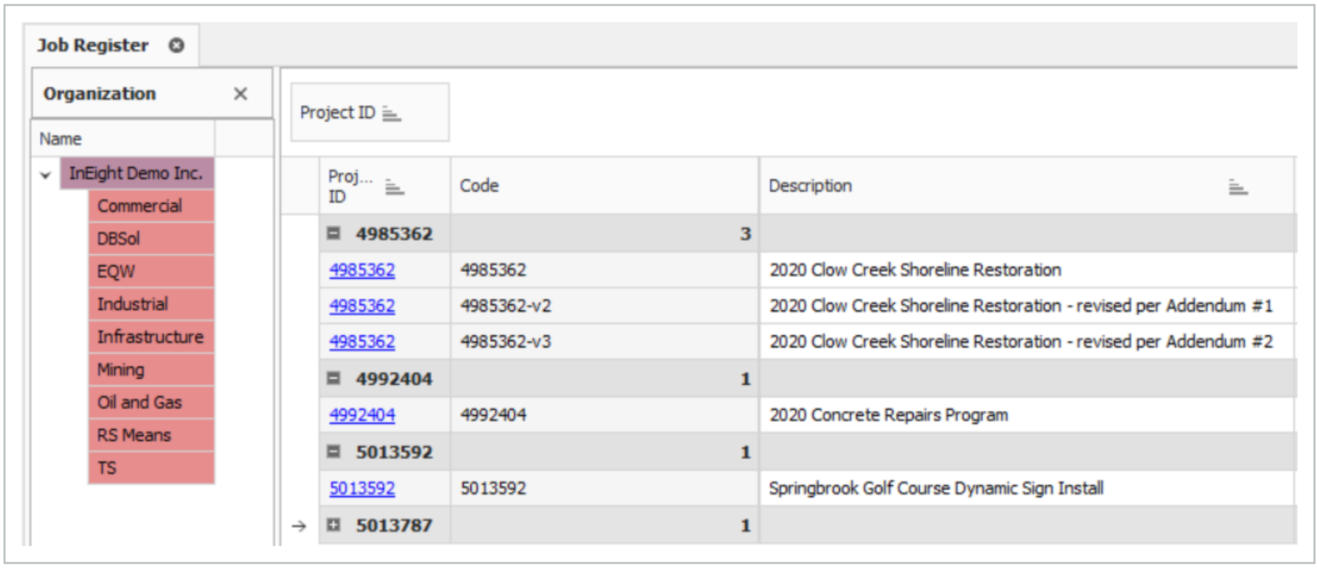
4.4.5 OBS filter tree

You can use the organization tree filter to see where estimates are located in the OBS.

When the Organization Tree Filter is enabled, you can see the jobs that are associated with an organization tree node in the new OBS filter tree. This helps you to quickly locate and organize estimates inside of an organization hierarchy.



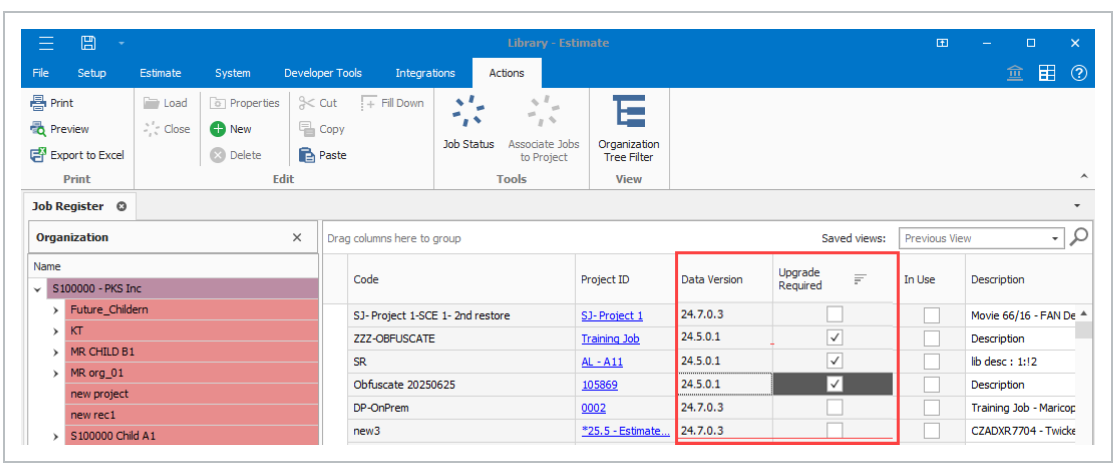
If you group by Project ID, and then select a node in the organization, you can see all the projects and their associated estimates belonging to that part of the organization. For example, there are three estimates associated with project 4985362 and one estimate associated with projects 4992404, 5013592 and 5013787. This view shows you the relationship between all the project and estimate associations.



4.4.6 Data Version and Upgrade Required Columns

There are two columns in the Job Register that help you identify a job's current data version and whether an upgrade is required for the job:

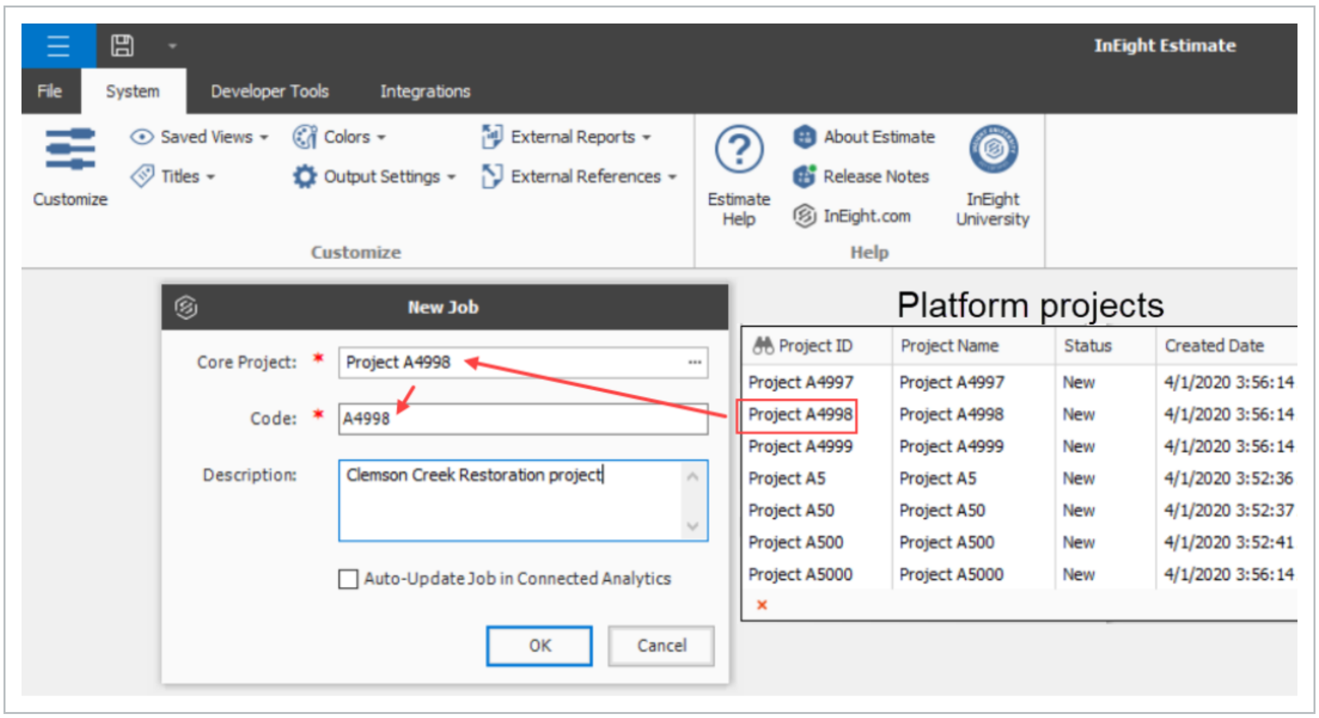
- **Data Version** - Identifies the current data version of the job which might be different from the Estimate application version. This column in not part of the standard view and must be added.
- **Upgrade Required** - identifies jobs that require an upgrade to match the current database version before they can be used in the application. The jobs that require an upgrade have the check box selected.



4.5 INEIGHT PLATFORM PROJECT ASSOCIATION

To create a job in Estimate, you must associate it to a project in Platform. Associating Platform projects lets you organize estimates directly from Platform's Organizational Breakdown Structure (OBS). Your location assignment in the OBS determines the access you inherit and the visibility you have to other areas of the OBS. For more information about associating a job to Platform, see Job Creation.

Extracting Platform project master data directly into Estimate promotes data consistency and helps ensure that the data is being pulled from a single source of truth.



Platform project-specific master data is maintained in one place, and then flows directly into Estimate in the cloud. Certain project data such as location and forecast start and finish dates are maintained in Platform which helps to enforce data consistency and reduce duplicate entries.

The table below shows the fields maintained in Platform's Project details that integrate with the Estimate's Overview tab in Job Properties.

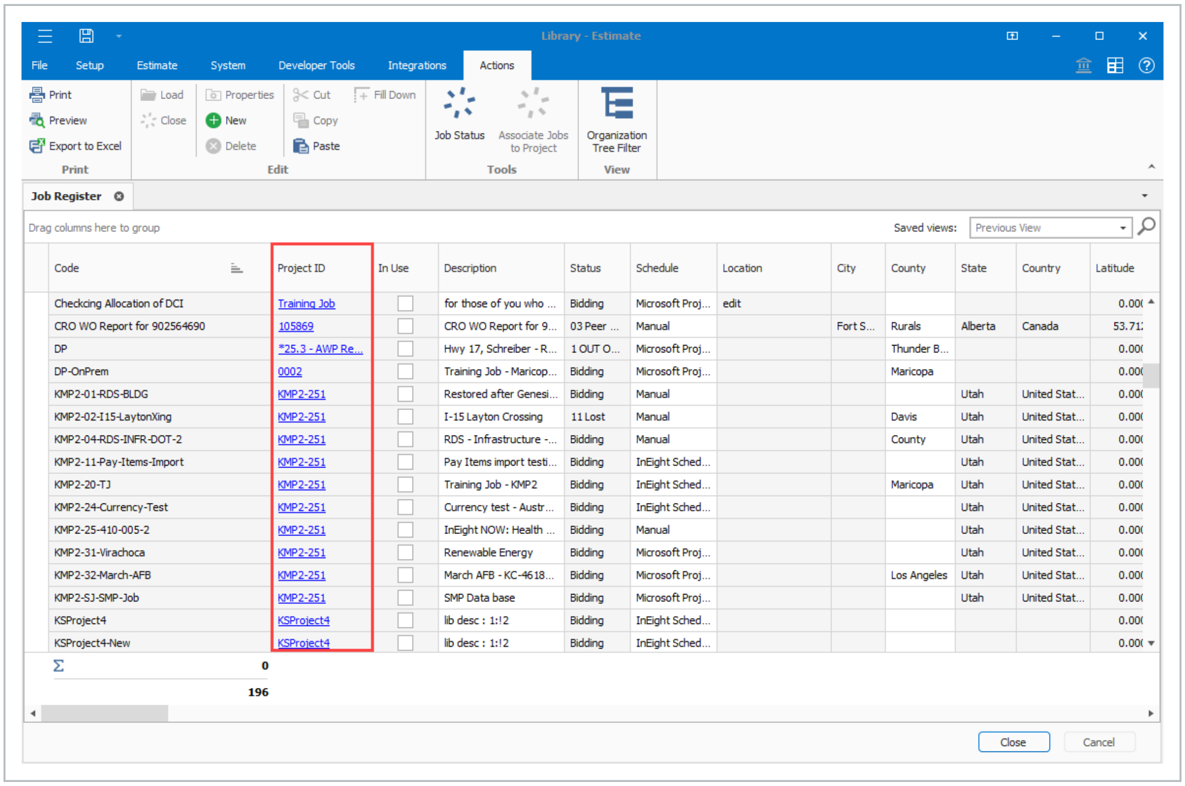
InEight Platform	InEight Estimate
Project ID	Project ID
Organization	Organization

InEight Platform	InEight Estimate
Name	Project Name
Notes	Project Notes

The table below shows the fields maintained in Platform's Project details that integrate with Estimate's Cover Sheet tab in Job Properties.

InEight Platform	InEight Estimate
Address 1	Location
City	City
Country/Region	Country
State	State
Latitude	Latitude
Longitude	Longitude
Forecast start date	Forecast Start
Forecast finish date	Forecast Finish

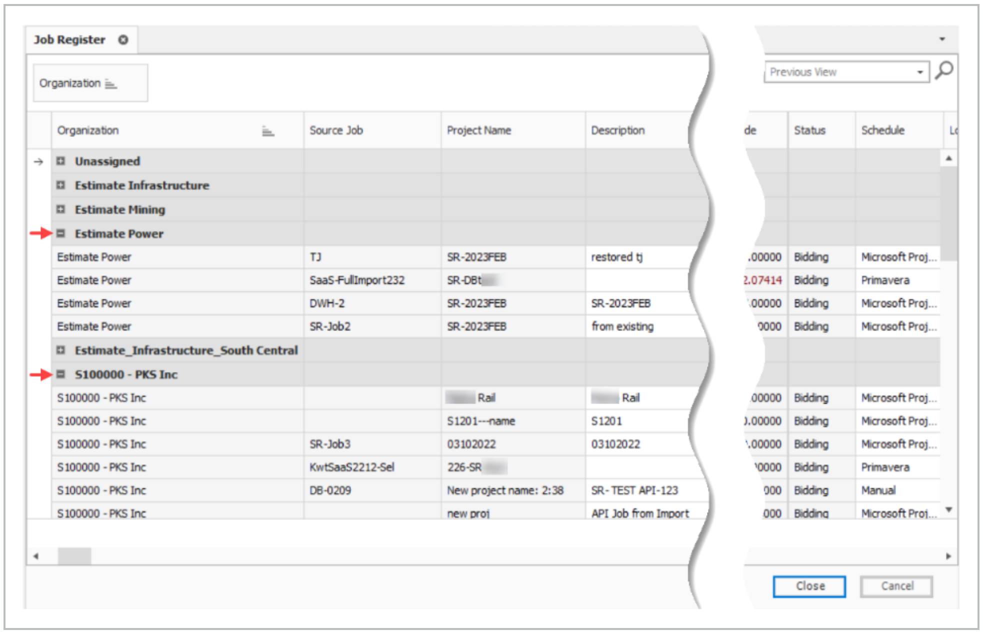
In Estimate, the Project ID field is a hyperlink field. You can click the hyperlink to navigate directly to the project Details page in Platform.



Modifications made to any of the integrated fields in Platform automatically show in Estimate. For example, when you change the name of the project in Platform to show the year 2025 instead of 2023, the change reflects in the in the Job Properties Project Name field form in Estimate.

4.5.1 Job register grouped by Platform project

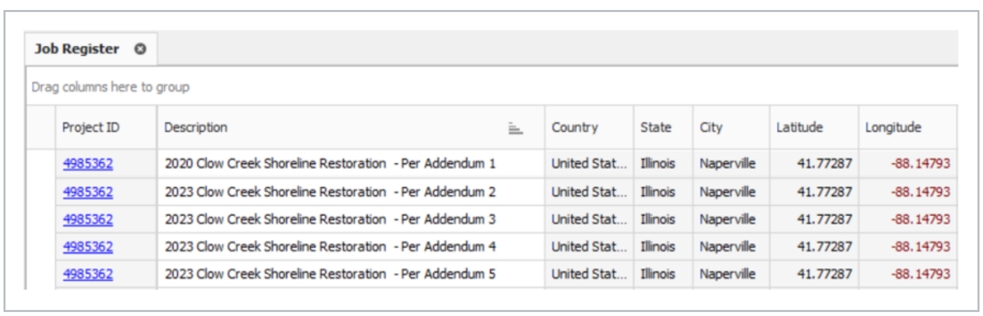
Grouping by organization lets you see projects batched in an organizational breakdown level, and lets you see a listing of projects in an organizational breakdown format and projects derived in Platform.



4.5.2 Manage Multiple Estimate Versions in the Job Register

An advantage to associating Estimate with Platform project data is the ability to manage multiple versions of estimates from one source project.

For example, if you have multiple addendums issued for the same project, you can maintain a version of the estimate for each addendum you've received.

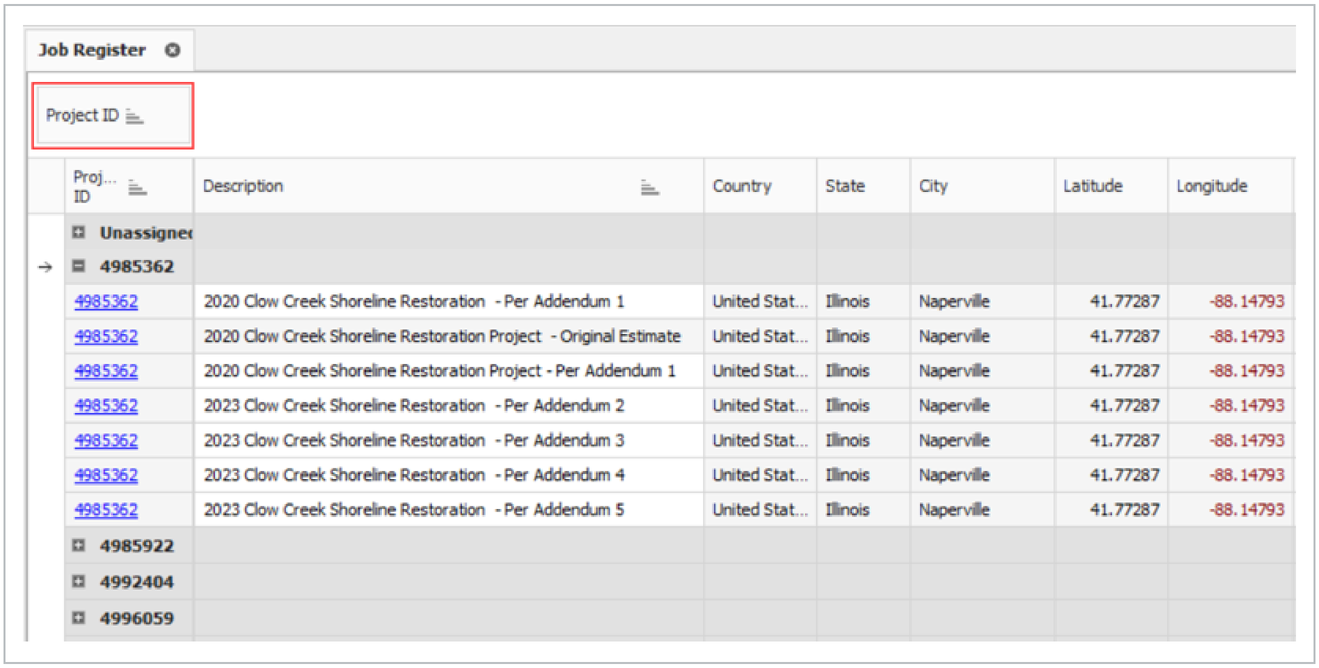


Job Register

Drag columns here to group

Project ID	Description	Country	State	City	Latitude	Longitude
4985362	2020 Clow Creek Shoreline Restoration - Per Addendum 1	United Stat...	Illinois	Naperville	41.77287	-88.14793
4985362	2023 Clow Creek Shoreline Restoration - Per Addendum 2	United Stat...	Illinois	Naperville	41.77287	-88.14793
4985362	2023 Clow Creek Shoreline Restoration - Per Addendum 3	United Stat...	Illinois	Naperville	41.77287	-88.14793
4985362	2023 Clow Creek Shoreline Restoration - Per Addendum 4	United Stat...	Illinois	Naperville	41.77287	-88.14793
4985362	2023 Clow Creek Shoreline Restoration - Per Addendum 5	United Stat...	Illinois	Naperville	41.77287	-88.14793

Grouping estimates together using a common project means there is no need to structure and enforce a job coding schema in Estimate on the Job Code, tag fields, or user defined fields to identify and manage different versions of a project in the Job register.

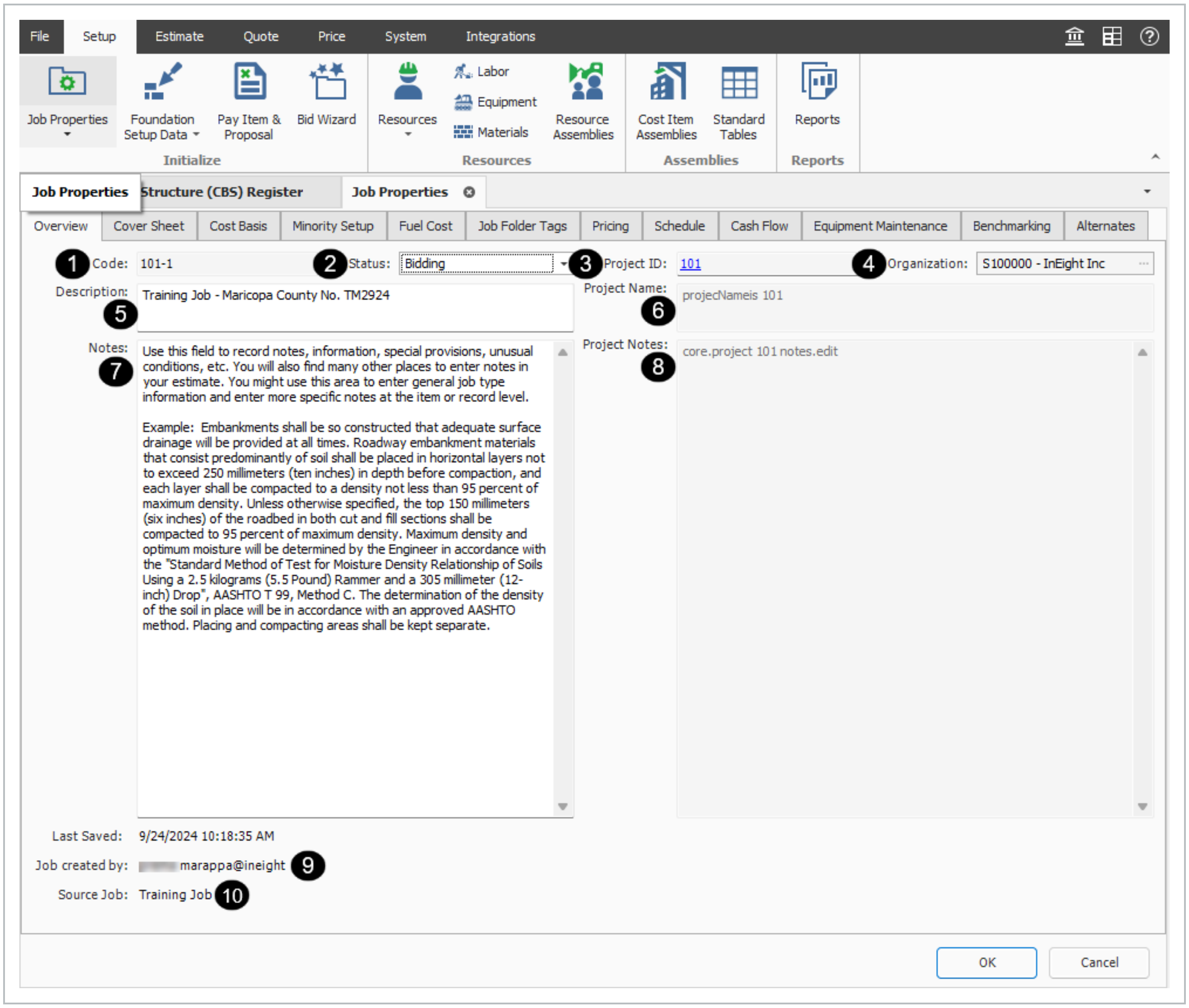


4.6 JOB PROPERTIES

When you create a new project, the Job Properties form automatically shows. This is where you can enter basic information about the project. You can access Job Properties on the InEight Estimate landing page > Setup > **Job Properties**.

4.6.1 Overview Tab

The Job Properties form opens to the Overview tab. The image and table below show the Overview options:



Overview Tab

Name		Description
1	**Code**	The name of the Estimate job. The name cannot be changed.
2	**Status**	Current state of the job, such as Bidding, Awarded, or Completed. • When searching for jobs in the Job Folders list, you can filter and sort jobs by their

Overview Tab (continued)

	Name	Description
		status. • You can set statuses for jobs to fit your company requirements in the Jobs Register > Actions > Tools > **Job Status**.
3	**Project ID**	Information in this field originates from the Platform project the estimate is associated with and cannot be changed. You can click the Project ID link to navigate to the project in Platform.
4	**Organization**	Information in this field originates from Platform.
5	**Description**	You can enter a job description. You can edit the description any time.
6	**Project name**	Information in this field originates from the Platform project the estimate is associated with and cannot be changed.
7	**Notes**	Add estimate related information, such as when creating multiple versions of an estimate for the same Platform project. For example, you can enter *This version is per addendum #1* or *This version is per a specified design change*, or *This version of the estimate is incorporating last minute changes*.

Overview Tab (continued)

	Name	Description
8	**Project Notes**	Information in this field originates from the Platform project the estimate is associated with. The notes can be added and edited at any time in Platform to document specific project-level details.
9	**Job created by**	Indicates the user or entity that initially created the job.
10	**Source job**	The name of the original job that the job was copied from.

When you copy a job, the new job shows the name of the person who created the copied job, and the name of the source job the job was copied from.

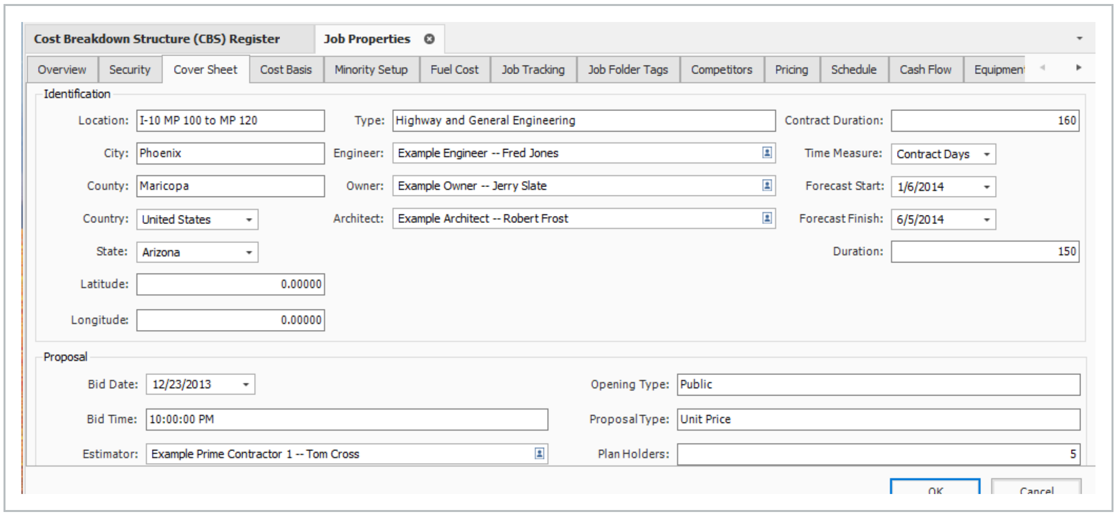
4.6.2 Cover Sheet Tab

The Cover Sheet tab is where you can define much of the general information about the project. It includes fields to identify the job's location, contacts, and bid details.

The following fields are available:

- Job Location
- City, County, Country, Province/State
- Job Type
- Engineer
- Owner
- Architect
- Forecast Start and Forecast Finish
- Bid Date and Bid Time
- Bid Location

- Estimator
- Opening Type and Proposal Type
- Liquidated Damages (if applicable)



The fields on this tab can be helpful for historical reference and job classification. It is good practice to complete as many of these fields as possible, so you can reference and find the project later. These fields can be updated as needed at any time.

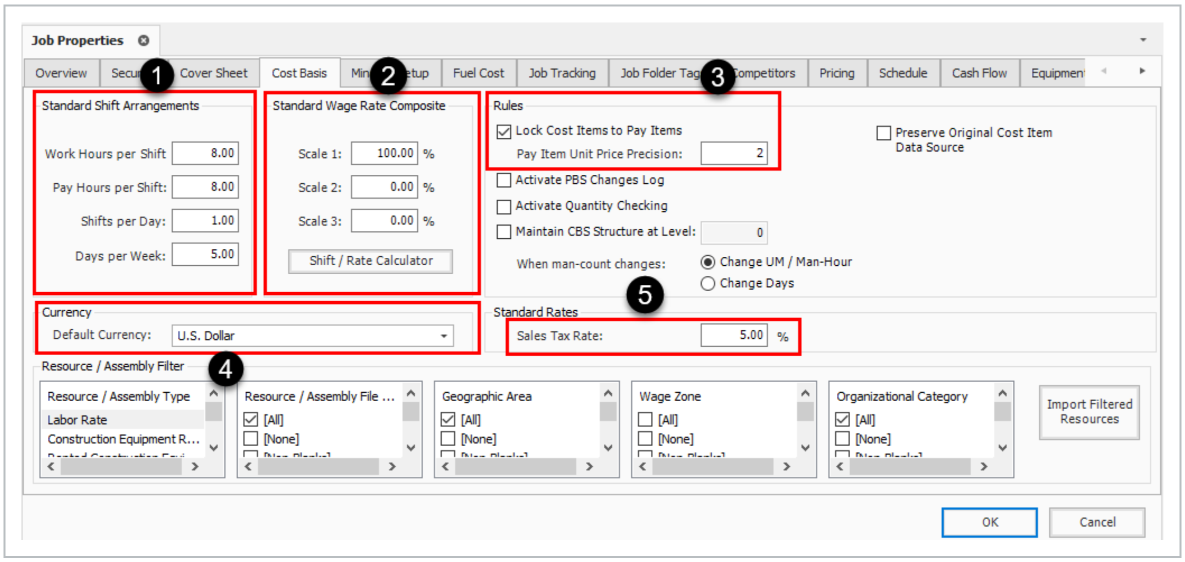
4.6.3 Cost Basis Tab

The Cost Basis tab has some important settings that will affect how costs are calculated in your estimate. The settings reviewed below are the ones you need to consider.

	Name	Description
1	Standard Shift Arrangements	The default standard shift arrangements are set up as 8 hours per shift, 1 shift per day, and 5 days per week; this can be changed if a project requires a different standard shift arrangement.
2	Standard Wage Rate Composite:	Allows you to indicate what percentage of your labor hours will be regular time (Scale 1), overtime (Scale 2) or double time (Scale 3). You can enter these percentages manually, or you can use the Shift Rate Calculator to obtain a more accurate figure.
3	Lock Cost Items to Pay Items:	For this sample job, you will check this box. When Cost Items are locked to Pay Items, your level 1 estimate structure is controlled by your list of pay items.

Name		Description
4	Default Currency:	The default will be set to U.S. Dollar, but this can be changed if needed.
5	Sales Tax Rate:	This field is not required but may be used to automatically apply a sales tax to all your material and rental items. The default is set to zero.

Cost Basis Tab Overview

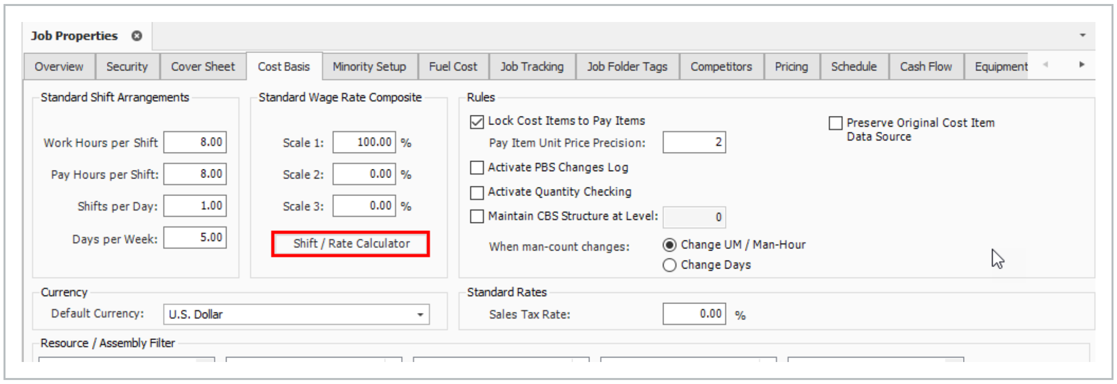


4.6.4 Shift Rate Calculator

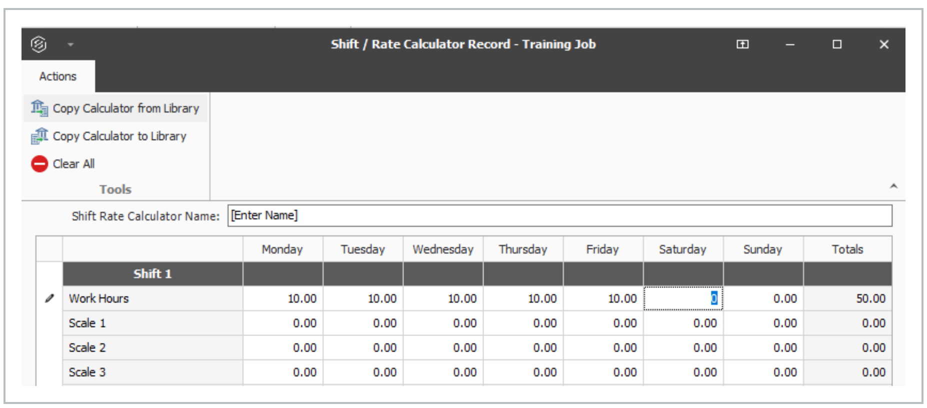
Take a closer look at calculating your shift rates using the Shift Rate Calculator. For this example, you will walk through setting up 2 shifts for your project.

Step by Step — Shift Rate Calculator

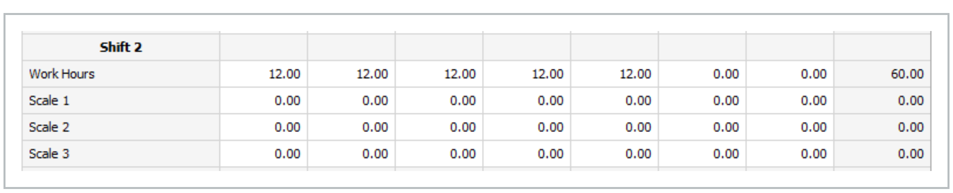
1. On the Job Properties > Cost Basis tab, select the **Shift Rate Calculator** button.



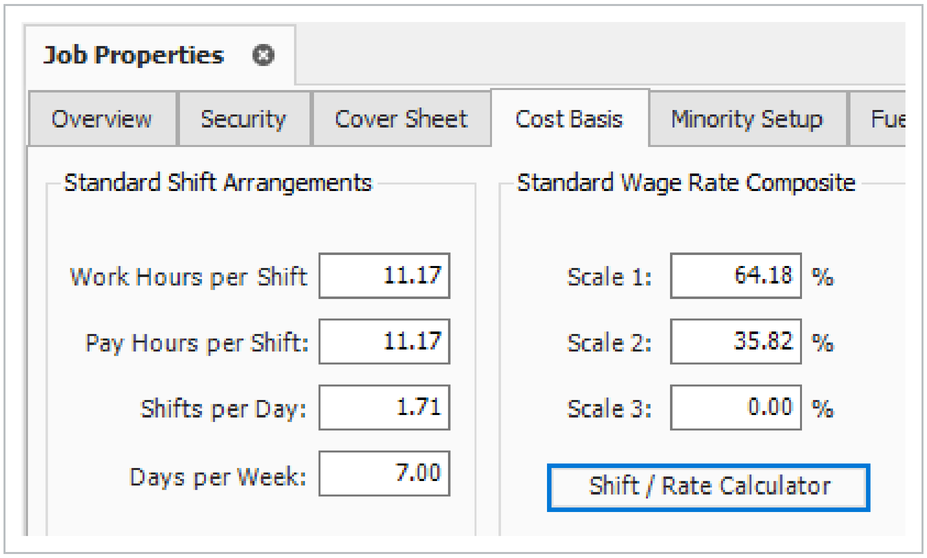
2. For Shift 1, type a **number value** of hours in the **Monday through Friday Work Hours** fields.
   - You can enter up to three shifts for the project
3. For Shift 1, type a **number value** of hours in the **Scale 1** fields.
   - Scale 1 will be your regular time and Scale 2 will be any overtime



4. Enter a **number value** for hours in the **Scale 2** fields (just Monday through Friday).
5. For Shift 2, type a **number value** for hours as you did above in Step 3.
6. Click **OK**.

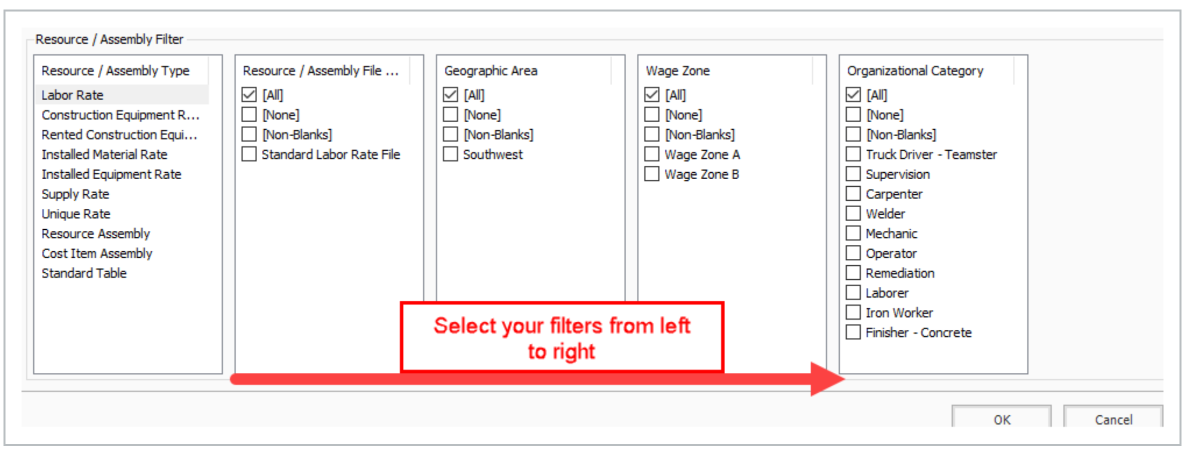


- Now you have a blended shift arrangement, and your labor rates are a blend of 64.18% straight-time and 35.82% overtime



4.6.5 Import Filtered Resources

You may have noticed the bottom portion of your Cost Basis tab called the Resource Filter.



The Resource Filter portion of the Cost Basis tab is the most important part of Job Properties. You use it to import your labor, equipment, and materials from the Library. Until you import filtered resources, you have no resources (labor, equipment, materials) in your project.

Updated resource rates can be imported into the Library on a regular basis. It is important to update and have the “Latest & Greatest” rates available to import into your estimates.

You will import the rates you need using a set of four filters called Resource Attributes. Especially for labor rates, filtering by these attributes allows you to pare down the master list to just the resources you need.

Each of the resource filter categories are open for use as determined best by your business. The following are examples of common uses:

Resource Attribute Filters	
Name	**Description**
Resource File Description	This attribute can be used to designate the rate type or the year to which the rates pertain.
Geographic Area	This attribute is used to designate regions, cities, or provinces based on geographical location of a project.
Wage Zone	This attribute is typically used specifically for labor resources. For example, it may designate the trade and union agreements your labor resources belong to.
Organizational Category	This attribute can be used to designate what trade or work type your resources pertain to.

Resource filters become more specific from left to right, so it makes sense to start with Resource File Description and end with Organizational Category. The geographic area, wage zone and organizational category attribute titles can be changed to meet your business needs for filtering resources.

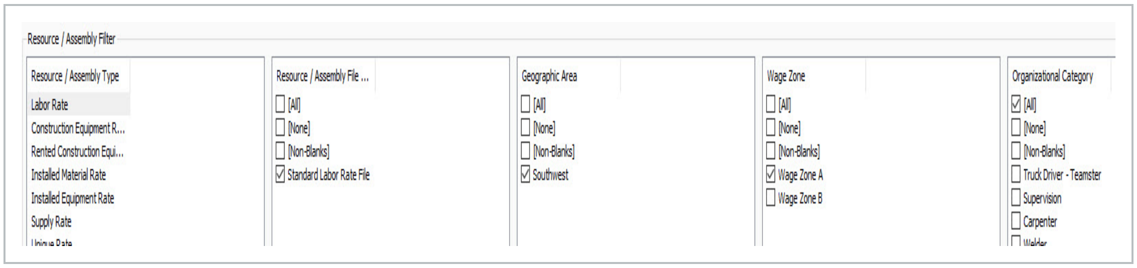
> You can sort the filter lists by clicking on the filter category titles.

The following steps walk through using the Resource Filter to import resources.

Step by Step – Import Filtered Resources

1. In your Job, go to the Job Properties > Cost Basis tab, select the **Labor Rate** resource type.
2. Under Resource File Description, select **Standard Labor Rate** File.
3. In the Geographic Area, select an **Area**.
4. For Wage Zone (Work Center), select a **Wage Zone**.

5. For Organizational Category, select **All**.
6. Follow the same steps for the remaining resource types.
7. Select the **Import Filtered Resources** button to bring your selected resources into the job.
   - For this example, we'll select the following filters for the Labor resource type:



You must select “Import Filtered Resources” to import your resources. Clicking **OK** on the Job Properties form will not import your resources.

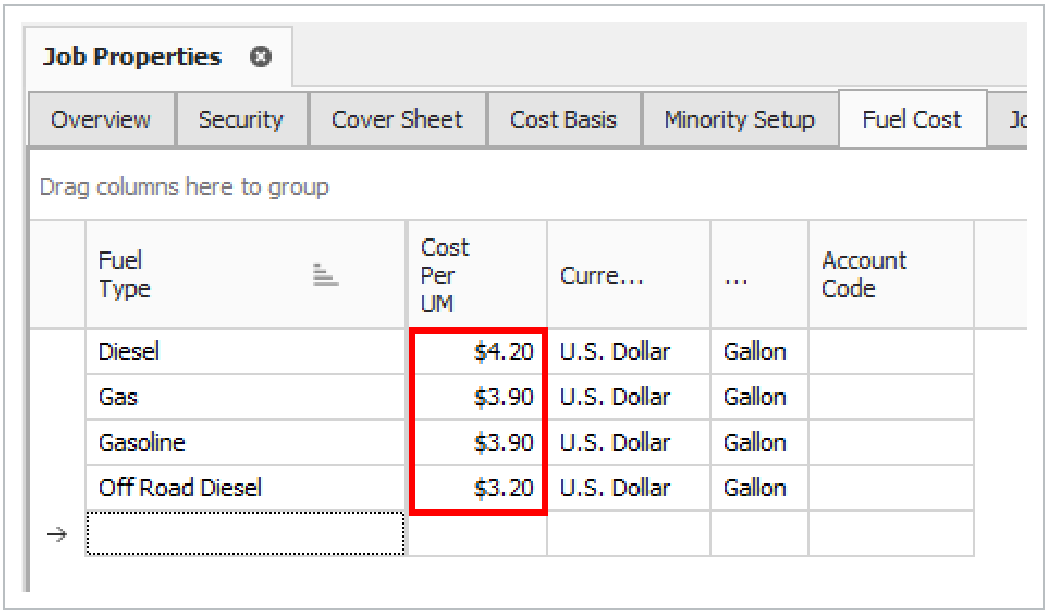
4.6.6 Fuel Cost Tab

On this tab you can enter the cost for fuel (or other energy sources). These unit cost will be multiplied by the consumption rates entered on each equipment record to define the fuel operating cost of each piece of equipment. The Cost per UM fields default to $0.00.

Step by Step – Enter Fuel Costs

1. In your job, open the **Job Properties** > **Fuel Cost** tab.
2. In Cost Per UM column, enter a **dollar amount** into the following:
   - Diesel
   - Gas & Gasoline

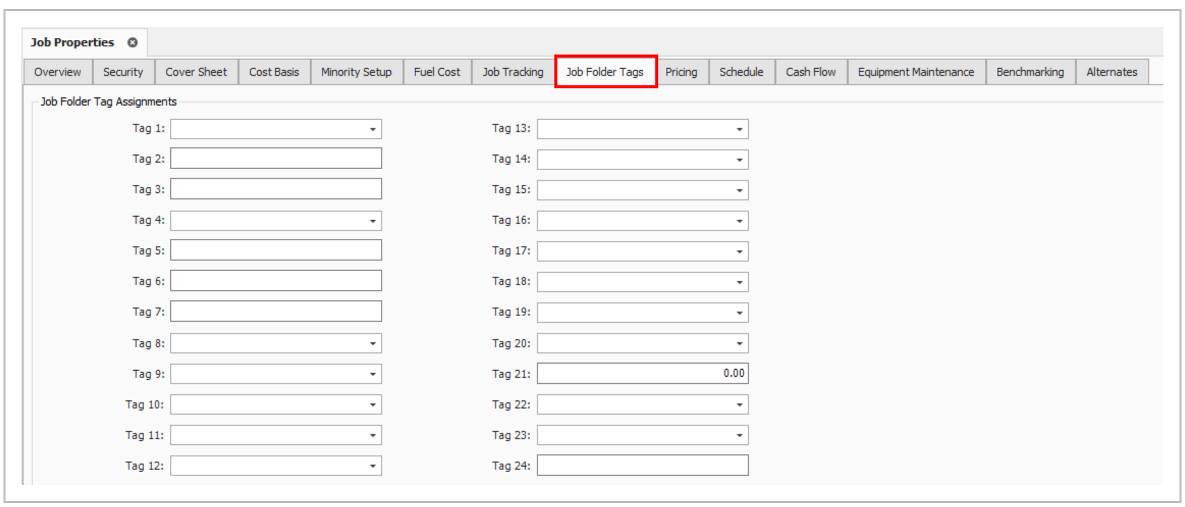
- Off Road Diesel



3. Currency should read U.S. Dollar and UM should read Gallon.

4.6.7 Job Folder Tags Tab

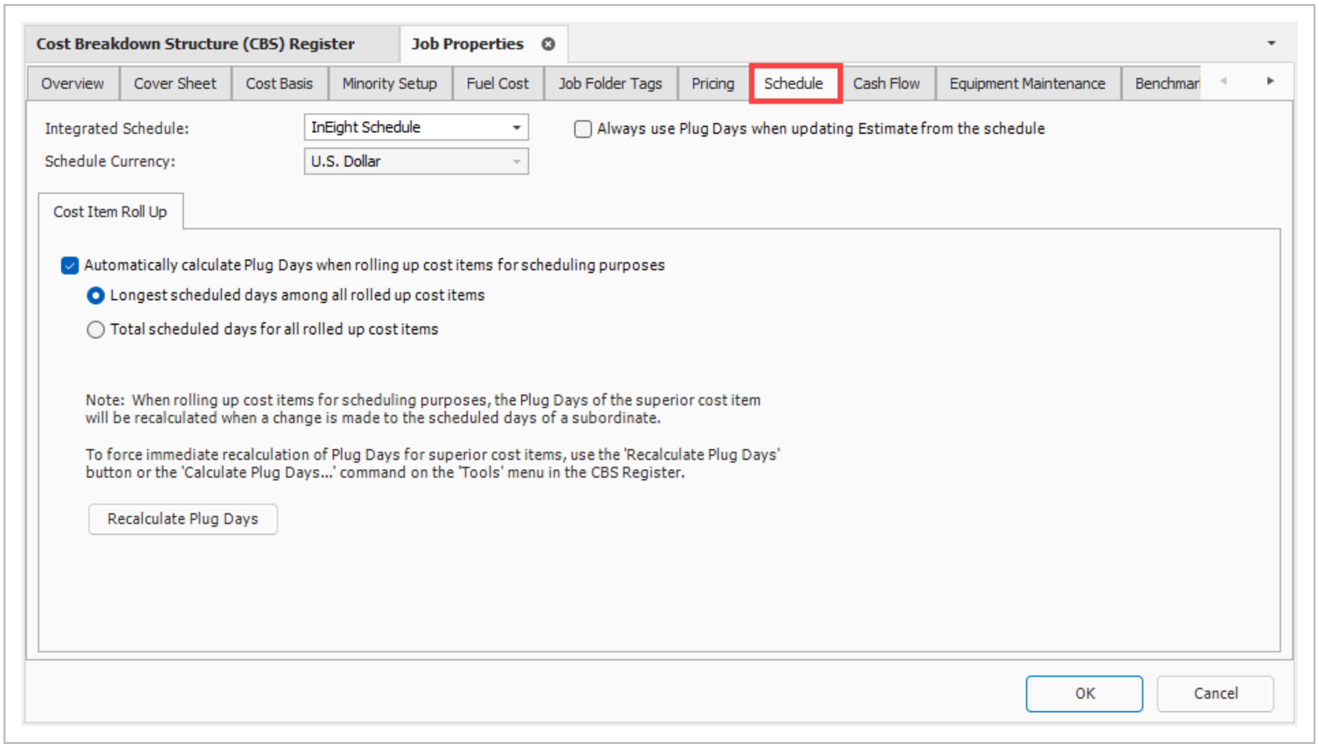
On this tab, you can enter tag fields to label your project, so you can reference it later.



Many of these fields are validated fields, meaning you can choose from options in a drop-down list. The names of these tags and the drop-down values are defined at a master level within the Library Foundation Setup Data. Some job folder tags are setup to be date fields or numerical fields. These tags are used to sort and filter the job register as well as for selecting which past estimates to utilize for benchmarking.

4.6.8 Schedule Tab

The Schedule tab is used to define the scheduling options for the integration of Estimate with InEight Schedule, Microsoft Project, or Primavera. The settings you define determine what information is sent to your scheduling application or tool, and how it's structured.



- **Integrated Schedule** – Select your integrated schedule from InEight Schedule, Microsoft Project, Primavera, or Manual.
- **Schedule Currency** – When you use Microsoft Project or Primavera, you can select the currency type used for the integration. The InEight Schedule and Manual option is set to U.S. Dollar by default.
- **Plug Days** - You can select **Always use Plug Days** when updating Estimate from schedule.
- **Cost Item Roll Up** – You can select to automatically calculate plug days when rolling up cost items for scheduling purposes.

4.6.9 Other Job Properties Tabs

There are several additional tabs on the Job Properties form. The other tabs will not be discussed here because they are either used for project controls, or they will be covered at another time.

Other Job Properties Tabs	
Name	**Function**
Minority Setup	Used to set up minority participation goals (for example, DBE or MBE) and you want to track minority participation goal attainment status during the bid process,
Job Tracking	Used to select the code that will be used when tracking job progress, define the planned production calculation, define the percent complete calculation, define the forecast methods, and define markup rates for calculating earned revenue on Time and Expense pay items.
Pricing	Used to define how you want the Balanced Unit Price for each of the job's pay items to be calculated when using the AutoPrice feature. You can also choose form several options in determining how markup is defined.
Cash Flow	Defines the cash flow rules (payment terms) that are used in the calculation of Job Financing and cost/revenue realization to generate the curves that display on the Cash Flow form.
Equipment Maintenance	Used to define the calculation of maintenance labor man-hours based on equipment utilization, to capture the impact on total man-hours when changes are made that affect the job's total value.
Benchmarking	Used to establish the historical data to be used for benchmarking the current job, and to define the default benchmark graph display and calculations.
Alternates	Used to define Alternate Scenarios, to assess the impact of those scenarios.

Exercise 4.1 – Define Job Properties

In this exercise, you will continue to define your Job Properties from the job you have created in two parts. Complete the following steps:

1. On the Cover Sheet tab, fill out the following fields:

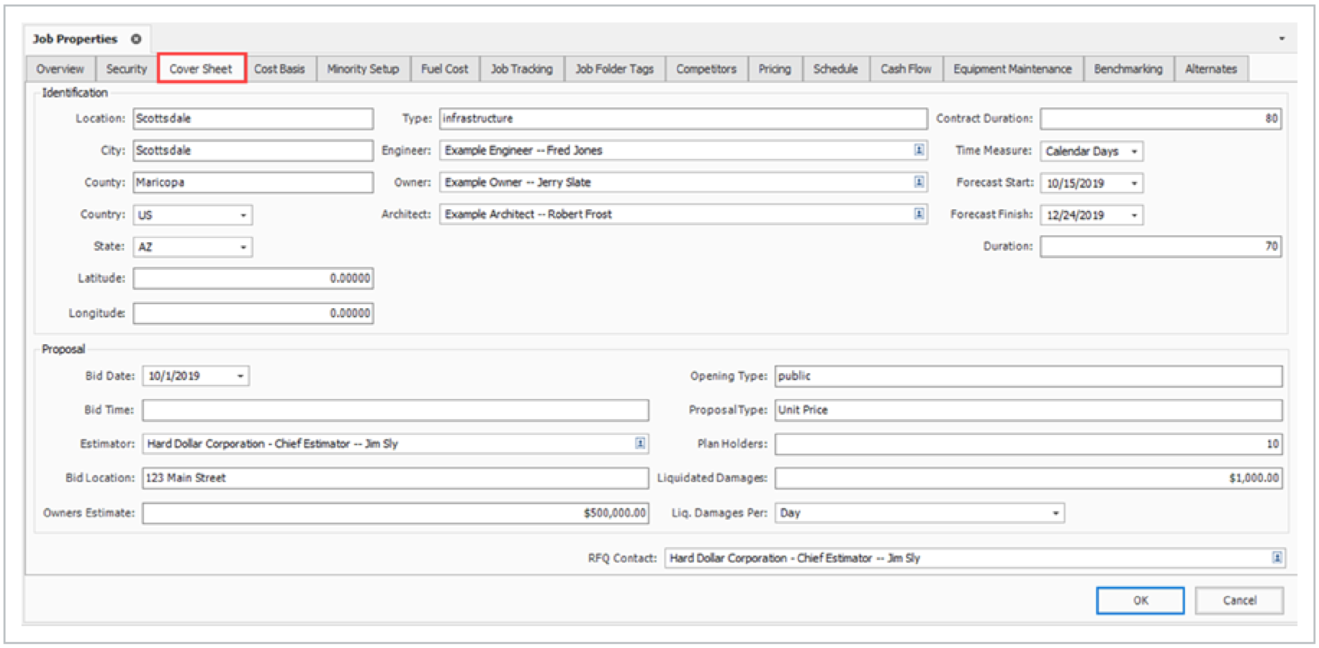
Job Location	90th Street & Shea
City	Scottsdale
County	Maricopa
Country	United States
State	Arizona
Type	Infrastructure
Engineer	Fred Jones
Owner	Jerry Slate
Architect	Robert Frost
Contract Duration	80
Time Measure	Calendar Days
Forecast Start	October 15, 2019
Duration (days)	70
Bid Date and Bid Time	10/1/2019 2:00 PM
Estimator	Jim Sly
Bid Location	123 Main Street
Owner's Estimate	$500,000.00
Opening Type	Public
Proposal Type	Unit Price
Plan Holders	10
Liquidated Damages	$1000.00 Per Day
RFQ Contact	Jim Sly

In this part 2 of this exercise, you will continue to define your Job Properties from the Job you have created. Complete the following steps:

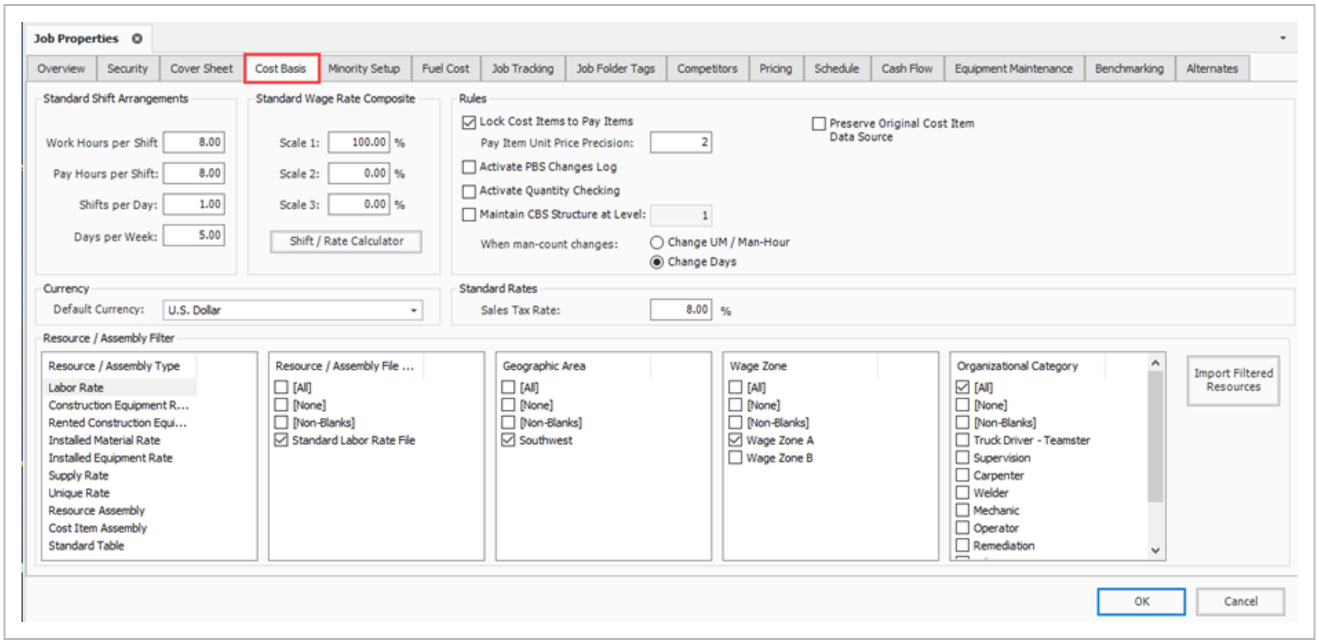
2. On the Cost Basis tab:
    - Ensure the **Shift Arrangement** is 8 hours a day, 5 days a week
    - Ensure the **Wage Composite** is set to 100% Scale 1
    - Ensure the **Sales Tax** is set to 8%

You should end up with similar results

The following Cover Sheet properties are defined:



The following Cost Basis settings are defined:



Congratulations, you have completed this exercise!

4.7 PAY ITEM CREATION

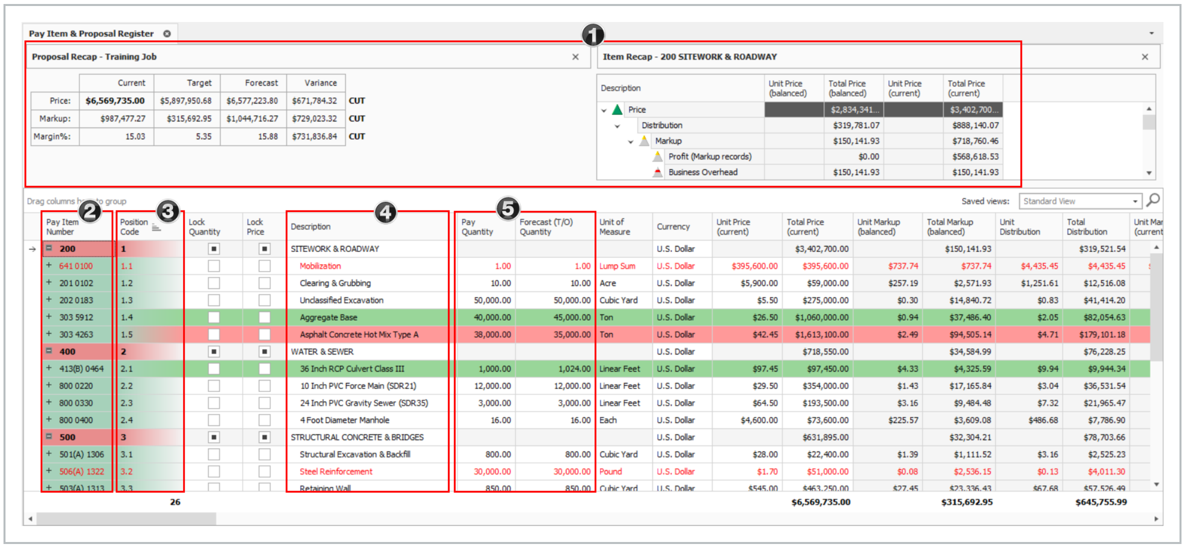
Pay items typically represent the owner required deliverables a contractor must submit pricing for. Within InEight Estimate, pay items are used to distribute the cost calculated in the Cost Breakdown Structure and all markup, fees or contingency calculated in the Price Breakdown Structure to a list of defined items. This allows the total estimate value to be distributed to a structure that is different then the CBS. Pay Items are predominantly used by Contractors to prepare a bid sheet. Owners may use pay items to identify funding sources or for various reporting needs.

Many Bid Forms are organized by grouping bid items for related scopes of work. Pay items within the Pay Item and Proposal screen can be grouped in a hierarchy by utilizing the Position Code column.

You can create pay items in the Pay Item & Proposal Register. Access this form by selecting the **Setup** tab > **Pay Item & Proposal**.

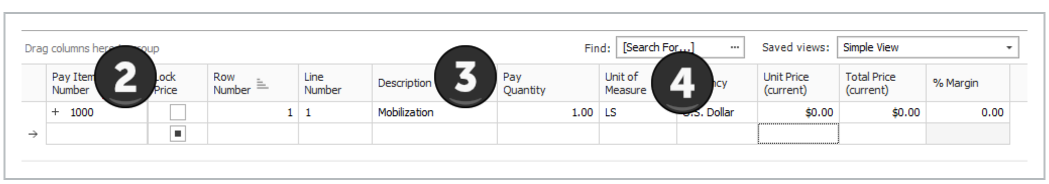
Name		Description
1	Proposal and Item Recaps	Related to pricing during bid close-out. You can disregard them at this time.
2	Pay Item Number	Represents the bid item number from the client (if they give you one) or can be a number you specify. This field is alpha-numeric
3	Position Code	Controls the way pay items can be grouped, and provide you with an efficient way to sort.
4	Description	You can enter a pay item description.
5	Pay Quantity and Forecast (T/O) Quantity	The Pay Quantity is the quantity provided by the client. The Forecast (T/O) Quantity is your measured quantity for the item.

4.7.1 Overview - Pay Item & Proposal Register



Step by Step – Create a Pay Item

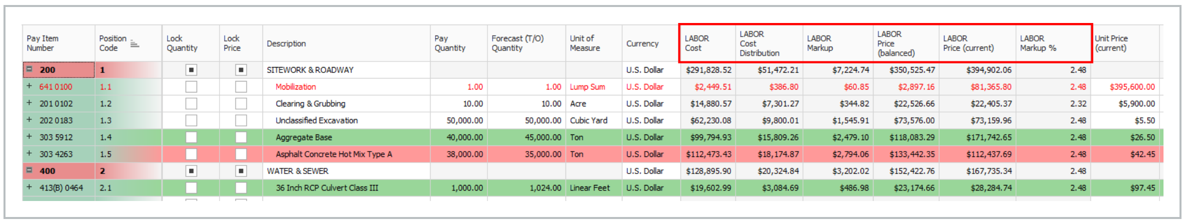
1. Open your job and select **Setup** tab **>Pay Item & Proposal** from the InEight Estimate landing page.
   - The Pay Item & Proposal Register displays
2. In the Pay Item Number column, in the first blank row, type a **number value**.
3. Use the Tab key to move to the Description column and type a **description**.
4. Leave the Pay Quantity at 1.00 and change the Unit of Measure to **LS (Lump Sum)**.
   - The Forecast (T/O) Quantity will auto populate to match your pay quantity, but can be changed later
   - You can tab to the next row to create additional pay items if needed



4.7.2 Pay Item Prices by Category

Owners are increasingly requiring more information from contractors as part of their bid submissions. Many times, this is a further breakdown of a bid price such as separating the price of an item based on its labor cost, material cost or man-hours. Select columns in the Pay Item & Proposal register enable users to summarize their pay item prices by up to 10 price categories.

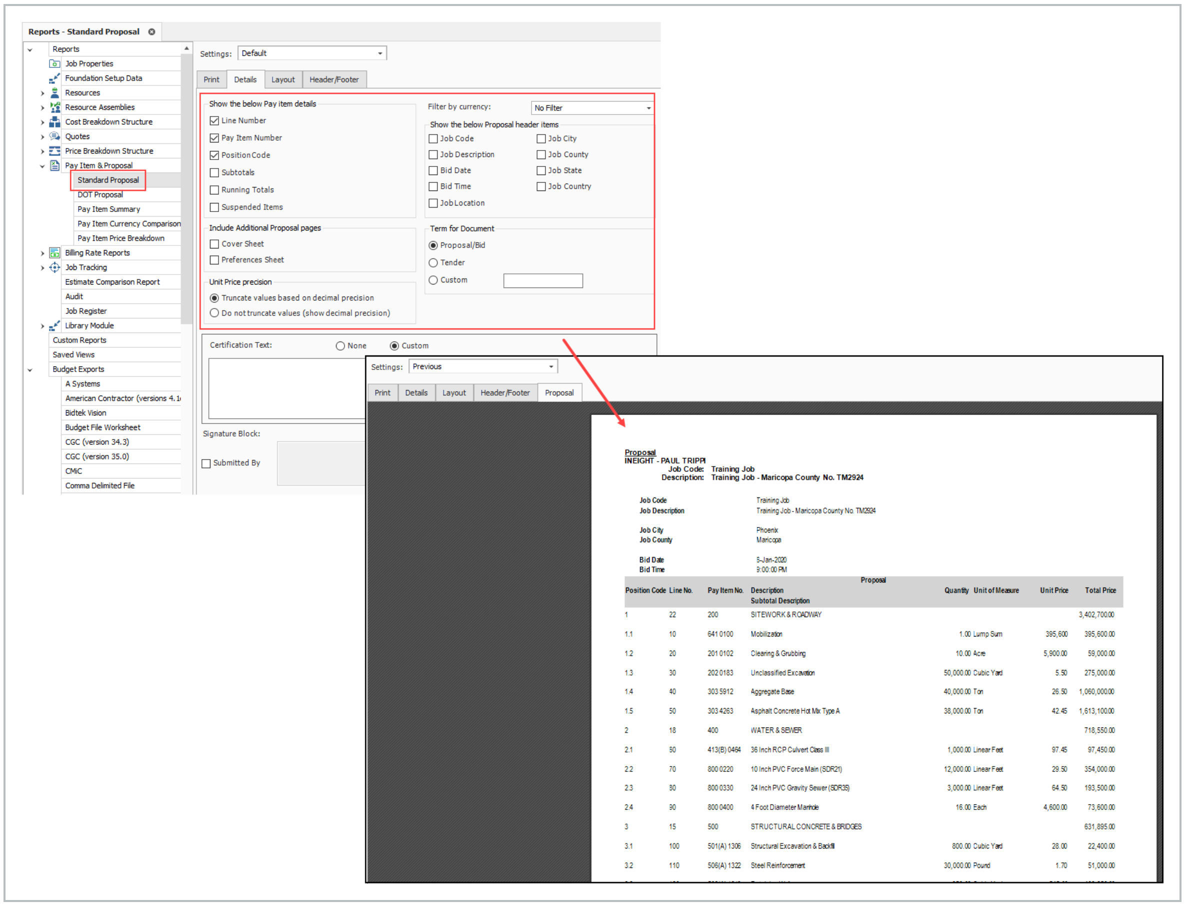
In addition to seeing the price by category, these additional columns also give users better visibility into how the price is established, including columns for the total cost, total distribution, total markup and markup percent. These new columns make it easier to verify that the distribution of unassigned cost and markup are calculated as intended by the estimator.



Pay Item Number	Position Code	Lock Quantity	Lock Price	Description	Pay Quantity	Forecast (T/O) Quantity	Unit of Measure	Currency	LABOR Cost	LABOR Cost Distribution	LABOR Markup	LABOR Price (balanced)	LABOR Price (current)	LABOR Markup %	Unit Price (current)
200	1	■	■	SITEWORK & ROADWAY				U.S. Dollar	$291,828.52	$51,472.21	$7,224.74	$350,525.47	$394,902.06	2.48	
641 0100	1.1			Mobilization	1.00	1.00	Lump Sum	U.S. Dollar	$2,449.51	$386.80	$60.85	$2,897.16	$81,365.80	2.48	$395,600.00
201 0102	1.2			Clearing & Grubbing	10.00	10.00	Acre	U.S. Dollar	$14,880.57	$7,301.27	$344.82	$22,526.66	$22,405.37	2.32	$5,900.00
202 0183	1.3			Unclassified Excavation	50,000.00	50,000.00	Cubic Yard	U.S. Dollar	$62,230.08	$9,800.01	$1,545.91	$73,576.00	$73,159.96	2.48	$5.50
303 5912	1.4			Aggregate Base	40,000.00	45,000.00	Ton	U.S. Dollar	$99,794.93	$15,809.26	$2,479.10	$118,083.29	$171,742.65	2.48	$26.50
303 4263	1.5			Asphalt Concrete Hot Mix Type A	38,000.00	35,000.00	Ton	U.S. Dollar	$112,473.43	$18,174.87	$2,794.06	$133,442.35	$112,437.69	2.48	$42.45
400	2	■	■	WATER & SEWER				U.S. Dollar	$128,895.90	$20,324.84	$3,202.02	$152,422.76	$167,735.34	2.48	
413(B) 0464	2.1			36 Inch RCP Culvert Class III	1,000.00	1,024.00	Linear Feet	U.S. Dollar	$19,602.99	$3,084.69	$486.98	$23,174.66	$28,284.74	2.48	$97.45

4.7.3 Standard Proposal report

The Pay Item Standard Proposal report is located in Execution > Reports > Pay Item & Proposal > **Standard Proposal**, and is intended to be used as a bid form, and distributed to other clients, partners, and contractors. In the Details box below, you can determine which key fields you want included and shown on your standard proposal report.


Reports - Standard Proposal
Reports
Job Properties
Foundation Setup Data
Resources
Resource Assemblies
Cost Breakdown Structure
Quotes
Price Breakdown Structure
Pay Item & Proposal
Standard Proposal
DOT Proposal
Pay Item Summary
Pay Item Currency Comparison
Pay Item Price Breakdown
Billing Rate Reports
Job Tracking
Estimate Comparison Report
Audit
Job Register
Library Module
Custom Reports
Saved Views
Budget Exports
A Systems
Bidtek Vision
Budget File Worksheet
CGC (version 34.3)
CGC (version 35.0)
CMiC
Comma Delimited File
Settings: Default
Print
Details
Layout
Header/Footer
Show the below Pay item details
Line Number
Pay Item Number
Position Code
Subtotals
Running Totals
Suspended Items
Filter by currency: No Filter
Show the below Proposal header items
Job Code
Job City
Job Description
Job County
Bid Date
Job State
Bid Time
Job Country
Job Location
Include Additional Proposal pages
Cover Sheet
Preferences Sheet
Term for Document
Proposal/Bid
Tender
Custom
Unit Price precision
Truncate values based on decimal precision
Do not truncate values (show decimal precision)
Certification Text:
None
Custom
Signature Block:
Submitted By
Settings: Previous
Proposal

Exercise 4.2 – Create Pay Items

In this exercise, you will practice creating pay items in the Pay Item & Proposal Register. Complete the following steps, using a job of your own.

Position Code	Pay Item Number	Description	Pay Quantity	Unit of Measure
1	200	SITEWORK & ROADWAY		
1.1	641 0100	Mobilization	1	LS
1.2	201 0102	Clearing & Grubbing	10	Acre
1.3	202 0183	Excavation	50,000	CY
2	400	WATER & SEWER		
2.1	800 0220	10 PVC Pipe	1,000	LF

You should end up with the following results:

Position Code	Pay Item Number	Description	Pay Quantity	Forecast (T/O) Quantity	Unit of Measure
1	**200**	SITEWORK & ROADWAY			
1.1	641 0100	Mobilization	1.00	1.00	LS
1.2	201 0102	Clearing & Grubbing	10.00	10.00	Acre
1.3	202 0183	Excavation	50,000.00	50,000.00	CY
2	**400**	WATER & SEWER			
2.1	800 0220	10 PVC Pipe	1,000.00	1,000.00	LF

Congratulations, you have completed this exercise!

