Peachtree Road Project:
Operations and Safety Analysis
P.I. 0012870 Fulton County

October 8, 2015

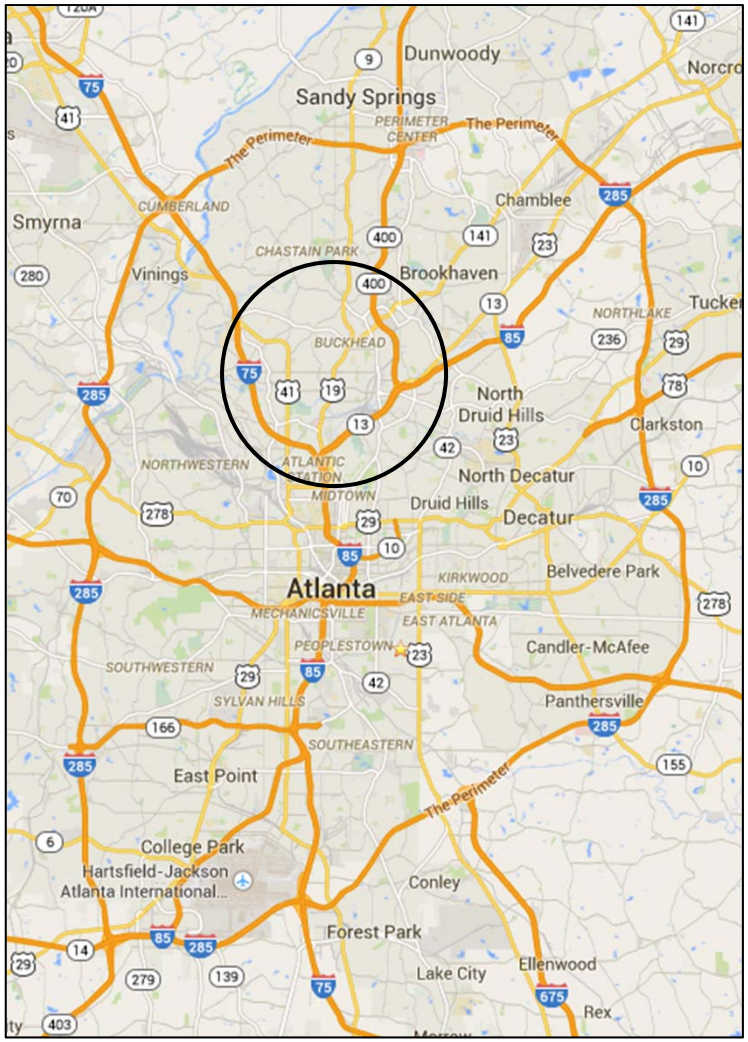
Buckhead Council of Neighborhoods

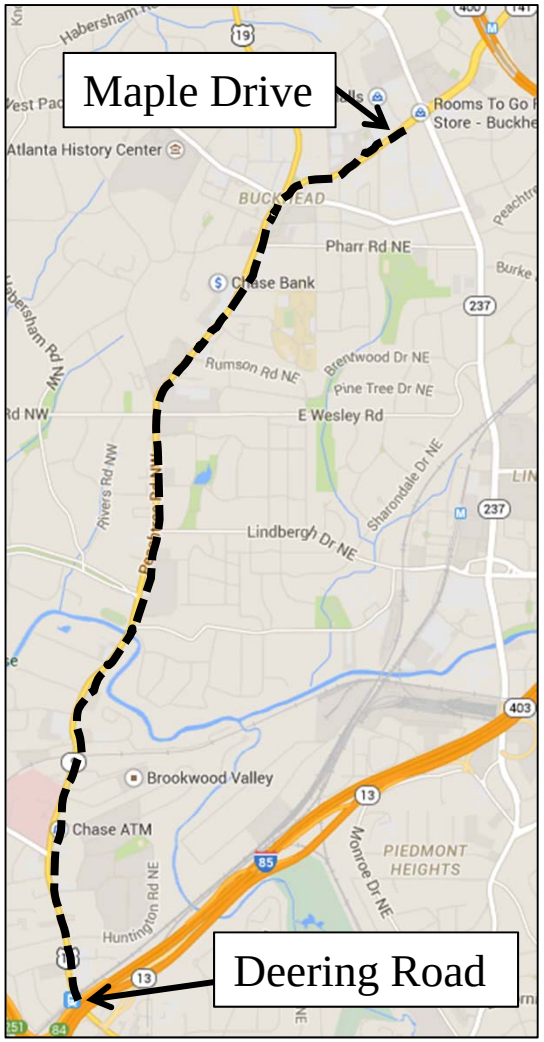
Presentation Overview

- Project location
- Project background
  - Early project development
  - Response to public input
  - Timeline
- Alternatives overview
- GDOT recommended alternative
- Next steps

Project Location

Peachtree Road in Atlanta, Georgia





Georgia Department of Transportation

Project Background

Early Project Development

- Project Need
  - Peachtree Road is due for repaving; there is an opportunity for striping changes in conjunction with the repaving.
  - Safety needs were identified.
  - GDOT District 7 identified that making left turns is challenging along the corridor.
  - There is a low utilization rate of far left lanes (15%).

Early Project Development

- 2009-2013 Crash data

Manner of Collision	Quantity
Angle	300
Rear End	279
Side Swipe Same Direction	148
Pedestrian	42
Bicyclist	11
Side Swipe Opposite Direction	11
Head On	10
TOTAL	**801**

Early Project Development

- 2009-2013 Crash data

Severity Category	Peachtree Rd	Statewide Average[1]
Total crashes per 100 million miles driven	439	425
Injuries crashes per 100 million miles driven	156	165
Fatalities crashes per 100 million miles driven	1.07	1.23

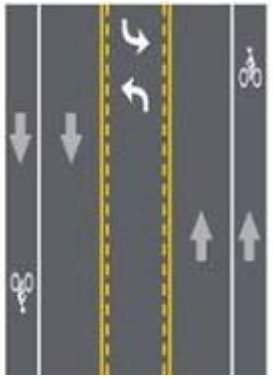
2009-2013 Crashes	
Bicycle	11
Pedestrian	42

