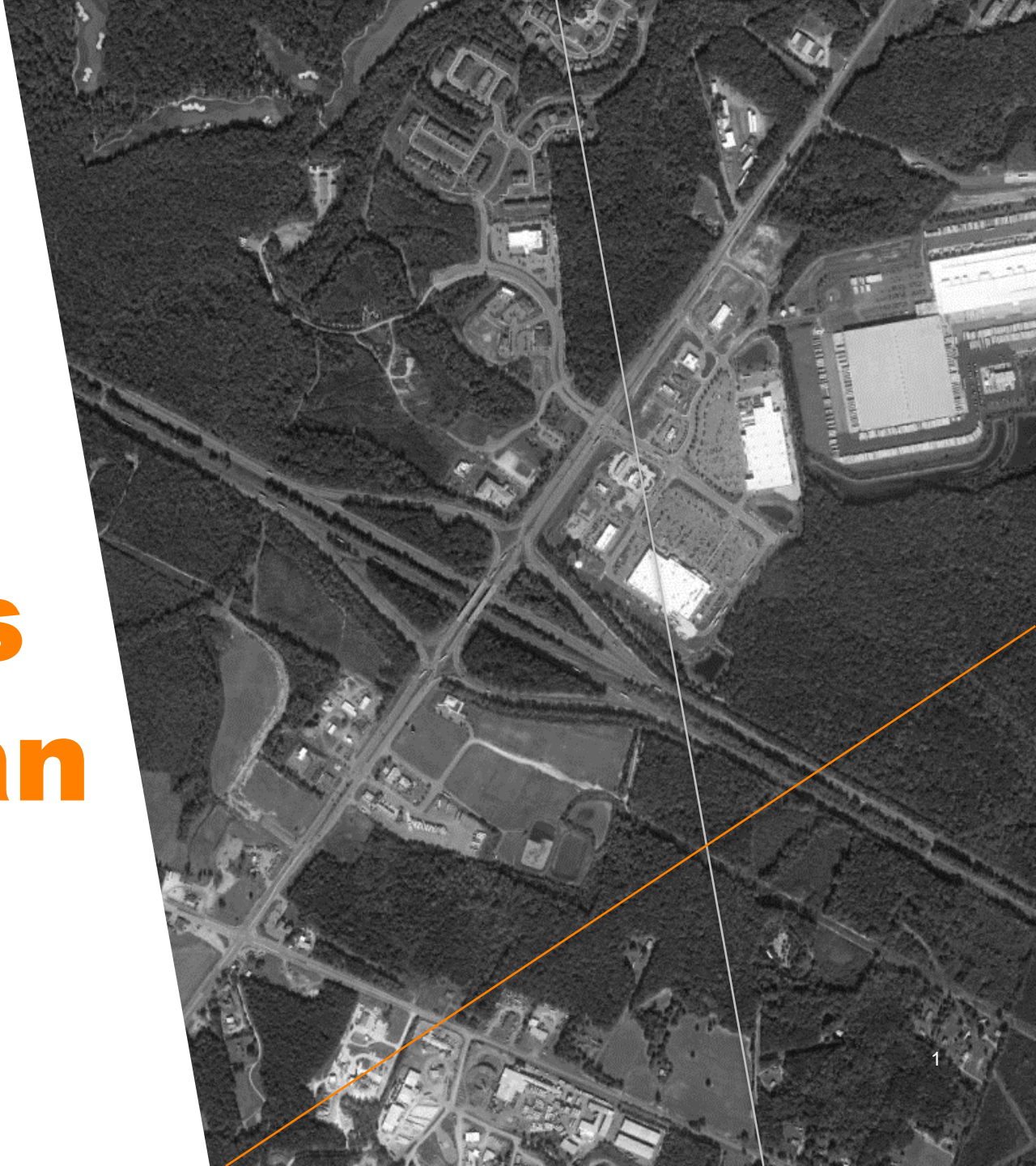




# Zion Crossings Small Area Plan

February 25, 2021

Virtual Meeting

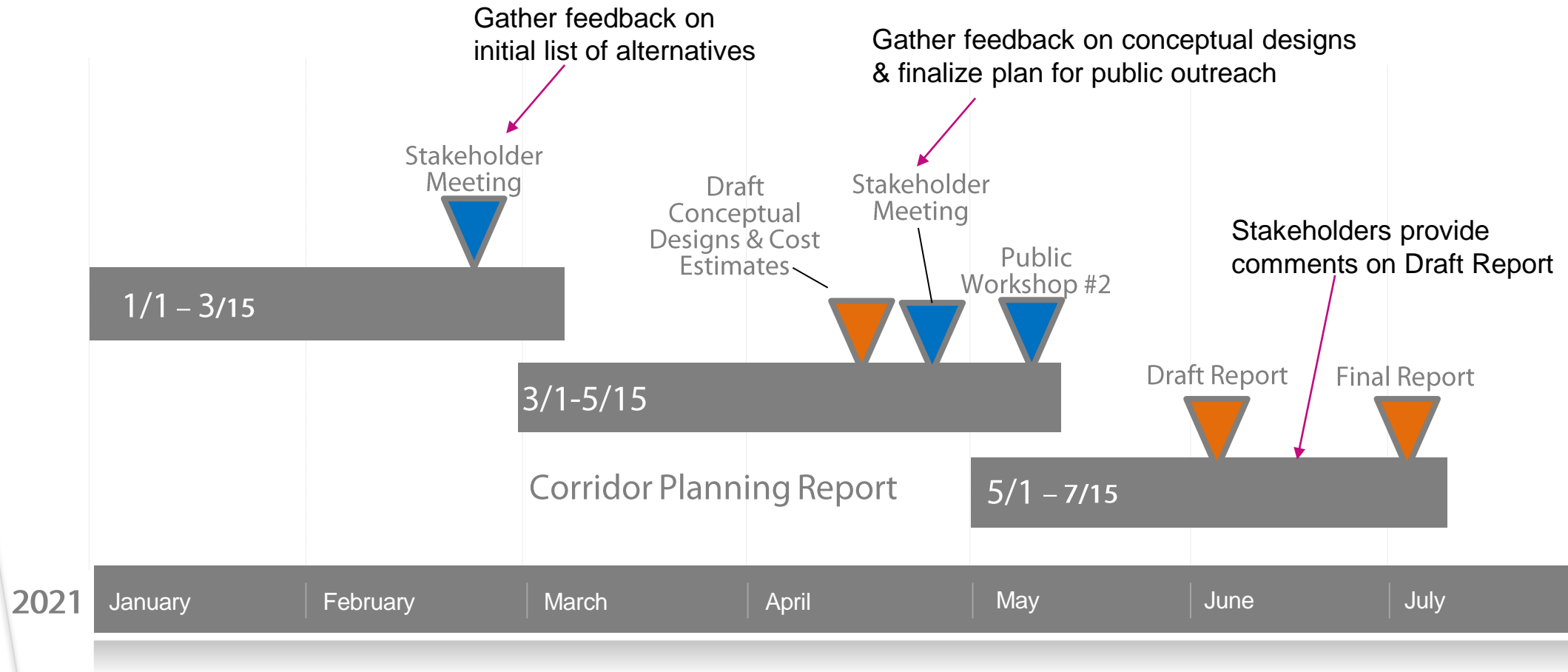


# Agenda

- Welcome and Introductions
- Schedule
- Review of Project Purpose
- Review of Public Outreach
- Alternatives Development
  - Intersection Improvements
  - Corridor and/or Segment Treatments
- Next Steps and Next Meeting



# Phase 2 Study Schedule



# Review of Project Purpose

Identify and vet operational and safety improvements along US 15 and US 250

- Engage stakeholders
- Confirm project goals
- Develop measures of effectiveness
- Evaluate and select potential solutions



# Zion Crossroads

Small Area Study

# Public Meeting Results

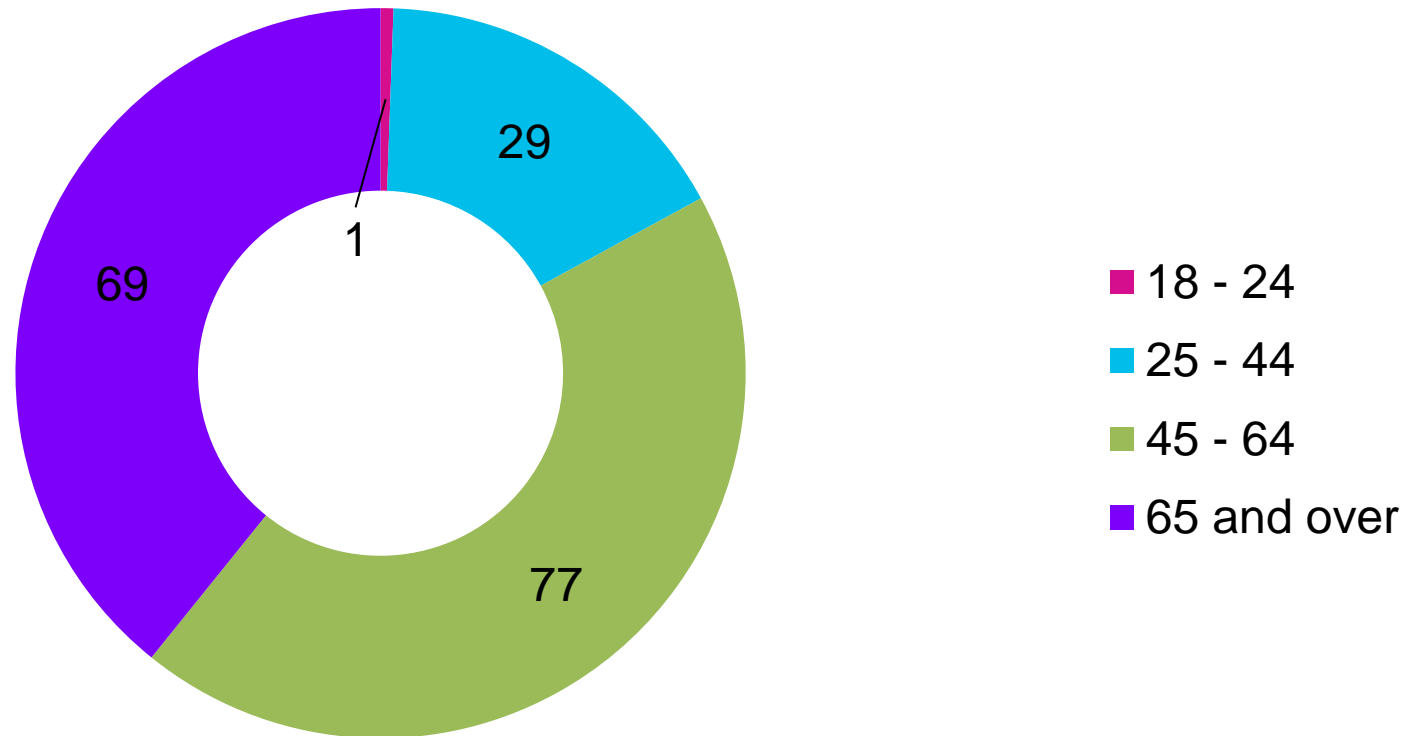
# Who did we reach?

- **319** Visitors to MetroQuest Survey
- **218** Survey Participants



# Optional Information:

What is your age?



