



# Presentation to ARC Technical Coordinating Committee

## June 7, 2019

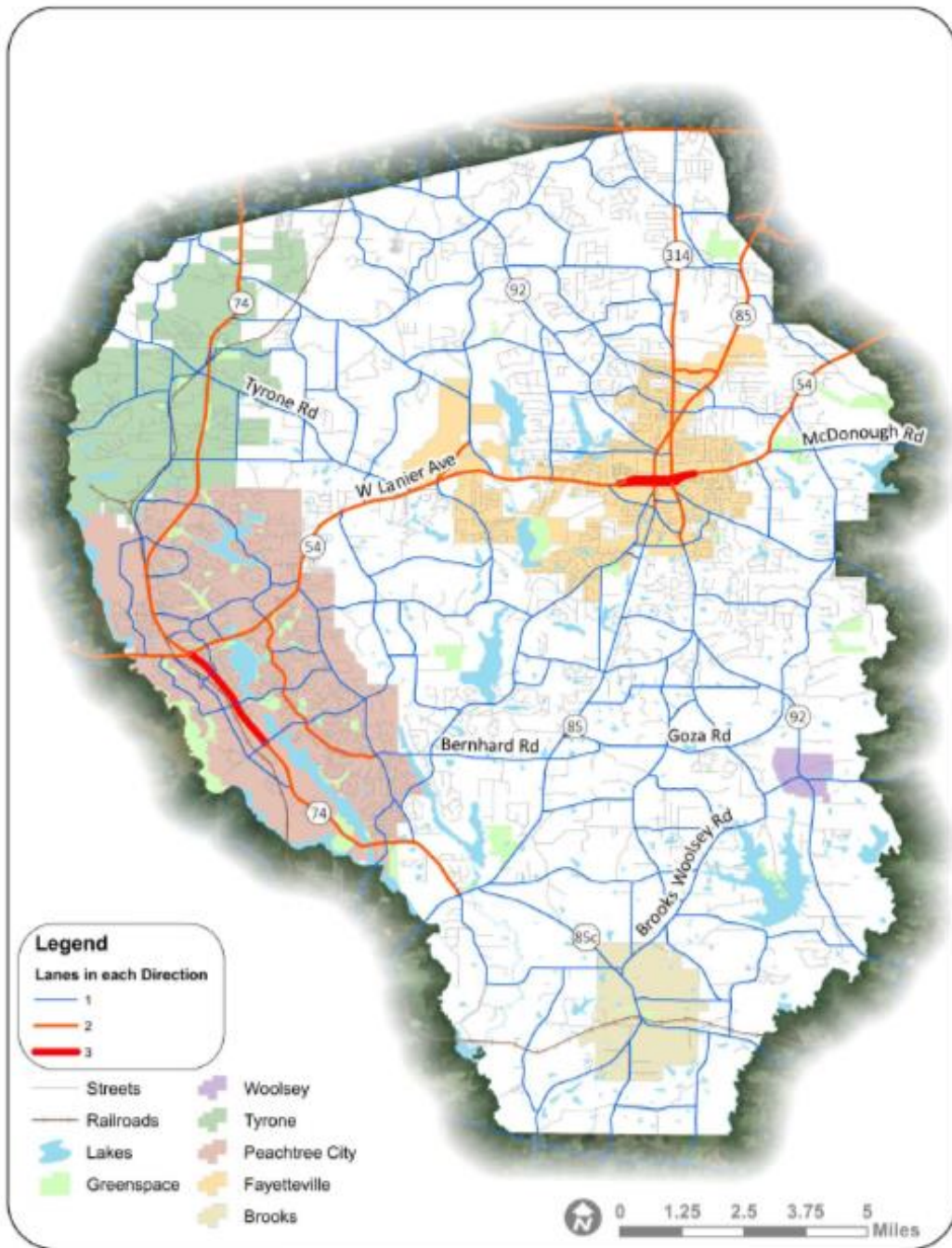


SR 74

COMPREHENSIVE CORRIDOR STUDY



**POND**



- Fayette County 2016 Population: 109,495
- Major Municipalities
  - Peachtree City
  - Fayetteville
  - Tyrone
- No Interstate
- ¼ million vehicles passing into and out of County each day, nearly 50% on or indirectly associated with SR 74
- County land use: 1-acre minimum lots in north transitioning to 5-acre in south. No sewer in unincorporated County.

