



COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION

RICHMOND DISTRICT

P.O. BOX 3402

COLONIAL HEIGHTS, VA 23834

Virginia.gov

GREGORY A. WHIRLEY
ACTING COMMISSIONER

May 30, 2006

ATTN: Developers, Engineers, and Contractors in Hanover and Goochland Counties

RE: Subdivision Private Entrance and Ditch Design

Dear Sir or Madam:

There have been some recent misinterpretations of VDOT standards and observed construction flaws on subdivision roads with regards to the referenced design topic. In order to avoid any further confusion and prevent future construction inspection problems, the following design guidance should be incorporated in all land development plan submissions.

1. Per Table 2&3 of Appendix B of the Subdivision Street Design Guide
"Minimum ditch width should be 4 feet or greater, based on slopes of 3:1 or flatter (Gentler slopes promote homeowner maintenance of ditches)"

The stated 4 feet is defined as the front ditch slope. The minimum standard roadside ditch is a 3:1 slope @ a front ditch slope width of 4 feet which results in a ditch depth of 16".

2. Per Standard PE-1 in the Road & Bridge Standards Volume I
"..... The ditch line may be moved back to provide at least 9" of cover over pipe..."

A minimum cover of 9" is required at all private entrances. Due to the variations in pipe strength and material, the Residency will consider less than 9" if supported in writing from the pipe manufacturer's engineer. The letter should clearly specify the recommended cover, pipe size, class, material, and necessary bedding requirements to avoid any misinterpretation.

3. Per Standard PE-1 in the Road & Bridge Standards Volume I

All entrance grades must begin at the back of graded shoulder point. It is not acceptable practice to design or construct an entrance grade from the edge of pavement.

4. Per pg. 8-8 of the VDOT Drainage Manual
"...hydraulically adequate 12inch diameter culverts may be used if the culvert length is less than

50 feet or if it is located under an entrance”

The Residency prefers 15” pipe culverts at entrances, but will consider hydraulically adequate 12” pipe culverts as a minimum. Equivalent elliptical or other shape pipe sizes are acceptable. All entrance culverts shall include hydraulic calculations.

Plan requirement

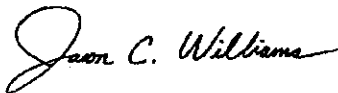
All subdivision plans shall show a private entrance section detail (To Scale) that demonstrates the above requirements are met. This detail should resemble the Standard PE-1 detail, but also include the following:

1. Show Entrance Grade in Cut and Fill Situation. (possibly 2 details)
2. Show Proposed R/W and necessary Easements.
3. Show Minimum Pipe Size and Material.
4. Show Proposed Ditch Dimensions and Slopes.
5. Show Cover (inches) above pipe.
6. Show Typical Section that accommodates private entrance detail requirements.

VDOT’s acceptance of the subdivision roads into the secondary system will be dependent on adherence to these VDOT standards and specifications.

If any questions arise related to the above-mentioned engineering guidance and recommendations, please contact Jason Williams at 804-752-5522.

Sincerely,



Jason C. Williams, P.E.
Residency Staff Engineer, Ashland