Instruction Guide

for using the

Culvert Asset Management Plan Template

Michigan
Transportation Asset
Management Council

Center for
Technology & Training

Contents

This document provides instruction for creating a customized asset management plan template for your specific agency by using the “CulvertAMP _v####.xlsm” tool and accompanying folders and files (including “CulvertAMDoc_v####.docm”, “CulvertAMP_v####.docm”, and “MichiganAgencyCulverts.csv”), distributed to you by the Center for Technology & Training (CTT) in collaboration with the Transportation Asset Management Council and the Michigan Department of Transportation.

Culvert asset data for your agency will need to be entered into the Microsoft Excel tool. Your agency’s culvert data can be exported from Roadsoft or the database of your choice; data should be saved in .csv format.

Another portion of the culvert asset data for the customized Microsoft Word template relies on your agency’s answers to asset management questions in the tool. The tool will parse the data for the Microsoft Word template. This Instruction Guide will detail how to enter data into the Excel workbooks and, subsequently, generate a customized culvert asset management plan template in Word.

For more information

? Select this symbol to learn more information about the tool.

! Select this symbol to discover where related requirements and/or recommendations can be found.

Saving the tools on your computer

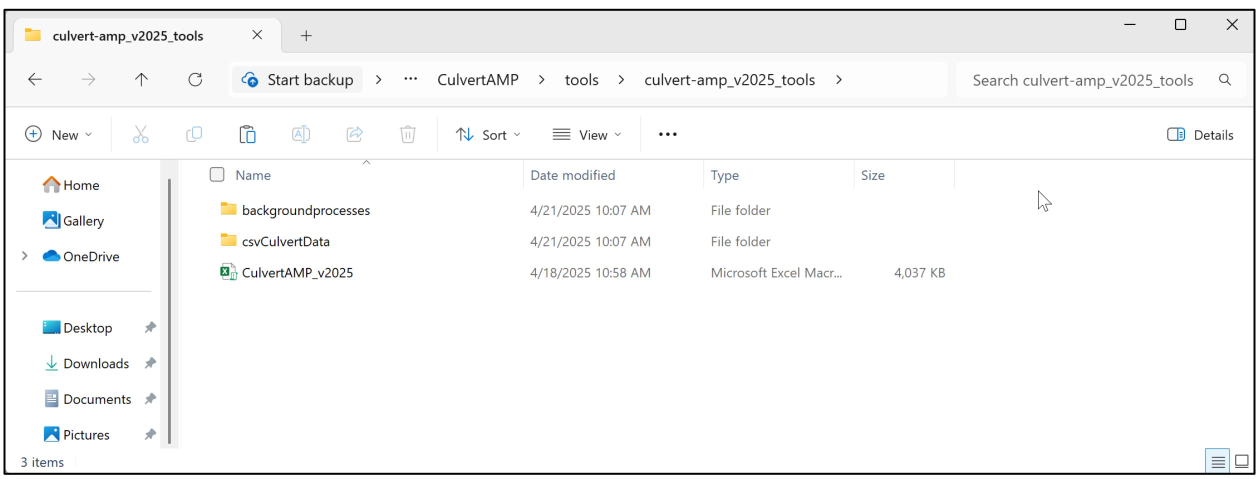
The tools for creating a customized culvert asset management plan template can be downloaded as a zipped file from ctt.mtu.edu/asset-management-resources. After unzipping the tools folder, it is recommended that the “culvertamp_v####_tools” folder be saved in your Documents or My Documents folder or on your desktop; if it is desired to rename this (sub)folder, use a unique name such as “CulvertAMP-2025”. ***Please note: DO NOT RENAME the included folders or files at any time. Also, if your computer system backs up your files to an online cloud service, you will need to save the asset management plan tools to a USB drive and work with the files on the USB drive.***

The tools within the “culvertamp_v####_tools” folder consist of (see figure below):

- the .xlsm file, “CulvertAMP_v####.xlsm”, housed in the main folder
- two subfolders
    - the “backgroundprocesses” subfolder that contains the generic Word template “BridgeAMP_V####.docm”
    - the “csvCulvertData” subfolder that contains a generic dataset “MichiganAgencyCulverts.csv” and that serves as a repository for your agency’s actual data in .csv format.

Do not rename these files or folders.

It is also recommended that any other content needed for your culvert asset management plan—such as logos and images—be kept in this folder, as well.



Obtaining your culvert data export from Roadsoft

To create a customized bridge asset management plan, you will need a custom MiBRIDGE export of your bridge data.

NOTE: If your agency stores culvert asset data in a database other than Roadsoft, export the data from the database following the instructions given by the database developer

NOTE: If you need to save your data export in .csv format, open Excel, select **File** > **Open**, navigate to the culvert data export file and select **Open**, and then save the file as a .csv file ("CSV (Comma delineated)").

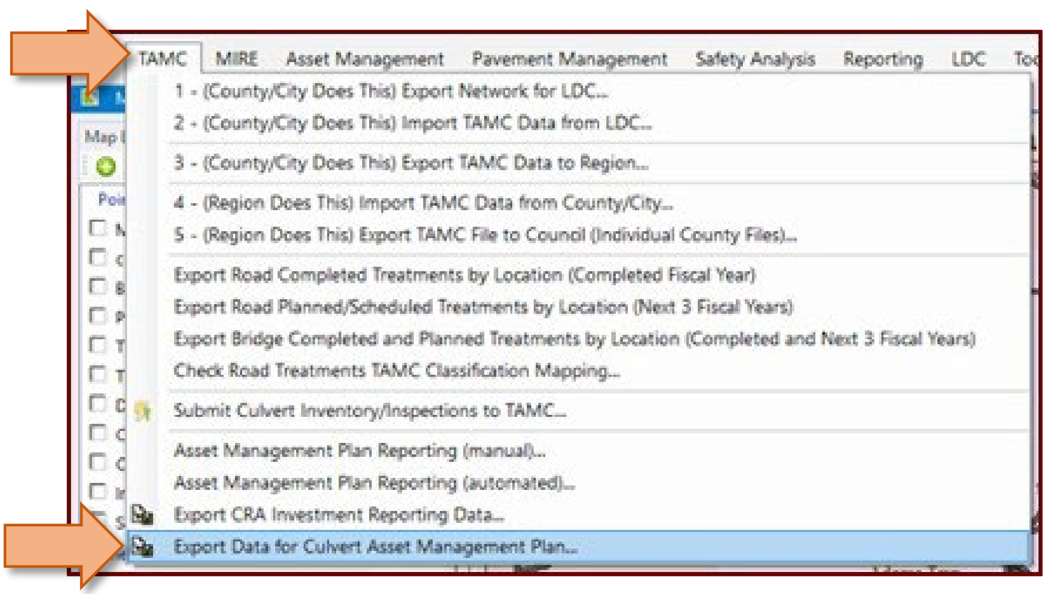
To download the Roadsoft culvert data export:

1. Create/locate the new folder you created on your hard drive for storing your culvert asset management plan files.

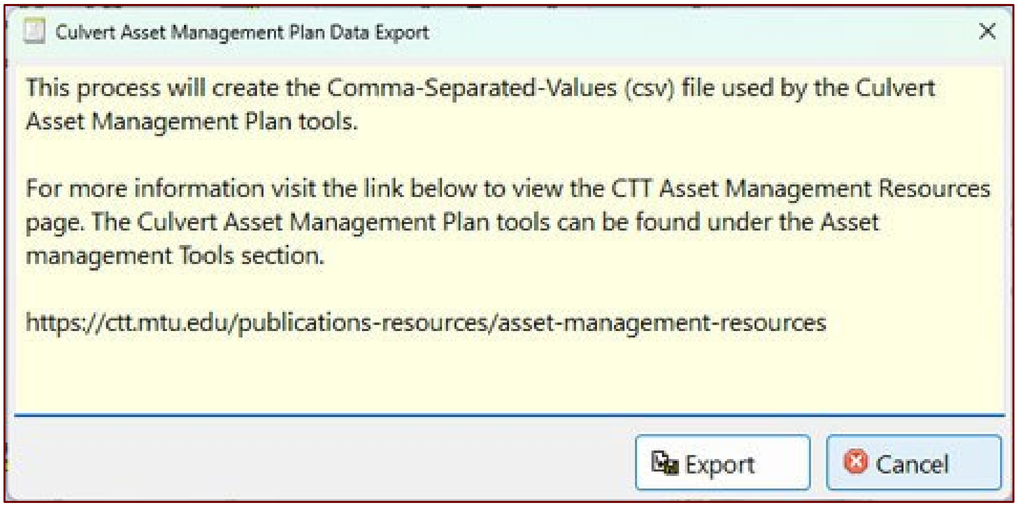
2. Launch the Roadsoft desktop application.

3. Select the **TAMC** menu (see figure below).

4. Select **Export Data for Culvert Asset Management Plan…** from the *TAMC* menu (see figure below).



⇨ The *Culvert Asset Management Plan Data Esport* window will open (see figure below).



5. Select **Export**.

6. Select the location to save the CulvertAMPExport.csv file, and select **Save**.

   NOTE: The culvert data export file, CulvertAMPExport.csv, must be saved in the culvert AMP tool's "csvCulvertData" folder, and the .csv file name must be the same name as automatically assigned by Roadsoft.

Saving your culvert data export from other sources

If culvert data is exported from another source, find your culvert data export(s). Copy or cut the export file(s) and paste the file(s) in your "*culvertamp_v####_tools*" folder "*csvCulvertData*" subfolder.

NOTE: Exported or downloaded files can typically be found in the Downloads folder, Documents folder, or on the Desktop; if the files are not there, you may need to do a Search of your system.

Entering data into the CulvertAMP_v####.xlsm tool

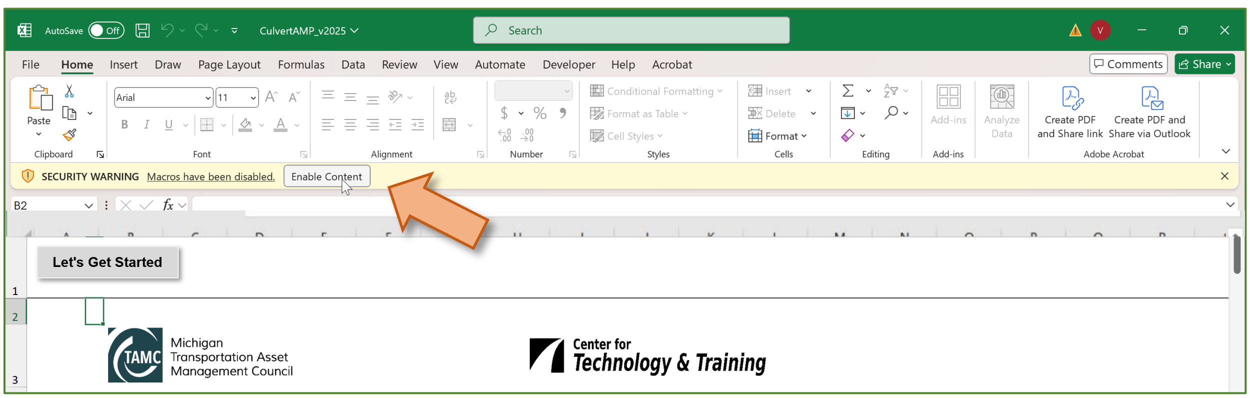
The CulvertAMP_v####.xlsm tool is an Excel workbook that allows you to enter and process your agency's culvert data and will subsequently populate a Word template, which you can further personalize for your agency's culvert asset management plan. This tool runs calculations in the background so that the data you enter will be parsed into the appropriate formats for the culvert asset management plan.

NOTE: Several worksheets in the CulvertAMP_v####.xlsm tool are protected to prevent inadvertent changes. A number of those protected worksheets require a password to unprotect the sheet. If a worksheet is password protected and you wish to modify it, the password is "password".

Using the .xlsm Tool for the First Time and Setting a Trusted Location

You will see a security warning when you open a macro-enabled Microsoft Office file for the first time. If this file is from a trusted source, select **Enable Content**.

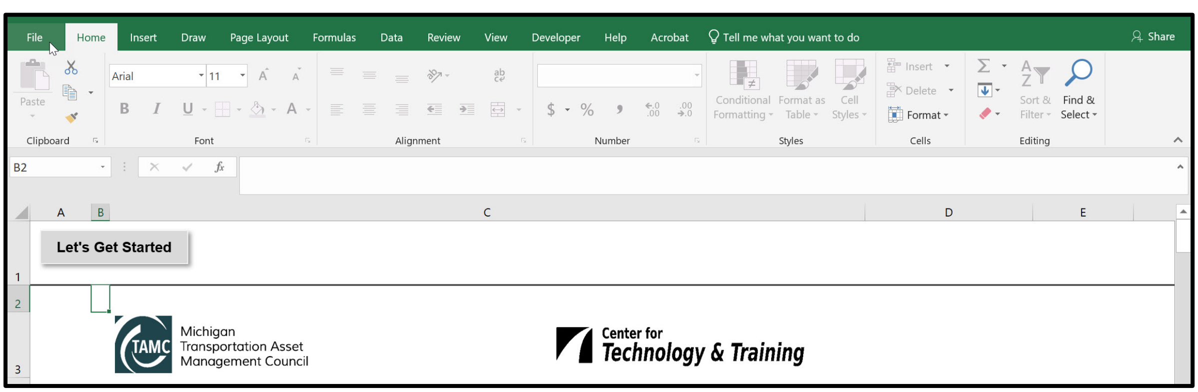
NOTE: You must enable macros for this workbook to function.



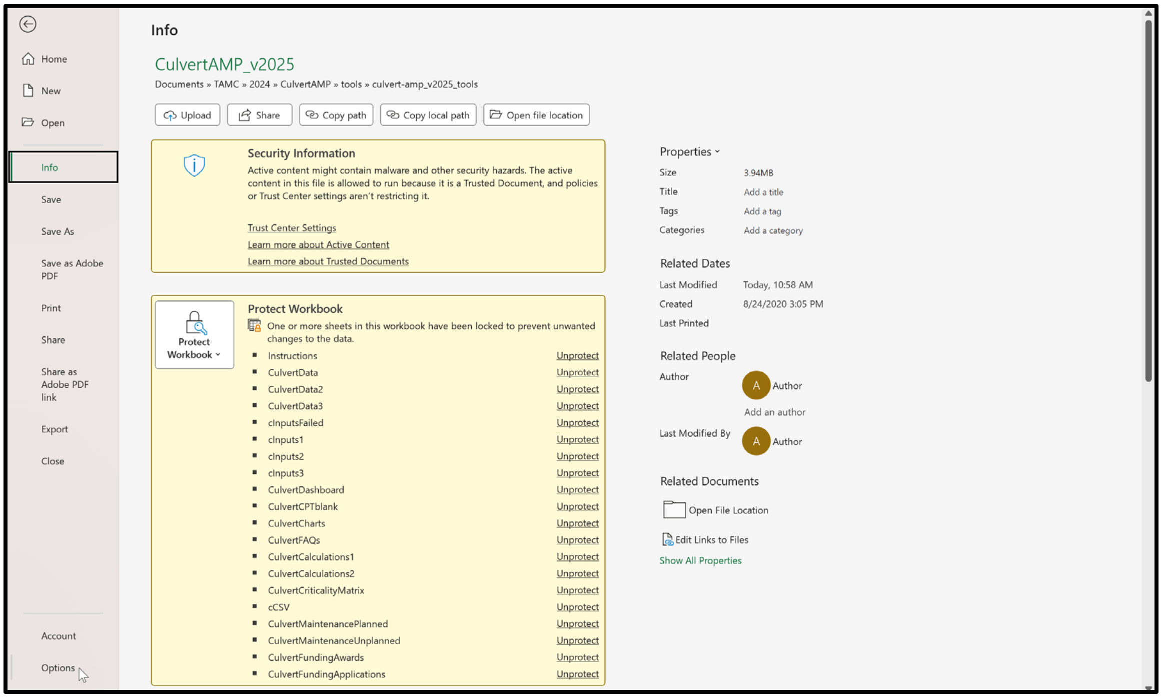
You will also need to set the folder containing your bridge asset management plan tools as a trusted location.

NOTE: This set of directions will work for setting trusted locations through either Microsoft Word or Excel.

1. Select **File**.

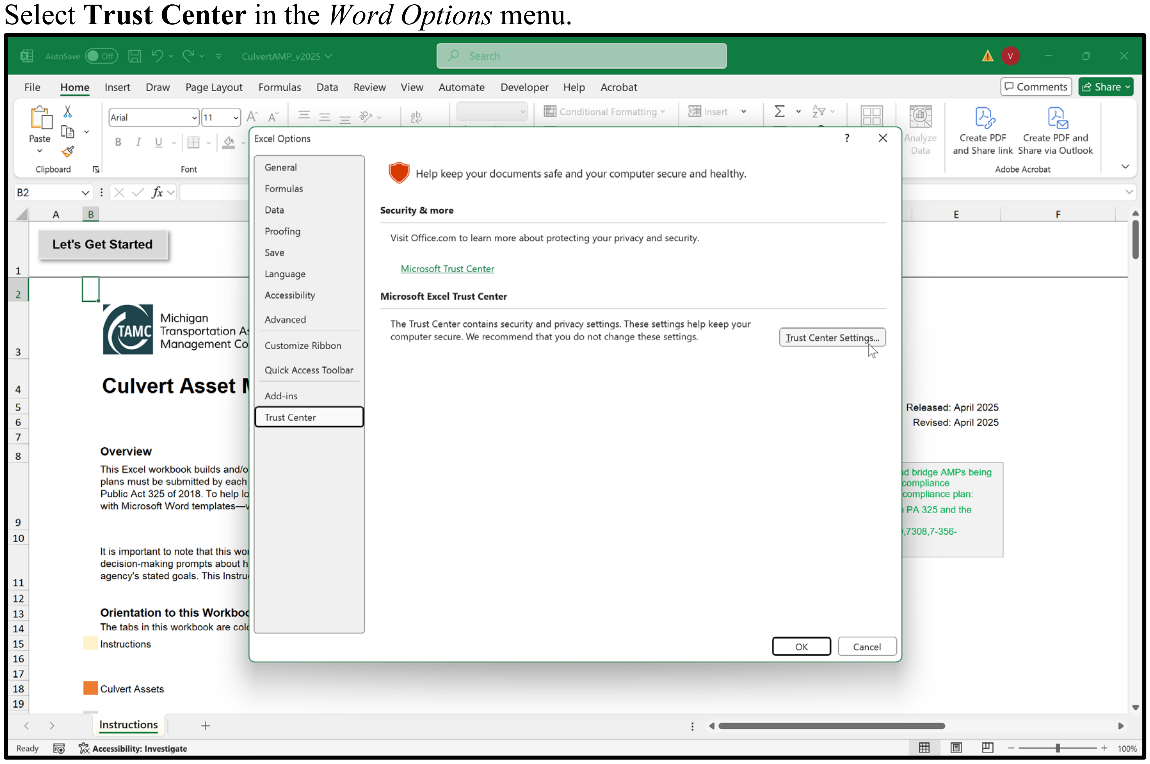


2. Select **Options**.



⇨ The *Word Options* window will appear.

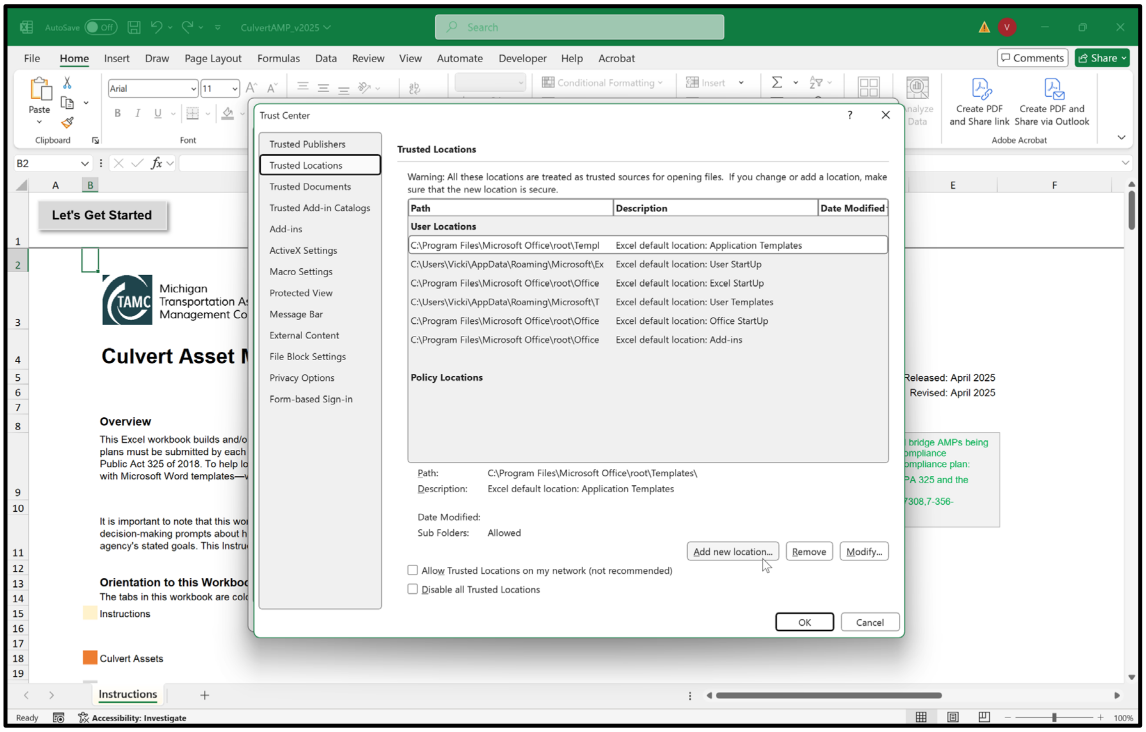
3. Select **Trust Center** in the *Word Options* menu.



4. Select **Trust Center Settings…**

⇨ The *Trust Center* window will appear.

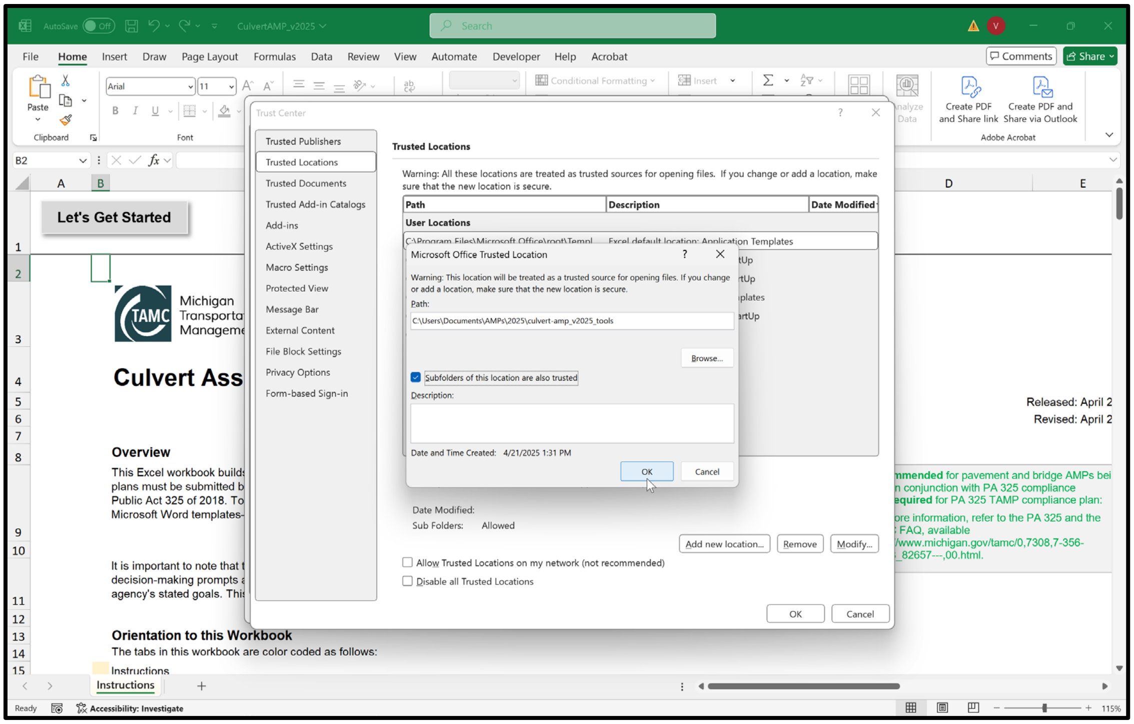
5. Select **Trusted Locations** in the *Trust Center* window menu.



6. Select **Add new location…**.

⇨ The *Microsoft Office Trusted Locations* window will appear.

7. Select **Browse**.

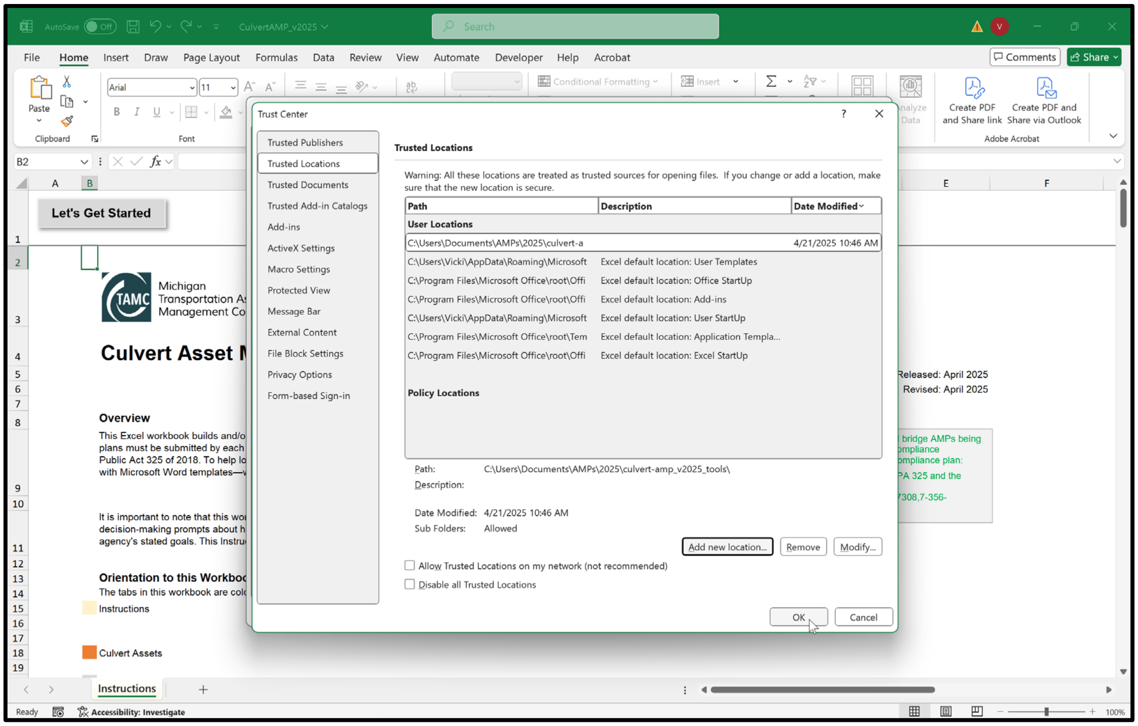


⇨ The *Browse* window will appear.

8. Browse to the folder you wish to set as a trusted location and select that folder in the main pane of the window; select **OK**.

⇨ The selected folder's path should appear in the *Microsoft Office Trusted Locations* window.

9. Select **Subfolders of this location are also trusted**; then, select **OK**.



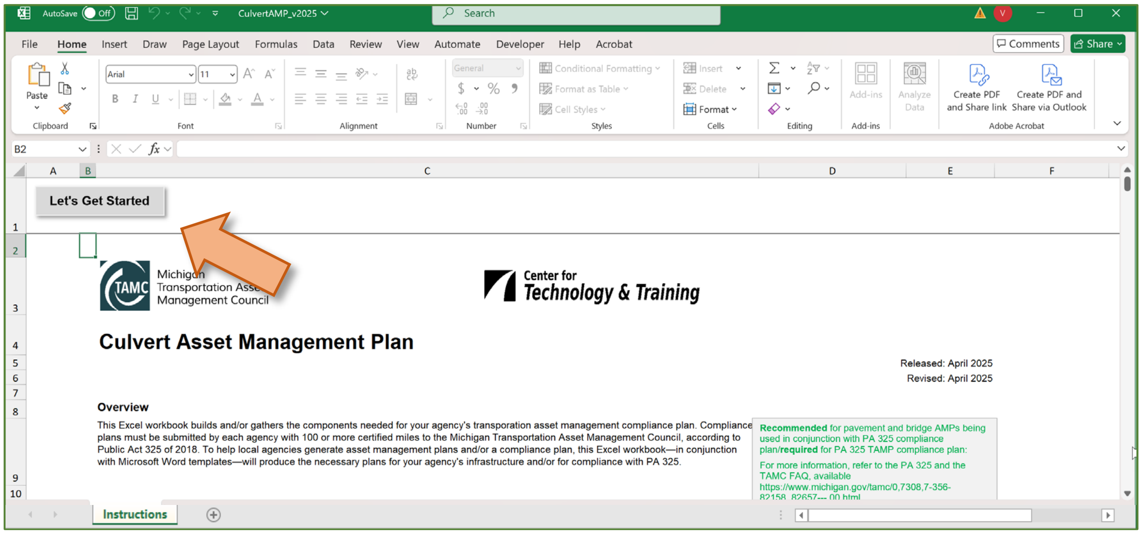
10. In the *Trust Center* window, select **OK**.