Lesson 4 Review

1. This is where you enter basic information about the job as well as define your cost basis.
    a. Pay Item & Proposal
    b. Job Properties
    c. Library
    d. Job Folder

---

2. On the Job Properties form, this tab is where you enter information such as the start date, bid date, job type and location.
    a. Overview
    b. Cover Sheet
    c. Cost Basis
    d. Foundation Setup Data

---

3. These are the project deliverables; anything the owner agrees to measure and pay for.
    a. Cost Items
    b. Resources
    c. Target Price
    d. Pay Items

Lesson 4 Summary

As a result of this lesson, you can:

- Create a new job
- Enter Job Properties
- Create pay items in the Pay Item & Proposal Register

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LESSON 5 – DIRECT COSTS

Lesson Duration: 30 Minutes

Lesson Objectives

After completing this lesson, you will be able to:

- Explain the Cost Breakdown Structure and its purpose
- Create cost items
- Add costs and production
- Manage cost item details

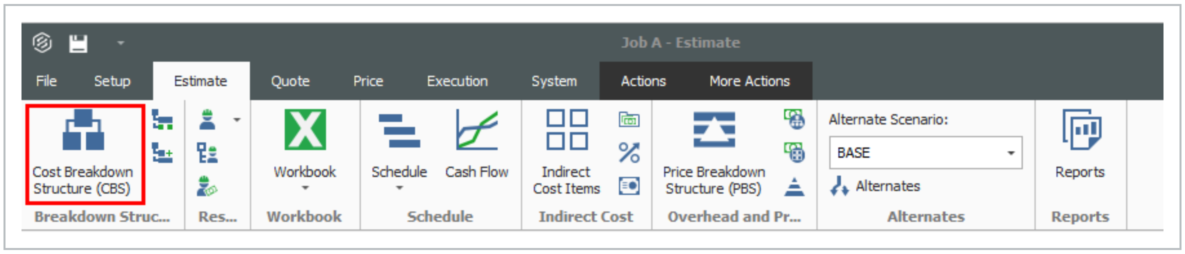
Lesson Topics

5.1 COST BREAKDOWN STRUCTURES

The Cost Breakdown Structure (CBS) is the main form where you will do your cost estimating.

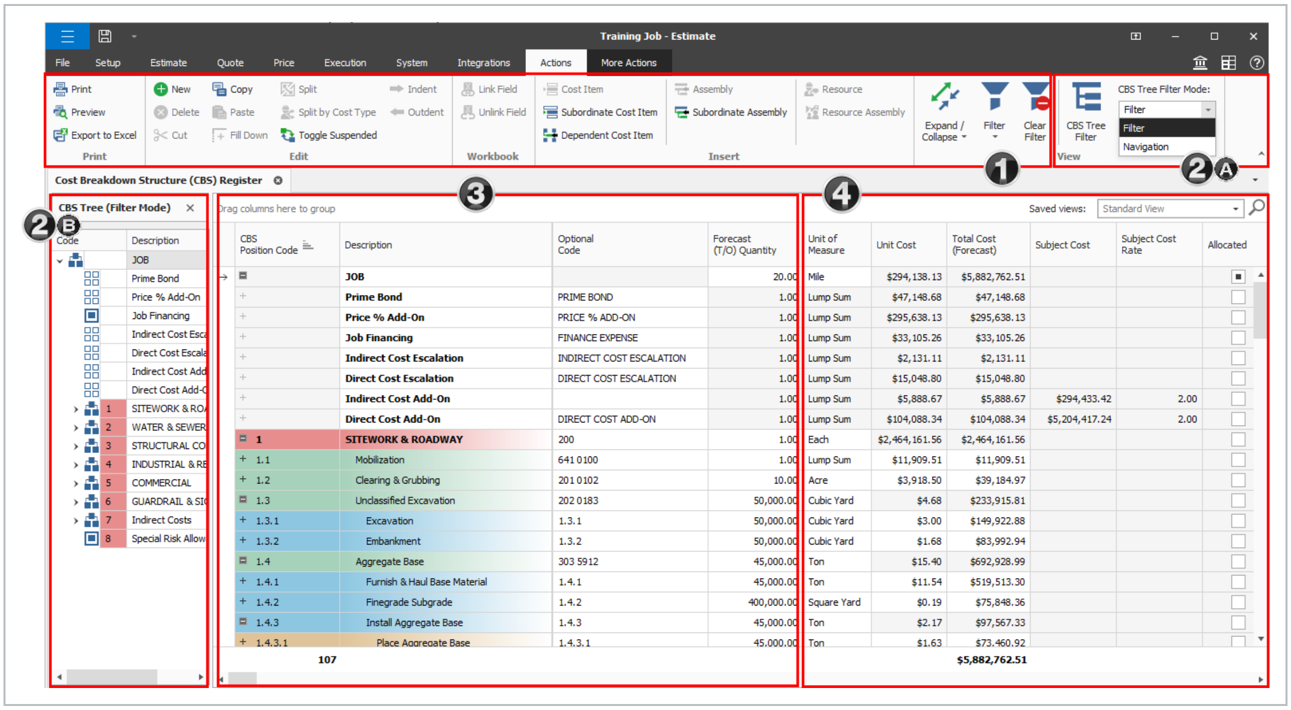
- It is the hierarchy of work activities that make up the estimate
- Each row in the CBS represents a work activity or organizing category and is called a cost item

To access the Cost Breakdown Structure, from the InEight Estimate landing page select the **Estimate** tab, then under the Breakdown Structure section select **Cost Breakdown Structure (CBS)**.



Overview - Cost Breakdown Structure (CBS) Register

Name		Description
1	Actions Menu	Shortcut icons allow you to edit cost items and import items from other sources such as Excel.
2A	CBS Tree Filter Mode (drop-down)	The CBS Tree filter shows the CBS hierarchy and is used to quickly help filter cost items, instead of scrolling the CBS to locate certain cost items. The CBS Tree Filter lets you choose between a filter mode or a new navigation mode.
2B	CBS Tree Filter or Navigation Mode	Both Filter and Navigation modes on the left side of the page provides you with the visibility of your entire CBS structure, as well as giving you the option to navigate and filter throughout the CBS estimate. The Cost Item record can also be tiled next to the tree to make navigating and filtering possible, while viewing all the cost item record details at the same time.
3	Left CBS register	This side of the register contains all of the estimate activities (cost items) that you create or import, organized into a parent-child hierarchy.
4	Right CBS register	This side of the register contains numerous columns for cost detail, production values, and user-defined tags and fields.



5.1.1 Cost Item Terminology

The CBS contains both direct and indirect costs.

- **Direct Cost Items** contain costs that pertain directly to the deliverables of the project. Therefore, direct cost items are typically assigned to pay items
- **Indirect Cost Items** contain overhead costs that are not directly associated with particular deliverable items but contribute to the total cost of the project (e.g., supervision, site office, safety supplies, bid securities). Occasionally an indirect cost item may be assigned to a pay item (e.g., Mobilization costs that are indirect but assigned to a Mobilization pay item).

InEight Estimate uses various terms to describe the parent-child relationships of the multiple levels in the CBS:

Terms	Description
Superior	A Superior cost item has subordinate (child) items below it that determine hours and costs.
Subordinate	A Subordinate cost item is a child to a Superior cost item.
Terminal	A Terminal cost item has no subordinate items. Resources, costs, and production can only be added at the terminal cost item level.

> A Terminal cost item may or may not be a subordinate.

The levels of the CBS are referred to as Level 1, Level 2, etc., as you drill down in the structure. As costs are defined on the terminal items, the sum of the terminal cost items roll up to the superior cost items.

> A superior cost item can have no costs of its own; its costs are strictly the rolled-up total from the subordinate cost items below it.

You can use superior cost items as buckets for organizing your work.

As hours and costs are defined on the terminal items, the sum of the terminal cost items roll up to the superior cost items.

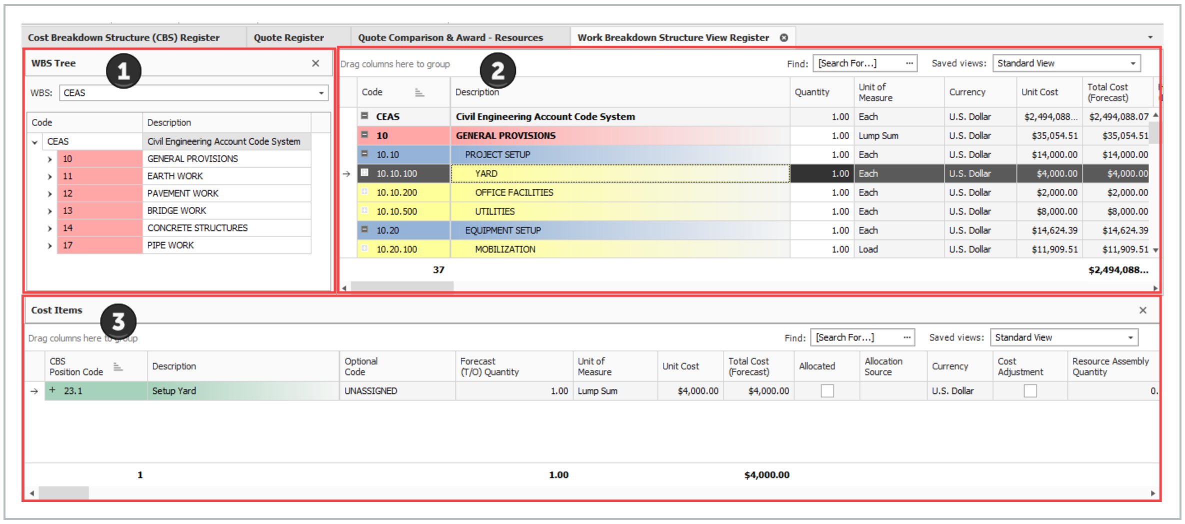
5.1.2 Work Breakdown Structures

The Work Breakdown Structure (WBS) allows you to reorganize the estimate using different formats such as Construction Specifications Institute (CSI) MasterFormat or UniFormat. WBS formats are used when you need multiple variations and summary reports of an estimate. The WBS retains the same relationships between items as in the original estimate while only changing the view and items arrangement in the WBS hierarchy.

To view the Work Breakdown Structure View Register, in the Ribbon select the tab **Estimate > Work Breakdown Structures**.

Overview - Work Breakdown Structure (WBS) View Register

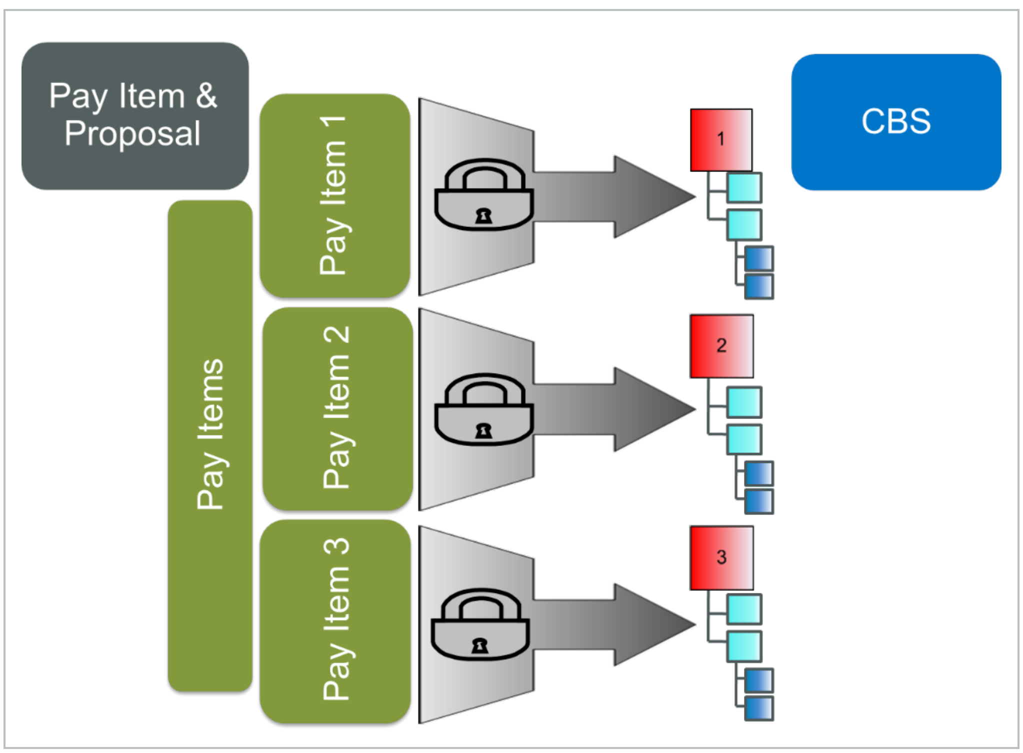
Name		Description
1	WBS Tree	Use the WBS Tree to filter to a particular WBS item.
2	WBS Grid	When a specific WBS item is selected in the WBS Tree, all subordinate WBS items display in the WBS grid.
3	Cost Items	The Cost Items associated with the WBS subordinate in the WBS Grid displays in this data block.



5.1.3 Locked vs. Unlocked Approach

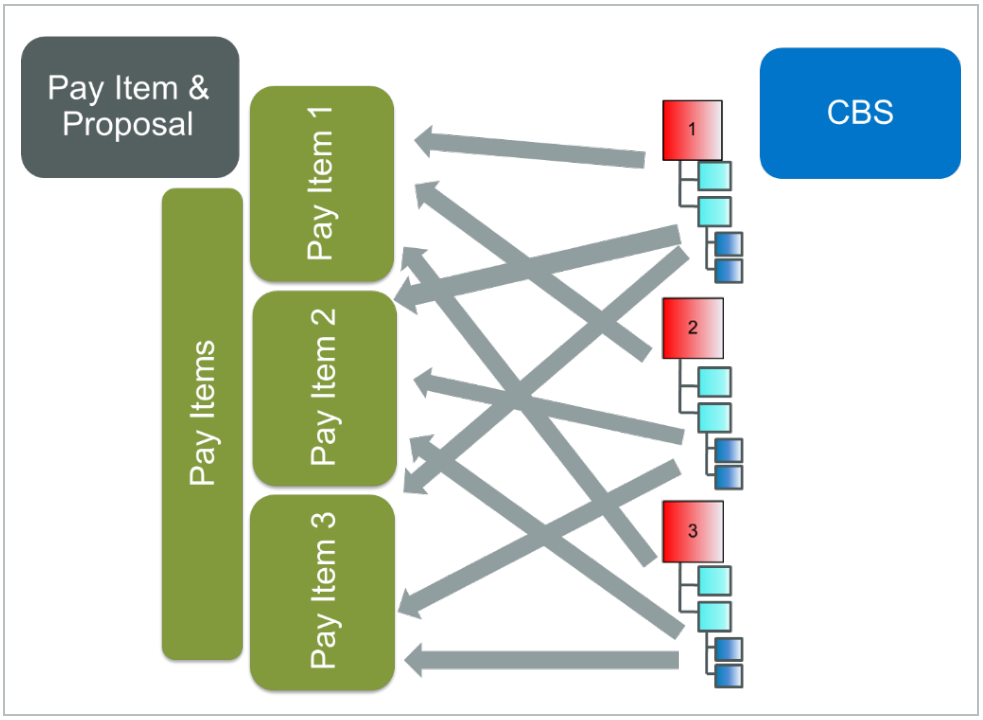
There are two basic approaches to structuring your cost items and pay items. You can choose to work in a “locked approach” or an “unlocked approach.”

In a locked approach, level one cost items are automatically created and assigned to pay items. This locked approach works well when pay items adequately represent the work plan. Subordinate cost items inherit the pay item assignment of superior cost items.

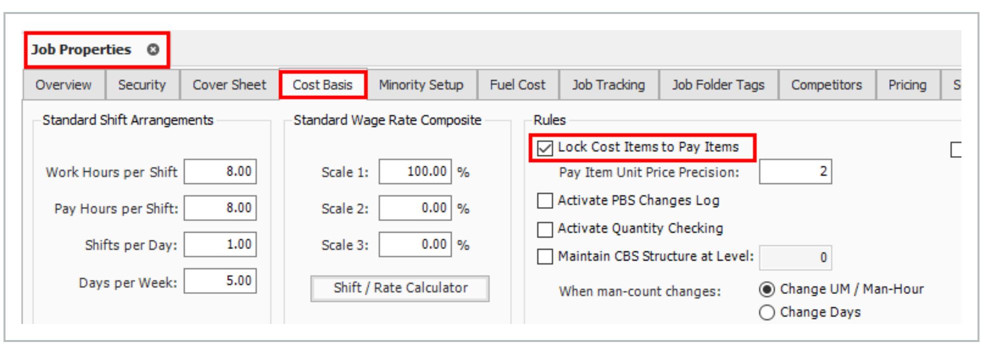


> If the Lock Cost Items to Pay Item rule is checked in Job Properties, InEight Estimate will automatically create level 1 cost items in the CBS Register for each of your pay items.

The unlocked approach may work better when the pay items do not adequately represent the work plan. You can then assign your cost items to your pay items in any arrangement. Companies looking to standardize the way they estimate and use templates will want to use this approach as it allows you to dictate the cost breakdown structure. Owners will also typically use the unlocked approach since pay items are not necessary to their estimating process.



The option of working in a locked approach vs. an unlocked approach is available in the Job Properties Form, on the Cost Basis tab under the Rules section. By selecting the checkbox for Lock Cost items to Pay Item, you are choosing to work in a locked approach.



5.1.4 Take-Off Quantities

In the Cost Breakdown Structure, estimated quantities are entered into the Forecast (T/O) Quantity field with a corresponding unit of measure. The quantity will default to 1 each when you create a new cost item and should be updated to reflect the work being estimated.

CBS Position Code	Description	Forecast (T/O) Quantity
1	**Mobilization**	1.00
2	**Clearing & Grubbing**	10.00
3	**Unclassified Excavation**	50,000.00
3.1	Excavation	50,000.00
3.2	Embankment	50,000.00
4	**Aggregate Base**	45,000.00
4.1	Furnish & Haul Base Material	45,000.00
4.2	Finegrade Subgrade	400,000.00
4.3	Install Aggregate Base	45,000.00
4.3.1	Place Aggregate Base	45,000.00
4.3.2	Blue Top Aggregate Base	400,000.00

Forecast (T/O) Quantities are only used for your cost items in the CBS Register.
Pay Quantities are used for final pricing in the PBS and Pay Item & Proposal forms.

Because the training project is a “locked” job, you already have level 1 cost items, and their default take-off quantities are populated from their corresponding pay item quantities.

The following step by step walks you through adjusting the default take-off quantities on a couple of your cost items.

Step by Step – Adjust take-off quantities

1. From the Estimate tab, select **Cost Breakdown Structure (CBS)**.
2. In the Forecast (T/O) Quantity column, the Forecast (T/O) Quantity is brought over from the Pay Item & Proposal Register, but here you can adjust it if needed. Practice adjusting the Forecast T/O quantity of one of your cost items.
   - For this example, we’ll change Clearing and Grubbing to **15.00 Acre** and Excavation to **40,000 CY**.

1	SITEWORK & ROADWAY	1.00	Each
1.1	Mobilization	1.00	LS
1.2	Clearing & Grubbing	15.00	Acre
1.3	Excavation	40,000.00	CY
2	WATER & SEWER	1.00	Each
2.1	10 PVC Pipe	1,000.00	LF

5.2 COST ITEM CREATION

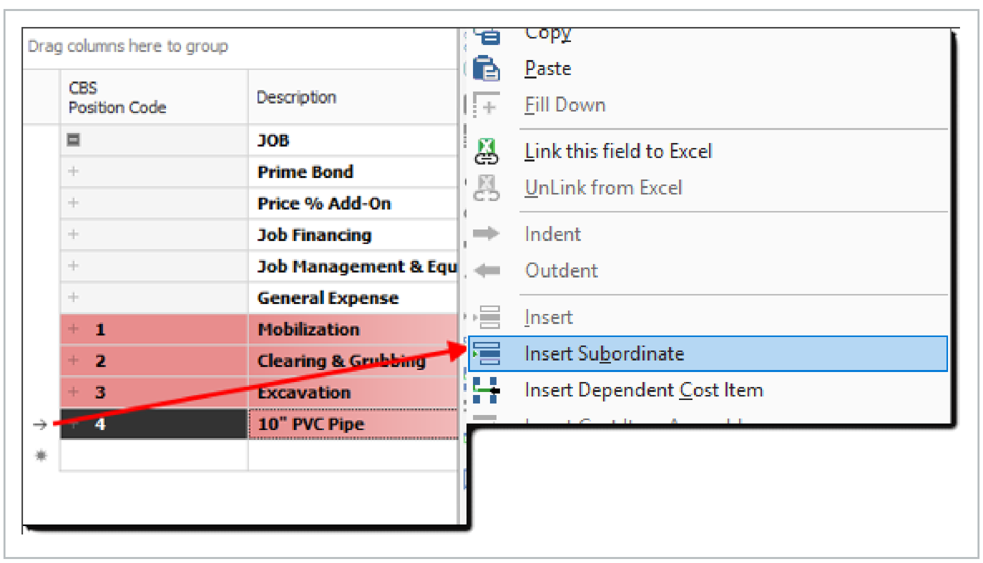
During estimate development, you will create new cost items to break down your work into specific activities. You can create superior and subordinate cost items as needed to organize your work.

5.2.1 Insert Subordinate Cost Item

You can add subordinate cost items in two different ways:

Option 1

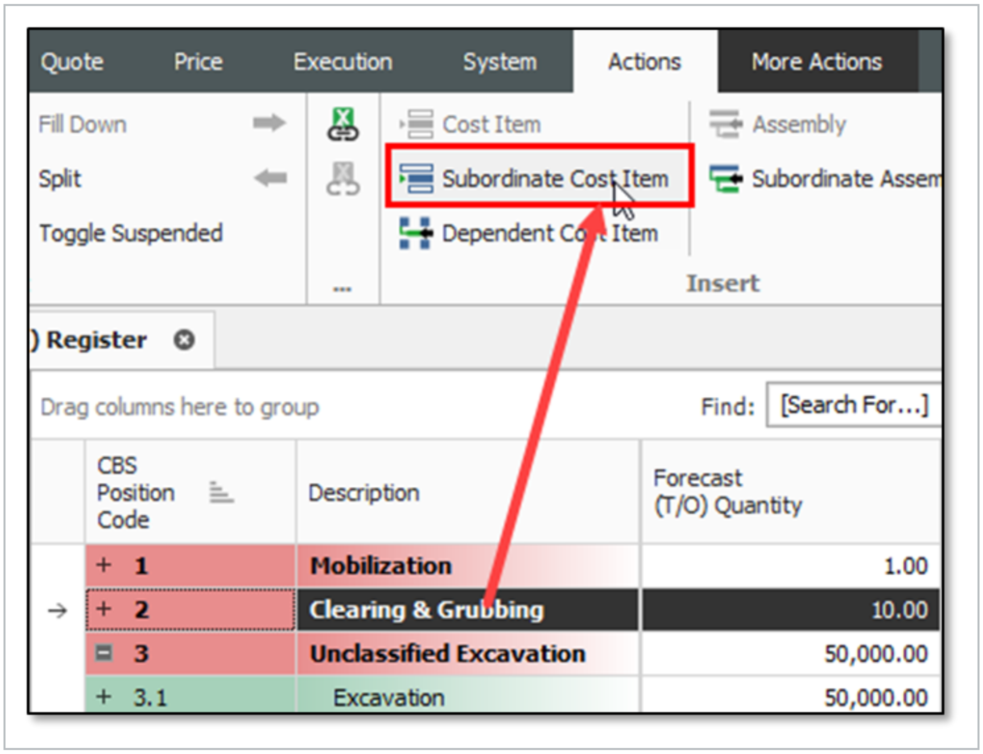
Right-click on the row header of the superior cost item and select **Insert Subordinate.**



The row header is considered the far left edge of the CBS row where the small arrow appear appears above. It is used to open records and perform actions on items instead of clicking on cells within the row which will allow you to directly type into the selected cell.

Option 2

Click on the **Subordinate Cost Item** icon on the Cost Breakdown Structure (CBS) Register toolbar.

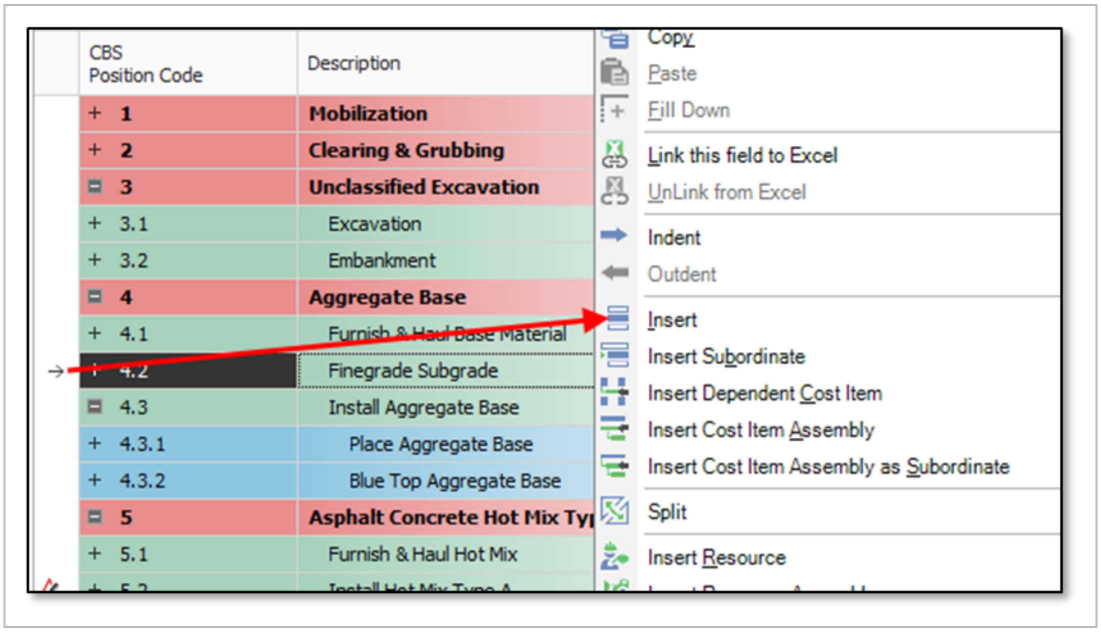


5.2.2 Insert Cost Item

You can add cost items at the same level in two different ways.

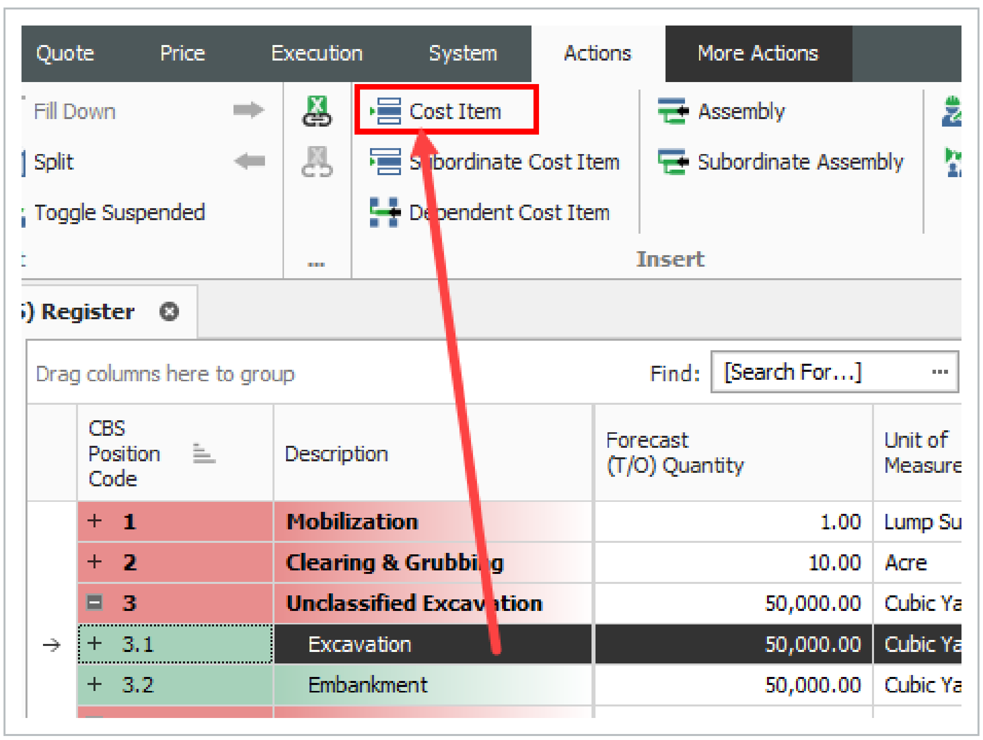
Option 1

Right click on the row header of the superior cost item and select **Insert.**



Option 2

Click on the **Cost Item**icon on the Cost Breakdown Structure (CBS) Register toolbar.



Because the project you are working in is a “locked” job (where cost items are locked to pay items), your CBS Register will already have level 1 cost items representing each of your pay items, and each cost item will be assigned to its corresponding pay item.

The following step by step walks you through creating a subordinate (child) cost item for one of your level-one cost items.

Step by Step – Create a subordinate cost item

1. From the Estimate tab, select **Cost Breakdown Structure (CBS)**.
2. Right-click on a cost item and select **Insert Subordinate**.
   - This creates a new subordinate cost item below your selected cost item
3. For the subordinate cost item, enter a description.
4. Add a quantity and select your Unit of Measure.
   - For this example, we’ll insert a subordinate under Clearing & Grubbing for Clearing

1	SITEWORK & ROADWAY	1.00	Each
1.1	Mobilization	1.00	LS
1.2	Clearing & Grubbing	15.00	Acre
1.2.1	Clearing	15.00	Acre
1.3	Excavation	40,000.00	CY
2	WATER & SEWER	1.00	Each
2.1	10 PVC Pipe	1,000.00	LF

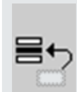
> You can create a subordinate at the same level, by right clicking on an equal-level cost item and selecting **Insert**.

5.2.3 Move Cost Items

As you develop your estimate, you may need to move cost items around in the Cost Breakdown Structure. To move a cost item:

1. Select the row header of the cost item you wish to move. If you select a superior cost item, it will bring the subordinates along with it.

2. Drag and drop the cost item to the right place in your structure. Notice one of two cursor symbols appears:

The symbol with three equal bars will drop the cost item at the same level as the cost item you drop it on.	
The symbol with a subordinate bar will make the cost item become a subordinate to the one you drop it on.	

Exercise 5.1 – Create cost items

In this exercise, you will practice creating additional cost items. Create the following cost items, using your own job.

Code	Description	Forecast (T/O) Quantity	Unit of Measure
1.2.2	Grading	10	Acre
1.3.1	Excavate	40,000	CY
1.3.2	Haul	40,000	CY
4.1	Furnish Pipe Materials	1,000	LF
4.2	Excavate-Install-Backfill Pipe	1,000	LF

You should end up with similar results:

1	SITEWORK & ROADWAY	1.00	Each
1.1	Mobilization	1.00	LS
1.2	Clearing & Grubbing	15.00	Acre
1.2.1	Clearing	15.00	Acre
1.2.2	Grading	10.00	Acre
1.3	Excavation	40,000.00	CY
1.3.1	Excavate	40,000.00	CY
1.3.2	Haul	40,000.00	CY
2	WATER & SEWER	1.00	Each
2.1	10 PVC Pipe	1,000.00	LF
2.1.1	Furnish Pipe Materials	1,000.00	LF
2.1.2	Excavate-Install-Backfill Pipe	1,000.00	LF

Congratulations, you have completed this Exercise!

5.3 COSTS AND PRODUCTION

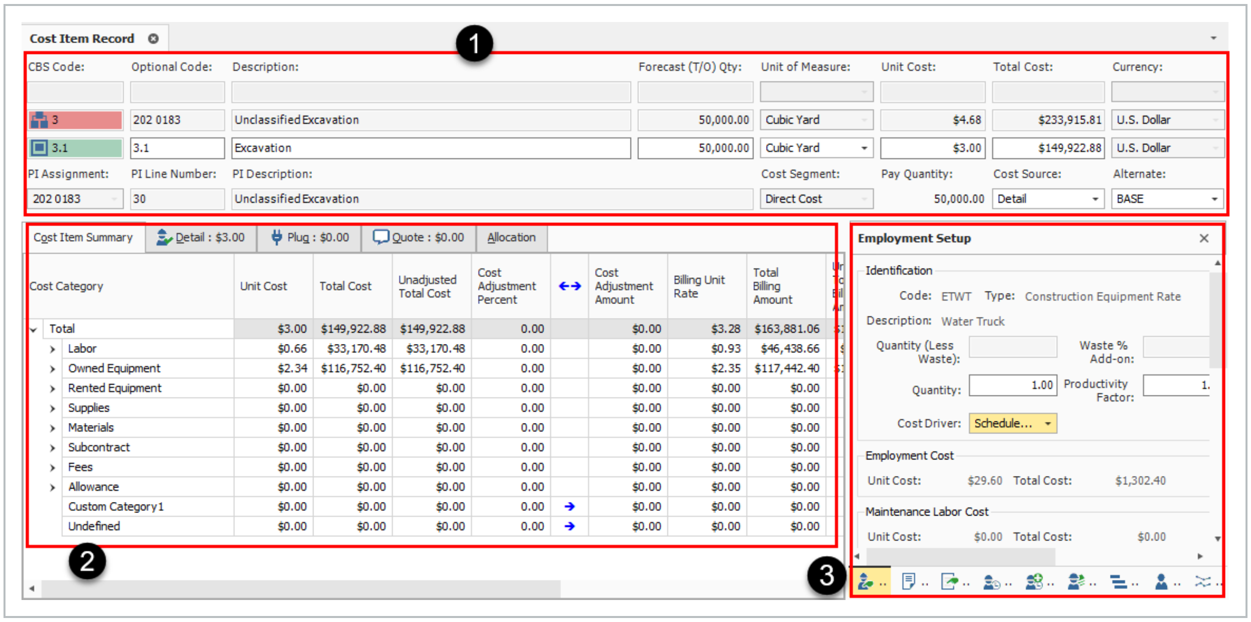
For the cost items you've created, you can now add their costs and production. All information for a cost item is contained in a Cost Item Record.

5.3.1 Cost Item Record

You can open the Cost Item Record by either double clicking on a cost item row header, or right clicking and selecting **Open**.

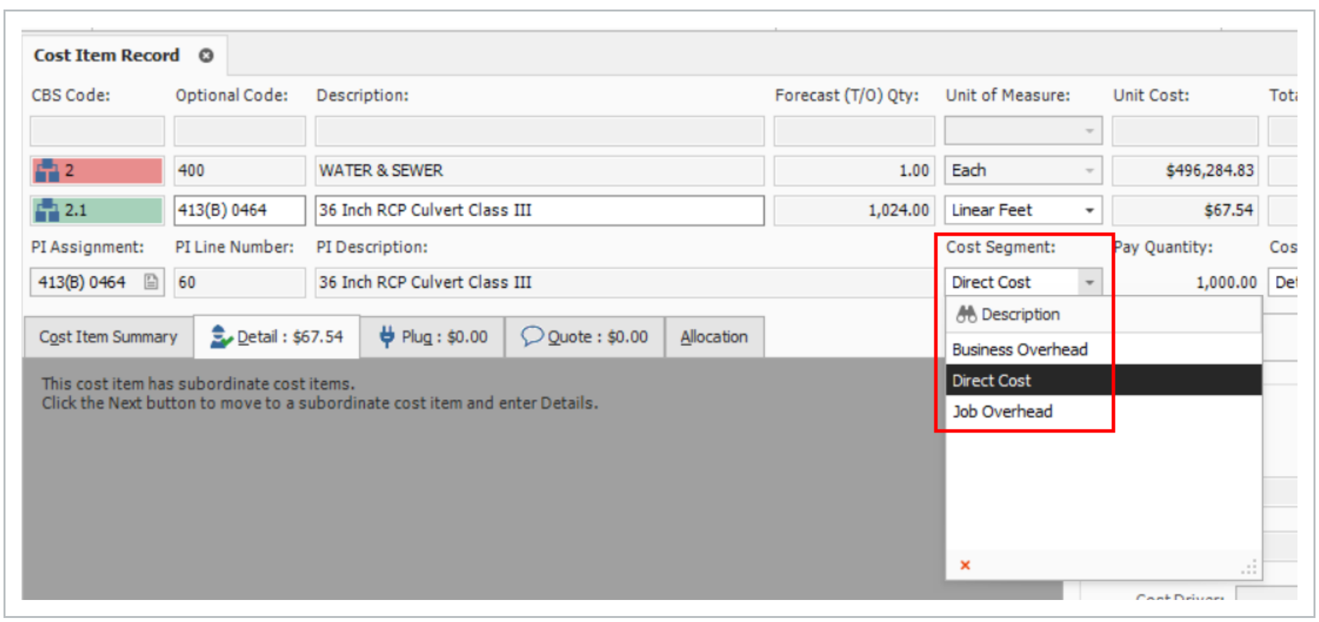
Cost Item Record Overview

Name		Description
1	Cost Item Header Information	Provides general information about the cost item. It displays the cost item's take-off quantity, Unit of Measure, and Cost. It also indicates what Cost Source is being used. The Cost Segment drop-down is used to differentiate estimated costs in the Direct Costs, Job Overhead or Business overhead categories.
2	Costing Area	Section where costs are defined. There are three ways to enter costs: Detail, Plug, and Quote. The Cost Summary tab summarizes whatever costs are defined. Under the Cost Segment drop down, you can choose
3	Data Blocks	Contains a set of tabs for entering additional information including production, shift arrangements, man-hour factors, notes, and scheduling information.



5.3.2 Cost Segments

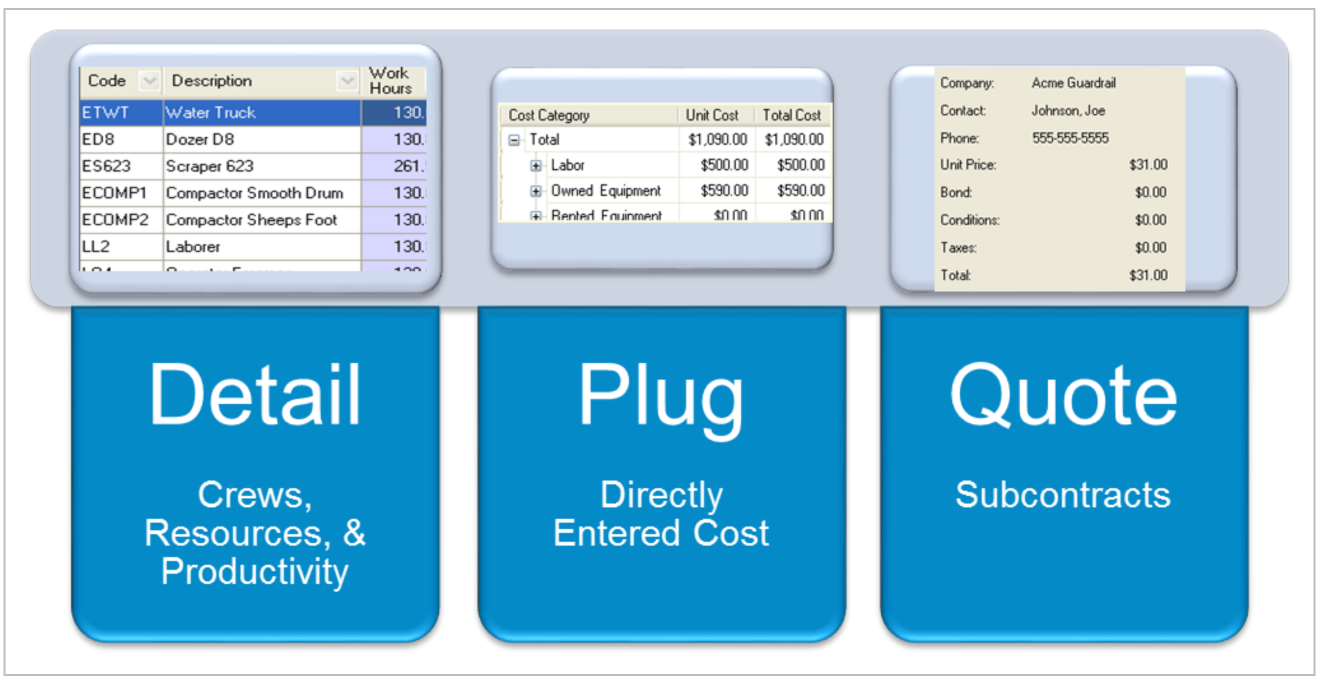
The Direct Costs, Job Overhead, and Business Overhead cost segments helps to classify the scope of work so you can report on direct vs indirect costs, and accurately control how markup is spread throughout your bid. This differentiation is necessary to effectively price work based on the risk profile of each segment of cost.



5.3.3 Cost Sources

You can define costs on a cost item in one of three ways, called Cost Sources:

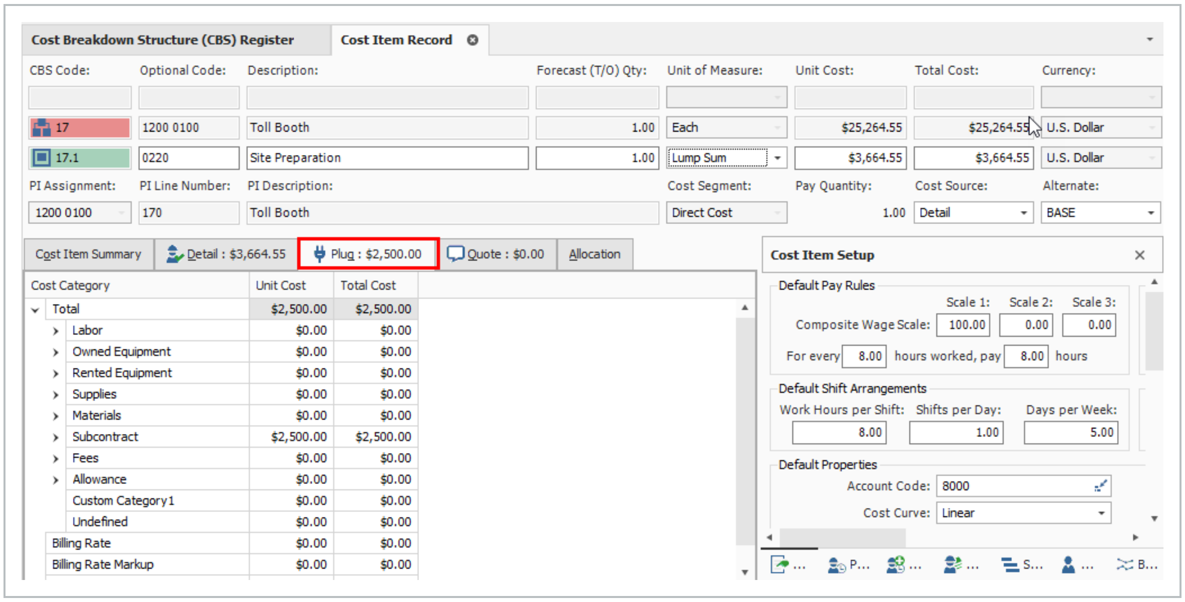
Tab	Description
Detail	This is the recommended costing method, where labor, equipment, and material resources are defined, along with productivity, to determine costs.
Plug	This method allows you to enter a unit or total cost directly, without needing to enter resources or production. **This should rarely be used**, but does have a couple of use cases: • Place holder value until you get more information (from subcontractors or designers) • For preliminary estimates when limited information is available
Quote	The Quote cost source is for contractors, subcontractors or vendor quotes. • Creating and managing quotes is covered in *Lesson - Quote Management*



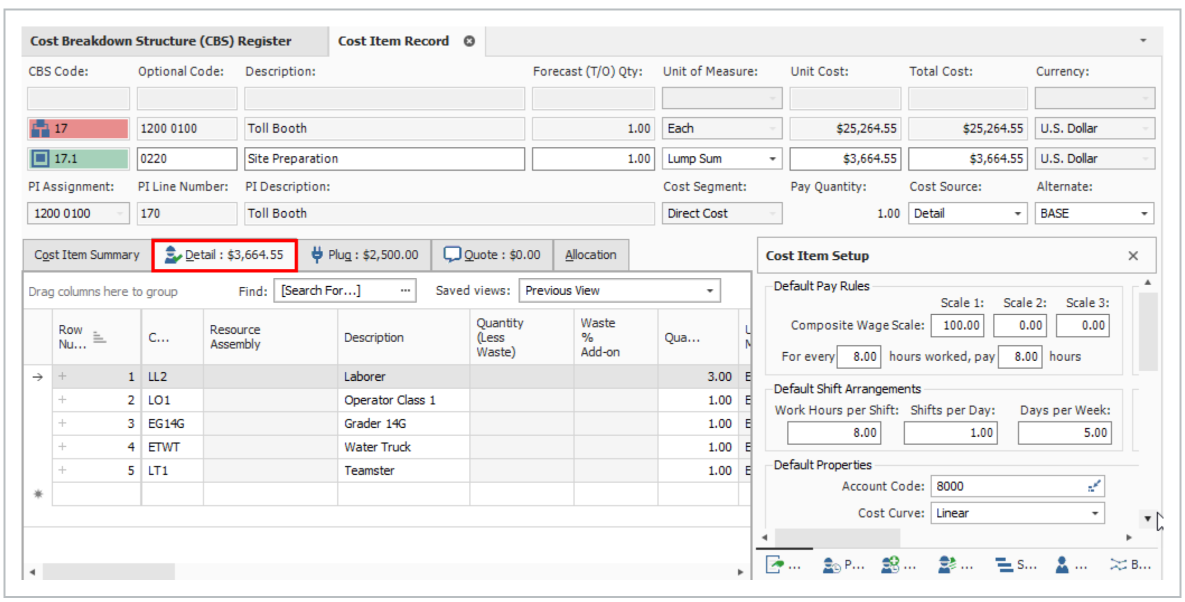
On each Cost Item Record, InEight Estimate gives you the option to define both Plug and Detail values on each respective tab.

5.3.3.1 Plug Tab

The Plug tab allows user to input unit or total cost to any of the listed cost categories which can be customized based on company requirements.

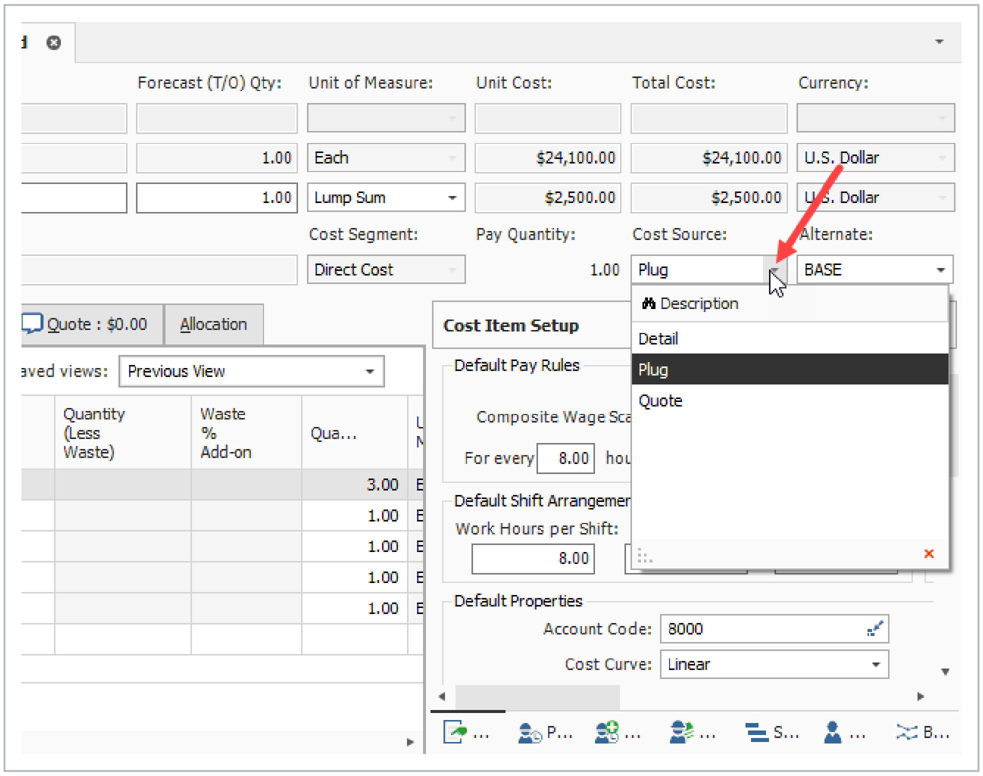


5.3.3.2 Detail Tab



Entering both a detailed and plug cost allows you to define costs at a higher summary level initially (Plug tab), and then define more detail as the estimating process progresses (Detail tab). You can review and compare your plug and detail values by toggling between tabs, but your cost item will only contribute the total cost from one of the tabs based on which cost source is selected.

You control which cost is used by selecting **Detail** or **Plug** in the Cost Source field on the Cost Item Record.



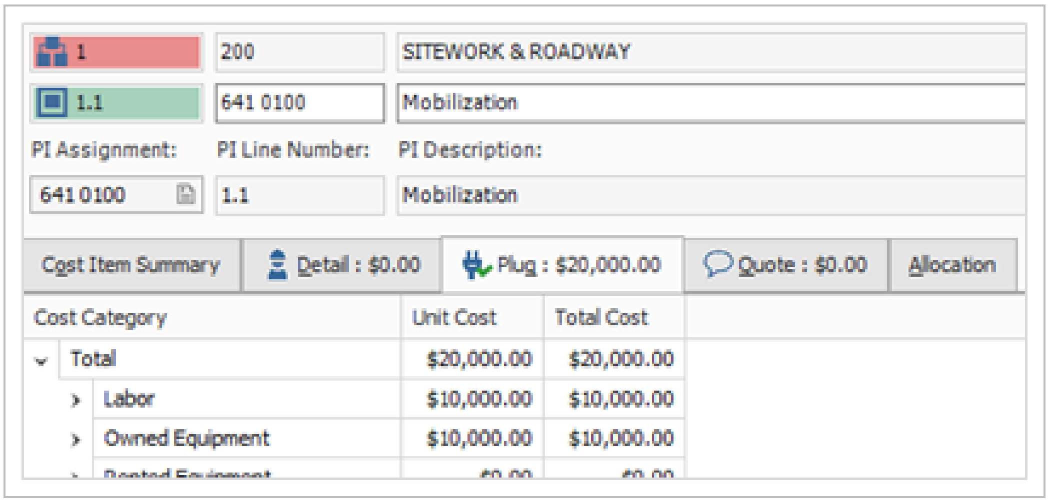
The Quote Cost Source can only be selected from the Quote Comparison & Award form. See Lesson 8 – Quote Comparison.

5.3.4 Plug Costs

The following steps walk you through defining a plug cost on a cost item.

Step by Step – Define a plugged cost

1. From the Estimate tab, select **Cost Breakdown Structure (CBS)**.
2. Right-click on the **row header** for a cost item and select **Open**.
3. In the Cost Source drop-down field select **Plug**.
4. In the left section of the cost item, select the **Plug** tab.
5. Click in the Unit cost or Total cost field for a cost category and type in a **Numeric Value**.
    - For this example, on the Mobilization cost item, we'll add $10,000 in the Total Cost field for both Labor and Owner Equipment.



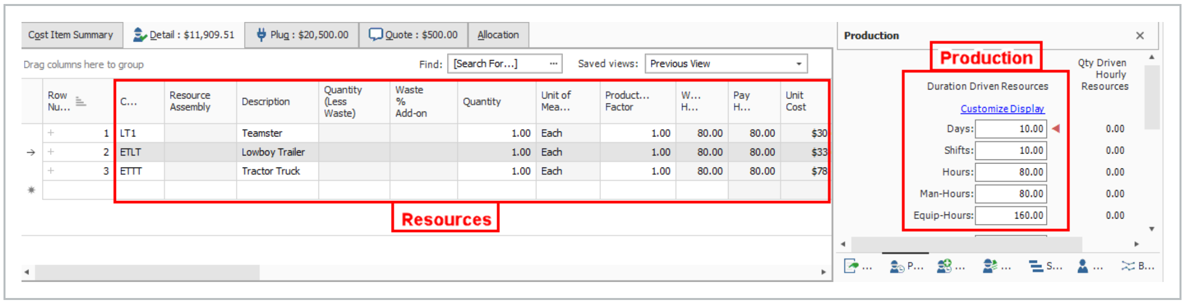
5.3.5 Detail Costs

The **Detail** cost method is also defined on the Cost Item Record. On the Detail tab, you can add resources (labor, equipment, and material) and define production.

On the Production tab (right side of screen), define production by entering one of the following:

- A duration, or
- A unit per duration, or
- A duration per unit

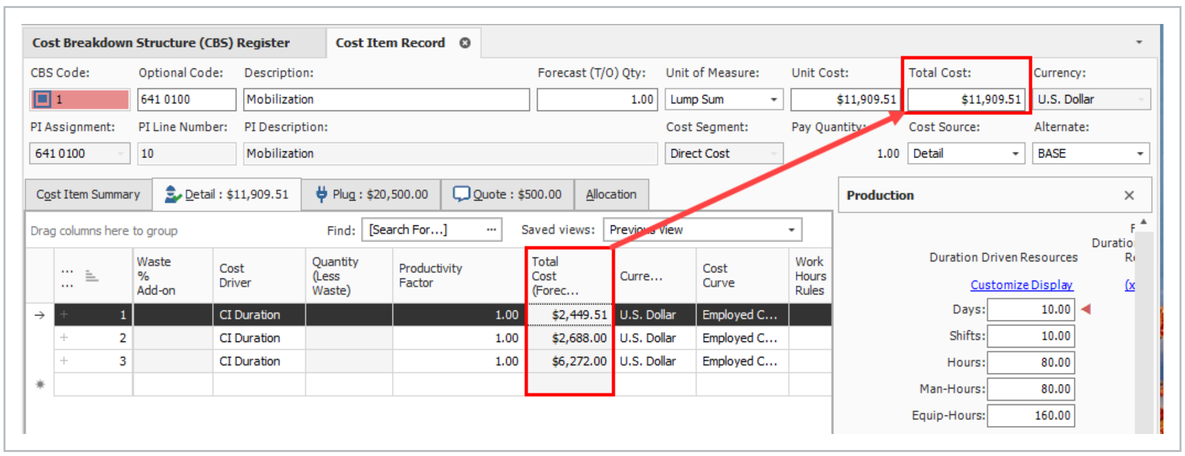
When you enter a production value, all the other production fields will auto-fill based on what you entered.



The hours defined on the Production tab drive the labor and equipment resources you employ on the left, multiplying their unit costs by the production hours.

When you employ material resources, their costs are driven by the quantity you enter into the quantity field.

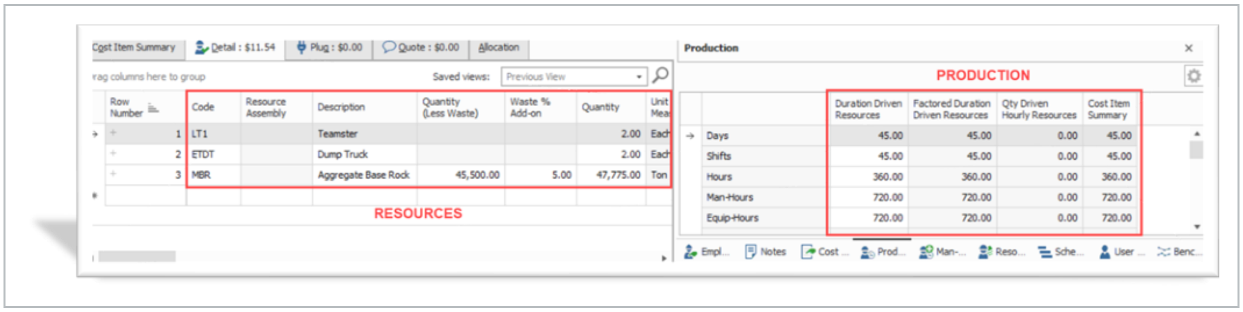
The Total Cost of each resource is added together to give you the Total Cost for the cost item.



Step by Step – Detail costs

1. On the Detail tab, add resources (labor, equipment, and material).
2. On the Production tab, define production (duration, unit per duration, or duration per unit).
3. The hours defined on the Production tab drive the labor and equipment resources on the left, multiplying their unit costs by the production hours.

- With material resources, their costs are driven by the quantity entered in the quantity field.



5.3.5.3 Add Cost Detail

The following steps walk you through adding resources and production on a cost item.

Step by Step – Add cost detail

1. From the Estimate tab, select **Cost Breakdown Structure (CBS)**.
2. Right-click on **row header** for a cost item and select **Open**.
3. Select the **Detail** tab.
4. A blank row is available to define your costs. With your cursor in the code field, click the **Resource Selection** icon to open the Resource Selection Register.
5. Select a resource tab (e.g., Labor).
6. Select a resource.
7. Select **OK**.
8. Repeat the steps to add additional resources as needed.
9. Click in each resource's quantity field to change their quantity as needed.
10. From the lower-right section of the form, select the **Production** tab.
11. Type a **numeric value** in the Days field, then press **Tab**.
12. Click **OK** to close the record.
    - For this example, we'll add cost detail to the Clearing cost item, adding the following labor

and equipment resources and production value:

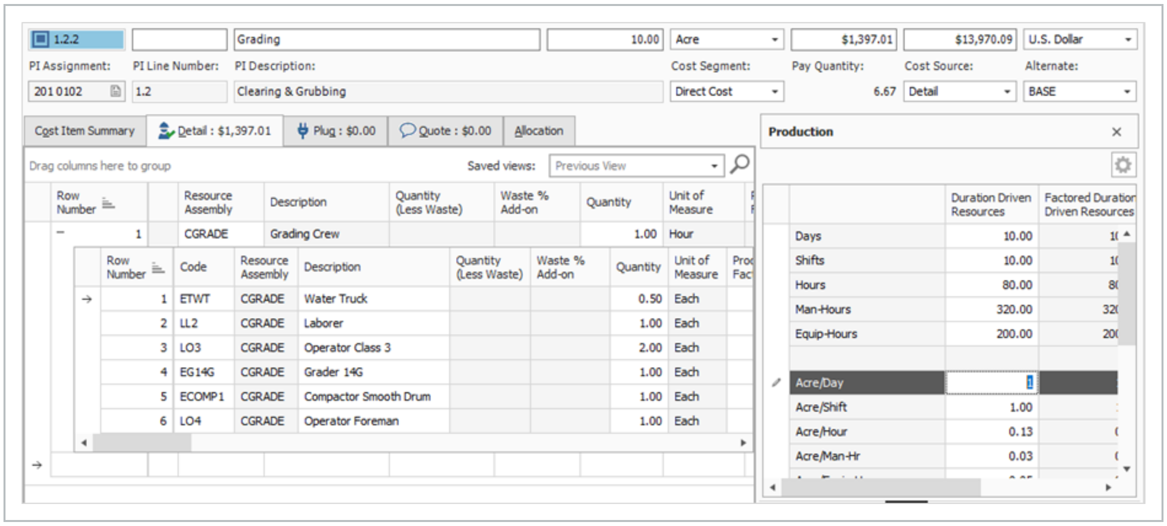
Resource	Quantity
LL2 Laborer	2
LO1 Operator Class 1	1
EL988 Loader 988	1
Cost Item Production Value (in Days)	
8	

5.3.5.4 Add Assembly

Step by Step – Define cost detail by adding an assembly

1. From the Estimate tab, select **Cost Breakdown Structure (CBS)**.
2. Right-click on the **row header** for one of the cost items and select **Open**.
3. Select the **Detail** tab.
4. With your cursor in the Resource Assembly field, click the **Resource Assembly Selection** icon to open the Resource Assembly Selection Register.
5. Select an assembly, then click **OK**.
6. Because this crew includes duration-based resources, you need to enter a Production value. Select the **Production** tab.
7. Type a **numeric value** in one of the production fields (e.g., UoM/day), then press **Tab**.
   - For this example, on the Grading cost item, we'll add a Grading assembly with a

production value of 1 Acre/Day.



Exercise 5.2 – Define cost detail

For cost items you create in InEight Estimate, you need to add resources, assemblies and production to define their costs. In this exercise, you will practice defining cost details. Complete the following steps, using your job:

Add the following or similar resources and production to your 1.3.1 Excavate cost item.

Code	Description	Quantity
LO1	Operator Class 1	1
LL2	Laborer	2
LL3	Labor Foreman	1
EX225	Excavator 225	1
CY/Hour	**400**	

Add the following resources and production to the 1.3.2 Haul cost item.

Code	Description	Quantity
LO1	Operator Class 1	1
LL2	Laborer	2
LL3	Labor Foreman	1
LT1	Teamster	1
EL950	Loader 950	1
ETDT	Dump Truck	1
EX225	Excavator 225	1
CY/Hour	400	

Add the following resource and quantity to the 2.1.1. Furnish Pipe Materials cost item.

Code	Description	Quantity
MPP10	Pipe 10" PVC SDR21	1,000 with 5% Waste % Add-on = 1,050 LF

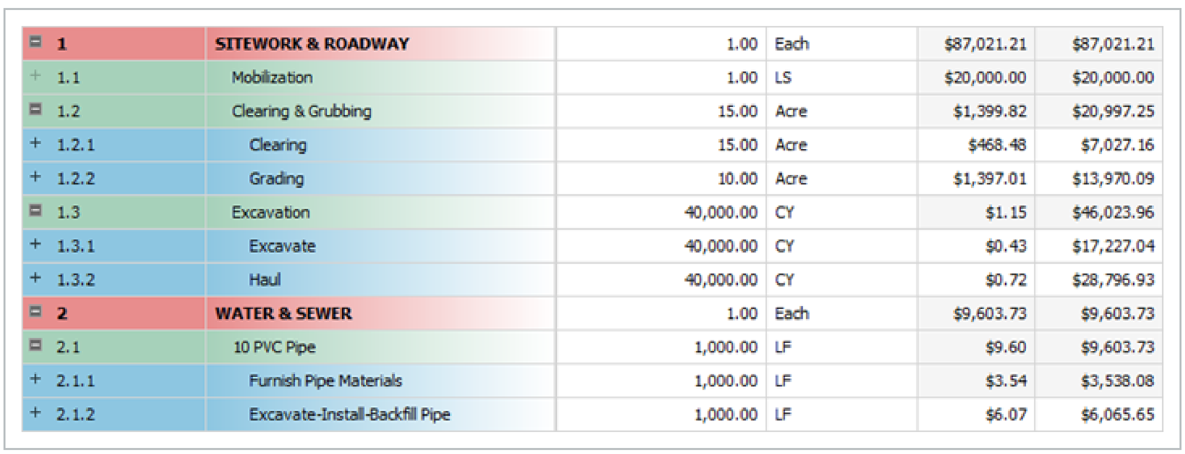
Add the following assembly to the 2.1.2 Excavate-Install-Backfill Pipe cost item.

Code	Description	Quantity
CPIPE	Pipe Crew	1

Add the following production value to cost item.

Days	3

You should end up with the similar results:

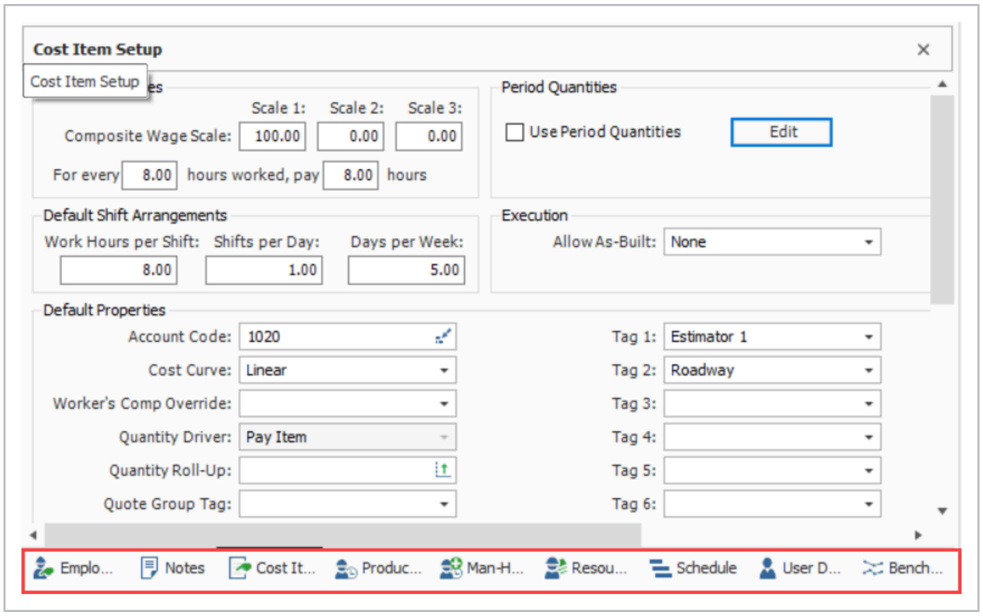


1	SITEWORK & ROADWAY	1.00	Each	$87,021.21	$87,021.21
1.1	Mobilization	1.00	LS	$20,000.00	$20,000.00
1.2	Clearing & Grubbing	15.00	Acre	$1,399.82	$20,997.25
1.2.1	Clearing	15.00	Acre	$468.48	$7,027.16
1.2.2	Grading	10.00	Acre	$1,397.01	$13,970.09
1.3	Excavation	40,000.00	CY	$1.15	$46,023.96
1.3.1	Excavate	40,000.00	CY	$0.43	$17,227.04
1.3.2	Haul	40,000.00	CY	$0.72	$28,796.93
2	WATER & SEWER	1.00	Each	$9,603.73	$9,603.73
2.1	10 PVC Pipe	1,000.00	LF	$9.60	$9,603.73
2.1.1	Furnish Pipe Materials	1,000.00	LF	$3.54	$3,538.08
2.1.2	Excavate-Install-Backfill Pipe	1,000.00	LF	$6.07	$6,065.65

Congratulations, you have completed this exercise!

5.4 COST ITEM DETAILS

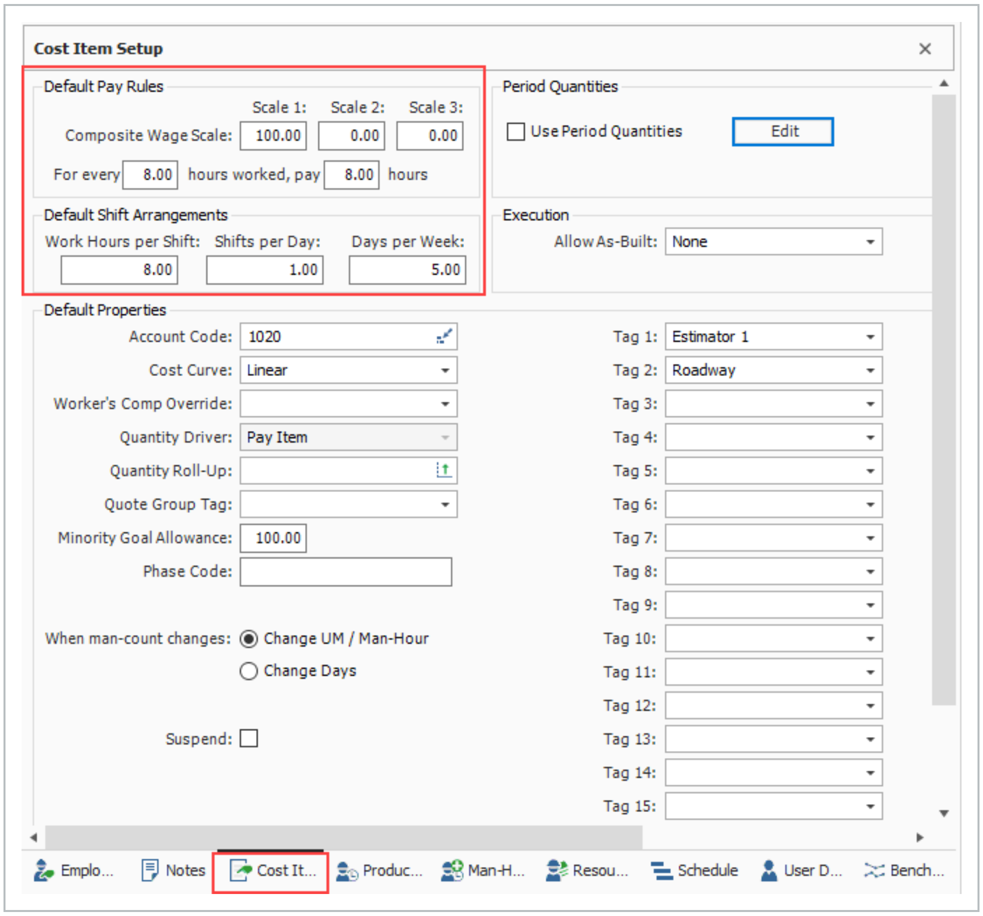
The Cost Item Record contains other tabs (called Data Blocks) in addition to the Production tab, for storing and calculating information specific to that cost item.



You can add to or adjust the information on these tabs as needed, based on the cost item’s circumstances. In this section, you will review three of the tabs (in addition to the Production tab) you will likely use most often: Cost Item Setup, Notes, and Man-Hour Factors.

5.4.1 Cost Item Setup

On the data block where the Production tab was found, there is also a Cost Item Setup tab where you can adjust wage scale and shift arrangements for a specific cost item.



The composite wage scale and work and pay hours are used in the calculation of the cost of employed labor resources. The data reported on the Default Pay Rules tab is, by default, the composite wage scale and work and pay hours defined on the Job Properties - Cost Basis tab for the current job.

These settings can be modified from the default on a cost item-by-cost item basis.

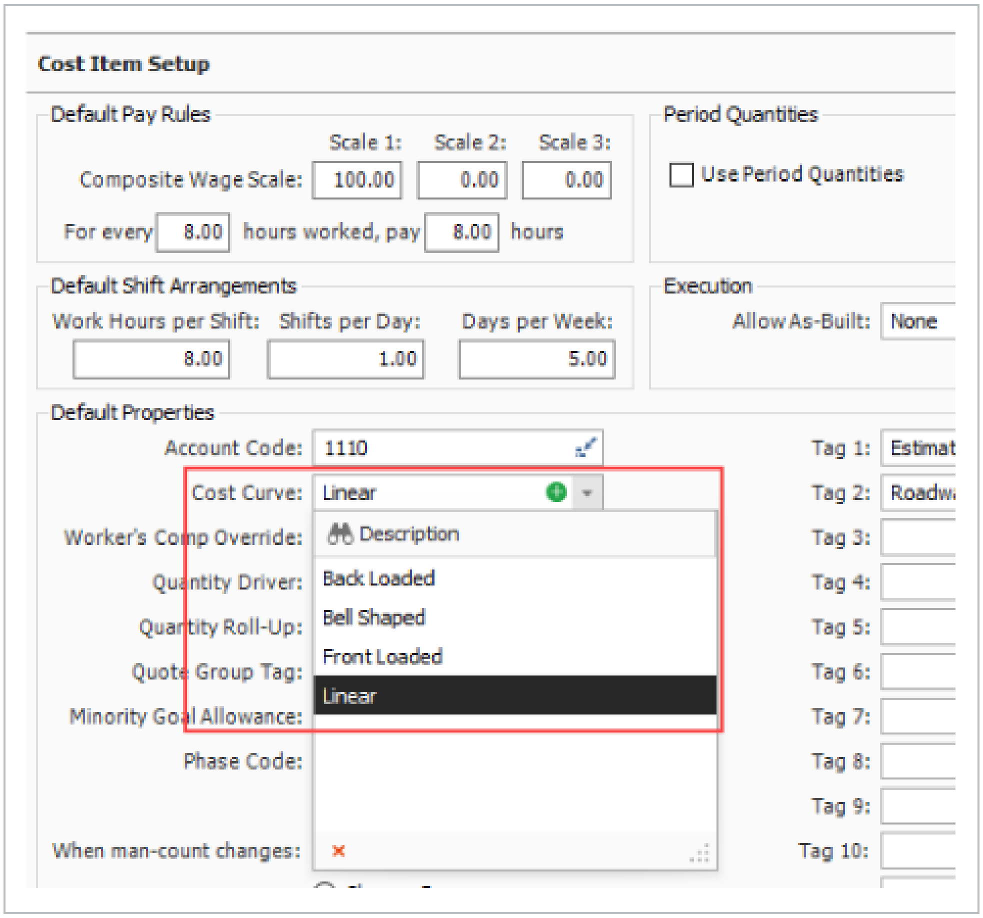
The Pay Rules for cost items can also be defined or modified on the Cost Breakdown Structure (CBS) Register in the Scale 1, Scale 2, Scale 3, Work Hours Rules, and/or Pay Hours Rules columns in the row of the subject cost item.

5.4.1.1 Cost Curves

Cost curves are used to determine how the cost of a cost item is distributed over time. The main benefit of defining the cost curve for a cost item is to create a more accurate estimation of the cash flow over the life of a project.

The schedule dates entered on a Cost Item are used to define the periods across which a cost item will incur its costs. A cost item's start and finish dates can be entered manually by the user or established using Schedule Integration, and the time periods (day, week, month, quarter, year) are determined in the Cash Flow settings in Job Properties. For more information on scheduling, see topics Microsoft Project and Primavera.

By default, Cost Items have a linear cost curve, which distributes the cost of the cost item equally across all periods for the Cost Item. There are 5 different types of cost curves that can be selected from in the Cost Item Record > **Cost Item Setup** page.