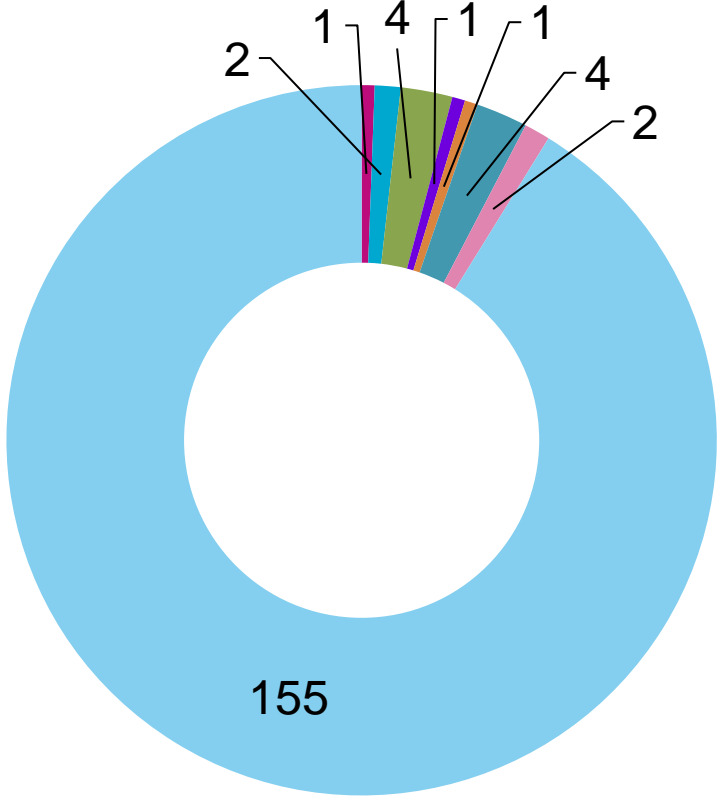
## KEY FINDING:

*39% of the respondents were older drivers and a single respondent was under the age of 24.*



# Optional Information:

## What is your race or ethnic background?



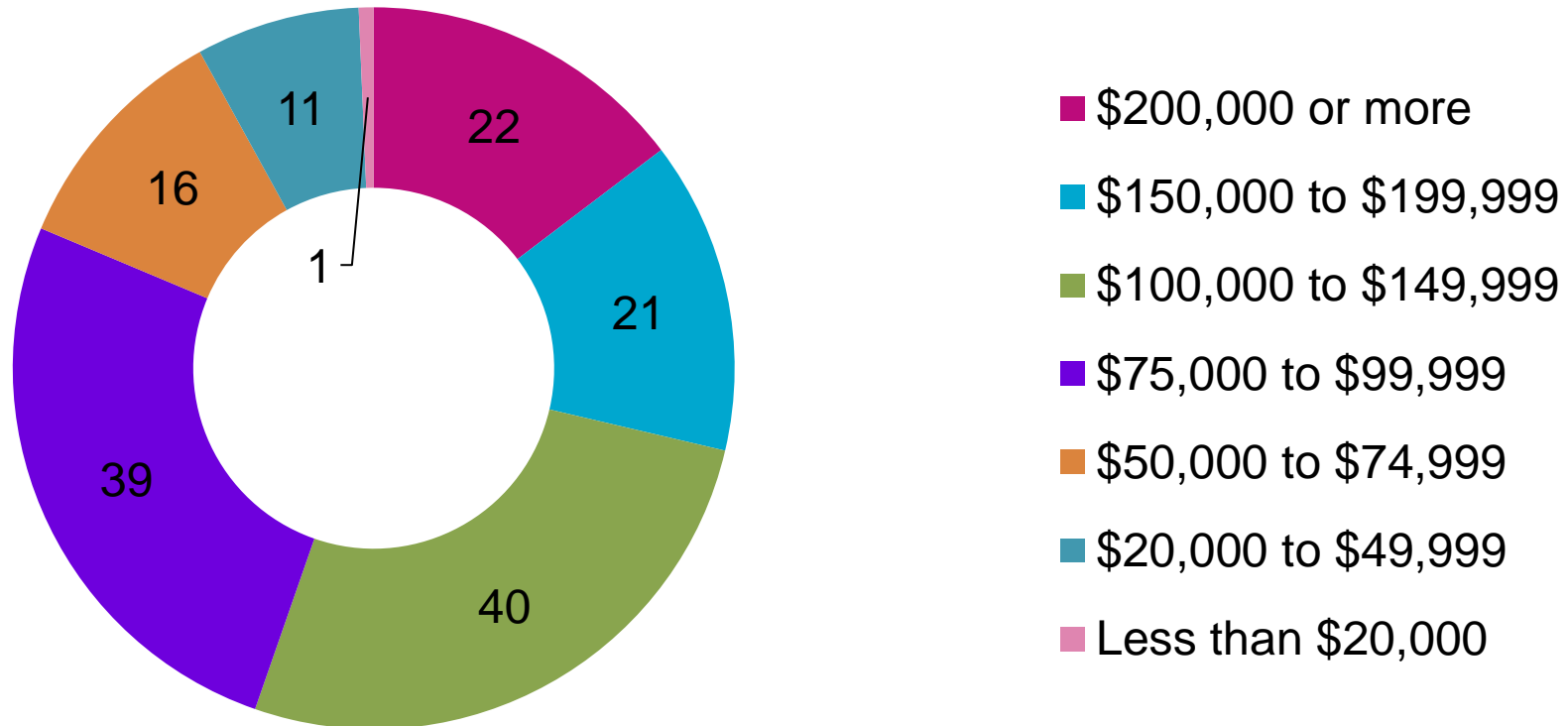
- American Indian or Alaska Native
- Asian
- Black or African American
- Hispanic or Latino
- Native Hawaiian or other Pacific Islander
- Other
- Two or more races
- White

**KEY FINDING:**  
*91% of the respondents were white.*



# Optional Information:

## What is your total yearly household income?



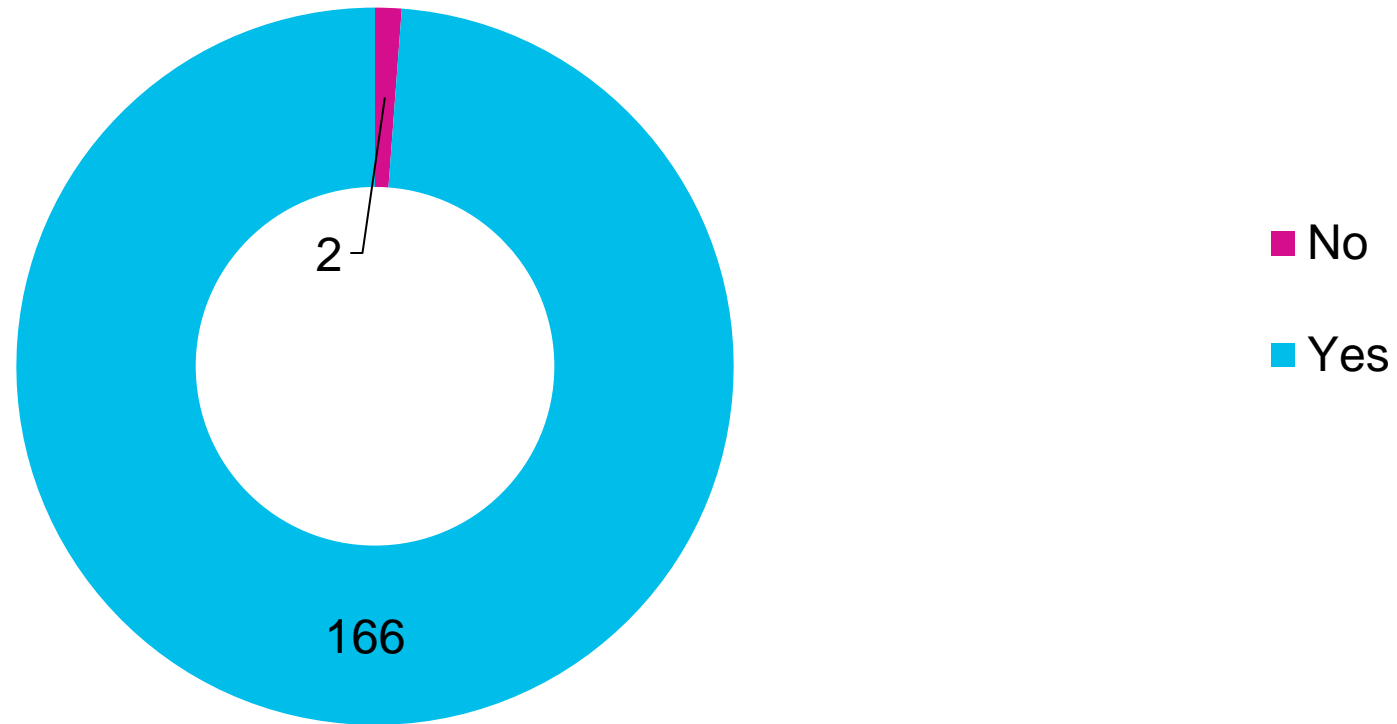
### KEY FINDING:

*19% of the respondents had yearly household incomes less than \$75,000.*



# Optional Information:

## Is English your first language?



### KEY FINDING:

99% of the respondents spoke English as their first language. Other languages spoke included Russian, Tagalog and "Other."

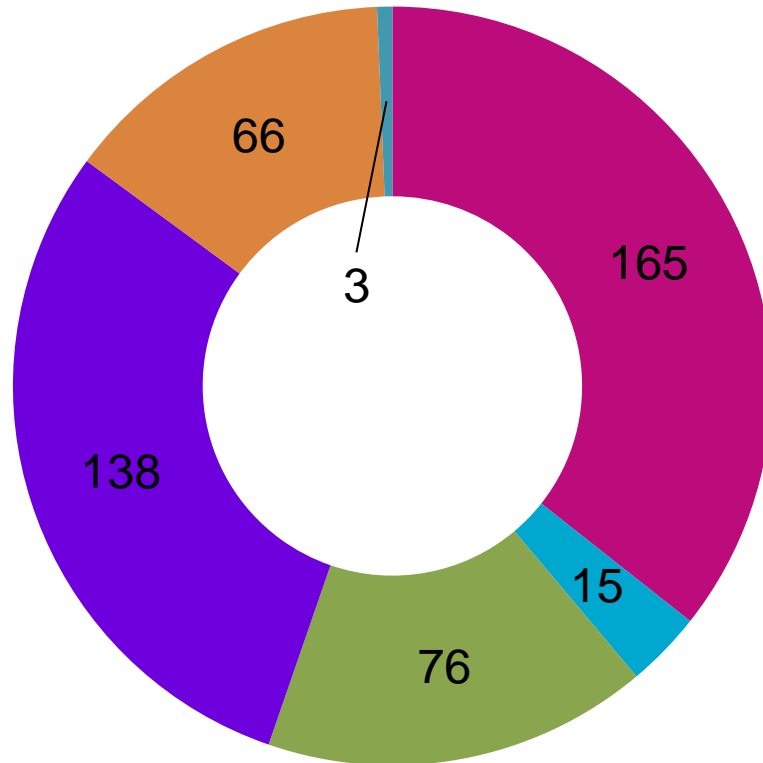


**What did they say?**



# About You:

## What is your relationship to Zion Crossroads?



- I live along US 15 or US 250.
- I work along US 15 or US 250.
- I commute through US 15 or US 250.
- I complete my shopping along US 15 or US 250.
- I use US 15 or US 250 for recreational purposes.
- I use the Park & Ride lot in Zion Crossroads.

