MUTCD Update #3

City Approaches to Setting Speed Limits

June 26, 2024

This meeting will be recorded

- A recording and copy of the slides will be shared with NACTO members and those registered for today's meeting.
- If you don't want to be on the recording, please keep your camera off.

Post-Webinar:

- All questions will be documented and answers will be sent as a follow up
- Receive AICP credit for attending today's session
  → https://www.planning.org/events/eventsingle/9292627/
- NACTO is unable to provide specialized accreditation for specific licenses and degrees.
  → Email events@nacto.org for a certificate of participation

Upcoming Webinars

- July 16 1-2pm Lunch & Learn Event with Jarrett Walker
- Upcoming MUTCD Webinar Topics for the rest of 2024
  - → Crosswalks
  - → Bike design and bike signals
  - → Transit+AV Traffic Control
  - → Signal Warrants
  - → Coordination on state MUTCD adoption

Webinar Speakers

City of Atlanta

Betty Smoot-Madison

City of Austin

Eric Bollich

Joel Meyer

June 26, 2024

Atlanta's Vision Zero Program – Speed Limits

Office of Strategy and Planning

CITY OF ATLANTA

DEPARTMENT OF TRANSPORTATION

Mayor Andre Dickens
ATLDOT Commissioner Solomon Caviness IV

CITY OF ATLANTA

VISION ZERO ACTION PLAN

visionZERO
Atlanta's commitment to ending all traffic deaths

CITY OF ATLANTA
DEPARTMENT OF TRANSPORTATION

November 2023

ATL Vision Zero

- Vision Zero was adopted by council in 2020
- Action Plan Goal to reach **zero traffic fatalities** in the City of Atlanta **by 2040**
- This is a whole-city, safe systems approach to build safer streets through infrastructure investments, support safer people through education and outreach, and achieve safer speeds through street designs.
- Year-to-Date Fatalities in 2024: 33

IMPLEMENTATION CORE VALUES

Leadership and Commitment

Authentic engagement, strategic planning, project delivery, and consistent results are foundations of how the City of Atlanta approaches safety decisions.

Interdepartmental Collaboration

Many City departments have a role in project delivery and shaping the City. The City of Atlanta ensures collaboration between all City decision makers.

Systemic Approach

Safe streets require proactive, consistent, and routine incorporation of safety countermeasures. The City of Atlanta routinely incorporates safer designs into every project.

Data-Informed Planning

Years of crash data illustrate the common, recurring factors that contribute to severe crashes. The City of Atlanta uses data analysis to proactively address the highest risks.

Community Perception

Community vision and input is vital to prioritizing safer streets. The City of Atlanta incorporates community engagement into every project.

Equity

A safe city is a fair city. The City of Atlanta engages with citizens and neighborhoods to ensure diverse input and safer streets, especially in neighborhoods that have been disproportionately exposed to traffic risks or are historically underrepresented.

Safer Speeds

Vehicle speeds contribute to both the frequency and severity of crashes. The City of Atlanta prioritizes travel speeds that are safe for all street users.

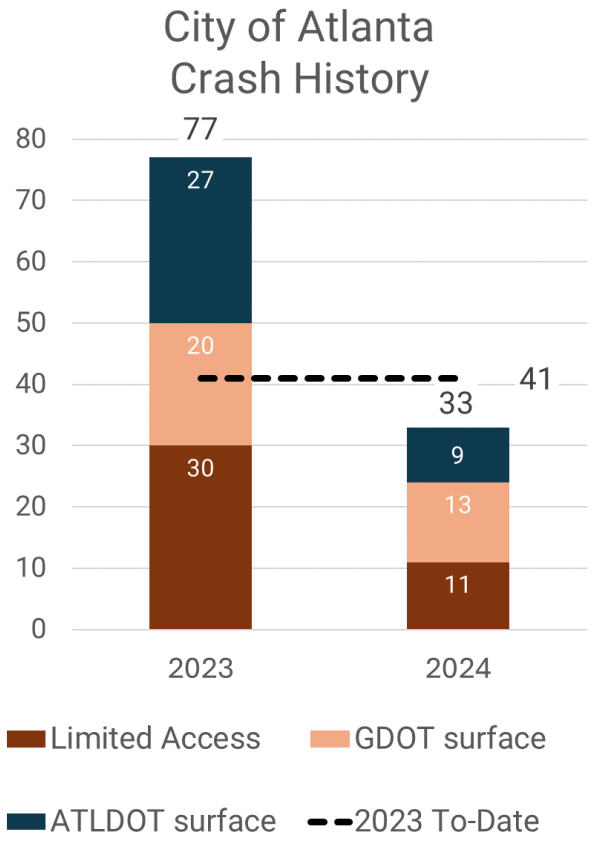
Safer Street Designs

Safe street designs are foundational to building a safer, more equitable city. The City of Atlanta's street designs anticipate human mistakes, mitigate crash severity, and encourage safe behaviors.

Data Matters

Year-to-Date Fatalities (2024)

- Fatalities: 33
  - 15 Vehicle occupant
  - 13 Pedestrians
  - 1 Scooter Rider
  - 3 Motorcyclist

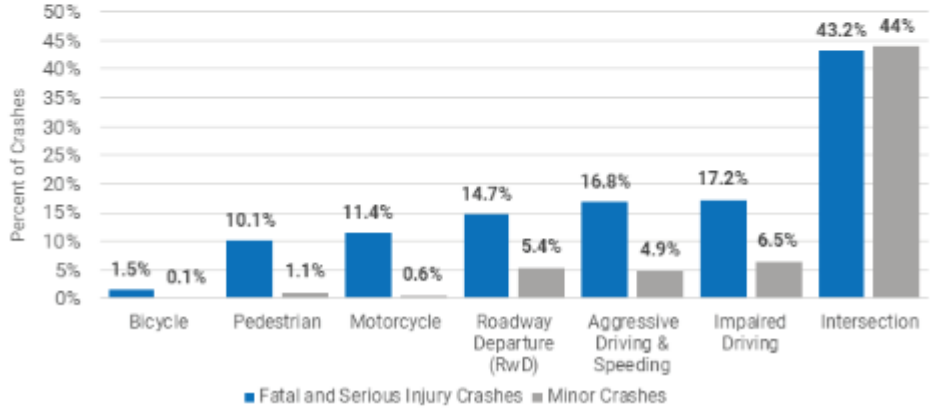


The Focus Crash Types used for further analysis are:

1. Bicycle
2. Pedestrian
3. Motorcycle
4. Roadway Departure (RwD)
5. Aggressive Driving & Speeding
6. Impaired Driving
7. Intersection

Maps of Focus Crash Type Risk Factors are included in Appendix B.

Figure 12: Selected Emphasis Areas for Focus Crash Types



Atlanta's Vision Zero Plan – Current Implementation Action Items

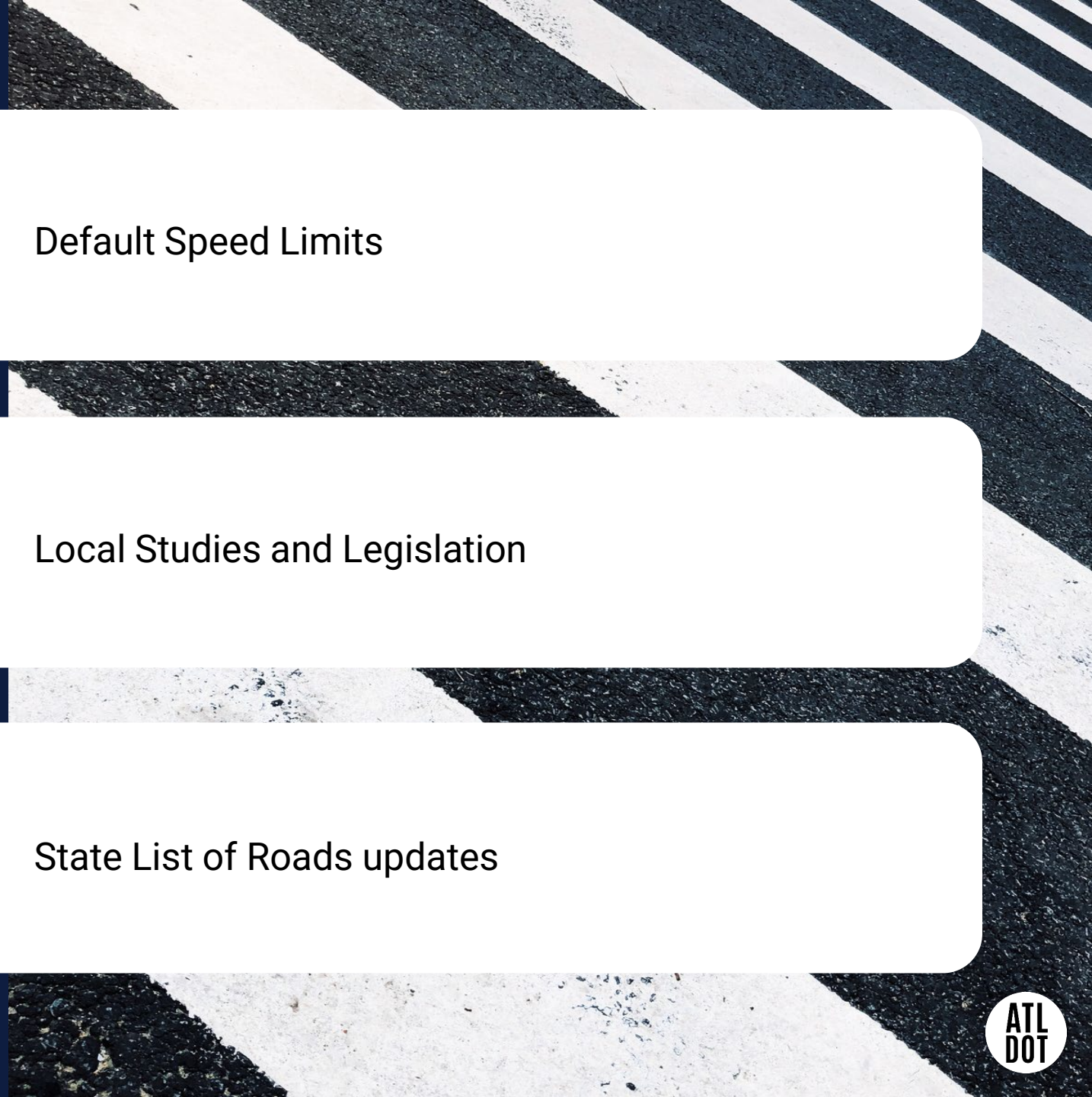
- Fatal Crash Review Commission
- LPI Policy and Implementation
- Daylight Intersections / Scooter and Bike Parking areas/bulbouts
- No Right Turn on Red
- Citywide Traffic Calming - $10M
- GDOT/MARTA coordination of safe stop placement / crossings
- School Zone Speed Cameras
- SRTS – school action plans
- Various Tactical Urbanism projects
- Cycle Atlanta Quick Implementation / Bike Network Review and Gaps analysis
- Centerline Hardening Engineering Evaluation
- RRFB requests from GDOT
- LOR – Speed Limit Changes

