



South Carolina Planning Education Advisory Committee (SCPEAC)

September 7, 2023

NOTICE OF DECISION

Title of Program: South Carolina Commerce Corridor Study

Organization: City of Rock Hill

The following action has been taken by the SCPEAC on this application:

RECEIVED BY THE COMMITTEE Date: August 7, 2023

REVIEWED BY THE COMMITTEE Date: _____

ACCEPTED WITHOUT OBJECTION Date: August 17, 2023

- a) X ACCREDITED for: 60 min. CE credits: 1.0
- b) _____ DENIED ACCREDITATION
- c) _____ RETURNED for more information

If accredited:

- a) Authorized Course No.: 2023-01
- b) Date of accreditation: August 17, 2023

Certification Signature, MASC Administrative Representative: *L.P. Floyd*

Certification Signature, SCPEAC Representative: *Stephanie Monroe Tilson*

**For further information, contact Urica Floyd at 803-354-4754
or the committee at SCPEAC@masc.sc.**

**LOCAL OFFICIAL'S CERTIFICATION OF NEED
FOR CONTINUING EDUCATION PROGRAM**

NOTE: The Planning Director of a jurisdiction, or the COG Director serving a jurisdiction, may certify to the SCPEAC that a particular continuing education program is appropriate to meet the needs of that jurisdiction.

This certification form, together with the required information referenced therein, shall be submitted to the Committee. **If no objections are raised** by a member of the SCPEAC within 10 business days of receipt, the continuing education program shall be considered accepted. If an objection is raised, a teleconference meeting shall be scheduled, with appropriate public notice, as soon as reasonably possible, to review the application.

Applications are due no later than 30 days prior to the first scheduled presentation of a program or class. The Committee will consider extenuating circumstances where the 30 day deadline cannot be met.

1. Certifying Official's Information:

- a. Name: Leah Youngblood
- b. Title: Planning and Zoning Director
- c. Jurisdiction for which certification is being made: City of Rock Hill
- d. Address of Jurisdiction: 155 Johnston Street/ PO Box 11706
- e. City: Rock Hill Zip Code: 29731-1706
- f. Telephone: 803-329-5569 Email: leah.youngblood@cityofrockhill.com
- g. For COG Directors:
 - i. Name of COG: _____
 - ii. Address of COG: _____
 - iii. City: _____ Zip Code: _____
 - iv. Telephone: _____ Email: _____

2. Information on Educational Program:

- a. Title of Program: South Carolina Commerce Corridor Study
- b. Name of Organization providing/sponsoring the Program: City of Rock Hill
 - i. Address: 155 Johnston Street/PO Box 11706
 - ii. City: Rock Hill Zip Code: 29731-1706
 - iii. Contact Person: Amy Jo Denton & Lisa Brown
 - iv. Title: Senior Planner & EUD Director
 - v. Telephone: 803-326-3869 803-326-3814 Email: amyjo.denton@cityofrockhill.com
lisa.brown@cityofrockhill.com
- c. Date(s) & Location(s) of Program:
City of Rock Hill Conference Room
- d. Briefly describe the program and why it is relevant to your jurisdiction:

3. Method of presentation: _____

4. Description of materials to be distributed: _____

5. When are materials distributed (before the program, at the time of the program): _____

6. Instruction Time:

a. Indicate the total number of minutes of instruction time: _____

NOTE: Breaks, meals, and introduction should not be counted. A reasonable period of Q & A should be included and counted.

7. Local contact person (if other than Certifying Official):

a. Name: _____

b. Title: _____

c. Jurisdiction: _____

d. Telephone: _____ Email: _____

8. Required attachments:

- a. Course description and outline including estimated time per section
- b. Brochure, if available
- c. Course Presenter(s) and credentials (include brief resumes and qualifications)
- d. Copies of all handouts and course materials
- e. Evaluation Form and method of evaluation (each program must be evaluated)

9. Certification. By submitting this application, the applicant agrees to:

- a. Allow in-person observation, without charge, of the Program by the SCPEAC Committee members. Any food, travel, or lodging costs will be the responsibility of the Committee member(s).
- b. The Certifying Official acknowledges that its approval for this Program may be withdrawn for violations of the regulations or failure to comply with the agreements and representations contained herein and as may be required by the SCPEAC.

10. Application and program materials shall be submitted:

- a. Electronically to each of the Committee members emails as listed on the website (<https://www.scstatehouse.gov/SCPEAC/members.htm>).



AmyJo Denton has been with the City of Rock Hill since 2018 as the Long-Range Planning Manager. She is a Certified Professional Planner (AICP), educated as an Architect (Assoc AIA) and a Certified Professional Project Manager (PMP). She has two Masters, an MBA and a Master's in Architecture.

Prior to working for the City of Rock Hill, AmyJo was working in the private sector practicing land use planning for eight years.



Lisa Brown
Director of Strategy
Management

Interim Director of
Economic & Urban
Development

Interim Executive
Director of Rock
Hill Economic
Development Corp.

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lisa.brown@cityofrockhill.com



ROCK HILL
SOUTH CAROLINA

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Lisa Brown

Lisa Brown is the Director of Strategy Management at the City of Rock Hill. Lisa's current role focuses on public information, strategic planning, performance evaluation, efficiency efforts, and the City Council Agenda. Lisa is also currently serving as the Interim Director of Economic & Urban Development and Executive Director of Rock Hill Economic Development Corporation (RHEDC).

Lisa began her service to the City in 2012 when she served as the sole Budget Analyst for a budget exceeding \$192 million annually. Lisa then took on the lead strategic planning responsibility in 2014 when she enhanced data-driven decision making efforts. Since taking over the City's strategic plan, Lisa has championed the City in winning the International City/County Management Association (ICMA) Certificate of Excellence every year since. Lisa also implemented the creation of the City's process improvement training for employees, Ignite, which helps employees improve their work processes for the better provision of City services. Lisa is also involved in a number of community engagement efforts including primary responsible for the City's win as an All-America City in 2019.

Lisa is a Certified Government Finance Officer through the Government Finance Officers Association of South Carolina, a graduate of the Government Finance Officers Association's Advanced Government Finance Institute, and a graduate of SC City and County Management Association's Local Government Leadership Institute. Lisa completed the Diversity Leaders Initiative through Furman's Riley Institute and Leadership ICMA, a competitive two-year program designed to cultivate key competencies for successful leadership at all levels of local government. Lisa is delegate for the Local Government 2030 Convening and serves on The Art of Public Service: The Communications Continuum committee. She also serves on the ICMA Performance Management Advisory Committee and the ICMA Leadership Programs Advisory Committee.

Lisa has a bachelor's degree in History and International Studies, as well as a Master's degree in Public Administration with a concentration in Public Finance from the University of North Carolina at Charlotte. Prior to her career in local government, Lisa served as a Peace Corps Volunteer in Madagascar. Lisa continues to be involved in the community and is Past President of the Early Learning Partnership.



CONTINUING EDUCATION EVALUATION FORM

Name of Program: _____ Date: _____

Facilitator(s): _____

Please rate the following on a scale from 1 to 5 by circling the appropriate number:

1= strongly disagree (SD); 2= disagree (D); 3= neutral (N); 4= agree (A); 5 = strongly agree (SA)

	SD	D	N	A	SA
1. The topic of this continuing education session was interesting and/or relevant to my role with the City of Rock Hill.	1	2	3	4	5
2. The coordinator demonstrated comprehensive knowledge of the subject matter.	1	2	3	4	5
3. The coordinator conveyed the material effectively.	1	2	3	4	5
4. The coordinator was well-prepared and the session was well-organized.	1	2	3	4	5

What was the most valuable part of this session?

What could have been done to improve this session?

Ideas for future continuing education topics:



**COURSE DESCRIPTION AND OUTLINE:
CONTINUING EDUCATION SESSION
INFRASTRUCTURE PLANNING**

This session will introduce staff and Board members to the concepts involved in long-range infrastructure planning, specifically for the area called the SC Commerce Corridor. Attendees will learn about basic concepts and practical application of land use planning, economic development implications, and engineering principals. This will include an overview of how these principals are applied in the planning analysis. Staff will review development standards, regulations and policies.

The session will involve a PowerPoint presentation given by the coordinators. The session will be followed by a short period of questions-and-answers.

- I. Long-Range Infrastructure Planning – 10 minutes**
 - a. Introductions
 - b. Economic Development Strategy
- II. Infrastructure Assessment - 10 minutes**
 - a. Methodology – When, Where, & How Much
 - b. Transportation Modeling
- III. Infrastructure Needs & Master Plans - 10 minutes**
 - a. Roadways
 - b. Utilities
- IV. Development Standards & Economic Development Goals - 10 minutes**
 - a. Development Standards & Transportation Planning
 - b. Future Challenges
- V. Next Steps - 5 minutes**
- VI. Questions & Answer Session - 15 minutes**

South Carolina Commerce Corridor Study

Continuing Education Program

September 2023

Peach Farm (Before) I-85 Outside Gaffney



Peach Farm (After) I-85 Outside Gaffney



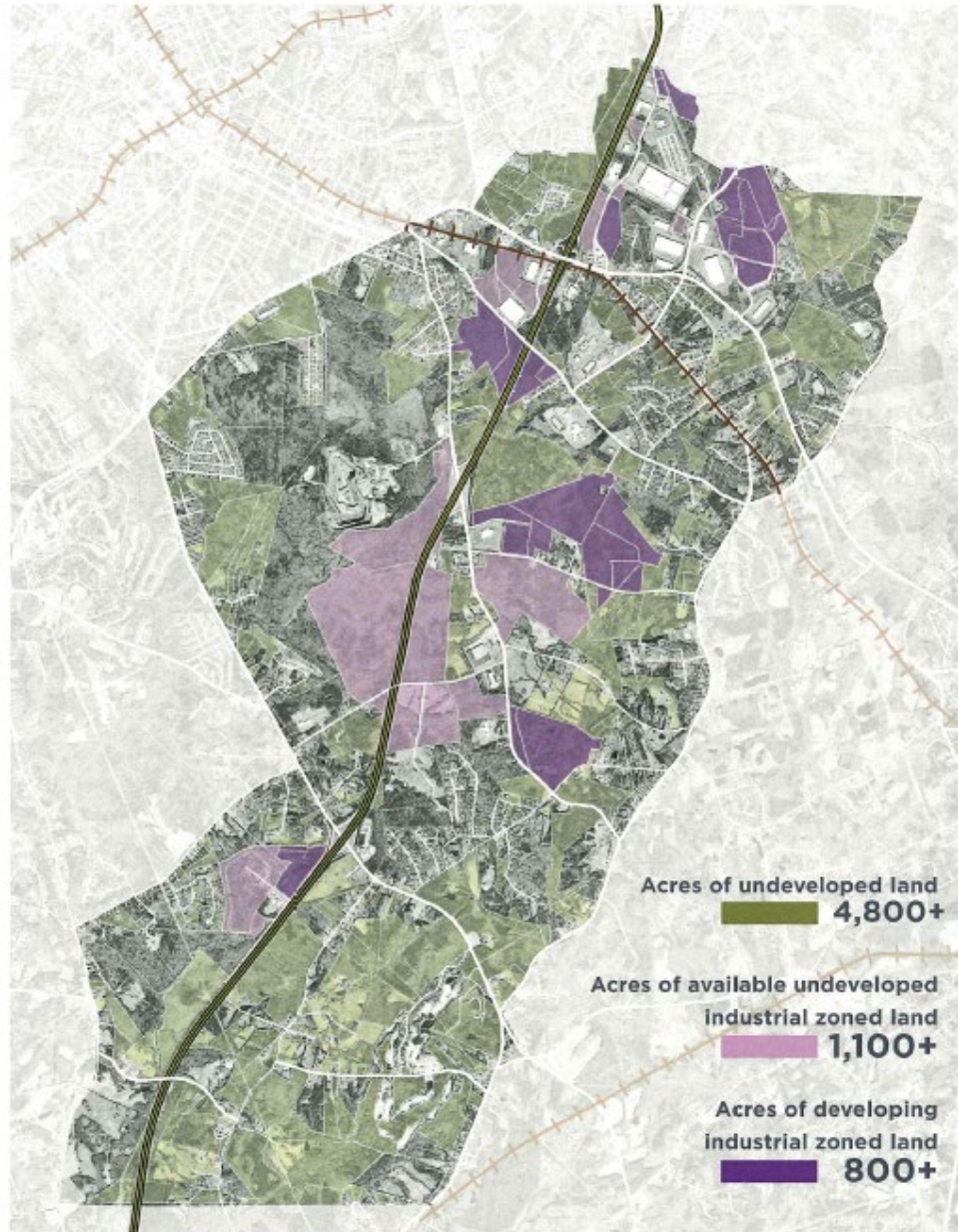
- 1.4 million square feet of distribution
- 120+/- Truck Bays facing the interstate
- Few jobs

Our Economic Development Strategy

- Plan, plan, plan, plan, and keep planning
- Short-term interest vs. Long-term viability
- **Development paying for needed infrastructure**
- Desired industries:
 - Life science
 - Headquarters
 - Research & Development
 - Advanced Manufacturing (not noxious)

- Rock Hill Economic Development Corporation is a non-profit organization committed to representing the business, educational, and community interests of the city while promoting jobs and supporting growth.
- Annual report quote from 1984:
“...we need to link our vision, resources, and commitment to seize the moment of opportunity... that’s what this entire community must do in the future if our momentum is to continue, if our people are to prosper, if the opportunity is truly to be seized...”

SC Commerce Corridor



3

INTERSTATE
INTERCHANGES

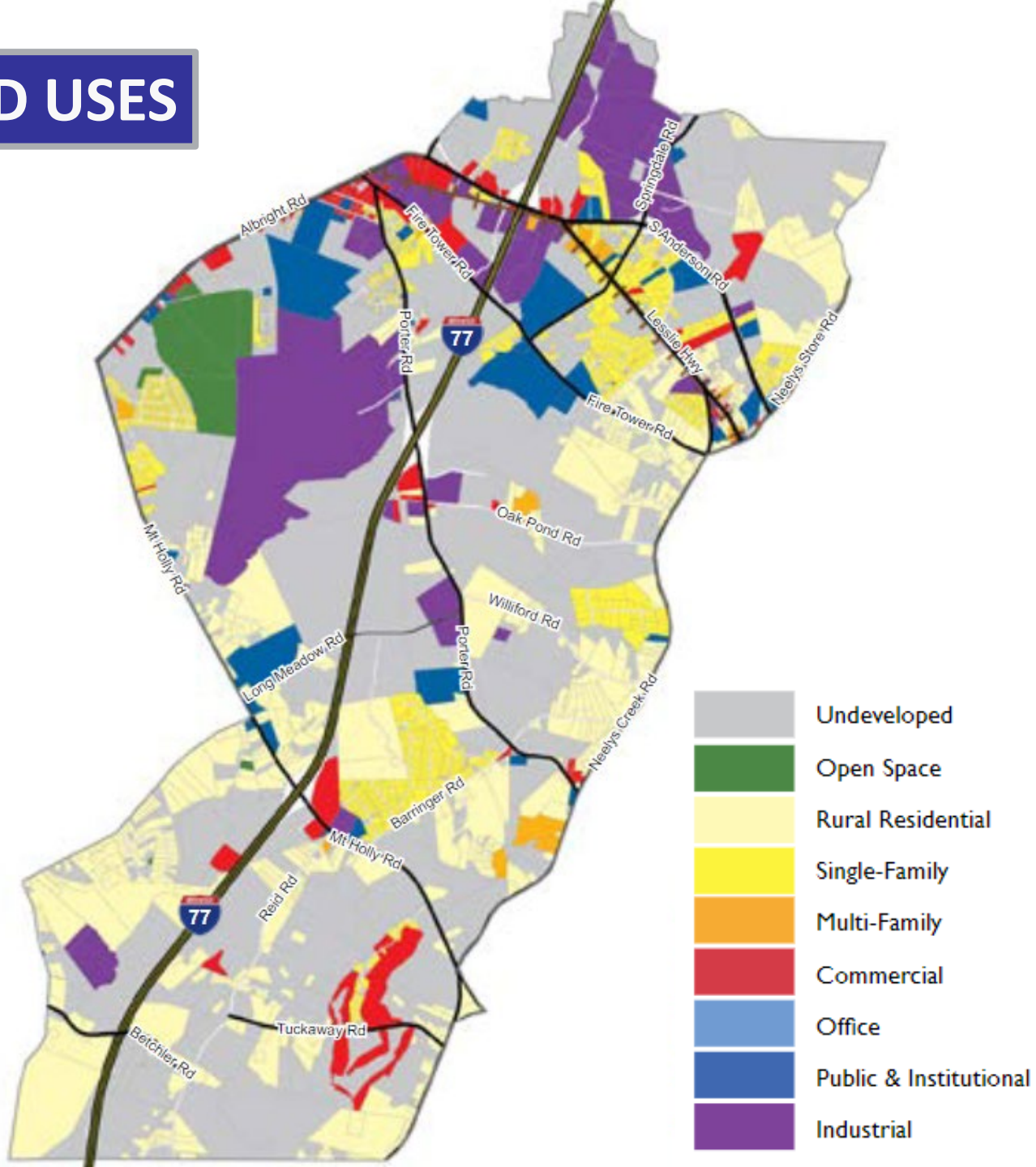
17+

MILES FRONTAGE
ALONG I-77

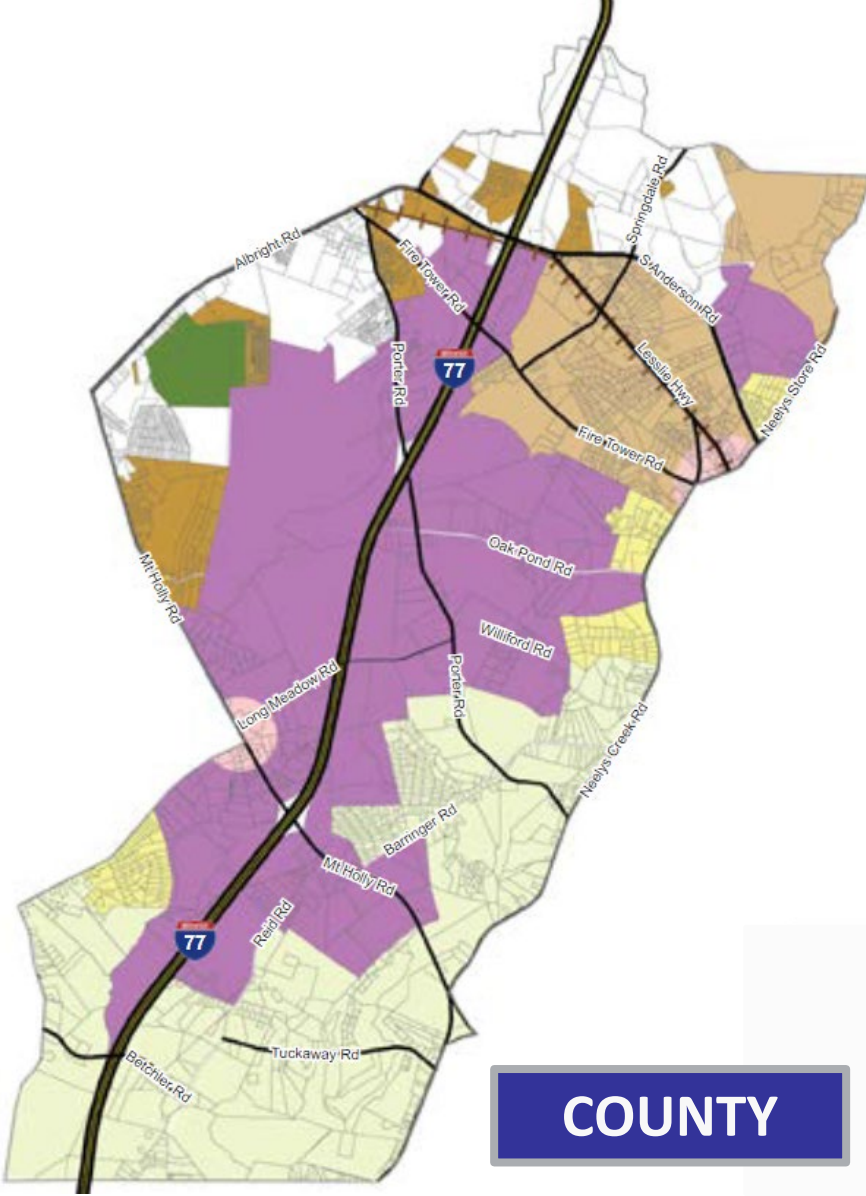
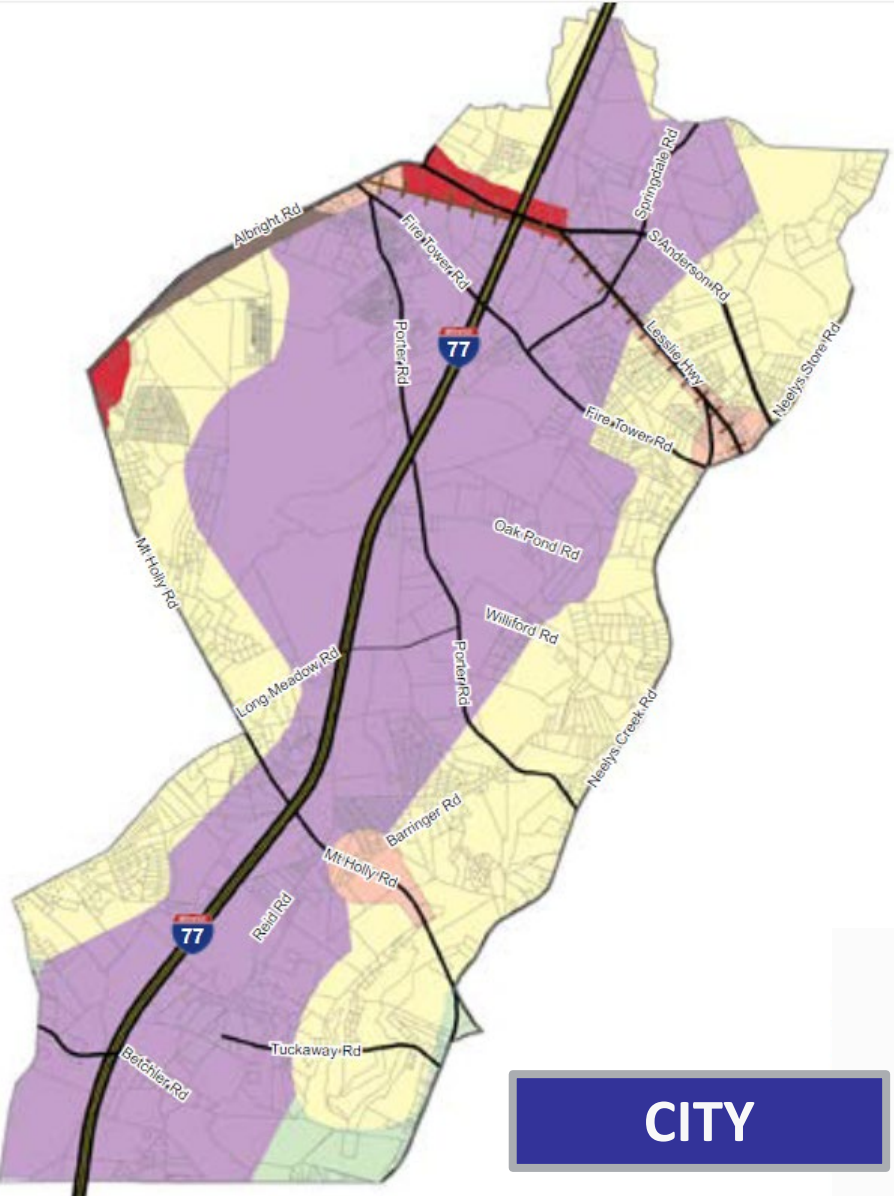
45%

OF US POPULATION
WITHIN 11-HR DRIVE

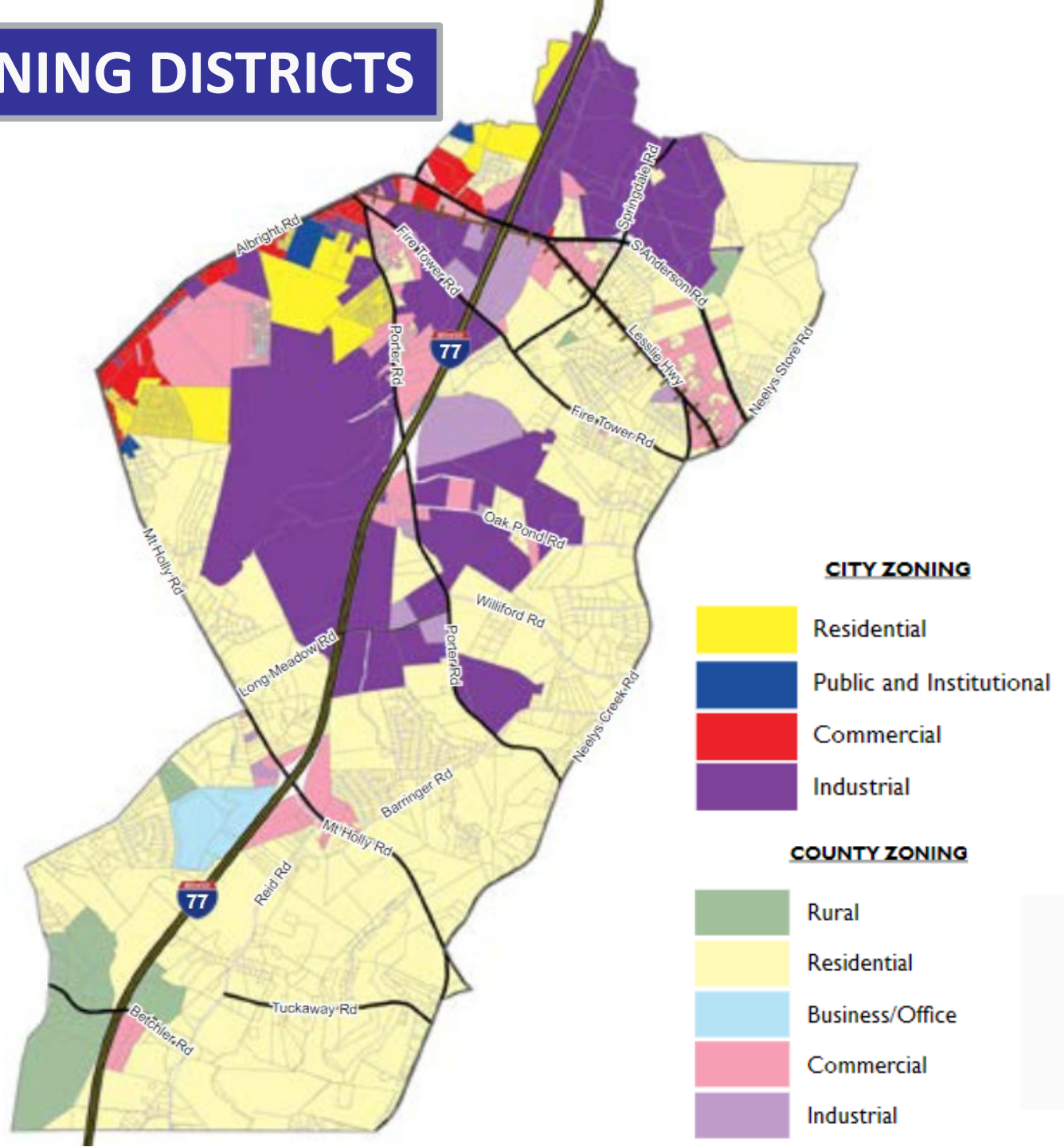
EXISTING LAND USES



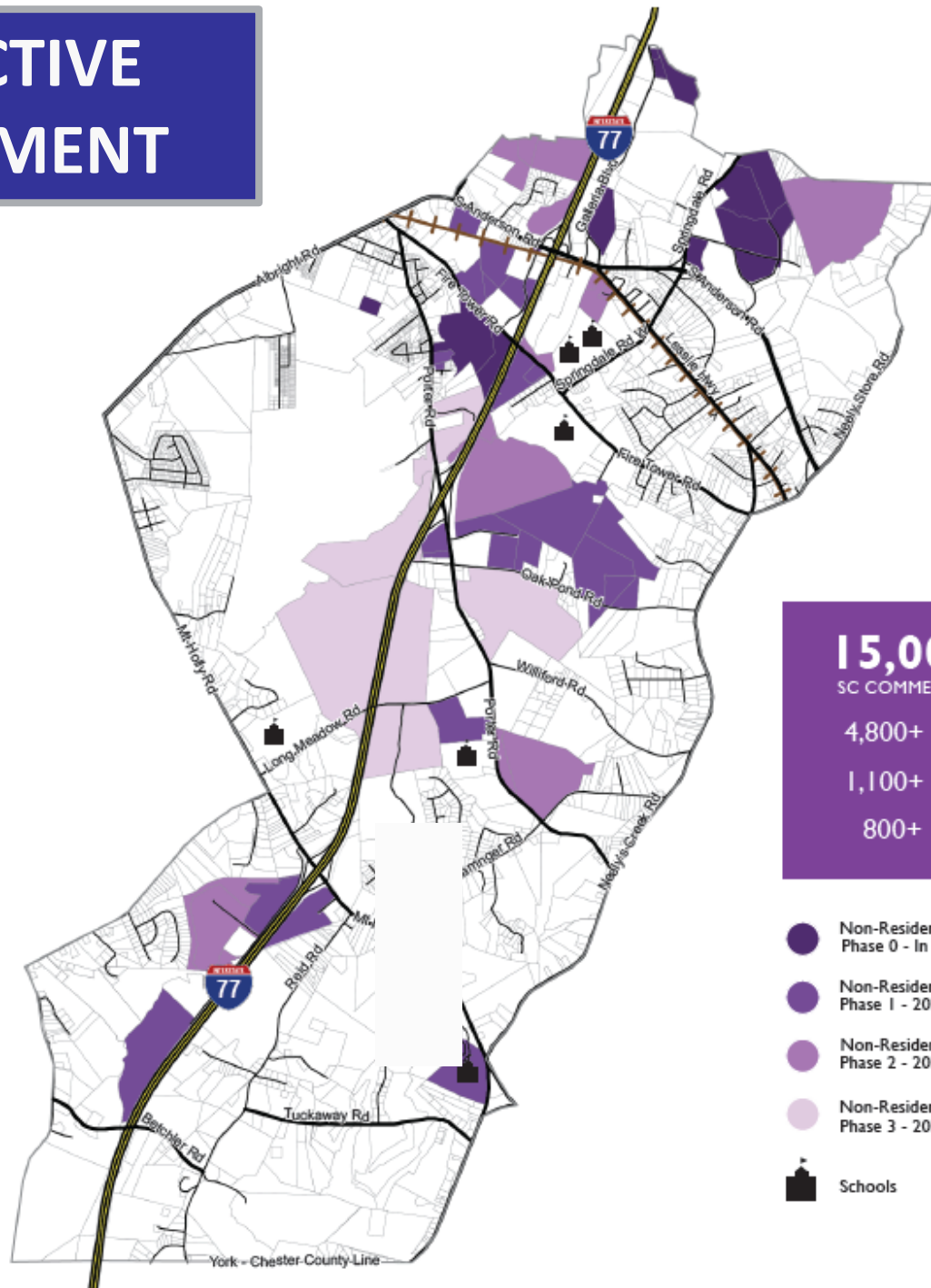
FUTURE LAND USE MAPS



EXISTING ZONING DISTRICTS



PROSPECTIVE DEVELOPMENT



15,000 ACRES

SC COMMERCE CORRIDOR

4,800+ acres of undeveloped non-residential land

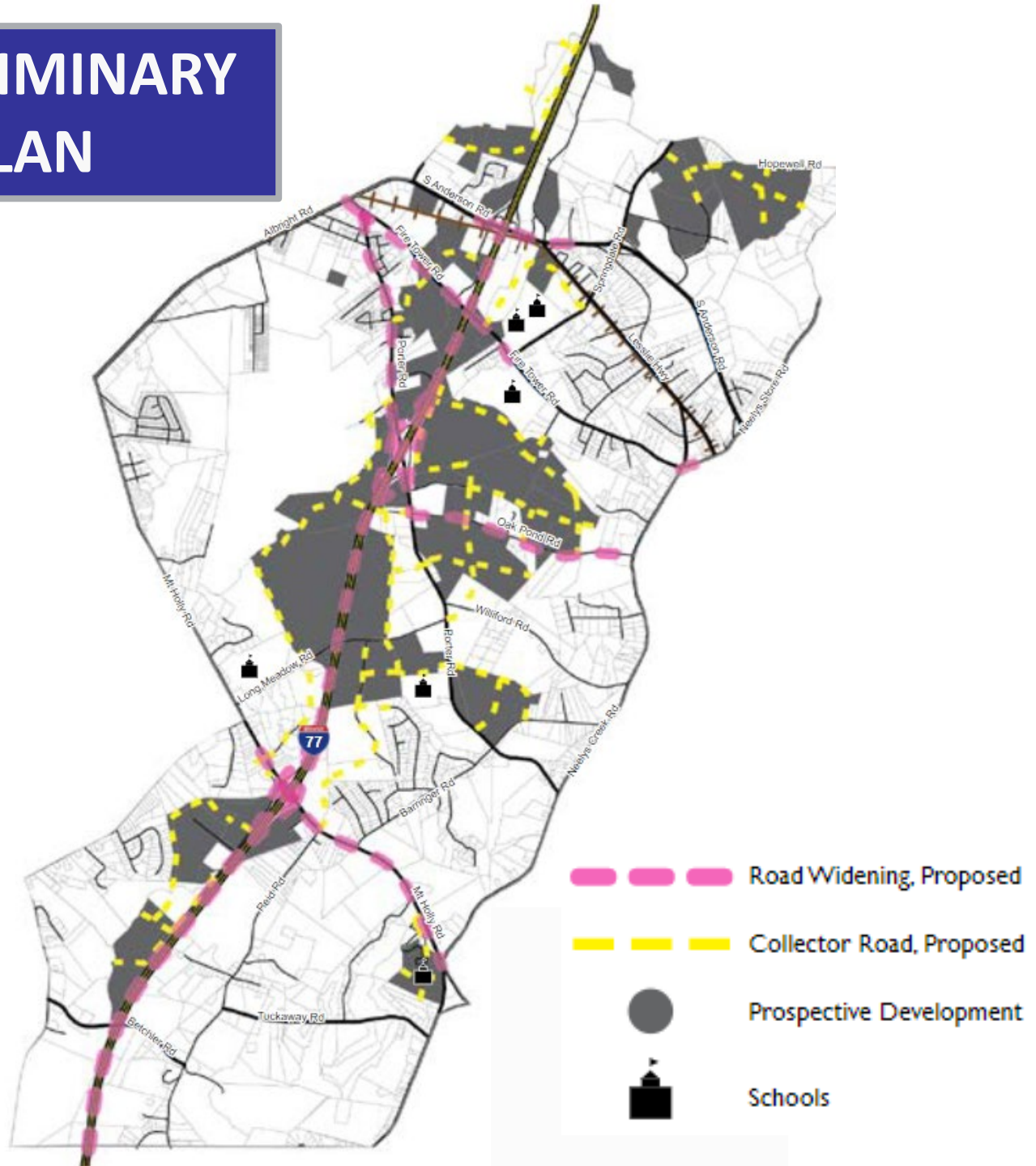
1,100+ acres of undeveloped industrial zoned land

800+ acres of developing industrial zoned land

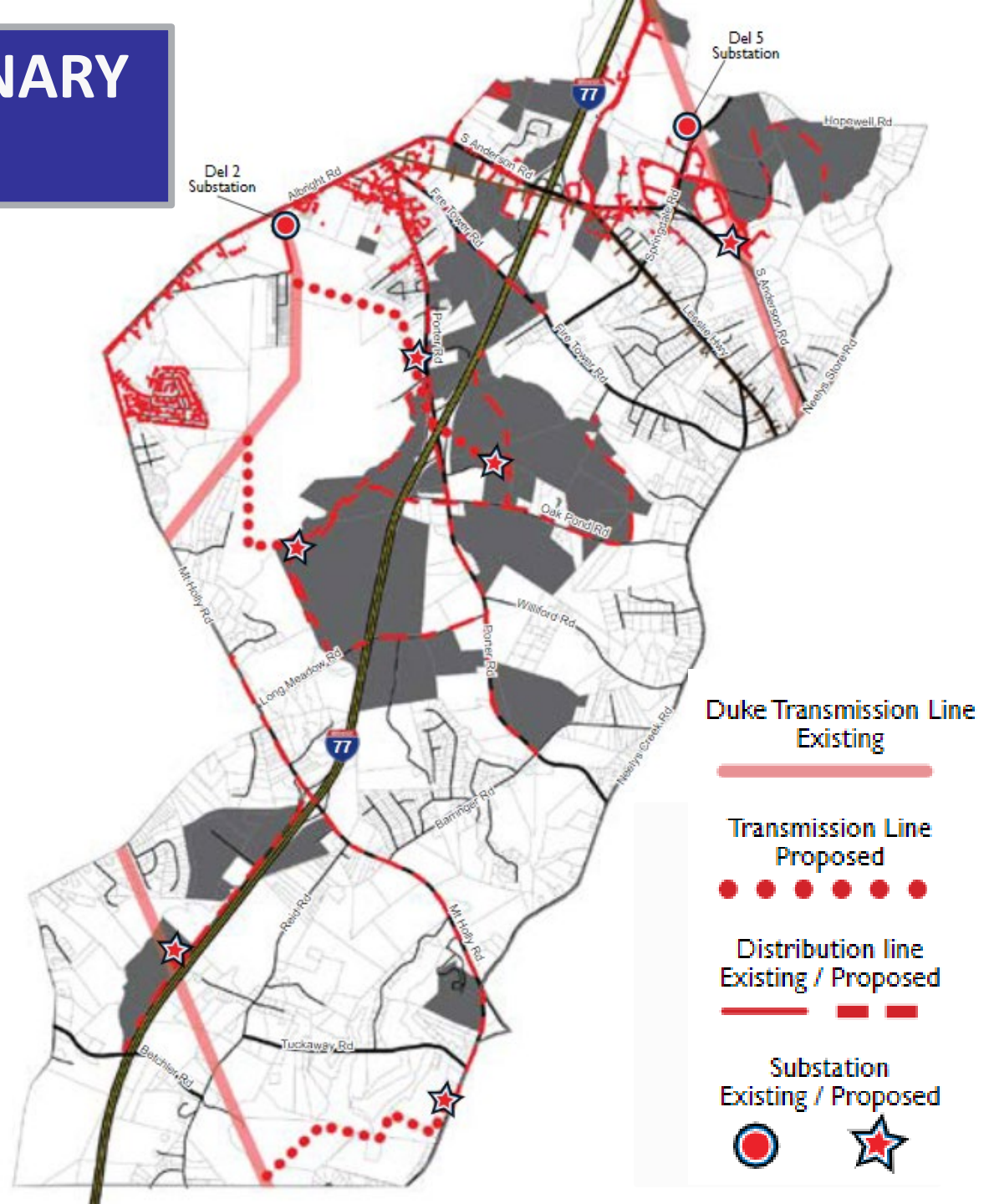
- Non-Residential, 327.1 acres
Phase 0 - In the pipeline
- Non-Residential, 752.5 acres
Phase 1 - 2025
- Non-Residential, 577.4 acres
Phase 2 - 2030
- Non-Residential, 879.1 acres
Phase 3 - 2035
- Schools

INFRASTRUCTURE NEEDS

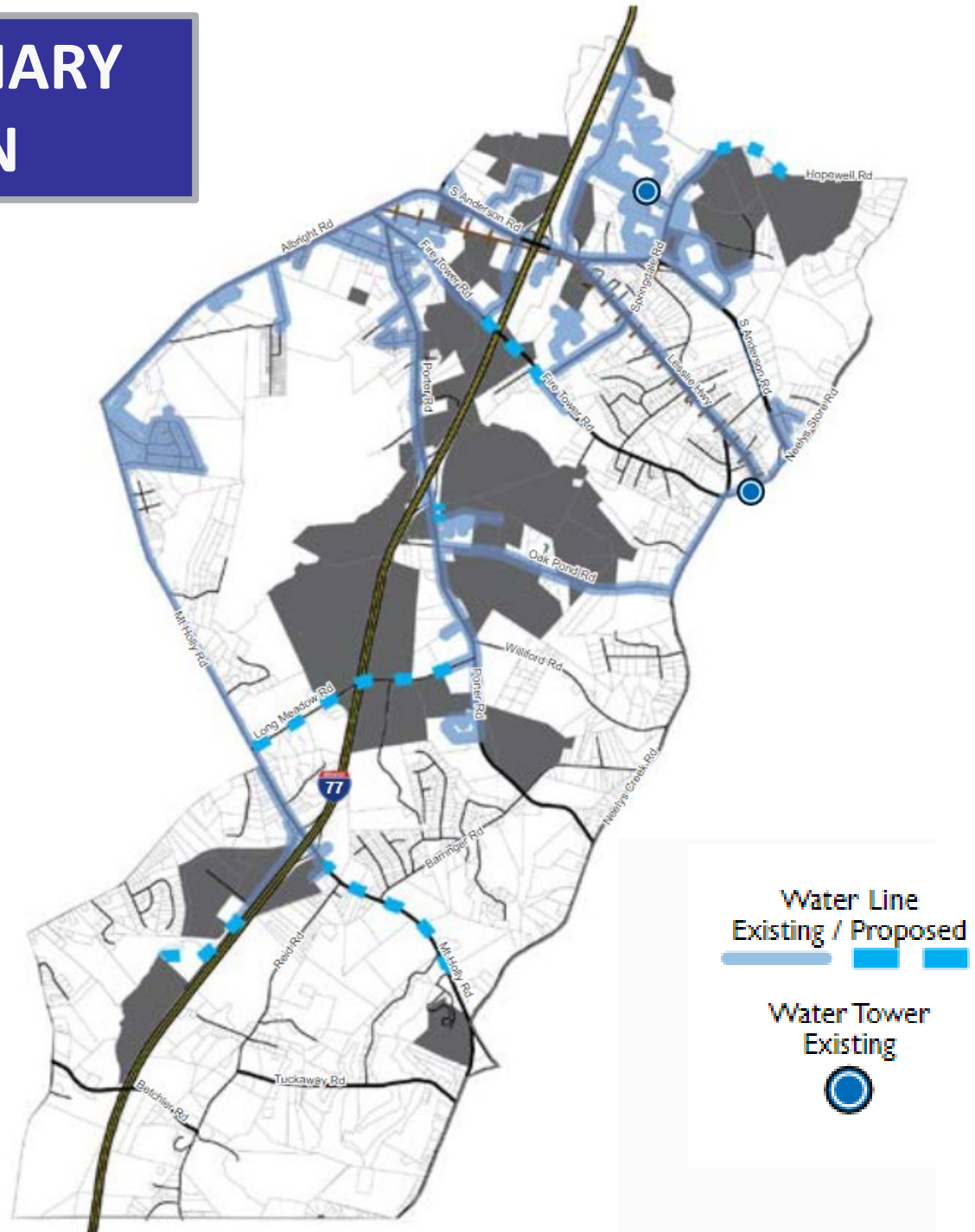
ROADWAY PRELIMINARY MASTER PLAN



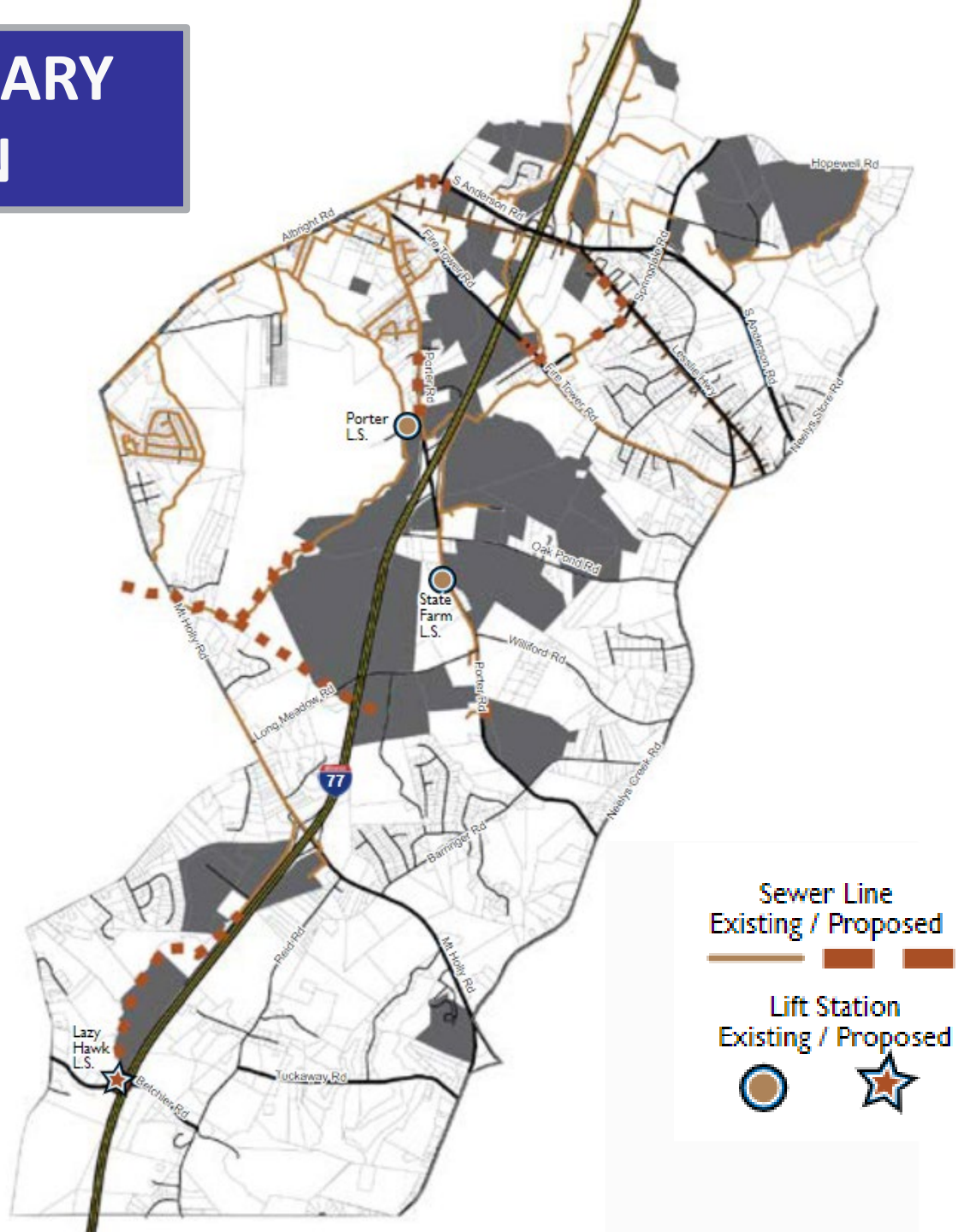
ELECTRIC PRELIMINARY MASTER PLAN



WATER PRELIMINARY MASTER PLAN



SEWER PRELIMINARY MASTER PLAN



1. Refine preliminary infrastructure master plans
2. Study needs beyond 2035

DEVELOPMENT STANDARDS

1. Consider allowing pad-ready sites



2. Consider requiring fewer design standards if pad-ready and marketed for manufacturing use

Signage Standards

Consider adopting a consistent signage program to support brand identity of South Carolina Commerce Corridor



Streetscape Standards

1. Consider adopting industrial roadway cross-sections
 - Special landscaping at entrances & in divided road medians at key locations
 - Bike/ped facilities to attract manufacturing/research uses
2. Start or partner with others on interstate beautification program



Transportation Improvement Project Funding

1. Consider impact fee for roads and/or fee-in-lieu for road improvements
2. Consider creating a Community Improvement District



FULTON INDUSTRIAL CID MASTER PLAN

Traffic Impact Analysis Standards

Consider modifying TIA standards to evaluate additional criteria

- Pavement quality
- Safety analysis
- More sources of background traffic data assumptions
- Cut-through traffic
- Etc.

