

To: Transportation Advisory Group
From: Planning Team
Subject: DRAFT LRTP Review

Date: November 8, 2012

DRAFT LRTP Review Packet

Please find the following LRTP information for your review prior to our meeting on November 15.

1. Draft Planning Strategies
2. Draft Project List with Costs and Draft Tiers
3. Project Evaluation Criteria Descriptions
4. Draft Project Map
5. Draft Bus Service Enhancement Map
6. Draft Project Descriptions
7. Revised LRTP Goals and Objectives

This is only a first draft of the LRTP and we are eager to get your feedback to help refine and reshape this draft into the draft we will present at the public open house in December. Please come to prepared to discuss your thoughts and comments. We would greatly appreciate receiving your comments in writing to ensure that they are adequately addressed and entered into the documentation for the plan. If you cannot attend the meeting, please provide us your comments in advance.

Please comment on anything related to the plan. Here are some questions you may want to consider:

1. Overall, does the plan move the region in the right direction? Why?
2. What projects or strategies do I strongly support? Why?
3. What projects or strategies do I strongly oppose? Why?
4. Are there any projects or strategies that I believe are missing?
5. How would I modify or revise any of the proposed projects or strategies?
6. What will we have to do as a region to make this plan successful?

L RTP Planning Strategies

DRAFT 11/2/2012

These strategies are intended to help guide the MPO's planning efforts during the LRTP period. These activities are important to achieving the goals and objectives of the recommended LRTP. Some of these activities are stand-alone planning efforts, but many are pre-cursors or support activities to projects identified in the "LRTP Capital Projects List."

Regional Sidewalk Connectivity Plan – Expand the Connecting Network Sidewalks (CNS) from the Morgantown Pedestrian Safety Plan to include the entire region and develop a 10-year action plan to implement improvements necessary to complete the CNS. *Related to LRTP capital project 39.*

Regional Bike Plan – Building on the Morgantown Bicycle Plan, develop a "Regional Connecting Bike Route Network" (same concept as the CNS) and a 10-year implementation plan that identifies specific signage, markings, spot roadway improvements, trail improvements, etc. meeting current state of the practice. The plan should also include an education program and campaign to promote cycling, improve awareness of traffic laws and appropriate operational practices to improve safety. A local law enforcement plan and officer education program to help curb bicyclist, pedestrian and automobile driver behavior that is dangerous for cycling should also be part of the plan. *Related to LRTP capital project 40.*

Access Management Plan – Complete a study of key corridors in the region to identify current access management deficiencies. Include data driven prioritization based on related crashes and congestion, and develop policy for access control, planning, design and retrofits. Identify priority locations and a 10-year implementation plan. *Related to LRTP capital project 44.*

Complete the Streets Initiative – Develop an action plan to increase and leverage local funding sources, and coordination and implementation processes, for local agencies to partner with WVDOH on projects to share costs related to complete street enhancements. *Related to the majority of the LRTP capital projects.*

Local Transportation Funding Committee – Establish group of local transportation and funding experts to meet regularly and develop an action plan to increase local agency (non-state/federal) transportation funding sources, and to maximize state/federal transportation funding expenditures in the region. *Related to the majority of the LRTP capital projects.*

Safe Routes to School Committee – Develop a committee and identify funding sources to help local schools develop Safe Routes to School Travel Plans and apply for federal funding assistance with improvements. *Related to LRTP capital project 43.*

Regional Freight Movement Plan – Collect data and perform more detailed analysis of existing freight movement characteristics (truck, air, rail, pipeline, etc.), current truck volumes, current problems related to freight movement, existing and projected attractors and generators, market trends, and current and preferred routes. Coordinate with local stakeholders, industry representatives, WVDOH, and local agencies to develop improvements and strategies to increase global competitiveness of the region while encouraging truck traffic to use desired routes.

Regional Parking Management Plan – Develop a "Park Once" policy for the urban area and a plan to manage parking and to incentivize rideshare/carpooling/walking/biking/transit to minimize parking (which encourages auto traffic) in congested areas. Related to LRTP capital project 46.

Region-wide Traffic Signal Upgrades – Undertake a study of all signalized intersections in the region. Develop an aggressive short-term plan to upgrade all signals to utilize state-of-the-art vehicle detection and vehicle responsiveness systems, corridor and system timing optimization, and central system control. Integrate priority timings for bus system where feasible. *Related to LRTP capital project 38.*

Regional TSM Plan – Develop region-wide micro-simulation analysis and site-specific alternative feasibility studies (primarily intersections) to develop a plan to maximize the capacity and safety of the transportation system through a series of intersection and other spot improvements to the system. *Related to most LRTP capital projects.*

Regional Crash Data and Analysis Program – Develop a program to improve crash data collection and analysis procedures and to develop an annual regional high-crash and priority improvement list. *Related to most LRTP capital projects.*

Regional Bicycle and Pedestrian Data Collection Program – Modify the current traffic data collection program to also include bicycle and pedestrian data. *Related to most LRTP capital projects.*

Regional Multimodal Travel Forecasting Model Development – Expand current TransCAD regional travel forecasting model to include transit, bike, and pedestrian trip generation and assignments to better reflect the nature of travel in the greater Morgantown area. *Related to most LRTP capital projects.*

The following is a first draft proposed project list with project prioritization. See attached maps and project descriptions for more detailed information about each project in the list.

DRAFT LRTP Projects List								
Tier	Project #	Project / Corridor	Planning Level Cost Estimate	Project Evaluation*				
				Goals Score	Regional Mobility Score	Feasibility Score	TAG Preference Score	
LRTP Fundable Projects**	8	Beechurst Avenue Improvements	\$7,000,000	☆☆☆	☆☆☆☆	☆☆☆	TBD	
	11	West Run Improvements - Western Section	\$12,000,000	☆☆☆	☆☆☆☆	☆☆☆☆	TBD	
	13	West Run Road Improvements - Eastern Section	\$3,000,000	☆☆☆	☆☆☆☆	☆☆☆☆	TBD	
	17	Fairmont Road / Holland Avenue (US-19)	\$11,000,000	☆☆☆☆	☆☆☆☆	☆☆	TBD	
	21	Earl Core Road (WV-7) North of I-68	\$9,000,000	☆☆☆☆	☆☆☆☆	☆☆☆	TBD	
	26	WVU Campus Bus Rapid Transit	\$1,000,000	☆☆☆	☆☆☆☆	☆☆☆☆	TBD	
	33	Grumbein's Island Grade Separation	\$10,000,000	☆☆☆	☆☆☆☆	☆☆☆	TBD	
	35	8th Street Bridge over Monongahela River and Roadway Connection to TIF	\$32,000,000	☆☆☆☆	☆☆☆☆	☆☆	TBD	
	38	Intersection Capacity and Safety Improvement Program	\$36,000,000	☆☆☆	☆☆☆☆	☆☆☆☆	TBD	
	40	Regional Bikeway Plan Implementation Program	\$5,000,000	☆☆☆	☆☆☆☆	☆☆☆☆	TBD	
	43	Safe Routes to School Improvements	\$2,000,000	☆☆☆	☆☆☆☆	☆☆☆☆	TBD	
	45	Downtown Morgantown Signalization and Street Changes	\$2,000,000	☆☆☆☆	☆☆☆☆	☆☆☆☆	TBD	
	46	TDM Program Expansion	\$10,000,000	\$350K/yr	☆☆☆	☆☆☆☆	☆☆☆☆	TBD
LRTP Fundable Total			\$140,000,000					
Tier 2	7	Van Voorhis Road Improvements	\$15,000,000	☆☆☆	☆☆☆☆	☆☆	TBD	
	9	University Avenue Improvements	\$20,000,000	☆☆☆	☆☆☆☆	☆☆	TBD	
	12	Stewartstown Road Improvements	\$12,000,000	☆☆☆	☆☆☆☆	☆☆☆☆	TBD	
	14	Cheat Road Improvements	\$6,000,000	☆☆☆	☆☆☆☆	☆☆☆☆	TBD	
	18	Greenbag Road Improvements	\$16,000,000	☆☆☆☆	☆☆	☆☆☆☆	TBD	
	27	Grant Avenue Bicycle / Pedestrian Connector	\$900,000	☆☆☆	☆☆☆☆	☆☆☆☆	TBD	
	39	Regional Pedestrian Safety and Sidewalk Connectivity Program	\$33,000,000	☆☆☆	☆☆☆☆	☆☆☆☆	TBD	
	41	New Park and Ride Lots	\$1,000,000	☆☆☆	☆☆☆☆	☆☆☆☆	TBD	
42	Enhanced Bus Service	\$88,000,000	\$3M/yr	☆☆☆	☆☆☆☆	☆☆☆☆	TBD	
Tier 2 Total			\$191,900,000					
Tier 3	2	West Run Extension and Lazelle-Union Road (WV-100) Connection to US 19	\$71,000,000	☆☆☆	☆☆☆☆	☆☆☆☆	TBD	
	3	Lazelle-Union Road (WV-100)	\$22,000,000	☆☆☆	☆☆☆☆	☆☆☆☆	TBD	
	4	I-79 / Chaplin Hill Road / US-19 / Lazelle-Union Road Interchange Access	\$22,000,000	☆☆☆	☆☆☆☆	☆☆☆☆	TBD	
	12	Stewartstown Road Improvements	\$12,000,000	☆☆☆	☆☆☆☆	☆☆☆☆	TBD	
	14	Cheat Road Improvements	\$6,000,000	☆☆☆	☆☆☆☆	☆☆☆☆	TBD	
	15	Willowdale Road Sidewalk Improvement	\$4,000,000	☆☆☆	☆☆☆☆	☆☆☆☆	TBD	
	20	Brockway Rogers / Powell Avenues (WV-7)	\$6,000,000	☆☆☆	☆☆☆☆	☆☆☆☆	TBD	
	28	White Park / Caperton Trail Connection	\$2,000,000	☆☆☆	☆☆☆☆	☆☆☆☆	TBD	
Tier 3 Total			\$145,000,000					
Tier 4	1	WV 705 Improvements	\$55,000,000	☆☆☆	☆☆☆☆	☆☆	TBD	
	10	Burroughs Street	\$4,000,000	☆☆☆	☆☆☆☆	☆☆☆☆	TBD	
	16	Old Cheat Road / Cheat Road Bike Lanes	\$7,000,000	☆☆☆	☆☆	☆☆☆☆	TBD	
	19	Dorsey Avenue Sidewalk Improvements	\$4,000,000	☆☆☆	☆☆	☆☆	TBD	
	22	Earl Core Road (WV-7) South of I-68	\$9,000,000	☆☆☆	☆☆☆☆	☆☆	TBD	
	23	New Road Connection from Willey Street to Downtown Campus Area	\$6,000,000	☆☆☆	☆☆☆☆	☆☆	TBD	
	24	Protzman / Falling Run Pedestrian and Bicycle Connector	\$1,000,000	☆☆☆	☆☆☆☆	☆☆☆☆	TBD	
	25	Willey Street Improvements	\$13,000,000	☆☆☆	☆☆☆☆	☆☆	TBD	
	29	Grafton Road (US-119)	\$5,000,000	☆☆☆	☆☆	☆☆☆☆	TBD	
	30	Stewart Street Improvements	\$11,000,000	☆☆☆	☆☆☆☆	☆☆	TBD	
	34	Riddle Street Improvements	\$4,000,000	☆☆☆	☆☆☆☆	☆☆	TBD	
	36	Mileground Road / WV-705 Connector to Hartman Run Road	\$17,000,000	☆☆☆	☆☆☆☆	☆☆	TBD	
44	Access Management Improvement Program	\$10,000,000	☆☆☆	☆☆☆☆	☆☆☆☆	TBD		
Tier 4 Total			\$146,000,000					
Funding Dependent	5	New I-79 Interchange at Business Park Site and Connecting Roadways	\$43,000,000	TIF	☆☆☆	☆☆☆☆	☆☆☆☆	TBD
	6	Roadway Connection from New I-79 interchange to Monongahela Boulevard	\$49,000,000	TIF	☆☆☆	☆☆☆☆	☆☆	TBD
	6B	PRT Connection New Business Park to Evansdale Campus	\$80,000,000	Grant	☆☆☆	☆☆☆☆	☆☆	TBD
	31	PRT Extension from University Health Sciences to Monongalia General Hospital	\$57,000,000	Grant	☆☆☆	☆☆☆☆	☆☆	TBD
	32	PRT Extension from Monongalia General Hospital to Glenmark Centre	\$103,000,000	Grant	☆☆☆	☆☆☆☆	☆☆	TBD
	37	Airport Industrial Road extension to WV-7	\$12,000,000	Private	☆☆	☆☆	☆☆	TBD
Funding Dependent Total			\$344,000,000					

* See next page for description of criteria.

