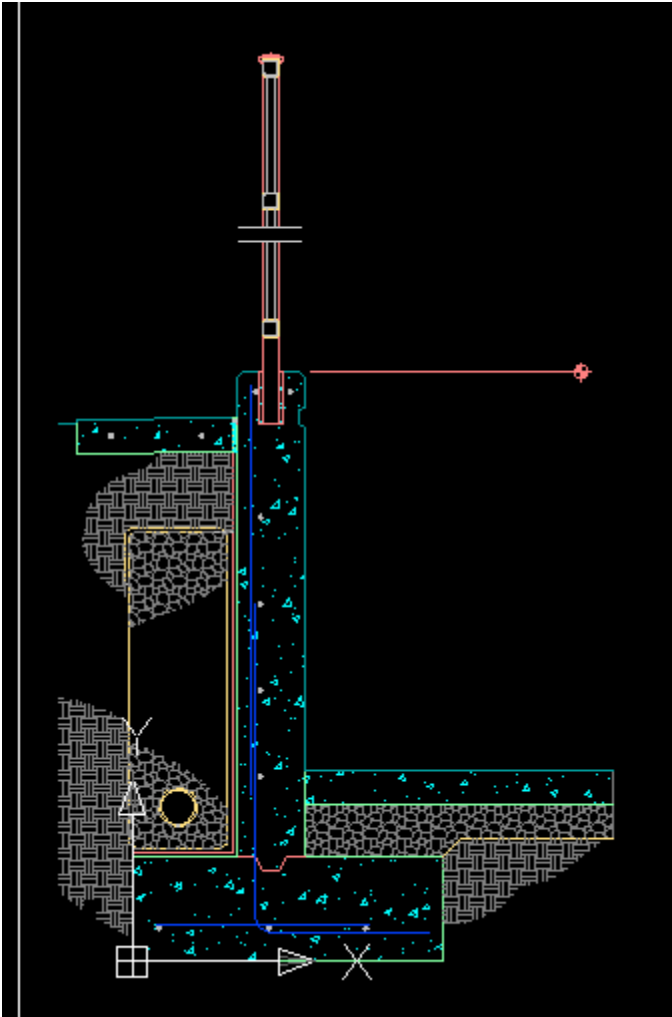


# TUTORIAL: ANNOTATIVE TEXT, MULTILEADERS AND DIMENSIONS

1. Open WallSection.dwg



## 2. Set the UNITS variable as follows:

Type UNITS ↵

Type: Architectural

Precision: 1/32"

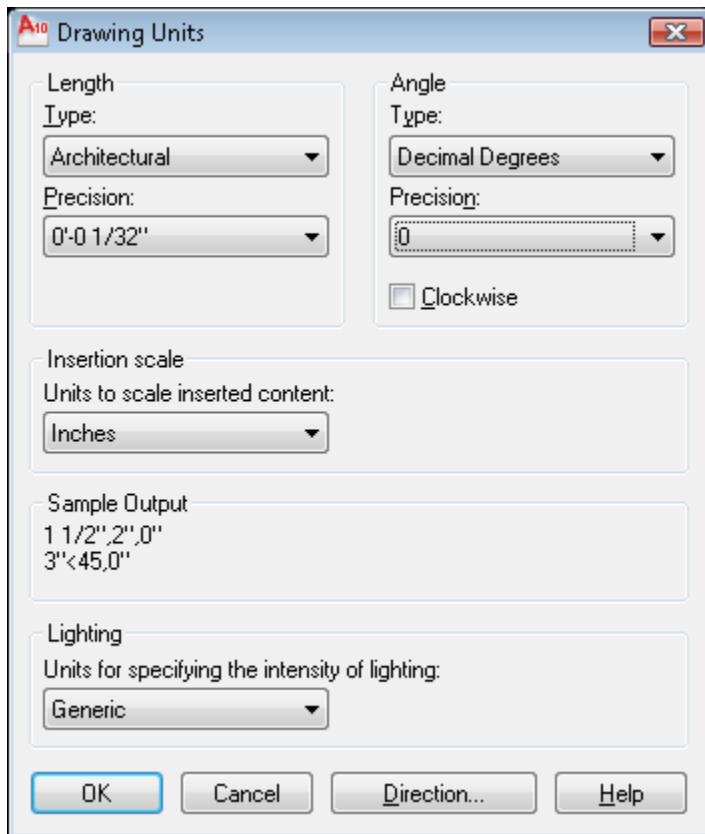
Insertion Scale: select drop-down list and pick "Inches"

Angle Type: Decimal Degrees

Angle Precision: select drop-down list and pick 0

Click the OK button

Below is how your dialogue box should look:



### 3. Create an Annotative Text Style:

Click on the Annotate Tab in the Ribbon

Open the Text Style dialogue box by clicking on the arrow that points diagonally down and to the right on the "Text" panel

Select the "Standard" style

Font Name: Stylus BT

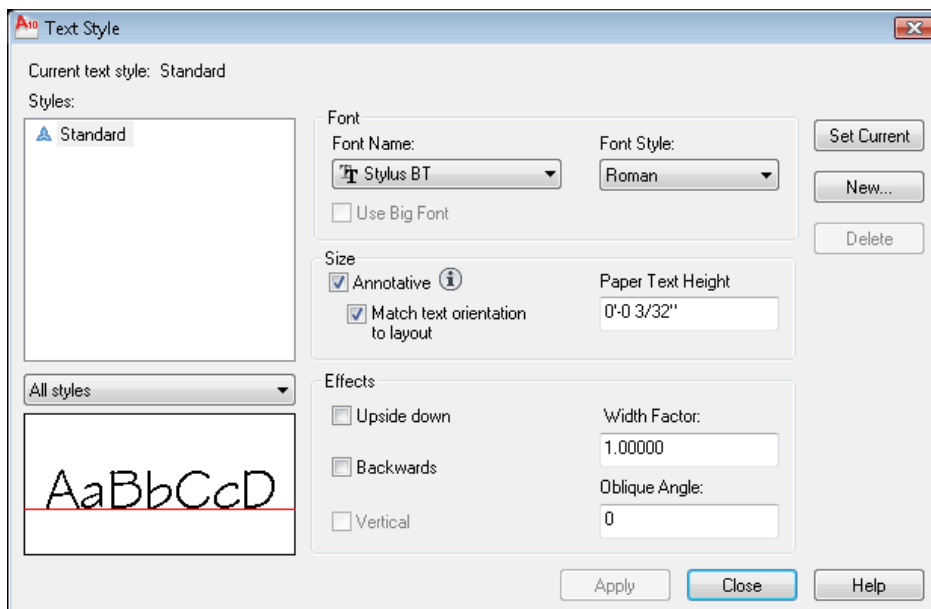
Check the box to the left of "Annotative"

Check the box to the left of "Match text orientation to layout"

Set "Paper Text Height" to 3/32"

Click the "Apply" button

Click the "Close" button



#### 4. Create a text style to assign to dimensions.

This text style will not need to be "Annotative," but it will be compressed horizontally in order to facilitate placing dimension numbers between extension lines. It will also give dimension text a distinctive look so they will not be confused with notes.

Open the Text Style dialogue box by clicking the clicking on the arrow that points diagonally down and to the right on the "Text" panel

Select the DIMENSIONS style

Font Name: Stylus BT

Leave the box to the left of "Annotative" unchecked

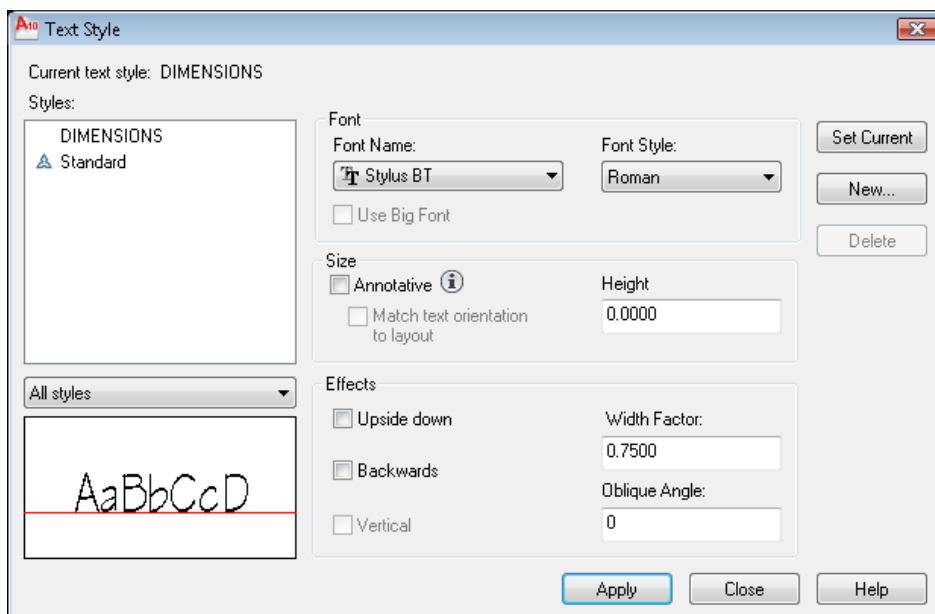
Set "Height" to 0

Set "Width Factor" to 0.75

Click the "Apply" button

Click the "Close" button

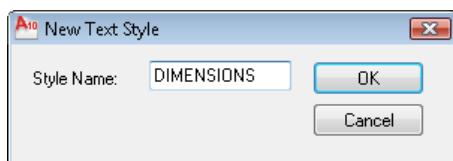
Your dialogue box should; look like this:



Note: If there is no DIMENSIONS text style already created, create a new one by that name, as follows:

Select the "New..." button

Type the name of the new style: DIMENSIONS and Click the OK button



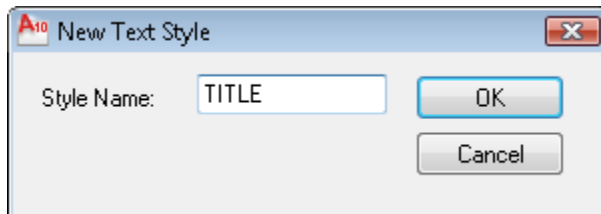
Follow the other steps as above.

