

ROCK HILL – FORT MILL AREA TRANSPORTATION STUDY (RFATS)

COLLECTOR ROAD PLAN

APRIL 25, 2019

PRESENTERS

- **David Hooper, AICP**

- **RFATS Administrator**

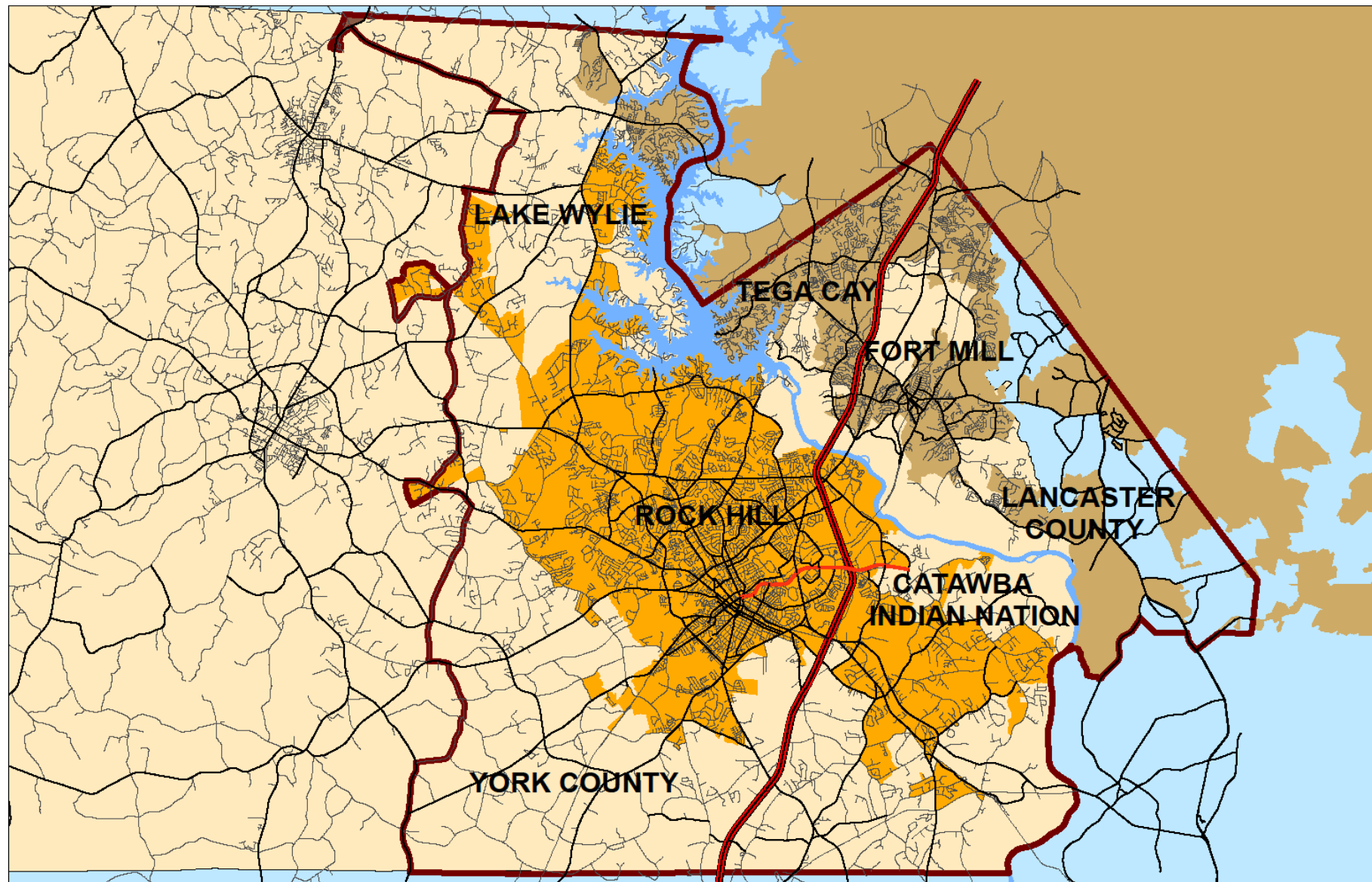
- **Roger Henderson, AICP, P.E.**

- **Director of Planning, RKA**

AGENDA

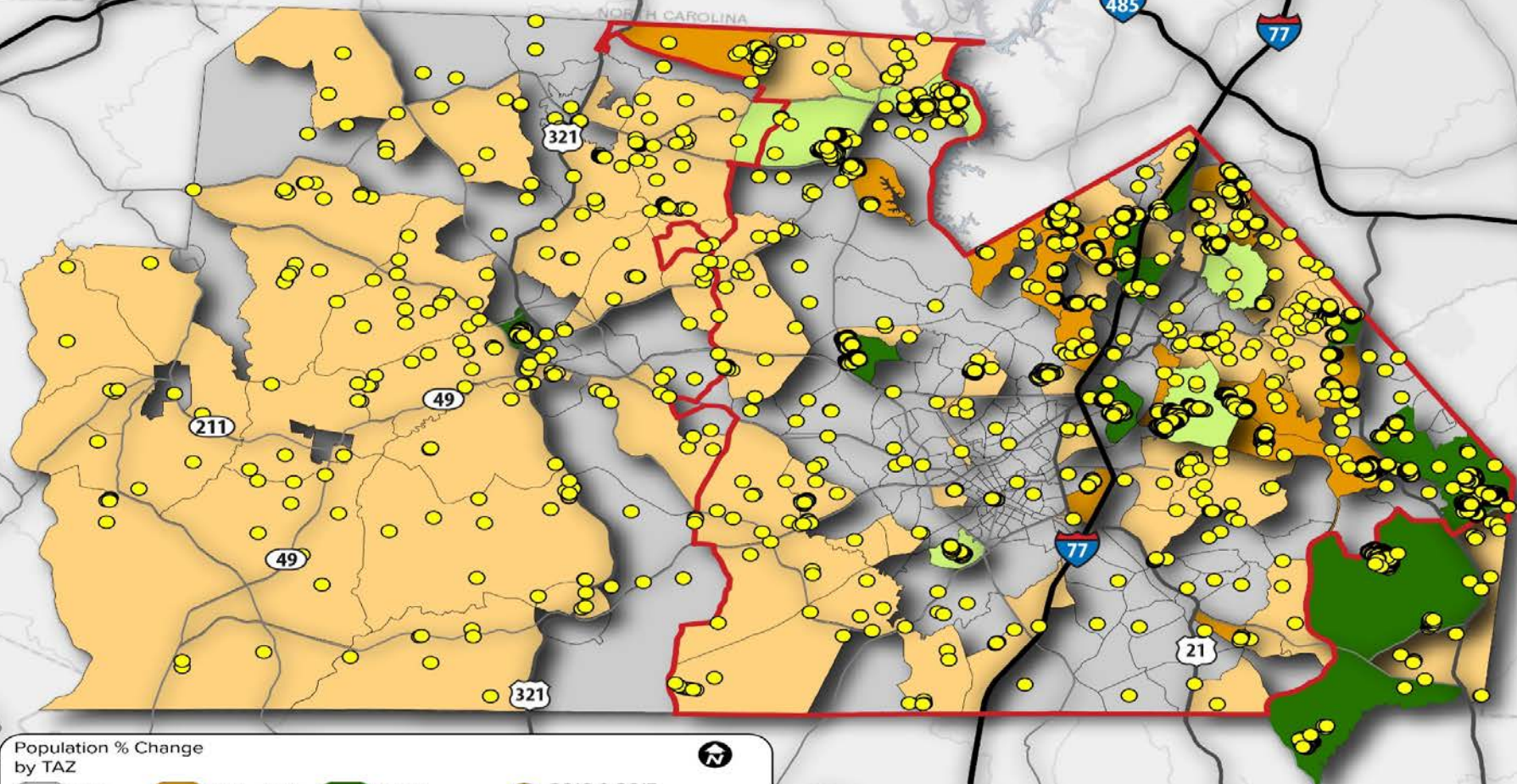
- **TRANSPORTATION NETWORK**
- **LAND USE / TRANSPORTATION**
- **NETWORK CONNECTIVITY**
- **COLLECTOR STREET PLAN**

