



Specialty Plan Items In iPDWeb

Project and Program Delivery Manual Chapter 5 Cost Estimating Originally Issued: 11-07-24 Revised: xx-xx-xx

Specialty Plan Items are categorized as Percentage (PCT-), Percentage Lump Sum (LS), Parametric (PARA-), and Composite (COMP-). These plan items can be used to generate a high-level conceptual estimate early in the development of a project or when the standard plan items and quantities have not been fully defined. <u>Specialty plan items can NOT be entered in Masterworks</u>. <u>Specialty plan items can only be entered in iPDWeb and these items will not be able to be used for final plan turn-in to Contracts</u>.



NOTE: Special care needs to be taken when using specialty plan items to make surer that plan items are not being duplicated in the estimate. This can occur where a plan item is already included in the specialty plan item and then added again as a standard plan item into the estimate.

This chapter contains the following sections:

Percentage Based Plan Items: Labeled as PCT- and are mainly used to identify pricing for elements in the design that have not been fully determined.

Percentage Lump Sum Items: Lump Sum items that are percentage based pricing.

Parametric Plan Items: Labeled as PARA- and can be used to develop early conceptual estimates when only a rough approximation of the project's dimensions are known.

Composite Plan Items: Labeled as COMP- and these plan items will be assigned quantities based on typical design sections. Composite items are built and maintained by each Bureau.

Percentage Based Plan Items

Percentage based plan items begin with "PCT- "and are searchable in the same method as standard plan items. Percentage items are composed of groups of standard plan items based on work type.



NOTE: A division must be selected for percent-based items to calculate correctly

| ems Load | | | | | |
|---------------------|-----------------|--------------|---------------------------------------|-----|----------|
| | | | Add Item(s) | | |
| Select Item(s): | pct | | > | | |
| | Item Number | UOM | Description | | |
| Item Number | PCT-020 | % of Project | STRUCTURES (020) | Add | |
| No records to displ | PCT-020-000 | % of Project | STRUCTURE REMOVALS (020-000) | Add | ~ |
| | PCT-020-010 | % of Project | EARTHWORK (020-010) | Add | |
| | PCT-020-010-010 | % of Project | STRUCTURE BACKFILL (020-010-010) | Add | |
| | PCT-020-010-020 | % of Project | TEMPORARY SHORING (020-010-020) | Add | |
| | PCT-020-010-030 | % of Project | DEWATERING (020-010-030) | Add | |
| | PCT-020-010-040 | % of Project | FOUNDATION IMPROVEMENTS (020-010-040) | Add | |
| | PCT-020-020 | % of Project | BRIDGES (020-020) | Add | ~ |
| | PCT-020-020-000 | % of Project | SUPERSTRUCTURE (020-020-000) | Add | • |
| | PCT-020-020-000 | % of Project | SUPERSTRUCTURE (020-020-000) | Add | ` |
| | | | | | |
| | | | | | |
| | | | | | |
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| | | | | | OK Cano |
| | | | | | |

It is important to understand the structure and what plan items are being included in a percentage-based item in order to avoid adding duplicate plan items to an estimate. This can occur when a standard plan item is already being included in the Percentage plan item and then was added as a separate plan item to the estimate. To view the components that make up a percentage-based item, right click on the PCT plan item and choose "Expand Item".

| P IMN-029-3(252)530E-78 | | | | | | | | | | | |
|--------------------------------|---------------------|--------------------|-------|-----------------------|-------------|--------------|------------|------|------------|-------|-----|
| IMN-029-3(76)540E-78 | Division Header | | | | | | | | | | |
| IMN-029-3(78)530E-78 | * Name: | Bridge Items | | | | Rep | ort | | | | |
| IMN-029-3(84)540E-78 | Description: | PSS: Division 1 | | | | | ~ | | | | |
| IMN-029-3(85)540E-78 | | | | | | | \sim | | | | |
| IMN-480-1(158)00E-78 | Alternate: | | | Alternate Name: | | | | | | | |
| IMN-480-1(159)00E-78 | Design County: | | - 0 | Use Suggestion: 🗹 | Update Sugg | ested Price | 04/22/2019 | | | | |
| IM-NHS-029-3(190)5303-78 | Use Division Total: | Use Project Tota | al: 🗖 | Use Office Total: | | | | | | | |
| P IM-NHS-029-3(191)5303-78 | Group by Level One: | Group by Level Tw | • 🗆 | Current Total: \$0.00 | Previous | Total: | | | | | |
| IM-NHS-029-3(192)5403-78 | Group by Ecverone. | | 0. | Current Total. \$0.00 | T TCVIOUS | rotal. | | | | | |
| IM-NHS-029-3(193)5403-78 | Item Number | Description | | | | UOM | Quantity | | Unit Price | | Use |
| Office Of Bridges & Structures | PCT-020 | STRUCTURES (020) 🥖 | | | | % of Project | | .000 | | 0.00% | |
| 💼 😡 Annu2017 Annual Estimate | | | Q | Expand Item | | | | | | | .l |
| Annu2018 Annual Estimate | | | | Add Item(s) | | | | | | | |
| 🗈 🕤 Annu2019 Annual Estimate | | | × | Delete Item(s) | | | | | | | |
| B01-12/2017-Layout | | | | Copy Item(s) | | | | | | | |
| 🗝 🚇 1320 78-Pottawattamie | | | | Item Trend Filter | | | | | | | |
| Bridge Items | | | Q | Item Trend Lookup | | | | | | | |

