

FY21 – FY24 DRAFT TIP

Richmond Regional TPO

TAC Meeting

January 14, 2020

Overview

- Transportation Improvement Program (TIP) required to be updated every three (3) years following the state's STIP schedule
- TIP lays out our planned transportation investments over the next four (4) years
- Inclusion in the TIP is required for a project to be eligible for federal funding
- TIP projects are consistent with priorities identified in the Long Range Transportation Plan

Changes to TIP Organization

- Financial plan included earlier in the plan to emphasize constrained nature of the TIP
- Projects organized by system rather than locality or agency
- Completed projects (based on schedule) listed separately so planned obligations are easier to find
- Performance based planning updated to discuss adopted measures, regional performance, and planned investments

Project Prioritization

- Projects were prioritized through the allocation process (Smart Scale, RSTP, CMAQ, TA, etc.)
- Projects were also analyzed against LRTP for consistency with goals/constrained plan
- As part of the LRTP update, staff is working to develop a prioritization methodology for projects
- Eventual goal is consistent prioritization for the LRTP, and future TIPs, and regional allocations projects

Ungrouped Projects

<u>System</u>	<u>Projects</u>	<u>Obligations</u>	<u>Percent</u>
Interstate	17	\$24,213,768	15.4%
Primary	17	\$57,907,022	36.7%
Secondary	29	\$6,619,523	4.2%
Urban	14	-\$721,466	-0.5%
Enhancement	12	\$275,055	0.2%
Miscellaneous	16	\$4,891,252	3.1%
Public Transportation	37	\$64,488,639	40.9%
Total	142	\$154,397,835	100%

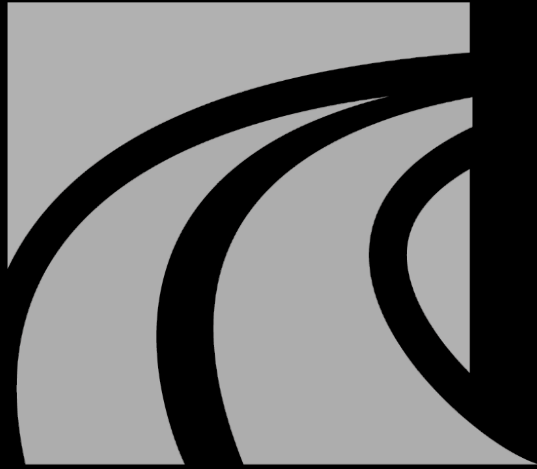
Grouped Projects

<u>Grouping</u>	<u>Obligations</u>	<u>Percent</u>
Construction : Bridge Rehabilitation/Replacement/Reconstruction	\$ 14,044,363	3.4%
Construction : Safety/ITS/Operational Improvements	\$ 120,470,318	29.5%
Maintenance : Traffic and Safety Operations	\$ 18,232,749	4.5%
Maintenance : Preventive Maintenance for Bridges	\$ 104,922,106	25.7%
Maintenance : Preventive Maintenance and System Preservation	\$ 128,026,686	31.3%
Construction : Rail	\$ 2,417,280	0.6%
Construction : Transportation Enhancement/Byway/Non-Traditional	\$ 20,438,783	5.0%
Total	\$ 408,552,285	100.0%

Requested Action

- **RESOLVED**, that the Richmond Regional Transportation Planning Organization opens a 45-day comment period for public review and input on the draft Transportation Improvement Program as required by federal regulations [23 CFR § 450.316(a)(1)(i)] and by the Public Participation Plan.
- **FURTHER RESOLVED**, that the Richmond Regional Transportation Planning Organization approves the list of ungrouped projects as the universe of RRTPO TIP projects for air quality conformity analysis as required by federal regulations (23 CFR § 450.326).

Feedback and Questions



Richmond Regional
**Transportation
Planning
Organization**

SUPPORTED BY **PlanRVA**
THE REGIONAL
COMMISSION

Greater RVA Transit Vision Plan: Phase 2

Evaluating High-Frequency Corridors for Near-Term Implementation

Technical Advisory Committee
January 14, 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