RFATS STUDY AREA



SOCIO-ECONOMIC DATA: POPULATION

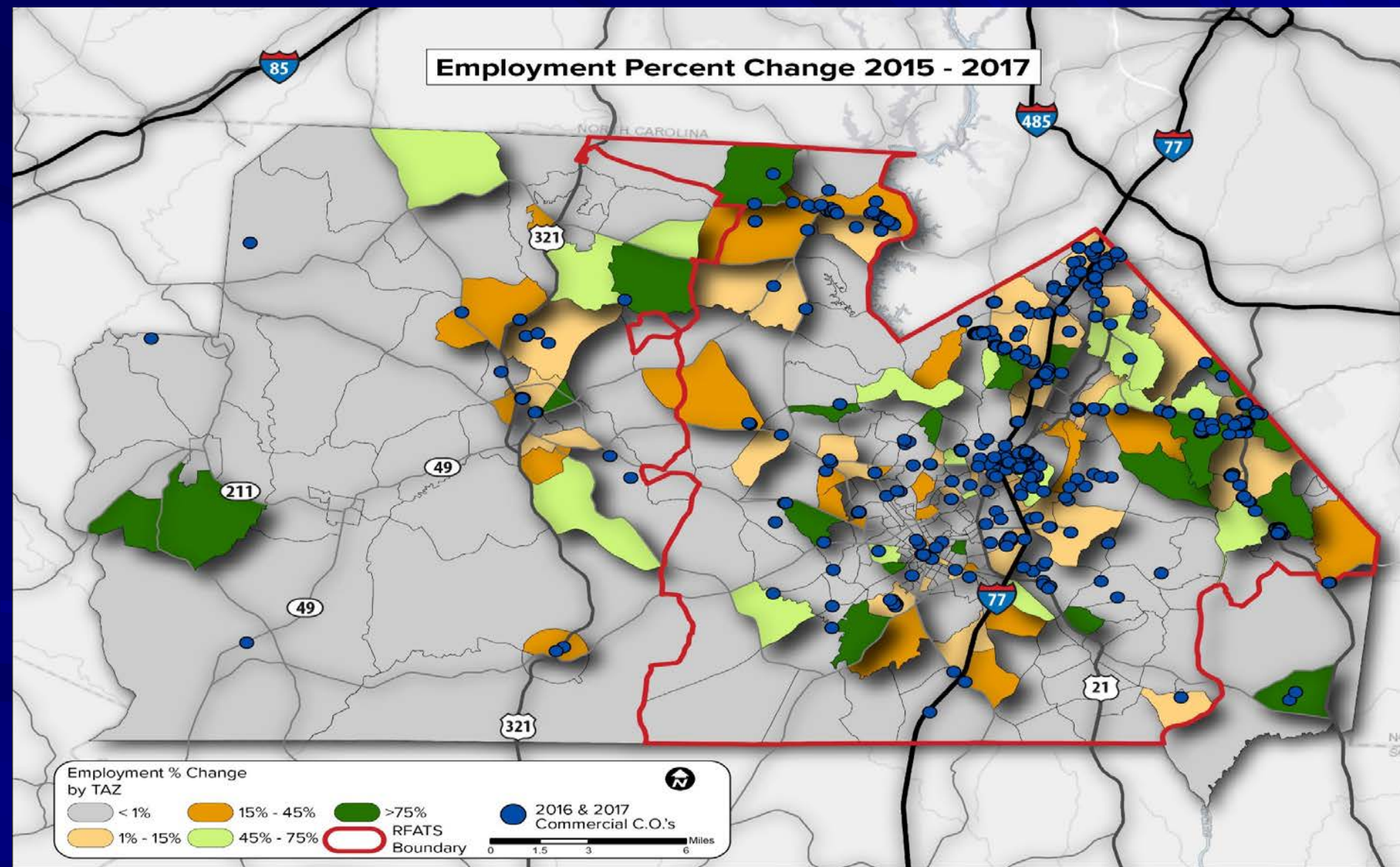
Population Percent Change 2015 - 2017



Population % Change
by TAZ



SOCIO-ECONOMIC DATA: EMPLOYMENT

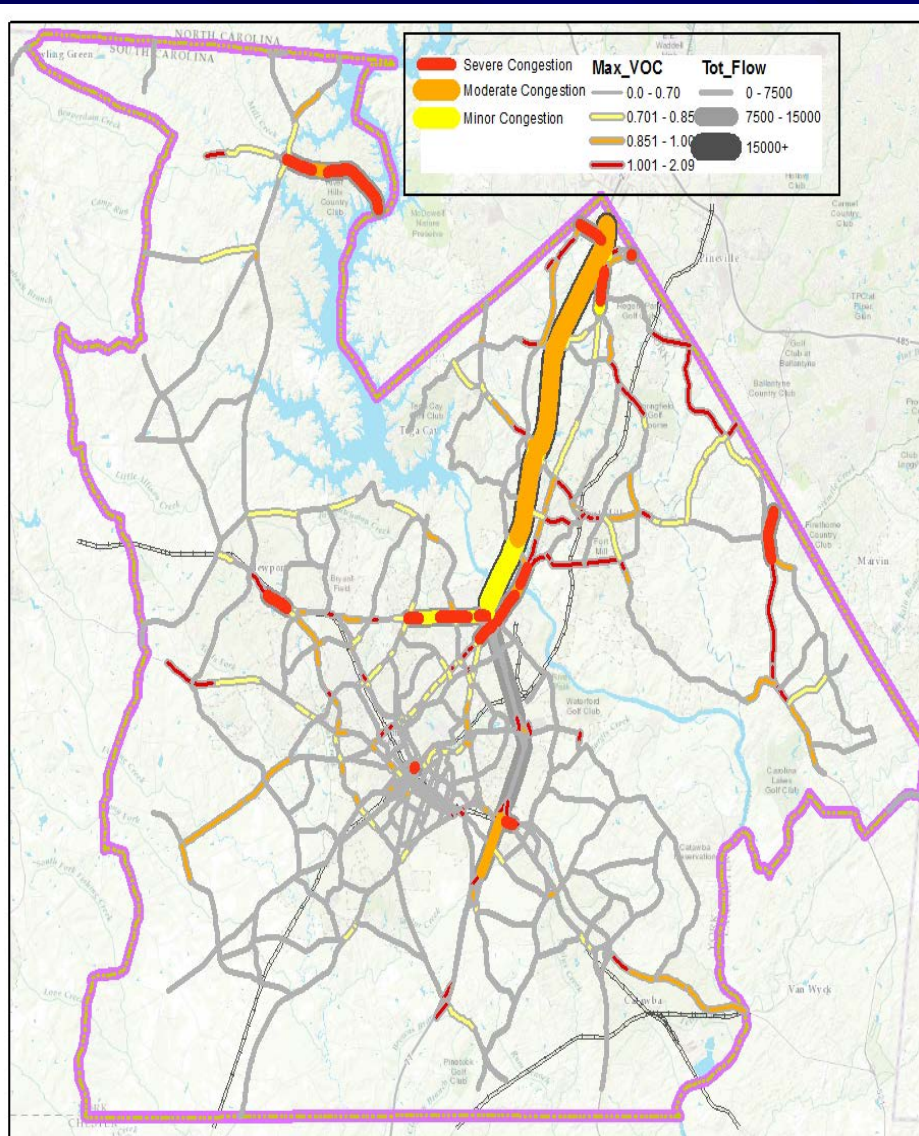


Network Analysis: E+C Projects

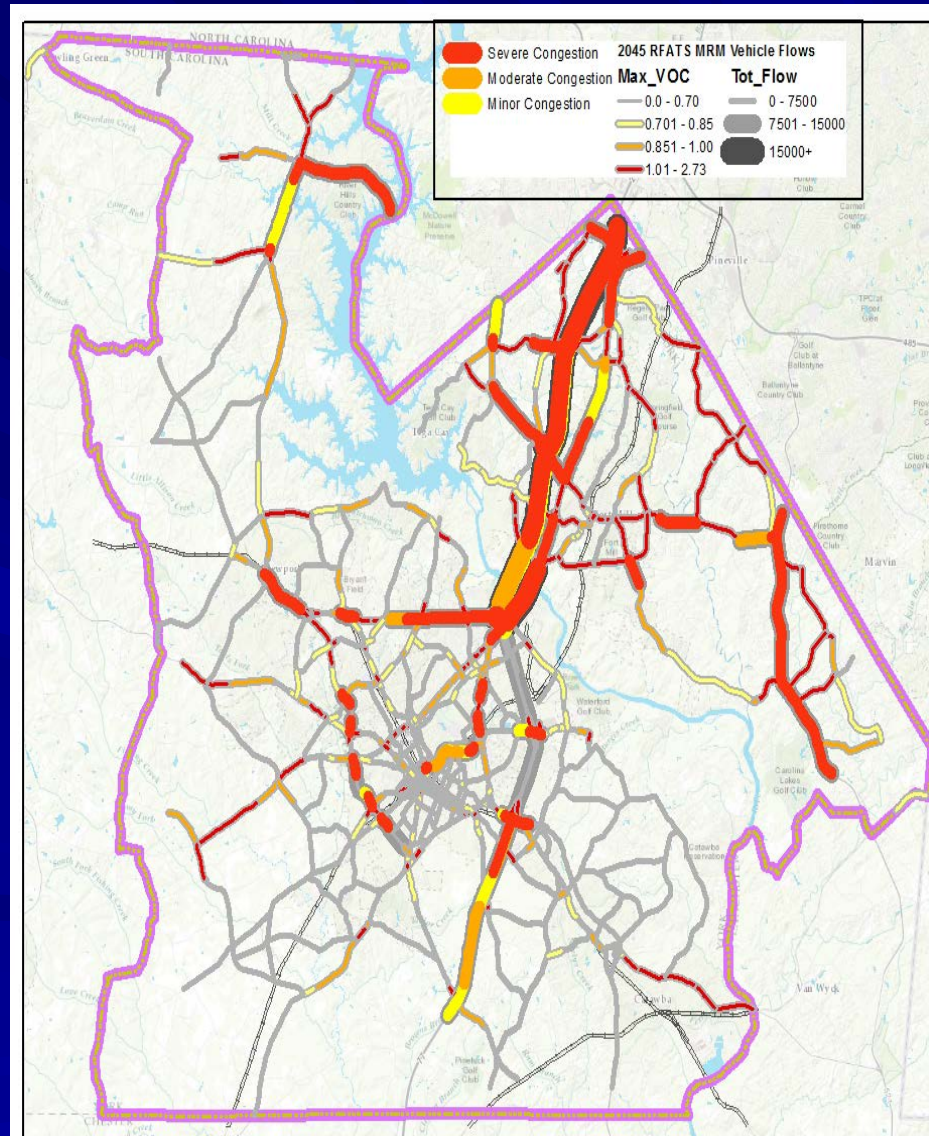
PROJECT	LIMITS	TYPE	E+C Projects	fund source
Cel-River / Red River	0.1 miles north of S-645 to SC 122 (Dave Lyle Blvd)	Widen to 5 lanes	yes	Guidehare/P4
Fort Mill; SC 51	US 21 to North Carolina State Line	Widen to 5-lanes	yes	P3
Rock Hill; Mt. Gallant Rd S-195	SC 161 to Twin Lakes Rd	Widen to 3-lanes	yes	P3
Ft Mill; Springhill Farm Rd	US 21 to SC 51	Widen to 5-lanes	yes	P3
Fort Mill; SC 160	Fort Mill Northern Bypass to County Line	Widen to 3-lanes	yes	P3
SC 557	Kingsbury to SC 49	Widen to 5 lanes	yes	P3
Fort Mill; US 21	Sutton Road to Northern Fort Mill Bypass	Widen to 5-lanes	yes	P4
Fort Mill; US 21	Northern Fort Mill Bypass to SC 51	Widen to 5-lanes	yes	P3
Rock Hill; Ebenezer Rd	SC 161 to Old Point Rd	Widen to 3-lanes	yes	P4
Fort Mill; Sutton Rd S-49	Harris Rd to SC 160	Widen to 3-lanes	yes	P4
S-133 (Pole Branch Rd)/SC274/279	SC 274 to Pole Branch Rd	Widen to 5-lanes	yes	P3
SC 322 (McConnells Hwy)	Heckle to Falls	Widen to 3 lanes	yes	P3
SC 72	SC 901 to Rambo Rd	Widen to 3 lanes	yes	P3
SC 160	Gold Hill to State Line	Widen to 5 lanes	yes	P3
Fort Mill; Southern Bypass	SC 160 to Holbrook	Widen to 5 lane	yes	P4
Fort Mill; Sutton Rd S-49	Harris Rd to US 21	Widen to 3-lanes	yes	P4
Cel-River / Red River	US 21 to 0.1 miles north of S-645	Widen to 5 lanes	yes	P3
Tega Cay Connector	Gold Hill Road to Stonecrest	2 lanes on new location	yes	P2
Cel-River Road	SC 122 to US 21 (south of Dave Lyle towards Lancaster)	Widen to 3-lanes	yes	P4
SC 160	Rosemont Drive to Fort Mill N. Bypass	widen to 5-lanes	yes	Guideshare
SC 160 Widening	US 21 to Sutton Road	Widen to 6 lanes	yes	P4
S-133 (Pole Branch Rd)/SC274/279	Pole Branch Rd to NC line (NC 279 con)	Widen to 3-lanes	yes	P3
Fort Mill; Southern Bypass	Holbrook to US 21 Bus	Widen to 5 lane	yes	P4
Ebinport Rd	Cherry to India Hook	Widen to 3 lanes	yes	P4
Zoar Road extension	SC 160 to Gold Hill	New 2 lane	yes	P4
Riverview Road	Celenase to Eden Terrace	Widen to 3 lanes	yes	P3
Mt Gallant Rd	Anderson to Dave Lyle	Widen to 3 lanes	yes	P3

