City of Little Rock Central High Corridor Proposal 2.0

Revised 1/6/17

Dr. John Landosky, City of Little Rock BikePed Coordinator

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Proposal Purposes

1) To clarify the placement of the Central High Corridor at a finer scale than has been previously considered.
2) To consider different options for trail placement in problematic areas.
3) To communicate our ideas to Brandon D. Morris and Union Pacific to determine where there are conflicts with Union Pacific active tracks and to work with Mr. Morris and Union Pacific to resolve those conflicts.
4) To communicate with US Depot, Inc. to consider options of circumnavigating Union Station.
5) To communicate with stakeholders regarding Mullenix development in the 2nd/Bishop triangle.
6) To communicate with State of Arkansas regarding parking lot in Capital Mall.
7) To establish property ownership along our proposed trail route to determine with whom we will have to work to obtain easements.
8) To communicate our ideas with stakeholders, to give them a better sense of the challenges and opportunities of installing this section of trail and to improve our concepts with their feedback.
9) To estimate costs of trail construction.
10) To build a local (i.e. Little Rock) consensus so that we are better prepared to seek funding from FLAP and other sources.

Introduction

The Central High Corridor (hereafter "Corridor") will be an off-street bike/ped trail from downtown Little Rock to Central High School. It will have many stand-alone benefits to our community and stakeholders, and will also be the first new construction of the proposed Southwest Trail that will eventually span 60+ miles and three counties to connect Little Rock to Hot Springs. Due to the cost of constructing the Southwest Trail, it is ideal to create the trail in segments that have stand-alone value; the Corridor is one such segment. The Corridor's route is informed by ALTA Planning's Southwest Trail Corridor & Economic Impact Study[1]; this report considers that ALTA Planning's route at a finer scale.

Trail Benefits

Benefits to Union Pacific

The Corridor would reduce liability exposure and costs to Union Pacific. If Union Pacific (UP) allowed construction of the Corridor, Arkansas's Recreational Use Statue (RUS) would protect UP from liability of injury of trail users. The RUS makes the burden of proof on the plaintiff to establish that Union Pacific deliberately intended to harm him or her (US DOT, 2002). Union Pacific currently has no such protection from liability of pedestrians in this corridor. US DOT pgs. V-VI itemize additional reductions in liability risk to Union Pacific due to trail development in the corridor.

The Corridor may also decrease trespassing on Union Pacific tracks, specifically pedestrian activity along the tracks and crossing the tracks. The trail would provide safe and comfortable pedestrian access along the railroad corridor and channel railroad crossings at designated locations, reducing the motivation to use the actual tracks as a pedestrian corridor. The Corridor would also improve the access to the tracks for emergency responders and UP maintenance vehicles.

Benefits to US Depot LLC/Amtrak

Little Rock Union Station (hereafter "Union Station") is currently tucked away in a corner of downtown that does not get much traffic. Union Station is on the National Register of Historic Places and should be more visible in our community. It is our understanding that Union Station is considering renovations in the rear of the building that will include several storefronts. A walking mall between Union Station and the railroad tracks that included the Corridor would create a steady flow of consumers to Union Station's new storefronts and its restaurant and advertise Amtrak as a transportation option. It would also create other ways for Little Rock residents to access Amtrak transit (by getting to Union Station by foot or bike). If coupled with a bikeshare station (launching in 2017), it would also create another way for visitors to get off an Amtrak train and travel by bike.

Benefits to Mullenix & Associates, LLC

Mullenix & Associates, LLC (hereafter "Mullenix") is building an office complex in the triangle created by 3rd St., 2nd St., and Bishop St. Their intention is to rent the space to lobbyists and others associated with the Capital Mall. 3rd St. is a major barrier between this development and the Capital Mall and there is no light at the corner of Bishop and 3rd. Crossing 3rd St. on foot in this location can be dangerous. This property would be much more attractive to those that would lease this space with a BikePed trail

[1] https://drive.google.com/file/d/0B8EDg_G8q_U2MGhiWGxmbFNoTjg/view

leading to the Capital Mall and to downtown Little Rock. Mullenix has expressed interest in being friendly to the bicycling community and facilitating Corridor development, which may include releasing 15 ft. of ROW along 2nd St. Installing bicycle parking in their new development and/or supporting a bikeshare station (launching 2017) would only increase the attractiveness of the space to tenants and further support the growth of bike culture in Little Rock. The development proposed by Mullenix would not be affected by this loss of ROW. Mullenix does not own this section of property but has a long-term lease on it. The property owner would also have to be involved in decisions regarding ROW as well.

Benefits to State of Arkansas

The State of Arkansas is by far the largest employer in Little Rock, employing over 23,000 people.[2] Many of these employees work in the Capital Mall. Creating BikePed connectivity from the Capital Mall to downtown Little Rock would decrease employee tension, increase employee fitness, and increase tourist visitation. Creating BikePed connectivity to the Arkansas River Trail will also create a corridor though which employees could walk or bike to work, increasing their safety and public health (see also below). Including one or more bikeshare stations (launching in 2017) would only increase the use of the Corridor to and from the Capital Mall by employees and tourists.

Benefits to Our Community

Economy/Tourism: The corridor would have several short- and long-term economic benefits to our community. Trail construction would create jobs. Bike/Ped trails have consistently been shown to increase property values (thereby increasing tax revenue for the City) and livability. Increased livability will help attract and retain the best talent for area businesses and attract new businesses to locate in Little Rock. The Corridor will also attract approximately 2,500 additional out-of-town bike tourists per year, injecting approximately $145,000 additional tourist revenue per year.[1] We also conservatively project that the Corridor will increase visitation to the Central High School National Historic Site by 6,000 visitors per year (over a 5% increase in visitation from 2014) increasing exposure to this important piece of Little Rock and United States history.

Increased Public Health: Arkansas is the second most inactive, the fourth most hypertensive, and the fourth most obese (over all age groups) state in the nation.[3] In addition to decreasing quality of life and life expectancy, obesity increases work absenteeism and healthcare costs. Arkansans are unhealthy because of our inactivity and we are inactive, in part, because our built environment discourages physical activity. This trail would be a critical off-street north-south corridor that would encourage active recreation and transportation.

Safety: The Central High Corridor service area may be the least safe area in all of Central Arkansas for bicyclists and pedestrians according to Metroplan.[4] 126 pedestrian crashes and 30 bicycle crashes occurred within ½ mile of the Corridor between 2005-2014 (Fig. 2). Ten of these crashes were fatalities.[3] The four most dangerous intersections for pedestrians in all of Central Arkansas are within the Corridor service area.[3] The Corridor service area also includes the most dangerous corridor in all of Central Arkansas (S. Broadway).[3]

[2] http://www.mba-today.com/business/arkansas-mba-employers.html
[3] http://stateofobesity.org/rates/
[4] https://www.littlerock.gov/media/1376/metroplan_2015ped-bikecrashanalysis.pdf

The project is not only important because of the safety concerns, but because of whom it will serve. Bicycle and pedestrian crashes disproportionately affect minorities. African-American male adults in Central Arkansas are 2.9 times more likely to be involved in a bicycle crash, 3.9 times more likely to be involved in a pedestrian crash, and 2.8 times more likely to be killed in a pedestrian crash as compared to white male adults.[3] The Corridor will safely link predominantly African-American neighborhoods to businesses and jobs in downtown Little Rock.

Orientation

The figures of the trail route in this report were created through ArcGIS at a fine scale (1:1,000) in order to communicate our ideas for the route with a higher fidelity than previously attempted. The dark blue line is the City of Little Rock's (CLR's) proposed Corridor center. This route is based on a trail route supplied by ALTA Planning's study, but altered by CLR to better fit our community. The light blue zone around the dark blue line represents the 12' wide trail to map scale. The required 18' right of way (ROW) sometimes mentioned refers to the three feet of level ground required on either side of the trail (not depicted in maps). The yellow contour lines show every two-foot elevation change (light "intermediate" lines) and every 10' elevation change (heavy "index" lines). I made every attempt to route the trail with the least elevation change possible (especially avoiding steep climbs) within the limits of the proposed route. The heavy green lines are estimated property boundaries. Survey work will need to determine exactly to what extent the trail would go within each parcel. The roads are included to orient the viewer and to inform access discussions.

Proximity to Active Track

An important concern of Brandon Morris and Union Pacific is the proximity of the proposed trail to active track. "Setback" is the distance between the paved edge of the Corridor and the centerline of the closest active railroad track. This report pays particular attention to setback at different points of the Corridor route.

It is important to note, however, that recreational trails have been established with very small setbacks without incident. The Razorback Greenway in Fayetteville, AR at the intersection of Dickson St., for example, has a setback of approximately six feet (Figs. 3-4). We do not propose any setbacks nearly that close for the Corridor. Safe setback distance for bicycle and pedestrian trails has been well-studied.[5,6] CLR looks forward to engaging in an evidence-based, active dialog with Union Pacific to establish a safe BikePed corridor. We may work with the Rails-to-Trails Conservancy to inform our discussion if that seems constructive. We feel confident that we can build a safe trail along the proposed route.

Creating a Low-Stress Recreational BikePed Path

It is important to make every effort to establish the Corridor as an off-road Class I bicycle and pedestrian path throughout its route. If trail users must mix with vehicular traffic, even for a short distance, the trail will only be used by those that feel comfortable doing so. The types of users of the Corridor and its overall use will decrease. The shared goal of the Southwest Trail Task Force is to create a low-stress recreational trail on which parents feel comfortable walking strollers, riding with a child in a bike trailer,

[5] http://altaplanning.com/resources/fhwa-rails-trails-lessons-learned/
[6] http://www.railstotrails.org/resource-library/resources/americas-rails-with-trails/

or shepherding toddlers just learning to walk, children unwary of automobiles, or children just learning to ride a bike. Compromises made now to expedite the completion of the trail may be difficult or impossible to remedy in the future. If we have no other alternative than to route the trail onto a city street, we should do everything possible to physically separate bicycle and pedestrian traffic from vehicular traffic. In this circumstance, we should also seek approval from the Southwest Trail Task Force as this decision would affect the character and use of the entire Corridor.

Route

The Corridor starts at the Junction Bridge and runs west along the river to the Union Pacific (UP) tracks (Fig. 1 and 5). This portion of the Corridor is already constructed. The Arkansas River Trail (ART) uses this same trail from the Junction Bridge to Arch St. but is then routed onto city streets (Fig. 5). The scenic portion of the Corridor west of Arch St. is currently unused west of Arch St. because of an erosion concern and a lack of connectivity (Figs. 6-7). A new bicycle and pedestrian bridge over the UP tracks will be completed Summer 2017, rerouting the ART north of LaHarpe, but without FLAP funding the Corridor west of Arch St. will remain unused (Fig. 8).