5. Create a variable height text style to use with the drawing titles in paper space, for example. This text style will not be Annotative

Open the Text Style dialogue box by clicking the clicking on the arrow that points diagonally down and to the right on the "Text" panel

Select the "New..." button

Type the name of the new style: TITLE and Click the OK button



Font Name: Stylus BT

Leave the box to the left of "Annotative" unchecked

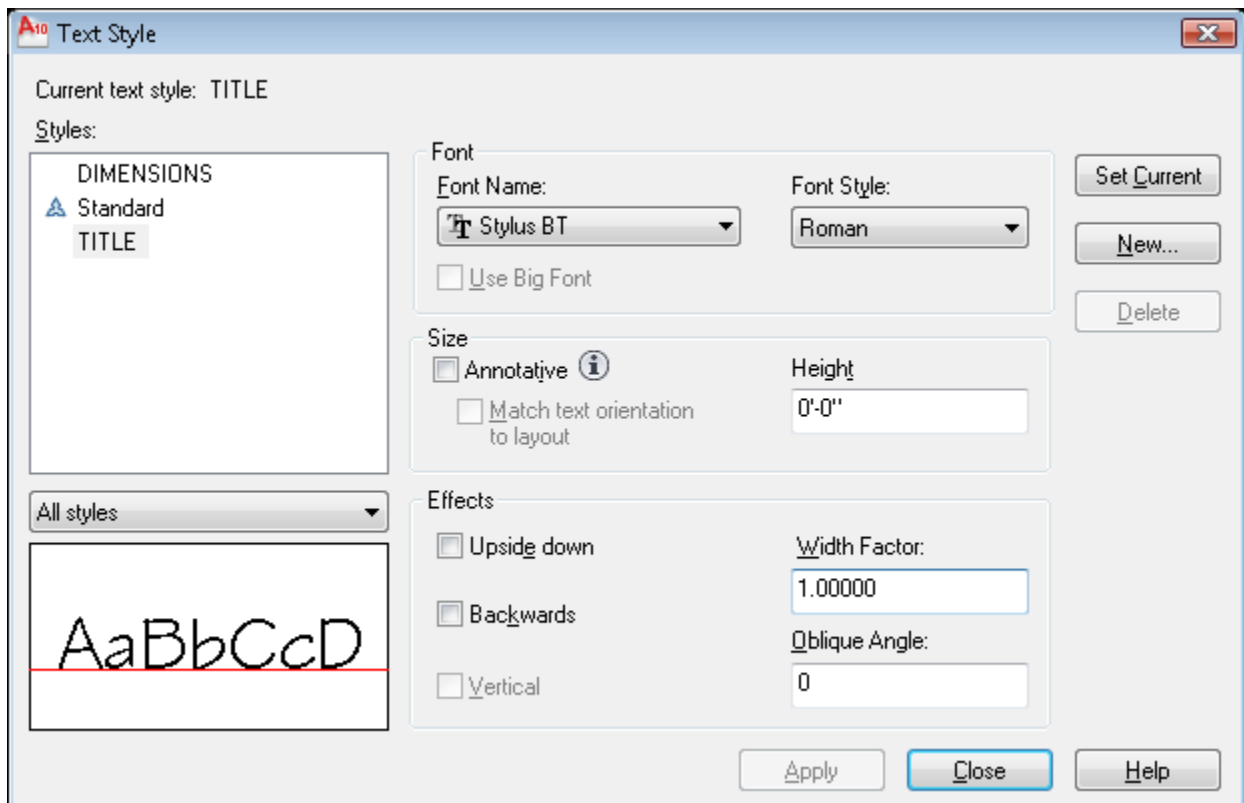
Set "Height" to 0

Set "Width Factor" to 1

Click the "Apply" button

Click the "Close" button

Your dialogue box should look like this:



## 6. Create an Annotative Dimension style:

Click on the Annotate Tab in the Ribbon

Open the Text Style dialogue box by clicking the clicking on the arrow that points diagonally down and to the right on the "Dimensions" panel

Select the Standard style

Click the "Modify..." button to make the following changes to the Standard style:

Select the "Symbols and Arrows" tab

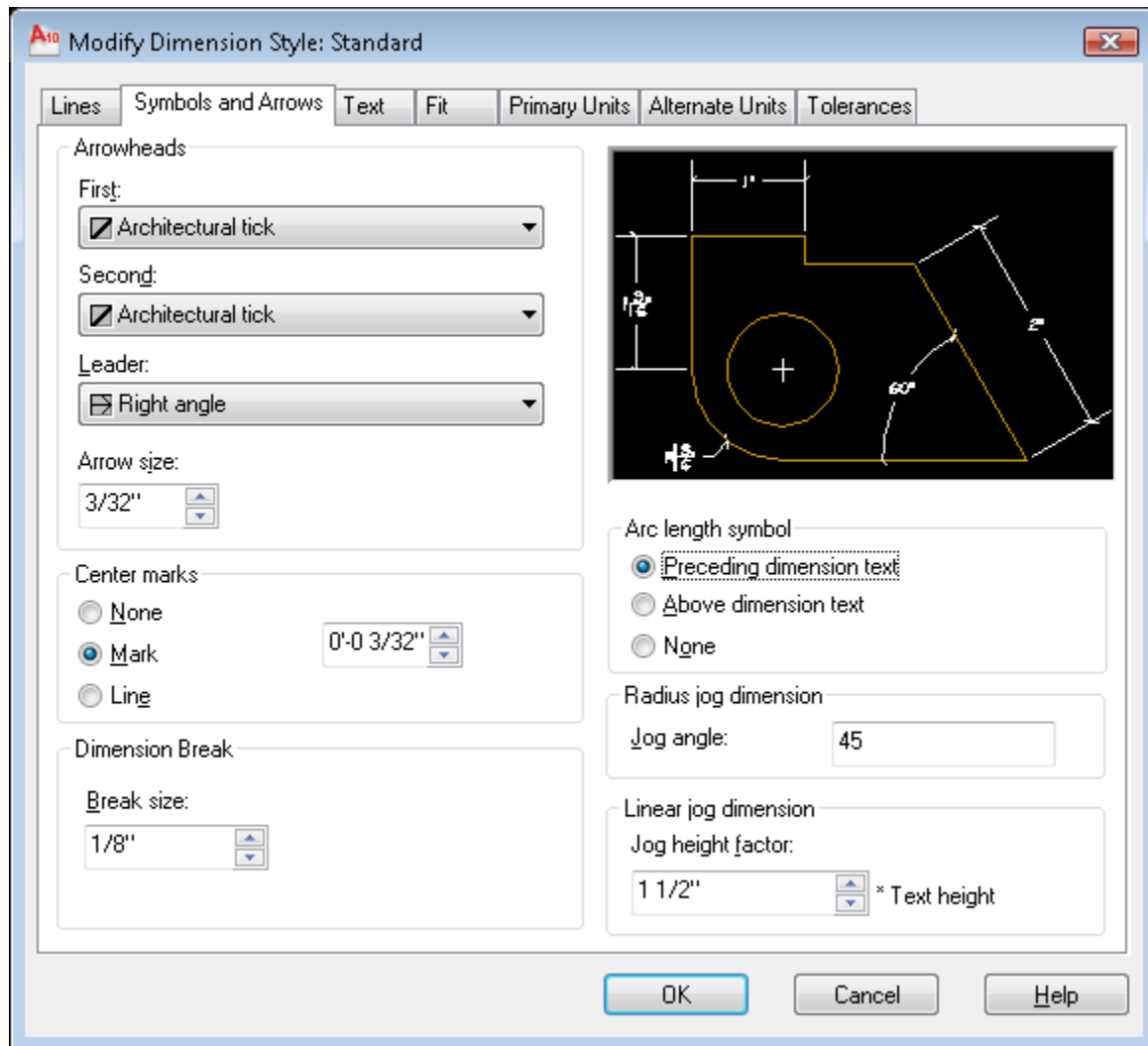
Arrowheads First: select drop-down list and pick Architectural tick

Arrowheads Second: select drop-down list and pick Architectural tick

Arrowheads Leader: select drop-down list and pick Right angle

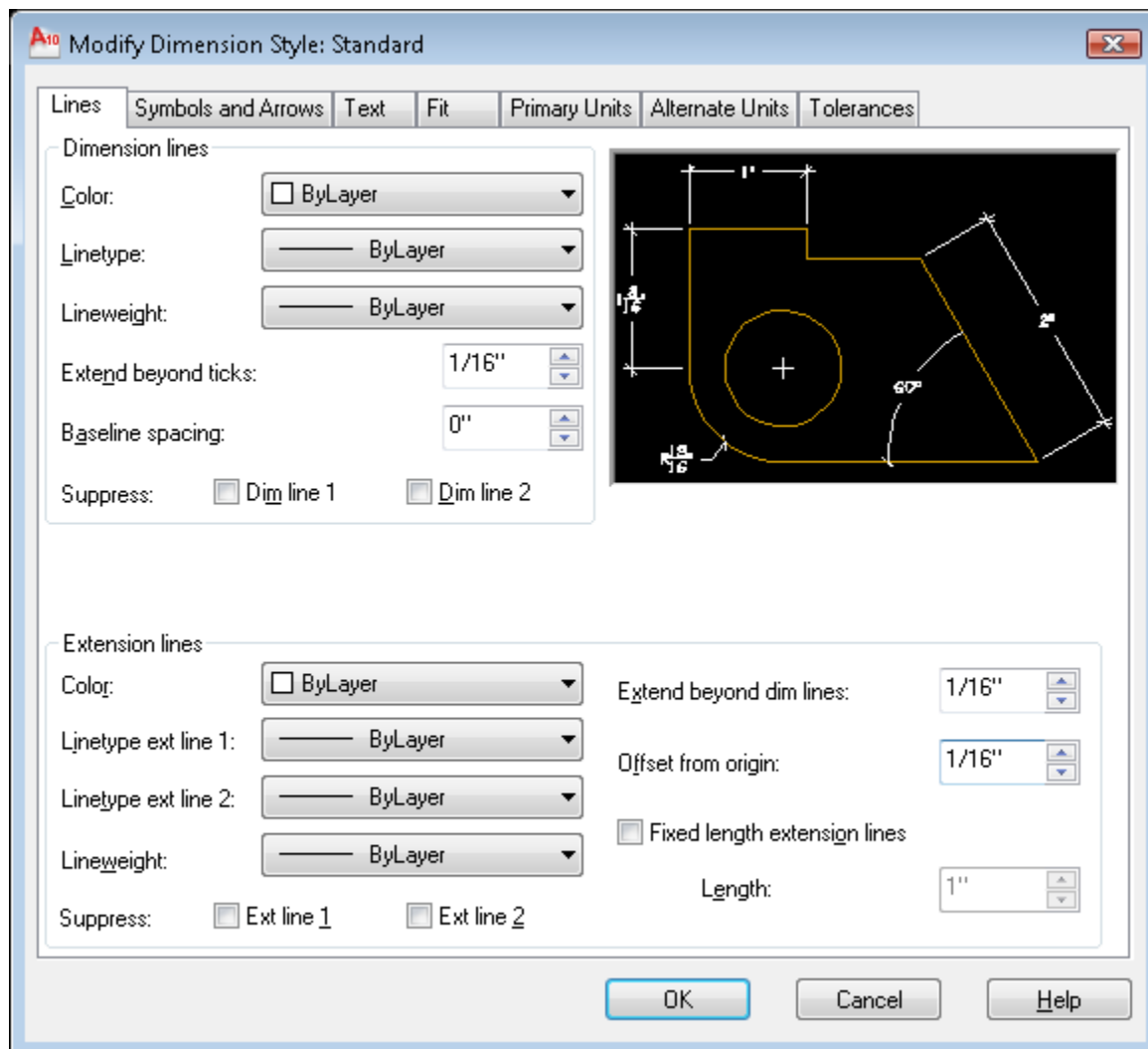
Arrow size: 3/32"

