BLACK ROCK TURNPIKE
SAFETY STUDY

Public Meeting
Meeting #2

Thursday, November 16, 2017

FITZGERALD & HALLIDAY, INC.
Innovative Planning, Better Communities

Tighe&Bond
Engineers | Environmental Specialists

METROCOG
Connecticut Metropolitan Council of Governments

AGENDA

1. Project Overview
2. Progress Update
3. Key Issues & Potential Solutions
4. Next Steps
5. Q&A

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PROJECT OVERVIEW

Introductions: The Project Team

Project Leads

Project manager: METROCOG Connecticut Metropolitan Council of Governments

In coordination with Town of Fairfield

Consultant Team

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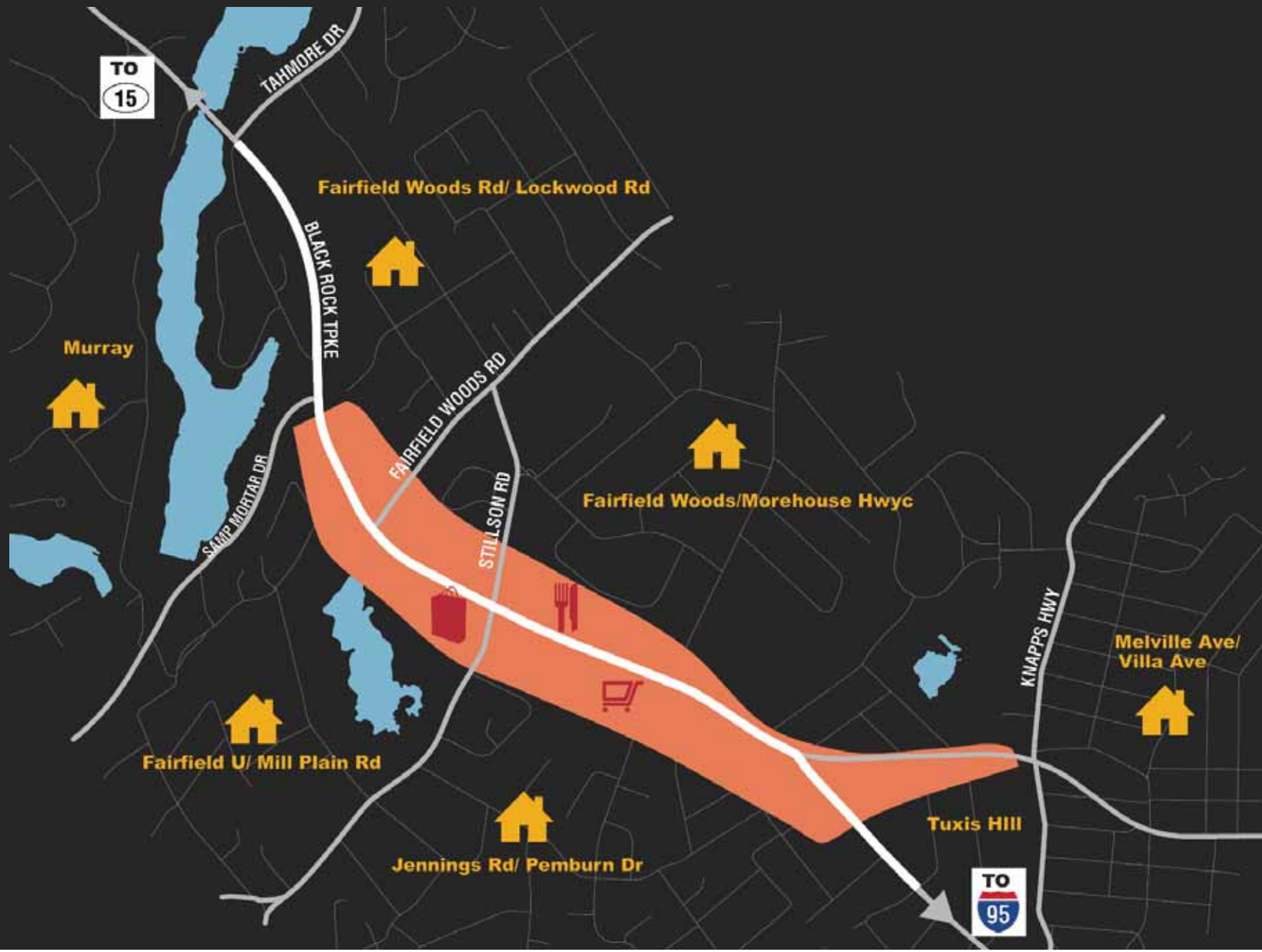
CT Counts, LLC

Key Stakeholders and the Public

Study Purpose

This study will identify strategies to create a safe and attractive pedestrian environment, a robust infrastructure for bicyclists, and linkages between residential areas and the shops, businesses and restaurants along Black Rock Turnpike.



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PROGRESS UPDATE

Study phases

WE ARE HERE

Phase 1 (Month 1-4)

- Data Collection
- Traffic Analysis
- Safety analysis
- Geometric Inventory
- Needs Assessment

Discovery

Phase 2 (Month 5-10)

- Public Design Charette
- Design Concepts
- Analysis/Testing
- Preferred Alternative

Design

Phase 3 (Month 11-14)

- Simulation/Renderings
- Order of Magnitude Costs
- Action Plan
- Timeline
- Public Meeting

Report

COMMUNITY ENGAGEMENT

Pop-Up Outreach Event #1

Pop-Up Outreach Event #2

Public Meeting

Online Survey

Stakeholder Meetings

Online Comments

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Snapshot of Input

Can be very difficult to make a left turn into streets or business driveways. I arrange my shopping to only take right turns.

"traffic frequently stopped as cars try to cross lanes; drivers rushed to cross and making hazardous decisions"

"Safety and traffic congestion come first, but I've always wondered what that road would be like if it were more pedestrian friendly. It would be a great place to walk if it were more attractive and safer for pedestrians."

Online Survey – What we heard

1069 people have taken the survey

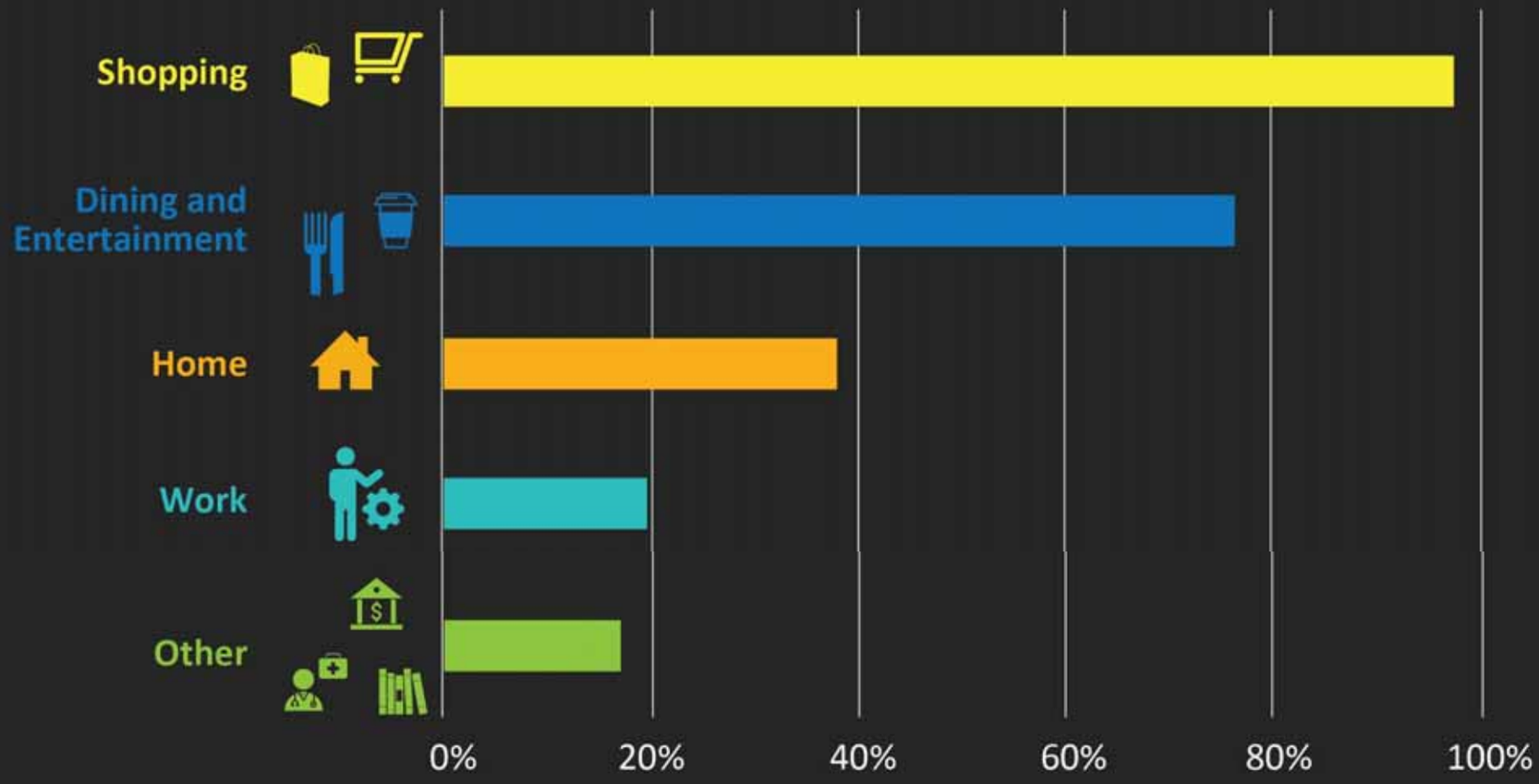
- Respondents
  - 55% between 41 to 60 years old
  - 66% female
- Where respondents live
  - Over 40% live on or within 5 minutes of Turnpike
  - More than 2/3 live in Fairfield
  - Only 2% lives outside Fairfield County

Survey results as of 9 AM on 6/6/17

Online Survey – How do people use the Tnpk?

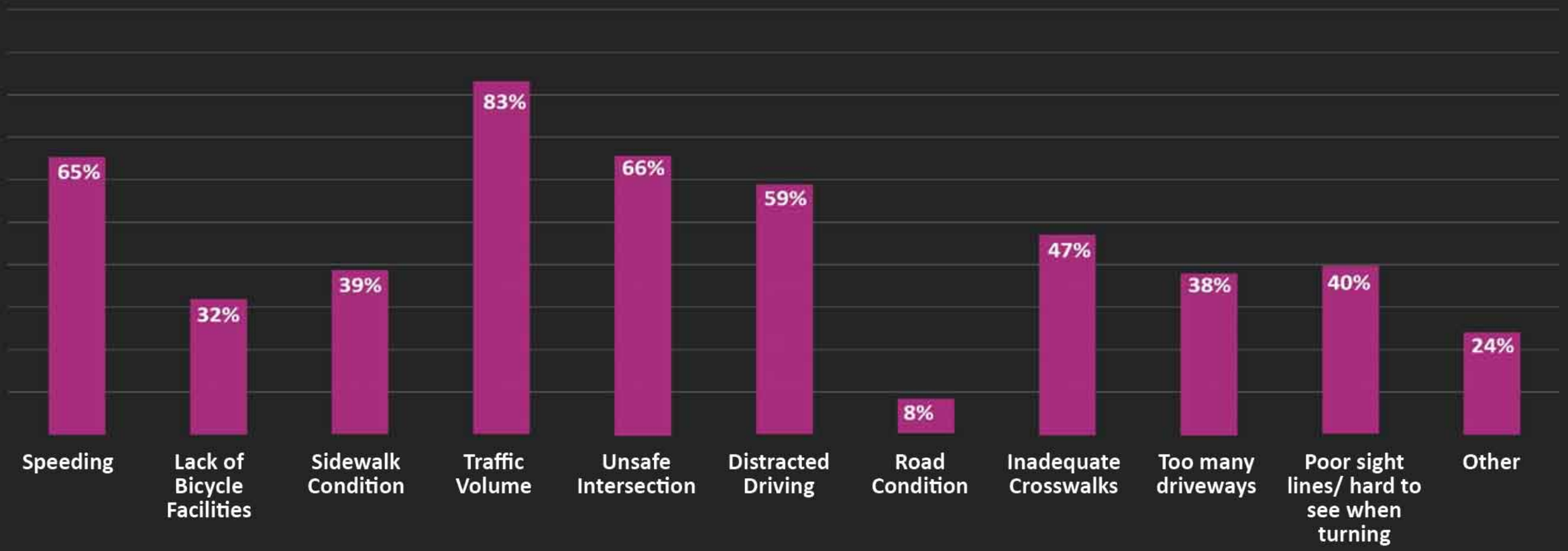
Over 80% are traveling to destinations ON the Turnpike (not cutting through)

- Where are they going?



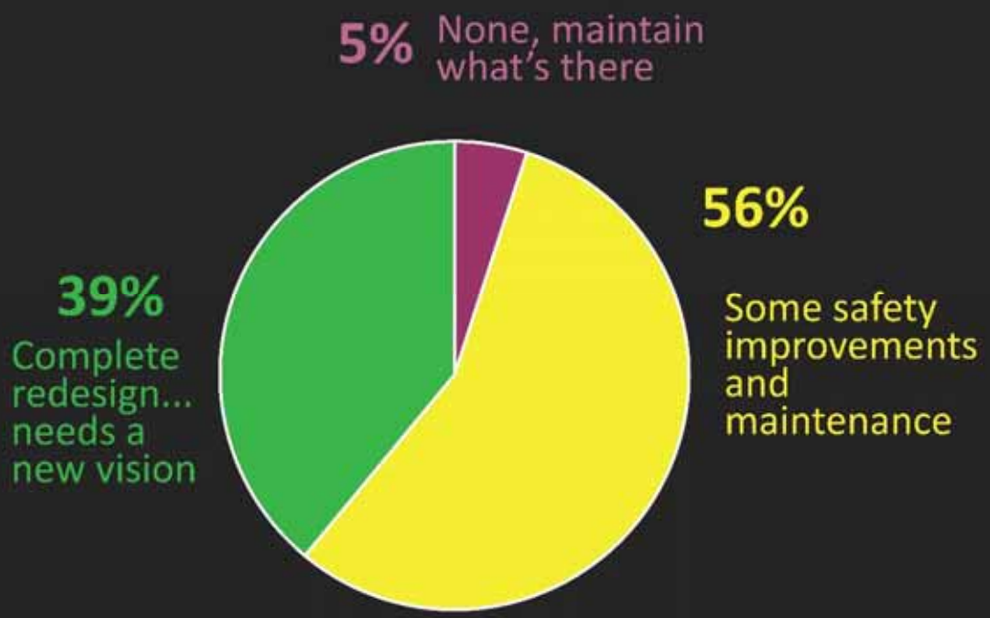
Online Survey – Safety

Numerous safety issues ranging across the corridor

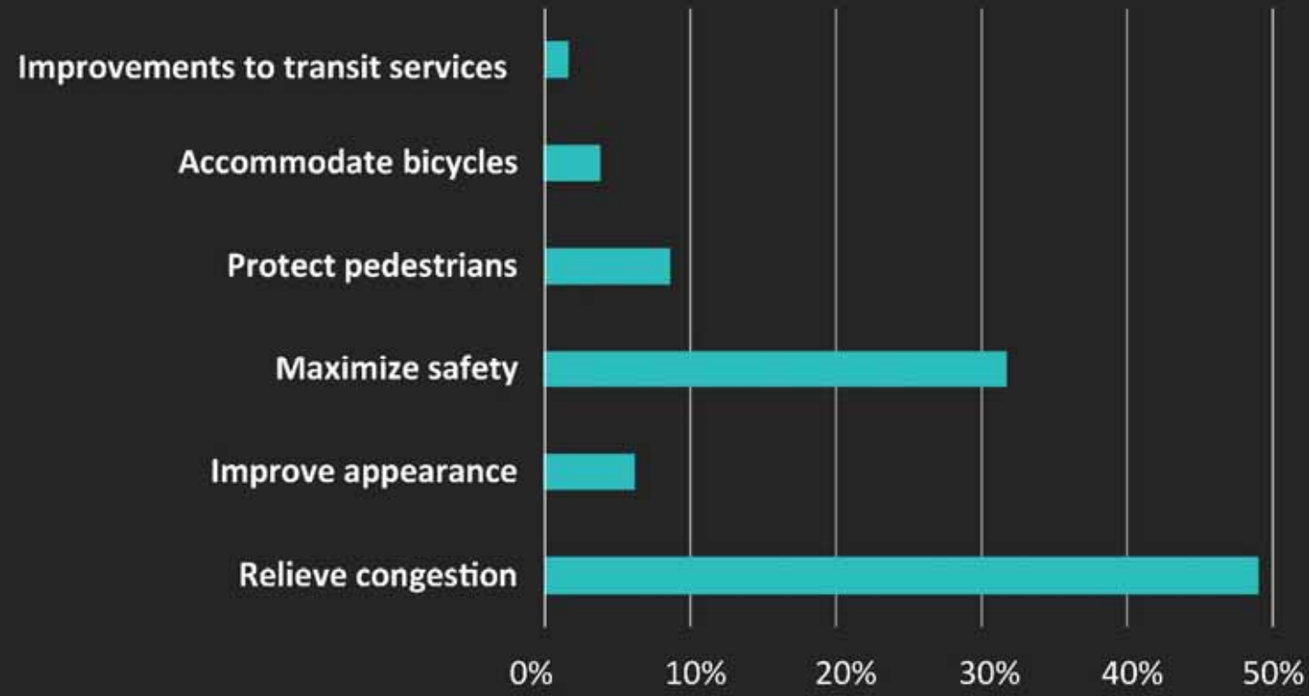


Online Survey – Future of the Turnpike

How much improvement does the Turnpike need?