Additional, Future Challenges

- Rural vs. Urban
- Economy (cost of doing business, interest rates, etc.)
- Timing (utilities, long lead times, etc.)
- Role of incentives; proximity to CLT/NC
- Evolving nature of industries
(distribution vs. manufacturing vs. high tech/high risk?)

1. **Modify development standards** (Zoning Ordinance / Muni Code)
 - Pad-ready sites
 - Signage program for brand identity
 - Industrial road cross-sections
 - Road impact fee for roads and/or fee-in-lieu
 - Modify TIA standards

2. **Consider implementing other initiatives**
 - interstate beautification
 - road improvement funding
 - community improvement district

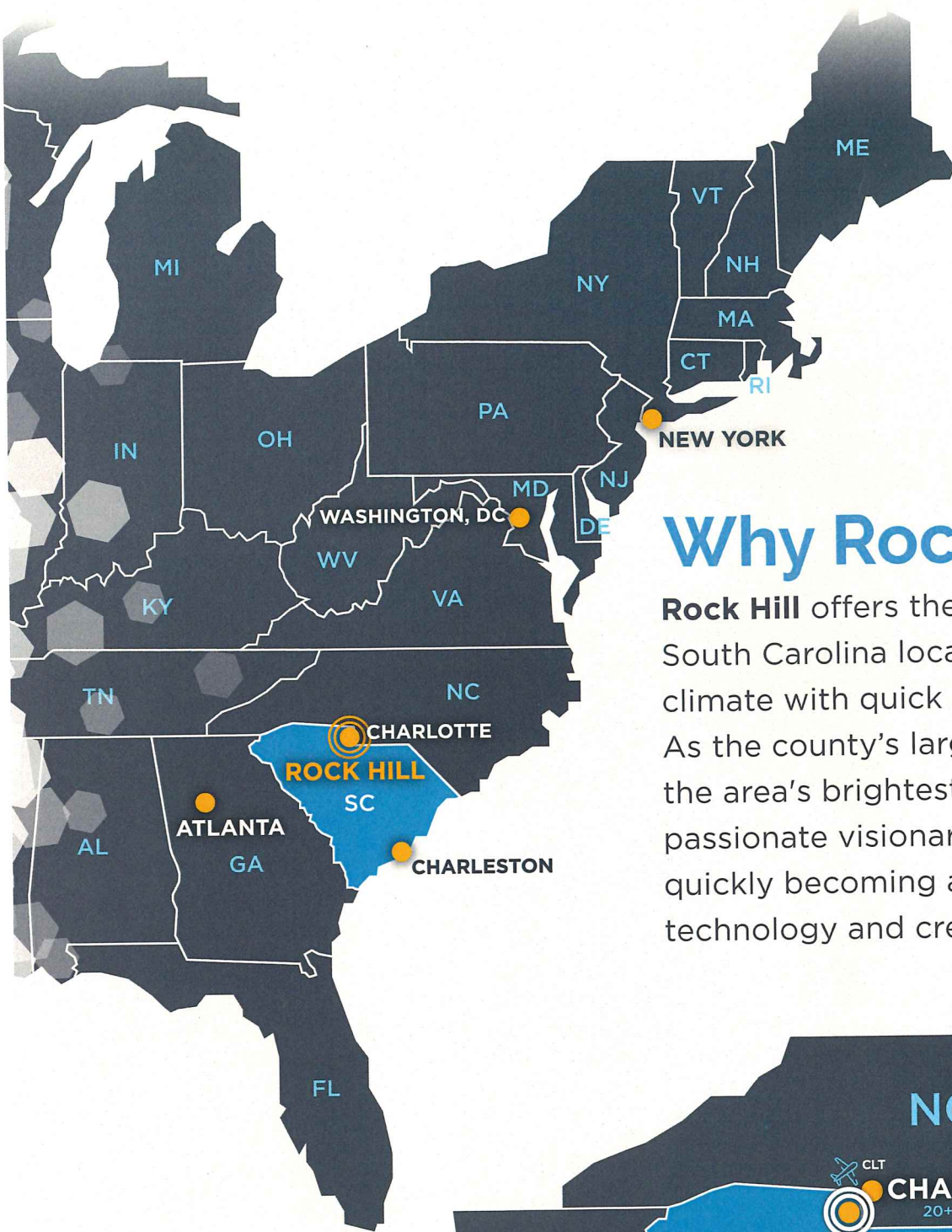
- What do you see as key opportunities? challenges?
- What concerns do you have for this study area?



SOUTH CAROLINA COMMERCE CORRIDOR 2023

CITYOFROCKHILL.COM
ROCKHILLUSA.COM





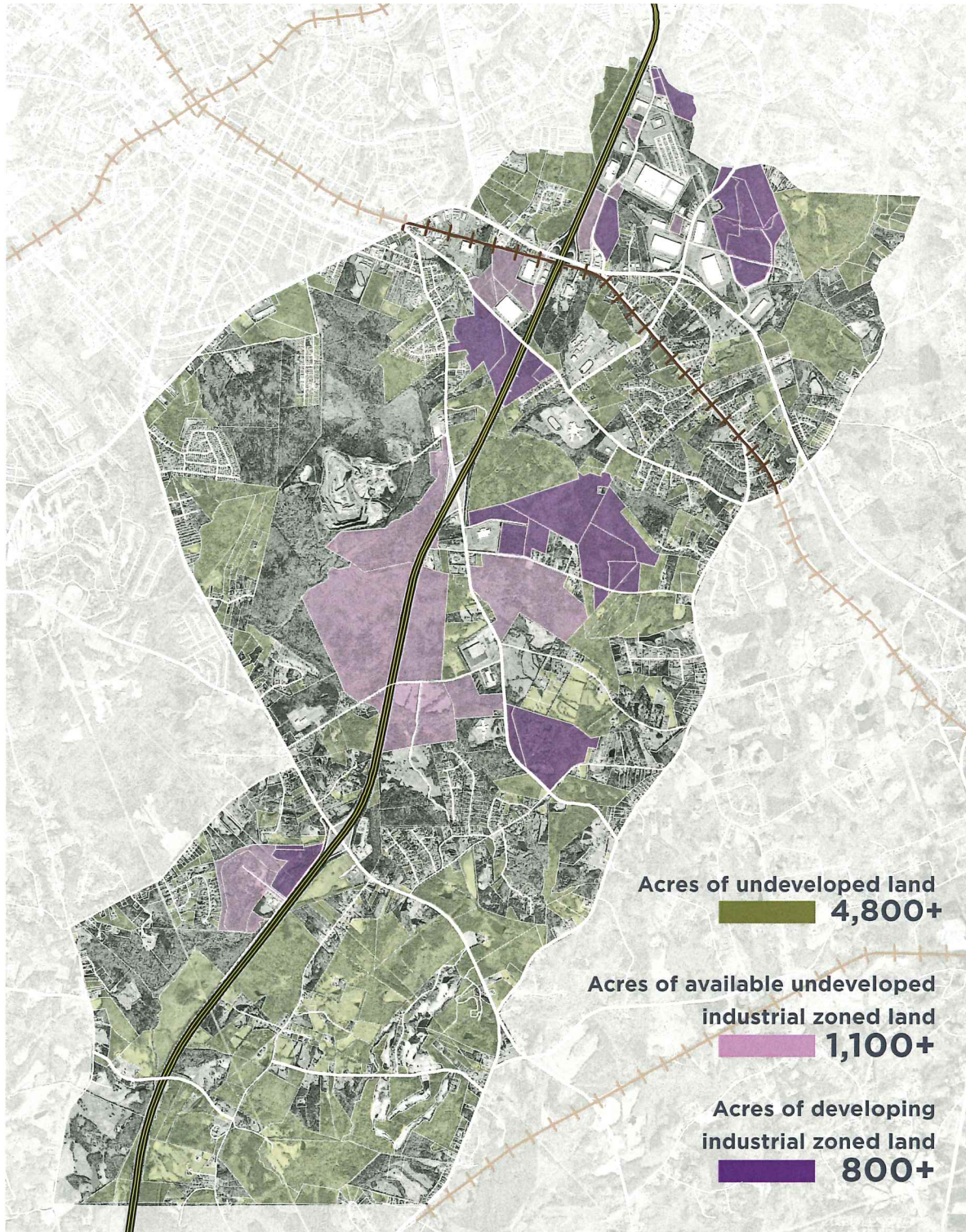
Why Rock Hill?

Rock Hill offers the advantages of a South Carolina location and business climate with quick access to Charlotte. As the county's largest city, with some of the area's brightest minds and most passionate visionaries, **Rock Hill** is quickly becoming a regional center for technology and creative companies alike.



SC Commerce Corridor

Rock Hill's latest business park opportunity includes 17+ miles of frontage along I-77, with 3 interstate interchanges. Located less than 15 miles from the North Carolina state line.



3

INTERSTATE
INTERCHANGES

17+

MILES FRONTAGE
ALONG I-77


45%

OF US POPULATION
WITHIN 11-HR DRIVE

Ready to Service the SC Commerce Corridor

The City of Rock Hill is actively planning and anticipating growth in the SC Commerce Corridor. With utility lines and road networks being designed for this untapped location, the City is ready for your business:

- The City provides electric service and is a part owner of the 2nd reactor at the Catawba Nuclear Plant through a consortium of electric cities. Since 2009, the City's electric department has been recognized nationally as a Reliable Public Power Provider (RP3). The City has materials in stock to construct a new, 50 MVA substation.
- Upgrades are continuously made around the City with the water plant recently upgraded from 36 to 48 MGD and the wastewater plant is currently being upgraded from 20 to 30 MGD. The City is the wholesale water and sewer provider to the greater York County area.
- The City has a FIRE ISO 1 rating and CALEA Certified Police Department, which can result in lower insurance rates for individuals and businesses.
- In 2020, the City cut business license fees for 94% of the businesses in Rock Hill.
- The City of Rock Hill provides award-winning public services including top-notch parks and recreation, solid waste, stormwater and a fixed-route, fare-free, all electric public transportation system.



Full-service city
with concierge
services.

Regional water
and wastewater
provider.

No tax
increase since
2006.

17,000 jobs
created/retained
since 2009.

Contact:

Jennifer McAdams

Dir. Economic & Urban Development
Jennifer.McAdams@cityofrockhill.com

803-325-2551



SOUTH CAROLINA COMMERCE CORRIDOR

2022-2035 STUDY

WINTER 2023





ADOPTED MARCH 13, 2023

PREVIOUS PLANS & STUDIES

This list of previous plans and studies is a quick reference to other initiatives that may have implications on this study area.

Geographically Related

- 2022, [South Anderson Road Corridor Study](#)
- 2022, [Southside Redevelopment Plan](#)
- 2021, [Clinton Connexion Action Plan](#)
- 2020, [Comprehensive Plan Update - Rock Hill 2030](#)
- 2020, [York County I-77 South Corridor Small Area Plan](#)
- 2017, [Albright Road & Saluda Road Corridor Study](#)

Transportation Related

- [Pennies For Progress Projects](#)
- 2022, RAISE submission
- 2021, [April DRAFT RFATS 2050 LRTP Update](#)
- 2017 [RFATS Collector Street Network Plan](#)
- 2017, [Connect Rock Hill: Bicycle and Pedestrian Master Plan](#)
- 2016, [RFATS Bicycle Pedestrian Connectivity Plan](#)

Stormwater Related

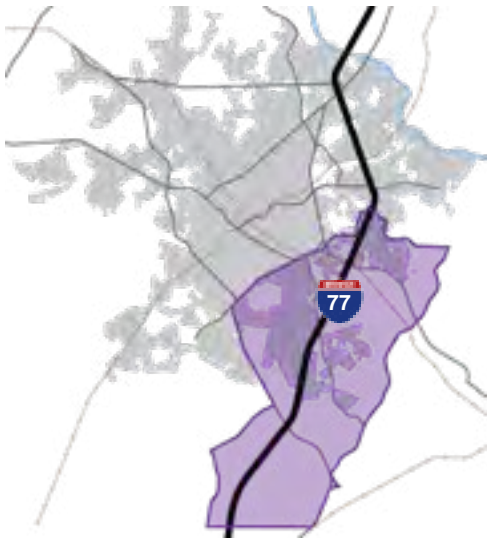
- [Stormwater Study & related Projects](#)

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EXECUTIVE SUMMARY

BACKGROUND



▲ MAP I.1 STUDY AREA RELATIVE TO CITY LIMITS

The 1970s construction of Interstate 77 (I-77) through York County was a major catalyst of growth in our region. The City of Rock Hill, being part of the Charlotte Metropolitan Statistical Area (MSA) and one of the nation's fastest growing MSAs, continues to experience population growth and development pressures. [Comprehensive Plan](#) growth projections into 2035 anticipate this trend to continue. The region's highway system is one of the many assets that makes the Piedmont Atlantic Megaregion one of the nation's largest emerging megaregions. While the I-77 corridor is a transportation link to all sorts of motorists everyday, it also serves as part of the national freight corridor system enabling direct access to interstates (Interstates 64, 81, 40, 85, 20 and 26) and intermodal terminals.

A significant portion of the land use around the interstate is characterized as 'Interstate Employment' on the City's Future Land Use Map (FLUM) as well as the County's FLUM, [Appendix Map B.20 - B.21](#). This has been the case for decades. Being outside the city core, much of the land is not served by city utilities and remains undeveloped, [Appendix Map B.2](#). In 2021, the City

annexed 2,279 acres of land that is within the City's FLUM Interstate Employment character area, and with input from property owners, rezoned the majority of the land to industrial zoning districts. This acreage was also included in the new Southside Tax Increment Financing (TIF) district as part of the City's [Southside Redevelopment Plan](#). As growth pressure continues to rise in the region, developer interest has risen in the interstate corridor. This study was conducted to determine how non-residential growth in the corridor can be served with the necessary infrastructure for development and how this development can be balanced with existing land uses. For analysis purposes, the study area, Map I.1 and I.2, is inclusive of about 15,000 acres from just north of South Anderson Road and I-77 interchange to the York County line. This corridor is referred to as the South Carolina Commerce Corridor.

STUDY OBJECTIVES

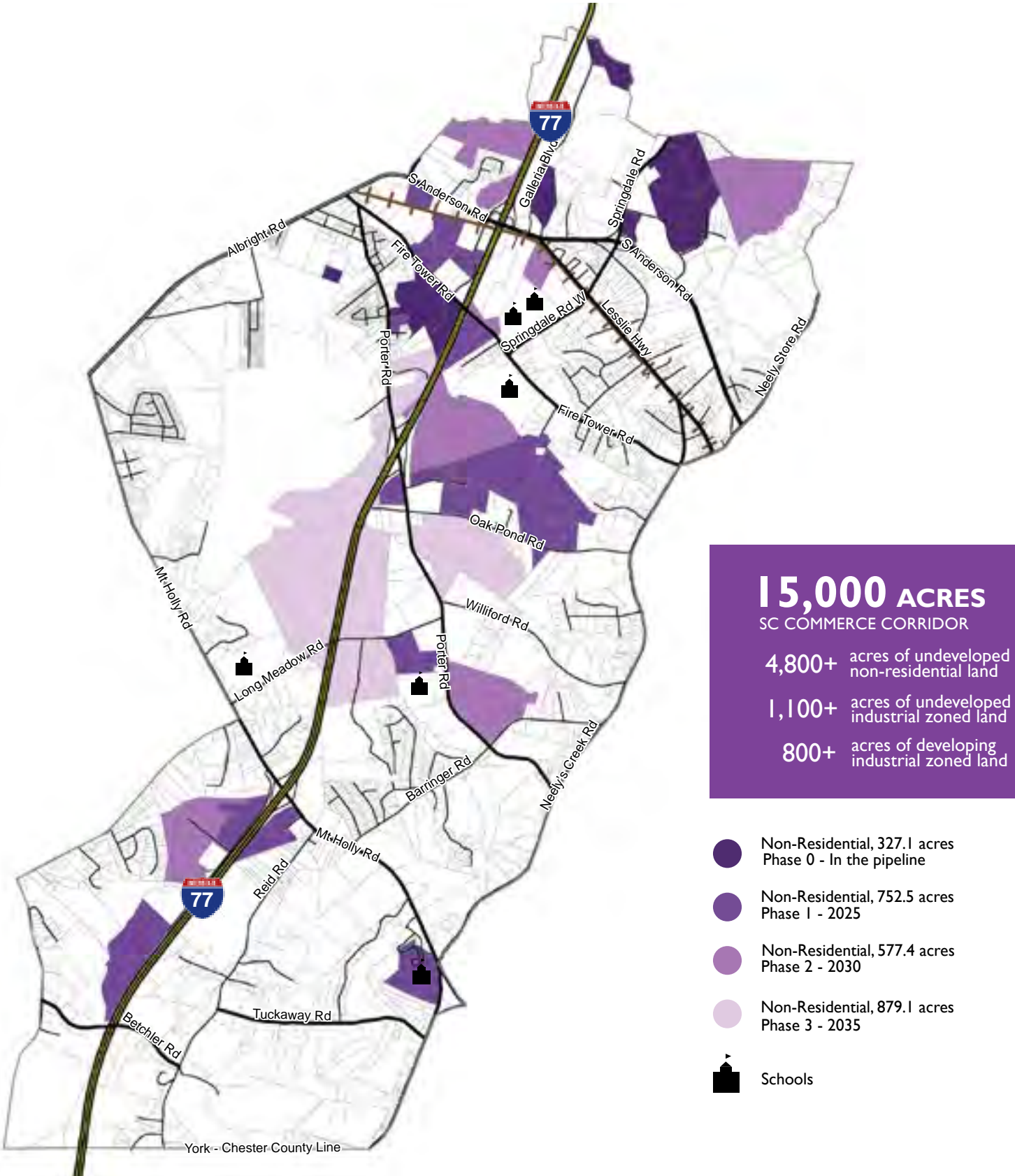
This study is the first step in defining a phased, master infrastructure plan in support of corridor development in the next fifteen years. As part of this first step, the study is focused on non-residential land uses which tends to be leading the development in the corridor. The intent of the study is to provide an assessment of infrastructure needs and potential costs and to be a starting point for further planning and development efforts including stakeholder and community engagement and ideas regarding potential design and development standards for the region.

PROSPECTIVE DEVELOPMENT

In order to assess the future infrastructure needs and propose a master plan, there are a considerable number of variables that are speculative in nature such as the timing, the type, the amount, and the location of the development. This assessment requires a methodology to estimate these variables which is defined in [Appendix A - Infrastructure Assessment](#). The assessment begins with utilizing the information known about prospective non-residential development in the area. Each site is assigned to a phase or time period of when the development is estimated to begin construction. Projects that are currently under construction or about to begin construction are assigned to Phase 0. Projects that will likely begin construction after 2022, but before the end of 2025 are assigned to Phase 1 and so forth through 2035, [Table A.1 and Map A.1](#). This creates consistent time intervals for the purposes of infrastructure modeling and cost projections. Then development scenarios are defined to create a range of types and amounts of development, [Table A.2 and Map A.2](#). This provides the basis for evaluating the existing conditions and identifying gaps in the current infrastructure. The last step is to create a proposed master plan that addresses the needs of future development.

EXECUTIVE SUMMARY

▼ MAP I.2 PROSPECTIVE DEVELOPMENT







EXECUTIVE SUMMARY

RECOMMENDATIONS

INFRASTRUCTURE PLANNING

To support the prospective, non-residential development in the corridor, preliminary master plans for each type of infrastructure improvement are proposed and are included in the [Recommendations](#) section. Provided below is a cost summary associated with each plan from 2022 through 2035. **At this preliminary planning stage, costs are not differentiated between public and private costs, but rather these costs are planning level, order of magnitude costs.** Costs include a twenty percent contingency and a four percent inflation rate. [Appendix A Infrastructure Assessment](#) breaks down each preliminary master plan by phase.

COST SUMMARY - INFRASTRUCTURE PRELIMINARY MASTER PLANS 2022 - 2035

	Quantity	Description	Costs Largely Benefit Corridor	Costs Benefit Region
 Preliminary Master Plan Link	Roadway & Related Infrastructure			
	8.27	Miles of street widening	\$105,359,222	
	24.26	Miles of collector roads	\$245,604,097	
	7.39	Miles of interstate widening		\$196,724,026
		Subtotal	\$350,963,319*	\$196,724,026*
* NOTE: The projected cost estimates do <u>not</u> include required right of way acquisition costs, costs associated with engineering design work, surveys, etc., interchange improvement costs, and intersection improvement costs.				
 Preliminary Master Plan Link	Electric Infrastructure			
	19.29	Miles of distribution lines	\$15,222,008	
	4.37	Miles of transmission lines	\$17,057,066	
	19.29	Miles of municipal fiber-optic cable	\$2,608,640	
	6	Substations	\$47,228,852	
	Subtotal	\$82,116,566		
 Preliminary Master Plan Link	Water Infrastructure			
	4.39	Miles of water lines	\$8,955,800	
		Subtotal	\$8,955,800	
 Preliminary Master Plan Link	Wastewater Infrastructure			
	1	Lift stations, new	\$15,185,700	
	3	Lift stations, upgrade	\$3,495,700	
	5.75	Miles of gravity sewer lines	\$20,395,400	
	1	Wastewater Treatment Plant, upgrades		\$342,142,300
	Subtotal	\$39,076,800	\$342,142,300	
	Totals		\$481,112,485	\$538,866,326

EXECUTIVE SUMMARY

RECOMMENDATIONS

DEVELOPMENT STANDARDS

One component of the corridor study is introducing concepts for potential design and development standards for industrial development related to -

- Pad-ready sites
- Signage
- Streetscape
- Traffic improvement funding
- Traffic Impact Analysis (TIA)

In order for these ideas to be implemented, they would need to be further refined and brought forward as amendments to the Zoning Ordinance, Design Overlay District, and/or Municipal Code.

NEXT STEPS

INFRASTRUCTURE

The next steps related to infrastructure improvements are categorized into two types:

1. Refining 2022-2035 preliminary master plans
2. Examining infrastructure needs beyond 2035

Both categories will require City Council direction and stakeholder engagement. For example, roadway related improvements will require coordination with agencies like RFATS, SC Department of Transportation, and York County. Refining the 2022-2035 preliminary master plans and projected costs will require additional transportation engineering support as well as stormwater engineering modeling. This additional analysis would require at least twelve months. As costs are refined, each Department will need to incorporate their respective master plans into the City budget.

DEVELOPMENT STANDARDS

Likewise, any modifications to development standards will require City Council direction regarding the proposed concepts in the [Recommendations](#) section. All of the desired regulation changes would then be drafted prior to the changes being formally taken through an adoption process. This process can be expected to take several months from the drafting phase to the final step of Council consideration.

“Proper planning is key to ensuring that the appropriate level of multimodal accommodations is provided in the right context, on the right project, and in the right manner to meet the needs of the community.”

- Christy A. Hall
Secretary of Transportation, South Carolina

STUDY AREA CHARACTER

DEMOGRAPHICS & EXISTING CONDITIONS

2022 AREA FAST FACTS

Source: City of Rock Hill Planning & Development, ESRI Business Analyst

285
BUSINESSES

6,058
RESIDENTS

\$1.3M
SALES REVENUE

3,529
JOBS

\$269M
NON-RESIDENTIAL
APPRAISED PROPERTY
VALUE

\$240M
RESIDENTIAL
APPRAISED PROPERTY
VALUE

Almost half of the land in the study area is undeveloped, and most of this undeveloped land is zoned residential, [Appendix Maps B.2 and B.3](#). The largest percent of developed land is zoned residential, and is rural residential in character. The number of households is estimated to be 2,492 per the 2020 American Community Survey. The area has a number of schools, including public, private, and charter schools, [Appendix Map B.5](#). However, as larger tracts are being annexed and rezoned to industrial uses, the character of the area is starting to become more industrial. As previously noted, utility systems are limited in the area and the majority of the roadways are two-lane country roads, [Appendix Maps B.4 -B.13](#).

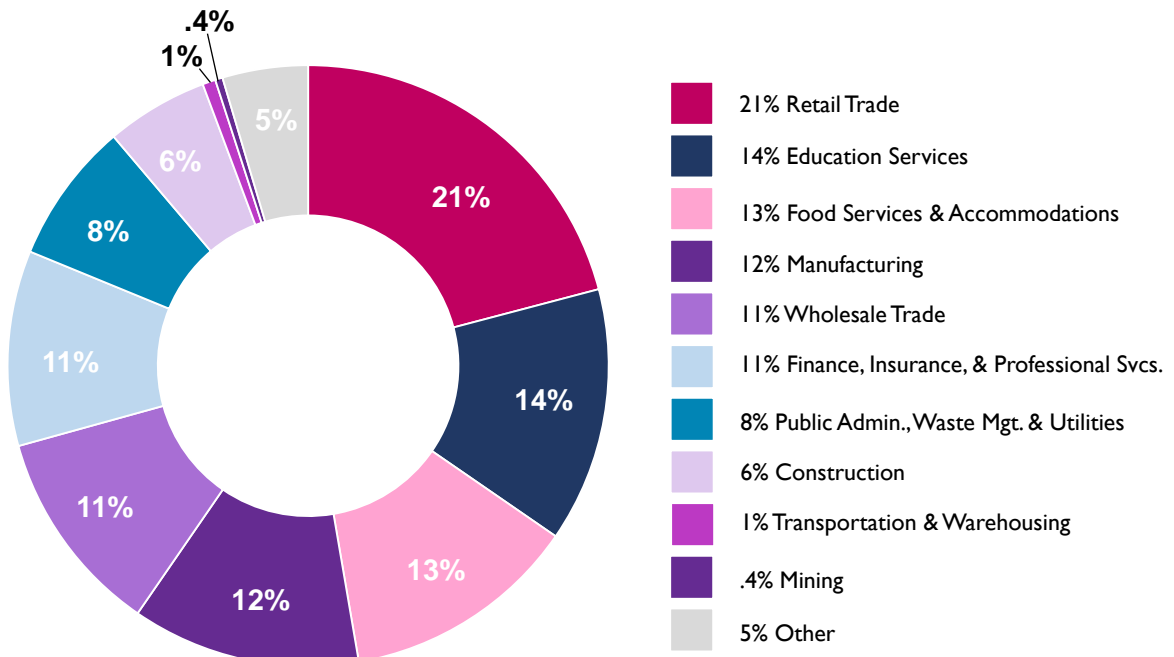
The Appendices provide further details about the infrastructure master planning process and the characteristics of the study area including roadways, utilities, and the suitability for future growth. This information serves as the study's basis for analysis and evaluation. The existing conditions and demographic statistics also serve as a benchmark to track trends over time.

EMPLOYMENT & THE CORRIDOR'S LABOR SHEDS

Existing employers in the corridor represent a diverse set of industries, Figure 1.1. The largest industry is retail trade with 21% of the jobs. Manufacturing, wholesale trade, and construction combined represent 29% of the jobs whereas transportation and warehouse only represent 1% of the jobs. Even though the City is an ideal location for a variety of industries, Rock Hill targets businesses in key industries including: Business and Financial Services, Knowledge Economy, Advanced Materials, Chemicals, Transportation Equipment, and Logistics.

▼ FIGURE 1.1 PERCENTAGE OF JOBS IN STUDY AREA BY INDUSTRY CLASSIFICATION SYSTEM, 2022

Source: City of Rock Hill Planning & Development, ESRI Business Analyst



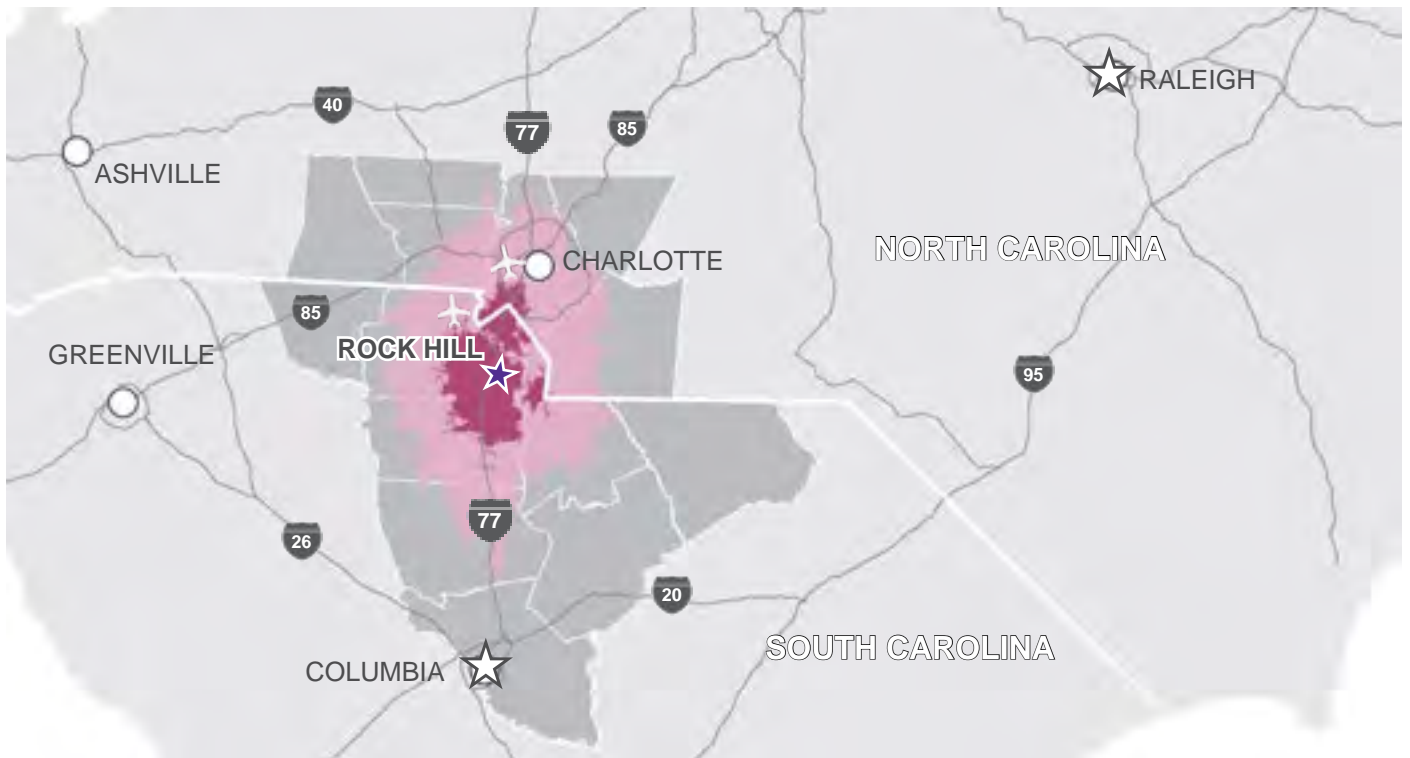
STUDY AREA CHARACTER

For the purposes of this study, the SC Commerce Corridor’s local labor shed is defined as the 24-minute drive time radius from the Porter Road and I-77 Interchange, and the regional labor shed is defined as the 45-minute drive time radius from the same location. This translates into a labor force of almost 260,000 for the local labor shed and about 1.4 million for the regional labor shed, Table I.1 and Map I.3. This analysis is based on the existing roadway network. Anticipated future transportation improvements could amplify the reach of the corridor’s labor shed.

▼ TABLE I.1 THE CORRIDOR’S LABOR SHEDS
 Source: City of Rock Hill Planning & Development, ESRI Business Analyst

	Local Labor Shed	Regional Labor Shed
Total Population, 2022	330,911	1,664,265
Civilian Population 16yrs+	259,835	1,407,747
Employed	170,248	891,500

▼ MAP I.3 LOCAL & REGIONAL LABOR SHEDS
 Source: City of Rock Hill Planning & Development, ESRI Business Analyst



INDUSTRIAL MARKET

The industrial brokerage community perceives that the I-77 corridor through York County and Rock Hill is an ideal market for warehouse distribution projects. However, the lower paying jobs and increased truck traffic associated with distribution projects has not historically been a preferred business sector for either City or County. The nature of industrial development often presents additional challenges. Developers typically build speculative industrial space and lease to distribution entities whereas many manufacturers seek to own their sites. This often causes a higher percentage of warehouse distribution than manufacturers given today’s market trends. Another challenge is trying to plan for the expansion of utility infrastructure because demand for electric, water, and wastewater can vary so widely across various types of industries.

RECOMMENDATIONS

INFRASTRUCTURE PLANNING - ROADWAY, PEDESTRIAN & STORMWATER

A preliminary master plan is created for the corridor by combining all of the identified needs for roadway related improvements, Map 1.4. The placement of collector roads is diagrammatic and may be altered to accommodate developer design requirements or other necessitating factors. The cumulative costs are summarized for a grand total of almost \$548 million. The I-77 interstate widening costs (almost \$197 million) are anticipated to be state and federally funded. Costs associated (almost \$246 million) with collector roads are generally the responsibility of the property owner or developer, whereas roadway widening may be funded through a number of transportation funding options such as, but not limited to RFATS Guideshare or Pennies For Progress. Stormwater and pedestrian/bike related infrastructure costs are included with the roadway improvements. The projected cost estimates do not include: required right of way acquisition costs, costs associated with engineering design work, surveys, and the like, interchange improvement costs or intersection improvement costs.

While it is anticipated that a number of new intersections and intersection improvements will be required, (see [Map. 1.8 in the Next Steps](#) section), at this preliminary assessment stage the type of traffic control points has not been determined. Further modeling and analysis will be required to determine the most appropriate type of traffic control at each intersection. If all the intersections require signalized traffic control, the additional cost could be about \$19.5 million for mast arm signalization or \$6.5 million for steel strain signalization. This could be used as the most conservative, planning-level project cost.

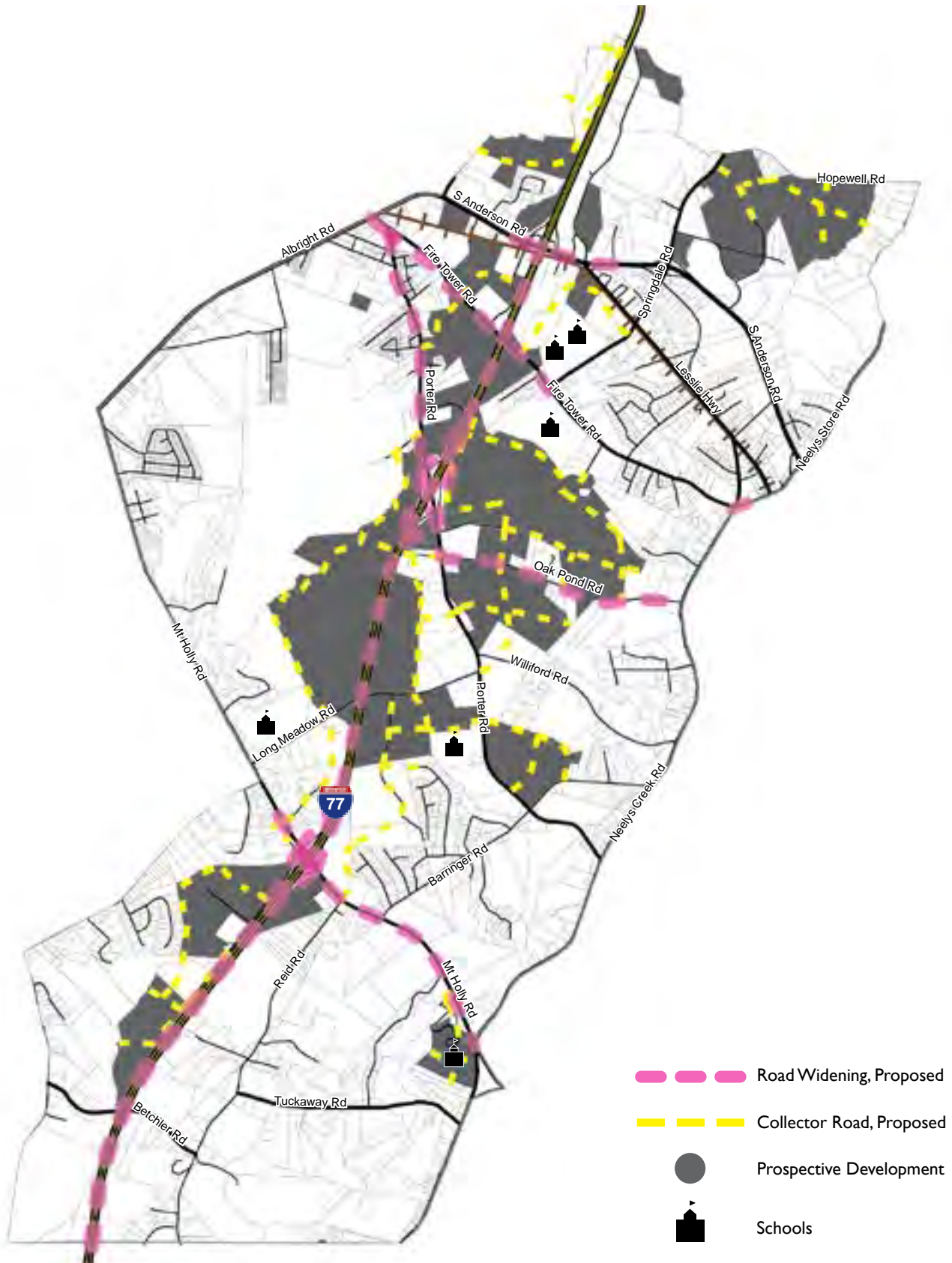
PROJECTED COSTS* - ROADWAY, PEDESTRIAN & STORMWATER IMPROVEMENTS

Phase 0		
.85	Miles of street widening	\$9,731,412
1.01	Miles of collector roads	\$7,287,998
	Subtotal	\$17,019,410
Phase 1		
2.01	Miles of street widening	\$22,170,538
6.08	Miles of collector roads	\$49,350,379
	Subtotal	\$71,520,917
Phase 2		
3.97	Miles of street widening	\$50,897,929
4.64	Miles of interstate widening	\$114,302,887
8.1	Miles of collector roads	\$79,990,540
	Subtotal	\$245,191,356
Phase 3		
1.44	Miles of street widening	\$22,559,343
2.75	Miles of interstate widening	\$82,421,139
9.07	Miles of collector roads	\$108,975,179
	Subtotal	\$213,955,661
	TOTAL	\$547,687,344

* NOTE: The projected cost estimates do not include required right of way acquisition costs, costs associated with engineering design work, surveys, etc., interchange improvement costs, and intersection improvement costs.

RECOMMENDATIONS

MAP I.4 2022-2035 ROADWAY PRELIMINARY MASTER PLAN



RECOMMENDATIONS

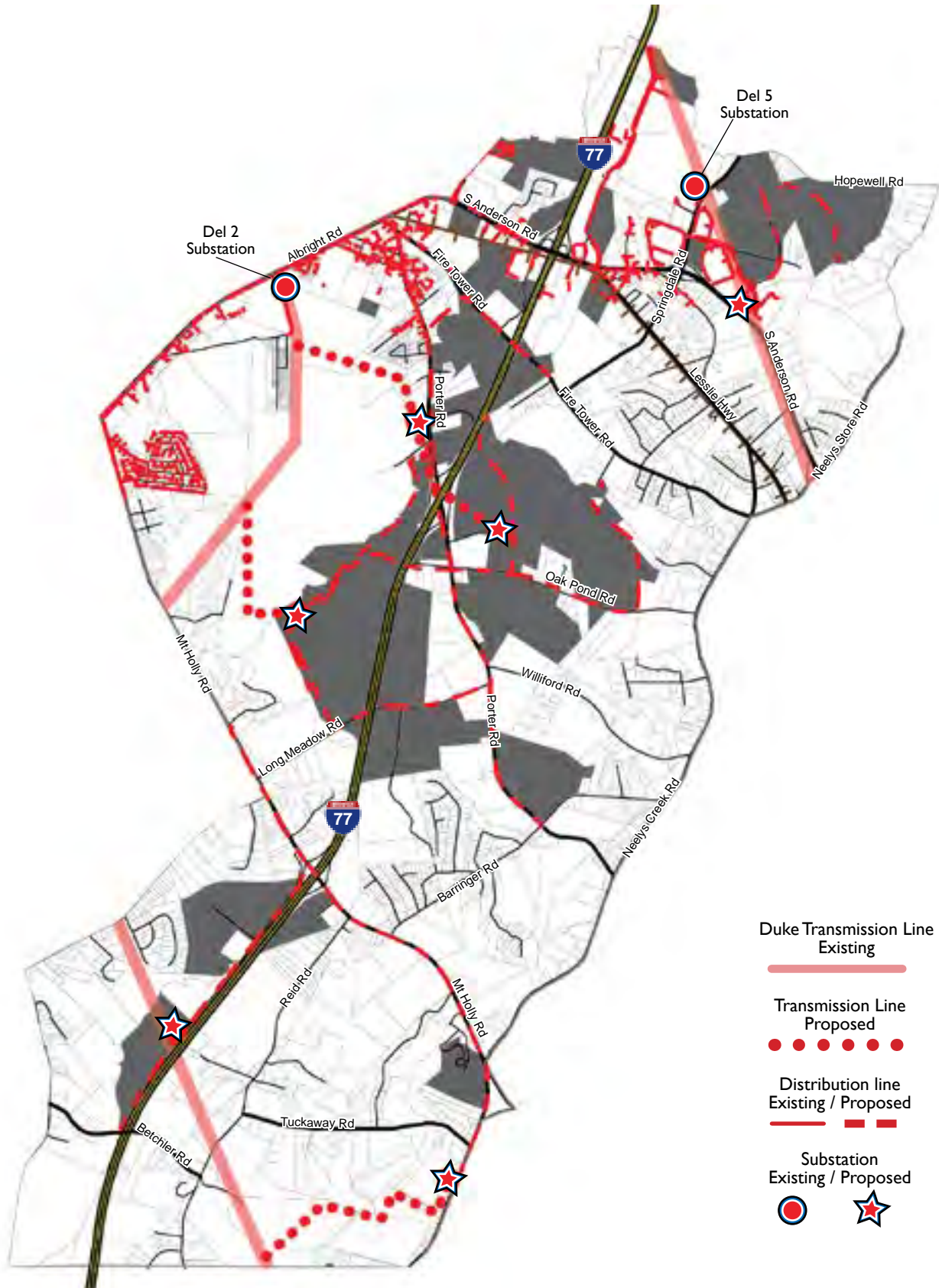
INFRASTRUCTURE PLANNING - ELECTRIC

The preliminary master plan for electric facilities includes six total substations and many miles of transmission, distribution, and fiber-optic lines at an estimated cost of about \$82 million. New transmission lines are subject to approval and permitting. It is possible that if development is not as intense as projected in the development scenarios, not all substations would be required or sized in the manner that is projected in the cost estimates below. Further, some flexibility exists regarding the placement of substations and the electric system design. As future development demand becomes known, the electric master plan will be revisited.