Clicking on the arrow will expand the percentage item showing the hierarchy of subcategories down to the standard plan items that make up the percentage-based plan item.

| | | | | Expand Item | |
|---------------|-----------------|--------------|------|---------------------------------------|---------|
| ltem # | U | ом | Desc | ription | Include |
| PCT-020-000 | % | of Project | STRU | UCTURE REMOVALS (020-000) | |
| PCT-020-010 | % | of Project | EAR | THWORK (020-010) | |
| ltem # | | UOM | | Description | Include |
| PCT-020-010 | -010 | % of Projec | t | STRUCTURE BACKFILL (020-010-010) | |
| PCT-020-010 | -020 | % of Projec | t | TEMPORARY SHORING (020-010-020) | |
| item # | | UOM | | Description | Include |
| 2501-84001 | 2501-8400170 LS | | | TEMP SHEET PILE+SHORING | |
| 2501-84001 | 501-8400171 LS | | | TEMP SHEET PILE, RETAIN WALL | |
| 2501-84001 | 72 | LS | | TEMP SHORING | |
| 2501-84001 | 79 | LS | | TEMP SUPRT | |
| PCT-020-010 | -030 | % of Project | t | DEWATERING (020-010-030) | |
| F PCT-020-010 | -040 | % of Projec | t | FOUNDATION IMPROVEMENTS (020-010-040) | |
| PCT-020-020 | % | of Project | BRID | OGES (020-020) | |
| PCT-020-030 | % | of Project | BOX | CULVERT (020-030) | |
| PCT-020-040 | % | of Project | RETA | AINING WALLS (020-040) | |

The expanded screen also allows for the existing percentage item to be sub divided into more detailed categories and further down to the individual plan items. This can be done by selecting the box in the include column. Once finished click on "OK".

| | | | | Expand Item | |
|-----------------------------|-----------------|--------------|------------------------|---------------------------------------|--------------|
| lte | m # | UOM | Des | cription | Include |
| PC | T-020-000 | % of Project | STR | UCTURE REMOVALS (020-000) | |
| PC | T-020-010 | % of Project | EAR | RTHWORK (020-010) | |
| | ltem # | UOM | | Description | Include |
| Б | PCT-020-010-010 | % of Proj | ect | STRUCTURE BACKFILL (020-010-010) | V |
| F | PCT-020-010-020 | % of Proj | ect | TEMPORARY SHORING (020-010-020) | |
| | item # | UOM | _ | Description | Include |
| | 2501-8400170 | LS | | TEMP SHEET PILE+SHORING | V |
| | 2501-8400171 | LS | | TEMP SHEET PILE, RETAIN WALL | \checkmark |
| | 2501-8400172 | LS | | TEMP SHORING | |
| | 2501-8400179 | LS | | TEMP SUPRT | |
| Б | PCT-020-010-030 | % of Proj | ect | DEWATERING (020-010-030) | |
| Þ | PCT-020-010-040 | % of Proj | ect | FOUNDATION IMPROVEMENTS (020-010-040) | |
| PC | T-020-020 | % of Project | BRID | DGES (020-020) | |
| PC | T-020-030 | % of Project | BOX | X CULVERT (020-030) | |
| PCT-020-040 % of Project RE | | RET | AINING WALLS (020-040) | | |



NOTE: Expanding a PCT based item is permanent and cannot be undone. Make sure that the expanding of the item is necessary, and all items are selected before clicking on "OK".

In this example, the original PCT-020-010 Earthwork item has now been expanded and broken out into the selected plan items. Care should be taken when moving forward to make sure that additional PCT items are not added that already include the plan items and other PCT items already in the estimate. Once an estimate is marked as complete the software will run a duplicate plan item analysis to check for any possible duplicate plan items in the estimate.