⇨ Your selected folder has now been set as a trusted location.

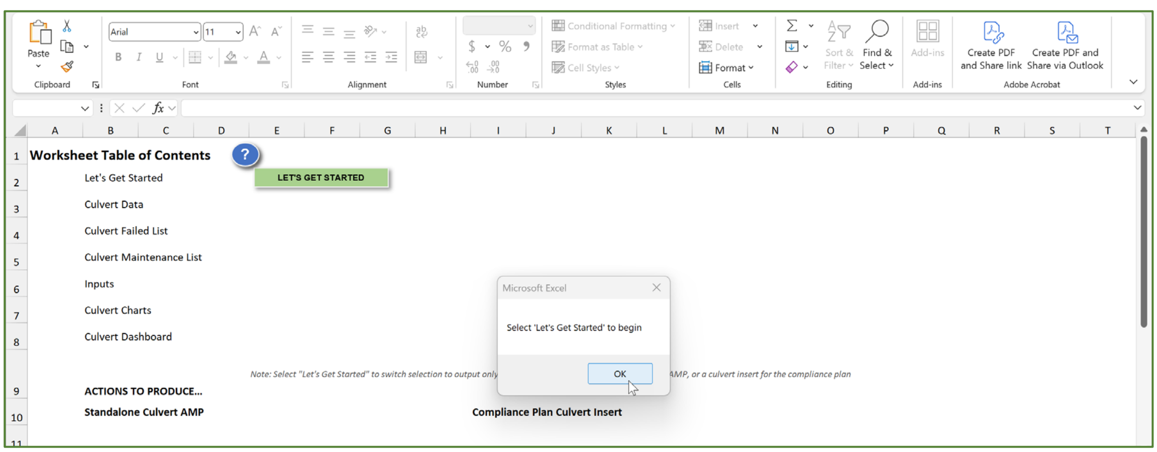
Instructions Worksheet

NOTE: When you open the CulvertAMP_v####.xlsm tool, you will be greeted with a welcome message in the *Instructions* worksheet. Please read the entire sheet before beginning. Then:

1. Select **Let's Get Started**.(see figure below).

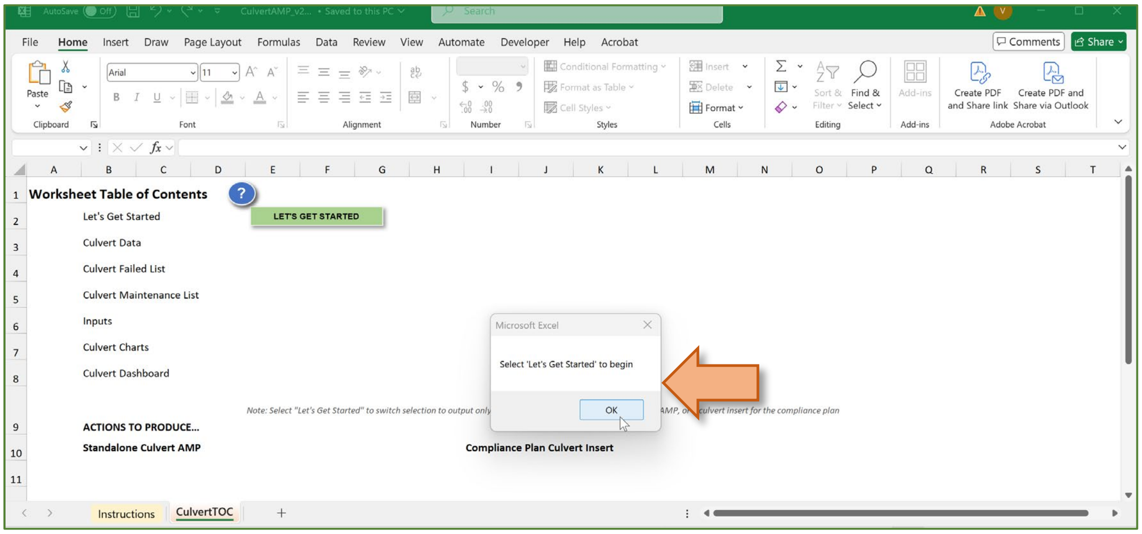


⇨ The *Culvert TOC* sheet and the *Select 'Let's Get Started' to begin* dialogue box will display (see figure below).

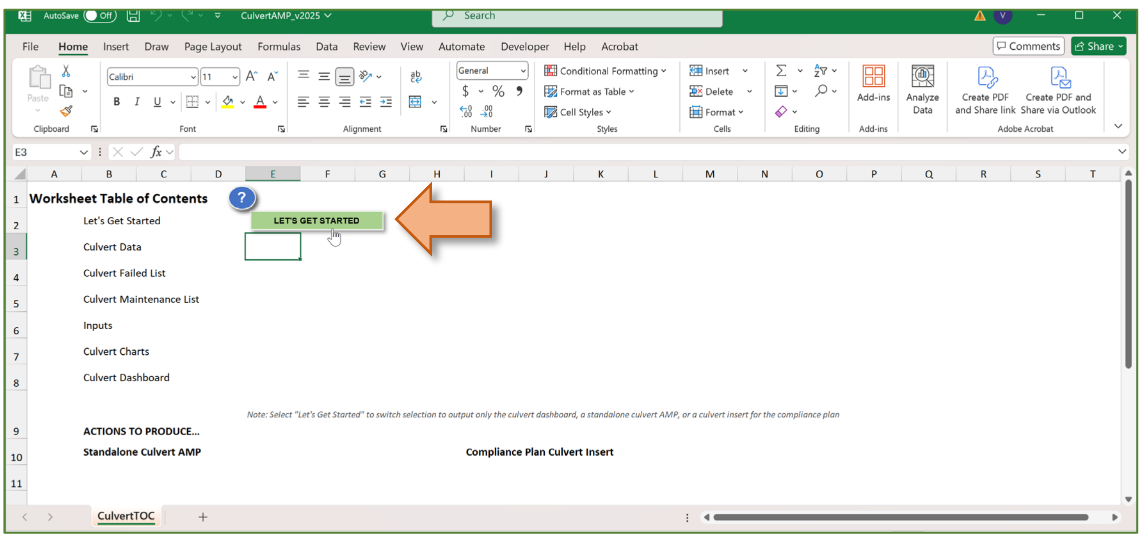


Culvert TOC Worksheet

1. In the *Select 'Let's Get Started' to begin* dialogue box, select **OK** (see figure below).

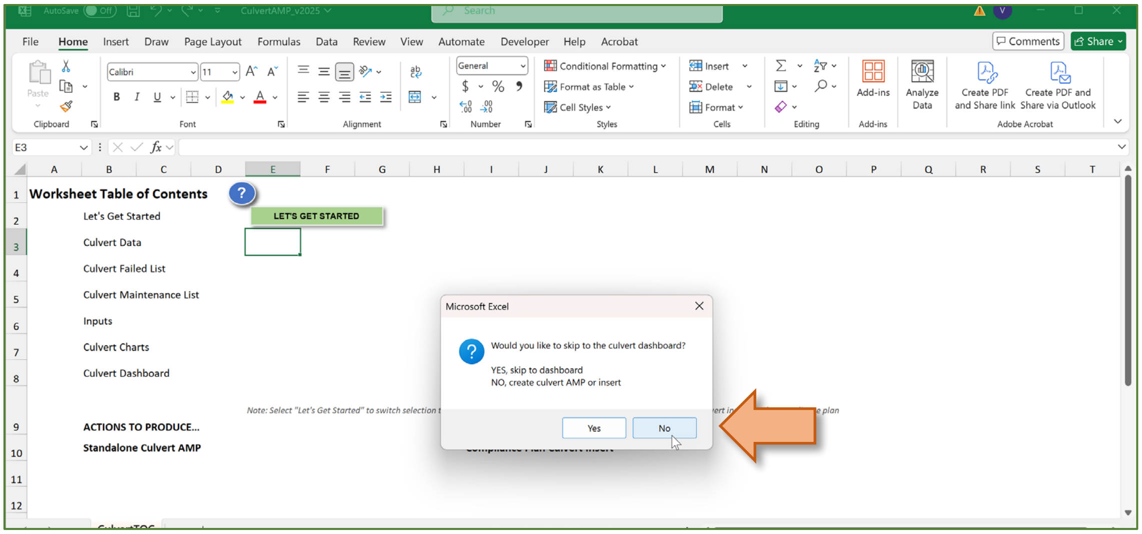


2. Select **LET'S GET STARTED** to continue (see figure below).



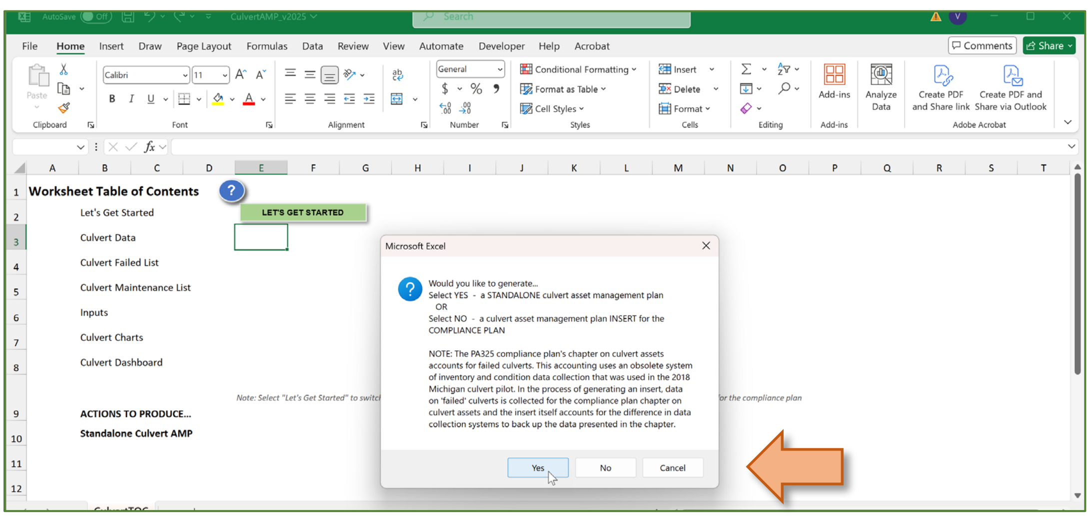
⇨ The *Would you like to skip to the culvert dashboard* dialogue box will display (see figure below).

3. Select **Yes** or **No** in the *Would you like to skip to the culvert dashboard?* Dialogue box to continue (see figure below).



⇨ If you selected Yes:

4. Select **View** next to *Culvert Dashboard* in the table of contents to view and export the culvert dashboard as a graphic (see…). CHANGE PIC



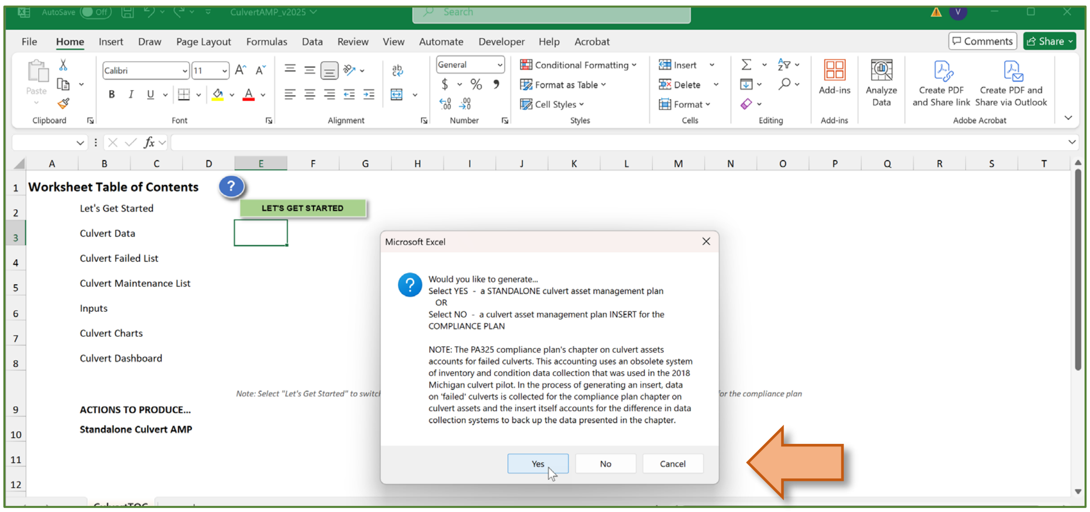
⇨ If you selected No: The *Would you like to generate…* dialogue box will display (see figure below).

4. In the *Would you like to generate…* dialogue box,
…select **Yes** if you would like to generate a standalone culvert asset management plan (see figure below).

OR

… select **No** if you would like to generate a culvert asset management plan insert for the PA 325 compliance plan (see figure below).

NOTE: The PA 325 compliance plan's chapter on culvert assets accounts for failed culverts. This accounting uses an obsolete system of inventory and condition data collection that was used in the 2018 Michigan culvert pilot. In the process of generating an insert, data on 'failed' culverts is collected for the compliance plan chapter on culvert assets and the insert itself accounts for the difference in data collection systems to back up the data presented in the chapter.

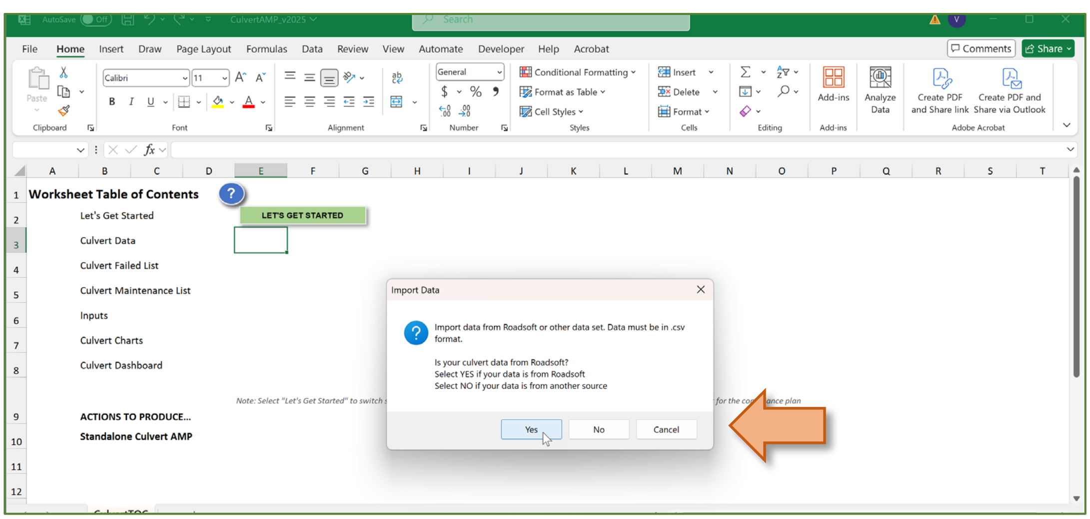


⇨ This selection will make the appropriate Generate… button will display. The *Import data from Roadsoft or other data set* dialogue box will also display (see figure below).

5. In the *Import data from Roadsoft or other data set* dialogue box,
…select **Yes** if your data is in Roadsoft exports (see figure below).

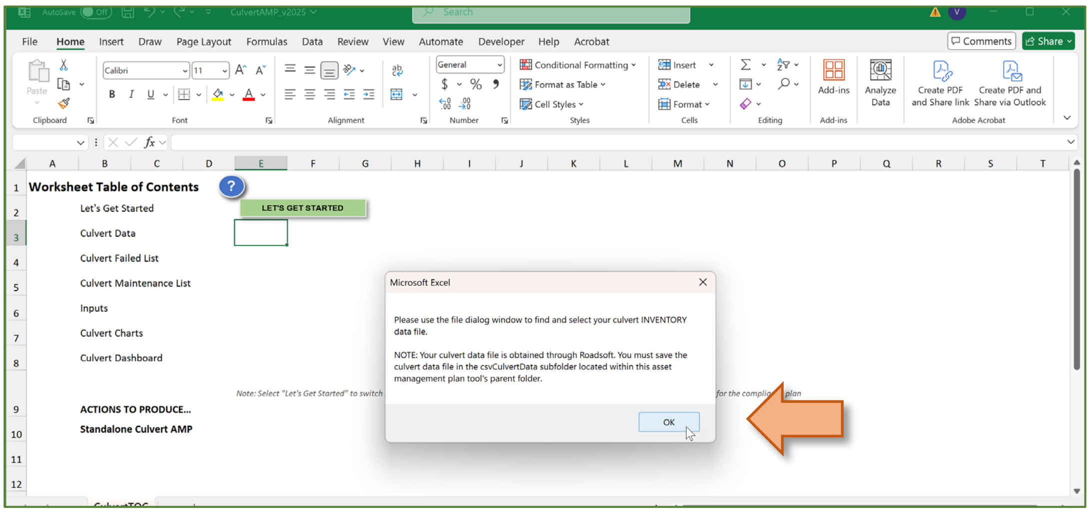
OR

… select **No** if your data is in another database export (see figure below).



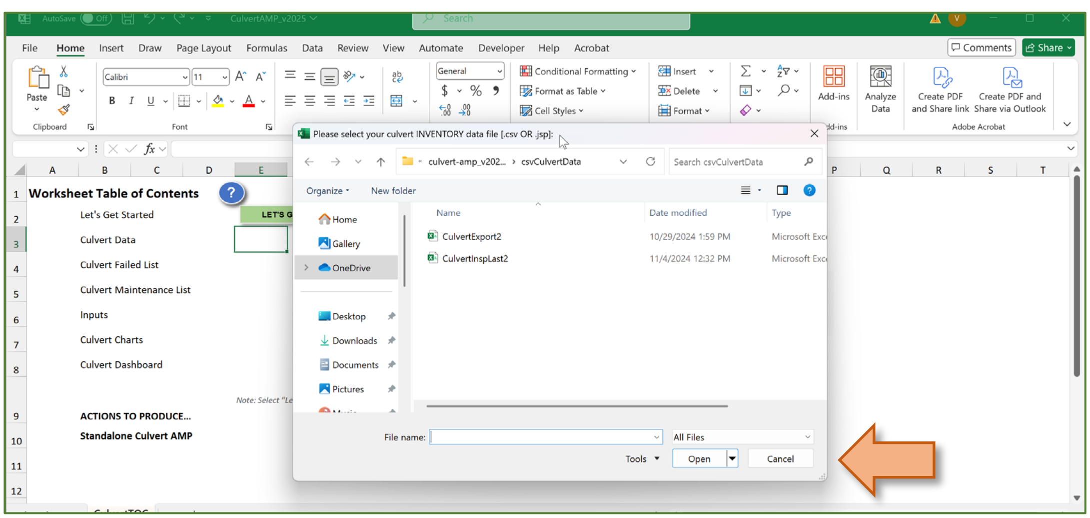
⇨ If you selected Yes, the *Please use the file dialog box to find and select your culvert INVENTORY data file* dialogue box will display (see figure below).

6. Select **OK** in the *Please use the file dialog box to find and select your culvert INVENTORY data file* dialogue box (see figure below).



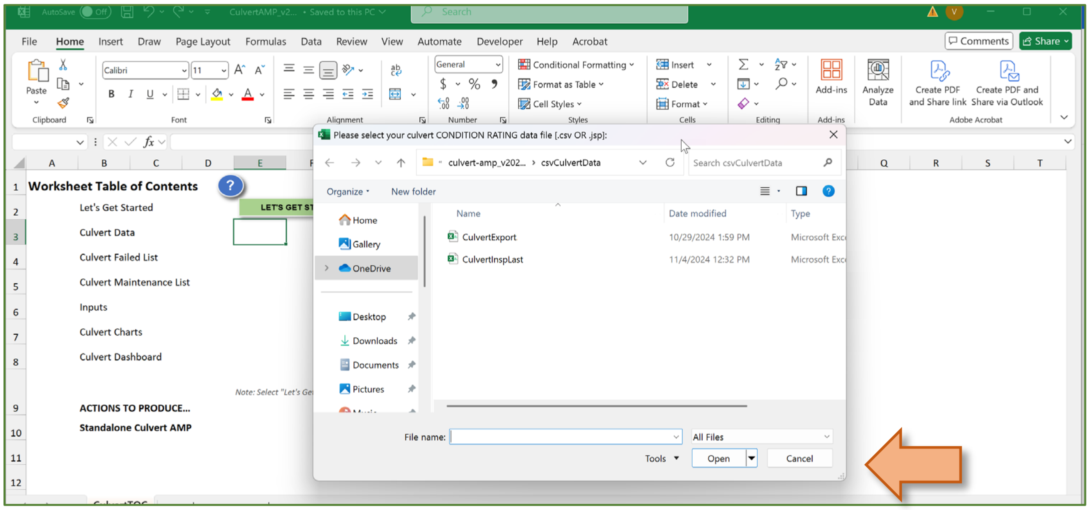
⇨ The *Please select your culvert INVENTORY data file [.csv OR .jsp]* dialogue box will display (see figure below).

7. Select the file CulvertExport.csv file and select **Open** (see figure below).

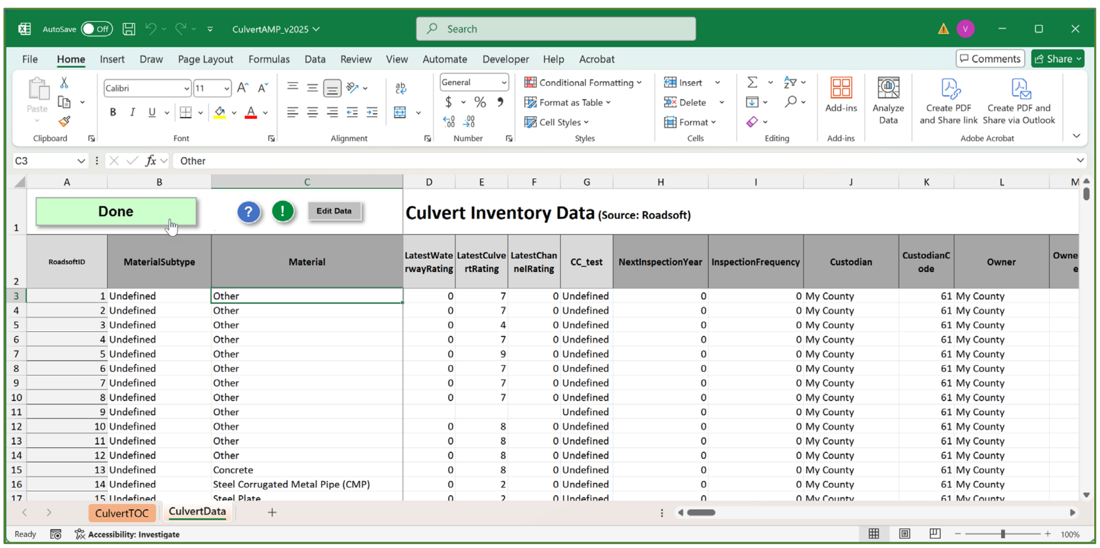


⇨ The *Please select your culvert CONDITION data file [.csv OR .jsp]* dialogue box will display (see figure below).

8. Select the file CulvertInspLast.csv file and select **Open** (see figure below).



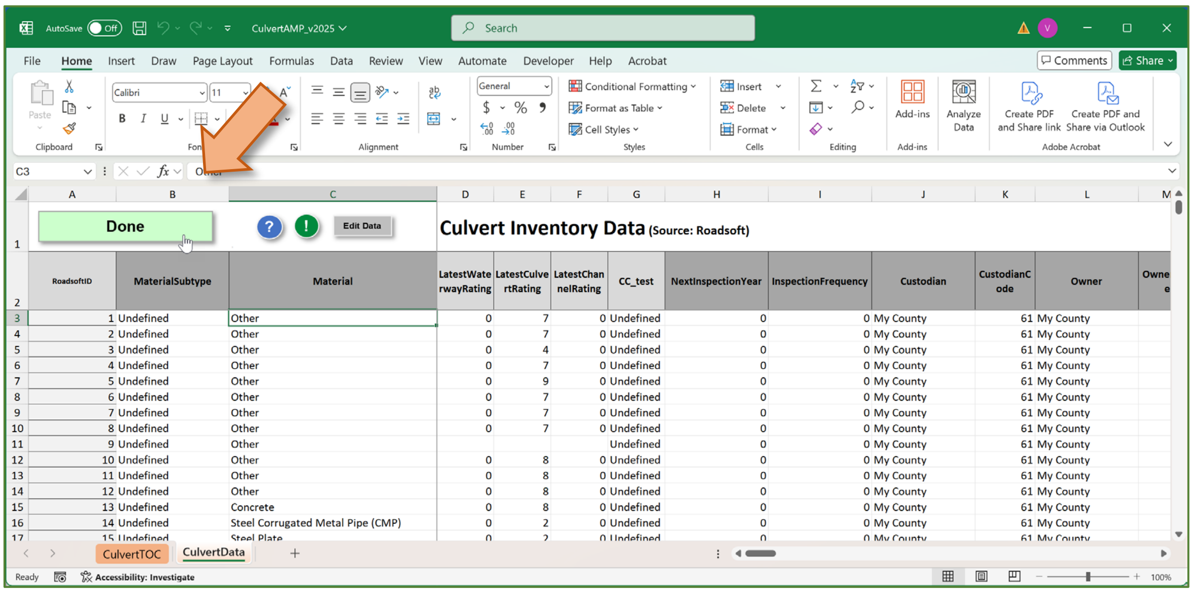
⇨ The *CulvertData* worksheet will display (see figure below).



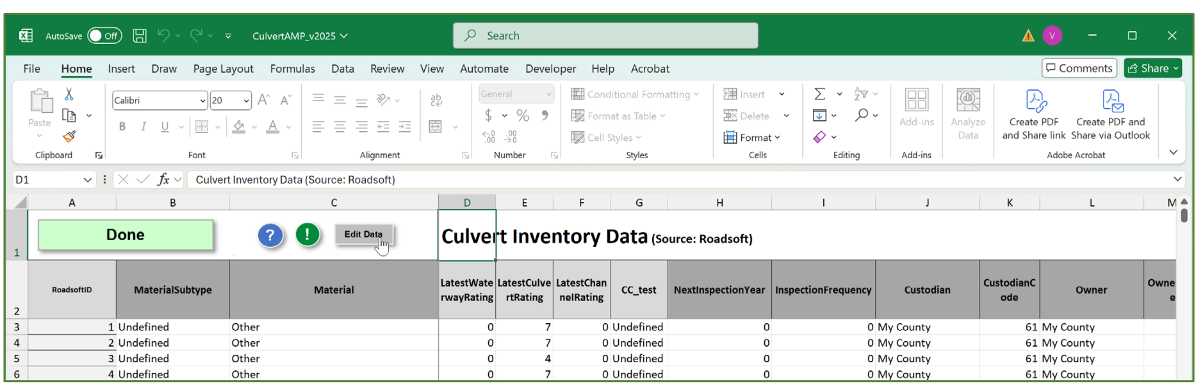
CulvertData Worksheets

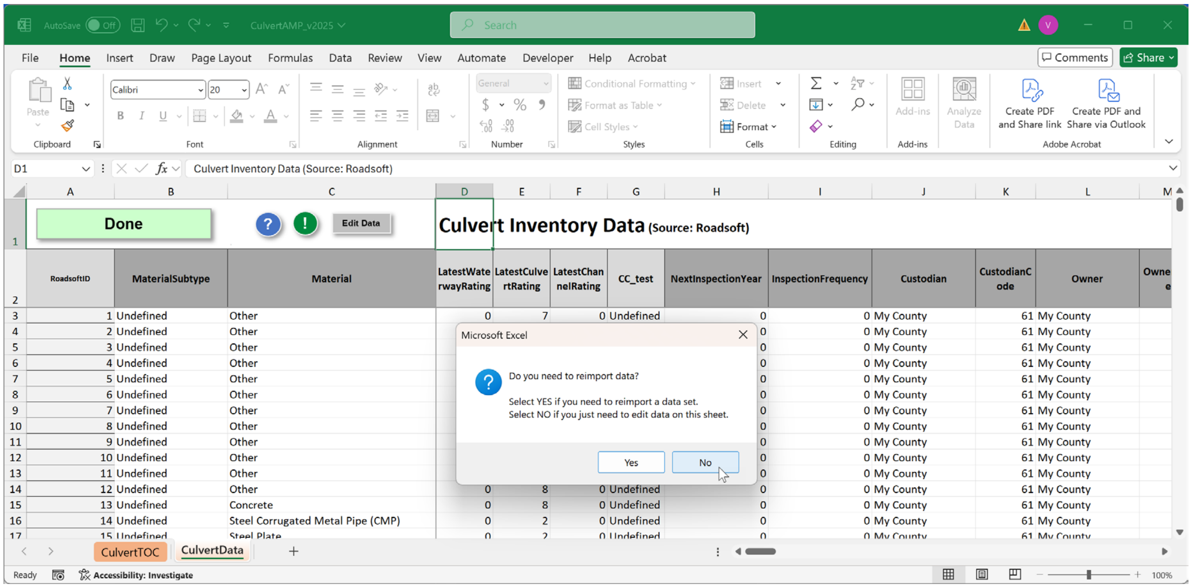
NOTE: The *CulvertData* and *CulvertData2* worksheets require a Roadsoft export dataset. By selecting **Let's Get Started** on the *CulvertTOC* worksheet, you will be guided through the importing of your data. If this process fails, you may unhide the *CulvertData* and *CulvertData2* worksheets, unprotect the worksheets, copy the data in the CulvertExport.csv file into the appropriate columns in the *CulvertData* worksheet, and copy the data in the CulvertInspLast.csv file into the appropriate columns in the *CulvertData2* worksheet. The steps for manually importing your data are detailed in a note after Step 3.

