Project Schedule

- **Initial External Stakeholder Meeting**: September 2017
- **Chapter Progress Meetings GDOT**: September 2017 - October 2018
- **10 Individual Stakeholder Meetings**: January - May 2018
- **30-Day Comment Period**: November 2018
- **Final External Stakeholder Meeting**: September 2018
- **Publish Guide 2019!**
Project Process/Stakeholder Driven

Stakeholder Input:

- GDOT Advisory Committee
- External Advisory Committee
- Statewide Individual Interviews
Project Advisory Committee

- GDOT Advisory Committee:
  - David Adams
  - Michelle Adejumo
  - Jack Anninos
  - Christina Barry
  - Katelyn DiGioia
  - Iris Gorduk
  - Daniel Pass
  - Michelle Pate
  - Andrew Pearson
  - Walt Taylor
  - Scott Zehngraff
Statewide Stakeholder Feedback:

- Cross Section Input:

- Douglas County
- City of Suwanee
- City of Norcross
- City of Decatur
- Emory University
- Augusta/Richmond County
- Cobb County
- Gwinnett County
- Southern Regional Commission
- City of Valdosta
External Stakeholder Committee

- ARC, MARTA, CDC, COA, The Beltline, PEDS, Citizens

- Corentin Auguin, MARTA
- Brad Belo, Macon-Bibb County
- Kelly Cornett, Center for Disease Control
- Sally Flocks, PEDS
- Amy Goodwin, Atlanta Regional Commission
- Byron Rushing, Atlanta Regional Commission

- Tamara Graham, City of Atlanta, Watershed Management
- Shaun Green, Atlanta BeltLine
- Sibetta Kakwete, Association of American Retired Persons
- Jack Kittle, Citizen/Decatur
- Dee Merriam, Landscape Architect/Citizen
- Kemberli Sargent, PEDS
- Andrew Walter, City of Atlanta, Office of Mobility
General Input Received

- Midblock Crossing Guidance
- Graphically Rich
- Remove Redundancy
- Encourage design flexibility on “Off System” or local roads
- Use Georgia relevant projects/examples
- Guidance on traffic calming measures
Chapter 1 – Introduction

1.1 Intended Users of this Guide
1.2 Relationship to Other Policies and Design Guidelines
1.3 Navigating the Guide
Users of the Guide/Initial Guidance!

Anticipated Users

Production Users
- Traffic and transportation engineers
- Site development and building permit review staff
- Planners and designers (including architects, civil engineers, landscape architects, urban designers, and other design professionals)
- Developers

Reference Users
- School districts
- Neighborhood councils/planning committees
- Metropolitan planning organizations
- Developers
- Central business district planning organizations and business people
- Small towns
- Elected officials
- Special campaigns and programs
- Citizen advocates
Relationship to Other Policies and Design Guidelines/Hyperlinks

Navigating the Guide

Organized two ways:

- By the project process
- Context
Navigating the Guide/Project Process

- GDOT project delivery
- Planning Streets for Peds.
- Road and Street Design for Peds.
- Traffic Signal Operations for Peds.
- Streetscape Design for Peds.
- Ped. Safety in Work Zones
Navigating the Guide

Appendix:

A. Mid-Block Pedestrian Crossing Evaluation

B. Landscape Maintenance Program
Navigating the Guide

- ≤15 mph: Less than or equal to 15 miles per hour
- ≤25 mph: Less than or equal to 25 miles per hour
- ≤30 mph: Less than or equal to 30 miles per hour
- ≤35 mph: Less than or equal to 35 miles per hour
- ≤40 mph: Less than or equal to 40 miles per hour
- ≤45 mph: Less than or equal to 45 miles per hour
- ≤50 mph: Less than or equal to 50 miles per hour

Not advised for routes with large volumes of truck traffic.

Best Management Practice
Navigating the Guide

- **Speed cushion**

  - Less than or equal to 40 miles per hour
  - Not advised for routes with large volumes of truck traffic.

- **Speed hump**

  - Less than or equal to 25 miles per hour
  - Not advised for routes with large volumes of truck traffic.
Design Information Layout

Application

Critical Design Requirements ("should")

Additional Considerations ("may")

Further Guidance

4.4.12 Raised Intersections
A raised intersection is a flat, raised area covering an intersection with ramps on all vehicle approaches. Similar to speed tables, raised intersections are effective in reducing vehicle speed to a range of 25 to 35 mph when crossing the intersection.

