

Business Analytics Tips & Hints

New World EPR: Business Analytics – Financial Management

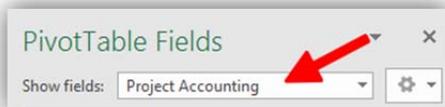
PROJECT TRANSACTION DETAIL

OBJECTIVES

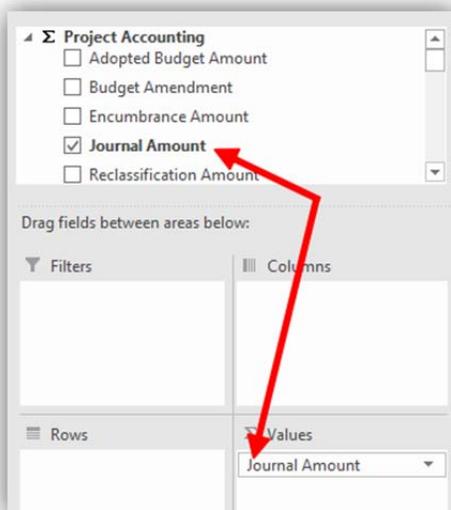
- Understand the different Report Layout options and when to use them
- Changing the Report Layout globally as well as on individual fields
- Adding & removing subtotals globally and to individual fields
- How to display blank row labels
- Using the Collapse feature to quickly summarize a detail report

CREATING THE REPORT

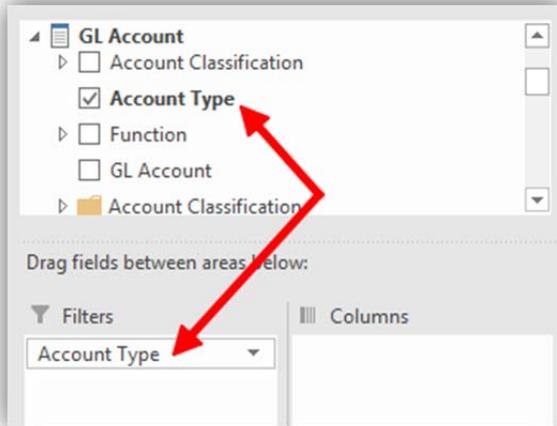
1. Choose the **Project Accounting** measure group at the top of the PivotTable Field list



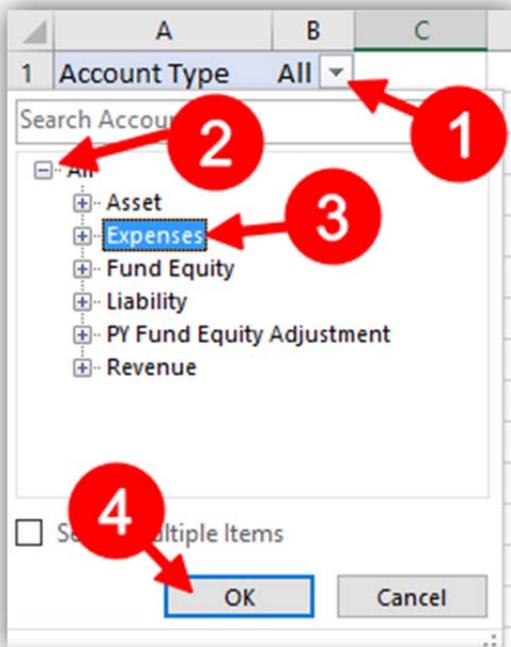
2. Select the **Journal Amount** value from the field listing



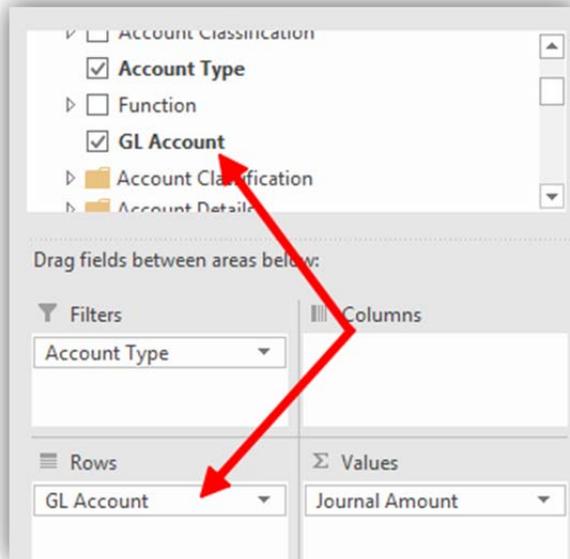
3. Scroll down to the **GL Account** section and drag the **Account Type** field to **Filters**



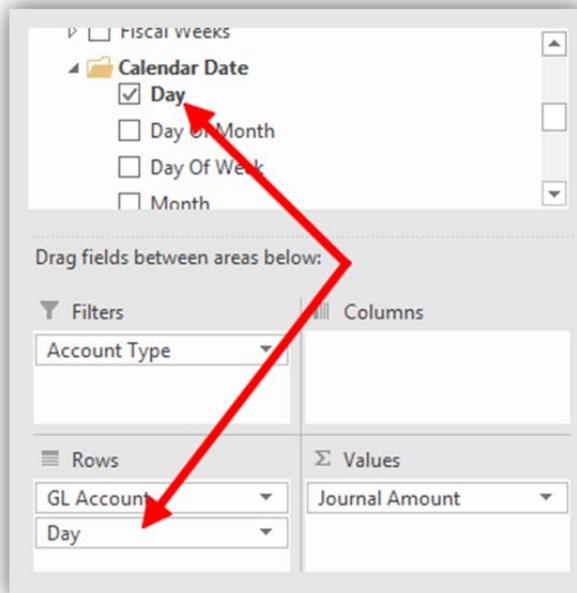
4. Filter the Account Type field to only show Expenses
 - a. Click the button next to **Account Type**
 - b. Click the **+ sign** next to All to display the list of Account Types
 - c. Select **Expenses**
 - d. Click **OK**



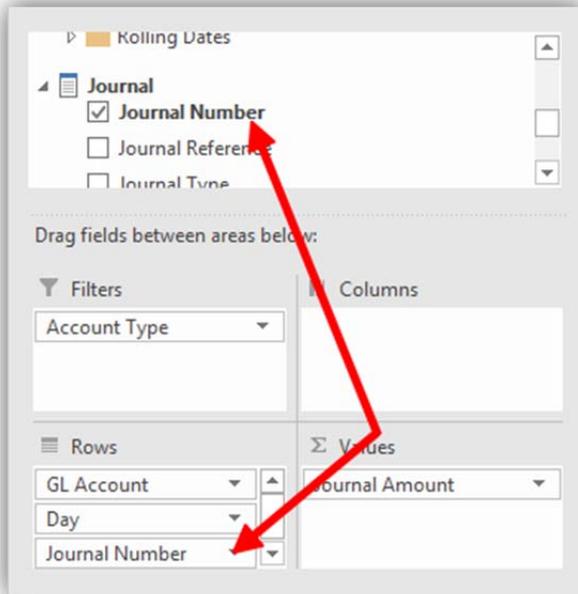
5. Back in the field list, move the **GL Account** field to the **Rows** section



