SR 9 CORRIDOR STUDY

SR 306 to SR 369

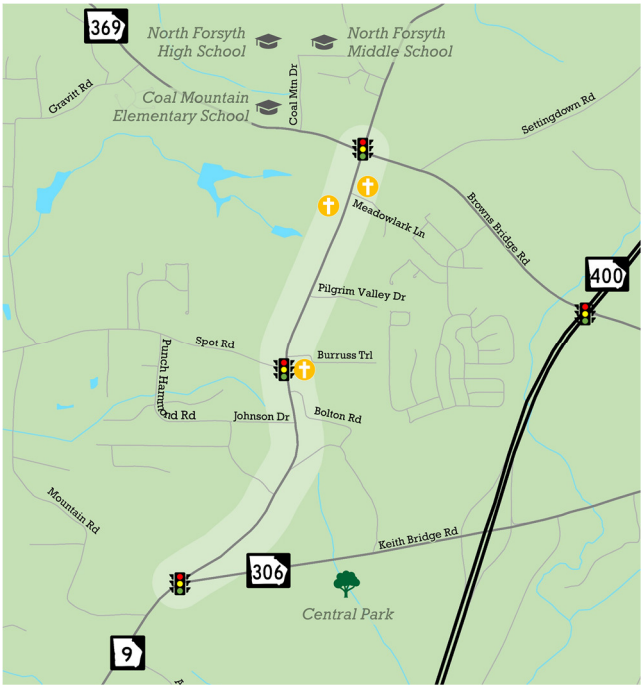
Background

STATION 1

What's Going On?

Forsyth County, in partnership with the Atlanta Regional Commission, is undertaking a regional transportation planning study of the SR 9 corridor from SR 306 to SR 369.

While this segment of SR 9 serves about 10,000 vehicles a day, projections into the future suggest that traffic and development growth will continue and result in over 25,000 vehicles a day in the future. Similarly, the 2018 Forsyth Comprehensive Transportation Plan identified the need to widen this segment from 2 to 4 lanes. Therefore, this process is being conducted to proactively identify the patterns and impacts of future growth to the corridor, understand the community's vision for the corridor, confirm the need for the widening anticipated in the Transportation Plan, and establish a timeline for the implementation of short and long term improvements along the corridor.



Northbound afternoon congestion approaching SR 369.

Skewed intersection at SR 306.

Schedule & Process

This planning process includes four overall phrases that will be completed in a six month process as indicated in the image below.

Phase 1 | Existing Conditions — November 2019
- Field Observations
- Collect Traffic Data
- Analyze Existing Capacity
- Safety Analysis
- Environmental Screening

December 2019

Phase 2 | Needs Assessment — January 2020
- Develop Vision for Corridor
- Anticipate Future Growth Patterns
- Analyze Future Capacity
- Identify Corridor Needs

February 2020

WE ARE HERE! → Community Input

Phase 3 | Evaluation — March 2020
- Develop & Test Alternatives
- Prepare Concept Layouts
- Identify Recommendations

Community Input

Phase 4 | Action Plan — April 2020
- Develop Implementation Timeframe
- Finalize Concept Layouts
- Concept Report & Plan Documentation