TRANSPORTATION NETWORK

2015 Model



2045 Model



TRANSPORTATION NETWORK

■ Network Layers

– Arterial Roads

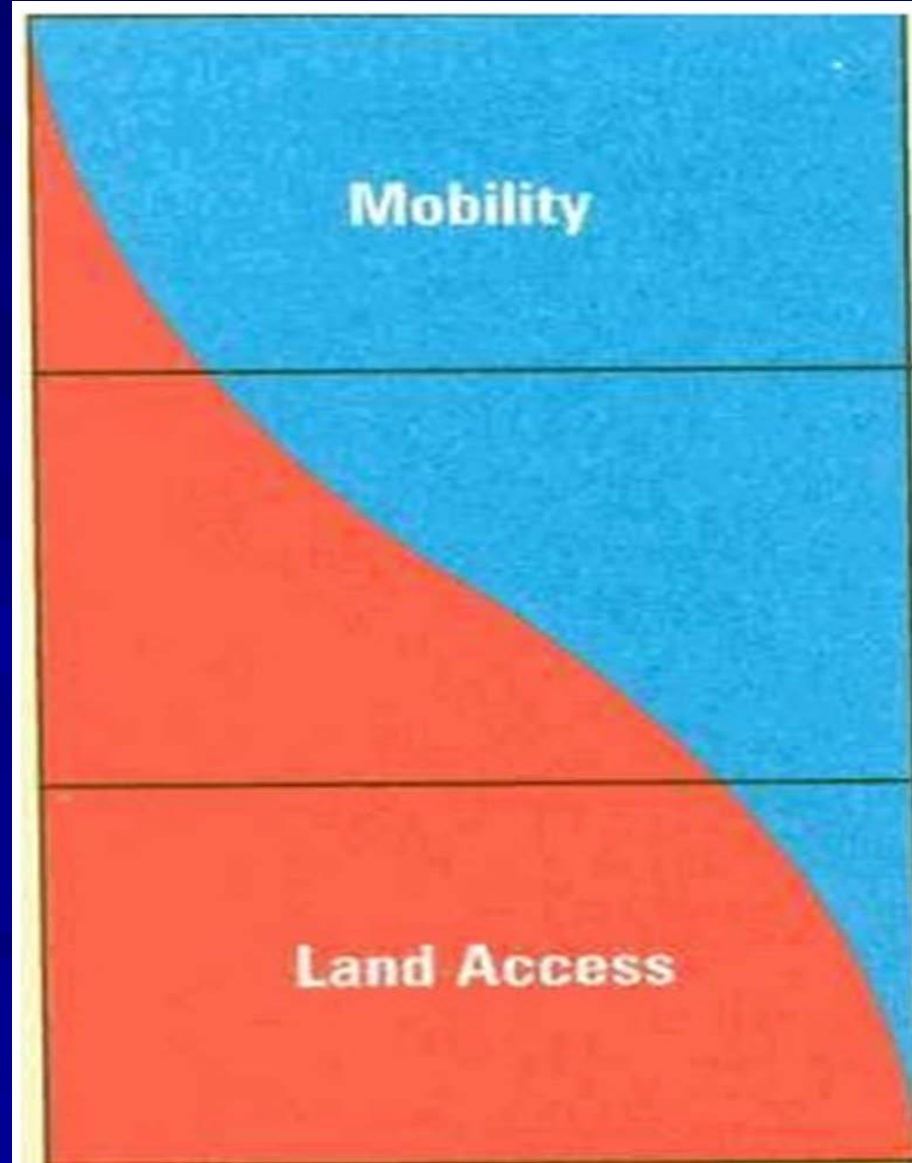
- Higher Volumes
- Longer Trip Lengths
- Interstate Access

– Collector Roads

- Lower Volume
- Shorter Trips

– Local Roads

- High Degree of Access
- Lowest Level of Mobility



AGENDA

- **TRANSPORTATION NETWORK**
- **LAND USE / TRANSPORTATION**
- **NETWORK CONNECTIVITY**
- **COLLECTOR STREET PLAN**

LAND USE / TRANSPORTATION

■ Land Use Patterns

■ Undeveloped Parcels

■ Development Review Process

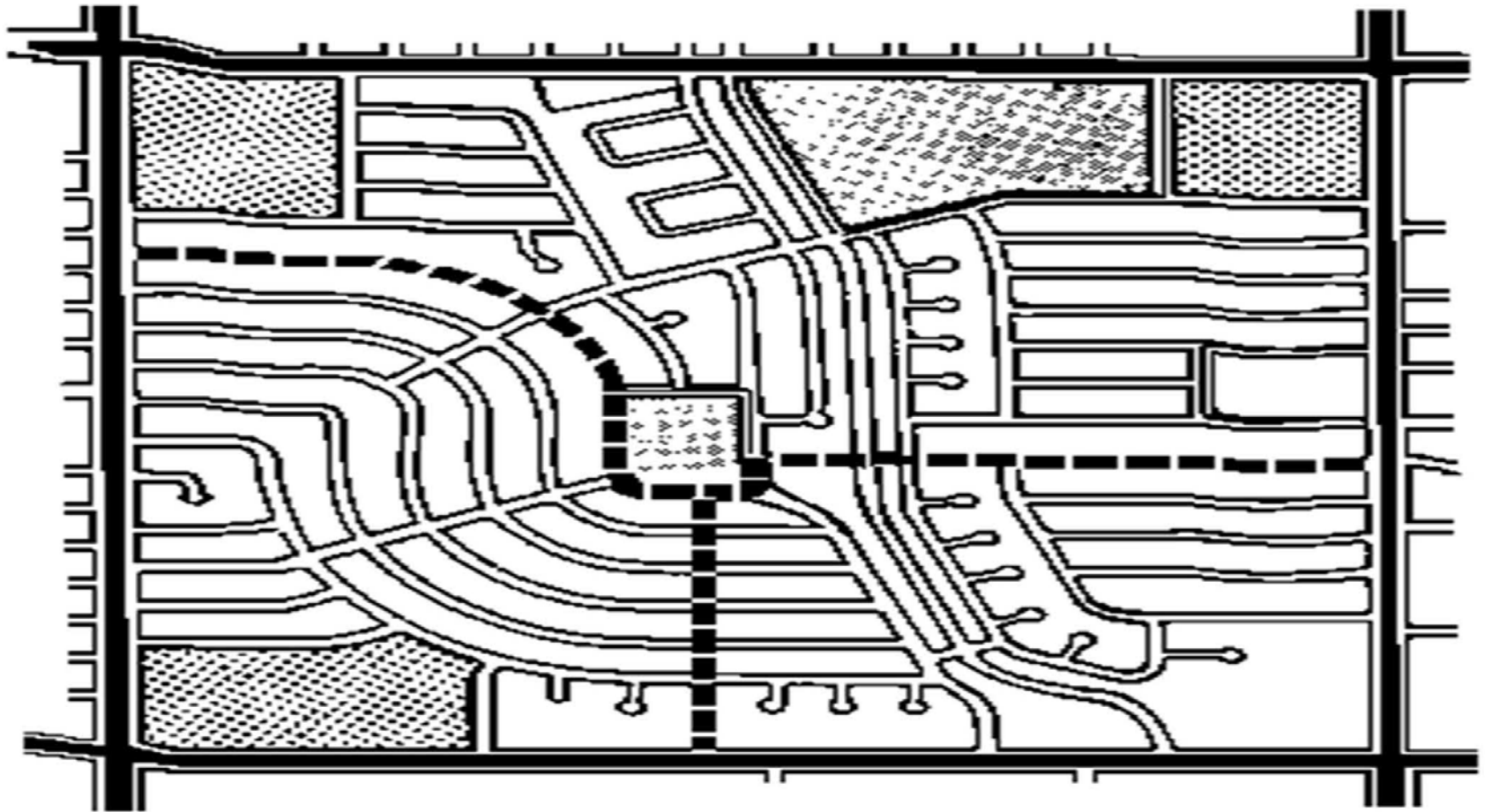
■ Conditions & Priorities

■ Transportation Network

■ Collector Street System

**Reduce Long Term Traffic Congestion
as Future Development Occurs**

LAND USE / TRANSPORTATION



Legend

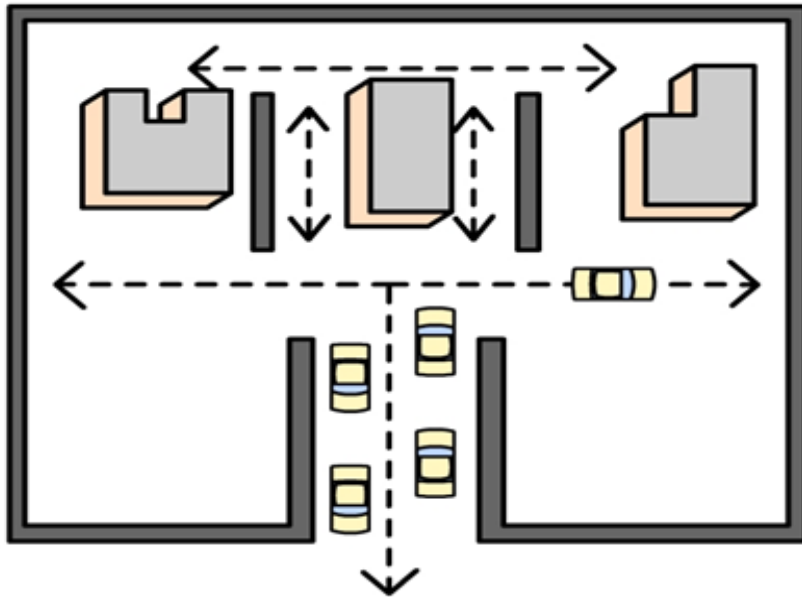
— Arterial street
••• Commercial

- - - Collector street
Public

LAND USE / TRANSPORTATION

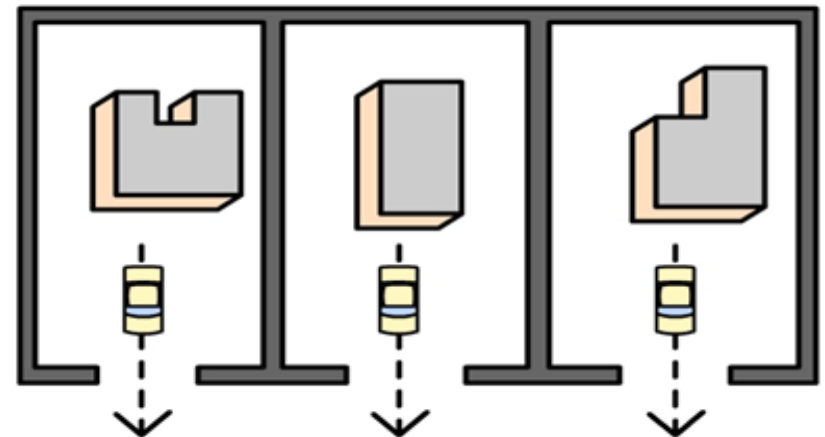
LINK ADJACENT LAND USES

PROMOTE



Cross Access Agreements
Shared Driveways
Interconnected Parking Lots
On - Site Circulation

