Instruction Guide

for using the

Compliance Plan Template

Michigan
Transportation Asset
Management Council

Center for
Technology & Training

Contents

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

Compliance plan data for your agency will need to come from the completed Pavement Asset Management Plan workbook or Bridge Asset Management Plan workbook or will need to be entered manually into the complianceplan_blank.csv Microsoft Excel spreadsheet. To enter data manually, instructions are available by contacting the CTT. This Instruction Guide will detail how to merge data into the Word template using the “CompliancePlan_v####.xlsm” tool.

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 template files on your computer

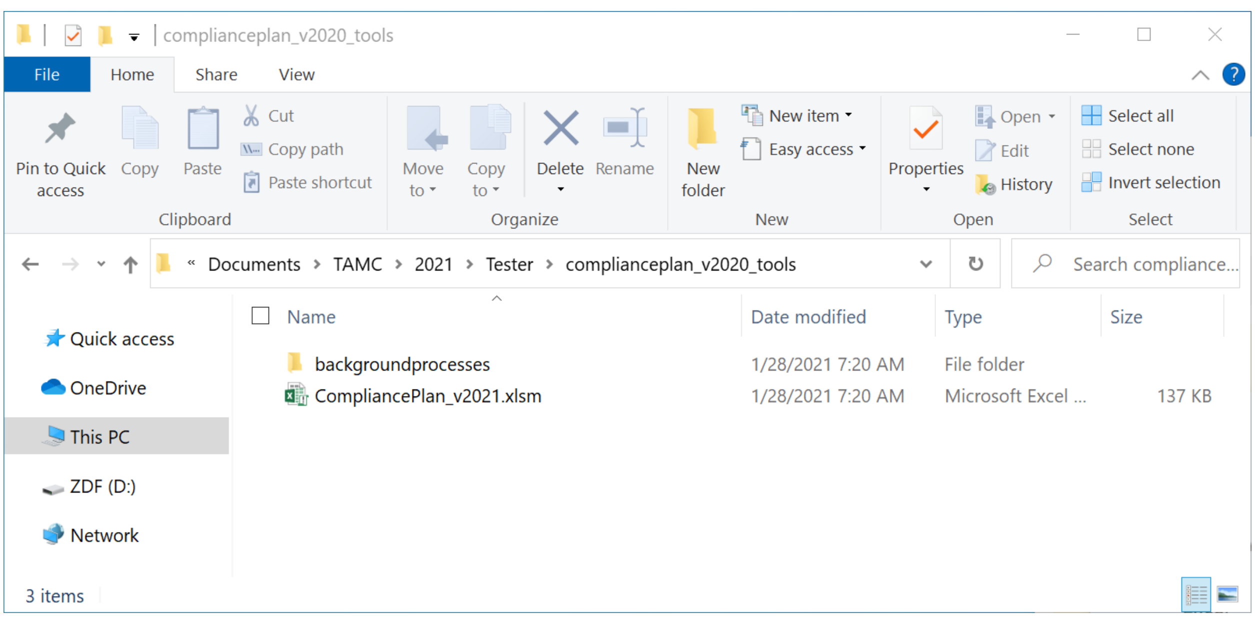
The tools for creating a customized compliance plan template can be downloaded as a zipped file from ctt.mtu.edu/asset-management-resources. After unzipping the tools folder, it is recommended that the "complianceplan_v####_tools" folder be saved in you Documents or My Documents folder on your desktop; if it is desired to rename this (sub)folder, use a unique name such as "CompliancePlan-2021". ***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 compliance plan tools to a USB drive and work with the files on the USB drive.***

The tools within the "complianceplan_v####_tools" folder consist of (see figure below):

- the.xlsm file, "CompliancePlan_v2021.xlsm", housed in the main folder
- one subfolder
  - the "backgroundprocesses" subfolder that contains the generic Word template "CompliancePlan_v2020.docm" and a blank .csv template "complianceplan_blank.csv"

Do not rename these files or folders.

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



Generating customized Compliance Plan template with the CompliancePlan.xlsm tool

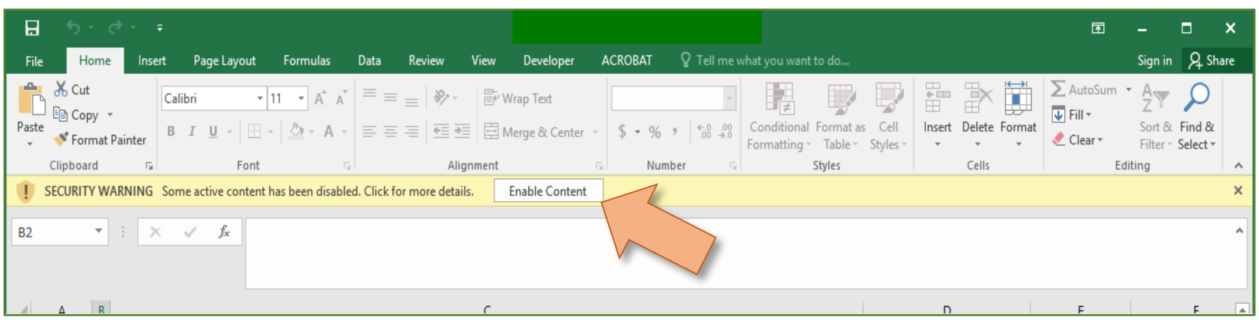
The CompliancePlan_v####.xlsm tool is an Excel workbook that allows you to process your agency's pavement and bridge asset management data to populate the generic compliance plan Word template, which you will personalize for your agency's compliance plan. This tool runs calculations in the background so that the data you identify for use in the tool will be parsed into the appropriate formats for the compliance plan.

NOTE: The worksheets in the ComplaincePlan_v####.xlsm workbook are protected to prevent inadvertent changes. Those protected worksheets require a password to unprotect the sheet. If you wish modify a protected worksheet, the password is "password".

Using the XLSM file for the first time and setting 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** (see figure below).

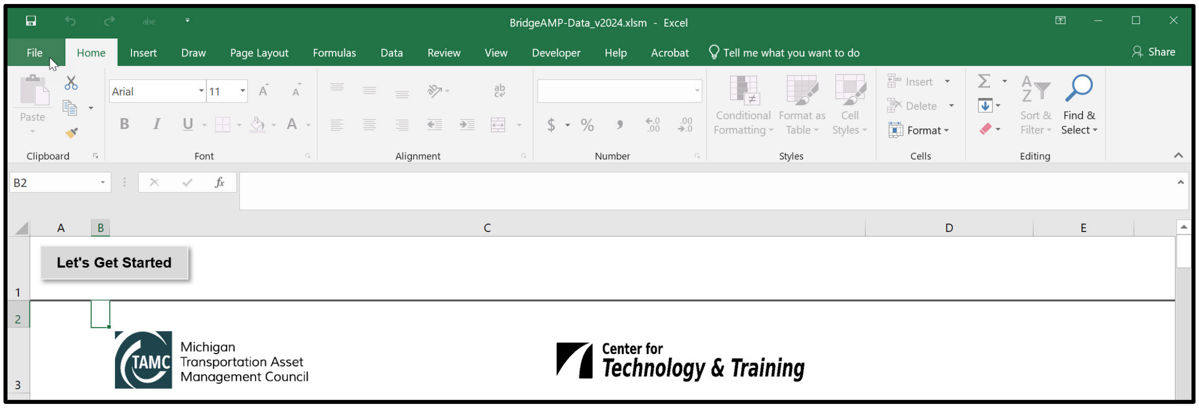
NOTE: You must enable macros for this workbook to function.



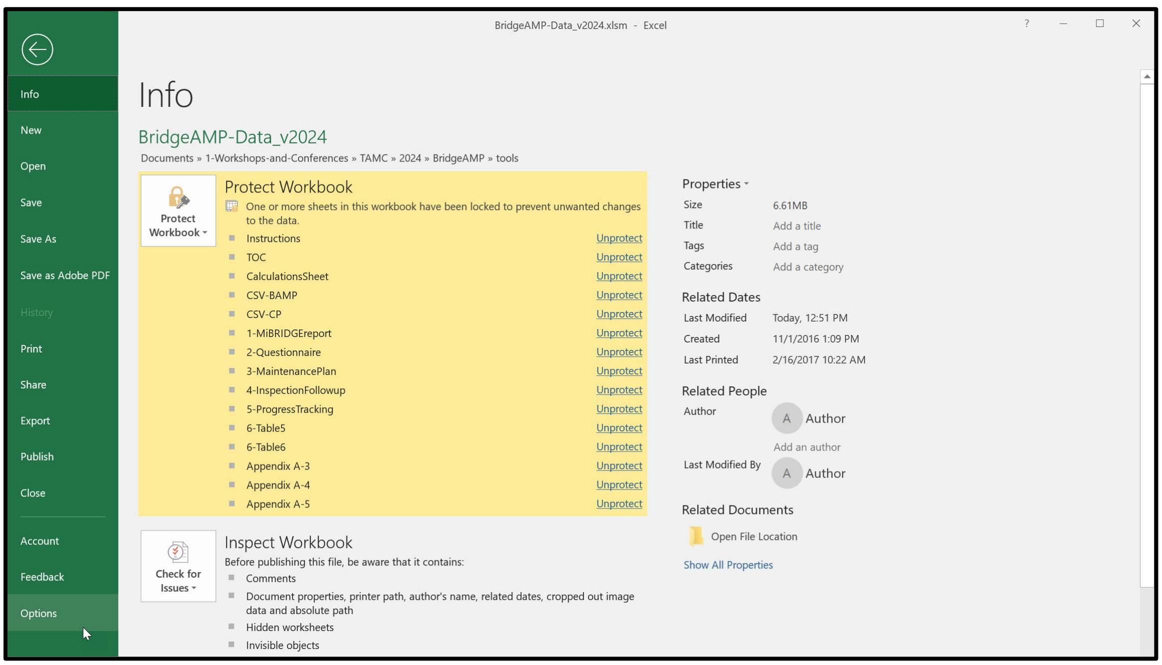
You will also need to set the folder containing your bridge asset management plan tools as a trusted location.

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

1. Select **File**.

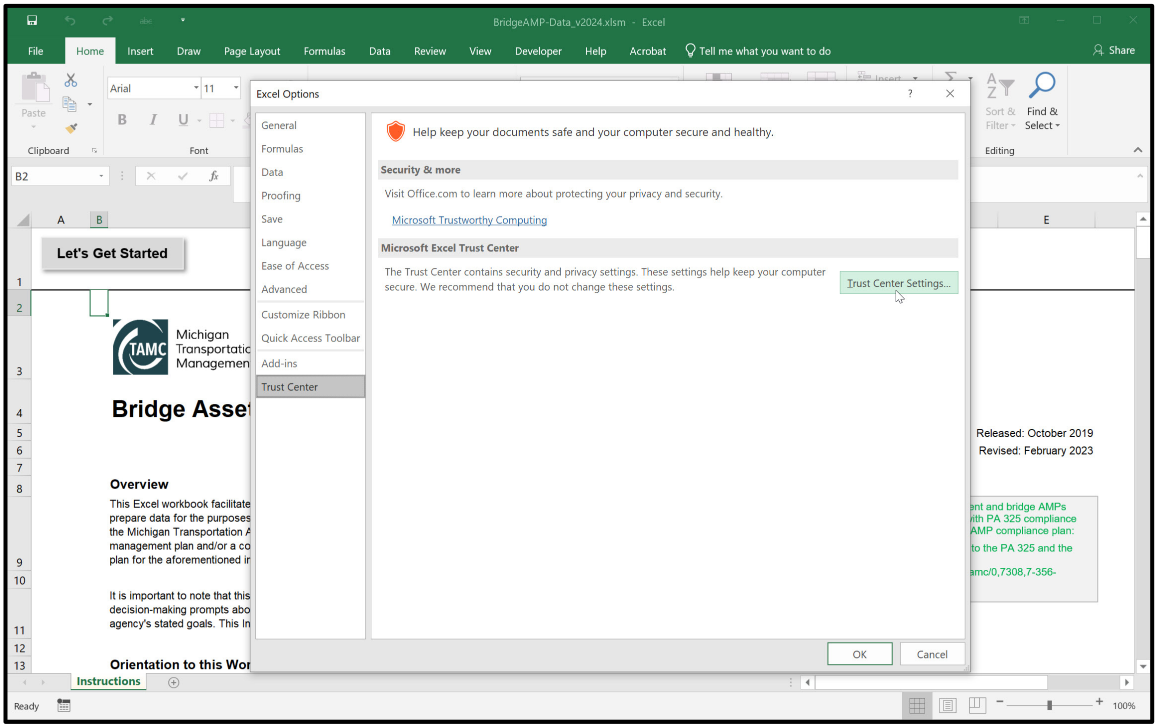


2. Select **Options**.



⇨ The *Word Options* window will appear.

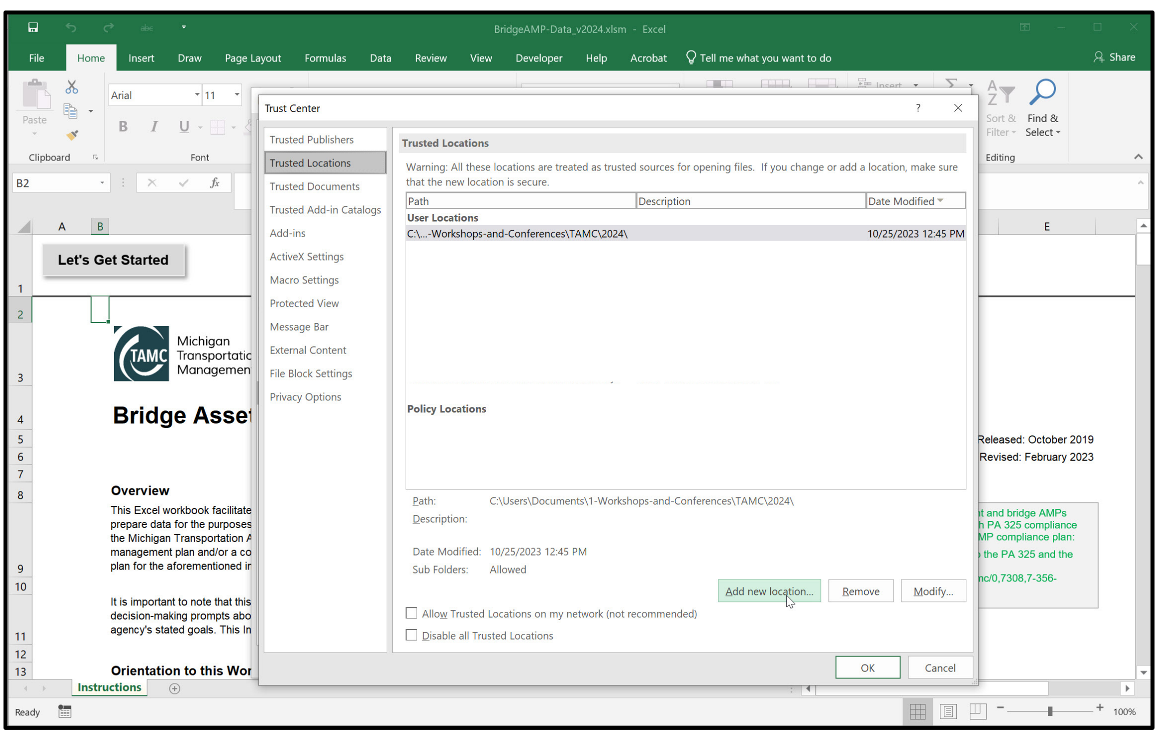
3.



4. Select **Trust Center Settings…**

⇨ The *Trust Center* window will appear.

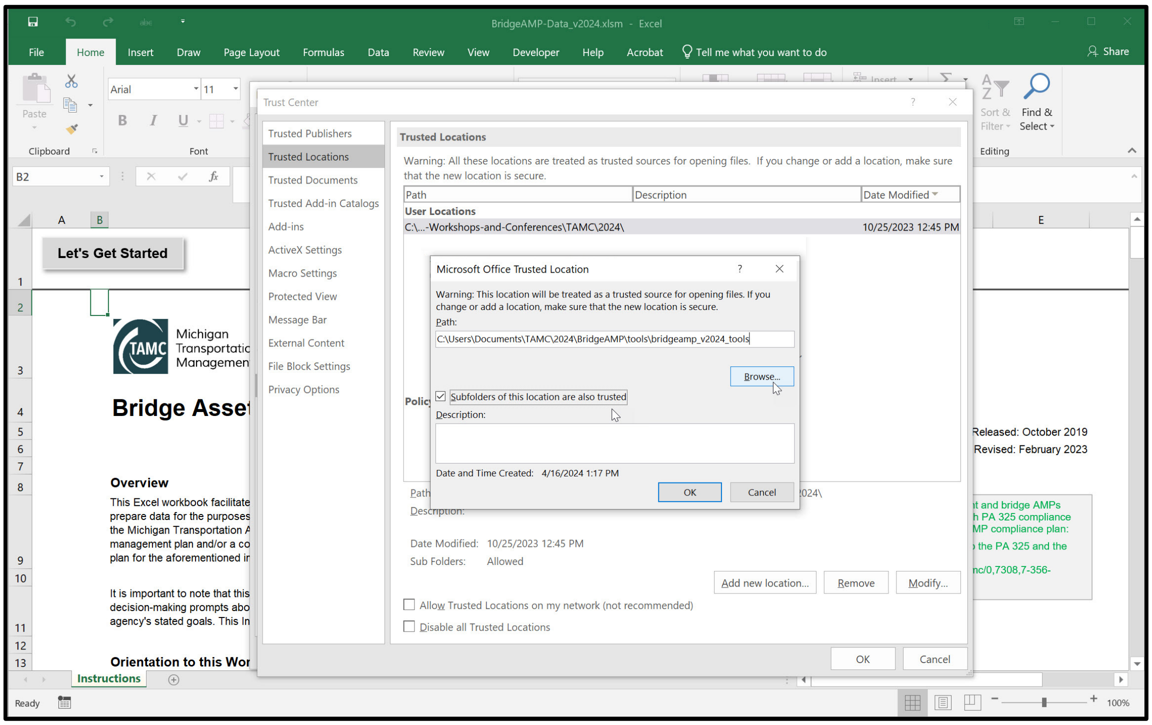
5. Select **Trusted Locations** in the *Trust Center* window menu.



6. Select **Add new location….**

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

7. Select **Browse**.

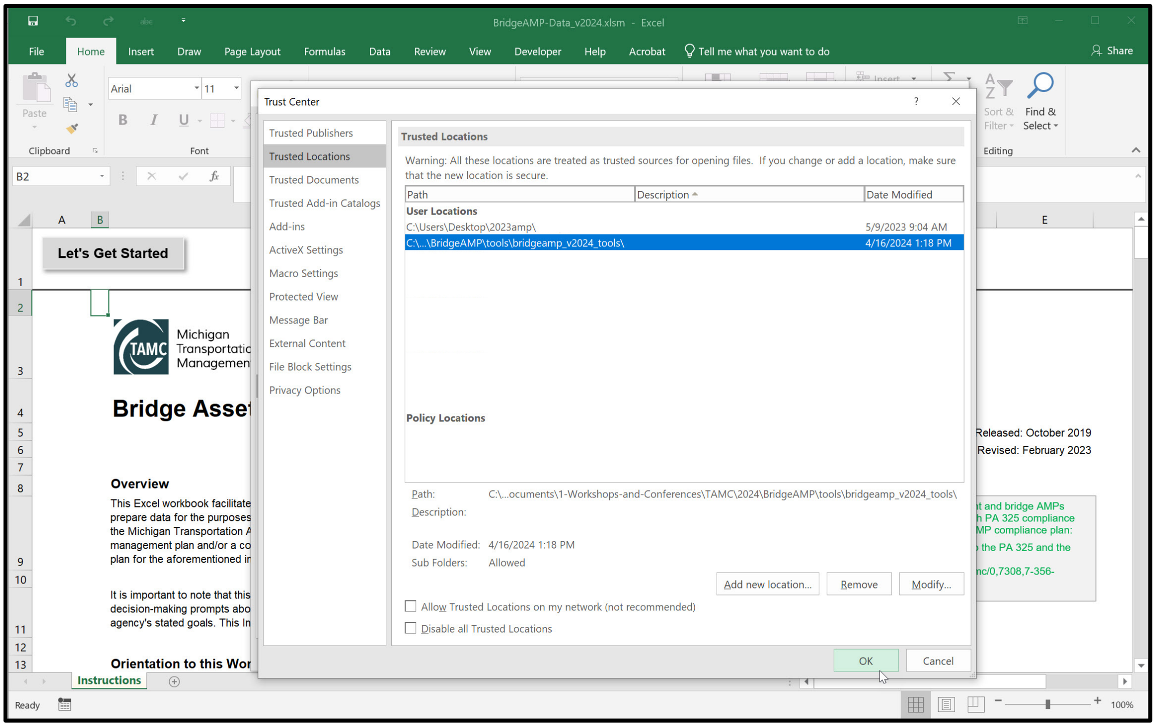


⇨ The *Browse* window will appear.

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**.

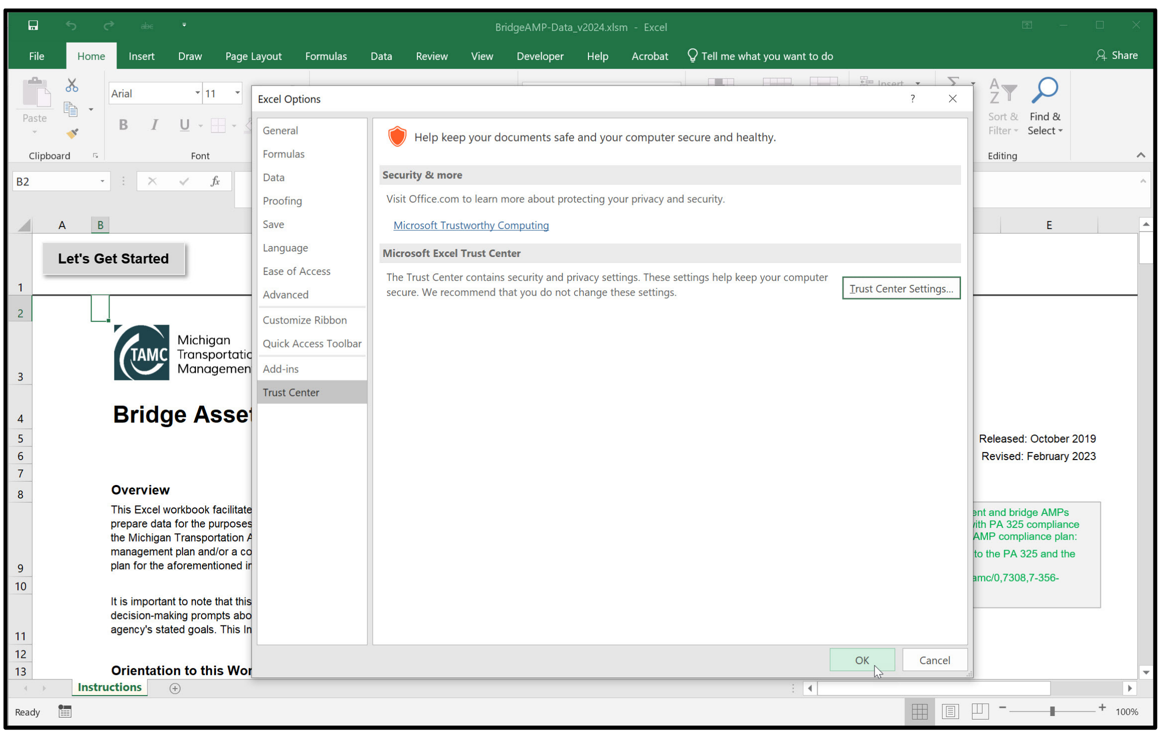
⇨ The selected folder's path should appear in the *Microsoft Office Trusted Locations* window.

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



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

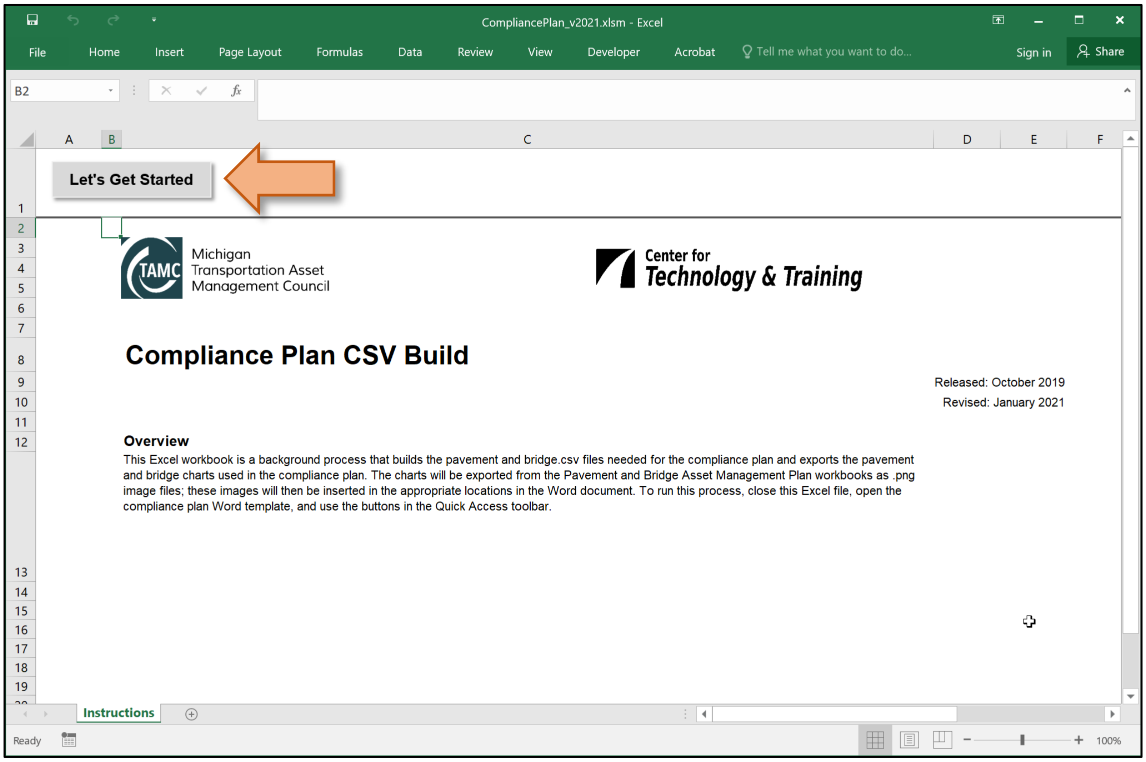
⇨ Your selected folder has now been set as a trusted location.



