

# Johns Island Roads Update

Spring 2016

# Several topics are of interest

- Johns Island Coalition
- Status of Sea Island Greenway
- Mark Clark Extension
- Superstreet/Route 17/Main Road
- Maybank Highway Widening
- Pitchfork
- Johns Island Task Force

# The J.I. Coalition didn't work

- Too many participants—too many naysayers
- Principal objective “stop I-526 & the Greenway”
- Group died a natural death
- New, small group formed, no bomb-throwers
- Initial objective “concentrate on land use regs”
- Avoid road plans, advance consensus projects
- Support Angel Oak type projects
- Work with/not against City & County

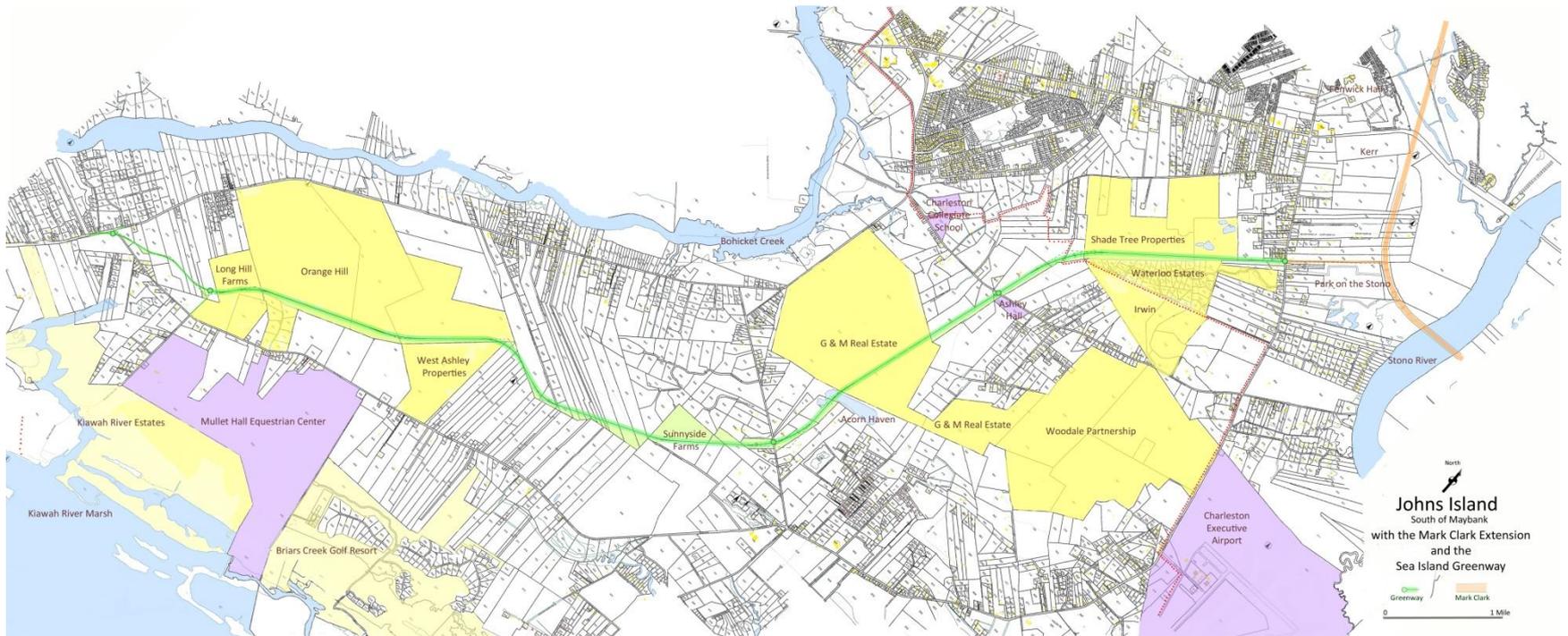
# Greenway Study was not completed

- LPA Study showed Greenway as best alternative
- We identified the most feasible alignment
- EIS must be completed before authorization
- TOKI talked with MBJr about finishing EIS
- County postponed effort until 526 DOR issued
- To get built, County must endorse Greenway
- Political position of Council is in question

