



Safe Streets & Roads For All (SS4A)

Comprehensive Safety Action Plan

Board of Supervisors Update

August 20, 2024

Agenda

- Project Background
- Safe Streets & Roads for All (SS4A) Requirements
- Crash Data Analysis
- Community Engagement
- Schedule
- Questions / Discussion

Project Background

- Spring 2022: United States Department of Transportation (USDOT) Safe Streets and Roads for All (SS4A) grant program announced
- September 2022: Roanoke County, Botetourt County and Town of Vinton application for funds to develop a Comprehensive Safety Action Plan
- January 2023: SS4A funds awarded to develop a Comprehensive Safety Action Plan
- April 2023: Agreement executed with the Federal Highway Administration (FHWA)
- November 2023: Notice to Proceed issued to Timmons Group for the SS4A Study
- Spring 2025: Intent to pursue SS4A Implementation Grants

Types of SS4A Grants

- Action Plan Grants (Planning and Implementation Grants):
 - Develop a Comprehensive Safety Action Plan (Action Plan)
 - Identify the most significant roadway safety concerns, and develop projects and strategies to address safety issues
 - Action Plan will result in one project for each locality to be worked up and submitted for implementation funding in Spring 2025
- Implementation Grants:
 - Carry out projects and strategies identified in Action Plan to address a roadway safety problem
 - Applicants must have an eligible Action Plan in place before applying to implement projects and strategies

SS4A Action Plan Requirements

- Leadership commitment and goal setting
- Planning structure
- Safety analysis
- Engagement and collaboration
- Equity
- Policy and process changes
- Strategy and project selections
- Progress and transparency



Safe Streets and Roads for All Action Plan Components

This document is not meant to replace the NOFO. Applicants should follow the instructions in the NOFO to correctly apply for a grant. See the SS4A website for more information: <https://www.transportation.gov/SS4A>



Leadership Commitment and Goal Setting

An official public commitment (e.g., resolution, policy, ordinance, etc.) by a high-ranking official and/or governing body (e.g., Mayor, City Council, Tribal Council, MPO Policy Board, etc.) to an eventual goal of zero roadway fatalities and serious injuries. The commitment must include a goal and timeline for eliminating roadway fatalities and serious injuries achieved through one, or both, of the following:

- (1) the target date for achieving zero roadway fatalities and serious injuries, OR
- (2) an ambitious percentage reduction of roadway fatalities and serious injuries by a specific date with an eventual goal of eliminating roadway fatalities and serious injuries.



Planning Structure

A committee, task force, implementation group, or similar body charged with oversight of the Action Plan development, implementation, and monitoring.



Safety Analysis

Analysis of existing conditions and historical trends that provides a baseline level of crashes involving fatalities and serious injuries across a jurisdiction, locality, Tribe, or region. Includes an analysis of locations where there are crashes and the severity of the crashes, as well as contributing factors and crash types by relevant road users (motorists, people walking, transit users, etc.). Analysis of systemic and specific safety needs is also performed, as needed (e.g., high-risk road features, specific safety needs of relevant road users, public health approaches, analysis of the built environment, demographic, and structural issues, etc.). To the extent practical, the analysis should include all roadways within the jurisdiction, without regard for ownership. Based on the analysis performed, a geospatial identification of higher-risk locations is developed (a High-Injury Network or equivalent).



Engagement and Collaboration

Robust engagement with the public and relevant stakeholders, including the private sector and community groups, that allows for both community representation and feedback. Information received from engagement and collaboration is analyzed and incorporated into the Action Plan. Overlapping jurisdictions are included in the process. Plans and processes are coordinated and aligned with other governmental plans and planning processes to the extent practical.



Crash Data Analysis

Roanoke County SS4A Dashboard

Roanoke County SS4A Dashboard



This dashboard is provided for informational purposes only. Minor crash data discrepancies often occur due to the nature and complexity of the data and purpose of research.

Crash data is obtained from the Virginia Department of Transportation crash database, which is populated by reports submitted by law enforcement officers throughout Virginia.

Crash data included in this dashboard includes crashes within Roanoke County, Virginia, inclusive of all public safety jurisdictions from 2015 - 2023.

What constitutes a fatal or serious injury crash?

Individual injury severity levels are defined by the National Highway Transportation Safety Administration and Governors Highway Safety Association through [Model Minimum Uniform Crash Criteria guidelines](#). There are five categories using a KABCO scale: Fatal Injury (K), Suspected Serious Injury (A), Suspected Minor Injury (B), Possible Injury (C), and No Apparent Injury (O). Crash data included in this dashboard is limited to fatal and serious injury crashes.

Definitions:

Fatal Injury (K): A fatal injury is any injury that results in death within 30 days after the crash.



