

Attachment A

Excerpts from *Transportation Needs Analysis*

EASTERN CORRIDOR SEGMENTS II and III (PID 86462)

TRANSPORTATION NEEDS ANALYSIS



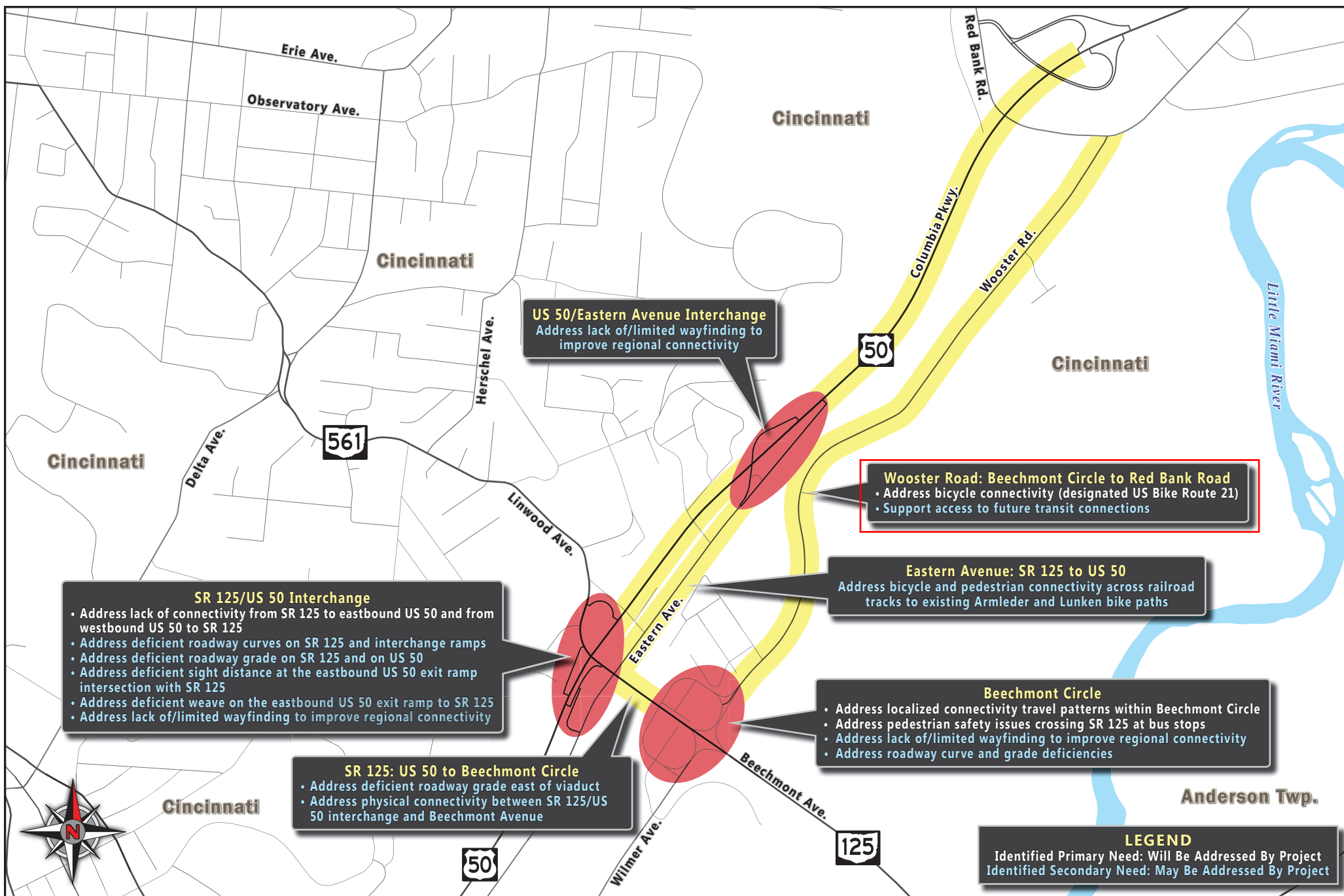
Prepared for:
Ohio Department of Transportation
District 8
505 South State Route 741
Lebanon, OH 45036-9518

Prepared by:
Stantec Consulting Services, Inc.

July 31, 2017

Eastern Corridor Segments II and III

Linwood/Eastern Interchange Focus Area

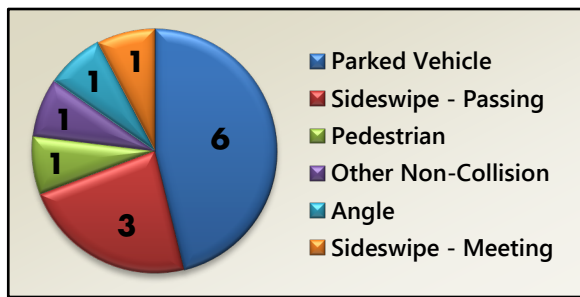


- Street calming is needed; Eastern Avenue between Linwood Avenue and US 50 is treated mostly as an on and off ramp and motorists go too fast. A solar radar sign would be beneficial in this location. (2 comments)

Three comments address bike issues:

- A pedestrian bridge is needed to get bikes over the railroad tracks (2 comments)
- Marked bike lanes are needed (1 comment).

One public transit comment identifies the need for a transit stop in this location.



**Figure 35: Frequency of Crashes by Crash Type
Eastern Avenue: SR 125 to US 50**

Crash Data: Eastern Avenue from south of SR 125 to US 50 was identified as a high hazard location through an ODOT crash screening of the Segments II and III roadway network.

As illustrated in **Figure 35**, there were 13 total crashes in this roadway section during the three-year period between 2013 and 2015. Parked vehicles and sideswipe crashes represent 75% of the total crashes. Although parked vehicle crashes are the most prevalent crashes, they do

not occur at the same location. There is no correlation between the crash data and a specific contributing cause for the crashes. A plot of all 13 crashes is provided in **Attachment A-2**.

LOS Analysis: No level of service analysis was conducted for this segment.

Geometric Data: No geometric deficiencies were identified for this segment.

Pedestrian Data: No pedestrian data is available for this segment.