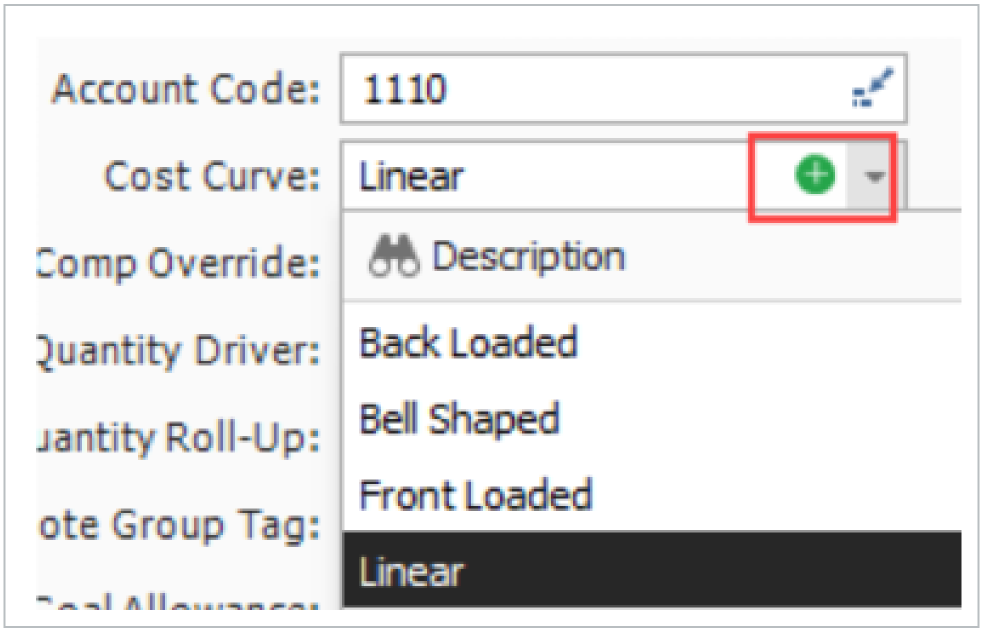


Cost curve type	Definition
Back Loaded	Costs are low for most of an activity's timeline, but then increase towards the end. This curve type starts out with a lower slope and gradually becomes steeper as the work progresses. Most resources are assumed to be consumed later in the activity and may be

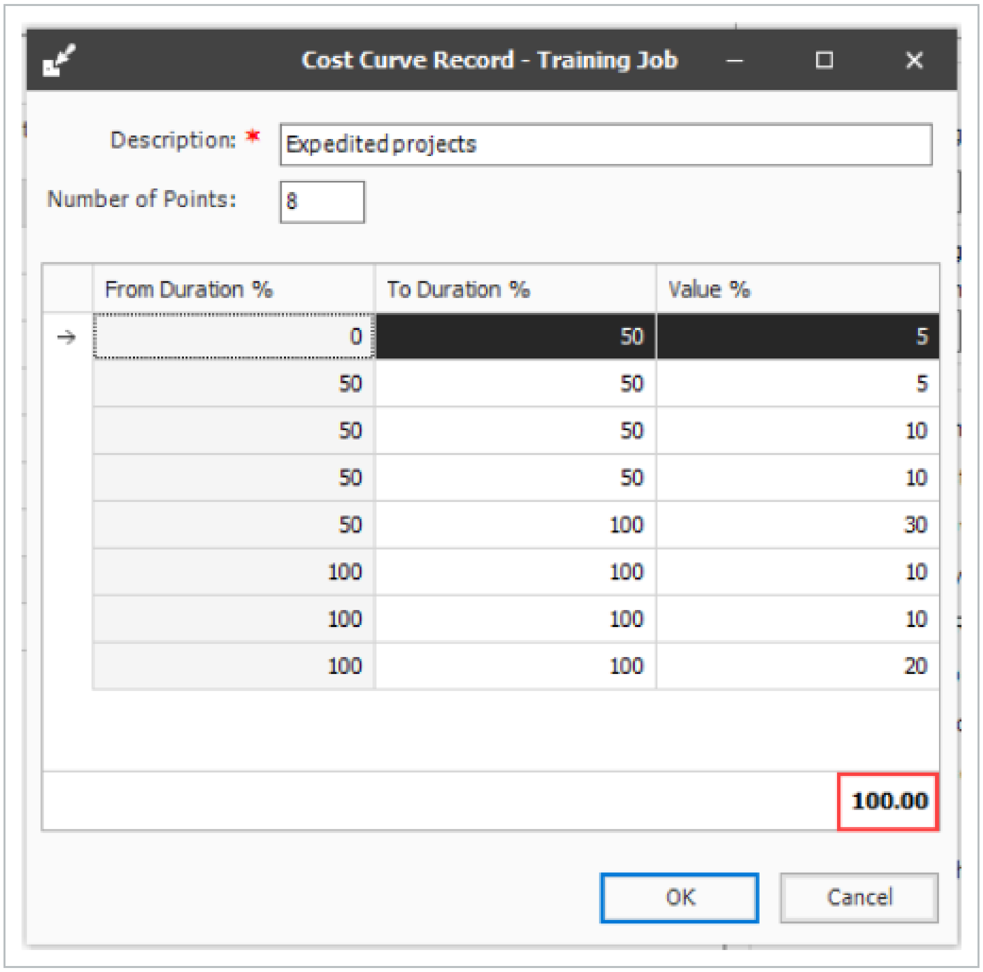
(continued)

Cost curve type	Definition
	more characteristic of subcontracted work where costs are incurred as the work nears completion.
Bell Shaped	Expenses are low at the start of an activity, increase during construction, and decrease as the project approaches completion. Bell shaped cost curves incur the majority of their costs towards the mid-point of the work and exponentially increase and decrease from the beginning to the end of the activity. This type of curve can be characteristic of larger portions of work that start with a few resources, ramp up to a peak, incurring more costs during the ramp up, then ramp back down as the work nears completion.
Front Loaded	A front-loaded cost curve is when costs are incurred early in a activity. This can happen for several reasons such as early procurement of materials to take advantage of lower prices or to address long lead times.
Linear	Linear cost curves take the total cost of the activity and spreads it equally amongst the specified periods.
Cost Item Periods	Invoked by using the Period Quantities feature (described below). Cost Item Periods are used to customize cost curves based on the quantities consumed in various periods. In comparison to the other curves which spread the items total cost proportionally based the chosen cost curve, the Cost Item Periods option can generate a more precise distribution of costs to specific periods because the user can simply define how much quantity of work is getting completed in each specific period.

You can also choose to create your own custom cost curve by clicking on the **add button** in the Cost Curve drop-down menu.



Custom cost curves let you define your own from and to durations along with their associated values, which need to add up to 100%.

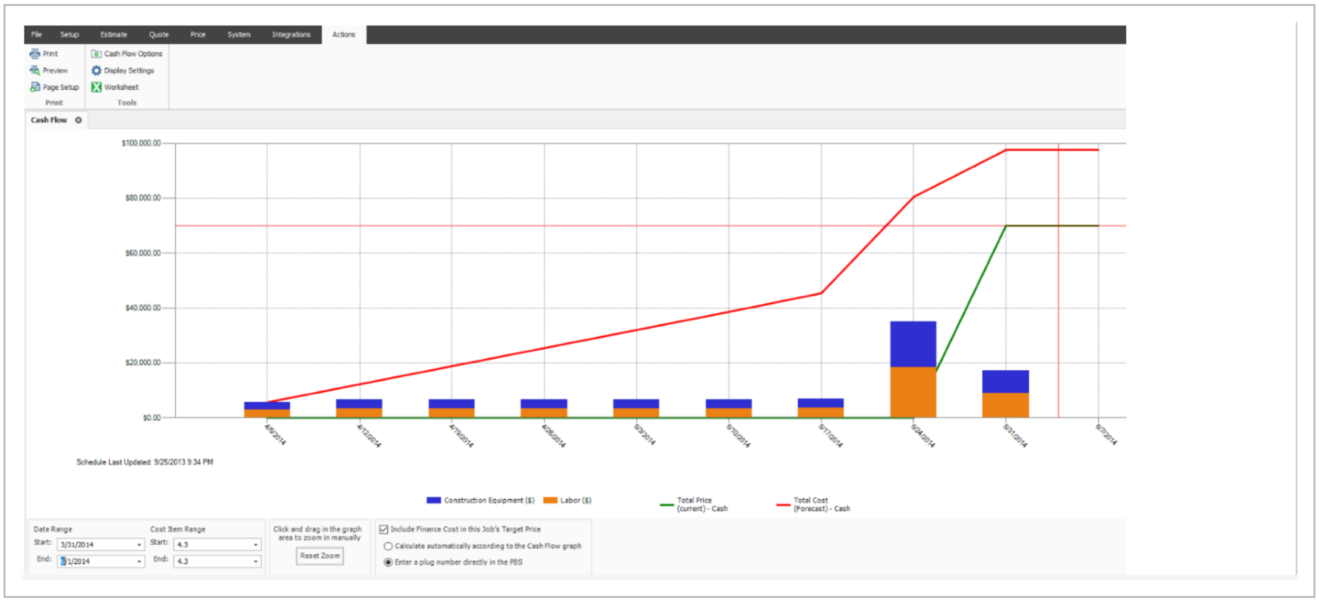


Cash Flow

All cost curves, regardless of type, impact the generation of the cash flow graph. 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.

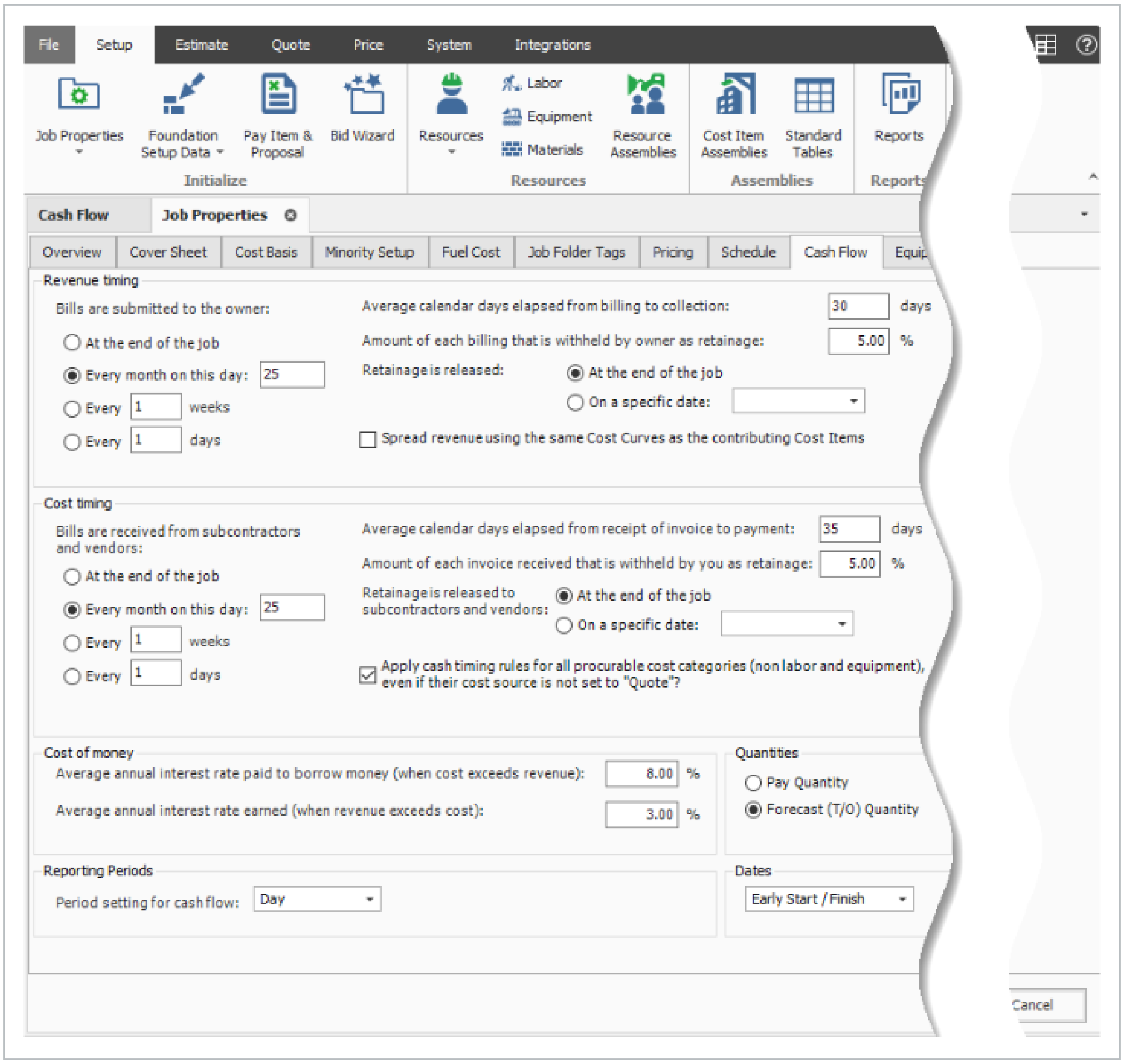
To generate a cash flow curve, the estimate must be populated with schedule dates either directly from integration with Primavera, Microsoft project, or input manually.



Cash flow options

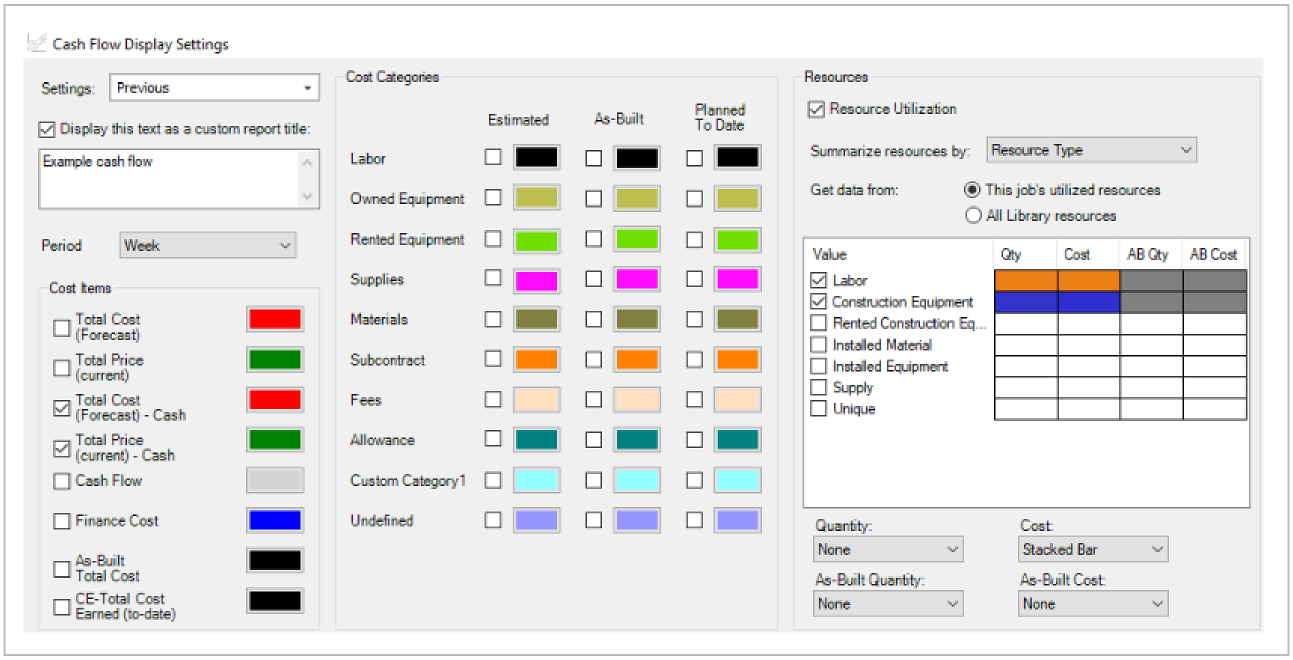
The Cash Flow Options are used to define the cash flow rules (revenue timing, cost timing, cost of money, and quantities) needed to calculate the finance expense and cash flow for your project.

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.



Cash Flow Display Settings

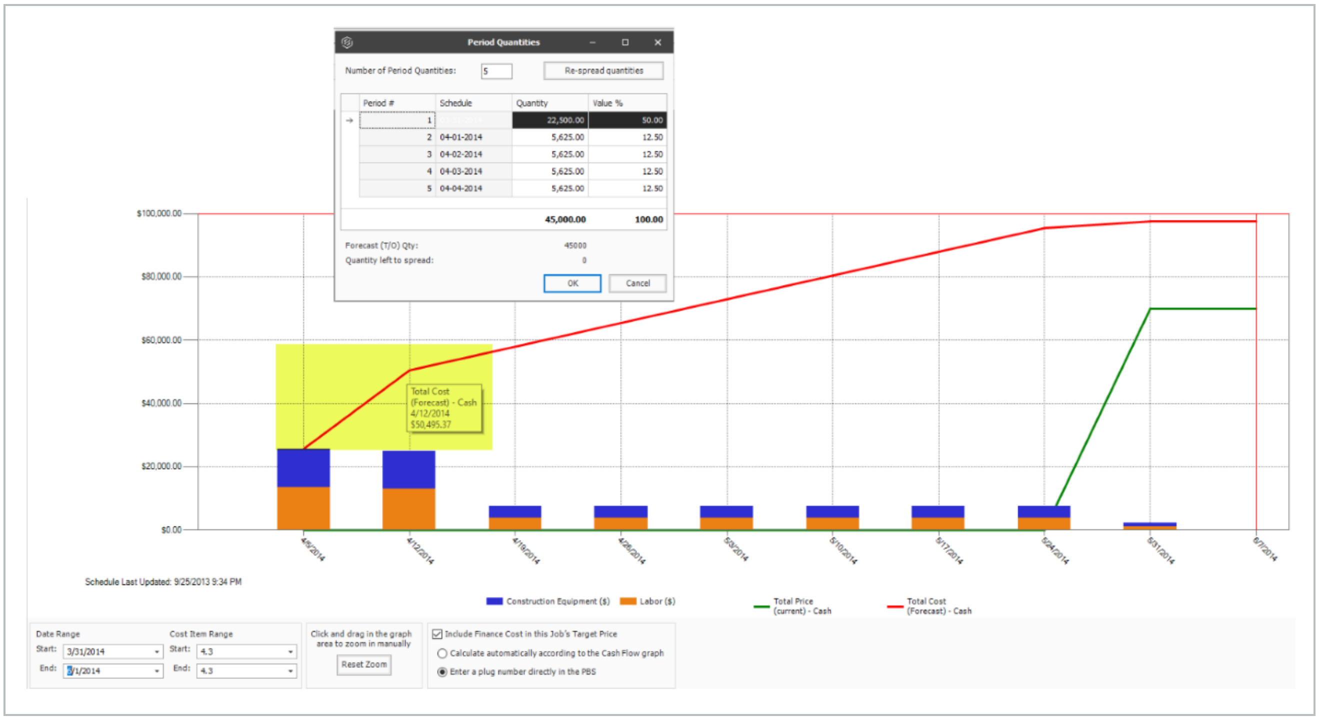
The Cash Flow Display Settings allow you to control what information displays on the Cash Flow graph.



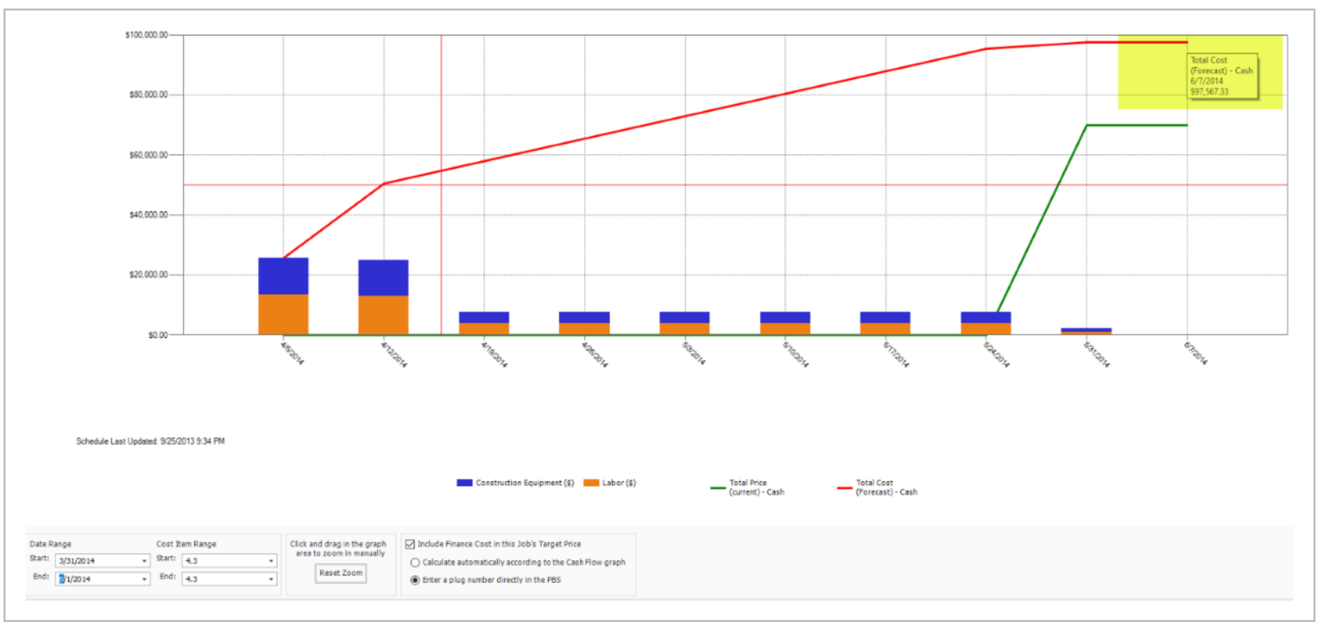
Cash Flow example

Using the Period Quantities cost curve type as an example, on the Cash Flow graph, you can see that 50% of the total cost for this cost item, represented by the red line, is incurred in the first period of the project. Half of the project's cost is incurred during the first period of the project's lifespan as determined by what is entered in the cost item's period quantities.

A reason why half of the project's cost is being used during the first period could be that resources available to perform the project happen to be mostly available during the front end of the project.



After the first period, the project incurs the remaining balance of the total project cost of $95,000. This is spread equally with quantities of $5,625 amongst the last three periods. This information helps you to better understand when the owner provides payment, in addition to deciding if more project funding or financing is needed.

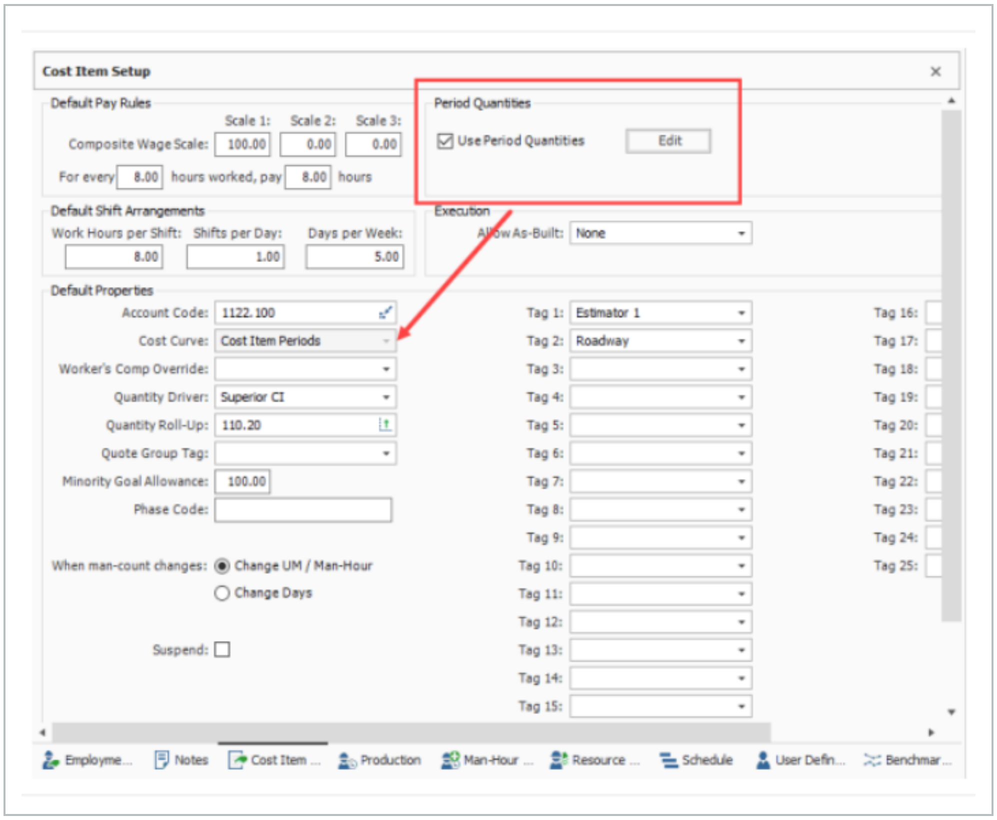


Perhaps most costs on this one item will be incurred at the end of the activity, such as a subcontractor billing for most of his work as it nears completion. If it's determined costs are incurred towards the end of the activity, you can attribute most of the cost items quantity in the last period. You can add any number of additional periods to a custom cost curve or to a cost curve defined by period quantities curve and the costs will be proportionally spread across the actual number of periods defined by the Cost Items start and finish dates and cash flow settings. Be aware reducing the number of periods in a front or back end loaded curve may show a steeper total cost in some periods.

Using period quantities as the cost curve helps you determine how much of a cost item's cost is going to be spread in different durations of time.

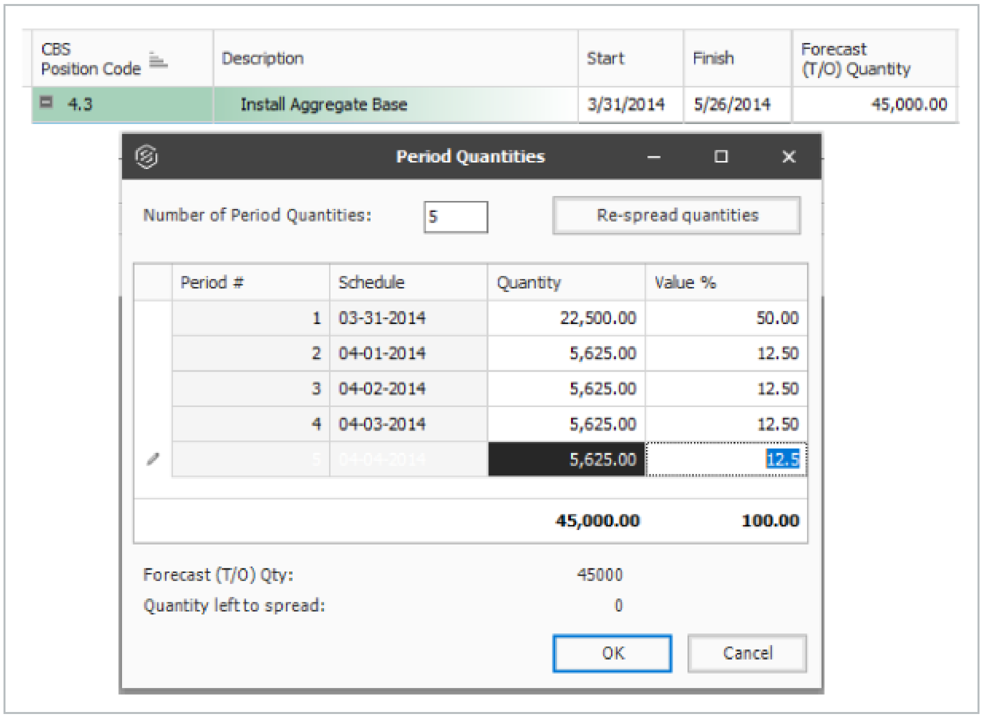
Period Quantities

Like the other four cost curves, Period Quantities are used to customize cost curves, which show you a graphical representation of the cash flow and resource utilization so you can assess the proper financing and resource project needs. When the Period Quantities check box is selected, the Cost Curve automatically changes to Cost Item Periods.

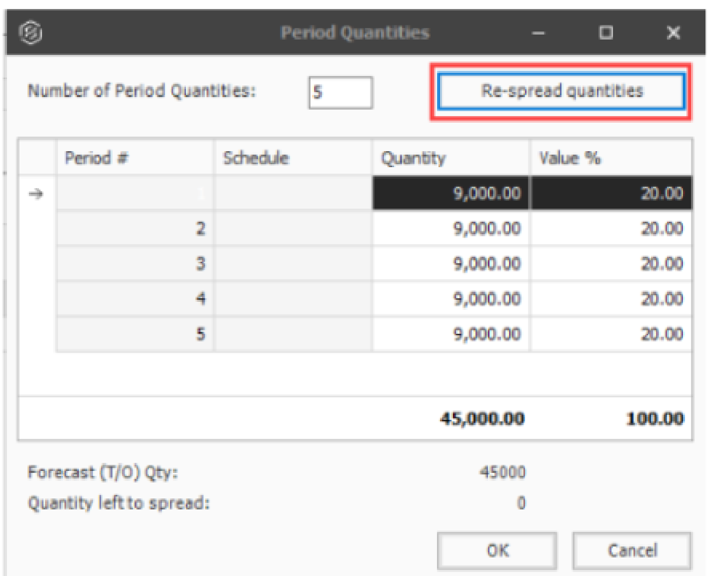


The Period Quantity calculator uses the cost item quantity assigned to various periods to calculate the specific percentages attributable to each range of periods covered by the cost item. The purpose of using period quantities is to spread costs via the cost curve in the cash flow analysis. For example, if you have an item where 50% of the cost is incurred when you start the work because you have to buy all the material first, then you would want a customized cost curve to reflect that this is how the costs will be incurred over time when building that work.

In the example below, since 50% of the cost is incurred when the project starts, period one's quantity is 50% of 45,000 Forecast (T/O) Qty which is 22,500. The remaining costs are then spread equally across the remaining three periods.

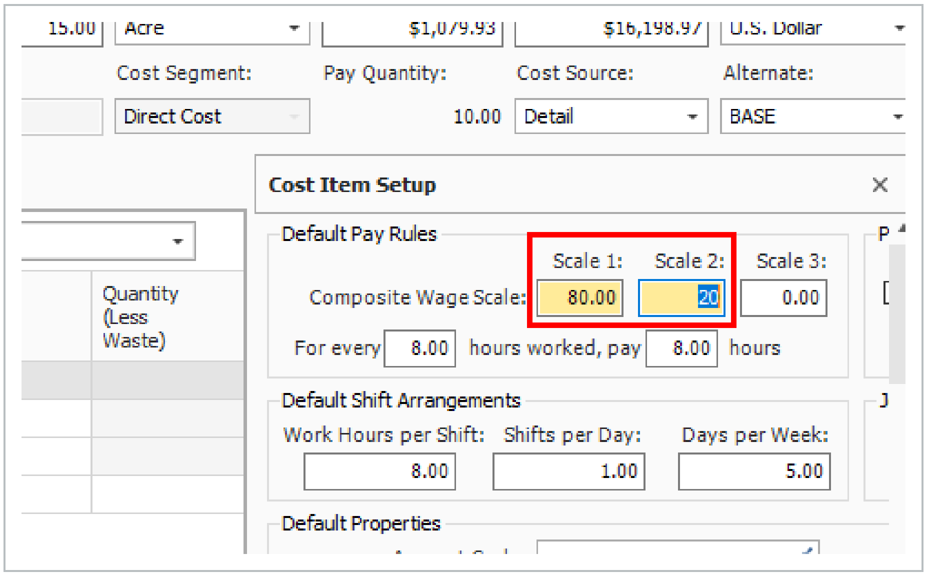


You can also choose to select the Re-spread quantities button to spread the quantities equally among the periods entered in the Number of Period Quantities field.

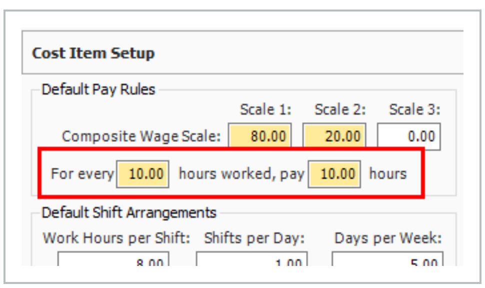


Step by Step – Adjust shift arrangements

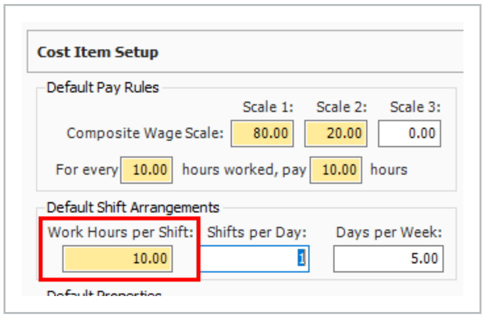
1. From the Estimate tab, select **Cost Breakdown Structure (CBS)**.
2. Right-click on the **row header** for a cost item and select **Open**.
3. Select the **Cost Item Setup** tab in the lower-right portion of the form (the tab name may be abbreviated).
4. In the Default Pay Rules data block, adjust your Composite Wage Scale as needed.



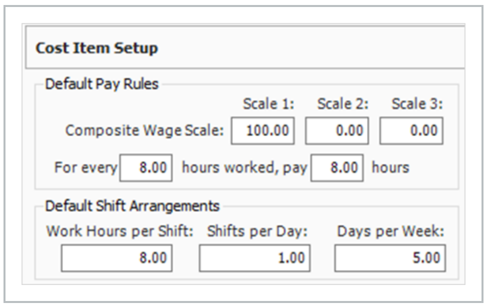
5. Under the Composite Wage Scale, adjust the number of hours and paid as needed



6. In the Default Shift Arrangements data block, make changes as needed.



- For this example, we'll make the following changes on the Clearing cost item:
  - Composite Wage Scale – 80% Scale 1, 20% Scale 2.
  - For every 10 hours worked, pay 10 hours.
  - Default Shift Arrangements – Change Work Hours per Shift to 10.



5.4.2 Notes

On the Cost Item Record, you can enter any cost item-specific instructions, parameters, or general information on the Notes tab. Below are a few examples of the kinds of notes you might enter:

- **For a Hauling cost item**: *There should be very little waste. If so, we can spread it out in the right of way at MP 111*
- **For a Structural Excavation and Backfill item**: *The backfill cannot be the native material. Have to use clean base rock*
- **For an Underground Pipe cost item**: *The average depth is close to 10 ft.*

> You can use the Notes tab to reference cost item changes (e.g., changing shift arrangements, changing a resource rate).

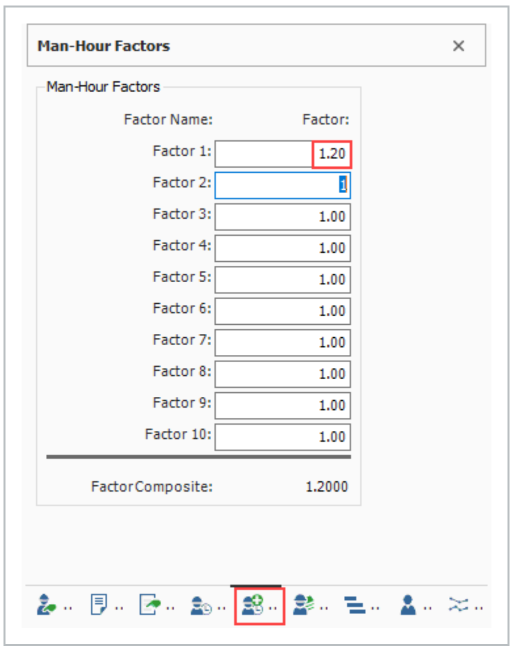
5.4.3 Man-Hour Factors

For items that have known risks or potential resource concerns, you can apply a Man-Hour Factor to take those risks into consideration.

Man-Hour factors are applied on the Man-Hour Factors tab on the Cost Item Record. Factors are applied in relation to 1, where slower production is greater than 1 and faster production is less than 1.

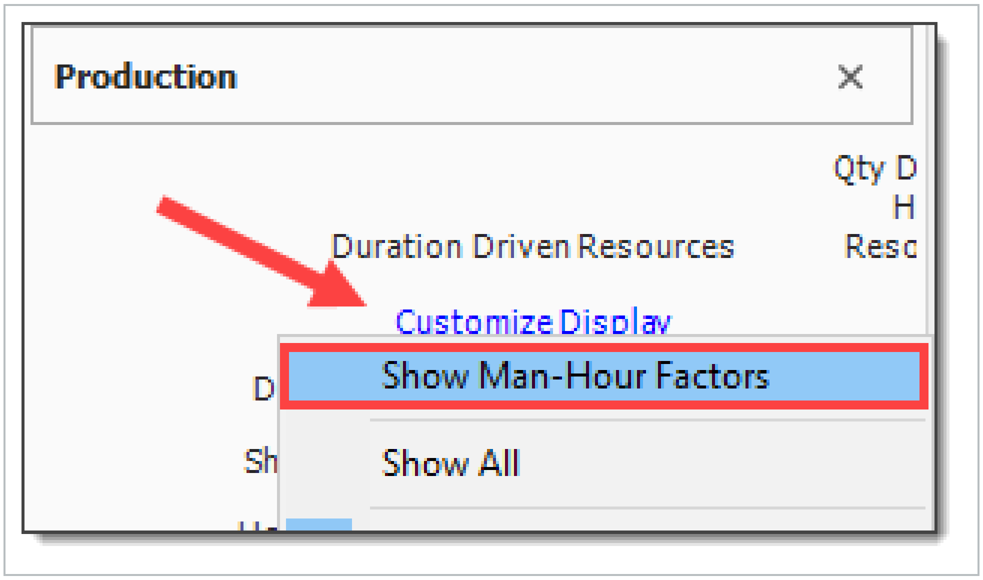
> Man-Hour Factors affect both Labor and Equipment Hours.

For example, if you predict production to be 20% slower due to weather concerns, you would type 1.2 in the weather factor field.



Even after defining a Man-Hour Factor, the Production tab will still display the original Production values.

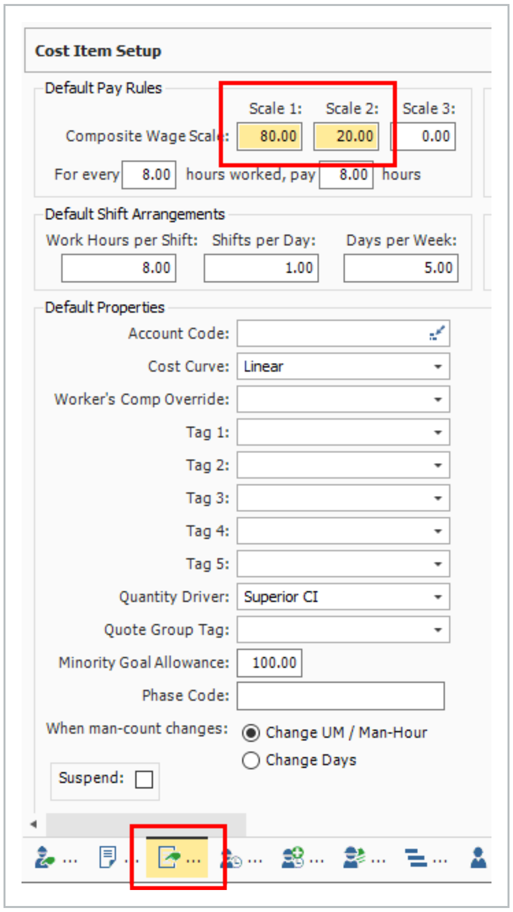
- To see the factored Production values, click the **Customize Display** link on the **Production** tab and select **Show Man-Hour Factors**
- Both original and factored production are then displayed on the Production tab



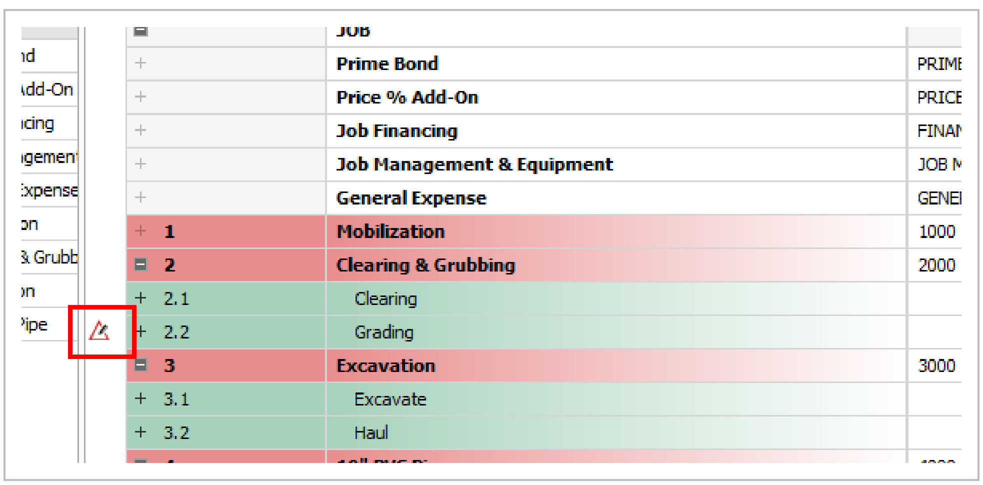
You can apply Man-Hour Factors to multiple cost items at once by Multi-Editing selected cost items on the CBS Register.

5.4.4 Unique Identifier

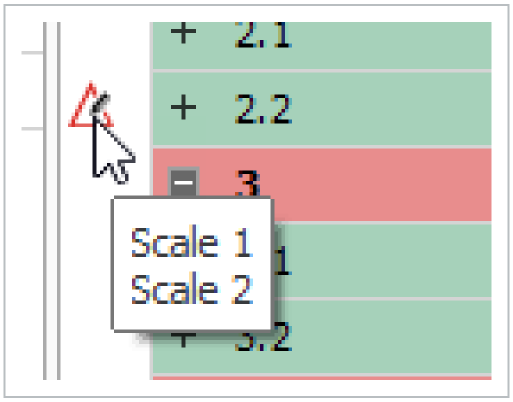
You may have noticed when you made changes on the Cost Item Setup tab, that the fields you changed and the Cost Item Setup tab became highlighted, indicating they were altered from their original state.



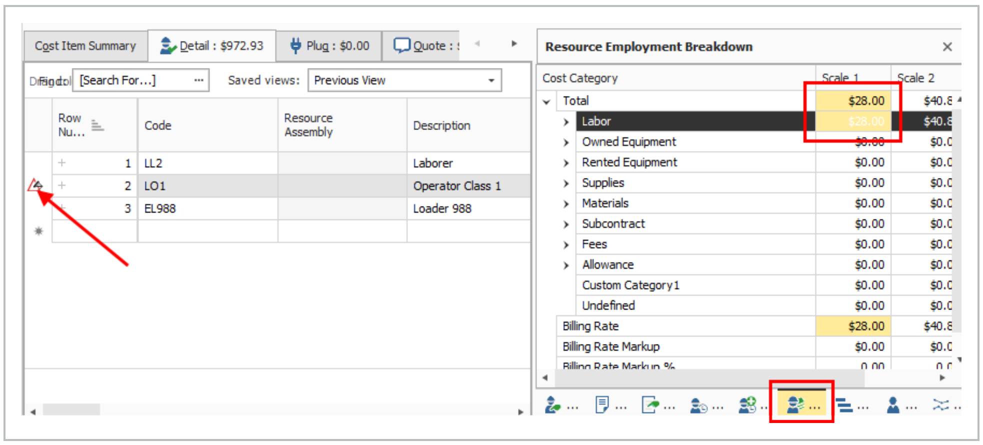
On the CBS Register, the cost item you edited now has a Unique Identifier in the row header indicating the cost item was altered from the default values set in the project job properties or in the project library of resources rates.



If you hover over the identifier, a pop-up menu appears indicating what data points were changed.

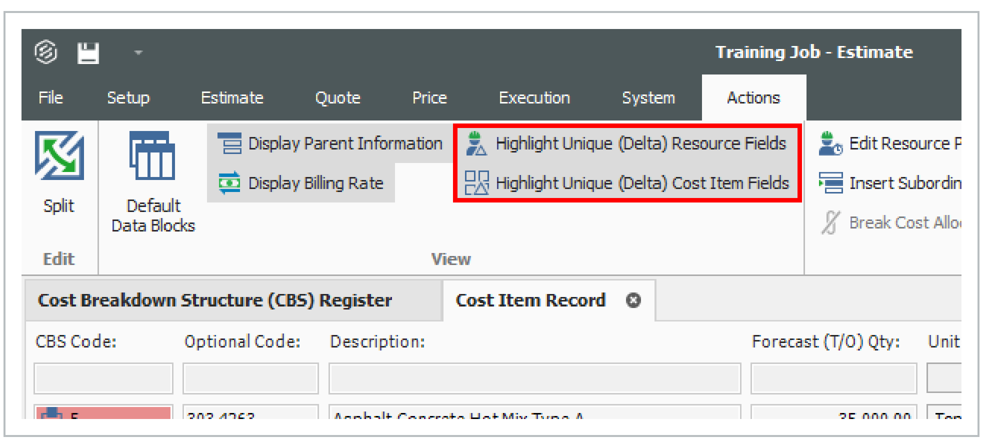


This same identifier will show up for resources as well, if you make changes to the employed resource's cost to be different than the original resource rate imported from the Resource Rate Register.



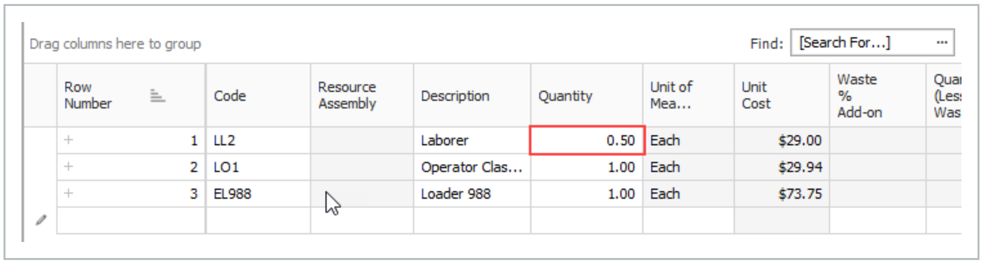
5.4.4.2 Highlight Unique (Delta) Toggle

You can turn the highlighting of unique resource and cost item fields off and on from the Actions menu of the Cost Item Record, under the View section.

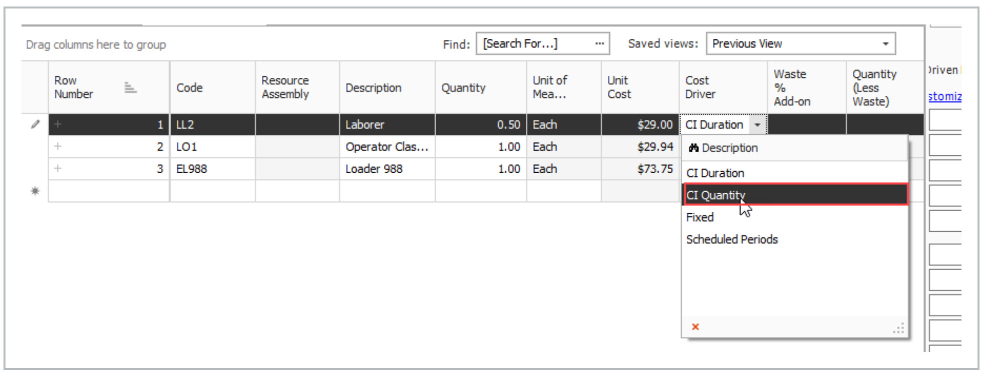


5.4.5 Cost Drivers

Each type of resource has a default cost driver. For example, Labor resources are duration driven so the cost driver is CI Duration, meaning their costs are driven by the duration of the cost item. If you want an Operator to only be assigned to a specific cost item or work activity for half the time, you can change its quantity to .5 and it will be driven by half of the cost item's hours.

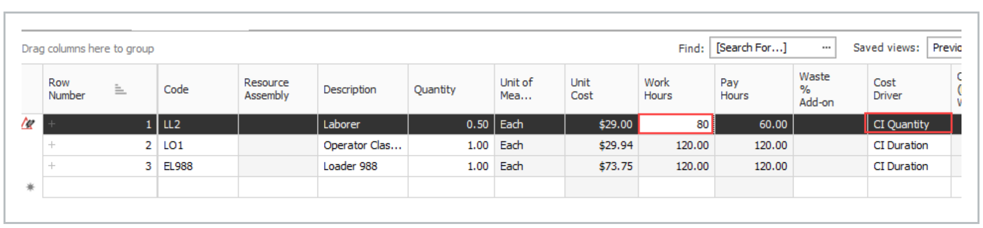


To enter work hours manually for the employed resource, you can change the Cost Driver option to CI Quantity or Fixed.

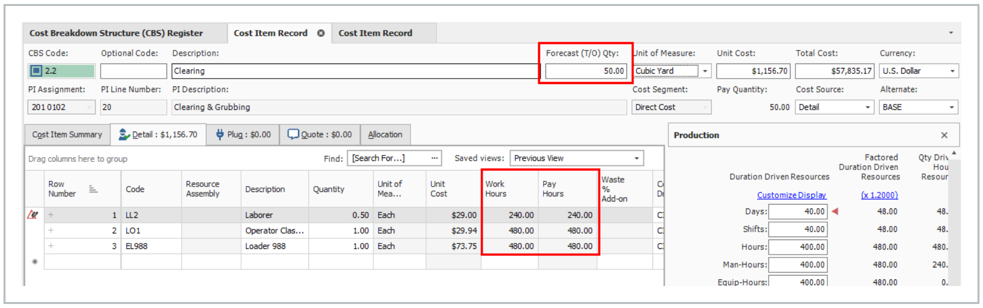


With CI Quantity as your cost driver for the Operator, you can adjust the Work Hours manually, where previously that column was read-only.

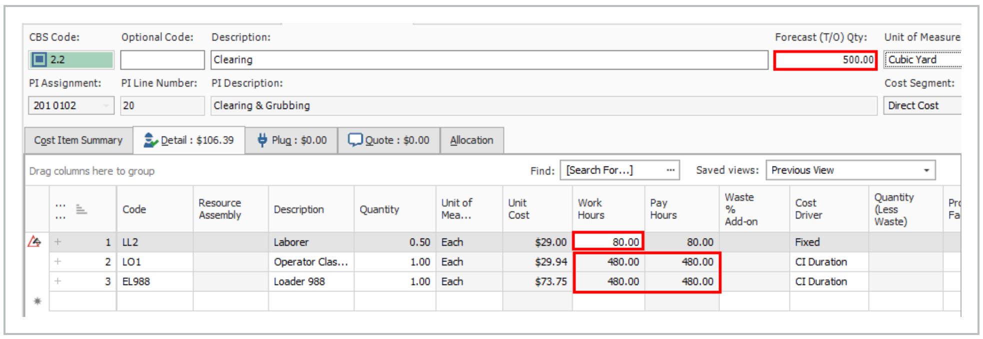
Let's say you want your Operator to work specifically 80 hours.



However, since the resource is now quantity driven, if you change the Forecast (T/O) Quantity to 50 you will see that the work hours will still adjust from 12 to 40.



If you want it set at 80 hours no matter what changes you make to your quantity, you can change the cost driver to Fixed. Then when you change the Forecast Quantity to 500, the work hours for the Operator will not change and will remain at 80 hours as shown below.



If you followed along and made any adjustments to cost item 2.1 Clearing, change the Cost Driver for the Operator resource back to **CI Duration** and the Work Hours back to **100**.

5.4.6 Suspend Cost Items

The Suspend feature allows you to turn cost items on and off in order to perform "what-if?" analysis or evaluate alternative approaches to the work.

A cost item can be suspended in InEight Estimate for various reasons including the following:

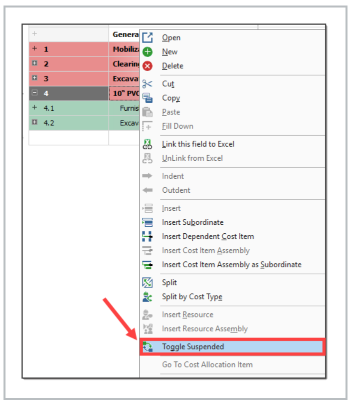
- Manually suspended cost items
- Suspended parent
- Parent with cost source that is not Detail (plugged or quoted)
- Parent cost item with a zero quantity
- Pay item is suspended
- Allocated cost items
- Alternate scenarios:

- Overridden by another alternate
- Alternative is not active

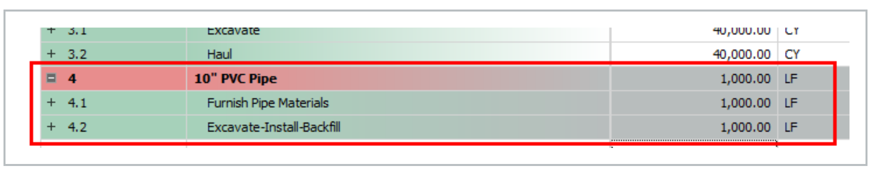
Suspended cost items do not contribute any cost to the job's total value. Suspended items can be un-suspended at anytime in order to be included in the total project value.

Step by Step – Suspend a Cost Item

1. On the **Cost Breakdown Structure (CBS) Register**, select a **cost item**.
2. Right click on the selection and select **Toggle Suspended** from the menu.
   - You can also select Toggle Suspended under the Edit section of the Actions tab up above
   - You can also suspend cost items by checking the Suspend checkbox on the Cost Item Setup tab of a cost item record



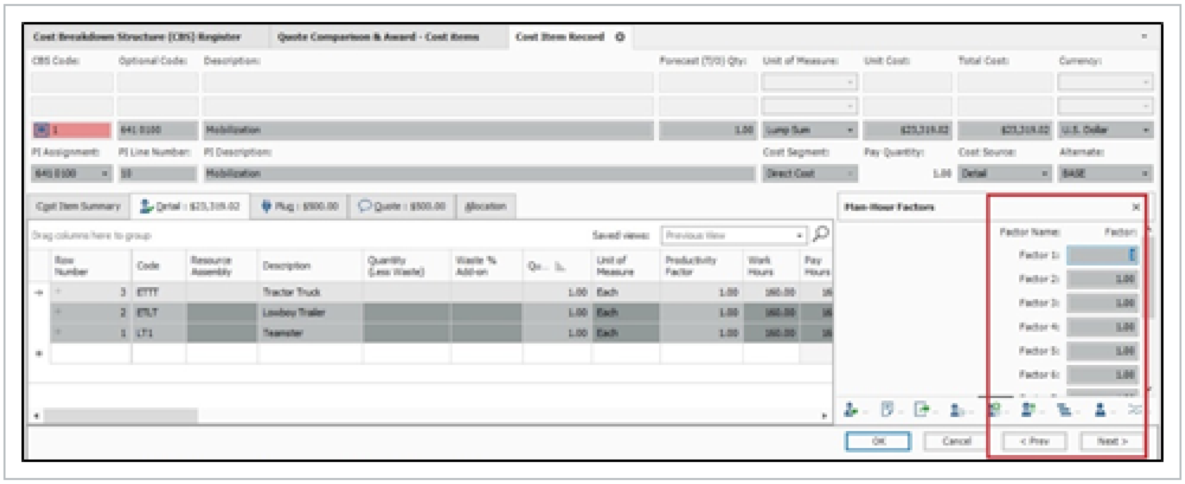
   - If a superior cost item is suspended, its subordinate cost items are automatically suspended as well



   - The costs associated with these cost items will no longer contribute to the estimate

5.4.6.3 Editable Man-Hour Factors in Suspended Cost Items

You can edit Man-Hour Factors for a suspended cost item by creating and maintaining cost items, including Man-Hour Factors. This can be accomplished in a suspended state while having the scope of work included in your estimate. The cost to contribute is excluded from the scope of work until you are ready to make it part of your estimate.



5.4.6.4 Unsuspend a Cost Item

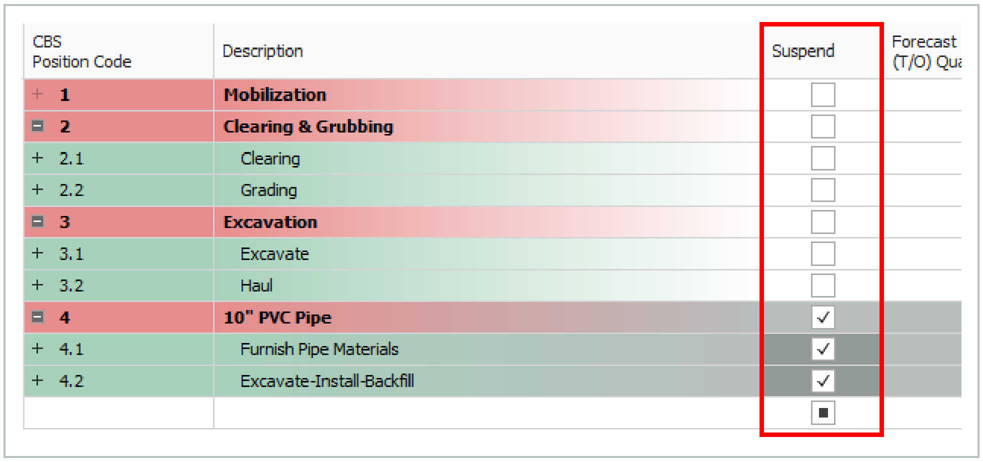
Follow the step by step below to unsuspend a cost item.

Step by Step – Unsuspend a Cost Item

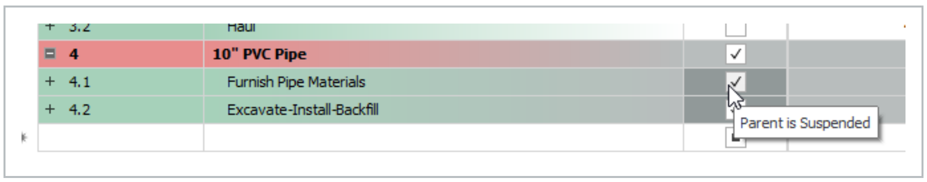
1. On the Cost Breakdown Structure (CBS) Register, select a **cost item**.
2. Right click on the selection and choose **Toggle Suspended**.
   - You can also select Toggle Suspended from the Edit section of the Actions tab
   - You can also unsuspend cost items by unchecking the Suspend checkbox on the Cost Item Setup tab of a cost item record

5.4.6.5 Suspend Column

Within the CBS Register, the Suspend column indicates which cost items are suspended.



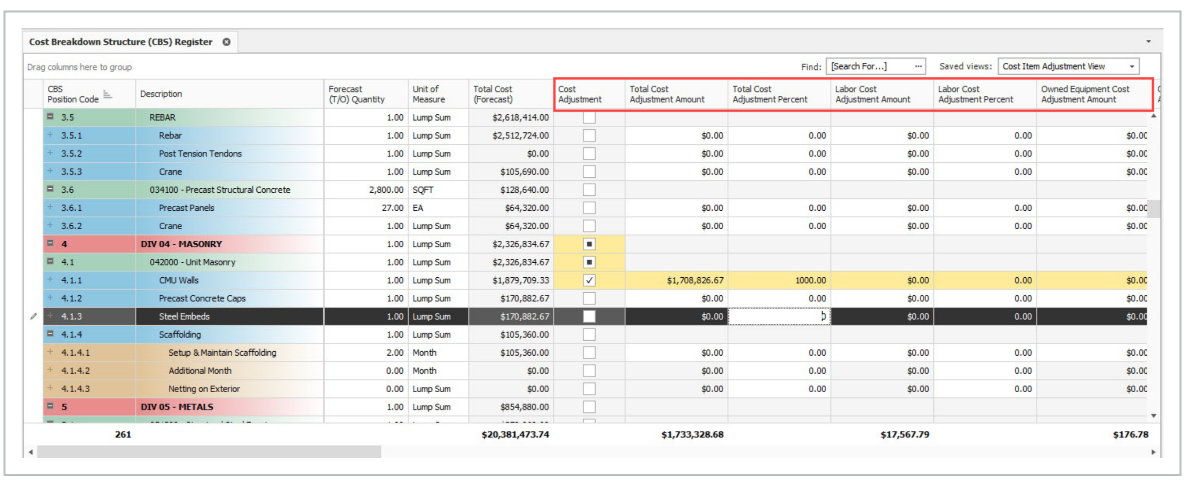
- Hover over the checkmarks to see why the cost item is suspended



- You can suspend and unsuspend cost items by checking and unchecking the checkboxes in the Suspend column as well

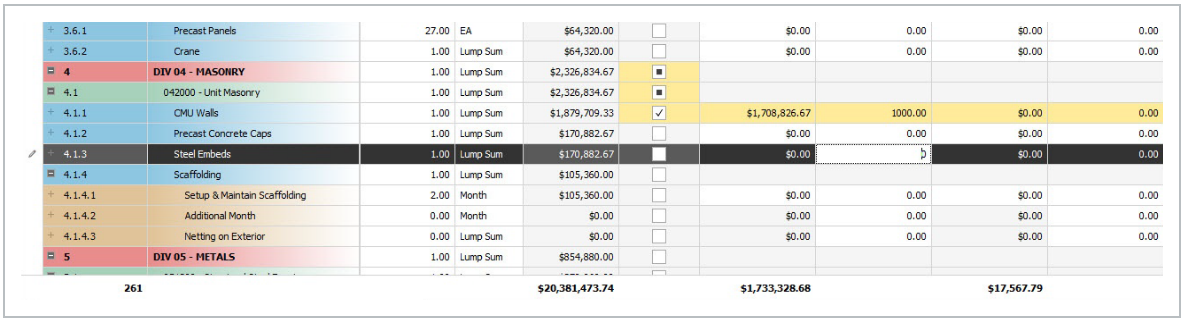
5.4.7 Adding Cost Adjustments

Total Cost and Billing Adjustments can now be made in the CBS register which can be viewed either from the Standard view of the CBS register, or a saved view affiliated with change.



Adjustment fields have been added to the CBS to view and modify the adjustment amount and adjustment percent without going into each individual cost item.

Any adjustment made to the Adjustment Amount fields on the CBS register will then have the Adjustment Percent field automatically calculated. Changes made to those fields will be highlighted in yellow signifying an adjustment has been made.



3.6.1	Precast Panels	27.00	EA	$64,320.00	☐	$0.00	0.00	$0.00	0.00
3.6.2	Crane	1.00	Lump Sum	$64,320.00	☐	$0.00	0.00	$0.00	0.00
4	DIV 04 - MASONRY	1.00	Lump Sum	$2,326,834.67	■				
4.1	042000 - Unit Masonry	1.00	Lump Sum	$2,326,834.67	■				
4.1.1	CMU Walls	1.00	Lump Sum	$1,879,709.33	☑	$1,708,826.67	1000.00	$0.00	0.00
4.1.2	Precast Concrete Caps	1.00	Lump Sum	$170,882.67	☐	$0.00	0.00	$0.00	0.00
4.1.3	Steel Embeds	1.00	Lump Sum	$170,882.67	☐	$0.00		$0.00	0.00
4.1.4	Scaffolding	1.00	Lump Sum	$105,360.00	☐				
4.1.4.1	Setup & Maintain Scaffolding	2.00	Month	$105,360.00	☐	$0.00	0.00	$0.00	0.00
4.1.4.2	Additional Month	0.00	Month	$0.00	☐	$0.00	0.00	$0.00	0.00
4.1.4.3	Netting on Exterior	0.00	Lump Sum	$0.00	☐	$0.00	0.00	$0.00	0.00
5	DIV 05 - METALS	1.00	Lump Sum	$854,880.00	☐				
261				$20,381,473.74		$1,733,328.68		$17,567.79	

Other adjustments fields in the CBS register include the many adjustments fields that have been added to the **Billing Rates View**.

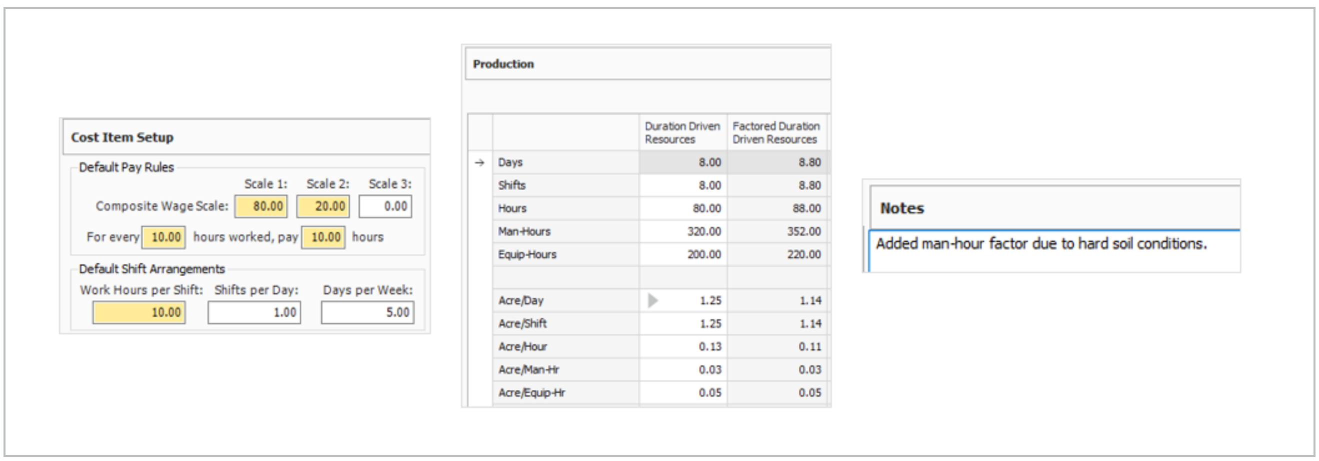
A new Saved view called **Cost Item Adjustment View** has been added to the Cost Breakdown Structure.

Exercise 5.3 – Manage cost item details

In this exercise, practice adjusting your cost item details. Complete the following steps, using your Job:

1. Open the Cost Item record for cost item**2.2 Grading**.
2. From the **Cost Item Setup tab**, change the Composite Wage Scale to **80%** Scale 1, **20%**Scale 2. Also adjust for every**10** hours worked, pay **10** hours.
3. Change the Default Shift Arrangements to **10** Work Hours per Shift, **1** Shift per Day, **5**Days per Week.
4. From the Man-Hour Factors tab, apply a Man-Hour Factor of **1.1** to the same cost item.
5. On the Notes tab, type **Added man-hour factor due to hard soil conditions**.

You should end up with similar results.



Congratulations, you have completed this exercise!

Lesson 5 Review

1. Resources, costs, and production can only be added to what type of cost item?
    a. Superior
    b. Terminal
    c. Parent

---

2. What Cost Source is used for defining resources and production?
    a. Plug
    b. Detail
    c. Quote

---

3. On the Cost Item Record, what tab is used for changing the cost item’s Default Shift Arrangements?
    a. Cost Item Setup
    b. Production
    c. Man-Hour Factors
    d. Notes

Lesson 5 Summary

As a result of this lesson, you can:

- Explain the Cost Breakdown Structure and its purpose
- Create cost items
- Add costs and production
- Manage cost item details

LESSON 6 – INDIRECT COSTS

Lesson Duration: 45 Minutes

Lesson Objectives

After completing this lesson, you will be able to:

- Explain how indirect costs are defined in InEight Estimate
- Estimate default indirect cost items
- Estimate user-defined indirect cost items

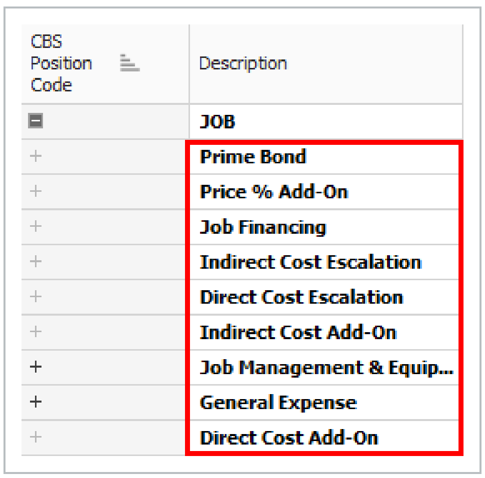
Lesson Topics

6.1 INDIRECT COSTS OVERVIEW

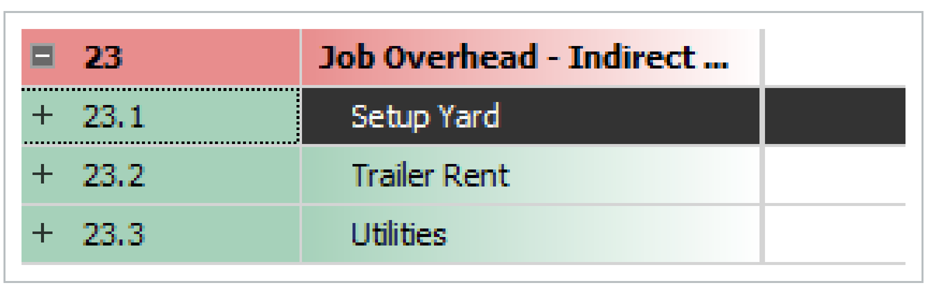
Indirect costs such as the cost of prime bond, mobilization, or site supplies are typically overhead costs that are not directly associated with a particular project deliverable but contribute to the total cost of the project. However, indirect costs can be assigned to a pay items. This gives you the flexibility to more accurately control the cost basis of bid items and strategically price the work to maximize cost recovery and profit.

Once your direct costs are defined, you can add indirect project costs. Estimate provides two ways you can create indirect costs:

1. **Default Indirect Cost Items**: These are pre-built cost items created by InEight Estimate, located at the top of the CBS Register.



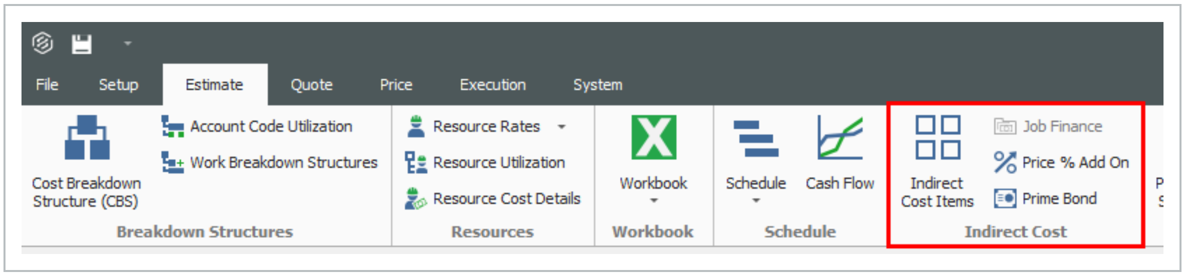
2. **User-Defined Indirect Cost Items**: Any cost item you create in the CBS Register that is not assigned to a pay item is considered indirect cost.



The Cost Breakdown Structure (CBS) located in the Library under the Estimate tab, Master Breakdown Structures section, controls which of the default indirect cost items to copy into new job folders.

6.1.1 Navigation to Indirect Costs

From the Estimate tab of the InEight Estimate landing page, you can quickly access indirect costs from the Indirect Cost section.



- Select Indirect Cost Items to open the Cost Breakdown Structure Register filtered to only your indirect costs
- You can select Prime Bond, Price % Add On, and Job Financing to access those indirects

The following section takes a closer look at the default indirect cost items.

6.2 DEFAULT INDIRECT COST ITEMS

InEight Estimate contains various default cost items to help you calculate your indirect costs.

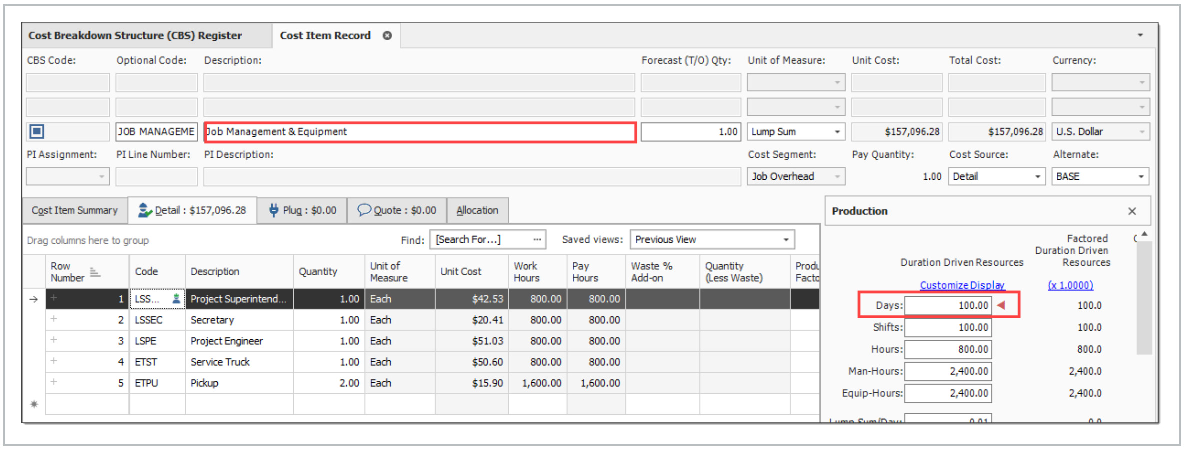
6.2.1 Independent Indirect Cost Items

Independent indirect cost items function very much like the direct cost items you defined previously:

- Job Management & Equipment
- General Expense

6.2.1.1 Job Management & Equipment

The sample Job Management & Equipment Record below shows that you can add resources and production just like in your direct cost items. Supervisory staff resources were added, and the production duration is set to 100 days.



