



# Walk – Bike Plan Phase V

## Perimeter Trail

### Analysis and Recommendations





# Study Overview

- The Perimeter Trail is a bicycle/pedestrian loop trail around Tampa's urban core - linking neighborhoods, parks, and schools
- Objectives of this study are:
  - Identify implementable sections of the original Perimeter Trail route north of SR 60/Adamo Drive (east side) and Columbus Drive (west side)
  - Connect with other major trails - Riverwalk and Selmon Greenway
  - Identify and evaluate potential alternative routes
  - Recommend modifications for crossings at dangerous intersections
  - Evaluate partnering opportunities with sidewalk and resurfacing projects
  - Develop preliminary cost estimates and implementation phasing plan



## Safety Issues

- Tampa-St. Petersburg metro area 2<sup>nd</sup> worst on Pedestrian Danger Index
- 1,132 bike/ped crashes in study area from 2010-2015
- 51 pedestrians killed (new record) in Hillsborough County in 2015

### Large Metro Areas, Ranked by Pedestrian Danger Index

Rank	Metropolitan area	Total Pedestrian deaths (2003-2012)	Annual Pedestrian deaths per 100,000 (2008-2012)	Percent of commuting by foot (2008-2012)	Pedestrian Danger Index (2008-2012)
1	Orlando-Kissimmee, FL	583	2.75	1.1	<b>244.28</b>
2	Tampa-St. Petersburg-Clearwater, FL	874	2.97	1.6	<b>190.13</b>
3	Jacksonville, FL	359	2.48	1.4	<b>182.71</b>
4	Miami-Ft. Lauderdale-Pompano Beach, FL	1,539	2.58	1.8	<b>145.33</b>
5	Memphis, TN-MS-AR	239	1.72	1.3	<b>131.26</b>
6	Birmingham-Hoover, AL	148	1.33	1.1	<b>125.60</b>
7	Houston-Sugar Land-Baytown, TX	1,034	1.70	1.4	<b>119.64</b>
8	Atlanta-Sandy Springs-Marietta, GA	839	1.59	1.3	<b>119.35</b>
9	Phoenix-Mesa-Scottsdale, AZ	840	1.86	1.6	<b>118.64</b>
10	Charlotte-Gastonia-Concord, NC-SC	254	1.65	1.5	<b>111.74</b>

### Crashes Involving Pedestrians or Bicyclists

Severity of Crash	Number of Crashes
Fatality	49
Injury	1013
Property Damage Only	70

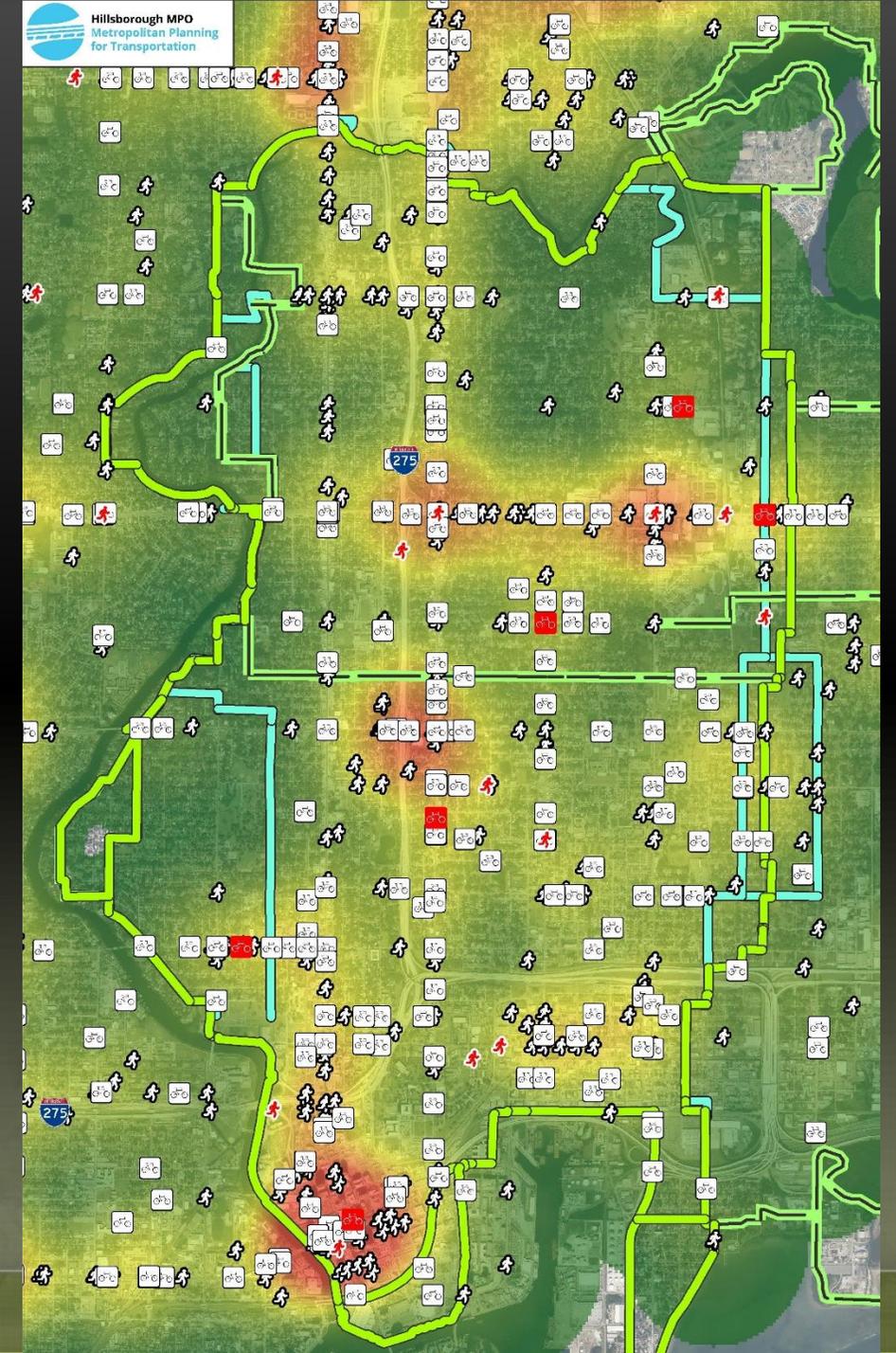


# City of Tampa

## Walk-Bike Plan Phase V

### Safety Issues

- Crash Heat Map with incident locations
- Hot Spots
  - Downtown
  - I-275 / MLK Interchange
  - East Hillsborough Avenue
  - Florida & Waters Intersection
- Proposed Perimeter Trail generally through safer areas





# Perimeter Trail Segments

- Study divided the trail into 8 segments for analysis
  - Segment A: SR 60/Adamo Drive to intersection of 21<sup>st</sup> Avenue & 29<sup>th</sup> Street
  - Segment B: Intersection of 21<sup>st</sup> Avenue & 29<sup>th</sup> Street to East Hillsborough Avenue
  - Segment C: Hillsborough Avenue to 22<sup>nd</sup> Street Park
  - Segment D: 22<sup>nd</sup> Street Park to Sulphur Springs Park
  - Segment E: Sulphur Springs Park to Sligh Avenue
  - Segment F: Sligh Avenue to West Hillsborough Avenue
  - Segment G: West Hillsborough Avenue to Dr. Martin Luther King, Jr. Boulevard
  - Segment H: Dr. Martin Luther King, Jr. Boulevard to Palm Avenue