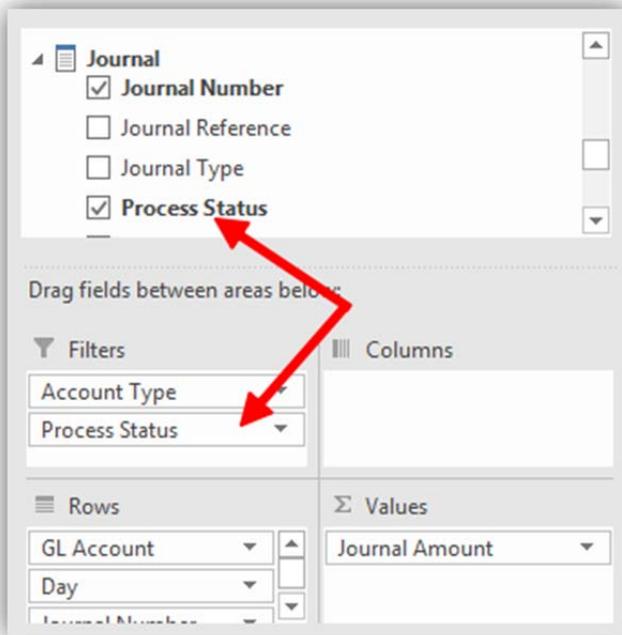
6. Scroll down to the **GL Date Section**, expand the **Calendar Date** folder and move the **Day** field to the **Rows** section (Below GL Account)



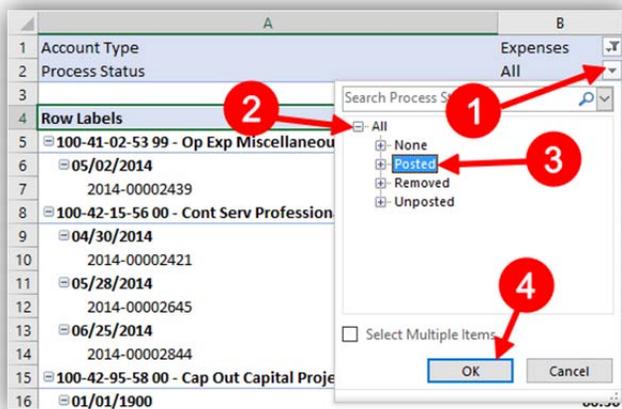
7. Scroll down to the **Journal section** and move **Journal Number** to the **Rows section** (Below Day)



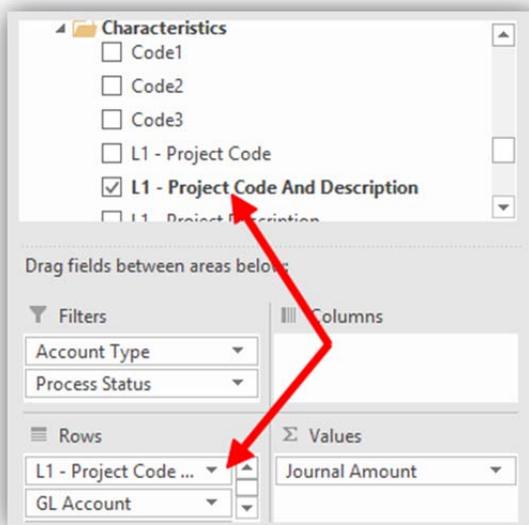
8. Drag the **Process Status** field to the **Filters** section



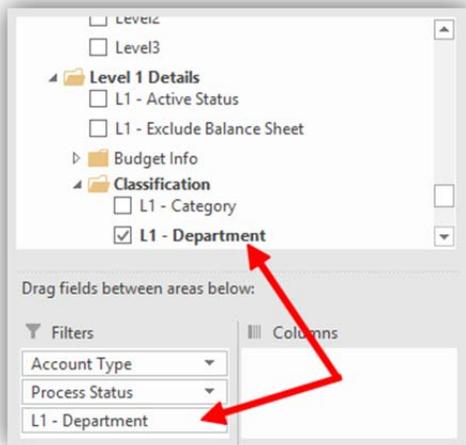
9. Filter the Process Status to only show Posted transactions
 - a. Click the button next to **Process Status**
 - b. Click the **+ sign** next to All to display the list of Statuses
 - c. Select **Posted** then
 - d. Click **OK**



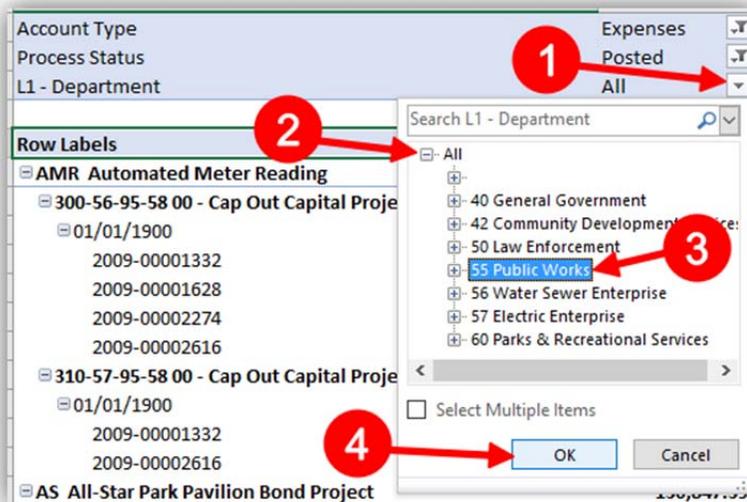
10. Add **L1-Project Code and Description** as a row label
 - a. Scroll down near the bottom of the list to the **Project Section**
 - b. Expand the **Characteristics** folder
 - c. Drag the **L1-Project Code and Description** field to the top of the **Rows** section (Above GL Account)



11. Add the **L1-Department** field as a **Filter**
 - a. Scroll down a little further
 - b. Expand the **Level 1 Details** folder
 - c. Expand the **Classification** sub folder
 - d. Drag the **L1-Department** field to **Filters**



12. **Filter** the **L1-Department** field to only show **55 Public Works**
 - a. Click the button next to **L1-Department**
 - b. Click the + sign next to All to display the list of Statuses
 - c. Select **55 Public Works** then
 - d. Click **OK**

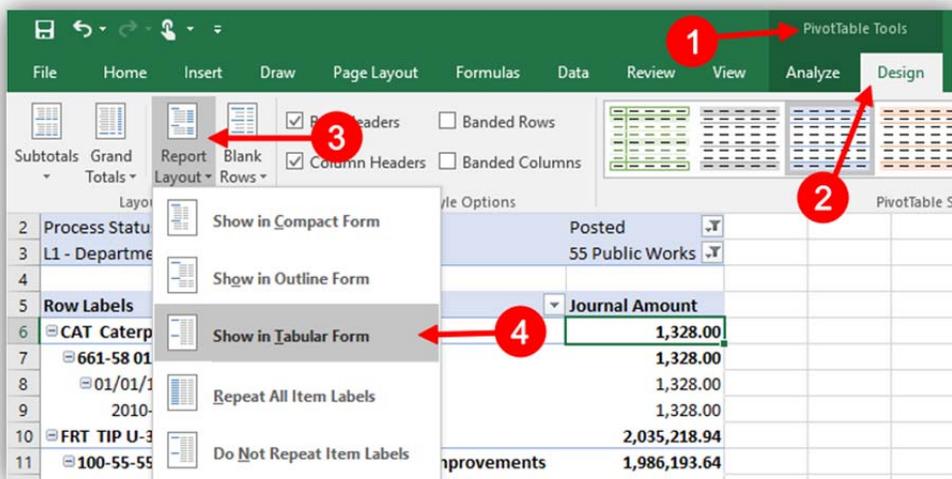


USING THE GLOBAL REPORT LAYOUT AND SUBTOTAL SETTINGS

13. The report is currently in Compact Form, which combines all the row labels (Project, GL Account, Date & Journal #) into a single column. It's not the cleanest way to display the information for this type of report.

