Update of Revision to
*Geometric Design Guidelines for Very Low-Volume Local Roads*

Barton A. Thrasher, P.E.

June 22, 2016
Background on the Update

• First edition published in 2001
  • Important document for the NACE (National Association of County Engineers)

• This update initiated at the request of the AASHTO Technical Committee on Geometric Design

• Project being managed as part of NCHRP Project 15-47: Developing an Improved Highway Design Process

• Received input from:
  • Survey of highway agencies
    • 32 States; 24 Localities; 6 Federal Agencies
  • Comments from the TRB Low-Volume Roads Committee

• Draft of updated guidelines now completed
Relationship to Other AASHTO Policies

2011 AASHTO Green Book

• Design guidelines presented in the update may be applied to low-volume roads in lieu of the applicable policies of the Green Book.

  • Information regarding local roads and streets may be used in lieu of Chapter 5 (Local Roads and Streets) of the Green Book.
  • For local roads that serve traffic volumes of 2000 vpd or less.
  • Information regarding minor collector roads and streets may be used in lieu of Chapter 6 (Collector Roads and Streets) in the Green Book.

Chapter 5 Local Roads and Streets

Chapter 6 Collector Roads and Streets
What is new

• Design guidelines for new construction projects with design volumes from 401 to 2,000 vehicles per day are based on the design criteria in Chapter 5 of the AASHTO Green Book.

• Recommended by the AASHTO Technical Committee on Geometric Design.
REVISIONS

What used to be

Guidelines for Geometric Design of Very Low-Volume Local Roads (ADT ≤ 400)

Is Now

Guidelines for Geometric Design of Low-Volume Roads

2001

2017
• Local roads with design volumes of 400 vehicles per day or less
• Collector roads with design volumes of 400 vehicles per day or less that primarily serve drivers who are familiar with the roadway.

Local roads or minor collectors with design volumes of 2,000 vehicles per day or less.
What Is Not Covered

Arterials

Major Collectors
Updated Photographs
What Has Stayed the Same

What is *essentially* the same?

- Design guidelines for projects on existing roads are *essentially* unchanged in the revised guidelines.

- Design guidelines for new construction projects with design volumes of 400 vehicles per day or less are *essentially* unchanged.
What is new

- Design guidelines for new construction projects with design volumes from 401 to 2,000 vehicles per day are based on the design criteria in Chapter 5 of the AASHTO Green Book.
- Recommended by the AASHTO Technical Committee on Geometric Design.
What is new

- New text referencing the AASHTO *Highway Safety Manual* has been added. The original guidelines were written before the *Highway Safety Manual* was published.
What is new

- A section of pedestrian and bicycles facilities on low-volume roads has been added, along with references to the AASHTO pedestrian and bike guides. In particular, the original guidelines were written before the AASHTO pedestrian guide was first published.
What is new

• Guidelines for minimum radius of curvature and traction coefficients on unpaved roads have been updated based on the U.S. Forest Service’s Road Preconstruction Handbook.
What is new

- The number of design examples had been increased from eight to ten.
- The two new examples address roadways with design volumes between 401 and 2,000 vehicles per day.
Questions

Barton A. Thrasher, PE
State Location and Design Engineer
(804) 786-5869
BA.Thrasher@vdot.virginia.gov