Instructions Worksheet

NOTE: When you open the CompliancePlan_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).

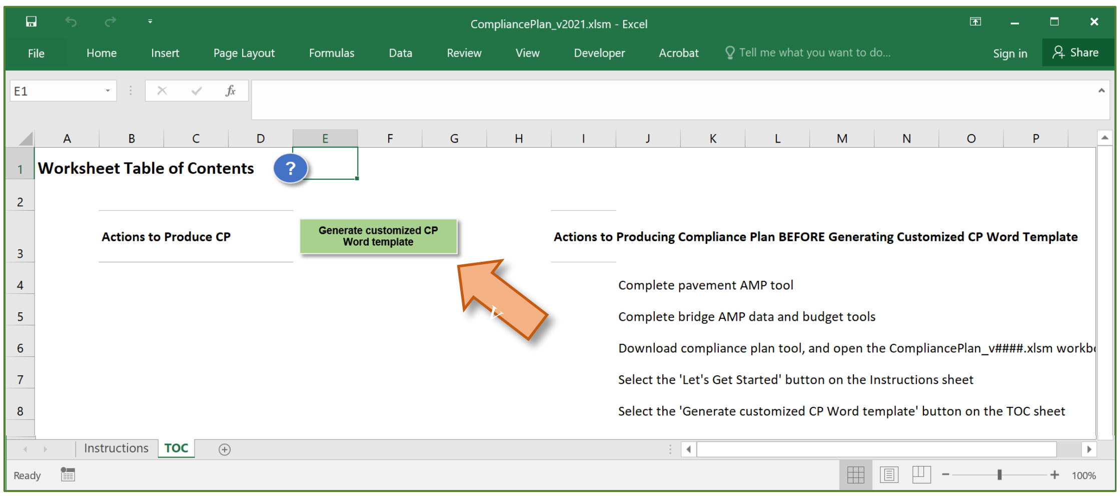


⇨ You will advance to the *TOC* worksheet (see figure below). Proceed to the TOC Worksheet section of this Instruction Guide.

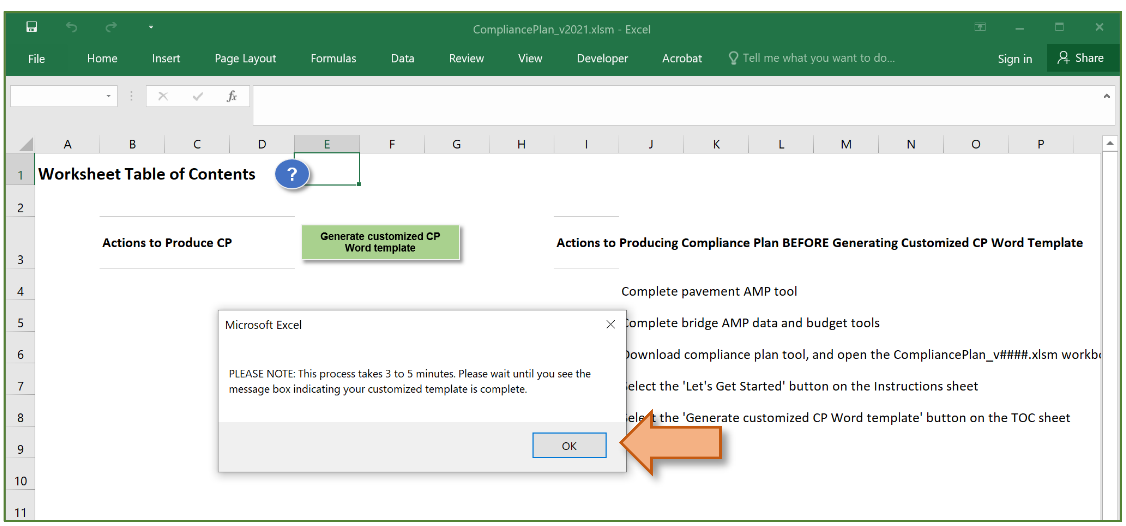
TOC Worksheet

NOTE: The *TOC* worksheet serves the location from which you can build your customized compliance plan template, and becomes available for viewing once finished with the *Instructions* worksheet (see figure below).

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



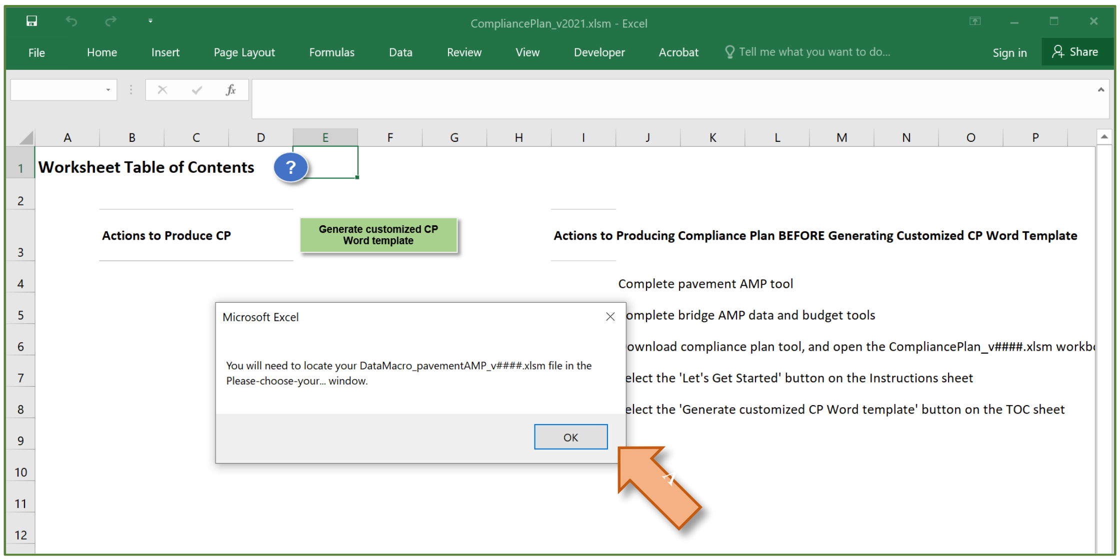
⇨ The *PLEASE NOTE: This process takes 3 to 5 minutes…* dialogue box will display (see figure below).



2. Select **OK** (see figure above).

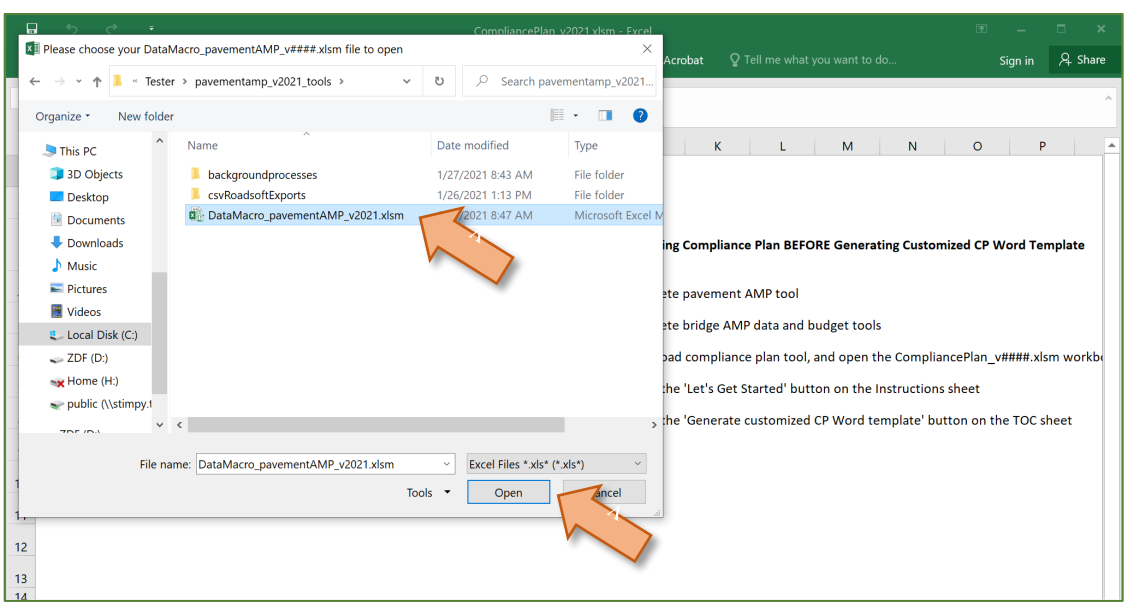
Note: The process to generate the customized compliance plan Word template takes about three to five minutes. During this time, just allow Microsoft Office to run the generation process. You will see Microsoft Word automatically open and close; this is part of the process. User input is only necessary when the dialogue boxes display:

⇨ The *You will need to locate your DataMacro_pavementAMP_v####.xlsm file*… dialogue box will appear indicating that you will need to locate your pavement asset management plan DataMacro_pavementAMP_v2019.xlsm file (see figure below).



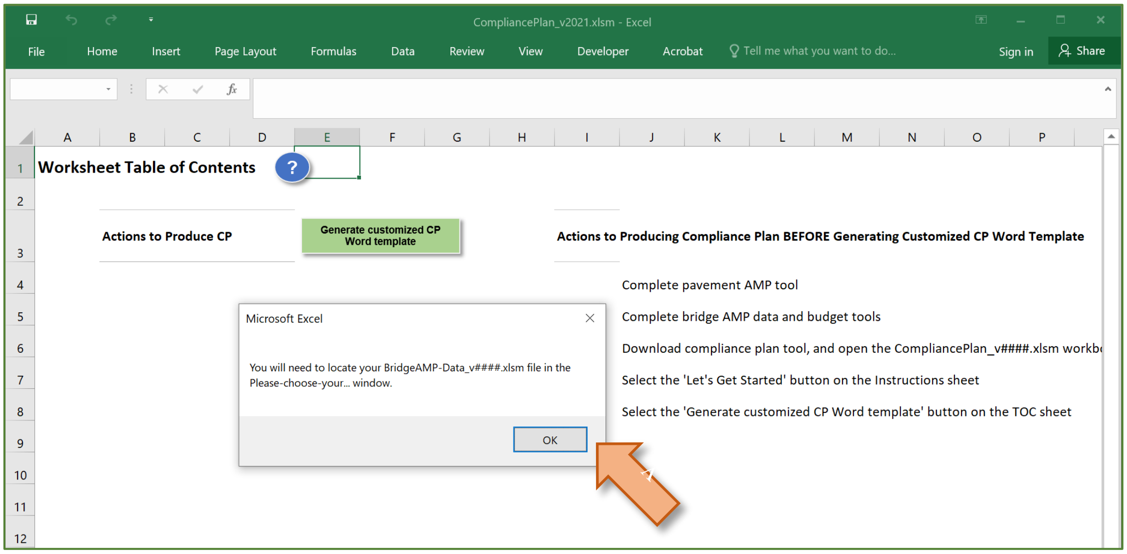
3. Select **OK** (see figure above).

⇨ The *Please choose your DataMacro_pavementAMP_v2019.xlsm file to open* window will appear (see figure below).



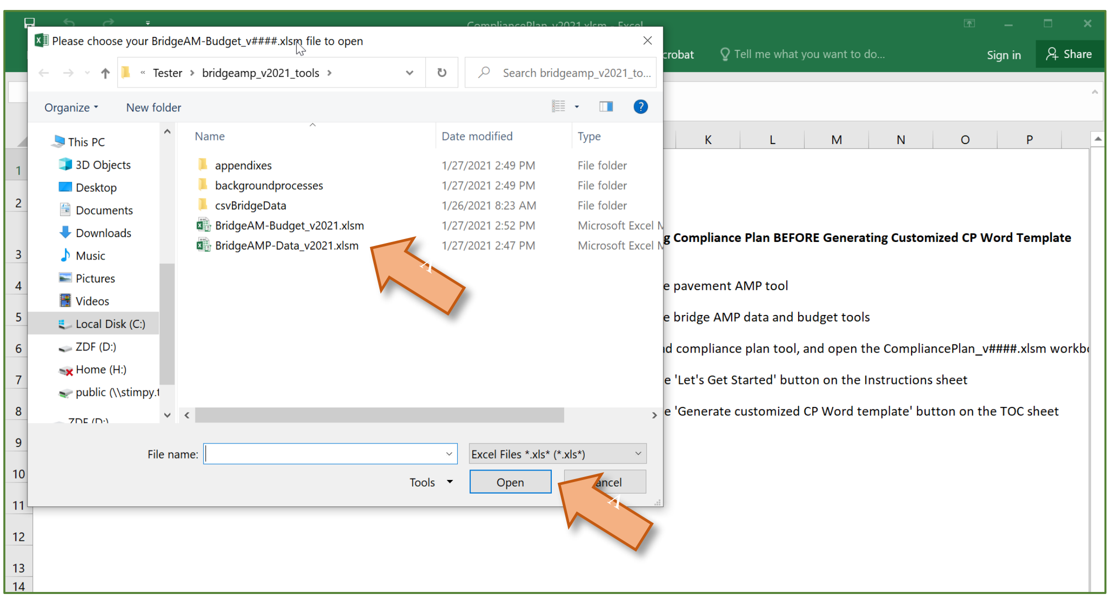
4. Locate your completed *DataMacro_pavementAMP_v####.xlsm* file, and select **Open** (see figure above).

⇨ The *You will need to locate your BridgeAMP-Data_v####.xlsm file…* dialogue box will appear indicating that you will need to locate your pavement asset management plan BridgeAMP_v####.xlsm file (see figure below).



5. Select **OK** (see figure above).

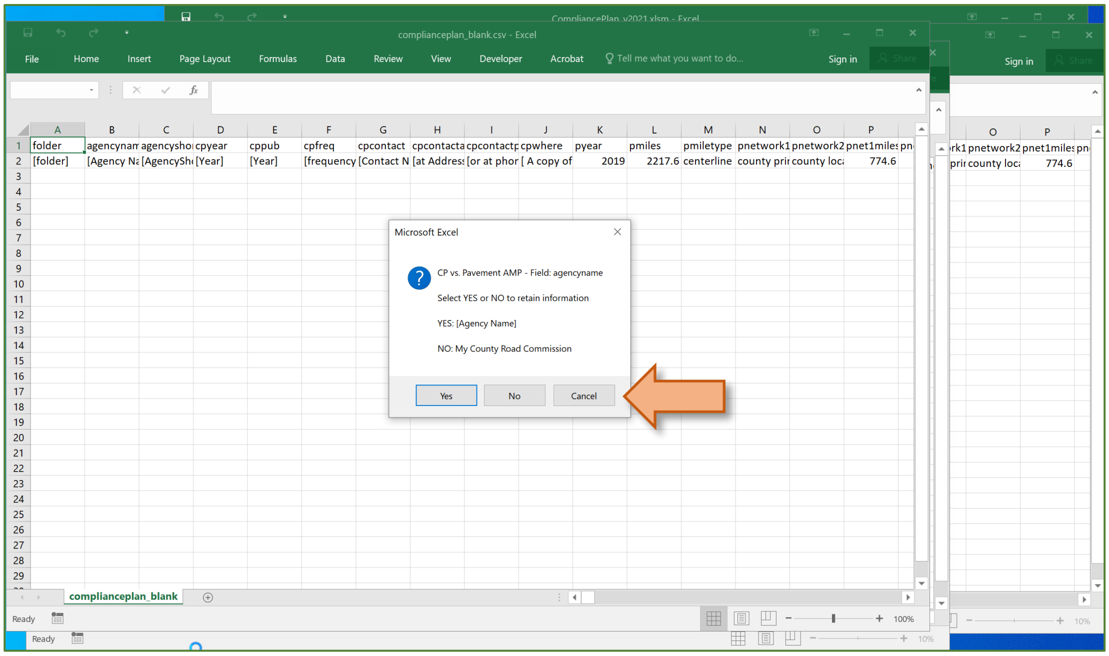
⇨ The *Please choose your BridgeAMP-Data_v####.xlsm file to open* window will appear (see figure below).



6. Locate your completed *BridgeAMP-Data_v####.xlsm* file, and select **Open** (see figure above).

⇨ Several workbooks will open.

⇨ A series of data comparison dialogue boxes—the *CP vs. Pavement AMP…* dialogue boxes and the *Pavement AMP vs. Bridge AMP…* dialogue boxes—will display (see figure below).



7. Select **Yes** to retain the information from the blank complianceplan_blank.csv file for the *CP vs. Pavement AMP…* dialogue boxes or from your pavement asset management data for the *Pavement AMP vs. Bridge AMP…* dialogue boxes (see figure above). Repeat step 7 until no more data comparison dialogue boxes display.

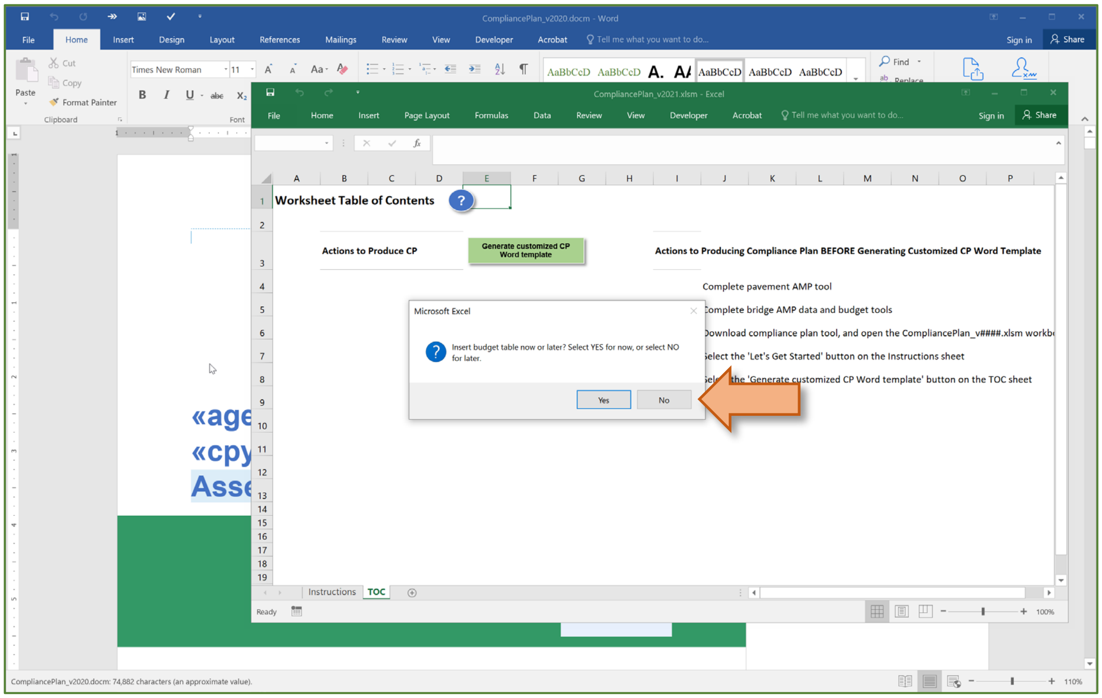
   OR

   Select **No** to retain the information from your pavement asset management data for the *CP vs. Pavement AMP…* dialogue boxes or from your bridge asset management data for the *Pavement AMP vs. Bridge AMP…* dialogue boxes (see figure above). Repeat step 7 until no more data comparison dialogue boxes display.

   OR

   Select **Cancel** to exit the process.

⇨ The *Insert budget table now or later?...* dialogue box will display (see figure below).

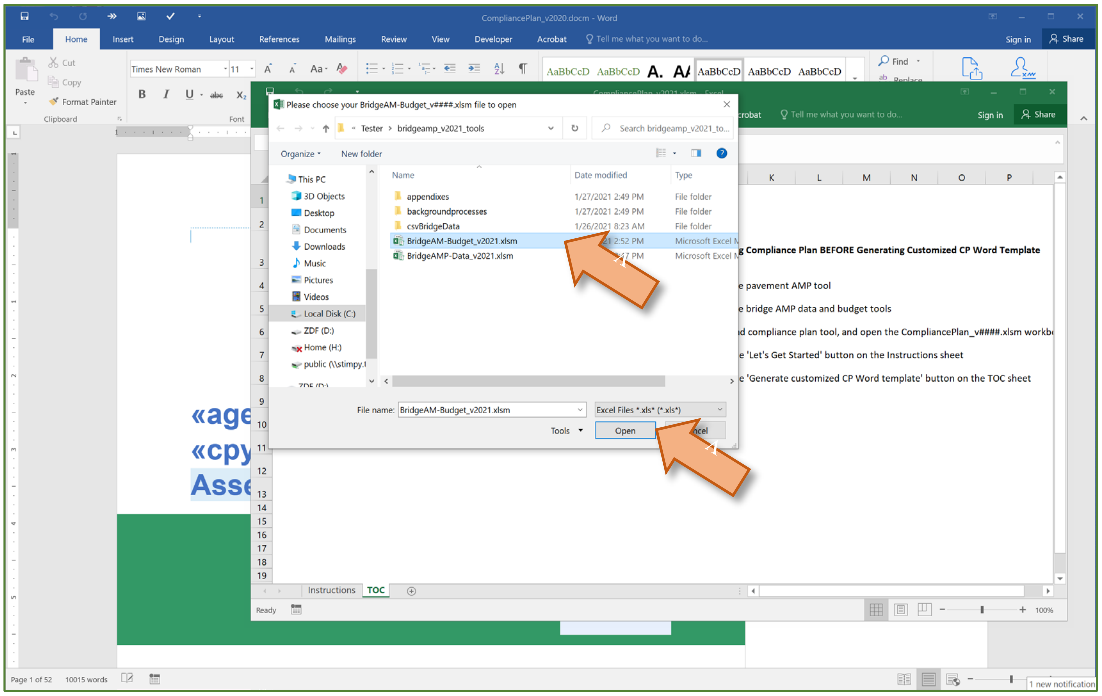


8. Select **Yes** for now (see figure above).

   OR

   Select **No** for later (see figure above). Proceed to step 9 step result 2.

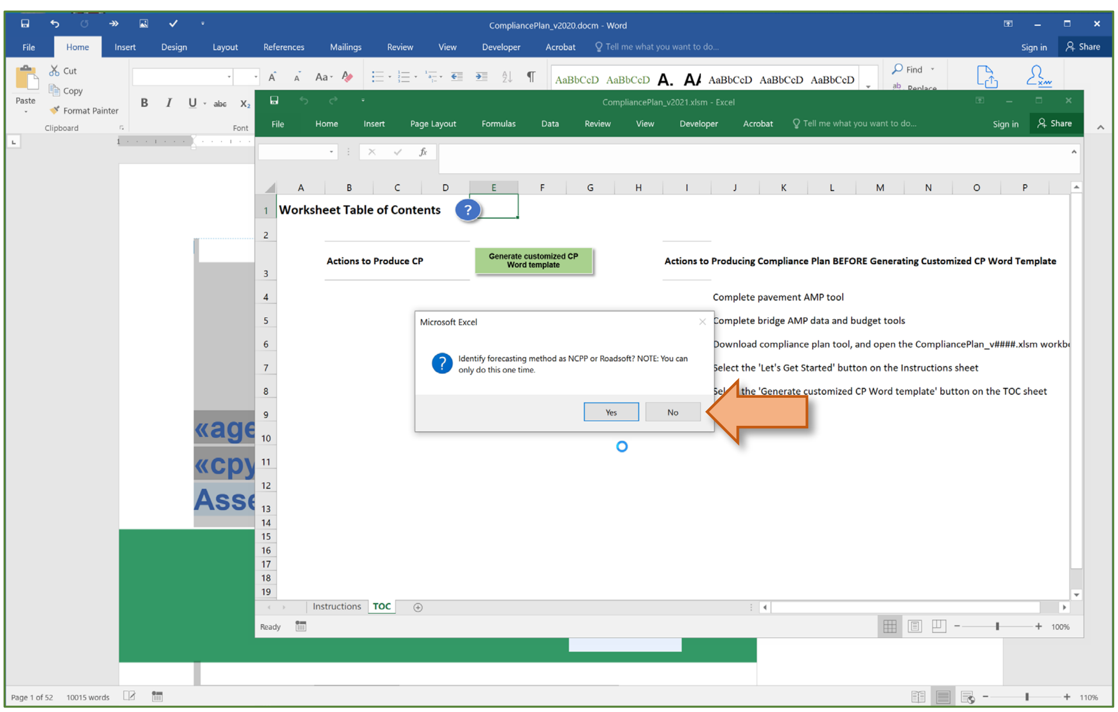
⇨ A *Please choose your BridgeAMP-Budget_v####.xlsm file to open* window will display (see figure below).



9. Locate your completed *BridgeAMP-Budget_v####.xlsm* file, and select **Open** (see figure above).

⇨ The cost projection/gap table will automatically be inserted into the compliance plan template.

⇨ The *Identify forecasting method…* dialogue box will display (see figure below).

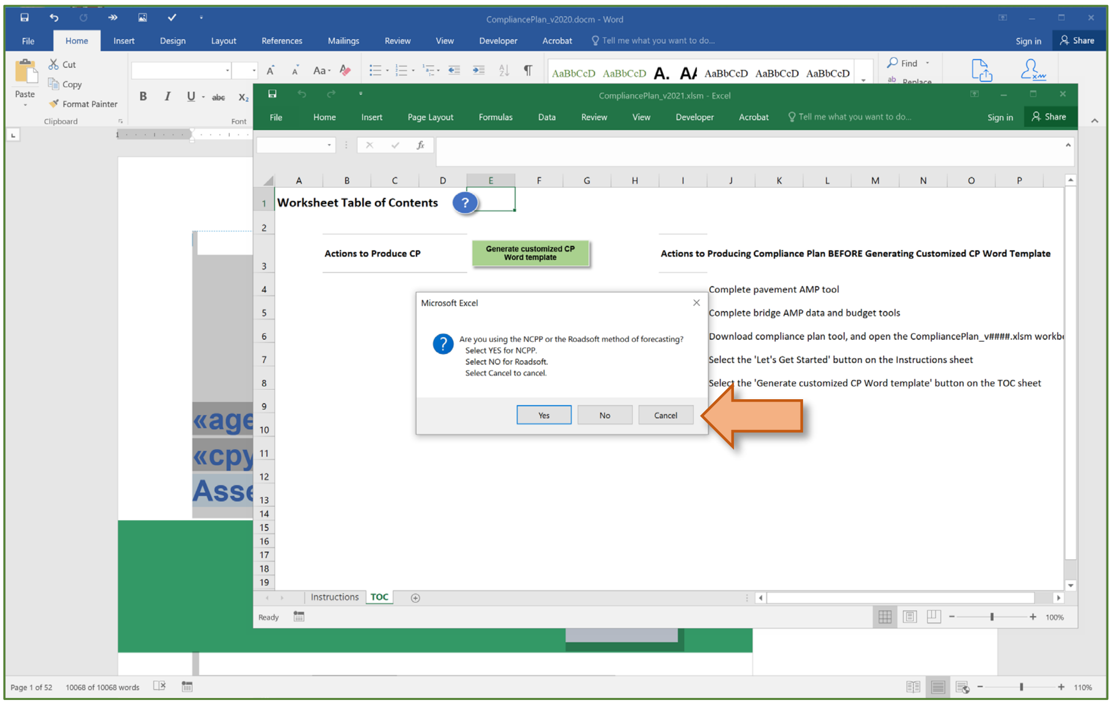


10. Select **Yes** to identify forecasting method (see figure above).

    OR

    Select **No** to skip identifying forecasting method (see figure above). Proceed to step ## step result.