** Assumes 100% State/Federal funding sources and is based on current funding projections for LRTP horizon (through

Project Evaluation Criteria

DRAFT 11/6/2012


This table explains the criteria used to score each of the projects under consideration for the LRTP. These scores are primarily based on the judgment of the consultant team informed by basic technical information and analysis. These scores are represented as stars (★) in the summary table. These scores, project costs, geographic distribution, and additional professional judgment informed the proposed project tiers presented in the project list.

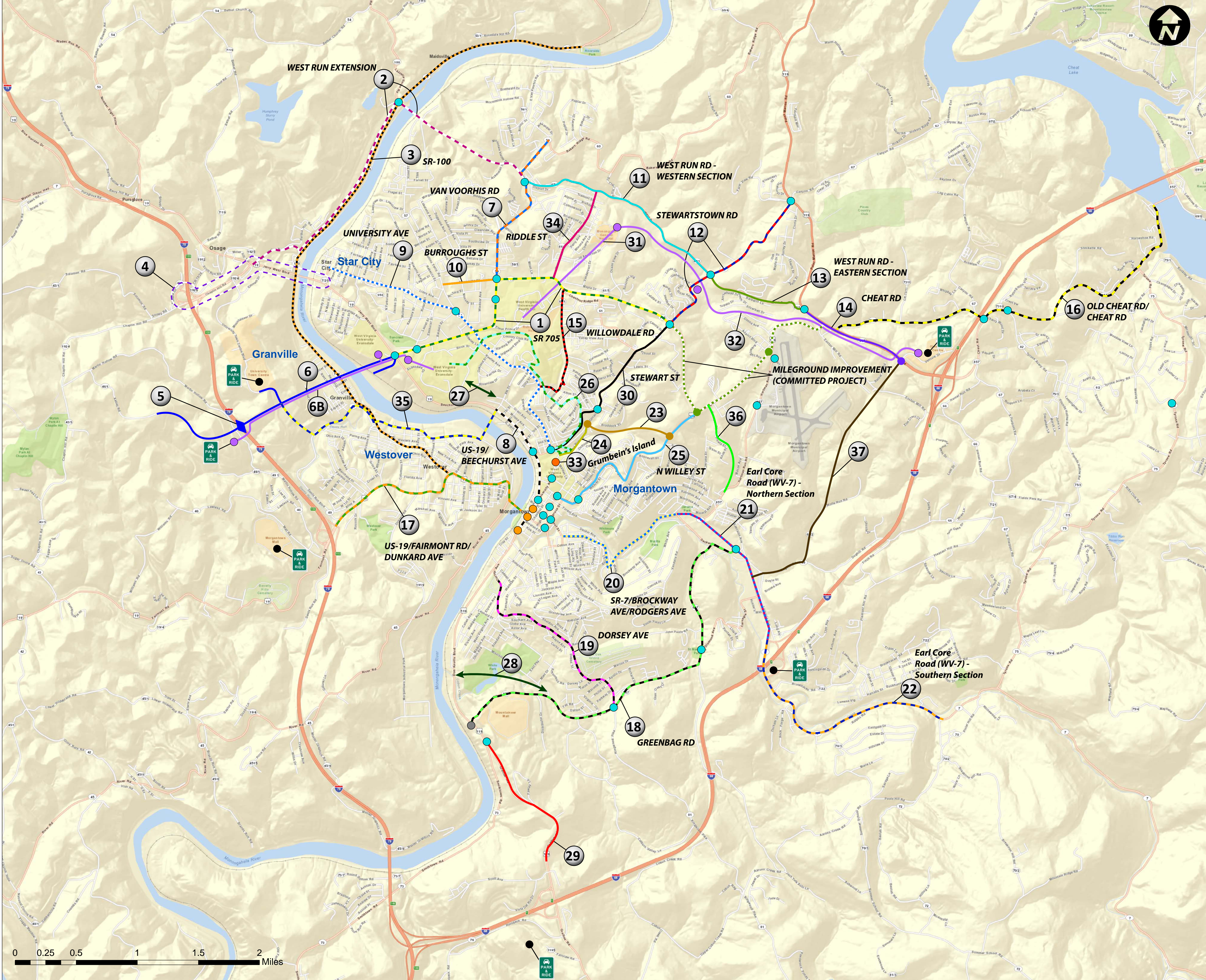
Goals Score			
Score = Number of LRTP Goals Directly Supported divided by 2			
User Impact Score			
4 – Project expected to impact a large number of users	3 – Project expected to impact a large to moderate number of users	2 – Project expected to impact a moderate to small number of users	1 – Project expected to impact a small number of users
Feasibility Score			
4 – Project appears to be feasible <ul style="list-style-type: none"> • low level of engineering complexity / risk • no anticipated major public opposition • minimal private property impacts • minimal anticipated negative environmental impacts 	3 – Project is likely feasible with one or more of the following true: <ul style="list-style-type: none"> • moderate level of engineering complexity • potential for some moderate public opposition • moderate level of property impacts • moderate level of environmental impacts possible 	2 – Project may or may not be feasible, or may be only partially feasible with one or more of the following true: <ul style="list-style-type: none"> • high level of engineering complexity / risk • potential for significant public opposition • high level of property impacts • high level of environmental impacts possible 	1 – Project not likely to be feasible with one or more of the following true: <ul style="list-style-type: none"> • very high level of engineering complexity / risk • potential for widespread public opposition • very high level of property impacts • very high level of environmental impacts possible
TAG Preference Score			
Quartile results from Transportation Advisory Group Feedback (lowest quartile = 1 star, 2 nd quartile = 2 star, etc.)			

DRAFT LRTP Projects

NOVEMBER 6, 2012

- | | |
|--|--|
| 1 WV-705 Corridor Improvements | 19 Dorsey Ave |
| 2 West Run Extension and Lazelle Union Rd (WV-100) Connection to US 19 | 20 Brockway Rodgers/Powell Avenues (WV-7) |
| 3 Lazelle Union Rd (WV-100) Improvements | 21 Earl Core Rd (WV-7) Northern Section |
| 4 I-79/Chaplin Hill Rd/US-10/Lazelle Union Rd Interchange and Access Improvements | 22 Earl Core Rd (WV-7) Southern Section |
| 5 New I-79 Interchange at Business Parks Site and Connecting Roadways | 23 New Rd Connection from Willey St to Downtown Campus Area |
| 6 Roadway Connection from New I-79 Interchange to Monogahela Blvd | 24 Protzman/Falling Run Pedestrian and Bicycle Connector |
| 6B PRT Connection New Business Park to Evansdale Campus | 25 Willey St Improvements |
| 7 Van Voorhis Rd Improvements | 26 WVU Campus Bus Rapid Transit Connector |
| 8 Beechurst Ave Improvements | 27 Grant Ave Bicycle/Pedestrian Connector |
| 9 University Ave Improvements | 28 White Park/Caperton Trail Connection |
| 10 Burroughs St | 29 Grafton Rd (US-119) |
| 11 West Run Improvements - Western Section | 30 Stewart St Improvements |
| 12 Stewartstown Rd Improvements | 31 PRT Extension from University Health Services to Mon General Hospital |
| 13 West Run Improvements - Eastern Section | 32 PRT Extension from Mon General Hospital to Glenmark Centre |
| 14 Cheat Rd Improvements | 33 Grumbein's Island Grade Separation |
| 15 Willowdale Rd Sidewalk Improvements | 34 Riddle St Improvements |
| 16 Old Cheat Rd/Cheat Rd Bike Lanes | 35 8th St Bridge over Monogahela River and Roadway Connection to TIF Development Area Interchange to I-79 |
| 17 Fairmont Rd/Holland Ave (US-19) | 36 New Roadway Connection from Mileground Rd to Hartman Run Rd |
| 18 Greenbag Rd Improvements | 37 Extension of Airport Industrial Rd to WV-7 in Sabraton |

-  Priority Safety Improvements Location
-  Priority Pedestrian Crossing Improvements Location
-  PRT Station