The following Step by Step walks you through defining resources and costs for your Job Management & Equipment indirect cost item.

Step by Step – Add job management & equipment costs

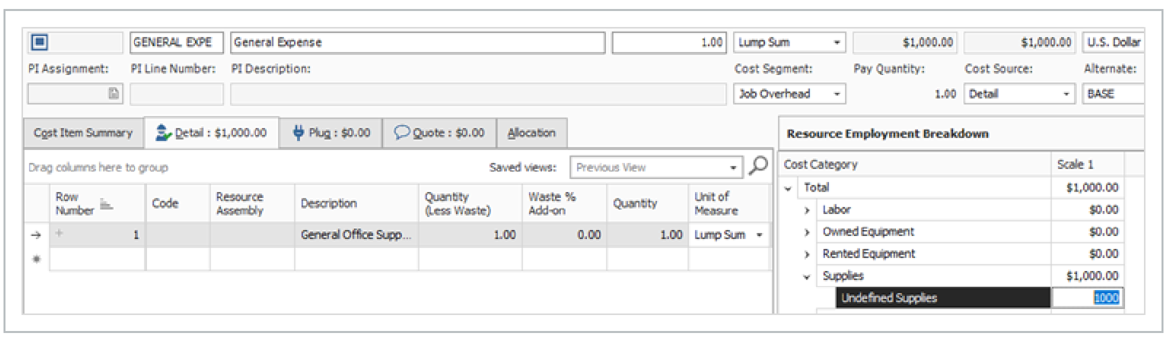
1. In your job, from the Estimate landing page, select the **Cost Breakdown Structure (CBS)**.
2. Double-click on the row header of the **Job Management & Equipment** indirect cost item.
3. Add resources by clicking in the Code column and selecting the **Icon**.
4. Select the **Production** tab.
5. Enter a production value.
6. Click **OK** to close the record.

- For this example, we'll add the following resources and production:

Resource	Quantity
LSSEC Secretary	1
LSSUPT Project Superintendent	1
Cost Item Production Value (in Days)	
70	

Step by Step – Add general expense costs

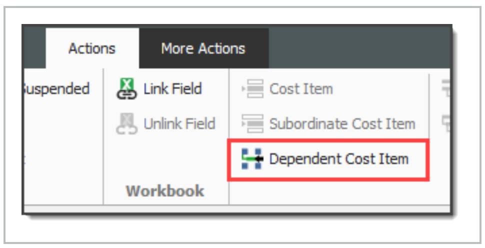
1. From the Estimate tab, select the **Cost Breakdown Structure (CBS)**.
2. Right-click the row header of the **General Expense** row header and select **Open**.
   - You could add existing resources here, but in this case, you will create an ad hoc resource.
3. In the first blank row, enter a description, quantity and unit of measure.
4. Click on (highlight) that row, and then click the **Resource Employment Breakdown** tab.
5. Type a **numeric value** in the Undefined Supplies cost category.
6. Click **Ok** to close the record.
   - For this example, we'll add General Office Supplies, 1 Lump Sum, $1,000 in the Supplies category.



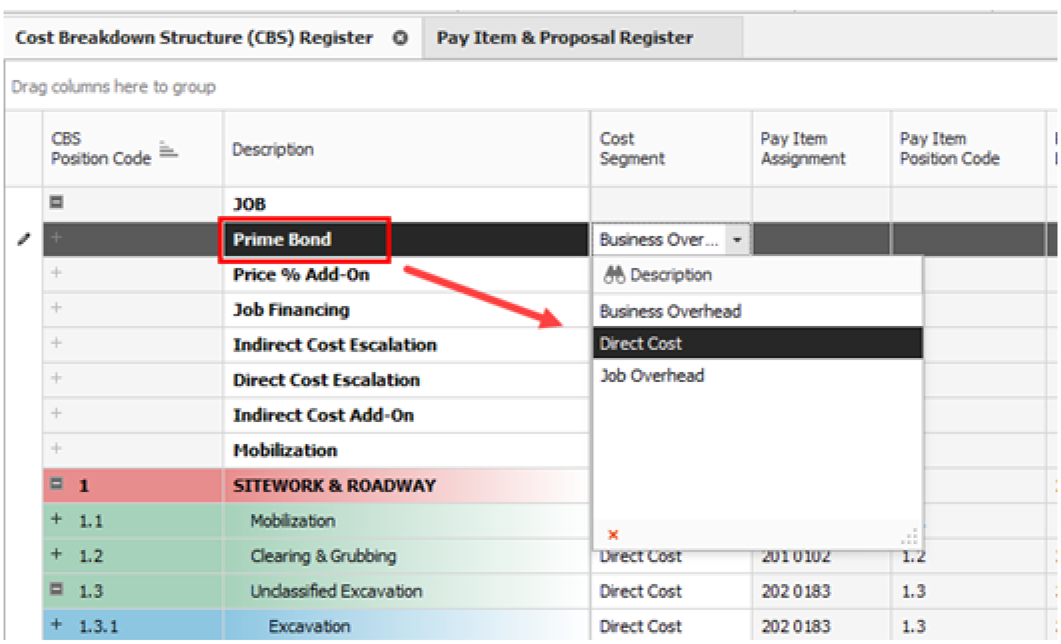
6.2.2 Dependent Indirect Cost Items

The other default indirect cost items are **dependent indirect cost items**, meaning their costs depend on other costs, prices or hours. They include:

- Direct and Indirect Cost Add-On
- Direct and Indirect Cost Escalation
- Prime Bond
- Price % Add-On
- Job Financing
- Man-Hour Add-On



It’s possible to assign any assigned or dependent cost Item to any of the 3 cost segments and provides greater control over where costs exist in the Price Breakdown Structure (PBS).



6.2.2.2 Default Dependent Cost Item Deletion

> If you need to use additional dependent cost items, you can create your own, but you must delete all the existing default dependent cost items first.

The following steps walk you through deleting your existing default indirect costs so you can create your own.

Step by Step – Delete existing default dependent cost items

1. From the Estimate tab, select **Cost Breakdown Structure (CBS)**.
2. Select an **Indirect Cost Item** by clicking on its row header.
3. Press and hold the Ctrl or Shift key to select multiple indirect cost items.
4. Right-click on the **selection** and select **Delete**.
5. Select **Yes** to confirm you want to delete the selected cost items.

6.2.2.3 Prime Bond

The following steps walk you through adding and defining your prime bond for the job.

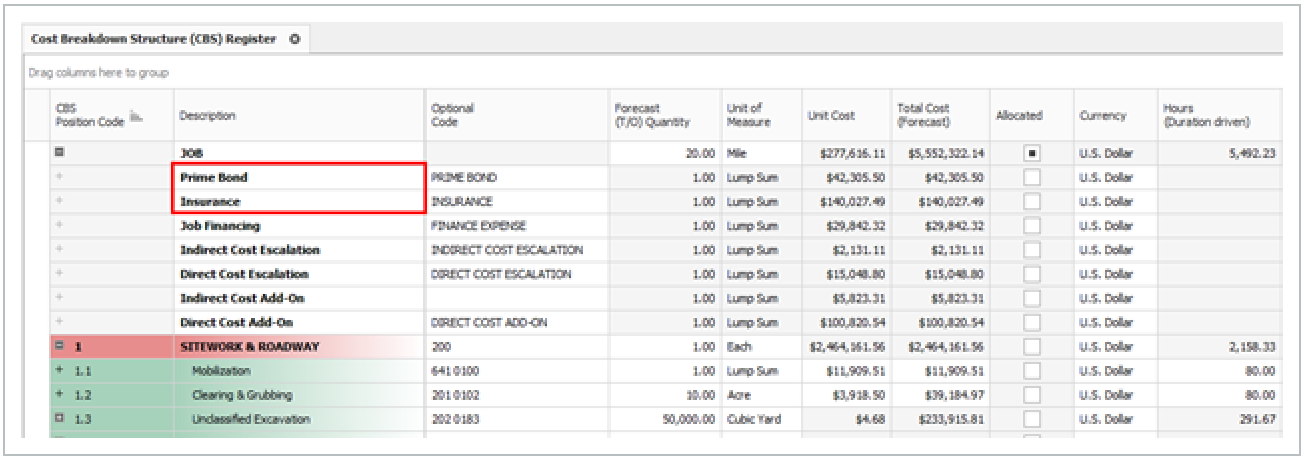
Step by Step – Define prime bond

1. From the Estimate tab, select **Cost Breakdown Structure (CBS)**.
2. Right-click on the **row header** for any cost item and insert **Dependent cost Item**.
3. On the resulting Attention prompt, select **Based on Bond Table**.
4. Click **OK**.
5. Right-click on the Prime Bond row header and select **Open**.
6. Use the Table Name drop-down to choose a table (e.g., Example: General Construction).
7. Click **OK** to close the record.

Multiple bond rate dependent items

For certain projects, it may be desirable to calculate costs for bond or insurance premiums based upon multiple different rate tables. It is now possible to add multiple bond/rate table based dependent items in the CBS.

For example, in addition to having a prime bond, the job may also require insurance coverage where the premium is calculated using a rate table-based approach. This can now be accomplished by adding another Bond/Rate-table based dependent cost item to the job.

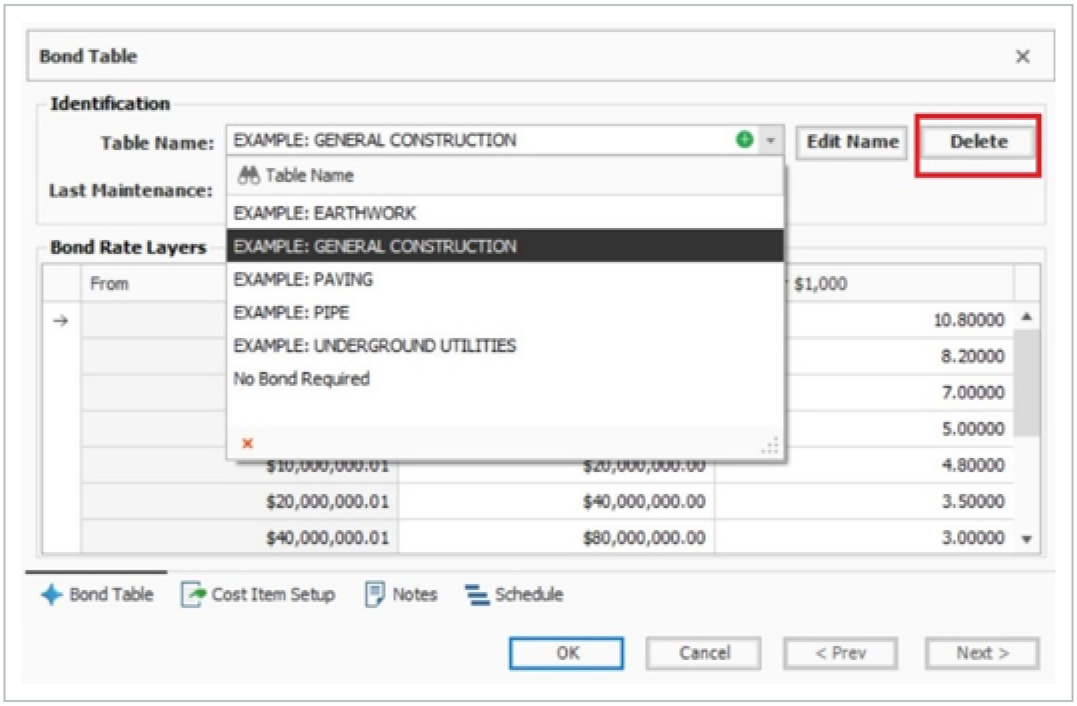

Cost Breakdown Structure (CBS) Register

Drag columns here to group

CBS Position Code	Description	Optional Code	Forecast (T/O) Quantity	Unit of Measure	Unit Cost	Total Cost (Forecast)	Allocated	Currency	Hours (Duration driven)
	JOB		20.00	Mile	$277,616.11	$5,552,322.14		U.S. Dollar	5,492.23
	Prime Bond	PRIME BOND	1.00	Lump Sum	$42,305.50	$42,305.50		U.S. Dollar	
	Insurance	INSURANCE	1.00	Lump Sum	$140,027.49	$140,027.49		U.S. Dollar	
	Job Financing	FINANCE EXPENSE	1.00	Lump Sum	$29,842.32	$29,842.32		U.S. Dollar	
	Indirect Cost Escalation	INDIRECT COST ESCALATION	1.00	Lump Sum	$2,131.11	$2,131.11		U.S. Dollar	
	Direct Cost Escalation	DIRECT COST ESCALATION	1.00	Lump Sum	$15,048.80	$15,048.80		U.S. Dollar	
	Indirect Cost Add-On		1.00	Lump Sum	$5,823.31	$5,823.31		U.S. Dollar	
	Direct Cost Add-On	DIRECT COST ADD-ON	1.00	Lump Sum	$100,820.54	$100,820.54		U.S. Dollar	
1	SITEWORK & ROADWAY	200	1.00	Each	$2,464,161.56	$2,464,161.56		U.S. Dollar	2,158.33
1.1	Mobilization	641 0100	1.00	Lump Sum	$11,909.51	$11,909.51		U.S. Dollar	80.00
1.2	Clearing & Grubbing	201 0102	10.00	Acre	$3,918.50	$39,184.97		U.S. Dollar	80.00
1.3	Unclassified Excavation	202 0183	50,000.00	Cubic Yard	$4.68	$233,915.81		U.S. Dollar	291.67

Deleting Bond Tables

Delete bond tables that are not applicable to your estimate by selecting them and then clicking the **Delete** button. You can customize the Bond Table window to only view the tables that are relevant to your estimate from the Table Name drop-down list.

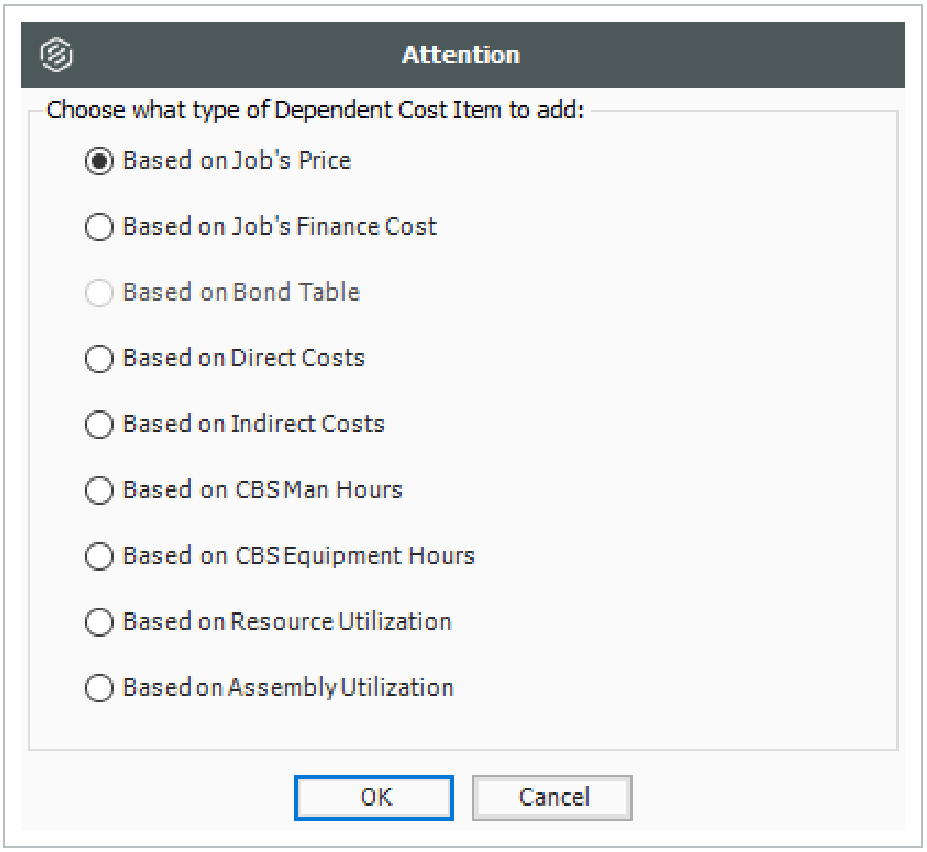


6.2.2.4 Price % Add-On

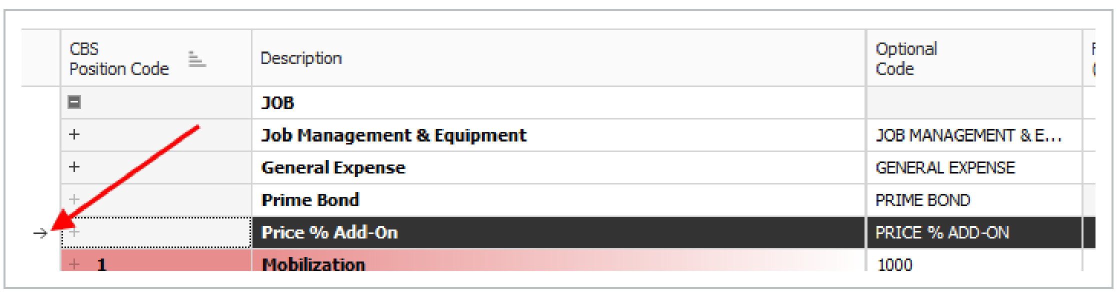
The following steps walk you through defining the Price % Add-On.

Step by Step – Define a price % add-on

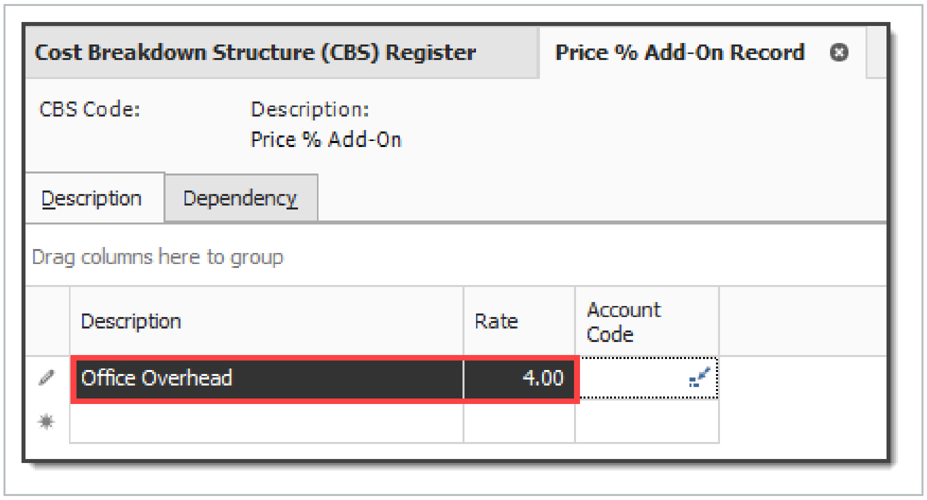
1. From the Cost Breakdown Structure (CBS) Register, right-click on the **row header** for any cost item and select **Insert Dependent Cost Item**.
2. On the resulting Attention prompt, select **Based on Job's Price**.



3. Click **OK**.
4. Double-click on the **Price % Add On** row header to open the record.



5. The Price % Add-on Record opens to the Description tab. Type a **description** in the Description field and enter a **numeric value** for rate.



6. Click **OK** to close the record.

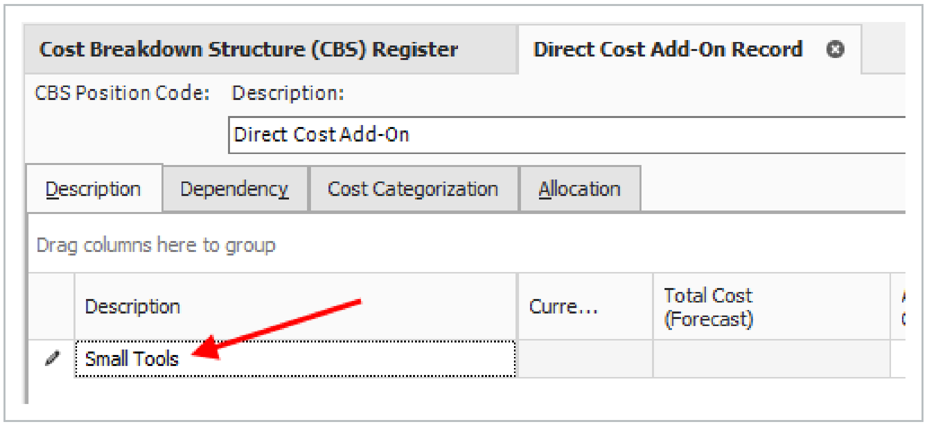
- For this example, we'll enter a description of Office Overhead and a rate of 4%.

6.2.2.5 Direct Cost Add-On

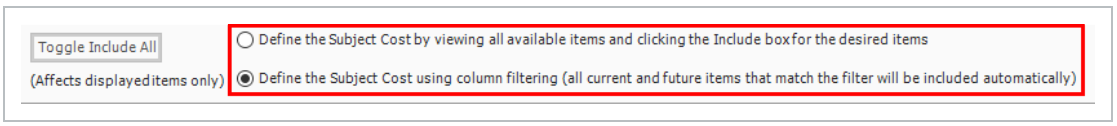
The following steps walk you through creating a Direct Cost Add-On dependent cost item.

Step by Step – Define a direct cost add-on

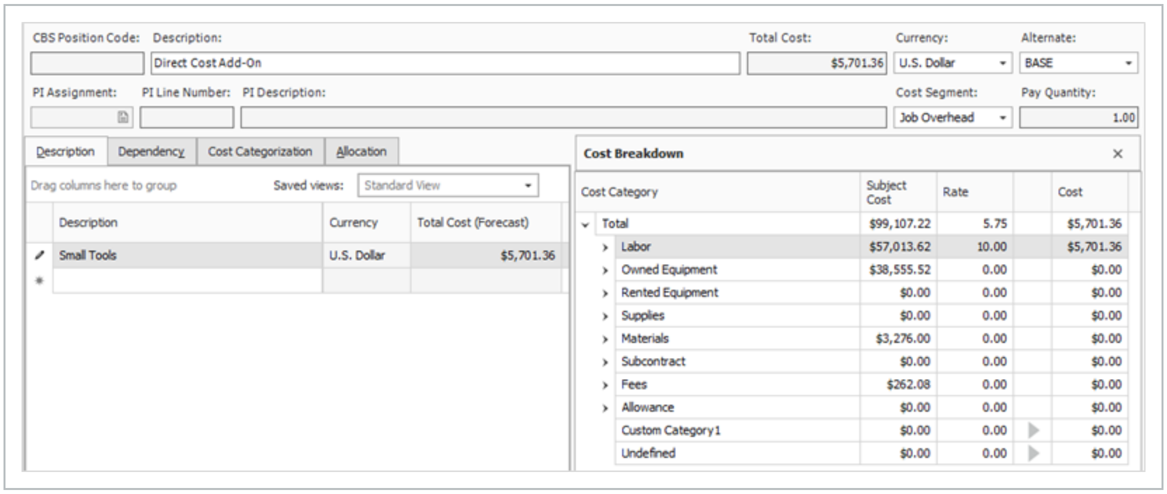
1. From the Cost Breakdown Structure (CBS) Register, right-click on the **row heade**r for any cost item and select **Insert Dependent Cost Item**.
2. On the resulting Attention prompt, select **Based on Direct Costs**.
3. Click **OK**.
4. Double-click on the **Direct Cost Add-On** row header.
5. On the Description tab, type a **description** in the Description column.



6. Press the **Tab** key (you can define additional rows for other add-on costs as needed).
7. Click on the **Dependency** tab to see what contributes to your subject cost.
8. For this activity, leave the default (lower) button selected.



9. On the Cost Breakdown tab on the right, add an add-on rate (percentage) or cost at any of the cost category levels you need.
   - This updates the Total Cost (Forecast) of your item on the Description tab
10. Click **OK** to close the record.
   - For this example, we'll create a new Direct Cost Add-On, giving it a description of Small Tools with a rate of 10% on the Labor cost category



6.2.2.6 Repositioning Dependent Cost Items

Repositioning dependent cost items creates a simpler way to manage the hierarchy of your project by placing items of more importance ahead of other line items.

Since dependent cost items can now be repositioned, a Position Code field has been added with the functionality similar to column remaining the same. The below listed dependent cost item fields are now exposed in the CBS register so you can more easily see the various percentages used in dependent items.

- Subject Cost
- Subject Cost Rate
- Subject Billing Amount
- Subject Billing Rate

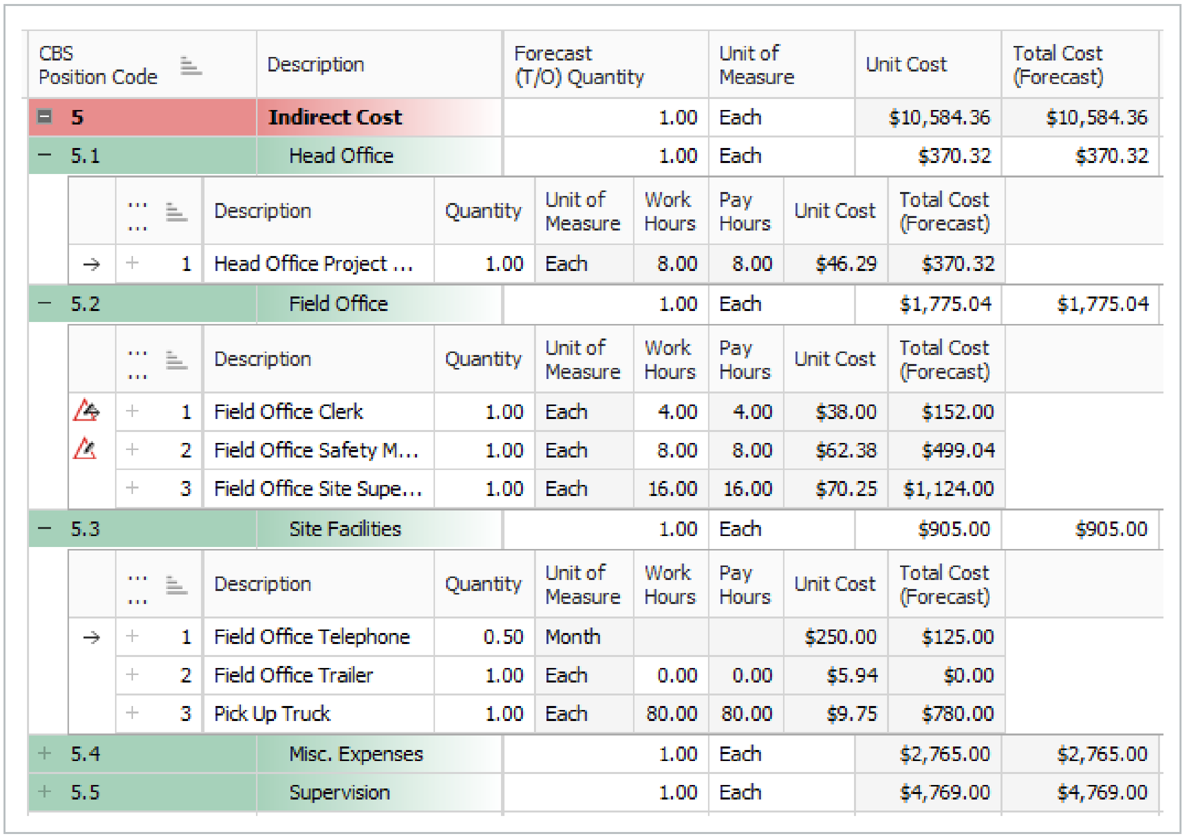
These columns can also be found in the new saved view **Bid Review**.

CBS Position Code	Description	Optional Code
	JOB	
	Prime Bond	PRIME BOND
	Price % Add-On	PRICE % ADD-ON
	Job Financing	FINANCE EXPENSE
	Indirect Cost Escalation	INDIRECT COST ESCALATION
	Direct Cost Escalation	DIRECT COST ESCALATION
	Indirect Cost Add-On	INDIRECT COST ADD-ON
	Job Management & Equipment	JOB MANAGEMENT & EQUIPMENT
	General Expense	GENERAL EXPENSE
	Direct Cost Add-On	DIRECT COST ADD-ON
1	Mobilization	641 0100
24.1.2	Day Two	
25	Prime Bond	PRIME BOND
26	Price % Add-On	PRICE % ADD-ON
27	Job Financing	FINANCE EXPENSE
28	Indirect Cost Escalation	INDIRECT COST ESCALATION
29	Direct Cost Escalation	DIRECT COST ESCALATION
30	Indirect Cost Add-On	INDIRECT COST ADD-ON
31	Job Management & Equipment	JOB MANAGEMENT & EQUIPMENT
32	General Expense	GENERAL EXPENSE
33	Direct Cost Add-On	DIRECT COST ADD-ON

6.3 USER-DEFINED INDIRECT COST ITEMS

You may prefer to create your own indirect cost items. You create user-defined indirect cost items the same way you create direct cost items. The only difference is that your indirect cost items will not be assigned to pay items. One advantage of creating your own indirect cost items is the ability to create a parent-child structure for your indirect costs.

Here is an example of user-defined indirect cost items, expanded to show their employed resources:



CBS Position Code	Description	Forecast (T/O) Quantity	Unit of Measure	Unit Cost	Total Cost (Forecast)
5	**Indirect Cost**	1.00	Each	$10,584.36	$10,584.36
5.1	Head Office	1.00	Each	$370.32	$370.32

	Description	Quantity	Unit of Measure	Work Hours	Pay Hours	Unit Cost	Total Cost (Forecast)
1	Head Office Project ...	1.00	Each	8.00	8.00	$46.29	$370.32

CBS Position Code	Description	Forecast (T/O) Quantity	Unit of Measure	Unit Cost	Total Cost (Forecast)
5.2	Field Office	1.00	Each	$1,775.04	$1,775.04

	Description	Quantity	Unit of Measure	Work Hours	Pay Hours	Unit Cost	Total Cost (Forecast)
1	Field Office Clerk	1.00	Each	4.00	4.00	$38.00	$152.00
2	Field Office Safety M...	1.00	Each	8.00	8.00	$62.38	$499.04
3	Field Office Site Supe...	1.00	Each	16.00	16.00	$70.25	$1,124.00

CBS Position Code	Description	Forecast (T/O) Quantity	Unit of Measure	Unit Cost	Total Cost (Forecast)
5.3	Site Facilities	1.00	Each	$905.00	$905.00

	Description	Quantity	Unit of Measure	Work Hours	Pay Hours	Unit Cost	Total Cost (Forecast)
1	Field Office Telephone	0.50	Month			$250.00	$125.00
2	Field Office Trailer	1.00	Each	0.00	0.00	$5.94	$0.00
3	Pick Up Truck	1.00	Each	80.00	80.00	$9.75	$780.00

CBS Position Code	Description	Forecast (T/O) Quantity	Unit of Measure	Unit Cost	Total Cost (Forecast)
5.4	Misc. Expenses	1.00	Each	$2,765.00	$2,765.00
5.5	Supervision	1.00	Each	$4,769.00	$4,769.00

Step by Step – Add user-defined indirect cost items

Let's walk through a specific scenario for this step by step.

1. At the bottom of your CBS, create an indirect cost item called Job Overhead with a Forecast (T/O) Quantity of **1** and Unit of Measure of **Each**.
2. Add two **subordinates** under the new cost item named Job Trailer and Utilities. Job Trailer is **1 Each** but change Utilities to **1 Lump Sum**.
3. Open the Job Trailer cost item by double-clicking on the row header.
    - Assuming there is no Job Trailer in our Resource Rate Register, you will create this resource "on the fly".
4. In the Detail grid, click on the **Resource Register** icon in the Code field as if you were going to select from the Resource Rate Register.
5. On the Resource Rate Register, click the **Rented Construction Equipment** tab.
6. Right-click on one of the **Line Items** and select **New** to add a new resource.

7. Enter a Resource Code of **RJT** and description of **Job Trailer**.
8. In the Amount column enter **25** for the Rented Equipment category.
9. Click **OK** to close the Resource Rate Record.
10. Select the **new resource** you created, then click **OK** to return to the cost item record.
11. On the cost item record, adjust the Job Trailer quantity to **2**.
12. On the Production tab, enter **70** days.
13. Click **OK** to close the record.
14. On the CBS register, select the **Utilities** cost item by double-clicking on the row header.
15. Create an ad hoc resource on this cost item called **Electricity**, which will be 1 Lump Sum.
16. Finally, go to the Resource Employment Breakdown tab and enter **1500** in the Custom Category1 row.
17. Click **OK** to close the record.

3	**Job Overhead**	1.00	Each	$31,740.00	$31,740.00
3.1	Job Trailer	1.00	Each	$30,240.00	$30,240.00

Row Number	Code	Resource Assembly	Description	Quantity (Less Waste)	Waste % Add-on	Quantity	Unit of Measure	Work Hours	Pay Hours	Unit Cost	Total Cost (Forecast)
1	RJT		Job Trailer			2.00	Each	1,1...	1,1...	$27.00	$30,240...

3.2	Utilities	1.00	Lump Sum	$1,500.00	$1,500.00

Row Number	Code	Resource Assembly	Description	Quantity (Less Waste)	Waste % Add-on	Quantity	Unit of Measure	Work Hours	Pay Hours	Unit Cost	Total Cost (Forecast)
1			Electricity	1.00	0.00	1.00	Lump ...			$1,500...	$1,500.00

6.4 COST ALLOCATION

The **Cost Item Record - Allocation** tab lets you to spread costs from a single Cost Item Record to one or more other cost items in the Cost Breakdown Structure (CBS) Register.

- **Allocation Item** - The cost item to be allocated, where you define the quantities, resource employments and the logic that determines how to allocate the item throughout the bid.
- **Allocation Target** - A cost item to be the recipient of allocated cost, as defined within the Allocation Item. There may be one or many Allocation Targets for one Allocation Item.
- **Distribution** - A read-only cost item in the CBS representing an Allocation Target's proportional share of the Allocation Item.

You can choose from several methods to determine specifically where and how much cost to spread:

- **Quantity** - Specify the amount of the Allocation Item to be spread to each Allocation Target.
- **Proportionately based on another field** - Allocate proportionately by one of many available cost item values, usually based on time or cost.
- **Percentage** - Specify the percentage of the Allocation Item to spread to each Allocation Target.
- **Unit Cost** - Use the unit cost from the Allocation Item and the quantity of each Allocation Target to drive the Forecast (T/O) Quantity of the Allocation Item.

Cost Item Allocation is a good means of spreading costs throughout a bid for the purpose of determining appropriate bid prices.

> Only Level 1 cost items can be allocated, including Add-On and Escalation dependent cost items. A subordinate cost item cannot be allocated, and a cost item that is assigned to a pay item cannot be allocated.

6.4.1 Cost Allocation

With Cost Item Allocation, you can track the cost of one broad cost item by distributing the cost of that item to other cost items, so that the cost can be tracked on a more detailed level. This gives better visibility into the cost that makes up an item. For example, you can spread ST&S from one cost item to multiple cost items that will use ST&S.

Imagine that a large portion of your scope of work for the job you are bidding has concrete. You face the options of batching your own raw materials or purchasing the materials from a supplier. You can use cost allocation to create the cost of a batch plant and allocate it to different items, and then compare this unit cost to the unit cost of purchasing the materials from a supplier.

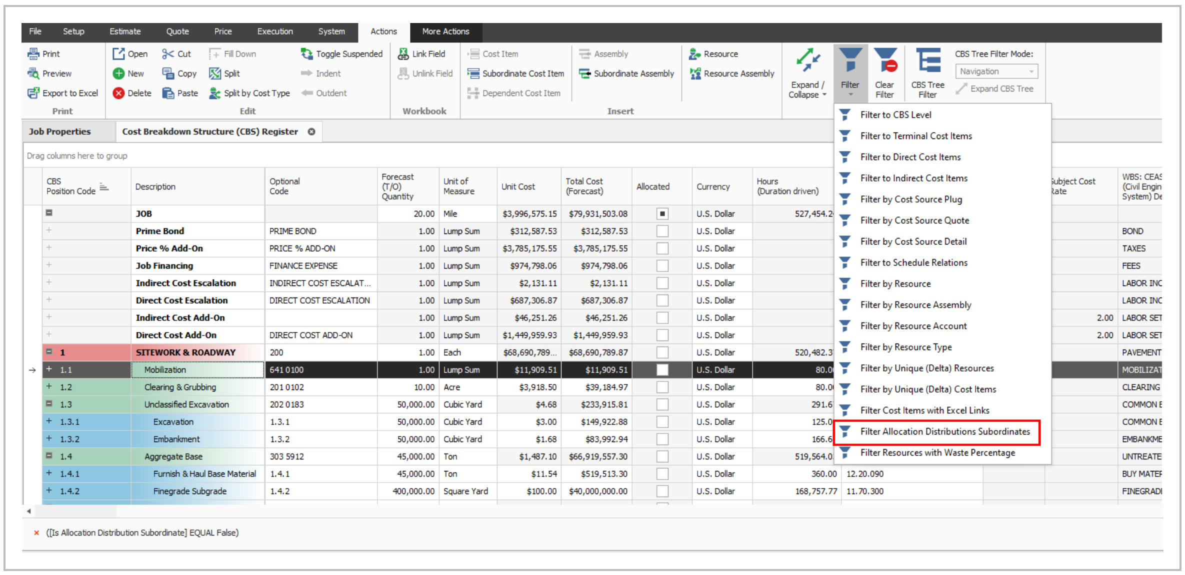
The Allocation tab allows you to spread costs from an Allocation Item to one or more Allocation Target (s).

> In the Allocation Target list, the **[Unit of Measure] Quantity** column caption displays the Unit of Measure of the Allocation Item. For instance, if the Allocation Item's Unit of Measure is **Cubic Yards (CY)**, then the caption displayed for this column is **CY** Quantity.

A Distribution cost item is created as a read-only subordinate cost item under each Allocation Target. It is copied proportionally with the quantity/cost defined to each different item in CBS.

6.4.2 View Filter Excludes Cost Item Allocation Details

A View Filter option is added to show only the level 1 cost item distribution in the allocation destinations to provide you with a clear and comprehensive view of the CBS register, especially when there are many allocations. When you are allocating cost items, the allocations are created in the destination cost item by creating a copy of the entire allocated cost items structure. This filter allows you to simplify the view by displaying only the parent level allocation cost item.



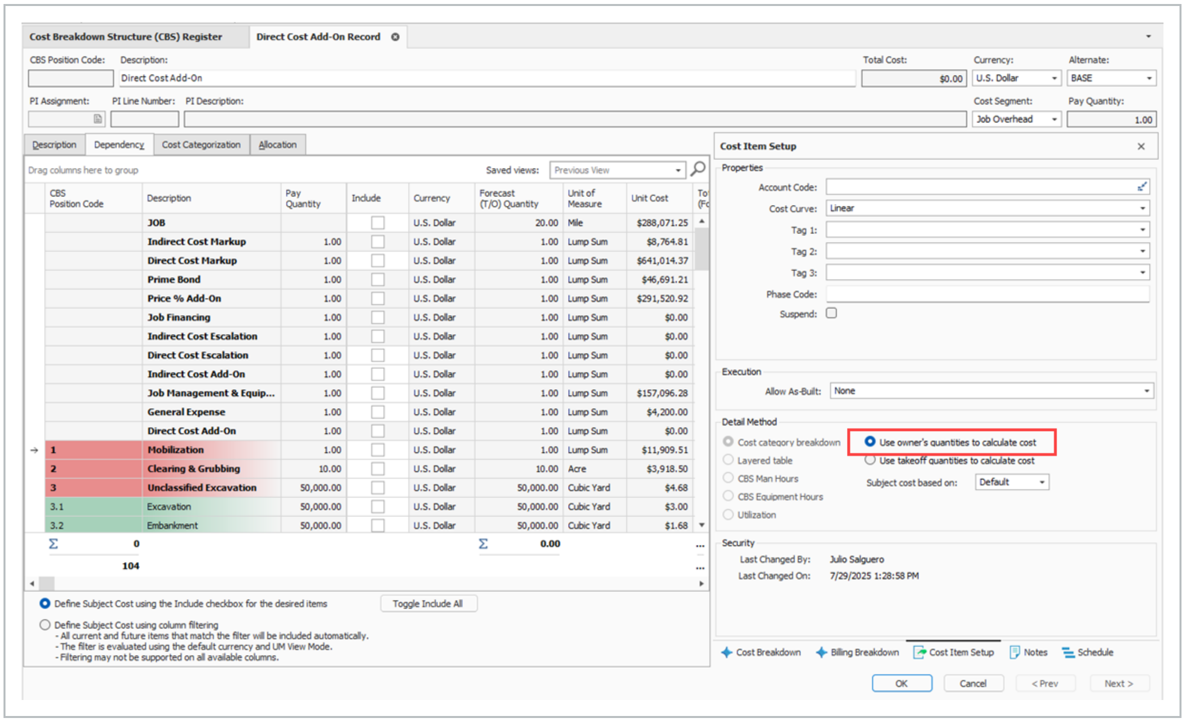
6.4.3 Cost Allocation to By Unit Cost

Having an under allocation or over allocation is ok, but it can be fixed by updating the Forecast (T/O) Quantity of the **Concrete Batch Plant**. To do this, change the cost allocation to **by Unit Cost**.

6.5 DEPENDENT COST ITEM ALLOCATION

When allocating cost for a dependent cost item, the calculation of the cost item's subject cost aligns with the allocation target values (such as values based on quantity, percentage, or unit cost). The target values are the owner's target values. This allows you to better manage allocation values.

When you allocate costs for a dependent cost item that defines its subject costs from other cost items that include allocation from other cost items and select the option *Use owner's quantities to calculate cost*, the subject cost calculation is based on how the cost items are currently allocated. In other words, it includes the distributed costs from the allocated cost item.



6.5.1 Turning Off Cost Allocation

If determined that you no longer want to spread the cost of an allocated item, you can turn off cost allocation for that cost item. To turn off cost allocation, in the cost item record's Allocation tab, deselect the **Allocate this Item's Cost** check box. The logic that you created to spread the costs are retained, so you can easily select it again later.

> Distributions cannot exist in the CBS when a job is published for Job Tracking. To remove distributions, either break the Cost Allocation link or deselect the **Allocate this Item's Cost** check box on the **Cost Item Record - Allocation** tab.

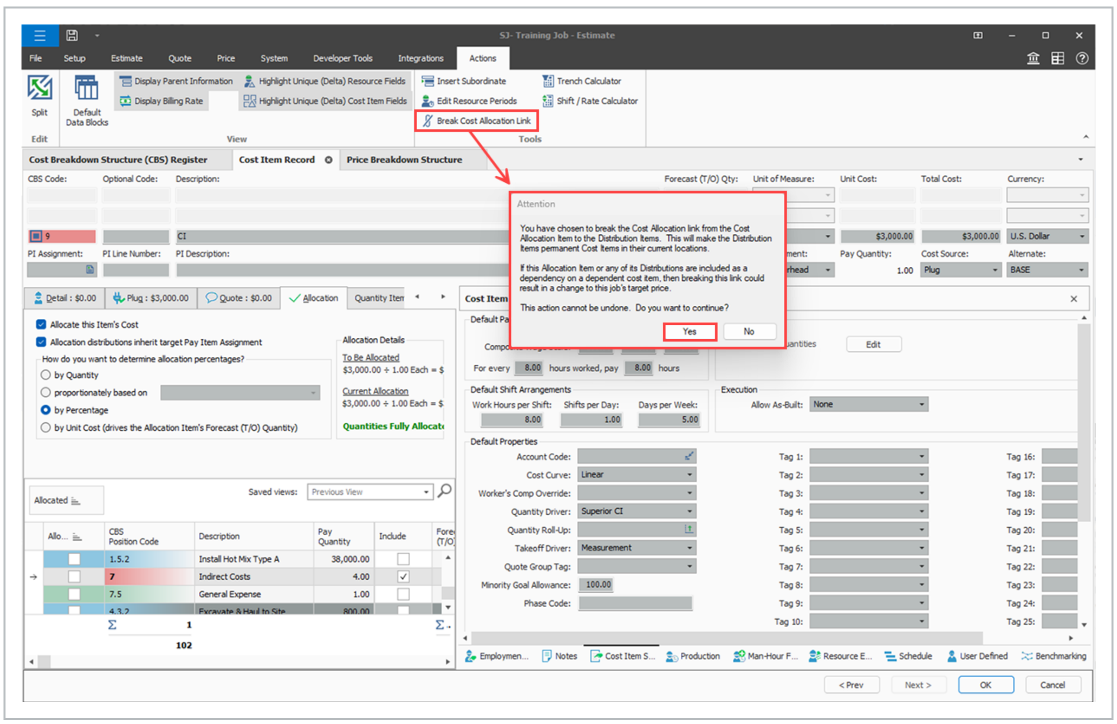
6.5.2 Break cost allocation link

You can break a cost allocation link and make a distribution be a permanent part of the CBS and permit its costs and quantities to be directly editable under the cost items to which it has been distributed.

Breaking the cost allocation link breaks the link from the cost allocation item to the distribution items, making the distribution items permanent cost items in their current locations. If the allocation item or any of its distributions are included as a dependency on a dependent cost item, then breaking the link could result in a change to the job's target price. The action cannot be undone.

Breaking a cost allocation link

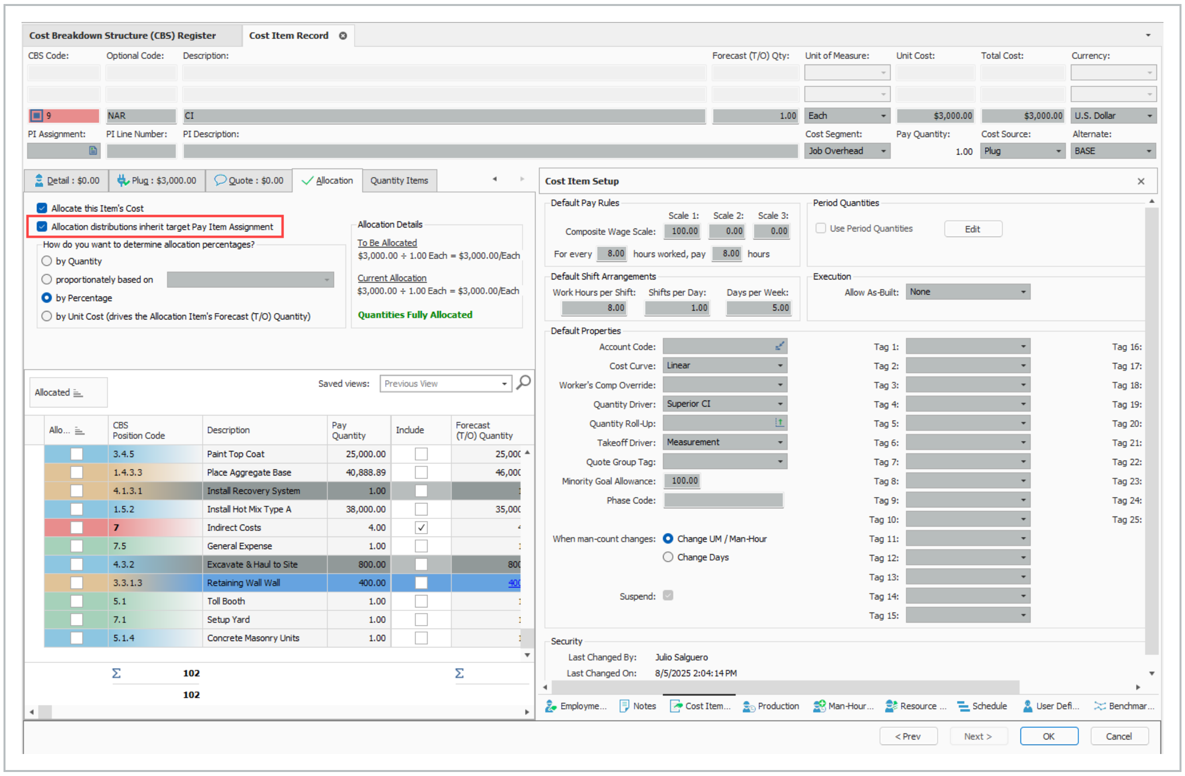
1. In the CBS, open the cost item record.
2. In the Actions tab of the record, click **Break Cost Item Allocation Link**.
3. In the Attention dialog box, click **Yes**.



6.5.3 Pay item assignment for allocation distribution

In locked jobs, the *Allocation distributions inherit target Pay Item Assignment* option is automatically selected and cannot be changed. This is normal Estimate behavior for locked jobs.

In a job that is unlocked, you have the option to select the **Allocation distributions inherit target Pay Item Assignment** check box to use the same allocation distribution for the cost item's costs anytime the cost item is copied and added to a job.

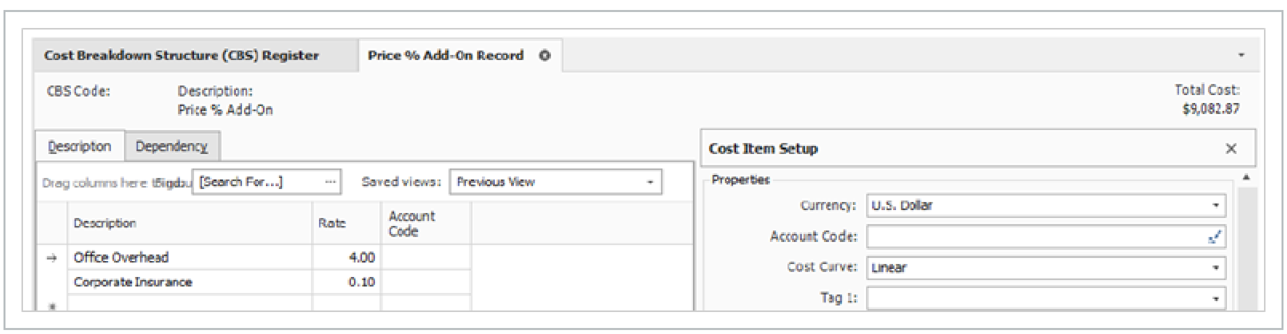


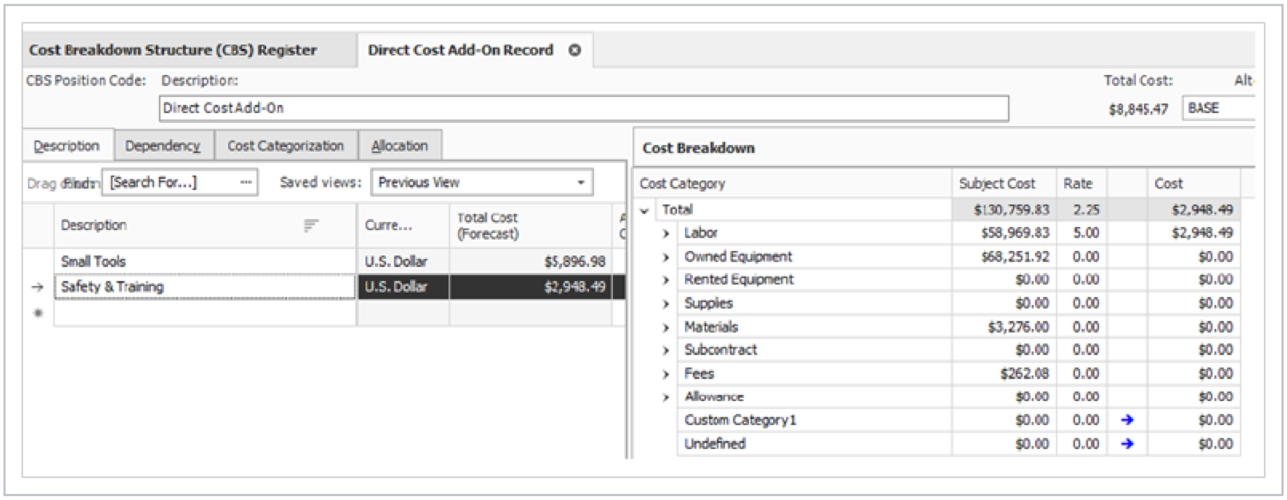
Exercise 6.1 – Define Indirect Costs

In this exercise, you will practice entering Indirect Costs. Complete the following steps, using your Job:

1. Double click on the **Price % Add On** row header.
2. You already have Office Overhead as your first line item. In the next blank row type **Corporate Insurance** in the Description field and enter a rate of **.10**.
3. Click **OK** to close the record.
4. Double click on the **Direct Cost Add-On** row header.
5. You already have Small Tools as your first line item. On the Description tab, type **Safety & Training** in the next blank row's Description field, then press **Tab**.
6. The Dependency Cost Breakdown appears on the right. Enter a rate of **5** for Labor Costs only.
7. Click **OK** to close the record.

You should end up with similar results like below:





Congratulations, you have completed this exercise!

Lesson 6 Review

1. Default indirect costs are pre-built _____ ______ created by InEight Estimate, located within the CBS Register.
    a. billing rates
    b. cost items
    c. pay items

---

2. By default, any cost item you create in the CBS Register that is not assigned to a pay item is considered indirect cost.
    a. True
    b. False

---

3. The cost segment field in the CBS is used to indicate:
    a. Whether your costs will be considered job overhead, business overhead, or direct cost.
    b. The source of your costs (Detail, Plug or Quote).
    c. What pay item your cost item is assigned to.

Lesson 6 Summary

As a result of this lesson, you can:

- Explain how indirect costs are defined in InEight Estimate
- Estimate default indirect cost items
- Estimate user-defined indirect cost items

LESSON 8 – QUOTE MANAGEMENT

Lesson Duration: 60 Minutes

Lesson Objectives

After completing this lesson, you will be able to:

- Create and publish RFQs
- Define quote pricing
- Compare and award quotes
- Create and analyze scope items

Lesson Topics

8.1 QUOTE MANAGEMENT OVERVIEW

8.1.1 Quote Management Workflow

When you make the decision to send out RFQs (Requests for Quote), as the estimator you will outline the specifications for the request, select the vendors you wish to contact, and issue the request for quotes.

When you receive quotes back from vendors, you can enter their pricing into InEight Estimate, where you can compare them, award them, and update your CBS costs in one fluid process without the need to re-enter data in multiple locations. InEight Estimate lets you enter multiple vendor quotes to enable price comparison.

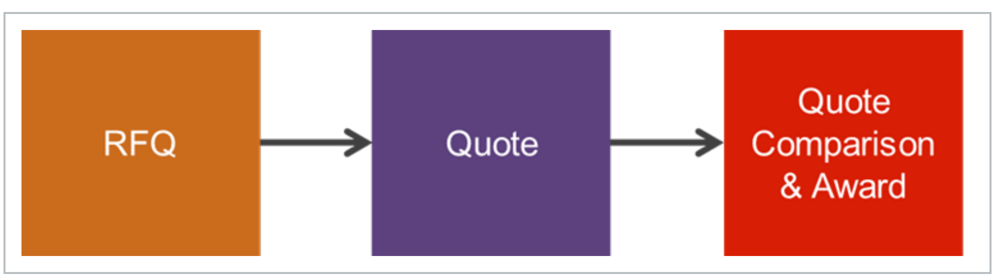
> Awarding a quote in InEight Estimate does not mean the vendor is awarded the contract, but rather that their price is selected as the carrying cost in the bid.

InEight Estimate provides a built-in workflow for managing your quotes, consisting of three steps:

1. Creating and publishing Requests for Quote (RFQs)
2. Updating quotes with vendor/subcontractor pricing
3. Comparing and awarding quotes

InEight Estimate has a separate form to manage each step:

1. Request for Quote (RFQ) Register
2. Quote Register
3. Quote Comparison & Award



8.1.2 Quotes and Quote Groups

Typically, an estimate contains two types of quotes:

1. Quotes for resources (materials, equipment) purchased or rented from suppliers.
2. Quotes for subcontracted work.

In InEight Estimate, quotes from suppliers are managed at the resource level. In other words, you can use material resources to represent the items purchased from the supplier.

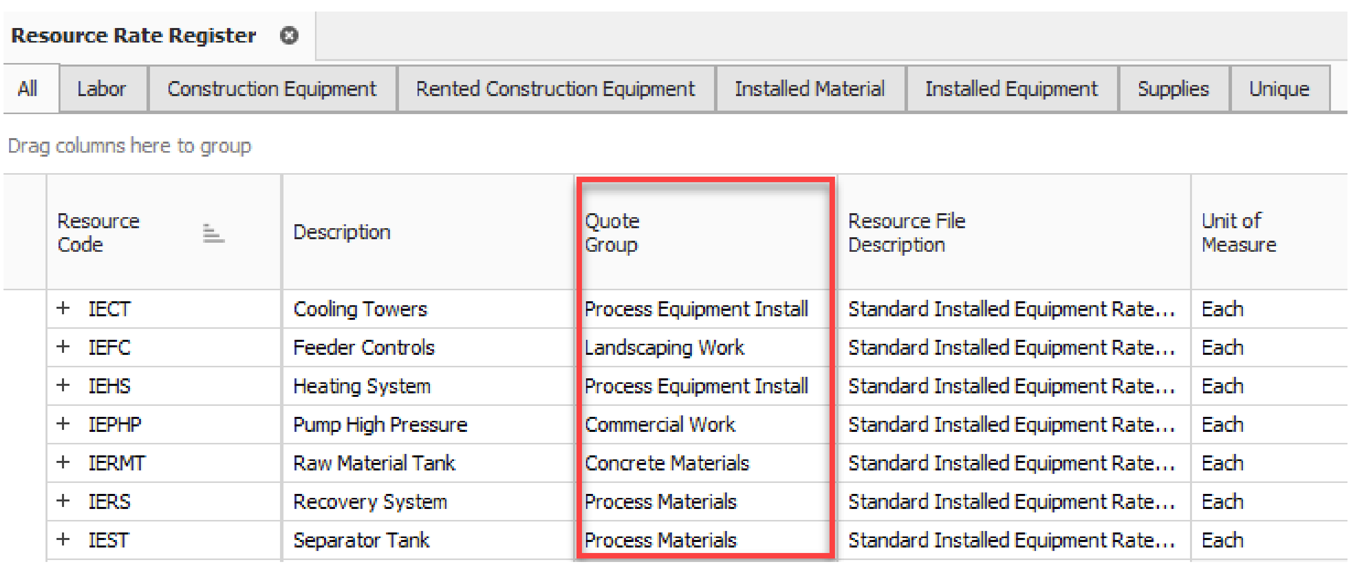
For the cost items in your project that you plan to subcontract, you can manage quotes at the cost item level, using the cost items themselves as the descriptions on the quote request.

You can use Quote Groups to group together multiple resources or cost items that will be sent in an RFQ package. Using quote group tags can save a great deal of time generating packages of items to request quotes for.

8.1.2.1 Resource Level Quote Groups

When sending out quotes, you may want to organize your resources into groups based on the type of material, such as pipe, aggregate, or concrete. When creating Requests for Quote, you will be able to select your pre-defined quote group and it will bring all the related resources along with it. You can assign quote groups using a pre-defined tag called a Quote Group in the Resource Rate Register.

Below is an example of resources with a quote group assigned:



Resource Rate Register

All | Labor | Construction Equipment | Rented Construction Equipment | Installed Material | Installed Equipment | Supplies | Unique

Drag columns here to group

Resource Code	Description	Quote Group	Resource File Description	Unit of Measure
+ IECT	Cooling Towers	Process Equipment Install	Standard Installed Equipment Rate...	Each
+ IEFC	Feeder Controls	Landscaping Work	Standard Installed Equipment Rate...	Each
+ IEHS	Heating System	Process Equipment Install	Standard Installed Equipment Rate...	Each
+ IEPHP	Pump High Pressure	Commercial Work	Standard Installed Equipment Rate...	Each
+ IERMT	Raw Material Tank	Concrete Materials	Standard Installed Equipment Rate...	Each
+ IERS	Recovery System	Process Materials	Standard Installed Equipment Rate...	Each
+ IEST	Separator Tank	Process Materials	Standard Installed Equipment Rate...	Each

8.1.2.2 CBS Level Quote Groups

For your subcontracted items, you can assign quote groups at the cost item level to group together subcontractor work, such as Commercial Work or Landscaping Work. These labels are assigned using a pre-defined tag called Quote Group in the Cost Breakdown Structure register.

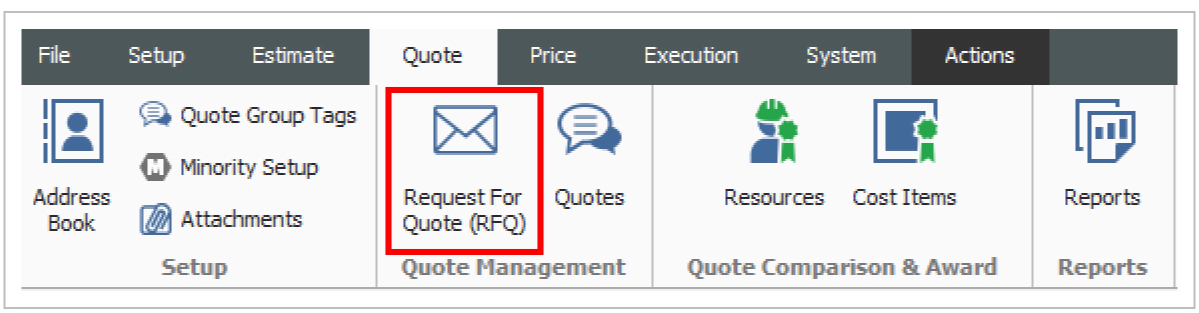
CBS Position Code	Description	Forecast (T/O) Quantity	Unit of Measure	Quote Group
13	Paint Existing Steel Bridge Structure	1.00	Lump Sum	Structural Painting
14	Process Equipment	1.00	Each	Process Equipment Install
17	Toll Booth	1.00	Each	Commercial Work
18	Guardrail Type 2	1,000.00	Linear Feet	Guardrail Work
19	Guardrail Type 3A	200.00	Linear Feet	Guardrail Work
20	Type 4 Signs	1,000.00	Square Feet	Sign Work

8.2 REQUESTS FOR QUOTE

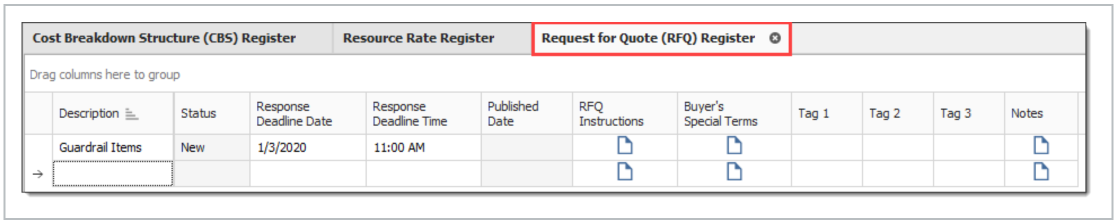
Requests for Quote (RFQs) are invitations to sellers that include a requested list of items or services/pricing and terms. When you create an RFQ in InEight Estimate, you are able to indicate the line items you want to include in the quote, and the vendor(s) to whom you want to send it.

8.2.1 Request for Quote (RFQ) Register Overview

To access the Request for Quote (RFQ) Register, from the InEight Estimate landing page, select the Quote tab, then click on Request for Quote (RFQ).

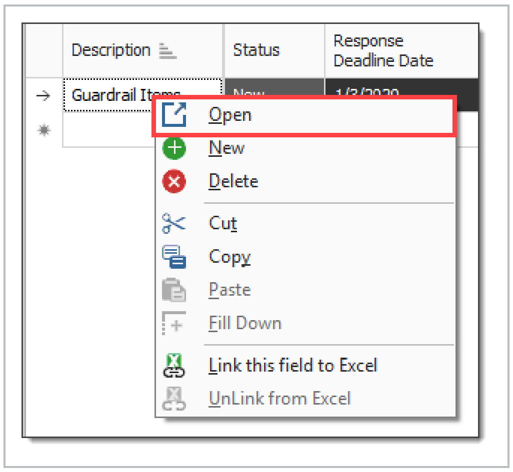


- The RFQ register lists all of the RFQs you've created, with a Description, a Status, and a Response Deadline Date



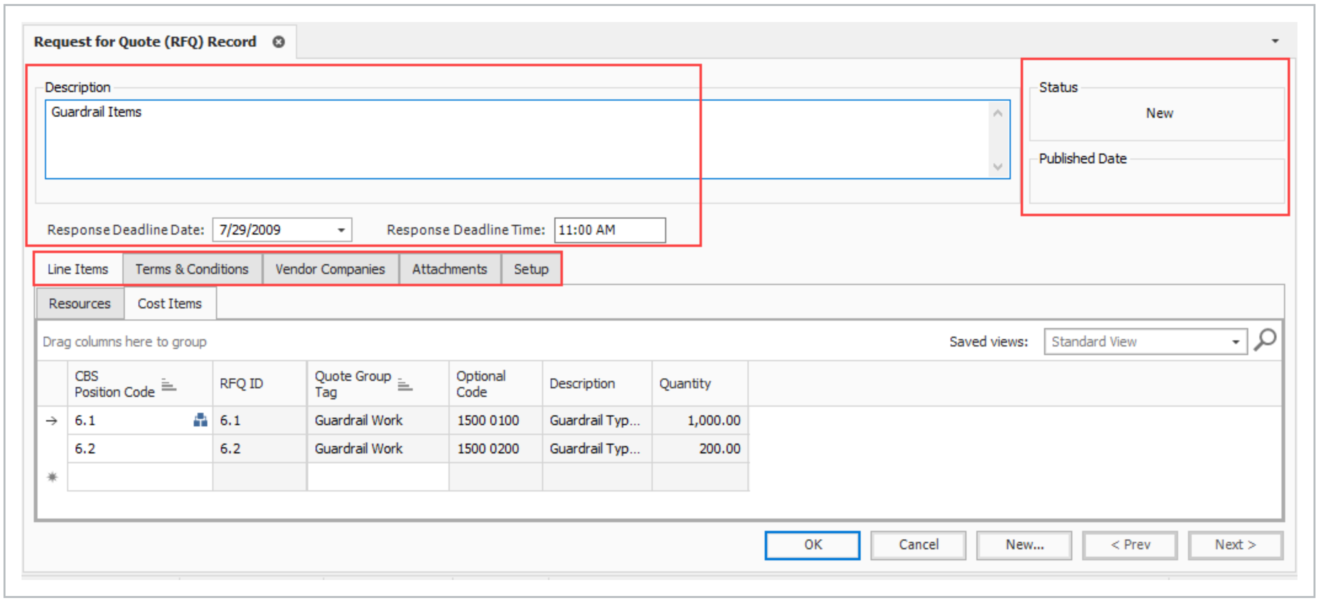
8.2.2 Request for Quote (RFQ) Record

You can double click on the row header, or right-click on any request for quote in the Request for Quote Register and choose **Open** to access an existing Request for Quote (RFQ) Record.



Overview - Request for Quote (RFQ) Record

	Name	Definition
1	RFQ Description	Each record contains a Description, Deadline Date and Deadline Time fields to identify the RFQ and indicate when a response is due.
2	RFQ Tabs	The record is organized into tabs where you can define the items for the quote, terms & conditions, and the seller companies to receive the RFQ.
3	Status and Published Data	The Status and Published Date let you know if it is new or published (sent out), and when it was published.

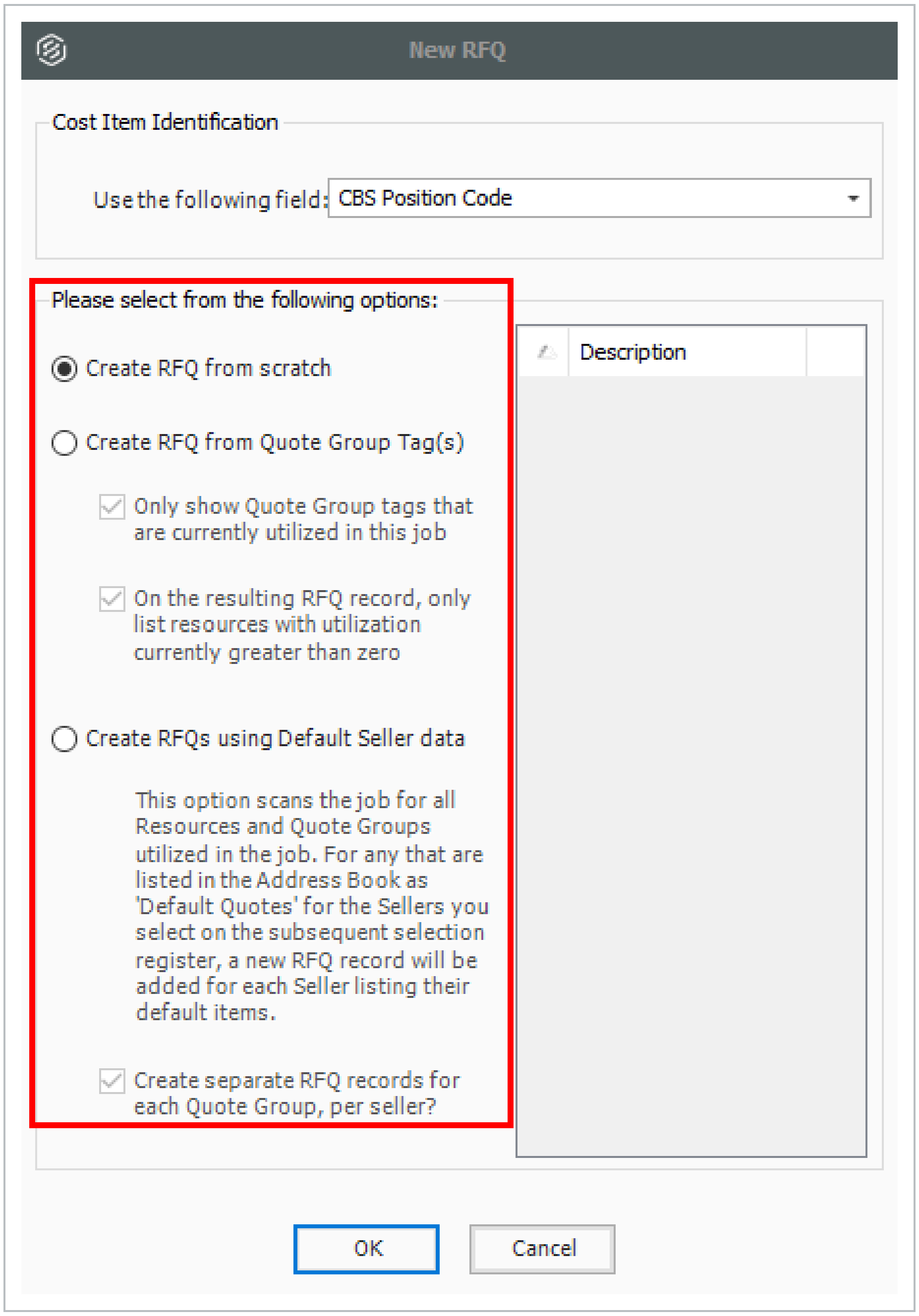


8.2.3 Create an RFQ

When putting together your RFQs, you will be able to select the appropriate material resources and cost items for which you need quotes in your estimate. To create a new RFQ, you have a few options:

- **Create RFQ from scratch**: This creates an empty RFQ Record for you to define
- **Create RFQ from Quote Group Tag(s)**: This option lets you create an RFQ from a quote group so you can add multiple materials or subcontract items at once
- **Create RFQ using Default Seller data**: In your address book you can store vendors with a list of their default materials. This option lets you select the vendor and have it automatically find their

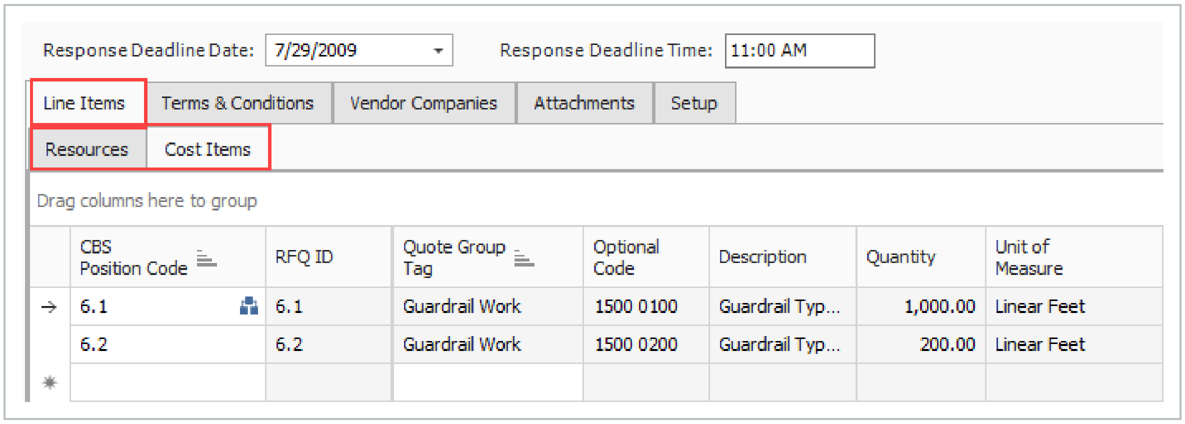
materials in the job



The rest of this section walks through each tab on the RFQ Record in more detail.