Georgia Department of Transportation

1. For principal arterial, non-freeway, NHS, urban roads. Average over past 5 years.

Early Project Development

- **Two-way left turn lanes** (TWLTL) identified as a low-cost corridor-wide improvement to address collisions and improve operations.
  - TWLTL's proven to reduce fatal, serious injury, and minor injury crashes up to 20%[1]
  - Dedicated left turn bays improve operations



- **Bicycle Lanes** identified to address bicycle and pedestrian safety and access
  - Bike lanes reduce the effective crossing distance for pedestrians
  - Provide a buffer between pedestrians and motor vehicle traffic.
  - provide a dedicated space for bicyclists to travel in the roadway

[1] http://www.cmfclearinghouse.org/results.cfm

Early Project Development

- Modeled different lane configuration alternatives with Synchro
  - Showed 5 lane model with TWLTL and bike lanes operated better than the no build alternative

- 2014 public meeting held
  - Presented 5-lane with TWLTL and bike lanes as preferred alternative
  - Comments and concerns received

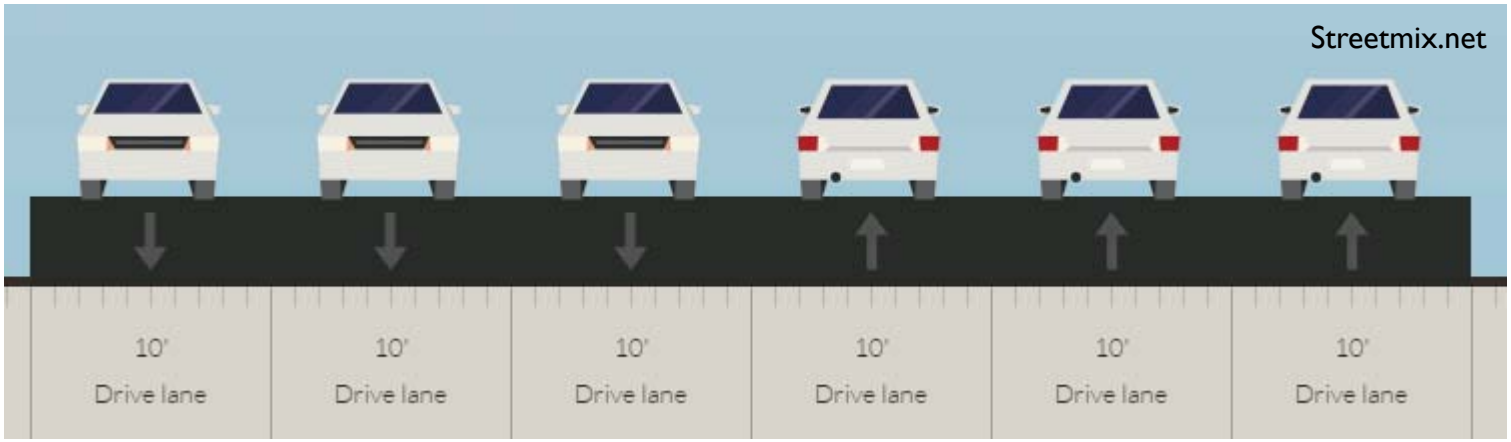
Response to Public Input

- **GDOT was asked to:**
  - Reevaluate alternatives with respect to the public comments
  - Create a more robust model
  - Reevaluate the collision data and safety statistics
- **Work Performed:**
  - Modeled 5L, 6L SB, 6L NB, & No Build; developed "6L Hybrid"
    - Modeled with Vissim and calibrated with field data
    - Ran AM, PM, and Sunday Church analyses
    - Bus analysis was also conducted
  - Cleaned, mapped, and analyzed collision data

Alternative Overview

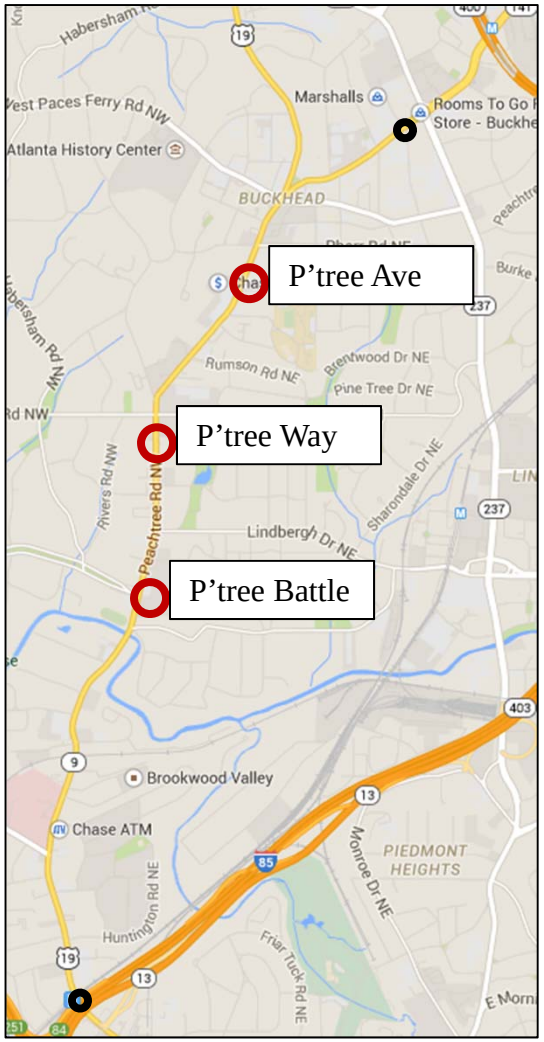
No Build Alternative

- Operations
  - No operational improvements
- Safety
  - Benefit/cost ratio (B/C): none
  - No safety improvements