# Result of Council's study of ways to improve Johns Island Roads

|   | Widening Main & Bohicket | Widening River Rd. | Building the Greenway |
|---|--------------------------|--------------------|-----------------------|
| <b>Cost of Construction and Right-of-Way</b>            | \$94 million             | \$ 68 million      | \$50 million          |
| <b>Traffic score for the overall network</b>            | 104                      | 87                 | 114                   |
| <b>Number of Grand Trees Cut</b>                        | 25-30                    | 30-40              | 2-5                   |
| <b>Number of Parcels Impacted</b>                       | 506                      | 426                | 78                    |
| <b>Residences, Business &amp; Govt. Bldgs Relocated</b> | 20                       | 40                 | 13                    |
| <b>Project Length (miles)</b>                           | 13.77                    | 11.97              | 11.19                 |
| <b>Amount that is 5-Lane Road (miles.)</b>              | 10                       | 4                  | 0                     |
| <b>Amount of Tree Canopy Disrupted (miles)</b>          | 2.2                      | 3                  | 0                     |
| <b>Farmlands (acres)</b>                                | 54.8                     | 37.7               | 41.2                  |
| <b>Wetlands (acres)</b>                                 | 8.8                      | 3.2                | 10.9                  |
| <b>Floodplains (acres)</b>                              | 46.5                     | 63.6               | 47.2                  |
| <b>No. Left Turn Generating Access Points</b>           | 200+                     | 200+               | 5                     |
| <b>Number of Cultural Sites Impacted</b>                | 4                        | 1                  | 1                     |
| <b>No. Hazardous Materials Sites Encountered</b>        | 12                       | 6                  | 1                     |
| <b>Controlled access?</b>                               | <b>No</b>                | <b>No</b>          | <b>Yes</b>            |

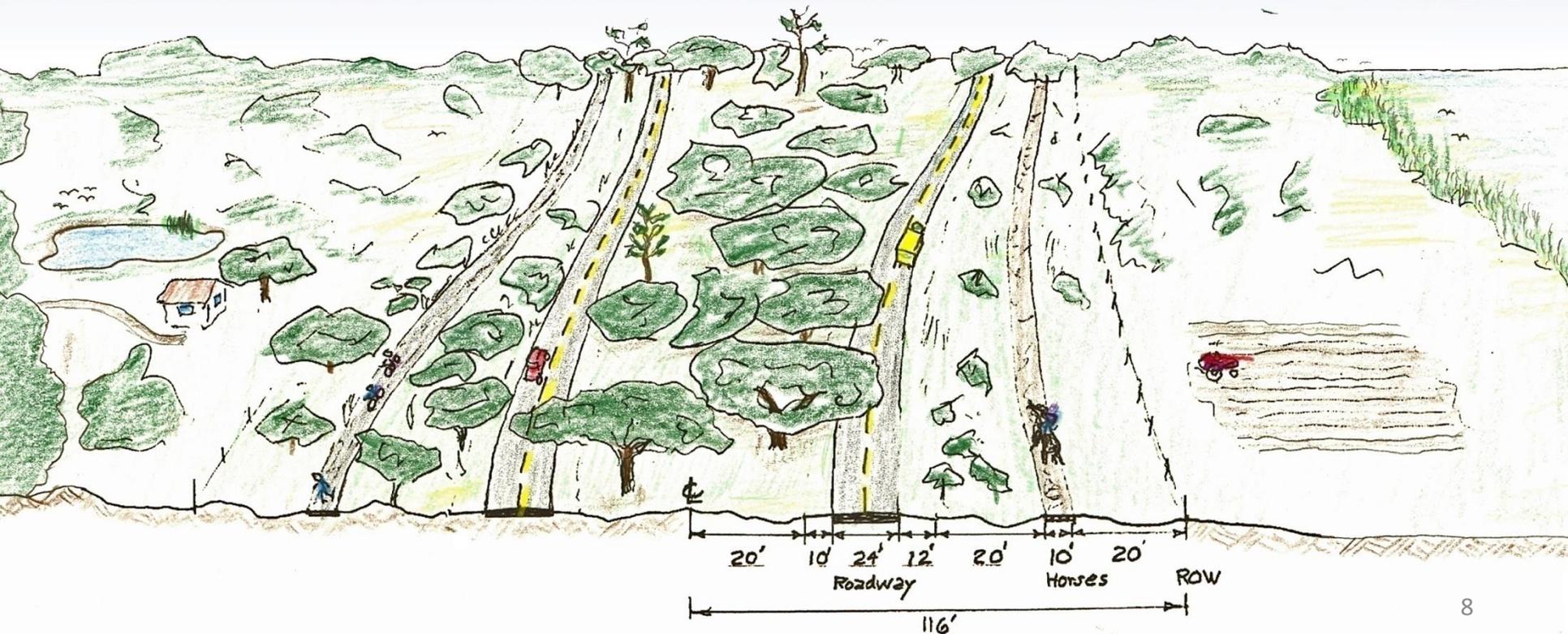
# Here is the best alignment we've found



