Objective
- To edit and create new Division and Branch breaks and annotation to accommodate the new incident operational area.

Required Data
- 2010_Bull_CASQF2701_iap_11x17_land.mxd (The master map document you saved after completing the previous exercise—Exercise 7).

Assumptions and Requirements
- That you’ve completed Exercise 7: Update the FirePolygon Feature Class.

Introduction and Overview of Procedure Steps
The fire perimeter has now been divided into several Divisions and Branches to accommodate the increase in the fire incident’s complexity. Your goal in this exercise is to modify the existing and create new Division and Branch breaks to reflect these changes. The major steps are:

I. Review the Division and Branch Assignment Break Location Reference Graphic
II. Prepare FIMT Incident Geodatabase to Create/Update Division and Branch Breaks
III. Create/Update Division and Branch Breaks that are on the Fire Perimeter Boundary
IV. Create Floating Division Breaks that are Not on the Fire Perimeter Boundary
V. Adjust Assignment Break Symbol Orientation Relative to the Fire Perimeter as Necessary
VI. Label Divisions and Branches and Convert Labels to Annotation
VII. Create Annotation for Floating Divisions by Copying and Pasting Existing Division Annotation

I. Review the Division and Branch Assignment Break Location Reference Graphic
1. Launch ArcMap and open 2010_Bull_CASQF2701_iap_11x17_land.mxd.
2. Before proceeding, review page 2—the Division and Branch Assignment Break Location Reference Graphic. Assume that you are provided with updated branch and Division break locations delineated on a hard-copy map. Your job is to update the incident geodatabase to reflect the new break locations (see note at sidebar). This reference graphic will guide you as to where to locate Division and Branch breaks and position their associated annotation features as you work through this exercise.

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The Division and Branch Break Location Reference Graphic

Note: The numbers on this graphic are used to reference breaks in the instructions. Also, the annotation font size has been increased so that you can read the Division and Branch labels while viewing the entire fire perimeter.
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II. Prepare FIMT Incident Geodatabase to Create/Update Division and Branch Breaks
1. Click **FIMT | Edit Incident** from the FIMT toolbar.
2. Adjust the data display so that only the DRGs, and AssignmentBreak and PerimeterSector layers are the only visible layers. You should notice the three Division breaks from the initial fire perimeter.
3. Right-click **PerimeterSector** in the Table of Contents and select **Zoom to Layer** so that the data view displays PerimeterSector in its full extent.
4. Right-click **PerimeterSector** in the Table of Contents and select **Open Attribute Table** so that you can edit the attributes of the Division field in order to remove all assignments except for Division A.
5. Scroll to the right in the table until the **Division** field is visible.
6. One at a time, click the Division B and Z attributes and reassign as Division A. Close the table after completing this task.
7. Click the **Update Perimeter Assignment Breaks** button on the FIMT Toolbar to implement the changes made in the table, merge the three PerimeterSector features into one Division A feature, and remove all associated AssignmentBreak features.
8. Right-click **PerimeterSector** in the Table of Contents and select **Open Attribute Table**—make sure PerimeterSector is now only comprised of a single feature, Division A.
9. Close the attribute table.

III. Create/Update Division and Branch Breaks that are on the Fire Perimeter Boundary
1. Review page 2—the Division and Branch Break Location Reference Graphic. You will begin adding Division and Branch breaks that are coincident with PerimeterSector. In this section, you will create Division and Branch breaks 1 through 8 as displayed on page 2.
2. Pan your data view so that you can see where assignment break #1 should be placed.
3. Click the **Split Assignment Line** button.
4. Move your cursor near the approximate location of the Branch break (#1) in the data view. Position the cursor so that the tip of the knife is located just to the outside of fire perimeter.
5. Single-click, release the click, and drag the cursor over the branch break #1 location so that the line crosses the Branch break location.
6. Single-click again to complete heads-up digitizing this Branch break. The Split Assignment Line dialog will appear and you are immediately prompted to attribute the perimeter assignments on either side of your new branch break.
7. When this dialog opens, assign the Divisions and Branches to the Blue and Green lines based on the assignments shown in the reference graphic on page 2 (refer to instructions for this procedure in...
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Always make sure to assign the appropriate Branch at the same time the Division assignments are made to the blue and green lines!

You may notice that FIMT automatically placed a Branch break on the fire perimeter in addition to the one you intended to digitize. Continue creating Branch breaks as instructed here and FIMT will eventually remove this Branch break.

Break Symbol Display Angle. At this point, don’t be too concerned about the angle the break symbols are displayed relative to the fire perimeter—you can inspect all assignment break symbols at one time once you’ve finished adding them to the database.

