Azalea Drive Bicycle + Pedestrian Counts

Published July 2022

Conducted by Charleston Moves Staff + Volunteers
- February, March + July 2021
- February + July 2022

Locations: Azalea/Cosgrove, Azalea/Meridian/Easton, Azalea/Old School, Northbridge Park (West Ashley)

Table of Contents

Issue Description + Incremental Improvements

Azalea Drive, located in the City of North Charleston, is a dynamic corridor that connects numerous neighborhoods to public transit, schools, restaurants, shops, employment, community centers, houses of worship and Charleston County's Lonnie Hamilton Building Headquarters and adjacent public services. It is also a critical link to the future Lowcountry Rapid Transit spine and Better North Bridge project.

Charleston Moves has led on robust data collection along Azalea Drive for the past couple of years. This includes bicycle and pedestrian ("bike/ped") counts, utilizing the National Bicycle and Pedestrian Documentation Project resource, as well as community surveying and photo documentation of vulnerable road user trips. Throughout this time, the South Carolina Department of Transportation (SCDOT) and Charleston County, with our involvement, have installed critical safety improvements, including:

1. bike lanes along Azalea from Cosgrove to Bonds Avenues (This infrastructure was the result of a road diet study to assess travel demand along the corridor. The conclusion to rebalance the space to accommodate all modes was coupled by the finding that reconfiguring the roadway to incorporate bike lanes and a two-way left-turn lane would not negatively impact motor vehicle travel time. SCDOT will be considering the addition of bike lanes for the remainder of this segment — from Bonds to Leeds Avenues — when it is up for resurfacing in 2022. This project is expected to be completed in July 2023.);
2. a sidewalk along Azalea from Cosgrove to the Lowcountry Food Bank; and
3. an updated Azalea/Cosgrove intersection (refreshed existing crosswalks, added a crosswalk leg over E Azalea, and fixed broken pedestrian pushbuttons).

In addition, the Charleston Area Regional Transportation Authority (CARTA) has increased the frequency of North Bridge-Route 32 during operating hours.

Existing Conditions

Noteworthy takeaways regarding existing conditions at the Azalea/Cosgrove intersection and how vulnerable road users navigate the space:

1. Due to the multitude and varied designations of travel lanes, vulnerable road users tend to cross 50-150' away from the signal to get space from speeding and turning vehicles, and to utilize the raised median along Cosgrove as a make-shift pedestrian refuge. People also take advantage of stacked cars at red lights to serve as barricades for a more protected crossing. It is worth noting there is still no crosswalk over the S Cosgrove leg of the intersection, despite

aforementioned improvements. In addition to adding this crosswalk leg, leading pedestrian intervals and pedestrian refuges need to be installed.
2. Sidewalks are covered in sand and overgrown with vegetation.
3. Motorist behavior at the intersection is erratic and unpredictable. People operating vehicles consistently run red lights and drive at excessive and dangerous speeds. Additionally, there are various permitted turning maneuvers that make it particularly dangerous for vulnerable road users. This includes a slip lane for free-flowing traffic from N Cosgrove to W Azalea (which needs to be removed), and a heavily-used left-turn lane on S Cosgrove that handles traffic from I-26 and the North Bridge. There is a high rate of lane changes along the S Cosgrove section, which exacerbates these problematic conditions.
4. There is a very high volume of bike/ped trips from nearby neighborhoods to the store and restaurant at the southeast corner of the Azalea/Cosgrove intersection. This community fixture is a hub for takeaway and dine-in hot meals and quick-stop purchases. It also serves as a spot to socialize with neighbors.
5. Consistently, CARTA buses coming over the North Bridge are carrying bikes on the front rack. We know from anecdotal data that many bike/ped trips over this bridge are taken because the bike racks for North Bridge-Route 32 are full.

