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LAWRENCE - DOUGLAS COUNTY

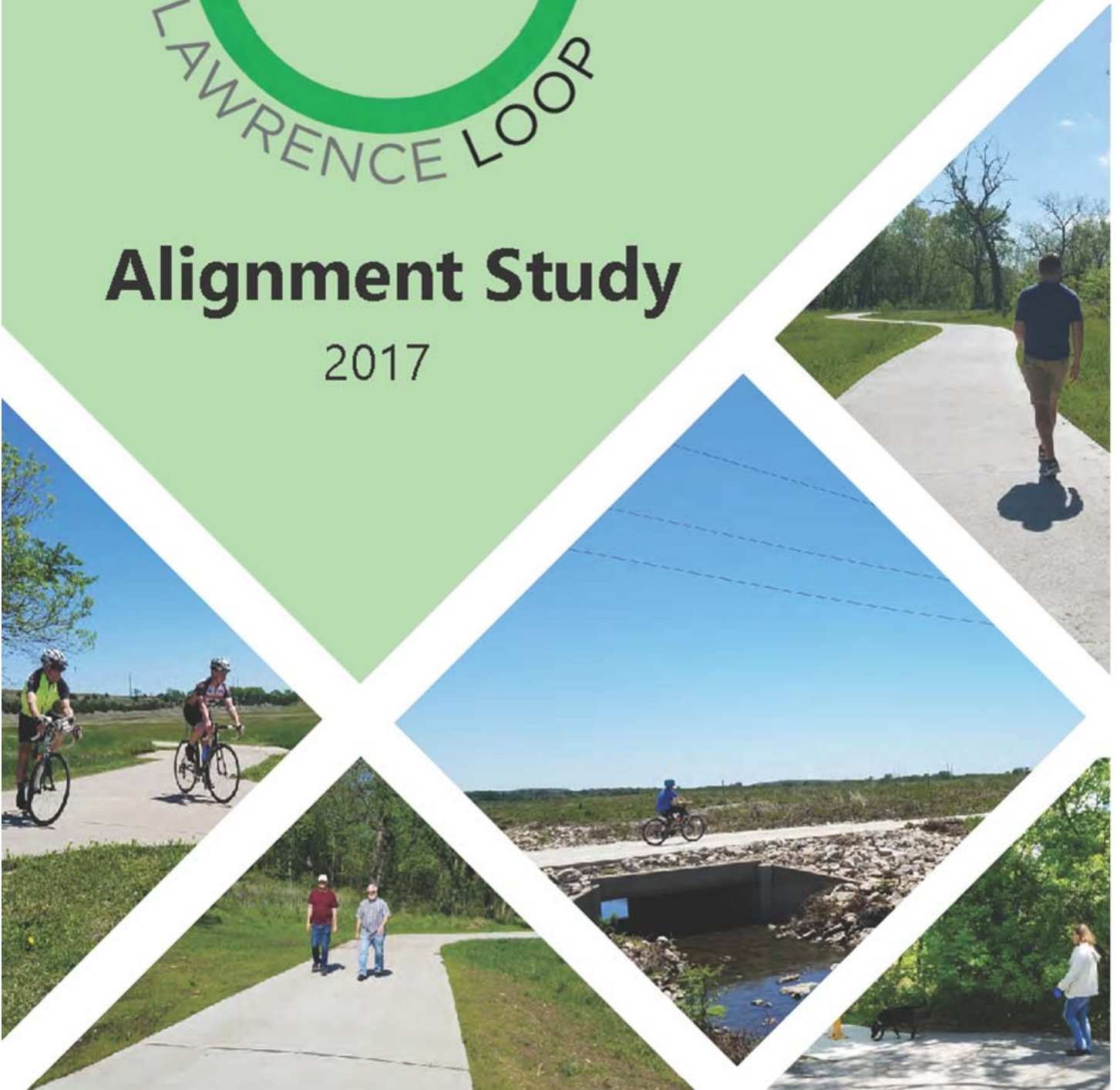
MPO



METROPOLITAN PLANNING ORGANIZATION

Alignment Study

2017



Approved by the MPO Policy Board: January 18, 2018
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Lawrence Loop Alignment Study
Prepared by BG Consultants, Inc.

Table of Contents

Introduction 1

Initial Open House Meeting and Lawrence Listens Online Survey 3

Selecting Alignments to Field Check and Analyze 8

Field Check and Analysis of Selected Alignments..... 11

Final Open House Meeting and Lawrence Listens Online Survey 35

Further Route Investigation Segment F.1 and F.2 39

BNSF Railway Coordination..... 44

Kansas Turnpike Authority Coordination 44

Conclusions..... 44

Next Steps 521

Introduction

The Lawrence Loop is currently a section of 16.4 miles of mostly 10 foot wide Shared-Use Path surrounding the city that is identified in the Countywide Bikeway Plan. The loop began over 20 years ago and the City has increased the number of segments during that time. Its goal is to accommodate residents and visitors of all ages and abilities and serve people who are walking, biking, or using assistive devices. The remaining sections, which are needed to complete the loop only have preliminary alignments that have been identified by the community.

In 2013 the Countywide Bikeway Plan¹ identified and prioritized the needs of existing and future bikeway networks for the Lawrence Urban Area and propose bikeway connections throughout the remainder of Douglas County, including the Cities of Eudora, Baldwin City, and Leocompton. The plan emphasized a network of bikeway facilities. Types of bikeways included: buffered, climbing, or colored bike lane, shared lane markings, signed bike routes, bike routes with paved shoulders, shared-use path, or side path.

The initial loop was identified by highlighting completed sections and connecting those sections along other defined bikeways in the Countywide Bikeway Plan. The number one bicycling priority of the Lawrence Pedestrian Bicycle Issues Task Force was to complete the Lawrence Loop.²

However, alignments of incomplete sections have not been studied for their community preference or feasibility. The City of Lawrence has submitted two unsuccessful grants to the Kansas Department of Transportation to fund sections of the Loop as currently proposed. Based on feedback from KDOT and additional conversations between staff and community members, the need to study alignment alternatives in greater detail to finalize the Loop alignment, has become apparent.

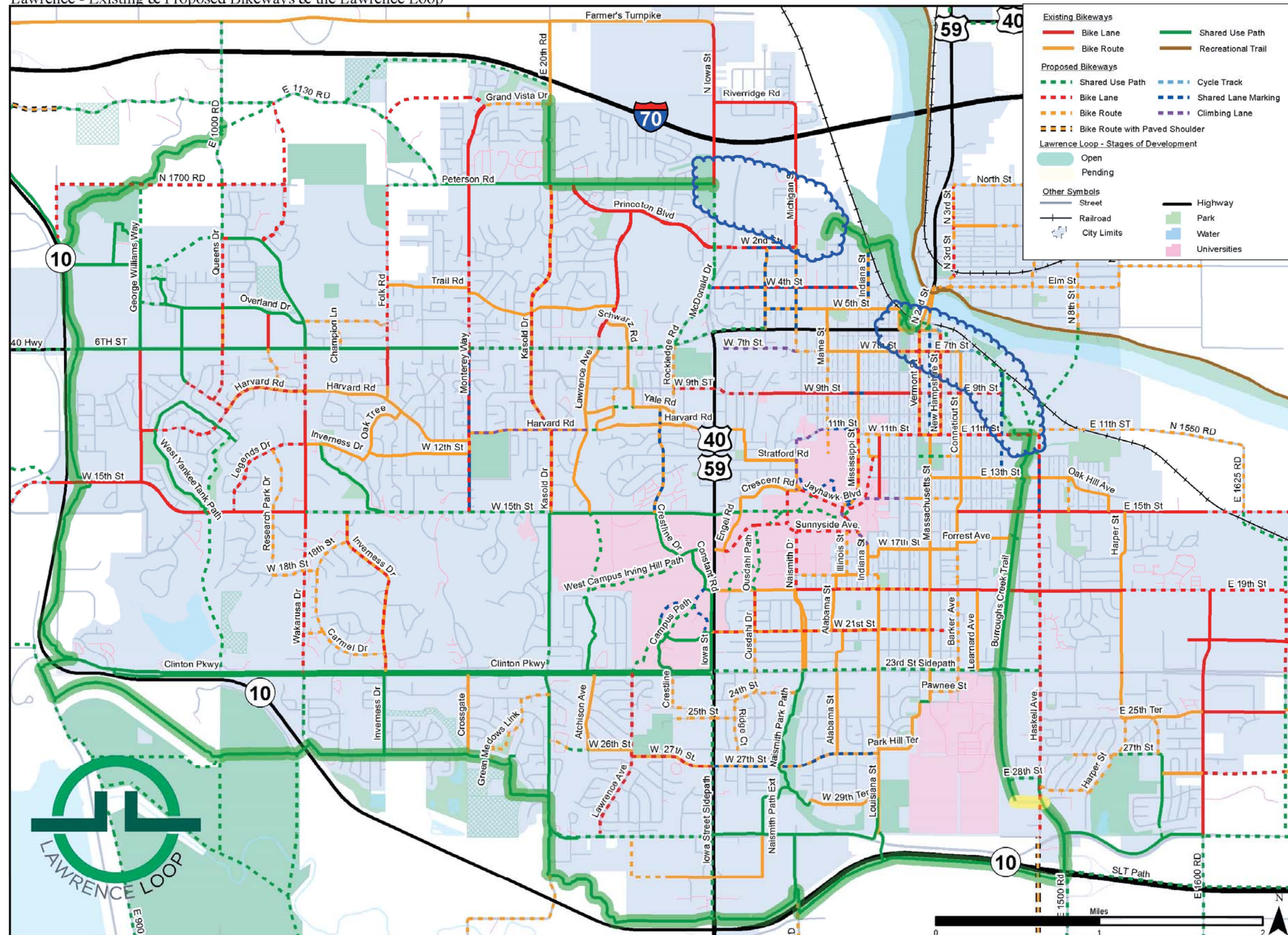
This study analyzed alternative alignments to determine the feasibility and public preference for two incomplete sections of bikeway between the north end of Burroughs Creek Rail Trail along 11th Street to the Shared Use Path in Burcham Park and the west side of the Sandra Shaw Trail to the Peterson Road Shared Use Path." A map of the existing Lawrence Loop showing the missing sections studied as part of this project is included as Figure 1.

¹ Countywide Bikeway Plan (2013) <https://assets.lawrenceks.org/assets/mpo/study/reports/bike.pdf>

² Pedestrian Bicycle Issues Task Force Report (2016)

https://assets.lawrenceks.org/assets/boards/pedestrian-bicycle/PBITF_Final_Report_2.29.16.pdf

Figure 1



Data provided by the Lawrence - Douglas County MPO and the U.S. Census Bureau. This map is originally produced for the Multimodal Planning Studies Bikeway System Plan and has been updated to fix mapping errors and as built facilities.

The map is provided "as is" without warranty or any representation of accuracy, timeliness or completeness. The burden for determining accuracy, completeness, timeliness, merchantability and fitness for or the appropriateness for use rests solely on the requester. The City of Lawrence makes no warranties, express or implied, as to the use of the map. There are no implied warranties of merchantability or fitness for a particular purpose. The requester acknowledges and accepts the limitations of the map, including the fact that the map is dynamic and is in a constant state of maintenance, correction and update. Plot date 09/25/2015.

Initial Open House Meeting and Lawrence Listens Online Survey

The first part of the process was ensuring there was adequate notification of potential affected property owners regarding the project. Therefore a postcard notification, Figure 2 was developed for the initial open house meeting and sent to 1,707 property owners within 200 feet of a boundary shown on Figure 3. An additional 200 postcards were printed and distributed in various venues.

