







- GENERAL NOTES**
- All construction and materials shall be in accordance with the current Virginia Department of Transportation Road and Bridge Specifications, Virginia Department of Transportation Road and Bridge Standards, and Henrico County Specifications and Standards where applicable.
  - Incidental concrete must be Class A3 in accordance with VDOT specifications.
  - A permit must be secured from the Henrico County Department of Public Works before any work is performed within an existing County right-of-way or easement.
  - The Department of Public Works must be notified at least 24 hours prior to beginning any construction work.
  - The contractor shall notify the Henrico County Department of Public Utilities prior to doing any utility work.
  - The location of existing utilities, as shown, is approximate. The contractor shall verify the location of existing utilities prior to any construction work.
  - A permit must be obtained from the Virginia Department of Transportation for any work performed within the State right-of-way.
  - The contractor shall notify "Miss Utility" at 1-800-552-7001 prior to any construction work in this area.
  - When it appears that the proposed work may have some impact in adjacent private or commercial properties, the applicant must inform the property owners of the proposed work and keep them apprised of time schedules, delays, impacts, changes in pedestrian and vehicle access or traffic patterns, and final restoration plans.
  - When a temporary cut-de-sac is no longer required due to a road extension, the developer of the road being extended is responsible for removing the temporary cut-de-sac and extending the road and property components (curb and gutter, grade, driveways, paved driveways, sidewalks, mailboxes, etc.) to the new road section and re-grading areas to finished contour acceptable to the adjacent property owners and to Henrico County.
  - No driveway access points shall be allowed within the radius of a public road intersection.
  - When driveways are located within roll face curb and gutter, transitions to a drop inlet, curb cuts and aprons are required.
  - Prior to the issuance of any building permits, all signs and barricades for dead end road must be in place.

- CURB AND GUTTER**
- All curb and gutter and storm sewer/inlets located within the existing County right-of-way shall be installed by the County upon written request being made to the County Engineer or by calling 501-4622.
  - All curb and gutter shall be Henrico County standard curb and gutter, except as noted.
  - This plan approval does not establish the curb and gutter elevations along the public right-of-way. The elevations will be set by Henrico County.
  - All curb and gutter in the County right-of-way must be wet curb and gutter. The use of dry curb and gutter is prohibited in the County right-of-way.
  - The transition from standard six (6) inch curb to roll-face curb shall be at intersections at the point of curvature (PC) of curb returns.
  - Where sidewalks are present or proposed, all driveways must be concrete from the back of curb to at least the rear of the sidewalk.
  - Class 37 stone must be placed under all curb and gutter and must extend one foot beyond the back of the curb.
  - CG-12's must be installed at curb returns where there is existing or proposed sidewalks. In locations where there is no sidewalk being proposed, the curb must be depressed for the future location of a CG-12.

- CONDITIONS FOR GUARDRAIL**
- Guardrail is typically required on sections of roadway when any of the following conditions exist within the clear zone:
- A roadside parallel embankment (fill slope) of 3:1 or steeper and a depth of four feet or more.
  - A water hazard with a depth of ten feet or more.
  - A ditch section with a depth of three feet or more as measured from the near edge of pavement.
  - A fixed object (such as a culvert, pipe, headwall, retaining wall, bridge pier, or abutment).
  - Other hazards as determined by the Traffic Engineer.
- Additional right-of-way or permanent easements may be required to accommodate the guardrail in its entirety.
- All guardrail must be approved by the Department of Public Works and shown on the plans, including any necessary details, type, and lengths of rail.

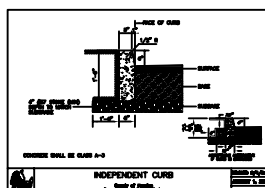
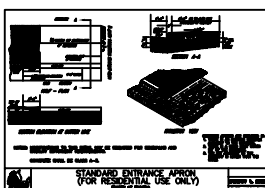
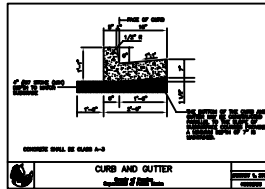
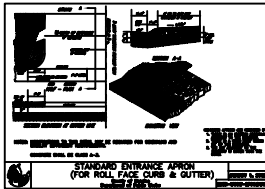
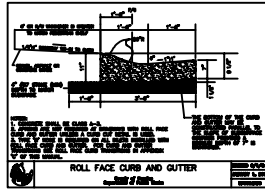
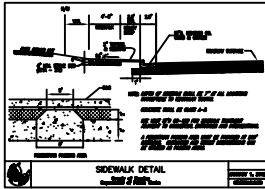
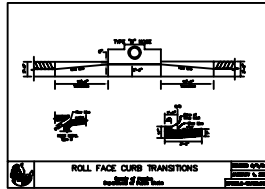
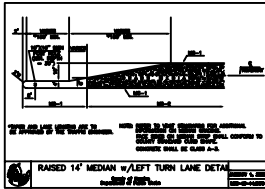
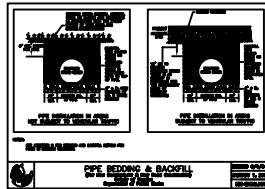
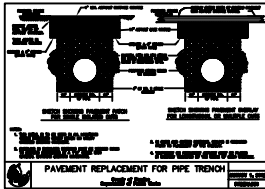
- PAVEMENT**
- The pavement section is subject to change based on soil conditions at the time of construction, as determined by the Construction Engineer for Henrico County.
  - Any necessary pavement widening between the existing pavement and the proposed improvements is the responsibility of the developer.
  - All medians for turn lanes must be VDOT Std. MS-1. For turn lanes being constructed on existing roads, the old median must be removed entirely and the said raised median portion on the opposite base course in accordance with the standards for MS-1 Median Standard MS-1A. In all variations of the same will not be permitted.
  - Pavement sections through lanes and turn lanes must be the same as the existing pavement section. These turn lanes must have underdrains.
  - No pavement open cuts are allowed on existing County maintained roads unless specifically approved by the Construction Engineer for Henrico County.
  - If utility connections are located outside of the pavement and right-of-way, no pavement disturbance is required and all utility crossings must be bored.
  - Soil tests and CBR information, with an appropriate pavement design, must be performed and made available to the Construction Engineer prior to subgrade approval.

