How to neaten up lateral designs for installation

After sizing lateral pipes in an irrigation block, you will often find that pipe lengths of the same diameter differ slightly. This is 100% correct and understandable, but during installation of laterals, it causes a bit of an issue for installers working with so many different lengths of pipe.

Although not hydraulically correct, installers will every so often decide on a "best fit" scenario whereby they would select the average length lateral and apply that length to other laterals of the same diameter, making it easier for installation. Yes, this method definitely compromises the hydraulic design, but if applied with moderation and common sense, the slight change may still deliver acceptable results.

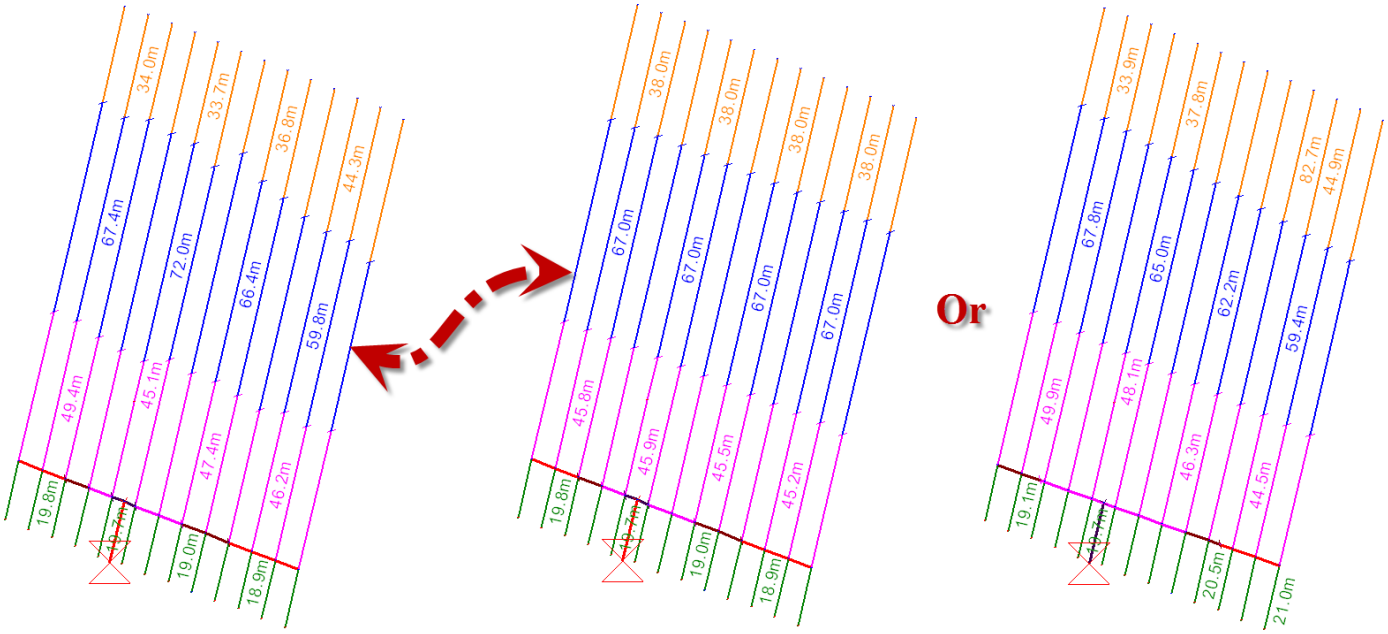
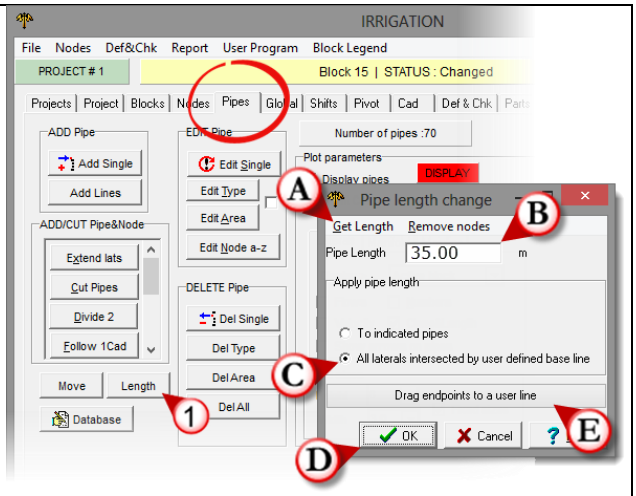


Fig 1.