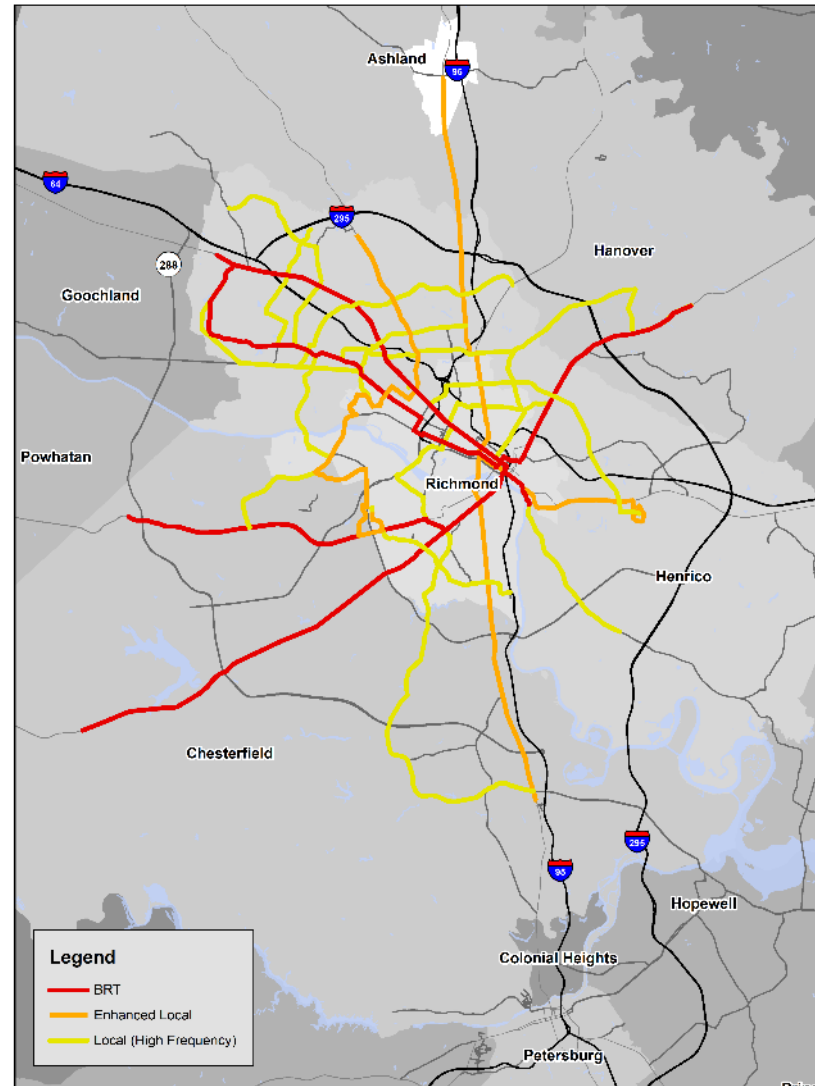
**Refined Phase 2
Segment
Analysis**

WE ARE HERE

Screening Analysis Recap

Screening Analysis

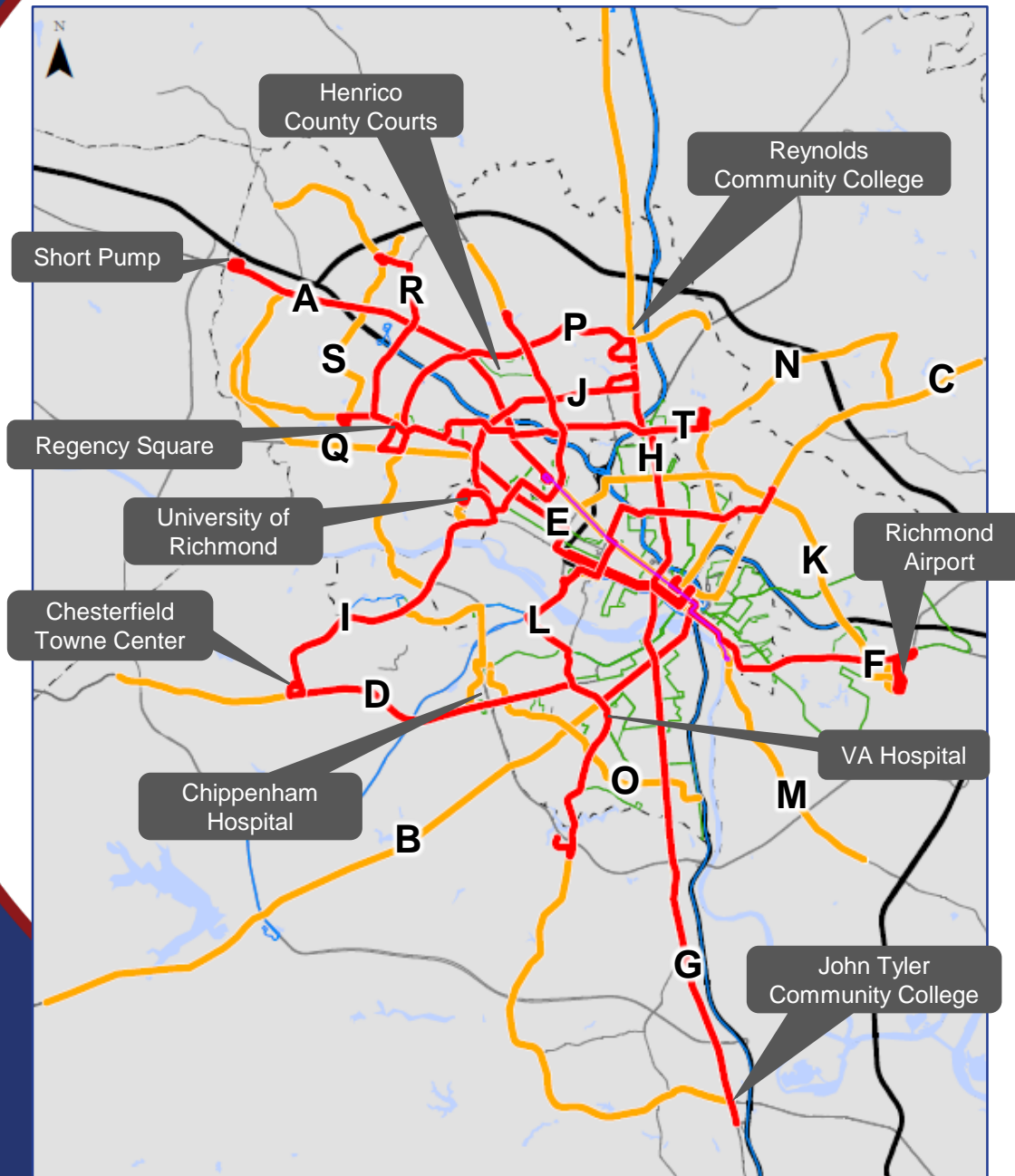
- Evaluated 20 high-frequency routes identified in Greater RVA Transit Vision Plan Phase 1
- Purpose was to determine viability of high frequency service for near-term implementation
- Selected corridors (or corridor segments) were advanced to the detailed analysis phase



Screening Analysis

- Evaluation considered:
 - Activity density
 - Employment and working populations
 - Environmental justice and transit-dependent populations
 - Existing GRTC network layout
 - Potential near-term transit supportive development
 - Steering committee feedback

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)

