

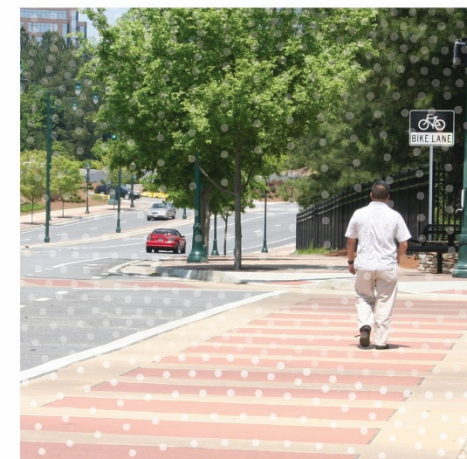
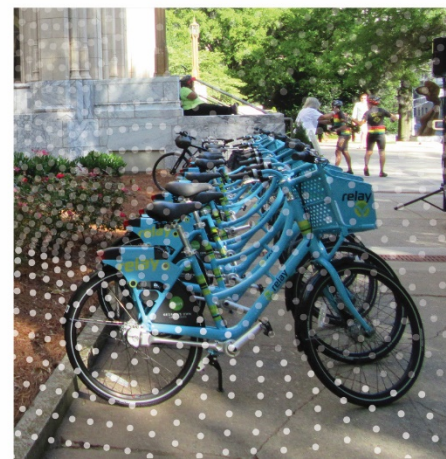
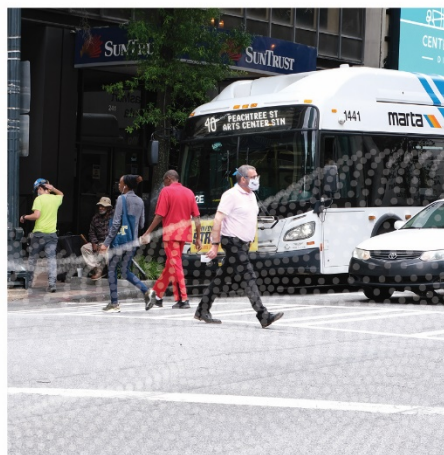