If FLAP is funded, Phases 1 and 2 will buttress the Corridor's erosion, create ramps from the BPB to the Corridor headed east and southwest, and retain an at-grade Corridor turning SW from its current terminus (Fig. 9-12). Phase 2 will construct the Corridor from this Corridor/ART junction to the Arkansas State Capital Complex. Phase 3 will construct the Corridor from the Arkansas State Capital Complex to Central High.

The trail would continue at-grade from the fence in Fig. 7 under the BikePed bridge ramp and under LaHarpe to Union Station (Figs. 10-13). The trail could either run behind Union Station in a created bicycle- and pedestrian-only space (Figs. 14-20) or in a space physically separated from vehicles along Victory St. and W. Markham St. (Figs. 21-32). If the trail is taken onto Victory and W. Markham, it could either run along the southern wall of the station (Fig. 31) or go onto the elevated green space just south of the southern wall (Fig. 32).

The trail would continue east of the tracks until intersecting with 2nd St. as it turns SW (Fig. 33). Space for the Corridor is extremely limited along 2nd St.; we must decide to what lengths we are willing to go to retain vehicular access on this block of 2nd St. (Figs. 33-40). At the end of this block of 2nd St., we could create a trail just NW of the State of Arkansas parking lot or take 18' of ROW plus space for a physical barrier from the NW edge of State of Arkansas parking lot (Fig. 41).

Beyond the parking lot, the trail would run just NW of a steep slope (Figs. 41-42). Running the trail up the grassy slope owned by the state of Arkansas would be extremely challenging for recreational riders and would not likely meet Corridor minimum standards (Figs. 41-42).

The trail continues south of the UP tracks, over what may be an abandoned railroad bridge which must be inspected for serviceability (Figs. 43-44). It then crosses 7th St. over 7th St. over another abandoned railroad bridge (Fig. 45). The trail then crosses under I-630 (Fig. 46) and into a valley just south of 10th St. (Fig. 47). The berm between the active tracks and the proposed trail route between 10th St. and 15th St. should satisfy any U.P. safety concerns in this segment (Figs. 47-51). Our area of immediate concern, connecting the Trail of Tears to Central High, will end at 16th St. (Fig. 52).

Connectivity

The Corridor will connect the Trail of Tears National Park to Central High School National Park and represent the first new construction of the Southwest Trail that will ultimately connect both parks to Hot Springs National Parks. However, we also intend this trail to fit into our transportation network so that bicyclists and pedestrians can use it as a low-stress north-south corridor. Connection to our Master Bike Plan is therefore particularly important (Fig. 53). Figure 53 is an overview map of our proposed connections for the Corridor.

Connection #1 is where the Arkansas River Trail joins the Corridor at the Union Pacific tracks (Fig. 10). This connection will require a ramp from the BikePed bridge over the UP tracks, but a quality connection here will encourage the hundreds of people per day who use the Arkansas River Trail to use the Corridor. **Connection #2** is at Union Station. The form this connection(s) takes will depend on the route the Corridor takes around Union Station (Figs. 14-32). This connection, especially if combined with a bikeshare station at Union Station, would increase multimodal transportation for visitors traveling to Little Rock by train and Little Rock residents riding the train. **Connection #3** is at 2nd (Fig. 33). Creating quality pedestrian facilities along Bishop St. is particularly important for Rock Region Metro users to access the Corridor (Fig. 54). **Connection #4** is on the Arkansas State Capital Complex (Fig. 41). This connection could encourage both bike commuting and tourism to the complex. **Connection #5** is at the trail's intersection with 7th St. (Fig. 45). Existing stairways could connect 7th St. to the Corridor for pedestrians (Fig. 55). We could create a Park and Ride opportunity at this location as well for both recreation and transportation (Fig. 56). **Connection #6** is at Maryland Ave (Figs. 46 & 57). This connection (and Connection #7) may be the most direct connections for users accessing Arkansas Children's Hospital. **Connection #7** is at 10th St. (Fig. 47, 58-59). This connection would be how a bicyclist would connect from the bike lanes on 12th St. going north and from the trail SW bound going east or west (Fig. 60). From 10th to 15th St., the Corridor is routed through a steep valley, making connections between these streets challenging (Figs. 47-51). **Connection #8** is at 15th St (Fig. 51 & 61). This would be the connection a bicyclist would use from 12th St. to go south on the trail or from NE-bound on the trail going east or west (Fig. 60). This would also be the connection a bicyclist on Daisy Bates would use, regardless of direction traveling (Fig. 62). This would also be one of two exits to access the Central High School National Park. **Connection #9** is the end of this phase of the Corridor and another access point to the Central High School National Park (Figs. 52 & 63). Connections from #8 and #9 to Central High School Visitor Center will be included in the next iteration of this report.

FLAP

We applied for the Federal Lands Access Program (FLAP) grant on 11/15/16. The purpose of the FLAP grant is to provide better access to or within National Parks or connect National Parks with transportation corridors.[7] The Arkansas River played a large role in both the Underground Railroad and the Trail of Tears and has National Parks landmarks along it, including the La Petite Roche ("the Little Rock") in Riverfront Park[8]. We applied for the FLAP grant in phases. Phases One and Two would buttress the erosion of the Medical Mile, connect the new BikePed bridge over the Union Pacific tracks to the Medical Mile and the proposed Corridor, and build the Corridor from the Arkansas River to the

[7] https://flh.fhwa.dot.gov/programs/flap/ar/
[8] https://www.nps.gov/trte/planyourvisit/places-to-go-in-arkansas.htm

Arkansas State Capital Complex. Phase Three would construct the Corridor from the Arkansas State Capital Complex to Central High School. The Visitor's Bureau reports that the two tourist attractions most asked about in Little Rock are the Clinton Library and Central High School. All of the BikePed facilities are currently built around the Clinton Library. Building the Corridor would connect visitors to Central High School and increase its exposure. All of this is in service of the ultimate goal of connecting La Petite Roche and Central High School to Hot Springs National Parks.

Figures

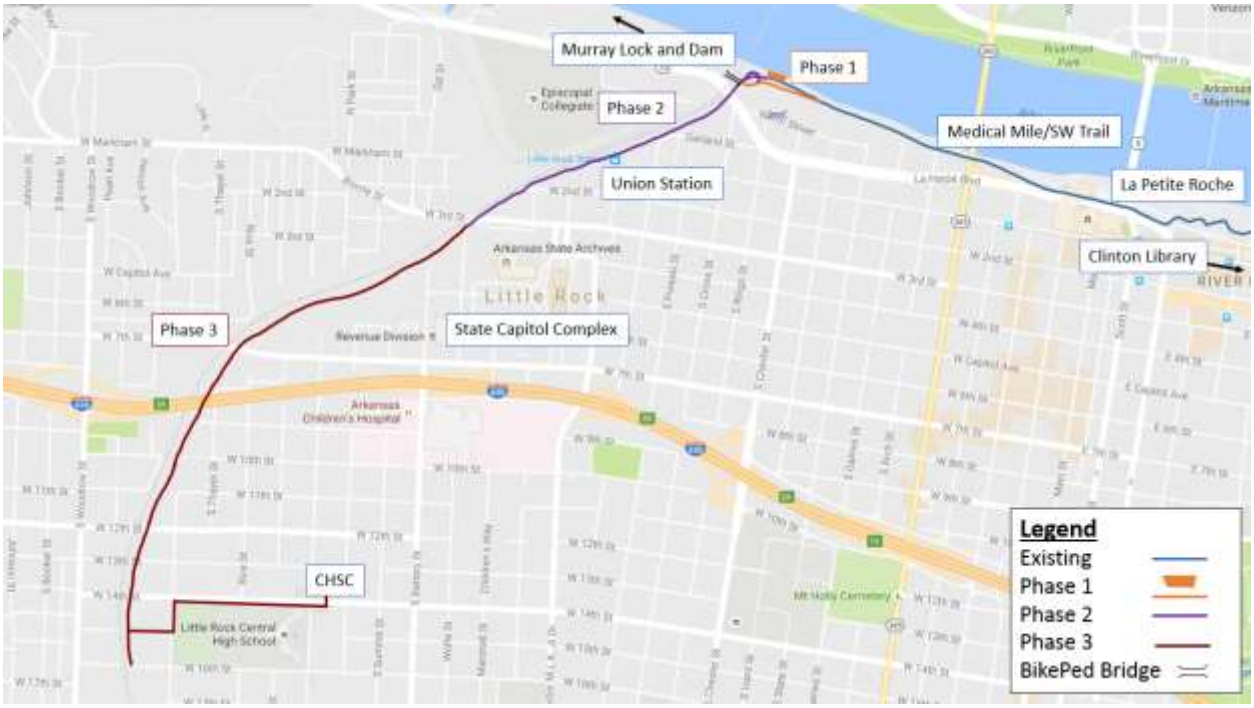

Figure 1. Overview of the proposed project, the Central High Corridor (CHC), its FLMAs, and its phases.

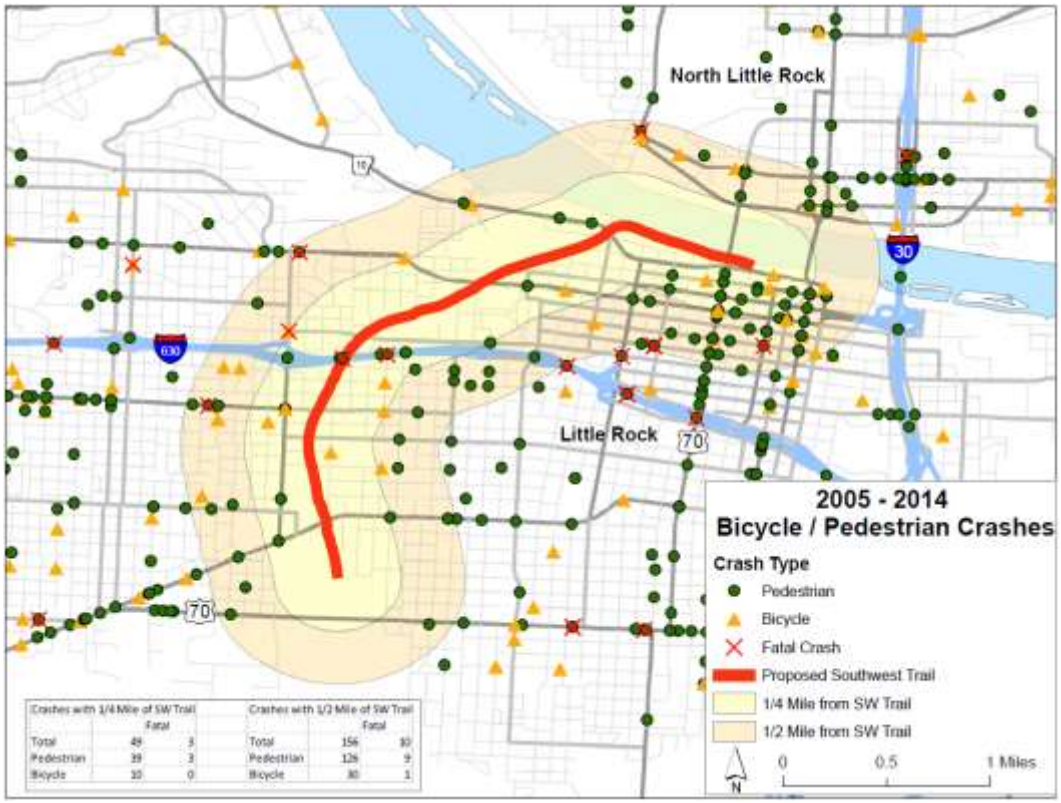

Figure 2. Summary of bicycle and pedestrian crashes in the Corridor from 2005-2014. Courtesy of Hans Haustein, Metroplan.