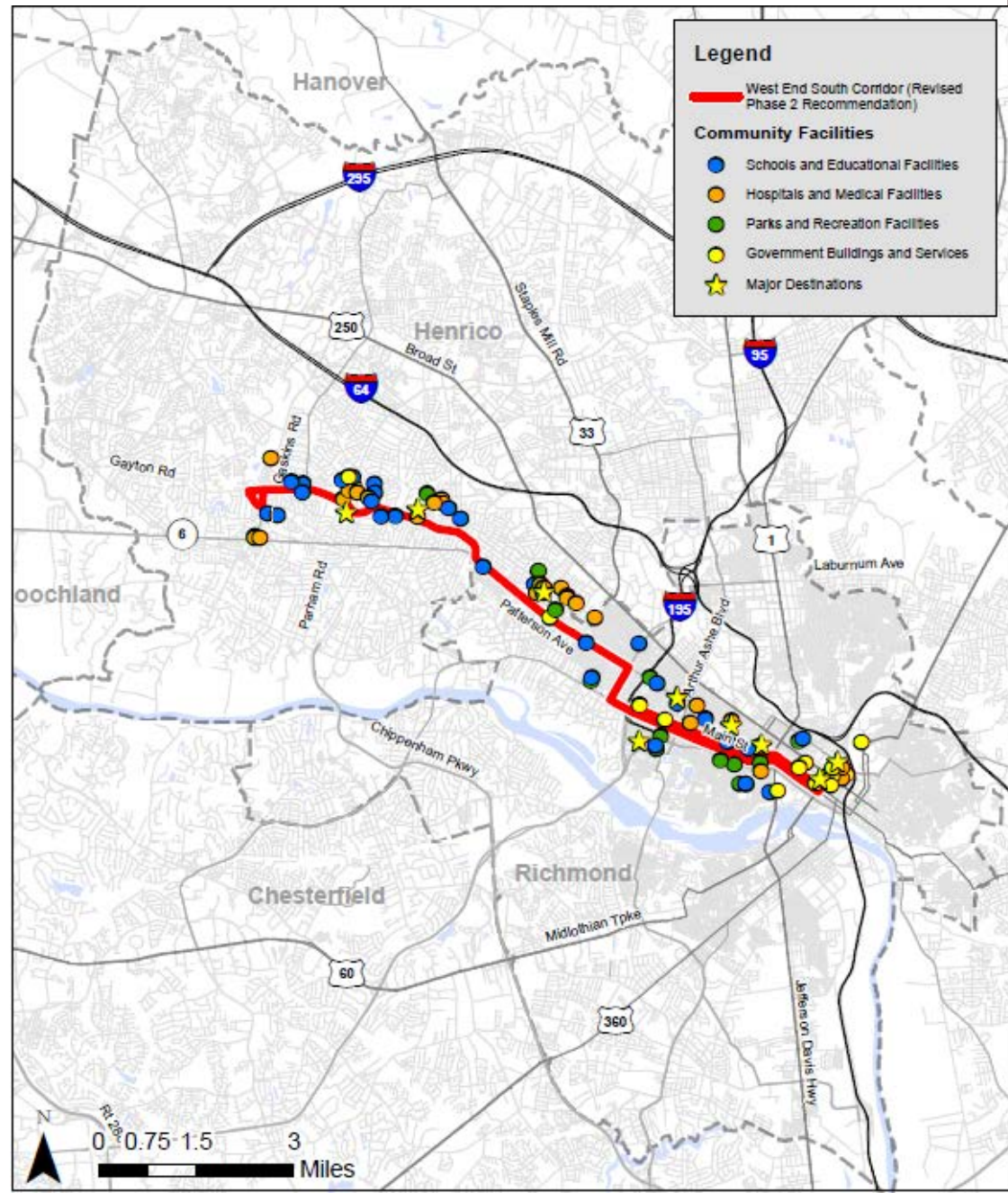
Detailed Analysis

- 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