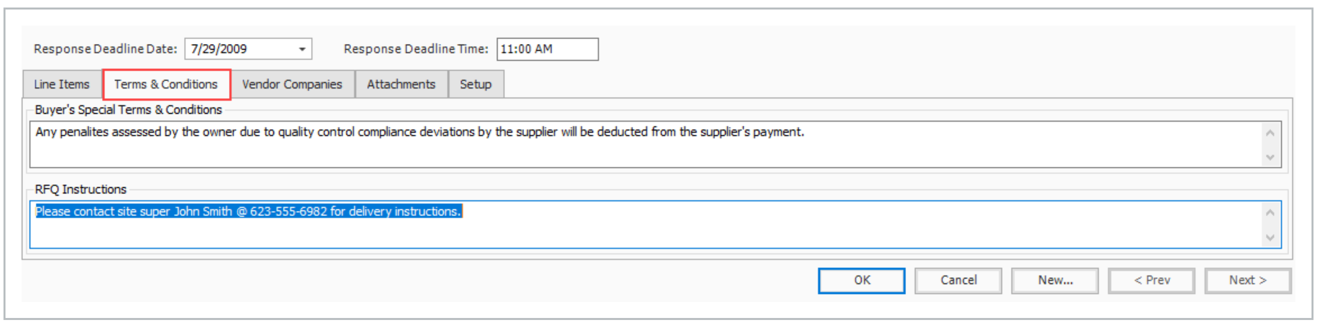
8.2.3.1 Line Items

The Line Items tab lists the resources or cost items selected for the RFQ, including the Description, Quantity, Quote Group, Currency and other user-defined tags.



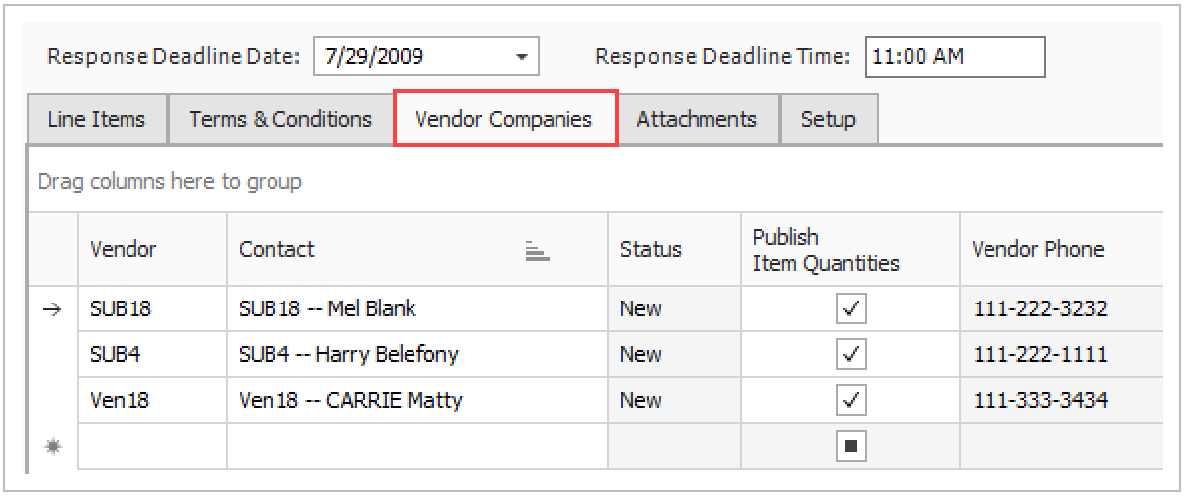
8.2.3.2 Terms & Conditions

This tab provides ample space for you to enter terms, conditions and instructions that need to be included on the RFQ.



8.2.3.3 Vendor Companies

You will use the Vendor Companies tab to select the suppliers or subcontractors that will be receiving the RFQ. This is done by selecting them from the Estimate Library Address Book. This tab will store all of the pertinent contact information for each seller, including their fax number and/or email address so that you can send them the RFQ.



The following options are particularly noteworthy:

- **Publish Item Quantities**: If you want the RFQ to specify your take-off quantities, select this checkbox. If you want to keep that information to yourself and let the vendors or contractors determine their own quantities, deselect this checkbox
- **Publish To File**: If you choose to Publish To File, Estimate creates a Microsoft Word document with a template filled out. It is ready to print and send, but you have the opportunity to double-check the information before emailing the RFQ

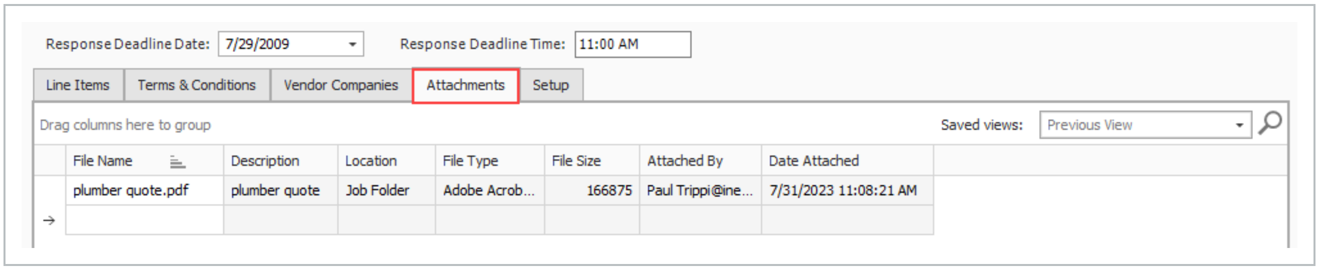
> When RFQs are generated for multiple vendors using the Publish To File option, be sure to separate the Microsoft Word document pages and send only the correct pages to each vendor.

- **Publish by Email**: If you choose to publish by email, the Word document is created, the template is filled out, it is attached to an email, and automatically sent to the email address listed for that vendor in the Address Book

> When using the Publish by Email option, the process is automatic and it does not give you the opportunity to double check your information before the RFQ is emailed. For this reason, it is recommended to Publish To File, review the information, and then email the RFQ manually.

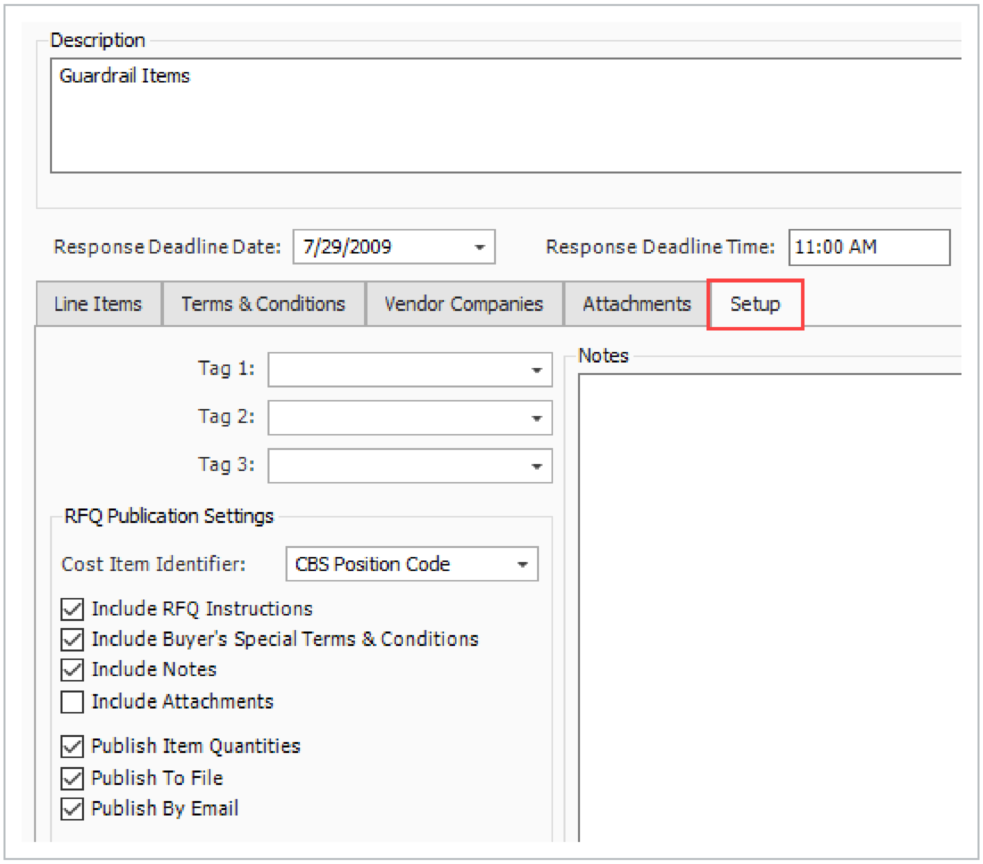
8.2.4 Attachments

This tab allows you to specify any electronic files that need to be attached to the RFQ, such as drawings or specifications for the work.



8.2.5 Setup

The Setup tab lets you indicate what information will display on the published RFQ template, including custom tags. In addition to selecting tags and adding notes on the Setup tab, you can also specify your RFQ Publication Settings and can choose whether you want to include the instructions, special terms and conditions, notes and attachments.



8.2.6 Publish an RFQ

Once created, Estimate allows you to generate a Microsoft Word RFQ template that can be faxed or manually sent via email to the supplier or subcontractor.

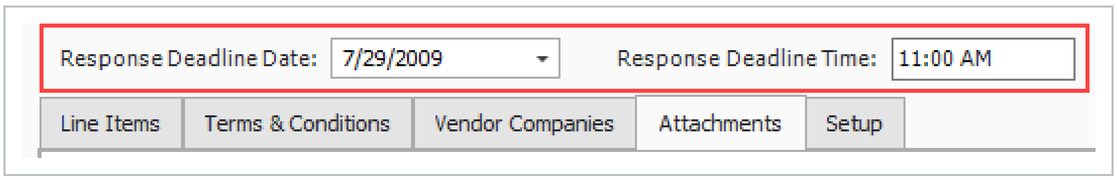
When you complete all of the fields that are required for this RFQ, you are ready to publish the RFQ, To do so, select all of the vendors that you want to receive the RFQ and click **Actions > Publish** on the RFQ Record ribbon.

Step by Step – Create and publish an RFQ

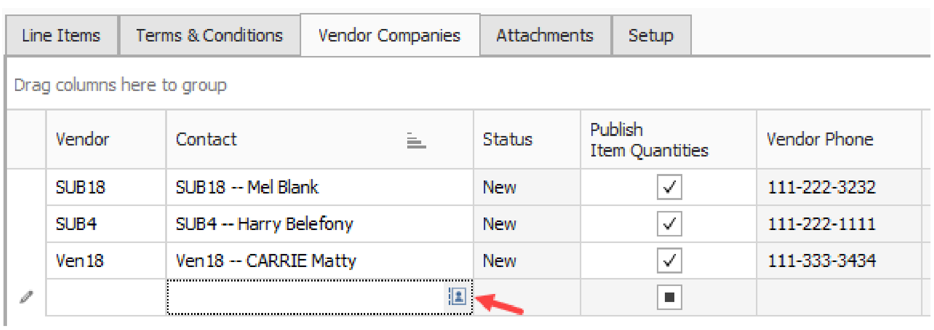
This exercise walks through a specific example using the Training Job.

1. From the Estimate landing page, select the **Quote** tab.
2. Select **Request for Quote (RFQ).**

3. From the Actions tab, click on the **New** icon to create a new RFQ.
4. Select **Create RFQ from Quote Group Tag(s)**, leaving the checkboxes checked to only show quote groups and resources that are being used.
5. Select the **Aggregates** quote group from the right panel.
6. Click **OK**.
7. In the Response Deadline Date field, select **a date** two weeks from today, and for the Response Deadline Time, type a **time stamp** (e.g. 11:00 am).



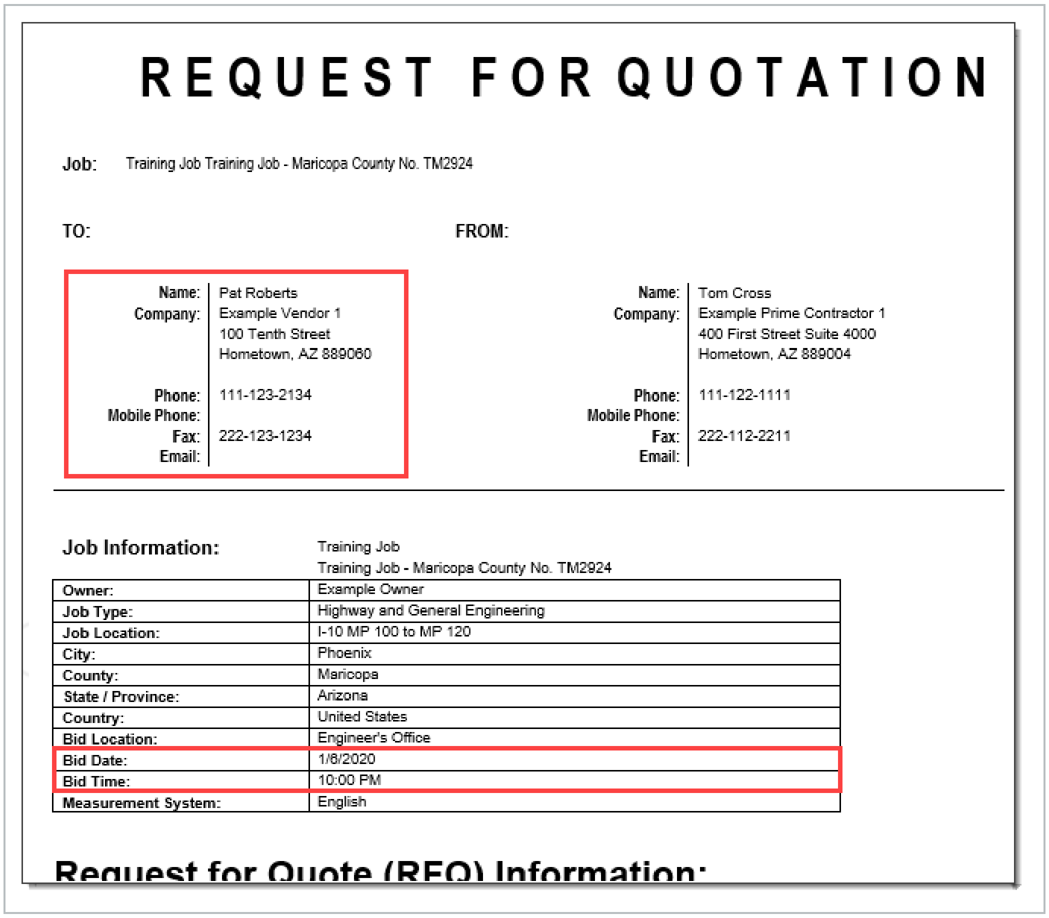
8. Select the **Terms & Conditions** tab.
9. Create and type **Prices are good for the duration of the contract** in the Buyer's Special Terms & Conditions field.
10. Type in **All items to be delivered to jobsite by supplier's trucks** in the RFQ Instructions field.
11. Select the **Vendor Companies** tab and click in the **first blank row** in the Company Name column.



12. Click on the **Address book** icon, and then select the following example vendors:

- Example Vendor 1: Pat Roberts
- Example Vendor 2: Stan Mark
- Example Vendor 4: Lester Slim

13. Click **OK**.
14. Make sure **Publish to File** is checked for all vendors.
15. Uncheck **Publish by email** for each vendor.

16. Select the **sellers** to whom you want to send the RFQ.
    - Word opens the file automatically for you to review; and from here you can either print it or send it in an email as an attachment
    - 

REQUEST FOR QUOTATION

Job: Training Job Training Job - Maricopa County No. TM2924

TO:

Name: Pat Roberts
Company: Example Vendor 1
100 Tenth Street
Hometown, AZ 889060
Phone: 111-123-2134
Mobile Phone:
Fax: 222-123-1234
Email:

FROM:

Name: Tom Cross
Company: Example Prime Contractor 1
400 First Street Suite 4000
Hometown, AZ 889004
Phone: 111-122-1111
Mobile Phone:
Fax: 222-112-2211
Email:

Job Information: Training Job
Training Job - Maricopa County No. TM2924

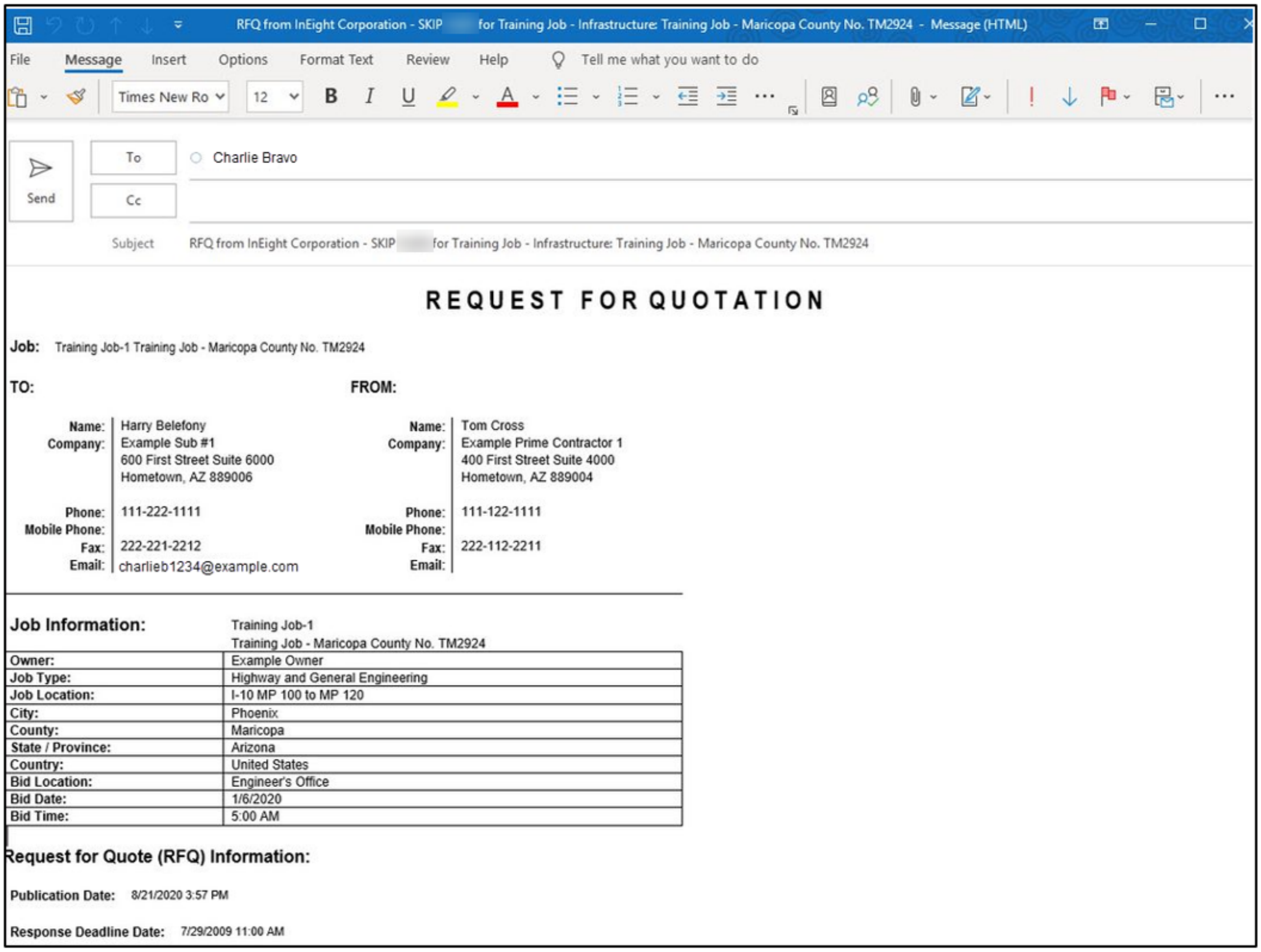
Owner:	Example Owner
Job Type:	Highway and General Engineering
Job Location:	I-10 MP 100 to MP 120
City:	Phoenix
County:	Maricopa
State / Province:	Arizona
Country:	United States
Bid Location:	Engineer's Office
Bid Date:	1/6/2020
Bid Time:	10:00 PM
Measurement System:	English

Request for Quote (RFQ) Information:

17. On the Actions tab of the record, select **Publish** to create your RFQ document.
18. Select the folder to publish to.
19. Click **OK** to save the RFQ Record.

8.2.7 RFQ Email Draft

When sending out Requests for Quotes (RFQ) on a bid, it is essential to be able to effectively communicate the project requirements to potential subs or suppliers to ensure you have good quote coverage within your estimate. Email RFQs open as a draft email message, giving you, the sender, the opportunity to control specifically what is sent and customize the message before sending it out to subs and suppliers.



RFQ from InEight Corporation - SKIP for Training Job - Infrastructure: Training Job - Maricopa County No. TM2924 - Message (HTML)

File Message Insert Options Format Text Review Help Tell me what you want to do

To: Charlie Bravo

Cc:

Subject: RFQ from InEight Corporation - SKIP for Training Job - Infrastructure: Training Job - Maricopa County No. TM2924

REQUEST FOR QUOTATION

Job: Training Job-1 Training Job - Maricopa County No. TM2924

TO:

Name:	Harry Belefony
Company:	Example Sub #1 600 First Street Suite 6000 Hometown, AZ 889006
Phone:	111-222-1111
Mobile Phone:	
Fax:	222-221-2212
Email:	charlieb1234@example.com

FROM:

Name:	Tom Cross
Company:	Example Prime Contractor 1 400 First Street Suite 4000 Hometown, AZ 889004
Phone:	111-122-1111
Mobile Phone:	
Fax:	222-112-2211
Email:	

Job Information: Training Job-1
Training Job - Maricopa County No. TM2924

Owner:	Example Owner
Job Type:	Highway and General Engineering
Job Location:	I-10 MP 100 to MP 120
City:	Phoenix
County:	Maricopa
State / Province:	Arizona
Country:	United States
Bid Location:	Engineer's Office
Bid Date:	1/6/2020
Bid Time:	5:00 AM

Request for Quote (RFQ) Information:

Publication Date: 8/21/2020 3:57 PM

Response Deadline Date: 7/29/2009 11:00 AM

8.3 QUOTES

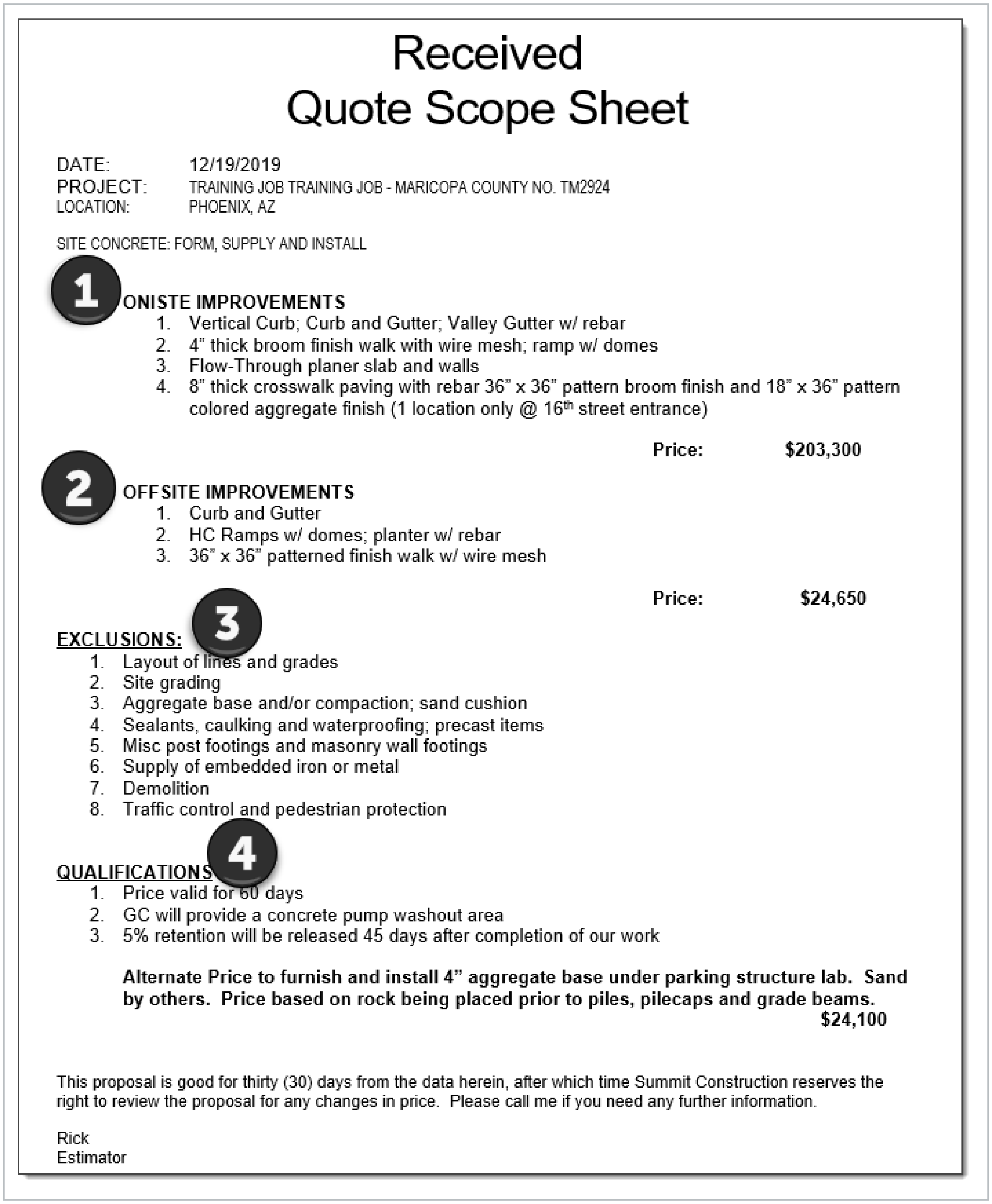
When you receive responses to your RFQ, the next step is to enter their pricing in the Quote Register. The Quote Register stores all of the quotes you have for that job. Each quote has a Description and a Quote Status, and each quote displays seller contact information.

In this case, an estimator in charge of receiving quotes would need to determine how best to input these quotes within the Quote register.

8.3.1 Sample Received Quote Scope Sheet

Overview - Received Quote Scope Sheet

Name		Description
1	Section one	Scope item one includes 4 items the subcontractor has considered as work to be done onsite. You may want to consider adding all 4 items as individual quotes. Then creating a package identifying these quotes as on-site work, totaling $203,000.
2	Section two	Scope item two includes 3 items the subcontractor has considered as work to be done offsite. You may want to consider adding all 3 items as individual quotes. Then creating a package identifying these quotes as offsite work, totaling $24,650.
3	Exclusions	The subcontractor is showing 9 items they excluded from their scope of responsibility.
4	Qualifications	The subcontractor has included 3 stipulations pertaining to this bid. If selected all 3 are considered accepted terms.



Received
Quote Scope Sheet

DATE: 12/19/2019
PROJECT: TRAINING JOB TRAINING JOB - MARICOPA COUNTY NO. TM2924
LOCATION: PHOENIX, AZ

SITE CONCRETE: FORM, SUPPLY AND INSTALL

1 ONISTE IMPROVEMENTS

1. Vertical Curb; Curb and Gutter; Valley Gutter w/ rebar
2. 4" thick broom finish walk with wire mesh; ramp w/ domes
3. Flow-Through planer slab and walls
4. 8" thick crosswalk paving with rebar 36" x 36" pattern broom finish and 18" x 36" pattern colored aggregate finish (1 location only @ 16th street entrance)

Price: $203,300

2 OFFSITE IMPROVEMENTS

1. Curb and Gutter
2. HC Ramps w/ domes; planter w/ rebar
3. 36" x 36" patterned finish walk w/ wire mesh

Price: $24,650

EXCLUSIONS: 3

1. Layout of lines and grades
2. Site grading
3. Aggregate base and/or compaction; sand cushion
4. Sealants, caulking and waterproofing; precast items
5. Misc post footings and masonry wall footings
6. Supply of embedded iron or metal
7. Demolition
8. Traffic control and pedestrian protection

QUALIFICATIONS 4

1. Price valid for 60 days
2. GC will provide a concrete pump washout area
3. 5% retention will be released 45 days after completion of our work

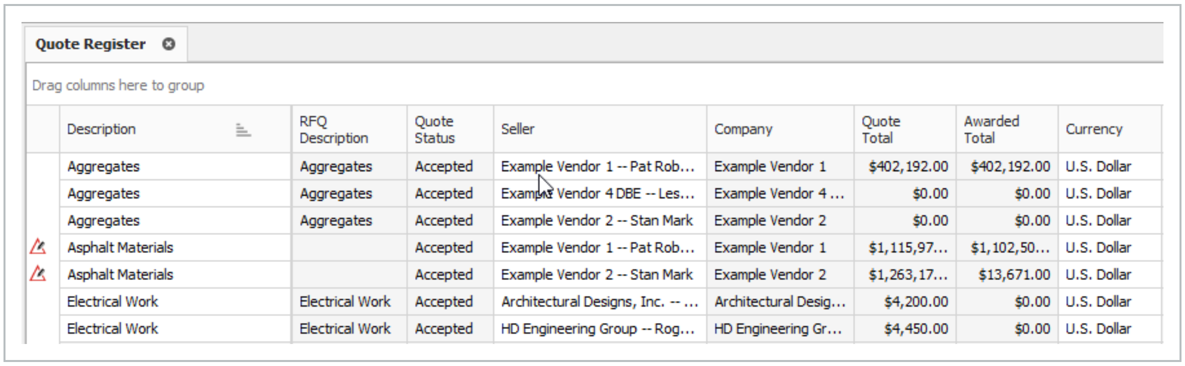
Alternate Price to furnish and install 4" aggregate base under parking structure lab. Sand by others. Price based on rock being placed prior to piles, pilecaps and grade beams. $24,100

This proposal is good for thirty (30) days from the data herein, after which time Summit Construction reserves the right to review the proposal for any changes in price. Please call me if you need any further information.

Rick
Estimator

8.3.2 Quote Register Overview

To access the Quote Register, choose **Quote > Quotes** on the main InEight Estimate menu or click the **Quotes** icon on the toolbar.



Quote Register

Drag columns here to group

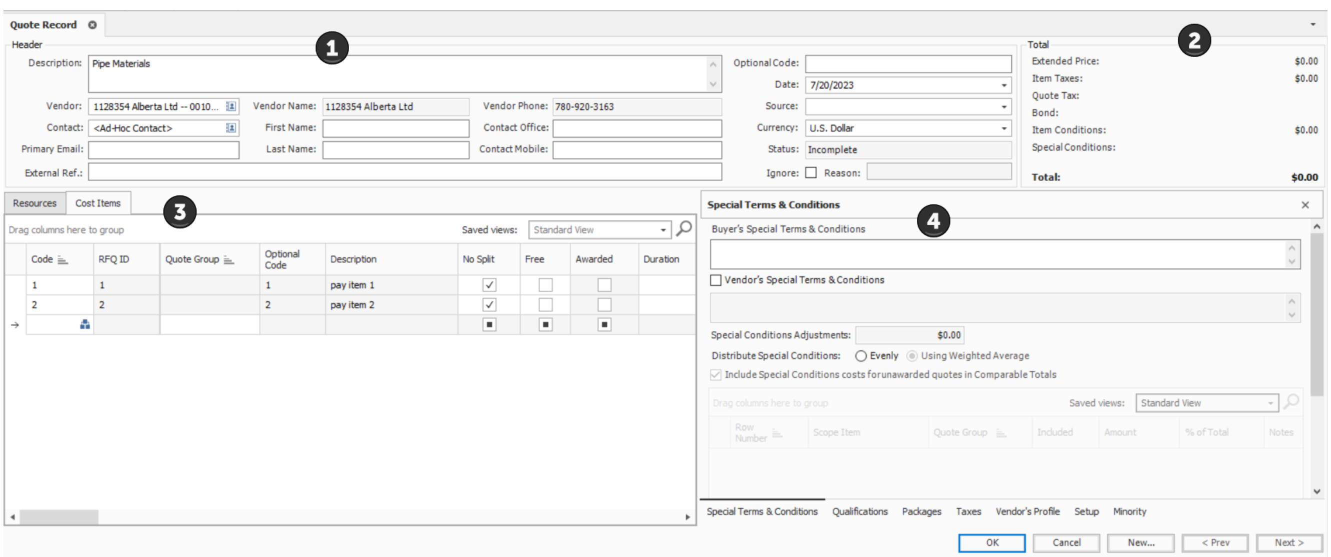
Description	RFQ Description	Quote Status	Seller	Company	Quote Total	Awarded Total	Currency
Aggregates	Aggregates	Accepted	Example Vendor 1 -- Pat Rob...	Example Vendor 1	$402,192.00	$402,192.00	U.S. Dollar
Aggregates	Aggregates	Accepted	Example Vendor 4 DBE -- Les...	Example Vendor 4 ...	$0.00	$0.00	U.S. Dollar
Aggregates	Aggregates	Accepted	Example Vendor 2 -- Stan Mark	Example Vendor 2	$0.00	$0.00	U.S. Dollar
Asphalt Materials		Accepted	Example Vendor 1 -- Pat Rob...	Example Vendor 1	$1,115,97...	$1,102,50...	U.S. Dollar
Asphalt Materials		Accepted	Example Vendor 2 -- Stan Mark	Example Vendor 2	$1,263,17...	$13,671.00	U.S. Dollar
Electrical Work	Electrical Work	Accepted	Architectural Designs, Inc. -- ...	Architectural Desig...	$4,200.00	$0.00	U.S. Dollar
Electrical Work	Electrical Work	Accepted	HD Engineering Group -- Rog...	HD Engineering Gr...	$4,450.00	$0.00	U.S. Dollar

8.3.3 Quote Record Overview

The quote record establishes who the vendor is, along with quoted prices and all terms and conditions. After a requested quote returns, you can either create the quote in InEight Estimate from scratch or convert the original RFQ to a quote and enter the supplier or subcontractor pricing. Each quote record contains additional fields and options for managing the quote.

Quote records utilize data blocks allowing you to reposition tabs, detach tabs into individual windows, and redock tabs in new locations. Using the data blocks layout, you can input and maintain important quote data like Vendor Qualifications and Special Terms & Conditions.

The image and table show the available blocks and descriptions.

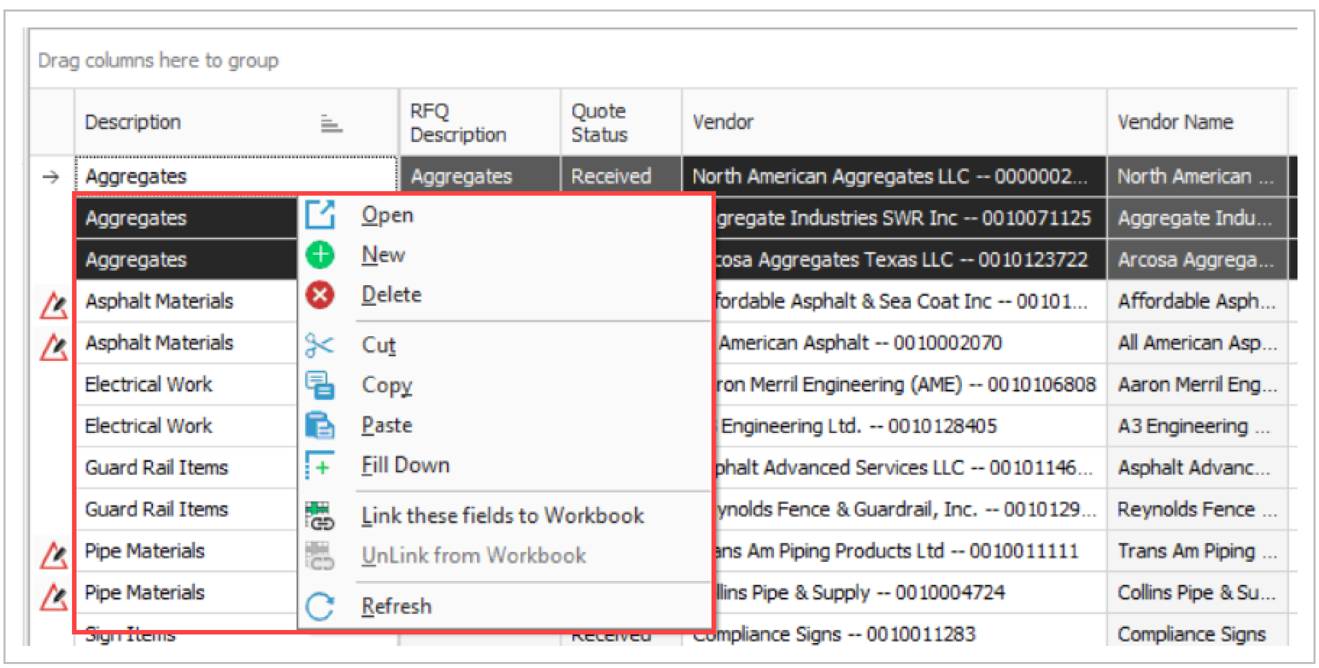


Name		Description
1	**Header**	You can include detailed contact information about the supplier or

	Name	Description
	block	subcontractor. The detailed contact information automatically fills when you select the seller from the Address Book. The External Ref field can be used to access information specific to the bid/quote.
2	**Price block**	The Price data block contains a breakdown of pricing information for the quote, including taxes, item conditions, and special conditions.
3	**Quote tabs**	The tabs at the bottom of the page hold detailed information regarding the quote.
4	**Default Data Blocks**	Data blocks include Special Terms & Conditions, Qualifications, Packages, Taxes, Vendor's Profile, Setup, and Minority.

You can right-click any existing quote in the Quote Register, and then click **Open** to access the Quote Record Register.

In the Quote Record Register, you can select multiple vendors by holding the *CTRL* key, and then selecting two or more vendors. After selecting multiple vendors, right-click a selected vendor, and then select an option from the context menu as shown in the image below.



8.3.4 Header Block

The Header block portion of the page is where you enter in description information pertaining to the quote, along with vendor/contractor information.

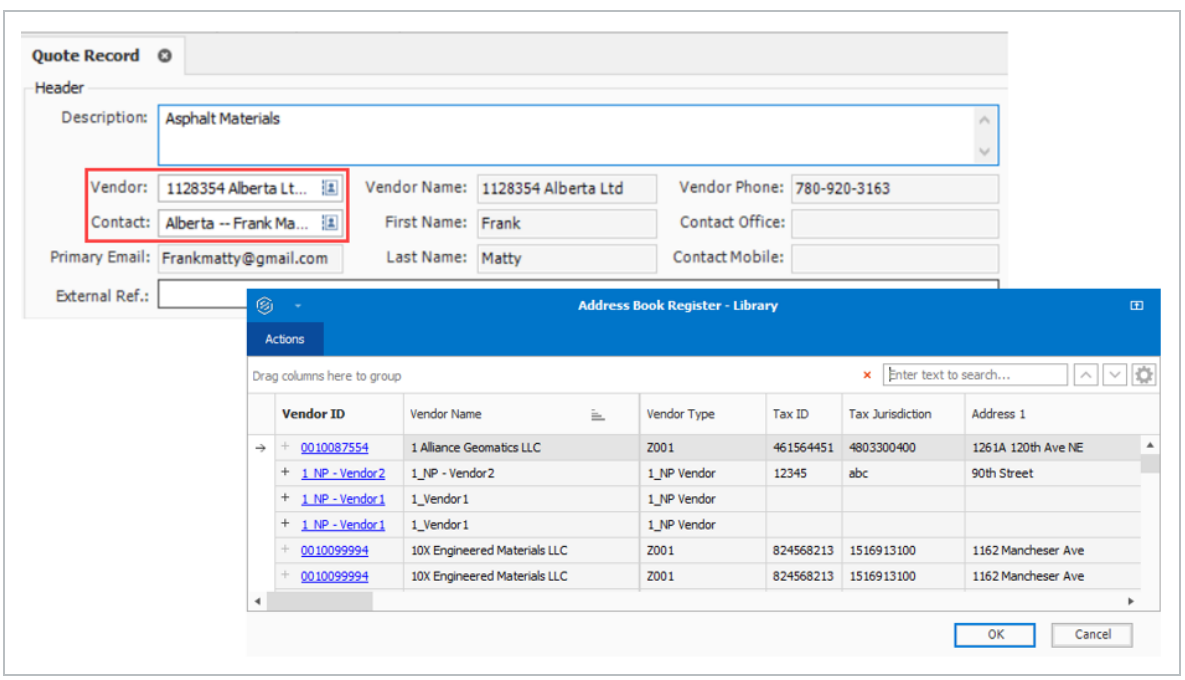
There is an **External Ref** field you can use as a hyperlink for attaching any supporting bid quote attachments from the vendor/contractor.

On the right portion of the header block is where you enter optional information related to:

- **Optional Code** – A code used to reference the received quote.
- **Date** – The date the quote is received.
- **Source** – This is the method by which the quote was received. The options are Email, Fax, Hard Copy, Phone, and Other.
- **Currency** – System of money in general use for a particular country..
- **Ignore** – By ignoring the quote, and providing a reason, the quote will turn grey in the Quote Comparison & Award page.

8.3.4.1 Quote records

The Quote record header block includes a vendor field with a searchable address book library register drop-down list. You can select shared vendor data to populate your quote header record with Platform's shared master data.



Using Platform's shared data also reinforces accurate Estimate quote reporting. For example, you can report on which vendors and contacts have been awarded quotes or run a report on how many RFQs have been sent to select vendors and how many RFQs were returned for certain jobs. Additionally, using Platform shared vendors makes it possible to report on all activity related to a particular vendor. Examples include seeing how many subcontract agreements have been executed in InEight Contract, or how many claims/issues a vendor has been involved with in InEight Change. The predominant value for Estimate using Platform vendors, along with other InEight applications, ensures that the same vendors are being used by all applications.

8.3.5 Price Block

The Price block includes the quotes extended price, along with any additional taxes, bonds, item conditions, and special conditions.

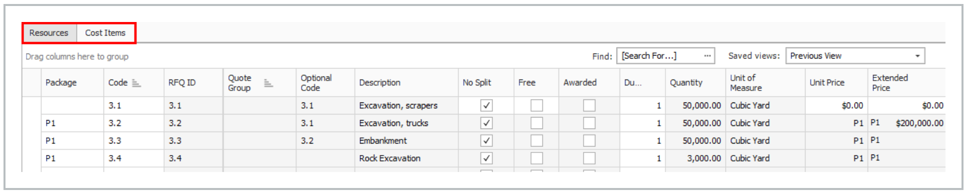
8.3.6 Quote Record Tabs

8.3.6.2 Resources & Cost Items

The Resources & Cost Items tab displays the resources or cost items quoted, along with their estimated quantities and units of measure.

- A Unit Price column is included on this tab for entering the quoted pricing from the seller, either manually or by pasting from an electronic format
- If a Package code is entered, the Unit Price field is greyed out, and the Package code amount is used
- Additional columns are provided for making conditional amount or percentage adjustments to the quote to manage last-minute changes
- A note field is included for explanation changes
- A No Split option indicates that the seller will only provide the quoted goods or services if they are selected to provide all listed items. They will not provide one quoted item without you procuring all others from them as well.
- You can check an item as Free for circumstances where the vendor will include the price of one item with another. Marking the included item(s) as free reminds you there is no quoted price for

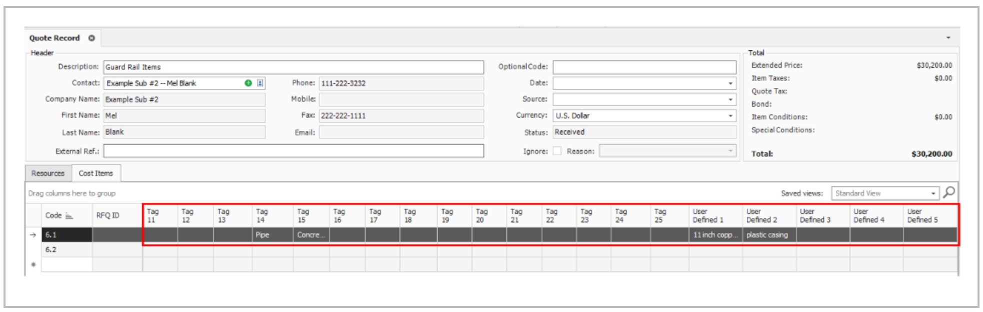
that item



Cost item tags and user defined fields

There are 25 tag fields in the Quote Record register cost items tab. There are also 15 user defined fields that let you sort, filter, and group on selected quote records more efficiently.

For example, you can use tags and user-defined fields to isolate certain cost items, or group cost items together.



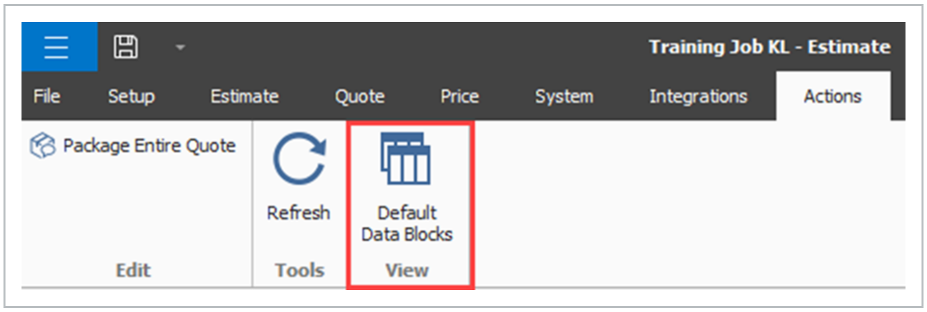
8.3.7 Data Blocks

In the Quote Record item, you can use data blocks that let you customize the layout to focus on data block tabs that matter most to you. You can select the Default Data Blocks action in the ribbon to revert to the default setting, which shows all six data blocks. Default data block tabs include:

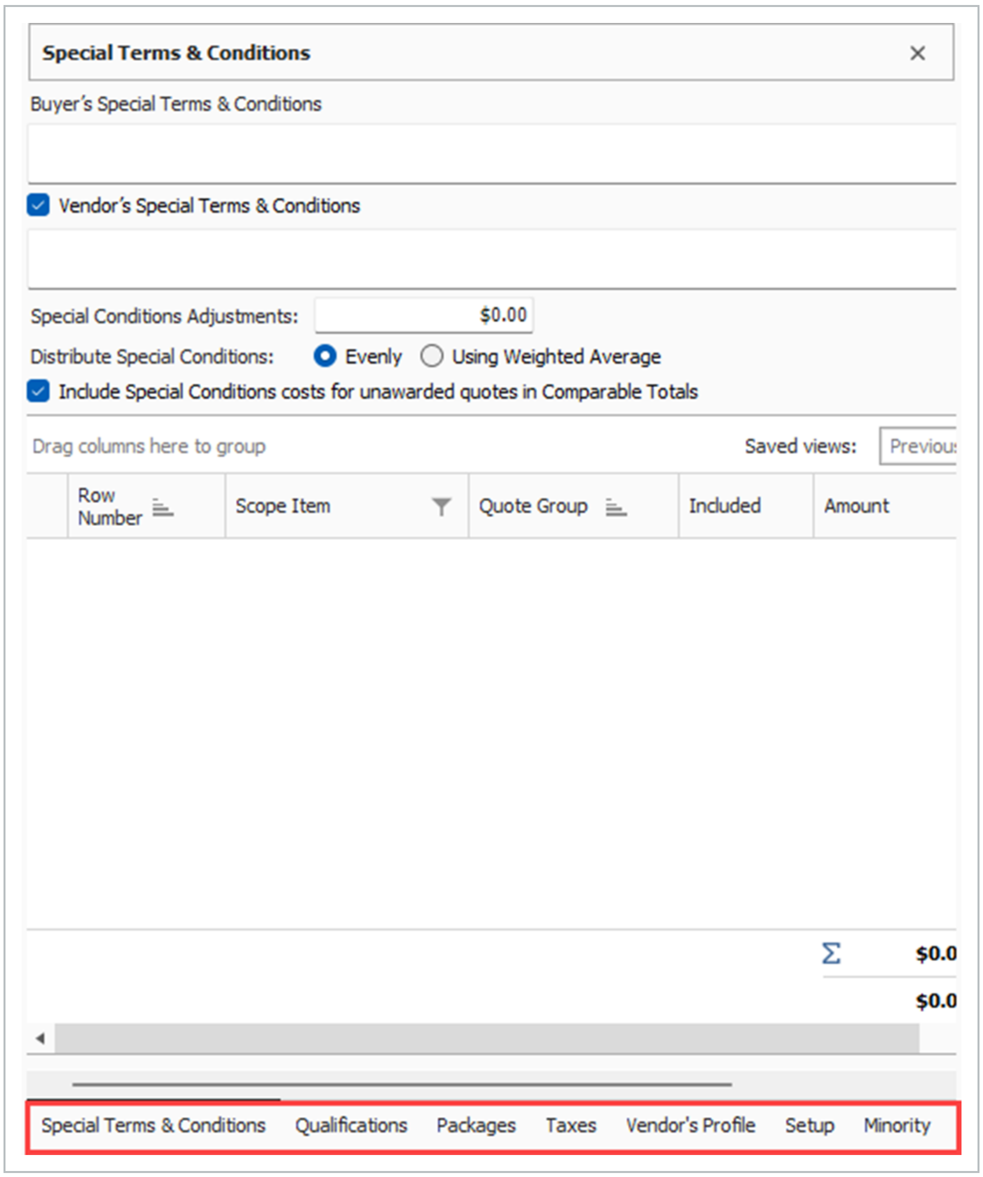
Default data block tabs include:

- Special Terms & Conditions
- Qualifications
- Packages
- Taxes
- Vendor's Profile
- Setup

- Minority

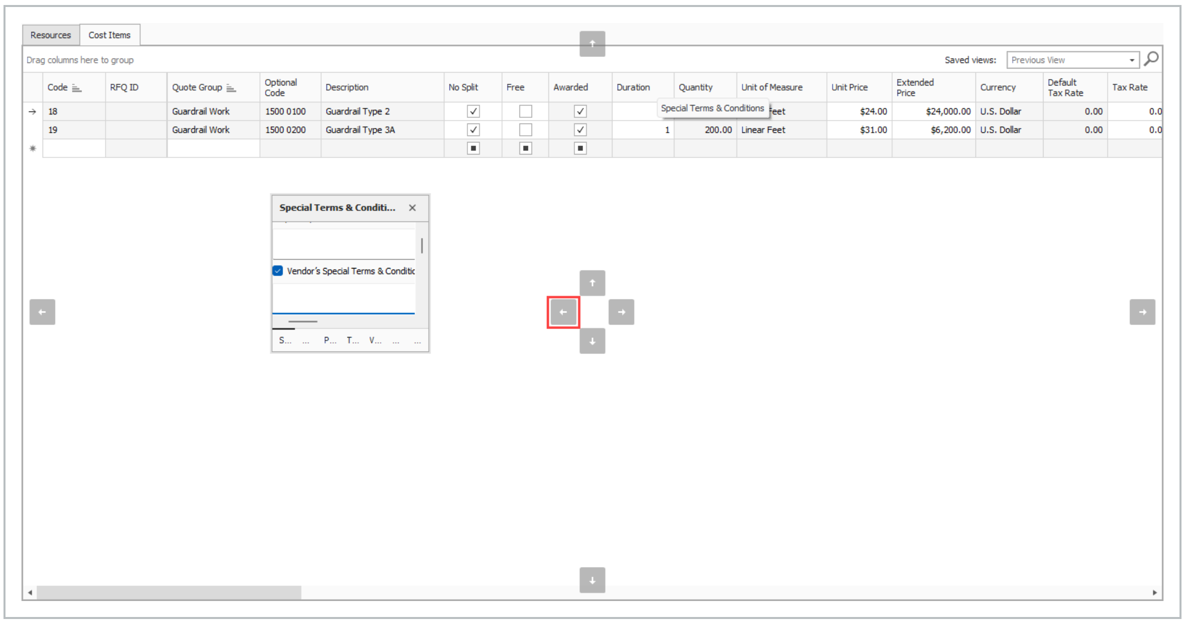


The seven data blocks show at the bottom right of the page.

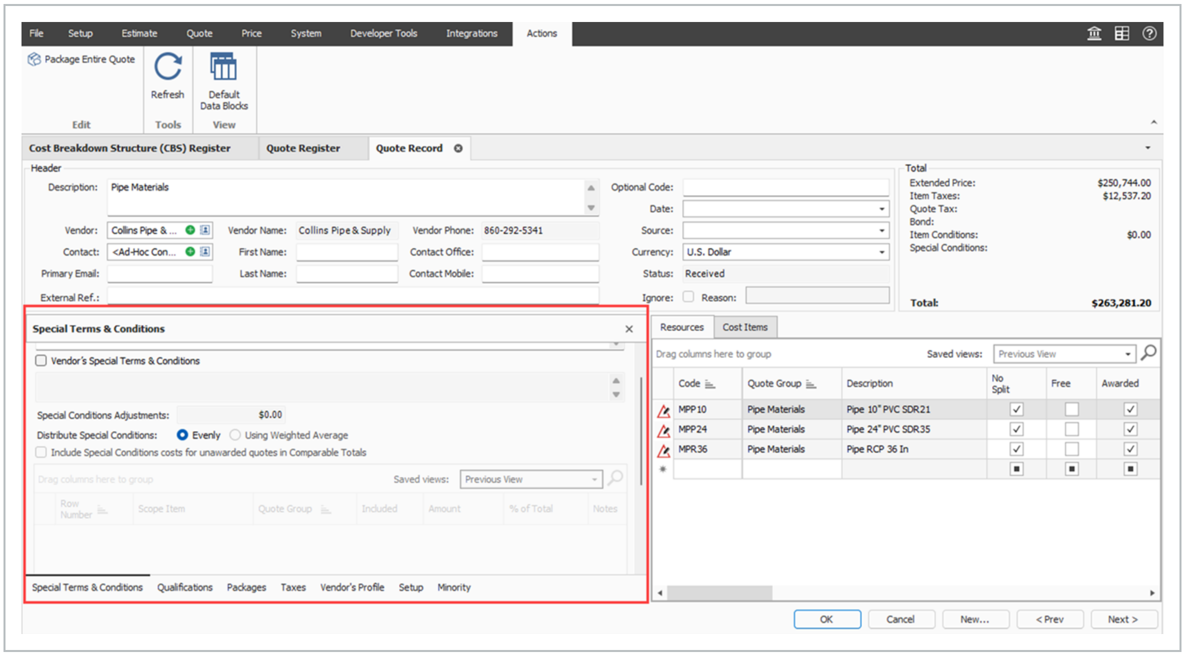


You can move the entire data block, or individual data blocks to other parts of the page. For example, select the **Special Terms & Conditions** header row, and then drag the pane to any part of the page.

You can drop the data block on top of an arrow where you want to land the data block, such as the left arrow.

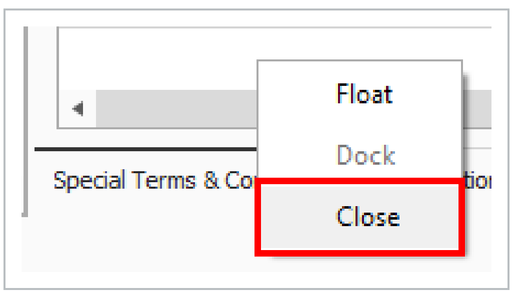


Selecting the left arrow places the data block on the left side of the page.



You can also close a specific tab if it’s not commonly used. For example, you can right-click a tab, such as the Special Terms & Conditions tab, and then select **Close**.

When selecting Float, the tab remains visible, but unattached to other tabs or data blocks.

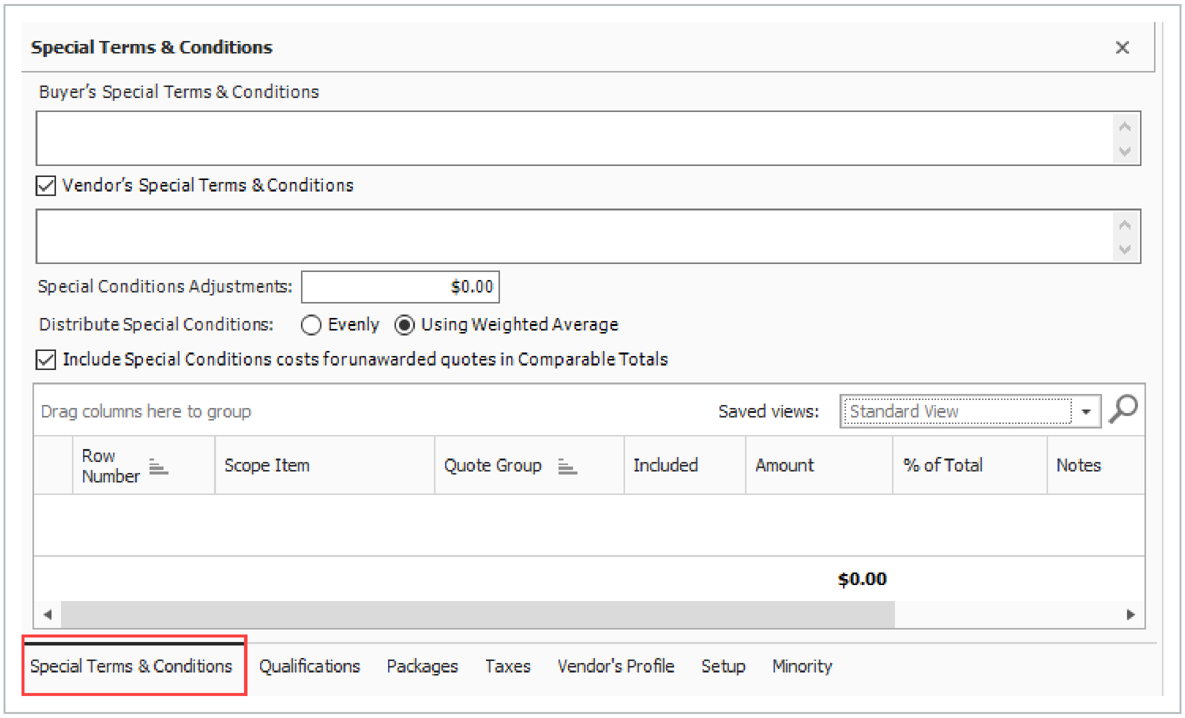


To close a tab and revert to the default tabs, select **Default Data Blocks**.

8.3.8 Data Block Tabs

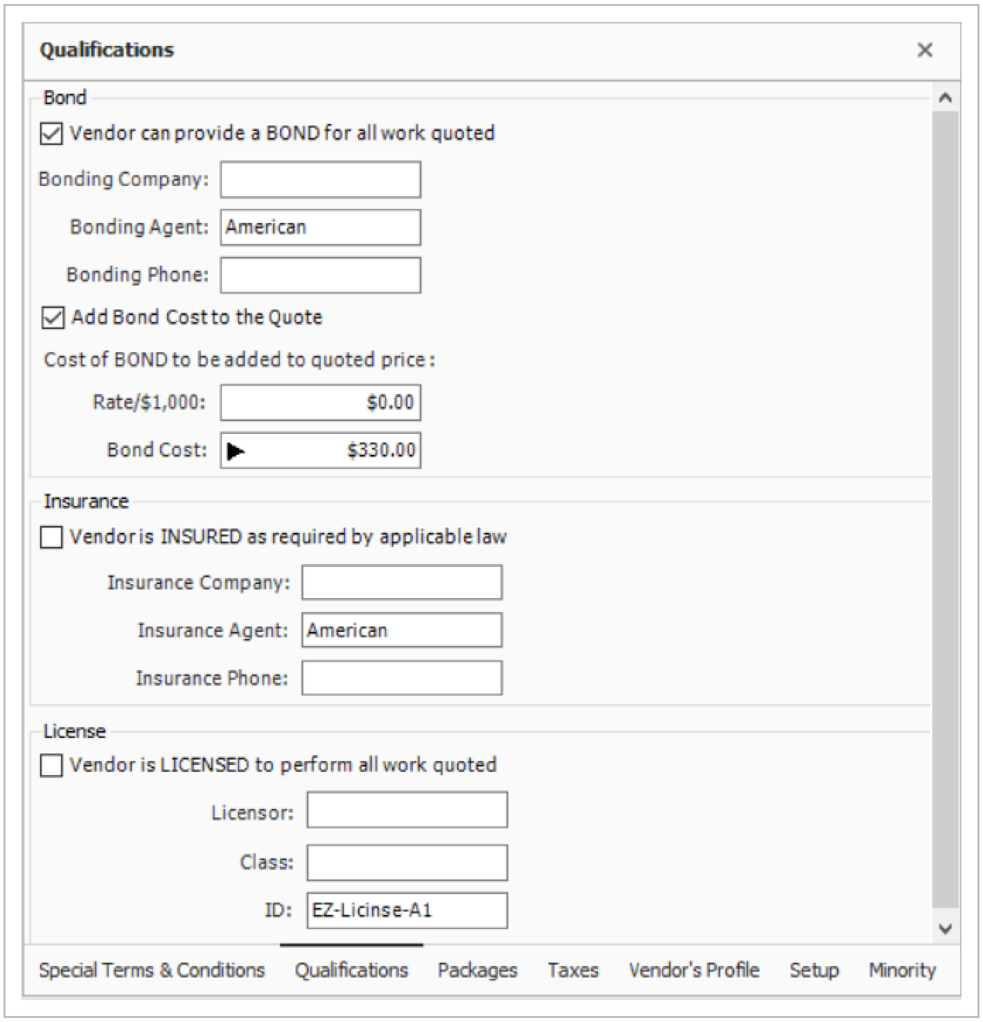
8.3.8.3 Special Terms & Conditions

Special Terms & Conditions is where you can include buyers and sellers special terms, add fixed cost to the quote, and include/exclude scope items.



8.3.8.4 Qualifications

This tab allows you to include bond. You can enter the bond rate and the system will calculate the total Bond Cost or vise versa. This tab also allows you to enter insurance contact information and seller license information. If the vendor in the address book already had this information, then this information will get pre-filled when the seller is assigned to the Quote.

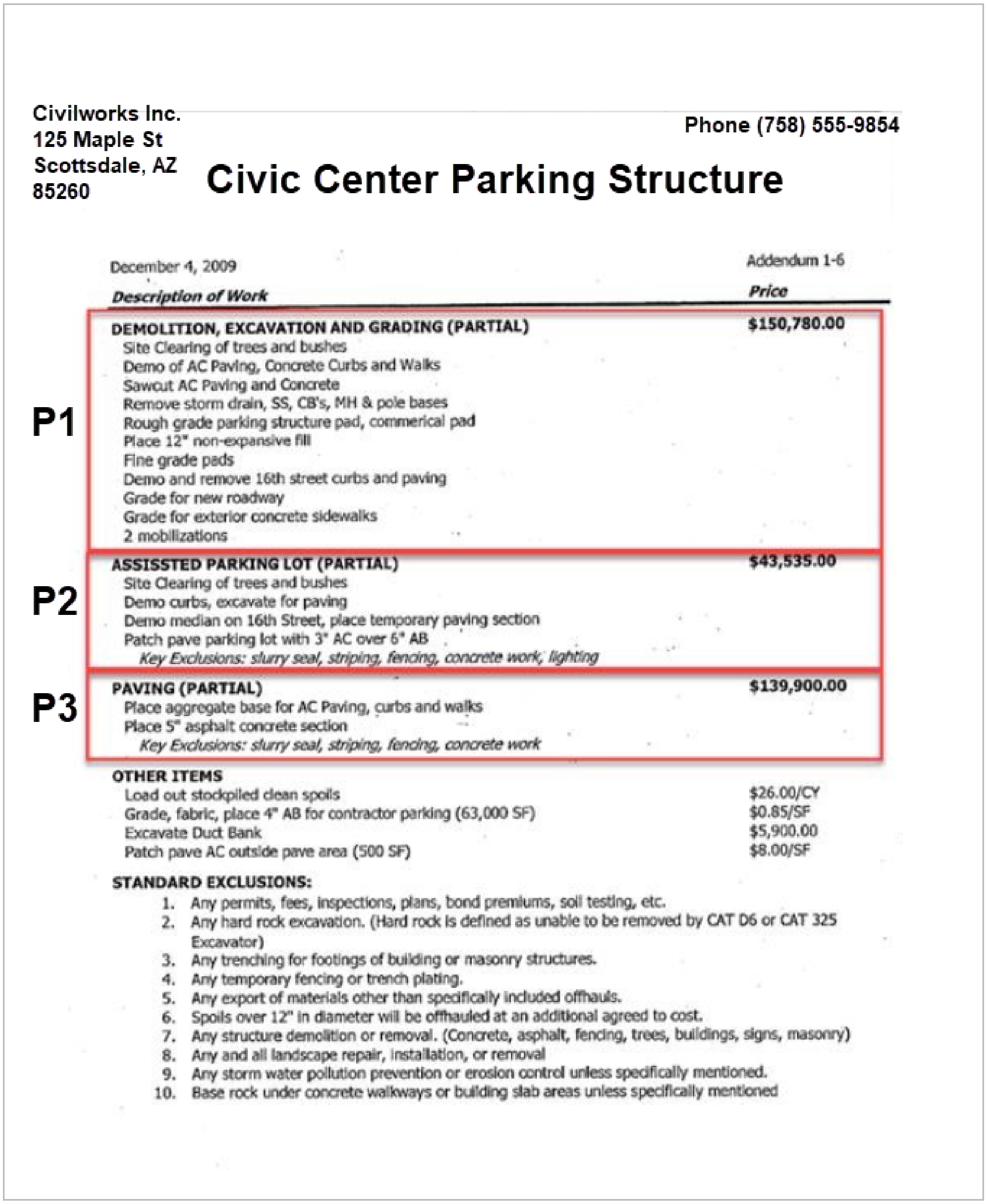


8.3.8.5 Packages

Using the Packages feature lets you logically organize quotes into an arranged collection of like grouped packaged quotes. You can determine how to enter quotes from subcontractors and classify them into a package grouping. When you create a package within the Packages block, and give it a monetary value, you can then assign that package code to one or more quote records. The package code is limited to three characters.

When comparing various vendor quotes in the Quote Comparison and Award form, with each quote containing its own scope of work, you can easily distinguish which items belong to each package. This helps to identify which quotes to award in your decision-making process.

As an example, the following Civic Center Parking Structure quote has three packages defined in it. The P1, P2, and P3 on the left represent the grouped package numbers that will be used to determine the package structure in the quote record. The vendor that submitted this quote shows detailed estimates defined for each of the three packaged items, but there is no breakdown provided in the quote of how much each line item is worth. Rather, this quote is showing a package price for each collection of items (scope of work).



Civilworks Inc.
125 Maple St
Scottsdale, AZ
85260

Phone (758) 555-9854

Civic Center Parking Structure

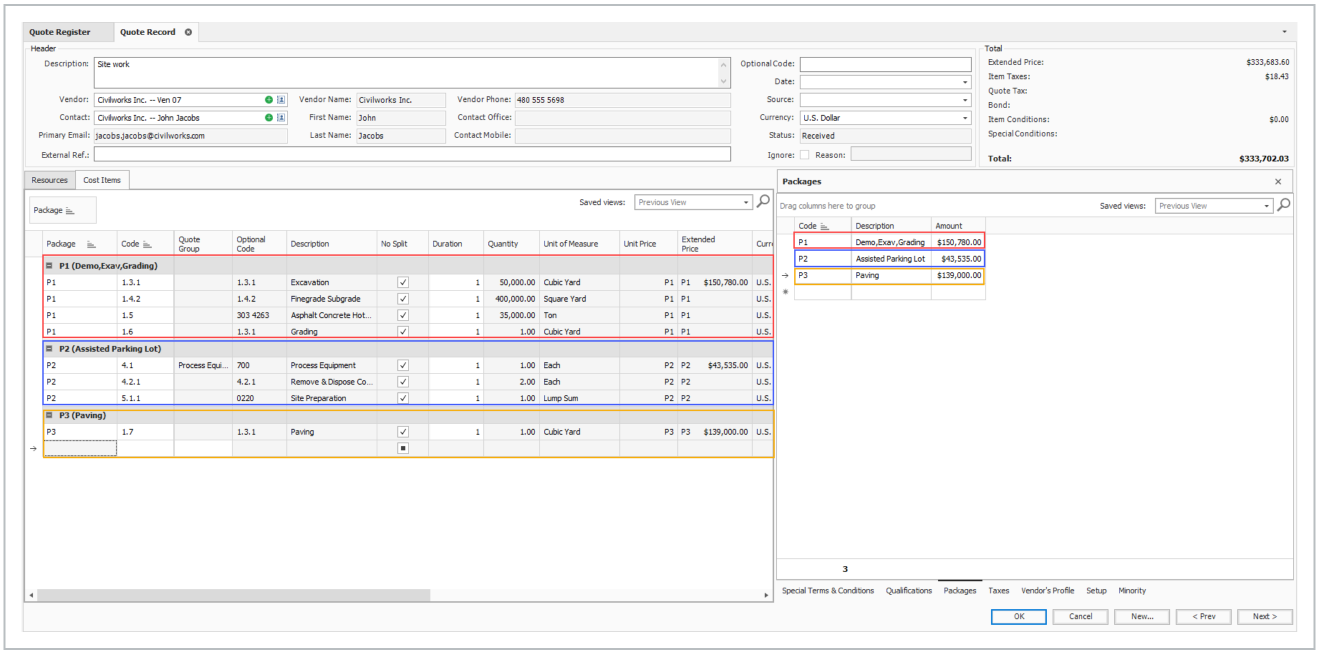
December 4, 2009 — Addendum 1-6

Description of Work	*Price*
DEMOLITION, EXCAVATION AND GRADING (PARTIAL)	**$150,780.00**
Site Clearing of trees and bushes	
Demo of AC Paving, Concrete Curbs and Walks	
Sawcut AC Paving and Concrete	
Remove storm drain, SS, CB's, MH & pole bases	
Rough grade parking structure pad, commerical pad	
Place 12" non-expansive fill	
Fine grade pads	
Demo and remove 16th street curbs and paving	
Grade for new roadway	
Grade for exterior concrete sidewalks	
2 mobilizations	
ASSISSTED PARKING LOT (PARTIAL)	**$43,535.00**
Site Clearing of trees and bushes	
Demo curbs, excavate for paving	
Demo median on 16th Street, place temporary paving section	
Patch pave parking lot with 3" AC over 6" AB	
Key Exclusions: slurry seal, striping, fencing, concrete work, lighting	
PAVING (PARTIAL)	**$139,900.00**
Place aggregate base for AC Paving, curbs and walks	
Place 5" asphalt concrete section	
Key Exclusions: slurry seal, striping, fencing, concrete work	
OTHER ITEMS	
Load out stockpiled clean spoils	$26.00/CY
Grade, fabric, place 4" AB for contractor parking (63,000 SF)	$0.85/SF
Excavate Duct Bank	$5,900.00
Patch pave AC outside pave area (500 SF)	$8.00/SF

STANDARD EXCLUSIONS:

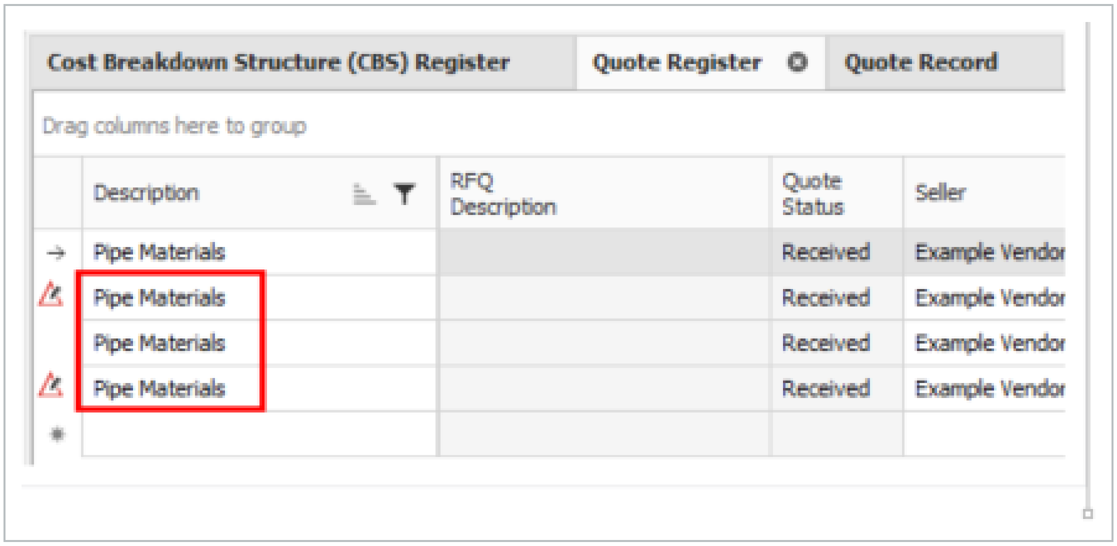
1. Any permits, fees, inspections, plans, bond premiums, soil testing, etc.
2. Any hard rock excavation. (Hard rock is defined as unable to be removed by CAT D6 or CAT 325 Excavator)
3. Any trenching for footings of building or masonry structures.
4. Any temporary fencing or trench plating.
5. Any export of materials other than specifically included offhauls.
6. Spoils over 12" in diameter will be offhauled at an additional agreed to cost.
7. Any structure demolition or removal. (Concrete, asphalt, fencing, trees, buildings, signs, masonry)
8. Any and all landscape repair, installation, or removal
9. Any storm water pollution prevention or erosion control unless specifically mentioned.
10. Base rock under concrete walkways or building slab areas unless specifically mentioned

Estimate's Package feature lets you pick all the cost items that belong to a particular package, then assign the price to that collection of packages. It then proportionally distributes the total package price across all of the corresponding cost items when comparing and awarding.

