Using Data to Move from Reactive to Proactive about Pedestrian Safety

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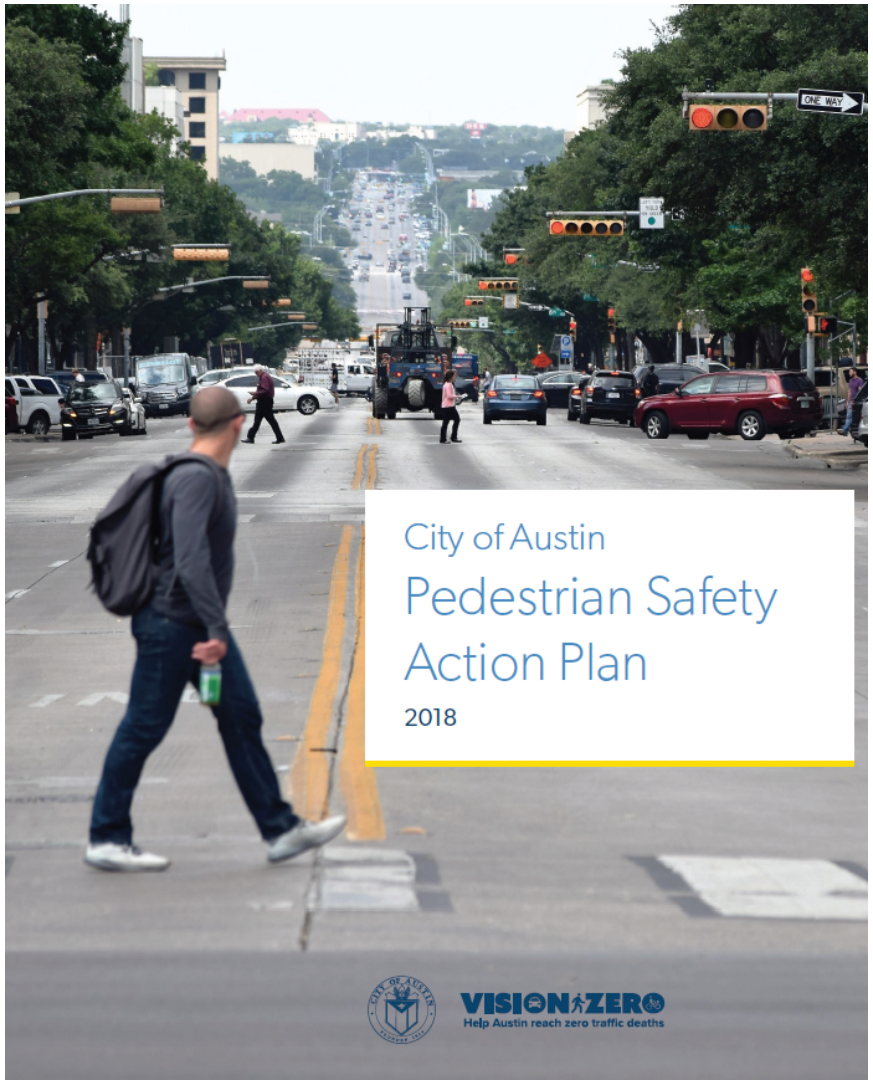
Austin Transportation Department