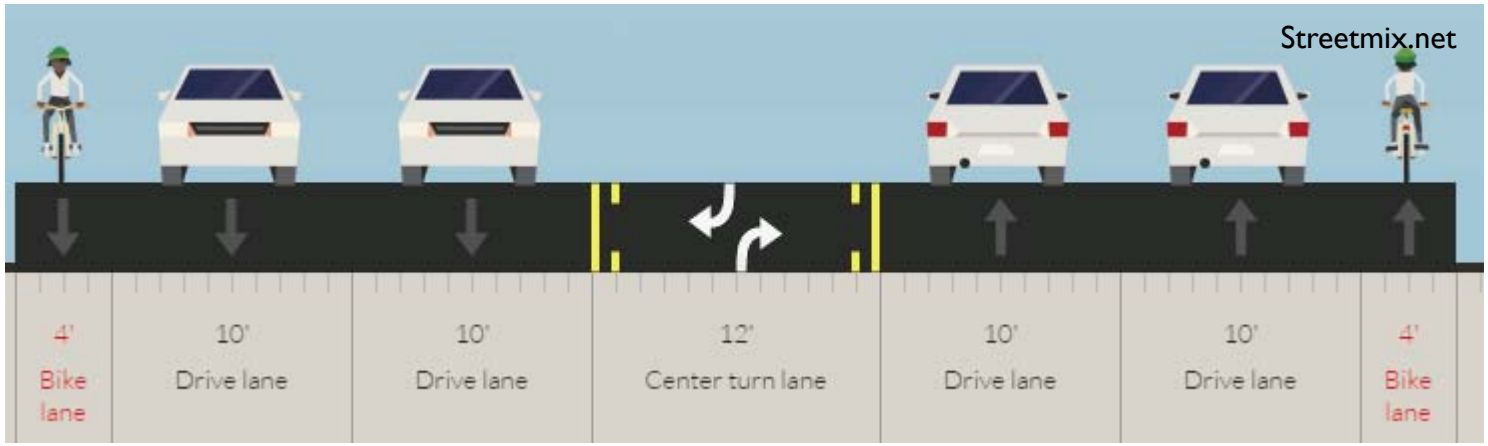
Spot Improvements

- Operations
  - May improve operations at selected intersections but not corridor-wide
- Safety
  - More costly, less effective, and would require much more time to construct than corridor-wide restriping improvements
  - Does not affect mid-block safety concerns
  - Does not change pedestrian or bicyclist experience along corridor
- Potential major ROW, utility, environmental, and history issues with spot improvement approach.



5-Lane Alternative

- Operations
  - Provides no operational disadvantage when compared to the No build model alternative
- Safety
  - B/C: 79.95
  - TWLTL is 12' wide
  - Reduces pedestrian crossing to 52' and creates sidewalk buffer
  - Creates dedicated space for cyclists



6-Lane Northbound Alternative

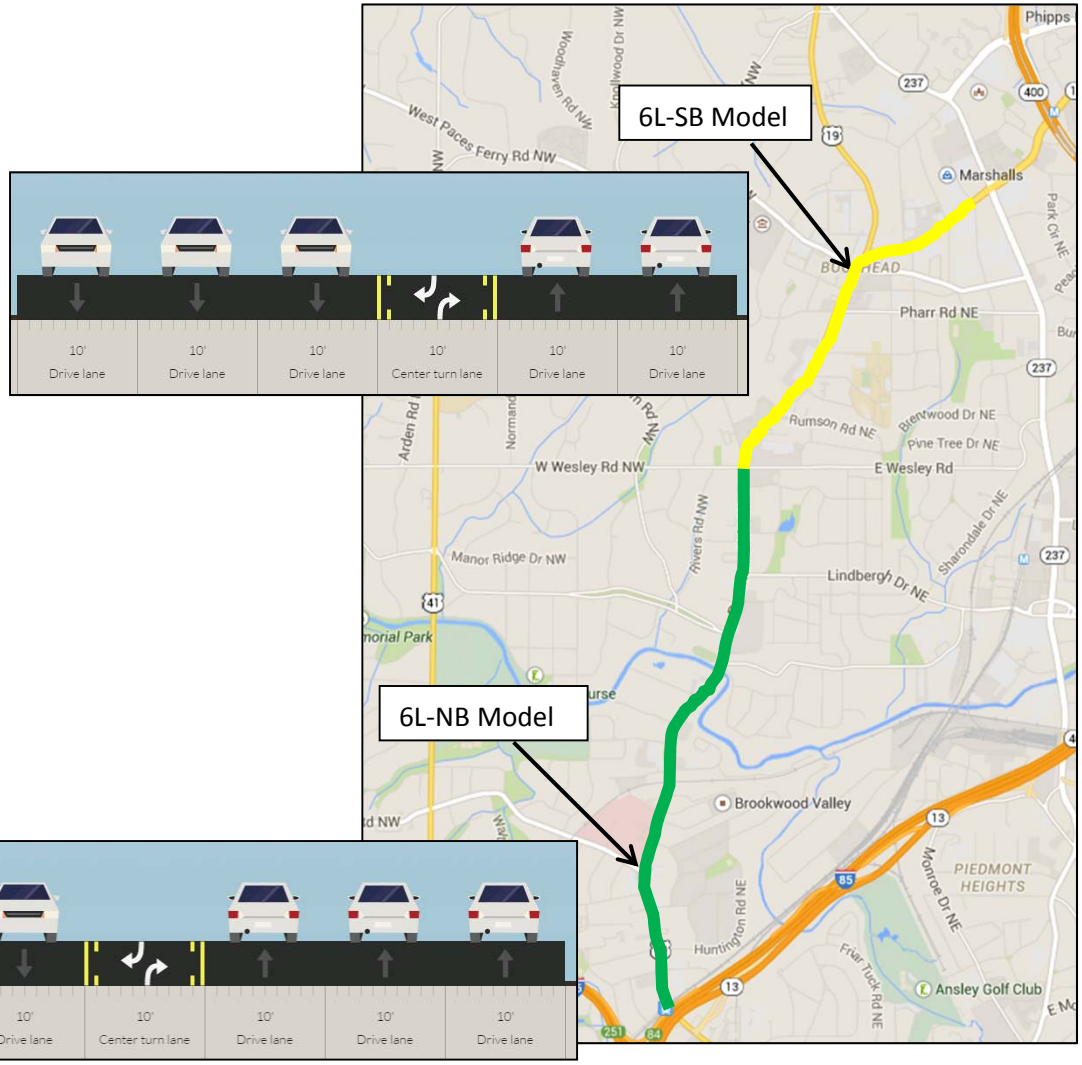
- Operations
  - Improves travel times in the AM and intersection delays throughout the corridor in the AM
- Safety
  - B/C: 75.32
  - TWLTL is 10' wide
  - Pedestrian crossing remains 60'