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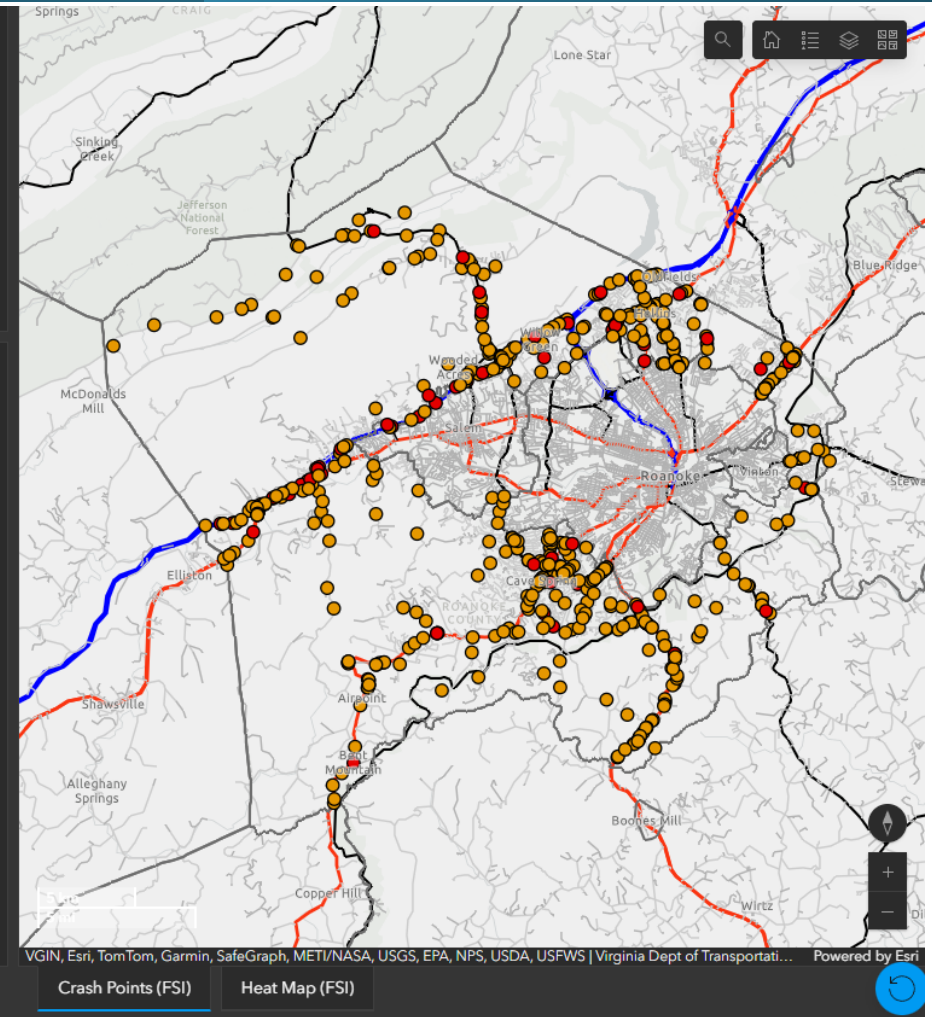
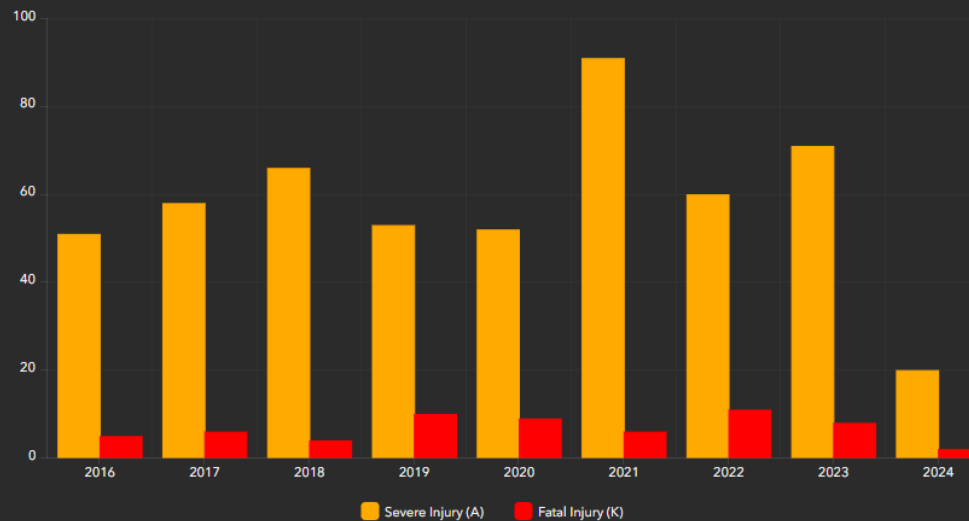
Fatalities on Public Roadways