# This alignment has these features

- The road takes only 2 houses versus 13 structures for other alignments
- Six trailers would need to be relocated
- This alignment affects only 78 properties as opposed to more than 400 on other routes
- The alignment is 9.9 miles long (shorter than the 11.2 miles proposed, and consequently less expensive than the least costly studied)
- Provides opportunities for wetlands to be developed to attract waterfowl and wildlife

# Protecting the road from encroachment avoids new development



# Extending Mark Clark has big impacts

- Mark Clark has implications for Sea Island Parkway
- BCDCOG uses CHATS computer model for analysis
- Until now, MC & SIP had never been run together
- CHATS examined traffic impacts on four different scenarios for the target year 2035:
  - Existing and committed (E+C)
  - (E+C) with Sea Island Parkway (SIP) alone
  - (E+C) with Mark Clark (MC) alone
  - (E+C) with both (MC) and (SIP)

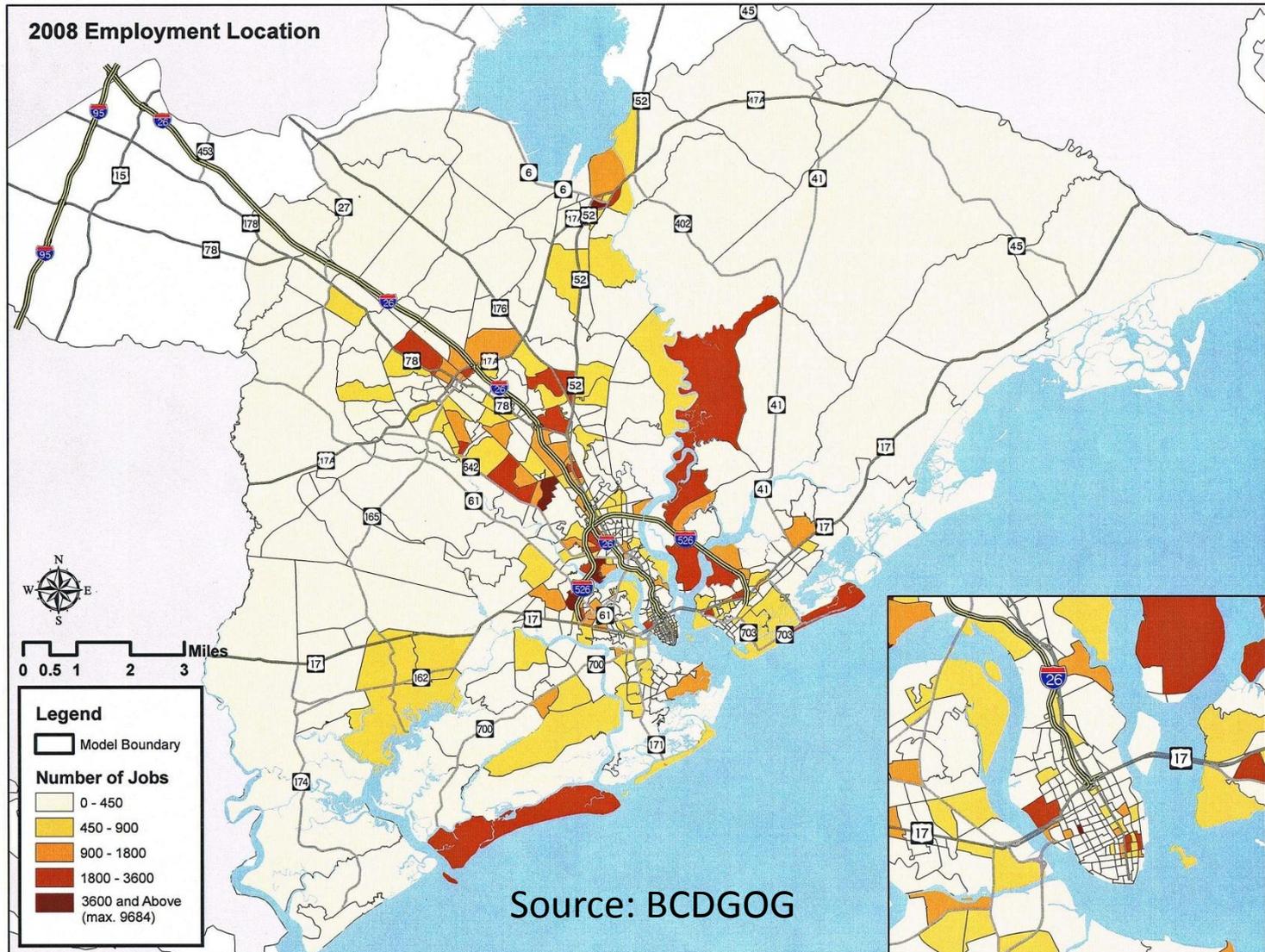
# Here is the network coding



## Traffic Volumes Forecast to Travel on Selected Links for 4 Scenarios

| Roadways Sections   | 2010<br>SCDOT<br>Counts | 2035<br>E+C Base<br>Alone Scene 1: | 2035 E+C<br>w/SIP Alone<br>Scene 2: | 2035 E+C<br>w/MC Alone<br>Scene 3: | 2035 E+C<br>w/both<br>projects<br>Scene 4: |
|---|-------------------------|------------------------------------|-------------------------------------|------------------------------------|--|
| Main Rd @ Stono River - Link ID 11686                         | 21,500                  | 25,200                             | 23,800                              | 15,300                             | 15,100                                     |
| Proposed Mark Clark @ Stono River, Southbound - Link ID 54188 | N/A                     | N/A                                | N/A                                 | 15,600                             | 16,000                                     |
| Proposed Mark Clark @ Stono River, Northbound- Link ID 54189  | N/A                     | N/A                                | N/A                                 | 15,100                             | 15,400                                     |
| Mark Clark connection to River Rd (north link) Link ID 54194  | N/A                     | N/A                                | N/A                                 | 20,500                             | 17,300                                     |
| Mark Clark connection to River Rd (south link) Link ID 54192  | N/A                     | N/A                                | N/A                                 | 14,300                             | 19,400                                     |
| Wesley Drive Between Savannah Hwy & Folly Rd - Link ID 21601  | 39,800                  | 43,100                             | 44,500                              | 33,800                             | 33,300                                     |
| Maybank Hwy @ Stono River - Link ID 50977                     | 23,200                  | 32,200                             | 35,400                              | 14,700                             | 17,900                                     |