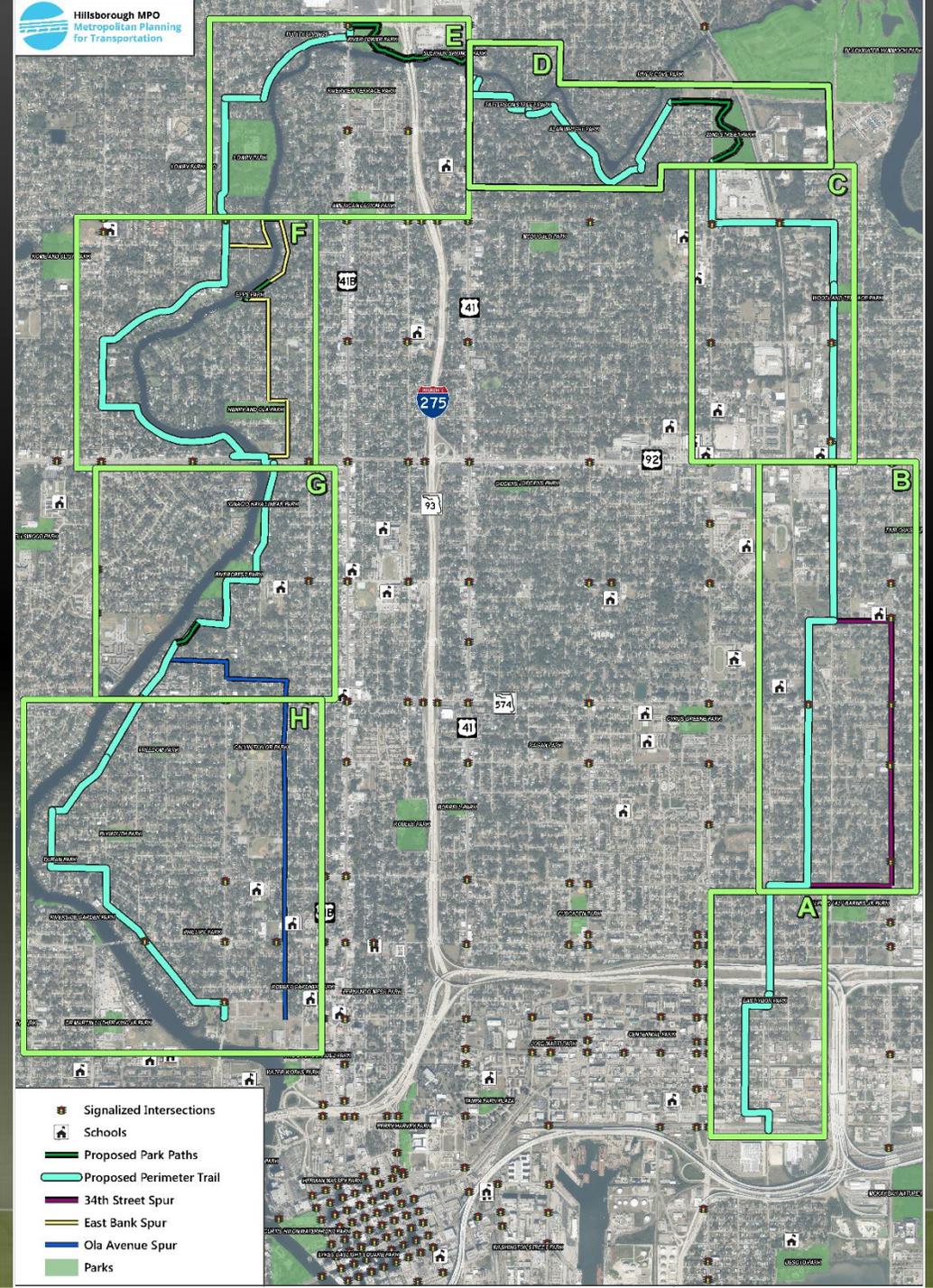




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## Walk-Bike Plan Phase V

# Perimeter Trail Segment Map





# Perimeter Trail Proposed Treatments

- Potential treatment techniques were identified
- Techniques were applied to each segment
- Treatments include:
  - Bicycle Boulevards / Neighborhood Greenways
  - 8-foot wide multi-use path were feasible
  - Dedicated bicycle lanes with sidewalks
  - Shared lane (sharrow) markings
  - Pedestrian lanes
  - Bicycle / pedestrian crosswalks and signals
  - High Intensity Activated Crosswalk (HAWK) pedestrian signals
  - Wayfinding and Branding



*Bicycle Boulevard*

Source: [Bloomington.in.gov](http://Bloomington.in.gov); Bloomington, IN



*Wayfinding Pavement Marking*

Source: [nacto.org](http://nacto.org); Vancouver, BC



# Perimeter Trail Proposed Treatments



*Shared Lane Markings – Euclid Avenue, Tampa*



*Share the Road Signage –  
Euclid Avenue, Tampa*



*Multi-Use Path – Philadelphia*



# Perimeter Trail Proposed Treatments



*HAWK Pedestrian Crossing Signal with Trail Signage*  
Source: [nickelplatetrail.org](http://nickelplatetrail.org); Fulton and Howard Counties, Indiana



*Dedicated Bike Lane with Sidewalk*



*Pedestrian Lane – Indian Rocks Beach, FL*  
Source: Google Street View, June 2015

