



City of West University Place Speed and Safety Study

City Council Update & Discussion: April 12, 2021

TRAFFIC ENGINEERS INC

Agenda

- Plan Objectives
- Existing Conditions Utilized in Speed Studies
- Safe Speed Studies Methodology
- Preliminary Toolbox Features

Plan Objectives

- To assess transportation network safety and existing speed limits on roadways within the City of West University Place
- Develop data driven recommendations on City speed limits
- Identify areas for detailed study and safety enhancements
- Capitalize on city-wide detailed data collection to develop a Safe Streets Toolbox for the City

Existing Conditions Utilized in Speed Studies

The City of West University Place

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- Civic
- Commercial
- Green Space
- Single-family Residential
- City Limits



City Thoroughfare Plan

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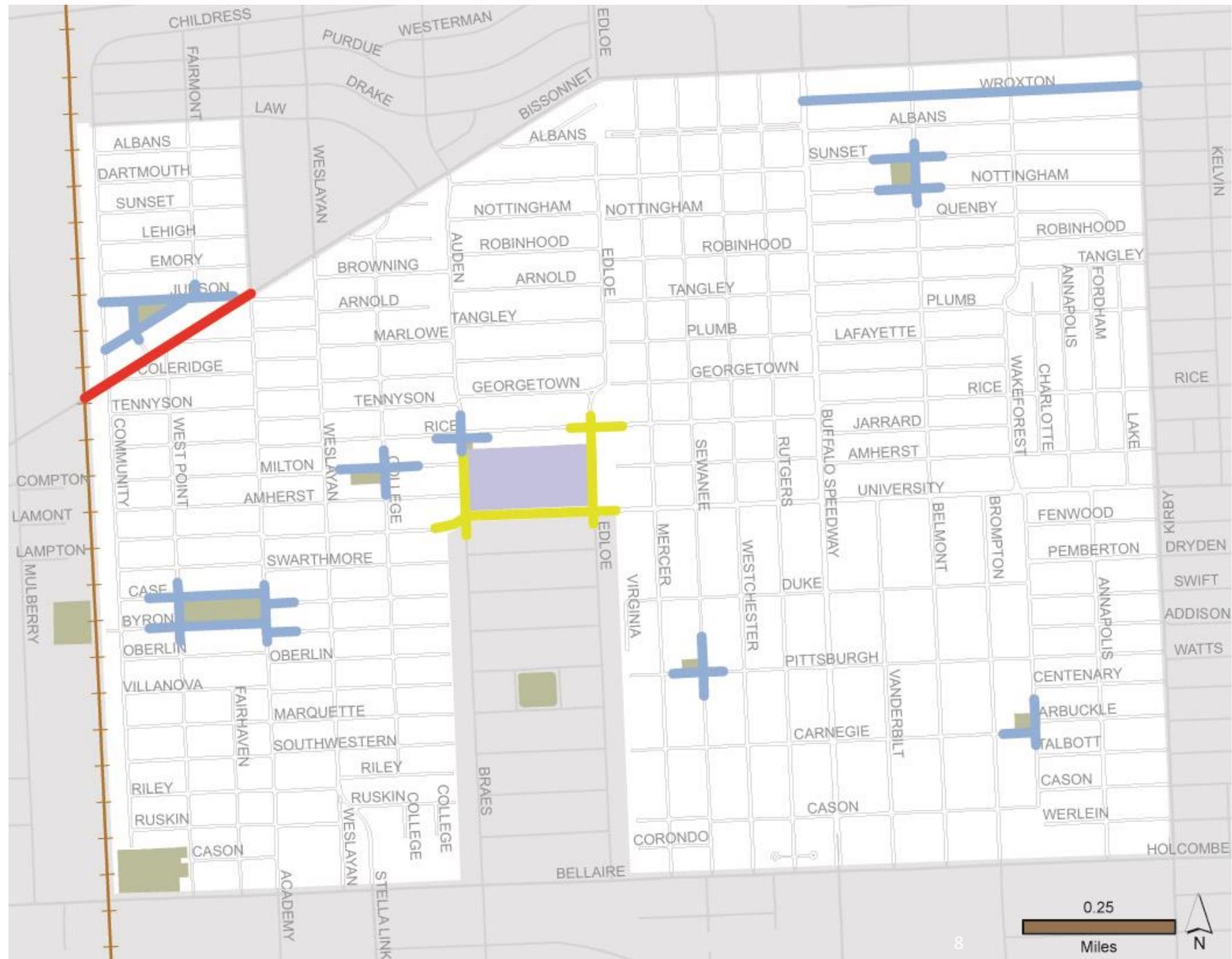
- Major Arterial
- Minor Arterial
- Major Collector
- Minor Collector