| Maybank Hwy west of River Rd - Link ID 28685                  | 17,200                  | 23,900                             | 17,700                              | 32,600                             | 26,600                                     |
| Proposed Sea Island Pkwy @ River Rd - Link ID 5418            | N/A                     | N/A                                | 17,300                              | N/A                                | 16,800                                     |
| Bohicket @ Maybank - Link ID 29039                            | 11,700                  | 18,000                             | 10,800                              | 16,100                             | 11,000                                     |
| Murraywood @ River Rd - Link ID - Link ID 25563               | 2,600                   | 2,900                              | 2,900                               | 11,000                             | 10,700                                     |
| Betsy Kerrison Pkwy (just before round-about)                 |                         |                                    | 19,900                              | 19,500                             | 20,500                                     |
| <b>Volumes on/off Johns Island in each scenario</b>           | <b>44,700</b>           | <b>57,400</b>                      | <b>59,200</b>                       | <b>64,800</b>                      | <b>69,700</b>                              |
| <b>Measures of Effectiveness</b>                              |                         |                                    |                                     |                                    |  |
| Vehicle Miles Traveled (VMT)                                  |                         | 20,060,436                         | 20,094,846                          | 20,141,138                         | 20,151,134                                 |
| Vehicle Hours Traveled (VHT)                                  |                         | 523,741                            | 523,910                             | 524,200                            | 524,141                                    |
| Hours of delay on the network (DELAY)                         |                         | 91,452                             | 91,252                              | 90,135                             | 89,823                                     |
| <b>Percent Different from the Base</b>                        |                         |                                    |                                     |                                    |  |
| Vehicle Miles Traveled (VMT2)                                 |                         |                                    | 0.17%                               | 0.40%                              | 0.45%                                      |
| Vehicle Hours Traveled (VHT2)                                 |                         |                                    | 0.03%                               | 0.09%                              | 0.08%                                      |
| Hours of delay on the network (DELAY2)                        |                         |                                    | -0.22%                              | -1.44%                             | -1.78%                                     |