Respondents' #1 Priorities



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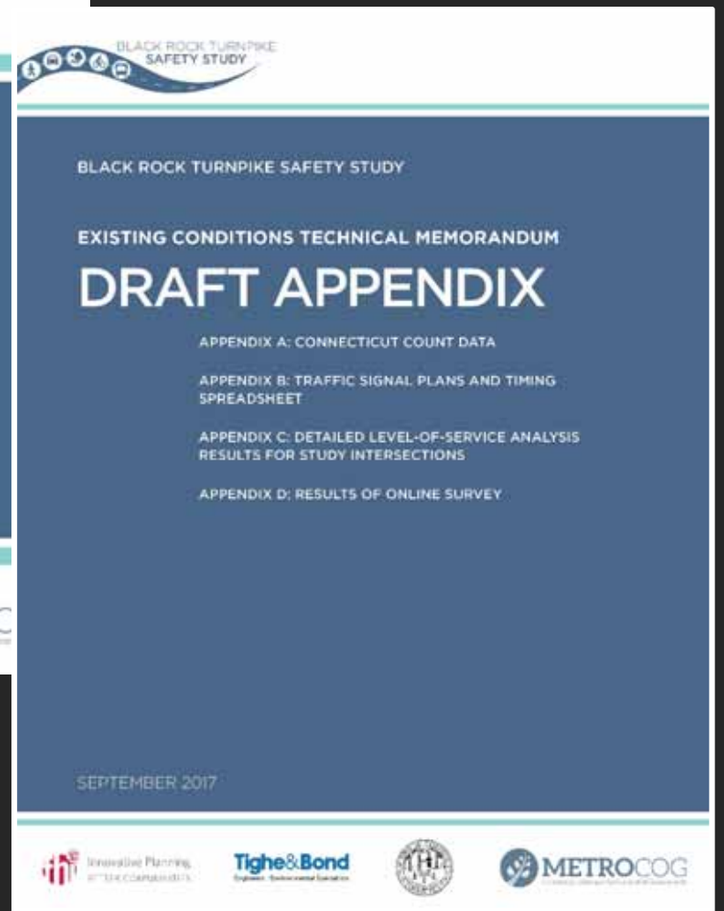
Existing Conditions Tech Memo

- Town reviewing
- Committee will be notified when report is available
- Today's meeting will summarize findings



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Supplemental data collection with drones

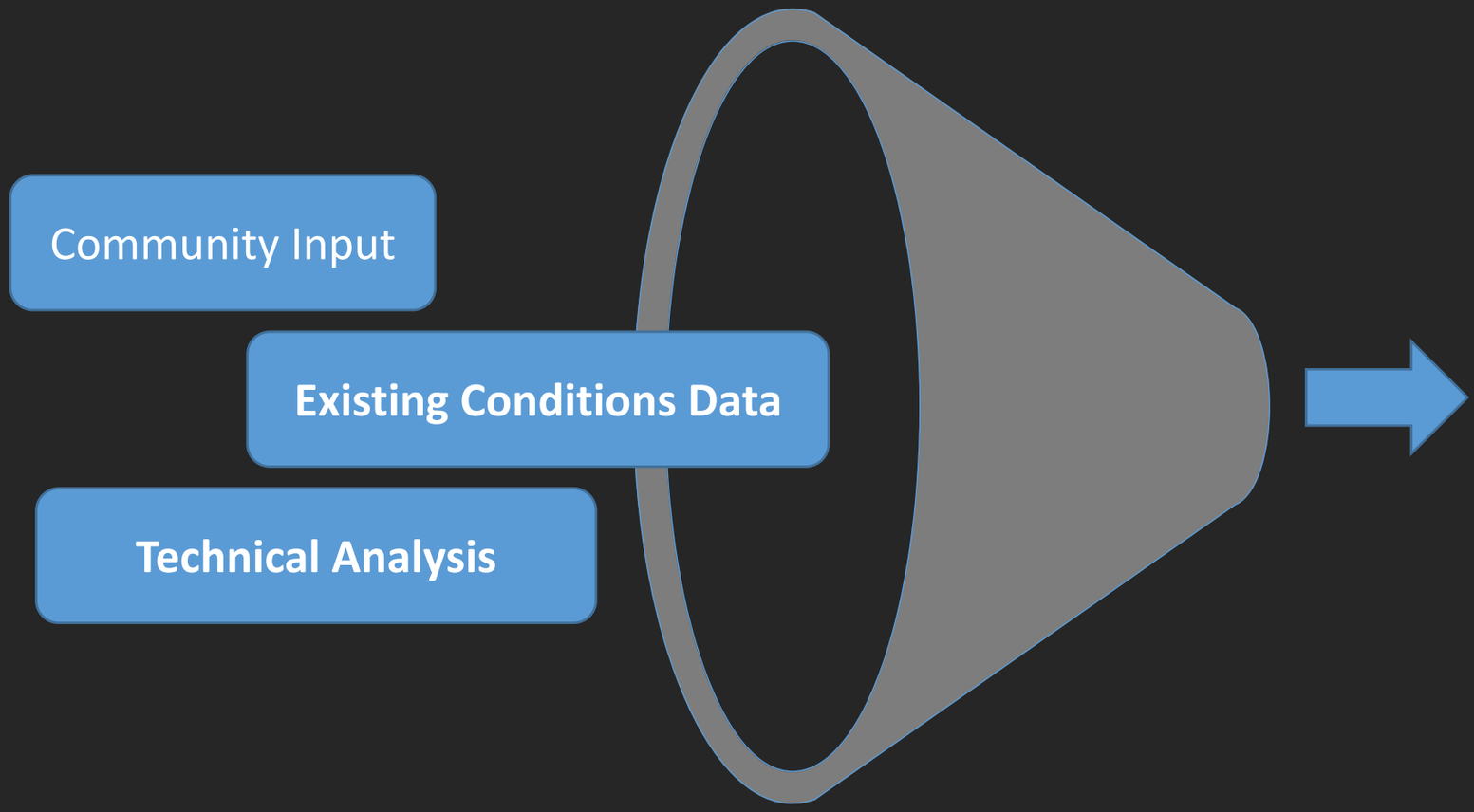
PURPOSE

- Obtain more precise data to communicate the complex issues along BRT
- Allows us to better calibrate our traffic models

LOGISTICS

- 7 simultaneous flights
- Total flight time 13 minutes (between 5:00 and 5:15 PM)
- Wednesday, October 11

PROCESS



Identification of three primary issues:

1. SAFETY
2. TRAFFIC OPERATIONS
3. ACCESSIBILITY


SAFETY

SAFETY: KEY ISSUES

- Crash history
- Conflict points
- Speed
- Roadway geometry
- Lane changing

3 YEARS
(2014 - 2016)

1.73 MILES

428 CRASHES

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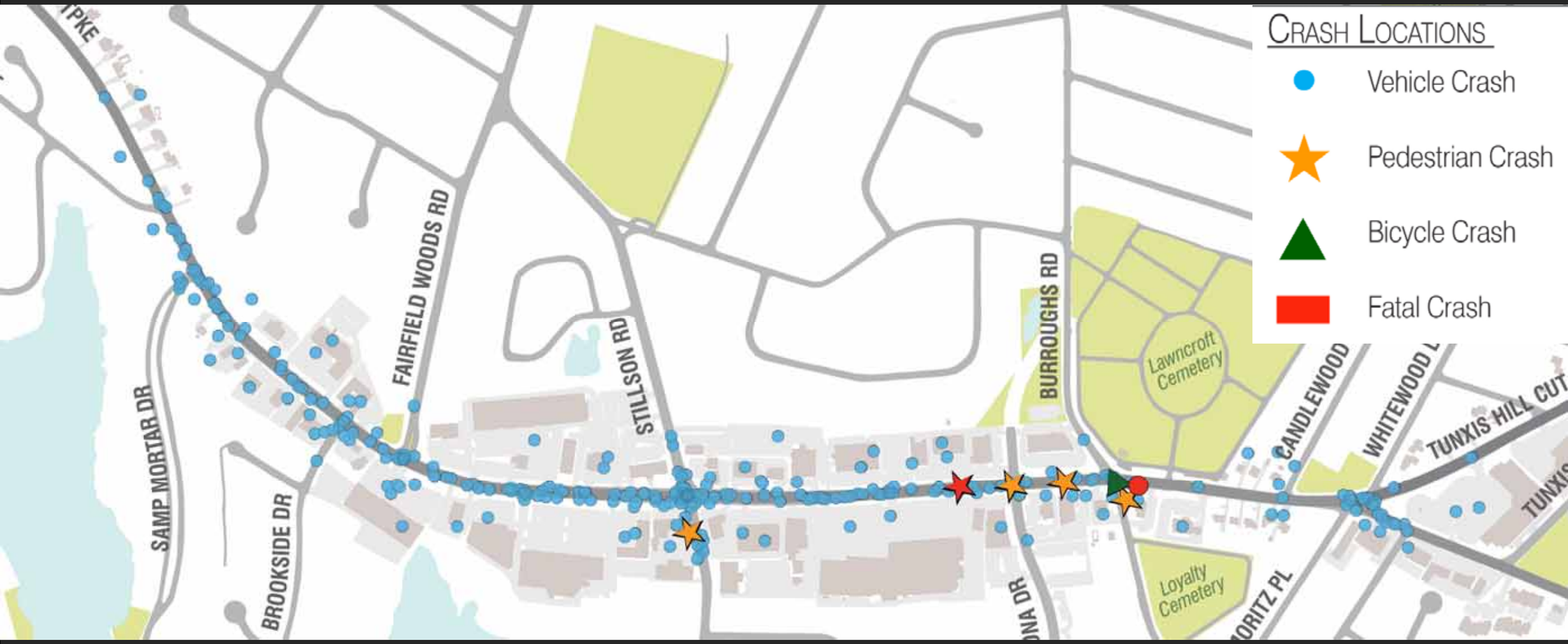
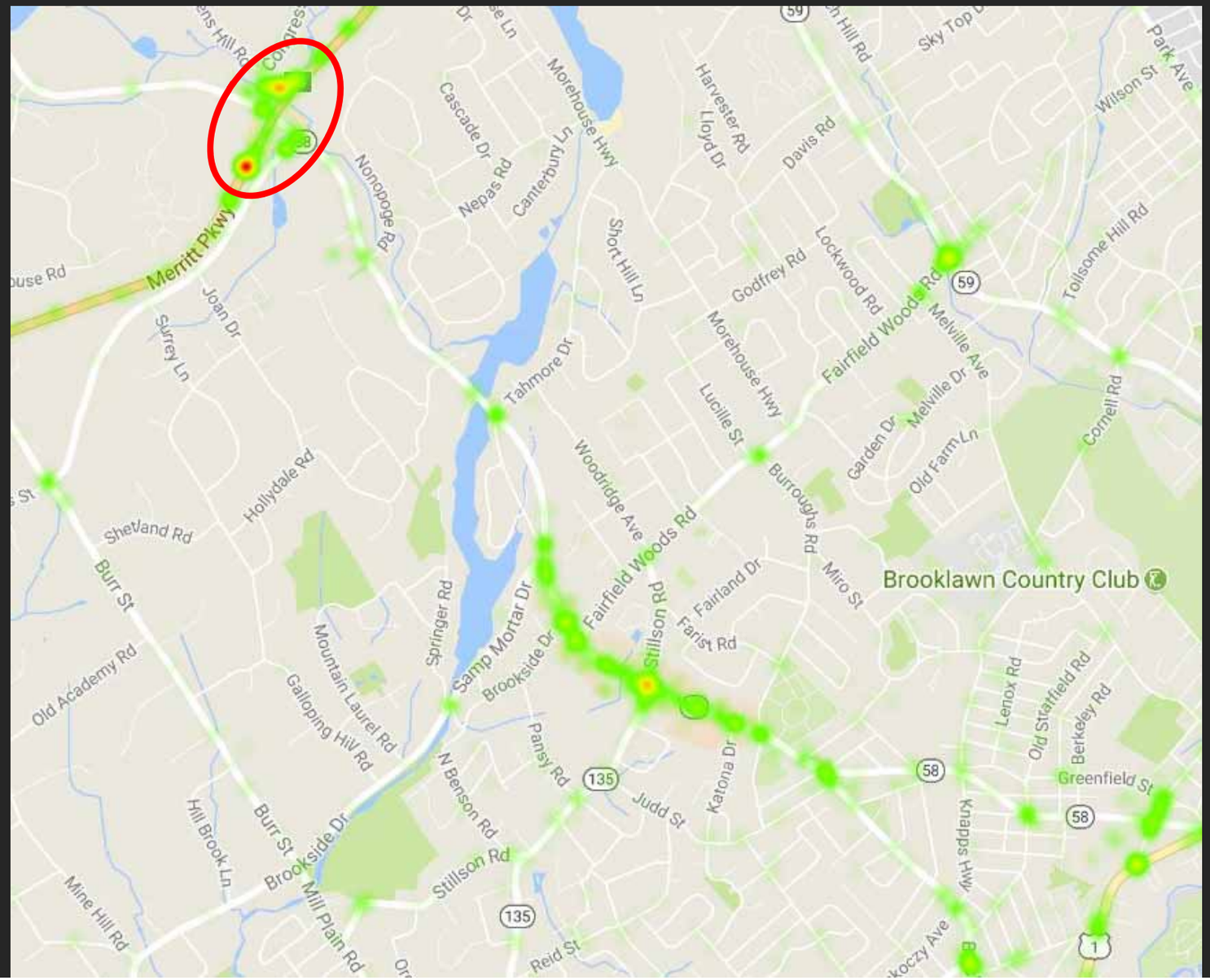
Crash history



Crash history

North of Tahmore Drive

- At the last Public Meeting, a request was made to look at crashes north of the study corridor
- Crashes reduce significantly north of Tahmore Drive
- High crash statistics are noted within the highway interchange (44) area



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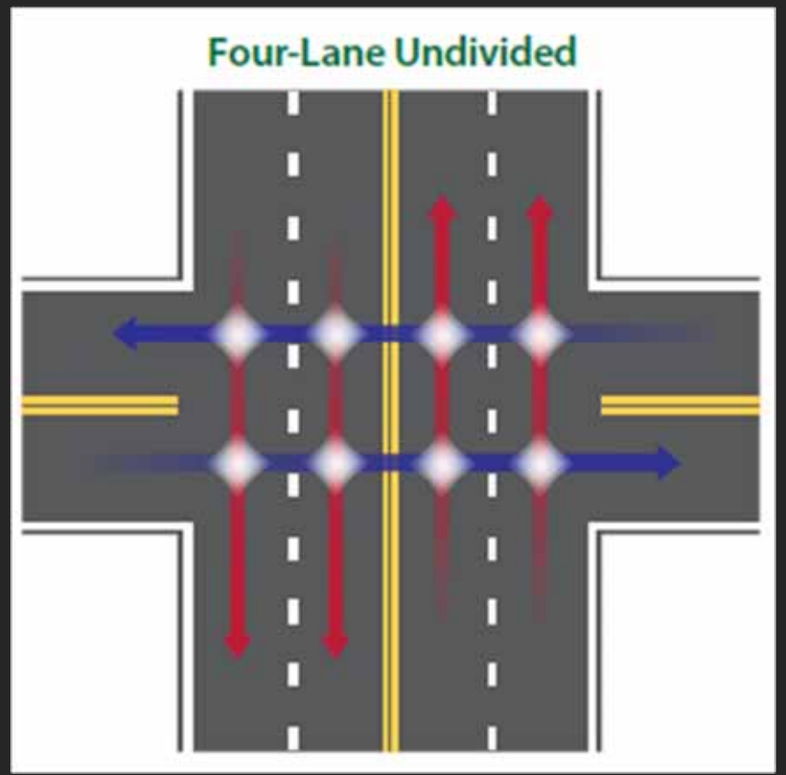
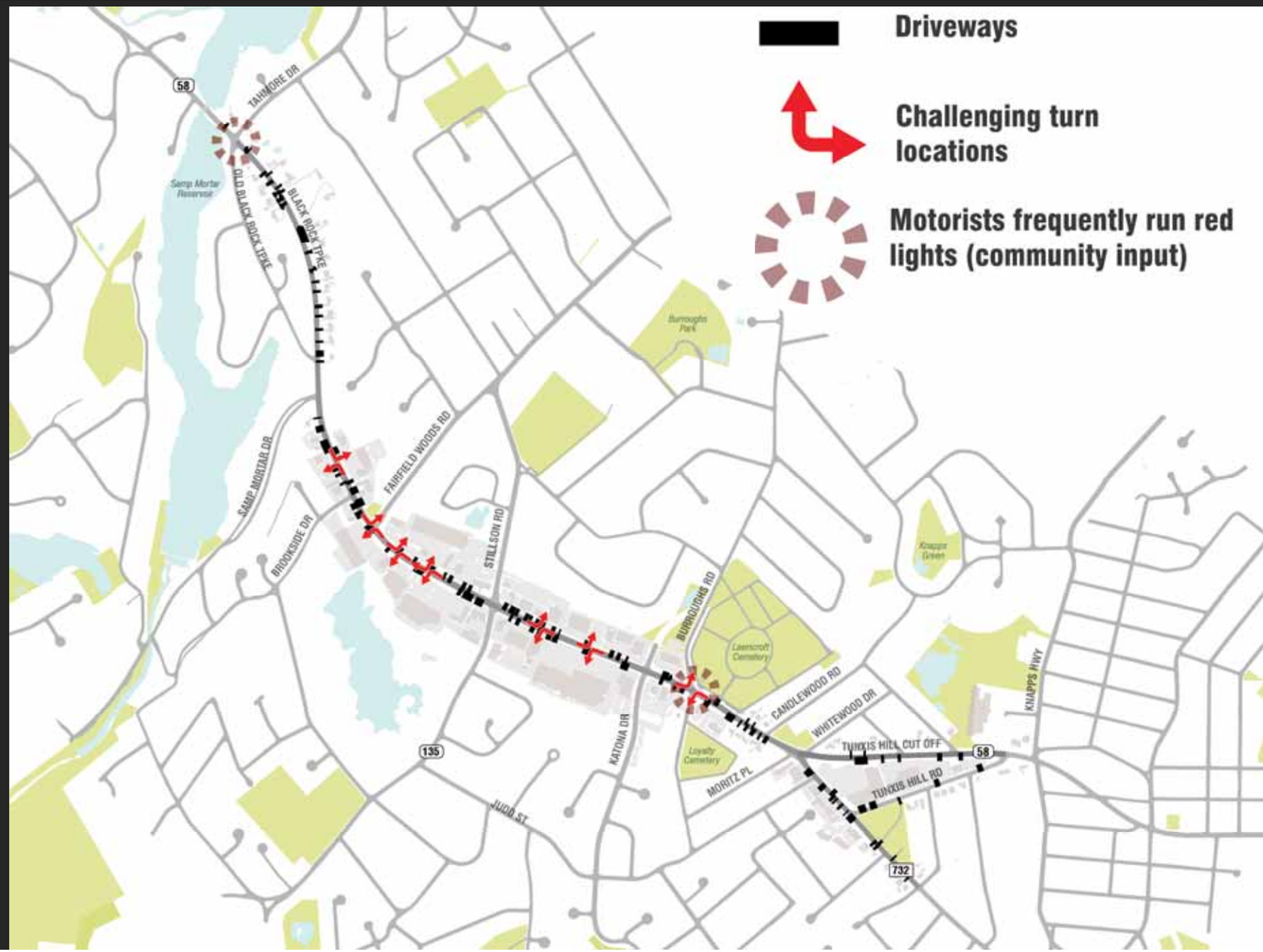
Conflict points