**LONG RANGE TRANSPORTATION PLAN
DRAFT PROJECTS**




DRAFT LRTP Project List
11/6/12

MAPPED PROJECTS

Project/Corridor	Description	Estimated Cost	Primary Travel Modes Improved	LRTP Goals Directly Supported	FHWA Planning Factors Supported
1 WV-705 Corridor Improvements	<p>Location: WV-705 from Monongalia Boulevard to Stewartstown Road</p> <p>Purpose: Improve traffic/people carrying capacity in the region's most heavily traveled corridor.</p> <p>Improvements:</p> <ul style="list-style-type: none"> • Add one lane of through capacity in each direction – The additional lane could be a High Occupancy Vehicle (HOV) lane that only buses and automobiles with 3 or more occupants could legally use (2 occupants or less would have to use other 2 general purpose lanes). The purpose of the HOV lane is to add vehicular capacity in this overcapacity corridor in a way that also gives a distinct travel time advantage to transit and vanpooling/carpooling to maximize total person trips that can be handled in the corridor. • Upgrade existing sidewalks where needed to provide continuous attractive facilities for pedestrian traffic and to create an enhanced environment for transit users. • Improved pedestrian crossings • Provide improved bike facilities either in the form of bike lanes or shared HOV lanes. • Improve access management in areas where currently deficient. • Increase automobile capacity at key intersections with priority given to buses/HOV. This could involve improvement to side streets. • Provide bust stops and shelters at key locations. <p>First implementation action: A preliminary engineering study of the corridor to comprehensively evaluate the benefits, feasibility and cost of these improvements - Crash data, peak hour traffic forecasts, bike and pedestrian facility needs and options, right-of-way and access impacts, pedestrian crossing locations, and other factors should be evaluated. The study process should engage key stakeholders, property owners, and users (the public) to obtain input and to build local buy-in and support of the recommendations of the study. The study could identify a phased approach where intersection capacity improvements, widening in key areas, key access improvements, signalization improvements, and bus queue jumps could be prioritized and constructed over several years.</p> <p>Key implementation factors: Local acceptance, acceptable property impacts, acceptable impacts to access, pedestrian crossings, and construction feasibility. Careful planning of pedestrian crossings with the widened roadway is a critical consideration. Grade separated options should be considered.</p>	\$55,000,000	Auto Transit Bicycle Pedestrian	1,2,3,4,5,7	1,2,3,4,5,6,7,8
2 West Run Extension and Lazelle Union Road (WV-100) Connection to US 19	<p>Location: Extension of West Run Road along a new alignment west from Van Voorhis Road to Lazelle Union Road (WV-100) including a new bridge over the Monongahela River.</p> <p>Purpose: To provide an additional traffic capacity from/to I-79 from/to the heavy employment areas north of WV-705.</p> <p>Improvements:</p> <ul style="list-style-type: none"> • New 4-lane roadway with access limited to 4 locations: at its termini with Van Voorhis Road and Lazelle Union Road, and at two access points spaced approximately 2000' apart between the termini. • Widen Lazelle Union Road to 4-lanes plus turn lanes at key locations between new bridge and US-19. Access limited to 3 full-movement access points approximately 2000 feet apart between US-19 and the proposed West Run Road extension. • Include parallel bike/pedestrian facilities (Potential: multiuse path on one side and sidewalk the other side). <p>First implementation action: A preliminary engineering study to verify the number of needed lanes, to determine the optimal alignment to minimize negative impacts, and to determine optimal intersection types and configurations for peak hour traffic operations. The study could identify a phased approach where, only two lanes and interim intersection</p>	\$71,000,000	Auto Transit Bicycle Pedestrian	1,2,3,4,5,7	

	types built initially with right-of-way obtained for the ultimate needs in the corridor.	1,2,3,4,5,8
	Key implementation factors: Local acceptance, acceptable environmental impacts, ability to obtain needed right of way, design of intersection with Lazelle Union Road.	FHWA Planning Factors Supported 1,2,3,4,5,6
3	Lazelle Union Road (WV-100) Improvements	
	Location: US-19 to PA state line.	
	Purpose: To provide a bike commuter and recreational route west of the Monongahela River. To improve roadway for freight movement/truck traffic.	<u>Estimated Cost</u> \$22,000,000
	Improvements:	<u>Primary Travel Modes Improved</u>
	<ul style="list-style-type: none"> • Repair truck damage to pavement • Widen roadway to provide bike lanes or other bike accommodations 	Auto Bicycle
	First Implementation Action: Detailed engineering review and cost estimates.	<u>L RTP Goals Directly Supported</u> 1,2,3,4,6
	Key Implementation Factors: Addition of bike lanes should be achieved as an enhancement to a maintenance project to repair the roadway pavement.	<u>FHWA Planning Factors Supported</u> 1,2,4,5,6,8
4	I-79/Chaplin Hill Road/US-19/Lazelle Union Road Interchange and Access Improvements	
	Limits: The system includes:	<u>Estimated Cost</u> \$22,000,000
	<ul style="list-style-type: none"> • the interchange of I-79 and Chaplin Hill Road, • the intersection of Chaplin Hill Road and University Town Center Boulevard, • the intersection of Monongahela Boulevard (WV-7/US-19) and Chaplin Hill Road, • the intersection of Monongahela Boulevard and Boyers Avenue 	<u>Primary Travel Modes Improved</u>
	Purpose: To improve traffic capacity and safety.	Auto Transit
	Improvements:	<u>L RTP Goals Directly Supported</u> 1,3,4,7,8
	<ul style="list-style-type: none"> • Reconfiguration of the interchange • Grade separation of Chaplin Hill Road from University Town Center Road • Lane additions to increase capacity • Upgrade of intersection of Monongahela Boulevard and Chaplin Hill Road • Upgrade of the intersection of US-19 and Boyers Avenue • Signal system coordination and optimization • Integrate bicycle/pedestrian improvements 	<u>FHWA Planning Factors Supported</u> 1,2,3,4,5,6,7,8
	First implementation action: Perform comprehensive preliminary engineering study to evaluate alternatives to improve this interchange and access system. New and innovative options for the interchange and connectivity should be explored to minimize construction costs and negative impacts in the study area.	
	Key implementation factors: Optimal solution could vary significantly based on other factors such as potential land use and interchange changes (TIF district improvements) and the related connection from the interchange to Patteson Boulevard.	
5	New I-79 Interchange at	
	Location: Approximately ½ way between the existing I-79 interchanges at Chaplin Hill Road and Fairmont Road (US-19)	

	<p>Business Park Site and Connecting Roadways</p> <p>Purpose: To support economic development and to provide an additional point of access to I-79 (reduce demand at current interchanges).</p> <p>Improvements:</p> <ul style="list-style-type: none"> • New interchange in conjunction with the proposed business park development • Access roadways including a connection to University Town Center • New access roadway located west of I-79 through new business park connecting to Chapel Hill Road • Park and ride lot <p>First implementation action: Interchange Justification Study to evaluate design needs of new interchange and internal roadways.</p> <p>Key implementation factors: Legislative approval of TIF and coordination with local agencies for roadway connections.</p>	<p><u>Estimated Cost</u> \$43,000,000 TIF District</p> <p><u>Primary Travel Modes Improved</u> Auto Transit</p> <p><u>L RTP Goals Directly Supported</u> 1,2,3,4,5,8</p> <p><u>FHWA Planning Factors Supported</u> 1,2,3,4,5,6</p>
<p>6 Roadway Connection from New I-79 Interchange to Monongahela Boulevard</p>	<p>Location: From proposed business park access roadway (that connects directly to new interchange) to Monongahela Boulevard at Patteson Boulevard.</p> <p>Purpose: To provide an additional portal into the urban core area to relieve traffic from current portals from I-79 and to reduce traffic on the Monongahela Boulevard and Beechurst Corridors. To provide a multimodal connection to the park and ride at new interchange to reduce vehicular demand into the core.</p> <p>Improvements:</p> <ul style="list-style-type: none"> • New 4-lane roadway • New bridge over Monongahela River • Parallel bike lanes, sidewalks and/or multi use path • Aesthetic gateway design <p>First implementation action: Alignment study to evaluate traffic capacity design needs and to choose an alignment and bridge location that minimizes negative property impacts and environmental impacts.</p> <p>Key implementation factors: Local acceptance of impacts, cost, impacts to WVU property and operations at Coliseum.</p>	<p><u>Estimated Cost</u> \$49,000,000</p> <p><u>Primary Travel Modes Improved</u> Auto Transit Bicycle Pedestrian</p> <p><u>L RTP Goals Directly Supported</u> 1,2,3,4,5,8</p> <p><u>FHWA Planning Factors Supported</u> 1,2,3,4,6</p>
<p>6B PRT Connection New Business Park to Evansdale Campus</p>	<p>Location: From new park and ride lot in TIF district business park to Coliseum parking lot, to Evansdale Campus.</p> <p>Purpose: To provide a transit connection to the park and ride at new interchange to reduce vehicular demand into the core.</p> <p>Improvements:</p> <ul style="list-style-type: none"> • New PRT track integrated with the construction of the new roadway and bridge connection. • Station at business park - Park and Ride • Station at Coliseum parking lot • Station near Evansdale Campus Drive • Connection to Engineering PRT station 	<p><u>Estimated Cost</u> \$80,000,000</p> <p><u>Primary Travel Modes Improved</u> Transit</p> <p><u>L RTP Goals Directly Supported</u> 1,2,3,5,6,7</p>

	<p>First implementation actions: Preliminary engineering study of potential ridership and implementation cost and feasibility.</p> <p>Key implementation factors: Likely not feasible with current PRT system infrastructure, but could become feasible if system moves to self-powered vehicles with wireless controls. Cost would then only be cost of guideway, vehicles, and stations, which is the estimated cost included in this description.</p>	<p>FHWA Planning Factors Supported 1,2,4,5,6,7</p>
7	<p>Van Voorhis Road Improvements</p> <p>Limits: From WV-705 to Bakers Ridge Road</p> <p>Purpose: To provide improved multimodal connectivity from the campus area to the residential areas to the north in a way that incentivizes transit usage and reduces automobile demand.</p> <p>Improvements:</p> <ul style="list-style-type: none"> • Improve traffic lanes (pavement, drainage, width) • Provide bicycle and pedestrian connectivity from WV-705 to White Oak Drive • Provide bus only lane southbound with priority traffic signal phase for buses at WV-705 intersection • Provide bus stops at key locations <p>First implementation actions: Preliminary engineering study of feasibility of bus lane and appropriate length, options for providing bicycle and pedestrian connectivity such as: 15 foot wide lane on northbound side, sidewalk on one or both sides, and/or a parallel multiuse trail. Logical limits of improvements based on walkable/bikeable slopes should also be verified.</p> <p>Key implementation factors: Coordination with MLTA to ensure utilization of proposed bus lane.</p>	<p><u>Estimated Cost</u> \$15,000,000</p> <p><u>Primary Travel Modes Improved</u> Auto Transit Bicycle Pedestrian</p> <p><u>L RTP Goals Directly Supported</u> 1,2,3,5,6,7</p> <p><u>FHWA Planning Factors Supported</u> 2,4,5,6,7,8</p>
8	<p>Beechurst Avenue Improvements</p> <p>Limits: From Foundry Street to 8th Street</p> <p>Purpose: To improve automobile capacity and travel time and maintain pedestrian and bicycle traffic through corridor</p> <p>Improvements:</p> <ul style="list-style-type: none"> • Additional lanes/turn lanes to improve capacity • Access management • Replace sidewalks • Provide bus stops with shelters at key locations <p>First implementation action: Perform a planning and preliminary engineering study of corridor that will include an assessment of capacity and safety needs, a detailed review of existing right-of-way, and the use and value of adjacent properties. The study must evaluate a comprehensive set of potential alternatives that maximize traffic capacity and maintains acceptable bicycle and pedestrian movement through the corridor. Access management options should be explored. The study should include an intense public/stakeholder/property owner involvement process that identifies potential partnership opportunities in redeveloping properties along the corridor and providing needed right-of-way. To-scale mapping based on ground survey and right-of-way research must be included.</p> <p>Key implementation factors: Identifying a cost feasible alternative that has acceptable impacts to adjacent properties, increases automobile capacity in the corridor, and maintains acceptable levels of service for bicycles and pedestrians.</p>	<p><u>Estimated Cost</u> \$7,000,000</p> <p><u>Primary Travel Modes Improved</u> Auto Transit Pedestrian</p> <p><u>L RTP Goals Directly Supported</u> 1,2,3,5,6,7</p> <p><u>FHWA Planning Factors Supported</u> 2,4,5,6,7,8</p>
9	<p>University Avenue Improvements</p> <p>Location: From Boyers Avenue to Fayette Street</p> <p>Purpose: To provide a bicycle and pedestrian focused corridor and improve traffic capacity.</p>	<p><u>Estimated Cost</u> \$20,000,000</p>

