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AUGUSTA'S ITS STORY

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Augusta GEORGIA

ITS Georgia Annual Meeting
October 2019

Changing City, Changing Transportation System

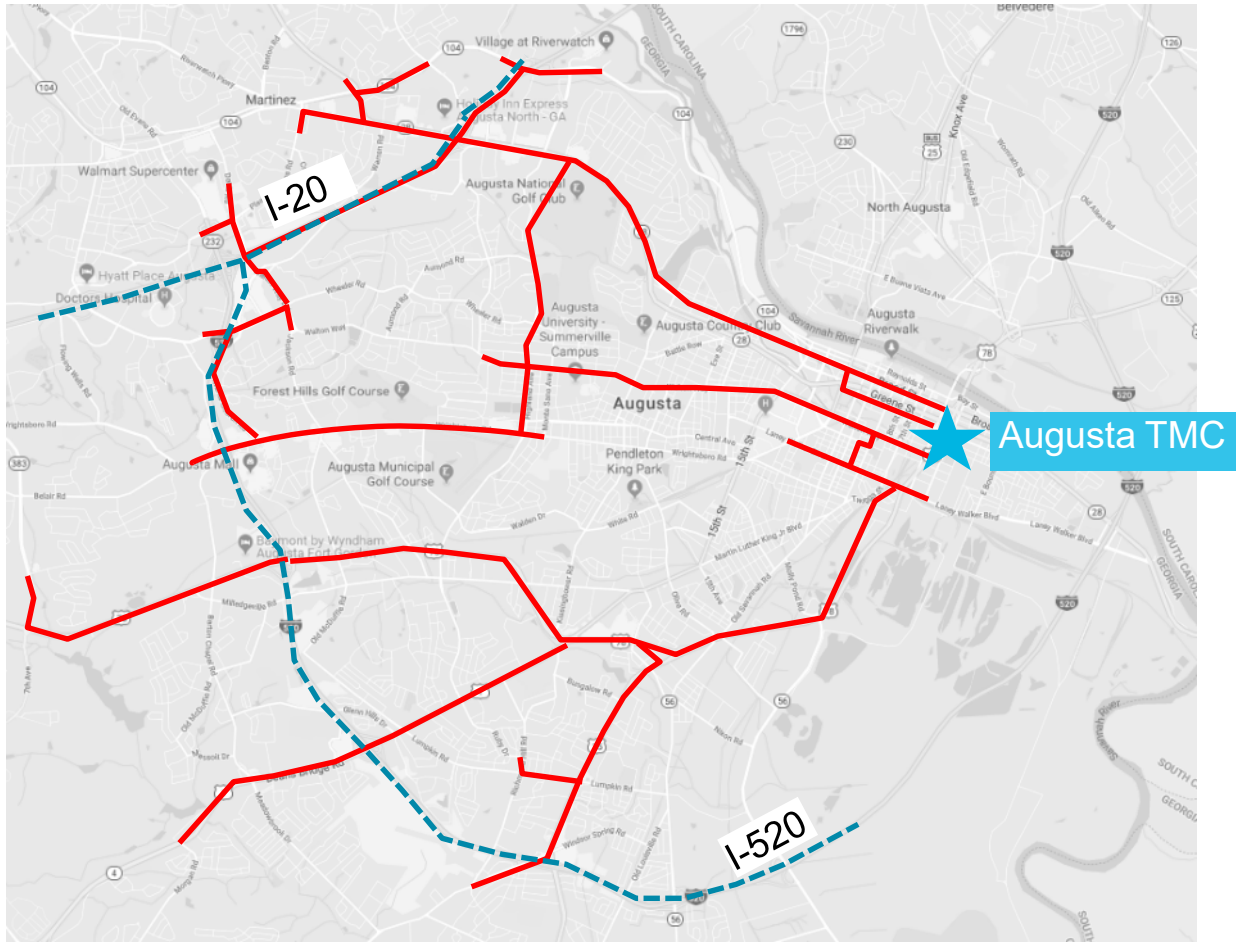
- Cyber Center of Innovation (near downtown)
- Fort Gordon Cyber Command
- Downtown redevelopment
- Augusta National Golf Club, development potential

