Reduced Conflict Intersections

OCTOBER 2023

Why an RCI?

- Safety is a top priority at NCDOT.
- Raised medians and reduced conflict intersections better manage access on the main road.
- The design improves safety—lowers crash rates—and improves traffic flow.
- An RCI is an innovative solution to traffic congestion. It often reduces the need to add extra lanes, which increase costs and environmental impacts.
- You can reach your destination more quickly.

Types of RCI designs

- There are variations, but they all function the same way by reducing the number of potential locations, or conflict points, where drivers can collide.
- In the most common design, drivers from minor movements from side streets are redirected to turn right.

Safety Benefits

- NCDOT study in 2010 and Federal Highway Administration study in 2017 found:
  - At unsignalized locations, total crashes reduced by 46%; and, injury crashes reduced by 63%
  - At signalized intersections, total crashes reduced by 15%; and, injury crashes reduced by 22%

Travel Time Savings

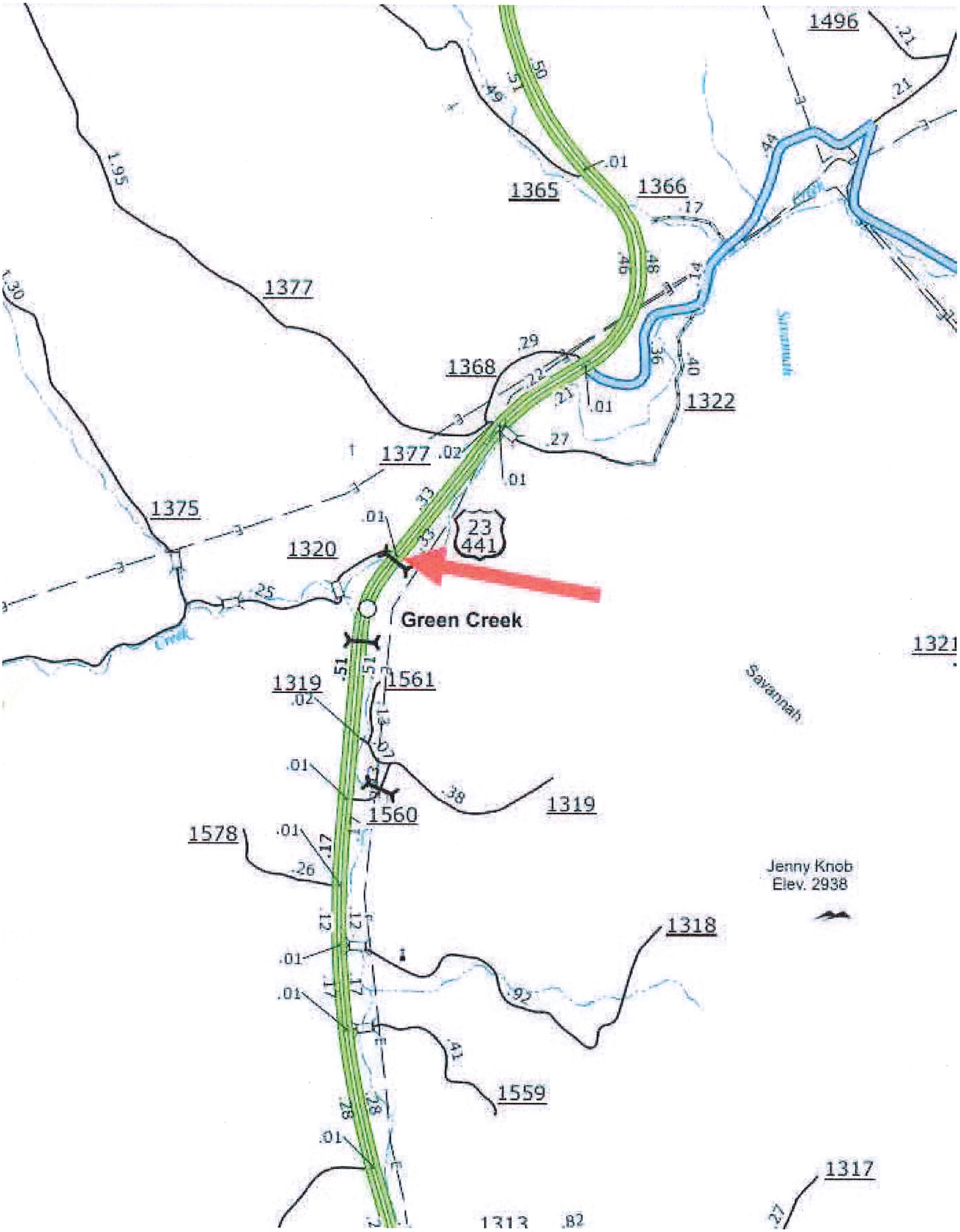
- There is an average 20% time savings on a signalized corridor with RCI designs vs. conventional intersections, per an N.C. State University study in 2010.
- At traditional intersection, several phases of a traffic signal are needed to cycle everyone through it, increasing travel time. At a signalized RCI, only two phases are needed.