AVOID

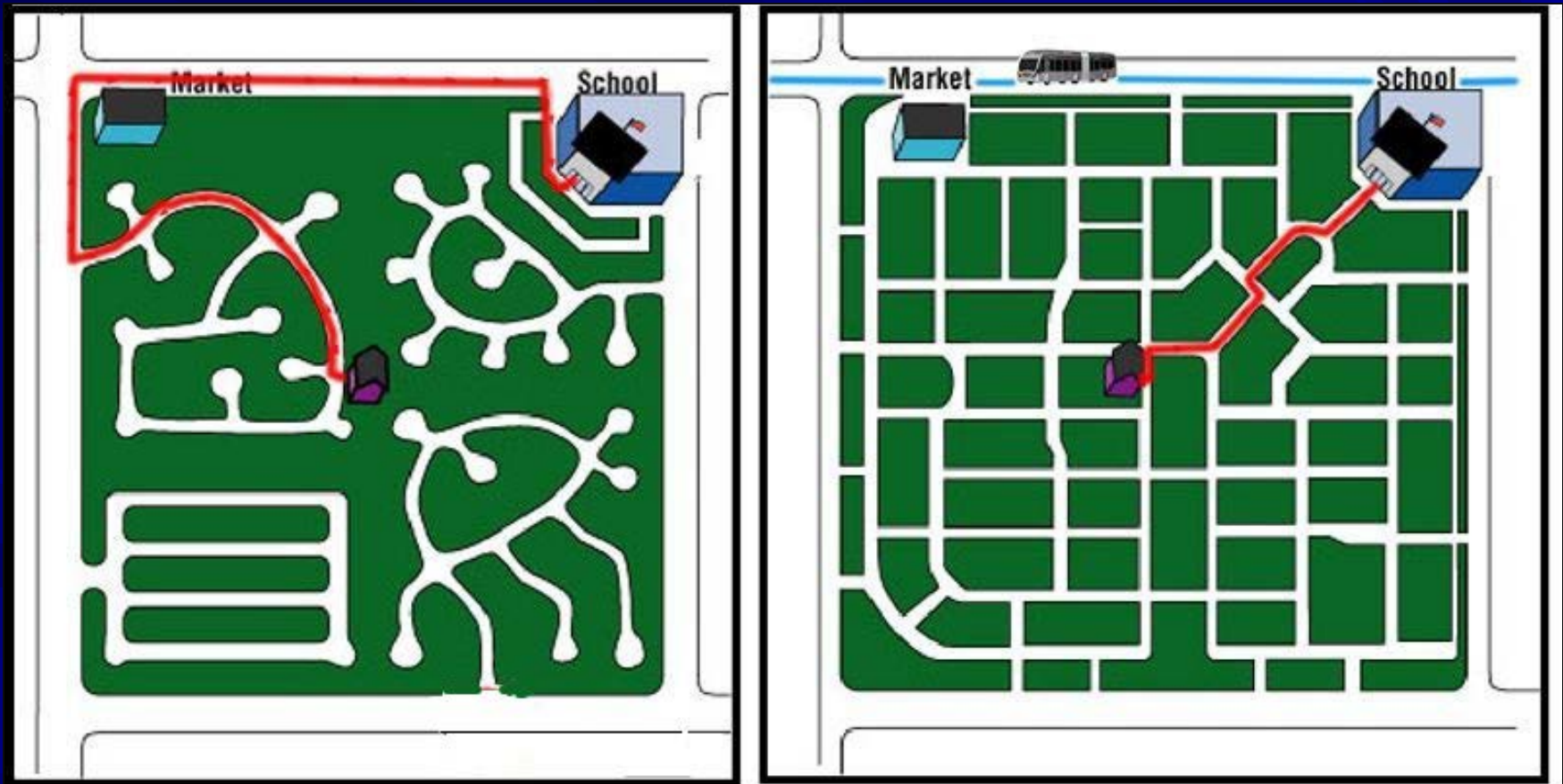


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- **TRANSPORTATION NETWORK**
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NETWORK CONNECTIVITY

- **Meeting Multiple Goals:** benefits traffic flow, bicycle and pedestrian safety, and overall network efficiency and functionality for all modes of travel.



NETWORK CONNECTIVITY

- **Lessen Reliance on Arterials**

- **Short Trip Congestion**

- **Reduce Travel Times**

- **Air Quality**

- **Mixed Use Developments**

- **Emergency Vehicle Response Times**

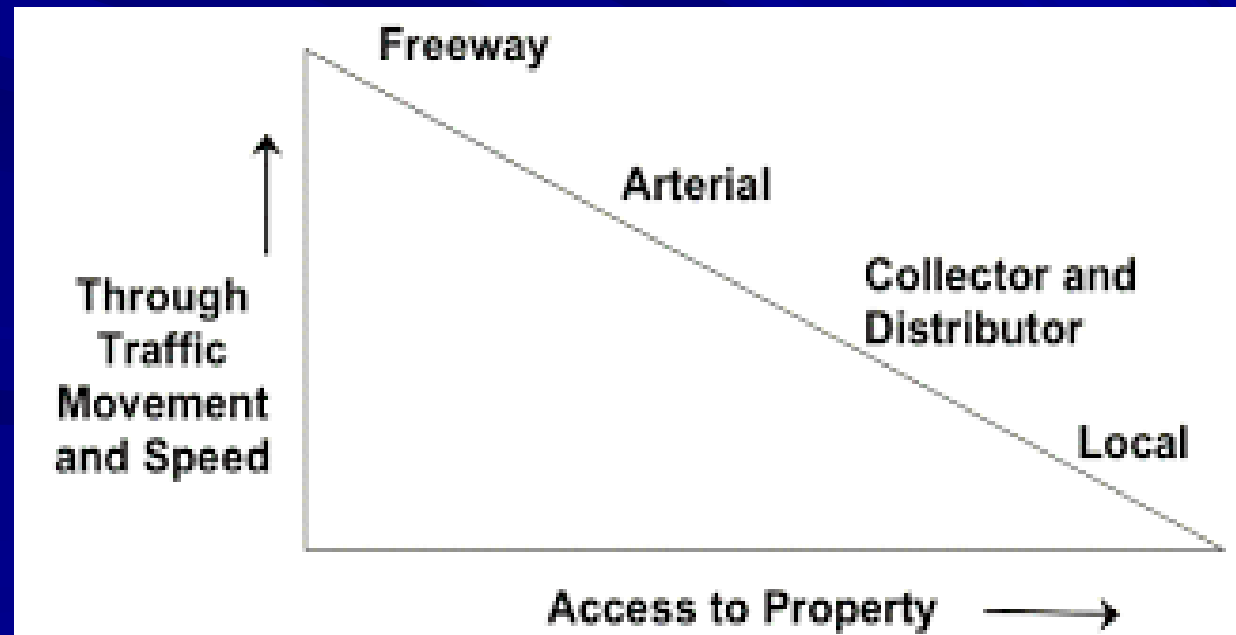
- **Connecting Complimentary Land Uses**

AGENDA

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COLLECTOR STREET PLAN

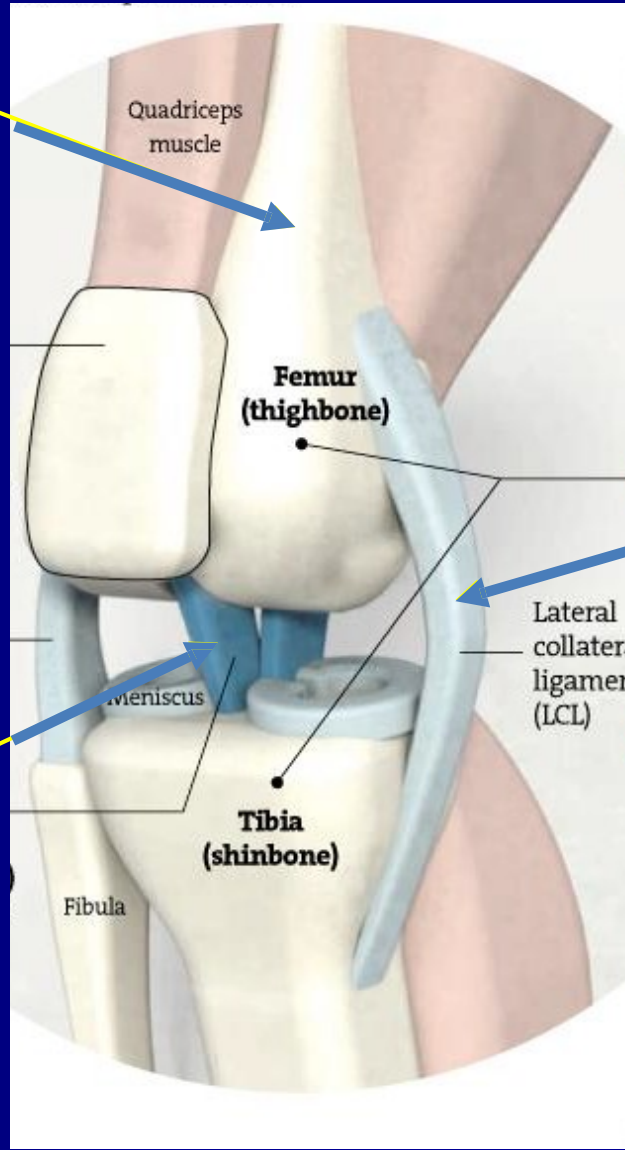
- Developing a more complete functional network of connecting local roads to minor and major thoroughfares to reduce long term traffic congestion as additional development occurs.