6-Lane Southbound Alternative

- Operations
  - Improves intersection delays throughout the corridor in the AM
- Safety
  - B/C: 75.32
  - TWLTL is 10' wide
  - Pedestrian crossing remains 60'

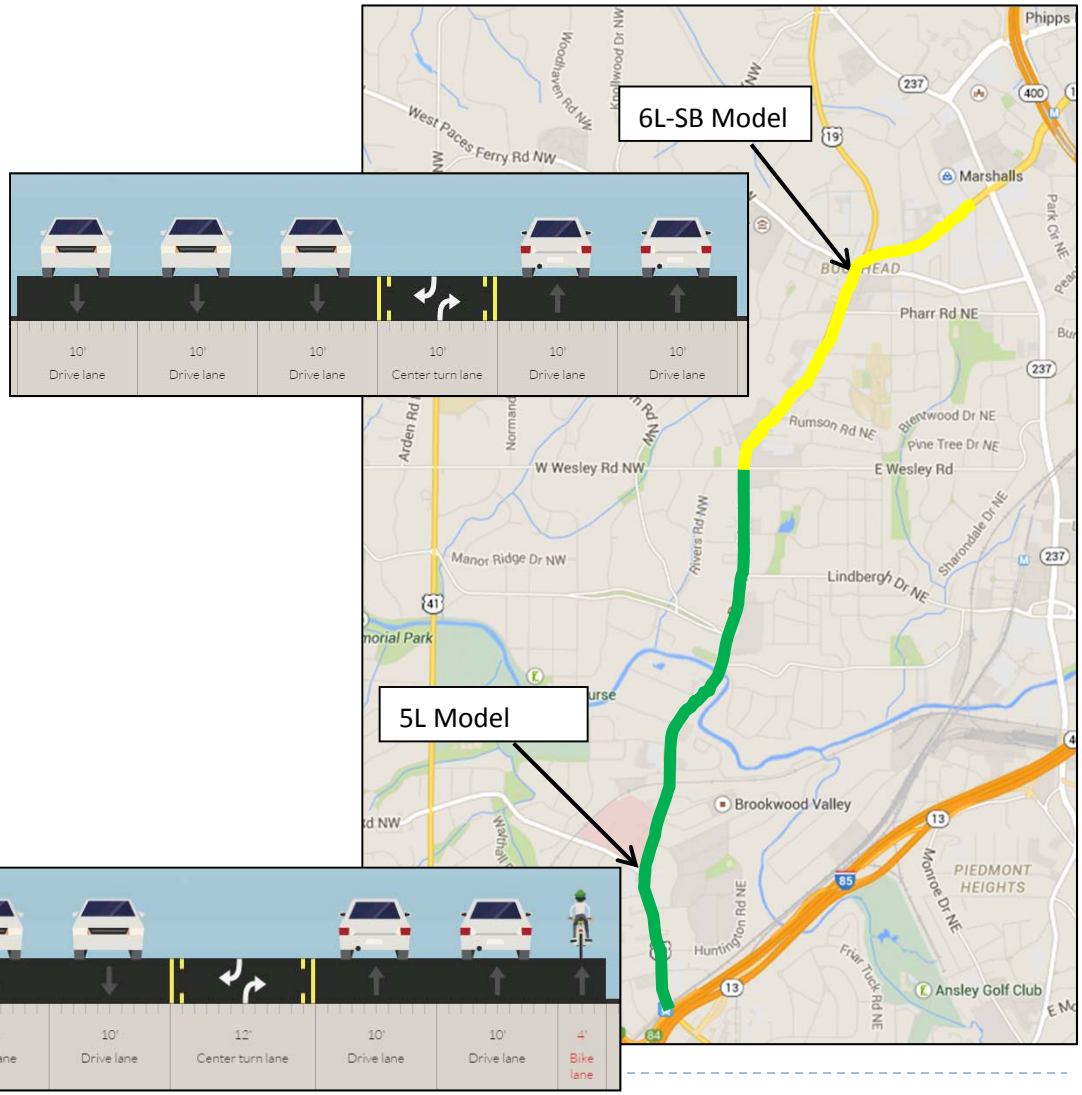
6-Lane Hybrid Alternative

- Operations
  - Improves the travel times, intersection delay, and throughput for the corridor in the PM
- Safety
  - B/C: 75.32
  - TWLTL is 10' wide
  - Pedestrian crossing remains 60'



