Town of Hilton Head Island, SC

omilor

Council Presentation - April 9, 2024



# **PROJECT TEAM**

# TOWN STAFF

**Marc Orlando** Shawn Colin **Bryan Mcllwee** Jim Iwanicki Karla Vincent

# Toole Design <---> MKSK <---> Kimley Horn

Addie Weber **Chris Puglisi Jared Draper**  Brian Kinzelman **Tony Roell** Jonathan Staker Nate Young

Jonathan Guy **Conrad Salvagin** 



Agenda Item 1: Major Thoroughfares Corridor Plan

Systems Segments Implementation

- Agenda Item 2: WHP-3 Segment Beach City Road to Dillon Road
- Agenda Item 3: WHP-2 Segment Wilborn Road to Beach City **Road and Main Street**



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- Focus on analyzing and understanding current conditions
- Target safety of roadways and pedestrian/bicycle movements
- Direct improvements to critical areas and corridors
- Design standards for infrastructure, materials, & aesthetics





### **WHP SEGMENTS**

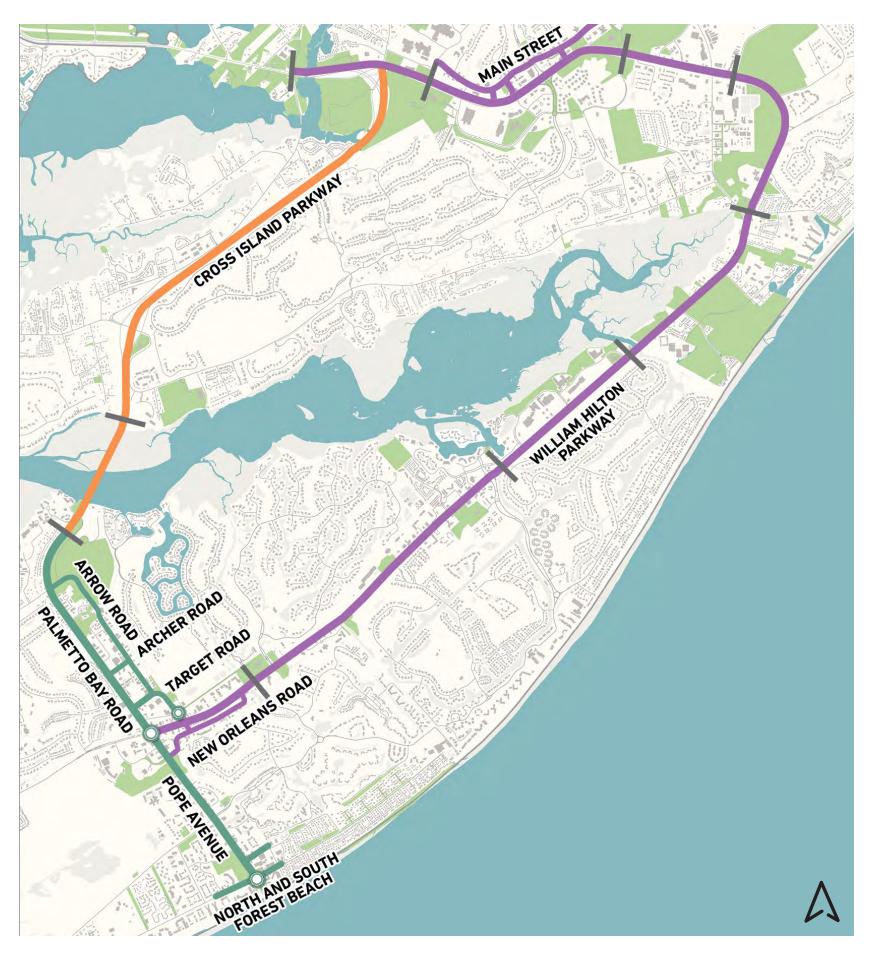
- » WHP 1: Spanish Wells Road / Wild Horse
  Road to Wilborn Road / Jarvis Park Road
- » WHP 2: Wilborn Road / Jarvis Park Road to Beach City Road / Gardner Drive and Main Street
- » WHP 3: Beach City Road / Gardner Drive to Dillon Road
- » WHP 4: Dillon Road to Mathews Drive / Folly Field Road
- » WHP 5: Mathews Drive / Folly Field Road to Shelter Cove Lane
- » WHP 6: Shelter Cove Lane to Queens Folly Road / King Neptune Drive
- » WHP 7: Queens Folly Road / King Neptune Drive to Wexford Drive / Shipyard Drive
- » WHP 8: Wexford Drive / Shipyard Drive to Sea Pines Circle and New Orleans Road

### SOUTH ISLAND SEGMENTS

- » Palmetto Bay Road and Arrow Road
- » Sea Pines Circle
- » Pope Avenue and Coligny Circle
- » Forest Beach Drives

### CROSS ISLAND PARKWAY SEGMENTS

- » Cross Island Parkway
- » Fraser Bridge and approaches





'Systems' are those essential elements that contribute to a corridor's character and functionality.

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'Segments' identifies specific areas for systems improvements within each corridor.





'Implementation' includes aspirational and attainable actions to help achieve the Plan's vision.





































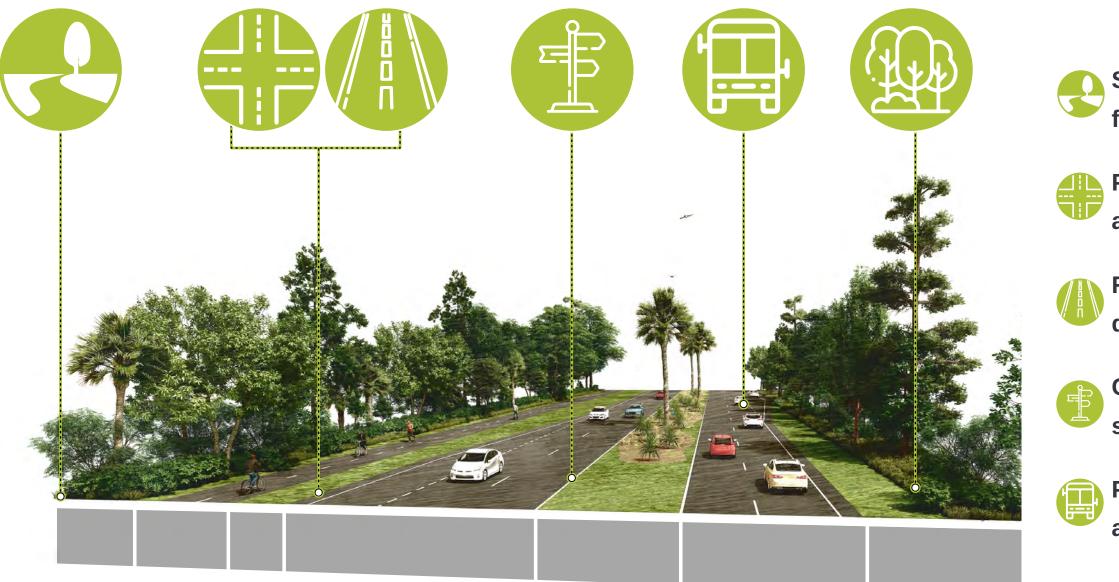












**EXISTING CONDITIONS** 

Safe and robust pathway system for all, regardless of age or ability

Prioritize the safety of pedestrians and cyclists

Reduce speeds and improve design geometry

Comprehensive logo, branding, signage, and wayfinding system

Prioritize transit use with increased amenities

Appropriate planting palettes, site furnishings, & materials





### LANDSCAPE AND AESTHETIC RECOMMENDATIONS

### **HIGHLIGHTS**

- 1 Standardize materials and corridor furnishings
- Island-appropriate lighting
- ③ Planting palettes at medians and buffers
- Maximize physical separation and aesthetics
- ④ Prioritize maintenance to sustain clear sight lines and pathways







### WAYFINDING, SIGNAGE, BRANDING, & ART RECOMMENDATIONS

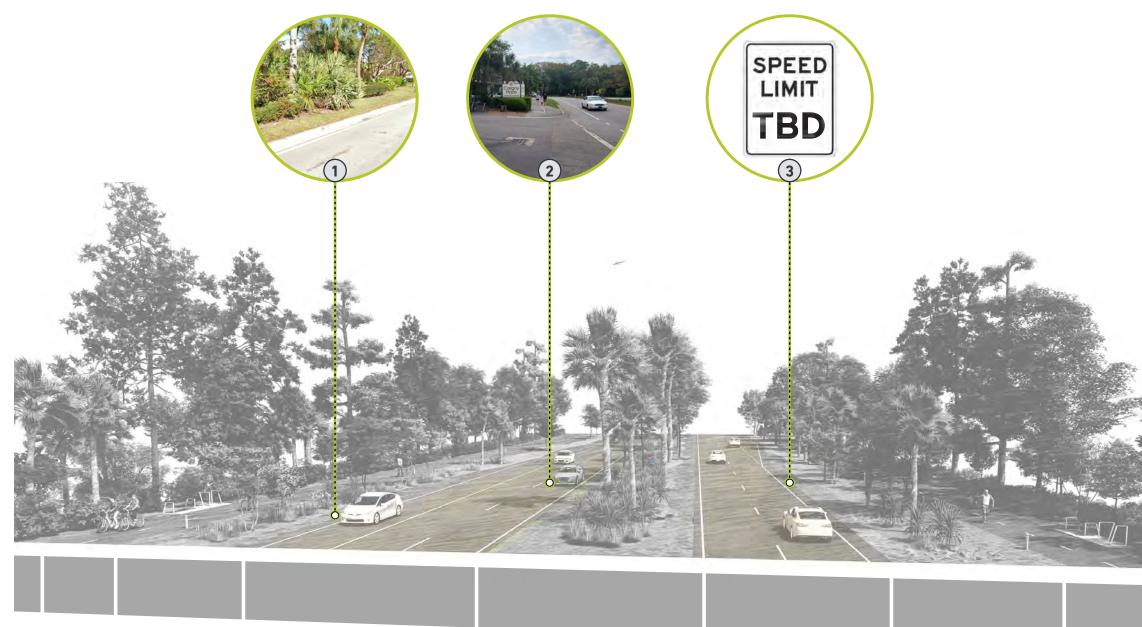
### **HIGHLIGHTS**

## 1 Consider Branding and Art Opportunities

Improve pathway signage and wayfinding







### **ROADWAY RECOMMENDATIONS**

### **HIGHLIGHTS**

- 1 Develop standards with SCDOT (speeds, road widths, and landscape)
- 2 Access management
- ③ Balance vehicular efficiency with travel speeds









INTERSECTION RECOMMENDATIONS

### **HIGHLIGHTS**

- 1 Standardize intersection geometry
- Improve queuing areas along pathways
- ③ Improve crossing standards
- Balance efficiency with travel speeds
- S Prioritize ped/bike safety at intersections





### PATHWAY RECOMMENDATIONS

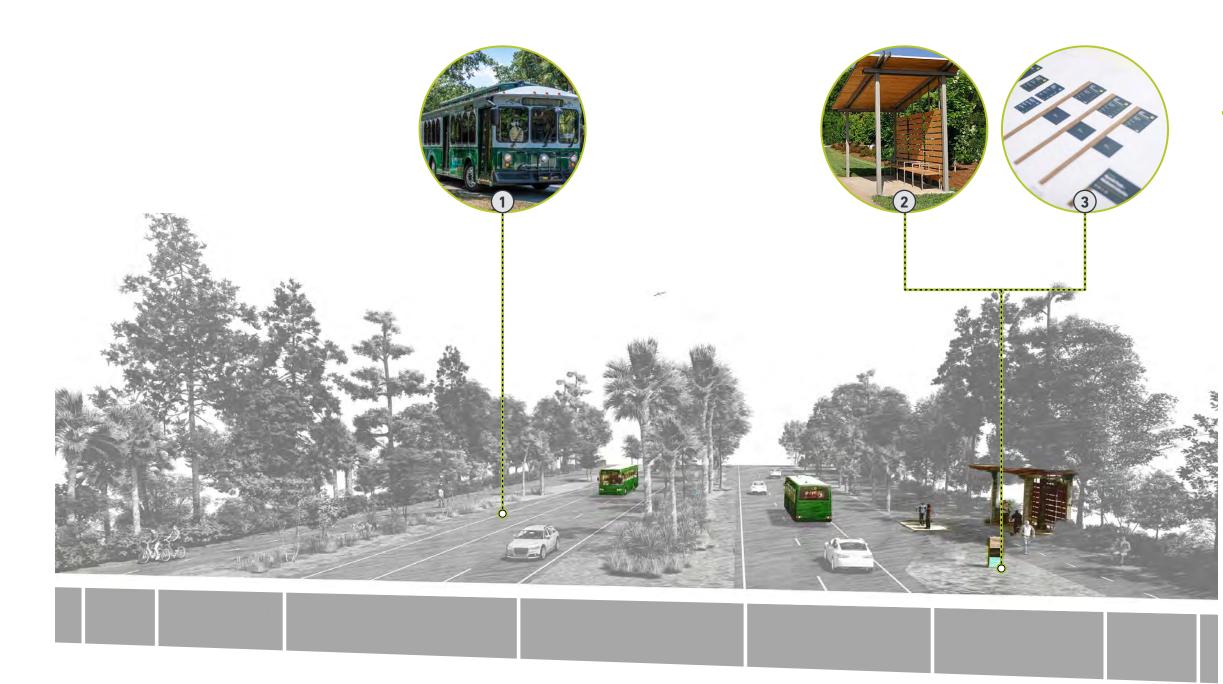
## HIGHLIGHTS

Fill gaps & create connections

Advocate for laws to improve bicycle and pedestrian safety

- Increase amenities (wayfinding and comfort stations)
- 2 Consistent palette of markings and signage along pathways
- ③ Uniform palette for all pathway materials and edge treatments
- Implement 10-12' as the Island pathway design standard





### TRANSIT RECOMMENDATIONS

### **HIGHLIGHTS**

- 1 Comprehensive Parking and Transit Plan
- 1 Develop strategy for an expanded system to satisfy workforce needs
- 2 Formalize transit stops and amenities
- ③ Standardize signage at all transit stops



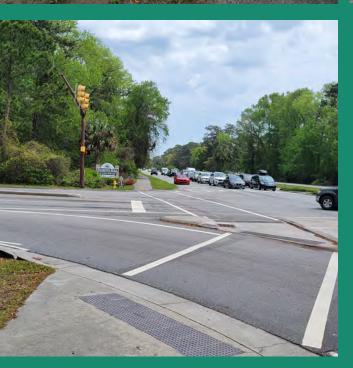


### **TYPICAL CORRIDOR AFTER SYSTEMS RECOMMENDATIONS**

























## WILLIAM HILTON PARKWAY SEGMENTS

WHP - 1: Spanish Wells Road / Wild Horse Road to Wilborn Road / Jarvis Park Road

WHP - 2: Wilborn Road / Jarvis Park Road to Beach City Road / Gardner Drive and Main St.

WHP - 3: Beach City Road / Gardner Drive to Dillon Road

WHP - 4: Dillon Road to Mathews Drive / Folly Field Road

WHP - 5: Mathews Drive / Folly Field Road to Shelter Cove Lane

WHP - 6: Shelter Cove Lane to Queens Folly Road / King Neptune Drive

WHP - 7: Queens Folly Road / King Neptune Drive to Wexford Drive / Shipyard Drive

WHP - 8: Wexford Drive / Shipyard Drive to Sea Pines Circle and New Orleans Road





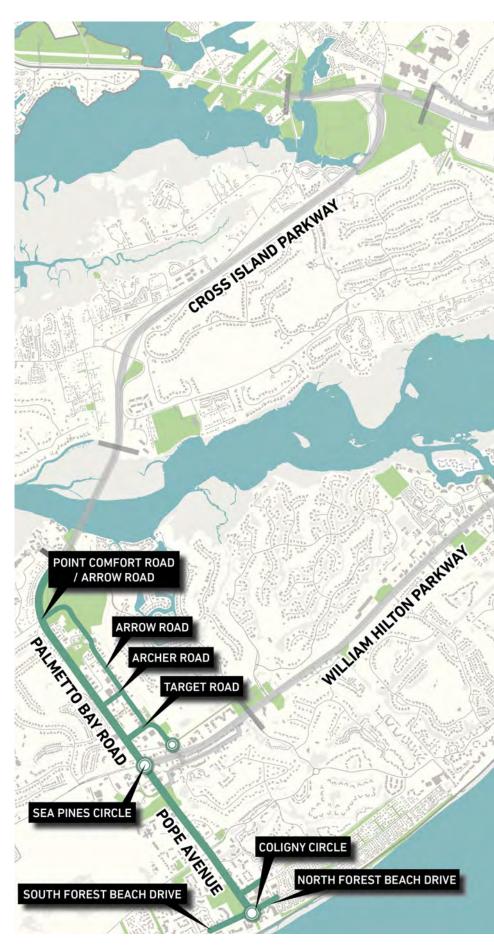
## SOUTH ISLAND SEGMENTS

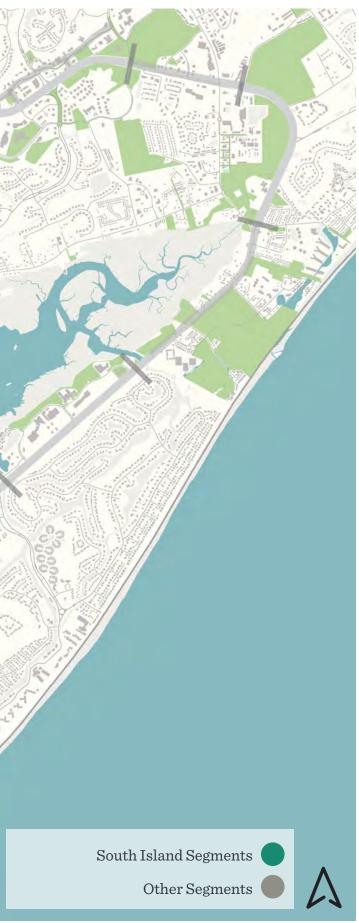
**Palmetto Bay Road and Arrow Road** 

**Sea Pines Circle** 

**Pope Avenue and Coligny Circle** 

**Forest Beach Drives** 





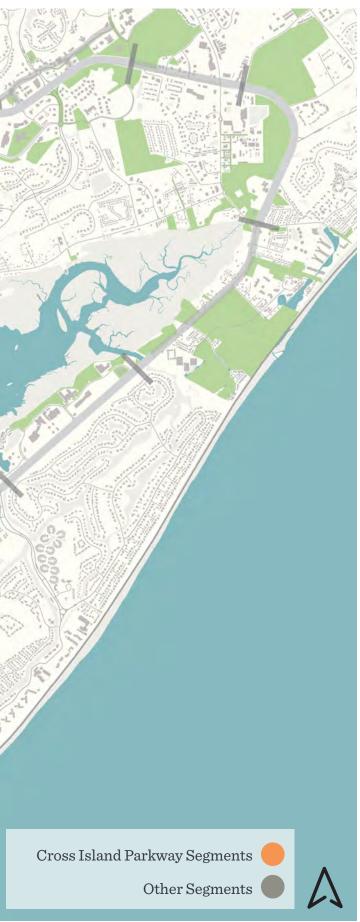


## **CROSS ISLAND PARKWAY SEGMENTS**

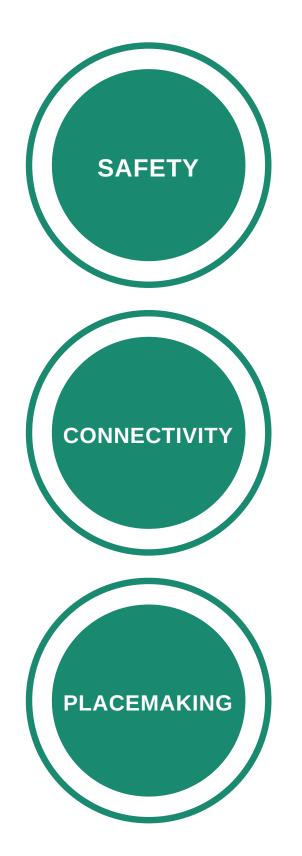
**Cross Island Parkway** 

**Fraser Bridge and approaches** 









- Improvements located in high crash areas
- New controlled or reconfigured intersections
- Improve access management
- Turn lane improvements

- Connects neighborhoods separated by roadways
- Fills gaps in pathway network
- Creates new neighborhood connections
- Reduces pathway conflict points

- Improvements support Island character
- Signature corridor or street within network
- Aesthetic and character improvements
- Median recommendations to enhance aesthetics

# Improvements to unsignalized crossings • Reduction in conflict points Reduction of speed • Complete streets • Traffic calming



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# MKSK + Kimley »Horn + "OOLE





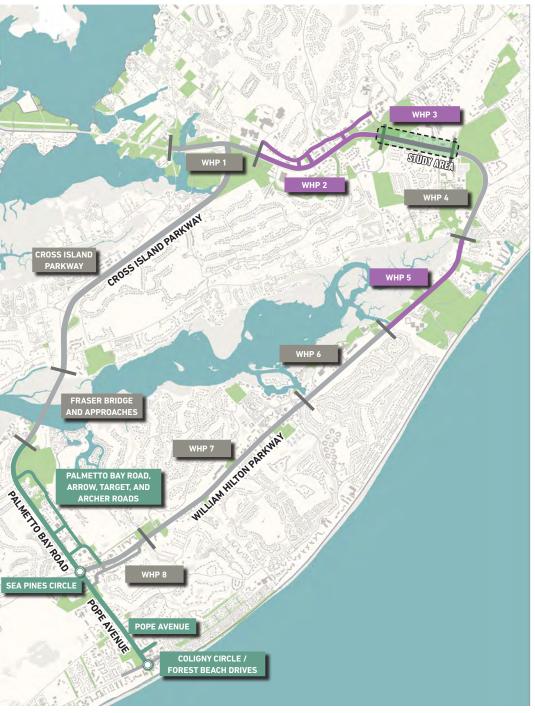
# of travel.