3 Ways to Change Speed Limits in Atlanta

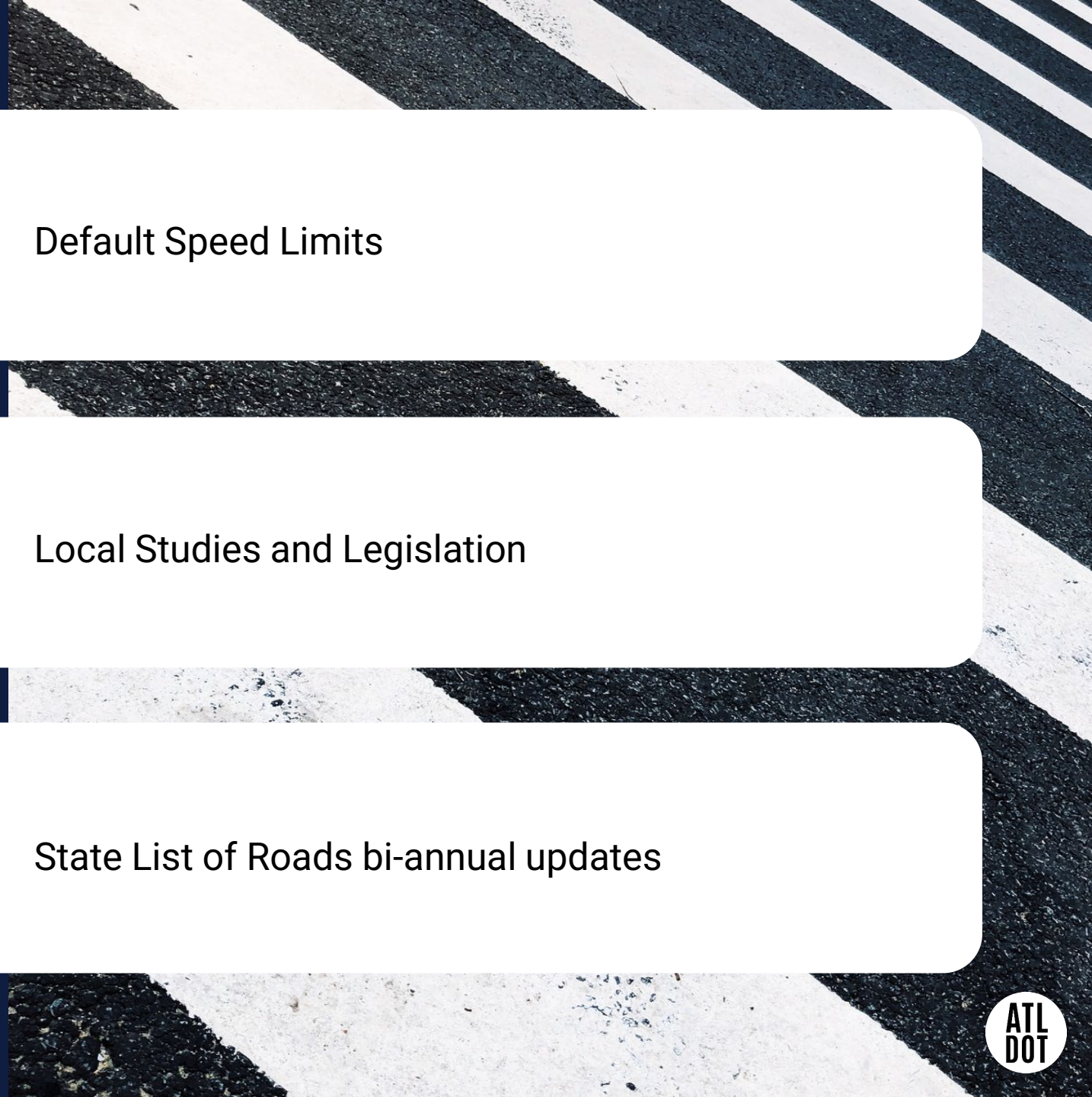
Default Speed Limits

Local Studies and Legislation

3 State List of Roads updates



3 Ways to Change Speed Limits in Atlanta



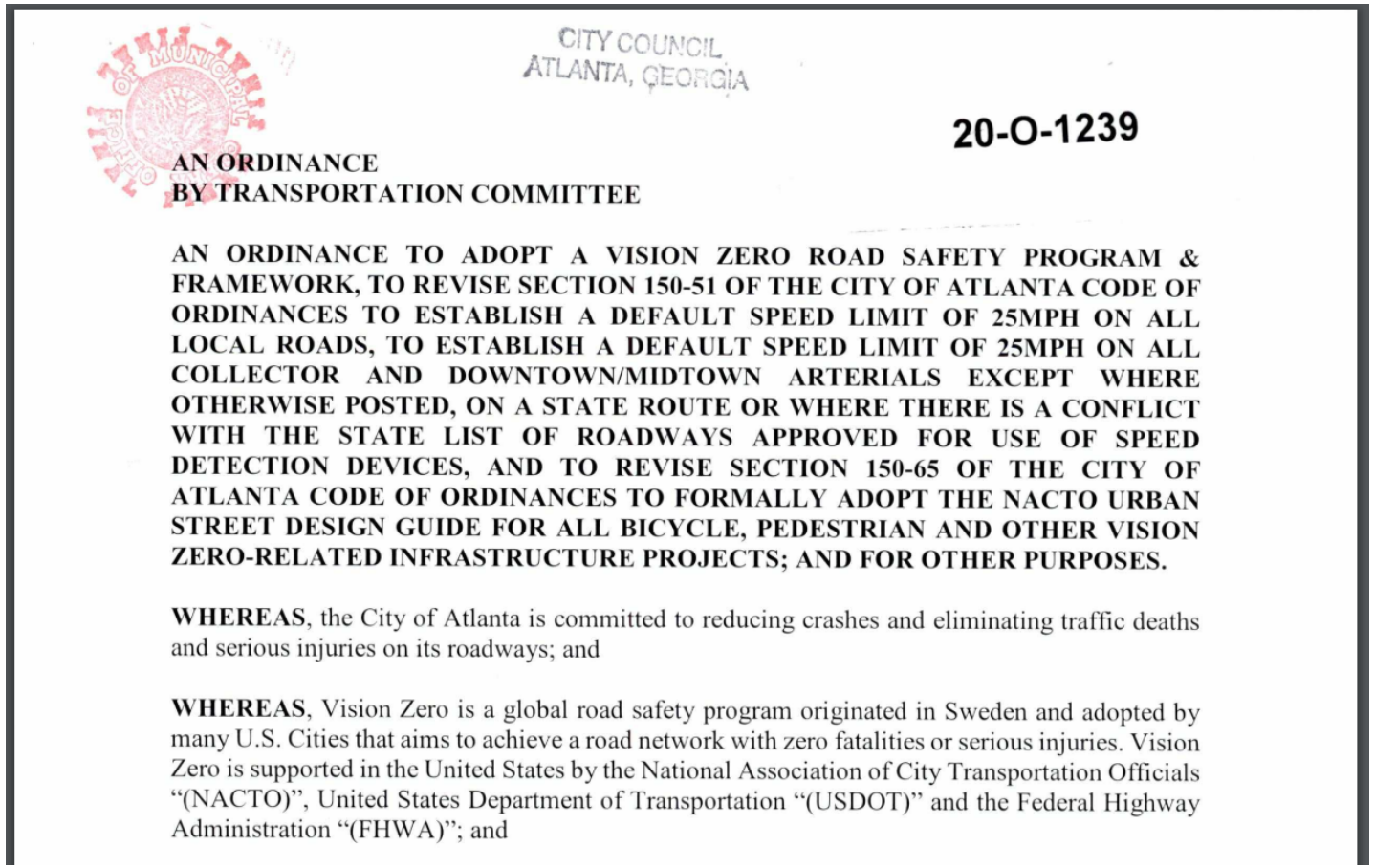
Default Speed Limits

Local Studies and Legislation

3 State List of Roads bi-annual updates

ATL DOT

Atlanta's Vision Zero Ordinance established a default 25 mph on local classified roads and within the Downtown and Midtown areas



CITY COUNCIL
ATLANTA, GEORGIA

20-O-1239

AN ORDINANCE
BY TRANSPORTATION COMMITTEE

AN ORDINANCE TO ADOPT A VISION ZERO ROAD SAFETY PROGRAM & FRAMEWORK, TO REVISE SECTION 150-51 OF THE CITY OF ATLANTA CODE OF ORDINANCES TO ESTABLISH A DEFAULT SPEED LIMIT OF 25MPH ON ALL LOCAL ROADS, TO ESTABLISH A DEFAULT SPEED LIMIT OF 25MPH ON ALL COLLECTOR AND DOWNTOWN/MIDTOWN ARTERIALS EXCEPT WHERE OTHERWISE POSTED, ON A STATE ROUTE OR WHERE THERE IS A CONFLICT WITH THE STATE LIST OF ROADWAYS APPROVED FOR USE OF SPEED DETECTION DEVICES, AND TO REVISE SECTION 150-65 OF THE CITY OF ATLANTA CODE OF ORDINANCES TO FORMALLY ADOPT THE NACTO URBAN STREET DESIGN GUIDE FOR ALL BICYCLE, PEDESTRIAN AND OTHER VISION ZERO-RELATED INFRASTRUCTURE PROJECTS; AND FOR OTHER PURPOSES.