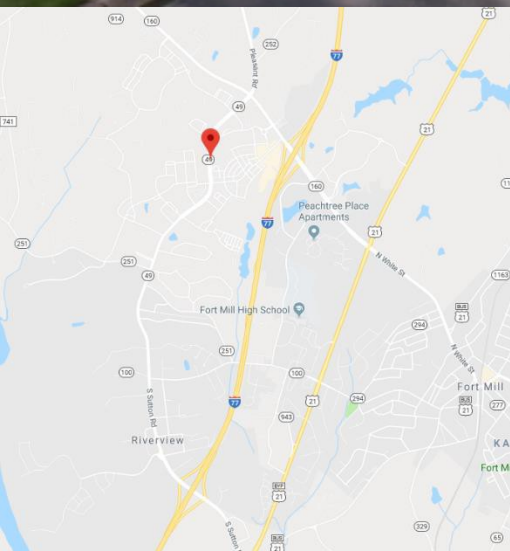


Arterial
(bones)

Collector
(ligaments)

Local
(tissue,
meniscus)

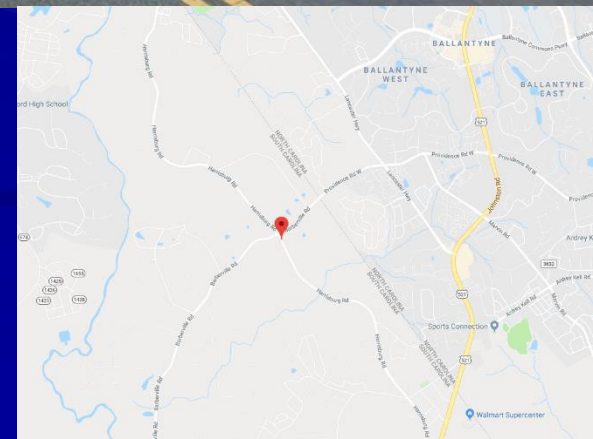




Sutton Road – Fort Mill, SC



Harrisburg Road – Lancaster County

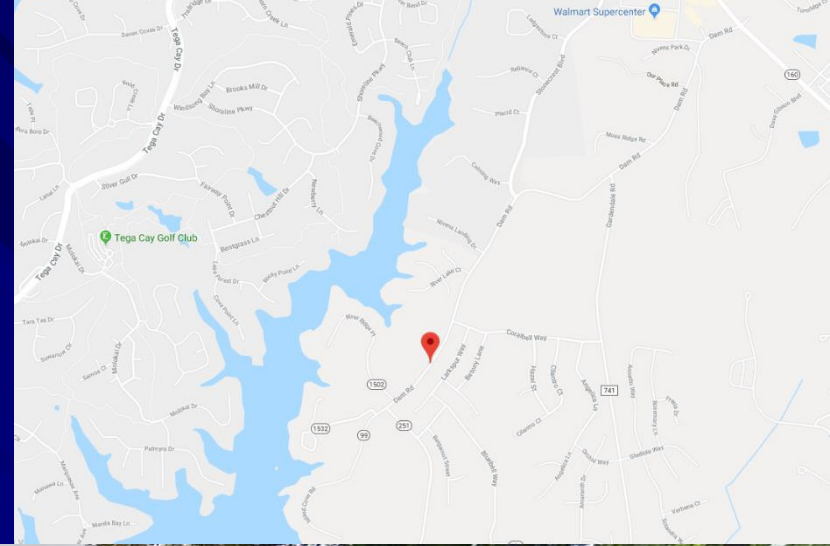




Twin Lakes Road – Rock Hill, SC



Dam Road – Tega Cay, SC

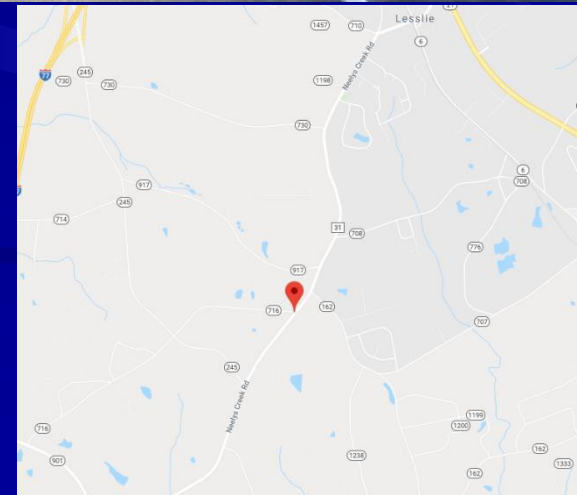




Reservation Road & George Dunn Road – Catawba Indian Nation



Neelys Creek Road – York County

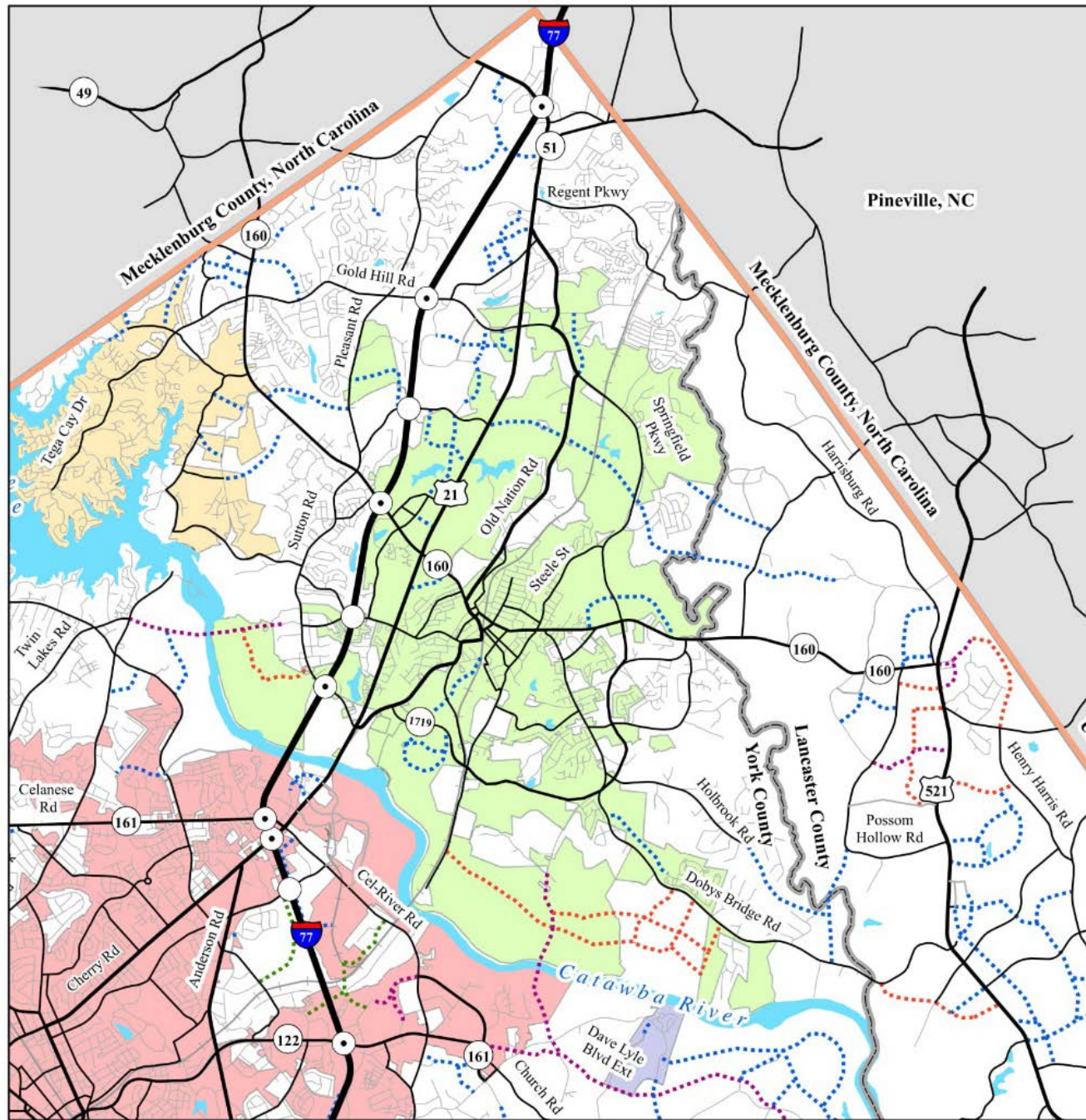


COLLECTOR STREET PLAN

■ Plan Development

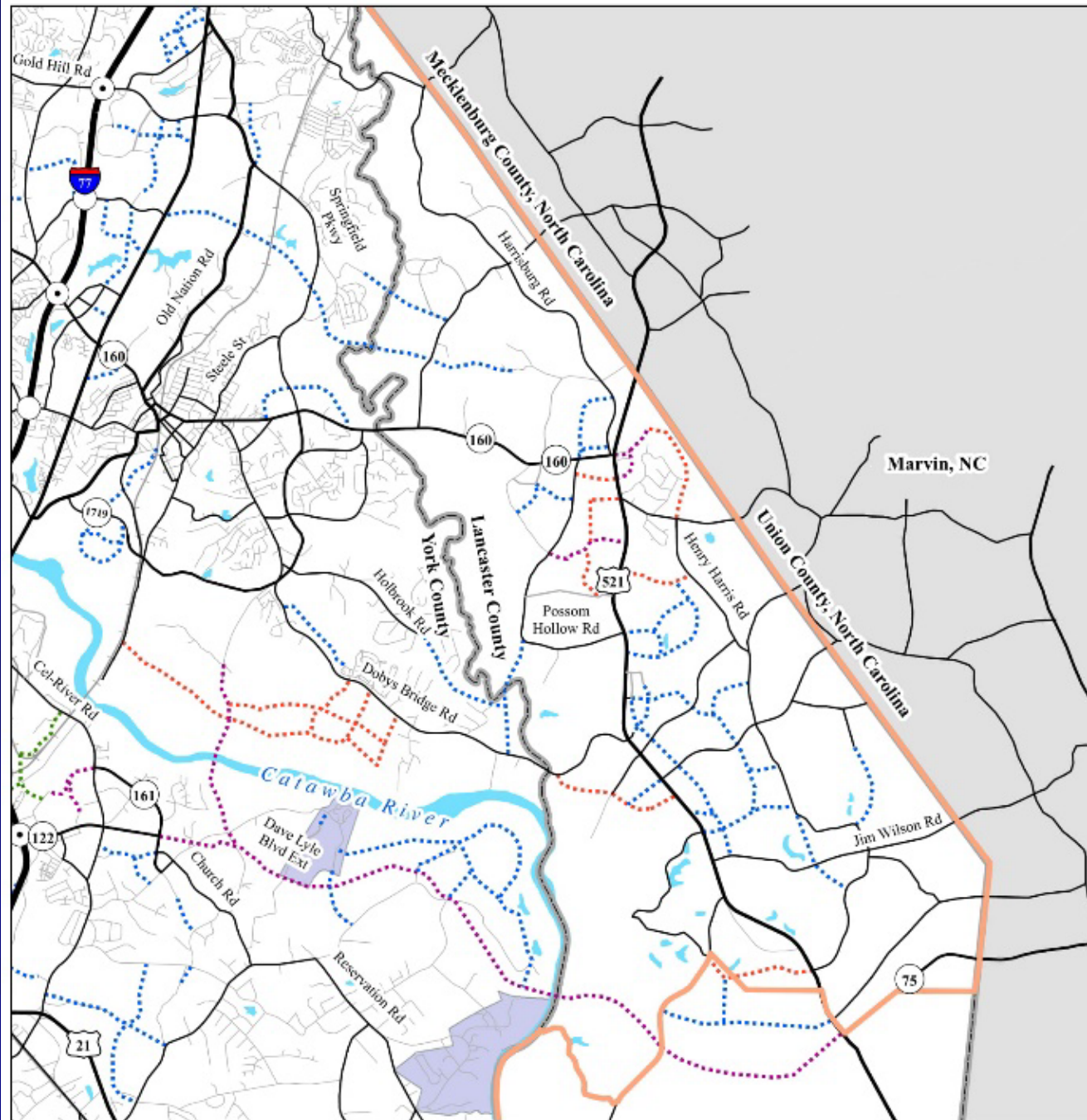
- Thorough Review of Existing Plans
- Evaluation of Regional Modeling Data & Assumptions
- Identified Environmental Features and Conflicts
- Conducted Field Visits
- Series of Public Outreach Meetings
- Prepared Network Maps reflecting
 - Existing
 - Planned
 - Potential Collector Streets

