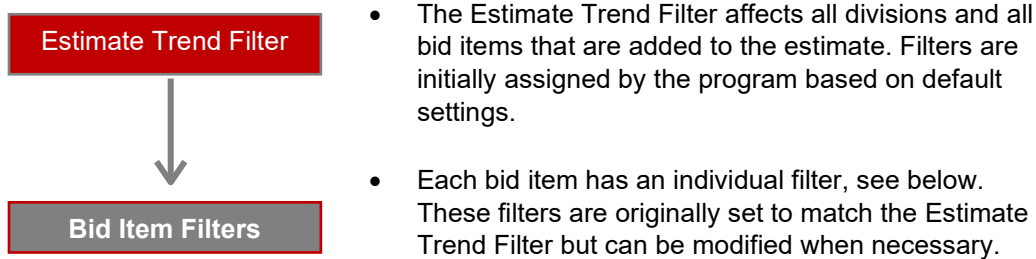![IOWA DOT logo]
TRANSPORTATION DEVELOPMENT DIVISION

Estimate Trend Filters

Previous estimating tools were based on a broad average cost across all work types for bid items over a 2-year period. That broad method worked well for overall programming but could be noticeably inconsistent project to project. iPDWeb allows for bid item pricing to be developed based on similar projects with the use of the **Estimate Trend Filters.** Estimate Trend Filters identify parameters and characteristics from past projects that have similarities to the current estimate. The bid items from these identified projects are then used to run a regression analysis to predict the pricing for items in the estimate. This allows for a more detailed analysis of the pricing for bid items. Trend filters can be set globally for bid items at the estimate level and further defined for each individual bid item with the Item Trend Lookup (See Chapter 5.2.2.4.5_Item_Trend_Filters_In_iPDWeb).

The program will automatically apply default filters that in most cases will identify sufficient past projects to develop cost data and will not require the user to adjust the filters. However, changes can be made by the user in situations where more detailed pricing analysis is required.

Figure 1: Filter Workflow

- The Estimate Trend Filter affects all divisions and all bid items that are added to the estimate. Filters are initially assigned by the program based on default settings.

- Each bid item has an individual filter, see below. These filters are originally set to match the Estimate Trend Filter but can be modified when necessary.

⚠️ **NOTE:** Any changes to the Estimate Trend Filter will overwrite all filters at the Plan Item level. It is highly recommended to not change the estimate trend filter after modifications have been made to individual bid item filters to avoid the potential loss of work.

Estimate Trend Filter

The Trend Filter button is located on the main estimate page. Setting the Trend Filter at the Base Estimate level will apply the selected filters to all the plan items in all of the containers in the Base Estimate.
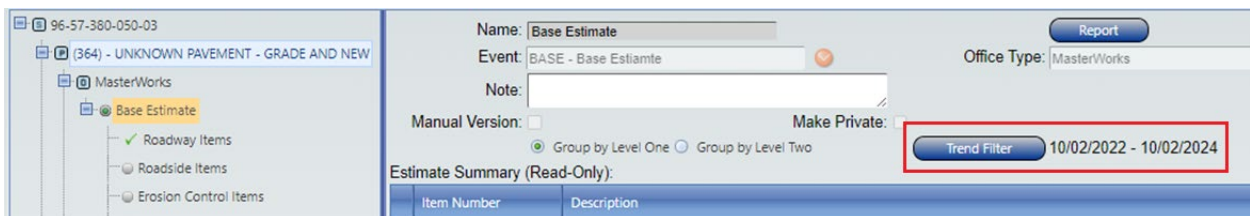
⚠️ **NOTE:** Individual plan item filters can later be modified to allow for more detailed cost analysis.

Once you select the trend filter, a popup will appear giving filter option tabs for Main, Locations, Work Type, and Estimate Parameters. Each tab will have default settings applied to allow for a broad selection of bid items to be analyzed. The "Main" tab allows for projects to be filtered by date, bidders, item price, quantity, delivered by, and season of letting. The default filters are set as shown in the graphic but can be changed if needed.


