

**Overview:** Plotting from a paperspace layout tab involves setting up a viewport that displays the desired items at useable scales. Plan views, profiles, or cross sections can be plotted on individual pages or combined on one page using multiple viewports. Civil 3D dimensioning is done in modelspace. Bar scales, and north arrows for plan views along with construction notes are typically done in the paperspace mode.

*Software:* AutoCAD Civil 3D 2016, NRCS C3D 2016 template

**Notation:** Button to Press *Displayed Text* **Icon** Action {Text to Enter} Menu Item...

Create an Additional Drawing Page using Paperspace Layout - (Optional)

Insert an additional layout tab

1. Right-Click on any layout tab Click From Template...
2. Select the *11x17EngTemplate.dwt...* (Note: Do NOT use a C3D template.)
3. Click Open
4. From the Insert Layout box select *Layout w Doc Fields...* Click Ok
5. Customize this layout tab as needed.

Rename the Layout tab

6. Right-Click on the *Layout w Doc Fields* tab and click *Rename..*
7. Input the new descriptive name e.g. *Plan View*. Press enter.

Edit drawing value fields used in the title blocks

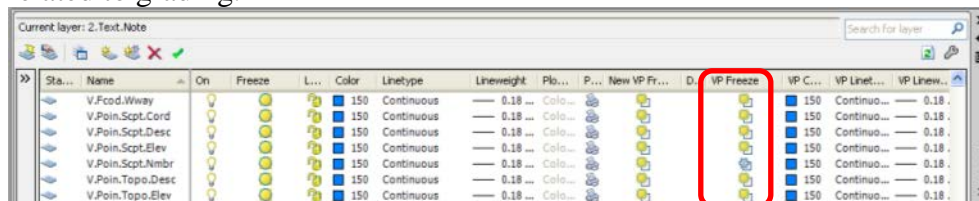
8. Click *Application menu... Drawing Utilities... Drawing Properties...*
9. Click *Custom* tab
10. Click into the Values for the items to change: *Designed by, Draw by*, etc. The user needs to click into the Values cells order to change them.
11. Click Ok



Freezing & Thawing Layers to Control items Displayed in a Viewport

1. Double click inside of the viewport. *PAPER* status will switch to *MODEL*.
2. Open the Layer Manager: *Home... Layers...* click *Layer Properties*
3. Scroll through the layer list (or use filters) to find the layer name to freeze/thaw within this viewport using the *VP Freeze* column.


Note: Refer to the **HowTo Plan View Grading Cleanup C3D** document for layers related to grading.



4. Click on the **VP Freeze icon** for the intended layer to toggle its status.

5. You can now close out of Layer Manager palette. (This palette can be docked or put into Auto-hide mode also.)

Note: The *On* and *Freeze* columns apply to the entire drawing and can prevent objects from displaying in a viewport also.

Note: The *Layer Freeze*  command can be used for plan AutoCAD objects. Use *VP Freeze* for Civil 3D objects.

### Preparing a Plan View for Plotting in a Layout Tab

#### Setting up Viewport.

1. Click on a layout tab. E.g. Plan View
2. Double click inside of the viewport. *PAPER* will switch to *MODEL* and the viewport border will appear thicker.
3. Zoom in on the area to view by
  - a. Using the mouse wheel to zoom the window to the area that you want, **Or**
  - b. Click View... Views... and highlight the named view that you want to appear in this viewport. E.g. *Dam*.

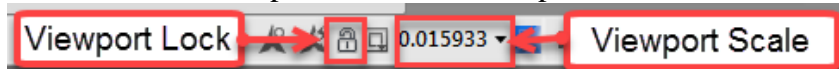


#### Rotating the Display of a Viewport - (Optional)

4. While in *MODEL* of the viewport
5. Type {*mvsetup*} Press Enter
6. Type {*a*} Press Enter
7. Type {*r*} Press Enter
8. Click near the center of the viewport.
9. Input the clockwise rotation angle relative to the original survey orientation. E.g. {45} Press Enter (Use this rotation angle to set the North arrow.)
10. Press Enter
11. Press Enter

#### Setting the Scale & Locking the View.

12. While in the viewport or with the viewport selected note the Drawing status bar:



13. Look at the Viewport Scale. Determine a useable engineering scale near this custom scale. E.g. Custom Scale = 0.0159 is 1/0.0159 or 62.89'. 1"=100' is the nearest scale.
14. Pulldown a useable scale from the Viewport Scale list.
15. You can pan the view and have the correct details appear. Make sure to recheck the scale setting after you have panned.
16. Click the Viewport Lock on the drawing status bar to lock it.