WHEREAS, the City of Atlanta is committed to reducing crashes and eliminating traffic deaths and serious injuries on its roadways; and

WHEREAS, Vision Zero is a global road safety program originated in Sweden and adopted by many U.S. Cities that aims to achieve a road network with zero fatalities or serious injuries. Vision Zero is supported in the United States by the National Association of City Transportation Officials "(NACTO)", United States Department of Transportation "(USDOT)" and the Federal Highway Administration "(FHWA)"; and

3 Ways to Change Speed Limits in Atlanta

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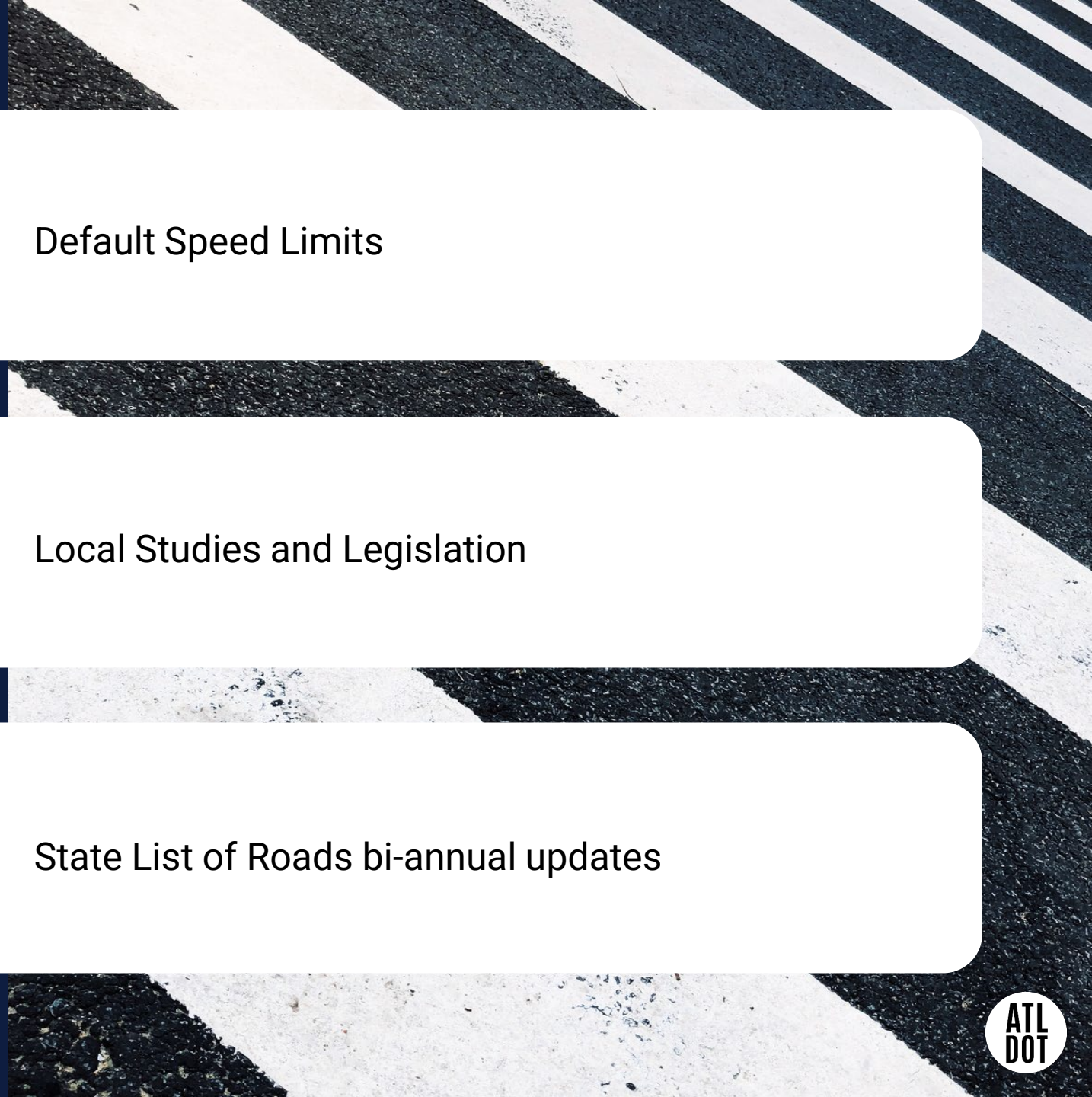


Speed Studies and Legislation

- Speed limits on city-owned streets can be changed via city council-approved legislation
- Generally speed studies are performed and historically have been percentile-based (ie 85th, etc)
- ~20 legislation actions reducing speed limits on specific streets since 2017
- COA utilized NACTO's Speed Limits Guide to test alternatives to traditional studies

Marietta Boulevard

- Project Limits: Marietta Boulevard, between W. Marietta Street and City/County Line (3.8 mi.)
- 4-5 Lanes
- 13,000 AADT
- Posted Speed: 45 MPH (higher than statutory speed limit of 30 MPH for this type of roadway)
- 9 Signalized intersections
- Most signalized intersections along corridor are spaced more than ¼ mile apart

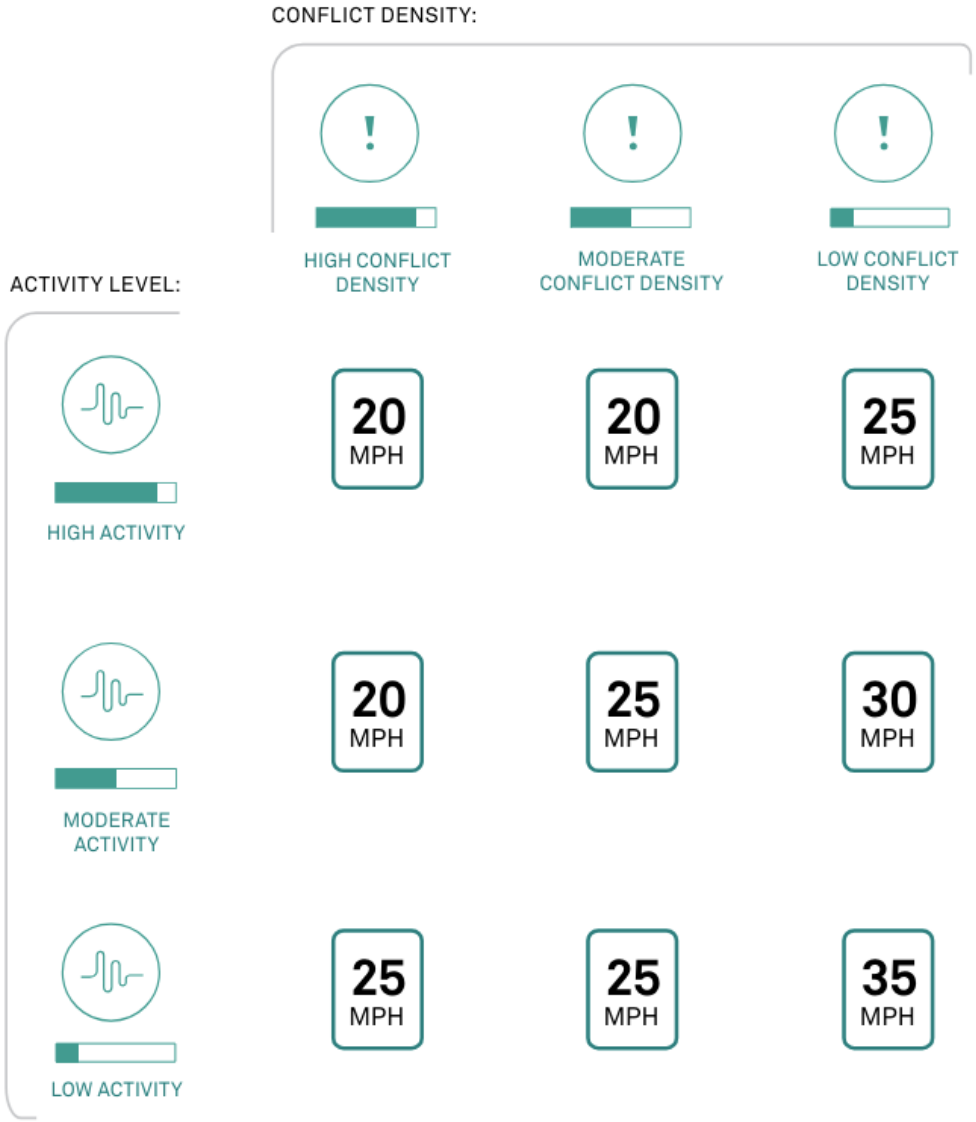

Marietta Blvd NW
Google

Marietta Boulevard

- Crashes
  - Total Crashes: ~350
  - KSI Crashes: 12
    - Left Turning movements
    - Sideswipe or head on
  - Fatal Crashes: 2
  - Overall Crashes Concentrated at signalized intersections and driveway access points
- Conflict Points
  - 85 Driveways
  - 22 Bus Stops
  - Insufficient Bike and Ped facilities
- Activity Levels

