Secondary Street Acceptance Requirements

- New regulation result of 2007 legislation and will replace current Subdivision Street Requirements (24VAC30-91)

- Intended to ensure streets accepted into state system for perpetual public maintenance provide adequate public benefit

- Legislation mandates that the new regulation:
  - Ensure connectivity of road and pedestrian networks with existing and future transportation network
  - Minimize storm water run-off
  - Minimize impervious surface area through reduced streets widths
  - Address performance bonding and cost recovery
Why Update Secondary Street Acceptance Requirements?

- Isolated developments cause additional strain on the regional transportation network by forcing local trips onto major roads
  - Requiring all trips – local and regional – to rely on major roads is not sustainable

- Increased connectivity will allow for context sensitive design neighborhood streets
  - Will help encourage friendly environments for pedestrians and bicyclists, and discourage speeding in neighborhoods
Why Update Secondary Street Acceptance Requirements?

Today

Goal
Public Comments

Proposed regulation was published for public comment for 75 days this spring and four public hearings were held.

There were four major themes:

• Support for connectivity between neighborhoods
• Concern regarding ability to make external connections and potential impact on internal design
• Support for enhanced pedestrian and bicycle accommodations with concern over proposed requirements
• Concern over potential for a result of increased stormwater runoff and environmental impacts
Connectivity

• Support expressed for increasing connectivity between neighborhoods
• Concern regarding ability to make external connections and potential impact on internal design

• Concern is based on:
  – Interpretation of connectivity index concept
  – Local governments may reject external connections
  – Uncertainty in exception process
Secondary Street Acceptance Requirements - Connectivity Index

Goal is for new subdivisions to meet connectivity requirement through additional connectivity

Today conventional neighborhoods often have a connectivity index of 1.0 – this is the lowest possible index.

7 streets
7 intersections
7/7 = 1.0
Secondary Street Acceptance Requirements - Connectivity Index

Developers have various options to meet connectivity index goal

The goal is to have multiple connections to adjacent neighborhoods
Secondary Street Acceptance Requirements - Connectivity Index

7 streets
5 intersections
7/5 = 1.4
Secondary Street Acceptance Requirements – Connectivity Exceptions

Connectivity is not always feasible. Two types of exceptions are recommended.

- Automatic exceptions
- Review related exceptions
Secondary Street Acceptance Requirements – Connectivity Exceptions

Automatic reductions would be given for perimeter constraints such as wetlands, existing development, rivers, terrain, railroad tracks, etc.

In this example 25% of the perimeter is effectively eliminated for connections due to railroad tracks, so the connectivity index is automatically reduced from 1.4 to 1.3 or 25%.
Secondary Street Acceptance Requirements – Connectivity Exceptions

- Review related exceptions
  - Incompatible land use
  - Unique characteristics of parcel
  - Access management regulations

- Consideration would be built into initial conceptual sketch review
  - VDOT would be required to respond within 45 calendar days
Secondary Street Acceptance Requirements

Public comments included concern regarding the impact of pedestrian accommodation requirements and street design requirements on impervious surface area and stormwater runoff.

VDOT has reviewed its street design requirements and recommends modifications.
These local streets – with multiple on-street and off-street parking spaces for each house – have lane widths effectively six feet wider than most interstates.

Lane widths of this size can encourage travel at high speeds and increase impervious surface area.
Street Design

This design and lane widths are necessary in many situations today due to emergency access needs and the lack of connectivity.

Increased vehicle speeds increase pedestrian injuries and fatalities.

Figure 1. Vehicle Impact Speed and Pedestrian Injury Severity (from DETR)
Street Design

Increased connectivity can allow the use of context sensitive street design which can:

• Promote safe environments for pedestrians, bicyclists and children

• Reduce stormwater runoff

• Discourage high travel speeds within neighborhoods
Street Design

Connectivity allows design of local streets will result in lower vehicle speeds – built-in traffic calming
Street Design

Recommended widths promote context sensitive solutions and are in compliance with engineering principles including AASHTO and Institute of Traffic Engineers.

Based on understanding that local roads serve access to property and disperse traffic.

<table>
<thead>
<tr>
<th>(curb and gutter)</th>
<th>Recommended Standards</th>
<th>Current Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 2000 vehicles</td>
<td>29 ft</td>
<td>36 ft</td>
</tr>
<tr>
<td>2001 to 4000 vehicles</td>
<td>36 ft</td>
<td>40 ft</td>
</tr>
</tbody>
</table>

*Widths assume on-street parking on both sides of the street*
Stormwater Runoff

VDOT has worked with DCR and private sector to develop list of innovative stormwater facilities that can be placed within VDOT right of way

Today, stormwater facilities are not permitted within VDOT right of way
Outstanding Issues

Implementation Advisory Committee will continue to meet to discuss:

• Pedestrian accommodation requirements
• Connectivity index requirement
• Provisions to encourage local governments to approve connectivity between neighborhoods
• Other concerns identified in public comments