22

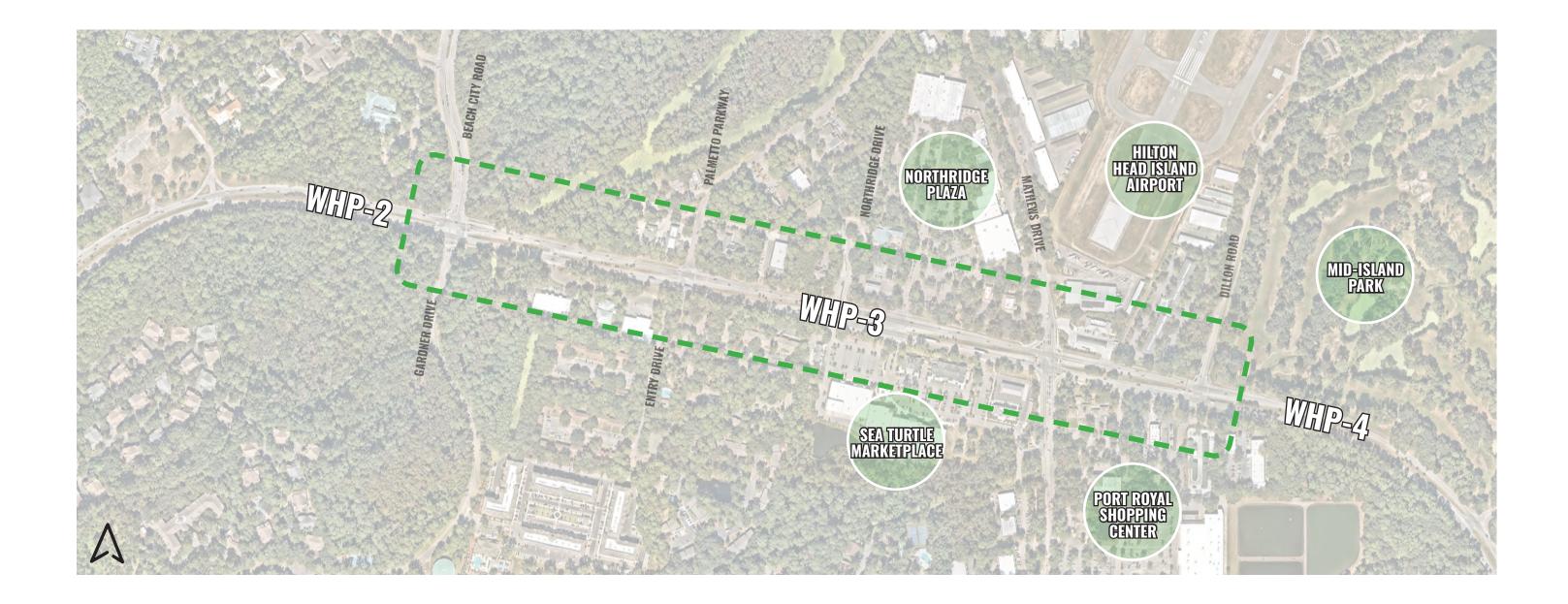
# Analysis GUIDING DOCUMENTS & STUDIES



MTCP Context



# Analysis LOCATION OF STUDY AREA



# Analysis HISTORY OF US ROUTE 278 (WHP)

# 1965

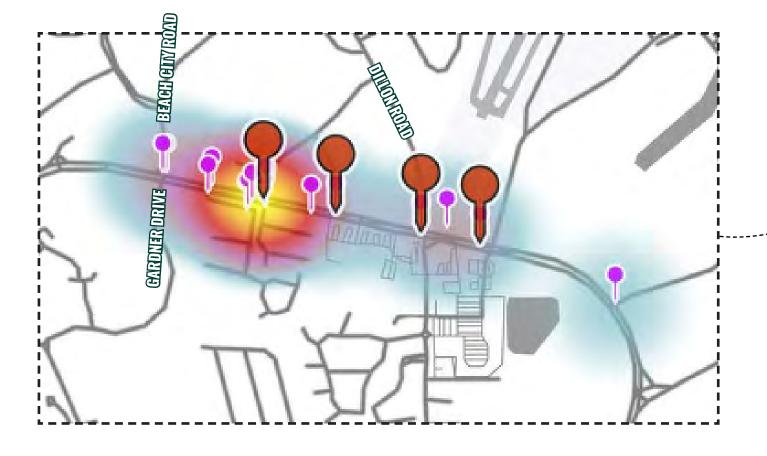
- Opening of US 278 (WHP)
- Original Intent move vehicular traffic
- +/- 1975
- Onset of development along US 278 (WHP)
- Driveways, pathways, other infrastructure alter roadway character

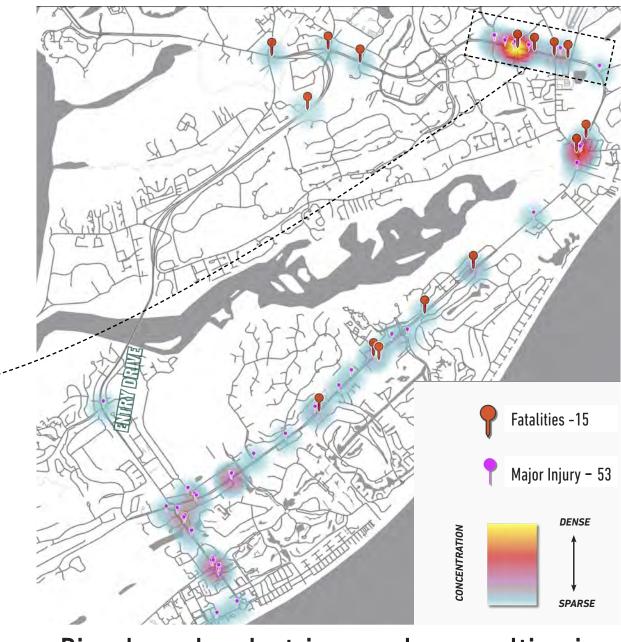
# 1998

- Opening of Cross Island Parkway US278, toll road
- WHP becomes Business US 278
- Users + development shifted after opening of Cross-Island Prkwy
  2021
- Cross-Island Parkway toll expired **Today**
- High number of collisions and incidents involving pedestrians
- Development of Major Thoroughfares Corridor Plan



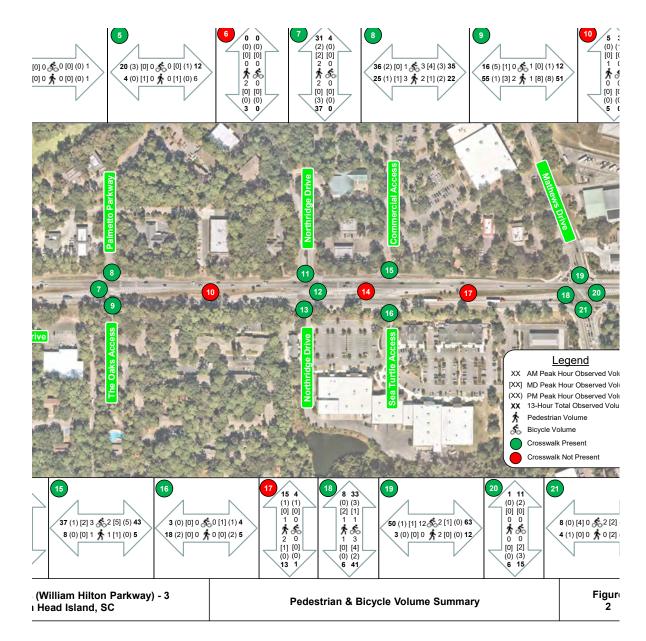






# Bicycle and pedestrian crashes resulting in fatalities and major injury (2014-2022)

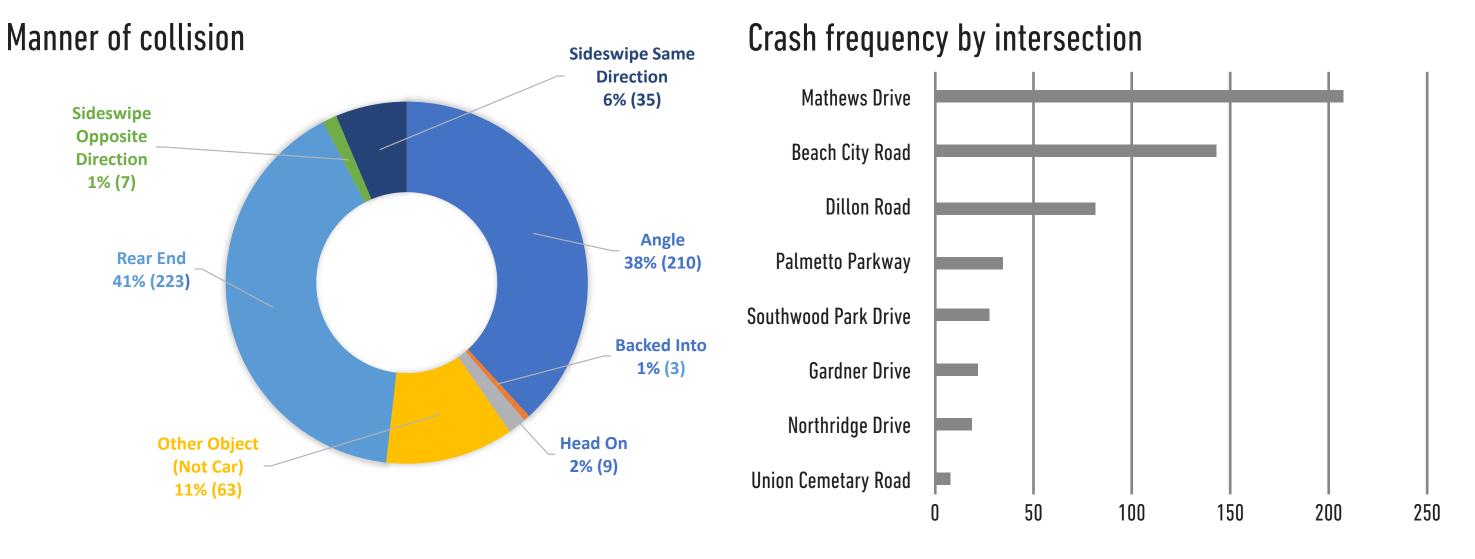
- Address pedestrian & bicycle safety issues
- Address pedestrian accessibility issues



# Pedestrian crossing patterns from data collection / inventory Spring 2024

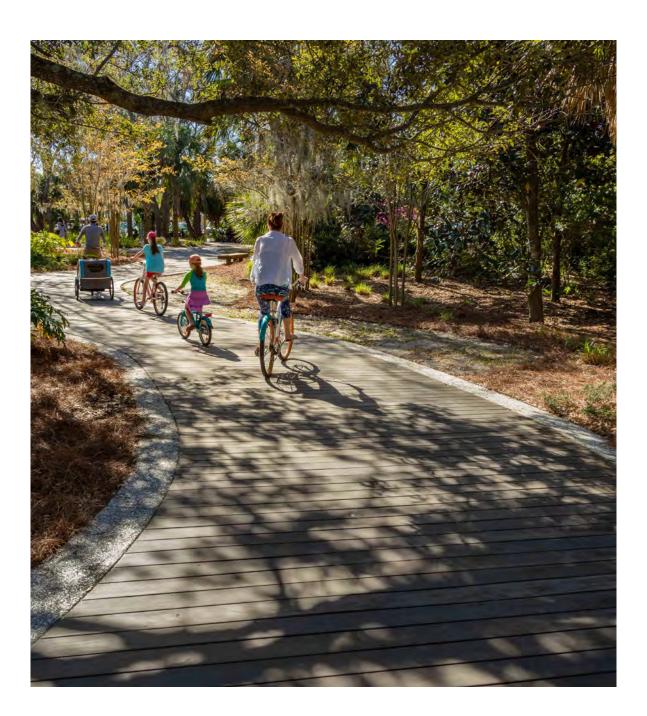
27

- Address pedestrian & bicycle safety issues
- Address pedestrian accessibility issues
- Address pattern of vehicular collisions

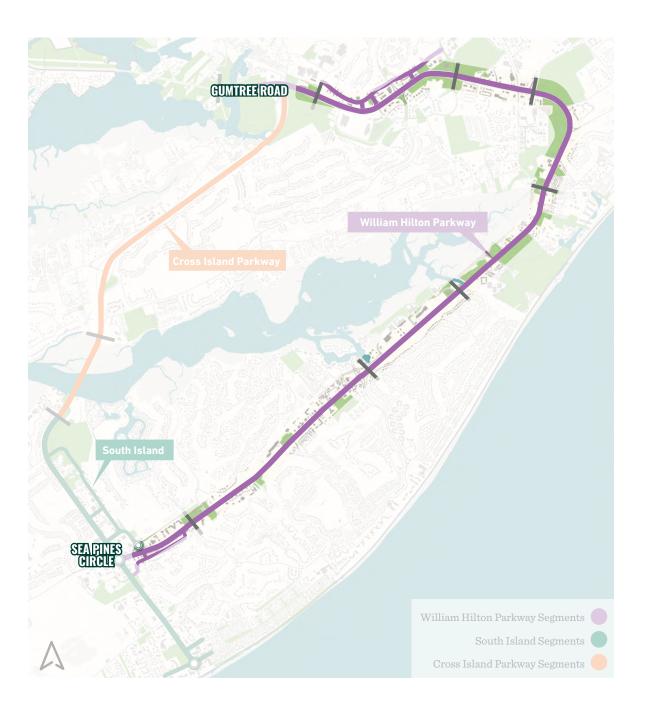


28

- Address pedestrian & bicycle safety issues
- Address pedestrian accessibility issues
- Address pattern of vehicular collisions
- Increase mobility for all modes of transportation



- Address pedestrian & bicycle safety issues
- Address pedestrian accessibility issues
- Address pattern of vehicular collisions
- Increase mobility for all modes of transportation
- Plan for better relationship between transportation network and land uses



- Address pedestrian & bicycle safety issues
- Address pedestrian accessibility issues
- Address pattern of vehicular collisions
- Increase mobility for all modes of transportation
- Plan for better relationship between transportation network and land uses
- Build upon interim improvement plan with Town Council feedback
  - -Pathway lighting
  - -Puck lighting
  - -Pedestrian markings at crossings
  - -RRFB at crossings
  - -Speed limit reduction
  - -Kiosk improvements



William Hilton Parkway – Beach City Road to Dillon Road – Interim Improvements

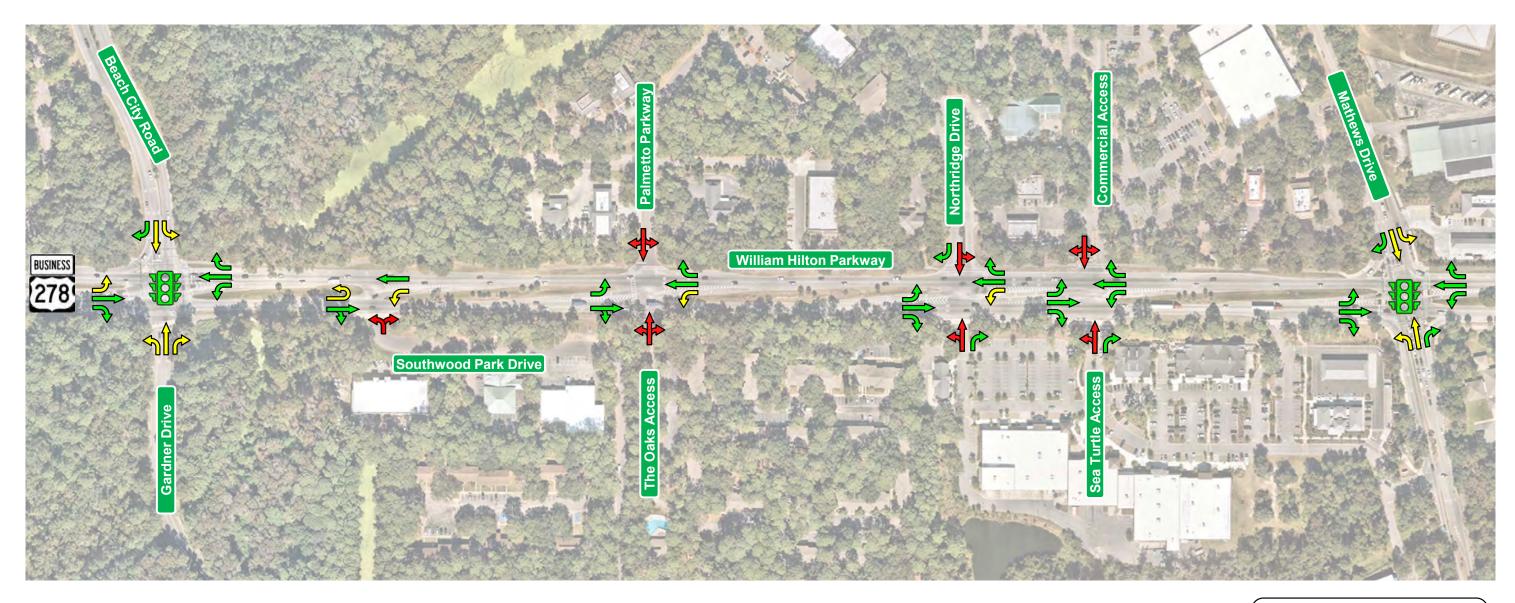




Pathway/Tree Uplighting Median Plantings



# Analysis EXISTING AND FUTURE PEAK HOUR TRAFFIC ANALYSIS



Future (2033) Capacity Analysis Results without design intervention to roadway corridor



### Legend

	Movement LOS
<u> 3</u> 88	Signalized Intersection LOS
	LOS A – LOS C
	LOS D – LOS E
	LOS F





# **Speed Reduction**

\*Reducing speed has been proven effective at stopping fatalities

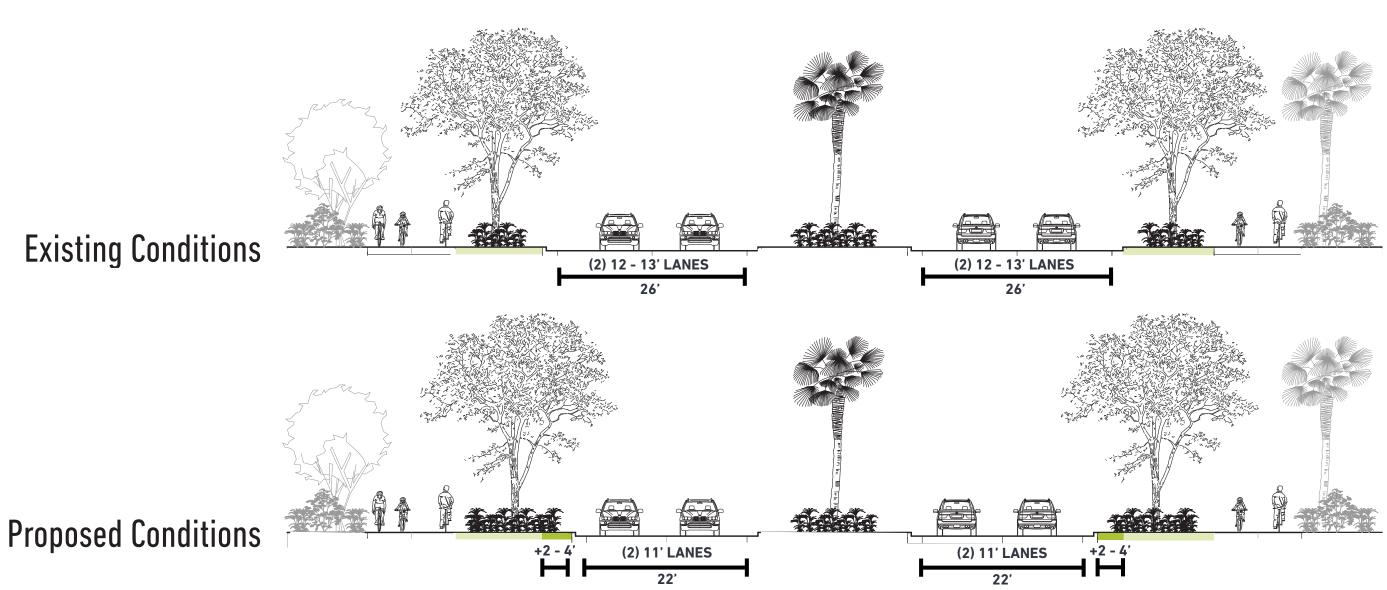




# **Speed Reduction**

\*Reducing speed has been proven effective at stopping fatalities

• Reduce lane widths to promote slower travel speeds



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## **Speed Reduction**

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- Reduce lane widths to promote slower travel speeds
- Coordinate signals for speed management
- Balance vehicular efficiency with travel speeds in coordination with SCDOT





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- Balance vehicular efficiency with travel speeds in coordination with SCDOT
- Reduce signal cycle duration





## **Speed Reduction**

\*Reducing speed has been proven effective at stopping fatalities

- Reduce lane widths to promote slower travel speeds
- Coordinate signals for speed management
- Balance vehicular efficiency with travel speeds in coordination with SCDOT
- Reduce signal cycle duration
- Establish new controlled intersections
  - -Traditional intersections -Roundabouts



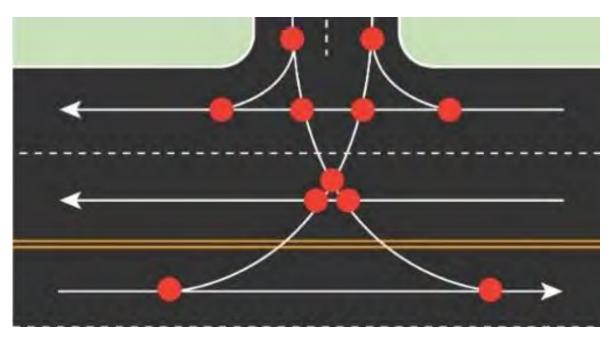


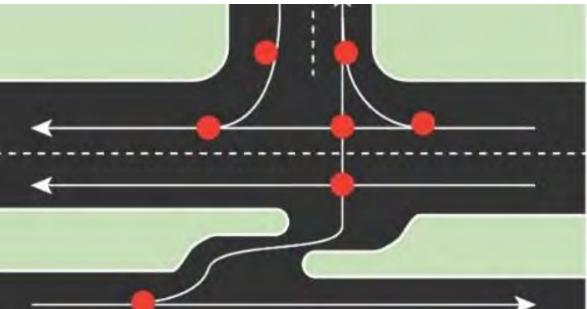


## **Conflict Reduction**

\*Removing or redesigning high conflict areas will reduce the probability of dangerous encounters

• Modify access/turning movement



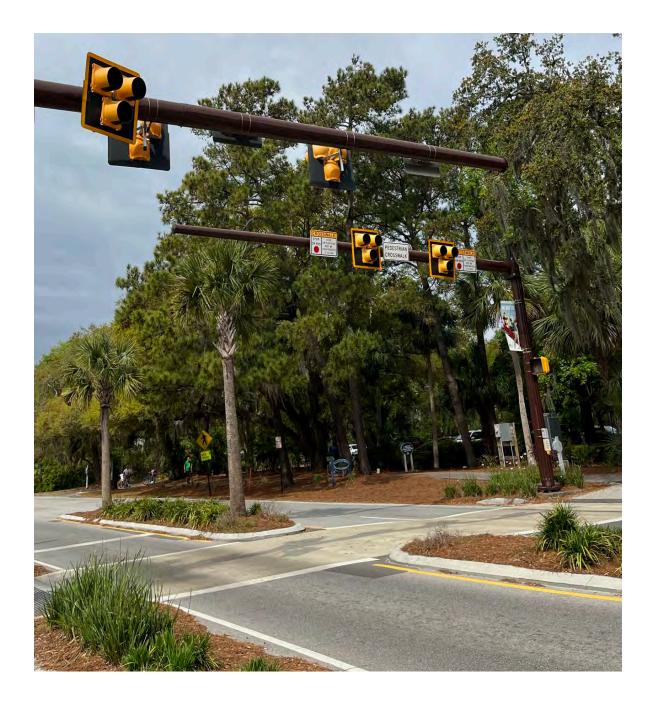




## **Conflict Reduction**

\*Removing or redesigning high conflict areas will reduce the probability of dangerous encounters