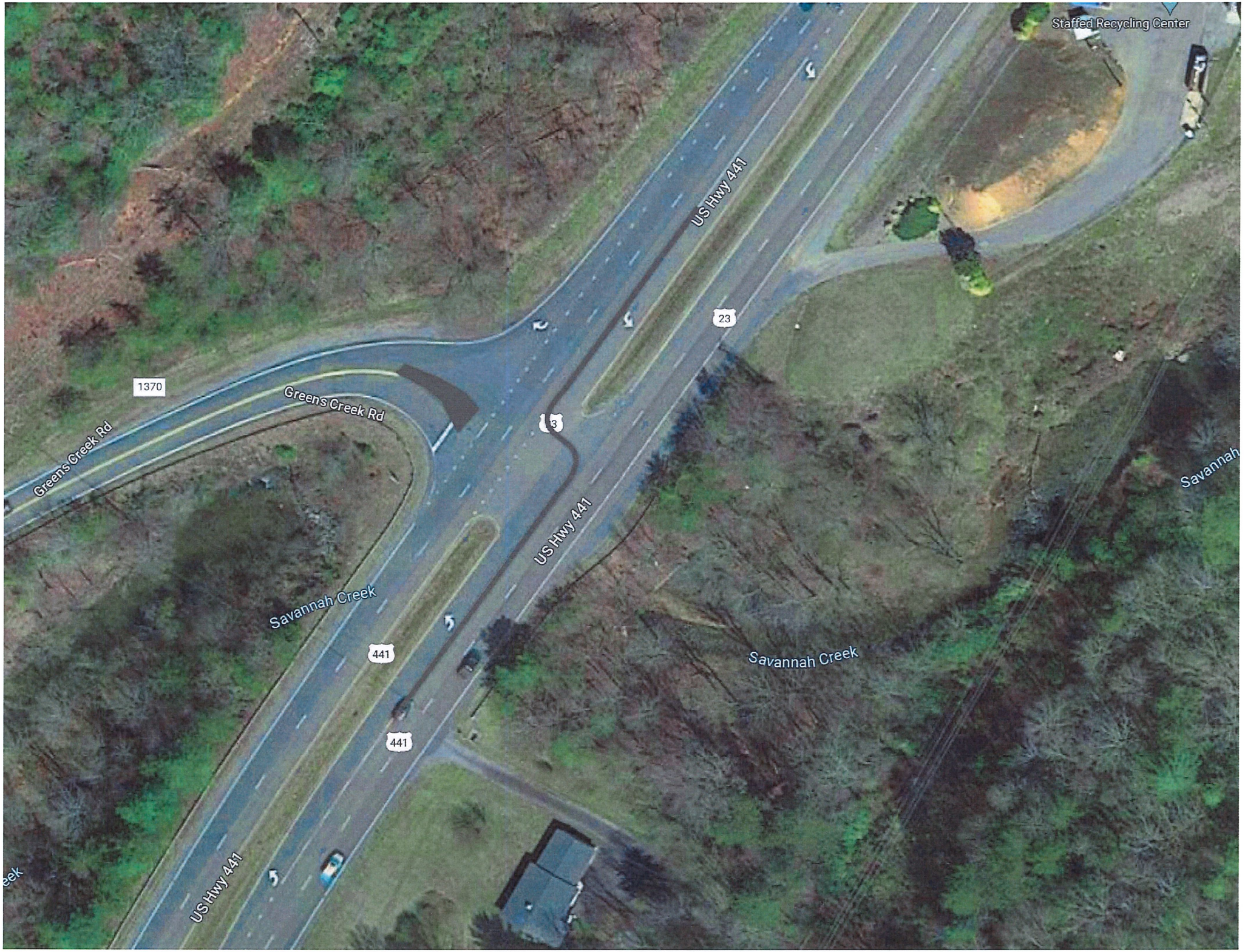
Other Benefits

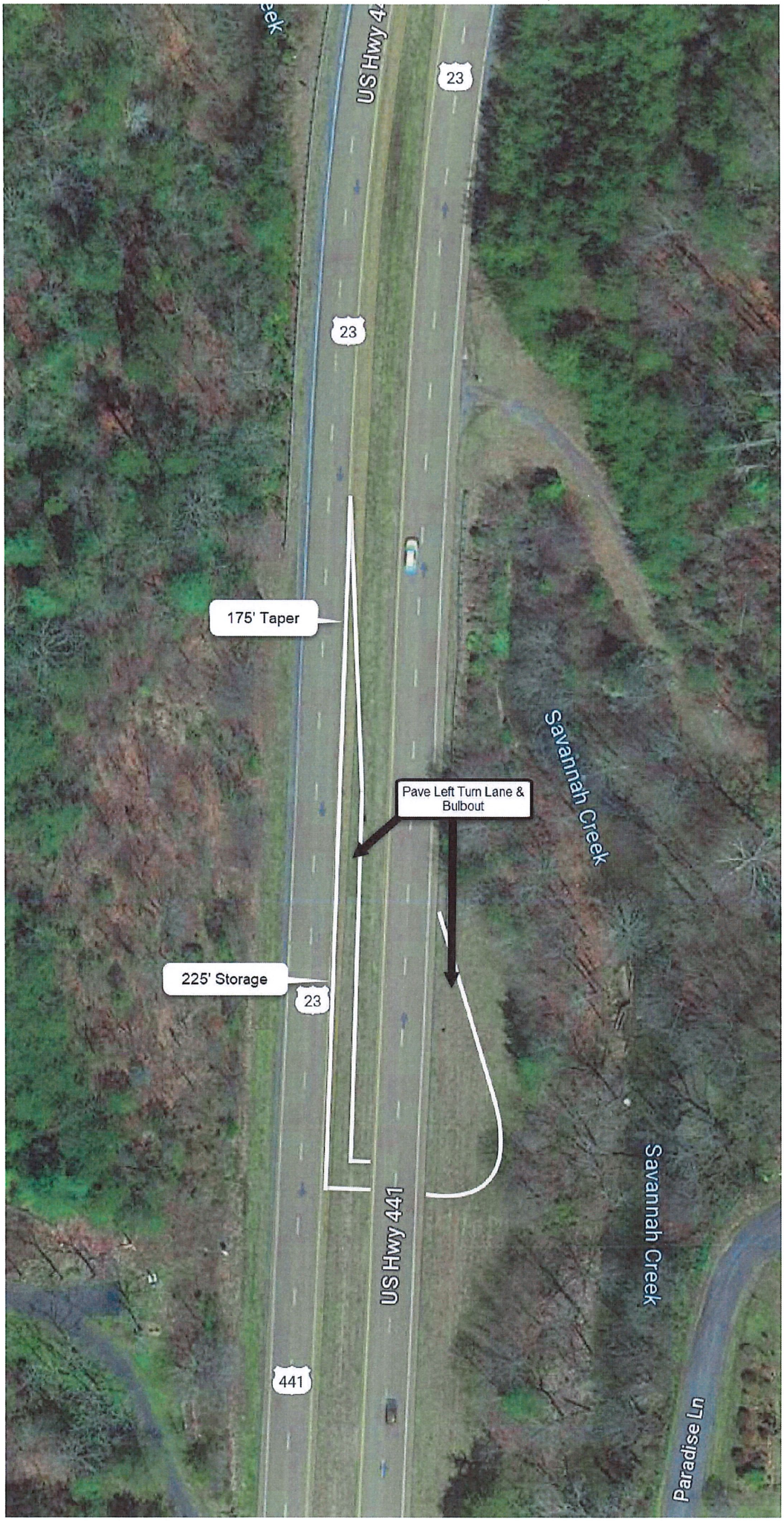
- Compared to widening roadways, the RCI design may require less new right of way, reducing impacts to businesses and the community.
- U-turns are designed to be performed safely at designated locations with clear visibility.
- It's often faster to turn right from the minor street and make a safe U-turn a short distance away, than to wait for a safe gap in both directions of traffic.
- An RCI design simplifies how traffic moves. It's the *right* way to go left!