December 2, 2021

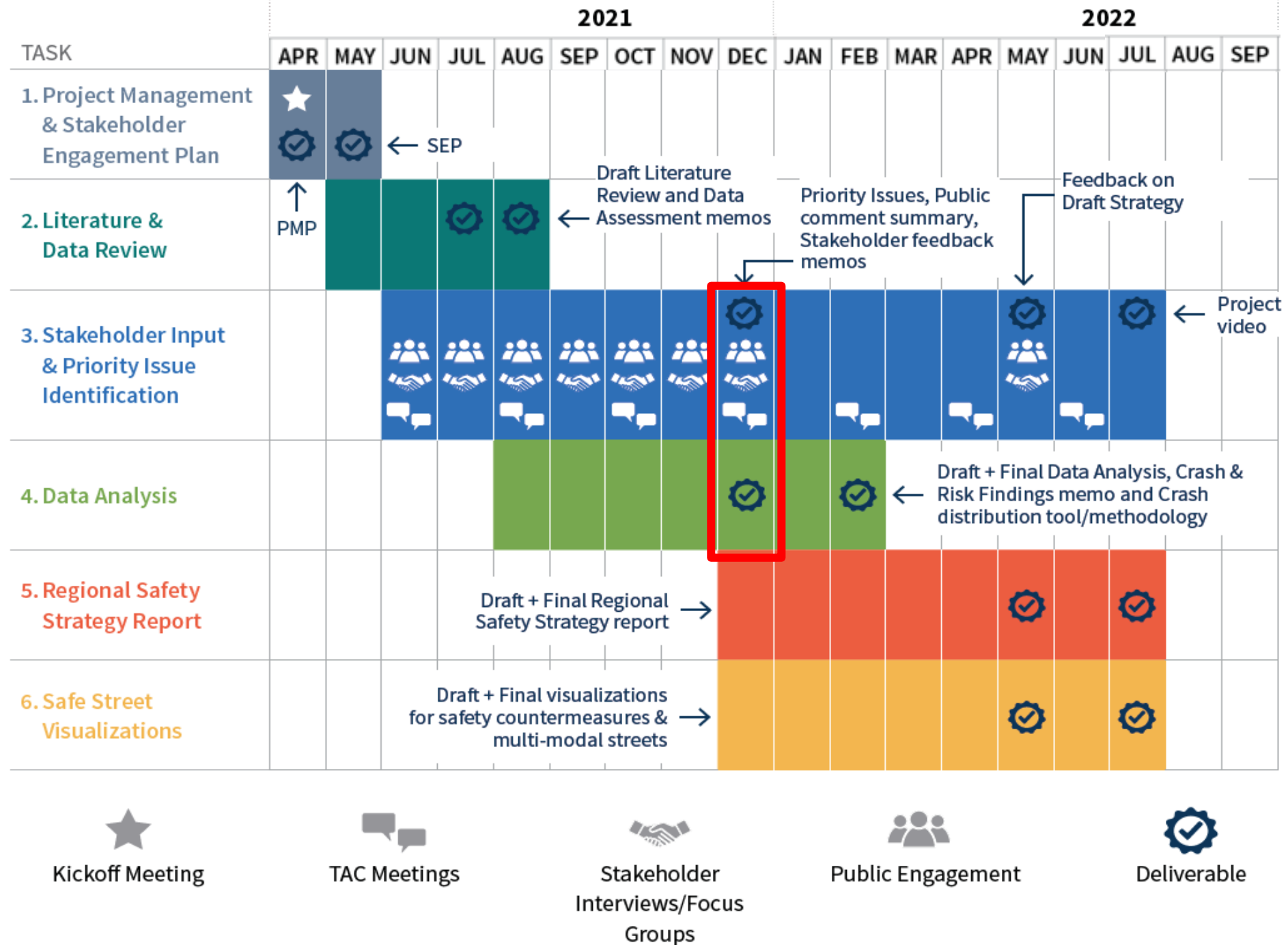
ATLANTA REGIONAL COMMISSION

Regional Safety Strategy

In Association with:



Status Update



Focus on KA Crashes

Crash Severity	2016 - 2020	%	2016	2017	2018	2019	2020
K (fatal)	2,853	0.2%	548	576	604	514	611
A (suspected serious injury)	12,233	0.8%	1,870	2,046	2,416	2,898	3,003
B (suspected non-serious injury)	63,376	4.7%	12,323	12,379	12,666	13,368	12,640
C (possible injury)	222,340	18.9%	46,020	46,048	46,632	47,314	36,326
O (property damage only)	854,393	74.2%	185,789	188,135	184,306	179,654	116,509

Focus Crash Types: Magnitude of Issues

Potential Focus Crash Types <i>[Georgia Strategic Highway Safety Plan (SHSP) Emphasis Areas]</i>	Average Fatalities (per year)	Average Serious Injuries (per year)
Intersection Related	325	1744
Roadway Departure Related	175	645
Pedestrian and Bicycle Related	138	250
Older Driver Related	98	406
Motorcycle Related	74	325
Impaired Driving	57	226
Young Driver Related	51	378
Aggressive Driving	34	106
Distracted Driving	11	30

Focus Crash Types: Over-Representation

Potential Focus Crash Type	KA Crashes	BCO Crashes
Pedestrian		
No	88.8%	99.4%
Yes	11.2%	0.6%
Distracted Driving		
No	56.5%	49.9%
Yes	43.5%	50.1%

County	Roadway Departure	Occupant Protection	Impaired Driving	Pedestrians	Motorcycles	Bicycles	Intersection	Young Driver	Older Driver (65+)	Aggressive Driving	Distracted Driving	Railroad	Hit & Run	Heavy Trucks	Secondary Crash
Barrow	R / C	R / C	R / C	C	C	C	R				R	R			
Carroll	R / C	R / C	C	C	C	C				R					
Cherokee	R / C	R / C	R / C	C	C	C	R								
Clayton	C	C	C	R / C	C	C									
Cobb	C	C	C	C	C	C				C					
Coweta	R / C	R / C	C	C	C	C	C	R		C		R			
Dawson	R / C	R / C	R / C	C	C	C			R	R / C					C
DeKalb	C	C	C	R / C	C	C									
Douglas	R / C	C	C	C	C	C				C					
Fayette	R / C	R / C	C	C	C	R / C	R	R	R						
Forsyth	R / C	C	C	C	C	C	C	R	R		R				
Fulton	C	C	C	C	C	C							R		
Gwinnett	C	C	C	C	C	C	R / C								
Henry	R / C	C	C	C	C	C									
Newton	R / C	R / C	C	C	C	C									
Paulding	R / C	C	C	C	C	C		R		R / C					
Rockdale	R / C	C	C	C	R / C	C				C					
Spalding	R / C	R / C		C	C	C									
Walton	R / C	C	C	C	C		R	R	R			C			
Count	14 / 19	8 / 19	3 / 18	2 / 19	1 / 19	1 / 18	5 / 3	5 / 0	4 / 0	3 / 6	2 / 0	2 / 1	1 / 1	0 / 0	0 / 1