2.4.3.5 Wooster Road: Beechmont Circle to Red Bank Road

The section of Wooster Road between Beechmont Circle and Red Bank Road is a two-lane undivided roadway approximately 1.4 miles in length with a posted speed of 35 mph. There are numerous accesses to industrial businesses along this section of Wooster Road.

Stakeholder Input: Thirteen roadway comments identify concerns and needs at Wooster Road between Beechmont Circle and Red Bank Road. Of these concerns, four comments address congestion issues and indicate that extra lanes should be added to this roadway and truck traffic limited during rush hour. Other roadway concerns include the following:

- The road should be repaired (1 comment)
- The road should be repaved and restriped (1 comment)
- Wooster Road occasionally floods (1 comment)
- Air and noise pollution from traffic in this area are concerns at Ault Park (1 comment)
- Large delivery trucks and trailers to Hafner and Cincinnati Paperboard occasionally block Wooster Road as they back into loading docks (1 comment)

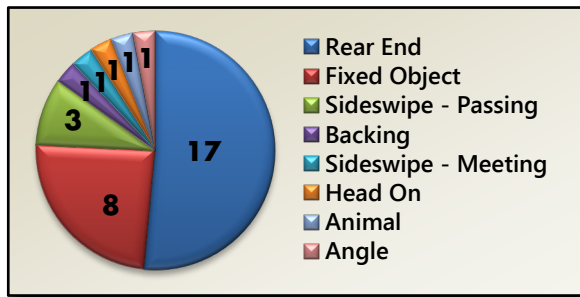
- Better signage is needed on Old Wooster Pike (1 comment)

Twenty-seven comments address bicycle access on Wooster Road:

- Although Wooster Road is an important route for cyclists, it is very dangerous (5 comments)
- A bike lane or bike path is needed along the Little Miami River between Lunken Park, Otto Armleder Park, Avoca Park, the Murray Avenue Trail, and the Little Miami Trail (10 comments)
- Marked bike lanes on Wooster are needed (8 comments)
- A bike/pedestrian crossing of the railroad tracks that parallel Eastern Avenue is needed (1 comment)
- A bike trail connection is needed across Wooster Pike from Armleder, along the Oasis Line ROW and connecting to the trail at Old Red Bank Road, which leads to the Murray Road Trail in Fairfax (1 comment).
- A bike path/trail is needed to connect with Downtown Cincinnati or to Hyde Park area (1 comment)
- Sharrows exist in Fairfax but disappear between Wooster Road and Otto Armleder Park (1 comment)

The following pedestrian comments were provided:

- A sidewalk is needed (1 comment)
- A crosswalk is needed at Carustar (1 comment)



**Figure 36: Frequency of Crashes by Crash Type
Wooster Road: Beechmont Circle to Red Bank**

Crash Data: The ODOT crash screening of the Segments II and III roadway network identified the sub-segment of Wooster Road from the Cincinnati City Limit to approximately 0.70 miles south as a high hazard area. Therefore, a detailed crash analysis of the entire segment from Beechmont Circle to Red Bank Road was completed.

As illustrated in **Figure 36**, there were 33 total crashes in this roadway section during the three-year period between 2013 and 2015. Rear-end and fixed object crashes represent 75% of the total crashes. Of the 33 total crashes on the segment, 25 (75%) occurred in the high hazard section. Within the high hazard segment, 12 of the 25 crashes were rear-end crashes and eight of the 25 were fixed object crashes. There was not a clustering of crashes at a particular location. Half of the rear end crashes occurred between 3:00 PM and 5:00 PM with the majority of crashes occurring during the day in clear conditions. Thirty-three percent (33%) of the rear-end crashes occurred in wet conditions. Other than the observations described above, there was no correlation between the crash data and a specific contributing cause for rear-end crashes.

Seven of the eight fixed object crashes occurred in clear weather, six involved a vehicle traveling southbound, and four occurred in the dark (lighted). Other than the observations described

above, there was no correlation between the crash data and a specific contributing cause for rear-end crashes. See [Attachment A-2](#) for a plot of all 33 crashes.

LOS Analysis: No level of service analysis was conducted for this segment.

Geometric Data: No geometric deficiencies were identified for this segment.

Pedestrian Data: No pedestrian data is available for this segment.

2.4.3.6 US 50: SR 125 to Eastern Avenue

The section of US 50 between SR 125 and Eastern Avenue is a four-lane divided, limited-access roadway approximately 0.7 miles in length with a posted speed of 50 mph.

Stakeholder Input: There are three public comments for the section of US 50 between SR 125 and Eastern Avenue:

- US 50 should be widened
- There are dangerous merges in this section of US 50
- There is a street lighting issue in this location

One transit comment indicates that public transit in this area is very limited and there should be more frequent bus service from Downtown Cincinnati.

Crash Data: ODOT's crash screening did not identify this segment as an area of high hazard. Crash data indicates that no crashes occurred over the three-year period (2013 – 2015).

LOS Analysis: A freeway analysis was performed using the HCS. During both the AM and PM peak hours, the eastbound and westbound directions operate at LOS A in 2015, the No Build opening year (2022), and No Build design year (2042) conditions. No improvements are required for the existing, No Build opening year, and No Build design year conditions. These results are supported by the travel time data which shows no significant increase in travel time during the peak hours compared to off-peak hours.

Geometric Data: No geometric deficiencies were identified for this segment.

Pedestrian Data: No pedestrian data is available for this segment.

2.4.3.7 US 50: Eastern Avenue to Red Bank Road

The section of US 50 between Eastern Avenue and Red Bank Road is a four-lane divided, limited-access roadway approximately 0.9 miles in length with a posted speed of 50 mph.