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STATION 2

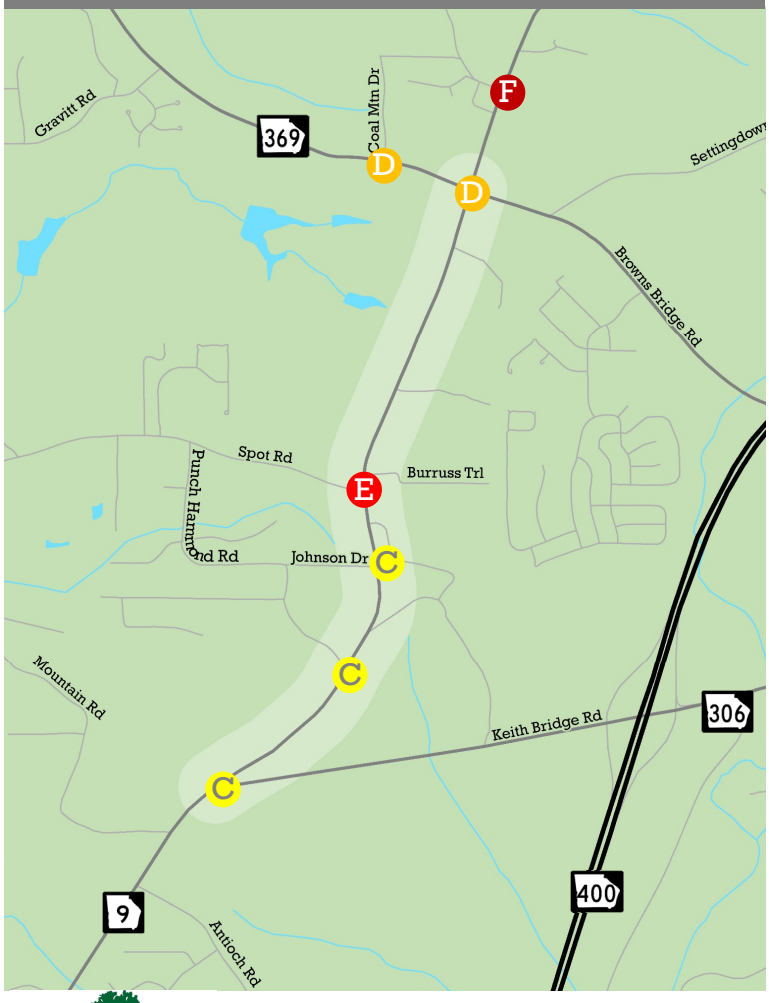
Existing Conditions

Level of Service? (LOS)

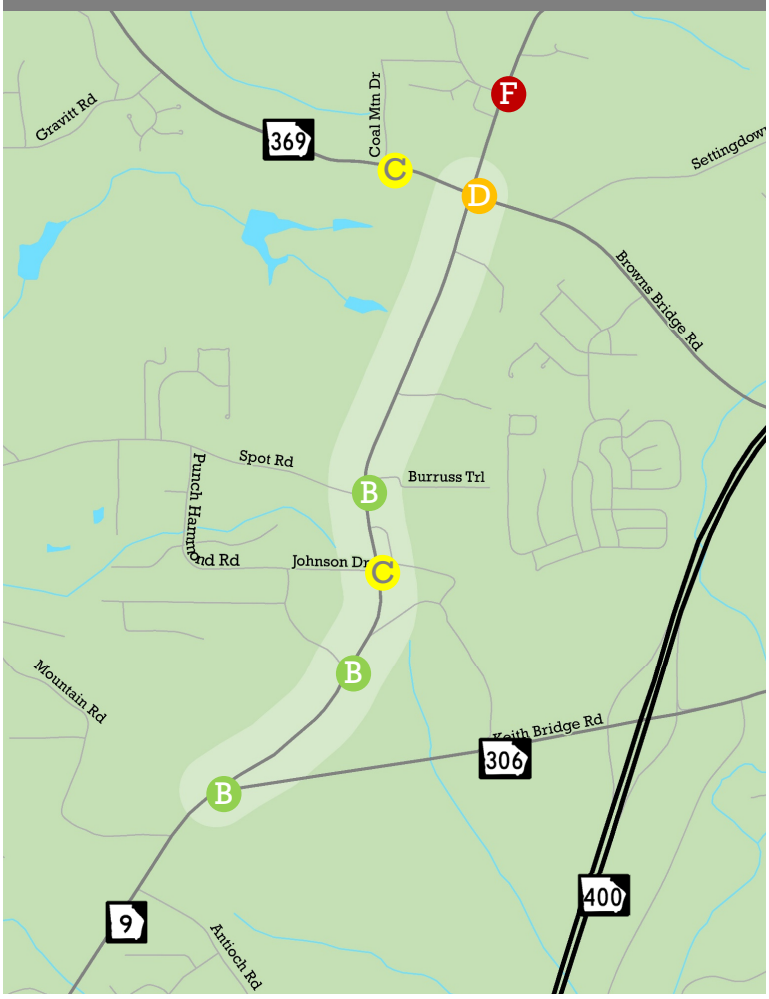
Level of Service (LOS) is a measurement used to express levels of traffic congestion using the letters A through F. In general, conditions of LOS A through D are considered to be acceptable, while LOS E through F conditions suggest capacity and operational improvements may be needed.

At signalized locations, intersection LOS conditions can be measured by determining the average amount of delay vehicles experience in an hour of time. While more detail and analysis is needed to identify specific movements or approaches that experience delay, intersection LOS is a good overall indicator of traffic conditions. For unsignalized locations, the average amount of delay experienced for stop-controlled movements can be used to determine LOS, though results often need to be field verified.

AM Peak Hour Level of Service



PM Peak Hour Level of Service



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Existing Conditions

STATION 2

Safety

Our planning team is also using data to understand where introducing design elements can improve the safety of the corridor. An initial review of crash histories along the corridor indicate that the corridor has a higher rate of crashes when compared to other similar corridors around the state. As a result, our planning team is conducting more in-depth analysis of crashes along the corridor to determine any factors that may increasing the rate.