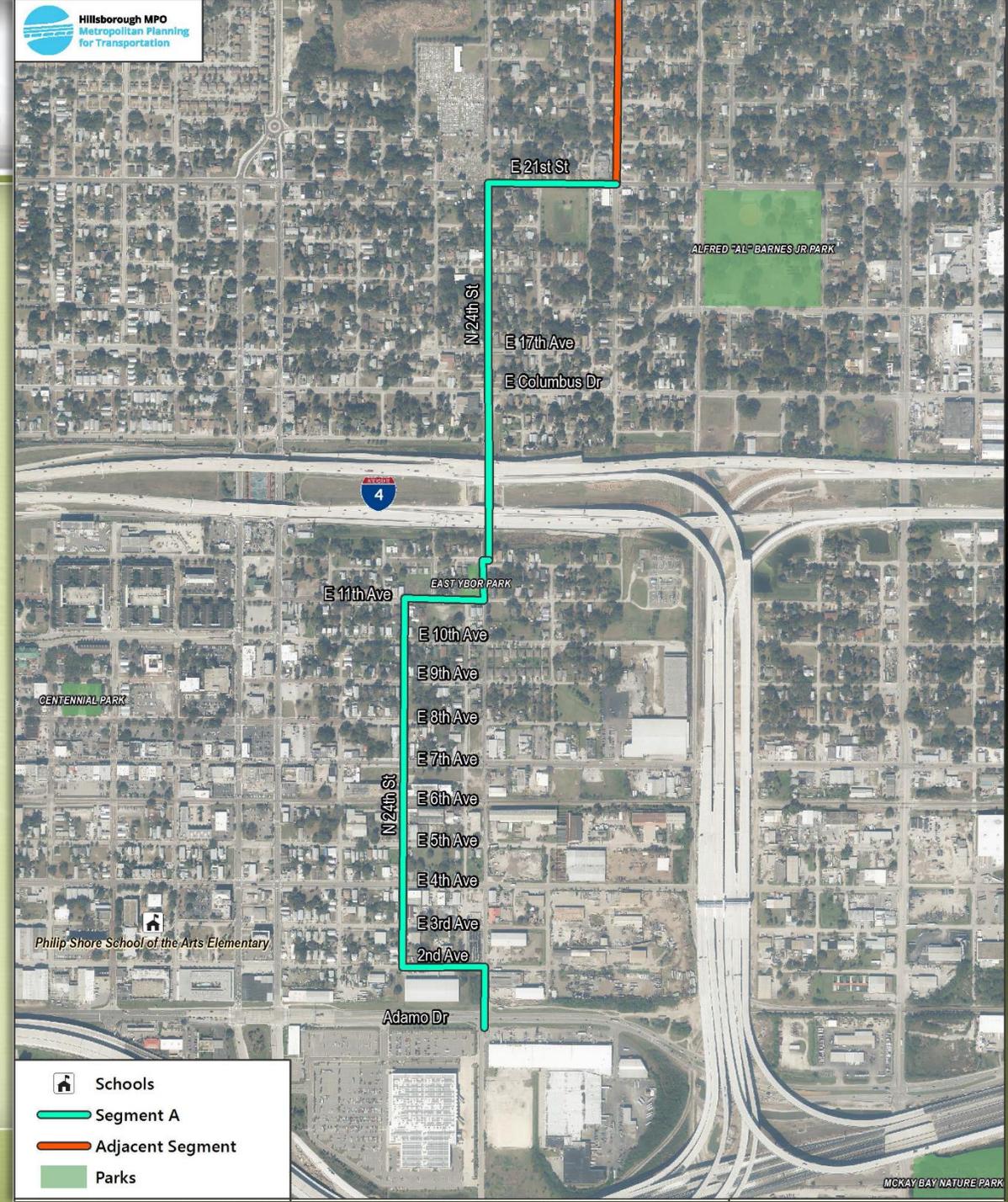


# City of Tampa

## Walk-Bike Plan Phase V

### Perimeter Trail: Segment A

- SR 60/Adamo Drive to intersection of 21<sup>st</sup> Avenue & 29<sup>th</sup> Street
- Total cost = \$454,700
- Treatments include:
  - New 8' multi-use paths
  - New 5' sidewalks
  - Pedestrian lane markings
  - Sharrow pavement markings
  - Bicycle Boulevard markings



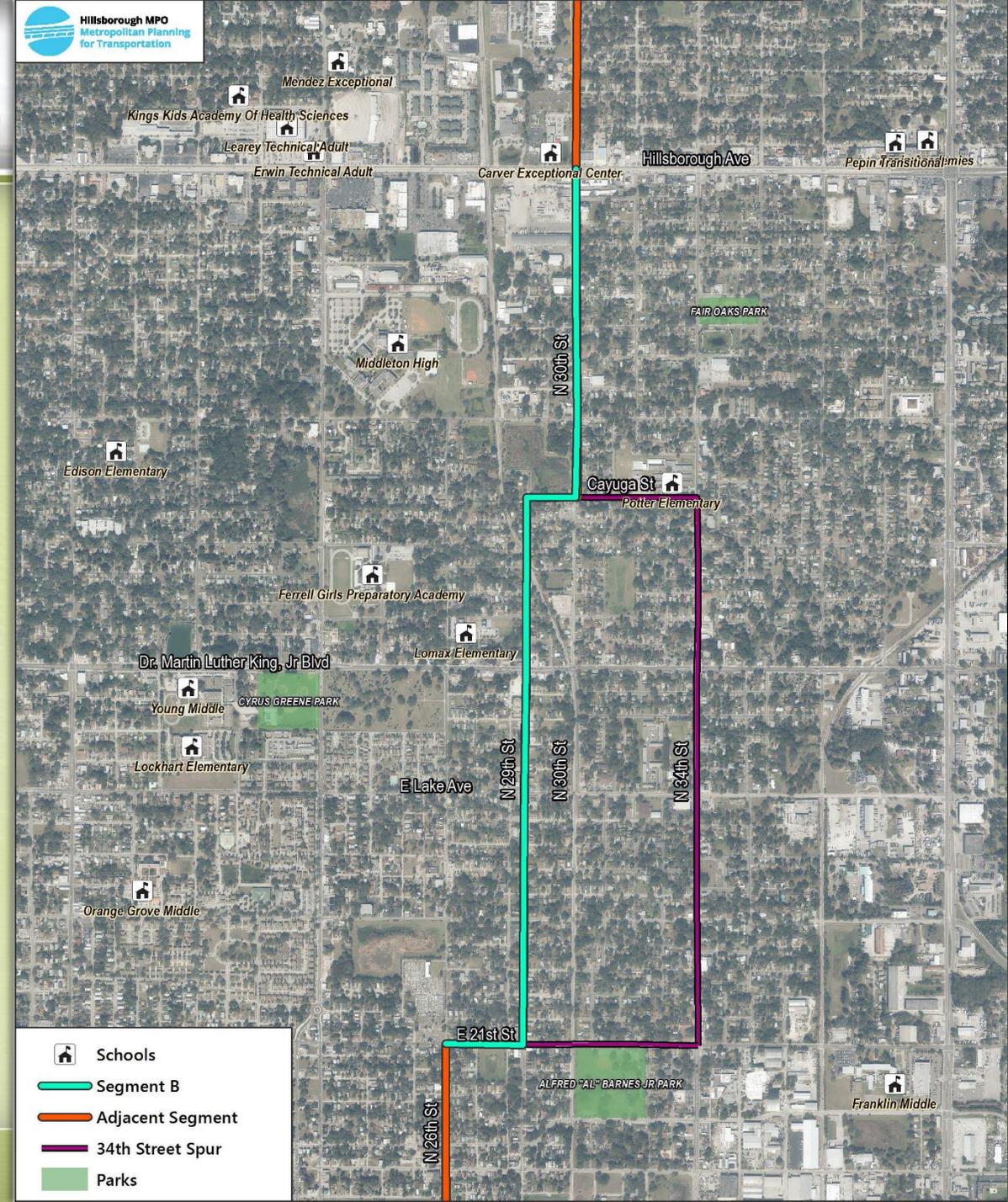


# City of Tampa

## Walk-Bike Plan Phase V

### Perimeter Trail: Segment B

- Intersection of 21<sup>st</sup> Avenue & 29<sup>th</sup> Street to East Hillsborough Avenue
- Total cost = \$925,300
- Treatments include:
  - New 8' multi-use paths
  - New 5' sidewalks
  - Pedestrian lane markings
  - Sharrows markings
  - Crosswalks & bicycle/pedestrian crossing signage