Application
- Raised intersections are applicable on-one way or two-way local streets with a speed limit of 35 mph or less, and a maximum daily vehicle volume of 10,000 vehicles.
- Raised intersections are appropriate at controlled intersections with a large volume of pedestrians crossing.

Critical Design Requirements
- The vehicle ramp onto the raised intersection should be sloped at a 5 percent minimum to 8 percent maximum grade from the roadway approach to the top of the raised intersection surface.
- While raised intersections make it easier to meet ADA requirements as the crosswalk is a natural extension of the sidewalk with no change in grade, the diminished curb line makes it more difficult for sight-impaired pedestrians to detect the edge of the roadway. To this extent, special treatment such as detectable warning truncated domes should be used where the sidewalk transitions to a crosswalk.
- The pedestrian travel path and the vehicle path should be differenced with pavement marking or special paving materials.

Additional Considerations
- Bollards may be used to delineate the corner radii in flush pavement conditions.
- Raised intersections may serve as a gateway treatment on main streets and urban areas.
- Additional drainage inlets may be required where the raised intersection grade returns to street level.

Further Guidance
- FHWA, MUTCD (latest edition)
- GDOT, Design Policy Manual (latest edition)
- NACTO, Urban Street Design Guide (latest edition)
Chapter 2. GDOT Project Delivery

2.1 Plan Development Process and Presentation Guide
2.2 Design Variances and Exceptions
Plan Development Process + Design Variances and Exceptions

- **On System/State Facilities**

- **Off System/Local Facilities**

Georgia Code § 50-21-24, Exceptions to state liability.

1. **Employees of the Department** are directly involved in the engineering and design, right-of-way acquisition, and/or construction letting of a project on an off-system roadway.

2. Any deviation proposed to “**Design Loading Structural Capacity**” standards will require the normal approval of a Design Variance from the Department’s State Bridge Engineer and/or the Department’s Chief Engineer before any deviation can be incorporated into a project.
Chapter 3. Planning Streets for Pedestrians

3.1 Prioritizing Pedestrian Safety
3.2 GDOT Complete Streets Policy
3.3 Connected Pedestrian Networks
3.4 Pedestrian-Oriented Data Collection
3.5 Context Sensitive Design for Pedestrian Facilities
Street Types and Adjacent Land Uses

- One Size does not fit all!
- Not all roads are created equal
- Context is a significant influence
Street Types and Adjacent Land Uses

Urban Core Context Area

Urban Context Area
Street Types and Adjacent Land Uses

Industrial Park Land Use

Suburban Context Area
Street Types and Adjacent Land Uses

Rural Context Area

Rural Town Context Area
Chapter 4. Road and Street Design for Pedestrians

4.1 Vehicle Speeds
4.2 Traffic Calming
4.3 Optimizing the Cross Section for Pedestrians
4.4 Intersection Design
Vehicle Speeds

Relationship among Vehicle Speed, Pedestrian Injuries and Fatalities

- **20 MPH**
  - 13% Likelihood of fatality or severe injury
  - 63 feet Stopping distance for a vehicle travelling at 20 mph

- **30 MPH**
  - 40% Likelihood of fatality or severe injury
  - 109 feet Stopping distance for a vehicle travelling at 30 mph

- **40 MPH**
  - 73% Likelihood of fatality or severe injury
  - 164 feet Stopping distance for a vehicle travelling at 40 mph
Traffic Calming

- Chicanes
- Lane Shifts
- Speed Cushions
- Curb Extensions
- Speed Humps
Intersection Design

- Channelized Right-Turn Lanes
- Corner Extensions
- Corner Radii
- Curb Ramps
- Diverging Diamond Interchanges
- Diverters
- Driveway Crossings
- Marked Crosswalks
- Pedestrian Bridges and Underpasses
- Protected Intersections
- Raised Crosswalks
- Raised Intersections
- Roundabouts
- Single-Point Urban Interchanges
- Skewed Intersections
Chapter 5. Traffic Signal Operations for Pedestrian Mobility

5.1 Signal Timing Strategies for Pedestrians
5.2 Pedestrian Infrastructure at Traffic Signals
5.3 Traffic Control Devices for Uncontrolled Pedestrian Crossing Locations
Signal Timing Strategies for Pedestrians