# Many jobs held by workers throughout the region are located on the Sea Islands





**Limehouse Entry**

14,687 JI/WI  
6,813 KI/SI  
21,500 Total

**Johns**

**Stono Entry**

17,730 JI/WI  
5,470 KI/SI  
23,200 Total

**Johns & Wadmalaw Islands**

32,417 JI/WI  
4,717 KI/SI  
37134 Total

**Wadmalaw Island**

**Island**

**Haulover Cut Entry**

0 JI/WI  
17,000 KI/SI  
17,000 Total

**Trip Summary**

| Trips To/From              |        | Entry/Exit Point |        |
|----------------------------|--------|------------------|--------|
| JI/WI                      | 32,417 | Limehouse        | 21,500 |
| KI/SI                      | 12,283 | Stono Bridge     | 23,200 |
| Bridge Trips               | 44,700 | Bridge Trips     | 44,700 |
| JI/WI Trips to KI/SE 4,717 |        |                  |        |
| <b>TOTAL TRIPS 49,417</b>  |        |                  |        |

**2010  
Major  
Traffic Flows  
on/off  
Johns  
&  
Wadmalaw  
Islands**

Red = JI/WI Trips  
Green = KI/SI Trips  
Black = Totals





**Limehouse Entry**  
 11,820 JI/WI  
 3,280 KI/SI  
 15,100 Total

**Stono Entry**  
 43,140 JI/WI  
 11,460 KI/SI  
 54,600 Total

**Johns Island/Wadmalaw Island**  
 44,000 JI/WI  
 5,661 KI/SI  
 49,661 Total

**Haulover Cut Entry**  
 0 JI/WI  
 20,400 KI/SI  
 20,400 Total

| Trip Summary  |        |                  |        |
|---------------|--------|------------------|--------|
| Trips To/From |        | Entry/Exit Point |        |
| JI/WI         | 49,661 | Limehouse        | 15,100 |
| KI/SI         | 20,039 | Stono Bridge     | 54,600 |
| Total Trips   | 69,700 | Total Trips      | 69,700 |

## 2035 Major Traffic Flows on/off Johns & Wadmalaw Islands

Red = JI/WI Trips  
 Green = KI/SI Trips  
 Black = Totals



Miles

# Conclusions of BCDCOG study:

- Almost a third of traffic on Johns Island is destined to the Sea Islands and about a quarter of bridge traffic.
- Completing the Mark Clark Extension will dramatically reduce travel time to and from Johns Island—in some cases by as much as 15 to 20 minutes during off peak travel and more during rush hour.
- Completing the Sea Island Parkway will improve travel times for more than half of the trips to and from Johns Island and will greatly improve travel safety on Johns Island roads as a whole.
- Finally, it will allow Johns Island to retain the rural character which is so important to its residents.

# The status of Mark Clark is unknown

- County wants SCDOT to absorb overruns
- Funding is required before Feds issue DOR
- Could County Council use sales tax increase?
- Vote would be 5 to 4, either for, or against
- State Infrastructure Bank has set a time limit
- If Mark Clark is not approved, it will be hard for the Greenway to proceed.
- If it fails, where will the money go?