PROJECTED COSTS - ELECTRIC IMPROVEMENTS		
Phase 0		
4.15	Miles of distribution lines	\$2,690,783
4.15	Miles of municipal fiber-optic cable	\$446,871
	Subtotal	\$3,137,654
Phase 1		
3	Substations	\$19,741,363
1.89	Miles of transmission lines	\$6,250,419
8.6	Miles of distribution lines	\$6,409,925
8.6	Miles of municipal fiber-optic cable	\$1,054,380
	Subtotal	\$33,456,087
Phase 2		
1	Substation	\$8,006,129
1.53	Miles of transmission lines	\$6,156,097
2.46	Miles of distribution lines	\$2,043,146
2.46	Miles of municipal fiber-optic cable	\$366,945
	Subtotal	\$16,572,317
Phase 3		
2	Substations	\$19,481,360
.95	Miles of transmission lines	\$4,650,550
4.08	Miles of distribution lines	\$4,078,154
4.08	Miles of municipal fiber-optic cable	\$740,444
	Subtotal	\$28,950,508
	TOTAL	\$82,116,566

RECOMMENDATIONS

MAP I.5 2022-2035 ELECTRIC PRELIMINARY MASTER PLAN



RECOMMENDATIONS

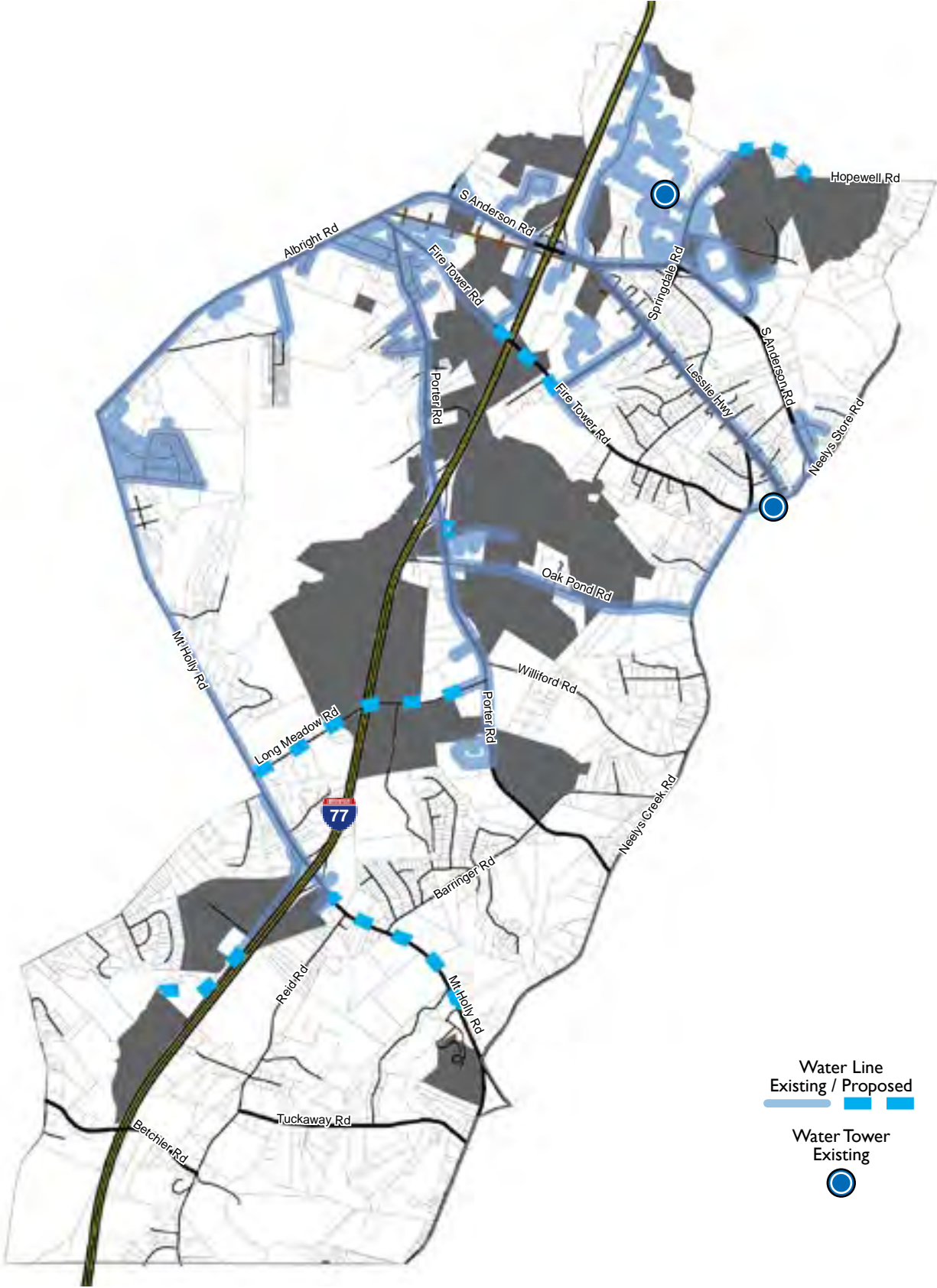
INFRASTRUCTURE PLANNING - WATER

The preliminary master plan for providing water service in the study area includes a little more than four miles of water lines including two extensions that traverse the interstate. The projected cost improvements are almost \$9 million. Unlike electric facility design, the water system design is not as flexible. Placement of lines is based on prospective development scenarios and line sizes are based on the largest available existing size. As future development demand becomes known, the water master plan will be revisited.

PROJECTED COSTS - WATER IMPROVEMENTS			
Phase 1			
2.31	Miles of water lines		\$3,786,900
		Subtotal	\$3,786,900
Phase 2			
.61	Miles of water lines		\$1,190,600
		Subtotal	\$1,190,600
Phase 3			
1.47	Miles of water lines		\$3,978,300
		Subtotal	\$3,978,300
		TOTAL	\$8,955,800

RECOMMENDATIONS

MAP I.6 2022-2035 WATER PRELIMINARY MASTER PLAN



RECOMMENDATIONS

INFRASTRUCTURE PLANNING - WASTEWATER

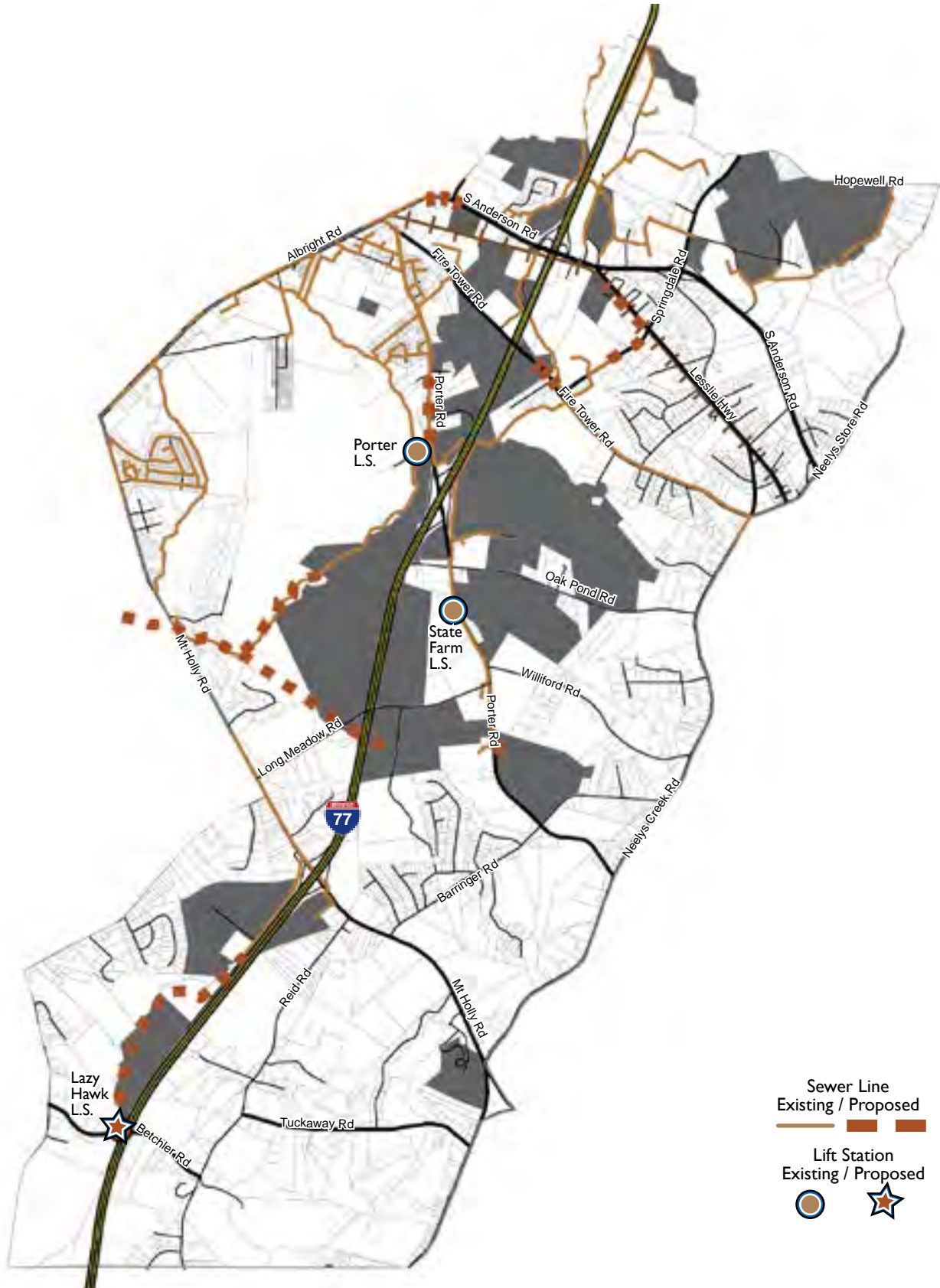
The preliminary master plan for providing wastewater service in the study area includes one new lift station, three lift station upgrades and almost six miles of wastewater lines. The estimated costs for these wastewater improvements are about \$39.1 million. If the development proves to be as projected, upgrades will also be needed at the Manchester Wastewater Treatment Plant, at a projected cost of about \$342 million. The wastewater system design is more flexible than the water system in terms of placement and sizing. Similarly, as future development demand becomes known, the wastewater master plan will be revisited.

PROJECTED COSTS - WASTEWATER IMPROVEMENTS

Phase 1		
1	Lift station, new Lazy Hawk	\$15,185,700
1	Lift station, upgrade Porter	\$1,237,400
2.31	Miles of gravity sewer lines	\$6,509,600
	Subtotal	\$22,932,700
Phase 2		
2	Lift station, upgrade Southland & State Farm	\$2,258,300
1	Wastewater Treatment Plant, upgrades	\$342,142,300
.70	Miles of gravity sewer lines	\$2,330,700
	Subtotal	\$346,731,300
Phase 3		
2.74	Miles of gravity sewer lines	\$11,555,100
	Subtotal	\$11,555,100
	TOTAL	\$381,219,100

RECOMMENDATIONS

MAP I.7 2022-2035 WASTE WATER PRELIMINARY MASTER PLAN



RECOMMENDATIONS

INFRASTRUCTURE PLANNING - NEXT STEPS

From an infrastructure planning perspective, future planning activities can be categorized into two major types - those associated with additional refinement of the 2022-2035 preliminary master plans and those related to examining infrastructure needs beyond 2035. In either case, further direction from City Council and stakeholder engagement will be required.

REFINING 2022-2035 PRELIMINARY MASTER PLANS

As more information becomes known about the prospective development in the study area, the preliminary master plans will need to be revisited on a periodic basis. This may include considering adding prospective residential development to the planning analysis. There are a number of recommended next steps to further inform the master plans and refine the projected costs that would entail at least twelve months of additional review for the roadway related infrastructure plans. These include:

- Analyzing development implications to the transportation network such as -
 - level of service
 - pavement conditions
 - traffic control points, [Map A.26](#)
 - interchanges
- Assessing the corridor’s bike and pedestrian needs since this area was not considered as part of the [Connect Rock Hill](#) plan
- Modeling stormwater infrastructure needs including assessment of stream crossings, [Map A.27](#)
- Including master plans in the City budget and Capital Improvement Plan (CIP) as appropriate for each impacted Department
- Determining if new sewer basin fees need to be established for basins in the study area such as Brown’s Creek

EXAMINING INFRASTRUCTURE NEEDS BEYOND 2035

The development of the prospective sites may act as a development catalyst for the remaining 6,500 acres of undeveloped land (residential and nonresidential) in the study area. Of this undeveloped land, there are large tracts greater than 50 acres, [Map 1.8](#), as well as tracts that could be assembled to accommodate large-scale development. Some of these sites may develop before 2035, but this was not taken into consideration during the completion of this study due to a lack of current development interest. Despite this, an initial level of consideration was given regarding how infrastructure could accommodate development on these sites and ensure a complete infrastructure network. [Map 1.8](#) illustrates some of this initial consideration that will need to be further explored during future planning initiatives. Due to the very speculative nature of these infrastructure needs and time horizon, those projected costs are not included here.

- The [Johnson family site \(#36\)](#) is a prospective development defined in Phase 3. Depending on the type of industrial development, a new interchange at Long Meadow Road may be required. However, this would require further analysis, as many factors could influence this type of major infrastructure improvement.
- Similarly, depending on the timing and intensity of development, the I-77 interchanges with Porter and Mt. Holly roads may need upgrades sooner versus later.
- CXS owns a couple hundred acres of undeveloped land to the east of the study area. The railroad company and other prospective developers have expressed interest in developing this land. Given the distance from the City limits and limited existing infrastructure, there are many challenges in serving this site. For these reasons, this site is considered to be a part of future development beyond 2035.

INFRASTRUCTURE IMPROVEMENTS BEYOND 2035	
14.24	Miles of collector roads
5.87	Miles of electric distribution lines
1.73	Miles of extended water lines
1	New elevated water storage tank
2	New lift stations
10.47	Miles of extended wastewater lines
1	New I-77 interchange at Long Meadow Road
2	I-77 interchange upgrades at Porter and Mt. Holly Roads

RECOMMENDATIONS

MAP I.8 EXAMINING INFRASTRUCTURE NEEDS BEYOND 2035



- | | | | | | |
|--|---|--|---------------------------|--|-------------------------------|
| | Undeveloped >50 Acres | | Collector Road Proposed | | Distribution Line Proposed |
| | Undeveloped | | Water Line Proposed | | Sewer Line Proposed |
| | 2022-2035 Prospective Development Sites | | Water Tower Proposed | | Lift Station Proposed |
| | | | New Interchange Potential | | Interchange Upgrade Potential |

RECOMMENDATIONS

DEVELOPMENT STANDARDS

One component of this corridor study is introducing concepts for potential design and development standards for industrial development. In order for any or all of these ideas to be implemented, they would need to be further refined and brought forward as amendments to the Zoning Ordinance, Design Overlay District, and for Municipal Code. The following sections include ideas regarding standards pertaining to -

- Pad-ready sites
- Signage
- Streetscape
- Traffic improvement funding
- Traffic Impact Analysis (TIA)

RECOMMENDATIONS

PAD-READY SITES

Another idea is for the City to allow developers to offer “pad ready” sites more easily, and then to encourage them to do so. When a site is fully “pad ready,” it means that all the necessary planning has been completed all the way through grading of the site—

- An industrial zoning district has been assigned to the property;
- Survey, title work, environmental studies, and soil analysis has been completed;
- A major site plan and/or preliminary plat, along with civil engineering plans, have been approved by the City;
- A stormwater permit has been approved by the South Carolina Department of Health and Environmental Control;
- The site has been graded and then stabilized to accommodate an industrial building of a specific size; and
- All utilities have been run to the site, and road infrastructure is in place to serve an industrial user.

Having pad-ready sites allows industrial developers to market their properties more competitively because many industrial businesses are looking for sites that are fully ready to build. Often, they are not willing to wait for all of these steps to take place and will simply select a different site that is more ready for their building.

The City currently requires that building plans be approved in addition to civil plans before grading can take place so that staff can ensure that the grading will accommodate the proposed building. If the City were to amend the Zoning Ordinance and its permit processes to stop requiring building plan approval first, it would allow the owners of industrial properties to make their sites pad-ready.

Because the City is particularly interested in attracting manufacturing use types, the City might also look at incentivizing pad-ready manufacturing sites by allowing for more flexible development and design standards for that type of use than for other types of industrial uses. For example, it might allow a manufacturing building to meet fewer design standards if it is being built on a site that was made pad-ready and marketed for manufacturing uses, or it might allow developments to provide less open space than otherwise would be required if a developer gets the sites pad-ready and markets them for manufacturing use.

▼ FIGURE 1.12 EXAMPLES OF A PAD-READY SITE



Image shows details about available pad-ready sites at Commerce Crossing at Westmoreland, PA.

The [Palmetto Sites Program](#) is offered each year by the South Carolina Department of Commerce and awarded at most to one site per county. Sites are vetted for development and evaluated to meet prospective development project needs.

RECOMMENDATIONS

SIGNAGE STANDARDS - INCORPORATING BRAND IDENTITY

▼ FIGURE 1.2 EXAMPLES OF INTERSTATE GATEWAY SIGNS



One concept is for future industrial businesses in the study area to adopt a consistent signage program to support the **brand identity** of the South Carolina Commerce Corridor. This could be achieved through a combination of sign initiatives—interstate gateway signs, project signs identifying the industrial corridor, wayfinding signs at key intersections, directory signs in areas with multiple businesses, and individual monument signs for businesses with the SC Commerce Corridor name on a portion.

Note: the example images here illustrate branding on various types of signage. These examples are not used to indicate other signage elements such as materiality and dimensions.

APPLICABLE SIGNAGE TYPES

- **Interstate gateway signs** with City of Rock Hill and South Carolina Commerce Corridor brand elements
- **Project signs** identifying the South Carolina Commerce Corridor at key points on other main roads serving the study area
- **Wayfinding signs** at key locations
- **Directory signs** listing both the SC Commerce Corridor name and individual business names in areas with a concentration of businesses
- **Individual business signs** with SC Commerce Corridor name and a consistent appearance

RECOMMENDATIONS

SIGNAGE STANDARDS - INCORPORATING BRAND IDENTITY

▼ FIGURE 1.3 EXAMPLES OF PROJECT SIGNS



▼ FIGURE 1.4 EXAMPLES OF WAYFINDING SIGNS



RECOMMENDATIONS

SIGNAGE STANDARDS - INCORPORATING BRAND IDENTITY

▼ FIGURE 1.5 EXAMPLES OF DIRECTORY SIGNS



▼ FIGURE 1.6 EXAMPLES OF INDIVIDUAL BUSINESS SIGNS



RECOMMENDATIONS

STREETSCAPE STANDARDS

Another concept is for the City to adopt street design and streetscape standards for areas of future industrial development within the SC Commerce Corridor. While future Traffic Impact Analyses will determine the exact road improvement needs for specific projects, establishing aesthetic parameters in advance would help the area have a cohesive appearance. Examples include:

Roadway cross-sections

- The most visible roadways may be required to have a divided landscaped median and special entrance landscaping.

▼ FIGURE 1.7 EXAMPLES OF STREETSCAPE CONDITIONS



Local example of a three-lane roadway with center turning lane.



Local example of a four-lane divided roadway with median plantings.

▼ FIGURE 1.8 EXAMPLE OF THREE-LANE ROADWAY CROSS-SECTION
Source: City of Rock Hill Planning & Development and Streetmix.net



▼ FIGURE 1.9 EXAMPLE OF FOUR-LANE DIVIDED ROADWAY CROSS-SECTION
Source: City of Rock Hill Planning & Development and Streetmix.net



RECOMMENDATIONS

STREETSCAPE STANDARDS

Interstate Roadway aesthetics

- While most of I-77 in this corridor has a center concrete barrier and therefore cannot be landscaped (or will when I-77 is widened to the south in the future), the City might partner with the SCDOT or other organizations on special gateway landscaping within the rights-of-way along the sides of the interstate and access ramp areas.
- The State uses some proceeds from “Keep It Beautiful” license plates for wildflowers and other enhancement programs, and the Garden Club of South Carolina administers a similar program.

▼ FIGURE I.10 EXAMPLES OF INTERSTATE ROADWAY AESTHETICS



The plantings at U.S. 74 Exit off I-85 near Kings Mountain in Gaston County, North Carolina won a state award from the NCDOT.



Landscaping adds appeal along the stretch of I-85 approaching Pine Street in Spartanburg County, South Carolina.

RECOMMENDATIONS

STREETSCAPE STANDARDS

Integrating Bike & Pedestrian Facilities

- The City could evaluate existing bicycle and pedestrian plans and determine whether the planned facilities need to be updated now that more is known about future development in the corridor than when the plans were adopted. Some industrial and business parks are known for providing these types of facilities as a strategy to attract desirable businesses.

▼ FIGURE 1.11 EXAMPLES OF INTEGRATING BIKE & PEDESTRIAN FACILITIES



Rock Hill's Tech Park is an example of a successful trail loop in a business park.



Flatiron Park touts trails and their connection to the larger trail network as one of its primary amenities.



The Research Triangle Park includes trails, on-street paths, and bike facilities.



The Huntersville Business Park in North Carolina is known by cyclists as a good training location.

RECOMMENDATIONS

TRAFFIC IMPROVEMENT PROJECT FUNDING

The City is a member of an intergovernmental transportation planning organization called RFATS—the Rock Hill-Fort Mill Area Transportation Study. RFATS has a long history of coordinating transportation planning activities within the urbanized area’s boundaries, which currently include the eastern part of York County and the panhandle of Lancaster County. The City should continue to ensure that the region’s regional transportation objectives are advanced through RFATS.

Additionally, the City might want to consider whether a new impact fee for roads, or a fee in lieu of some road improvements, or both, might be needed to help fund regional road improvement projects in this area. While individual projects will be required to mitigate their own impacts near their site, many existing intersections will need to be improved as well, and it is not always practical for the cost of those types of larger improvements to be borne by any individual developer.

If the City were to require each project to pay a certain percentage into those larger roadway projects, they would likely be completed more quickly than if left to be completed through other types of regional funding. Both York County Pennies for Progress program and the RFATS Guideshare program are highly competitive and funding can be limited. This type of shared fee system also would help avoid situations where developers intentionally slow their development plans in order to be “last to the table” so they do not have to pay for the larger improvements on their own. If this type of funding program is not pursued, the City may want to instead consider limiting development in more congested areas until the larger road projects are completed using other avenues of funding.

Creating a Community Improvement District (CID) is another idea that would require stakeholder cooperation, but has had success in other areas, such as the Fulton Industrial Boulevard District highlighted below.

EXAMPLE OF COMMUNITY IMPROVEMENT DISTRICT

The Fulton Industrial Boulevard District is one of the largest industrial districts in the southeastern United States, thanks in part to its proximity to major transportation nodes, the City of Atlanta, its international airport, and intermodal terminals. The commercial property owners were willing to tax themselves to finance needed improvements for the district including transportation infrastructure, economic development, landscaping, and public safety. The Fulton Industrial Community Improvement District (CID) was formed in 2010. District stakeholders identified improvements for the I-20 interchange as the first priority. The total raised for improvements was about \$1.8 million contributed by various partner funds, including \$500,000 from the CID.



RECOMMENDATIONS

TRAFFIC IMPACT ANALYSIS STANDARDS

The City might also consider revising its Traffic Impact Analysis standards to require developers to evaluate certain aspects of roadways that it does not currently require to be evaluated, such as:

- Requiring TIAs for developments that generate more than 400 Average Daily Trips instead of only those that generate 100 or more peak-hour trips. This would lead to more projects completing TIAs instead of only those with heavy peak-hour trips.
- Requiring TIAs to study a specific geographic area based on trip generation from the proposed development. Staff currently establishes the study area based on the scale and impact of the development, but this could be quantified more objectively by using peak hour trips and percentage of growth added to intersections within certain distances of the proposed development.
- With new connections to adjacent developments, additional trips may occur in the form of through traffic. Cut through traffic could be accounted for whenever these new connections are made to adjacent developments or whenever travel patterns change due to new development.
- TIAs may be allowed to use various sources to determine background traffic growth. Currently, the City uses data from city sources or from the SC DOT, with annual growth rates calculated based on historic trends and projected out for future years. Additional sources might include projected volumes from RFATS studies, volumes from TIAs of nearby approved developments, or other City plans.
- TIAs could discuss overall system improvements to assist with mitigating the traffic impacts of the proposed development and promoting other modes of transportation, such as bicycling and walking.
- TIAs could be required to conduct a safety analysis, and if areas of concern are identified, require the developer to propose mitigation measures.
- TIAs could evaluate pavement quality to analyze whether the infrastructure has the capability of withstanding additional traffic volumes, especially additional truck traffic volumes. This would require core-sampling and analysis to determine whether re-paving or re-construction of roadway is needed.

DEVELOPMENT STANDARDS - NEXT STEPS

In order to implement modifications to development standards, the following next steps are required:

- Determining which of the ideas on the previous pages City Council is interested in pursuing;
- Drafting all associated regulation changes; and
- Taking the proposed regulation changes forward for consideration.

Any Zoning Ordinance or Design Overlay District changes will require the Planning Commission to hold a public hearing and make a recommendation to City Council, and then City Council would have to consider the proposed changes over two different meetings.

Any Municipal Code changes, necessitates City Council's consideration of proposed changes over two different meetings. A public hearing is not required.

If impact fees are under consideration, the state's impact fee statute requires a specific process of consideration and approval that would be followed.

This process can be expected to take several months from the drafting stage to final consent by City Council.

APPENDIX A

INFRASTRUCTURE ASSESSMENT

Methodology	A.1
Step 1 - Estimate Timing of Development	A.2
Step 2 - Define Development Scenarios	A.4
Step 3 - Evaluate By Phase	
Phase 0	A.6
Phase 1	A.8
Phase 2.....	A.10
Phase 3.....	A.12
All Phases, Transportation Modeling	A.14
Step 4 - Analyze Needs & Project Costs By Phase	
Phase 0.....	A.16
Phase 1	A.18
Phase 2.....	A.22
Phase 3.....	A.26
A Focus On Industrial Development	A.30
Infrastructure Planning Next Steps	A.32

METHODOLOGY

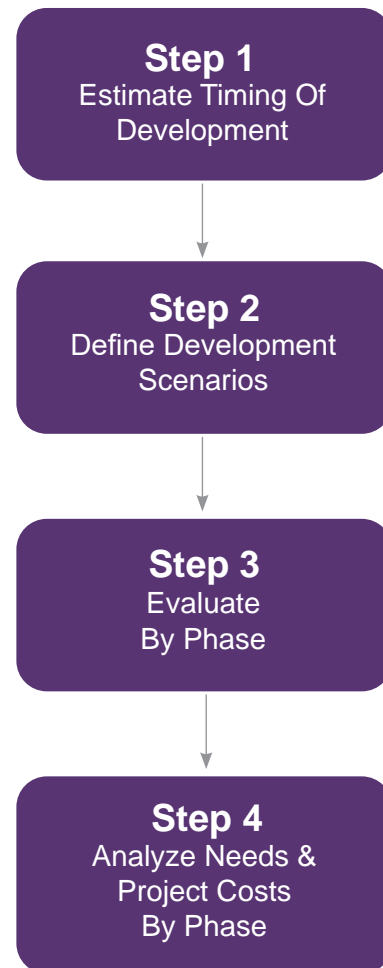
Appendix A details the methodology or process of how each master plan was formulated. The majority of this work was conducted by city staff with assistance from transportation consulting firm WSP, for the [roadway infrastructure modeling](#).

After examining existing conditions within the study area, (detailed in [Appendix B](#)), all of the properties with known potential non-residential development interests were identified and their construction timeline was estimated, Step 1. In some cases, development site plans were available, but in others they were not. In order to project future demand of utilities and roadway utilization, development scenarios were created, Step 2. Definitions of these development scenarios are further detailed in the [Step 2](#) section.

[Step 3](#) was to evaluate the ability to serve the prospective development. For roadways, this entailed modeling trip generation and evaluating the level of service on existing roads. Next a needs analysis was performed to identify system gaps and capacity issues.

With this information, a preliminary master plan was designed for roadway, pedestrian, and stormwater infrastructure as well as utilities (electric, water, and wastewater), [Step 4](#). A planning level cost estimate was then calculated to determine an order of magnitude project cost. At this initial planning phase, public versus private costs are not distinguished. However it is noted when a general type of cost is known to be funded by private or public dollars, for example collector roads are generally the responsibility of the developer and thus are covered by private funds. Costs include a contingency factor and a 4% inflation rate, but generally do not identify a funding source.

▼ FIGURE A.1 PROCESS DIAGRAM, METHODOLOGY



Step 1

ESTIMATE TIMING OF DEVELOPMENT

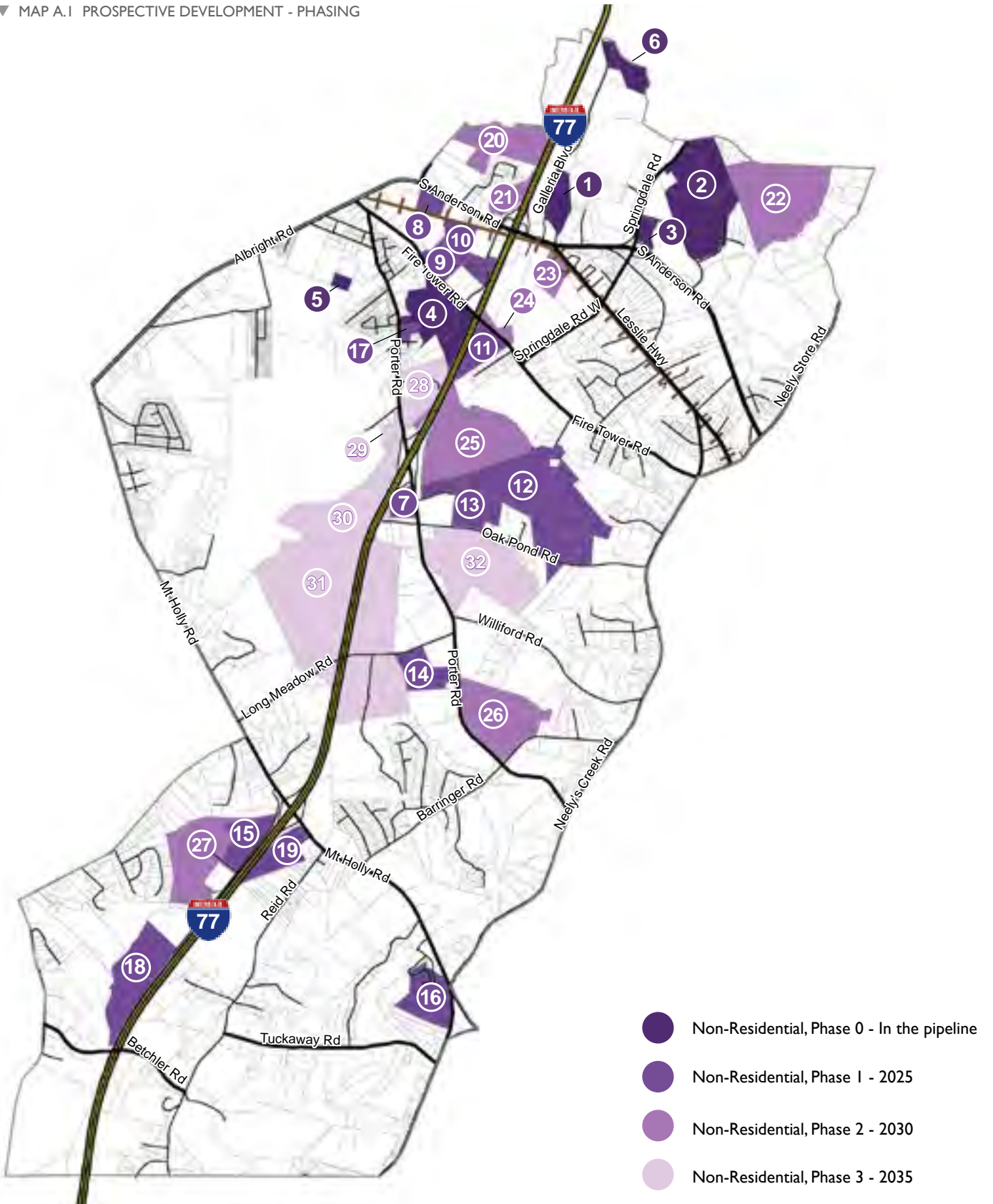
After soliciting input from current planning and economic development staff as well as property owners and developers, a list of prospective development was constructed with an estimated timeline of when construction may begin for a particular non-residential site. Sites are divided into two major categories - residential and non-residential. If construction is pending or is underway, these sites are assigned to Phase 0 - in development pipeline. Sites that are in the early development process or actively being targeted for development with the potential for construction to begin by 2025 are designated as Phase I. Sites assigned to Phase 2 are likely to begin construction by 2030 and sites in Phase 3 are likely to begin construction by 2035.

It is anticipated that the timing of site development will likely change for various reasons; however, for the purposes of modeling system needs and capacity constraints, an estimated development timeline is required. Thus for the purposes of this planning initiative, Table A.1 and Map A.1 illustrate the timing of the prospective development.

▼ TABLE A.1 PROSPECTIVE DEVELOPMENT

Map No.	Site Name [Owner(s) if different/Developer if under contract]	No. of Acres	Map No.	Site Name [Owner(s) if different/Developer if under contract]	No. of Acres
Phase 0 - In Development Pipeline					
1	Galleria Industrial Distribution [Riverbend Rock Hill Properties, II, LLC]	31.7	4	Firetower Logistics [Firetower Logistics @ 77, LLC]	71.8
2	Legacy Park East, Phases IV - V [Multiple]	173.7	5	Nucycle Land, LLC	7.1
3	Legacy Park East [Multiple]	12.1	6	Antrim Investment Partners, LLC	30.7
Phase I - 2025					
7	Charlotte Truck Center, Inc.	17.7	14	BRICO, LLC	49
8	Johnston Farms, LLC (South Anderson Road)	16.5	15	KCS Icebox Lazy Hawk Rd Owner, LLC	41.4
9	Johnston Farms, LLC (Fire Tower Road)	20	16	York Preparatory Academy [Indigo Rush, LLC]	30
10	Commercial Development Holdings, LLC	52.9	17	Fire Tower Industrial Flex [Multiple]	7.9
11	Industrial Developers, LLC [Cope]	35.6	18	Blue Bridge [Poag Reid]	122
12	I-77 Commerce [Multiple / Strategic Capital]	293	19	Crenshaw Leasing III, LLC	43.5
13	Old Dominion Freight Line, Inc.	23			
Phase 2 - 2030					
20	City of Rock Hill (Operations Center Extension)	25	24	MDV I031, LLC [Lindsay Precast]	9.9
21	Abraham, Sheila Clanton, ETAL	23.3	25	Agnes Slack LLP of Georgia [Ron Slack / Panattoni]	181
22	JFP Burgis Creek Holdings, LLC, ETAL [Pursley]	178	26	MPC Porter Road Investments, LLC	97.4
23	Smith, Daniel M. Jr.	25.8	27	Lazy Hawk [Multiple]	121
Phase 3 - 2035					
28	Wolfcreek Development, LLC	53.5	31	Johnson Realty Company [Ben Johnson & Family]	495
29	Rock Ridge #3, LLC [David Norman]	13.8	32	The Cato Corporation	186.8
30	Norman Development Company, Inc. [Warren Norman]	130			

▼ MAP A.1 PROSPECTIVE DEVELOPMENT - PHASING



Step 2

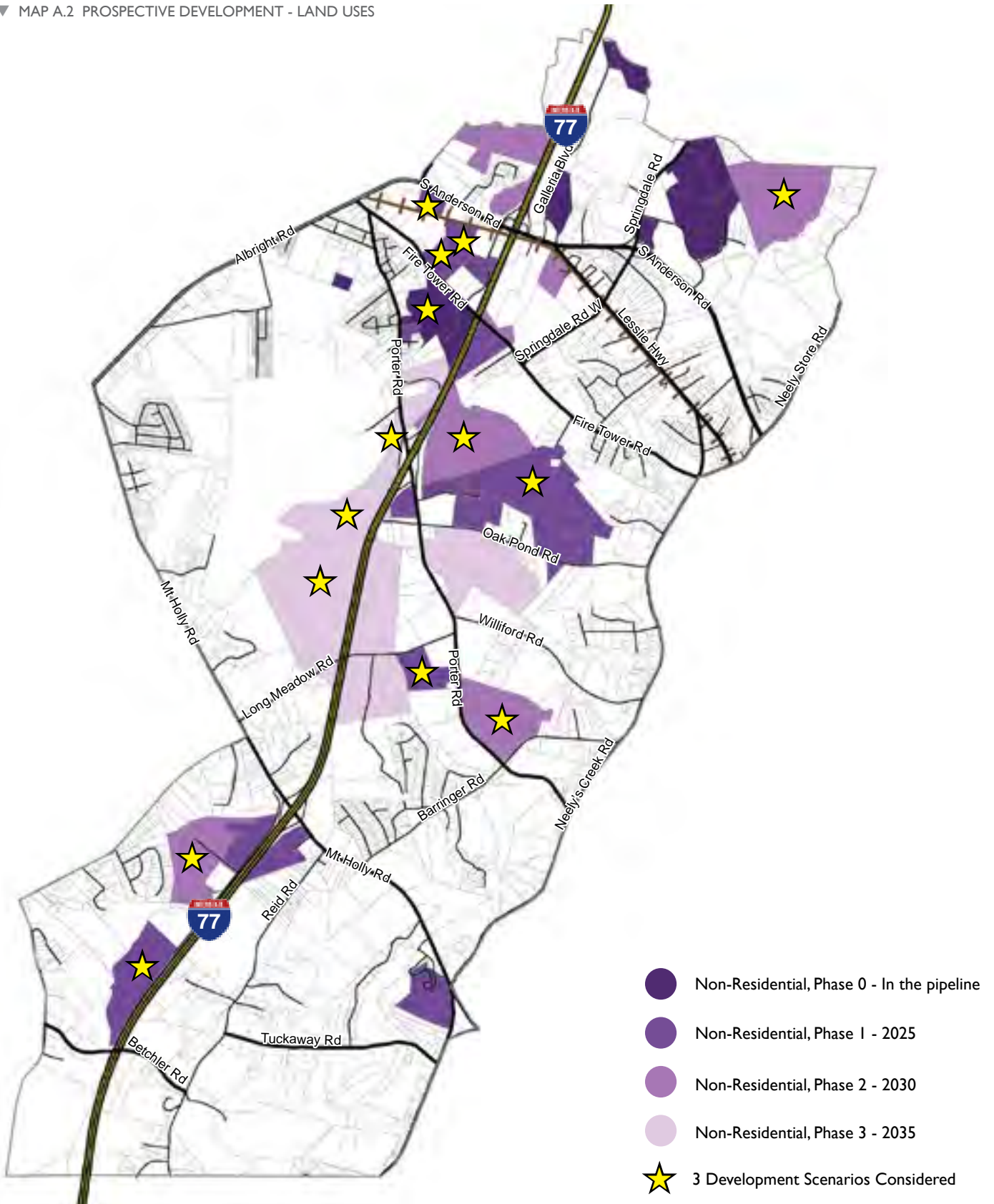
DEFINE DEVELOPMENT SCENARIOS

The other major component to planning for infrastructure needs is what type of development to anticipate. In order to build flexibility into the analysis and a range of potential system demand, three types of development scenarios were considered. The first scenario is the “most probable” type (and amount) of non-residential development. The second scenario is defined as what the likely non-residential development may be if “left to market forces.” The third scenario is defined as the “highest and best” use of the land typically in terms of intensity of the land use. For various reasons, not all of the prospective development sites were analyzed under each development scenario, but those that were are noted in Map A.2 with a star. A summary of the type and amount of non-residential development by phase is provided in Table A.2.

▼ TABLE A.2 PROSPECTIVE DEVELOPMENT - SUMMARY OF LAND USES BY PHASE

	DEVELOPMENT SCENARIOS		
	MOST PROBABLE	LEFT TO MARKET FORCES	HIGHEST & BEST LAND USE
Phase 0 - In Development Pipeline			
Warehouse / Distribution	2,817,696 SF	3,118,272 SF	2,617,312 SF
Manufacturing	531,706 SF	231,130 SF	732,090 SF
Retail	50,765 SF	-	-
Phase 1 - 2025			
Warehouse/Distribution	3,624,040 SF	6,500,440 SF	2,419,720 SF
Freight Terminal	43,508 SF	-	-
Manufacturing	1,976,010 SF	397,110 SF	2,824,630 SF
Retail	266,100 SF	-	-
Restaurant	42,700 SF	-	-
Office	18,750 SF	-	-
Hotel	127 Rooms	-	-
Institutional (Charter School)	116,000 SF	-	-
Phase 2 - 2030			
Warehouse/Distribution	2,370,348 SF	4,925,675 SF	591,950 SF
Fulfillment	1,628,600 SF	-	-
Light Industrial	193,500 SF	-	1,167,525 SF
Manufacturing	1,009,778 SF	317,070 SF	3,314,150 SF
Restaurant	20,200 SF	-	-
Hotel	254 Rooms	-	-
Phase 3 - 2035			
Warehouse/Distribution	2,818,750 SF	3,668,750 SF	1,650,625 SF
Manufacturing	2,715,625 SF	20,000 SF	3,100,000 SF

▼ MAP A.2 PROSPECTIVE DEVELOPMENT - LAND USES



Step 3

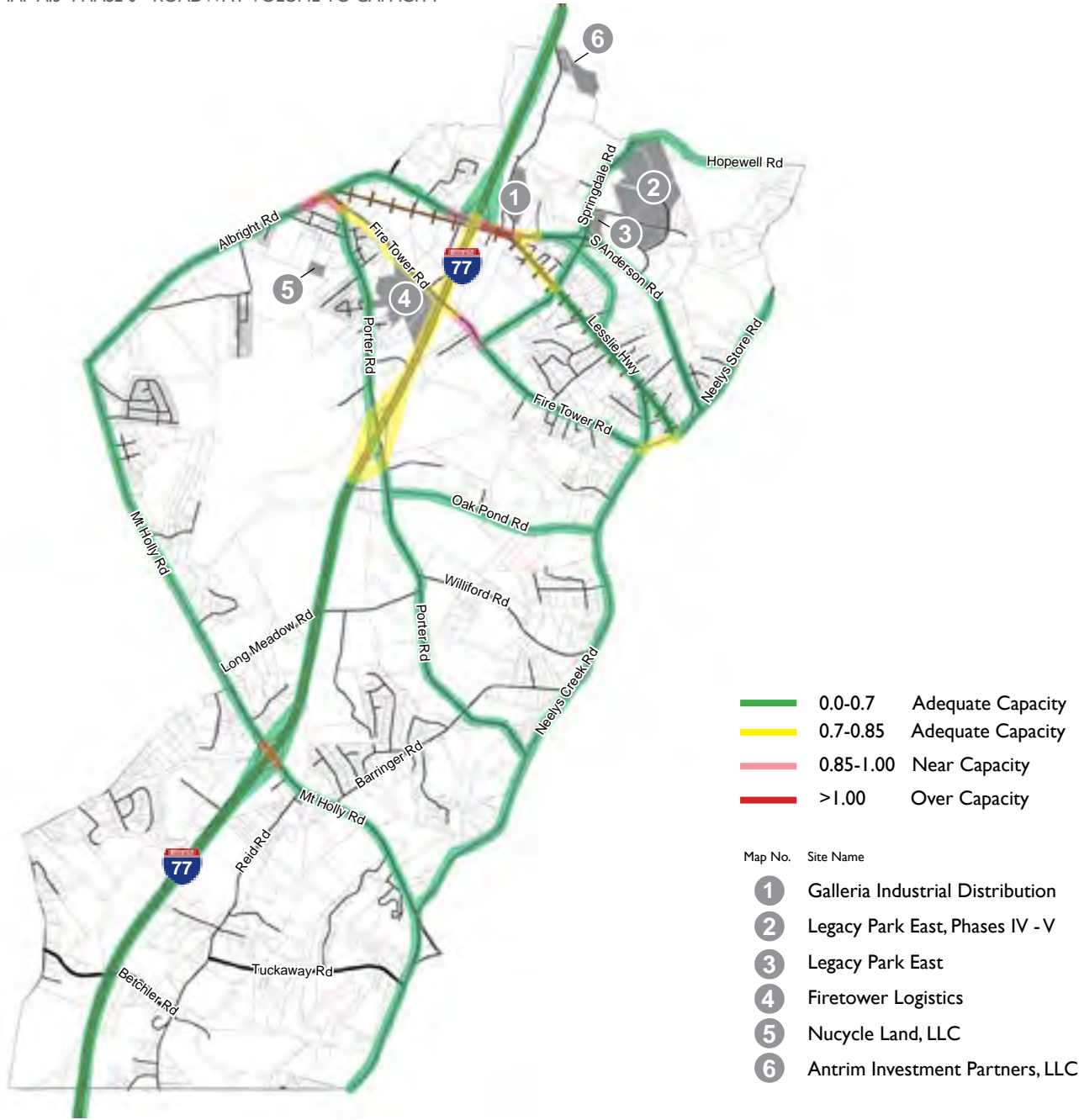
EVALUATE [PHASE 0]

A volume-to-capacity analysis was performed for major roadways in the study area. Map A.3 indicates the results of this analysis for the development in the pipeline, Phase 0. Areas where increases in the volume-to-capacity are likely to occur include:

- US21 / South Anderson Road, segment west of I-77, (yellow to pink)
- US21 / South Anderson Road, segment Galleria Boulevard to Southside Road, (yellow to pink)
- Fire Tower Road, segment from Main Street to Porter Road (pink to red)
- Fire Tower Road, segment east of I-77 to Springdale Road, (yellow to pink)
- Mt. Holly Road, segment at I-77 interchange (pink to red)

In addition to these roadways, segments of along Interstate 77, Fire Tower Road, Leslie Highway, and Neely's Creek Road indicate rising capacity (green to yellow).