Existing Citywide Speed Limits

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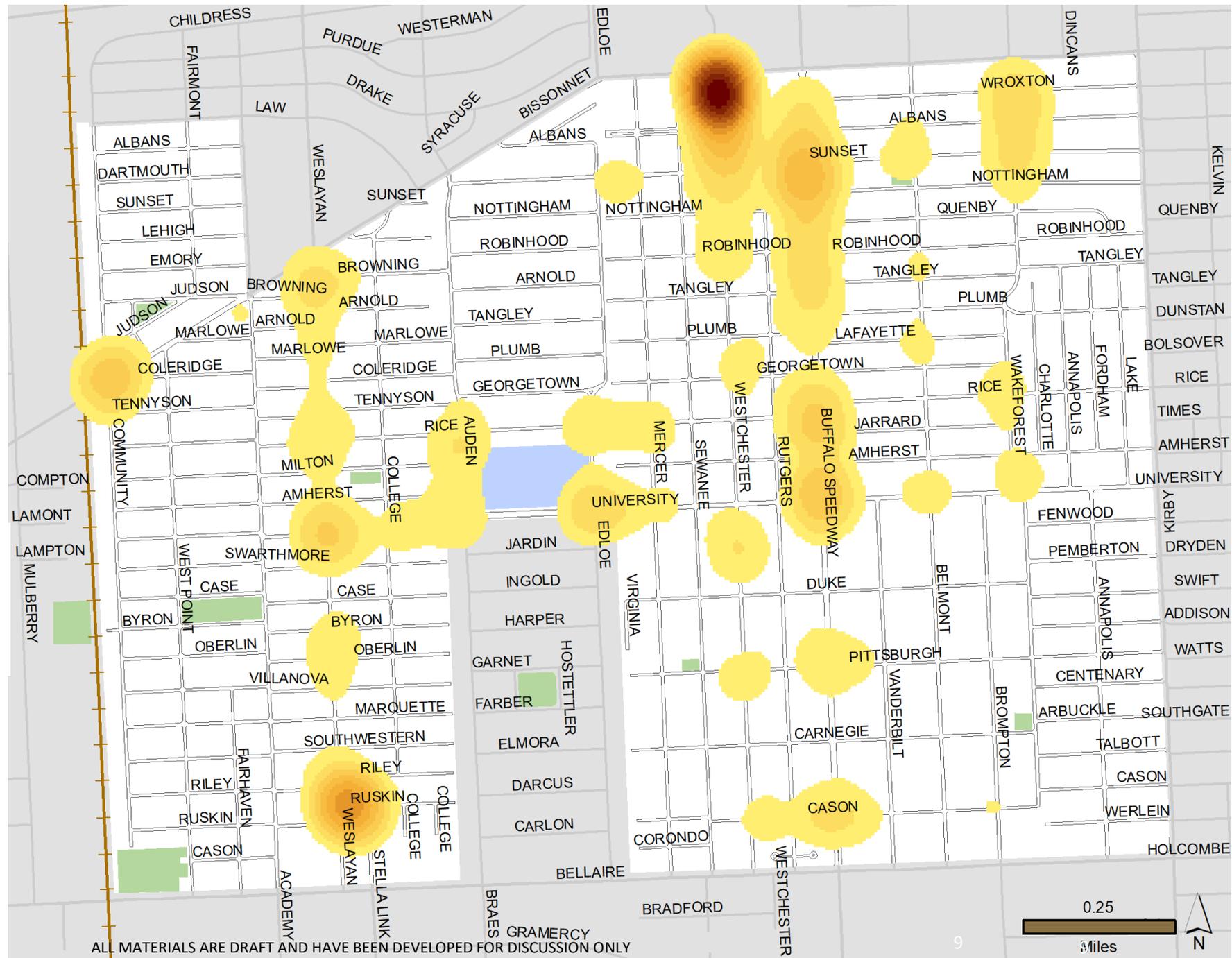
- == 30 MPH
- 20 MPH Posted
- 20 MPH School Zone
- 35 MPH Posted