- Modify access/turning movement
- Provide protected pedestrian crossings





## **Conflict Reduction**

\*Removing or redesigning high conflict areas will reduce the probability of dangerous encounters

- Modify access/turning movement
- Provide protected pedestrian crossings
- Create parallel network connectivity





## Placemaking

\*Providing a unique identity and sense of place will aid in with both of the goals above while providing an identifiable segment of William Hilton Parkway

 Incorporate Mid-Island District character recommendations to establish district identity:

-Locate entry markers on WHP as a threshold to the district

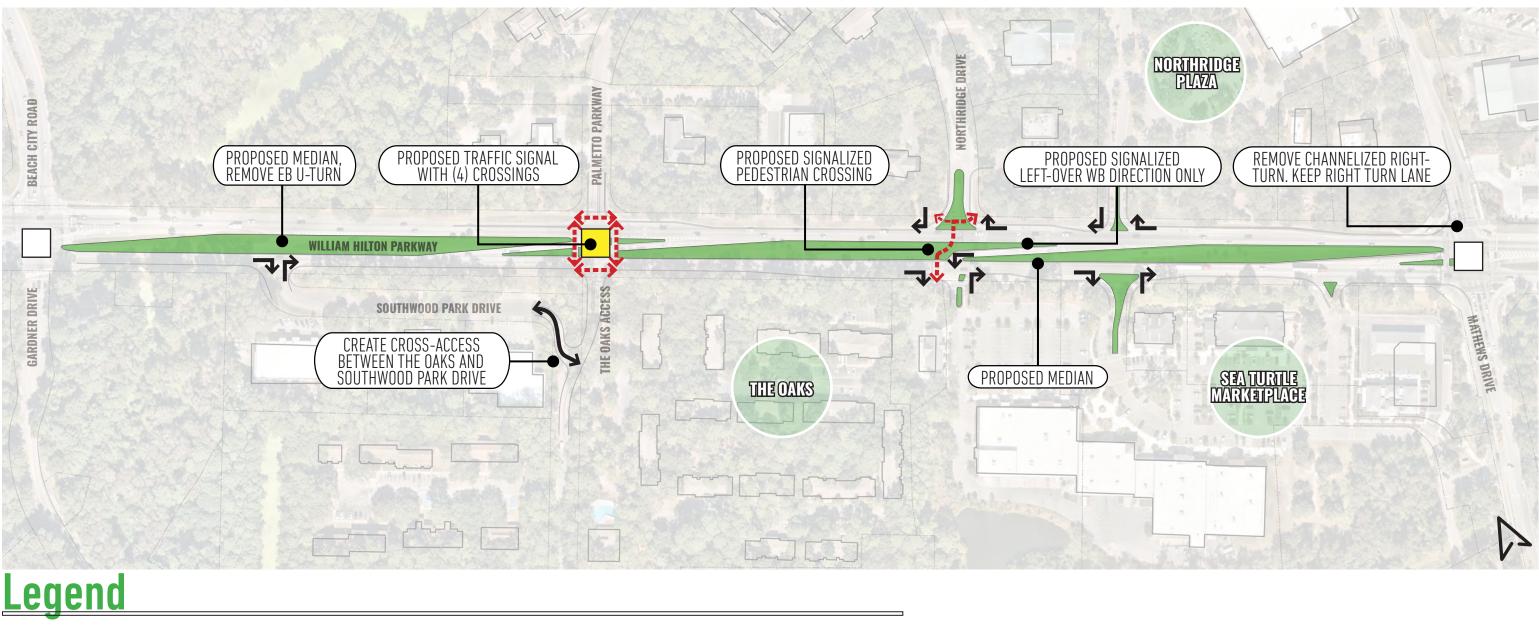
- -Utilize a signature landscape for median planting to promote district identification
- -Provide additional district accents such as tree up-lighting, art, and wayfinding signage





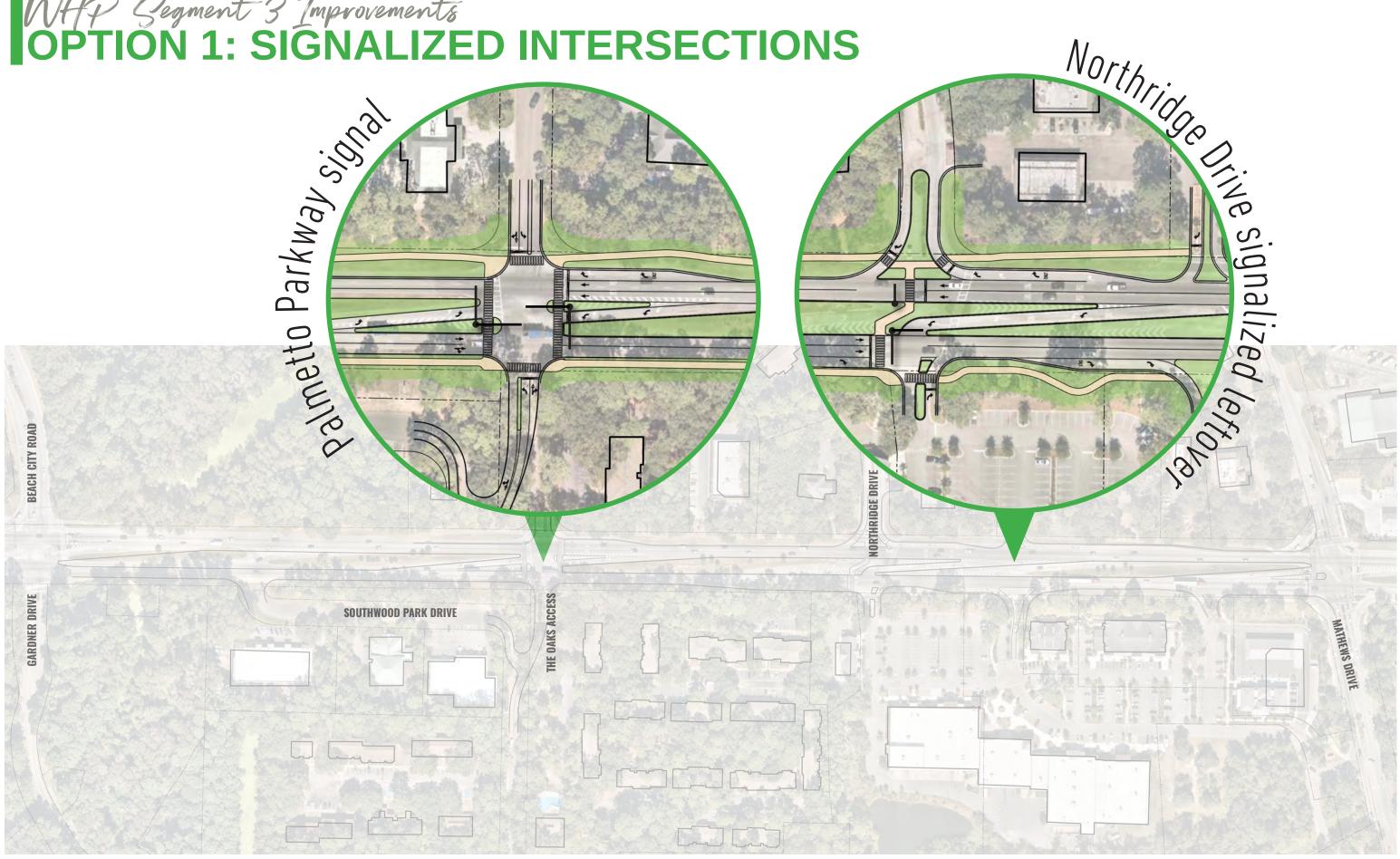






- Proposed Signalized Intersection
  - ← → Proposed Vehicular Movement / Connection
- Existing Signalized Intersection
- Proposed Planted Median
- <---> Proposed Pathway Crossing

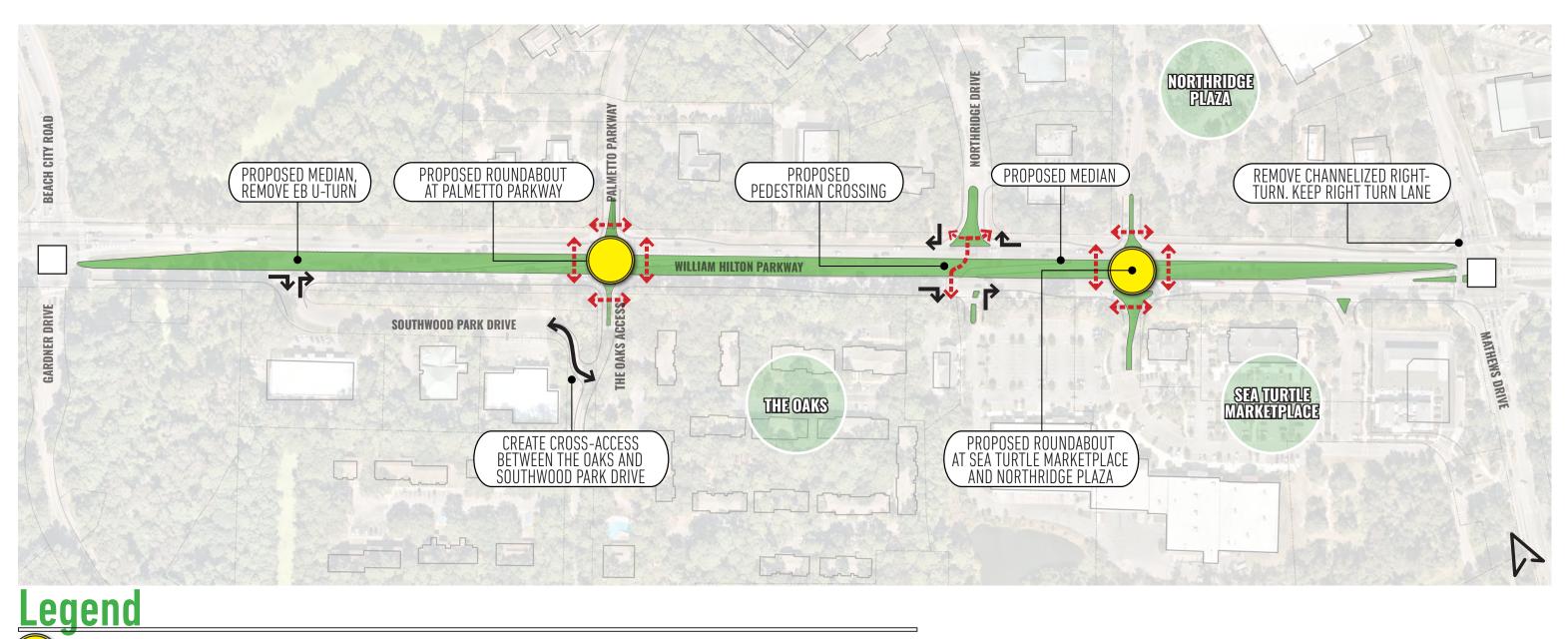
# WHP Gegment 3 Improvements OPTION 1: SIGNALIZED INTERSECTIONS



WILLIAM HILTON PARKWAY SEGMENT 3 | COUNCIL PRESENTATION



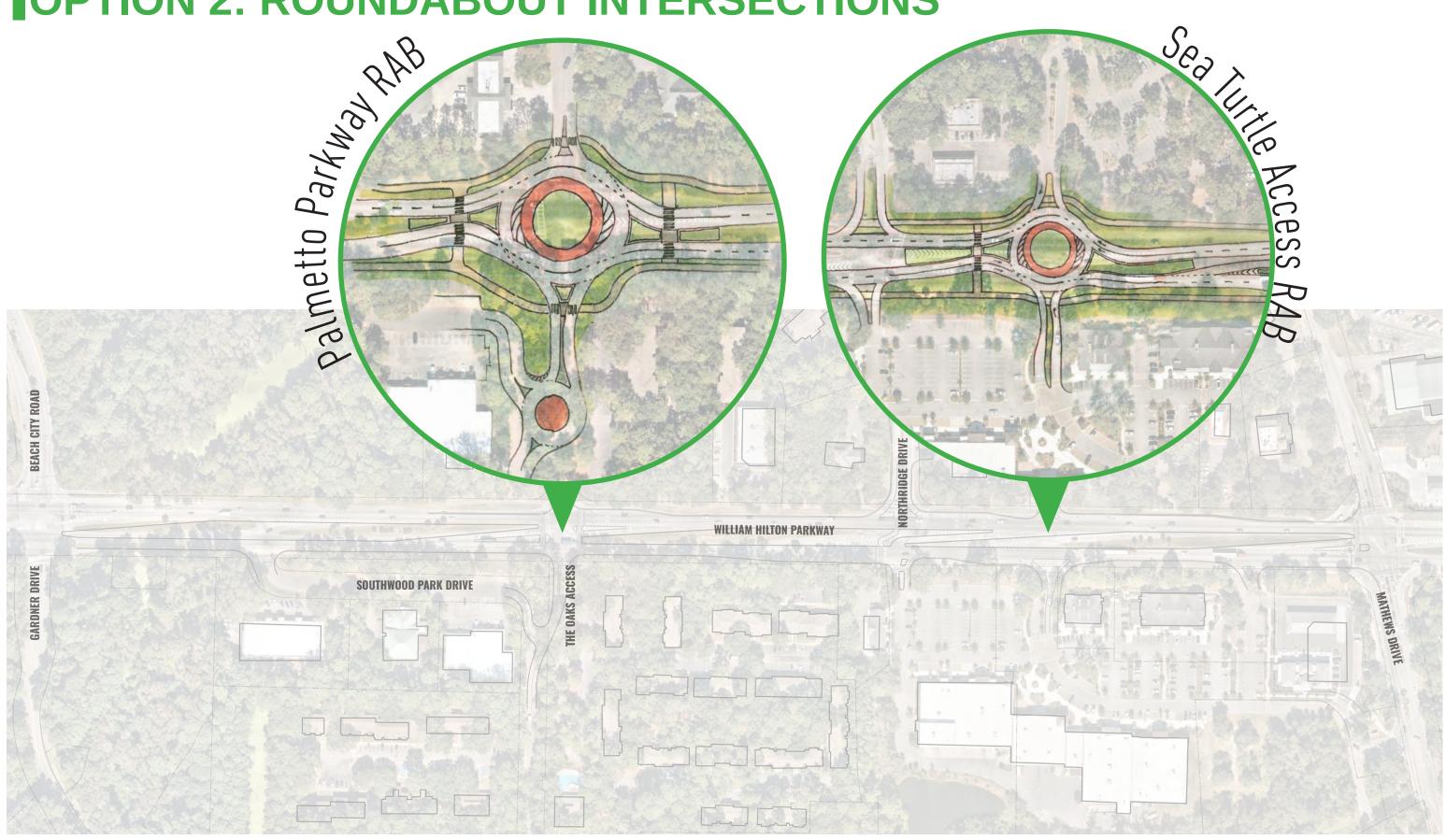
 $\leftrightarrow$ 



Proposed Vehicular Movement / Connection

- Proposed Roundabout
- Existing Signalized Intersection
- Proposed Planted Median
- <---> Proposed Pathway Crossing







Pros

# **Option 1: Signalized Intersections**

- Controls pedestrian movements crossing WHP and removes guess work by those crossing
- Focuses crossing infrastructure where pedestrians are crossing today
- Controls left-turning movements from WHP onto the side streets
- Removes conflicts between through and left-turning movements at problematic intersections
- Easily adapts into the existing roadway network traffic control system

- Does not reduce the number of conflict points to the same level as RAB's
- Does not reduce motor vehicle speeds along the corridor

## **Option 2: Roundabout Intersections** Pros

- Slow traffic at a constant speed through the corridor to make it easier for pedestrians to cross the street
- Narrows the roadway section pedestrians are required to cross
- Removes conflicts between left-turns and through movements
- Addresses one of the most predominate crash types present, reduces angle crashes

#### Cons

- Roundabout fatigue on the island
- Visitor / tourist unfamiliarity with the operations of the RAB
- Close spacing between multiple roundabouts and traffic signals







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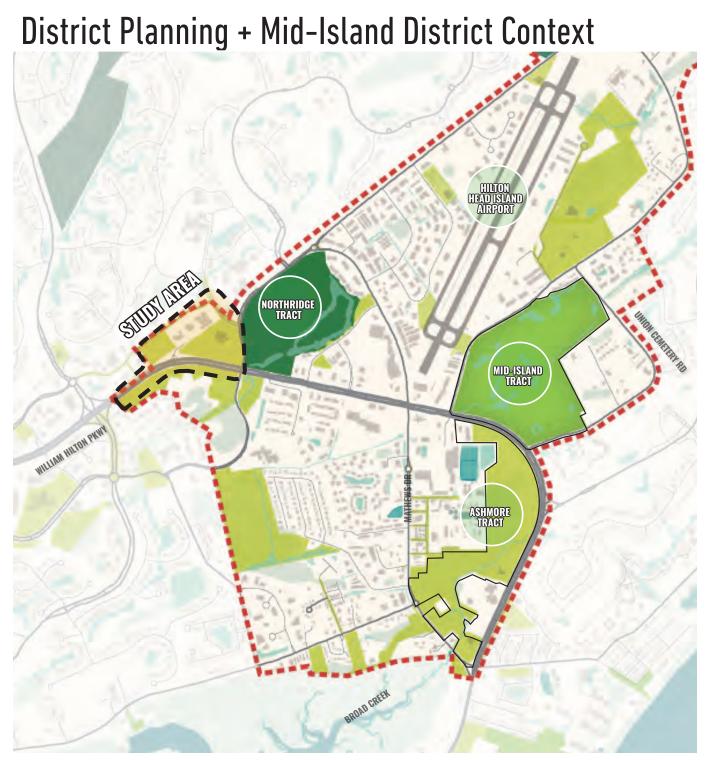




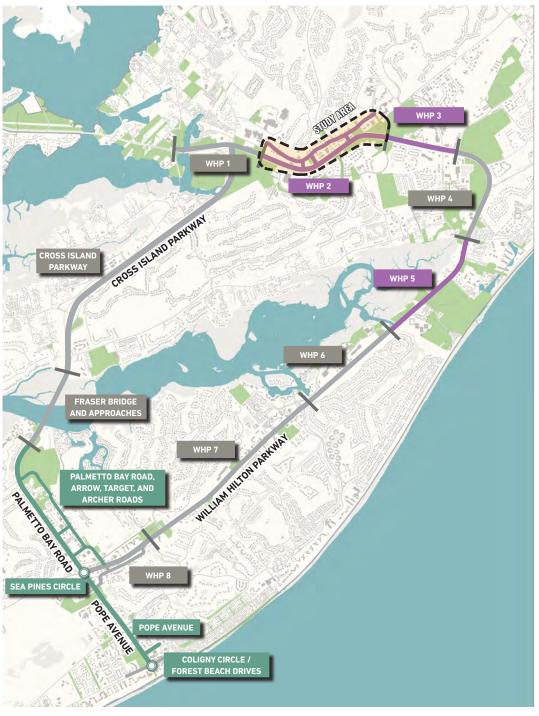
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#### Establish an identity for Main Street

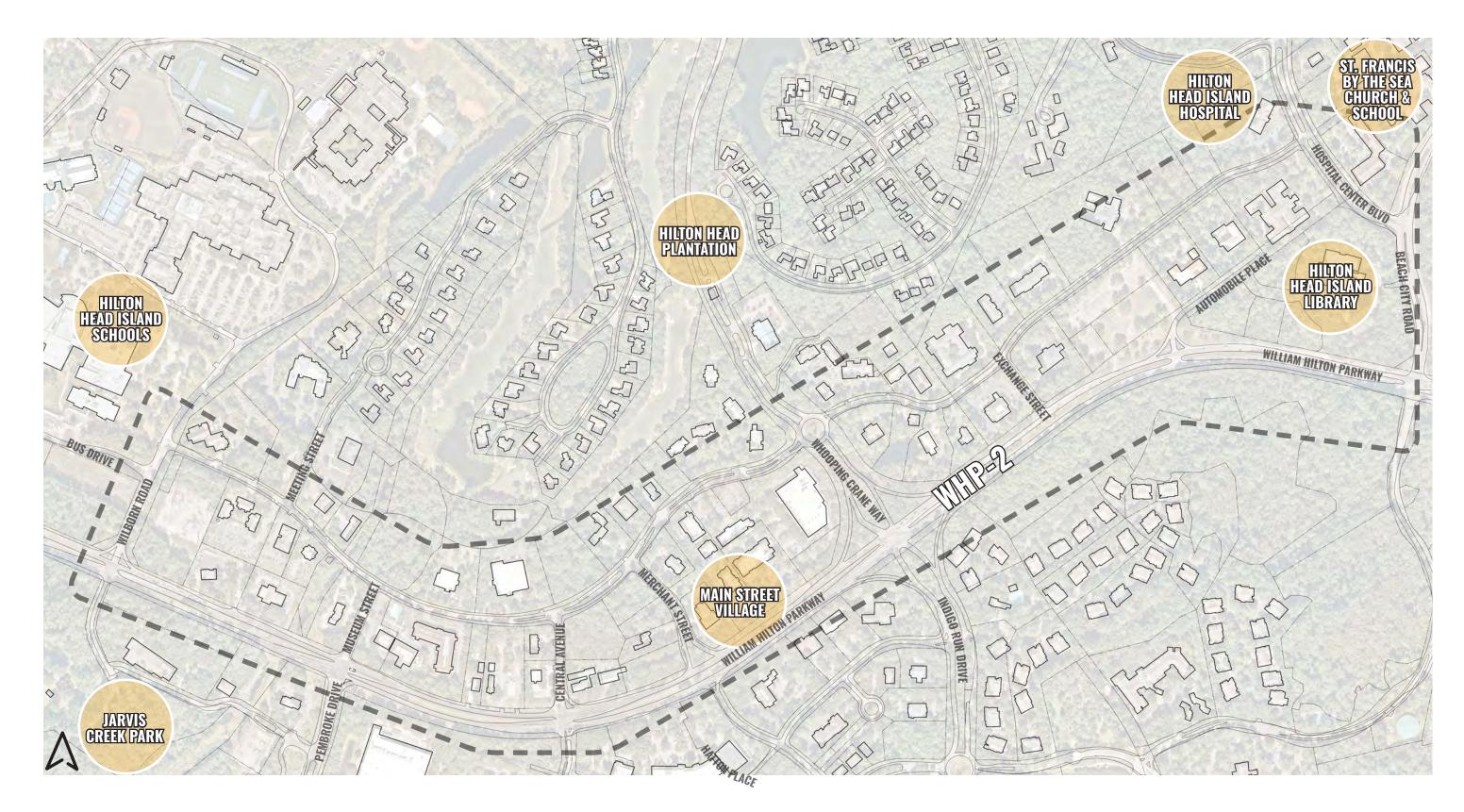
## Analysis GUIDING DOCUMENTS & STUDIES



MTCP Context



## Analysis LOCATION OF STUDY AREA





Improve pedestrian & bicycle connectivity and safety



- Improve pedestrian & bicycle connectivity and safety
- Improve existing pedestrian crossings