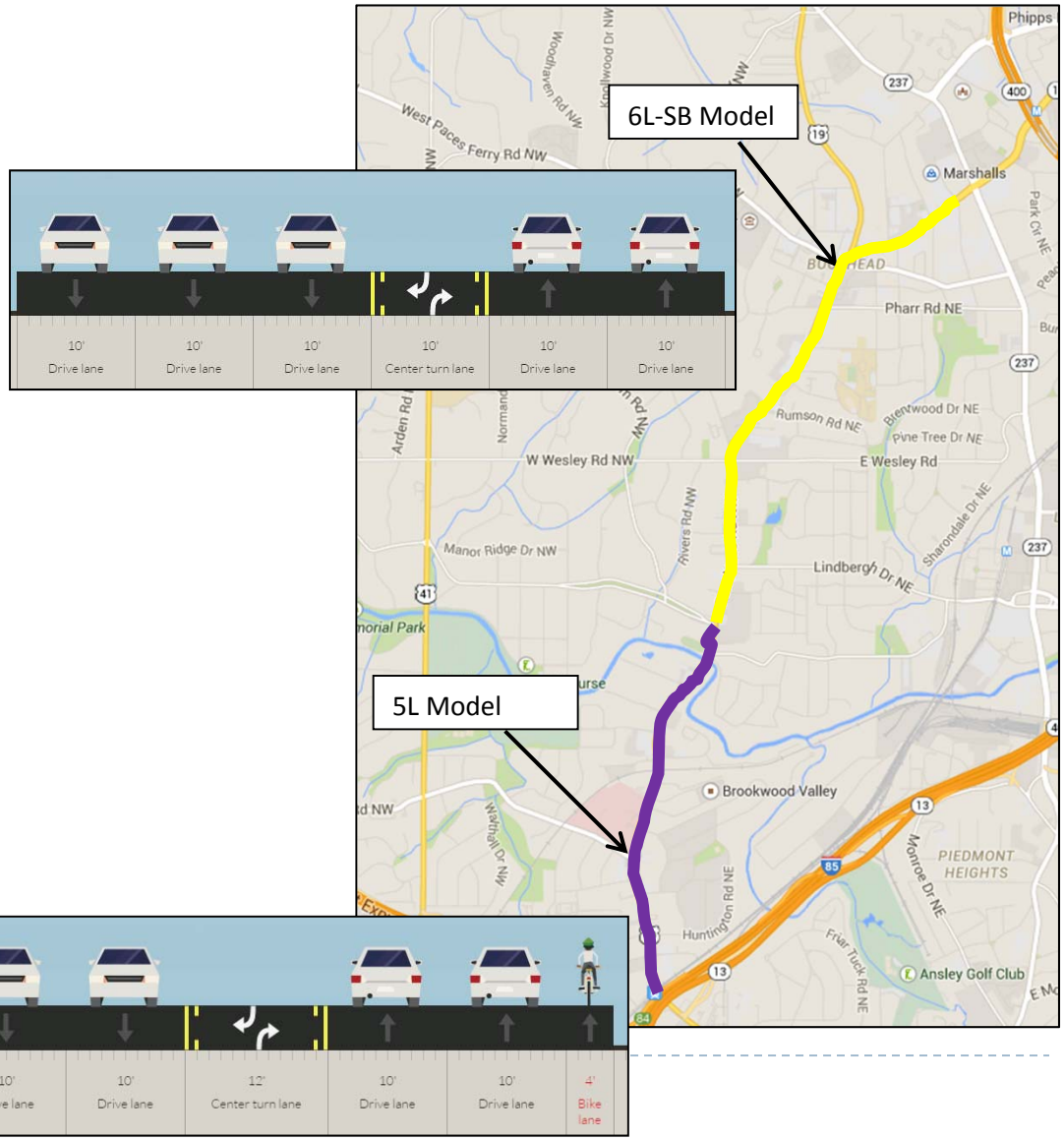
West Wesley Hybrid Alternative

- Operations
  - Provides a more uniform stream of vehicles through the corridor (AM and PM), allowing for a more reliable commute
- Safety
  - B/C: 51.72
  - Creates dedicated space for bicyclists north to BeltLine



Peachtree Battle Hybrid Alternative

- Operations
  - Provides a more uniform stream of vehicles through the corridor (AM and PM), allowing for a more reliable commute
- Safety
  - B/C: 63.45
  - Creates dedicated space for bicyclists north to BeltLine



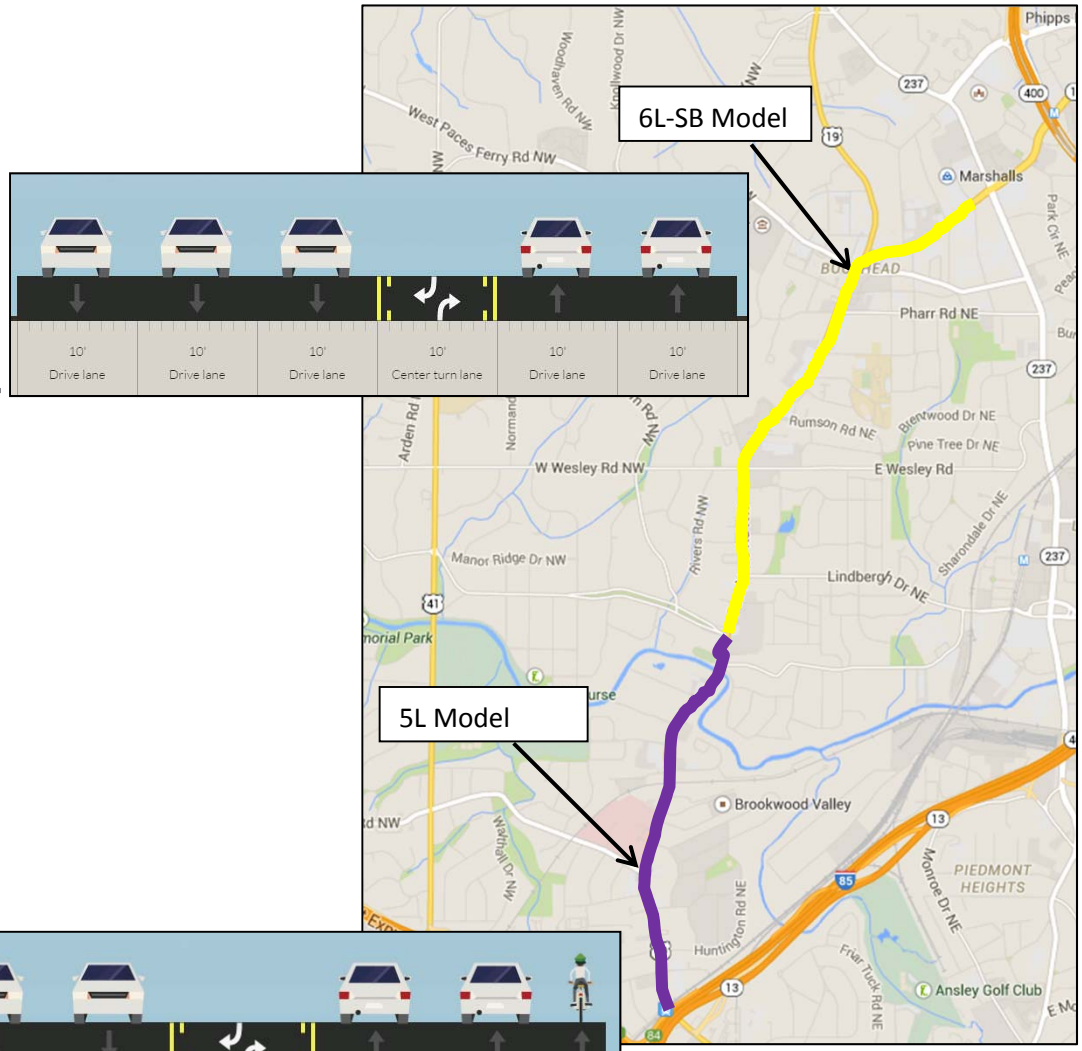
GDOT Recommended Alternative

Goals of the Peachtree Project

- Repave the roadway
- Improve safety for all road users
- Improve corridor reliability and operations
- Create multimodal access on P'tree to the BeltLine
- Be sensitive to neighborhoods, residents, and churches

