

Greater RVA Transit Vision Plan: Phase 2

Evaluating High-Frequency Corridors for Near-Term Implementation

Community Transportation Advisory
Committee

March 19, 2020

Project Purpose

- Build upon the Greater RVA Transit Vision Plan Phase 1 (2017) and recent transit improvements in the Richmond Region
- Identify recommendations for high-frequency routes that can be implemented in the near-term to advance toward the long-term vision

Analysis Methodology

Screening → Detailed Analysis → Recommendation Development

- Activity Density
- Employment & Workers
- Environmental Justice & Transit-Dependency
- Existing Network Layout
- Near-Term Development
- Steering Committee Feedback

Phase 1
Corridor
Review

Initial Phase 2
Segment
Analysis

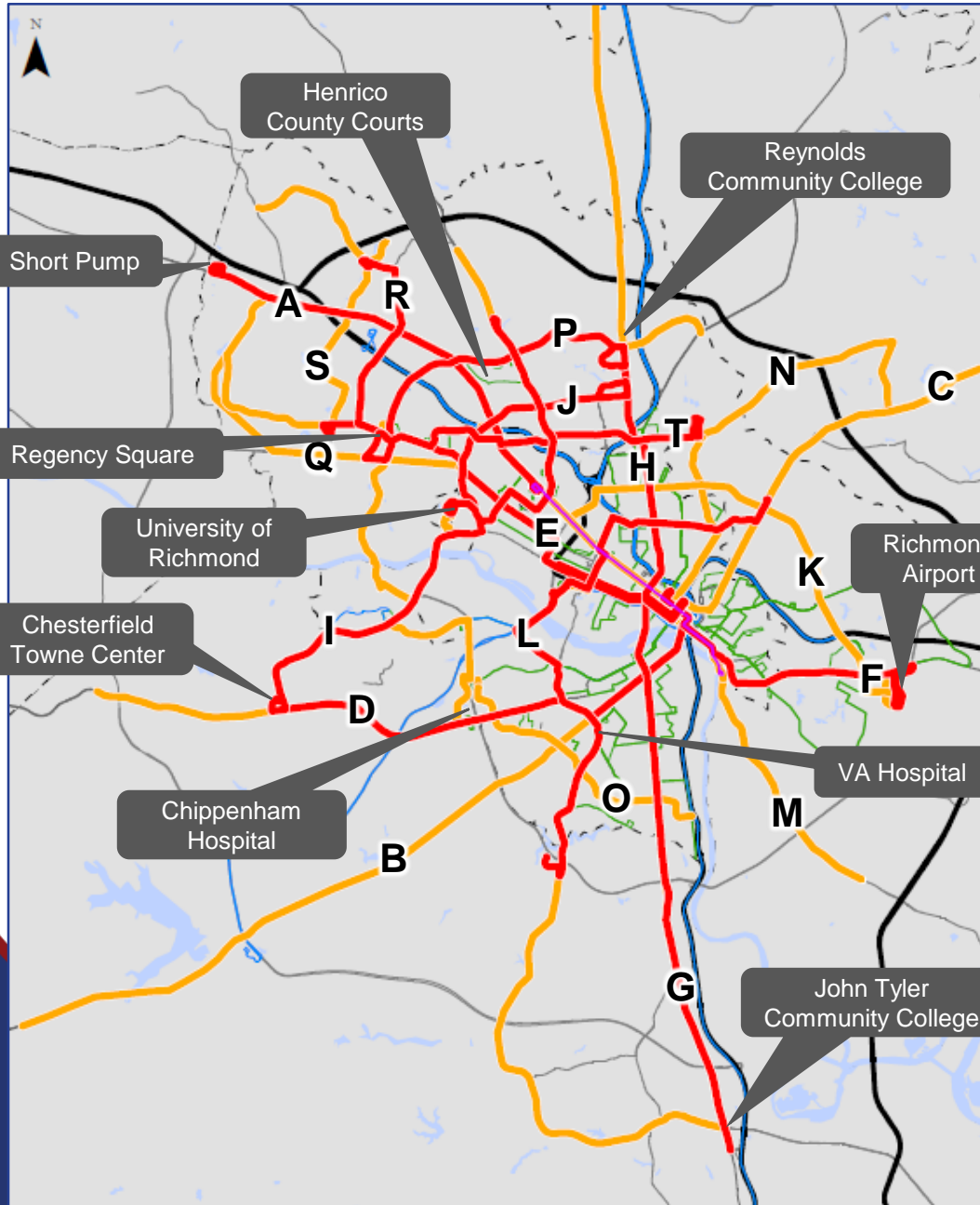
- Potential Ridership
- Community Resources
- Pedestrian Facilities
- Roadway Characteristics