R = over-represented compared to regional KA crashes; C = over-represented compared to county BCO crashes; R / C = over-represented in both categories

County	Roadway Departure	Occupant Protection	Impaired Driving	Pedestrians	Motorcycles	Bicycles	Intersection
Barrow	R / C	R / C	R / C	C	C	C	R
Carroll	R / C	R / C	C	C	C	C	
Cherokee	R / C	R / C	R / C	C	C	C	R
Clayton	C	C	C	R / C	C	C	
Cobb	C	C	C	C	C	C	
Coweta	R / C	R / C	C	C	C	C	C
Dawson	R / C	R / C	R / C	C	C	C	
DeKalb	C	C	C	R / C	C	C	
Douglas	R / C	C	C	C	C	C	
Fayette	R / C	R / C	C	C	C	R / C	R
Forsyth	R / C	C	C	C	C	C	C
Fulton	C	C	C	C	C	C	
Gwinnett	C	C	C	C	C	C	R / C
Henry	R / C	C	C	C	C	C	
Newton	R / C	R / C	C	C	C	C	
Paulding	R / C	C	C	C	C	C	
Rockdale	R / C	C	C	C	R / C	C	
Spalding	R / C	R / C		C	C	C	
Walton	R / C	C	C	C	C		R
Count	14 / 19	8 / 19	3 / 18	2 / 19	1 / 19	1 / 18	5 / 3