▼ MAP A.3 PHASE 0 - ROADWAY VOLUME TO CAPACITY

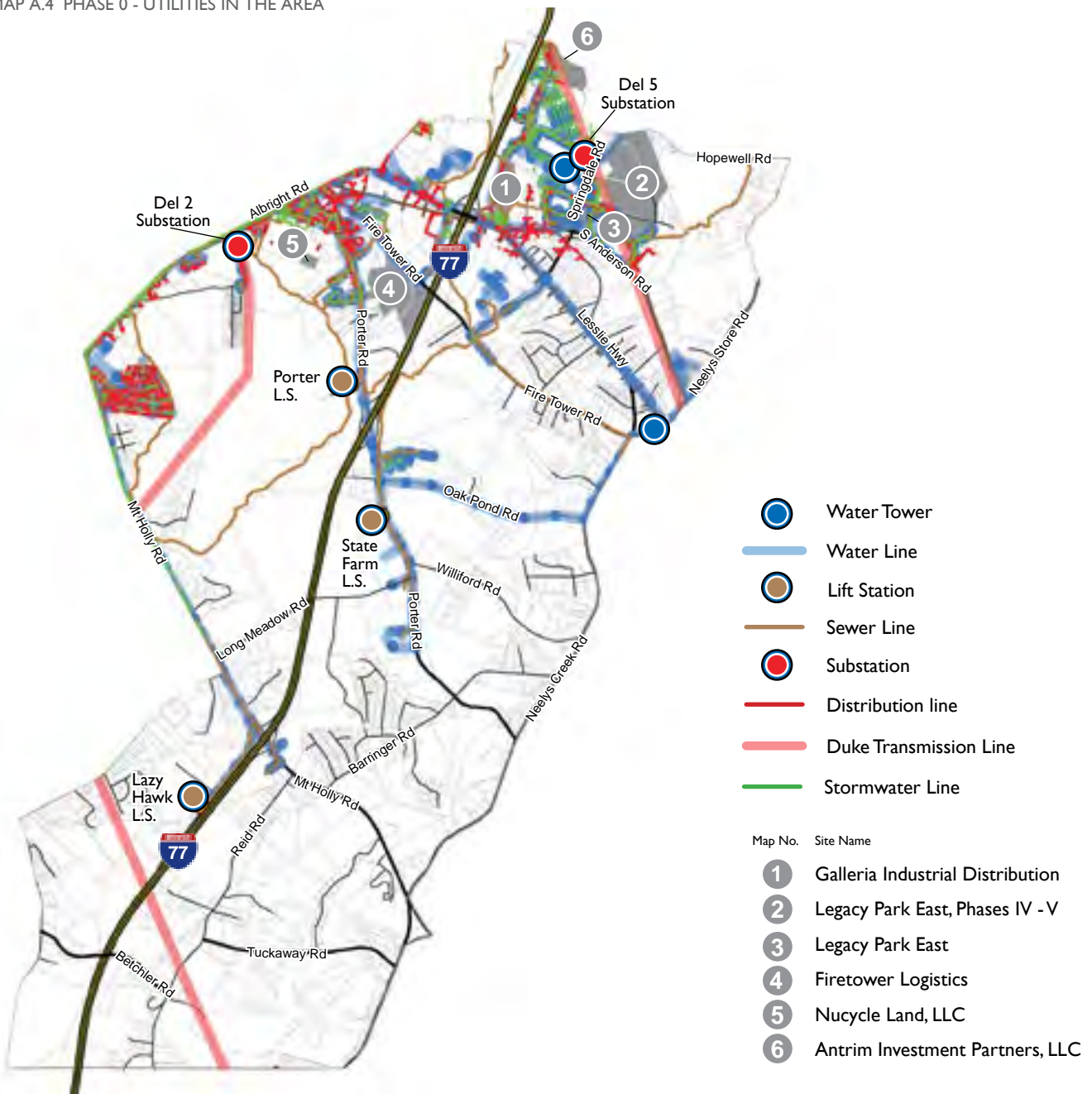


Water & Wastewater Facilities Water and wastewater lines are in proximity to the development sites. Existing water and wastewater facilities, including lift stations inside and in proximity to the study area, are anticipated to accommodate the development sites requesting services.

Electric Facilities The majority of development that is in process has electric distribution lines in proximity to the site, requiring little or no extensions. At the time of this study, the existing electric facility configuration can support about 22 megawatts of additional demand. While this capacity is constantly fluctuating and can be augmented with system configuration changes, it is expected that this capacity will serve these sites.

Stormwater Facilities There are public stormwater facilities in proximity to the development sites including some planned projects along Porter Road, Fire Tower Road and Marine Drive, see [Map B-13](#). Any new public roads or expansion of roads will require integration with stormwater facilities detailed in the [Needs Analysis](#) section.

▼ MAP A.4 PHASE 0 - UTILITIES IN THE AREA



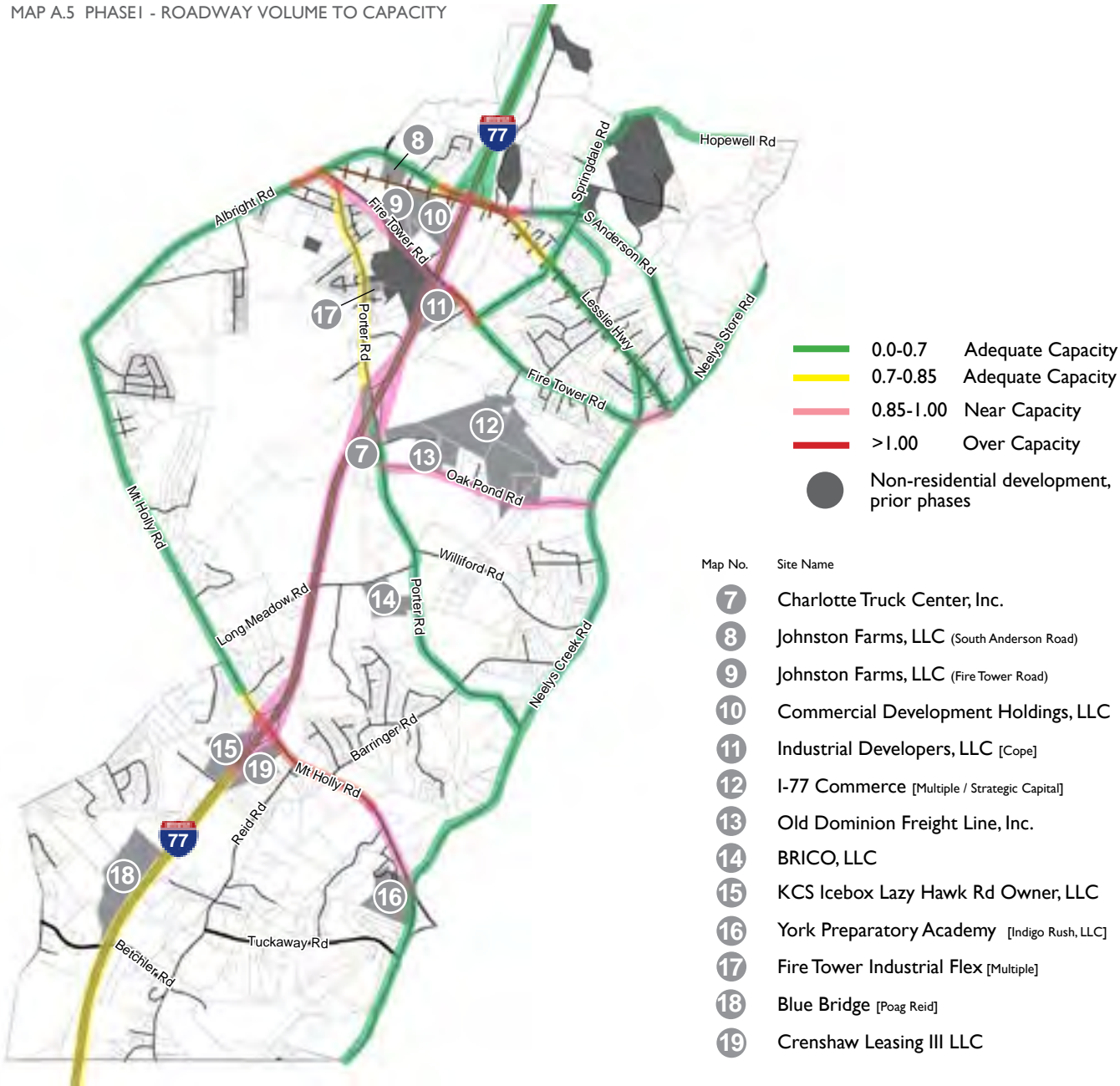
Step 3

EVALUATE [PHASE I]

With additional development spread throughout the study area in Phase I, Map A.5 shows the volume-to-capacity analysis. This growth will mean several major roadways are nearing capacity and are over capacity. Changes in capacity include:

- I-77, segment US21 / South Anderson Road to Porter Road, (yellow to pink)
- I-77, segment Porter Road to beyond county line, (green to pink and yellow)
- US21 / South Anderson Road, segment Townland Drive to Marine Drive, (green to yellow)
- US21 / South Anderson Road, segment Waffle House to I-77, (pink to red)
- Fire Tower Road, segment Porter Road to Feemster Lane, (yellow to pink)
- Fire Tower Road, segment Feemster Lane to Springdale Road, (pink to red)
- Porter Road, segment I-77 to Fire Tower, (green to yellow)
- Oak Pond Road, segment Porter Road to Neely's Creek Road (green to pink)
- Mt. Holly Road, segment Frostproof Trail to Neely's Creek Road, (green to yellow/red/pink)
- Neely's Creek Road, segment Leslie Highway to Schoolside Drive, (yellow to pink)

MAP A.5 PHASE I - ROADWAY VOLUME TO CAPACITY

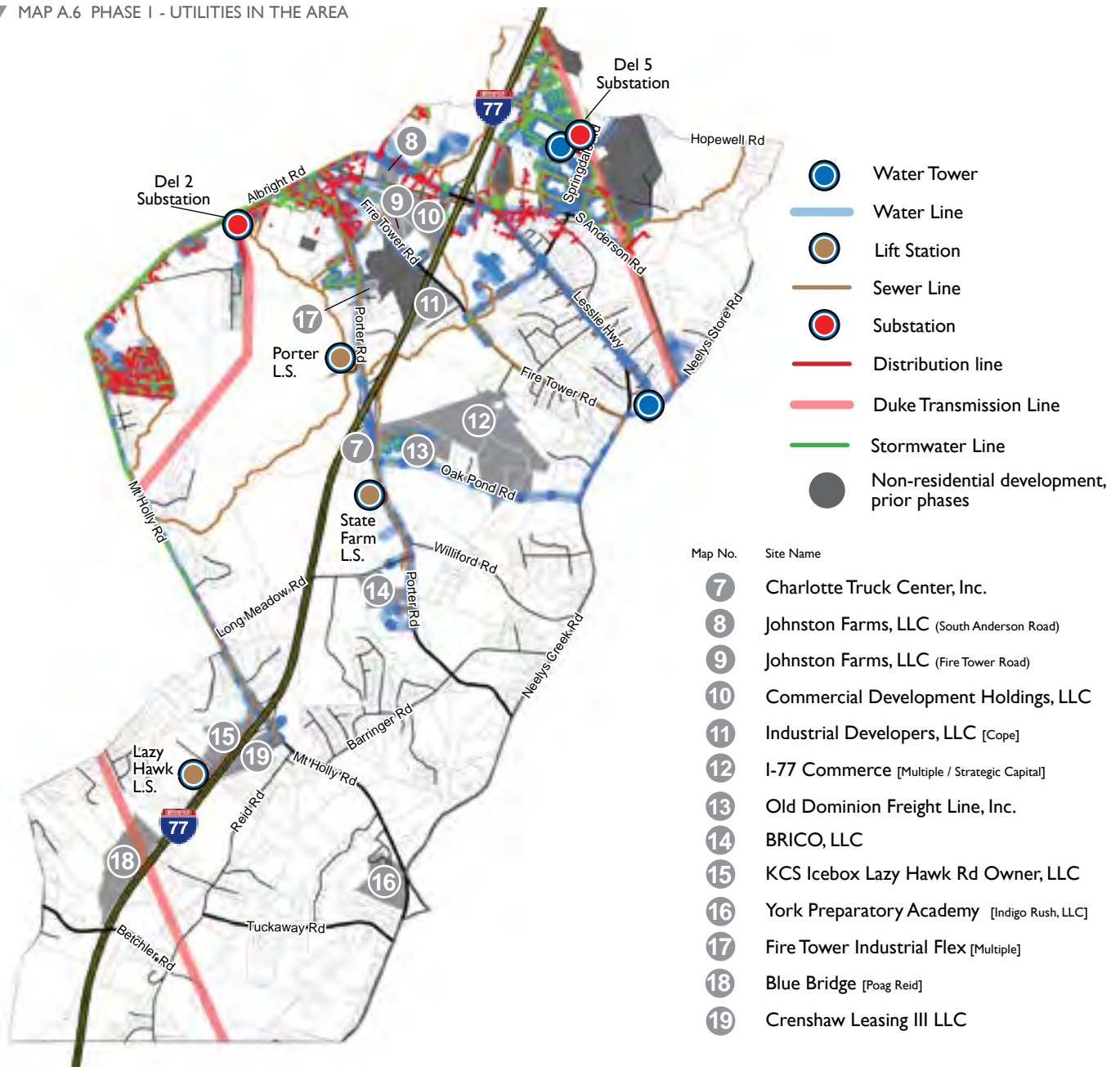


Water & Wastewater Facilities Water and wastewater lines are in proximity to the majority of development sites. Depending on the site and type of development, water and wastewater facilities may need to be extended and expanded. The demand for water and wastewater from Phase I development may likely require improvements to the Porter and Lazy Hawk lift stations as well as upgrades to the collection and distribution systems.

Electric Facilities Extension of distribution lines may be required for sites south of Fire Tower Road including sites #7, 11, 12, 13, 14, 15, 16, 18 and 19. Some Phase I sites may be accommodated by existing capacity; however, a high electric user in this phase could require substation expansion, and/or a new substation and transmission line expansion.

Stormwater Facilities Similar to Phase 0, there are public stormwater facilities in proximity to some of the development sites including planned projects along Albright Road, Fire Tower Road and Marine Drive, see [Map B-13](#). Any new public roads or expansion of roads may require integration with stormwater facilities detailed in the [Needs Analysis](#) section.

▼ MAP A.6 PHASE I - UTILITIES IN THE AREA



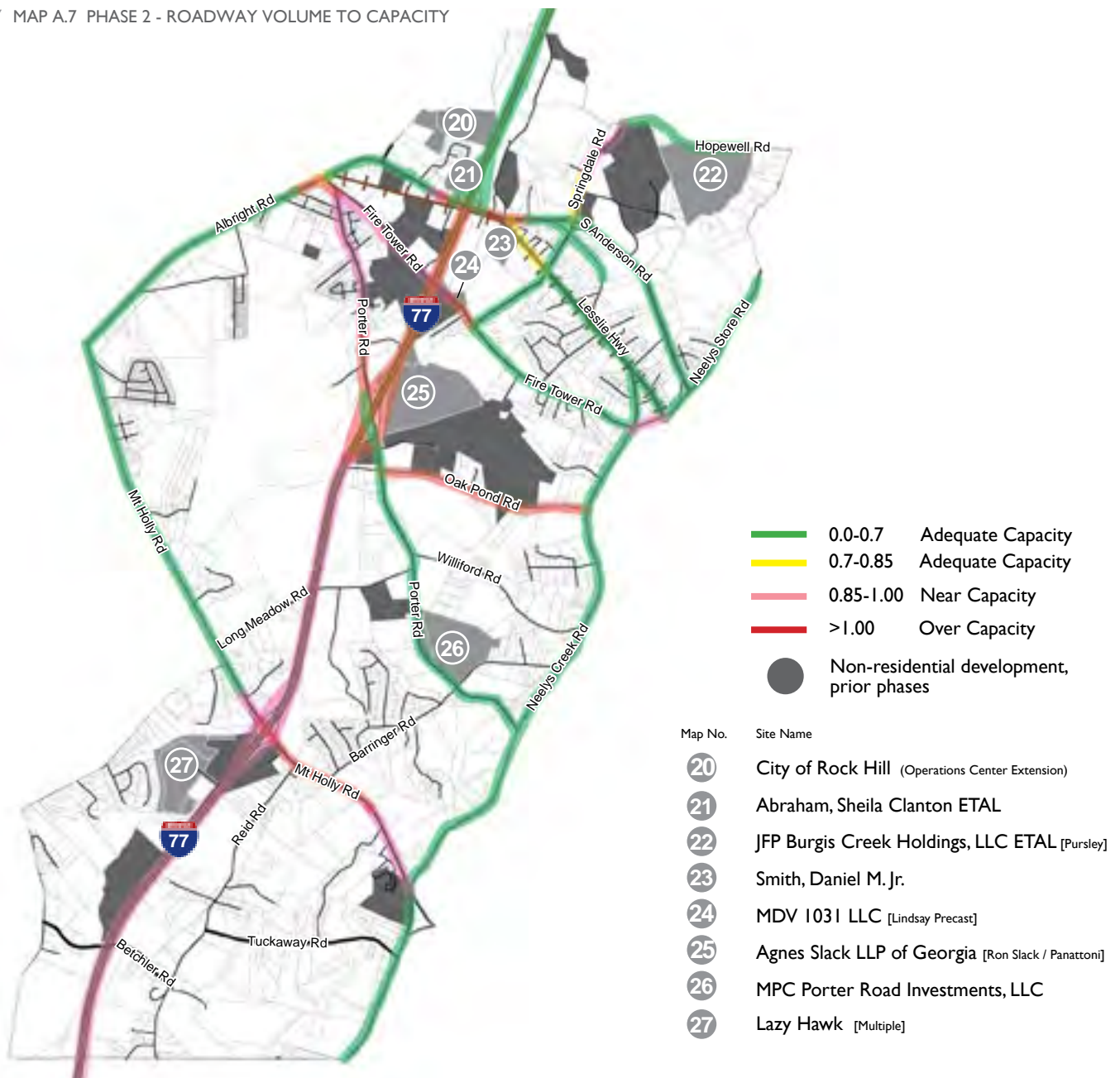
Step 3

EVALUATE [PHASE 2]

Similar to Phase I and development being spread over the study area, Map A.7 indicates an intensification of roadways being over capacity. This includes:

- I-77, segment South Anderson Road to Porter Road, (pink to red)
- I-77, segment Mt Holly to beyond county line, (yellow to pink)
- US21 / South Anderson Road, segment Townland Drive to Waffle House, (yellow to pink)
- US21 / South Anderson Road, segment Galleria Boulevard to Southside Road, (pink to red)
- Springdale, segment Neptune Drive to Hopewell Road, (green to yellow)
- Porter Road, segment I-77 to Fire Tower Road, (yellow to pink/red)
- Oak Pond Road, segment Porter Road to Neely's Creek Road (pink to red)
- Mt. Holly Road, segment I-77 to Frostbrook Trail, (yellow to pink)

MAP A.7 PHASE 2 - ROADWAY VOLUME TO CAPACITY

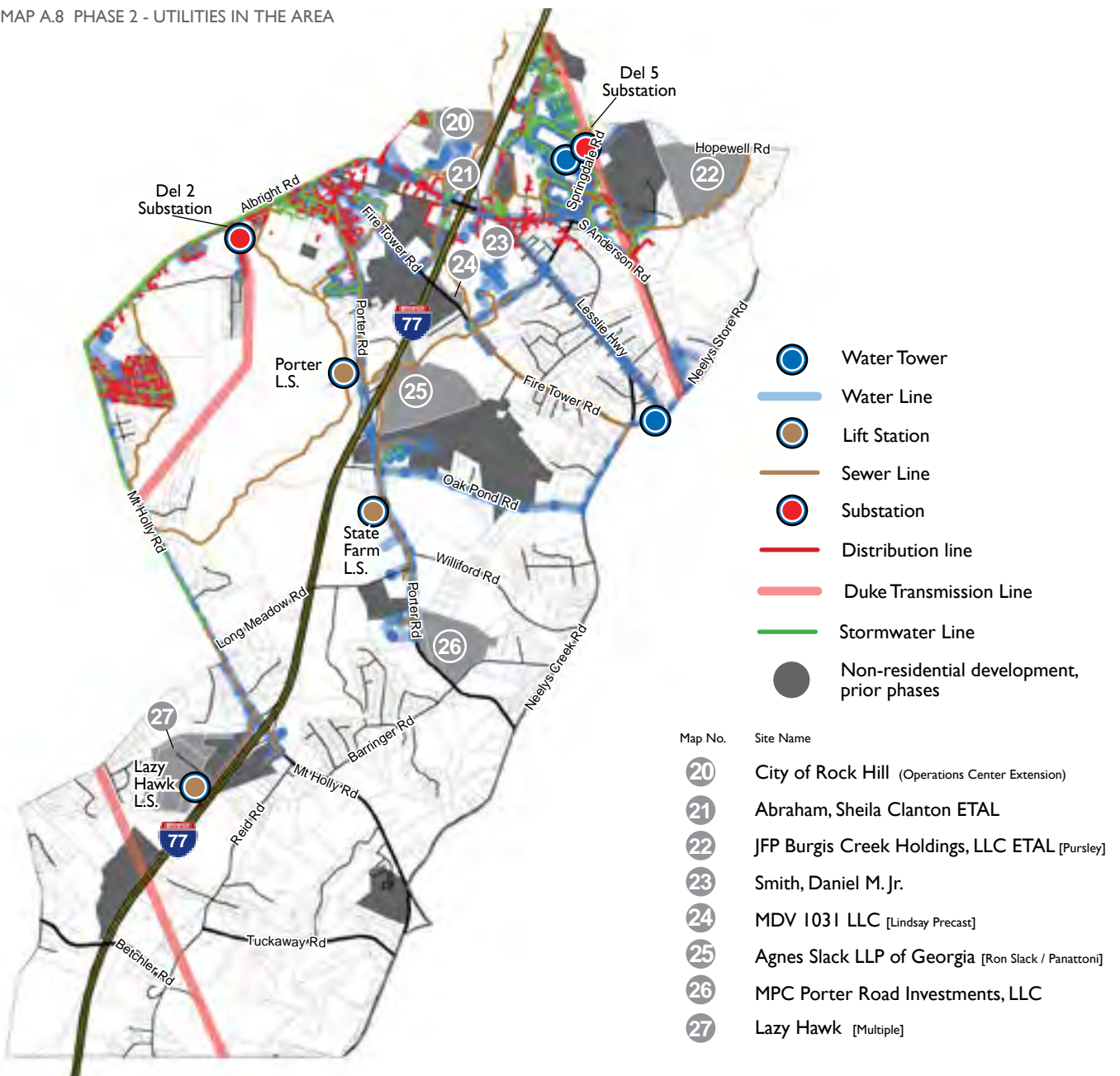


Water & Wastewater Facilities Similar to Phase 1, water and wastewater lines are in proximity to the majority of development sites, but additional water and wastewater facilities may need to be extended and expanded. Water and wastewater demand of Phase 2 development may likely require improvements to the State Farm and Southland (outside the study area) lift stations as well as upgrades to the collection and distribution systems.

Electric Facilities Distribution lines may need to be extended for Phase 2 sites south of Fire Tower Road (#25, 26, and 27) as well as site #22 off of Hopewell Road. Some Phase 2 sites may be accommodated by existing capacity; however, electric demand of Phase 2 development may likely require substation expansion, and/or a new substation and transmission line expansion.

Stormwater Facilities Any new public roads or expansion of roads will require integration with public stormwater facilities detailed in the [Needs Analysis](#) section.

▼ MAP A.8 PHASE 2 - UTILITIES IN THE AREA



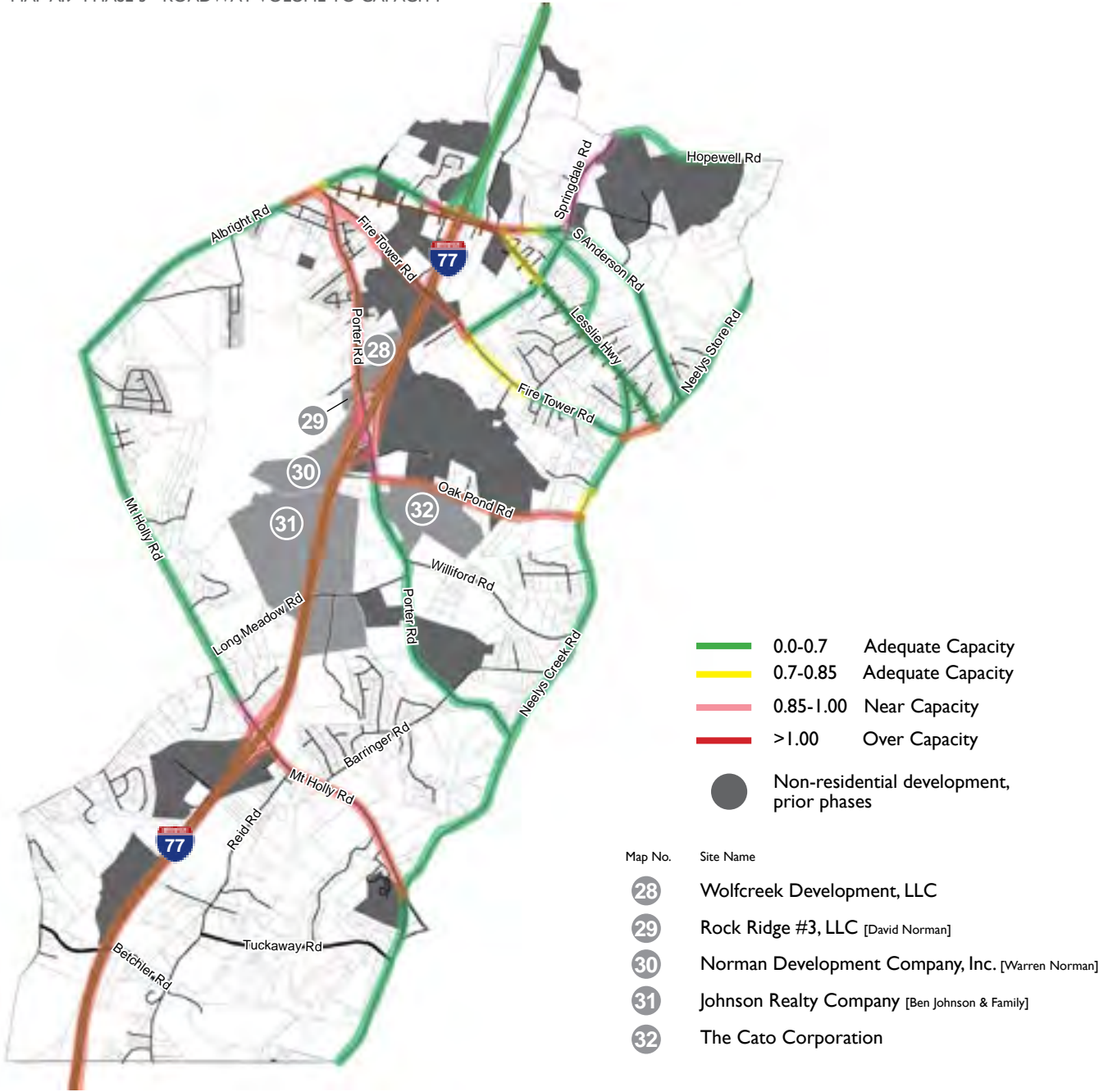
Step 3

EVALUATE [PHASE 3]

By Phase 3, continued growth without roadway improvements will cause the majority of the major roadways to be near or over capacity. This includes:

- I-77, segment Porter Road to beyond county line, (pink to red)
- Fire Tower Road, segment Main Street to Springdale Road, (more red)
- Springdale, segment South Anderson Road to Hopewell Road, (more pink)
- Porter Road, segment Fire Tower Road to Oak Pond Road, (green to pink)
- Mt. Holly Road, segment Barringer Road to Neely's Creek Road, (pink to red)
- Neely's Creek Road, segment Lesslie Highway to Schoolside Road, (pink to red)

MAP A.9 PHASE 3 - ROADWAY VOLUME TO CAPACITY

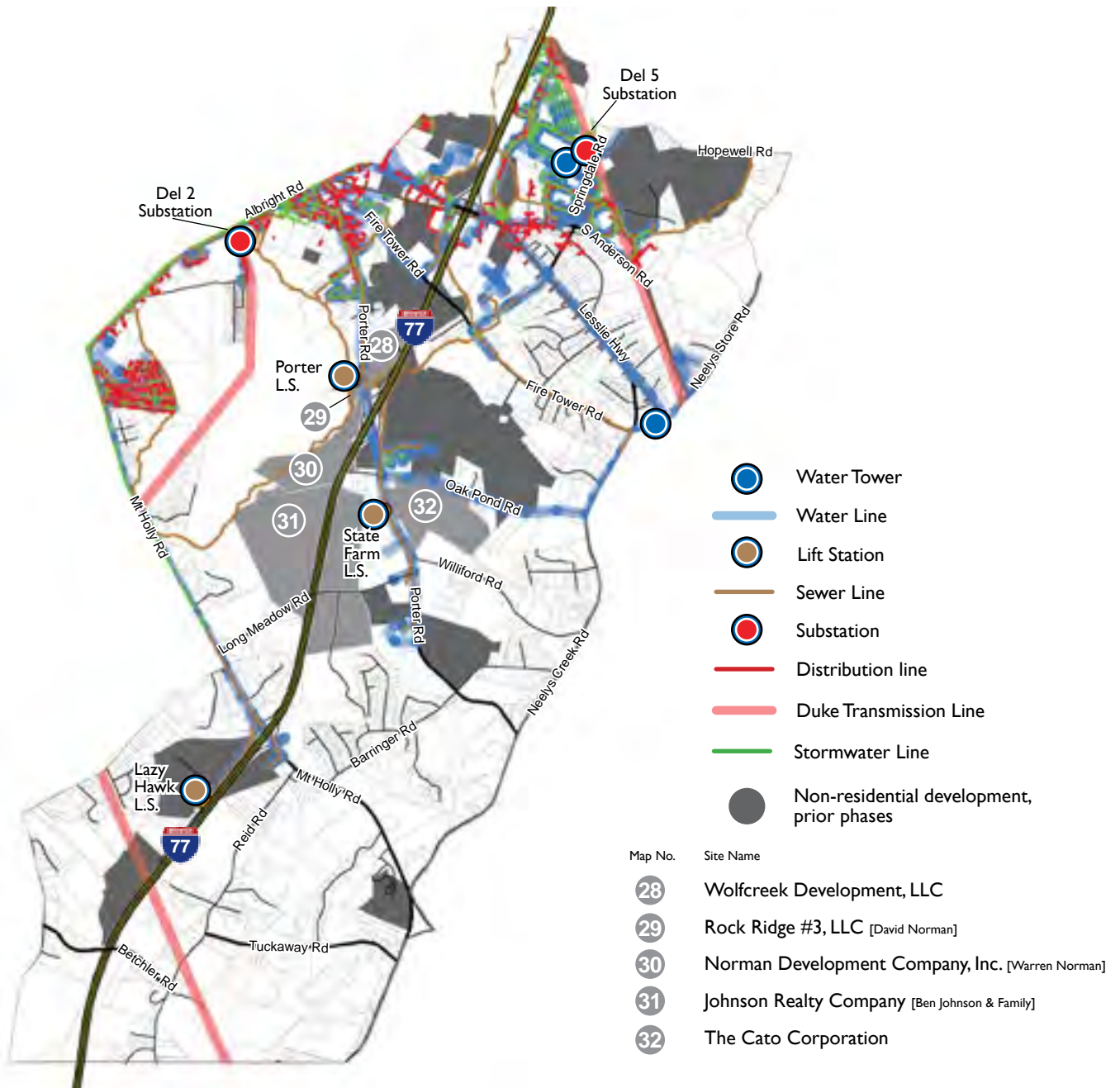


Water & Wastewater Facilities The potential for high water and wastewater demand from manufacturing users in Phase 3 may require expansion of water and wastewater facilities. The cumulative effect of prior phase developments in addition to Phase 2 development may likely require upgrades at the Manchester (outside the study area) wastewater treatment plant, WWTP.

Electric Facilities Distribution lines may need to be extended for some Phase 3 sites (#30, 31, and 32). Some Phase 3 sites may be accommodated by existing capacity; however, electric demand of Phase 3 development may likely require substation expansion, and/or a new substation and transmission line expansion.

Stormwater Facilities Any new public roads or expansion of roads may require integration with public stormwater facilities detailed in the [Needs Analysis](#) section.

▼ MAP A.10 PHASE 3 - UTILITIES IN THE AREA



Step 3

EVALUATE [ALL PHASES]

TRANSPORTATION ANALYSIS MODELING

Roadway	Segment	2022 NB PM v/c	2025 NB PM v/c	2030 NB PM v/c	2035 NB PM v/c	2022 B PM v/c - MP	2025 B PM v/c - MP	2030 B PM v/c - MP	2035 B PM v/c - MP	2022 B PM v/c - LE	2025 B PM v/c - LE	2030 B PM v/c - LE	2035 B PM v/c - LE	2022 B PM v/c - HE
L-77	Dave Lyle Blvd to US 21	0.41	0.42	0.44	0.47	0.43	0.54	0.60	0.68	0.43	0.51	0.56	0.60	0.43
L-77	US 21 to Porter Rd	0.68	0.70	0.73	0.77	0.71	0.91	1.02	1.19	0.71	0.86	0.96	1.02	0.71
L-77	Porter Rd to SC 901 (Mt Holly Rd)	0.62	0.64	0.68	0.71	0.66	0.86	0.95	1.00	0.66	0.81	0.90	0.95	0.66
L-77	SC 901 (Mt Holly Rd) to Lancaster Hwy	0.62	0.64	0.67	0.70	0.66	0.79	0.88	0.98	0.65	0.74	0.83	0.88	0.66
Albright Rd	SC 901 (Mt Holly Rd) to Saluda St to Heckle Blvd	0.34	0.35	0.37	0.39	0.34	0.41	0.44	0.47	0.34	0.38	0.41	0.44	0.34
Albright Rd	Heckle Blvd to Blackmon St	0.56	0.57	0.60	0.63	0.56	0.59	0.62	0.66	0.56	0.58	0.62	0.65	0.56
Albright Rd	Blackmon St to Rockdale St	0.43	0.45	0.47	0.49	0.43	0.46	0.49	0.52	0.43	0.45	0.48	0.51	0.43
Albright Rd	Rockdale St to Midvale Ave	0.44	0.46	0.48	0.50	0.44	0.47	0.50	0.53	0.44	0.46	0.49	0.52	0.44
Albright Rd	Midvale Ave to Rockwood Dr	0.45	0.46	0.48	0.51	0.45	0.48	0.50	0.53	0.45	0.47	0.50	0.52	0.45
Albright Rd	Rockwood Dr to Advance Auto Parts	0.45	0.47	0.49	0.51	0.45	0.48	0.51	0.54	0.45	0.47	0.50	0.53	0.45
Albright Rd	Advance Auto Parts to 8th St	0.46	0.47	0.50	0.52	0.46	0.49	0.52	0.55	0.46	0.48	0.51	0.54	0.46
Albright Rd	8th St to Mint St	0.42	0.43	0.45	0.49	0.42	0.44	0.47	0.52	0.42	0.44	0.46	0.51	0.42
Albright Rd	Mint St to Flint St Ext	0.40	0.42	0.44	0.48	0.41	0.43	0.46	0.50	0.41	0.42	0.45	0.49	0.41
Albright Rd	Flint St Ext to Black St	0.55	0.57	0.60	0.66	0.55	0.59	0.62	0.69	0.55	0.58	0.61	0.67	0.55
Albright Rd	Black St to Main St	0.94	0.96	1.01	1.11	0.94	1.00	1.06	1.17	0.94	0.98	1.04	1.14	0.94
Main St	Main St to Eastside Shopping Center	1.20	1.24	1.30	1.37	1.20	1.29	1.36	1.45	1.20	1.27	1.34	1.42	1.20
Main St	Eastside Shopping Center to White St/Firetower Rd	1.61	1.66	1.74	1.91	1.61	1.71	1.81	1.99	1.61	1.69	1.78	1.96	1.61
Main St	White St/Firetower Rd to Bellevue Rd	0.62	0.64	0.67	0.70	0.64	0.69	0.77	0.81	0.64	0.68	0.77	0.80	0.64
Main St	Bellevue Rd to Pinewood Rd	0.48	0.49	0.52	0.55	0.50	0.53	0.60	0.62	0.50	0.53	0.59	0.62	0.50
Main St	Pinewood Rd to Christopher Cir	0.39	0.42	0.44	0.46	0.42	0.49	0.57	0.60	0.42	0.47	0.57	0.59	0.42
Main St	Christopher Cir to Cowan Rd	0.24	0.26	0.28	0.29	0.27	0.32	0.39	0.41	0.27	0.31	0.39	0.40	0.27
Main St	Cowan Farm Rd to US 21 (Anderson Rd) 1	0.36	0.39	0.41	0.43	0.38	0.43	0.48	0.50	0.38	0.42	0.48	0.50	0.38
Main St	Cowan Farm Rd to US 21 (Anderson Rd) 2	0.36	0.39	0.40	0.43	0.38	0.42	0.48	0.50	0.38	0.42	0.48	0.50	0.38
US 21	US 21 (Anderson Rd) to Towland Dr	0.36	0.39	0.40	0.43	0.41	0.52	0.62	0.64	0.40	0.47	0.60	0.62	0.41
US 21	Towland Dr to Waffle House	0.59	0.63	0.67	0.70	0.64	0.78	0.89	0.92	0.64	0.73	0.88	0.91	0.65
US 21	Waffle House to Marine Dr	0.81	0.87	0.92	0.96	0.88	1.06	1.21	1.26	0.87	1.00	1.20	1.24	0.89
US 21	Marine Dr to L-77 SB Ramps	0.83	0.89	0.93	0.98	0.89	1.07	1.21	1.26	0.88	1.00	1.20	1.24	0.89
US 21	L-77 SB Ramps to L-77 NB Ramps	0.81	0.87	0.91	0.96	0.87	1.05	1.19	1.24	0.87	0.99	1.18	1.22	0.88
US 21	L-77 NB Ramps to Glen Hope Rd	1.26	1.30	1.36	1.43	1.42	1.48	1.74	1.81	1.42	1.46	1.62	1.69	1.42
US 21	Glen Hope Rd to Galleria Blvd/SC 6	1.46	1.50	1.58	1.66	1.62	1.68	1.96	2.04	1.62	1.67	1.84	1.92	1.62
US 21	Galleria Blvd/SC 6 to Southside Rd	0.78	0.80	0.84	0.88	0.85	0.89	1.04	1.08	0.85	0.88	0.97	1.01	0.85
US 21	Southside Rd to Catawba Church Rd	0.42	0.44	0.46	0.48	0.48	0.50	0.61	0.63	0.48	0.50	0.55	0.58	0.48
US 21	Catawba Church Rd to Springdale Rd	0.41	0.42	0.45	0.47	0.47	0.49	0.60	0.62	0.47	0.48	0.54	0.57	0.47
US 21	Springdale Rd to Benson Rd	0.43	0.44	0.46	0.49	0.44	0.46	0.50	0.52	0.44	0.46	0.49	0.51	0.44
US 21	Benson Rd to Neely Store Rd	0.44	0.45	0.48	0.50	0.45	0.47	0.51	0.54	0.45	0.47	0.50	0.52	0.45
Firetower Rd	Main St to Porter Rd	1.16	1.20	1.26	1.38	1.28	1.58	1.73	2.15	1.21	1.42	1.58	1.78	1.28
Firetower Rd	Porter Rd to Marine Dr	0.69	0.72	0.75	0.79	0.77	0.86	0.92	1.02	0.73	0.80	0.88	0.92	0.80
Firetower Rd	Marine Dr to Feemster Ln	0.69	0.71	0.75	0.79	0.77	0.85	0.92	1.02	0.73	0.80	0.88	0.92	0.80
Firetower Rd	Feemster Ln to Springdale Rd	0.79	0.85	0.89	0.94	0.89	1.03	1.14	1.28	0.83	0.96	1.06	1.14	0.92
Firetower Rd	Springdale Rd to Edenville Rd (SC 624)	0.46	0.50	0.52	0.55	0.49	0.60	0.65	0.76	0.48	0.57	0.63	0.67	0.50
Firetower Rd	Edenville Rd (SC 624) to Neelys Creek Rd	0.22	0.24	0.25	0.26	0.24	0.32	0.34	0.42	0.23	0.29	0.33	0.35	0.25
Porter Rd	Firetower Rd to Black St	0.35	0.36	0.38	0.41	0.43	0.68	0.77	1.24	0.39	0.54	0.60	0.73	0.45
Porter Rd	Black St to Flint St Ext	0.35	0.36	0.38	0.41	0.43	0.68	0.77	1.24	0.39	0.54	0.60	0.73	0.45
Porter Rd	Flint St Ext to Hemlock Ave	0.39	0.40	0.42	0.46	0.48	0.75	0.86	1.35	0.43	0.60	0.67	0.82	0.50
Porter Rd	Hemlock Ave to Coleman Dove Pl	0.38	0.39	0.41	0.45	0.47	0.74	0.85	1.34	0.43	0.59	0.66	0.81	0.49
Porter Rd	Coleman Dove Pl to L-77 SB Ramps	0.42	0.44	0.46	0.48	0.51	0.79	0.90	1.34	0.47	0.64	0.71	0.82	0.54
Porter Rd	L-77 SB Ramps to L-77 NB Ramps	0.23	0.23	0.25	0.27	0.23	0.41	0.49	0.80	0.23	0.32	0.38	0.46	0.23
Porter Rd	L-77 NB Ramps to Oak Pond Rd	0.28	0.29	0.31	0.33	0.29	0.47	0.55	0.86	0.28	0.38	0.44	0.53	0.29
Porter Rd	Oak Pond Rd to Long Meadow Rd	0.20	0.21	0.22	0.24	0.21	0.24	0.33	0.49	0.21	0.22	0.27	0.33	0.22
Porter Rd	Long Meadow Rd to Barringer Rd	0.16	0.16	0.17	0.18	0.17	0.18	0.27	0.33	0.16	0.17	0.21	0.23	0.17
Porter Rd	Barringer Rd to Neelys Creek Rd	0.12	0.12	0.13	0.13	0.13	0.14	0.15	0.20	0.12	0.13	0.14	0.15	0.13
SC 901 (Mt Holly Rd)	Albright Rd to Belle Meade Rd	0.28	0.29	0.30	0.31	0.28	0.45	0.50	0.60	0.28	0.44	0.47	0.50	0.28
SC 901 (Mt Holly Rd)	Belle Meade Rd to Oakdale Rd	0.23	0.23	0.25	0.26	0.23	0.36	0.40	0.47	0.23	0.35	0.38	0.39	0.23
SC 901 (Mt Holly Rd)	Oakdale Rd to Long Meadow Rd	0.42	0.43	0.45	0.48	0.42	0.56	0.61	0.69	0.42	0.55	0.58	0.61	0.42
SC 901 (Mt Holly Rd)	Long Meadow Rd to Frostproof Trl	0.44	0.45	0.47	0.50	0.44	0.57	0.61	0.63	0.44	0.56	0.60	0.63	0.44
SC 901 (Mt Holly Rd)	Frostproof Trl to L-77 SB Ramps	0.57	0.59	0.62	0.65	0.57	0.77	0.85	0.91	0.57	0.75	0.81	0.84	0.57
SC 901 (Mt Holly Rd)	L-77 SB Ramps to L-77 NB Ramps	1.47	1.52	1.59	1.67	1.47	2.17	2.44	2.65	1.47	2.09	2.38	2.58	1.47
SC 901 (Mt Holly Rd)	L-77 NB Ramps to Barringer Rd	0.67	0.69	0.72	0.76	0.67	1.72	1.89	2.02	0.67	1.68	1.76	1.81	0.67
SC 901 (Mt Holly Rd)	Barringer Rd to Neelys Creek Rd/Collins Rd	0.38	0.39	0.41	0.43	0.38	0.87	0.95	1.08	0.38	0.84	0.90	0.92	0.38
SC 901 (Mt Holly Rd)	Neelys Creek Rd/Collins Rd to Hall Spencer Rd	0.23	0.24	0.25	0.26	0.23	0.45	0.52	0.59	0.23	0.42	0.47	0.48	0.23
SC 901 (Mt Holly Rd)	Hall Spencer Rd to Puddins Pl	0.23	0.24	0.25	0.26	0.23	0.45	0.52	0.59	0.23	0.42	0.47	0.48	0.23
SC 901 (Mt Holly Rd)	Puddins Pl to Garlen Rd	0.23	0.24	0.25	0.27	0.23	0.45	0.53	0.59	0.23	0.42	0.47	0.49	0.23
Springdale Rd	Hopewell Rd to Neptune Dr	0.34	0.35	0.37	0.39	0.46	0.47	0.74	0.75	0.46	0.47	0.56	0.58	0.46
Springdale Rd	Neptune Dr to US 21	0.44	0.45	0.48	0.50	0.56	0.57	0.84	0.87	0.56	0.57	0.67	0.69	0.56
Springdale Rd	US 21 to Catawba Church Rd	0.12	0.13	0.13	0.14	0.12	0.13	0.14	0.14	0.12	0.13	0.13	0.14	0.12
Springdale Rd	Catawba Church Rd to SC 6	0.11	0.11	0.11	0.12	0.11	0.11	0.11	0.12	0.11	0.11	0.11	0.12	0.11
Springdale Rd	SC 6 to Independence Elementary School	0.56	0.57	0.60	0.63	0.56	0.57	0.62	0.65	0.56	0.57	0.62	0.65	0.56
Springdale Rd	Independence Elementary School to Firetower Rd	0.55	0.57	0.60	0.63	0.55	0.57	0.62	0.65	0.55	0.57	0.62	0.65	0.55
SC 6	US 21 to Springdale Rd	0.71	0.73	0.77	0.81	0.71	0.73	0.80	0.84	0.71	0.73	0.80	0.84	0.71
SC 6	Springdale Rd to Catawba Church Rd	0.21	0.21	0.22	0.23	0.21	0.21	0.22	0.23	0.21	0.21	0.22	0.23	0.21
SC 6	Catawba Church Rd to Schoolside Dr	0.15	0.16	0.17	0.18	0.15	0.16	0.17	0.18	0.15	0.16	0.17	0.18	0.15
SC 6	Schoolside Dr to Neelys Creek Rd/Neely Store Rd	0.25	0.26	0.27	0.28	0.25	0.26	0.27	0.28	0.25	0.26	0.27	0.28	0.25
Neely Store Rd	Shady Oak Ln to Walker Rd	0.18	0.18	0.19	0.20	0.19	0.29	0.31	0.39	0.19	0.29	0.31	0.39	0.19
Neely Store Rd	Walker Rd to Bridges Dr	0.19	0.20	0.21	0.22	0.21	0.31	0.33	0.40	0.21	0.31	0.33	0.40	0.21
Neely Store Rd	Bridges Dr to US 21	0.29												