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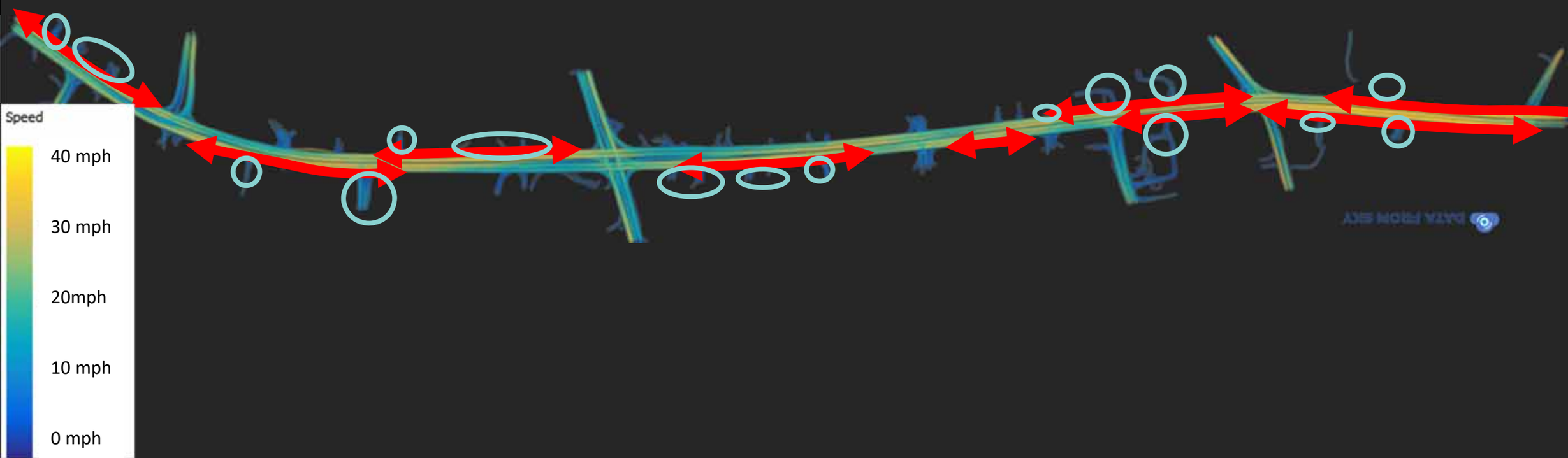
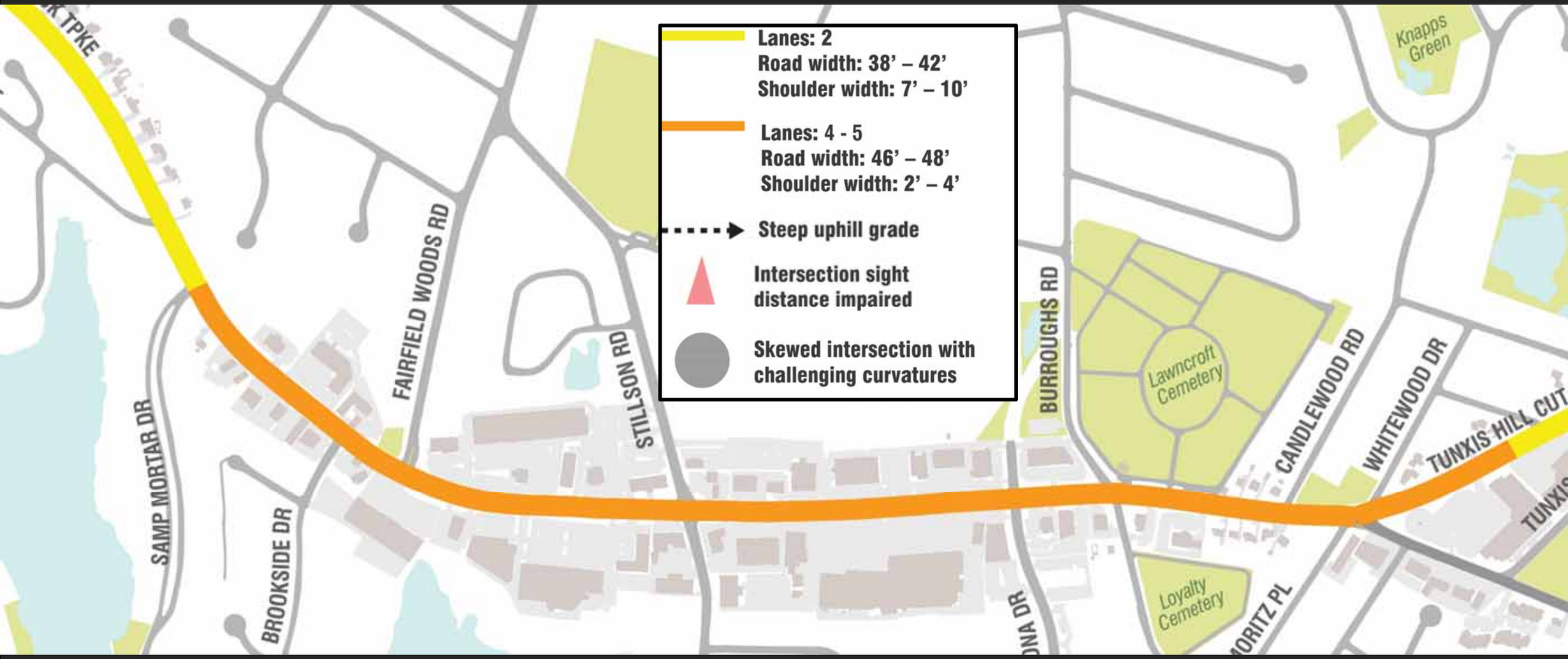
Average Speed

Individual vehicle speeds

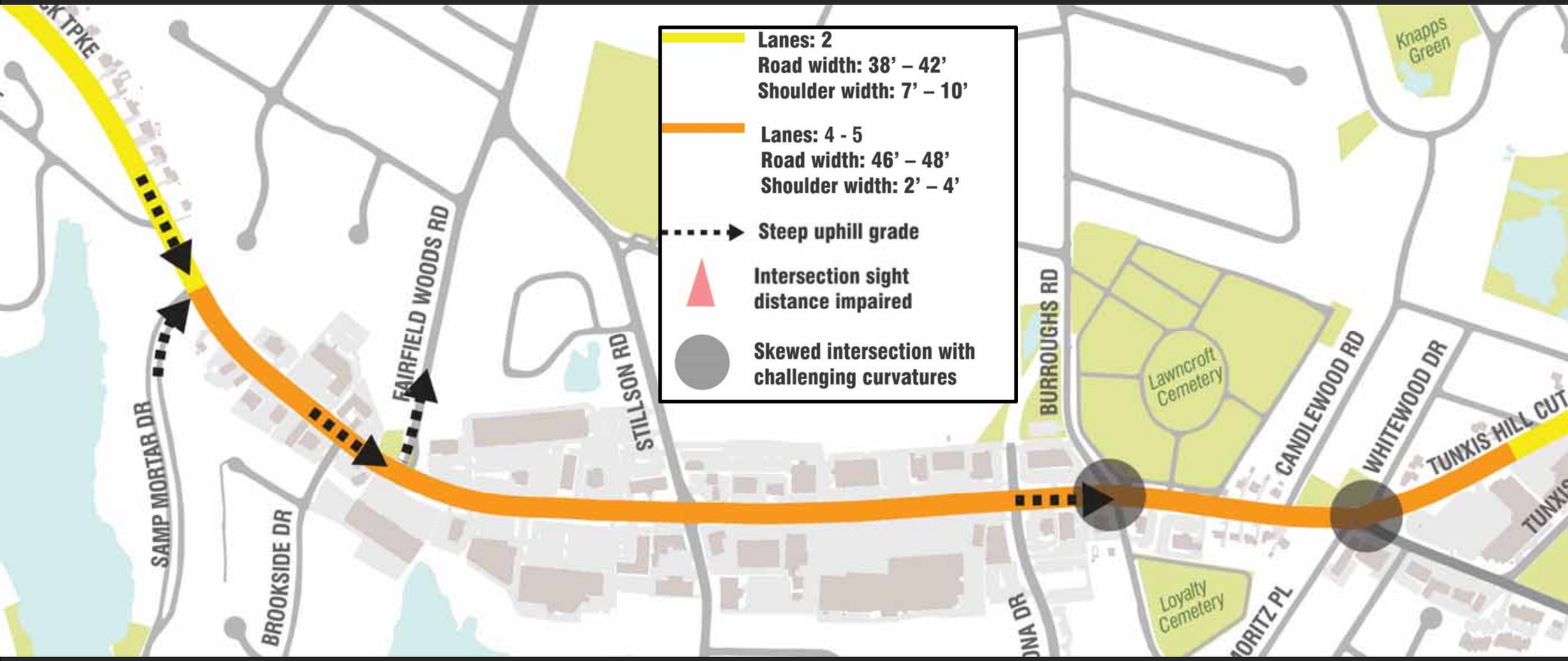
30-40 mph traffic mixing with 0-10 mph traffic = high crash probability



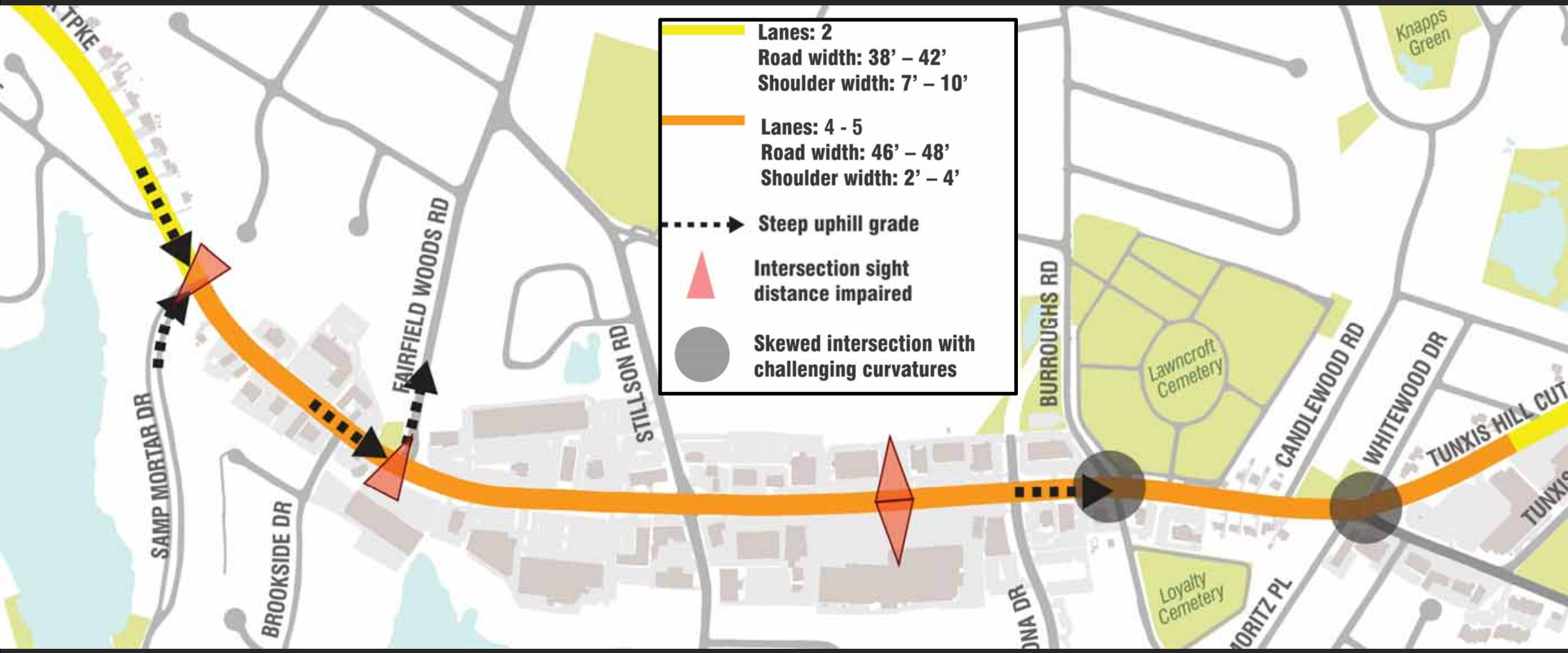
Road geometry



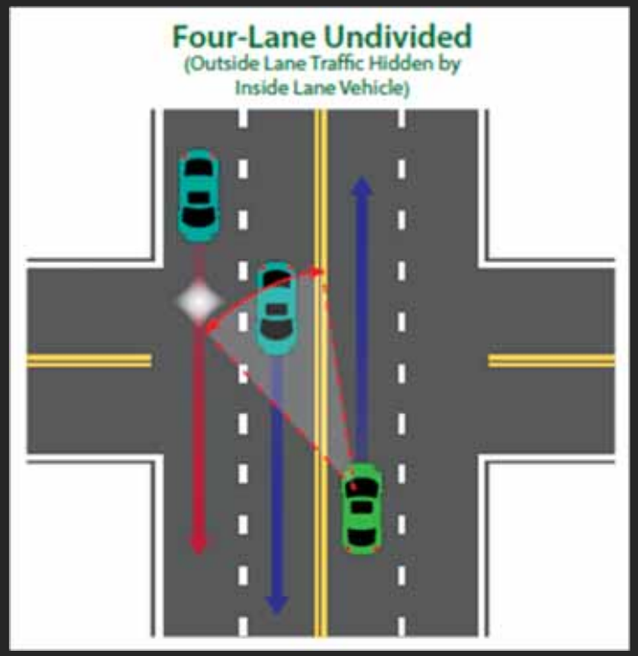
Road geometry



Road geometry

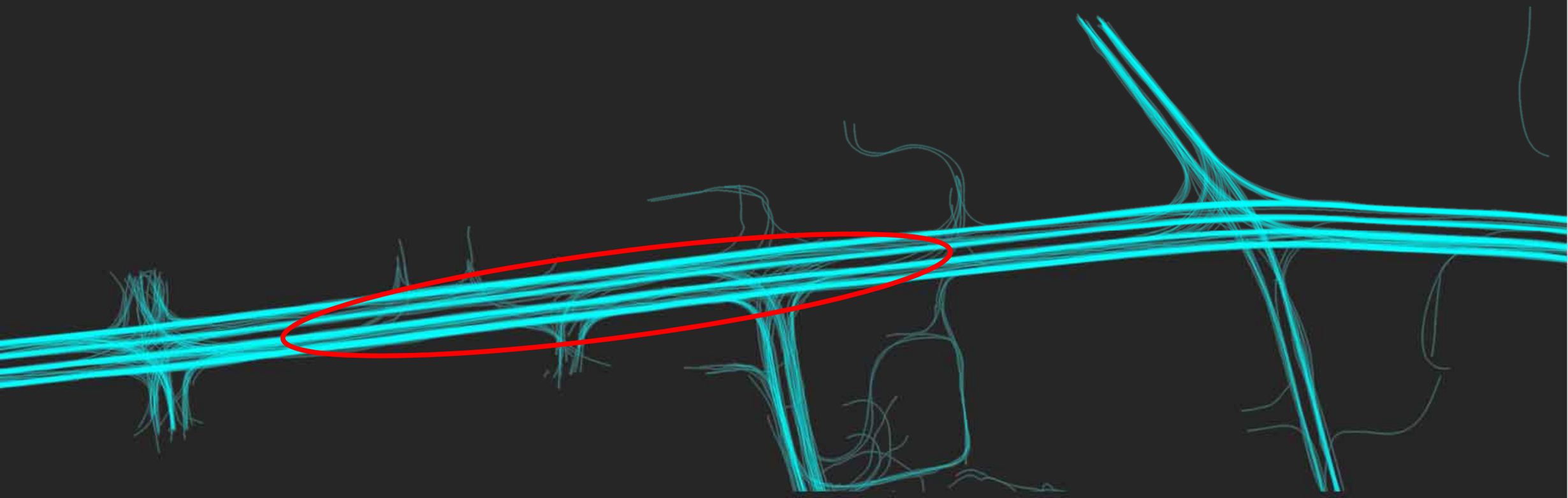


Road geometry



Lane changing

Lane changing



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Lane change from outside to inside

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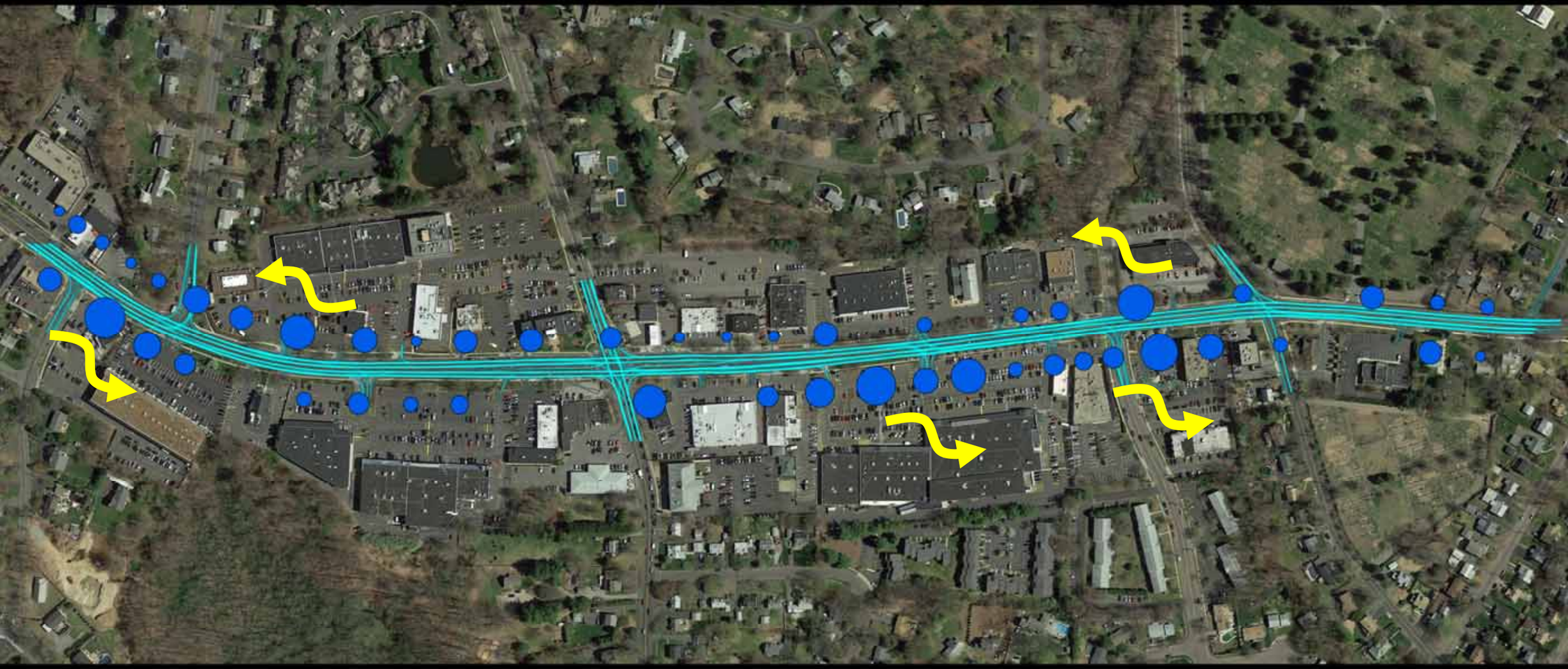
Lane change from inside to outside



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Lane changing statistics

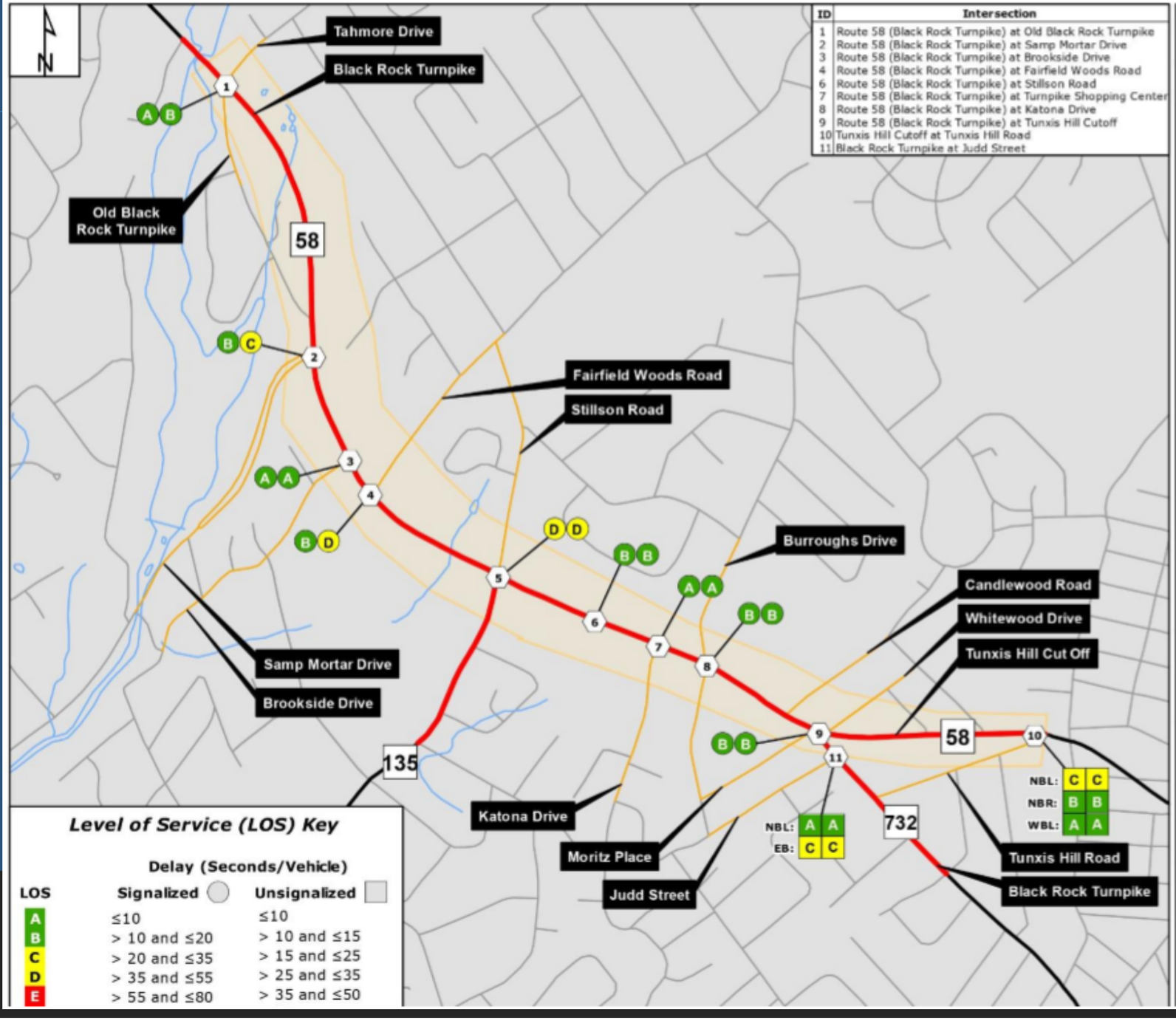
Southbound	
# lane changes	% of traffic
0	100%
1	88%
2	77%
3	68%
4	40%
5	28%
6	14%
7	4%
8	2%