Row Labels	Journal Amount
CAT Caterpillar Connector Road	1,328.00
661-58 01 - Cap Out Construction	1,328.00
01/01/1900	1,328.00
2010-00001814	1,328.00
FRT TIP U-3605 - E FRONT ST	2,035,218.94
100-55-55-58 12 - Cap Out Street Repair and Improvements	1,986,193.64
09/24/2013	127,947.30
2014-00000703	127,947.30
10/30/2013	6,979.87
2014-00000998	6,979.87
11/05/2013	241,156.46

14. Change the layout to the Tabular format
- At the top of the excel file, under **Pivot Table Tools**
 - Click on the **Design** tab
 - Click the **Report Layout** button then **Show in Tabular Form**
 - This moves each field into their own columns



15. The report also includes subtotals for the various row labels (Project, GL Account & Date). In this case it doesn't make sense to have the extra subtotals on the GL Accounts and Dates.

	A	B	C	D	E	
1	Account Type	Expenses				
2	Process Status	Posted				
3	L1 - Department	55 Public Works				
4						
5	L1 - Project Code And Description	GL Account	Day	Journal Number	Journal Amount	
6	☒ CAT Caterpillar Connector Road	☒ 661-58 01 - Cap O	☒ 01/01/1	2010-00001814	1,328.0	
7				01/01/1900 Total	1,328.0	
8		661-58 01 - Cap Out Construction Total			1,328.0	
9	CAT Caterpillar Connector Road Total				1,328.0	
10	☒ FRT TIP U-3605 - E FRONT ST	☒ 100-55-55-58 12 -	☒ 09/24/2	2014-00000703	127,947.3	
11				09/24/2013 Total	127,947.3	
12				☒ 10/30/2	2014-00000998	6,979.8

16. To turn off the Subtotals
- Go to the **Design** tab
 - Click the **Subtotals** button then **Do Not Show Subtotals**

The screenshot shows the Excel ribbon with the 'Design' tab selected under 'PivotTable Tools'. A red circle labeled '1' points to the 'Design' tab. A red circle labeled '2' points to the 'Subtotals' button in the 'Table Style Options' group. A red circle labeled '3' points to the 'Do Not Show Subtotals' option in the 'Subtotals' dropdown menu. The background shows a PivotTable with subtotals for 'CAT Caterpillar Connector Road' and 'FRT TIP U-3605 - E FRONT ST'.

17. The extra subtotal lines should now be gone

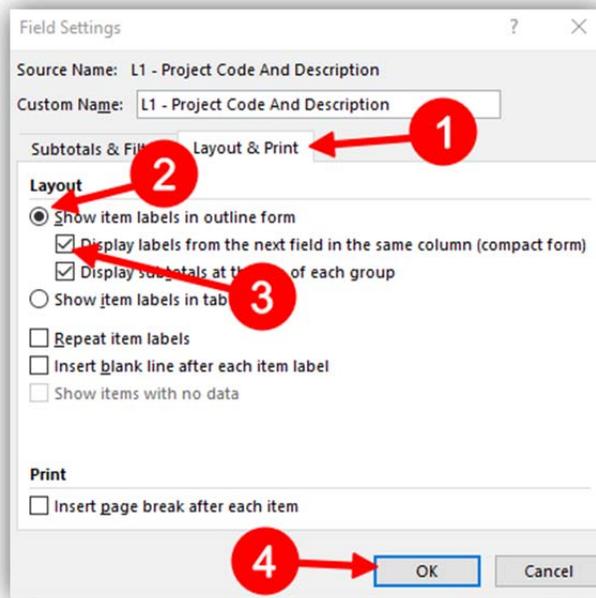
	A	B	C	D	E
1	Account Type	Expenses			
2	Process Status	Posted			
3	L1 - Department	55 Public Works			
4					
5	L1 - Project Code And Description	GL Account	Day	Journal Number	Journal Amount
6	CAT Caterpillar Connector Road	661-58 01 - Cap O	01/01/1	2010-00001814	1,328.00
7	FRT TIP U-3605 - E FRONT ST	100-55-55-58 12 -	09/24/2	2014-00000703	127,947.30
8			10/30/2	2014-00000998	6,979.87
9			11/05/2	2014-00001037	241,156.46
10			01/16/2	2014-00001609	270,227.96
11			02/11/2	2014-00001771	209,194.61
12			03/19/2	2014-00002079	22,449.51
13			04/08/2	2014-00002243	24,692.85
14			05/06/2	2014-00002471	85,959.96
15			06/03/2	2014-00002506	65,000.00

18. The Report Layout and Subtotal settings shown above apply to the entire report. We can also apply these settings to individual fields

19. This report for example would look better with the Project Description in the **Compact format** while leaving the remaining fields in Tabular Form
- Right click on any projects in the first column
 - Click **Field Settings**

	A	B	C	D
1	Account Type			
2	Process Status			
3	L1 - Department			
4				
5	L1 - Project Code And Description		Day	Journal Number
6	CAT Caterpillar Connector Road	Cap O	01/01/1	2010-00001
7	FRT TIP U-3605 - E FRONT ST	8 12 -	09/24/2	2014-00000
8			10/30/2	2014-00000
9			11/05/2	2014-00001
10			01/16/2	2014-00001
11			02/11/2	2014-00001
12			03/19/2	2014-00002
13			04/08/2	2014-00002
14			05/06/2	2014-00002

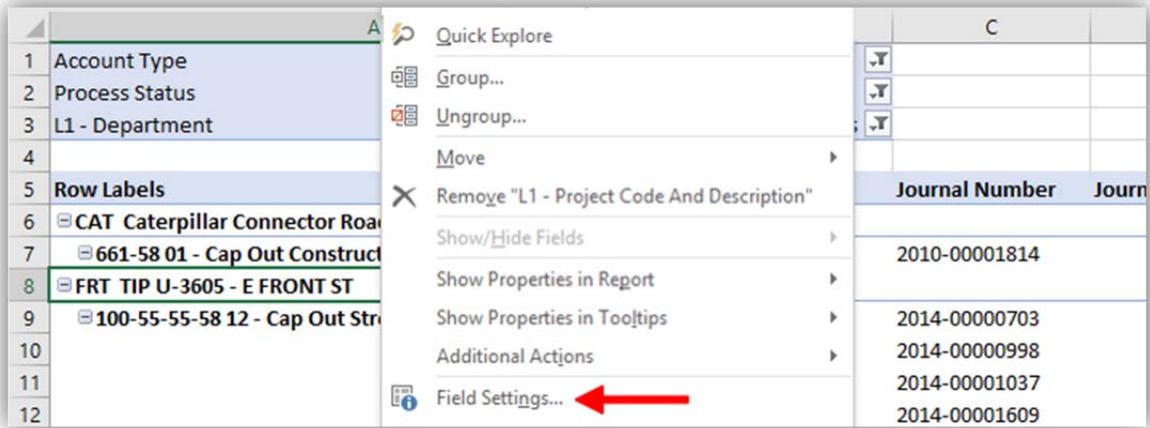
- c. Select the **Layout & Print** tab
- d. Select the **Show item labels in outline form** option
- e. Check the box to **Display labels from the next field in the same column (compact form)**
- f. Click **OK**



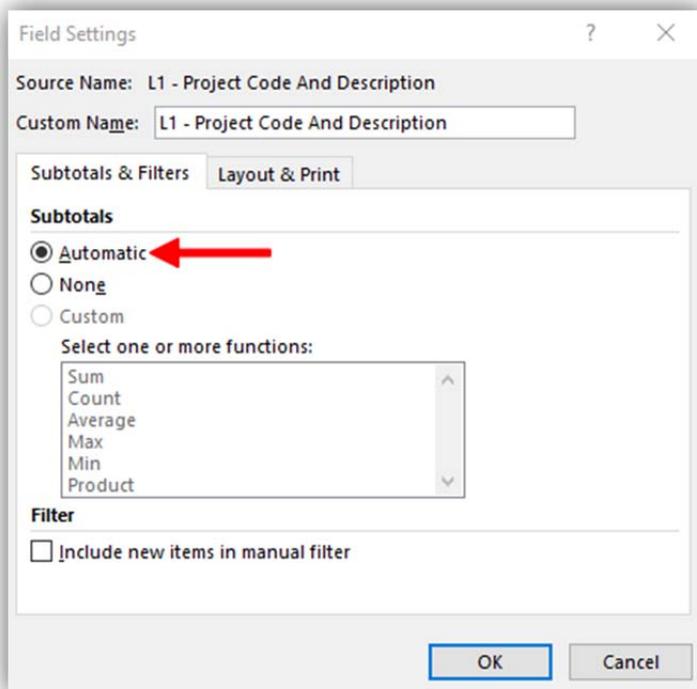
20. The Project and GL Account are now located in the same column while the Date and Journal number are in separate columns