context

we know the indicators…

Image Source: Seattle Bicycle and Safety Analysis



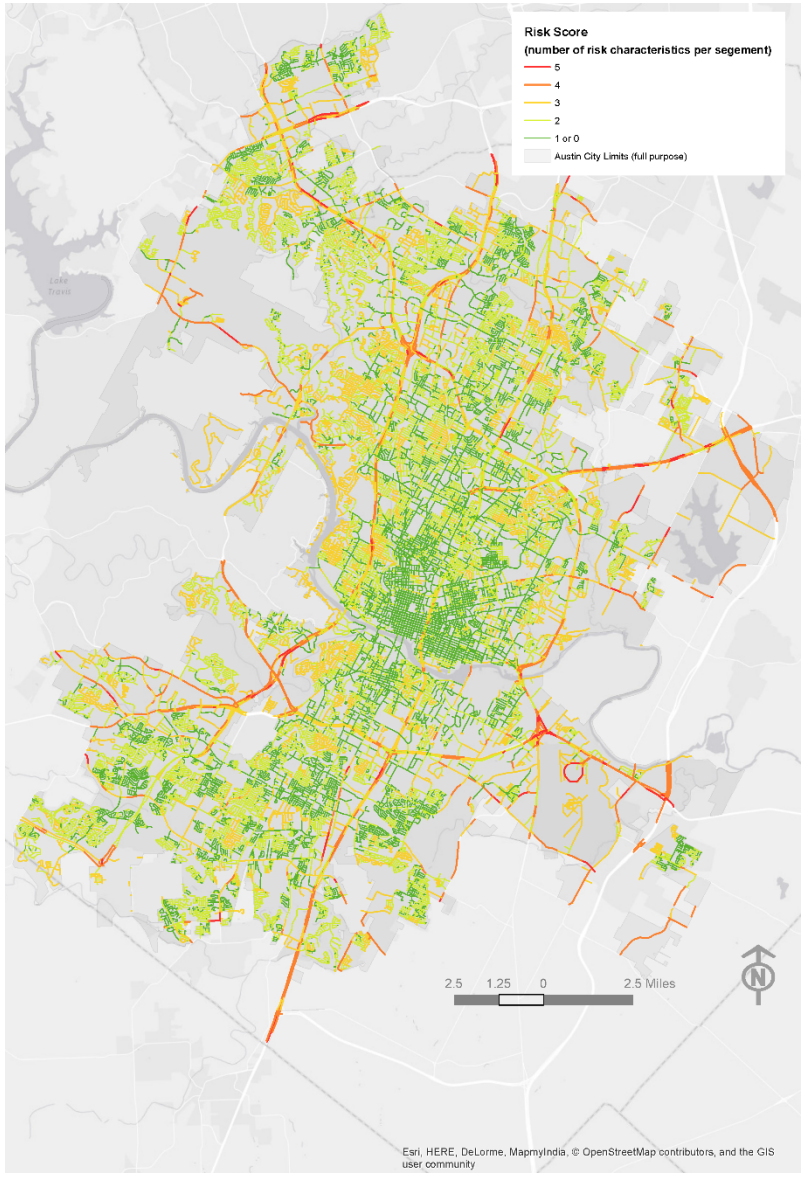
Crash Analysis

Community Priorities

Pedestrian Safety Priority Network

Action Plan

- Engineering
- Education
- Enforcement
- Policy + Land Use
- Evaluation
- Partners and Funding