	<p>Improvements:</p> <ul style="list-style-type: none"> • Provide completed sidewalks on both sides of street for entire length • Provide 15 foot lanes in uphill direction for bicycle climbing by widening and/or restriping: <ul style="list-style-type: none"> ○ Boyers Avenue to Congress Avenue ○ Mulberry Street to Laurel Street ○ Koontz Ave to Patteson Boulevard • Include bicycle route signing and marking in corridor • Improve pedestrian crossings throughout corridor • Improve automobile capacity (turn lanes, improved intersections, etc.) and safety (pedestrian crossings, sight distance, etc.) at key intersections (i.e. law school, Patteson Blvd., Collins Ferry) • Provide identifiable bus stop locations and shelters at key locations <p>First implementation action: Perform preliminary engineering study to identify (through data and analysis) the optimal solution for the corridor including traffic forecasts and capacity analysis, pedestrian and bicycle safety and flow needs, right-of-way and cost impacts of solutions, etc.</p> <p>Key implementation factors: Property impacts and costs related to widening of roadway/right-of-way.</p>	<p>Primary Travel Modes Improved Auto Transit Bicycle Pedestrian</p> <p>L RTP Goals <u>Directly Supported</u> 1,2,3,5,6,7</p> <p>FHWA Planning Factors Supported 2,4,5,6,7,8</p>
<p>10 Burroughs Street</p>	<p>Location: From Collins Ferry Road to WV-705/Van Voorhis Road</p> <p>Purpose: To increase capacity to address existing capacity deficiency.</p> <p>Improvements:</p> <ul style="list-style-type: none"> • Improve automobile capacity at intersections with Collins Ferry Road and WV-705 • Provide left turn lanes at key intersection/driveways • Limit and/or combine access points • Maintain and widen sidewalk on south side of street • Add sidewalk to north side of street <p>First implementation action: Perform preliminary engineering analysis to determine most critical needs and potential solutions and impacts in corridor.</p> <p>Key implementation factors: Acceptance of improvements by residents along corridor. Potential property impacts of widening for turn lanes and/or sidewalks.</p>	<p><u>Estimated Cost</u> \$4,000,000</p> <p>Primary Travel Modes Improved Auto Pedestrian</p> <p>L RTP Goals <u>Directly Supported</u> 1,2,3,5,6,7</p> <p>FHWA Planning Factors Supported 2,3,4,5,6,7</p>
<p>11 West Run Improvements - Western Section</p>	<p>Location: From VanVoorhis Road to Stewartstown Road</p> <p>Purpose: To increase traffic capacity and to improve pedestrian and bike traffic flow.</p> <p>Improvements:</p> <ul style="list-style-type: none"> • Add capacity through key turn lane additions and intersection improvements • Widen lanes to 15 feet wide lanes on inclines for adequate bicycle overtaking width • Improve geometry (sight distance, curvature, lane widths, shoulders, etc.) • Explore potential for parallel multiuse path in corridor <p>First implementation actions: Engineering study of needed turn lane additions and intersection upgrades, lane widening, and geometric improvements that includes property impacts and costs. Feasibility study for parallel multiuse path in corridor.</p>	<p><u>Estimated Cost</u> \$12,000,000</p> <p>Primary Travel Modes Improved Auto Transit Bicycle Pedestrian</p> <p>L RTP Goals <u>Directly Supported</u></p>

	Key implementation factors: Impacts to adjacent properties and cost.	1,2,3,5,6,7 <u>FHWA Planning Factors Supported</u> 1,2,4,5,6,7,8
12 Stewartstown Road S1 Improvements	<p>Location: From WV-705 to Point Marion Road (US-119)</p> <p>Purpose: To provide additional people moving capacity from I-68 to campus area and employment areas north of WV-705.</p> <p>Improvements:</p> <ul style="list-style-type: none"> • Add one through traffic lane in each direction from WV-705 to West Run Road • Provide turn lanes where appropriate • Implement a defined access management corridor plan • Rightmost lane between West Run Road and WV-705 to be HOV lane and/or provide bus queue jump at WV-705 • Limit access points to one full movement intersection between WV-705 and West Run Road • Limit access points to two full movement access points between West Run Road and Point Marion Road • Construct outside lanes 15 feet wide on inclines for adequate bicycle overtaking width • Construct sidewalk on west side of street <p>First implementation actions: Preliminary engineering study to determine intersection and capacity needs, access management concepts, HOV/BRT feasibility and benefits, costs, right-of-way and environmental impacts.</p> <p>Key implementation factors: Acceptance of any negative impacts versus benefits, HOV/BRT benefits and acceptability, maintaining adequate access.</p>	<p><u>Estimated Cost</u> \$12,000,000</p> <p>Primary Travel Modes Improved Auto Transit Pedestrian</p> <p>LRTP Goals <u>Directly Supported</u> 1,3,5</p> <p>FHWA Planning Factors Supported 1,2,4,5,6,7,8</p>
13 West Run Road Improvements - Eastern Section	<p>Location: From Stewartstown Road to Point Marion Road</p> <p>Purpose: To increase traffic capacity and to improve transit, pedestrian, and bike traffic flow.</p> <p>Improvements:</p> <ul style="list-style-type: none"> • Add capacity through key turn lane additions and intersection improvements • Widen lanes to 15 feet wide lanes on inclines for adequate bicycle overtaking width • Improve geometry (sight distance, curvature, lane widths, shoulders, etc.) • Explore potential for parallel multiuse path in corridor • Explore providing queue jump lanes at intersections for expedited bus service <p>First implementation actions: Engineering study of needed turn lane additions and intersection upgrades, lane widening, and geometric improvements that includes property impacts and costs. Feasibility study for parallel multiuse path in corridor.</p> <p>Key implementation factors: Impacts to adjacent properties and cost.</p>	<p><u>Estimated Cost</u> \$3,000,000</p> <p>Primary Travel Modes Improved Auto Transit Bicycle Pedestrian</p> <p>LRTP Goals <u>Directly Supported</u> 1,2,3,5,6,7</p> <p>FHWA Planning Factors Supported 1,2,4,5,6,8</p>
14 Cheat Road Improvements	<p>Location: From I-68 interchange to West Run Road</p> <p>Purpose: Improve traffic/people carrying capacity in heavily traveled corridor. To encourage transit use, and van/carpooling from park and ride at Glenmark Centre.</p>	<p><u>Estimated Cost</u> \$6,000,000</p>

	<p>Improvements:</p> <ul style="list-style-type: none"> • Add one lane of through capacity in each direction – The additional lane would be a High Occupancy Vehicle (HOV) lane that only buses and automobiles with 3 or more occupants could legally use (2 occupants or less would have to use other 2 general purpose lanes). The purpose of the HOV lane is to add vehicular capacity in this overcapacity corridor in a way that also gives a distinct travel time advantage to transit and vanpooling/carpooling to maximize total person trips that can be handled in the corridor. • Explore option of rightmost lane as an HOV/BRT lane • Improve signal with Glenmark Center to provide bus priority • Add bike lanes <p>First implementation actions: Engineering study to determine required widening and potential use of existing shoulder for HOV/BRT use in lieu of widening.</p> <p>Key implementation factors: HOV/BRT benefits and acceptability.</p>	<p>Primary Travel Modes Improved Auto Transit Bicycle</p> <p>L RTP Goals Directly Supported 1,2,3,5,6,7</p> <p>FHWA Planning Factors Supported 1,2,4,5,6,7,8</p>
15	<p>Willowdale Road Sidewalk Improvements</p> <p>Location: From University Avenue to WV-705</p> <p>Purpose: To provide a convenient/inviting corridor for pedestrians.</p> <p>Improvements:</p> <ul style="list-style-type: none"> • Complete sidewalks connections on both sides of street <p>First implementation actions: Preliminary engineering investigation of the preferred locations for sidewalk additions, impacts, and costs.</p> <p>Key implementation factors: Acceptability of property impacts and cost feasibility.</p>	<p>Estimated Cost \$4,000,000</p> <p>Primary Travel Modes Improved Pedestrian</p> <p>L RTP Goals Directly Supported 1,2,3,5,6,7</p> <p>FHWA Planning Factors Supported 2,4,5,6,8</p>
16	<p>Old Cheat Road / Cheat Road Bike Lanes</p> <p>Location: From Cheat Lake bridge to western intersection of Cheat Road and Old Cheat Road</p> <p>Purpose: To provide a more inviting bike route for commuters from the Cheat Lake area.</p> <p>Improvements:</p> <ul style="list-style-type: none"> • Widen roadway to provide bike lanes <p>First implementation actions: Engineering study to determine the required widening needs and costs.</p> <p>Key implementation factors: Identification of funding.</p>	<p>Estimated Cost \$7,000,000</p> <p>Primary Travel Modes Improved Bicycle</p> <p>L RTP Goals Directly Supported 1,2,3,5,6,7</p> <p>FHWA Planning Factors Supported 2,4,5,6</p>
17	<p>Fairmont Road / Holland</p> <p>Location: Through Westover from the I-79 Interchange to the Westover Bridge</p>	

<p>Avenue (US-19)</p>	<p>Purpose: To improve automobile traffic capacity and safety and increase travel by pedestrians and bicyclists.</p> <p>Improvements:</p> <ul style="list-style-type: none"> • Improve access management by reducing and consolidating access points • Improve intersections and traffic signal timings and coordination • Provide additional turn lanes where beneficial • Provide 15 feet wide lanes or bike lanes on inclines and other difficult areas for adequate bicycle overtaking width • Provide complete sidewalks on both sides of the street • Provide bus stops and shelters at key locations <p>First implementation actions: Perform preliminary engineering study to identify optimal solutions for the corridor that includes crash analysis, traffic forecasts and capacity analysis, pedestrian and bicycle safety and flow needs, identification of access management deficiencies, locations for bicycle climbing lanes, right-of-way and cost impacts of solutions, etc.</p> <p>Key implementation factors: Property impacts and costs related to widening of roadway/right-of-way.</p>	<p><u>Estimated Cost</u> \$11,000,000</p> <p><u>Primary Travel Modes Improved</u> Auto Transit Bicycle Pedestrian</p> <p><u>L RTP Goals Directly Supported</u> 1,2,3,5,6,7</p> <p><u>FHWA Planning Factors Supported</u> 1,2,4,5,6,7,8</p>
<p>18 Greenbag Road Improvements</p>	<p>Location: From Don Knotts Boulevard (US-119) to Sabraton Avenue (SR-7)</p> <p>Purpose: To enhance route as an attractive alternative for automobiles and especially trucks (in lieu of traveling downtown). To increase travel by pedestrians and bicyclists.</p> <p>Improvements:</p> <ul style="list-style-type: none"> • Improve intersection of Sabraton Avenue and Greenbag Road to better accommodate truck turns • Improve intersections in corridor • Widen roadway to a minimum of two 11' lanes with 4-5' paved shoulders including wider (15 feet wide) lanes on inclines for adequate bicycle overtaking width • Construct sidewalks in targeted locations (focused on key sidewalk network connections) • Provide bus stops with shelters at key locations • Strengthen pavement where needed • Include truck route signage <p>First implementation actions: Perform preliminary engineering study to determine most appropriate intersection configurations, pedestrian and bicycle safety and connectivity needs, locations for bicycle climbing lanes, right-of-way and cost impacts of solutions, etc.</p> <p>Key implementation factors: Property impacts and costs related to widening of roadway/right-of-way.</p>	<p><u>Estimated Cost</u> \$16,000,000</p> <p><u>Primary Travel Modes Improved</u> Auto Bicycle Pedestrian Transit</p> <p><u>L RTP Goals Directly Supported</u> 1,2,3,4,5,6,7</p> <p><u>FHWA Planning Factors Supported</u> 2,4,5,6,7,8</p>
<p>19 Dorsey Avenue</p>	<p>Location: High Street to Greenbag Road</p> <p>Improvements:</p> <ul style="list-style-type: none"> • Complete the sidewalks on at least one side of the Street <p>First implementation actions: Preliminary engineering investigation of the preferred locations for sidewalk additions, impacts, and costs.</p> <p>Key implementation factors: Acceptability of property impacts and cost feasibility.</p>	<p><u>Estimated Cost</u> \$4,000,000</p> <p><u>Primary Travel Modes Improved</u> Pedestrian</p> <p><u>L RTP Goals Directly Supported</u></p>

