

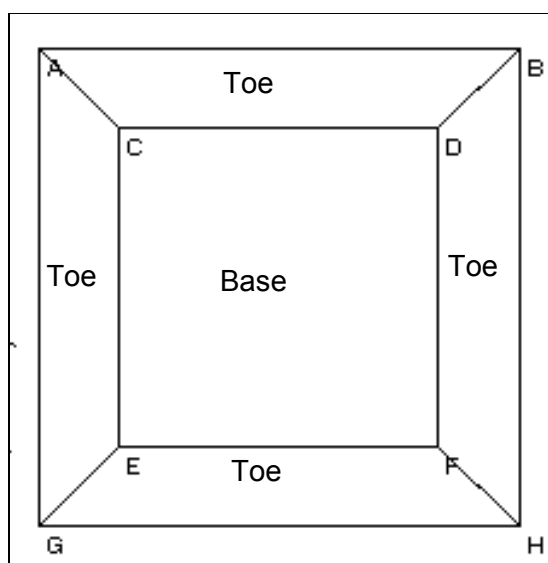


Adding Toes in Advanced Channel Design

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One method of building a channel template in ADVANCED CHANNEL DESIGN is to define the base surface, then build the channel up from there using the "Add Toe" feature.

FIGURE 1. Simple channel



1. **Define the base surface.**
 - a. **Select WINDOWS-NODES.** The Node Editor is a 4-column spreadsheet where you define the X, Y, Z and ID of each node. In Figure 1, the nodes are represented by IDs of A through H.
 - b. **Enter the nodes that describe the base surface** of your channel.

Note: It is important that all nodes are located at the same height (Z).

 - c. **Save the nodes** by selecting FILE-SAVE.
 - d. **Close the Node Editor** by selecting FILE-EXIT.
 - e. **Open the Face Editor** by selecting WINDOW-FACES.
 - f. **Describe the base surface** using the node IDs in counter-clockwise order.
2. **Add the faces on the side slope.**
 - a. **In the Faces Editor, select FILE-ADD TOES.**

FIGURE 2. Sample Add Toe Dialog

- b. **Specify nodes ids that describe the side where you want to add the toe.**

Notes:

- If the first and the last node in the list are the same (as in Figure 2), the program will connect the first and the last face.
- Node orientation is important. The face always leans toward left side of the base segment. In the example in Figure 1, you would enter the nodes in a clockwise order so the toes slope outward from the base in the center.

Add Toe

Nodes: 21_ 22_ 23_ 24_ 25_ 21_ ...

Slope: 1 : 1 0:1 vertical slope
1:0 horizontal slope

Top Depth: 45 Toe Depth = Toe Len for horizontal slope

Border Depth: [] Apply

- c. **Specify the slope ratio.** The latest release of ADVANCED CHANNEL DESIGN allows you to add horizontal and vertical toe.
- **To add a horizontal toe**, enter a slope ratio of 1:0 and set the toe depth to the desired length of the toe.
 - **To add a vertical toe**, select a slope ratio of 0:1 and set the toe depth to the desired depth at the top of the toe.
- d. **Save your faces** by selecting FILE-SAVE.
3. **Exit the Faces Editor** by selecting FILE-EXIT.
4. **Save your channel** by selecting FILE-SAVE AS and naming your file.
- Figure 3 displays three different views of a channel with three types of toes created using the method described above.

FIGURE 3. Adding Toes - An Advanced Application