COMPARISON OF SR 9 TO SIMILAR CORRIDORS ACROSS THE STATE (2014-2018)

Year	Number of Crashes	Crash Rate*	Statewide Average Crash Rate	No of Injury Accidents	Injury Accident Rate*	Statewide Injury Accident Rate
2014	49	1025	329	12	251	97
2015	59	1006	194	11	187	63
2016	51	841	186	9	148	63
2017	23	359	199	9	140	67
2018	61	952	Not Available	10	156	Not Available

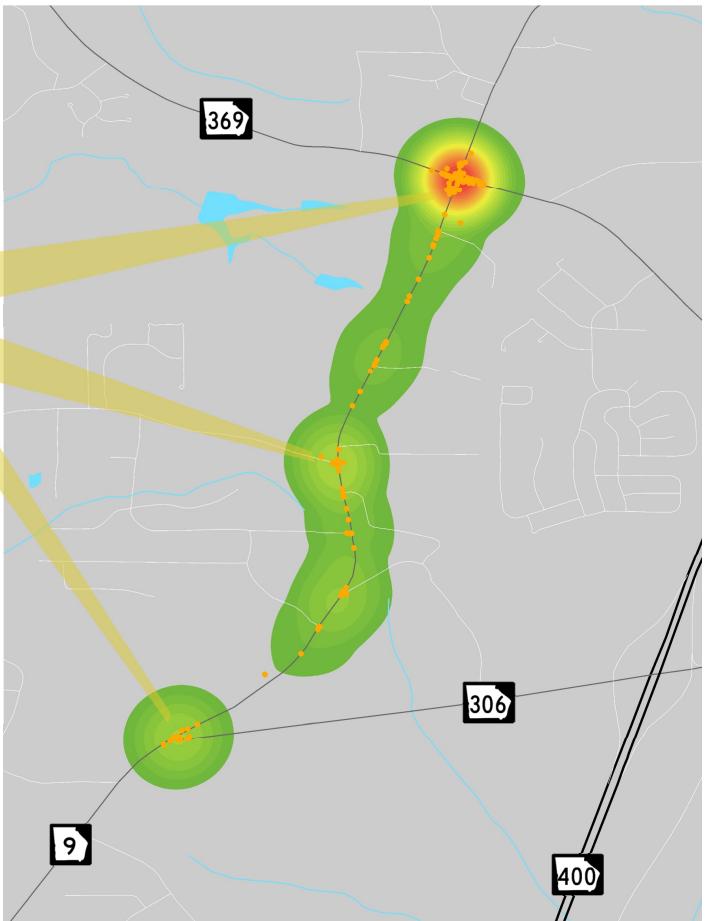
* Values for rate of crashes and injury accidents are per 100 million vehicle-miles.

TYPES OF CRASHES ON SR 9 (2014-2018)

Year	Total Crashes	Injury Crashes	Fatalities	Crash Type					
				Angle	Head On	Rear End	Sideswipe	Not with a Motor Vehicle	Other
2014	49	12	0	10	2	33	3	1	0
2015	59	11	0	12	0	40	2	5	0
2016	51	9	0	19	1	24	4	3	0
2017	23	9	0	5	0	15	1	2	0
2018	61	10	0	22	1	28	4	6	0
Total	243	51	0	68	4	140	14	17	0

CRASHES AT MAJOR INTERSECTIONS (2014-2018)

Total Crashes	Injury Crashes	Fatalities	Crash Type					
			Angle	Head On	Rear End	Sideswipe	Not with a Motor Vehicle	Other
135	36	1	40	3	83	8	1	0
27	5	0	10	0	12	2	3	0
24	5	0	12	1	8	0	3	0



These initial findings suggest that the large number of rear end crashes may be driving the relatively high crash rate. In addition to the rear ends at the major intersections, many of the rear end crashes are occurring at driveways and smaller intersections, suggesting that a lack of turn lanes for turning vehicles may be causing conditions where these types of crashes are more likely.