Northbound	
# lane changes	% of traffic
0	100%
1	57%
2	29%
3	21%
4	14%
5	7%
6	0%
7	0%
8	0%

TRAFFIC OPERATIONS

KEY ISSUES

- Traffic
- Capacity
- Queuing
- Travel time
- Lane utilization
- Parking lot circulation



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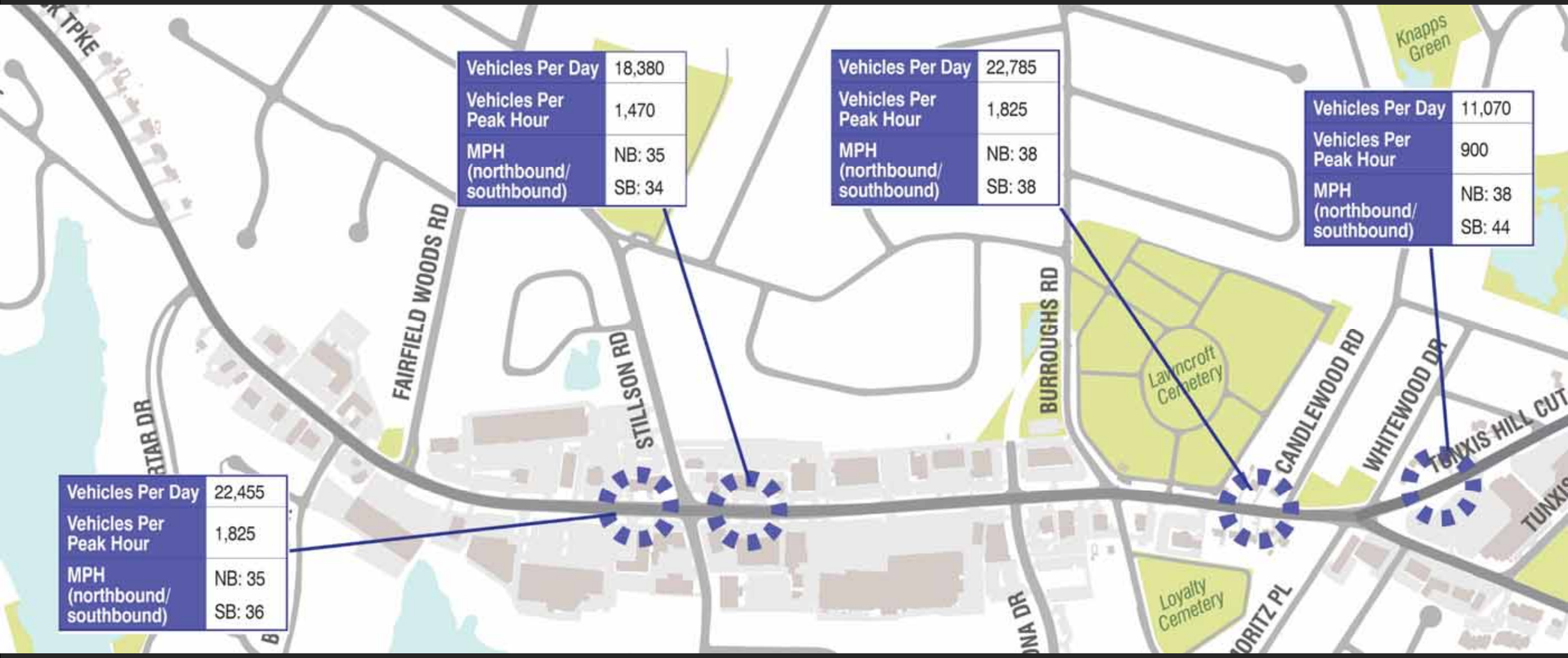
Average daily traffic



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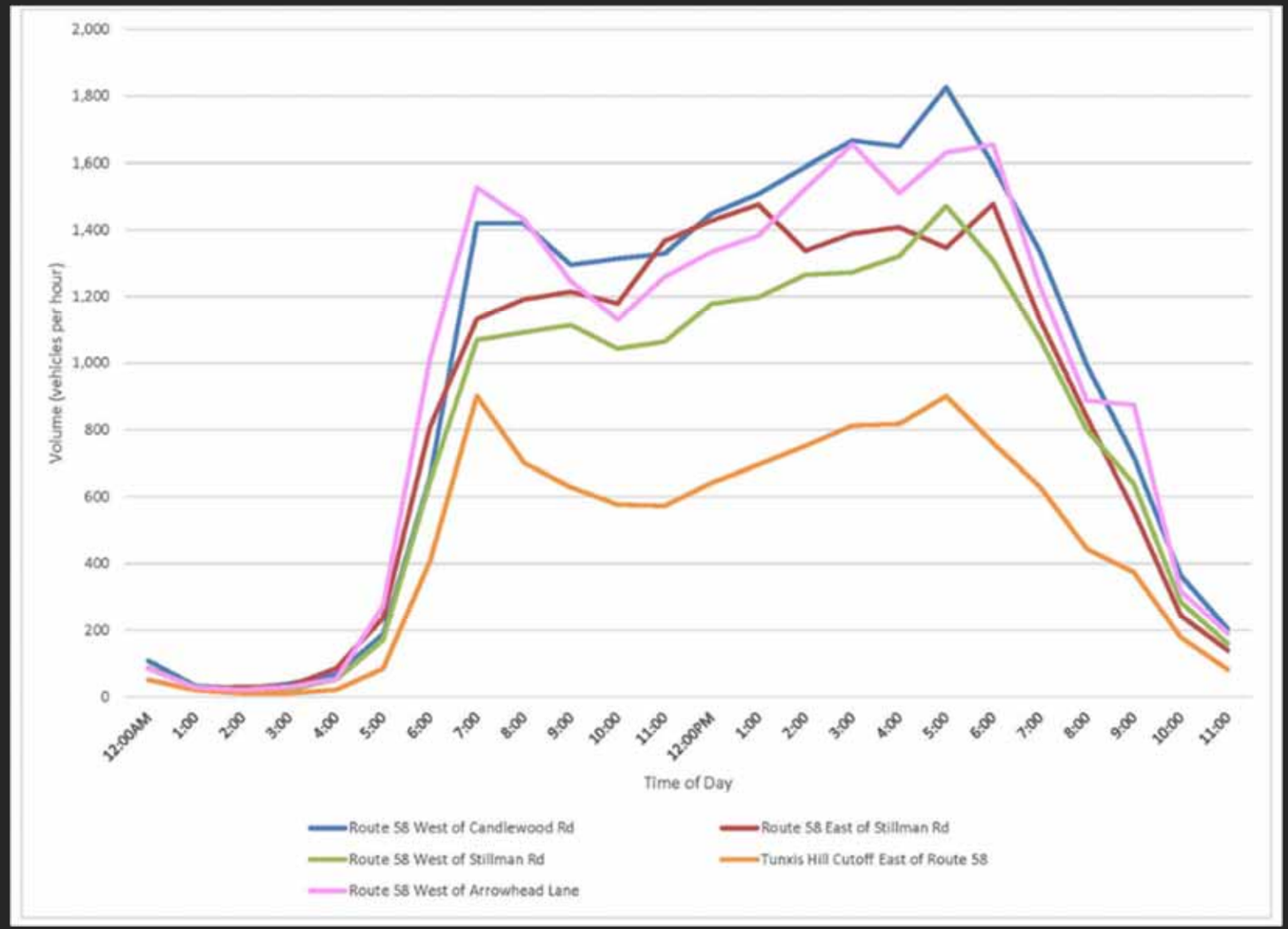
Daily traffic profiles

- PM Peak hour highest
- AM Peak due to commuter traffic
- Saturday continuous afternoon volume



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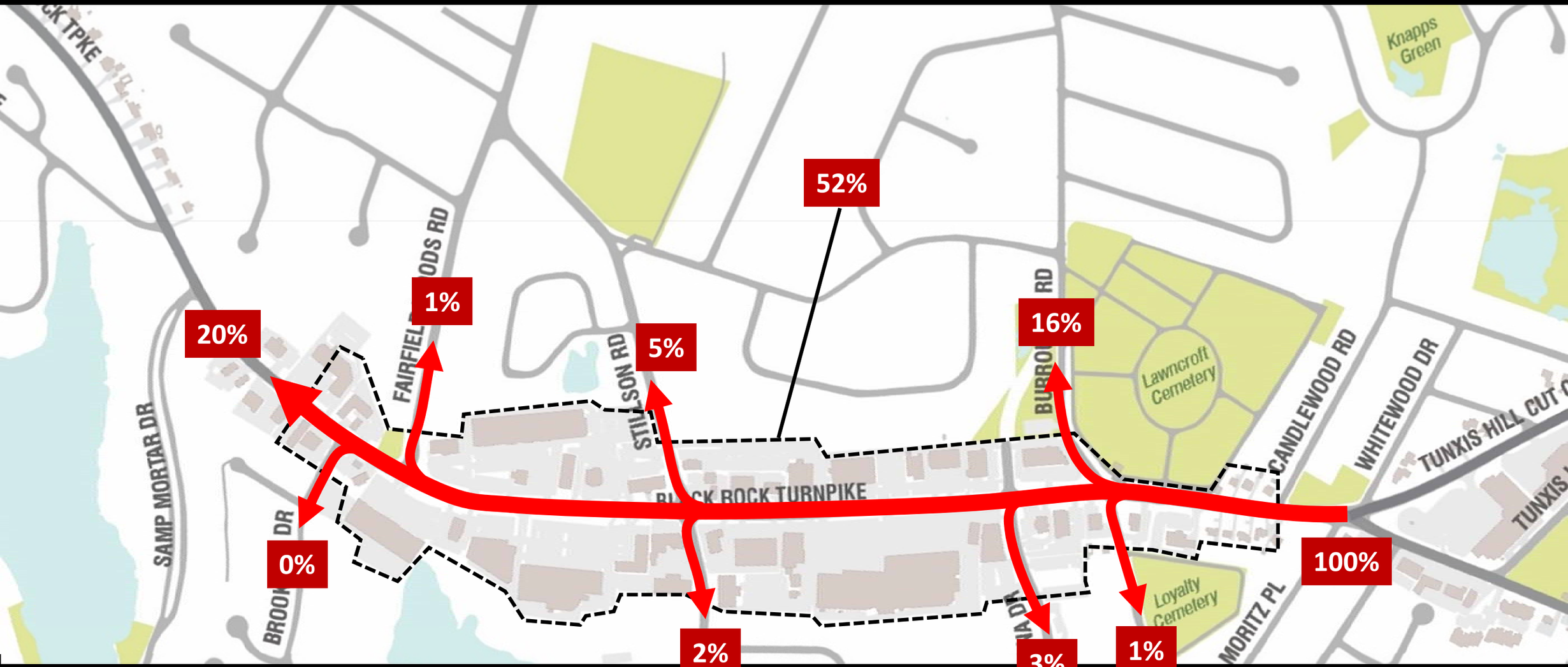
Northbound traffic



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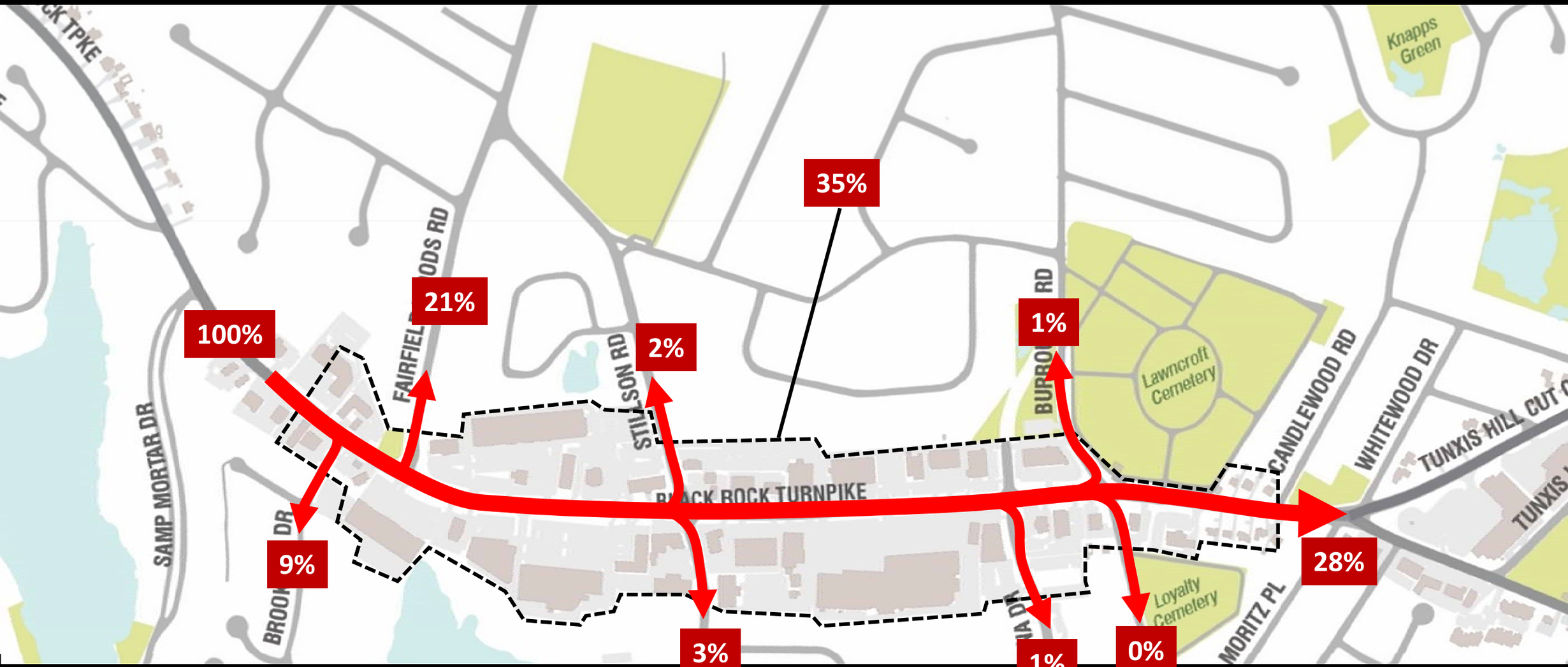
Southbound traffic



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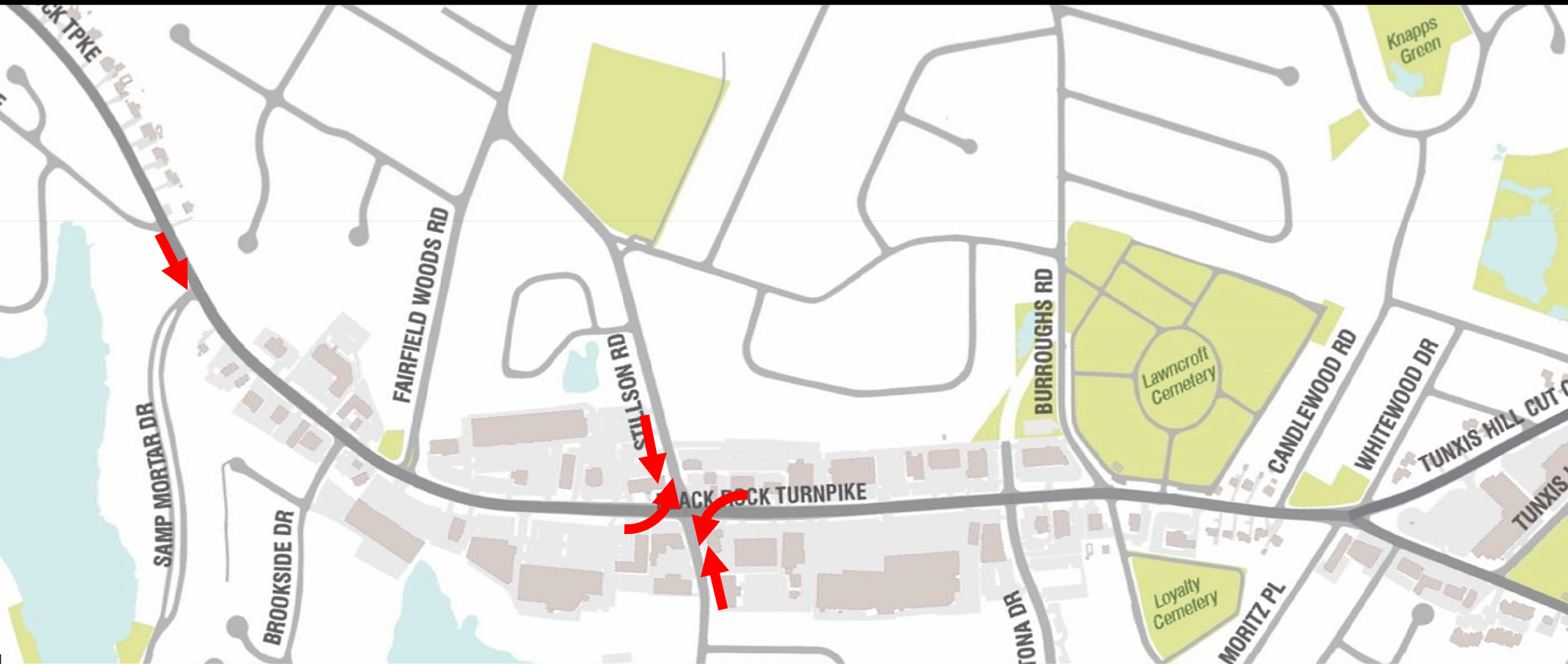
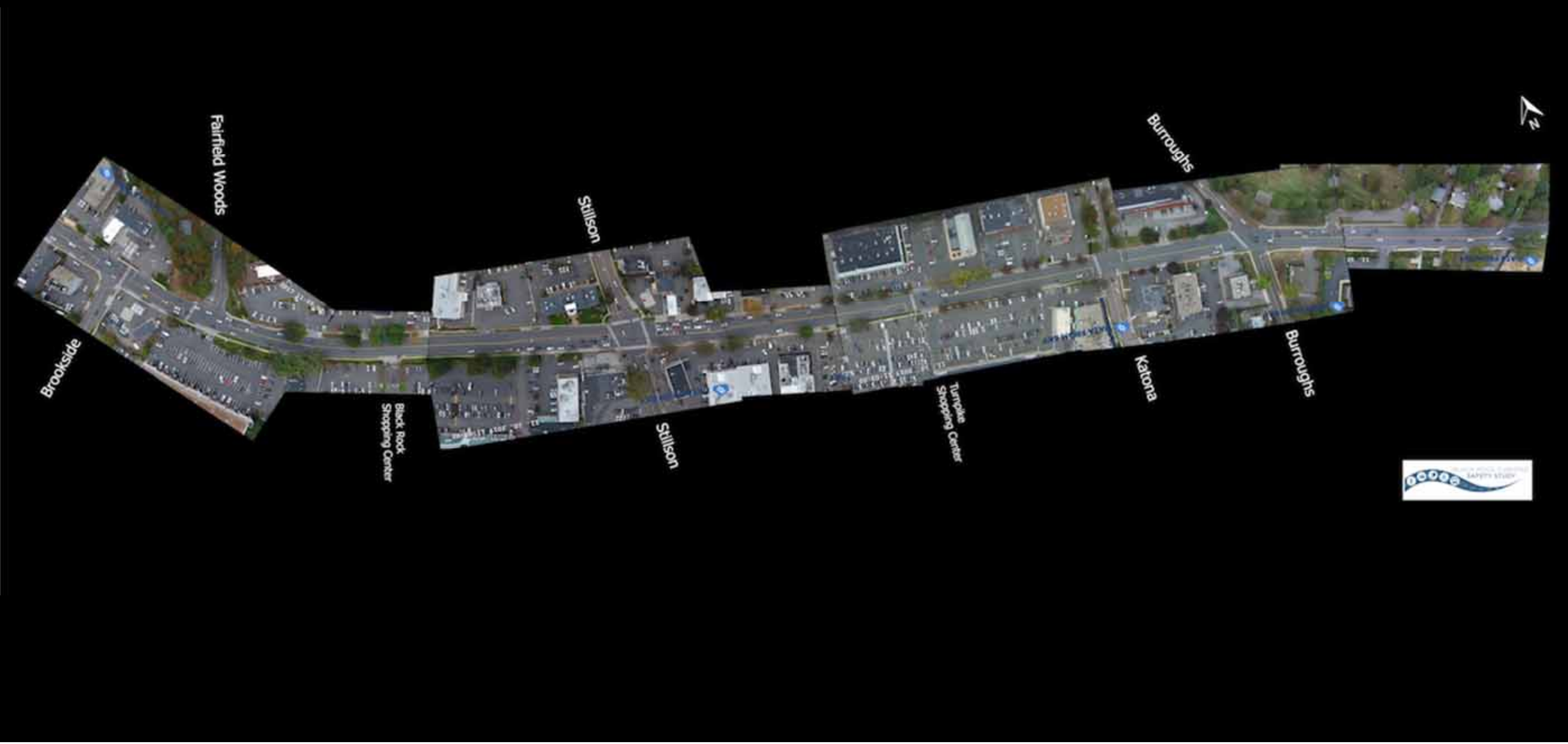
Capacity - critical movements