			1,2,3,5,6,7 FHWA Planning Factors Supported 2,4,5,6,8
20	Brockway Rodgers/Powell Avenues (WV-7)	<p>Location: Walnut Street to Old Rte 7 (CR-64)</p> <p>Purpose: To provide pedestrian and bike connectivity from Sabraton to downtown.</p> <p>Improvements:</p> <ul style="list-style-type: none"> • Improve connections to Decker’s Creek Trail • Improve and complete sidewalk connections • Provide bus stops with shelters at key locations <p>First implementation action: Preliminary engineering study to determine most appropriate locations to provide/improve trail connections and to improve sidewalk connectivity and to determine right-of-way impacts and costs.</p> <p>Key implementation factors: Acceptability of property impacts and cost feasibility.</p>	<p><u>Estimated Cost</u> \$6,000,000</p> <p><u>Primary Travel Modes Improved</u> Bicycle Pedestrian Transit</p> <p><u>L RTP Goals Directly Supported</u> 1,2,3,5,6,7</p> <p><u>FHWA Planning Factors Supported</u> 2,4,5,6,7,8</p>
21	Earl Core Road (WV-7) - Northern Section	<p>Location: Old Rte 7 (CR-64) to I-68</p> <p>Purpose: To provide pedestrian and bike connectivity from Sabraton to downtown, to improve traffic flow and safety, and to provide attractive truck access to Greenbag Road</p> <p>Improvements:</p> <ul style="list-style-type: none"> • Corridor signal optimization • Reduce access conflicts (consolidation of duplicate access points, redesign of driveways) • Add continuous sidewalks on both sides of Earl Core Road • Improve capacity and safety in corridor • Add turn lanes where appropriate • Improve connectivity to Decker’s Creek Trail at key locations • Provide bus stops with shelters at key locations <p>First implementation action: Preliminary engineering study that includes needed intersection capacity and safety improvements based on crash data and traffic volumes, identification of existing access management deficiencies, coordination with local property owners to optimize access design and sidewalk locations, and identifications of costs and property impacts.</p> <p>Key implementation factors: Coordination with local property owners for access improvements and sidewalk installation, and potential property impacts for capacity improvements.</p>	<p><u>Estimated Cost</u> \$9,000,000</p> <p><u>Primary Travel Modes Improved</u> Auto Transit Bicycle Pedestrian</p> <p><u>L RTP Goals Directly Supported</u> 1,2,3,4,5,6,7</p> <p><u>FHWA Planning Factors Supported</u> 1,2,4,5,6,7,8</p>
22	Earl Core Road (WV-7) - Southern Section	<p>Location: I-68 to Deckers Creek Boulevard</p> <p>Purpose:</p> <ul style="list-style-type: none"> • Improve traffic capacity and flow 	<p><u>Estimated Cost</u> \$9,000,000</p>

	<p>Improvements:</p> <ul style="list-style-type: none"> • Consolidate and redesign driveways • Add turn lanes (potentially a center two-way left turn lane for entire length) • Add sidewalks on at least one side of roadway <p>First implementation action: Preliminary engineering study that includes needed intersection capacity and safety improvements based on crash data and traffic volumes, identification of existing access management deficiencies, coordination with local property owners to optimize access design and sidewalk locations, and identifications of costs and property impacts.</p> <p>Key implementation factors: Coordination with local property owners for access improvements and sidewalk installation, and potential property impacts for capacity improvements.</p>	<p>Primary Travel Modes Improved</p> <p>Auto Transit Bicycle Pedestrian</p> <p>L RTP Goals Directly Supported 1,2,3,5,6,7</p> <p>FHWA Planning Factors Supported 2,4,5,6,8</p>
<p>23 New Road Connection from Willey Street to Downtown Campus Area</p>	<p>Location: From Willey Street approximately ¼-mile south of WV-705 to Protzman Street or Falling Run Road.</p> <p>Purpose: To provide a more efficient connection between Mileground area and downtown campus for autos, buses, bicyclists, and pedestrians. Reduce traffic volumes at WV-705/Stewartstown Road Intersection. Provide a direct route to campus that bypasses downtown.</p> <p>Improvements:</p> <ul style="list-style-type: none"> • New two-lane roadway with 11 feet wide traffic lanes • 10 feet wide multiuse trail on one side of roadway • Strict access management (no access points allowed) <p>First implementation actions: Alignment study to determine best alignment and termination points and treatments, environmental impacts, and costs.</p> <p>Key implementation factors: Providing the transportation connection without violating the communities desire to preserve the “Reserved Open Area” and “Limited Growth” through which the alignment would traverse (see land use concept map from Visioning process). Completing the pedestrian and bicycle connectivity to University Avenue will be important to make this project successful.</p>	<p>Estimated Cost \$6,000,000</p> <p>Primary Travel Modes Improved</p> <p>Auto Transit Bicycle Pedestrian</p> <p>L RTP Goals Directly Supported 1,2,3,5,6</p> <p>FHWA Planning Factors Supported 1,2,4,6</p>
<p>24 Protzman/Falling Run Pedestrian and Bicycle Connector</p>	<p>Location: From the western terminus of Project # 23 to University Avenue.</p> <p>Purpose: To connect multiuse trail of Project 23 to the downtown campus area.</p> <p>Improvements:</p> <ul style="list-style-type: none"> • 10-12’ wide multiuse trail/path parallel to existing streets • Sidewalks adjacent to street on one side <p>First implementation actions: Engineering study of feasible locations for proposed improvements and impacts/costs.</p> <p>Key implementation factors: Constructability/funding.</p>	<p>Estimated Cost \$1,000,000</p> <p>Primary Travel Modes Improved</p> <p>Bicycle Pedestrian</p> <p>L RTP Goals Directly Supported 1,2,3,5,6,7</p>

			FHWA Planning Factors Supported 2,4,5,6,8
25 Willey Street Improvements	<p>Location: From High Street to WV-705</p> <p>Purpose: To increase traffic capacity of Willey Street and to improve auto capacity and pedestrian and bike traffic flow from neighborhoods to downtown and the Mileground.</p> <p>Improvements:</p> <ul style="list-style-type: none"> • Add capacity through key turn lane additions and intersection improvements • Add key connections to complete the sidewalks • Widen lanes to 15 feet wide lanes on inclines for adequate bicycle overtaking width • Improve geometry (sight distance, curvature, lane widths, shoulders, etc.) • Provide bus stops and shelters at key locations. <p>First implementation actions: Engineering study of needed turn lane additions and intersection upgrades, sidewalk locations, lane widening, and geometric improvements that includes property impacts and costs.</p> <p>Key implementation factors: Impacts to adjacent properties and cost.</p>	<p>Estimated Cost \$13,000,000</p> <p>Primary Travel Modes Improved Auto Bicycle Pedestrian Transit</p> <p>L RTP Goals Directly Supported 1,2,3,5,6,7</p> <p>FHWA Planning Factors Supported 2,4,5,6,7,8</p>	
26 WVU Campus Bus Rapid Transit Connector	<p>Location: From Evansdale Campus to Downtown Campus</p> <p>Purpose: To improve capacity of transit service between WVU campuses.</p> <p>Improvements:</p> <ul style="list-style-type: none"> • Designation of combination of WVU and City streets • Construct missing roadway sections required for completing the route <p>First implementation actions: Engineering study of the feasibility and cost of the concept.</p> <p>Key implementation factors: Coordination between MLTA, WVU, and the City.</p>	<p>Estimated Cost \$1,000,000</p> <p>Primary Travel Modes Improved Transit</p> <p>L RTP Goals Directly Supported 1,2,3,5,6,7</p> <p>FHWA Planning Factors Supported 2,4,5,6,7,8</p>	
27 Grant Avenue Bicycle/Pedestrian Connector	<p>Location: From end of Grant Avenue to Riverview Drive</p> <p>Purpose: To provide bicycle and pedestrian connection between Downtown and the WVU Evansdale Campus.</p> <p>Improvements:</p> <ul style="list-style-type: none"> • Construct multiuse trail <p>First implementation actions: Preliminary engineering study to determine the most appropriate alignment, impacts, right-of-way needs, and costs.</p>	<p>Estimated Cost \$900,000</p> <p>Primary Travel Modes Improved Bicycle Pedestrian</p>	

	Key implementation factors: Right-of-way acquisition (if not already publicly owned).	<p>L RTP Goals <u>Directly Supported</u> 1,2,3,5,6,7</p> <p>FHWA Planning <u>Factors Supported</u> 2,3,4,5,6</p>
28 White Park / Caperton Trail Connection	<p>Location: From White Park to Caperton Trail</p> <p>Purpose: To provide connectivity from White Park and adjacent neighborhoods to the regional trail system.</p> <p>Improvements:</p> <ul style="list-style-type: none"> Construct multiuse trail <p>First implementation actions: Preliminary engineering study to determine the preferred alignment, crossing treatment at Don Knotts Boulevard, impacts, right-of-way needs, and costs.</p> <p>Key implementation factors: Crossing of Don Knotts Boulevard.</p>	<p><u>Estimated Cost</u> \$2,000,000</p> <p><u>Primary Travel Modes Improved</u> Bicycle Pedestrian</p> <p>L RTP Goals <u>Directly Supported</u> 1,2,3,5,6,7</p> <p>FHWA Planning <u>Factors Supported</u> 2,3,4,5,6</p>
29 Grafton Road (US-119)	<p>Location: From Scotts Avenue to Greenbag Road</p> <p>Purpose: To increase automobile capacity to address existing capacity deficiency and to provide bike connectivity.</p> <p>Improvements:</p> <ul style="list-style-type: none"> Complete 4-lane roadway Provide turn lanes where appropriate Limit any new full access points to no closer than 2000 feet from an existing full access point Bike lanes or climbing lanes <p>First implementation actions: Preliminary engineering study to identify capacity and delay deficiencies in more detail, impacts, costs, and access point locations.</p> <p>Key implementation factors: Identifying the true need for this improvement in more detailed studies. Establishing access management in short-term to avoid future access problems.</p>	<p><u>Estimated Cost</u> \$5,000,000</p> <p><u>Primary Travel Modes Improved</u> Auto Bicycle</p> <p>L RTP Goals <u>Directly Supported</u> 1,2,3,4,7</p> <p>FHWA Planning <u>Factors Supported</u> 1,2,4,5,6,8</p>
30 Stewart Street Improvements	<p>Location: From High Street to WV-705</p> <p>Purpose: To increase traffic capacity and to improve pedestrian and bike traffic flow from neighborhoods to downtown and WV-705.</p>	<p><u>Estimated Cost</u> \$11,000,000</p>