# Study Background



Formation of SR  
74 Coalition



Desire for Consistent  
Corridor Approach



Partnership with  
GDOT and ARC



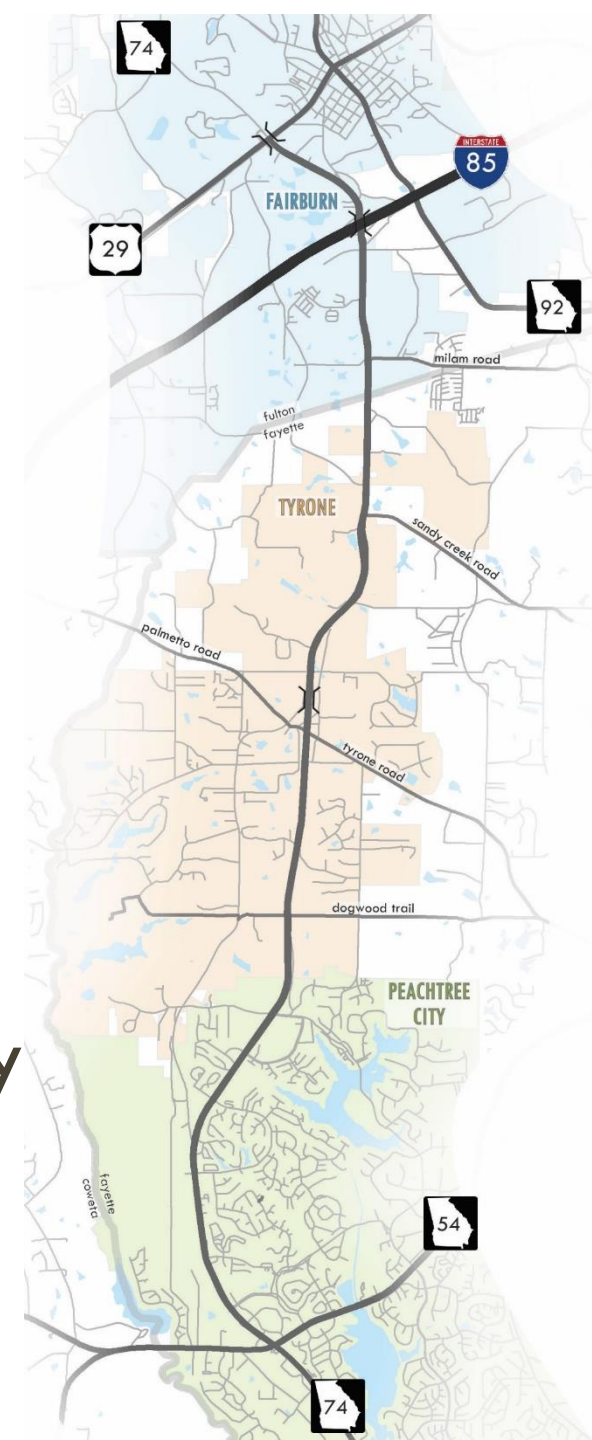
# Study Purpose

Establish a unified vision for the corridor

Understand long term transportation needs

Address congestion and future growth needs

Provide capacity to maintain corridor mobility



SR 74

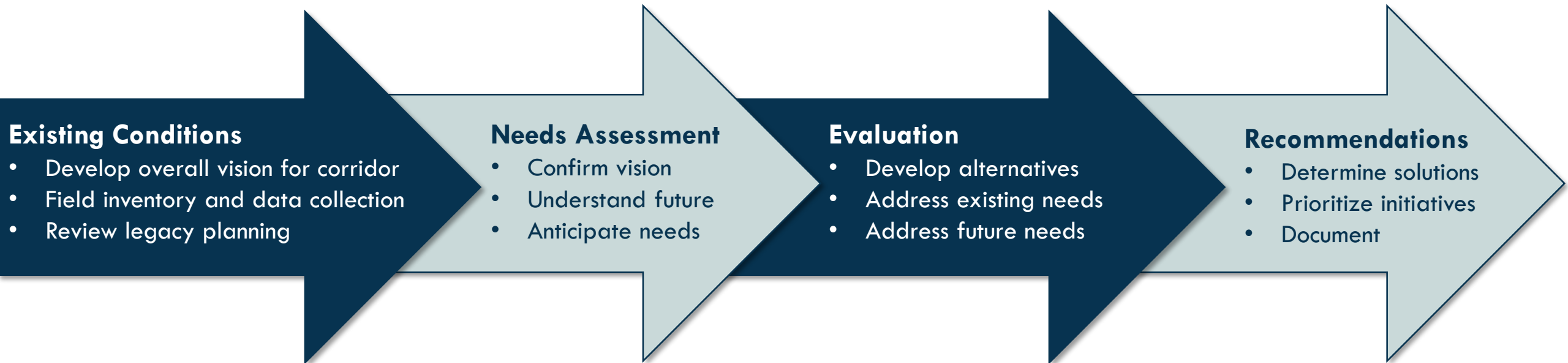
COMPREHENSIVE CORRIDOR STUDY



# Process & Schedule



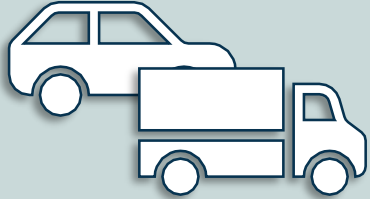
Summer 2017      Fall 2017      Winter 2018      Spring 2018      Summer 2018



SR 74  
COMPREHENSIVE CORRIDOR STUDY



# Recommendations



## Vehicle Improvements

### Superstreet Concept

- RCUTs
- J-Turns
- MUTs



## Bicycle & Pedestrian Improvements

### Multi-Use Path

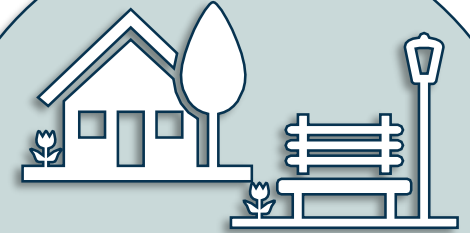
- Grade Separations
- Enhanced Crossings
- Alignment Options