Figure 3. The setback between the Razorback Greenway and active railroad tracks is approximately six feet at its intersection with Dickson St. Photo courtesy of Mandy Bunch.

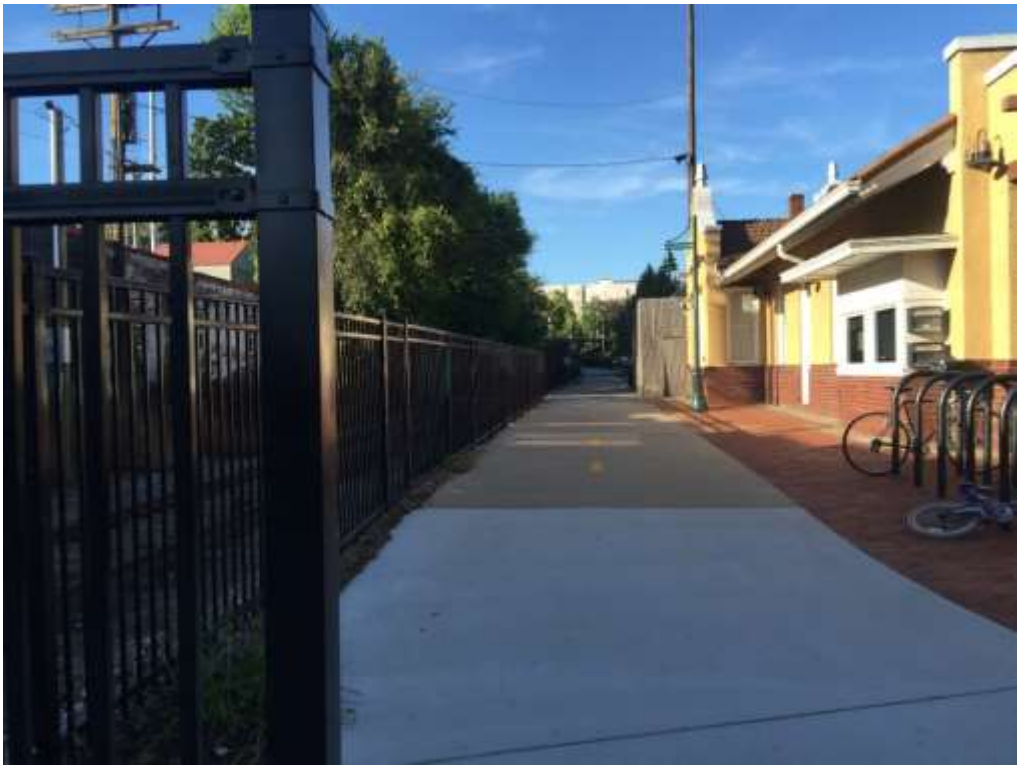

Figure 4. Note the Razorback Greenway pavement extends to the fence. Photo by Mandy Bunch.

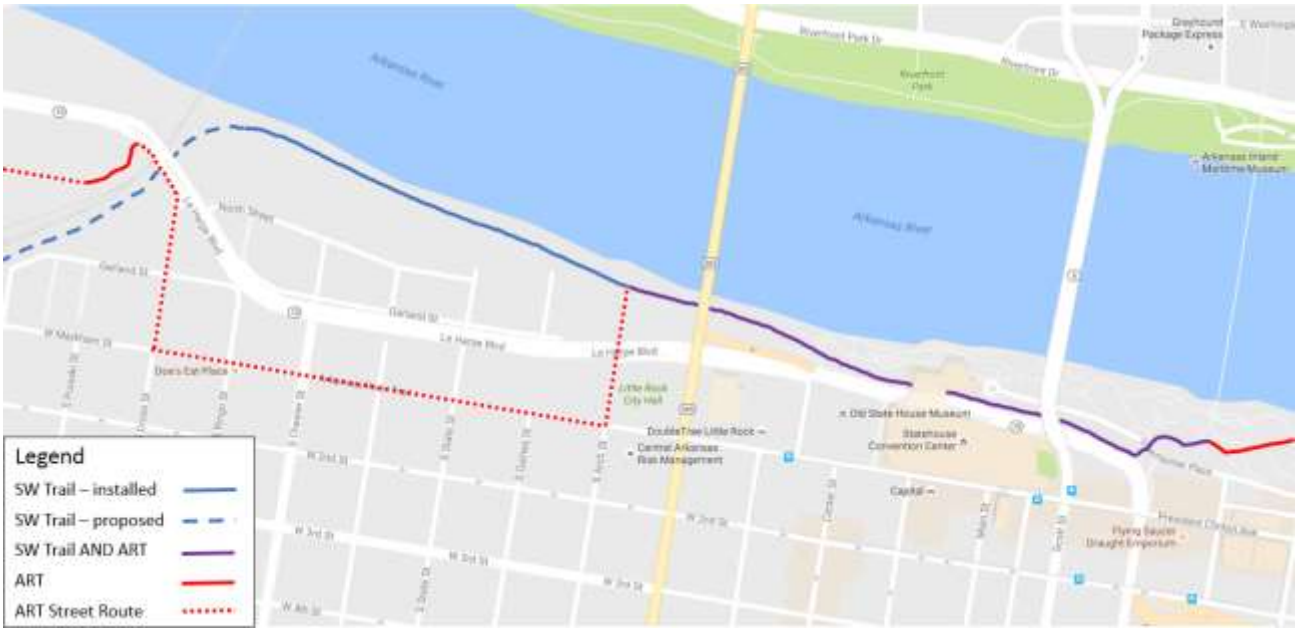

Figure 5. Current routes of the Corridor (SW Trail) and Arkansas River Trail (ART) from La Petite Roche the Union Pacific tracks (not considering temporary Broadway Bridge construction detour). Note the current lack of connectivity at the Corridor's NW terminus.

Figure 6. The trail west of Arch St. is beautiful but unused because it leads nowhere (Fig. 4).

Figure 7. The Corridor terminates at a gate close to the Union Pacific tracks. The broken trail in the bottom right of the Figure is caused by erosion into the Arkansas River.

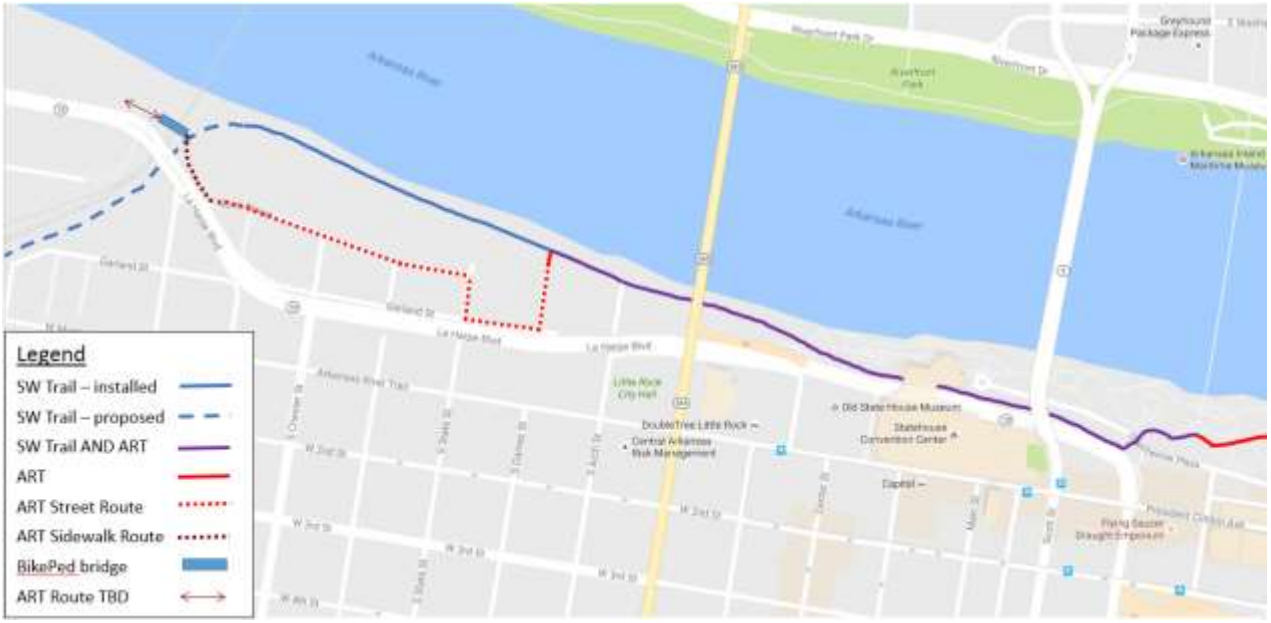

Figure 8. Map of Fall 2017 ART Route without FLAP funding. The Arkansas River Trail west of the UP BikePed bridge is yet to be determined (TBD).