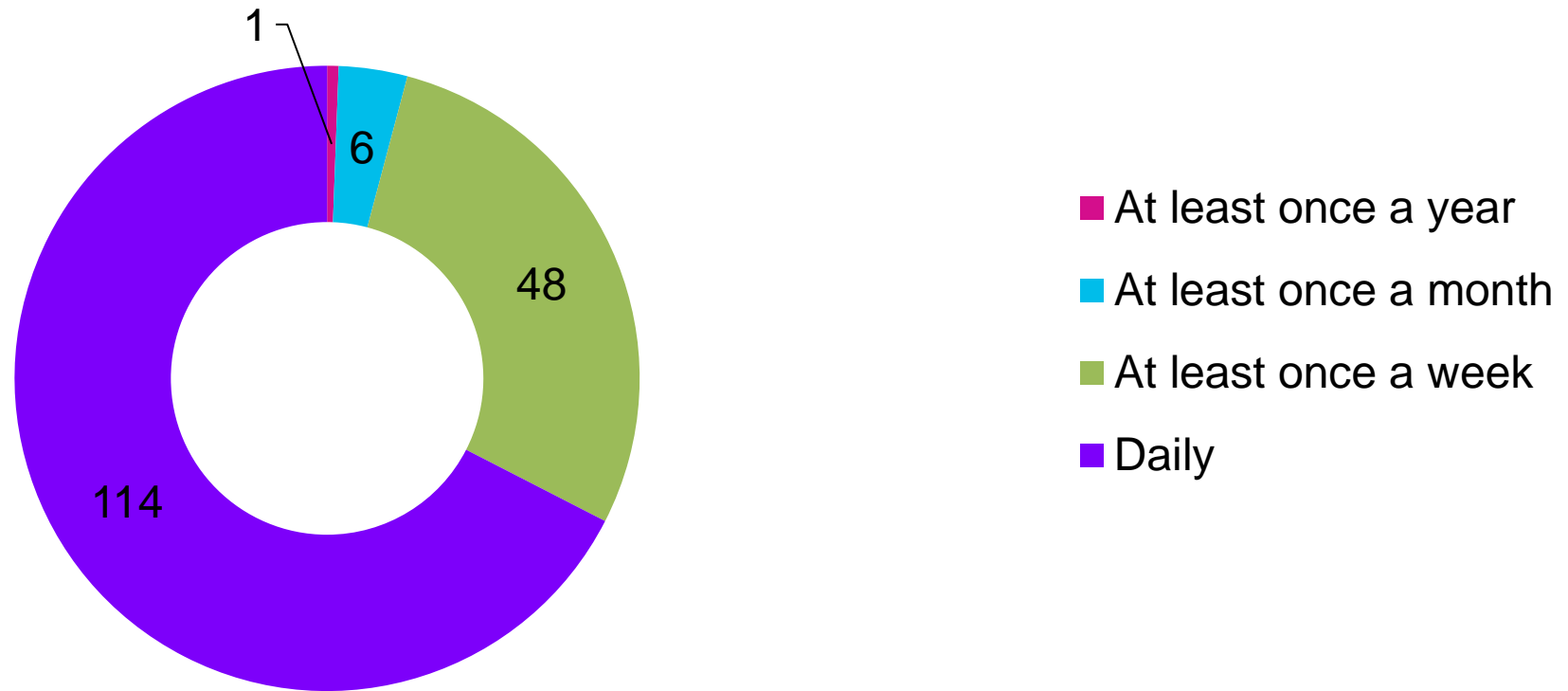
### KEY FINDING:

*Over 35% of all respondents live along US 15 or US 250 and 30% complete their shopping along these same sections.*



# About You:

## How often do you travel in or through Zion Crossroads?



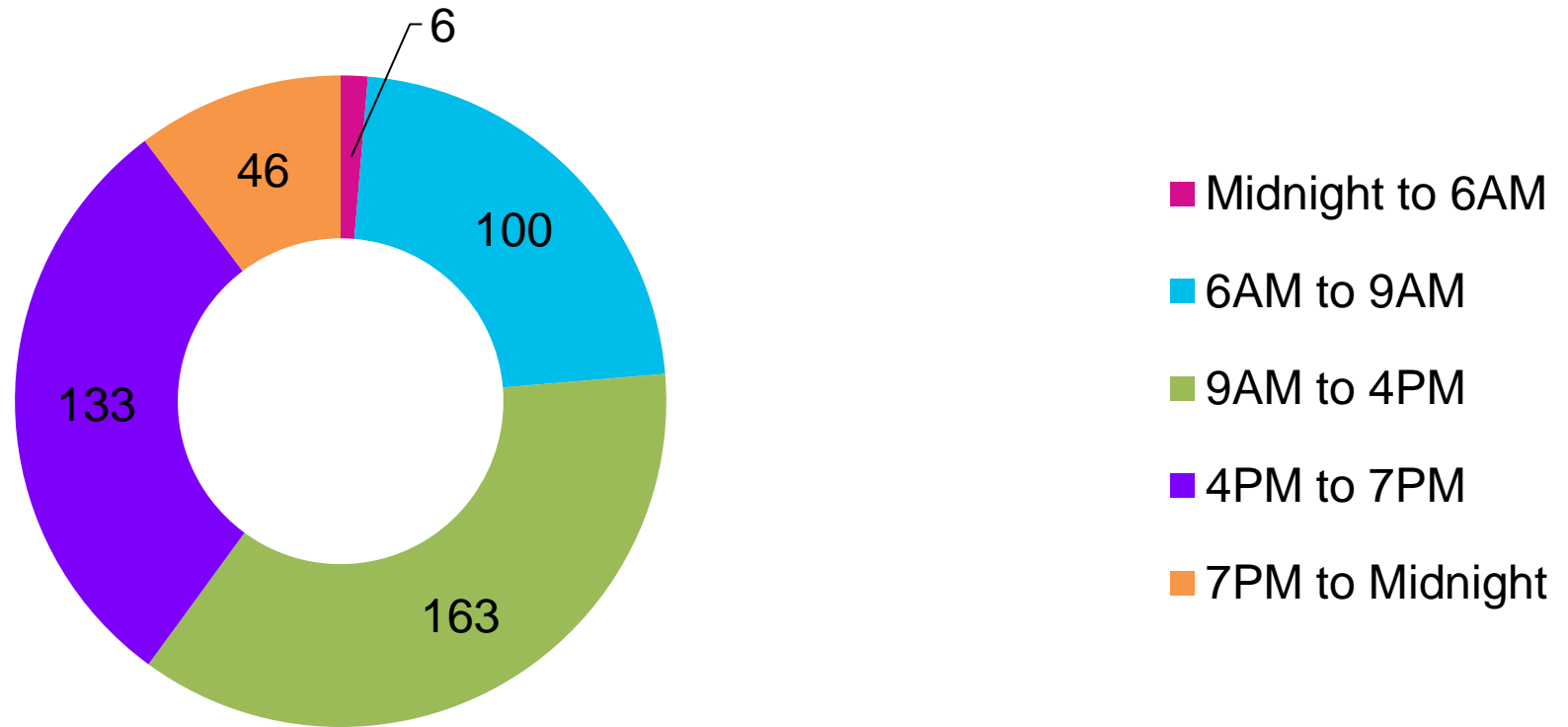
### KEY FINDING:

*Over 67% of all respondents travel through Zion Crossroads daily.*



# About You:

When do you normally travel on these sections of US 15 or US 250?



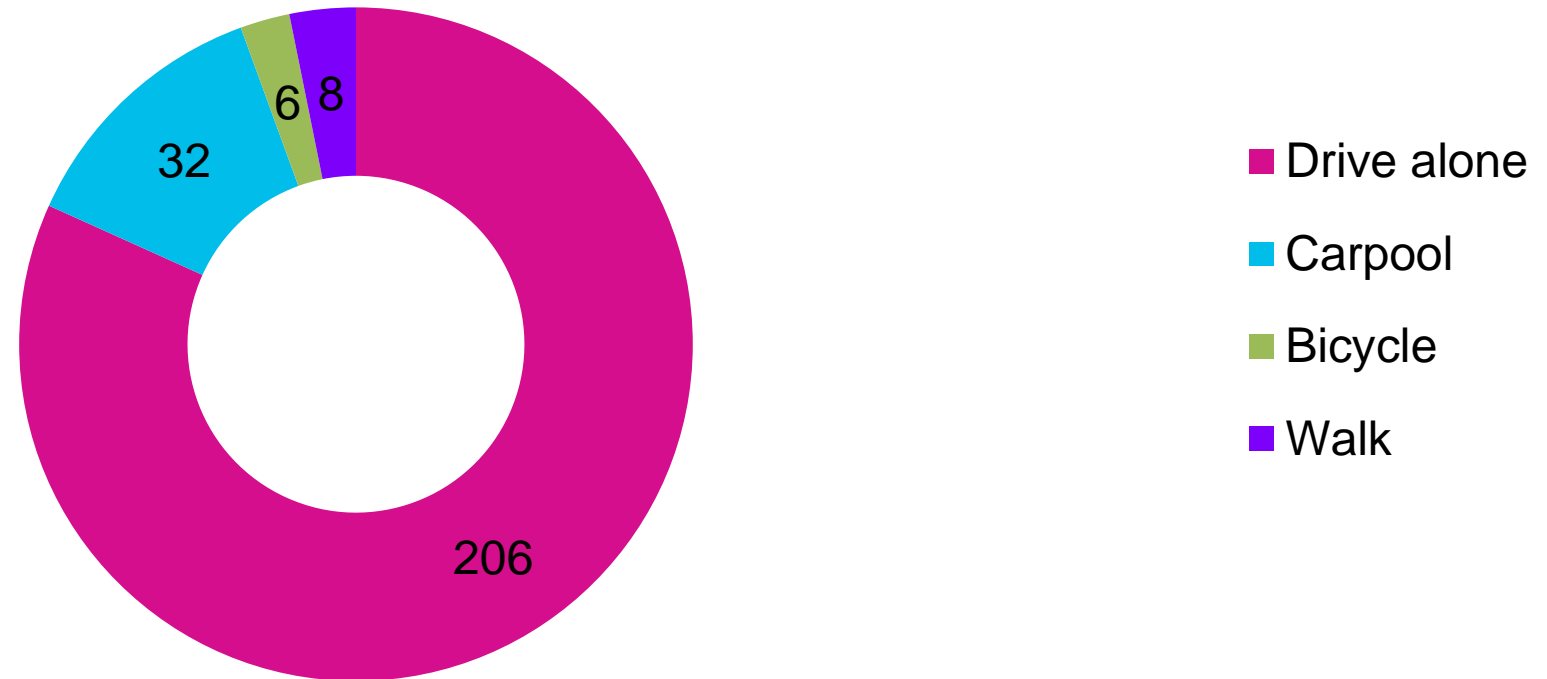
**KEY FINDING:**

Over 36% of all respondents use US 15 or US 250 from 9AM – 4PM.



## About You:

What mode(s) do you use when traveling these sections of US 15 or US 250?



