



Wisconsin Department of Transportation

# Quantities 2 Plans User Guide

Quantities to Plans User Guide - Sept. 15, 2016



WisDOT - DOT Q2P Support Committee  
September 15, 2016

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WisDOT Quantities 2 Plans workbook and macros (20160915) version 1.4

AASHTO Trns•port PES 5.9g

AASHTOWare Project Estimator 2.14a-1

AASHTOWare Project Preconstruction

Adobe Acrobat Pro DC

Microsoft Office Excel 2013

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Wisconsin Department of Transportation  
Hill Farms State Transportation Building  
4802 Sheboygan Avenue  
P.O. Box 7999  
Madison, WI 53707-7999

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## INTRODUCTION

### Quantities 2 Plans

Quantities 2 Plans (Q2P) was developed by the Wisconsin Department of Transportation to create a single repository of construction bid item data for maintaining a live link between the engineer's estimate, quantity calculations, and the construction plan miscellaneous quantity (MQ) sheets. Q2P is a Microsoft® Excel® macro-enabled workbook-based application that contains all the current bid items (from the WisDOT Standard Specifications for Highway and Structure Construction).

The MQ plan sheets are created in Microsoft® PowerPoint® and link to Q2P. The data is updated by design staff from scoping phase through PS&E, when the estimate is uploaded into AASHTO Trns•port PES® or AASHTOWare Project Preconstruction (AWP Preconstruction). When a project estimate is submitted to Central Office at PS&E phase, Q2P is no longer considered the official engineer's estimate. At this stage, region policy dictates whether or not Q2P is kept current with the changed data in Trns•port PES or AWP Preconstruction (from PS&E review revisions, addenda, etc.)

The WisDOT Q2P Support Committee maintains Q2P (the workbook and macros), and provides support via the [DOTQ2P@dot.wi.gov](mailto:DOTQ2P@dot.wi.gov) (DOT Q2P) email address. The WisDOT Estimating Group is an additional resource that provides best practices and information related to construction cost estimating.

Visit <http://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrcs/tools/estimating/est-q2p.aspx> to subscribe to the WisDOT Q2P email list for Q2P news or to find the name of power users in your region for support. Notifications for updates, or tips & tricks, etc. are shared via this distribution list.

Quantities 2 Plans contains some menu items that have been disabled due to incompatibility with Office 2013, or because they are related to a legacy workflow.

### Confidentiality Notice

Engineering estimates are always treated as **confidential before, during and after the letting** by WisDOT. Engineer estimate data should not be released outside of WisDOT with the exception of the Federal Highway Administration and engineering consultants working directly for WisDOT. The State Transportation Agency (i.e. WisDOT) policy is further explained in [Appendix C](#).

When sharing information with the public, or when a general estimate is required in a project report (e.g. the Work Zone Transportation Management Plan), obtain the project estimate range from region planning section's Public Report.

## USING QUANTITIES 2 PLANS

### 1. Before You Get Started

Quantities 2 Plans (Q2P) requires system files to be installed. WisDOT staff will need to contact the DOT IT Service Desk for installation of the necessary system files. Simply copying the C:\Q2P in a disk image or from another user will not be adequate for the application to operate.

Q2P requires a C:\temp directory and will create a C:\Q2P\temp directory as needed.

The workbook **template (XLTM)** and **macros (XLAM)** must be in [C:\Q2P](#) on Windows® XP and Windows® 7. The project **working file (XLSM)** should be stored in your project estimate folder, or where your region's policy dictates.



Q2P updates are pushed to WisDOT staff's workstations by IT. These updates will delete (and recreate) the entire C:\Q2P directory (and its subdirectories).

---

Q2P is currently supported under Microsoft® Office 2013 (32-bit) on Windows 7 (32-bit version).

Q2P is not expected to run under any 64-bit version of Office as Microsoft does not provide 64-bit versions of the necessary (ActiveX) Common Controls. Q2P can also possibly run on a 32-bit version of Office on Windows 8 (64-bit), provided installation of the 32-bit Common Controls is allowed. This environment is currently untested.

## 2. Begin a New Project – Entering Project Information

1. Open the **Q2P.xltm** workbook and enable the macros.

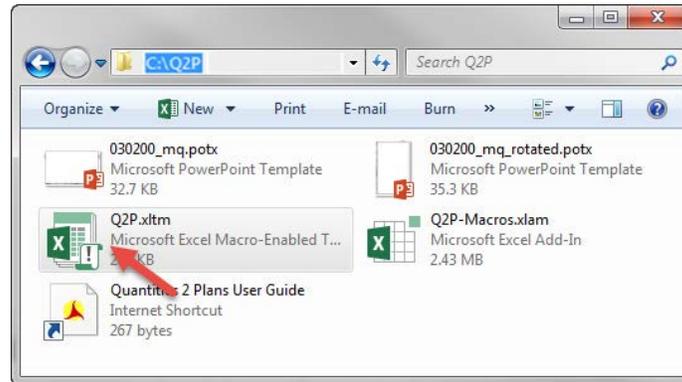


Figure 2.1 The Excel launch icon for Q2P.

*If security warnings display (Figure 2.2), enable the Q2P macros. Alternatively, to avoid these messages in the future, the Q2P application directory can be added as a trusted location and macros can be allowed to run without prompt. See the [Revising Security Settings in the Miscellaneous Helpful Information](#) section for more information.*

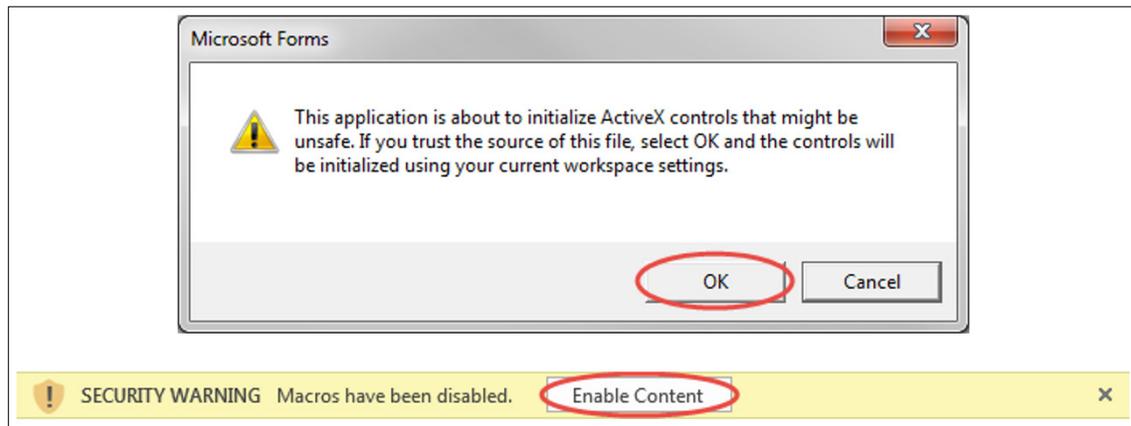


Figure 2.2 Security warnings.

Once the macros are enabled, the **ADD-INS** tab will appear on the ribbon (Figure 2.3). This tab houses all of Q2P’s specific commands and functionality.

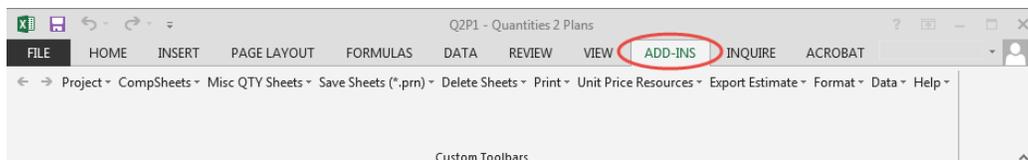


Figure 2.3 Q2P-specific commands found under the ADD-INS tab.

- Verify the date of the WisDOT Standard Specifications. The example below uses the 2017 edition.

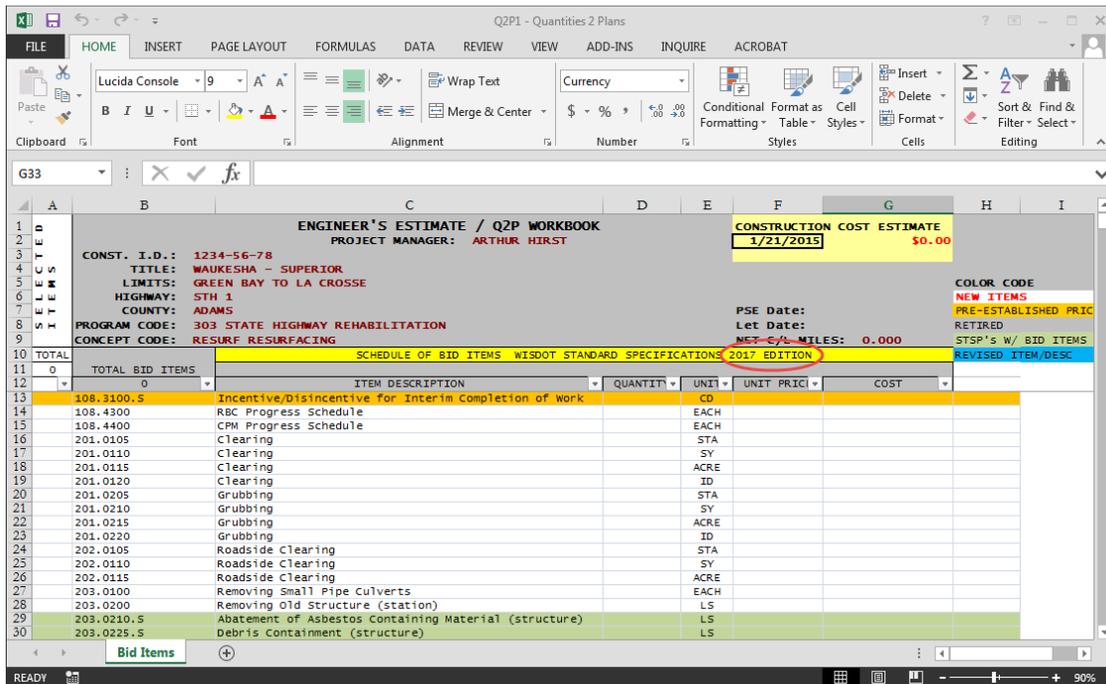


Figure 2.4 Initial view of Q2P: The main “Bid Items” worksheet.

- Save the workbook, using the **0000000\_mqw.xlsm** format, where 0000000 is the associated construction ID. Store the working file under your project estimate folder, or where your region’s policy dictates. A date or other version related text can be added to the file name (e.g., 12345678\_mqw-30REVIEW.xlsm).



Never save the file in C:\Q2P as this directory is deleted and recreated during updates.

- Enter all the project information, including those found at the bottom of the worksheet (Figure 2.7), which can all be obtained from FIIPS through **Project > Funding...** and clicking **Category # 00n0** for more detailed information. The information in Q2P must match FIIPS information **EXACTLY**.



Do not insert any new rows or columns or delete existing ones in the Project Information section (rows 1-12, columns A-I). Also, do not edit any table or field headings/labels such as “CONST. I.D.:", “UNIT PRICE”, “CONSTRUCTION COST ESTIMATE”, etc.

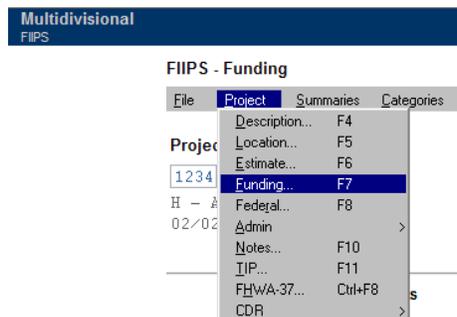


Figure 2.5 FIIPS menu navigation.

w/ Del add-on	w/o Del add-on	Type	Limit	Priority	% w/in priority	State app.	Fed app/ Demo ID	Ent	Alloc	Emk	
<b>Category # 0010</b>		<b>Category estimate</b>									<b>Category desc: Roadway Construction</b>
Fed Imp Ty 05	\$2,854,794.33										
\$2,348,314.47	\$2,283,835.46	FEDERAL	Unlimited	1	80.000%	383	L20E	N	Y	N	
\$587,078.62	\$570,958.87	STATE	Unlimited	1	20.000%	363		N	Y		
\$2,935,393.09	\$2,854,794.33										
<b>Category # 0020</b>		<b>Category estimate</b>									<b>Category desc: Bridge Overlay</b>
Fed Imp Ty 14	\$21,703.17										
\$17,852.73	\$17,362.54	FEDERAL	Unlimited	1	80.000%	383	L20E	N	Y	N	
\$4,463.18	\$4,340.63	STATE	Unlimited	1	20.000%	363		N	Y		
\$22,315.91	\$21,703.17										

Figure 2.6 FIIPS project information

Always use the dialog box to edit the category information and do not edit their headings (i.e. “Categories”) on the “Bid Items” worksheet.

 **Never delete Category rows on the main “Bid Items” worksheet in Excel. If the category is not needed, select the blank entry at the beginning of the dropdown list.**

Figure 2.7 Categories, Federal Work Types and Funding entry in Q2P.

If more categories are needed, clicking in the **CATEGORIES** column under the last used category will auto-populate the blank row with a new one. If the desired work type is not in the list, type it in (50 – New Tunnel, for example).

 *If a category row does not exist for a category on an item worksheet, Q2P will not recognize any data for that category in the bid items quantity totals.*

5. Save the changes made to this workbook. Saving (to your local computer or a network drive) will enable Excel’s Autosave feature, reducing the risk of data loss in the event of a program crash.

### 3. Contingency Amounts



Do not include construction contingencies in the Delivery Cost field in Q2P, and do not keep contingencies in the final estimate.

In Q2P, a transient, mock bid item for contingencies is included for each category.

The items **SPV.0999.10, SPV.0999.20, etc.** are used for this purpose. A separate contingency item is required for each category as the appropriate percentage will vary. Multiple items per each category can also be used, if separating the costs is desired (e.g. Traffic Control and Drainage both in Cat. 0010).

Delivery cost is different than contingency amounts used in preliminary cost estimates; it is an estimate of staffing costs during the construction phase of a project. Prior to final submittal of the cost estimate, this value should be coordinated with the delivery cost/percentage in FIIPS for the project.

SCHEDULE OF BID ITEMS WISDOT STANDARD SPECIFICATIONS 2017 EDITION							
10	TOTAL						
11	0	TOTAL BID ITEMS					
12		0	ITEM DESCRIPTION	QUANTIT	UNIT	UNIT PRIC	COST
2466		SPV.0205	Special		WD		
2467		SPV.0210	Special		WK		
2468		SPV.0999.10	CONTINGENCY (10. CAT 0010 XX%)		\$\$\$		
2469		SPV.0999.20	CONTINGENCY (20. CAT 0020 XX%)		\$\$\$		
2470		SPV.0999.30	CONTINGENCY (30. CAT 0030 XX%)		\$\$\$		
2471		SPV.0999.40	CONTINGENCY (40. CAT 0040 XX%)		\$\$\$		
2472		SPV.0999.50	CONTINGENCY (50. CAT 0050 XX%)		\$\$\$		
2473		SPV.0999.X0	CONTINGENCY (X0. CAT 00X0 XX%)		\$\$\$		
2474							
2475							
2476							
2477							
2478							
<b>CONSTRUCTION TOTAL :</b>							<b>\$0.00</b>
<b>DELIVERY COST :</b>						<b>15.00%</b>	<b>\$0.00</b>
<b>TOTAL :</b>							<b>\$0.00</b>

Figure 3.1 Delivery Cost entry.

## 4. Adding Bid Items and Worksheets

Use either of the following workflows in 4.1, 4.2, or 4.3 to add bid items and worksheets. (Though it is not recommended, you may edit the bid item worksheet template. See [Editing the Q2P Template](#) for disclaimer and more information on how to edit the main worksheet template.)

*Using Excel undo/redo on the Q2P macros is not recommended. If a Miscellaneous Quantity Worksheet must be deleted after it is created, use the Q2P command.*

### 4.1 Using the “Project” Drop Down Menu (Inserts one bid item/worksheet at a time)

1. **ADD-INS > Project > Insert a New Item...** will add the item and create the miscellaneous quantity (MQ) worksheet in one step. Note that “Fixed Price” refers to a Pre-Established Price item from [FDM 19-5 Exhibit 10.6](#). Also note that any .S items created with these methods will not get color coded.

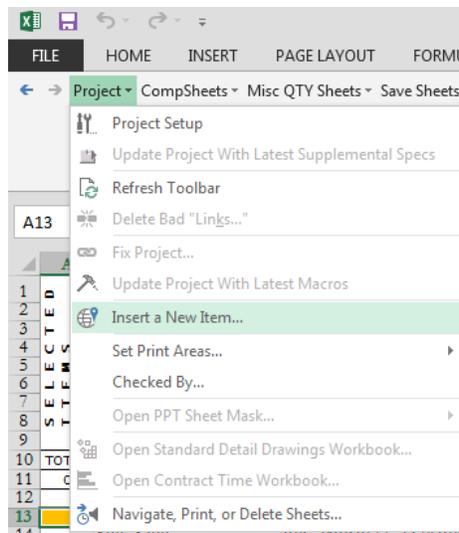


Figure 4.1 Inserting a new item from the “Project” drop down menu.

2. Once the “Insert New Item...” dialog box appears (Figure 4.2), fill in the fields appropriately.

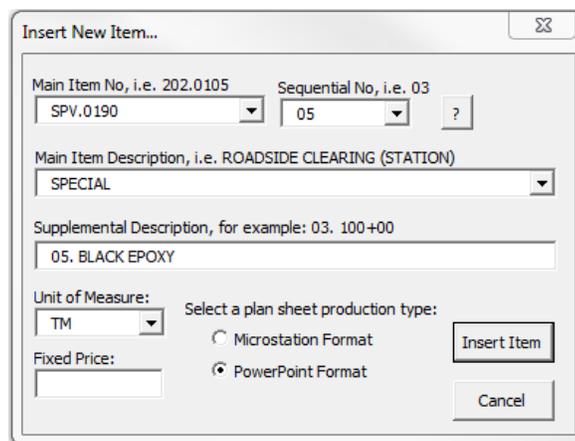


Figure 4.2 “Insert New Item...” dialog box.

3. Select "Insert Item" to finish.

#### 4.2 Using the Main "Bid Items" Worksheet (Inserts multiple bid items/worksheets at once)

1. On the main "Bid Items" worksheet, verify the filter in A12 is set to "(Select All)," which displays all the rows.

	A	B
1	SELECTED	
2		
3		CONST. I.D.: 1234
4		TITLE: WAUKESHA
5		LIMITS: GREEN BAY TO LA CROSSE
6		HIGHWAY: STH 1
7		COUNTY: ADAMS
8		PROGRAM CODE: 303 STATE HIGHWAY REHABILITATION
9		CONCEPT CODE: RESURF RESURFACING
10	TOTAL	
11	0	TOTAL BID ITEMS
12	X	0
13		108.3100.5 INCENT
14		108.4300 RBC PRI
15		108.4400 CPM PRI
16		201.0105 CLEARI

Figure 4.3 Excel filter button.

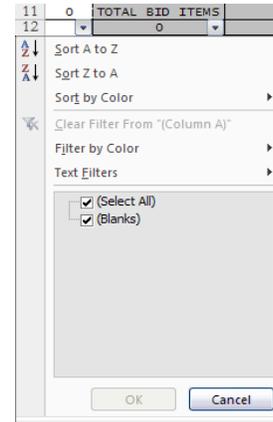


Figure 4.4 Excel filter for viewing selected bid items.

2. With all the bid items shown, scroll through the list and place an upper or lower case "x" in the far left column to mark the items you want to add.
3. Select **ADD-INS > Misc QTY Sheets > Create Miscellaneous Quantity Sheets for ALL the Marked Items "x" > for PowerPoint Plan Sheets Format.**

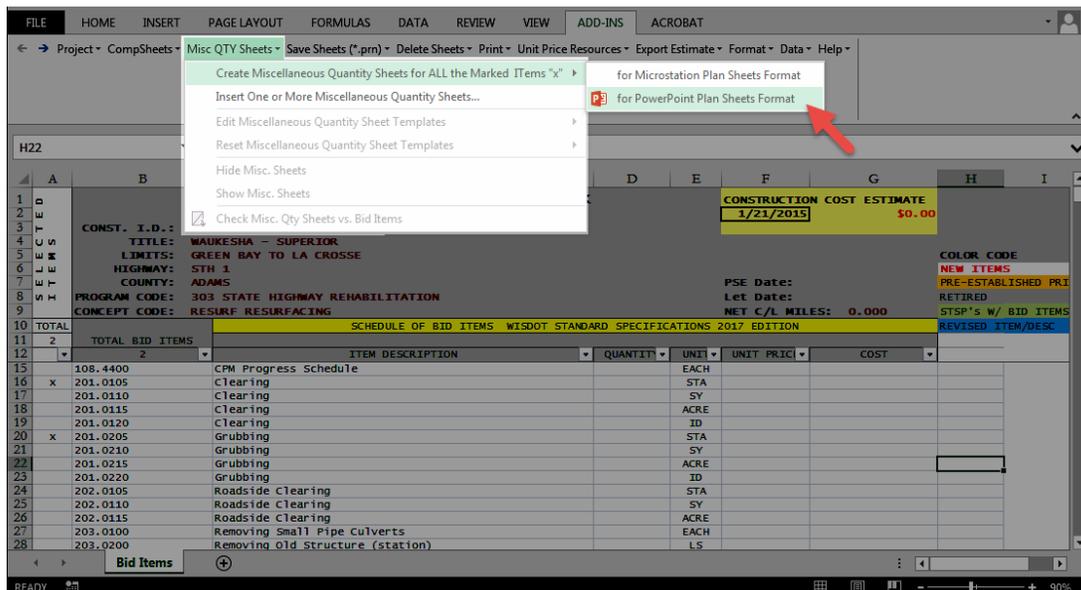


Figure 4.5 Create Miscellaneous Quantity Sheets command.

In the event that this command becomes grayed out even though new items have been marked with an "X," use the next method for inserting the MQ worksheets, or unload the **Q2P-Macros.XLAM** and

reload using the “Add-ins” dialog and then add an additional item. You can also use **ADD-INS > Project > Refresh Toolbar**.