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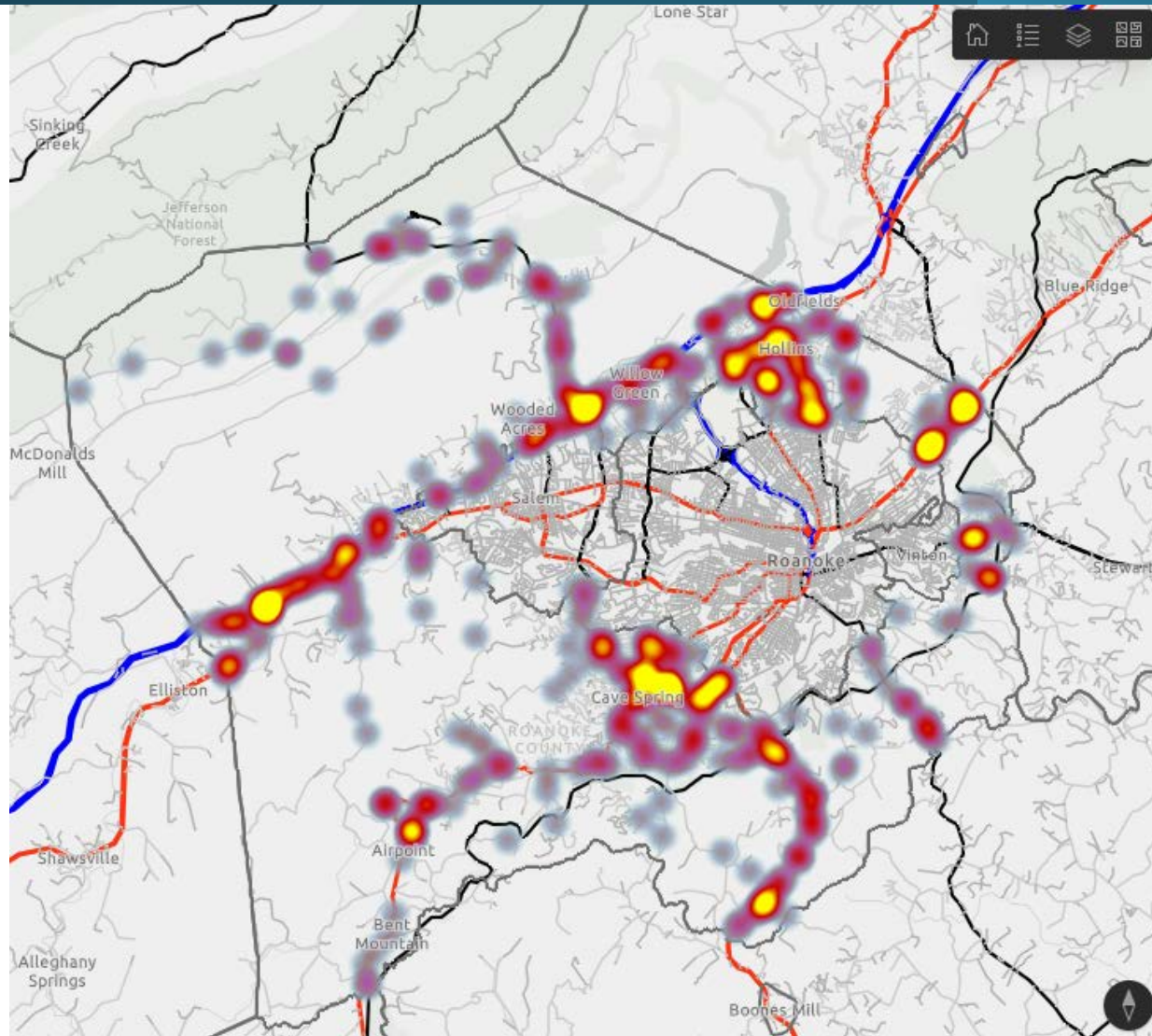
Serious Injuries on Public Roadways

By Year



<https://www.arcgis.com/apps/dashboards/a85a20fee3104a60b8355544a654578f>

Roanoke County SS4A Dashboard

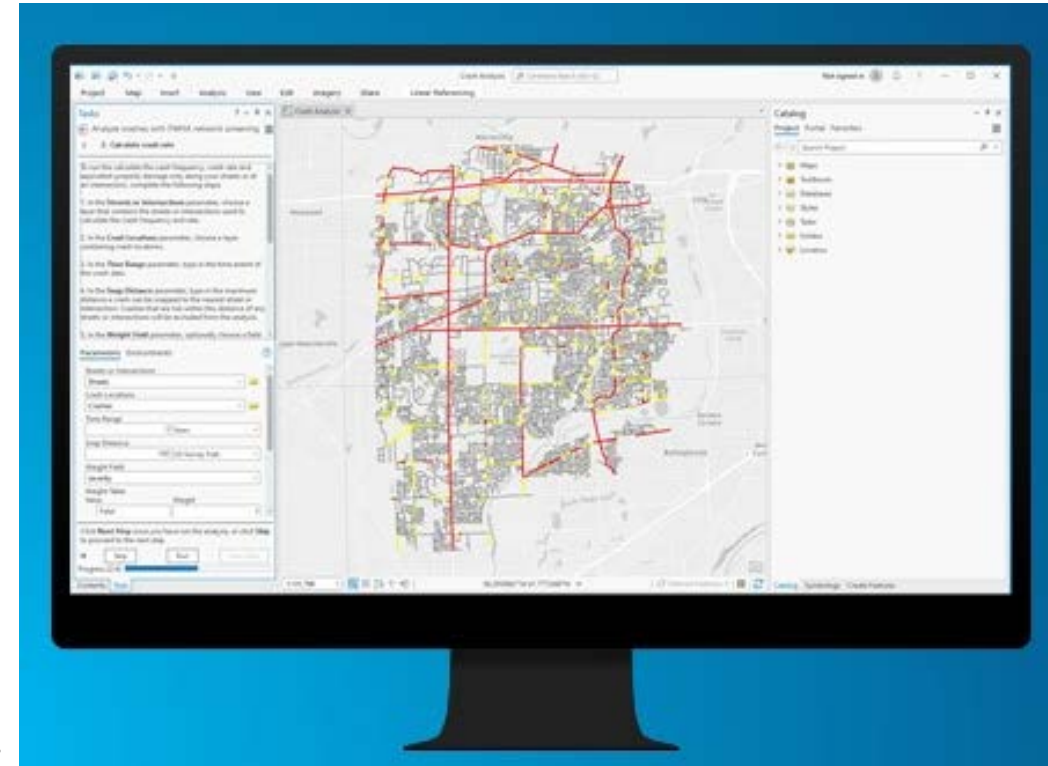


Crash Analysis Trends

- Top Crash Types
 - Fixed Object Off Road (38%)
 - Angle (25%)
 - Rear End (14%)
- Most crashes occur during clear weather conditions (87%), daylight hours (67%), and a dry roadway (84%).
- Common Locations
 - Flashing Yellow Arrow Installations
 - Locations with Poor Sight Distance
 - Unsignalized Median Crossovers on 4-lane Divided Roadways