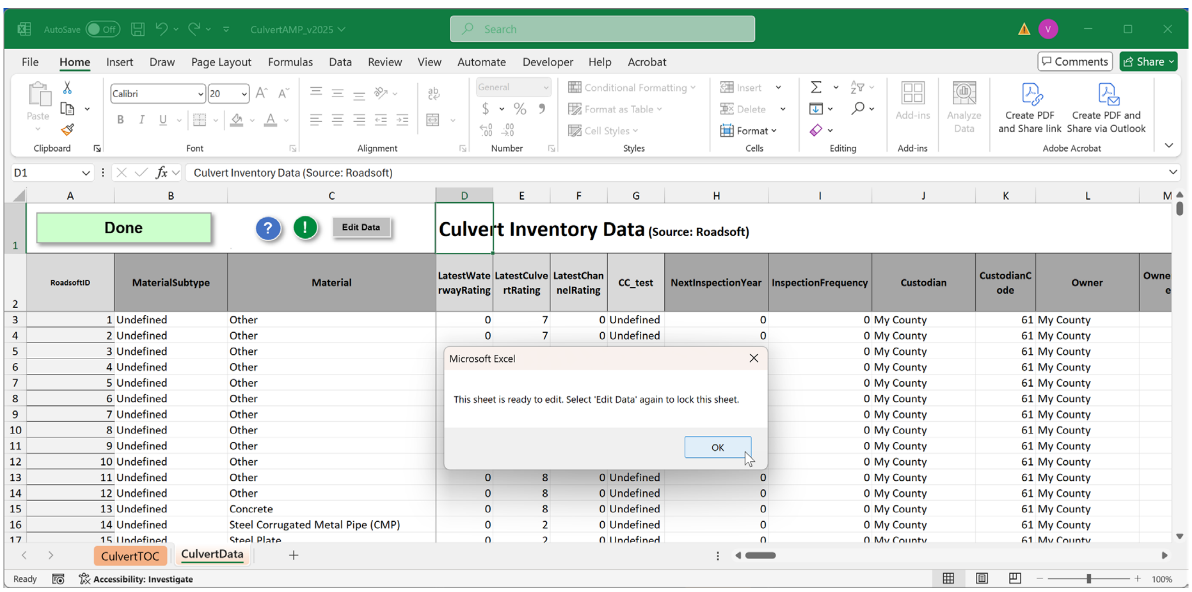
1. Review the data in the CulvertData worksheet.
2. Select the **Done** button at the top of the Culvert Inventory Data worksheet (see figure below).



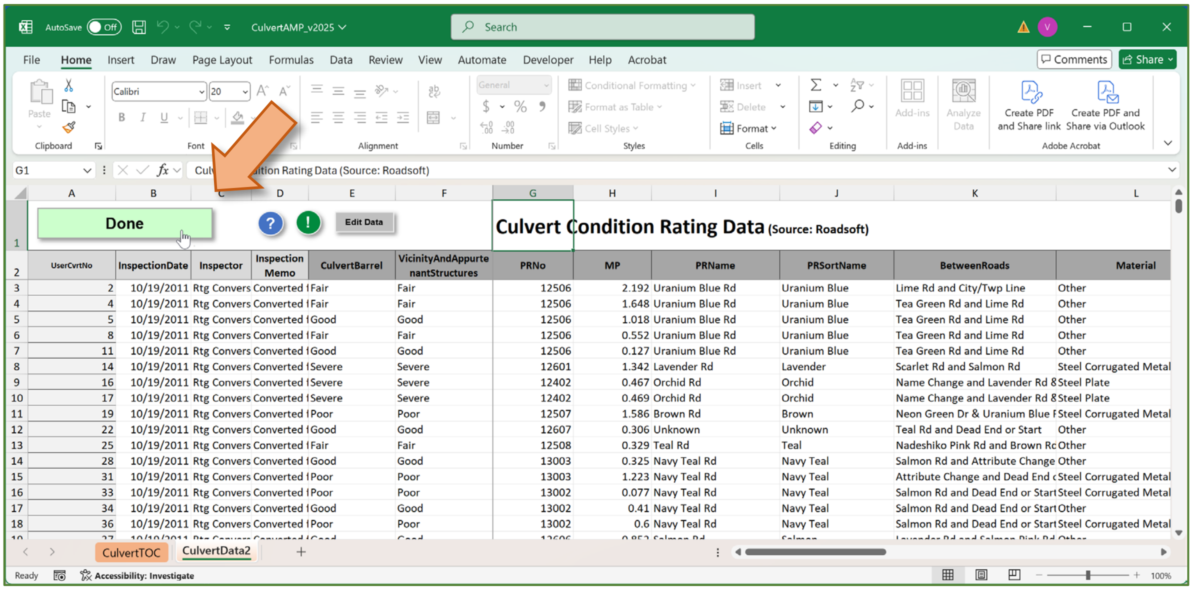
NOTE: If you need to edit any of the imported culvert data, select **Edit Data**. You will be given the choice to select a new data set to import or simply to edit the data set that is already placed. When done, select **Edit Data** again, and select **Done** (see figures below).




Culvert Inventory Data (Source: Roadsoft)
Done
Edit Data
Microsoft Excel
Do you need to reimport data?
Select YES if you need to reimport a data set.
Select NO if you just need to edit data on this sheet.
Yes
No
CulvertTOC
CulvertData


Culvert Inventory Data (Source: Roadsoft)
Done
Edit Data
Microsoft Excel
This sheet is ready to edit. Select 'Edit Data' again to lock this sheet.
OK
CulvertTOC
CulvertData

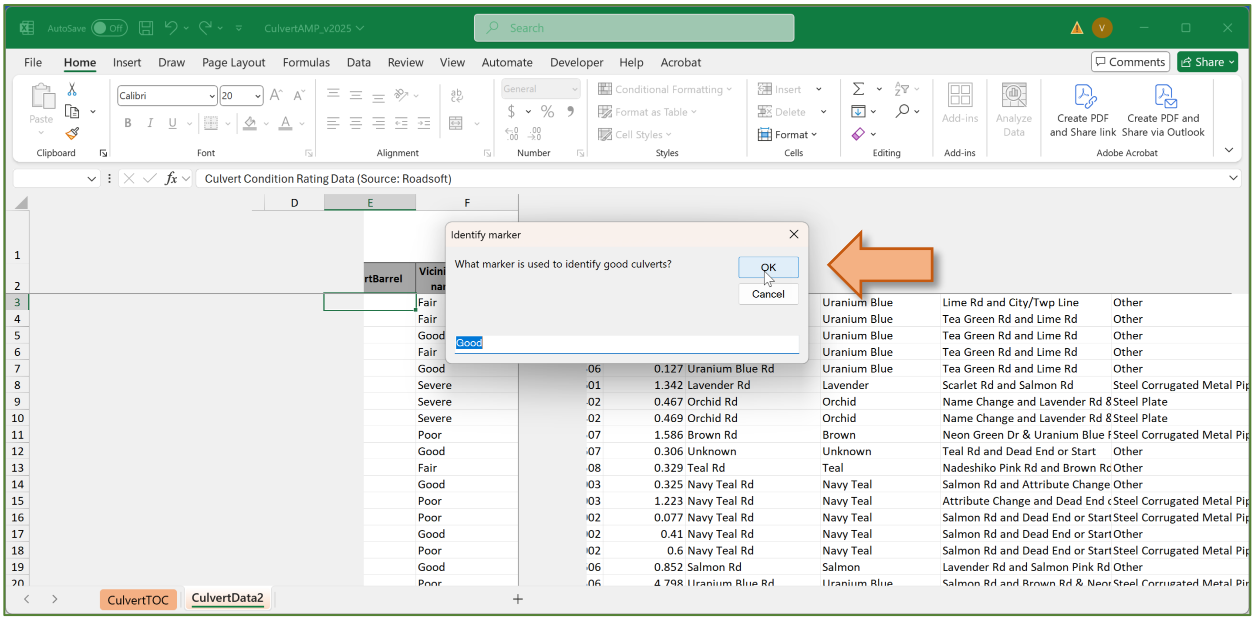
3. Select the **Done** button at the top of the Culvert Condition Rating Data worksheet (see figure below).



⇨ The *Identify marker* dialogue boxes will display (see figure below). The defaults will be 'Good', 'Fair', 'Poor', and 'Severe', OR 'GOOD', 'FAIR', 'POOR', and 'SEVERE' as found in the culvert barrel condition rating column; if some other marker was used to identify these conditions, enter that marker when prompted.

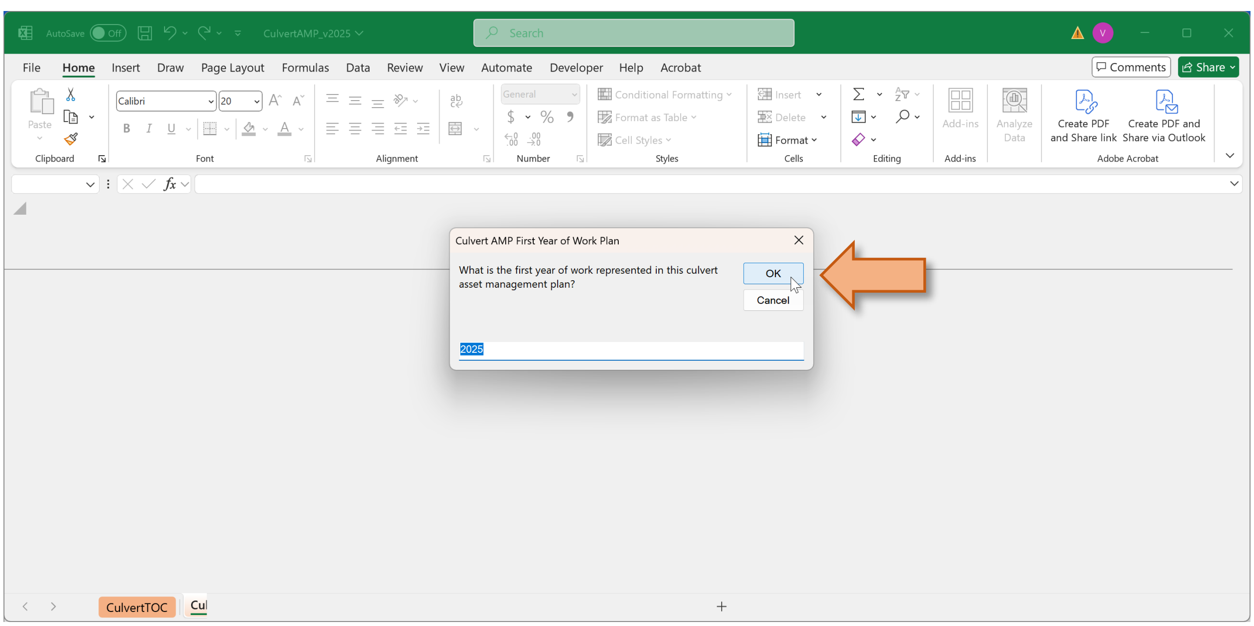
4. For each of the *Identify marker* dialogue boxes, select **OK** (see figure below).

⇨ The *Culvert AMP First Year of Work Plan* dialogue box will display (see figure below).



5. In the *Culvert AMP First Year of Work Plan* dialogue box, enter the year/first year reflected in this culvert asset management plan (see figure below).

6. Select **OK** (see figure below).



⇨ The *cInputsMaintenance* worksheet will display.

cInputsMaintenance Worksheet

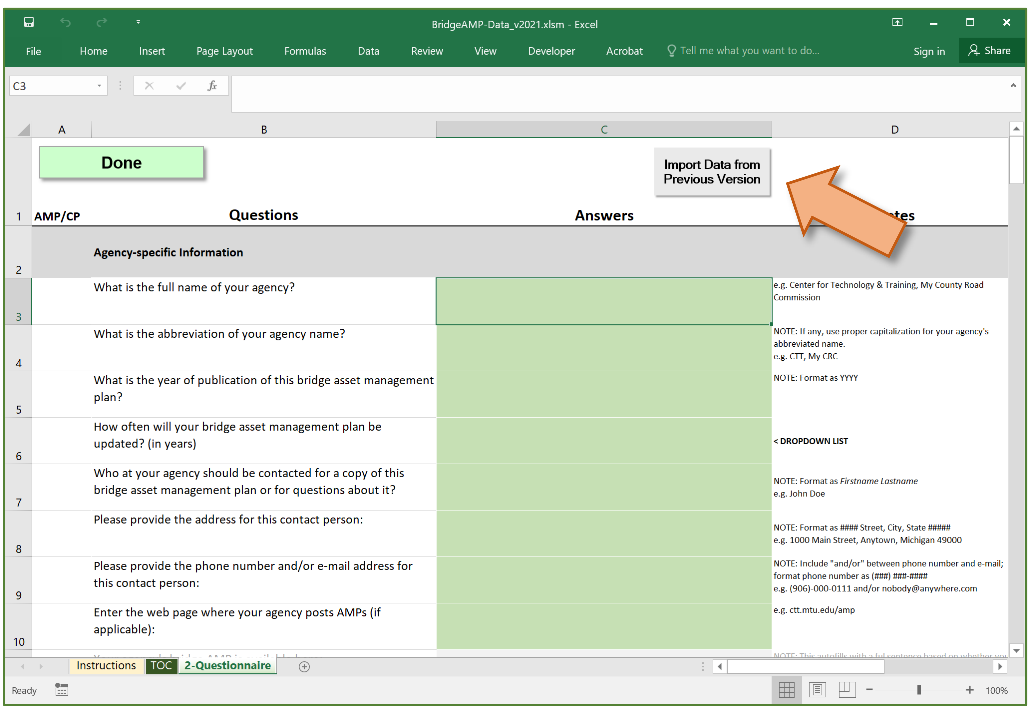
NOTE: The *2-Questionnaire* worksheet requires your response to several questions that will help tailor your asset management plan content. By selecting **Done** on the 1-MiBRIDGEreport worksheet, you will automatically progress to the questionnaire. If this process fails at any point, you may visit the *TOC* worksheet and unhide the *2-Questionnaire* worksheet (see figure below).

NOTE: The *2-Questionnaire* worksheet and several of the following worksheets are protected in order to provide guidance in modifying only the necessary cells. Throughout the Excel template, heading rows should not be altered; altering heading rows will prevent data from transferring into the Word template.

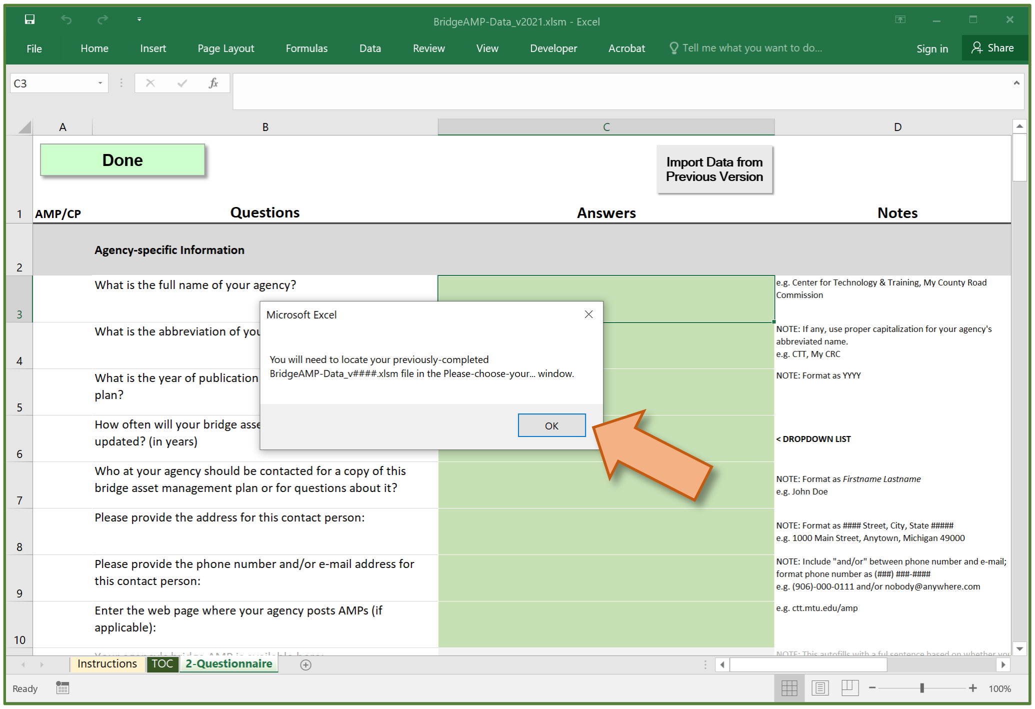
1. Answer the questions on the questionnaire (see figure below).

NOTE: If you have previously completed the 2019/2020 versions of the bridge asset management tools, you can import your fill-in data into the 2021 and newer versions of the tool:

a) Select **Import Data from Previous Version** (see figure below).

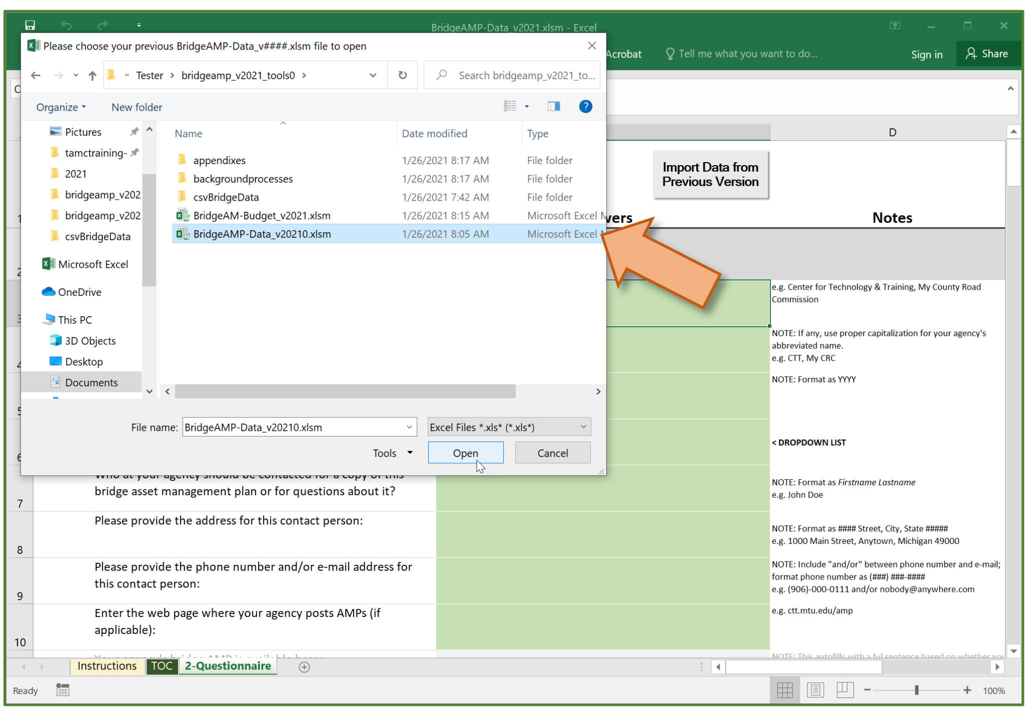


⇨ The *You will need to locate…* window will display (see figure below).



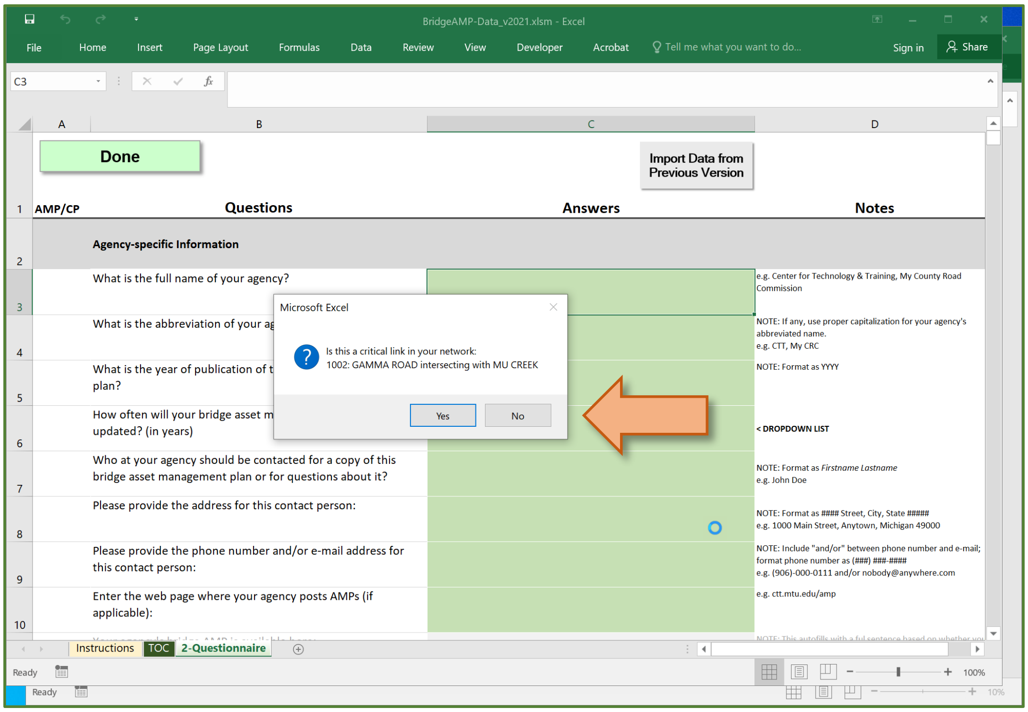
b) Select **OK** in the *You will need to locate…* window.

⇨ The *Please choose your previous BridgeAMP-Data_v###.xlsm to open* window will display (see figure below).



c) Select the file in the *Please choose your previous BridgeAMP-Data_v###.xlsm to open* window, and select **Open** (see figure above).

⇨ The prompts to identify posted/close bridges that are critical links will display (see figure below).

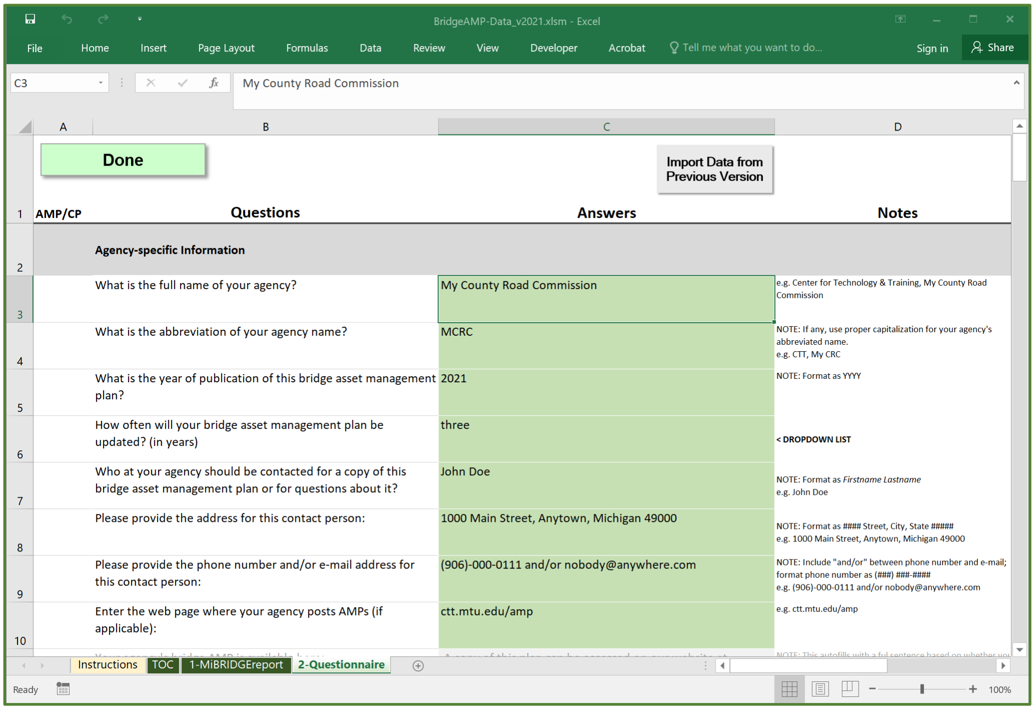


d) Select **Yes** to identify posted/closed bridges that are critical links.

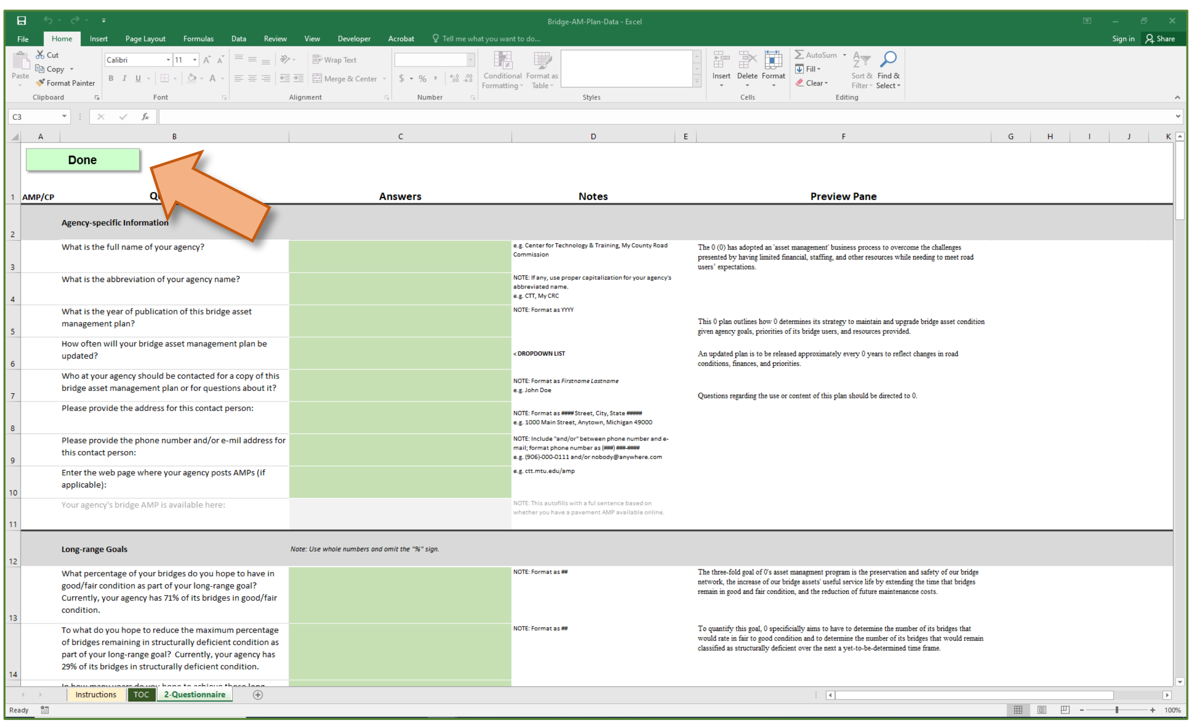
OR

Select **No** to identify posted/closed bridges that are not critical links.

⇨ After the last posted/closed bridge has been reached, the import process will continue until all of the data has been transferred into the current tool. The current data will appear on the 2-Questionnaire worksheet once the process is completed (see figure below).