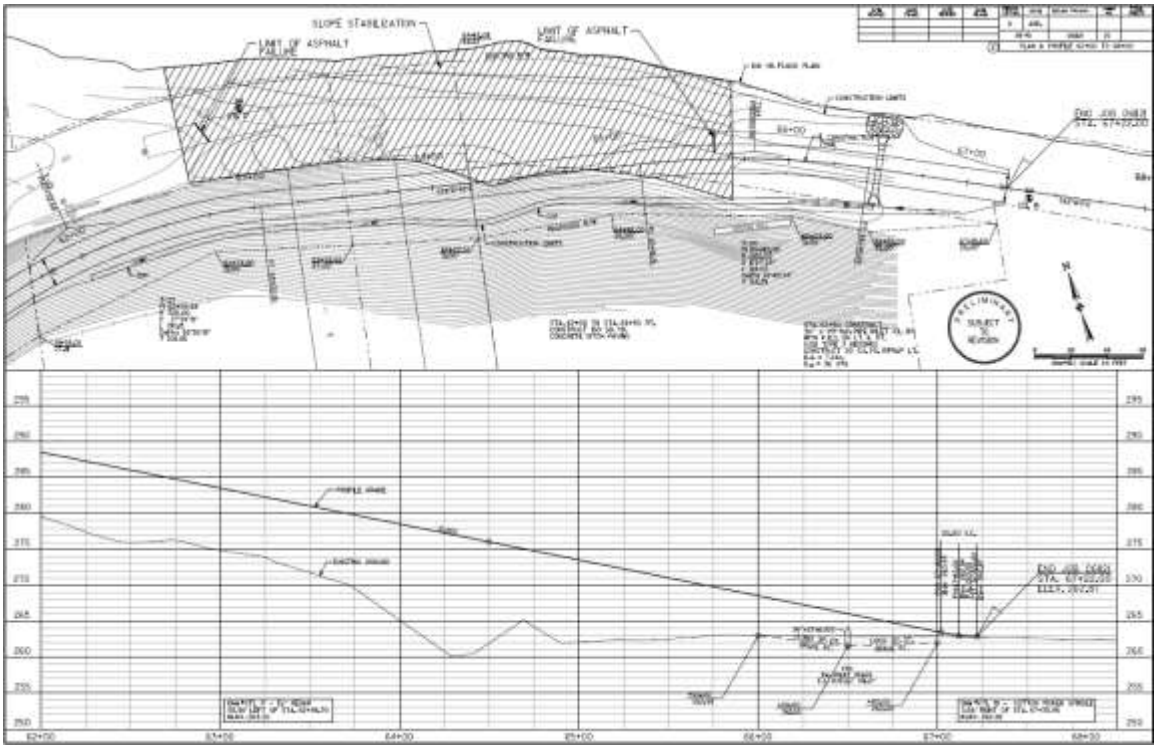

Figure 9. Plans to fix the slide along the Corridor close to the UP tracks. Stabilizing the slope will cost $1.7M.

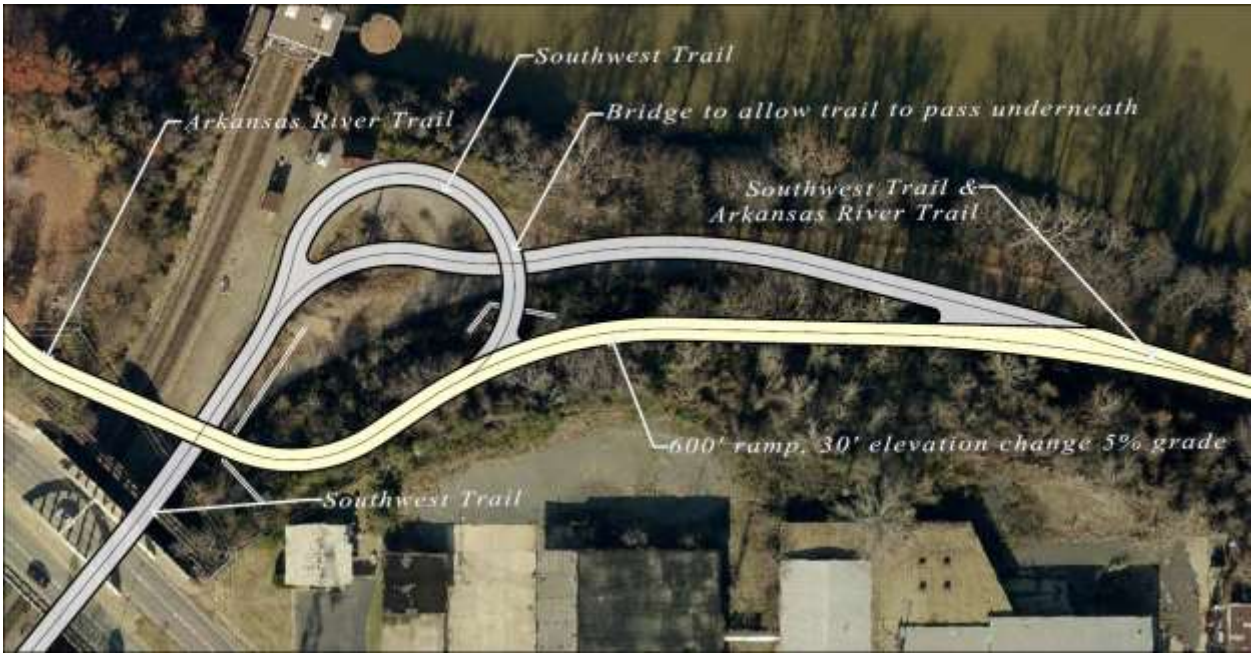

Figure 10. The proposed northern Corridor/ART ramp to the BikePed bridge (as of now, the trail route (light blue) is inaccurate west of the bridge). A second connection to the Corridor southwest of the BikePed bridge will be included in Leland Couch's concept map, which will replace this figure once created.

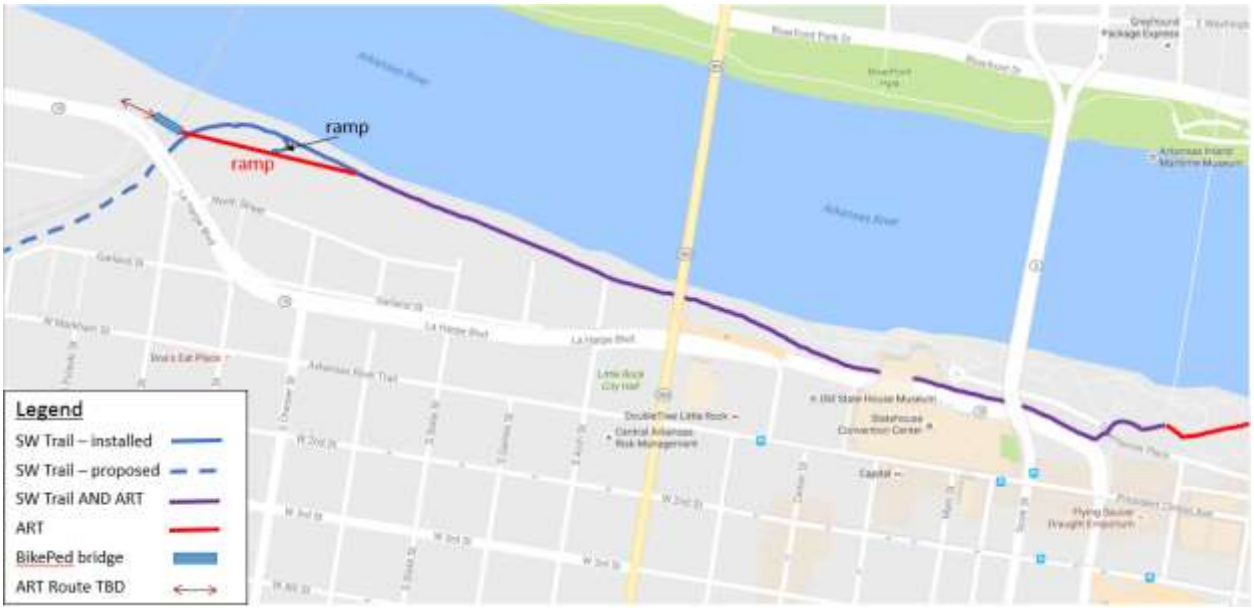

Figure 11. Corridor and Arkansas River Trail (ART) route map if FLAP is funded, after Phases 1 and 2. In order to make a 30' elevation change at a grade consistent with Corridor standards, the red ramp will be at least 600' long. The semicircular ramp along the red ramp allows SW traffic from the Corridor to go west on the ART and ART traffic from the west to go SW on the Corridor without traveling the entire 600' of the red ramp and making a 170° turn.

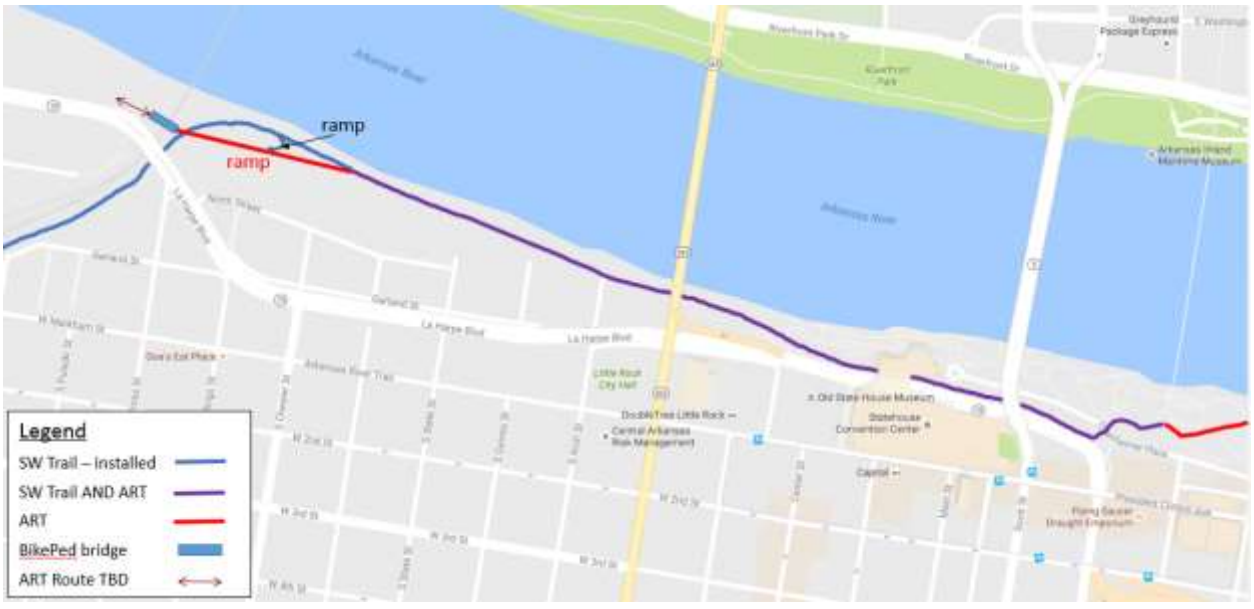

Figure 12. Corridor and Arkansas River Trail route map after FLAP Phase 3, if funded.