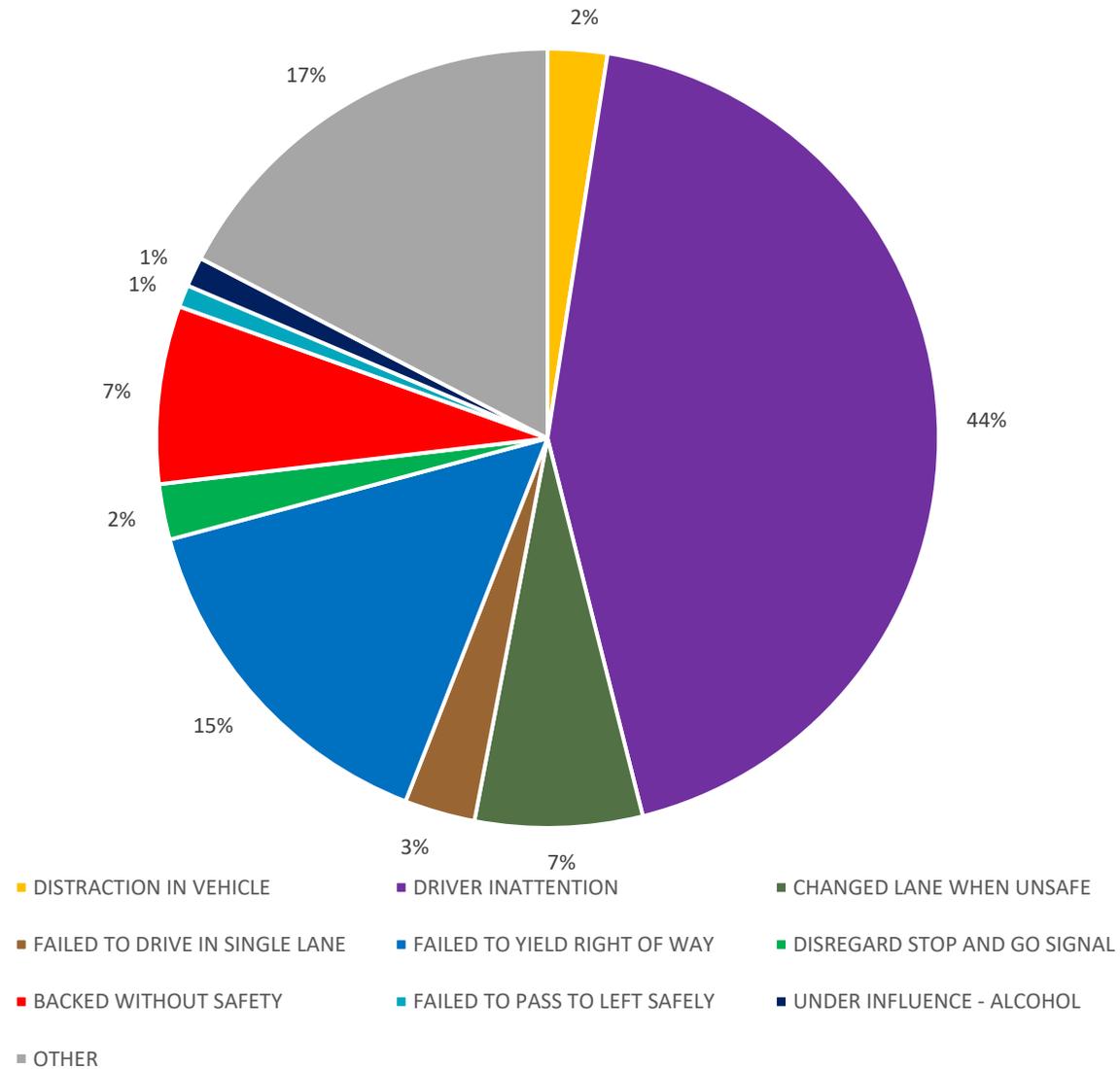
All Crashes Density City Limits Only

All Crashes from
2014-2019

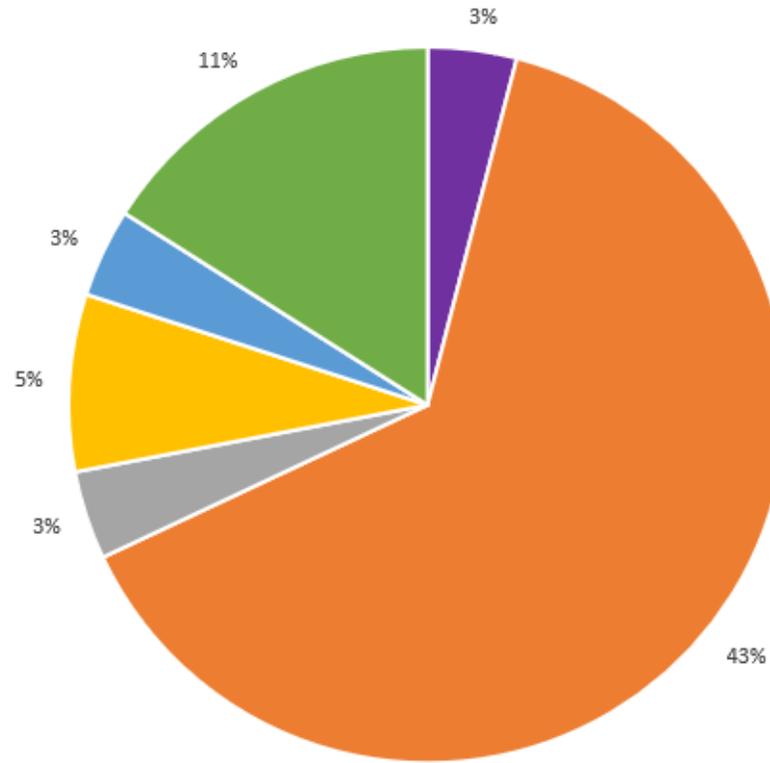
LEGEND



Contributing Factors



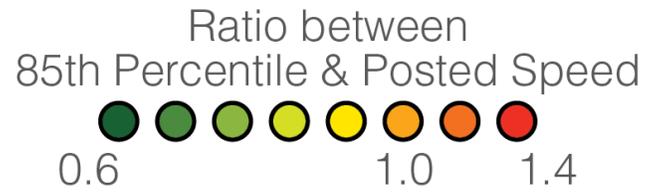
Ped/Bike Contributing Factors



- DISTRACTION IN VEHICLE
- DRIVER INATTENTION
- FAILED TO YIELD RIGHT OF WAY - PRIVATE DRIVE
- FAILED TO YIELD RIGHT OF WAY - TURNING LEFT
- FOLLOWED TOO CLOSELY
- PEDESTRIAN FAILED TO YIELD RIGHT OF WAY TO VEHICLE