Stakeholder Input: Four roadway comments identify congestion as a concern along US 50 between Eastern Avenue and Red Bank Road. Representative comments are:

- Congestion is a problem (2 comments)
- Columbia Parkway should be widened (1 comment)

Table 12: Linwood/Eastern Avenue Interchange Focus Area Needs Analysis

Primary Needs	Secondary Needs
SR 125/US 50 Interchange	
Address lack of connectivity from SR 125 to eastbound US 50 and from westbound US 50 to SR 125	<ul style="list-style-type: none"> • Address deficient roadway curves on SR 125 and interchange ramps • Address deficient roadway grade on SR 125 and on US 50 • Address deficient sight distance at the eastbound US 50 exit ramp intersection with SR 125 • Address deficient weave on the eastbound US 50 exit ramp to SR 125 • Address lack of/limited wayfinding to improve regional connectivity
SR 125: US 50 to Beechmont Circle	
None	<ul style="list-style-type: none"> • Address deficient roadway grade east of viaduct • Address physical connectivity between SR 125/US 50 interchange and Beechmont Circle
Beechmont Circle	
<ul style="list-style-type: none"> • Address localized connectivity travel patterns within Beechmont Circle • Address pedestrian safety issues crossing SR 125 at bus stops 	<ul style="list-style-type: none"> • Address lack of/limited wayfinding to improve regional connectivity • Address roadway curve and grade deficiencies
Eastern Avenue: SR 125 to US 50	
None	Address bicycle and pedestrian connectivity across railroad to existing Armleder and Lunken bike paths
Wooster Road: Beechmont Circle to Red Bank Road	
<ul style="list-style-type: none"> • Address bicycle connectivity (designated US Bicycle Route 21) 	<ul style="list-style-type: none"> • Support access to future transit connections
US 50: SR 125 to Eastern Avenue	
None	None
US 50/Eastern Avenue Interchange	
None	Address lack of/limited wayfinding to improve regional connectivity
US 50: Eastern Avenue to Red Bank Road	
None	None

Attachment B

Excerpts from *Conceptual Alternatives*
Implementation Plan



CONCEPTUAL ALTERNATIVES IMPLEMENTATION PLAN

Eastern Corridor Segments II and III
PID 86462

JULY 24, 2019

Prepared for:

Ohio Department of Transportation,
District 8
505 South SR 741
Lebanon, Ohio 45036

Prepared by:

Stantec Consulting Services Inc.

Focus Area	PI Mtg Identifier	Identifier	Website Link	Conceptual Project Description	Priority	Maintaining Agency	Phasing Recommendations	Next Steps	Construction Cost Range	Right-of-Way Cost Range
SR 32 / SR 125	A9	32-2a	Link	Connect Five Mile Trail using subdivision streets in Turpin Hills to the end of Patterson Farms Ln, and then by utilizing existing emergency access road connecting to Turpin Lake Place to Little Miami Trail. Final connection to use A7 or A8.	Medium Priority	Anderson Township		Eastern Corridor Study Analysis complete; turned over to local agency for future consideration.	\$2,500 to \$4,000	\$30,000 to \$60,000
SR 32 / SR 125	A7	32-1a	Link	Make connection from Turpin Lake subdivision to Little Miami Trail with "mid-block" at-grade pedestrian crossing. Perform speed study in conjunction and move crossing to the intersection.	Medium Priority	Anderson Township	Build after A9	Eastern Corridor Study Analysis complete; turned over to local agency for future consideration.	\$35,000 to \$50,000	%5,000 to \$10,000
Newtown	B10	RB-3d	Link	Connect Riverside Park and Lake Barber with Little Miami Trail with shared use path. Golf course alignment.	Medium Priority	The Village of Newtown		Eastern Corridor Study Analysis complete; turned over to local agency for future consideration.	\$1,175,000 to \$1,775,000	\$107,000 to \$214,000
Newtown	B8	RB-3a	Link	Connect Riverside Park and Lake Barber with Little Miami Trail with shared use path. Portion of alignment along Valley.	Medium Priority	The Village of Newtown		Eastern Corridor Study Analysis complete; turned over to local agency for future consideration.	\$160,000 to \$240,000	\$150,000 to \$300,000
Ancor-SR 32 Hill	C10 C11	A-1 A-2	Link	Add access road from Newtown east corporation line to Broadwell Road. Includes adjacent shared use path.	Medium Priority	TBD		Eastern Corridor Study Analysis complete; turned over to local agency for future consideration. Next step will consist of developing alternatives before arriving at a recommended preferred alternative.	\$9,100,000 to \$16,850,000	\$175,000 to \$1,450,000
Ancor-SR 32 Hill	C6	I-3e	Link	New alignment and grade separation of eastbound SR 32 over Eight Mile; unsignalized continuous green tee intersection at Eight Mile and westbound SR 32. (Partial eastbound only grade improvements on hill). Includes grade adjustments on Eight Mile Rd.	Medium Priority	ODOT	Construct after C5	Re-evaluate after construction of C5 or if C10/C11 move forward.	\$11,650,000 to \$17,450,000	\$1,850,000 to \$3,700,000
Linwood-Eastern_US-50_Red_Bank	E5	BIKE-1a BIKE-2a	Link	Connect Wasson Trail to Eastern (at D2) with shared use path along US 50.	Medium Priority	The City of Cincinnati		Eastern Corridor Study Analysis complete; turned over to local agency for future consideration.	\$5,100,000 to \$7,700,000	\$855,000 to \$1,710,000
Linwood-Eastern_US-50_Red_Bank	E7	BIKE-2b X-4d-1 BIKE-4a	Link	Connect Wasson Trail to Armleder with shared use path from Ault Park to Red Bank to Wooster, behind Cincinnati Paperboard to Armleder Trail Loop.	Medium Priority	The City of Cincinnati		Eastern Corridor Study Analysis complete; turned over to local agency for future consideration. Shared use path connection without X-4d-1 could be considered.	\$3,100,000 to \$4,650,000	\$830,000 to \$1,660,000
Newtown	B8	RB-1	Link	Connect Riverside Park and Lake Barber with Little Miami Trail with shared use path. Portion of alignment from Riverside Park & Lake Barber to Valley.	Medium Priority	The Village of Newtown		Eastern Corridor Study Analysis complete; turned over to local agency for future consideration.	\$820,000 to \$1,230,000	\$195,000 to \$390,000
SR 32 / SR 125		I-22a		Improve signal timing at SR 125 & Elstun intersection.	Medium Priority	ODOT / Anderson Township		Due to planned redevelopment of the Skytop Pavilion, this intersection needs to be analyzed in conjunction with the new development's Traffic Impact Study.	Not available	Not available
SR 32 / SR 125		I-22b		Improve turn lanes at SR 125 & Elstun intersection.	Medium Priority	ODOT / Anderson Township		Due to planned redevelopment of the Skytop Pavilion, this intersection needs to be analyzed in conjunction with the new development's Traffic Impact Study. Possible items to review would be: addition of westbound right turn lane and extension of northbound left turn lane.	Not available	Not available
US 50 Corridor		I-32b		Mariemont HS considering new access point to connect to US 50 Promenade signal.	Medium Priority	Columbia Township		This alternative is being considered by Mariemont Schools.	Not available	Not available



Eastern Corridor Segments II and III

Combined Linwood/Eastern Interchange and US 50/Red Bank Interchange Focus Area

Theme

Bicycle and Pedestrian

Primary Needs identified for this theme:

- P9) Address pedestrian safety issues crossing SR 125 at bus stops.
- P10) Address bicycle connectivity (designated US Bicycle Route 21).