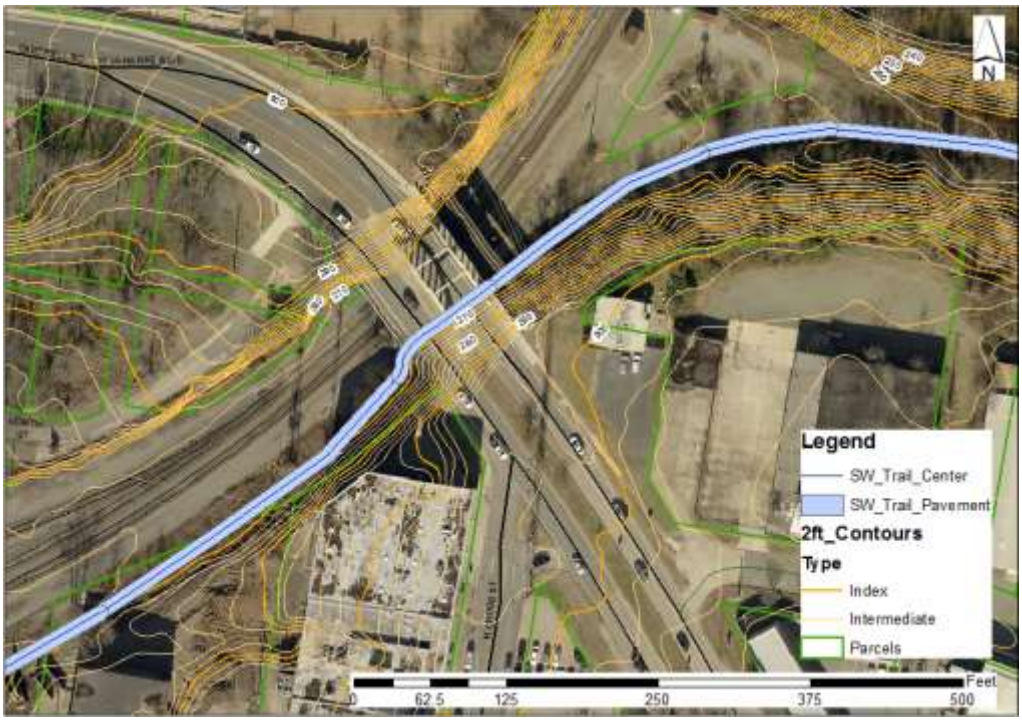

Figure 13. The junction of the Corridor and the Arkansas River Trail. The setback is 24' at the southern edge of the LaHarpe Bridge.

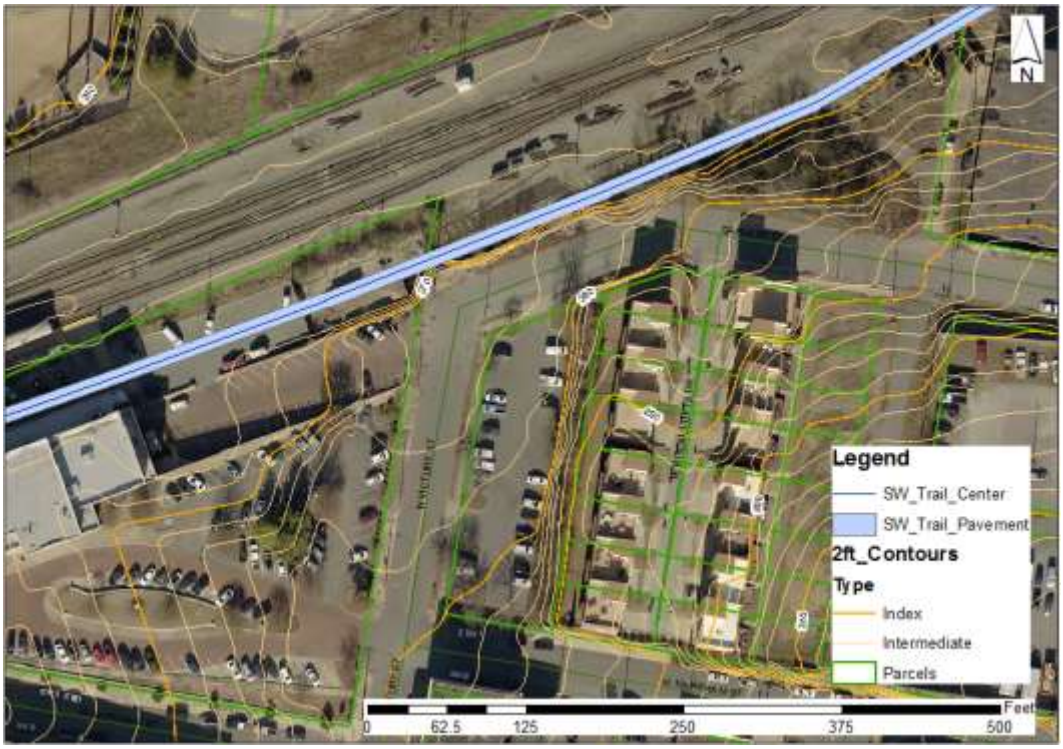

Figure 14 – Union Station BikePed Zone Option. Corridor Route from LaHarpe to the train station. Circumventing the train station is a challenge. One option would be to create a pedestrian and bicycle space (vehicle-free) behind Union Station. The trail run close enough to the building to avoid the handicapped access ramps to the train platform. The closest setback is 54'.

Figure 15. This is the space behind Union Station as it is currently. The distance from the building to the end of the pavement is 30', 17' for parking and 13' for drivethough. There is ~20' of space north of the parking lot and south of the platform fence, but a slope, ramps with handrails, lightpoles, and the building in the center-right of this Figure make a trail unlikely there. The Corridor could not safely share this space with vehicles. Vehicles pulling out of their parking spaces would be pulling into the 13' drivethrough we would call the "Corridor", a car parked between trucks would be backing out blindly. The minimum standard for the Corridor is 18' of ROW; this drivethough does not meet this standard. Imagining this area as a bicycle and pedestrian-only space, the area of highest pedestrian traffic, on the eastern end and center of the building, includes a pedestrian canopy. Pedestrians coming from the building and trail users would have lines of sight to see one another. Landscaping could make this area a destination.

Figure 16. The brick ramp from N. Victory St. to the eastern edge of the building (see also Fig. 13) could remain a parking lot. A removable bollard could be installed to allow bicycle and pedestrian access but typically prevent vehicular access.

Figure 17. One of two ramps that extends into the parking lot (Fig. 14, left center). The proposed trail route runs closer to the building to avoid these ramps.

Figure 18 – Union Station BikePed Zone Option. From the top right corner, the trail would continue close to the building to avoid the second ramp extending into the parking lot, then start to move away from the building to get around its NW corner. The vehicle-free space would end at the NW corner of the building. Moving SW, the trail would take 18' of the parking lot, hugging its northern border, leaving the rest for parking. Already present concrete parking stops could create a physical barrier between trail and the parking lot.

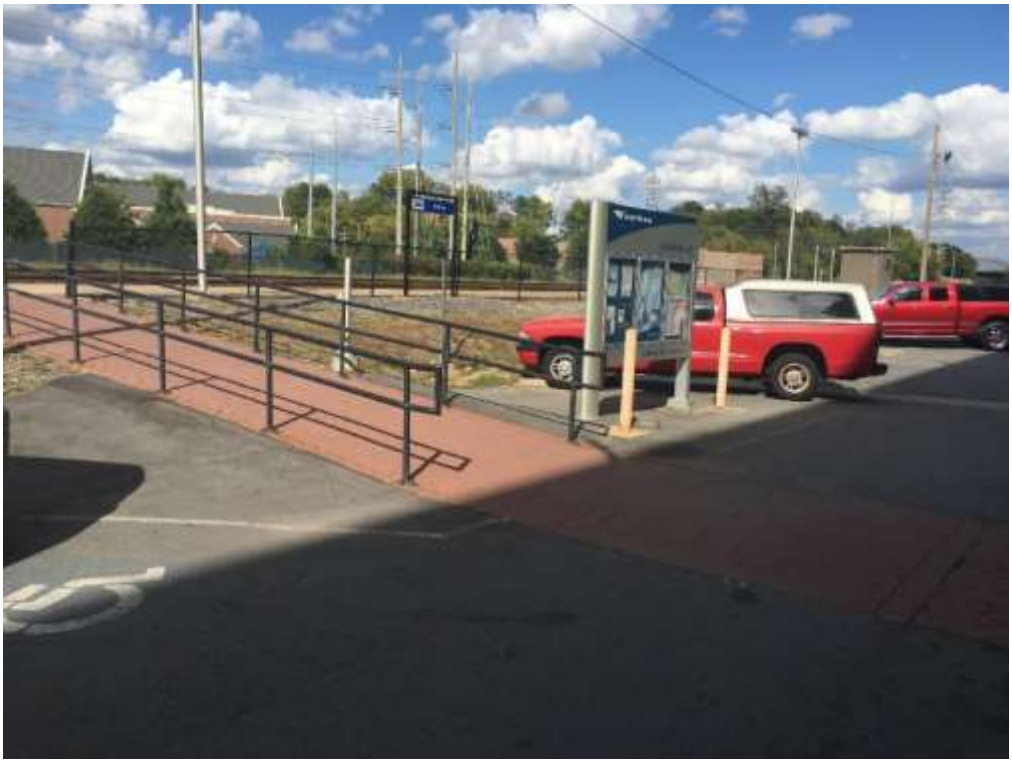

Figure 19. The trail would run close to the building to avoid this ramp (top of Fig. 18).

Figure 20. From close to the Union Station, looking SW. The trail would occupy the right-most 18' of this parking lot, leaving the rest for parking (see also left side of Fig. 18).

Figure 21 - N. Victory St./W. Markham St. Connection Part 1. Either we would build a ramp to N. Victory St. (about a 10' elevation change, see contours) or route an 18' ROW up the existing brick ramp. Using the brick ramp would be problematic: 1) neither the 180° turn required at the entrance of the brick ramp nor the 120° turn required at the top of the brick ramp would meet Corridor standards, 2) either we would close the bottom of the brick ramp for vehicular traffic or risk BikePed vs. vehicle problems in bind turns (see also Fig. 15), and 3) 13 parking spots would be removed on the brick ramp.

Figure 22. Google streetview of N. Victory St. from the corner of N. Victory and Markham. The street is 36' wide, has a low average daily traffic count, and the sidewalk on the west side is in good repair.

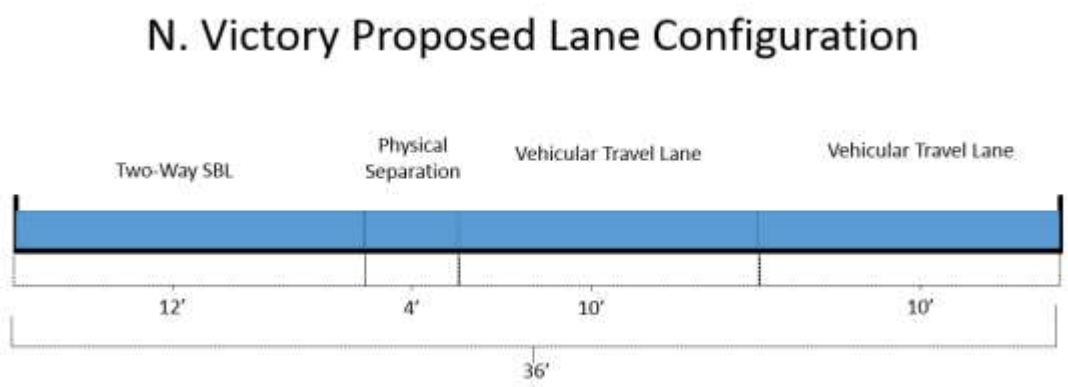

Figure 23. We could create a safe separated space for bicycles with a two-way separated bike lane (SBL) on the west side of the street (see also Fig. 23) on the block depicted in Fig. 20. Pedestrian traffic can be routed to the existing sidewalks in this section. This has not yet been vetted by Public Works.