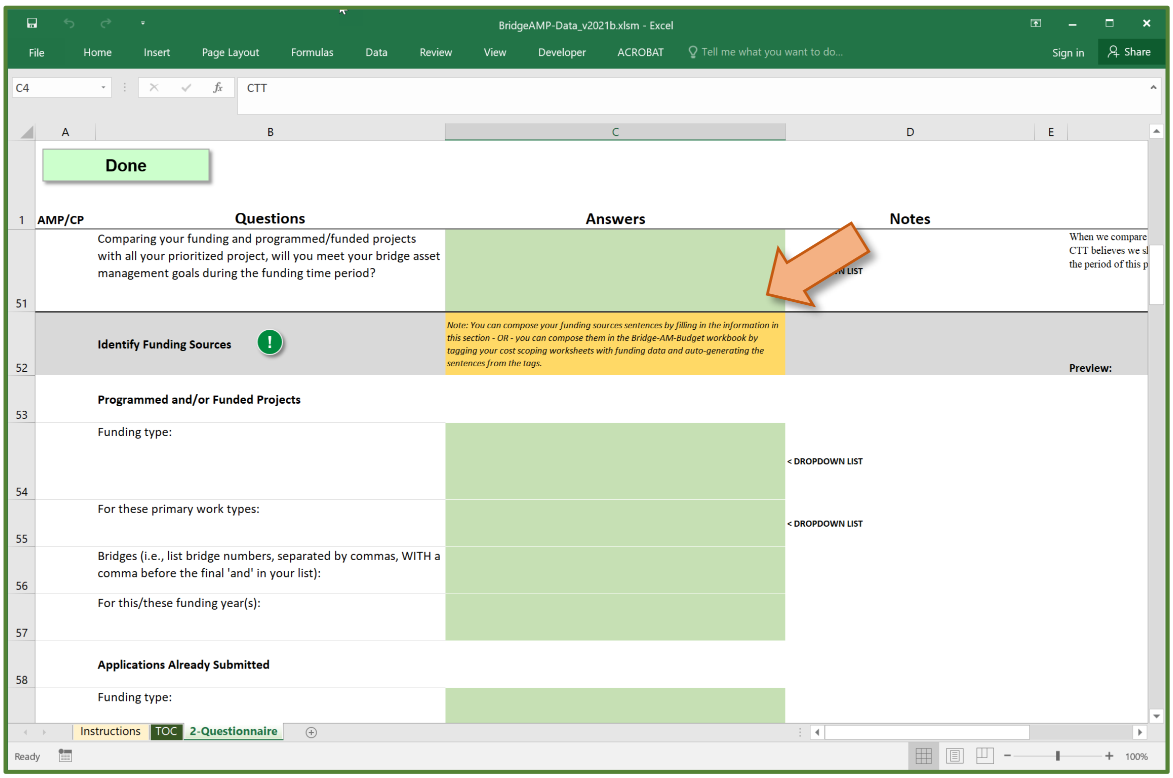


NOTE: You are only able to type in green or red cells in Column C. Column B (white cells) contains the questions, Column D (white cells) contains answer prompts and/or examples to make sure you format responses correctly, and Column F (white cells) contains preview text that will update to illustrate how the answer will be reflected within the context of the asset management plan (see figure below).

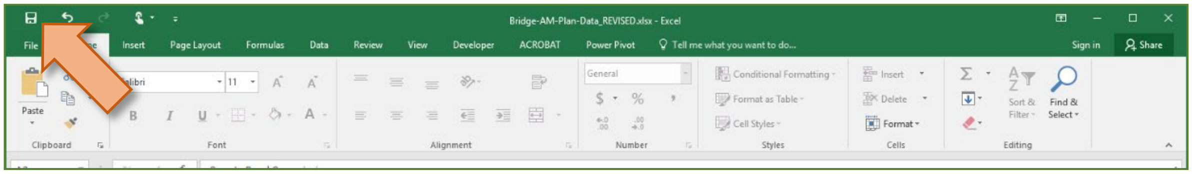


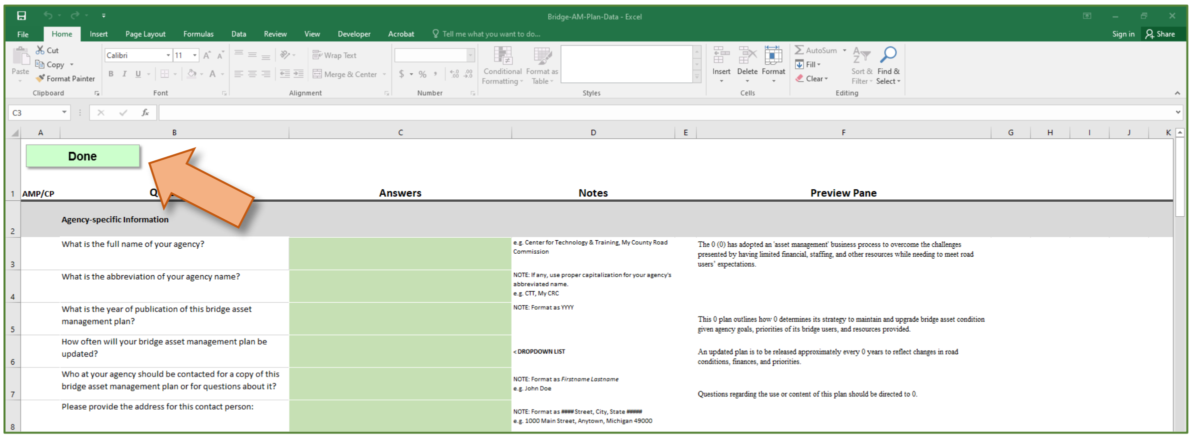
NOTE: Some green cells are dropdown lists. If none of the listed answers appropriately reflects your agency's situation, select the blank entry in the dropdown list, and then type your answer into the green cell; note that in some cases this is discouraged.

NOTE: The sentences for the 2. Financial Resources section of the bridge asset management plan are created either in the BridgeAMP-Data.xlsm tool or the BridgeAMP-Budget.xlsm tool (with the latter being possibly easier to compile). To create the financial resources sentences in the BridgeAMP-Data.xlsm tool, complete the 2-Questionnaire worksheet's Identify Funding Sources section (see figure below). The tool will look for blanks in this section to determine if you are creating your financial resources sentences here or electing to create your financial resources sentences in the BridgeAMP-Budget.xlsm tool.



2. Review your responses, select **Save** in order to save your work before continuing, and select **Done** (see figures below).



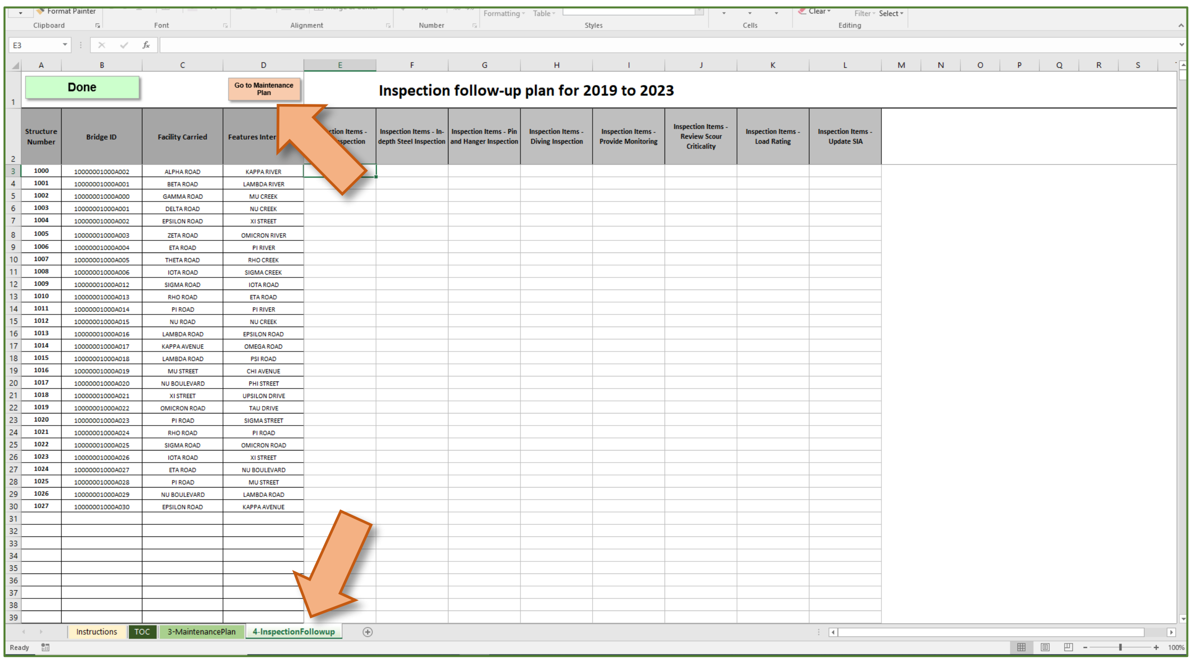


⇨ You will be directed to the *3-MaintenancePlan* and *4-InspectionFollowup* worksheets.

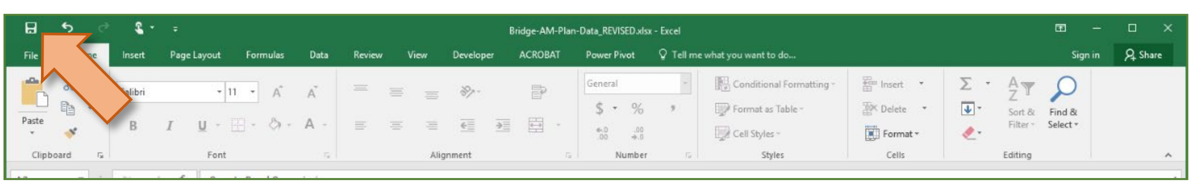
3-MaintenancePlan and 4-InspectionFollowup Worksheets

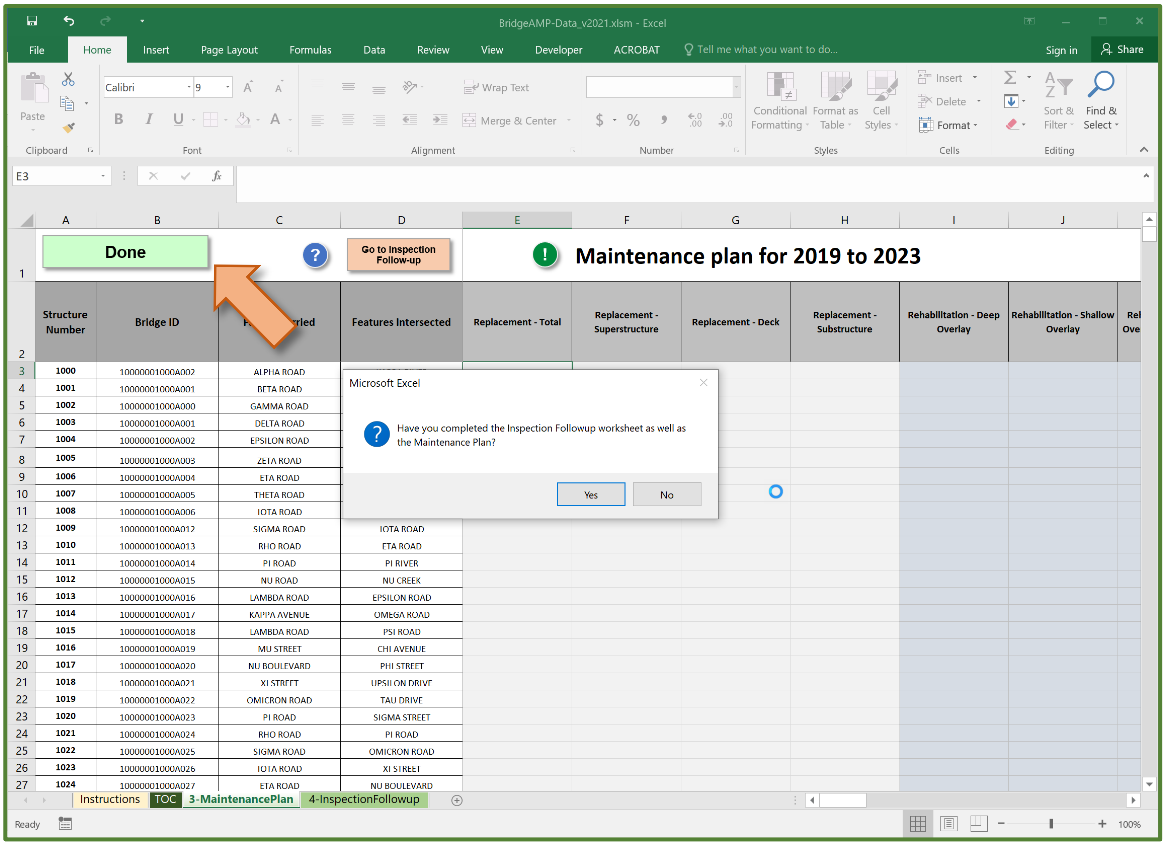
1. Begin indicating your agency's plan for maintenance and inspection follow-up by inserting a lowercase "x" (alternatively, you may choose to use "h", "m", "l" for high, medium, and low priority items to correspond with your agency's prioritization metric, which can be optionally indicated in the BridgeAM-Budget.xlsm workbook) in its corresponding replacement, rehabilitation, proposed preventive maintenance, and/or proposed scheduled maintenance item—in *3-MaintenancePlan*'s columns E through AQ—and in its corresponding inspection follow-up item—in *4-InspectionFollowup*'s columns E through M (see figure below).

   NOTE: You can toggle between the *3-MaintenancePlan* and *4-InspectionFollowup* worksheets using the **Go to…** button or the worksheet tabs, indicated by the green arrows in the figure below.



2. Review your responses, select **Save** in order to save your work before continuing, and select **Done** (see figures below).





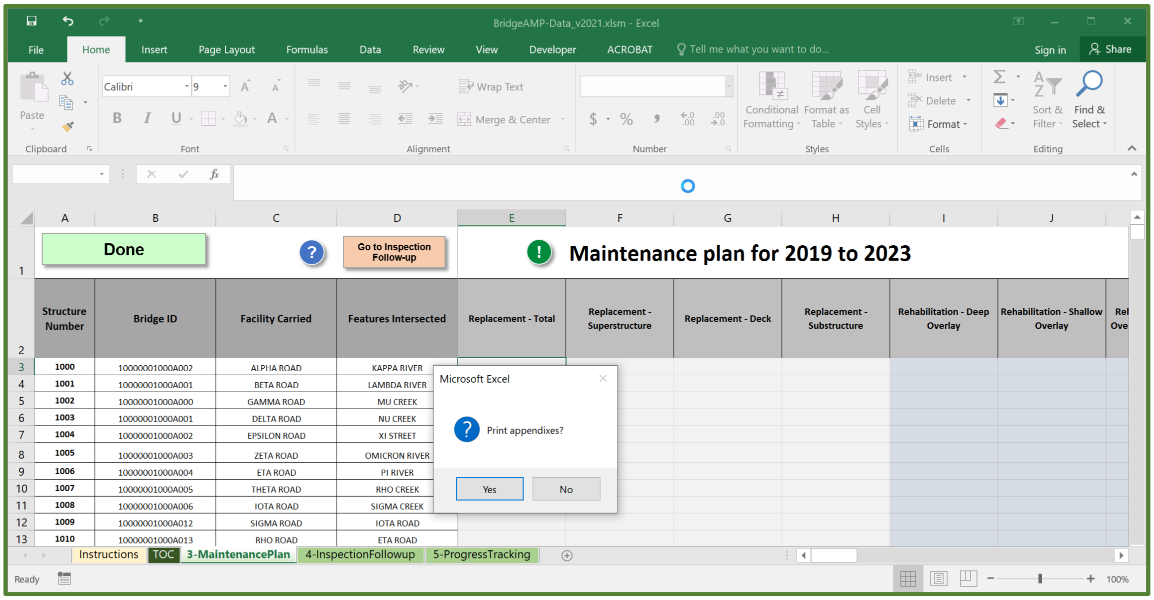
⇨ You will be asked to confirm whether you completed both the 3-MaintenancePlan worksheet and the 4-InspectionFollowup worksheet (see figure above).

3. Select **Yes** if you have completed both worksheets, and proceed to step 3 step result.

   OR

   Select **No** if you still need to complete one of the worksheets, and return to step 1.

⇨ A *Print appendixes?* window will display (see figure below).



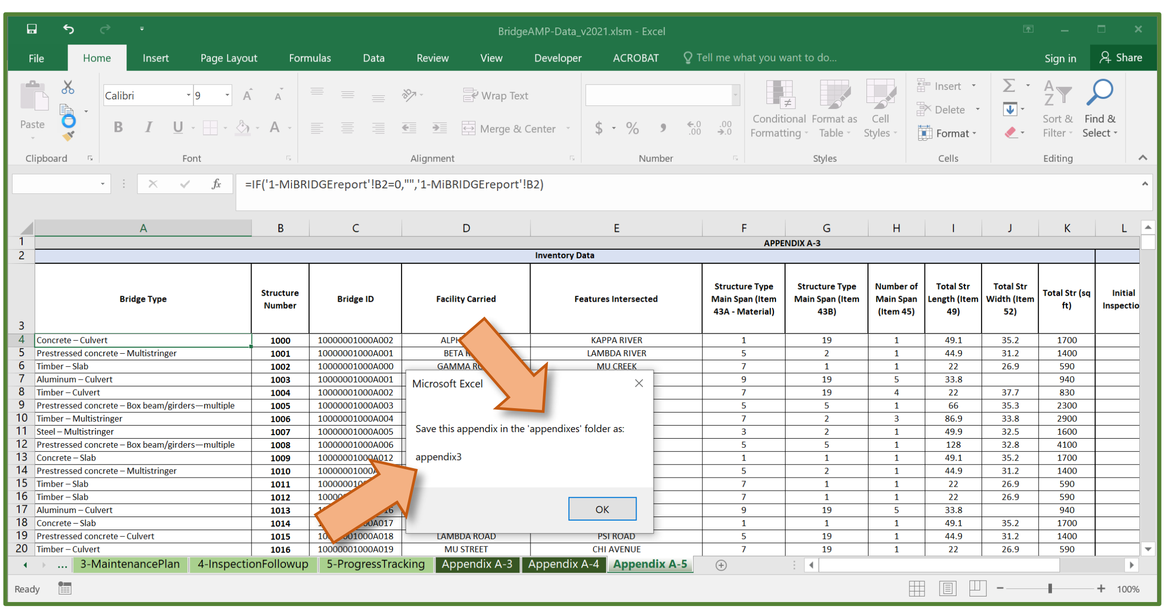
4. Select **Yes** to print appendixes (see figure above), and proceed to step 4 step result.

   OR

   Select **No** to skip printing appendixes (see figure above), and proceed to this instruction guide's section on the *5-ProgressTracking* sheet.

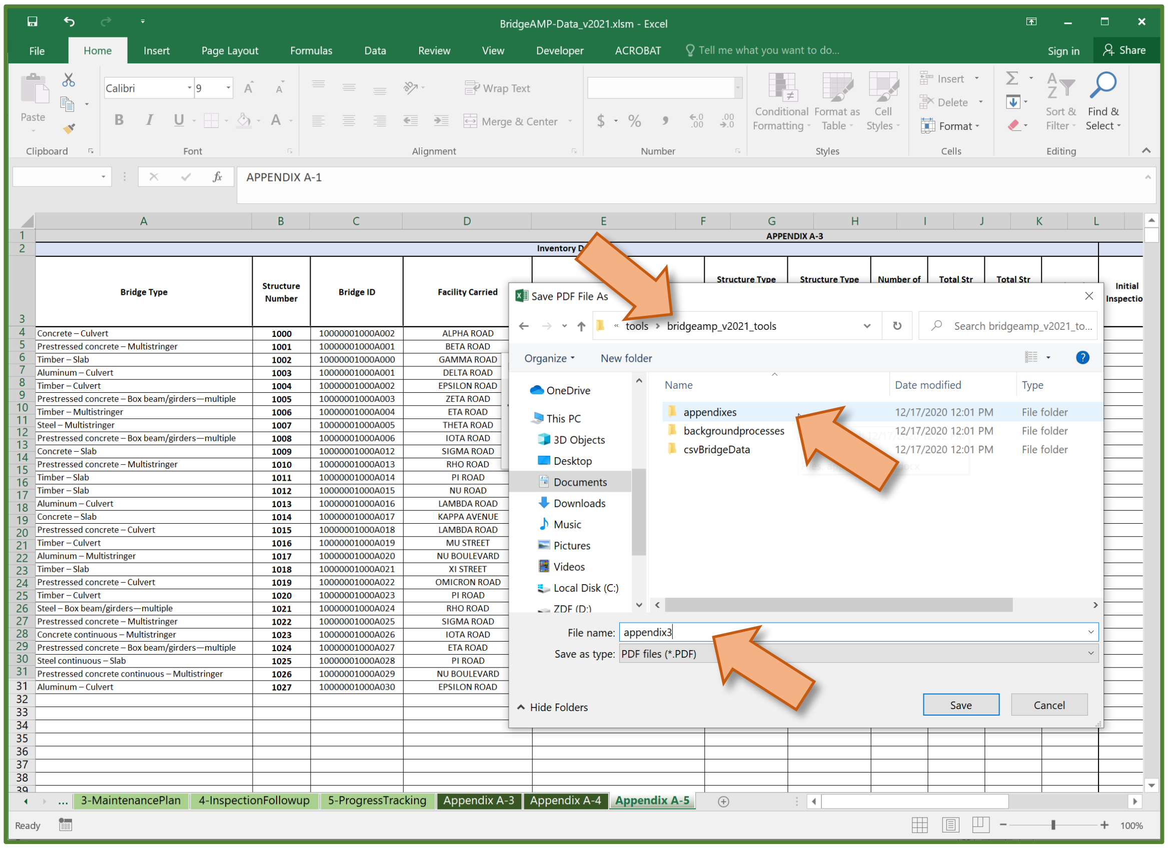
⇨ The *Save this appendix in…/as…* dialogue box will display (see figure below).

NOTE: Pay special attention to the specified folder and the save-as name. It is critical that all of these PDFs are stored in the appendixes subfolder and named "appendix3", "appendix4", and "appendix5" respectively for automation in future steps to function correctly.



5. Select **OK** in the the *Save this appendix in…/as…* dialogue box (see figure above).

⇨ The *Save PDF File As* file dialogue box will display (see figure below).

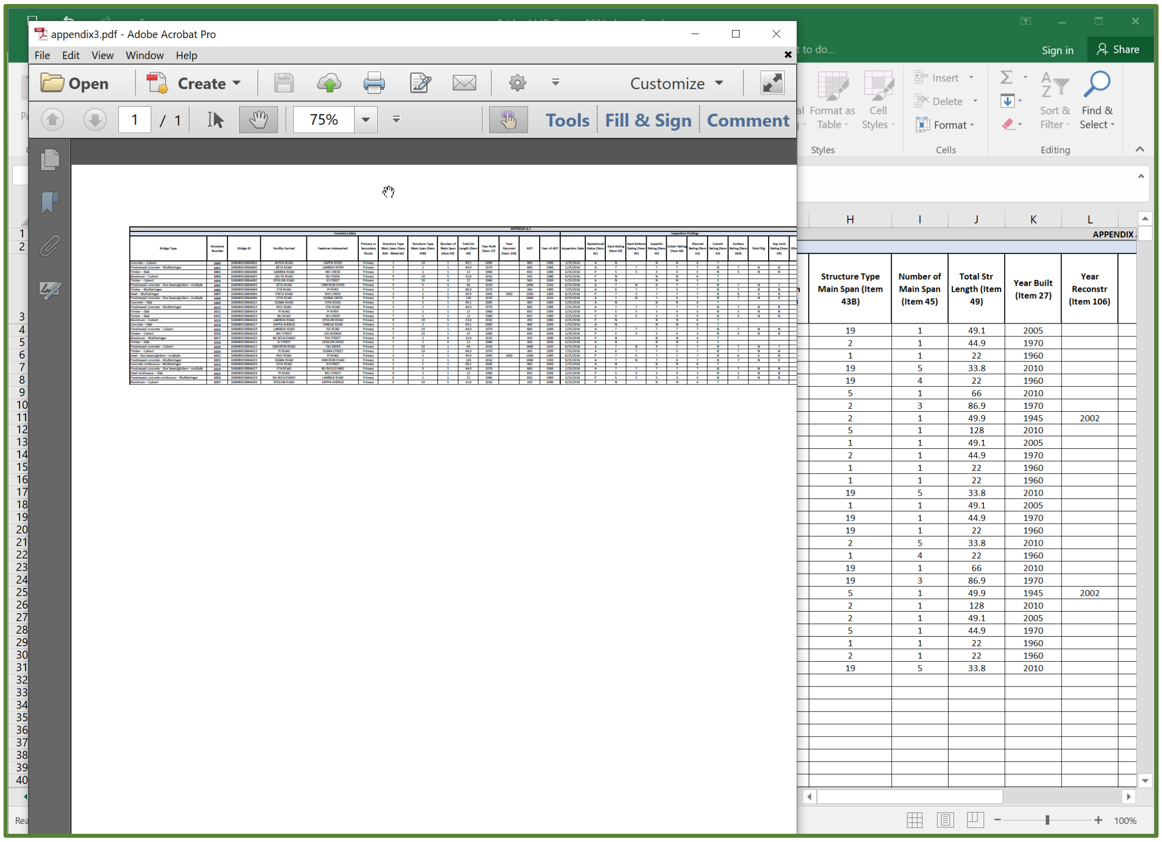


6. Navigate to the appendixes subfolder, located within the bridge asset management tools folder, in the *Save PDF File As* file dialogue box, and enter the file name that displayed in the *Save this appendix in…/as…* dialogue box—the first time "appendix3", the second time "appendix4", or the third time "appendix5"— in the *File name* field (see figure above).

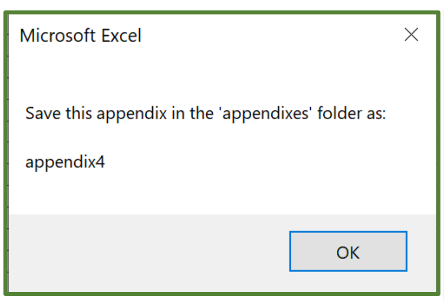
7. Select **Save**.

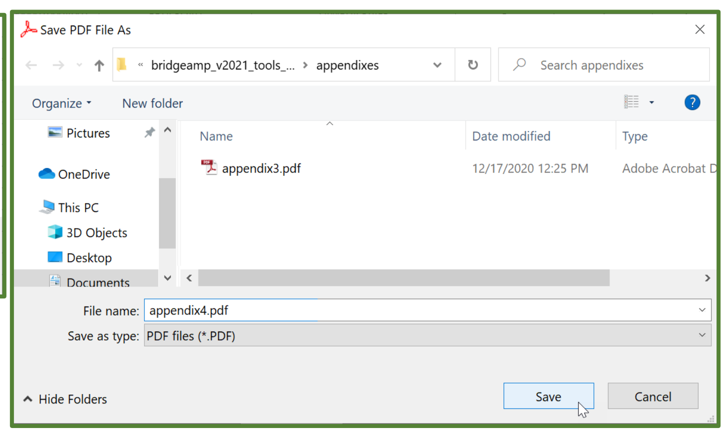
⇨ The appendix will print to a PDf, and Acrobat Reader (or your default PDF reader) will open and display the PDF file (see figure below).

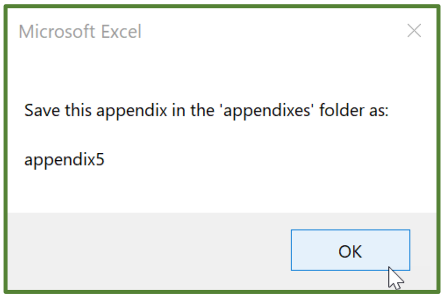
NOTE: You may need to close the Acrobat Reader (or your default PDF reader) in order to see the next dialogue box.

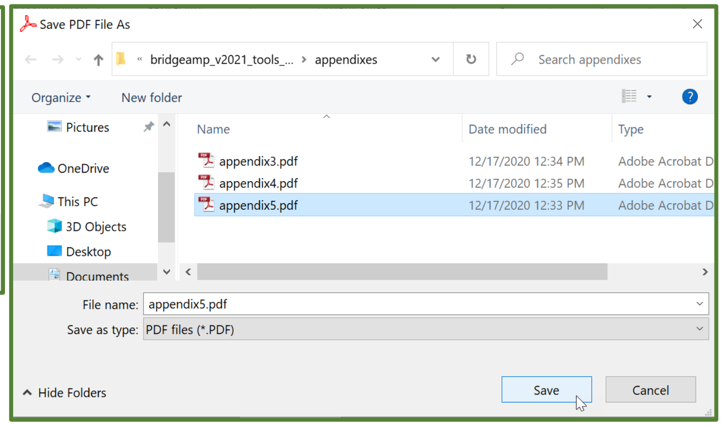


8. Repead steps 5 through 7 two more times for appendix 4 and appendix 5 respectively.





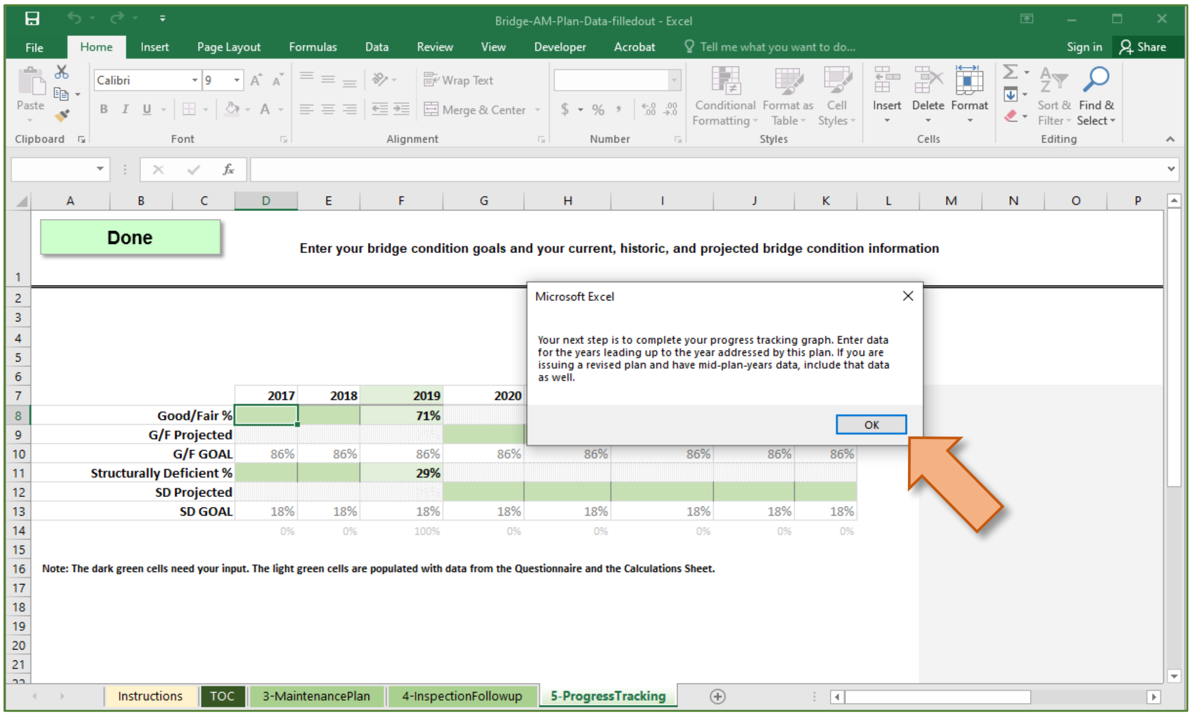




⇨ You will be directed to the *5-ProgressTracking* sheet.