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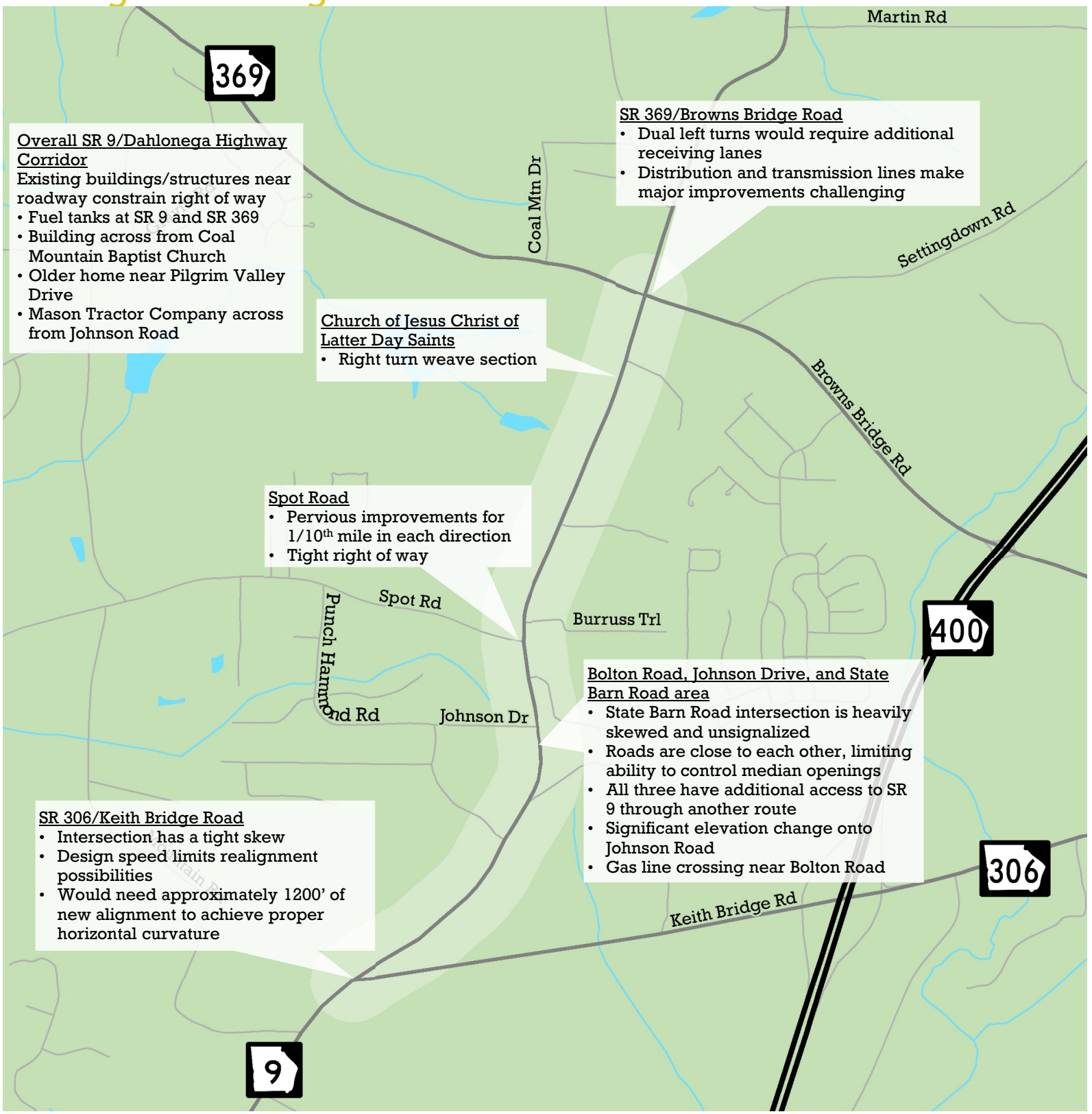
Existing Conditions

STATION 2

Design Challenges



Overall SR 9/Dahlonega Highway Corridor

Existing buildings/structures near roadway constrain right of way

- Fuel tanks at SR 9 and SR 369
- Building across from Coal Mountain Baptist Church
- Older home near Pilgrim Valley Drive
- Mason Tractor Company across from Johnson Road

SR 369/Browns Bridge Road

- Dual left turns would require additional receiving lanes
- Distribution and transmission lines make major improvements challenging

Church of Jesus Christ of Latter Day Saints

- Right turn weave section

Spot Road

- Pervious improvements for 1/10th mile in each direction
- Tight right of way

Bolton Road, Johnson Drive, and State Barn Road area

- State Barn Road intersection is heavily skewed and unsignalized
- Roads are close to each other, limiting ability to control median openings
- All three have additional access to SR 9 through another route
- Significant elevation change onto Johnson Road
- Gas line crossing near Bolton Road

SR 306/Keith Bridge Road

- Intersection has a tight skew
- Design speed limits realignment possibilities
- Would need approximately 1200' of new alignment to achieve proper horizontal curvature