| P IMN-029-3(252)530E-78 | | | | | | | | |
|---|-------------------|----------------------------------|-----------------------|------------------------|------------|-------|------------|-----|
| IMN-029-3(76)540E-78 | Division Header | | | | | | | |
| P IMN-029-3(78)530E-78 | * Name | e: Bridge Items | | Re | port | | | |
| P IMN-029-3(84)540E-78 | Description | PSS: Division 1 | | | ~ | | | |
| P IMN-029-3(85)540E-78 | | | | | \sim | | | |
| P IMN-480-1(158)00E-78 | Alternate | e: 🗌 | Alternate Name: | | | | | |
| P IMN-480-1(159)00E-78 | Design Count | r: 🚺 🥝 | Use Suggestion: 🗹 | Update Suggested Price | 04/22/2019 | | | |
| IM-NHS-029-3(190)5303-78 | Use Division Tota | I: 🗸 Use Project Total: | Use Office Total: | | | | | |
| IM-NHS-029-3(191)5303-78 | Group by Level On | Group by Level Two: | Current Total: \$0.00 | Previous Total | | | | |
| IM-NHS-029-3(192)5403-78 | Group by Lever on | | | Trevious Total. | | | | |
| IM-NHS-029-3(193)5403-78 | Item Number | Description | | UOM | Quantity | | Unit Price | Use |
| Office Of Bridges & Structures | 2501-8400170 | TEMP SHEET PILE+SHORING 🥖 | | LS | | 1.000 | \$0. | 00 |
| 🖅 😡 Annu2017 Annual Estimate | 2501-8400171 | TEMP SHEET PILE, RETAIN WALL 🥖 | | LS | | 1.000 | \$0. | 00 |
| 🖅 🎯 Annu2018 Annual Estimate | PCT-020-010-010 | STRUCTURE BACKFILL (020-010-010) | £ | % of Project | | .000 | 0.00 | 0% |
| Annu-2019 Annual Estimate B01-12/2017-Layout U 3120 78-Pottawattamie Bridge Items | | | | | | | | |

Percentage-based plan items are calculated based on the value of the total price of the division. Therefore, it is necessary to have other items in the estimate with an assigned price for the percentagebased items to be analyzed correctly. In this example, a bridge project is currently priced at \$1,751,989.63, but needs to have temporary shoring added. No design information is currently available for this item so a percentage-based item will be used at this stage to price shoring. Adding a percentage plan item uses the same process as described in Chapter 5.2.1.3 Add Or Delete Plan Items.

Historically we added a percentage to the total project. It now makes the item a % of the total project by running iterations. Example of the old method: 100×1.2 would be the add for a 20% item. The system now runs iterations to make the item exactly 20% of the project total. The reason for the change is to better align with the history of the item.

| Division Header | | | | | • | | | | | |
|-------------------|---|-----------------|-------------------------|-------------|----------------|------------|---------------------|--------------|----|------|
| * Nam | e: Design 1031 | | Report |) | | | | | | |
| Descriptio | n: | | 0 | | | | | | | |
| Alternat | e: 🗌 Alternate Name: | | | | | | | | | |
| Design Count | ly: 🚺 🥥 Use Suggestion: 🗹 🔃 | odate Suggested | Price 05/14/2019 | | | | | | | |
| Use Division Tota | al: 🗹 Use Project Total: 🗌 Use Office Total: 🗌 | | | | | | | | | |
| Group by Level On | e: Group by Level Two: Current Total: \$1,761,989 | .63 Previo | us Total: \$1,790,974.0 | 8 | | | | | | |
| Item Number | Description | UOM | Quantity | Unit Price | Use Suggestion | Suggestion | Suggestion Range | Ext. Price | - | Docs |
| 2104-2710020 | EXCAVATION, CL 10, CHANNEL / | CY | 650.000 | \$9.82 | V | \$9.82 | \$8.35 - \$11.54 | \$6,383.00 | NA | D |
| 2402-2720000 | EXCAVATION, CL 20 / | CY | 500.000 | \$24.89 | | \$24.89 | \$21.87 - \$28.33 | \$12,445.00 | NA | D |
| 2403-0100010 | STRUCT CONC (BRIDGE) 🖋 | CY | 600.000 | \$542.55 | 2 | \$542.55 | \$510.42 - \$576.70 | \$325,530.00 | NA | D |
| 2403-7000210 | HIGH PERFORMANCE STRUC CONC 🗡 | CY | 600.000 | \$663.70 | V | \$663.70 | \$643.54 - \$684.49 | \$398,220.00 | NA | D |
| 2404-7775005 | REINFORC STEEL, EPOXY COATED / | LB | 115,000.000 | \$1.00 | | \$1.00 | \$0.94 - \$1.06 | \$115,000.00 | NA | D |
| 2404-7775009 | REINF STEEL, STAINLESS STEEL 🖊 | LB | 110,000.000 | \$2.63 | | \$2.63 | \$2.46 - \$2.81 | \$289,300.00 | NA | D |
| 2414-6424110 | CONC BARRIER RAIL 🗡 | LF | 500.000 | \$70.16 | V | \$70.16 | \$63.62 - \$77.38 | \$35,080.00 | NA | D |
| 2501-0201473 | PILE, STEEL, HP 14X73 A | LF | 5,000.000 | \$52.67 | 2 | \$52.67 | \$47.65 - \$58.23 | \$263,350.00 | NA | D |
| 2507-2638650 | BRIDGE WING ARMORING - EROSION STONE 🖊 | SY | 200.000 | \$25.06 | 2 | \$25.06 | \$5.52 - \$113.81 | \$5,012.00 | NA | D |
| 2507-3250005 | ENGINEER FABRIC 🖉 | SY | 500.000 | \$3.37 | V | \$3.37 | \$3.15 - \$3.61 | \$1,685.00 | NA | D |
| 2507-6800061 | REVETMENT, CLASS E 🗡 | TON | 6,000.000 | \$35.63 | 2 | \$35.63 | \$31.93 - \$39.77 | \$213,780.00 | NA | D |
| 2526-8285000 | CONSTRUCTION SURVEY / | LS | 1.000 | \$11,452.93 | V | 0.65% | 0.40% - 1.20% | \$11,452.93 | NA | D |
| 2533-4980005 | MOBILIZATION / | LS | 1.000 | \$84,751.70 | N | 4.81% | 3.50% - 6.50% | \$84,751.70 | NA | D |