ITS DEVELOPMENT TIMELINE

- 2010 Adaptive signal system on Washington Road
- 2013 ARTS ITS Master Plan Update
- 2015 TIA-funded traffic signal system projects begin
- 2016 GDOT Region TS Operations program begins
- 2017 – 2018 TIA I, ATMS Expansion construction
- 2019 Augusta TMC public opening
- 2021 TIA II, ITS expansion project (in development)

ATMS EXPANSION AND TMC

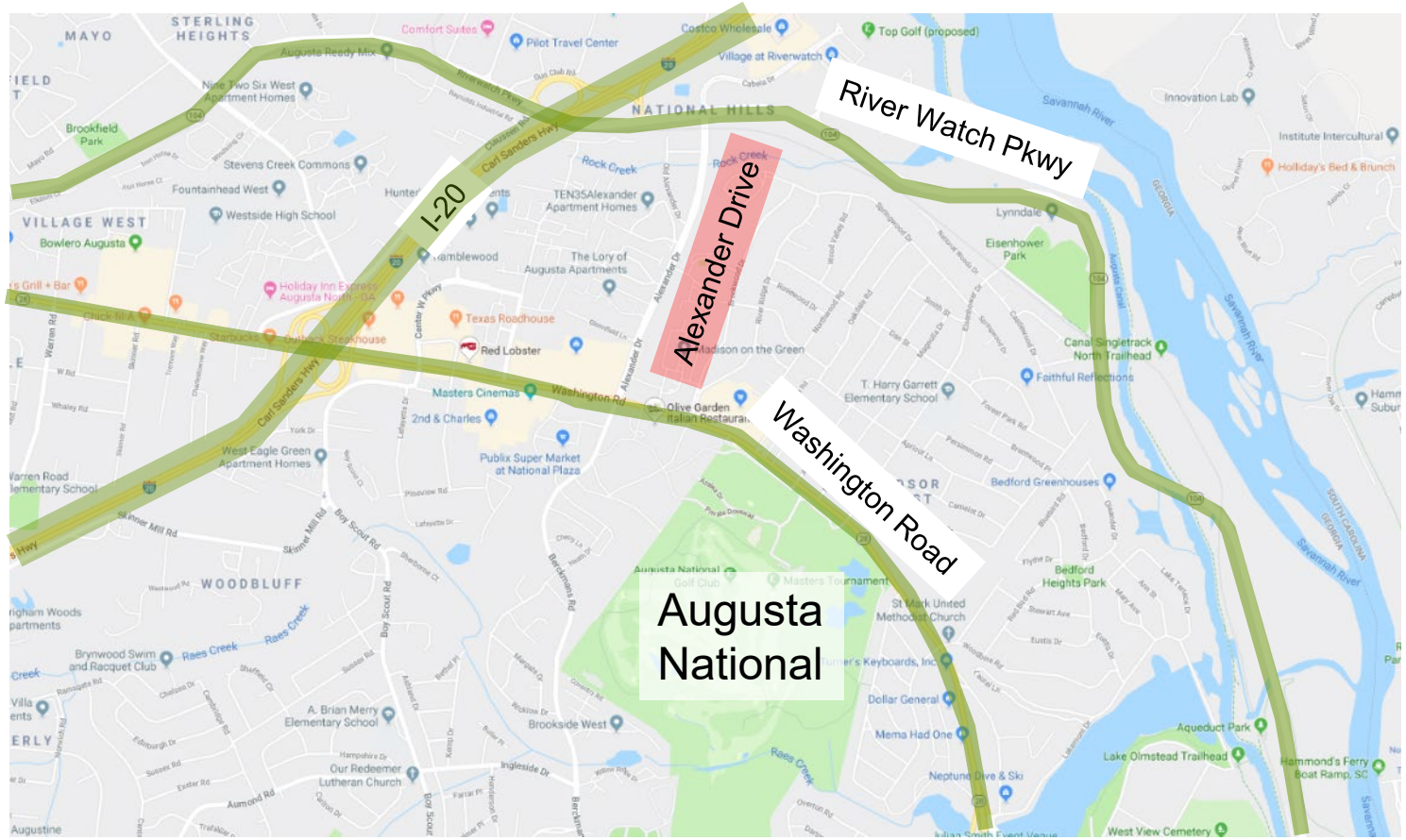
- $6.5M TIA-funded project
- Traffic management center in new Augusta engineering building
- 15 miles of fiber-optic cable (96 strands)
- 129 intersections with Ethernet switches (approx. ½ of Augusta's signals)
- 109 intersections with EVP and TSP capability
- 55 surveillance cameras