### 4.3 Using the Dialog Box (Inserts multiple bid items/worksheets at once)

1. Select **ADD-INS > Misc QTY Sheets > Insert One or More Miscellaneous Quantity Sheets...**

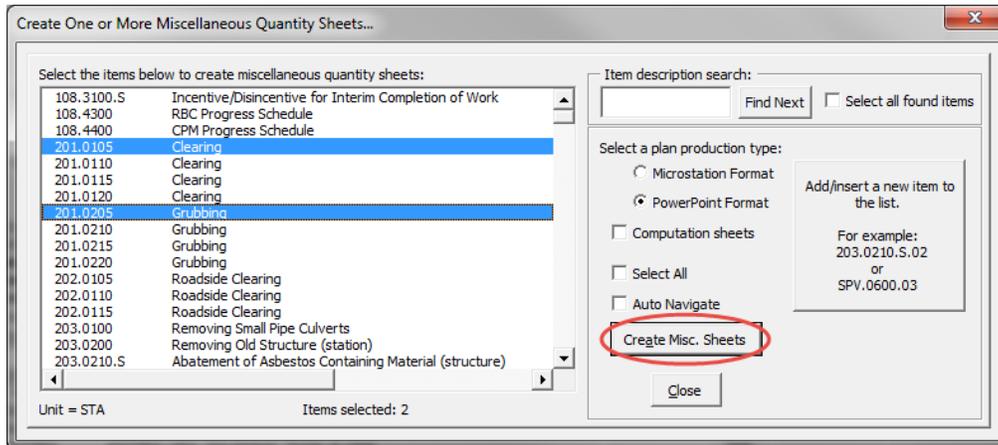


Figure 4.6 Selecting items from the dialog box.

2. Use the dialog box to highlight one or more bid items. You can type part of the item description in the search bar to navigate to a particular item in the list. Select multiple bid items by holding down the “Ctrl” key and clicking different items.



Use caution when holding the “Ctrl” key to select multiple items. If you accidentally release the “Ctrl” key while selecting an additional item, all previously selected items in the list will no longer be selected.

3. Select “Create Misc. Sheets” to finish.

## 5. Items with Supplemental Descriptions

Items that contain ( ) in their **ITEM DESCRIPTION** and **SPV** items are required to have a supplemental description entered, and a unique bid item number assigned. This is true for any item that has extra digits appended to the item number – item numbers must be unique if they are intended to pay for different things within the contract.

 For these special items in Q2P, the bid item numbers must be set up properly **PRIOR** to creating the item MQ worksheets.

For contracts with multiple projects, remember that items that need a supplemental description, such as “Finishing Roadway (project),” need unique numbers for each project, for example:

Finishing Roadway (01. 1234-56-78); Finishing Roadway (02. 9999-99-79)

### 5.1 Using the Dialog Box from the “Insert One or More Miscellaneous Quantity Sheets...” Command

 If this “Add/Insert a new item to the list” button is used to add a new item, be aware that this only inserts a new item into the main Q2P bid item list, and the associated MQ worksheet needs to be created via additional steps.

To access the same dialog box and create the associated MQ worksheet in one step, see workflow [4.1](#).

1. Select **ADD-INS > Misc QTY Sheets > Insert One or More Miscellaneous Quantity Sheets... > Add/Insert a new item to the list.**

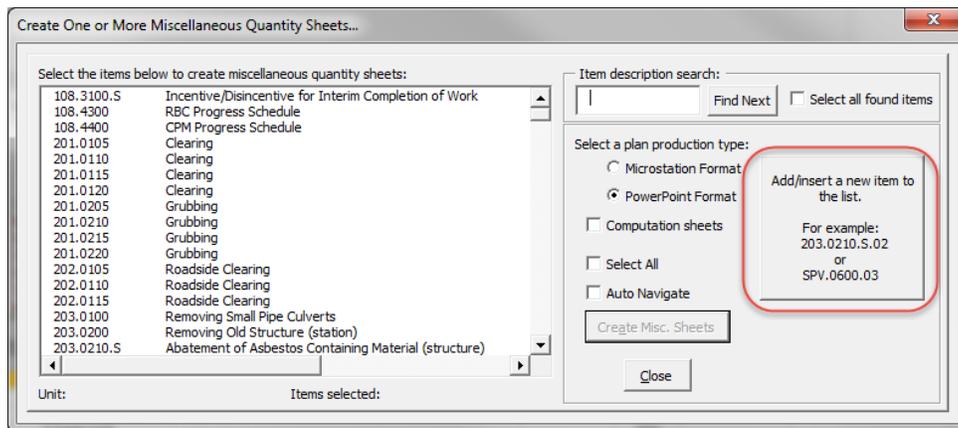


Figure 5.1 “Create One or More Miscellaneous Quantity Sheets...” dialog box.

- Once the “Insert New Item...” dialog box appears, fill in the fields appropriately.

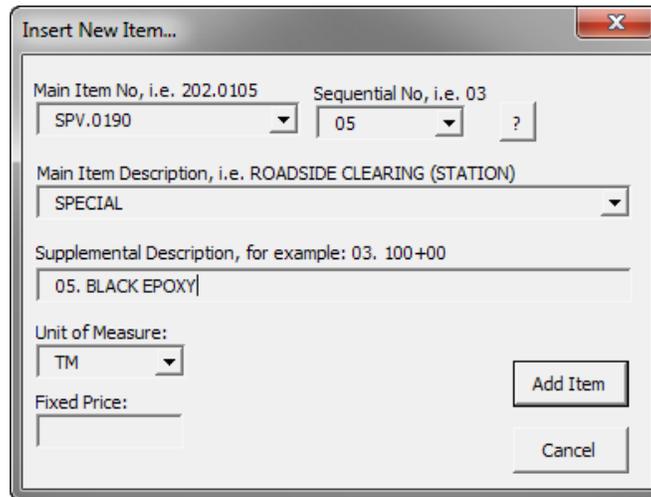


Figure 5.2 “Insert New Item...” dialog box.

- Select “Add Item.”
- Create the associated worksheet by following the workflow in either [4.2](#) or in [4.3](#).

Occasionally the Excel worksheets will get out of numeric order when creating new MQ worksheets. Use **ADD-INS > Data > Sort Sheets** to reorder the worksheets.

### 5.2 Using a Copy of the Template Bid Item

- On the main “Bid Items” worksheet, **highlight the entire template row in Excel > right-click > Copy > right-click > Insert Copied Cells.**

*Be sure and leave a copy of the original item in Q2P for future copying. The .S items that do not require a supplemental description are only used once and therefore do not need a copy retained.*

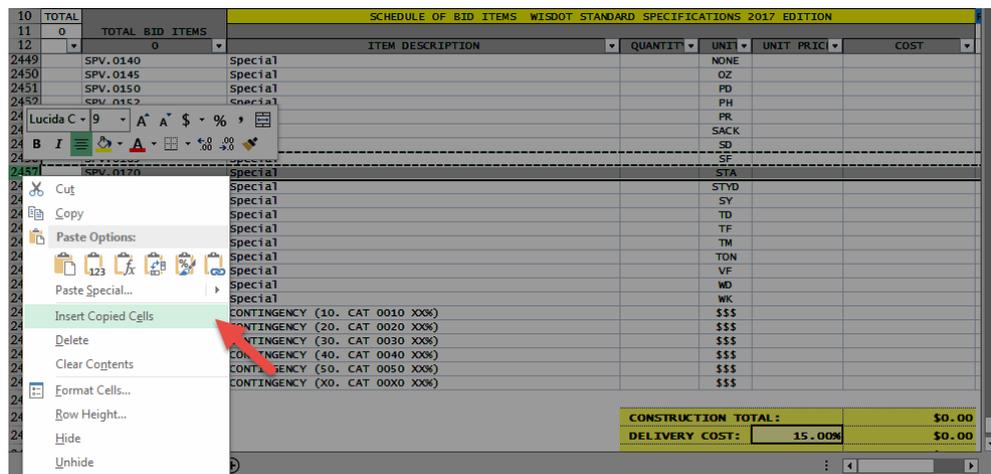


Figure 5.3 Using the Right-Click menu to insert a copy of the highlighted template row.

2. Append the item number with a decimal and (typically) two digits, and edit the description as appropriate (Figure 5.4).

The item number suffix can and typically restarts at 01 for each different bid item. The numbers do not need to be sequential, and in some cases it is beneficial to leave a gap in numbering, especially for when multiple items will be defined in a single special provision, so additional sizes, types, etc. can later be easily added and grouped with like items.

**When editing the SPV item descriptions, the word “Special” is retained even though it would not be in the special provision language.**

TOTAL		SCHEDULE OF BID ITEMS WISDOT STANDARD SPECIFICATIONS 2017 EDITION				
10	TOTAL BID ITEMS	ITEM DESCRIPTION	QUANTIT	UNIT	UNIT PRIC	COST
	10					
		203.0200				LS
x		203.0200.01				LS
x		305.0502.S				STA
		415.1150.S				SY
x		415.1150.S.01				SY
		SPV.0035				CY
x		SPV.0035.04				CY
x		SPV.0035.08				CY
x		SPV.0035.12				CY
x		SPV.0035.50				CY
		SPV.0195				TON
x		SPV.0195.01				TON
x		SPV.0195.02				TON
		SPV.0210				WK
x		SPV.0210.01				WK

Figure 5.4 Adding supplemental descriptions prior to creating miscellaneous quantity worksheets.

(Some rows manually hidden for illustrative purposes.)

The bid item supplemental descriptions are edited directly on the “Bid Items” worksheet which are linked to MQ worksheets. Include a period after the number in the supplemental description, e.g. (02. Cool Mix Asphalt Pavement Type 1).

More information on naming ( ) and SPV items can be found in [FDM 19-5](#), Exhibits 10.2 and 10.4.



**When inserting new items into the bid items list, always insert them between existing items, i.e., do not add an item below the last item in the list.**

## 6. Deleting Bid Items and Worksheets

**Delete Sheets** is used to delete both the MQ worksheets and comp sheets (See [Comp Sheets](#) for more information).

 Do not delete MQ worksheets using basic Excel functions (i.e., delete a worksheet by right-clicking the worksheet tab and selecting delete or by using Home [tab] > Cells [panel] > Delete [dropdown] > Delete Sheets). Using basic Excel methods will cause problems in Q2P.

1. Select **ADD-INS > Delete Sheets > Delete One or More Sheets** to delete individual items from the “Bid Items” worksheet. Note that this is the same dialog as the **ADD-INS > Project > Navigate, Print, or Delete Sheets...** and that multiple items are selectable with **Ctrl + Select**.

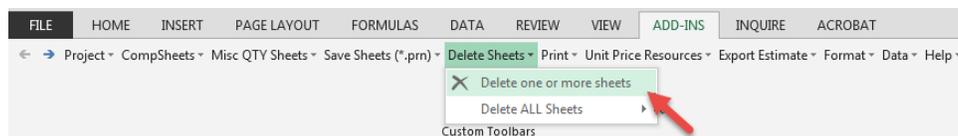


Figure 6.1 Drop down menu from the Delete Sheets command.

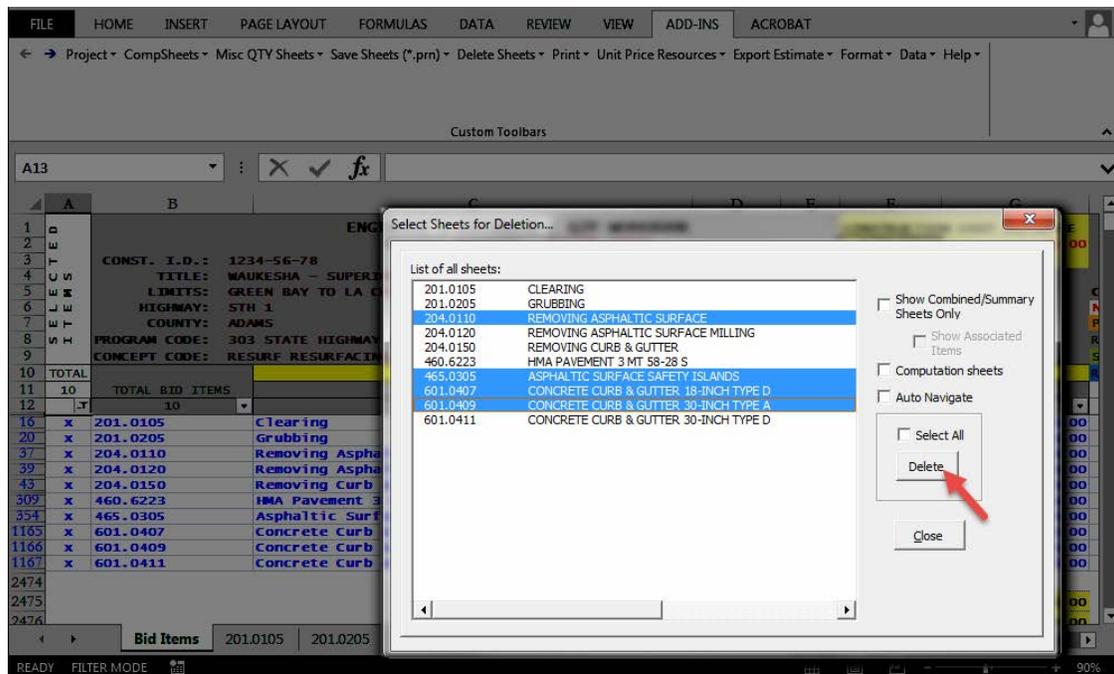


Figure 6.2 Select sheets for deletion.

2. After the items for deletion are selected, click “Delete” and then “Yes” on the subsequent two dialog boxes. Close out of the dialog box when finished.

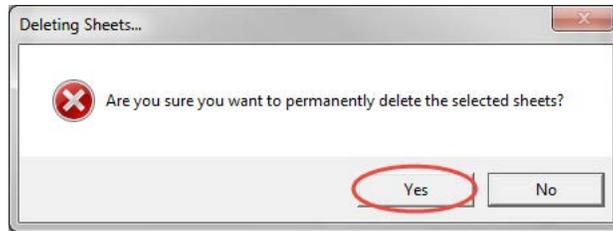


Figure 6.3 Deleting Sheets confirmation dialog box.

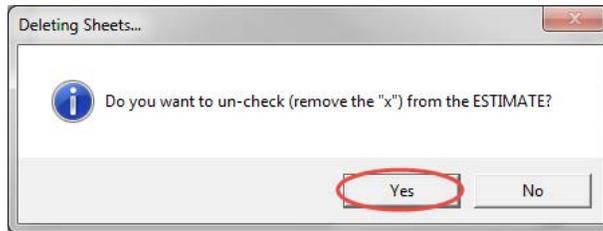


Figure 6.4 Un-check the items on the "Bid Items" worksheet confirmation dialog box.

The item MQ worksheets will be deleted and will appear as follows on the "Bid Items" worksheet.

The screenshot shows an Excel spreadsheet titled "ENGINEER'S ESTIMATE / Q2P WORKBOOK". The main content is a table of bid items. The table has columns for item ID, description, quantity, unit, unit price, and cost. The 'Bid Items' tab is selected at the bottom. The table data is as follows:

	ITEM ID	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST
16	201.0105	Clearing	0	STA		\$0.00
20	201.0205	Grubbing	0	STA		\$0.00
35	204.0105	Removing Pavement Butt Joints		SY		
37	204.0110	Removing Asphaltic Surface		SY		
124	305.0110	Base Aggregate Dense 3/4-Inch	0	TON		\$0.00
126	305.0120	Base Aggregate Dense 1 1/4-Inch	0	TON		\$0.00
205	415.0090	Concrete Pavement 9-Inch	0	SY		\$0.00
349	465.0105	Asphaltic Surface	0	TON		\$0.00
354	465.0305	Asphaltic Surface Safety Islands		TON		
1163	601.0407	Concrete Curb & Gutter 18-Inch Type D		LF		
1166	601.0409	Concrete Curb & Gutter 30-Inch Type A		LF		
1167	601.0411	Concrete Curb & Gutter 30-Inch Type D	0	LF		\$0.00

Figure 6.5 "Bid Items" worksheet after deleting sheets.

Delete the Unit Price from the bid items before re-filtering the items; that way, if the item is later reinserted, the old price will not get accidentally used.



Deleting the quantities and unchecking an item does not prevent it from appearing in reports and exports. The item MQ worksheet must be deleted with **Delete Sheets** to be fully removed.

## 7. Combining Multiple Bid Items into One Table

### 7.1 Before You Combine Items

Before entering quantities into the MQ worksheets, it is best to combine the like items into summary sheet tables. Q2P can only use one individual bid item worksheet as a template for the summary sheet table, so **any data entered onto non-template worksheets will not carry over to the summary sheet** (i.e. Using a template worksheet that only has CAT 0010 quantities to combine items with CATEGORY 0030 quantities will not display any CATEGORY 0030 quantities on the new combined sheet. To add a missing category total to the item worksheet you want to use as the template, see [8.1.3 Adding/Deleting Categories](#)).

 It is very important to keep all the quantities for an item in one table only (i.e. do not have “Sawing Asphalt” combined with “Removing Asphaltic Surface Butt Joints,” and also combined with “Asphaltic Surface Driveways and Field Entrances.” Q2P’s macros do not allow for this, but it would be possible to manually set that up. Delete any data that was entered into an MQ worksheet that has been combined (other than the category totals) so it is clear to other users of the file where the most up-to-date information is located.

It is good practice to set up all the item MQ worksheets categories **BEFORE** combining them onto a summary sheet because adding or deleting categories on the summary sheet requires links to be recreated. Run **ADD-INS > Data > Update Quantities...** whenever deleting categories from an item worksheet.

### 7.2 Combined Summary Sheets

1. Select **ADD-INS > Data > Combine/Add Related Items...** or use the right-click menu for launching the dialog box.

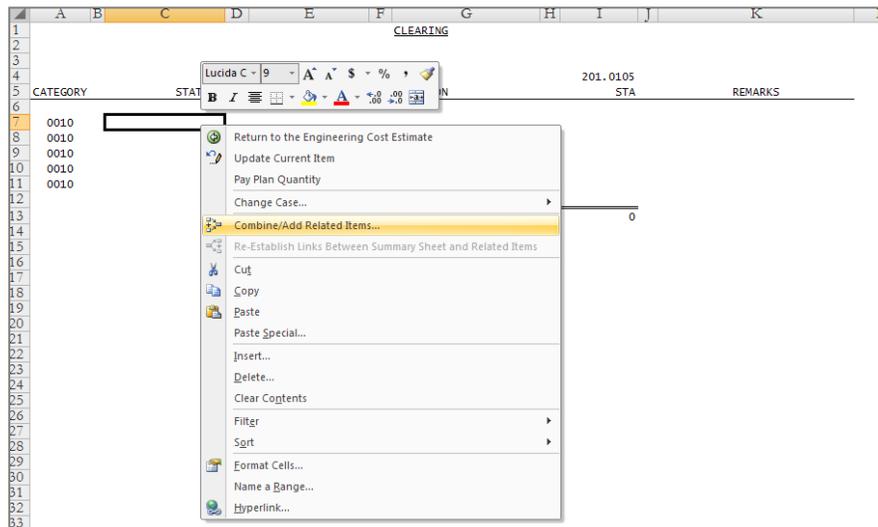


Figure 7.1 Launching the combining items dialog from the right-click menu.

2. Enter a name that starts with three numbers, then a hyphen, and then a description that uses text and hyphens so the worksheet tab will be placed next to the associated bid items, and fill out the rest of the information to describe the combined summary sheet.

 Do not start the combined summary sheet name with text, or use any symbol other than a hyphen, otherwise the worksheet may show up on the Cost Report as an item with no quantity or cost, or end up in the export file.

 An Excel worksheet name cannot exceed 31 characters, be blank, or contain any of the following characters \ / : ? \* [ ]. A Q2P Combined Summary Sheet is further limited to no special characters (other than hyphens in the name), and cannot end with the combination of a hyphen and only the letter C (e.g. -c).

3. Select “Create Summary Sheet.” If the button is grayed-out, click into a different field in the dialog box to refresh it.

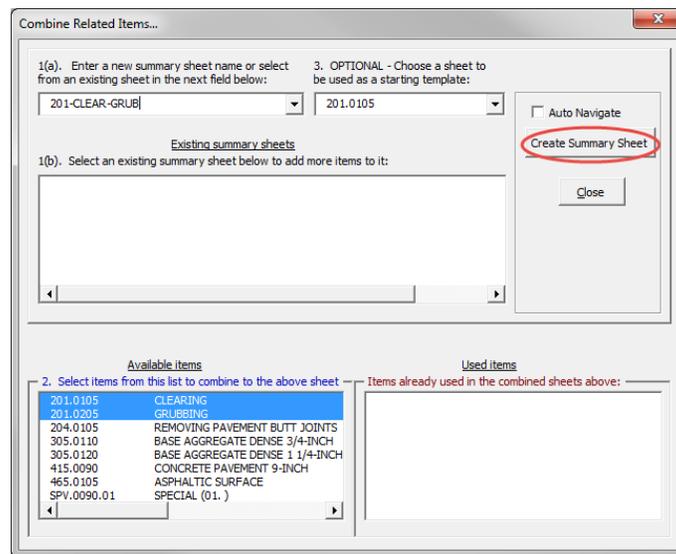


Figure 7.2 Combining items dialog for creating Summary Sheet.

4. Once items have been combined onto a summary sheet, format your tables by adding the item names, changing the title, changing text color, centering, etc. and begin entering quantities into the table (Figure 7.3).

1	A	B	C	D	E	F	G	H	I	J	K	L	M
1	201.0105		CLEARING										
2	201.0205		GRUBBING										
3													
4													
5													
6													
7													
8									201.0105		201.0205		
9									CLEARING		GRUBBING		
10									STA		STA		REMARKS
11													
12		0010	100+00	-	200+00		STH 1		100		100		
13			500+00	-	750+00		STH 1		250		250		
23													
24							TOTAL 0010		350		350		
25													
26		0020											
27		0020											
28		0020											
29		0020											
30		0020											
31													
32							TOTAL 0020		0		0		

Figure 7.3 Example of formatted table to be displayed on MQ Plan Sheets.

### 7.3 How Totals are Linked

The following screenshots show how the item totals are the sum of the row entries from the combined summary sheet, which is linked back to the total cell on the individual item worksheet, which is then linked back to the main “Bid Items” worksheet, via the “Name”.