> **NOTE:** The estimator should ensure the "End Date" field matches the current date to allow the most up to date pricing history. It is recommended to use a 2-year period for the Begin and End Date fields. For example, if the current date is 10/2/2024, the End Date field should be set to 10/2/2024 and the Begin Date field should be set to 10/2/2022.

> **BEST PRACTICE:** Leave filters at default settings until after the first analysis of plan items to see the data set provided and to avoid the number of past projects used to calculate the unit price of the plan items to become too small to be considered useful.

The "Locations" tab allows for projects to be filtered by urban and rural, district, and county. The default setting has no filters applied for this tab to allow for maximum number of projects to be included. When both Urban and Rural are selected only projects that have both a rural and urban designation will be returned (this is an "and" function and not an "or" function).
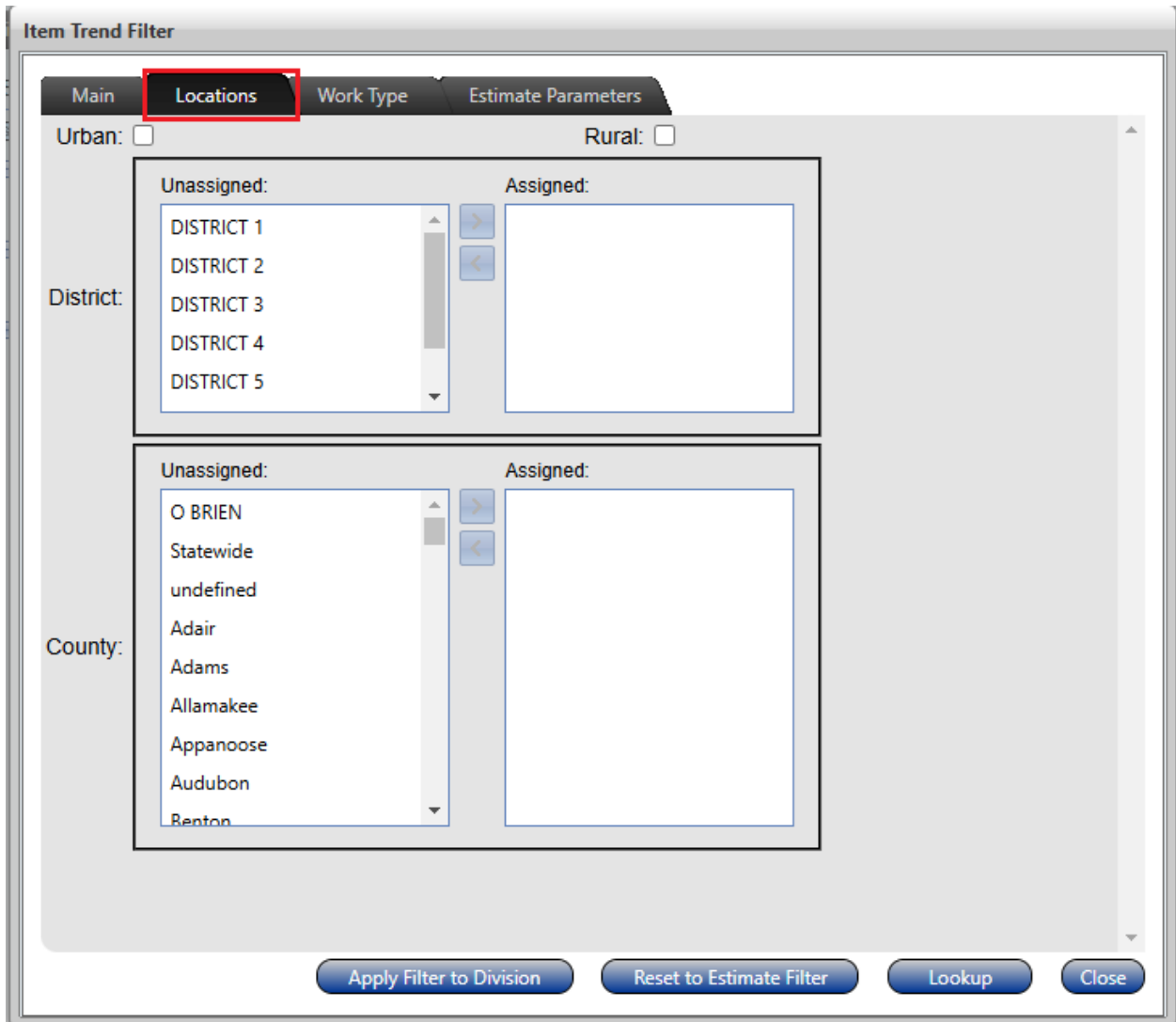
The "Work Type" tab allows for projects to be filtered based on the assigned work type. The program will automatically assign all work types to capture the maximum number of projects to be analyzed. The assigned work types can be filtered down if desired.
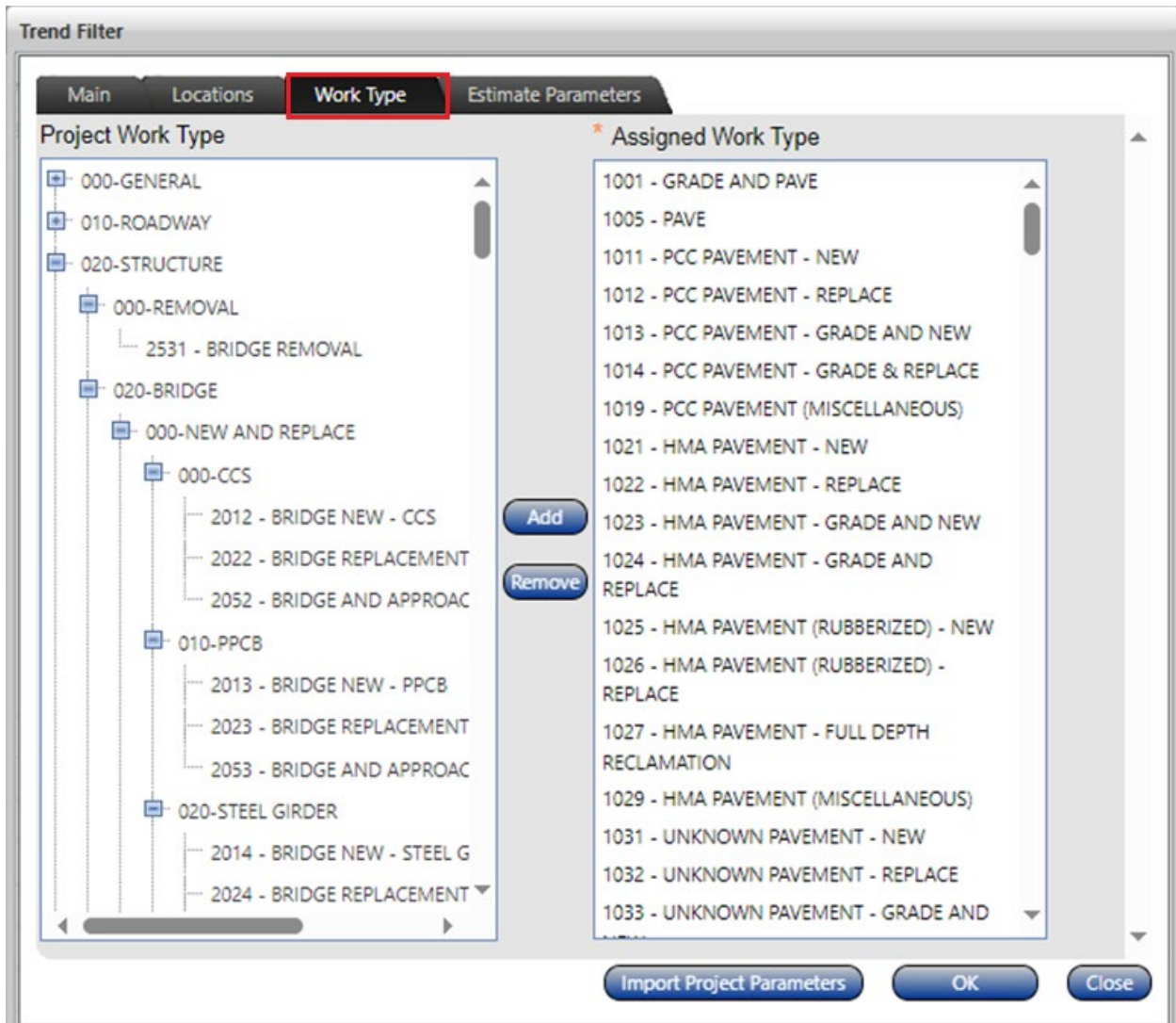
The "Estimate Parameters" tab should not be used at this time.

