

InEight Estimate **Benchmarking with Data from** **InEight Control** **Supplement guide to Benchmarking**



InEight[®]
ESTIMATE



InEight[®]
CONTROL



Changelog

This changelog contains only significant or other notable changes to the document revision. Editorial or minor changes that do not affect the context of the document are not included in the changelog.

Rev	Date	Description
1.0	11-June-2022	Initial publication
1.1	12/22/2022	Revised by AC

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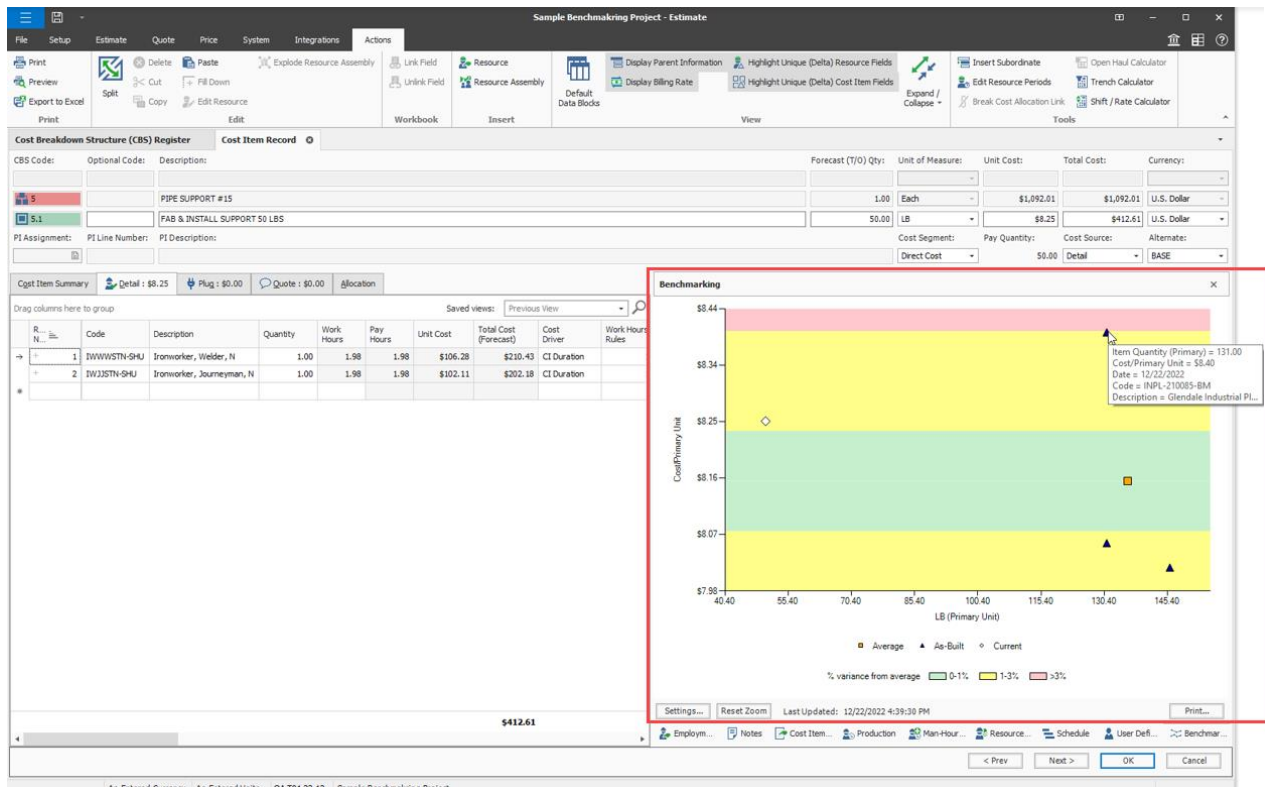
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Benchmarking Actual Costs from InEight Control

Benchmarking is the process of leveraging a company's past experiences to provide a level of assurance that any scope of work being estimated is either within an acceptable range of confidence or identifies a unit cost or productivity rate exceeding an acceptable value. Estimate can benchmark using as-estimated or as-built data. For users of Control, Estimate can pull as-built data points directly from Control, so estimators can more easily leverage information on productivity rates and unit costs achieved on past projects.



Benchmarking and Unit Costs

When benchmarking on as-built data from Control, cost items must have both actual cost and quantities claimed. Estimate uses unit costs for benchmark data points. Data points for Control cost items that incur costs with no quantities, or quantities claimed with no corresponding actual costs, have a unit cost of zero and cannot be benchmarked.

Subordinate Cost Items

In Control, you should claim both costs and quantities at the lowest benchmark level you intend to use, so the cost items produce benchmarkable unit rates. Benchmark data points are generated for both subordinate and superior cost items in Control, and actual costs and man-hours automatically roll up to the superior cost items.

CBS

ACS

PAY ITEMS

CHANGE REGISTER

AUDIT LOG

Task details

< ● ● ● >

⋮

Resources	Forecast (T/O) qty	UoM
	1.00	Each
2	50.00	Lb
1	4.00	Ft

Actuals

12/22/2022

to

12/28/2022

📅

< ● ● ● >

Actual qty (to date)	Actual unit cost (to date)	Actual cost (to date)	Actual MHrs (to date)	Actual MHrs/unit (to date)
1.00	\$ 1,254.00	\$ 1,254.00	12.26	12.26
50.00	\$ 8.50	\$ 425.00	4.00	0.08
4.00	\$ 131.25	\$ 525.00	5.00	1.25

Superior Cost Item As-built quantities

As-built quantities for superior cost items are automatically calculated based on the percent complete of the subordinate cost items. If actual costs and quantities are being claimed on the subordinate cost items, no option is available to claim quantities on the superior cost item. The image below shows the Allow as-built option is unavailable for a superior cost item where claiming of both actual costs and quantities is being done on subordinate cost items.

The screenshot shows the InEight Control interface with a task list on the left and details for 'PS# 15 FOUNDATION' on the right. A red arrow points to the 'Allow as-built' dropdown menu, which is currently set to 'None'. The dropdown options are 'None', 'All', 'Quantities', and 'Costs'. The 'None' option is selected, indicating that as-built quantities are not being calculated for this superior cost item.

