

Working with Communities to Improve Safety for Non-Motorized Users

*Alternate Title: Learning to Let Go - How We Engineered Less and
Accomplished More*

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First, Some Background

SCDOT maintains the 4th largest roadway system in US - over 41,000 miles

A lot of these miles are local/neighborhood roads that a State DOT normally wouldn't maintain

Much of our engineering guidance is for “big” roads

There is less guidance for Low Volume roadways

SCDOT has Traffic Calming Guidelines for local roads

The Reasons to “Let It Go”

SCDOT District 1 serves 5 counties - Richland, Lexington, Kershaw, Sumter, & Lee

Local traffic can have its own characteristics

Local governments are more familiar with their citizens and the area

Best to address an entire neighborhood

Traffic calming should be driven at the local level

Reframing our Approach

Goals of Traffic Engineering are Safety and Operations

Engineers are trained to make decisions based on formulas, data, guidelines and rules.

When addressing neighborhood traffic concerns, residents go by how they feel rather than data. These concerns are very personal and evoke strong feelings.

The first question used to be “Is there *REALLY* a problem?”

Now we work to propose a solution to the neighborhood concern even if the data does not demonstrate a specific problem.

Many ideas proposed by neighborhoods may not fit exactly in guidelines

Instead of asking “Will it help?” now we often ask “Will it hurt?”

Benefits of Community Collaboration

Working with communities has allowed us to implement several innovative approaches to addressing pedestrian concerns.

We have found that working with communities, municipal governments and elected officials to implement pedestrian safety measures and traffic calming when feasible has helped us develop rapport with these stakeholders that is useful on larger projects

By saying “yes” when we can to requests in local, residential areas, we establish our willingness to be flexible and responsive

This also helps in the instances that SCDOT policies require a “no” answer to requests. These citizens, municipal governments and elected officials realize that we are agreeable whenever possible so when we must disagree, they are more likely to listen to the reasons why