Figure 2

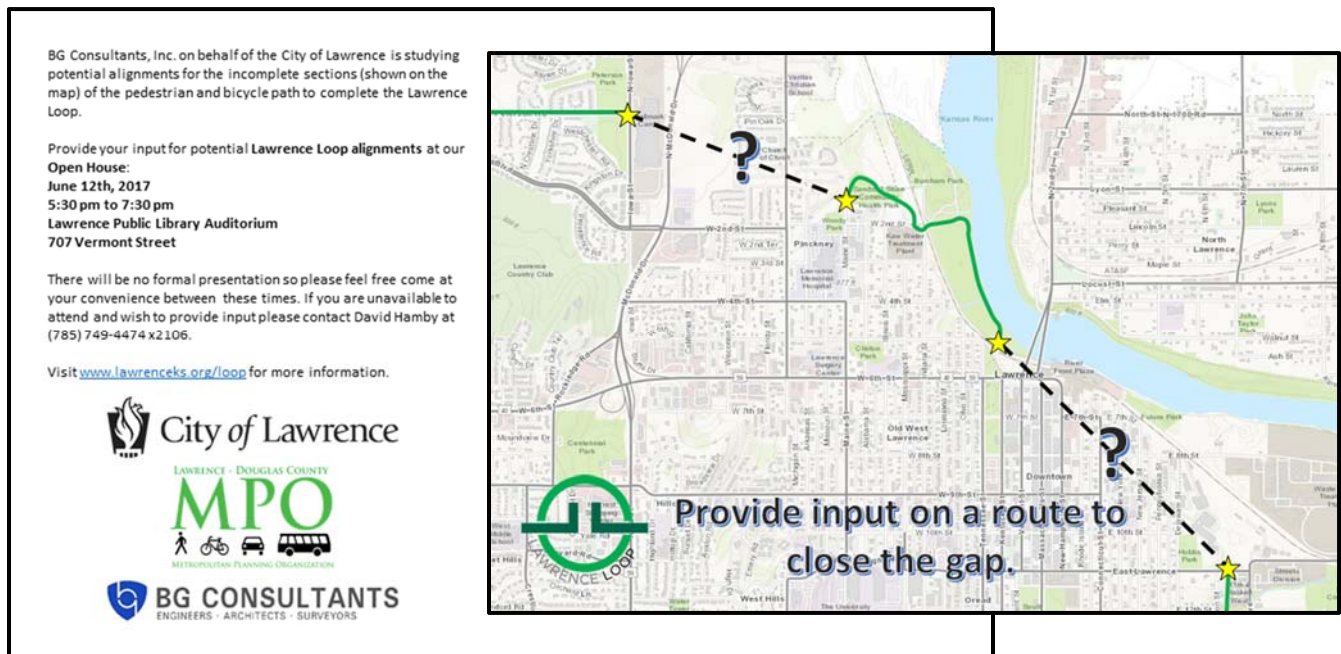


Figure 3



The initial open house meeting was conducted on June 12, 2017 from 5:30 pm to 7:30 pm at the Lawrence Public Library. Attendees were given three sheets which consisted of aerial maps of each missing Loop section and a comment form. These sheets have been included in Appendix A. Approximately 70 responses were received at the meeting.

The responses received from the meeting were generally focused on the following items:

Sandra Shaw Trail to Peterson Road Shared Use Path

- Grade separation (bridge/tunnel) for McDonald Drive crossing
- 2nd and McDonald intersection is difficult to cross
- Stay off streets
- Avoid driveways/intersections
- Prefer natural route/scenic areas

Burroughs Creek Trail to Constant Park

- Avoid streets, driveways and intersections
- Use railroad right-of-way and build parallel to the tracks
- Prefer shortest, most direct route
- Avoid hills
- Route under Kansas River bridges
- Avoid un-signalized railroad crossing in Constant Park
- Build close to Kansas River, prefer natural/scenic route
- Avoid residential property

The individual responses have been included in Appendix B. The responses were compiled onto a map for each missing Loop Section and are shown in Figures 4 and 5.



Participants at the June 12th Open House

Figure 4

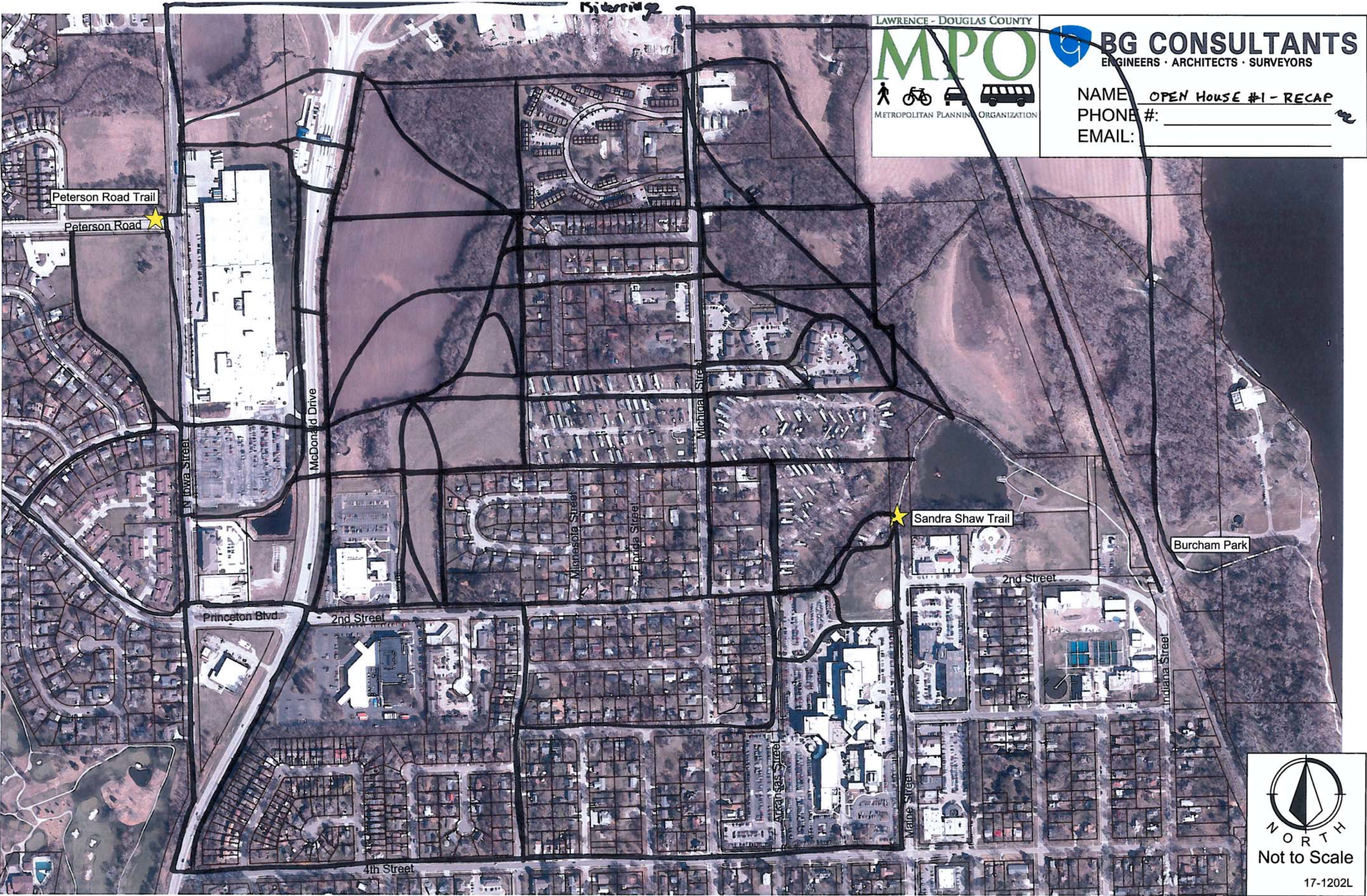
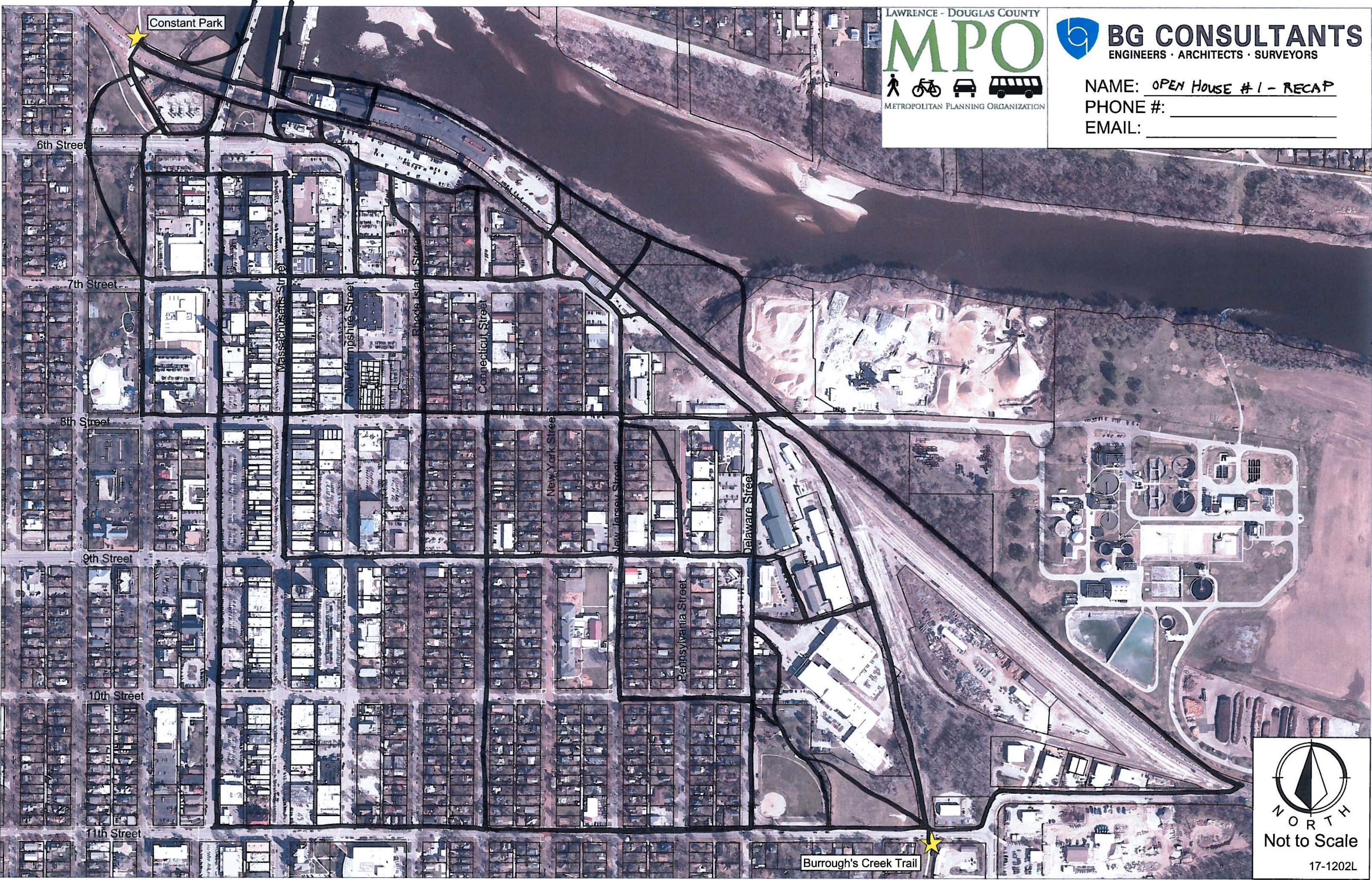


Figure 5



Selecting Alignments to Field Check and Analyze

A Study Team consisting of MPO, City of Lawrence Public Works, City of Lawrence Parks & Rec and KDOT guided the work for this study. The Study Team reviewed the responses from the initial open house meeting and discussed the merits of the possible alignments. The team chose alignments for further study and analysis based upon the values that were offered on the comment forms. The alignments selected for further study are shown in Figures 6 and 7.