Risk Score
(number of risk characteristics per segement)
5
4
3
2
1 or 0
Austin City Limits (full purpose)
2.5 1.25 0 2.5 Miles
N
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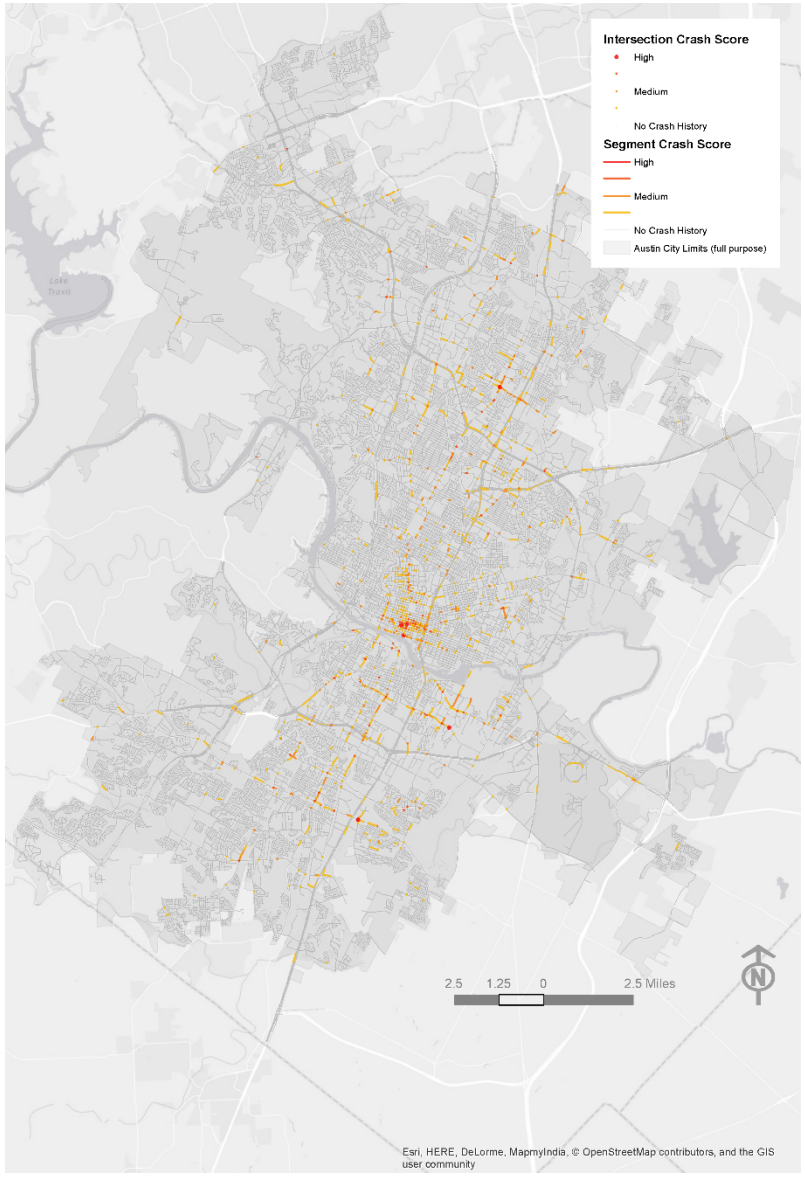
Intersection Crash Score
High
Medium
No Crash History
Segment Crash Score
High
Medium
No Crash History
Austin City Limits (full purpose)
2.5 1.25 0 2.5 Miles
N
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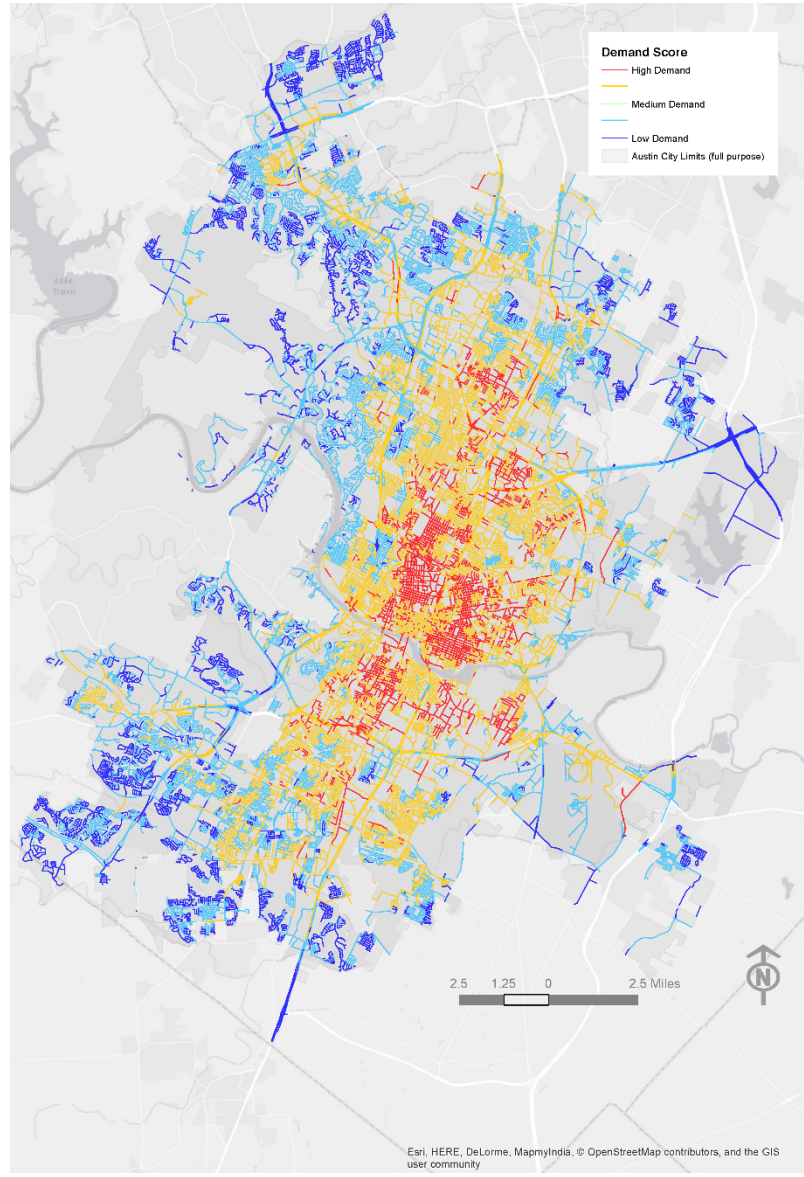
Demand Score
High Demand
Medium Demand
Low Demand
Austin City Limits (full purpose)
2.5 1.25 0 2.5 Miles
N
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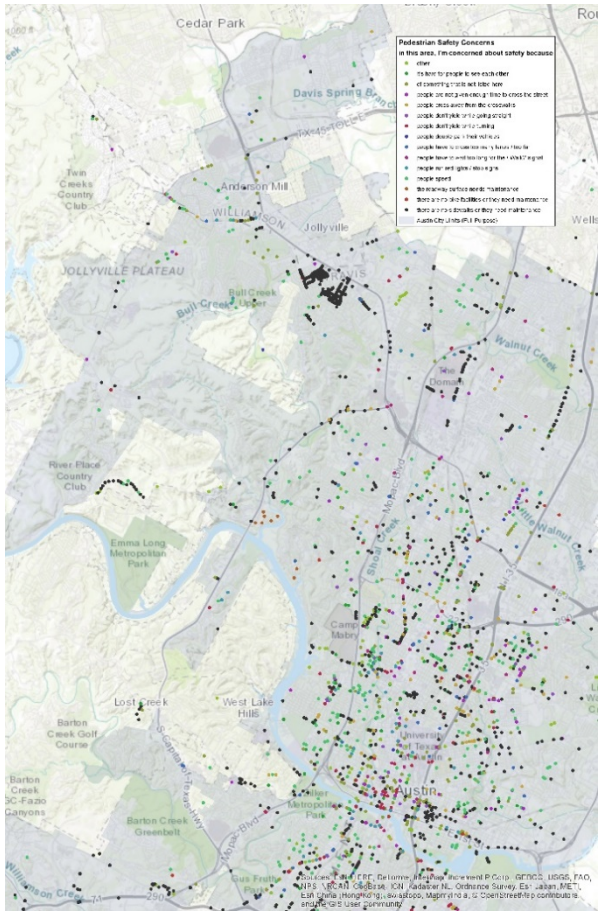
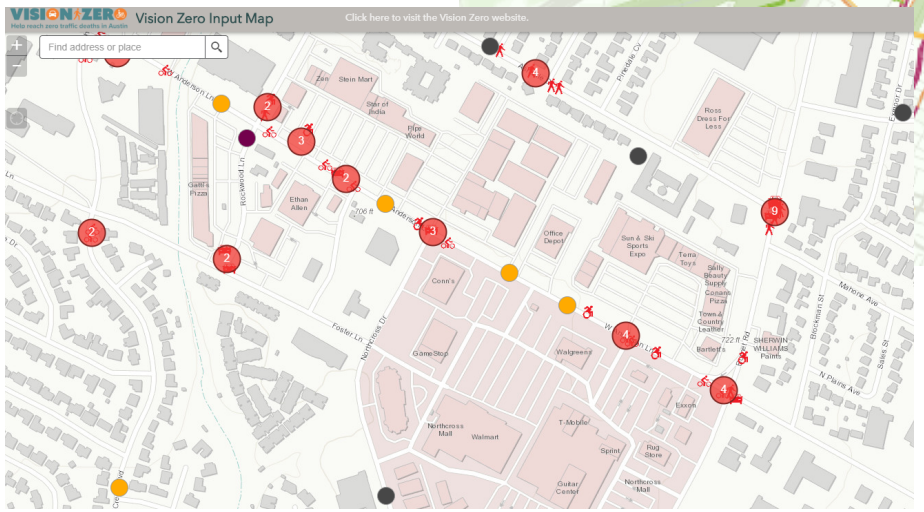
other sources and inputs