Chart Area

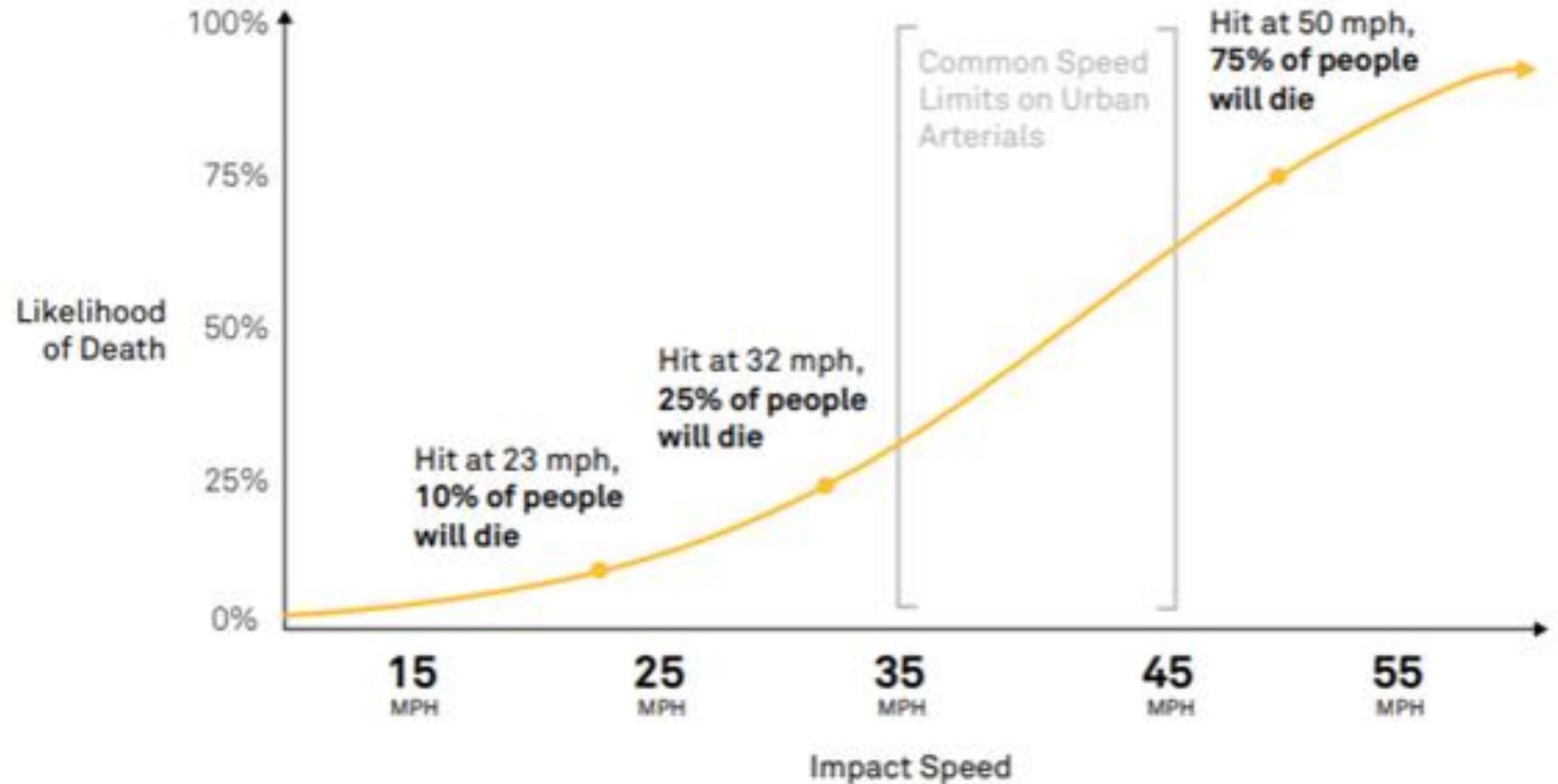
Ratio between the 85th Percentile & Posted Speed Limit



Speed & Safety

- The relationship between speed and fatalities
- The relationship between likelihood of fatality and speed is **exponential**