⇨ The *Are you using NCPP or Roadsoft method of forecasting?...* dialogue box will display (see figure below).



11. Select **Yes** to customize your compliance plan template for the NCPP forecasting method (see figure above).

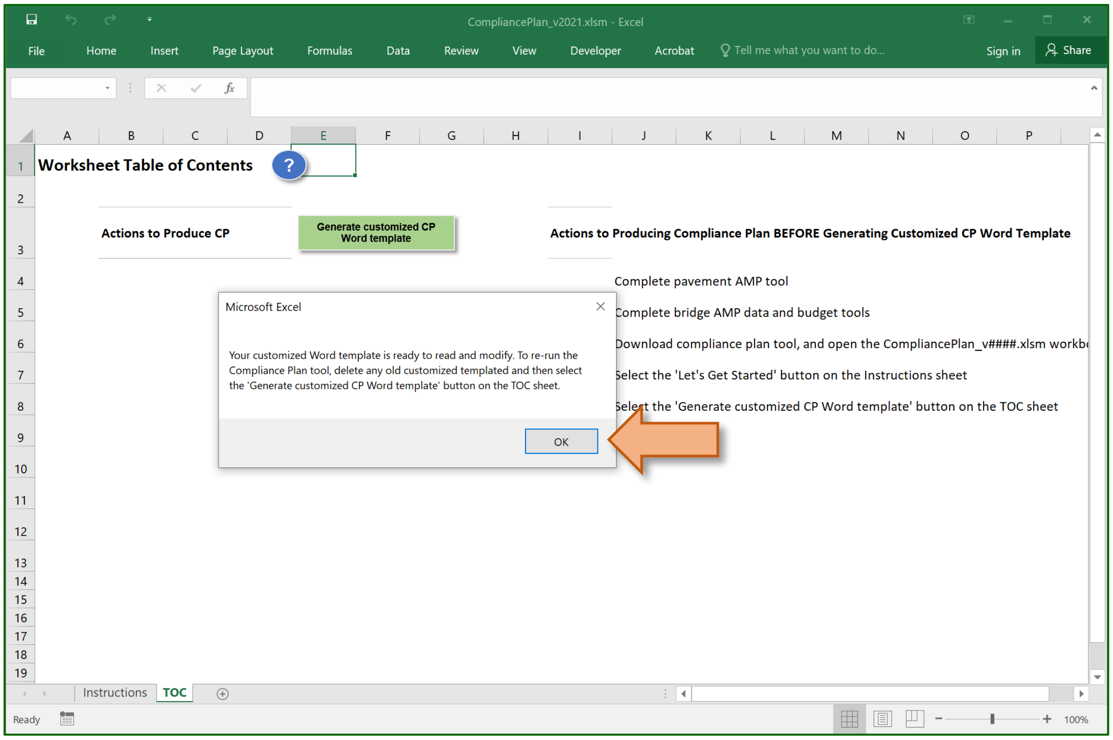
    OR

    Select **No** to customize your compliance plan template for the Roadsoft forecasting method (see figure above).

    OR

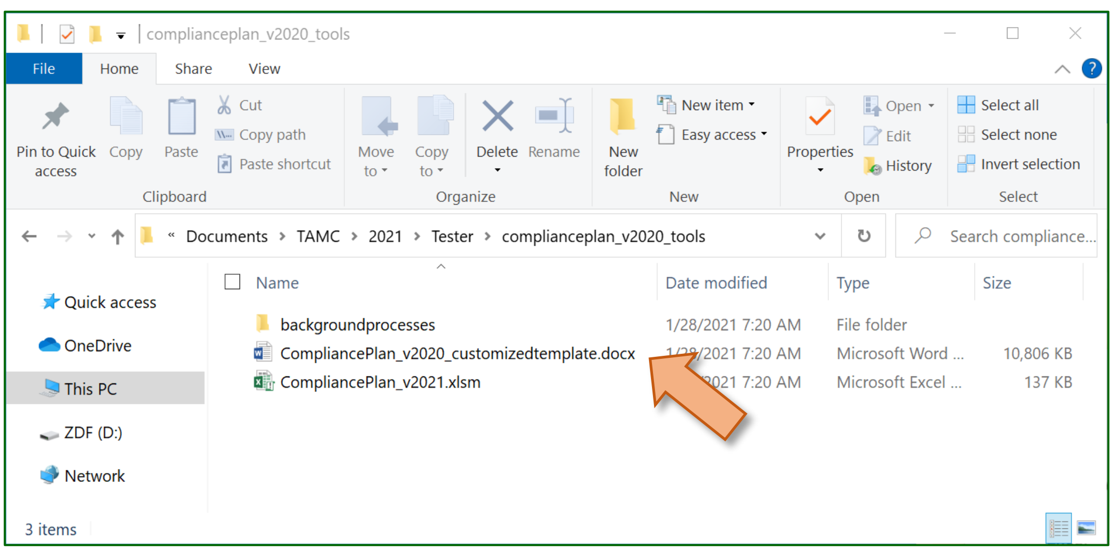
    Select **Cancel** to skip customizing your compliance plan template for the NCPP or Roadsoft forecasting method (see figure above).

⇨ The *Your customized Word template is ready to read and modify…* dialogue box will display (see figure below).



12. Select **OK** (see figure above).

⇨ The "CompliancePlan_v####.xlsm" tool will automatically close. Your customized compliance plan Word template will display in your compliance plan tools folder (see figure below).



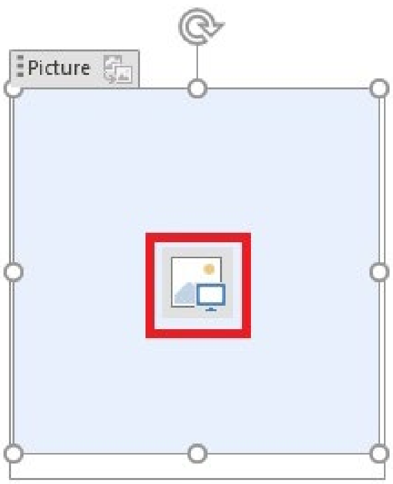
Inserting content into the compliance plan Word template

Inserting a logo

There is one instance in the compliance plan where you will need to insert an image—the title page should incorporate your agency's logo. A *Picture* placeholder indicates where the logo should be inserted.

To insert a logo into the *Picture* placeholder:

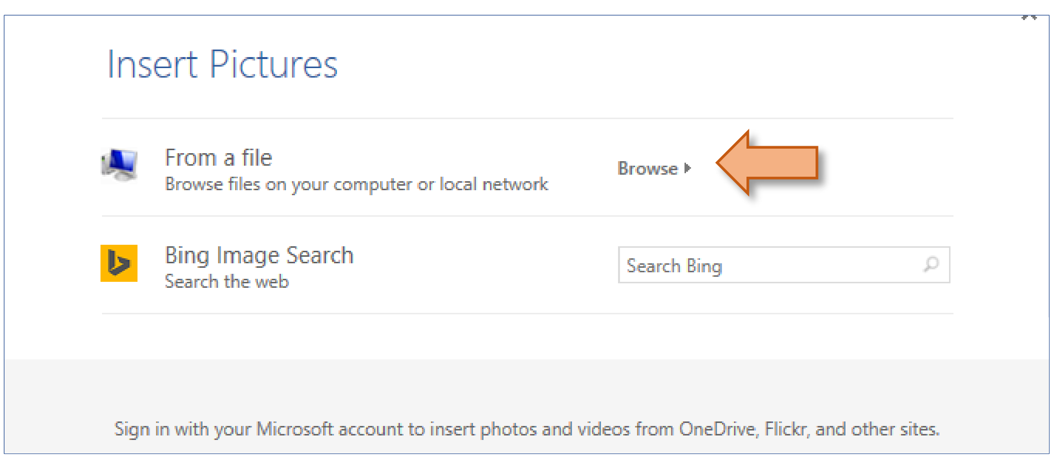
1. Select the *Picture* placeholder (shown below) where you plan to insert a logo (not a chart).



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

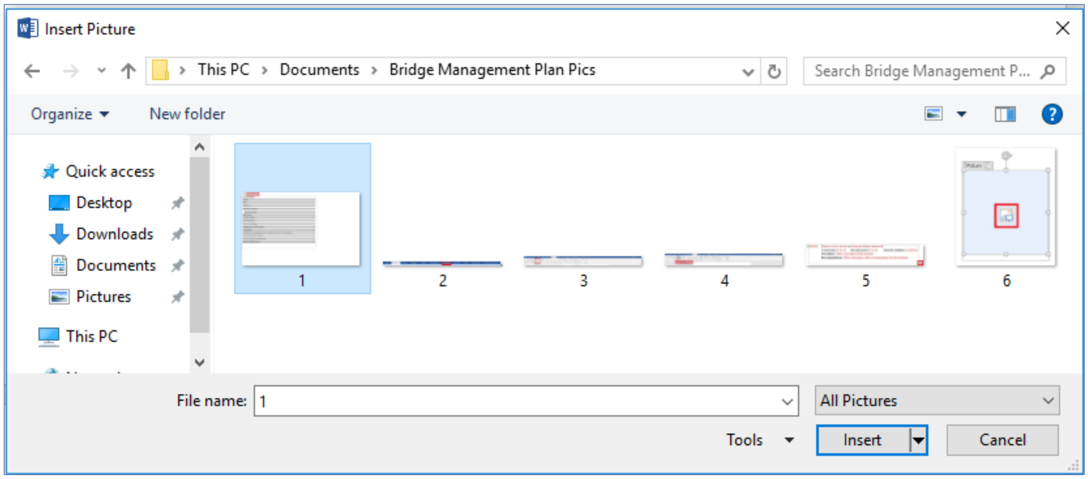
⇨ The *Insert Pictures* dialogue box will open (shown below).

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



⇨ The *Insert Picture* window will open (see figure below).

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

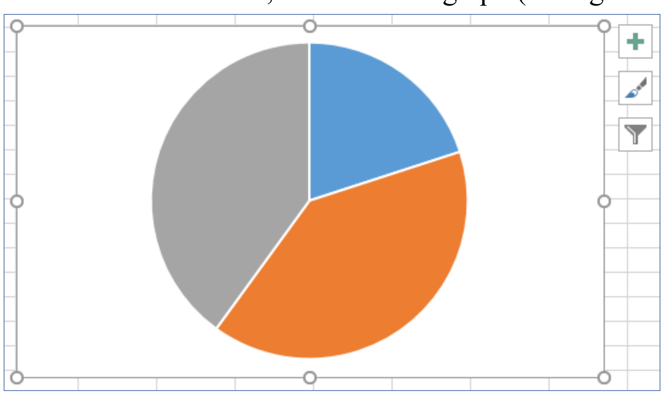


⇨ The *Picture* placeholder will be replaced with the selected logo or graphic.

Inserting charts

You may also choose to add Excel charts or graphs to your compliance plan Word template (i.e., CompliancePlan_v2019.docm). To insert Microsoft Excel charts/graphs into the Word document:

1. In the Excel workbook, select a chart/graph (see figure below).



2. In the Excel workbook's *Home* tab, 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 your compliance plan Word template (i.e., complianceplan_v2019.docm), place cursor at the position in the document where the chart or graph shoul be inserted.

   NOTE: If your compliance plan Word template was not open before you started this procedure, you may open it now.

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

   OR: Right-click where your cursor is positioned, and select **Paste** from the dropdown menu.

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

Inserting images

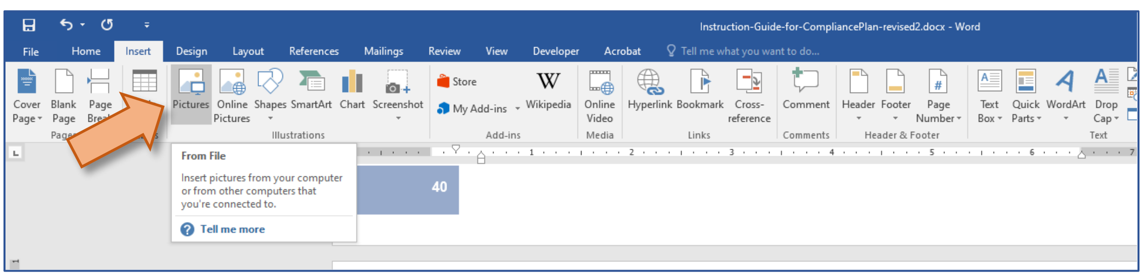
Maps and other images will help communicate your inventory of assets and your asset management goals.

NOTE: The procedure for creating maps in Roadsoft, exporting them as PDFs, and saving them as image files is detailed below.

To insert an image into the Word template:

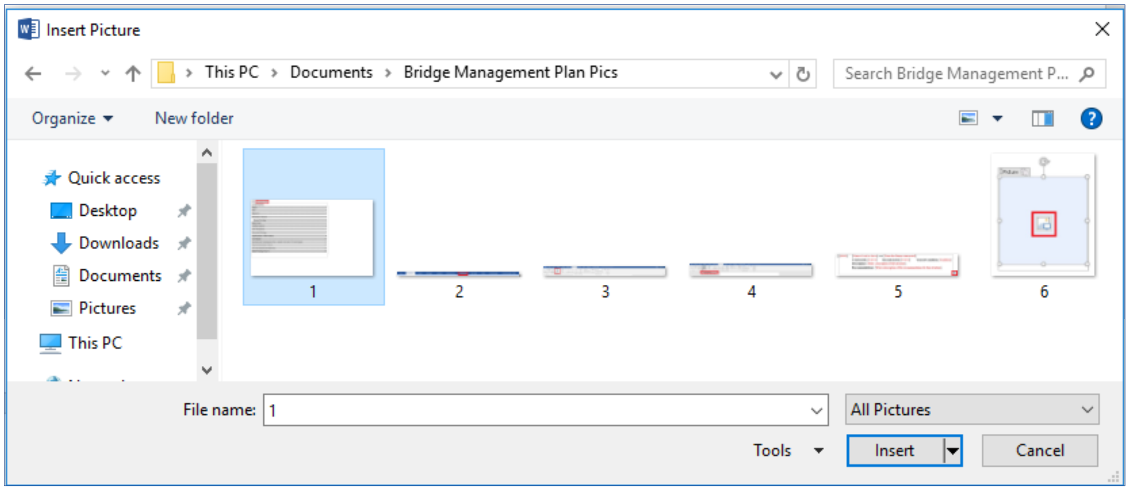
1. Place cursor where you desire to insert an image.

2. Select **Pictures** in the *Insert* ribbon *Illustrations* group.



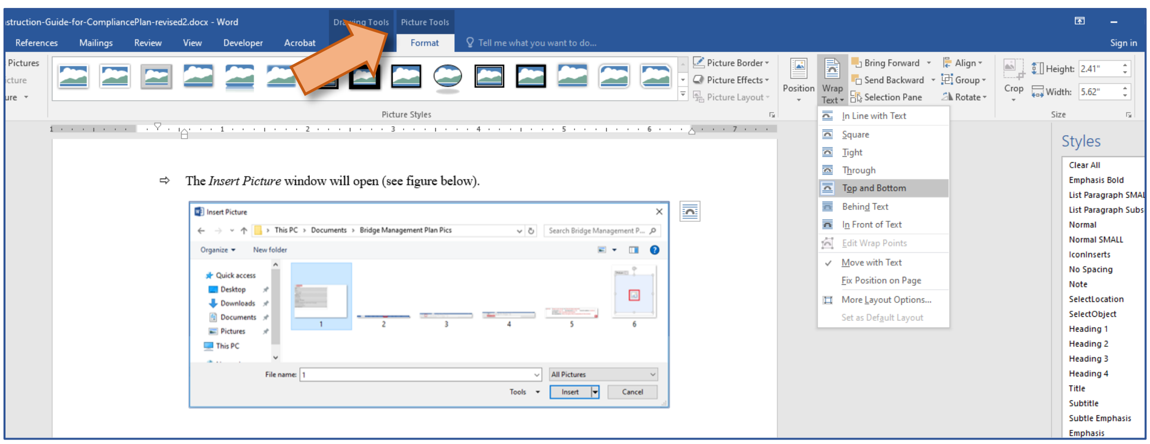
⇨ The *Insert Picture* window will open (see figure below).

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



⇨ The picture will insert into the Word template.

4. Adjust by selecting the image and using **Wrap Text** option in the *Picture Tools* > *Format* ribbon (see figure below).



Creating map images from Roadsoft

The compliance plan Word template has four map images: figure 1 – inventory of pavement assets, figure 6 – pavement assets' planned projects, figure 7 – inventory of bridge assets, and figure 9 – critical links in the road and bridge network. The following procedures detail the creation of each of these maps in Roadsoft and exporting them PDF files; an additional procedure explains the process of saving a PDF file as an image. The preceding section (above)—*Inserting content into the compliance plan Word Template*—details the procedure for inserting images into a Word document.

Creating image for 1. Pavement Assets > Inventory of Assets (Figure 1)

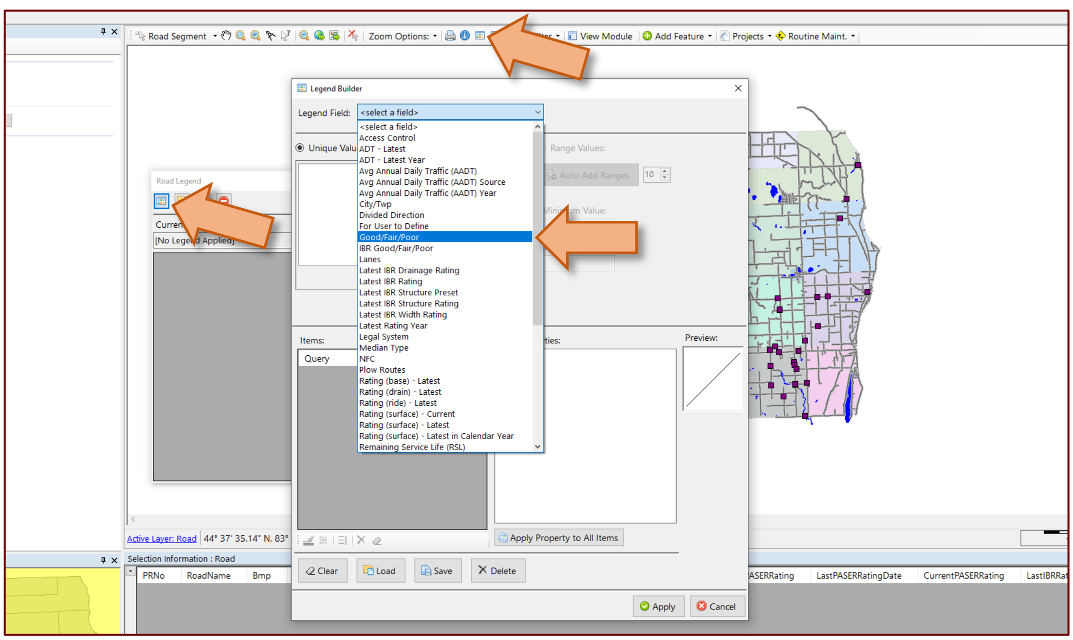
1. Display roads according to rating.

   a. Select **Show Legend Window** ( ) in the *Map tool options* bar.

   ⇨ The *Road Legend* window will open (see figure below).

   b. Select **Open Legend Builder** ( ) in the *Road Legend* window (see figure below).

   ⇨ The *Legend Builder* window will open (see figure below).



c. Choose the **Good/Fair/Poor** field from the *Legend Field* dropdown list (see figure above).

d. Move the good, fair, and poor rated road values down to the *Query* box of the *Legend Builder* window.

   i. Highlight good, fair and poor unique values by selecting the first value (e.g., Good), holding down the **Alt** key on your keyboard, and selecting the subsequent unique values (e.g., Fair and Poor).

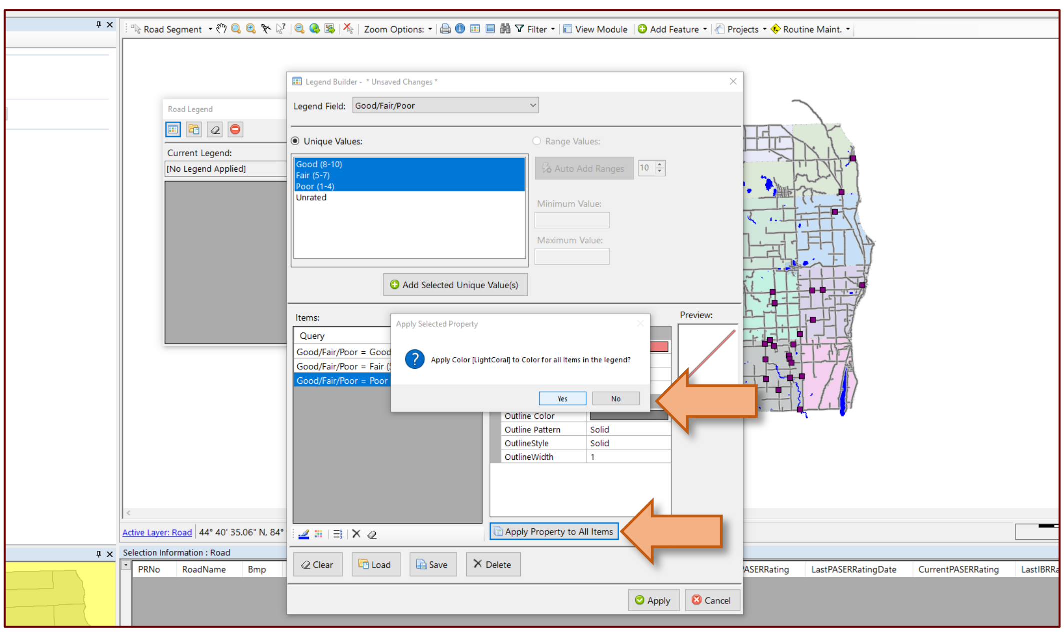
   ii. Select **Add Selected Unique Value(s)** (Add Selected Unique Value(s)).

e. Select one condition Query value in the *Items* list.

f. Adjust color and font size of the selected value using *Feature* and *Outline* in the *Item Properties* box (see figure below).

g. Select **Apply Property to All Items** to apply adjusted color and font size to all Query items (see figure below).

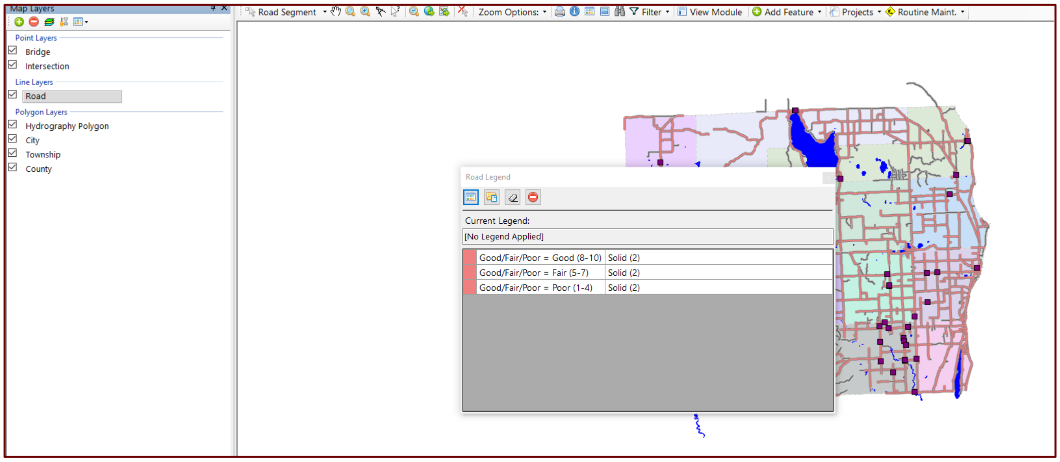
⇨ The *Apply Selected Property* dialogue box will open (see figure below).



h. Select **Yes** in the *Apply Selected Property* dialogue box (see figure above).

i. Select **Apply** (Apply) in the bottom right of the *Legend Builder* window once the legend settings are correct.

⇨ The *Road Legend* window will display the applied legends (see figure below).



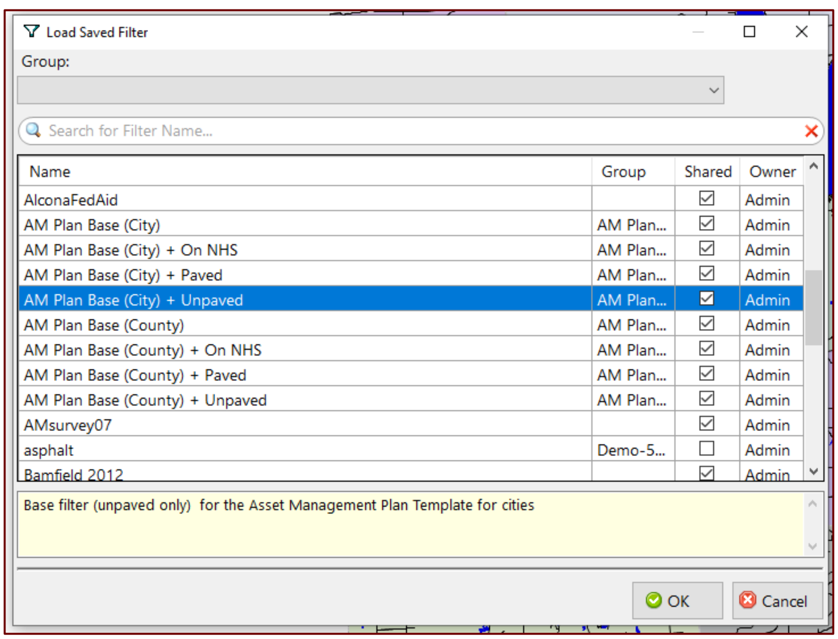
2. Add an unpaved road filter.

   a. Select *Filter* (Filter) in the *Map tool options* bar.

   b. Select **Apply Saved Filter as Selection…** from the *Filter* dropdown list.