- Improve pedestrian & bicycle connectivity and safety
- Improve existing pedestrian crossings
- Incorporate Safe Routes to School principles due to: -proximity to schools
  - -limited existing pedestrian infrastructure



#### Creating safe routes with engineering

- Improve children's safety
- Improve accessibility
- Encourage more bicycling and walking



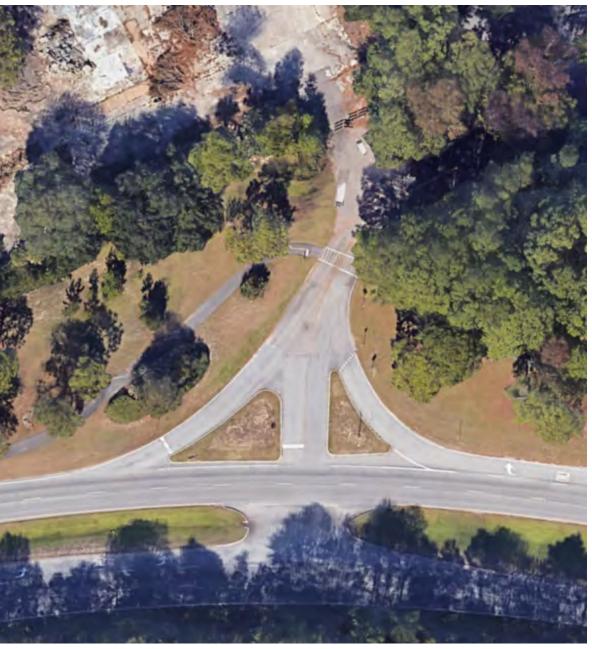
### Safe Routes to School



- Improve pedestrian & bicycle connectivity and safety
- Improve existing pedestrian crossings
- Incorporate Safe Routes to School principals
- Provide multimodal facilities and transit options



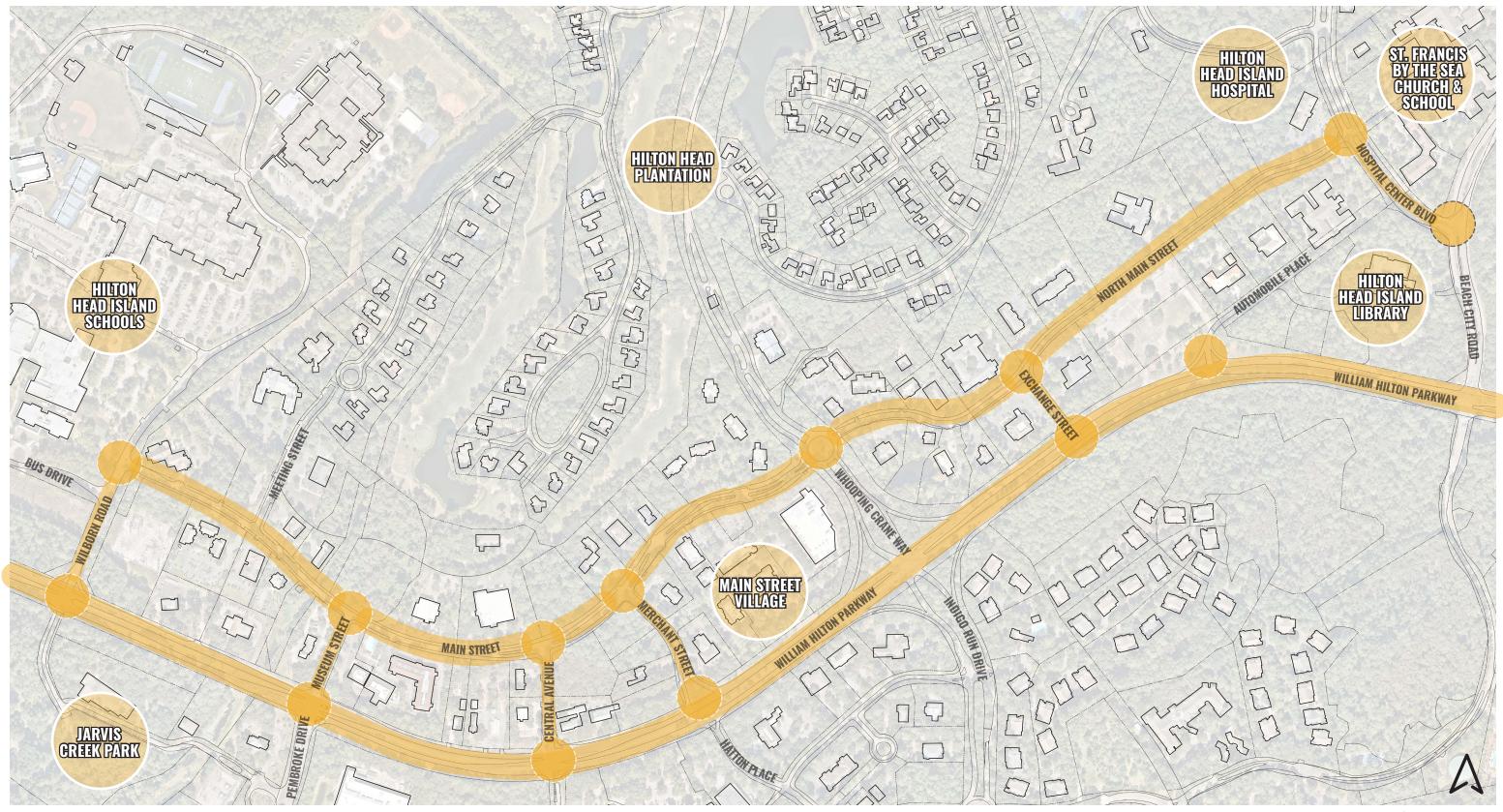
- Improve pedestrian & bicycle connectivity and safety
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- Incorporate Safe Routes to School principals
- Provide multimodal facilities and transit options
- Improve intersections, create consistent vehicular geometry, reduce conflicts



- Improve pedestrian & bicycle connectivity and safety
- Improve existing pedestrian crossings
- Incorporate Safe Routes to School principals
- Provide multimodal facilities and transit options
- Improve intersections, create consistent vehicular geometry, reduce conflicts
- Establish a district identity with landscape, signage, and wayfinding improvements

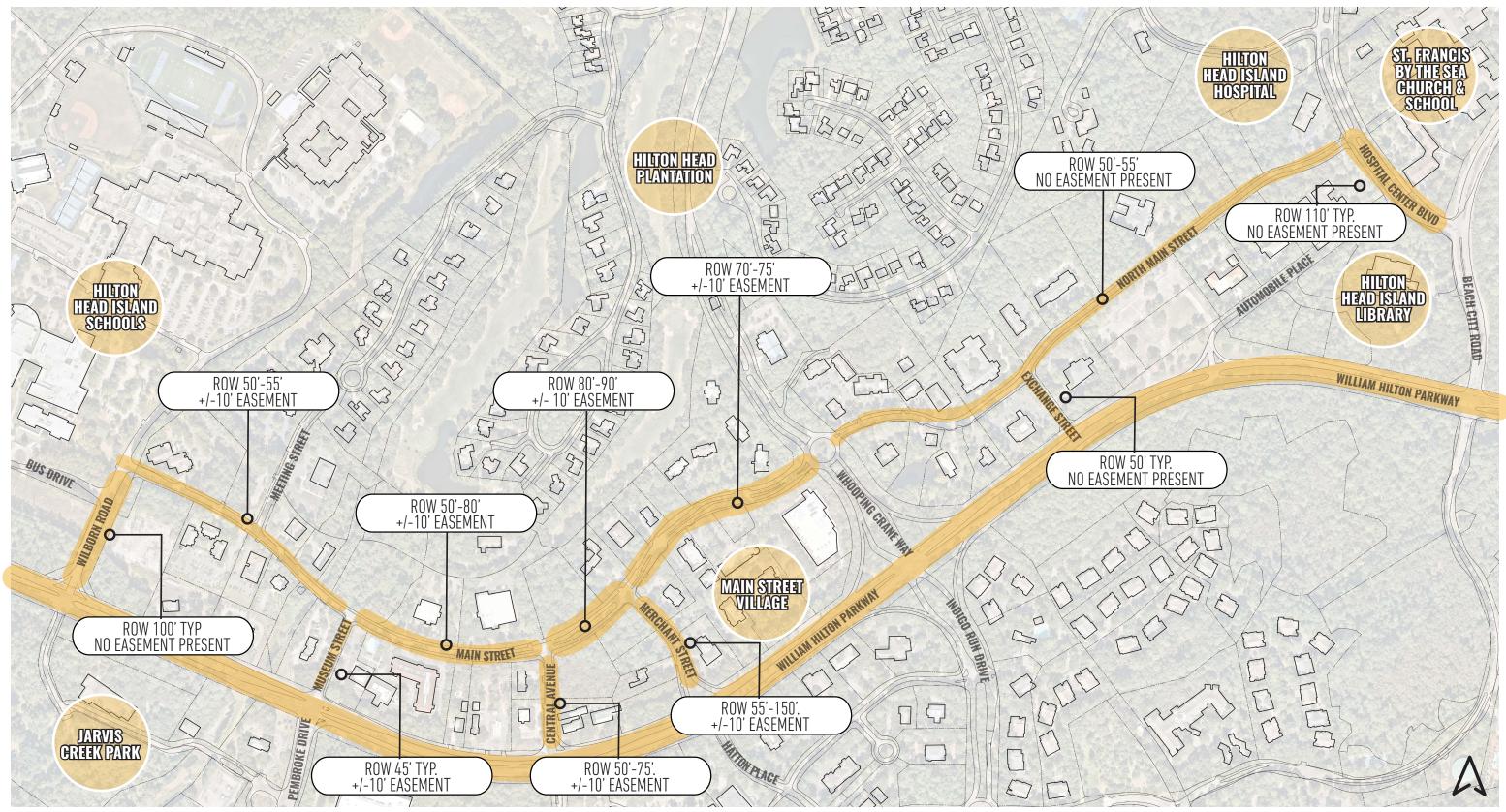


## Analysis PROJECT EXTENT & FOCUS AREAS



WILLIAM HILTON PARKWAY 2 & MAIN STREET | COUNCIL PRESENTATION

## Analysis EXISTING RIGHT-OF-WAY EXTENT



WILLIAM HILTON PARKWAY 2 & MAIN STREET | COUNCIL PRESENTATION

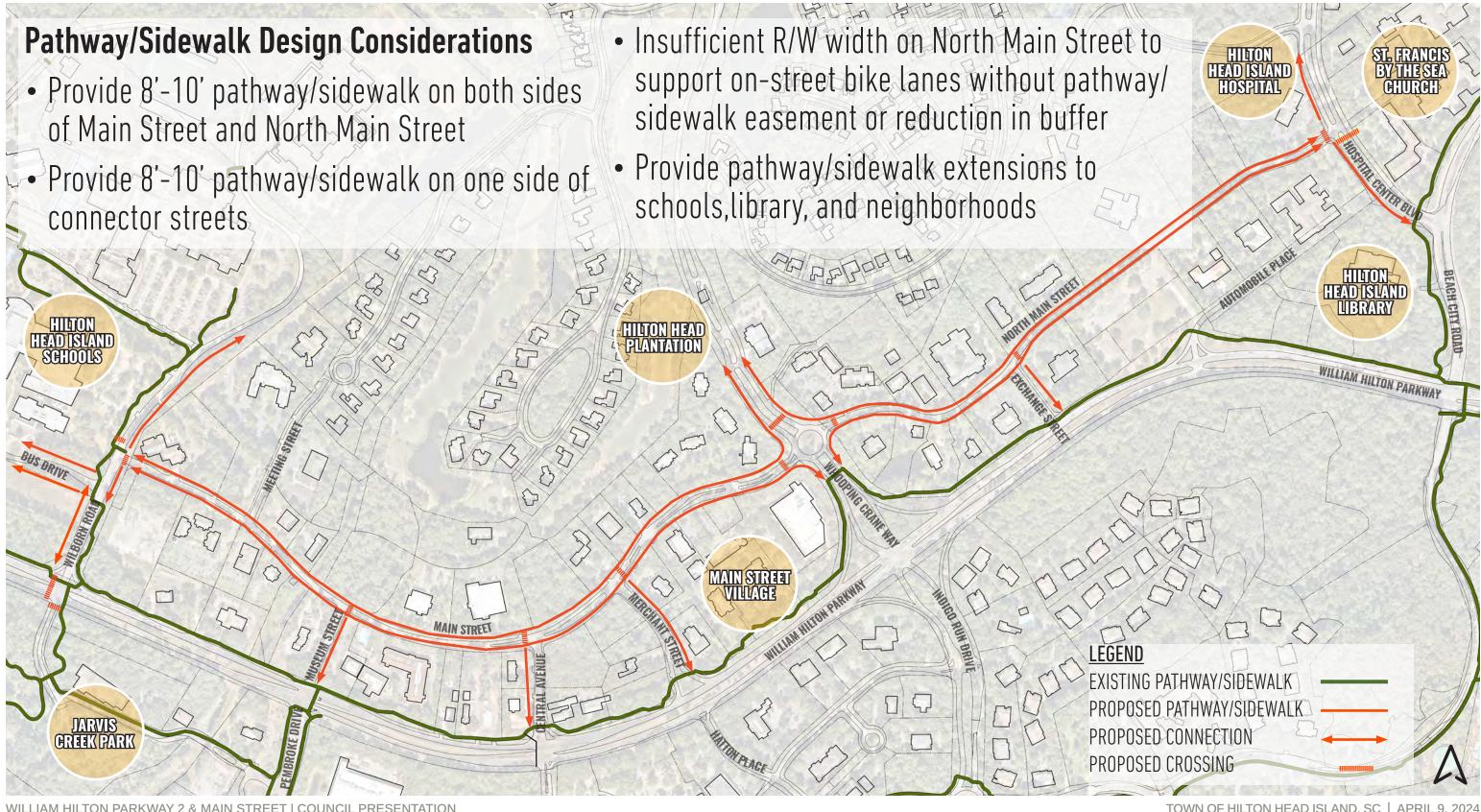
## Analysis EXISTING PEDESTRIAN CONNECTIVITY



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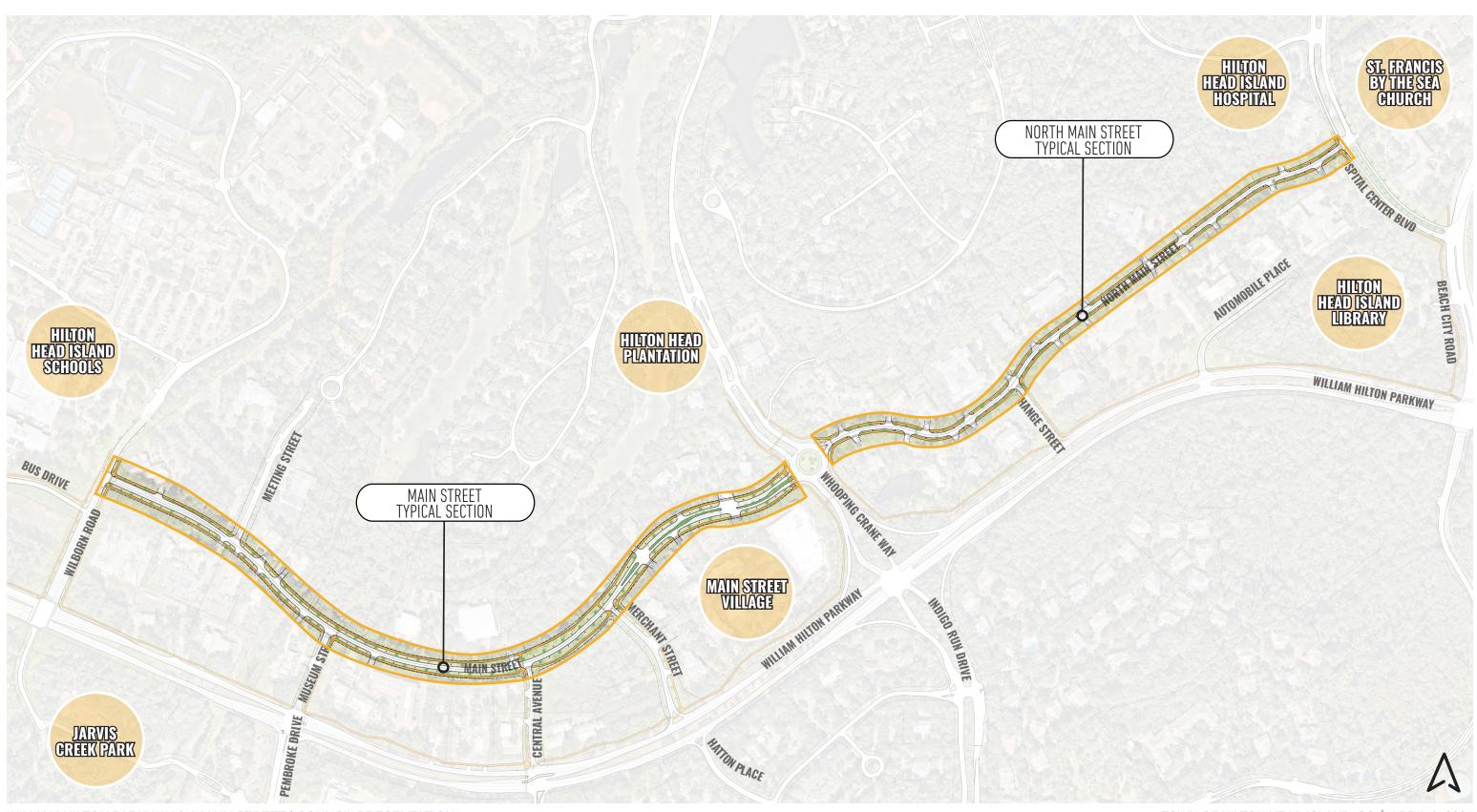
# Analysis PROPOSED PATHWAY CONNECTIVITY

- of Main Street and North Main Street
- Provide 8'-10' pathway/sidewalk on one side of connector streets
- sidewalk easement or reduction in buffer
- schools, library, and neighborhoods





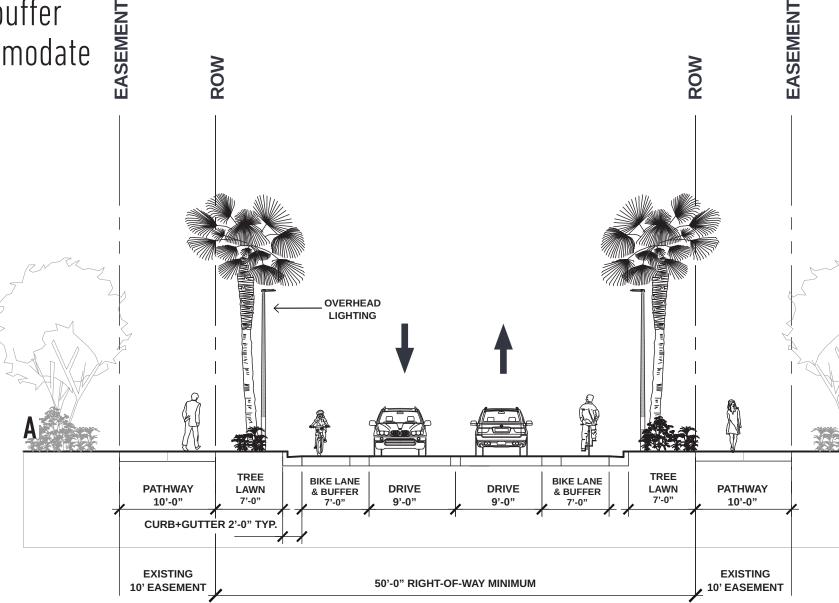




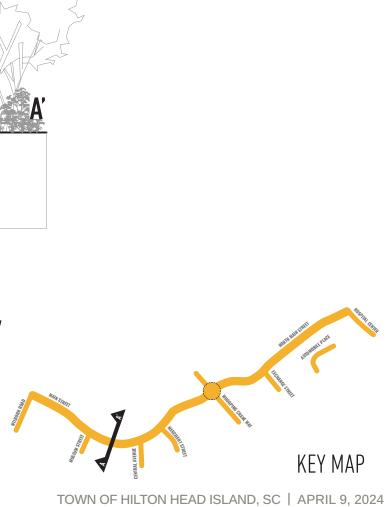
WILLIAM HILTON PARKWAY 2 & MAIN STREET | COUNCIL PRESENTATION

## Preliminary Fraincering MAIN STREET IMPROVEMENTS: OPTION 1

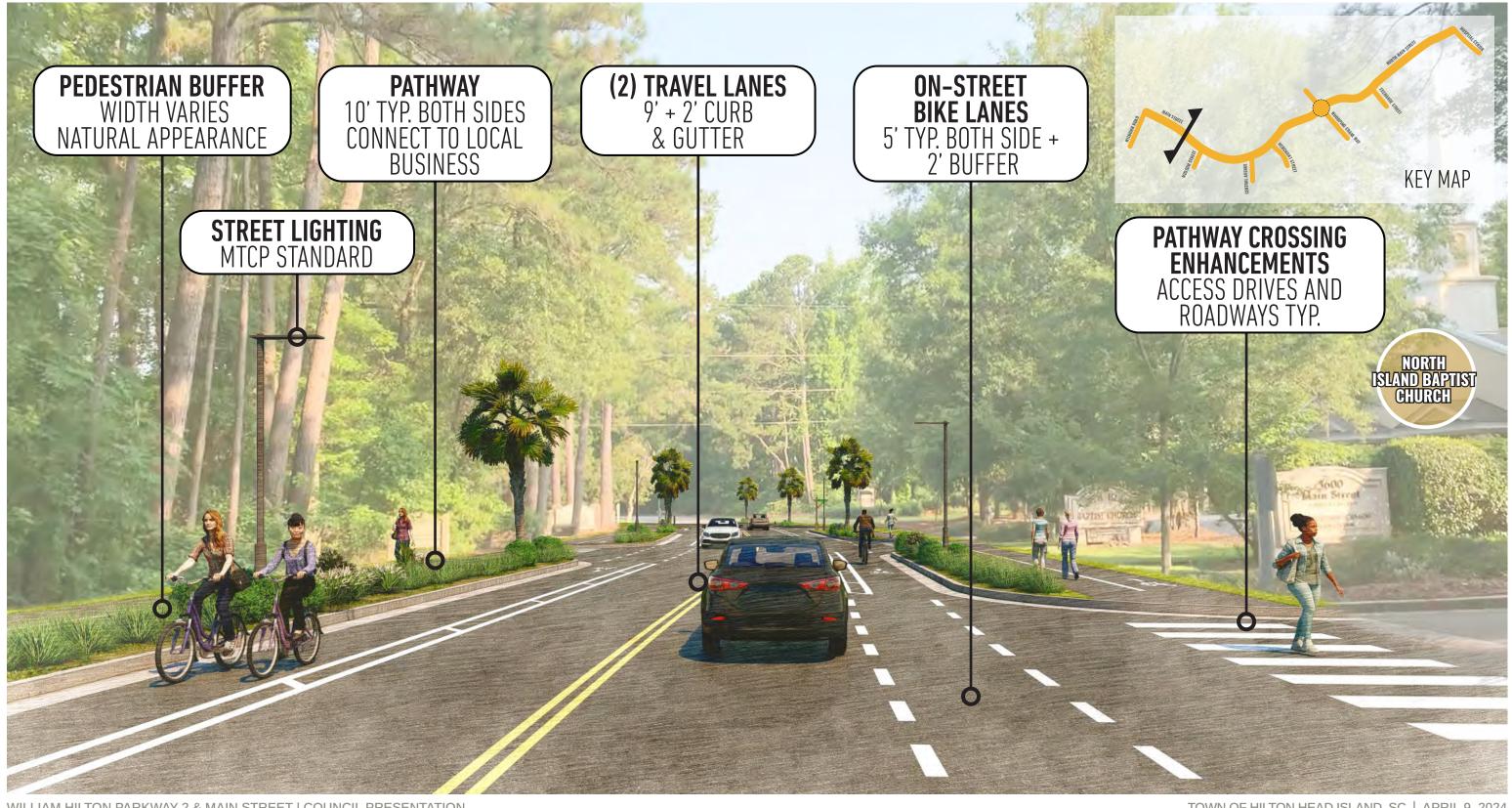
\*Tree lawn / pedestrian buffer reduced in size to accommodate on-street bike lanes