## Transit & Travel Demand Management

### Park & Ride Lot

- Route Extensions
- Carpool and Vanpool Policies



## Framework for Consistency

### Common Elements

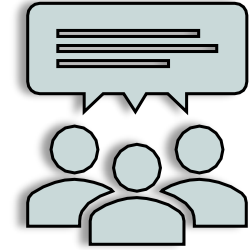
- Signage
- Access Management
- Parking



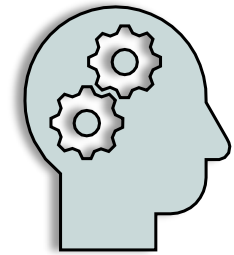
# Keys to Success



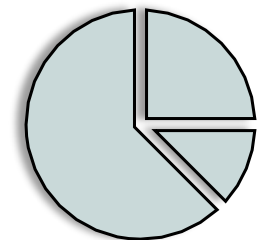
Community & Stakeholder Engagement



Strong Technical Analysis



Communication Through Imagery and Plan Document



SR 74

COMPREHENSIVE CORRIDOR STUDY

# 1. Engagement



## SR 74 Coalition/Stakeholder Group

- Early Listening Session to gather ideas
- Visioning Process
- Ideas and Recommendations Vetting

SR 74 COMPREHENSIVE CORRIDOR STUDY	goals and objectives	SR 74 COMPREHENSIVE CORRIDOR STUDY	goals and objectives	SR 74 COMPREHENSIVE CORRIDOR STUDY	goals and objectives
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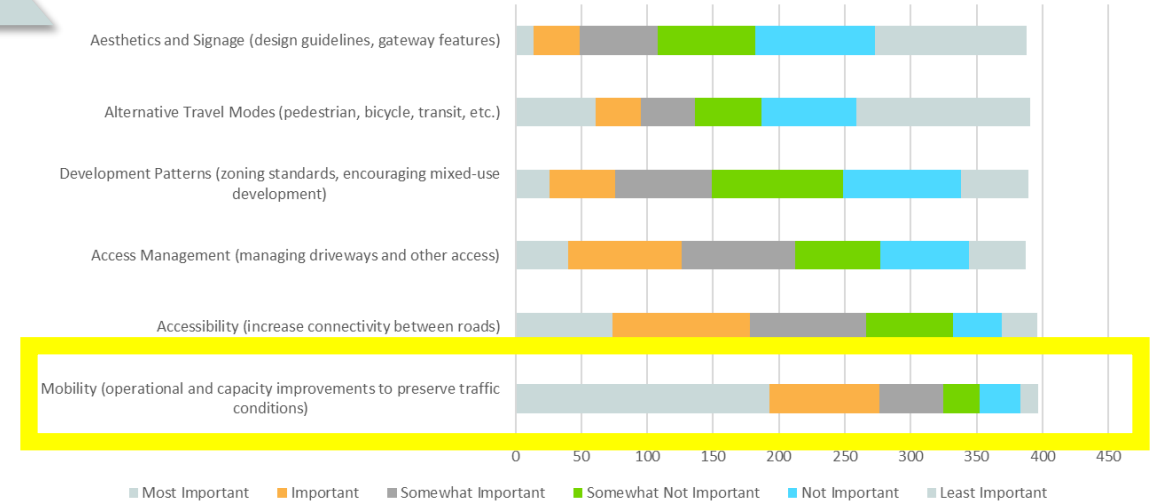
# 1. Engagement



## Surveys & Meetings

- 4 Community Meetings
- Online survey
- Tactical Engagement

What are the most important types of improvements that can be made along SR 74?



Area ID	Suggested Emphasis	Stakeholder Group		Community Meetings		Total		Direction
		Yes!	No!	Yes!	No!	Yes!	No!	
1	Access	6	5	28	32	34	37	52% Mobility
2	Mobility	7	3	31	16	38	19	67% Mobility
3	Access	4	5	31	24	35	29	55% Access
4	Mobility	6	4	30	11	36	15	71% Mobility
5	Access	6	3	19	22	25	25	50% Mix
6	Mobility	9	3	37	5	46	8	85% Mobility
7	Access	6	4	24	24	30	28	52% Mobility