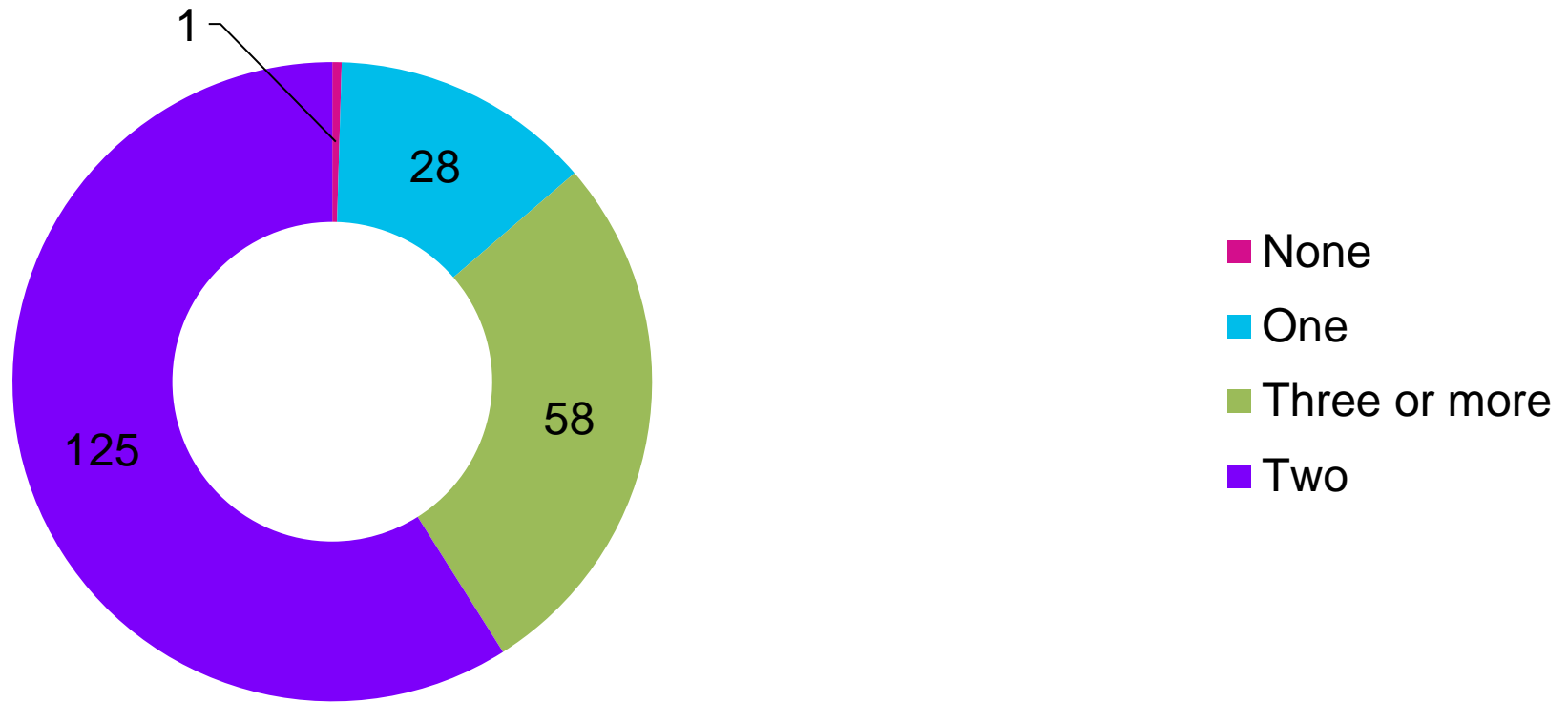
### KEY FINDING:

*Only 6% of all respondents walk or bike along these sections of US 15 or US 250.*



# About You:

How many automobiles do you own or have access to?



## KEY FINDING:

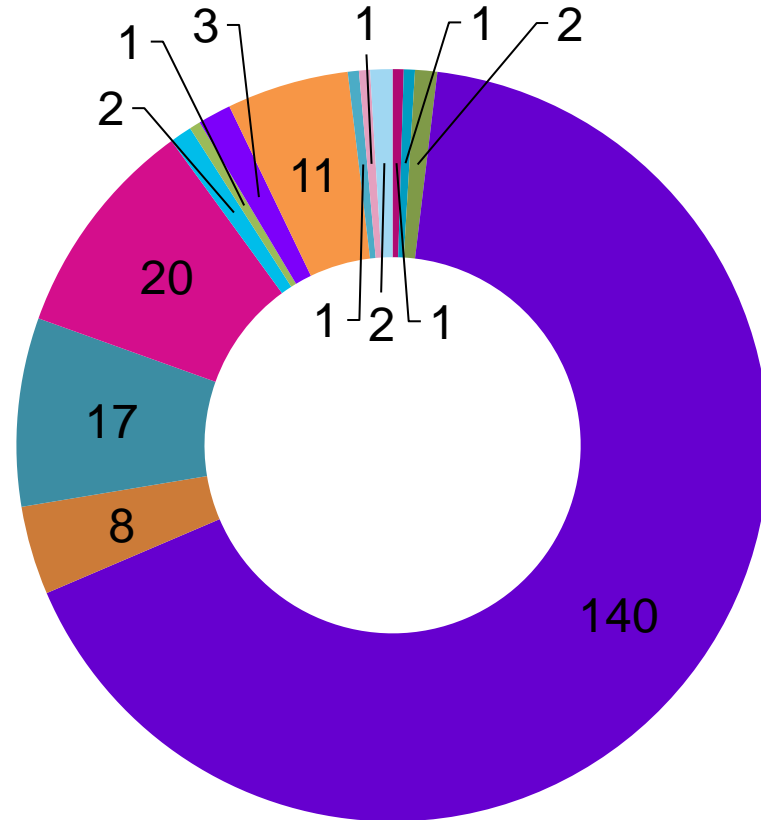
*13% of the respondents had access to a single vehicle while one respondent had no access.*





# About You:

## What is your home zip code?



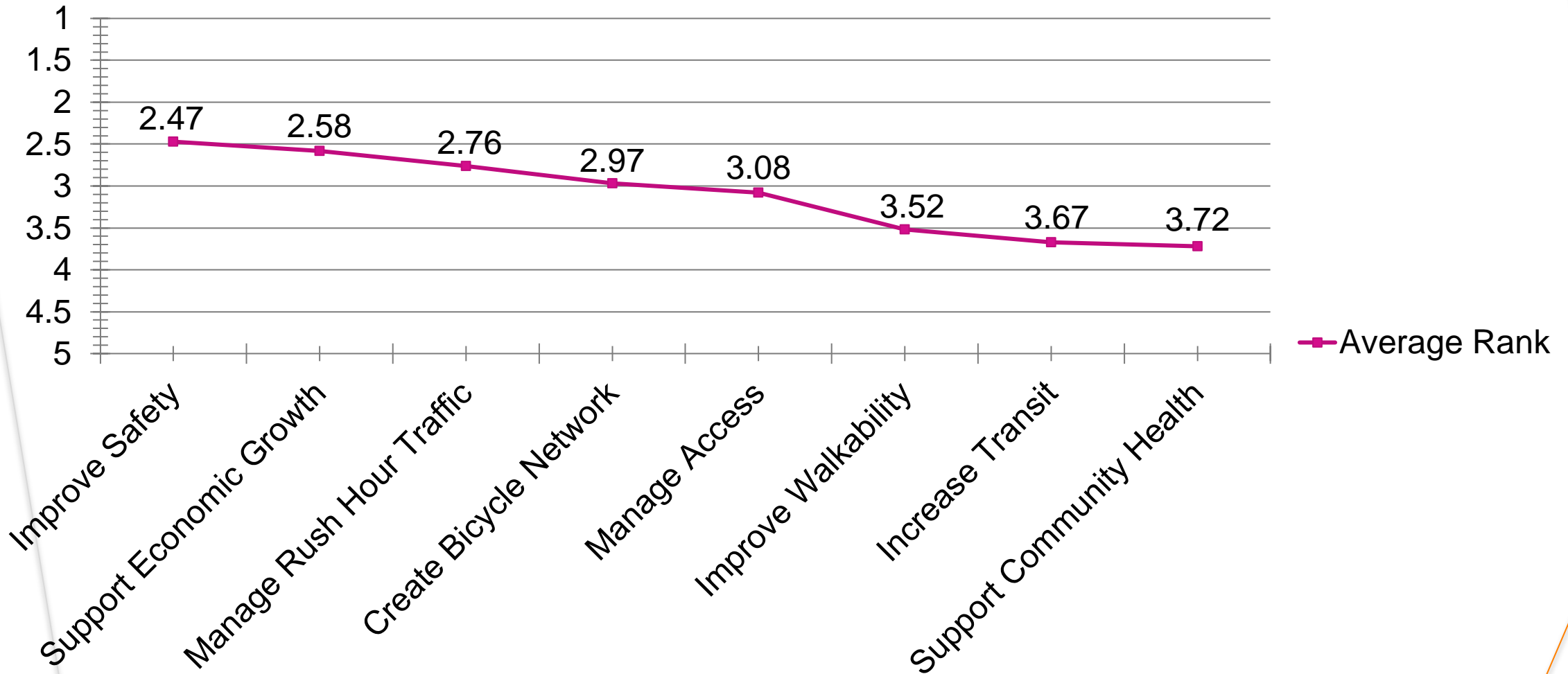
### KEY FINDING:

Over 67% of all respondents have a home zip code of 22942.



# Study Goals

## Ranking of Study Goals

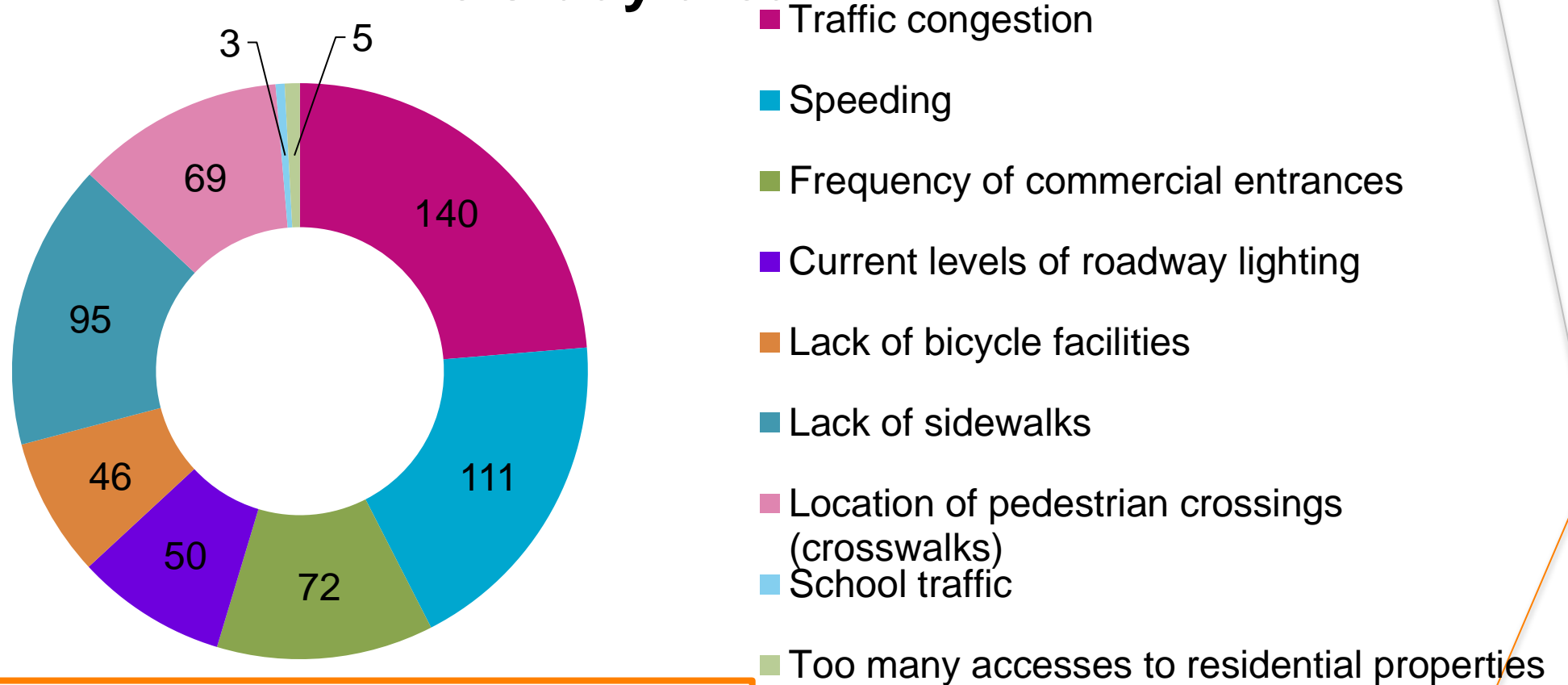


Note: Rank 1 was "highest priority" and Rank 5 the "lowest"



# Transportation Issues:

## What transportation problems have you observed in the study area?



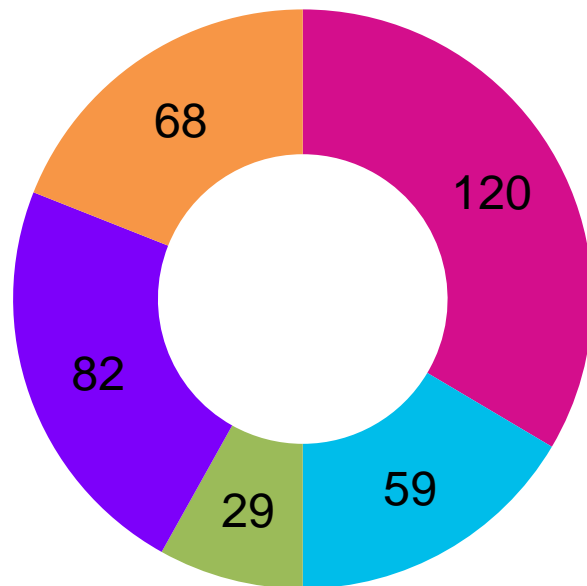
### KEY FINDING:

*Traffic congestion, speeding and lack of sidewalks were the top three issues observed by respondents.*



# Automobile Opportunities:

What transportation investments do you believe would improve driving conditions on US 15 or US 250?