If a superior cost item quantity is not being calculated, then no unit cost can be calculated and no benchmarkable data point can be sent to Estimate. This can be the result of the items budget not being set. To resolve this issue, ensure the budget is locked for the cost items in question.

CBS ACS PAY ITEM

Actions

- Global forecast method..
- Set forecast method
- Time phased forecasting
- Claim multiple CBS quantities
- Budget move and contract adjustment
- Lock/unlock budget
 - Lock budget
 - Unlock budget
 - Lock project budget and price
- Add required cost items
- Sync
- Reverse estimated actuals

Task details

Resources	Description	Forecast (T/O) qty	UoM
	PIPE SUPPORT #15	1.00	Each
2	FAB & INSTALL S...	50.00	Lb
1	3/16" FILLET WEL...	4.00	Ft
	DRILL 5/8" 4 EA	4.00	Each

The cost item's quantity is now derived based on Control's quantity roll up calculation settings and a unit cost is automatically calculated.

CBS ACS PAY ITEMS CHANGE REGISTER AUDIT LOG

Task details

Resources	Forecast (T/O) qty	UoM
2	50.00	Lb
1	4.00	Ft

Actuals 12/22/2022 to 12/28/2022

Actual qty (to date)	Actual unit cost (to date)	Actual cost (to date)	Actual Mhrs (to date)	Actual Mhrs/unit (to date)
1.00	\$ 1,254.00	\$ 1,254.00	12.26	12.26
50.00	\$ 8.50	\$ 425.00	4.00	0.08
4.00	\$ 131.25	\$ 525.00	5.00	1.25

Setting up Benchmarking from InEight Control

Projects must be set to **Active** in InEight Platform > Project Details > **Status**. Projects that are set to **New** will not be available in Estimate.

All projects & organizations > Edit project

DETAILS INFORMATION ATTRIBUTES

Project details

* Project ID

INPL-210326-BM

* External project ID

INPL-210326-BM

* Name

Oakview Facility Improvements

* Phase

Execution

* Status

New

New

Active

Closed

Unit costs need to be present on Control cost items for benchmark data points to be useful in Estimate. To accomplish this, set the Allow as-built setting to *All* for the cost items that you want to generate benchmark data points for, and make sure actual costs, man-hours and quantities are claimed on the cost item.

Tasks			Task details	
	CBS position	Description	Resources	
☐	4.5	RECEIVE MATERI...	1	
☐	4.6	DEMOB OF BACK...	2	
☐	5	PS# 15 FOUNDAT...		
☐	5.1	SAW CUT CONCR...	1	
☐	5.2	DEMO CONCRETE	1	
☐	5.3	TRANSPORT CON...	1	
☐	5.4	HAND EXCAVATE	1	
☐	5.5	TRANSPORT SOIL...	1	
☒	5.6	FORMWORK (CO...	1	
☐	5.7	INSTALL REBAR	1	
☐	5.8	EPOXY DOWELS ...	1	
☐	5.9	PLACE CONCRETE	1	
☐	5.10	FINISH CONCRETE	1	
☐	6	PS# 30 FOUNDAT...		
☐	6.1	SAW CUT CONCR...	1	
☐	6.2	DEMO CONCRETE	1	

Subtotals 89 (1 rows selected)

1033
FORMWORK (COMBINED FABRICATION, INSTALLATION AND REMOVAL)

DETAILS	ATTRIBUTES	COST
CE total cost	CE unit cost	
\$ 1,253.25	\$ 69.63	
CE total MHrs	CE total equipment Hrs	
13.48	0.00	
CE Mhr/Unit	CE Units/MHrs	
0.75	1.34	
* Allow as-built	Pay item assignment	
All		
None		
All		
Quantities		
Costs		
	* Quantity driver	
	Superior CI	

In Control, select a field to use as the benchmark matching criteria. This field is used by Estimate in identifying the cost items to be used in generating the benchmark data points. The same key value can be used on multiple cost items and the benchmark data point produced will be a weighted average unit cost of all the items.

Tasks			1001 FAB & INSTALL SUPPORT 50 LBS			
	CBS position	Description	DETAILS	ATTRIBUTES	COST CATEGORIES	CURRENT ESTIMATE RESOURCES
☐	1	PIPE SUPPORT #15	CBS tag 22	CBS tag 23		CBS tag 24
☒	1.1	FAB & INSTALL S...				
☐	1.2	3/16" FILLET WEL...				
☐	1.3	DRILL 5/8" 4 EA.				
☐	1.4	BOLT UP 1/2" BAS...				
☐	1.5	GROUT BASE SUP...				
☐	2	PIPE SUPPORT #19				
☐	2.1	FAB & INSTALL S...				