Model Maker's IrriMaker module provides a tool that can help the designer prepare "installer friendly" designs with the ability to check the hydraulics of such changes making sure the manipulated designs are still within tolerance.

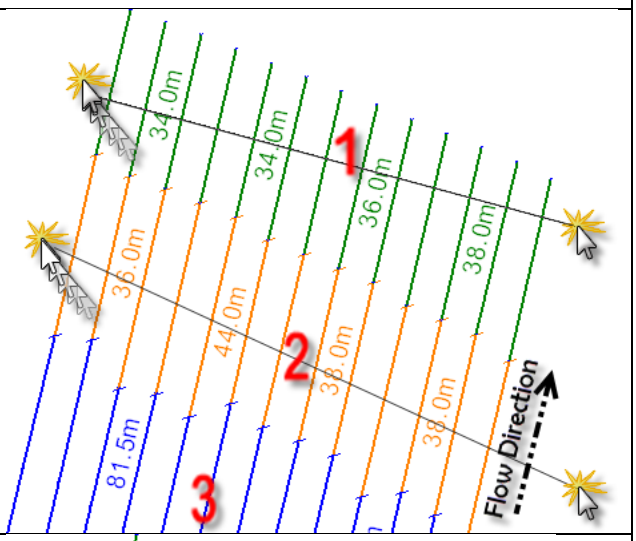
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Step 1: On the Pipes page, Click on (1) Length. To apply a length of an existing lateral to other laterals, use the (A) **Get Length** option and click on a lateral in the active block that you think is the average length. This will populate the (B) **Pipe Length** textbox with a length value. You may also enter your own value into the text box. Now choose the option (C) **All laterals intersected by user defined base line** and click (D) OK.



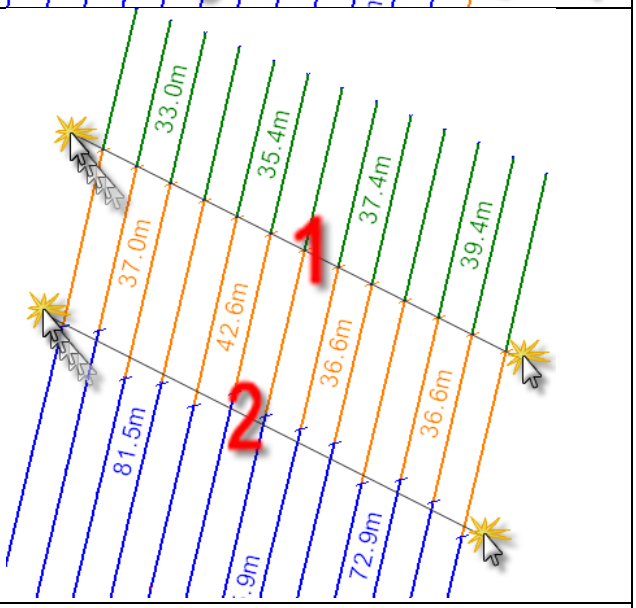
Step 2a: USER BASELINE OPTION:
Click on one side of the laterals and then click again on the other side of the laterals that should be affected by the length defined in step 1. Repeat steps 1 and 2 for all other laterals until you are satisfied.

Tip: With this method, it is advised to start with the smaller diameters working your way back up towards the sub-main.