****Important to remember, illustrative links
do not represent specific roadway alignments****



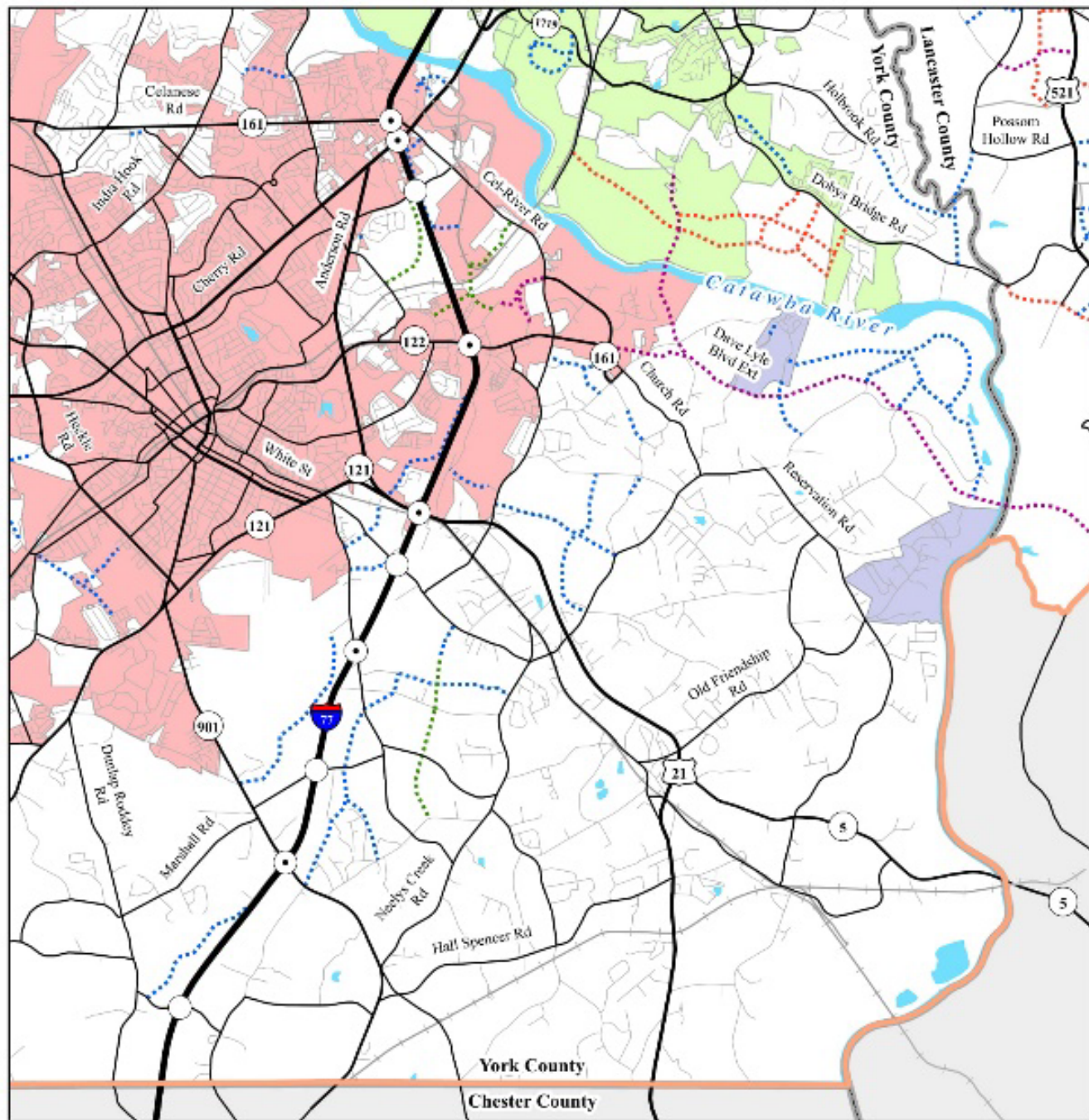
RFATS Collector Street Plan

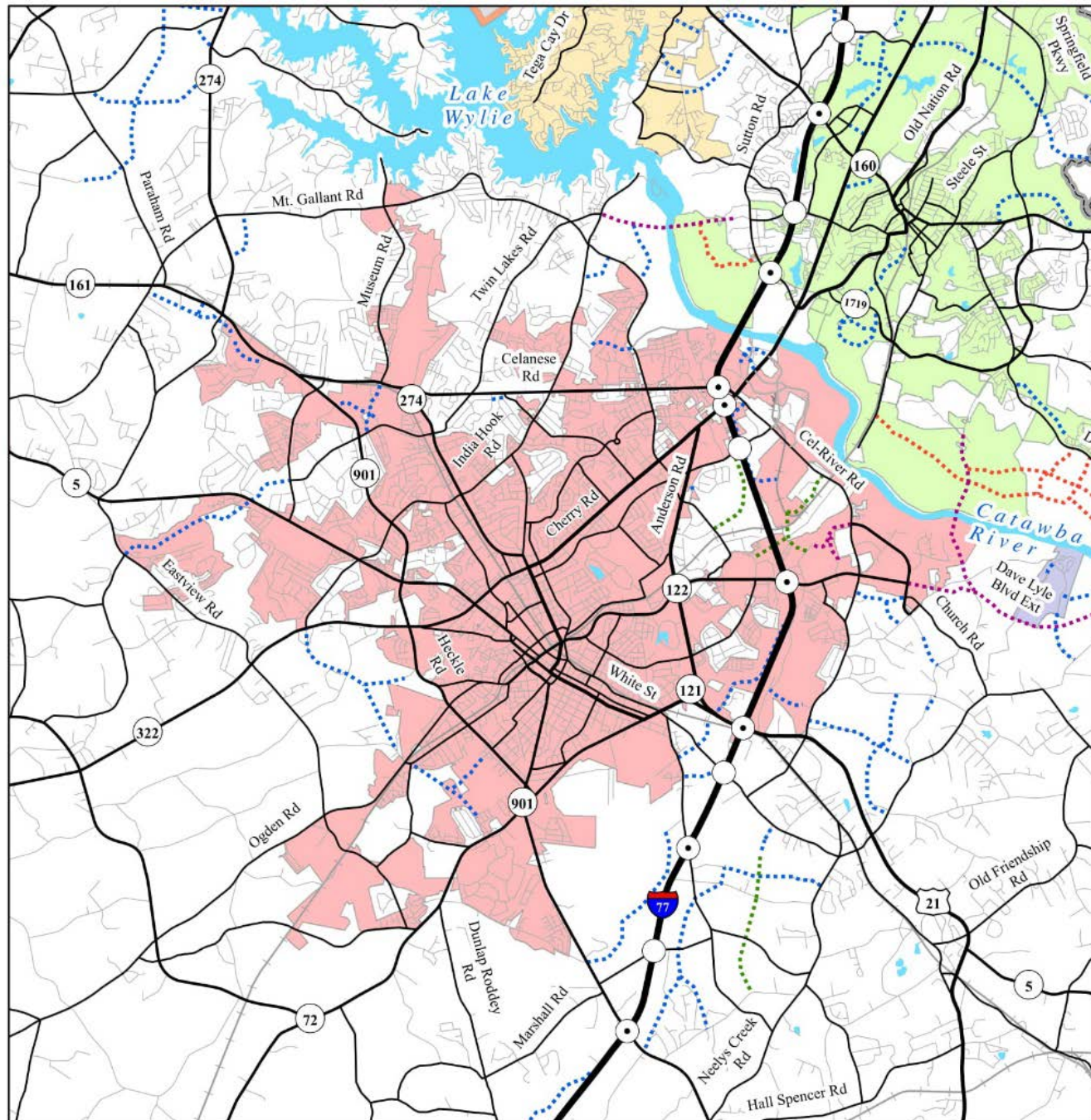
Fort Mill and Tega Cay, SC



RFATS Collector Street Plan

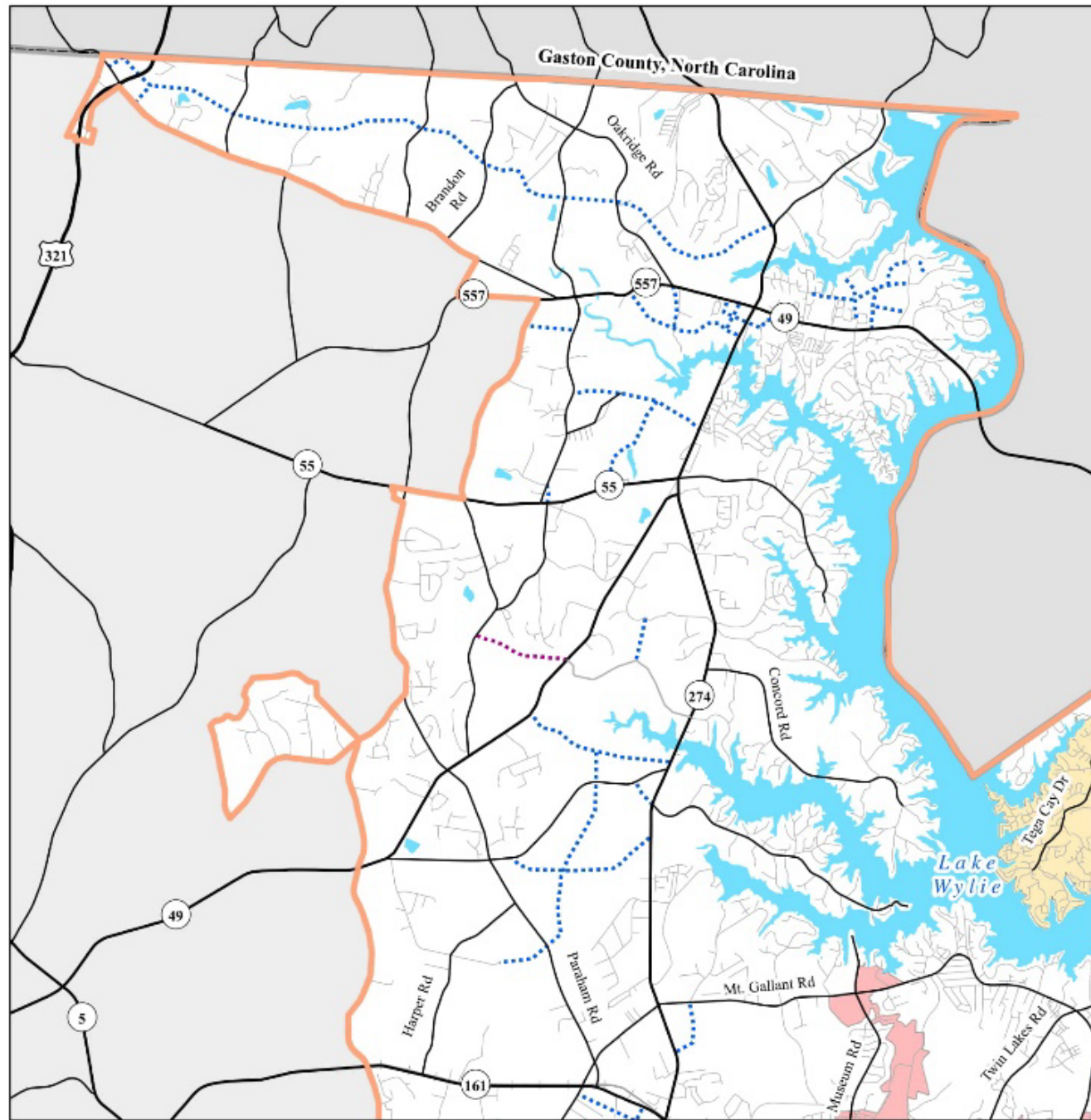
Lancaster County, SC





RFATS Collector Street Plan

Rock Hill, SC

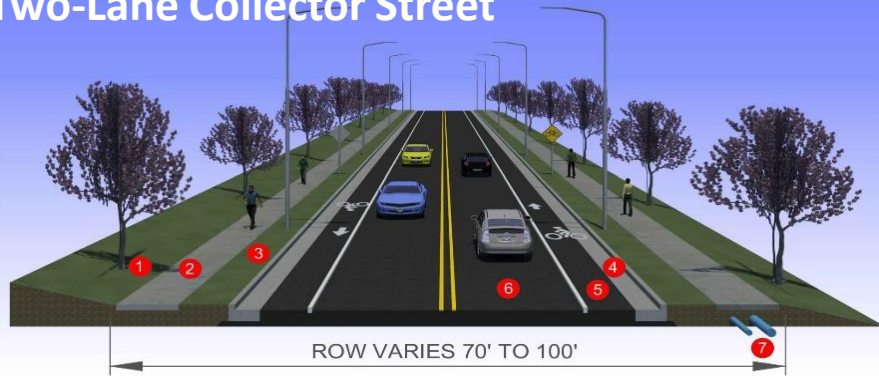


RFATS Collector Street Plan

Lake Wylie, SC

TYPICAL SECTIONS

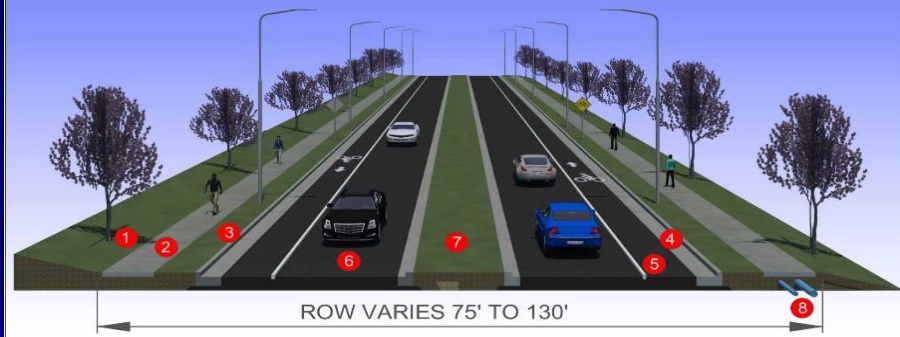
Two-Lane Collector Street



KEY to Typical Section

- | | |
|--|-------------------------------|
| 1. Street Trees - Back of Sidewalk: 8 - 10 ft. | 5. Bicycle Lanes: 4 - 6 ft. |
| 2. Sidewalk or Multi-Use Path: 5 - 12 ft. | 6. Traffic Lanes: 11 - 12 ft. |
| 3. Verge or Utility Strip: 4 - 8 ft. | 7. Subsurface Utilities |
| 4. Curb and Gutter: 2 - 2.5 ft. | |

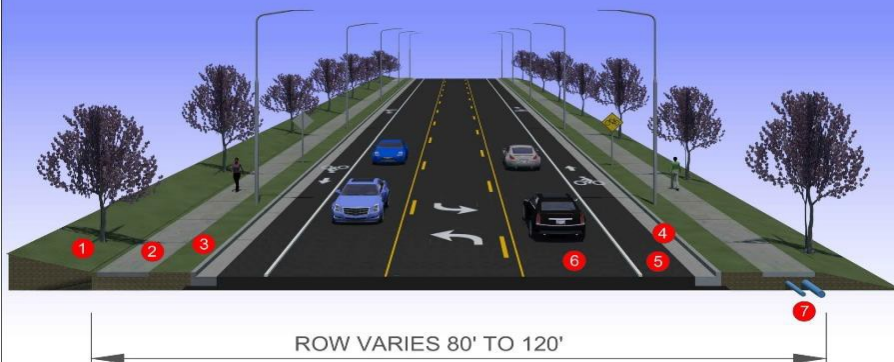
Two-Lane Divided Collector Street



KEY to Typical Section

- | | |
|--|-------------------------------|
| 1. Street Trees - Back of Sidewalk: 8 - 10 ft. | 5. Bicycle Lanes: 4 - 6 ft. |