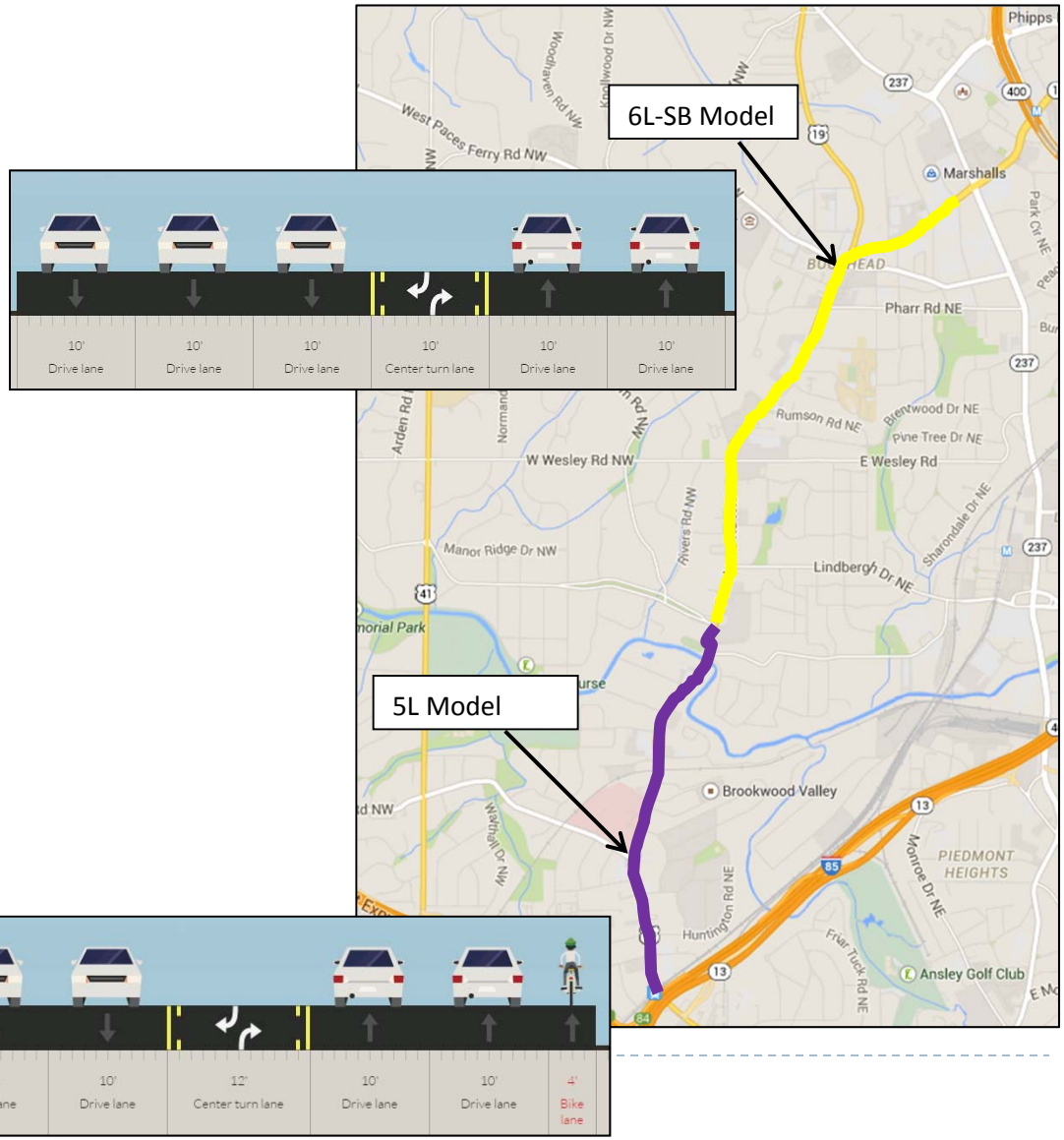
Peachtree Battle Hybrid Alternative

- Safety
  - B/C: 63.45
  - TWLTL and shorter pedestrian crossing distance are low cost but have a very significant safety impact.