Proposed Routes to Close Gaps in the Lawrence Loop - Sandra Shaw to Peterson Road


City of Lawrence

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9/20/17
 LAWRENCE - DOUGLAS COUNTY
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 TRANSPORTATION PLANNING & PROGRAMMING
 2015-2035

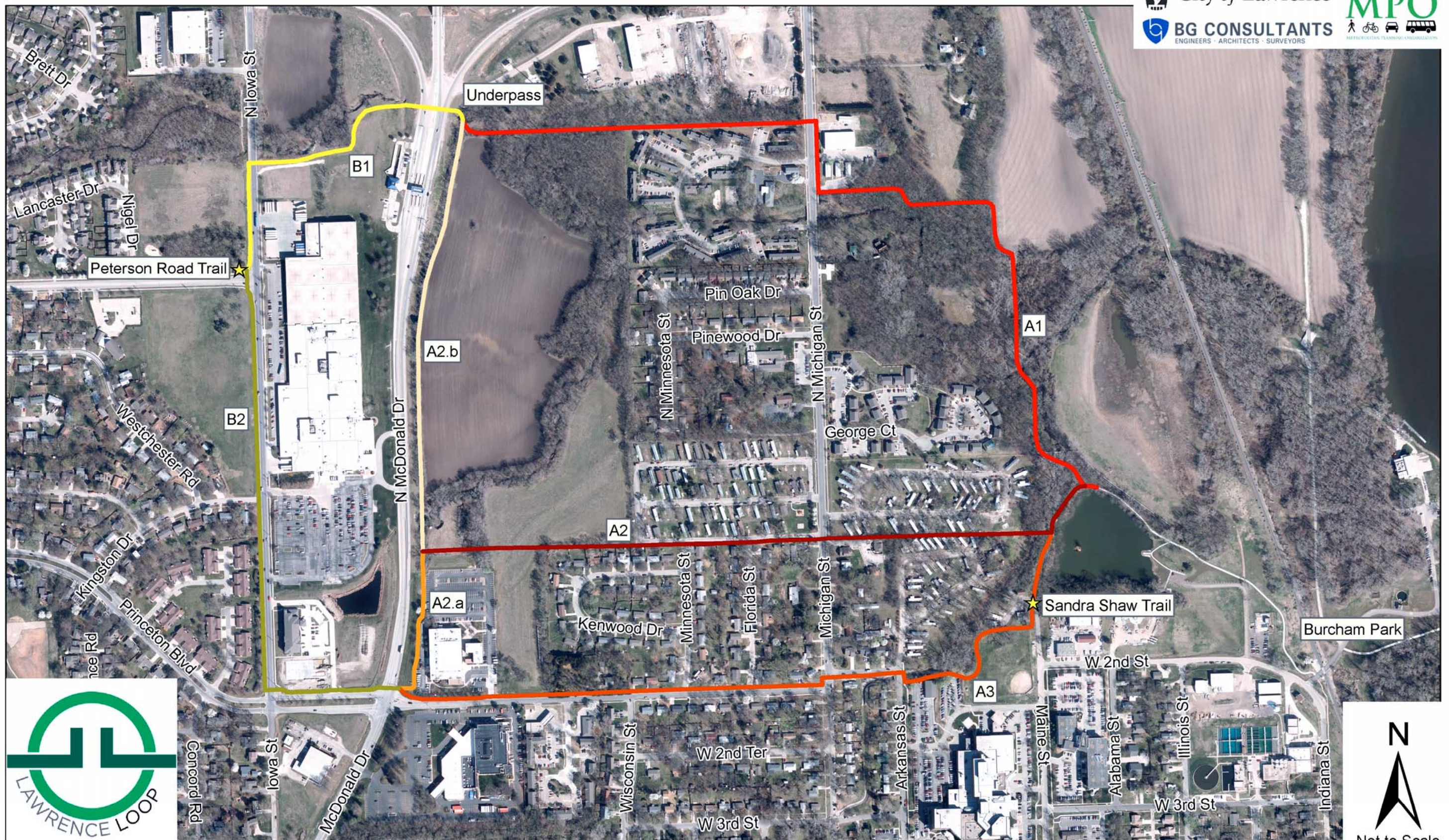
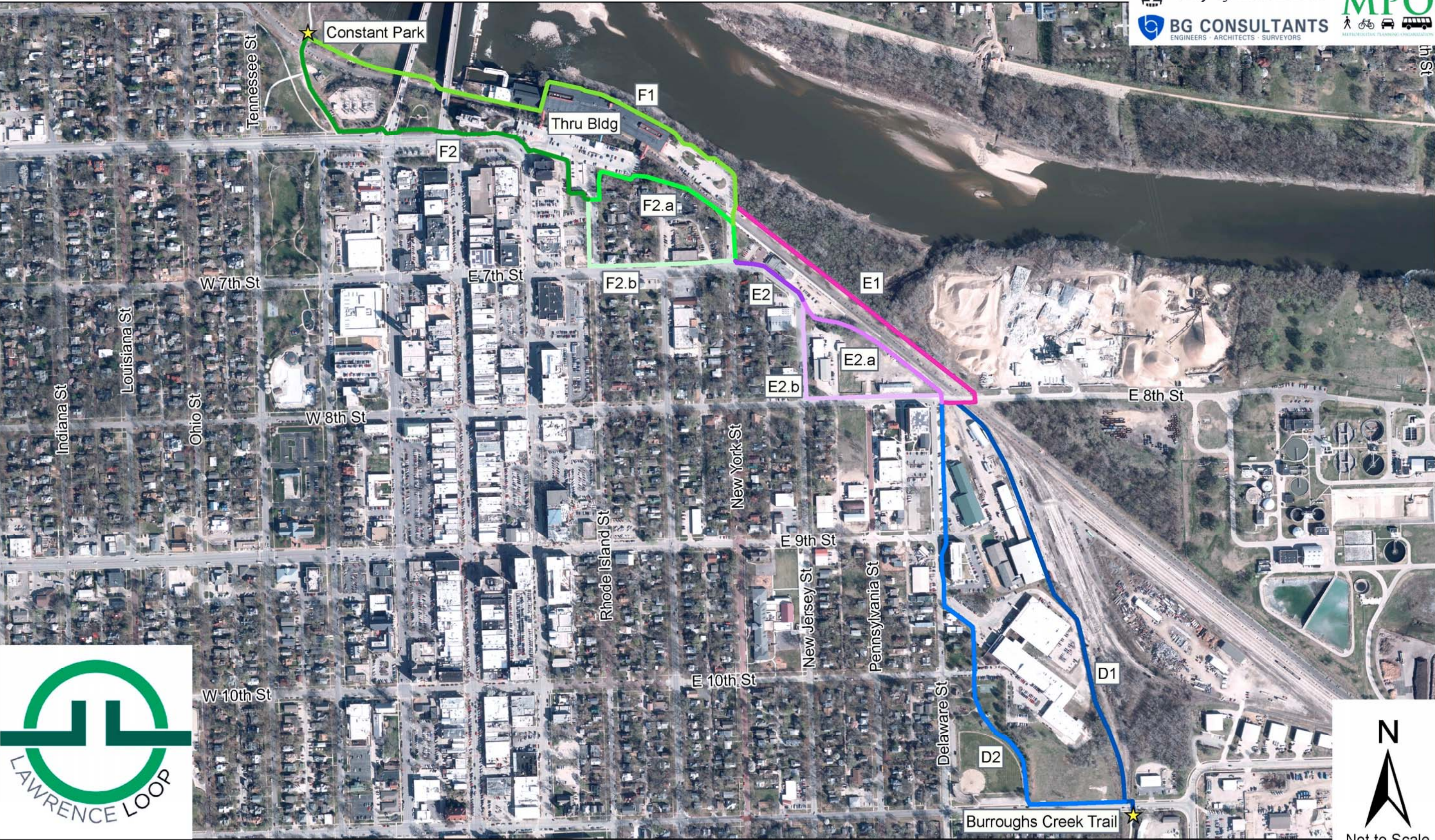


Figure 7

Proposed Routes to Close Gaps in the Lawrence Loop - Burroughs Creek to Constant Park

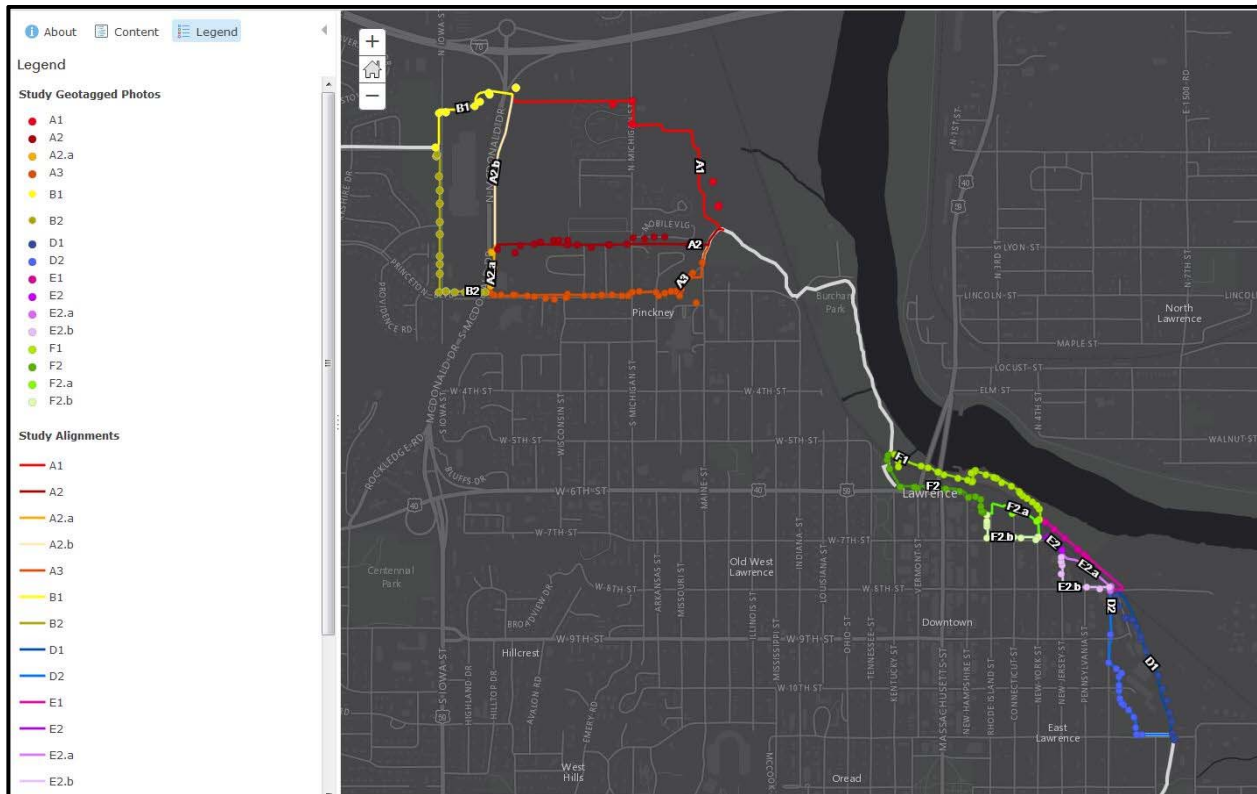
9/2017



Field Check and Analysis of Selected Alignments

After the study team selected alignments to study, BG personnel walked and photographed each of the study alignments. The MPO developed an online map (Figure 8) that located the photographs with respect to the study alignment. The online map can be found at <http://arcg.is/1XCD9u>.

Figure 8



A Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis was prepared for each of the study alignments. This analysis described the strengths, weaknesses, opportunities and threats for each alignment along with the approximate length of the segment, the number of driveway and street crossings, pedestrian/bicycle crashes, adjacent roadway speed limit and average annual daily traffic. The SWOT analysis for each section follows.