2025 B PM v/c - HE	2030 B PM v/c - HE	2035 B PM v/c - HE	2022 NB Imp PM v/c	2025 NB Imp PM v/c	2030 NB Imp PM v/c	2035 NB Imp PM v/c	2022 B Imp PM v/c - MP	2025 B Imp PM v/c - MP	2030 B Imp PM v/c - MP	2035 B Imp PM v/c - MP	2022 B Imp PM v/c - LE	2025 B Imp PM v/c - LE	2030 B Imp PM v/c - LE	2035 B Imp PM v/c - LE	2022 B Imp PM v/c - HE	2025 B Imp PM v/c - HE	2030 B Imp PM v/c - HE	2035 B Imp PM v/c - HE	Improvements
0.54	0.62	0.69	0.41	0.42	0.44	0.47	0.43	0.54	0.60	0.68	0.43	0.51	0.56	0.60	0.43	0.54	0.62	0.69	
0.91	1.06	1.21	0.45	0.46	0.49	0.51	0.47	0.61	0.68	0.79	0.47	0.57	0.64	0.68	0.47	0.61	0.71	0.81	4 to 6 lanes
0.86	1.00	1.05	0.42	0.43	0.45	0.47	0.44	0.57	0.63	0.67	0.44	0.54	0.60	0.63	0.44	0.57	0.66	0.70	4 to 6 lanes
0.79	0.92	1.01	0.41	0.43	0.45	0.47	0.44	0.53	0.66	0.66	0.43	0.50	0.55	0.58	0.44	0.52	0.61	0.68	4 to 6 lanes
0.43	0.49	0.52	0.34	0.35	0.37	0.39	0.34	0.41	0.44	0.47	0.34	0.38	0.41	0.44	0.34	0.43	0.49	0.52	
0.59	0.64	0.68	0.56	0.57	0.60	0.63	0.56	0.59	0.62	0.66	0.56	0.58	0.62	0.65	0.56	0.59	0.64	0.68	
0.46	0.50	0.53	0.43	0.45	0.47	0.49	0.43	0.46	0.49	0.52	0.43	0.45	0.48	0.51	0.43	0.46	0.50	0.53	
0.47	0.51	0.54	0.44	0.46	0.48	0.50	0.44	0.47	0.50	0.53	0.44	0.46	0.49	0.52	0.44	0.47	0.51	0.54	
0.48	0.51	0.54	0.45	0.46	0.48	0.51	0.45	0.48	0.50	0.53	0.45	0.47	0.50	0.52	0.45	0.48	0.51	0.54	
0.48	0.52	0.55	0.45	0.47	0.49	0.51	0.45	0.48	0.51	0.54	0.45	0.47	0.50	0.53	0.45	0.48	0.52	0.55	
0.49	0.53	0.56	0.46	0.47	0.50	0.52	0.46	0.49	0.52	0.55	0.46	0.48	0.51	0.54	0.46	0.49	0.53	0.56	
0.45	0.48	0.53	0.42	0.43	0.45	0.49	0.42	0.44	0.47	0.52	0.42	0.44	0.46	0.48	0.41	0.42	0.45	0.48	0.53
0.43	0.47	0.51	0.40	0.42	0.44	0.48	0.41	0.43	0.46	0.50	0.41	0.42	0.45	0.49	0.41	0.43	0.47	0.51	
0.59	0.64	0.70	0.55	0.57	0.60	0.66	0.55	0.59	0.62	0.69	0.55	0.58	0.61	0.67	0.55	0.59	0.64	0.70	
1.01	1.08	1.19	0.94	0.96	1.01	1.11	0.94	1.00	1.06	1.17	0.94	0.98	1.04	1.14	0.94	1.01	1.08	1.19	
1.30	1.41	1.49	1.20	1.24	1.30	1.37	1.20	1.29	1.36	1.45	1.20	1.27	1.34	1.42	1.20	1.30	1.41	1.49	
1.72	1.85	2.03	1.61	1.66	1.74	1.91	1.61	1.71	1.81	1.99	1.61	1.69	1.78	1.96	1.61	1.72	1.85	2.03	
0.68	0.78	0.81	0.62	0.64	0.67	0.70	0.64	0.69	0.77	0.81	0.64	0.68	0.77	0.80	0.64	0.68	0.78	0.81	
0.53	0.60	0.63	0.48	0.49	0.52	0.55	0.50	0.53	0.60	0.62	0.50	0.53	0.59	0.62	0.50	0.53	0.60	0.63	
0.48	0.58	0.61	0.39	0.42	0.44	0.46	0.42	0.49	0.57	0.62	0.42	0.47	0.57	0.59	0.42	0.48	0.58	0.61	
0.31	0.40	0.41	0.24	0.26	0.28	0.29	0.27	0.32	0.39	0.41	0.27	0.31	0.39	0.40	0.27	0.31	0.40	0.41	
0.42	0.49	0.51	0.36	0.39	0.41	0.43	0.38	0.43	0.48	0.50	0.38	0.42	0.48	0.50	0.38	0.42	0.49	0.51	
0.42	0.48	0.50	0.36	0.39	0.40	0.43	0.38	0.42	0.48	0.50	0.38	0.42	0.48	0.50	0.38	0.42	0.48	0.50	
0.49	0.61	0.63	0.36	0.39	0.40	0.43	0.41	0.52	0.62	0.64	0.40	0.47	0.60	0.62	0.41	0.49	0.61	0.63	
0.75	0.88	0.92	0.59	0.63	0.67	0.70	0.64	0.78	0.89	0.92	0.64	0.73	0.88	0.91	0.65	0.75	0.88	0.92	
1.02	1.20	1.25	0.54	0.58	0.61	0.64	0.59	0.71	0.81	0.84	0.58	0.66	0.80	0.83	0.59	0.68	0.80	0.83	5 to 7-lanes
1.03	1.20	1.25	0.55	0.59	0.62	0.65	0.59	0.71	0.81	0.84	0.59	0.67	0.80	0.83	0.60	0.68	0.80	0.83	5 to 7-lanes
1.01	1.18	1.23	0.54	0.58	0.61	0.64	0.58	0.70	0.80	0.83	0.58	0.66	0.79	0.82	0.59	0.67	0.79	0.82	5 to 7-lanes
1.46	1.90	1.97	0.80	0.82	0.87	0.91	0.90	0.94	1.11	1.15	0.90	0.93	1.03	1.08	0.90	0.93	1.20	1.25	5 to 7-lanes, right turn lanes
1.67	2.11	2.19	0.93	0.95	1.00	1.05	1.03	1.10	1.24	1.29	1.03	1.06	1.17	1.22	1.03	1.06	1.34	1.39	5 to 7-lanes, right turn lanes
0.88	1.14	1.18	0.52	0.53	0.56	0.59	0.57	0.59	0.69	0.72	0.57	0.59	0.65	0.67	0.57	0.59	0.76	0.79	5 to 7-lanes
0.50	0.68	0.71	0.42	0.44	0.46	0.48	0.48	0.50	0.61	0.63	0.48	0.50	0.55	0.58	0.48	0.50	0.68	0.71	
0.48	0.67	0.69	0.41	0.42	0.45	0.47	0.47	0.49	0.60	0.62	0.47	0.48	0.54	0.57	0.47	0.48	0.67	0.69	
0.46	0.50	0.53	0.43	0.44	0.46	0.49	0.44	0.46	0.50	0.52	0.44	0.46	0.49	0.51	0.44	0.46	0.50	0.53	
0.47	0.51	0.54	0.44	0.45	0.48	0.50	0.45	0.47	0.51	0.54	0.45	0.47	0.50	0.52	0.45	0.47	0.51	0.54	
1.64	1.91	2.28	0.50	0.52	0.55	0.60	0.54	0.68	0.75	0.93	0.52	0.61	0.68	0.77	0.55	0.71	0.83	0.99	2 to 5 lanes, right turn lanes
0.88	0.95	1.04	0.35	0.36	0.38	0.40	0.39	0.43	0.46	0.51	0.37	0.40	0.44	0.46	0.40	0.44	0.48	0.52	2 to 4 lanes
0.88	0.95	1.04	0.35	0.36	0.38	0.39	0.43	0.46	0.51	0.56	0.40	0.44	0.46	0.40	0.44	0.44	0.47	0.52	2 to 4 lanes
1.07	1.16	1.27	0.39	0.42	0.45	0.47	0.44	0.52	0.56	0.62	0.42	0.48	0.53	0.56	0.46	0.54	0.58	0.64	2 to 4 lanes
0.61	0.67	0.77	0.46	0.50	0.52	0.55	0.49	0.60	0.65	0.76	0.48	0.57	0.63	0.67	0.50	0.61	0.67	0.77	
0.32	0.36	0.42	0.22	0.24	0.25	0.26	0.24	0.32	0.34	0.42	0.23	0.29	0.33	0.35	0.25	0.32	0.36	0.42	
0.72	0.90	1.26	0.17	0.18	0.19	0.21	0.21	0.34	0.39	0.61	0.20	0.27	0.30	0.37	0.23	0.36	0.45	0.63	2 to 4 lanes
0.72	0.90	1.26	0.17	0.18	0.19	0.21	0.21	0.34	0.39	0.61	0.20	0.27	0.30	0.37	0.23	0.36	0.45	0.63	2 to 4 lanes
0.80	1.00	1.40	0.19	0.20	0.21	0.23	0.24	0.38	0.43	0.67	0.22	0.30	0.34	0.41	0.25	0.40	0.50	0.70	2 to 4 lanes
0.80	0.99	1.39	0.19	0.20	0.21	0.23	0.23	0.37	0.42	0.67	0.21	0.30	0.33	0.40	0.25	0.40	0.50	0.70	2 to 4 lanes
0.84	1.04	1.39	0.21	0.22	0.23	0.24	0.26	0.39	0.45	0.67	0.24	0.32	0.36	0.41	0.27	0.42	0.52	0.69	2 to 4 lanes
0.44	0.60	0.88	0.23	0.23	0.25	0.27	0.23	0.41	0.49	0.80	0.23	0.32	0.38	0.46	0.23	0.44	0.60	0.88	
0.50	0.66	0.95	0.28	0.29	0.31	0.33	0.29	0.47	0.55	0.86	0.28	0.38	0.44	0.53	0.29	0.50	0.66	0.95	
0.24	0.30	0.44	0.20	0.21	0.22	0.24	0.21	0.24	0.33	0.49	0.21	0.22	0.27	0.33	0.22	0.24	0.30	0.44	
0.18	0.24	0.29	0.16	0.16	0.17	0.18	0.17	0.18	0.27	0.33	0.16	0.17	0.21	0.23	0.17	0.18	0.24	0.29	
0.14	0.15	0.20	0.12	0.12	0.13	0.13	0.13	0.14	0.15	0.20	0.12	0.13	0.14	0.15	0.13	0.14	0.15	0.20	
0.45	0.50	0.59	0.28	0.29	0.30	0.31	0.28	0.45	0.50	0.60	0.28	0.44	0.47	0.50	0.28	0.45	0.50	0.59	
0.36	0.40	0.46	0.23	0.23	0.25	0.26	0.23	0.36	0.40	0.47	0.23	0.35	0.38	0.39	0.23	0.36	0.40	0.46	
0.56	0.60	0.68	0.42	0.43	0.45	0.48	0.42	0.56	0.61	0.69	0.42	0.55	0.58	0.61	0.42	0.56	0.60	0.68	
0.57	0.62	0.64	0.44	0.45	0.47	0.50	0.44	0.57	0.61	0.63	0.44	0.56	0.60	0.63	0.44	0.57	0.62	0.64	
0.77	0.87	0.93	0.57	0.59	0.62	0.65	0.57	0.77	0.85	0.91	0.57	0.75	0.81	0.84	0.57	0.77	0.87	0.93	
2.19	2.51	2.69	0.67	0.69	0.72	0.76	0.67	0.99	1.14	1.20	0.67	0.95	1.04	1.08	0.67	1.00	1.14	1.22	2 to 5 lanes
1.73	1.84	1.97	0.30	0.31	0.33	0.35	0.30	0.78	0.86	0.92	0.30	0.76	0.80	0.82	0.30	0.79	0.84	0.90	2 to 5 lanes
0.88	0.96	1.02	0.19	0.19	0.20	0.22	0.19	0.44	0.48	0.51	0.19	0.42	0.45	0.46	0.19	0.44	0.48	0.51	2 to 4 lanes
0.45	0.53	0.59	0.23	0.24	0.25	0.26	0.23	0.45	0.52	0.59	0.23	0.42	0.47	0.48	0.23	0.45	0.53	0.59	
0.45	0.53	0.59	0.23	0.24	0.25	0.26	0.23	0.45	0.52	0.59	0.23	0.42	0.47	0.48	0.23	0.45	0.53	0.59	
0.46	0.53	0.59	0.23	0.24	0.25	0.27	0.23	0.45	0.53	0.59	0.23	0.42	0.47	0.49	0.23	0.46	0.53	0.59	
0.47	0.54	0.66	0.34	0.35	0.37	0.39	0.46	0.47	0.74	0.75	0.46	0.47	0.56	0.58	0.46	0.47	0.84	0.86	
0.57	0.95	0.97	0.44	0.45	0.48	0.50	0.56	0.57	0.84	0.87	0.56	0.57	0.67	0.69	0.56	0.57	0.95	0.97	
0.13	0.13	0.14	0.12	0.13	0.13	0.14	0.12	0.13	0.13	0.14	0.12	0.13	0.13	0.14	0.12	0.13	0.13	0.14	
0.11	0.11	0.12	0.11	0.11	0.11	0.12	0.11	0.11	0.11	0.12	0.11	0.11	0.11	0.12	0.11	0.11	0.11</		

Step 4

ANALYZE NEEDS & PROJECT COSTS [PHASE 0]

Capacity issues at the intersection of Fire Tower Road and Main Street may need to be addressed. Site #4 and #2 are required to construct collector roads through their respective sites. Note: The South Anderson Road and I-77 interchange is a planned project as identified, [Appendix Map B.1](#), thus those project costs are not included here. Stormwater and pedestrian/bike related infrastructure costs are included with the roadway improvements.

ROADWAY, PEDESTRIAN & STORMWATER IMPROVEMENTS

.85	Miles of street widening	\$9,731,412
1.01	Miles of collector roads	\$7,287,998
	Subtotal	\$17,019,410

MAP A.11 ROAD RELATED IMPROVEMENTS



Extension of distribution lines are currently planned for Porter, Fire Tower, Mt Holly, and Lazy Hawk roads in response to development in the planning stages and in anticipation of several developments planned early in Phase I.

Note: There are no water or wastewater improvements needed for this phase.

ELECTRIC IMPROVEMENTS

4.15	Miles of distribution lines	\$2,690,783
4.15	Miles of municipal fiber-optic cable	\$446,871
	Subtotal	\$3,137,654

▼ MAP A.12 ELECTRIC FACILITIES



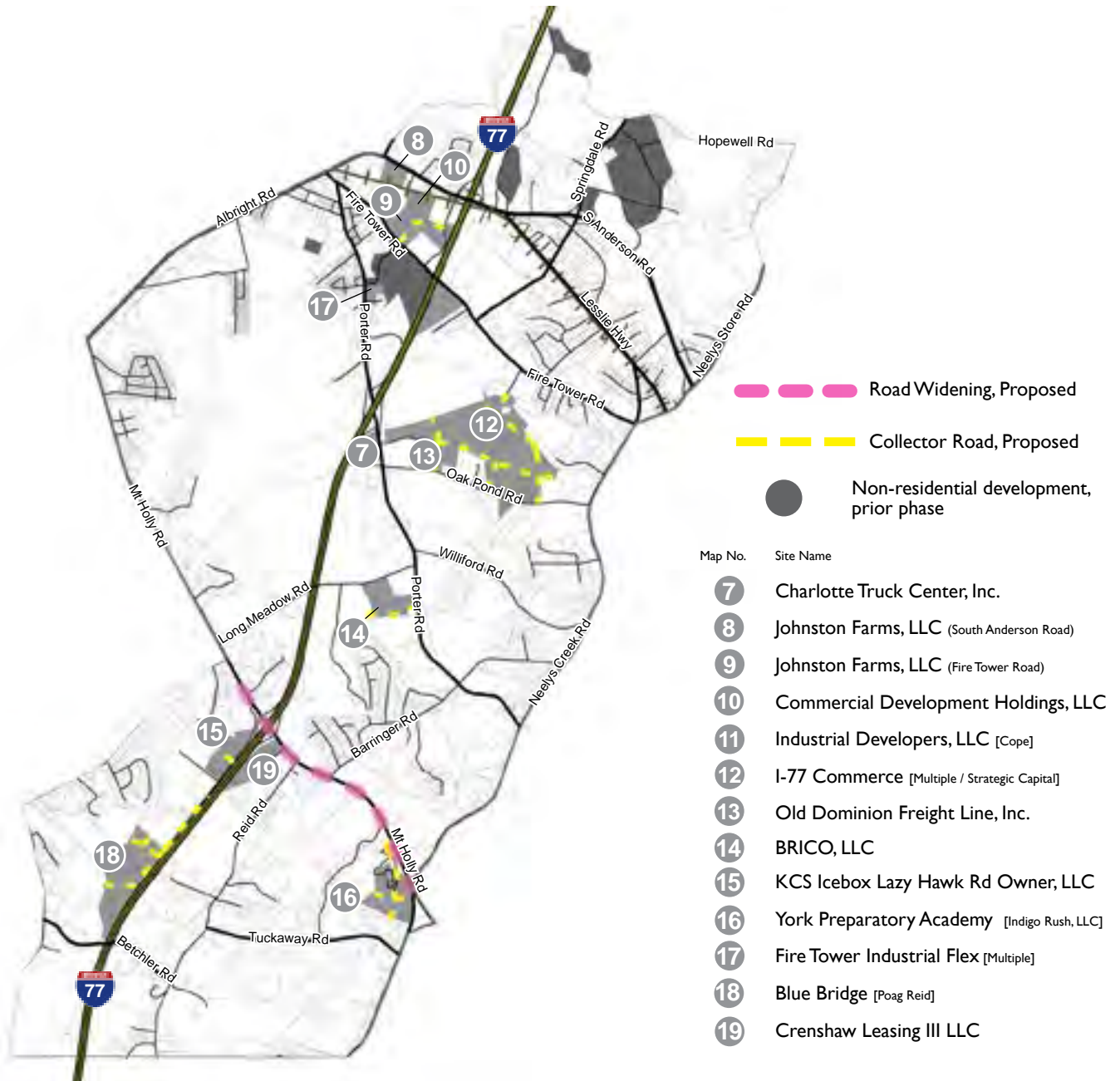
Step 4

ANALYZE NEEDS & PROJECT COSTS [PHASE I]

Road widening may be needed at Mt. Holly Road to accommodate capacity in proximity to the interchange. Funding sources for road widening may include RFATS Guideshare, Pennies For Progress, and/or developer funding depending on Traffic Impact Analysis results. Several collector roads will be required of developers to support Phase I development including sites #9, 10, 12, 13, 14, 16, and 18.

ROADWAY, PEDESTRIAN & STORMWATER IMPROVEMENTS		
2.01	Miles of street widening	\$22,170,538
6.08	Miles of collector roads	\$49,350,379
	Subtotal	\$71,520,917

MAP A.13 ROADWAY RELATED IMPROVEMENTS



A transmission line may need to be extended from existing transmission lines located in close proximity to the Del 2 Substation. Additionally, distribution lines may need to be extended in several areas in Phase I as well as several new substations depending on specific types of prospective industrial development, Map A.14.

ELECTRIC IMPROVEMENTS

3	Substations	\$19,741,363
1.89	Miles of transmission lines	\$6,250,419
8.6	Miles of distribution lines	\$6,409,925
8.6	Miles of municipal fiber-optic cable	\$1,054,380
	Subtotal	\$33,456,087

▼ MAP A.14 ELECTRIC FACILITIES



Step 4

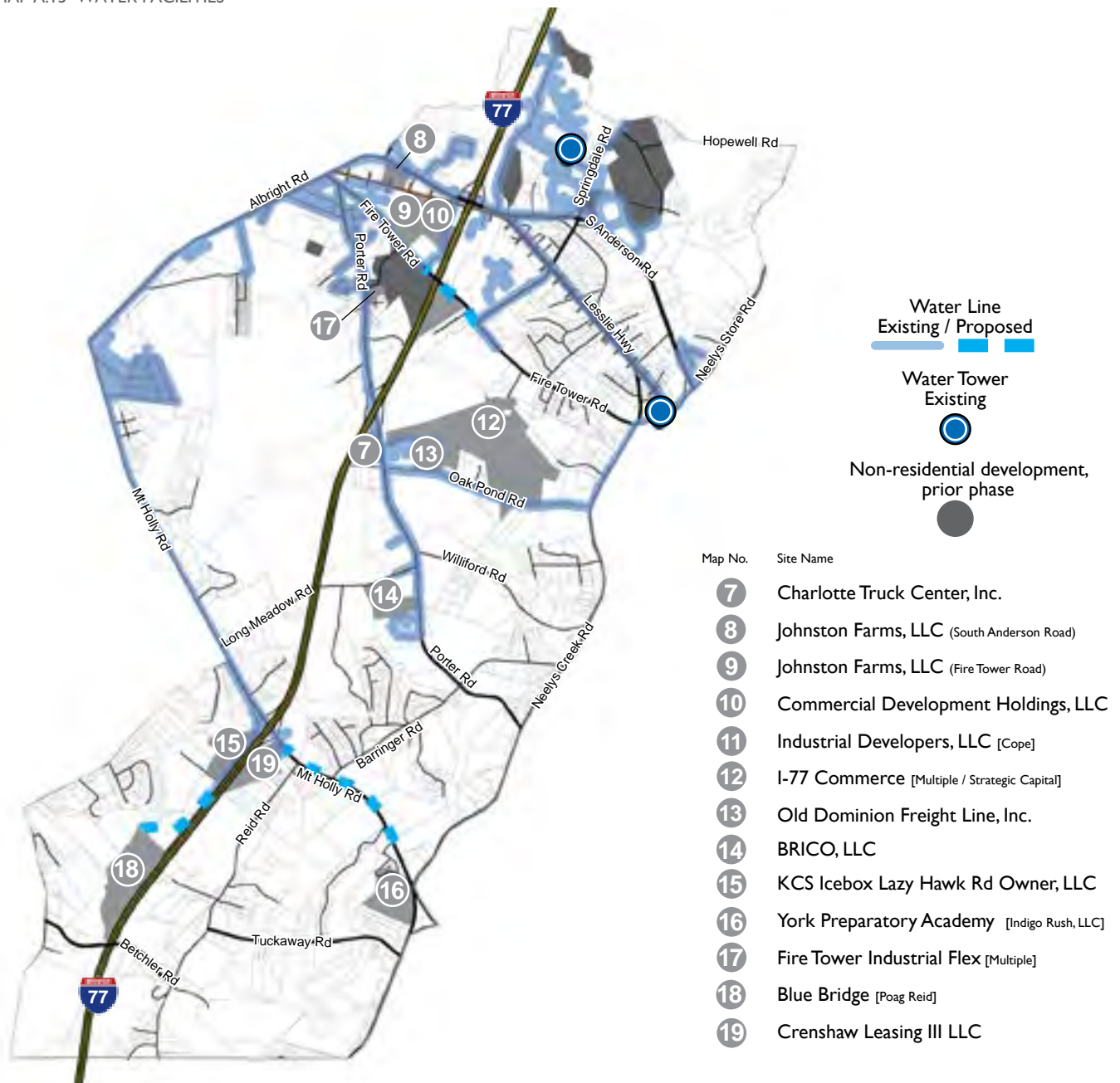
ANALYZE NEEDS & PROJECT COSTS [PHASE I]

Water lines may need to be extended in several places across the study area in order to support anticipated Phase I development. Note: Should additional development be catalyzed in the area around York Preparatory Academy prior to 2035, a water tower will be needed to support water demand in the southern portion of the study area. Otherwise an elevated water tank is planned for beyond the 2035 horizon.

WATER IMPROVEMENTS

2.31	Extensions and upgrades of water lines	\$3,786,900
	Subtotal	\$3,786,900

▼ MAP A.15 WATER FACILITIES

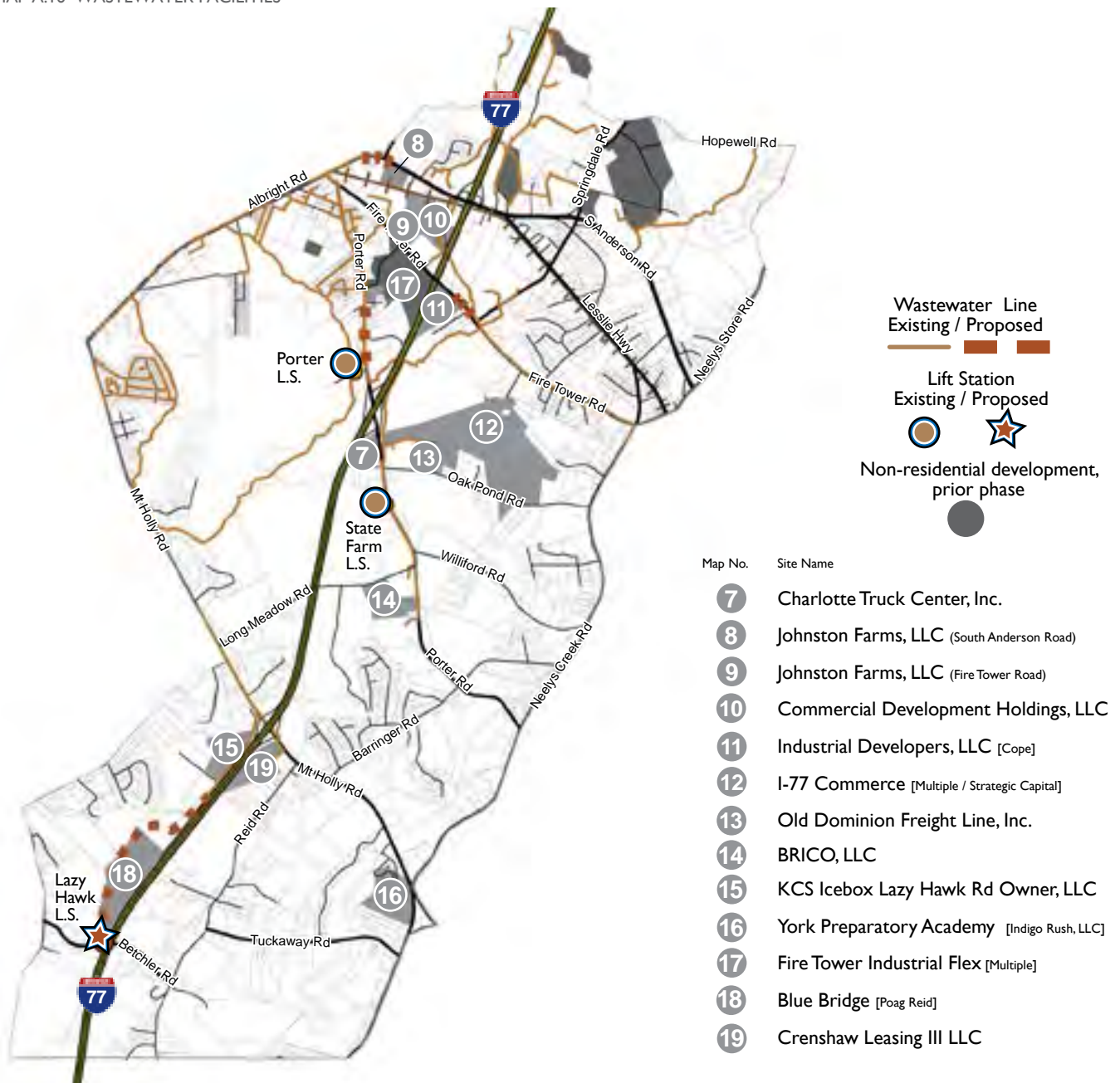


The Lazy Hawk lift station may need to be moved south toward Betchler Road and the Porter lift station may need an upgrade. Gravity sewer lines may need to be extended for several sites including sites #8, 11, and 18. An upgrade to sewer capacity may be needed along Porter Road.

WASTEWATER IMPROVEMENTS

I	Lift station, new Lazy Hawk	\$15,185,700
I	Lift station, upgrade Porter	\$1,237,400
2.31	Extensions and upgrades of gravity sewer lines	\$6,509,600
	Subtotal	\$22,932,700

▼ MAP A.16 WASTEWATER FACILITIES



Step 4

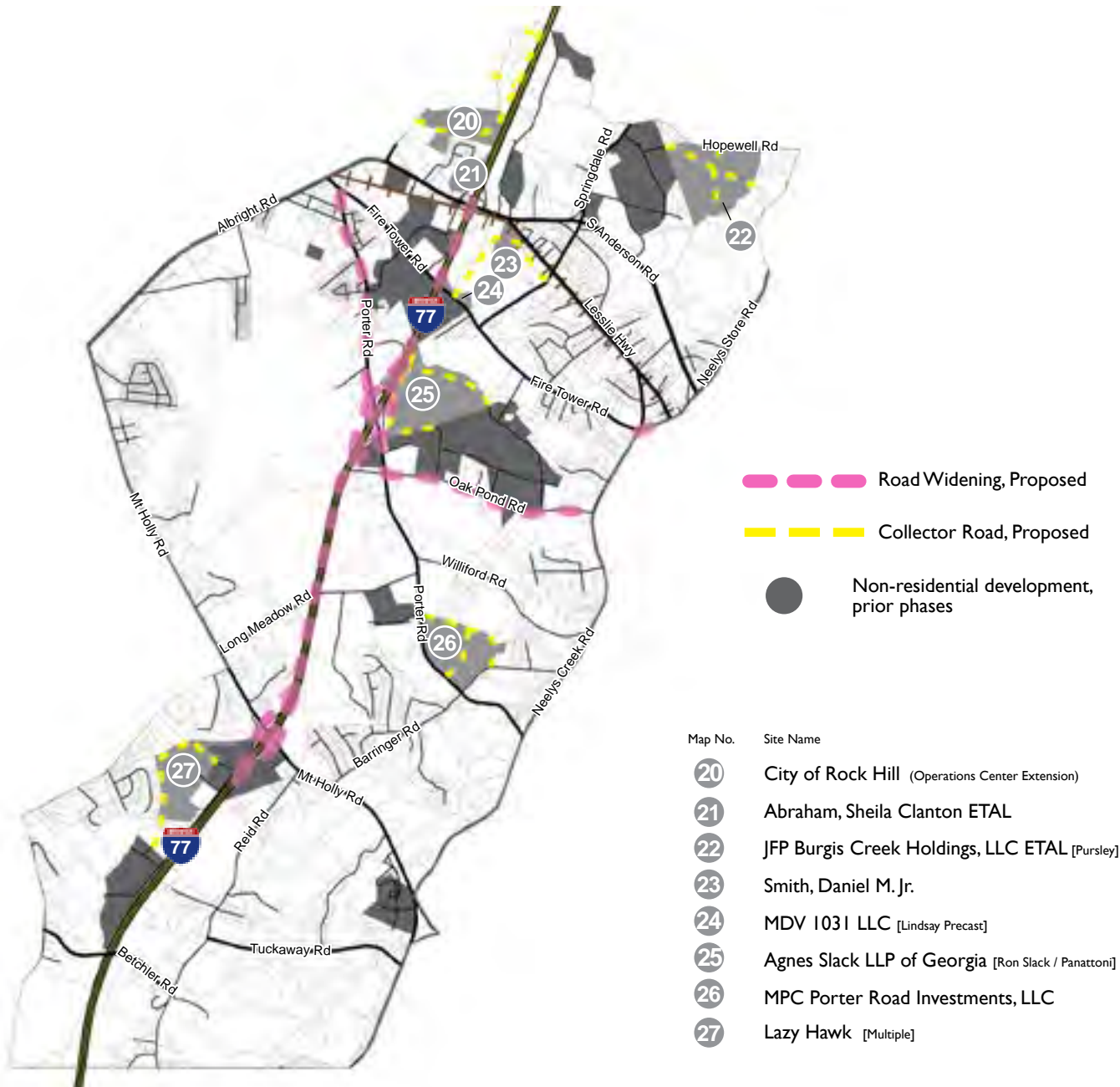
ANALYZE NEEDS & PROJECT COSTS [PHASE 2]

Road widening may be needed along I-77, Porter, Oak Pond, South Anderson, and Mt. Holly roads to accommodate capacity of Phase 2 development. Interstate roadway projects are typically funded through state and federal programs. Whereas other road widening projects could seek funding through RFATS Guideshare, Pennies For Progress, and/or developer funding depending on Traffic Impact Analysis results. Several collector roads will be required of developers at Phase 2 sites including sites #20, 22, 23, 24, 25, 26, and 27.

ROADWAY, PEDESTRIAN & STORMWATER IMPROVEMENTS

3.97	Miles of street widening	\$50,897,929
4.64	Miles of interstate widening	\$114,302,887
8.1	Miles of collector roads	\$79,990,540
	Subtotal	\$245,191,356

▼ MAP A.17 ROAD & STORMWATER IMPROVEMENTS

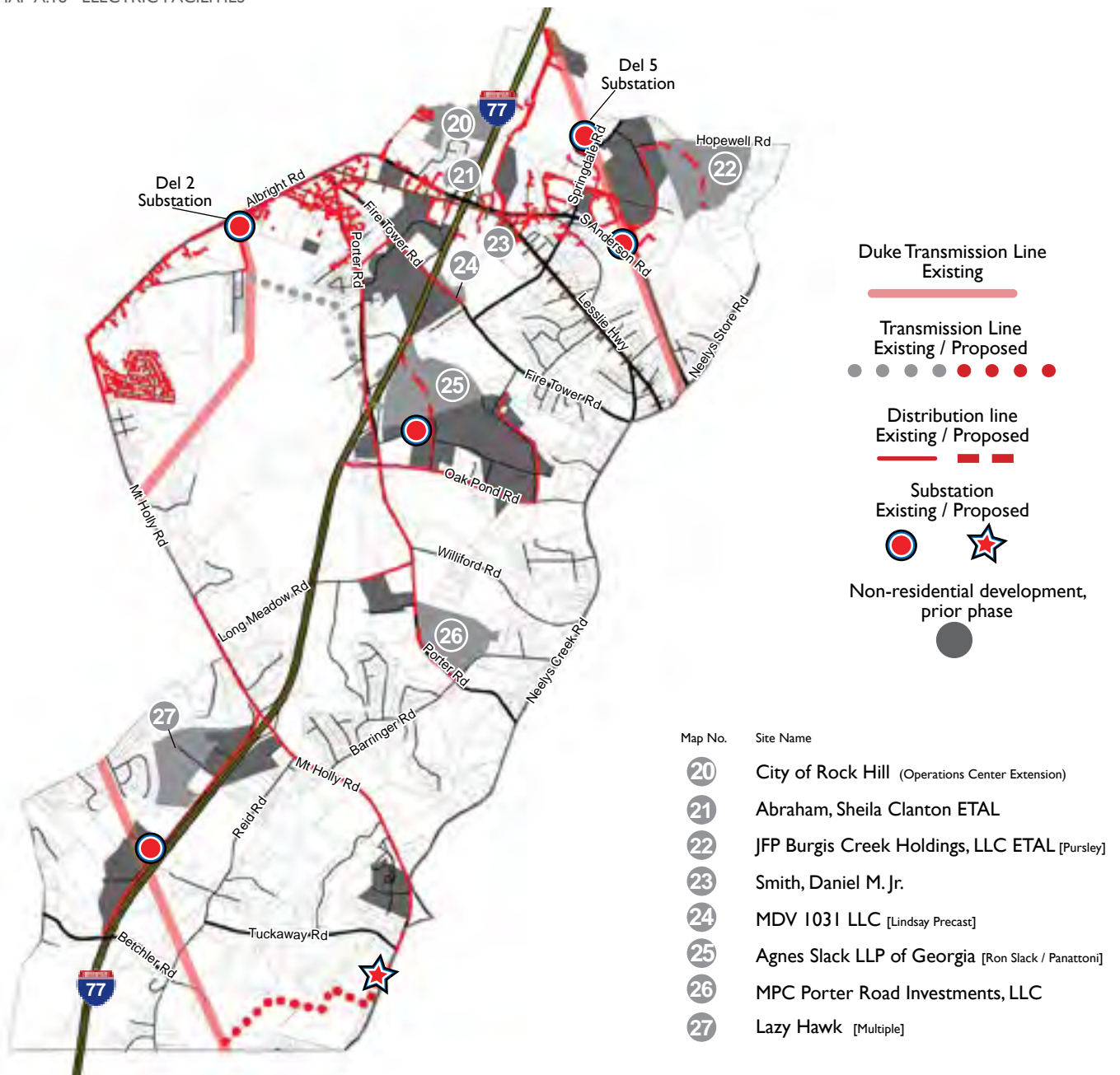


Distribution lines may need to be extended in several areas during Phase 2 including at sites #22, 25, and 26, Map A. 18.

ELECTRIC IMPROVEMENTS

1	Substation	\$8,006,129
1.53	Miles of transmission lines	\$6,156,097
2.46	Miles of distribution lines	\$2,043,146
2.46	Miles of municipal fiber-optic cable	\$366,945
	Subtotal	\$16,572,317

▼ MAP A.18 ELECTRIC FACILITIES



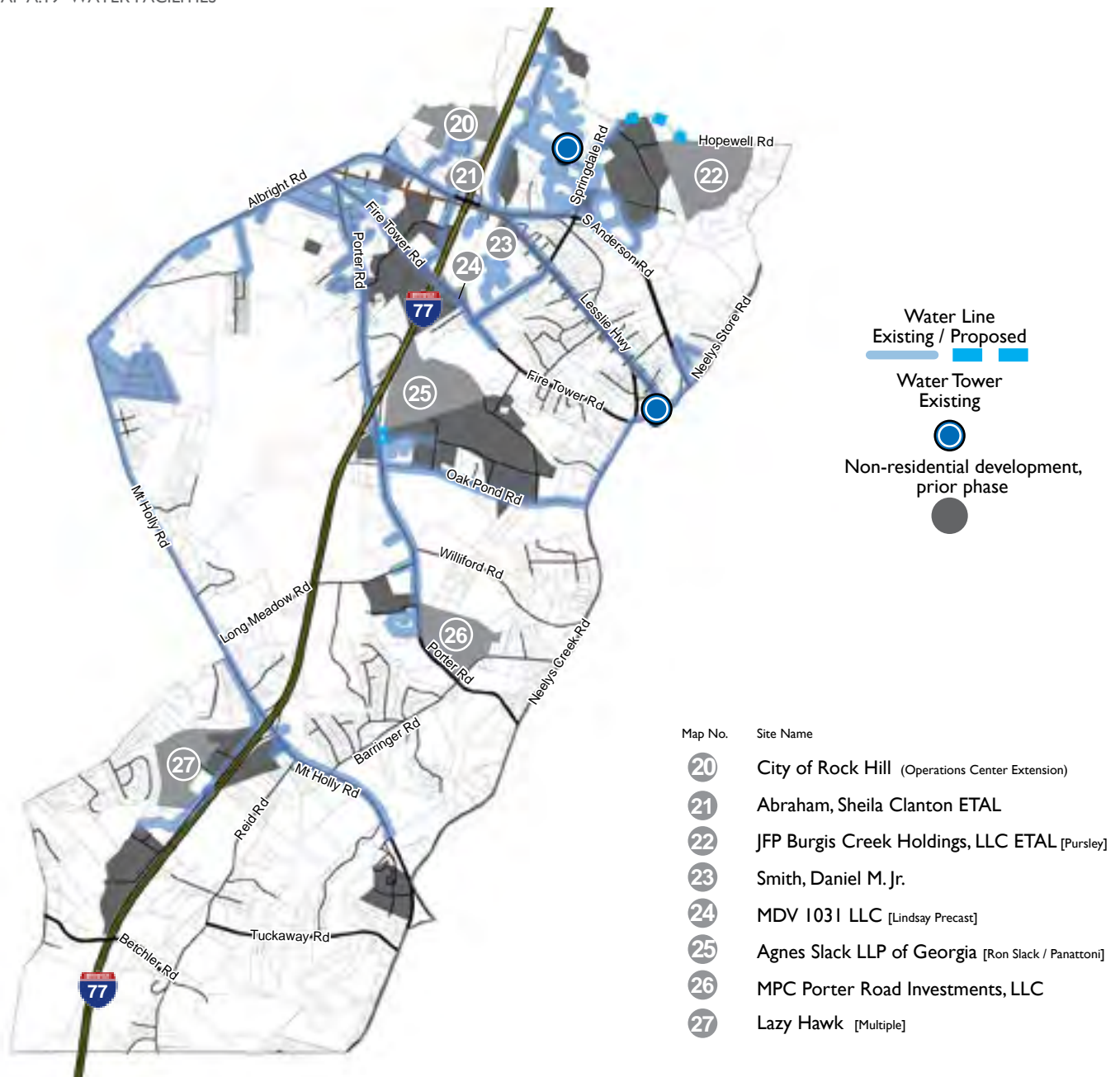
Step 4

ANALYZE NEEDS & PROJECT COSTS [PHASE 2]

The water demand associated with continued development in Phase 2 will likely mean several extensions and upgrades to water lines including site #22 and 25.