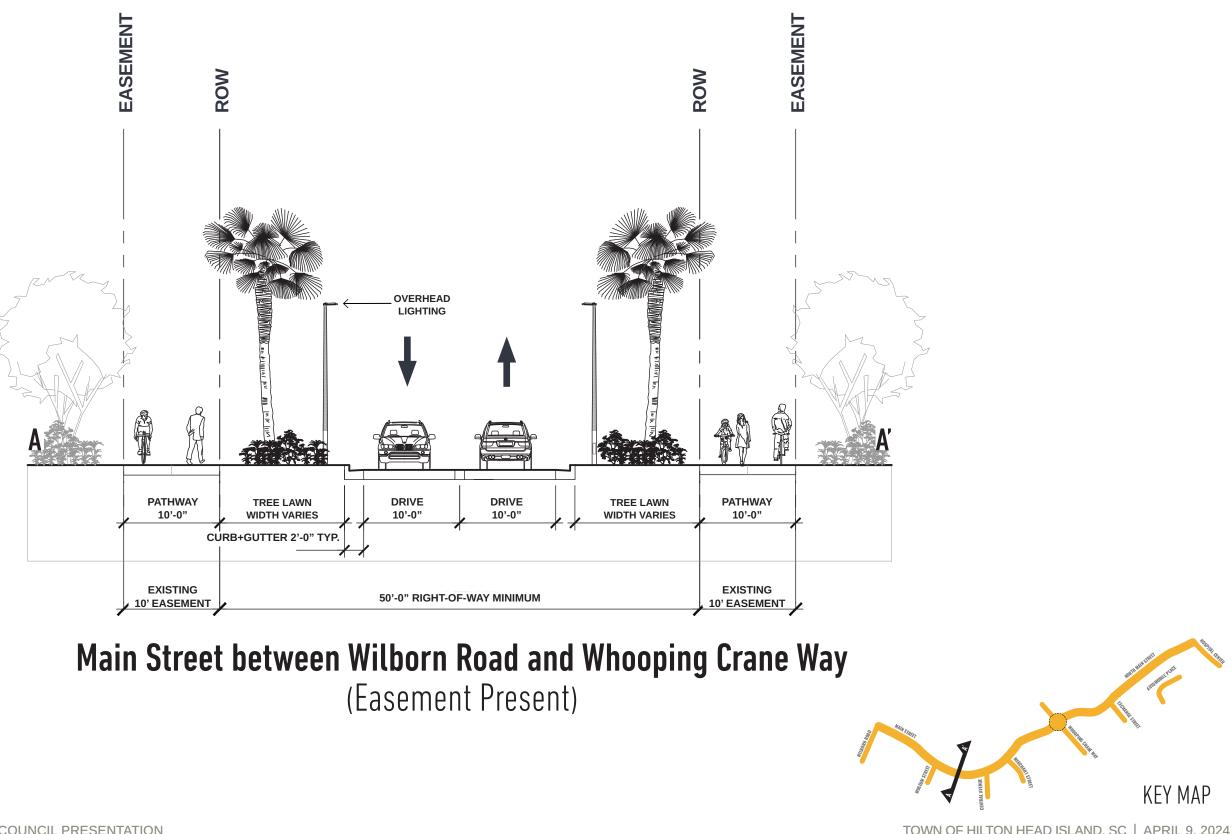
### Main Street between Wilborn Road and Whooping Crane Way (Easement Present)



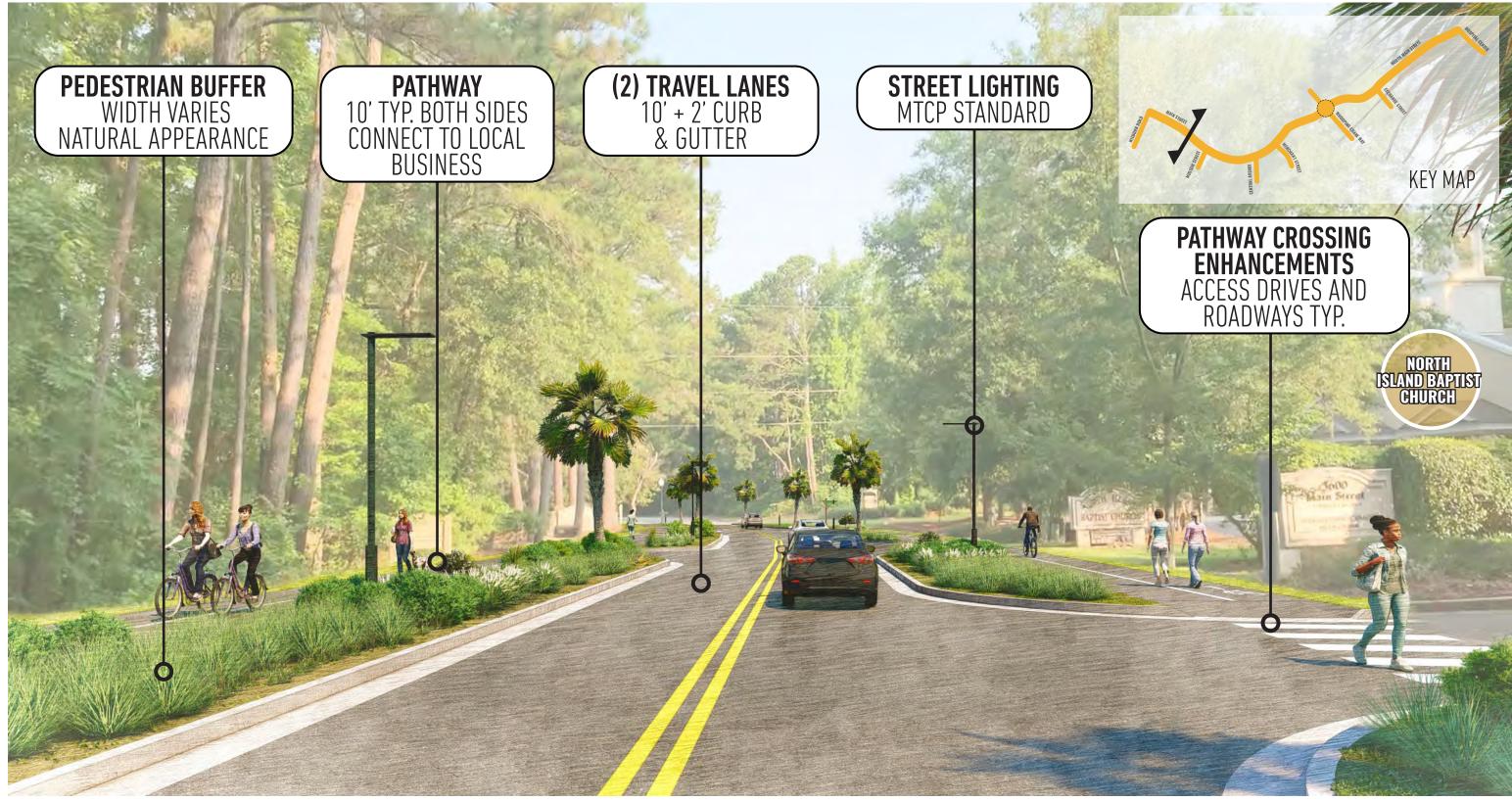




# Preliminary Fraineering MAIN STREET IMPROVEMENTS: OPTION 2

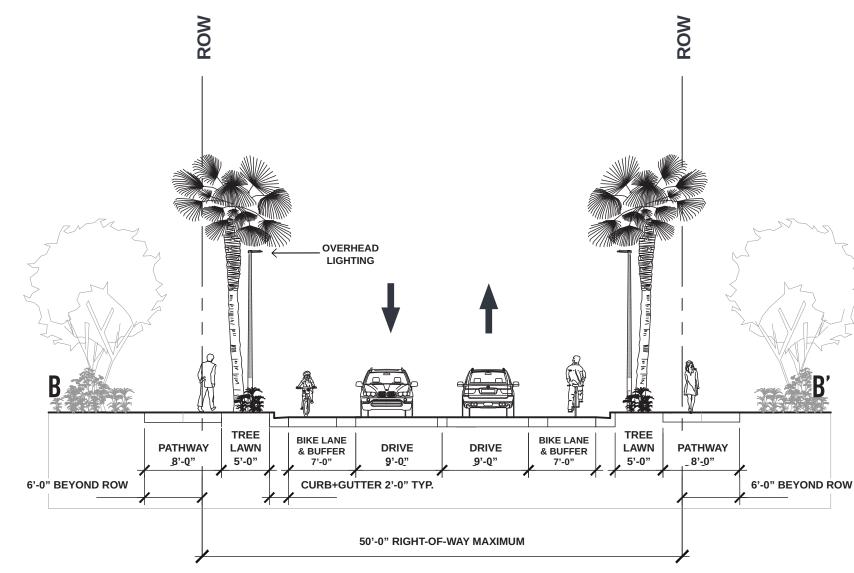






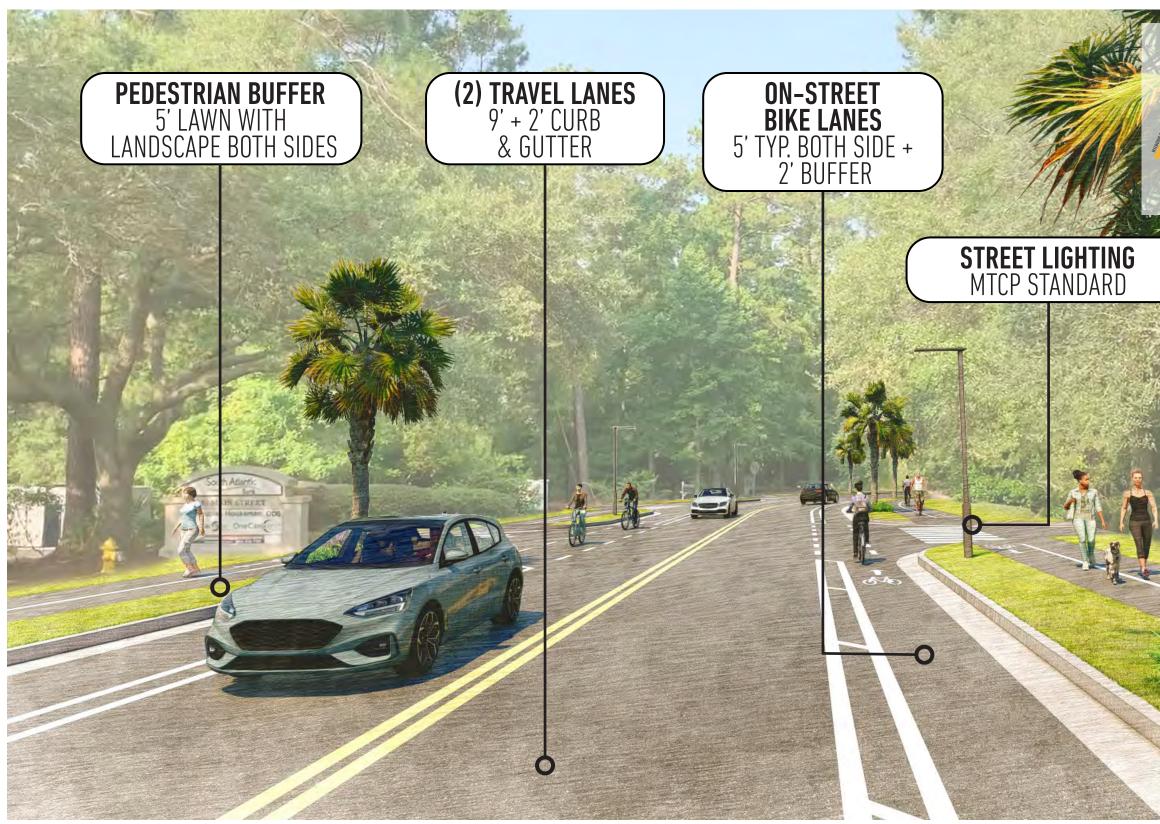


\*Easement proposed to accommodate on-street bike lanes



### North Main Street Between Whooping Crane Way and Hospital Center Boulevard (Proposed Easement)

## Visualizations 80 NORTH MAIN STREET: OPTION 1

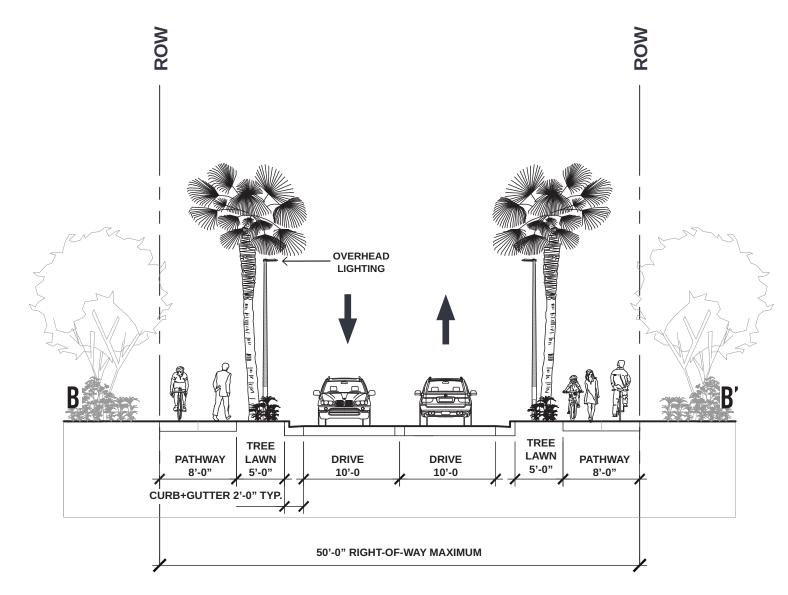


WILLIAM HILTON PARKWAY 2 & MAIN STREET | COUNCIL PRESENTATION



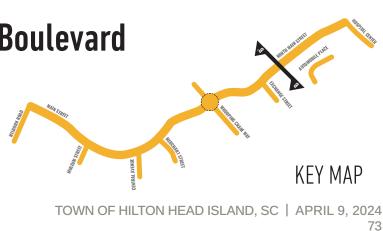
#### **PATHWAY** 8' TYP. BOTH SIDES CONNECT TO LOCAL BUSINESS



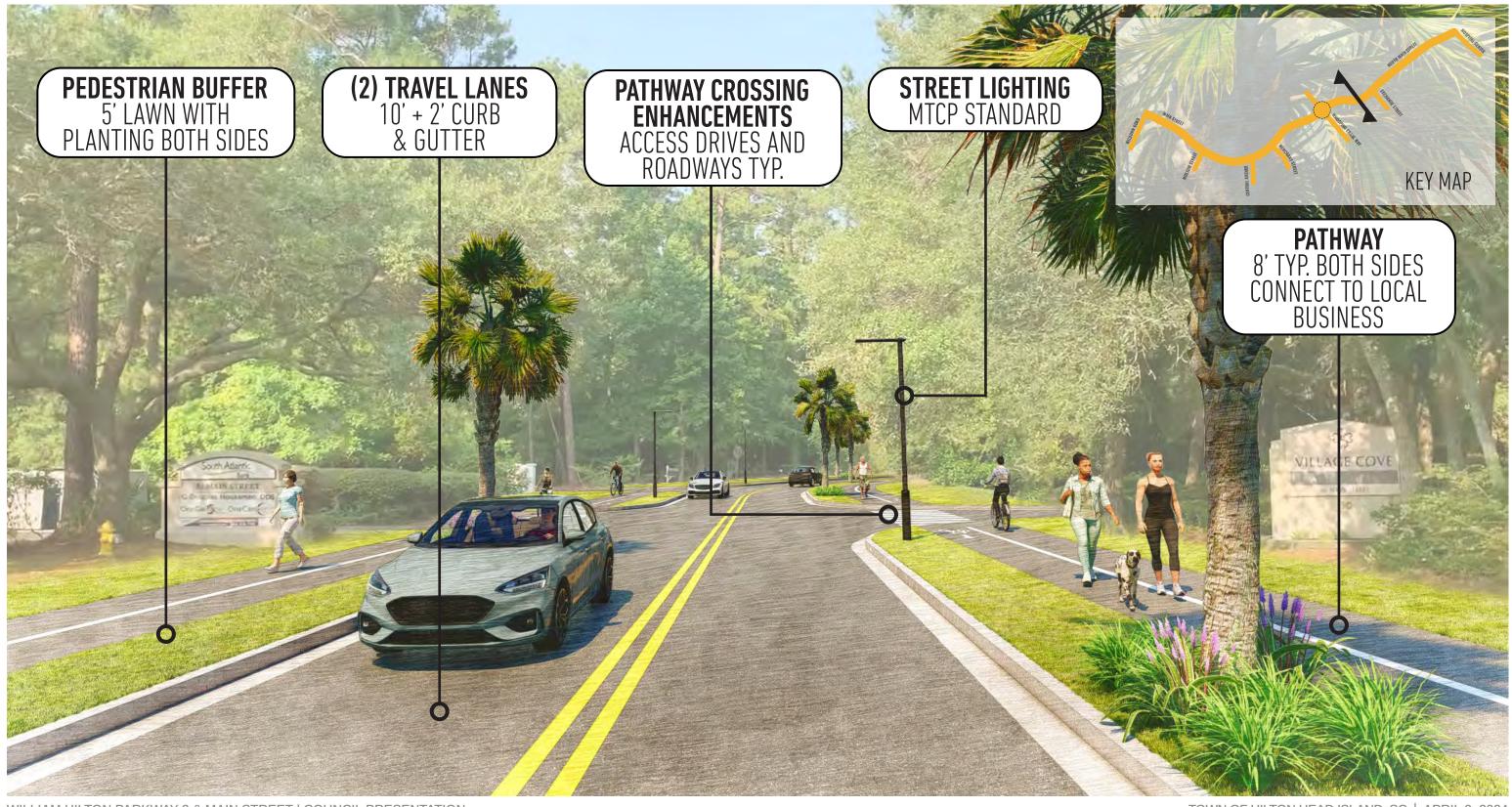


### North Main Street Between Whooping Crane Way and Hospital Center Boulevard (No Easement)





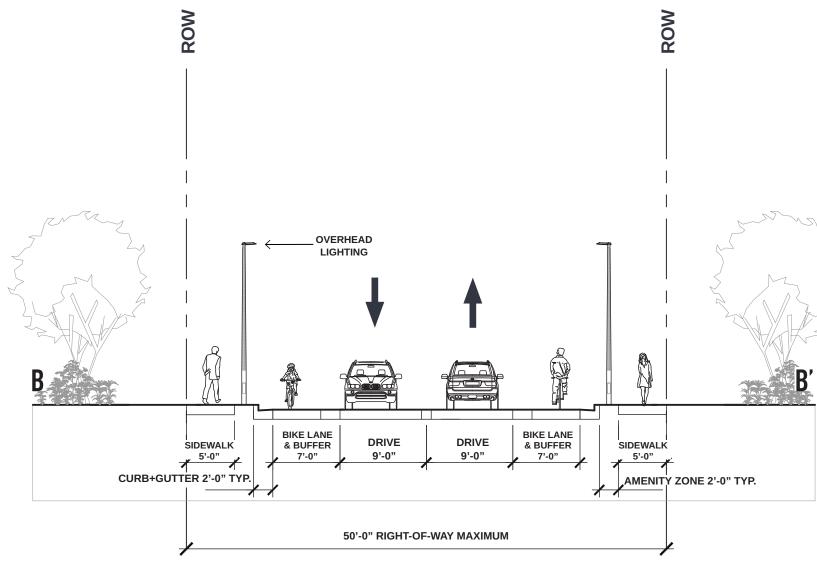
### Visnalizations 80 NORTH MAIN STREET: OPTION 2



WILLIAM HILTON PARKWAY 2 & MAIN STREET | COUNCIL PRESENTATION

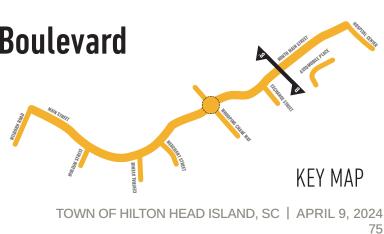
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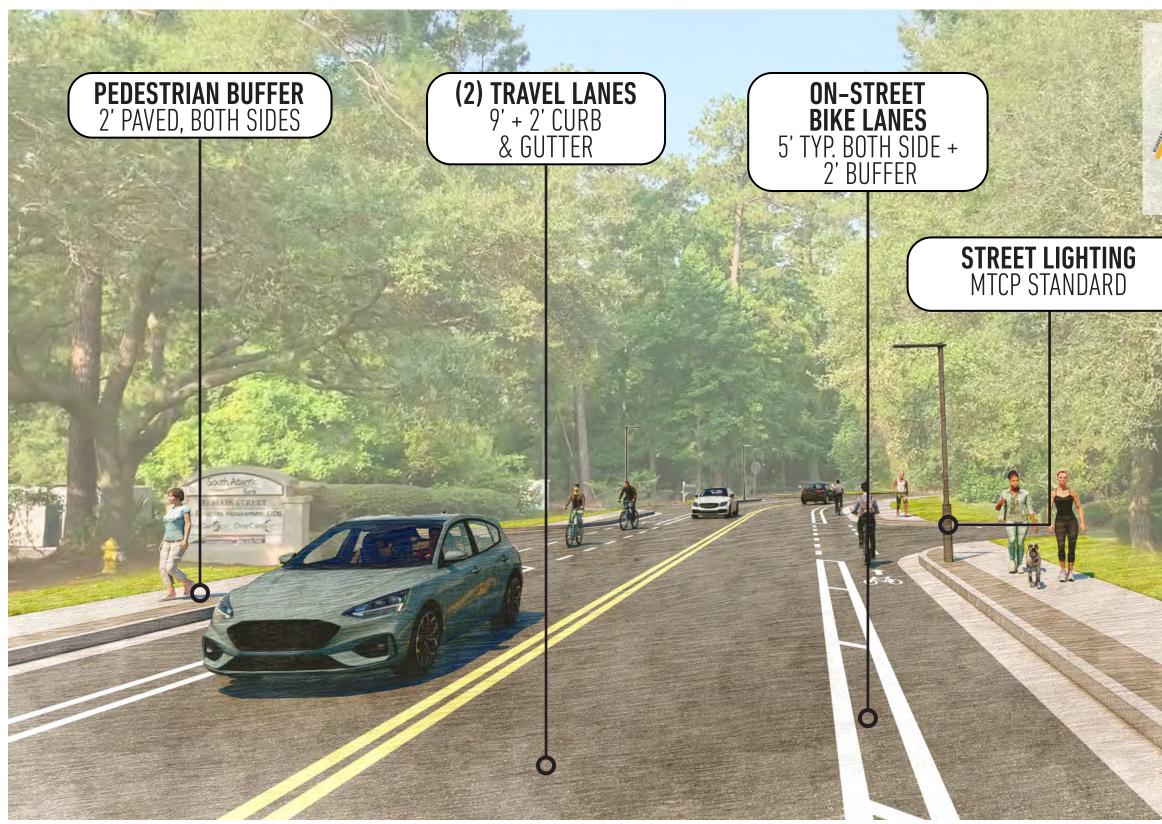