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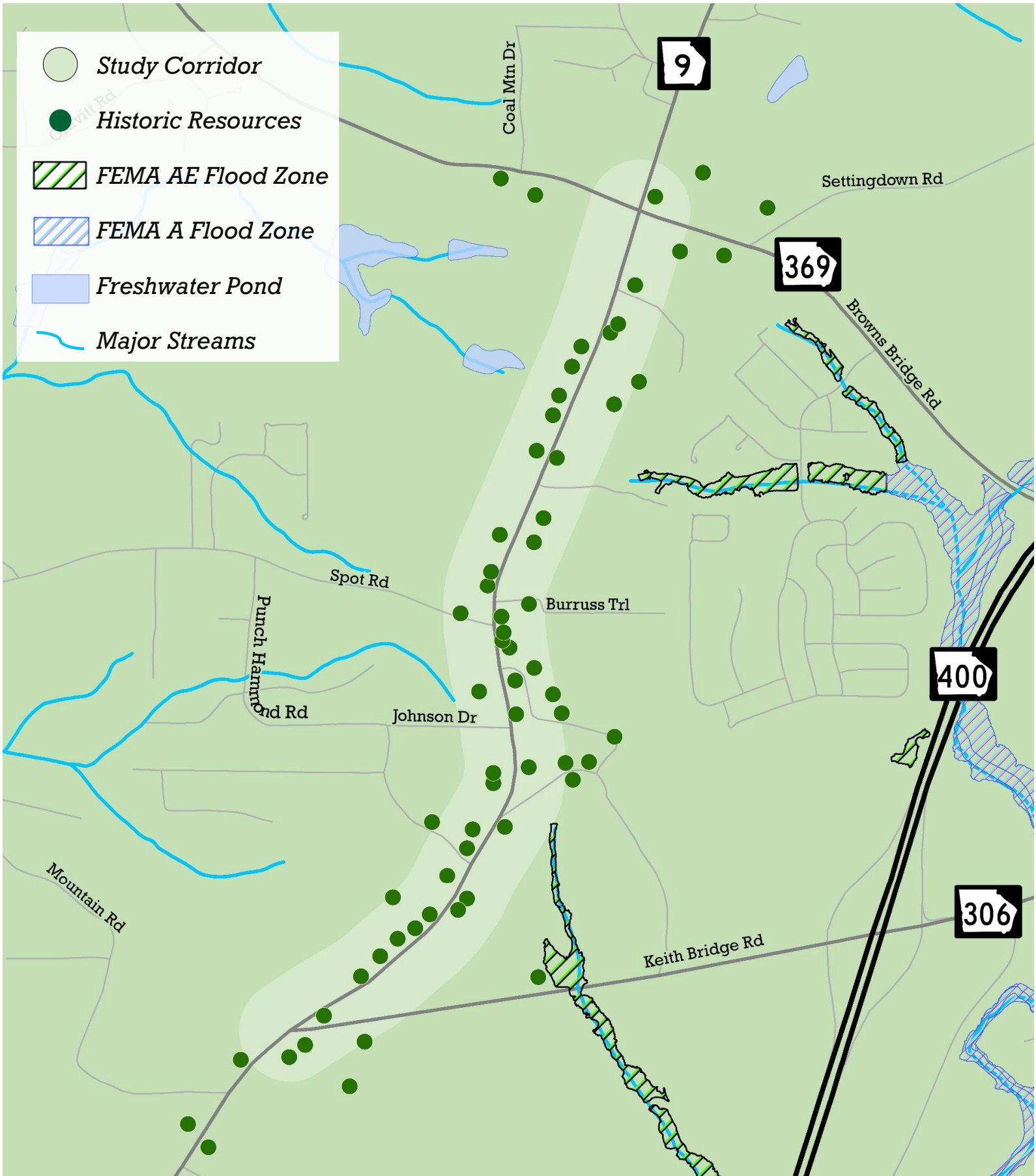
STATION 2