Recommendations

- NACTO
  - Speed Limit can be set to 20 MPH, based on conflict density and activity levels, however, state code does not allow for lower than 25 MPH
- CITY
  - Reduce speed limit to 35 and maintain consistency with southern portion of corridor (35 MPH) – Ordinance approved by Council in 2020
  - Program/Fund corridor redesign and re-evaluate further speed limit reductions during design



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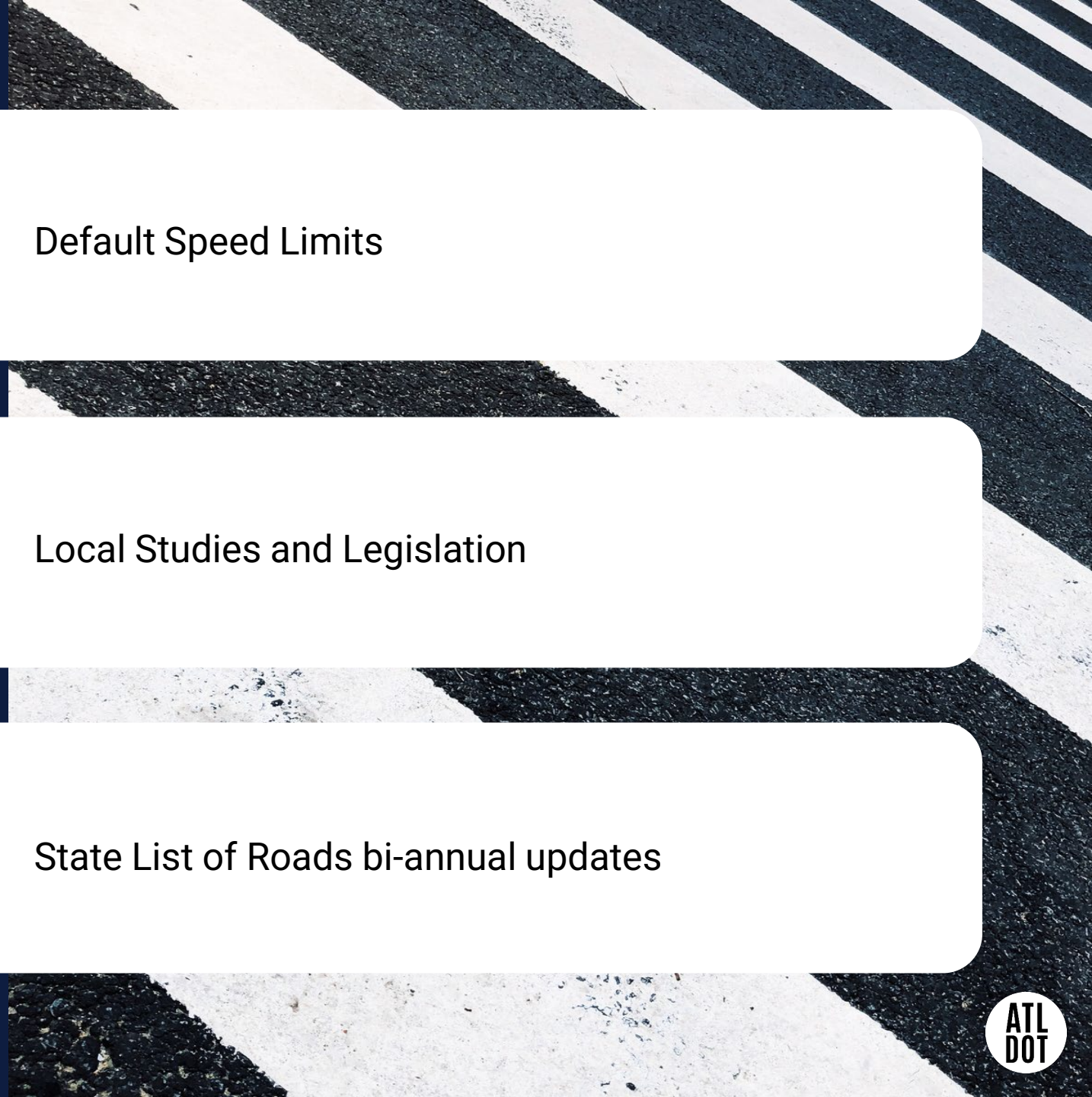


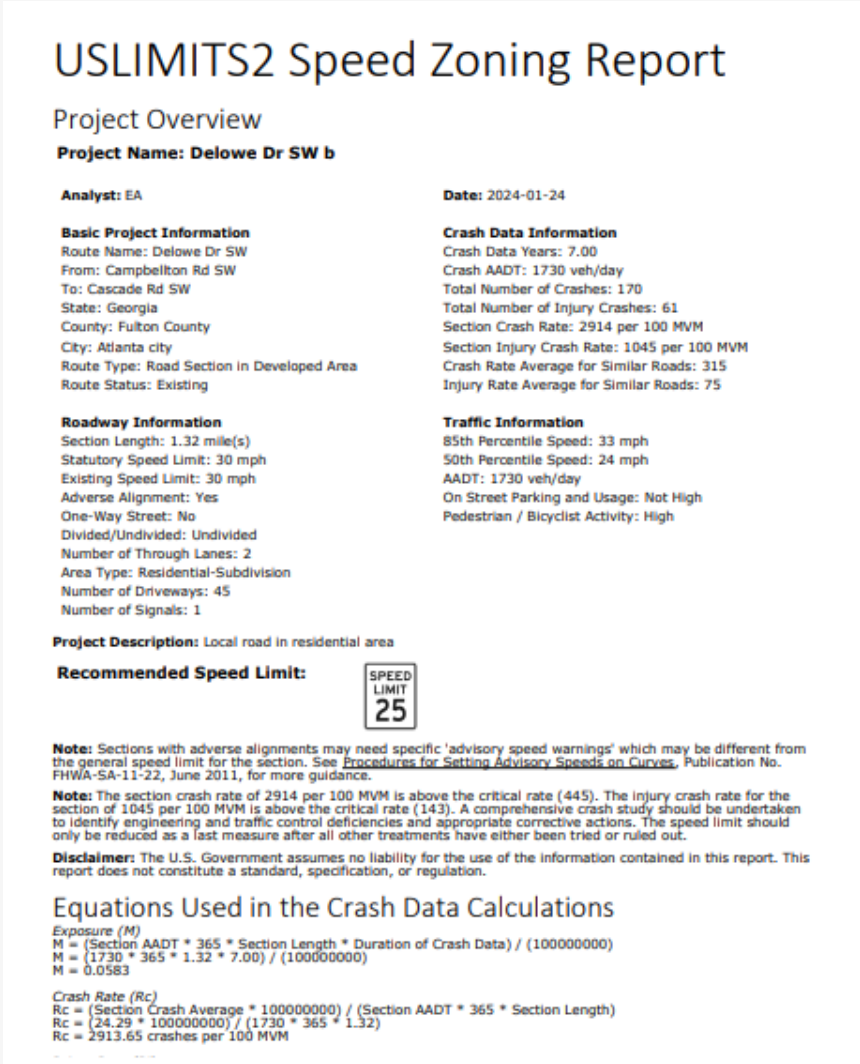
State LOR Update

- **What is the LOR?**
  - A GDOT-approved 'list of roads' (LOR) that includes segment lengths and speed limits within a particular jurisdiction in which law enforcement is permitted to use speed detection devices.
- **Why is the LOR being updated?**
  - Each municipality within the state of GA leads any efforts to update their local LOR. The COA's LOR was last updated in 2002 and was missing many key corridors & school zone designations. The final 2024 updated LOR will include over 200 updates and revisions, in which the key elements are:
    - All School Zone Designations
    - Critical Street Segments w/ speed limits (on-system and off-system)

- **Why is this update important?**
  - This update is important to the city's safety and Vision Zero efforts to improve safety on city streets and reduce the opportunity for speeding.
- **When will the update be completed?**
  - ATLDOT is currently working with GDOT on the approval process, which includes uploading each individual update into the GPAS system. We anticipate this process taking approximately 2 weeks. Additionally, legislation is required to authorize the final LOR, which has been initiated and we anticipate final council action in early March.

LOR Updates Summary

- ATLDOT Data Analytics and Engineering team conducted over 200 Engineering Traffic Investigations (ETIs) to inform the new speed limits. These studies utilize roadway and traffic information to inform recommended speed limits.
- Some streets required additional analysis, in which the ATLDOT utilize USLIMITS2, an FHWA web-based tool for conducting engineering studies and setting reasonable, safe and consistent speed limits.



USLIMITS2 Speed Zoning Report

Project Overview

Project Name: Delowe Dr SW b

Analyst: EA

Date: 2024-01-24

Basic Project Information
Route Name: Delowe Dr SW
From: Campbellton Rd SW
To: Cascade Rd SW
State: Georgia
County: Fulton County
City: Atlanta city
Route Type: Road Section in Developed Area
Route Status: Existing

Crash Data Information
Crash Data Years: 7.00
Crash AADT: 1730 veh/day
Total Number of Crashes: 170
Total Number of Injury Crashes: 61
Section Crash Rate: 2914 per 100 MVM
Section Injury Crash Rate: 1045 per 100 MVM
Crash Rate Average for Similar Roads: 315
Injury Rate Average for Similar Roads: 75

Roadway Information
Section Length: 1.32 mile(s)
Statutory Speed Limit: 30 mph
Existing Speed Limit: 30 mph
Adverse Alignment: Yes
One-Way Street: No
Divided/Undivided: Undivided
Number of Through Lanes: 2
Area Type: Residential-Subdivision
Number of Driveways: 45
Number of Signals: 1

Traffic Information
85th Percentile Speed: 33 mph
50th Percentile Speed: 24 mph
AADT: 1730 veh/day
On Street Parking and Usage: Not High
Pedestrian / Bicyclist Activity: High

Project Description: Local road in residential area

Recommended Speed Limit: SPEED LIMIT 25

Note: Sections with adverse alignments may need specific 'advisory speed warnings' which may be different from the general speed limit for the section. See Procedures for Setting Advisory Speeds on Curves, Publication No. FHWA-SA-11-22, June 2011, for more guidance.