1. The example “Clearing” item sum calculated:

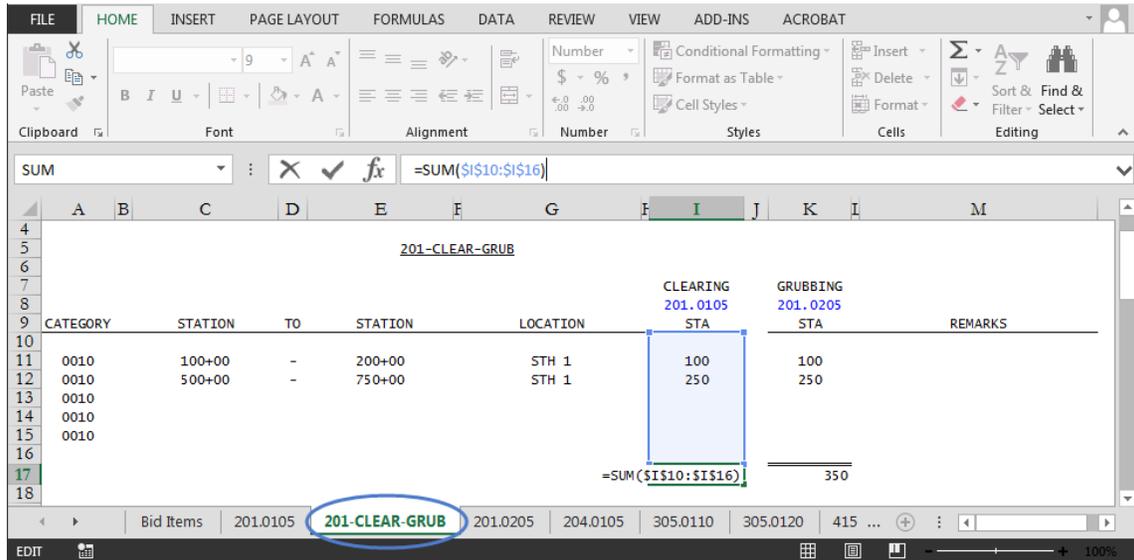


Figure 7.4 Combined summary sheet.

2. On the individual worksheet for the “Clearing” item, note the TOTAL201.0105\_0010 Name is still set on this page, but the total itself is a link to the combined summary sheet. The 99999 quantities entered here in the example do not affect the Q2P quantity for “Clearing”:

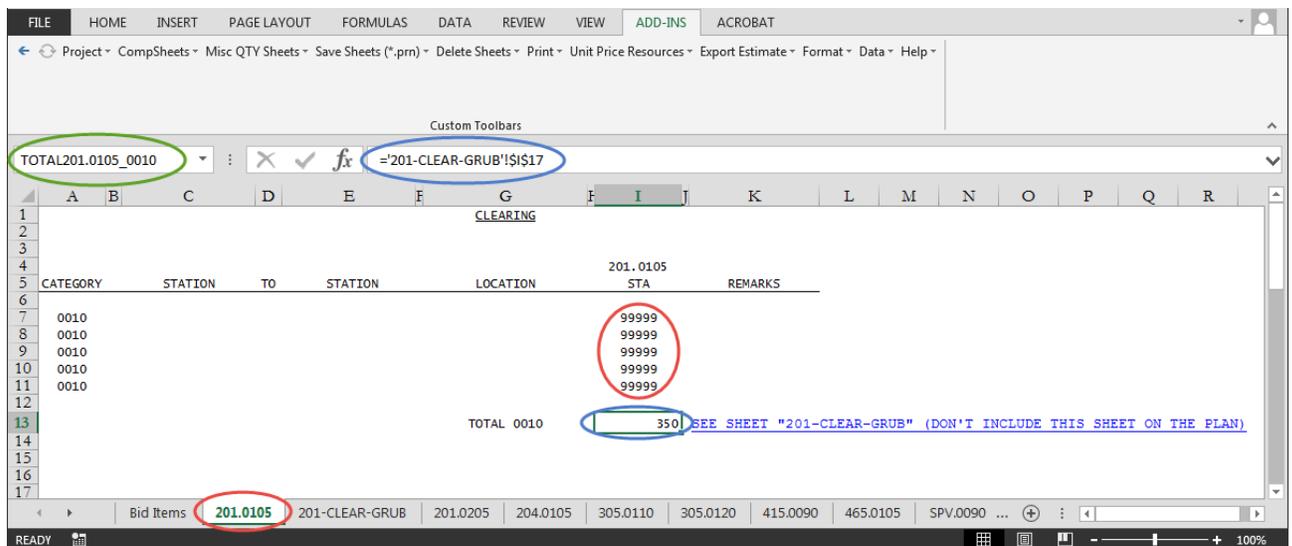


Figure 7.5 Individual miscellaneous quantity worksheet that has been combined.

(Note that quantities can still be entered, but will not be reflected because the sum is a link to the combined summary sheet and not the current worksheet.)

✱ The “...(DON’T INCLUDE THIS SHEET ON THE PLAN)” note is a reminder that this worksheet should not be linked to the PowerPoint miscellaneous quantity sheet file, since the data is not live updating with the engineer’s estimate or the combined summary sheet (other than category total).

- On the “Bid Items” worksheet, the total quantity for “Clearing” is determined by the Name TOTAL201.0105\_0010 in the workbook. If there was more than one category, the Names would be totaled:

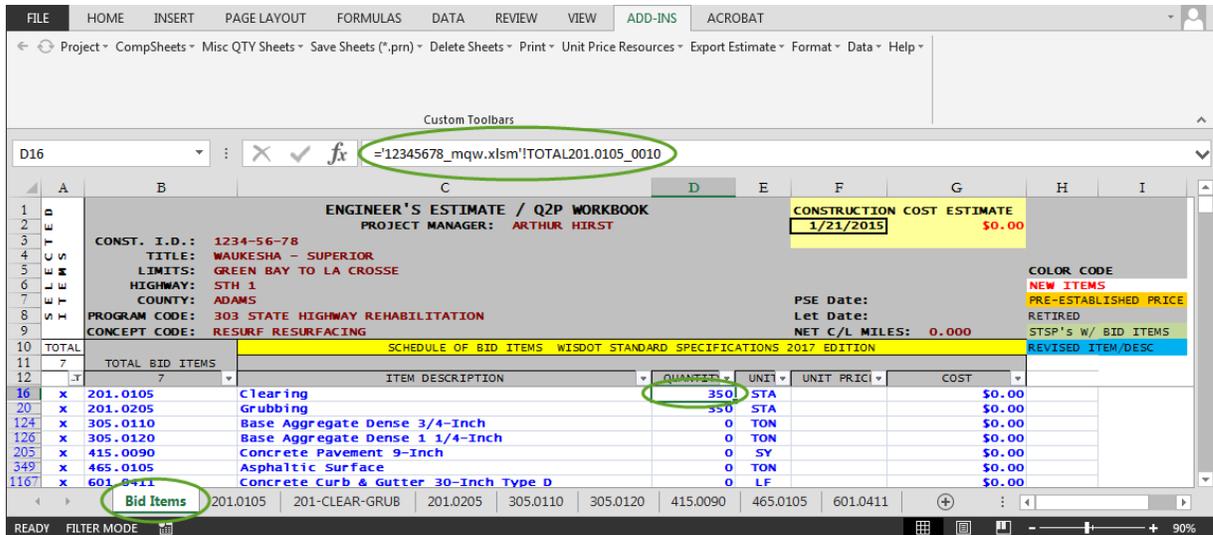


Figure 7.6 The total item quantity on the Bid Item worksheet is linked to the total of the category Names.

(In this example, there is only one category.)



Since the quantities are obtained from the item Name, the individual item worksheets should not be deleted after a summary sheet is created. Otherwise, the cell reference links on the summary sheet will break. (See Chapter 9, [Deleting an Item from a Combined Summary Sheet](#) for the preferred method.)

- If categories are added/deleted from the combined summary sheet, select **ADD-INS > Data > Re-Establish Links Between Summary Sheet and Related Items** or run this command from the right-click menu.

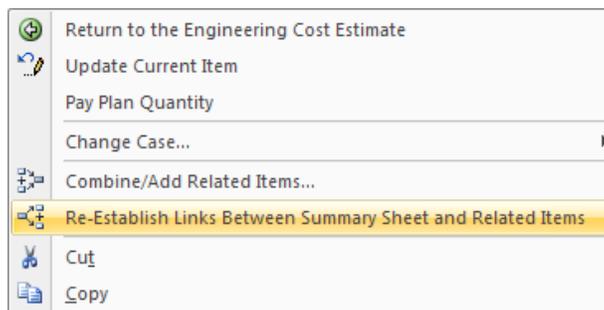


Figure 7.7 Right-click menu to re-establish inks.

## 8. Entering and Computing Quantities

Once all the miscellaneous quantity worksheets (MQ sheets) have been inserted into Q2P and items combined as appropriate, enter the quantity information. Use the space to the right of the “REMARKS” column to calculate quantities as needed.

*It is important to use the =Round (<formula>,0) function to properly round the results of a formula. If cell formatting is used instead, then it is possible that when summed on paper, the individual quantities will not add up to the total.*

	A	B	C	D	E	F	G	H
1	100.00	3.00		33.33	=A1/B1		33.33	=(ROUND(A1/B1,2))
2	100.00	3.00		33.33	=A2/B2		33.33	=(ROUND(A2/B2,2))
3	100.00	3.00		33.33	=A3/B3		33.33	=(ROUND(A3/B3,2))
4				100.00	=SUM(D1:D3)		99.99	=SUM(G1:G3)
5								
6	All cells formatted as Category: Number; Decimal places: 2							

Figure 8.1 Example of how ROUND makes formula results add up correctly on paper.

For example, format the cell for locating new passing zones and permanent signing to always show two decimals. See [FDM 19-5-5.7.3](#) for guidance on rounding quantities.



Do not rename or delete the “Bid Items” worksheet, and never enter quantities on the main “Bid Items” worksheet. Always enter the quantities on the MQ sheets. If quantities are entered in the “Bid Items” worksheet and the **Update Quantities** command is run, all the entries will be lost and replaced with a link to the total on the associated worksheet.

Q2P utilizes **SUM** to create the category totals, and this function will only add **numbers**. If a unit is included in the same cell as the quantity (e.g. “4887 CY” or “33” instead of “4887” or “33”) it will be ignored. Enter station as the whole number (without the “+”) to be able to use them in calculations.

### 8.1 Important Formatting Rules

You can use simple Excel functions to format the rows, columns, and cells to display the data as it will be shown in the construction plan miscellaneous quantity sheets, but it is important to maintain some spatial relationships between certain cells. Before you start heavily formatting, see the following sections for important rules to follow.

#### 8.1.1 "Total 00X0" Cell

The "TOTAL 00X0" text must contain that exact content and format (i.e. TOTAL 0010, TOTAL 0020, etc.). Changing it to "TOTAL 10," for example, will cause errors (<Error - CHECK CATEGORY NUMBERS>). Q2P creates the Excel cell **Name** and a **SUM** based on this spatial relationship and that **Name** is how the quantity is referenced in various reports, outputs, and the main "Bid Items" worksheet.

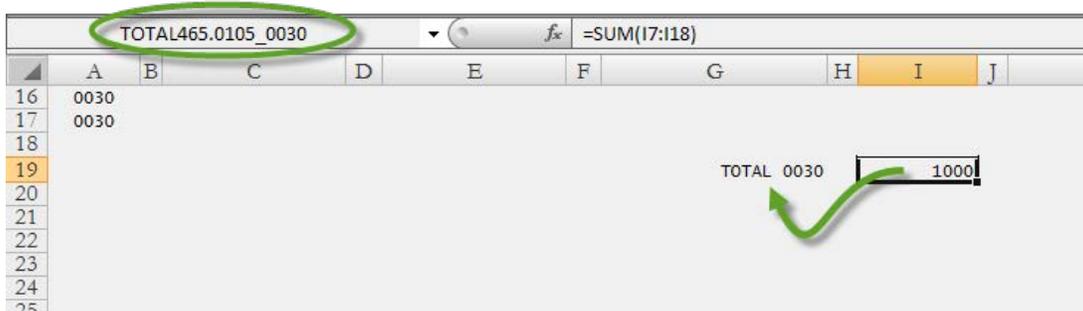


Figure 8.2 Source of bid item category sum Name.

If these **Names** or links are inadvertently deleted or otherwise corrupted, running **ADD-INS > Data > Update Quantities...** will recreate the links (for only the categories included in the list on the bottom of the "Bid Items" worksheet). The "CATEGORY" listed in column A is optional text for the miscellaneous quantity sheets and does not affect calculations.

#### 8.1.2 Multiple Categories

If multiple categories are used for the item, then a "Project Total" must also be shown on the plan sheet table, which is a manually created sum of the category totals.

	A	B	C	F	G	H	I	J	K	L
1										
2										
3										
4										
5							204.0220			
6							EACH			
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										

The table above is a simplified representation of the data shown in the image. The image shows a table with columns for CATEGORY, STATION, LOCATION, EACH, and REMARKS. The data is as follows:

CATEGORY	STATION	LOCATION	EACH	REMARKS
0010	1+00	STH 1	1	C EAU CLAIRE
		TOTAL 0010	1	
0020	2+00	STH 1	1	C ALTOONA
		TOTAL 0020	1	
		PROJECT TOTAL	2	

Figure 8.3 Project Total.

### 8.1.3 Adding/Deleting Categories

Delete unused category rows (using Excel commands) from the individual MQ sheets. Do not keep empty Cat. 0020, 0030 totals on the worksheet (unless intended to be used at a later time), otherwise the 0 quantity/cost will appear in the **Cost Report** and the upload file to Trns•port/AWP Preconstruction.

To add additional categories to the MQ sheet, copy and paste the text and formatting of a category name and total that is already on the item worksheet and place them in the same columns. Then select **ADD-INS > Data > Update Quantities... > Update One Item** to create the proper links for that particular item, or use **Update All Items** to update all items at once, which may take longer to process.

### 8.1.4 Item Number and Unit Links

Links to the item number and item unit must be in the same column as the category sums (Figure 10.3). If this relationship is lost, the “Bid Items” worksheet quantity will show an error (<Error - CHECK CATEGORY NUMBERS>) and the first category in the column will not appear in outputs.

	A	B	C	D	E	F	G	H	I	J	K
1											
2									ASPHALTIC SURFACE		
3											
4									465.0105		
5	CATEGORY	STATION TO	STATION		LOCATION				TON	REMARKS	
6											
7	0030	100+00 -	200+00		STH 1				1000		
8											
9					TOTAL 0030				1000		

Figure 8.4 Bid item number and unit must remain in the same column as the SUM formula.

### 8.2 Formatting Text

**ADD-INS > Format** in Q2P contains various tools for formatting text. The most useful format change is for forcing the station value to display two decimals. Excel formatting will insert the “+” for you (i.e. Enter “12345.05” to display as “123+45.05”).

### 8.3 Pay Plan Quantity

If it is desired to pay plan quantity for an item ([FDM 19-5-5.7.2](#)), then right-click and select “Pay Plan Quantity.” The bid item name will be appended with “\*\*P\*\*” and a check box appears for toggling it off.



Figure 8.5 Pay Plan Quantity on miscellaneous quantity worksheet.

The setting can also be changed by right-clicking on the item in the “Bid Items” worksheet list.

### 8.4 Recording Computations

Being able to have the quantity calculations done right alongside the location data is one of the advantages of using Q2P to create MQ plan sheets.

The image shows a screenshot of an Excel spreadsheet with a table of data. The formula bar at the top shows the formula:  $=ROUND((U7*Y7*AA7)/2000,0)$ . The table has the following columns: LOCATION, TON, REMARKS, ENTIRE INT SF, BUTT JOINT SF, SY, EXTRA SY, IN, and #/IN-SY. The data rows are as follows:

	LOCATION	TON	REMARKS	ENTIRE INT SF	BUTT JOINT SF	SY	EXTRA SY	IN	#/IN-SY
7	STH 1	4395	28' WIDE	-	-	31960.44	-	2.50	110
8	STH 1	1951	28' WIDE	-	-	14189.78	-	2.50	110

Figure 8.6 Typical computations.

When quantity calculations are completed in Q2P, it is very easy to see how a change in milling thickness, for example, will affect project cost. If the change must be made after the miscellaneous quantity plan sheets are created, the computations will carry-through all the way to the PowerPoint sheets, and only the PDF output needs to be recreated.

### 8.5 Row Tracking

While entering information on larger combination worksheets, it can be difficult to keep track which row is being edited. The **ADD-INS > Data > Highlight Row** command will create a helpful visual aid.

The image shows a screenshot of an Excel spreadsheet with a table of data. The table has the following columns: CATEGORY, STATION TO, STATION, LOCATION, TON, and REMARKS. The data rows are as follows:

	CATEGORY	STATION TO	STATION	LOCATION	TON	REMARKS
7	0010	100+00	150+00	STH 1	10000	
8	0010					
9	0010					
10	0010					
11						
12	0010					

Figure 8.7 Highlight Row in use.

## 9. Deleting an Item from a Combined Summary Sheet

1. Copy the appropriate rows/columns of data back to the individual item worksheets so that data is not lost when unlinking all items.
2. Select the **ADD-INS > Data > Combine/Add Related Items...** command.
3. Select an existing summary sheet; select one of the associated items; click the “Unlink” button that appears after an associated item is selected.

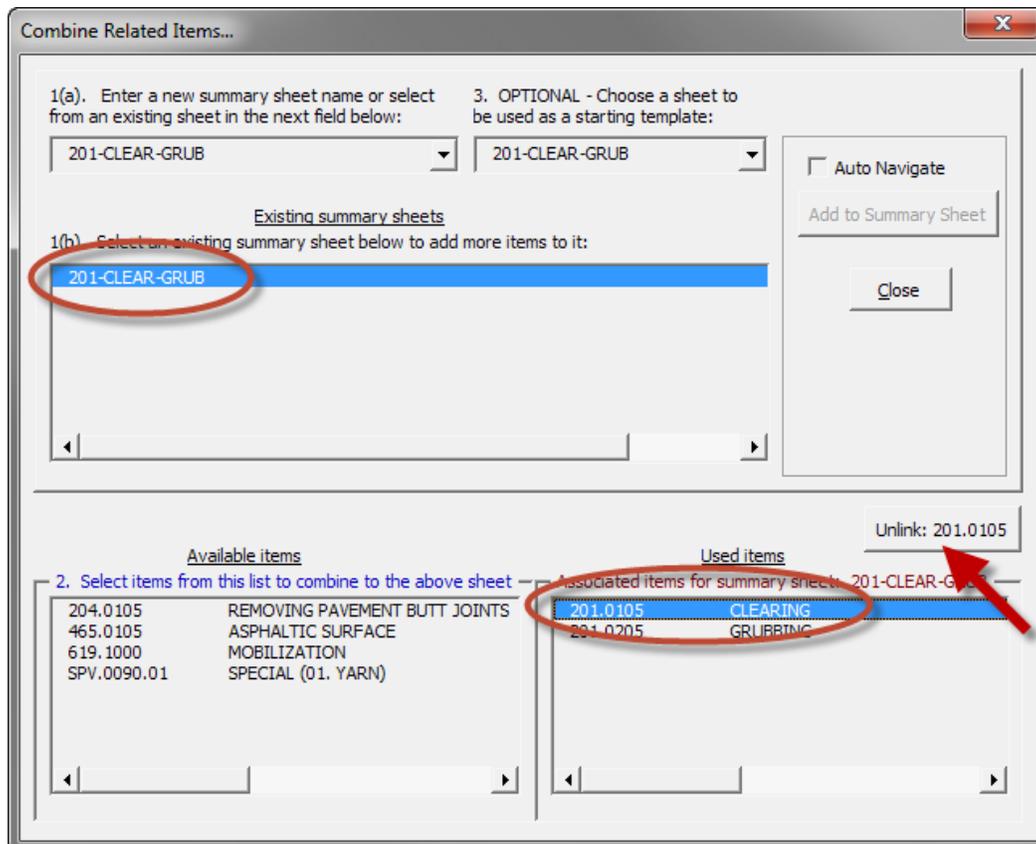


Figure 9.1 Unlinking items from the summary sheet.

### 9.1 Unlinking Causes Performance Issues

When a bid item is unlinked from a Summary Sheet, occasionally some garbage data gets inserted into row 1,048,576. This causes performance issues in the file, which is visible when you examine the file size and see that it has increased significantly. This is more immediately noticeable when the scroll bar on the right side of the summary sheet becomes very small.

As a workaround (until the bug can be fixed), select all the rows (down to the very end) under the worksheet’s visible data and right-click delete. When the file is saved, the scrollbar should appear normal again.

## 10. Establishing Unit Prices

Unit prices are entered on the “Bid Items” worksheet and are always entered into Q2P as present day costs without inflation. Inflationary cost increases are typically applied just prior to the October 1 FIIPS snapshots. Unit prices and quantities are also verified at all Life Cycle changes and PMP phase changes.

Commonly used sources for item prices include: AASHTOWare Project Estimator™; comparable, nearby and recent projects (via Bid Express® or bid tabs); averages from WisDOT Central Office Structures; and WisDOT Regional Technical Services staff for pavement pricing trends. More details can be found in the WisDOT [Facilities Development Manual 19-5-5 Estimating Guidelines](#). Bid item average price is not appropriate to use at PS&E, but can be acceptable earlier in design.



Do not change the prices of bid items that are highlighted as pre-established price items. These are typically incentive, on-the-job training, and SPV items (with DOL or HRS units). Enter prices to the nearest cent. The SPV.0055 and SPV.0075 items are normally pre-established price items, but can be bid normally depending on the item details. Pay special attention to these two items.

**Always update the date in Q2P to reflect quantity and/or unit prices revisions.**

## 10.1 Exporting from Q2P into AASHTOWare Project Estimator™

1. Select **ADD-INS > Unit Price Resources > Run ESTIMATOR.**

This command will create a temporary file for import (and launch Estimator for WisDOT staff).