Update Perimeter Assignment Breaks button

Exercise 2 from Workflow 1 if necessary). Assign the line west of the break to Branch II, Division J, and the line east of the break to Branch III, Division R. See notes at sidebar.

9. Click OK in the Split Assignment Line dialog to accept this change.

10. Proceed in clockwise order around the fire perimeter creating the appropriate breaks at #2-#7 assigning both Divisions and Branches at each location.

11. Since the Division breaks after #8 are not on the fire perimeter (#9 and #10), you will split the line at the #8 location and assign the line north of the break to Branch II, Division J, and the south line to Branch I, Division C. Once this has been done, all of the PerimeterSector and AssignmentBreak features should be appropriately assigned and symbolized on the map.

12. Right-click PerimeterSector in the Table of Contents and select Zoom to Layer so that you can check that all assignments are appropriately displayed as shown in the reference graphic on page 2.

13. Right-click PerimeterSector in the Table of Contents and select Open Attribute Table.

14. Scroll across the attribute table until the Branch and Division fields are visible.

15. Resize and move the table so that you can see all Division and Branch assignments on the map.

16. One at a time click on the grey colored cell at the far left of the table for each row and check that the Division and Branch assignments in the table match the assignments on the map and in the reference graphic on page 2.

17. If any of the PerimeterSector features are not properly assigned, you can make the appropriate changes for those attributes in the Division and Branch Fields, and then click the Update Perimeter Assignment Breaks button on the FIMT Toolbar to implement the changes made in the table.

18. If all of the Divisions and Branches are accounted for in the table and you discover there are extra records in the PerimeterSector table, select them one at a time in the table. Right-click on the gray colored cell at the far left of the table for the selected record and select Zoom to Selected to zoom in and determine which Division and Branch they should be assigned. You may need to zoom out a bit or also select the adjacent PerimeterSector feature to make this determination. After finding out which Division and Branch the inappropriately assigned feature should be, make the necessary changes for those attributes in the Division and Branch Fields, and then click the Update Perimeter Assignment Breaks button on the FIMT Toolbar to implement the changes made in the table.

19. Close the attribute table.

20. Click Editor | Save Edits from the Editor toolbar.
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21. Click File | Save from ArcMap’s main menu.

IV. Create Floating Division Breaks that are Not on the Fire Perimeter Boundary

1. Locate break #9 from the reference graphic on page 2, and adjust your data view appropriately (see note at sidebar).
2. Click the Floating Assignment Break Tool button from the FIMT toolbar.
3. Click over the correct location to place the floating Division break for #9. The Assignment Break dialog will appear. Set the following parameters in the Assignment Break dialog:
   4. Assignment Break Type: Division
   5. Angle: 90
   6. Leave the Assignment Break Label field empty
   7. Click OK to accept these parameters and to close the Assignment Break dialog. You may get an FIMT error. Simply click No to dismiss it if you do get it, and FIMT will place the the floating Division break.
8. Follow the same steps to add break #10 to the incident geodatabase. Set the break type to Division and the angle to 120.
9. Click Editor | Save Edits from the Editor toolbar.
10. Click File | Save from ArcMap’s main menu.

V. Adjust Assignment Break Symbol Orientation Relative to the Fire Perimeter as Necessary

1. Now you must rotate the AssignmentBreak symbols where they are not perpendicular to the perimeter or where they don’t bisect the angle of the perimeter if they exist at an angle in the perimeter.
2. Set the AssignmentBreak layer as the only selectable layer.
3. Click the Edit Tool button from the Editor toolbar.
4. Select an AssignmentBreak feature that must be rotated.
5. Click the Rotate Tool button on the Editor toolbar.
6. Position the cursor near the end of the symbol and then while holding the left mouse button down, move the cursor around until the symbol is at the desired angle. Release the mouse button once the AssignmentBreak symbol is perpendicular to the fire perimeter.
7. Use this method to change the angle of all other breaks that must be rotated.
8. Click the Clear Selected Features button once you’ve rotated and/or verified all AssignmentBreak
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VI. Label Divisions and Branches and Convert Labels to Annotation

Delete Existing PerimeterSectorAnno24k Annotation Features
1. Right-click PerimeterSectorAnno24k in the Table of Contents and select Open Attribute Table.
2. Select and delete all three records contained in the feature class.
3. Close the attribute table.
4. Click the List By Drawing Order button associated with the Table of Contents.
5. Right-click PerimeterSector in the Table of Contents and select Properties to open the Layer Properties dialog.
6. Click the Labels tab.
7. Enable Label Features in the Layer.
8. Set the Method pulldown menu to Define Classes of Features and Label Each Class Differently.