Note: The section crash rate of 2914 per 100 MVM is above the critical rate (445). The injury crash rate for the section of 1045 per 100 MVM is above the critical rate (143). A comprehensive crash study should be undertaken to identify engineering and traffic control deficiencies and appropriate corrective actions. The speed limit should only be reduced as a last measure after all other treatments have either been tried or ruled out.

Disclaimer: The U.S. Government assumes no liability for the use of the information contained in this report. This report does not constitute a standard, specification, or regulation.

Equations Used in the Crash Data Calculations

Exposure (M)
M = (Section AADT * 365 * Section Length * Duration of Crash Data) / (100000000)
M = (1730 * 365 * 1.32 * 7.00) / (100000000)
M = 0.0583

Crash Rate (Rc)
Rc = (Section Crash Average * 100000000) / (Section AADT * 365 * Section Length)
Rc = (24.29 * 100000000) / (1730 * 365 * 1.32)
Rc = 2913.65 crashes per 100 MVM

LOR Update Summary

Off-System (City-Owned)

Updates	Total	Lane Miles
School Zones on 2002 LOR	42	--
Added School Zones	104	--
Removed School Zones	12	--
Total School Zones on 2024 LOR	134	--
Added Corridors	55	39.2 mi
Removed Corridors	82	60 mi
Corridors w/ Speed Limit Changes	41	62.1 mi
Corridors w/ 25 MPH	187	139.7 mi
Corridors w/ 30 MPH	47	54.7 mi
Corridors w/ 35 MPH	79	149.7
Total Mileage of Corridors on 2024 LOR	--	344 mi

On-System (State-Owned)

Updates	Total	Lane Miles
School Zones on 2002 LOR	19	--
Added School Zones	17	--
Removed School Zones	7	--
Total School Zones on 2024 LOR	29	--
Added Corridors	5	3.1 mi
Removed Corridors*	0	0 mi
Corridors w/ Speed Limit Changes	8	45.3 mi
Corridors w/ 25 MPH	N/A	N/A
Corridors w/ 30 MPH	2	2.8 mi
Corridors w/ 35 MPH +	64	149.1
Total Mileage of Corridors on 2024 LOR	--	151.9 mi

Next Steps

- Final approval of LOR by GDOT and Ga Public Safety anticipated in June 2024
- Develop Implementation Strategy with Cost Estimates
  - Incorporating speed limit changes in Capital Projects
  - Coordinating with APS on School Zones
    - Develop standards and guidelines for consistent signage and pavement markings for school zones, based on best practices and safe systems approach
  - ATLDOT sign installations across system
- Post-Implementation Studies

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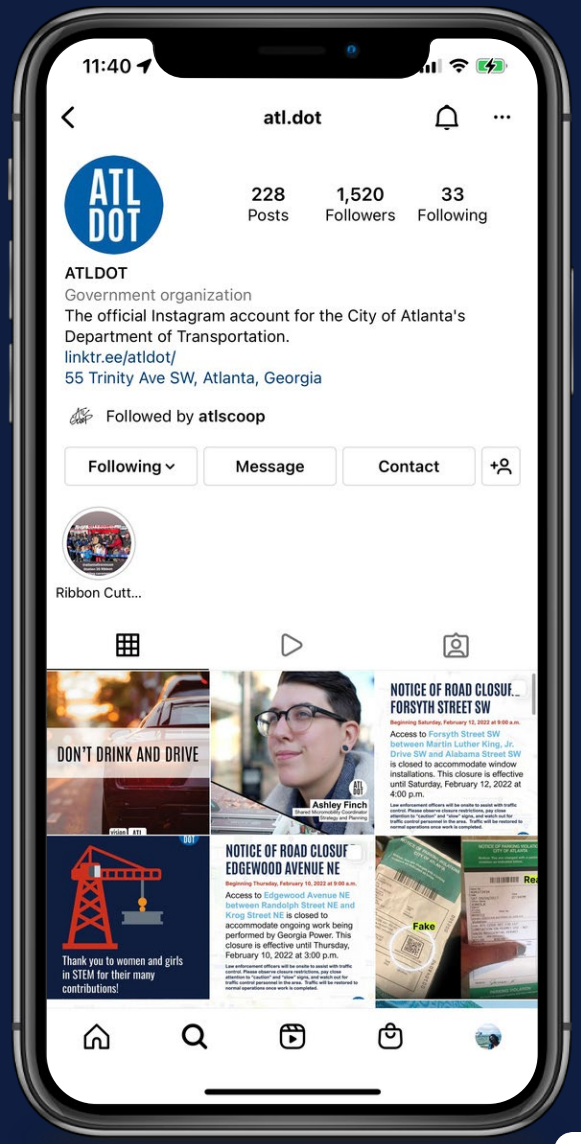
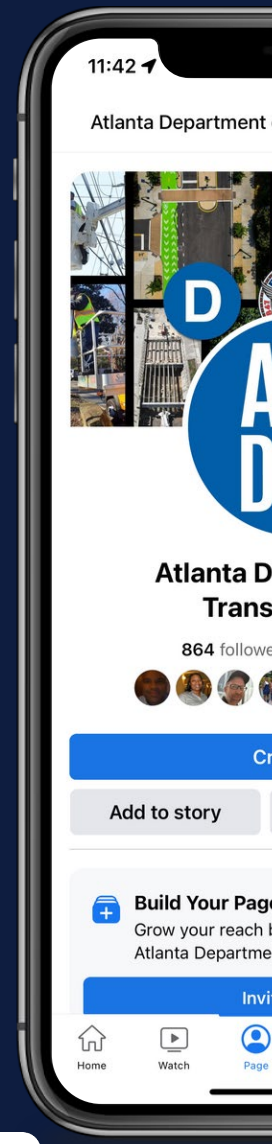





Thank you!

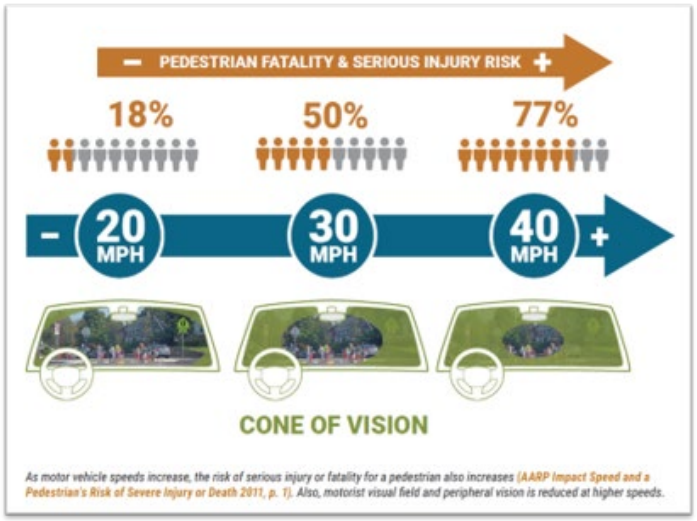
TRANSPORTATION
PUBLIC WORKS

Using Safe Systems to Set Speed Limits in the City of Austin

NACTO MUTCD Webinar – City Approaches to Setting Speed Limits

June 26, 2024

VISION ZERO



Vision Zero and Speed Management

- Speed plays a role in almost every severe crash
- Speed Limit setting as one part of a holistic speed management strategy
  - Policy and design guidelines
  - Redesigning streets
  - To a lesser extent, education and enforcement
- Focus on what we can control, versus what we can't control
  - Design of State-owned roadways
  - Enforcement staffing / automated enforcement
  - Vehicle regulations (e.g. ISA)
  - Societal norms around speeding

Austin's Speed Management Program

- Mission: improve safety and enhance the livability of Austin's streets by implementing context-appropriate speed reduction strategies to reduce egregious speeding.
- Includes systematic speed limit reductions, data collection, residential traffic calming program, speed display devices, more comprehensive corridor redesigns.
- In 2020 and 2022, **Austin lowered speed limits citywide on arterial, residential, and downtown streets based on comprehensive traffic engineering studies using Safe System approaches** under its revamped Speed Management Program.

Lowering speeds through safer street design

SAFER SPEEDS ON BARTON SPRINGS ROAD

A goal of the Barton Springs Road safety pilot project is to reduce high-risk speeding, defined as driving 10 mph above the speed limit or faster. This area has a 30 mph speed limit.