- Reduce congestion and delay at intersections
- Slower speeds through roadway design
- Slower speeds through law enforcement
- Reduce roadway turning conflicts
- Improve lighting

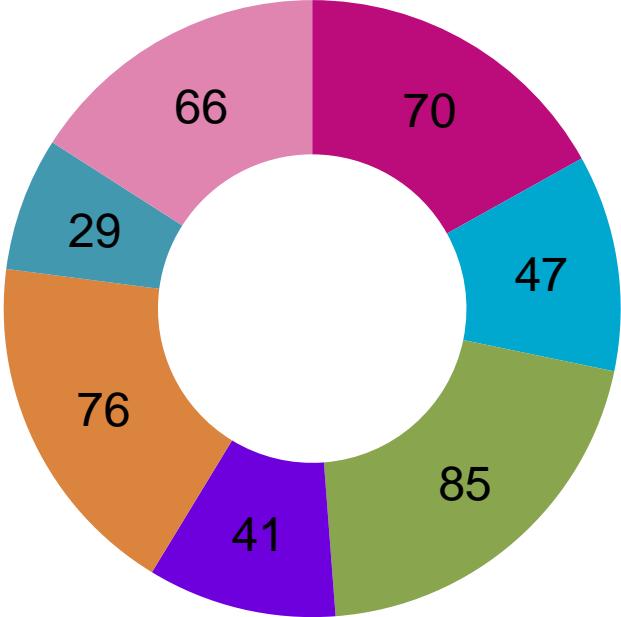
## KEY FINDING:

*Reducing congestion and delay at intersections was the top recommendation by the respondents to improve the automobile experience in Zion Crossroads.*



# Non-Automobile Opportunities:

## What investments would you prefer to consider non-driving modes of transportation along US 15 or US 250?



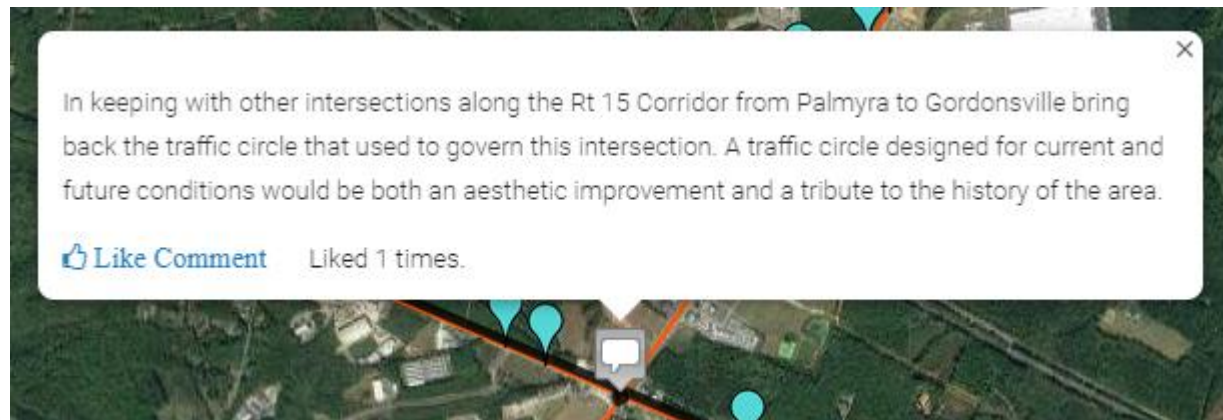
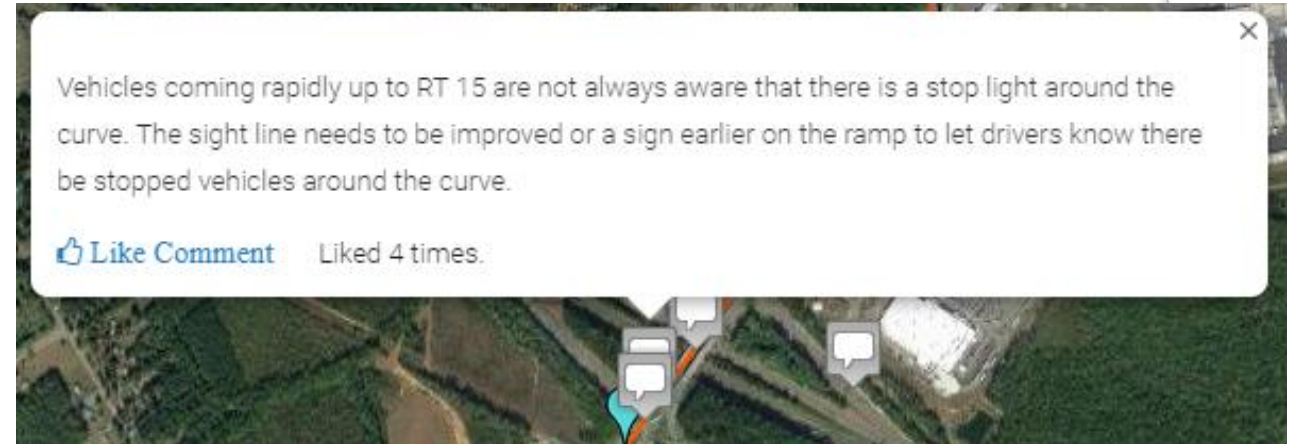
- More trails/shared use paths
- More bicycle lanes
- More sidewalks
- Slower traffic
- Improved lighting
- Transit service
- I would not bike, walk or use transit along US 15 or US 250

**KEY FINDING:**  
*More sidewalks, more trails/shared use paths and improved lighting were the top three recommendations to improve the non-automobile experience in Zion Crossroads.*

# Website Comment Map



# Example Response from Comment Map





# Zion Crossroads

Small Area Study

# Alternatives Analysis





0 Crashes

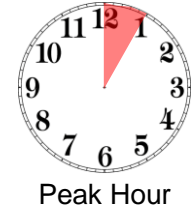
# Sommerfield 1

## Business Park/US 15

Operations	AM	PM	SAT
Existing	B	C	C
2040 No-Build	C	D	D

- Safety-Specific Treatment:
- Provide Gateway Signage in median or off-road
  - Improve pavement condition, particularly in curb returns

### Volume-Based Signal Warrants

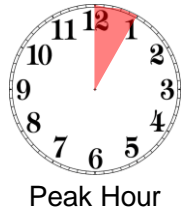


# 2 Spring Creek Parkway/ Stonegate Drive/US 15

0 Crashes

Operations	AM	PM	SAT
Existing	C	D	D
2040 No-Build	F	F	F

## Volume-Based Signal Warrants



## 2 Spring Creek Parkway/Stonegate

Unsignalized RCUT

Roundabout

Bowtie

Operations	AM	PM	SAT
Existing	C	D	D
2040 No-Build	F	F	F
Unsignalized RCUT	C	B	C
Roundabout	A	A	B
Bowtie	-	-	-

Mainline left-turns restricted. Vehicles desiring to make left-turns would turn right and use existing roundabouts on minor street approaches

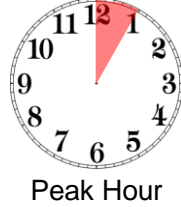
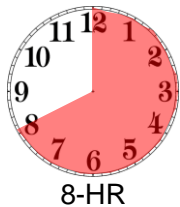
# Liberty Trail/US 15

7 Crashes  
Priority Intersection



Operations	AM	PM	SAT
Existing	C	D	E
2040 No-Build	E	E	F

### Volume-Based Signal Warrants



# Liberty Trail/US 15

3

## Unsignalized Green-T

## Roundabout

Rather than merging, left-turn acceleration lane would become add lane

Operations	AM	PM	SAT
Existing	C	D	E
2040 No-Build	E	E	F
Unsignalized Green T	B	C	C
Roundabout	A	A	B

### Safety-Specific Treatment:

- Restrict U-Turns
- Improve pavement condition, particularly in curb returns
- Provide supplemental signage for Flashing Yellow

# 4 Freedom Trail/US 15

0 Crashes

Operations	AM	PM	SAT
Existing	C	C	C
2040 No-Build	C	D	D

### Volume-Based Signal Warrants



# 4 Freedom Trail/US 15

Unsignalized RCUT

Unsignalized "Superstreet"

Operations	AM	PM	SAT
Existing	C	C	C
2040 No-Build	C	D	D
Unsignalized RCUT	C	C	D
Unsignalized "Superstreet"	B	C	C

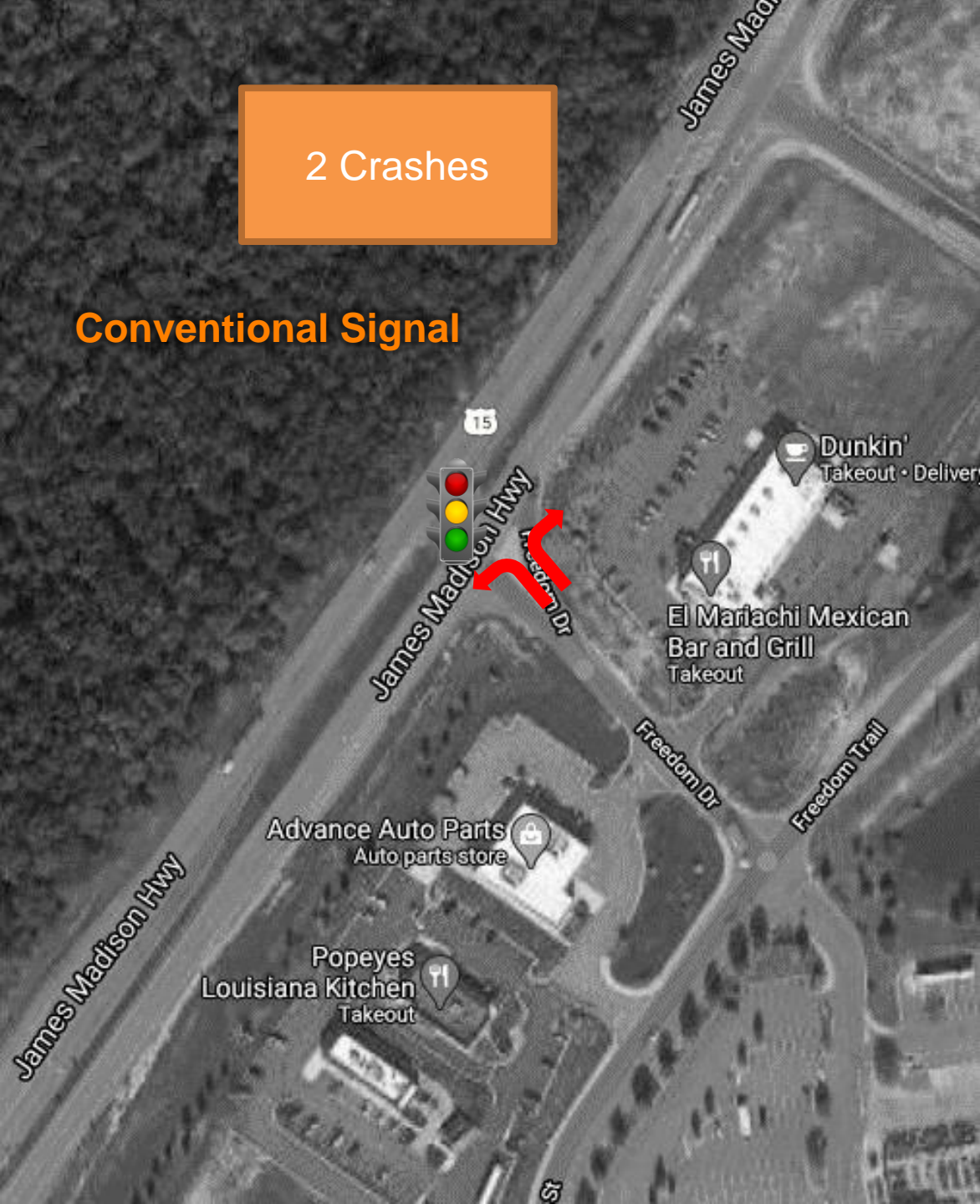
Safety-Specific Treatment:

- Improve pavement condition, particularly in curb returns

# Freedom Drive/US 15 5

2 Crashes

## Conventional Signal



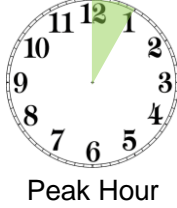
Operations	AM	PM	SAT
Existing	A	B	B
2040 No-Build	B	B	B
Conventional Signal*	C	D	D

\*Would only become signalized as a part of potential quadrant intersection at adjacent Spring Creek/Camp Creek intersection

Safety-Specific Treatments:

- Improve pavement condition, particularly near median to reduce ponding
- Restripe to finish lane drop before or after Freedom Drive

### Volume-Based Signal Warrants





# 6 Spring Creek Parkway/Camp Creek Parkway/US 15

14 Crashes  
*Priority Intersection*



Operations	AM	PM	SAT
Existing	D	D	E
2040 No-Build	F	F	F

# Spring Creek Parkway/Camp Creek Parkway/US 15

Operations	AM	PM	SAT
Existing	D	D	E
2040 No-Build	F	F	F
Bowtie	C	C	C
Provide NBRT Receiving Lane	F	F	F
Quadrant Roadway (SW)	D	E	E
Quadrant Roadway (NE)	C	E	E

All left-turns at main intersection routed to roundabouts, allowing for 2-phase signal

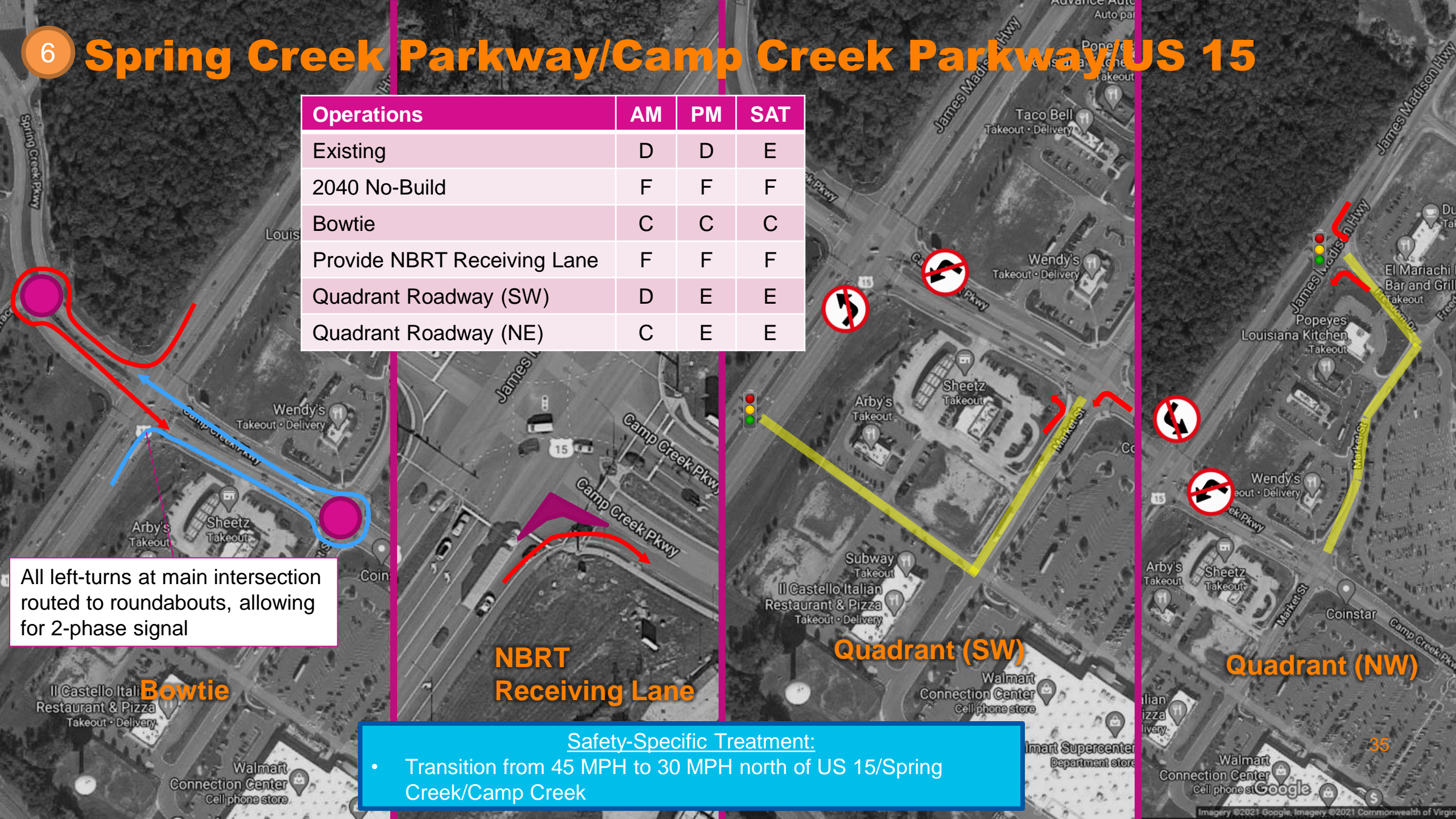
**NBRT Receiving Lane**

**Quadrant (SW)**

**Quadrant (NW)**

Safety-Specific Treatment:

- Transition from 45 MPH to 30 MPH north of US 15/Spring Creek/Camp Creek



# 7 Spring Creek Parkway/ Wood Ridge Terrace

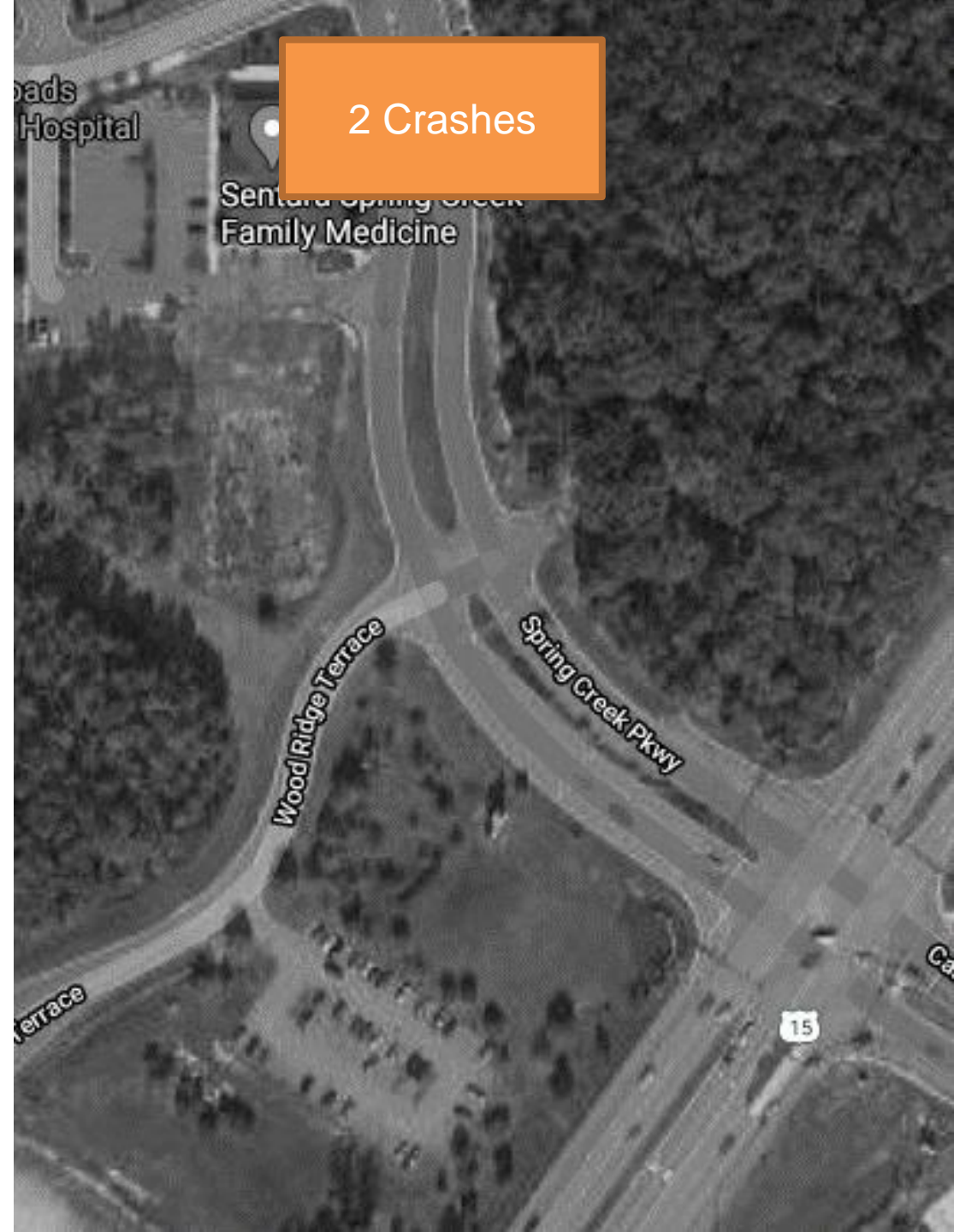
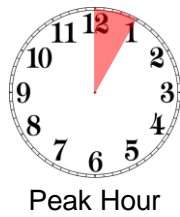
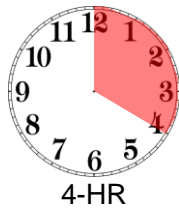
2 Crashes

Operations	AM	PM	SAT
Existing	B	B	A
2040 No-Build	B	B	B
Bowtie (Roundabout)	A	B	C

Safety-Specific Treatment:

- Provide Curve Warning Signage

Volume-Based Signal Warrants

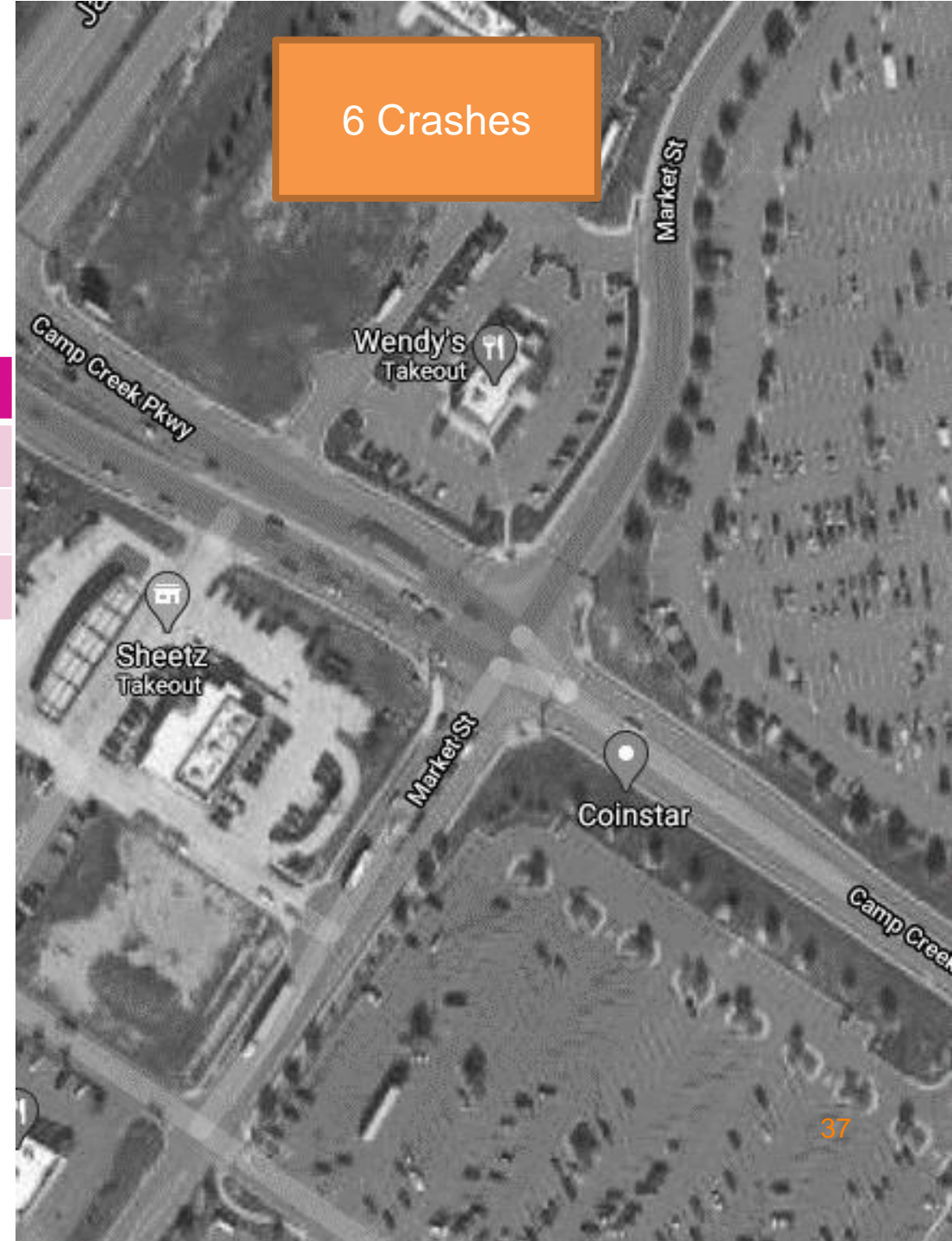


# 8 Camp Creek Parkway/Market Street

Operations	AM	PM	SAT
Existing	C	D	C
2040 No-Build	C	C	D
Bowtie (Roundabout)	A	A	A

### Safety-Specific Treatments:

- Provide speed limit sign
- Provide Red Light Running Treatment (cameras, etc.)



9 **North DDI Ramp**

10 **South DDI Ramp**

Operations	AM	PM	SAT
Existing	C	C	C
2040 No-Build	C	D	D

Operations	AM	PM	SAT
Existing	C	C	B
2040 No-Build	B	C	C

20 Crashes  
*Priority Intersection*

10 Crashes

Safety-Specific Treatments:

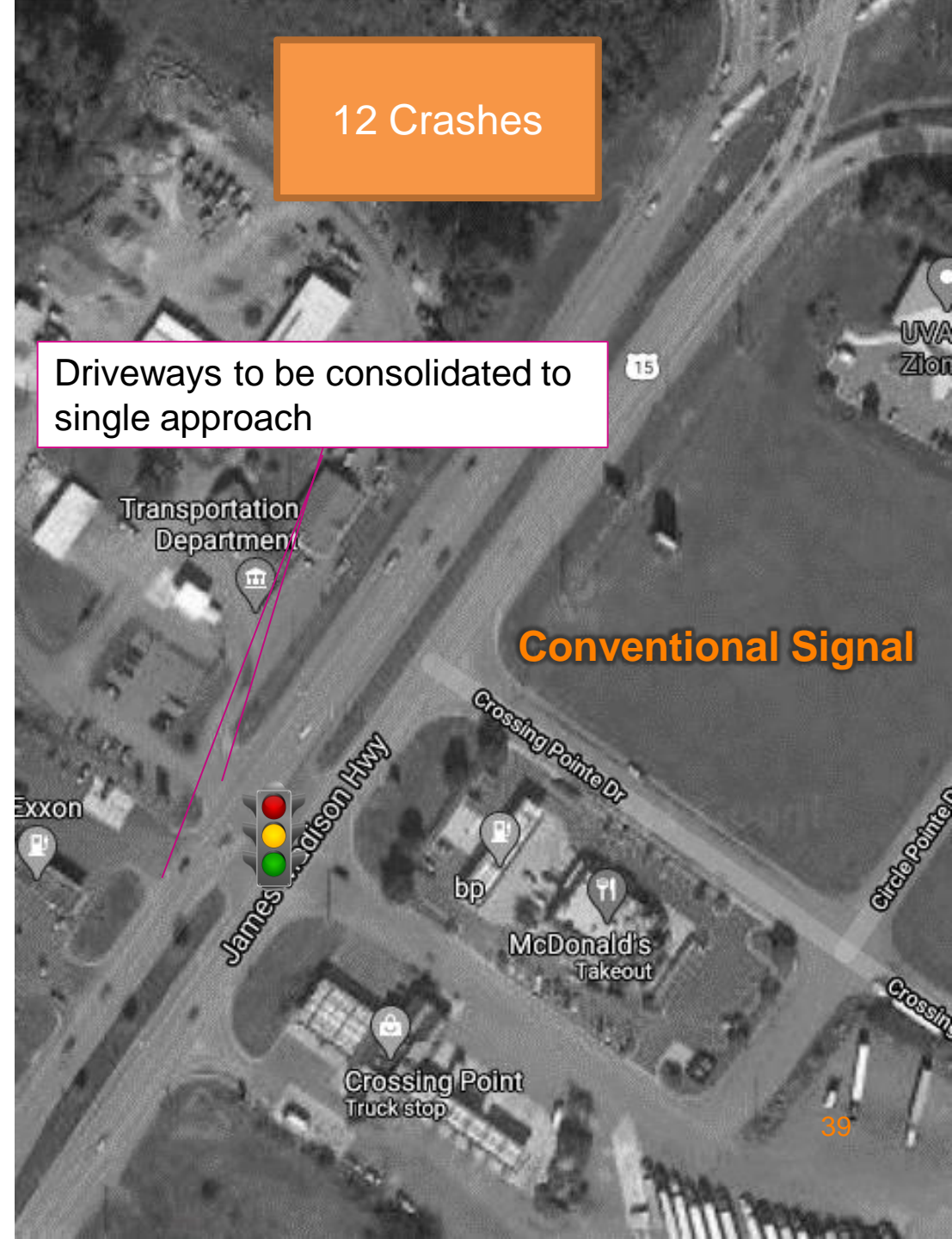
- Adjust timing to improve progression (reducing likelihood of rear-end crashes)
- Add three-section signal head to address signal visibility issues in SB direction

# 11 Crossing Pointe Drive/US 15

Operations	AM	PM	SAT
Existing	D	E	F
2040 No-Build	F	F	F
Conventional Signal	B	C	C

- Safety-Specific Treatments:
- Transition from 45 to 30 MPH south of Crossing Pointe
  - Reduce median opening

## Volume-Based Signal Warrants



12 Crashes

Driveways to be consolidated to single approach

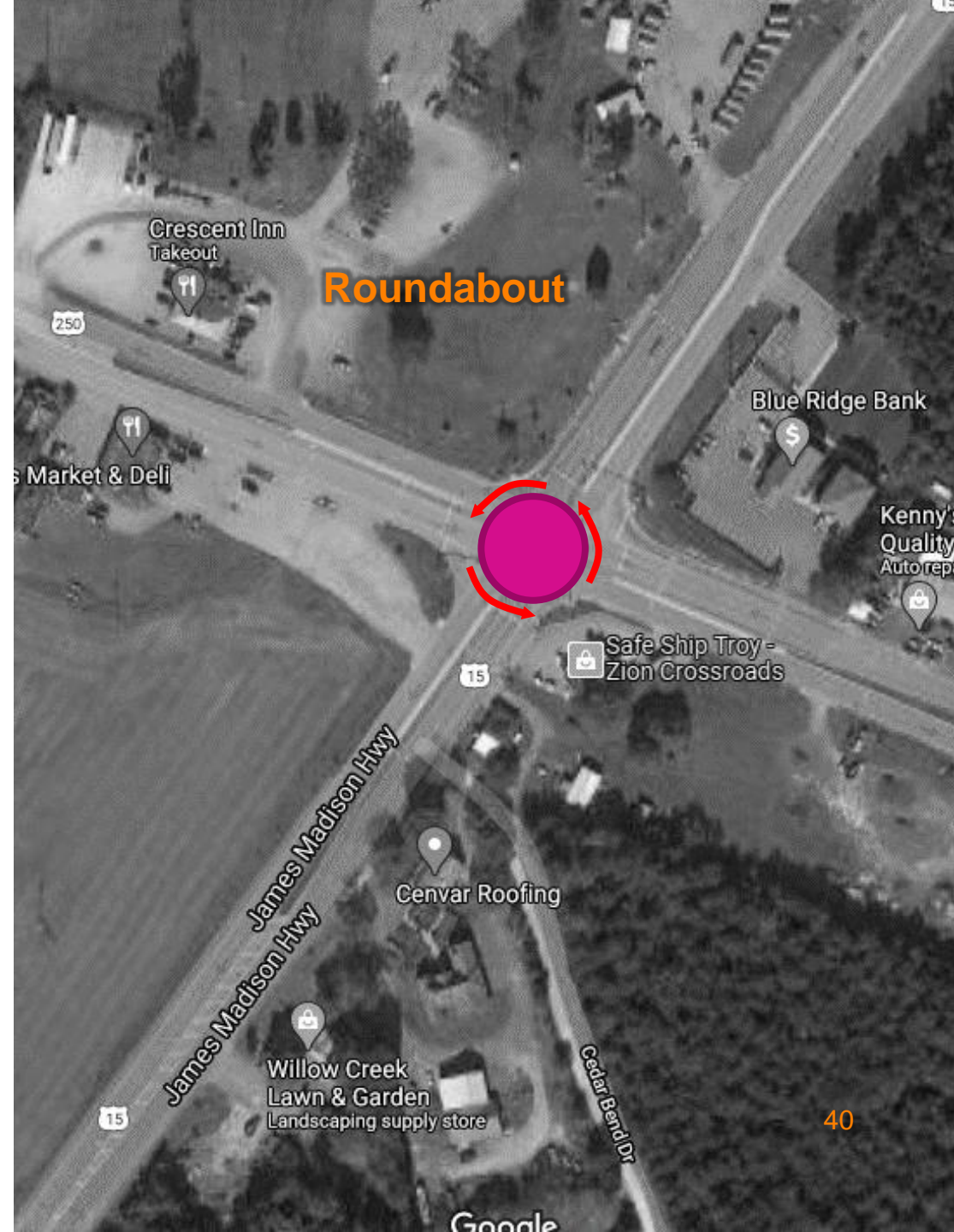
Conventional Signal

# US 250/US 15

21 Crashes  
Priority Intersection

Operations	AM	PM	SAT
Existing	C	C	C
2040 No-Build	C	D	C
Roundabout	B	B	A

- Safety-Specific Treatments:
- Provide Red Light Running Treatment (cameras, etc.)
  - Provide Signal Ahead signage