| 2. Sidewalk or Multi-Use Path: 5 - 12 ft. | 6. Traffic Lanes: 11 - 12 ft. |
| 3. Verge or Utility Strip: 4 - 8 ft. | 7. Median: 6 - 23 ft. |
| 4. Curb and Gutter: 2 - 2.5 ft. | 8. Subsurface Utilities |

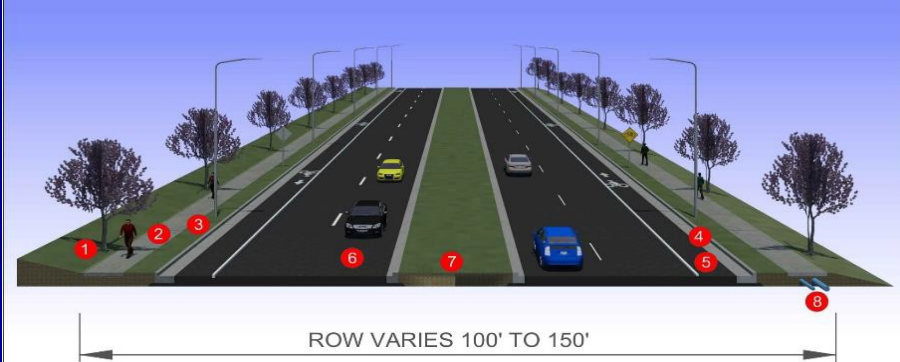
Three-Lane Collector Street



KEY to Typical Section

- | | |
|--|-------------------------------|
| 1. Street Trees - Back of Sidewalk: 8 - 10 ft. | 5. Bicycle Lanes: 4 - 6 ft. |
| 2. Sidewalk or Multi-Use Path: 5 - 12 ft. | 6. Traffic Lanes: 11 - 12 ft. |
| 3. Verge or Utility Strip: 4 - 8 ft. | 7. Subsurface Utilities |
| 4. Curb and Gutter: 2 - 2.5 ft. | |

Four-Lane Divided Collector Street



KEY to Typical Section

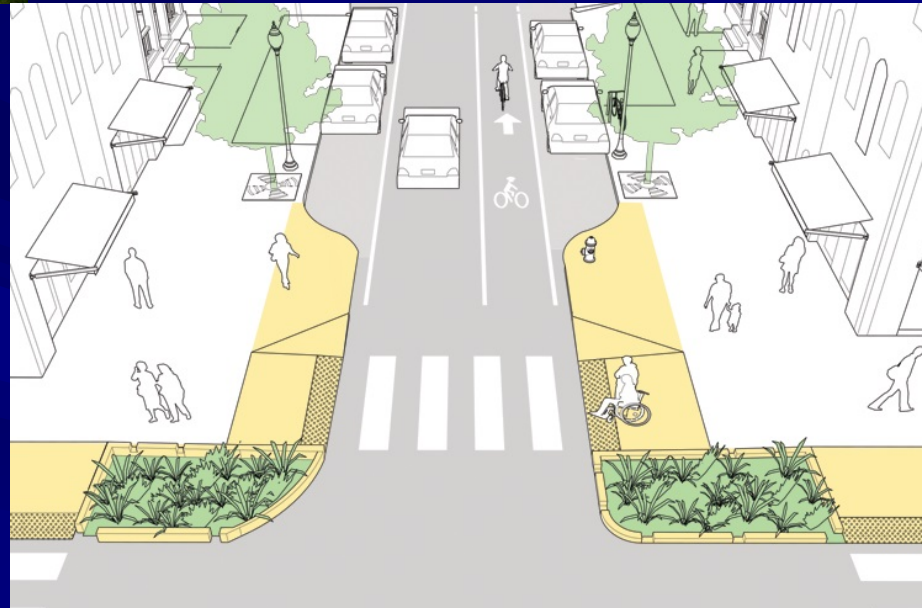
- | | |
|--|-------------------------------|
| 1. Street Trees - Back of Sidewalk: 8 - 10 ft. | 5. Bicycle Lanes: 4 - 6 ft. |
| 2. Sidewalk or Multi-Use Path: 5 - 12 ft. | 6. Traffic Lanes: 11 - 12 ft. |
| 3. Verge or Utility Strip: 4 - 8 ft. | 7. Median: 6 - 23 ft. |
| 4. Curb and Gutter: 2 - 2.5 ft. | 8. Subsurface Utilities |