THE LIKELIHOOD OF FATALITY INCREASES EXPONENTIALLY WITH VEHICLE SPEED³²



Source: City Limits, National Association of City Transportation Officials, 2020

Major Arterials

- Buffalo Speedway
- Bissonnet Street

Safe Speed Studies

- Minor Arterials
- Major Collector

City-Wide Speed Limit

- Minor Collector
- Local Streets

Safe Speed Limit Categories

Safe Speed Studies

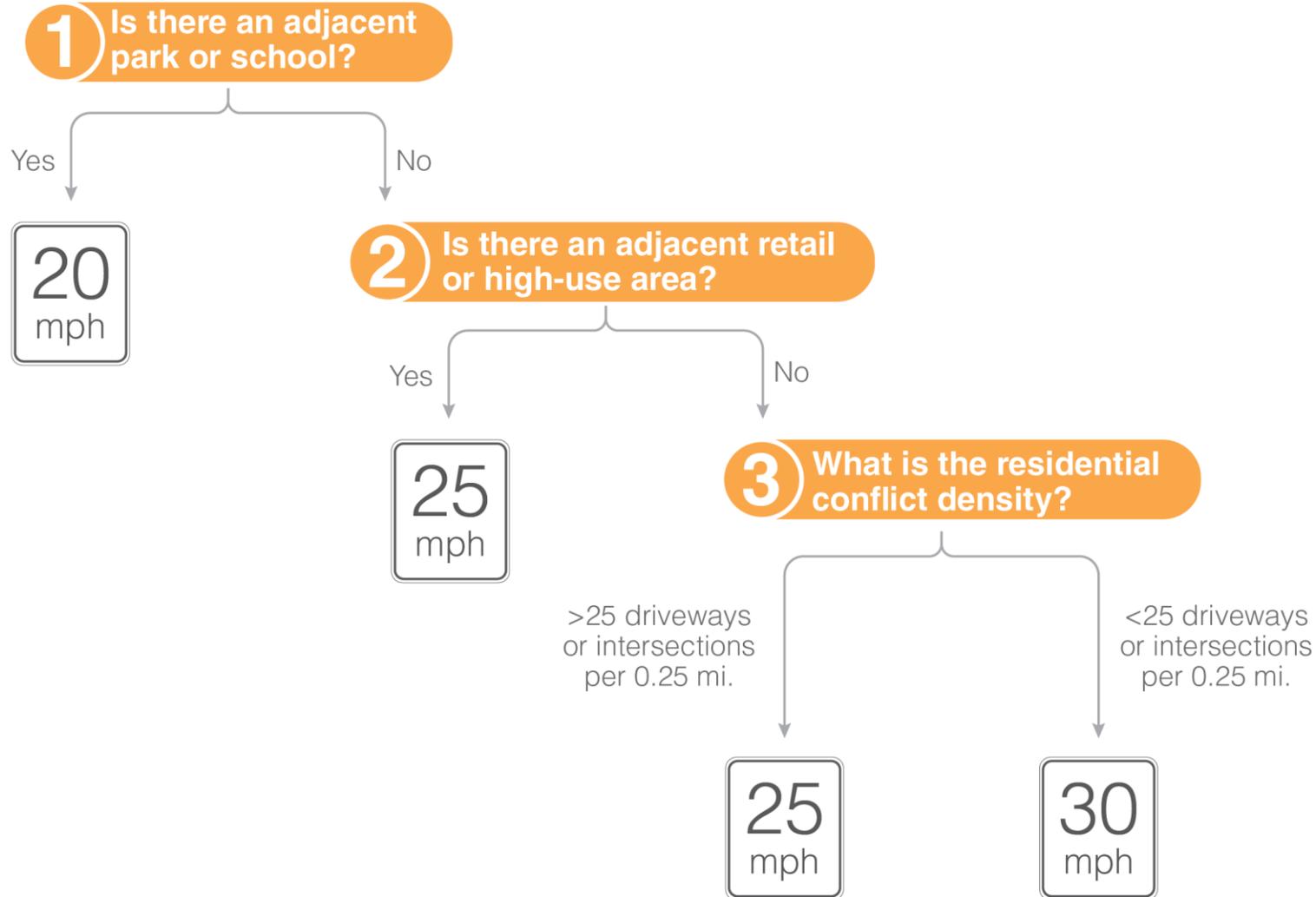
*A RE-EVALUATION OF CURRENT SPEEDS ON MAJOR
CORRIDORS*

Safe Speed Study Methodology

For Minor Arterials and Major Collectors

1. Collect data
 - Corridor conditions, speed data, and crash history
2. Analyze existing conditions
 - Review frequency of conflict density and activity level for Safe Speed Tool
3. Determine best options for speed management using Speed Management Tool
4. Conduct evaluation
 - Evaluation pre- and post-implementation data