*This command is used to transfer items and quantities into Estimator for obtaining the bid regression prices. It is **NOT** used to create a complete Estimator file for use with Trns•port/AWP Preconstruction. As such, all quantities will be imported into Estimator under one category (10).*

2. Once the import file is created, follow the instructions in the “Estimator Help” dialog box as shown in Figure 10.1.

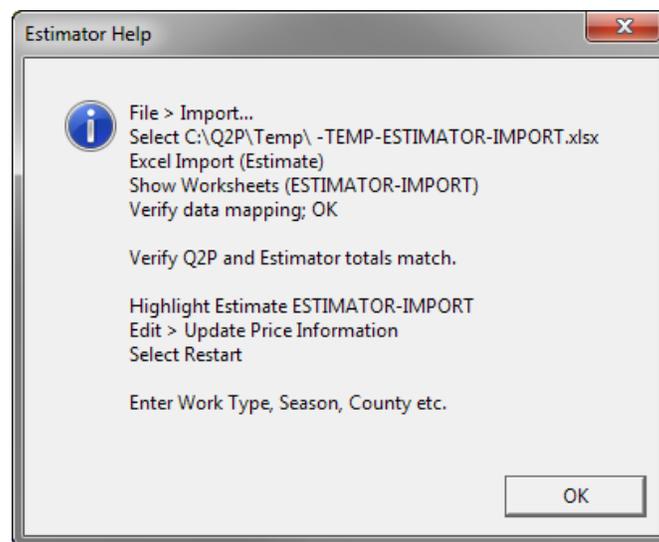


Figure 10.1 Importing Q2P into Estimator help.

3. Verify the project total in Estimator matches the construction cost total in Q2P.
4. Select and highlight the estimate total.
5. To use the bid regression/average prices in Estimator, select **Edit > Update Price Information: Restart.**

### 10.2 Important Estimator Information

- After restarting an estimate, most items will have a bid regression based price, but some items will have a \$0.00 ad hoc price, and SPV items will receive a bid regression/average price that is completely inappropriate since the item details are unknown to Estimator. Look out for these prices.
- Any item with a supplemental description (and therefore likely a .01, etc. added to the bid item number) will always be stuck at ad hoc in Estimator until the extra numbers are removed.

*Typically users should not be relying on bid regression prices for any item that requires a supplemental description as by definition they are unique and cannot be bid under a “standard” bid item, but those prices can be a good start or reassurance for a price, especially early on in the project lifecycle.*

96 TOTAL BID ITEMS		MACROS REVISED 8/27/2012 7:02:25 AM			
QTY	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST
X 465.0105	ASPHALTIC SURFACE	500	TON	95.00	47,500.00
X 465.0110	ASPHALTIC SURFACE PATCHING	100	TON	95.00	9,500.00
X 465.0120	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	200	TON	95.00	19,000.00
X 506.7050.S.01	REMOVING BEARINGS (01. B-4-26)	11	EACH	2,004.01	22,044.11
X 520.7000	CLEANING CULVERT PIPES	8	EACH	230.00	1,840.00

Figure 10.2 Item with supplemental description.

Estimator will show a blank description in the left pane and ad hoc price source, when the extra decimal and numbers are included in the item number.

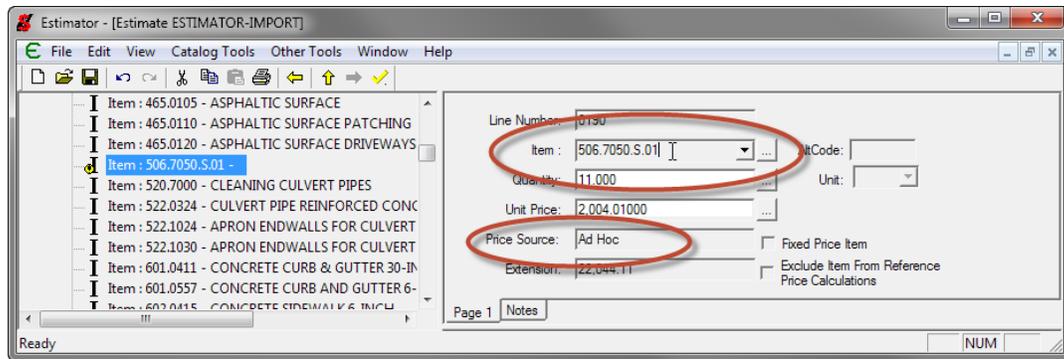


Figure 10.3 Estimator view of an item that has been imported, that has a supplemental description.

*Estimator will also show blank item descriptions for item numbers that are not in the catalog, therefore the Export to Estimator tool in Q2P can be used to check older Q2P files for items that may have been retired since their initial selection.*

Once the item number is corrected, the item description loads on the left, and the bid regression price loads on the right.

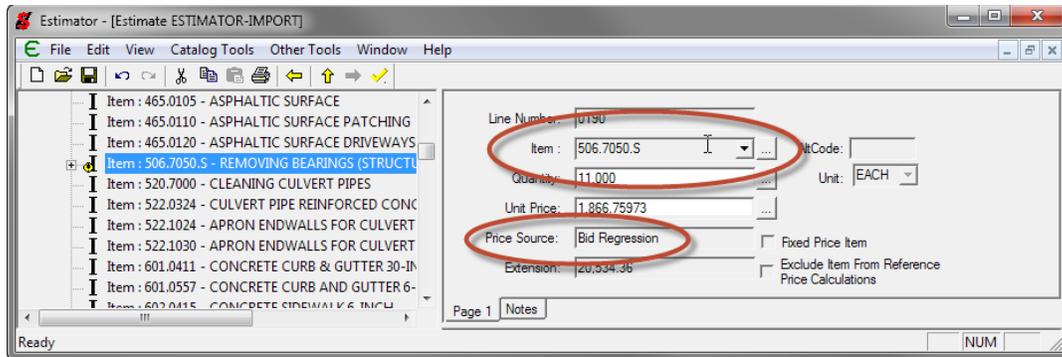


Figure 10.4 Estimator view once the extra digits and decimal have been deleted from the item number.

- Importing into Estimator can sometimes cause an Excel process to hang. Therefore, it is recommended that you save your file prior to making the export to Estimator. Also, none of the data in Estimator has a live link to Q2P, so the process must be repeated with quantity or item changes.
- If the user has data past column Z, and it has a number in row 12, that will cause errors for Estimator during the import. Move the number up out of row 12 in the Q2P file, or delete those columns entirely in the TEMP-ESTIMATOR-IMPORT file.

### 10.3 Importing from AASHTOWare Project Estimator™ into Q2P

1. In Estimator, select **FILE > Export...** and name the file **ESTIMATOR-EXPORT.x/sx** and save to the **C:\Q2P\Temp\** directory. Do not edit this file.
2. In Q2P, select **ADD-INS > Unit Price Resources > Copy Prices from Another Project.**

 This command will replace any existing notes, data, etc. that is currently in column K on the “Bid Items” worksheet. Before running this command, verify column K is empty.

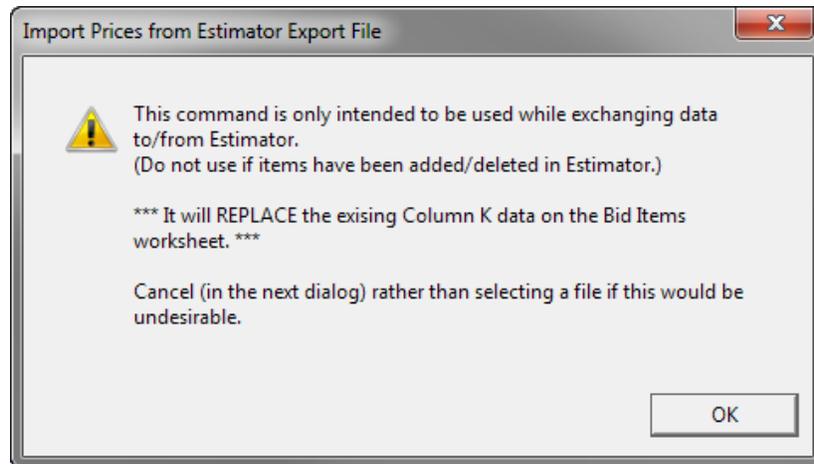


Figure 10.5 Warning message.

3. Select the file that was exported from Estimator (named by date and time) and select “Open.”

 *The prices from Estimator will load into column K and will be rounded to the nearest cent, therefore if all the Estimator prices are used in Q2P, the project totals will likely differ by a small amount.*

---

4. Rename the column K heading to something like the date of the Estimator run. Otherwise, in the future, that data might be mistakenly used when transferring data to/from Estimator, instead of the current Q2P unit prices.

## 10.4 Copying Unit Prices

1. From the “Bid Items” worksheet, filter the items to only show “X.”
2. Select the first cell down from K12 (i.e. the first unit price from Estimator) and use **Ctrl + Shift + Down Arrow** to select the range.
3. Un-filter the Q2P item list and use **Ctrl + C** to copy the prices in column K.
4. Select the first cell with a price in the Q2P unit price column F.
5. **Right-click > Paste Special...** and use **Paste: Values, Operation: None, and Skip Blanks** settings.
6. Select “OK.”



Note that by completing the above steps, price data for items that are not currently used in the Q2P project will be deleted. (A user may delete an item out of Q2P, but keep the price information in case the item is reinserted at a later date. By copying all Estimator prices over, those retained prices will be lost.)

## 10.5 Copying Q2P Items into Bid Express®

1. Select **ADD-INS > Unit Price Resources > Letting Reports.**

This command creates a temporary file that contains a comma delimited list of all the Q2P bid items currently marked with an “X” (for items with and without corresponding worksheets created), and copies that list to the clipboard. Follow the instructions on the dialog box for pasting the item list into Bid Express.

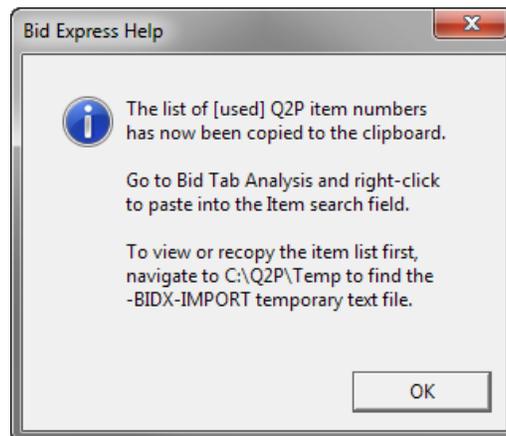


Figure 10.6 Bid Express help.

7. To edit the list of items before pasting into Bid Express, edit the TXT file and then copy/paste.



SPV items are not searchable by bid item number because each number can refer to completely different items based on the project.

## 11. Viewing “80/20 Rule” Items for Documenting Unit Price Sources

WisDOT construction projects typically adhere to the Pareto principle and have 80% of their total contract cost generated by about 20% of the total items. Therefore, it is important to focus on these items the most when creating the engineer’s estimate and then document the basis for the unit price. This documentation will aid others who may work on the project and/or be indispensable when responding to a justification request after project let. The documentation can be as simple as including a note off to the right of Column K in Q2P for the items and should detail the bid item unit price estimate source, such as: nearby, similar projects (IDs); Bid Express; Estimator; regional trends; or a combination of these. Also, state whether or not one bidder was assumed for the project.

Items that fall outside the 80/20 rule can still end up being “significant items” and therefore require careful consideration and should be documented, especially if they have a history of price fluctuation.

### 11.1 CAUTION!



**Do not use the Excel Sort command on the “Bid Items” worksheet.**

Sort will only automatically expand the selection to data that is contiguous to the original selection. It will not automatically expand the selection when run from an AutoFilter drop-down, even if the data is contiguous. Sort also changes the row number of each line, but only does so within the AutoFilter group and does not extend past column G in Q2P. This means if Sort is used from the filter drop-down, any price information stored off the to the right of “Cost” will be out of order relative to the rest of the data. Item worksheets will contain incorrect links as these do not auto-update when using Sort.

**Use either of the following workflows in 11.2 or 11.3 to view the “80/20 Rule.”**

## 11.2 Using a Number Filter

1. Use the “Top 10...” Excel Number Filter.

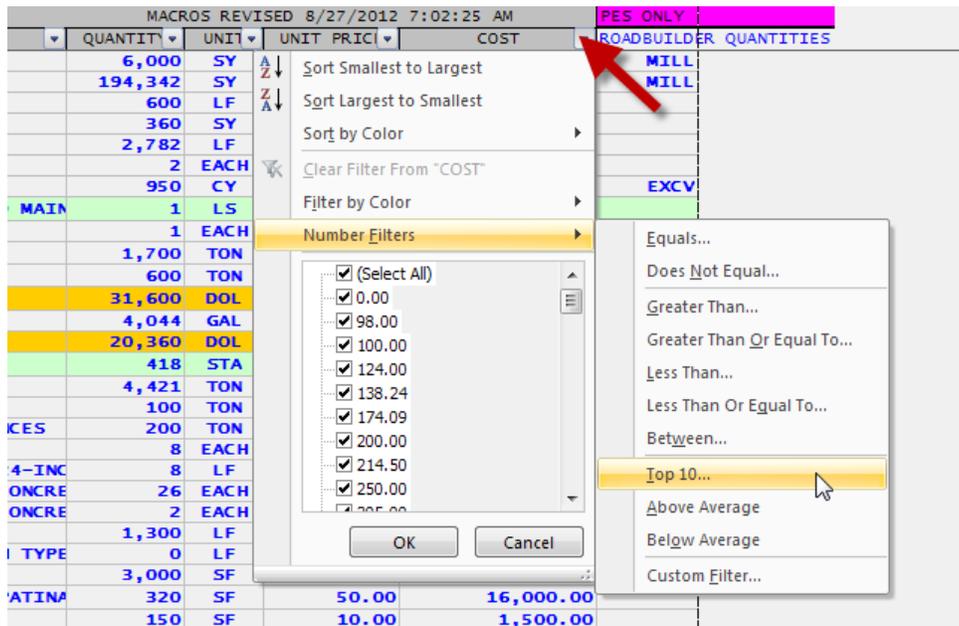


Figure 11.1 Filter drop-down selected in “Cost” cell.

2. Change to Top | 20 | Percent.

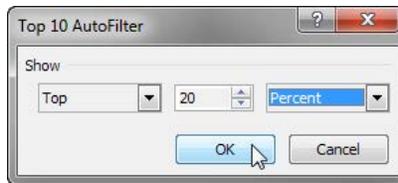


Figure 11.2 Top 10 AutoFilter changed to “Top 20 Percent.”

The “Bid Items” worksheet is now filtered on the top (by value) 20% of the items.

	QUANTITY	UNIT	UNIT PRICE	COST	
42	6,000	SY	5.00	30,000.00	MILL
43	194,342	SY	1.00	194,342.00	MILL
122	1,700	TON	15.00	25,500.00	BCRS
265	31,600	DOL	1.00	31,600.00	
301	20,360	DOL	1.00	20,360.00	
304	4,421	TON	100.00	442,100.00	ASPH
307	200	TON	100.00	20,000.00	ASPH
733	26	EACH	800.00	20,800.00	
1008	1,300	LF	15.00	19,500.00	
1342	20	EACH	1,000.00	20,000.00	
1377	2,700	LF	15.00	40,500.00	
1383	20	EACH	2,500.00	50,000.00	
1414	1	EACH	100,000.00	100,000.00	
1608	87,125	LF	1.00	87,125.00	STRP
1630	66,000	LF	1.00	66,000.00	STRP
1790	118,800	LF	1.00	118,800.00	STRP
2179	12,981	TON	100.00	1,298,100.00	ASPH
2180	18,831	TON	100.00	1,883,100.00	ASPH
2185	100,000	\$\$\$	1.00	100,000.00	

Figure 11.3 View of “Bid Items” worksheet data that has been filtered by “Top 20 Percent.”

- Highlight the group of "COST" total cells to display the total of the filtered Cost. Excel displays the sum of a selection on the bottom right of the status bar. For this example, the top 20% of items is equal to about 95% of the total project construction cost. It isn't necessary to re-filter the list down to an exact 80% of project cost – just be aware that these are the items that require the most scrutiny when developing the engineer's estimate and require some level of price documentation.

QUANTITY	UNIT	UNIT PRICE	COST
6,000	SY	5.00	30,000.00
194,342	SY	1.00	194,342.00
1,700	TON	15.00	25,500.00
31,600	DOL	1.00	31,600.00
20,360	DOL	1.00	20,360.00
4,421	TON	100.00	442,100.00
200	TON	100.00	20,000.00
26	EACH	800.00	20,800.00
1,300	LF	15.00	19,500.00
20	EACH	1,000.00	20,000.00
2,700	LF	15.00	40,500.00
20	EACH	2,500.00	50,000.00
1	EACH	100,000.00	100,000.00
87,125	LF	1.00	87,125.00
66,000	LF	1.00	66,000.00
118,800	LF	1.00	118,800.00
12,981	TON	100.00	1,298,100.00
18,831	TON	100.00	1,883,100.00
100,000	\$\$\$	1.00	100,000.00
<b>CONSTRUCTION TOTAL:</b>			<b>4,785,237.37</b>
<b>DELIVERY COST:</b>			<b>717,785.61</b>
<b>TOTAL:</b>			<b>5,503,022.98</b>

Average: 240,411.95 Count: 15 Sum: 4,567,827.00

Figure 11.4 Using the selection sum feature of Excel.

- Select the filter drop-down in the "Cost" cell again to clear the Number Filter.

QUANTITY	UNIT	UNIT PRICE	COST
6,000	SY		
194,342	SY		
1,700	TON		
31,600	DOL		
20,360	DOL		
4,421	TON		
200	TON		
26	EACH		
1,300	LF		
20	EACH		
2,700	LF		
20	EACH		
1	EACH		
87,125	LF		
66,000	LF		
118,800	LF		
12,981	TON		
18,831	TON		
100,000	\$\$\$		

CONSTRUCTION TOTAL: 4,785,237.37  
 DELIVERY COST: 717,785.61  
 TOTAL: 5,503,022.98

MACROS REVISED 8/27/2012 7:02:25 AM

Filter menu options: Sort Smallest to Largest, Sort Largest to Smallest, Sort by Color, Clear Filter From "COST", Filter by Color, Number Filters (with sub-menu: (Select All), 0.00, 98.00, 100.00, 124.00, 138.24, 174.09, 200.00, 250.00, 305.00)

Figure 11.5 Filter drop-down, used to clear the Number Filter.

### 11.3 Using Conditional Formatting

1. Highlight all the cells in **G12:G2187** (match the actual range of Costs).
2. Select **HOME > Styles panel > Conditional Formatting > Top/Bottom Rules > Top 10%...**

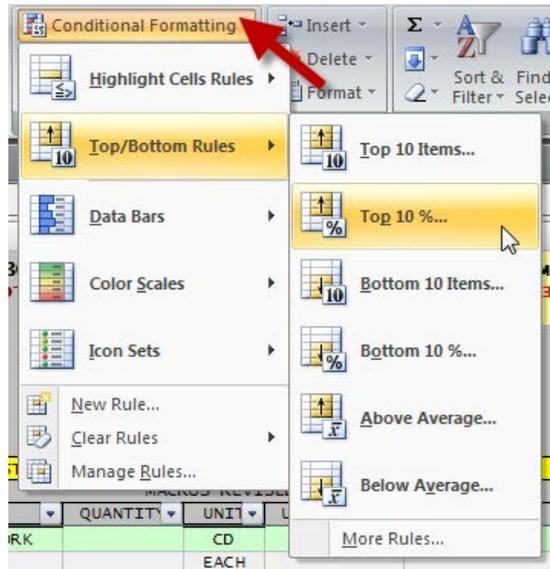


Figure 11.6 Conditional Formatting Excel command.

3. Set the conditional formatting to 20% along with the desired highlighting.



Figure 11.7 Top 10% Conditional Formatting dialog box.

Now all Costs can be viewed at the same time, with the top 20% items highlighted.

96	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST
204.0115	REMOVING ASPHALTIC SURFACE BUTT JOINTS	6,000	SY	5.00	30,000.00
204.0120	REMOVING ASPHALTIC SURFACE MILLING	194,342	SY	1.00	194,342.00
204.0150	REMOVING CURB & GUTTER	600	LF	5.00	3,000.00
204.0155	REMOVING CONCRETE SIDEWALK	360	SY	5.00	1,800.00
204.0165	REMOVING GUARDRAIL	2,782	LF	1.00	2,782.00
204.0220	REMOVING INLETS	2	EACH	200.00	400.00

Figure 11.8 Bid items with the higher Cost items highlighted as they are included in the top 20%.

The formatted cells will change as new items are added to the project, or existing prices are revised.

96	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST
204.0115	REMOVING ASPHALTIC SURFACE BUTT JOINTS	6,000	SY	0.01	60.00
204.0120	REMOVING ASPHALTIC SURFACE MILLING	194,342	SY	1.00	194,342.00
204.0150	REMOVING CURB & GUTTER	600	LF	5.00	3,000.00
204.0155	REMOVING CONCRETE SIDEWALK	360	SY	5.00	1,800.00
204.0165	REMOVING GUARDRAIL	2,782	LF	1.00	2,782.00
204.0220	REMOVING INLETS	2	EACH	200.00	400.00

Figure 11.9 Bid items with item 204.0115 Cost no longer highlighted as the unit price was revised down.

Use a **Number Filter** to quickly sum these top 20% items to verify that 20% is still the appropriate value to use for delineating the items that total around 80% of project cost. This should be done especially when major changes have occurred to the project estimate.

- To clear Conditional Formatting, use **HOME > Styles > Conditional Formatting > Manage Rules...**

## 12. Creating the Miscellaneous Quantity Plan Sheets

### 12.1 Setting up the Power Point Slide Template

1. Open a new Miscellaneous Quantities plan sheet template, titled **030200\_mq.potx**, found in the **C:\Q2P** directory. There is also a rotated plan sheet template for use as needed.

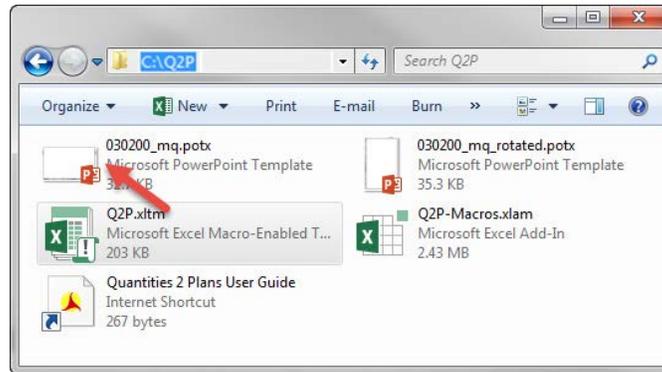


Figure 12.1 PowerPoint sheet template launch icon.

2. Save the PowerPoint sheet working file in the same directory as the project's Q2P workbook working file and name it **030200\_mq.PPTX**. It should remain there until after PS&E.



**Remember to never save project files in C:\Q2P because updates will rewrite the files stored in this directory.**

3. Fill in the project title block information. This is done by editing the "Slide Master." Go to **VIEW > Master Views > Slide Master**.