Provides guidance on traffic signal timings that:

- Improve accessibility
- Reduce pedestrian delay
- Give more priority to pedestrians crossing the street, i.e., leading pedestrian interval, etc.
Traffic Control Devices for Uncontrolled Pedestrian Crossing Locations

- Rectangular Rapid Flash Beacon (RRFB)
- Pedestrian Hybrid Beacon (PHB)
Mid-Block Pedestrian Crossing Evaluation (Appendix A)

- Review Complete Streets Policy
- Collect Data and Make Field Observations
- Evaluation the Crossing Location
- Select the Pedestrian Crossing Treatment
Step 1: Review Complete Streets Policy

- Evidence of pedestrian activity
- Pedestrian crash history
- Existing land use
- Approved developments
- Other planning documents
Step 2: Collect Data and Make Field Observations

- Data collection
- Existing infrastructure
- Existing traffic control
- Transit
- Lighting
- Activity generators
- Behaviors and compliance
Step 3: Evaluate the Crossing Location

- Pedestrian volume criteria
- Sight distance requirements
  - Minimum stopping sight distance
  - Vehicle sight distance
  - Pedestrian crossing sight distance
- Minimum crosswalk spacing
Step 4: Select the Pedestrian Crossing Treatment

- Median
- Select treatment (FHWA table, 2017)
- Lighting
- Compliance

<table>
<thead>
<tr>
<th>Roadway Configuration</th>
<th>( \leq 30 \text{ mph} )</th>
<th>35 mph</th>
<th>( \geq 40 \text{ mph} )</th>
<th>( \leq 30 \text{ mph} )</th>
<th>35 mph</th>
<th>( \geq 40 \text{ mph} )</th>
<th>( \leq 30 \text{ mph} )</th>
<th>35 mph</th>
<th>( \geq 40 \text{ mph} )</th>
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</thead>
<tbody>
<tr>
<td>2 lanes*</td>
<td>1 2 3 4</td>
<td>5 6 7 5</td>
<td>5 6 7</td>
<td>1 3 4</td>
<td>1 3 4 1</td>
<td>1 3 4</td>
<td>1 3 4</td>
<td>1 3 4 1</td>
<td>1 3 4 1</td>
</tr>
<tr>
<td>3 lanes with</td>
<td>1 2 3 4</td>
<td>5 7 7 5</td>
<td>5 7 7</td>
<td>1 3 4</td>
<td>1 3 4 1</td>
<td>1 3 4</td>
<td>1 3 4</td>
<td>1 3 4 1</td>
<td>1 3 4 1</td>
</tr>
<tr>
<td>raised median*</td>
<td>5 5 7 5 7</td>
<td>5 7 7 5</td>
<td>5 7 7</td>
<td>1 3 4</td>
<td>1 3 4 1</td>
<td>1 3 4</td>
<td>1 3 4</td>
<td>1 3 4 1</td>
<td>1 3 4 1</td>
</tr>
<tr>
<td>3 lanes w/o</td>
<td>1 2 3 4</td>
<td>5 6 7 5</td>
<td>5 6 7</td>
<td>1 3 4</td>
<td>1 3 4 1</td>
<td>1 3 4</td>
<td>1 3 4</td>
<td>1 3 4 1</td>
<td>1 3 4 1</td>
</tr>
<tr>
<td>raised median†</td>
<td>5 5 7 5 7 5</td>
<td>5 6 7 5</td>
<td>5 6 7</td>
<td>1 3 4</td>
<td>1 3 4 1</td>
<td>1 3 4</td>
<td>1 3 4</td>
<td>1 3 4 1</td>
<td>1 3 4 1</td>
</tr>
<tr>
<td>4+ lanes with</td>
<td>1 3 1 3</td>
<td>5 7 7 5</td>
<td>5 7 7</td>
<td>1 3 1 3</td>
<td>1 3 1 3</td>
<td>1 3 1 3</td>
<td>1 3 1 3</td>
<td>1 3 1 3</td>
<td>1 3 1 3</td>
</tr>
<tr>
<td>raised median†</td>
<td>5 5 7 5 7</td>
<td>5 6 7 5</td>
<td>5 6 7</td>
<td>1 3 1 3</td>
<td>1 3 1 3</td>
<td>1 3 1 3</td>
<td>1 3 1 3</td>
<td>1 3 1 3</td>
<td>1 3 1 3</td>
</tr>
<tr>
<td>4+ lanes w/o</td>
<td>1 3 1 3</td>
<td>5 6 7 5</td>
<td>5 6 7</td>
<td>1 3 1 3</td>
<td>1 3 1 3</td>
<td>1 3 1 3</td>
<td>1 3 1 3</td>
<td>1 3 1 3</td>
<td>1 3 1 3</td>
</tr>
<tr>
<td>raised median†</td>
<td>5 5 7 5 7 5</td>
<td>5 6 7 5</td>
<td>5 6 7</td>
<td>1 3 1 3</td>
<td>1 3 1 3</td>
<td>1 3 1 3</td>
<td>1 3 1 3</td>
<td>1 3 1 3</td>
<td>1 3 1 3</td>
</tr>
</tbody>
</table>
Chapter 6. Streetscape Design for Pedestrians