WATER IMPROVEMENTS		
.61	Extensions and upgrades of water lines	\$1,190,600
	Subtotal	\$1,190,600

MAP A.19 WATER FACILITIES

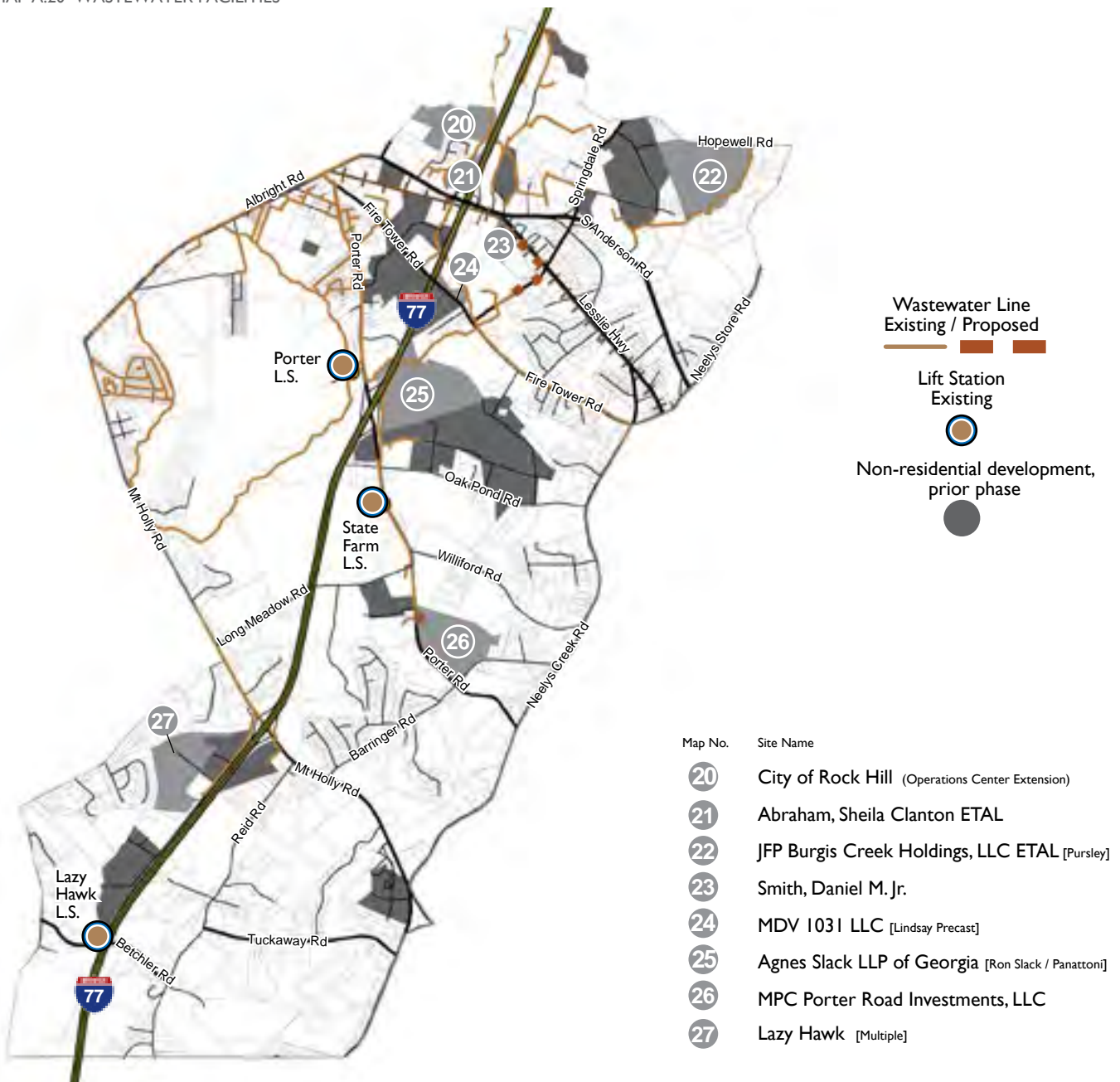


During phase 2, upgrades to the State Farm and Southland (outside the study area) lift stations will likely be needed. Gravity sewer lines may need to be extended and/or upgraded. Additionally, upgrades will likely be needed at the Manchester WWTP to accommodate increased demand on wastewater services.

WASTE WATER IMPROVEMENTS

2	Lift station, upgrade Southland & State Farm	\$2,258,300
1	Wastewater Treatment Plant, upgrades	\$342,142,300
.70	Extensions and upgrades of gravity sewer lines	\$2,330,700
	Subtotal	\$346,731,300

▼ MAP A.20 WASTEWATER FACILITIES



Step 4

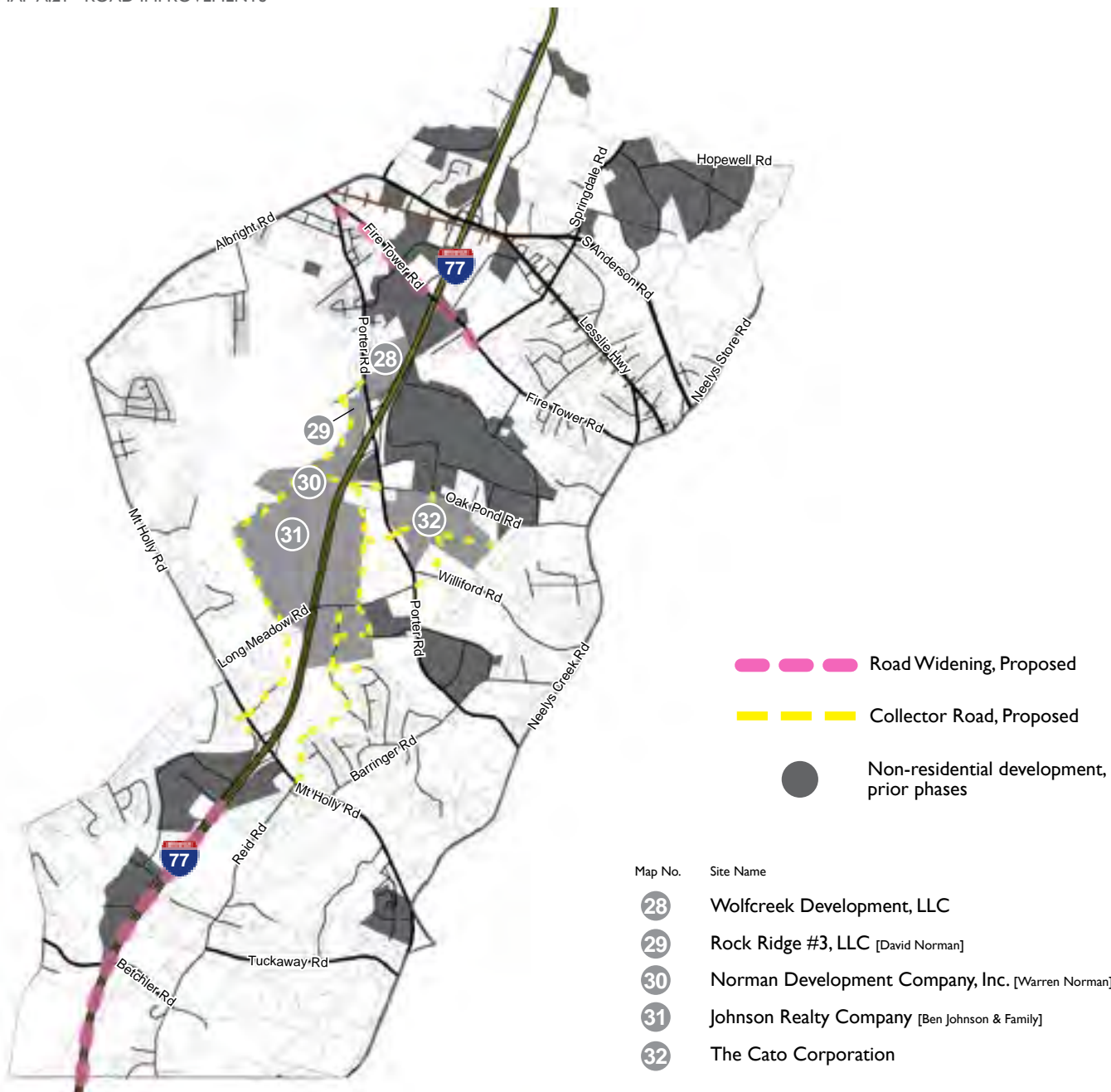
ANALYZE NEEDS & PROJECT COSTS [PHASE 3]

Road widening may be needed along I-77 and Fire Tower Road to accommodate capacity of Phase 3 development. The widening of the Interstate would typically be funded through state and federal programs. Whereas the Fire Tower Road widening project could seek funding through RFATS Guideshare, Pennies For Progress, and/or developer funding depending on Traffic Impact Analysis results. A significant number of collector roads will be needed at Phase 3 sites #29, 30, 31, and 32.

ROADWAY, PEDESTRIAN & STORMWATER IMPROVEMENTS

1.44	Miles of street widening	\$22,559,343
2.75	Miles of interstate widening	\$82,421,139
9.07	Miles of collector roads	\$108,975,179
	Subtotal	\$213,955,661

▼ MAP A.21 ROAD IMPROVEMENTS

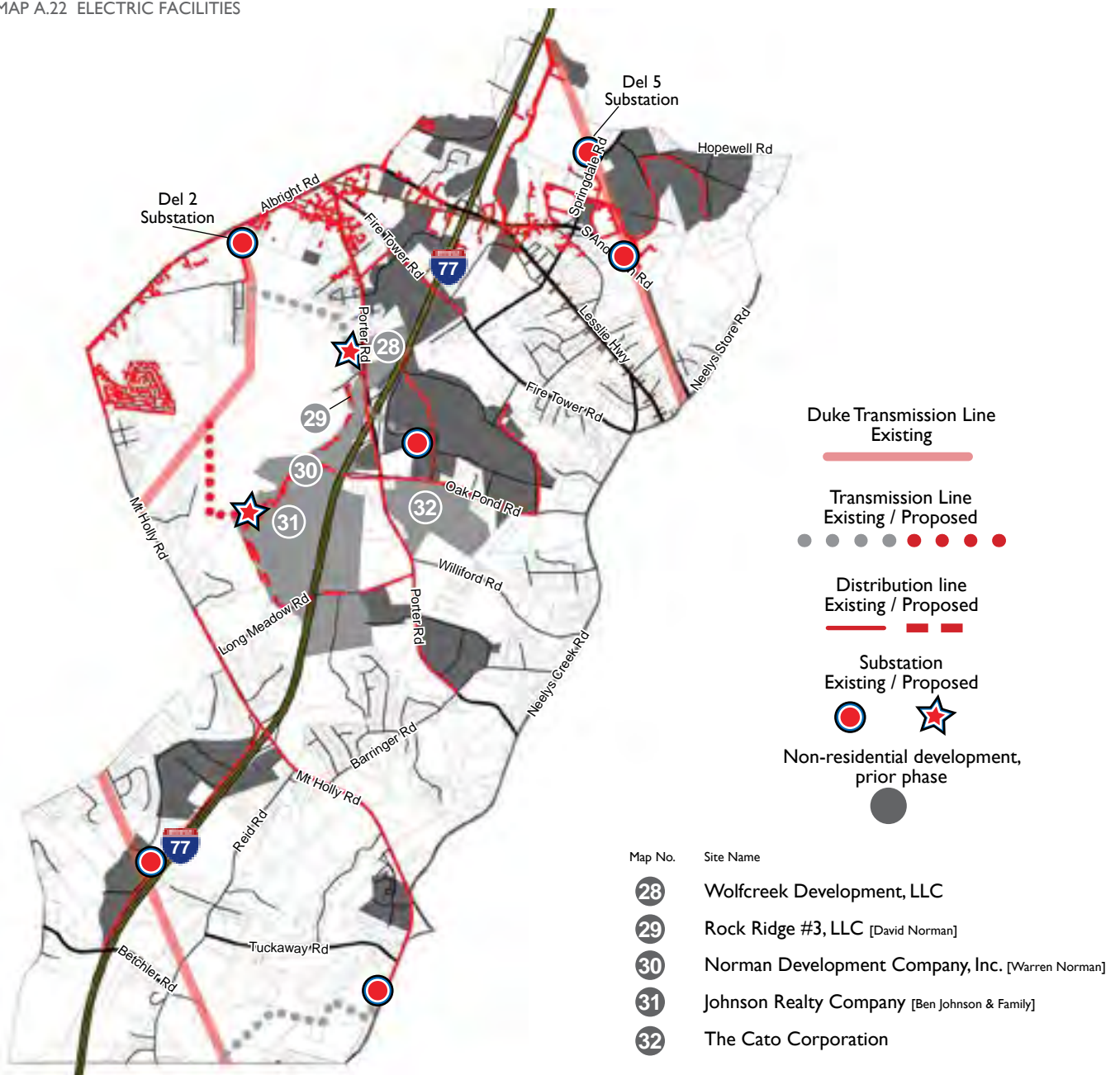


With the expectation of high electricity users at the Johnson and Norman properties, another transmission line may be required as well as potentially two more substations depending on the specific type of industrial development. Distribution lines would then need to be extended to these properties, Map A.22.

ELECTRIC IMPROVEMENTS

2	Substations	\$19,481,360
.95	Miles of transmission lines	\$4,650,550
4.08	Miles of distribution lines	\$4,078,154
4.08	Miles of municipal fiber-optic cable	\$740,444
	Subtotal	\$28,950,508

▼ MAP A.22 ELECTRIC FACILITIES



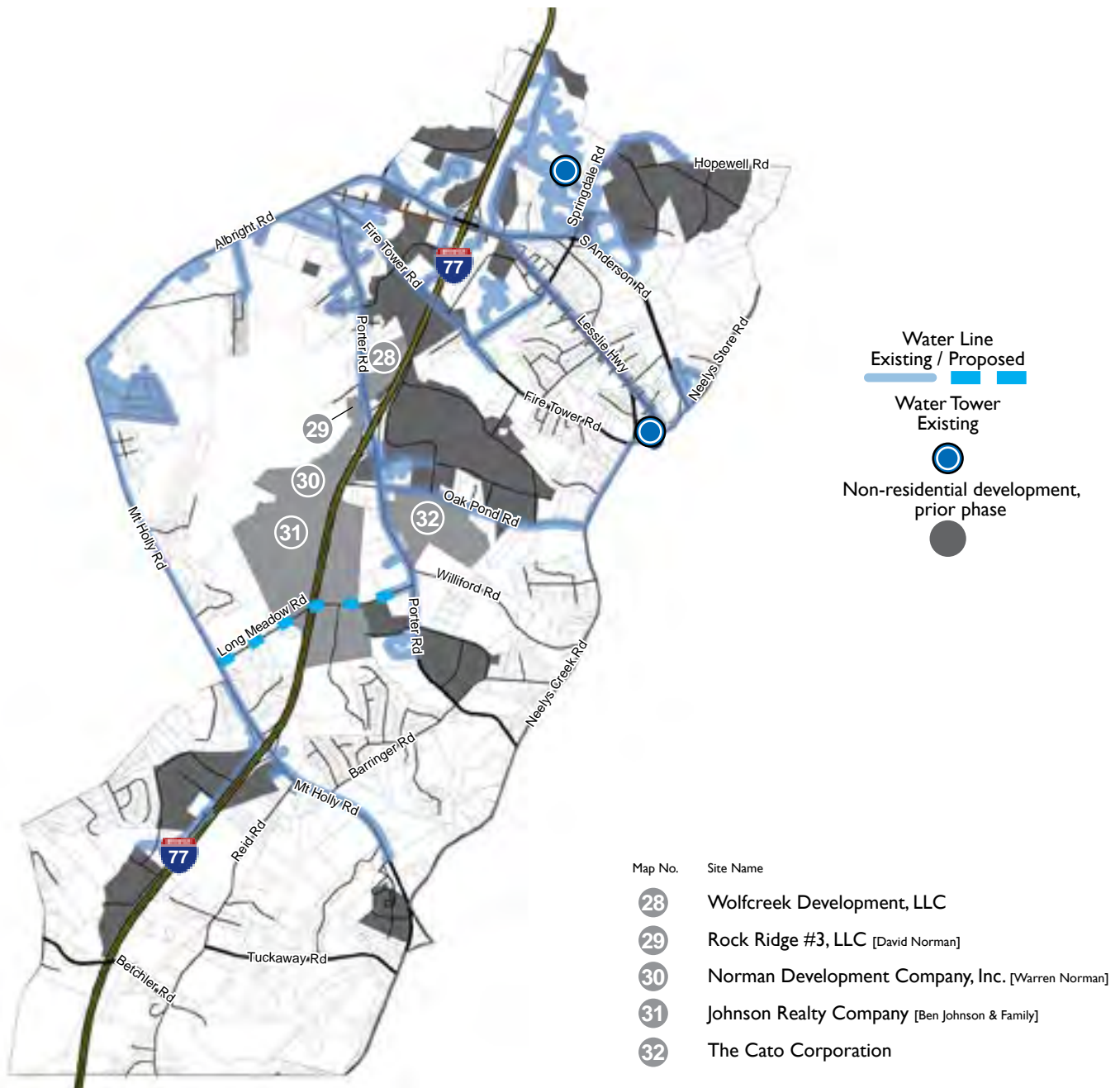
Step 4

ANALYZE NEEDS & PROJECT COSTS [PHASE 3]

Extension for water will likely be necessary along Long Meadow Road to accommodate water demand with the development of sites #29, 30, and 31.

WATER IMPROVEMENTS		
1.47	Extensions and upgrades of water lines	\$3,978,300
	Subtotal	\$3,978,300

MAP A.23 WATER FACILITIES

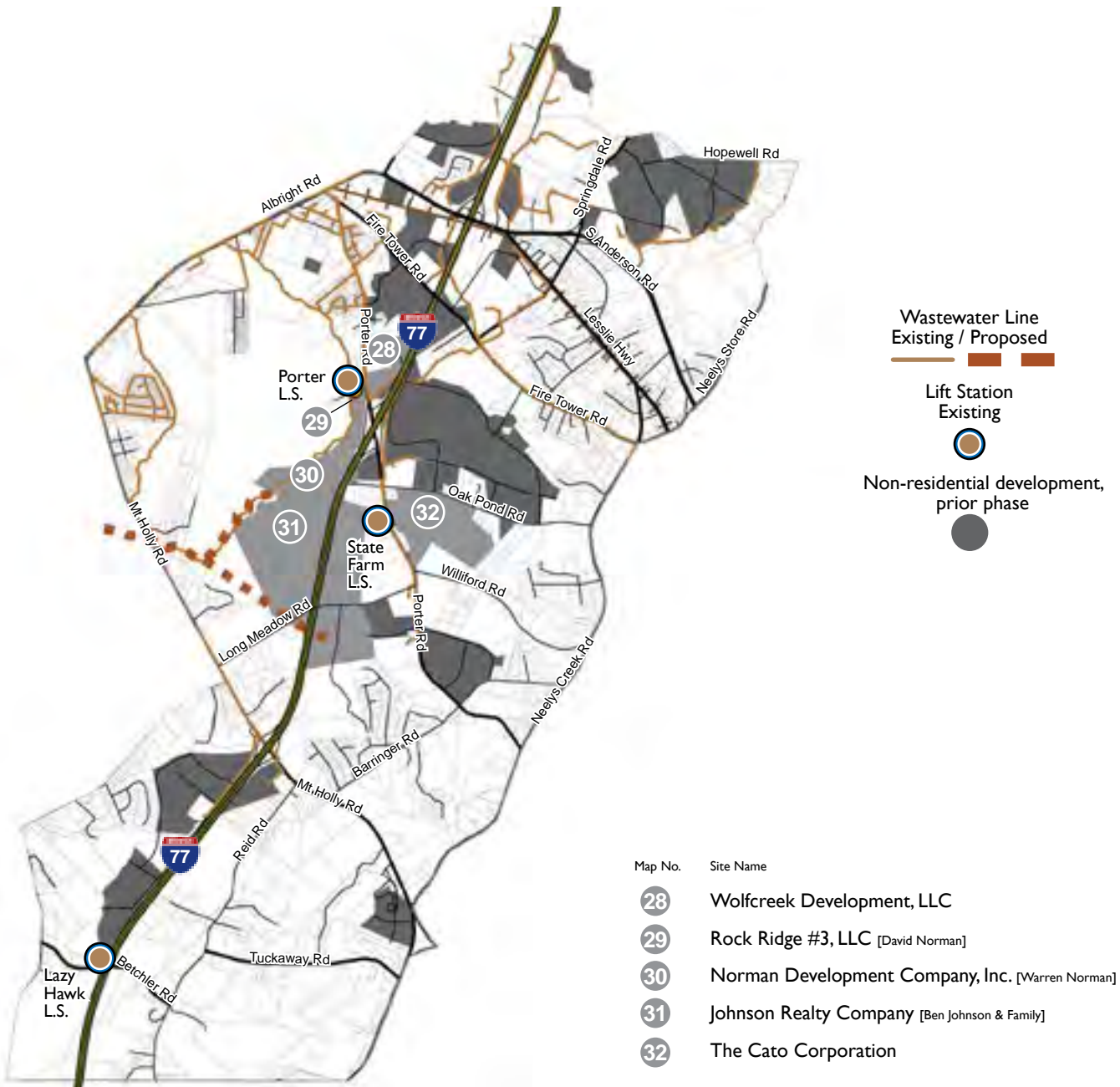


Likewise extensions and upgrades will likely be needed to serve the future development of sites #29, 30, and 31.

WASTE WATER IMPROVEMENTS

2.74	Extensions and upgrades of gravity sewer lines	\$11,555,100
	Subtotal	\$11,555,100

▼ MAP A.24 WASTEWATER FACILITIES



A FOCUS ON INDUSTRIAL DEVELOPMENT

Each industrial site has unique attributes such as size, ownership, topography, and ease of interstate access. Some of the most common site attributes pertaining to prospective industrial development (Phases 1 - 3) are highlighted in Table A.3 and Map A.25.

- The projected cost of a line connection is primarily associated with the distance required to make a connection.
- While utility systems can be reconfigured to support greater demand, the capability to serve columns indicate whether the proposed utility infrastructure would support a low, medium or high utility user.
- Key sites are noted on Map A.25. These are sites that are greater than 100 acres or are sites that can be combined with others to become greater than 100 acres. Large tracts of land with the highest capability to serve are generally candidates for the most intense industrial development or candidates for the widest array of industrial development options.

▼ TABLE A.3 INDUSTRIAL SITE ANALYSIS SUMMARY

SITE	SIZE	TYPE OF OWNERSHIP	PROJECTED COST OF LINE CONNECTION		CAPABILITY TO SERVE			TRANSPORTATION NETWORKS
			WATER	SEWER	ELECTRIC	WATER	SEWER	
7	17.7	Owner/Developer	\$	\$	Low	High	High	
8	16.5	Owner	\$	\$\$	Low	High	High	Rail access
9	20	Owner	\$	\$	High	High	High	
10	52.9	Owner	\$	\$	High	High	High	Rail access
11	35.6	Developer	\$\$	\$\$	Medium	High	High	
12	293	Developer	\$	\$	High	Low	Low	Collector Road
13	23	Owner/Developer	\$\$	\$	Medium	High	High	Collector Road
14	49	Owner	\$	\$	Medium	High	High	Collector Road
15	41.4	Owner/Developer	\$	\$	High	High	High	Collector Road
17	7.9	Developer	\$	\$\$\$	Low	High	High	
18	122	Developer	\$\$	\$\$\$\$	High	Med	Med	Collector Road
22	178	Owner	\$\$\$	\$	Medium	High	High	Collector Road
23	25.8	Owner	\$	\$\$\$	Medium	High	High	Rail access; Poor road access
24	9.9	Owner/Developer	\$\$	\$	Low	High	High	
25	181	Owner	\$\$	\$	High	High	High	Collector Road
26	97.4	Developer	\$\$	\$\$	Low	Med	Med	Collector Road
27	121	Owner/Developer	\$	\$	High	Med	Med	Collector Road
28	53.5	Owner/Developer	\$	\$	High	High	High	
29	13.8	Owner/Developer	\$	\$\$\$\$	High	High	High	Collector Road
30	130	Owner/Developer	\$\$	\$\$\$\$	High	High	High	Collector Road
31	495	Owner	\$\$\$	\$\$\$\$\$	High	Med	Med	Collector Road
32	186.8	Owner/Developer	\$	\$	High	Low	Low	Collector Road

Note:

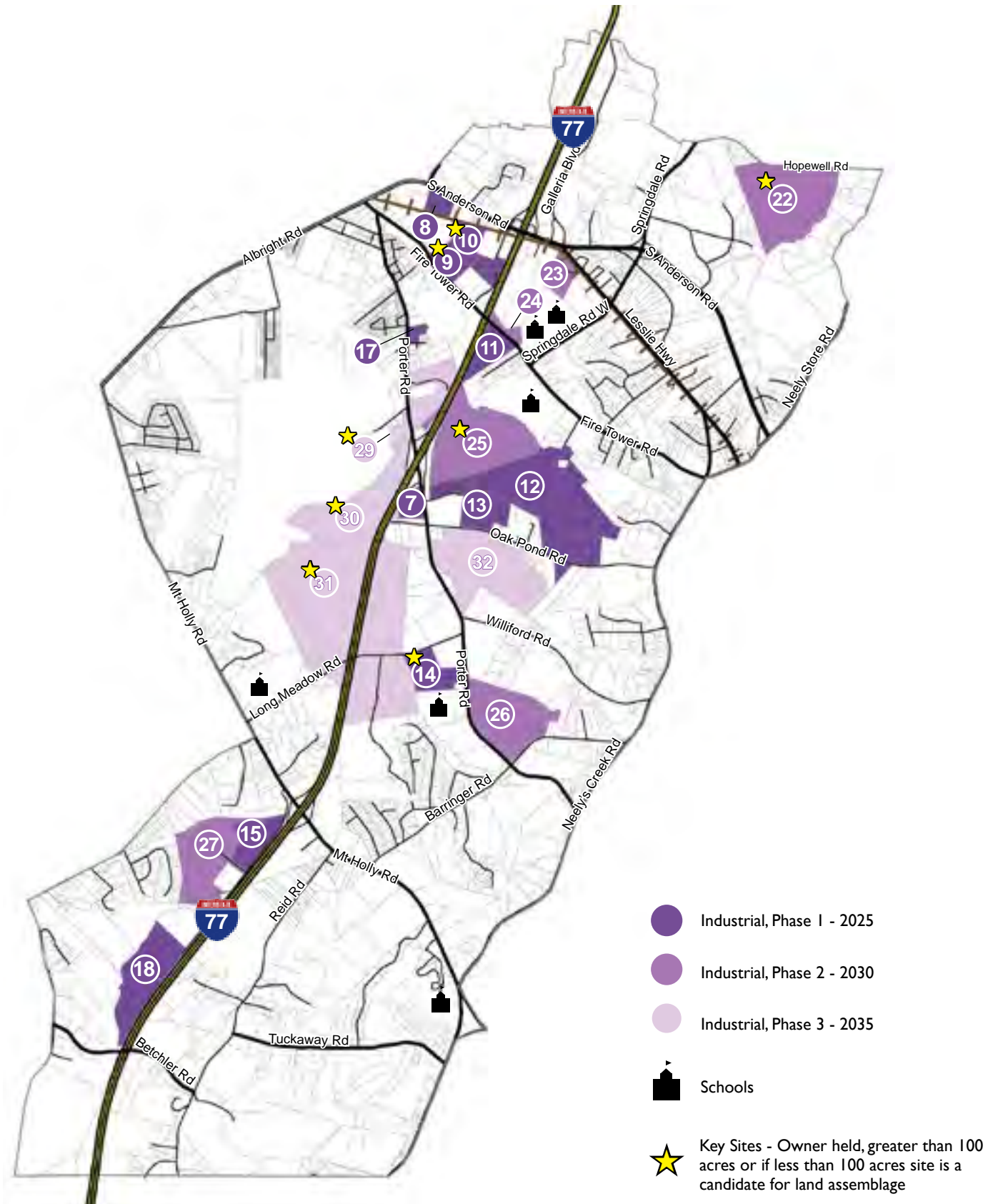
Projected Cost of Line Connection => \$ = 0 - 1Mil, \$\$ = 1Mil - 3Mil, \$\$\$ = 3Mil - 5Mil, \$\$\$\$ = 5Mil - 7Mil, \$\$\$\$\$ = 7Mil+

Electric => Low = <5 MW peak demand; Medium = 5-10 MW peak demand; High = >10 MW peak demand

Water => Low = access to 6" water line or smaller; Medium = access to 8" - 12" water line; High = access to 16" water line or greater

Sewer => Low = 50% projected flow is >66% of capacity; Medium = 50% projected flow is between 33% - 66% of capacity; High = 50% projected flow is <33% of capacity

▼ MAP A.25 PROSPECTIVE INDUSTRIAL DEVELOPMENT - SITE ANALYSIS



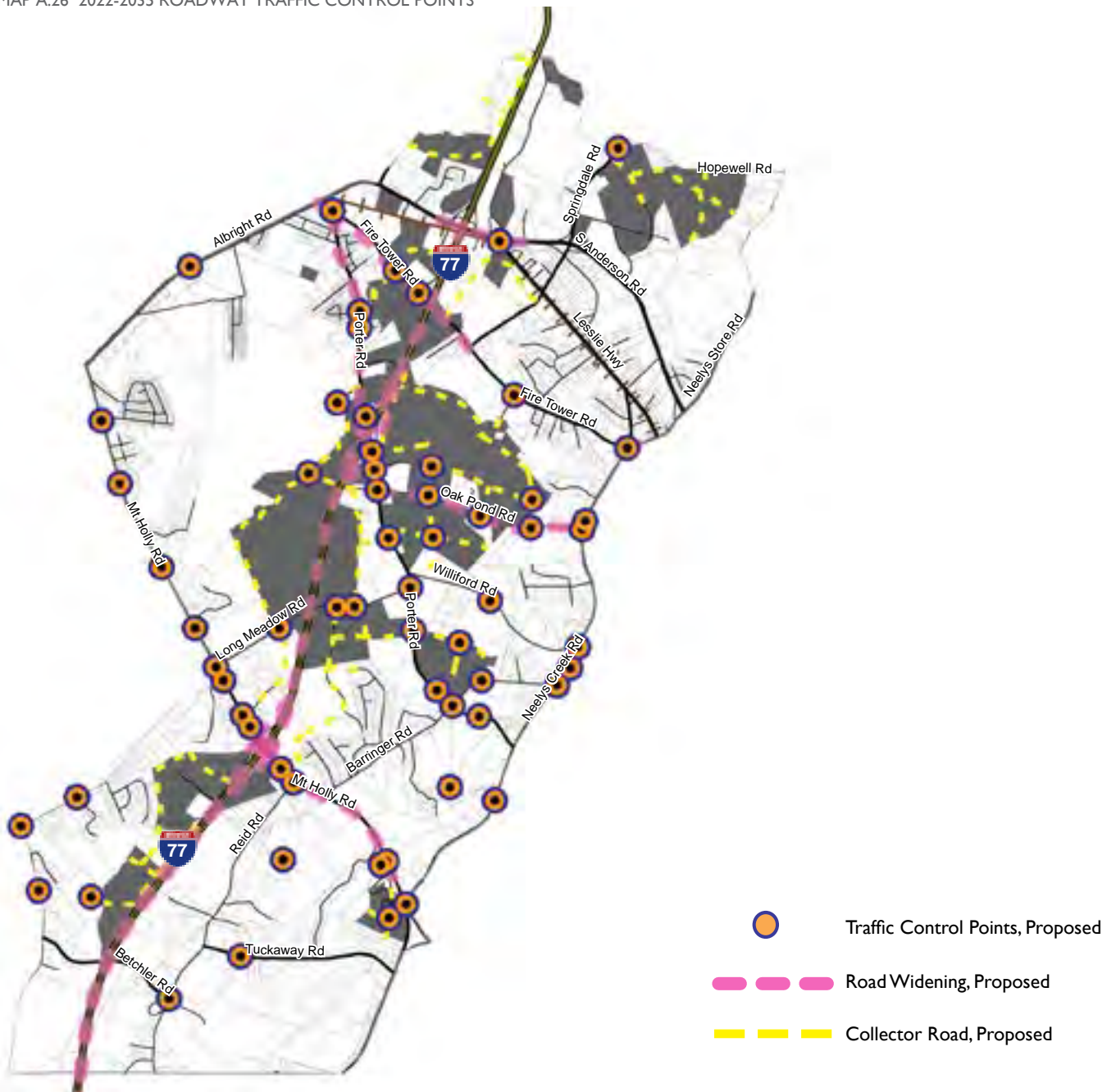
INFRASTRUCTURE PLANNING - NEXT STEPS

The aggressive timeline of the study did not allow for a complete assessment. In order to further inform the preliminary master plans and refine projected cost data, additional planning needs to occur such as --

- study the corridor's bike and pedestrian needs since this was not considered when the *Connect Rock Hill* plan was completed
- analyze implications of transportation improvements including level of service, intersection modeling, interchanges, and pavement conditions
- incorporate analysis to determine best type of traffic control points as noted in Map A.26 (some of these traffic control points may be beyond 2035)

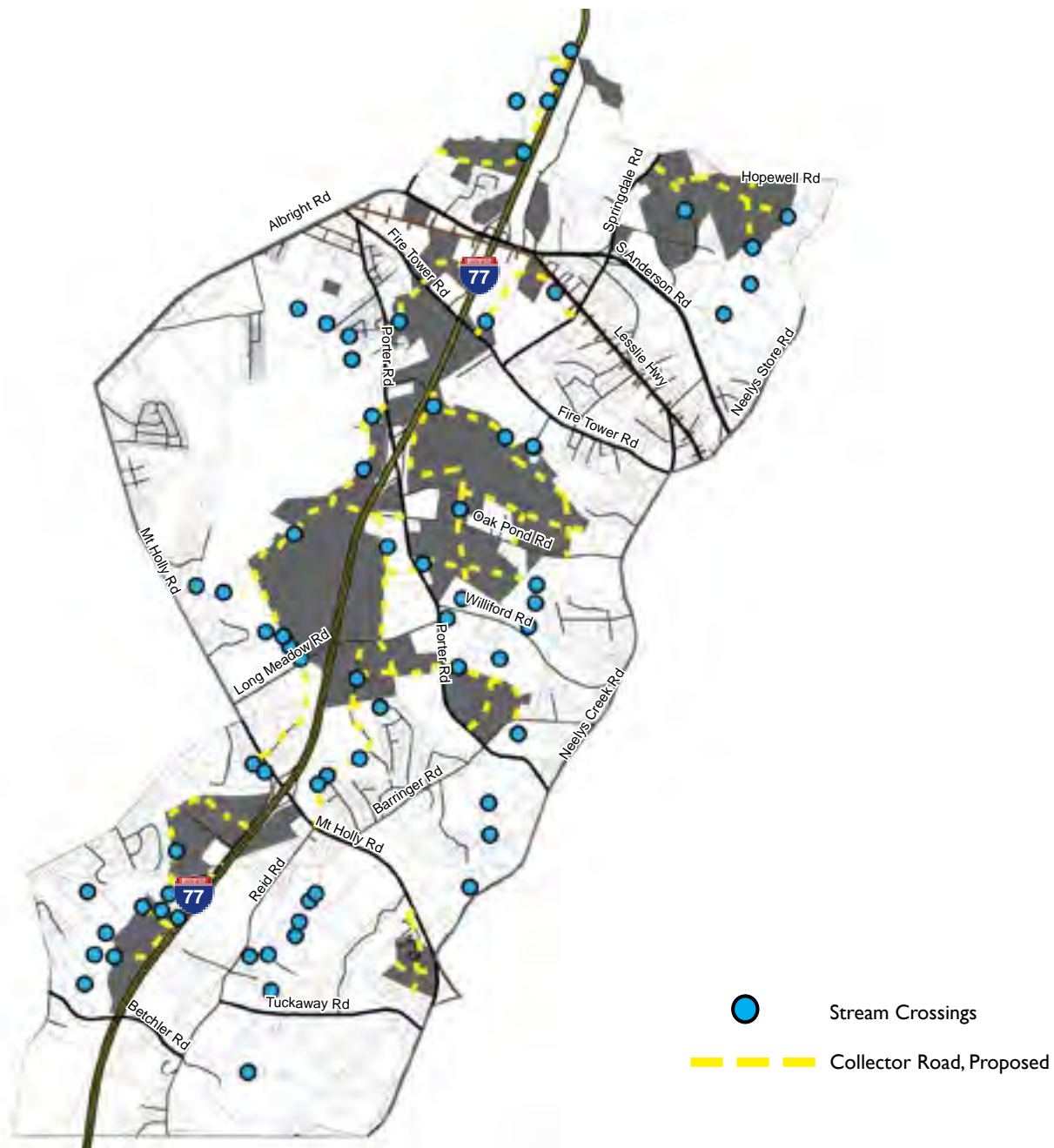
Additional consultant support will be required to provide this additional planning analysis.

▼ MAP A.26 2022-2035 ROADWAY TRAFFIC CONTROL POINTS



Similarly, the timeline of the study did not permit an in-depth analysis of the stormwater infrastructure needs. Additional review and modeling will be required in order to determine additional flood prone areas as well as required infrastructure upgrades to existing stormwater facilities, as noted on [Appendix B, page B-13](#). The City's [Stormwater Master Plan](#) will need to incorporate this study area. Once the Stormwater Master Plan is updated, then detailed designs can begin to determine the required upgrades to existing and new infrastructure.

▼ MAP A.27 2022-2035 STORMWATER - COLLECTOR ROADWAY STREAM CROSSINGS



APPENDIX B

EXISTING CONDITIONS

Funded Projects	B.1
Existing Land Uses	B.2
Existing Generalized Zoning Districts	B.3
Business Parks, Industrial & Institutional Uses.....	B.4
Neighborhoods.....	B.5
Roadway Travel Lanes & Signals.....	B.6
Roadway Ownership	B.7
Pedestrian & Bike Network	B.8
Electric Territories & Facilities	B.9
Water & Wastewater Facilities.....	B.10
Watershed Basins	B.12
Stormwater Infrastructure	B.13

GROWTH ASSESSMENT

Development Suitability Analysis	B.14
Environmental Constraints.....	B.15
Topographic Constraints / Slope Analysis.....	B.16
Level of Service	B.17
Collision Data	B.18
Traffic Counts	B.19
City Future Land Use Map.....	B.20
County Future Land Use Map	B.21
Water & Sewer Service Agreements	B.22
Incentives	B.23
Design Overlay District & Standards Maps.....	B.24

EXISTING CONDITIONS

PLANNED, FUNDED PROJECTS

Examining the funded projects in the study area is helpful to identify issues that may not be resolved by these projects, to spot unintended issues these projects may create, and to ensure a positive correlation between development and the infrastructure to support that development. Several will help to improve traffic flow and to reduce traffic congestion. These will be vital as Legacy Park East and Galleria industrial sites complete build out. **Note: I-77 is planned to be widened after 2035 and thus is not documented here.**

▼ MAP B.1 FUNDED PROJECTS



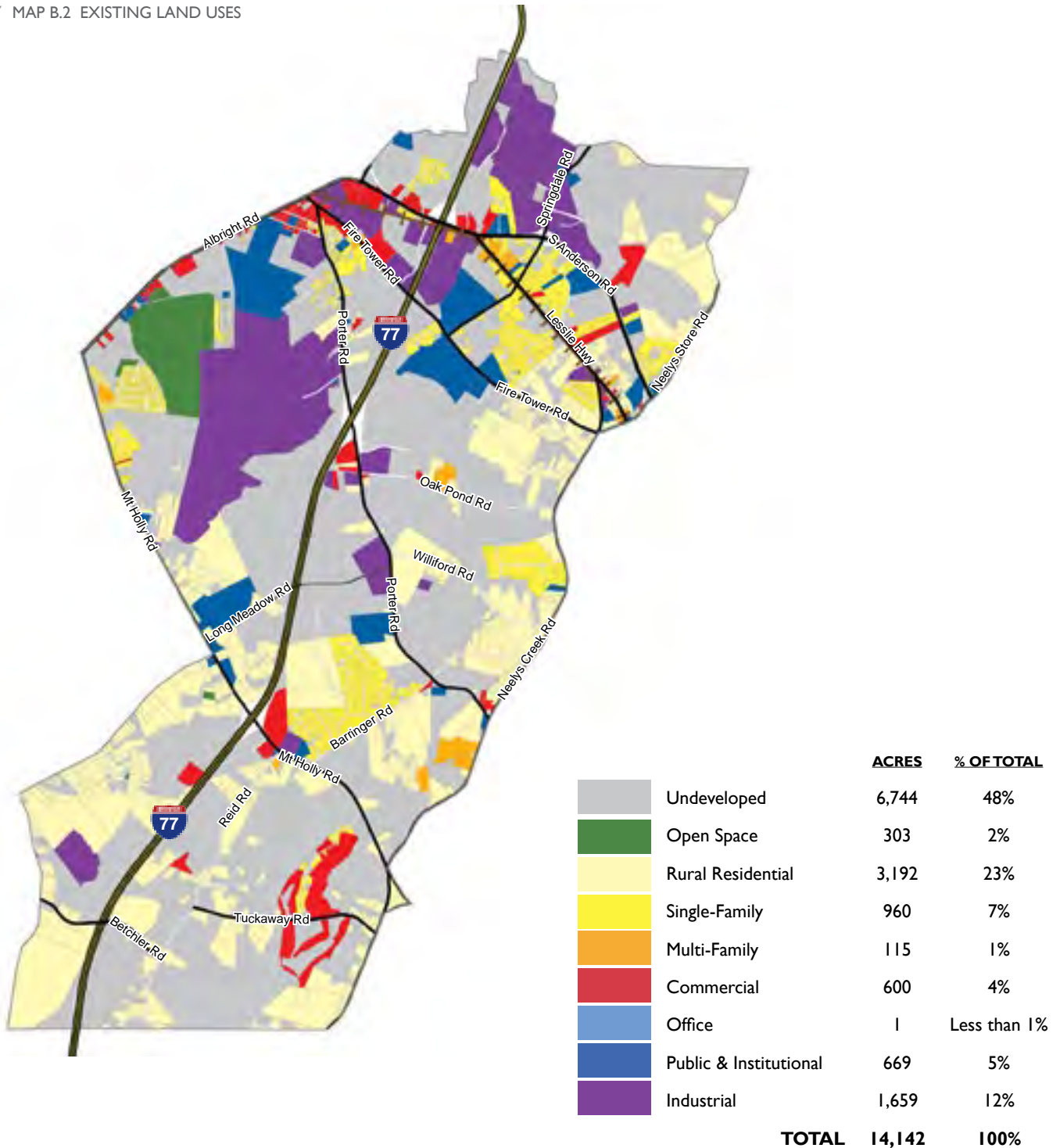
MAP NO.	PROJECTS	TYPE	LEAD	OTHER STAKEHOLDERS	STATUS
1	Improving the interchange at I-77 and South Anderson Road	Transportation	RFATS	City	Design Concept - 2030
2	Improving the interchange at South Anderson Road and Springdale Road	Transportation	Pennies-4	City	Pre-Design Phase, Construction target completion 2024
3	Adding sidewalk on Galleria Boulevard between South Anderson Road & Dave Lyle Blvd	Transportation	Developer	City, Private Sector	Pending - not started
4	Extending the water line beyond Legacy Park East	Utilities	City	Private Sector	To be determined
5	Extending Watson Woods to Springdale Road & Springdale Road widening including a Shared Use Path (SUP)	Transportation	Developer	City, Private Sector	Construction target begin 2023

EXISTING CONDITIONS

LAND USES

Existing land uses and generalized zoning maps are key components to assess the present land uses versus the uses permitted by the zoning ordinance of the City and County. They also convey the general character of the corridor, and can suggest future land uses for undeveloped land, particularly when combined with the future land use maps, Maps B.20 and B.21. Reviewing Maps B.2 and B.3, it is easy to determine that the majority of the undeveloped City land is zoned for business and industrial parks, whereas undeveloped County land is zoned for residential uses. Public and institutional land is also a significant portion of land uses in the corridor given the presence of Flexible Learning Center, Rock Hill High School, Castle Heights Middle School, Independence

▼ MAP B.2 EXISTING LAND USES

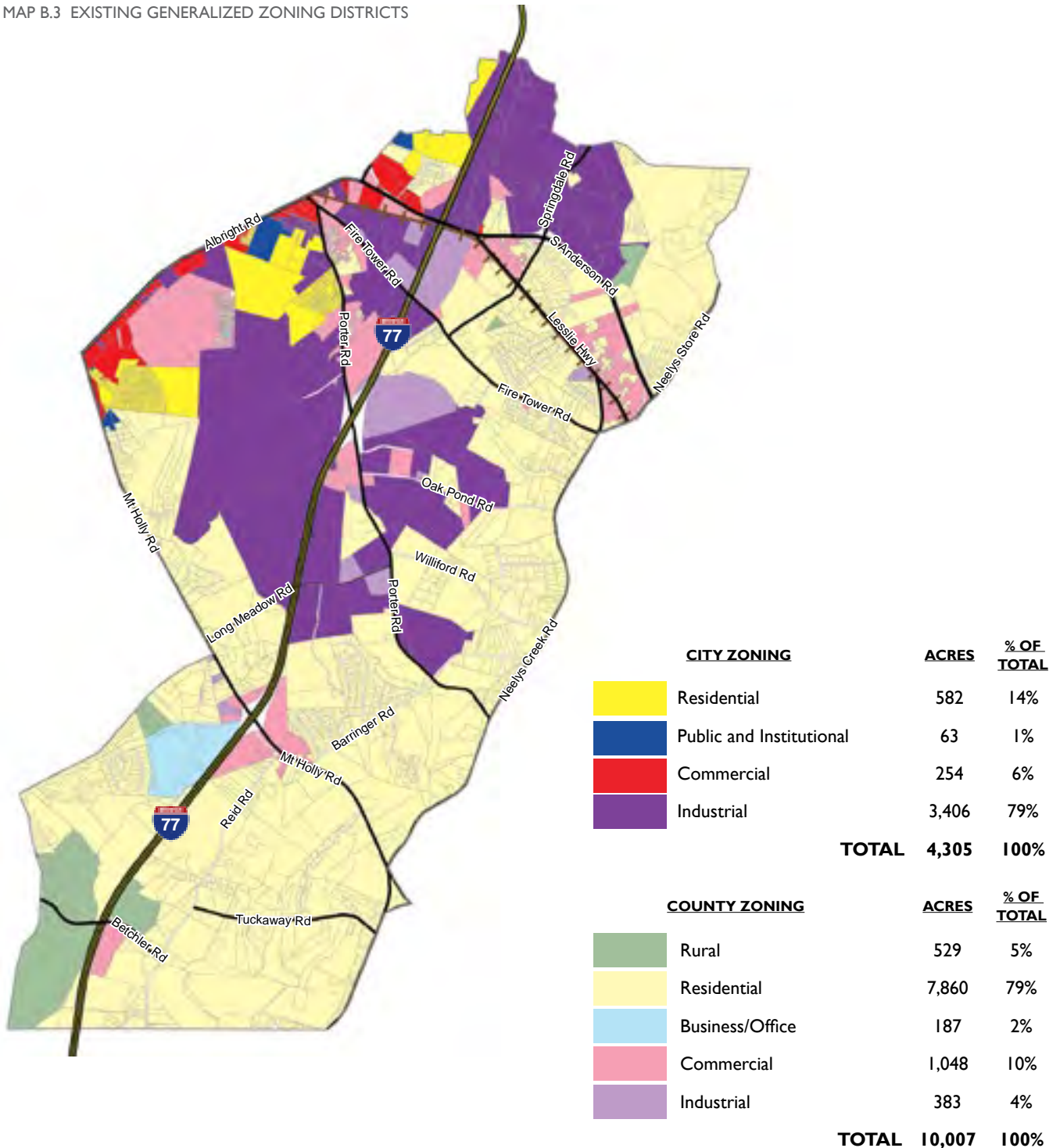


EXISTING CONDITIONS

GENERALIZED ZONING DISTRICTS

Elementary School, Mount Holly Elementary School, Legion Collegiate Academy, and several churches. Commercial land is primarily located along South Anderson Road, Albright Road, I-77 interchanges, and at Pinetuck Golf Course. In total, City zoning regulates 28% of the land. This percentage has increased over time as the City has annexed unincorporated land. More than 2,400 acres of mostly undeveloped land was annexed as part of the Southside Redevelopment Plan in November 2021. See Map B.24, for those unincorporated properties with City Water and/or Sewer Service Agreements.