# 13 Starlite Park/US 15

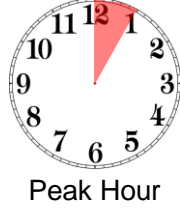
4 Crashes

Operations	AM	PM	SAT
Existing	C	C	B
2040 No-Build	C	D	C
Northbound Left Turn Lane	C	C	C

### Safety-Specific Treatment:

- Provide Intersection Ahead Signage
- Improve curb returns

### Volume-Based Signal Warrants





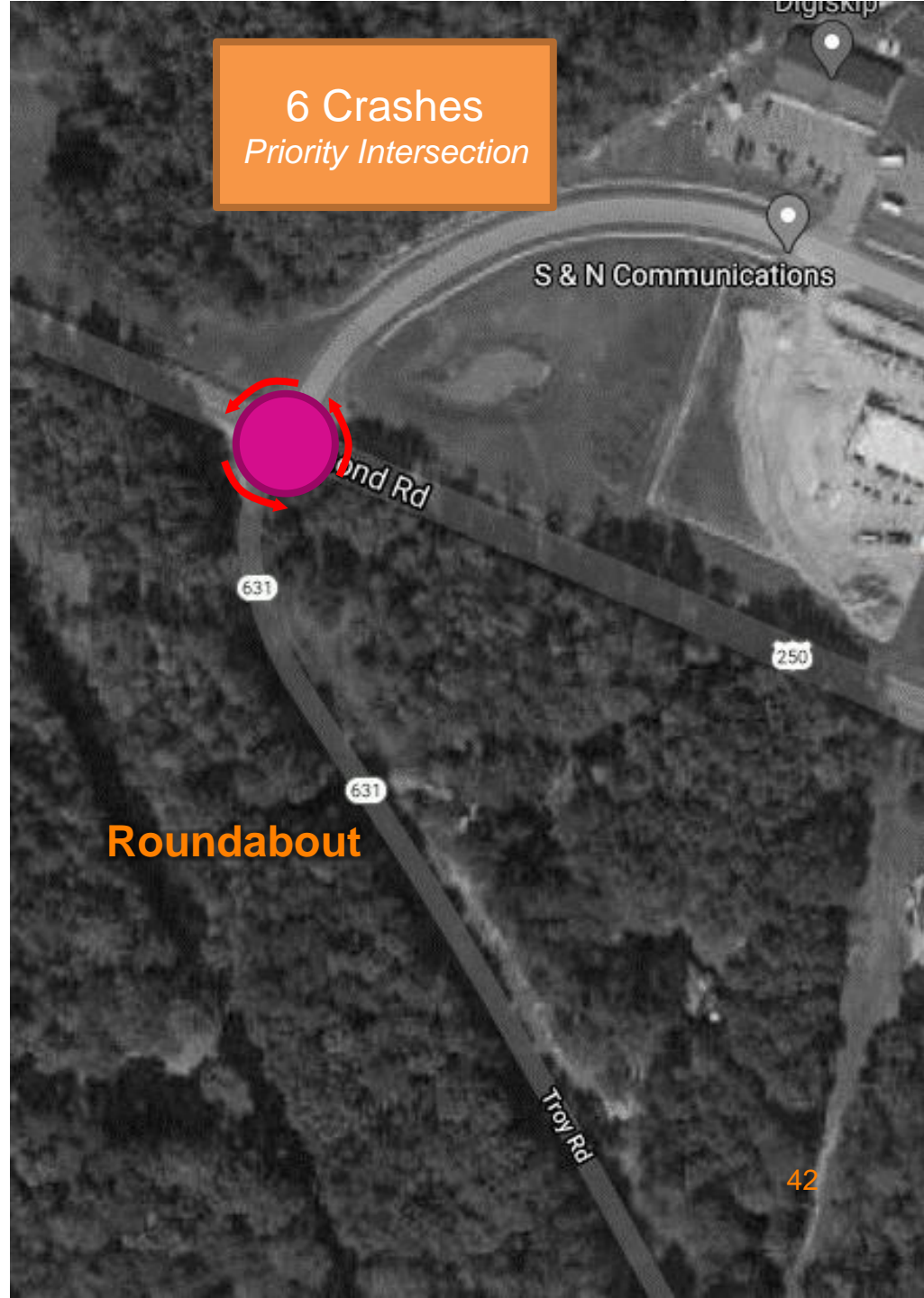
# 14 Troy Road (Route 631)/Zion Station Court /US 250

Operations	AM	PM	SAT
Existing	B	B	B
2040 No-Build	B	B	B
Roundabout	A	A	A

Safety-Specific Treatment:

- Provide Deer Crossing Sign
- Ensure Sight Triangles are not blocked by trees
- Improve pavement conditions, particularly in curb returns

## Volume-Based Signal Warrants



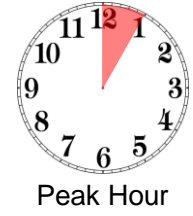
**Roundabout**

# 15 Hunters Branch Road (Route 689)/US 250/Edgecomb Road

Operations	AM	PM	SAT
Existing	B	B	B
2040 No-Build	B	B	B

- Safety-Specific Treatment:
- Provide Deer Crossing Sign
  - Ensure Sight Triangles are not blocked by trees
  - Improve pavement conditions, particularly in curb returns

## Volume-Based Signal Warrants



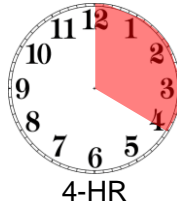
# 16 Better Living Drive/US 250

Operations	AM	PM	SAT
Existing	B	B	A
2040 No-Build	B	B	A

### Safety-Specific Treatment:

- Ensure Sight Triangles are not blocked
- Determine if curb will tie into future driveway

### Volume-Based Signal Warrants



# 17 Zion Road (Route 615)/US 250

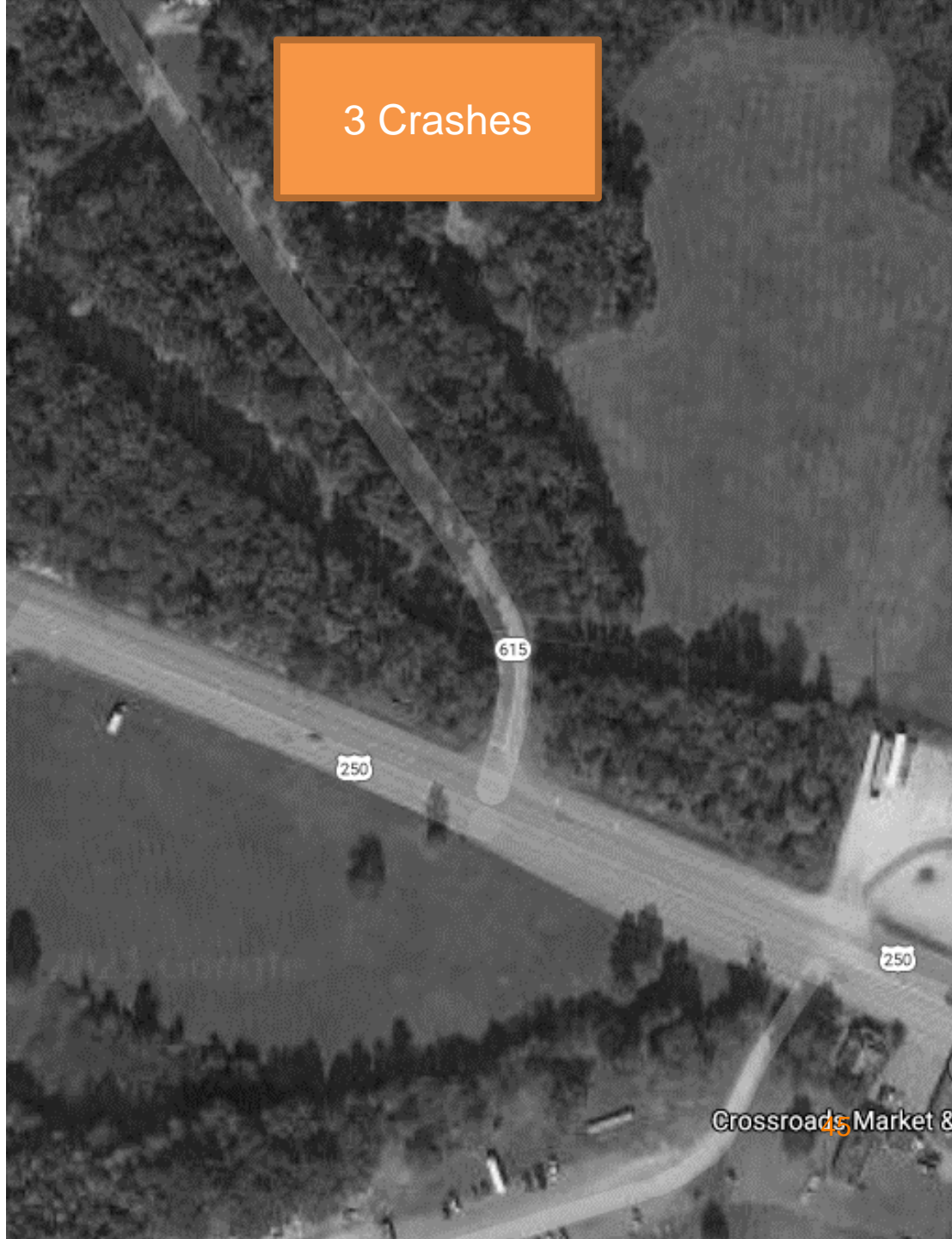
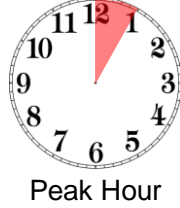
3 Crashes

Operations	AM	PM	SAT
Existing	B	B	B
2040 No-Build	B	B	B

Safety-Specific Treatment:

- Improve Striping
- Pull up to stop bar
- Ensure Sight Triangles are not blocked by trees

Volume-Based Signal Warrants



# 18 Zion Park Road/US 250

2 Crashes

Operations	AM	PM	SAT
Existing	B	B	B
2040 No-Build	C	C	C
Westbound Left Turn Lane	C	C	C

### Safety-Specific Treatment:

- Move transition of speed east of Zion Park
- Consolidate driveways/access
- Ensure Sight Triangles are not blocked

### Volume-Based Signal Warrants



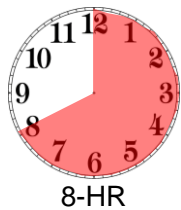
# 19 Poindexter Road (Route 613)/US 250

3 Crashes

Operations	AM	PM	SAT
Existing	B	B	B
2040 No-Build	C	B	B
Westbound Right Turn Lane	C	B	B

- Safety-Specific Treatment:
- Ensure Appropriate Sight Distance
  - Provide right turn pavement markings for driveway access

## Volume-Based Signal Warrants



# Corridor and/or Segment Treatments:

- Medians
- Sidewalks/Shared Use Paths
- Transit Stops
- Lighting
- Other Minor Improvements (e.g., rumble strips)



# Next Steps:

- Conceptual Designs
- Public Meeting







**Thank You!**