⇨ The *Load Saved Filter* window will open (see figure below).

   c. From the list of filters, apply ***both*** the city ***and*** county unpaved roads filters (see figure below).

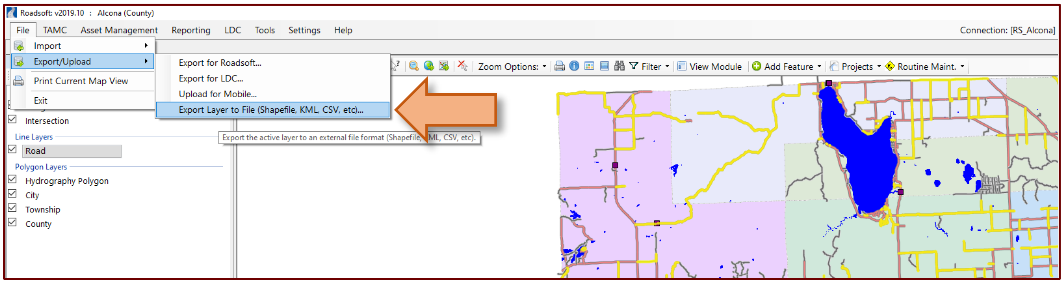


   d. Select **OK**.

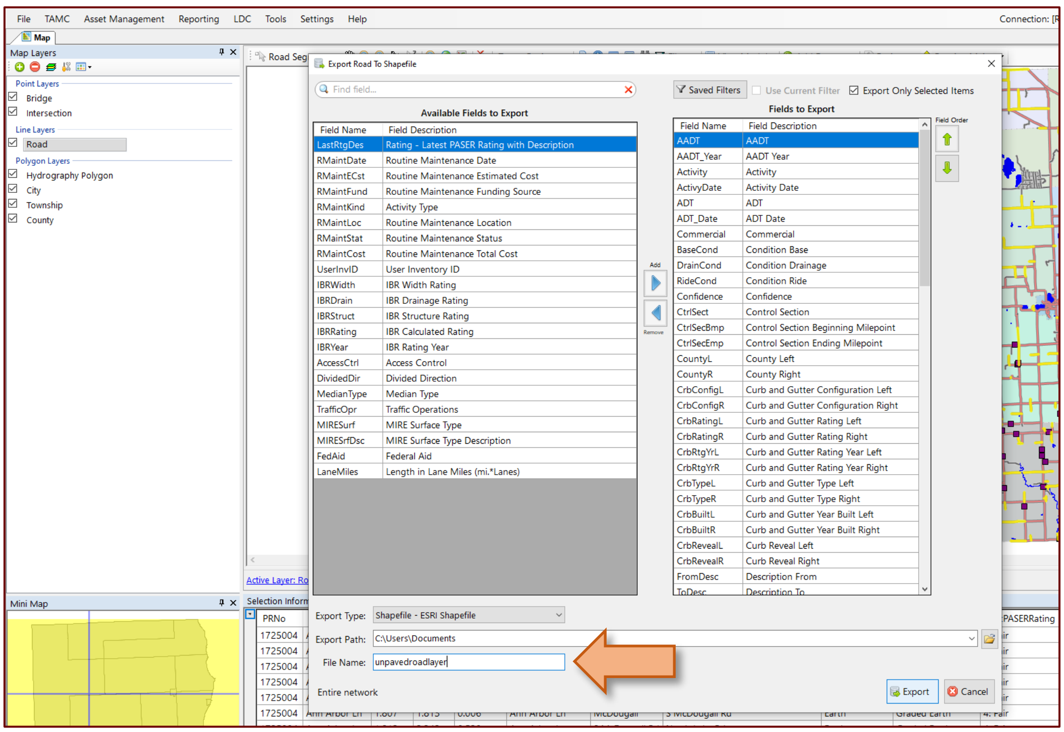
⇨ The filters will be applied.

e. Select **File** from the main menu, and select **Export/Upload** >.

f. Select **Export Layer to File** from the *Export/Upload* > flyout menu (see figure below).



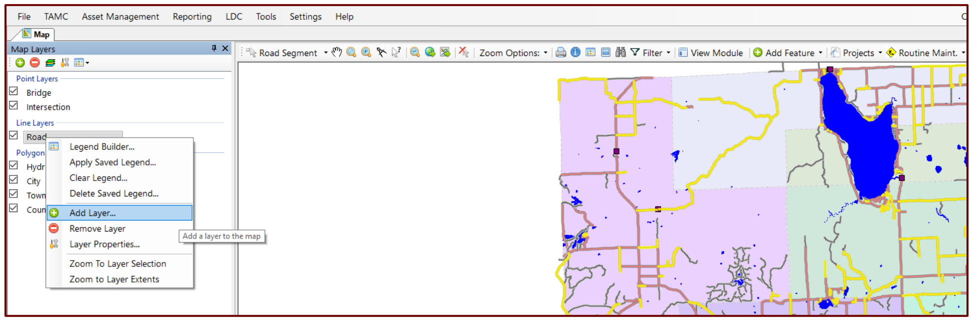
⇨ The *Export Road to Shapefile* window will open (see figure below).



g. Select an *Export Path* (e.g., folder where you are storing your materials for your compliance plan) and enter a *File Name* (e.g. unpavedroadlayer) (see figure above).

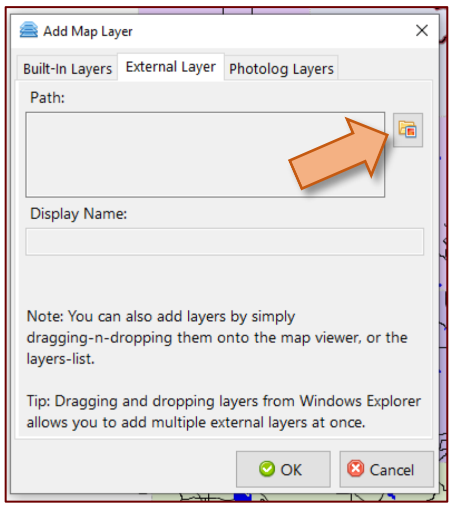
h. Import the shape file as a layer.

i. Right-click on **Road** from the *Map Layers* window (see figure below).



ii. Select **Add Layer** from the flyout menu (see figure above).

⇨ The *Add Map Layer* window will open (see figure below).

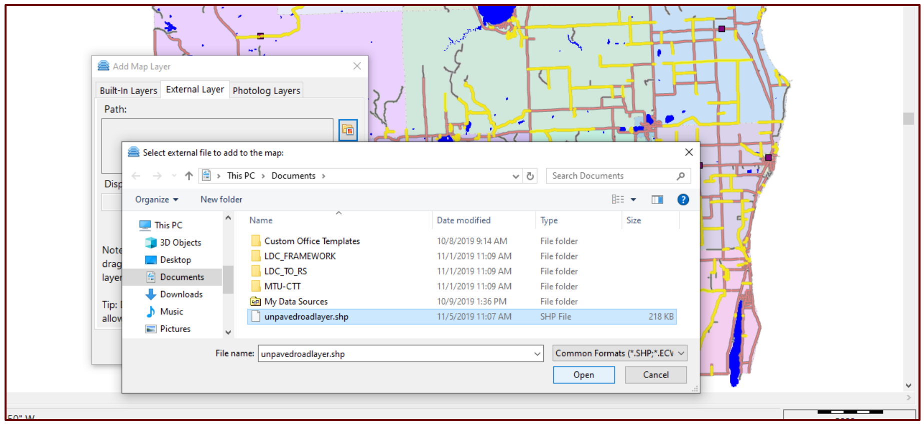


iii. Select the **External Layer** tab in the *Add Map Layer* window (see figure above).

iv. Browse for the exported shape file using the *Path* browse button (see figure above).

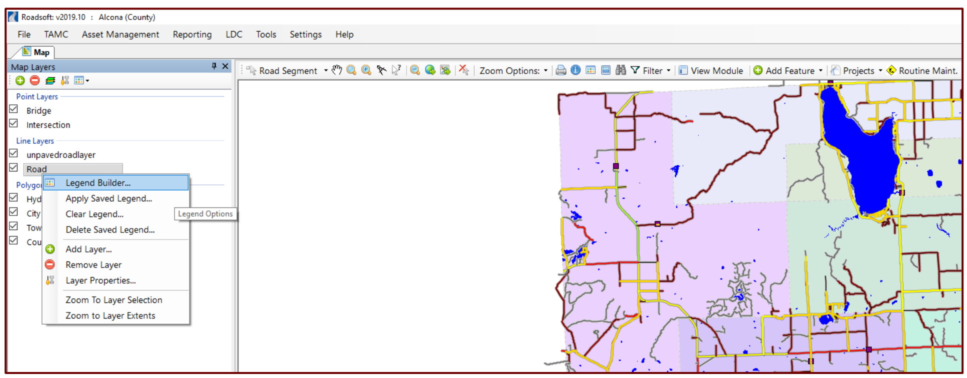
⇨ The *Select external file to add to the map* window will open (see figure below).

v. Navigate in the *Select external file to add to the map* window to the shape file exported in step 1, select the shape file, and select **Open**. (see figure below).



vi. Select **OK** in the *Add Map Layer* window.

⇨ The shape file will be added as a *Line Layer* in the *Map Layers* window (see figure below).



i. Right-click on the **Road** category once again (see figure above).

j. Select **Layer Properties** ( ).

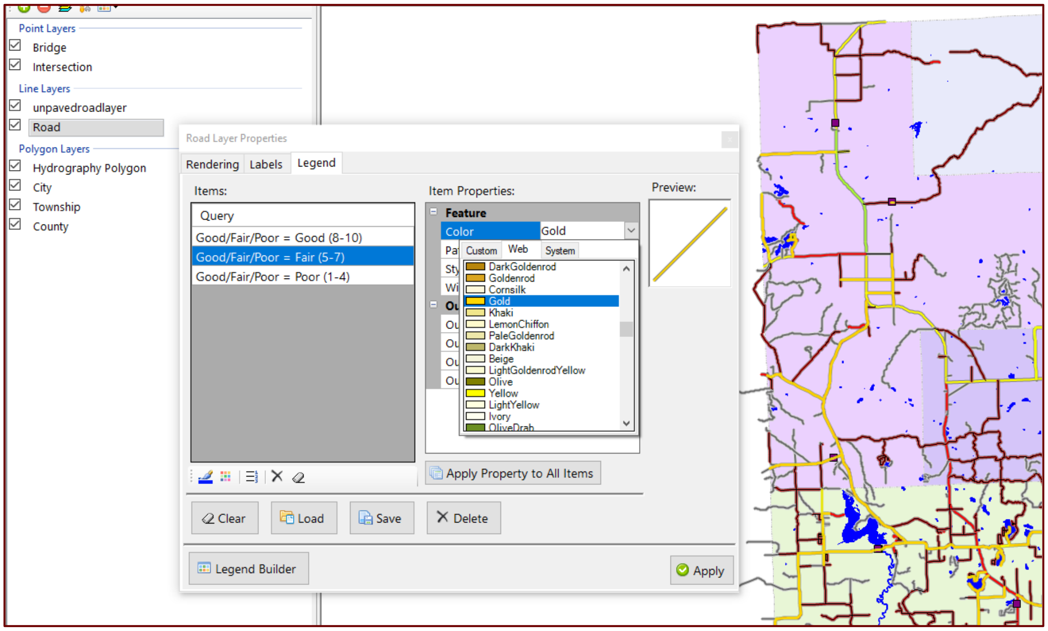
⇨ The *Road Layer Properties* window will open (see figure below).

k. Select the **Legend** tab of the *Road Layer Properties* window (see figure below).

l. Adjust color and font size of the roads in the unpaved road layer (see figure below).

m. Select **Apply** (see figure below).

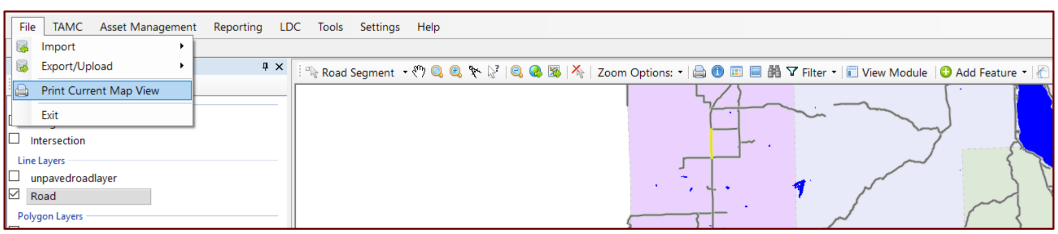
n. Ensure that both the **shape layer** (e.g., unpavedroadlayer) and the **Road** layer are selected in the *Line Layers* group of the *Map Layers* window; de-select the **Bridge** and **Intersection** layers of the *Point Layers* group.



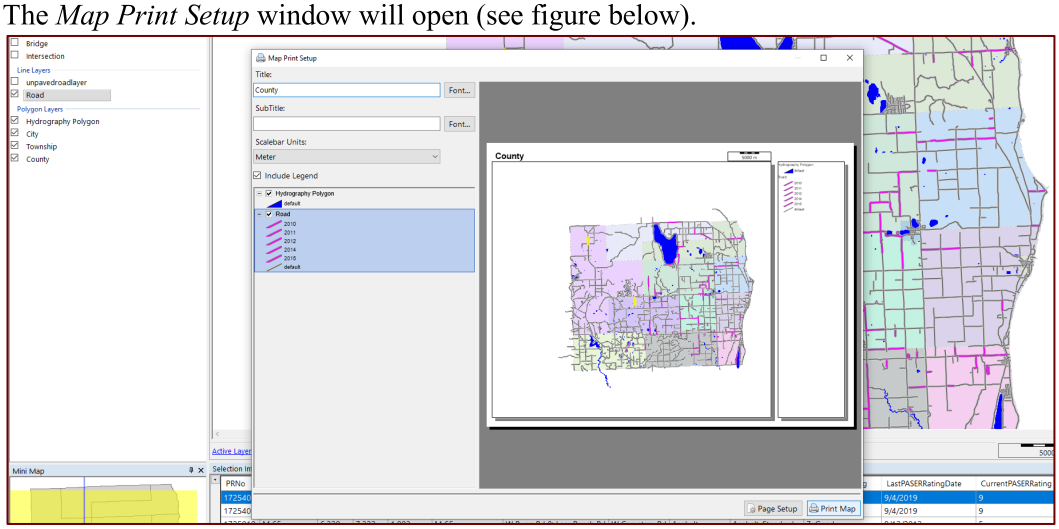
3. Print the map as a PDF.

   a. When the map is ready, select **File** from the main menu (see figure below).

   b. Select **Print Current Map View** from the *File* menu (see figure below).



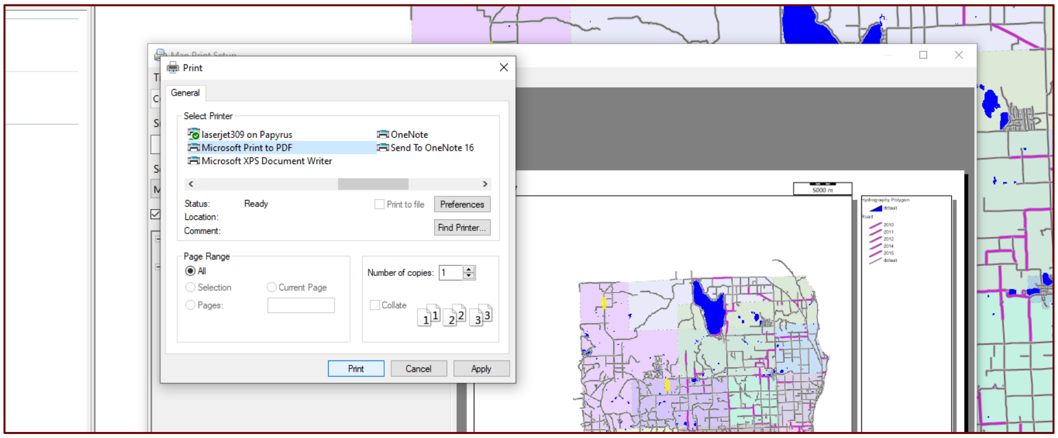
⇨ The *Map Print Setup* window will open (see figure below).



c. Enter desired label information into the *Title* and *Subtitle* input boxes, and adjust the *Scalebar Units* and *legend* as desired (see figure above).

d. Select **Print Map** (see figure above).

⇨ The Windows *Print* window will open (see figure below).



e. Select **Microsoft Print to PDF** from the *Print* window (see figure above).

f. Select **Print** (see figure above).

⇨ The *Save Print Output As* window will open.

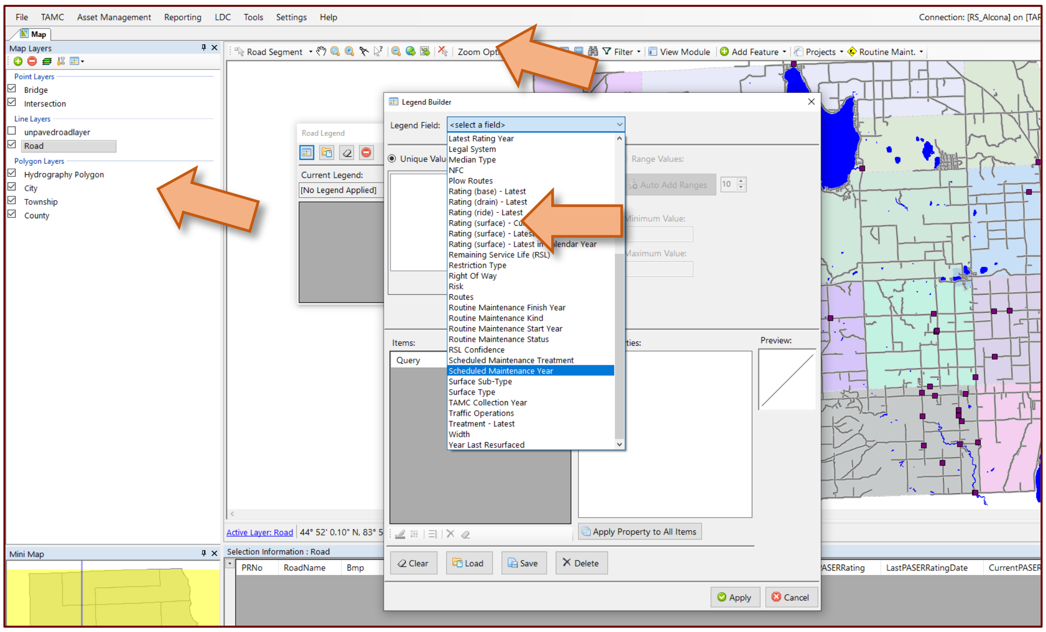
g. Navigate in the *Save Print Output As* window to the desired folder containing compliance plan materials, enter a descriptive file name in the *File name* input box (e.g., ***complianceplan_figure1***), and select **Save**.

Creating image for 1. Pavement Assets > Planned Projects (Figure 6)

1. View projects.

   a. Select **Show Legend Window** ( ) in the *Map tool options* bar.

   ⇨ The *Road Legend* window will open (see figure below).

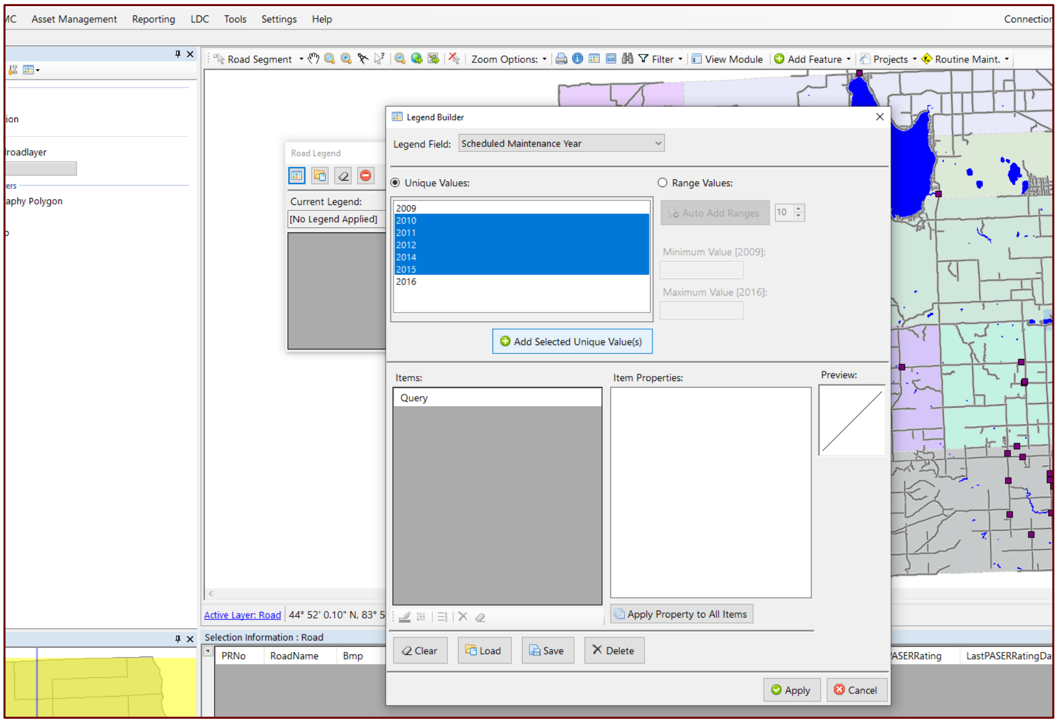


   b. Select **Open Legend Builder** ( ) in the *Road Legend* window (see figure above).

   ⇨ The *Legend Builder* window will open (see figure above).

   c. Select **Scheduled Maintenance Year** from the *Legend Field* dropdown box in the *Legend Builder* window (see figure above).

⇨ Relevant unique values will populate the *Unique Values* box (see figure below).



d. Select a span of years in the *Unique Values* box by clicking the first year, holding down the **Shift** key, and then clicking the last year in the range (see figure below).

NOTE: Since the compliance plan is looking forward at the project you plan to do on your network, the selected span of years should begin during or after the publication year of your compliance plan and include the subsequent years corresponding to the subsequent years covered in your compliance plan.

⇨ All the selected years should be highlighted in blue.

e. Select **Add Selected Unique Value(s)** (Add Selected Unique Value(s)) in the *Unique Values* box of the *Legend Builder* window (see figure above).

NOTE: The years should appear in the *Items* box (lower left).

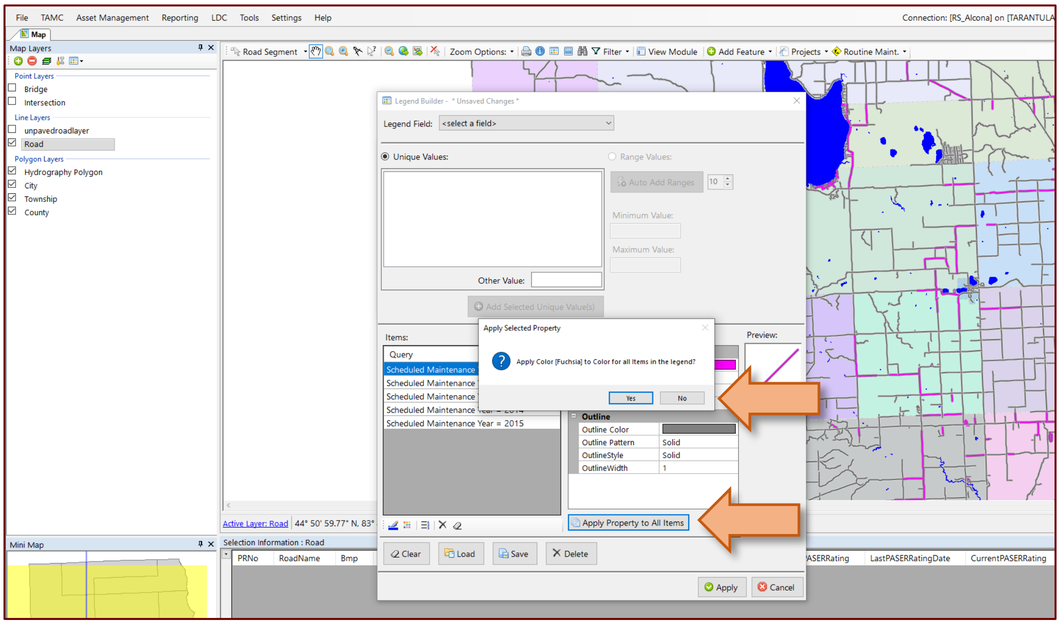
NOTE: If any other values are listed in the *Items* box, these values should be deleted so that only the desired project years are listed (see figure below).

f. Select one year Query item in the *Items* list.

g. Adjust color and font size of the selected item using *Feature* and *Outline* in the *Item Properties* box (see figure below).

h. Select **Apply Property to All Items** to apply adjusted color and font size to all Query items (see figure below).

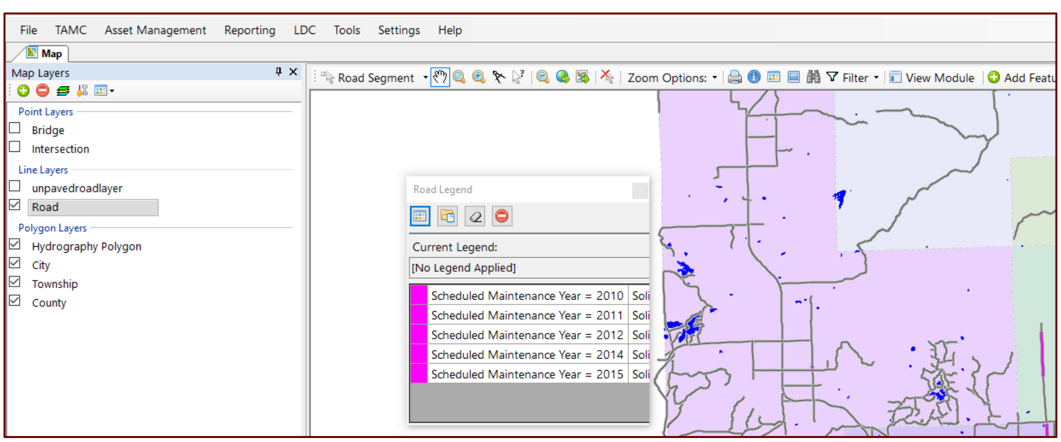
i. The *Apply Selected Property* dialogue box will open (see figure below).



j. Select **Yes** in the *Apply Selected Property* dialogue box (see figure above).

k. Select **Apply** (Apply) in the bottom right of the *Legend Builder* window once the legend settings are correct.