A1 (Map Color: Red)

- This alignment could be a very scenic route avoiding developed areas. It would be similar to Rock Chalk Trail.
- This alignment avoids conflicts with a majority of the streets and driveways in the area.

- A section of this alignment is fairly remote so user safety security concerns exist. There appears to be several persons that may be currently or previously residing on the City of Lawrence property to the north of Sandra Shaw Park.
- This alignment, while fairly direct between the start and end points, eliminates connection to the path from the 2nd and McDonald area.

- This route crosses City of Lawrence property to the north of the Sandra Shaw Park. This project could open up this property to future park development.
- This route provides a direct connection to Veritas Christian School.

- This route crosses several areas of private property and easement acquisition would be necessary.
- This route crosses a major watercourse on the north side of the City of Lawrence property. A culvert structure or low water crossing would be necessary to cross this stream.

Adjacent Roadway Average Annual Daily Traffic – N/A



Sandra Shaw Trail to Peterson Road – A1 – Looking north from Sandra Shaw

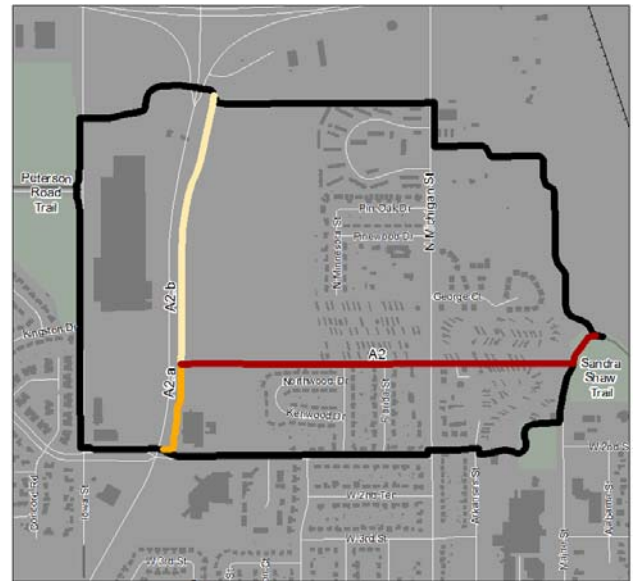


Sandra Shaw Trail to Peterson Road – A1 – Looking west from Michigan St.

Sandra Shaw Trail to Peterson Road

A2 (includes A2.a & A2.b) (Map Color: A2-Maroon, A2.a-Gold, A2.b-Cream)

This alignment connects to the Sandra Shaw Trail on the west side of the pond and heads west through and along the south side of the Mobile Village and crosses Michigan Street. The route continues west along the south side of Pine Hills Manufactured Home Community and the north side of Northwood Hills until it reaches McDonald Drive. The alignment splits at this point into two options, A2.a and A2.b. Alignment A2.a heads south to 2nd Street along the east side of McDonald Drive. Alignment A2.b heads north along the east side of McDonald Drive until it reaches the Kansas Turnpike Authority maintenance area.



Strengths:

- This alignment avoids conflicts with a majority of the streets and driveways in the area.
- This alignment allows connection to either the B1 or B2 alignment.
- This route provides a connection to the 2nd and McDonald area.

Weaknesses:

- This route would be constructed in an already built up area and may be difficult to place the path to minimize negative impacts to the property owners.
- The portion of the Sandra Shaw Trail that is not 10' wide needs to be reconstructed to a 10' width to match the proposed section of the path.

Opportunities:

- This alignment would allow easy connection to the path by residents of two mobile home parks through which this route would pass.

Threats:

- The route through the Mobile Village is very confined and there may not be enough room to construct the path in this location. An alternate alignment would be along the north property line of the Mobile Village.
- This route crosses several areas of private property and easement acquisition would be necessary.

Section Statistics:

Approximate Length – 4,000 ft. (A2, A2.a), 5,350 ft. (A2, A2.b)

Residential Driveway Crossings – 0

Commercial Driveway Crossings – 0

At-Grade Street Crossings – 3

Pedestrian/Bicycle Crashes (2013 – 2016) – N/A

Adjacent Roadway Speed Limit – 35 mph (McDonald Dr.), 30 mph (Michigan Way)

Adjacent Roadway Average Annual Daily Traffic – N/A



Sandra Shaw Trail to Peterson Road – A2 – Looking East across Michigan St.

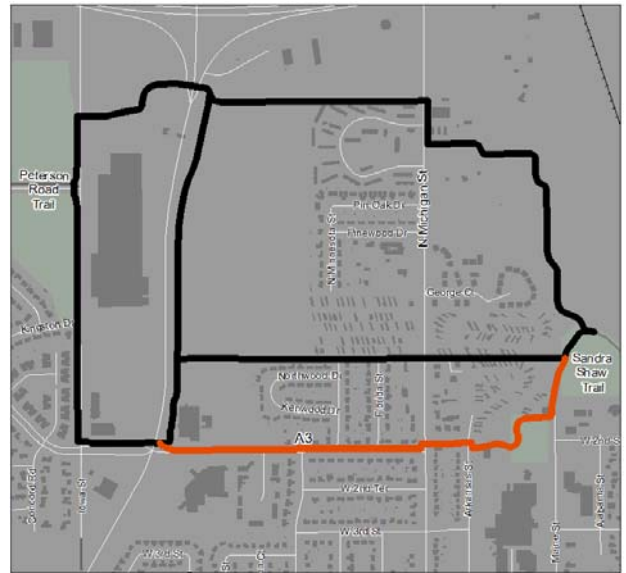


Sandra Shaw Trail to Peterson Road – A2 – Looking east from McDonald Dr.

Sandra Shaw Trail to Peterson Road

A3 (Map Color: Orange)

This alignment connects to the south end of the Sandra Shaw Trail and then continues south and west along the north side of Woody Park and the Lawrence Memorial Hospital property until it reaches Arkansas Street. After crossing Arkansas Street, the alignment continues west to Michigan Street along the south side of 2nd Street. After crossing Michigan Street, the alignment continues west to McDonald Drive along the north side of 2nd Street.



Strengths:

- This route generally runs along existing streets and within public right-of-way.
- This route provides the most direct access between the end of the Sandra Shaw Trail and the 2nd and McDonald Area.

Weaknesses:

- The construction of this route would significantly impact the front yard of the properties along 2nd Street. Anticipated impacts are tree and landscaping removal and driveway reconstruction.
- The portion of the Sandra Shaw Trail that is not 10' wide needs to be reconstructed to a 10' width to match the proposed section of the path.
- This route includes a large amount of driveway conflicts and two major at-grade street crossings.

Opportunities:

- There is not currently a sidewalk on the north side of 2nd Street from Michigan to McDonald Drive so this path could assist with connectivity in this area. 2nd Street is designated as a bike route but it has no bike lanes.

Threats:

- This section would have the highest concentration of residential driveway crossings on any Loop section.

Section Statistics:

Approximate Length – 3,750 ft.

Residential Driveway Crossings – 6

Commercial Driveway Crossings – 2

At-Grade Street Crossings – 5

Pedestrian/Bicycle Crashes (2013 – 2016) – 2016 (Collision w/pedestrian at 2nd/Wisconsin)

Adjacent Roadway Speed Limit – 30 mph (W 2nd St.)

Adjacent Roadway Average Annual Daily Traffic – 2013: 4,875 (2nd St.)



Sandra Shaw Trail to Peterson Road – A3 – Looking southwest towards Woody Park



Sandra Shaw Trail to Peterson Road – A3 – Looking west along 2nd St.

Sandra Shaw Trail to Peterson Road

B1 (Map Color: Yellow)

This alignment begins at the end of alignment A1 and A2.b and then continues west in a proposed tunnel under McDonald Drive. After crossing McDonald Drive the route continues west to North Iowa Street north of the Hallmark Building. A proposed at-grade crossing of North Iowa Street could include a HAWK beacon. The route would then head south along the west side of North Iowa Street and connect to Peterson Road.

Strengths:

- The proposed tunnel under McDonald Drive creates a safe crossing of this road that users have requested.
- A HAWK beacon on North Iowa Street at the crossing would assist users in crossing that street.
- This alignment would eliminate the need to cross Peterson Road.

Weaknesses:

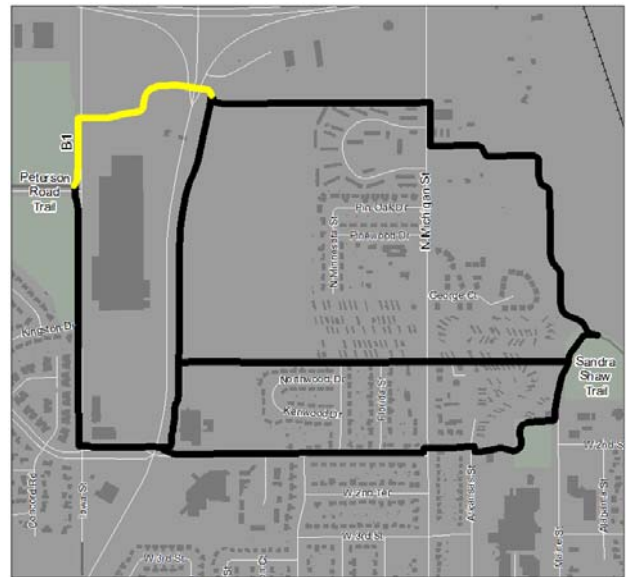
- The proposed tunnel would add a significant cost to the project budget.

Opportunities:

- Possibly could time work to coordinate with any work the Kansas Turnpike Authority plans to do where the tunnel would cross. This could result in savings in cost.

Threats:

- The construction of the tunnel under McDonald Drive would require Kansas Turnpike Authority approval.



Section Statistics:

Approximate Length – 1,700 ft.

Residential Driveway Crossings – 0

Commercial Driveway Crossings – 0

At-Grade Street Crossings – 1

Pedestrian/Bicycle Crashes (2013 – 2016) – N/A

Adjacent Roadway Speed Limit – 40 mph (N Iowa St.)

Adjacent Roadway Average Annual Daily Traffic – N/A



Sandra Shaw Trail to Peterson Road – B1 – Looking southwest from McDonald Dr.



Sandra Shaw Trail to Peterson Road – B1 – Looking south on North Iowa Street

Sandra Shaw Trail to Peterson Road

B2 (Map Color: Yellow-Green)

This alignment begins at the end of alignment A2.a and A3 and crosses McDonald Drive with an at-grade crossing. The alignment continues west along the north side of Princeton Boulevard and crosses North Iowa Street with an at-grade crossing. The route continues on the west side of North Iowa Street until it reaches Peterson Road, crossing Peterson Road with an at-grade crossing.

Strengths:

- The majority of this alignment will likely be located in or adjacent to existing right-of-way thus minimizing property acquisition.

Weaknesses:

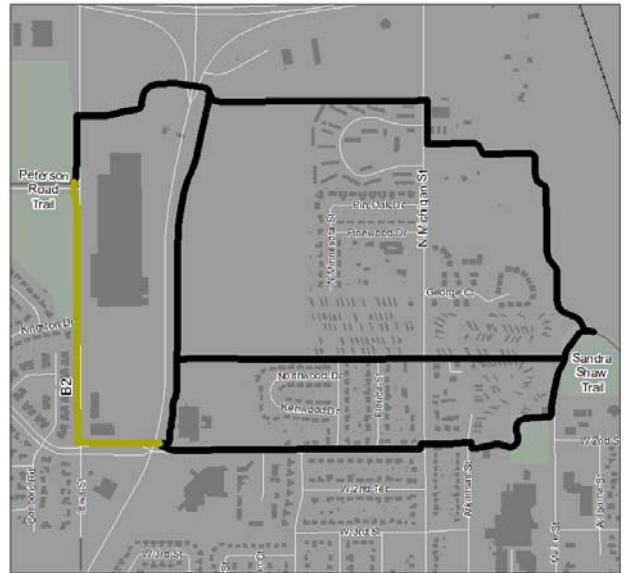
- This route includes at-grade street crossings for McDonald Drive, North Iowa Street, Kingston Drive and Peterson Road.
- The existing intersection of 2nd Street and McDonald Drive is not square thus creating visibility concerns for users trying to cross this intersection.

