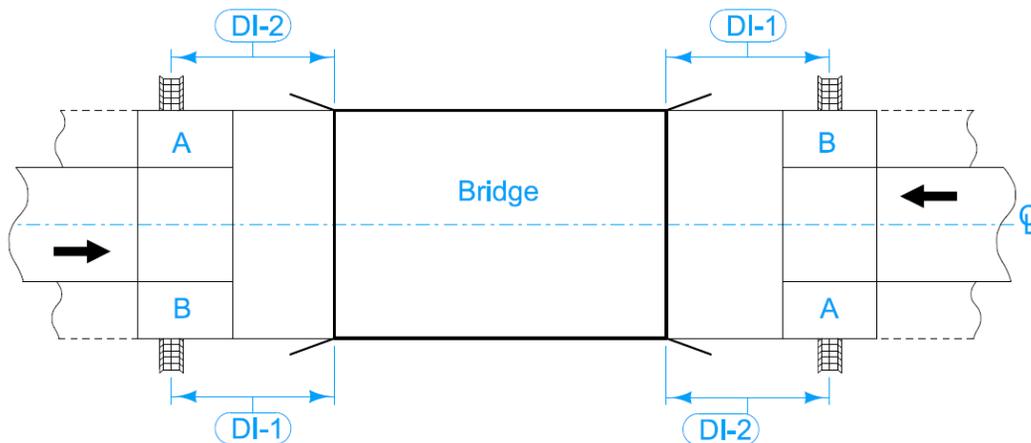


## DR-401 Scour Protection for Bridge End Drain

(This section last updated 01-22-15)

When determining shoulder panel locations for non-skewed bridges, the choice of which shoulder panel location detail on [DR-401](#) to use is actually irrelevant. However, for the sake of consistency with skewed bridges, keep panel A associated with DI-2. Panels C and D may not be required.

For the example below, the choice was to place DI-1 on the approach side and DI-2 on the trailing side of one non-skewed bridge. The designer would want to be consistent and place DI-1 on the approach side and DI-2 on the trailing side of the remaining non-skewed bridges. Notice in this example, DI-2 remains associated with panel A, but DI-1 is associated with panel B (rather than with panel C as would be the case for a skewed bridge). Panels C and D were not required.



In situations where the design calls for a flared shoulder panel, move the flume down the foreslope to maintain a minimum length of 4 feet of scour protection adjacent to the shoulder panel. This will create a situation where there is an additional triangular shape of scour protection adjacent to the shoulder panel.