### North Main Street Between Whooping Crane Way and Hospital Center Boulevard (No Easement)





### Visualizations 80 NORTH MAIN STREET: OPTION 3



WILLIAM HILTON PARKWAY 2 & MAIN STREET | COUNCIL PRESENTATION

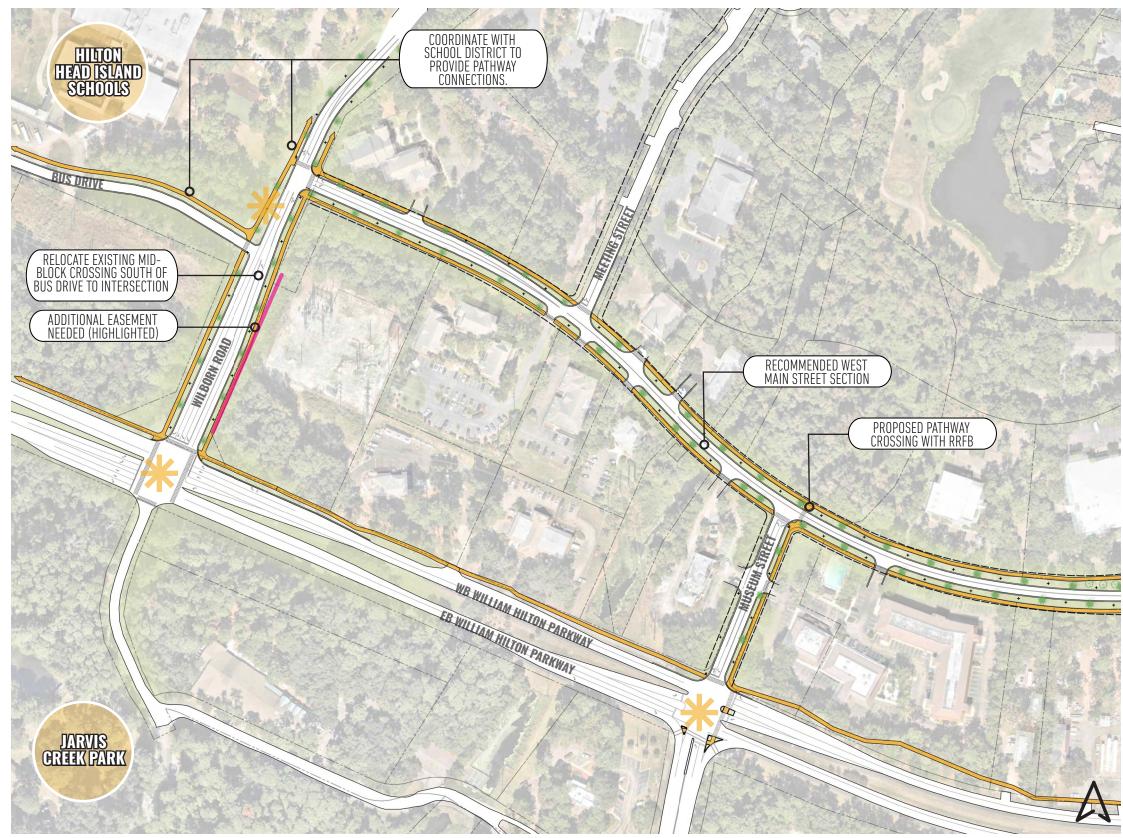
### KEY MAP

### **SIDEWALK** 5' TYP. BOTH SIDES CONNECT TO LOCAL BUSINESS

AGE COVE

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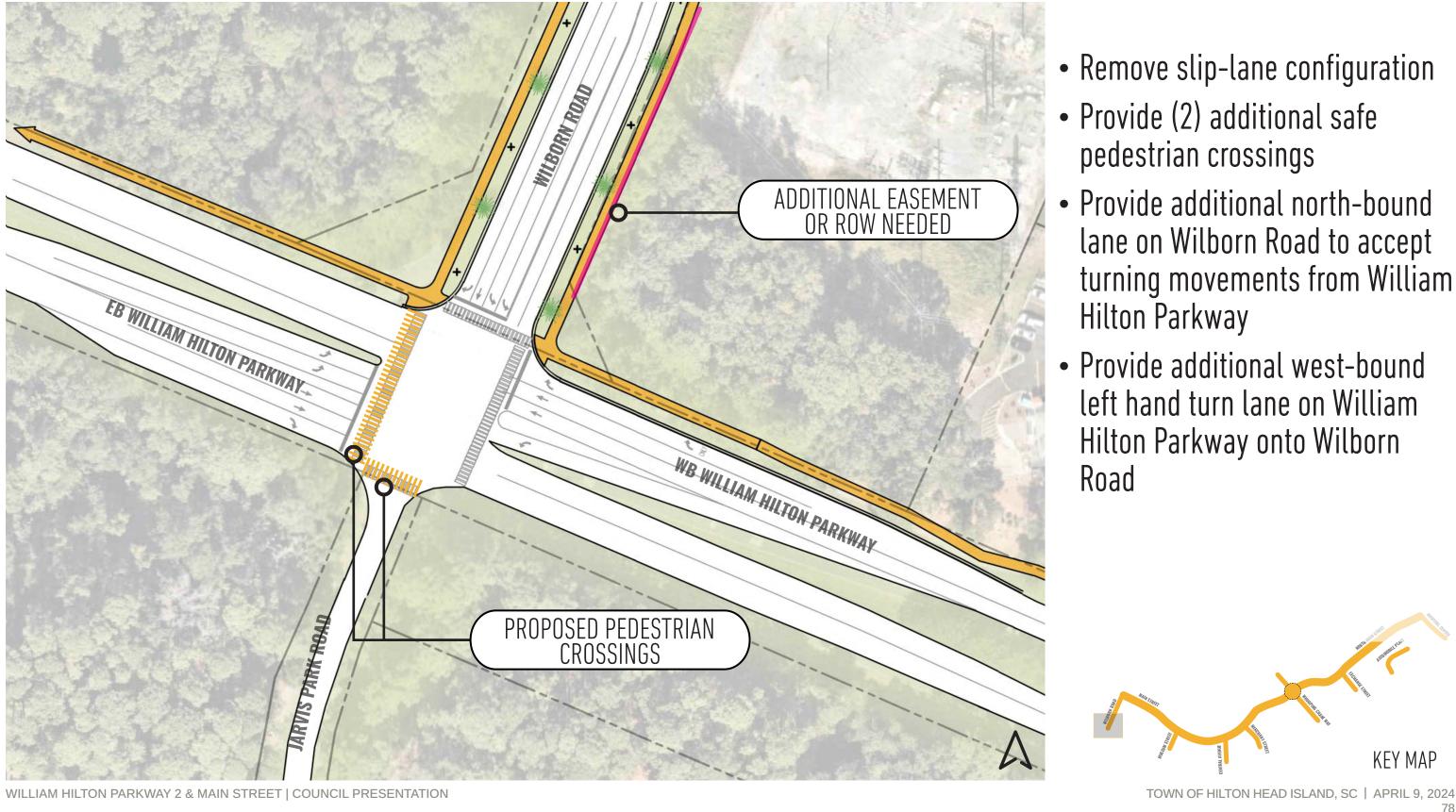
### Preliminary Fraineering WILBORN ROAD TO CENTRAL AVENUE



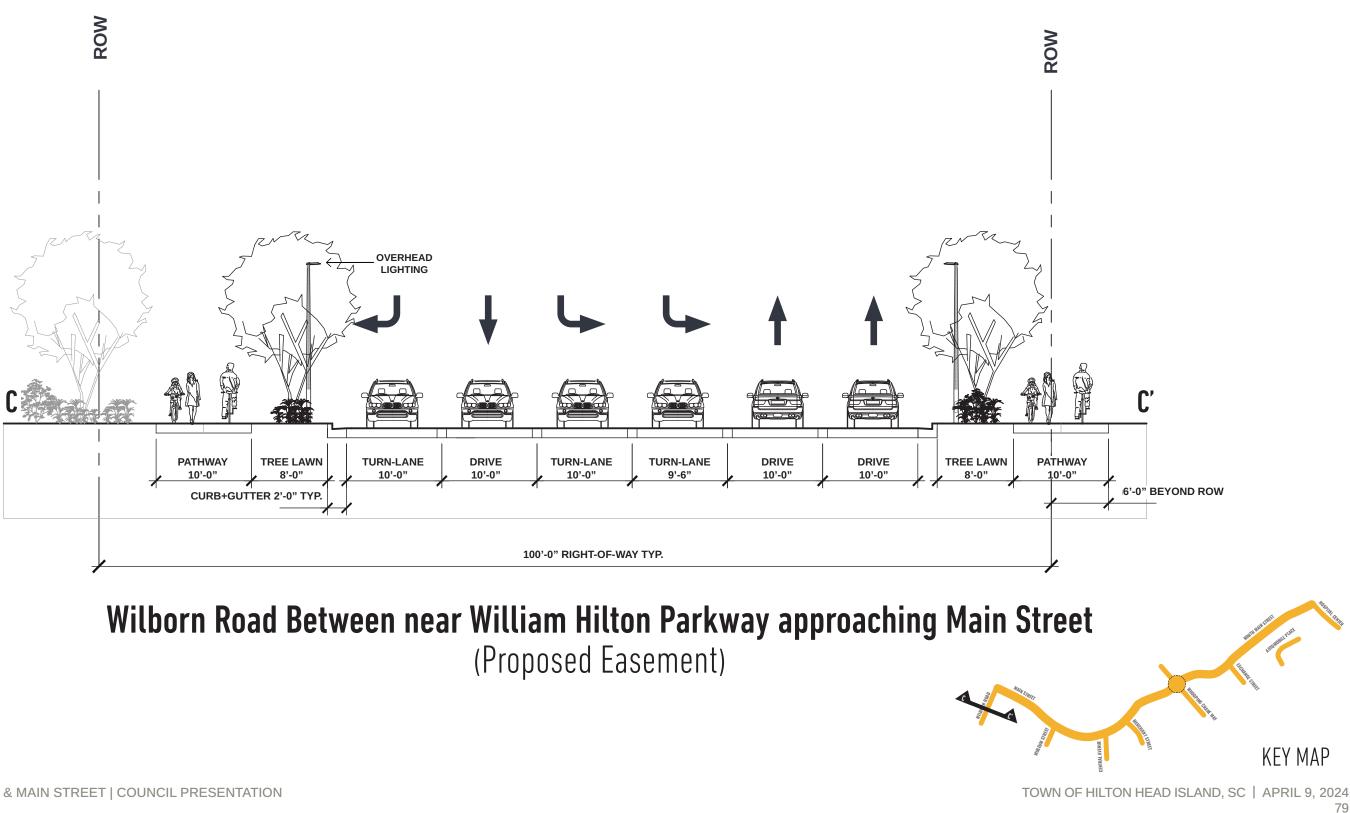




# Preliminary Fraineering WILBORN ROAD AT WILLIAM HILTON PARKWAY

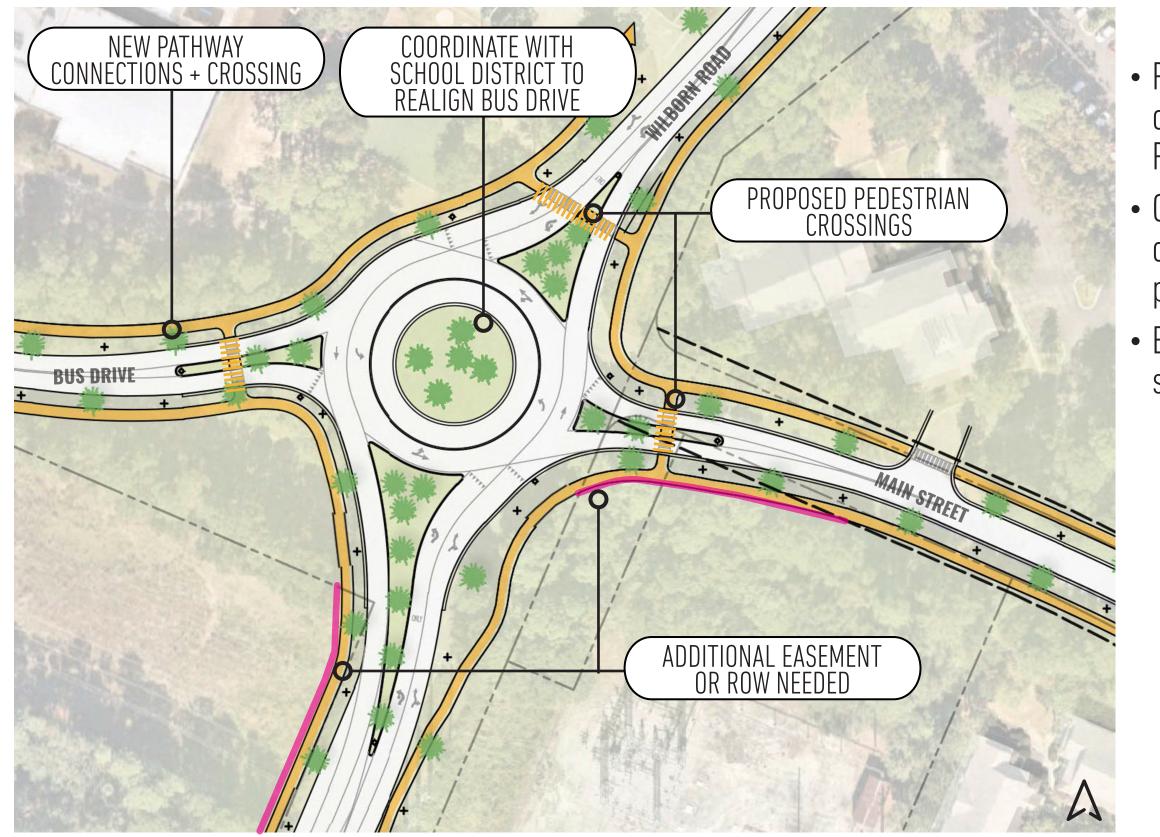






WILLIAM HILTON PARKWAY 2 & MAIN STREET | COUNCIL PRESENTATION

### Preliminary Frazineering WILBORN ROAD AT MAIN STREET AND BUS DRIVE: OPTION 1



WILLIAM HILTON PARKWAY 2 & MAIN STREET | COUNCIL PRESENTATION

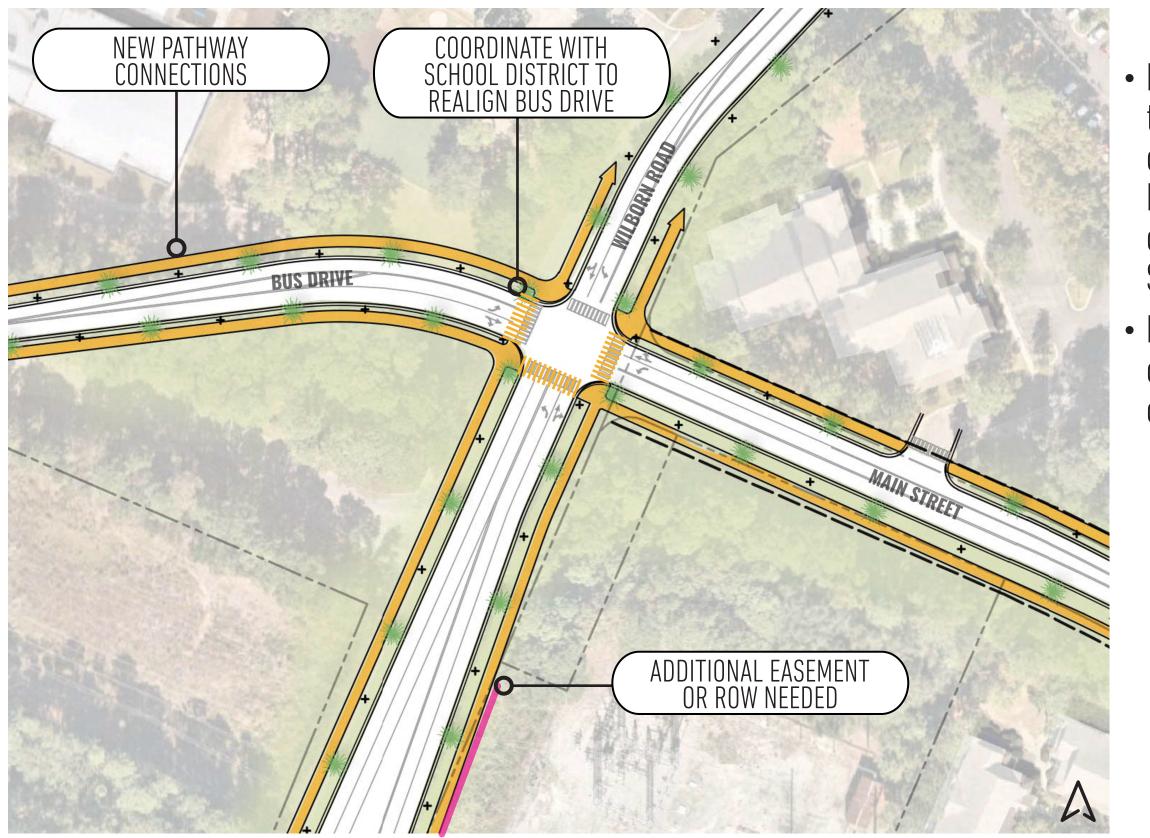
 Roundabout configuration connecting Main Street, Wilborn Road and Bus Drive

• Continuous movement reduces congestion and stacking during peak traffic hours

• Eliminate pedestrian crossing south of Bus Drive



### Preliminary Fragineering WILBORN ROAD AT MAIN STREET AND BUS DRIVE: OPTION 2



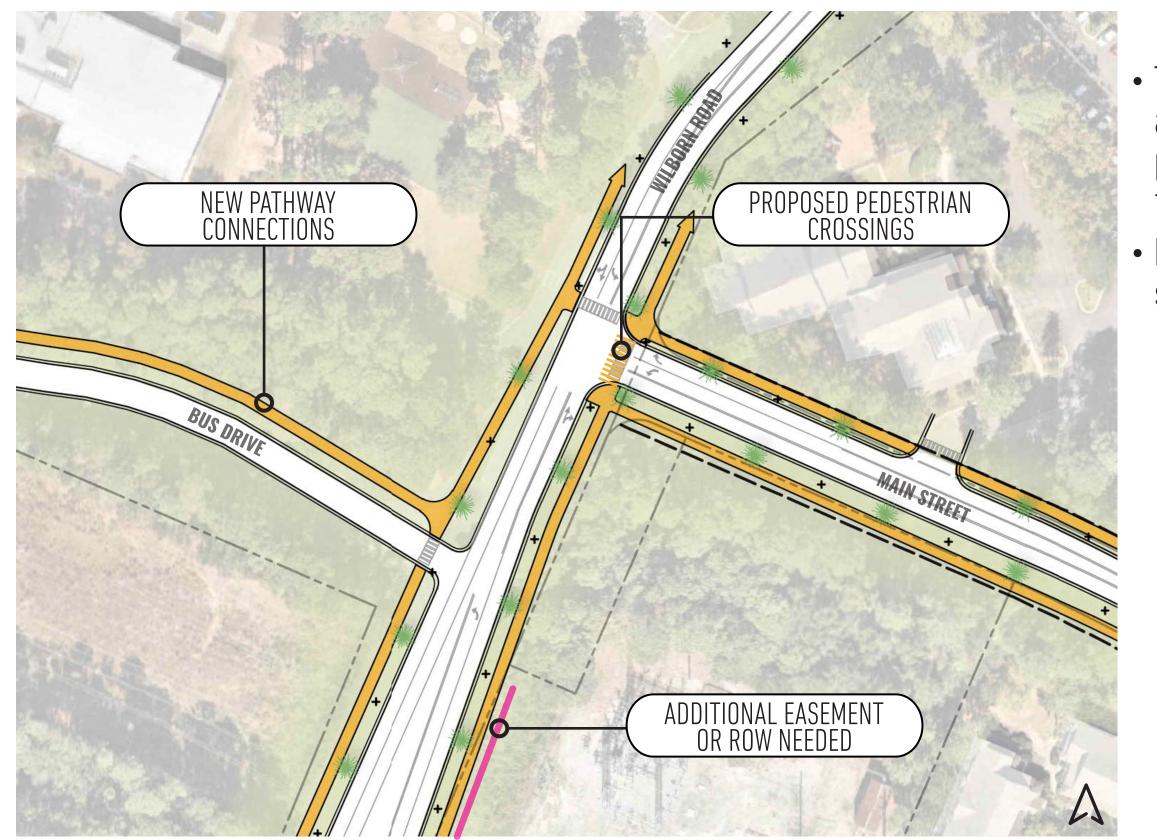
WILLIAM HILTON PARKWAY 2 & MAIN STREET | COUNCIL PRESENTATION

 Realign roadways to create two-way stop condition connecting Main Street, Wilborn Road and Bus Drive. Thru traffic on Wilborn, stop condition Main Street.