Safe Speed Tool



Safe Speed Tool

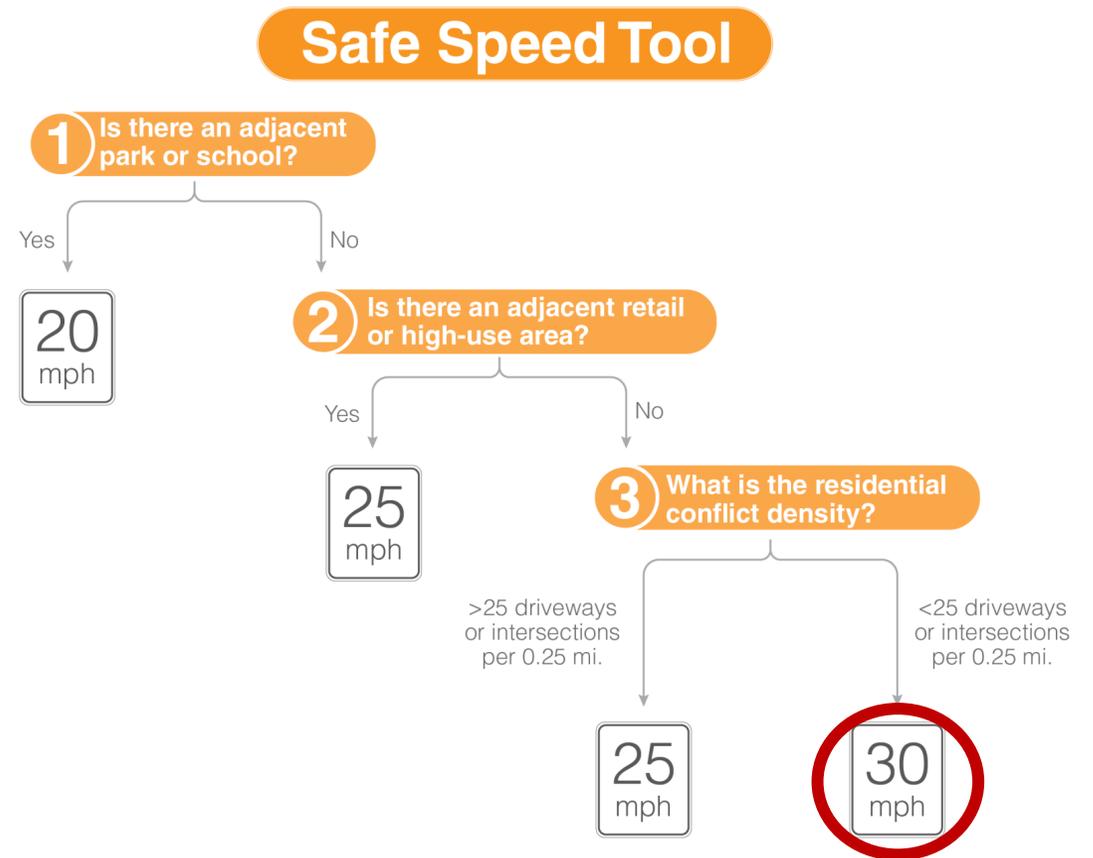
1. Slow speed zones of 20 mph will be kept surrounding parks and schools

2. High use areas include churches, municipal/civic buildings, retail buildings and restaurants

3. Residential conflict density includes crosswalks, residential driveways, and intersections.

Safe Speed Study Example: Wesleyan St

- Two-lane minor arterial
- Land use: largely residential, one-block section of commercial at border
 - No parks or schools
- Residential conflict density of a typical section (University to Villanova) – 24 conflict points per quarter mile



Safe Speed Study Recommendations

- **Weslayan St** – 30 mph
 - **University Blvd** – 25 mph
 - **Rice Blvd** – 25 mph
 - **Auden St** – 25 mph
 - **Sunset Blvd** – 25 mph
 - **Academy St** (north of University Blvd) – 25 mph
 - **Wakeforest Ave** (north of University Blvd) – 25 mph
- 
- 20 mph speed zones for school and parks to remain where existing