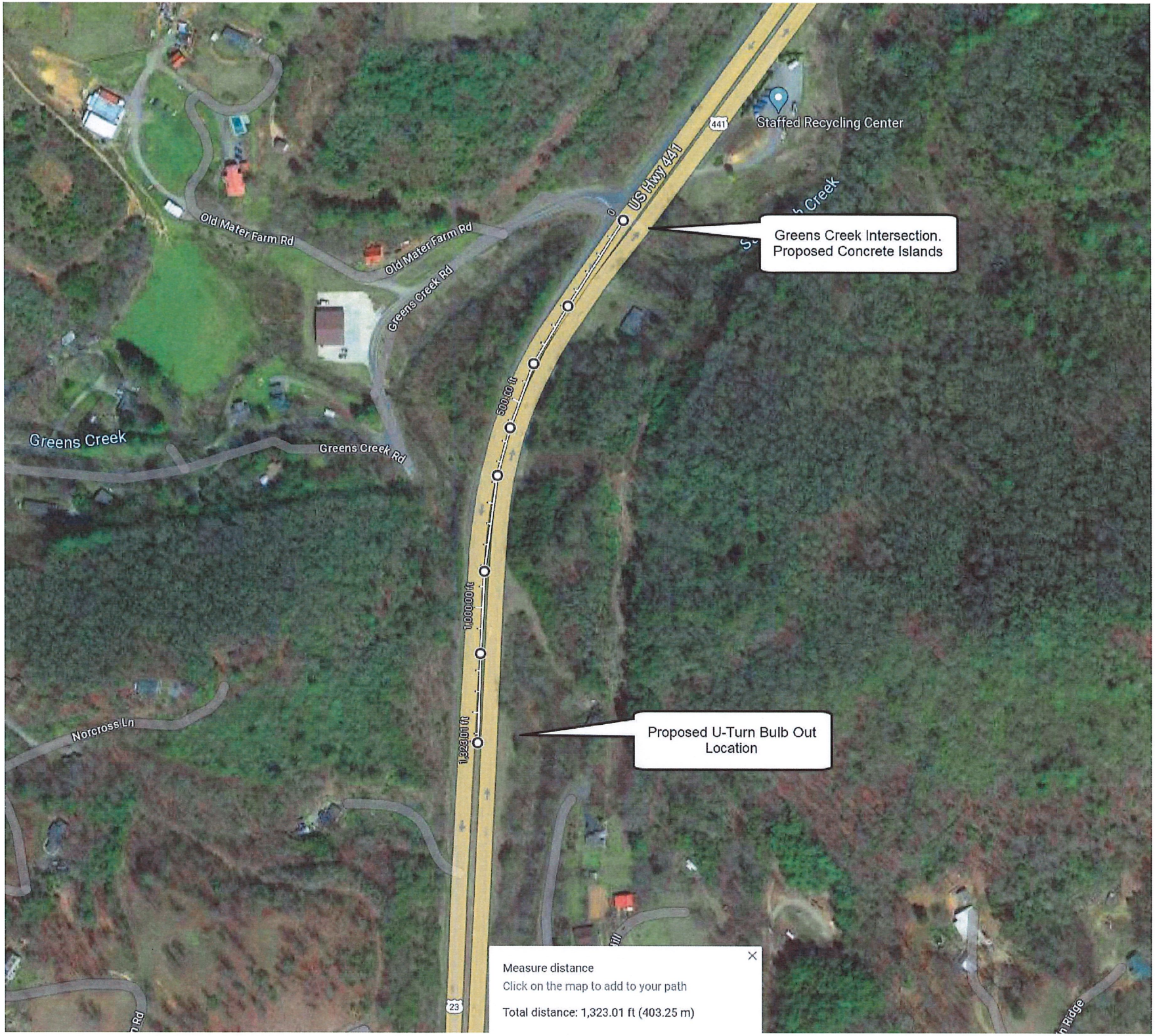
A 2022 Study of the Economic Impacts by UNC-Wilmington Found:

- While some locations showed a positive increase in economic activity, many others had neither a negative nor positive effect, suggesting that the RCI benefits to the traveling public do not generally harm a business.
- The RCI design has the potential to support home values.
- Safe access is good for business.
  - Customers will less likely travel on a corridor with a high crash rate.
  - Customers avoid using a corridor with heavy backups and long travel times.
- **NCDOT's Reduced Conflict Intersection website**


1496
1365
1366
1377
1368
1322
1375
1320
23
441
Green Creek
1321
1319
1561
1560
1578
1319
Jenny Knob
Elev. 2938
1318
1559
1317
1313


Staffed Recycling Center
US Hwy 441
23
1370
Greens Creek Rd
Greens Creek Rd
3
US Hwy 441
Savannah
Savannah Creek
441
Savannah Creek
441
US Hwy 441


US Hwy 4
23
23
175' Taper
Pave Left Turn Lane &
Bulbout
Savannah Creek
225' Storage
23
US Hwy 441
Savannah Creek
441
Paradise Ln


Staffed Recycling Center
441
US Hwy 441
Greens Creek Intersection.
Proposed Concrete Islands
Old Mater Farm Rd
Old Mater Farm Rd
Greens Creek Rd
500.00 ft
Greens Creek
Greens Creek Rd
1,000.00 ft
Norcross Ln
1,323.01 ft
Proposed U-Turn Bulb Out
Location
Measure distance
Click on the map to add to your path
Total distance: 1,323.01 ft (403.25 m)
23

STATE OF NORTH CAROLINA
COUNTY OF JACKSON

R24-XX

**RESOLUTION BY THE COUNTY OF JACKSON
IN SUPPORT OF NCDOT CONSTRUCTING A REDUCED CONFLICT INTERSECTION
AT US 23-441 AND GREENS CREEK ROAD**

WHEREAS, NCDOT has identified the intersection of US 23-441 at Greens Creek Road as a safety project to mitigate a pattern of crash history to the south of Dillsboro; and

WHEREAS, analysis of the intersection by NCDOT's Traffic Safety Unit has shown a pattern of crashes involving left turning movements from Greens Creek Road onto US 23-441, with moderate to severe injuries; and

WHEREAS, the safety project would eliminate left turning movement, via installation of a concrete island, requiring a right turn and utilization of a newly constructed U-turn located approximately 1,300 feet to the south of the existing intersection; and

WHEREAS, NCDOT has identified funding for this project via the Highway Safety Improvement Program, as this project is eligible due to the history of crashes at this location over the most recent five years; and

WHEREAS, the Board of County Commissioners is of the opinion the request should be granted, if it meets minimum standards and criteria established by the Division of Highways of the Department of Transportation.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Commissioners of Jackson County hereby requests the Division of Highways to review the recommendation and construct a reduced conflict intersection at US 23-441 and Greens Creek Road.

Adopted this the 16th day of July, 2024.

_____
Mark A. Letson, Chair
Jackson County Board of Commissioners

ATTEST:

_____
Angela M. Winchester Clerk to the Board