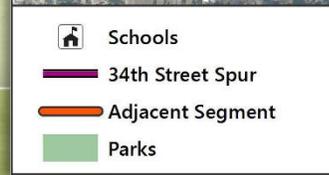
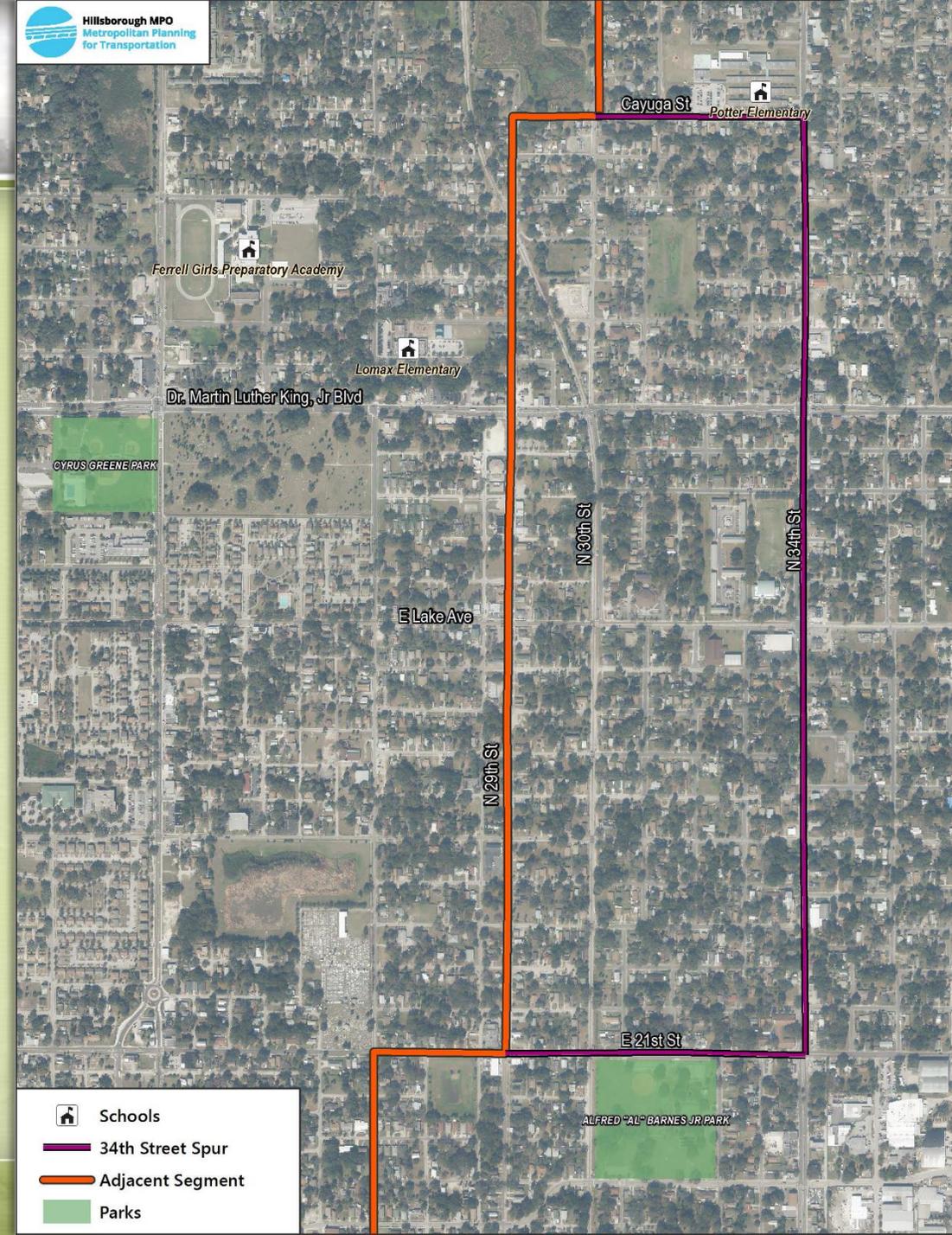


# City of Tampa

## Walk-Bike Plan Phase V

### Perimeter Trail: 34<sup>th</sup> Street Spur

- Intersection of 21<sup>st</sup> Avenue & 29<sup>th</sup> Street to Intersection of Cayuga Street & 30<sup>th</sup> Street
- Possibly include with road diet project for 34<sup>th</sup> Street
- Treatments include:
  - Bike lanes on 34<sup>th</sup> Street
  - Sharrow markings
  - Crosswalks & bicycle/pedestrian crossing signage



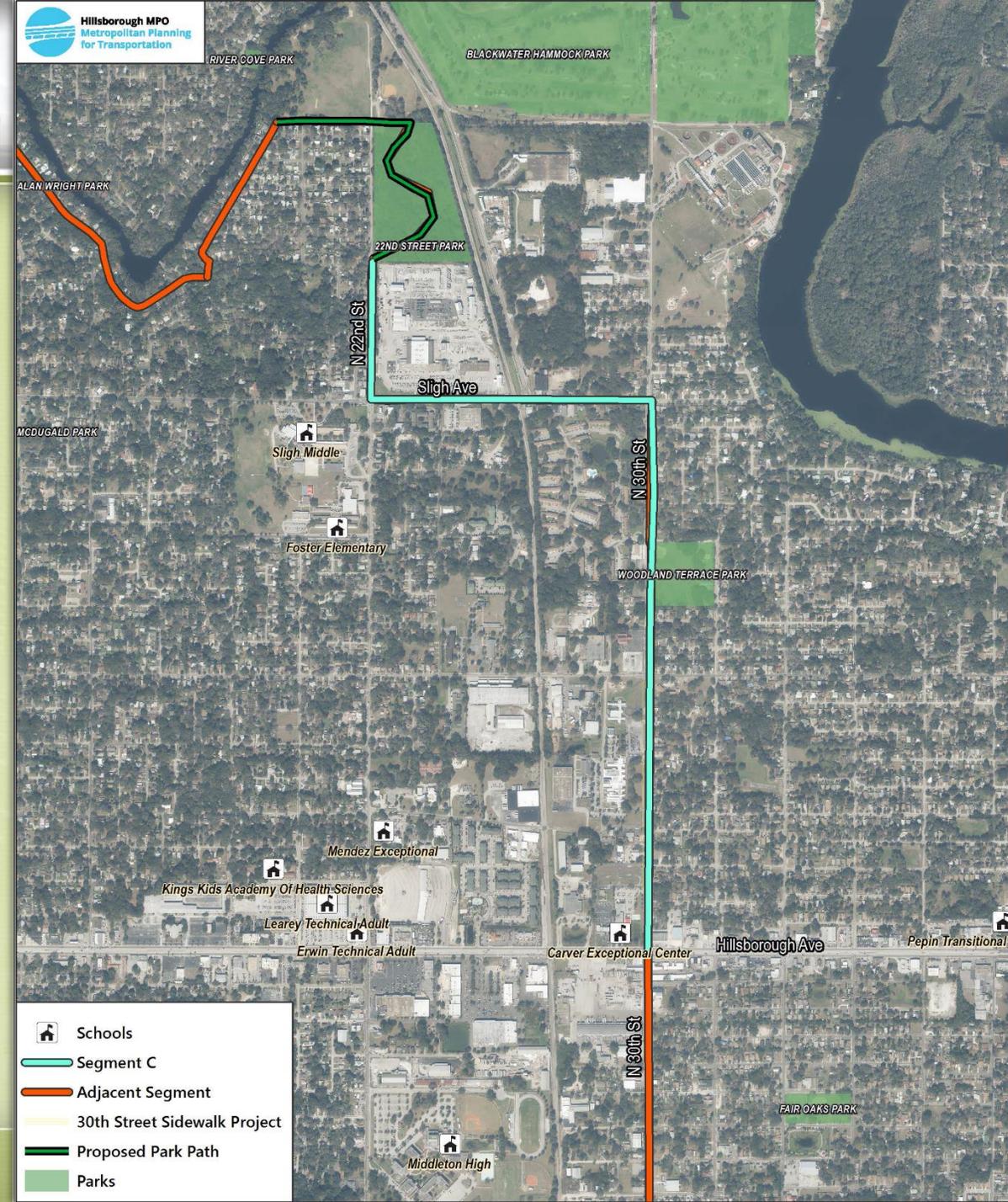


# City of Tampa

## Walk-Bike Plan Phase V

### Perimeter Trail: Segment C

- East Hillsborough Avenue to 22<sup>nd</sup> Street Park
- Total cost = \$500,200
- Treatments include:
  - New 8' multi-use paths
  - Pedestrian lane markings
  - Crosswalks with bicycle/pedestrian crossing signage