- O&M Cost Estimates
- Capital Cost Estimates
- Return on Investment
- Funding Resources






Refined Phase 2
Segment
Analysis

WE ARE HERE

Screening Analysis Corridors



Legend

-  Selected Screening Analysis Corridors
-  Phase 1 (2017) Corridors
- Existing GRTC Service**
 -  Regular
 -  Express
 -  Pulse BRT

Selected Analysis Corridors

Full Phase 1 Corridors:

- A. Broad Street – Short Pump**
- F. Airport via Route 60**
- G. Jeff Davis South to Chester**
- T. West End Route 7 – Regency to Azalea**

Partial Phase 1 Corridors:

- D. Midlothian Turnpike**
(Downtown Richmond to Huguenot Road)
- E. West End South**
(Downtown Richmond to Regency Square)
- H. Route 1 to Ashland**
(Downtown Richmond to Parham Road)
- I. West End Route 6 – Staples Mill/Route 33**
(Midlothian Turnpike to Hungary Road)
- J. Glenside to Midlothian**
(University of Richmond to Brook Road)
- L. Iron Bridge Road – City to Jeff Davis**
(Laburnum Avenue to Chippenham Parkway)
- P. West End and Midlothian**
(Regency Square to Brook Road)
- R. West End Route 4 – Pemberton Nuckols**
(Regency Square to Cox Road)

Detailed Analysis

- Further evaluation of corridors identified in the screening phase
- Detailed analysis evaluated:
 - Access to community facilities
 - Walkability
 - Pedestrian network and connectivity
 - Roadway suitability
 - Ridership potential

Potential Ridership Summary

Corridor	Ridership		Boardings per Mile		Boardings	
	Low	High	Low	High	per Trip	per Hour
E - West End South	2,400	4,100	151	258	32	28
D - Midlothian Turnpike	2,300	3,900	161	266	30	30
G - Jeff Davis South to Chester	2,000	3,400	120	204	26	22
H - Route 1 to Ashland	1,900	3,100	176	287	25	32
L - Iron Bridge Road Jeff Davis	1,700	2,800	94	155	22	20
F - Airport Via Route 60	1,500	2,500	143	238	20	26
I - West End Route 6 - Staples Mill	1,300	2,200	73	119	17	16
A - Broad Street to Short Pump	1,000	1,700	87	148	13	19
T - West End Route 7 - Regency to Azalea	900	1,400	77	120	12	17
P - West End and Midlothian	700	1,200	63	108	9	14
J - Glenside to Midlothian	600	1,100	69	126	8	15
R - West End Route 4 - Pemberton Nuckols	500	900	61	110	7	13

* Blue corridors include Downtown Richmond

*Note: Corridor ridership potential is **inclusive of existing ridership**. Therefore, net new ridership in a corridor with existing service would be less than shown in ridership range*

Corridor Comparison

	Ridership (daily riders)	Boardings per Mile	Boardings per Trip	Boardings per Hour	Community Facilities (# w/in 0.5 mi)	Connected Ped Areas (% ped facility coverage)	Walkability (average score)
A							
D							
E							
F							
G							
H							
I							
J							
L							
P							
R							
T							
	Low: <1,200 Med: 1,200-2,400 High: >2,400	Low: <100 Med: 100-200 High: >200	Low: <15 Med: 15-25 High: >25	Low: <16 Med: 16-25 High: >25	Low: <45 Med: 45-65 High: >65	Low: <40% Med: 40%-60% High: >60%	Low: 7.8-8.3 Med: 8.3-8.8 High: 8.8-9.6

Recommended Near-Term High-Frequency Corridors

Recommended for Near-Term

A. Broad Street – Short Pump

(Willow Lawn to Bon Secours Short Pump)

D. Midlothian Turnpike

(Downtown Richmond to Huguenot Road)

E. West End South

(Downtown Richmond to Regency Square)