	A	B	C	D
1	Account Type	Expenses		
2	Process Status	Posted		
3	L1 - Department	55 Public Works		
4				
5	Row Labels	Day	Journal Number	Journal Amount
6	CAT Caterpillar Connector Road			
7	661-58 01 - Cap Out Construction	01/01/1900	2010-00001814	1,328.00
8	FRT TIP U-3605 - E FRONT ST			
9	100-55-55-58 12 - Cap Out Street Repair and Improvements	09/24/2013	2014-00000703	127,947.30
10		10/30/2013	2014-00000998	6,979.87
11		11/05/2013	2014-00001037	241,156.46
12		01/16/2014	2014-00001609	270,227.96
13		02/11/2014	2014-00001771	209,194.61
14		03/19/2014	2014-00002079	22,449.51
15		04/08/2014	2014-00002243	24,692.85
16		05/06/2014	2014-00002471	85,959.96
17		06/03/2014	2014-00002686	65,893.83

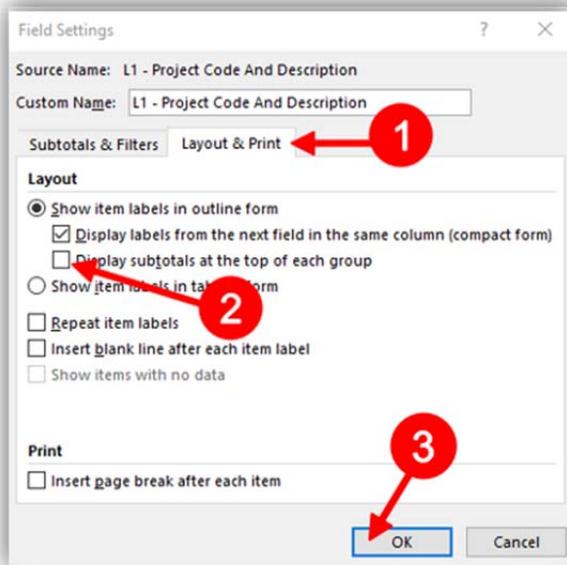
21. We can also turn on subtotals for just the **Project** while leaving them off for the GL Accounts and the Date
 - a. Right click on any projects in the first column
 - b. Click **Field Settings**



- c. Select **Automatic** under the Subtotals section



- d. Click on the **Layout & Print** tab
- e. Uncheck **Display subtotals at the top of each group**
- f. Click **OK**



22. You should now see a subtotal for each Project

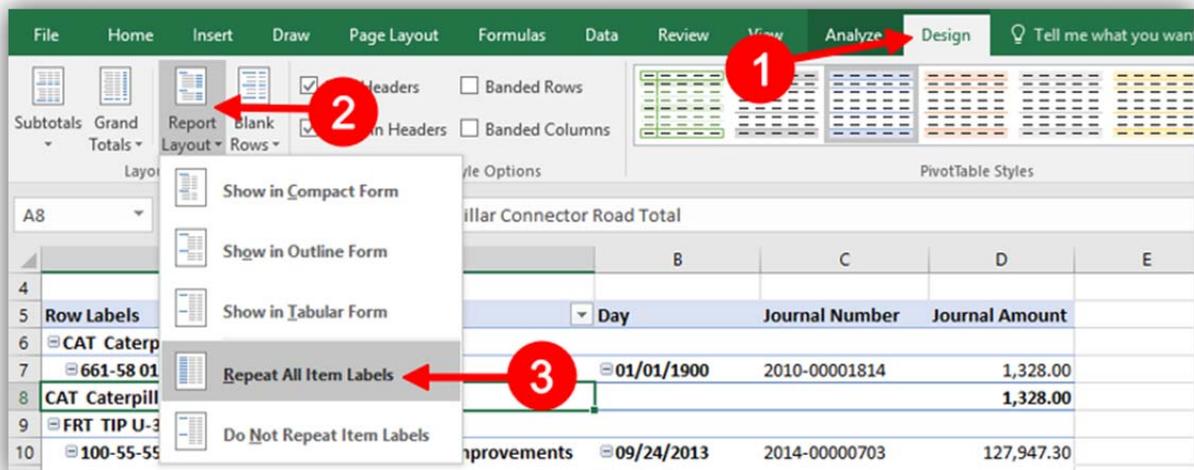
	A	B	C	D
1	Account Type	Expenses		
2	Process Status	Posted		
3	L1 - Department	55 Public Works		
4				
5	Row Labels	Day	Journal Number	Journal Amount
6	[-] CAT Caterpillar Connector Road			
7	[-] 661-58.01 - Cap Out Construction	01/01/1900	2010-00001814	1,328.00
	CAT Caterpillar Connector Road Total			1,328.00
9	[-] FRT TIP U-3605 - E FRONT ST			
10	[-] 100-55-55-58 12 - Cap Out Street Repair and Improvements	09/24/2013	2014-00000703	127,947.30
11		10/30/2013	2014-00000998	6,979.87
12		11/05/2013	2014-00001037	241,156.46

DISPLAY MISSING ROW LABELS

23. By default, the report hides row labels if it is repeat of the same value as the previous line. - For example, the GL Account and dates are not displaying on some of the rows where it's a repeat of the prior row

5	Row Labels	Day	Journal Number	Journal Amount
6	CAT Caterpillar Connector Road			
7	661-58 01 - Cap Out Construction	01/01/1900	2010-00001814	1,328.00
8	CAT Caterpillar Connector Road Total			1,328.00
9	FRT TIP U-3605 - E FRONT ST			
10	100-55-55-58 12 - Cap Out Street Repair and Improvements	09/24/2013	2014-00000703	127,947.30
11		10/30/2013	2014-00000998	6,979.87
12		11/05/2013	2014-00001037	241,156.46
13		01/16/2014	2014-00001609	270,227.96
14		02/11/2014	2014-00001771	209,194.61
15		03/19/2014	2014-00002079	22,449.51
16		04/08/2014	2014-00002243	24,692.85
17		05/06/2014	2014-00002471	85,959.96
18		06/03/2014	2014-00002686	65,893.83
19		06/30/2014	2014-00002924	154,980.66
20			2014-00002948	98,545.71
21			2014-00002956	257,230.49
22			2014-00002974	(3,648.11)
23		09/17/2014	2015-00000648	24,702.75
24		11/12/2014	2015-00001139	164,020.95
25		03/18/2015	2015-00002275	2,885.31

24. On this report we want to see all repeating labels
- Make sure you have the **Design** tab selected at the top of the excel file
 - Click on **Report Layout**
 - Select **Repeat All Item Labels**