Your dialogue box should look like this:



Select the "Lines" tab  
Color: Bylayer  
Linetype: ByLayer  
Lineweight: ByLayer  
Extend beyond ticks: 1/16"  
Baseline spacing: 0  
Extension lines Color: ByLayer  
Linetype ext line 1: ByLayer  
Linetype ext line 2: ByLayer  
Extension lines Linetype: ByLayer  
Extend beyond dim lines: 1/16"  
Offset from origin: 1/16"

Your dialogue box should look like this:



Select the "Text" tab

Text style: Dimensions (you made this text style earlier in this exercise)

Text color: ByLayer

Text height: 3/32"

Fraction height scale: 0.75 (this is the height proportion of numerator and denominator in stacked fractions)

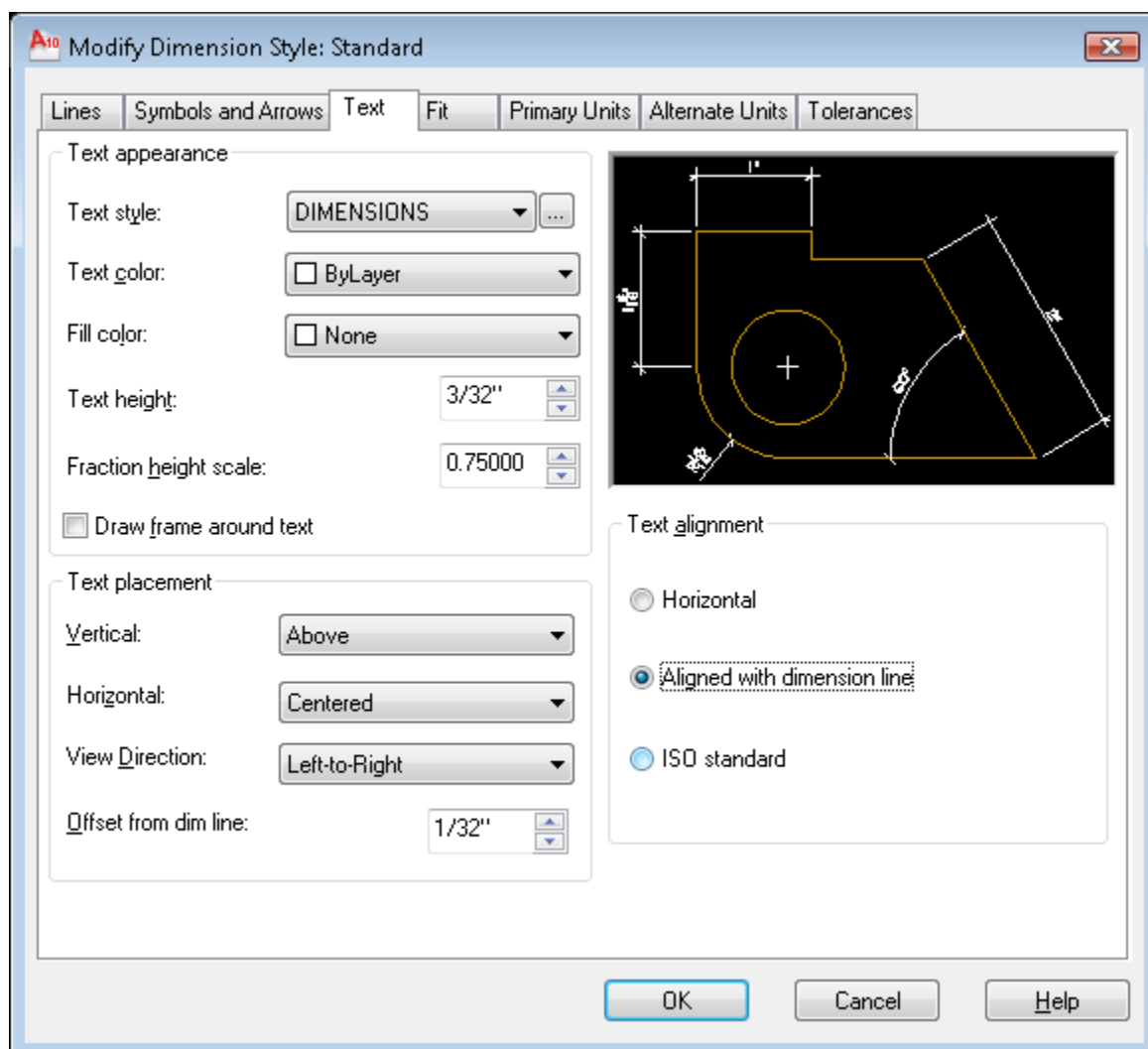
Text placement Vertical: select drop-down list and pick "Above"

Text placement Horizontal: select drop-down list and pick "Centered"

Offset from dim line: 1/32"

Text alignment: select the radio button "Aligned with dimension line"

Your dialogue box should look like this:





Select the "Fit" tab

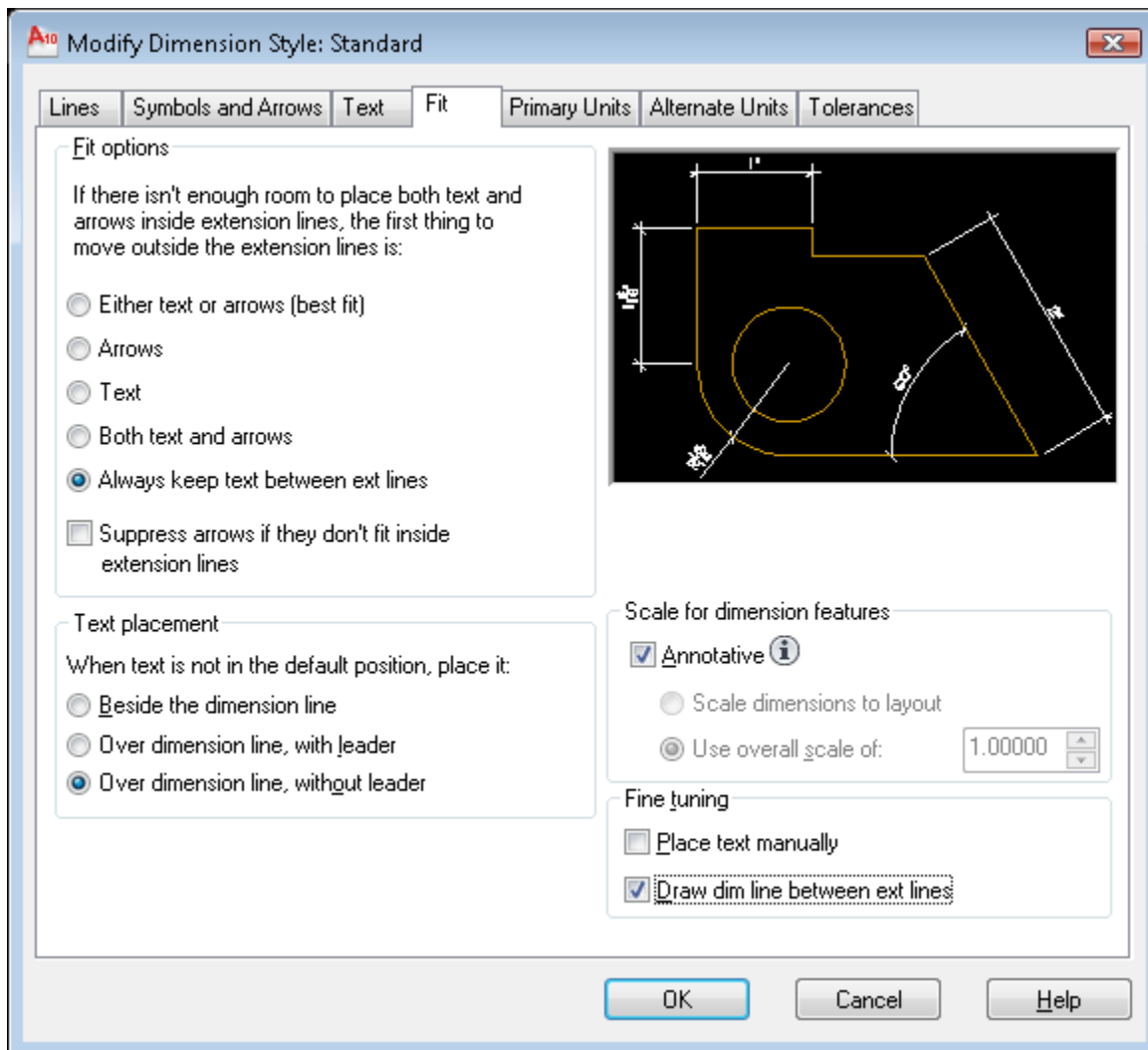
Fit options: "Always keep text between ext lines"

Text placement: "Over dimension line, without leader"

Scale for dimension features: check the box to the left of "Annotative"

Fine tuning: check the box to the left of "Draw dim line between ext lines"

Your dialogue box should look like this:



Select the "Primary Units" tab

Unit format: select drop-down list and pick "Architectural"

Precision: select drop-down list and pick "0'-0 1/16"

Fraction format: select drop-down list and pick "Diagonal"