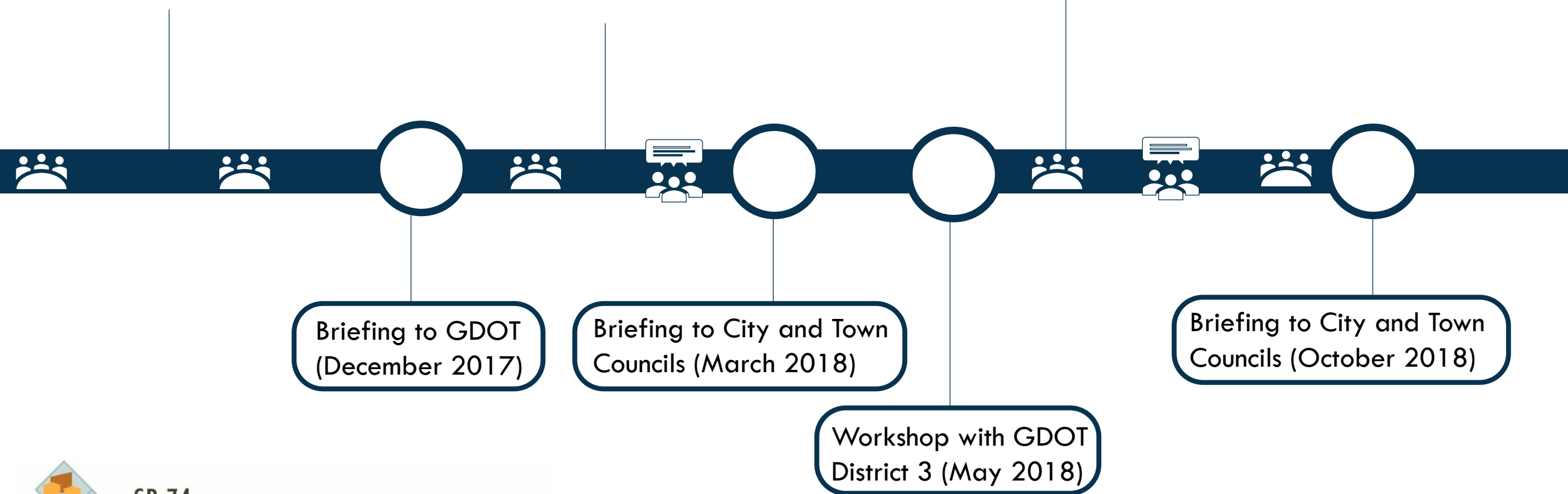
# 1. Engagement

## Partnership Engagement

Establish Existing Conditions & Needs Assessment

Develop Scenarios & Project Ideas

Finalize Recommendations



Briefing to GDOT  
(December 2017)

Briefing to City and Town  
Councils (March 2018)

Workshop with GDOT  
District 3 (May 2018)

Briefing to City and Town  
Councils (October 2018)

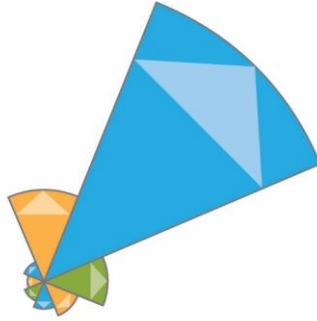


# 2. Technical Analysis



Establishment  
and  
understanding  
of baseline  
data

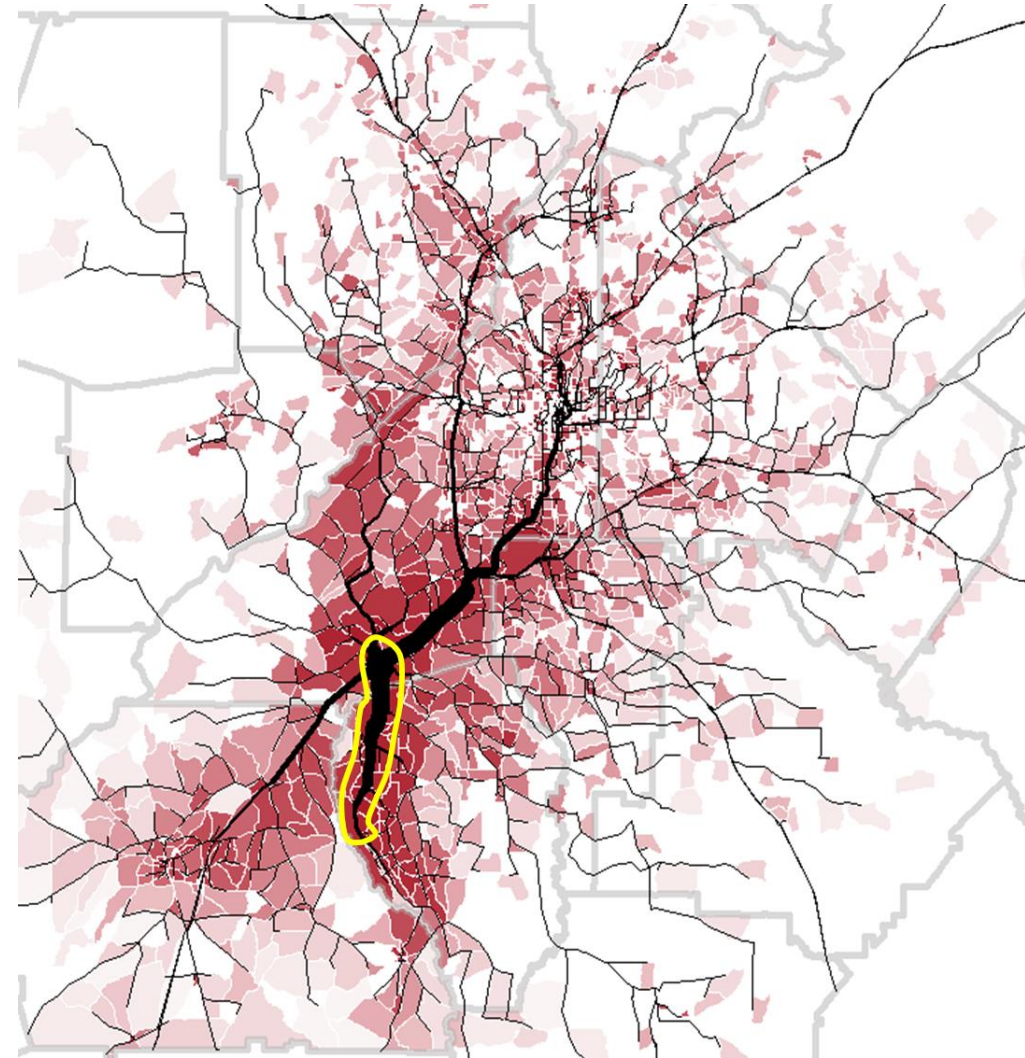
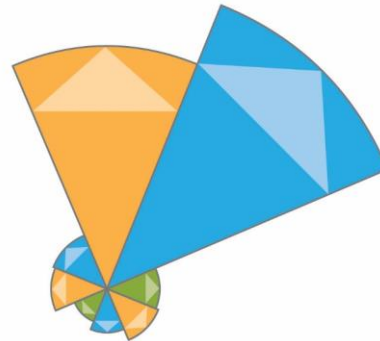
FAIRBURN