#### Place Plan View Dimensioning (Modelspace)

17. Tool Palettes>NRCS 11x17B... click 11x17 Text\_Dims
18. Click on the correct dimension tool. E.g. {*Aligned Dimension(MS)*}
19. Osnap to the beginning point of the object to dimension.
20. Osnap to the ending point of the object to dimension.

21. Click to place the dimensioning in a useable location.  
Refer to the **Annotative Dimensions** document for more details.

### Place a North Arrow onto the Page (Paperspace)

22. Switch to paperspace of the layout
23. Tool Palettes>NRCS 11x17B... click *11x17 Symbols...bNArrow*
24. Click the location where you want to place the North Arrow.
25. Input the clockwise rotation angle used for the viewport if it was rotated.  
E.g. {45} (See “Rotating the Display of a Viewport”) If it was not rotated leave the value as {0}.
26. Press Enter  
(Note: When you look at the rotation value in the Properties for the North Arrow it will show up as 90 degrees more what you had entered.)

### Place Notes onto the Page (Paperspace)

27. From the AutoCAD Tool Palettes click *11x17 Text\_Dims*
28. Click on *Notes - Multiline(PS)*
29. Click to the set first corner of the text box.
30. Click to the set opposite corner of the text box
31. Input the text.
32. Click OK when done.

## **Adding an Extra Viewport to a Layout (Optional)**

Setting up more than one viewport in a layout allows any combination of profiles, cross sections, or plan views to be plotted on the same sheet.

1. Click on the Layout Tab where you want to add a viewport.
2. Tool Palettes>NRCS 11x17B... select Profile Click *Viewport* Aviewport  
(F3 toggles Osnaps on/off.)
3. Click in the layout to specify the lower left corner of the new viewport.
4. Click in the layout to specify the upper right corner of the new viewport.

## **Creating Multiple Viewport in a Layout (Optional)**

Set up 2 or more viewports for multiple cross section views or profile views.

Note: The Profiles layout tab in the NRCS template has 2 viewports already created.

1. Switch to paperspace of the layout
2. Click *Layout Tools... Viewports... Named...*
3. On the *New Viewports* tab select one of Standard viewports. Click Ok.
4. Click in the layout to specify the lower left corner of the new viewport.
5. Click in the layout to specify the upper right corner of the new viewport.
6. Select the Viewports and set their Layer to *2.Vprt*

### Preparing a Profile View for Plotting in a Layout Tab

1. Double click inside of the viewport. *PAPER* will switch to *MODEL*.
2. Zoom in on the area to view by
  - a. Using the mouse wheel to zoom the window to the area that you want, **Or**
  - b. Click *View... Views...* and highlight the profile named view that you want to appear in this viewport. E.g. *CL dam profile*.
3. On the drawing status bar, pull down the Viewport Scale that matches the Profile View's horizontal scale. E.g. For 50Hx10V use *1"=50'*
4. Pan the view so that the left edge of the Profile View grid lines up with the guideline that is  $\frac{1}{2}$ " inside of the title block border.
5. Click the Viewport Lock on the drawing status bar to lock it. With Viewport Locked you cannot change the scale of the viewport or pan the viewport.
6. Click and drag the viewport grips in order to resize the viewport border if needed.

### Plotting from a Layout Tab

#### Select the Printer & Paper Size.

1. Click on the layout tab to be plotted. E.g.
2. Right Click the  Tab and Click *Page Setup Manager...*
3. Click
4. Pull down the printer/plotter that you will use. E.g. {*BizHub*}
5. Pull down Plot style table to *NRCS BWgray.ctb* for gray plotting of gray lines. (Use *Monochrome.ctb* for B&W only plotting.)
6. Pull down the paper size E.g. {*11 x 17*}. Plot Scale is typically left at 1:1.
7. Click Plot area = *Extents* and in Plot offset checkmark *Center the plot*.
8. Click . Click

#### Previewing & Plotting the Page.

9. Right Click the  Tab and Click
10. Click  to review the planned plot.
11. Press Enter to return to the Plot screen.
12. Click  to Plot.