Regarding existing conditions along the eastern segment of Azalea, including the Azalea/Meridian/Easton and Azalea/Old School intersections:

1. The new sidewalk spanning Azalea/Cosgrove to the Lowcountry Food Bank has offered critical safe space for people traveling east and west through the Hub Village and Accabee neighborhoods. It is being utilized by pedestrians, joggers, and people on bikes alike. Given the volume of cars that use Azalea as a cut through, including large trucks, this provision is a major benefit for vulnerable road users. Meridian Road and Easton Street are key connectors to and through the neighborhoods. Having the sidewalk facilitates a safer connection to this popular north-south corridor, including surrounding destinations.
2. There are no bicycle or pedestrian facilities surrounding the Azalea/Old School intersection; vulnerable road users are left to walk in the grass, ditch or street, which means they contend with speeding motorists and large trucks leaving and entering nearby industrial sites. It is a hostile environment.
3. For this stretch, there are a handful of improvements that should be made: the sidewalk needs to extend to King Street; high-visibility crossings need to be provided at all streets that intersect with Azalea; the speed limit needs to be reduced; shade trees and street lighting should be installed; and CARTA stops need to be upgraded with shelters and concrete pads for ADA-accessibility.

Count Data

The goal of conducting bike/ped counts is to track volume and origin-destination data for vulnerable road user trips in the area, so we could better understand demand and optimum location of safe multi-modal infrastructure improvements. Below are the results of our bike/ped counts over the years.

Note regarding chart sections: The overall count by mode and origin-destination numbers do not always tally to be the same, due to individual trip characteristics. Some observed trips that do not align with movement through (and beyond) an intersection are tallied in the overall count by mode section, but not necessarily in the origin-destination section. An example of this is if a pedestrian got off the bus on N Cosgrove (beyond the Azalea/Cosgrove intersection) and continued their trip on foot, headed north; since they did not begin their bike/ped trip on one part of the intersection and continue through, they are only represented in the overall count by mode. This discrepancy does not indicate faulty data.

FEBRUARY 23, 2021 **Azalea/Cosgrove** **3-5 pm**	
Overall Count By Mode	
Bicyclists	6
Pedestrians	47
TOTAL	53
Origin-Destination	
N Cosgrove to E Azalea	8
N Cosgrove to S Cosgrove	0
N Cosgrove to W Azalea	0
E Azalea to N Cosgrove	17
E Azalea to W Azalea	4
E Azalea to S Cosgrove	3
S Cosgrove to W Azalea	1
S Cosgrove to N Cosgrove	2

FEBRUARY 23, 2021 Azalea/Cosgrove 3-5 pm	
S Cosgrove to E Azalea	4
W Azalea to N Cosgrove	1
W Azalea to E Azalea	6
W Azalea to S Cosgrove	0

MARCH 19, 2021 Azalea/Cosgrove 2-4 pm	
Overall Count By Mode	
Bicyclists	12
Pedestrians	32
TOTAL	44
Origin-Destination	
N Cosgrove to E Azalea	10
N Cosgrove to S Cosgrove	1
N Cosgrove to W Azalea	2
E Azalea to N Cosgrove	8
E Azalea to W Azalea	8
E Azalea to S Cosgrove	4
S Cosgrove to W Azalea	0
S Cosgrove to N Cosgrove	6
S Cosgrove to E Azalea	4
W Azalea to N Cosgrove	2
W Azalea to E Azalea	6
W Azalea to S Cosgrove	0

JULY 10, 2021 Azalea/Cosgrove 10 am - 12 pm	
Overall Count By Mode	
Bicyclists	2
Pedestrians	12
TOTAL	14
Origin-Destination	
N Cosgrove to E Azalea	4
N Cosgrove to S Cosgrove	1
N Cosgrove to W Azalea	1
E Azalea to N Cosgrove	0
E Azalea to W Azalea	0
E Azalea to S Cosgrove	4
S Cosgrove to W Azalea	0
S Cosgrove to N Cosgrove	0
S Cosgrove to E Azalea	0
W Azalea to N Cosgrove	0
W Azalea to E Azalea	4
W Azalea to S Cosgrove	0