Secondary Needs identified for this theme:

- S16) Address bicycle and pedestrian connectivity across the railroad tracks to existing Armleder and Lunken bike paths.

Concept drawings are presented on the following pages.

DESCRIPTION

- Connect Wasson Way Trail to the Armleder Road entrance with a shared-use path along US 50.
 - This concept brings Wasson from Ault Park along Columbia Parkway to Eastern, where it could tie into Concept BIKE-1.

NEEDS ADDRESSED

P10) Address bicycle connectivity (designated US Bicycle Route 21).

5/22/18 MEETING DISCUSSION AND COMMENTS

- A barrier-protected shared-use path would be located along right side of westbound US 50.
- The path would follow the existing exit ramp (5% grade) from US 50 to Eastern Avenue, then cross to Armleder Road using the connection established in the BIKE-1 concept.
- No additional comments received following the 5/22 meeting.

9/7/18 MEETING DISCUSSION AND COMMENTS

- This concept requires construction of a new bridge crossing from Eastern Avenue to Wooster Road. The bridge would be located immediately east of Linwood Park.
- A shared-use path located next to US 50 would need to be separated by a physical barrier; concrete barriers are proposed. Installing concrete barriers would not impact the hillside or shoulder along US 50, but would require modification of the city gateway.
 - One Committee member expressed concern that cyclists would be traveling a long way without an option to exit the path. Another

suggested that, even with the concrete barrier, cyclists might not feel safe, particularly with children traveling so close to vehicular traffic on US 50.

- The BIKE-2b, BIKE-4a and BIKE-4b concepts would need to be construction in conjunction with other projects to complete a full connection. Cost estimates for the necessary combinations are:
 - BIKE-2a: \$3.1M to \$4.7M
 - BIKE-2b, X-4d-1, BIKE-4a: \$4.53M to \$7M
- BIKE 2b, X-4d-1, BIKE-4b: \$4.43M to \$6.8M
- No additional comments received following the 9/7 meeting.

12/12/18 MEETING DISCUSSION AND COMMENTS

- This project would connect the bike path to Ault Park’s hiking trails, which opens up a larger commuter network to local neighborhoods.
- Consider incorporating the spur to the Murray Trail (as outlined in concepts E6/E7) into this concept.
- The priority of this concept will depend on the status and advancement of the Wasson Way trail.

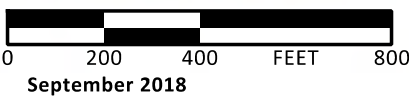
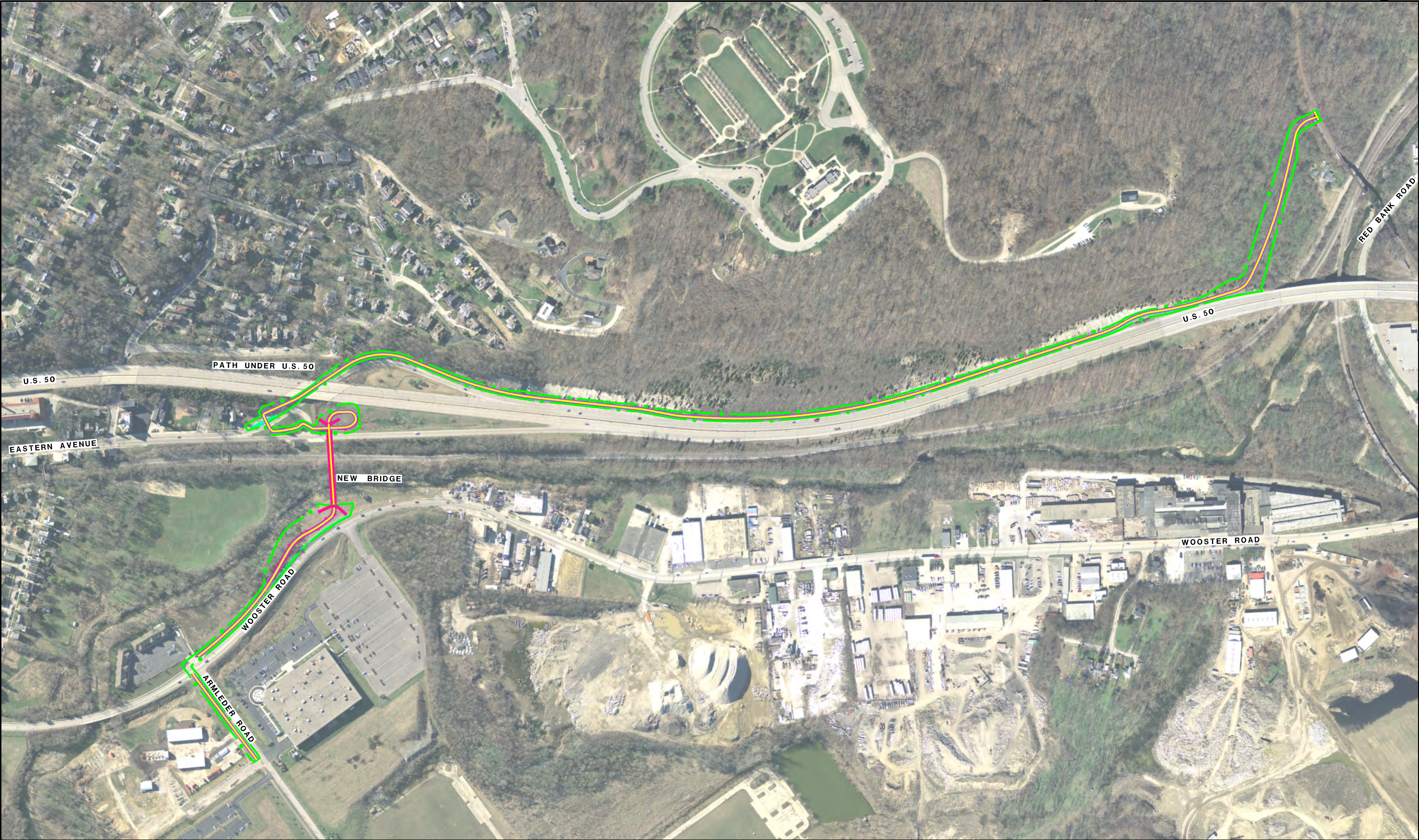
NEXT STEPS/RECOMMENDATION