 Provides safer crossing conditions for pedestrians compared to existing alignment



### Preliminary Fraineering WILBORN ROAD AT MAIN STREET AND BUS DRIVE: OPTION 3



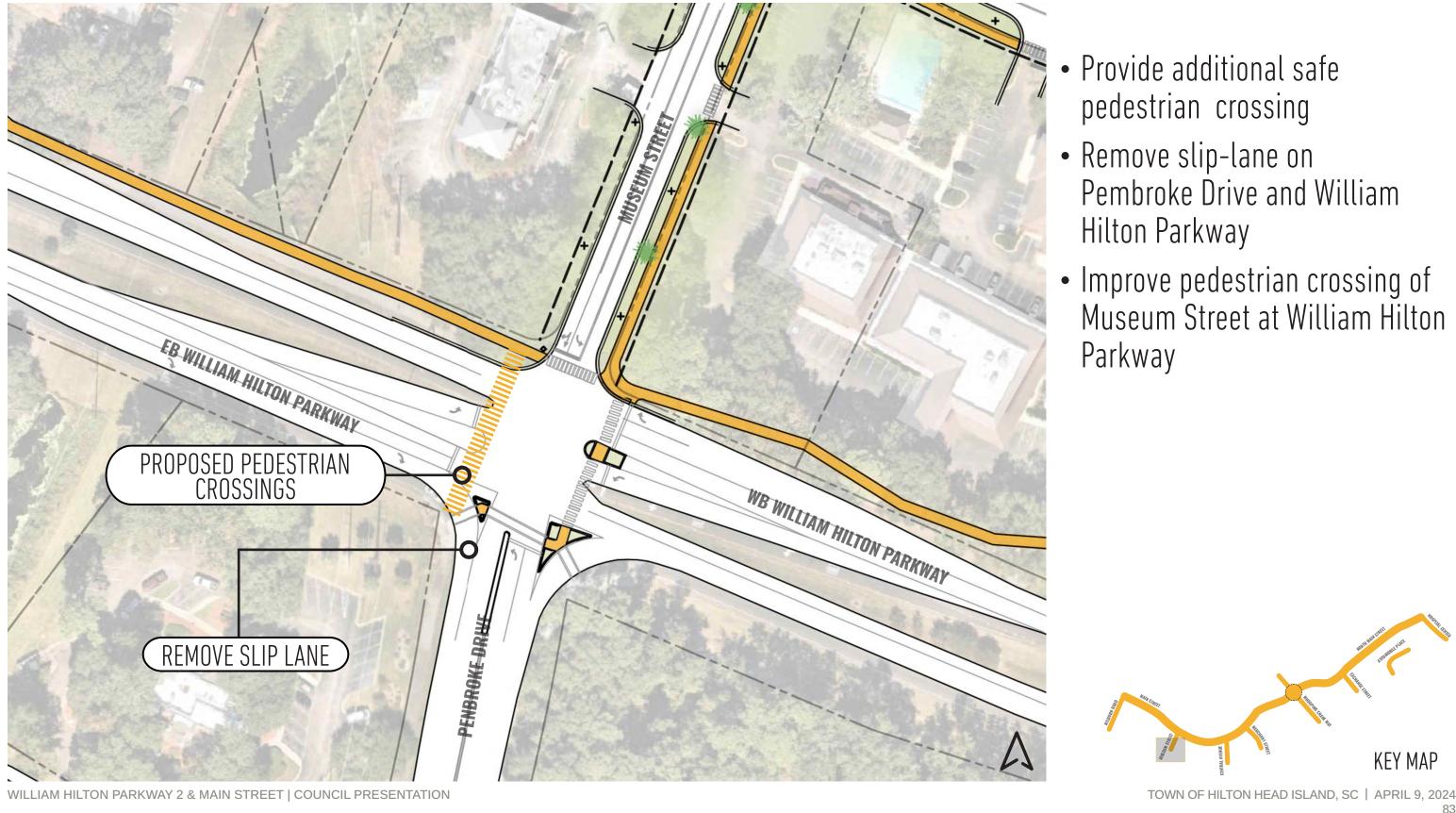
WILLIAM HILTON PARKWAY 2 & MAIN STREET | COUNCIL PRESENTATION

• Tie-in new Main Street alignment with relocated pedestrian crossing. No change to intersection

• Eliminate pedestrian crossing south of Bus Drive

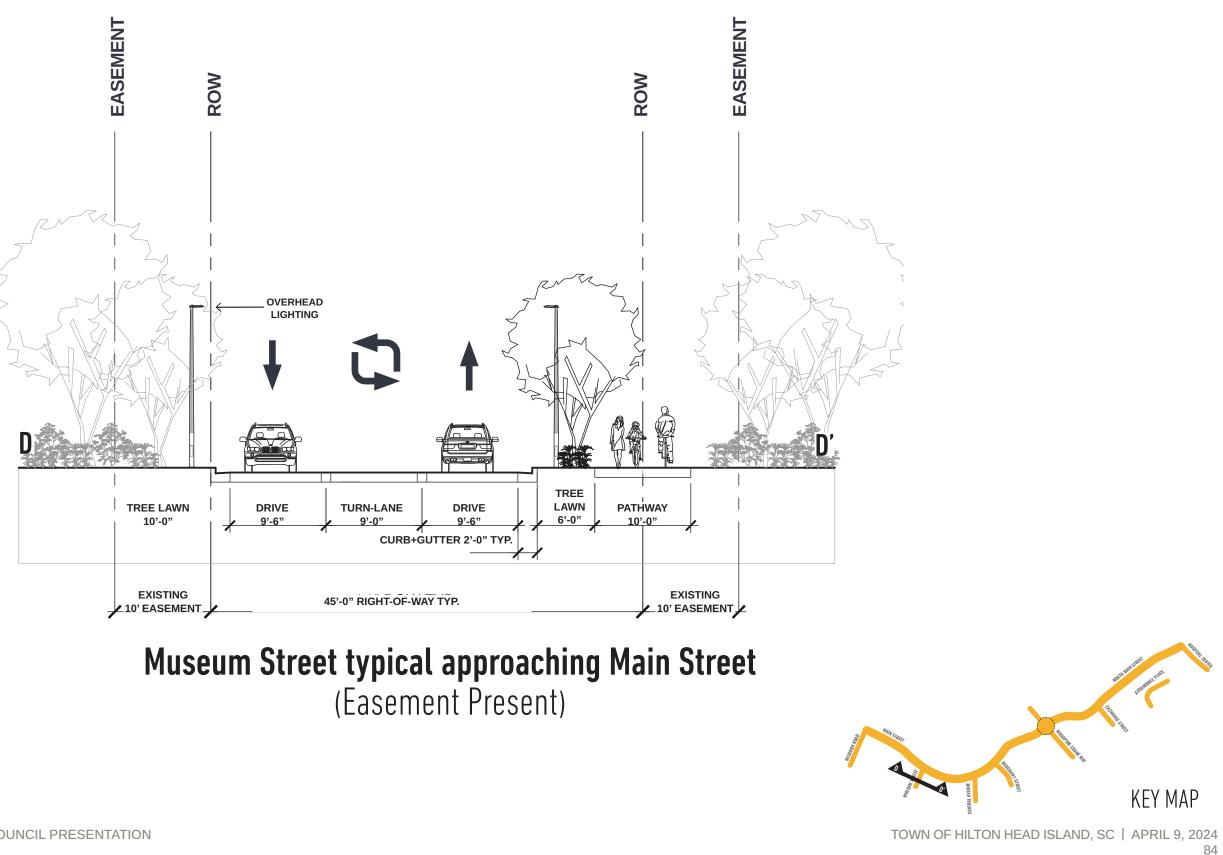


# Preliminary Fraincering MUSEUM STREET AT WILLIAM HILTON PARKWAY

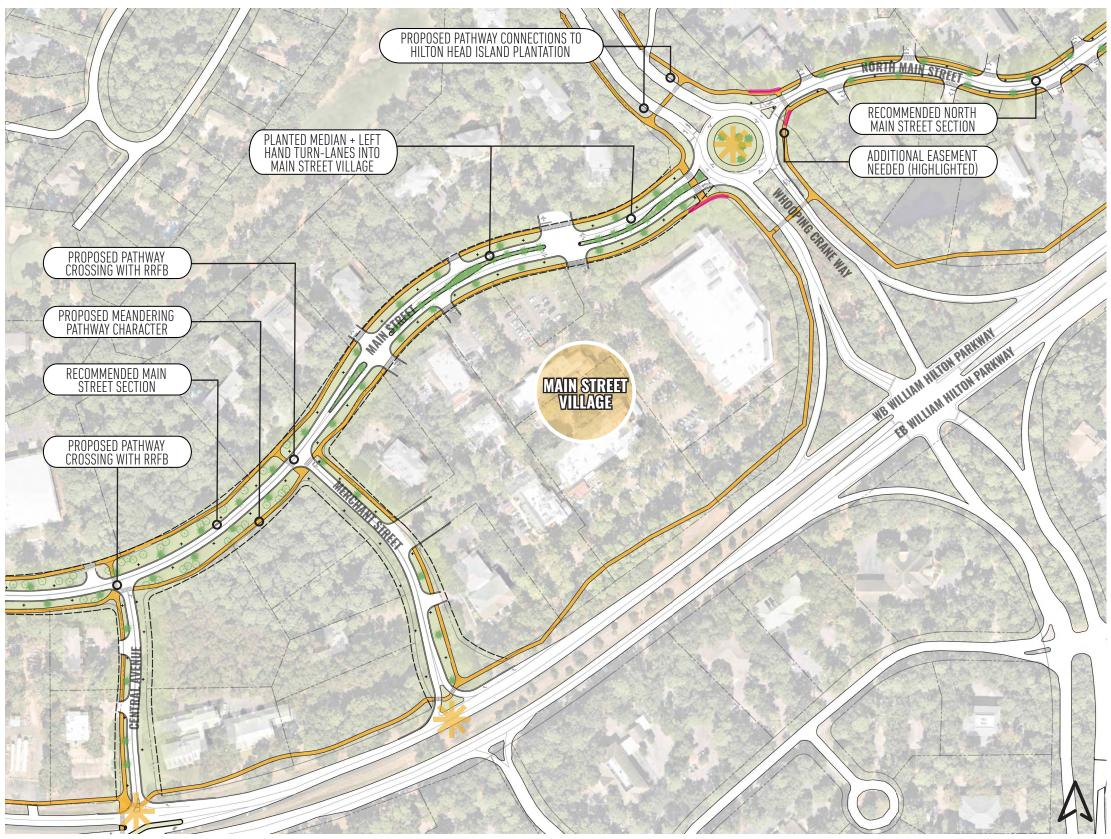








### Preliminary Fraincering CENTRAL AVENUE TO EXCHANGE STREET



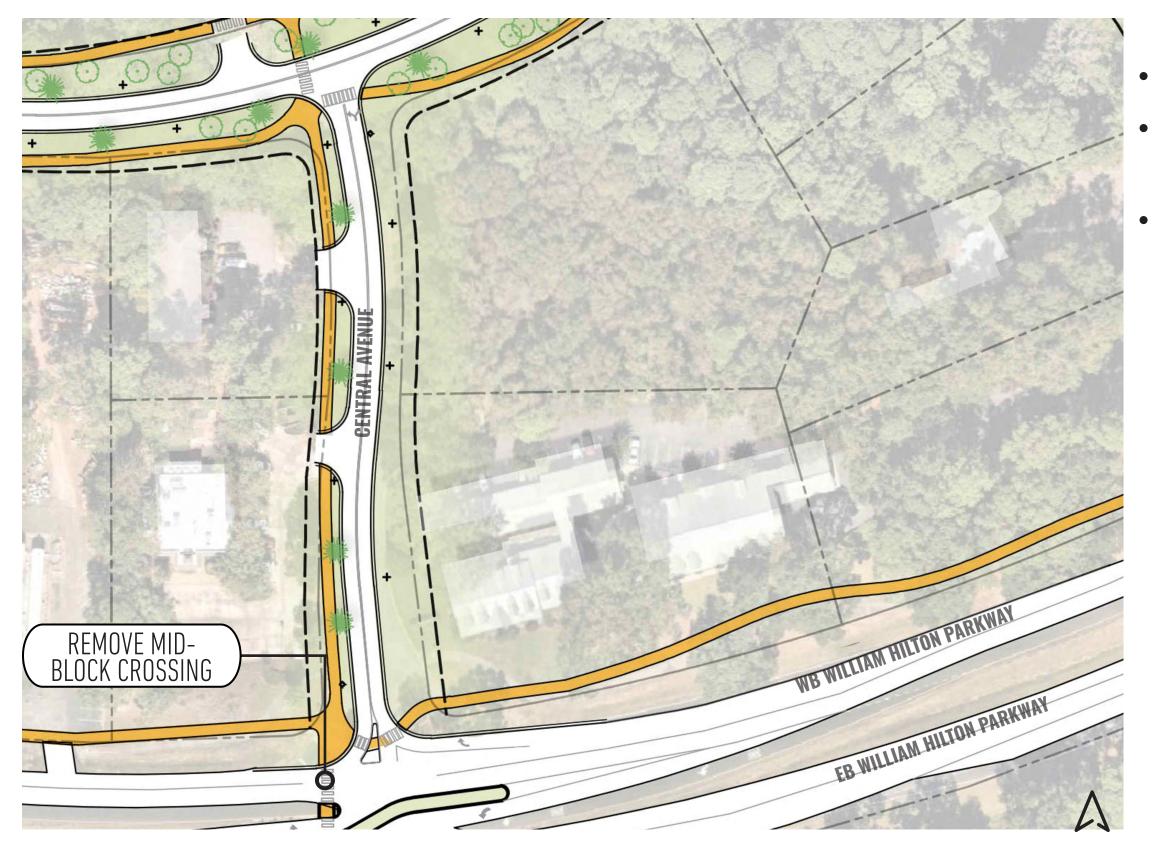
WILLIAM HILTON PARKWAY 2 & MAIN STREET | COUNCIL PRESENTATION





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## Preliminary Frazineering CENTRAL AVENUE AT WILLIAM HILTON PARKWAY

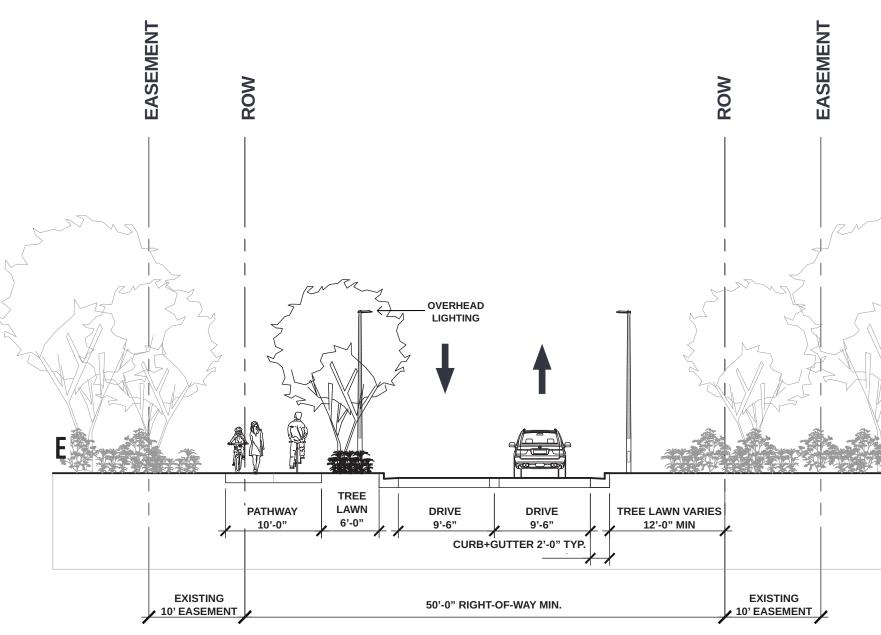




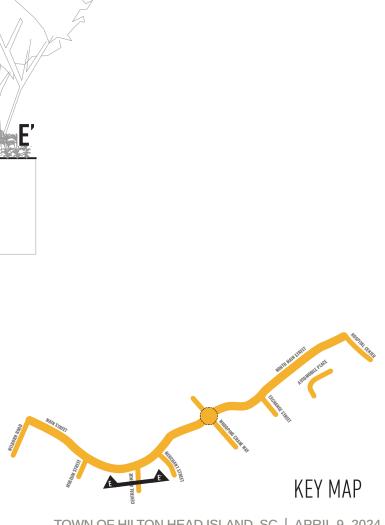
### • Remove slip-lane configuration • Provide splitter island for safer vehicular turning movements • Consider removal of mid-block crossing per MTCP





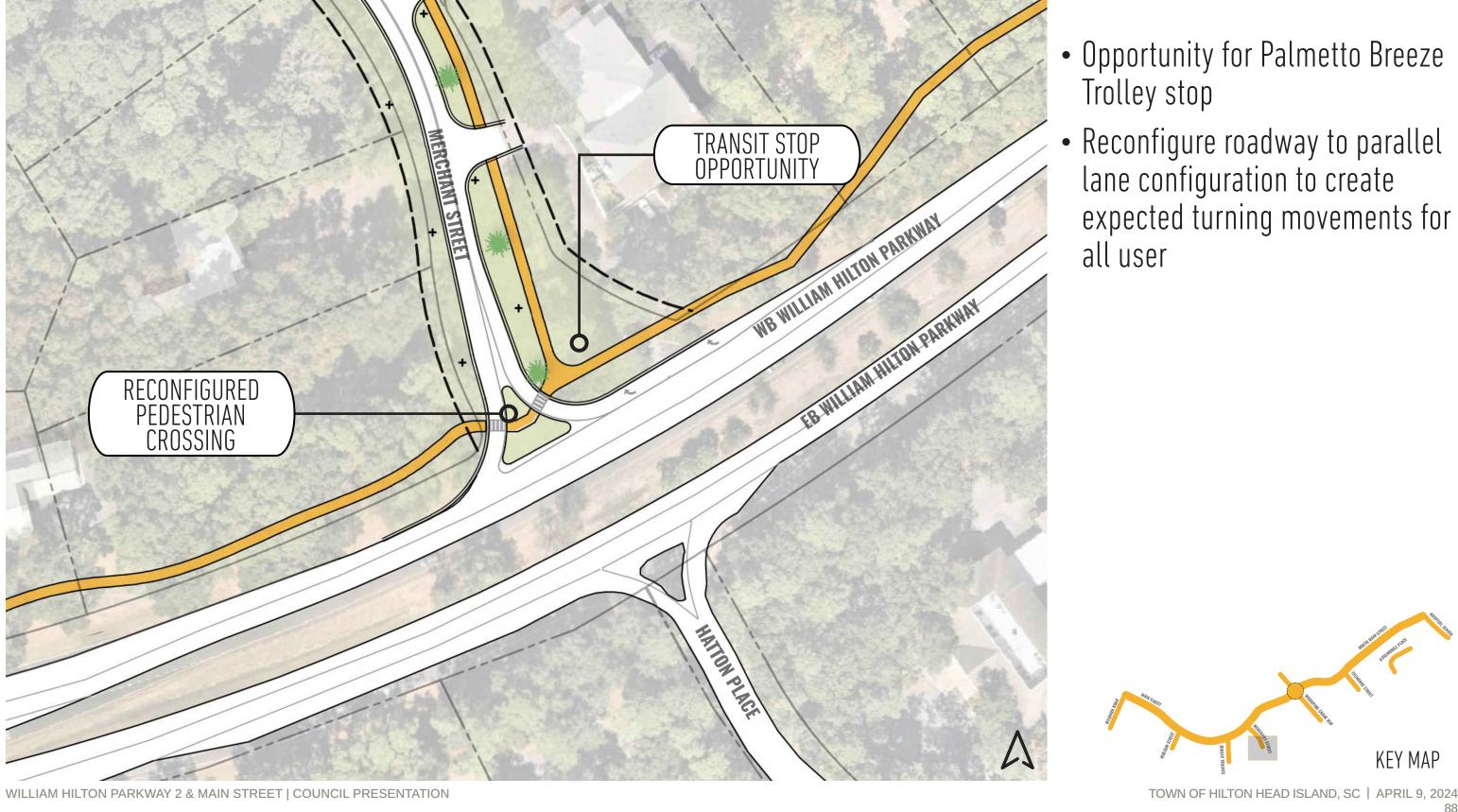


### **Central Avenue at narrowest ROW approaching Main Street** (Easement Present)



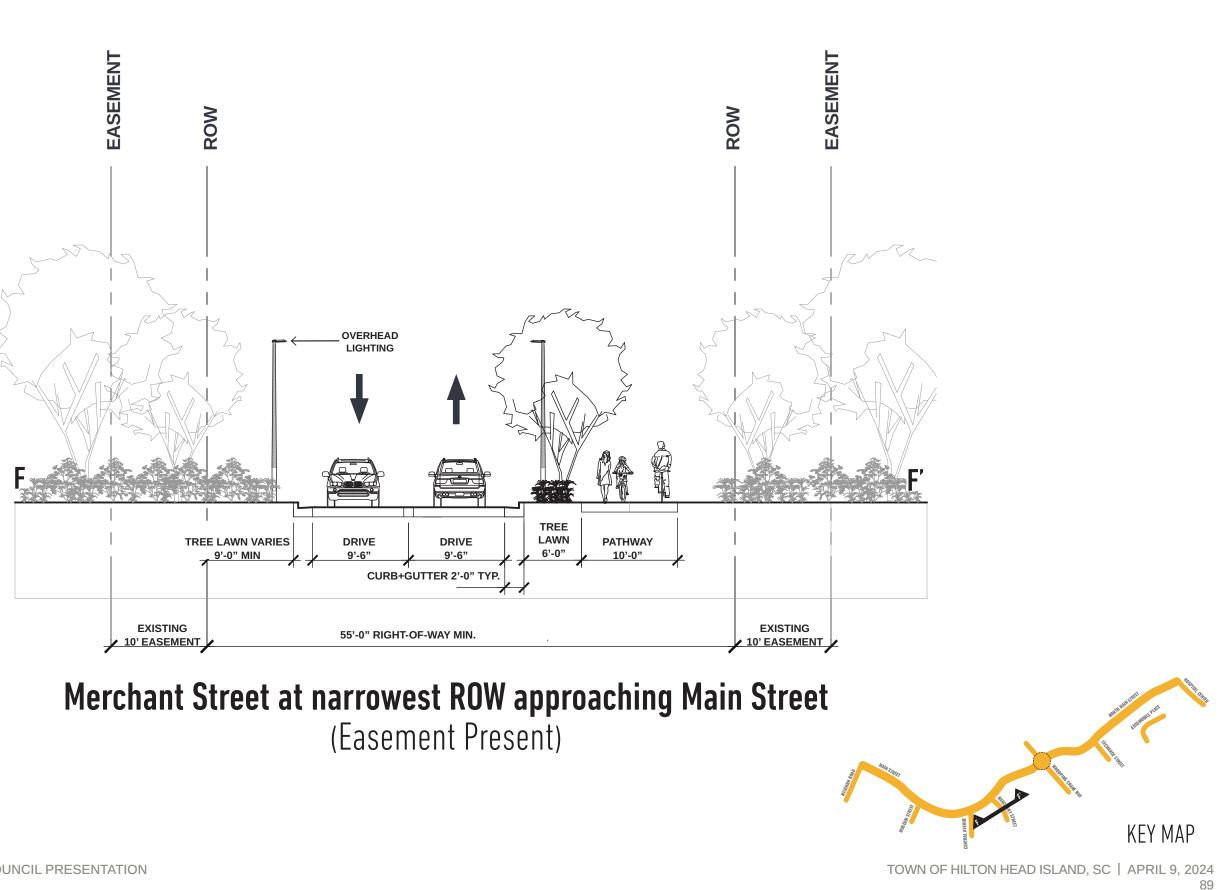
TOWN OF HILTON HEAD ISLAND, SC | APRIL 9, 2024 87