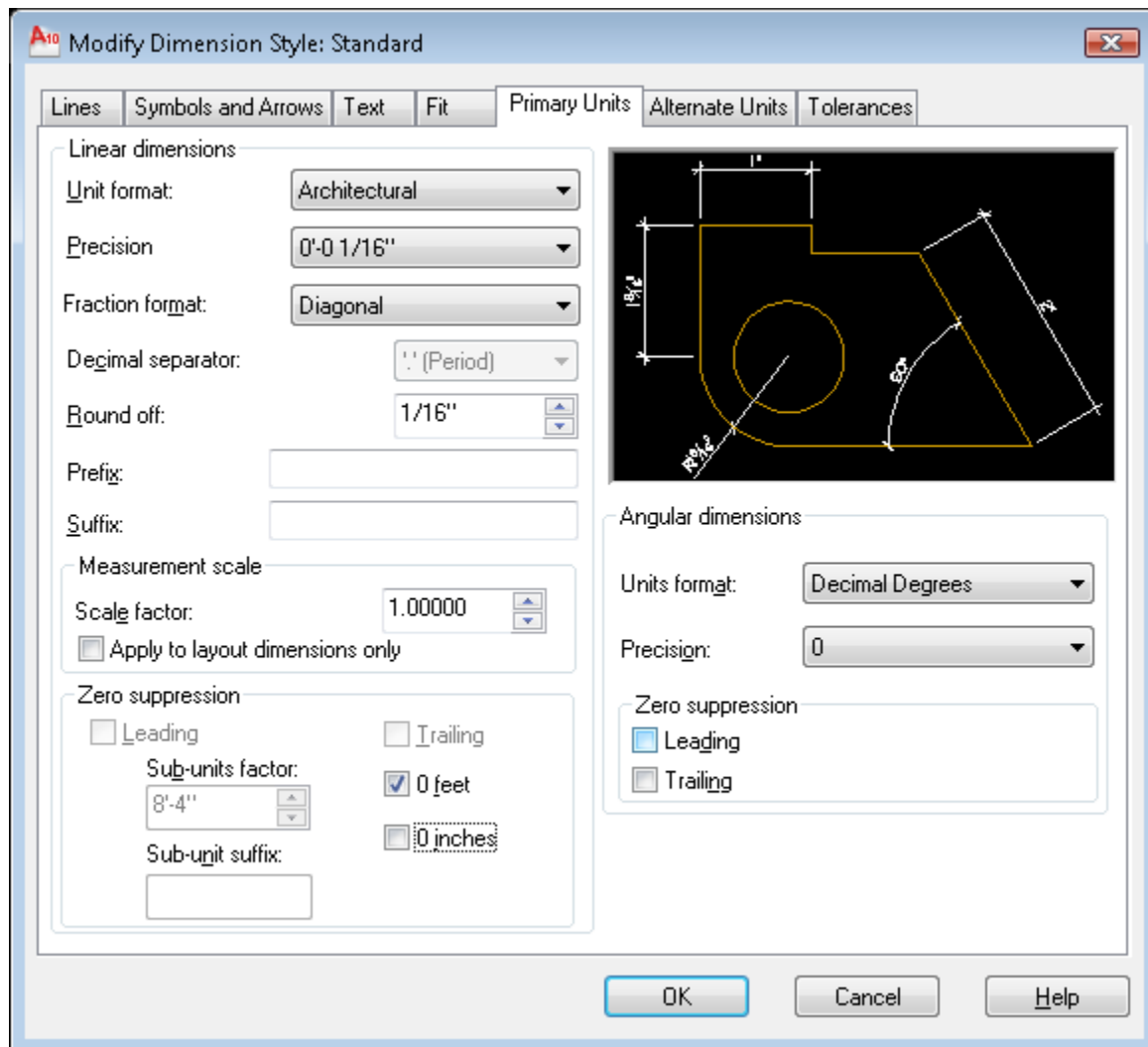
Round off: 1/16"

Zero suppression: check the box to the left of 0 feet

Angular dimensions: select drop-down list and pick "Decimal Degrees"

Angular dimensions Precision: select drop-down list and pick 0

Your dialogue box should look like this:



You do not need to change anything in the "Alternate Units" or "Tolerances" tabs

Click "OK" button

Click "Set Current" button

Click "Close" button

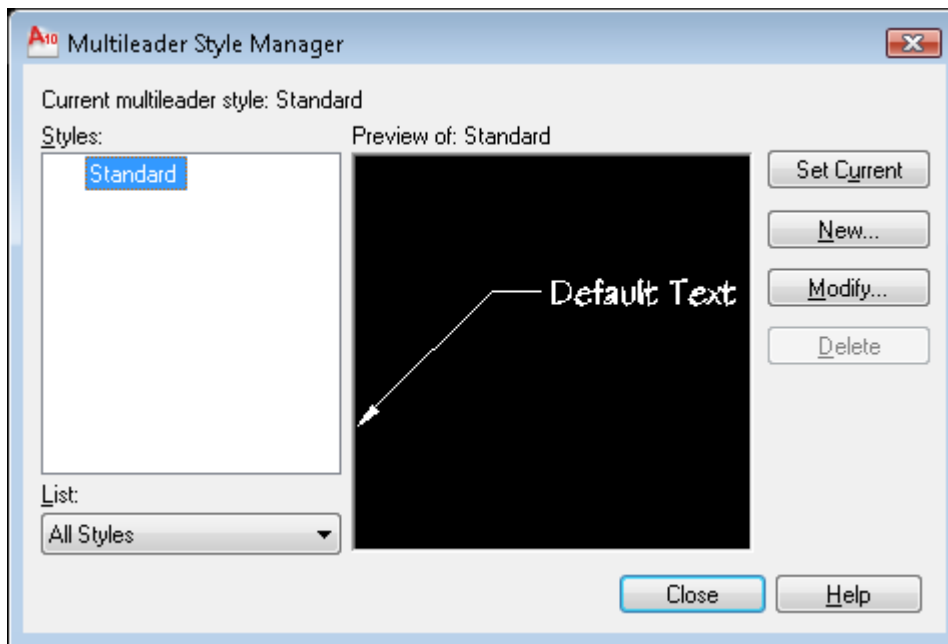
**Done**

## 7. Create a Multileader Style to annotate the drawing:

Click on the Annotate Tab in the Ribbon

Open the Multileader Style Manager by clicking on the arrow that points diagonally down and to the right on the "Leaders" panel

In the Multileader Style Manager dialogue box, select the Standard style:



Click the "Modify..." button

Under the Leader Format tab, change the following:

Type: Straight

Color: By layer

Linetype: By layer

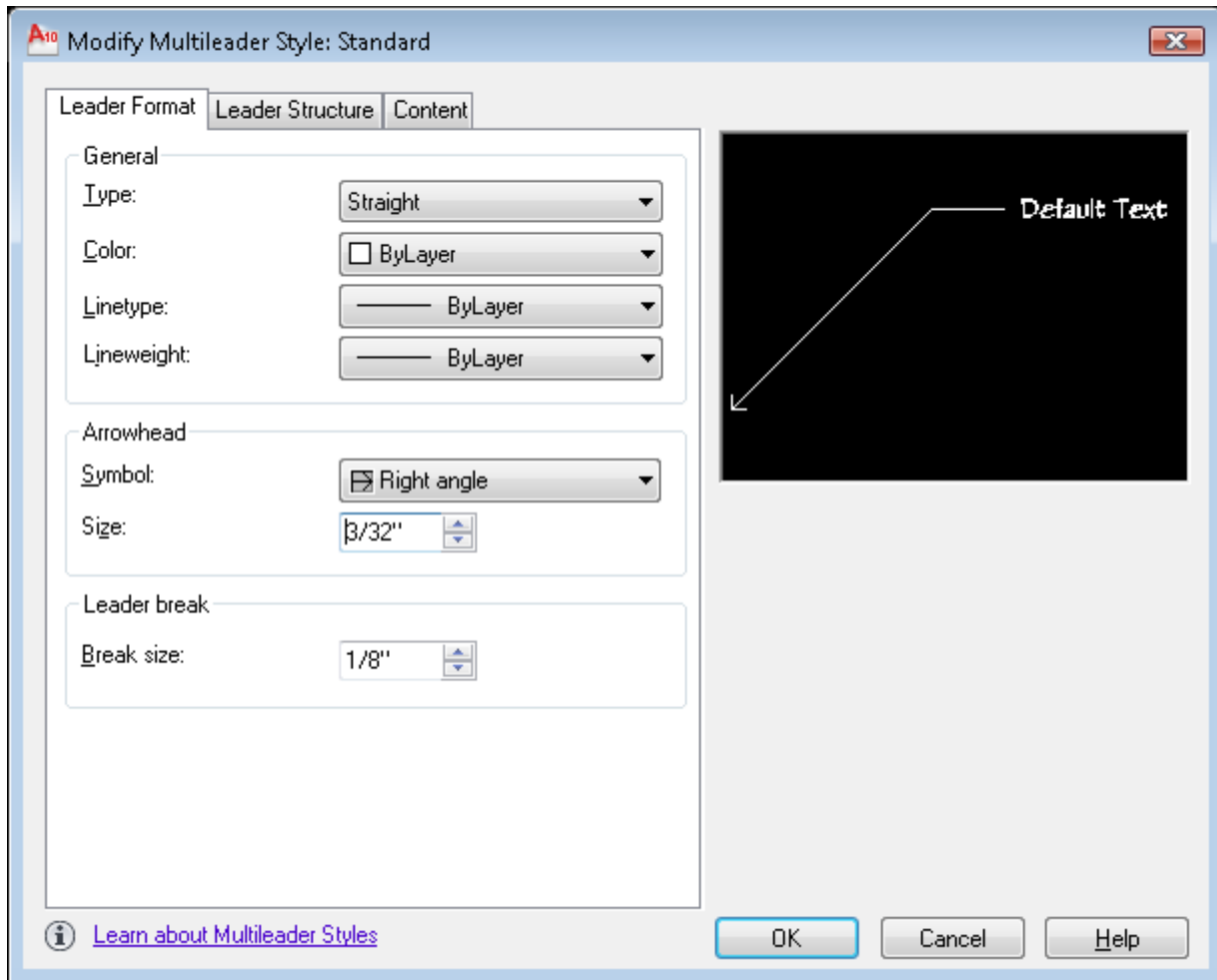
Lineweight: By layer

Arrowhead Symbol: Right Angle

Arrowhead Size: 3/32"

Leader Break Size: 1/8" (a Leader Break is a gap created in the leader line where leader lines cross model geometry)

Your dialogue box should look like this:



Click on the "Leader Structure" tab

Check the box to the left of Maximum leader points and set to 2

Uncheck the box to the left of "First segment angle"