- Include in the Implementation Plan as a medium priority, including BIKE-2a and BIKE-1a to fully connect Wasson Way Trail to Armleder Park.
- Consider connecting Murray Trail spur.

Safety ECAT Benefit /Cost Ratio	Location	Traffic Operations							Construction Cost	R/W Impacts		Environmental Impacts		Support and/or Facilitate Multi-Modal	Improve Regional Connectivity	Improve Local Access
		Time Period	HCS Results			TransModeler Results				Number of Relocations	R/W Cost	Anticipated Environmental Document	Red Flag Triggers			
			2042 Delay (seconds)	2042 LOS	% Reduction from No Build	2042 Delay (seconds)	2042 LOS	% Reduction from No Build								
									\$5.1M to \$7.6M	0		D1	Section 4(f)	Improves	Improves	Improves

PRIORITY: MEDIUM





Concept Drawing
Eastern Corridor Multi-Modal Projects
Segment II-III (SR 32 Corridor)
HAM-32F-0.00; PID 86462

Figure BIKE-2A (Overall View)
SHARED USE PATH FROM WASSON TRAIL
TO ARMLEDER ROAD

Concept drawings are presented on the following pages. Concept is also shown with BIKE-2a (E5).

DESCRIPTION

- Connect the Wasson Way Trail to Armleder Road with shared-use path running on a gravel path in Ault Park to Old Red Bank Road over to Red Bank.
 - This shared-use path would drop out of Ault Park at the first railroad trestle and follow the tracks north to a connection with Red Bank Road.
- Path would then follow Red Bank south to Wooster Road. Path would continue southwest on Wooster Road to Armleder Road.

NEEDS ADDRESSED

P10) Address bicycle connectivity (designated US Bicycle Route 21).

5/22/18 MEETING DISCUSSION AND COMMENTS

- An on-street bike path on Wooster would be challenging because businesses are located close to the road on both sides in this area.
- Commercial use of the road would make it a challenge to keep the bike path clean. Road debris (gravel, dirt, sand, trash, etc.) would likely collect in the bike path.
- Running the bike path behind the businesses located on the north side of Wooster may be a challenge. Space availability is limited by a creek and old rail tracks (not used since 1982) and buildings. Ownership of the rail tracks may be split between SORTA and Norfolk Southern.
- The consultant team will confirm whether routing a bike path behind businesses on the north side of Wooster may be an option.
- The consultant team will determine who owns the railroad tracks in this area.
- No additional comments received following the 5/22/18 meeting.

9/7/18 MEETING DISCUSSION AND COMMENTS

- This concept would be part of a phased-approach to connecting the Wasson Way Trail to Armleder Road using X-4d-1 (Wooster extension to Colbank with roundabout at Red Bank Road and Wooster Road) and BIKE-4a or BIKE-4b.
- The path would connect with the gravel path in Ault Park, drop under the railroad trestle at the back of the park and go north parallel to Old Red Bank road, then over the creek before turning south to follow along the new X-4d or X-4d-1 connector.
- A Committee member asked if instead of following the new connector, would it be possible to continue the path along Old Red Bank Road US 50 of the US 50 ramp. ODOT shared that there is an existing abutment wall under US 50 that is a barrier to a bike path connection.
- The BIKE-2b, BIKE-4a and BIKE-4b concepts would need to be construction in conjunction with other projects to complete a full connection. Cost estimates for the necessary combinations are:
 - BIKE-2a: \$3.1M to \$4.7M
 - BIKE-2b, X-4d-1,BIKE-4a: \$4.53M to \$7M
 - BIKE 2b, X-4d-1, BIKE-4b: \$4.43M to \$6.8M
- No additional comments received following the 9/7 meeting.

12/12/18 MEETING DISCUSSION AND COMMENTS

- Of the three bike path options in this area [BIKE-2a (E5), BIKE-4b (E6) and BIKE-4a (E7)], E6 received the highest amount of support from the public.
 - The committee surmised that this is because, as drawn, the bike path would travel along a vegetated corridor and creek before linking with the Armleder bike path.
 - H. Hafner & Sons expressed concern with having the bike path

cross the company’s driveway. They reported that 800 trucks come in and out of the driveway on a daily basis and it is hard to see bikes from the trucks. There is also typically a lot of debris in area.

- E6/E7 estimates do not include the cost of constructing the proposed roundabout at Wooster and Red Bank. If that cost were to be added, the estimates for each would be closer to the cost estimates for concept BIKE-2a (E5).
- The committee discussed eliminating BIKE-4b (E6) due to the concerns of connecting the bike path across the Hafner driveway.
- The committee agreed that concept BIKE-4a (E7) needs to include the proposed roundabout at Wooster and Red Bank. Therefore, the cost estimates for the roundabout should be added to the estimate for BIKE-4a (E7). This will increase the cost significantly. Even so, the committee agreed that this option should still be included in the Implementation Plan for future consideration.
- The priority of this concept will depend on the status and advancement of the Wasson Way trail.
- No further study on E6; include E7 in the Implementation Plan as a medium priority.