Figure 24. Example of a two-way separated bike lane (SBL) from Dayton, OH.

Figure 25. Google streetview of W. Markham from the corner of N. Victory and Markham. The street is 36' wide, has a low average daily traffic count, and the sidewalk on the north side is serviceable.

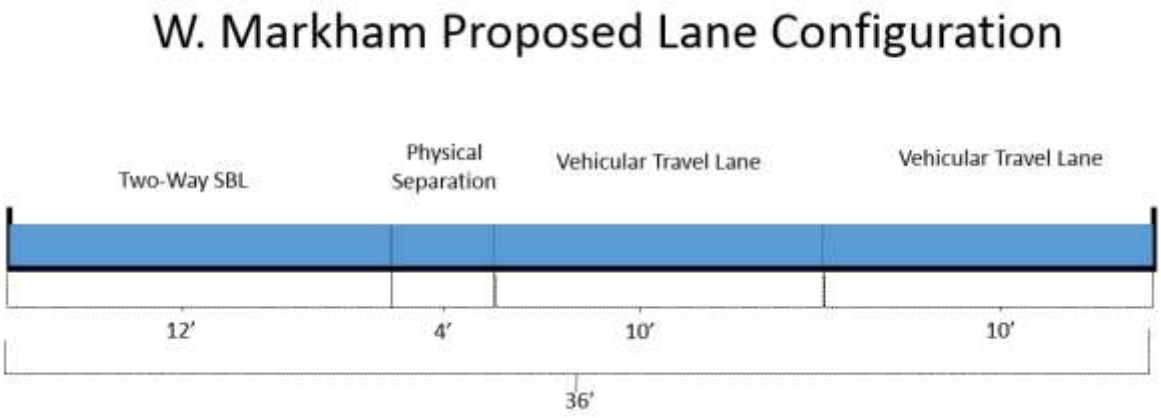

Figure 26. We could use the same lane configurations as proposed for N. Victory. Parking would have to be removed on both sides of the street. This has not yet been vetted by Public Works.

Figure 27. If we were to take the Corridor onto Victory and W. Markham streets, we would want to minimize vehicular traffic on these streets. One possibility would be to make W. 2nd Street two-way instead of one-way between S. Victory St. and Cross St. W. 2nd St. is two-way west of Victory St.; the change would only affect those two blocks circled in red. We could also consider making W. Markham St. and Garland St. one-way for these two blocks (yellow circle). There are few businesses and residences on these streets for these two blocks that would be affected. These changes would funnel the vehicular traffic that would travel on Victory and W. Markham to Victory and W. 2nd St., away from the Corridor. These ideas have not yet been vetted by Public Works.

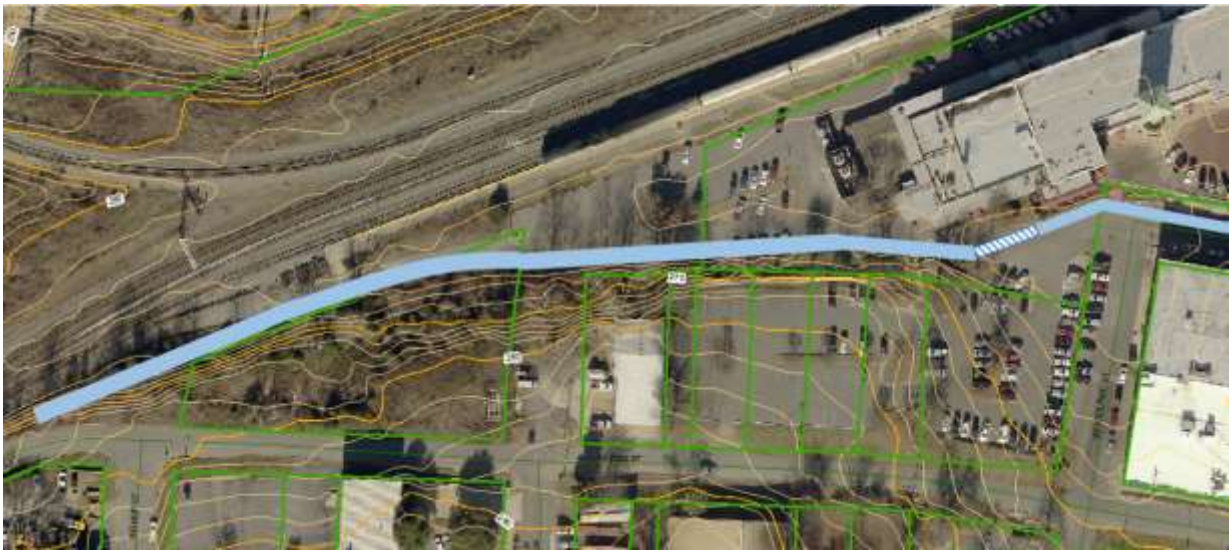

Figure 28. Continuing from Fig. 20, the two-way SBL must convert to a BikePed trail at the end of the sidewalk at the end of W. Markham St.

Figure 29. The sidewalk ends at the corner of W. Markham St. and Woodlane St. Here the two-way SBL must become a separated BikePed trail. Any physical separation will have to allow access from the parking lot to Union Station entrances.

Figure 30. Close-up of intersection of W. Markham and Woodlane. Balancing the needs of the Corridor with vehicular traffic and building access in this area is problematic. From right to left, at the end of W. Markham's sidewalk, the two-way SBL will convert to a separated BikePed trail. Physical separation must break at the building entrances (red circles). Three parking spaces may need to be removed immediately south of the crosswalk, and the area within the purple circle may have to be a sharrow due to the width between the building and the stairs. Mark Webre suggested we may be able to move the stairs south to create better separation between the Corridor and vehicular traffic. Removal of the tree and curb in the yellow area could allow some parking just off the figure to the left to be retained.

Figure 31. Creating an 18' ROW (blue bar) with physical separation would remove the parking along the south wall, but vehicles would still be able to circumnavigate the parking lot island (especially if one-way counterclockwise traffic arrows were installed. If parking capacity is a concern, the parking island could be removed to create additional parking.

Figure 32. Instead of running the trail along the southern wall, immediately after the stairway (bottom left), a portion of the wall could be removed and the trail could ramp up to the greenspace in between the two walls. Construction would cost more but the south wall parking spots would be retained. The area between the two walls is approximately 18'. We would have to survey this area to see if there is adequate ROW. If this was the Corridor route, we may want to erect a fence along the lower wall to prevent falls. Note too the challenge the ramp on the bottom right will create to creating the trail. Mark Webre suggested that the stairway could be moved to facilitate separation between vehicles and BikePed traffic in this narrow area.

Figure 33. The BikePed Zone behind Union Station and the Victory/Markham Street options both converge approximately at the right edge of this figure. At that point, the Corridor is approximately at 262 ft. above sea level. From right to left, the Corridor will have to go upslope to meet 2nd St. (which is itself descending at and after its turn southwest). The Corridor will not run on what is now 2nd St. at its turn southwest (at 276 ft. above sea level), but will instead briefly run on the slope alongside it so that the Corridor is never higher than 270 ft. above sea level. After clearing Curry's property (the property immediately south of 2nd St. when it turns southwest), the Corridor will run on what is now 2nd St. 2nd St. could either be recreated to the southeast of where it runs now, could be limited to one vehicular lane, or vehicular traffic could be removed from it entirely.

Figure 34. The slope the Corridor would travel along and up to meet 2nd St. What is not easily seen in this photo is that the difference in elevation between 2nd St. and the tracks is decreasing as distance from the camera increases. The Corridor would run parallel to 2nd St., meeting it at around 270 ft. above sea level. This 8 ft. rise in elevation over ~250 ft. would create a ~3.2% grade on the Corridor (well within minimum standards), and the retaining wall required would create separation from the Union Pacific tracks and thereby increase safety. Leland Couch pictured for scale.

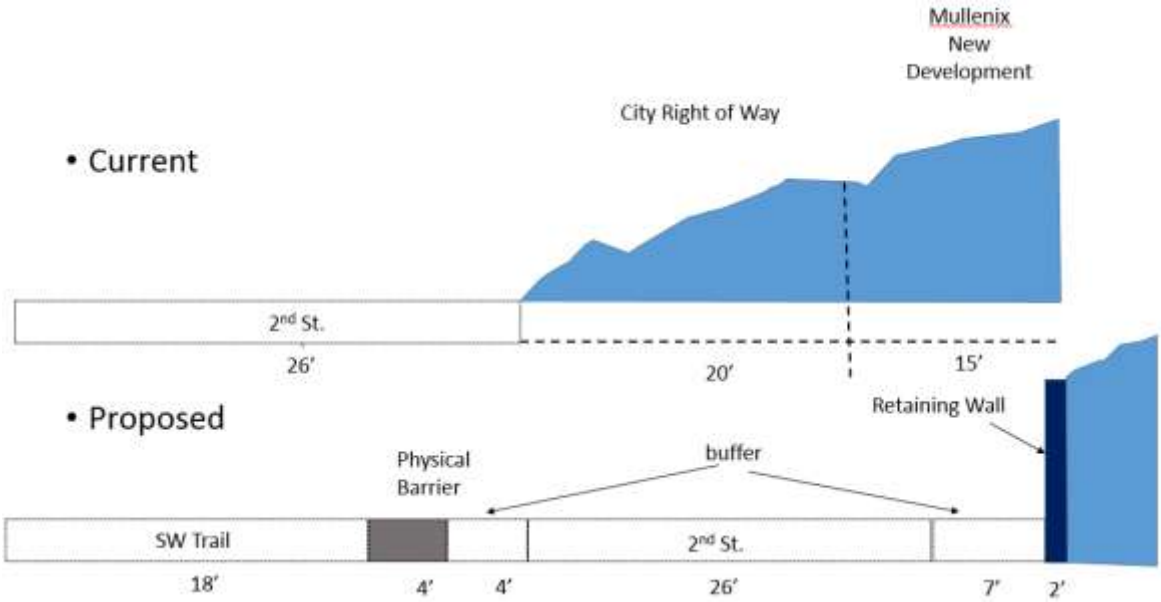

Figure 35. Retaining two-way vehicular traffic on 2nd St. In order to retain two-way traffic on 2nd St., we would have to use the 20 ft. of City/Union Pacific ROW to the southeast of 2nd St. and obtain an easement for 15 ft. of additional ROW. Because the Mullenix development plans have no intentions for using this 15 ft. and they expressed interest in facilitating the Corridor through this section (a street also designated for bike facilities by the Master Bike Plan), this could be a feasible solution.