After all desired filters have been selected, click on the OK button. The program will now search out projects matching the chosen filters.

NOTE: Clicking OK will cause previous filters in all containers that have not been marked complete in the estimate to be reset to the current trend filter. This includes any filters that were previously changed for individual bid items.
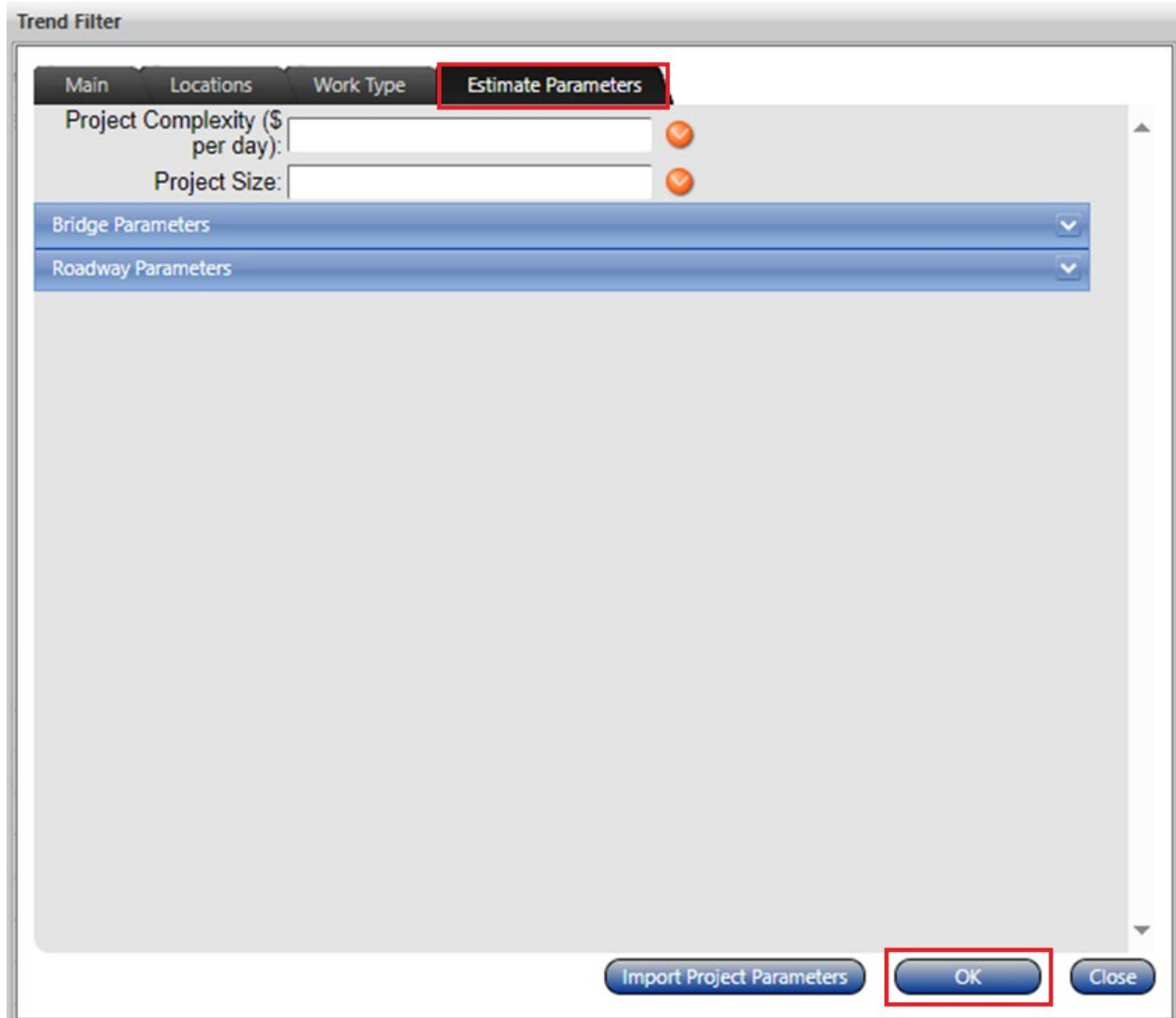
A dialog box will appear noting how many projects were found, as shown below.
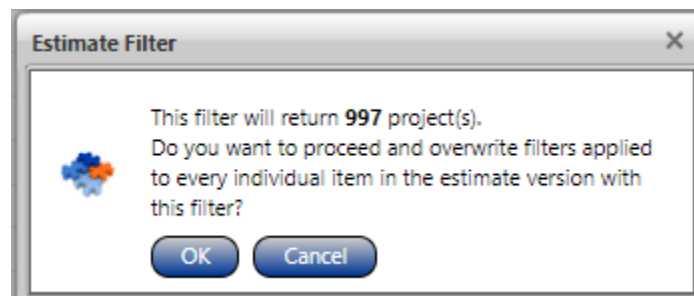
If less than 10 projects are generated, then it will be necessary to go back and expand the filters to include more projects.