The Temporary Shoring plan item is now shown on the plan item page with the suggested price. For percentage-based items the suggestion and suggestion range will be shown as a percentage and the quantity will be the dollar value of the "Current Total".

| Division Header | | | | 4 | 5 | | | | | |
|--------------------|---|----------------------|---------------|-------------|----------------|------------|---------------------|--------------|----|------|
| * Name | 2. Design 1031 | | Report | | | | | | | |
| Description | 1. | | 0 | | | | | | | |
| Alternate | Alternate Name: | | - | | | | | | | |
| Design Number | r: 🚺 Use Suggestion: 🗹 🛛 🗍 Update S | uggested Price 05/ | 14/2019 | | | | | | | |
| Group by Level One | E Group by Level Two: Current Total: \$1,790,974.08 | Previous Total: \$1, | 809,848.98 | | | | | | | |
| Item Number | Description | UOM | Quantity | Unit Price | Use Suggestion | Suggestion | Suggestion Range | Ext. Price | - | Docs |
| 2104-2710020 | EXCAVATION, CL 10, CHANNEL | CY | 650.000 | \$9.82 | 2 | \$9.82 | \$8.35 - \$11.54 | \$6,383.00 | NA | D |
| 2402-2720000 | EXCAVATION, CL 20 X | CY | 500.000 | \$24.89 | 8 | \$24.89 | \$21.87 - \$28.33 | \$12,445.00 | NA | D |
| 2403-0100010 | STRUCT CONC (BRIDGE) 🛹 | CY | 600.000 | \$542.55 | 2 | \$542.55 | \$510.42 - \$576.70 | \$325,530.00 | NA | D |
| 2403-7000210 | HIGH PERFORMANCE STRUC CONC 2 | CY | 600.000 | \$663.70 | 2 | \$663.70 | \$643.54 - \$684.49 | \$398,220.00 | NA | D |
| 2404-7775005 | REINFORC STEEL EPOXY COATED / | LB | 115,000.000 | \$1.00 | 2 | \$1.00 | \$0.94 - \$1.06 | \$115,000.00 | NA | D |
| 2404-7775009 | REINF STEEL, STAINLESS STEEL | LB | 110,000.000 | \$2.63 | 2 | \$2.63 | \$2.46 - \$2.81 | \$289,300.00 | NA | D |
| 2414-6424110 | CONC BARRIER RAIL | LF | 500.000 | \$70.16 | 2 | \$70.16 | \$63.62 - \$77.38 | \$35,080.00 | NA | D |
| 2501-0201473 | PILE, STEEL, HP 14X73 / | U | 5,000.000 | \$52.67 | 2 | \$52.67 | \$47.65 - \$58.23 | \$263,350.00 | NA | D |
| 2507-2638650 | BRIDGE WING ARMORING - EROSION STONE 🗡 | SY | 200.000 | \$25.06 | Ø | \$25.06 | \$5.52 - \$113.81 | \$5,012.00 | NA | D |
| 2507-3250005 | ENGINEER FABRIC 🖉 | SY | 500.000 | \$3.37 | 2 | \$3.37 | \$3.15 - \$3.61 | \$1,685.00 | NA | D |
| 2507-6800061 | REVETMENT, CLASS E / | TON | 6,000.000 | \$35.63 | 2 | \$35.63 | \$31.93 - \$39.77 | \$213,780.00 | NA | D |
| 2526-8285000 | CONSTRUCTION SURVEY / | 15 | 1.000 | \$11.641.33 | 2 | 0.65% | 0.40% - 1.20% | \$11,641.33 | NA | D |
| 2533-4980005 | MOBILIZATION / | LS | 1.000 | \$86,145.85 | 2 | 4.81% | 3.50% - 6.50% | \$86,145.85 | NA | D |
| PCT-020-010-020 | TEMPORARY SHORING (020-010-020) / | % of Project | 1,790,974 090 | 1.53% | | 1.53% | 0.20% - 27.80% | \$27,401.90 | NA | D |



NOTE: The Ext Price of the PCT plan item is also calculated into the Current Total.

Analyzing and modifying the price for percentage-based plan items uses the same method described in Chapter <u>5.2.2.4.5 Item Trend Filters In iPDWeb</u>. The only difference is the regression analysis is based on the total project price and the percentage of the project that is associated with the percentage plan item.