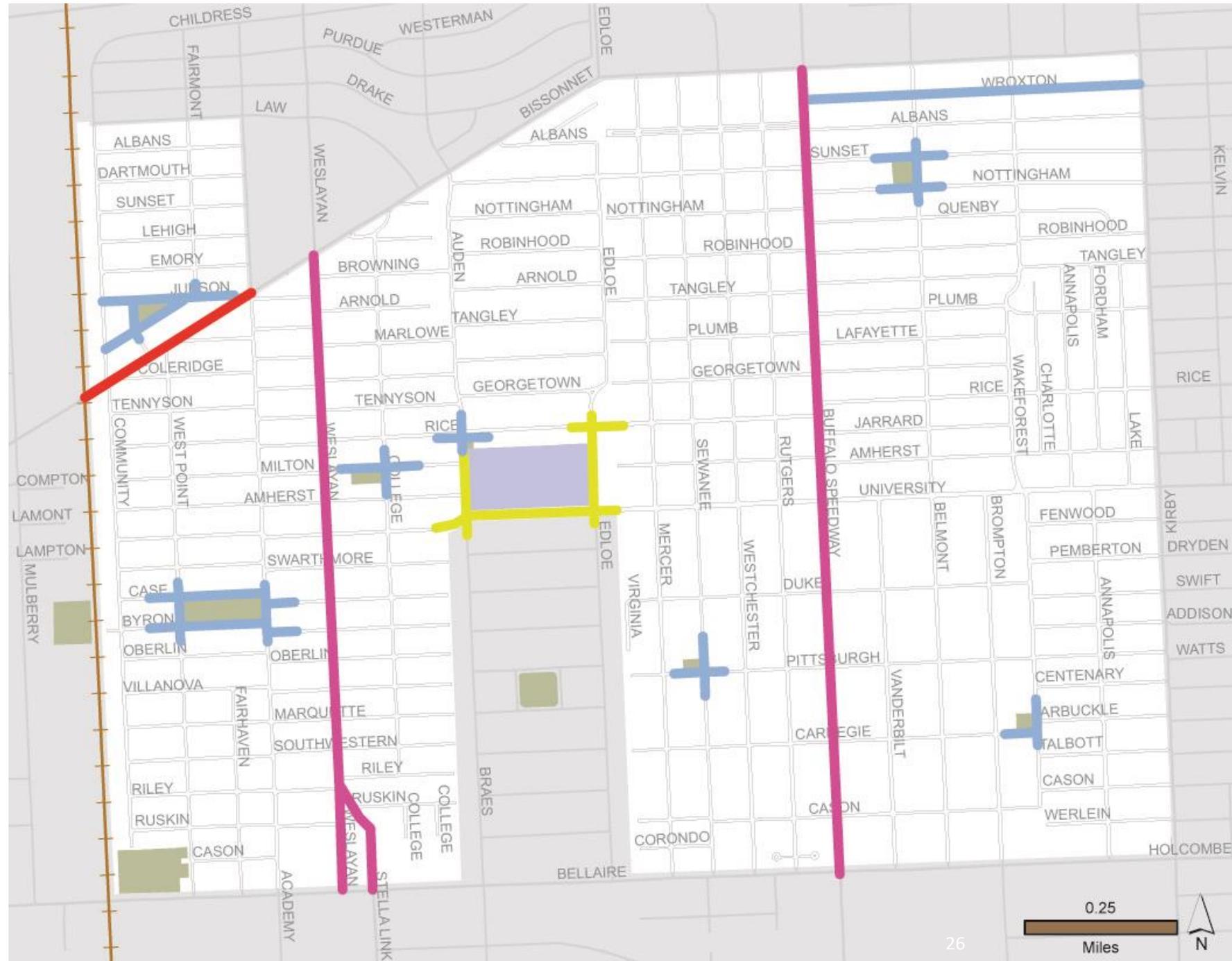
City-wide Speed Limit Recommendation

- 25 mph as the City of West University Place prima facie speed limits
 - Applicable where speed limit is not posted
- NACTO City Limits report recommends maximum speed limits of 25 miles per hour for most City streets
- Austin, TX and Cambridge, MA successfully lowered prima facie speed limit to 25 mph.

Recommended Citywide Speed Limits

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-  25 MPH
-  Existing 20 MPH to Remain
-  Existing 20 MPH School Zone to Remain
-  30 MPH
-  35 MPH