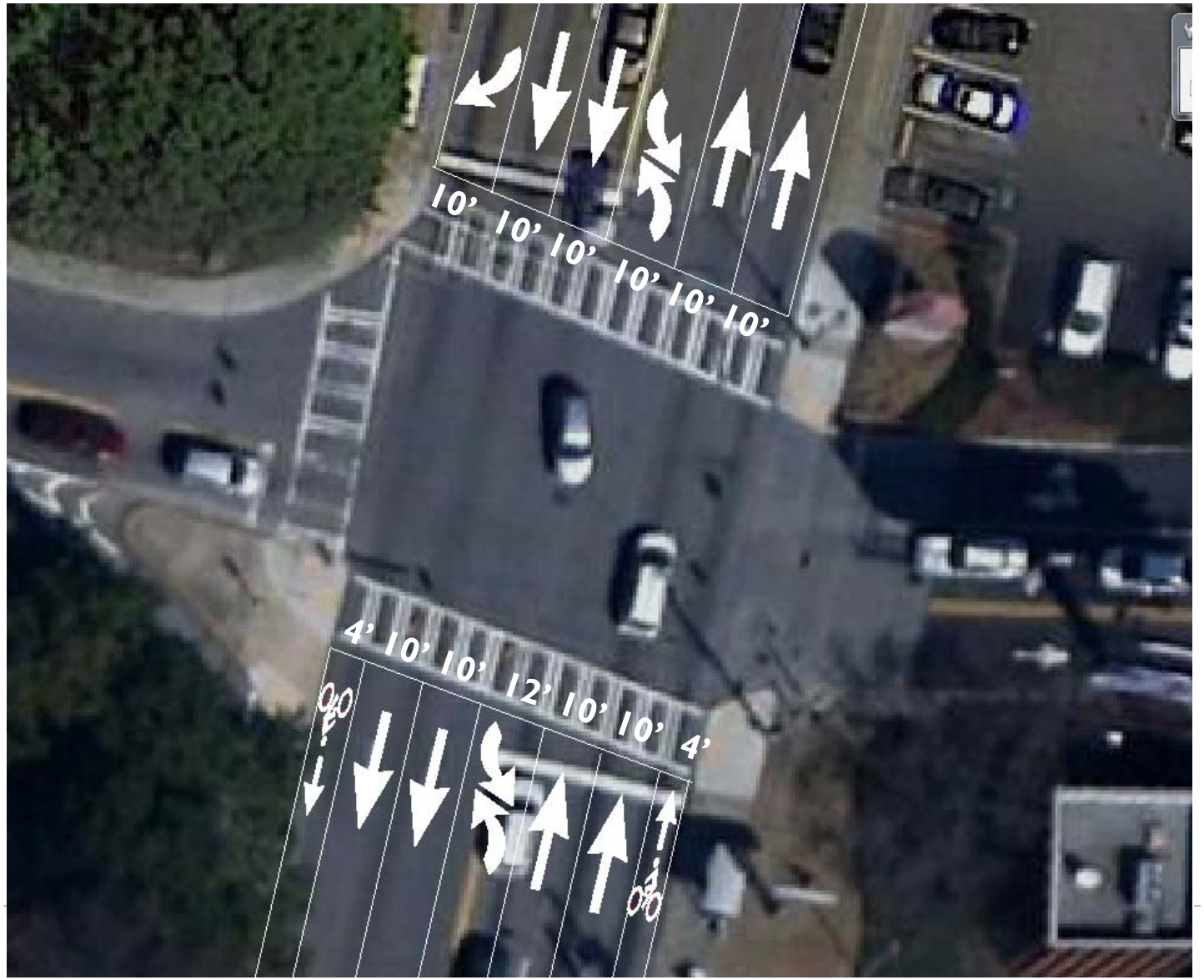


Peachtree Battle Hybrid Alternative

- Operations
  - Provides a more uniform stream of vehicles through the corridor (AM and PM)
  - Allows for a more reliable commute
  - Increases average throughput volume on Peachtree Rd.



Peachtree Battle Hybrid Alternative



Peachtree Battle Hybrid – Performance Measures

AM Analysis							
		No Build	5 Lane	6 Lane NB	6 Lane SB	West Wesley Hybrid	Peachtree Battle Hybrid
Node No.	**Intersection Label**	**Average LOS**	**Average LOS**	**Average LOS**	**Average LOS**	**Average LOS**	**Average LOS**
1	Deering Rd	C	D	D	B	C	C
2	25th St	B	B	B	A	B	B
3	26th St	C	C	C	B	C	C
4	PalisadesRd	A	A	A	A	A	A
5	Collier Rd	C	E	D	C	C	C
6	Brighton Rd	A	A	A	A	B	B
7	Brookwood Valley	A	A	A	A	A	B
8	Peachtree Valley	A	A	A	A	B	B
9	Peachtree Park	A	A	A	A	B	A
10	Colonial Homes	A	A	A	A	A	A
11	Biscayne Dr	A	A	A	A	A	A
12	Peachtree Memorial	A	A	A	A	A	A
13	Fairhaven/Peachtree Hills	B	B	B	B	B	B
14	Peachtree Battle	D	E	E	D	C	C
15	Terrace	A	A	A	A	A	A
16	Lindbergh	C	C	B	C	B	B
17	Lakeview	A	A	A	A	A	A
18	Peachtree Way	A	A	A	A	A	A
19	Wesley	D	D	D	C	C	C
20	Rumson	A	A	A	A	A	A
21	Sheridan	A	A	A	A	A	A
22	Delmont	A	A	A	A	A	A
23	Peachtree Ave	A	A	A	A	A	A
24	Pharr	C	C	C	C	C	C

Peachtree Battle Hybrid - Alternative Achieves Goals

- ✓ Roadway will be repaved
- ✓ Improves safety for all road users
- ✓ Improves corridor reliability and operations
- ✓ Creates multimodal access on P'tree to the BeltLine
- ✓ Sensitive to neighborhoods, residents, and churches