TYRONE



PEACHTREE  
CITY

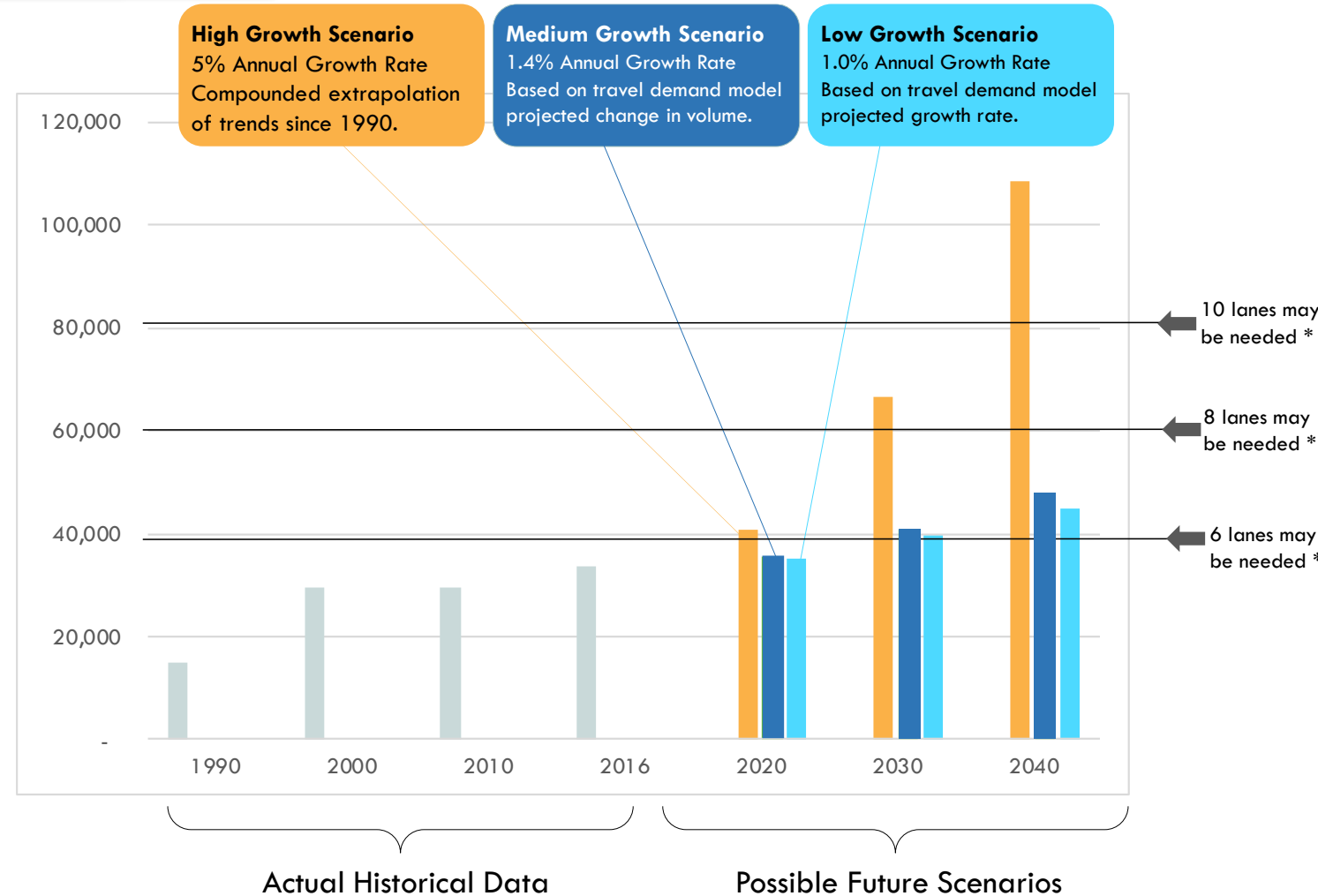


SR 74  
COMPREHENSIVE CORRIDOR STUDY



# 2. Technical Analysis

Thorough understanding of possible futures



\*Various operational improvements at bottleneck locations and intersections can help reduce the number of lanes needed.