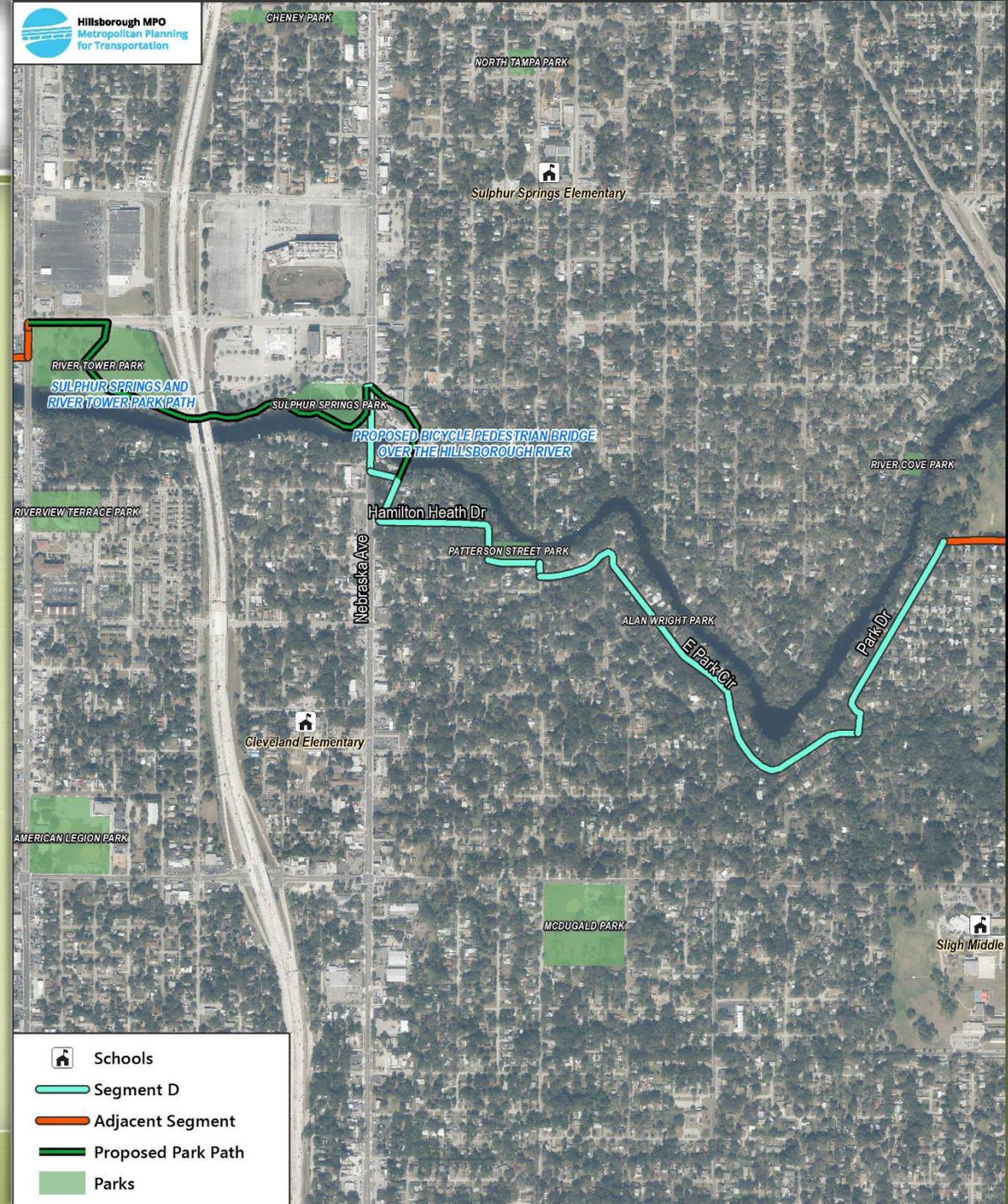


# City of Tampa

## Walk-Bike Plan Phase V

### Perimeter Trail: Segment D

- 22<sup>nd</sup> Street Park to Sulphur Springs Park
- Total cost = \$39,800
- Treatments include:
  - Bicycle Boulevard markings
  - New 5' sidewalks
  - Sharrow markings





# City of Tampa

## Walk-Bike Plan Phase V

### Perimeter Trail: Segment E

- Sulphur Springs Park to Sligh Avenue
- Total cost = \$225,200
- Treatments include:
  - Bicycle Boulevard markings
  - New 8' multi-use paths
  - New 5' sidewalks
  - Sharrow markings