Percentage Lump Sum Items

For most Lump Sum Items pricing cannot have a suggested price calculated by the software due to varying quantity and materials that are usually found in such plan items. However, the 4 Lump Sum Items shown above differ in the fact that there is no variance in the quantity or the materials. These plan items are known as Percentage Lump Sum Items.

| Item Number | Description | UOM |
|--------------|-----------------------|-----|
| 2526-8285000 | CONSTRUCTION SURVEY / | LS |
| 2528-8445110 | TRAFFIC CONTROL 🖊 | LS |
| 2533-4980005 | MOBILIZATION 🥖 | LS |
| 2590-0000020 | PROJECT MANAGEMENT 🖊 | LS |

The Percentage Lump Sum Items are calculated using a method similar to the Percentage Based Plan Items described earlier in this chapter. When generating a suggested percentage price, the software analyzes other projects that contain the Percentage Lump Sum Item and runs a regression analysis based on the Project Total and the % of the Project for the Lump Sum Item.

| Item Number | Description | UOM | Quantity | Unit Price | Use Suggestion | Suggestion | Suggestion Range |
|--------------|-----------------------|-----|----------|------------|----------------|------------|------------------|
| 2526-8285000 | CONSTRUCTION SURVEY / | LS | 1.000 | \$0.00 | \checkmark | 0.00% | 0.00% - 0.00% |
| 2528-8445110 | TRAFFIC CONTROL 🖊 | LS | 1.000 | \$0.00 | \checkmark | 0.00% | 0.00% - 0.00% |
| 2533-4980005 | MOBILIZATION 🖉 | LS | 1.000 | \$0.00 | \checkmark | 0.00% | 0.00% - 0.00% |
| 2590-0000020 | PROJECT MANAGEMENT 🖋 | LS | 1.000 | \$0.00 | \checkmark | 0.00% | 0.00% - 0.00% |
| 2590-0000020 | PROJECT MANAGEMENT 🖉 | LS | 1.000 | \$0.00 | \checkmark | 0.00% | 0.00% - 0.00% |

V

NOTE: Since the suggested percentage is based on total project value it is necessary to have other plan items priced out in the estimate for the Percentage Based Lump Sum Items to calculate correctly.

Once the suggested price is calculated the percentage used can be modified by right clicking on the plan item and selecting "Modify Lumpsum Percent". It is a good idea to document the reason for manual changes in the notes for that item.

| Name | New Division | | Report | | | | | | | |
|--|--|-----------------|---------------------------------|--------------|----------------|---------------------------------|--|----------------|----|-----|
| Description | New Division | | 0 | | | | | | | |
| Alternate Design Number Group by Level One | Alternate Name: Use Suggestion: Current Total: \$3,086,351.18 | Suggested Price | 06/19/2019 at: \$0.00 | | | | | | | |
| Item Number | Description . | UOM | Quantity | Unit Price | Use Suggestion | Suggestion. | Suggestion Range | Ext. Price | - | Doc |
| 3402-2720000 | EXCAVATION, CL 20 - | CY | 3,000.000 | \$21.81 | | \$21.81 | \$17.23 - \$27.60 | \$65,424.30 | NA | |
| 2403-0100010 | STRUCT CONC (BRIDGE) / | CY | 2,400,000 | \$467.20 | Ø | \$467.20 | \$435.83 - \$500.83 | \$1,121,288.88 | NA | D |
| 2403-7000210 | HIGH PERFORMANCE STRUC CONC 🥓 | CY | 1,700.000 | \$628.84 | N | \$628.84 | \$603.48 - \$655.28 | \$1,069,035.82 | NA | D |
| 2404-7775000 | REINFORC STEEL 🖉 | L8 | 510,000.000 | \$0.87 | ×. | \$0.87 | \$0.80 - \$0.94 | \$443,445.00 | NA | D |
| 2404-7775005 | REINFORC STEEL, EPOXY COATED * | LB | 87,000.000 | \$0.91 | 2 | \$0.91 | \$0.88 - \$0.93 | \$78,830.70 | NA | D |
| 2526-8285000 | CONSTRUCTION SURVEY 2 | LS | 1.000 | \$11,110.86 | R | 0.36% | 0.10% - 1.60% | \$11,110.86 | NA | D |
| 2528-8445110 | TRAFFIC CONTROL / | LS | 1.000 | \$6,401.34 | | 0.21% | 0.00% - 1.00% | \$6,481.34 | NA | |
| 2533-4980005 | MOBILIZATION / | LS | 1.000 | \$208,328.70 | • | 6.75% | 3.10% - 14.70% | \$208,328.70 | NA | D |
| 2590-0000020 | PROJECT MANAGEMENT / | LS | 1.000 | \$82,405.58 | 2 | Modif | y Lumpsum Percent | \$82,405.58 | NA | D |
| | | | | | | Add h Copy tem 1 Rem 1 | rem(s) Litem(s) Litem(s) Litem(s) Liter Liter | | | |

This will open a pop-up window and will allow for a new percentage to be input by the estimator.

| Modify Lumpsum Percent |
|--------------------------------|
| Enter Percent(%): OK Cancel |

Parametric Plan Items

Adding a parametric plan item uses the same process described in Chapter 5.X.X.X: Adding Plan Items. This example is for a 6,000 square foot PPCB bridge.