25. We now see all repeating labels have been filled in

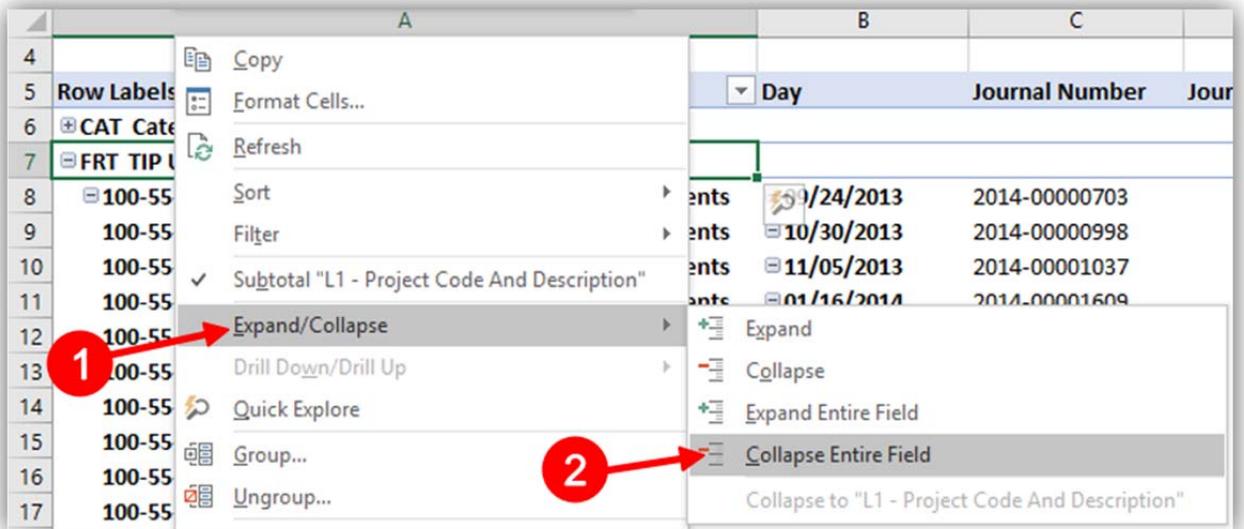
5	Row Labels	Day	Journal Number	Journal Amount
6	[-] CAT Caterpillar Connector Road			
7	[-] 661-58 01 - Cap Out Construction	01/01/1900	2010-00001814	1,328.00
8	CAT Caterpillar Connector Road Total			1,328.00
9	[-] FRT TIP U-3605 - E FRONT ST			
10	[-] 100-55-55-58 12 - Cap Out Street Repair and Improvements	09/24/2013	2014-00000703	127,947.30
11	100-55-55-58 12 - Cap Out Street Repair and Improvements	10/30/2013	2014-00000998	6,979.87
12	100-55-55-58 12 - Cap Out Street Repair and Improvements	11/05/2013	2014-00001037	241,156.46
13	100-55-55-58 12 - Cap Out Street Repair and Improvements	01/16/2014	2014-00001609	270,227.96
14	100-55-55-58 12 - Cap Out Street Repair and Improvements	02/11/2014	2014-00001771	209,194.61
15	100-55-55-58 12 - Cap Out Street Repair and Improvements	03/19/2014	2014-00002079	22,449.51
16	100-55-55-58 12 - Cap Out Street Repair and Improvements	04/08/2014	2014-00002243	24,692.85
17	100-55-55-58 12 - Cap Out Street Repair and Improvements	05/06/2014	2014-00002471	85,959.96
18	100-55-55-58 12 - Cap Out Street Repair and Improvements	06/03/2014	2014-00002686	65,893.83
19	100-55-55-58 12 - Cap Out Street Repair and Improvements	06/30/2014	2014-00002924	154,980.66
20	100-55-55-58 12 - Cap Out Street Repair and Improvements	06/30/2014	2014-00002948	98,545.71
21	100-55-55-58 12 - Cap Out Street Repair and Improvements	06/30/2014	2014-00002956	257,230.49
22	100-55-55-58 12 - Cap Out Street Repair and Improvements	06/30/2014	2014-00002974	(3,648.11)
23	100-55-55-58 12 - Cap Out Street Repair and Improvements	09/17/2014	2015-00000648	24,702.75
24	100-55-55-58 12 - Cap Out Street Repair and Improvements	11/12/2014	2015-00001139	164,020.95

USING THE EXPAND/COLLAPSE OPTIONS

26. Collapse data on a single project
 - a. Click on the **minus sign** next to the first project (CAT Caterpillar Connector Road)
 - b. This is a quick way to summarize the data to the overall project report

5	Row Labels	Day	Journal Number
6	[-] CAT Caterpillar Connector Road		
7	[-] 661-58 01 - Cap Out Construction	01/01/1900	2010-00001814
8	CAT Caterpillar Connector Road Total		
9	[-] FRT TIP U-3605 - E FRONT ST		

27. Collapse the data on all projects
 - a. Right Click on any project description
 - b. Select **Expand/Collapse**
 - c. Click **Collapse Entire Field**



28. The entire report is now summarized to the project level

	A	B	C	D
4				
5	Row Labels	Day	Journal Number	Journal Amount
6	⊕ CAT Caterpillar Connector Road			1,328.00
7	⊕ FRT TIP U-3605 - E FRONT ST			2,035,218.94
8	⊕ S1 Street Improvements Bond Project - Section 1			955,819.55
9	⊕ S2 Street Improvements Bond Project - Section 2			4,081,312.74
10	⊕ VM Vehicle Maintenance			6,387.20
11	Grand Total			7,080,066.43

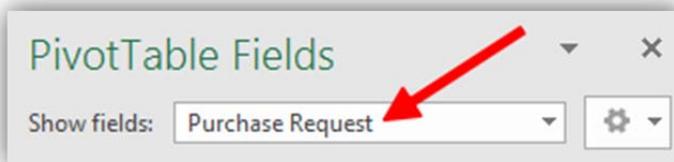
PURCHASE ORDER COUNT BY DEPARTMENT

OBJECTIVES

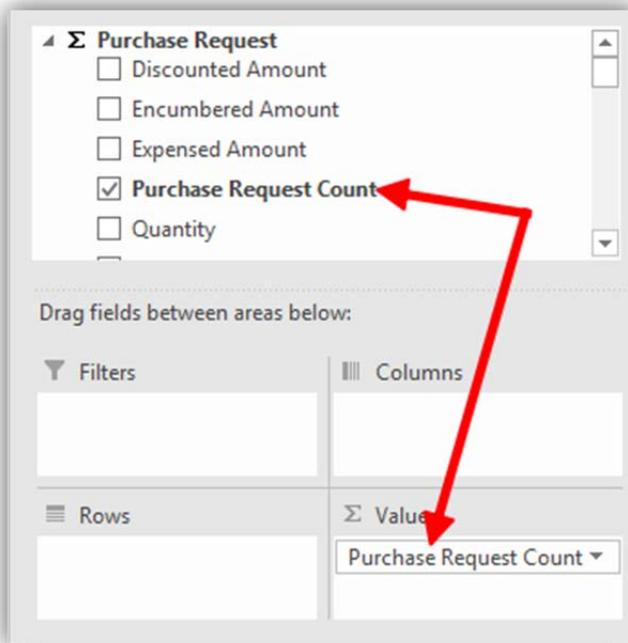
- Filtering on individual rows and column labels
- Understand the different date options
- Using formulas outside of the pivot table
- Creating and formatting a graph from the business analytics data