BEST PRACTICE: It is recommended to have a minimum of 10 projects in order to have sufficient data to generate unit pricing.

It is important to note that modifying the estimate trend filter will not affect estimates in containers that are marked "complete". If a container that has already been marked complete needs to be updated to match a revised trend filter, the user must first mark that container incomplete. To do this, right click on the container and select "Mark Incomplete".
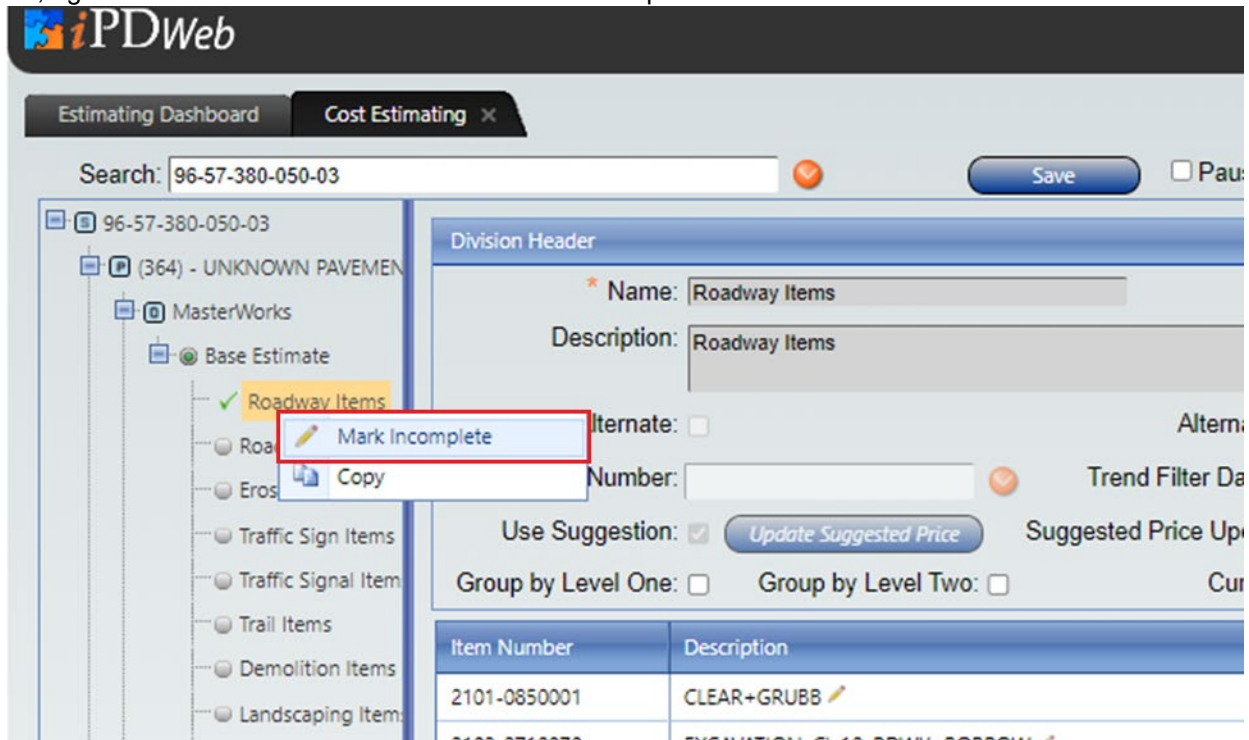