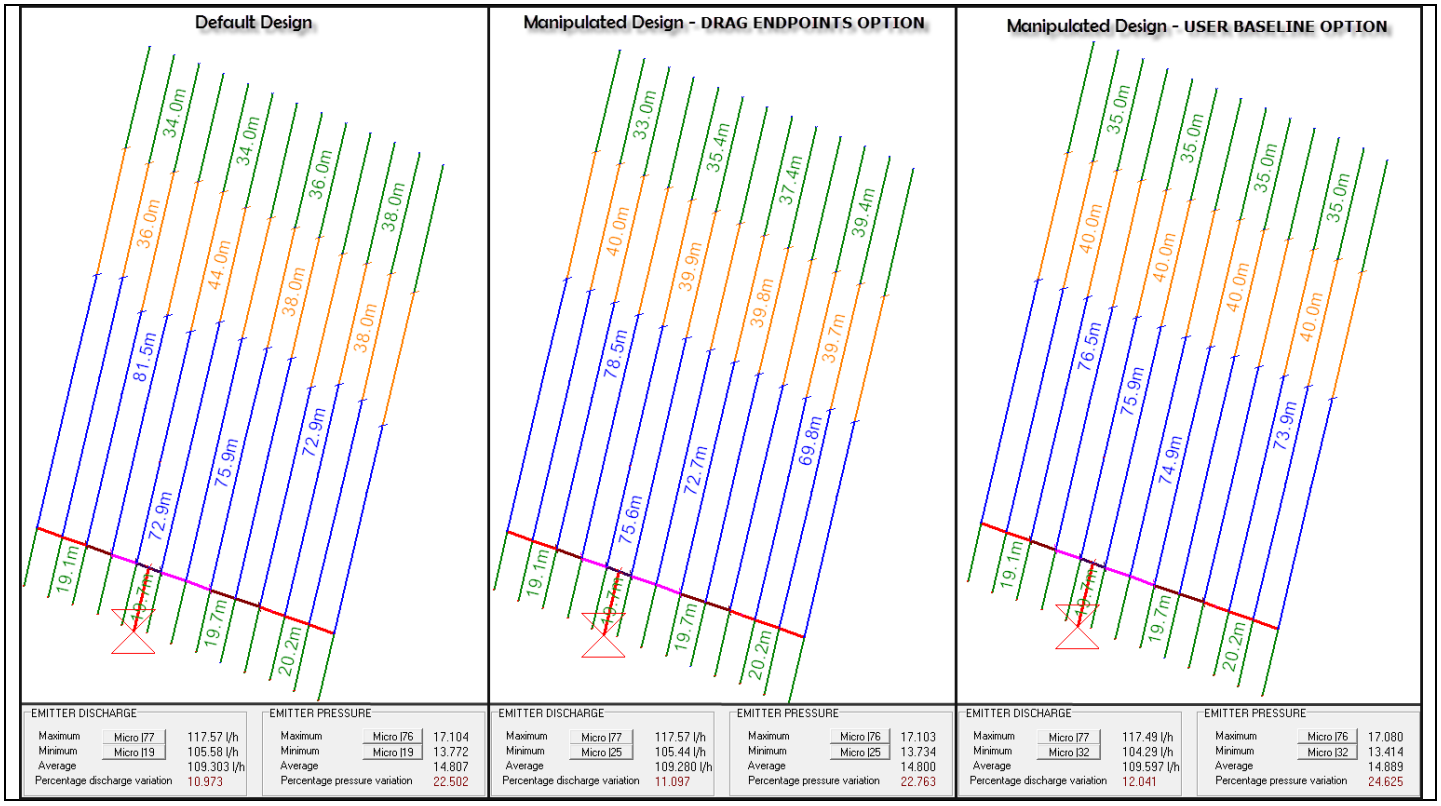


Step 2b: DRAG ENDPOINTS OPTION:
Using the (E) **Drag endpoints to a user line** option, click close to the nodes that must move. You will notice that the length defined is ignored and that the positioning of the indicated line is used. The user can define new node positions at leisure. Irrimaker will look at the line and find the closest nodes to the indicated line whilst moving nodes and pipes to the line.

Tip: Use the  key on your numeric keypad to undo changes made by this function BEFORE YOU EXIT THE FUNCTION if needed.



In the following image we can see how the subtle design changes affected the basic design hydraulics



This is just one of those functions that makes IrriMaker such a pleasure to work with. I trust you will find this hidden function a lot of fun to work with.