- DRAINAGE**
- All storm sewer within the County right-of-way and easements must be ASTM C-76, Class II or better, reinforced concrete pipe with sealed joints in accordance with VDOT specifications.
  - Precast drop inlets are not permitted at locations where the grade of the adjacent curb and gutter is less than 1.5%. Precast drop inlets with flat inverts are not permitted in sag locations when the total length of the required throat opening exceeds six (6) feet.
  - All storm sewer within a County easement or right-of-way must have a minimum of four (4) inches of aggregate bedding material and must be backfilled in accordance with the detail on this sheet.
  - All drop inlets must have Type B noses.
  - Drop inlets on grade must be paired with the throat on the same grade as the adjoining curb and gutter.
  - Six (6) x 8" downlets must be placed at approximately 12' c/c in all areas adjacent to abutting concrete to prevent settlement.
  - When using non-concrete pipe for private areas, the connection to the structure in the County easement or right-of-way must be concrete. Non-concrete pipe must terminate in a concrete structure and concrete must be placed where it ties into the County easement or right-of-way. All manholes and inlets must be concrete.
  - LED2 underdrains are required along the entire length of proposed roads and/or road widening within the public right-of-way unless waived by the Director of Public Works.
  - Ingration is not permitted in the shoulder area within the County right-of-way unless specifically approved by the County Engineer.
  - CD3 underdrains are required on all vertical sags.
  - LED2 underdrains are required in all raised grade medians and islands within the public right-of-way.
  - The outlet end of all underdrains must terminate in drainage structures or daylight out of fill slopes with a standard EW-12 endwall placed at the outlet end of the underdrain.

- GRADING**
- The subgrade area shall be scarified to a depth of eight inches for a minimum of two feet beyond the proposed edges of the pavement on both sides or from the curb and gutter and compacted to a density of not less than 95 percent.
  - When materials which are unsuitable for foundation, subgrade, or other roadway purposes occur within the roadway limits, such materials must be excavated below the grade shown on the plans as directed by the geotechnical engineer or as approved by the Henrico County Construction Engineer and the area must be backfilled with suitable material.
  - All sand rock or boulders found in the roadway shall be excavated to the full roadway width to a depth of one foot below subgrade and then backfilled to the proper grade with suitable materials.
  - A six (6) feet wide pedestrian shelf is required behind all curb and gutter in the County right-of-way. The shelf must be cleared/constructed at the time of road construction, including the relocation of all power poles and other above ground obstacles.
  - All graded islands must be graded to 1% rise to minimize sight distance problems.
  - All areas to be filled within the buildable area (ponds, sediment basin, sediment traps, wetlands, etc.) must be backfilled with structural fill and compacted to 95% compaction.
  - All grading shown on lots must be done prior to building permit issuance.
  - The design and construction of basins must be in compliance with the general requirements for dams as in the *Standard Stormwater Management Program Manual*. A geotechnical engineer must certify the construction compliance requirements have been achieved. BMPs for subdivisions will not be accepted for County maintenance until the geotechnical certification is provided and accepted by the Department of Public Works.

- SURVEY**
- All roadways must be cleared in the area of proposed construction prior to requesting staking from the County.
  - All utility poles, fire hydrants, and other above ground obstacles located within the public right-of-way and in conflict with the proposed sidewalk, shelf, curb and gutter, and/or the pavement widening shall be relocated at the developer's expense prior to Henrico County staking the curb and gutter.
  - All curb and gutter and storm sewer/inlets located within the existing County right-of-way shall be staked by the County upon written request being made to the County Engineer or by calling 501-4622.
  - Prior to requesting County staking, all appropriate information necessary for staking must be provided to the Henrico County Survey Department.
  - Right-of-way and baseline information must be established in the field and clearly tied to monuments/benchmarks prior to requesting staking by the County.

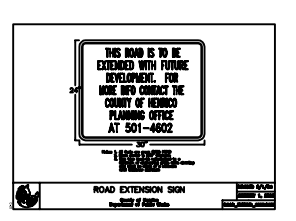
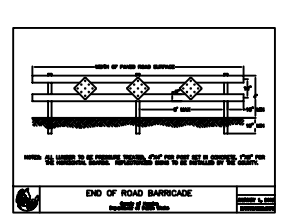
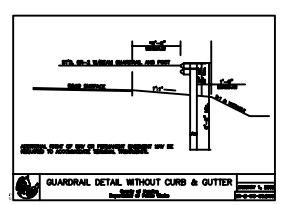
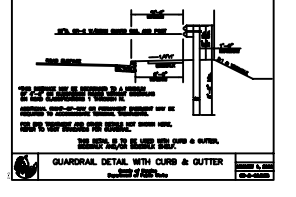
**WHERE CONFLICTS EXIST, THE NOTES AND DETAILS ON THIS SHEET SUPERCEDE THE CURRENT VERSION OF THE HENRICO COUNTY DESIGN MANUAL.**



**County Of Henrico**  
Department of Public Works

**STANDARD CONSTRUCTION NOTES AND DETAILS**

REFER TO HENRICO COUNTY DESIGN MANUAL FOR ADDITIONAL DETAILS



HENRICO COUNTY DEPARTMENT OF PUBLIC WORKS