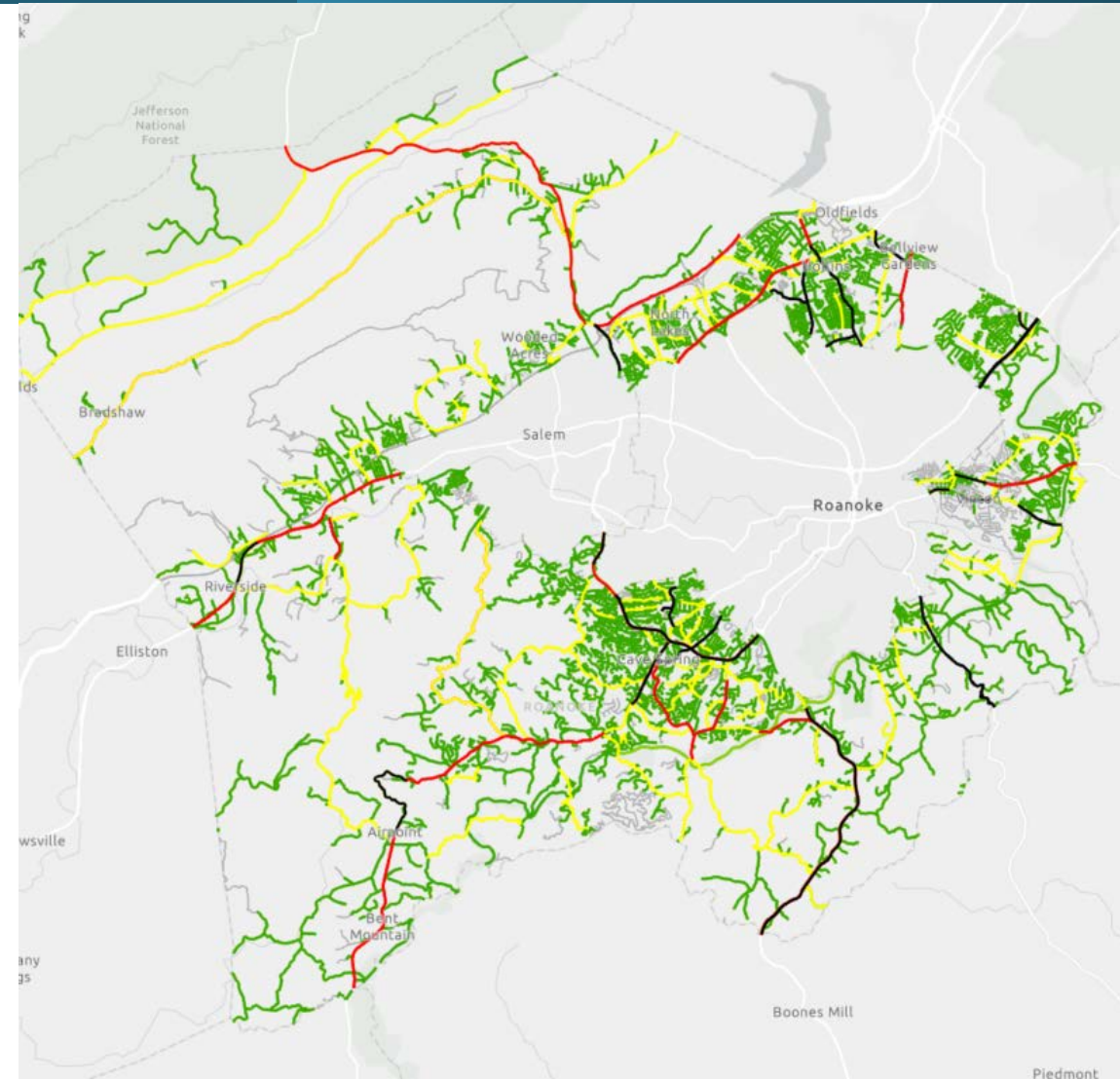
Crash Analysis Background

- Utilized the ESRI Traffic Crash Analysis Tool to reveal areas with the highest incidence of serious injury and fatal crashes and develop a High Injury Network (HIN)
- The Tool uses methodologies outlined by the United States Road Assessment Program (usRAP) and the Federal Highway Administration (FHWA)
- The tool creates roadway segments, assigns crashes to the segments, and creates risk maps.
- Road networks are divided into segments with breakpoints at locations where the following things occur:
 - A route begins or ends.
 - The county name changes.
 - There is discontinuity in the route, such as a gap in mileposts.
 - The roadway type changes.
 - The annual average daily traffic (AADT) changes by 20 percent or more.
 - The speed limit category changes.



Risk Maps and Analysis Output

- The analysis generates four risk maps:
 - **Crash Density:** Crashes per mile of road. These segments represent areas where there may be the greatest opportunity to reduce crashes.
 - **Crash Rate:** Crashes per 100 million vehicle miles of travel. Illustrates the risk to an individual motorist while traveling through a given road segment.
 - **Crash Rate Ratio:** Ratio of the crash rate for a particular segment to the average crash rate for all segments of the same roadway type. Emphasizes segments that have above average crash rates for their roadway type.
 - **Potential Crash Savings:** Estimate of the number of crashes per mile that would be reduced if the crash rate for the road segment could be reduced to the average crash rate for similar road segments.