Label Divisions
1. Click the Rename button.
2. Enter Division and click OK in the dialog that appears.
3. Click the Expression button to open the Label Expression dialog. You should see the "Div " & [DivisionID] syntax in the expression window. Leave it as you will use this syntax to label Divisions.
4. Click Verify to make sure it works, click OK in the Expression Verification dialog, and click OK again in the Label Expression dialog.
5. Set the following text symbology for the Divisions: Arial Font, Font Size of 20, and Bold.
6. Click the Placement Properties button and ensure that the Horizontal Orientation and Place One Label per Feature options are enabled. Click OK.

Label Branches
1. Click the Add button.
2. Enter **Branch** in the dialog that appears and click **OK**.
3. Click the **Expression** button.
4. Delete the "Div " & [DivisionID] syntax as you will use a different one to label Branches.
5. Enter the following syntax into the expression window: "Branch " & [BranchID]
6. Verify the syntax was entered correctly.
7. Make all the same text symbology settings as you did for the Divisions except change the font size to 24.
8. Click the **Placement Properties** button and ensure that the **Horizontal** Orientation and **Remove Duplicate Labels** options are enabled. Click **OK**.
9. Click **OK** in the Layer Properties dialog. Check to make sure all the labels are correct and display correctly.

*Convert Labels to Annotation (i.e., Updating PerimeterSectorAnno24k)*

1. Ensure your map display scale is set to **1:24,000** (otherwise you cannot create annotation).
2. Click **FIMT | Stop Editing Incident** from the FIMT toolbar. Click Yes when prompted to save edits.
3. Right-click **PerimeterSector** and select **Convert Labels to Annotation** to open the Convert Labels to Annotation dialog.
4. Click to enable the following settings: **In the Database**, **All Features**, and **Append**. Disable **Feature Linked**.
5. Click the **Yellow Folder** button (Annotation Feature Class) and navigate to and select **PerimeterSectorAnno24k** from your master FIMT incident geodatabase (2010_Bull_CASQF2701_fimt10.gdb). Click **Add**.
6. Click **Convert** to convert labels to annotation in the Convert Labels to Annotation dialog.
7. Toggle-on **PerimeterSectorAnno24k** in the Table of Contents. Take a moment and inspect annotation features associated with the PerimeterSectorAnno24k layer (attribute table and data display). It should be apparent to you that you need to adjust the location of the annotation features...

*Reposition Annotation Features to More Appropriate Locations*

1. Click **FIMT | Edit Incident** from the FIMT toolbar.
2. Click the **List by Selection** button associated with the Table of Contents, and set **PerimeterSectorAnno24k** as the only selectable Layer.
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3. Click the Edit Annotation Tool button from the Editor toolbar.
4. Click and drag all other labels so that they don’t obscure incident features or features on background maps that would be important for users to see. Feel free to match your annotation feature locations with those on the reference graphic on page 2. Note that you still have not created annotation features for Divisions associated with the floating Division breaks—you will do this in the next section.
5. Click Editor | Save Edits from the Editor toolbar.
6. Click File | Save from ArcMap's main menu.

VII. Create Annotation for Floating Divisions by Copying and Pasting Existing Division Annotation
1. Click the Edit Annotation Tool button from the Editor toolbar.
2. Select any Division annotation feature in the data view (e.g., Div J).
3. Right-click on the selected annotation feature and select Copy.
4. Right-click again and select Paste to open the Paste dialog.
5. Set the Target pulldown menu to Division (under PerimeterSectorAnno24k). Click OK to add this text as a annotation feature to the PerimeterSectorAnno24k layer. The new annotation text will be selected and positioned directly on top of the original text.
6. Click and drag the new annotation feature to a desired location (see reference graphic on page 2).
7. Double-click the annotation feature so that you can change its attributes in the Attributes dialog (Note: The only attribute that requires changing is the text in the Annotation tab of the Attributes dialog—change the text appropriately and click Apply to accept the change.)
8. Follow these steps to create annotation features for the E and H Divisions.
9. Once finished, right-click PerimeterSectorAnno24k in the Table of Contents and select Open Attribute Table.
10. Scroll down to the bottom of the PerimeterSectorAnno24k attribute table and inspect the newest records—Div H and E. They should be appropriately attributed as Division labels.
11. Click FIMT | Stop Editing Incident from the FIMT toolbar.
12. Click Yes when prompted to save the edits.
13. Click File | Save from ArcMap's main menu to save your map document.
14. Click File | Exit to close the map document.

This Ends This Exercise