Next, ensure the "Use Suggestion" check box is marked. Click "Update Suggested Price" to get updated unit prices based on the revised trend filter.
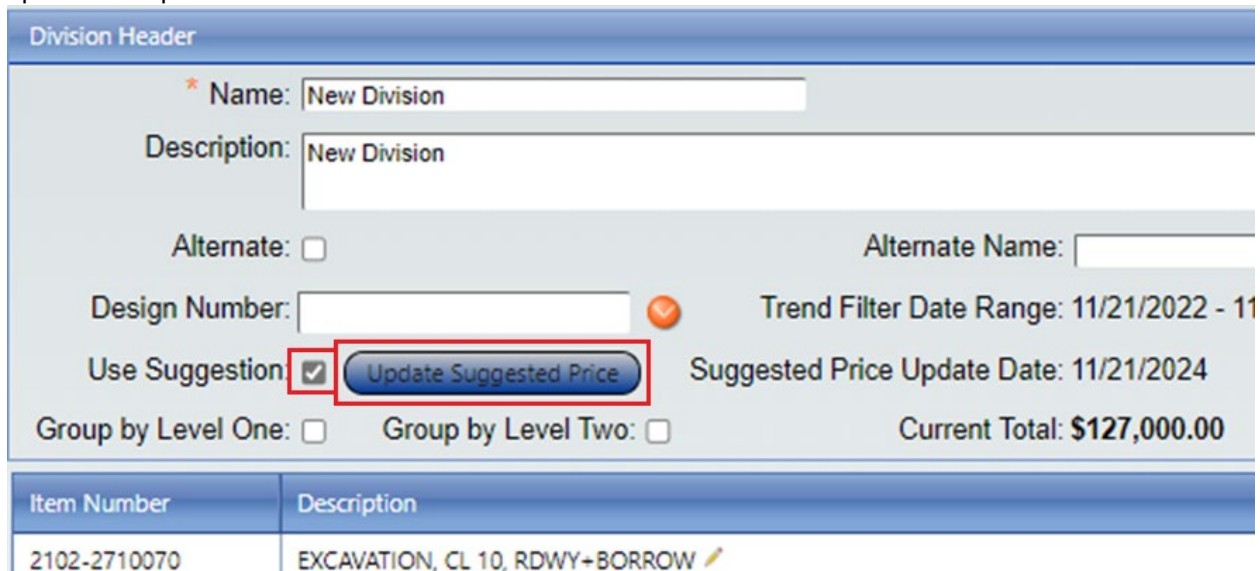
Item Trend Filter

Item trend filters will only affect the specific items selected. The other items will still be set to the estimate trend filter.

Select the desired item and right click and select the Item Trend Filter. The filter options are the same as the one for the estimates and the same best practices apply to the item too.