CBS tag 22

CBS tag 23

CBS tag 24

CBS tag 25

CBS user defined 1

CBS user defined 2

CBS user defined 3

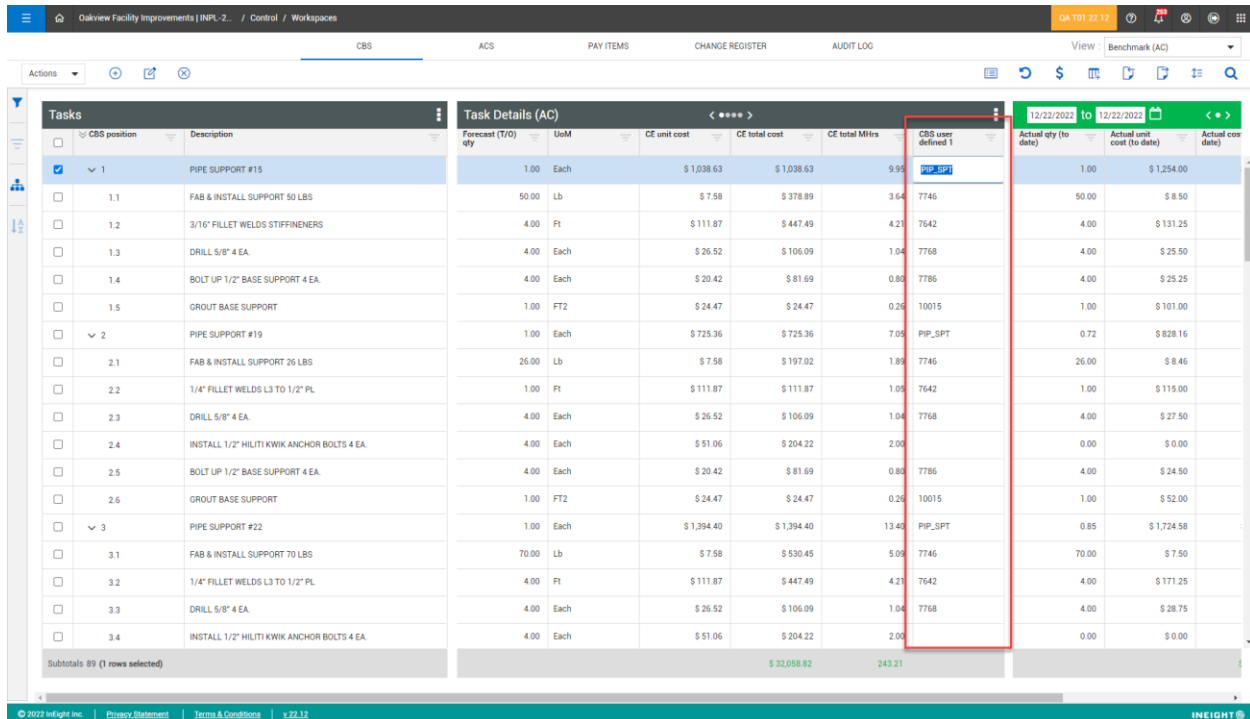
CBS user defined 4

CBS user defined 5

The following fields can be used as matching criteria:

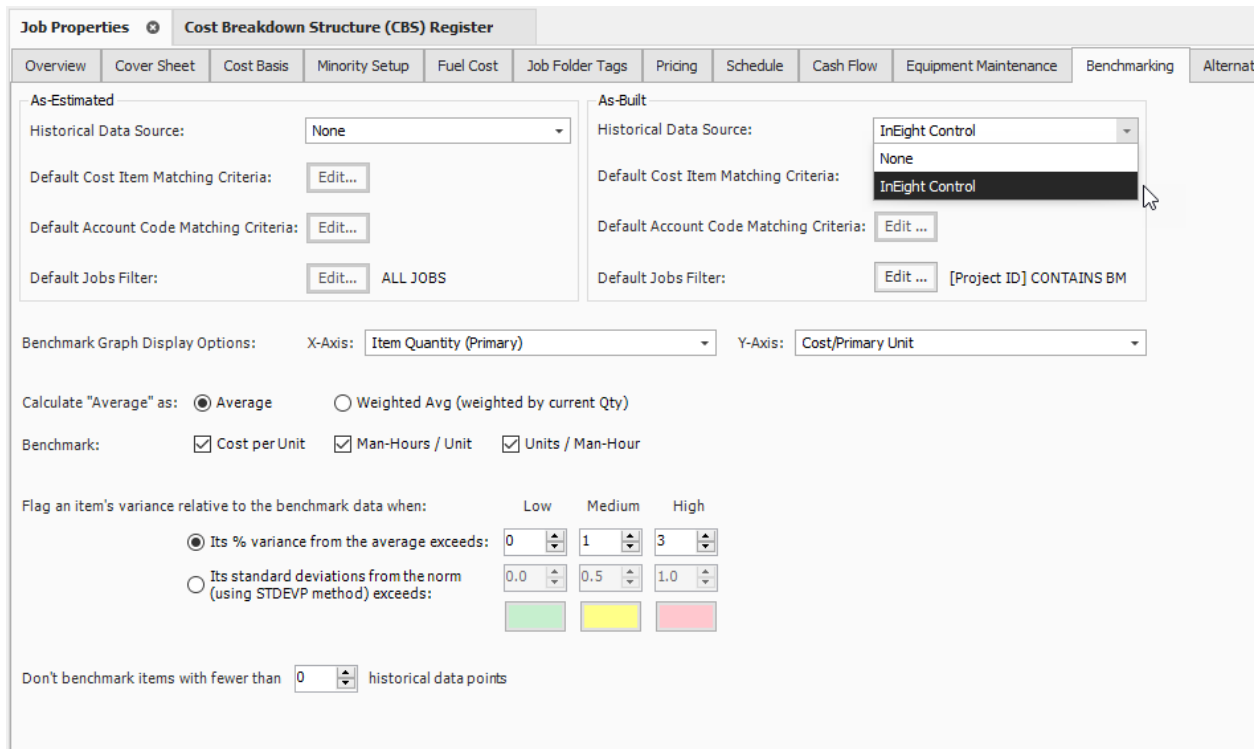
- CBS Position
- Description
- WBS Phase Code
- Account Code
- Any CBS tag field, 1-25
- Any CBS user defined field, 1-15

The matching criteria field will be designated in Estimate. Fill in the applicable values to distinguish the cost items to be used as benchmarkable data point. Cost items with no values in the designated matching criteria field are not used in benchmarking.