JULY 10, 2021 Azalea/Cosgrove 12-2 pm	
Overall Count By Mode	
Bicyclists	7
Pedestrians	17
TOTAL	24
Origin-Destination	

JULY 10, 2021 Azalea/Cosgrove 12-2 pm	
N Cosgrove to E Azalea	3
N Cosgrove to S Cosgrove	1
N Cosgrove to W Azalea	0
E Azalea to N Cosgrove	1
E Azalea to W Azalea	1
E Azalea to S Cosgrove	2
S Cosgrove to W Azalea	0
S Cosgrove to N Cosgrove	1
S Cosgrove to E Azalea	0
W Azalea to N Cosgrove	0
W Azalea to E Azalea	0
W Azalea to S Cosgrove	0

FEBRUARY 18, 2022 Azalea/Cosgrove [INFORMAL COUNT] 4-5 pm	
Overall Count By Mode	
Bicyclists	2
Pedestrians	5
TOTAL	7
Origin-Destination	
Bike: N Cosgrove to E Azalea	1
Bike: Traveling W on Azalea in bike lane	1
Ped: Exited CARTA bus @ Mary Ford Elementary stop	1

FEBRUARY 18, 2022 Azalea/Cosgrove [INFORMAL COUNT] 4-5 pm	
Ped: Crossed over S Cosgrove, behind Applied Building Sciences to corner grocery and back	3
Ped: E Azalea to W Azalea	1
CARTA bus crossed North Bridge with bike on rack	1

JULY 6, 2022 Azalea/Meridian/Easton 5-7 pm	
Overall Count By Mode	
Bicyclists	5
Pedestrians	13
TOTAL	18
Origin-Destination	
N Easton to E Azalea	1
N Easton to S Meridian	0
N Easton to W Azalea	0
E Azalea to N Easton	5
E Azalea to W Azalea	2
E Azalea to S Meridian	0
S Meridian to W Azalea	1
S Meridian to N Easton	0
S Meridian to E Azalea	2
W Azalea to N Easton	3
W Azalea to E Azalea	3
W Azalea to S Meridian	2

JULY 6, 2022 Azalea/Old School 5-7 pm	
Overall Count By Mode	
Bicyclists	2
Pedestrians	5
TOTAL	7
Origin-Destination	
E Azalea to S Old School	0
E Azalea to W Azalea	2
S Old School to W Azalea	0
S Old School to E Azalea	1
W Azalea to E Azalea	3
W Azalea to S Old School	1

JULY 9, 2022 Azalea/Meridian/Easton 12-2 pm	
Overall Count By Mode	
Bicyclists	9
Pedestrians	6
TOTAL	15
Origin-Destination	
N Easton to E Azalea	2
N Easton to S Meridian	1
N Easton to W Azalea	0
E Azalea to N Easton	0
E Azalea to W Azalea	1

JULY 9, 2022 Azalea/Meridian/Easton 12-2 pm	
E Azalea to S Meridian	3
S Meridian to W Azalea	0
S Meridian to N Easton	1
S Meridian to E Azalea	2
W Azalea to N Easton	0
W Azalea to E Azalea	0
W Azalea to S Meridian	3

JULY 9, 2022 Azalea/Old School 12-2 pm	
Overall Count By Mode	
Bicyclists	1
Pedestrians	0
TOTAL	1
Origin-Destination	
E Azalea to S Old School	0
E Azalea to W Azalea	0
S Old School to W Azalea	0
S Old School to E Azalea	0
W Azalea to E Azalea	1
W Azalea to S Old School	0

JULY 19, 2022 Azalea/Meridian/Easton 8-10 am	
Overall Count By Mode	

JULY 19, 2022 Azalea/Meridian/Easton 8-10 am	
Bicyclists	4
Pedestrians	4
TOTAL	8
Origin-Destination	
N Easton to E Azalea	0
N Easton to S Meridian	1
N Easton to W Azalea	1
E Azalea to N Easton	0
E Azalea to W Azalea	2
E Azalea to S Meridian	1
S Meridian to W Azalea	1
S Meridian to N Easton	0
S Meridian to E Azalea	0
W Azalea to N Easton	0
W Azalea to E Azalea	2
W Azalea to S Meridian	0