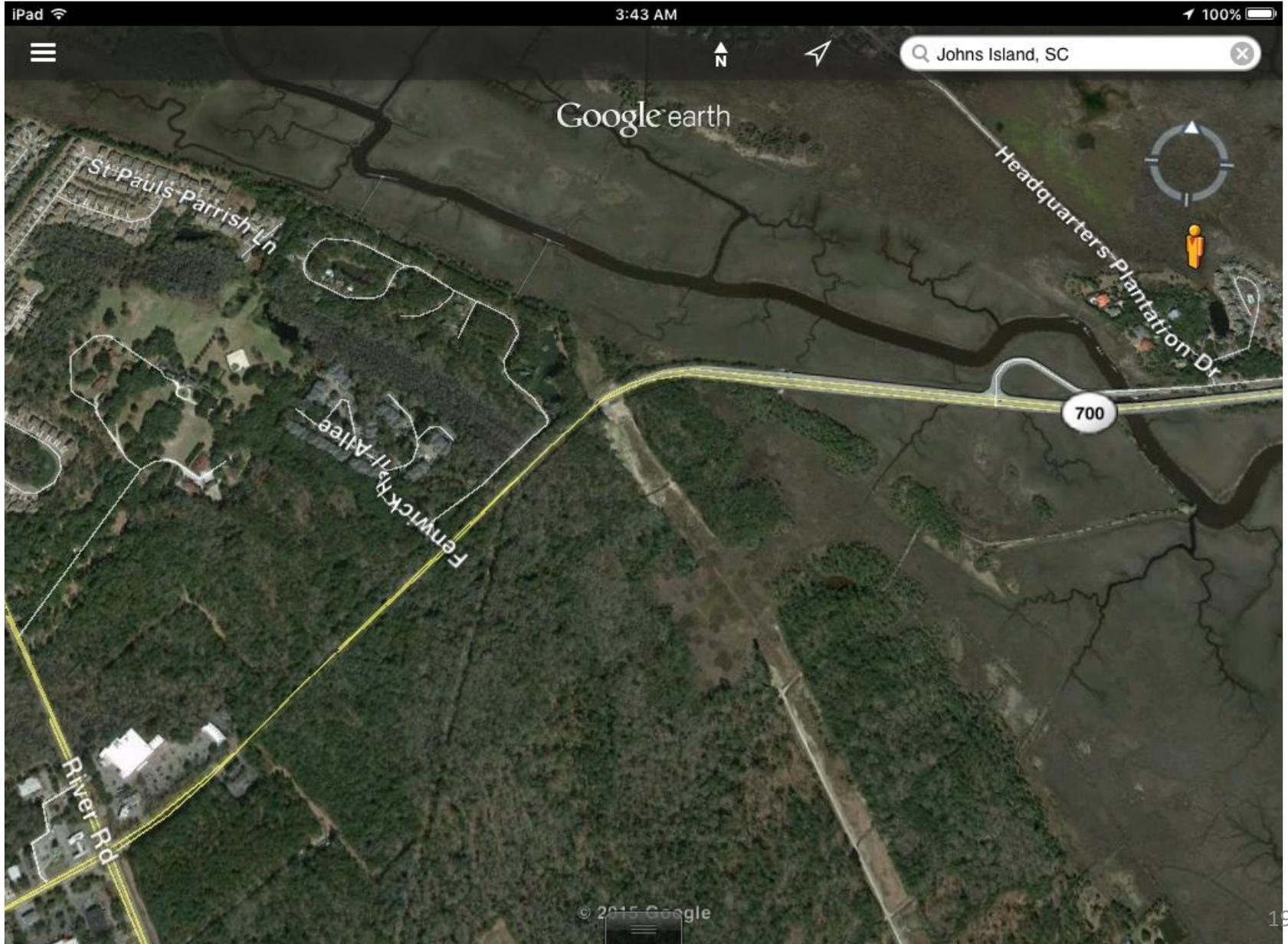
# Route 17/Main Road status

- Flooding on Main Road changed the politics
- Looks like Superstreet Project is dead
- Funding redirected to long term solution
- Main Road flooding mitigated by raising grade
- Summey favors Rte 17 overpass of Main Rd
- Probability is Main Road widened to Maybank
- This increases pressure to widen Bohicket to connect with Betsy Kerrison