Existing Conditions

Environmental Conditions



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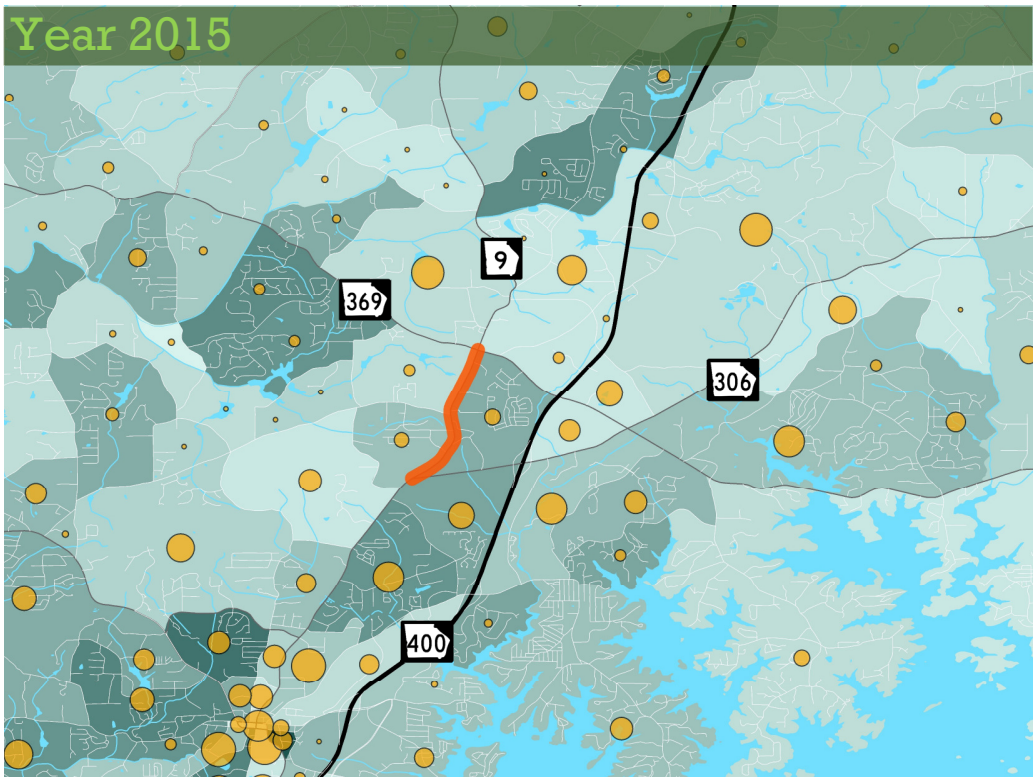
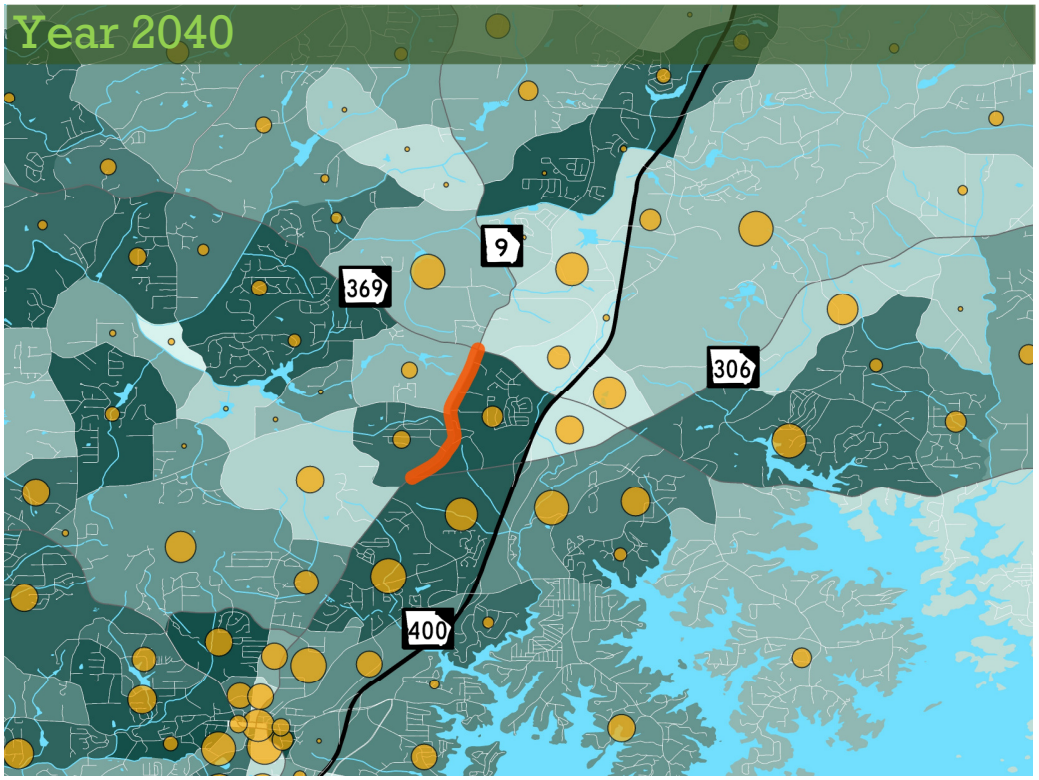
Future Conditions

STATION 3

What Does Future Growth Look Like?





Study Corridor

Population

Less population — More population

Employment

Less employment — More employment

Sources: US Census, Atlanta Regional Commission

Year 2015

Population (in map view)
66,000 people

Employment (in map view)
21,700 jobs

Year 2040

Population (in map view)
168,200 people

Employment (in map view)
37,700 jobs

In 25 years, the population of the area is anticipated to increase by 155 percent while area employment is anticipated to increase by 74 percent!