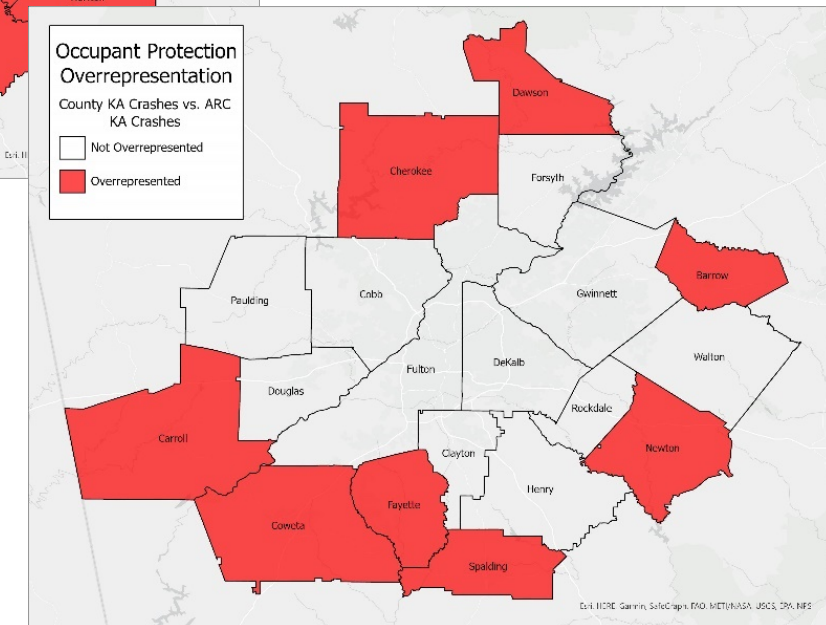
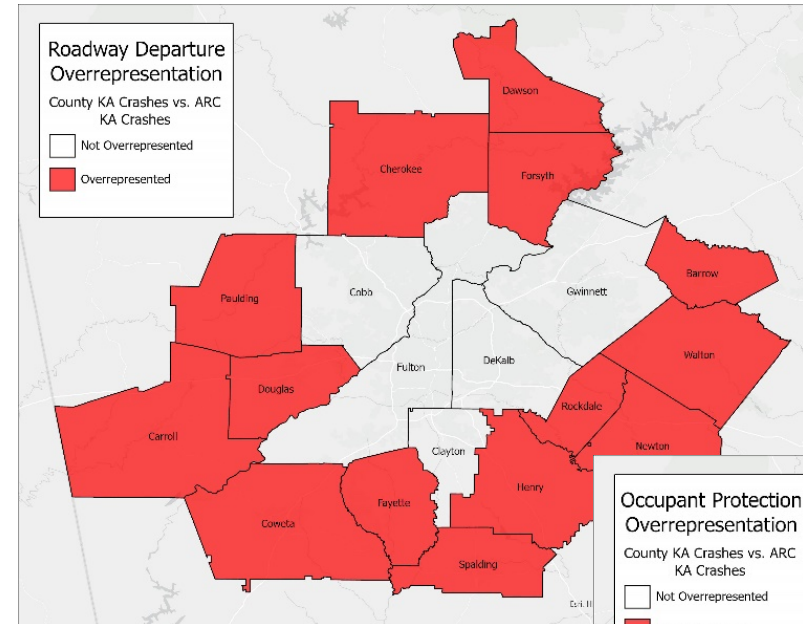
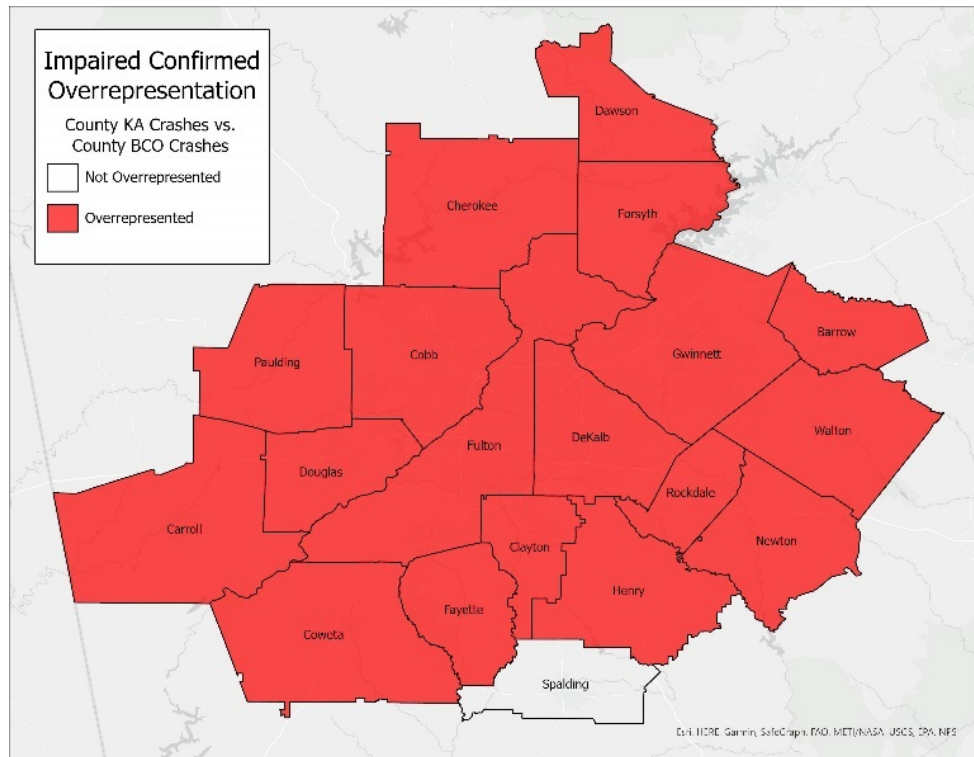
Are there factors that differ from region?

Potential draw to area for cyclists

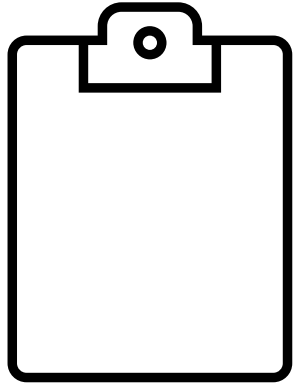
Interstates or city streets?