Developing a Process for Working with Communities



Neighborhood Traffic Calming

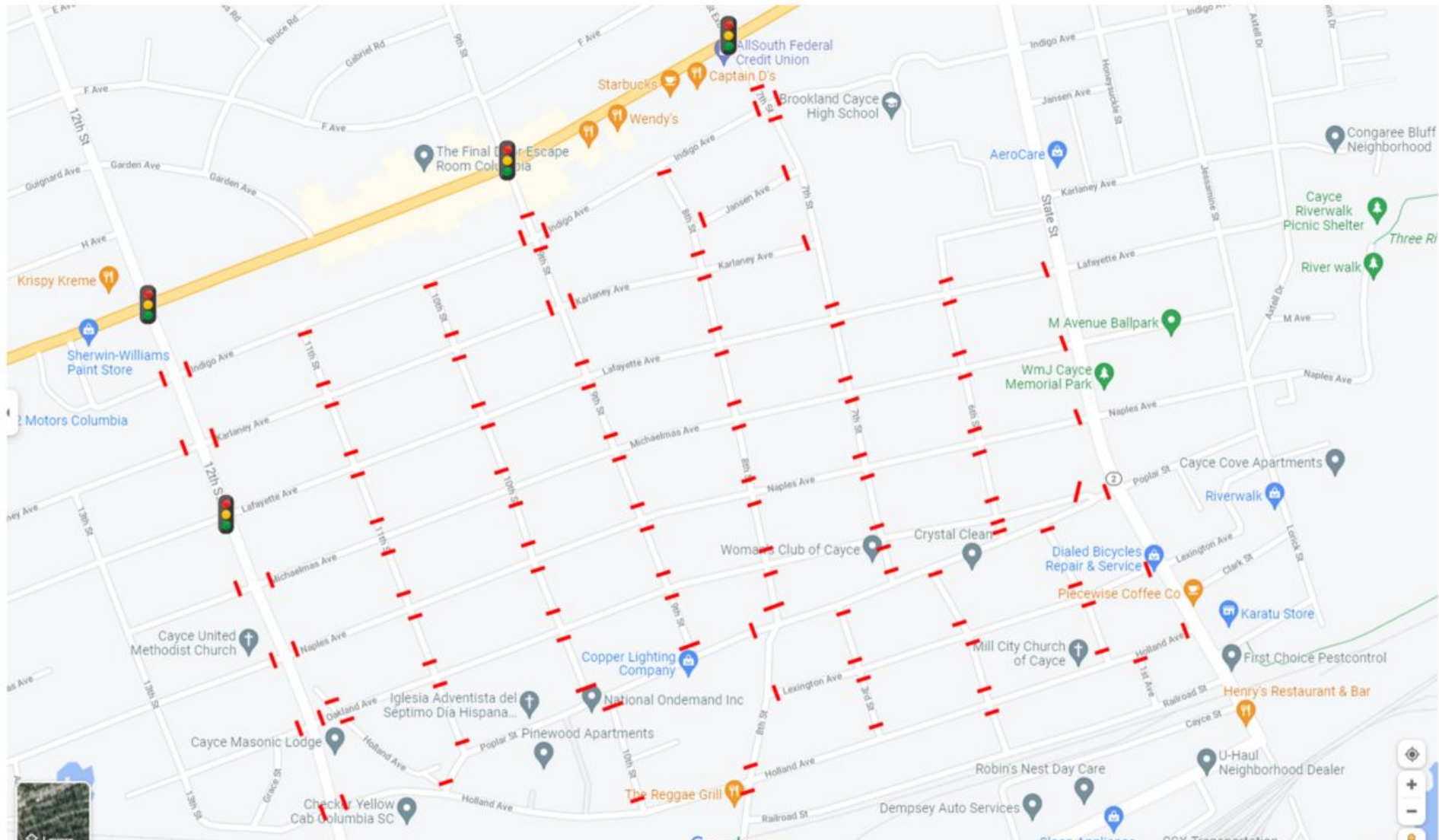
- ▶ District 1 receives many requests for traffic calming on neighborhood streets
- ▶ While traffic calming seems to be intended to address vehicular concerns, the request usually stems from the needs of non-motorized users
- ▶ SCDOT has Traffic Calming Guidelines that outline criteria for speed humps, all-way stops and other treatments
- ▶ Implementation of most traffic calming would be done under encroachment permit by municipalities
- ▶ Many of the municipalities in District 1 do not have a speed hump program
- ▶ In those areas, we are often asked to implement all-way stops for the purposes of slowing down traffic or reducing “cut-through” traffic

Neighborhood Traffic Calming

- ▶ District 1 Traffic has found that requests for traffic calming are best addressed in coordination with local municipalities
- ▶ Municipalities know their citizens and local issues. They can best identify whether or not the request made by one citizen represents the desires of the neighborhood or just an individual
- ▶ When possible, we have found that traffic calming should be implemented across an entire neighborhood rather than the single street that was requested
- ▶ When only one street is addressed, complaints and requests from adjacent streets will follow soon after implementation