5-ProgressTracking Worksheets

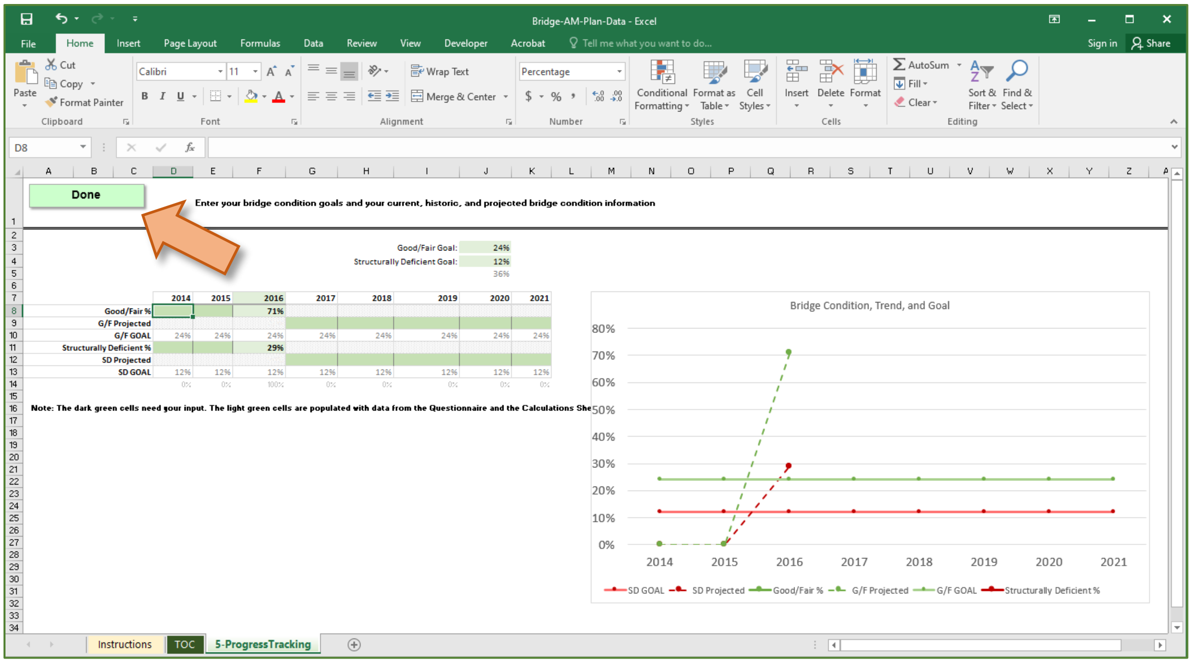
1. Select **OK** in the message box after reading the information.



2. Fill in the green fields of the chart with bridge condition goals and your historic (Columns D and E), current (Column F), and projected bridge condition (Columns G through K) information. The graph to the right of the table will update automatically as data is entered into the chart.

   NOTE: The Goal/Fair Goal (J3), the Structurally Deficient Goal (J4), and the year (F8) data come from your answers to the goals section of the *2-Questionnaire* worksheet (cells B13, B14, and B23, respectively). If you wish to change these goals or the years reflected in the graph, you will need to make the change on the *2-Questionnaire* worksheet.

3. Review your responses and the graphs, and select **Done**.

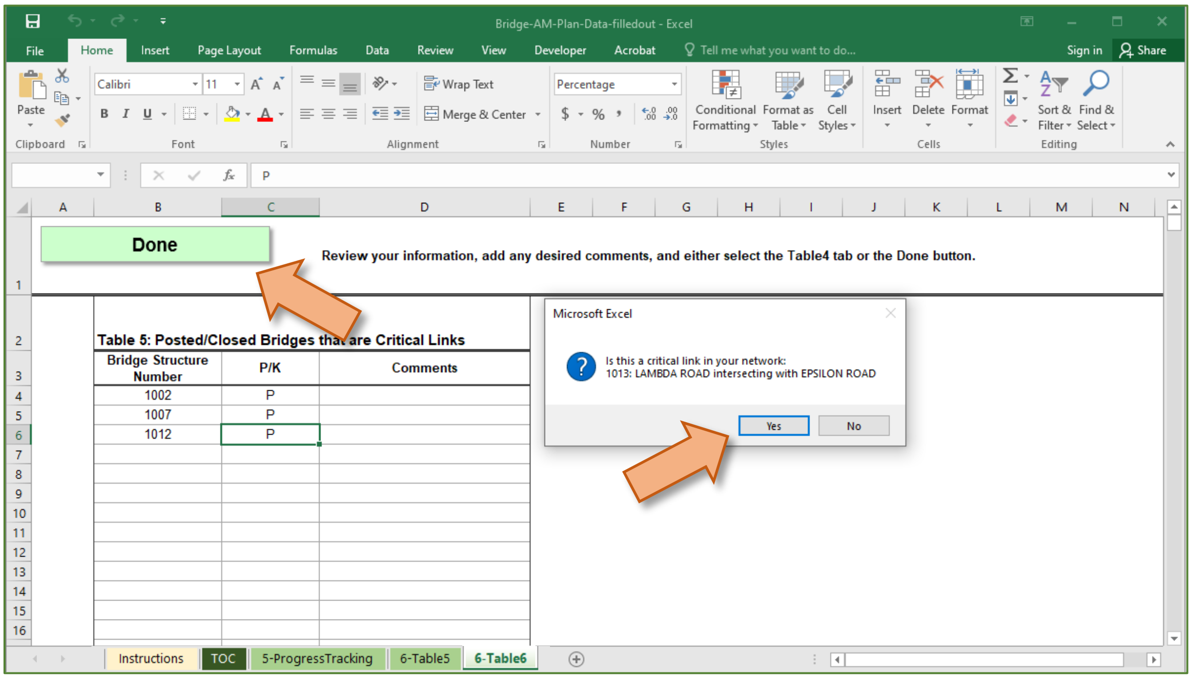


⇨ A message box will display to notify you that you are proceeding to the next step of the creating tables for scour critical bridges and posted/closed bridges. You will then automatically proceed to the *6-Table5* worksheet.

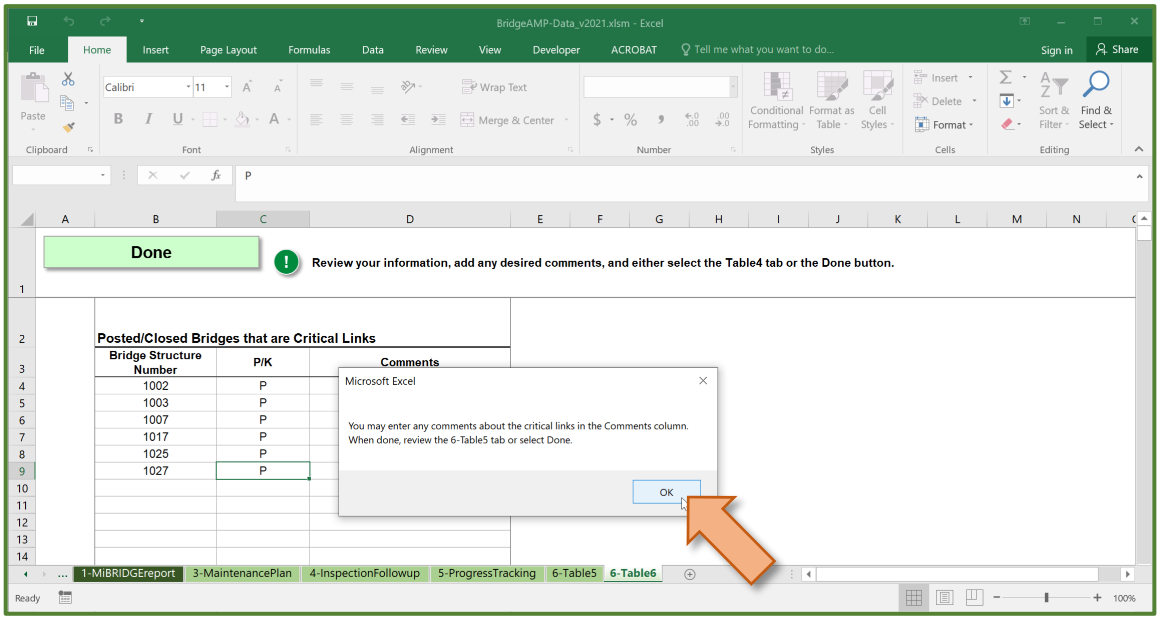
6-Table5 and 6-Table6 Worksheets

NOTE: Table 5 in the bridge asset management plan identifies scour critical bridges. This data will be pulled from your MiBRIDGE data, so you will automatically proceed past Table 5 to Table 6, which lists posted/closed bridges in your jurisdiction and requires you to identify them as critical links.

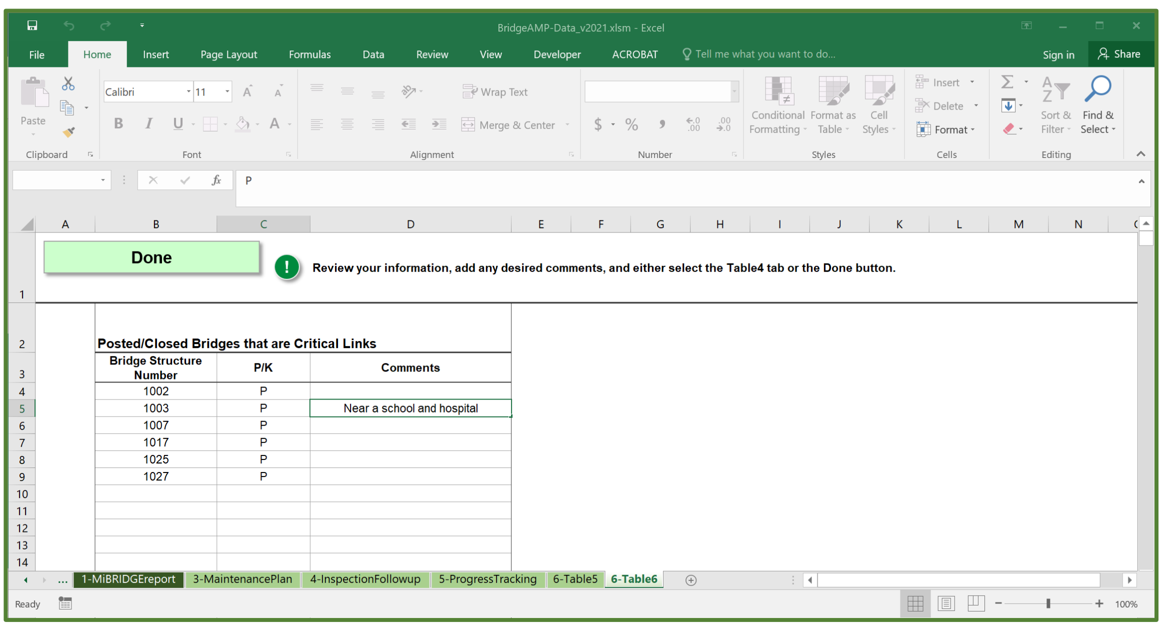
1. Select **Yes** or **No** in the dialogue box depending upon whether the specified bridge is a critical link (see figure below).



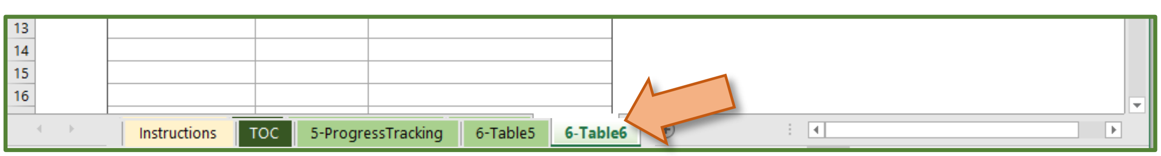
⇨ All the critical links will be displayed in *Posted/Closed Bridges that are Critical Links*. The *You may enter any comments…* dialogue box will display (see figure below).



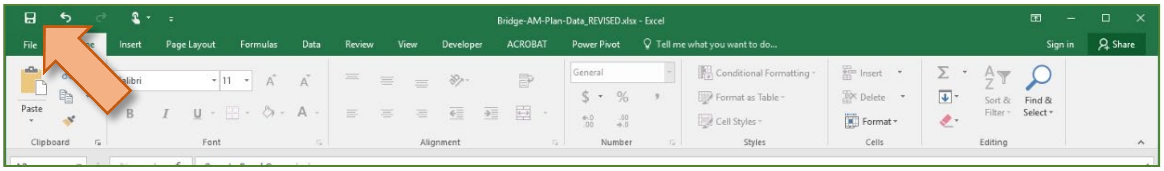
2. **Optional:** Add comments about the critical-link posted/closed bridges in the *6-Table6* worksheet Column D (see figure below).



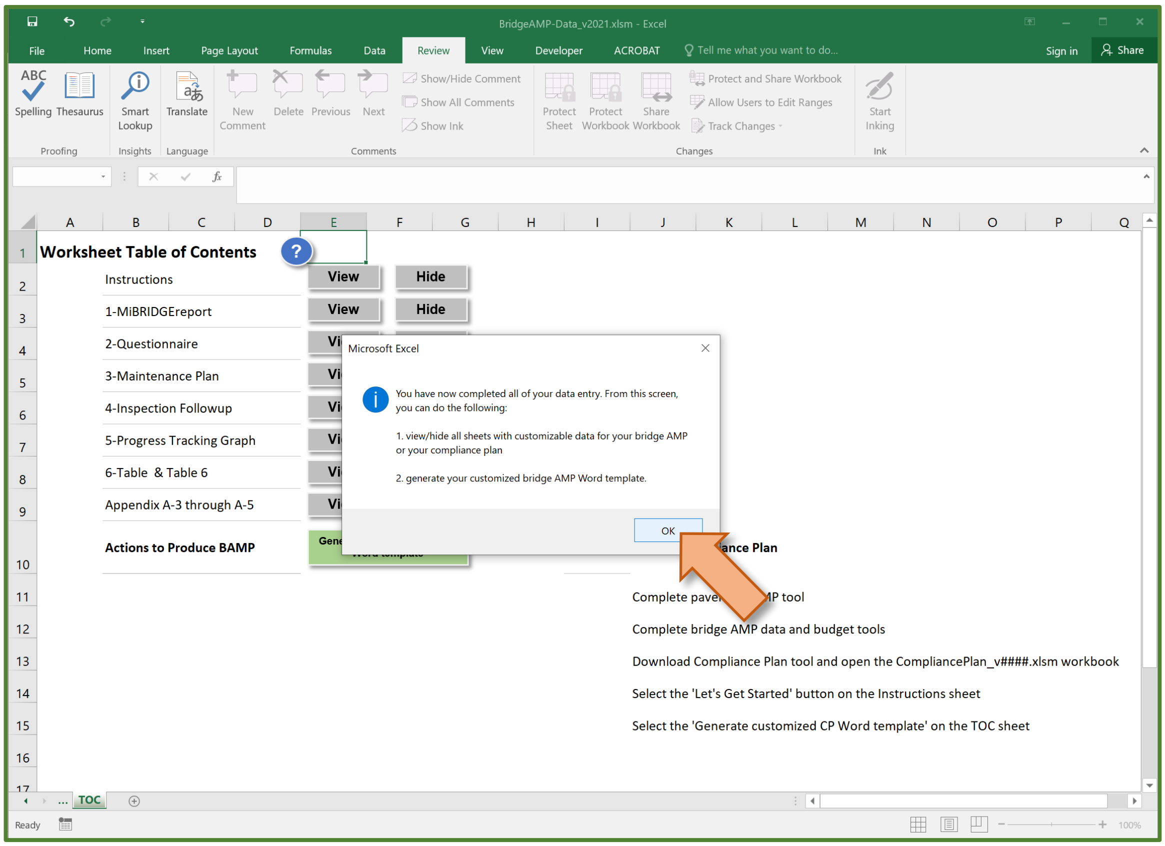
3. Review both *6-Table5* and *6-Table6* worksheets, using the tabs to toggle between them (see figure below).



4. Select **Save** in order to save your work before continuing, and select **Done** (see figure below).



⇨ You will advance to the TOC worksheet, and the *Your have now completed all your data entry…* dialogue box will display (see figure below).



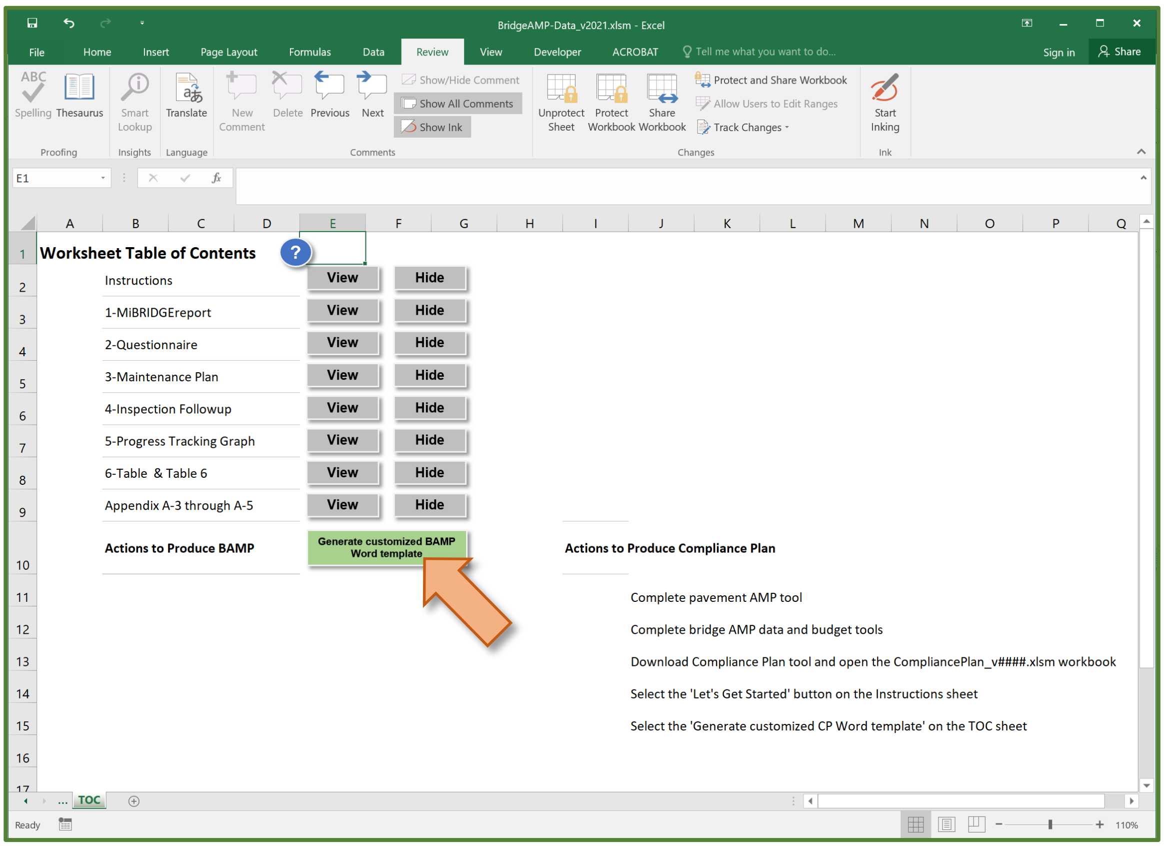
5. Select **OK**.

TOC Worksheet

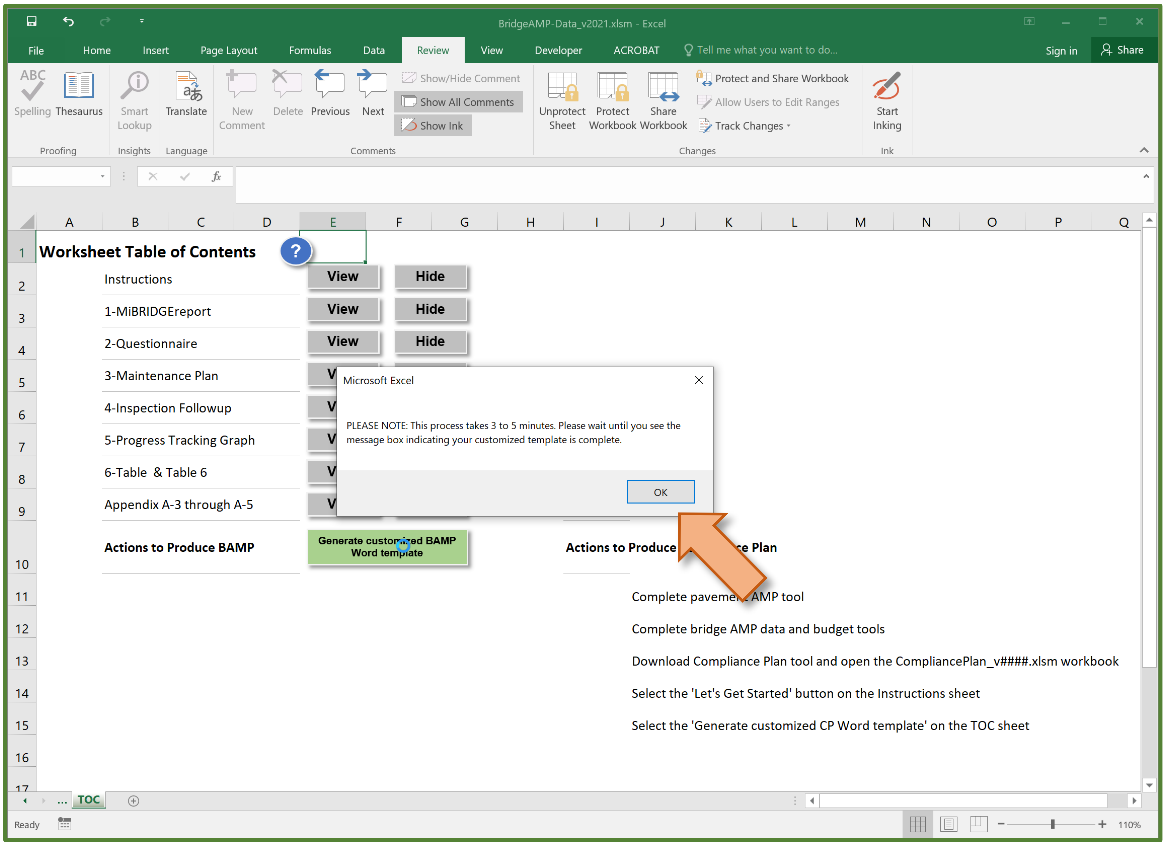
NOTE: The *TOC* worksheet serves as an access point to the various worksheets in your workbook, and becomes available for viewing once finished with the Instructions worksheet. The TOC worksheet also serves as the location from which you can build your Bridge Asset Management Plan (see figure below).

Build a Bridge Asset Management Plan

1. Select **Generate customized BAMP Word template** on the *TOC* worksheet's contents item Actions to Produce BAMP (see figure below).

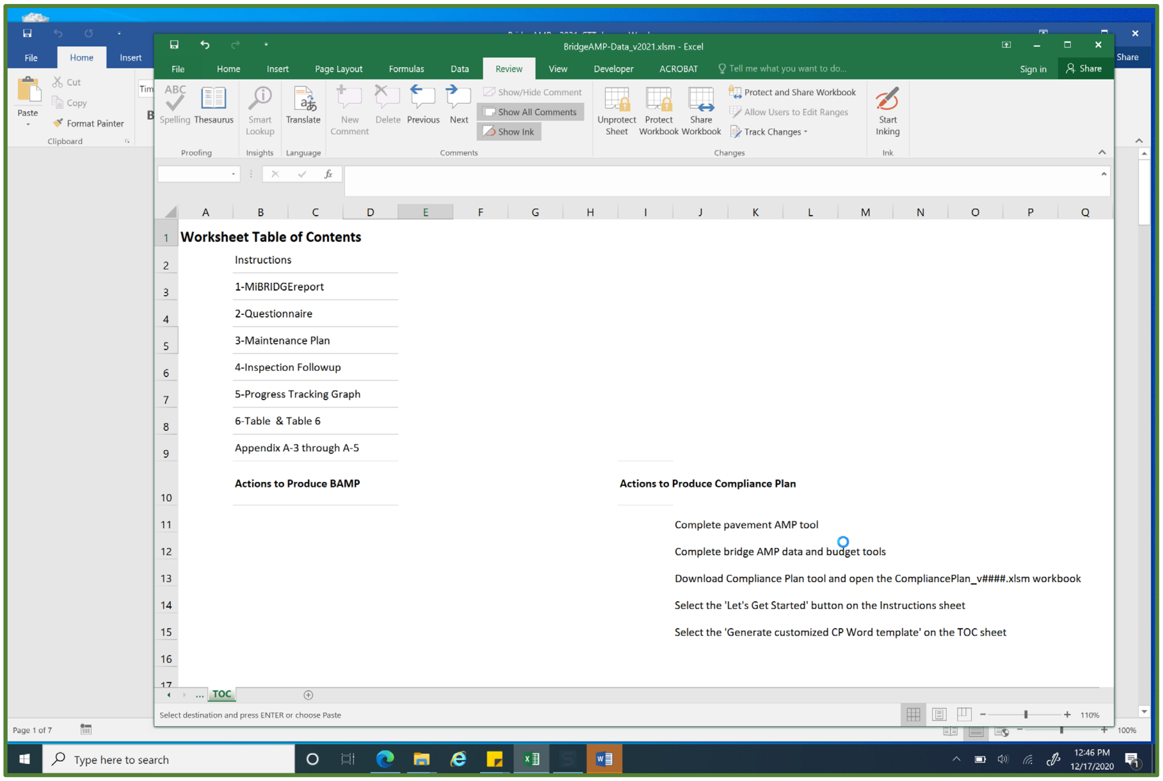


⇨ The *PLEASE NOTE: This process takes 3 to 5 minutes…* dialogue box will display (see figure below).

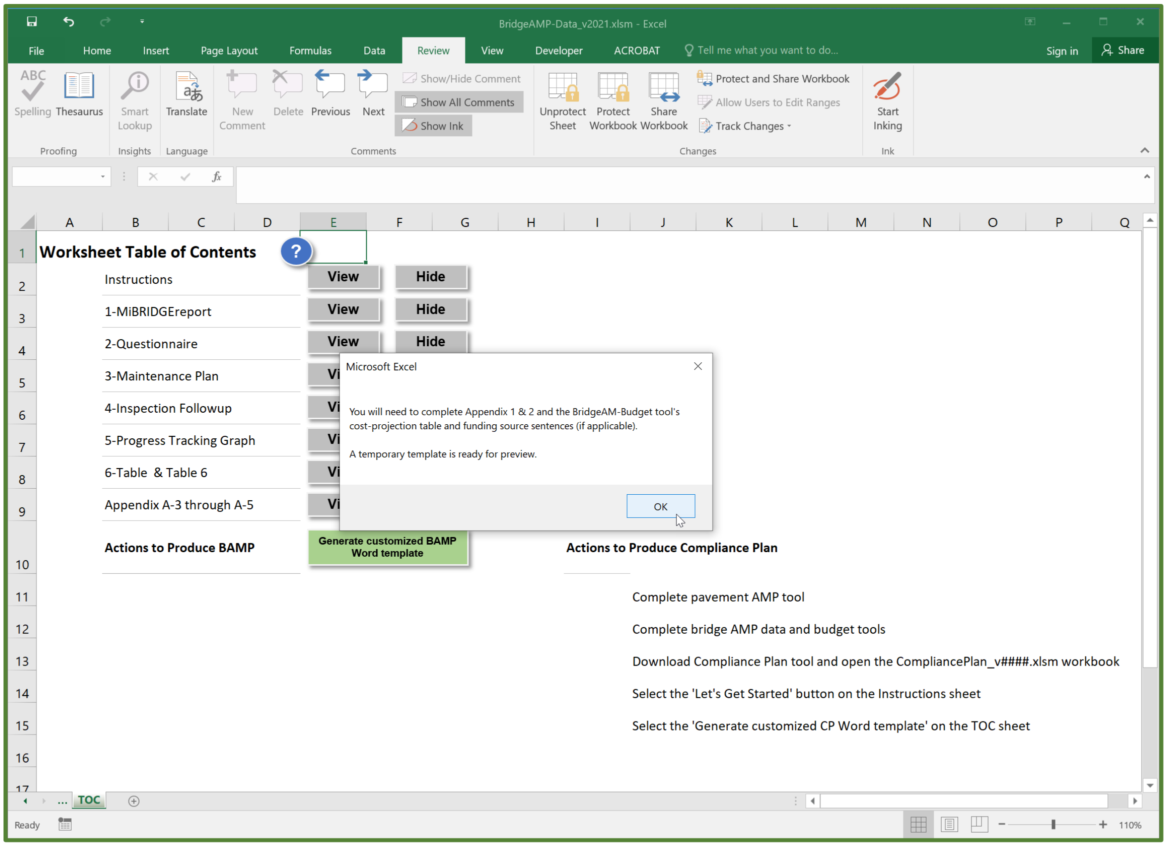


2. Select **OK**.

NOTE: The process to generate the customized bridge asset management plan Word template takes about three to five minutes. During this time, just allow Microsoft Office to run the generation process. You will see Microsoft Word automatically open and close; this is part of the process (see figure below). No user input is necessary during this process.