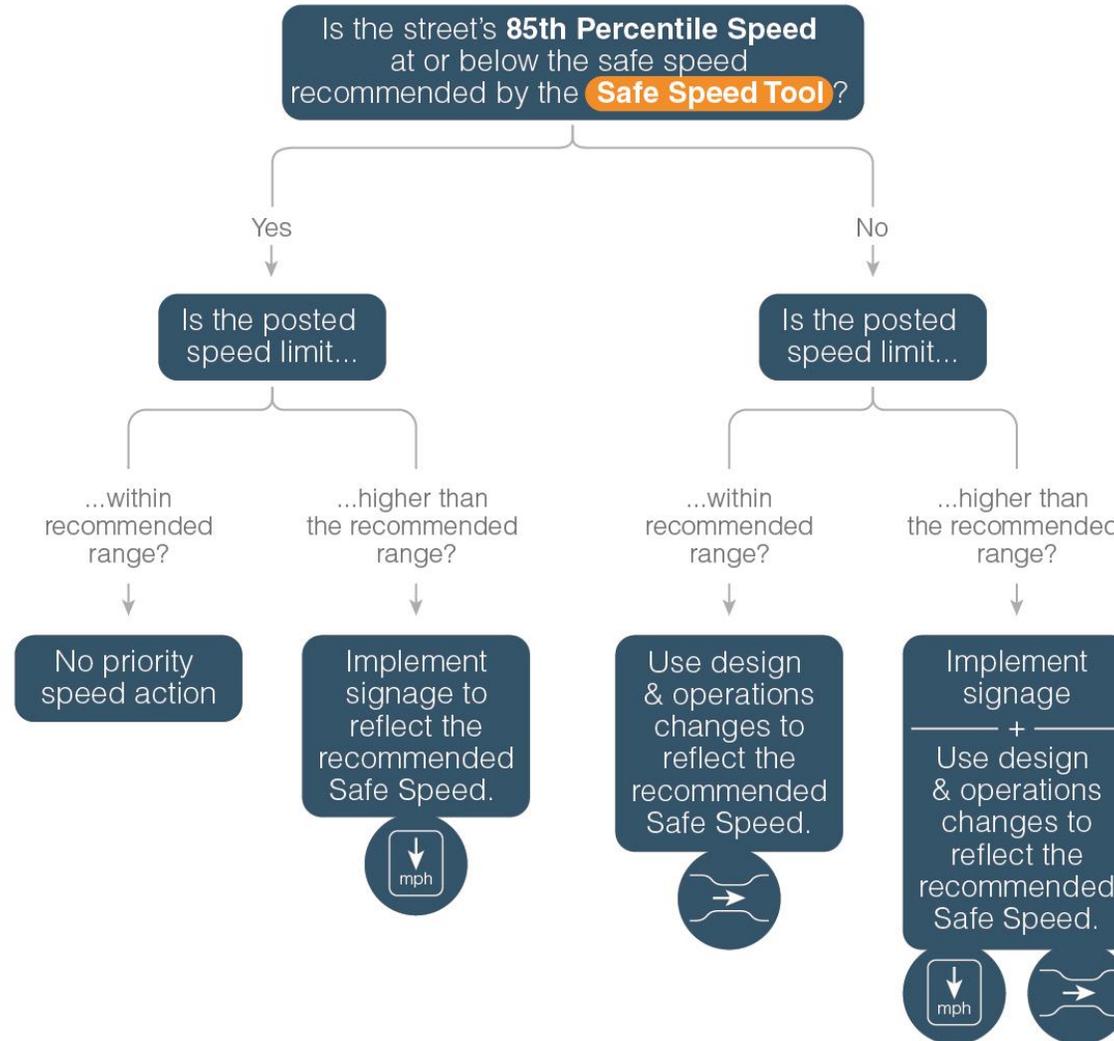
Tools for Speed Management

To be expanded further within the Safe Street Toolbox

- Signage and pavement markings
- Reducing number of lanes or lane widths
 - Parking lanes
- Mid-block crossings
 - Raised crossings
 - Signalization
- Arterial slowpoints
 - Curb extensions
 - Chicanes
 - Traffic Circles

Speed Management Selection Tool

Adapted from the National Association of City Transportation Officials



Final Recommendations

25 mph for City-wide speed limit

Existing school zones and 20 mph park zones to remain

Buffalo Speedway, Bissonnet St, Wesleyan St to remain at existing speed limits

All other Minor Arterials and Major Collectors to be reduced to 25 mph

Discussion



Mid-block Crossings

Rectangular rapid flashing beacon, Pedestrian hybrid beacon, Raised crosswalks

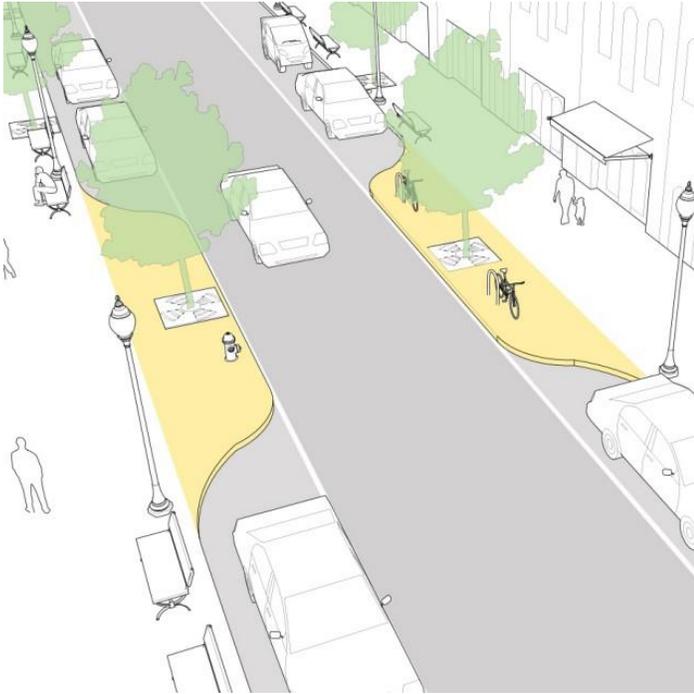


Photo Examples: *Curb Extensions*



Photo Examples: *Chicanes*



Photo Examples: *Traffic Circles*

Speed Limit Signage

A city-wide strategy for implementing new speed limit signs would likely involve installing speed limit signs at the following:

- Beginning and endpoints of major thoroughfares at the city limits
- Repeating signs on major thoroughfares after intersecting thoroughfares
- Collector roadways: approximately every 1/4 to 1/2 mile
- Residential roadways: at entrances and exits to specific neighborhoods

A typical new speed limit sign, post, and installation would cost approximately \$400 each.

Existing Traffic Control Devices

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- All-way Stop Controlled
- Signalized Intersection
- ⊙ Two-Way Stop Controlled