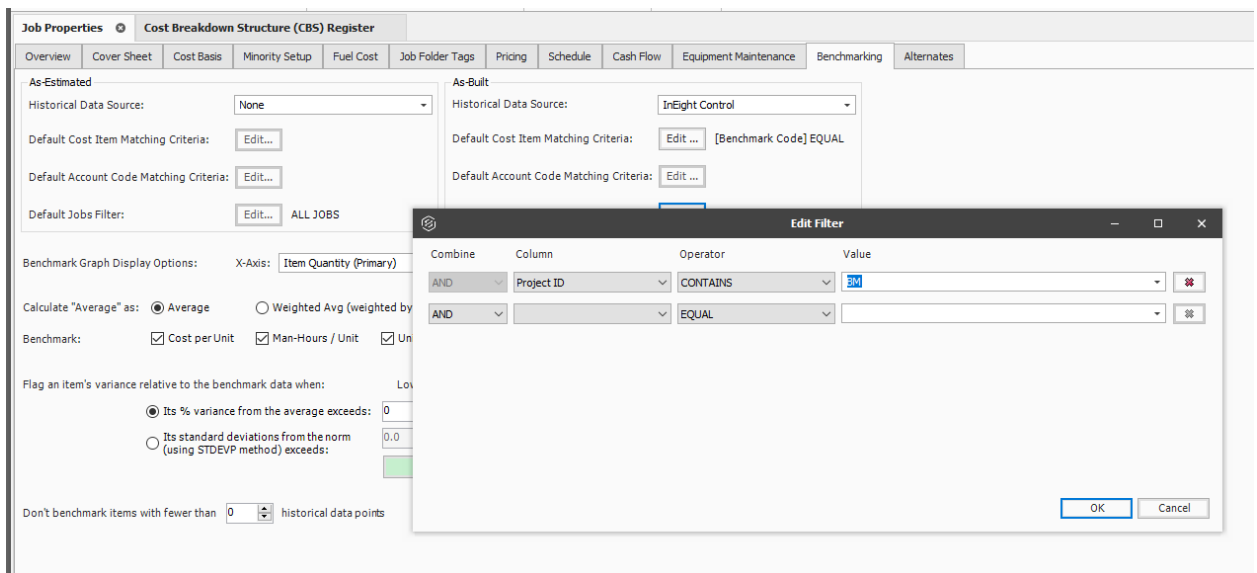
Tasks		Task Details (AC)						12/22/2022 to 12/22/2022		
CBS position	Description	Forecast (T/O) qty	UoM	CE unit cost	CE total cost	CE total Mhrs	CBS user defined 1	Actual qty (to date)	Actual unit cost (to date)	Actual cost (to date)
1	PIPE SUPPORT #15	1.00	Each	\$ 1,038.63	\$ 1,038.63	9.95	PIP_SPT	1.00	\$ 1,254.00	
1.1	FAB & INSTALL SUPPORT 50 LBS	50.00	Lb	\$ 7.58	\$ 378.89	3.64	7746	50.00	\$ 8.50	
1.2	3/16" FILLET WELDS STIFFENERS	4.00	Ft	\$ 111.87	\$ 447.49	4.21	7642	4.00	\$ 131.25	
1.3	DRILL 5/8" 4 EA.	4.00	Each	\$ 26.52	\$ 106.09	1.04	7768	4.00	\$ 25.50	
1.4	BOLT UP 1/2" BASE SUPPORT 4 EA.	4.00	Each	\$ 20.42	\$ 81.69	0.80	7786	4.00	\$ 25.25	
1.5	GROUT BASE SUPPORT	1.00	FT2	\$ 24.47	\$ 24.47	0.26	10015	1.00	\$ 101.00	
2	PIPE SUPPORT #19	1.00	Each	\$ 725.36	\$ 725.36	7.05	PIP_SPT	0.72	\$ 828.16	
2.1	FAB & INSTALL SUPPORT 20 LBS	20.00	Lb	\$ 7.58	\$ 197.02	1.89	7746	20.00	\$ 8.46	
2.2	1/4" FILLET WELDS L3 TO 1/2" PL	1.00	Ft	\$ 111.87	\$ 111.87	1.05	7642	1.00	\$ 115.00	
2.3	DRILL 5/8" 4 EA.	4.00	Each	\$ 26.52	\$ 106.09	1.04	7768	4.00	\$ 27.50	
2.4	INSTALL 1/2" HILTI KWIK ANCHOR BOLTS 4 EA.	4.00	Each	\$ 51.06	\$ 204.22	2.00		0.00	\$ 0.00	
2.5	BOLT UP 1/2" BASE SUPPORT 4 EA.	4.00	Each	\$ 20.42	\$ 81.69	0.80	7786	4.00	\$ 24.50	
2.6	GROUT BASE SUPPORT	1.00	FT2	\$ 24.47	\$ 24.47	0.26	10015	1.00	\$ 52.00	
3	PIPE SUPPORT #22	1.00	Each	\$ 1,394.40	\$ 1,394.40	13.45	PIP_SPT	0.85	\$ 1,724.58	
3.1	FAB & INSTALL SUPPORT 70 LBS	70.00	Lb	\$ 7.58	\$ 530.45	5.09	7746	70.00	\$ 7.50	
3.2	1/4" FILLET WELDS L3 TO 1/2" PL	4.00	Ft	\$ 111.87	\$ 447.49	4.21	7642	4.00	\$ 171.25	
3.3	DRILL 5/8" 4 EA.	4.00	Each	\$ 26.52	\$ 106.09	1.04	7768	4.00	\$ 28.75	
3.4	INSTALL 1/2" HILTI KWIK ANCHOR BOLTS 4 EA.	4.00	Each	\$ 51.06	\$ 204.22	2.00		0.00	\$ 0.00	
Subtotals 89 (1 rows selected)					\$ 32,058.82	243.21				

In Estimate, benchmarking from Control can be activated by selecting Job Properties > Benchmarking > As-Built > Historical Data Source > **InEight Control**. This step is not needed for Estimate in the Cloud.