Opportunities:

- Hallmark Park is adjacent to the path and the path could be tied to the existing picnic area in the park.

Threats:

- The 2nd Street and McDonald Drive is under Kansas Turnpike Authority control and the project would need to be coordinated with the Authority.



Section Statistics:

Approximate Length – 2,645 ft.

Residential Driveway Crossings – 0

Commercial Driveway Crossings – 1

At-Grade Street Crossings – 4

Pedestrian/Bicycle Crashes (2013 – 2016) – N/A

Adjacent Roadway Speed Limit – 35 mph (McDonald Dr.), 30 mph (Princeton Blvd.), 40 mph (N Iowa St.)

Adjacent Roadway Average Annual Daily Traffic – 2014: 20,342 (Princeton/McDonald), 2013: 9,080 (Iowa/Princeton)



Sandra Shaw Trail to Peterson Road – B2 – Looking west across McDonald Dr.



Sandra Shaw Trail to Peterson Road – B2 – Looking north along North Iowa St.

Burroughs Creek Trail to Constant Park

D1 (Map Color: Dark Blue)

This alignment connects to the north end of the Burroughs Creek Trail and continues along the west side of the Railroad to 8th Street.

Strengths:

- This alignment avoids conflicts with a majority of the streets and driveways in the area.
- This route is fairly flat and avoids the hill that alignment D2 crosses.

Weaknesses:

- About half of this alignment is adjacent to the railroad which has the possibility to create safety concerns and noise, dust and other nuisance concerns.

Opportunities:

- This route could reclaim some of the abandoned railroad area and clean the area up. There is a substantial amount of trash and dumping happening in the area.

Threats:

- The majority of this route is aligned on Railroad property. An agreement with the Railroad would be necessary to allow this route to be constructed as shown.



Section Statistics:

Approximate Length – 2,270 ft.

Residential Driveway Crossings – 0

Commercial Driveway Crossings – 1

At-Grade Street Crossings – 0

Pedestrian/Bicycle Crashes (2013 – 2016) – N/A

Adjacent Roadway Speed Limit – N/A

Adjacent Roadway Average Annual Daily Traffic – N/A



Burroughs Creek Trail to Constant Park – D1 – Looking north from 11th St.
Burroughs Creek Trail to Constant Park – D1 – Looking north towards 8th St.



Burroughs Creek Trail to Constant Park D2 (Map Color: Light Blue)

This alignment connects to the north end of the Burroughs Creek Trail and continues along the north side of 11th Street to the east edge of Hobbs Park. The route continues north along the east side of the Hobbs ballfield crossing 10th Street and running along the west side of the Allen Press property until it intersects with Delaware Street. The alignment continues along the east side of Delaware Street until it intersects 8th Street.



Strengths:

- A majority of this route already has established sidewalks or paths although the desired width of 10' is generally not present.

Weaknesses:

- The route has a fairly substantial hill cresting in Hobbs Park. The grade will create some difficulties for less experienced users.

Opportunities:

- This route is adjacent to the restroom in Hobbs Park creating an opportunity for users of the Lawrence Loop to use the facilities here.
- The existing concrete sidewalk on the east side of Delaware is 8' wide.

Threats:

- This route crosses or is adjacent to three historic properties/areas. The implications would need to be determined.
- A portion of this route is located on private property. Property acquisition would be required.

Section Statistics:

Approximate Length – 2,630 ft.

Residential Driveway Crossings – 0

Commercial Driveway Crossings – 7

At-Grade Street Crossings – 1

Pedestrian/Bicycle Crashes (2013 – 2016) – N/A

Adjacent Roadway Speed Limit – 30 mph (E 11th St., Delaware St.)

Adjacent Roadway Average Annual Daily Traffic – 2014: 2,524 (Delaware St.), 2014: 1,824 (W 8th St./Delaware St.)



Burroughs Creek Trail to Constant Park – D2 – Looking north behind Hobbs Park



Burroughs Creek Trail to Constant Park – D2 – Looking north along Delaware Street

Burroughs Creek Trail to Constant Park E1 (Map Color: Pink)

This alignment connects to the north end of the D1 and D2 alignment and continues northwest along the northeast side of the Railroad to the Riverfront Mall parking lot.

Strengths:

- This route does not cross any driveways and is isolated from vehicle traffic.
- This route is adjacent to the Habitat Restoration area.

Weaknesses:

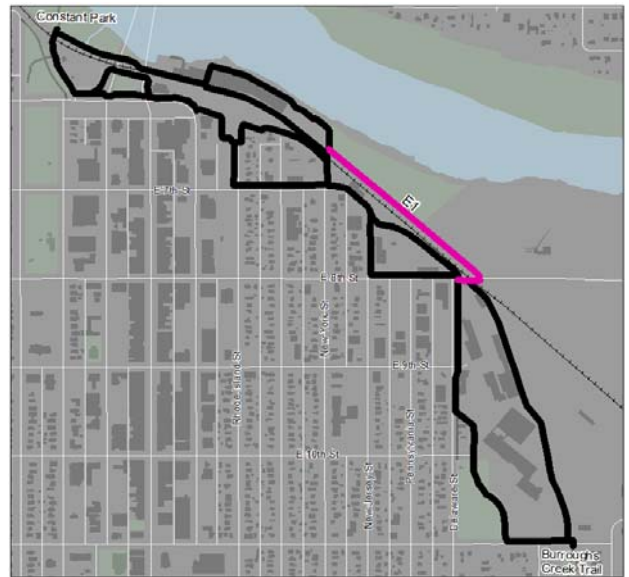
- This alignment is adjacent to the railroad which has the possibility to create safety concerns and noise, dust and other nuisance concerns.
- There is not a dedicated pedestrian/bicycle crossing at 8th Street but there is a signalized railroad crossing.

Opportunities:

- A route adjacent to the Habitat Restoration area could create a possibility of opening this area up with more trails.

Threats:

- This route is aligned on Railroad property. An agreement with the Railroad would be necessary to allow this route to be constructed as shown.



Section Statistics:

Approximate Length – 1,710 ft.

Residential Driveway Crossings – 0

Commercial Driveway Crossings – 0

At-Grade Street Crossings – 1

Pedestrian/Bicycle Crashes (2013 – 2016) – N/A

Adjacent Roadway Speed Limit – N/A

Adjacent Roadway Average Annual Daily Traffic – 2014: 1,824 (W 8th St./Delaware St.)



Burroughs Creek Trail to Constant Park – E1 – Looking northwest from 8th St.



Burroughs Creek Trail to Constant Park – E1 – Looking northwest towards New York St.

Burroughs Creek Trail to Constant Park

E2 (E2.a and E2.b) (Map Color: E2-Purple, E2.a-Light Purple, E2.b-Lilac)

This alignment connects to the north end of the D1 and D2 alignment and splits into two alignment options, E2.a and E2.b. E2.a continues northwest along the southwest side of the Railroad until it reaches the southeast edge of the Depot property. E2.b heads west along the north side of 8th Street and continues north along the east side of New Jersey Street until it reaches the Depot property. Alignment E2.a and E2.b merge into Alignment E2 at the Depot and continues along the north side of New Jersey Street and 7th Street until it reaches New York Street.



Strengths:

- Route E2.a does not cross any driveways and is isolated from vehicle traffic until it reaches the Depot property.
- Routes E2.b and E2 are generally familiar routes for existing Loop users connecting between existing sections.

Weaknesses:

- Alignment E2.b crosses the driveways of several businesses along the route.

Opportunities:

- This route provides a direct connection to the Amtrak Depot.
- Route E2.b is on a route that is located within street right-of-way but does not have any existing sidewalk. This alignment would fill that gap.
- Plans for the Depot include a 10' path with the proposed improvements.

Threats:

- Route E2.a is aligned on Railroad property. An agreement with the Railroad would be necessary to allow this route to be constructed as shown.

Section Statistics:

Approximate Length – 1,300 ft. (E2, E2.a), 1,560 ft. (E2, E2.b)

Residential Driveway Crossings – 0

Commercial Driveway Crossings – 2 (E2, E2.a), 7 (E2, E2.b)

At-Grade Street Crossings – 1

Pedestrian/Bicycle Crashes (2013 – 2016) – N/A

Adjacent Roadway Speed Limit – 30 mph (E 8th St., New Jersey St.)

Adjacent Roadway Average Annual Daily Traffic – 2013: 1,430 (E 8th St.), 2014: 1,824 (W 8th St./Delaware St.)



Burroughs Creek Trail to Constant Park – E2 – Looking northwest from 8th St.

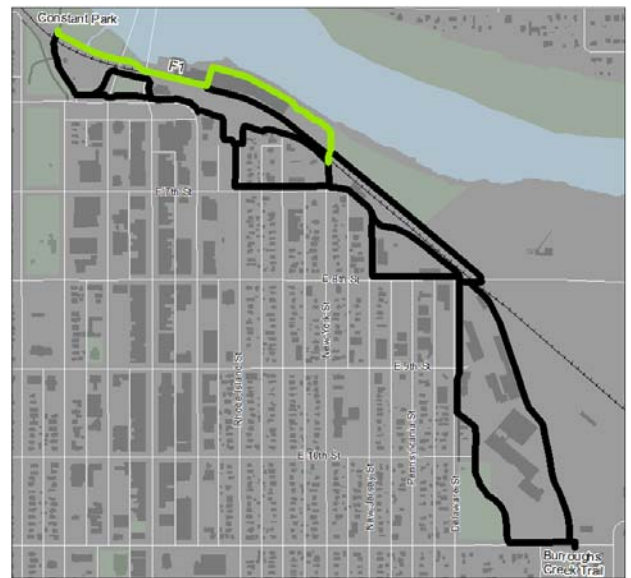


Burroughs Creek Trail to Constant Park – E2 – **Looking** northwest along New Jersey St.

Burroughs Creek Trail to Constant Park

F1 (Map Color: Light Green)

This alignment connects to the north end of the E1 and E2 alignments and continues along the east and north sides of the Riverfront Mall parking area. The route continues onto the Riverfront Mall Promenade area until it reaches the west end of the building. The proposed route would cut through the existing building and continue west along the north side of the Railroad until it reaches the existing path.



Strengths:

- This route does not cross any driveways and is isolated from vehicle traffic and at-grade street crossings.
- This is a very scenic route as it is adjacent to the Kansas River.

Weaknesses:

- The section of the route adjacent to the Railroad may feel confined due to the buildings on one side and the Railroad on the other.
- The section of the route adjacent to the Railroad would occupy a space that is currently used for deliveries to the adjacent building.
- Improvements would be necessary on the Promenade to correct drainage issues and eliminate standing water.
- There is not a dedicated pedestrian/bicycle crossing at New York Street but there is a signalized railroad crossing (connection to F1 from E2 only).

Opportunities:

- The pass thru in the existing building would create a unique feature on the Lawrence Loop. Other amenities could be considered in this pass thru to provide services.

Threats:

- A portion of this route is aligned on Railroad property. An agreement with the Railroad would be necessary to allow this route to be constructed as shown.
- A portion of this route is located on the Promenade of the Riverfront Mall. The Promenade is closed from January 1 to March 1 by Order of the Corps of Engineers. This restriction would need to be removed for a year round connection.
- The owners of the Riverfront Mall would need to agree to allow the construction of the pass thru in the building and the use of the Promenade.

Section Statistics:

Approximate Length – 2,680 ft.