▼ MAP B.3 EXISTING GENERALIZED ZONING DISTRICTS

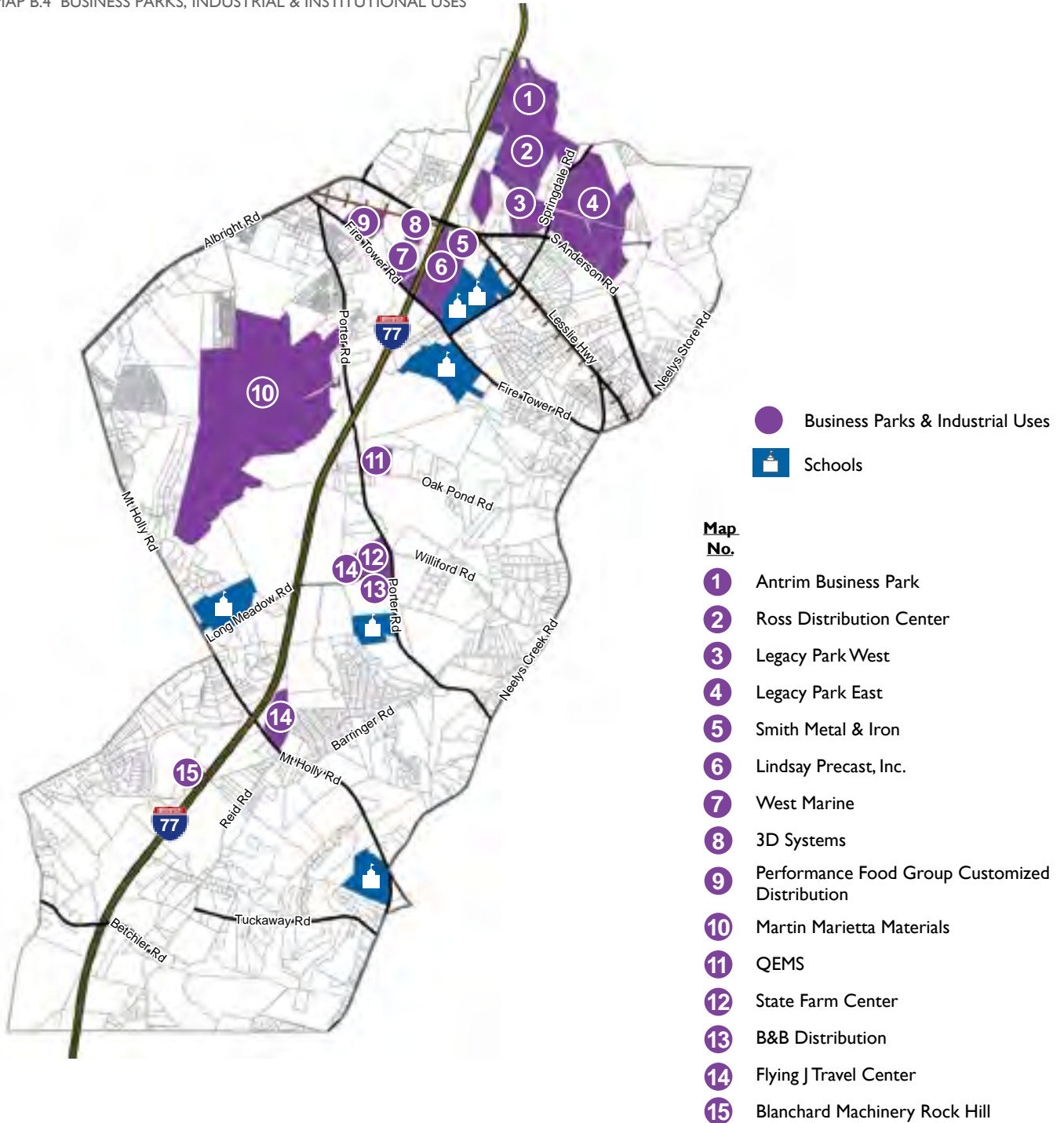


EXISTING CONDITIONS

BUSINESS PARKS, INDUSTRIAL & INSTITUTIONAL USES

Maps B.4 shows the major businesses (and thus employers) within the corridor. The concentration of businesses makes it one of the City's key employment corridors, with an estimated 3,510 employees at 289 businesses. Most of the large-scale distribution centers are located on the east side of I-77. There are concerns about truck traffic in this area mixing with school traffic given proximity of these land uses to each other.

▼ MAP B.4 BUSINESS PARKS, INDUSTRIAL & INSTITUTIONAL USES

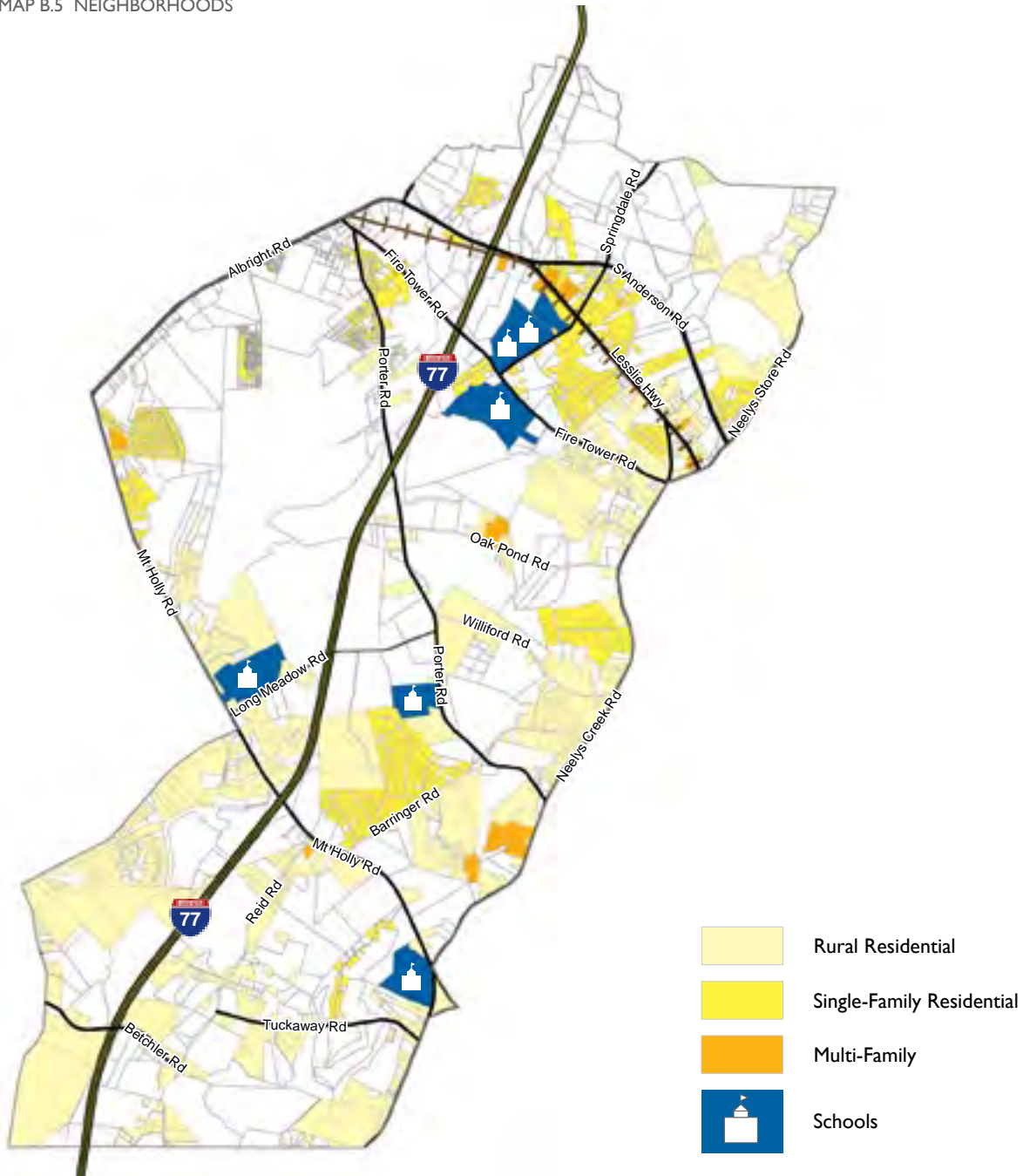


EXISTING CONDITIONS

NEIGHBORHOODS

Neighborhoods and residential land uses are scattered throughout the corridor, but are primarily located on larger lots on the east side of I-77. The corridor has about 6,400 residents. While the Rock Hill School District has an extensive busing system, the District reports that many parents opt to take their children to and from school as well as provides the option for parents to choose schools for their children outside their sending zone. These choices can add to traffic congestion in the corridor during concentrated periods during the day. Private schools in the area do not utilize busing and thus also impact traffic congestion.

▼ MAP B.5 NEIGHBORHOODS

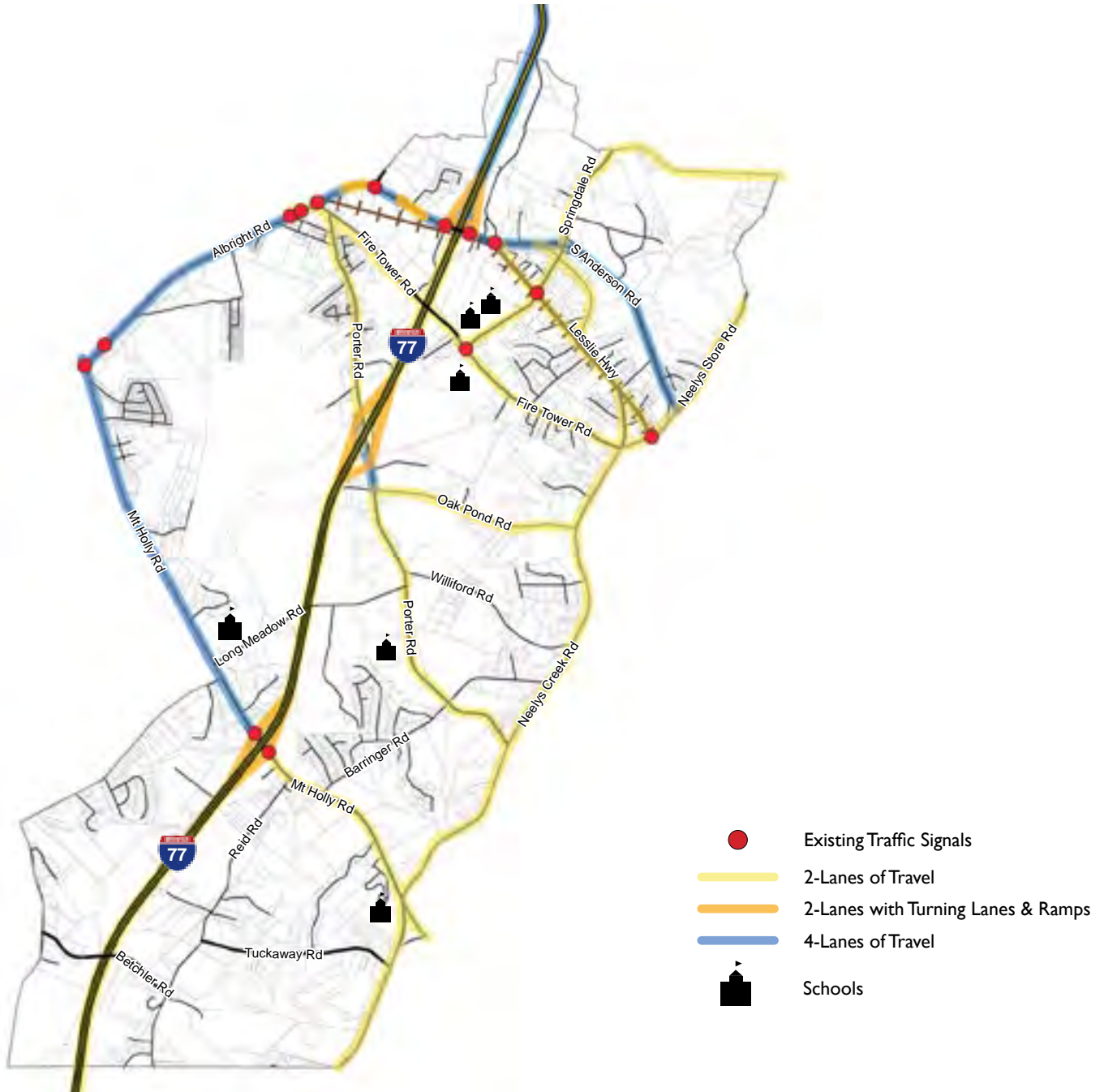


EXISTING CONDITIONS

ROADWAY TRAVEL LANES & SIGNALS

While the major roadways in the corridor - Mt. Holly Road, Albright Road, and S. Anderson Road - have four travel lanes, the majority of roadways have two. Two of the three interchanges are signaled - only Porter Road (Exit 75) is unsignaled. With the recent industrial development, coupled with proposed development, increased truck traffic will pose congestion, traffic flow, and maintenance issues.

▼ MAP B.6 ROADWAY TRAVEL LANES & SIGNALS

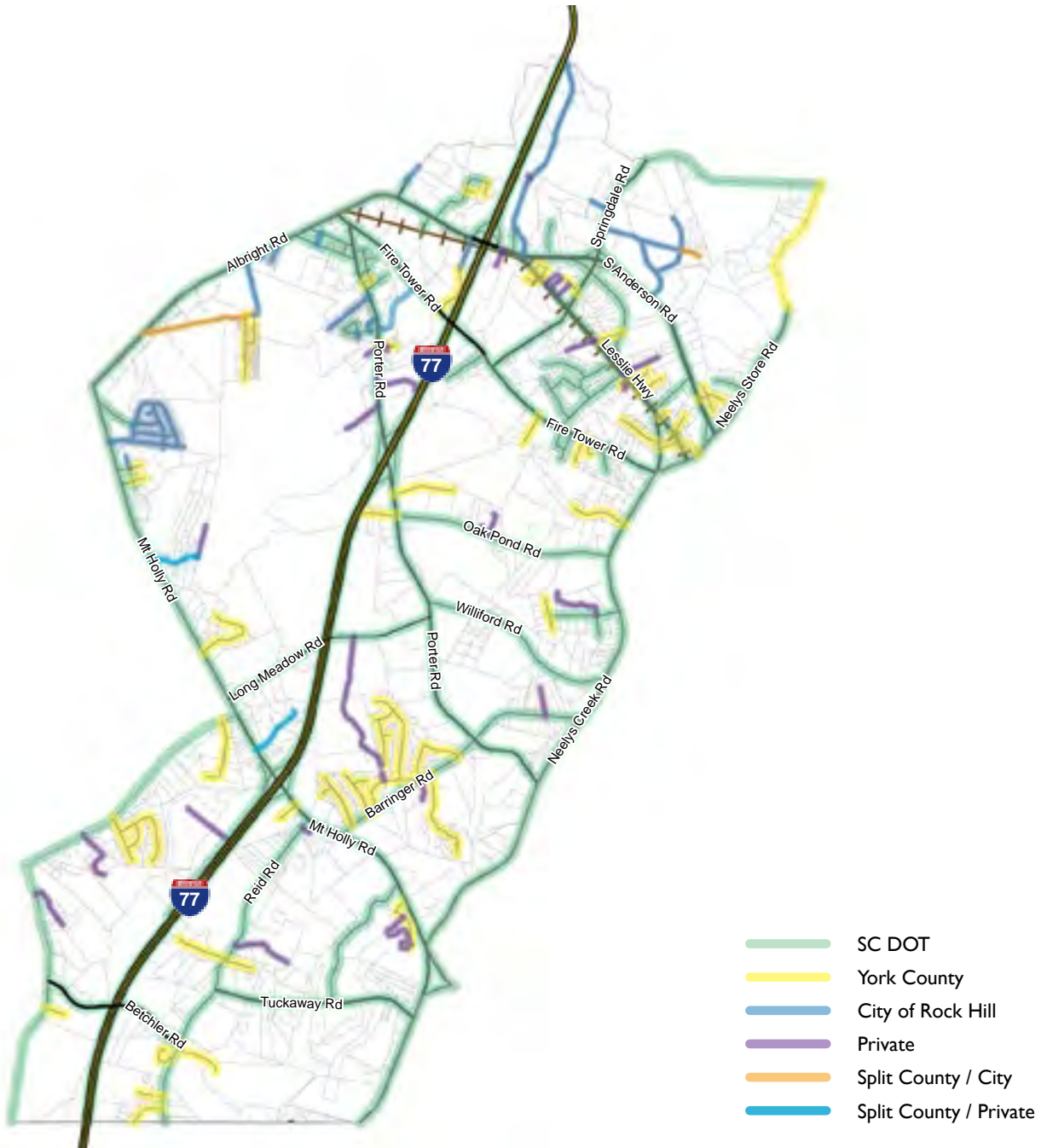


EXISTING CONDITIONS

ROADWAY OWNERSHIP

The corridor has about 115 miles of roadway. The South Carolina Department of Transportation (SCDOT) owns the vast majority of roadways at 70% and the City owns just over 6.5%. Many of the SCDOT roadways are two lanes and are located adjacent to undeveloped land that has development interest. Therefore, most future projects will require SCDOT review and approval before any new road improvements take place.

▼ MAP B.7 ROADWAY OWNERSHIP

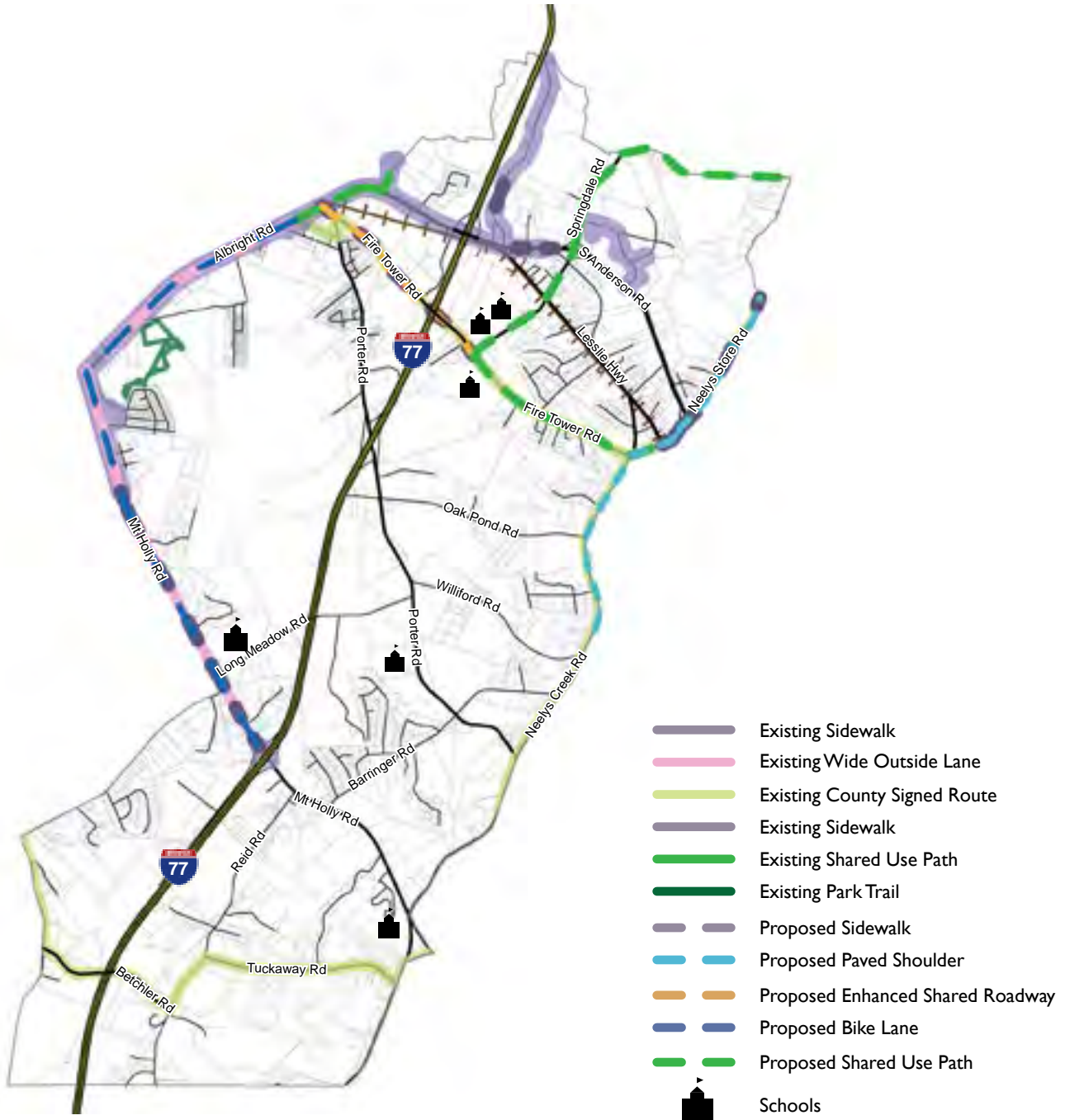


EXISTING CONDITIONS

ROADWAY & RELATED INFRASTRUCTURE

Bike and pedestrian facilities are limited in the corridor. Sidewalks exist on all or a portion of the major roadways where development is present. York County has a signed route that traverses much of the corridor and wide outside lanes were included as part of the Pennies For Progress widening projects for Albright Road and Mt. Holly Road. The [Connect Rock Hill Bicycle and Pedestrian Master Plan](#) proposes additional bicycle and pedestrian facilities in the corridor. These projects are opportunistic, and will be built as part of road improvement and development projects. It will be important to update this Plan as the City grows to include improvements in areas that were not considered as part of the scope when the Plan was adopted.

▼ MAP B.8 PEDESTRIAN & BIKE NETWORK
(EXCERPT FROM THE CONNECT ROCK HILL MASTER PLAN)

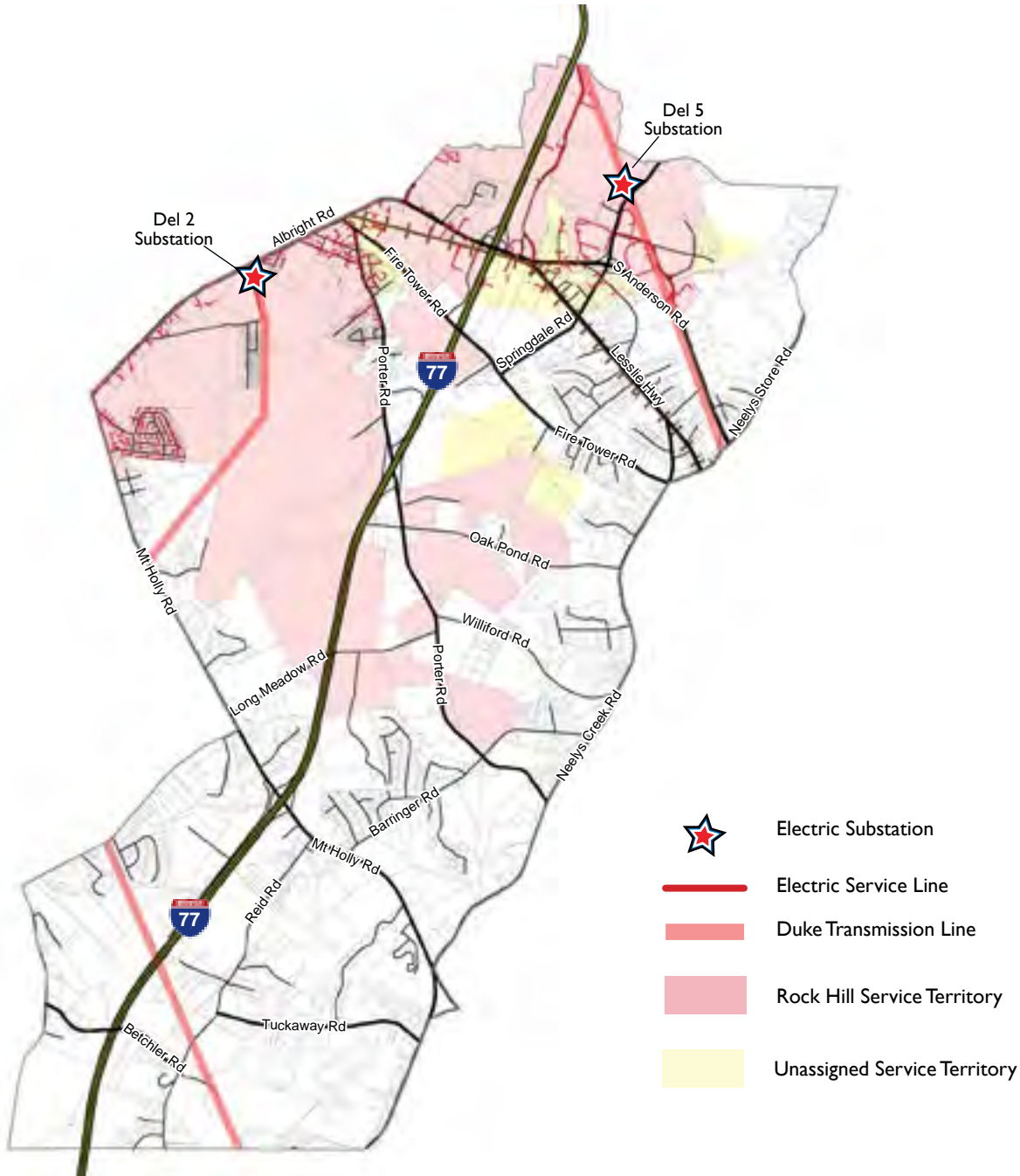


EXISTING CONDITIONS

ELECTRIC TERRITORIES & FACILITIES

The City of Rock Hill is an electric distribution service provider with service territory indicated on Map B.9. Some areas in the corridor do not have assigned territory and any service provider can serve these areas (unless the area is annexed, in which case, the City will serve if possible). The corridor has two City substations: one in proximity to Legacy Park East, and the other off Albright Road. The corridor has two City substations: one in proximity to Legacy Park East, and the other off Albright Road. The Del 5 substation has about 22 megawatts in remaining capacity to serve additional development whereas the Del 2 substation has about 16 megawatts. This capacity is always fluctuating and can be reconfigured based on demand.

▼ MAP B.9 ELECTRIC TERRITORIES & FACILITIES

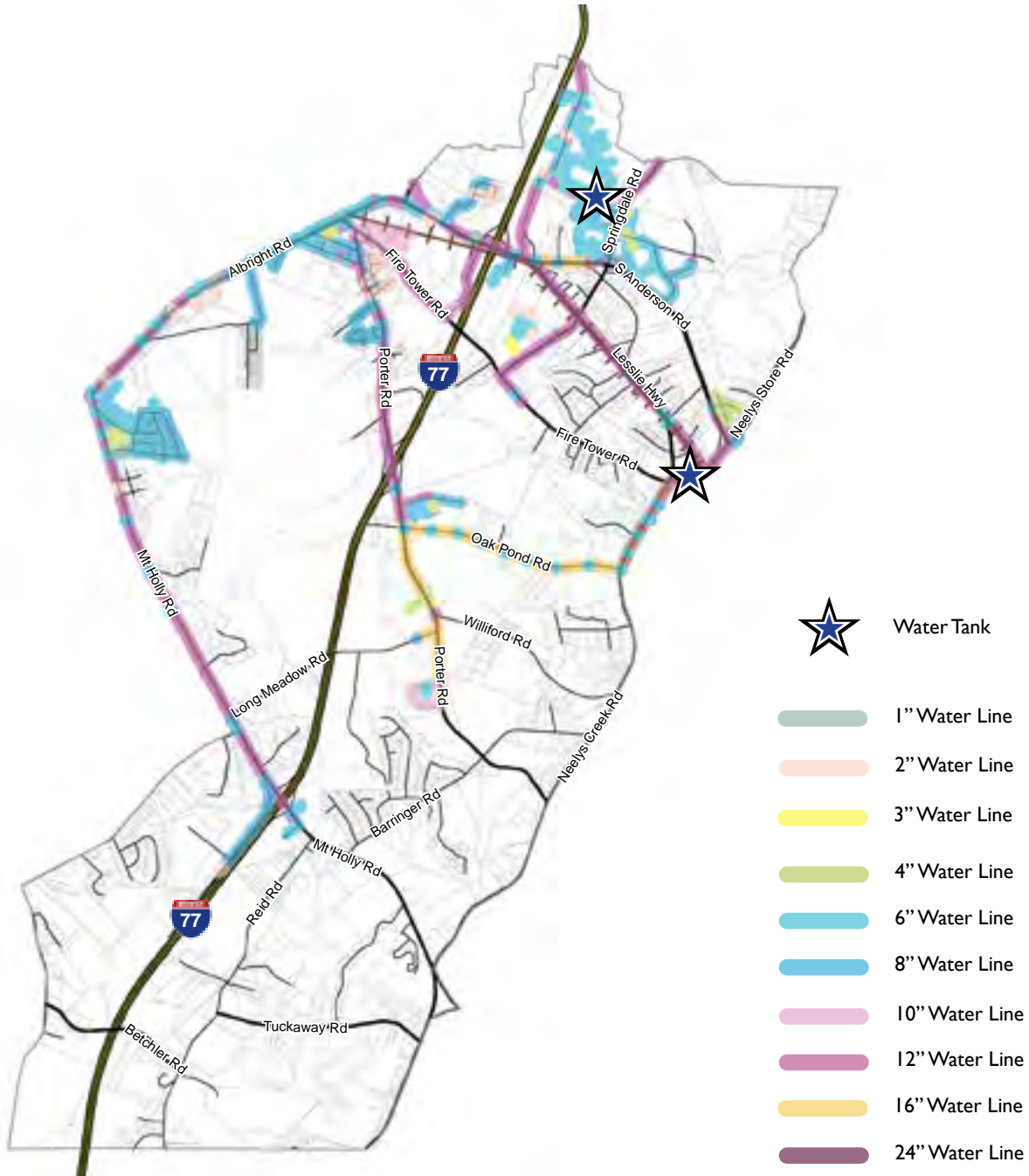


EXISTING CONDITIONS

WATER & WASTEWATER FACILITIES

The City of Rock Hill is the sole water and wastewater provider in the corridor. New development or requests by existing development to tie onto the system are reviewed and processed by City staff. City water and/or wastewater serve all existing industrial development in the corridor. These services are not available to many of the residential uses in the south and eastern portions of the corridor, so many residents are on well and septic. Larger lines run along major roads and their ability to serve

▼ MAP B.10 WATER FACILITIES

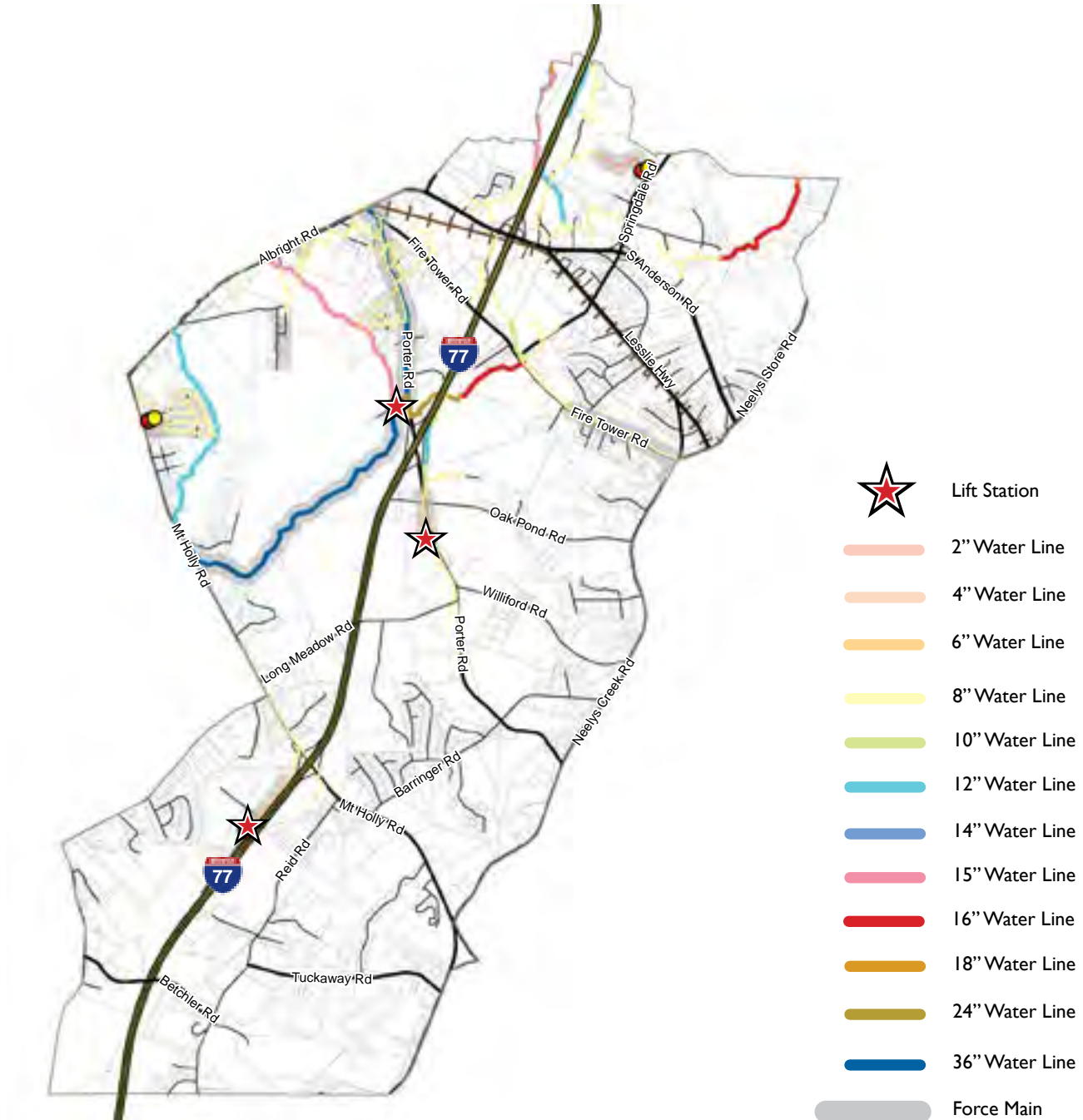


EXISTING CONDITIONS

WATER & WASTEWATER FACILITIES

new development depends on the intensity of the use. For example, warehouse/distribution sites typically use less water and wastewater whereas a bottling plant or food processing facility typically use more. The City's Utilities Department reviews these development proposals on a case-by-case basis to determine the City's ability to serve new development where lines exist, or their ability to handle additional flows if lines are extended.

▼ MAP B.11 WASTEWATER FACILITIES



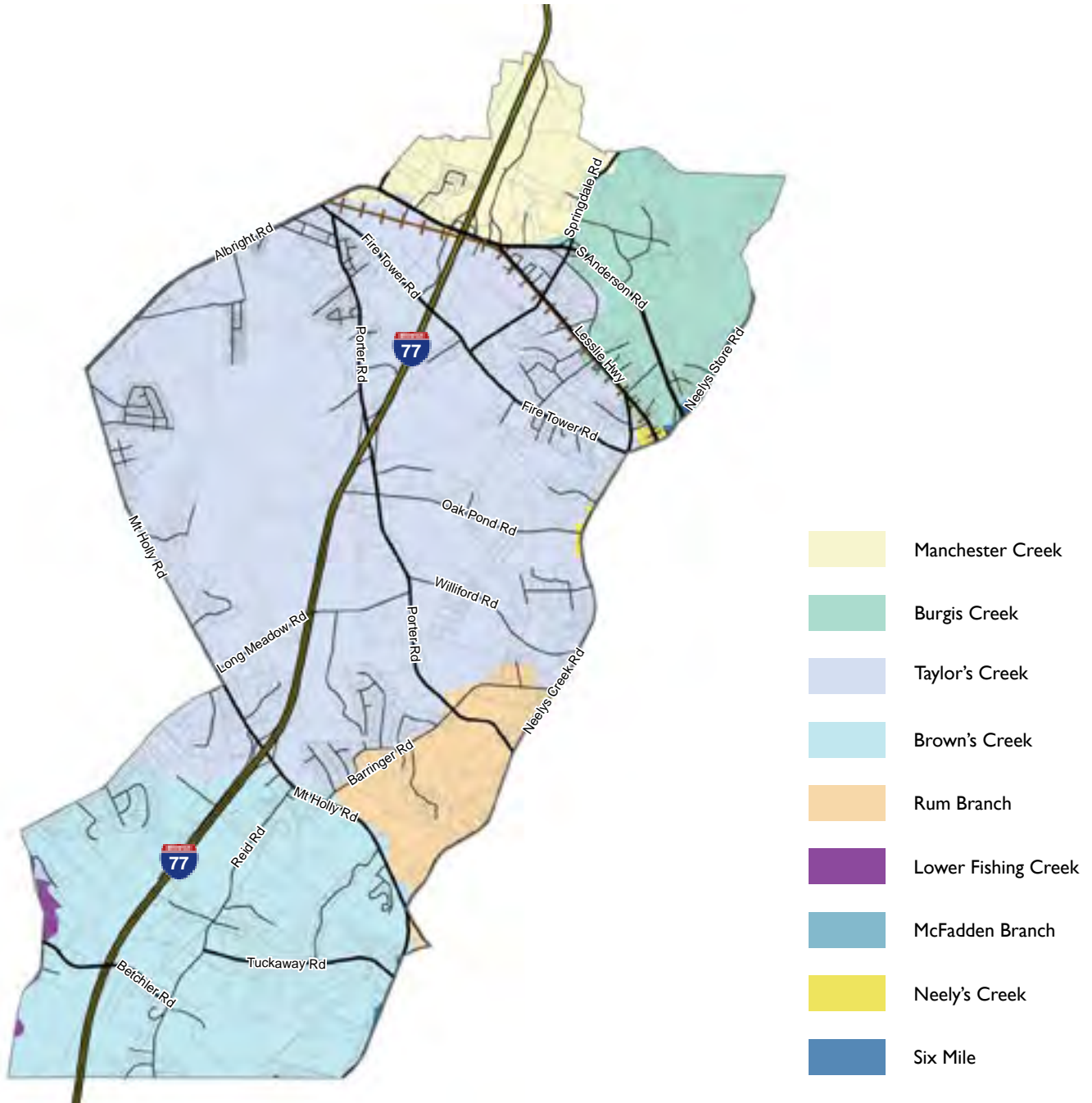
EXISTING CONDITIONS

SEWER BASINS

Sewer basins are distinct wastewater collection areas that are generally defined by topography. Lines within these areas generally flow to a single point or pump station before being sent to the wastewater treatment plant or larger line within the system. The majority of the corridor falls within the Taylors Creek and Browns Creek basins. As shown in Map B.11, existing wastewater infrastructure in the Browns Creek basin is very limited.

▼ MAP B.12 SEWER BASINS

Source: Wiedeman & Singleton Inc

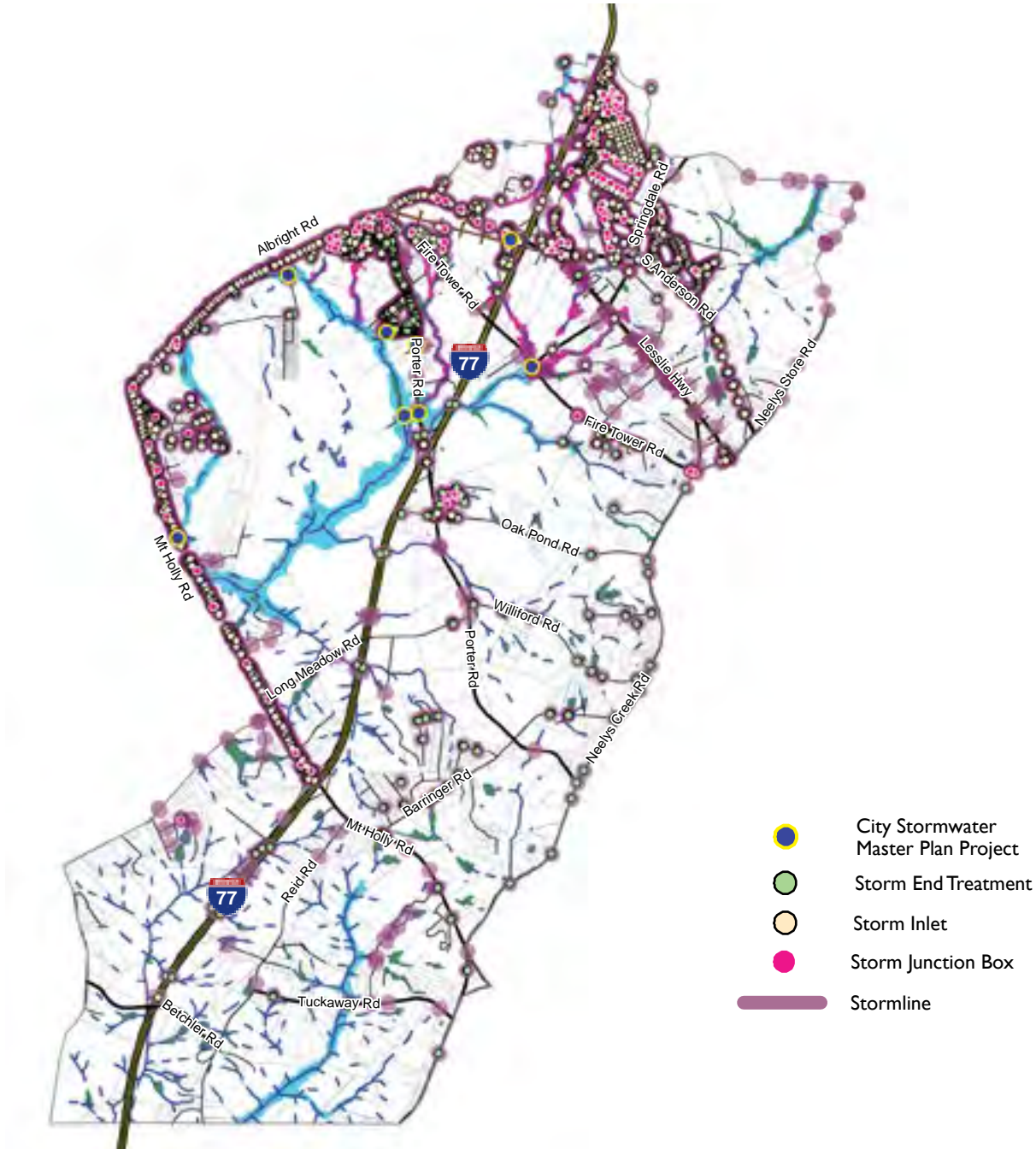


EXISTING CONDITIONS

STORMWATER FACILITIES

The City has limited stormwater facilities in the corridor. City-owned facilities are primarily located in the northern third of the corridor. The vast majority of stormwater facilities are owned and maintained by SCDOT since SCDOT owns the majority of the roadways. Regardless of ownership, City staff performed a field inspection of stormwater facilities in the study area in order to assess the general condition of facilities. The majority (80%) are aging facilities and are in need of replacement. For example, there are numerous existing corrugated metal pipes (CMP) with major issues (rusted out flowlines, separations, etc.), and many culvert sizes appear to be undersized when compared to the surrounding drainage areas.