| Division Header | | | | 1 | ~ | | | | | |
|-------------------|--|--|-----------|------------|----------------|------------|--------------------|----------------|---|------|
| Nam | 8: [Design 1031 | (| Report) | | | | | | | |
| Descriptio | n. Parametric Example | | 0 | | | | | | | |
| Alternat | e: 🗌 Alternate Name. | | - | | | | | | | |
| Design Numbe | r. 🛛 🥥 Use Suggestion: 🗹 🔃 Update Sa | oggested Price 05/1 | 6/2019 | | | | | | | |
| Group by Level On | e: 🗌 Group by Level Two: 🗍 Current Total: \$1,606,648.00 | Previous Total: \$0.0 | 0 | | | | | | | |
| Item Number | Description | UOM | Quantity | Unit Price | Use Suggestion | Suggestion | Suggestion Range | Ext. Price | - | Docs |
| PARA-020-020 | Bridges 🖊 | Parametric (Square Feet of Deck) | 6,600,000 | \$228.28 | Ø | \$228.28 | \$97.70 - \$533.35 | \$1,506,648,00 | | D |

Parametric plan items begin with "PARA-"and can be used to develop early conceptual estimates when only a rough approximation of the projects dimensions are known such as square yards of paving or square footage of bridge deck. They are searchable similar to standard plan items.

Parametric plan items are composed of a hierarchy of standard plan items that have been grouped together similar to the percent-based plan items. As with the Percentage Based Plan Items, care should be taken when adding Parametric based plan items to avoid duplicating any existing plan items in the estimate.

| Select Item(s): PARA- Item Number PARA-010 | ЦОМ | Add Item(s) | |
|---|---------------|--------------------------|-------|
| Select Item(s): PARA- Item Number PARA-010 | ЦОМ | > | |
| Item Number PARA-010 | · LIOM | | |
| PARA-010 | UOW | Description | |
| | Parametric | Roadway | Add |
| lo records to displ PARA-010(S | Y) Parametric | Roadway parametric by SY | Add |
| PARA-010-00 | 00 Parametric | ROADWAY REMOVALS | Add |
| PARA-010-0 | 10 Parametric | Earthwork | Add |
| PARA-010-02 | 20 Parametric | Surfacing | Add |
| PARA-010-04 | 40 Parametric | Barrier | Add |
| PARA-010-0 | 50 Parametric | Drainage | Add |
| PARA-010-00 | 60 Parametric | Fencing | Add 🧹 |
| PARA-010-0 | 70 Parametric | Noise Wall | * |

When working with Parametric plan items it is important to select filters that are similar to the material of construction. In this scenario we only want the price for PPCB and will need to adjust the assigned work types. It will be necessary to clear all existing work types. To do this, select all the items shown in the Assigned Work Type box and then click on "Remove" to clear out all existing filters. Then click on 010-PPCB and "Add" to have those filters applied to the Assigned Work Type box. Click on "Lookup" to go to the Item Trend Filter Screen.

| Main Locations Work Type Project Work Type * Assigned Work Type • 000-GENERAL • Assigned Work Type • 010-ROADWAY • 020-STRUCTURE • 020-STRUCTURE • 000-REMOVAL • 020-BRIDGE • 000-NEW AND REPLACE • 020-BRIDGE • 000-CCS • 010-PPCB - 2013 - BRIDGE NEW - PPCB • 2013 - BRIDGE NEW - PPCB - 2023 - BRIDGE REPLACEMENT • 2020-STELE GIRDER - 020-STEEL GIRDER • 020-STEEL GIRDER - 020-STEEL GIRDER • 020-STEEL GIRDER - 020-STEEL GIRDER • 020-STEEL GIRDER - 030-UNKNOWN | em Trend Lookup | | |
|--|--|----------------------|--|
| Project Work Type * Assigned Work Type © 000-GENERAL © 010-ROADWAY © 020-STRUCTURE © 000-REMOVAL © 020-BRIDGE © 000-NEW AND REPLACE © 000-CCS © 010-PPCB © 010-PPCB © 2013 - BRIDGE NEW - PPCB © 2013 - BRIDGE NEW - PPCB © 2023 - BRIDGE NEW - PPCB © 2023 - BRIDGE REPLACEMENT © 020-STEEL GIRDER © 020-STEEL GIRDER © 020-STEEL GIRDER | Main Locations Work Type Estin | mate Parameters | |
| 000-GENERAL 010-ROADWAY 020-STRUCTURE 000-REMOVAL 000-REMOVAL 000-NEW AND REPLACE 000-NEW AND REPLACE 000-CCS 010-PPCB 2013 - BRIDGE NEW - PPCB 2023 - BRIDGE REPLACEMENT 2023 - BRIDGE REPLACEMENT 203 - BRIDGE REPLACEMENT 2053 - BRIDGE AND APPROAC 020-STEEL GIRDER 020-STEEL GIRDER 030-UNKNOWN | Project Work Type | * Assigned Work Type | ~ |
| Image: 010-WIDENING Image: 020-REHABILITATION AND MAINTEN. Image: 030-BOX CULVERT Image: 040-RETAINING WALLS Image: 030-LANDSCAPING Image: 040-EROSION CONTROL | Indject Work Type 000-GENERAL 010-ROADWAY 020-STRUCTURE 000-REMOVAL 020-BRIDGE 000-NEW AND REPLACE 000-CCS 010-PPCB 010-PPCB 010-PPCB 020-3 - BRIDGE REPLACEMENT 2053 - BRIDGE AND APPROAC 020-STEEL GIRDER 020-STEEL GIRDER 020-REHABILITATION AND MAINTEN. 030-BOX CULVERT 040-RETAINING WALLS 040-EROSION CONTROL | Add Remove | \[\] \[|