Residential Driveway Crossings – 0

Commercial Driveway Crossings – 1 (adjacent to Commercial Driveway)

At-Grade Street Crossings – 0

Pedestrian/Bicycle Crashes (2013 – 2016) – N/A

Adjacent Roadway Speed Limit – N/A

Adjacent Roadway Average Annual Daily Traffic – 2013: 220 (New York St./Railroad)



Burroughs Creek Trail to Constant Park – F1 – Looking northwest along Riverfront Plaza

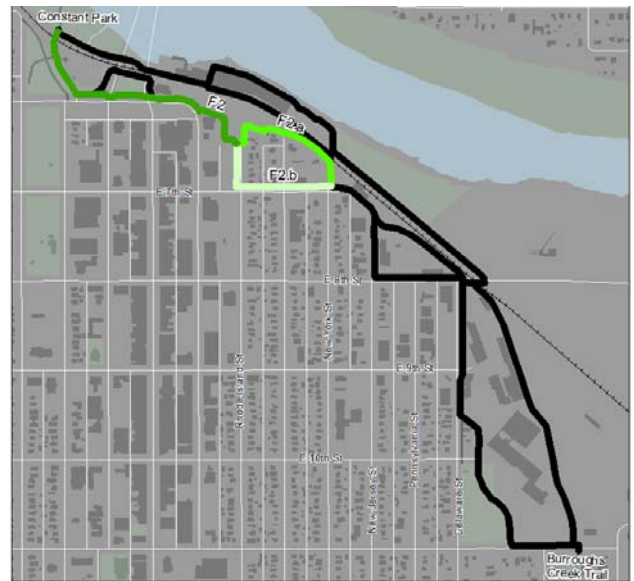


Burroughs Creek Trail to Constant Park – F1 – Looking west along the BNSF Railway

Burroughs Creek Trail to Constant Park

F2 (F2.a & F2.b) (Map Color: F2-Green, F2.a-Neon Green, F2.b-Mint Green)

This alignment connects to the north end of the E1 and E2 alignments and splits into two alignment options, F2.a and F2.b. Route F2.a heads north along the east side of New York Street until it reaches the south side of the Railroad. The route continues west along the south side of the Railroad and Parking Garage until it reaches Rhode Island Street. Route F2.b heads west along the north side of 7th Street and continues north along the west side of Rhode Island Street to the Parking Garage. F2.a and F2.b merge into F2 at the Parking Garage and continues north and west along the west and south edges of the Parking Garage to New Hampshire Street. The route continues on the north side of 6th Street to the access road and heads north and crosses the Railroad and connects to the existing path.



Strengths:

- Route F2.b and F2 are generally within or adjacent to existing right-of-way.
- Routes F2.b and F2 are generally familiar routes for existing Loop users connecting between existing sections.

Weaknesses:

- Route F2.b crosses an alley between Rhode Island Street and Connecticut Street that has poor visibility and multiple streets with at-grade crossings.
- Route F2.b requires the removal of landscaping and trees along 7th Street.
- Route F2 crosses Massachusetts Street and Vermont Street with signalized at-grade crossings and the Railroad with an un-signalized at-grade crossing.
- Route F2.a crosses terrain that would make meeting ADA requirements difficult. Less experienced users may find the route challenging to navigate.

Opportunities:

- Route F2 could be expanded in the future to create an underpass on the south side of the Railroad under the existing Kaw Bridges which could be tied to Robinson Park. This bypass would eliminate the at-grade crossings of Massachusetts Street and Vermont Street.

Threats:

- A portion of Route F2.a is aligned on Railroad property. An agreement with the Railroad would be necessary to construct the route as shown. This route crosses areas of private property and easement acquisition would be necessary.

Section Statistics:

Approximate Length – 3,110 ft. (F2, F2.a), 3,050 ft. (F2, F2.b)

Residential Driveway Crossings – 0

Commercial Driveway Crossings – 2 (F2, F2.a), 6 (F2, F2.b)

At-Grade Street Crossings – 5 (F2, F2.a), 4 (F2, F2.b)

Pedestrian/Bicycle Crashes (2013 – 2016) – 2016 (Collision w/pedestrian at 6th/Vermont)

Adjacent Roadway Speed Limit – 30 mph (New York St., Rhode Island St., E 7th St., E 6th St.)

Adjacent Roadway Average Annual Daily Traffic – N/A



Burroughs Creek Trail to Constant Park – F2 – Looking West along 7th Street



Burroughs Creek Trail to Constant Park – F2 – Looking northwest onto City Hall

Final Open House Meeting and Lawrence Listens Online Survey

After the alignments were field checked and the SWOT analysis was conducted, a final open house meeting and Lawrence Listens online survey was conducted as an opportunity to receive public input on the study alignments and analysis. A postcard notification (Figure 9) was developed for the final open house meeting and sent to the same 1,707 property owners that were notified for the initial open house meeting.

Figure 9



Prior to the final open house meeting, the Lawrence Listens platform was used to host an online survey to receive public input of the study alignments and SWOT analysis. The survey was active from September 5, 2017 to September 19, 2017. A copy of the survey has been included in Appendix C.

The final open house meeting was conducted on September 18, 2017 from 5:30 pm to 7:30 pm at the Lawrence Public Library. Attendees were given a paper copy Lawrence Listens online survey. Ninety-five copies of the survey were returned by the end of the meeting.



Participants at the September 18th Open House

The survey results from the online survey and the final open house meeting were then compiled. The general findings of the survey were in line with the responses obtained from the first open house meeting. The preferred route for the Sandra Shaw Trail to Peterson Road Shared Use Path gap was the A1 and B1 segments. The preferred route for the Burroughs Creek Trail to Constant Park gap was the D1, E1 and F1 segments. Route maps with the vote count percentages have been included as Figures 10 and 11. The detailed survey results and the vote counts are as follows:

Sandra Shaw Trail to Peterson Road Shared Use Path

Segment	%	Vote Count
A1 (Red)	76.6%	128
A2 (Maroon/Dark Red)	15.6%	26
A3 (Orange)	7.8%	13

A2.a (Gold)*	60.9%	14
A2.b (Cream)*	39.1%	9

B1 (Yellow)	74.4%	122
B2 (Yellow-Green)	25.6%	42

*A2.a and A2.b options were only available to those who selected A2 as their preferred route.

Burroughs Creek Trail to Constant Park

Segment	%	Vote Count
D1 (Dark Blue)	73.6%	120
D2 (Light Blue)	26.4%	43

E1 (Pink)	66.1%	109
E2 (Purple)	33.9%	56

E2.a (Light Purple)*	72.7%	40
E2.b (Lilac)*	27.3%	15

F1 (Light Green)	81.3%	135
F2 (Green)	18.7%	31

F2.a (Neon Green)*	70.0%	21
F2.b (Mint Green)*	30.0%	9

*E2.a, E2.b, F2.a & F2.b options were only available to those who selected E2 and F2 as their preferred route, respectively.

The individual survey responses have been included in Appendix C.

Figure 10

Proposed Routes to Close Gaps in the Lawrence Loop - Sandra Shaw to Peterson Road

9/2017

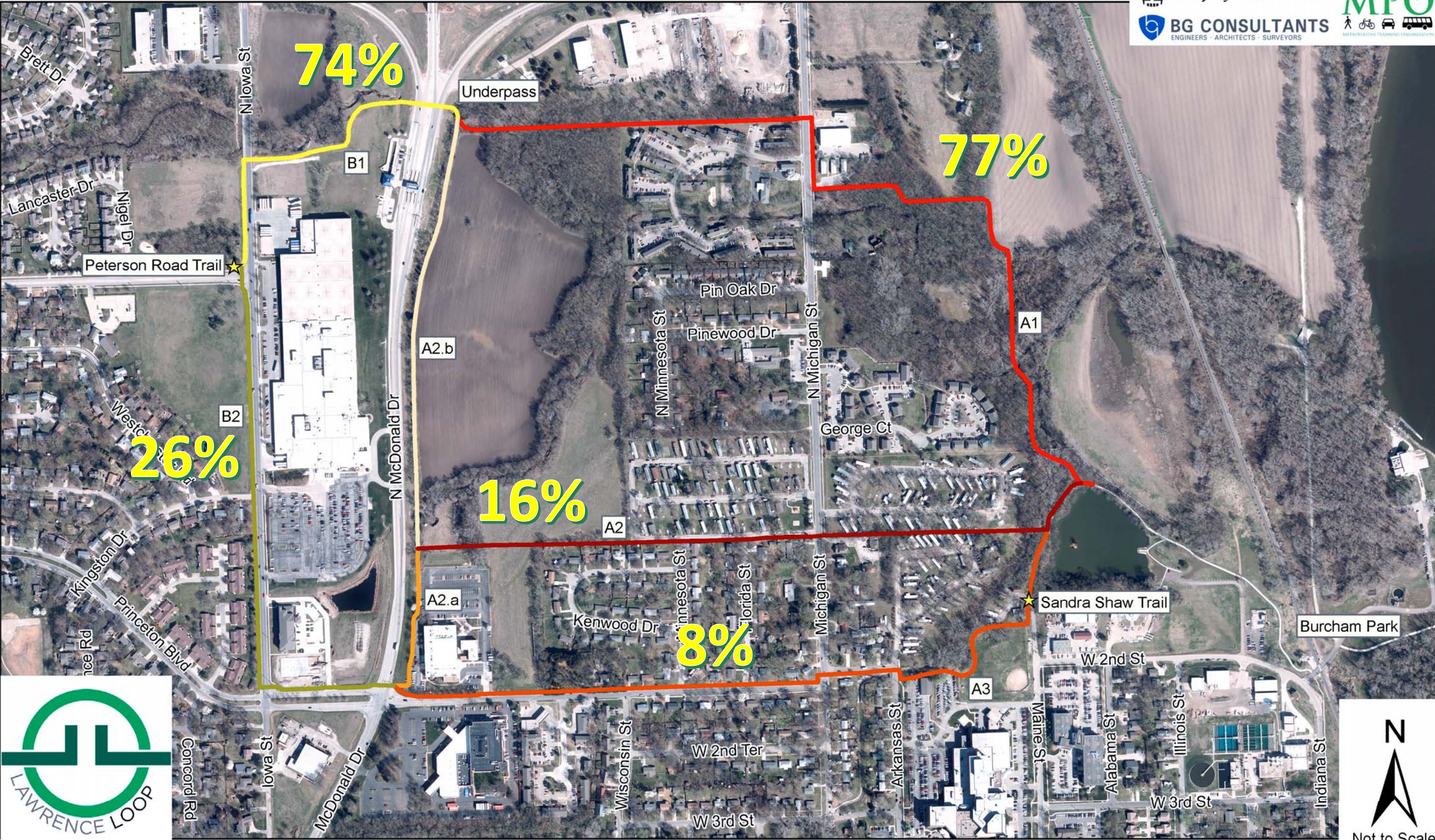
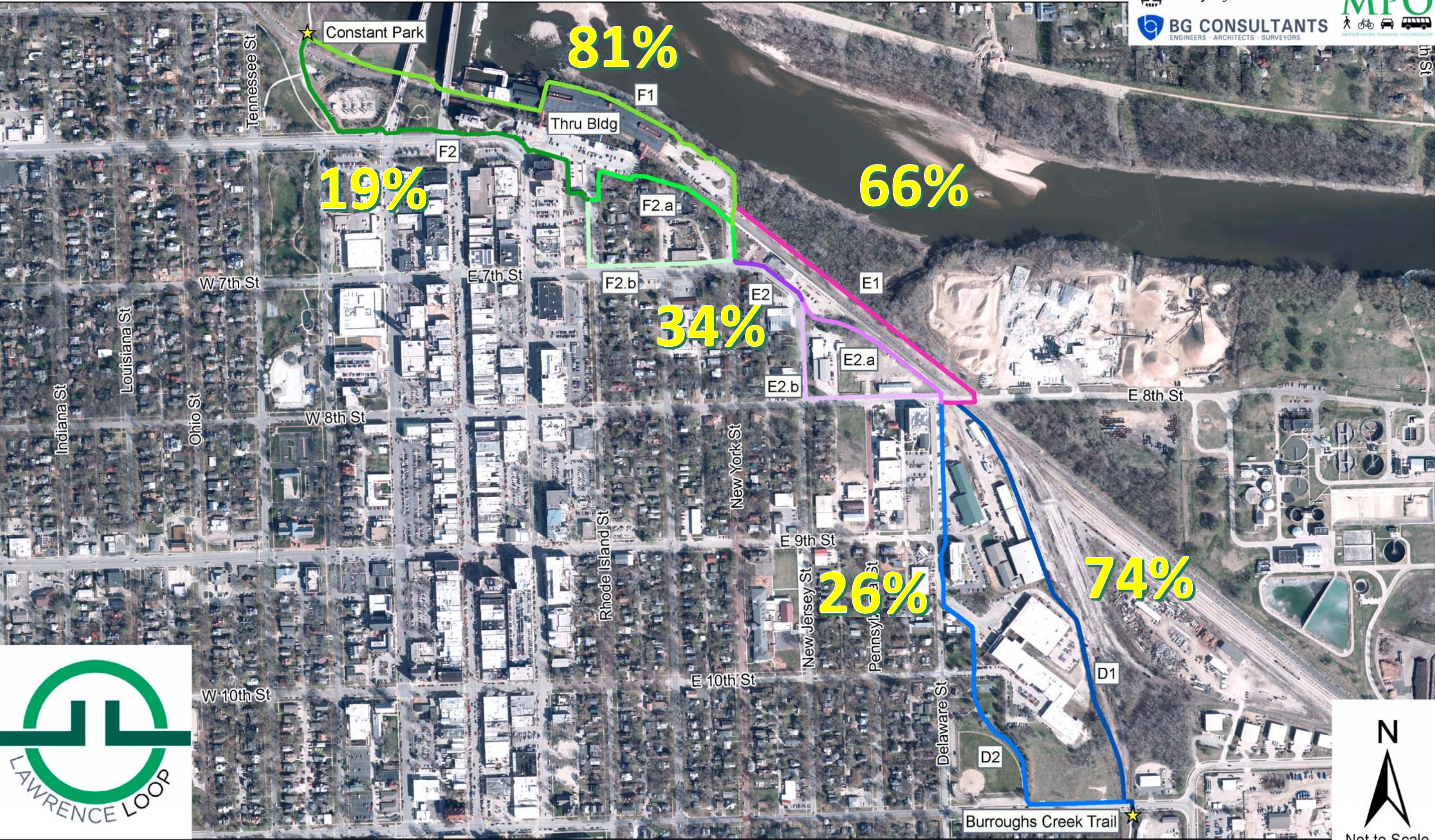


