**Offset distance ($\Theta$) = 1/4 TW**

**Typical Section**

**DATA**

- Offset distance ($\Theta$)
- Drain installation depth ($D$)
- Drain diameter ($d$)
- Drain pipe material

Source: Adapted from IL Urban Manual

Symbol: $
\text{(VC/LC)}(\text{P/T}) + \text{PD}$

Detail No. **DE-ESC-3.3.3.3**

Sheet 1 of 2

Effective FEB 2019
Construction Notes:

1. Deformed, warped, or damaged pipe shall not be used.

2. All subsurface drains shall be laid to a uniform line and covered with envelope material. The pipe or tubing shall be laid with the perforations down and oriented symmetrically about the vertical center line. Connections will be made with manufactured junctions comparable in strength with the specified pipe or tubing unless otherwise specified. The method of placement and bedding shall be as specified on the drawing.

3. Envelope material shall consist of either filter cloth or DE #8 aggregate.

4. The upper end of each subsurface drain line shall be capped with a tight fitting cap of the same material as the conduit or other durable material unless connected to a structure.

5. A continuous 10-foot section of corrugated metal, cast iron, PVC, or steel pipe without perforations shall be used at the outlet end of the line. No envelope material shall be used around the 10-foot section of pipe. An animal guard shall be installed on the outlet end of the pipe.

6. Where surface water is entering the system, the pipe outlet section of the system shall contain a swing type trash and animal guard.

7. Backfilling shall be done immediately after placement of the pipe. The backfill material shall not contain rocks or other sharp objects. Place backfill in a manner that will not damage or displace the pipe.