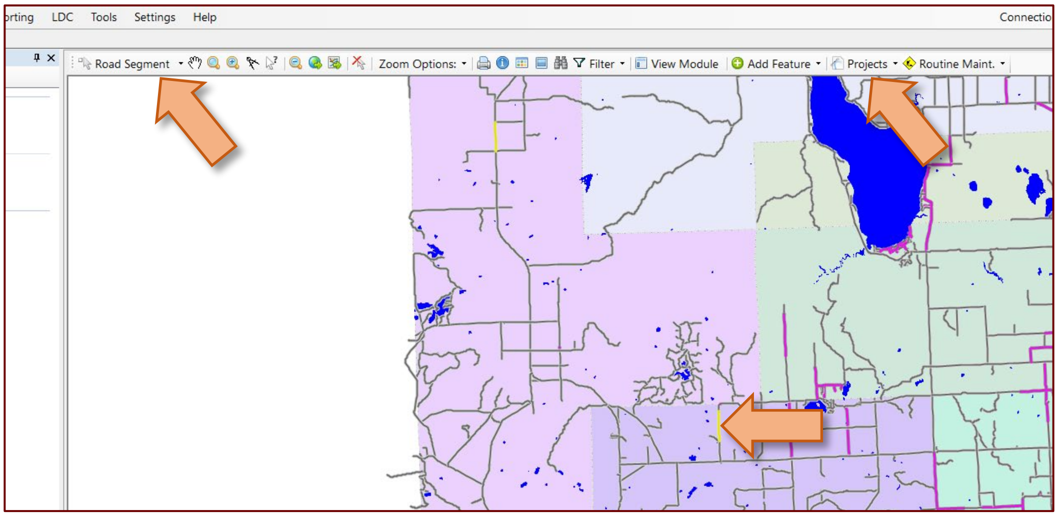
⇨ The *Road Legend* window will display the applied legends (see figure below).



l. Ensure that the **Road** layer is selected in the *Line Layers* group of the *Map Layers* window; de-select the **Bridge** and **Intersection** layers of the *Point Layers* group (see figure above).

2. Create a new project.

   a. In the *Map* window, select **Road Segment** in the *Map tool options* bar (see figure below).



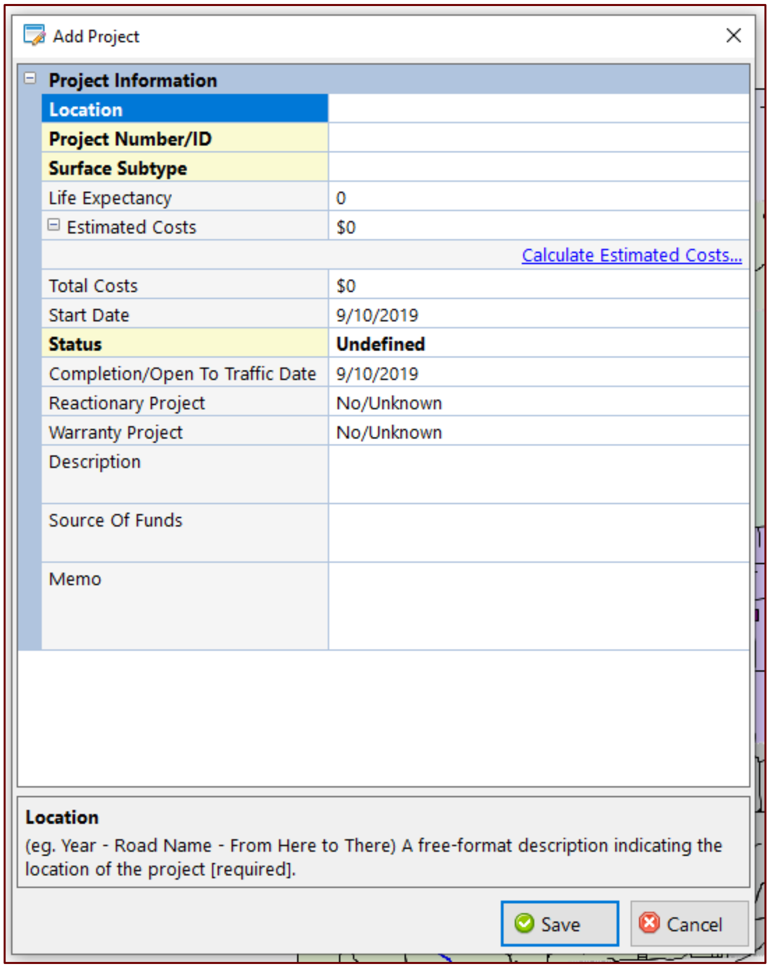
   b. Select the segment(s) of road on the map where the project will take place (see figure above).

⇨ Selected segment(s) will be highlighted.

   c. Select the **Projects** in the *Map tool options* bar (see figure above).

   d. Select **Add Project Using Selection…** in the *Projects* dropdown menu.

⇨ The *Add Project* window will open (see figure below).



e. Fill out *Project Information* fields (i.e., Location, Project Number/OD. Surface Subtype, Life Expectancy, Estimated Costs, Total Costs, Start Date, status, Completion/Open To Traffic Date, Reactionary Project, Warranty Project, Description, Source of Funds, Memo).

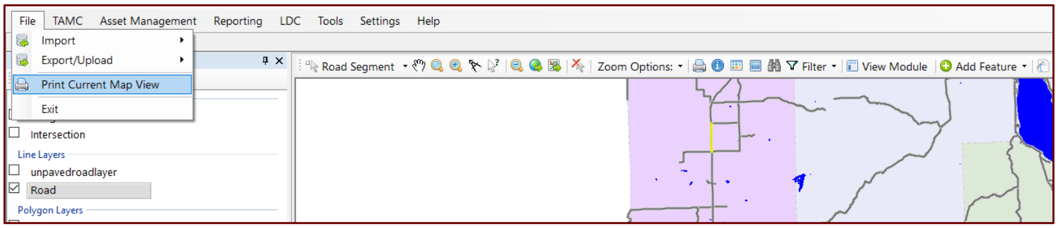
NOTE: As long as the *Start Date* field data falls within the selected span of years (see step 1.c), the road segments will be displayed with the same color as the other road projects within the same span of years.

f. Select **Save**.

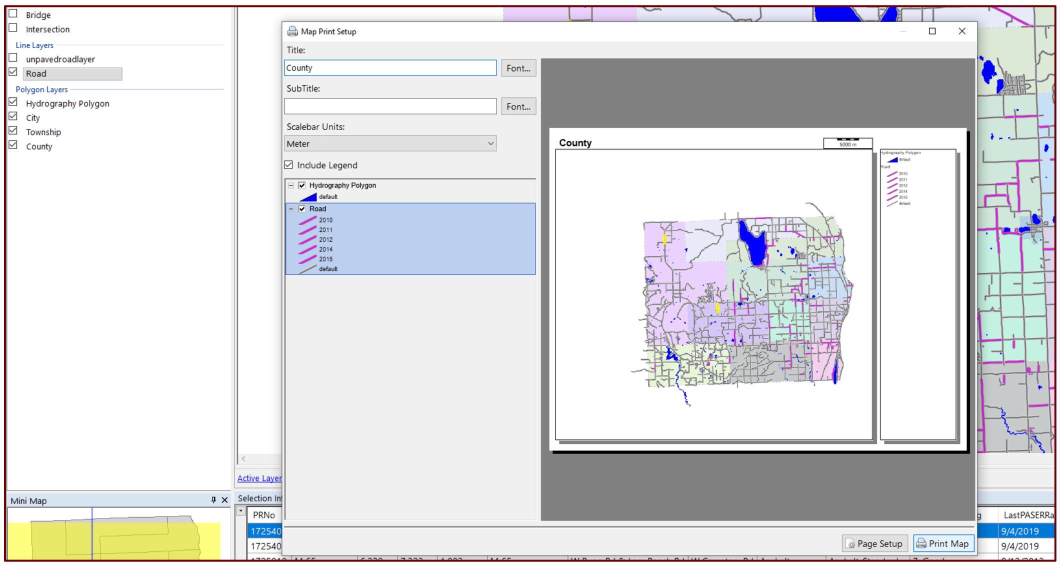
3. Print the map as a PDF.

a. When the map is ready, select **File** from the main menu (see figure below).

b. Select **Print Current Map View** from the *File* menu (see figure below).



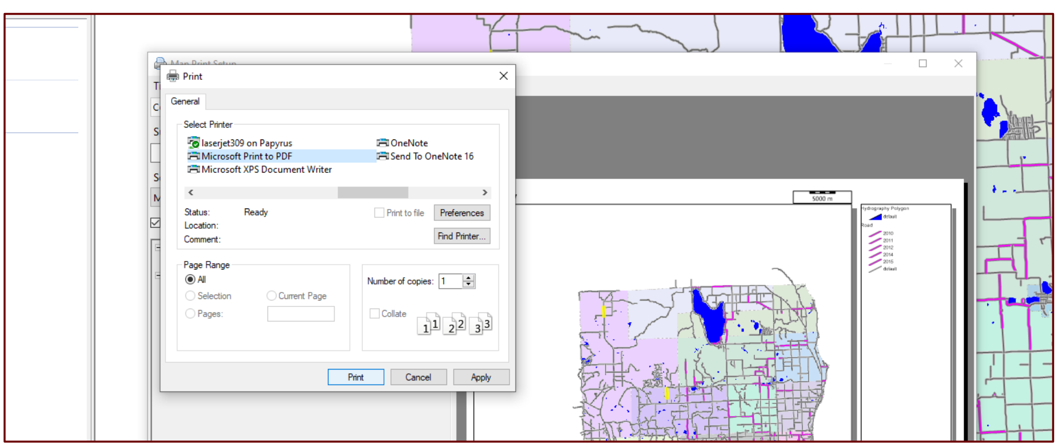
⇨ The *Map Print Setup* window will open (see figure below).



c. Enter desired label information into the *Title* and *Subtitle* input boxes, and adjust the *Scalebar Units* and *legend* as desired (see figure above).

d. Select **Print Map** (see figure above).

⇨ The Windows *Print* window will open (see figure below).



e. Select **Microsoft Print to PDF** from the *Print* window (see figure above).

f. Select **Print** (see figure above).

⇨ The *Save Print Output As* window will open.

g. Navigate in the *Save Print Output As* window to the desired folder containing compliance plan materials, enter a descriptive file name in the *File name* input box (e.g., ***complianceplan_figure6***), and select **Save**.

Creating image for 2. Bridge Assets > Inventory of Assets (Figure 7)

1. Display bridges according to rating.

a. Ensure **Road** is selected in the *Line Layers* group of the *Map Layers* window but has no legends associated with it.

NOTE: To view legends associated with the *Road* layer:

i. Select **Road** in the *Map Layers* window.

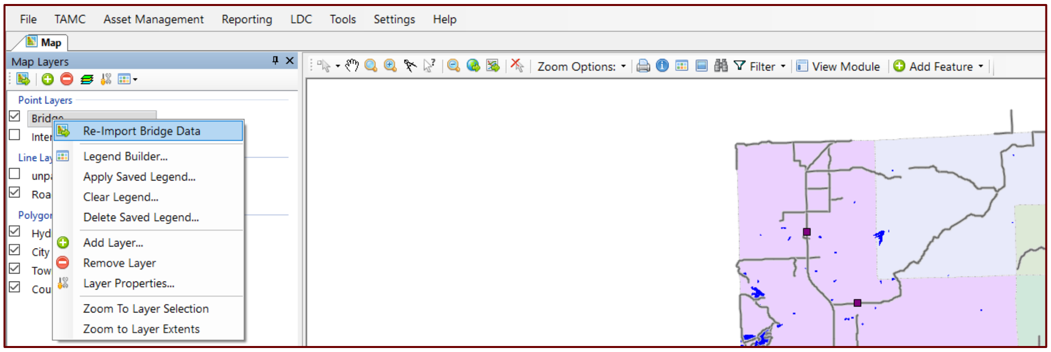
ii. Select **Show Legend Window** ( ) in the *Map tool options* bar.

iii. Select any legends listed, and select **Delete a saved legend** ( ).

b. Select **Bridge** in the *Map Layers* window.

⇨ A prompt will appear if bridge data needs to be imported.

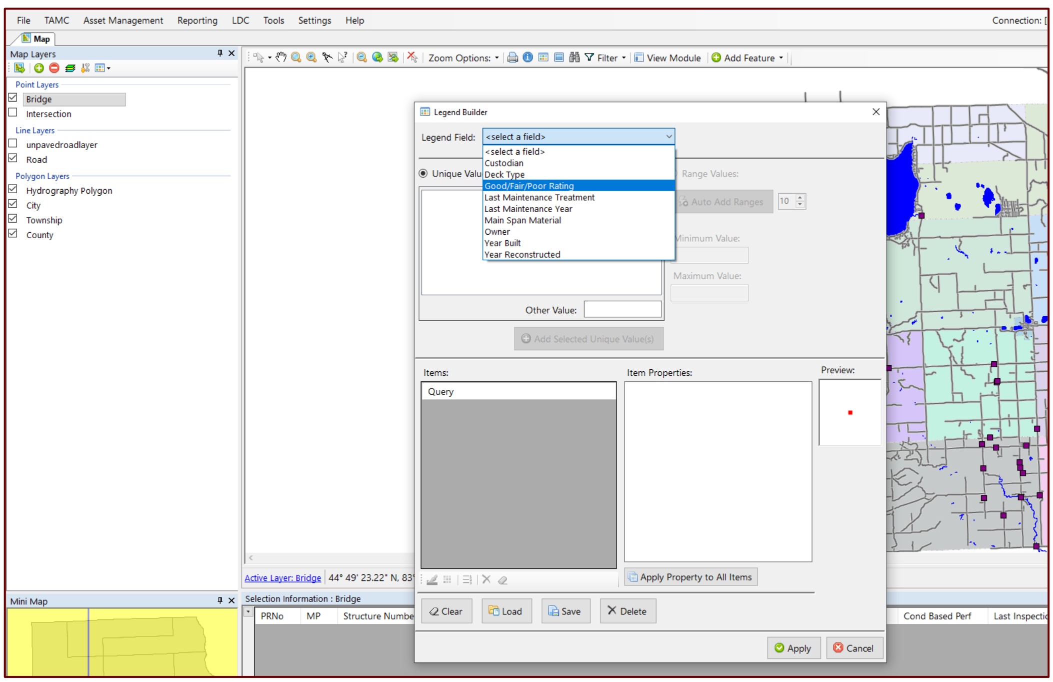
NOTE: To re-import bridge data, right-click on the **Bridge** and select **Re-Import Bridge Data** from the dropdown menu (see figure below).



c. Right-click on **Bridge** in the *Map Layers* window.

d. Select **Legend Builder…** ( ) from the dropdown menu.

⇨ The *Legend Builder* window will open (see figure below).



e. Select **Good/Fair/Poor Rating** from the *Legend Field* dropdown list.

⇨ Relevant unique values will populate the *Unique Values* box.

f. Select the **Good**, **Fair**, and **Poor** values by clicking the value (e.g., Good), holding down the **Ctrl** key, and then clicking all subsequent desired values (e.g., Fair and Poor).

⇨ All the selected unique values should be highlighted in blue.

g. **Add Selected Unique Value(s)** (Add Selected Unique Value(s)) in the *Unique Values* box of the *Legend Builder* window.

NOTE: The good, fair, and poor values should appear in the *Items* box (lower left).

NOTE: If any other values are listed in the *Items* box, these values should be deleted so that only the desired project years are listed (see figure below).

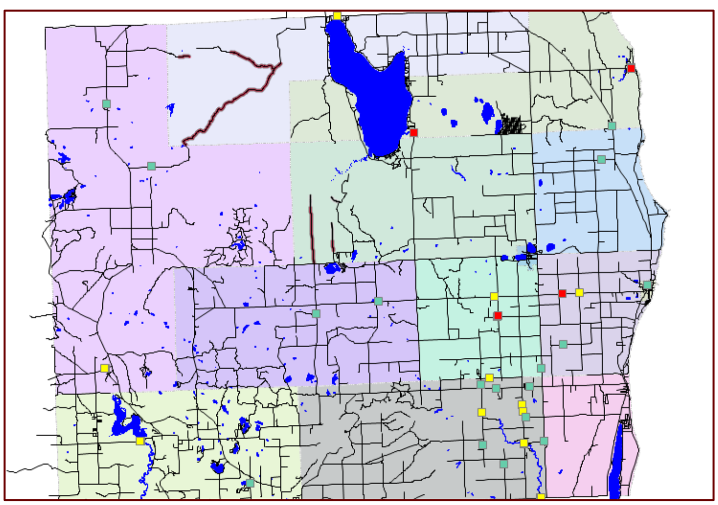
h. Select the first Query item in the *Items* list, i.e., **Good/Fair/Poor Rating = Good**.

i. Adjust color to green and font size of the selected item using *Feature* and *Outline* in the *Item Properties* box.

j. Repeat steps 1h and 1i for **Good/Fair/Poor Rating = Fair** adjusting color to yellow and **Good/Fair/Poor Rating = Poor** adjusting color to red.

k. Select **Apply** (Apply).

⇨ The map will display all bridges in the county with the rating-specific legend applied (see figure below).

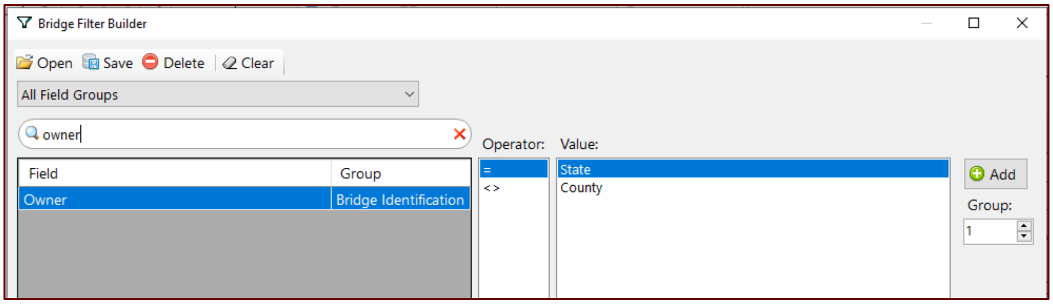


2. Add a filter to display bridges based on ownership.

a. Select **Filter** (Filter) in the *Map tool options* bar.

b. Select **Filter Builder…** from the *Filter* dropdown menu.

⇨ The *Bridge Filter Builder* window will open (see figure below).



c. Search for "owner" in the search bar of the *Bridge Filter Builder* window (see figure above).

d. Select **Owner** in the *Field* list (see figure above).

⇨ The available operator(s) and value(s) will display.

e. Select the desired operator in the *Operator* box and the desired value(s) associated with the selected operator in the *Value* box (see figure above)

f. Select **Add** (to the right of the Value box) (see figure above).

g. Select **Apply as Filter** in the *Bridge Filter Builder* window.

NOTE: You may be prompted to save this filter in order to apply it. In this case, the *Save Filter* window will open; enter a unique name in the *Name* input box, (optional) associate the filter with a group using the *Group* dropdown list, (optional) share/create a private the filter by selecting/de-selecting *Shared Filter* check box, and then select **Save As**. Alternatively, if you are updating an already-saved filter, you may have to re-save the filter; select **Save** in the window prompting you to update the saved filter.

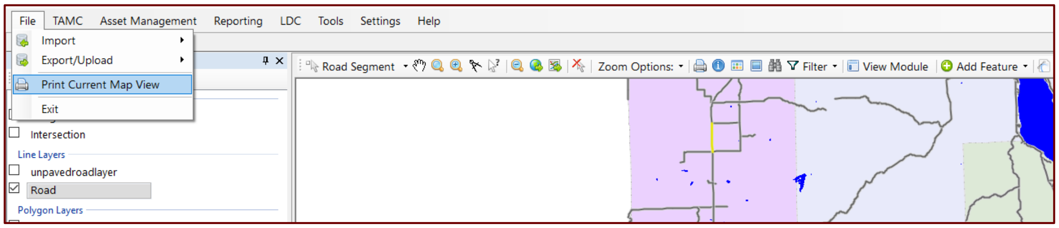
h. Exit the *Bridge Filter Builder* window using the **x** in the top right corner.

i. Check to make sure only the bridges owned by the value(s) chosen are displayed on the map.

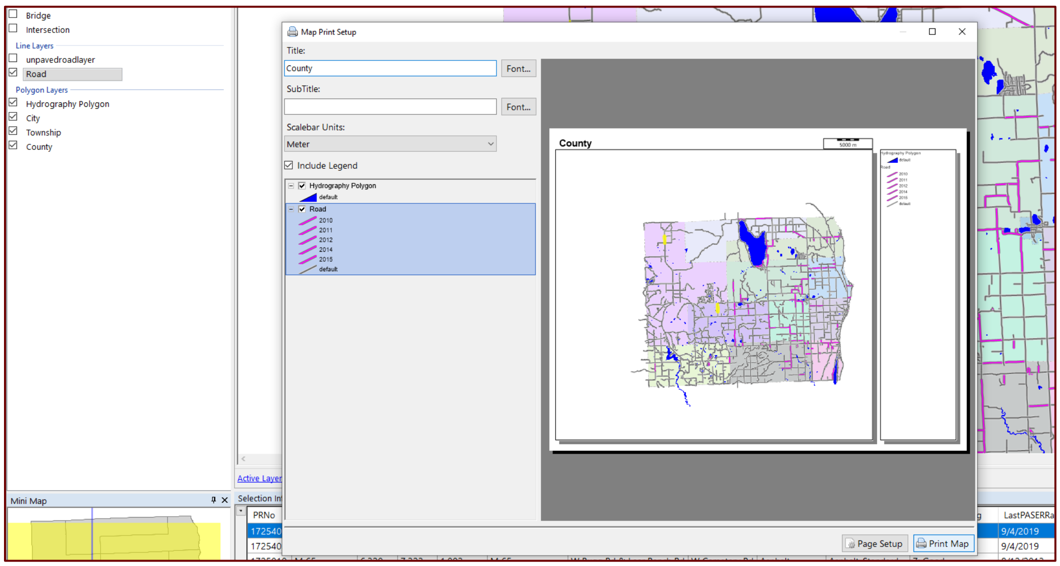
3. Print the map as a PDF.

a. When the map is ready, select **File** from the main menu (see figure below).

b. Select **Print Current Map View** from the *File* menu (see figure below).



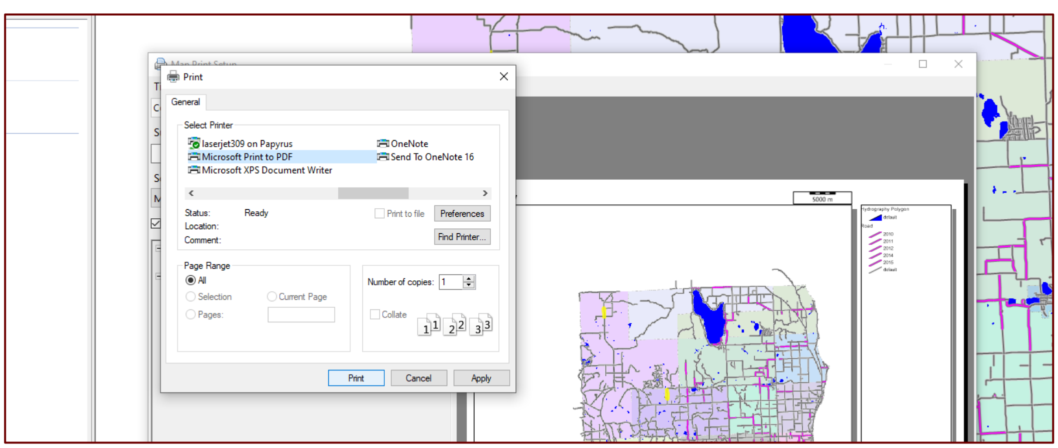
⇨ The *Map Print Setup* window will open (see figure below).



c. Enter desired label information into the *Title* and *Subtitle* input boxes, and adjust the *Scalebar Units* and *legend* as desired (see figure above).

d. Select **Print Map** (see figure above).

⇨ The Windows *Print* window will open (see figure below).



e. Select **Microsoft Print to PDF** from the *Print* window (see figure above).

f. Select **Print** (see figure above).

⇨ The *Save Print Output As* window will open.

g. Navigate in the *Save Print Output As* window to the desired folder containing compliance plan materials, enter a descriptive file name in the *File name* input box (e.g., ***complianceplan_figure7***), and select **Save**.