F. Airport via Route 60

(Downtown Richmond to Richmond Airport)

H. Route 1 to Ashland

(Downtown Richmond to Parham Road)

Not Recommended for Near-Term

G. Jeff Davis South to Chester

(Downtown Richmond to John Tyler Community College)

I. West End Route 6 – Staples Mill/Route 33

(Midlothian Turnpike to Hungary Road)

J. Glenside to Midlothian

(University of Richmond to Brook Road)

L. Iron Bridge Road – City to Jeff Davis

(Laburnum Avenue to Chippenham Parkway)

P. West End and Midlothian

(Regency Square to Brook Road)

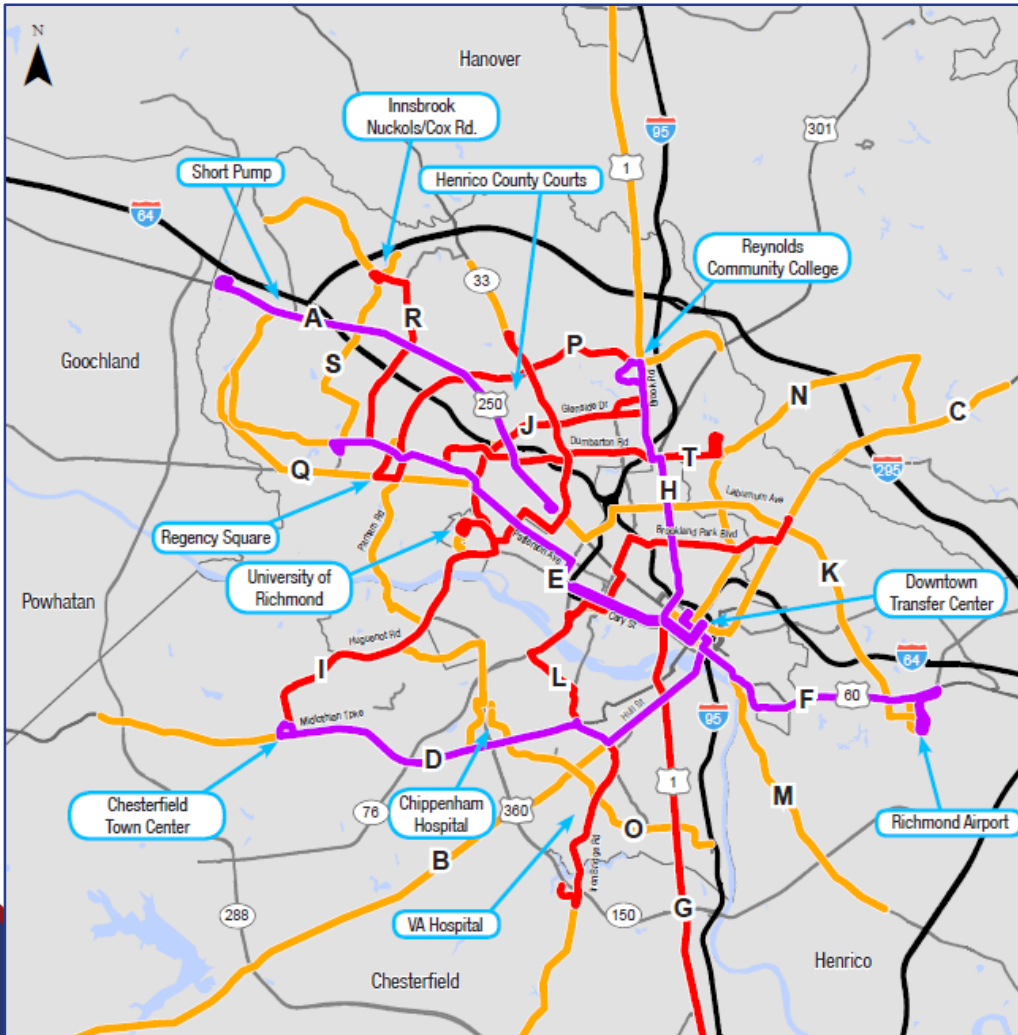
R. West End Route 4 – Pemberton/Nuckols

(Regency Square to Cox Road)




T. West End Route 7 – Regency to Azalea

(Regency Square to Richmond Henrico Turnpike)