6.1 Utilities
6.2 Sidewalk Zones
6.3 Components of a Streetscape/Urban Design Elements
6.4 Green Stormwater Infrastructure
6.5 Tree and Plant Considerations
Utilities

- Guidance on utility coordination, “Early and Often”

- Utility installations are governed by the GDOT Utility Accommodation Policy and Standards Manual. Designers should read and understand the referenced policy, in conjunction with the policies and guidelines set forth in the GDOT Design Policy Manual.
## Sidewalk Zones/Context

<table>
<thead>
<tr>
<th>Zone</th>
<th>Frontage Zone</th>
<th>Pedestrian Circulation Zone</th>
<th>Greenscape / Furniture Zone</th>
<th>Curb Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban Core</td>
<td>0 - 10’</td>
<td>10 - 12’ or greater</td>
<td>4 - 6’</td>
<td>6”</td>
</tr>
<tr>
<td>Urban</td>
<td>0 - 10’</td>
<td>8 - 10’ or greater</td>
<td>4 - 8’</td>
<td>6”</td>
</tr>
<tr>
<td>Suburban</td>
<td>0 - 10’</td>
<td>6 - 8’</td>
<td>4 - 10’</td>
<td>6”</td>
</tr>
<tr>
<td>Rural Town</td>
<td>0’ - 10’</td>
<td>5 - 8’</td>
<td>4 - 6’</td>
<td>6”</td>
</tr>
</tbody>
</table>
Components of a Streetscape / Urban Design Elements

- Hardscape materials
- Bike Parking
- Bollards/Pedestrian-Scale Lighting
- Seating/ART
- Transit Stop Amenities
- Liter Receptacles
- Wayfinding Signage
- Street Trees
Green Stormwater Infrastructure

- Green infrastructure techniques are often the most effective when used in combination with conventional storm drainage systems such as inlets and pipes.

- The **MS4 process** should be used for “On Street” State Facilities.

N. McDonough Street – Decatur, GA
Street Tree and Plant Considerations

GDOT Policy 6755-9,
Policy for Landscaping and Enhancements on GDOT Right of Way.