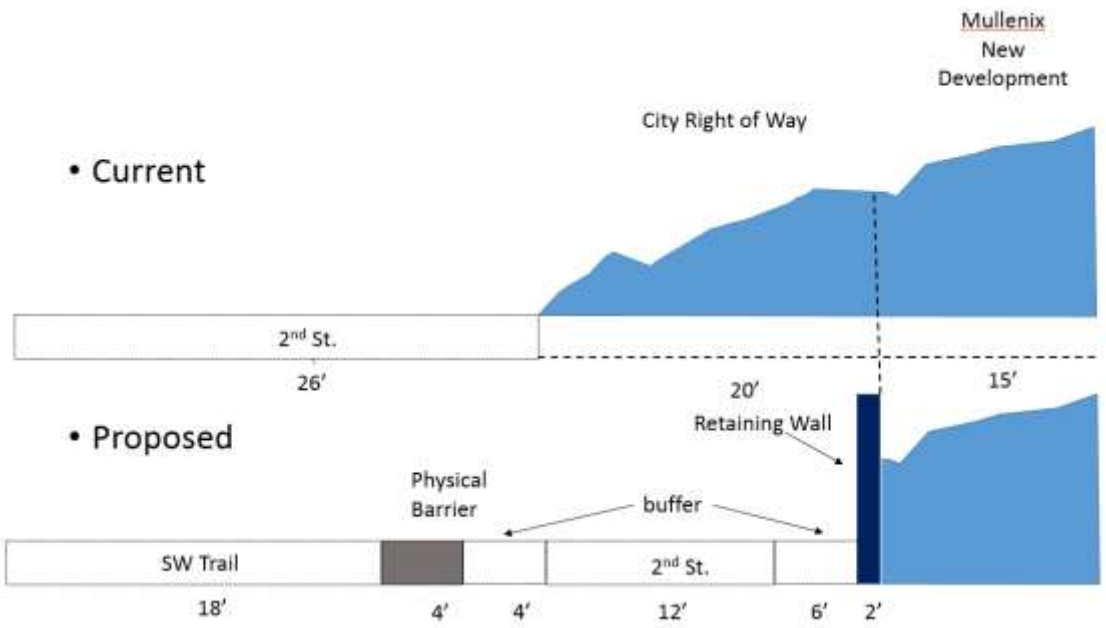

Figure 36. Retaining one-way vehicular traffic on 2nd St. If we are not able to obtain the additional 15' of ROW or due to cost or other considerations, we could use the City's 20 ft. of ROW southeast of the current 2nd St. to build a one lane 2nd St.

Figure 37. One-way vehicular traffic on 2nd St. The main function of this section of 2nd St. is to provide access to a Capital Mall parking lot to and from 3rd St. (bottom left corner of picture). There are two ways to access this parking lot from 3rd St. (green and blue arrows). The main advantage of 2nd St. vehicular access is allowing vehicles to easily turn westbound onto 3rd St. from Capital Mall (from the blue arrow access, a vehicle would have to make a left turn onto 3rd St., which is challenging without a traffic light.

Figure 38. Eliminate vehicular traffic on 2nd St. Yet another option would be to eliminate vehicular traffic from 2nd St. entirely and increase the utility of the blue arrow access road for vehicles coming from and getting onto 3rd St. by adding a traffic light at this intersection. Care would have to be taken to time the light with the traffic light at 3rd and Martin Luther King to the right of the picture to avoid traffic issues on 3rd St.

Figure 39. Getting the Corridor under 3rd St., between the two 3rd St. Bridge support pillars that surround 2nd St., is another challenge. Note the drains on the left side of 2nd St.

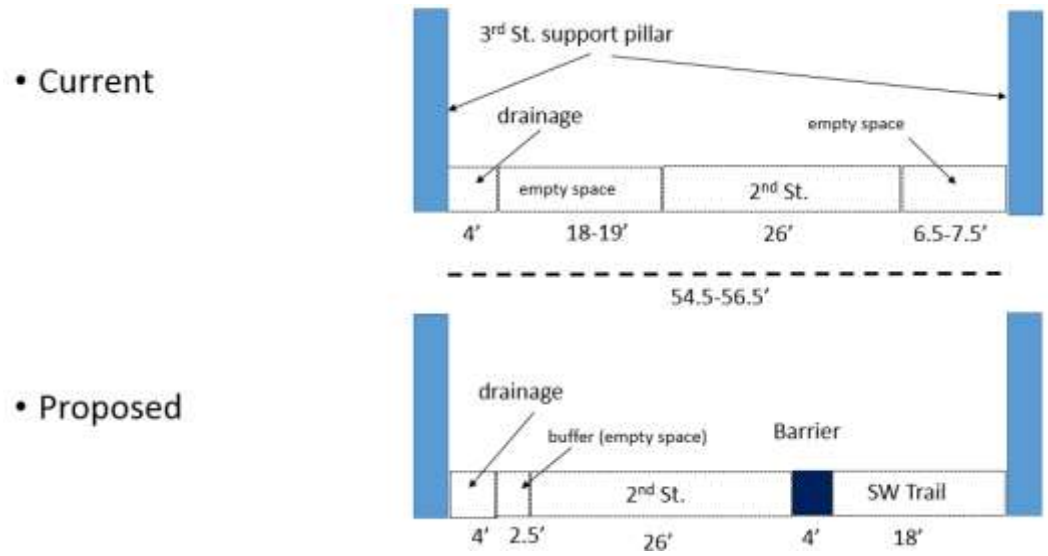

Figure 40. There is room between the pillars to create the Corridor and a two-lane 2nd St., but drainage facilities along 2nd St. would have to be relocated. Making 2nd St. only one lane of vehicular traffic or removing vehicles from this section of 2nd St. entirely would simplify this section as well.

Figure 41. At the State of Arkansas parking lot, we could either run the trail onto the NW-most 18' of a State of Arkansas parking lot (pictured here) or immediately to its NW. If the trail was created in the parking lot, a physical barrier would have to separate parking lot traffic from the trail and a row of parking would be lost. If the trail were created NW of the parking lot, the slope would likely require a retaining wall (expensive). The closest setback is 24', just south of 3rd St.; creating a trail just NW of the parking lot would not bring the trail setback closer to 24'.

Figure 42. This is a picture of the same portion of the Corridor route shown in the bottom left of Fig. 41. Without moving earth, the Corridor grade may become too steep to meet Corridor minimum standards and deter user the farther the trail is routed from the tracks (see also Fig. 41 contours).

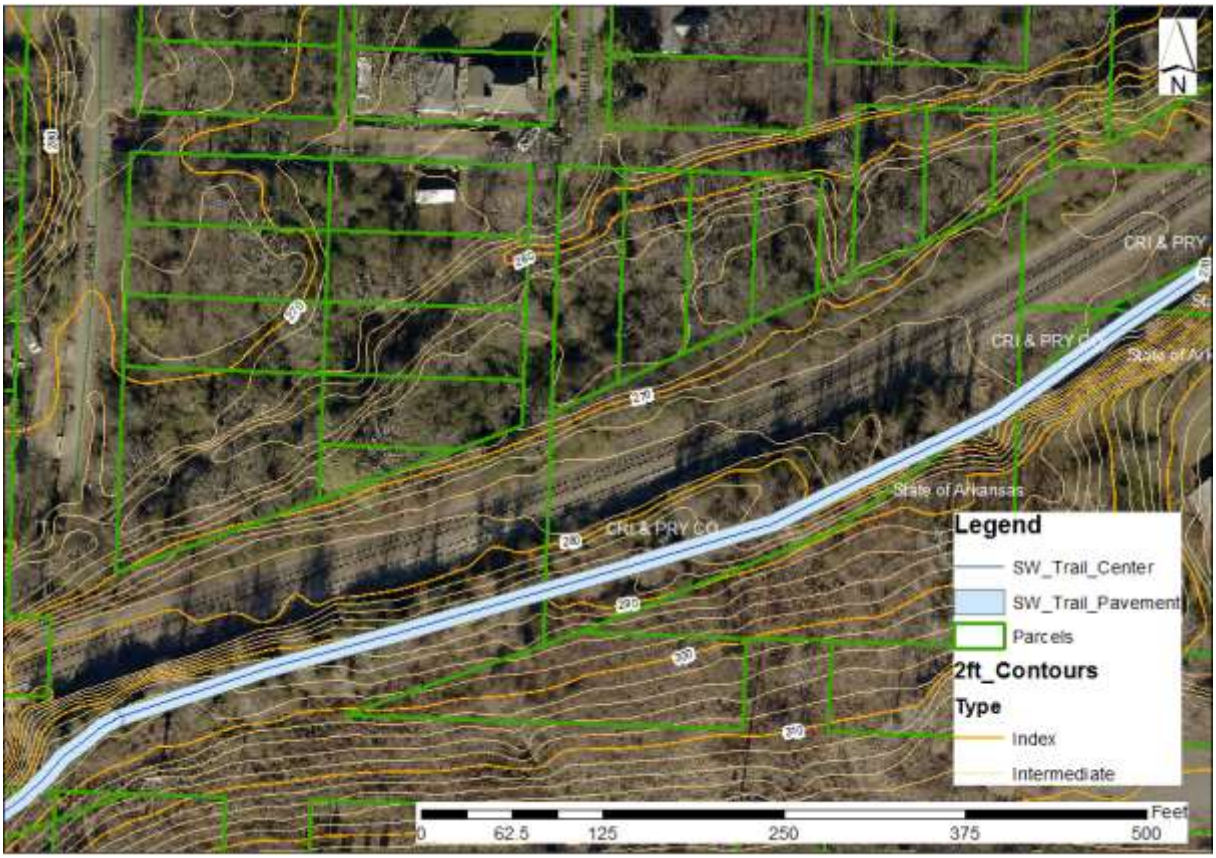

Figure 43. The trail may cross within three State of Arkansas Parcels and two CRI & PRY CO parcels. The closest setback is 35’ in the bottom left corner of the figure.