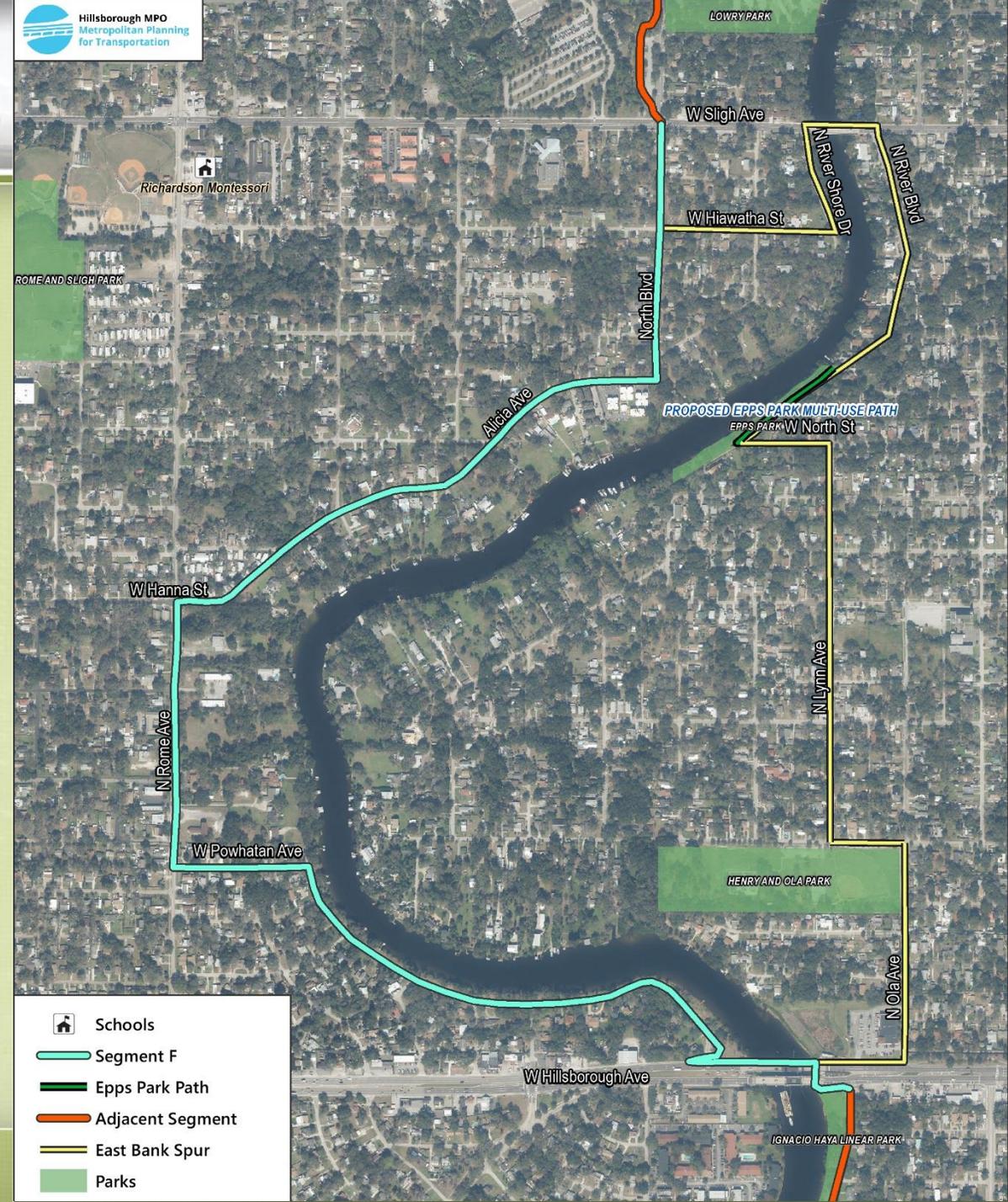


# City of Tampa

## Walk-Bike Plan Phase V

### Perimeter Trail: Segment F

- Sligh Avenue to West Hillsborough Avenue
- Total cost of \$665,600
- Treatments include:
  - New 8' multi-use paths
  - New 5' sidewalks
  - Bicycle Boulevard markings
  - Sidewalk ramps at River Shore Drive & West Hillsborough Avenue
  - Crosswalks & bicycle/pedestrian crossing signage



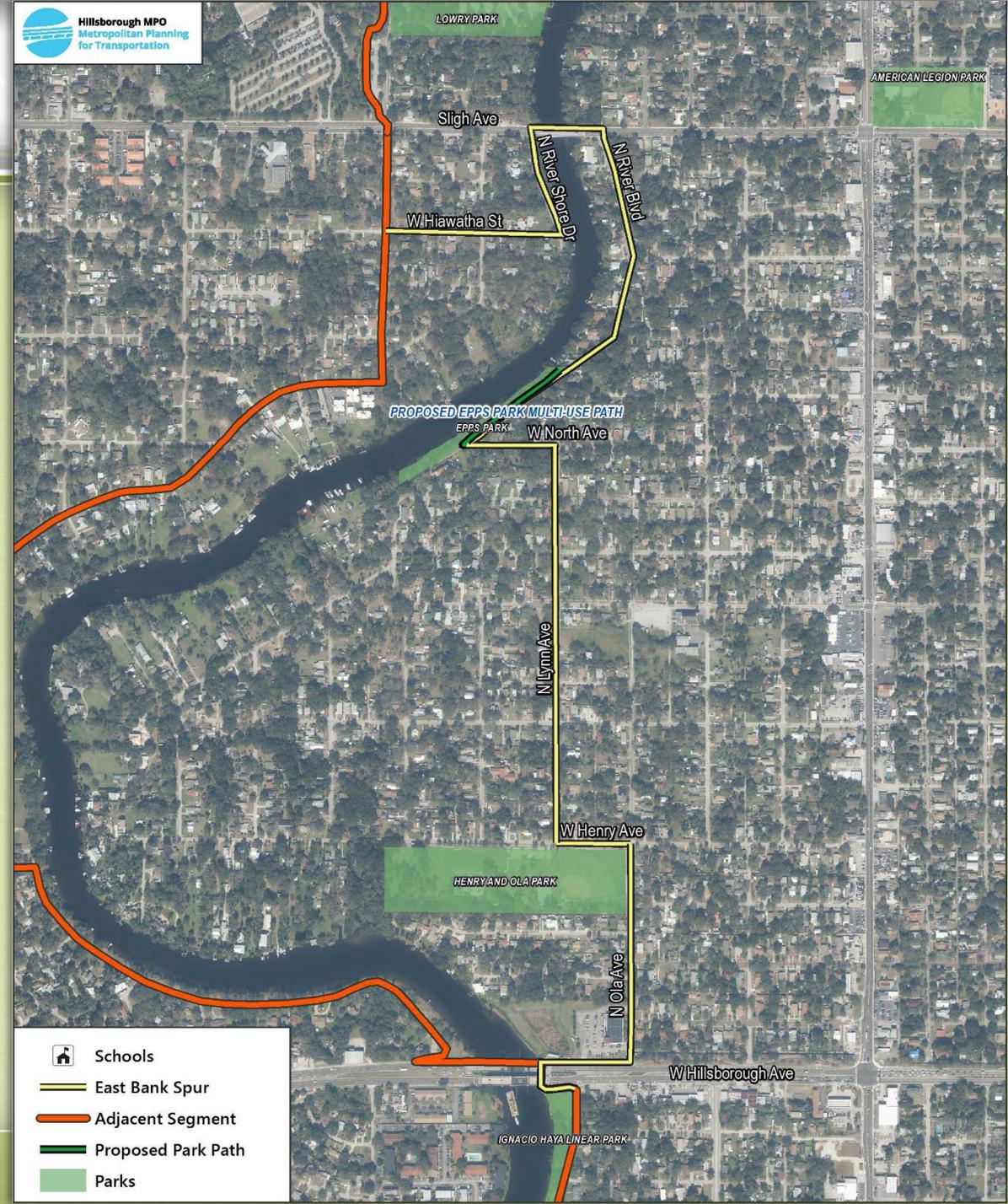


# City of Tampa

## Walk-Bike Plan Phase V

### Perimeter Trail: East Bank Spur

- Intersection of North Boulevard & Hiawatha Street to West Hillsborough Avenue
- Treatments Include:
  - New 8' multi-use paths
  - Bicycle Boulevard markings



