Introducing the Alabama Vulnerable Road Users Guidebook

Jeff LaMonda, PhD | Associate Professor
Auburn University | Department of Civil Engineering
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This is Engineering.

The Vulnerable Road User Guidebook

Guidebook Objective

Provide
Clearly Organized
Easy To Apply
Alabama-Tailored
guidance on designing roadways that support all VRUs in rural and urban areas

Vulnerable Road Users...

...are most at risk for serious injury or death when they are involved in a motor-vehicle-related crash

...should be considered differently on urban and rural highways, where we have unique challenges and users

Vulnerable Road Users Include...

Pedestrians: 4,800 deaths each year (11% of all traffic fatalities)
Bicyclists: 700 deaths each year (2% of all traffic fatalities)
Motorcyclists: 5,200 deaths each year
Older Drivers: 5,000 deaths each year

Why VRUs are Important to You is

More than 1,500 VRU fatalities on Rural Roads
About 4% occurred on Local Rural Roads
Pedestrians: 83%
Bicyclists: 14%
Other VRU: 3%
Motivation: Toward Zero Deaths

The vision – zero deaths and serious injuries on the Nation’s roadways – is being realized through annual performance objectives in each of the three safety units.

Office of Safety
Office of Safety Research and Development
Resource Center Safety and Design Technical Services

Supported by FHWA’s Safety Strategic Plan & State’s Mandatory Strategic Highway Safety Plan (SHSP)

Existing Federal Laws, Policies & Programs

- Federal Surface Transportation Legislation (FAST Act, 2015)
- Transportation Alternatives Program
- USDOT Action Plan to Increase Walking and Biking and Reduce Pedestrian and Bicyclist Fatalities (2014)
- National Highway Performance Program (NHPP)
- Surface Transportation Block Grant (STBG) Program
- Highway Safety Improvement Program (HSIP)
- Congestion Mitigation and Air Quality Improvement (CMAQ) Program
- Statewide and Metropolitan Planning Programs
- State and Community Highway Safety Grant Program
- TIGER Grants

Existing State Laws, Policies & Programs

- Alabama Bicycle and Pedestrian Laws
- Alabama Statewide Transportation Plan and Transportation Improvement Plan
- ALDOT Bicycle and Pedestrian Plan
- Alabama Strategic Highway Safety Plan

Who is Responsible?

Responsibility for the design, placement, operation, maintenance and uniformity of traffic control devices shall rest with the public agency or the official having jurisdiction on any street, highway, bikeway, or private road open to public travel.

Where Does This Guidance Come From?
How Do We Improve Safety For All?

Increase awareness and understanding of safety issues related to vulnerable road users.

Increase compliance with traffic laws and regulations related to pedestrian and bicycle safety through education and enforcement.

Develop and use a systemic approach to identify locations and behaviors prone to pedestrian and bicycle crashes and implement multidisciplinary countermeasures.

Encourage adequate funding levels for effective pedestrian and bicycle safety programs and initiatives.

Create built environment (urban and rural) to support and encourage safe bicycling and walking in resurfacing projects.

Support national, state, and local legislative initiatives and policies that promote bicycle and pedestrian safety.

5 Helpful Guiding Questions

- Is my final roadway environment COMPLEMENTARY?
- Are my roadway treatments CONSISTENT?
- Am I supporting VRU CONNECTIVITY?
- Can I COMBINE VRU treatments with other roadway improvement projects?
- Did I COORDINATE my treatments with local VRU’s needs?

Guidebook Organization

Chapter 1 Introduction
Chapter 2 References
Chapter 3 VRU Characteristics
Chapter 4 Cross-sectional Countermeasures
Chapter 5 Intersection & Crossing Countermeasures
Chapter 6 Urban Roadway Guidance
Chapter 7 Rural Roadway Guidance

Cross-Sectional Counterm easures

Wide Paved Shoulder with Rumble Strips
Traffic Calming / Speed Management
Slow Moving Vehicle Turnout
No Thru Traffic Lane
Median Rumble
Shoulder/Airplane Lamp Marking
Alien Lane
Capillaries / Separated Alien lane
Bikeway
Solar Panel / Adjacent Multi-use path
General Motorcycle Improvements

Intersection & Crossing Counterm easures

Conventional Crosswalk
Raised Crosswalk
Pedestrian/Bicycle Island / Median
Accessible Pedestrian Features
Curved/Curved Median
Protected Crossing
Rectangular Flashing Beacon (RRFB)
Leading Pedestrian Signal (Tight 90° Radius)