PEOPLE DRIVING 40 MPH OR FASTER WITHIN PROJECT LIMITS (DAILY AVERAGE)

738
BEFORE PROJECT INSTALLATION

264
AFTER PROJECT INSTALLATION

474 fewer people driving faster than 40mph daily on average

64.2% reduction

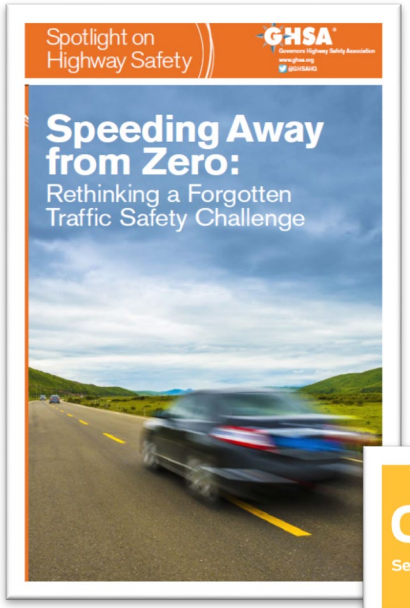
0 serious injuries or fatalities after installation

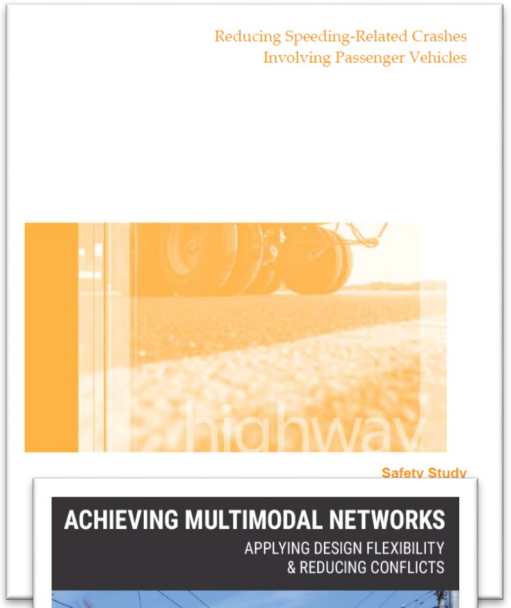
2 crashes with full crash reports

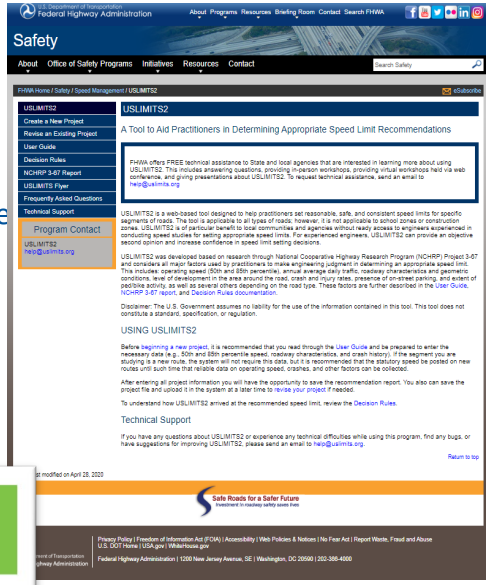
Source: Austin Transportation and Public Works Department Vision Zero program

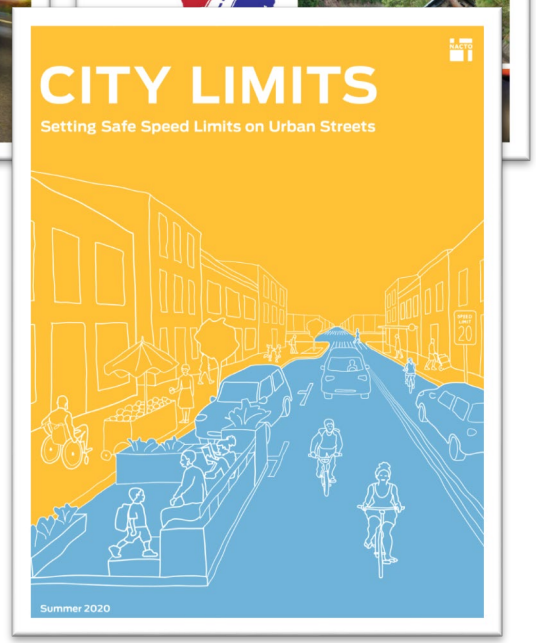
VISION ZERO

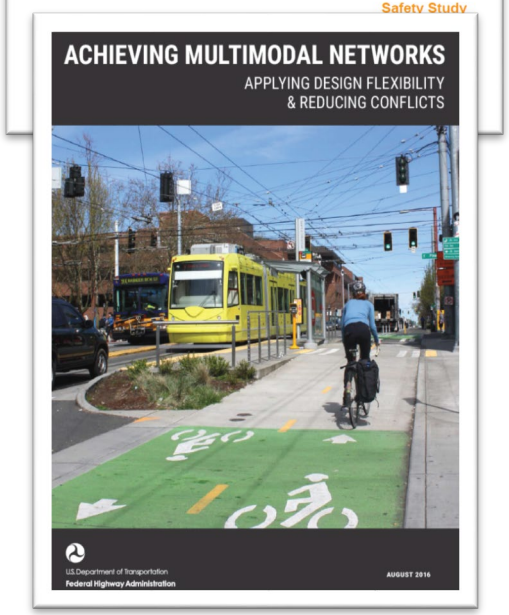
Review of Best Practices





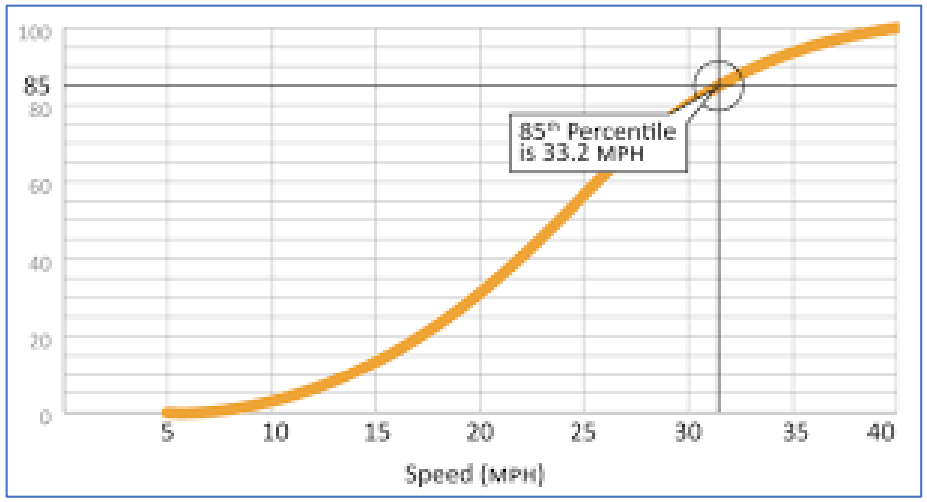






Historical Engineering Approach → Expert Systems (USLIMITS2)

85th Percentile Speed as Primary Input



Source: FHWA

15 Different Inputs

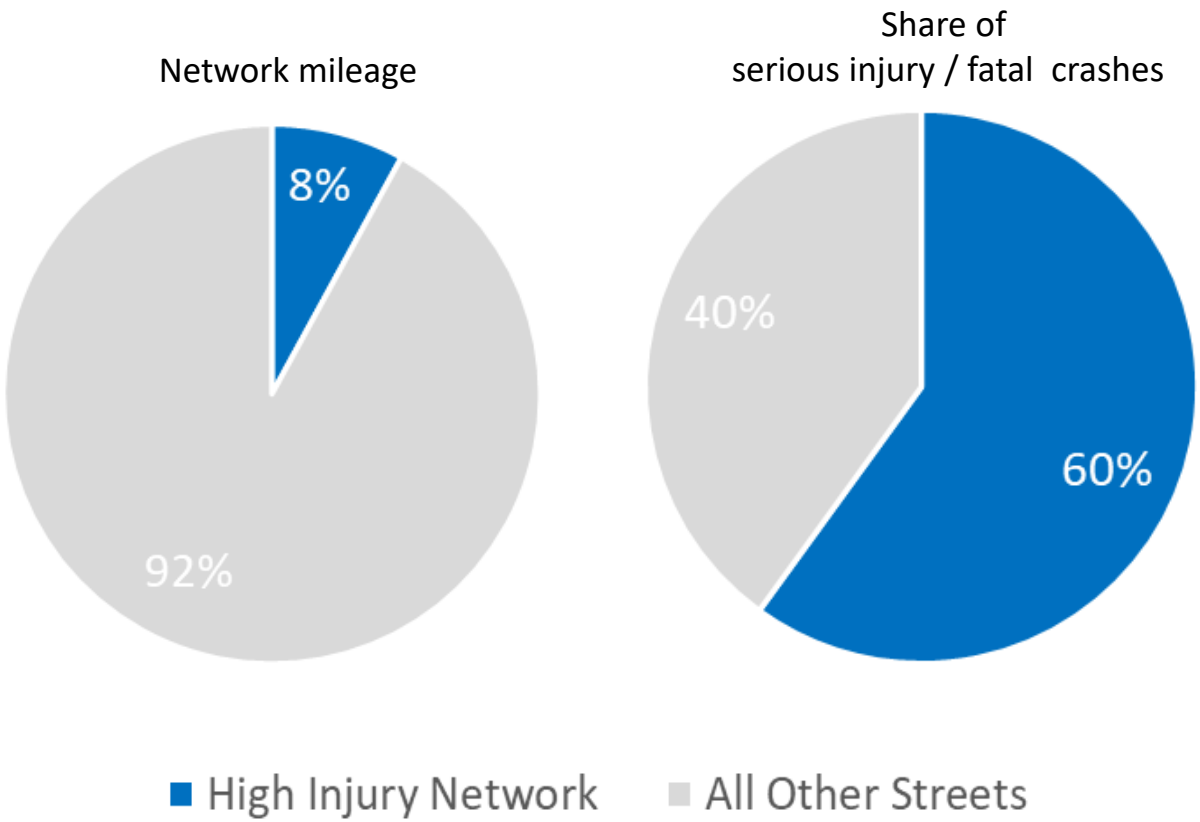
- 50th percentile speed
- Driveway Density
- Traffic Controls
- Adjacent Land Use
- Bike and Ped Activity
- Crash History
- Plus Others

Engineering Study Process – Arterials

Transportation and Public Works (TPW) can recommend speed limit modifications based on an **engineering study** under Texas Transportation Code and City of Austin Code

Developed **comprehensive engineering studies** to cover multiple streets rather than individual studies for each street