R = over-represented compared to regional KA crashes; C = over-represented compared to county BCO crashes; R / C = over-represented in both categories

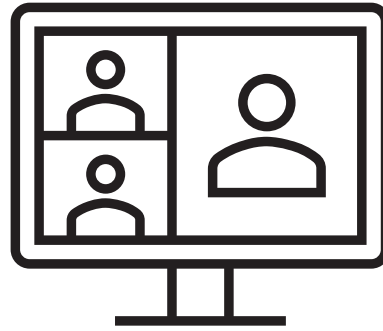
Focus Facility Types



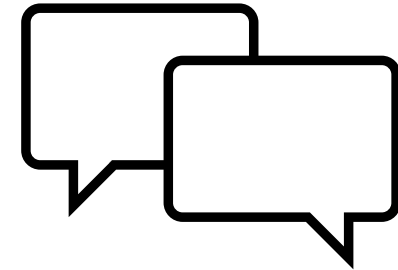
Stakeholder Engagement



- Surveys
 - Staff
 - Elected Officials



- Focus Group Workshop



- Targeted Interviews

Staff Survey (34 responses)

Questions	Responses
Top priority in transportation planning...	#1: Improving mobility #2: Improving safety
% with specific safety goal or objective...	1 in 3
% of projects in plan or budget that address safety...	Many indicate few (projects) Few indicate many (projects)
Commonly voiced concerns...	Pedestrians Intersections
Challenge(s) in implementing safety measures...	#1: Funding #2: Conflicts with other objectives
Self-rated effectiveness at generating positive safety change...	63 (out of 100)

Elected Officials Survey (8 responses)

Questions	Responses
Top priority in transportation for your community...	#1: Improving mobility #2: Economic development #3: Improving safety
Willingness to consider tradeoffs between mobility and safety...	Willing
Frequency of hearing safety concerns from community...	Often / Very often
Commonly voiced concerns...	#1: Intersections #2: Roadways
Preferred method of funding...	Safety grants
Self-rated effectiveness at generating positive safety change...	69 (out of 100)

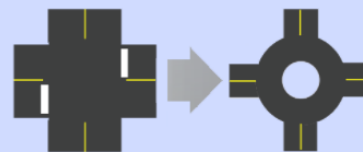
Focus Group Workshop

- 75 attendees
 - County and city staff, CIDs, GDOT, FHWA, GA Tech, consultants
- 3 topical sessions and discussions
 - Roadway Departure
 - Intersections
 - Pedestrian and Bicyclist

Intersection Risk Factors

- Traffic volume
- Speed
 - Posted vs. design vs. operating
- Traffic control device
 - Type
 - Visibility
- Sight distance
 - To/from intersection
- Skew angle
- Turn lanes
 - Left
 - Right
 - TWLTL
- Signing/delineation
 - Wayfinding
 - Advance warning
- Context
 - Along or near horizontal curve
 - Adjacent commercial development
- Signals
 - Left-turn phasing
 - # signal heads vs. lanes
 - Backplates
 - Right-turn-on-red
 - Overhead vs. pedestal

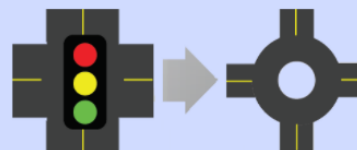
Two-Way Stop-Controlled Intersection to a Roundabout