Community Facilities

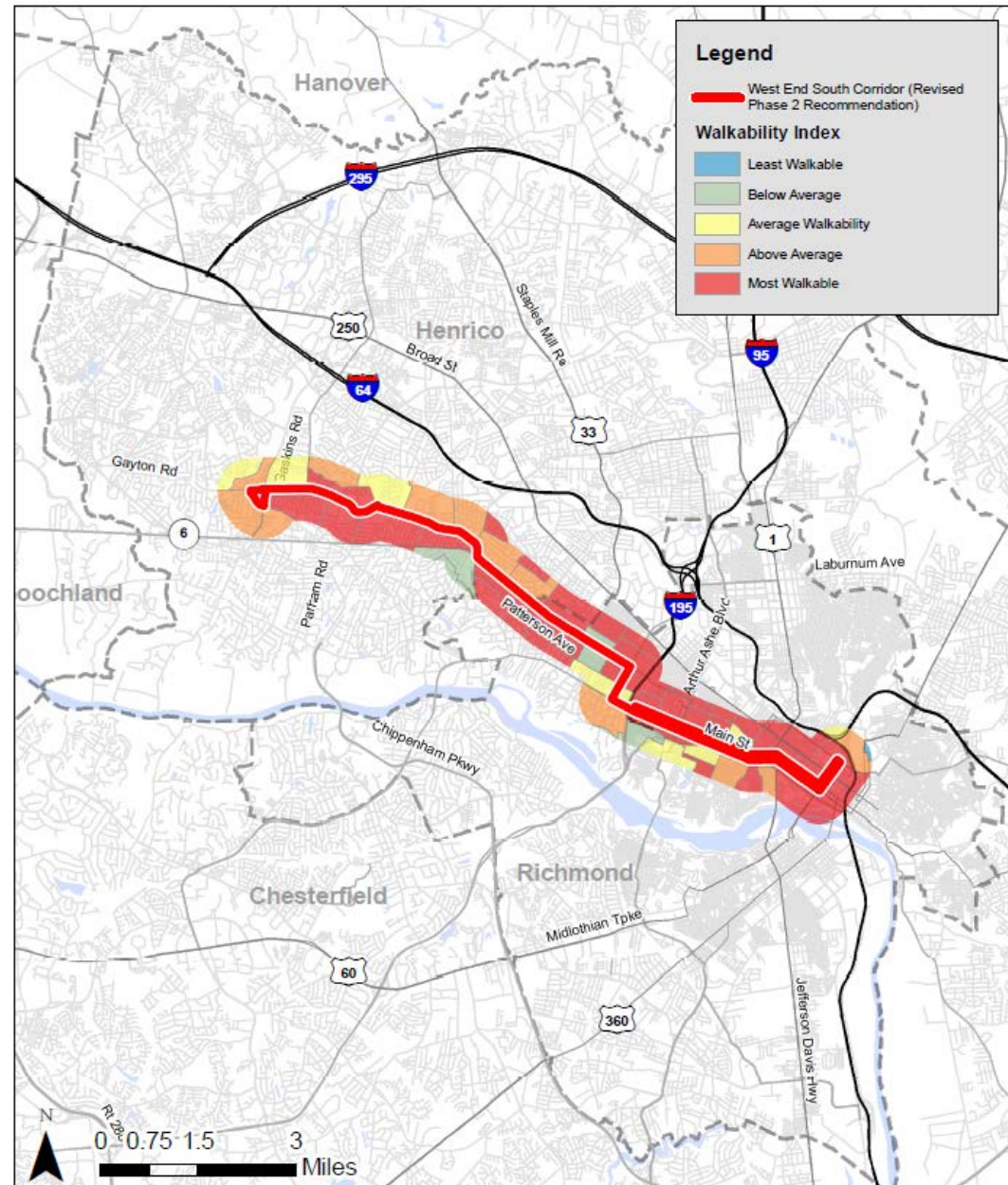
- Identified community facilities within ½ mile of route