NEXT STEPS/RECOMMENDATION

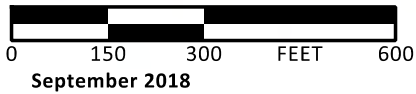
- No further study on concept E6.
- Include E7 in the Implementation Plan as a medium priority. This includes a connection from Wasson Way Trail to Murray Trail, a shared-use path on the X-4d-1 alignment without the roadway improvements and the roundabout at Wooster and Red Bank.

Safety ECAT Benefit /Cost Ratio	Location	Traffic Operations							Construction Cost	R/W Impacts		Environmental Impacts		Support and/or Facilitate Multi-Modal	Improve Regional Connectivity	Improve Local Access
		Time Period	HCS Results			TransModeler Results				Number of Relocations	R/W Cost	Anticipated Environmental Document	Red Flag Triggers			
			2042 Delay (seconds)	2042 LOS	% Reduction from No Build	2042 Delay (seconds)	2042 LOS	% Reduction from No Build								
									\$530K to \$800K	0	\$380K to \$760K	C2	R/W Impacts, Stream Impacts, Waterway Permit, Potential T&E, Section 4(f), ESA Issues	Improves	Improves	Improves



Concept Drawing
Eastern Corridor Multi-Modal Projects
Segment II-III (SR 32 Corridor)
HAM-32F-0.00; PID 86462

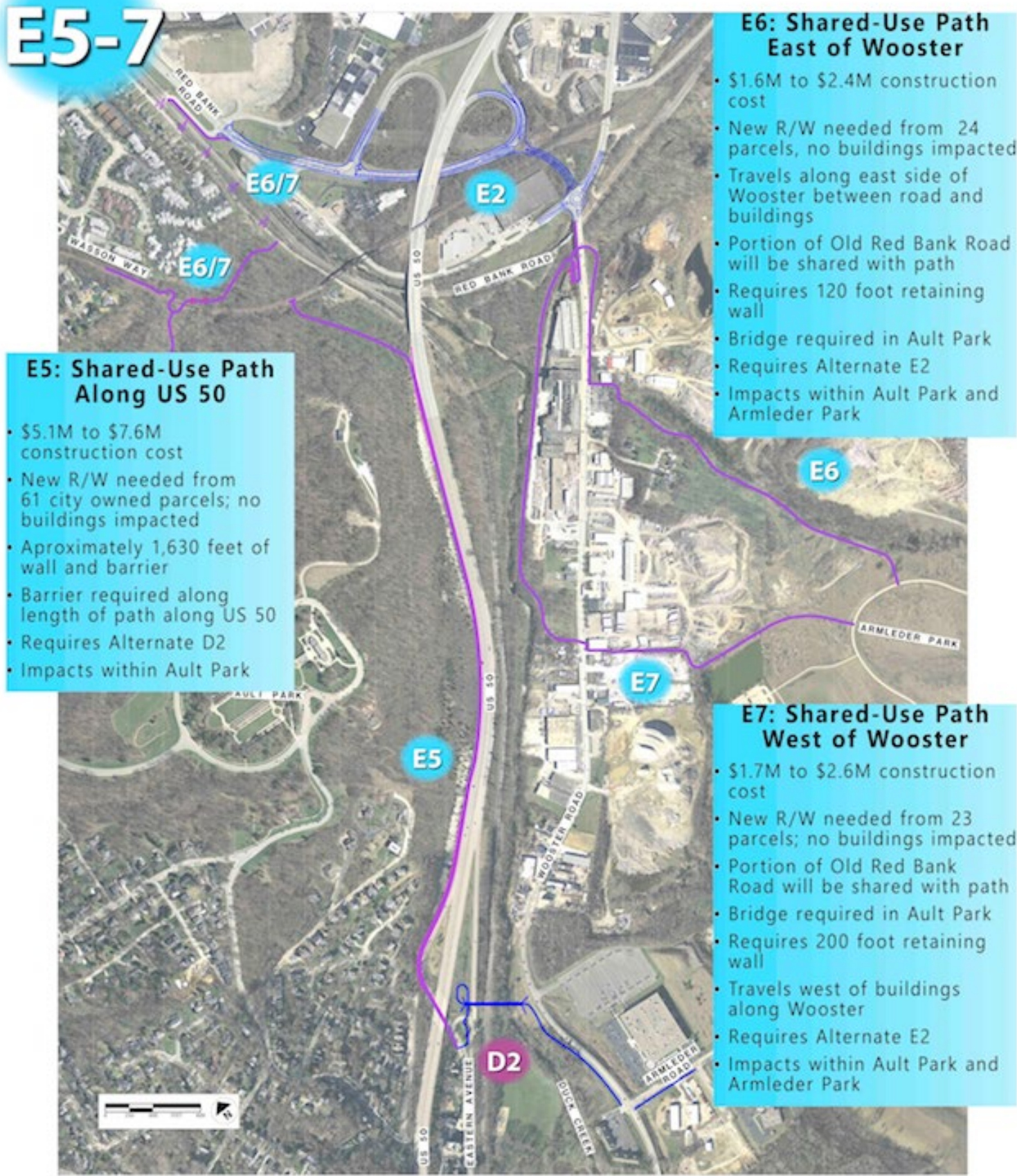
Figure BIKE-2B
SHARED USE PATH FROM WASSON TRAIL
TO ARMLEDER ROAD



Concept Drawing
Eastern Corridor Projects
Segment II-III (S.R. 32 Corridor)
HAM-32F-0.00; PID 86462

Figure BIKE-2B
SHARED USE PATH CONNECTION BETWEEN
WASSON TRAIL AND ARMLEDER TRAIL

Alternatives to address pedestrian and bicycle connectivity from Wasson Way Trail to Armleder Park



Drawing was presented at the October 24 & 25 2018 Open House meetings.

PUBLIC FEEDBACK RATINGS SUMMARY (E5)

Strongly Oppose	Dislike	Neutral	Like	Strongly Support
6%	11%	24%	23%	36%

(percentages have been rounded)

PUBLIC FEEDBACK RATINGS SUMMARY (E6)

Strongly Oppose	Dislike	Neutral	Like	Strongly Support
9%	2%	23%	25%	42%

(percentages have been rounded)

PUBLIC FEEDBACK RATINGS SUMMARY (E7)

Strongly Oppose	Dislike	Neutral	Like	Strongly Support
14%	3%	29%	20%	34%

(percentages have been rounded)

Concept drawing is presented on the following page.