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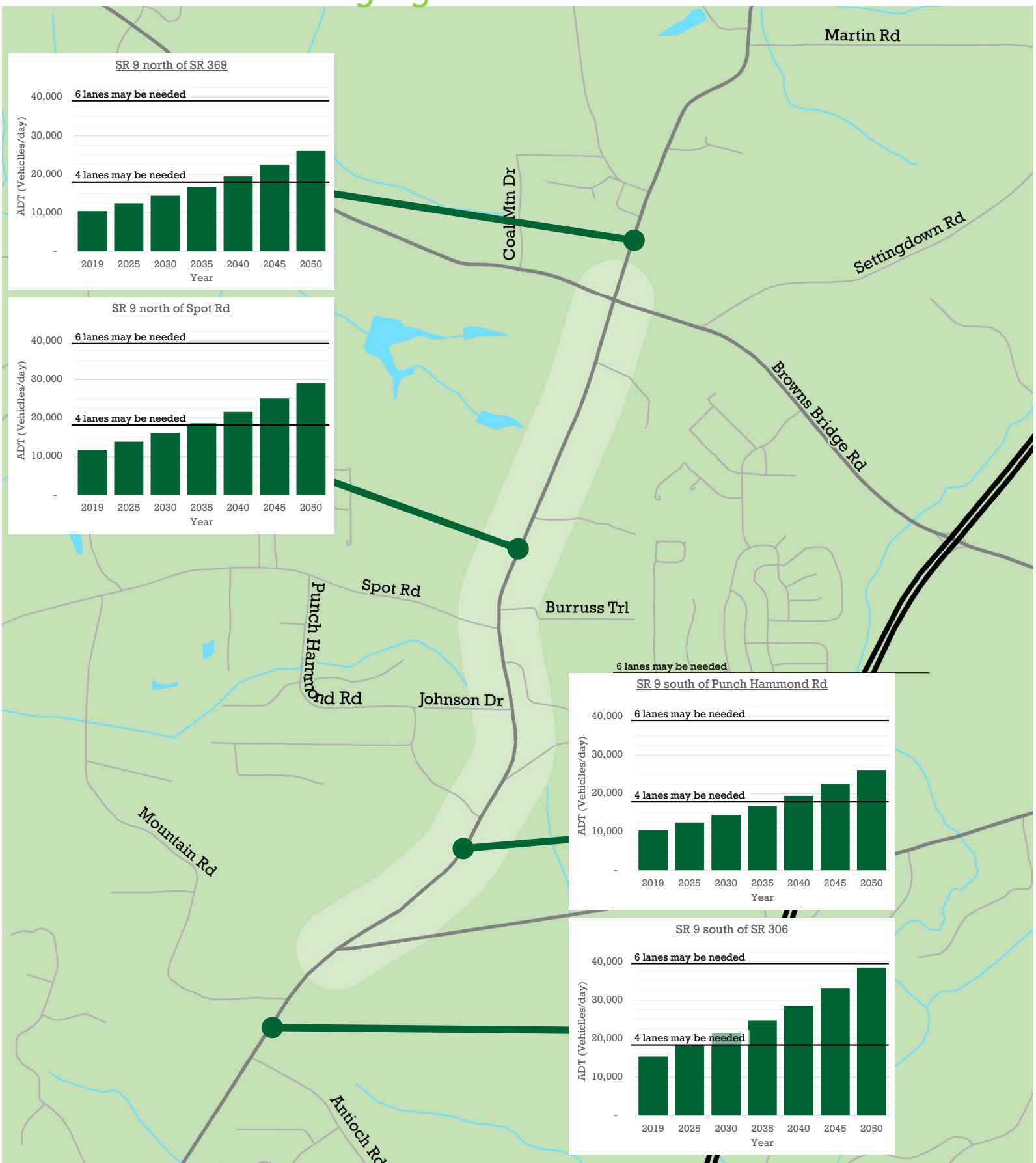
STATION 3

Future Conditions

What Are the Emerging Future Needs On the Corridor?



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Let's Hear From You!

STATION 4

How important are the following strategies to you as we consider improvements to the SR 9 corridor?

	NOT IMPORTANT AT ALL	NOT IMPORTANT	NEUTRAL	SOMEWHAT IMPORTANT	VERY IMPORTANT
MOBILITY Identify and implement transportation improvements to address travel times and vehicle speeds through the corridor					
CONGESTION RELIEF Consider intersection improvements to reduce congestion, delays, and traffic queues					
BICYCLE/PEDESTRIAN INFRASTRUCTURE Install bicycle and pedestrian infrastructure to increase safety for bicyclists and pedestrians					
SAFETY Prioritize improvements at high crash locations and safety related improvements.					
FREIGHT MOVEMENTS Identify roadway and intersection improvements to accommodate truck traffic along the corridor					

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Let's Hear From You!

STATION 4

Use the 6 dots you have been provided to distribute across these 8 categories to indicate what is most important to you.