<table>
<thead>
<tr>
<th>Tree Selection List</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Small Canopy:</strong> 15 to 20 feet tall with a spread of 15 to 30 feet wide</td>
</tr>
<tr>
<td>Amelanchier arborea</td>
</tr>
<tr>
<td>Cercis canadensis</td>
</tr>
<tr>
<td>Chionanthus virginicus</td>
</tr>
<tr>
<td>Cornus florida</td>
</tr>
<tr>
<td>Crataegus phaenopyrum</td>
</tr>
<tr>
<td>Koelreuteria paniculata</td>
</tr>
<tr>
<td>Lagerstroemia indica</td>
</tr>
<tr>
<td>Prunus x yedoensis</td>
</tr>
<tr>
<td><strong>Medium Canopy:</strong> 35 to 40 feet tall with a spread of 25 to 35 feet wide</td>
</tr>
<tr>
<td>Acer buergerianum</td>
</tr>
<tr>
<td>Acer griseum</td>
</tr>
<tr>
<td>Acer rubrum</td>
</tr>
<tr>
<td>Carpinus betulus</td>
</tr>
<tr>
<td>Carpinus caroliniana</td>
</tr>
<tr>
<td>Cercidiphyllum japonicum</td>
</tr>
<tr>
<td>Cladrastis kentukea</td>
</tr>
<tr>
<td>Cupressus arizonica</td>
</tr>
<tr>
<td>Juniperus virginiana</td>
</tr>
<tr>
<td>Magnolia virginiana</td>
</tr>
<tr>
<td>Metasequoia glyptostroboides</td>
</tr>
<tr>
<td>Nyssa sylvatica</td>
</tr>
<tr>
<td>Nyssa sylvatica</td>
</tr>
<tr>
<td>Oxydendrum arboreum</td>
</tr>
<tr>
<td>Pistacia chinensis</td>
</tr>
<tr>
<td>Platanus x acerifolia</td>
</tr>
<tr>
<td>Prunus caroliniana</td>
</tr>
<tr>
<td>Taxodium distichum</td>
</tr>
<tr>
<td>Ulmus parvifolia</td>
</tr>
<tr>
<td>U. americana 'Jefferson'</td>
</tr>
<tr>
<td><strong>Large Canopy:</strong> 40 to 80 feet tall with a spread of 30 to 40 feet wide</td>
</tr>
<tr>
<td>Acer rubrum 'Autumn Blaze'</td>
</tr>
<tr>
<td>Fraxinus americana</td>
</tr>
<tr>
<td>Ginkgo biloba</td>
</tr>
<tr>
<td>Liquidambar styraciflua</td>
</tr>
<tr>
<td>Platanus x acerifolia</td>
</tr>
<tr>
<td>Quercus alba</td>
</tr>
<tr>
<td>Quercus cocinea</td>
</tr>
<tr>
<td>Quercus falcata</td>
</tr>
<tr>
<td>Quercus hemisphaerica</td>
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<tr>
<td>Quercus lyrata</td>
</tr>
<tr>
<td>Quercus phellos</td>
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<tr>
<td>Quercus prinus</td>
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<tr>
<td>Quercus rubra</td>
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<tr>
<td>Quercus shumardii</td>
</tr>
<tr>
<td>Quercus stellata</td>
</tr>
<tr>
<td>Quercus texana</td>
</tr>
<tr>
<td>Quercus virginiana</td>
</tr>
<tr>
<td>Serai palmetto</td>
</tr>
<tr>
<td>U. americana 'Princeton'</td>
</tr>
</tbody>
</table>
Horizontal Clearances for Trees and Shrubs
(Keep shrubs below 30” max. height).

<table>
<thead>
<tr>
<th>Posted / Design Speed</th>
<th>Minimum Horizontal Clearance¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 35 mph (Commercial Area²)</td>
<td>4-ft. 8-ft. median</td>
</tr>
<tr>
<td>≤ 35 mph</td>
<td>8-ft. in median</td>
</tr>
<tr>
<td>40 mph</td>
<td>10-ft. 16-ft. in median³</td>
</tr>
<tr>
<td>45 mph</td>
<td>14-ft. 22-ft. in median³</td>
</tr>
<tr>
<td>&gt;45 mph</td>
<td>Outside the clear zone</td>
</tr>
<tr>
<td>Interstates</td>
<td>120% of the clear zone requirement</td>
</tr>
</tbody>
</table>

1 From center of tree to face of curb.

2 In a Central Business District and/or where commercial businesses are typically directly adjacent to the rights of way.

3 Small trees and shrubs that mature at ≤ 4” in diameter may be planted a minimum of 8 feet from the face of the curb in medians adjacent to 40 to 45 mph speeds. Tree size is diameter of the tree at maturity, measured at dbh (4.5 feet above the ground).

Certain situations may require an increased horizontal clearance setback for additional safety considerations.

For rural shoulders, trees should be placed outside the clear zone.
Tree Protection in Work Zones

- Visible warning sign, attached to tree protection barrier every 50 feet o.c.
- Tree protection barrier
- Critical Root Zone
- Drip Line

10" Diameter
10" Radius
10" diameter tree = 10" radius CRZ
Chapter 7. Pedestrian Safety in Work Zones

7.1 Temporary Traffic Control and Detour Plans
7.2 Components of an Accessible Work Zone
7.3 Maintenance of Pedestrian and Bicycle Infrastructure in Work Zones
Pedestrian Safety in Work Zones

- GDOT, Special Provision Section 150 – Traffic Control (latest edition)
- US Access Board, PROWAG (latest edition)
Together we can make a difference! Thank you!