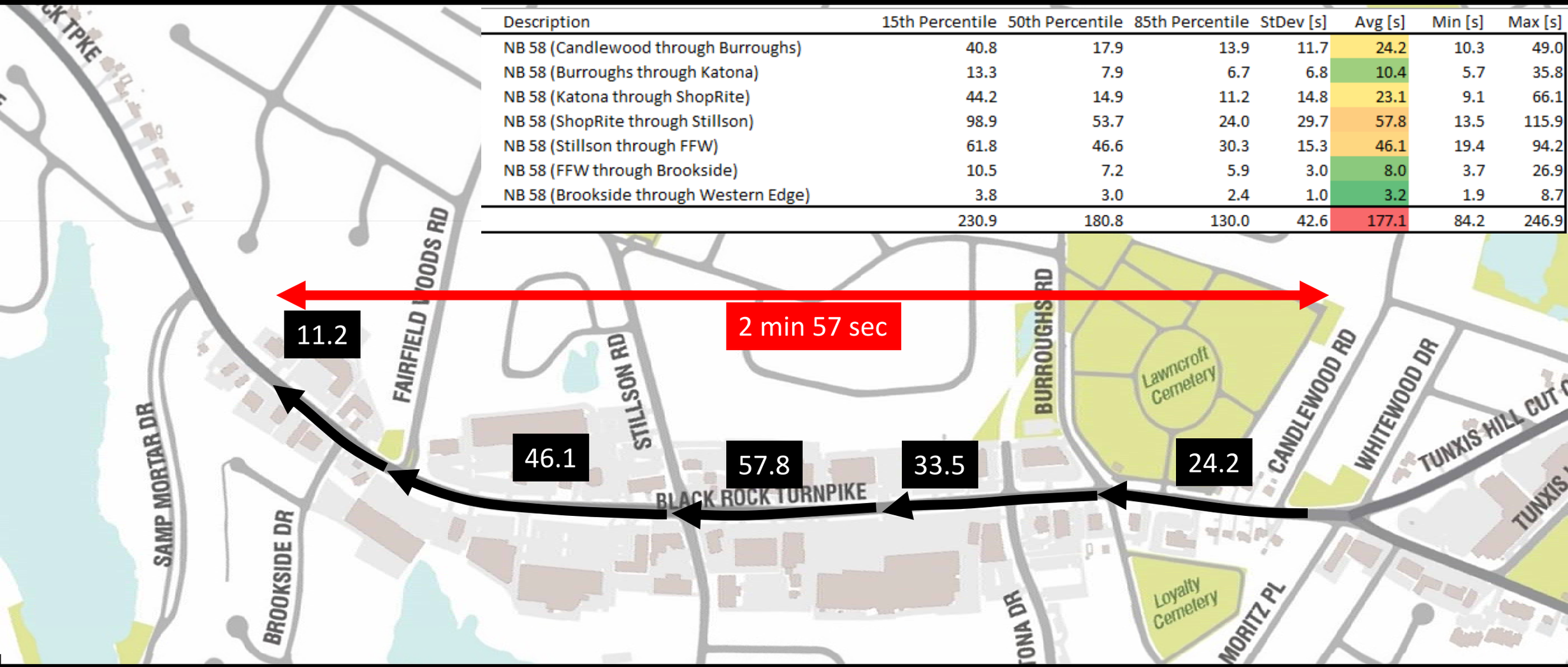
Queueing - video



Queueing Synchro

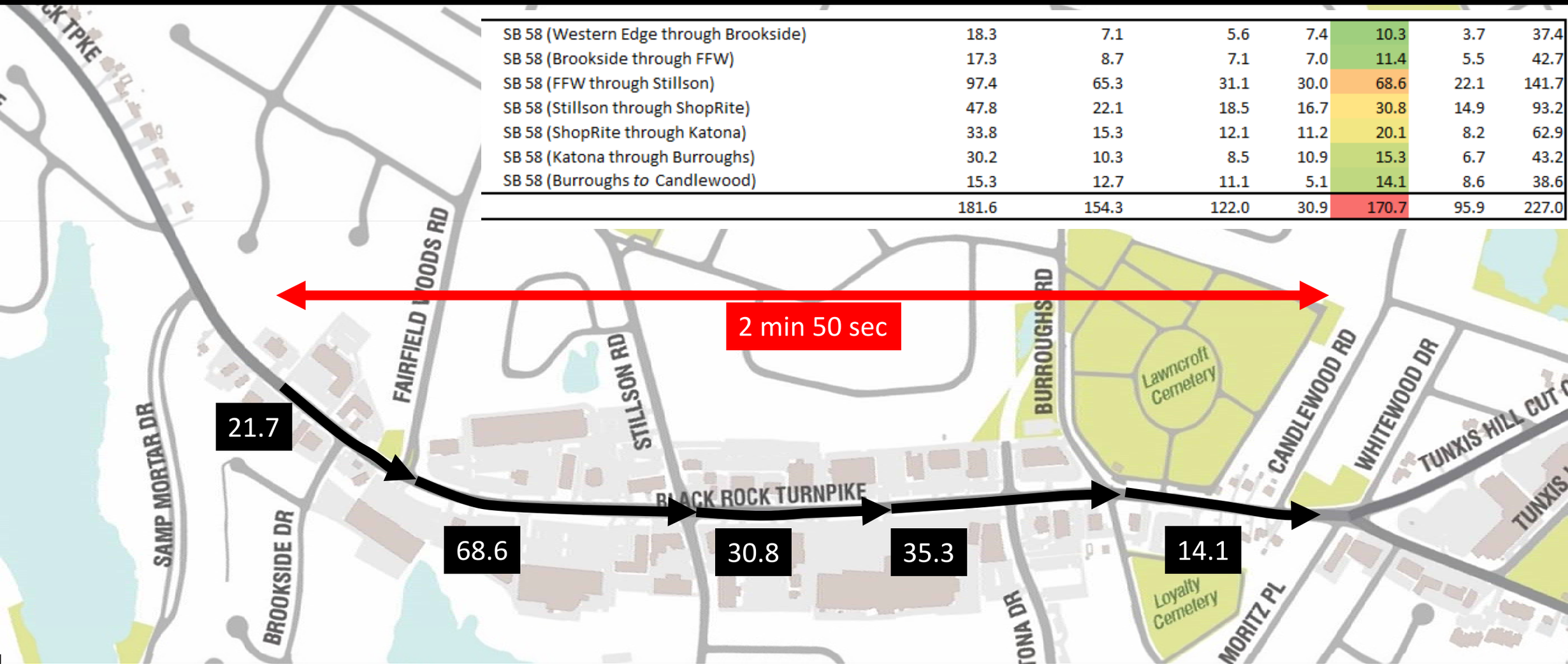
Northbound travel time

Description	15th Percentile	50th Percentile	85th Percentile	StDev [s]	Avg [s]	Min [s]	Max [s]
NB 58 (Candlewood through Burroughs)	40.8	17.9	13.9	11.7	24.2	10.3	49.0
NB 58 (Burroughs through Katona)	13.3	7.9	6.7	6.8	10.4	5.7	35.8
NB 58 (Katona through ShopRite)	44.2	14.9	11.2	14.8	23.1	9.1	66.1
NB 58 (ShopRite through Stillson)	98.9	53.7	24.0	29.7	57.8	13.5	115.9
NB 58 (Stillson through FFW)	61.8	46.6	30.3	15.3	46.1	19.4	94.2
NB 58 (FFW through Brookside)	10.5	7.2	5.9	3.0	8.0	3.7	26.9
NB 58 (Brookside through Western Edge)	3.8	3.0	2.4	1.0	3.2	1.9	8.7
	230.9	180.8	130.0	42.6	177.1	84.2	246.9

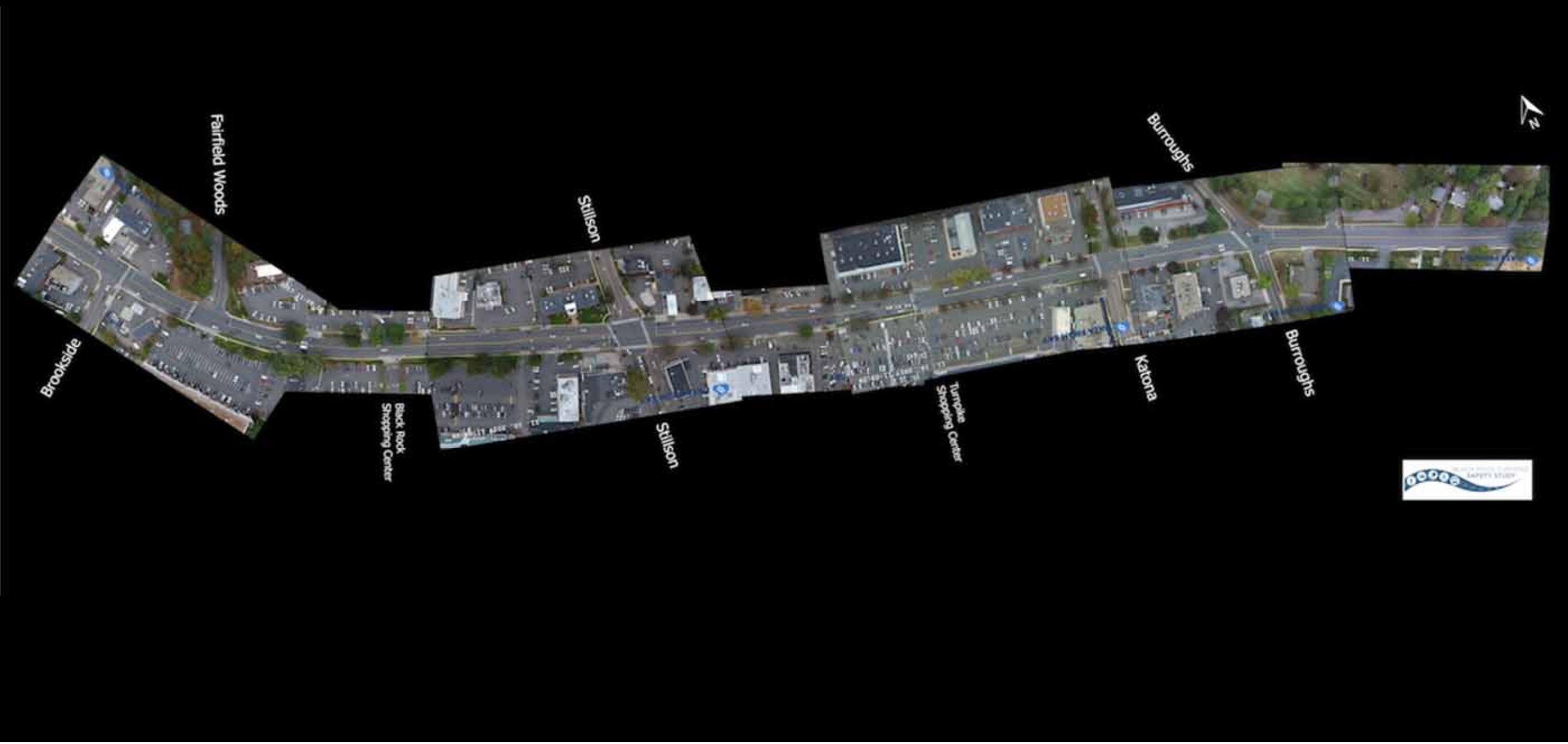


Southbound travel time

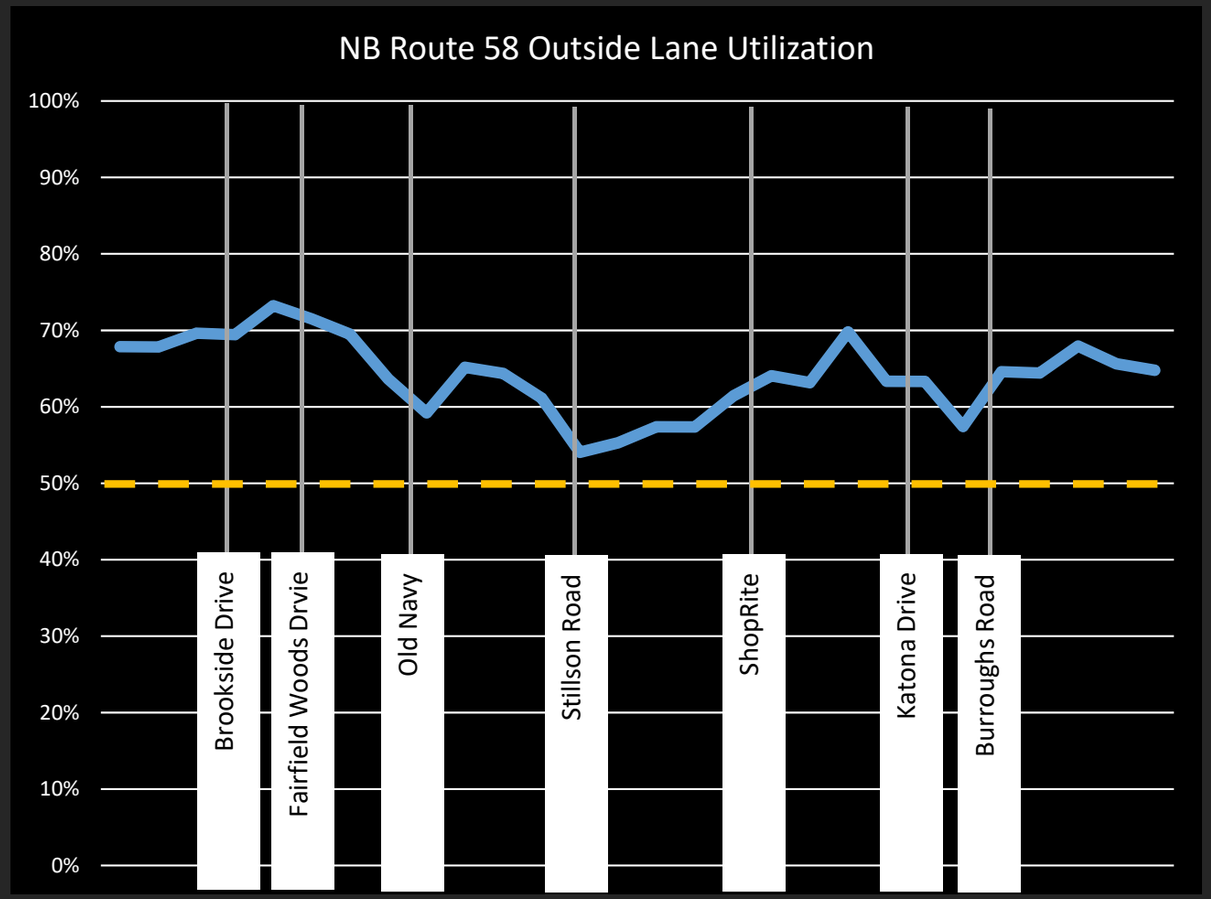
SB 58 (Western Edge through Brookside)	18.3	7.1	5.6	7.4	10.3	3.7	37.4
SB 58 (Brookside through FFW)	17.3	8.7	7.1	7.0	11.4	5.5	42.7
SB 58 (FFW through Stillson)	97.4	65.3	31.1	30.0	68.6	22.1	141.7
SB 58 (Stillson through ShopRite)	47.8	22.1	18.5	16.7	30.8	14.9	93.2
SB 58 (ShopRite through Katona)	33.8	15.3	12.1	11.2	20.1	8.2	62.9
SB 58 (Katona through Burroughs)	30.2	10.3	8.5	10.9	15.3	6.7	43.2
SB 58 (Burroughs *to* Candlewood)	15.3	12.7	11.1	5.1	14.1	8.6	38.6
	181.6	154.3	122.0	30.9	170.7	95.9	227.0