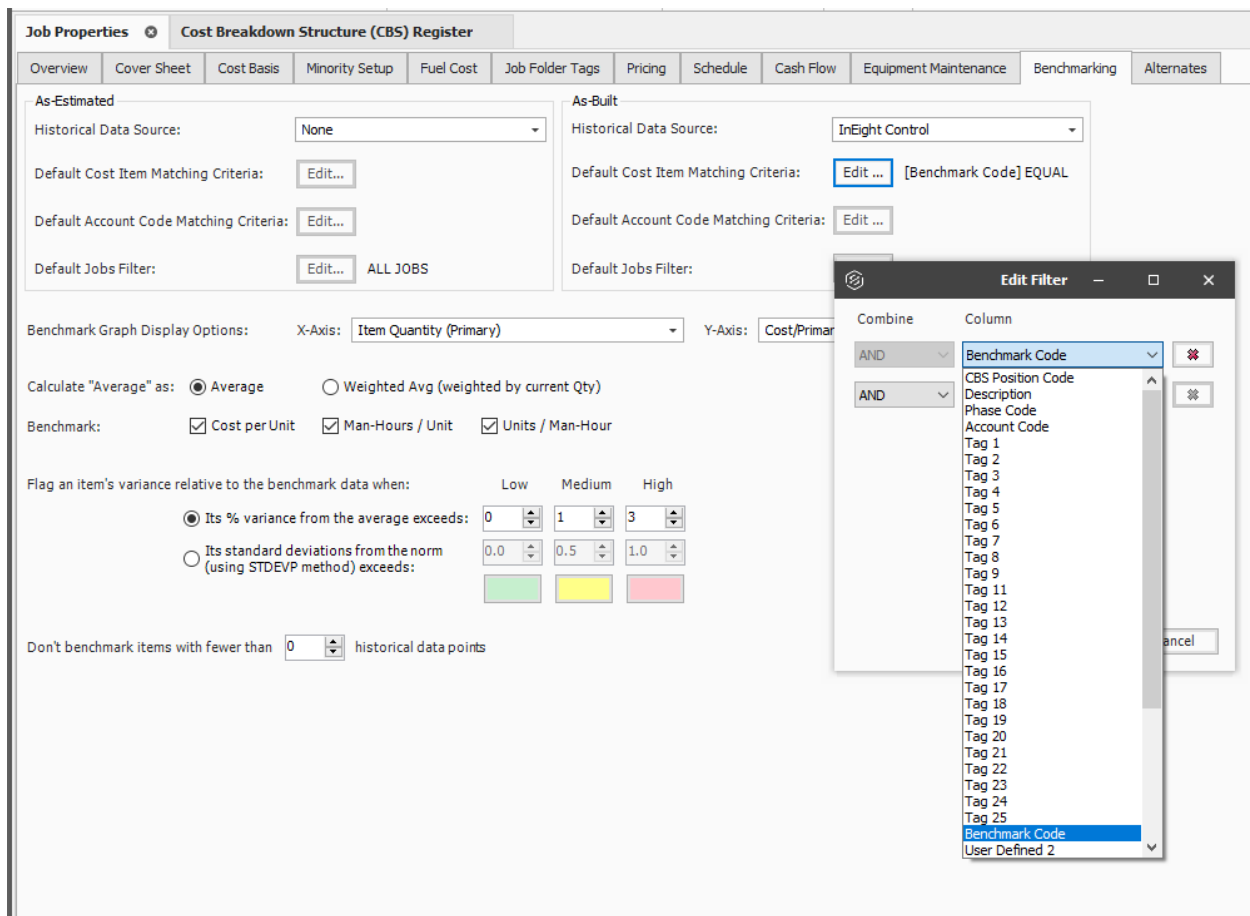
Next, define the Control projects that will be sources of benchmark data. For the Default Jobs filter, click **Edit**. In the Edit Filter dialog box, you can either specify the project IDs and or project names of the benchmarkable projects or create a filter criteria. It is good practice to modify either the project IDs or project names in Platform to designate them as benchmarkable projects.

In this example, the letters **BM** have been appended to the end of every benchmarkable project in Platform and a filter can be used to include all projects where the project IDs contains the characters BM.



NOTE: As-Estimated benchmark data comes from a data warehouse, where you can explicitly control the timing of updates to As-Estimated data. As-Built data from Control is live data and might change based on how frequently actual costs, man-hours and quantities are being updated in Control, and how often the benchmark data points in the estimate are refreshed.

To set the Default Cost Item Matching Criteria, click Edit. This designates the fields used between both Control and Estimate in determining which Control benchmark data points map to the Estimate cost items.



The screenshot shows the 'Cost Breakdown Structure (CBS) Register' window. It has tabs for Overview, Cover Sheet, Cost Basis, Minority Setup, Fuel Cost, Job Folder Tags, Pricing, Schedule, Cash Flow, Equipment Maintenance, Benchmarking, and Alternates. The 'Benchmarking' tab is active.

Under 'As-Estimated':

- Historical Data Source: None
- Default Cost Item Matching Criteria: Edit...
- Default Account Code Matching Criteria: Edit...
- Default Jobs Filter: Edit... ALL JOBS

Under 'As-Built':

- Historical Data Source: InEight Control
- Default Cost Item Matching Criteria: Edit ... [Benchmark Code] EQUAL
- Default Account Code Matching Criteria: Edit ...
- Default Jobs Filter: Edit ...

Benchmark Graph Display Options: X-Axis: Item Quantity (Primary) Y-Axis: Cost/Primary

Calculate "Average" as: ☒ Average ☐ Weighted Avg (weighted by current Qty)

Benchmark: ☒ Cost per Unit ☒ Man-Hours / Unit ☒ Units / Man-Hour

Flag an item's variance relative to the benchmark data when:

	Low	Medium	High
☒ Its % variance from the average exceeds:	0	1	3
☐ Its standard deviations from the norm (using STDEV method) exceeds:	0.0	0.5	1.0

Don't benchmark items with fewer than 0 historical data points

The 'Edit Filter' dialog is open, showing a list of fields to choose from for matching criteria. The fields include: Benchmark Code, CBS Position Code, Description, Phase Code, Account Code, Tag 1 through Tag 25, Benchmark Code, and User Defined 2. The 'Benchmark Code' field is selected.

The ACS in Control does not generate benchmarkable data points from as-built data. Benchmarking on account codes in Estimate is not possible when using as-built data from Control, and the Edit button for Define Account Code Matching Criteria is disabled.

Benchmark using data from Control

In Estimate, after you create a cost estimate, ensure the field defined as a matching criteria field is populated with a value corresponding to the benchmarkable data points to be pulled from Control.