# 2. Technical Analysis



GDOT		GDOT ICE STAGE 1: SCREENING DECISION RECORD							ICE Version 2.14   Revised 08/03/2018
GDOT PI #		<b>Note:</b> Up to 5 alternatives may be selected and evaluated; Use this ICE Stage 1 to screen 5 or fewer alternatives to evaluate in Stage 2 1. Does alternative address the project need in a balanced manner and in scale with the project? 2. Does alternative improve safety performance in terms of reducing severe crashes? 3. Does alternative improve safety performance in operations (pedestrians and/or bicyclists)? 4. Does alternative improve (or preserve) traffic characteristics (congestion, delay, reliability, etc.)? 5. Does alternative appear feasible given the site context? 6. Does alternative appear feasible with respect to other project factors? 7. Overall feasible alternative (select alternative for further evaluation in Stage 2)?							
Project Location:	Major @ Minor								
Prepared by:									
Analyst:									
Date:									
Answer "Yes" or "No" to each policy question for each control type to identify which alternatives should be evaluated in the Stage 2 Decision Record; enter justification in the rightmost column									
<b>Intersection Alternative</b> (see "Intersections" tab for detailed description of intersection/interchange type)									
Unsignalized Intersections	Conventional (Minor Stop)	No	No	No	No	No	No	No	
	Conventional (All-Way Stop)	No	No	No	No	No	No	No	
	Mini Roundabout	No	No	No	No	No	No	No	
	Single Lane Roundabout	No	No	No	No	No	No	No	
	Multilane Roundabout	No	No	No	No	No	No	No	
	RCUT (stop control)	No	No	No	No	No	No	No	
	RIRO w/down stream U-Turn	No	No	No	No	No	No	No	
	High-T (unsignalized)	No	No	No	No	No	No	No	
	Offset-T Intersections	No	No	No	No	No	No	No	
	Diamond Interch (Stop Control)	No	No	No	No	No	No	No	
	Diamond Interch (RAB Control)	No	No	No	No	No	No	No	
	No LT Lane Improvements	No	No	No	No	No	No	No	
	No RT Lane Improvements	No	No	No	No	No	No	No	
Other unsignalized (provide description):	No	No	No	No	No	No	No		

Early adoption of  
GDOT ICE process

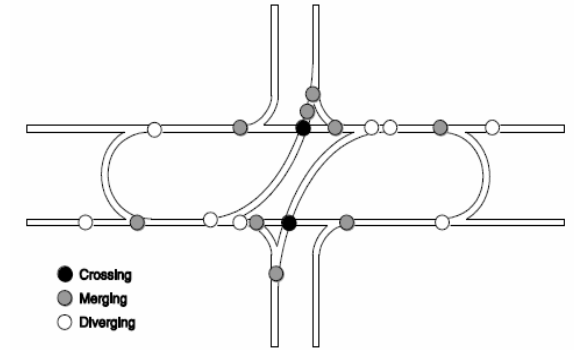
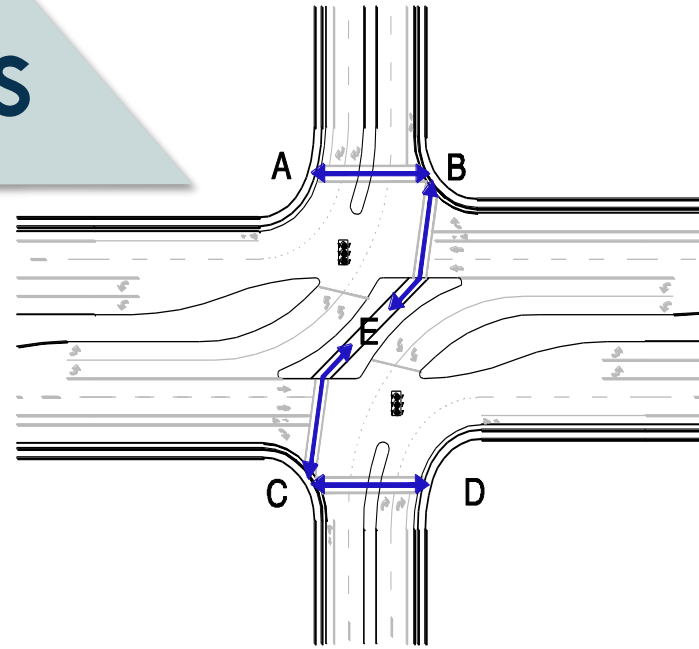