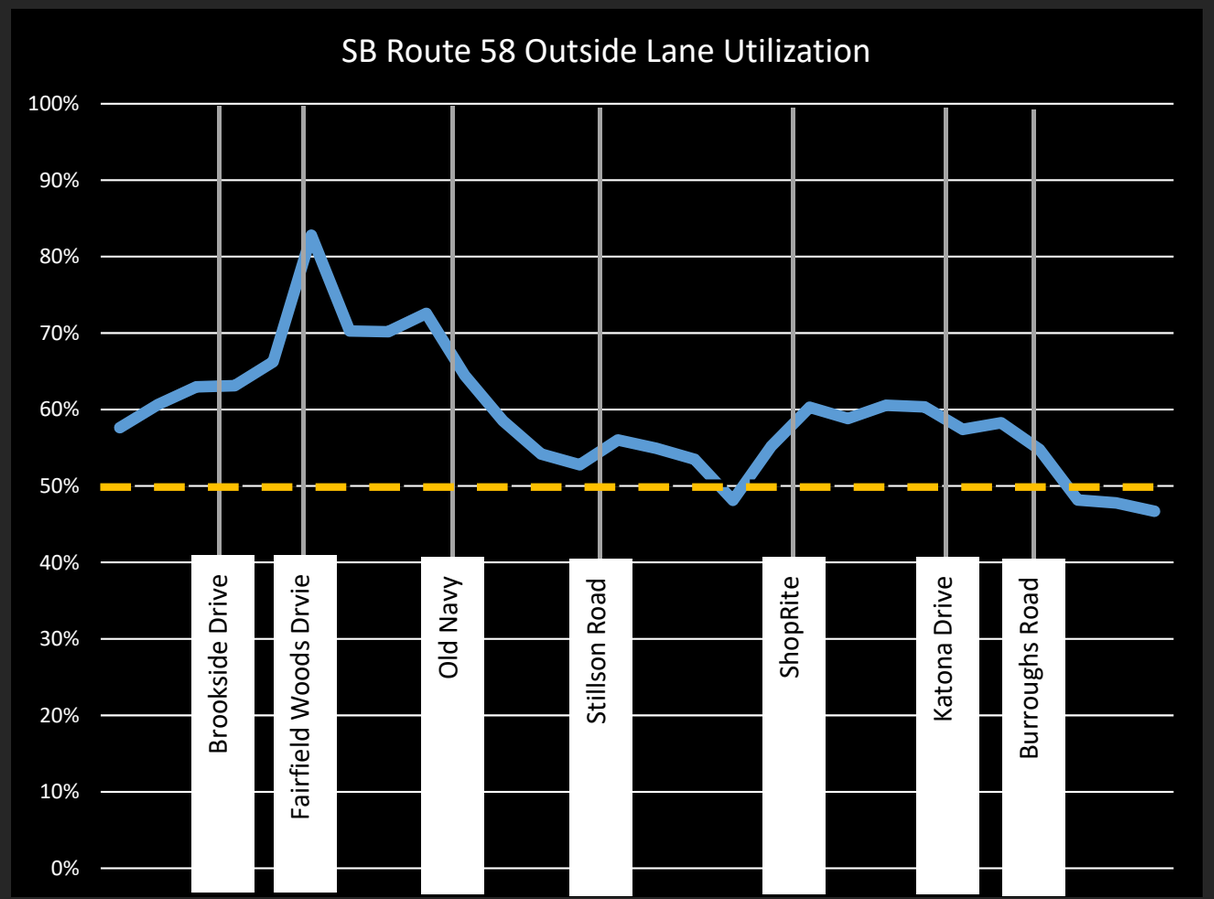


Lane utilization - video



Lane utilization





Traffic volume by lane

Traffic volume by lane

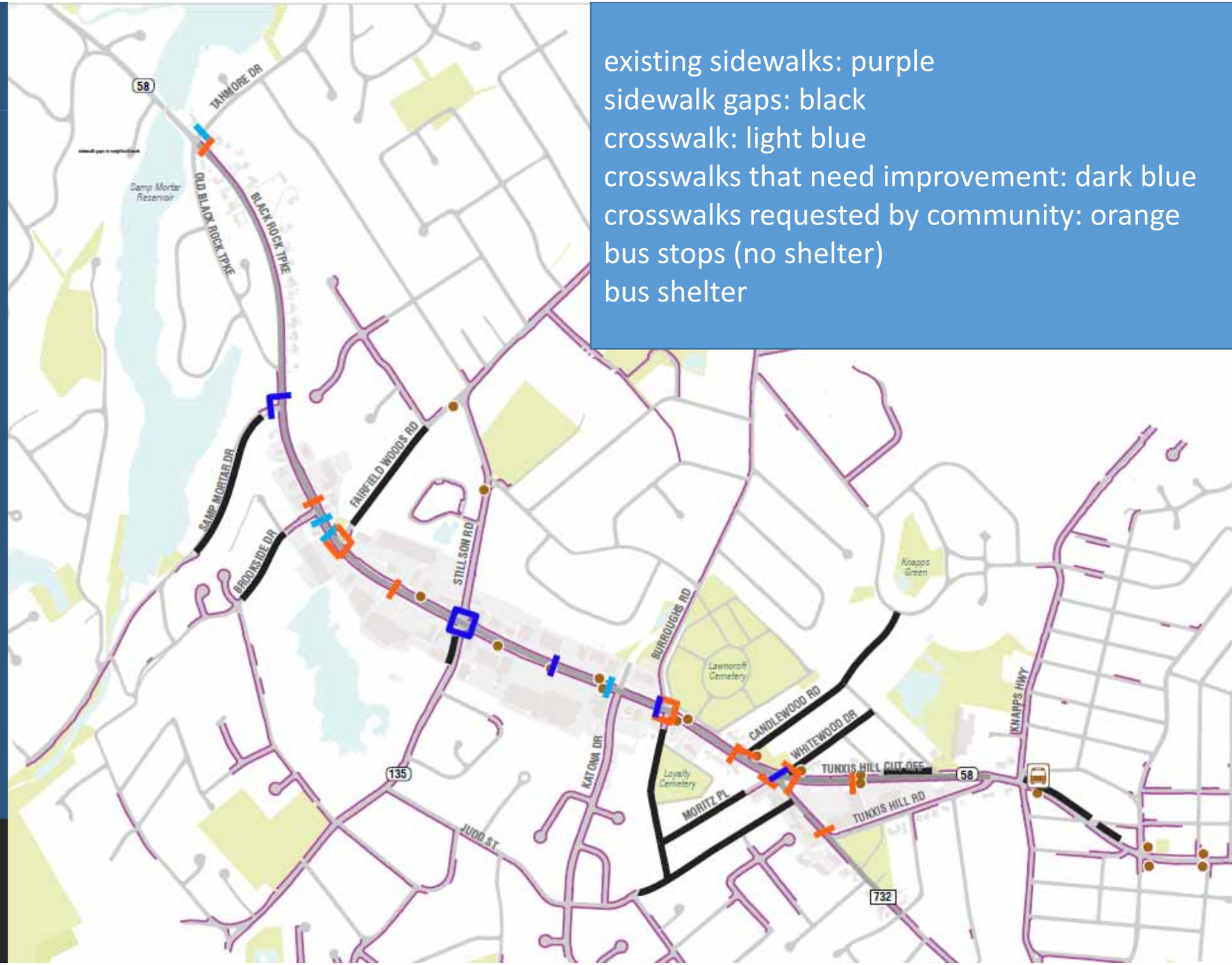
Parking lot circulation - video

- Vehicles waiting to turn into lots block traffic flow on Black Rock Turnpike
- Exiting traffic at high volume plazas can block intersections on BRT

ACCESSIBILITY

KEY ISSUES

- Sidewalk gaps
- Pedestrian crossings
- No bicycle facilities
- Minimal bus stops
- Sign clutter/ Wayfinding



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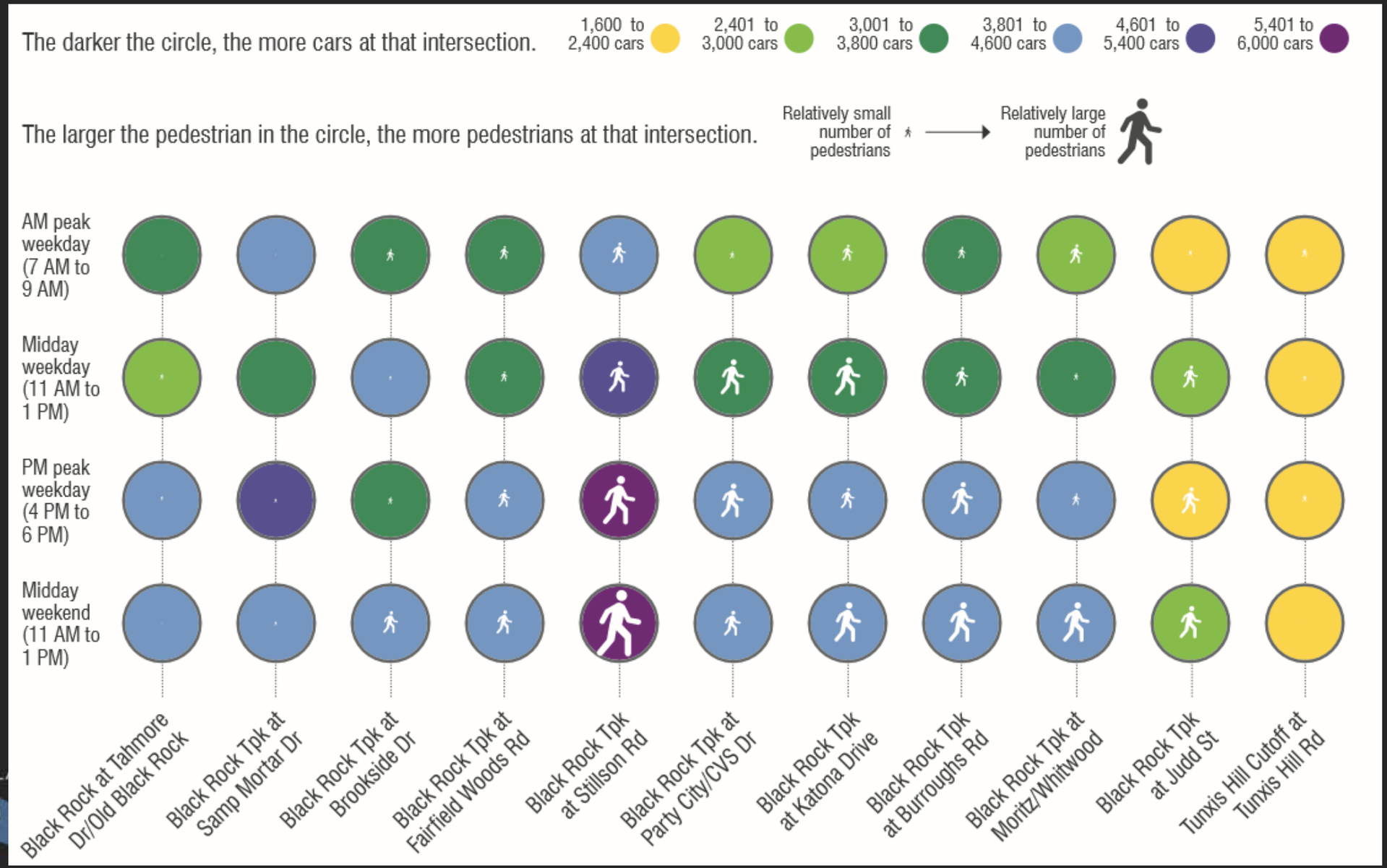
Bus stops

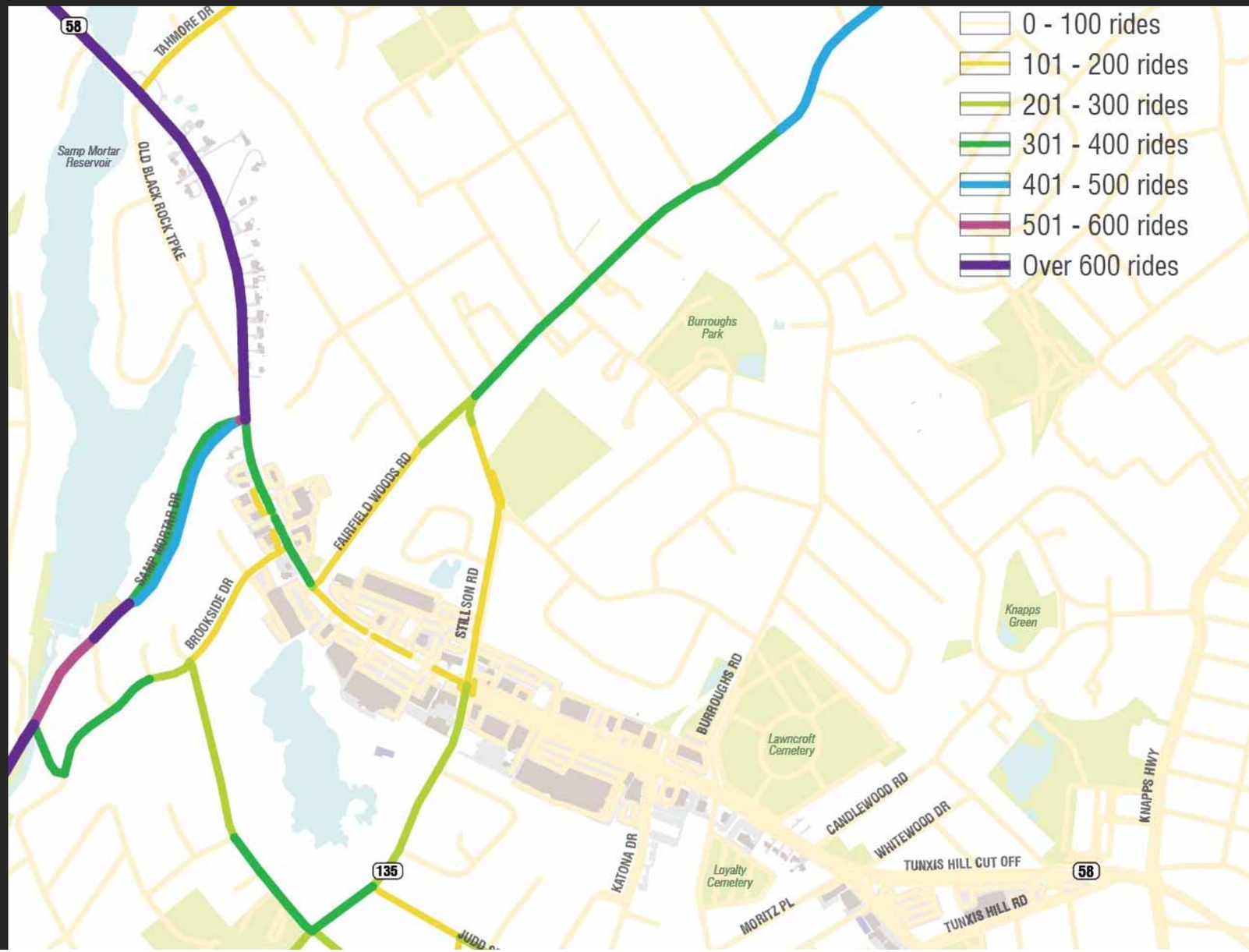
Pedestrian Counts



Bicycle Ridership

Strava Counts confirmed with traffic count data

- Bicycling limited to northern end of corridor
- Neighborhoods used to bypass Turnpike



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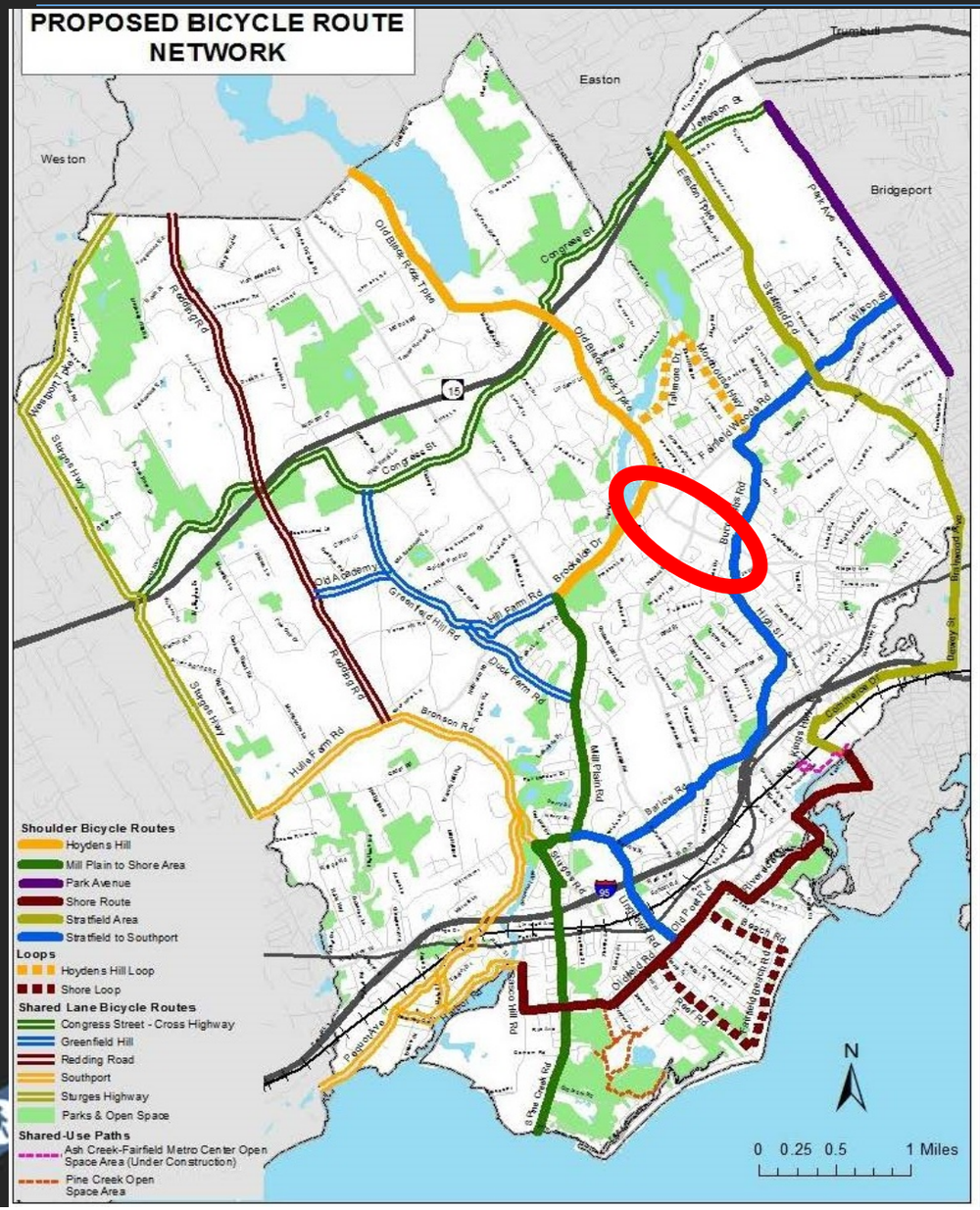
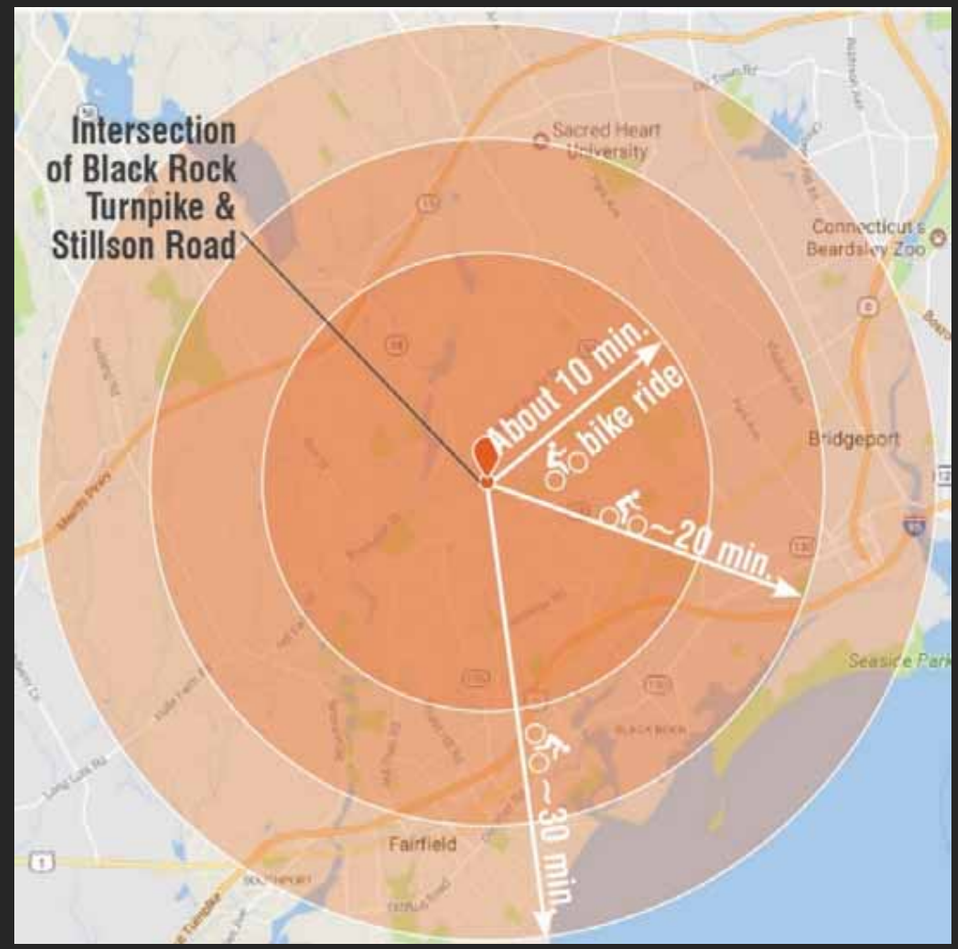
…But Potential Latent Demand