The Item Trend Lookup screen will display the analysis of other PPCB bridges based on the size and unit cost. Additional analysis of the price and modification of the filters can be done as described in Chapter <u>5.2.2.4.5 Item Trend Filters In iPDWeb</u>.



Additional costs may need to be added to the base parametric cost to have a better estimate of the total bridge costs. Some items such as bridge removal, revetment, and mobilization can be accounted for by adding the appropriate plan item.

| Division Header | | | | | | 2 | | | | | |
|---|---------------------------|-----------------------------|---------------------------|----------|-------------|----------------|---------------|------------------|-------------|------|------|
| * Name | R | eport | | | | | | | | | |
| Description: Parametric Example Alternate: Alternate Name: | | | | 0 | | | | | | | |
| | | | | - | | | | | | | |
| Design Number | c 🔽 🥥 | Use Suggestion: 🗹 🛛 🕕 | date Suggested Price 05/1 | 6/2019 | | | | | | | |
| Group by Level One | : 🔲 Group by Level Two: 🗌 | Current Total: \$997,648.43 | Previous Total: \$942, | 678.00 | | | | | | | |
| Item Number | Description | | UOM | Quantity | Unit Price | Use Suggestion | Suggestion | Suggestion Range | Eut. Price | - | Docs |
| 2401-6745625 | RMVL OF EXISTING BRIDGE | | LS | 1.000 | \$0.00 | × | \$0.00 | | \$0.00 | NA | D |
| 2507-6800061 | REVETMENT, CLASS E 🖌 | | TON | 000 | \$0.00 | 2 | \$0.00 | | \$0.00 | NA | D |
| 2526-8285000 | CONSTRUCTION SURVEY / | | LS | 1.000 | \$7,582.13 | 2 | 0.76% | 0.40% - 1.60% | \$7,582.13 | NA | [D] |
| | MOBILIZATION / | | | | | 4004 | in the second | | | 1922 | 1000 |
| 2533-4980005 | MOBILIZATION / | | LS | 1.000 | \$47,388.30 | × | 4.75% | 3.50% - 6.40% | \$47,388.30 | NA | D |

Composite Plan Items

Composite plan items are a set of plan items that have been grouped together for estimating purposes. These plan items will form a larger component of a project. These plan items will be assigned quantities based on typical design sections. They begin with "COMP- "and are searchable like standard plan items. Composite items are built and maintained by each Bureau.

| ems Load | | | | | |
|---------------------|-------------|-----|---|---------------|----|
| | | | Add Item(s) | | |
| Select Item(s): | COMP- | | > | | |
| | Item Number | UOM | Description | | |
| Item Number | COMP-1112 | EA | Composite Major Right Turn Lane (72,787.72) | Add | |
| No records to displ | COMP-1113 | EA | Composite Minor Right Turn Lane (35,255.94) | Add | ^ |
| | COMP-1114 | EA | Composite Maximum Left Turn Lane (141,110.51) | Add | |
| | COMP-1115 | EA | Composite Minimum Left Turn Lane (95,347.99) | Add | |
| | COMP-1600 | EA | Composite 50' Median Dual Crossover (224,419.06) | Add | |
| | COMP-1601 | EA | Composite 64' Median Dual Crossover (269,382.89) | Add | |
| | COMP-1602 | EA | Composite 68.24' Median Dual Crossover (297,297.11) | Add | |
| | COMP-1603 | EA | Composite 50' Median Interchange Crossover (178,9021 | 5) <u>Add</u> | |
| | COMP-1605 | EA | Composite 64' Median Interchange Crossover (220,665.3 | 5) <u>Add</u> | * |
| | | | | | |
| | | | | | ок |

The individual plan items that make up a composite item can be viewed by right clicking on the composite item and clicking "Composite Items".

| Division Header | | | | | | 5 | | | | | |
|--|---|--|----------------------------|----------|------------|----------------|------------|------------------|------------|-------|-----|
| * Name | Design 1031 | | Report | | | | | | | | |
| Description | Composite Example | | | 0 | | | | | | | |
| Alternate Design Number Group by Level One | Atten | ate Name: Update Sug suggestion: I Update Sug rrent Total: \$0.00 Previous | rested Price 05/1 Total | 16/2019 | | | | | | | |
| nem Number | Description | | UOM | Quantity | Unit Price | Use Suggestion | Suggestion | Suggestion Range | Ext. Price | - | Dow |
| COMP-1112 | Composite Major Right Turn Lane (72,787.72) | (1) Expand Item | EA | 000 | \$0.00 | × | \$0.00 | | \$0. | 10 NA | D |