Job Properties		Cost Breakdown Structure (CBS) Register					
Drag columns here to group							
	CBS Position Code	Description	Forecast (T/O) Quantity	Unit of Measure	Unit Cost	Total Cost (Forecast)	Benchmark Code (UDF1)
	1	STRUCTURAL GENERAL	1.00	Each	\$1,051.60	\$1,051.60	
	+ 1.1	MOBILIZE & DEMOBILIZE EQUIPMENT, TO...	1.00	Each	\$1,051.60	\$1,051.60	
	2	PIPE SUPPORT #1	1.00	Each	\$526.30	\$526.30	PIP_SPT
	+ 2.1	FAB & INSTALL SUPPORT 10 LBS (SD-153...	10.00	LB	\$7.65	\$76.52	7746
	+ 2.2	1/4" FILLET WELDS (FIELD WELDS) *	2.00	FT	\$224.89	\$449.78	7649
	3	PIPE SUPPORT #2	1.00	Each	\$353.42	\$353.42	PIP_SPT
	+ 3.1	FAB & INSTALL SUPPORT 16 LBS	16.00	LB	\$7.50	\$120.03	7746
	+ 3.2	1/4 FILLET WELDS (FIELD WELDS)	2.00	FT	\$116.70	\$233.39	7642
	4	PIPE SUPPORT #7	1.00	Each	\$4,829.05	\$4,829.05	PIP_SPT
	+ 4.1	FAB & INSTALL SUPPORT 105 LBS	105.00	LB	\$8.10	\$850.50	7746
	+ 4.2	3/16 TO 1/4" FILLET WELDS FAB	11.00	FT	\$116.70	\$1,283.65	7642
	+ 4.3	CUT OFF & PREP AREA- EXISTING PIPE ST...	1.00	Each	\$212.56	\$212.56	
	+ 4.4	T&B FLG. FILLET FULL PEN W8X31 TO EXI...	4.00	FT	\$620.59	\$2,482.34	7651
	5	PIPE SUPPORT #15	1.00	Each	\$1,092.01	\$1,092.01	PIP_SPT
	+ 5.1	FAB & INSTALL SUPPORT 50 LBS	50.00	LB	\$8.25	\$412.61	7746
	+ 5.2	3/16" FILLET WELDS STIFFINERS	4.00	FT	\$116.70	\$466.78	7642
	+ 5.3	DRILL 5/8" 4 EA.	4.00	Each	\$26.55	\$106.19	7768
	+ 5.4	BOLT UP 1/2" BASE SUPPORT 4 EA.	4.00	Each	\$20.42	\$81.69	7786
	+ 5.5	GROUT BASE SUPPORT	1.00	FT2	\$24.73	\$24.73	10015
	6	PIPE SUPPORT #19	1.00	Each	\$728.58	\$728.58	PIP_SPT
	+ 6.1	FAB & INSTALL SUPPORT 26 LBS	26.00	LB	\$7.50	\$195.05	7746
	+ 6.2	1/4" FILLET WELDS L3 TO 1/2" PL	1.00	FT	\$116.70	\$116.70	7642
	+ 6.3	DRILL 5/8" 4 EA.	4.00	Each	\$26.55	\$106.19	7768
	+ 6.4	INSTALL 1/2" HILITI KWIK ANCHOR BOLTS...	4.00	Each	\$51.06	\$204.22	
	+ 6.5	BOLT UP 1/2" BASE SUPPORT 4 EA.	4.00	Each	\$20.42	\$81.69	7786
	+ 6.6	GROUT BASE SUPPORT	1.00	FT2	\$24.73	\$24.73	10015
	7	PIPE SUPPORT #22	1.00	Each	\$1,408.76	\$1,408.76	PIP_SPT
	+ 7.1	FAB & INSTALL SUPPORT 70 LBS	70.00	LB	\$7.50	\$525.14	7746
	+ 7.2	1/4" FILLET WELDS L3 TO 1/2" PL	4.00	FT	\$116.70	\$466.78	7642
	+ 7.3	DRILL 5/8" 4 EA.	4.00	Each	\$26.55	\$106.19	7768
	+ 7.4	INSTALL 1/2" HILITI KWIK ANCHOR BOLTS...	4.00	Each	\$51.06	\$204.22	
	+ 7.5	BOLT UP 1/2" BASE SUPPORT 4 EA.	4.00	Each	\$20.42	\$81.69	7786
103							\$38,943.27

From the More Actions tab of the CBS register, click the **Refresh Benchmarks** button. The Refresh Benchmarks dialog box indicates the number of jobs found that meet the job matching criteria defined in Job Properties > Benchmarking. If this looks accurate, click **Refresh Now**; otherwise, click **Cancel**, and refine the Default Job Matching Criteria.

Training Job - Estimate

File Setup Estimate Quote Price Execution System **Actions** More Actions

Schedule Selection Unschedule Selection Calculate Plug Days

Swap Remove Update Batch Operations

Bid Wizard Subtotal Calculator Quantity Checking

Unit / Total Confirmation Refresh Benchmarks Roll Up Quantities

Import / Update CBS Data Source

Refresh Benchmarks

Last refresh: N/A

Jobs matching filter criteria: 2

Refresh Now Cancel

4.1.1.2	4.1.1.3	4.1.2	4.1.2.1	4.1.2.2	4.1.3.2	4.2	4.2.1				
	Blended Materials Tanks							3.00	Each		
	Refining Area							1.00	Each		
	Install Heating System							1.00	Each		
	Separator Tank							2.00	Each		
	Install Cooling Columns							1.00	Each		
	Removal of Underground Storage Tanks							2.00	Each		
	Remove & Dispose Contents							2.00	Each	\$4,797.71	0.02 0.02 0.02

Change the CBS Register view to Benchmark. Benchmark data is now populated for the cost items where the matching criteria fields matched in the benchmarkable jobs.