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POTENTIAL CORRIDOR SOLUTIONS

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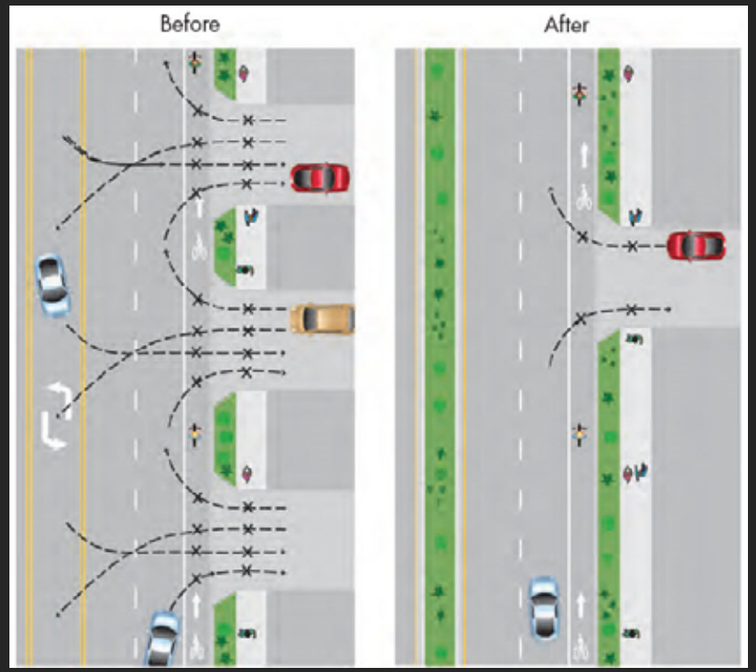
Potential corridor solutions



Access Management

Add turn lanes at intersections

Road diet (TWLTL)

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Potential corridor solutions

Center median

Reduce left turn intersections

Modern roundabouts

Potential corridor solutions

Signal timing optimization

Realignment

Streetscape improvements

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Potential corridor solutions

Road diet with separated bike lanes

Improved bus stops

Pedestrian refuge islands

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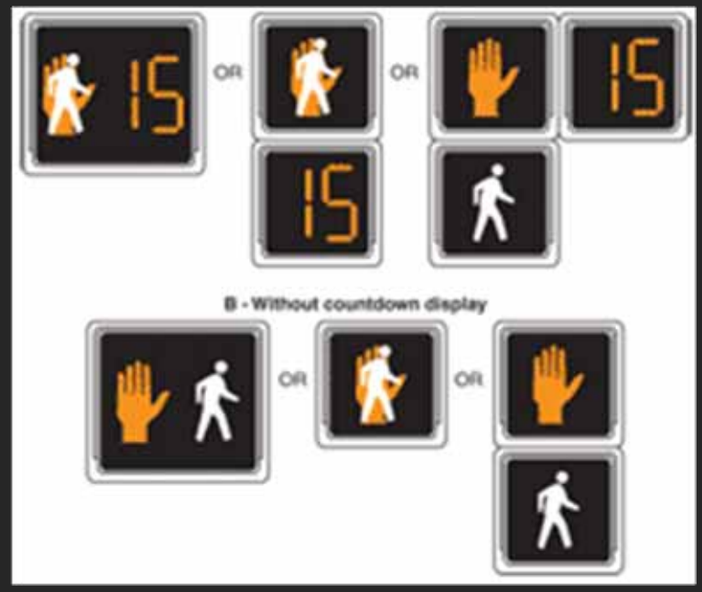
Potential corridor solutions

Additional pedestrian crossings

Improved crosswalk visibility



Pedestrian signalization

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Potential corridor solutions

Fill in sidewalk gaps

Reduce sign clutter

Improve pedestrian connections between parking lots

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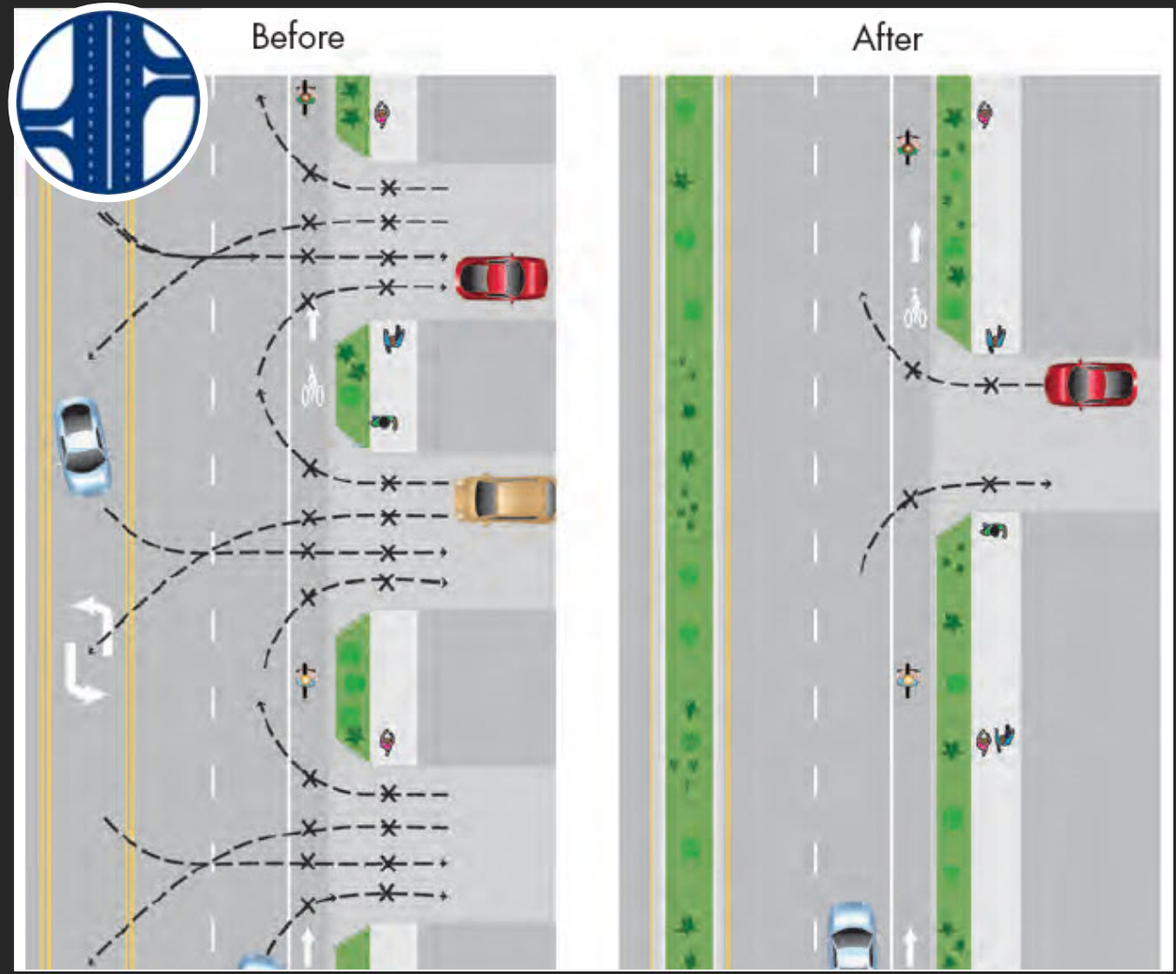
Question 1: Potential Improvement Strategies

Do you think ACCESS MANAGEMENT would improve safety and congestion if applied somewhere along the Black Rock Turnpike?

1. Yes
2. No
3. Unsure



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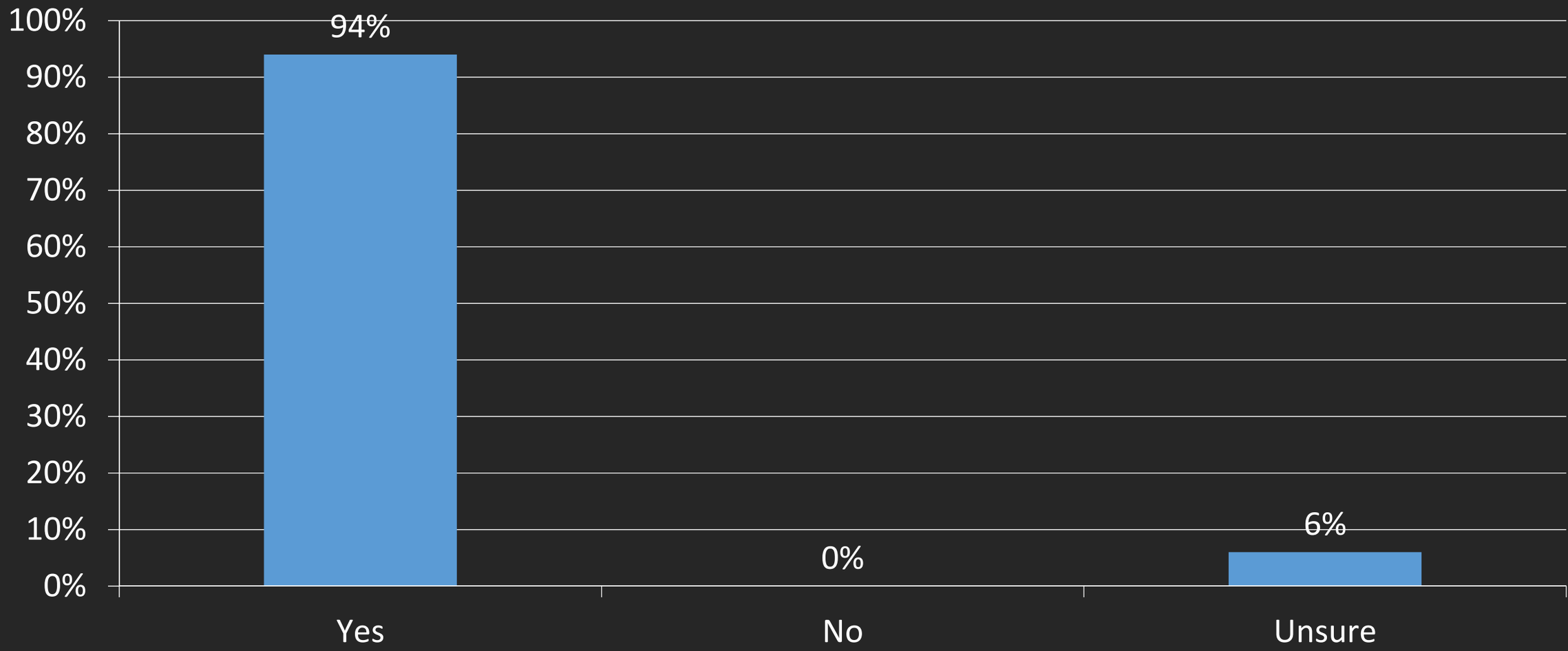
QUESTION 1 RESULTS: Access Management



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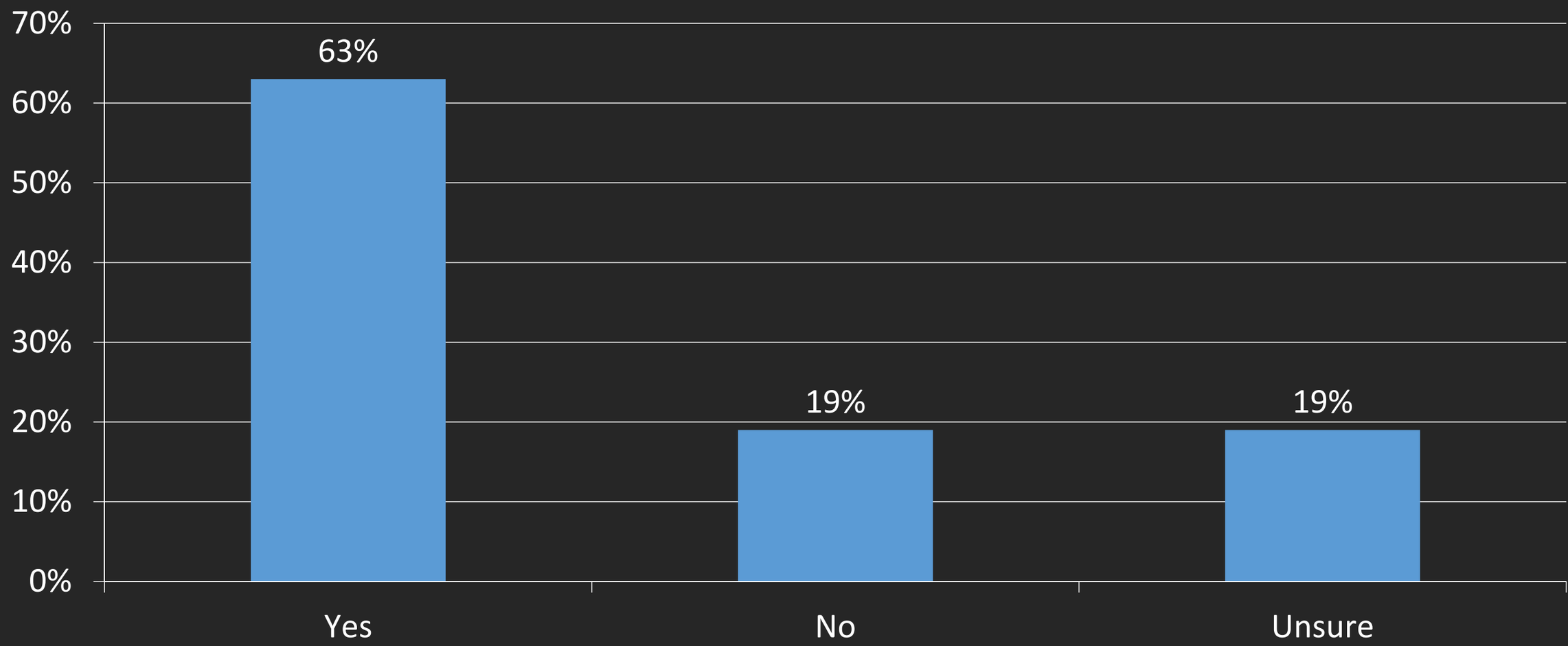
Question 2: Potential Improvement Strategies

Do you think a ROAD DIET would improve safety and congestion if applied somewhere along the Black Rock Turnpike?

1. Yes
2. No
3. Unsure

Question 2 Results: Road Diet



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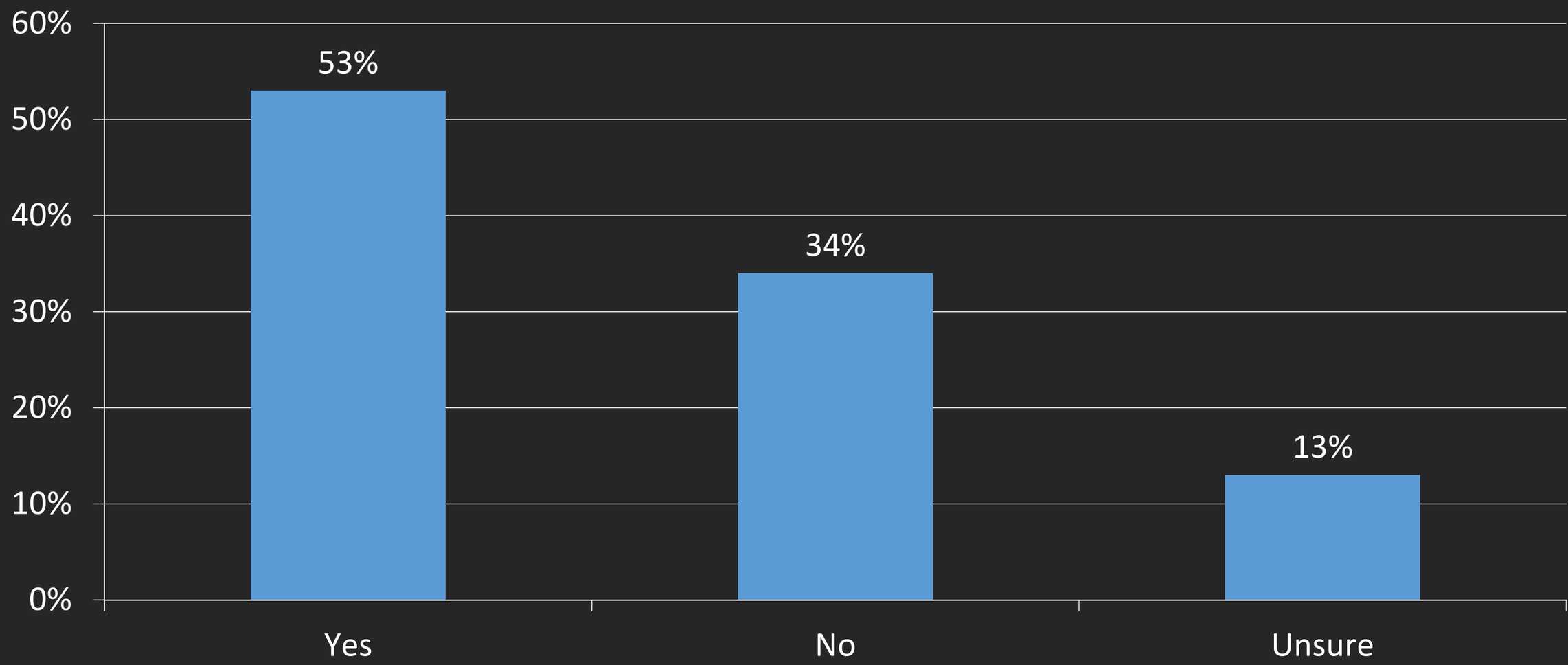
Question 3: Potential Improvement Strategies

Do you think a CENTER MEDIAN would improve safety and congestion if applied somewhere along the Black Rock Turnpike?

1. Yes
2. No
3. Unsure

QUESTION 3 RESULTS: Center Median



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Question 4: Potential Improvement Strategies

Do you think a MODERN ROUNDABOUT would improve safety and congestion if applied somewhere along the Black Rock Turnpike?