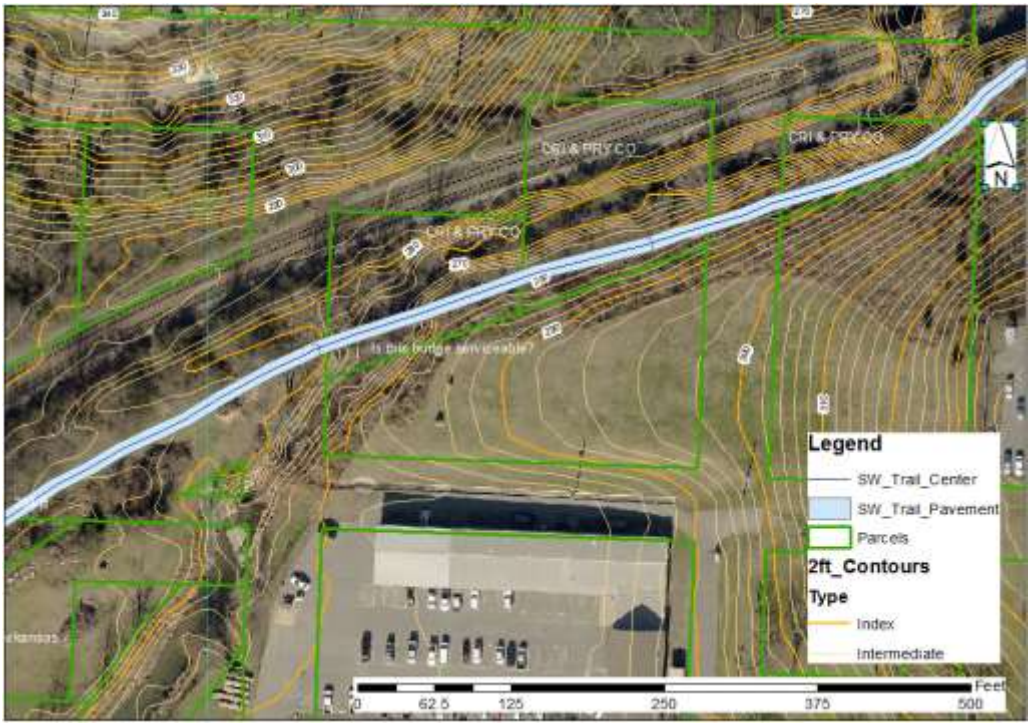

Figure 44. The trail may cross within three CRI & PRY CO parcels. The closest setback is 38' in the top right corner of the Figure (same area as Figure 18) but after that is no closer than 84'. The trail route crosses an old bridge, likely part of the abandoned UP line. It will have to be inspected to see if we can route the trail over it.

Figure 45. The trail may cross within CRI & PRY CO and TLC Properties. The closest setback is 79'. The trail crosses 7th St. via an abandoned U.P. bridge.

Figure 46. The trail crosses under I-630. The closest setback is 82' at the bottom of the figure.

Figure 47. Note the berm starting just south of 10th St. separating the trail route from active track. The closest setback is 69' in this figure.

Figure 48. The berm starting at 10th St. creates a beautiful, hidden corridor in the middle of Little Rock. Figure taken between 10th and 12th Streets. BACA President Mason Ellis pictured here.

Figure 49. The trail continues to follow the valley of the abandoned UP line and cross 12th St. The closest setback is 88' in this figure.

Figure 50. The trail continues to follow the valley of the abandoned UP line and cross 13th St. The closest setback is 84' in this figure.

Figure 51. The trail continues to follow the valley of the abandoned UP line and cross Daisy Bates Dr. Note that the berm ends just north of 15th St. The closest setback is 78' in this figure.

Figure 52. Though the trail route continues beyond 16th St., the trail will end at 16th St. for the purpose of the scope of the FLAP grant. Getting the trail to 15th and 16th Streets serves the purpose of connecting the Trail of Tears at the Little Rock at Junction Bridge to Central High School. The closest setback is 91' in this figure.

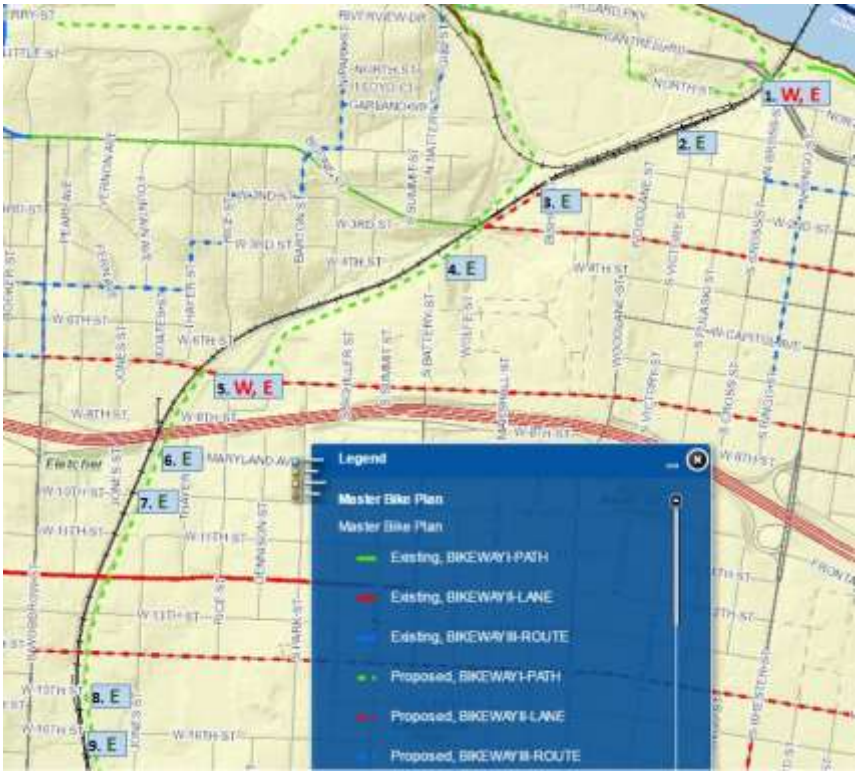

Figure 53. Map of the Corridor connections on Little Rock's Master Bike Plan. An "E" represents street-to-trail access from the east and a "W" represents street-to-trail access from the west. A green letter represents an access point easily created and a red letter indicates an access point that may be more difficult to create (i.e. requiring earthworks or easements). The number allows map reference in text.

Figure 54 – Connection #3: The Corridor will occupy what is now 2nd St. for a block (Figs. 33-40), creating an opportunity to connect the Corridor to city streets. It is important to create safe and attractive pedestrian facilities from 3rd St. to 2nd St. and the Corridor, especially to connect Rock Region Metro passengers from the bus stop at Bishop and 3rd to the Corridor. The Mullenix development will create a sidewalk on the west side of Bishop across its development, but that will not reach 2nd St. Curry's is in between the Mullenix development and 2nd St. and their building is very close to the road. When the Corridor is created, we must somehow create separated pedestrian connectivity along Bishop.

Figure 55 - Connection #5. Stairways from 7th Street to the abandoned bridge could provide pedestrian access.

Figure 56 – Connection #5. A parking lot to the northeast of the abandoned UP bridge would provide bicycle access from 7th Street as well as park and walk/ride access.

Figure 57 – Connection #6. An access point could be created at Maryland Ave. While this area appears to be being used by Tipton & Hurst, it is owned by the City of Little Rock.

Figure 58 – Connection #7. The access point to the Corridor at 10th is almost complete already.

Figure 59 – Connection #7. The Corridor would be at the same elevation as 10th and Thayer, so no earthworks would be required to create a connection here. BACA President Mason Ellis pictured here.

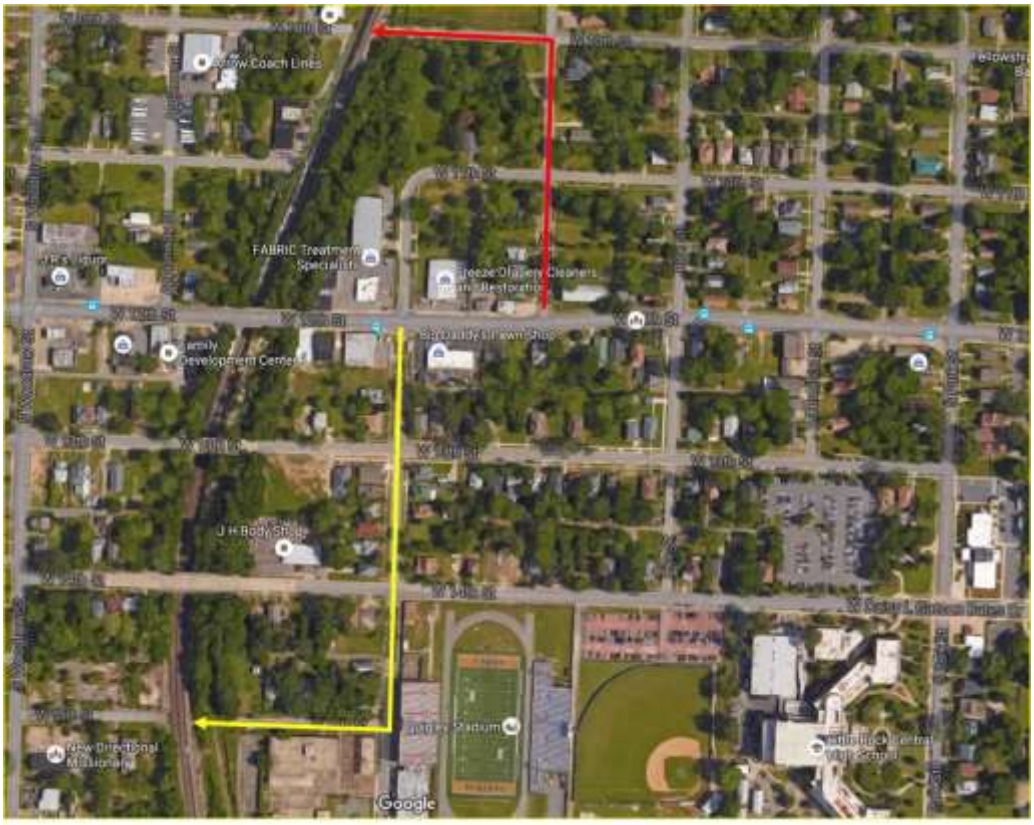

Figure 60. 12th St. is an east-west bicycle corridor. From 12th St., we should use wayfinding signs and sharrows/bike lanes to direct northbound cyclists to the 10th St. trail access (red arrow) and southbound cyclists to 15th St. trail access (yellow arrow). Similarly, along the trail headed SW, we should have a sign before 10th St. directing cyclists to exit here for 12th St. east-west corridor and along the trail headed NE, a sign before 15th St. directing cyclists to exit here for the same.

Figure 61 – Connection #8. Creating access from 15th Street appears to be straightforward. No earthworks or easements would be required. Considering the required change in elevation and the development close to the street on both sides of the street, access at Daisy Bates would be challenging.

Figure 62. Corridor access from 14th St. (a proposed bike route) could be achieved by sharrows and wayfinding signs to 15th St. access for users wanting to travel north or south on the Corridor.

Figure 63. A 16th St. access point would not require earthworks. Pictured is Mayor Mark Stodola.