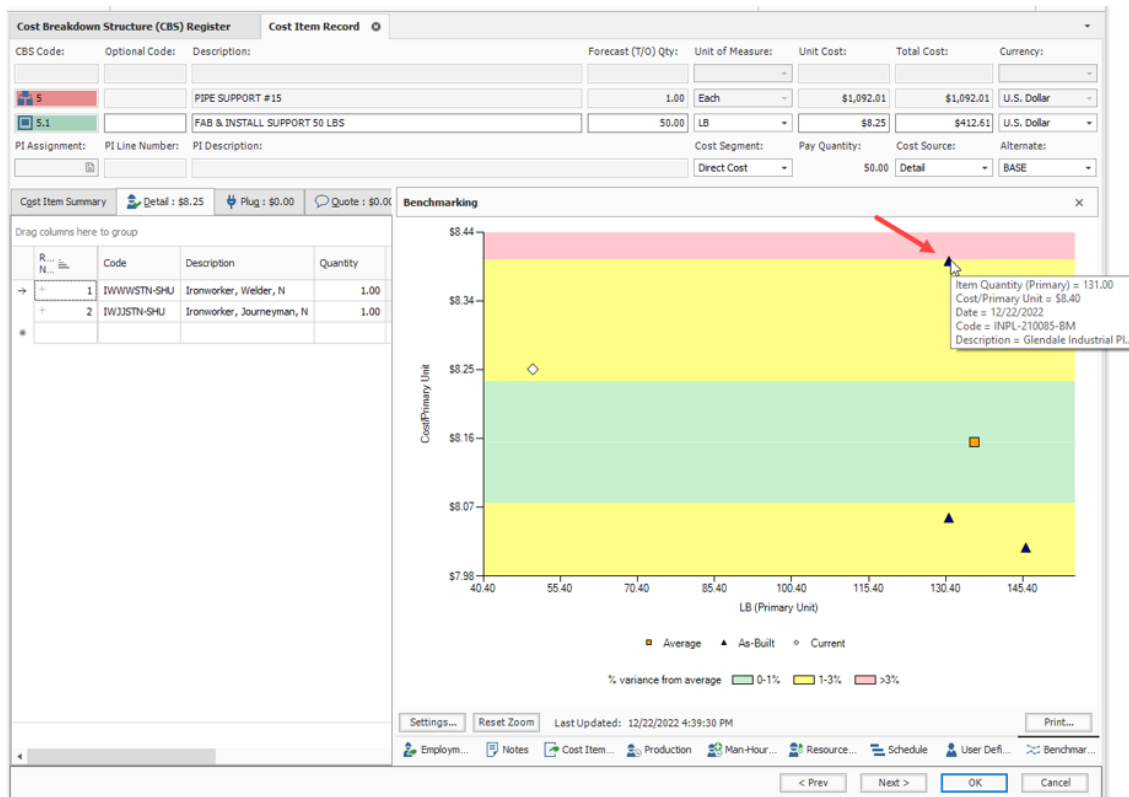
Job Properties Cost Breakdown Structure (CBS) Register

Drag columns here to group

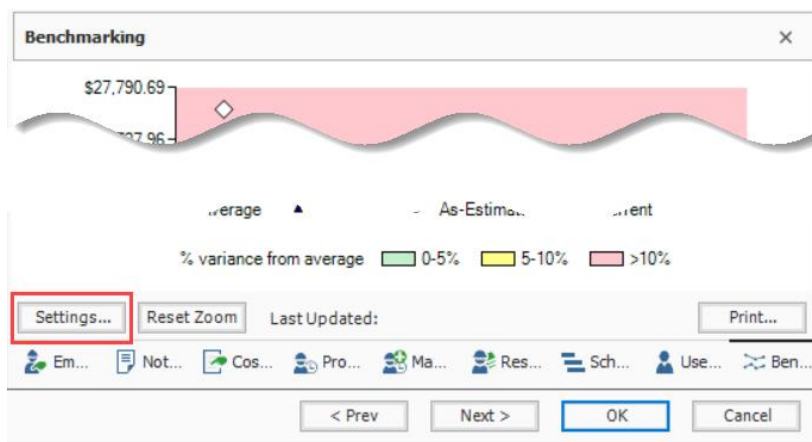
Saved views: Benchmark View

CBS Position Code	Description	Forecast (7/0) Quantity	Unit of Measure	Unit Cost	Unit Cost / Variance	Benchmark Units / Mfr (std. dev.)	Benchmark Unit Cost (low)	Benchmark Unit Cost (high)	Benchmark Unit Cost (average)	Benchmark Unit Cost (% variance)	Benchmark Unit Cost (std. dev.)	Benchmark Data Points
1	STRUCTURAL GENERAL	1.00	Each	\$1,051.60	0.00	0.00	\$0.00	\$0.00	\$0.00	0.00	0.00	0
1.1	MOBILIZE & DEMOBILIZE EQUIPMENT, T...	1.00	Each	\$1,051.60	0.00	0.00	\$0.00	\$0.00	\$0.00	0.00	0.00	0
2	PIPE SUPPORT #1	1.00	Each	\$526.30	59.49	23.15	\$1,291.21	\$2,372.52	\$1,923.99	-72.55	3.04	3
2.1	FAB & INSTALL SUPPORT 10 LBS (50-15...	10.00	LB	\$7.65	100.54	7.45	\$8.01	\$8.40	\$8.15	-6.16	2.92	3
2.2	1/4" FILLET WELDS (FIELD WELDS) *	2.00	FT	\$224.89	110.08	9.89	\$251.00	\$262.50	\$256.75	-12.41	5.54	2
3	PIPE SUPPORT #2	1.00	Each	\$353.42	876.85	36.23	\$1,291.21	\$2,372.52	\$1,923.99	-81.63	3.41	3
3.1	FAB & INSTALL SUPPORT 16 LBS	16.00	LB	\$7.50	100.54	7.45	\$8.01	\$8.40	\$8.15	-8.00	3.79	3
3.2	1/4" FILLET WELDS (FIELD WELDS)	2.00	FT	\$116.70	110.56	11.73	\$110.45	\$147.22	\$130.87	-10.83	0.93	3
4	PIPE SUPPORT #7	1.00	Each	\$4,829.05	-33.22	1.37	\$1,291.21	\$2,372.52	\$1,923.99	150.99	6.31	3
4.1	FAB & INSTALL SUPPORT 105 LBS	105.00	LB	\$8.10	67.16	4.98	\$8.01	\$8.40	\$8.15	-0.67	0.32	3
4.2	3/16" TO 1/4" FILLET WELDS FAB	11.00	FT	\$116.70	110.56	11.73	\$110.45	\$147.22	\$130.87	-10.83	0.93	3
4.3	CUT OFF & PREP AREA- EXISTING PIPE S...	1.00	Each	\$212.56	0.00	0.00	\$0.00	\$0.00	\$0.00	0.00	0.00	0
4.4	TWO FLG. FILLET FULL PEN W8X31 TO EX...	4.00	FT	\$620.59	101.48	0.00	\$662.50	\$718.75	\$690.63	-10.14	2.49	2
4.5	PIPE SUPPORT #15	1.00	Each	\$1,092.01	223.87	9.25	\$1,291.21	\$2,372.52	\$1,923.99	-43.24	1.81	3
5.1	FAB & INSTALL SUPPORT 50 LBS	50.00	LB	\$8.25	100.54	7.45	\$8.01	\$8.40	\$8.15	1.20	0.57	3
5.2	3/16" FILLET WELDS STIFFENERS	4.00	FT	\$116.70	110.56	11.73	\$110.45	\$147.22	\$130.87	-10.83	0.93	3
5.3	DRILL 5/8" 4 EA.	4.00	Each	\$26.55	92.31	0.00	\$27.25	\$27.25	\$27.25	-2.57	0.00	1
5.4	BOLT UP 1/2" BASE SUPPORT 4 EA.	4.00	Each	\$20.42	216.67	0.00	\$24.75	\$24.75	\$24.75	-17.49	0.00	1
5.5	GROUT BASE SUPPORT	1.00	FT2	\$24.73	467.21	0.00	\$67.33	\$67.33	\$67.33	-63.27	0.00	1
6	PIPE SUPPORT #19	1.00	Each	\$728.98	260.34	10.76	\$1,291.21	\$2,372.52	\$1,923.99	-62.13	2.60	3
6.1	FAB & INSTALL SUPPORT 26 LBS	26.00	LB	\$7.50	100.54	7.45	\$8.01	\$8.40	\$8.15	-8.00	3.79	3
6.2	1/4" FILLET WELDS L3 TO 1/2" PL	1.00	FT	\$116.70	110.56	11.73	\$110.45	\$147.22	\$130.87	-10.83	0.93	3
6.3	DRILL 5/8" 4 EA.	4.00	Each	\$26.55	92.31	0.00	\$27.25	\$27.25	\$27.25	-2.57	0.00	1
6.4	INSTALL 1/2" HILTI KWIK ANCHOR BOLT...	4.00	Each	\$51.06	0.00	0.00	\$0.00	\$0.00	\$0.00	0.00	0.00	0
6.5	BOLT UP 1/2" BASE SUPPORT 4 EA.	4.00	Each	\$20.42	216.67	0.00	\$24.75	\$24.75	\$24.75	-17.49	0.00	1
6.6	GROUT BASE SUPPORT	1.00	FT2	\$24.73	467.21	0.00	\$67.33	\$67.33	\$67.33	-63.27	0.00	1
7	PIPE SUPPORT #22	1.00	Each	\$1,408.76	110.48	4.56	\$1,291.21	\$2,372.52	\$1,923.99	-26.78	1.12	3
7.1	FAB & INSTALL SUPPORT 70 LBS	70.00	LB	\$7.50	100.54	7.45	\$8.01	\$8.40	\$8.15	-8.00	3.79	3
7.2	1/4" FILLET WELDS L3 TO 1/2" PL	4.00	FT	\$116.70	110.56	11.73	\$110.45	\$147.22	\$130.87	-10.83	0.93	3
7.3	DRILL 5/8" 4 EA.	4.00	Each	\$26.55	92.31	0.00	\$27.25	\$27.25	\$27.25	-2.57	0.00	1
7.4	INSTALL 1/2" HILTI KWIK ANCHOR BOLT...	4.00	Each	\$51.06	0.00	0.00	\$0.00	\$0.00	\$0.00	0.00	0.00	0