82%

Reduction in severe crashes

Signalized Intersection to a Roundabout



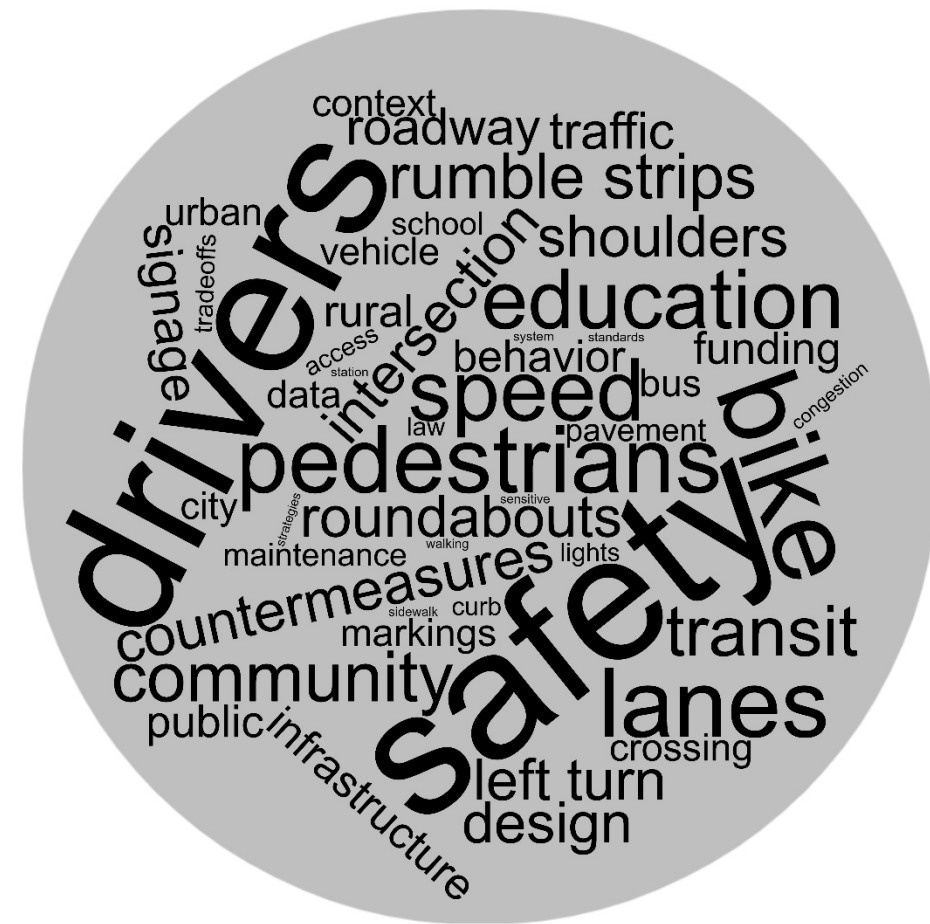
78%

Reduction in severe crashes



Focus Group Workshop: Themes

- **Context** is key
 - One size does not fit all
- **Equity** is not inherent in countermeasures
 - Benefits are not equal (and negative impacts for certain users)
- **Road user behavior** impacts countermeasure success
 - Speed, distraction, aggression are problems
- **Public education** for all users is essential
 - Help to understand countermeasures and how they work
- **Funding** is a major challenge to implementation
- **Conversations** are needed among practitioners, public, and policy makers
 - What measures are needed and where
 - What works and doesn't
 - What are priorities and tradeoffs



Targeted Interviews

Deep dive into safety planning

- Issues, challenges, successes
- Input into RSS guidance

Audiences

- Safety-focused practitioners & Peer MPO's
- Local transportation & general planning practitioners
- Comprehensive Transportation Planning (consultants and ARC)

Themes

- Education/information needed for practitioners
- Safety projects vs. comprehensive safety approach
- Regional approach must consider local differences

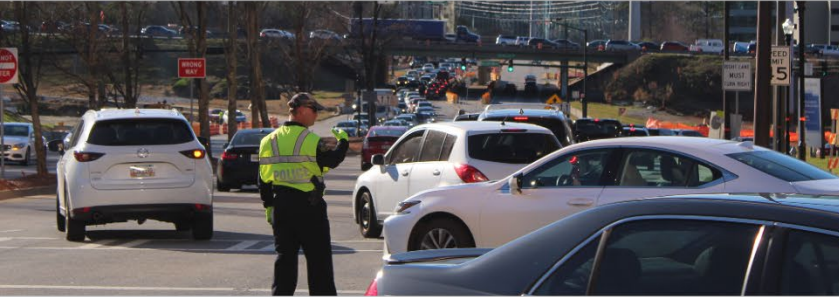
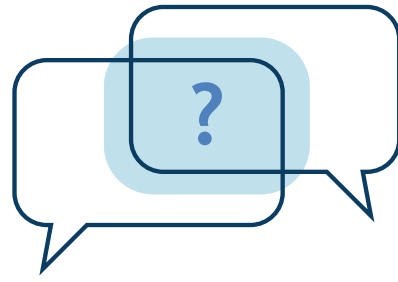
Looking Ahead: Risk Factor Analysis

Table 134. Contributing factors for ANG-KAB-D crashes at four-leg signalized intersections on urban multilane undivided roads: Ohio.

Variable	Impact on Crash-Frequency Predictions
Mainline AADT	Increases
Cross street AADT	Increases
Factor 1 (no education and low income)	Increases**
Speed limit	Increases
Annual average number of days with a minimum temperature of $\leq 32^{\circ}\text{F}$	Increases
Percentage of households with any number of vehicles	Decreases**
Percentage of households with 0 vehicles	Increases**
Average annual winter minimum temperature	Decreases**
Factor 2 (diploma education and medium income)	Decreases**
Average annual snowfall totals	Decreases**
Average annual minimum temperature	Increases
Lane width	Decreases

**Counterintuitive finding.

Questions



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