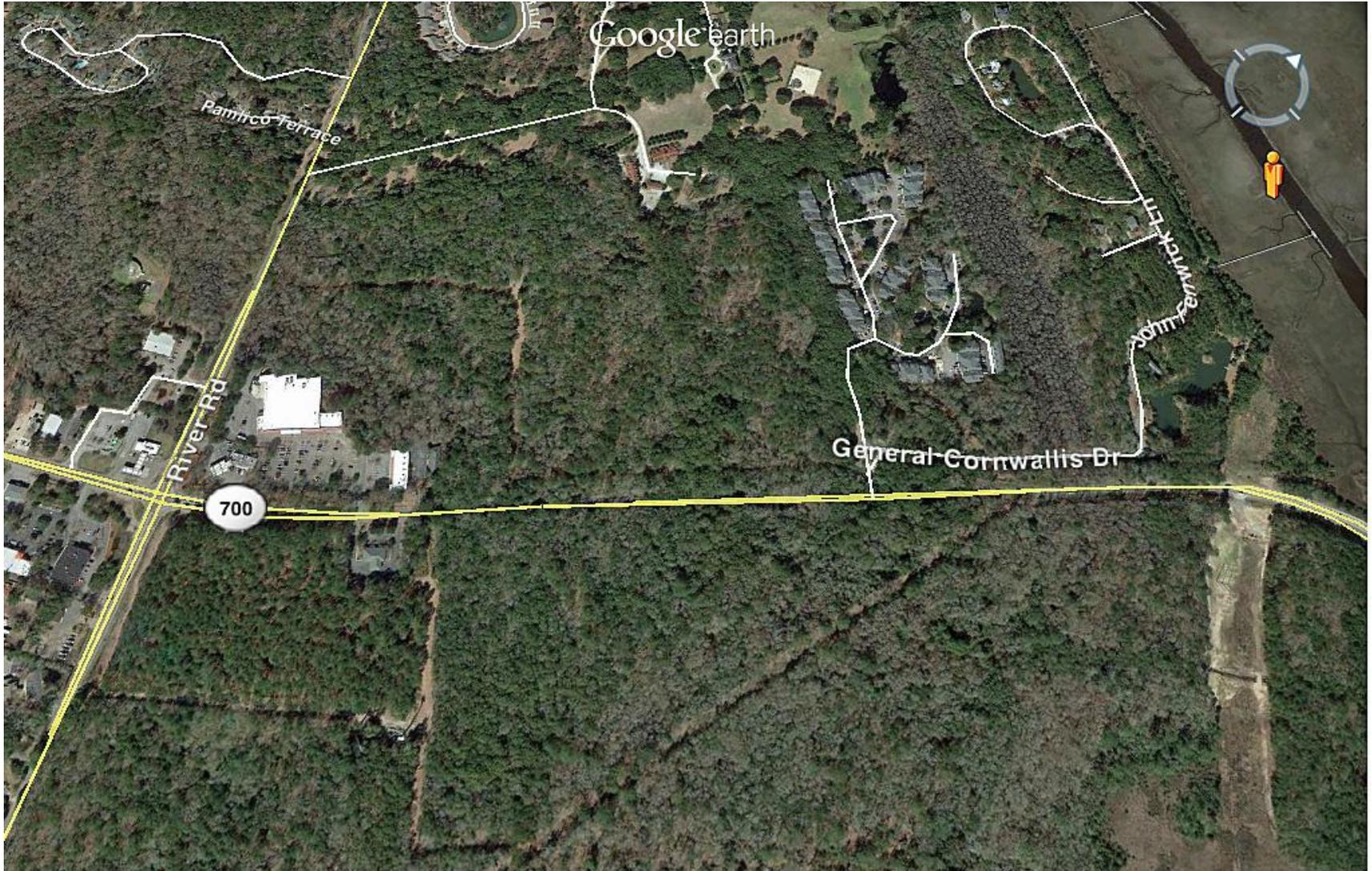
# Maybank continues to pose questions

- SCDOT had money for widening to 4 lanes
- Mayor Riley favored keeping rural character
- Create 3 activity centers w/on-street parking
- Don't cut grand oaks for access to Stono Bridge
- This led to concept of Pitchfork solution
- Plans are now ready for implementation
- First step is widening Maybank to 3 lanes in section from River Road to Stono Bridge