SR 74  
COMPREHENSIVE CORRIDOR STUDY



# 2. Technical Analysis

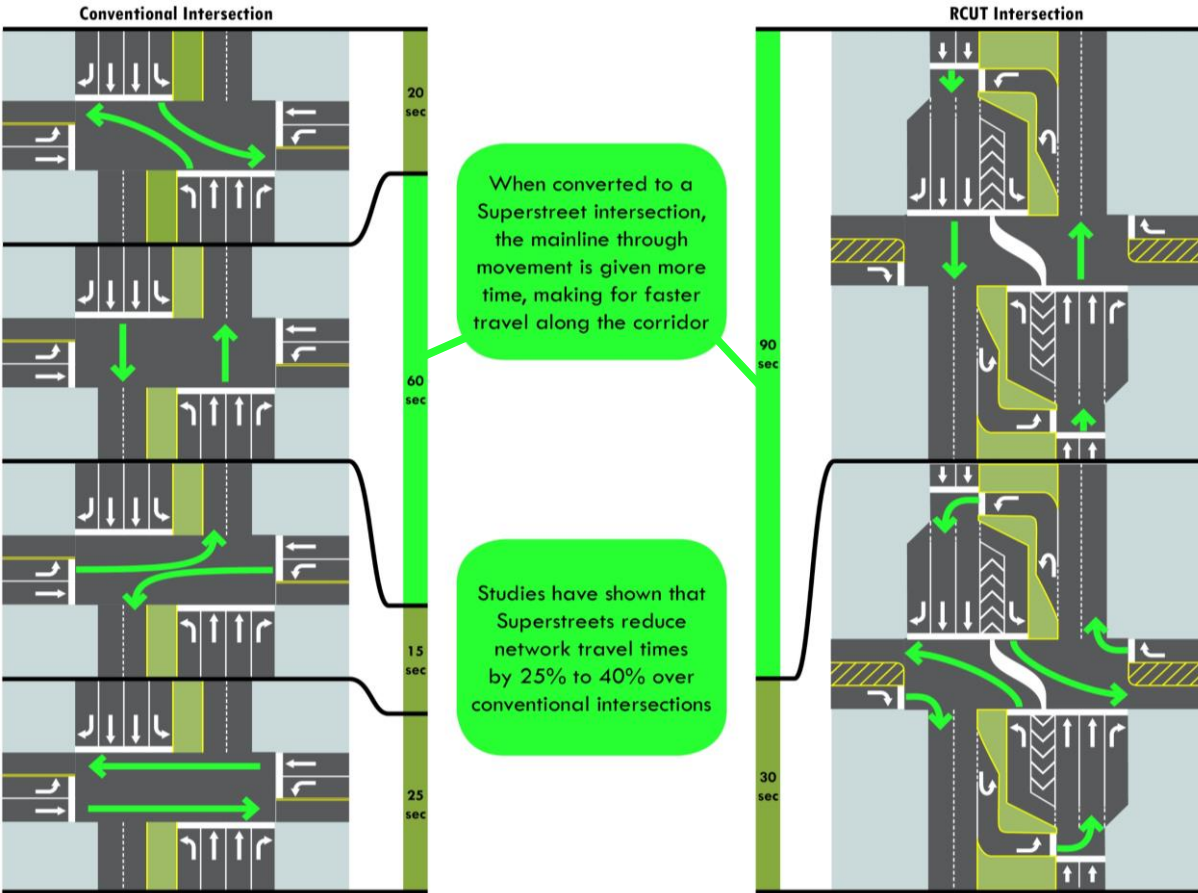
Comprehensive examination of benefits



Network Totals	2040 AM Peak No-Build	2040 AM Peak Build	Percent Change	2040 PM Peak No-Build	2040 PM Peak Build	Percent Change
Total Delay (hr)	4,113	814	-80%	10,164	2,863	-72%
Number of Stops (#)	65,712	46,840	-29%	173,709	99,748	-43%
Average Speed (mph)	8.0	19.0	+11.0	5.0	13.0	+8.0
Total Travel Time (hr)	5,586	2,309	-59%	12,261	4,992	-59%
Distance Traveled (mi)	44,201	44,847	+1%	62,917	63,830	+1%



# 3. Communication



# 3. Communication



SR 74  
COMPREHENSIVE CORRIDOR STUDY





# 3. Communication

**STATE ROUTE 74 COMPREHENSIVE CORRIDOR STUDY**

**EXISTING CORRIDOR CONDITIONS | BICYCLE AND PEDESTRIAN FACILITIES**

**bicycle and pedestrian facilities**  
The majority of the study corridor lacks dedicated facilities for bicyclists or pedestrians. Immediately south of I-85, much of the new development has been built with sidewalks. Some sidewalks also exist at the developments around Landrum Road/Milam Road, and near SR 54, but otherwise, there are no sidewalks directly on the corridor.

At the southern end of the study corridor, Peachtree City has a substantial network of off-road multi-use trails that support not only bicyclists and pedestrians, but also Personal Transportation Vehicles (PTVs) like golf carts and similar small vehicles. Current state law prohibits PTVs from traveling along higher-speed roads such as SR 74 and limits places where PTVs can cross state routes. In the study corridor, there are two places where a trail crosses over SR 74 - a trail bridge over Wisdom Road, and a grade-separated crossing of SR 74 between Kedron Drive (north) and Ardenlee Parkway/Georgia Park.

Though intermittent, sidewalks and pedestrian crossing features are available near the I-85 interchange.

In the Tyrone area, much of the corridor has a rural feel and bicycle and pedestrian facilities are not common.

In Peachtree City, active mode transportation is separated from the SR 74 Corridor via multi-use paths.

Grade-separated trail crossings  
Existing Multi-Use Paths

**POND**

**Heat Map of Crashes on Study Corridor**

In order to evaluate crash patterns and safety risks in the study corridor, crash data was retrieved from the Georgia Electronic Accident Reporting System (GEARS) database. Data from this database was used to examine overall crash patterns. As shown in the table below, based on crash data from 2013 through 2017, the study corridor experienced lower crash rates (457 crashes per 100 million vehicle-miles traveled) than the average for similar types of roads throughout Georgia (628 crashes per 100 million vehicle-miles traveled).

The map immediately to the right shows where crashes occurred more and less frequently. The highest concentrations of crashes occur at major cross streets, including the I-85 interchange and at Carriage Oaks Drive and Crabapple Lane/N Peachtree Parkway. The table on the opposite page shows crashes by severity near each analyzed intersection. Of note, the intersections of SR 74 and SR 54 had intersection crash rates higher than the statewide average.