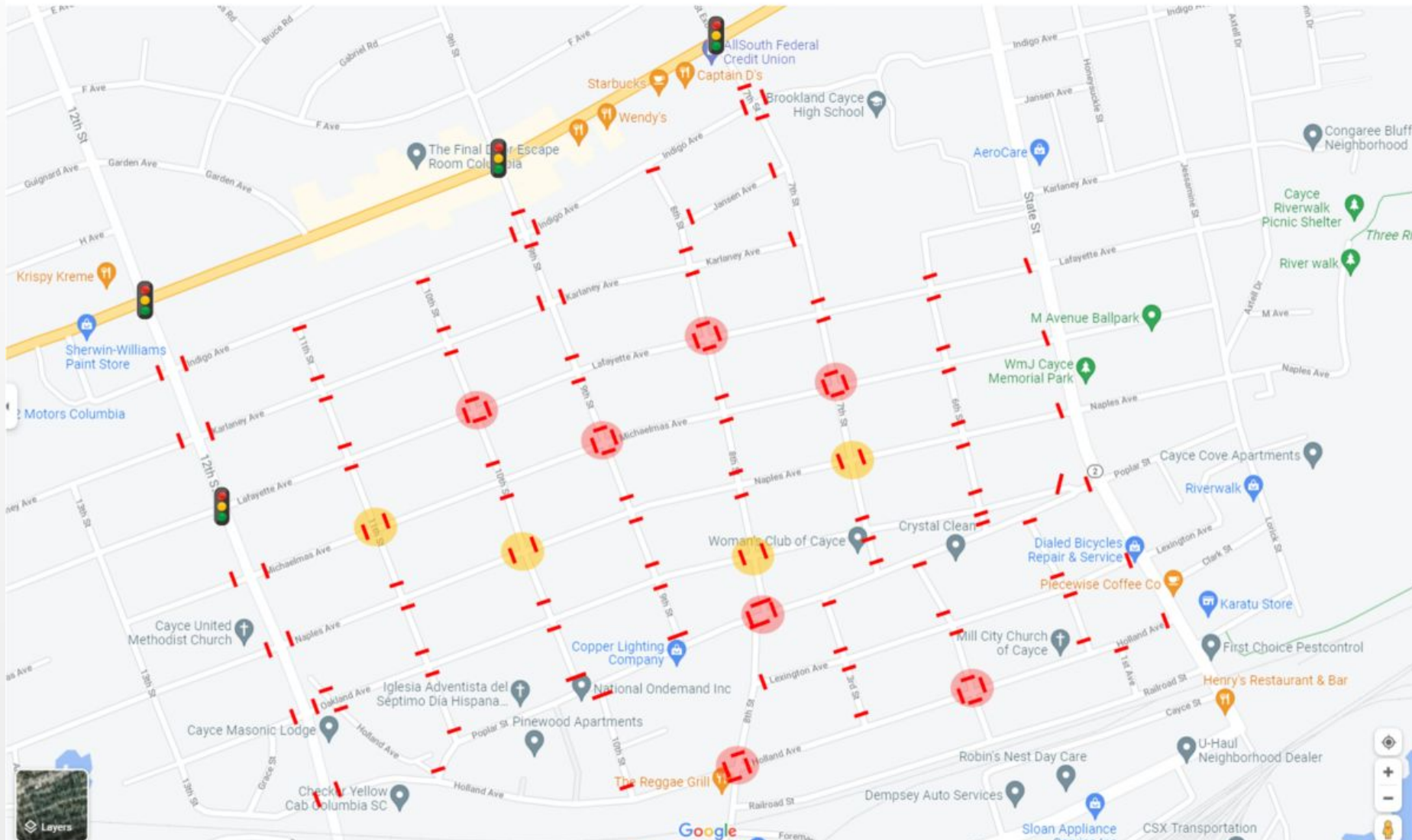
Neighborhood Traffic Calming

Cayce Avenues – Existing Conditions



Neighborhood Traffic Calming

Cayce Avenues – Proposed Conditions



Neighborhood Traffic Calming



Gervais Street at Pulaski Street

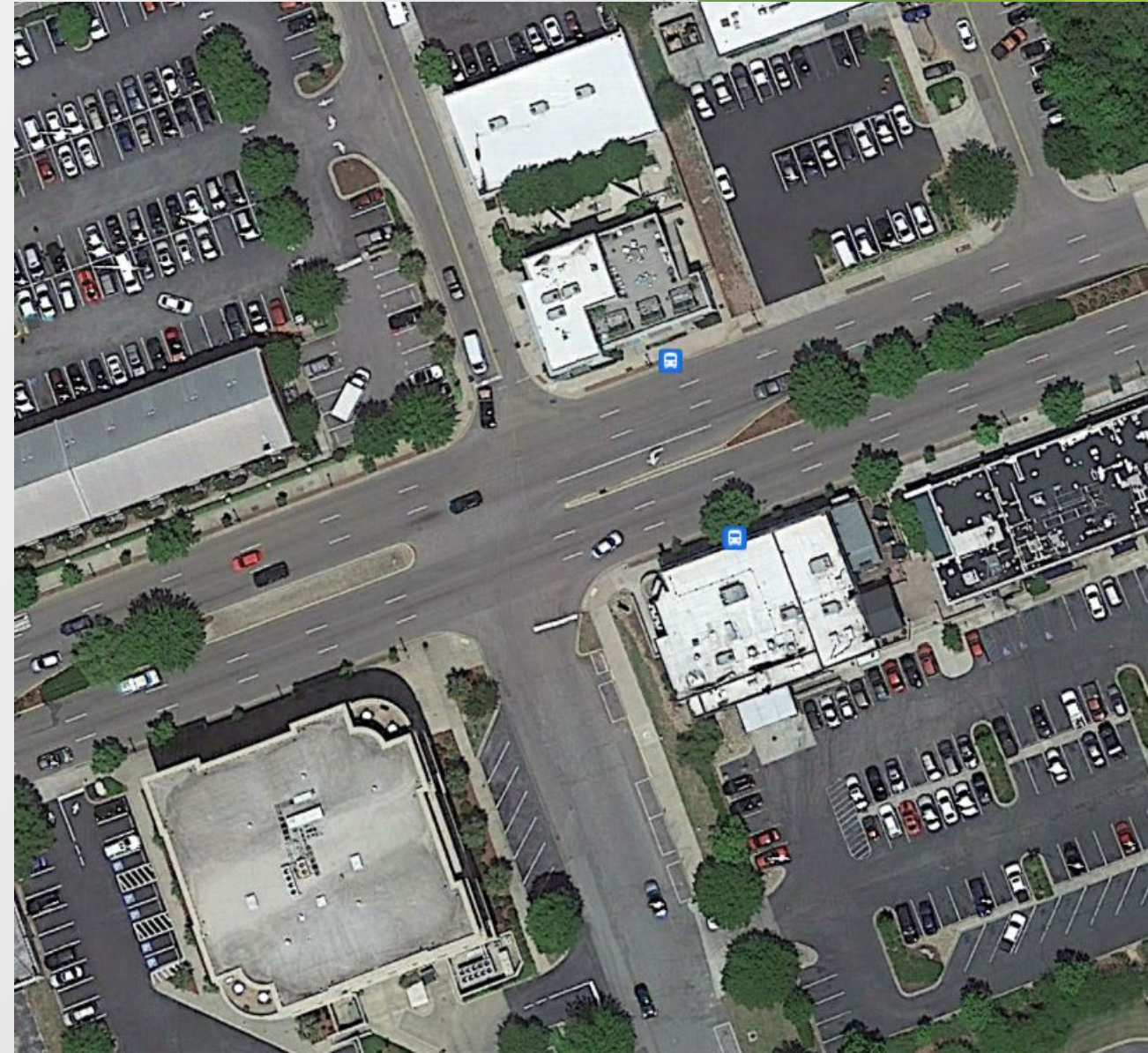
Neighborhood Association expressed concerns about the intersection

A review of crashes identified several vehicular crashes, many involving vehicles trying to cross or make left turns onto Gervais Street

One vehicular crash resulted in a pedestrian on the sidewalk being hit by a vehicle

After talking with the neighborhood and evaluating alternating routes, it was determined that Pulaski should be made RIRO

SCDOT developed an alternative pedestrian crossing design to address the offset of the side streets