Roanoke County Top 10 Corridors

Route	From	To	Serious Injury Crashes	Fatal Crashes	Planned Improvements
Challenger Avenue	Roanoke City Line	Botetourt County Line	29	4	Funded SMART SCALE improvements at West Ruritan Road, Carson Road, East Ruritan Road/Bonsack Road, Huntridge Road and Cloverdale Road intersections
Electric Road	Brambleton Avenue	Roanoke City Line	25	1	Funded improvements include a Diverging Diamond Interchange at Route 220, intersection improvements between Route 220 & Starkey Road, widening bicycle lanes and sidewalks between Ogden Road & Starkey Road
Electric Road	Brambleton Avenue	Glen Heather Drive	17	1	Pedestrian improvements funded at Postal Drive & Brambleton Avenue intersections; RCUT funded at Glen Heather Drive & Stoneybrook Drive
Plantation Road	Williamson Road	Hershberger Road	15	2	Currently conducting Office of Intermodal Planning & Investment Project Pipeline Study, to be used for Summer 2024 SMART SCALE application to improve the Williamson Road & Plantation Road intersection
West Main Street	West River Road	Pleasant Run Drive	13	1	Currently conducting Office of Intermodal Planning & Investment Project Pipeline Study for a peanut roundabout, to be used for Summer 2024 SMART SCALE application
Bent Mountain Road	Back Creek Orchard Road	Tinsley Lane	11	1	
Bradshaw Road	Catawba Valley Drive	Montgomery County Line	10	2	
Jae Valley Road	Blue Ridge Parkway	Franklin County Line	10	1	
Garst Mill Road	Brambleton Avenue	Roanoke City Line	7	1	
Starkey Road	Benois Road	Merriman Road	7	0	Construction of new roundabout at Starkey Road & Buck Mountain Road intersection nearing completion

Bent Mountain Road
3 miles from Back Creek Orchard Road to Tinsley Lane

Bradshaw Road
13.4 miles from Catawba Valley Drive to Montgomery County Line

West Main Street
1.4 miles from West River Road to Pleasant Run Drive

Electric Road
2 miles from Brambleton Avenue to Glen Heather Drive

Garst Mill Road
1.5 miles from Brambleton Avenue to Roanoke City Line

Electric Road
2.8 miles from Brambleton Avenue to Roanoke City Line

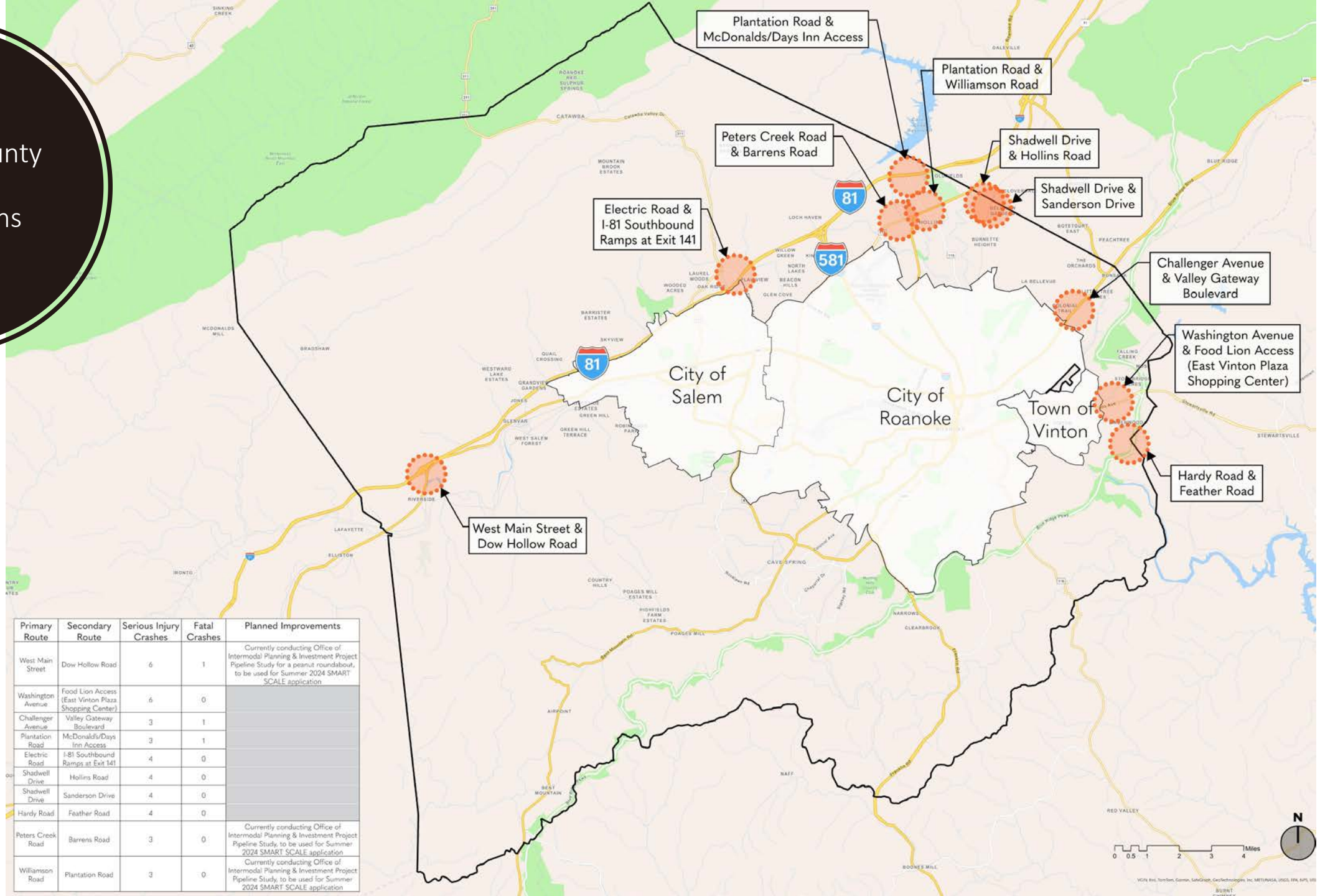
Starkey Road
1.9 miles from Benois Road to Merriman Road