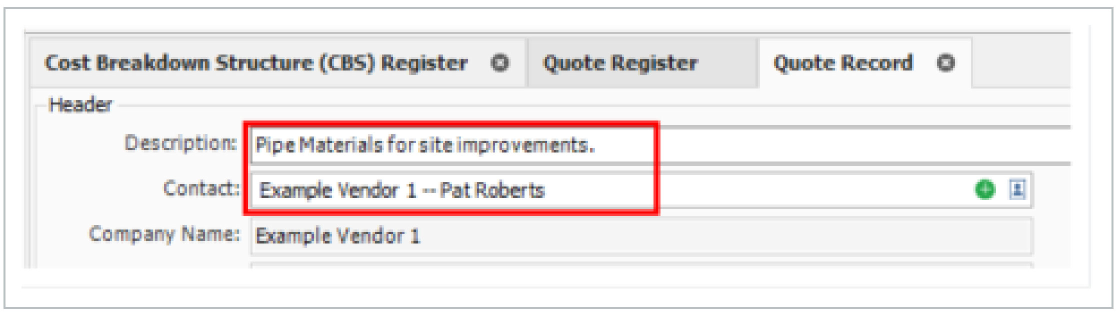


Create a multi-packaged quote

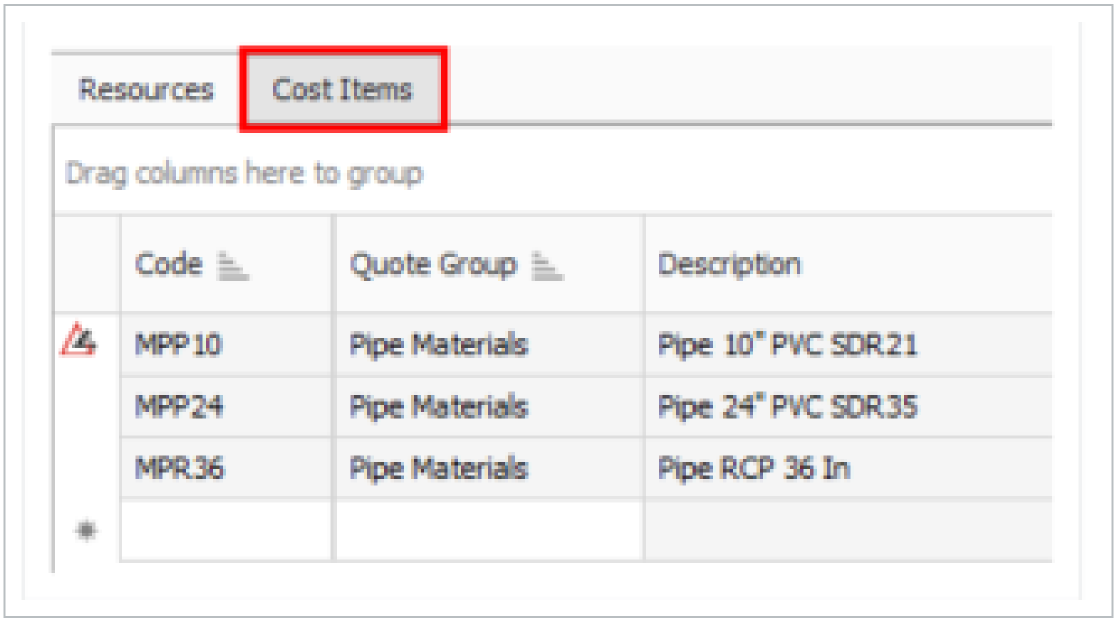
1. From the InEight Estimate landing page, select the **Quote** tab.
2. Click on the **Quotes** icon under Quote Management.
3. Double-click an item (e.g. **Pipe Materials**).



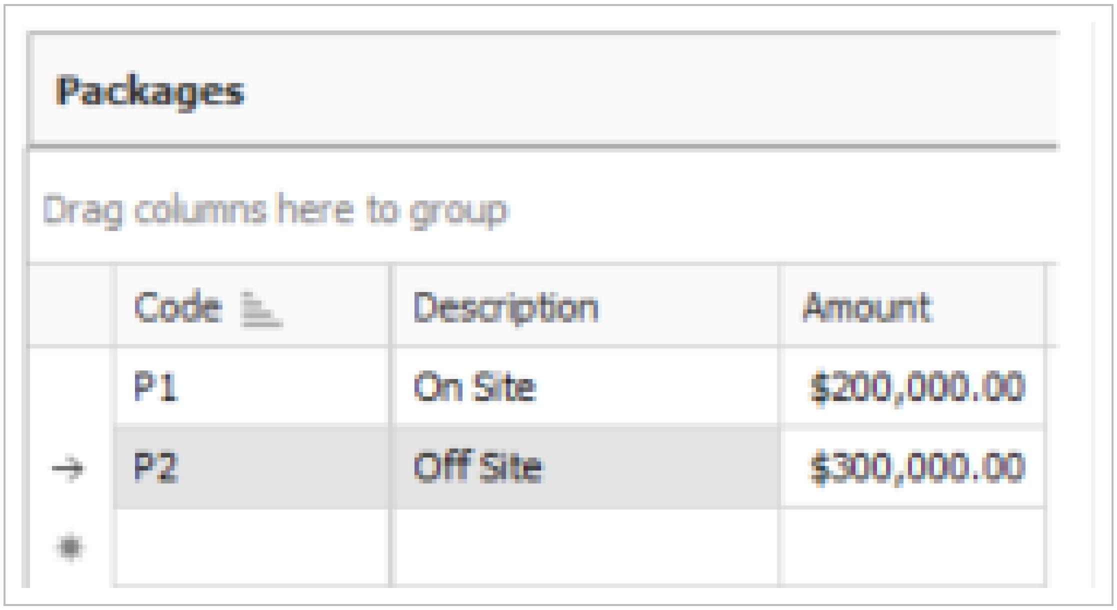
4. In the Description field, type in or replace the **description**.
5. In the Contact field, select a **contact**.



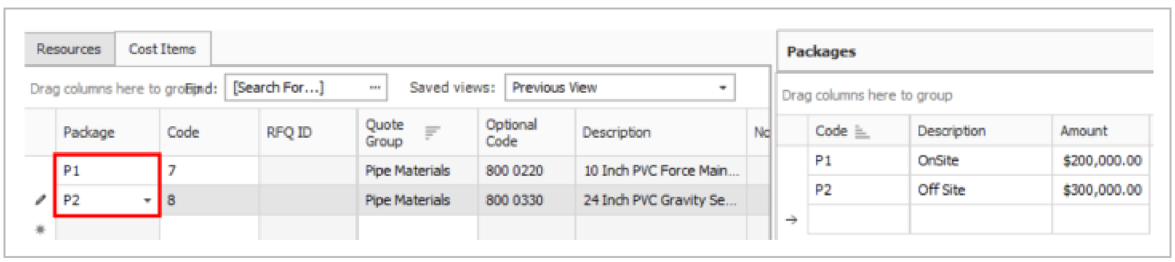
6. Click **OK**
7. Select the **Cost Items** tab on the left side of the page.



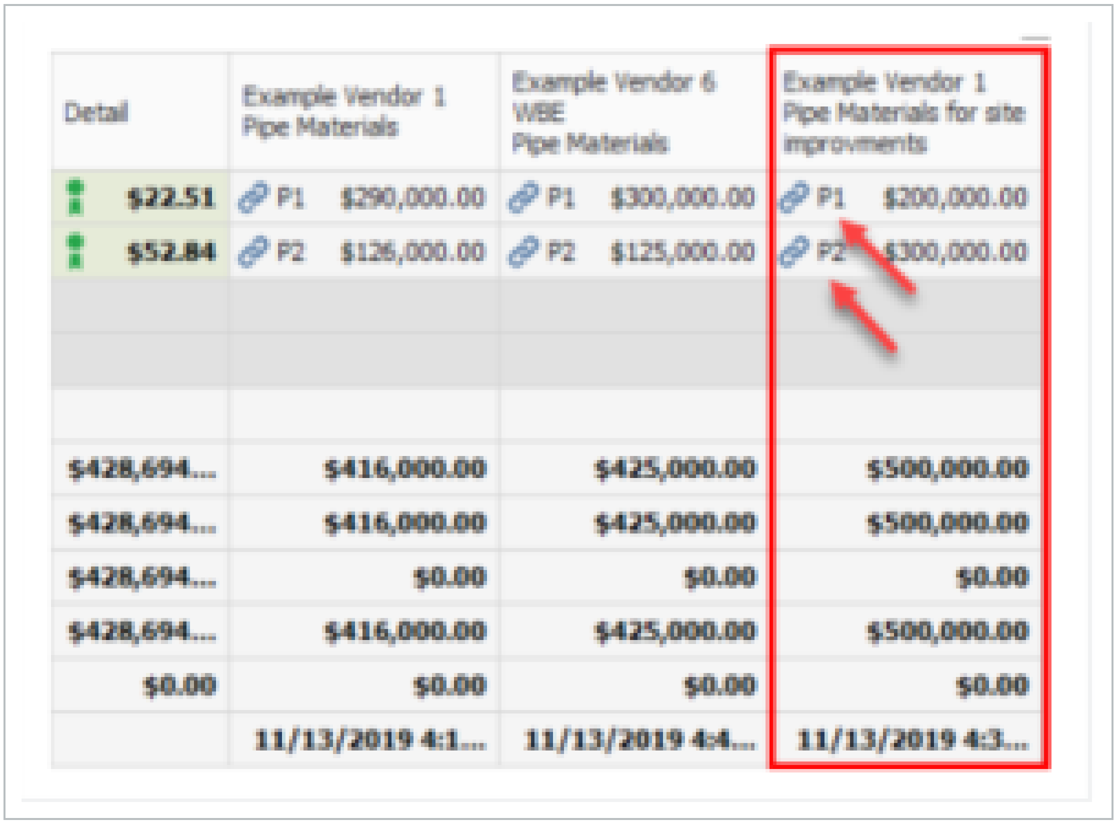
8. Add a **cost item** under Cost Items.
9. Then, add another **cost item** under Cost Items.
10. On the Packages tab, enter the following 2 new records:
    - Code: **P1**
    - Description: **On Site**
    - Amount: **$200,000**
    - Code: **P2**
    - Description: **Off Site**
    - Amount: **$300,000**



11. Type in **P1** under Package for cost item 7.
12. Type in **P2** under Package for cost item 8.

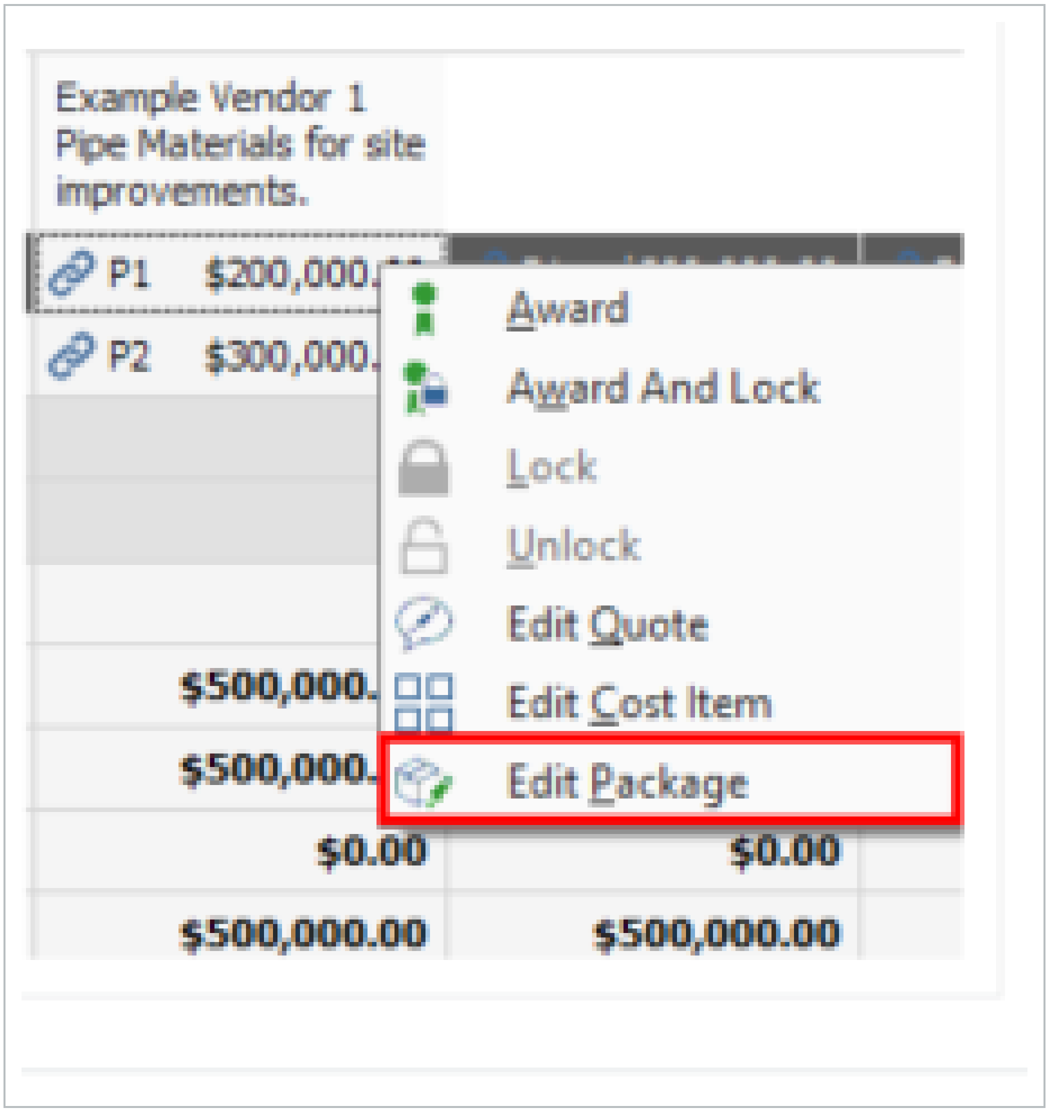


13. Select **OK**.
14. Under the Quote Comparison and Award ribbon, select **Cost Items**.
15. Under Quote Groups, select **Pipe Materials**.
    - Quote Comparison and Award shows the newly created quote with the associated package quotes.



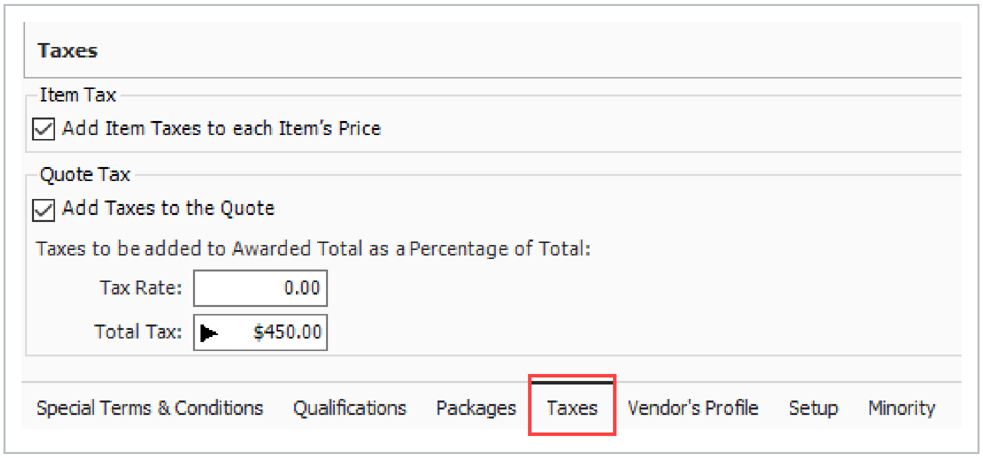
Detail	Example Vendor 1 Pipe Materials	Example Vendor 6 WBE Pipe Materials	Example Vendor 1 Pipe Materials for site improvments
$22.51	P1 $290,000.00	P1 $300,000.00	P1 $200,000.00
$52.84	P2 $126,000.00	P2 $125,000.00	P2 $300,000.00
$428,694...	$416,000.00	$425,000.00	$500,000.00
$428,694...	$416,000.00	$425,000.00	$500,000.00
$428,694...	$0.00	$0.00	$0.00
$428,694...	$416,000.00	$425,000.00	$500,000.00
$0.00	$0.00	$0.00	$0.00
	11/13/2019 4:1...	11/13/2019 4:4...	11/13/2019 4:3...

- The Package Price can quickly be modified in the Quote Comparison and Award form by selecting the Edit Package action in the Actions tab or by using the right-click context menu.



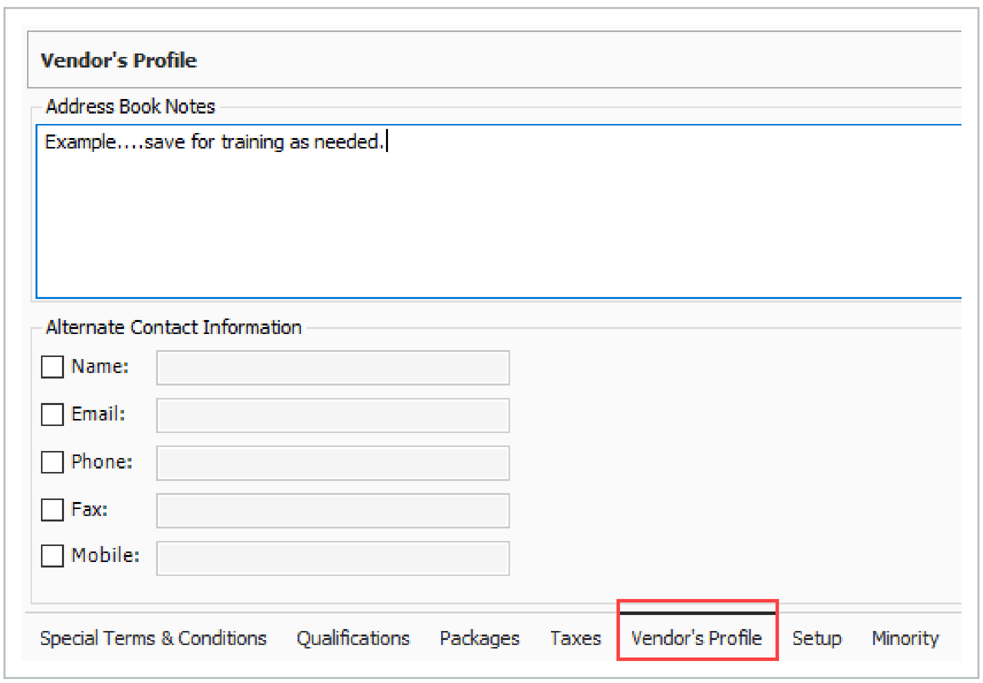
8.3.8.6 Taxes

Item Tax and Quote Tax have been combined to display on a single data block called Taxes. Using the taxes feature allows you to add item taxes to each item's price. You can also add taxes to the quote.



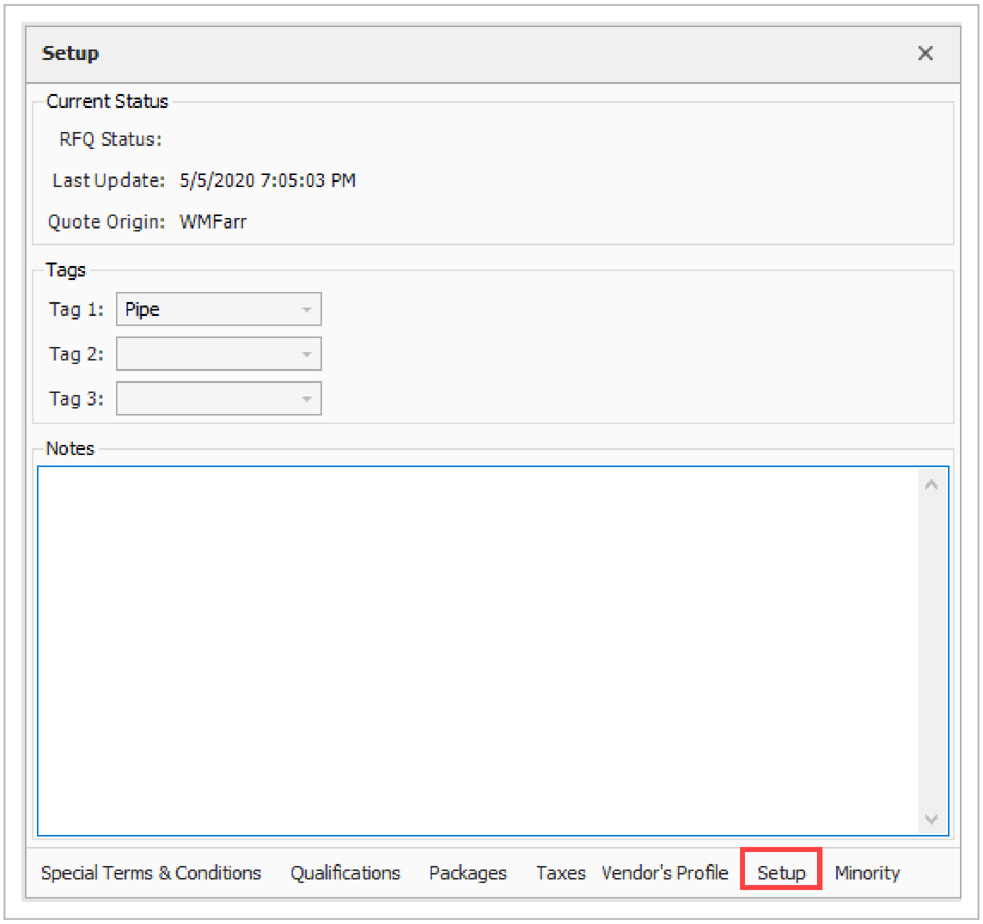
8.3.8.7 Seller’s Profile

The Seller’s Profile tab populates with address book notes and alternate contact information.



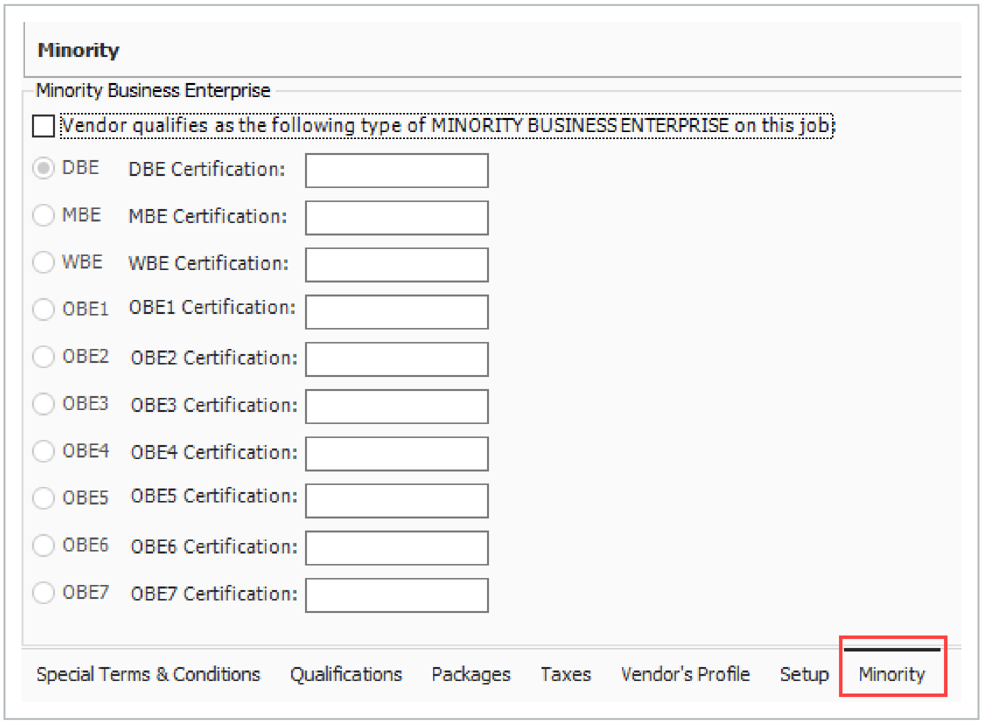
8.3.8.8 Setup

This tab provides extra space for any additional notes and tags to be assigned to the quote.

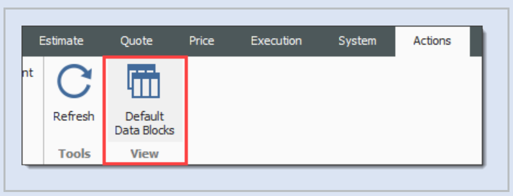


8.3.8.9 Minority

This tab allows you to determine if the seller qualifies for any type of minority business, and the ability to apply a certification number.



If any of your Data Blocks become deleted on a Quote Record, simply click the **Default Data Block** icon.



8.3.9 Create a Quote from RFQ

Walk through the steps of creating a quote from an RFQ.

To create a quote from scratch, click the **New** icon on the Quote Register and fill in the quote details and seller fields manually.

Create a quote from RFQ

This exercise walks through a specific example using the Training Job.

1. From the Estimate landing page, select the **Quote** tab.
2. Select **Request for Quote (RFQ)**.
3. Open the RFQ record for which you've received quotes.
4. Select the **Vendor Companies** tab, and then select the vendors for whom you need to create quotes. In this case, select all the vendors.
5. From the Actions menu, select **Create Quote**.
6. Click **OK** on the Quotes created prompt.
7. Close the RFQ record and the RFQ register.

8.3.10 Enter Quote Details

Now that you have quotes created, you can enter pricing.

Enter quote details

This exercise walks through a specific example using the Training Job.

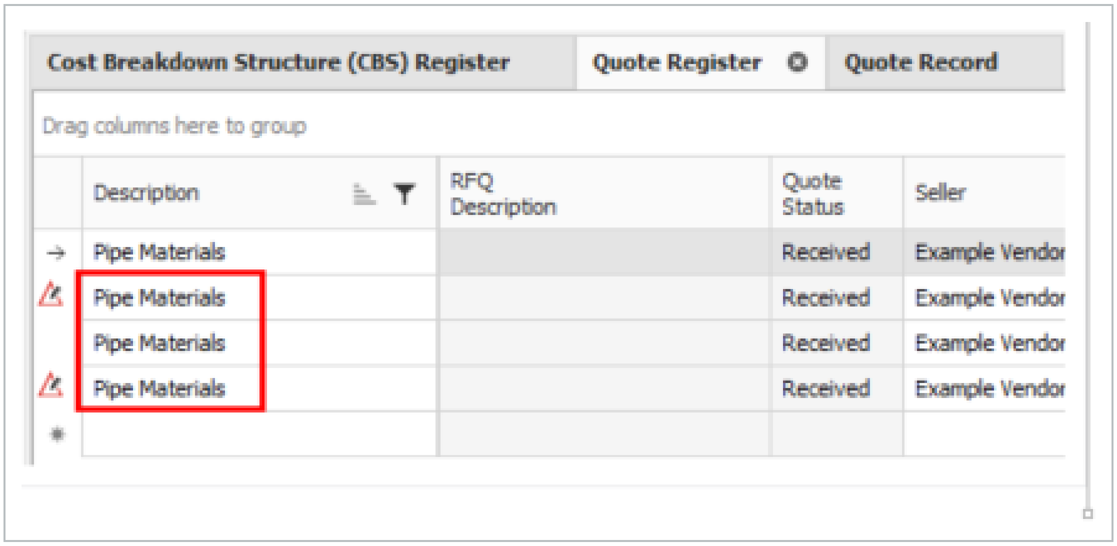
1. To open the Quote Register, select **Quote** from the Estimate landing page.
2. Select **Quotes** from the Quote Management section.
3. Open the Aggregates Quote Record for Vendor 1 – Pat Roberts.
4. On the Resources tab, make sure No Split is unchecked for all items.
5. Also on the Resources tab, enter the following unit prices:

Resource Code	Description	Unit Price
MBR	Aggregate Base Rock	$8.00
MDIRTB	Dirt Class B	$6.00

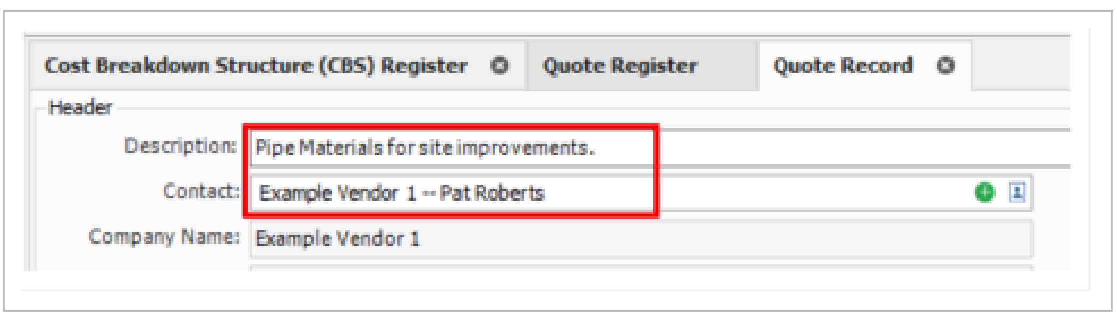
6. Click **OK** to close the Quote Record.

Create a multi-packaged quote

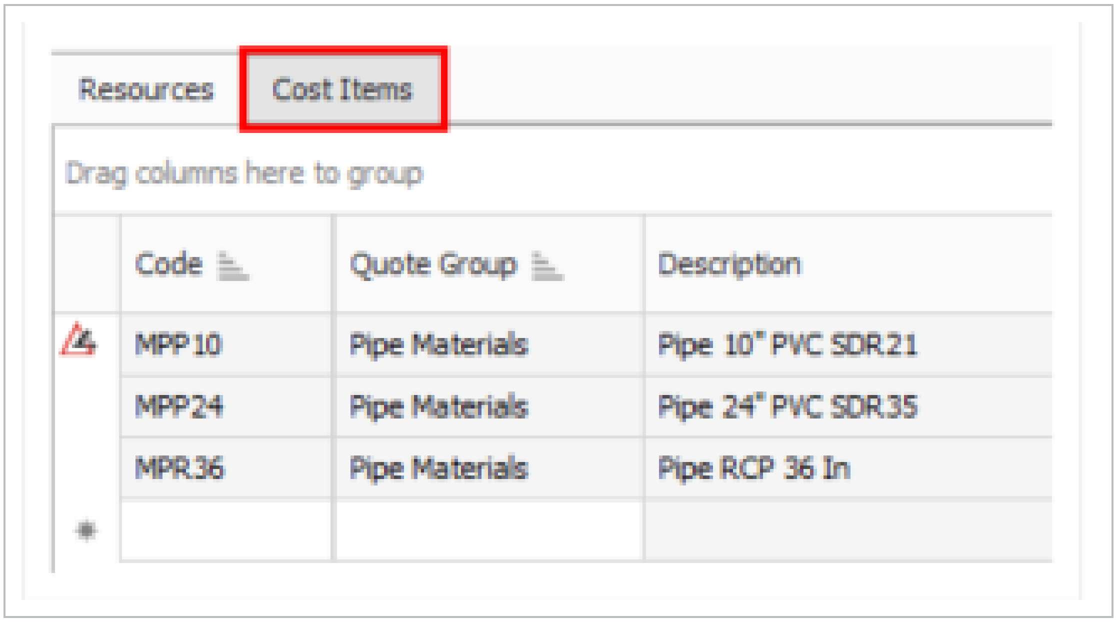
1. From the InEight Estimate landing page, select the **Quote** tab.
2. Click on the **Quotes** icon under Quote Management.
3. Double-click an item (e.g. **Pipe Materials**).



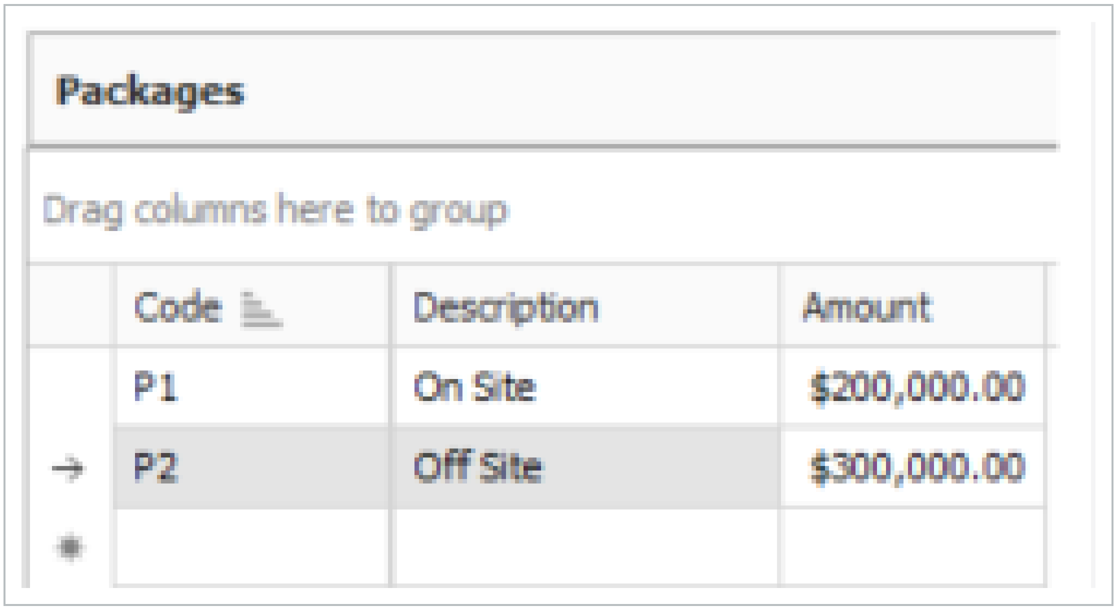
4. In the Description field, type in or replace the **description**.
5. In the Contact field, select a **contact**.



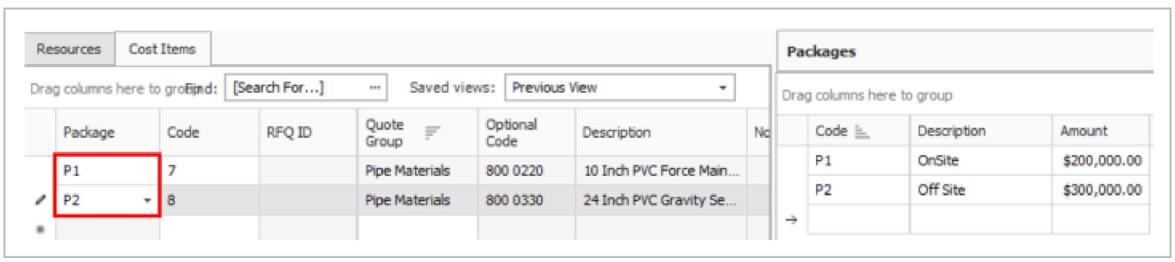
6. Click **OK**
7. Select the **Cost Items** tab on the left side of the page.



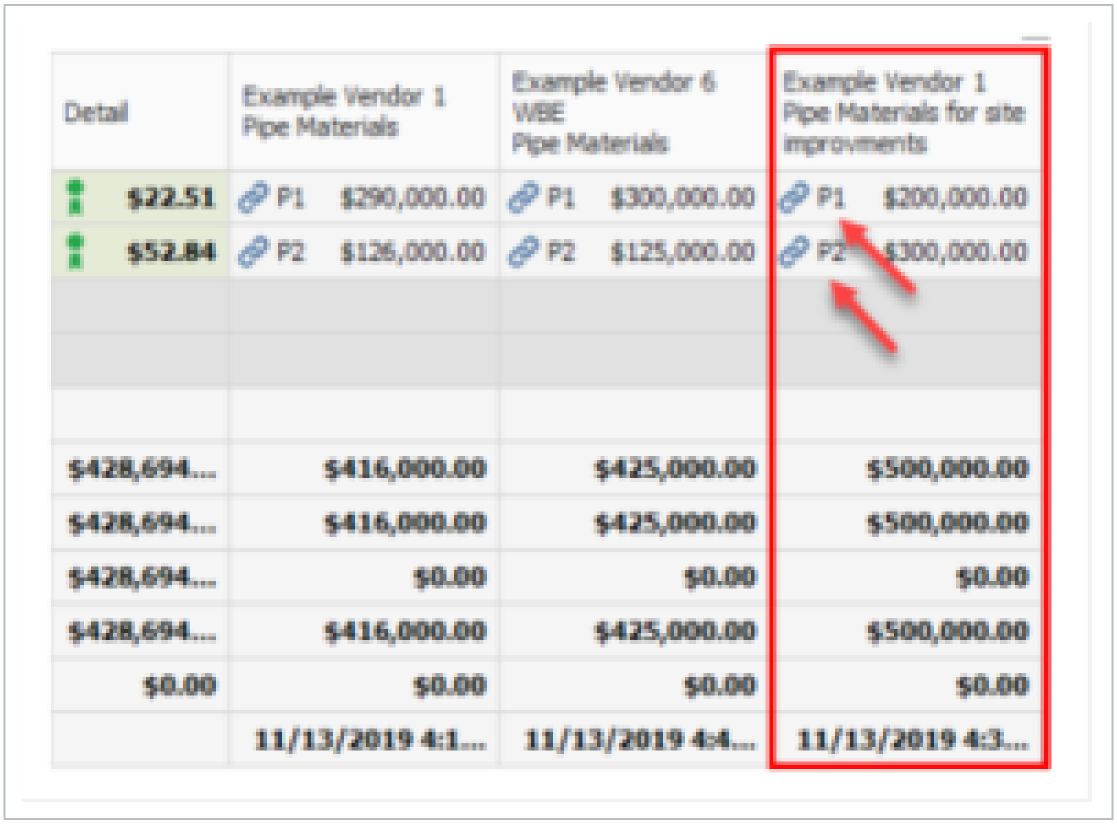
8. Add a **cost item** under Cost Items.
9. Then, add another **cost item** under Cost Items.
10. On the Packages tab, enter the following 2 new records:
    - Code: **P1**
    - Description: **On Site**
    - Amount: **$200,000**
    - Code: **P2**
    - Description: **Off Site**
    - Amount: **$300,000**



11. Type in **P1** under Package for cost item 7.
12. Type in **P2** under Package for cost item 8.

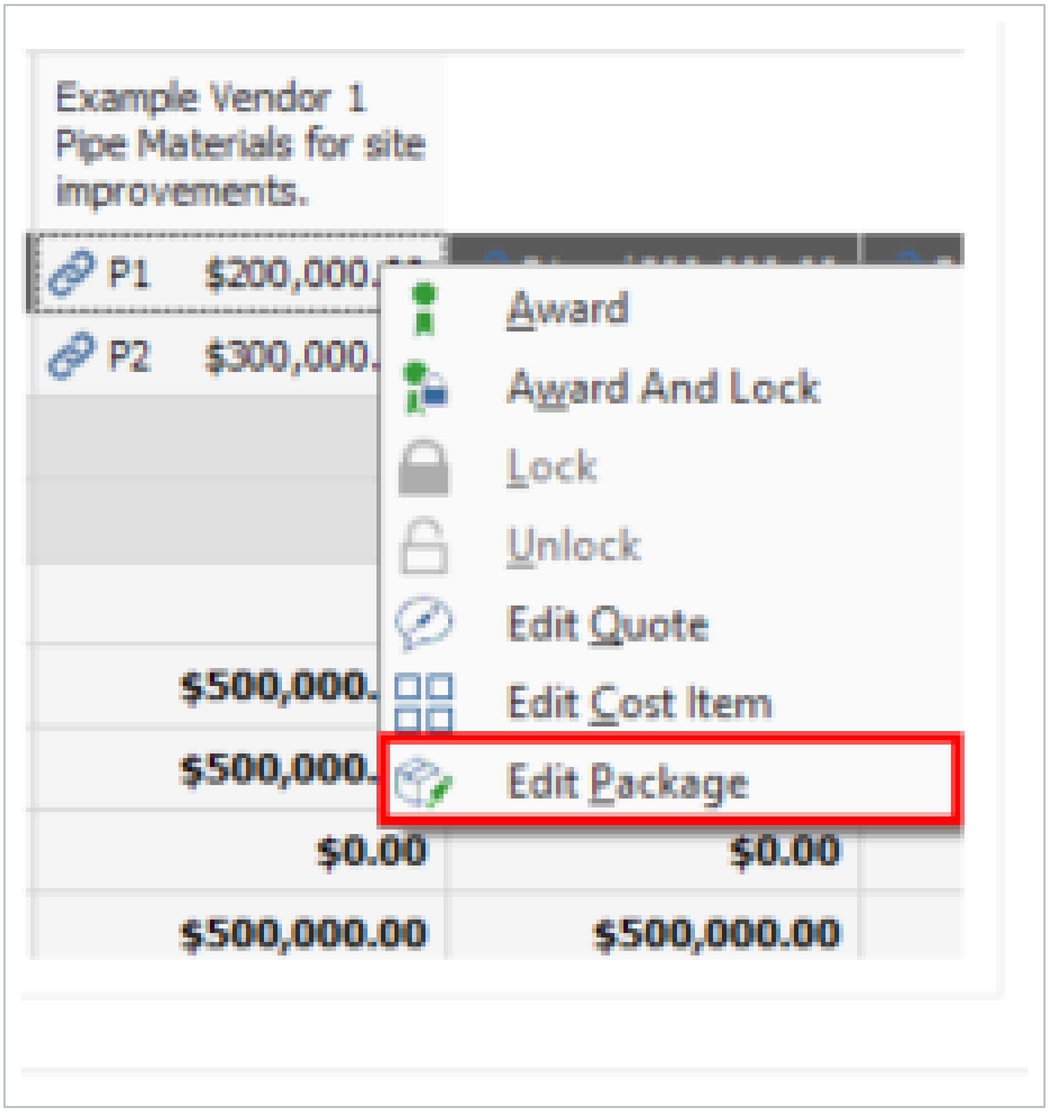


13. Select **OK**.
14. Under the Quote Comparison and Award ribbon, select **Cost Items**.
15. Under Quote Groups, select **Pipe Materials**.
    - Quote Comparison and Award shows the newly created quote with the associated package quotes.



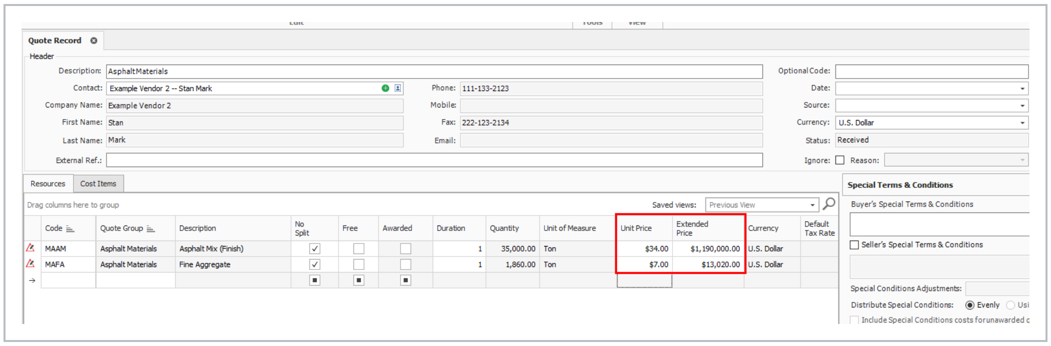
Detail	Example Vendor 1 Pipe Materials	Example Vendor 6 WBE Pipe Materials	Example Vendor 1 Pipe Materials for site improvments
$22.51	P1 $290,000.00	P1 $300,000.00	P1 $200,000.00
$52.84	P2 $126,000.00	P2 $125,000.00	P2 $300,000.00
$428,694...	$416,000.00	$425,000.00	$500,000.00
$428,694...	$416,000.00	$425,000.00	$500,000.00
$428,694...	$0.00	$0.00	$0.00
$428,694...	$416,000.00	$425,000.00	$500,000.00
$0.00	$0.00	$0.00	$0.00
	11/13/2019 4:1...	11/13/2019 4:4...	11/13/2019 4:3...

- The Package Price can quickly be modified in the Quote Comparison and Award form by selecting the Edit Package action in the Actions tab or by using the right-click context menu.



8.3.11 Use Unit Price or Extended Price on Quote Record Item

It's possible to enter the Extended Price for a Quote Item, and the Unit Price is then calculated, which makes entering quotes more efficient and results in less errors.

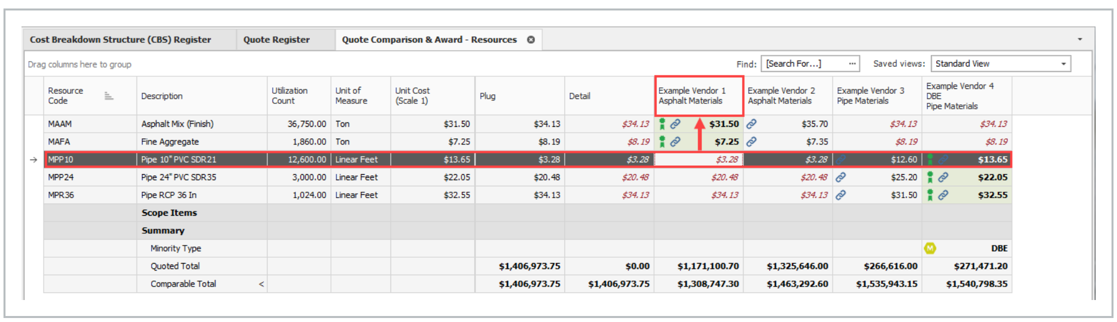


8.3.12 Duplicating an Existing Quote

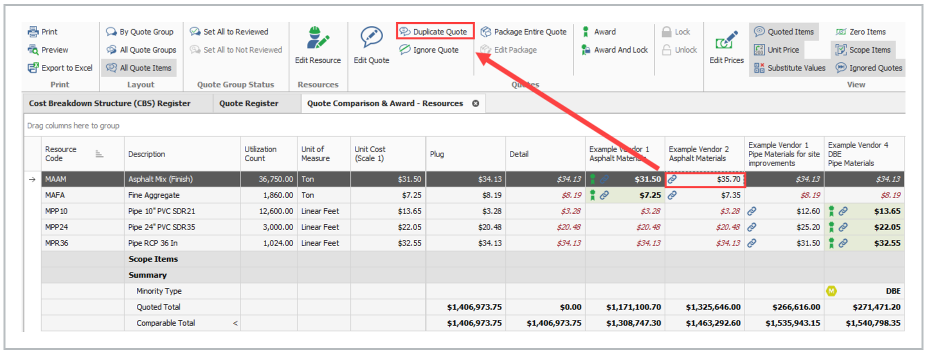
You can create a new quote by duplicating an existing quote from the Quote Compare & Award form. Duplicate Quotes will contain the same scope as the quote that you previously copied.

Duplicate an existing quote

1. From the InEight Estimate landing page, select the **Quote** tab.
2. Select the **Resources** icon under Quote Comparison & Award.
3. Highlight any row under the Quote column you want to duplicate.

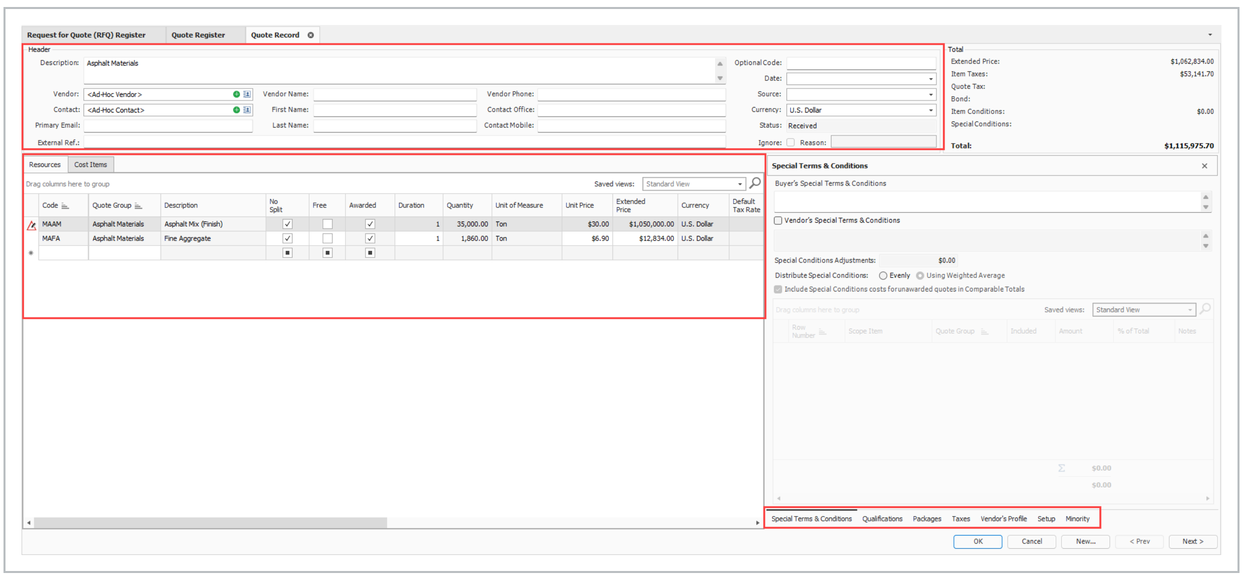


4. Select the **Actions** tab.
5. Under the Quotes section, select the **Duplicate Quote** icon.



- The resources and prices from the quote you previously selected have been copied into a new Quote Record.

6. From the Header block, enter in any missing information.
   - The information listed in the Header block will not copy over to the duplicated quote.
7. Enter additional Cost Items in the Quote tabs data block.
   - Check the default data blocks for any information you want to add to your duplicate quote.



8. Once done, click **OK**.

Exercise 8.1 – Quote Management

When you receive quotes from vendors, you will need to record their pricing and conditions in their Estimate quote records. In this exercise, you will practice entering quote details. Enter the following quote record details, using the Training Job:

Quote Name: Aggregates	**Seller Name**: Example Vendor 2 - Stan Mark	
Resource Code	**Description**	**Unit Price**
MBR	Aggregate Base Rock	$7.45
MDIRTB	Dirt Class B	Not Quoted (delete)
Special Instructions Seller is NOT willing to split items.		
Quote Name: Aggregates	**Seller Name**: Example Vendor 4 - Lester Slim	
Resource Code	**Description**	**Unit Price**
MBR	Aggregate Base Rock	$8.15
MDIRTB	Dirt Class B	FREE
Special Instructions Seller is NOT willing to split items.		

You should end up with similar results like below:

Description	RFQ Description	Seller	Contact Name	Quote Total
Aggregates	Aggregates	Example Vendor 4 DBE -- Lester Slim	Slim, Lester	$408,834.56
Aggregates	Aggregates	Example Vendor 2 -- Stan Mark	Mark, Stan	$373,719.94
Aggregates	Aggregates	Example Vendor 1 -- Pat Roberts	Roberts, Pat	$402,192.00

Congratulations, you have completed this exercise!

8.4 QUOTE COMPARISON & AWARD

Now that you've received quotes and entered pricing information, you will compare them to determine which is the preferred vendor or contractor to carry their pricing in your estimate. The Quote Comparison & Award forms improve visibility into comparative analytics, while increasing efficiencies in populating the estimate with quoted values.

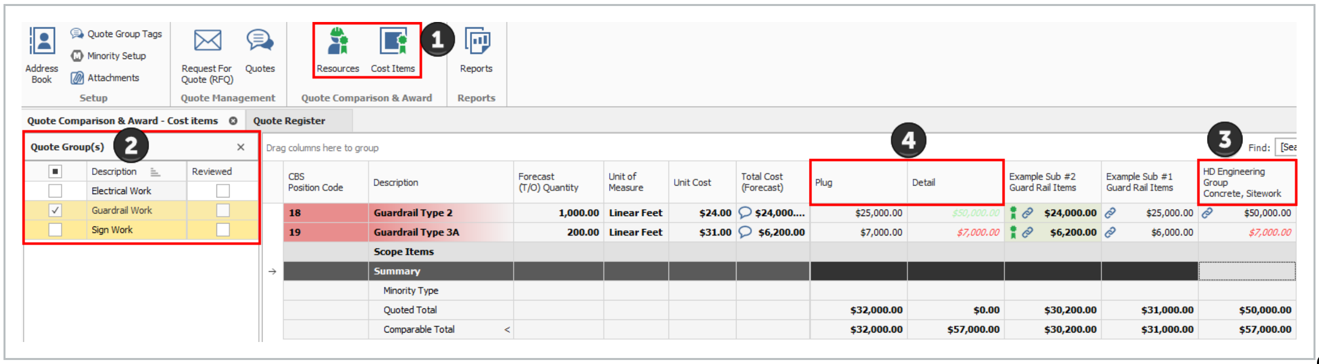
The Quote Comparison & Award screen is designed to closely match the layout of a vendor comparison sheet. It's designed to show all scope items with prices provided by multiple vendors and substitute pricing where items have been excluded.

Now that you've entered contextual quote information in the Quote Register, the Quote Comparison & Award screen provides you with the ability to make better, and more efficient determinations for awarding the quote.

8.4.1 Quote Comparison & Award Overview

To open the Quote Comparison & Award form, select Quote > **Quote Comparison & Award**. The table and image below show an overview of the Quote Comparison and Award form.

Name		Definition
1	**Resources and Cost Items Filter**	You can show either your quoted resources or cost items.
2	**Quote Group Filter**	This section provides checkboxes to further filter your items. The Quote Group Filter allows you to mark the quotes as reviewed.
3	**Quote Description and Vendor**	Your quotes show with the vendor name plus the quote description. • Awarded items have an award symbol If an item is designated as No Split, it has a chain link icon • Awarded and Locked items have a lock symbol next to the award symbol
4	**Cost Source Type**	The cost source can either be a Plug or Detail type.



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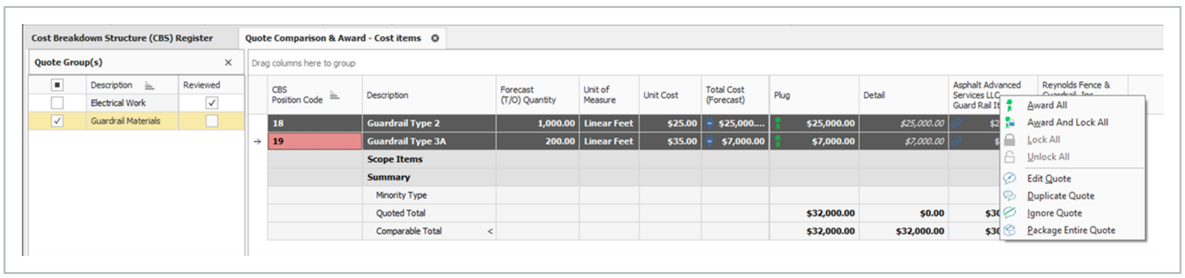
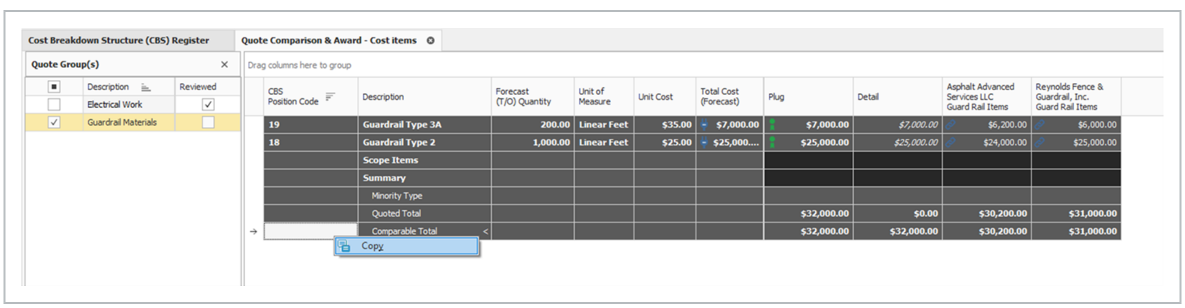
8.4.1.1 Select multiple items

You can use the *CTRL* key to select multiple cost items in the selected quote groups, and then right-click a selected item to make awards using the context menu.



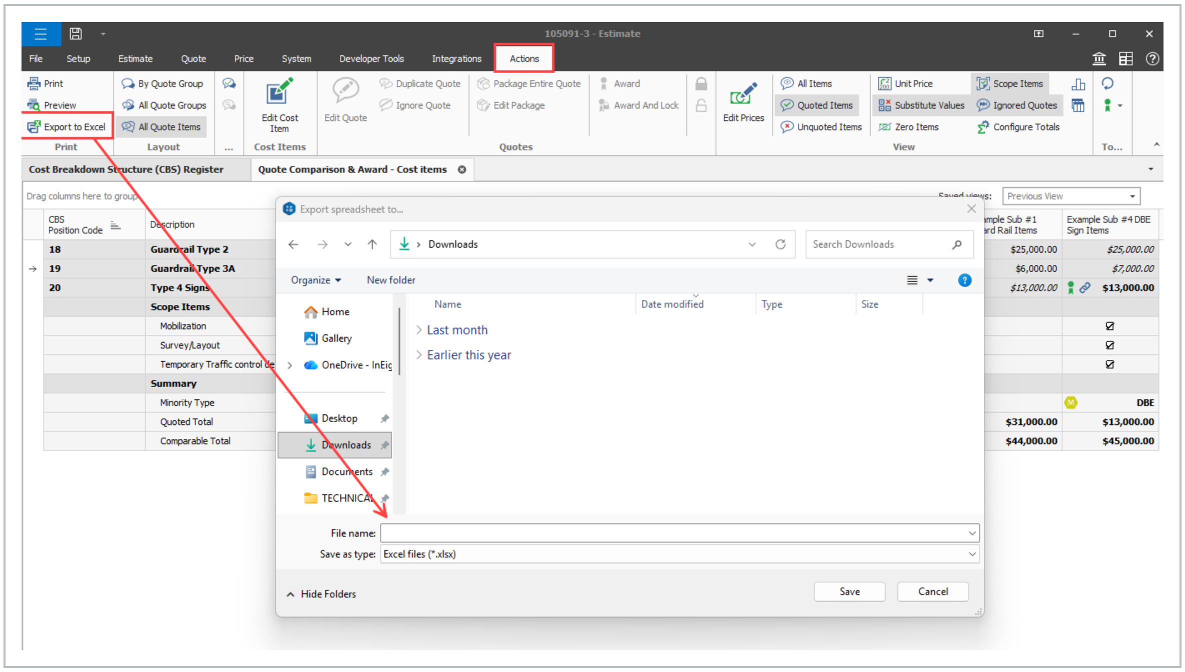
Similarly, you can use the *CTRL* key to select multiple rows, and then right-click a selected row to copy and paste to Microsoft Excel, or other applications.



8.4.1.2 Export quote comparison and award

The Quote Comparison & Award form changes frequently in the closing hours of a bid, which can prompt estimators to keep track of what the subcontractor and supplier quotes might have looked like at any point throughout the bid closing. Some estimators rely on such bid leveling information but do not want to access live information directly in the application, making it crucial to produce an identical output file of the Quote Compare & Award form at any given time.

You can export the Quote Comparison & Award form to a Microsoft Excel file. In the Quote Comparison & Award form, go to Actions > and then click the **Export to Excel** icon. In the **Export spreadsheet to** dialog box, select a location to save the file, enter a file name, and then click **Save**.

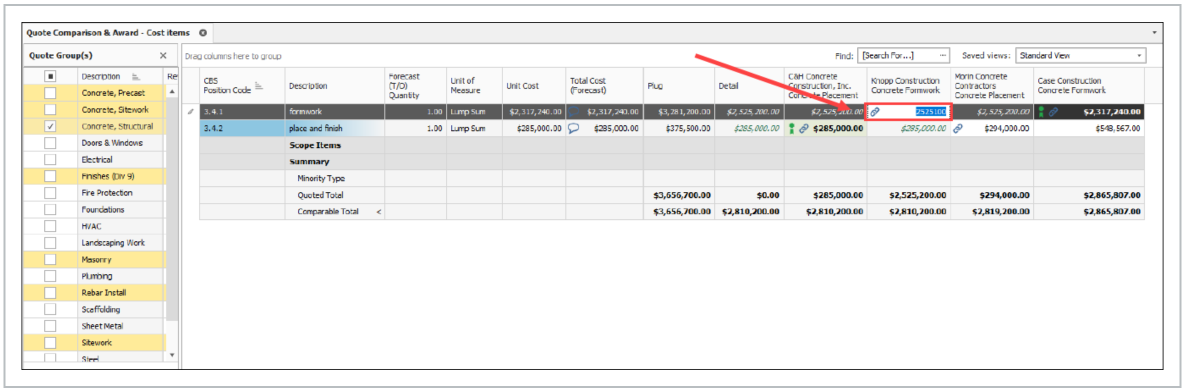


8.4.2 Edit Mode

You can make last minute modifications to the quote price directly in the Quote Comparison and Award form.

When in Edit mode, the quote item's price, unmodified by the quote's bond cost or special conditions, can be updated. You can modify the Unit price or the Extended price for each of the quote items that are not part of the package or marked as Free.

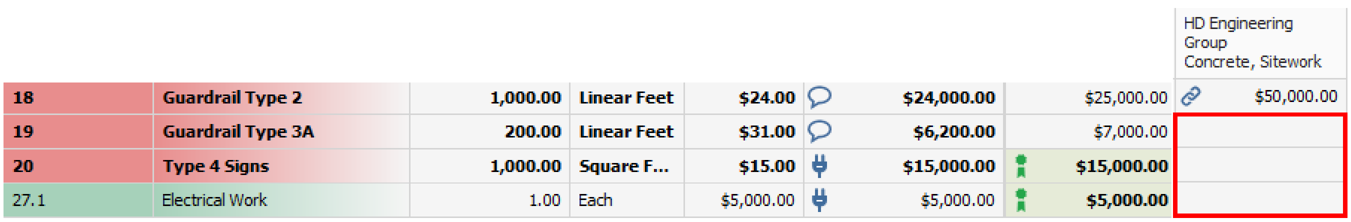
The updates made to quote items in Quote Compare and Award will update the estimate in real time allowing you to see the impact of the changes in the estimate.



8.4.3 Substitute Values

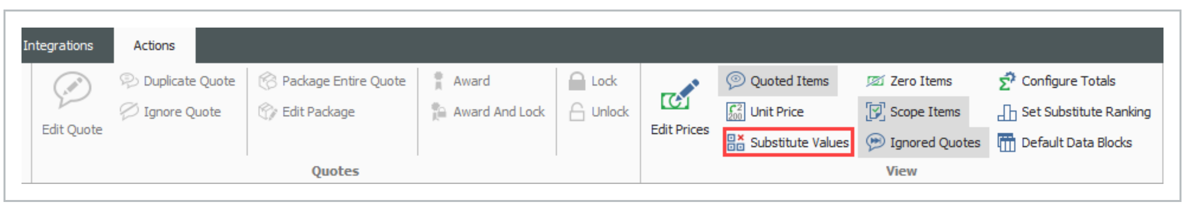
You can display a substitute value by selecting **Actions > Substitute Values**.

Notice the entered quotes. One of the vendors did not give pricing for three of the CBS items.

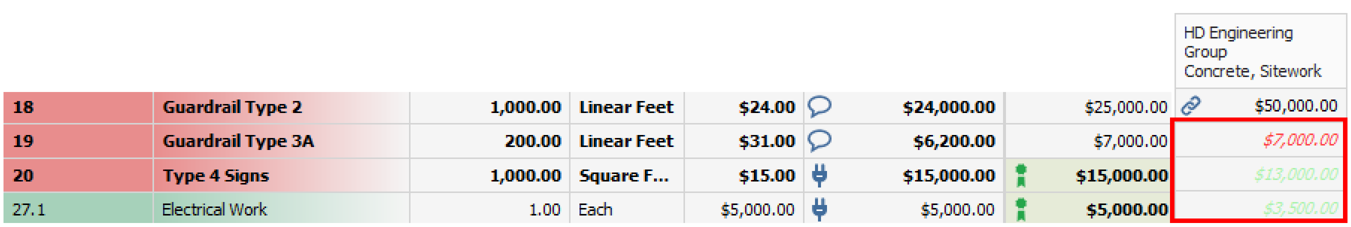


								HD Engineering Group Concrete, Sitework
18	**Guardrail Type 2**	**1,000.00**	**Linear Feet**	**$24.00**	**$24,000.00**		$25,000.00	$50,000.00
19	**Guardrail Type 3A**	**200.00**	**Linear Feet**	**$31.00**	**$6,200.00**		$7,000.00	
20	**Type 4 Signs**	**1,000.00**	**Square F...**	**$15.00**	**$15,000.00**		**$15,000.00**	
27.1	Electrical Work	1.00	Each	$5,000.00	$5,000.00		**$5,000.00**	

When you compare this quote to the others, it can be difficult to see if the total cost of the quote is high or low because it is missing some of the pricing. InEight Estimate can help you make an “apples to apples” comparison by filling in a substitute price for items that are missing.



You can tell when it’s a substitute value because the price displays in italics.

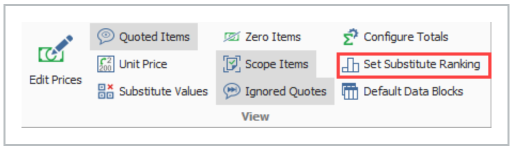


								HD Engineering Group Concrete, Sitework
18	**Guardrail Type 2**	**1,000.00**	**Linear Feet**	**$24.00**	**$24,000.00**		$25,000.00	$50,000.00
19	**Guardrail Type 3A**	**200.00**	**Linear Feet**	**$31.00**	**$6,200.00**		$7,000.00	*$7,000.00*
20	**Type 4 Signs**	**1,000.00**	**Square F...**	**$15.00**	**$15,000.00**		**$15,000.00**	*$13,000.00*
27.1	Electrical Work	1.00	Each	$5,000.00	$5,000.00		**$5,000.00**	*$3,500.00*

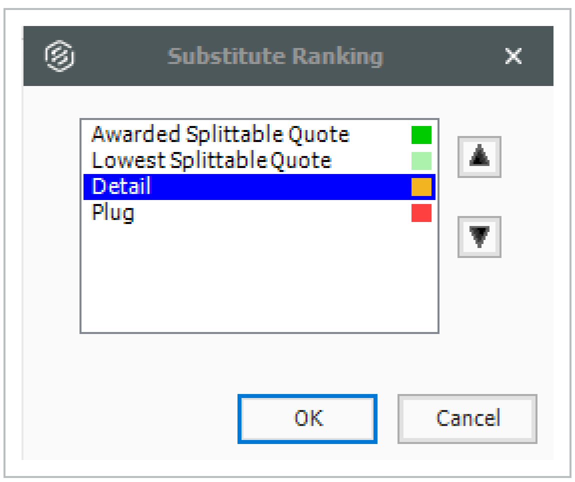
InEight Estimate grabs the substitute value from one of four places:

1. Awarded splittable quote
2. Lowest splittable quote you've received
3. Detail (this only applies to quoting cost items)
4. Plug cost (the rate defined for that resource in InEight Estimate)

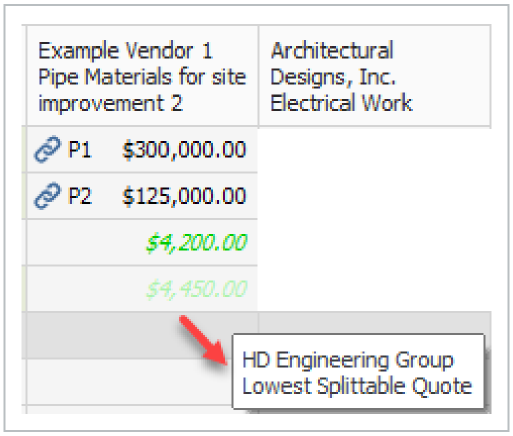
You can set the order for a substitute value by selecting **Actions > Set Substitute Ranking.**



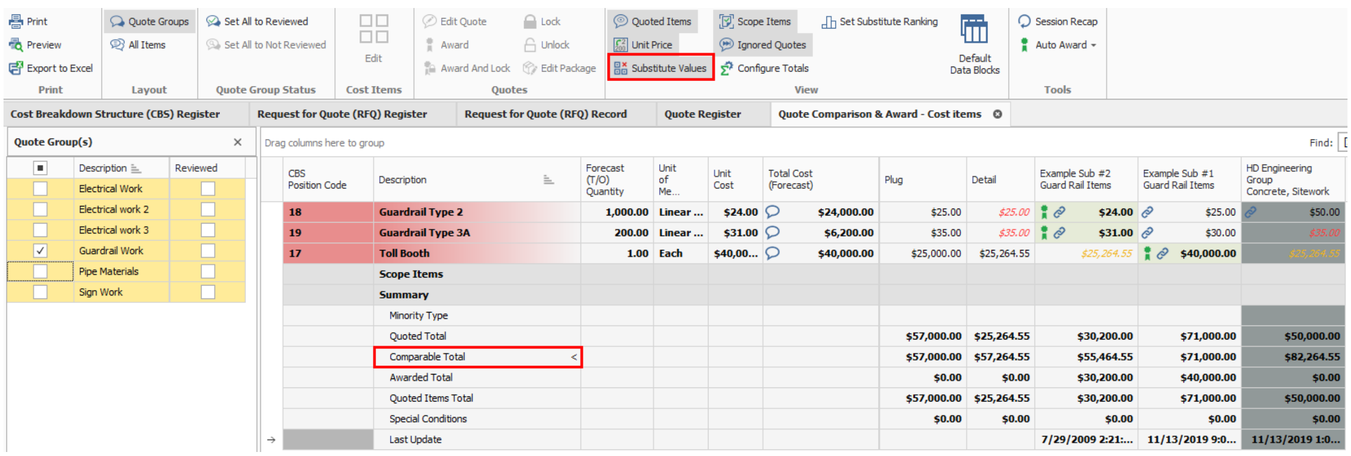
On the resulting Substitute Ranking window, you can use the up and down arrows to change the selection order. It will look from the top to the bottom of the list. The plug being in red represents the most risk, while the Awarded Splittable Quote is the least risk. Users can modify the color coding of these Substitute values by navigating to System Customize dialog and then selecting Substitute Quote Ranking in the colors sections.



Note that the substitute values are color-coded so that back on the Quote Comparison & Award form you can see the source that your substitute value comes from. When you hover- over a substitute value it displays the vendor whose substitute value has been used.