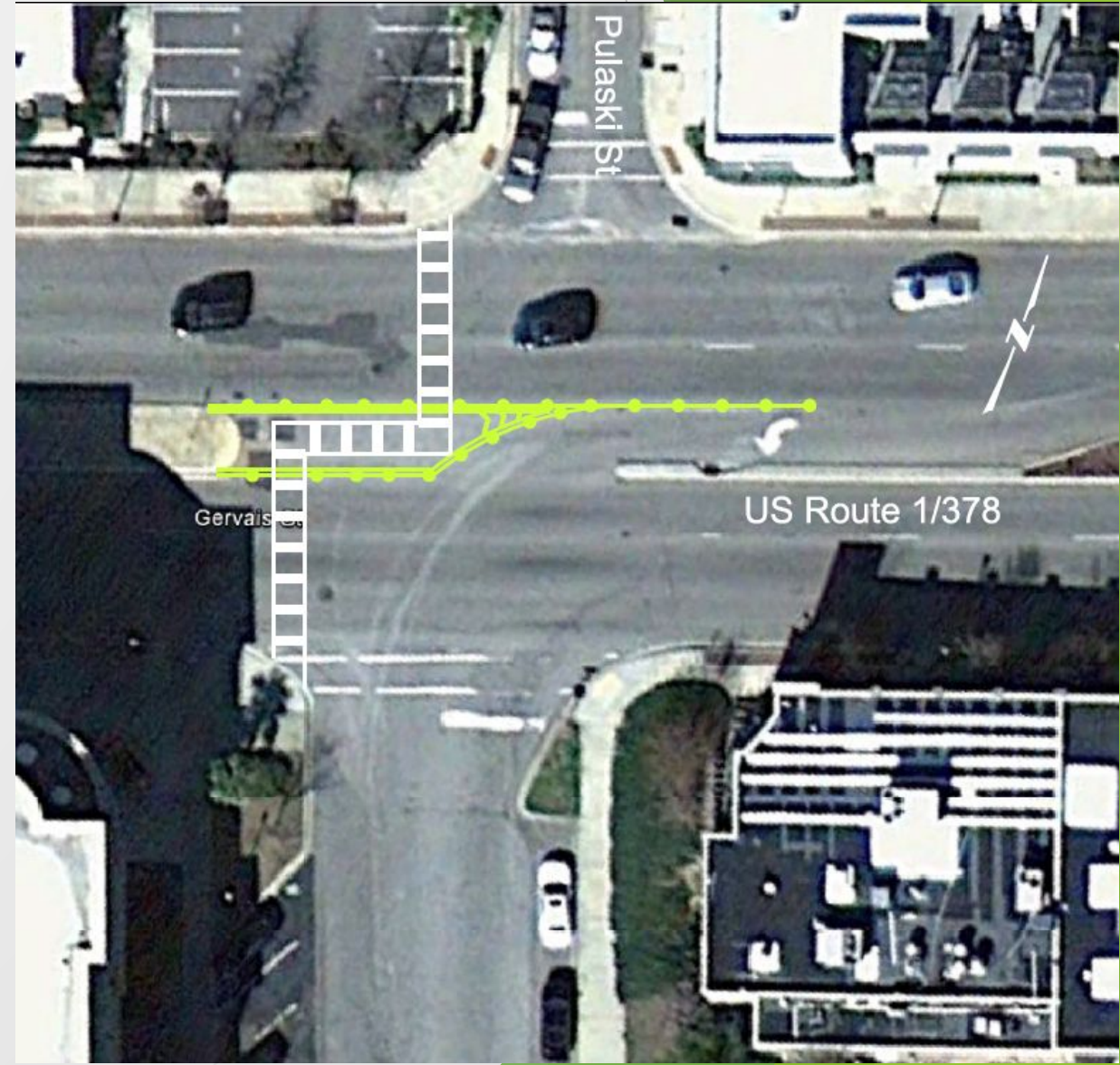
Gervais Street at Pulaski Street

The conceptual plan was presented to the neighborhood for their buy-in

District 1 Traffic coordinated with the City of Columbia to ensure the City was in favor of the proposed changes and did not anticipate any negative reactions from area residents or business owners

The City of Columbia provided their concurrence with the plan

SCDOT implemented the changes



Gervais Street at Pulaski Street



Hello,

I took my first walk across the completed intersection at Gervais & Pulaski. The increased feeling of safety was amazing!

Thanks for all of your efforts,
Bart Walrath

Millwood Avenue Bike & Ped Improvements

- ▶ The section of Millwood Avenue between Gervais Street and King Street had experienced several pedestrian crashes including at least 2 fatalities
- ▶ State and City leaders contacted SCDOT for assistance in addressing the issues in this segment to improve pedestrian safety.
- ▶ SCDOT conducted an analysis of this section of roadway and developed several concepts to improve both pedestrian and vehicular safety

Millwood Avenue Bike & Ped Improvements

► Existing Conditions

- US 76 (Millwood Avenue)
- Classification - Urban Principal Arterial
- Speed Limit - 35 mph
- Average Annual Daily Traffic (AADT) - 21,600 vpd
- 4-lane undivided facility - 64' pavement width
- Sidewalks present on both sides of roadway
- Crosswalks at House Street and Tree Street
- Transit stops present at Page/Pendleton and Tree/Santee

Millwood Avenue Bike & Ped Improvements

► Considerations

- Pedestrian Safety
 - Pedestrian Origins and Destinations (Businesses, Transit Stops, etc.)
 - Clarify/simplify crossing locations
- Vehicular Safety
 - Reduce rear end and angle crashes
 - Remove turning vehicles from through lanes
 - Clarify/simplify roadway intersections
- Accommodate parking where existing
- Accommodate all modes of transportation