	<p>Improvements:</p> <ul style="list-style-type: none"> • Add capacity through key turn lane additions and intersection improvements • Add key sidewalk connections to complete the sidewalks • Widen lanes to 15 feet wide lanes on inclines for adequate bicycle overtaking width • Improve geometry (sight distance, curvature, lane widths, shoulders, etc.) • Provide bus stops and shelters at key locations <p>First implementation actions: Engineering study of needed turn lane additions and intersection upgrades, sidewalk locations, lane widening, and geometric improvements that includes property impacts and costs.</p> <p>Key implementation factors: Impacts to adjacent properties and cost.</p>	<p>Primary Travel Modes Improved</p> <p>Auto Bicycle Pedestrian Transit</p> <p>L RTP Goals Directly Supported</p> <p>1,2,3,5,6,7</p> <p>FHWA Planning Factors Supported</p> <p>2,4,5,6,7,8</p>
<p>31 PRT Extension from University Health Services to Mon General Hospital</p>	<p>Location: From University Health Sciences to Mon General Hospital</p> <p>Purpose: To provide high capacity person moving connection between these locations to reduce automobile traffic demand within the core campus and employment areas.</p> <p>Improvements:</p> <ul style="list-style-type: none"> • Extension of PRT system • Stations at each location • Assumes a system that includes wireless communications and battery powered vehicles (expansion cost greatly reduced over current technology) <p>First implementation actions: Alignment study to determine the most cost effective route.</p> <p>Key implementation factors: Feasibility of construction and cost.</p>	<p>Estimated Cost</p> <p>\$57,000,000</p> <p>Primary Travel Modes Improved</p> <p>Transit</p> <p>L RTP Goals Directly Supported</p> <p>1,2,3,5,6,7</p> <p>FHWA Planning Factors Supported</p> <p>1,2,4,5,6,7,8</p>
<p>32 PRT Extension from Mon General Hospital to Glenmark Centre</p>	<p>Location: From Mon General Hospital to Glenmark Centre</p> <p>Purpose: To provide high capacity person moving connection between these locations to reduce automobile traffic demand to and from the core campus and employment areas from I-68.</p> <p>Improvements:</p> <ul style="list-style-type: none"> • Extension of PRT system • Stations at each location • Assumes a system that includes wireless communications and self-powered (battery) vehicles. <p>First implementation actions: Alignment study to determine the most cost effective route.</p> <p>Key implementation factors: Feasibility of construction and cost.</p>	<p>Estimated Cost</p> <p>\$103,000,000</p> <p>Primary Travel Modes Improved</p> <p>Transit</p> <p>L RTP Goals Directly Supported</p> <p>1,2,3,5,6,7</p> <p>FHWA Planning Factors Supported</p> <p>1,2,4,5,6,7,8</p>

33 Grumbein's Island Grade Separation	<p>Location: Grumbein's Island on University Avenue</p> <p>Purpose: To separate vehicular traffic on University Avenue from pedestrian crossing traffic to improve traffic flow and reduce pedestrian/auto conflicts.</p> <p>Improvements: Grade separation of roadway from pedestrian crossing.</p> <p>First implementation actions: Completion of traffic operations study and prepare final plans based on preliminary engineering report.</p> <p>Key implementation factors: Coordination between WVU, City, and State.</p>	<p><u>Estimated Cost</u> \$10,000,000</p> <p><u>Primary Travel Modes Improved</u> Auto Pedestrian Transit</p> <p><u>L RTP Goals Directly Supported</u> 1,2,3,5,6,7</p> <p><u>FHWA Planning Factors Supported</u> 2,4,5,7,8</p>
34 Riddle Street Improvements	<p>Location: From WV-705 to West Run Road</p> <p>Purpose: To improve pedestrian and bike traffic flow from neighborhoods to WV-705.</p> <p>Improvements:</p> <ul style="list-style-type: none"> • Add sidewalk to at least one side of street • Widen lanes to 15 feet wide lanes on inclines for adequate bicycle overtaking width • Provide bus stops and shelters at key locations <p>First implementation actions: Engineering study of most desirable sidewalk locations and lane widening that includes property impacts and costs.</p> <p>Key implementation factors: Impacts to adjacent properties and cost.</p>	<p><u>Estimated Cost</u> \$4,000,000</p> <p><u>Primary Travel Modes Improved</u> Pedestrian Bicycle Transit</p> <p><u>L RTP Goals Directly Supported</u> 1,2,3,5,6,7</p> <p><u>FHWA Planning Factors Supported</u> 2,4,5,6,8</p>
35 8th Street Bridge over Monongahela River and Roadway Connection to TIF Development Area Interchange to I-79	<p>Location: From Beechurst Avenue at 8th Street to new interchange at I-79</p> <p>Purpose: To provide additional connection between I-79 to Morgantown and Campus. To reduce traffic volumes on Beechurst Avenue south of 8th Street and on Westover Bridge, and on Monongahela Boulevard at Patteson Drive.</p> <p>Improvements:</p> <ul style="list-style-type: none"> • New bridge over Monongahela River • Reconstructed intersection at Beechurst Avenue and 8th Street • New intersection at extended 8th Street and Riverside Avenue • Improve roadways including improved intersections, sidewalks, and bike lanes <ul style="list-style-type: none"> ○ Riverside Avenue from new intersection with 8th Street to intersection with Dunkard Avenue 	<p><u>Estimated Cost</u> \$32,000,000</p> <p><u>Primary Travel Modes Improved</u> Auto Transit Bicycle Pedestrian</p>

	<ul style="list-style-type: none"> ○ Dunkard Avenue from Riverside Drive to Dents Run Boulevard ○ Dents Run Boulevard to roadway connection to TIF development roadways ○ Bus stops and shelters at key locations ● New roadway connection between Dents Run Boulevard to TIF development <p>First implementation item: Alignment and feasibility studies for the bridge and new roadway connection. Engineering study of needed turn lane additions and intersection upgrades, sidewalk locations, lane widening, and geometric improvements to Riverside Avenue, Dunkard Avenue, and Dents Run Boulevard that includes property impacts and costs.</p> <p>Key implementation factors: Environmental feasibility, local acceptance of impacts, property acquisition.</p>	<p>L RTP Goals <u>Directly Supported</u> 1,2,3,4,5,6,8</p> <p>FHWA Planning Factors Supported 1,2,3,4,5,6,7,8</p>
36	<p>New Roadway Connection from Mileground Road to Hartman Run Road</p> <p>Location: From intersection of WV-705 and Mileground Road to Hartman Run Road near Fulmer Street</p> <p>Purpose: To provide an efficient alternative route for traffic from the Mileground to Sabraton for all modes including trucks.</p> <p>Improvements:</p> <ul style="list-style-type: none"> ● New 2-lane roadway with turn lanes at appropriate locations ● Sidewalk on one side ● Multiuse trail on one side ● Bus stops and shelters at key locations <p>First implementation item: Alignment and feasibility study for the roadway connection</p> <p>Key implementation factors: Construction feasibility, property impacts, public acceptance, and cost.</p>	<p><u>Estimated Cost</u> \$17,000,000</p> <p>Primary Travel <u>Modes Improved</u> Auto Bicycle Pedestrian Transit</p> <p>L RTP Goals <u>Directly Supported</u> 1,2,3,4,5,6</p> <p>FHWA Planning Factors Supported 1,2,4</p>
37	<p>Extension of Airport Industrial Road to WV-7 in Sabraton</p> <p>Location: From terminus of planned industrial road east of airport to WV-7 in Sabraton</p> <p>Purpose: To provide an efficient alternative route for traffic from Cheat Road to Sabraton</p> <p>Improvements:</p> <ul style="list-style-type: none"> ● New 2-lane roadway with turn lanes at appropriate locations. <p>First implementation item: Alignment and feasibility study for the roadway connection.</p> <p>Key implementation factors: Construction feasibility, property impacts, public acceptance, and cost.</p>	<p><u>Estimated Cost</u> \$12,000,000</p> <p>Primary Travel <u>Modes Improved</u> Auto</p> <p>L RTP Goals <u>Directly Supported</u> 1,3,4,5</p> <p>FHWA Planning Factors Supported 1,2,4</p>

UNMAPPED PROJECTS

Project/Corridor	Description	
38 Intersection Capacity and Safety Improvement Program	<p>Location: Numerous intersections throughout the region</p> <p>Purpose: To systematically improve capacity and/or safety at key intersections in the region.</p> <p>Improvements: Short to medium term improvements to intersections to reduce crashes and to increase system capacity and automobile travel efficiency. The improvements could include:</p> <ul style="list-style-type: none"> • Traffic signal optimization through additional and improved detection, improved control equipment and software, optimized phasing and timing. • Addition of turn lanes and/or through lanes. • Correction of geometric deficiencies • Change in traffic control (roundabout, traffic signal, stop sign, yield) • Improved pedestrian crossings • Improved bicycle accommodations <p>The preferred improvements could, but would not necessarily have to, be developed as part of a larger corridor study. The intent of this plan item is to develop feasible short to medium term improvements that can be implemented quickly to improve safety and capacity.</p> <p>First implementation actions:</p> <ul style="list-style-type: none"> • Prioritization of intersections in the region based on a comprehensive study of: <ul style="list-style-type: none"> ○ Crash data including rankings based on number of crashes, crash rates, and severity (injury/fatality) rates. ○ Existing congestion levels (delay per vehicle, backups) • Detailed safety and congestion studies of the top 5 to 10 intersections each year. These studies should evaluate crash data and operational data in detail to identify contributing factors, potential countermeasures, intersection improvement alternatives, short and long term needs, etc. Preferred alternatives should then be programmed and implemented. • Coordination with the findings of the Downtown Signalization Study (RTI/WVU), which is exploring options for some of the key intersections listed below. <p>Key implementation factors:</p> <ul style="list-style-type: none"> • Prioritizing locations • Identifying short to medium term solutions that also fit within the long term needs of the corridor • Acceptable impacts to adjacent properties <p>Initial intersection list for safety and congestion studies:</p> <ul style="list-style-type: none"> • Monongahela Boulevard / Patteson Drive • Patteson Drive / Laurel Street • University Avenue / Collins Ferry Road • University Avenue / Patteson Drive • Van Voorhis Road / Chestnut Ridge / Burroughs Street • Van Voorhis Road / Christy Street • Van Voorhis Road / West Run Road • Van Voorhis Road / Elmer Prince • WV-705 / Stewartstown Road • West Run Road / Stewartstown Road • Stewartstown Road / Point Marion Road 	<p><u>Estimated Cost</u> \$36,000,000</p> <p><u>Primary Travel Modes Improved</u> Auto Bicycle Pedestrian Transit</p> <p><u>L RTP Goals Directly Supported</u> 1,2,3,5,6,7</p> <p><u>FHWA Planning Factors Supported</u> 1,2,4,5,7,8</p>

- Point Marion Road / West Run Road
- University Avenue / Campus Drive
- University Avenue / Beechurst Avenue/Fayette Street
- University Avenue / 8th Street
- Beechurst Avenue / Campus Drive
- Greenbag Road and Don Knotts Boulevard
- Greenbag Road / Dorsey Avenue
- Greenbag Road and Diamond Avenue
- Greenbag Road and Earl Core Road
- Tyrone Road / Tyrone Avery Road
- Cheat Road / Tyrone Avery Road
- Hartman Run Road / Hart Field Road (north intersection)
- Hartman Run Road / Hart Field Road (south intersection)
- Stewart Street / Hoffman Street / Van Guilder Street
- Spruce Street / Walnut Street
- Spruce Street / Pleasant Street
- Fayette Street / High Street
- High Street / Willey Street
- High Street / Pleasant Street
- Walnut Street / University Avenue

39 Regional Pedestrian Safety and Sidewalk Connectivity

Location: Region-wide

Purpose: To complete sidewalk connectivity to provide safer and more convenient routes for pedestrian travel.