CREATING THE REPORT

1. Choose the **Purchase Request** measure group at the top of the PivotTable Field list

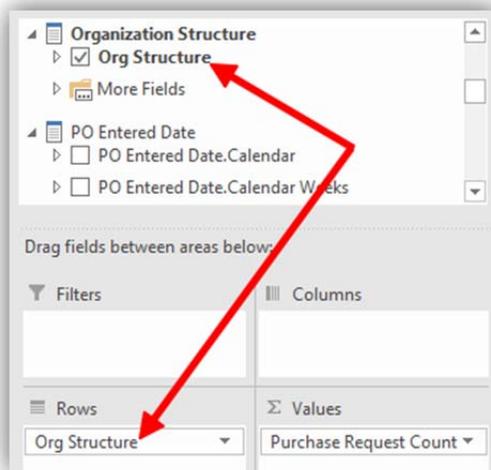


2. Select the **Purchase Request Count** value from the field listing

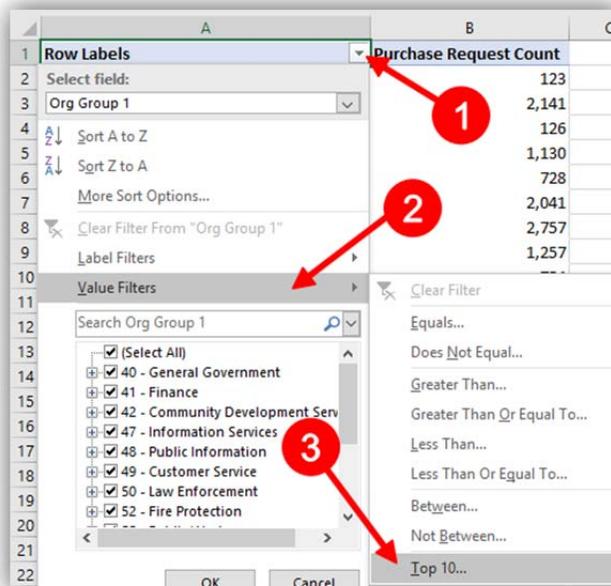


FILTERING ON A ROW LABEL

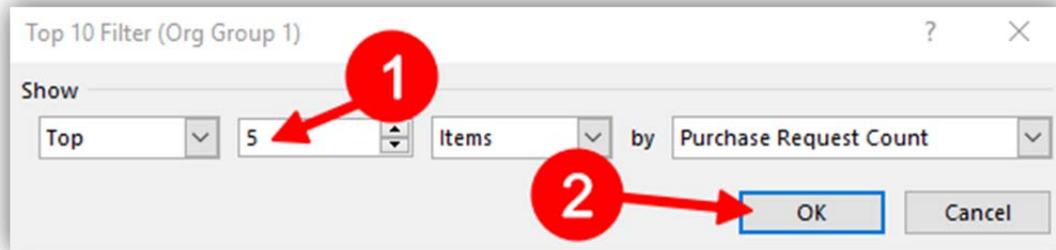
3. Scroll down to the **Organization Structure** section and move the **Org Structure** field to the **Rows** section.



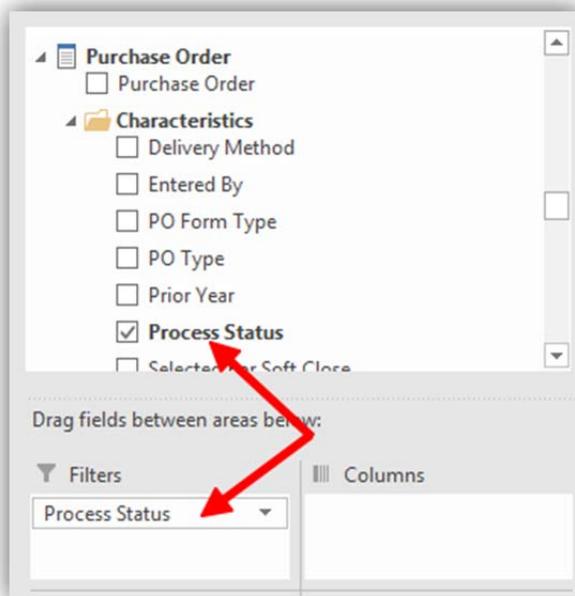
4. **Filter** the department list to show the top 5 departments
 - a. Click the button in the cell that says **Row Labels**
 - b. Go to **Value Filters** and select **Top 10**



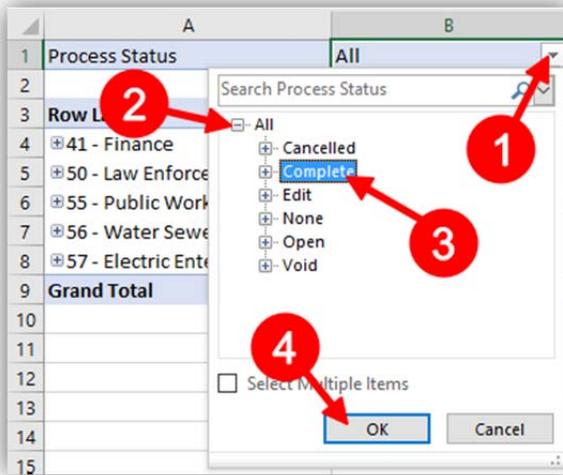
- c. Change the 10 to 5 in the 2nd field and click OK



- 5. Add the **Process Status** field to the **Filters**
 - a. Scroll down to the **Purchase Order** section
 - b. Expand the **Characteristics** folder
 - c. Add **Process Status** to the **Filters**

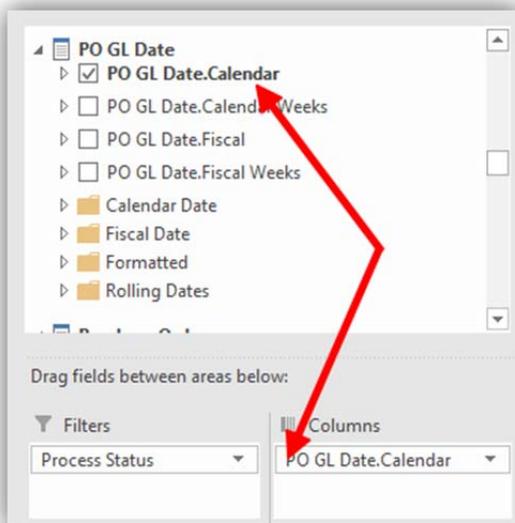


6. Filter the **Process Status** field to only show **Completed** POs
 - a. Click the button next to **Process Status**
 - b. Click the **+ sign** next to All to display the list of Statuses
 - c. Select **Complete** then click OK

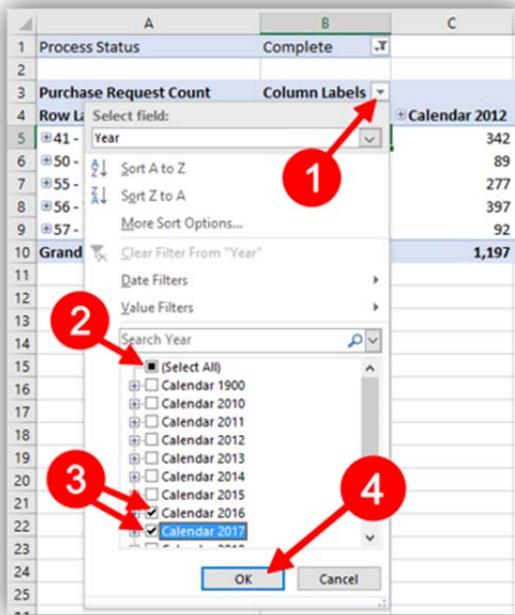


WORKING WITH THE DIFFERENT DATE OPTIONS

7. Scroll up to the **PO GL Date** section and first add the **PO GL Date.Calendar** field to the **Columns** section



8. Filter the Date to show Calendar 2016 & 2017
 - a. Click the button in the cell that says **Column Labels**
 - b. **Uncheck** the box next to **Select All**
 - c. Select **Calendar 2016** and **Calendar 2017**
 - d. Click **OK**



9. Expanded the year to show additional detail
 - a. Click the **+** sign in the **Calendar 2017** cell

	A	B	C	D
1	Process Status	Complete		
2				
3	Purchase Request Count	Column Labels		
4	Row Labels	<input type="button" value="+"/> Calendar 2016	<input type="button" value="+"/> Calendar 2017	Grand Total
5	<input type="button" value="+"/> 41 - Finance	282	211	493
6	<input type="button" value="+"/> 50 - Law Enforcement	165	114	279
7	<input type="button" value="+"/> 55 - Public Works	253	212	465
8	<input type="button" value="+"/> 56 - Water Sewer Enterprise	391	300	691
9	<input type="button" value="+"/> 57 - Electric Enterprise	230	315	545
10	Grand Total	1,321	1,152	2,473