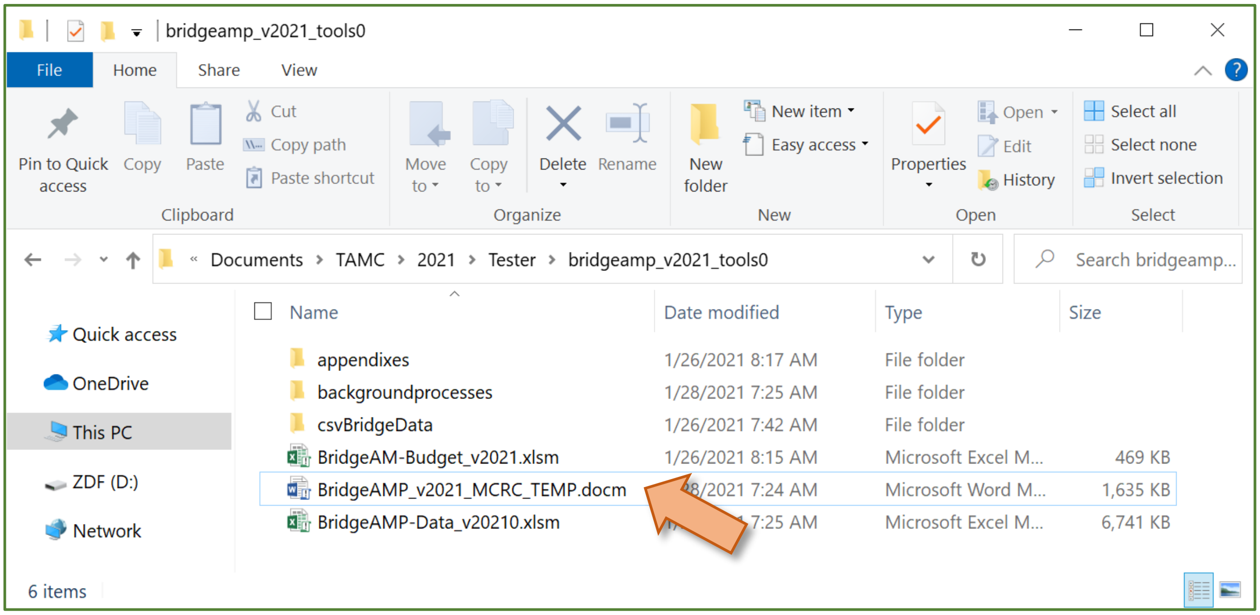


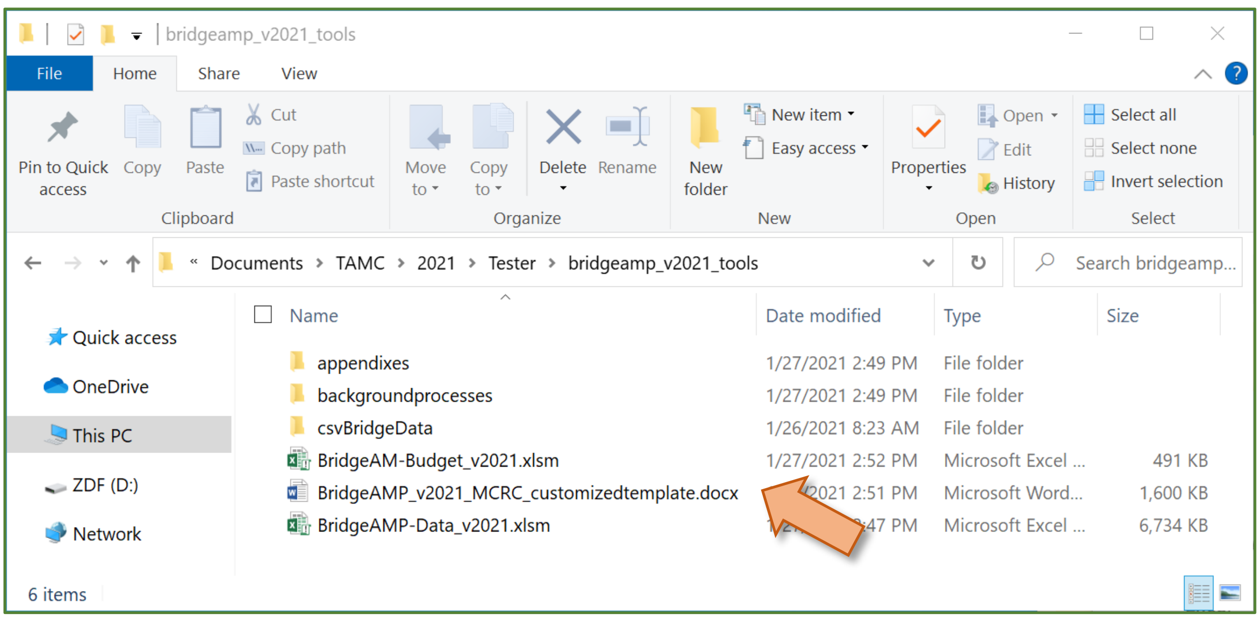
⇨ Once the customized bridge asset management plan Word template has been generated, the *You will need to complete…* dialogue box will display (see figure below).



3. Select **OK**.

NOTE: At this point, you will have either a temporary template or a finalized template (see figures below). If you have a temporary template, you must complete steps to create financial resources content (i.e.g, funding source sentences) in the BridgeAM-Budget.xlsm tool; this will replace the temporary template and generate a finalized template. The temporary template is for preview purposes only (refer to the section Opening the Word template in this instruction guide for more information on opening the template); ***do not make any changes to the temporary template that you want to see reflected in your final document***. If you have a finalized template, you can skip the steps for creating funding source sentences in the BridgeAM-Budget.xlsm tool. Both the temporary template and the finalized template require a cost projection table (generated in the BridgeAM-Budget.xlsm tool) and completion of Appendix 1 and Appendix 2. Proceed to the section ***Generating annual cost projection/gap analysis data from the budget template*** in this instruction guide.





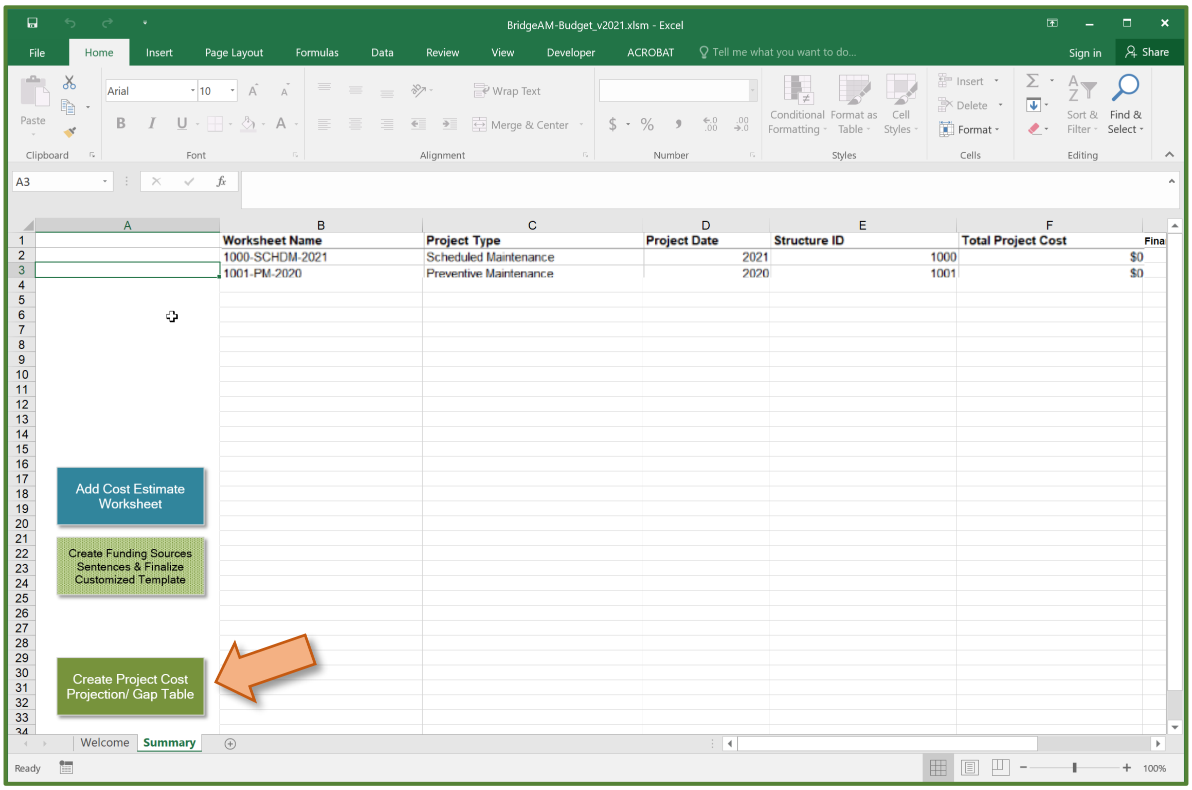
NOTE ABOUT BRIDGEAMP-DATA.XLSM: There are two additional worksheets built into the BridgeAMP-Data.xlsm file—the Agency-Data-Summary worksheet and the CalculationsSheet worksheet. These two worksheets are hidden and protected. They are embedded with formulas to parse the data from the Websource spreadsheet into a format that is usable by the asset management plan's Word template. If it is necessary to access these worksheets, unhide and unprotect them; be aware that unhiding and unprotecting them leaves them vulnerable to inadvertent changes that will render the Excel file useless for inserting data into the Word template.

Creating a Cost Projection/Gap Analysis Table

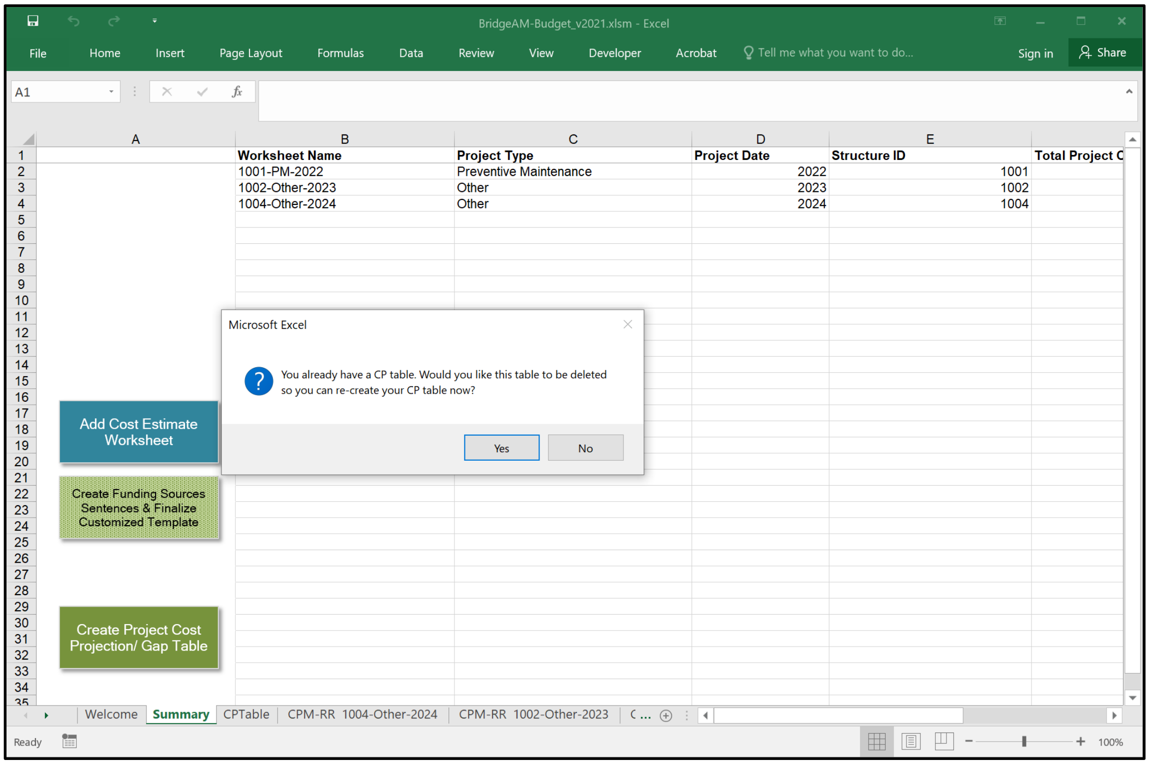
The cost projection/gap analysis table will present your data in a format that can be more easily transferred into the BridgeAMP.docx Word document's *Prioritization, Programmed/Funded Projects, and Planned Projects* section's *Planned Projects* subsection.

1. Ensure that the *Summary* worksheet is the active worksheet.

2. Select the **Create Project Cost Projection/Gap Table** button (see figure below).

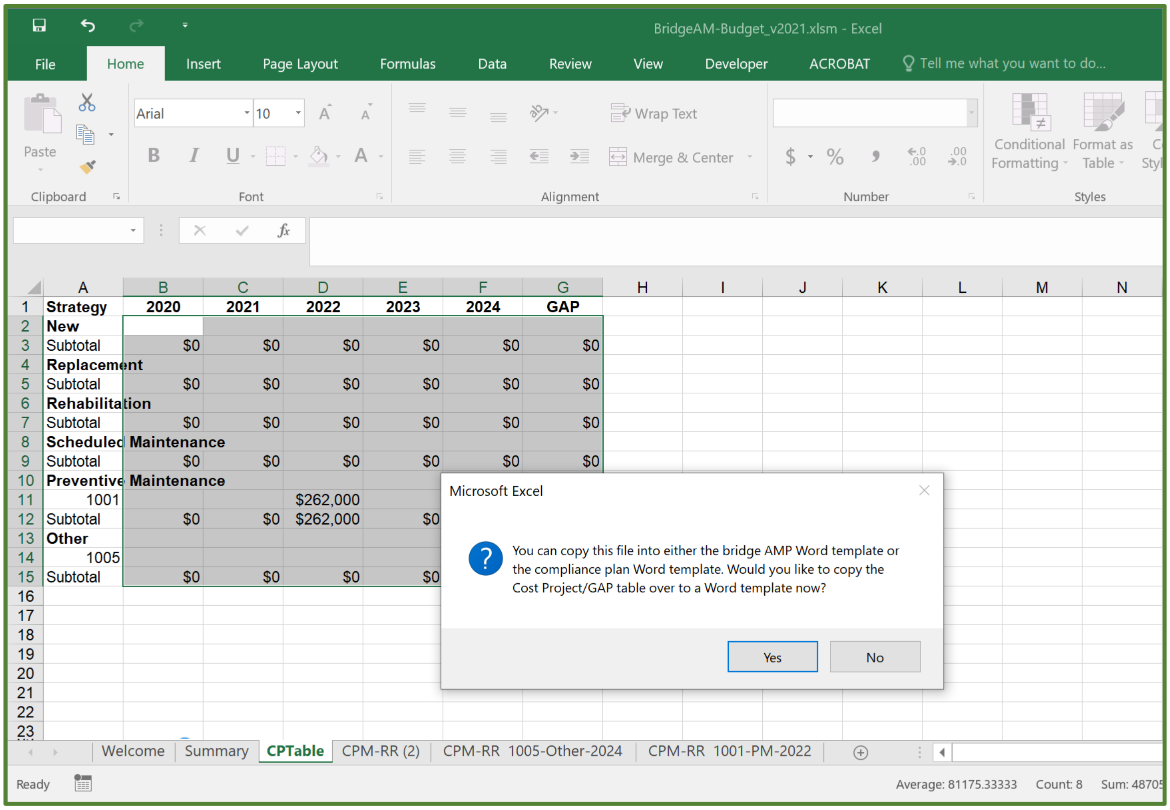


NOTE: If a cost projection table has already been created, the You already have a CP table… dialogue box will display. Select Yes to delete the current cost projection table and continue with creating a new one, OR select No to exit the process (see figure below).



⇨ The *CPTable* worksheet will automatically generate, and cells A1 through the last column and last row will automatically be selected and copied to the Windows clipboard; the *You can copy this table into either…* message box will display with directions for the next step (see figure below).

NOTE: The *CPTable* worksheet orders all projects, first, by project type (in this order: Reconstruction, Replacement, Rehabilitation, Capital Preventive Maintenance, Scheduled Maintenance, and Other) and, then, by date/gap.

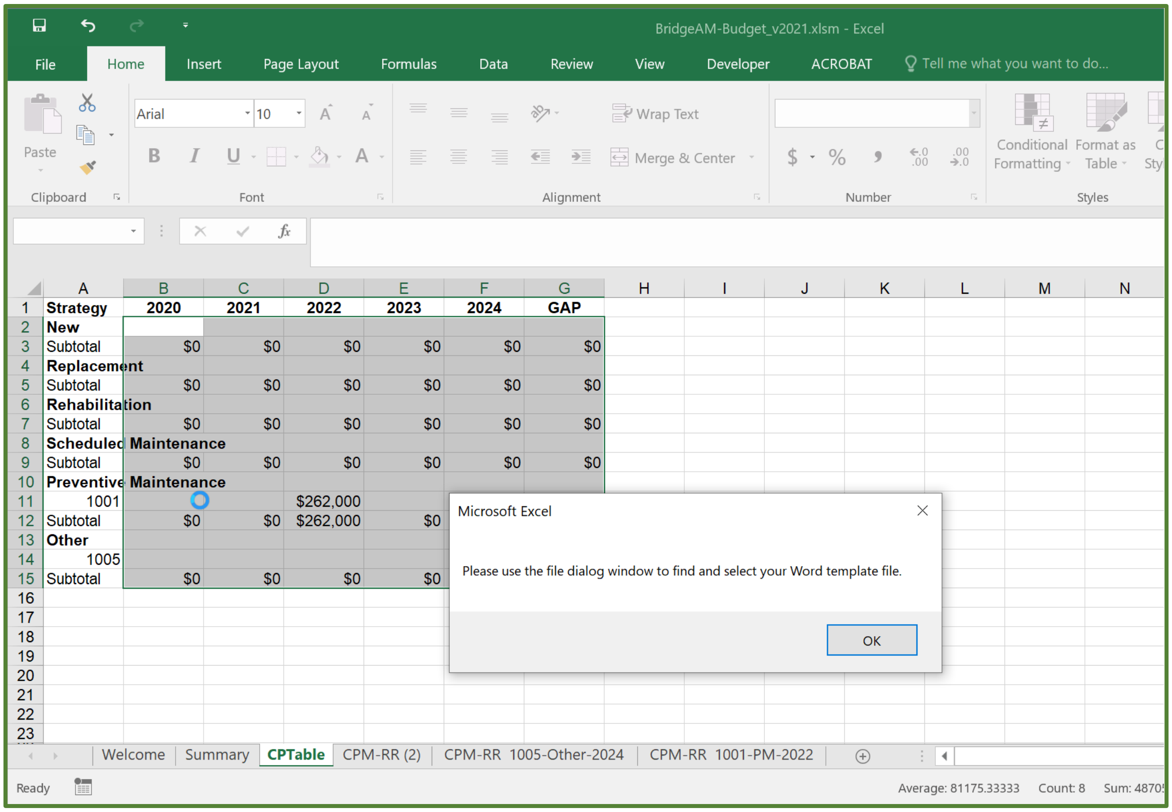


3. Select **Yes** to insert the cost-projection/gap table into your bridge asset management plan template (or your compliance plan template). Proceed to the step 3 step result.

   OR

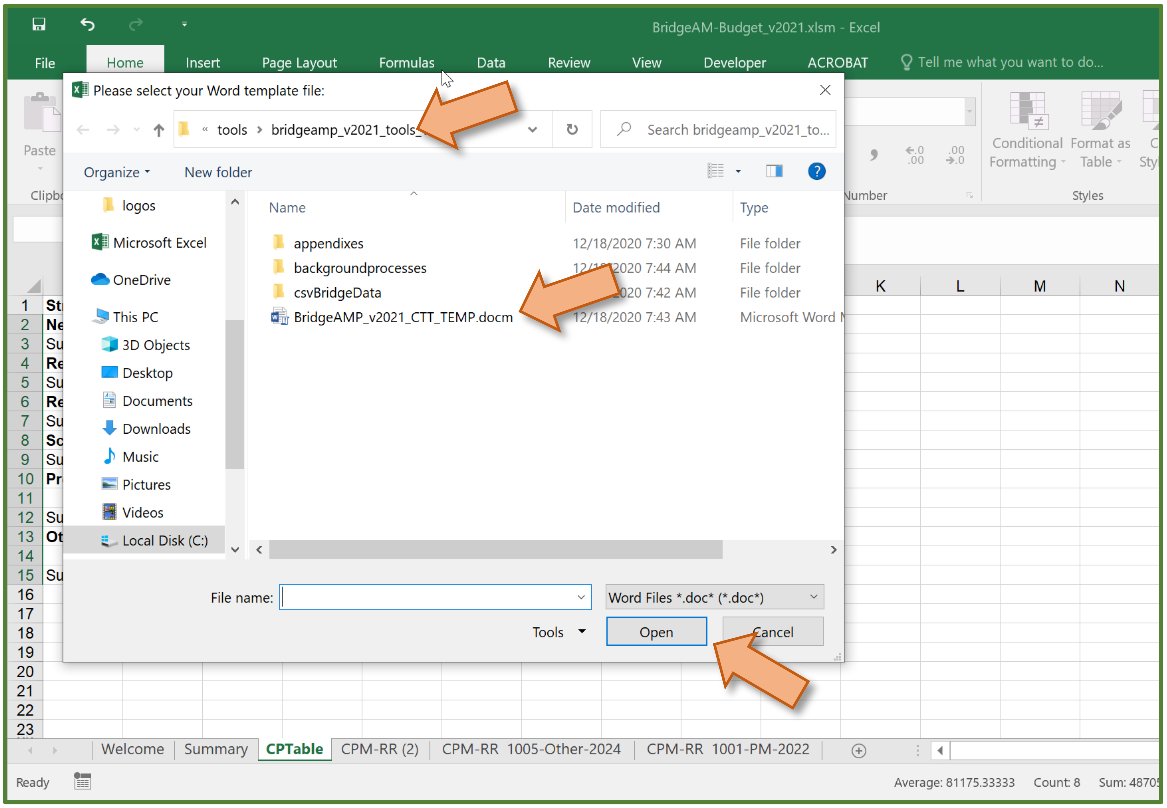
   Select **No** to skip inserting the cost-projection/gap table into your bridge asset management plan template (or your compliance plan template). Proceed to ***Creating Financial Resources Content*** section of this instruction guide or to ***Reviewing and modifying the customized Word template*** section of this guide.

⇨ The *Please use the file dialogue window…* message box will display.



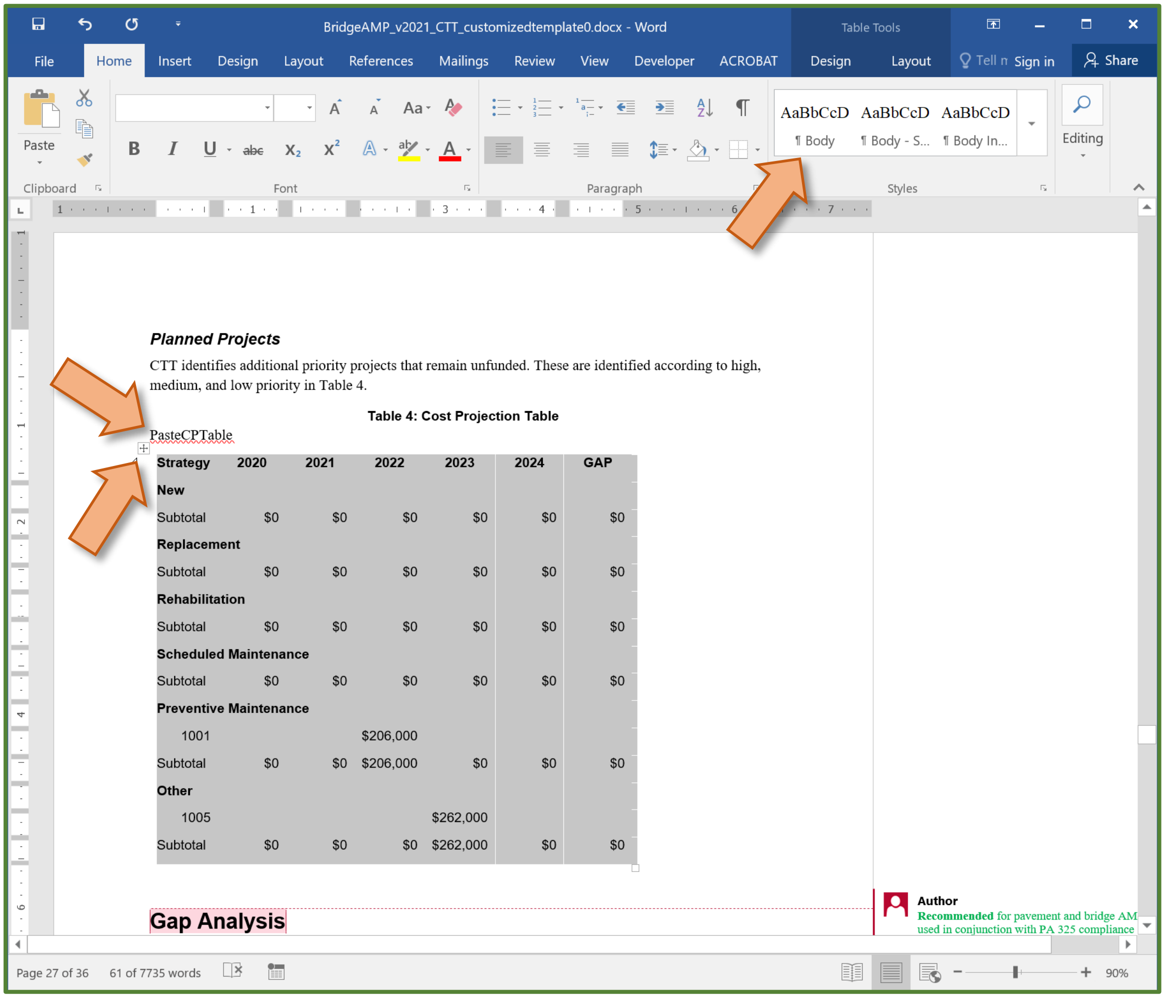
4. Select **OK**.

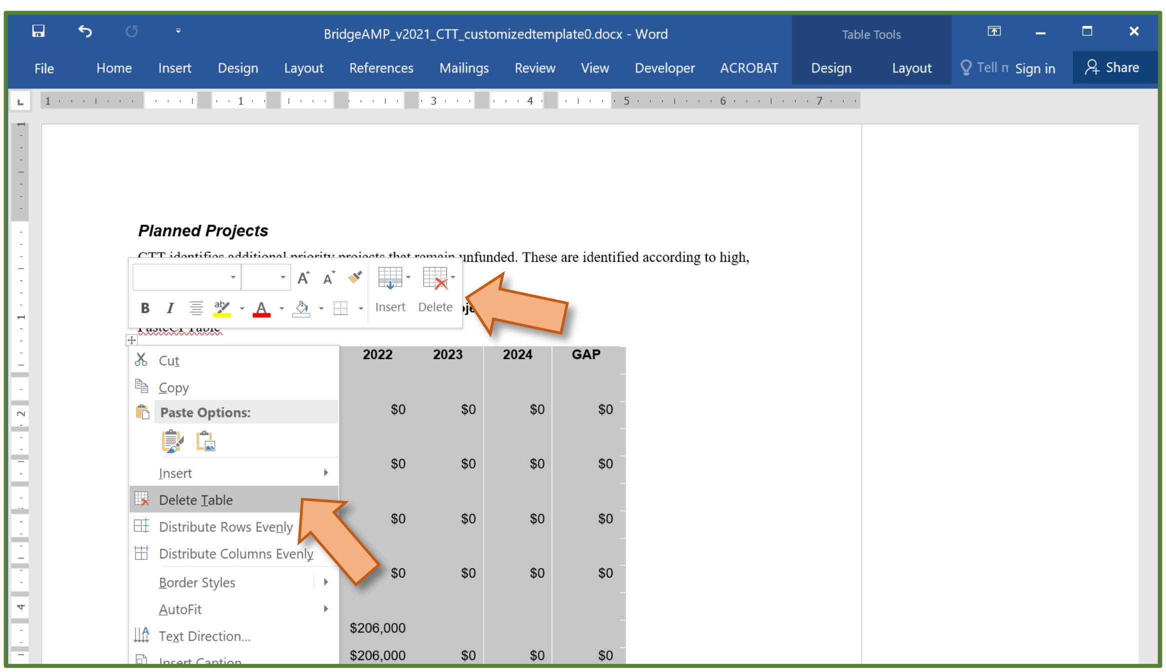
⇨ A file explorer dialogue box will display (see figure below).