For arterials, TPW focused on streets with greater operating speeds and those on our High Injury Network, collecting data on most of our major arterials, and evaluating through USLIMITS2



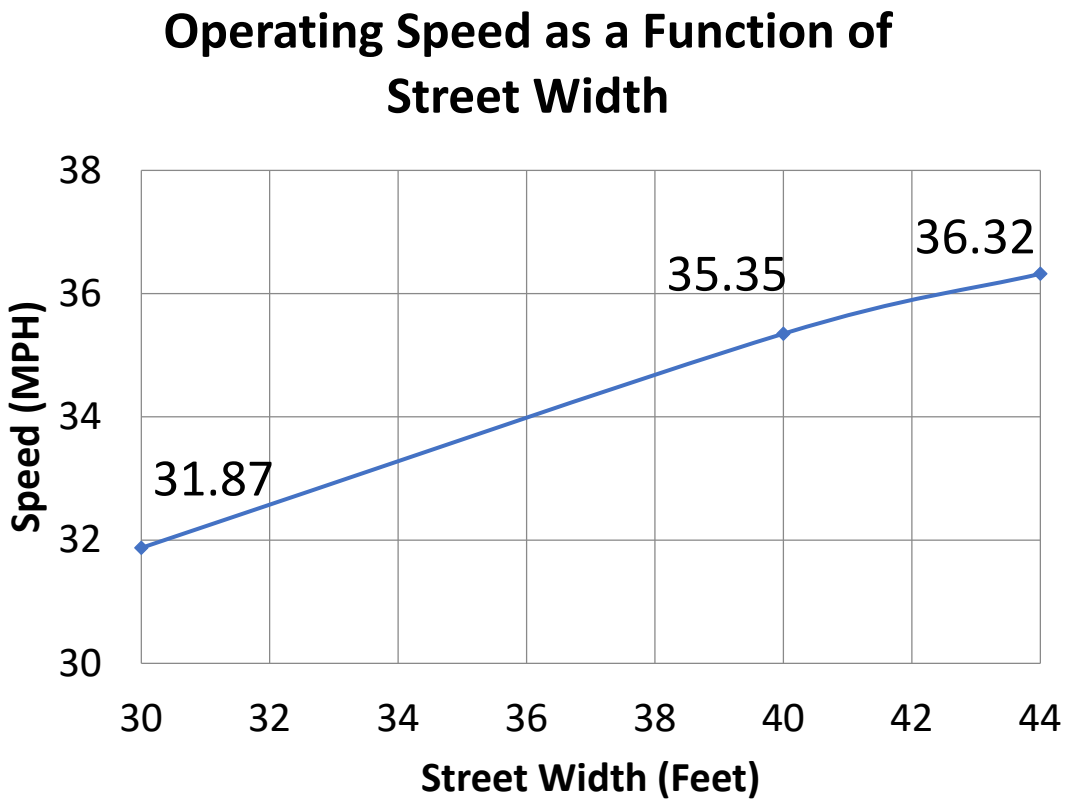
Engineering Study Process – Residential Streets

Sampled data on 600 streets and calculated statistical values for 100 to determine how the built environment influences operating speeds

Speeds increase in a nearly linear relationship to street width

Speeds are most influenced by on-street parking utilization, conflicts from driveways, and visual cues from adjacent front-facing residences

Street widths less than 36 feet cause yield-flow operation



Engineering Study Process – Code Changes

DOWNTOWN STREET means a street within the area bounded by Lamar Boulevard (North), East and West Martin Luther King, Jr. Boulevard, the West Frontage Road of Interstate Highway 35 North, and Lady Bird Lake regardless of commercial, governmental, or residential orientation.

NEIGHBORHOOD STREET means a street approximately 40 feet or less in width between faces of curbs, or, in the absence of curbs, between edges of pavement, and having primarily front-facing residential land uses.

URBAN CORE ARTERIAL STREET means a street in the area bounded by US 183, SH 71, and Loop 1

Engineering Study Process – Code Changes

§ 12-4-65 - SPEED LIMITS ON DOWNTOWN STREETS.

A person may not operate a vehicle on downtown streets at a speed greater than a maximum speed limit of 25 miles per hour unless an increased or reduced speed is necessary for safe vehicle operation, an increased or reduced speed is necessary as determined by the City Traffic Engineer, or compliance with law.

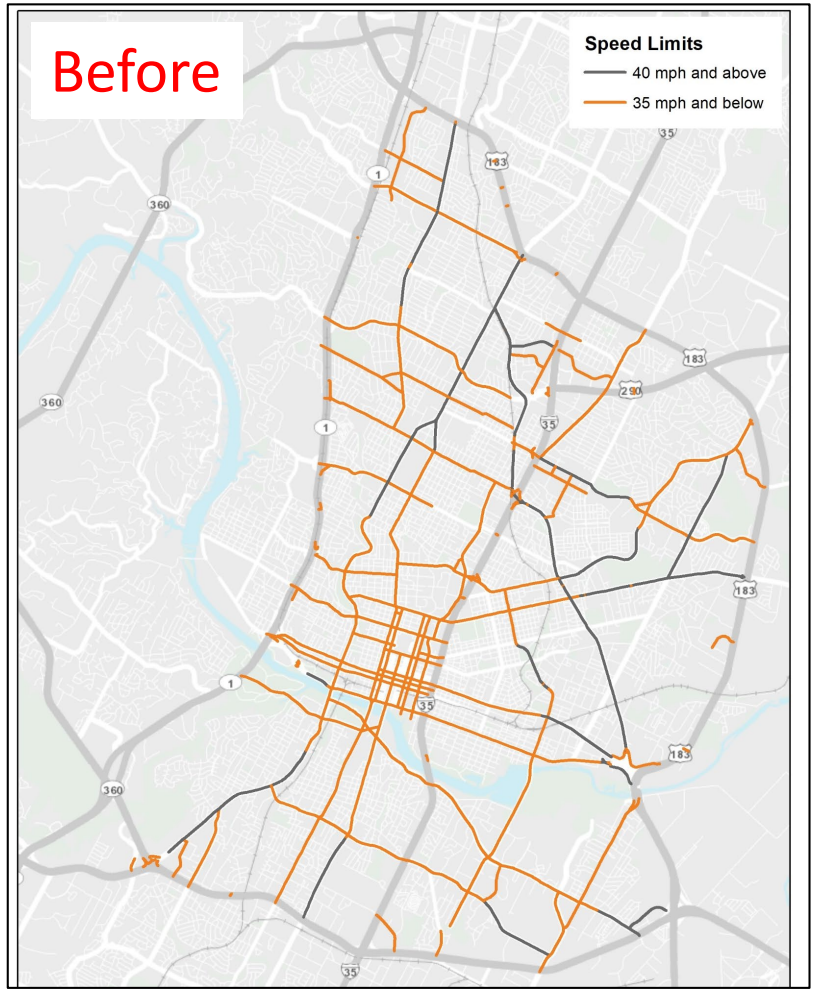
§ 12-4-66 - SPEED LIMITS ON NEIGHBORHOOD STREETS.

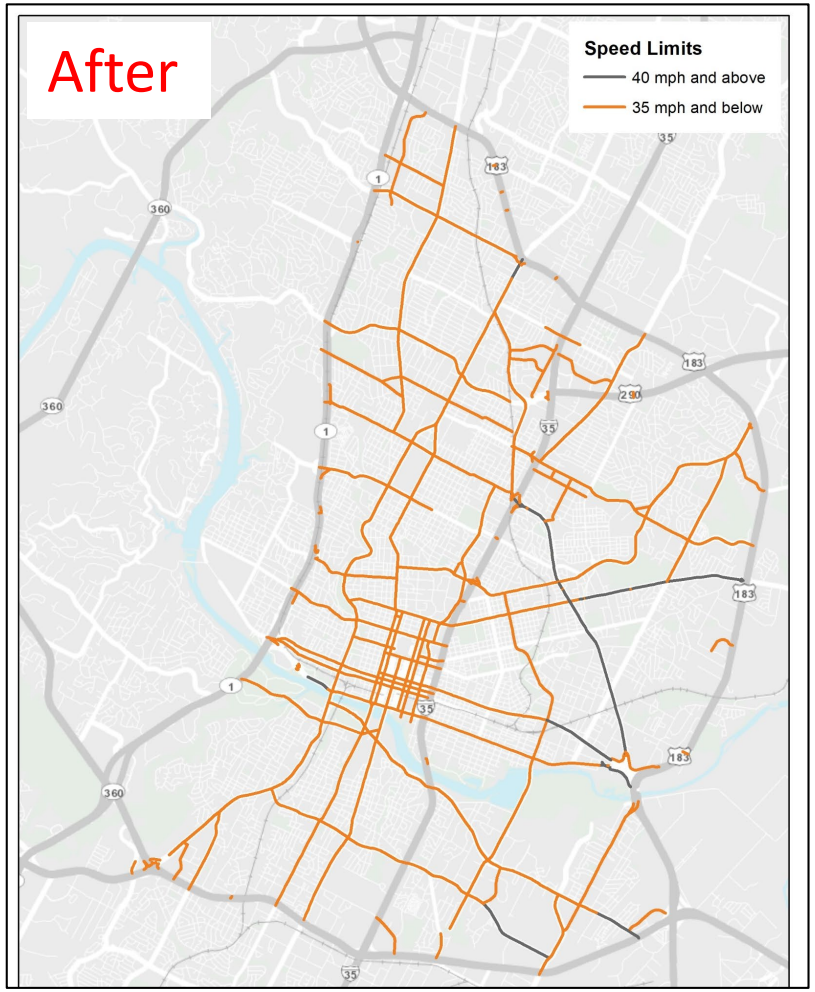
A person may not operate a vehicle on a neighborhood street at a speed greater than a maximum speed limit of 25 miles per hour unless an increased or reduced speed is necessary for safe vehicle operation, an increased or reduced speed is necessary as determined by the City Traffic Engineer, or in compliance with law.