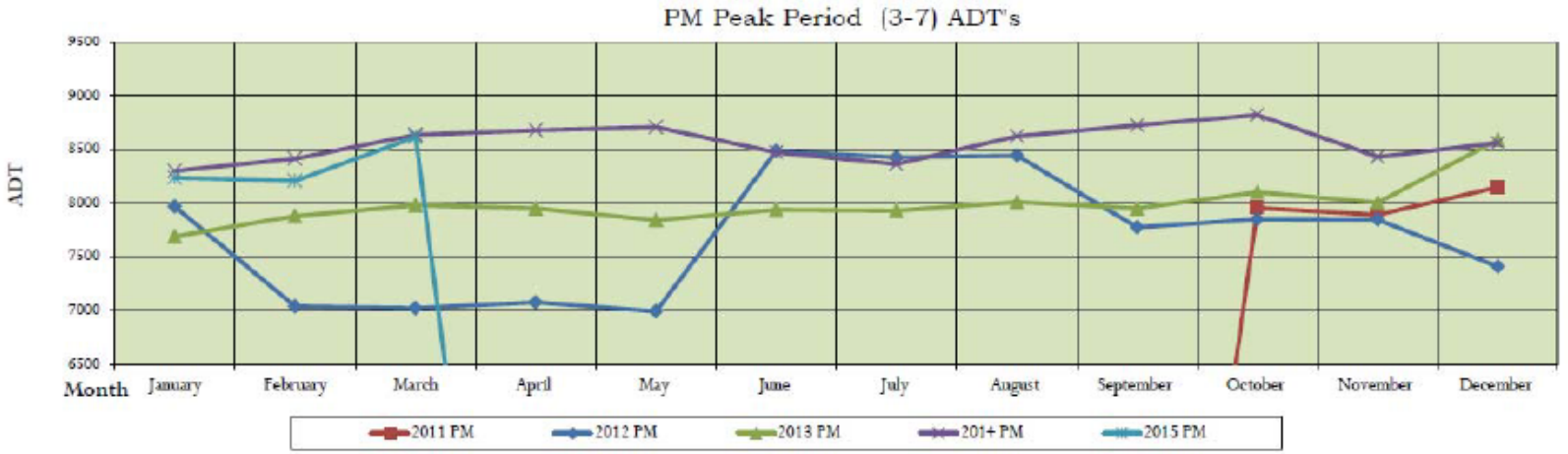

PI 0012870
ARTISTIC VIEW OF US19/PEACHTREE ROAD
LOOKING SOUTH AT ANDREWS DRIVE
GDOT
Georgia Department of Transportation
VERG
Visual Engineering Resource Group

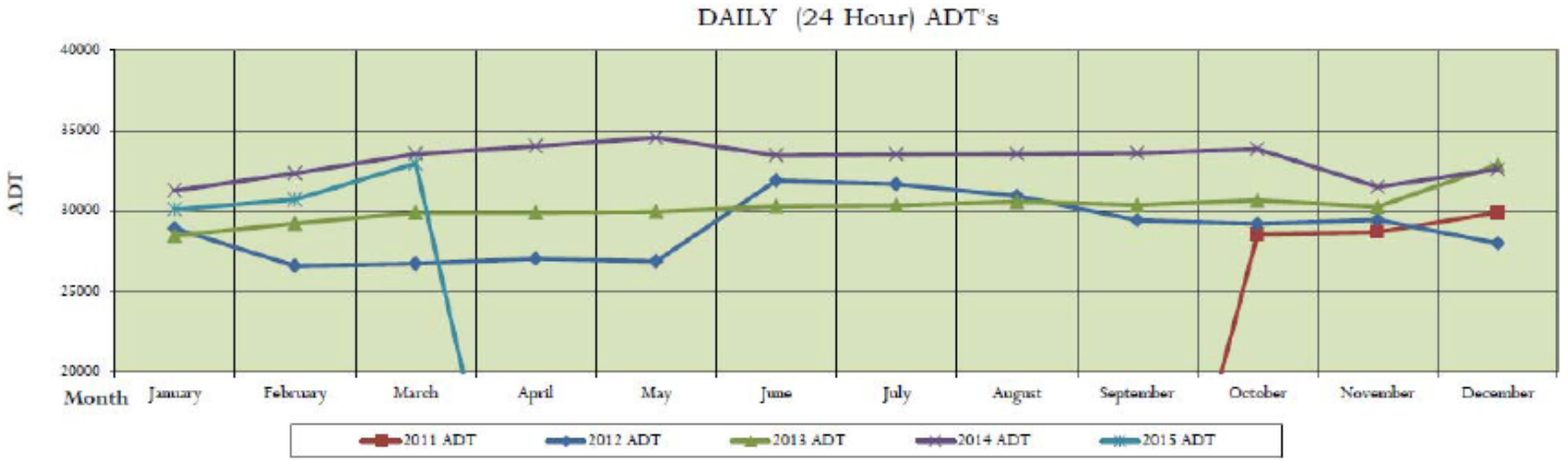

PI 0012870
ARTISTIC VIEW OF US19/PEACHTREE ROAD
LOOKING SOUTH TOWARD DEERING ROAD
GDOT
Georgia Department of Transportation
VERG

PI 0012870

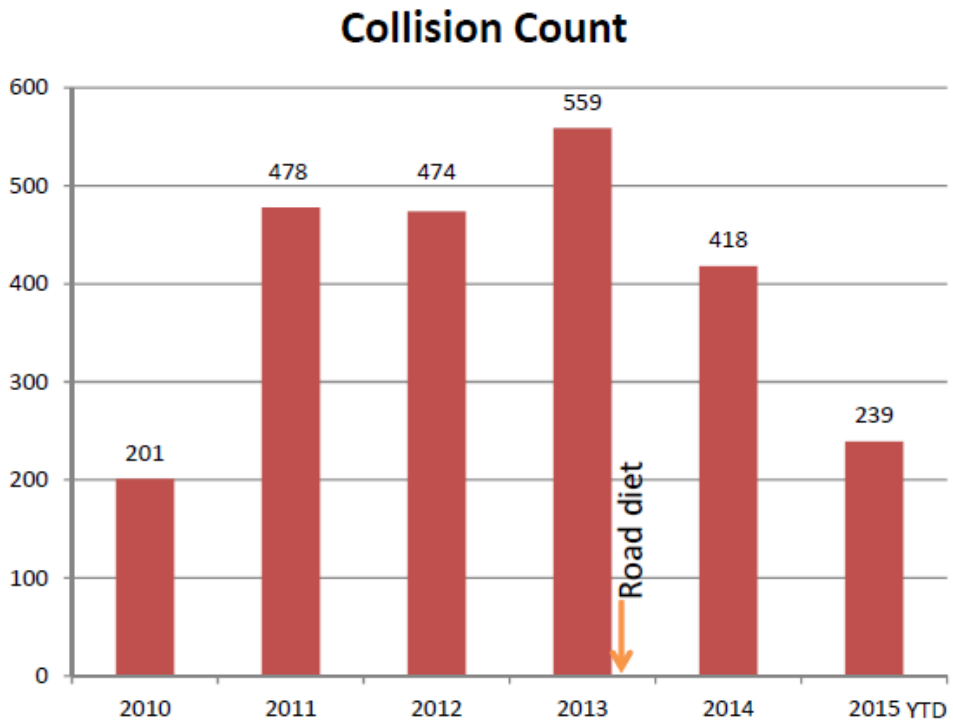
ARTISTIC VIEW OF US19/PEACHTREE ROAD
LOOKING SOUTH TOWARD PEACHTREE BATTLE AVE

Ponce Project





Ponce Project



25% decrease in overall crashes between 2013 and 2014

Next Steps