- b. This will expand the column to show the counts broken down by quarter
- c. Next, click the + sign next to one of the quarters to see it broken down by month

	A	B	C	D	E	F	G
1	Process Status	Complete					
2							
3	Purchase Request Count	Column Labels					
4		<input checked="" type="checkbox"/> Calendar 2016 <input type="checkbox"/> Calendar 2017					Grand Total
5	Row Labels		<input checked="" type="checkbox"/> Quarter 1, 2017 <input type="checkbox"/> Quarter 2, 2017 <input type="checkbox"/> Quarter 3, 2017 <input type="checkbox"/> Quarter 4, 2017				
6	41 - Finance	282	31	22	86	72	493
7	50 - Law Enforcement	165	12	33	44	25	279
8	55 - Public Works	253	49	29	122	12	465
9	56 - Water Sewer Enterprise	391	118	77	73	32	691
10	57 - Electric Enterprise	230	133	67	88	27	545
11	Grand Total	1,321	343	228	413	168	2,473

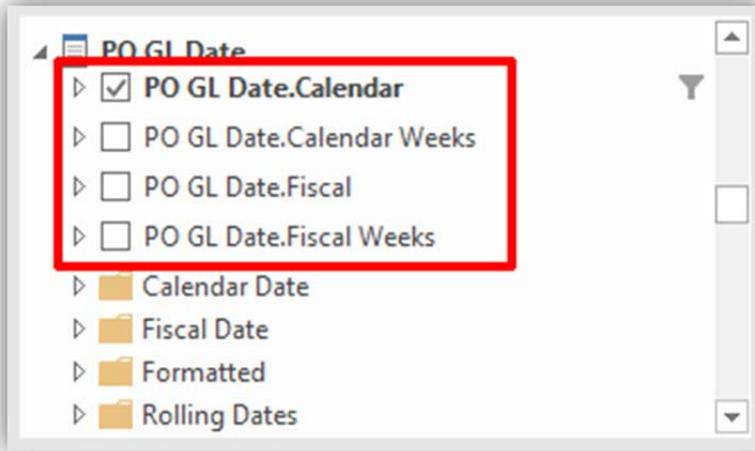
- d. You can then expand any of the months to show the detail by date

	A	B	C	D	E	F
1	Process Status	Complete				
2						
3	Purchase Request Count	Column Labels				
4		<input checked="" type="checkbox"/> Calendar 2016 <input type="checkbox"/> Calendar 2017				
5			<input type="checkbox"/> Quarter 1, 2017 <input checked="" type="checkbox"/> Quarter 2, 2017			
6	Row Labels		<input checked="" type="checkbox"/> January 2017 <input type="checkbox"/> February 2017 <input type="checkbox"/> March 2017			
7	41 - Finance	282	7	19	5	22
8	50 - Law Enforcement	165	3	5	4	33
9	55 - Public Works	253	18	20	11	29
10	56 - Water Sewer Enterprise	391	39	34	45	77

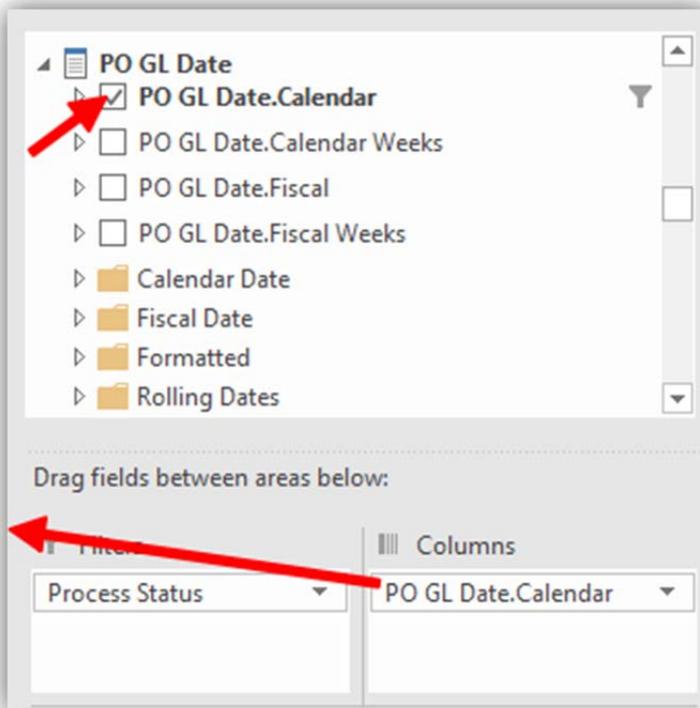
- e. Click the – sign next to Calendar 2017 to once again summarize the detail by year

	A	B	C	D	E	F
1	Process Status	Complete				
2						
3	Purchase Request Count	Column Labels				
4		<input checked="" type="checkbox"/> Calendar 2016 <input type="checkbox"/> Calendar 2017				
5			<input type="checkbox"/> Quarter 1, 2017 <input type="checkbox"/> January 2017			
6						
7	Row Labels		01/04/2017	01/05/2017	01/06/2017	01/07/2017
8	41 - Finance	282				
9	50 - Law Enforcement	165				
10	55 - Public Works	253	4		4	
11	56 - Water Sewer Enterprise	391	21	8	1	

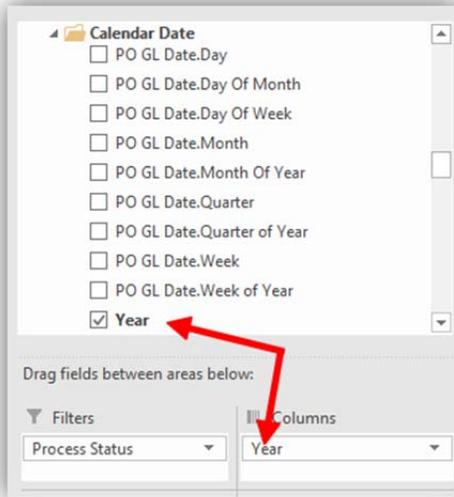
- The other date fields that are not grouped in subfolder work similarly to allow you to drill down into additional detail



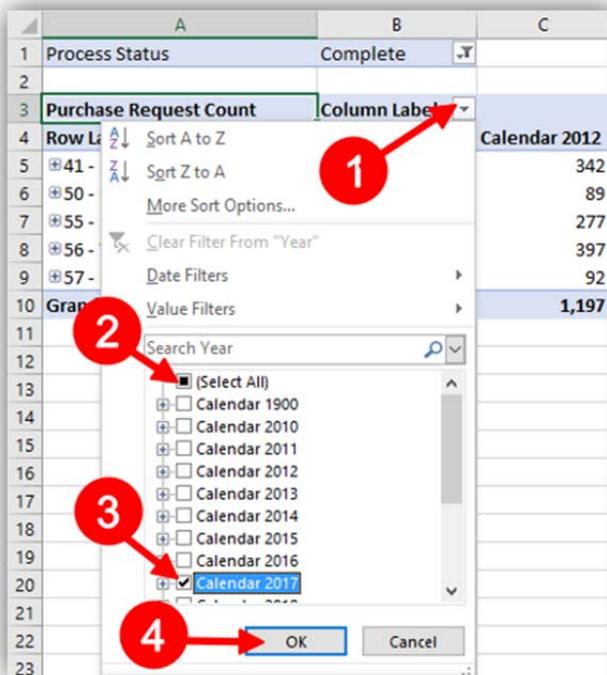
- Next, remove the **PO GL Date.Calendar** Column label from the report (either uncheck the box or drag the field from the columns section and drop outside of the field listing)



12. In the field list, expand the **Calendar Date** field and add the **PO GL Date.Year** field to the **Columns** section



13. Follow the same process as Step 8 but only **filter** it to show **Calendar 2017**



14. You'll notice the **+ sign** doesn't exist for this field. The date fields within the folders do not have the built-in drilldown detail.