Figure 11

Proposed Routes to Close Gaps in the Lawrence Loop - Burroughs Creek to Constant Park

9/2017



Further Route Investigation Segment F.1 and F.2

BG met with City staff to further discuss the feasibility of segment F1. The segment alignment was walked and reviewed and it was determined that it would be infeasible to construct the Loop on that alignment. There is a grade change from the north side of Riverfront Mall to the south side of Riverfront Mall that would have difficult to make ADA accessible. It was also determined that the door located on the river side of the building at the west end is located below the Base Flood Elevation. An alternate alignment, segment F1.a, was chosen as an alternative to F1.

During the final open house meeting support was expressed for an alignment that routed under the Kansas River bridges on the south side of the railroad tracks. This route was labeled as segment F2.c in a map showing the two new segments (Figure 12). BG developed a SWOT analysis for each new segment (included after Figure 12).

An online survey was developed to determine public preference between Routes F1/F1.a and F2/F2.a/F2.c. The survey was posted on the Lawrence Listens platform and was active from October 16, 2017 to October 30, 2017. Previous open house attendees and other interested parties that had furnished an email address were notified about the online survey. A copy of the survey has been included in Appendix D.

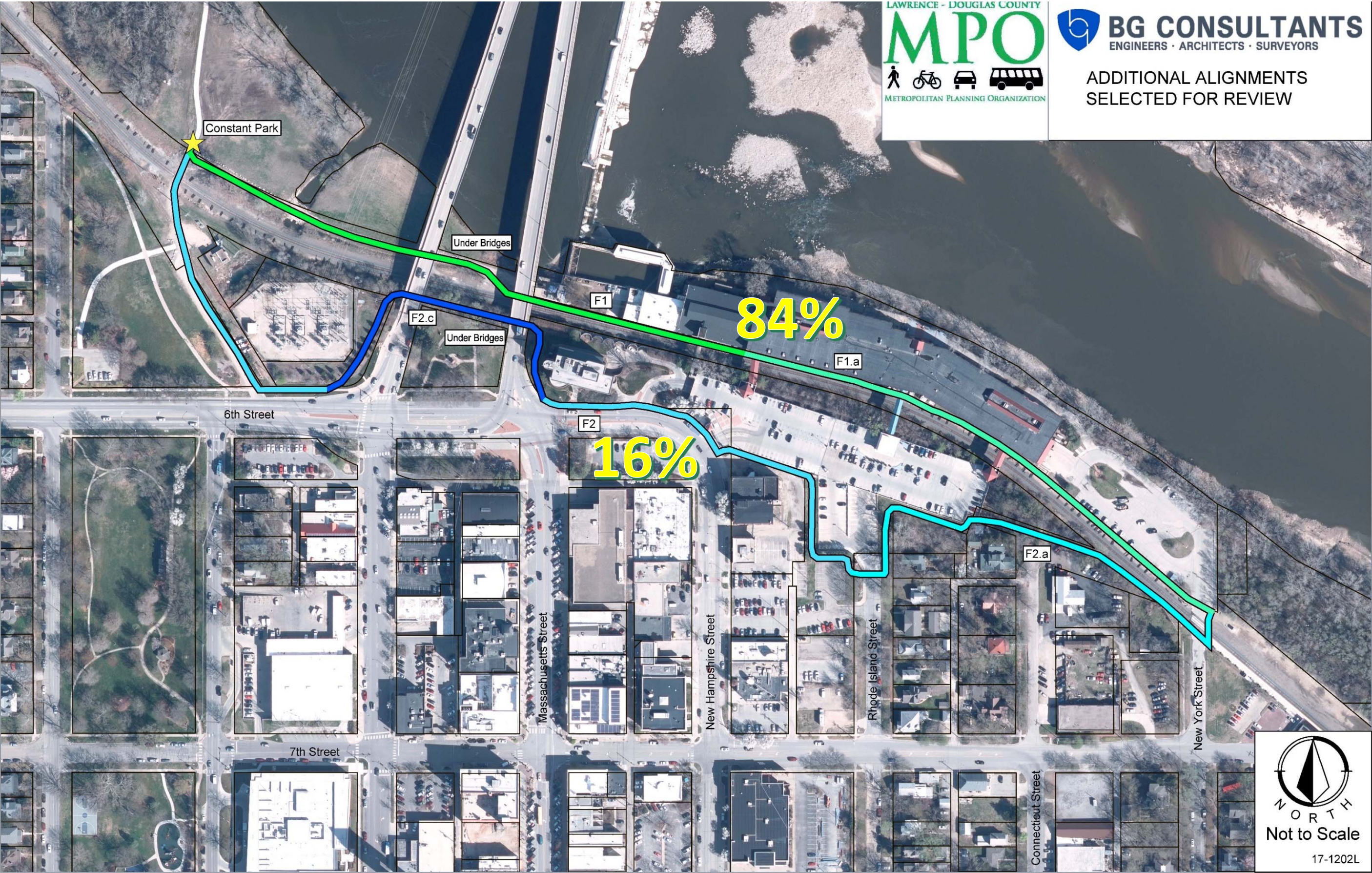
The results of the online survey indicated an overwhelming support for the F1/F1.a segment. The general findings of the survey are as follows:

Burroughs Creek Trail to Constant Park

Segment	%	Vote Count
F1/F1.a (Green)	84.3%	150
F2/F2.a/F2.c (Blue)	15.7%	28

The individual survey responses have been included in Appendix D.

Figure 12



Burroughs Creek Trail to Constant Park

F1 (F1.a) (Map Color: F1-Green, F1.a-Light Green)

This alignment connects to the north end of the E1 and E2 alignments, crosses New York Street and continues along the north side of the railroad tracks. Once it reaches the Riverfront Mall building, the route continues between the railroad and the buildings on the north side of the railroad tracks. The proposed route continues west under the Kansas River bridges along the north side of the Railroad until it reaches the existing path.

Strengths:

- This route does not cross any driveways and is isolated from vehicle traffic and at-grade street crossings.

Weaknesses:

- The section of the route adjacent to the buildings may feel confined due to the buildings on one side and the Railroad on the other.
- The section of the route adjacent to the Railroad would occupy a space that is currently used for deliveries to the adjacent building.
- There is not a dedicated pedestrian/bicycle crossing at New York Street but there is a signalized railroad crossing (connection to F1 from E2 only).

Opportunities:

- The construction of the route in this location could provide a secondary route for emergency vehicle access to the Bowersock Power Plant and trash service to Abe and Jake's.

Threats:

- A portion of this route is aligned on Railroad property. An agreement with the Railroad would be necessary to allow this route to be constructed as shown.



Section Statistics:

Approximate Length – 2,340 ft.

Residential Driveway Crossings – 0

Commercial Driveway Crossings – 1 (adjacent to Commercial Driveway)

At-Grade Street Crossings – 1

Pedestrian/Bicycle Crashes (2013 – 2016) – N/A

Adjacent Roadway Speed Limit – N/A

Adjacent Roadway Average Annual Daily Traffic – 2013: 220 (New York St./Railroad)



Burroughs Creek Trail to Constant Park – F1.a – Looking southeast along Riverfront Plaza

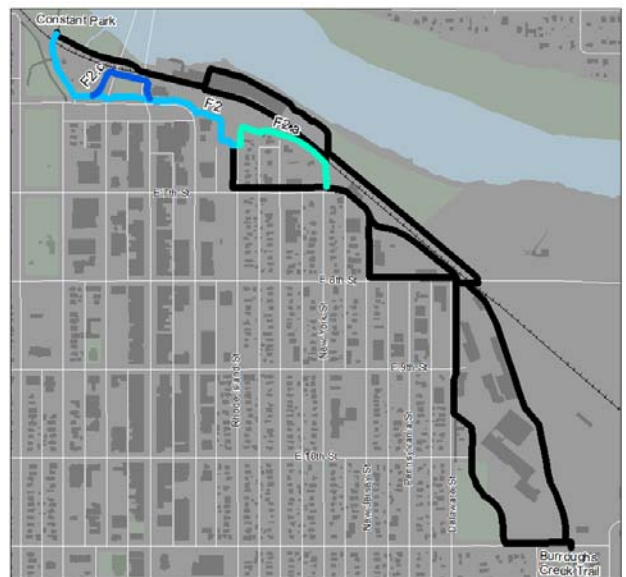


Burroughs Creek Trail to Constant Park – F1.a – Looking southeast along Riverfront Plaza

Burroughs Creek Trail to Constant Park

F2 (F2.a and F2.c) (Map Color: F2-Light Blue, F2.a-Teal, F2.c-Dark Blue)

This alignment connects to the north end of the E1 and E2 alignments. Route F2.a heads north along the east side of New York Street until it reaches the south side of the Railroad. The route continues west along the south side of the Railroad and Parking Garage until it reaches Rhode Island Street. Route F2.a ends at the Parking Garage and Route F2 continues north and west along the west and south edges of the Parking Garage to New Hampshire Street. The route continues on the north side of 6th Street to the west side of Massachusetts Street where Route F2.c heads north and continues under the Kansas River Bridges on the south side of the railroad tracks. The route continues south of the west side of the Vermont Street to the north side of 6th Street to the access road and then continues heading north and crossing the Railroad and connects to the existing path.



Strengths:

- Route F2.c avoids the at-grade crossing of Massachusetts Street and Vermont Street.

Weaknesses:

- Route F2 crosses the Railroad with an unsignalized at-grade crossing.
- Route F2.a crosses terrain that would make the path difficult to construct and meet ADA requirements. Less experienced users may find the route difficult to navigate.

