



# Access Management Application Guidelines (AMAG) Overview

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# Purpose of AMAG

Provide a “**How To**” Document to compliment the Transportation Research Board’s *Access Management Manual* (2<sup>nd</sup> edition)



# Document Content



# Typical Chapter Format

- Definition
- Purpose
- Guidance for Users: Needs and Issues to Consider
- Application Issues
- Vehicle Perspective
- Other User Perspective
- Evaluation Techniques
- Related Content
- Example Problems
- References



# Guideline Modules Overview

## **AMAG Module Topic**

### **Section I. General Access Management Concepts**

Chapter 1 -- When/Where to Apply Access Management

Chapter 2 -- Roadway Functional Classification

Chapter 3 -- Access Management Categories

Chapter 4 -- Alternative Access Strategies and Applications



# Guideline Modules Overview (continued)

## **AMAG Module Topic**

### **Section II. Policy Related Access Management Program Development and Implementation**

Chapter 5 -- Guidelines versus Standards

Chapter 6 -- Legal Authority for Access Management

Chapter 7 -- Establishing Methods or Procedures for Variances and/or Deviations

Chapter 8 -- Permitting Process and Methods

Chapter 9 -- Economic Impacts of Access Management Strategies



# Guideline Modules Overview (continued)

## **AMAG -- Module Topic**

### **Section III. Local Access Driveway Design**

Chapter 10 -- Driveway Design & Geometrics

Chapter 11 – Driveway Throat Length Guidelines

# Guideline Modules Overview (continued)

## AMAG Module Topic

### Section IV. Corridor Design

Chapter 12 -- Unsignalized Access Spacing

Chapter 13 -- Signalized Access Spacing

Chapter 14 -- Roundabout Access Spacing

Chapter 15 -- Median Applications and Design

Chapter 16 -- Unsignalized Median Opening Design

Chapter 17 -- U-turn Lane Requirements (passenger cars & trucks)

Chapter 18 -- Access Management at Crossroads in the Vicinity of Interchanges





# Guideline Modules Overview (continued)

## AMAG Module Topic

### Section V. Site Design

Chapter 19 – Special Site Circulation and Access Techniques

Chapter 20 -- Summarizing Land Use (Urban, Suburban, Rural) Considerations



# Guideline Modules Overview (continued)

## AMAG Module Topic

### Section VI. Turn Lanes

Chapter 21 -- Left-turn Lanes

Chapter 22 -- Right-turn Lanes



# Guideline Modules Overview (continued)

## AMAG Module Topic

### Section VII. Other Access Management Considerations

Chapter 23 -- Access Management and Human Factors

Chapter 24 -- Localized Access Management Corridor Considerations

Chapter 25 -- System-wide Access Management Considerations

Chapter 26 -- Effective Communication Strategies for Access Management Decisions

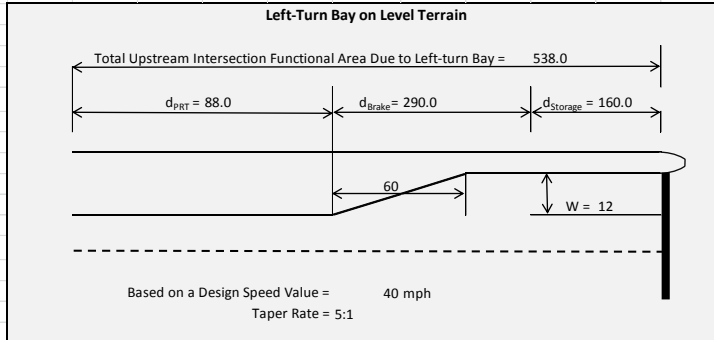
Chapter 27 -- Applicability of Existing AASHTO Design Standards in Relation to Access Management



# User Tools – Companion “Self-Calculating Spreadsheets”

- Corner Clearance – Upstream
- Corner Clearance – Downstream
- Decision Sight Distance
- Intersection Sight Distance – Minor Stop
- Left-Turn Lanes
- Right-Turn Lanes

# Example Spreadsheet Tool – Left Turn Lanes



Terms:  
W = Width of Turn Lane  
 $d_{PRT}$  = Distance traveled for perception-reaction time  
 $d_{Brake}$  = Distance to maneuver into the turn lane and brake to a stopped condition  
 $d_{Storage}$  = Minimum storage length for stopped vehicles

<u>Minimum Storage Length Input</u>	
Input Variables	Values
Average Vehicle Length (ft): (Refer to Table A for Recommendations)	32
Cycle Length (seconds):	90
Left-Turn Volume (vph):	100
Roadway Type:	Arterial
k -- AMM2, Eqn. 16-1, p. 398 = 2.0	
<b>Minimum <math>d_{Storage}</math> (ft) -- calculated:</b>	<b>160.0</b>
<u>Minimum Braking and Maneuver Distance (assumes level terrain)</u>	
Input Variables	Values
Design Speed (mph):	40
<b>Minimum <math>d_{Brake}</math> (ft) -- calculated:</b>	<b>290.0</b>
<u>Taper Length (begin taper within 10 mph where deceleration begins)</u>	
Input Variables	Values
Taper Type:	Rate
Taper Rate:	5:1
W (ft):	12
<b><math>L_{Upper}</math> (ft) -- calculated:</b>	<b>60</b>
<u>Perception-Reaction Distance</u>	
Input Variables	Values
Level of Development:	Urban
PR Time (seconds) -- calculated: 1.5	
<b>Minimum <math>d_{PRT}</math> (ft) -- calculated:</b>	<b>88.0</b>