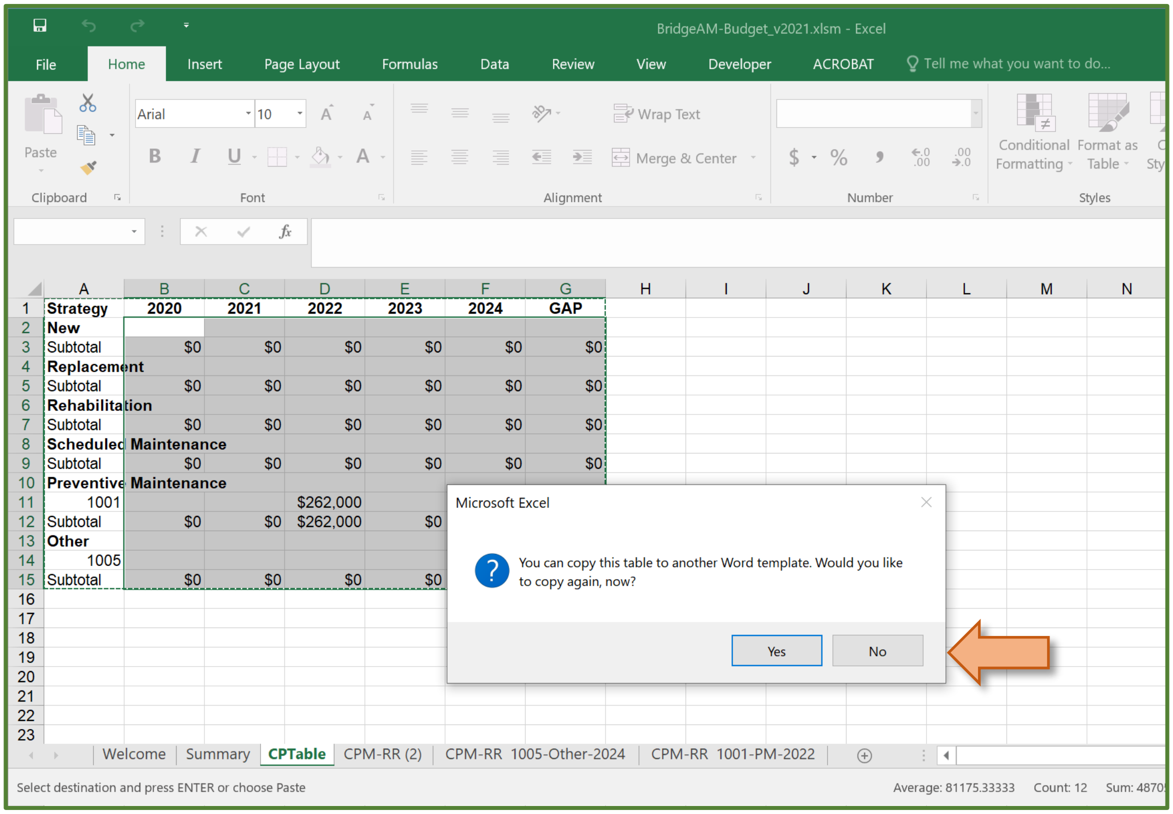
5. In the file explorer dialogue box, select the **BridgeAMP_v####_[youragencyabbr]_TEMP.docm** (or compliance plan template) file found in the tools parent folder, and select **Open** (see figure below).

   NOTE: If the table has been placed in the Word template previously, you will need to delete the table and replace the table with the following text: PasteCPTable. This text should be formatted with **Body** style in the *Styles* group (see figure below). To delete table, select the table and right-click on the box with the four-directional arrow that displays at the top left corner of the selected table; then, select **Delete Table** from the dropdown menu (see figures below).


BridgeAMP_v2021_CTT_customizedtemplate0.docx - Word
Table Tools
File
Home
Insert
Design
Layout
References
Mailings
Review
View
Developer
ACROBAT
Design
Layout
Sign in
Share
Paste
Clipboard
Font
Paragraph
Styles
Editing
AaBbCcD
¶ Body
¶ Body - S...
¶ Body In...
Planned Projects
CTT identifies additional priority projects that remain unfunded. These are identified according to high, medium, and low priority in Table 4.
Table 4: Cost Projection Table
PasteCPTable
Strategy 2020 2021 2022 2023 2024 GAP
New
Subtotal $0 $0 $0 $0 $0 $0
Replacement
Subtotal $0 $0 $0 $0 $0 $0
Rehabilitation
Subtotal $0 $0 $0 $0 $0 $0
Scheduled Maintenance
Subtotal $0 $0 $0 $0 $0 $0
Preventive Maintenance
1001 $206,000
Subtotal $0 $0 $206,000 $0 $0 $0
Other
1005 $262,000
Subtotal $0 $0 $0 $262,000 $0 $0
Gap Analysis
Author
Recommended for pavement and bridge AM used in conjunction with PA 325 compliance
Page 27 of 36
61 of 7735 words
90%


BridgeAMP_v2021_CTT_customizedtemplate0.docx - Word
Table Tools
File
Home
Insert
Design
Layout
References
Mailings
Review
View
Developer
ACROBAT
Design
Layout
Sign in
Share
Planned Projects
unfunded. These are identified according to high,
Insert
Delete
2022 2023 2024 GAP
Cut
Copy
Paste Options:
Insert
Delete Table
Distribute Rows Evenly
Distribute Columns Evenly
Border Styles
AutoFit
Text Direction...
$206,000

⇨ The cost projection/gap table will be placed in the selected Word template. The *You can copy this table to another Word template…* message box will display (see figure below).

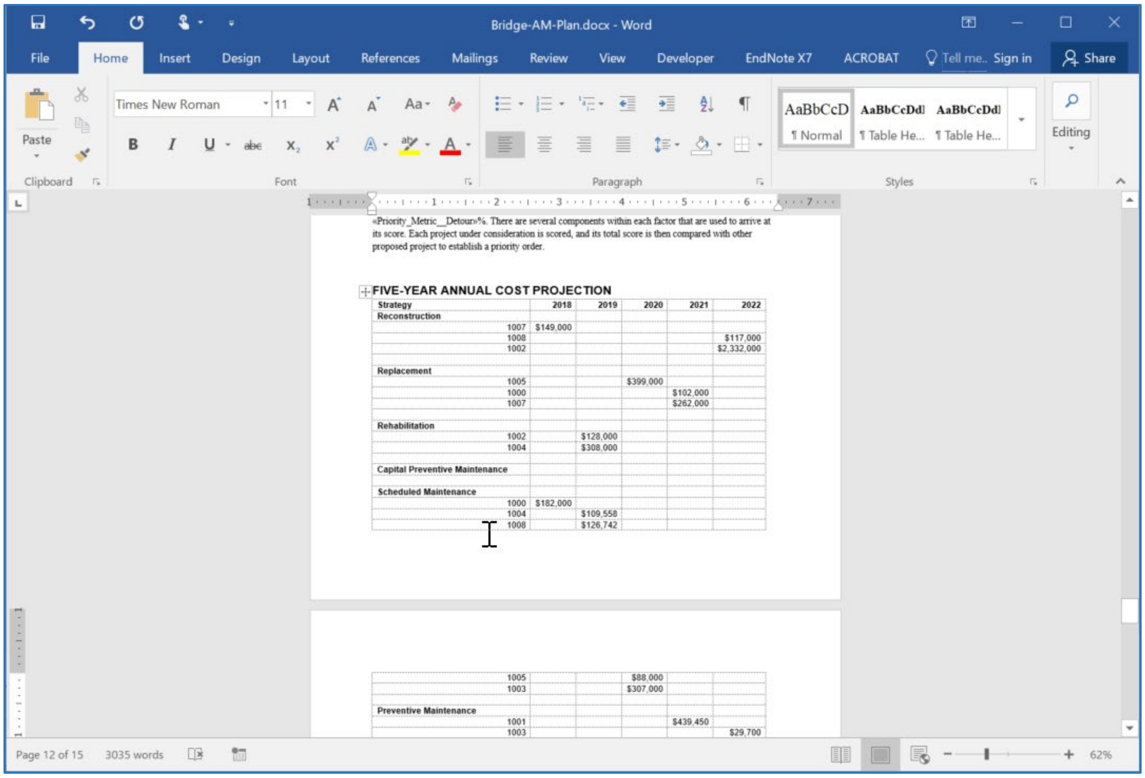


6. Select **Yes** to insert the cost-projection/gap table into your compliance plan template (or bridge asset management plan template). Repeat steps 3, 4, and 5; and proceed to step 7.

   OR

   Select **No** to skip inserting the cost-projection/gap table into your compliance plan template (or bridge asset management plan template). Proceed to ***Creating Financial Resources Content*** section of this instruction guide.

7. Open the Word template and format table as desired (see figure below).



Strategy		2018	2019	2020	2021	2022
Reconstruction						
	1007	$149,000				
	1008					$117,000
	1002					$2,332,000
Replacement						
	1005			$399,000		
	1000				$102,000	
	1007				$262,000	
Rehabilitation						
	1002		$128,000			
	1004		$308,000			
Capital Preventive Maintenance						
Scheduled Maintenance						
	1000	$182,000				
	1004		$109,558			
	1008		$126,742			
	1005			$88,000		
	1003			$307,000		
Preventive Maintenance						
	1001				$439,450	
	1003					$29,700

Reviewing and modifying the customized Word template

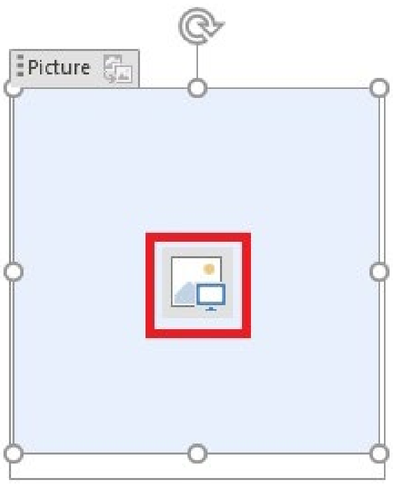
Inserting logos

The bridge asset management plan should incorporate your agency's logo on the title page. A picture placeholder indicates where the logo should be inserted.

To insert the logo into a Picture placeholder:

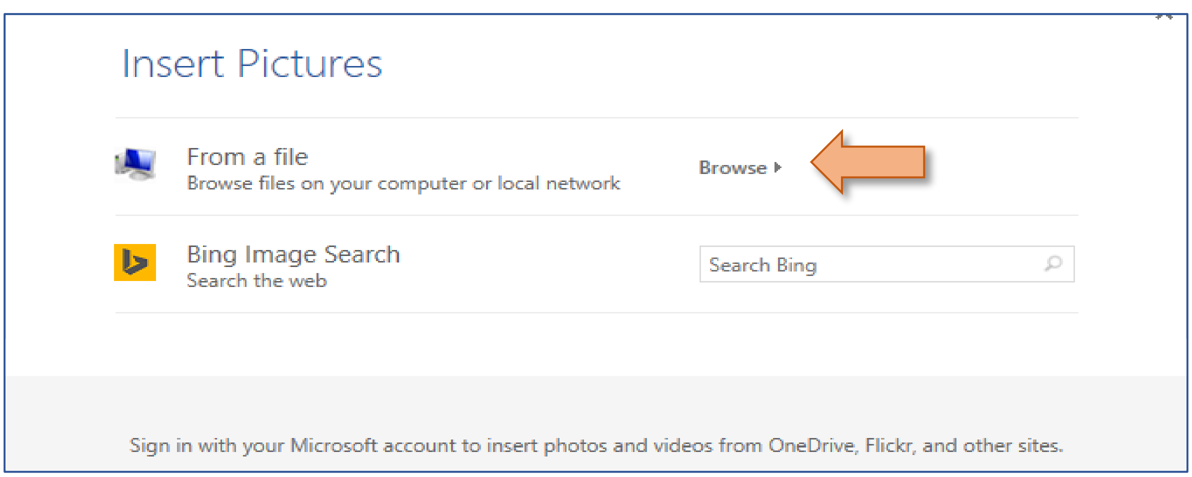
1. Select the *Picture* placeholder (see figure below) where you plan to insert a logo or graphic (not a chart).

2. Select the icon in the center of the placeholder.

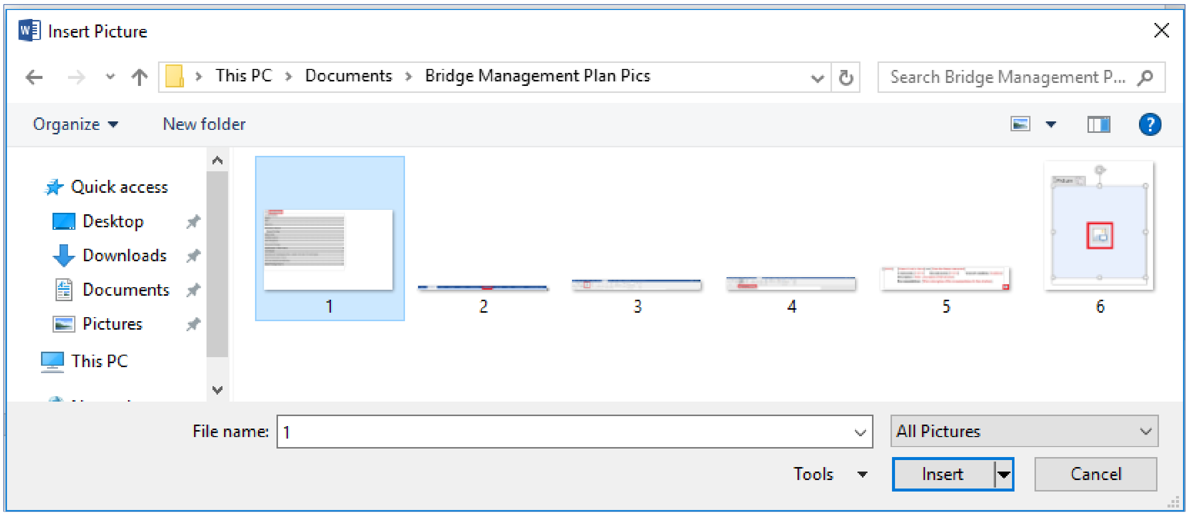


⇨ The *Insert Pictures* dialogue box will display (see figure below).

3. Select **Browse** > in the *From a file* option row in the *Insert Pictures* dialogue box (see figure below).



4. Navigate to your desired image using the *Insert Picture* window; select the image and then select **Insert** (see figure below).



⇨ The *Picture* placeholder will be replaced with the selected logo or graphic.

Working with list items

Some sections of the template and the appendix1-2.docx template enable you or require you to create lists:

- OBJECTIVES (Note: This section's list is not necessary to extend, but may be extended if desired.)

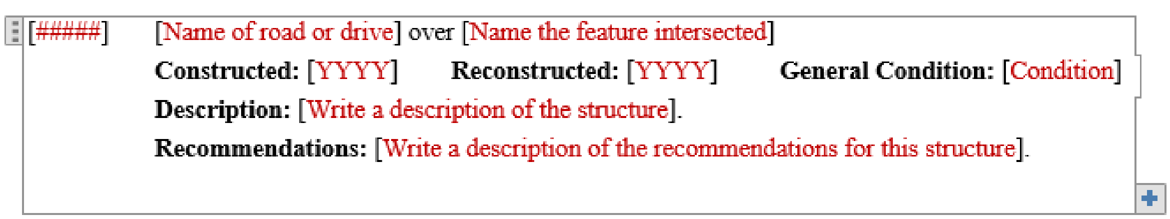
NOTE: As long as the list ***always has*** one placeholder list item (which appears boxed and, in the Bridge Inspection Report sections, contains the [red text field] placeholders) in it, selecting the + button will generate a new list item template. You will want to generate additional list items before replacing red text fields; see the ***Working with red text fields*** section below.

To generate additional items in a required list:

1. Find a list item.

2. Place cursor anywhere inside in the list item.

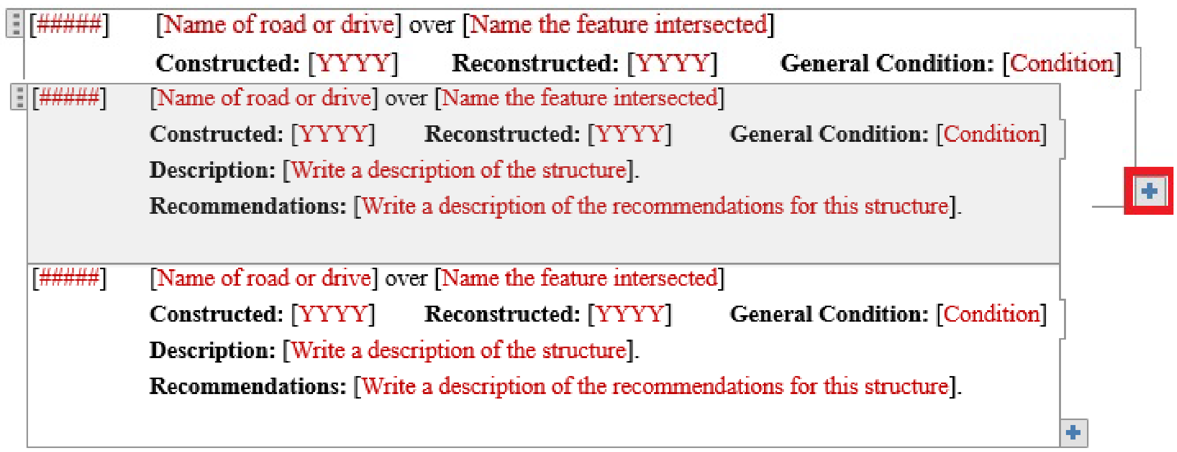
⇨ The list item will appear boxed when the cursor is placed inside it (see figure shown below).


[#####] [Name of road or drive] over [Name the feature intersected]
Constructed: [YYYY] **Reconstructed:** [YYYY] **General Condition:** [Condition]
Description: [Write a description of the structure].
Recommendations: [Write a description of the recommendations for this structure].

3. Select the + button on the lower right corner of the list item *before* filling in any of the text fields.

⇨ A new, blank list item will be generated below the previous list item and will contain the text fields that need to be completed.

4. Repeat this process as necessary to obtain the appropriate number of list items.

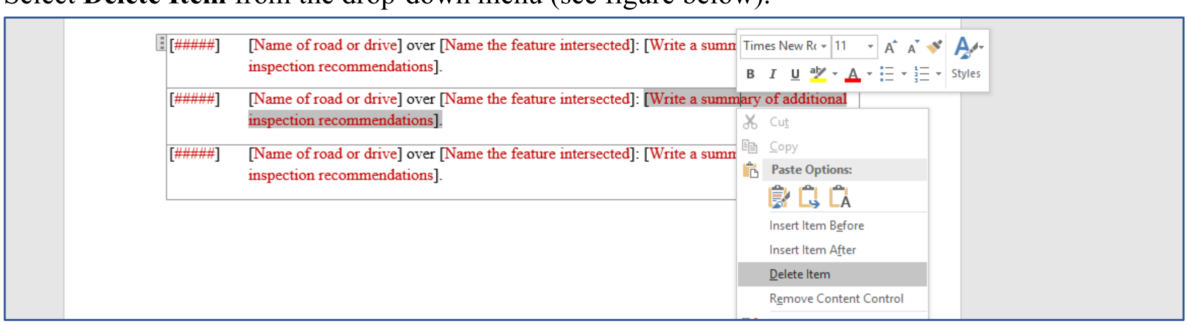


To delete items in a required list:

1. Select the list item with the right mouse button.

⇨ A drop-down menu will display (see figure below).

2. Select **Delete Item** from the drop-down menu (see figure below).



Working with red text fields

[Red text fields] are placeholders for user-entered data. They can be found in the following sections:

- FIVE-YEAR ANNUAL COST PROJECTION

- «AGENCY_FULL_NAME» [YYYY] BRIDGE INSPECTION REPORT SUMMARY OF ADDITIONAL INSPECTION RECOMMENDATIONS
- «AGENCY_FULL_NAME» [YYYY] BRIDGE INSPECTION REPORT EXECUTIVE SUMMARY

To replace red text field placeholders—Each of these placeholders has a different prompt depending on the type of information to be inputted.

1. Find and highlight a red text field by either:
   a. placing your cursor at the beginning of the Word document and then selecting **F11**.

   OR

   b. directly selecting an instance and highlighting the text field including the black brackets around it.

⇨ The red text field will be highlighted in a dark grey color.

[% of locally-owned bridges]

2. Replace the text field by typing the information for which the red text is prompting.

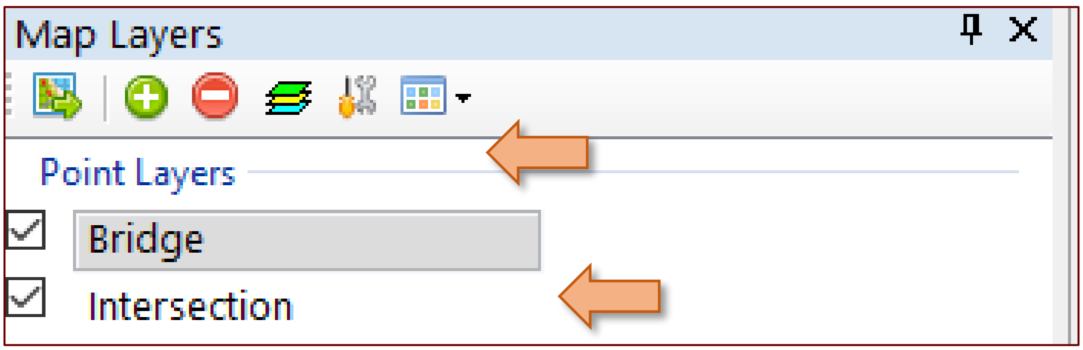
Creating A Map of Bridge Assets in Roadsoft

The bridge asset management plan should contain a map of your county's bridges and their condition assessments. In Roadsoft:

1. Select **Bridges** from the layer window on the left side of the screen (see figure below).

⇨ A prompt will display if the bridge data needs to be imported; the data will important. To re-import bridge data, right-click on the **Bridges** category and select **Re-Import Bridge Data**.

2. Select the **Legend Builder** icon.

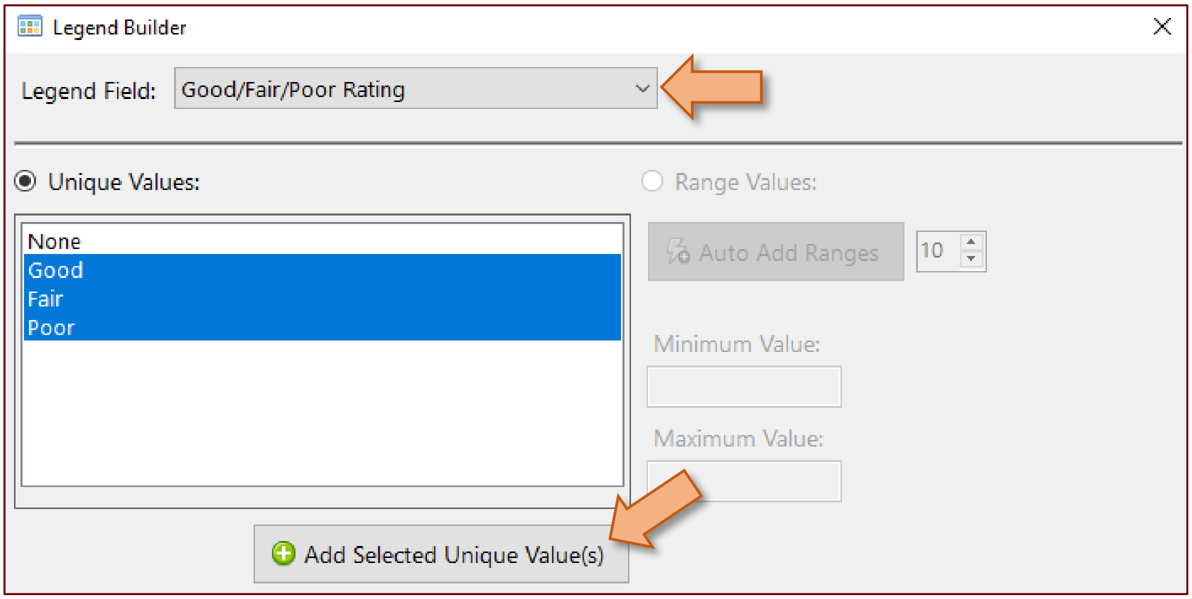


⇨ The *Legend Builder* window will display.

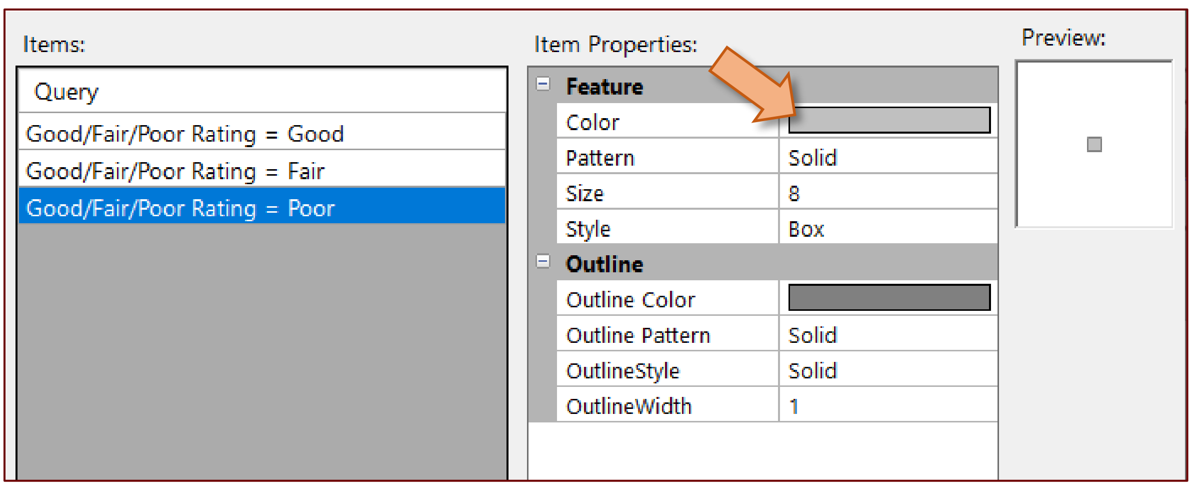
3. Select **Good/Fair/Poor Rating** from the dropdown list in the *Legend Builder* window (see figure below).

4. Select the **Good**, **Fair**, and **Poor** values so that they are highlighted blue (see figure below).

5. Select **Add Selected Unique Value(s)** (see figure below).

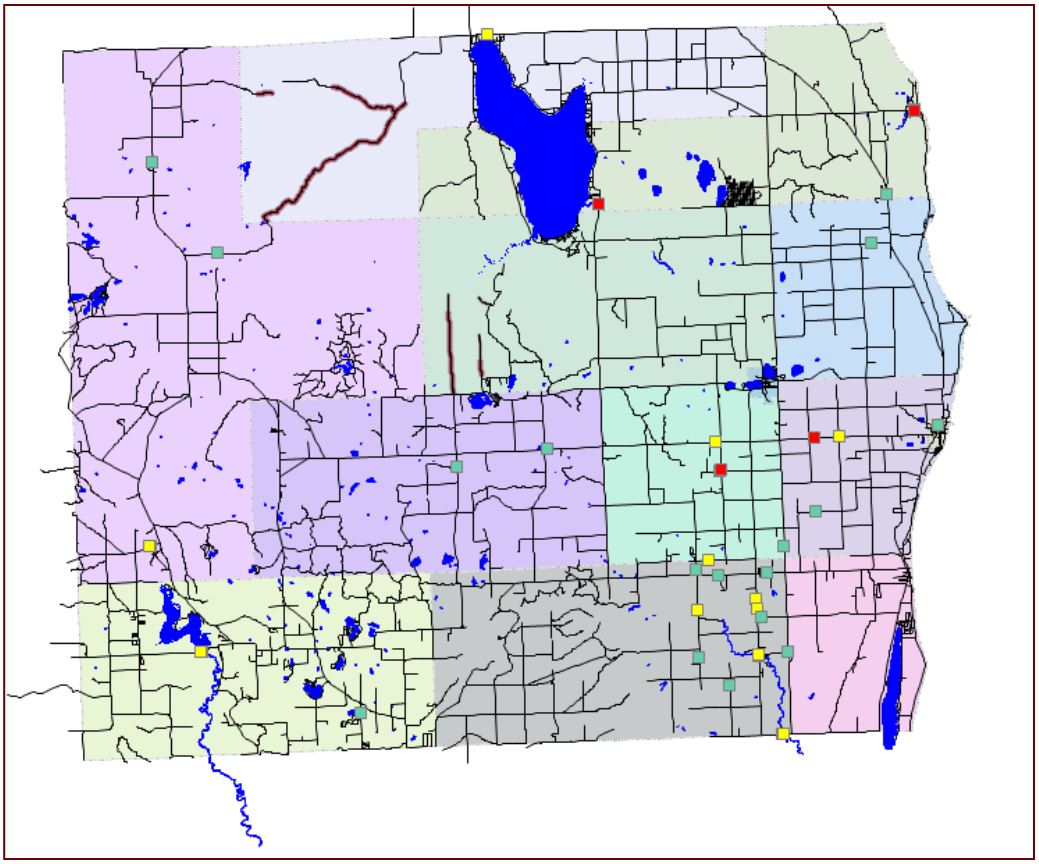


6. Change the color of the bridges based on their condition under *Item Properties:* (see figure below).



7. Select **Apply**.

⇨ The bridges on the map will turn colors according to their respective condition.