§ 12-4-67 - SPEED LIMITS ON URBAN CORE ARTERIAL STREETS.

A person may not operate a vehicle on an urban core arterial street at speeds greater than a 30, 35, or 45 miles per hour maximum speed, as more specifically described in City Code Section 12-4-64(D) (Table of Speed Limits), at speeds greater than 30, 35, or 45 miles per hour unless an increased or reduced speed is necessary for safe vehicle operation, an increased or reduced speed is necessary as determined by the City Traffic Engineer, or compliance with law.

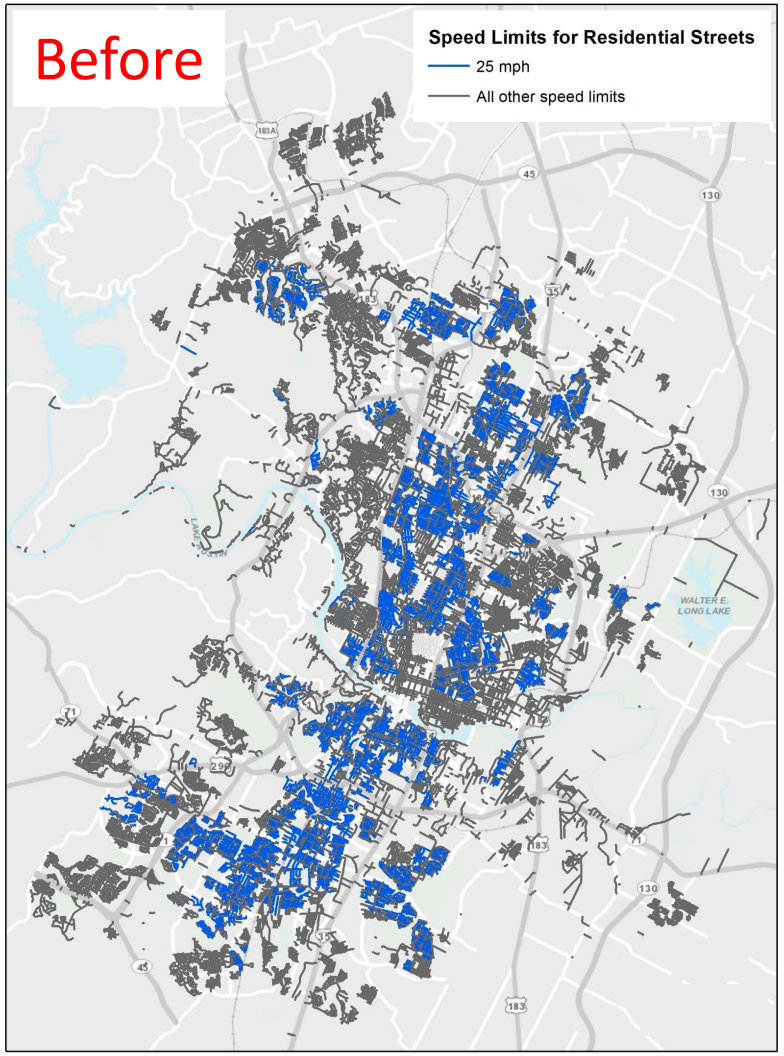
Speed Limit Changes – Urban Core Arterials



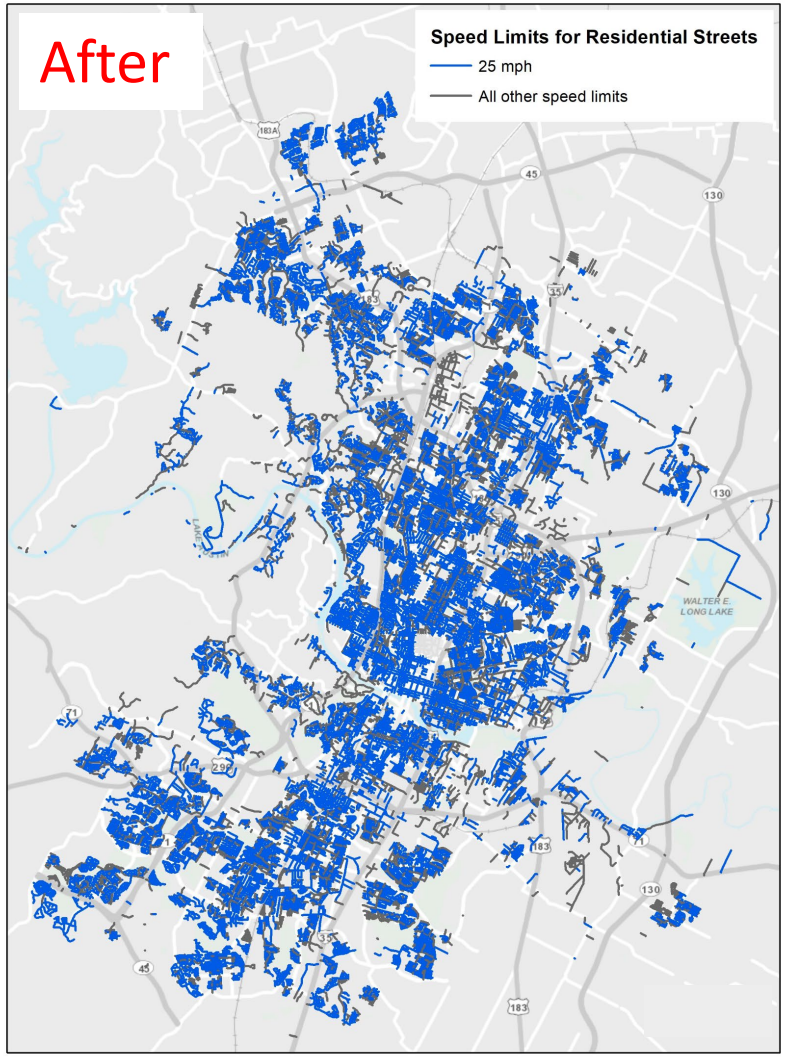


Speed Limit Changes – Residential and Downtown Streets

Before

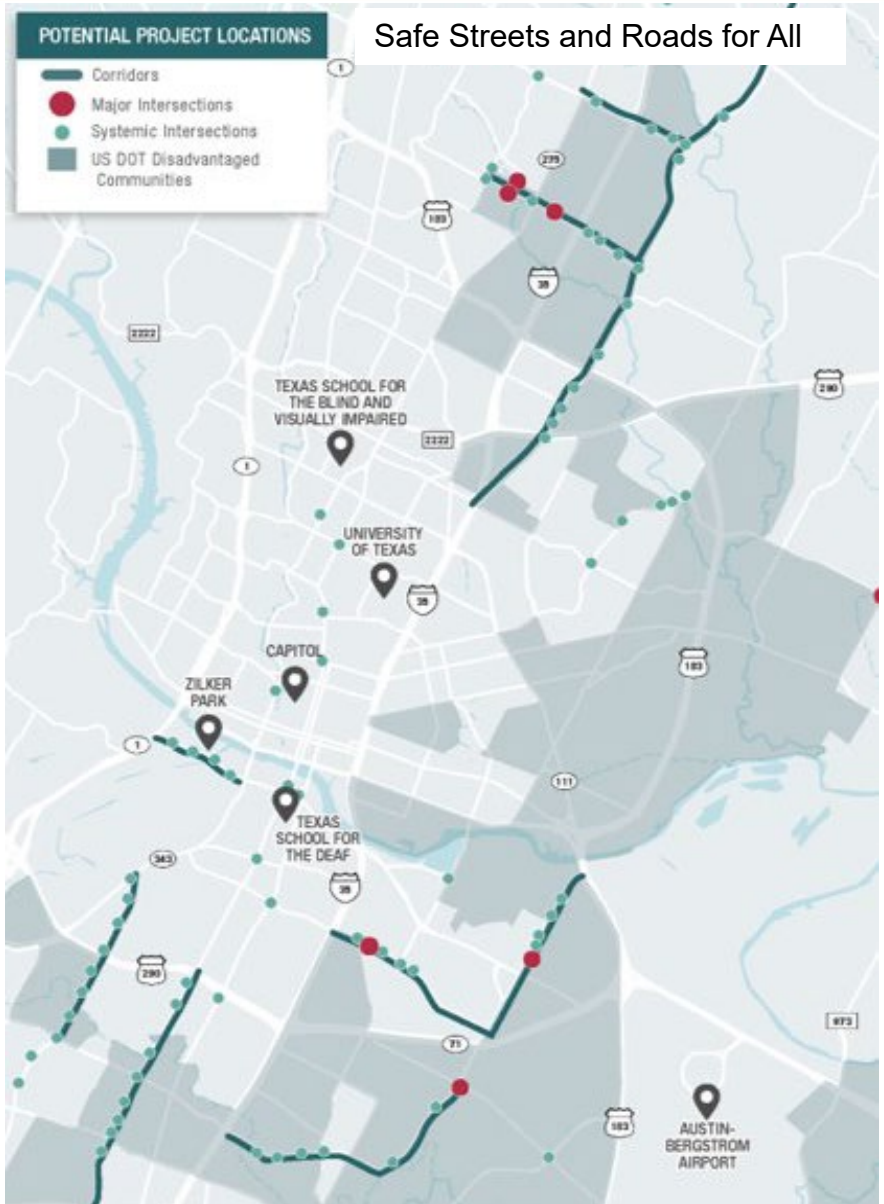


After



Next steps

- Before and after evaluation of speeds and crashes on streets where speed limits have been lowered
- Continue to identify corridors for speed limit reductions
- Continue to refine speed limit setting methodology to align with Safe Systems philosophy
  - Apply Target Speeds
  - USLIMITS3?
- Systematically redesign streets to manage for safe speeds



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