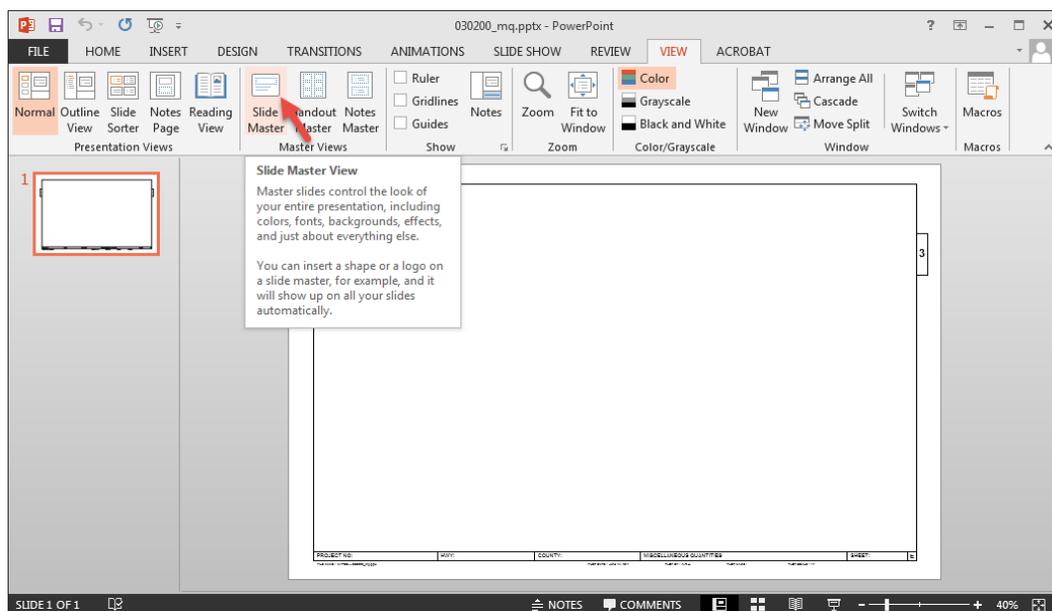


Figure 12.2 Normal View.

Making edits to the “Slide Master” will translate those edits to be used on all sheets.

4. Click on the **Slide Master #1** and then edit the text boxes at the bottom of the plan sheet.

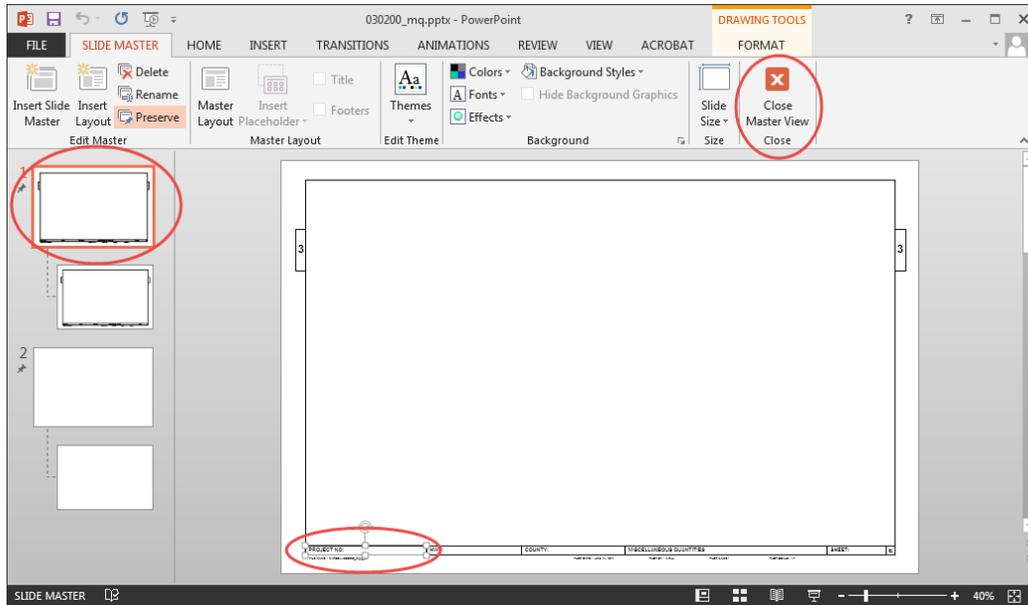


Figure 12.3 Slide Master View.

*Note that there is a second master slide which is blank. This can be used to create a second sheet, if different project information is required within the same PPTX file.*

5. When finished, click the “Close Master View” button.
6. In **Normal** view, use **HOME > New Slide** to create multiple copies of the slide as needed to accommodate the Q2P miscellaneous quantity data.

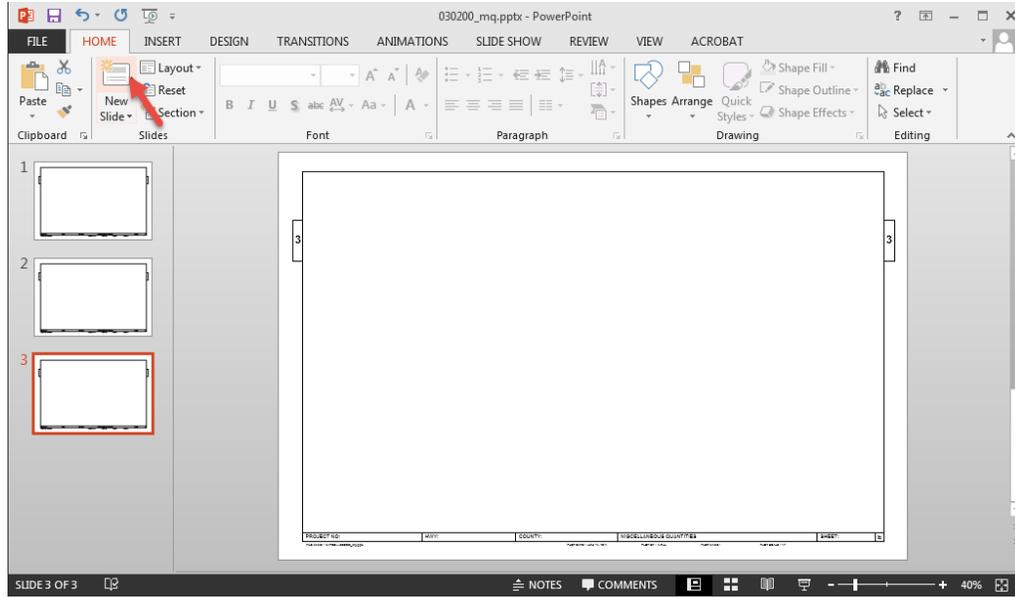


Figure 12.4 PowerPoint New Slide.

## 12.2 Copying Data onto PowerPoint Slide

1. In Q2P, highlight the range of data to be included on the plan sheet.
2. Select **PAGE LAYOUT > Print Area > Set Print Area**.
3. **Right-click + Copy** or select **HOME > Clipboard > Copy** to copy the selection.

*Q2P works best when a Print Area is linked to PowerPoint since this allows users to insert rows and columns and have those changes reflected in PowerPoint. If only a cell range is selected, rows will shift out of view when new ones are inserted into the table. Alternatively, Use **FORMULAS > Defined Names > Define Name**, to break-up worksheets that must span two PowerPoint sheets.*

4. In PowerPoint, select **HOME > Clipboard panel > Paste drop down menu > Paste Special...** and select the "Paste link" radio button. Choose "Microsoft Office Excel Worksheet Object".

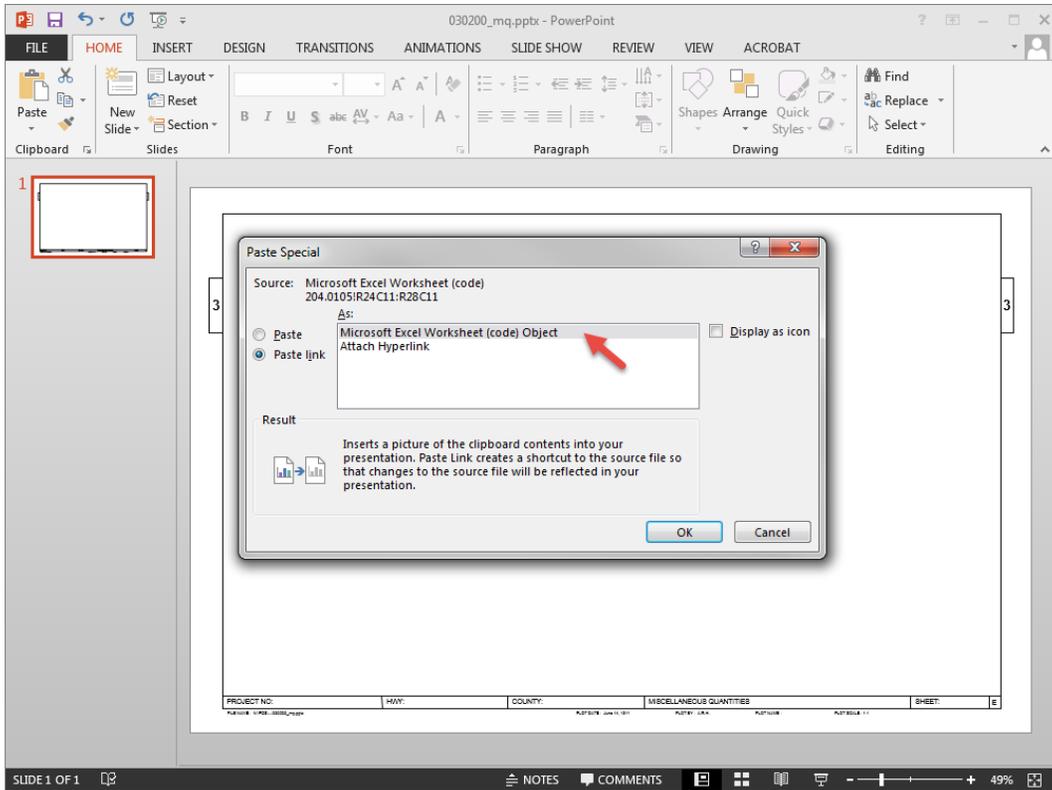


Figure 12.5 Paste Special in PowerPoint.

Make sure the “Display as icon” checkbox is NOT checked.

- Use the **right-click menu > Format Object** to scale to a standard percent for the sheets, or set the insertion point manually if attempting to align multiple items.

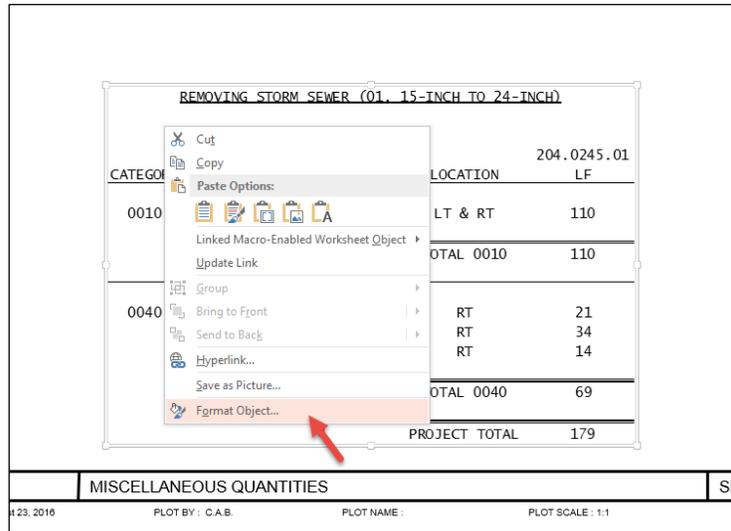


Figure 12.6 Right-Click Menu

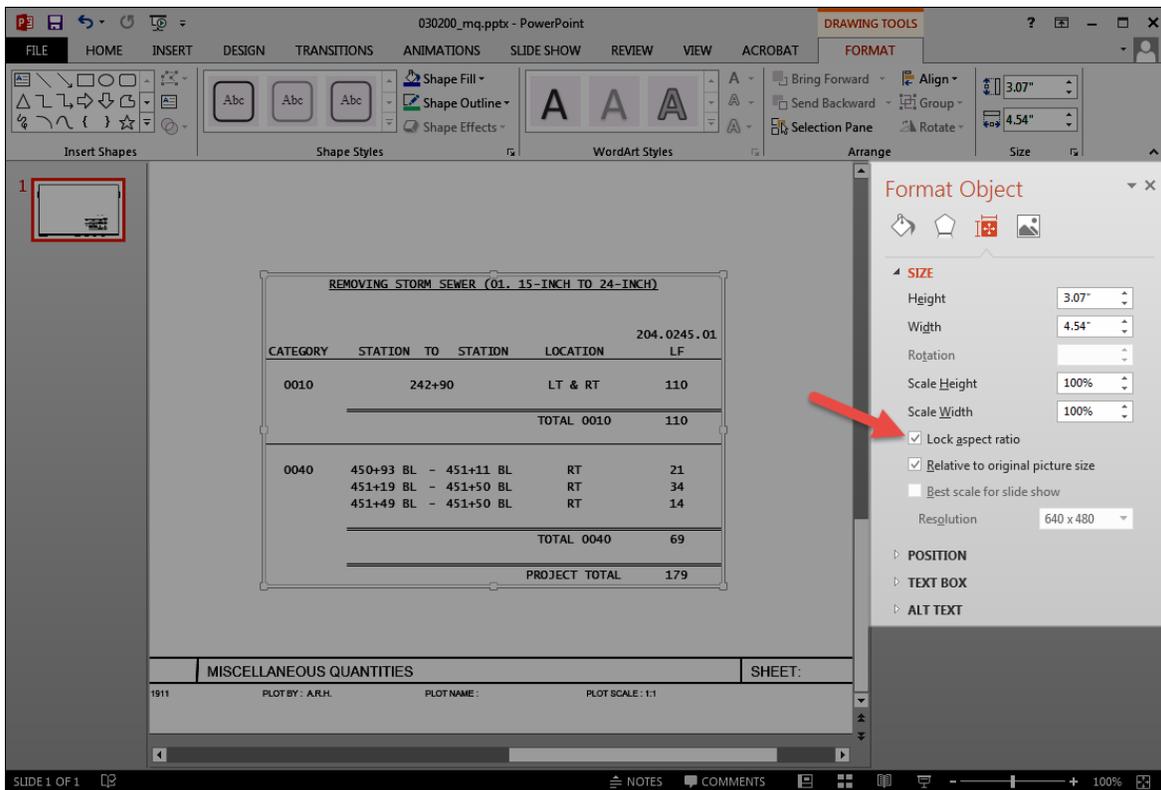


Figure 12.7 Format Object dialog box.

Note that “Lock aspect ratio” needs to be checked.

6. Use the standard PowerPoint tools to create lines (**HOME > Drawing**) to separate items.

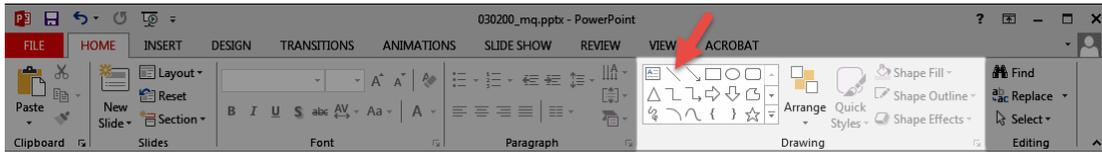


Figure 12.8 Drawing lines in PowerPoint.

*Holding the shift key while creating or lengthening a line will lock in the direction to 90°/180°/270°/360°.*

Once miscellaneous quantity worksheets are linked to PowerPoint, the XLSM file should not be moved or renamed, as links are not relative, they are absolute. Under the **FILE > Info > Related Documents > Edit Link to Files**, the links may be reviewed for problems and file source locations manually updated for each link, one at a time, if necessary.

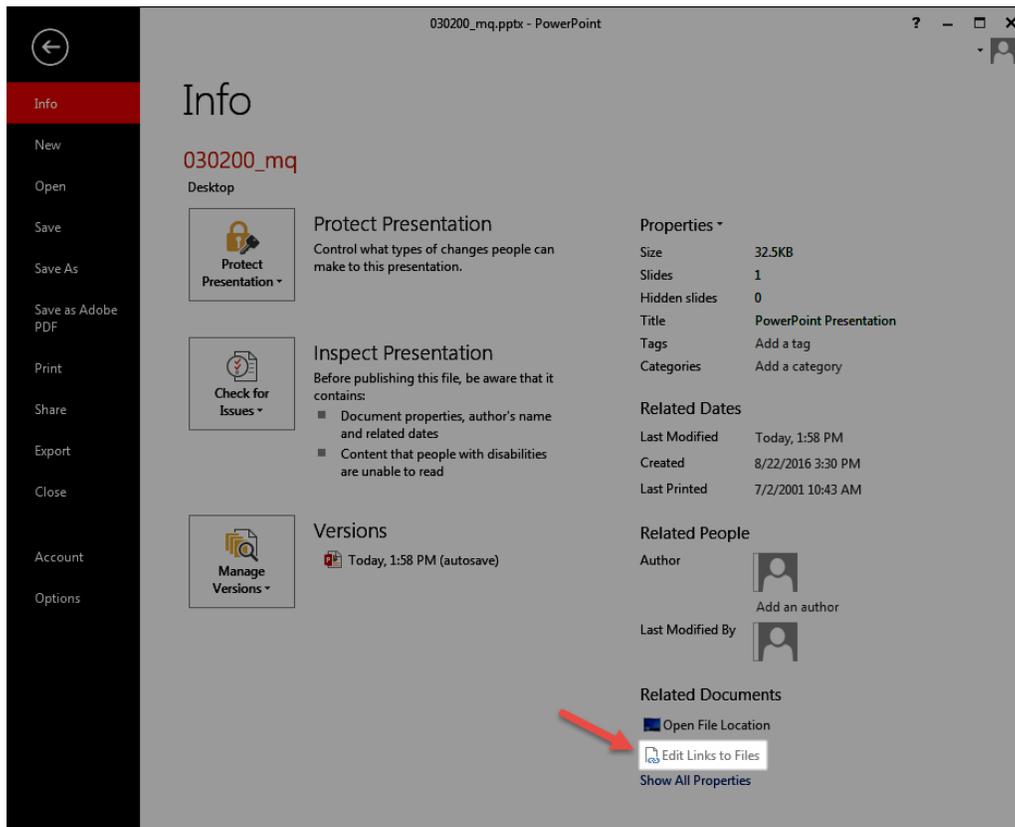


Figure 12.9 Use “Edit Links to Files” to review links between Q2P and PowerPoint.

**⚠ Always have the associated Q2P workbook open BEFORE opening the PowerPoint MQ plan sheets. This will avoid extremely slow processing due to PowerPoint needing to open and close Excel to update every link in the file.**

### 12.3 Printing the Miscellaneous Quantity Sheets

The MQ plan sheets must conform to the standards in [FDM 15-1-30](#), *Miscellaneous Quantity Sheet*. Use the following steps to create the PDF file from PowerPoint for the final electronic plan (ePlan).

1. Select **FILE > Print** and set the **Printer** to “Adobe PDF” and verify “All Slides” are to be printed.
2. Click “Printer Properties” to access the Print dialog box.

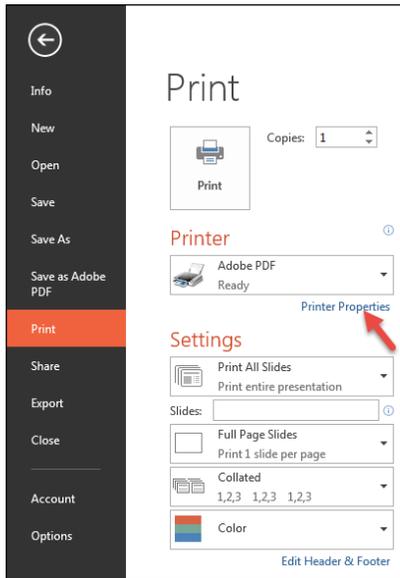


Figure 12.10 Accessing printer properties.

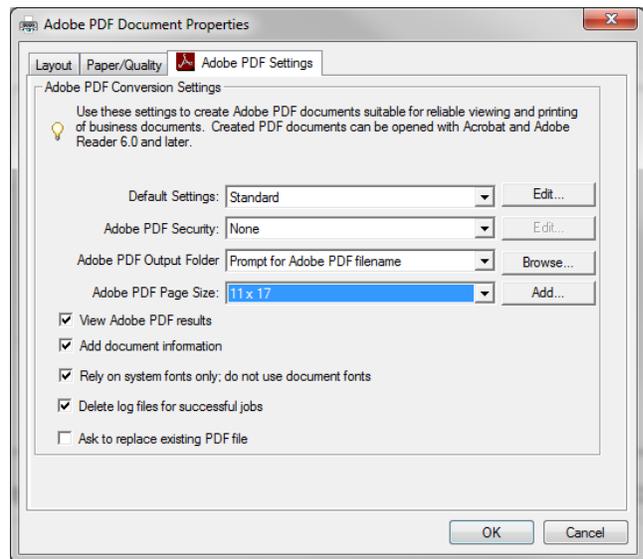


Figure 12.11 Basic Print Settings for Adobe PDF.

3. Set “Adobe PDF Page Size” to **11 x 17**.
4. Change the “Layout” to **Landscape** and hit “OK.”

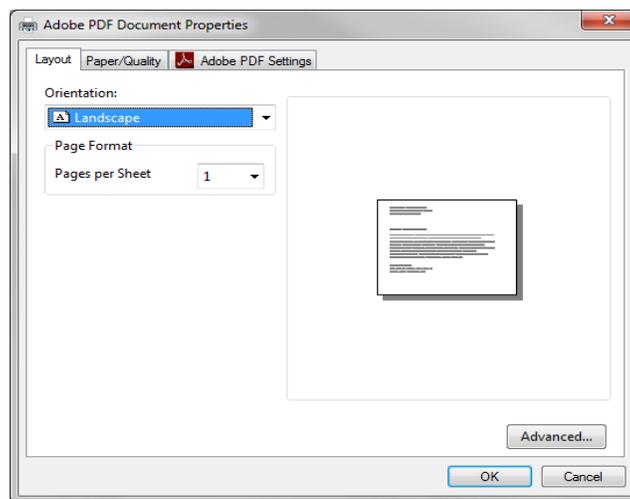


Figure 12.12 Layout changed to Landscape.