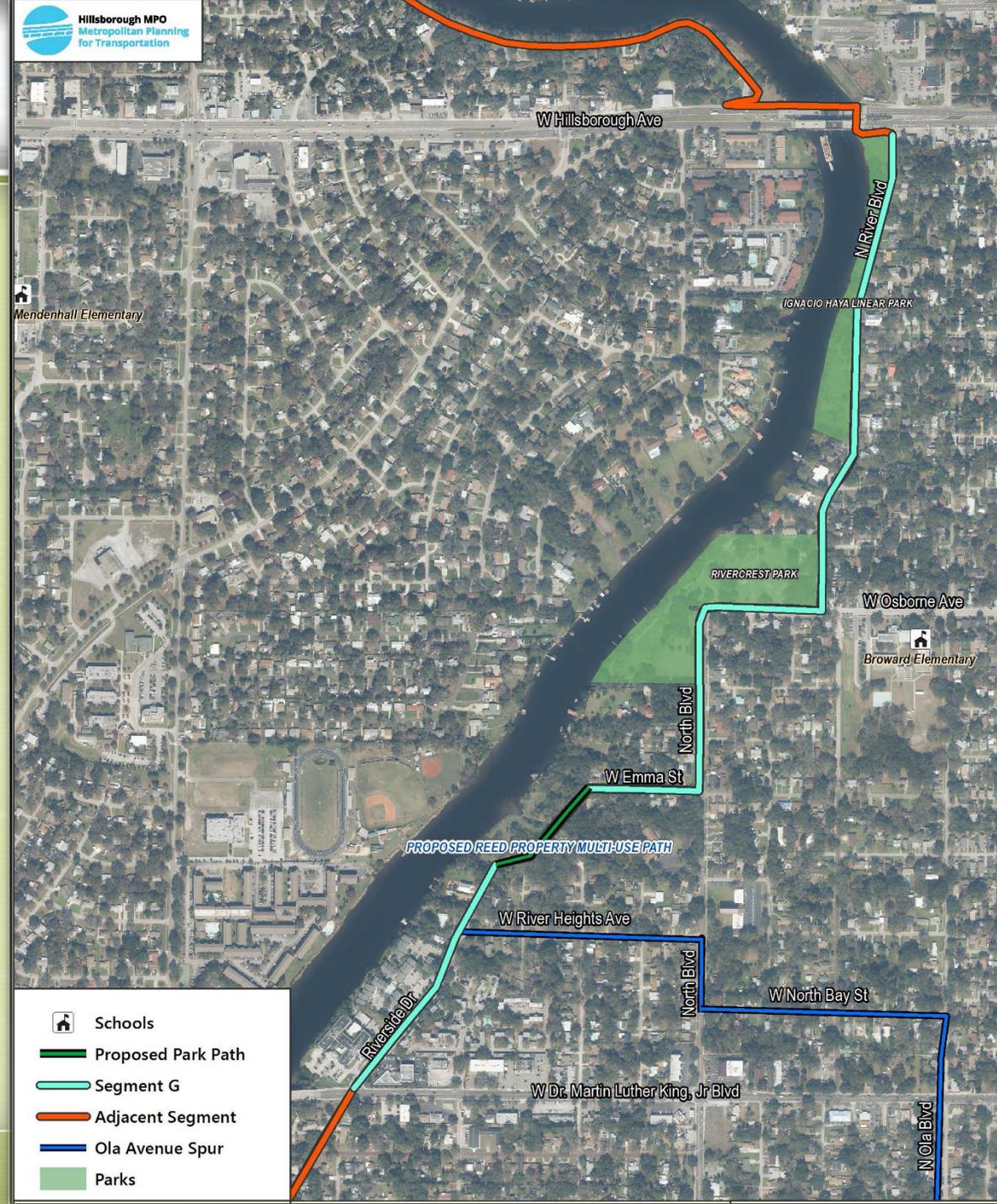


# City of Tampa

## Walk-Bike Plan Phase V

### Perimeter Trail: Segment G

- West Hillsborough Avenue to Dr. Martin Luther King, Jr. Boulevard
- Total cost of \$171,500
- Treatments include a mix of:
  - Bicycle Boulevard markings
  - New 5' sidewalks
  - Sidewalk ramp at River Boulevard & West Hillsborough Avenue
  - Crosswalks & bicycle/pedestrian crossing signage



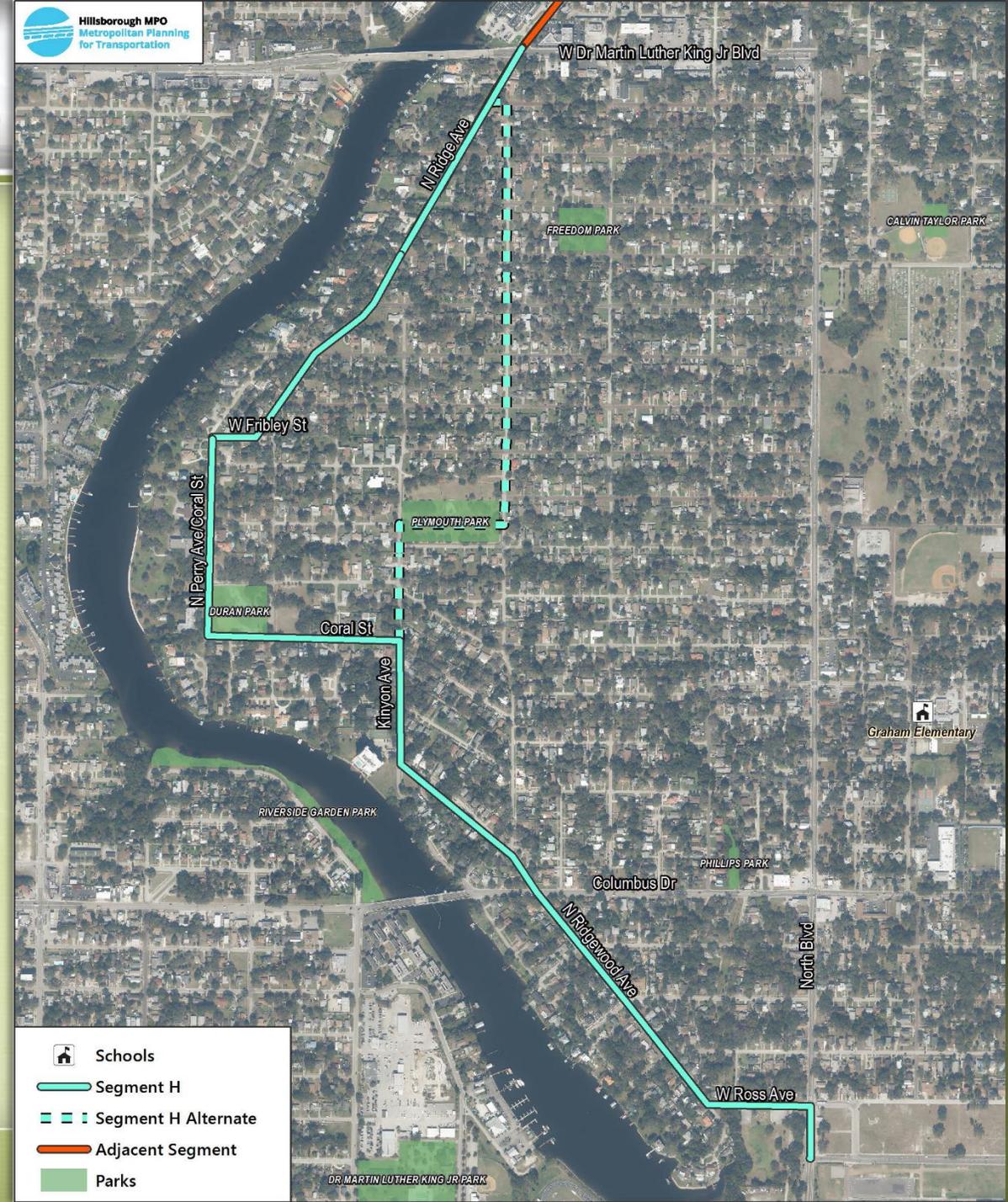


# City of Tampa

## Walk-Bike Plan Phase V

### Perimeter Trail: Segment H

- Dr. Martin Luther King, Jr. Boulevard to Palm Avenue
- Total cost of \$709,000
- Treatments include:
  - HAWK signal at intersection of Dr. Martin Luther King, Jr. Boulevard & Ridge Avenue/Riverside Drive
  - Bicycle Boulevard markings
  - New 8' multi-use paths
  - New 5' sidewalks
  - Crosswalks & bicycle/pedestrian crossing signage