JULY 19, 2022 Azalea/Old School 8-10 am	
Overall Count By Mode	
Bicyclists	3
Pedestrians	1
TOTAL	4
Origin-Destination	
E Azalea to S Old School	1

JULY 19, 2022 Azalea/Old School 8-10 am	
E Azalea to W Azalea	1
S Old School to W Azalea	0
S Old School to E Azalea	0
W Azalea to E Azalea	2
W Azalea to S Old School	0

We also did a short observation session of Northbridge Park on the West Ashley side of the North Bridge. Here are those results:

FEBRUARY 22, 2022 Northbridge Park 3-5 pm	
Overall Count By Mode	
Bicyclists	3
Pedestrians	37
TOTAL	40
Origin-Destination	
Bike: Walked bikes over North Bridge in the median to spend time at Northbridge Park	2
Bike: Used Sam Rittenberg multi-use path to get out to Northbridge Park	1
Ped: Used Sam Rittenberg multi-use path to get out to Northbridge Park	2 (1 walker, 1 jogger)
Ped: Enjoying Northbridge Park, under bridge and along beach areas	26
Ped: Enjoying the fishing pier	10
School buses crossed North Bridge	5

Summary

We have spent over 20 hours on site, observing vulnerable road user demand and tracking travel patterns for the Azalea corridor, most notably at the Azalea/Cosgrove intersection. It is abundantly clear that there is a high volume of existing bike/ped/transit trips throughout the area, and promise for many more as safe, connected and thoughtful multi-modal infrastructure is installed.

It is worth noting these counts were conducted in winter and summer months. Despite this, on average, we documented: 20 people per hour at Northbridge Park; 16 people per hour at Azalea/Cosgrove; 7 people per hour at Azalea/Meridian/Easton; and 2 people per hour at Azalea/Old School. Vulnerable road users are utilizing all segments of the corridor, regardless of weather conditions and time of day.

Neighborhoods within the immediate vicinity of the North Bridge, on the North Charleston side, are federally-categorized as historically disadvantaged communities, as well as areas of persistent poverty. As such, it is critical that smart decisions are made when it comes to growth and development. It is beyond time to proactively work toward repairing the trauma that has burdened these communities — particularly Dorchester Terrace, Accabee and Hub Village — by the interstate system that divided and isolated them. It is as important to maintain a balanced socio-economic mix of residents to prevent displacement, as it is to improve safety and quality of life through transportation access, so these neighborhoods become more connected, healthier and enjoyable. The Better North Bridge project will bring safe, equitable access to healthy food, employment, education, recreation, healthcare, bus rapid transit, and countless other services and destinations throughout West Ashley and North Charleston. Through hours of community surveying, we know that residents want this safe access for themselves, their neighbors, and their community on the other side of the river. It is a truly inclusive and wholly-beneficial project, and one that relies on connectivity throughout the Azalea and Cosgrove corridors.

This document is a testament to the transformative power of collaboration. Over the years of conducting research and documentation in this area, we have been able to work with SCDOT, Charleston County, City of North Charleston, City of Charleston and community members around the understanding that improving safety in this area is a shared priority. And that there are steps we need to take to build the key connections that will ensure a reduction of fatalities and serious injuries on our roadways. With Black and senior populations on foot and bike bearing the disproportionate impact of these preventable tragedies, urgent and swift action is the answer to saving lives.

Gallery


creech's
843-747-7343


32 NORTH BRIDGE
3512
CARTA


creech's
843-747-7343


Airport
Columbia
Charleston


LOWCOUNTRY
FOOD BANK
ALL TRUCK DELIVERIES
VOLUNTEER & VISITOR
PARKING


CARTA
(843) 724-7420
BUS STOP
United Rentals


gerber