Once the desired adjustment has been made select lookup.
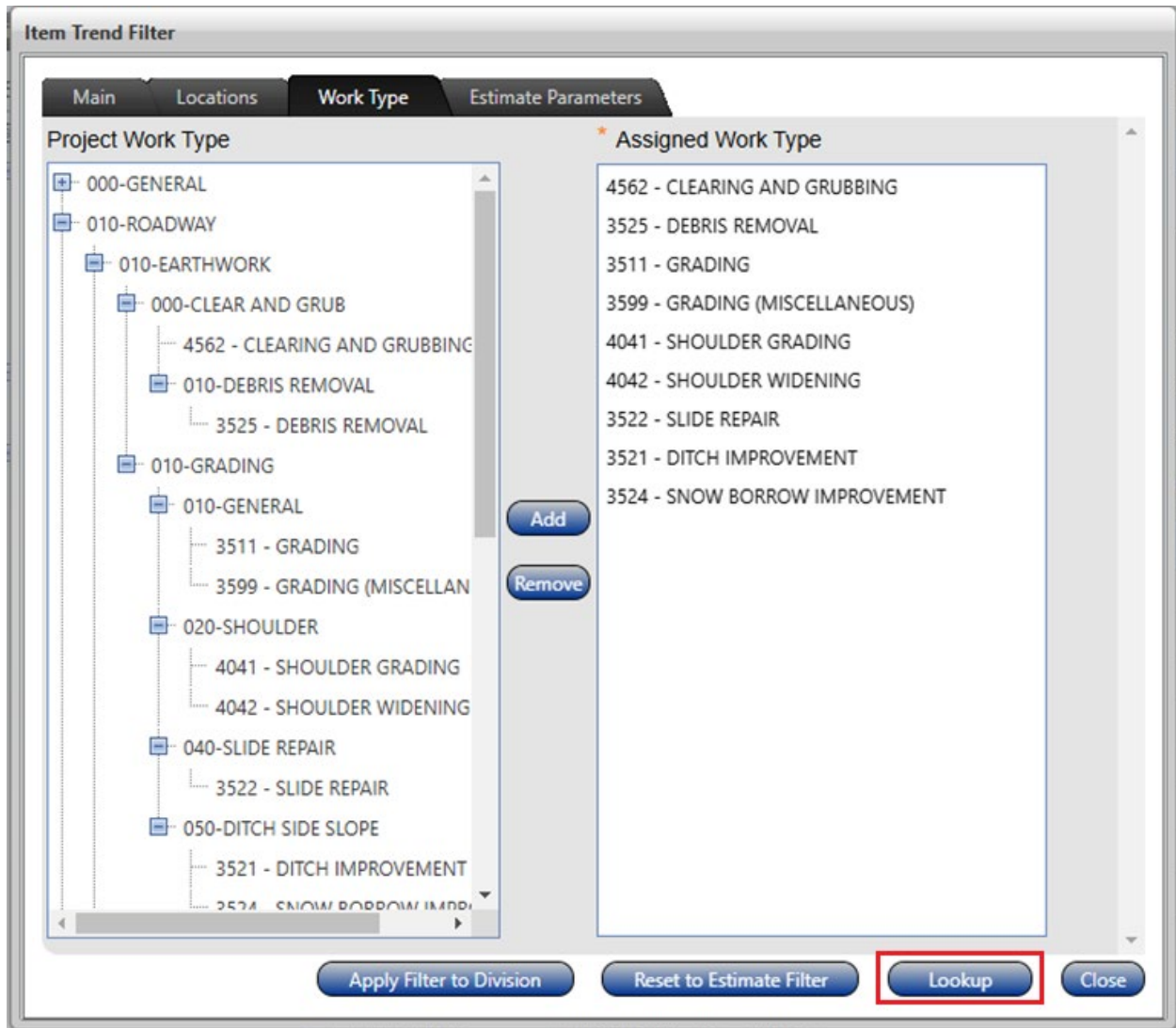
Review the results of the changes. Note the number of samples. If you are happy with the changes, click the accept button.

Notice the suggested price will be highlighted with red lettering for items with Item Trend Filters applied.

Chronology of Changes to Manual Section:

5.2.1.1.5 Estimate Trend Filters

11/07/2024	NEW
12/20/2024	Added information about "End Date" field
	Added information about how to update a container that was previously marked complete with an updated estimate trend filter