Composite items have pre-assigned typical quantities that are based on experience with the type of work, however these quantities can be adjusted in the Composite Items screen. The software will analyze and assign a price for each of the plan items.

| Composite Items | | | | |
|-----------------|----------------------------------|------|---------------|-----------|
| Item Number | Description | Unit | Org. Quantity | Quantity |
| 2102-2710070 | EXCAVATION, CL 10, RDWY+BORROW | CY | 1,222.000 | 1,222.000 |
| 2102-2710090 | EXCAVATION, CL 10, WASTE | CY | 668.000 | 668.000 |
| 2111-8174100 | GRANULAR SUBBASE | SY | 1,136.000 | 1,136.000 |
| 2121-7425010 | GRANULAR SHLD, TYPE A | TON | 159.000 | 159.000 |
| 2301-1033090 | STD/S-F PCC PAV'T, CL C CL 3, 9" | SY | 913.000 | 913.000 |
| 2601-2636044 | SEED+FERTILIZE (URBAN) | ACRE | .750 | .750 |
| | | | | |
| | | | | OK Cancel |

This price is then combined into an overall price for the composite item. Composite items can also be expanded into the individual plan items by right clicking on the composite item and then selecting "Expand Item".

| Division Header | | | | | | | | | | | |
|--|---|---|--------------------------------------|-------------|-------------|----------------|-------------|-------------------------------|-------------|----|------|
| Name | Design 1031 | | Rep | ort | | | | | | | |
| Description | Composite Example | 0 | | | | | | | | | |
| Alternate Design Number Group by Level One | Alternat | e Name: ggestion: ☑ Update Sugge int Total: \$87,392.97 Previ | nted Price 05/16 ous Total \$0.00 | - 5/2019 | | | | | | | |
| Item Number | Description | | UOM | Quantity | Unit Price | Use Suggestion | Suggestion | Suggestion Range | Ext. Price | - | Docs |
| COMP-1112 | Composite Major Right Turn Lane (72,787.72) 🗡 | Ci. Expand Item | - | 1.000 | \$87,392.97 | × | \$87,392.97 | \$79,508.66 - \$101,468.60 | \$87,392.97 | NA | ۵ |
| | | Composite Items Add Item(s) Delete Item(s) Copy Item(s) Item Trend Filter | | | | | | | | | |

V

NOTE: It is a good idea to review the attached document on the far right of the item information. That document should explain the assumptions and dimensions used for the component item. If a document is not attached to the item, please contact Design Methods Section.

These plan items can then be adjusted and analyzed separately.

| Division Header | | | | 1 | • | | | | | |
|--|---|---------------|----------------|------------|----------------|------------|-------------------------|-------------|----|------|
| Nam | ne: Design 1031 | | Report | | | | | | | |
| Descriptio | Dn: Composite Example | | 0 | | | | | | | |
| Alternal Design Numb Group by Level Or | te:Atternate Name: er:Use Suggestion: ☑Ugeters/sugge ne:Group by Level Two:Current Total: \$87,392.97 | sted Price 05 | 5/16/2019 0 | | | | | | | |
| Rem Number | Description | UOM | Quantity | Unit Price | Use Suggestion | Suggestion | Suggestion Range | Ext, Price | 1 | Docs |
| 2102-2710070 | EXCAVATION, CL 10, RDWY+BORROW (Composite Major Right Turn Lane (72,787.72)) | CY | 1,222.000 | \$10.30 | R | \$10.30 | \$9.13 - \$11.61 | \$12,585.38 | NA | D |
| 2102-2710090 | EXCAVATION, CL 10, WASTE (Composite Major Right Turn Lane (72,787.72)) | CY | 668.000 | \$10.40 | M | \$10.40 | \$7.63 - \$14.17 | \$6,948.54 | NA | D |
| 2111-8174100 | GRANULAR SUBBASE (Composite Major Right Turn Lane (72,787.72)) 🖉 | SY | 1,136.000 | \$8.35 | V | \$8.35 | \$6.49 - \$10.74 | \$9,482.19 | NA | D |
| 2121-7425010 | GRANULAR SHLD, TYPE A (Composite Major Right Turn Lane (72,787.72)) 🖍 | TON | 159.000 | \$27.10 | 2 | \$27.10 | \$23.26 - \$31.58 | \$4,308.93 | NA | D |
| 2301-1033090 | STD/S-F PCC PAV'T, CL C CL 3, 9" (Composite Major Right Turn Lane (72,787.72)) | SY | 913.000 | \$56.92 | | \$56.92 | \$55.27 - \$63.54 | \$51,963.40 | NA | D |
| 2601-2636044 | SEED+FERTILIZE (URBAN) (Composite Major Right Turn Lane (72 787 720 | ACRE | 750 | \$7 806 05 | V | \$2,806.05 | \$2 200 22 . \$2 427 88 | \$2 104 52 | NA | |

Chronology of Changes to Manual Section:

5.1.2 Specialty Plan Items in iPDWeb 11/07/2024 NEW