# Maybank Highway to Stono Bridge



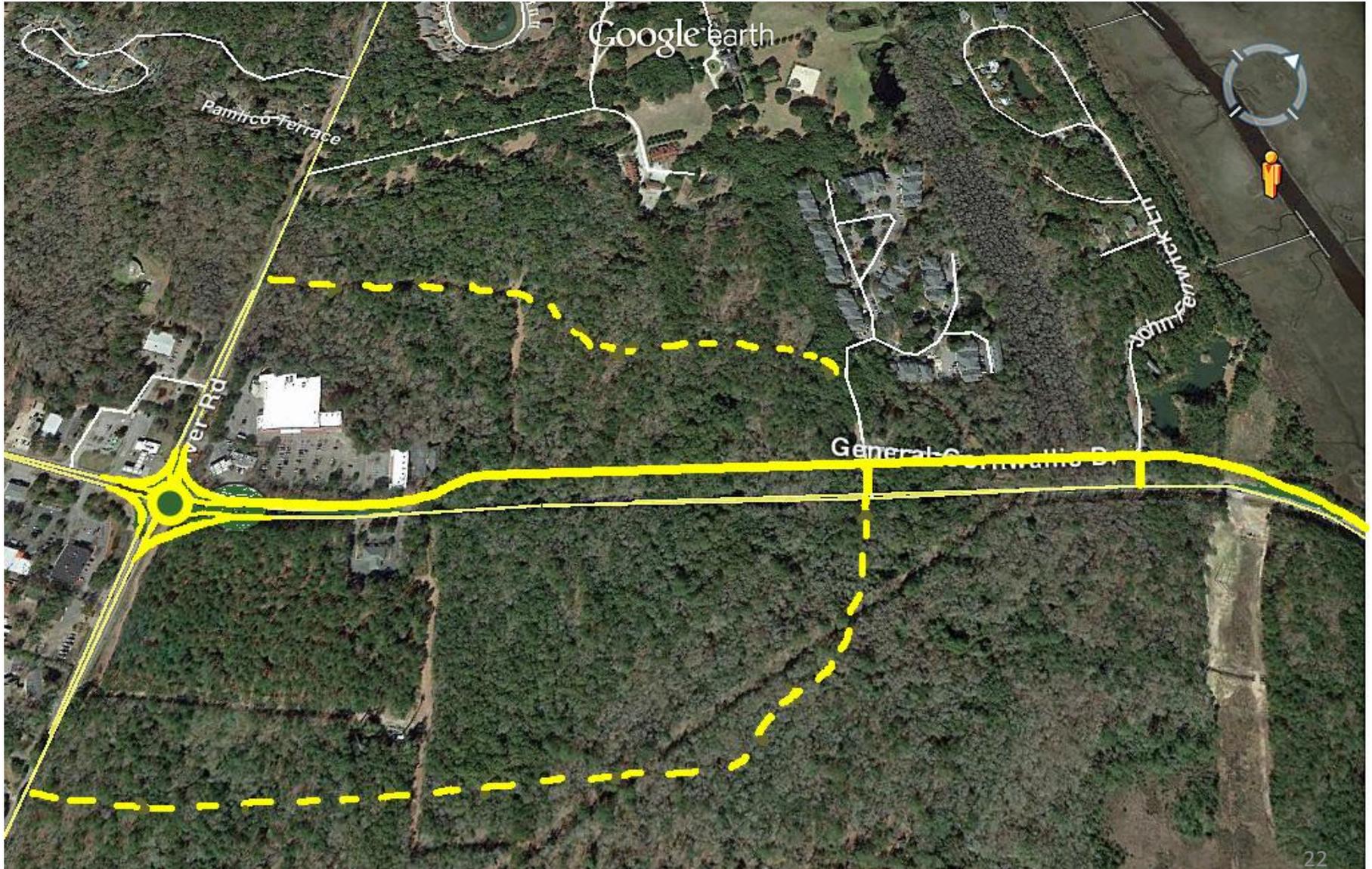
# Build three 11' lanes (2 in, 1 out)



# A better solution is to use Cornwallis Dr.

- Provides two 24' roadways with 50' median
- Avoids cutting any grand oaks
- Build 4 lanes beyond River to facilitate merge
- Replace traffic signal with a roundabout
- J.I. Task Force endorses this as long-run answer
- Supports 3-lane now to avoid slowing progress
- Developers should build pitchfork roads

# Best final solution combines all elements



# The way forward from here?

- Meet with Tecklenburg to see where he stands on:
  - Completion of Mark Clark Extension
  - Support for use of General Cornwallis Drive
  - Widening of Maybank Highway throughout
  - Support for Sea Island Parkway (Greenway)
- Meet with Summey on the same issues
- Work with Johns Island Task Force to find joint path forward
- If Mark Clark is dead, form coalition with others to use a portion of the I-526 funds for consensus plan