## Preliminary Fragineering MERCHANT STREET AT WILLIAM HILTON PARKWAY

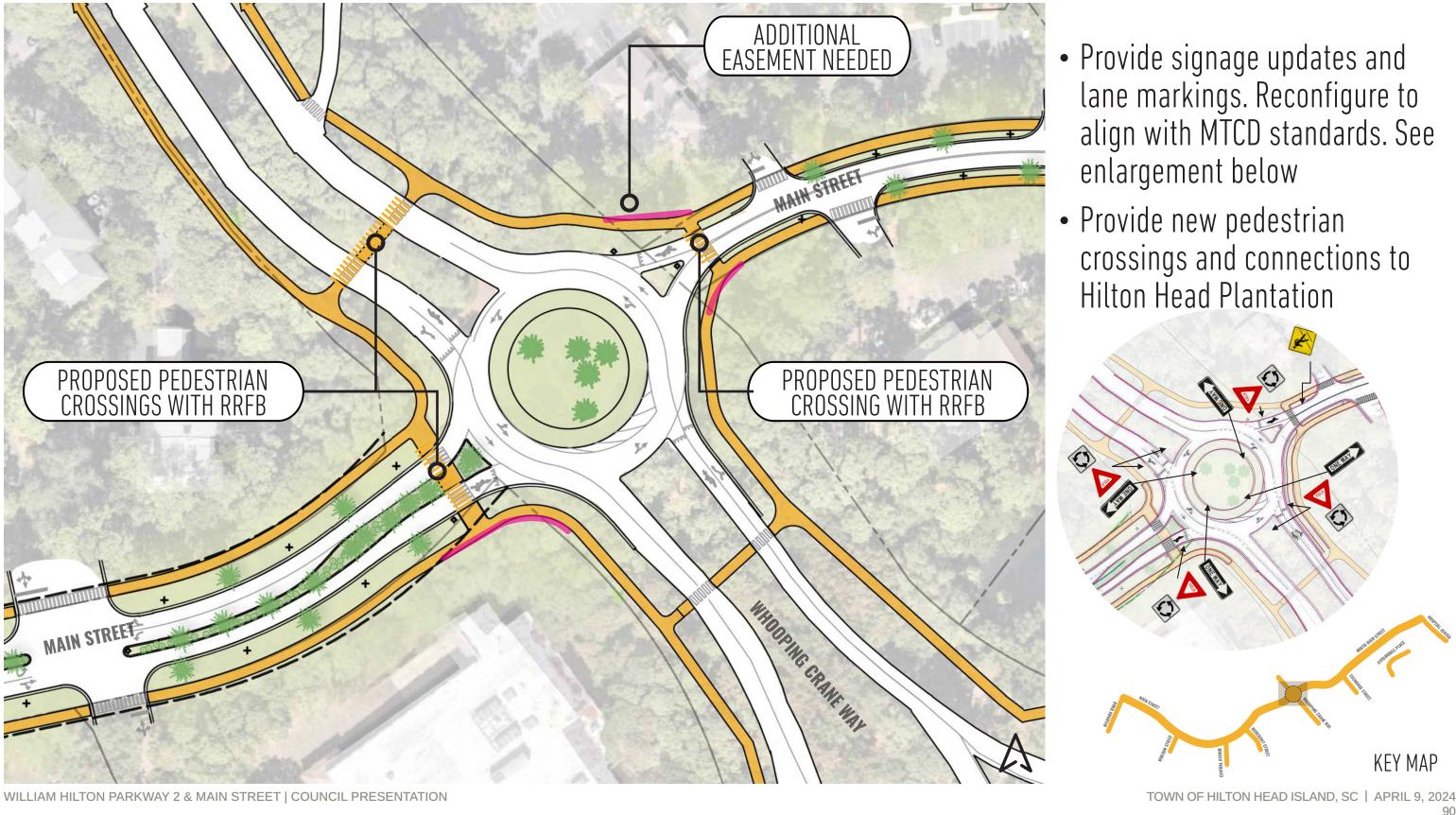




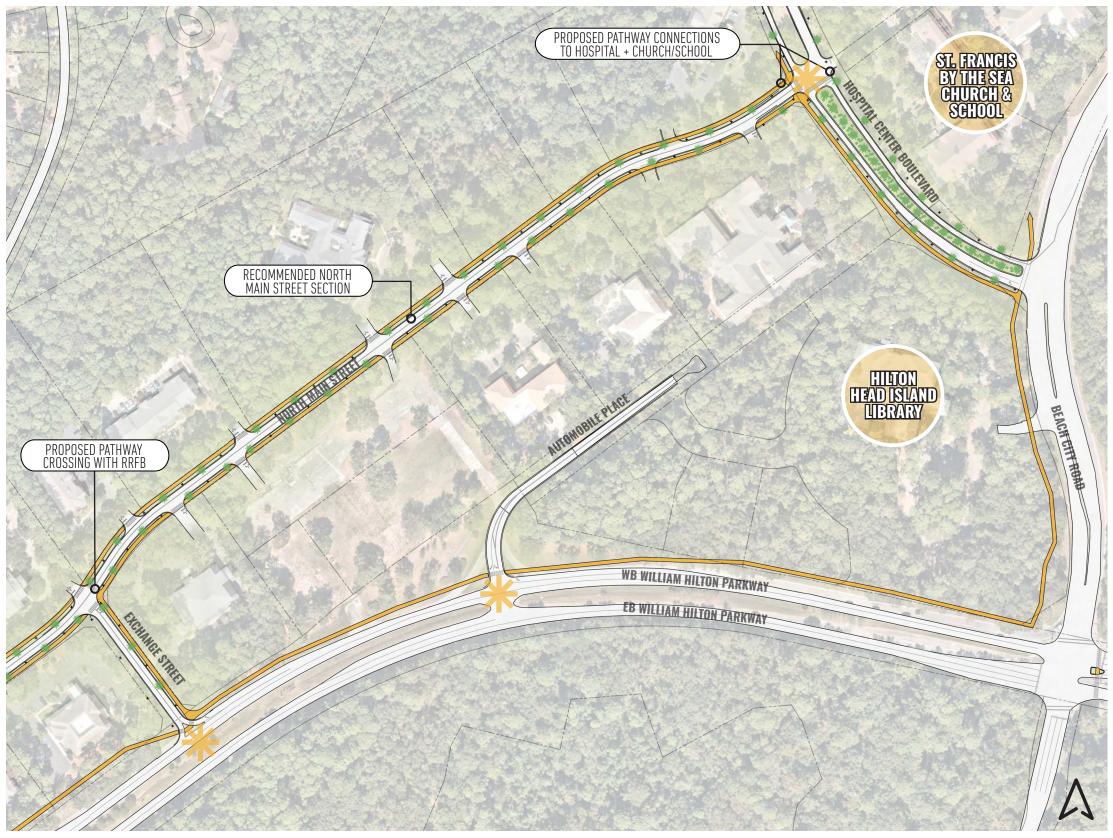








### Preliminary Figineering EXCHANGE STREET TO HOSPITAL CENTER BOULEVARD



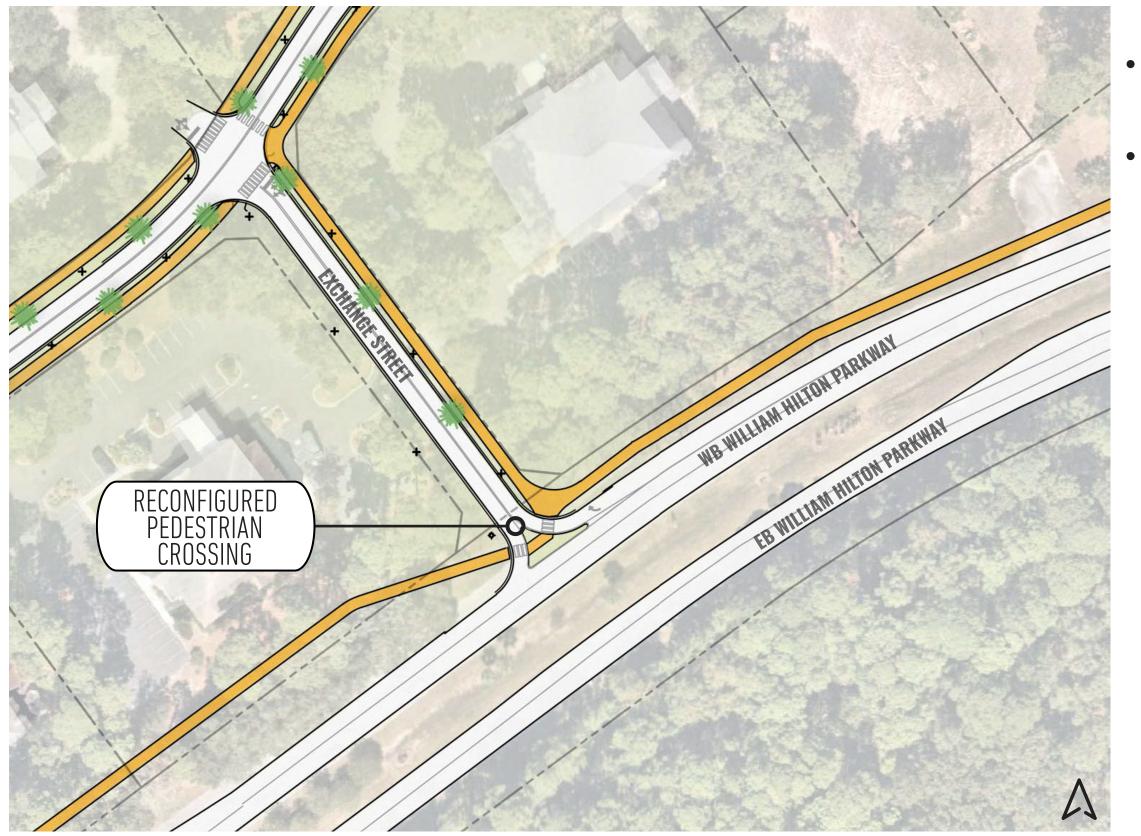
WILLIAM HILTON PARKWAY 2 & MAIN STREET | COUNCIL PRESENTATION







## Preliminary Fraineering EXCHANGE STREET AT WILLIAM HILTON PARKWAY

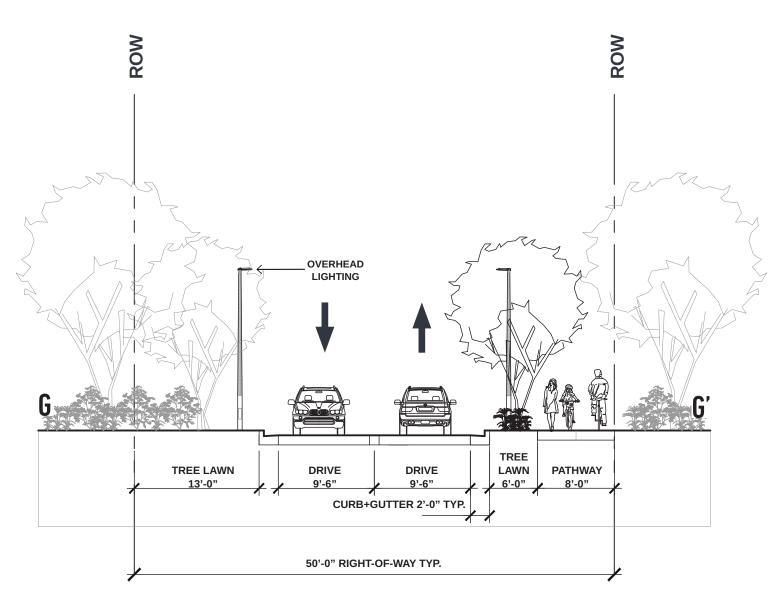




### • Provide splitter island for safer vehicular turning movements • Reconfigure pathway / crossing location



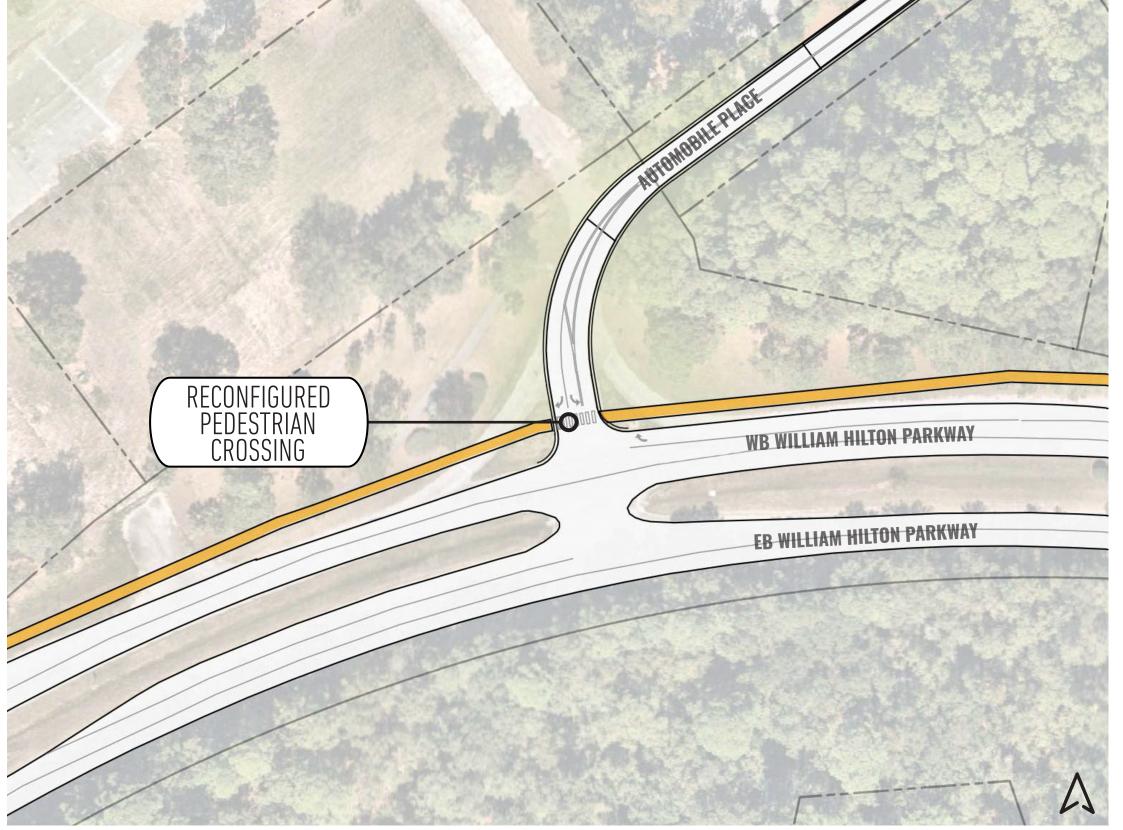




### **Exchange Street typical approaching Main Street** (No Proposed Easement)



## Preliminary Fragineering AUTOMOBILE PLACE AT WILLIAM HILTON PARKWAY

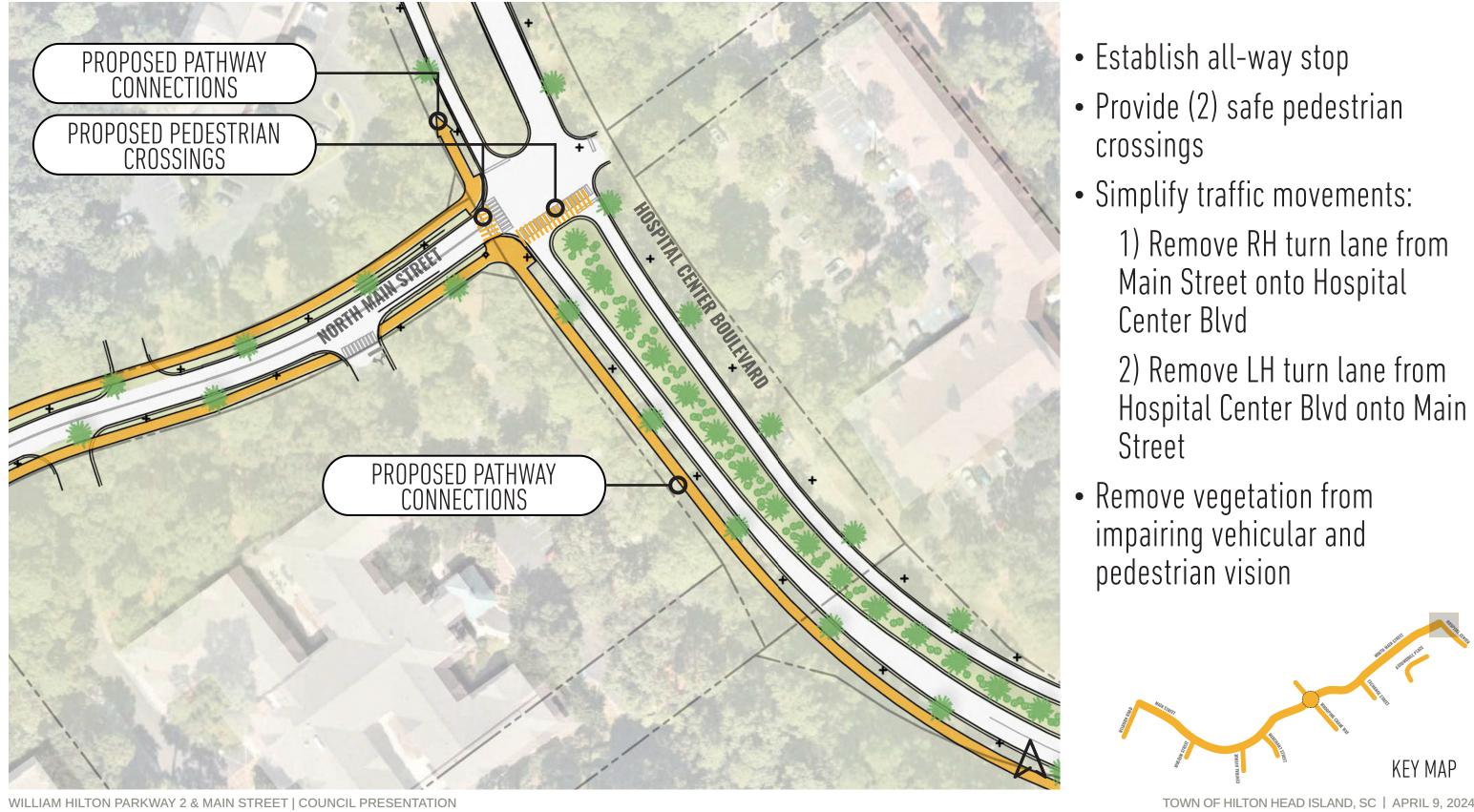




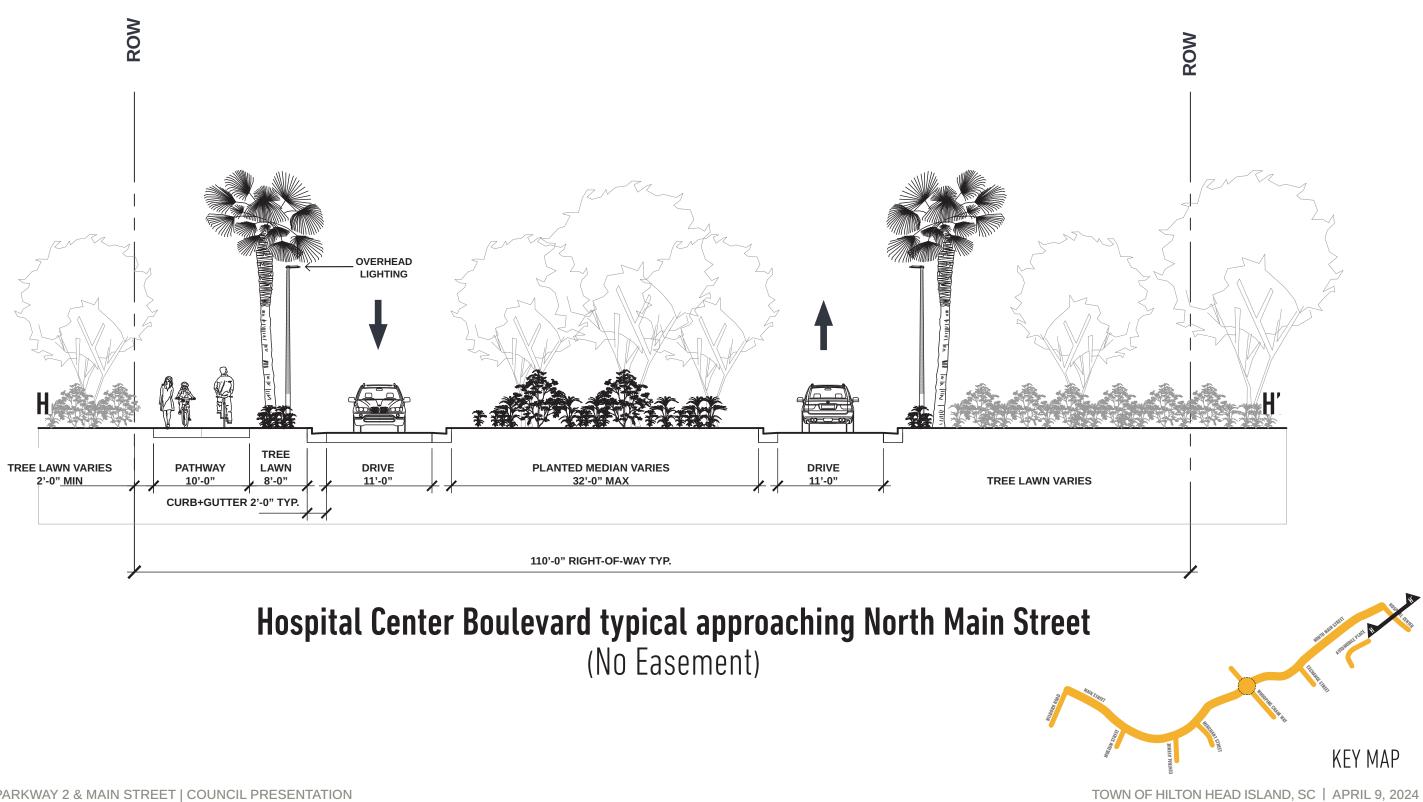
### • Remove slip-lane configuration • Reconfigure pathway / crossing location



## Preliminary Fragineering MAIN STREET AT HOSPITAL CENTER BOULEVARD







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Next Steps

- Town Council feedback and direction on interim improvements for WHP-3
- Town Council feedback and direction for WHP-3, WHP-2, and Main Street
- Town Council to review full Major Thoroughfares Corridor Plan (MTCP) over next 60 days
- Town Council Adoption of MTCP no later than August 1st, 2024
- Workshops on additional Segments TBD