▼ MAP B.13 STORMWATER FACILITIES

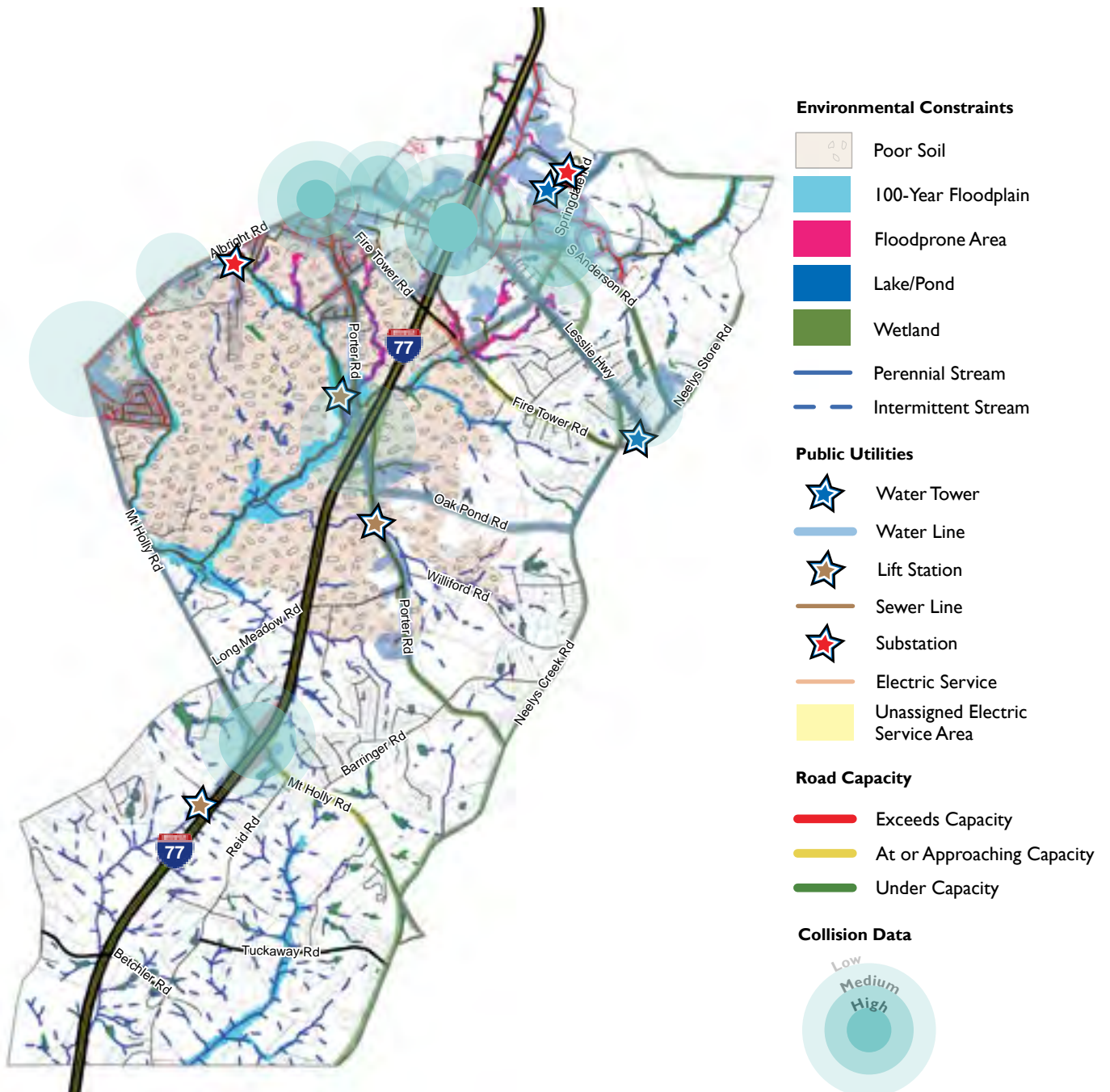


GROWTH ASSESSMENT

DEVELOPMENT SUITABILITY ANALYSIS

A suitability analysis, drawn from the [Comprehensive Plan Update - Rock Hill 2030](#), is a compilation of several maps in the appendix. This type of analysis is used to help guide growth into areas that make sense for development and away from areas with challenges or areas unsuitable for development. For example, this analysis shows that the area of South Anderson closest to I-77 is not currently conducive for additional development given the mobility challenges in proximity to the interchange.

▼ MAP B.14 DEVELOPMENT SUITABILITY ANALYSIS



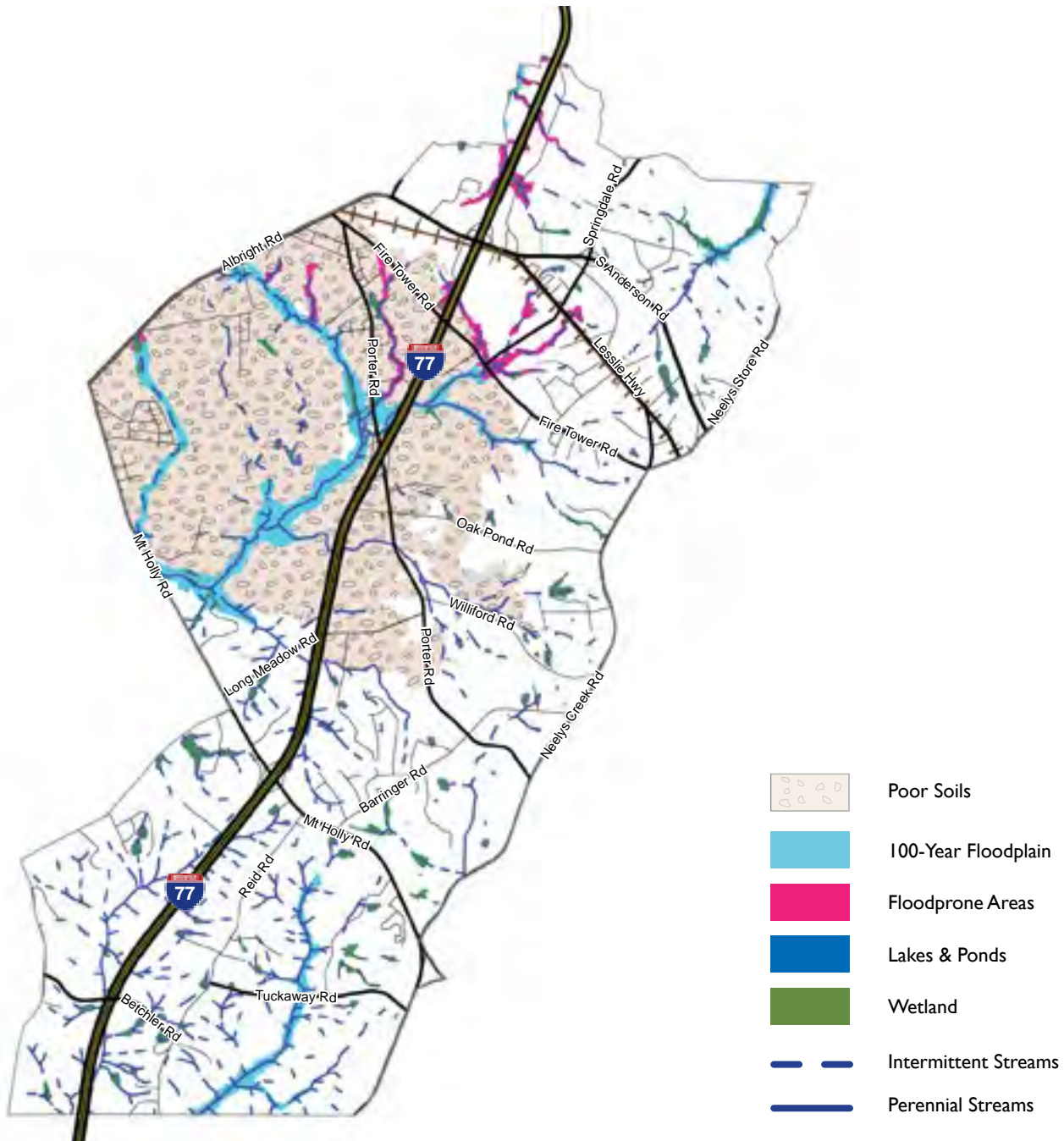
GROWTH ASSESSMENT

ENVIRONMENTAL CONSTRAINTS

Iredell soil, commonly referred to as Blackjack soil, is present throughout middle of the corridor, especially on the west side of I-77. This soil is rocky, drains poorly, and can make development more costly and challenging.

The City has identified flood-prone areas that go beyond the 100-year FEMA floodplain. Identified areas are limited to the City and slightly beyond its limit, but does not yet include the area that was annexed as part of the Southside Redevelopment Plan. Therefore, the majority of the corridor would need to be studied to identify properties that are floodprone. Properties within floodprone areas and the 100-year FEMA floodplain are subject to additional development standards to protect these areas.

▼ MAP B.15 ENVIRONMENTAL CONSTRAINTS

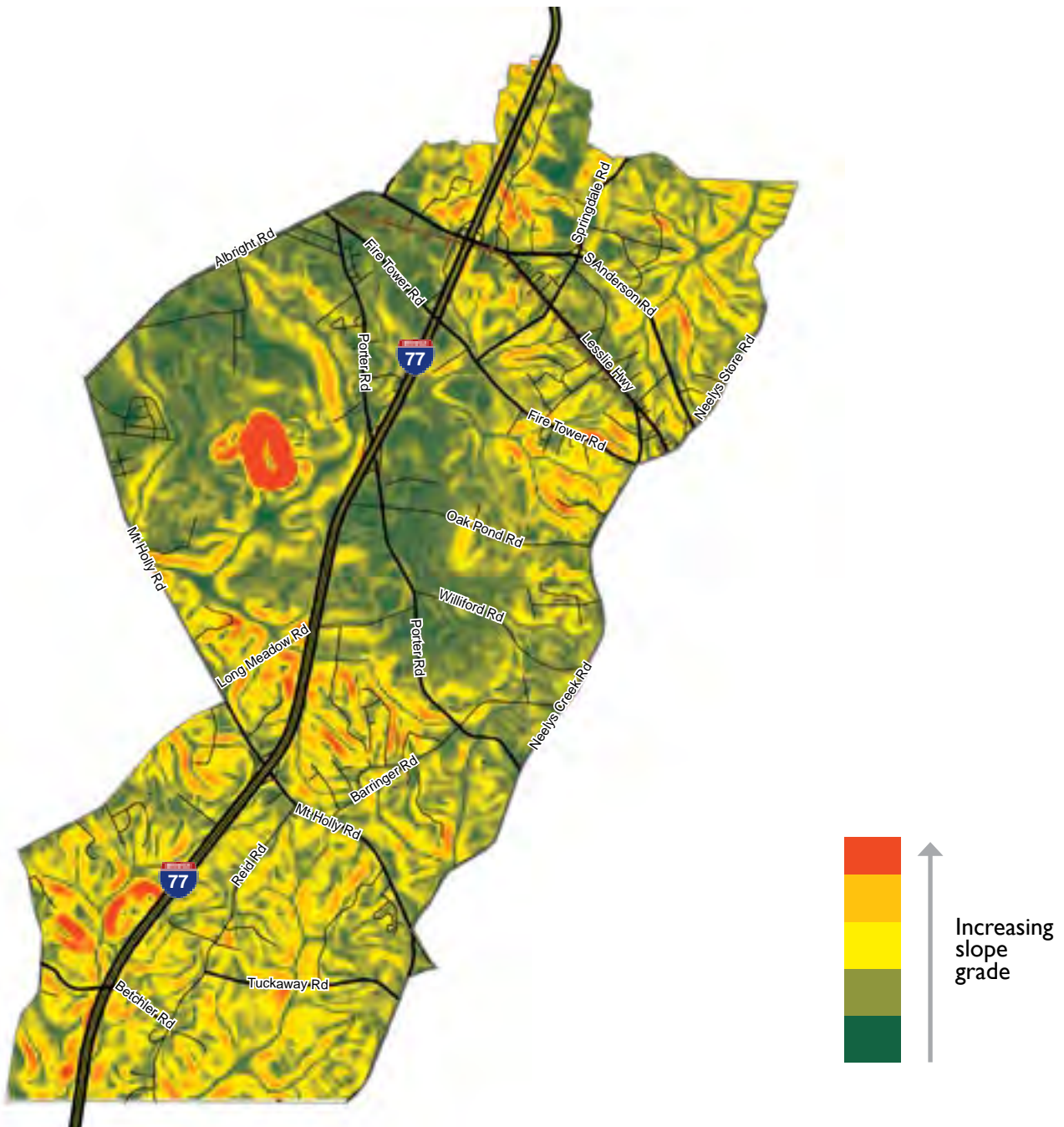


GROWTH ASSESSMENT

TOPOGRAPHIC CONSTRAINTS

Map B.16 uses contour lines and elevation to depict areas where slope may pose a challenge for development. Much of the land south of Mt. Holly has rolling slopes that may cause increased development costs. In contrast, much of the land near Williford Road, Oak Pond Road, and Porter Road appears to be rather flat and potentially would require less grading, which reduces development costs.

▼ MAP B.16 TOPOGRAPHY & SLOPE ANALYSIS

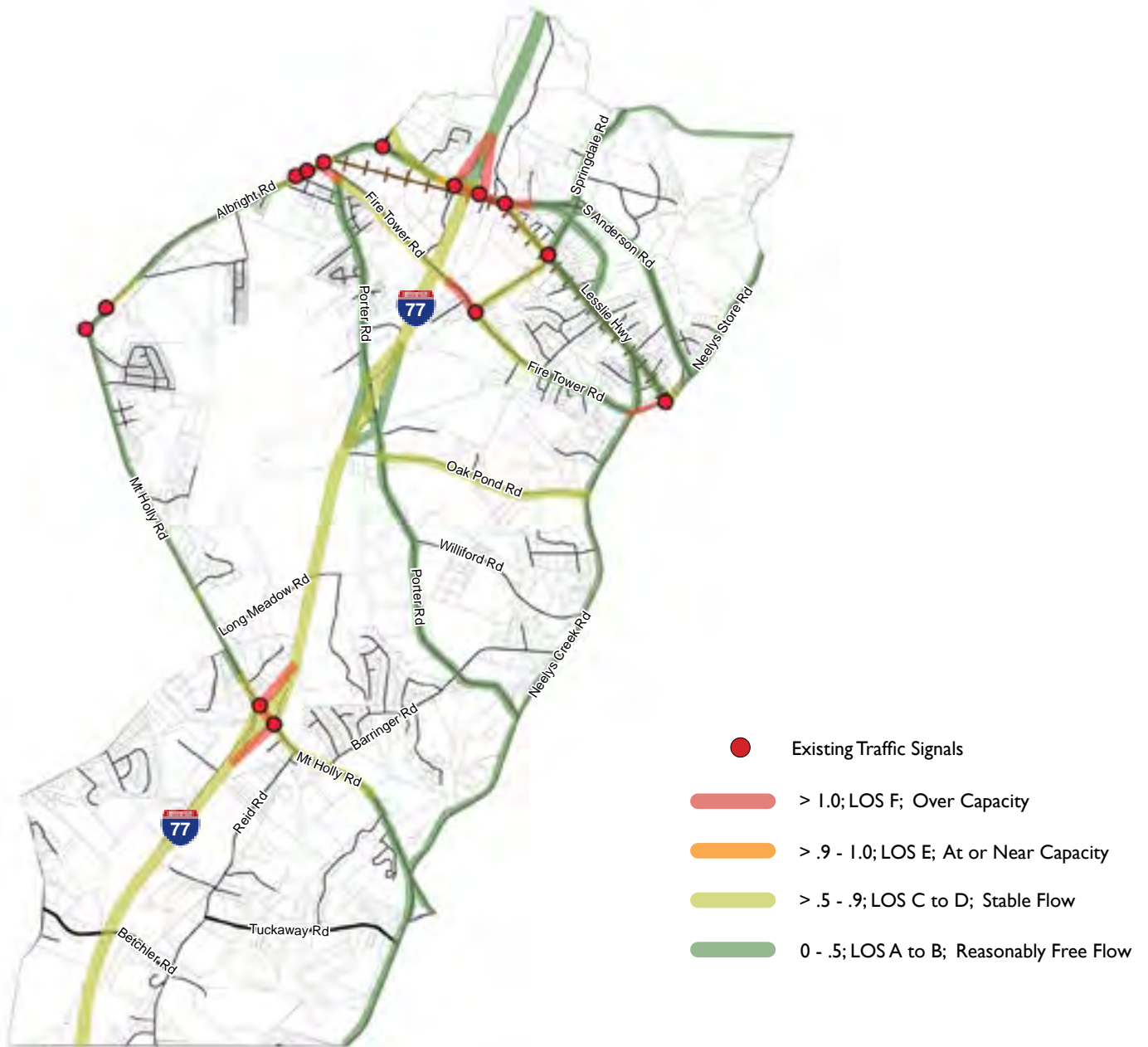


GROWTH ASSESSMENT

LEVEL OF SERVICE

The interchanges at South Anderson Road and Mt. Holly Road are overcapacity. As mentioned in Map B.1, a funded improvement project is planned to help address the issues at the South Anderson Road interchange. No plans exist to alleviate the congestion at Mt. Holly Road at this time. In general, the remainder of the corridor does not have current traffic flow issues.

▼ MAP B.17 LEVEL OF SERVICE (2018 PM LOS)
Source: WSP USA



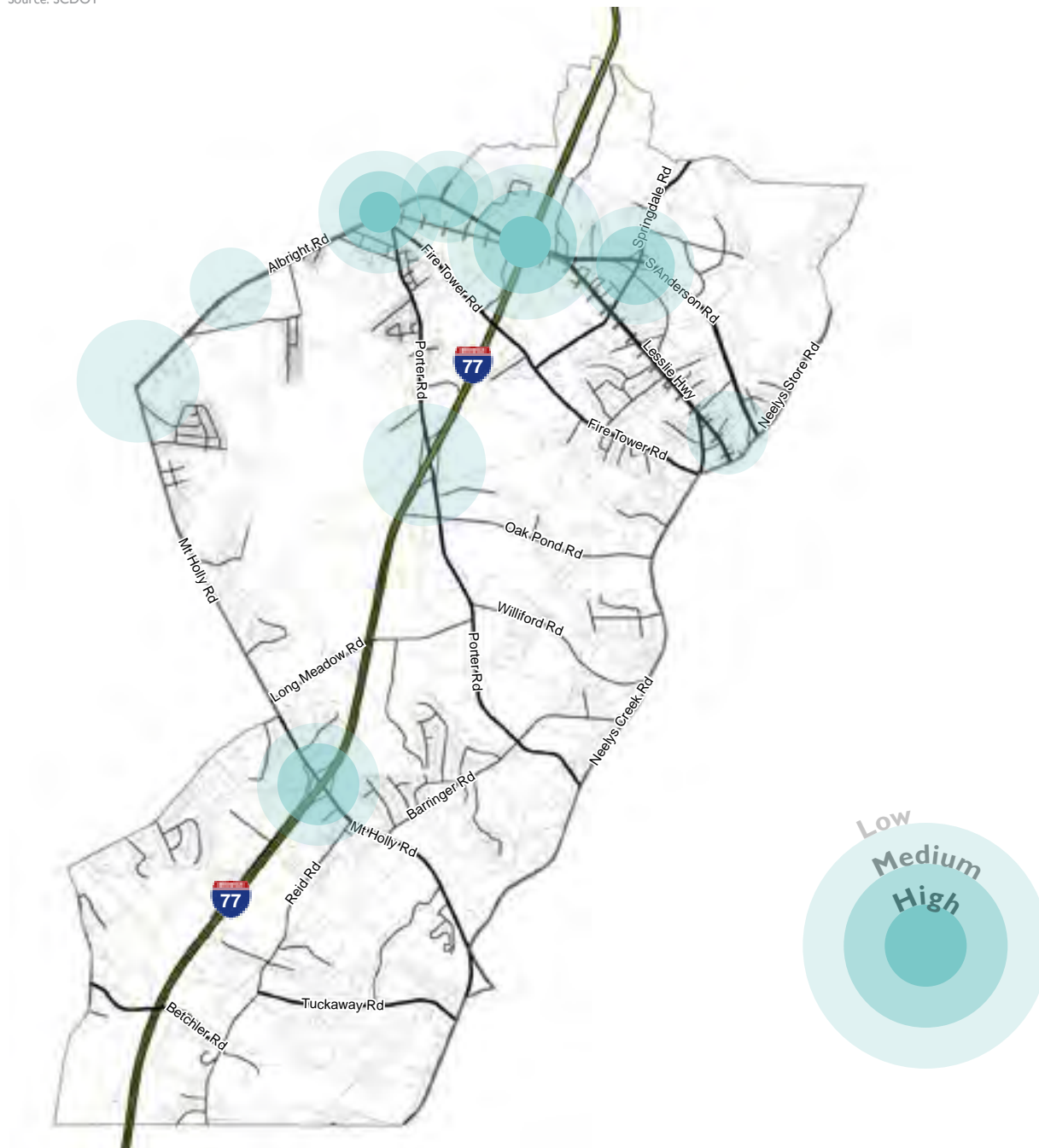
GROWTH ASSESSMENT

COLLISION DATA

Most accidents have occurred at the interchange of I-77 and South Anderson Road (Exit 77). The RFATS [2050 Long Range Transportation Plan Update](#) has federal funding identified to make safety improvements and improve traffic flow. This project is slated to begin construction in 2030. Due to the proximity of the railroad to the interchange, engineers are confined to work with the existing design versus utilizing state-of-the-art interchange design solutions. As a short-term solution, the Legacy Park East development extended the off-ramp and added a turning lane to the southbound exit until the RFATS project begins. Other accident hotspots are generally located in areas that have the highest traffic counts or worst level of service as shown on Maps B. 19 and B. 17.

▼ MAP B.18 COLLISION DATA (2020 DATA)

Source: SCDOT



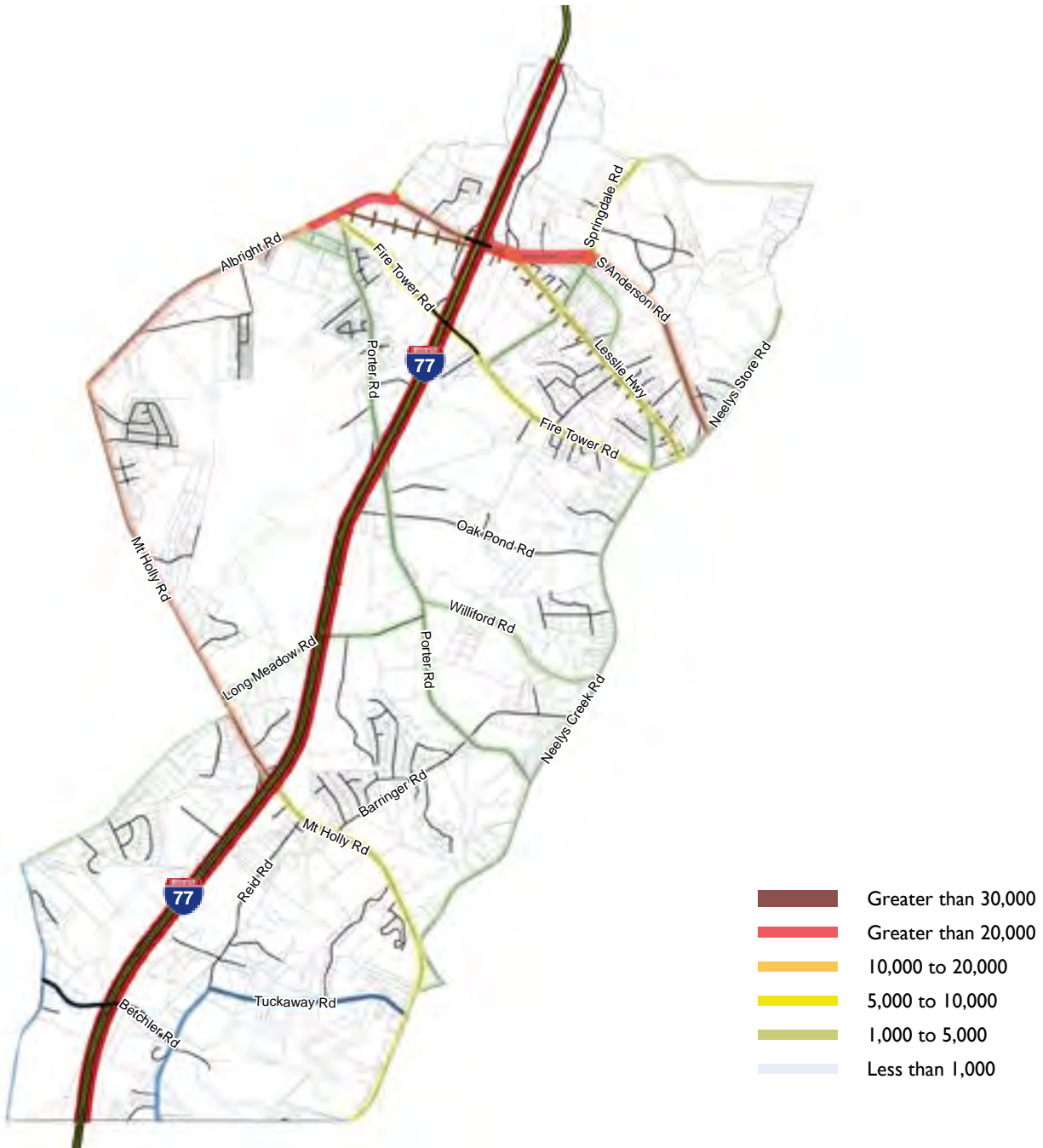
GROWTH ASSESSMENT

TRAFFIC COUNTS

With a peak of 22,200 vehicles per day (vpd) at the interstate, South Anderson Road is the fourth busiest corridor in the City behind Celanese Road, Cherry Road, and Dave Lyle Boulevard. Albright Road and Mt. Holly Road have moderate traffic counts between 10,000 and 20,000 vpd but the majority of the roadways in the corridor are less than 5,000 vpd.

▼ MAP B.19 TRAFFIC COUNTS (2020 ANNUAL AVERAGE DAILY TRAFFIC)

Source: SCDOT

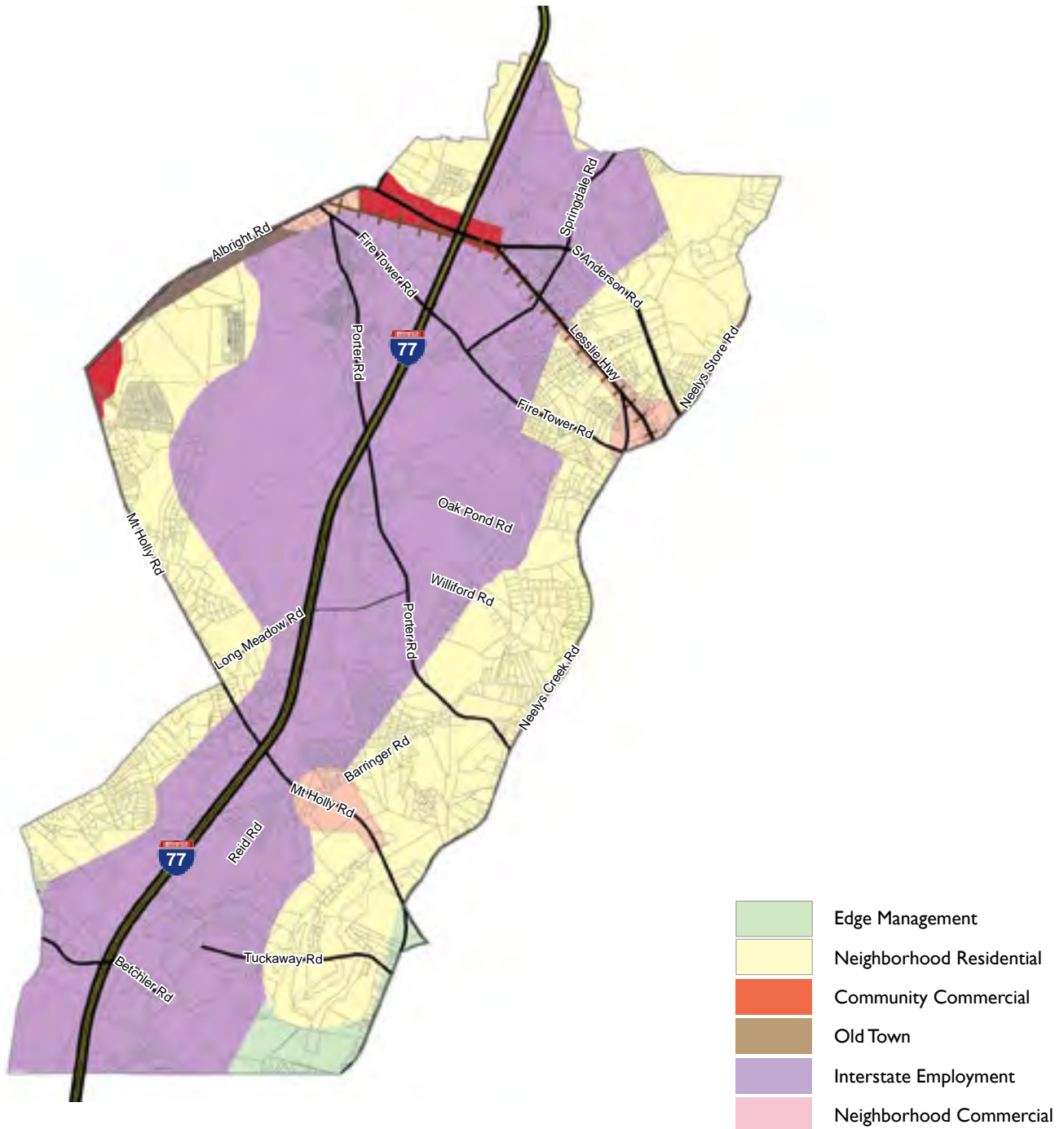


GROWTH ASSESSMENT

CITY FUTURE LAND USE MAP

The City's future land use map was updated as part of the [Comprehensive Plan Update - Rock Hill 2030](#). The map shows the intended future land use character areas and thus serves as a guide when reviewing development plans. Utilizing this map in combination with the suitability maps provides a stronger analysis and assessment regarding the appropriateness of proposed future development. The general trend of development and redevelopment has been consistent with the suggested future lands uses in the study area to date.

▼ MAP B.20 CITY FUTURE LAND USE MAP

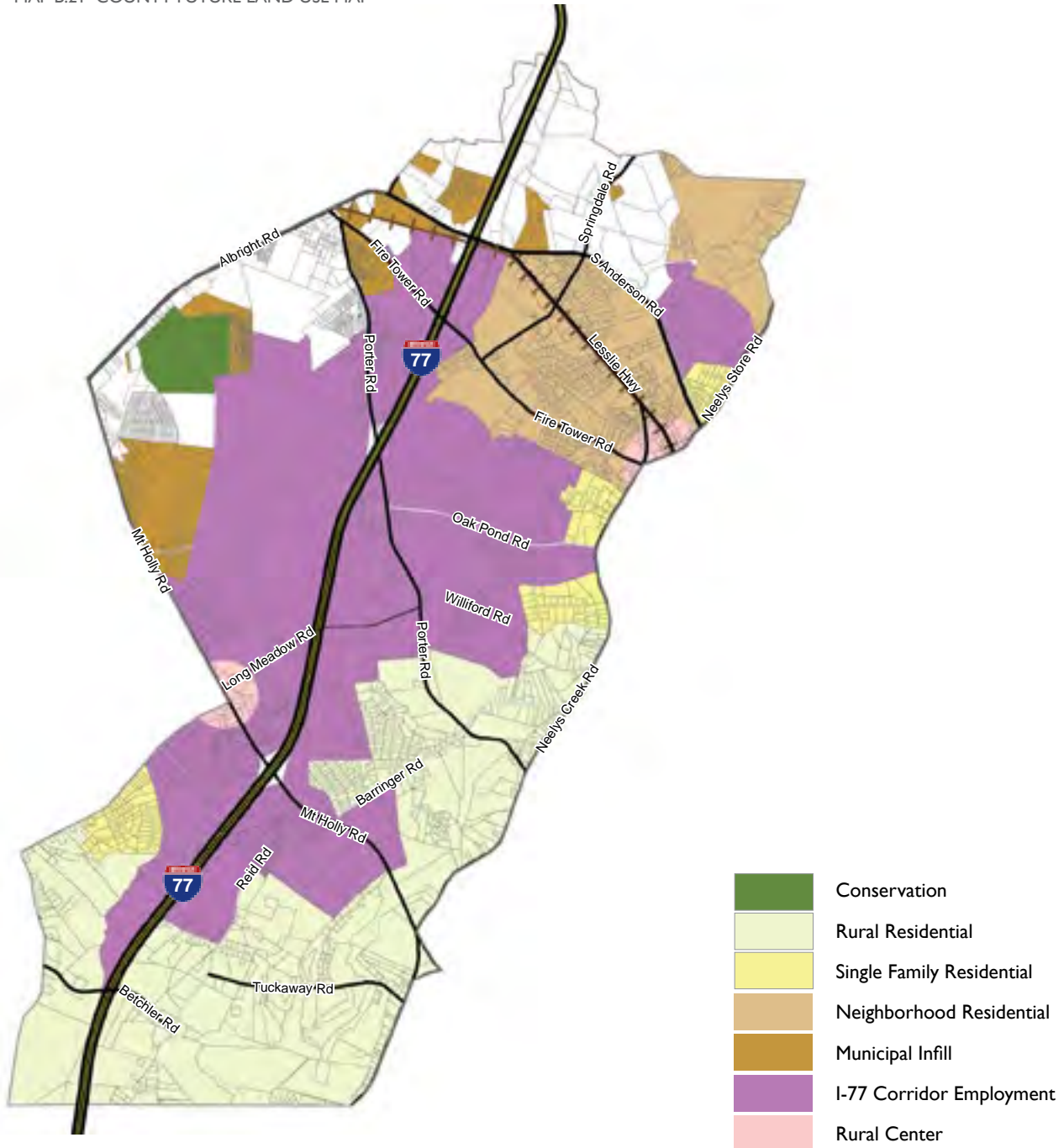


GROWTH ASSESSMENT

COUNTY FUTURE LAND USE MAP

The County's future land use map was updated as part of [York Forward 2035 Comprehensive Plan](#) and shows the intended future land uses. York County includes a future land use area called "Municipal Infill." These are unincorporated areas that are surrounded by municipal limits; the County defers future land use decisions to City plans in these areas. In general, these areas are annexed by the City when developments that require City services are proposed. Additionally, this map does not reflect the land annexed as part of the Southside Redevelopment Plan.

▼ MAP B.21 COUNTY FUTURE LAND USE MAP



GROWTH ASSESSMENT

WATER & SEWER SERVICE AGREEMENTS

The City is the sole water and sewer provider in the corridor. When the City chooses to serve properties outside of the City limits, the City requires that property owners sign a Water and/or Sewer Service Agreement. This covenant states that when the property becomes contiguous to the City limits, the owners will willingly annex into the City if desired by City Council.

▼ MAP B.22 WATER & SEWER SERVICE AGREEMENTS

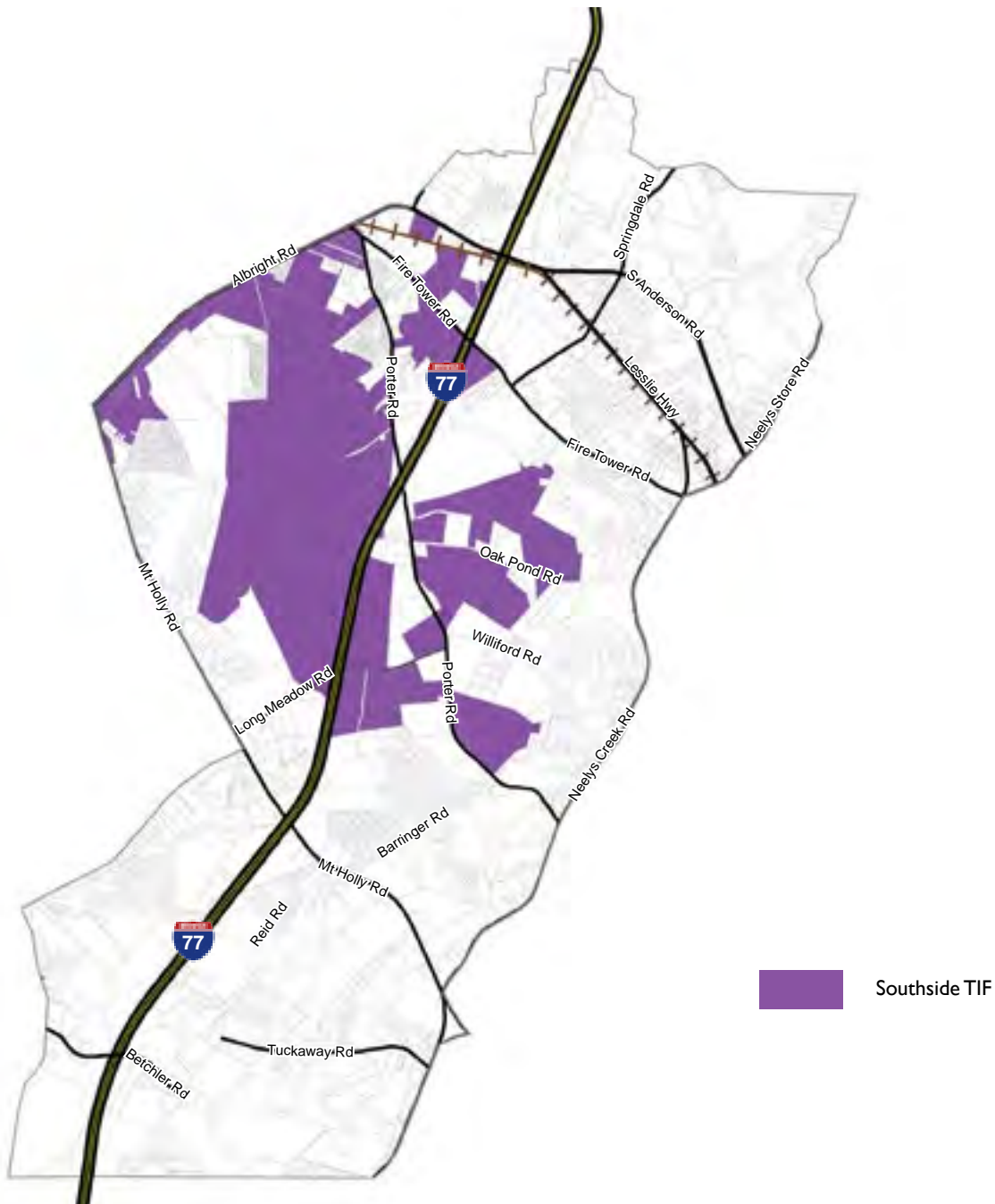


INCENTIVES

In November 2021, the City adopted the Southside Redevelopment Plan. This Plan created the Southside TIF District to help spur redevelopment in the south side of Rock Hill which has historically seen low levels of development. As part of the Plan, the City annexed over 2,400 acres of mostly undeveloped land that will help contribute tax revenue to the TIF as they develop.

Other types of incentives also exist that could be used to support development and redevelopment in the corridor, including: the Growth Management Incentive (GMI), Facade Rehabilitation Grant Program, and Tax Credits. Additional information about City, County and State incentives is available [here](#).

▼ MAP B.23 INCENTIVES IMPACTING THE CORRIDOR

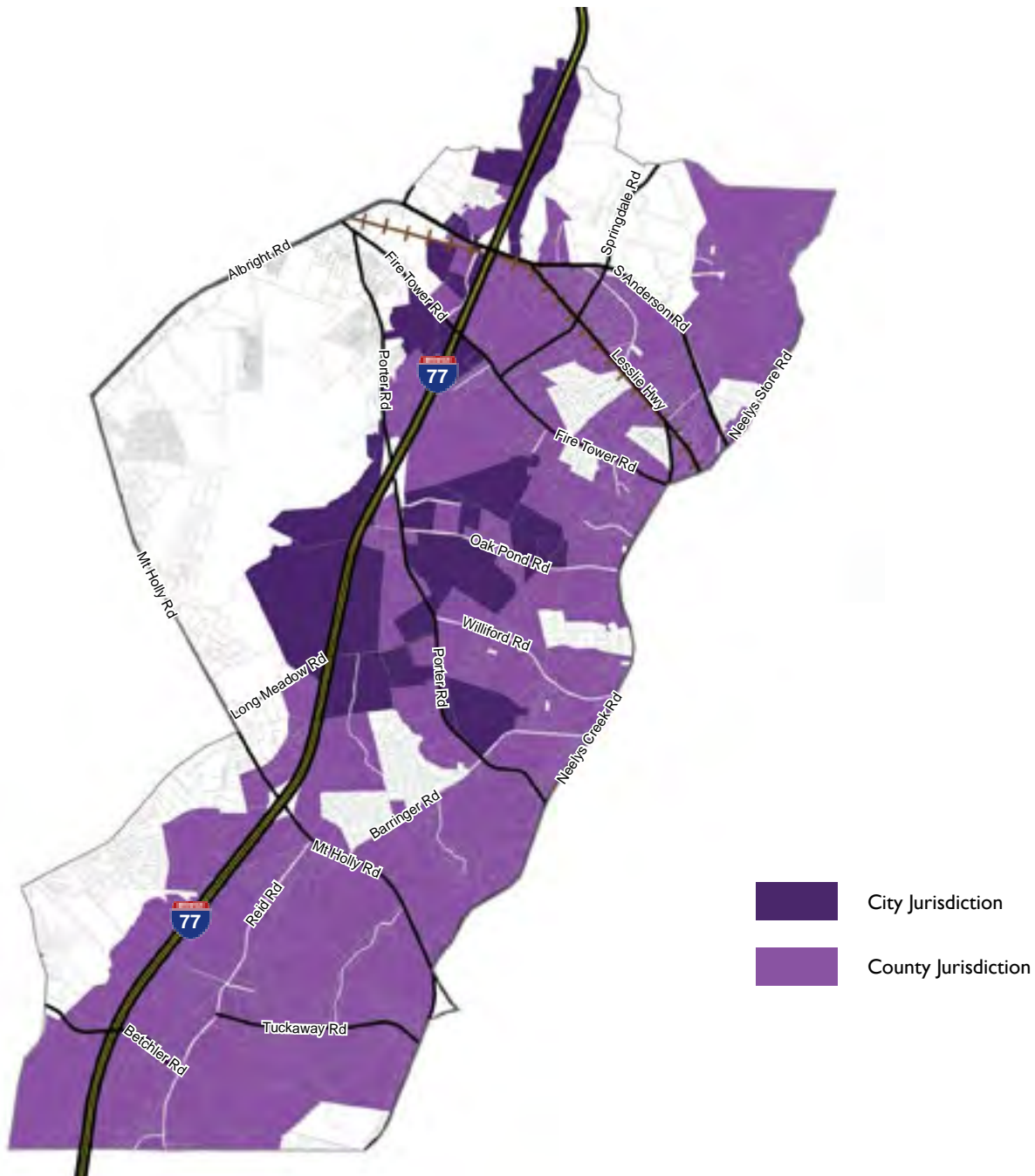


GROWTH ASSESSMENT

DESIGN OVERLAY DISTRICT & STANDARDS

In October 2021, the City adopted a [design overlay district](#) along the I-77 Corridor. This overlay district imposes additional design standards for new development and redevelopment projects. The goal of the overlay district is to ensure that future development and redevelopment projects have high quality design along the high visibility corridor. These design standards will help to ensure a consistent character and quality of development within the area, protecting private and public investments.

▼ MAP B.24 DESIGN OVERLAY DISTRICT WITHIN STUDY AREA





SOUTH CAROLINA COMMERCE CORRIDOR

2022-2035 STUDY

WINTER 2023