Existing Augusta Fiber Network

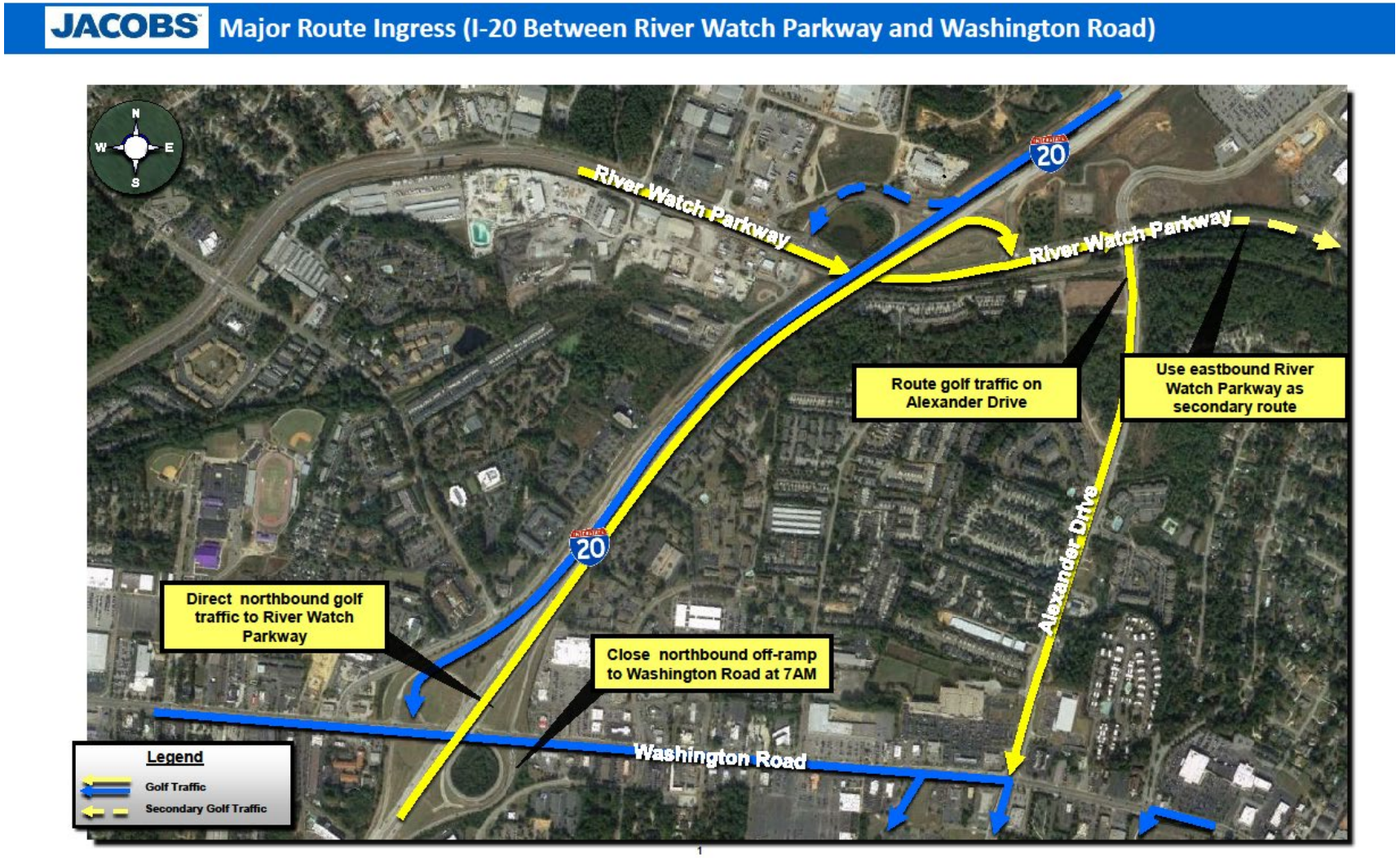
THE MASTERS 2019 (WITH NEW TMC)