Millwood Avenue Bike & Ped Improvements

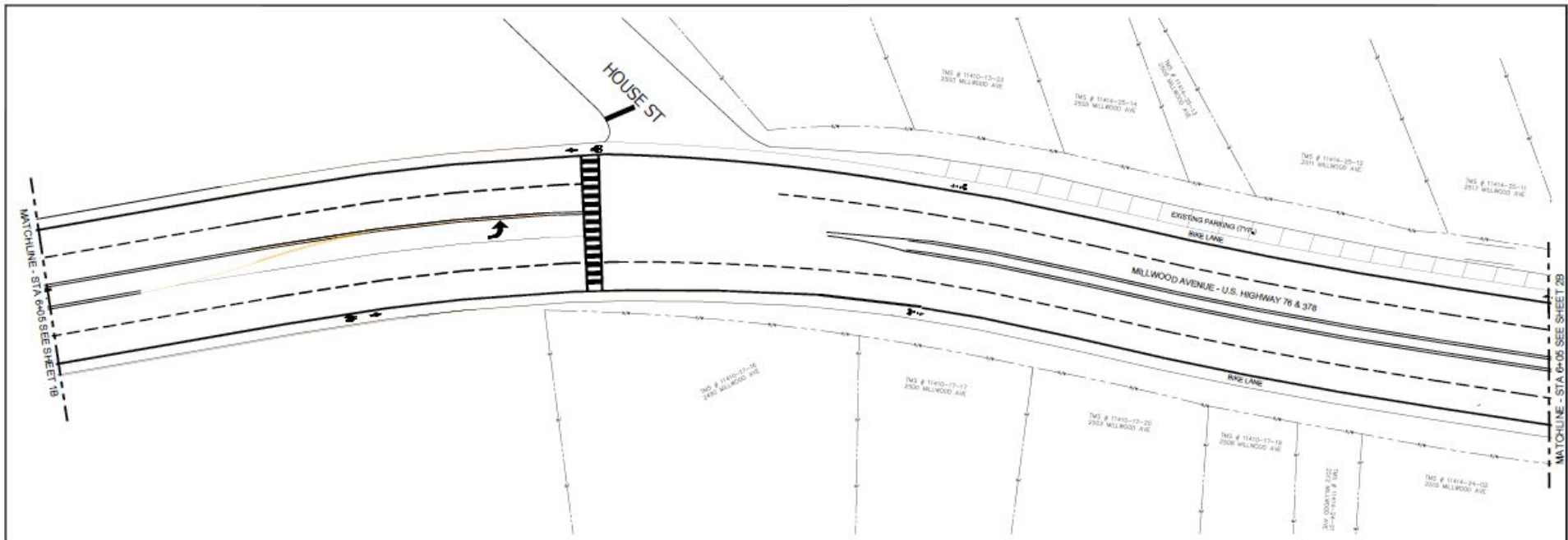
► Recommendations

- Key Consideration - Create a center refuge for pedestrians
- Additional Consideration - Create a left turn lane to remove turning vehicles from through lanes and allow for 2-stage turns from side streets
- Desired Feature - City of Columbia Bike Plan had identified a desire for bike lanes in this section
- Developed 3 Options
 - 11' Turn Lane w/6' Pedestrian Refuge
 - 6' Median w/Bike Lanes and Ped refuge island
 - 10' Center Turn Lane w/Bike Lanes