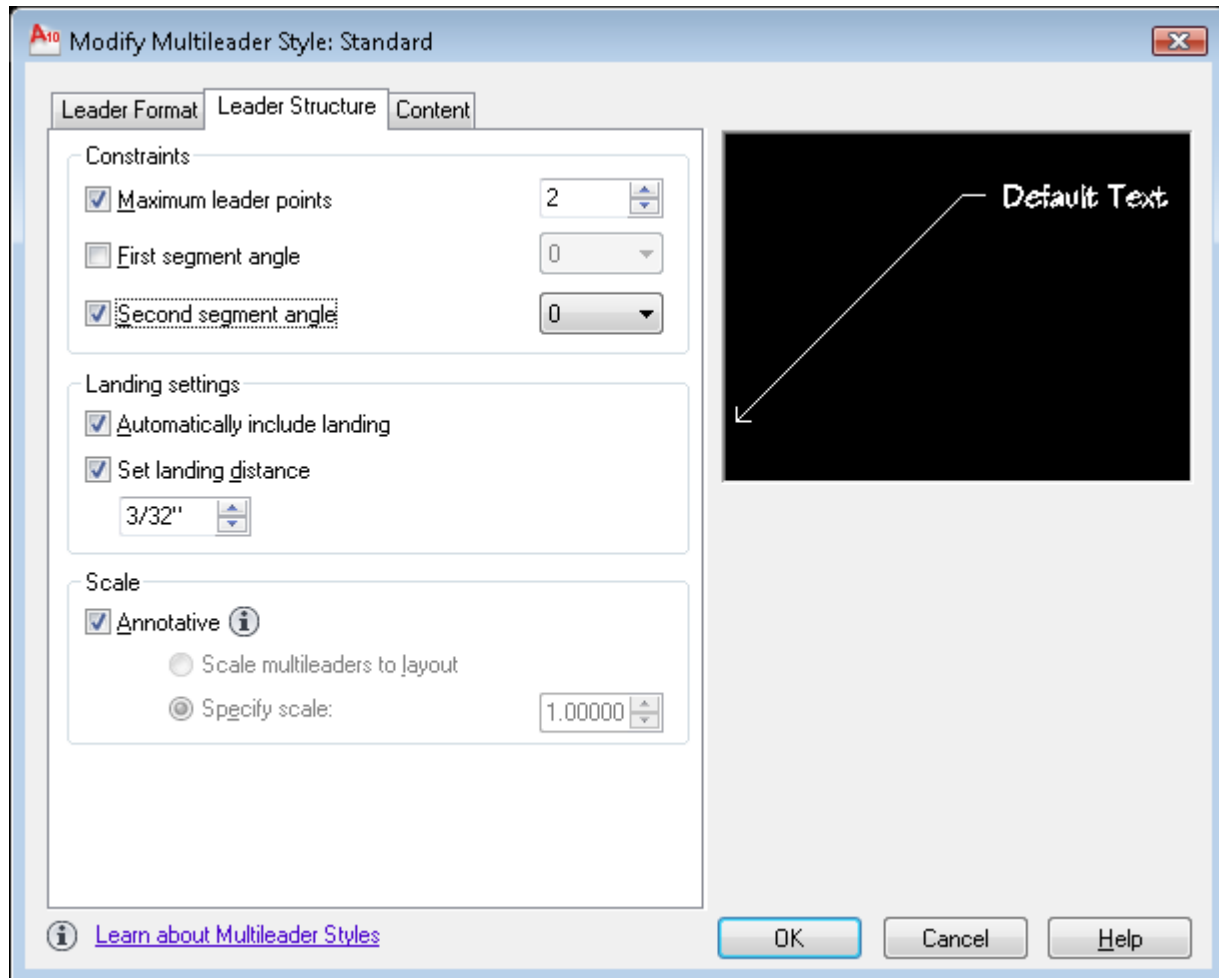
Check the box to the left of "Second segment angle" and set to 0

Check the box to the left of "Automatically include landing"

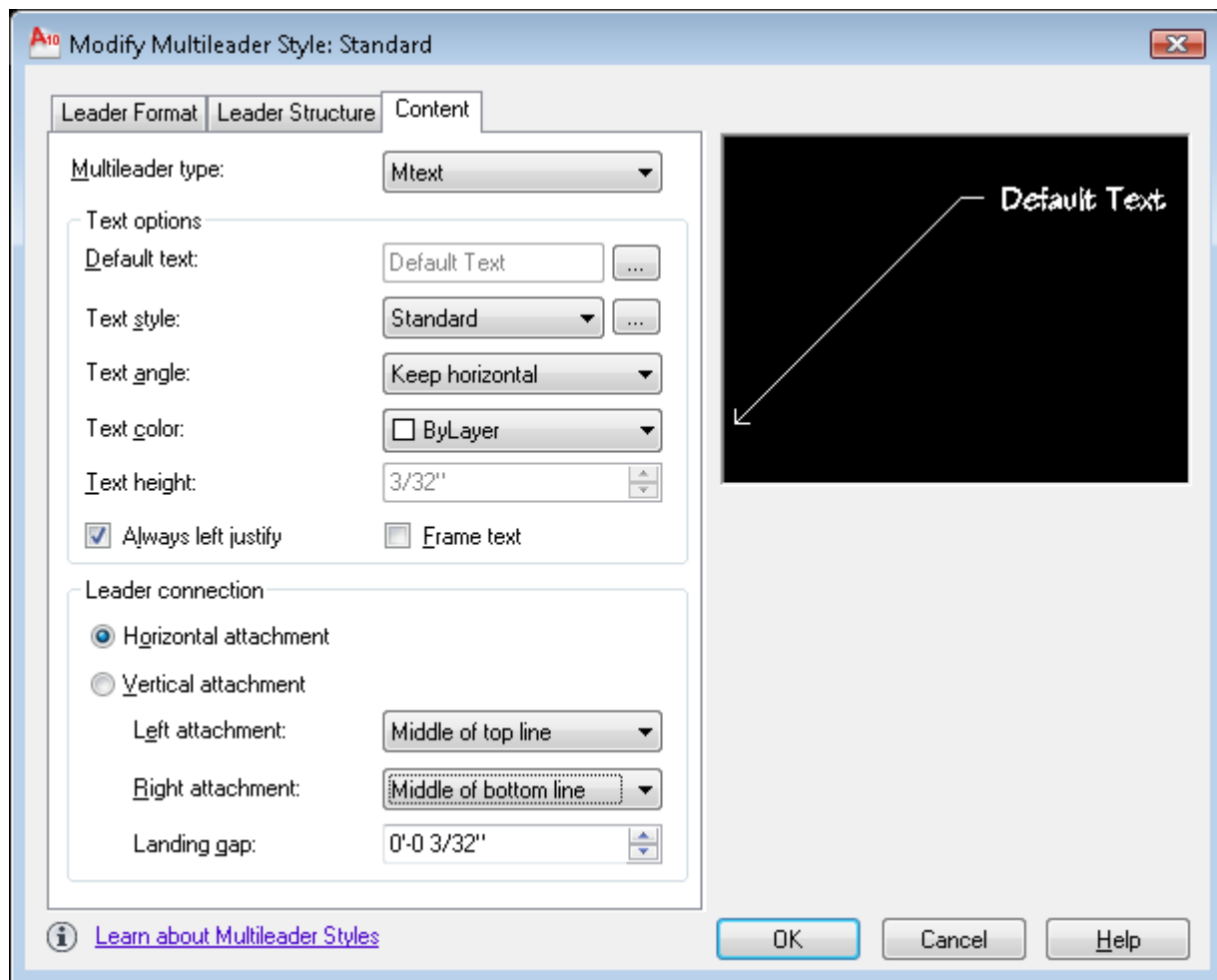
Check the box to the left of "Set landing distance" and set it to 3/32"

Check the box to the left of "Annotative"

Your dialogue box should look like this:



Click the Content tab  
Multileader type = Mtext  
Text style: Standard  
Text angle: Keep horizontal  
Text color: ByLayer  
Check the box to the left of "Always left justify"  
Pick the radio button "Horizontal attachment"  
Left attachment: Middle of top line  
Right attachment: Middle of bottom line  
Landing gap: 3/32"



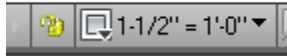
Click "OK" button  
Click "Set Current" button  
Click "Close" button

## 8. Set up two viewports each with different scales:

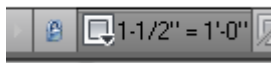
Click on the Layout1 tab

Double-click inside the viewport with the mouse wheel (this will zoom to extents)

Set the scale of the viewport to  $1\ 1/2" = 1'-0"$  by clicking on the "Viewport Scale" button on the bottom right side of the screen.



Lock the viewport scale by selecting the open golden lock icon to the left of the Viewport Scale button - the lock icon will close and turn gray.



Set the current layer to A-ANNO-VPRT

Zoom out so that the viewport covers about 1/2 of the screen

Make a new viewport by typing MV↵

Pick a lower left corner for the viewport , then an upper right corner

Double click inside this new viewport

Set the scale of this new viewport to  $3/4" = 1'-0"$

Lock the viewport scale

Click on the Model tab

Now you are in business to do Annotative Text, Dimensions and Multileaders

## 9. Place a general note in the left viewport

Set the current layer to A-ANNO-NOTE

Click on the Layout 1 tab

Double click inside the left viewport (the one with the scale of 1 1/2" = 1'-0")

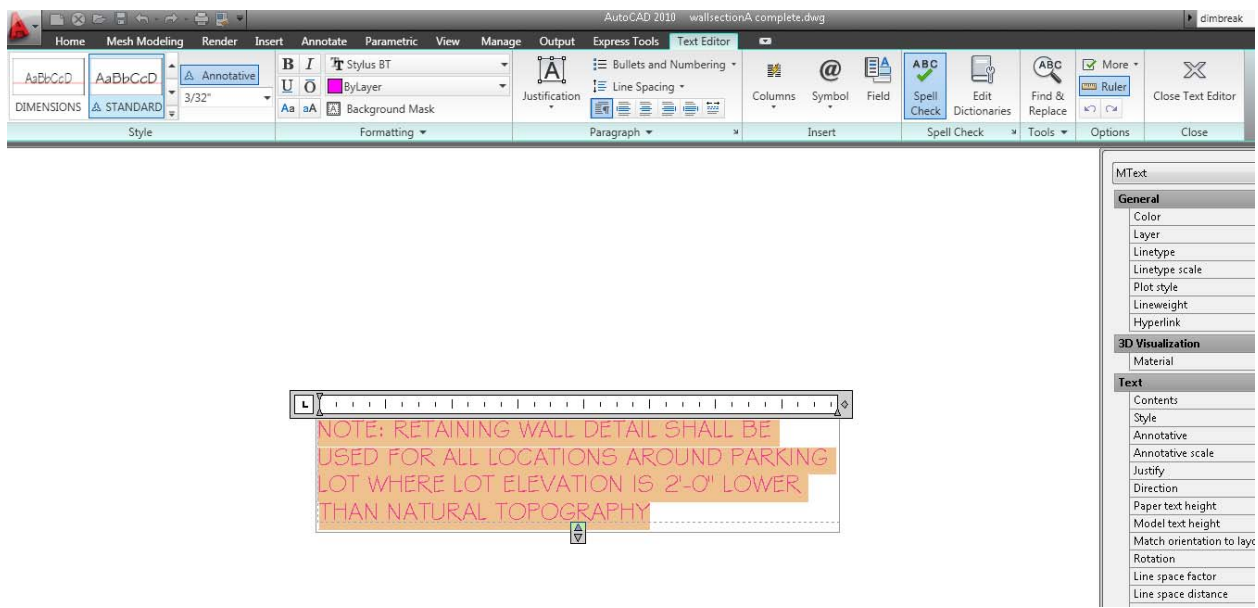
Select the Annotate tab in the Ribbon

In the Text panel, select the Standard text style

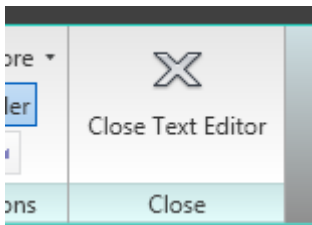
Select the Multiline text button (the Big A) and denote the boundaries of the text box