- Alexander Drive



THE MASTERS 2019 (WITH NEW TMC)

- River Watch Parkway traffic control plan



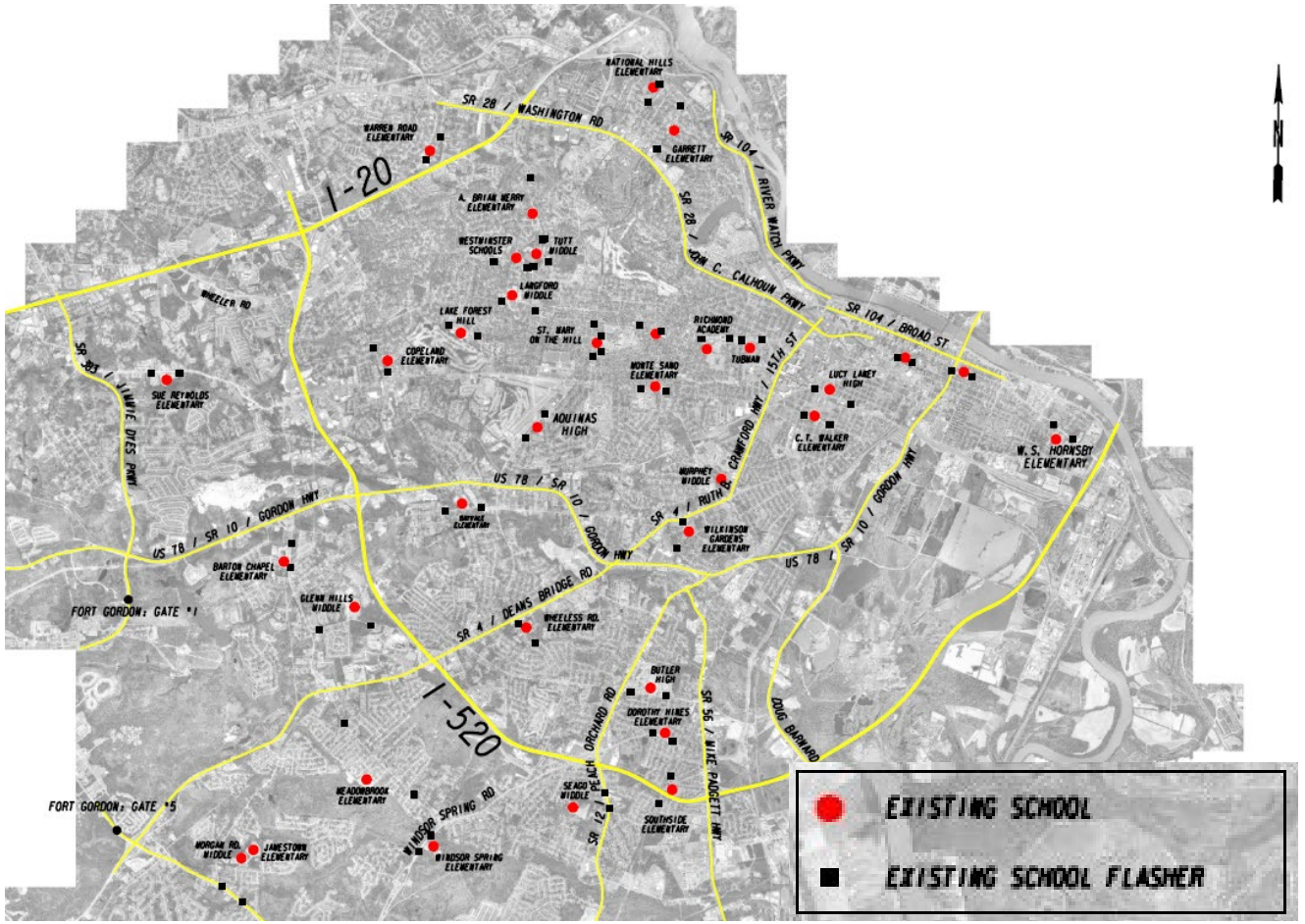
THE MASTERS 2019 (WITH NEW TMC)