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



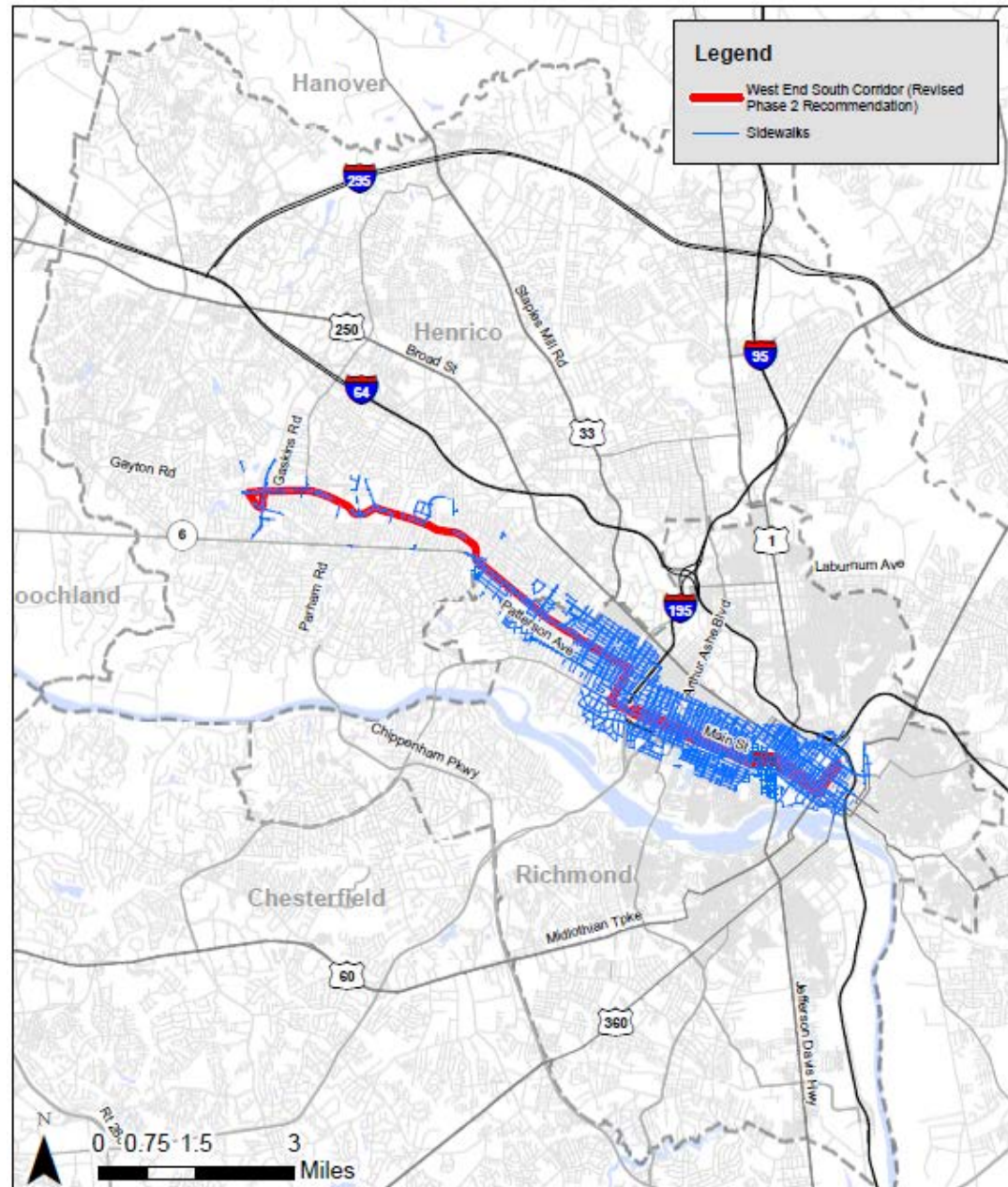
Walkability

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



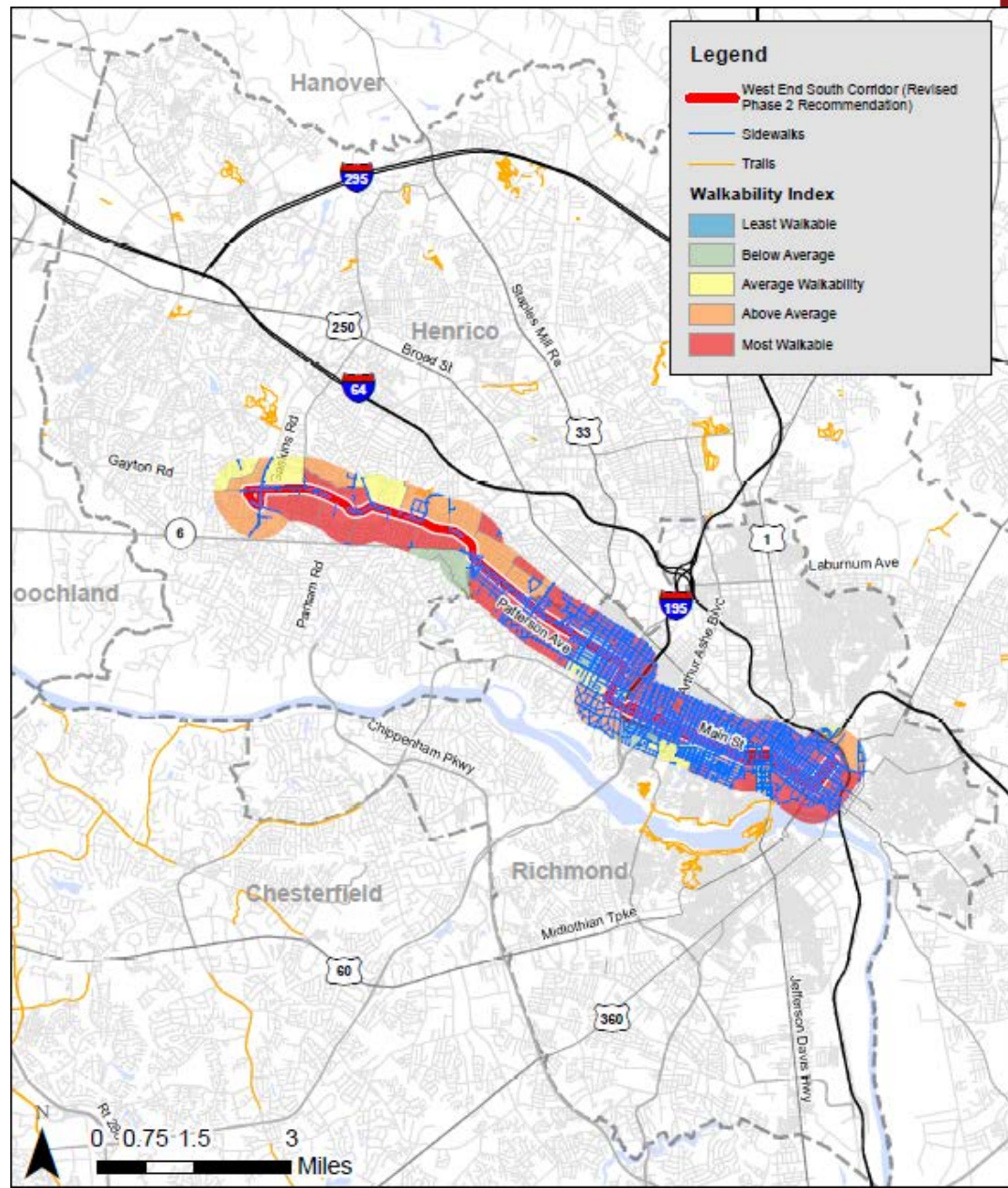
Pedestrian Network

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



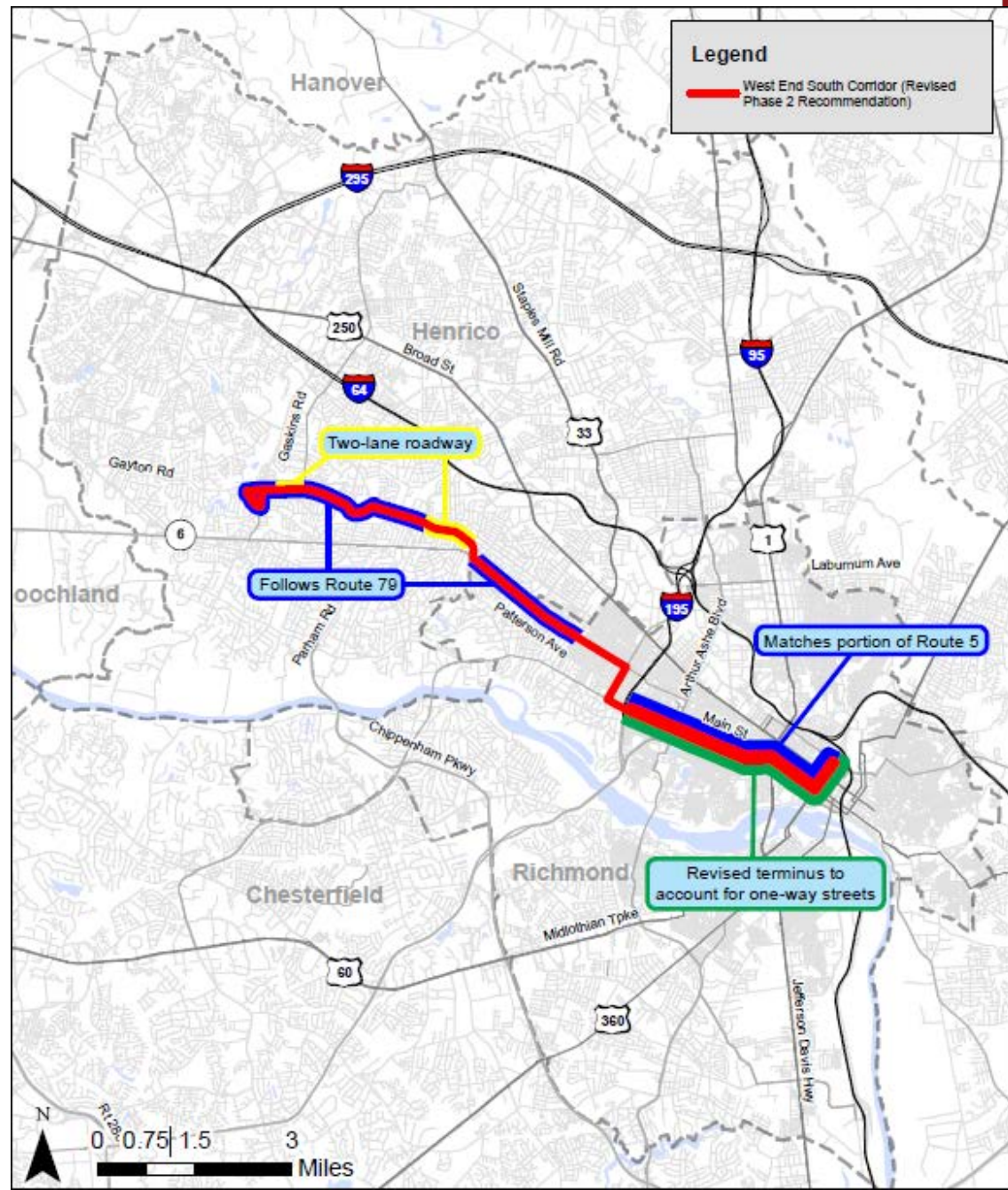
Pedestrian Connectivity

- 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



