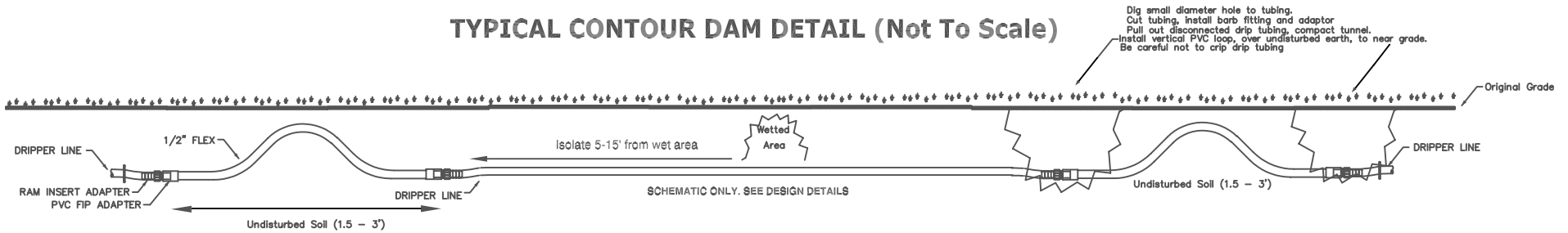


TYPICAL CONTOUR DAM DETAIL (Not To Scale)



REDISTRIBUTION

Redistribution of effluent by gravity in drip dispersal networks occurs at pump shut off. Top feed manifolds provide for rapid pressurization of the network at fill up, and eliminate redistribution between laterals to the lower portions of an individual zone. Top feed manifolds also mitigate a related condition known as the "French Drain Effect" when heavy precipitation (or snow melt) allow water to enter the tubing network by way of the emitters and flow downslope through the network.

CONDUIT FLOW

Typically drip tubing is required to maintain the required installation depth and be installed following the topographic contour with the tubing laying as flat (level tubing installation) as possible. At pump shut off there may be redistribution along an individual drip tubing run by conduit flow. If tubing is installed with a significant pitch, effluent within and out side the tubing may flow to lower portions of the run, potentially overloading the area hydraulically and biologically. Additional factors observed that may lead to conduit flow include compaction of a portion of a run, resulting in severe restriction of the absorption capacity of the soil, forcing effluent to adjacent areas. Over saturation will likely result in biological clogging of the soil further reducing its ability to receive and move water off site. Excessive fill cover and / or clayey fill cover may have the same effect.

CONTOUR DAMS

Correction of the redistribution to a saturated area would require the use of "Contour Dams" which will prevent the tubing run portion volume from entering the area. This is accomplished by means of a raised, flexible PVC loop on each line located approximately 5-15' from either side the area of surfacing. The PVC loops would rise vertically to a depth that will prevent the adjacent sections of tubing from draining past the loop. Native clay should be packed on either end of the pipe connection. All installation is to be by hand. It is recommended drying the soil by either resting the area for several days by turning off the zone at the control panel or by pumping both tanks. An only beginning the alterations when field conditions have dried. The corrections should take less than a day. Scarify and add clean loamy material to any low spots. Seed the disturbed area, the area of the break out, and over seed the entire field. Conserve water to extend the period of field resting. Once the tanks are filled and the system begins dosing the field should be ready to receive flow.

Maintaining an aggressive turf cover, and cutting the grass higher will hopefully allow the vegetation to help loosen and restructure the soil providing increased infiltration.

"STEP DOWNS"

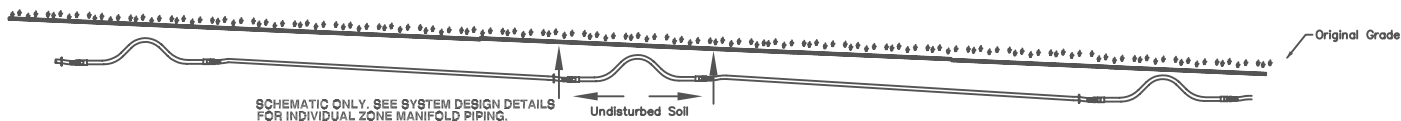
Due to site constraints some designs necessitates the tubing running off contour to fill the available area and maintain the minimal amount of required tubing. As always, Top Field Manifolds should be utilized on sites with any discernable slope. For example topographic information may show the distal end of the drip tubing is indicated to be as much as 1.5' lower in elevation than the header end of the tubing. This elevation difference would produce an approximate 1.2% off-contour slope over most of the length of the drip field (~130 feet).

Maintaining level tubing shall necessitate the use of "Contour Dams" which will "step down" approximately every 25' by means of a raised, flexible PVC loop. The PVC loops shall rise vertically to a depth that will prevent the uphill section of tubing from draining past the loop. Tubing installation depth along each 25' section shall vary as required to maintain level tubing as well as possible over the 25' section. If a site has over 130' of tubing length, which indicates four to five individual "contour dams" per tubing run.

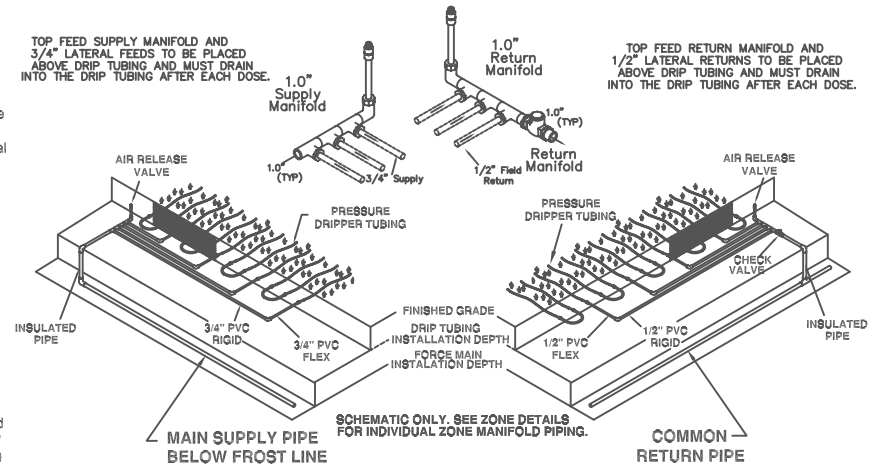
For example, begin installing each 25' section at 8-10", maintaining flat tubing to the end with the tubing at approximately 6". At this point lift the plow (or trencher) up and out and restart the next 25' section, damming with in place undisturbed soil. Each 25' section will then be connected with solid flex tubing, isolating each portion by gravity. Coupled with the top feed manifolds, redistribution by gravity is eliminated, installation depth is maintained, and the intent of the regulation is met.

Note that we do not recommend this approach as a standard design, and represent a bit more effort in design as well as stake out and installation on the part of the contractor. In this case as a repair, it may be the only approach to maximize the amount of area.

TYPICAL STEP DOWN CONTOUR DAM DETAIL (Not To Scale)



STANDARD DRIP SYSTEM DETAILS FOR SITES WITH DISCERNIBLE SLOPES



TOP FEED MANIFOLD DETAIL (Not To Scale)

AMERICAN MANUFACTURING CO.

P. O. Box 97, Elkwood, VA 22718 Ph: 800-345-3132

PROJECT NAME :	
	DATE
TITLE :	Contour Dam DETAILS
COUNTY :	
SCALE : NTS	SHEET: OF