- Washington Road egress plan

WHAT'S NEXT - TIA II ITS EXPANSION PROJECT

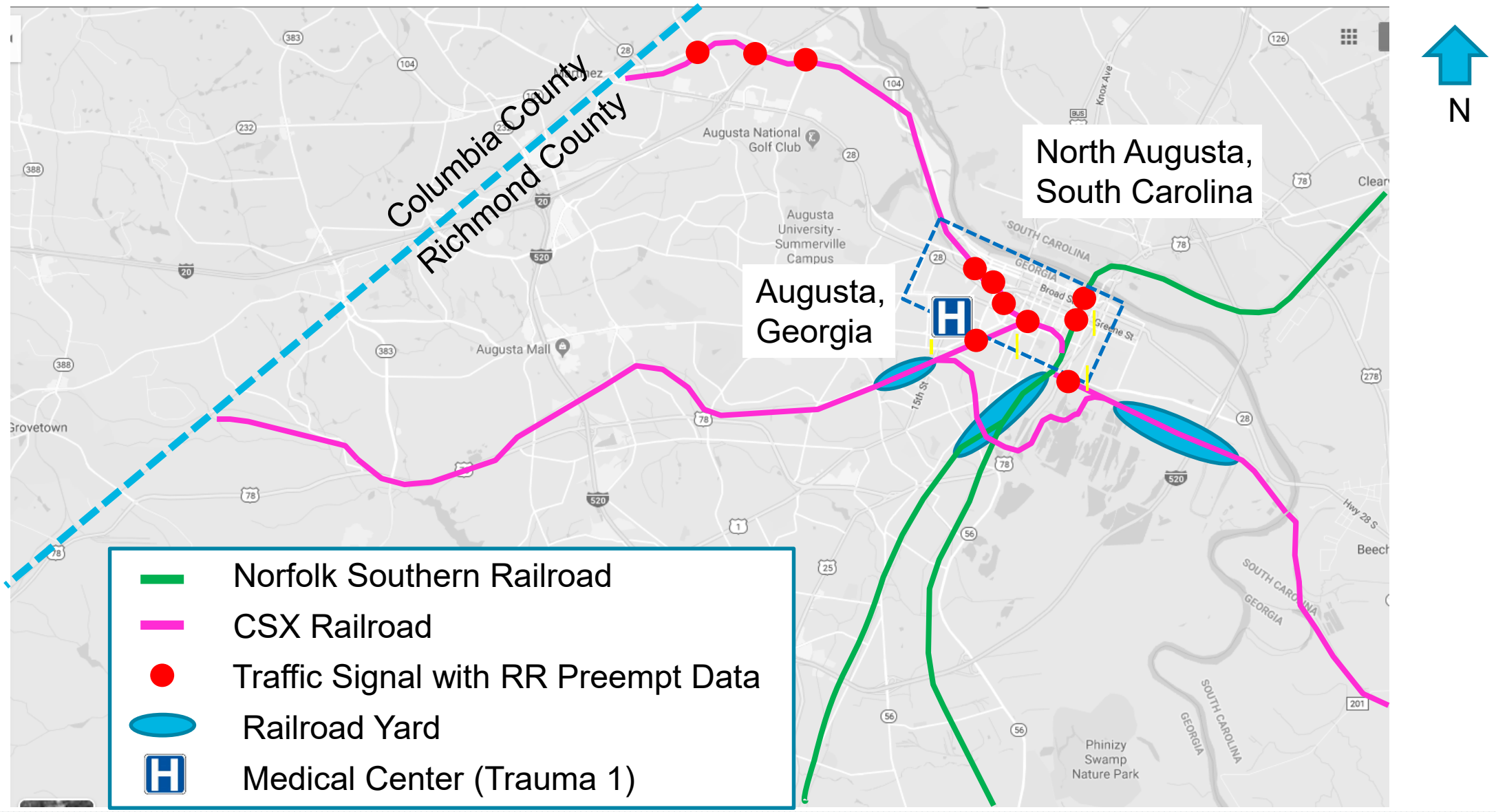
Areas of Focus

- Fiber expansion throughout Richmond County
- Tie in remaining ½ of Augusta traffic signals
- Railroad crossing blockage alert system
- School flasher central management
- Fiber redundancy (I-520 ring)