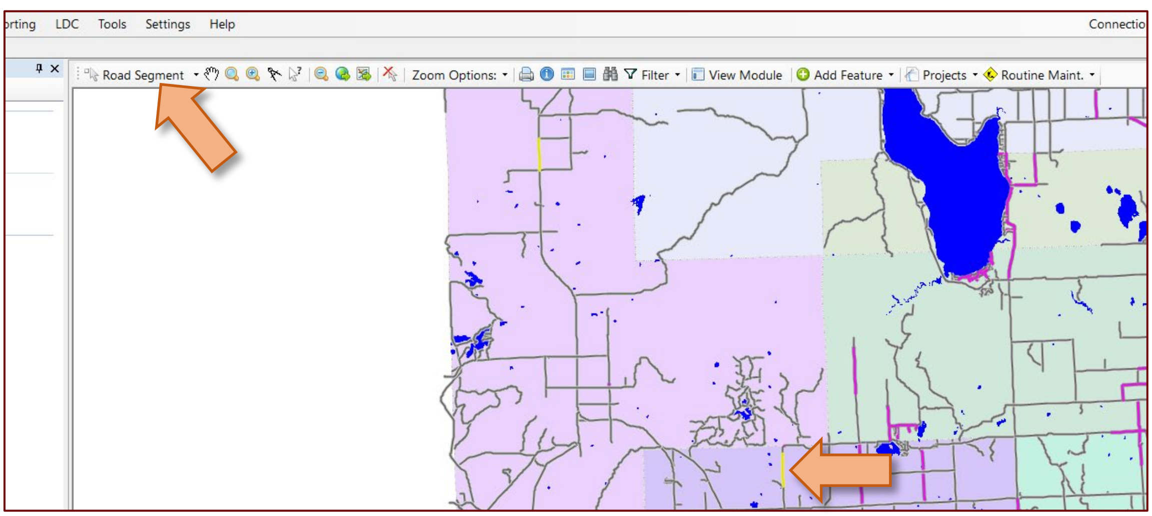
Creating image for 6. Risk of Failure Analysis (Figure 9)

1. Select **Road** in the *Map Layers* window.

2. Select **Road Segment** in the *Map tool options* bar (see figure below).

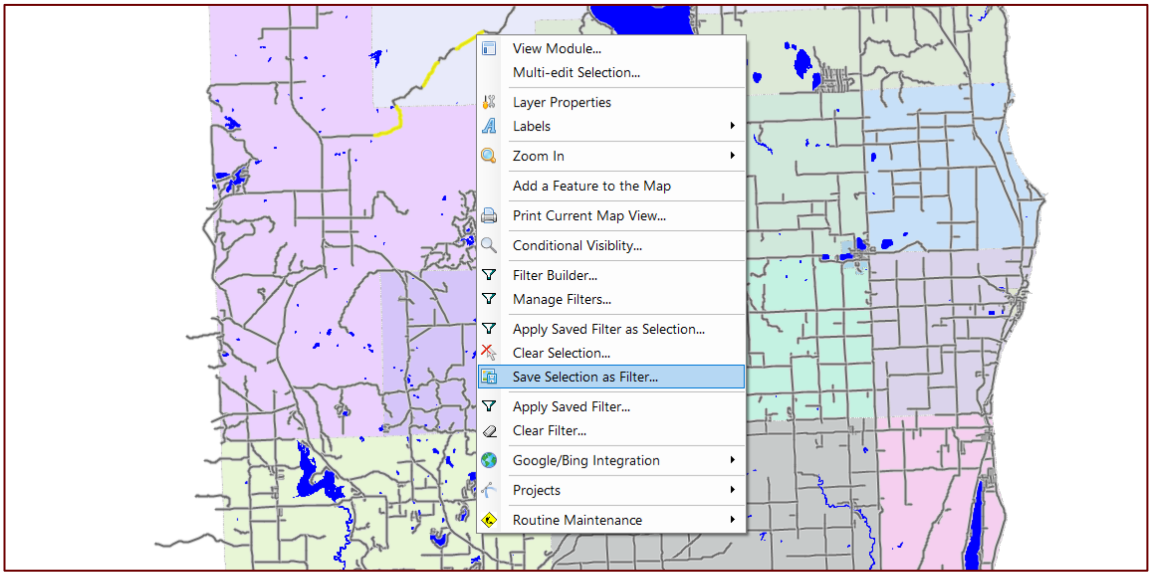
3. In the *Map* window, select a segment or multiple segments of road (see figure below).

   NOTE: Hold down the **Ctrl** on your keyboard when selecting with the mouse in order to make multiple selections, or hold down the **Alt** key on your keyboard when selecting with the mouse in order to de-select a segment.

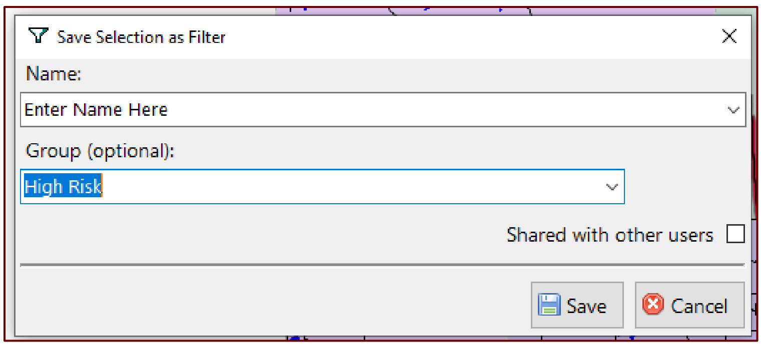


4. Right-click on any of the selected segments (see figure above).

5. Select **Save Selection as Filter…** from the dropdown list (see figure below).



⇨ The *Save Selection as Filter* window will open (see figure below).



6. Enter a name in the *Name* input box for filter.

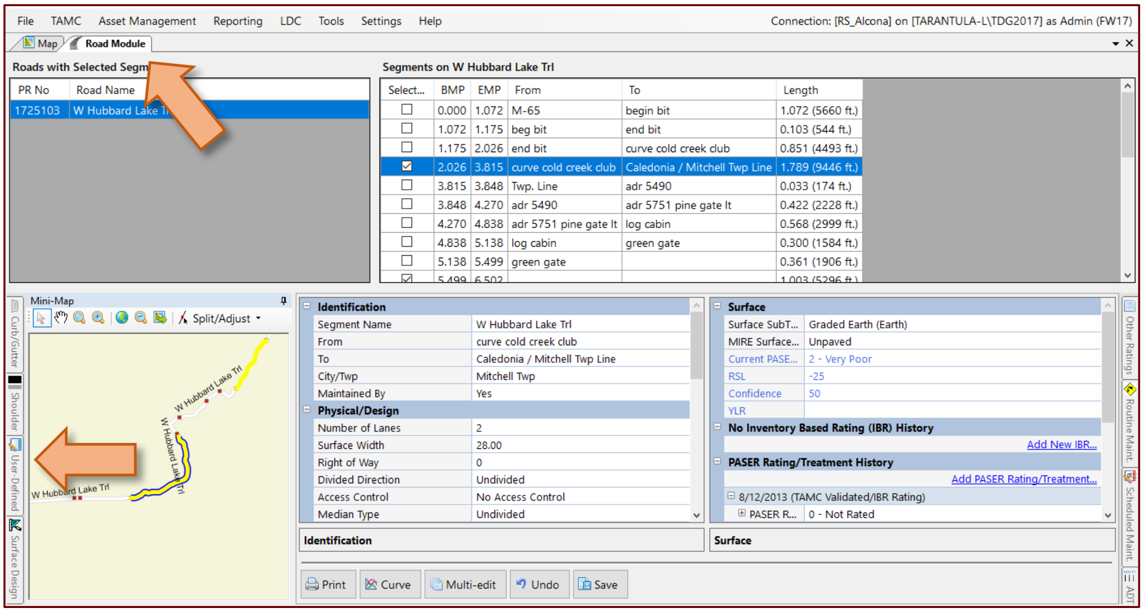
7. If a risk group already exists, select risk group from the *Group* dropdown list.

   OR: If a risk group does not exist, type in the name of a new risk group in the *Group* field.

8. Right-click on a selected high-risk segment in the *Map* window.

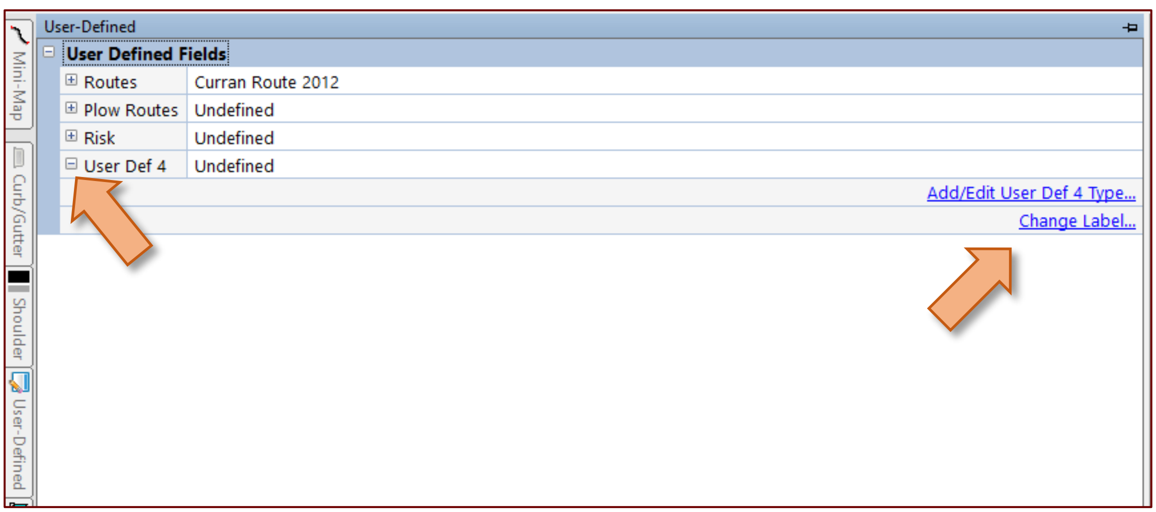
9. Select **View Module…** from the dropdown list.

⇨ The *Road Module* tab will open (see figure below).



10. Select the **User-Defined** tab located on the left side of the *Road Module* tab (see figure above).

⇨ The *User-Defined* window will display (see figure below).

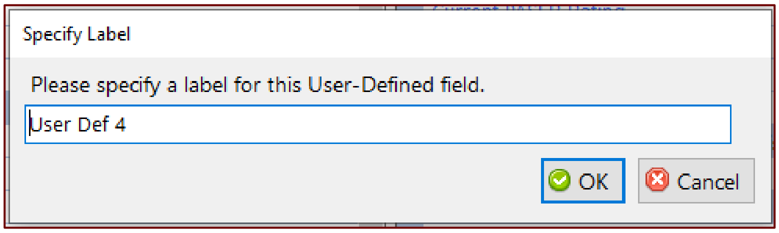


11. Select the plus sign to the left of the first user-defined field, “User Def 4” (see figure above).

⇨ This will expand the field options for that user defined field.

12. Select the **Change Label…** option associated with the *User Def 4* field options (see figure above).

⇨ The *Specify Label* window will open (see figure below).

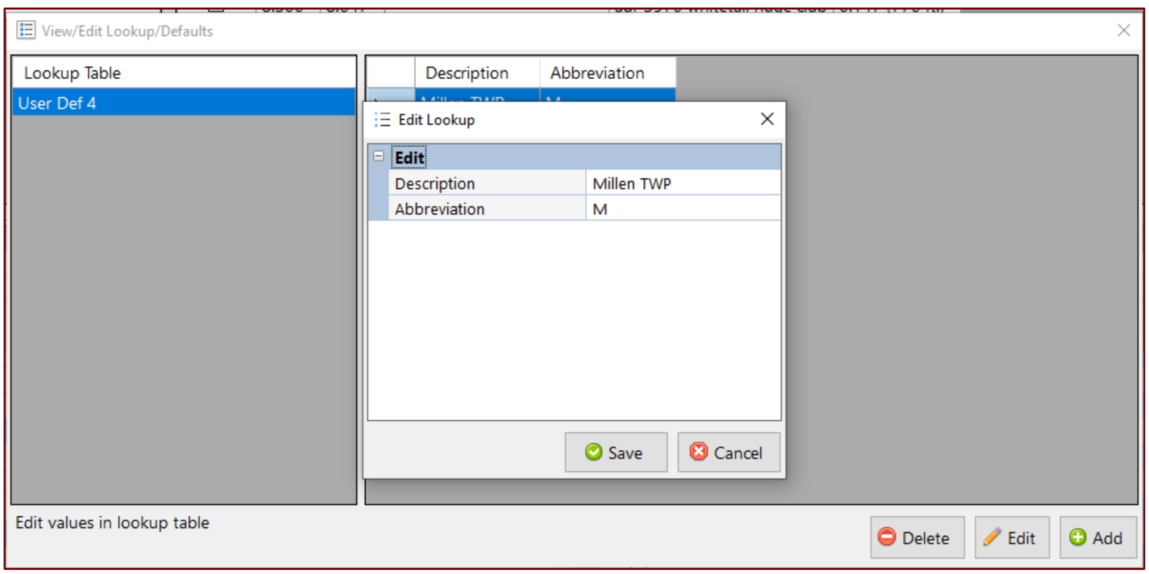


13. Enter a name for the user-defined field in the input box: "Risk" (see figure above).

14. Select **OK**.

15. Select the **Add/Edit Risk…** option associated with the *Risk* field options

⇨ The *View/Edit Lookup/Defaults* window will open (see figure below).



16. Select **Add** (see figure above).

⇨ The *Edit Lookup* window will open (see figure above).

17. Enter a new name in the *Description* input field and an abbreviation in the *Abbreviation* input field for the new high-risk section.

18. Select **Save**.

NOTE: Save these options for the "Risk" user-defined field before creating values for every other high-risk section.

19. Select the **X** in the top right corner of the *View/Edit Lookup/Defaults* window to close the window and return to the map when finished.

⇨ User-defined values will now be added to the *Road Module*.

NOTE: These newly-added user-defined values still need to be applied to the appropriate segments. The Multi-edit tool is used to accomplish this.

20. Select the **Map** tab.

21. Right-click on the map.

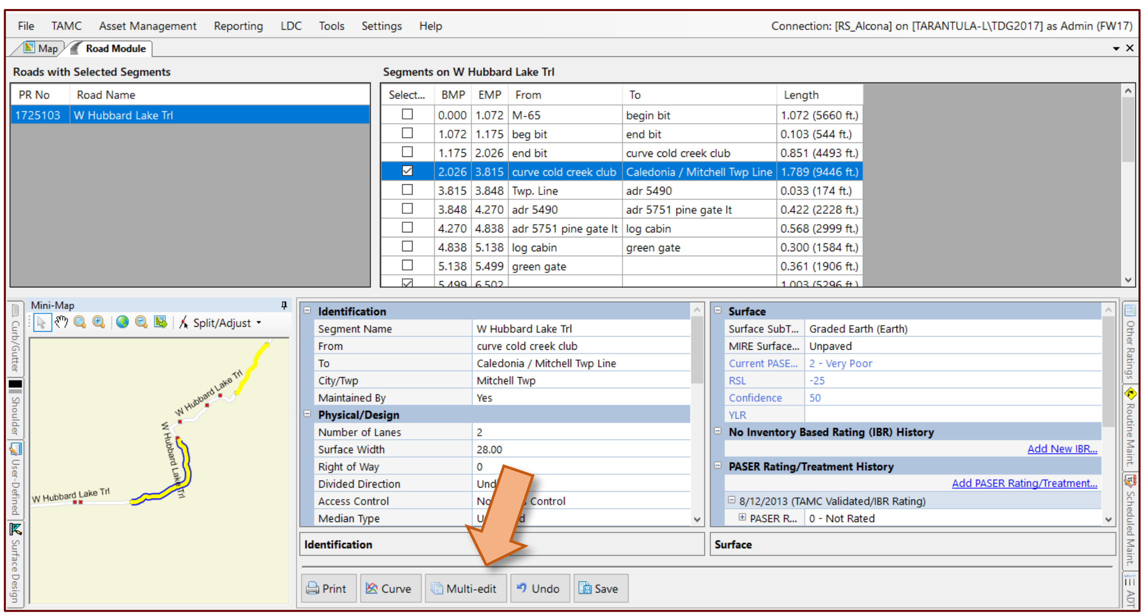
22. Select **Apply Saved Filter as Selection…** from the dropdown menu.

23. Use the *Group* dropdown to locate the *Risk* group.

24. Select **OK**.

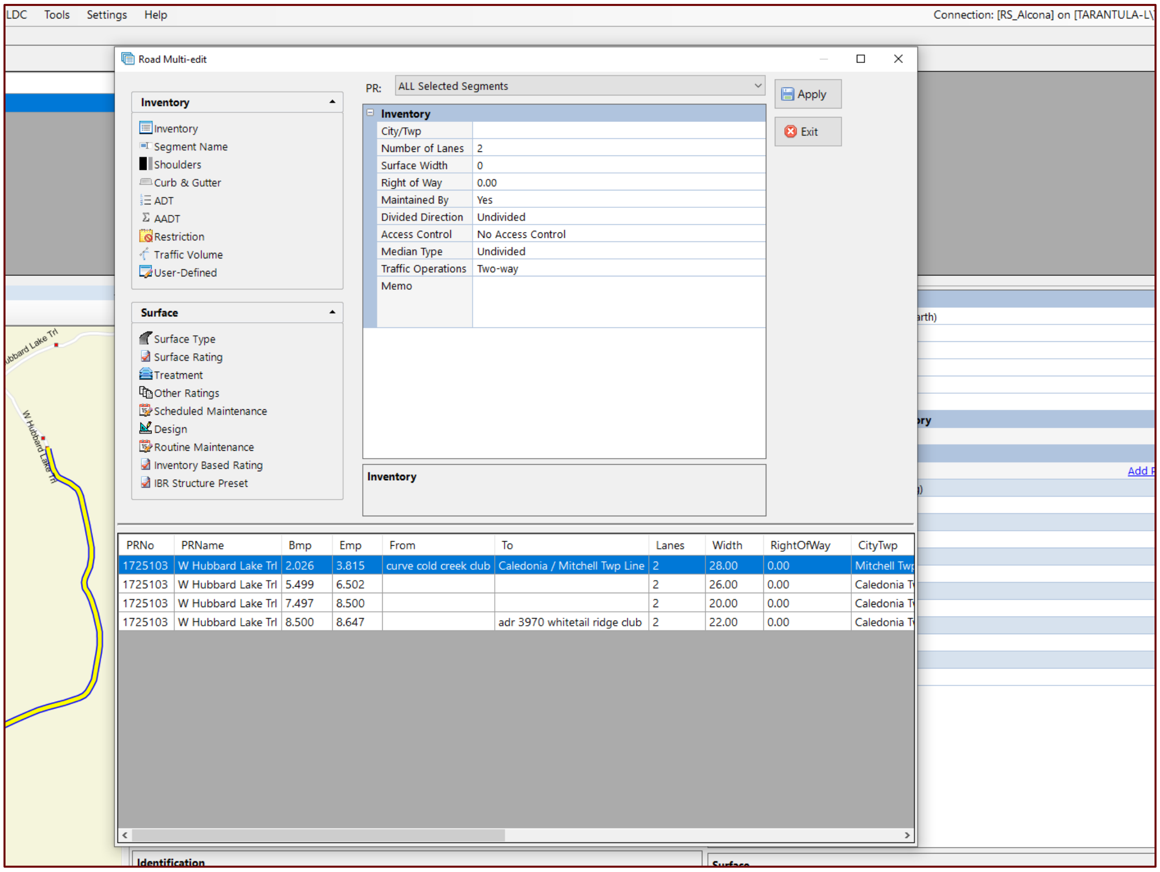
25. Select **View Module** (View Module) in the *Map tool options* bar.

26. Select **Multi-edit** (Multi-edit) in the *Road Module* tab (see figure below).



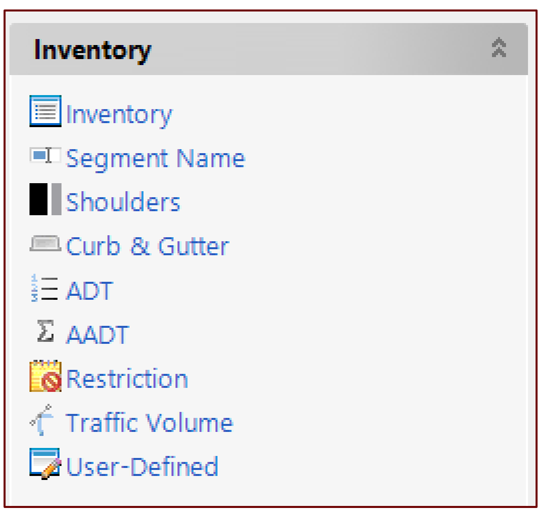
27. Select **All Segments** from the dropdown menu.

⇨ The *Road Multi-edit* window will open (see figure below).



28. Select **ALL Selected Segments** from the *PR* dropdown list.

29. Select **User-Defined** from the *Inventory* section of the window (see figure below).



30. Select Risk in the User Defined Fields box, and use the dropdown list at the right side of the field to select the first segment.

31. Repeat this steps 29 and 30 for each of the segments.

32. Apply legends to high-risk segments.

c. Select **Show Legend Window** ( ) in the *Map tool options* bar.

⇨ The *Road Legend* window will open (see figure below).

d. Select **Open Legend Builder** ( ) in the *Road Legend* window (see figure above).

⇨ The *Legend Builder* window will open (see figure above).

e. Select **Risk** from the *Legend Field* dropdown box in the *Legend Builder* window (see figure above).

⇨ Relevant unique values will populate the *Unique Values* box.

f. Select the desired segments.

⇨ All the selected segments should be highlighted in blue.

g. Select **Add Selected Unique Value(s)** (Add Selected Unique Value(s)) in the *Unique Values* box of the *Legend Builder* window.

h. Values will be added to the Query in the *Items* box.

i. Select the first Query item in the *Items* list.

j. Adjust the color and font size using *Feature* and *Outline* in the *Item Properties* box.

k. Select **Apply Property to All Items** to apply adjusted color and font size to all Query items.

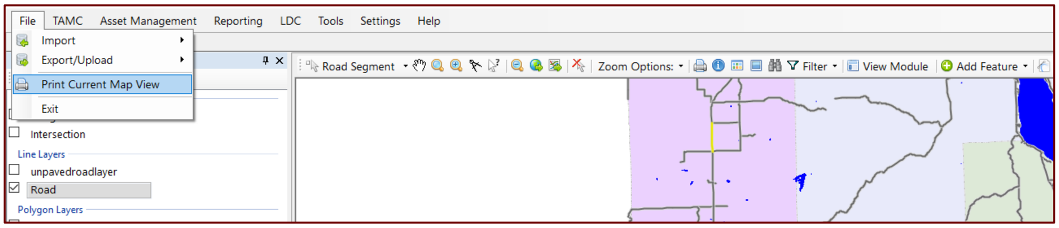
OR: Repeat steps 32g and 32h for each Query item to create a unique legend for each item.

l. Select **Apply** (Apply).

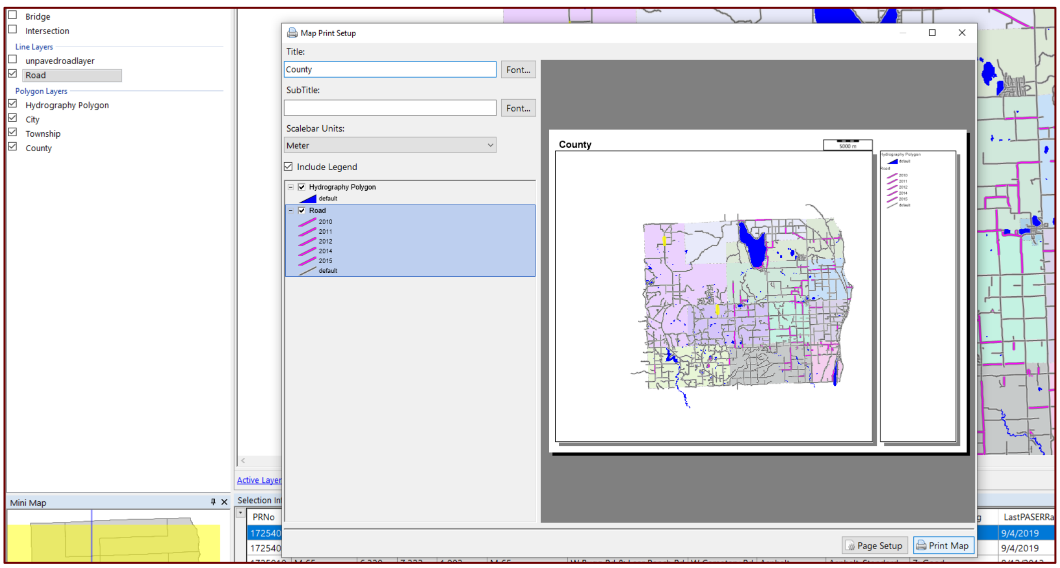
33. Print the map as a PDF.

c. When the map is ready, select **File** from the main menu (see figure below).

d. Select **Print Current Map View** from the *File* menu (see figure below).



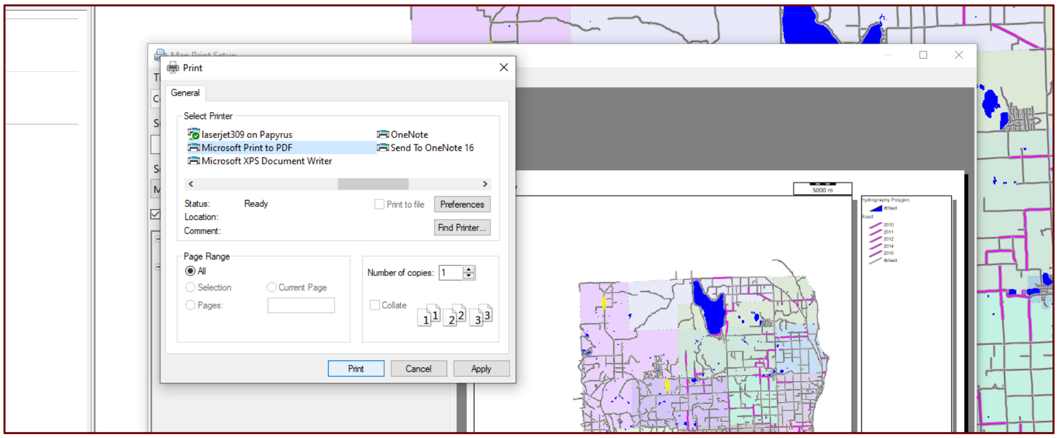
⇨ The *Map Print Setup* window will open (see figure below).



e. Enter desired label information into the *Title* and *Subtitle* input boxes, and adjust the *Scalebar Units* and *legend* as desired (see figure above).

f. Select **Print Map** (see figure above).

⇨ The Windows *Print* window will open (see figure below).



g. Select **Microsoft Print to PDF** from the *Print* window (see figure above).

h. Select **Print** (see figure above).

⇨ The *Save Print Output As* window will open.

i. Navigate in the *Save Print Output As* window to the desired folder containing compliance plan materials, enter a descriptive file name in the *File name* input box (e.g., ***complianceplan_figure9***), and select **Save**.

Creating images from PDF files

To create images from the four PDF Roadsoft map files, you will need a PDF reader/writer software program that allows you to save the PDF as an image. An example of this software is Adobe Acrobat.

1. Open each PDF map in the PDF software program.

2. Select **File** from the main menu.

3. Select **Save As** from the *File* menu.

4. Change *Save as type* to an image format (e.g., JPG, PNG, GIF, TIF).

   Note: It is important to ensure that the save location for the file is the same folder where you are saving all of your compliance plan materials.

Note: The file name should remain the same as the PDF file name, but the extension will change from “.pdf” to the file extension corresponding with your selected image format.