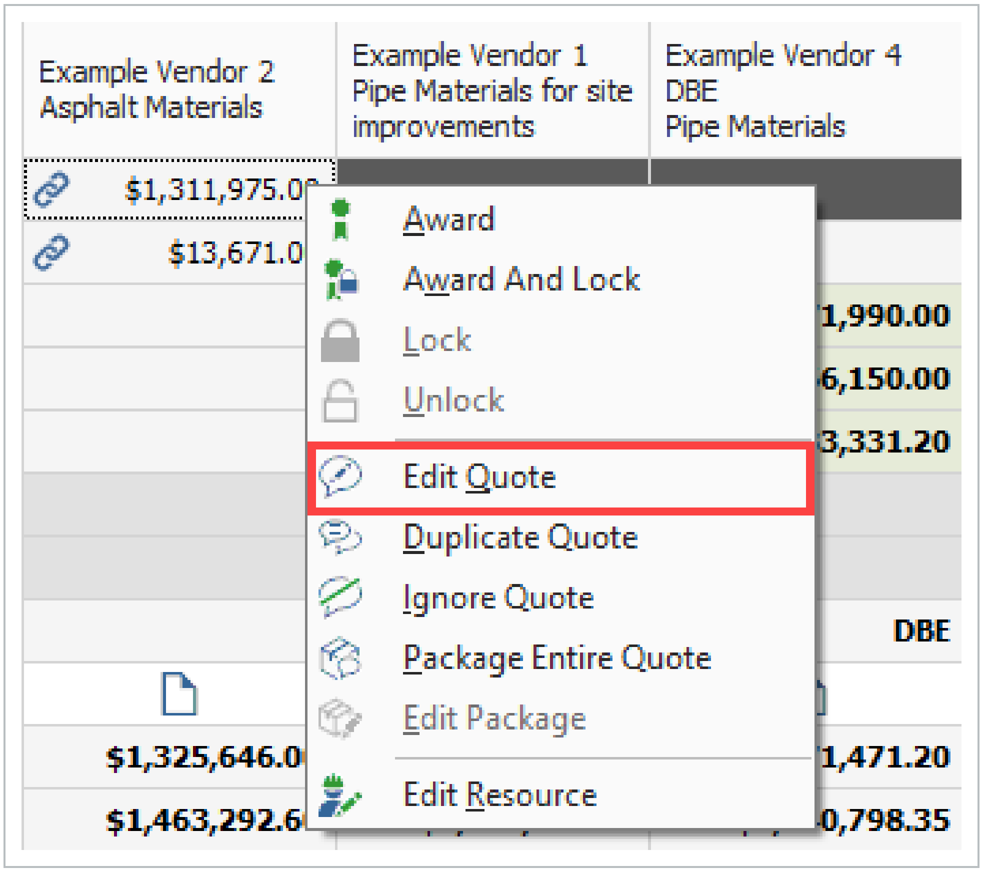
When you use a substitute value, it is included in your Comparable Total so you can have a more realistic comparison of your quotes.



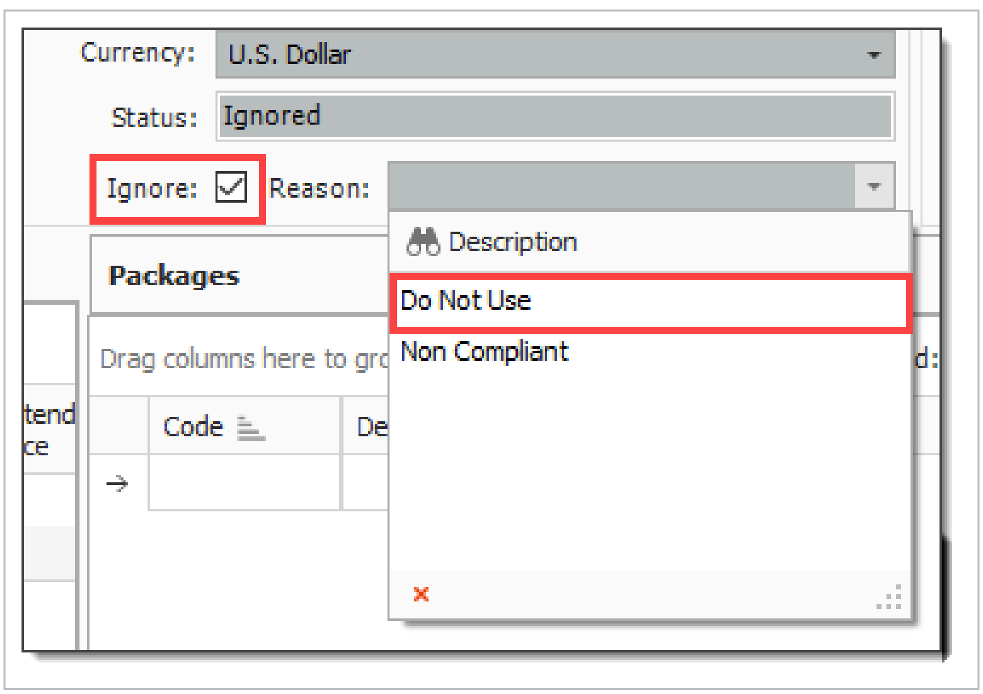
8.4.4 Display Ignored Quotes

You can view ignored quotes by selecting **Actions > Ignored Quotes**.

You can ignore a quote by right clicking on the subcontractor header, then selecting Edit Quote.

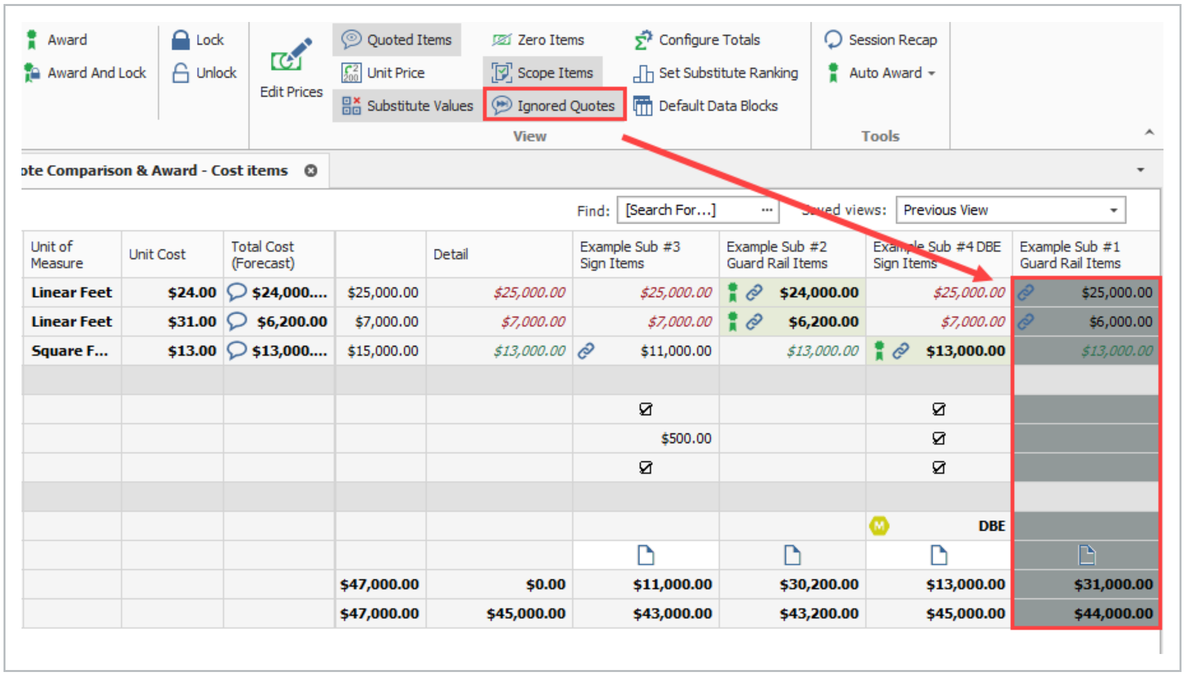


From the Quote Record screen, select the Ignore check box and also a Reason, then select OK.



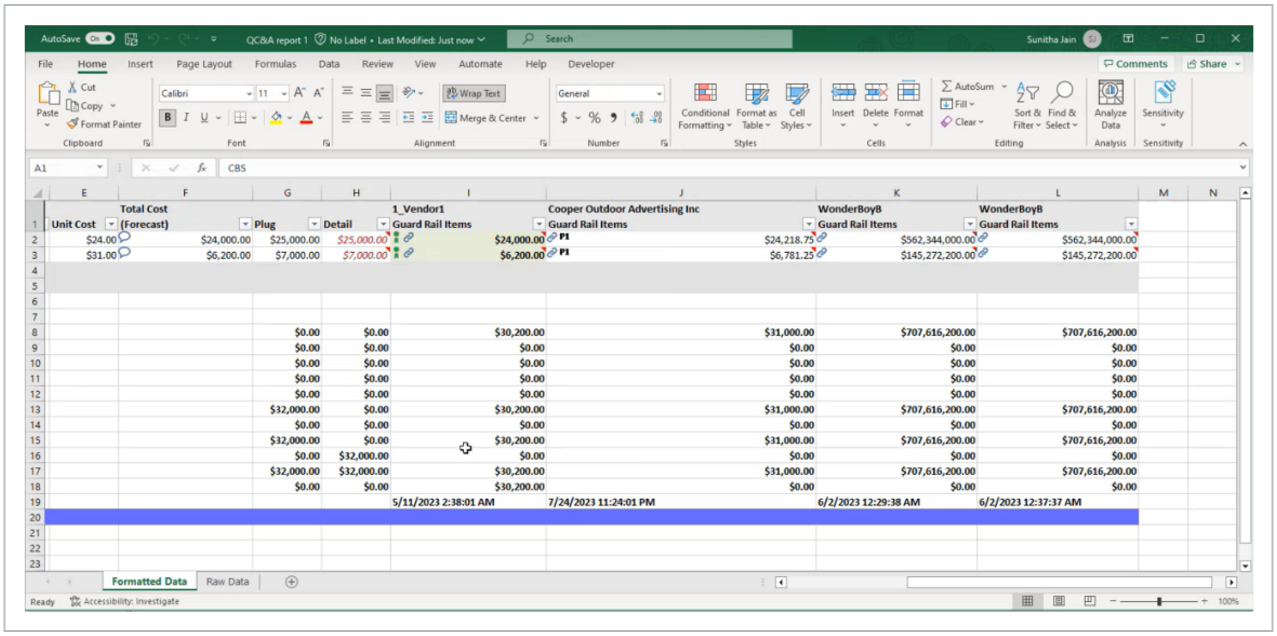
> If the quote record is already awarded, you will not be able to select the **Ignore** option.

If the Ignored Quotes button is pressed, the ignored quote will display in grey. An ignored Quote cannot be awarded. The ignored quotes get appended to the right end of the QC&A form.



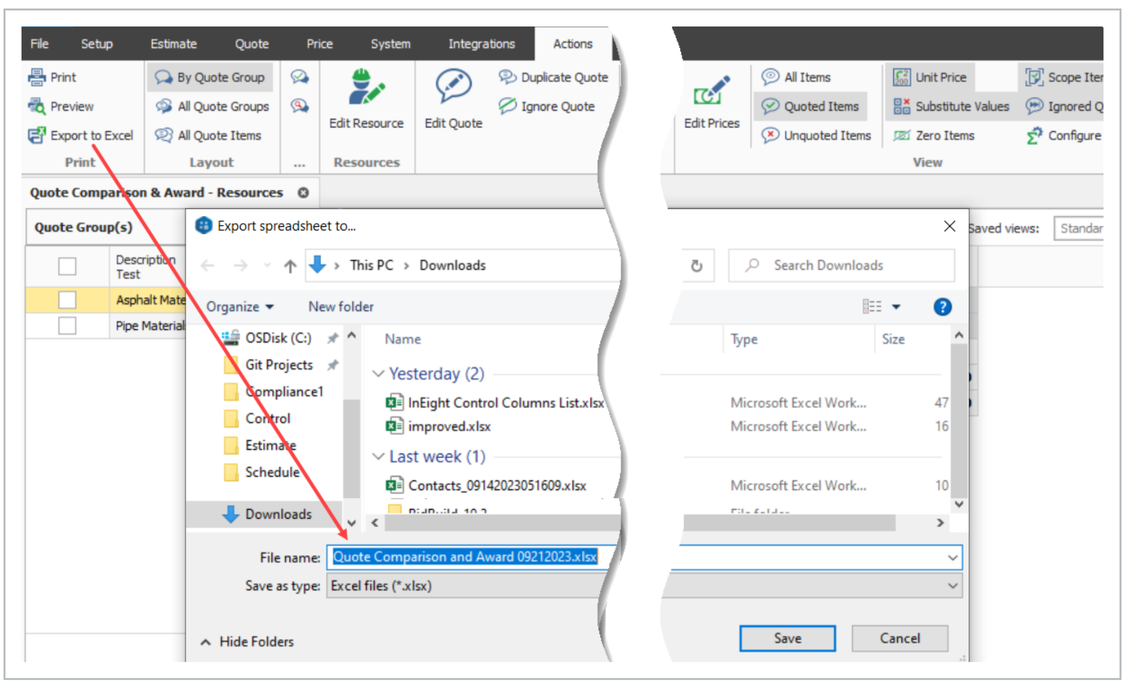
8.4.5 Export Quote Comparison and Award to Microsoft Excel

The Microsoft Excel file generated when you export the Quote Comparison & Award form closely resembles the form in Estimate, so users of this output can more clearly understand what the estimators knew when they made determinations on which numbers to carry.



The Quote Comparison & Award form changes frequently in the closing hours of a bid, which can prompt estimators to keep track of what the subcontractor and supplier quotes might have looked like at any point throughout the bid closing. Some estimators rely on such bid leveling information but do not want to access live information directly in the application, making it crucial to produce an identical output file of the Quote Compare & Award form at any given time.

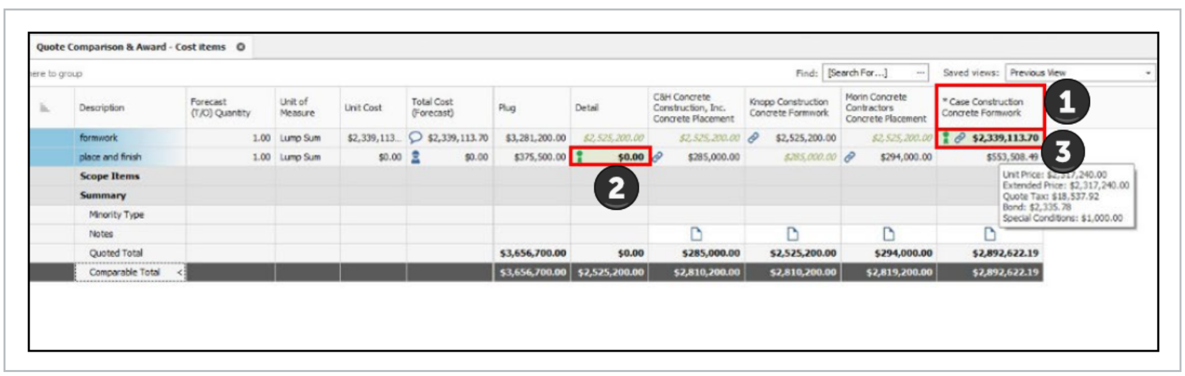
To create the Quote Comparison & Award Excel file, click on the **Export to Excel** icon. Enter a file name for the Excel file, and then click **Save**.



8.4.6 Additional Quote Comparison and Award functions

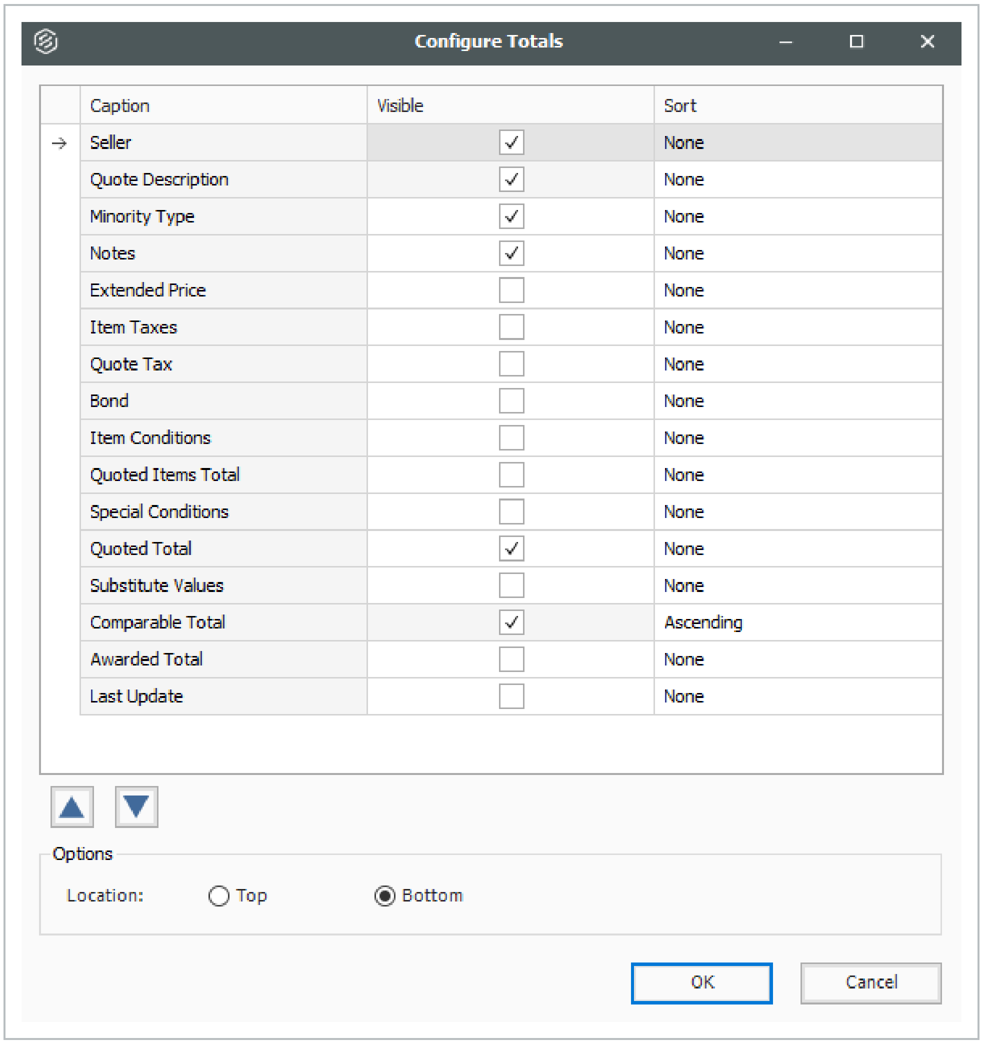
The Quote Comparison and Award form contains other notable functions which improves the process of selecting the quote that brings the greatest value to the estimate.

	Name	Definition
1	Asterisk next to Quote Item	An Asterisk (*) is displayed on a quote to indicate when that quote includes quote items appearing in other Quote groups.
2	Zero value Plug/Detail	Award quotes to Plug or Detail when its value is zero.
3	Updated Quote Items Tool tip	Quote Item Tool tip displays details including: • Unit Price • Extended Price • Bond • Taxes • Special Conditions • an indicator for a delta quote item



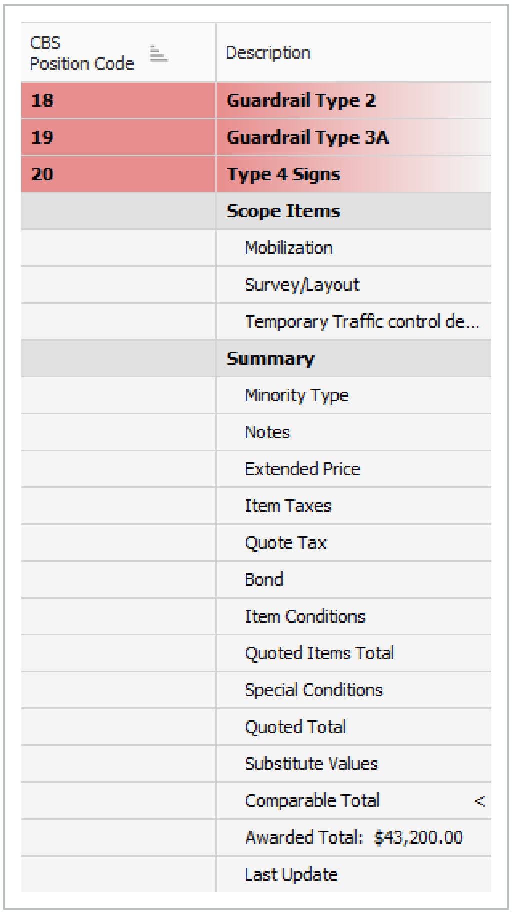
8.4.7 Configure Totals

You can display and sort additional Summary Totals, Special Conditions, and Last Updated fields by selecting **Actions > Configure Tools**.



The Options radio button give you better control for viewing totals at the tops of the screen or after the quotes.

After selecting additional captions, the new fields appear at the bottom of the Quote Comparison & Award screen. Notice that the caret symbol next to the Comparable totals in the below screenshot indicates that the Quotes are sorted based on Comparable totals in an ascending order.



CBS Position Code	Description
18	**Guardrail Type 2**
19	**Guardrail Type 3A**
20	**Type 4 Signs**
	Scope Items
	Mobilization
	Survey/Layout
	Temporary Traffic control de...
	Summary
	Minority Type
	Notes
	Extended Price
	Item Taxes
	Quote Tax
	Bond
	Item Conditions
	Quoted Items Total
	Special Conditions
	Quoted Total
	Substitute Values
	Comparable Total <
	Awarded Total: $43,200.00
	Last Update

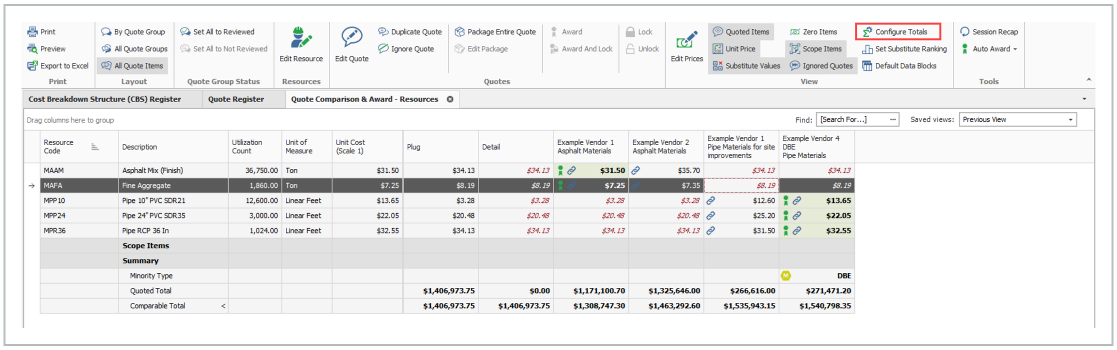
8.4.8 Adding Notes to Quote Comparison & Award

The Notes feature within the Configure Totals tool, allows you to quickly add, edit, and view notes for a quote in the Quote Comparison & Award form. Having visibility into the notes such as phone conversations with vendor/supplier, quotes that need clarification, or notes on other attributes will help you in making better decisions on who to consider when awarding a particular quote.

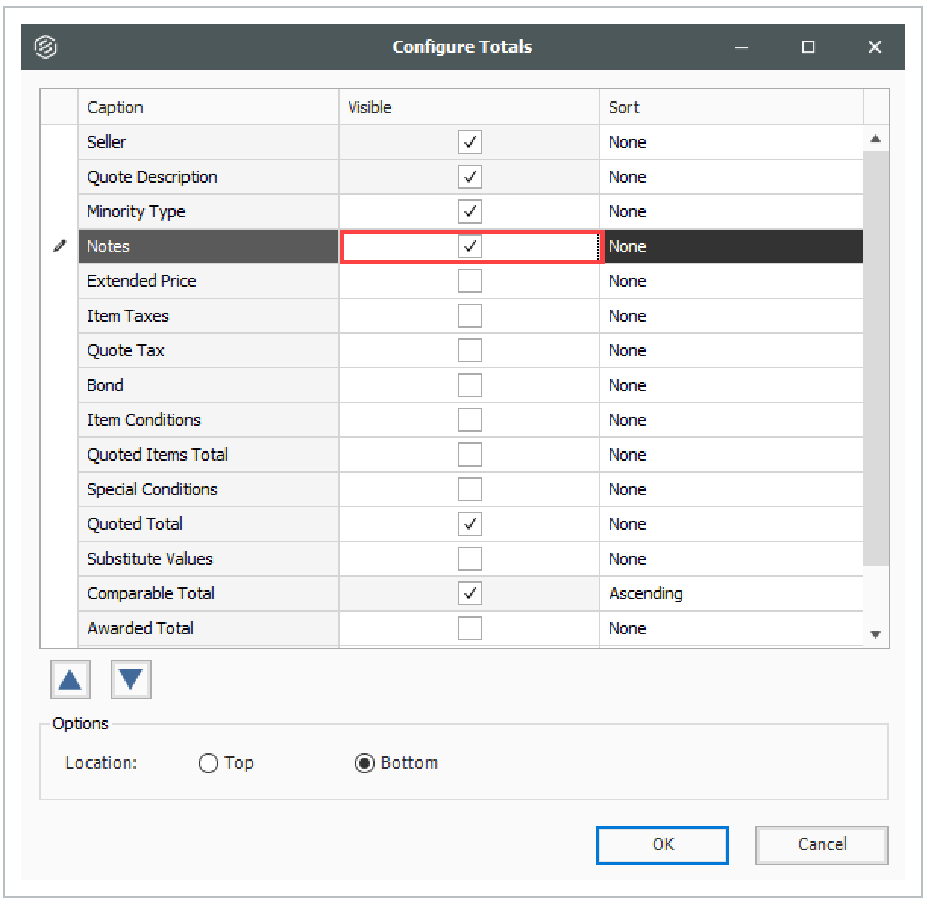
Add the Notes section to Quote Comparison & Award form

1. From the InEight Estimate landing page, select the **Quote** tab.
2. Select the **Resources** icon under Quote Comparison & Award.
   - Notice the absence of the Notes section. This is the default option until you follow the next steps.

3. Select the **Actions** tab.
4. From the View section, select the **Configure Totals** icon.

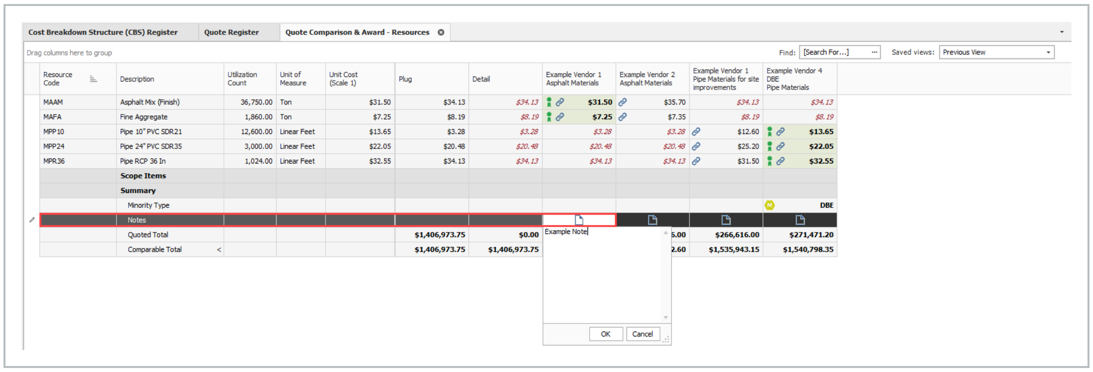


5. Select the check box in the Visible column for the Notes caption.



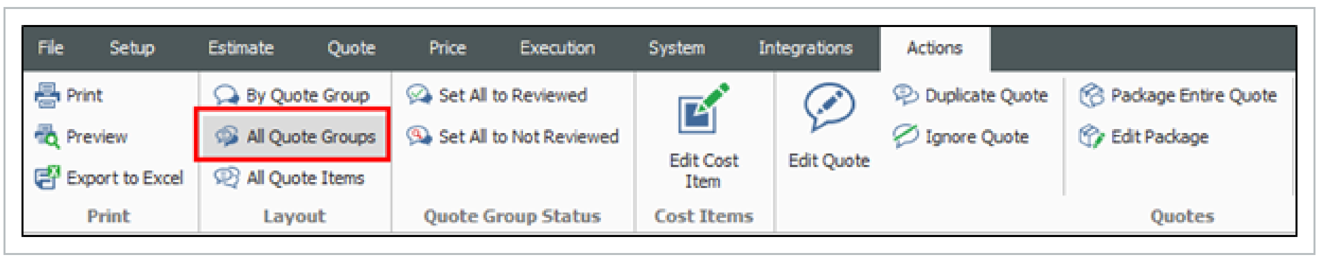
6. Select **OK**.

- The Notes section displays on the Quote Comparison & Award form.



8.4.9 All Quote Groups Layout

The All Quote Group icon, located within the Quote Comparison and Award ribbon, allows you to see all the quote groups at the same time.



You can make appropriate quote group selections based on understanding how choosing a quote group impacts the entire estimate. In addition, the quote groups layout provides you with the visibility and flexibility in aligning scopes, and being able to perform an efficient comparison of various quotes.

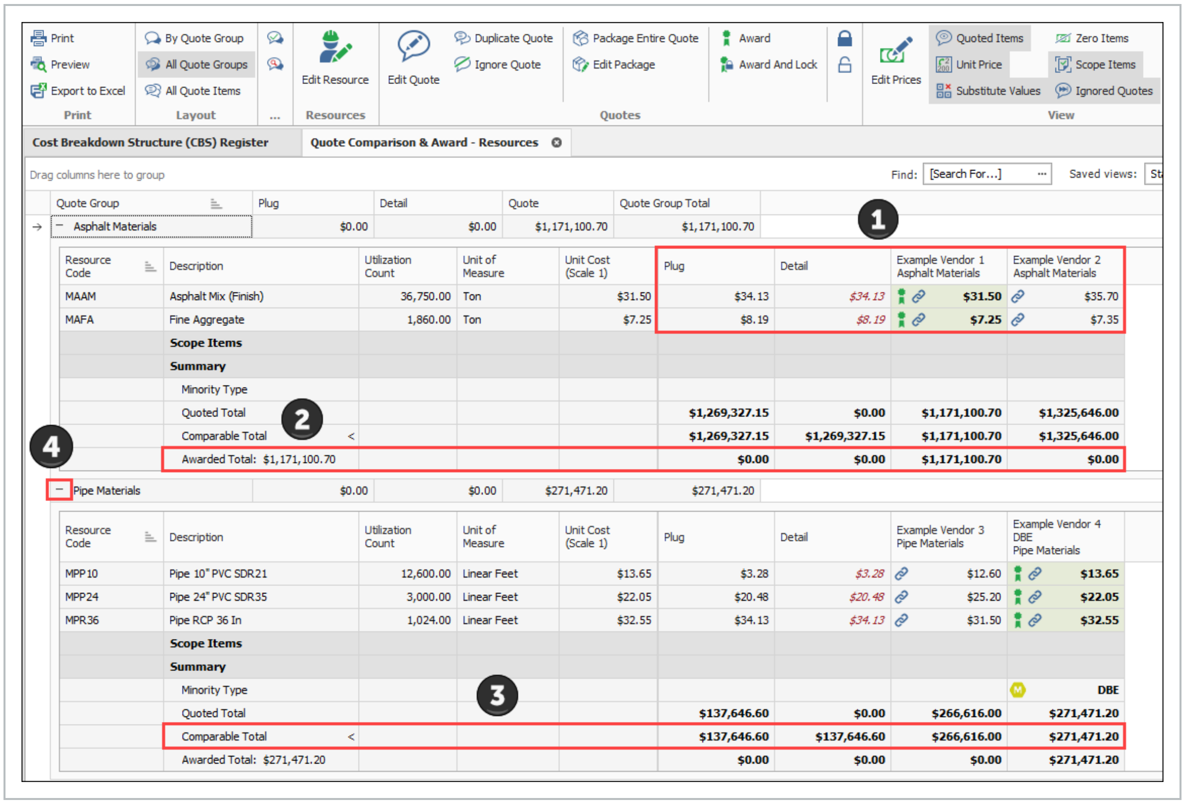
Features of this layout include:

Overview - Quote Groups Layout

Name		Definition
1	Totals per Quote Group	Ability to see the Awarded Total Plug, Detail and Quote amount per Quote Group
2	Total Awarded Amount	Visibility into the Total Awarded Amount per Quote Group

Overview - Quote Groups Layout (continued)

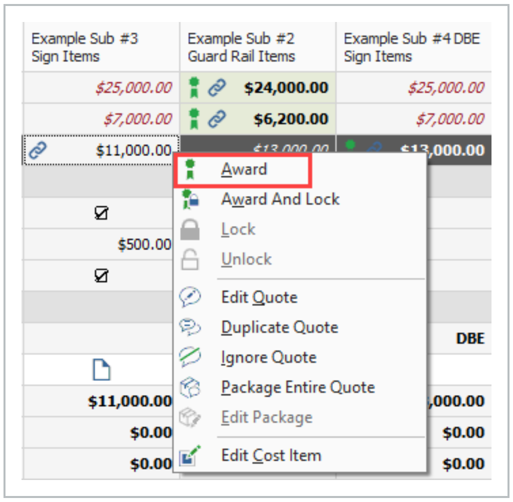
Name		Definition
3	Comparable totals	Better visibility into the Comparable totals per Quote Group
4	Expand/Collapse	Expand/Collapse individual or All Quote Groups to display the quote items



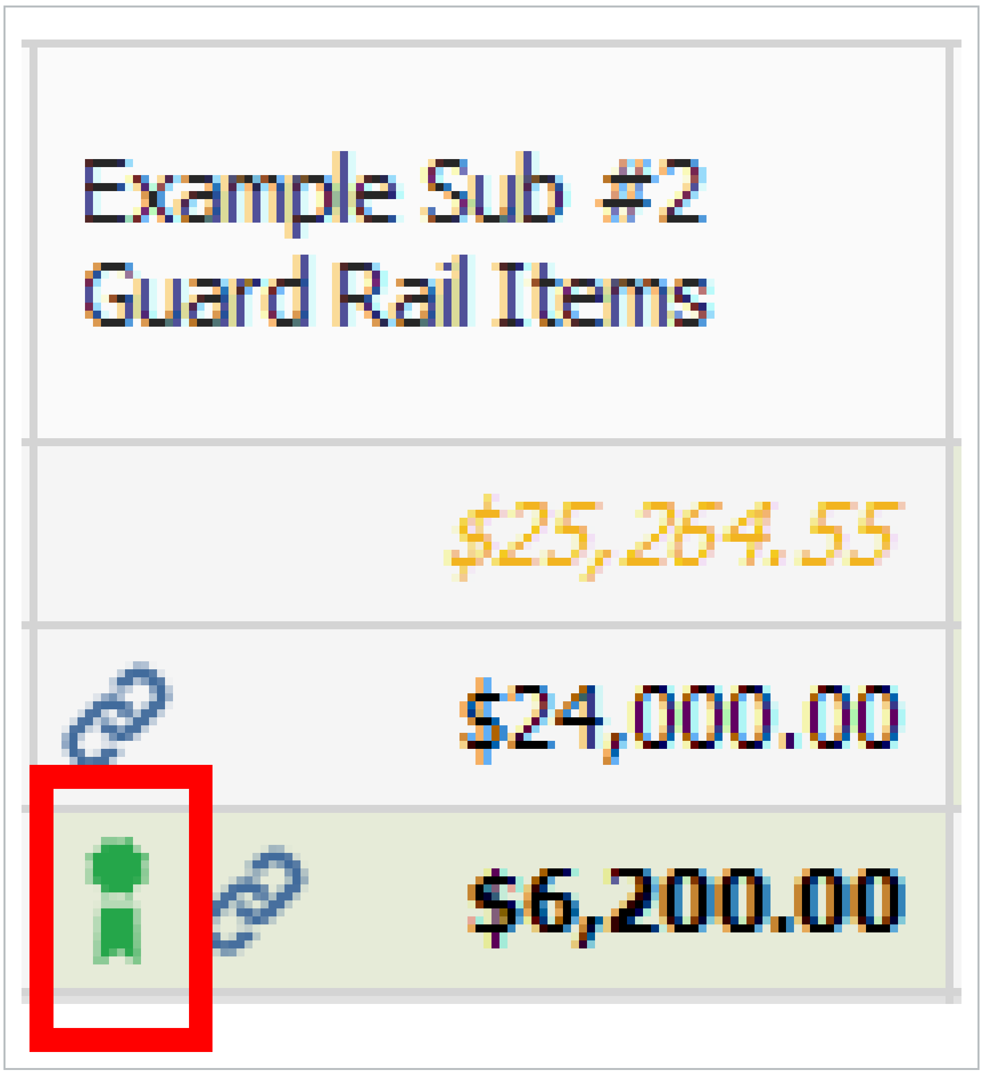
You can scan through all the quote groups in the estimate and see if you are carrying the most appropriate quote. You can also review the Totals per Quote Group and better analyze the risks in the estimate based on whether the cost is a plug number, detailed estimate or a quoted value.

8.4.10 Compare and Award Quotes

To award an item, right click on that item and select **Award**.



The Award icon displays next to the awarded item(s).



Once you award a quote in InEight Estimate, you can see it adds the Awarded Total on the comparison screen, and the pricing updates automatically in the Cost Breakdown Structure.

CBS Position Code	Description	Forec... (T/O) Quan...	Unit of Me...	Unit Cost	Total Cost (Fore...	Plug	Detail	Example Sub #2 Guard Rail Items	Example Sub #1 Guard Rail Items
17	Toll Booth	1.00	Each	$40,000...	$40,0...	$25,000.00	$25,264.55	$25,264.55	$40,000.00
18	Guardrail Type 2	1,000.00	Linear ...	$25.00	$25,0...	$25,000.00	$50,000.00	$24,000.00	$25,000.00
19	Guardrail Type 3A	200.00	Linear ...	$30.00	$6,00...	$7,000.00	$7,000.00	$6,200.00	$6,000.00
20	Type 4 Signs	1,000.00	Square...	$15.00	$15,0...	$15,000.00	$14,000.00	$14,000.00	$14,000.00
27.1	Electrical Work	1.00	Each	$5,000.00	$5,000...	$5,000.00	$3,500.00	$3,500.00	$3,500.00
	Summary								
	Minority Type								
	Quoted Total					$77,000.00	$25,264.55	$30,200.00	$71,000.00
	Comparable Total <					$77,000.00	$99,764.55	$72,964.55	$88,500.00
	Awarded Total					$20,000.00	$0.00	$0.00	$71,000.00
	Quoted Items Total					$77,000.00	$25,264.55	$30,200.00	$71,000.00
	Special Conditions					$0.00	$0.00	$0.00	$0.00
	Last Update							7/29/2009 2:21:...	11/13/2019 9:0...

You can award multiple Quote items by selecting all the items and then using the right click context menu to award.

8.4.10.3 Open Status

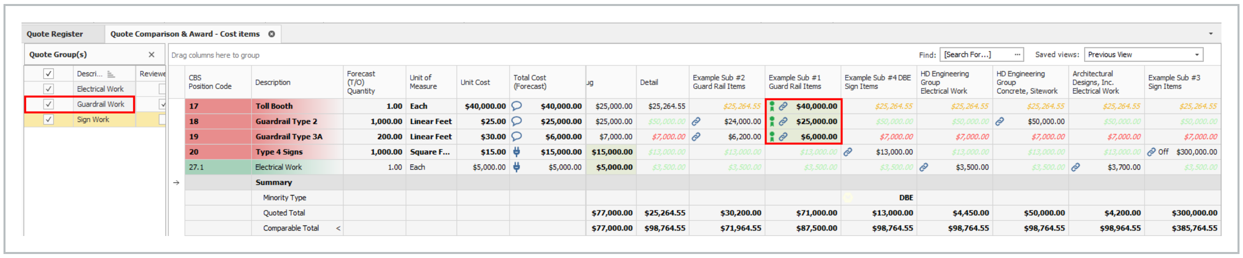
If a quote is yellow, this indicates that the quote record is open in another screen. Closing out of the quote record, will turn the record back to gray.

Drag columns here to group Find: [Searc

CBS Position Code	Description	Forecast (T/O) Quantity	Unit of Measure	Unit Cost	Total Cost (Forecast)	Plug	Detail	Example Sub #2 Guard Rail Items	Example Sub #1 Guard Rail Items	HD Engineering Group Concrete, Sitework
18	Guardrail Type 2	1,000.00	Linear Feet	$24.00	$24,000....	$25,000.00	$50,000.00	$24,000.00	$25,000.00	$50,000.00
19	Guardrail Type 3A	200.00	Linear Feet	$31.00	$6,200.00	$7,000.00	$7,000.00	$6,200.00	$6,000.00	$7,000.00
	Scope Items									
	Summary									
	Minority Type									
	Quoted Total					$32,000.00	$0.00	$30,200.00	$31,000.00	$50,000.00
	Comparable Total <					$32,000.00	$57,000.00	$30,200.00	$31,000.00	$57,000.00

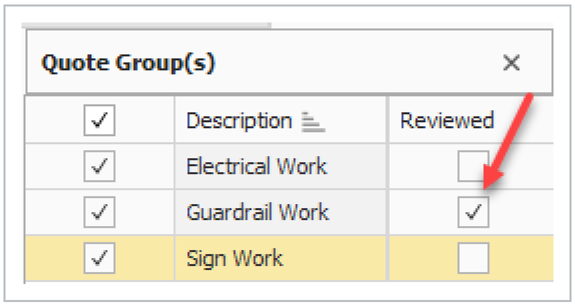
8.4.10.4 Award Status

The Award Status indicates whether or not all quotes are awarded within a quote group.

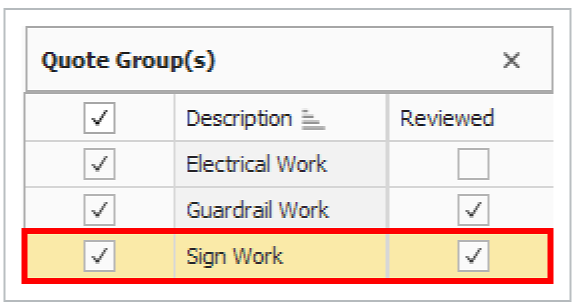


8.4.10.5 Review

You can keep track of what quote groups have been reviewed by checking the Reviewed check box.



This can be helpful when there are many quotes to track and several users managing them. If any changes are made to quotes within a quote group *after* the quote group is marked as Reviewed, the quote group will be highlighted in yellow to indicate something changed since the last review.



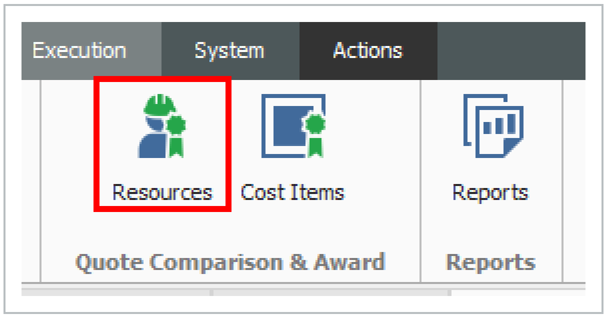
Once reviewed again after the changes, you can uncheck and check the Reviewed checkbox again to indicate it is up to date, and the yellow highlighting disappears.

The following steps walk you through comparing and awarding the Aggregate quotes.

Compare and award quotes

This exercise walks through a specific example using the Training Job.

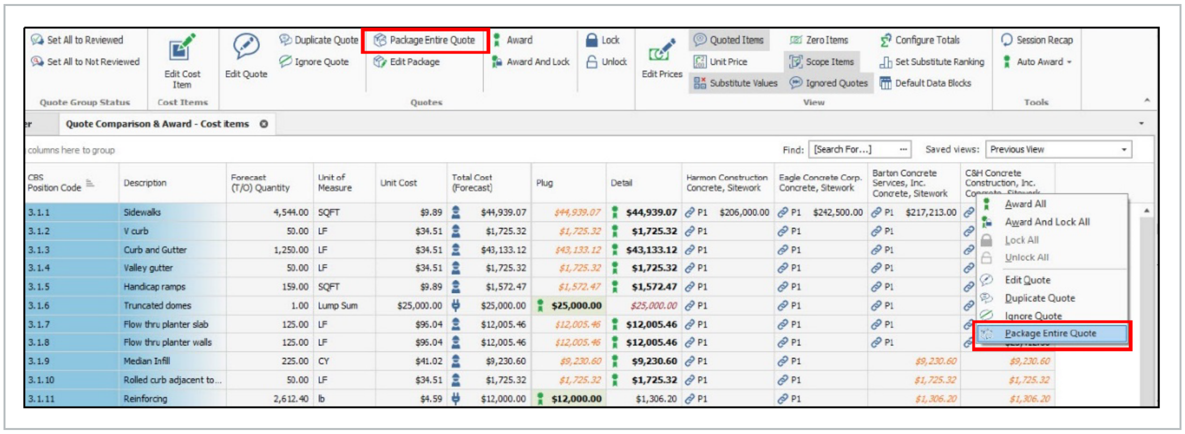
1. From the main Estimate landing page select **Quote>Quote Comparison & Award**.
2. Select **Resources** on the Quote Comparison & Award ribbon.



3. Under Quote Groups, select **Aggregates**.
4. Review the quotes to determine the lowest bidder:
   - MDIRTB is marked as Free for Example Vendor 4 and their quote is not splitable.
   - Vendor 2 Stan Mark did not give a quote for MDIRTB, so a substitute value is being used.
5. Vendor 2 has the lowest comparable amount for MBR Aggregate Base Rock and Vendor 1 has the lowest comparable amount for MDIRTB, so you decide to award each respectively. Award each of them by right-clicking on the value and selecting **Award.**
6. On the attention prompt click **Yes**.

8.4.11 Package Entire Quote

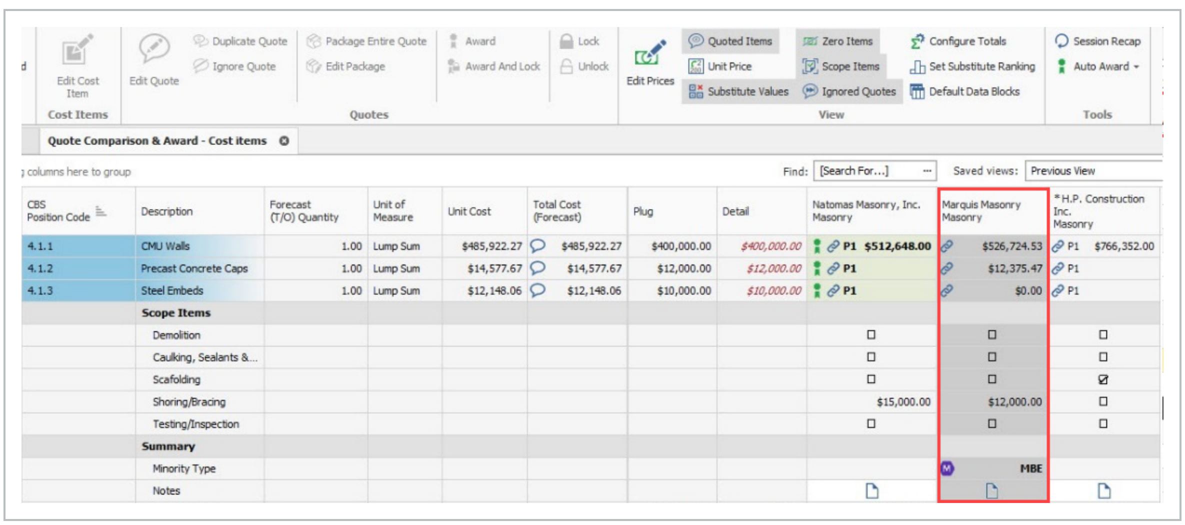
The Package Entire Quote function allows you to mark an entire quote as a package. This is beneficial if you are attempting to quickly update an existing detailed quote to a lump sum quote from the Quote Record or Quote Compare and Award form.



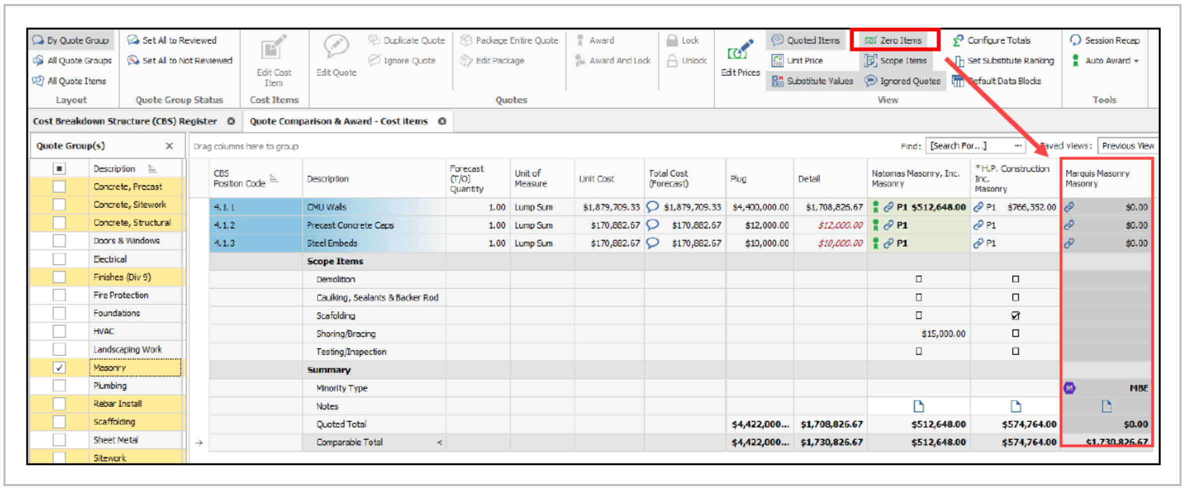
The Package Price can quickly be modified in the Quote Comparison & Award form by selecting the Edit Package action in the Actions tab or by using the right-click context menu.

8.4.12 Incomplete Quotes

The Incomplete quotes status indicates if a quote includes quote items that do not yet have a price. This is often the case when vendors respond to an RFQ expressing interest in bidding but do not provide their prices until right before the bid is due. These quotes display in gray in the Quote Compare and Award form.



Incomplete Quotes that are Scope Only can be viewed in the Quote Compare and Award form using the **Zero Items** toggle. These are quotes that have none of the Items priced. These quotes are displayed to the right of all the Comparable Quotes.



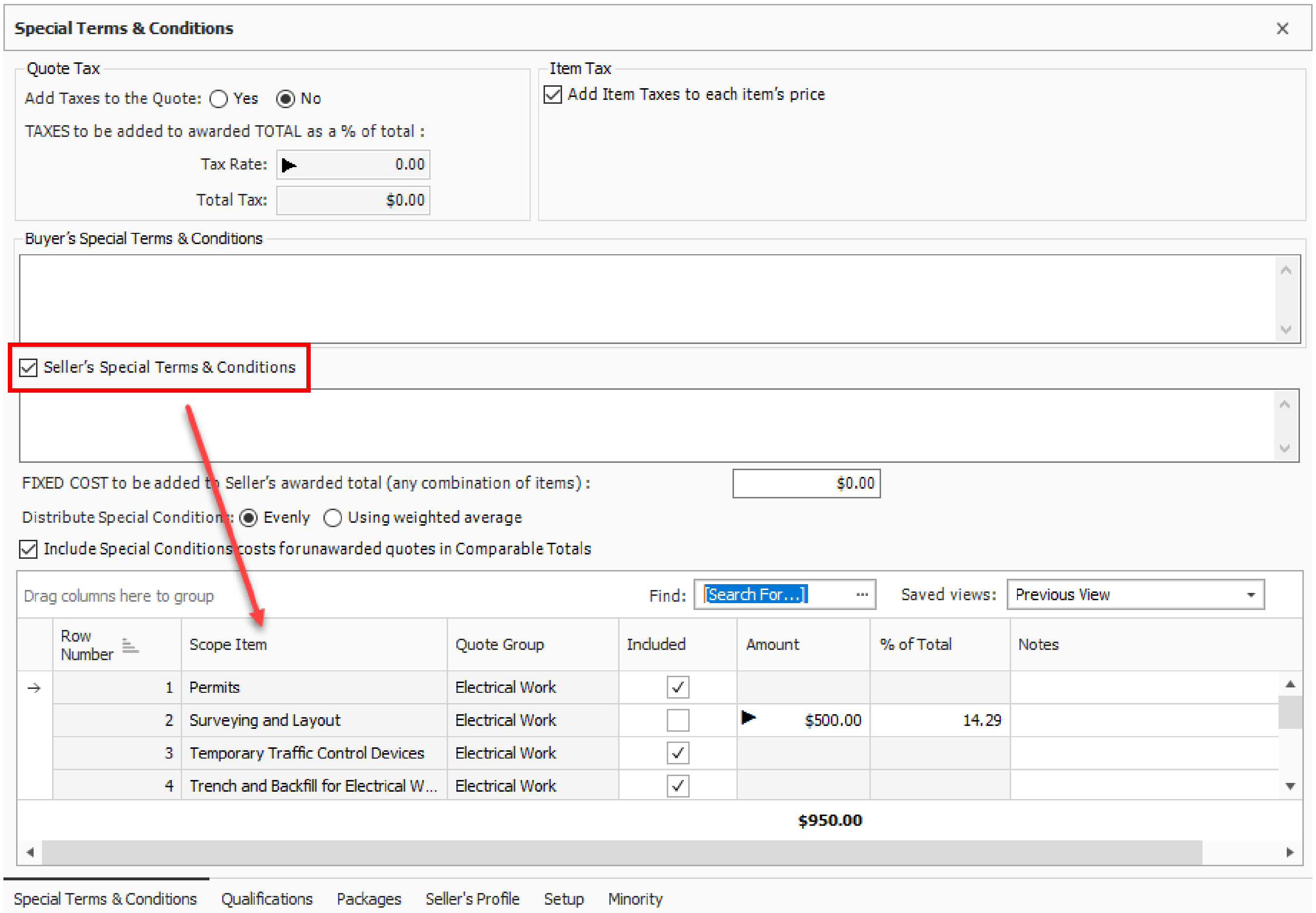
8.5 SCOPE ITEMS

During the bidding process, it’s common for subcontractors and suppliers to provide a quote(s) for work during the tail end of the bidding process. These last-minute offers make it extremely difficult for you to evaluate and compare the various quotes and your ability to award them. With **scope items**, you can create and evaluate checklists and quote group exclusions, and account for them within the Quote Comparison and Award form.

You can view scope items as a checklist of items that break down the quote’s scope of work into individual tasks to aid in the process of evaluating subcontractor and supplier quotes in greater detail. This can be used to ensure that certain items of work are included or excluded. If excluded, the scope items need to be properly accounted for by contractor awarding the quote.

Overview - Quote Record - Scope Items

Section	Description
Seller’s Special Terms & Conditions	By default, all scope items are considered included in the quote, and the Special Conditions amount is $0.00. On the quote record, by selecting the checkbox, you can indicate scope items and uncheck items that are not included. The amount associated with these items will then total up in the Special Conditions subtotal. The person responsible for awarding quotes needs to update the Inclusions field to correspond with what the subcontractor has agreed to include in the quote.

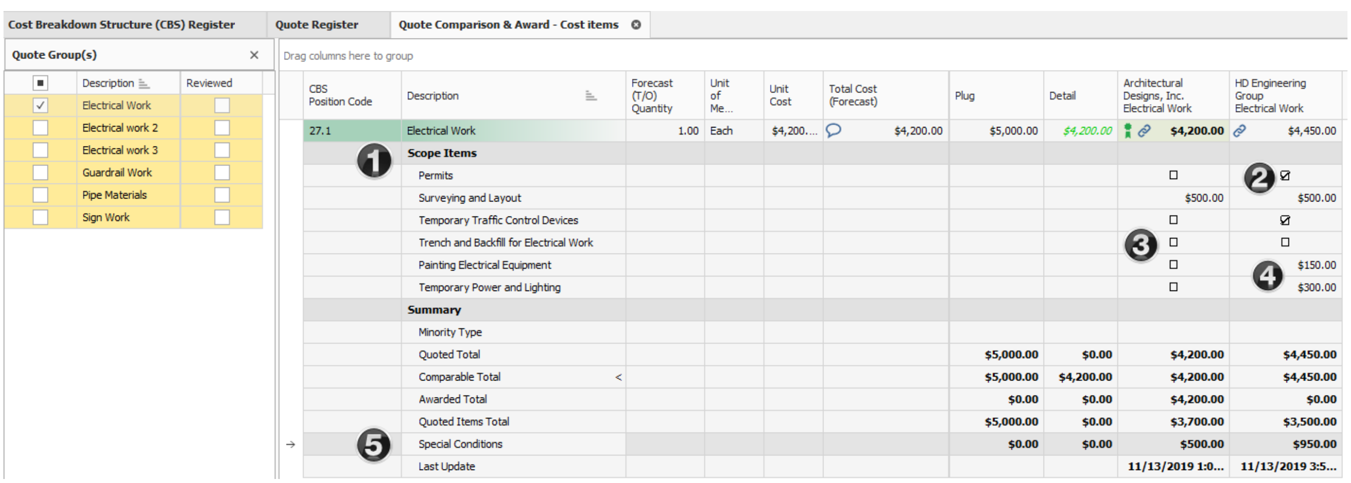


Overview - Quote Comparison and Award - Scope Items

Section		Description
1	Scope Items	Quote Comparison and Award checklist items for your quote that help with evaluating subcontractor and supplier quotes in greater detail. This is used to ensure certain items are either included (inclusion) or excluded (exclusion) in the quote and accounted for by the entity awarding the quote.
2	Scope Item Inclusions	Maintained in Quote Record form. These are the Seller's Special Terms & Conditions scope items that the subcontractor is including in their quote price. When the scope item contains a value, the subcontractor is agreeing to perform the work.
3	Scope Item Exclusions	Maintained in Quote record form. These are the Seller's Special Terms & Conditions scope items price. If the Inclusions checkbox is blank, the

Overview - Quote Comparison and Award - Scope Items (continued)

Section		Description
		subcontractor is NOT agreeing to perform the scope items.
4	Scope Item value	An entered value means that the subcontractor is excluding this scope of work. However, you may add an amount because this scope could incur a cost. Once the bid is awarded, you may find another subcontractor to perform the work. You are simply accounting for a cost for this scope of work. In the example below, HD Engineering is not going to paint the electrical equipment, but you know the cost is $150.00. You are showing this cost to account the cost for this scope of work that needs to happen.
5	Seller's Special Terms & Conditions	By default, all scope items are considered included in the quote, and the Special Conditions amount is $0.00. On the quote record, by selecting this checkbox, you can indicate scope items and uncheck items that are not included. The amount associated with these items will then total up in the Special Conditions subtotal. The person responsible for awarding quotes needs to update the Inclusions field to correspond with what the subcontractor has agreed to include in the quote.



The example below in the Quote Register form shows quotes from two subcontractors, both with different quote prices. It is important to understand all scope of work the subs are quoting. By just viewing these quotes alone, it's difficult to understand which quote will provide you with the best value. In other words, just because Example Sub #3 is the lowest priced quote, does not mean it is the best quote to go with.

Quote Register

Drag columns here to group

Description	RFQ Description	Quote Status	Seller	Company	Quote Total	Awarded Total	Currency	Awarded	Awarded Status
Electrical Work	Electrical Work	Accepted	Example Sub #5 MBE -- Chr...	Example Sub #5 MBE	$4,450.00	$0.00	U.S. Dollar	☐	None
Electrical Work	Electrical Work	Accepted	Example Sub #3 -- Frank M...	Example Sub #3	$4,200.00	$0.00	U.S. Dollar	☐	None

The example below in Quote Comparison and Award shows that HD Engineering Group is excluding 3 scope items in their quote that totals $950. This provides a more granular picture for what is being included within each subcontractor's scope of work. It also displays how much each scope of work costs, so you have the option to find another subcontractor to perform this scope work.

e Register | Quote Comparison & Award - Cost items

g columns here to group

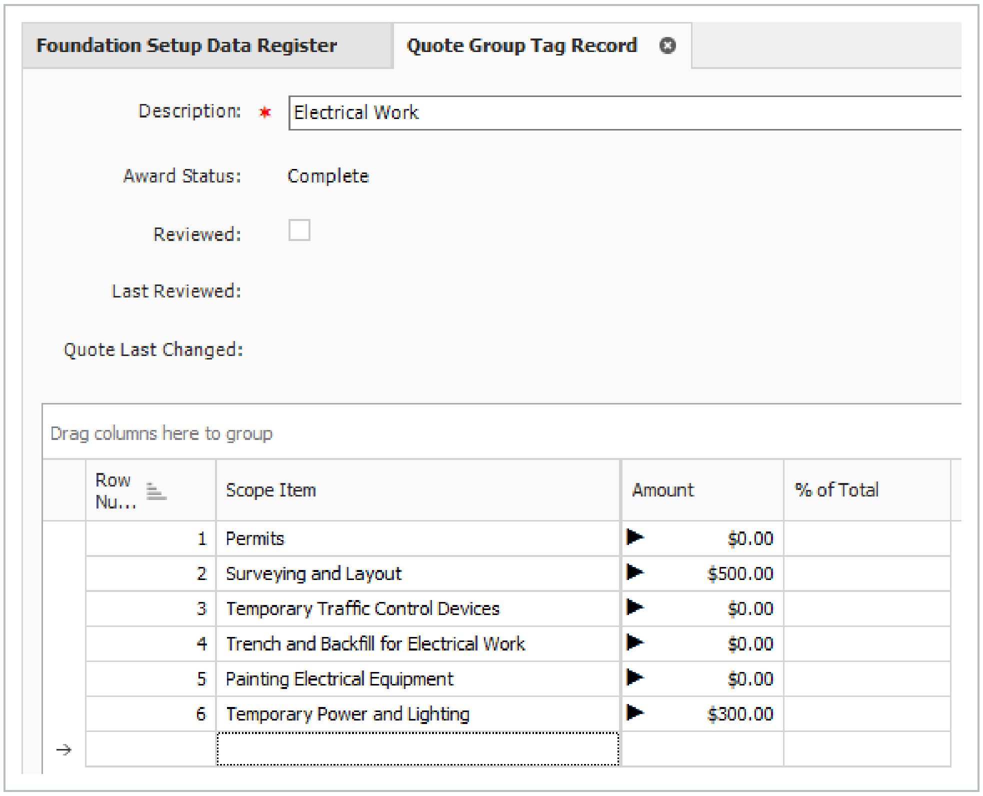
CBS Position Code	Description	Forecast (T/O) Quantity	Unit of Me...	Unit Cost	Total Cost (Forecast)	Plug	Detail	Architectural Designs, Inc. Electrical Work	HD Engineering Group Electrical Work
27.1	Electrical Work	1.00	Each	$4,200....	$4,200.00	$5,000.00	$4,200.00	**$4,200.00**	$4,450.00
	Scope Items								
	Permits							☐	☑
	Surveying and Layout							$500.00	$500.00
	Temporary Traffic Control Devices							☐	☑
	Trench and Backfill for Electrical Work							☐	☑
	Painting Electrical Equipment							☐	$150.00
	Temporary Power and Lighting							☐	$300.00
	Summary								
	Minority Type								
	Quoted Total					**$5,000.00**	**$0.00**	**$4,200.00**	**$4,450.00**
	Comparable Total					**$5,000.00**	**$4,200.00**	**$4,200.00**	**$4,450.00**
	Awarded Total					**$0.00**	**$0.00**	**$4,200.00**	**$0.00**
	Quoted Items Total					**$5,000.00**	**$0.00**	**$3,700.00**	**$3,500.00**
	Special Conditions					**$0.00**	**$0.00**	**$500.00**	**$950.00**
	Last Update							**11/13/2019 1:0...**	**11/13/2019 3:5...**

Utilizing Scope Items enables you to more effectively compare quotes from subcontractors and suppliers by providing a deeper comparison of quotes. Moreover, it provides clearer visibility of what a proposal may or may not be including at the time you are attempting to make an award.

You can make a more informed decision on whom to award the quote to, now that the vendor quotes and associated scope items are all visible on one screen.

8.5.1 Scope Item Setup

Scope items are stored within each quote group tag in the Foundation Setup Data form. On each Quote Group Tag Record, you can list out scope items that break down the work into smaller scopes of work, along with the estimated cost amount associated with each scope item.



Step by Step – Set up scope items

This exercise walks through a specific example using the Training Job.

1. Open your job.
2. Select the **Setup** tab.
3. Click on **Foundation Data Setup** in the Initialize section.
4. Select the **Quote group tags** tab to set up scope items within a quote group.
5. Create a new Quote Group Tag called **Electrical Work** and click **Ok**.
6. Open **Electrical Work** and add the following scope items:

- Permits
- Surveying and Layout
- Temporary Traffic Control Devices
- Trench and Backfill for Electrical Work

- Painting Electrical Equipment
- Temporary Power and Lighting

7. Enter **500** in the Amount field for Survey and Layout, and a **300** for Temporary Power and Lighting.
8. Click **Ok**.

Row Number	Scope Item	Amount	% of Total
1	Permits	$0.00	
2	Surveying and Layout	$500.00	
3	Temporary Traffic Control Devices	$0.00	
4	Trench and Backfill for Electrical Work	$0.00	
5	Painting Electrical Equipment	$0.00	
6	Temporary Power and Lighting	$300.00	

Step by Step – Set up quotes for scope items

This exercise walks through a specific example using the Training Job.

1. From the **Estimate** tab, click on **Cost Breakdown Structure (CBS)**.
2. Change your saved views to **Quote Group Setup view**.
3. Create a cost item **Entry Gate** with a subordinate **Electrical Work**.
4. Assign the **Electrical Work** quote group to the Electrical work cost item.
5. From the Quote tab, click **Request for Quote** (RFQ) to open the RFQ register.
6. Create an RFQ by selecting the **New** icon on the Actions tab.
7. Select **Create RFQ from Quote Group Tag(s)** and select **Electrical Work**.
8. Click **Ok**.
9. Click on the **Seller Companies** tab and select the following company names:

- Architectural Designs
- HD Engineering Group

10. Highlight both companies and select **Publish**.
11. Assuming you've already received quotes back from both companies, create a quote from this RFQ for both companies by selecting the companies and selecting **Create Quote**.
12. Click **Ok** to close the RFQ record.

Description	RFQ Description	Quote Status	Seller
[Enter Description]		Invalid	<Ad-Hoc Address>
[Enter Description]		Invalid	<Ad-Hoc Address>
Aggregates	Aggregates	Received	Example Vendor 1 -- P
Aggregates	Aggregates	Received	Example Vendor 4 DBE
Aggregates	Aggregates	Received	Example Vendor 2 -- S
Asphalt Materials		Received	Example Vendor 1 -- P
Asphalt Materials		Received	Example Vendor 2 -- S
Concrete, Sitework		Ignored	HD Engineering Group
Electrical Work	Electrical Work	Received	Architectural Designs
Electrical Work	Electrical Work	Received	HD Engineering Group

8.5.2 Scope Item Creation and Award

The following Step by Step assumes you are putting out an advertisement for bids for some electrical work on a project. You will add scope items with some fixed costs as a special condition, then will compare quotes in order to decide which vendor quote is the best deal.

Step by Step – Manage and award scope items

This exercise walks through a specific example using the Training Job.

1. Click the **Quote** tab and then click the **Quotes** icon to open the Quote register.
2. Open the Quote Record for HD Engineering Group and enter a Unit Price of **3,500** which is based on the quote you received.
3. Select the **Special Terms & Conditions** tab and select the **Seller's Special Terms & Conditions** radio button.
4. Assuming the HD Engineering is excluding certain scope items from this quote, click on the **Included** checkbox to exclude (uncheck) the following scope items:
   - Surveying and Layout
   - Painting Electrical Equipment
   - Temporary Power and Lighting
5. Type **150** in the Amount field for Electrical Equipment.
   - Notice how the 3 scope items you just excluded are now added to the Special Conditions total for the quote.
6. Click **Next** to move to the other Quote record for Architectural Designs.
7. Enter a Unit Price of **3,700**.
8. Press **Tab** to move to the **Special Terms & Conditions** tab and select the **Seller's Special Terms & Conditions** (at right) radio button.
9. Uncheck the inclusions checkbox for **Surveying and Layout**.
10. Add the amount **500**.
11. Click **Ok**.
12. Select the **Quote** tab.
13. Open the **Quote Comparison and Award** form, and select the **Cost Items** tab.
14. Under Quote Groups, select **Electrical work**.
15. Right-click on the quoted amount for Architectural Design and select **Award** to award the work to them.
16. Click **Yes** on the resulting prompt to mark the quote group as reviewed.

8.6 QUOTE ITEM ADJUSTMENT

Quote items can be adjusted even after a quote has been awarded. This could happen on closing day when a vendor sends in a last minute discount. For example, vendor 3 has sent in a 10% discount on piping materials. This percentage discount is applied to the vendor 3 quote by entering the 10% in the Condition Adjustment column.

Step by Step – Quote item adjustment

From the Ribbon, select the **Quote** tab.

1. Under the Quote Comparison and Award section, select **Resources**.
2. Locate a **Vendor** column.
3. Select the quote you want to edit under the vendor column. In the Ribbon, select the **Actions** tab.
4. Under the Quotes section, select **Edit Quote**. You can also right-click and select **Edit Quote**. This launches the Quote Record.
5. You can make Condition Adjustments by a percentage or an amount. Select the field to adjust the percentage or amount of the **Condition Adjustments**.
6. Items adjustments can be applied individually or by using the multi-edit function. Select multiple resources in the Quote Record, then right-click and select **Open**. This opens the Quote Resource Item Record.
7. If you populate a 10% discount adjustment to all of the items selected using the multi-edit tool, the amount value changes to “Varies”. This is because of the variance in the unit rates for each selected item.
8. Click **Ok** to save the changes to the line items in the Quote record and to save the Quote.

Lesson 8 Review

1. When you receive responses to your RFQ, the next step is to enter their pricing in the ___________________.
   a. CBS Register
   b. PBS
   c. Quote Register
   d. RFQ Register

2. On a Quote Record, No Split means
   a. The quote must be combined with other quotes from the same vendor
   b. All items on the quote must be purchased from that seller
   c. You can’t split the quote into multiple quotes

3. When a quote group is highlighted in yellow on the Quote Comparison & Award form, it signifies that
   a. The quote group has changed since it was last marked as Reviewed
   b. No quotes have been awarded for that quote group
   c. There are some quotes in the quote group that contain substitute values

Lesson 8 Summary

As a result of this lesson, you can:

- Create and publish RFQs
- Define quote pricing
- Compare and award quotes
- Create and analyze scope items

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LESSON 9 – FINALIZE THE ESTIMATE

This lesson is primarily suited towards contractors who must add profit or markup to their total estimated cost, which will be submitted in the form of a bid or proposal. Most owners can divert from this lesson as it's more geared towards adding profit and markup. There are a few use cases in which an owner may wish to use the price breakdown structure. For example: to add risk, contingency, or reserves if it is preferred, these are not shown directly in the budget line items. The price breakdown structure also provides a summary level review of the total estimate and is a great reference during estimate reviews.

Lesson Duration: 45 Minutes

Lesson Objectives

After completing this lesson, you will be able to:

- Add job markup (profit)
- Use tools on the PBS form to review your estimate
- Spread Target Price over pay items
- Make bid adjustments

Lesson Topics

9.1 JOB MARKUP (PROFIT)

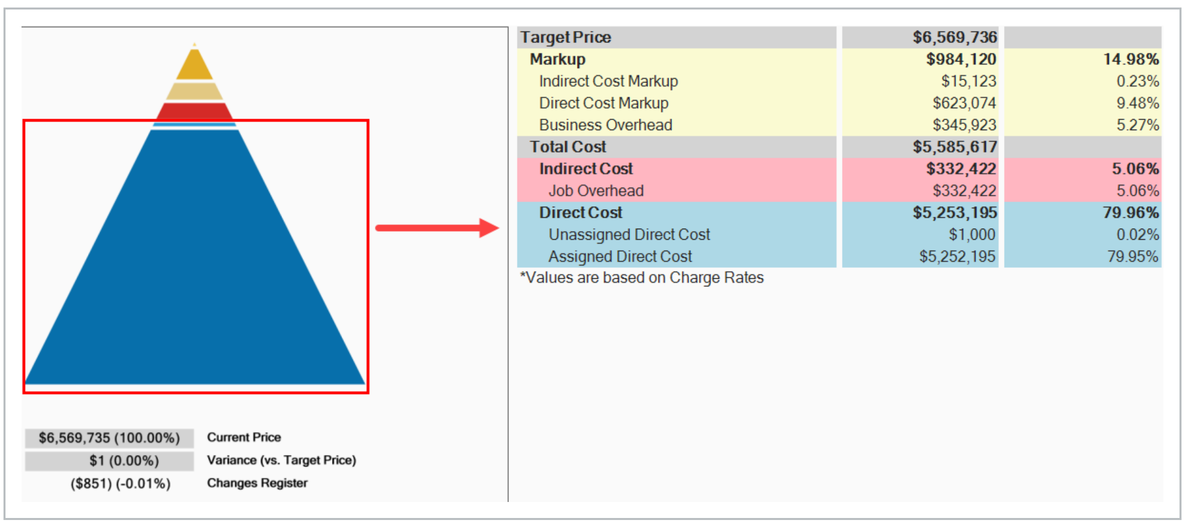
On the Data Map Data Map notice how the different segments within the pyramid coincide with the percentage amounts that make up Direct Costs, Indirect Costs and Target Profit. Illustrations below show how the Data Map values correspond to the values that make up the cost and profit.