Turn Caps lock key on

Type the following in the text box: NOTE: RETAINING WALL DETAIL SHALL BE USED FOR ALL LOCATIONS AROUND PARKING LOT WHERE LOT ELEVATION IS 2'-0" LOWER THAN NATURAL TOPOGRAPHY



Left click mouse outside of text box or click on the "Close Text Editor" button on the right side of the Ribbon

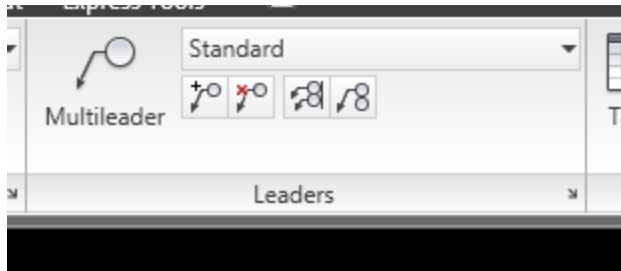




## 10. Place multileader callouts in each viewport

Zoom into the railing cap

Under the "Leaders" panel, click the "Multileader" button



Click the first point on the railing cap and the second point a bit to the right from there

Type the note: RAILING CAP

Left click mouse outside of text box or click on the "Close Text Editor" button on the right side of the Ribbon

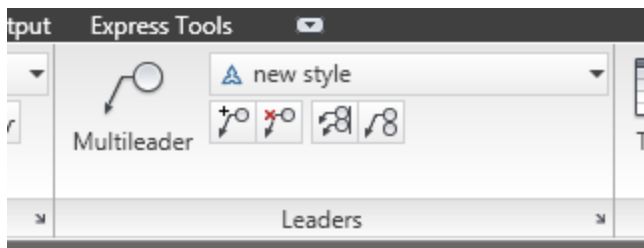
Click the "Multileader" button again

Click the first point on the square tube in the detail and the second point a bit to the right from there

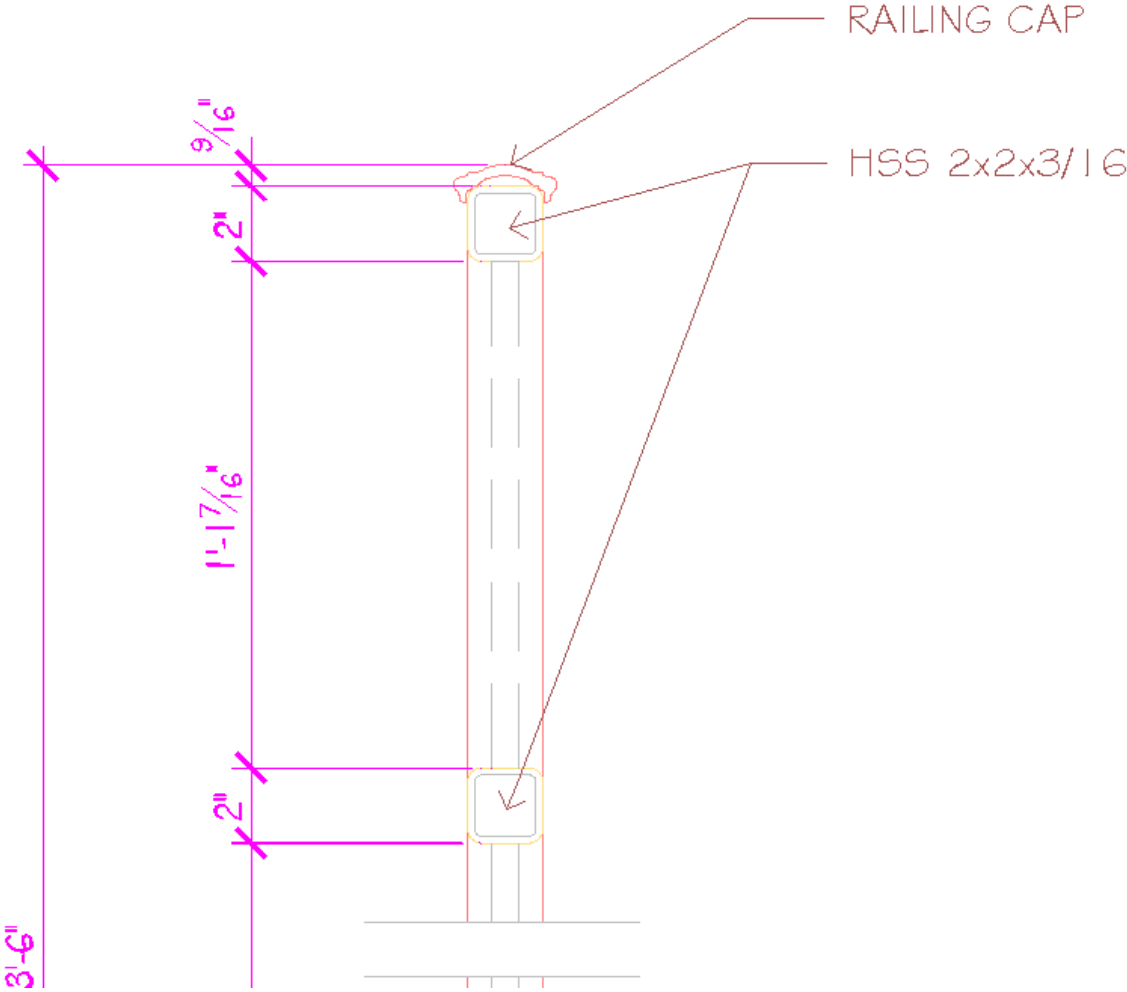
Type the note: HSS 2x2x3/16

Left click mouse outside of text box or click on the "Close Text Editor" button on the right side of the Ribbon

In order to create a second (or more) leader line from a multileader note, click on the icon on the Ribbon to the right of the Multileader icon - the one with the + sign in it. Left-click on the text of the Multileader, then left-click on the location you want to position the second arrow head. Conversely, if you want to remove a leader, click on the icon on the Ribbon to the right of the add multileader icon - the one with the red x, then left-click on the text of the Multileader, and then left-click on the leader line that you want to delete.



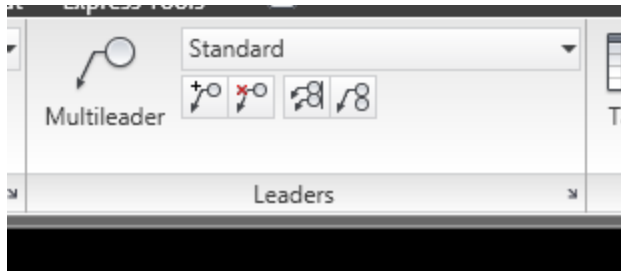
The result is shown below:



Now click inside the other viewport (the one whose scale is 3/4" = 1'-0")

Zoom into the railing.

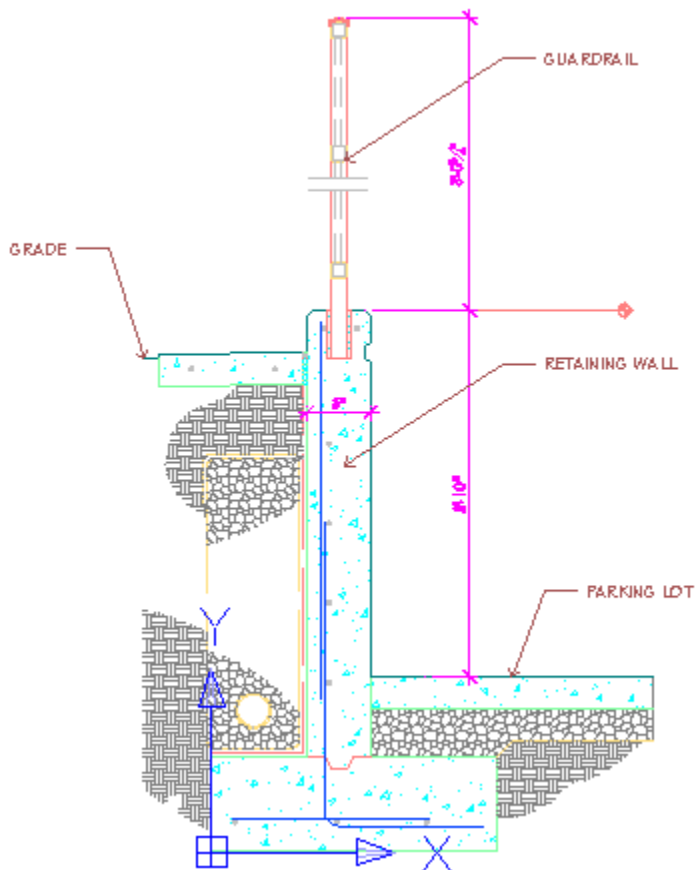
Under the "Leaders" panel, click the "Multileader" button



Click the first point on the railing and the second point a bit to the right from there

Type the note: GUARDRAIL

Left click mouse outside of text box or click on the "Close Text Editor" button on the right side of the Ribbon




Add the other notes using the Multileader command as shown.

Note that the text is proportionally larger with relation to the guardrail drawing itself than the text in the left viewport but appears to be the same text size in paper space.


Note also that this text does not appear at all in the left viewport, or vice-versa.

That is because each viewport is set to a different scale and annotative text, multileaders and dimensions are scaled to the viewport scale in which they are drawn.


When the "Annotation Visibility" button at the bottom right corner of the screen is turned on

(looks like this):  all annotative objects are displayed in each viewport regardless of the viewport scale.

When the "Annotation Visibility" button at the bottom right corner of the screen is turned off

(looks like this):  only annotative objects that are setup for the current annotation scale are displayed.