“Hidden” data points

- Where do people walk
- Where do people want to walk
- How are short trips being made
- Before and after metrics on countermeasures

Reactive to Proactive, thinking in context

CTR Yielding Study

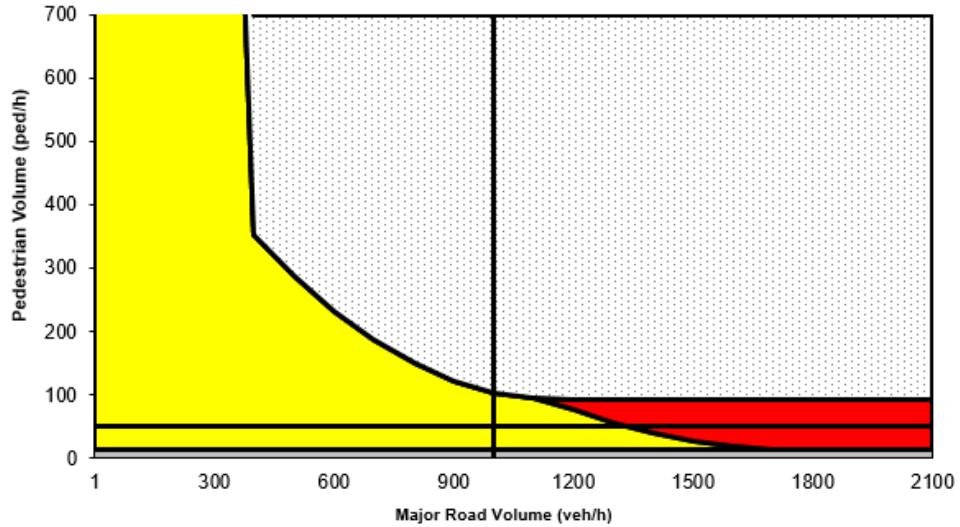
- Testing yield compliance of drivers
- 25 crossings at each location
- Time, date, yielding vehicles, weather, observed speed, posted speed, traffic volume, pedestrian volume, visibility