Recommended Near-Term High-Frequency Corridors



Legend

-  Recommended Near-Term High-Frequency Corridors
-  Selected Screening Analysis Corridors
-  Phase 1 (2017) Corridors

Next Steps

- **Summarize screening and detailed analysis results in Tech Memo**
- **Evaluate costs for recommended routes**
 - Operating and maintenance cost estimates
 - Capital cost estimates
 - Potential funding sources
- **Prioritize corridors for near-term implementation**
- **Review prioritized results at Steering Committee Meeting #3**

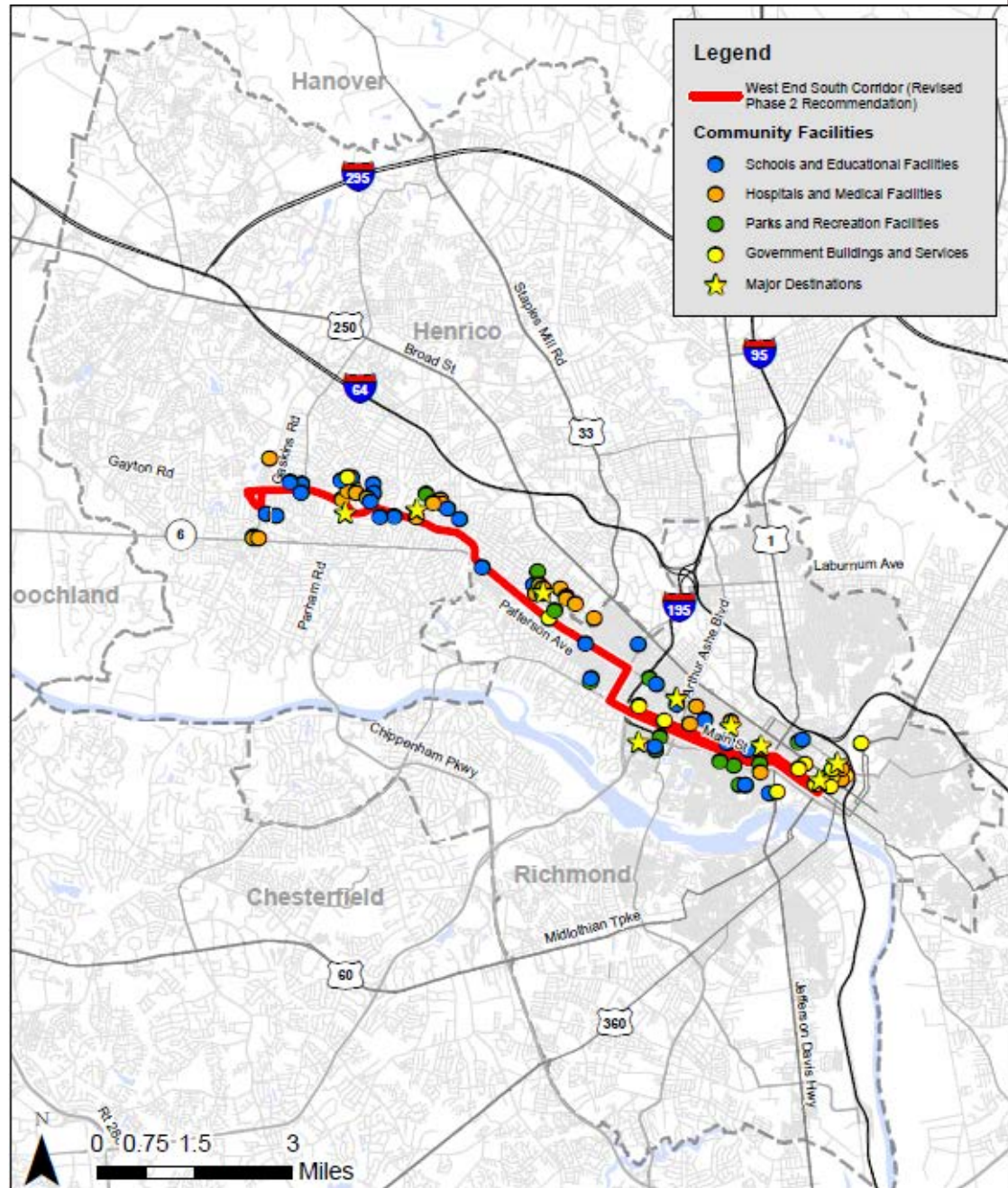
Additional details

- See following slides for more detail on screening analysis

Community Facilities

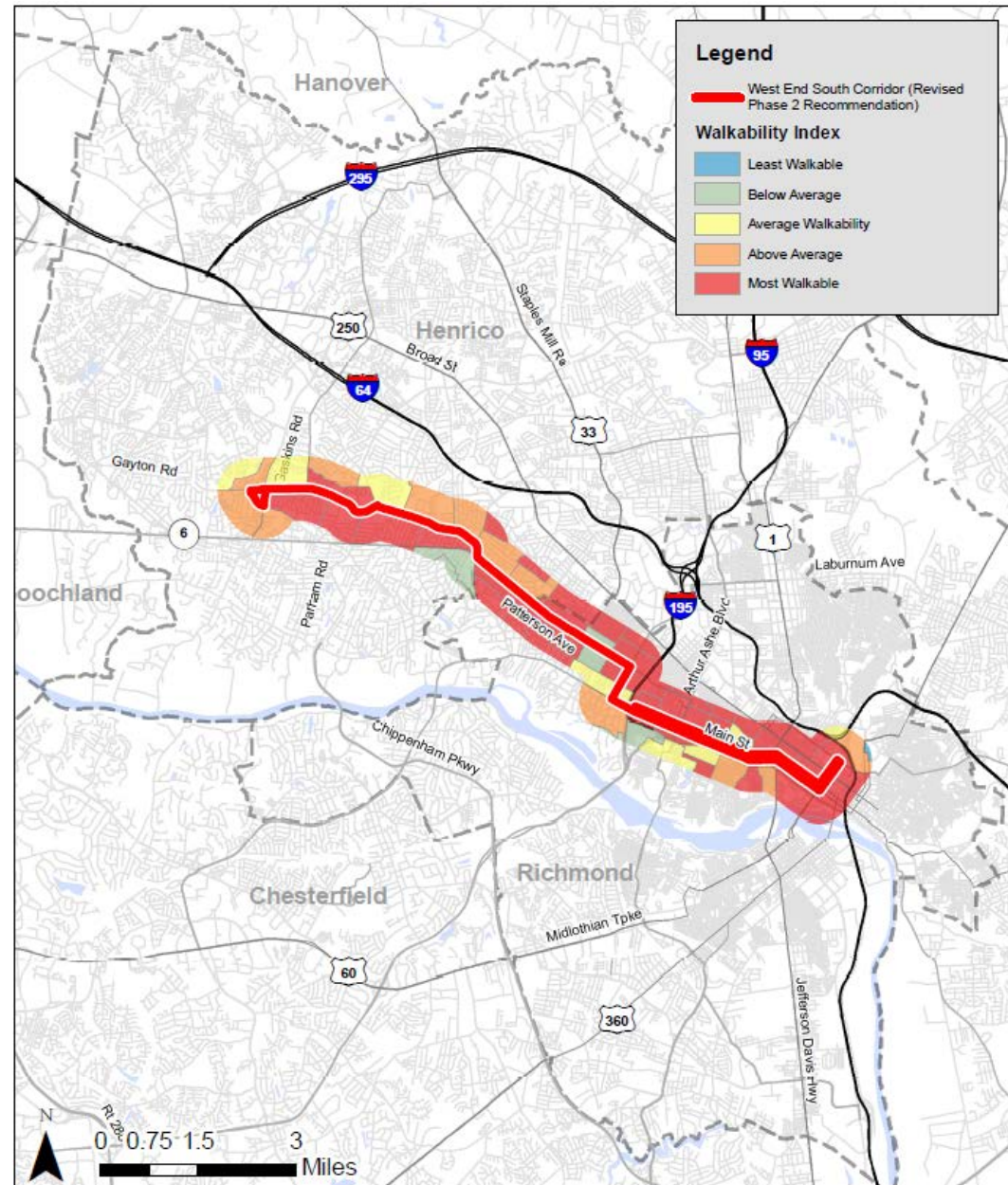
- Identified community facilities within ½ mile of route

- Schools and Educational Facilities
- Hospitals and Medical Facilities
- Parks and Recreation Facilities
- Government Buildings and Services
- ★ Major Destinations
 - Grocery Stores (reviewed but not shown)