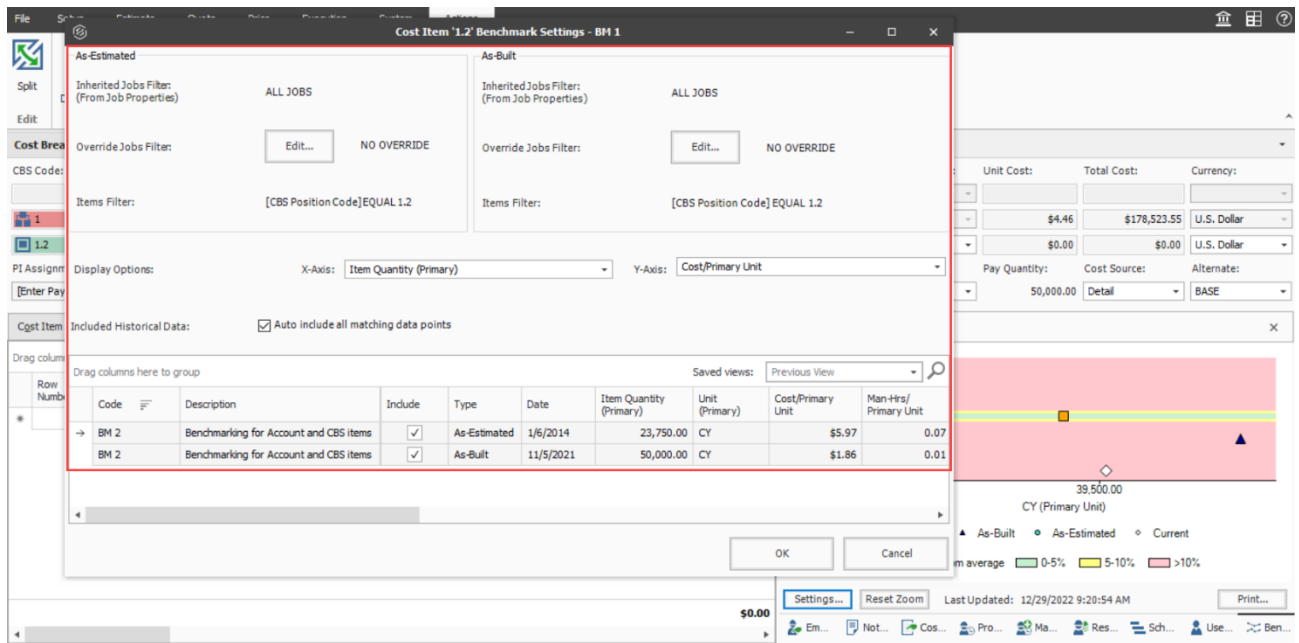
Open a cost item and navigate to the Benchmark data block to view the scatter plot that shows various as-built data points designated with a blue triangle. Hover over the data point for a tool tip indicating further information about the data point, such as the name of the project, the date of the data, total quantity, and cost per unit.



In the Benchmarking data block, click **Settings** to further refine the chart options.



Settings include choosing which values to show on the horizontal or vertical axis, or manually choosing which data points to include in the scatter plot by removing any jobs that could potentially skew the range of reasonable values.



Click the **Print** button in the data block to produce a report or export the data.