5. Select “Print” and save the PDF as **030200\_mq.pdf** in the **SheetsPlan\pdf** folder.

### 13. Print Project Cost Report

The Cost Report is the engineer’s estimate, grouped by category.

1. Prior to creating a Cost Report, use **ADD-INS > Project > Checked By...** and enter the appropriate initials and date. This information will appear on the Cost Report footer.
2. Select **ADD-INS > Print > Estimate... > Print Full Estimate (Formatted)** to print the project cost report which displays the estimate totals by category. This command automatically prints as a PDF. Alternatively, the main “Bid Items” worksheet can be printed from the standard Excel print dialog to disregard categories and just view the item costs across all categories.

ENGINEER'S ESTIMATE / Q2P WORKBOOK									
PROJECT MANAGER: ARTHUR HIRST				<table border="1"> <tr> <td colspan="2">CONSTRUCTION COST ESTIMATE</td> </tr> <tr> <td>10/14/2012</td> <td>\$757,175.00</td> </tr> </table>		CONSTRUCTION COST ESTIMATE		10/14/2012	\$757,175.00
CONSTRUCTION COST ESTIMATE									
10/14/2012	\$757,175.00								
CONST. I.D.: 1234-56-78									
TITLE: WAUKESHA - SUPERIOR									
LIMITS: GREEN BAY TO LA CROSSE									
HIGHWAY: STH 1									
COUNTY: EAU CLAIRE									
PROGRAM CODE: 303 STATE HIGHWAY REHABILITATION									
CONCEPT CODE: RESURF RESURFACING									
NET C/L MILES: 0.000									
ITEMS	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST				
CATEGORY 0010 ROADWAY CONSTRUCTION (80% FEDERAL 20% STATE)									
201.0105	CLEARING	350	STA	999.00	349,650.00				
201.0205	GRUBBING	350	STA	50.00	17,500.00				
619.1000	MOBILIZATION	0.25	EACH	75,000.00	18,750.00				
643.0100.01	TRAFFIC CONTROL (01. 1234-56-78)	1	EACH	5,000.00	5,000.00				
CATEGORY 0010 TOTAL:					390,900.00				
CATEGORY 0020 BRIDGE OVERLAY (80% FEDERAL 20% STATE)									
502.0100	CONCRETE MASONRY BRIDGES	500	CY	400.00	200,000.00				
619.1000	MOBILIZATION	0.25	EACH	75,000.00	18,750.00				
643.0100.01	TRAFFIC CONTROL (01. 1234-56-78)	0	EACH	5,000.00	0.00				
CATEGORY 0020 TOTAL:					218,750.00				
CATEGORY 0030 BIKE/PED TRAIL (100% CITY OF WISCONSIN RAPIDS)									
465.0105	ASPHALTIC SURFACE	1000	TON	100.00	100,000.00				
619.1000	MOBILIZATION	0.25	EACH	75,000.00	18,750.00				
SPV.0090.01	SPECIAL (01. YARN)	25	LF	1.00	25.00				
CATEGORY 0030 TOTAL:					118,775.00				
CATEGORY 0040 SANITARY SEWER & WATERMAIN (100% CITY OF RHINELANDER)									
619.1000	MOBILIZATION	0.25	EACH	75,000.00	18,750.00				
677.0500.S	INSTALL VIDEO DETECTION CAMERA	1	EACH	10,000.00	10,000.00				
CATEGORY 0040 TOTAL:					28,750.00				
<b>CONSTRUCTION COST ESTIMATE:</b>					<b>757,175.00</b>				
Checked By:					1 of 2				
Date:									

Figure 13.1 Q2P Cost Report.

Note the zero quantity in CATEGORY 0020 for traffic control. This category was incorrectly left on the traffic control MQ worksheet.

 Delete unused category rows (using Excel commands) from the MQ worksheets and run **ADD-INS > Data > Update Quantity... > Update One Item** to refresh the links to the main “Bid Items” sheet.

TOTAL643.0100.01_0020											
=SUM(I10:I12)											
	A	B	C	D	E	F	G	H	I	J	K
1	TRAFFIC CONTROL (01. 1234-56-78)										
2											
3											
4	643.0100.01										
5	CATEGORY	STATION TO	STATION	LOCATION			EACH	REMARKS			
6											
7	0010						1				
8											
9				TOTAL 0010			1				
10											
11	0020										
12											
13				TOTAL 0020			0				
14											
15											

Figure 13.2 Item worksheet with unused category left in place.

*A miscellaneous quantity worksheet must only contain the categories that are required. Do not keep empty CATEGORY 0020, 0030 totals on the worksheet (unless intended to be used at a later time), otherwise the 0 quantity/cost will appear in the Cost Report and the upload file to Trns•port/AWP Preconstruction.*

The **Print Category Costs Summary** command creates a useful report for completing a **Project Change Request** for updating FIIPS. This command outputs to a Microsoft® Word document.

## 14. Creating the Upload File for Trns•port®

This command may take several minutes to finish and is best run from a fresh session of Q2P.

 Prior to creating the upload file for Trns•port, verify all empty categories are deleted from each miscellaneous quantity worksheets, otherwise 0 quantities will appear in the file (See Category 0020 in [Figure 13.1](#)).

1. Select **ADD-INS > Export Estimate > Create Pjport.xml** file.

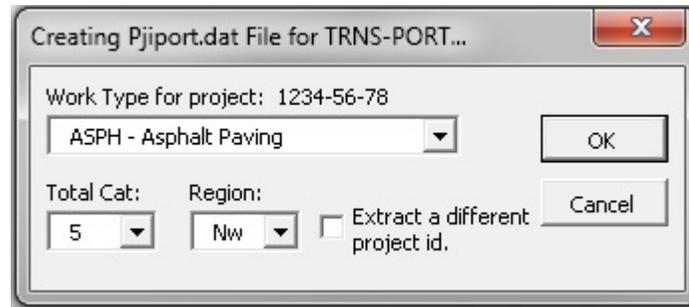


Figure 14.1 Work Type and additional header information dialog box.

2. Select the proper “Work Type” from reviewing the descriptions, or by consulting with the region project manager. The “Total Cat” should automatically match the number of categories on the bottom of the “Bid Items” worksheet. Select your “Region” from the dropdown menu and select “OK.”

 If an empty dialog box appears and does not load the options shortly thereafter, using Esc will usually resolve the issue.

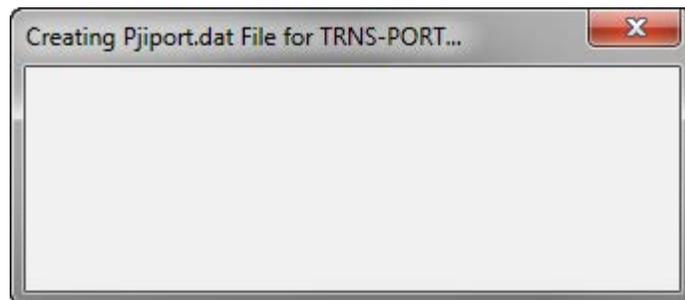
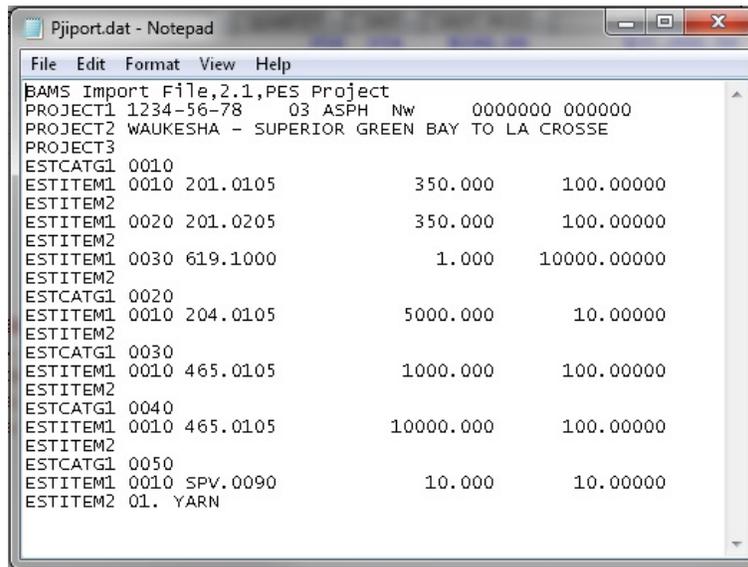


Figure 14.2 Empty dialog box – hit “Esc” on keyboard if encountered.

The resulting Pjport.dat file is a simple text file and can be opened and reviewed with any text editor.



```

Pjport.dat - Notepad
File Edit Format View Help
BAMS Import File,2.1,PES Project
PROJECT1 1234-56-78 03 ASPH Nw 0000000 000000
PROJECT2 WAUKESHA - SUPERIOR GREEN BAY TO LA CROSSE
PROJECT3
ESTCATG1 0010
ESTITEM1 0010 201.0105 350.000 100.00000
ESTITEM2
ESTITEM1 0020 201.0205 350.000 100.00000
ESTITEM2
ESTITEM1 0030 619.1000 1.000 10000.00000
ESTITEM2
ESTCATG1 0020
ESTITEM1 0010 204.0105 5000.000 10.00000
ESTITEM2
ESTCATG1 0030
ESTITEM1 0010 465.0105 1000.000 100.00000
ESTITEM2
ESTCATG1 0040
ESTITEM1 0010 465.0105 10000.000 100.00000
ESTITEM2
ESTCATG1 0050
ESTITEM1 0010 SPV.0090 10.000 10.00000
ESTITEM2 01. YARN

```

Figure 14.3 Example Trns•port PES upload file.

3. Manually review the Pjport.dat file for completeness and/or errors prior to uploading into Trns•port PES. Pay special attention to the items with supplemental descriptions.

Note how the Item Description from Q2P is not actually exported to Trns•port. Rather, it is populated in that system from the item number.

For instructions on uploading the Pjport.dat file into Trns•port PES, see [FDM 19-5, Exhibit 10.5, Uploading Project from Estimator to Trns.port PES](#). The help documentation refers to the pjiport.dat file originating from Estimator, but the Q2P version is also a valid source.

## 15. Creating the Upload File for AASHTOWare Project Preconstruction™

This command may take several minutes to finish and is best run from a fresh session of Q2P.

 Prior to creating the upload file for AWP Preconstruction, verify all empty categories are deleted from each miscellaneous quantity worksheets, otherwise 0 quantities will appear in the file (See Category 0020 in [Figure 13.1](#)).

1. Select **ADD-INS > Export Estimate > Create XML Estimate File**. After selecting the command, a window will appear that informs you that a pass file for upload into AWP Preconstruction will be created and asks if you want to continue. Select “Yes” to continue.

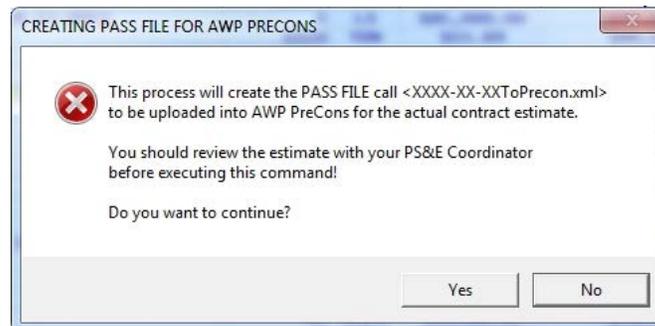


Figure 15.1 Pass file creation confirmation dialog box.

2. Select the proper “Work Type” from reviewing the descriptions, or by consulting with the region project manager. The “Total Cat” should automatically match the number of categories on the bottom of the “Bid Items” worksheet. Select your “Region” from the dropdown menu and select “OK.”

 If an empty dialog box appears and does not load the options shortly thereafter, using Esc will usually resolve the issue.

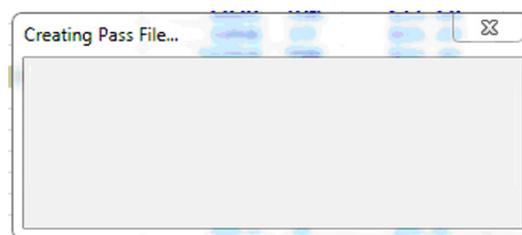


Figure 15.2 Empty dialog box – hit “Esc” on keyboard if encountered.

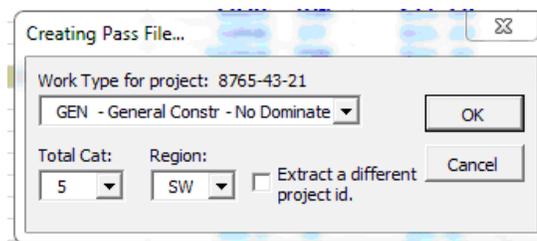


Figure 15.3 Work Type and additional header information dialog box.



## APPENDICES

### Appendix A. Troubleshooting

#### A-1 “#####” Displays in a Cell

When a cell in Excel does not have sufficient width to display the entire number, it will display a cell filled with “#”. Increasing the width of the column will fix the issue.

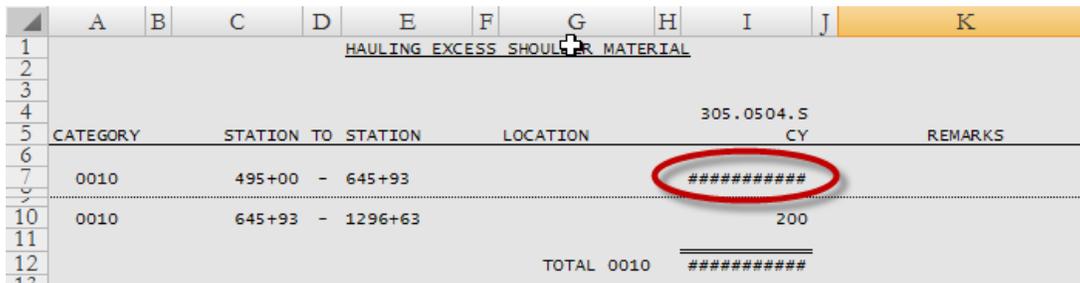


Figure A-1 Insufficient column width.

Double-clicking in the area between columns headings (columns I and J in our example) will automatically change the width to an amount that will allow all content to display properly. Excel will do this when the mouse cursor has changed to the Excel “resize column width” cursor.

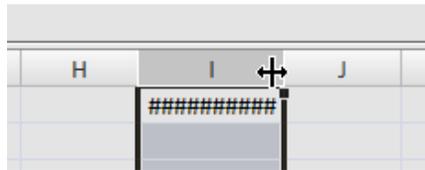


Figure A-2 Resize column width cursor.

You can also right-click on the column name (I) and select “Column Width...” to change the width to a set larger value.

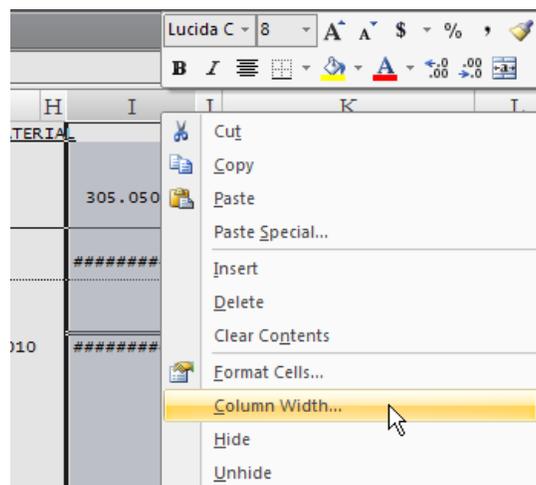


Figure A-3 Right-click menu for accessing the “Column Width...” command.

## A-2 “#REF !” Appears in the Quantity Total on the main “Bid Items” Worksheet

This error occurs most often when a category has been deleted from an MQ worksheet. The solution is to update the item by using **right-click + Update Item...** which will create the proper links. You can also do this by selecting **ADD-INS > Data > Update Quantities...** to update all items at once.

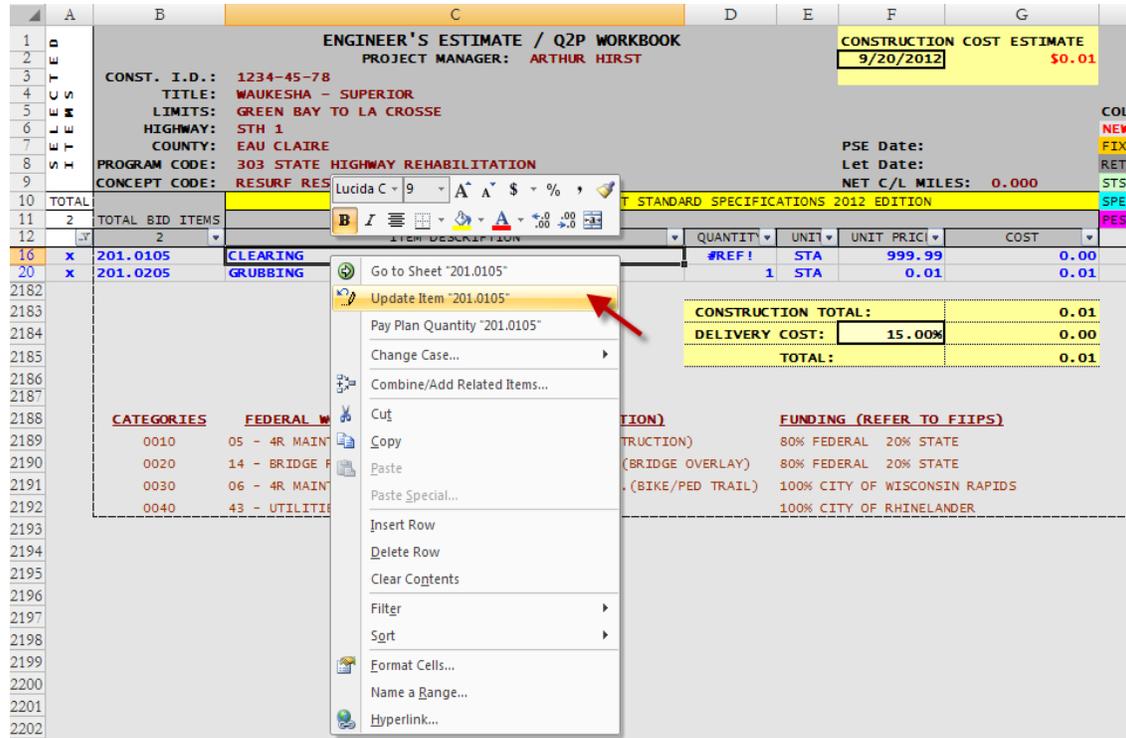


Figure A-4 Fixing error with Update Item.

## A-3 Bid Item Number Loses Trailing Zeros When Cell is Edited

The bid item number cells on the main “Bid Items” worksheet must be formatted as “Text,” not “General.” If they are formatted as “General” they will appear normal until a cell is entered into for editing. Once edited, the trailing zeros will be lost and the number will change to right aligned. Cell formatting can be changed by selecting the cells, and then via **Home > Number Panel > Drop-down**, change the format from “General” to “Text.” You can also **right-click + Format Cells...** to access the same menu.

## A-4 Combine/Add Related Items... Command is unavailable in Data Menu

If the **Combine/Add Related Items...** command is unavailable in the **Data** menu, use **Project > Refresh Toolbar** to reload it. If this does not work, close and reopen the Q2P file. Note that this command will not be available if the Q2P file does not have any individual MQ worksheets in it.

### A-5 Compile Error

A compile error is typically due to ActiveX controls not being properly installed and registered. This happens because the Q2P directory was incorrectly copied over to a workstation rather than being installed from the Q2P package. Verify Q2P was properly installed with the [DOT Computer Help Desk](#).

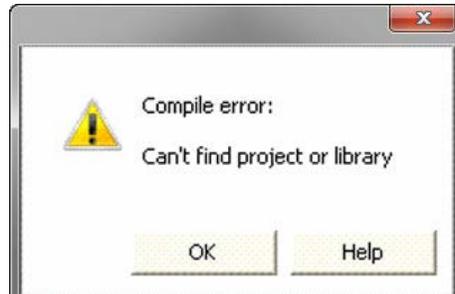


Figure A-5 Compile error warning message.

### A-6 Cost Report Errors

If the **Cost Report** created from **Print > Full Estimate (Formatted)...** generates a “CONSTRUCTION COST ESTIMATE” that differs from the one on the main “Bid Items” worksheet, Q2P will recognize this error and highlight it on the costs report. This occurs when an item has the category changed and the **ADD-INS > Data > Update Quantities...** command does not complete the task properly, leaving the old category total values as duplicates.

CATEGORY 0010 ROADWAY CONSTRUCTION (80% FEDERAL 20% STATE)					
-->	204.0105	REMOVING PAVEMENT BUTT JOINTS	1750	SY	8,750.00
-->	204.0109.S	REMOVING CONCRETE SURFACE PARTIAL DEPTH	128000	SF	44,800.00
	204.0150	REMOVING CURB & GUTTER	200	LF	800.00
	204.0155	REMOVING CONCRETE SIDEWALK	100	SY	600.00
	204.0165	REMOVING GUARDRAIL	500	LF	750.00

Figure A-6 Error highlighting under CATEGORY 0010 in the Cost Report.

CATEGORY 0030 BIKE/PED TRAIL (100% C WISCONSIN RAPIDS)					
-->	204.0105	REMOVING PAVEMENT BUTT JOINTS	1750	SY	8,750.00
-->	204.0109.S	REMOVING CONCRETE SURFACE PARTIAL DEPTH	128000	SF	44,800.00

Figure A-7 Error highlighting under CATEGORY 0030 in the Cost Report.

--> Denotes that there may be discrepancies with the quantities between the miscellaneous quantity sheets and the estimate due to rounding or sheet names and items don't match.

Figure A-8 Message on bottom of Cost Report referencing aforementioned error.

The fix is to manually remove duplicates from Q2P by using the **FORMULAS > Name Manger** and then deleting the “TOTAL<item-number\_category-number>” that is causing the issue. There may be other Names starting with “Unit”, “Print\_Area”, “Description”, etc. that are broken as well (names with #REF! values or references), but they do not need to be deleted for the **Cost Report** to generate correctly.