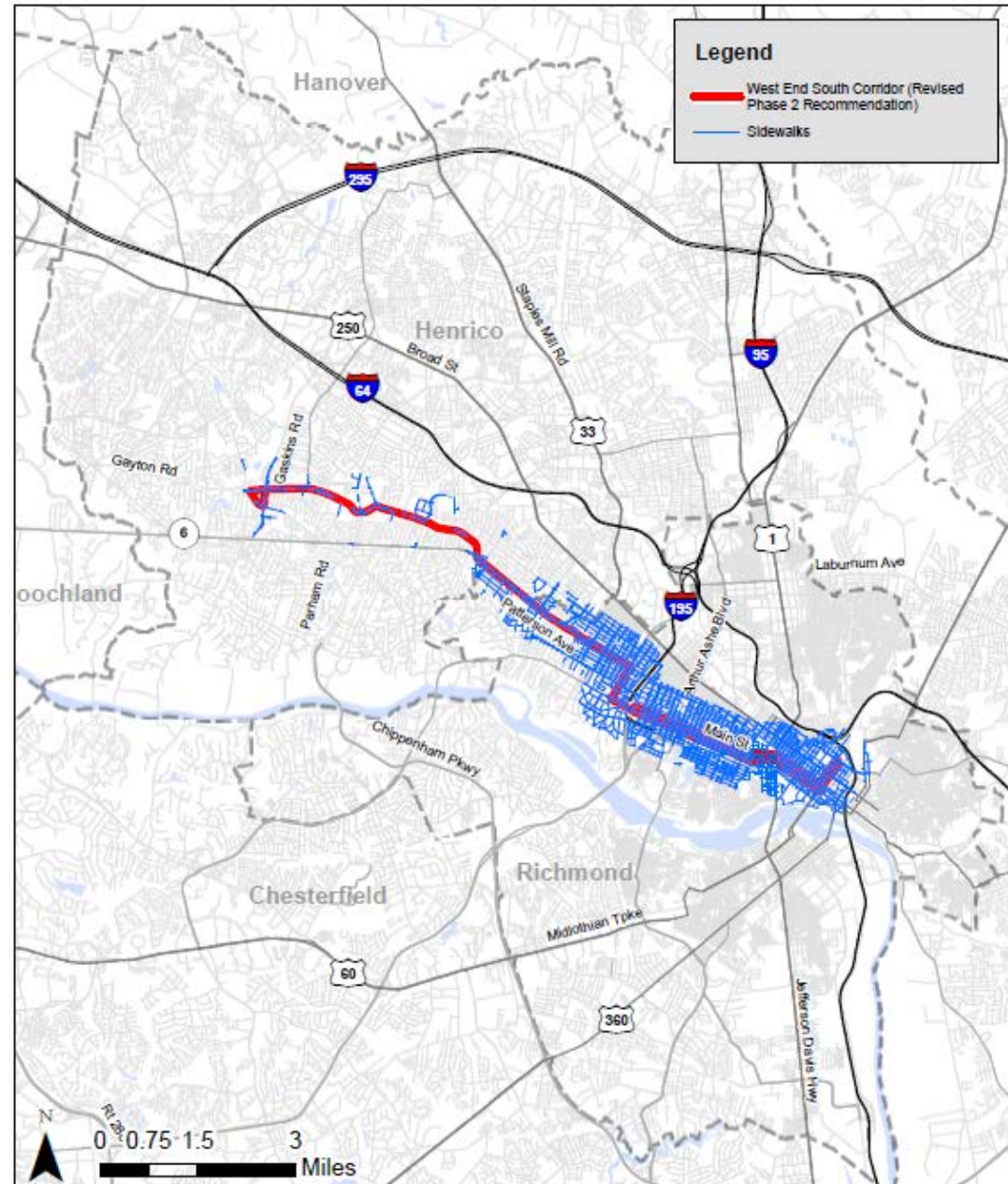
Walkability

- Highlighted areas that *might* be desirable to walk in if safe walking conditions are available
 - Based on EPA's walkability index