**Study Corridor Crash Statistics (2013-2017)**

Total Crashes	3,332
Crashes per 100 Million Vehicle-Miles of Travel	457
Statewide Crash Rate Average for Non-Freeway Principal Arterials in Urban Areas (2016)	628
Angle	500
Head On	44
Rear End	1,759
Sideswipe - Same Direction	370
Sideswipe - Opposite Direction	34
Not a Collision with a Motor Vehicle	245
Other/Unclassified	380
Property Damage Only	2,826
Crashes with Injuries	500
Crashes with Fatalities	6

**Crashes by Intersection and Severity**

Intersection	Property Damage Only Crashes	Injury Crashes	Fatal Crashes	Total Crashes
1 SW Broad St/US 29	8	4	0	12
2 McLarin Road	8	2	0	10
3 Senoia Road (north)	8	3	0	11
4 I-85 Southbound	239	36	0	275
5 I-85 Northbound	155	16	0	171
6 Oakley Industrial Boulevard	356	57	1	414
7 Harris Road	158	32	0	190
8 Meadow Glen Parkway	33	7	0	40
9 Landrum Road/Milam Road	67	17	0	84
10 Kirkley Road/Westbourne Drive	14	2	0	16
11 Laurelmont Drive/Sandy Creek Road	37	5	0	42
12 Peggy Lane/Jenkins Road	32	4	0	36
13 Carriage Oaks Drive	26	3	1	30
14 Palmetto Road/Tyrone Road	30	8	0	38
15 E Crestwood Road	8	2	0	10
16 Dogwood Trail	5	4	0	9
17 SR 54	15	0	82	97
18 SR 74	19	0	71	90
19 SR 74	6	0	58	64
20 SR 74	1	32	0	33
21 SR 74	0	40	0	40
22 SR 74	0	78	0	78
23 SR 74	0	51	0	51
24 SR 74	0	429	0	429

**EXISTING CORRIDOR CONDITIONS | LEVEL OF SERVICE**

Intersecting Street	Existing Control	No Build Year 2017 Intersection Analysis Results			
		Average AM Delay (sec/vehicle)	AM Level of Service*	Average PM Delay (sec/vehicle)	PM Level of Service*
1 SW Broad St/US 29	Minor Street Stop	16	C	15	B
2 McLarin Road	Minor Street Stop	19	C	13	B
3 Senoia Road (north)	Minor Street Stop	81	F	73	F
4 I-85 Southbound	Signal	35	C	82	F
5 I-85 Northbound	Signal	256	F	89	F
6 Oakley Industrial Boulevard	Signal	98	F	16	B
7 Harris Road	Signal	11	B	†/†	F/F
8 Meadow Glen Parkway	Signal	209/†	F/F	28	C
9 Landrum Road/Milam Road	Signal	19	B	226/†	F/F
10 Kirkley Road/Westbourne Drive	Signal	274/†	F/F	27/29	D/D
11 Laurelmont Drive/Sandy Creek Road	Minor Street Stop	16/221	C/F	21	C
12 Peggy Lane/Jenkins Road	Signal	19	B	23	C
13 Carriage Oaks Drive	Signal	13	B	42	D
14 Palmetto Road/Tyrone Road	Signal	20	C	†/†	F/F
15 E Crestwood Road	Signal	84/56	F/F	13	B
16 Dogwood Trail	Signal	11	B	29	C
17 Crabapple Lane/N Peachtree Parkway	Signal	21	C	30	C
18 Ardenlee Parkway/Georgian Park	Signal	15	B	31	C
19 Kedron Drive (north)	Signal	15	B	135/†	F/F
20 Senoia Road (south)/Lexington Pass	Minor Street Stop	15/136	B/F	†/†	F/F
21 Wisdom Road	Signal	9	A	14	B
22 Aberdeen Parkway	Signal	135	F	†	F
23 SR 54	Signal	87	F	138	F
24 SR 74	Signal				

**Control Type**  
 ○ Minor Street Stop  
 □ Signal

**Intersection**  
 Fairburn  
 Tyrone  
 Peachtree City

**POND**

**STATE ROUTE 74 COMPREHENSIVE CORRIDOR STUDY**

**Analyzed Intersections by Current Control Type**

This analysis is typically needed to understand specific operations at a given intersection. For this study, intersection-level analyses were based on the criteria listed in the Highway Capacity Manual, 2000 edition. The Synchro Studio 10 software, using the HCM 2000 methodology, was utilized to perform the analyses for twenty-four intersections. More recent methodologies concerning shared lanes were not used in this analysis as they were not available in the software. Raw output of the intersection analysis is shown in Appendix B, while the results are shown in the table to the right. The intersection analysis performed is similar to the TDM results, intersection analysis at the I-85 interchange and the I-85 interchange at the I-85 interchange. Also, the most pronounced congestion is at the I-85 interchange and the I-85 interchange. Several of the side streets that are currently stop-controlled at SR 74 experience substantial delays along the corridor as well.

**LOS**  
 A-B  
 C-D  
 E-F

**POND**



# Questions?



SR 74

COMPREHENSIVE CORRIDOR STUDY



**POND**