Plantation Road
2.2 miles from Williamson Road to Hershberger Road

Challenger Avenue
2.4 miles from Roanoke City Line to Botetourt County Line

Jae Valley Road
2.8 miles from Blue Ridge Parkway to Franklin County Line

Roanoke County Top 10 Intersections

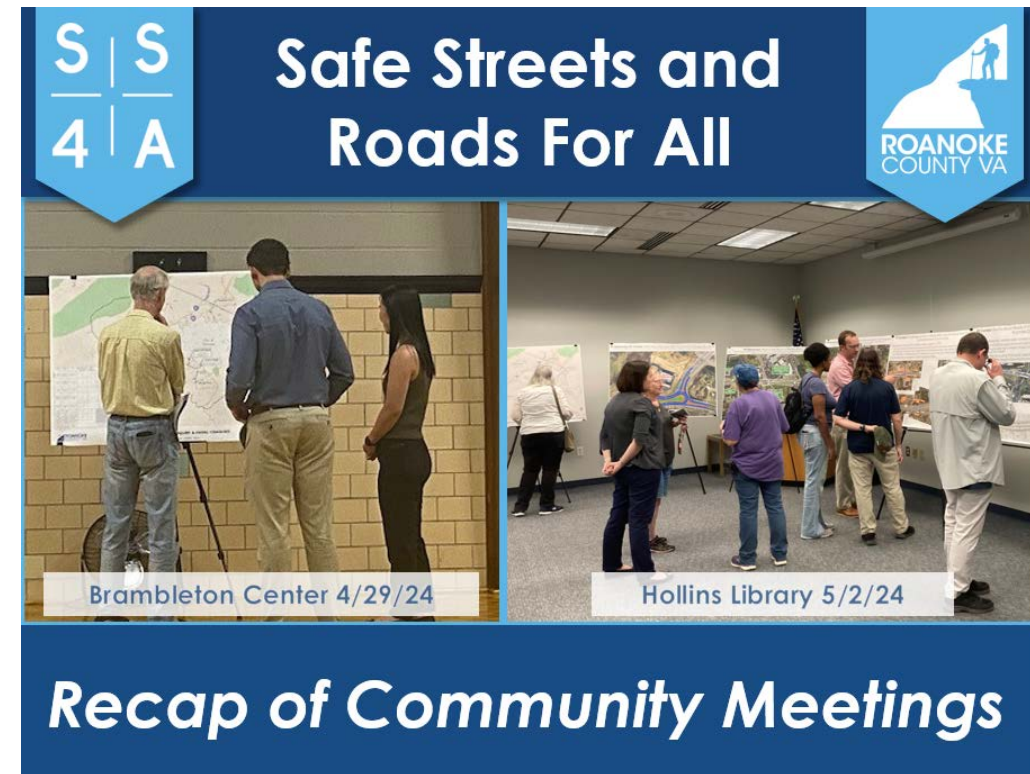


Primary Route	Secondary Route	Serious Injury Crashes	Fatal Crashes	Planned Improvements
West Main Street	Dow Hollow Road	6	1	Currently conducting Office of Intermodal Planning & Investment Project Pipeline Study for a peanut roundabout, to be used for Summer 2024 SMART SCALE application
Washington Avenue	Food Lion Access (East Vinton Plaza Shopping Center)	6	0	
Challenger Avenue	Valley Gateway Boulevard	3	1	
Plantation Road	McDonalds/Days Inn Access	3	1	
Electric Road	I-81 Southbound Ramps at Exit 141	4	0	
Shadwell Drive	Hollins Road	4	0	
Shadwell Drive	Sanderson Drive	4	0	
Hardy Road	Feather Road	4	0	
Peters Creek Road	Barrens Road	3	0	Currently conducting Office of Intermodal Planning & Investment Project Pipeline Study, to be used for Summer 2024 SMART SCALE application
Williamson Road	Plantation Road	3	0	Currently conducting Office of Intermodal Planning & Investment Project Pipeline Study, to be used for Summer 2024 SMART SCALE application

Community Engagement

Community Meetings

- Spring 2024 – First Round of Community Engagement – Existing Conditions (16 attendees at Roanoke County meetings)
 - April 29th – Roanoke County (South) at the Brambleton Center Gymnasium
 - April 30th – Town of Vinton at the Vinton War Memorial
 - May 2nd – Roanoke County (North) at the Hollins Library
 - May 6th – Botetourt County (North) at Eagle Rock Elementary School
 - May 7th – Botetourt County (South) at the County Administration Building
- Meeting exhibits included funded and proposed solutions in progress for high crash corridors and intersections
- Paper and online surveys available from late May through late June
 - 121 responses



Survey Results – Intersections

Highest Ranked Crash Intersections:

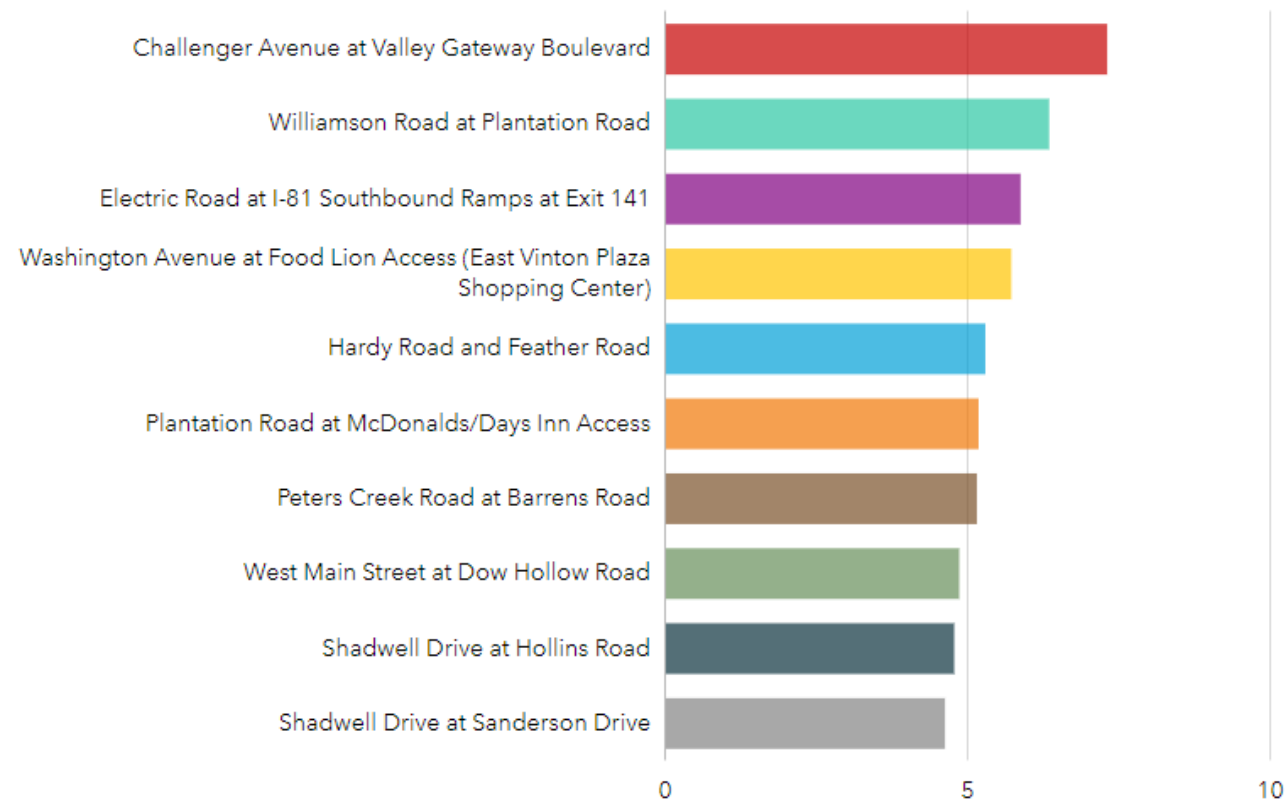
1. Challenger Avenue at Valley Gateway Boulevard
2. Williamson Road at Plantation Road
3. Electric Road at I-81 Southbound Ramps at Exit 141

Please rank the Top Crash Intersections *



Column

Bar



Survey Results – Corridors

Highest Ranked Crash Corridors:

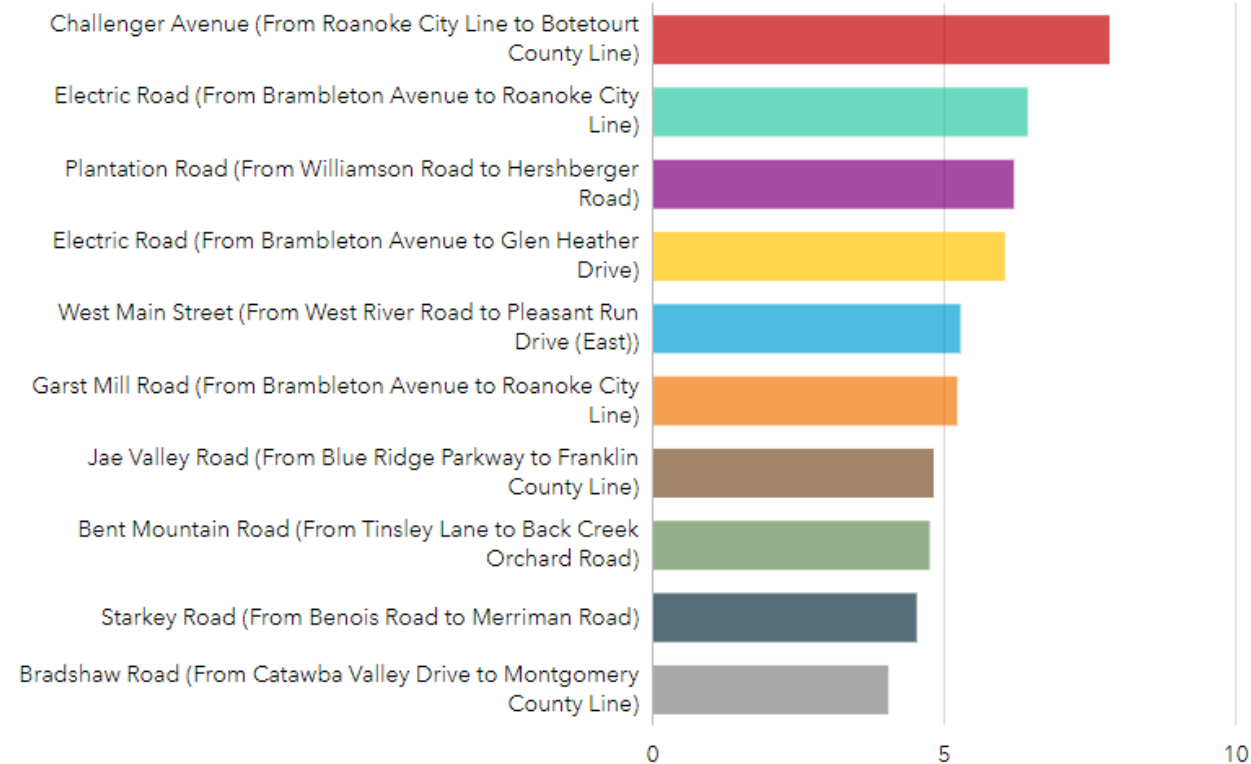
1. Challenger Avenue (Route 460)
From Roanoke City Line to Botetourt County Line
2. Electric Road (Route 419)
From Brambleton Avenue to Roanoke City Line
3. Plantation Road (Route 115)
(From Williamson Road to Hershberger Road)