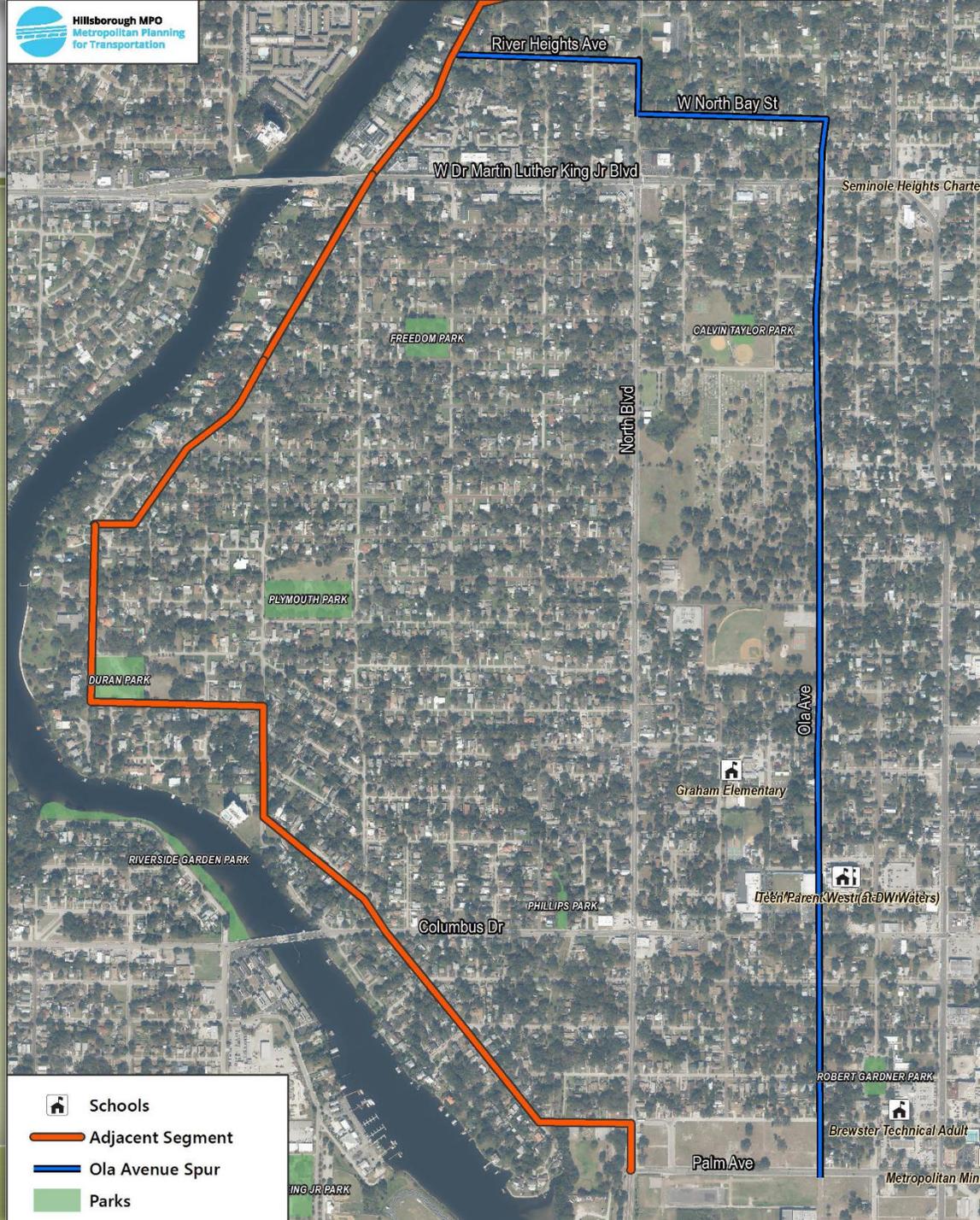


# City of Tampa

## Walk-Bike Plan Phase V

### Perimeter Trail: Ola Avenue Spur

- Intersection of Riverside Drive & River Heights Avenue to Intersection of Ola & Palm Avenues
- Treatments include:
  - New 5' sidewalks
  - Sharrow markings
  - Bicycle Boulevard markings
  - Crosswalks & bicycle/pedestrian crossing signage
  - HAWK signals at MLK, Columbus, and Palm intersections





# Perimeter Trail: Cost Estimates

- FDOT LRE Cost Calculated by Segment
  - Construction
  - Signing/Marking
  - Signalization
  - Utility Pole Relocation
  - Contingency & Other
  - Design & CEI
- Additional Set-Aside
  - Wayfinding - \$300,000
  - Lighting - \$600,000
  - Drainage - \$400,000
- Total Estimated Cost = \$4.99 Million

Cost Element	Perimeter Trail Segments								All Segments
	A	B	C	D	E	F	G	H	
Construction	\$164,700	\$276,100	\$196,800	\$8,500	\$91,700	\$213,100	\$59,300	\$57,900	\$1,068,100
Signing, Marking, & Signalization	\$22,300	\$10,900	\$8,400	\$11,800	\$13,200	\$21,500	\$18,200	\$248,800	\$355,100
Utility Pole Relocation	\$45,000	\$185,000	\$50,000	\$0	\$10,000	\$105,000	\$10,000	\$55,000	\$460,000
<b>Subtotal</b>	<b>\$232,000</b>	<b>\$472,000</b>	<b>\$255,200</b>	<b>\$20,300</b>	<b>\$114,900</b>	<b>\$339,600</b>	<b>\$87,500</b>	<b>\$361,700</b>	<b>\$1,883,200</b>
Contingency & Other	\$104,800	\$213,400	\$115,300	\$9,200	\$51,900	\$153,500	\$39,500	\$163,500	\$851,100
Design	\$50,500	\$102,800	\$55,600	\$4,400	\$25,000	\$73,900	\$19,100	\$78,800	\$410,100
CEI	\$67,400	\$137,100	\$74,100	\$5,900	\$33,400	\$98,600	\$25,400	\$105,000	\$546,900
<b>Total</b>	<b>\$454,700</b>	<b>\$925,300</b>	<b>\$500,200</b>	<b>\$39,800</b>	<b>\$225,200</b>	<b>\$665,600</b>	<b>\$171,500</b>	<b>\$709,000</b>	<b>\$3,691,300</b>
Wayfinding									\$300,000
Lighting									\$600,000
Drainage									\$400,000
<b>Grand Total</b>									<b>\$4,991,300</b>



## Future Trail Elements

- New bicycle/pedestrian bridge over Hillsborough River east of Nebraska Avenue
- New bicycle/pedestrian underpass adjacent to Hillsborough River at MLK Boulevard





# Perimeter Trail: Implementation

- Proposed Phasing of Implementation

1. Segment D: 22<sup>nd</sup> Street Park to Sulphur Springs Park
2. Segment E: Sulphur Springs Park to Sligh Avenue
3. Segment G: West Hillsborough Avenue to Dr. Martin Luther King, Jr. Boulevard
4. Segment F: Sligh Avenue to West Hillsborough Avenue
5. Segment C: Hillsborough Avenue to 22<sup>nd</sup> Street Park
6. Segment B: Intersection of 21<sup>st</sup> Avenue & 29<sup>th</sup> Street to East Hillsborough Avenue
7. Segment H: Dr. Martin Luther King, Jr. Boulevard to Palm Avenue
8. Segment A: SR 60/Adamo Drive to intersection of 21<sup>st</sup> Avenue & 29<sup>th</sup> Street



# Walk – Bike Plan Phase V

Discussion