DESCRIPTION

- Restripe Wooster Road to include bike lanes and/or sharrows.

NEEDS ADDRESSED

- P10) Address bicycle connectivity (designated US Bicycle Route 21).

5/22/18 MEETING DISCUSSION AND COMMENTS

- This concept would require widening Wooster Road on both sides.
- Commercial use of the road would make it a challenge to keep the bike path clean. Road debris (gravel, dirt, sand, trash, etc.) would likely collect in the bike path.
- Is there any option to route the bike path between Miami Bluff in Mariemont to the back of Armleder?
 - Concern is that the grade is too steep.
 - The consultant team will determine who owns the railroad tracks in this area, and which of these, if any, could potentially be used for a bike path (City of Cincinnati may have some documentation).

Comments Submitted Following the 5/22/18 Meeting

(Comments are presented as submitted by Committee members; no edits to content were made.)

- Figure BIKE-3 shows a bike trail extension across Wooster towards Mariemont Avenue near the Mariemont Industrial District. Any proposed bike paths in Mariemont will require Village approval. Also, not bike path information has been provided for the US 50 segment. Mariemont reserves the right to additional comments as this information becomes available from ODOT.

NEXT STEPS/RECOMMENDATION

- No further study due to the high cost of project and right-of-way impacts. Also, it would be difficult to keep the path clear of debris from local truck traffic.

Safety	Traffic Operations	Constructability Issues	Construction Cost	R/W Impacts	Environmental / Community Impacts	Supports and/or Facilitates Multi-Modal	Improve Regional Connectivity	Improve Local Access	RECOMMENDATION
IMPROVES	NEUTRAL	SIMPLE	< \$5 MILLION	PROPERTY TAKES	MINIMAL (C1/C2)	IMPROVES	NEUTRAL	NEUTRAL	NO FURTHER STUDY

RECOMMENDATION: NO FURTHER STUDY



0 250 500 FEET 1000
MARCH 2018



Concept Drawing
Eastern Corridor Projects
Segment II-III (S.R. 32 Corridor)
HAM-32F-0.00; PID 86462

Figure BIKE-3
WOOSTER ROAD TO INCLUDE BIKE LANES

Concept drawing is presented on the following page.

DESCRIPTION

- Improve Wooster Road to include a shared-use path.

NEEDS ADDRESSED

- P10) Address bicycle connectivity (designated US Bicycle Route 21).

5/22/18 MEETING DISCUSSION AND COMMENTS

- None discussed.

Comments Submitted Following the 5/22/18 Meeting

(Comments are presented as submitted by Committee members; no edits to content were made.)

- Figure BIKE-4 shows a bike trail extension across Wooster towards Mariemont Avenue near the Mariemont Industrial District. Any proposed bike paths in Mariemont will require Village approval. Also, not bike path information has been provided for the US 50 segment. Mariemont reserves the right to additional comments as this information becomes available from ODOT.

9/7/18 MEETING DISCUSSION AND COMMENTS

- Concept advanced as BIKE-4a and BIKE-4b (described on following pages).
- No additional comment received following the 9/7 meeting.

NEXT STEPS/RECOMMENDATION

- Incorporate concept into BIKE-2b; BIKE-4a becomes part of BIKE-2b (E7), while BIKE-4b becomes part of BIKE-2b (E6).

Safety	Traffic Operations	Constructability Issues	Construction Cost	R/W Impacts	Environmental / Community Impacts	Supports and/or Facilitates Multi-Modal	Improve Regional Connectivity	Improve Local Access	RECOMMENDATION
IMPROVES	NEUTRAL	SIMPLE	< \$5 MILLION	PROPERTY TAKES	MODERATE (D1/D2)	IMPROVES	NEUTRAL	IMPROVES	ADVANCE

RECOMMENDATION: ADVANCE WITH BIKE-2B (E6/E7).



0 250 500 FEET 1000
MARCH 2018



Concept Drawing
Eastern Corridor Projects
Segment II-III (S.R. 32 Corridor)
HAM-32F-0.00; PID 86462

Figure BIKE-4
SHARED USE PATH ALONG WOOSTER ROAD

Concept drawing is presented on the following page; Concept also shown with BIKE-2b (E6 and E7).

DESCRIPTION

- Add shared-use path along Wooster Pike behind Cincinnati Paperboard and then crossing Wooster at the greenspace to the Armleder Trail loop.

NEEDS ADDRESSED

P10) Address bicycle connectivity (designated US Bicycle Route 21).

9/7/18 MEETING DISCUSSION AND COMMENTS

- This concept could be combined with X-4d-1 (Wooster extension to Colbank with roundabout at Red Bank Road and Wooster Road) and BIKE-2b to connect the Wasson Way Trail to the Armleder Trail Loop.
- This concept would include a mid-block crossing on Wooster (west of Cincinnati Paperboard’s greenspace) with a rectangular rapid flash beacon (RRFB).
- Running the shared-use path behind Cincinnati Paperboard but south of the creek is a tight fit.
- A Committee member asked if it might be possible to take the trail through the existing Norfolk-Southern railyard in Mariemont (Clare Yard). It was reported however, that that area is being preserved for potential future rail use.
- A Committee member asked whether it was possible to rate Concept BIKE-4a and BIKE-4b as to which is more feasible from a construction

standpoint. Additional engineering analysis would be required in order to make that determination.

- The BIKE-2b, BIKE-4a and BIKE-4b concepts would need to be construction in conjunction with other projects to complete a full connection. Cost estimates for the necessary combinations are:
 - BIKE-2a: \$3.1M to \$4.7M
 - BIKE-2b, X-4d-1, BIKE-4a: \$4.53M to \$7M
 - BIKE 2b, X-4d-1, BIKE-4b: \$4.43M to \$6.8M
- No additional comments received following the 9/7 meeting.