# Example Spreadsheet Tool – Left Turn Lanes

## Minimum Storage Length Input

<u>Input Variables</u>	<u>Values</u>
Average Vehicle Length (ft): (Refer to Table A for Recommendations)	32
Cycle Length (seconds):	90
Left-Turn Volume (vph):	100
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# Example Spreadsheet Tool – Left Turn Lanes

## Minimum Braking and Maneuver Distance (assumes level terrain)

<u>Input Variables</u>	<u>Values</u>
Design Speed (mph):	40

<b>Minimum <math>d_{\text{Brake}}</math> (ft) -- calculated:</b>	<b>290.0</b>
--	--------------



# Example Spreadsheet Tool – Left Turn Lanes

**Taper Length (begin taper within 10 mph where deceleration begins)**

Input Variables

Values

Taper Type:

Rate

Taper Rate:

5:1

W (ft):

12

**$L_{\text{taper}}$  (ft) -- calculated:**

**60**





# Example Spreadsheet Tool – Left Turn Lanes

## Perception-Reaction Distance

### Input Variables

### Values

Level of Development:

Urban

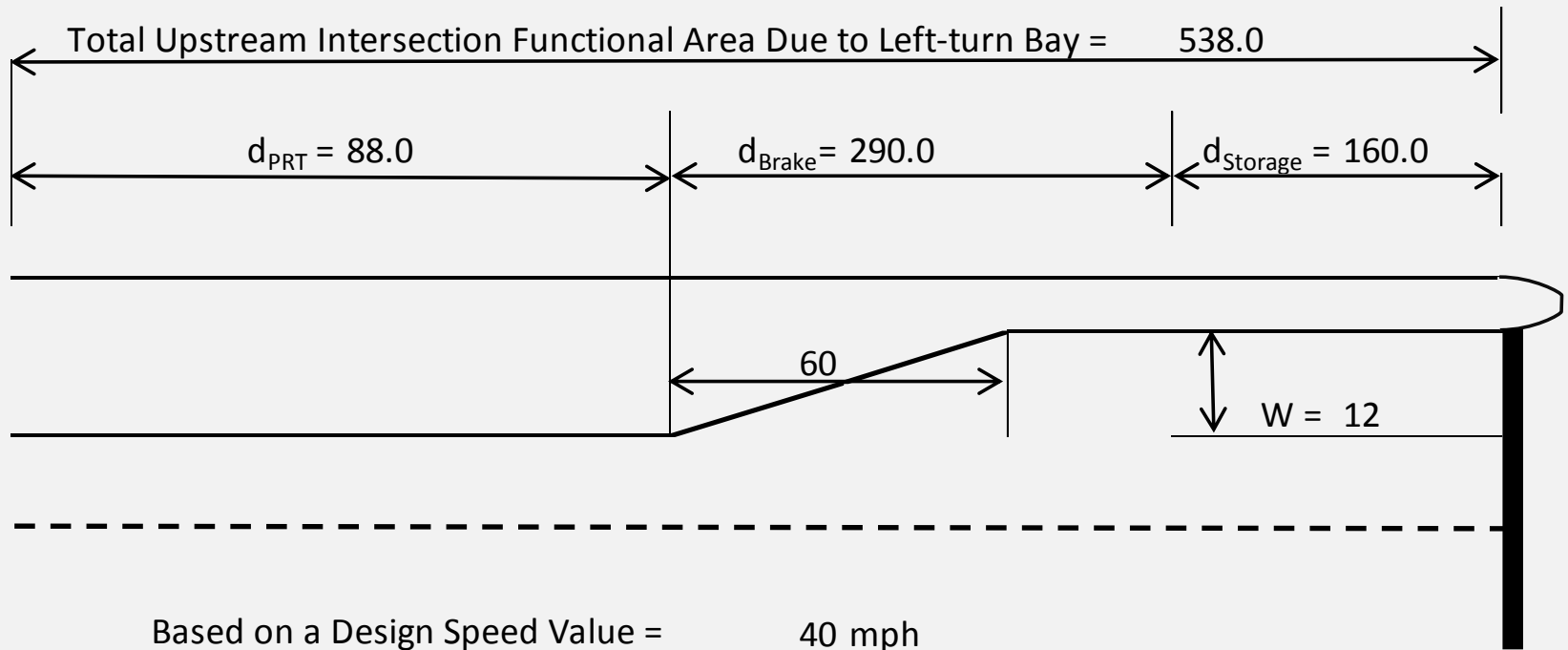
PR Time (seconds) -- calculated: 1.5

Minimum  $d_{PRT}$  (ft) -- calculated:

88.0

# Example Spreadsheet Tool – Left Turn Lanes

## Left-Turn Bay on Level Terrain



Based on a Design Speed Value = 40 mph  
Taper Rate = 5:1

Minimum  $d_{PRT}$  (ft) -- calculated: 88.0



# Project Status

- Text submitted in Spring 2015
- Proofs for entire document complete
- Final modifications and revisions underway
- Expected publication late 2016



# Questions & Discussion

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