To open the Data Map, select the Price tab, then Data Map from the Overhead and Profit section.

9.1.1 Target Price

For contractors building the price of your project is like building a pyramid. The foundation of your price consists of the direct costs of the job.

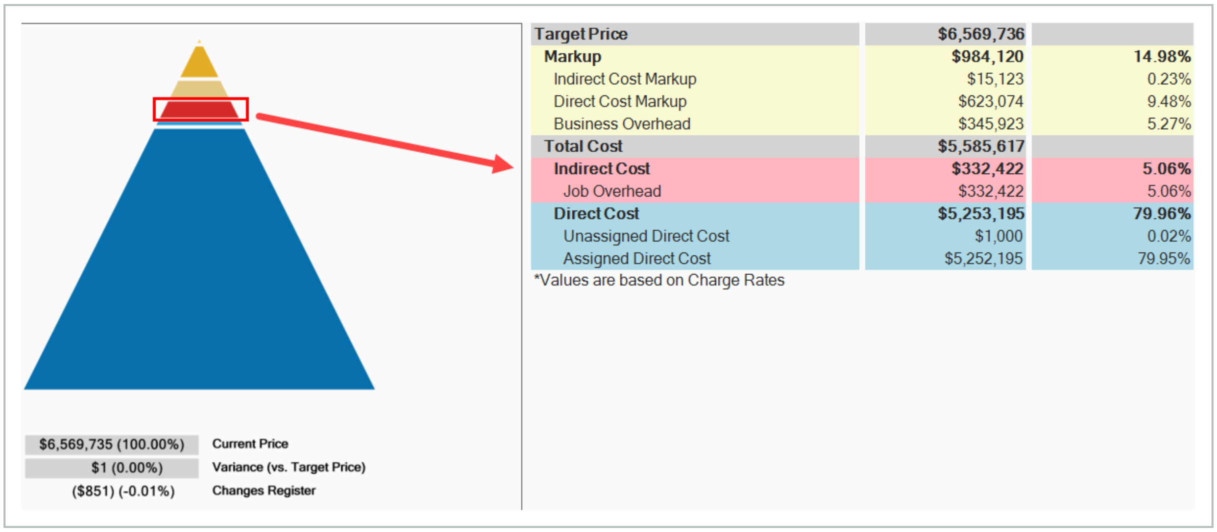
The images below represent a default examples.



Target Price	$6,569,736	
Markup	$984,120	14.98%
Indirect Cost Markup	$15,123	0.23%
Direct Cost Markup	$623,074	9.48%
Business Overhead	$345,923	5.27%
Total Cost	$5,585,617	
Indirect Cost	$332,422	5.06%
Job Overhead	$332,422	5.06%
Direct Cost	$5,253,195	79.96%
Unassigned Direct Cost	$1,000	0.02%
Assigned Direct Cost	$5,252,195	79.95%

*Values are based on Charge Rates

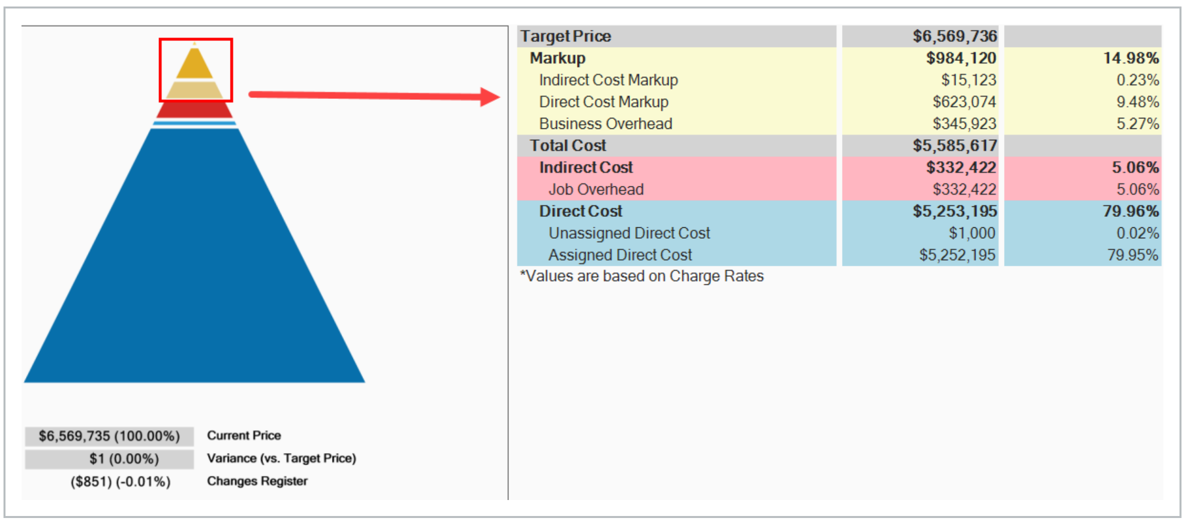
On top of your direct costs, you can decide if costs with a cost segment of business overhead should be indirect costs or markup. You estimate your direct and indirect costs in the CBS Register.



Target Price	**$6,569,736**	
Markup	**$984,120**	**14.98%**
Indirect Cost Markup	$15,123	0.23%
Direct Cost Markup	$623,074	9.48%
Business Overhead	$345,923	5.27%
Total Cost	**$5,585,617**	
Indirect Cost	**$332,422**	**5.06%**
Job Overhead	$332,422	5.06%
Direct Cost	**$5,253,195**	**79.96%**
Unassigned Direct Cost	$1,000	0.02%
Assigned Direct Cost	$5,252,195	79.95%

*Values are based on Charge Rates

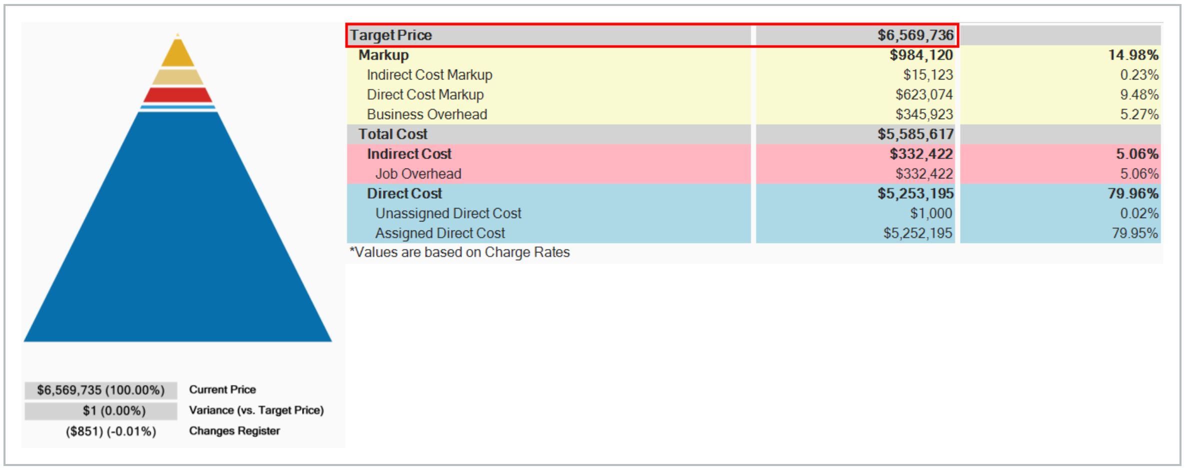
At the top of the pyramid you add an amount for profit. You add profit in the Price Breakdown Structure (PBS) form. There is a very small block at the top of the Data Map, which comprises 0.22% of Indirect Cost Markup.



Target Price	**$6,569,736**	
Markup	**$984,120**	**14.98%**
Indirect Cost Markup	$15,123	0.23%
Direct Cost Markup	$623,074	9.48%
Business Overhead	$345,923	5.27%
Total Cost	**$5,585,617**	
Indirect Cost	**$332,422**	**5.06%**
Job Overhead	$332,422	5.06%
Direct Cost	**$5,253,195**	**79.96%**
Unassigned Direct Cost	$1,000	0.02%
Assigned Direct Cost	$5,252,195	79.95%

*Values are based on Charge Rates

The total of the direct cost, indirect cost, and profit in the project is referred to in InEight Estimate as the Target Price. This is the final price that you want to submit as your proposal.



9.1.2 Price Breakdown Structure

As you already practiced, your direct and indirect costs are estimated in the CBS. Your project's profit needs to be defined in the Price Breakdown Structure (PBS) form.

The main purpose of the Price Breakdown Structure (PBS) is to add markup (profit) to the estimate. The Price Breakdown Structure is a visual run-down of the costs and profit that make up your Target Price. It helps you analyze how your costs contribute to the price you are targeting, including the amount of profit you would like to include.

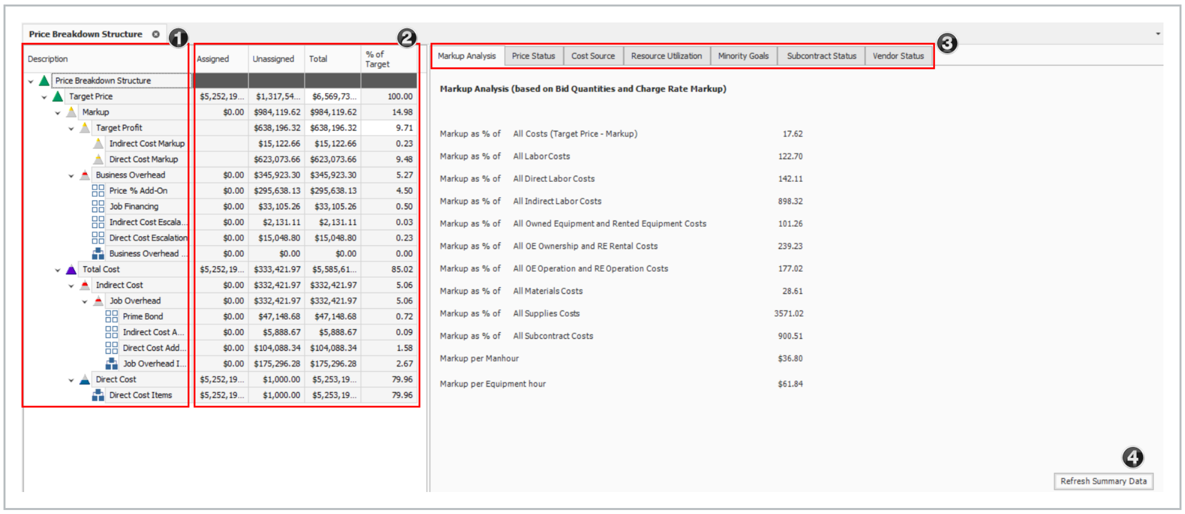
You can open the PBS from the InEight Estimate landing page by selecting the **Price** tab, then **Price Breakdown Structure (PBS)** from the Overhead and Profit section.

Overview - Price Breakdown Structure

	Name	Definition
1	PBS Description	The left side of the screen displays several cost classifications: • Target Profit • Business Overhead • Job Overhead • Direct Cost
2	Various Columns	The Assigned and Unassigned columns show which costs are either assigned or not assigned to pay items. Unassigned costs are spread back to pay items based on the distribution logic set in Job Properties > Pricing. The Total columns represents a summation of both columns.

Overview - Price Breakdown Structure (continued)

Name		Definition
		Each layer displays with an amount, and the percentage of the Target Price that this amount represents.
3	PBS Menu	The right side of the screen holds several tabbed pages of information. This information is useful in analyzing the job at a summary level.
4	Refresh Data	To ensure that you are always reviewing the most up-to-date factors and ratios, click the Refresh Summary Data button whenever you are reviewing the data.



All costs in the Price Breakdown Structure are based on pay quantities (not forecast take-off quantities).

9.1.3 Markup vs. Margin

Let's look at the difference between Markup and Margin.

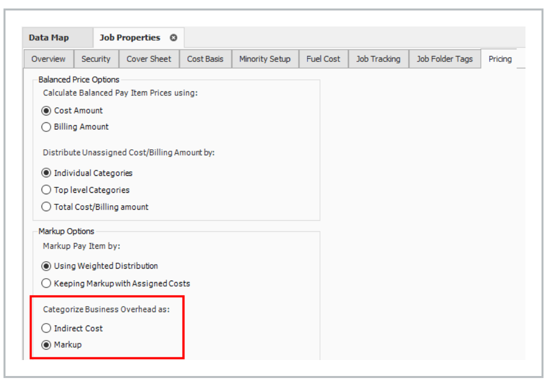
- Markup is a function of cost, while margin is a function of price
- Markup indicates how much you are marking up the cost
- Margin indicates what percentage of your price the markup represents

The percentages on the main PBS screen are margin, so you can see what percentage each category in the PBS represents compared to the total price. If you enter 10% in the Target Profit field, your profit will be 10% margin of your total price.

Description	Assigned	Unassigned	Total	% of Target
Price Breakdown Structure				
Target Price	$5,252,19...	$1,317,54...	$6,569,73...	100.00
Markup	$0.00	$984,119.62	$984,119.62	14.98
Target Profit		$638,196.32	$638,196.32	9.71
Business Overhead	$0.00	$345,923.30	$345,923.30	5.27
Total Cost	$5,252,19...	$333,421.97	$5,585,61...	85.02

When you open the Direct or Indirect Markup Records, the Rate percentage there indicates markup of the cost. If you enter 10% markup on $100, the markup will be $10.

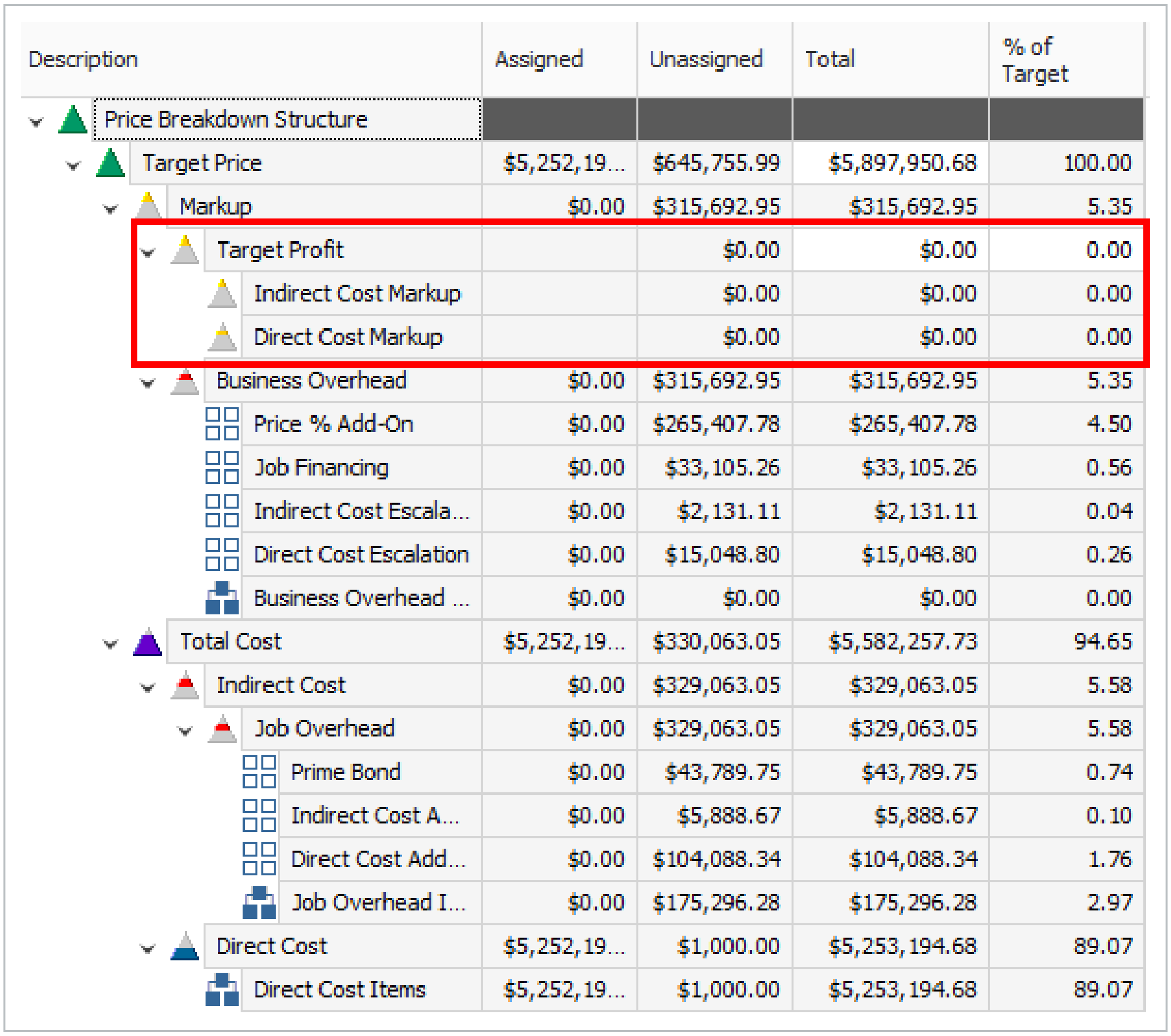
Within Job Properties, you can choose if costs with a cost segment of business overhead should be indirect costs or markup. If selecting markup, then Business Overhead will be spread within the Markup category of the Price Breakdown Structure. The Total Markup will be the sum of Target Profit and all Items categorized as Business Overhead.



This lets you see the true total cost of the job, including the total markup inclusive of the business overhead. You can also create cost items and categorize them as business overhead, then possibly include overhead costs such as estimating or home office expenses. This provides you with added flexibility in marking up your job.

9.1.4 Define Profit

Before you define profit, review the PBS. You estimated your direct cost items, and you also estimated some indirect cost items in the CBS. You can view your direct and indirect cost totals on the Price Breakdown Structure. Notice you have not defined profit yet.



Description	Assigned	Unassigned	Total	% of Target
Price Breakdown Structure				
Target Price	$5,252,19...	$645,755.99	$5,897,950.68	100.00
Markup	$0.00	$315,692.95	$315,692.95	5.35
Target Profit		$0.00	$0.00	0.00
Indirect Cost Markup		$0.00	$0.00	0.00
Direct Cost Markup		$0.00	$0.00	0.00
Business Overhead	$0.00	$315,692.95	$315,692.95	5.35
Price % Add-On	$0.00	$265,407.78	$265,407.78	4.50
Job Financing	$0.00	$33,105.26	$33,105.26	0.56
Indirect Cost Escala...	$0.00	$2,131.11	$2,131.11	0.04
Direct Cost Escalation	$0.00	$15,048.80	$15,048.80	0.26
Business Overhead ...	$0.00	$0.00	$0.00	0.00
Total Cost	$5,252,19...	$330,063.05	$5,582,257.73	94.65
Indirect Cost	$0.00	$329,063.05	$329,063.05	5.58
Job Overhead	$0.00	$329,063.05	$329,063.05	5.58
Prime Bond	$0.00	$43,789.75	$43,789.75	0.74
Indirect Cost A...	$0.00	$5,888.67	$5,888.67	0.10
Direct Cost Add...	$0.00	$104,088.34	$104,088.34	1.76
Job Overhead I...	$0.00	$175,296.28	$175,296.28	2.97
Direct Cost	$5,252,19...	$1,000.00	$5,253,194.68	89.07
Direct Cost Items	$5,252,19...	$1,000.00	$5,253,194.68	89.07

You can define profit by entering a profit percentage directly on the PBS, or by modifying the Direct or Indirect Cost Markup Records.

The following steps walk you through plugging a Target Profit percentage directly on the PBS form.

9.1.4.1 Profit as a Percentage of Target Price

Step by Step – Add profit as a percentage of target price

1. Open your job.
2. Select the **Price** tab.

3. Select **Price Breakdown Structure** (PBS) from the Overhead and Profit section.
4. On the Target Profit row, enter a **numeric value** in the % of Target Price column; press **Tab**.

- For this example, we’ll add 10% for the Target Profit.

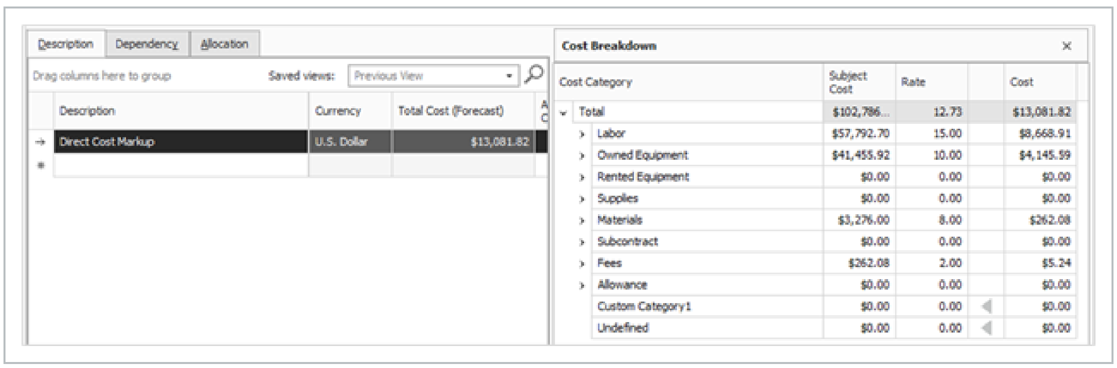
9.1.4.2 Profit Through Direct Cost Markup Record

The following steps walk you through how to add profit as markup on the Direct Cost Markup record.

Step by Step – Modify the direct cost markup record

1. On the **PBS** form, double-click on the **Direct Cost Markup** row.
2. In the record, overwrite the Default entry with **Direct Cost Markup** in the description field.
3. In the Rate column on the Dependency Cost Breakdown, add a **numeric value** in Labor, Owned Equipment, Materials and Fees categories. Then reset other categories back to **0**.
4. Click **Ok** to save your changes and return to the PBS.
5. Click the **Refresh Summary Data** button to see the changes reflected.

- For this example, we’ll add a rate of 15 for Labor, 10 for Owned Equipment, 8 for Materials, and 2 for Fees, then zero out all other categories.

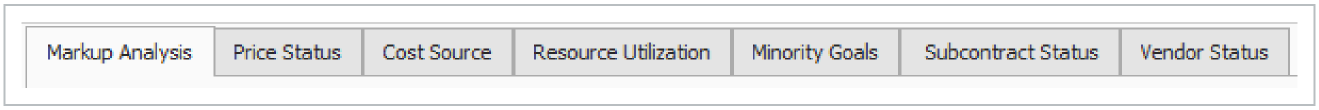


9.2 COST ESTIMATE AUDIT/REVIEW

InEight Estimate offers built-in reports to double check your estimate and review different aspects of your project, including material costs, quotes, man-hours and production.

9.2.1 Price Breakdown Structure Tabs

The purpose of the tabs on the Price Breakdown Structure is to assist with estimate reviews.



9.2.1.1 Markup Analysis

On this tab, you can compare your profit to your costs for labor, subcontract and other cost groupings. By seeing the ratios of your markup compared to your different cost categories, you can gauge if you have the right balance of costs in your estimate.

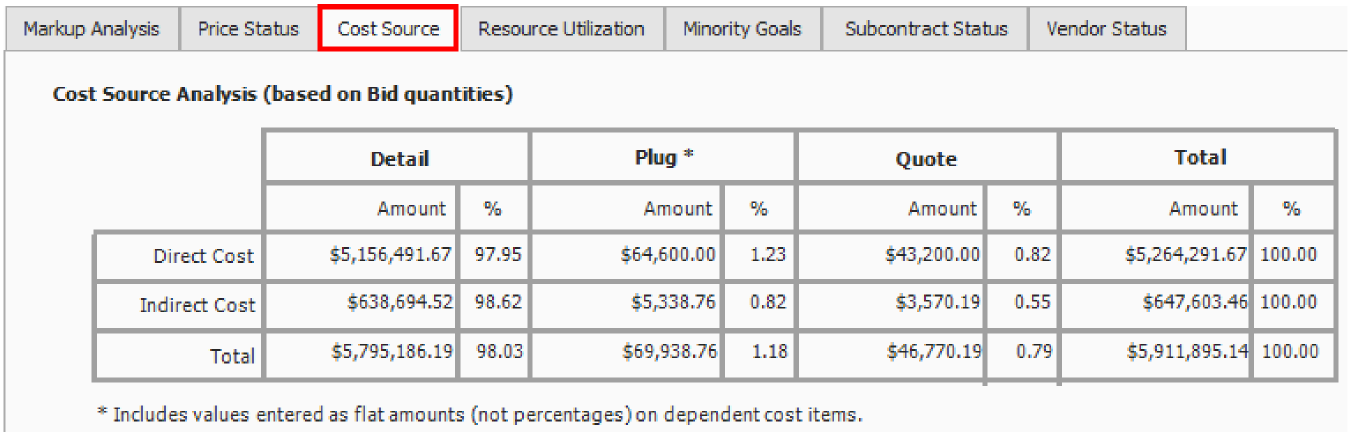
Markup Analysis (based on Bid quantities)

Markup as % of	All Costs (Target Price - Target Profit)	11.11
Markup as % of	All Labor Costs	79.42
Markup as % of	All Direct Labor Costs	94.07
Markup as % of	All Indirect Labor Costs	510.05

For example, if your markup is more than 100% of your Labor cost, it may indicate that you don't have enough labor cost in your estimate to cover the work, which could indicate labor cost overruns during execution that would eat into your profit margin.

9.2.1.2 Cost Source

The Cost Source tab shows the breakdown of Detail, Plug and Quote cost sources, as well as the amounts and percentages of each that are attributable to Direct and Indirect cost. Your Plug cost source should be the lowest percentage.



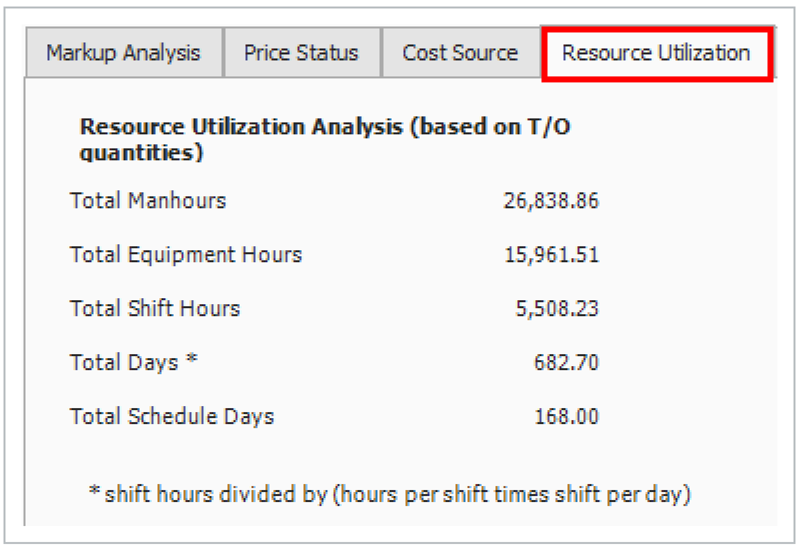
Cost Source Analysis (based on Bid quantities)

	Detail		Plug *		Quote		Total	
	Amount	%	Amount	%	Amount	%	Amount	%
Direct Cost	$5,156,491.67	97.95	$64,600.00	1.23	$43,200.00	0.82	$5,264,291.67	100.00
Indirect Cost	$638,694.52	98.62	$5,338.76	0.82	$3,570.19	0.55	$647,603.46	100.00
Total	$5,795,186.19	98.03	$69,938.76	1.18	$46,770.19	0.79	$5,911,895.14	100.00

* Includes values entered as flat amounts (not percentages) on dependent cost items.

9.2.1.3 Resource Utilization

The Resource Utilization tab shows a breakdown of the man-hours and equipment hours utilized on the job, based on take-off quantities.



Resource Utilization Analysis (based on T/O quantities)

Total Manhours	26,838.86
Total Equipment Hours	15,961.51
Total Shift Hours	5,508.23
Total Days *	682.70
Total Schedule Days	168.00

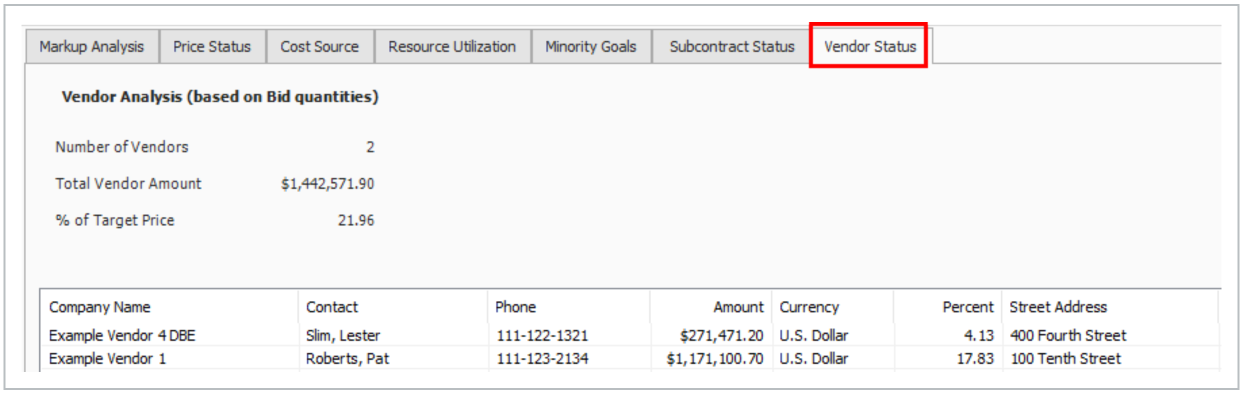
* shift hours divided by (hours per shift times shift per day)

9.2.1.4 Subcontract Status

The Subcontract Status tab displays a breakdown of subcontractor amounts, costs, and percentages for quoted cost items. This is a good place to review how much of your estimate is subcontracted.

9.2.1.5 Vendor Status

The Vendor Status tab displays a breakdown of vendor information, including amounts and percentages of the Target Price represented by vendors. This is a good place to review how much of your estimate costs come from vendor quotes.



Markup Analysis | Price Status | Cost Source | Resource Utilization | Minority Goals | Subcontract Status | Vendor Status

Vendor Analysis (based on Bid quantities)

Number of Vendors	2
Total Vendor Amount	$1,442,571.90
% of Target Price	21.96

Company Name	Contact	Phone	Amount	Currency	Percent	Street Address
Example Vendor 4 DBE	Slim, Lester	111-122-1321	$271,471.20	U.S. Dollar	4.13	400 Fourth Street
Example Vendor 1	Roberts, Pat	111-123-2134	$1,171,100.70	U.S. Dollar	17.83	100 Tenth Street

9.3 SPREAD TARGET PRICE OVER PAY ITEMS

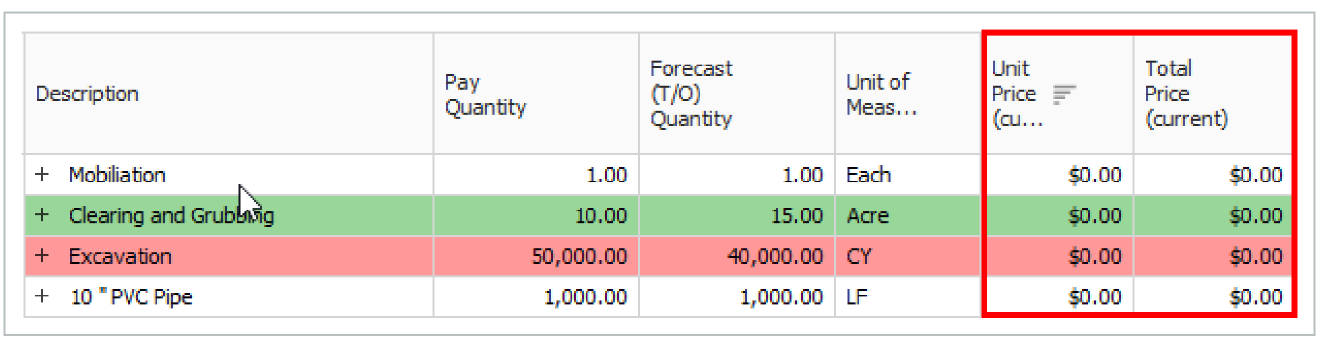
In the Cost Breakdown Structure you generated your direct and indirect costs, and in the Price Breakdown Structure you added profit to come up with a Target Price for the bid, but you still haven't decided how to spread the Target Price over your pay items.

In Lesson 4 you created pay items for the project in the Pay Item & Proposal Register. You can now go back to the Pay Item & Proposal Register to distribute your Target Price over those pay items.

9.3.1 Current Price vs. Target Price

In InEight Estimate, Current Price means the total price that is currently assigned on your pay items. Open the Pay Item & Proposal Register to see what the Current Price is for your pay items (Price > Pay Item & Proposal).

At this point there is no pricing on your pay items, so your Current Price is $0.00. This is because you have not yet spread your Target Price (the total of your cost and profit) over your pay items.



Description	Pay Quantity	Forecast (T/O) Quantity	Unit of Meas...	Unit Price (cu...	Total Price (current)
+ Mobilization	1.00	1.00	Each	$0.00	$0.00
+ Clearing and Grubbing	10.00	15.00	Acre	$0.00	$0.00
+ Excavation	50,000.00	40,000.00	CY	$0.00	$0.00
+ 10 " PVC Pipe	1,000.00	1,000.00	LF	$0.00	$0.00

9.3.2 Proposal Recap

On the Pay Item & Proposal Register, there is a Proposal Recap table where you can compare your Current Price to your Target Price to see if there is any variance.

Proposal Recap - Training Job

	Current	Target	Forecast	Variance	
Price:	**$6,455,450.00**	$6,506,904.35	$6,462,850.00	$51,454.35	**ADD**
Profit:	$599,221.88	$650,676.22	$655,858.61	$5,182.39	**CUT**
Margin%:	9.28	10.00	10.15	$10,653.01	**CUT**

Ideally, you want to add pricing to your pay items until your Current Price equals your Target Price, so that your Variance equals zero. That way you know you are covering all your costs and getting the profit you want.

Notice the Variance column will indicate if you need to ADD or CUT pricing on your pay items to hit your Target Price.

9.3.3 Spread the Target Price

For lump sum contracts, spreading the Target Price may be as simple as spreading it to a single pay item that represents the entire project. However, most jobs will have at least a few pay items defined by the owner, and Unit Price contracts will have many pay items.

There are two main ways to distribute pricing onto your pay items:

1. Define pay item prices manually, by entering a unit or total price, or a margin percentage.
2. Use InEight Estimate’s AutoPrice feature to distribute pricing automatically.

9.3.4 Define Pricing for Pay Items Manually

First, you will walk through the process of defining pricing manually. This method requires filling in each item’s price based solely on your own judgment.

Define pricing manually

1. From the Estimate landing page, select the **Price** tab.
2. Select **Pay Item & Proposal** from the Pay Items section.
3. Select a **Pay Item** row.
4. In either the Unit Price (current), Total Price (current), or % Margin field of a pay item, type a **numeric value**.

   For this example, we'll do the following:

   - Mobilization pay item – change Total Price (current) to $20,000.
   - Clearing & Grubbing pay item – change % Margin to 5%.

Position Code	Pay Item Number	Description	Pay Quantity	Forecast (T/O) Quantity	Unit of Measure	Unit Price (current)	Total Price (current)	% Margin
1	200	SITEWORK & ROADWAY					$51,369.60	
1.1	641 0100	Mobilization	1.00	1.00	LS	$20,000.00	$20,000.00	-34.67
1.2	201 0102	Clearing & Grubbing	10.00	15.00	Acre	$3,136.96	$31,369.60	5.00

9.3.5 Use AutoPrice to Balance and Hit the Target Total

Perhaps you want to get a head start and have InEight Estimate spread your Target Price proportionately over your pay items for you. This can be done using the InEight Estimate AutoPrice feature.

> Once distributed, you will still have the ability to adjust your pricing on pay items manually as needed.

Look at how you can use the AutoPrice feature.

Use AutoPrice to balance and hit the target total

1. Open the your job in Estimate.
2. From the Estimate landing page, select the **Price** tab.
3. Click on **Pay Item & Proposal** to open the Pay Item & Proposal Register.

4. On the Pay Item & Proposal Register menu, choose **Actions > Balanced Bid > Hit Target Total.**
5. Review the Proposal Recap and see that the Variance is now $0.00. Now that the job is balanced, you can see that the Current Price and the Target Price are the same, indicating that the costs and profit are spread proportionately over your pay items.

9.3.6 Use AutoPrice to Unbalance and Hit the Target Total

The Autoprice to Unbalance feature in InEight Estimate can automatically distribute profit to account for your over- and underrun items.

InEight Estimate will take profit from your underrun and put it on your overrun by using the Actions > Unbalanced > Hit Target Total feature. The purpose is to maximize your profit by spreading it strategically between these items.

Unbalance bid

1. You may encounter overrun and/or underrun items in the Pay Item & Proposal Register of your job.

Description	Pay Quantity	Forecast (T/O) Quantity	Unit of Meas...	Curre...
Excavation	10.00	15.00	Cubic Yard	U.S. Dollar
Clearing & Grubbing	50,000.00	40,000.00	Acre	U.S. Dollar

2. If you do, highlight the row for each item to view it's current balanced item recap.

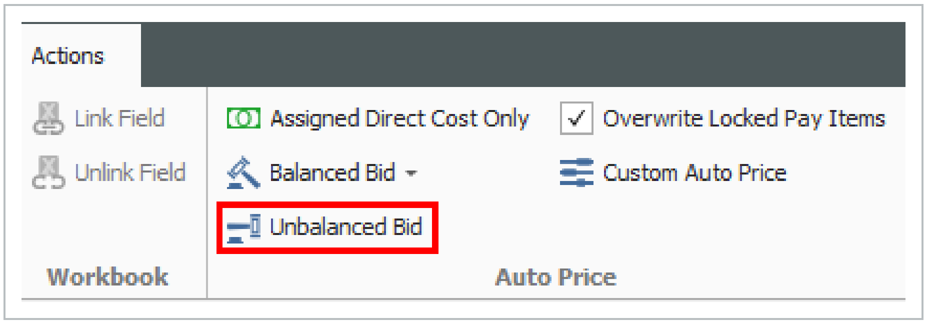
Item Recap - 2000 Clearing && Grubbing

	Balanced Unit	Current Unit
Price:	$4,985.70	**$4,994.91**
Profit:	$515.91	$525.12
Total Cost:	$4,469.79	$4,469.79
Business Overhead:	$245.35	
Job Overhead:	$1,681.60	
Unassigned Direct Cost:	$0.00	
Assigned Direct Cost:	$2,542.84	

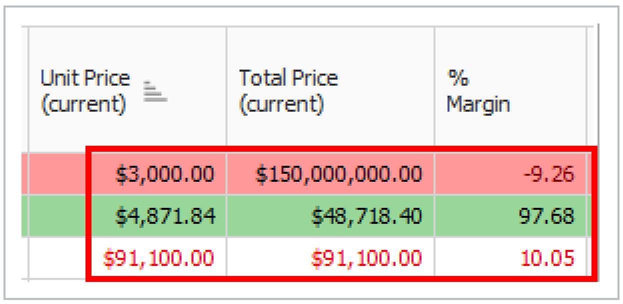
Item Recap - 3000 Excavation

	Balanced Unit	Current Unit
Price:	$2.86	**$2.86**
Profit:	$0.29	$0.29
Total Cost:	$2.57	$2.57
Business Overhead:	$0.15	
Job Overhead:	$0.91	
Unassigned Direct Cost:	$0.00	
Assigned Direct Cost:	$1.52	

3. On the Pay Item & Proposal Register menu, choose **Actions > Unbalanced Bid**.



- You will see the changes reflected and how the profit was spread to your overrun and underrun items



Unit Price (current)	Total Price (current)	% Margin
$3,000.00	$150,000,000.00	-9.26
$4,871.84	$48,718.40	97.68
$91,100.00	$91,100.00	10.05

- In the example shown, highlighting each item will show that all your overhead and profit from Excavation was put onto Clearing & Grubbing.

Item Recap - 2000 Clearing && Grubbing

	Balanced Unit	Current Unit
Price:	$4,985.70	$11,706.11
Profit:	$515.91	$7,236.32
Total Cost:	$4,469.79	$4,469.79
Business Overhead:	$245.35	
Job Overhead:	$1,681.60	
Unassigned Direct Cost:	$0.00	
Assigned Direct Cost:	$2,542.84	

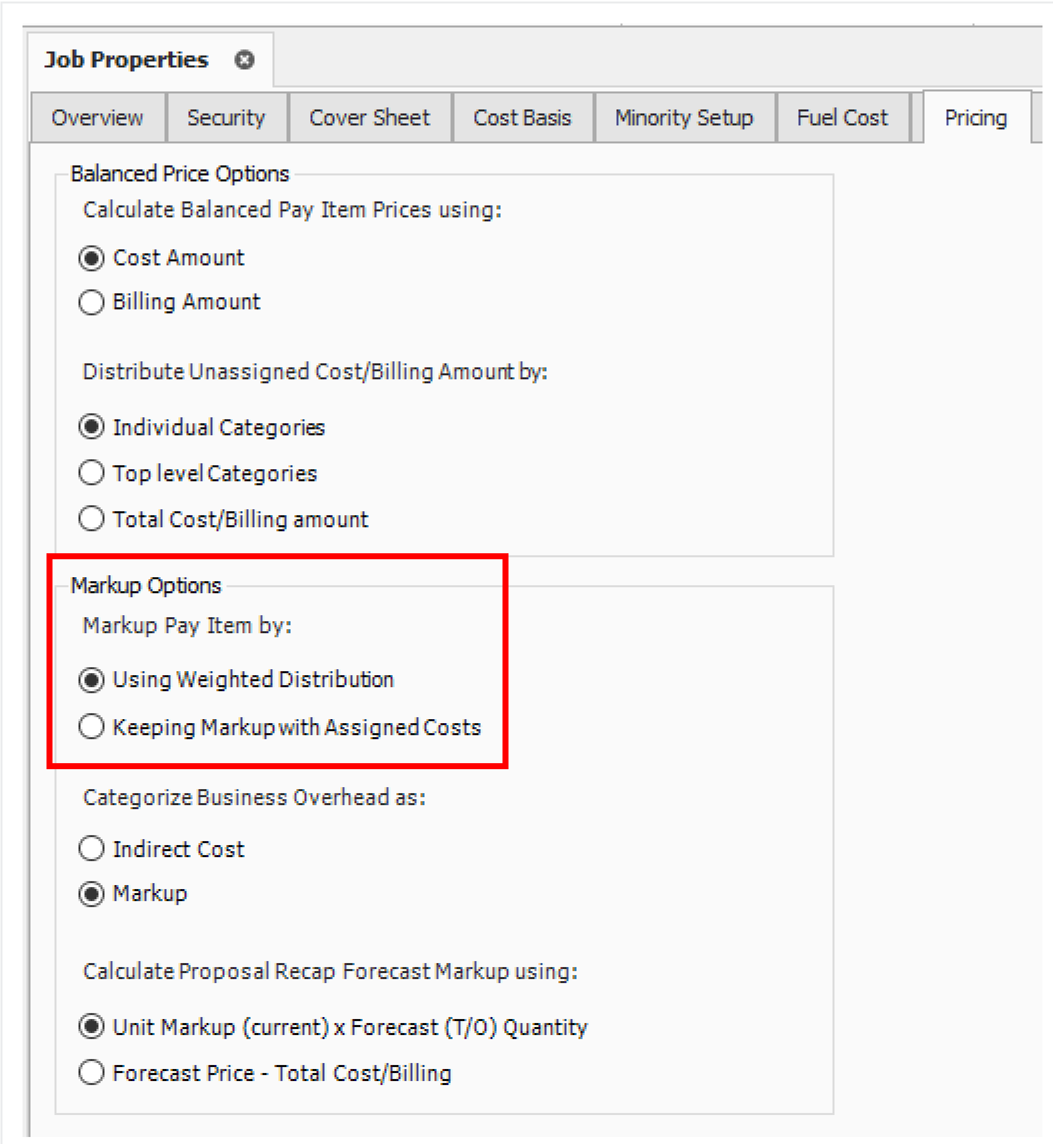
Item Recap - 3000 Excavation

	Balanced Unit	Current Unit
Price:	$2.86	$1.52
Profit:	$0.29	($1.05)
Total Cost:	$2.57	$2.57
Business Overhead:	$0.15	
Job Overhead:	$0.91	
Unassigned Direct Cost:	$0.00	
Assigned Direct Cost:	$1.52	

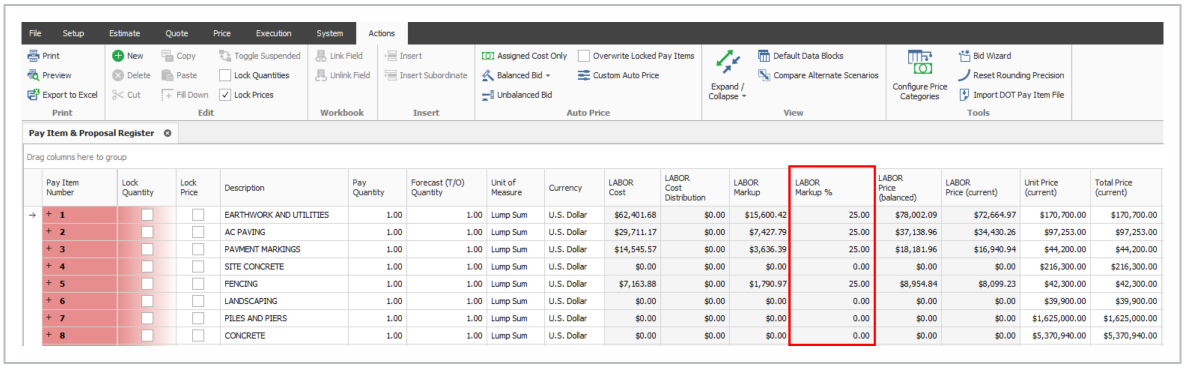
9.4 SELECTIVE PAY ITEM MARKUP

Estimate has a streamlined process to estimate the cost of a project and price the work to ensure all unassigned costs and markup are included in the final price of the project. For markup to be spread to pay items, a weighted distribution method is used as determined in the Job Properties, Pricing tab. It might be desirable for markup percentages to not be distributed, but rather directly applied to the costs assigned to any particular pay item.

This option can be set to keep markup with assigned costs for establishing a pay item price.



Additionally, this option can be used to isolate the markup and apply it only to specific pay items. The following is an example of a dependent cost item being used to mark up the labor of select site work pay items by 25%.


File
Setup
Estimate
Quote
Price
Execution
System
Actions
Print
Preview
Export to Excel
New
Delete
Cut
Copy
Paste
Fill Down
Toggle Suspended
Lock Quantities
Lock Prices
Link Field
Unlink Field
Insert
Insert Subordinate
Assigned Cost Only
Balanced Bid
Unbalanced Bid
Overwrite Locked Pay Items
Custom Auto Price
Expand / Collapse
Default Data Blocks
Compare Alternate Scenarios
Configure Price Categories
Bid Wizard
Reset Rounding Precision
Import DOT Pay Item File
Print
Edit
Workbook
Insert
Auto Price
View
Tools
Pay Item & Proposal Register
Drag columns here to group
Pay Item Number
Lock Quantity
Lock Price
Description
Pay Quantity
Forecast (T/O) Quantity
Unit of Measure
Currency
LABOR Cost
LABOR Cost Distribution
LABOR Markup
LABOR Markup %
LABOR Price (balanced)
LABOR Price (current)
Unit Price (current)
Total Price (current)
1 EARTHWORK AND UTILITIES 1.00 1.00 Lump Sum U.S. Dollar $62,401.68 $0.00 $15,600.42 25.00 $78,002.09 $72,664.97 $170,700.00 $170,700.00
2 AC PAVING 1.00 1.00 Lump Sum U.S. Dollar $29,711.17 $0.00 $7,427.79 25.00 $37,138.96 $34,430.26 $97,253.00 $97,253.00
3 PAVMENT MARKINGS 1.00 1.00 Lump Sum U.S. Dollar $14,545.57 $0.00 $3,636.39 25.00 $18,181.96 $16,940.94 $44,200.00 $44,200.00
4 SITE CONCRETE 1.00 1.00 Lump Sum U.S. Dollar $0.00 $0.00 $0.00 0.00 $0.00 $0.00 $216,300.00 $216,300.00
5 FENCING 1.00 1.00 Lump Sum U.S. Dollar $7,163.88 $0.00 $1,790.97 25.00 $8,954.84 $8,099.23 $42,300.00 $42,300.00
6 LANDSCAPING 1.00 1.00 Lump Sum U.S. Dollar $0.00 $0.00 $0.00 0.00 $0.00 $0.00 $39,900.00 $39,900.00
7 PILES AND PIERS 1.00 1.00 Lump Sum U.S. Dollar $0.00 $0.00 $0.00 0.00 $0.00 $0.00 $1,625,000.00 $1,625,000.00
8 CONCRETE 1.00 1.00 Lump Sum U.S. Dollar $0.00 $0.00 $0.00 0.00 $0.00 $0.00 $5,370,940.00 $5,370,940.00

Exercise 9.1 – Manually Price Pay Items

To finalize your bid proposal, you will apply final pricing (costs and profit) to your pay items either manually or using the AutoPrice tool. In this exercise, you will practice entering prices manually for your pay items. Complete the following steps, using your job.

1. Continue manually pricing items in the Pay Item & Proposal Register.
2. Type **2.75** in the Unit Price (current) column for pay item Excavation.
3. Type **2** in the % Margin field for pay item 4000 – 10” PVC Pipe.
4. Check your variance to see if you need to add or cut your current pricing to hit your Target Price.

You should end up with similar results

Pay Item Number	Row Nu...	Description	Pay Quantity	Forecast (T/O) Quantity	Unit of Meas...	Unit Price (current)	Total Price (current)	% Margin
+ 1000	1	Mobilization	1.00	1.00	Lump Sum	$20,000.00	$20,000.00	-40.04
+ 2000	2	Clearing & Grubbing	10.00	15.00	Acre	$4,705.04	$47,050.40	5.00
+ 3000	3	Excavation	50,000.00	40,000.00	CY	$2.75	$137,500.00	6.44
+ 4000	4	10" PVC Pipe	1,000.00	1,000.00	LF	$22.00	$22,000.00	1.99

Congratulations, you have completed this exercise!

9.5 BID ADJUSTMENTS

Often you will want to continue adjusting certain pay items and then rebalance to hit the target total.

9.5.1 Lock Price

You can lock down a pay item price and it will not factor in future rebalancing.

Step by Step – Lock Price

1. Select the **Lock Price** checkbox on an item's row.

Pay Item Number	Description	Lock Price	Pay Quantity	Forecast (T/O) Quantity
+ 202 0183	Unclassified Excavation		50,000.00	50,000.00
+ 641 0100	Mobilization	✓	1.00	1.00
+ 201 0102	Clearing & Grubbing		10.00	10.00

2. After making further adjustments in the next step by step, you will return to the Pay Item & Proposal to rebalance.
   - You can continue to adjust at previous levels aside from solely in the Pay Item & Proposal Register
   - For example, you could make a last-minute adjustment in the PBS or CBS. You can make adjustments anywhere, but for this example an adjustment will be made in the Direct Cost Add-On record at the CBS level

Step by Step – Make Last Minute Bid Adjustments

1. With your job open, select the **Estimate** tab.
2. Click on **Cost Breakdown Structure** to open the CBS.
3. Double click on the row header to open the **Direct Cost Add-On** dependent cost item record.

4. Under the Description tab on the left, click in the blank row under the **Description column**.
5. Type in a **description**.
6. Make the adjustment by typing a **numeric value** in the **Cost column** of the Materials Cost category under the Cost Breakdown section on the right.

Cost Breakdown

Cost Category	Subject Cost	Rate		Cost
Total	$130,759.83	-0.76		($1,000.00)
Labor	$58,969.83	0.00		$0.00
Owned Equipment	$68,251.92	0.00		$0.00
Rented Equipment	$0.00	0.00		$0.00
Supplies	$0.00	0.00		$0.00
Materials	$3,276.00	-30...		($1,000.00)
Subcontract	$0.00	0.00		$0.00
Fees	$262.08	0.00		$0.00
Allowance	$0.00	0.00		$0.00
Custom Category1	$0.00	0.00	→	$0.00
Undefined	$0.00	0.00	→	$0.00

- To make a cut, enter a negative value, i.e. -1000

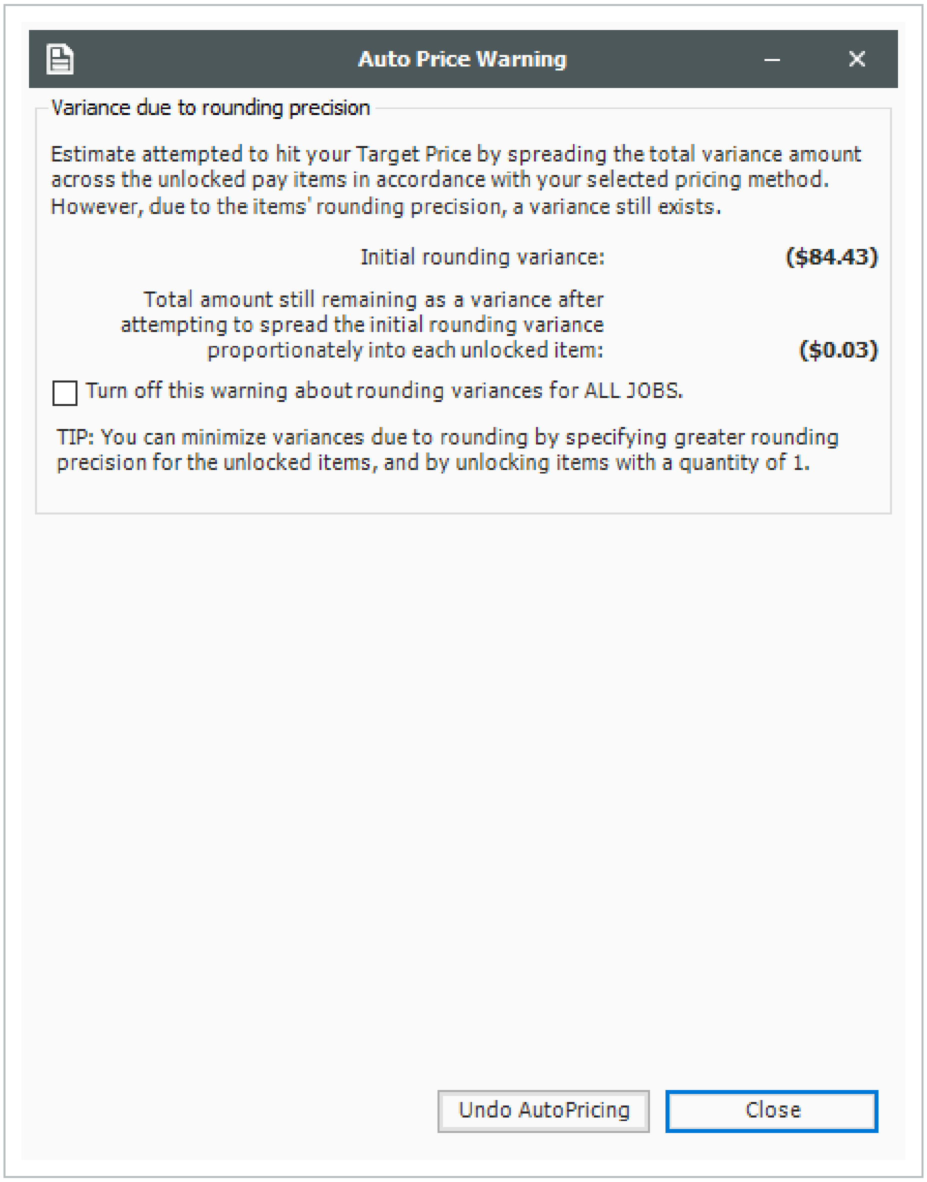
7. Press the **Tab** key, and your adjustment will be reflected on the left-hand side.

Description | Dependency | Cost Categorization | Allocation

Drag columns here to group

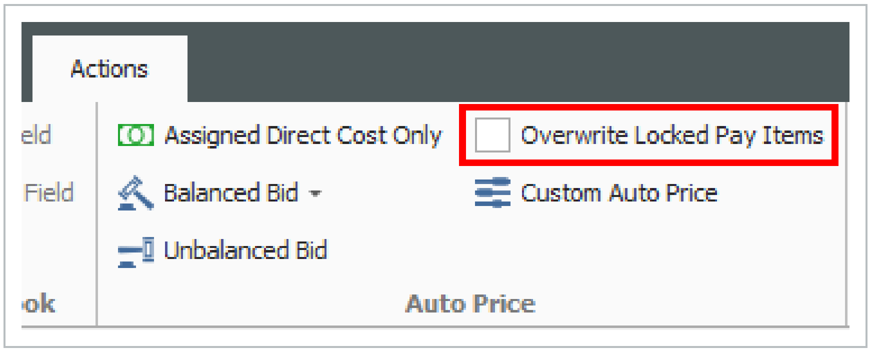
	Description	Curre...	Total Cost (Forecast)	Ac Co
	Small Tools	U.S. Dollar	$5,896.98	
	Safety & Training	U.S. Dollar	$2,948.49	
→	Cut	U.S. Dollar	($1,000.00)	
*				

8. Finally, return to the **Pay Item & Proposal**.
9. On the **Actions** menu, select **Balanced Bid > Hit Target Total**.
10. An Auto Price Warning may display, informing you of rounding variances. After reading the details, click the **Close** button.



- Note on the proposal recap that a variance may still exists because there are limited number of pay items to spread the rounding error over
- Note that the locked item did not adjust, but the other pay items were updated
- Note that you can overwrite locked items for spreading your price by checking the

Overwrite Locked Pay Items option on the Actions menu



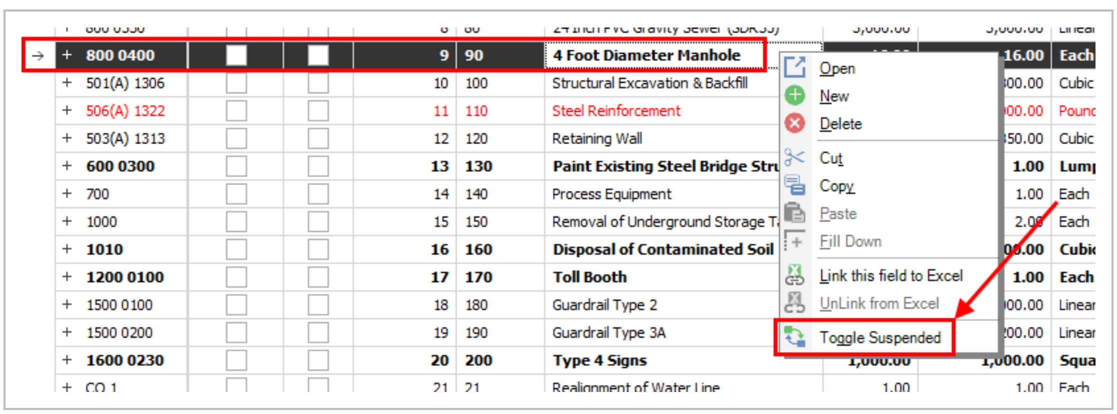
9.5.2 Suspend Pay Items

Like suspending cost items in the CBS Register, you can suspend pay items in the Pay Item & Proposal Register. Suspending a pay item causes it to no longer contribute quantities and pricing to the estimate.

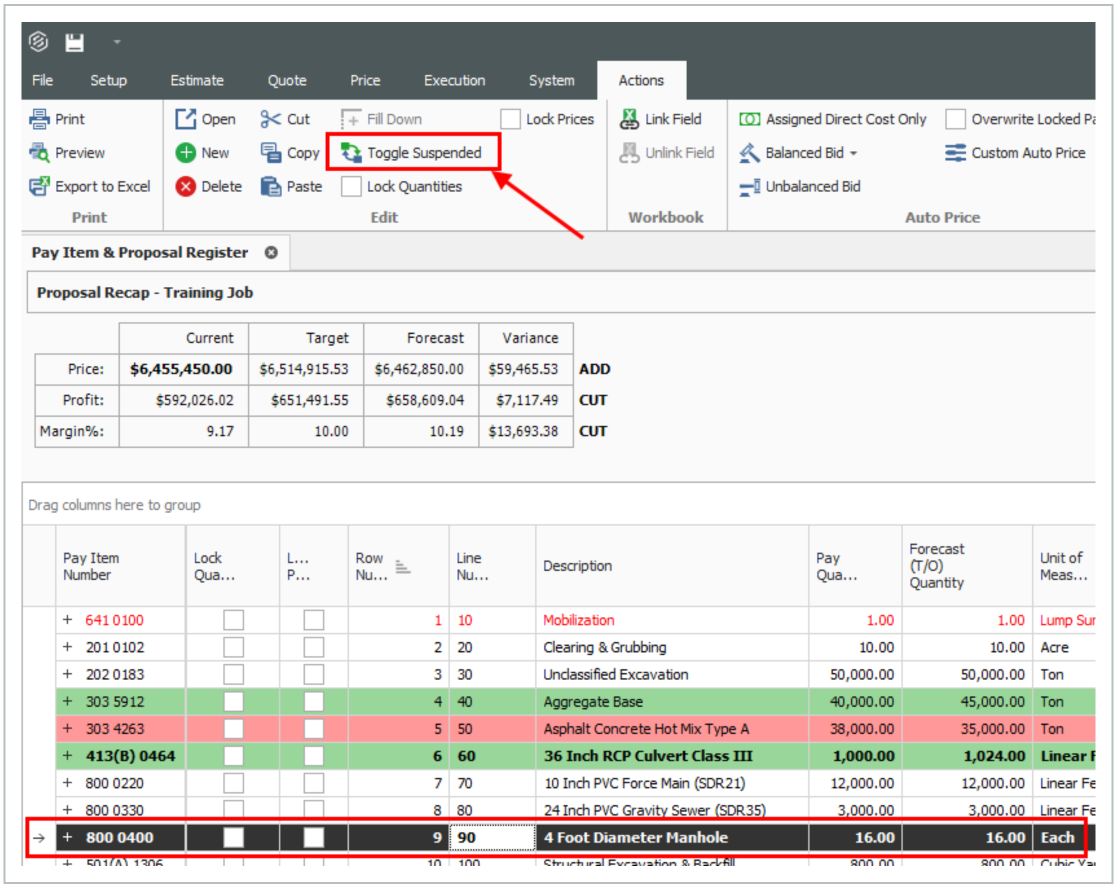
This can be helpful when considering alternate items on a bid submission. Should the client decide to not require a pay item, you can suspend it, causing the pay item and any of its assigned cost items to no longer contribute any cost or price. It will no longer show up on your bid and no longer contribute to the overall total price.

You can suspend/unsuspend pay items in one of three ways:

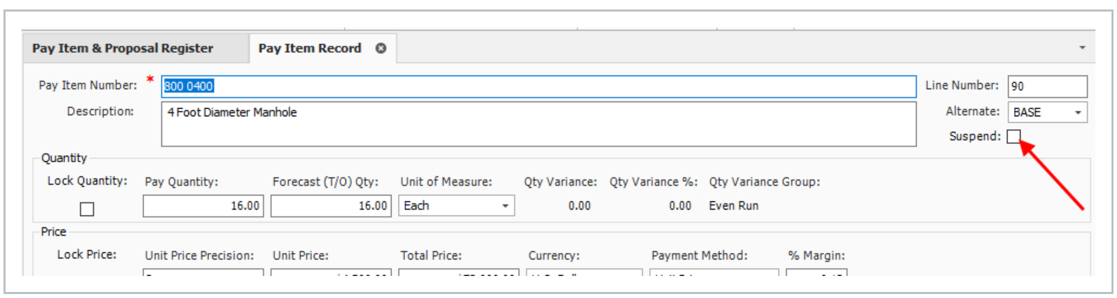
- Right click on the pay item and select Toggle Suspended



- Select the pay item and click Toggle Suspended under the Edit section of the Actions Tab



- Open the pay item record and checking/unchecking the Suspend box



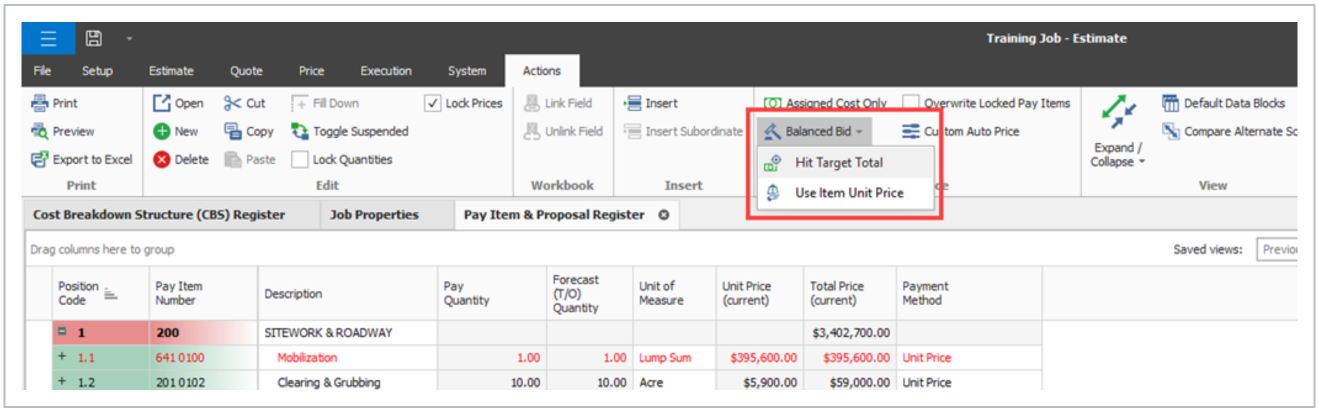
9.6 AUTO PRICE BALANCED BID OPTIONS

To determine the final pricing of your pay items on the job, you can use one of the following two options in Auto Price > **Balanced Bid**:

- Hit Target Total
- Use Item Unit Price

These Balanced Bid options are a simple way to have the Estimate automatically balance the bid, spreading your cost, overhead, and profit proportionately across your pay items. This can be a great starting point for finalizing your bid, with the understanding that, once balanced, you can still make your own adjustments to pay items manually.

You access the Balanced Bid options from the Actions menu of the Pay Item & Proposal Register.



9.6.1 Considerations

- **Pricing Options** - Prior to using the Auto Price feature, pricing options should be considered. These can be configured as a default for all jobs from Library > **Job Properties**, or for an individual job in its own Job Properties.

  See Library Job Properties Pricing for more information.

- **Rounding Precision** - The Rounding Precision option is an important factor to consider when using Auto Price to balance your bid, as it can influence how pricing is or is not spread to a pay item based on what decimal the item’s unit price is rounded to.

  In the Pay Item & Proposal Register, you can define the rounding precision at the pay item level using the Rounding Precision column. For more information, see Rounding Precision.

9.6.2 Hit Target Total

The Hit Target Total option is the same as the Use Item Unit Price option, though it goes the extra step and tries to spread the variance (if there is any) back over your pay items.

In most cases, selecting Balance Bid > **Hit Target Total** results in all the rounding variance being spread over your pay items successfully. The following use cases explore situations where some variance might remain.

9.6.2.1 Large quantity pay items

When adjusting the pricing of pay items to absorb rounding variance, even minor adjustments to the unit price can result in a large change to the pay item's total price if it has a large pay quantity. For example, cutting $.01 from a lump sum pay item has very little effect when compared to a pay item with a pay quantity of 50,000.

Pay Item	Pay Quantity	Unit of Measure	Unit Price Adjustment Amount	Total Price Adjustment Amount	Rounding Precision
Mobilization	1	Lump Sum	$0.01	$0.01	2
Excavation	50,000	Cubic Yards	$0.01	$500.00	2

Depending on the amount of variance that needs to be spread and the pay quantities of your unlocked pay items, Estimate might not be able to spread all your remaining variance.

For example, if your remaining rounding variance is $200.00 and Estimate only has high quantity pay items to spread to like the Excavation pay item in the above example, it would not be able to adjust the pay item by only $200.00.

9.6.2.2 High rounding pay items

When balancing the bid, the higher the rounding precision of your pay items, the less variance there will be, and the more likely Estimate will be able to spread the variance back over your pay items.

For example, a bid that has a rounding precision of 2 (two to the right of the decimal or *to the penny*) for all the pay items in the bid will typically have no remaining variance when using Balance Bid > **Hit Target Total**, because any rounding variance from the initial balancing can be absorbed by making minor adjustments to the pay items' unit prices.

If the bid includes a pay item that has a lower rounding precision, that pay item might not be able to absorb variance because of the rounding precision assigned to it.

In the below example, the pay item's rounding precision is set to -2 (two to the left of the decimal or *to a hundred*. If the Estimate needs to add $49 to this pay item to balance the bid, it will not be able to since its precision is set to round back down to $18,500.

Position Code	Pay Item Number	Lock Price	Description	Pay Quantity	Unit of Measure	Unit Price (current)	Total Price (current)	Rounding Precision
1	200	■	SITEWORK & ROADWAY				$3,112,772.20	
+ 1.1	641 0100	☐	Mobilization	1.00	Lump Sum	$18,500.00	$18,500.00	-2

9.6.2.3 Low number of available pay items

If your bid has a low number of pay items to spread variance to, either due to a low number of deliverables, or to a small number of unlocked pay items, this leaves less opportunity for Estimate to spread the remaining variance successfully.

9.6.3 Use Item Unit Price

The option Balanced Bid > **Use Item Unit Price** can best be thought of as *use the item's balanced unit price* for balancing the bid. When this option is selected, the following takes place:

- All assigned costs are distributed to pay items based on the cost items assigned to them.
- All unassigned costs are distributed to pay items proportionally according to the weight of the pay items' assigned costs and the level selected for distributing unassigned costs on the Job Properties > **Pricing tab** (Individual Categories, Top level Categories, or Total Cost/Billing amount).
- Markup is applied to pay items according to the markup options selected on the Job Properties > **Pricing** tab.

  See **Balanced Price Options** in Library Job Properties Pricing for more information.

After balancing, when you select a pay item, on the Item Recap section you can see the Unit Price (current) now matches the Unit Price (balanced), indicating the pay item is using the balanced unit price.

Item Recap - 201 0102 Clearing & Grubbing

Description	Unit Price (balanced)	Total Price (balanced)	Unit Price (current)	Total Price (current)
Price	$5,895.22	$58,952.20	$5,895.22	$58,952.20
Distribution	$1,976.72	$19,767.23	$1,976.72	$19,767.23
Markup	$979.64	$9,796.43	$979.64	$9,796.45
Profit (Markup records)	$696.49	$6,964.91	$696.49	$6,964.92
Business Overhead	$283.15	$2,831.52	$283.15	$2,831.52
Unassigned Cost	$997.08	$9,970.78	$997.08	$9,970.78
Job Overhead	$996.33	$9,963.26		
Direct Cost	$0.75	$7.52		
Assigned	$3,918.50	$39,184.97	$3,918.50	$39,184.97
Markup	$0.00	$0.00	$0.00	$0.00
Business Overhead	$0.00	$0.00		
Cost	$3,918.50	$39,184.97	$3,918.50	$39,184.97
Job Overhead	$0.00	$0.00		
Direct Cost	$3,918.50	$39,184.97		

As Estimate calculates the balanced unit price for each pay item, it follows the rounding precision defined for each pay item. As it rounds pricing up or down based on this precision, a variance from the Target Price might occur. You can see this variance on the Proposal Recap section, with an indication of whether you need to cut or add money to reach the Target price.

Proposal Recap - Training Job

	Current	Target	Forecast	Variance	
Price:	**$6,520,896.49**	$6,521,125.58	$6,456,826.25	$229.09	**ADD**
Markup:	$981,209.50	$981,438.59	$972,839.35	$8,599.24	**ADD**
Margin%:	15.05	15.05	15.07	$1,268.87	**CUT**

Lesson 9 Review

1. Markup is a function of cost, while margin is a function of _________.
   a. billing
   b. price
   c. job overhead
   d. indirect costs

---

2. When adding profit, it must be the same amount for direct and indirect costs.
   a. True
   b. False

---

3. What options do you have to enter profit on the PBS?
   a. % Mark-Up, % Margin, and Fixed Dollar Amount
   b. % Mark-Up or % Margin
   c. Fixed Dollar Amount Only

---

4. Once distributed, you still can adjust your pricing on pay items manually as needed.
   a. True
   b. False

Lesson 9 Summary

As a result of this lesson, you can:

- Add job markup (profit)
- Use tools on the PBS form to review your estimate
- Spread Target Price over pay items
- Make bid adjustments