Improvements:

- Repair and replace existing deficient sidewalks
- Widen and improve key sidewalk sections
- Construct new sidewalks in key locations
- Improve safety at locations of high pedestrian crashes
- Improve key pedestrian crossings

Initial intersections identified for pedestrian crossing and safety improvements:

- Foundry Street / University Avenue (US-119)
- Pleasant Street / University Avenue (US-119)
- Walnut Street / University Avenue (US-119)
- Spruce Street / Walnut Street
- High Street / Willey Street
- University Avenue / College Avenue
- Willey Street / Prospect Street
- Spruce Street / Pleasant Street
- Beechurst Avenue / Campus Drive
- Beechurst Avenue / 3rd Street
- Beechurst Avenue / 6th Street
- Chestnut Ridge Road / Van Voorhis Road
- High Street / Walnut Street
- High Street / Fayette Street
- University Avenue / Prospect Street

Estimated Cost
\$30,000,000

Primary Travel Modes Improved
Pedestrian

LRTP Goals Directly Supported
1,3,5,6,7

FHWA Planning Factors Supported
1,2,4,5,6,7,8,

First implementation item: Extend the City of Morgantown Connecting Network Sidewalks (CNS) plan to include the rest of the region. Develop an action plan that includes identifying potential funding sources, sponsoring agencies, design responsibilities, etc.

Key implementation factors: Identifying local funding sources and defining implementation responsibilities.

40 Regional Bikeway Plan Implementation

Location: Region-wide

Purpose: To implement a logical and interconnected bikeway system for the region.

Improvements:

- Bike lanes
- Multiuse trails
- Bike route pavement markings
- Bike route signage

First implementation actions: Complete the Regional Bikeways Plan as described in the non-mapped strategies.

Key implementation factors: Identification of funding.

Estimated Cost
\$5,000,000

Primary Travel Modes Improved
Bicycle

L RTP Goals Directly Supported
1,2,3,5,6,7

FHWA Planning Factors Supported
1,2,4,5,6,7,8

41 New Park and Ride Lots

Location: As indicated on map.

Purpose: To provide locations for commuters and visitors to park and carpool, use transit, or bike.

Improvements:

- Sign existing parking areas (public-private partnership) that are underutilized on weekdays during work hours.
- New construction not expected

First implementation item: Approach private owners and discuss terms.

Key implementation factors: Reaching agreements with owners. Promotion and awareness of the locations and advantages of utilizing them.

Estimated Cost
\$1,000,000

Primary Travel Modes Improved
Auto
Transit

L RTP Goals Directly Supported
1,2,3,5,6,7

FHWA Planning Factors Supported
1,4,5,6,7,8

42 Enhanced Bus Service

Location: Region-wide

Improvements:

- Provide 10 to 15 minute headways for the following three identified transit routes (see “Bus Service Enhancement” map):
 - East-West Corridor
 - North-South Corridor
 - West Run, Mountaineer Station Loop
- Provide identifiable and attractive bus stop locations

Estimated Cost
\$88,000,000

- \$3M/yr for operations
- \$4M capital cost for connections to PRT Stations and

	<ul style="list-style-type: none"> Provide convenient connections to Mountaineer Station and Walnut Street PRT Station (requires some construction) <p>First implementation item: Identify funding sources beyond current federal sources.</p> <p>Key implementation factors: Public support for additional local funding. Developing an appropriate implementation phasing plan.</p>	<p>bus stop improvements</p> <p>Primary Travel Modes Improved Auto Transit</p> <p>L RTP Goals <u>Directly Supported</u> 1,2,3,5,6,7</p> <p>FHWA Planning Factors Supported 1,2,4,5,6,7,8</p>
43 Safe Routes to School Improvements	<p>Location: All K-8 schools.</p> <p>Purpose: To enhance safety and personal health of school children and to reduce automobile trips through a greater number of children walking and/or biking school.</p> <p>Improvements:</p> <ul style="list-style-type: none"> sidewalk improvements traffic calming and speed reduction improvements pedestrian and bicycle crossing improvements on-street bicycle facilities off-street bicycle and pedestrian facilities secure bicycle parking facilities traffic diversion improvements in the vicinity of schools <p>First implementation actions: Establish safe routes to school plan through working with safe routes to school committee (see non-capital improvements strategy). The Pedestrian Safety Board’s plan can be used as a significant resource since it addresses pedestrian needs in the vicinity of many schools.</p> <p>Key implementation factors: Prioritization and funding of improvements.</p>	<p><u>Estimated Cost</u> \$2,000,000 80% State/Federal 20% Local</p> <p>Primary Travel Modes Improved Bike Pedestrian</p> <p>L RTP Goals <u>Directly Supported</u> 1,2,3,5,6,7</p> <p>FHWA Planning Factors Supported 2,4,5,6,8</p>
44 Access Management Improvements	<p>Location: Region-wide</p> <p>Purpose: To improve multimodal safety, capacity, and to improve property values and attractiveness of development areas.</p> <p>Improvements:</p> <ul style="list-style-type: none"> Removal and consolidation of excess access points Improved driveway designs Addition of turn lanes at key locations Medians to restrict turning movements U-turn locations <p>First implementation item: Complete Access Management Study (see non-mapped strategies)</p>	<p><u>Estimated Cost</u> \$10,000,000 80% State/Federal 20% Local</p> <p>Primary Travel Modes Improved Auto Bicycle Pedestrian Transit</p>

	<p>Key implementation factors: Coordination with property owners and stakeholder during the study phase.</p>	<p>L RTP Goals <u>Directly Supported</u> 1,2,3,5,6</p> <p>FHWA Planning <u>Factors Supported</u> 2,4,5,6,7,8</p>
<p>45 Downtown Morgantown Signalization and Street Changes</p>	<p>Location: Morgantown Central Business District (CBD)</p> <p>Purpose: To improve multimodal safety, capacity, and to improve attractiveness of downtown area.</p> <p>Improvements:</p> <ul style="list-style-type: none"> • Improved signal system • Improved multimodal traffic flows and circulation • Improved multimodal safety • Improved streetscape <p>First implementation item: Complete ongoing traffic study and selection of preferred improvements.</p> <p>Key implementation factors: Coordination with property owners and stakeholder during the study phase.</p>	<p><u>Estimated Cost</u> \$2,000,000 80% State/Federal 20% Local</p> <p><u>Primary Travel Modes Improved</u> Auto Bicycle Pedestrian Transit</p> <p>L RTP Goals <u>Directly Supported</u> 1,2,3,5,6,7</p> <p>FHWA Planning <u>Factors Supported</u> 1,2,4,5,7,8</p>
<p>46 TDM Program Expansion</p>	<p>Location: Region-wide</p> <p>Purpose: Reduce the total number of automobile trips in the region (goal of 3% reduction in peak hours) through aggressive Transportation Demand Management (TDM) to reduce congestion and reduce the need for costly infrastructure improvements.</p> <p>Improvements:</p> <ul style="list-style-type: none"> • Expand the Commuter Choices program as a formal transportation management association (TMA) • Form strategic partnership between WVU and Commuter Choices • Facilitate access to current transit service, both in terms of geographic proximity and with fare payment incentives, to allow Mountain Line Transit Authority services to play a greater role in meeting commuter transportation needs • Develop land use policies and zoning regulations that offer parking reductions, intensity bonuses or other development incentives to applicants who commit to funding TDM, transit or other alternative commuting strategies for a given period of time. • Develop educational programs targeted at the commuting population of the Morgantown region that illustrate the benefits of TDM <p>First implementation item: Identify program funding. Explore:</p> <ul style="list-style-type: none"> • Taxes or surcharges on public and private parking infrastructure. • Levying Transportation impact fees on new development that to fund multi-modal options and services 	<p><u>Estimated Cost</u> \$?,000,000 10% State/Federal 90% Local</p> <p><u>Primary Travel Modes Improved</u> Auto Transit</p> <p>L RTP Goals <u>Directly Supported</u> 1,2,3,5,6,7</p> <p>FHWA Planning</p>