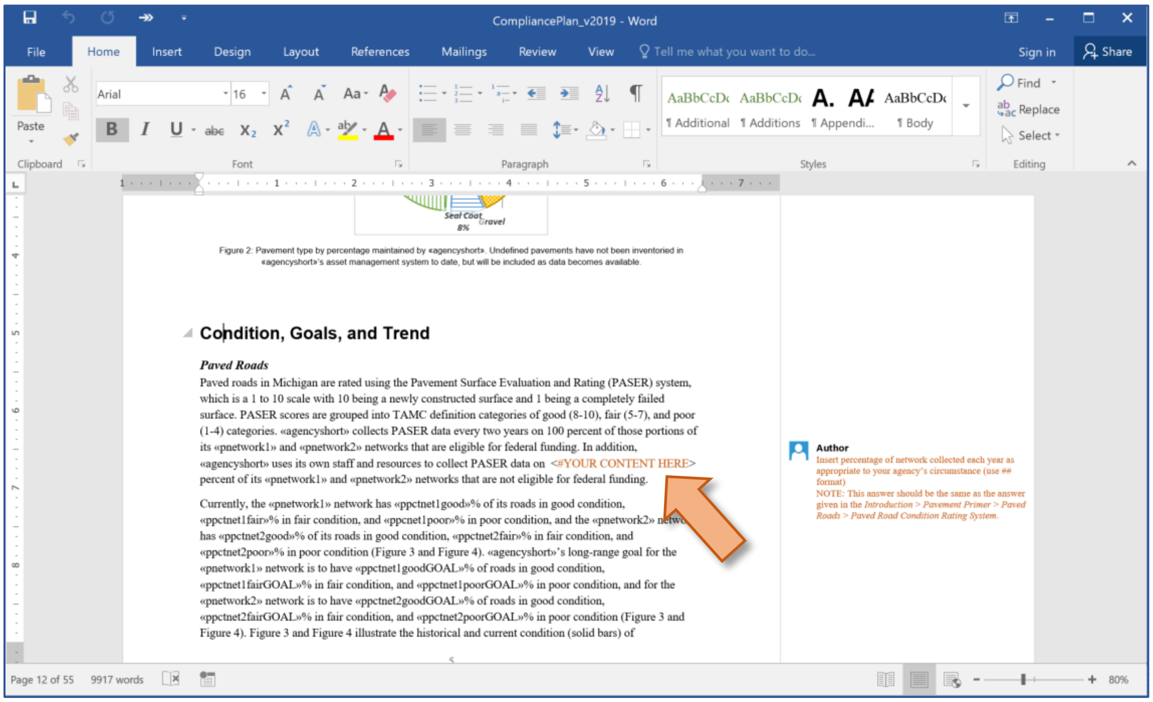
5. Select **Save**.

6. Follow the procedures (detailed above) for inserting images into your compliance plan Word template.

Completing the Word template

The compliance plan Word template is automatically linked to your newly-generated complianceplan.csv file, which will populate the template with content based on your agency's specified circumstances. However, several places in the Word template still require your input and editing.

1. Address all orange-text field prompts or comments/"Your Content Here" prompts (see figure below).



NOTE: <#Orange text fields> are placeholders for user-entered data. Each of these placeholders can be identified by its field formatting, its orange color, and its unique tagging "<#". Each of these placeholders has a different prompt depending on the type of information to be inputted. An example of an orange text field is:

<# YOUR CONTENT HERE: Insert percent in ## format>

To address these prompts:

a. Navigate to the orange-text field prompts or comments/"Your Content Here" prompts.

i. Place cursor on the cover page, then toggle to each prompt using the **F11** key on your keyboard.

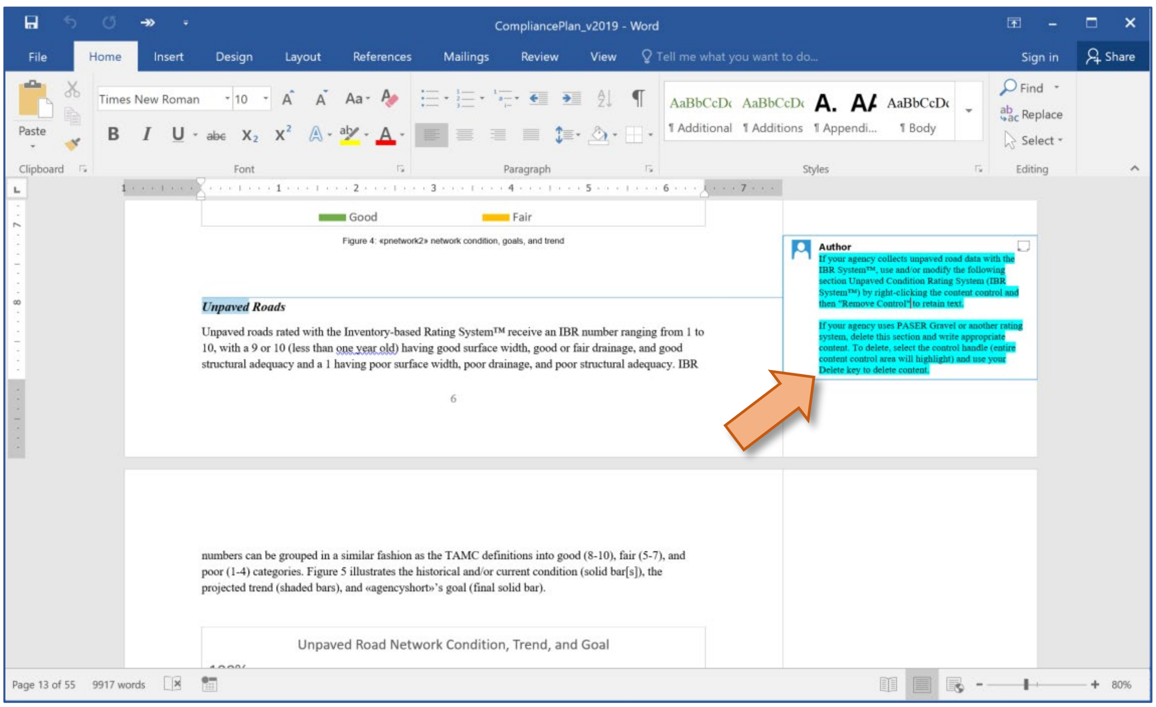
OR: Visually search the document for orange-text fields and/or "Your Content Here" prompts.

OR: Select **Find** from the *Home* ribbon *Editing* group, and enter “<#” in the *Search document* input box. (Note: This will also find the missed auto-fills; see step 4, below).

b. Fill in content/responses manually.

NOTE: Some orange text field prompts are associated with dropdown selections for content/responses. The chosen dropdown selection or the manually-entered content/response should flow with the context of the paragraph or section.

2. Address all teal-commented optional sections (see figure below).



NOTE: Teal-commented optional sections signal entire sections that are optional and can be deleted based on hour agency’s circumstances. These sections are placed in content controls. In many cases, you will have a choice between alternate teal-commented sections for the same entire section; you may delete one or all options for the entire section if it does not apply to your agency’s circumstances. Optional sections are accompanied by instructions in the teal-highlighted comment. An example of an optional section’s instructional comment is:

Use and/or modify the following section by right-clicking the content control and then “Remove Control” to retain text.
To delete, select the control handle (entire content control area will highlight) and use your Delete key to delete content.

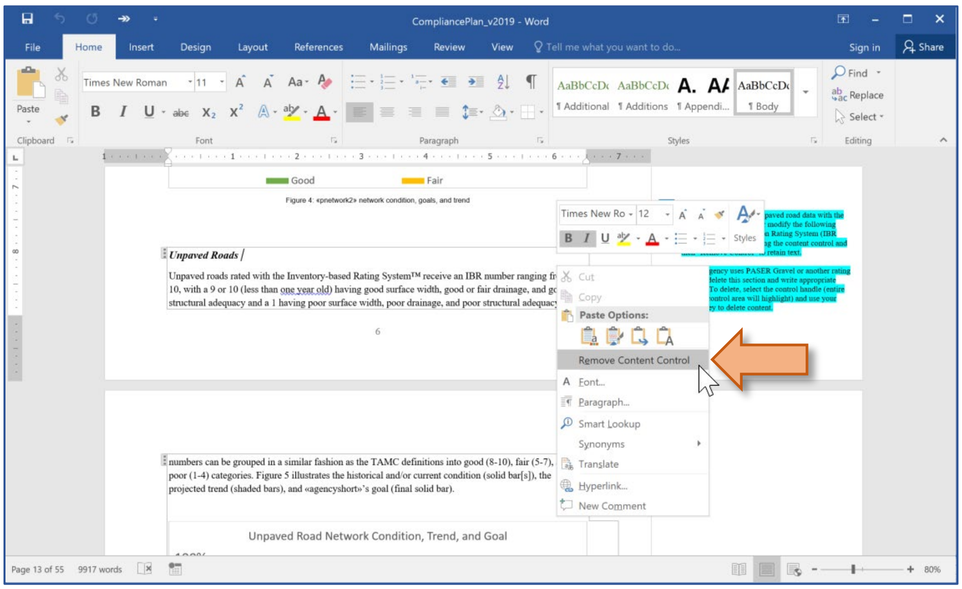
Scrolling over an optional section will show its content control and will shade the content control in grey (see figure above). At this point, you may address the teal-commented optional section in one of three ways:

a. OPTION 1: Use and/or modify optional sections content:

i. Right-click anywhere inside the content control.

⇨ A drop-down menu will appear.

ii. Select **Remove Content Control** (see figure below).



⇨ The content control is now removed and the text has merged with the body of the document. You may now edit this section as part of the body itself.

b. OPTION 2: Create new sub-sections:

i. Place cursor in optional section content control.

⇨ The content control frame and handle (upper left corner) will open.

ii. Select the content control handle (see figure below).

iii. Copy the content control:
In the *Home* ribbon, select **Copy** from the *Clipboard* group.

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

iv. Place cursor at the end and outside the content-controlled area.

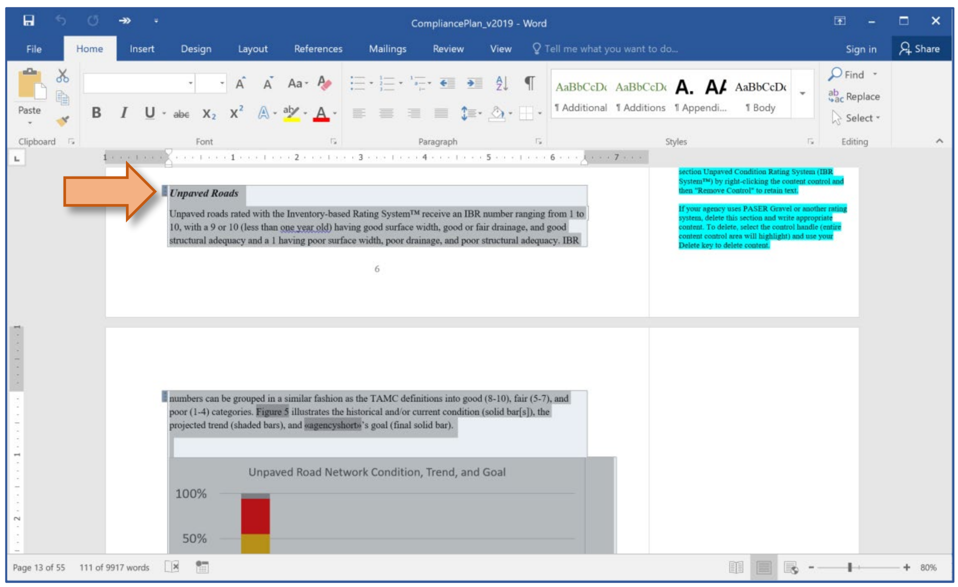
v. Paste the copied content control:
In the *Home* ribbon, select **Paste** from the *Clipboard* group.

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

c. OPTION 3: Delete optional sections entirely.

i. Place cursor in optional section content control.

⇨ The content control frame and handle (upper left corner) will open.



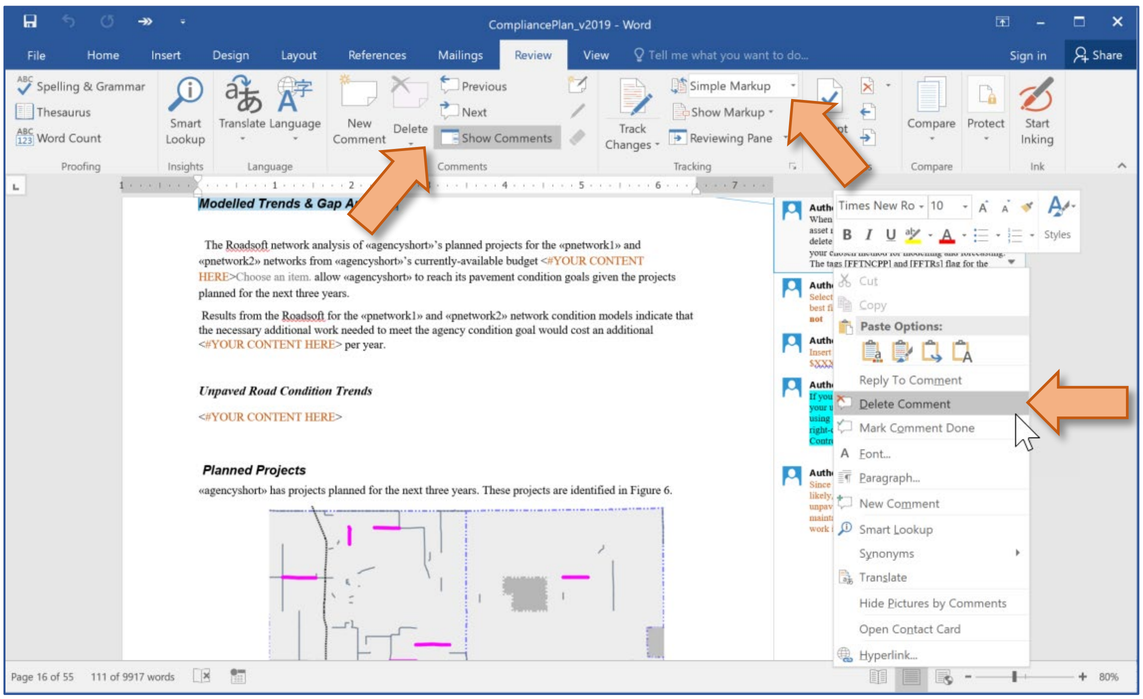
ii. Select the content control handle (see figure above).

iii. Press the **Delete** key on your keyboard.

⇨ This removes the entire optional section.

3. Address comments.

NOTE: Comments appear along the right side of the Word document. If you do not see comments, ensure that the markup dropdown menu in the *Review* ribbon *Tracking* group says "All Markup" or "Simple Markup". If you select "Simple Markup", you will need to select **Show Comments** in the *Comments* group (see figure below).



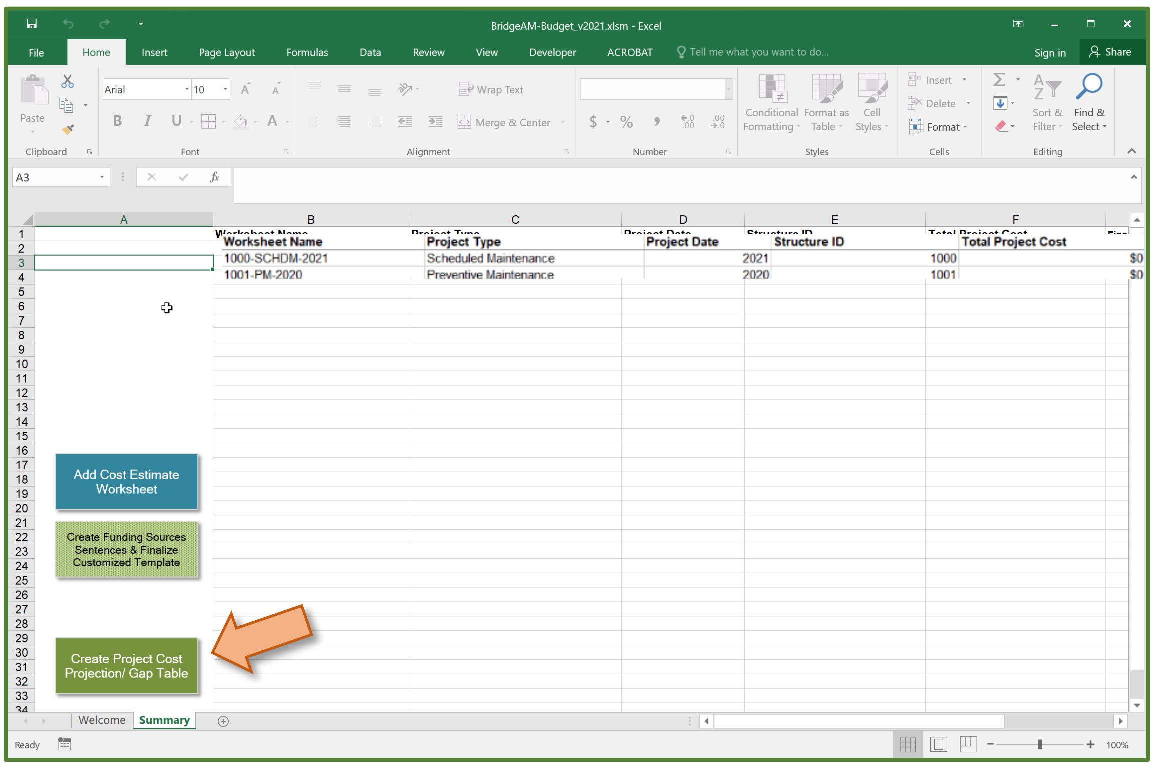
Generating cost projection/gap analysis table for bridge assets from budget template

The BridgeAM-Budget_v####.xlsm Excel workbook is a comprehensive budgeting tool that allows you to plan your bridge maintenance budget allocations by organizing various types of bridge maintenance projects and their associated costs. It also helps to identify gaps in funding. The cost projection/gap analysis table will present your data in a format that can be more easily transferred into your customized compliance plan Word template's section *2. Bridge Assets* subsection *Programmed/Funded Project, Gap Analysis, and Planned Projects*.

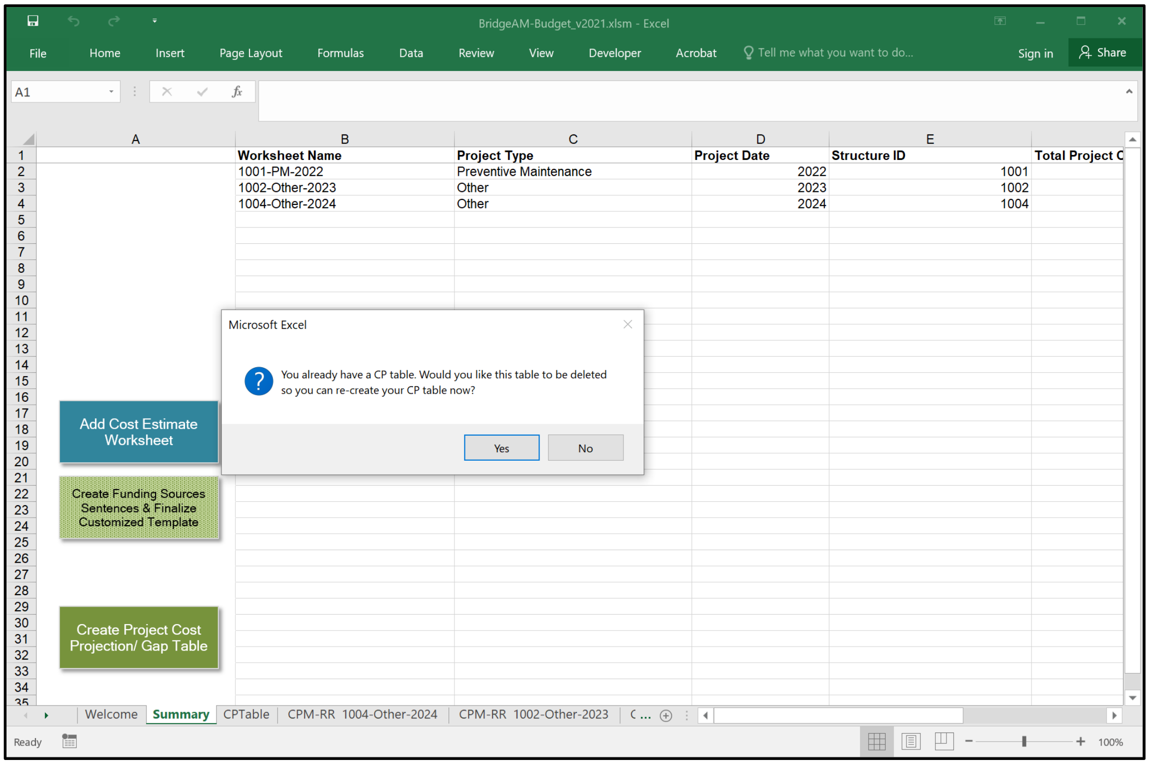
To create a cost projection/gap analysis table for you compliance plan:

1. Open the BridgeAM-Budget_v####.xlsm tool, and ensure that the *Summary* worksheet is the active worksheet.

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

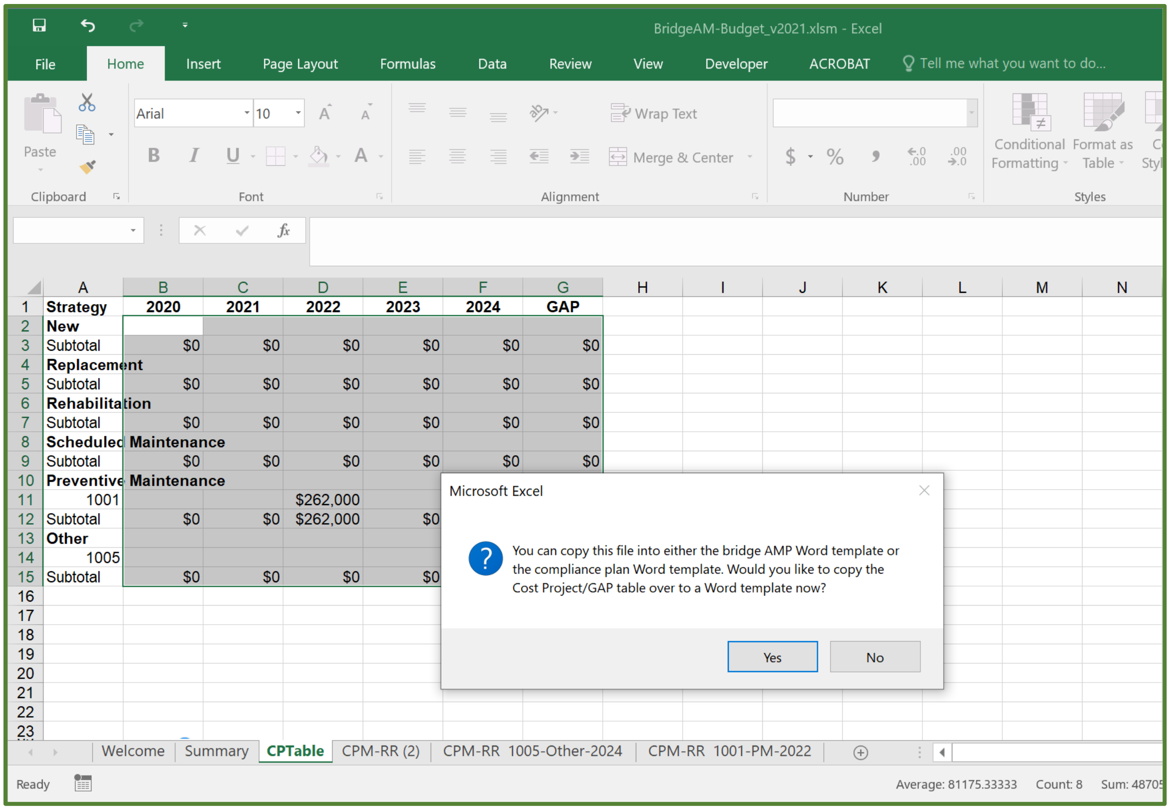


NOTE: If a cost projection table has already been created, the *You already have a CP table…* dialogue box will display. Select **Yes** to delete the current cost projection table and continue with creating a new one, OR select **No** to exit the process (see figure below).



⇨ 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.

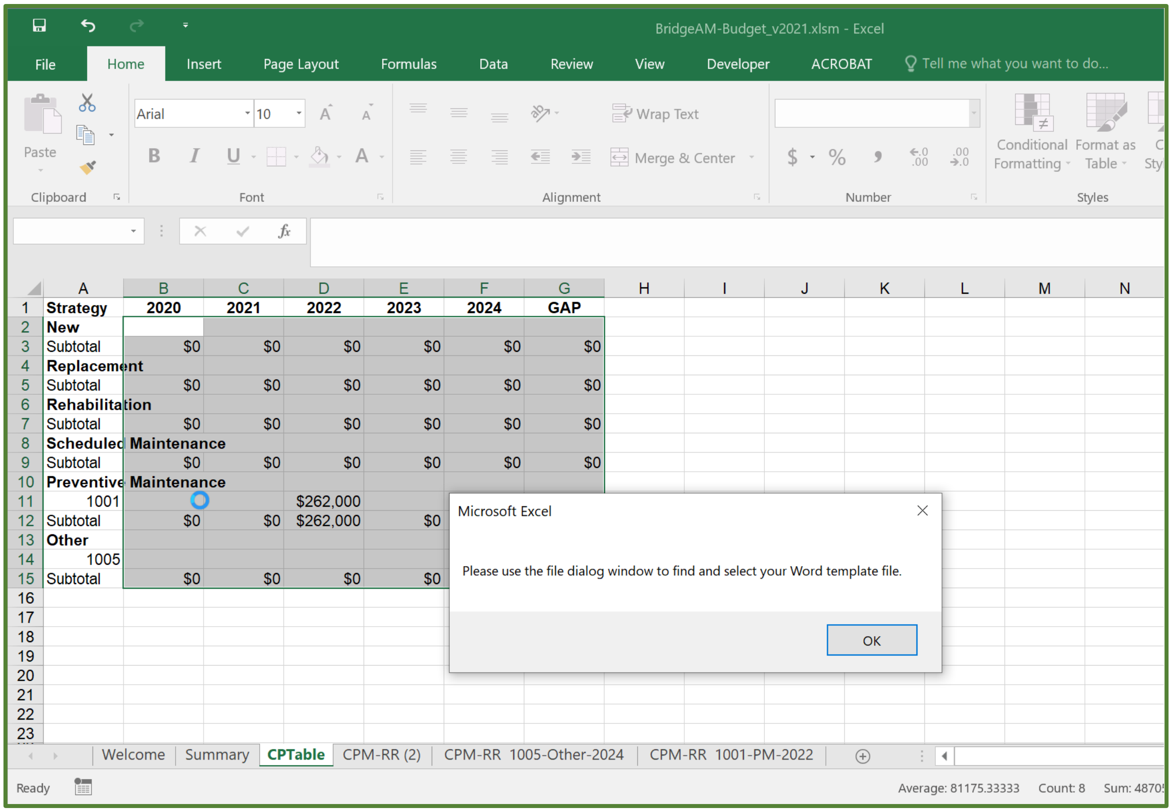


3. Select **Yes** to insert the cost-projection/gap table into your compliance plan Word template (or your bridge asset management plan Word template). Proceed to the step 3 step result.