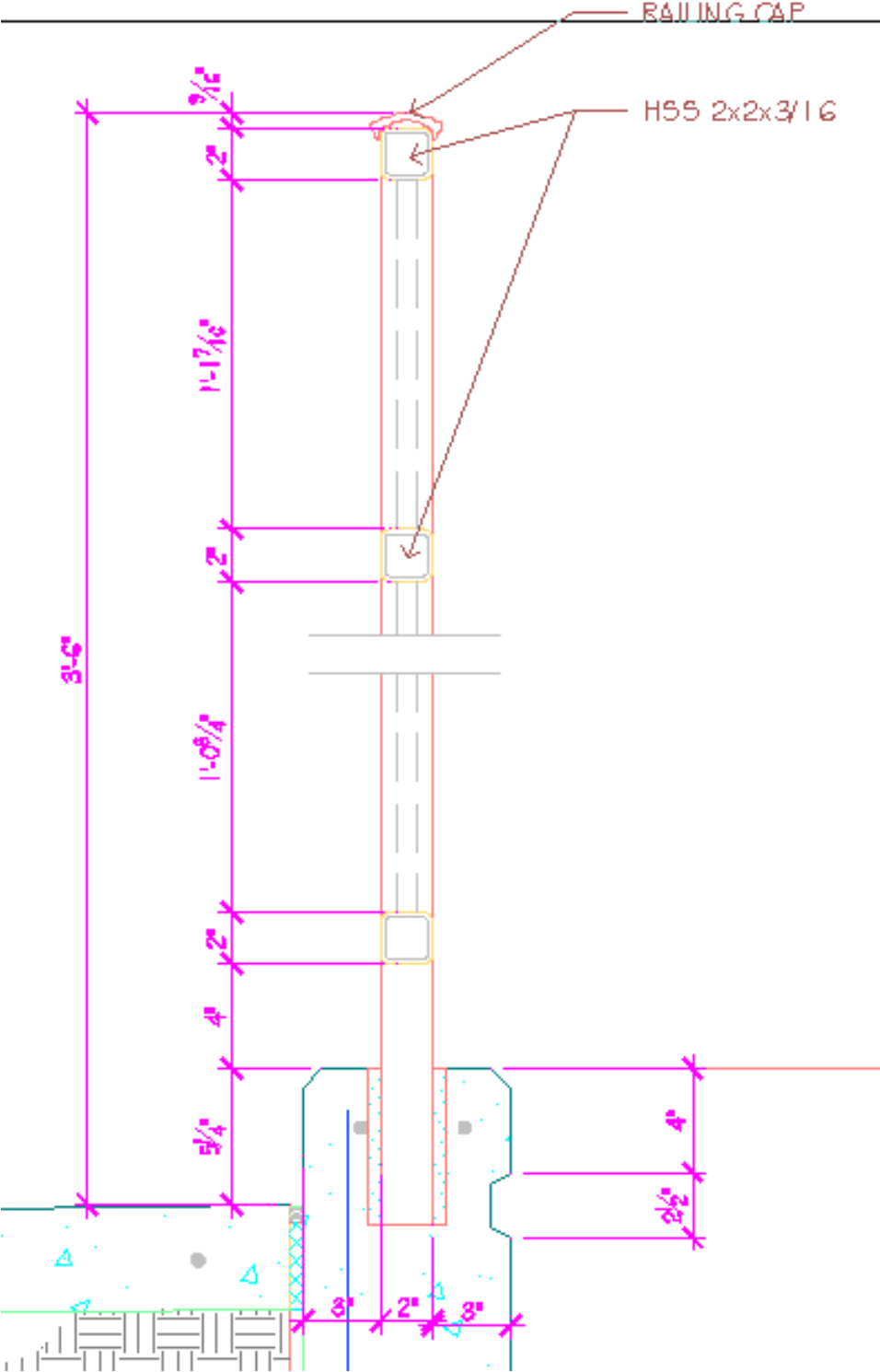
There is also an "Annotative Scale Add" button to the right of the Annotation Visibility

button at the bottom of the screen. It is off by default (looks like this): 

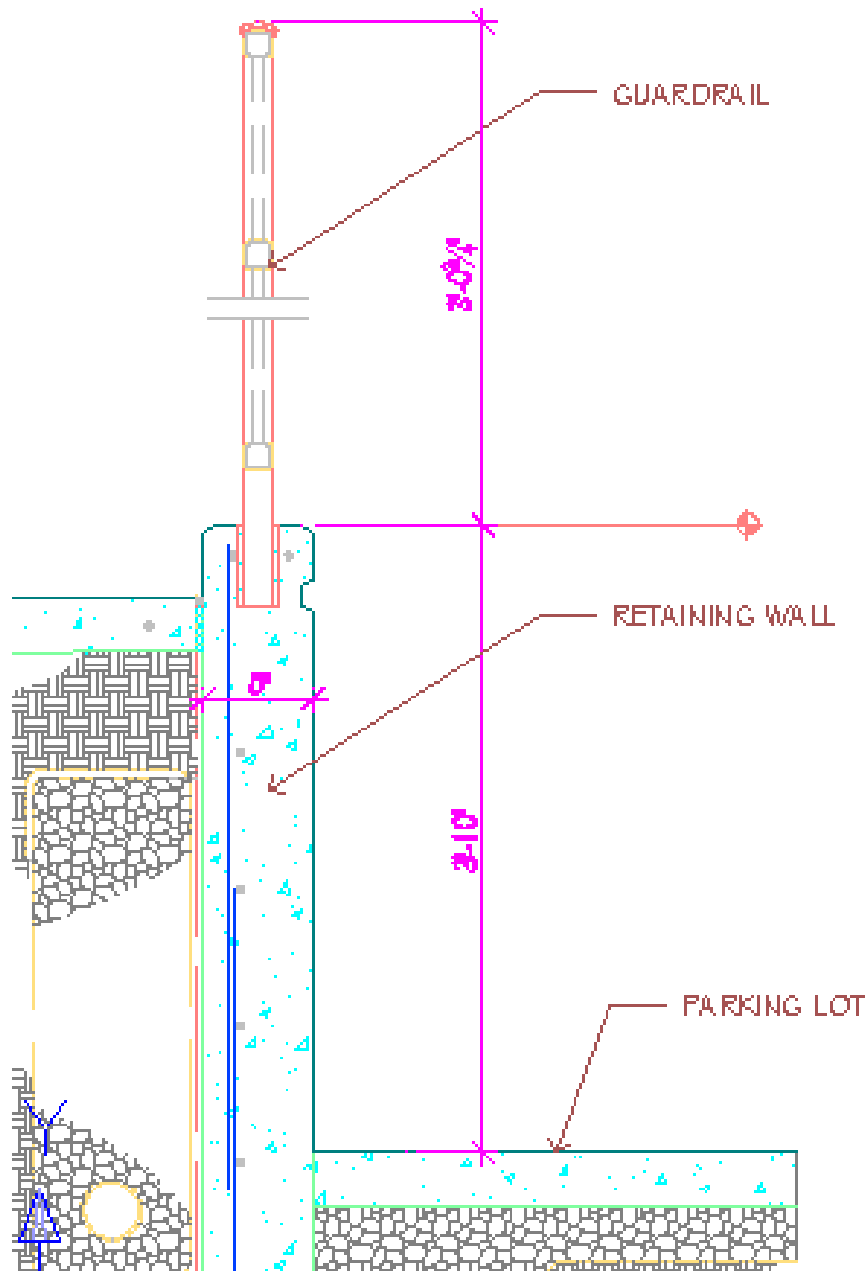
I strongly recommend that you do not turn this on. With this button turned on, if you change scales of the viewport, all annotations already created within the viewport will change scales. Thus, each such annotation receives a "multi scale" icon (two triangles) when you hover your cursor over it, and such annotations will appear in any viewport scaled to either of those scales. It is a blessing but also a curse. For simplicity, I suggest keeping each annotation object confined to one viewport scale only. With this button turned off (the default) if you were to change scales of the viewport, the annotative objects would disappear.

11. Add dimensions in each viewport

Set the current layer to A-ANNO-DIMS  
Click in the left viewport to make it active  
Add the following dimensions:



Click in the right viewport to make it active  
Add the following dimensions:

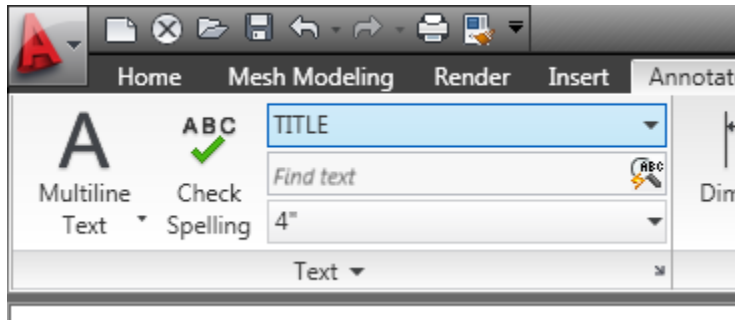


12. Put a title and scale under each viewport in paper space.

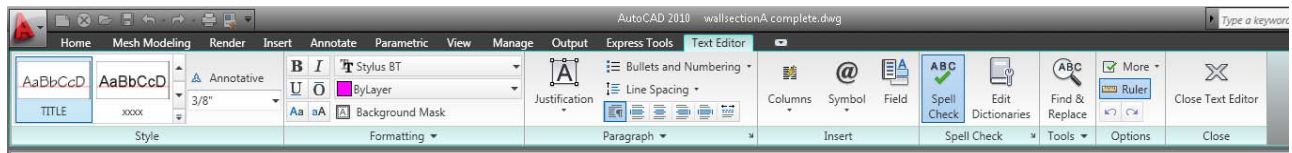
Set current layer to A-ANNO-NOTE

Select the "Annotate" tab on the Ribbon

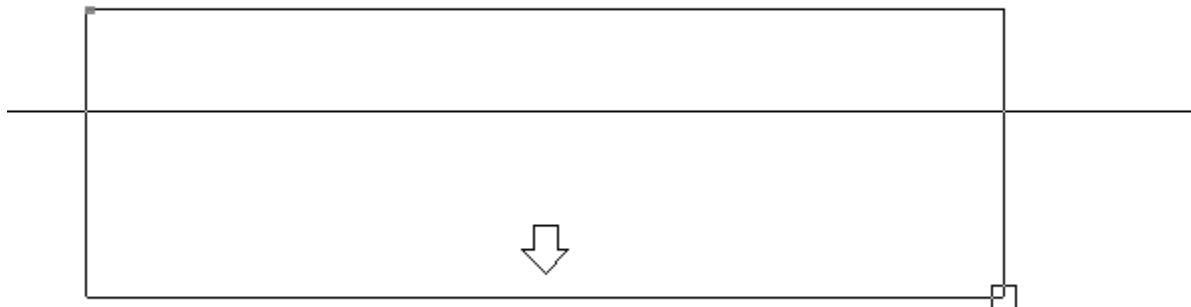
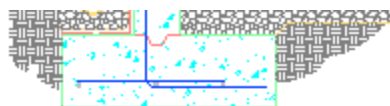
Select the Multiline Text Icon on the left side of the Annotate Ribbon



Make the TITLE style current. Do not be concerned about the size of the text yet. You can change it after you type the text into the text box.

