

# Section 1 – General

	PAGE
<b>1.01 - Purpose</b>	<b>4 of 192</b>
<b>1.02 - Definitions and Acronyms</b>	<b>5 of 192</b>
<b>1.03 - Effect of Legislation</b>	<b>9 of 192</b>
<b>1.04 - Discretionary Authority and Appeal Procedure</b>	<b>9 of 192</b>
<b>1.05 - Design Manual Updates</b>	<b>11 of 192</b>
<b>1.06 - Design Manual Effective Date/Grandfathering</b>	<b>12 of 1922</b>

## **1.01 Purpose**

### **Standard**

This Manual has been prepared to promote uniform design procedures for designers and technicians in the development of property and roads in the County of Henrico, Virginia. The Manual is intended to serve as a procedural design guide which is to be used in conjunction with specifications, standards and policy directives from other County agencies as well as design manuals published by the American Association of State Highway and Transportation Officials (AASHTO), and the Virginia Department of Transportation (VDOT).

Public roadways within the County are either maintained by VDOT or Henrico County. Roadways which are designated as Interstate Routes (I-64, I-95, I-295), U.S. Highways (U.S. 250, W. Broad Street; U.S. 60, Williamsburg Road; etc.) and Virginia Primary Routes (Rt. 6, Patterson Avenue; Rt. 5, New Market Road, Rt. 895 Pocahontas Parkway; etc.) are maintained by VDOT. The Ashland Residency Office of VDOT should be contacted regarding issues relating to these roads. All other public roads within the County are maintained by Henrico County.

The design and construction of all public roads intended to be included in the Henrico County System of Maintained Roadways shall conform to the details included in this Manual and to the VDOT requirements where this Manual is silent.

Roads that are intended to be included in the VDOT system of maintained roadways must meet the standards and specifications prescribed by VDOT.

### **Applicability of the Standard**

This standard applies to all types of development, including residential subdivisions, PODs, and CIP projects.

### **Design Requirements**

N/A

## **1.02 Definitions and Acronyms**

### **Standard**

The following terms, definitions and acronyms are utilized in this Manual. See Chapters 18 and 19 of the Henrico County Code for additional definitions of terms described herein.

“**AASHTO**” means American Association of State Highway and Transportation Officials.

“**ADAAG**” means ADA Accessibility Guidelines. This document contains scoping and technical requirements for accessibility to buildings and facilities by individuals with disabilities under the Americans with Disabilities Act (ADA) of 1990.

“**ADT**” means Average Daily Traffic.

“**Arterial Road**” is a road that connects major activity centers, carries high volumes of traffic longer distances and has access to abutting development/land as a small part of its function. The concept of service to abutting land is secondary to the provision of mobility for major traffic movements on arterial roads. Normally, arterial roads carry significantly higher traffic volumes and a variety of traffic types at higher speeds than collector roads or residential roads.

“**ASTM**” means American Society of Testing Materials.

“**BFE**” means Base Flood Elevation, which is the water surface elevation during the 1 percent annual chance (100-year) storm event.

“**BMP**” means Best Management Practice. A BMP is a practice or combination of practices that is determined to be the most practicable means of preventing or reducing the amount of pollution generated by non-point sources to a level compatible with water quality goals.

“**Board of Supervisors**” means the Henrico County, Virginia, Board of Supervisors.

“**CBLAD**” means Chesapeake Bay Local Assistance Department.

“**CBR**” means California Bearing Ratio. This is a testing procedure to determine the load bearing capacity of the soil.

“**CIP**” means Capitol Improvement Project

“**Clerk**” means the Clerk of the Henrico County Circuit Court.

**“Collector Road”** is a road that provides both access and service for local traffic movements within a neighborhood, commercial or industrial area. Access and traffic service are of approximate equal importance on collector roads. Normally, collector roads carry higher volumes of traffic at higher speeds than residential roads.

**“County Code”** means the Henrico County Code.

**“County Engineer”** means the Henrico County Director of Public Works.

**“Cul-de-sac”** means a road with only one outlet that connects to the balance of the public road system at only one point. At the end opposite this outlet is an appropriate turnaround for the safe and convenient reversal of traffic movement.

**“DBIZ”** means Dam Break Inundation Zone, which is the area which would be inundated when a dam fails during a specified storm.

**“DCR”** means Virginia Department of Conservation and Recreation.

**“DEQ”** means Virginia Department of Environmental Quality

**“Dam”** means an embankment or structure intended or used to impound, retain, or store water either as a permanent pond or as a temporary storage facility.