Existing School Flasher Locations

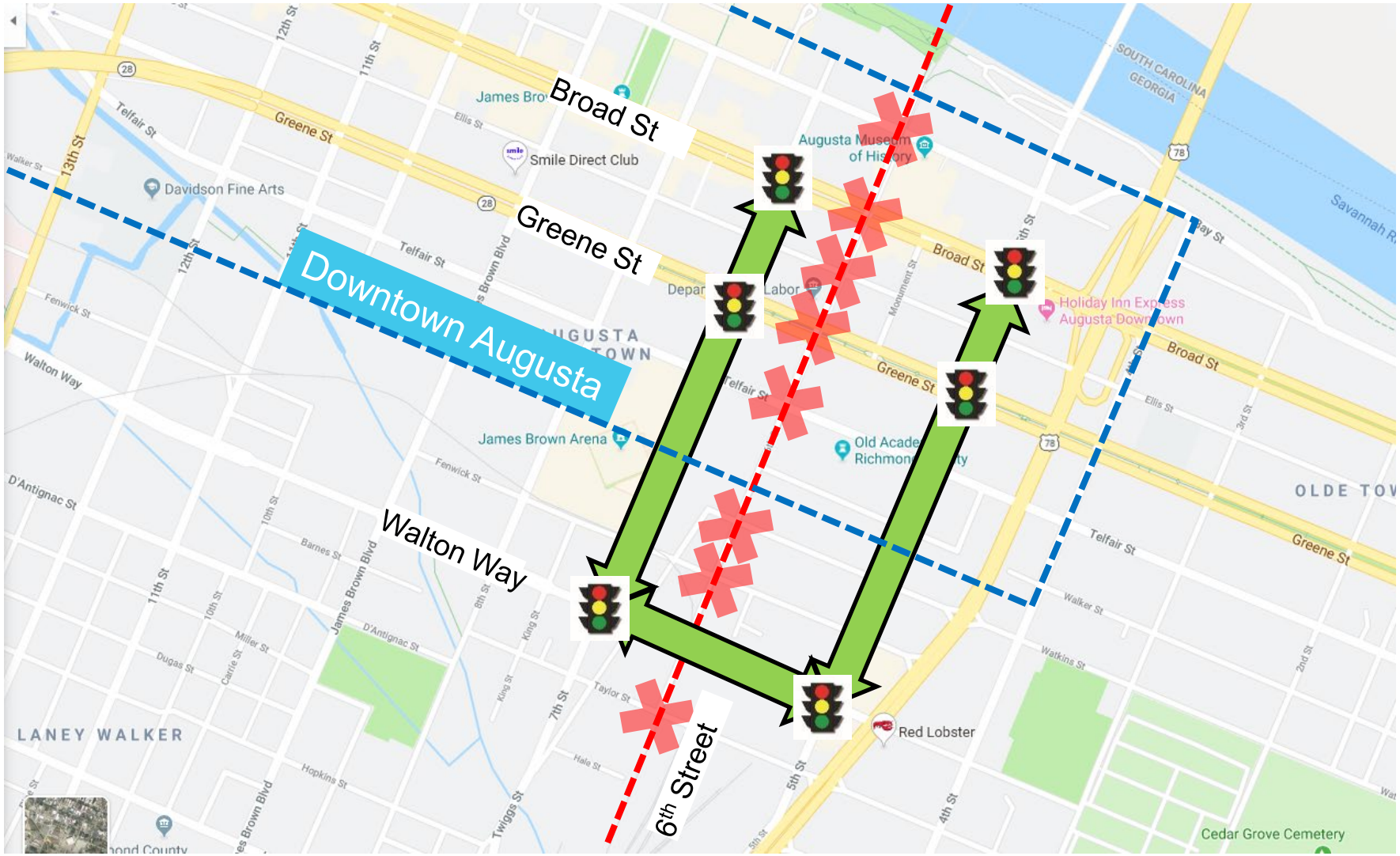
Augusta Railroad Map



6th Street Railroad Activity

Source: Google Streetview

Walton Way Railroad Overpass – Temporary Traffic Diversion



The Masters – High Pedestrian Activity Areas

Downtown Pedestrian Activity - New Cyber Center

Use Cases

- **Railroad activity**
  - Crossing blockage events impact on first responders and the public
  - Crossing safety challenges (250+ fatalities, 800+ injuries per year)

- **Pedestrian activity**
  - Difficulty with monitoring pedestrian trends on a regional scale
  - Difficulty with developing a proper understanding of the pedestrian safety exposure

Photo Credit: https://www.cnn.com/2013/04/10/us/georgia-firefighters-hostage/index.html