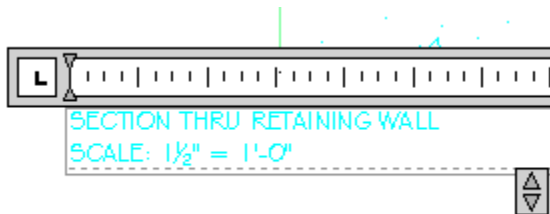


Draw a multiline text box under the left viewport to define the area where you want the title to show (don't worry, you can always change it later, if it is not exactly where you want it to be).

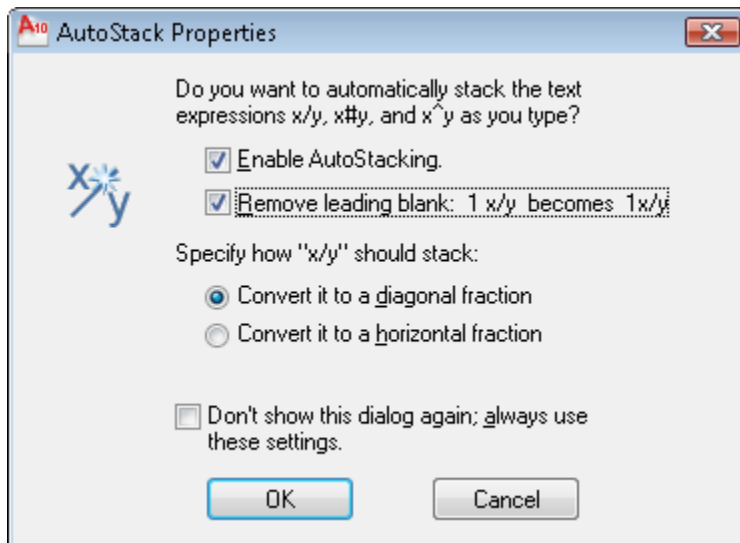


Type the following text into the box:  
SECTION THRU RETAINING WALL ↵  
SCALE: 1 1/2" = 1'-0"

It will look like this:



As you type the 1 1/2" after the SCALE: you may receive a pop-up dialogue box that looks like this:

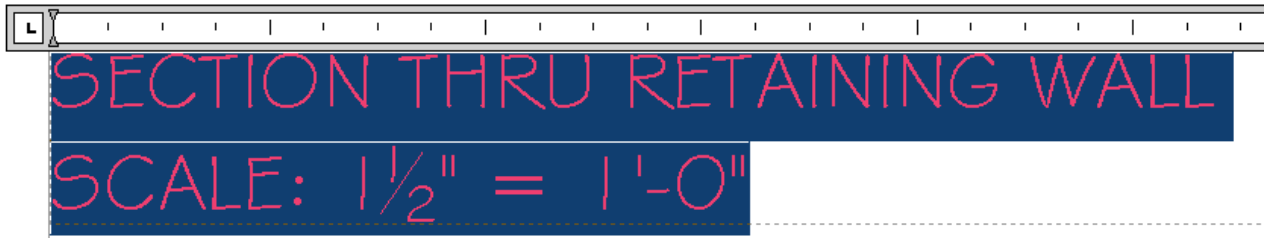


In order for your text fractions to be "stacked" check "Enable AutoStacking" and "Remove leading blank" and select the radio button "Convert it to a diagonal fraction". Thus your fractional text will have the same appearance as your fractional dimensions. If you always want these same results every time you type a fraction, check the box "Don't show this dialogue again' always use these settings"

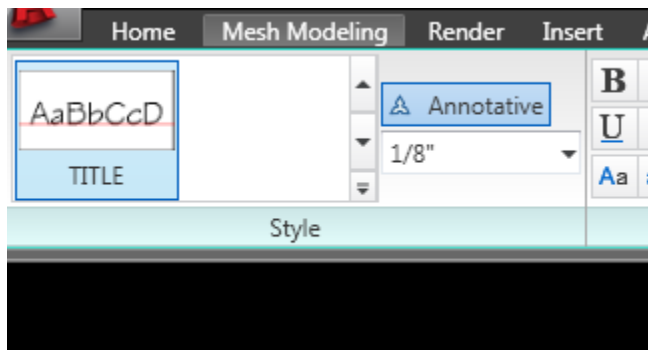


Now you can set the height of the text.

Highlight both lines of text.

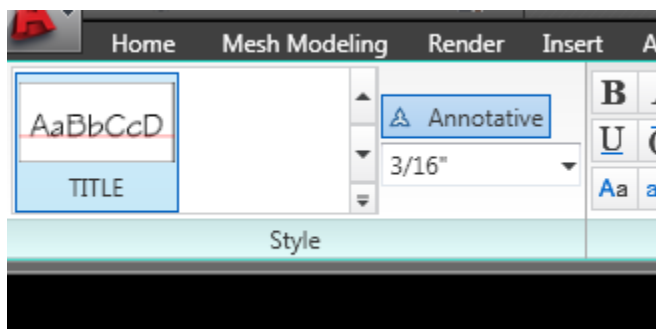


In the Ribbon, change the height of both lines of text to 1/8" (looks like this):

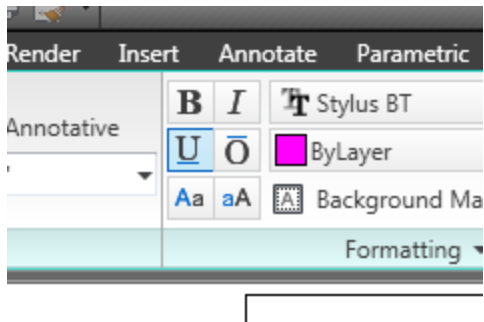


Highlight the top line:

In the Ribbon, change the height of this line of text to 3/16" (looks like this):



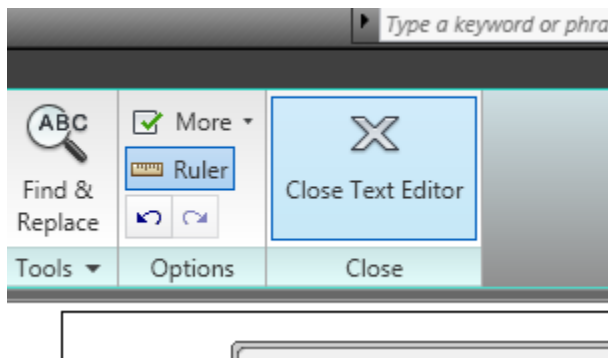
Also, select the U button (looks like this):



Here is the result:



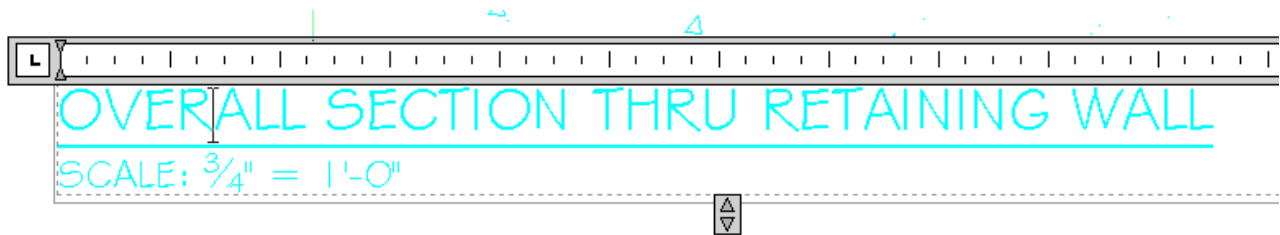
When it looks like that, click outside the box, or close the text editor:



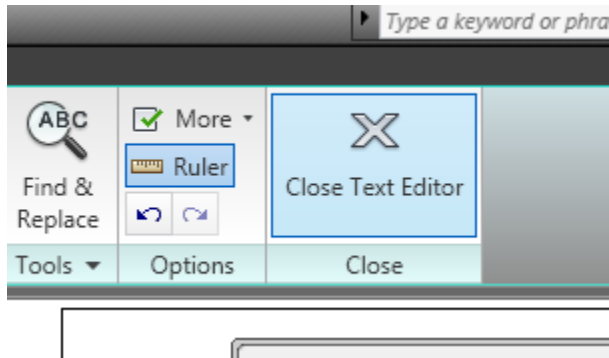
Now do the same for the right viewport.

Type the following text into the box:  
OVERALL SECTION THRU RETAINING WALL ↵  
SCALE: 3/4" = 1'-0"

It will look like this:



When it looks like that, click outside the box, or close the text editor:



13. In paper space, zoom to extents and plot both viewports to a PDF using the Monochrome plot style table

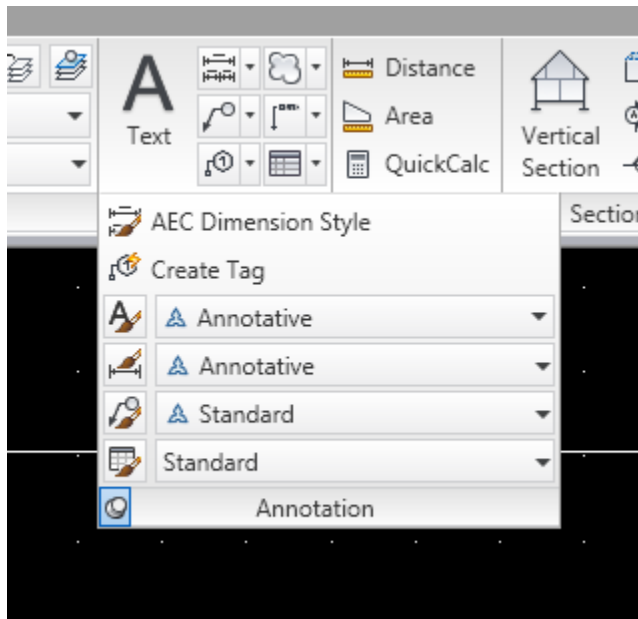
14. Create a DWF


15. Submit both in blackboard as attachments

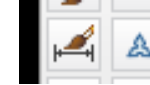
## **Appendix:**


### **User interface differences with AutoCAD Architecture 2010 program**

Conveniently in AutoCAD Architecture 2010, text styles, dimension styles and multileader styles can be selected and modified on the Home tab of the Ribbon, the "Annotation" panel, shown pinned open below.



Click on the  to bring up the Text Style Manager.

Click on the  to bring up the Dimension Style manager.

Click on the  to bring up the Multileader Style manager.

Creating and modifying these is the same as in AutoCAD 2010.

You can also insert text, dimensions and multileaders in the drawing all from this same very useful panel. Note that you may also insert text and dimensions (but curiously, not multileaders) from the "Annotate" tab of the Ribbon.

END OF TUTORIAL:  
ANNOTATIVE TEXT, MULTILEADERS AND DIMENSIONS