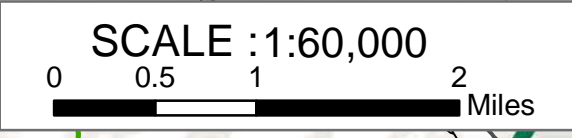
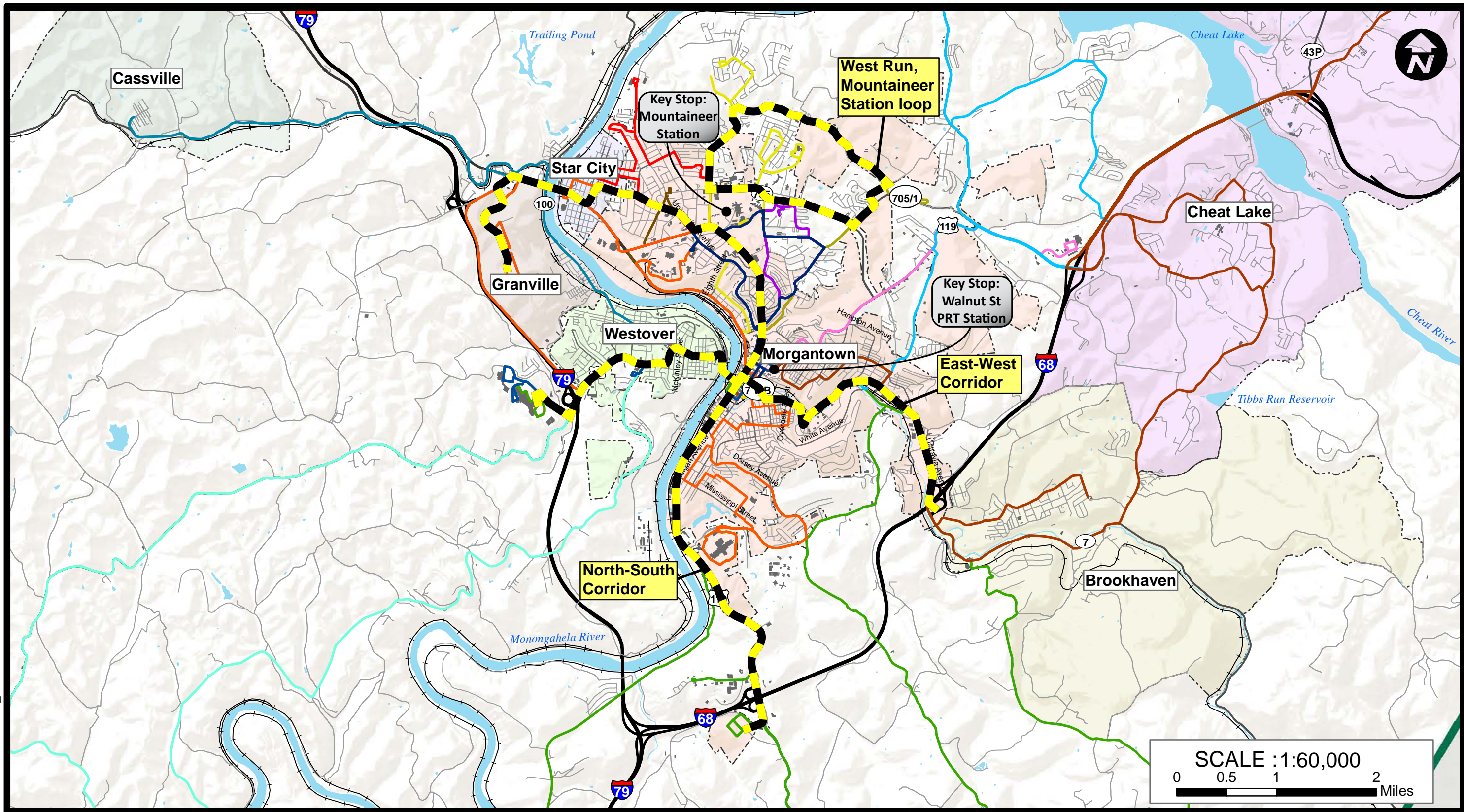
- Explore private and public grants

Key implementation factors: Public agency and private entity buy-in and support.

Factors Supported

1,2,4,5,6,7,8

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Existing Bus Routes

Route 1	Route 6	Route 10	Route 14	Route 38
Route 2	Route 7	Route 11	Route 15	Route 44
Route 3	Route 8	Route 12	Route 16	
Route 4	Route 9	Route 13	Route 30	

Legend

Bus Route with Enhanced* Headways

**Maximum of 15 minutes average time between buses in peak travel periods, 30 minutes in non-peak travel periods.*

DRAFT
NOVEMBER 6, 2012

LONG RANGE TRANSPORTATION PLAN
BUS SERVICE ENHANCEMENTS

MMMPO
morgantown monongalia metropolitan planning organization

LONG RANGE TRANSPORTATION PLAN - VISION, GOALS, and OBJECTIVES

FINAL DRAFT – November 2, 2012

Transportation Vision Statement

Through the Crossroads Regional Visioning Process the community has communicated the following vision statement for the transportation system for the Morgantown-Monongalia Metropolitan Planning Area:

The Morgantown Monongalia area will have a complete and attractive transportation system with reduced congestion. The system will support and guide future growth by integrating the use of private vehicles, with public transportation, biking, and walking.

Transportation Goals

The following eight transportation goals for the region have been developed based on this vision, the goals and objectives communicated by the community through the Crossroads regional vision process, local stakeholder interviews, collaboration with the Transportation Advisory Group, and in consideration of the SAFETEA-LU eight metropolitan planning factors which must be addressed according to Federal guidance. These goals are intended to be the basis for decision-making related to region's Long Range Transportation Plan. The numbering of the goals is in no way an indication of priority or a ranking of importance.



Goal #1: A multimodal transportation system that efficiently moves people and goods

OBJECTIVES	MEASUREMENTS			
Objective 1A: To eliminate/reduce current congestion and multimodal traffic flow restrictions on arterial and collector roadways	Change in delay and travel time for pedestrians	Change in delay and travel time for bicyclists	Change in delay and travel time for automobiles	Change in delay and travel time for bus and PRT
Objective 1B: To ensure that future development and related transportation improvements address capacity and connectivity needs proactively rather than reactively	Change in number of transportation improvements built prior to and concurrently with growth and development (rather than reactive to)			
Objective 1C: Improve ingress/egress to the most densely developed / highest activity areas of region (the core)	Change in time to travel to and from core	Change in number of people traveling to and from core	Change in number of routes and connection options to and from the core (all modes)	
Objective 1D: Provide adequate transportation capacity and access to support current businesses	Change in access to current clusters of businesses	Change in travel time to current clusters of businesses		
Objective 1E: Focus capacity improvements for all modes in areas of desired future growth and development that support the public's vision for the region	Change in number of improvements planned, designed, and/or constructed in areas of desired growth		Change in amount of growth and development in areas identified as priority areas in regional vision	

Goal #2: A transportation system in which all modes are highly integrated and connected

OBJECTIVES	MEASUREMENTS		
Objective 2A: To allow for convenient transfer from one mode to another in the region (i.e. biking to bus, vanpooling to bus, etc) to maximize travel efficiency	Change in number of multimodal trips	Change in travel time / travel delay for trips	Change in cost of travel
Objective 2B: To encourage the use of the most efficient mode based on the distance and characteristics of a particular trip	Change in number of people walking for trips one-mile or less	Change in number of people bicycling for trips 10-miles or less	Change in number of people riding the bus and PRT for all trips
Objective 2C: Increase the geographic area in which people have convenient access to non-automobile modes	Change in number of travel options to individuals in all populated areas	Change in amount of county served by non-auto transportation modes	
Objective 2D: Reduce reliance on automobile for travel	Change in number of person trips by non-automobile modes	Change in auto ownership	
Objective 2E: Better serve those who do not/cannot own and drive a personal automobile.	Change in number of opportunities to travel for those who do not drive	Change in travel times for those who do not drive	
Objective 2F: To allow for efficient transfers of goods between modes (air, pipeline, river rail)	Change in quantity of people and goods transferred by these modes		
Objective 2G: Improve and expand infrastructure for pedestrians, bicyclists and people with disabilities	Change in linear feet of sidewalks that connect destinations/attractions	Change in number and length of bicycle routes that connect destinations/attractions	Change in number of fully accessible (per ADA guidelines) transportation options and facilities
Objective 2H: Increase use of existing rail-trails for transportation purposes	Number of trail users with trip purposes of commuting, shopping, entertainment		

Goal #3: A multimodal transportation system that safely moves people and goods

OBJECTIVES	MEASUREMENTS	
Objective 3A: To minimize crashes, especially injury/fatality crashes by 50% through improvement of high crash locations and improvement of local enforcement of traffic laws and education of transportation system users	Change in frequency and rate of crashes (all modes)	Change in frequency of injury/fatality crashes (all modes)
Objective 3B: To ensure that future growth and related transportation improvements address transportation safety needs in planning and design	Change in crash frequency and rates in areas affected by development and growth	Transportation improvements built prior to and concurrently with growth and development (rather than in reaction to growth)

Goal #4: A transportation system that maximizes the efficiency of freight movement through and within the region with minimal impacts on neighborhood and campus areas, especially areas of higher bicycle and pedestrian demand

OBJECTIVES	MEASUREMENTS		
Objective 4A: Reduce truck traffic in residential neighborhoods and on other streets where significant numbers of bicycles and pedestrians are present	Change in number of trucks in neighborhoods	Change in number of trucks in other pedestrian/bicycle activity areas	
Objective 4B: Improve truck access to key industrial areas	Change in time to deliver freight	Change in amount of freight moved	Change in amount of freight dependent industries
Objective 4C: Increase options for freight movement that minimizes truck traffic on non-interstate roadways	Change in amount of freight moved by non-truck mode		

Goal #5: Greater collaboration between local agencies, state officials, and private interests in the pursuit and funding of transportation improvements

OBJECTIVES	MEASUREMENTS		
Objective 5A: More effective and less costly transportation improvements by capitalizing on common goals and needs between communities and agencies in the region	Change in number of policies and projects co-sponsored by multiple jurisdictions	Change in number of projects funded by multiple jurisdictions	Change in number of projects that physically cross jurisdictional lines
Objective 5B: Higher quality transportation system improvements due to cost sharing and collaboration.	Change in the ratio of funding by state sources versus local sources for projects	Change in public opinion related to quality of transportation improvements	Change in number of projects and programs jointly funded by multiple jurisdictions
Objective 5C: Transportation improvements that support the public's long-term vision for the region	Change in number of regional goals supported by projects	Change in public satisfaction related to transportation projects	

Goals #6: A Transportation system that is attractive, sustainable, and livable.

OBJECTIVES	MEASUREMENTS		
Objective 6A: Integrate the local context of the area into the planning, design, and construction of transportation improvements	Change in the quality and livability of the built environment	Change in public satisfaction related to transportation projects	Change in property values
Objective 6B: Include sustainability features in design of	Change in storm water run-off	Change in vehicle emissions impact on	Change in negative impacts to environment due

transportation improvements that minimize environmental impacts	due to transportation infrastructure and runoff related to vehicular byproducts.	air-quality	to transportation
Objective 6C: Address multimodal system needs in all planning, design, and construction of transportation improvements	Change in number of non-automobile focused transportation projects planned, designed, and constructed	Change in comfort, safety and convenience for travel (all modes)	

Goals #7: Reduce automobile trip demand, especially during peak travel hours

OBJECTIVES	MEASUREMENTS		
Objective 7A: Reduce the need to construct costly transportation and parking infrastructure improvements	Change in project funding required to meet the region's transportation and parking needs		
Objective 7B: Invest in transportation improvements that encourage and support development/land use patterns that decrease need to travel	Change in number of projects that support mixed-use, transit oriented, and non-auto centric land development		
Objective 7C: Reduce automobile emissions and improve air quality	Change in air-quality measures		
Objective 7D: 50% increase in trips made by walking	Change in walking trips		
Objective 7E: 5% of all trips made by bicycle by 2025	Change in bicycle trips		
Objective 7F: Increase number of trips made by public transit by 200%	Change in bus trips	Change in PRT trips	Change in other public transit trips
Objective 7G: Increase work telecommuting and virtual lectures (WVU)	Change in number of employees working from home or other remote locations	Change in number of students taking classes remotely	Change in person trips to/from work and classes
Objective 7H: Increase average vehicle occupancy by 100%	Change in average occupants per vehicle		

Goals #8: A multimodal transportation system that enhances the homeland security of the region

OBJECTIVES	MEASUREMENTS		
Objective 8A: Heighten awareness of homeland security needs related to transportation	Change in occurrences of security issues being considered		
Objective 8B: Improve understanding of critical transportation system related homeland security issues in the region	Change in knowledge of critical homeland security issues		
Objective 8C: Incorporate homeland security needs in transportation project planning, design, and construction	Change in number of projects and policies that include homeland security considerations		