USE CASE OVERVIEW

- **Railroad activity** :
  - Railroads do not share the location of trains
  - How reliably can train activity at a crossing be predicted?

- **Pedestrian activity:**
  - Pedestrian activity is less visible, and difficult to collect at a regional level
  - How reliably can pedestrian activity at a traffic signal be predicted?

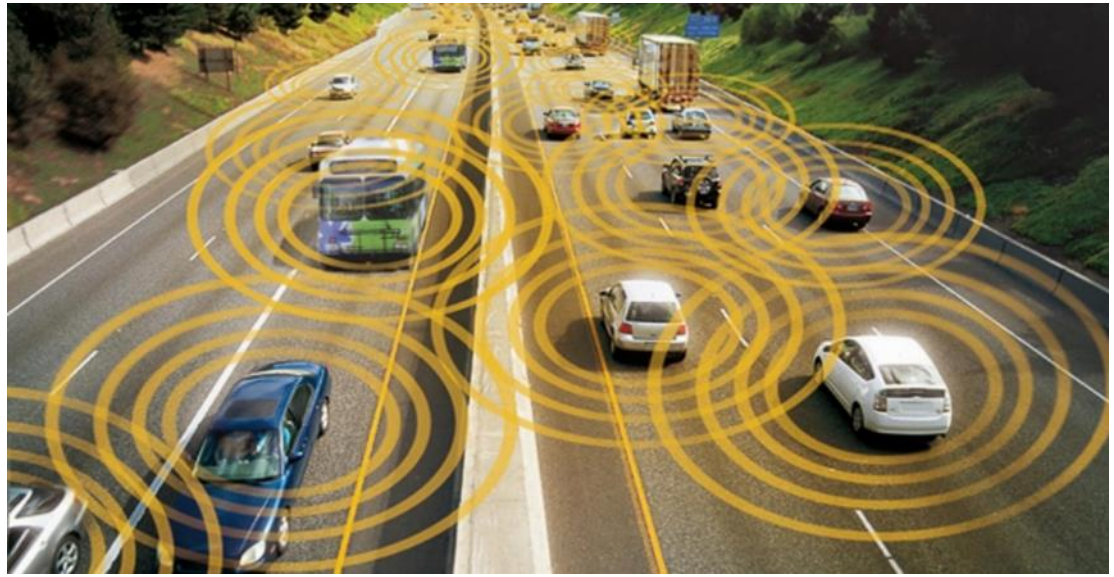
Opportunities for Driver Notification (Connected Vehicle Applications)

Train event prediction

- Train approaching time estimate
- Train event time-to-clear estimate

Pedestrian event prediction

- Pedestrian presence – sensitive areas that are active
- Pedestrian presence – in dark conditions



Thank you!

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