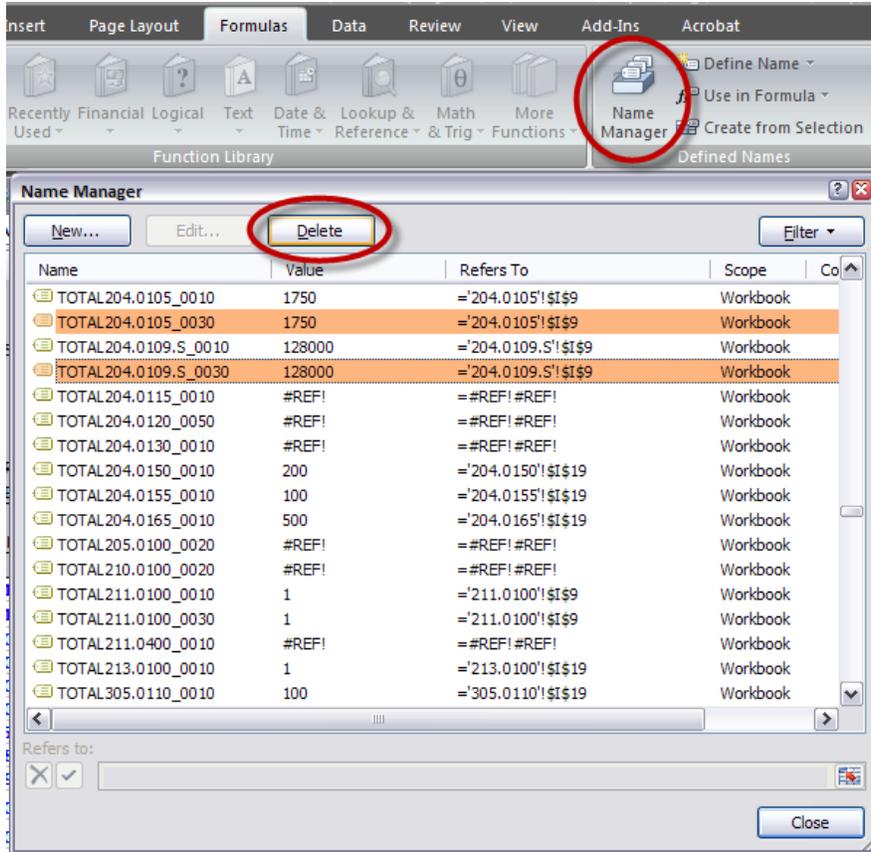


Figure A-9 Deleting duplicate entries in Name Manager.

Other **Cost Report** errors and fixes include the following:

**NOTE:** This report's estimate total doesn't match that of the workbook's estimate.

1. Possible causes could be:  
Quantities between misc. sheets and estimate are not the same due to rounding.
2. Hint - If you use formulas to compute quantities in the misc. sheets, be sure to round them to conform with FDM requirements.

Figure A-10 Other Cost Report errors.

The “workbook’s estimate” refers to the “Bid Items” worksheet. If this error occurs, navigate down the **Quantities** column on the “Bid Items” worksheet to see if one contains too many decimal places.

## A-7 Macros Fail to Load

If the Q2P macros fail to load when the workbook is opened, check that the **Q2P-Macros.XLAM** file is located in the [C:\Q2P](#) directory.

To manually un\load Q2P-Macros, use the “Add-Ins...” command. This command is no longer in the default toolbars/ribbon but can be added to the **Quick Access Toolbar** by using **FILE > Options > Quick Access Toolbar**.

Choose commands from: **All Commands**. Select “Add-Ins...” and **Add >> OK**.

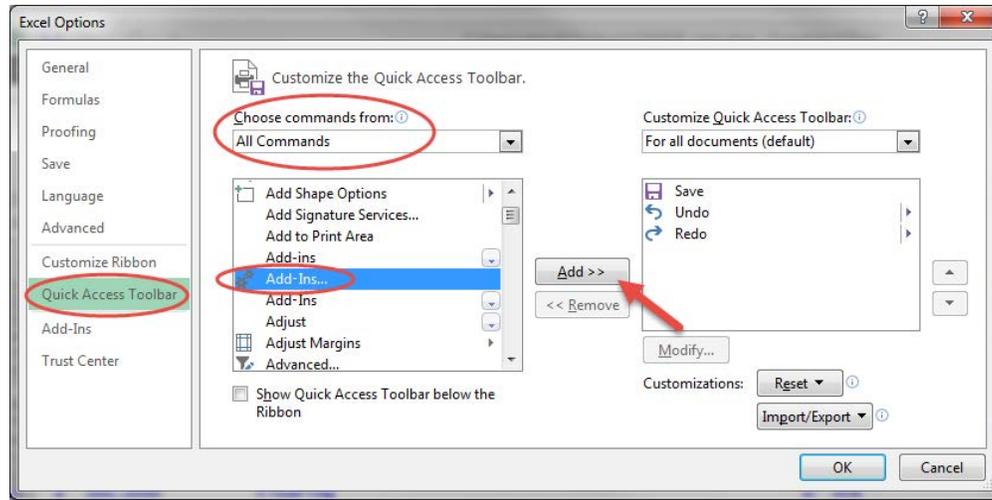


Figure A-11 Adding a button for Excel Add-Ins.

The “Add-Ins” dialog box can also be accessed via **FILE > Options > Add-Ins > Manage: Excel Add-Ins > Go...**

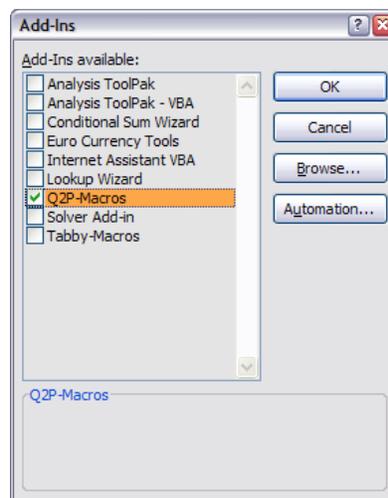


Figure A-12 Excel Add-Ins manager.

### A-8 Paste via Right-click Causes Q2P to Freeze

When selecting and copying multiple rows or columns in Q2P and then pasting via the right-click menu into a **single** row/column, Q2P will freeze.

There are many workarounds to avoid this issue, and they all require the user to not use the right-click menu when pasting. Therefore, **Ctrl+V**; **HOME > Clipboard > Paste**; or hitting **Enter** will all work without problems.

If the right-click menu is used to paste in this situation, hitting **Enter** immediately after the paste will complete the paste, or if still frozen, then hitting **F12** and then **Cancel** on the next dialog box will resolve the issue.

### A-9 Right-click Menu for Q2P Disappears

If the right-click menu items disappear from Q2P, use **ADD-INS > Project > Refresh Toolbar** to reload them. If this does not work, close and reopen the Q2P file.

### A-10 Small Triangles Appear in Cells

If “Error Checking” is enabled in Excel, then small triangles will appear in cells when it believes there is an error (such as the multiple leading zeros in category numbers, etc.).

	A	B	C	D	E	F	G	H	I	J	K
1	REMOVING GUARDRAIL										
2											
3											
4									204.0165		
5	CATEGORY		STATION TO	STATION		LOCATION			LF		REMARKS
6											
7	0010		597+69	- 599+16		RT			147.00		
8	0010		598+15	- 599+37		LT			122.00		
9	0010		599+43	- 600+65		RT			122.00		
10	0010		599+65	- 601+12		LT			147.00		
11											
12	0010		1202+31.28	- 1202+75.03		RT			43.75		
13	0010		1202+48.06	- 1202+91.81		LT			43.75		
14	0010		1203+19.03	- 1203+62.78		RT			43.75		
15	0010		1203+35.81	- 1203+79.56		LT			43.75		
16											
17						TOTAL 0010			713.00		
18											
19											

Figure A-13 Excel error checking displaying small triangles in cells – will also display in PowerPoint.

To stop Excel from displaying these error triangles, select **FILE > Options > Formulas**. Then under “Error Checking,” unselect “Enable background error checking”.

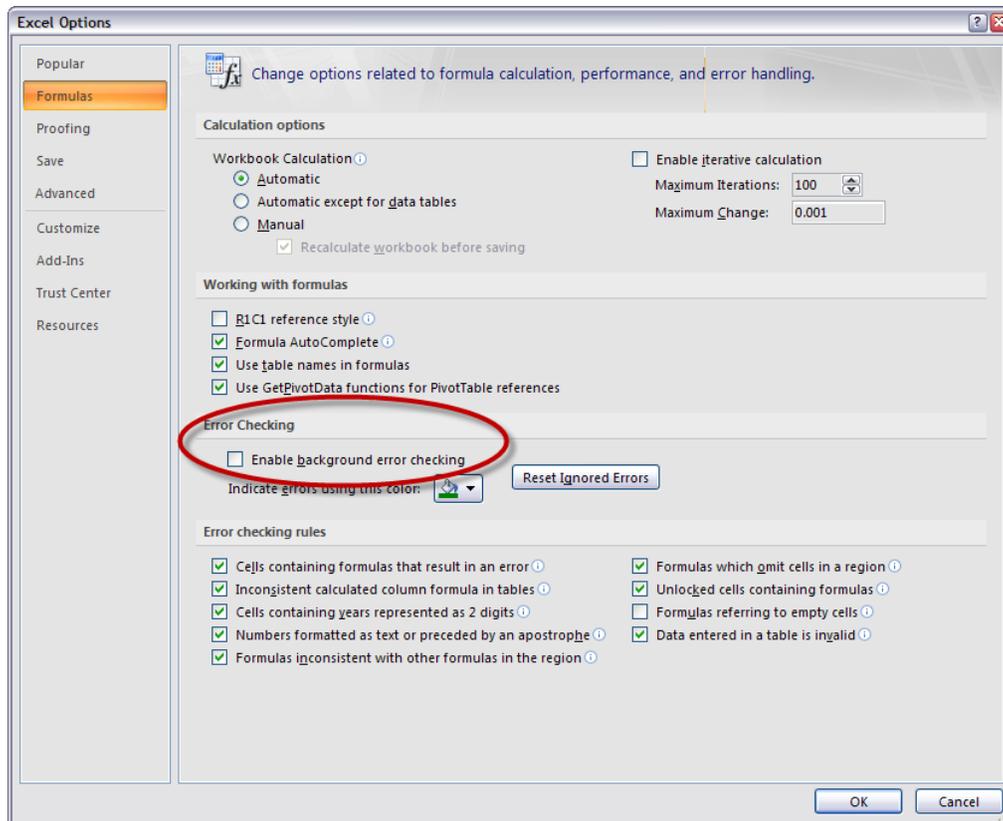


Figure A-14 Disabling Excel error checking.

### A-11 Sort via Right-click or the AutoFilter Drop-down Causes Q2P to Freeze



Do not use the “Sort” command from any of the Excel menus. Instead, use “Conditional Formatting” and/or “Number Filters” to review the 80/20 rule items. If you wish to view the data in a particular order (e.g. largest to smallest to include in the estimate documentation), copy the data onto a new workbook prior to sorting and use that new copy for manipulating.

If the **Sort** command is used from the right-click menu or from the AutoFilter drop-down on the “Bid Items” worksheet, Q2P will freeze after completing the sort. To make Excel responsive again, hit “Enter” or try hitting F12 and then “Cancel” on the next dialog box. The freeze can be avoided by using the **Sort** commands found on the **DATA > Sort & Filter** panel.



Use **EXTREME** caution if you decide to Sort the data as sorting is known to cause errors in Q2P.

## A-12 “Trns•Port” or Other Application Installer Dialog Box Appears

- If an unrelated application installer dialog box appears when first loading the macros or selecting a macro related object in Q2P, immediately select “Cancel”.

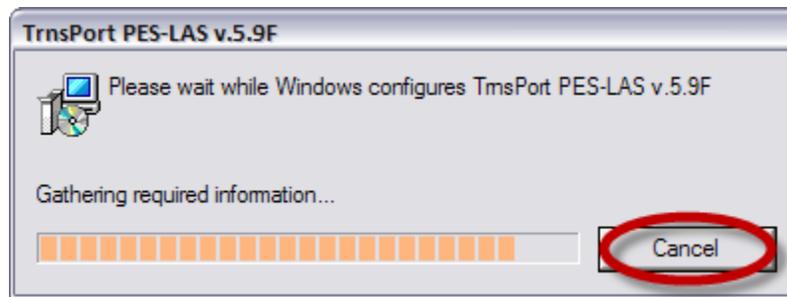


Figure A-15 Installer dialog box.

Users may need to “Cancel” several times if the dialog continues to pop up.

If the installer is allowed to finish before cancel is selected, an invalid source message will appear.

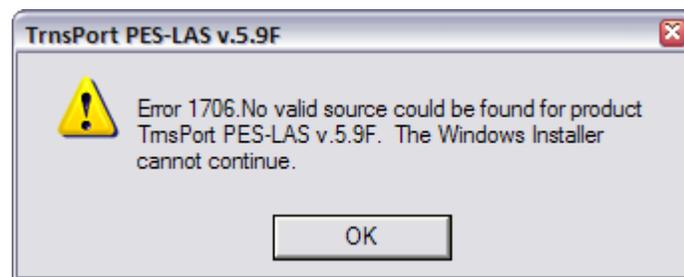


Figure A-16 Installer error.

Q2P will operate fine after the dialog is cancelled, but WisDOT staff should notify [DOTQ2P](#) of the issue and contact the [DOT Computer Help Desk](#) for a reinstall of Trns•port if the problem persists.

- When some of the **ADD-INS > Print > Estimate... >** commands are run, the following error can pop-up:

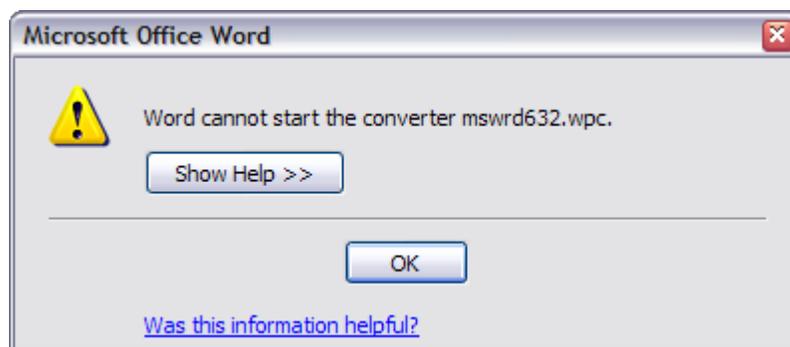


Figure A-17 Converter error.

This error can be ignored.

## Appendix B. Miscellaneous Helpful Information

### B-1 Getting Help

Request help with Quantities 2 Plans by contacting the region Q2P power users in your office found [here](#) or by sending an email to [DOT Q2P Support](#). If the issue is believed to be more of a general problem with Excel or PowerPoint, WisDOT staff should contact the [DOT IT Service Desk](#).

### B-2 Excel® Tips and Tricks

- To bypass automatic formatting of data in a cell, insert an apostrophe in front of the data.
- To quickly flip through worksheets, use **Ctrl + Page Up/Down**.
- Excel will only sort data that is contiguous to the initial selection. Also, even if the data is contiguous, it will not sort outside of an autofilter group.
- The **N function** can be repurposed for inserting comments into formulas. Using it will add 0 to the end of the formula, as the **N function** generally converts text (other than TRUE) to 0. This is cleaner than using Excel comments as it will not show a red triangle in the cell. Append a formula with:

**+ N("This is the comment")**

### B-3 Complex Formulas

In addition to relatively simple computations, more complex formulas can be written.

One common reoccurring issue with permanent signing MQ sheets is that stop signs have their SF calculated from the entered length X width (with a simple unrounded formula such as “=U9\*W9/144”), rather than octagonal area. The correct value from the sign plate can be used by using a lookup table:

```
=IF(K9="R1-1",VLOOKUP(U9,tables!$B$7:$C$14,2,FALSE),
IF(K9="ZX-X",VLOOKUP(U9,tables!$B$79:$C$86,2,FALSE),
IF(ISNUMBER(SEARCH("M",K9)),"-",
IF(ISBLANK(K9),"",
ROUND(((U9*W9)/144),2))))))
```

R1-1 SIZE	STOP W (A)	SF
1	24	3.31
2S	30	5.18
2M	36	7.46
3	36	7.46
4	48	13.25
5	48	13.25
6	18	1.86
7	12	0.78

Figure B-1 Excerpt from tables worksheet.  
(Lookup array highlighted)

Additional formulas can be used to show category subtotals on the “Bid Items” worksheet.

For CATEGORY 0010, with the quantity to be reported in column N:

```
=IF(A13<>"x", "", IF(ISERROR(INDIRECT("TOTAL"&B13&"_0010")), "<CAT>", (INDIRECT("TOTAL"&B13&"_0010"))))
```

For CATEGORY 0010 cost:

```
=IF(A13<>"x", "", IF(N13="<CAT>", "<CAT>", IF(ISERROR(D13), 0, IF(D13="", 0, IF(D13=" ", 0, IF(D13="<Error>", 0, F13*N13))))))
```

Adjust the **red** values for each category/location. These formulas can cause slowdowns in Excel with larger projects.



It is important to always build a formula that other users will be able to understand. That might require using individual cells that are labeled for both variables and constants.

Other formulas can be written with Excel for computing incentives, etc.

Q2P users are encouraged to submit their custom formulas or workflows to [DOT Q2P Support](#), so they can be added to the User Guide or otherwise shared.

## B-4 Revising Security Settings

To avoid the security prompts, the Q2P application directory can be added as a trusted location. Also, certain settings should be verified if Excel will not load the macros.

1. Open **FILE > Options > Trust Center > Trust Center Settings...**

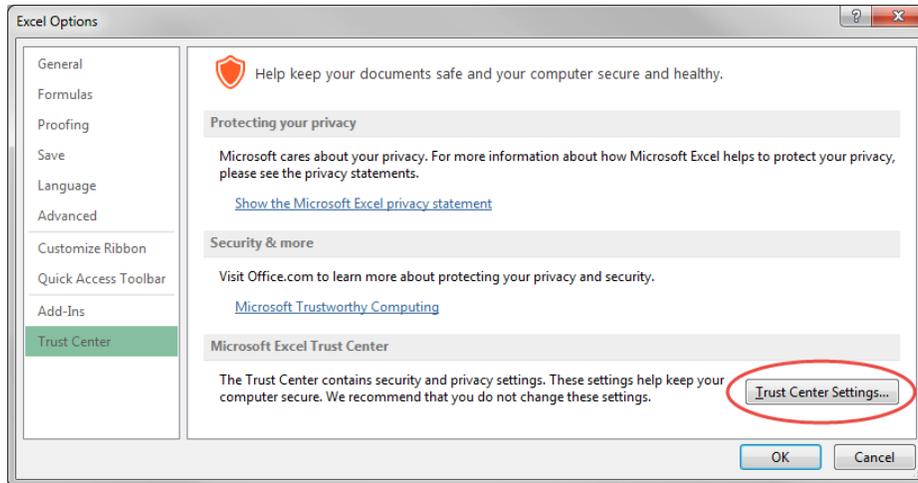


Figure B-2 Trust Center.

2. Click on the “Trusted Locations” tab.

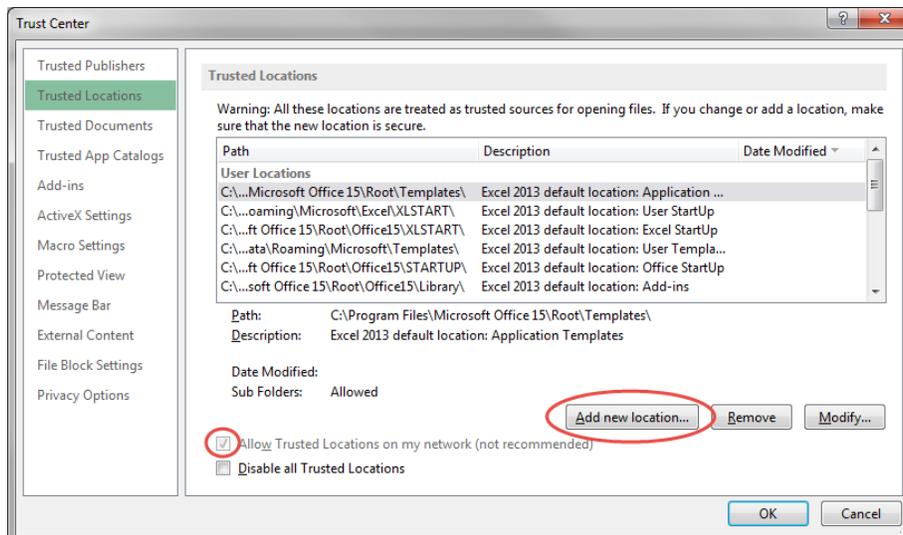


Figure B-3 Adding a Trusted Location.

3. Make sure that “Allow Trusted Locations on my network (not recommended)” is checked.
4. Click on the “Add new location...” button.

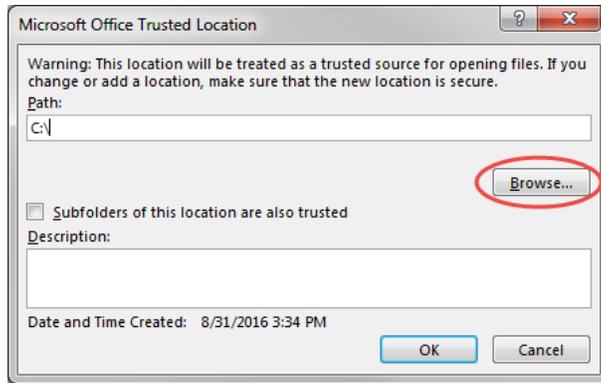


Figure B-4 Specifying the Trusted Location.

5. Click the “Browse...” button and navigate to C:\Q2P

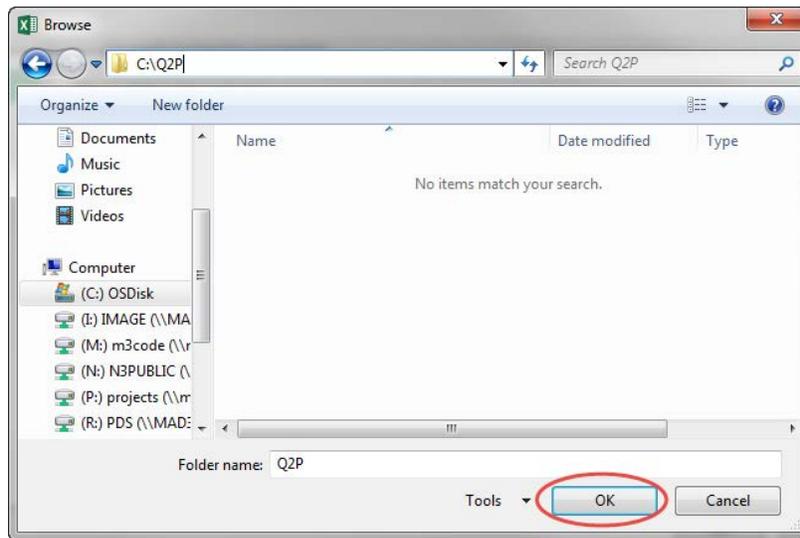


Figure B-5 Browsing to the Q2P directory.