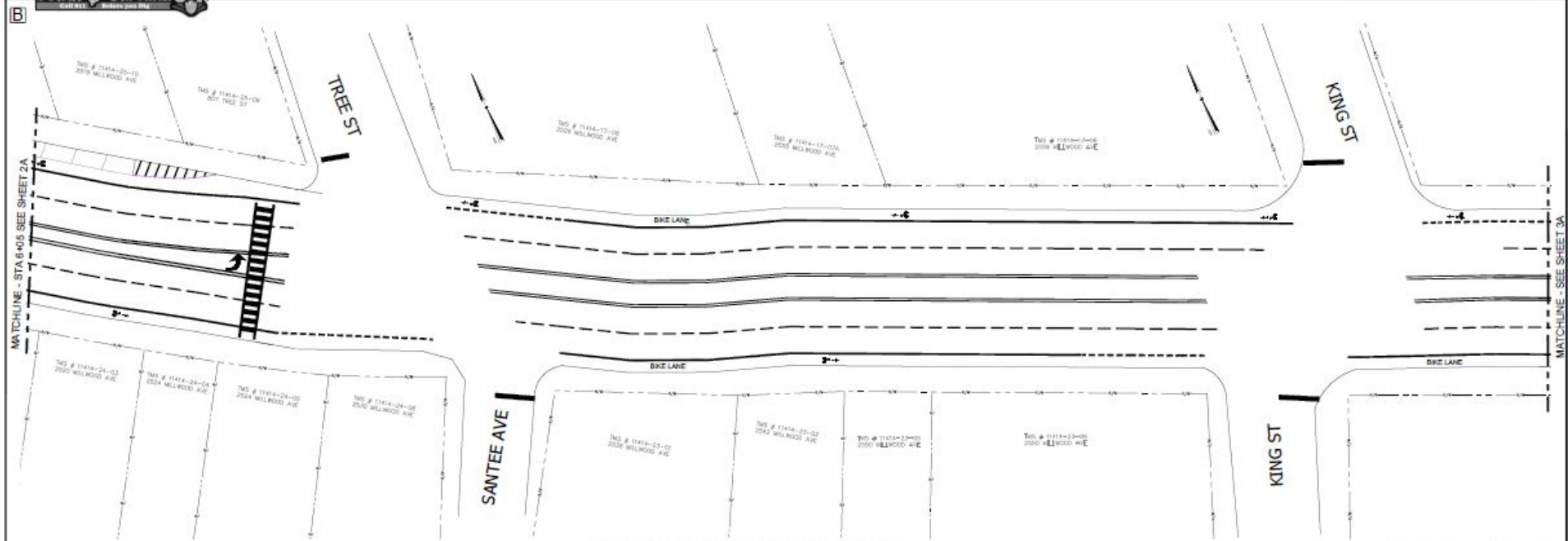
Millwood Avenue Bike & Ped Improvements

► Implementation

- Once a preferred design was selected, funding was needed to implement the pavement marking changes by way of resurfacing the roadway
- Millwood was on SCDOT's resurfacing list, but the project wouldn't occur for approximately 5 years based on resurfacing rankings
- Political leaders worked with SCDOT to secure over \$500k in funding from the Richland County CTC for resurfacing the critical section of Millwood from Gervais to Gladden Street
- During the analysis, it was determined that a HAWK signal was needed to facilitate pedestrian crossings at the intersection of Millwood and House Street. SCDOT provided the design and funding for this installation
- The City of Columbia assisted with pavement marking design plans, facilitated public information efforts, installed bike lane signage, and provided signal installation inspection and programming
- Overall, the project was accomplished through a partnership of elected officials at all levels, community leaders, Richland County CTC, the City of Columbia and SCDOT staff



PLAN - MILLWOOD AVE STA 0+00 TO STA 6+05



PROFILE - MILLWOOD AVE STA 6+05 TO STA 12+15

Millwood Avenue Bike & Ped Improvements



Other Initiatives



District 1 Traffic has worked with a couple of municipalities to obtain FHWA Interim approval for RRFBs at high volume crosswalks. We further coordinate with them to develop sketch plans for them to use in installing the RRFBs under encroachment permit.



We have also worked with neighborhoods in the City of Columbia to create traffic calming plans for speed humps. This is similar to the stop reversal plans and attempts to address an entire neighborhood at once rather than piecemeal.

SPEED
LIMIT
25

As part of our efforts in neighborhoods we have also reduced speed limits to 25 mph. Particularly in areas with neighborhood schools with a school speed zone, it makes sense to make the neighborhood 25 mph at all times rather than just school hours.



We also coordinate with local governments on the posting of “No Thru Trucks” restrictions. Many of these requests are “nuisance” requests rather than being related to roadway safety or maintenance. In those instances, if the municipality passes an ordinance (assuming viable alternate routes are identified) we will post “No Thru Trucks”

Conclusion

While big initiatives are great, small local efforts can have a large impact.

We can change things that aren't working for the community even if the data doesn't show a problem.

Collaboration provides the best chance for success.