12/12/18 MEETING DISCUSSION AND COMMENTS

The following notes as the same as those documented under BIKE-2b (E6, E7):

- Of the three bike path options in this area (E5, E6 and E7), E6 received the highest amount of support from the public.
- The committee surmised that this is because, as drawn, the bike path would travel along a vegetated corridor and creek before linking with the Armleder bike path.
- H. Hafner & Sons expressed concern with having the bike path cross the company’s driveway. They reported that 800 trucks come in and out of the driveway on a daily basis and it is hard to see bikes from the trucks. There is also typically a lot of debris in area.
- E6/E7 estimates do not include the cost of constructing the proposed roundabout at Wooster and Red Bank. If that cost were to be added,

the estimates for each would be closer to the cost estimates for concept BIKE-1 (E6).

- The committee discussed eliminating E6 due to the concerns of connecting the bike path across the Hafner driveway.
- The committee agreed that concept E7 needs to be include the proposed roundabout at Wooster and Red Bank. Therefore, the cost estimates for the roundabout should be added to the estimate for E7. This will increase the cost significantly. Even so, the committee agreed that this option should still be included in the Implementation Plan for future consideration.
- The priority of this concept will depend on the status and advancement of the Wasson Way trail.



NEXT STEPS/RECOMMENDATION

- Include in the Implementation Plan as part of E7 as a medium priority.

Safety ECAT Benefit /Cost Ratio	Location	Traffic Operations							Construction Cost	R/W Impacts		Environmental Impacts		Support and/or Facilitate Multi-Modal	Improve Regional Connectivity	Improve Local Access
		Time Period	HCS Results			TransModeler Results				Number of Relocations	R/W Cost	Anticipated Environmental Document	Red Flag Triggers			
			2042 Delay (seconds)	2042 LOS	% Reduction from No Build	2042 Delay (seconds)	2042 LOS	% Reduction from No Build								
									\$1.3M to \$2M	0	\$390K to \$780K	C2	R/W Impacts, Stream Impacts, Waterway Permit, Potential T&E, Section 4(f), ESA Issues	Improves	Improves	Improves

PRIORITY: MEDIUM



<p>0 150 300 FEET 600</p> <p>September 2018</p> 	 <p>Stantec</p>	<p>Concept Drawing Eastern Corridor Projects Segment II-III (S.R. 32 Corridor) HAM-32F-0.00; PID 86462</p>	<p>Figure BIKE-4A SHARED USE PATH BETWEEN RED BANK ROAD AND ARMLEDER TRAIL</p>
---	---	---	---

Concept drawing is presented on the following page. Concept is also shown with Concept BIKE-2b (E6 and E7).

DESCRIPTION

- Add shared-use path along the south side of Wooster Pike past Hafner parcel to Armleder Trail Loop.

NEEDS ADDRESSED

P10) Address bicycle connectivity (designated US Bicycle Route 21).

9/7/18 MEETING DISCUSSION AND COMMENTS

- This concept could be combined with X-4d-1 (Wooster extension to Colbank with roundabout at Red Bank Road and Wooster Road) and BIKE-2b to connect the Wasson Way Trail to the Armleder Trail Loop.
- This concept uses the existing Wooster bridge and then crosses under the bridge to get to the east side of Wooster, near the Hafner driveway.
- The path would weave between parking lots, past the Miami Avenue residential area and follow a swale to an eventual connection with the Armleder trail.
- A Committee member asked whether it was possible to rate Concept 4-a and Concept 4-b as to which was more feasible from a construction standpoint. However, additional engineering analysis would be required in order to make that determination.

- The BIKE-2b, BIKE-4a and BIKE-4b concepts would need to be construction in conjunction with other projects to complete a full connection. Cost estimates for the necessary combinations are:
 - BIKE-2a: \$3.1M to \$4.7M
 - BIKE-2b, X-4d-1, BIKE-4a: \$4.53M to \$7M
 - BIKE 2b, X-4d-1, BIKE-4b: \$4.43M to \$6.8M
- No additional comments received following the 9/7/18 meeting.

12/12/18 MEETING DISCUSSION AND NOTES

The following notes as the same as those documented under BIKE-2b (E6, E7):

- Of the three bike path options in this area (E5, E6 and E7), E6 received the highest amount of support from the public.
- The committee surmised that this is because, as drawn, the bike path would travel along a vegetated corridor and creek before linking with the Armleder bike path.
- H. Hafner & Sons expressed concern with having the bike path cross the company’s driveway. They reported that 800 trucks come in and out of the driveway on a daily basis and it is hard to see bikes from the trucks. There is also typically a lot of debris in area.
- E6/E7 estimates do not include the cost of constructing the proposed roundabout at Wooster and Red Bank. If that cost were to be added, the estimates for each would be closer to the cost estimates for concept BIKE-1 (E6).

- The committee discussed eliminating E6 due to the concerns of connecting the bike path across the Hafner driveway.
- The committee agreed that concept E7 needs to be include the proposed roundabout at Wooster and Red Bank. Therefore, the cost estimates for the roundabout should be added to the estimate for E7. This will increase the cost significantly. Even so, the committee agreed that this option should still be included in the Implementation Plan for future consideration.
- The priority of this concept will depend on the status and advancement of the Wasson Way trail.

NEXT STEPS/RECOMMENDATION

- No further study.

Safety ECAT Benefit /Cost Ratio	Location	Traffic Operations							Construction Cost	R/W Impacts		Environmental Impacts		Support and/or Facilitate Multi-Modal	Improve Regional Connectivity	Improve Local Access
		Time Period	HCS Results			TransModeler Results				Number of Relocations	R/W Cost	Anticipated Environmental Document	Red Flag Triggers			
			2042 Delay (seconds)	2042 LOS	% Reduction from No Build	2042 Delay (seconds)	2042 LOS	% Reduction from No Build								
									\$1.2M to \$1.8M	0	\$450K to \$900K	C2	R/W Impacts, Stream Impacts, Waterway Permit, Potential T&E, Section 4(f), ESA Issues	Improves	Improves	Improves

RECOMMENDATION: NO FURTHER STUDY



0 150 300 600
FEET
September 2018



Concept Drawing

Eastern Corridor Projects
Segment II-III (S.R. 32 Corridor)
HAM-32F-0.00; PID 86462

Figure BIKE-4B
SHARED USE PATH BETWEEN
RED BANK ROAD AND ARMLEDER TRAIL