	A	B	C
1	Process Status	Complete	
2			
3	Purchase Request Count	Column Labels	
4	Row Labels	Calendar 2017	Grand Total
5	41 - Finance	211	211
6	50 - Law Enforcement	114	114

15. Next go up about 10 lines in the filed list and add the **PO GL Date.Day of Week** field below the Year in the **Columns** section

Calendar Date

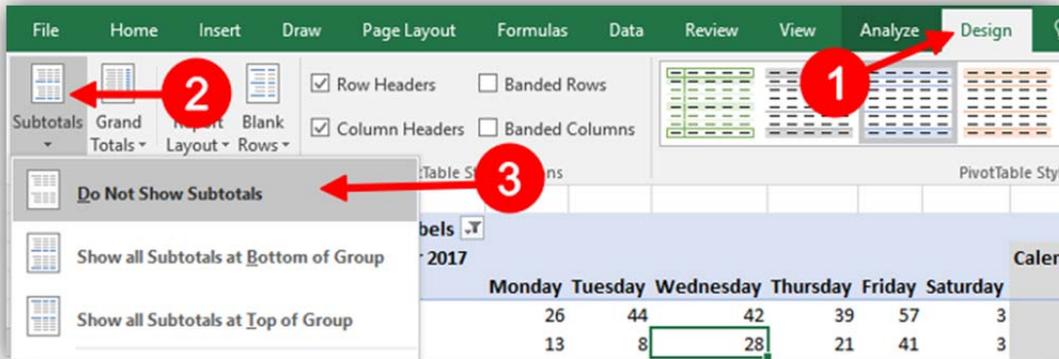
- PO GL Date.Day
- PO GL Date.Day Of Month
- Day Of Week
- PO GL Date.Month
- PO GL Date.Month Of Year
- PO GL Date.Quarter
- PO GL Date.Quarter of Year
- PO GL Date.Week
- PO GL Date.Week of Year
- Year

Drag fields between areas below:

Filters: Process Status

Columns: Year, Day Of Week

16. Turn off the Subtotals
 - a. Click on the **Design** tab at the top of the excel file
 - b. Select **Subtotals**
 - c. click on **Do Not Show Subtotals**



USING YOUR OWN FORMULAS TO REFERENCE PIVOT TABLE DATA

17. Click in the cell to the right of the last column in your table next to the first grand total number

Thursday	Friday	Saturday	Grand Total
39	57	3	211
21	41	3	114
54	62	11	212

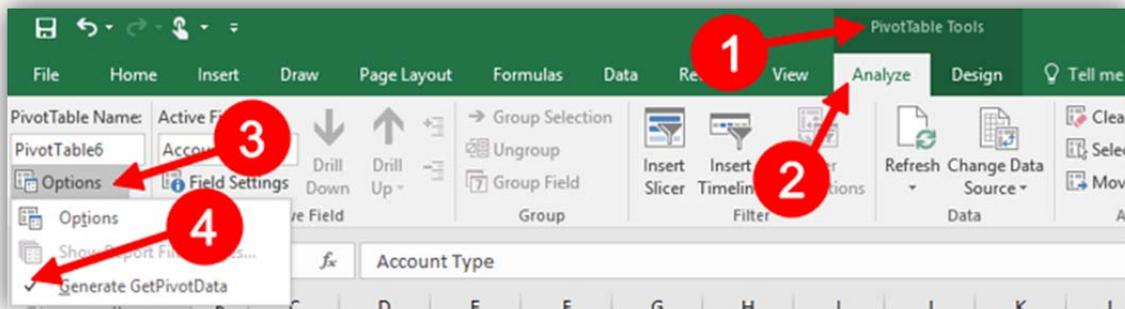
18. Enter a formula to combine the counts for Monday & Tuesday. You'll notice that the formula contains a lot of extra information but the result is correct

Thursday	Friday	Saturday	Grand Total
39	57	3	211
21	41	3	114
54	62	11	212
53	76	3	315
69	51	3	315
236	287	20	1,152

19. Copy the formula down to the rest of the table. The problem is the formula is still referencing the cells in the first row.

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Grand Total
	44	42	39	57	3	211	70
	8	28	21	41	3	114	70
	48	20	54	62	11	212	70
	28	100	53	76		300	70
	32	127	69	51	3	315	70
	160	317	236	287	20	1,152	

20. For this to work, you need to first turn off the **GetPivotData** setting
- Click back anywhere on the pivot table so the PivotTable Tools tab show up at the top
 - Go to the **Analyze** tab
 - Click on **Options** (all the way to the left)
 - And unselect the **Generate GetPivotData** option



21. Go back to the cell where you originally entered the formula and enter it again using the same method to combine Monday and Tuesday. It now looks like a normal excel formula.

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Grand Total
	26	44	42	39	57	3	211

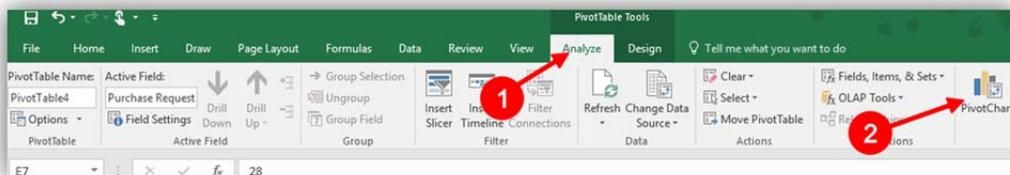
Formula bar: =C6+D6

22. Copy the formula down to the remaining rows and you'll see the values are now updated to show the correct amounts

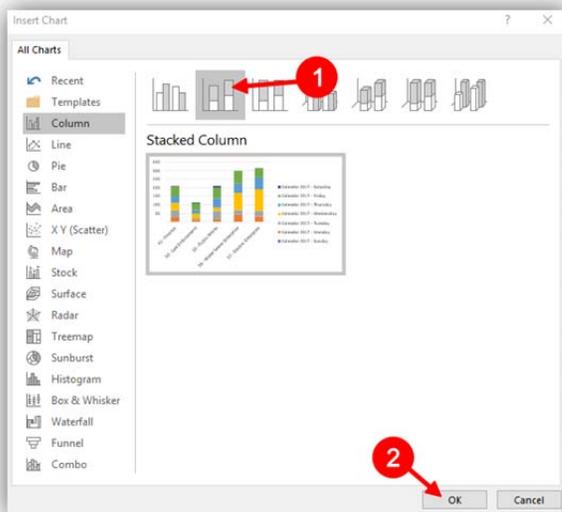
	C	D	E	F	G	H	I	J
							Grand Total	
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday		
	26	44	42	39	57	3	211	70
	13	8	28	21	41	3	114	21
	17	48	20	54	62	11	212	65
	42	28	100	53	76		300	70
	33	32	127	69	51	3	315	65
	131	160	317	236	287	20	1,152	

CREATING A PIVOT CHART

23. Click anywhere back on the pivot table
 24. Select the **Analyze** tab and click the **PivotChart** button



25. Select the **Stacked Column** (2nd option) chart under the Columns section and click OK



26. Modify the Chart Elements

- Click anywhere on the chart and click the **large + sign** in the top right corner
- Check the box next to **Data Labels** to display the counts for each day directly on the graph



27. Click the **Paint Brush Icon** and select any of the formation options to change the style of the graph