Coordination

- Cap Metro
- Sidewalks and Special Projects
- Urban Trails
- Safe Routes to School
- Street and Bridge
- 2016 Mobility Bond

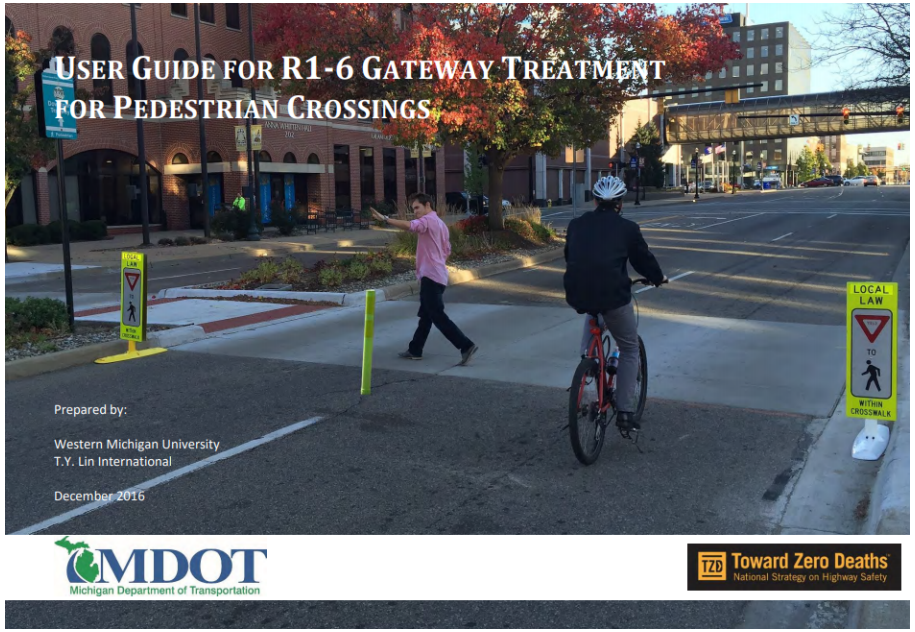
Crossing Guidelines Development

Analyst and Site Information			
Analyst Name		Major Street	
Analysis Date		Minor Street or Location	
Speed: 85th percentile speed if known, or posted or statutory speed limit on the major street (mph)		40	mph
Pedestrian Volume: pedestrian crossings per hour in peak hour		50	peds/hr
Crossing Distance: curb to curb pedestrian crossing distance (feet)		25	feet
Vehicle Volume: total peak hour volume of both approaches OR approach being crossed if refgue island is present		1,000	vehicles/hr
Treatment Recommendation	**ACTIVE OR ENHANCED**		



NO TREATMENT	Treatment typically not recommended -- use engineering judgement	ACTIVE OR ENHANCED	Devices that increase visibility of the crossing and/or warn motorists of pedestrian presence + curb ramps: - RRFB - In-street signage/Gateway treatment - Advance yield bars -In-roadway warning lights - Overhead flashing beacons	RED	Pedestrian Hybrid Beacon + curb ramps
CROSSWALK	Marked crosswalk + curb ramps			SIGNAL	Traffic signal, if warrants are met + curb ramps

Quick Build Treatments



R1-6 Gateway Treatment

In-street signage

Complements existing infrastructure

Rectangular Rapid Flashing Beacons

New Interim Approval, covers all of Texas

10 installations to evaluate compliance

Research with Toole Design Group

High Injury Network

- HIN and GIS script/tool

Systemic Safety Analysis

- pedestrian and bicycle exposure where known
- estimate volumes for the entire network
- risk factors associated with known safety issues
- locations that have a greater likelihood of a crash, **regardless of whether crashes have been reported there in the past**

Pedestrian Signal Guidelines

- Timing
- Locations
- Prioritization
- Phasing
- Signal actuation

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TooleDesignGroup