

Chapter 8 - Residential Lot Drainage

Residential lot drainage for residential lots that are part of a common plan of development includes providing drainage and/or grading of the land to direct surface drainage away from building and toward streets, drainage conveyance structures, BMPs, or sheet flow.

8.1 References

Except where more stringent requirements are presented in this Design Manual, lot drainage shall comply with state requirements. The primary design references are:

- VDOT Drainage Manual
- VA SWM Handbook
- VA ESC Handbook
- BMP Clearinghouse
- State Building Code

8.2 General Lot Grading

Lot grading plans establish the grading relationships between adjacent properties, determine the drainage areas and sizing of stormwater conveyance systems and BMPs, and account for the build out of the developed lot.

8.3 Construction Plan Requirements

Individual lot grading and drainage shall be shown on the site plans and shall include the following information:

- All high or low points shall be labeled on the plans.
- All impervious areas shall be shown on the site plans. Additionally, all impervious areas shall be shown on the plot plans and shall not exceed the impervious areas shown on the approved site plans. Building pads sizes shall be noted on the site plans and the plot plans. If plot plans show an increase in the impervious areas then additional stormwater BMPs and a redesigned site plan may be required. Designers are encouraged to provide an adequate building pad on the site plans in order to meet homebuilders desired pad size and prevent redesign of the plans.

- Proposed and existing contours at two foot intervals. The proposed contours on plot plans shall conform with the intent of the approved site plan”.
- All stormwater conveyance structures (drainage pipes, swales, etc.) shall be shown on the plans.
- All BMPs and swales shall be shown on the plans.
- A finished floor elevation (FFE) shall be provided for each building pad on the site plan to the nearest foot. The plot plan shall show a FFE that is consistent with the intent of the approved site plan. See Section 12.2 for lots that are located in a floodplain.
- Roof drains shall be shown on plot plans and shall meet the drainage areas as shown on the approved site plan. Rooftop disconnects used for stormwater quality shall be shown on the site plan.
- Plot plans shall show that grading is consistent with the approved site plan. If plot plans is not consistent with the approved site plan then additional stormwater structures and a redesigned plan may be required.
- Residential lots that are not part of a common plan of development may require residential lot grading at the discretion of Roanoke County due to the need of SWM plans, drainage issues, or other circumstances.
- Residential driveways shall meet VDOT specifications for driveways abutting a public roadway and Roanoke County’s Street standards for driveways abutting a private roadway for maximum driveway grades.