Ridership Potential

- Existing GRTC ridership and activity density were used to estimate ridership potential on proposed routes
 - Identified TAZs with high, medium, and low activity densities along existing GRTC routes
 - Determined average ridership within each high, medium, and low activity density category
 - Applied average ridership to high, medium, and low activity density TAZs along proposed routes
 - Summarized TAZ ridership along proposed routes

Potential Ridership Summary

Corridor	<u>Ridership</u>		<u>Boardings per Mile</u>		<u>Boardings</u>	
	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)

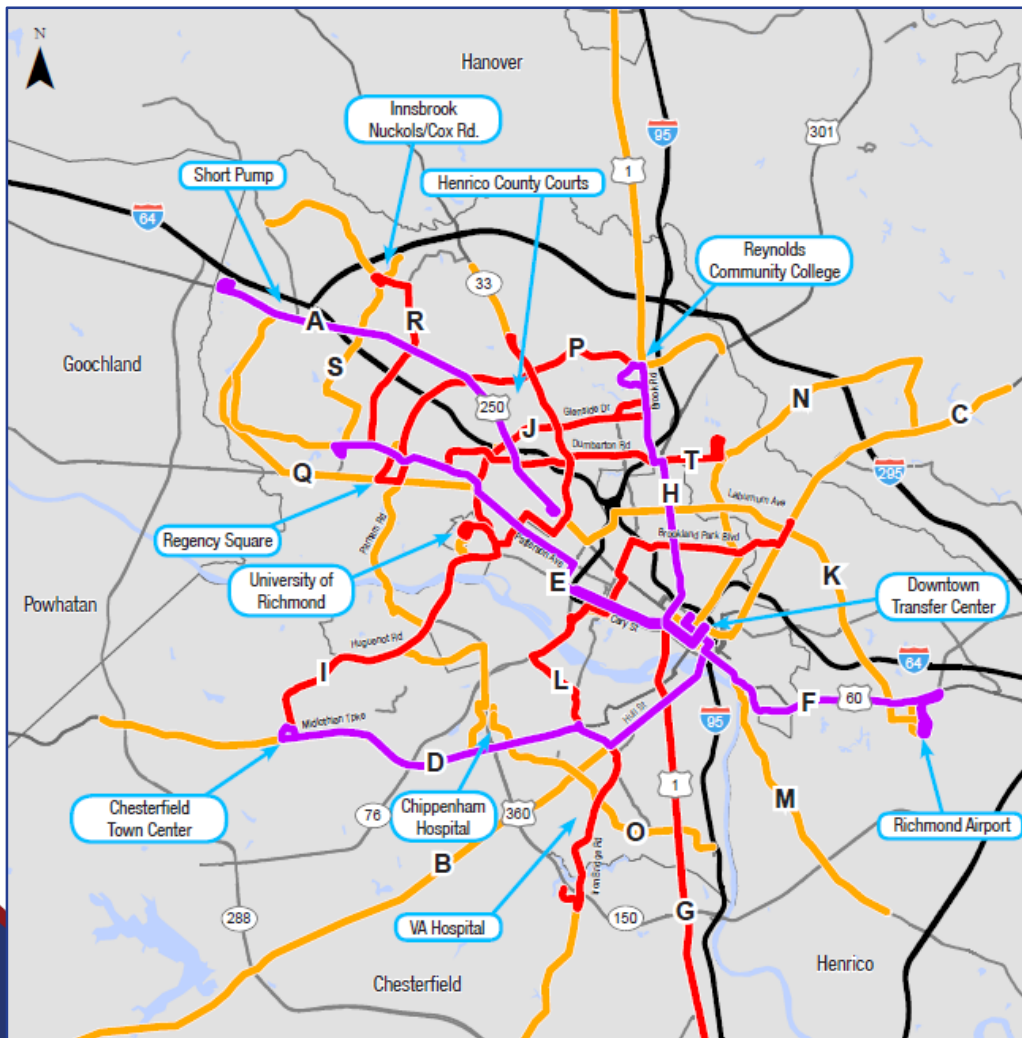
R. West End Route 4 – Pemberton/Nuckols

(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**