**“Dead End Road”** means a road that connects to the balance of the public road system at only one point and has no turnaround at the end.

**“Design Speed”** means a speed selected for purposes of design and correlation of those features of a road such as curvature, superelevation, and sight distance, upon which the safe operation of vehicles is dependent.

**“Easement”** means a grant of a right to use property of an owner for a defined specific limited use or purpose.

**“Expressway”** means a public way designed to handle heavy volumes of vehicular traffic with limited access. An expressway is a divided highway for through traffic, with full or partial control of access.

**“Extrinsic Structure”** means any structure whose primary mission is not essential for the operation of a public road (i.e. subdivision identification signing, landscaping, wall, etc.).

**“FEMA”** means Federal Emergency Management Agency.

**“FHWA”** means Federal Highway Administration.

**“Functional Classification”** means the process by which roads and streets are grouped into classes, or systems according to the character of service they provide or are intended to provide.

**“GCN”** means the Henrico County Geodetic Control Network.

**“GIS”** means Geographic Information System.

**“ITE”** means Institute of Transportation Engineers.

**“ITE Trip Generation”** means the current edition of Trip Generation, an informational report of the Institute of Transportation Engineers.

**“Intersection”** means the juncture of two or more roads or streets at which point there are three or more legs.

**“Level of Service”** means a qualitative measure describing operational conditions within a traffic stream. The latest edition of the Highway Capacity Manual shall serve as the basis for determining “level of service”.

**“Major Street”** means a street which typically falls within the functional classification range of major collector road to arterial. The street will normally carry a large percentage of through trips while, at the same time, providing for a certain amount of access to abutting property.

**“Major Thoroughfare Plan”** is the transportation element of the County’s Comprehensive Plan. The Major Thoroughfare Plan identifies the existing roadways and future roadway corridors (controlled access roads, arterial roads, collector roads and major access roads) that are planned to serve the County.

**“Manual”** means the Department of Public Works Design Manual.

**“May”** means that the condition is permissive. The design or condition is optional when “may” is referenced.

**“Minor Street”** means a street which typically falls within the functional classification range of local street to minor collector road. A minor street provides access to abutting property without large volumes of through traffic. The street normally carries a large percentage of local, short distance trips.

**“MUTCD”** means the Manual on Uniform Traffic Control Devices (published by Federal Highway Administration).

**“NEC”** means National Electrical Code.

**“NPDES”** means National Pollution Discharge Elimination System.

**“Offsite Drainage Easement”** is a drainage easement located outside of the development parcel that allows drainage improvements to be utilized and/or constructed. The easement may be public or private.

**“Private Road”** means a road or street that has not been accepted into the Henrico County or the VDOT system of maintained roadways.

**“POD”** means Plan of Development as defined by Section 24-3 of the Henrico County Code.

**“Professional Engineer”** means an engineer registered and licensed to practice in the Commonwealth of Virginia.

**“PROWAG”** means Public Right-of Way Accessibility Guidelines. The proposed guidelines ensure that the following facilities for pedestrian circulation and use located in the public right-of-way are readily accessible to and usable by pedestrians with disabilities.

**“Public Road”** means a road or street that has been formally accepted into the Henrico County or the VDOT system of maintained roadways.

**“Residential Road”** is a road whose primary purpose is to serve abutting development/land and carry low traffic volumes over short distances.

**“R/W”** means right-of-way, which is land, property or interest therein, usually in a strip, acquired for or devoted to a public road designated to become part of the County system of maintained roadways or the VDOT system of maintained roadways.

**“Shall”** means that the specified criteria is mandatory.

**“SFHA”** means Special Flood Hazard Area, which is the land area covered by the floodwaters during the 1 percent annual chance (100-year) storm event.

**“Should”** means that the condition is advisory or recommended.

**“Through Street”** means a street or road which connects to and provides access between at least two other public streets or roads.

**“Unmaintained Right-of-Way”** is land, or property, usually in a strip, acquired for or devoted to a public street designated to become part of the County system of maintained roadways or the VDOT system of maintained roadways but is not currently maintained in any way by the County or VDOT.

“VDOT” means the Virginia Department of Transportation.

“VPD” means Vehicles Per Day

#### Applicability of the Standard

This standard applies to all types of development, including residential subdivisions, PODs, and CIP projects.