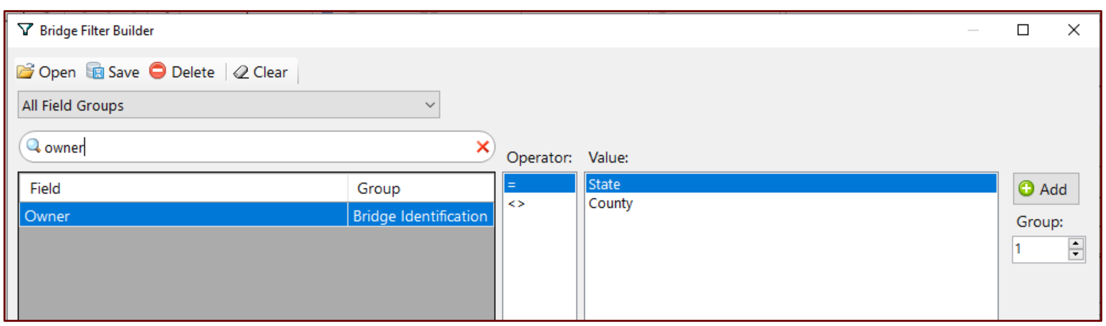


8. Add a filter to display bridges based on ownership.

    a. Select **Filter Builder** from the *Filter* tab located above the map.

    b. Search for "owner" in the search bar of the *Filter Builder* window (see figure below).

    c. Add the desired value option.



    d. Select **Apply as Filter**.

    e. Check to make sure only the bridges owned by the value chosen are displayed on the map.

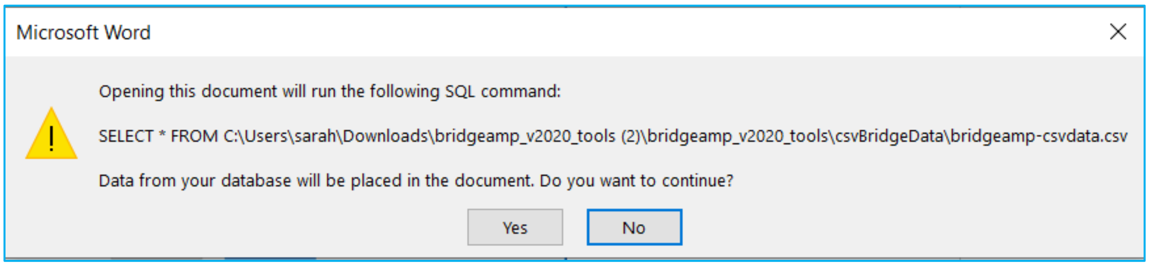
Appendix

Opening the uncustomized Word template

Opening the BridgeAMP.docx Word template will immediately cause Microsoft Word to confirm the mail-merge link between the Word template and the Excel spreadsheet data, which was established in the TOC Worksheet's Build a Bridge Asset Management Plan Step 8. To confirm this link:

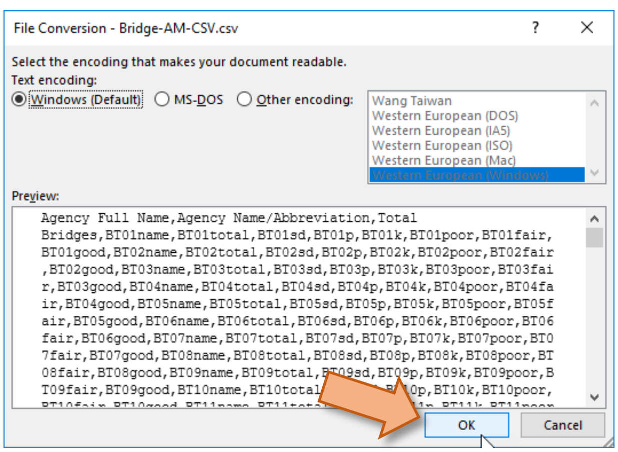
1. Open the BridgeAMP.docx Word template.

⇨ A Microsoft Word warning box will display.



2. Select **Yes**.

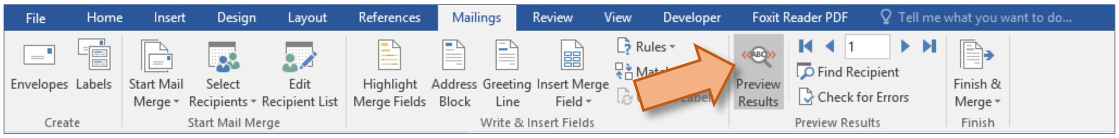
⇨ The *File Conversion* window will display (see figure below).



3. Select **Windows (Default)** in the *File Conversion – [yourcsv].csv* window, and select **OK** (see figure above).

⇨ The [yourcsv].csv file is now linked to the Word template and the data has been imported into the document.

4. In the *Mailings* ribbon, select **Preview Results** in the *Preview Results* group to preview the document with this auto-filled data (see figure below).



⇨ Scroll through the document: Text fields previously enclosed with double-right and double-left carets (e.g.: «Agency_NameAbbreviation») should now be replaced with the appropriate data from the Excel spreadsheet.

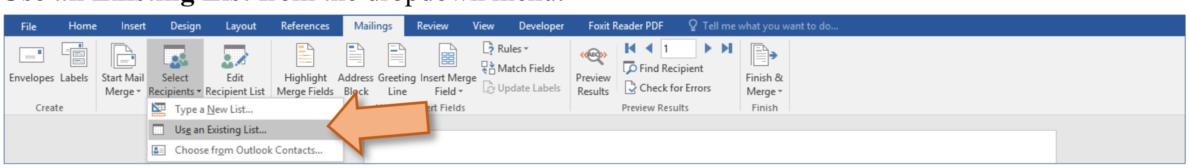
Manually linking the Excel spreadsheet data to the Word template

The Excel spreadsheet data can be linked manually to the Word template. To re-link the Excel spreadsheet data within the Word template and auto-fill corresponding text fields:

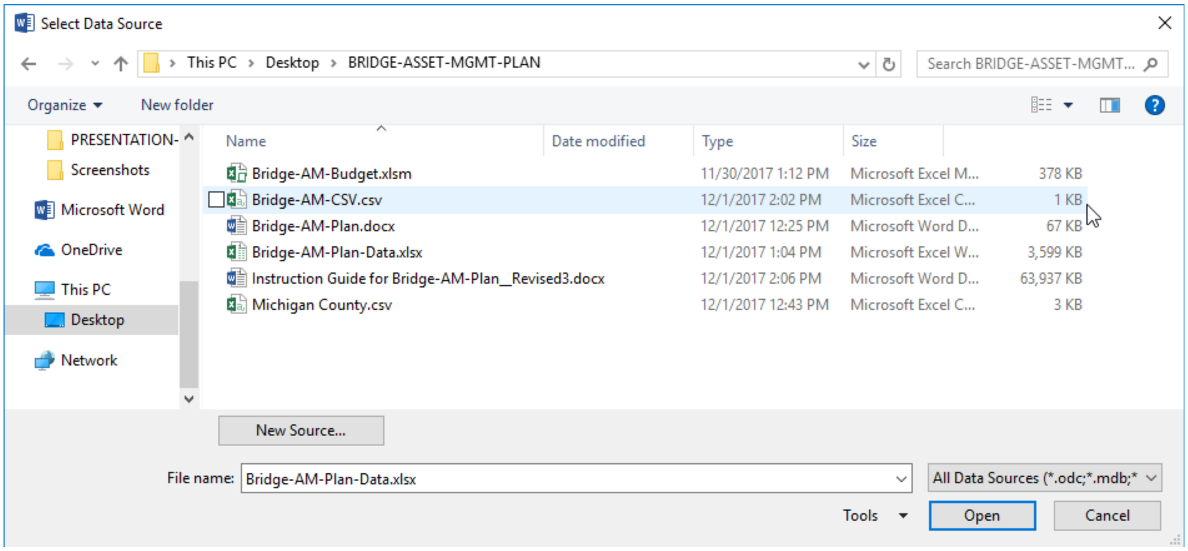
1. Open the BridgeAMP.docx Word template.

2. Select the **Mailings** ribbon.

3. In the *Mailings* ribbon, select the **Select Recipients** from the *Start Mail Merge* group; then, select **Use an Existing List** from the dropdown menu.

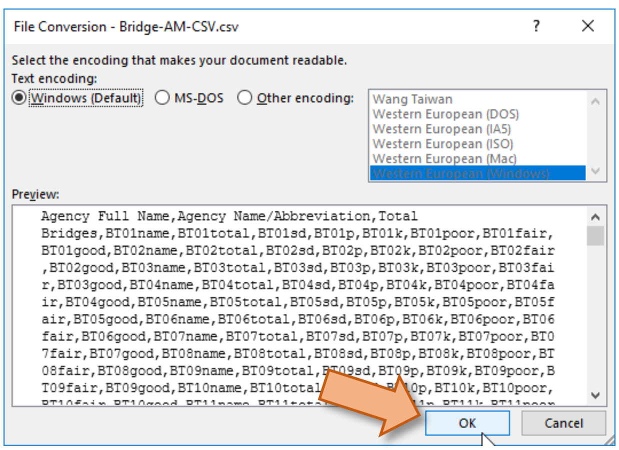


⇨ The *Select Data Source* dialogue box will display.



4. Navigate to the save location for your exported .csv file using the *Select Data Source* window; then, select the Excel file and select **Open**.

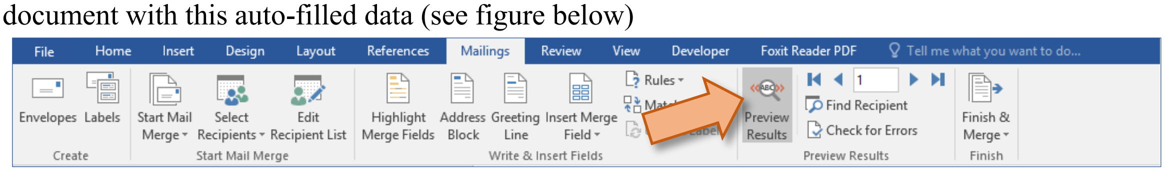
⇨ The *File Conversion* window will display (see figure below).



5. Select **Windows (Default)** in the *File Conversion – [yourcsv].csv* window, and select **OK** (see figure above).

⇨ The [yourcsv].csv file is now linked to the Word template and the data has been imported into the document.

6. In the *Mailings* ribbon, select **Preview Results** in the *Preview Results* group to preview the document with this auto-filled data (see figure below)

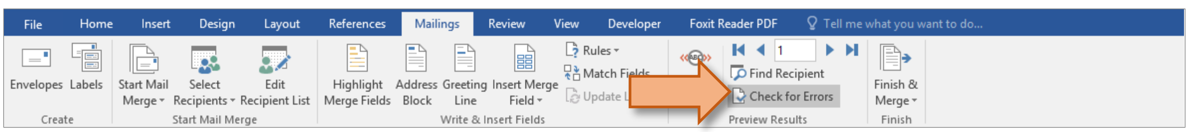


⇨ Scroll through the document: Text fields previously enclosed with double-right and double-left carets (e.g.: «Agency_NameAbbreviation») should now be replaced with the appropriate data from the Excel spreadsheet.

Manually reviewing the template for errors and finalizing

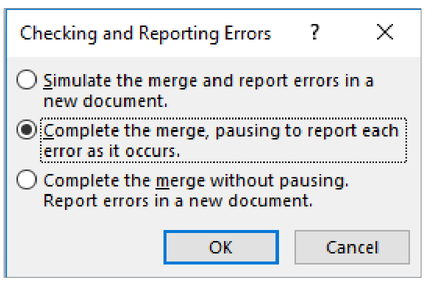
Once the bridge asset management plan .csv file has been created, it will be automatically linked to the BridgeAMP.docx template. The template should then be checked for unfilled text fields that should have been replaced with required information. This check should be done to ensure that no text field is overlooked and forgotten. To check the template:

1. In the *Mailings* ribbon, select **Check for Errors** in the *Preview Results* group.

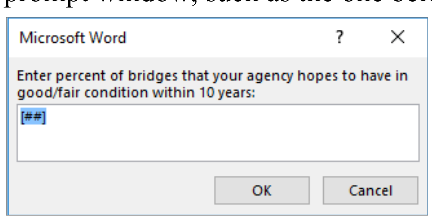


⇨ The *Checking and Reporting Errors* dialogue box will display.

2. Select **Complete the merge, pausing to report each error as it occurs**, and select **OK**.



⇨ Word will prompt you to complete any unfilled text fields using a *Microsoft Word* information prompt window, such as the one below.



3. Enter in the requested information in the *Microsoft Word* information prompt window, and select **OK**.

4. Repeat step 3 until there are no more *Microsoft Word* information prompt windows remaining.

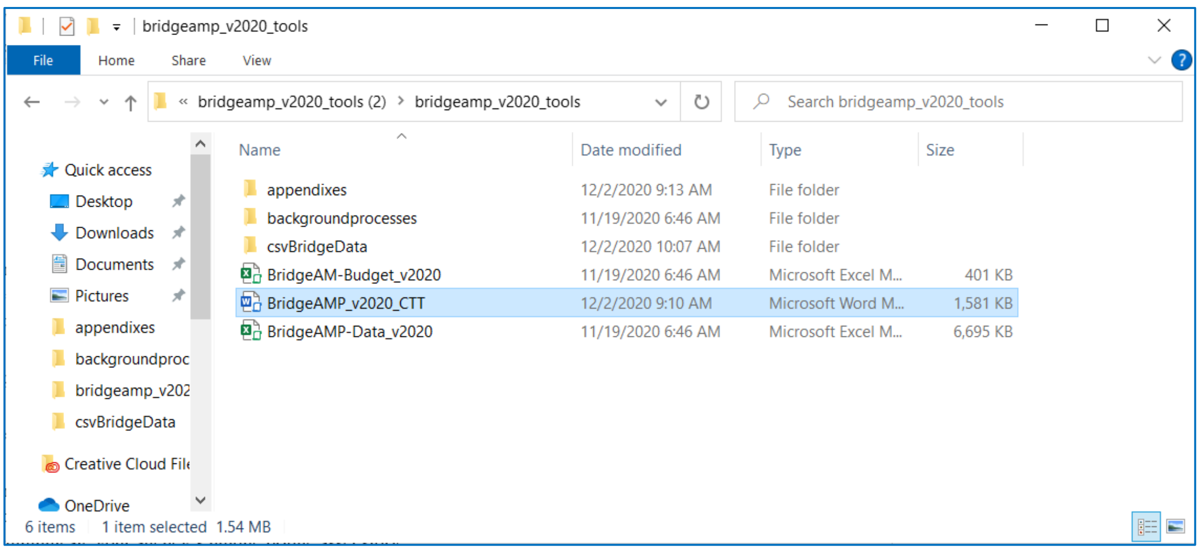
⇨ Microsoft Word will generate a new file, named ***Letters 01.docx***, of your final asset management plan.

5. Save Letters 01.docx with a unique name—such as BridgeAMP-2020.docx—in the desired location on your computer (see recommended save location information on page 1).

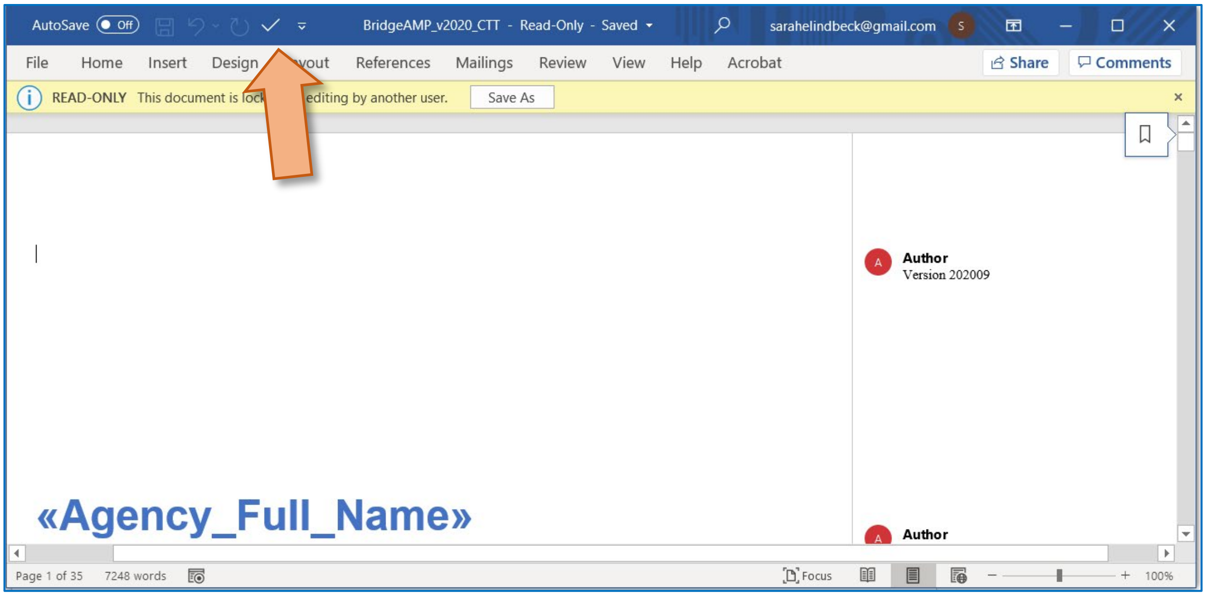
Finalizing the template

Once the BridgeAM-Data.xlsm and BridgeAM-Budget.xlsm processes are complete, you can access and finalize your customized bridge asset management plan Microsoft Word template. To finalize the template:

1. Open BridgeAMP_v####_[youragency].docm located in the tools parent folder (see figure below).



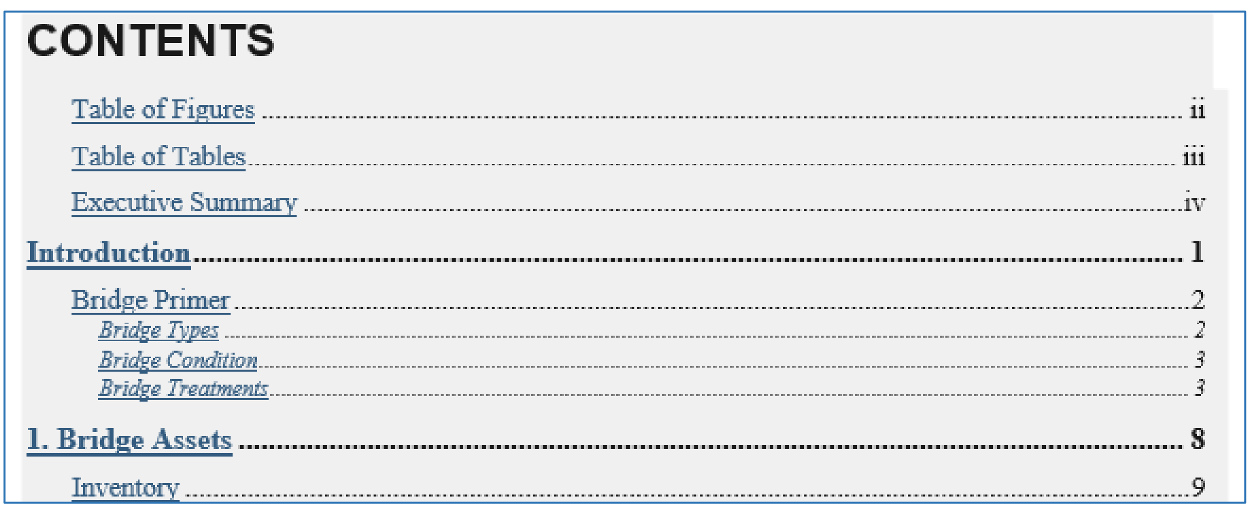
2. Select the checkmark button at the top of the Word document window to finalize the plan (see figure below).



⇨ The tool will produce a finalized Word document, BridgeAMP_v####_[youragency]_final.docx. You will need to customize this document to include the Roadsoft map of bridge assets and to communicate your agency's unique bridge asset story.

Manually updating Table of Contents

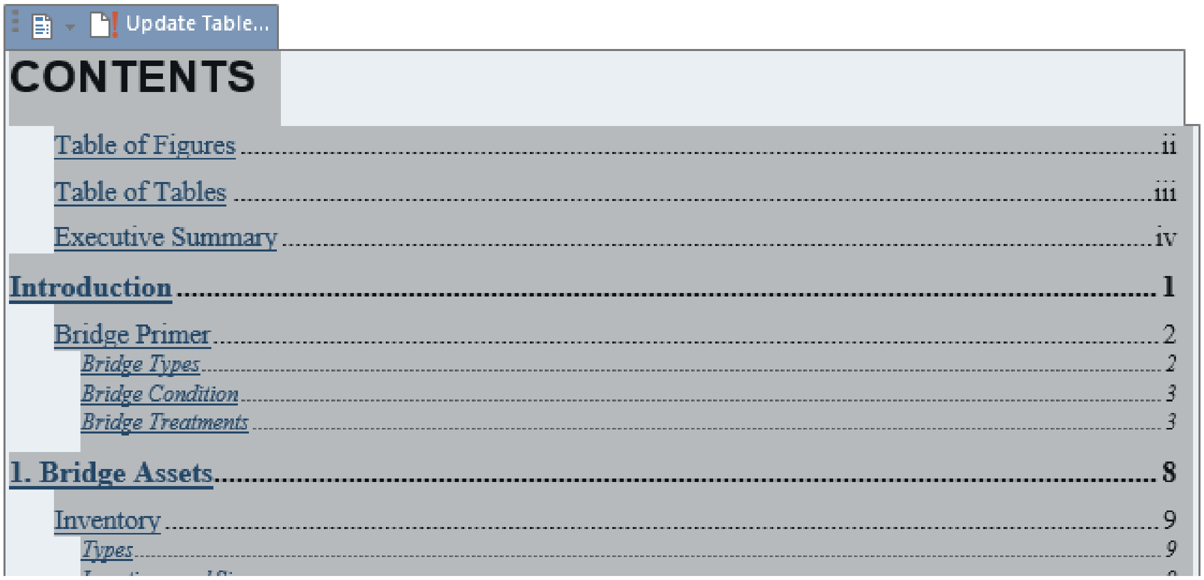
The Contents field will appear as a list of links after the mail merge (see figure below). To fix this, the table must be deleted and replaced.



1. Go to the Contents section on the second page of the document.
2. Select the *Contents* field.

⇨ The Contents listing will appear boxed with buttons located in the upper left corner of the field.

3. Select the three dots.



Update Table...

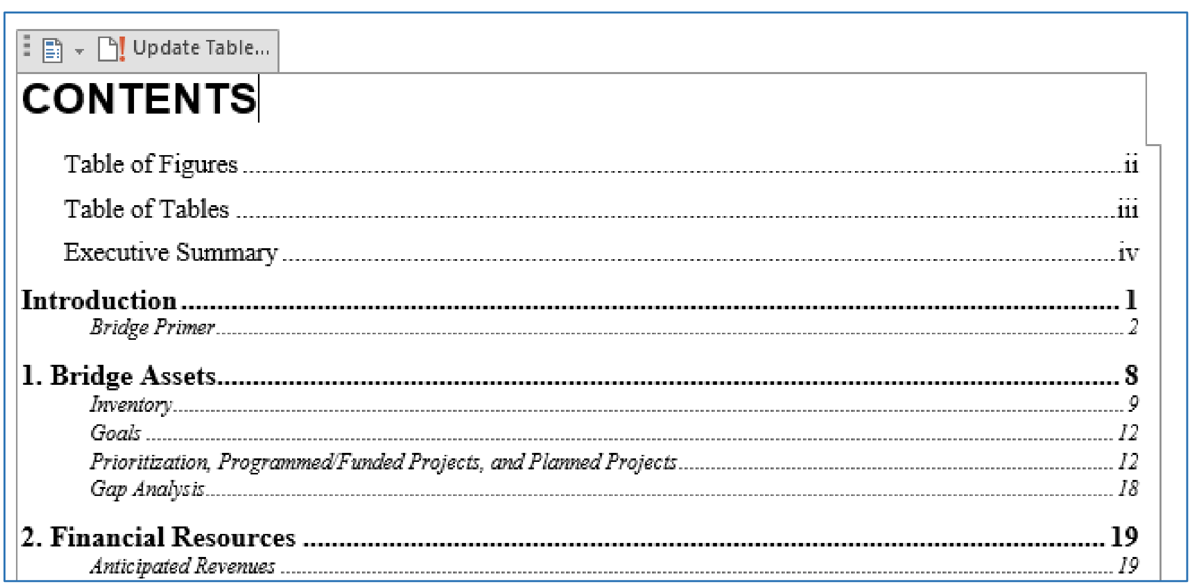
CONTENTS

⇨ The entire table of contents will become highlighted.

4. Press the **backspace** or **delete** key on your keyboard to delete the entire table of contents.

5. From the *References* ribbon, select **Table of Contents,** and then select **Automatic Table 1** from the dropdown list.

⇨ A new and updated Contents will replace the old one on page two of the Word document (see figure below).



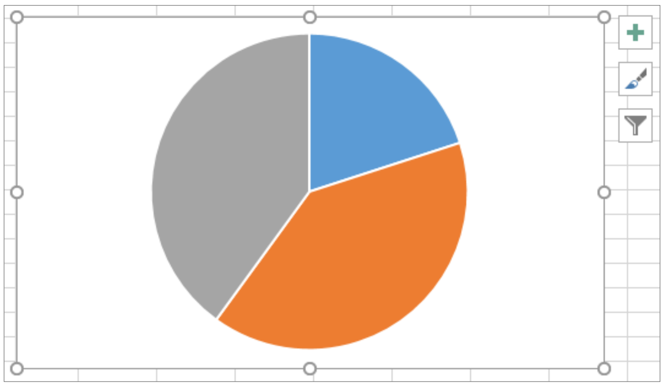
Update Table...

CONTENTS

6. Repeat these steps with the Table of Figures and the Table of Tables.

Manually inserting Microsoft Excel charts/graphs into Word

1. In an Excel spreadsheet, select a chart/graph (as shown below).

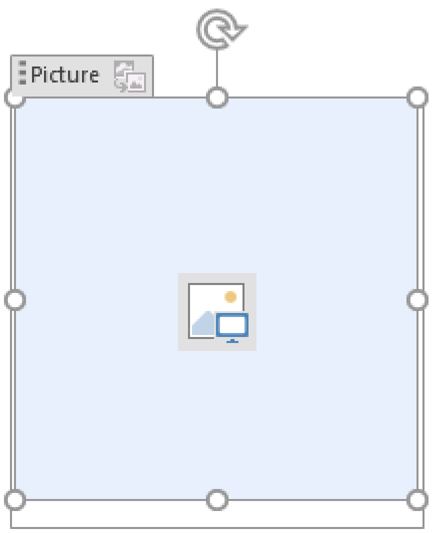


2. In the *Home* ribbon, select **Copy** from the *Clipboard* group to copy the chart/graph to the Windows clipboard.

   OR: Right-click on the chart/graph; select **Copy** from the dropdown menu.

   OR: Use the **Ctrl** + **C** keyboard shortcut.

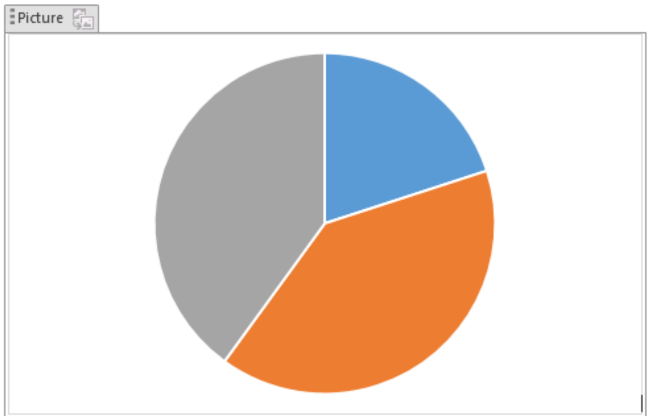
3. In the BridgeAMP.docx Word template, select the *Picture* placeholder (shown below) and press the **Delete** key on your keyboard.



4. In the *Home* ribbon, select **Paste** from the *Clipboard* group to paste the chart/graph that was copied to the Windows clipboard.

   OR: Right-click on the placeholder; select **Paste** from the dropdown menu.

OR: Use the **Ctrl** + **V** keyboard shortcut.



⇨ The copied chart/graph will display in the Picture placeholder.