   OR

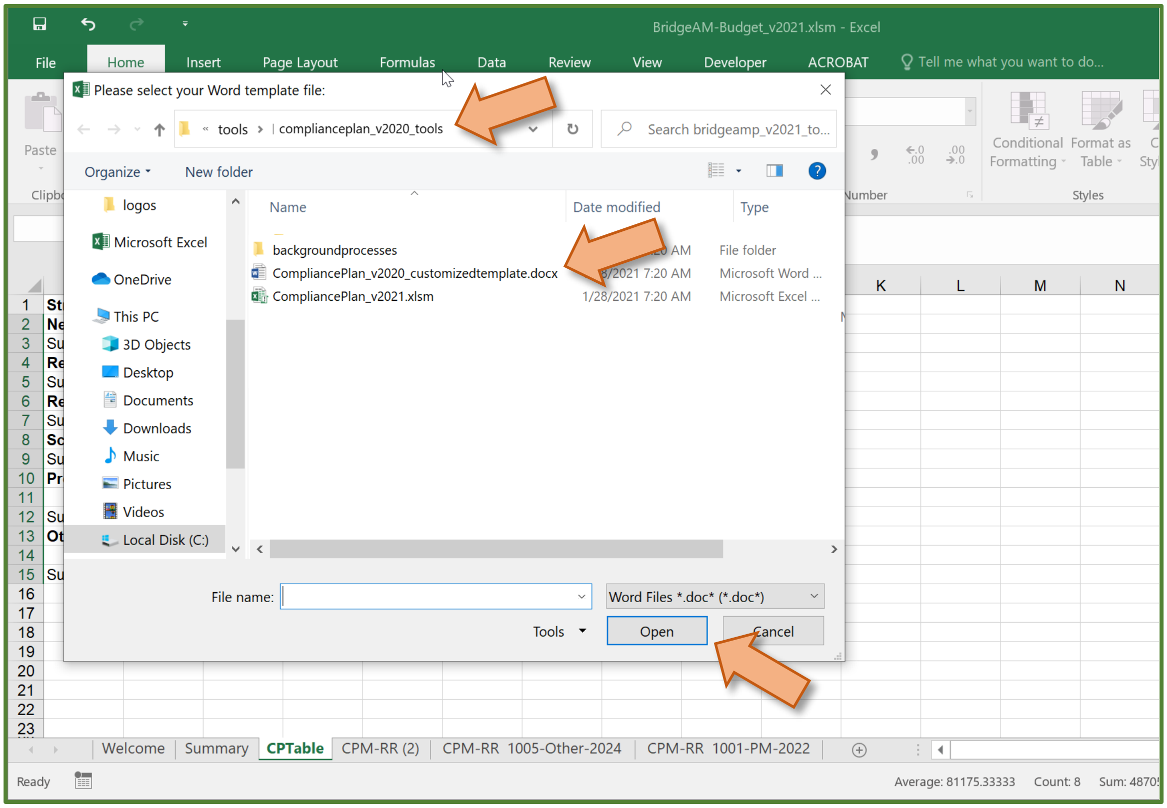
   Select **No** to skip inserting the cost-projection/gap table into your bridge asset management plan template (or your compliance plan template). Proceed to ***Updating the Table of Contents*** section of this instruction guide.

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


BridgeAM-Budget_v2021.xlsm - Excel
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Developer
ACROBAT
Tell me what you want to do...
Microsoft Excel
Please use the file dialog window to find and select your Word template file.
OK
Strategy
2020
2021
2022
2023
2024
GAP
New
Subtotal
Replacement
Rehabilitation
Scheduled Maintenance
Preventive Maintenance
1001
$262,000
Other
1005
Welcome
Summary
CPTable
CPM-RR (2)
CPM-RR 1005-Other-2024
CPM-RR 1001-PM-2022
Ready
Average: 81175.33333
Count: 8

4. Select **OK**.

⇨ The *Please select your Word template file* file explorer dialogue box will display (see figure below).



5. In the file explorer dialogue box, select the **CompliancePlan_v####_customizedtemplate.docx** (or bridge asset management plan template) file found in the tools parent folder, and select **Open** (see figure above).

   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).

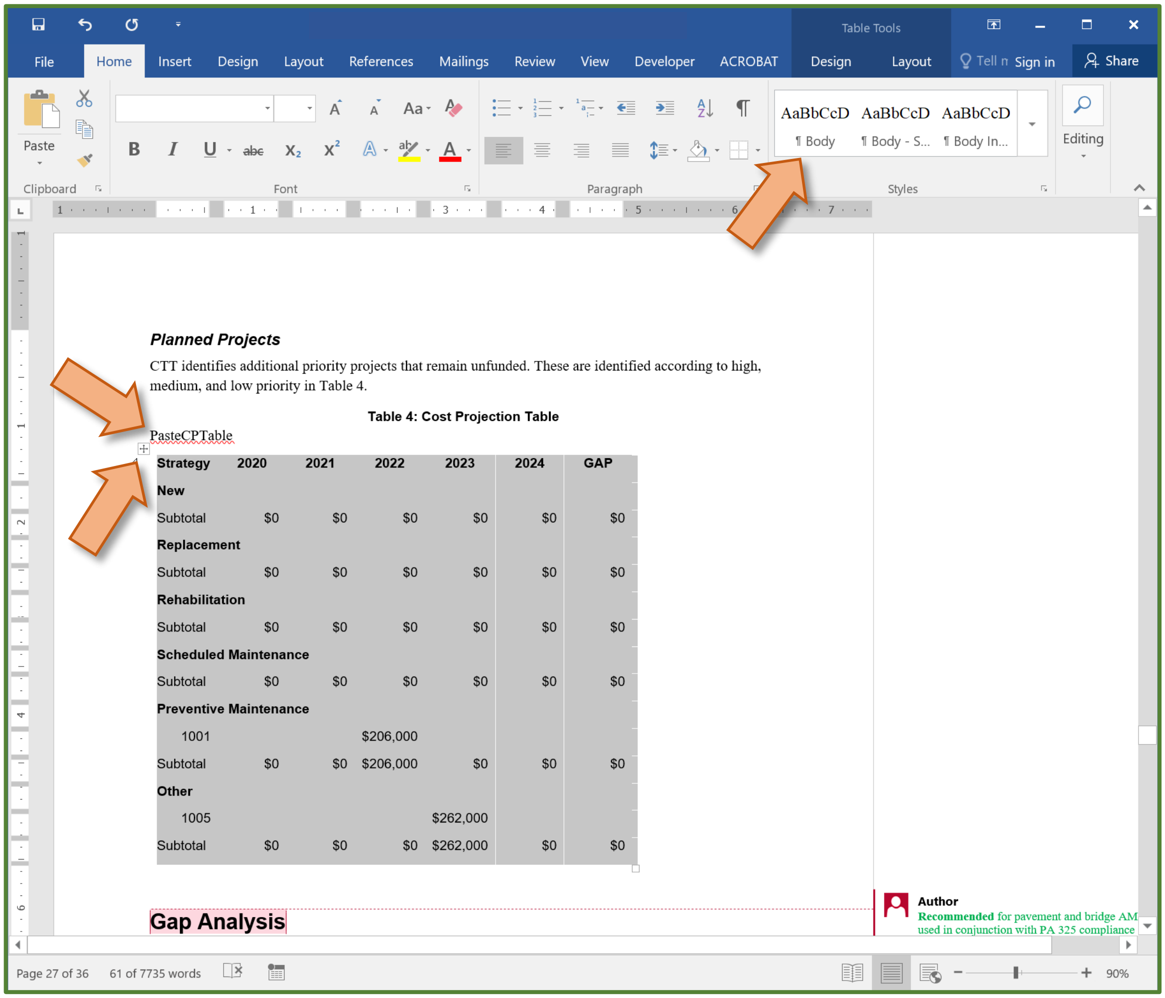


Table Tools
File
Home
Insert
Design
Layout
References
Mailings
Review
View
Developer
ACROBAT
Design
Layout
Sign in
Share
Paste
Clipboard
Font
Paragraph
AaBbCcD
¶ Body
¶ Body - S...
¶ Body In...
Styles
Editing
Planned Projects
CTT identifies additional priority projects that remain unfunded. These are 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%

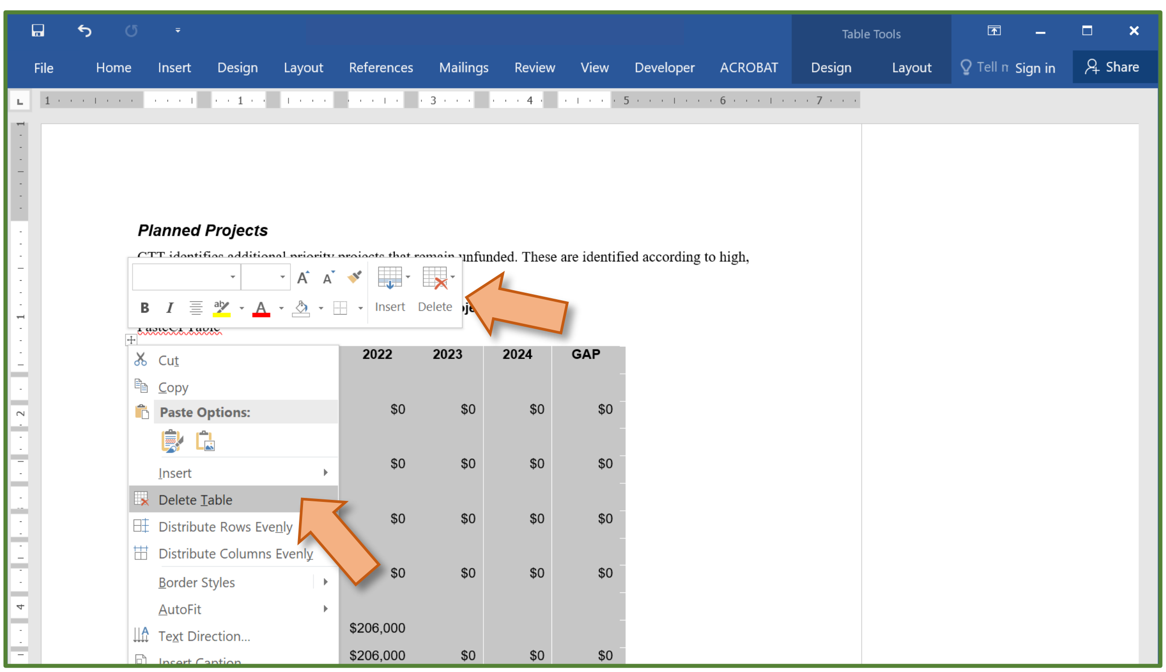
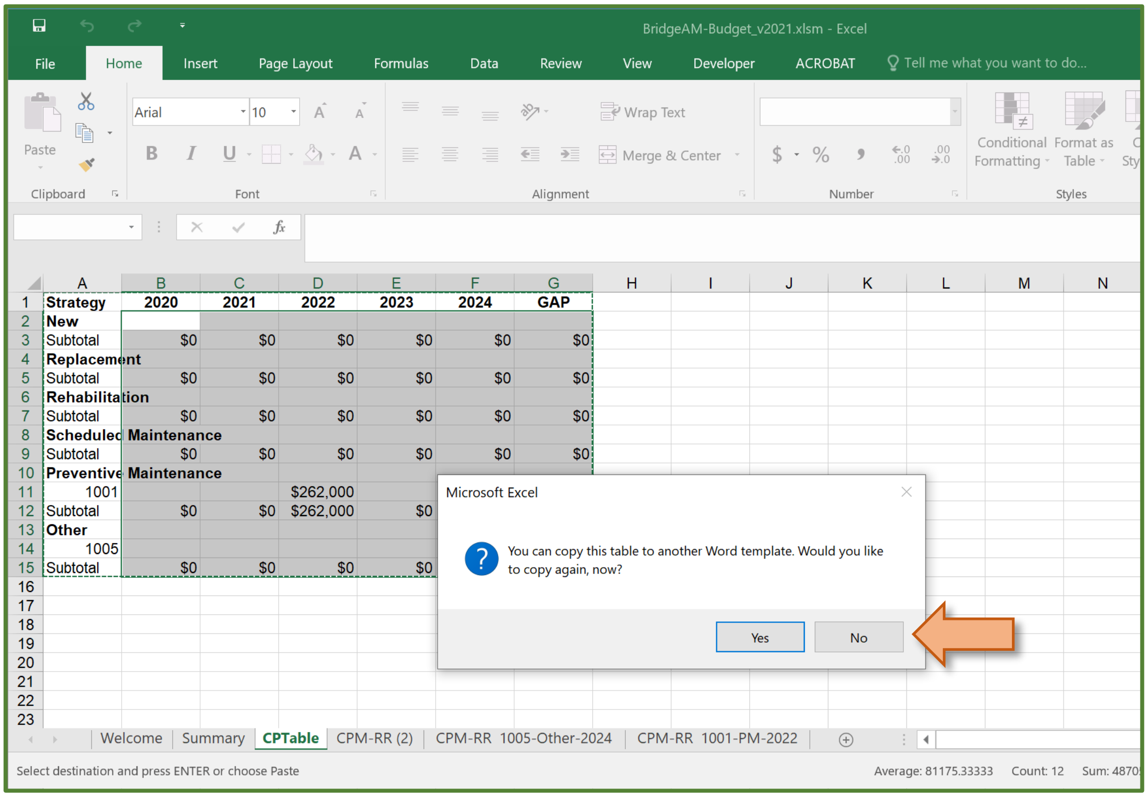


Table Tools
File
Home
Insert
Design
Layout
References
Mailings
Review
View
Developer
ACROBAT
Design
Layout
Sign in
Share
Planned Projects
unfunded. These are identified according to high,
Insert
Delete
Cut
Copy
Paste Options:
Insert
Delete Table
Distribute Rows Evenly
Distribute Columns Evenly
Border Styles
AutoFit
Text Direction...
2022 2023 2024 GAP
$0 $0 $0 $0
$0 $0 $0 $0
$0 $0 $0 $0
$0 $0 $0 $0
$206,000
$206,000 $0 $0 $0

⇨ 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).



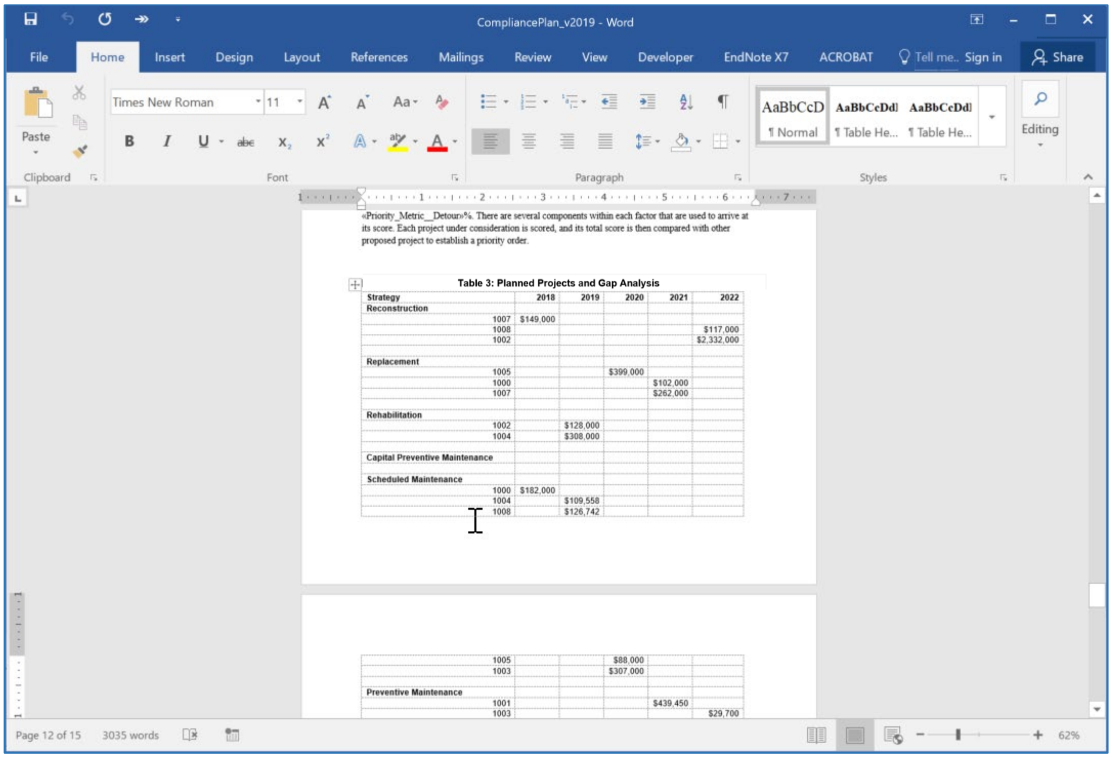
6. Select **Yes** to insert the cost-projection/gap table into your bridge asset management plan Word template (or compliance plan Word template). Repeat steps 3, 4, and 5; and proceed to step 7.

   OR

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

7. Save and close the BridgeAM-Budget_v####.xlsm tool.

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



«Priority_Metric__Detour»%. There are several components within each factor that are used to arrive at its score. Each project under consideration is scored, and its total score is then compared with other proposed project to establish a priority order.

Table 3: Planned Projects and Gap Analysis

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

Updating the Table of Contents

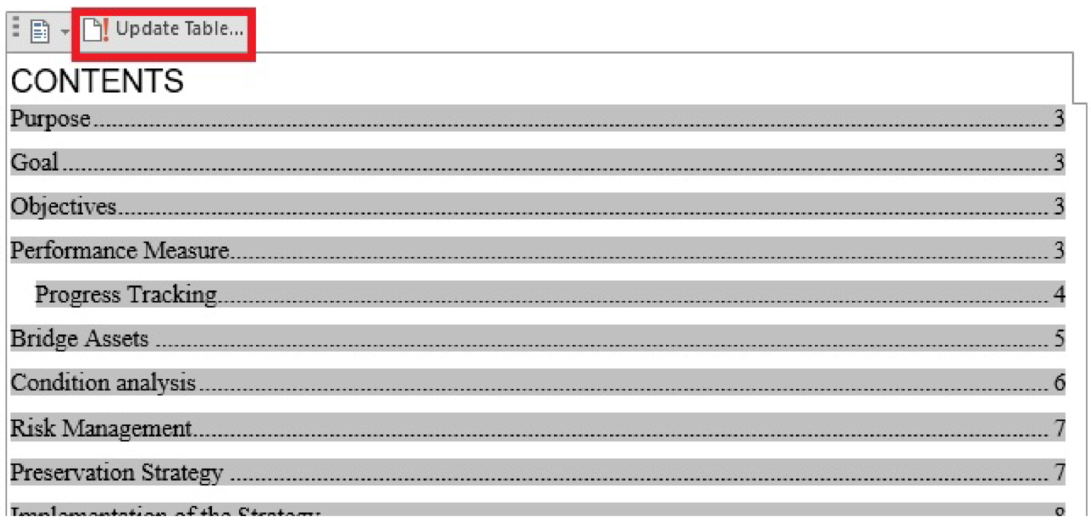
Finally, make sure to update the Contents field to match the completed document.

1. Go to the Contents section on the second page of the document.

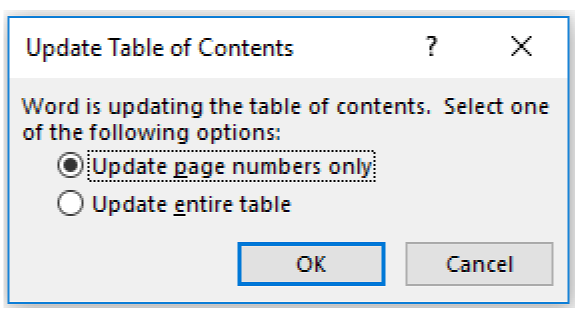
2. Select the *Contents* field.

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

3. Select the **Update Table** button.



4. Select **Update page numbers only** from the *Update Table of Contents* dialog box that opens.



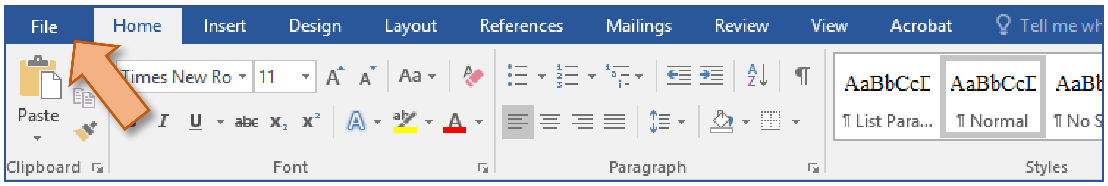
NOTE: These procedures for the MS Word template file will generate one Word document. An export-to-PDF process similar to the Excel export detailed in the ***Entering data into the Excel template: Appendix*** section can be used to save the Word file as a PDF. This PDF can be merged with the three PDF appendix files using the full version of Adobe Acrobat or a free, open-source app that has a PDF-merge capability.

Inserting Appendixes

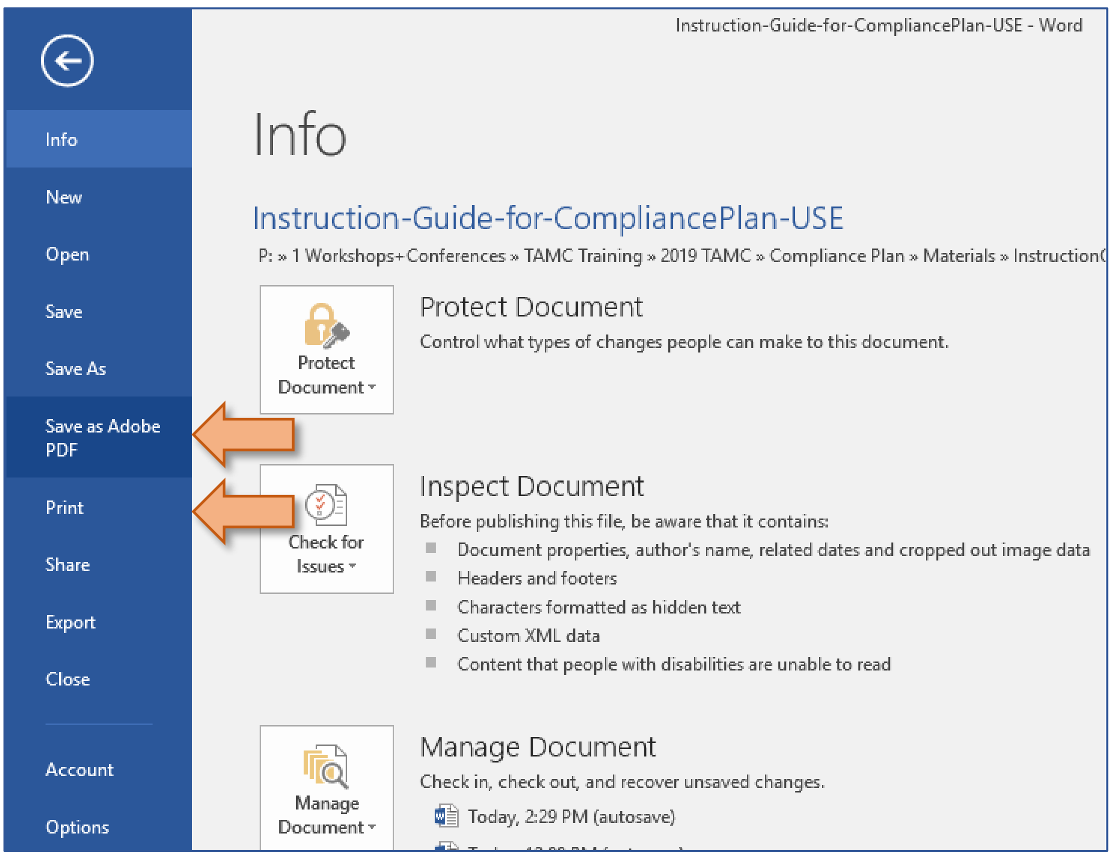
To create a single compliance plan document, save the compliance plan Word template, the pavement asset management plan Word document, the bridge asset management plan Word document, and any other associated files as PDFs. Then, using a PDF editing software program, merge the PDFs into a single PDF.

To save a Word document as a PDF:

1. Select **File** in the ribbon menu.



2. Select **Save as Adobe PDF** in the *File* sidebar menu (see figure below).



OR: Select **Print** in the *File* sidebar menu (see figure above).

⇨ The Windows *Print* window will open (see figure below).

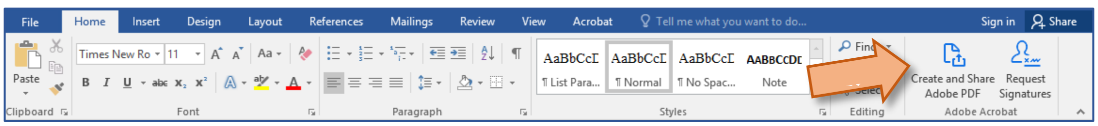
a. Select **Microsoft Print to PDF** from the *Print* window (see figure above).

b. Select **Print** (see figure above).

⇨ The *Save Print Output As* window will open.

c. Navigate in the *Save Print Output As* window to the desired folder containing compliance plan materials, enter a descriptive file name in the *File name* input box (e.g., ***complianceplan_2019*** or ***complianceplan-appendix1_2019***), and select **Save**.

OR: In the *Home* ribbon, select **Create and Share Adobe PDF** in the *Adobe Acrobat* group (see figure below).



3. Once all necessary files have been saved as a PDF, proceed with using a PDF editor to compile all necessary PDFs into a single PDF.