1. Yes
2. No
3. Unsure

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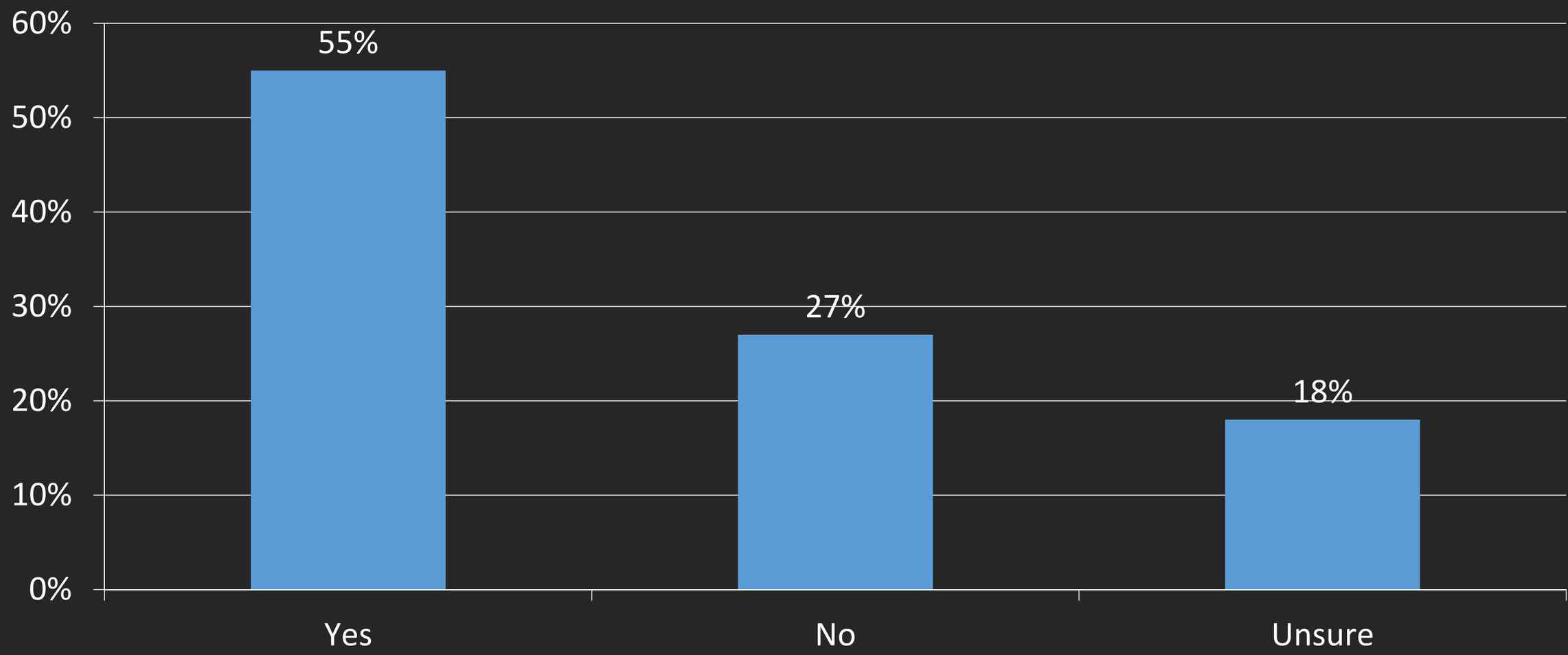
Question 4 RESULTS: Modern Roundabout



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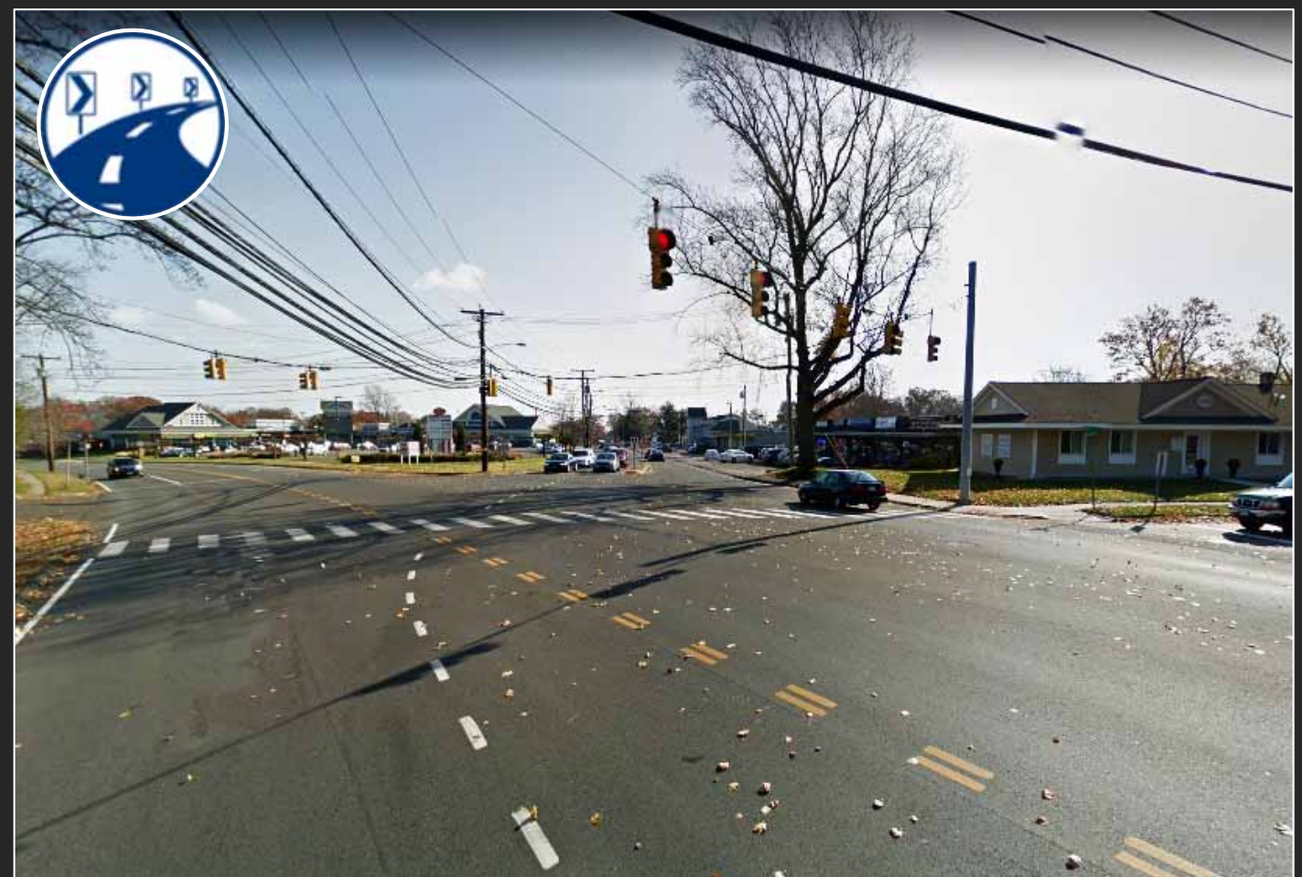
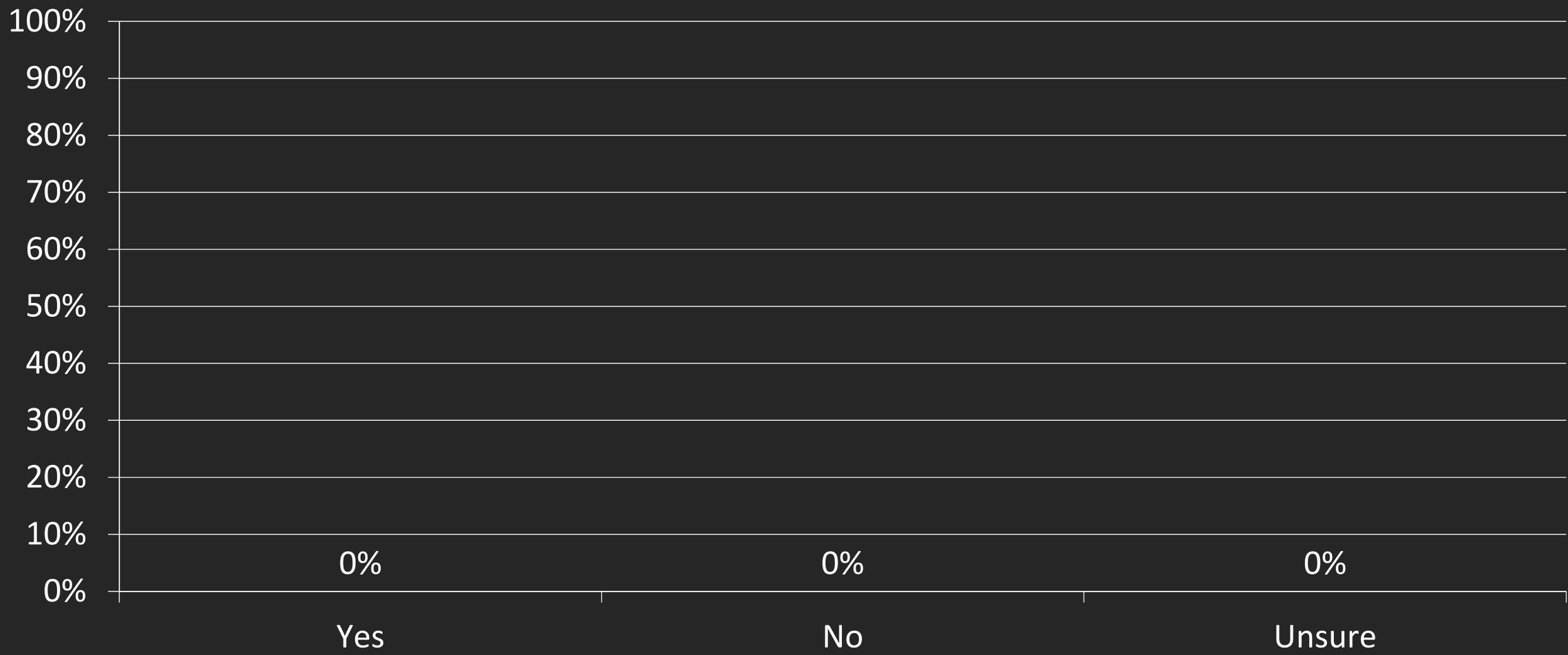
Question 5: Potential Improvement Strategies

Do you think REALIGNMENT would improve safety and congestion if applied somewhere along the Black Rock Turnpike?

1. Yes
2. No
3. Unsure



QUESTION 5 RESULTS: Realignment



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Question 6: Potential Improvement Strategies

Do you think SEPARATED BIKE LANES would improve safety and congestion if applied somewhere along the Black Rock Turnpike?

1. Yes
2. No
3. Unsure

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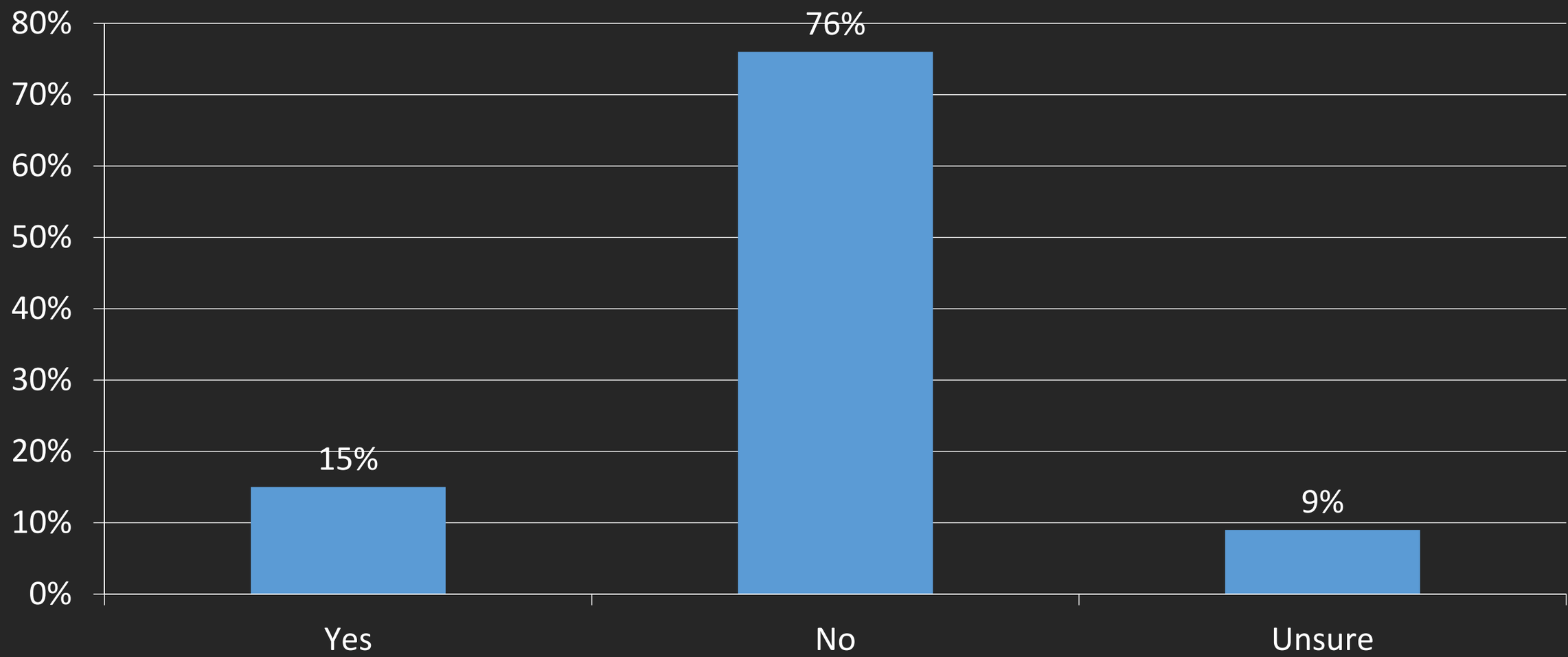
QUESTION 6 RESULTS: Separated Bike Lane

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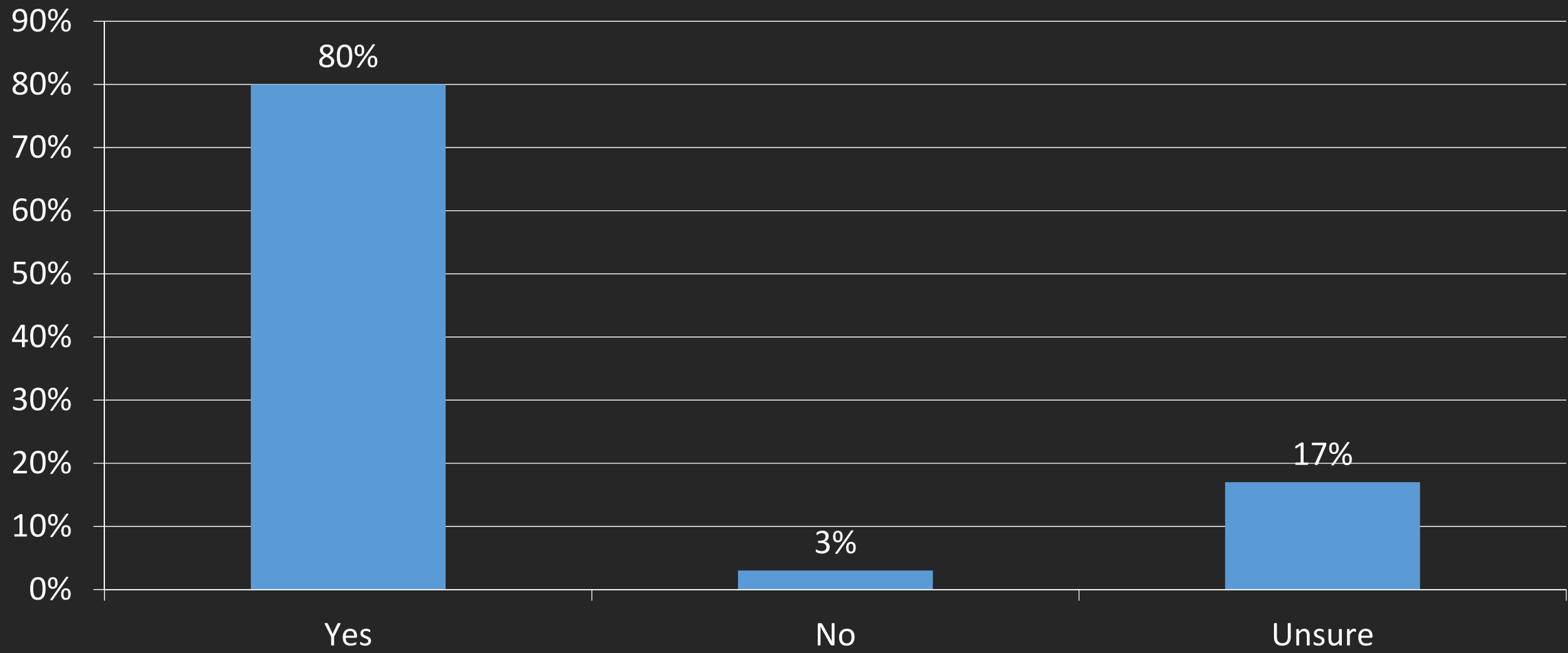
Question 7: Potential Improvement Strategies

Do you think more CROSSWALKS and REFUGE ISLANDS would improve safety and congestion if applied somewhere along the Black Rock Turnpike?

1. Yes
2. No
3. Unsure

QUESTION 6 RESULTS: Pedestrian Crossings

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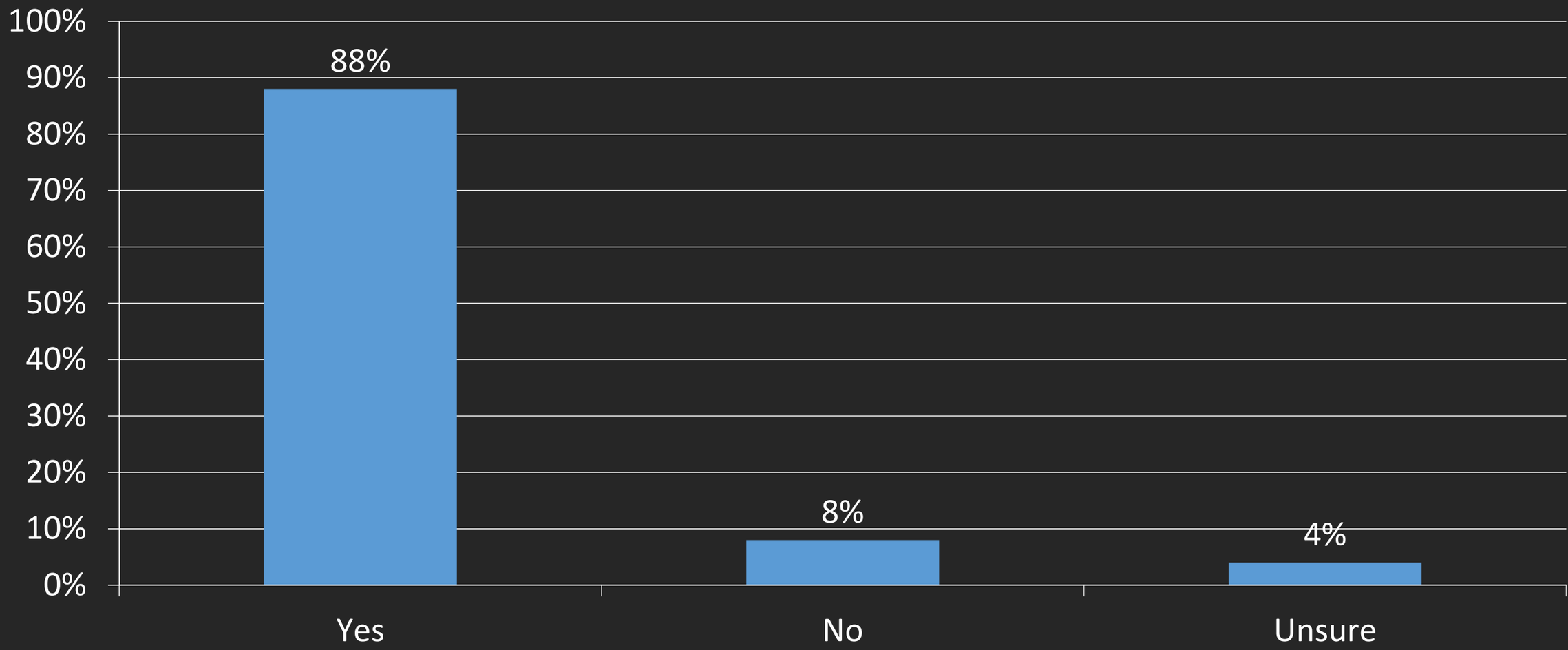
Question 7: Potential Improvement Strategies

Do you think ENHANCED PEDESTRIAN CONNECTIONS BETWEEN PARKING LOTS would improve safety and congestion if applied somewhere along the Black Rock Turnpike?

1. Yes
2. No
3. Unsure

QUESTION 7 RESULTS: Enhanced Ped Connections

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NEXT STEPS

- Future year forecast over 20 years
- Test alternative concepts
- Develop a draft corridor improvement plan


QUESTIONS