Please Rank the Top Crash Corridors *



Column

Bar



Survey Comments

- Pedestrian and Cycling Infrastructure
 - **Sidewalks and Bike Lanes:** Requests for more sidewalks and bike lanes on main thoroughfares, Feather Rd, Hardy Rd, Washington Ave, and from the traffic circle to Bradshaw on 311.
 - **Safe Bicycle Routes:** A plea to maintain safe bicycle routes and to add bike lanes in specific areas, such as from Webster Drive to Goodwill and on Plantation Rd.
 - Calls for more pedestrian-friendly options, especially on main thoroughfares in neighborhoods like Stoneybrook Drive.

Survey Comments

- Dangerous Intersections and Roads

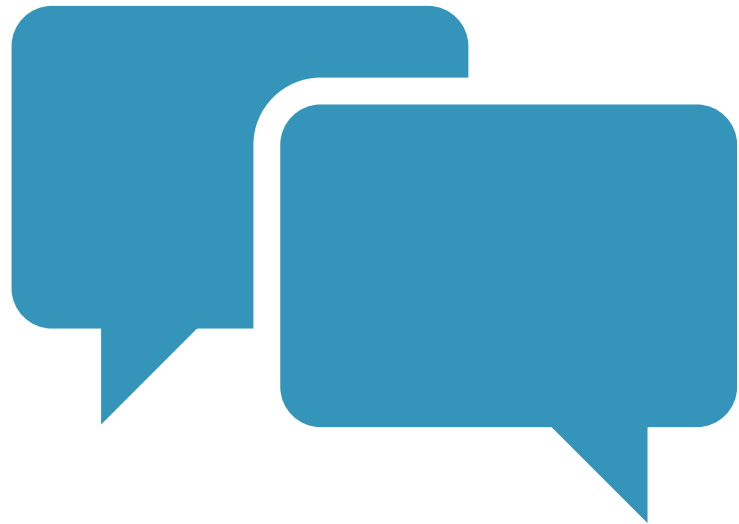
- **Rt 24E at Spring Grove Drive:** Identified as a dangerous intersection, especially for new drivers from William Byrd High School who are forced to make U-turns. Lack of crosswalks for students is also a concern.
- **Colonial Ave and Electric Rd:** The area is described as very dangerous, with a suggestion to add a stoplight near shopping centers to slow down traffic.
- **Electric Road Corridor:** Frequent accidents are reported, with a request to install a traffic light in front of Promenade Park and reduce the speed limit from 45 to 35 mph.
- **Carvins Cove Rd and Rt.311:** Mentioned as a problematic area, with drivers not paying attention to traffic and signals.

Survey Comments

- Speed and Traffic Control
 - **Speed Enforcement:** There are multiple calls for increased speed enforcement in various areas.
 - **Traffic Lights:** Suggestions include installing traffic lights at specific locations and adjusting the timing of lights to prevent accidents. There are multiple comments expressing concern about the flashing yellow lights on Challenger Avenue.
 - **Stoplight at Route 24E and Spring Grove Drive:** A stoplight is requested before a serious accident occurs involving a student.

Schedule

- Summer 2024 – Draft Project Recommendations
- September 2024 – Second Round of Community Engagement – Draft Recommendations to Improve Safety at high crash intersections and corridors
 - Tuesday, September 3rd from 5 to 7 p.m. – Botetourt County at Cloverdale Elementary School
 - Wednesday, September 4th from 5 to 7 p.m. – Botetourt County at Colonial Elementary School
 - Thursday, September 5th from 5 to 7 p.m. – Roanoke County (North) at the Hollins Library
 - Monday, September 9th from 5 to 7 p.m. – Roanoke County (South) at the South County Library
 - Tuesday, September 10th from 5 to 7 p.m. – Town of Vinton at the Vinton War Memorial
- Fall 2024 – Draft Action Plan
- December 2024 through February 2025 – Action Plan Review and Public Hearings with the Planning Commission and Board of Supervisors
- Spring 2025 – Apply for SS4A Implementation Grants



Questions and
Discussion