6. Click “OK.”

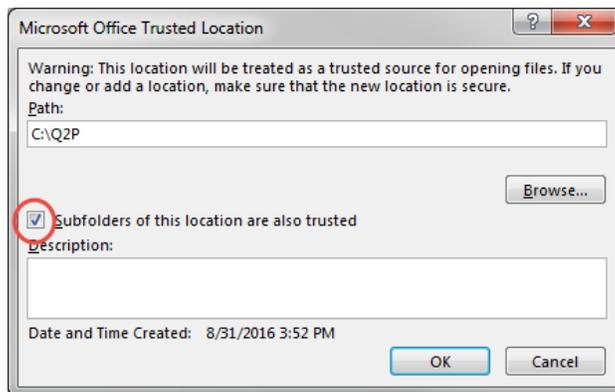


Figure B-6 Including subfolders in the Trusted Location.

7. C:\Q2P should be listed. Check “Subfolders of this location are also trusted” and click “OK.” C:\Q2P should now be in the list of trusted locations, user locations.

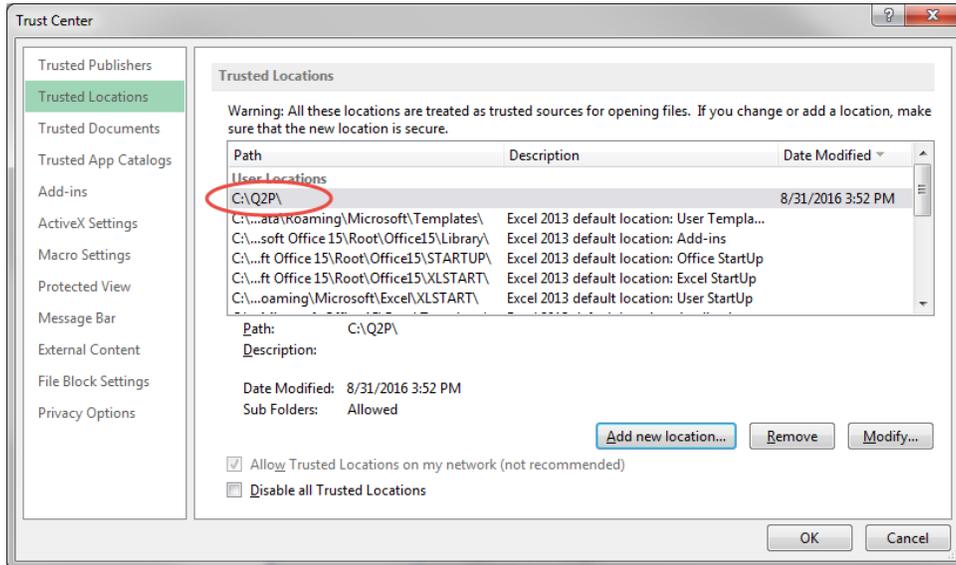


Figure B-7 Verifying Q2P was added to Trusted Locations.

8. Click the “Add-ins” tab and make sure the settings are as listed below.

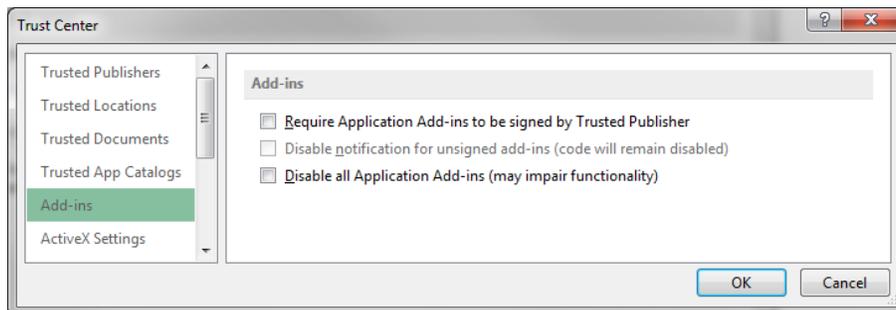


Figure B-8 Verifying Q2P Add-in settings.

9. Click the “ActiveX Settings” tab and make sure the settings are as listed below.

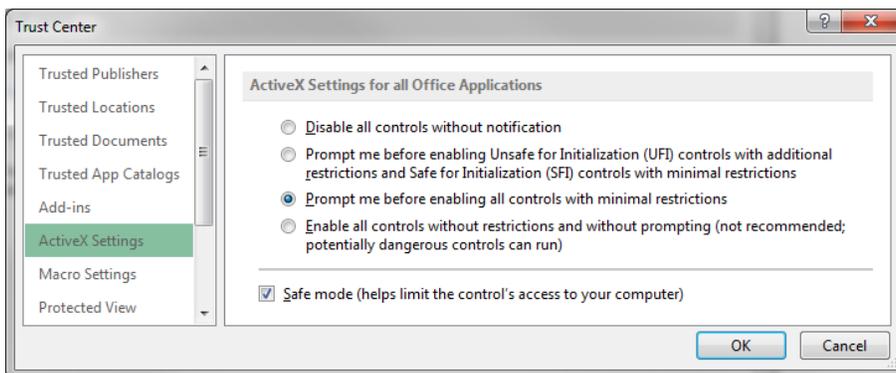


Figure B-9 Verifying ActiveX settings.

10. Click the “Macro Settings” tab and make sure that the settings are as listed below.

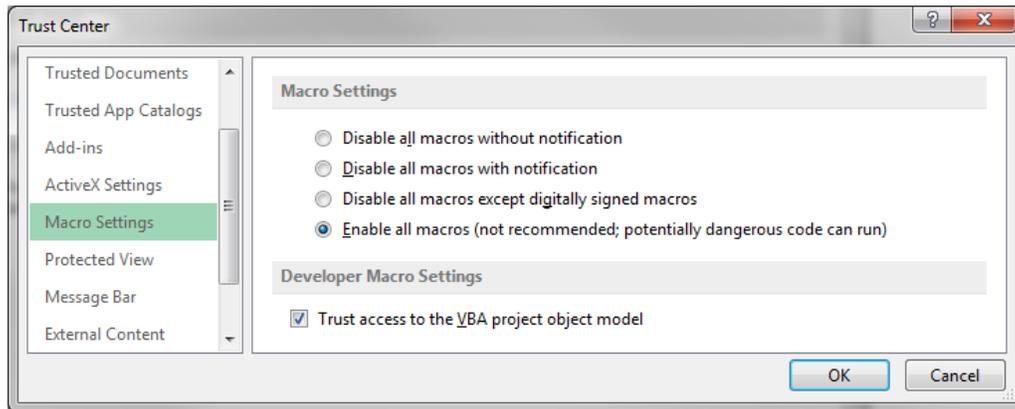


Figure B-10 Verifying Macro settings.

11. Click the “External Content” tab and make sure that the settings are as listed below. Click “OK.”

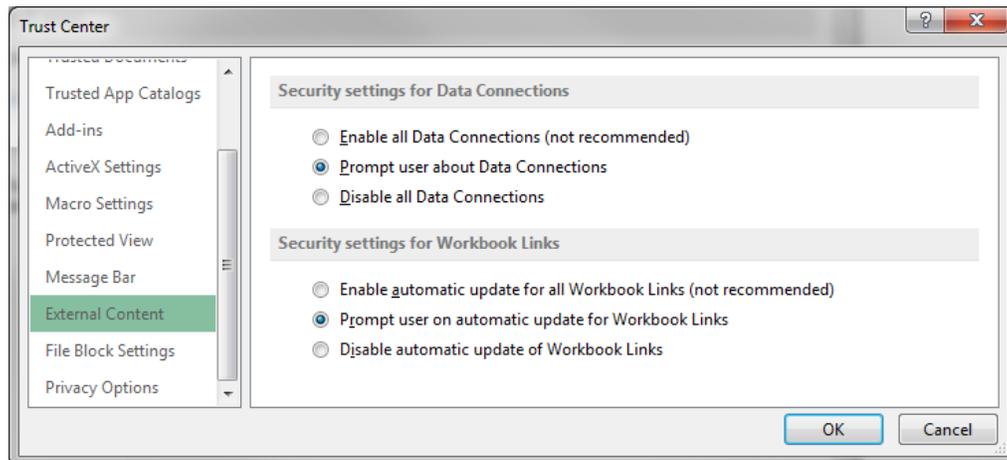


Figure B-11 Verifying External Content settings.

12. Click “OK” again to close the dialog box.

Verify all these settings if having issues with links to other workbooks.

## B-5 Editing the Hidden Q2P Template



It is strongly recommended for users to not edit the miscellaneous quantity worksheet template by un-hiding the appropriate worksheet in Excel. This method of editing the template has been known to cause significant issues such as deleted category totals appearing in the Cost Report. As such, the workflow is unsupported; however, if the template has been edited and problems are encountered, the User Guide section on [Cost Report Errors](#) should help resolve them.

Editing the MQ worksheet template will yield the best results if it is done **only once, before any items have been created**. The issues get worse if it is edited after it has been used to create worksheets.

Once the MQ worksheet template is open, unwanted categories can be deleted, rows and columns can be added, resized, etc. and those changes will be pushed to subsequently created bid item worksheets.

1. To unhide the template worksheet, use **ALT+F11** to launch the **Microsoft Visual Basic** window.
2. In the VBAPROJECT tree, select the “Sheet6 (MiscellaneousQTYSheet D5).”

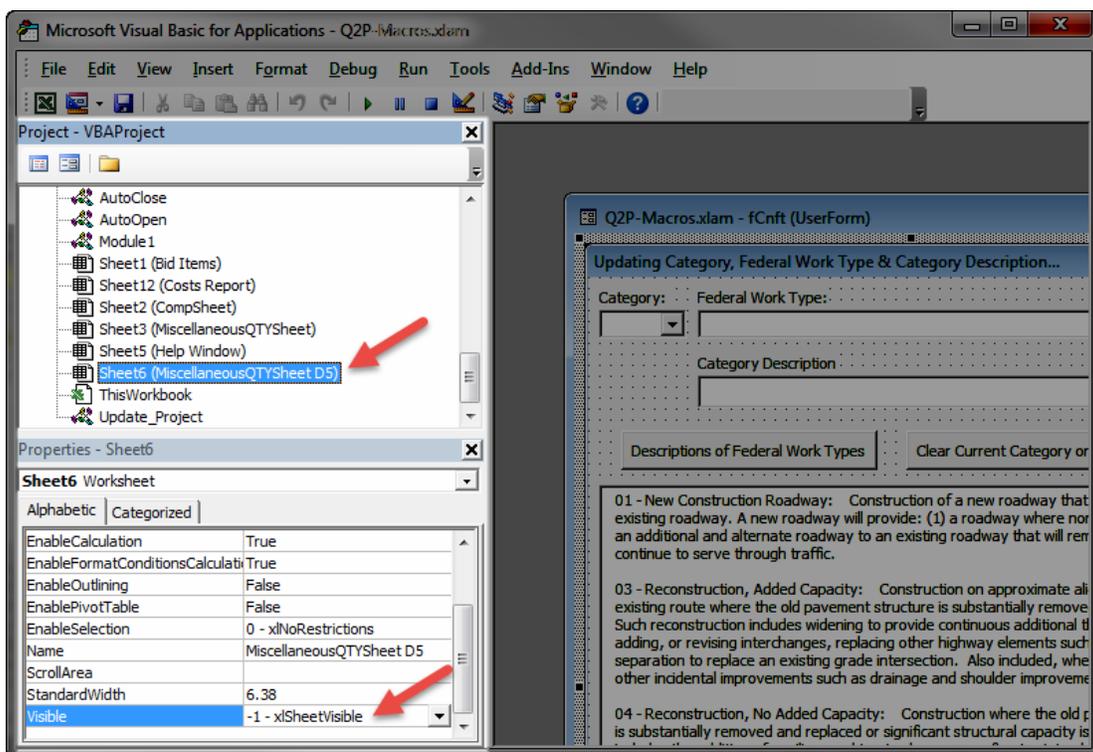


Figure B-12 Visual Basic window.

3. Under the **Properties**, change the “Visible” setting from “2 - xlSheetVeryHidden” to “-1 - xlSheetVisible” by clicking and selecting from the dropdown.
4. Then in **Visual Basic**, use **File > Close and Return to Microsoft Excel**. The worksheet template (named “MiscellaneousQTYSheet D5”) will now be visible for editing.

Typically, some standard REMARKS are added, or the LOCATION is entered as the highway.

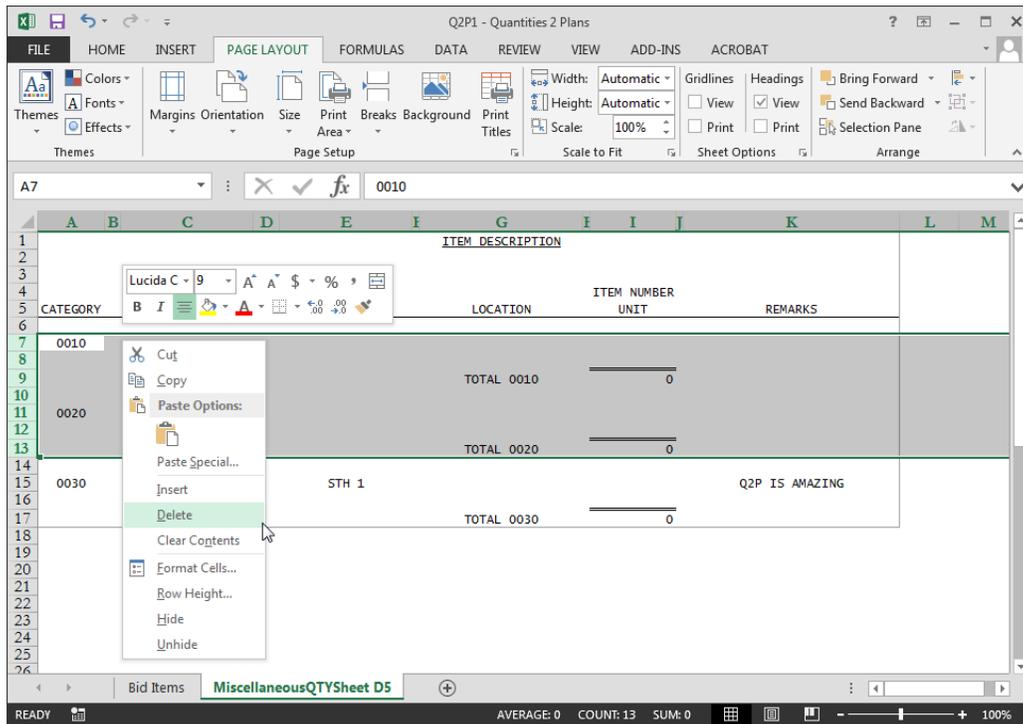


Figure B-13 Editing the template in Excel.

## B-6 Creating Comp Sheets

Once the bid items have been selected, WisDOT form DT2138 “Design/Final Computations” sheets can be generated, if desired, through **ADD-INS > CompSheets > Create Computation Sheets for ALL the Marked Items “x”** or **Insert One or More Computation Sheets**.

These worksheets are not linked to the MQ worksheets and are not intended for users to do quantity calculations on them. They are provided to automate the task of entering the Project No., Item, etc. information on paper comp sheets. Only create these comp sheets if paper copies are desired for sketches or other written records.

## B-7 Making Notes in Q2P

The columns past **column G** (except for **column K**) can be used to make notes about any particular item. Unit price source information and tagging the items in the FIIPS Preliminary Quantities groups are the most common notes recorded in Q2P.



**Column K must be avoided as the command for importing prices from Estimator will overwrite this column. Also, keep the Color Code legend in column H intact.**

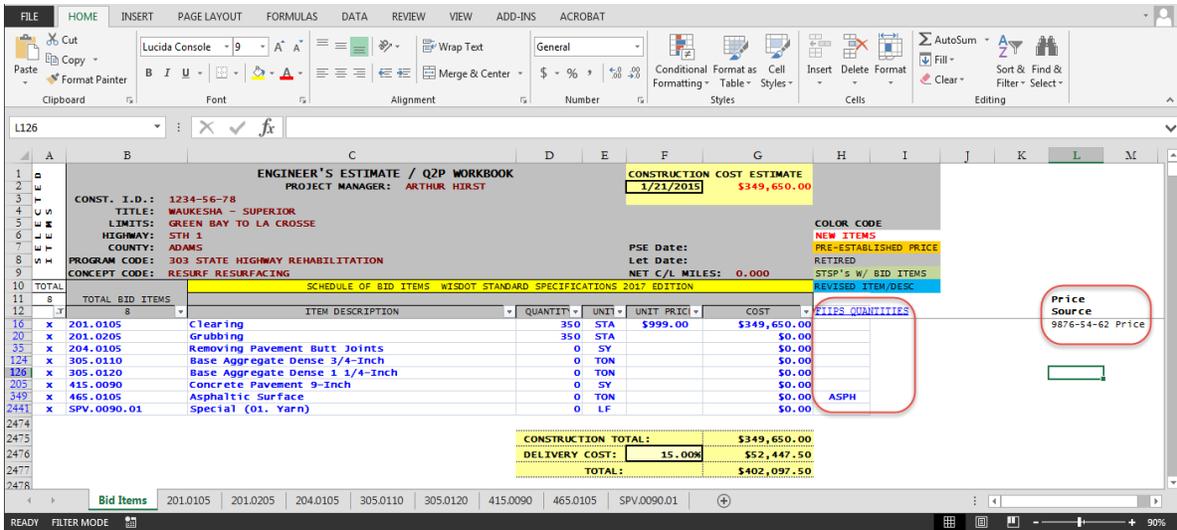


Figure B-14 Making notes in Q2P.

The commonly used abbreviations for FIIPS Preliminary Quantities (Roadbuilder Quantities) are:

ASPH (Asphalt Pavement TON), CONC (Concrete Pavement SY), EXCV (Excavation CY), BCRS (Base Course TON), BRDG (Bridge SF), MILL (Milling SY), GRND (Diamond Grinding SY), STRP (Pavement Marking LF), and RUBL (Rubbilized Pavement SY). Obviously some quantities need to be converted to the correct unit of measure prior to being totaled for entry into FIIPS.

The notes can serve as the required documentation of how unit prices were arrived at for the engineer’s estimate (for the 80/20 rule items). When making notes about unit price sources, be sure to include a general project statement as to whether or not “one bidder” was assumed.

### B-8 Finding Contingency Let Dates in FIIPS

The **Earliest Possible Let** is obtained from the FIIPS. These are considered to be Priority 1 advanceable and have the PS&E submitted early. Priority 2 code projects are ones that are the top region priority for advancement and C.O. may request the PS&E package as needed. The regions may also have priority 10 contingency projects that don’t have early lets in FIIPS and are just kept for regional balancing due to individual project delays, etc. rather than statewide program issues or unbalanced lettings.

Find the earliest possible let in FIIPS by checking **Project > Estimate...** and view the LET project information. If the “Earliest schedule date” differs from the “Schedule date” then the project is a priority 1 contingency and must be submitted early. PMP should have the base schedule set to the earliest date and the project developed accordingly.

This contingency date can be manually added to Q2P, above the PSE Date field, if the designer finds that information helpful to display.

## Appendix C. Confidentiality of Engineer's Estimate and Pre-award Bid Data

CORRESPONDENCE/MEMORANDUM

State of Wisconsin

DATE: June 29, 2012  
 TO: DOT Staff and Design Consultants  
 FROM: Bill McNary, Chief Proposal Management Engineer  
 SUBJECT: Confidentiality of Engineer's Estimate and Pre-award Bid Data

As a reminder, the engineer's estimate and bid tab information, prior to award, are confidential. The release of this information may compromise the integrity of the competitive bidding process and cause harm to contractors and the Department. Individuals that knowingly release this information may be subject to discipline.

**The engineer's estimate is confidential before, during and after the letting.**

The engineer's estimate should not be released outside the department with the exception of the FHWA and engineering consultants working directly for the department on the project in question. The department publishes an estimate range which can be found at <http://www.dot.wisconsin.gov/business/docs/mastercontract.pdf>.

The following excerpt from the FHWA contract administration manual explains why it is important to keep the engineer's estimate confidential:

*"As a result of the bid rigging scandal during the early 1980's, the AASHTO supports estimate confidentiality in its 1981 guidance, "Suggested Guidelines for Strengthening Bidding and Contract Procedures." The DOT and DOJ also address this issue in their joint 1983 guidance, "Suggestions for the Detection and Prevention of Construction Contract Bid Rigging."*

*Among the STAs, the policies and procedures regarding confidentiality of the estimate range from including the estimated cost in the bid proposal, to not disclosing the estimate, even after the award is made. Publicizing the estimate minimizes any advantage a bidder might gain by procuring the estimate secretly, and removes possible pressure on STA employees to secretly release the estimate. A significant disadvantage of releasing the estimate is that firms may be able to use the information to manipulate their bids.*

*Although keeping the estimate confidential will not by itself deter collusion among bidders, it will prevent bidders from knowing the approximate amount that the contracting agency is willing to pay for the project."*

**Bid tab information, prior to award of the contract, is confidential**

Bid tab information (contractor's bids on individual items) will not be publicized until the proposal is awarded. The Bureau of Project Development Proposal Management Section may share bid tab information with the design engineer during the bid analysis process to assist in evaluating the proposal and in particular as it relates to unbalancing. The concern arises when all bids are rejected. It is possible that bidders may want to use some of the submitted unit prices for subsequent bid lettings on the same proposal. Release of this information compromises the competitive bidding process.

## Appendix C (continued)

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Bid tab information is posted on the HCCI and Bid Express websites after the proposal is awarded. After the proposal is awarded, the bid tab information is public information.

To address confidentiality concerns, access to bid letting reports is restricted. If you require access to confidential bid letting reports, please contact Proposal Management at DOT DTSD BPD Proposal Management Section.

Thank you for supporting our efforts to maintain this needed confidentiality.

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