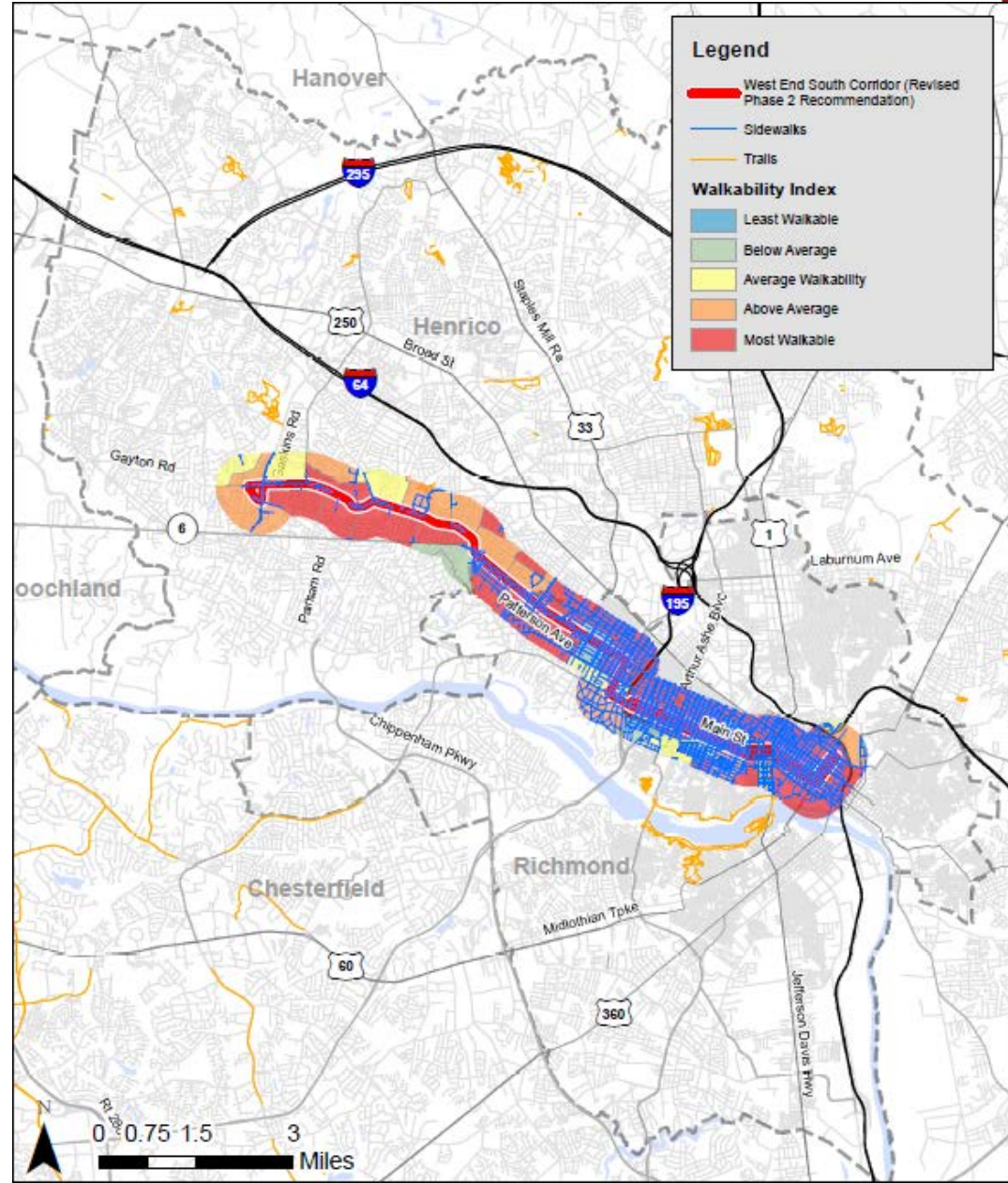
Pedestrian Network

- Evaluated existing pedestrian infrastructure
 - Percent of roadway network within ½ mile of route with sidewalk



Pedestrian Connectivity

- Overlap of walkability index score and existing pedestrian infrastructure identifies areas where investment in pedestrian infrastructure may be needed to support connections to transit



Roadway Suitability

- Reviewed roadway characteristics of routes and identified:
 - One-way streets
 - Two-lane roads
 - Difficult turning radii
 - Unsignalized left-turn movements
 - Turnaround locations
 - Alignment with existing GRTC routes