TRAFFIC CALMING



Reduced
vehicular
speeds



Altered
driving
behavior



Improved
conditions for
pedestrians
and cyclists



EFFECTIVE IMPLEMENTATION

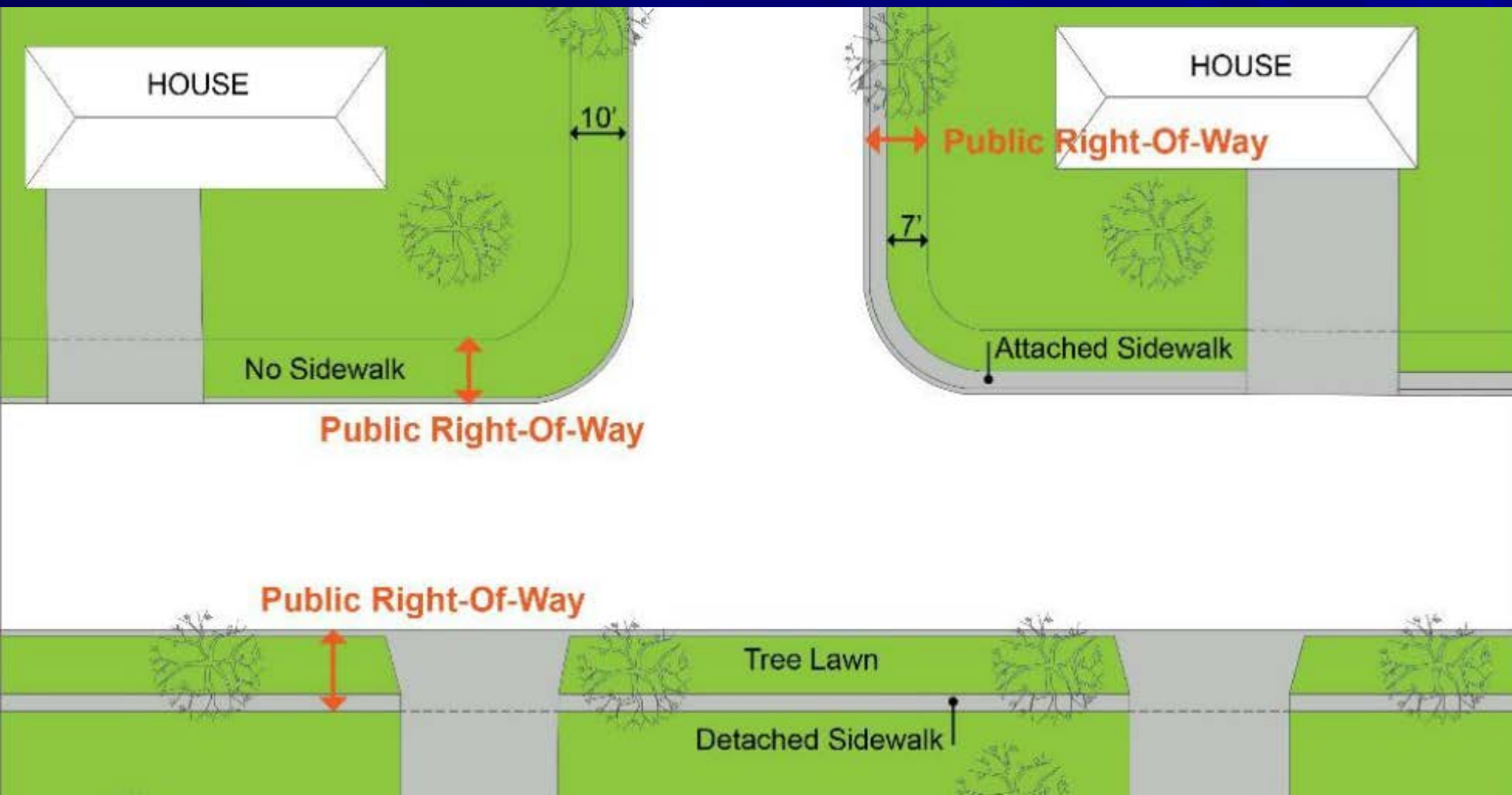
Staff in each member agency should work in a collaborative and cooperative manner

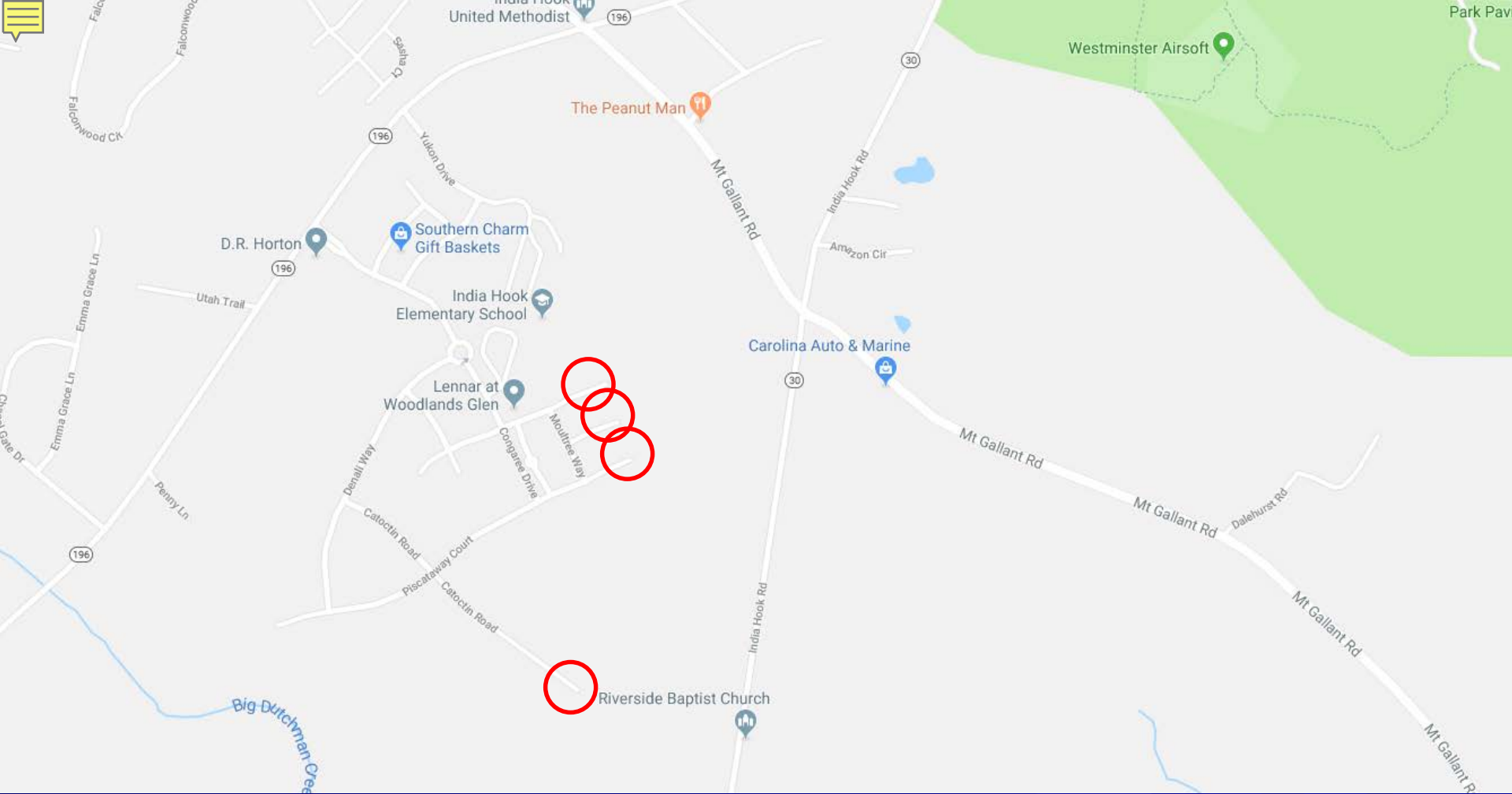




Use the plan as a means to preserve collector street corridors and communicate desired connectivity/local level supplements to developers as proposed development plans are submitted and reviewed.

Require developers to dedicate right-of-way for identified collector streets

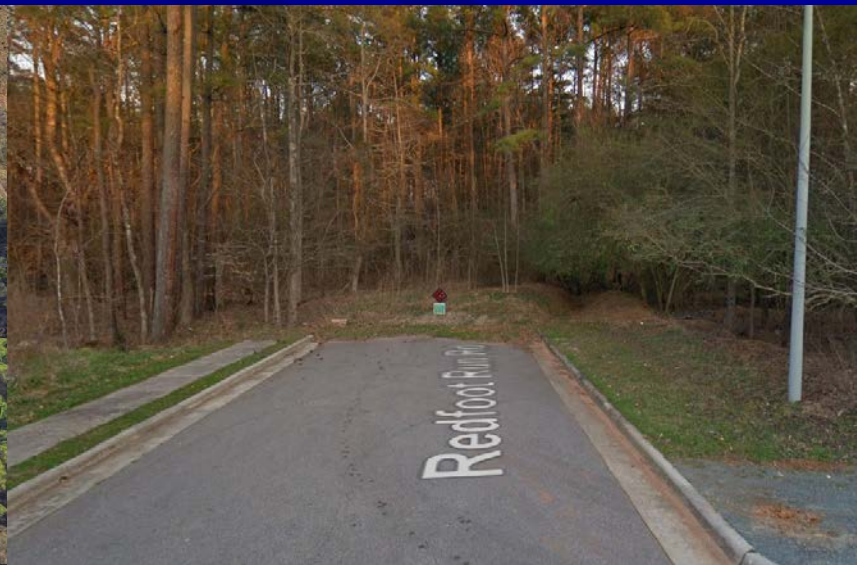




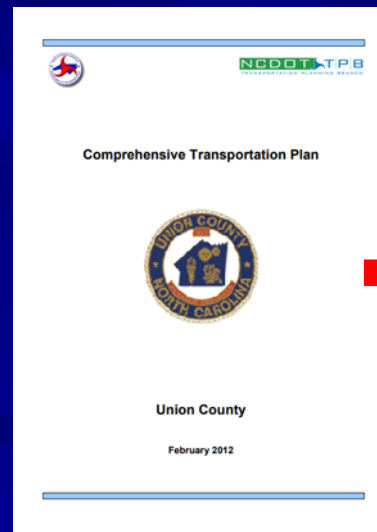
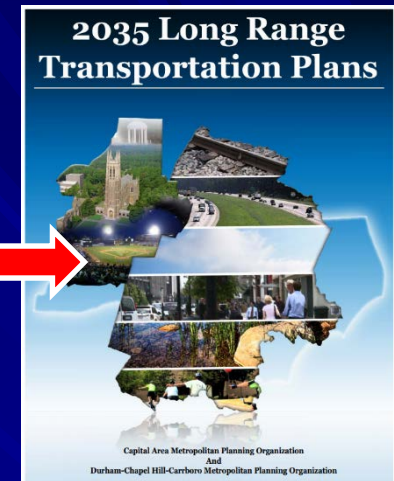
***Require new
developments to
'stub-out' streets***



*Require new developments to
'stub-out' streets*



*Periodically review
and amend the
Collector Street
Plan with new
future collector
street connections
as they are
identified during
the development
review process.*



DISCUSSION & QUESTIONS?