### **1.03 Effect of Legislation**

#### Standard

If subsequent legislation is enacted that conflicts with any provision of this Manual, the legislation provisions shall govern. As of its effective date, such legislation shall take precedence over any conflicting interpretations or decisions rendered by the Department of Public Works personnel prior to the enactment of the legislation. However, such action shall not affect the validity of these requirements as a whole, or any part thereof, other than the specific provision involved.

#### Applicability of the Standard

This standard applies to all types of development, including residential subdivisions, PODs, and CIP projects.

#### Design Requirements

N/A

### **1.04 Discretionary Authority and Appeal Procedure**

#### Standard

The Director of Public Works may utilize discretionary authority, as it relates to the provisions of this Manual. Such judgments will take into consideration the individual situation, but safety features or structural integrity prescribed by these standards shall not be sacrificed.

The Director of Public Works will consider and render a ruling on unresolved differences of opinion between a developer and a Public Works staff member that pertain to the interpretation and application of the requirements specified herein.

To obtain this review, the developer shall submit a written waiver request to the Director identifying the conflict and describing the unresolved issue. After reviewing all pertinent information, the Director will advise the developer of his decision in writing relative to the appeal.

The request for an exception or more liberal interpretation, may be considered provided that the request is not based exclusively on financial considerations. The exception must also not be detrimental to public safety or injurious to surrounding property.

### Applicability of the Standard

This standard applies to all types of development, including residential subdivisions, PODs, and CIP projects.

### Design Requirements

N/A



## **1.05 Design Manual Updates**

<b>Section</b>	<b>Description</b>	<b>Version</b>
1.05	<ul style="list-style-type: none"> <li>Added revision table</li> </ul>	V4.2023.01
1.06	<ul style="list-style-type: none"> <li>Updated dates</li> </ul>	V4.2023.01
2.35	<ul style="list-style-type: none"> <li>Added “Parking in Private Developments - Maintenance” Section</li> </ul>	V4.2023.01
2.36	<ul style="list-style-type: none"> <li>Revised the Reference to Henrico County Code</li> </ul>	V4.2023.01
2.32	<ul style="list-style-type: none"> <li>Revised name of Traffic Calming Program to “Henrico County Neighborhood Traffic Management Program”</li> <li>Added Note regarding Developers may install Speed Humps/Cushions in new subdivisions, and shall coordinate the work with Traffic Engineering during the Plan of Development Process</li> </ul>	V4.2023.01
3.14	<ul style="list-style-type: none"> <li>Added ability to use Polypropylene (PP) Pipe</li> </ul>	V4.2023.01
Appendix C	<ul style="list-style-type: none"> <li>Added Backfill for Polypropylene Pipe (Page C-30)</li> </ul>	V4.2023.01
Appendix C	<ul style="list-style-type: none"> <li>New Right of Way Monument Detail (Page C-31)</li> </ul>	V4.2023.01
1.06	<ul style="list-style-type: none"> <li>Updated effective date and grandfathering language removed due to being past current date.</li> </ul>	V4.2023.02
General	<ul style="list-style-type: none"> <li>Page numbers updated.</li> </ul>	V4.2023.02
Appendix C	<ul style="list-style-type: none"> <li>Added Emergency Gate Access detail (Page C-36)</li> </ul>	V4.2023.02
2.04	<ul style="list-style-type: none"> <li>Correction to language regarding single lot road improvements.</li> </ul>	V4.2023.02
2.50	<ul style="list-style-type: none"> <li>Added Temporary or Emergency Gate Access language.</li> </ul>	V4.2023.02
2.32	<ul style="list-style-type: none"> <li>Revised name of “Henrico County Neighborhood Traffic Management Program” back to “Traffic Calming Program”.</li> </ul>	V4.2024.01
2.36	<ul style="list-style-type: none"> <li>Added minimum distance a single-family driveway can be to a public or private travel lane</li> </ul>	V4.2024.01
2.37	<ul style="list-style-type: none"> <li>Added language that prior to a new traffic signal design or modification to an existing traffic signal design, a Roundabout design shall be investigated.</li> </ul>	V4.2024.01
2.43	<ul style="list-style-type: none"> <li>Added language that Roundabouts have demonstrated safety and operational benefits and are the primary design for intersection improvement projects, and the advantages Roundabouts provide.</li> </ul>	V4.2024.01
General	<ul style="list-style-type: none"> <li>Page numbers updated.</li> </ul>	V4.2024.01

## **1.06 Design Manual Effective Date/Grandfathering**

### Standard

This version of the Design Manual is effective on January 26, 2024.