WIDENING Increase the number of travel lanes in order to improve roadway capacity	
INTERSECTION IMPROVEMENTS Construct turn lanes and improve intersection geometries	
TRAFFIC SIGNALS Install new traffic signals or add turn phases to existing signals	
ROUNDABOUTS Construct roundabouts at congested and/or intersections with safety concerns	
SIDEWALKS AND CROSSINGS Construct sidewalks and/or install pedestrian crossings to improve pedestrian accessibility and safety	
MULTI USE PATHS Construct multi-use facilities that can be used by pedestrians and bicyclists	
BICYCLE LANES Install roadway facilities to accommodate bicyclists	
OTHER Please identify any additional objectives or improvements we should consider	

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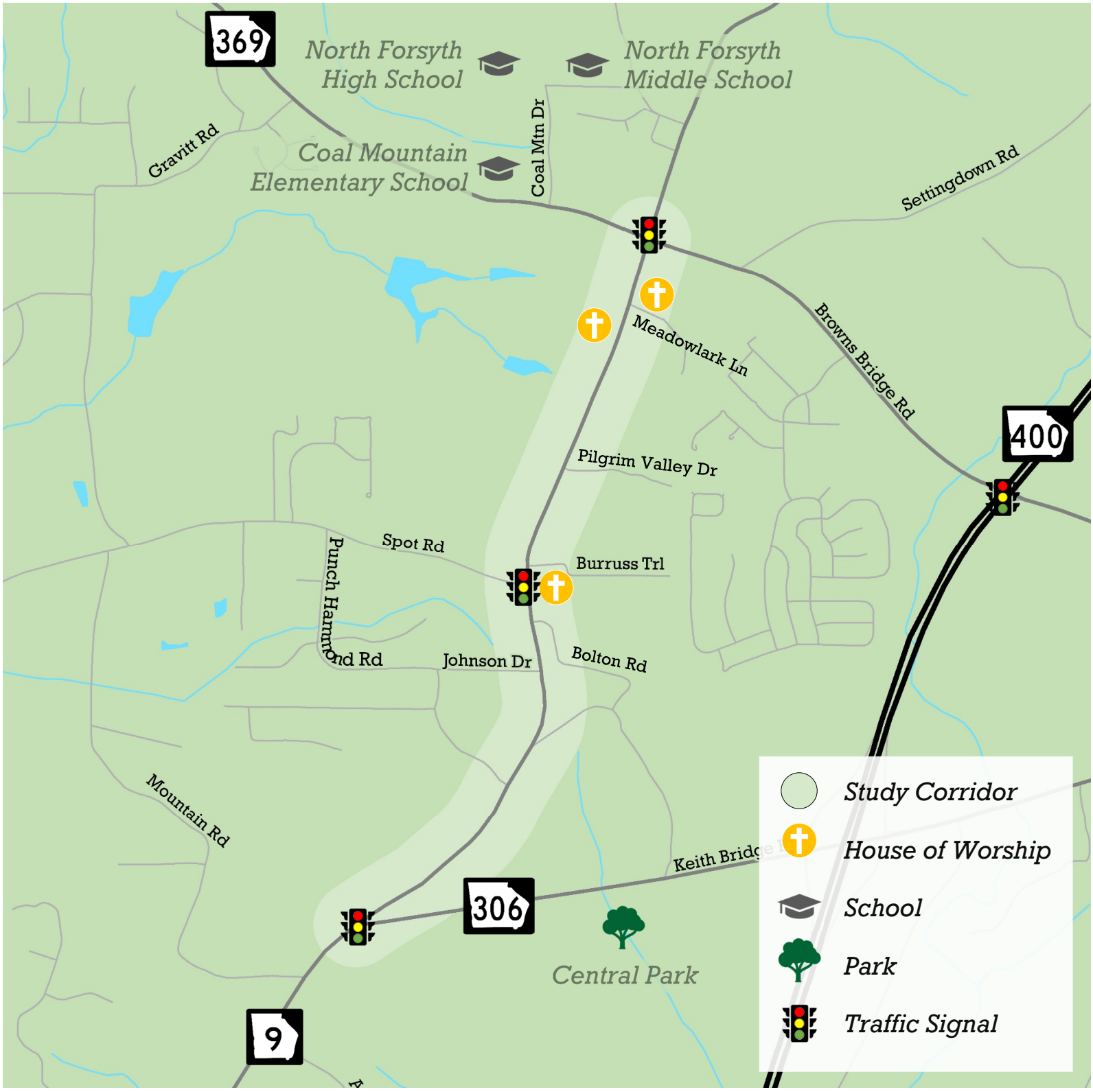
STATION 4

Let's Hear From You!

Please place 3 red dots on corridor locations where you regularly experience congestion.

Please place 3 yellow dots on corridor locations that you believe pose a safety concern.



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