Opportunities:

- Route F2.c provides an opportunity to connect the Lawrence Loop to Robinson Park.

Threats:

- A portion of Route F2.a is aligned on Railroad property. An agreement with the Railroad would be necessary to allow this route to be constructed as shown.
- This route crosses several areas of private property and easement acquisition would be necessary.

Section Statistics:

Approximate Length – 3,220 ft.

Residential Driveway Crossings – 0

Commercial Driveway Crossings – 2

At-Grade Street Crossings – 2

Pedestrian/Bicycle Crashes (2013 – 2016) – 2016 (Collision w/pedestrian at 6th/Vermont)

Adjacent Roadway Speed Limit – 30 mph (New York St., Rhode Island St., E 7th St., E 6th St.)

Adjacent Roadway Average Annual Daily Traffic – N/A

BNSF Railway Coordination

BG and members of City staff met with Kamalah Young with BNSF Railway to discuss the City's potential use of the Railroad right-of-way for the Lawrence Loop. Ms. Young was provided a copy of the Rails-to-Trails Conservancy's report titled *"America's Rails-with-Trails"*. Ms. Young was going to visit with her supervisors to discuss the project. On November 28, 2017 we received an email from Ms. Young. She indicated that "BNSF does not recommend the trail project as proposed." City Staff should follow up with the BNSF Railway to continue the discussion and determine what additional information or modifications can be made to allow BNSF to support the project on the alignment shown.

Kansas Turnpike Authority Coordination

BG sent David Jacobson, Director of Engineering with the Kansas Turnpike Authority (KTA) a copy of the study alignments map for the Sandra Shaw Trail and Peterson Road Shared Use Path section. Mr. Jacobson reviewed the drawing and indicated that a formal request needs to be made and additional details need to be provided before consideration.

Conclusions

Through a series of open houses and online surveys, this study process has provided an opportunity for the public to weigh in on selecting a preferred alignment to complete two missing Lawrence Loop segments.

The study process has facilitated the selection of route priorities for each section. The priorities for each section are listed below.

Sandra Shaw Trail to Peterson Road Shared Use Path (See Figure 13)

1st Priority – Segments A1/B1

2nd Priority – Segments A2/A2.b/B1

3rd Priority – Segments A2/A2.a/B2

4th Priority – Segments A3/B2

The 1st priority route for this section appears to be feasible but the route will involve constructing an underpass under the KTA's West Lawrence Interchange (Exit 202), working with the floodplain and floodway for a large section of the path east of Michigan Street and acquiring easements from several parcels. The 1st priority could be phased from Sandra Shaw Trail to Michigan Street and from Michigan Street to the Peterson Road Shared Use Path. The Engineer's Opinion of Probable Construction Cost (2017 Dollars) for each phase of the 1st Priority is below.

The 3rd priority route for this section provides an alternate route that does not involve the construction of the underpass under McDonald Drive. This route would cross McDonald Drive at the W. 2nd Street intersection. The Engineer's Opinion of Probable Construction Cost (2017 Dollars) for the 3rd Priority is also below.

Engineer's Opinion of Probable Construction Cost*
Sandra Shaw Trail to Peterson Road Shared Use Path
1st Priority - Segments A1/B1

Section 1 - Sandra Shaw Trail to Michigan Street

<u>Work Item</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Total Price</u>
1. Mobilization	1	L.S.	\$7,000.00	\$7,000.00
2. Clearing, Grubbing	1	L.S.	\$20,000.00	\$20,000.00
3. Earthwork	1	L.S.	\$30,000.00	\$30,000.00
4. 10'x6" Concrete Path	3340	S.Y.	\$50.00	\$167,000.00
5. ADA Ramp	8	S.Y.	\$100.00	\$800.00
6. 4" AB-3 Subgrade	3348	S.Y.	\$7.00	\$23,436.00
7. Drainage Structure	1	Each	\$40,000.00	\$40,000.00
8. Storm Sewer Pipe Crossing	1	Each	\$2,000.00	\$2,000.00
9. Erosion Control	1	L.S.	\$5,000.00	\$5,000.00
10. Construction Staking	1	L.S.	\$7,500.00	\$7,500.00
11. Traffic Control	1	L.S.	\$1,500.00	\$1,500.00
12. Seed, Fertilize and Mulch	1	L.S.	\$5,000.00	<u>\$5,000.00</u>
Subtotal =				\$309,236.00
+25% Construction Contingency =				<u>\$77,309.00</u>
Total =				\$386,545.00

Section 2 - Michigan Street to Peterson Road Shared Use Path

<u>Work Item</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Total Price</u>
1. Mobilization	1	L.S.	\$20,000.00	\$20,000.00
2. Clearing, Grubbing	1	L.S.	\$20,000.00	\$20,000.00
3. Earthwork	1	L.S.	\$30,000.00	\$30,000.00
4. 10'x6" Concrete Path	3450	S.Y.	\$50.00	\$172,500.00
5. ADA Ramp	24	S.Y.	\$100.00	\$2,400.00
6. 4" AB-3 Subgrade	3348	S.Y.	\$7.00	\$23,436.00
7. 12'x10' Underpass	1	Each	\$400,000.00	\$400,000.00
8. Storm Sewer Pipe Crossing	1	Each	\$4,000.00	\$4,000.00
9. Concrete Pavement (12" A.E.)	310	S.Y.	\$100.00	\$31,000.00
10. HAWK Signal	1	Each	\$55,000.00	\$55,000.00
11. Erosion Control	1	L.S.	\$5,000.00	\$5,000.00
12. Construction Staking	1	L.S.	\$7,500.00	\$7,500.00
13. Traffic Control	1	L.S.	\$10,000.00	\$10,000.00
14. Seed, Fertilize and Mulch	1	L.S.	\$5,000.00	<u>\$5,000.00</u>
Subtotal =				\$785,836.00
+25% Construction Contingency =				<u>\$196,459.00</u>
Total =				\$982,295.00

Sandra Shaw Trail to Peterson Road Shared Use Path* (non-underpass option)
3rd Priority - Segments A2/A2.b/B2

<u>Work Item</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Total Price</u>
1. Mobilization	1	L.S.	\$12,000.00	\$12,000.00
2. Clearing, Grubbing	1	L.S.	\$20,000.00	\$20,000.00
3. Earthwork	1	L.S.	\$60,000.00	\$60,000.00
4. 10'x6" Concrete Path	7312	S.Y.	\$50.00	\$365,600.00
5. ADA Ramp	112	S.Y.	\$100.00	\$11,200.00
6. 4" AB-3 Subgrade	7424	S.Y.	\$7.00	\$51,968.00
7. Storm Sewer Pipe Crossing	2	Each	\$2,000.00	\$4,000.00
8. Erosion Control	1	L.S.	\$10,000.00	\$10,000.00
9. Construction Staking	1	L.S.	\$15,000.00	\$15,000.00
10. Traffic Control	1	L.S.	\$15,000.00	\$15,000.00
11. Seed, Fertilize and Mulch	1	L.S.	\$10,000.00	<u>\$10,000.00</u>
Subtotal =				\$574,768.00
+ 25% Construction Contingency =				<u>\$143,692.00</u>
Total =				\$718,460.00

* R/W and easement acquisition costs have not been included.

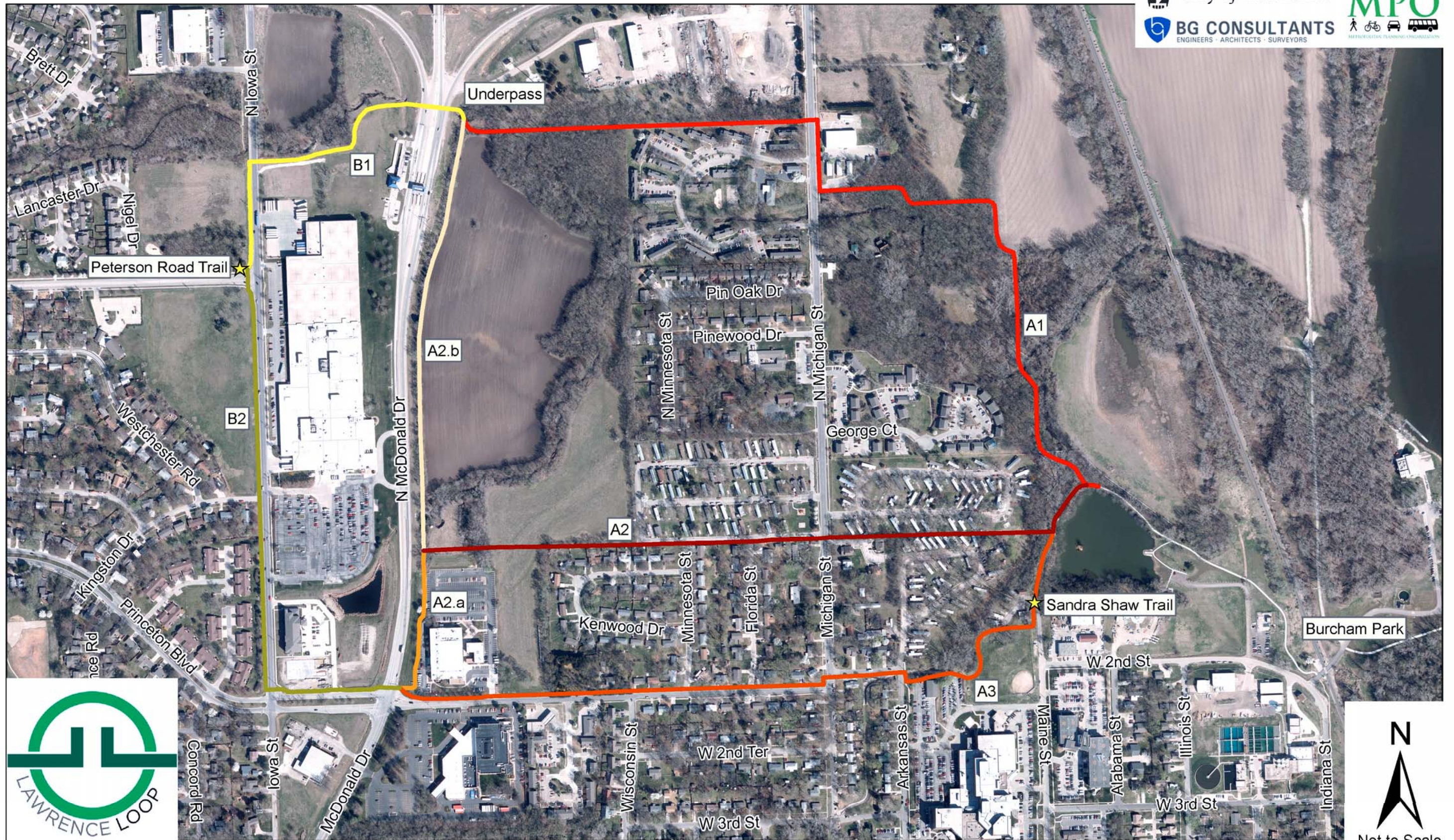
Proposed Routes to Close Gaps in the Lawrence Loop - Sandra Shaw to Peterson Road


City of Lawrence

BG CONSULTANTS
 ENGINEERS • ARCHITECTS • SURVEYORS

9/20/17


 LAWRENCE - DOUGLAS COUNTY
MPO
 ALL MODELS, PLANNING, ORGANIZATION



Burroughs Creek Trail to Constant Park (See Figure 14)

1st Priority – Segments D1/E1/F1/F1.a

Alternate Substitutions – Segment D2 for D1, Segment E2/(E2.a or E2.b) for E1, Segment F2/(F2.a or F2.b)/(or F2.c) for F1/F1.a

The 1st priority route for this section is physically feasible to be constructed but is solely dependent upon the BNSF Railway's decision to allow their right-of-way to be used for construction of the path. The alternate routes appear to be feasible but each will involve acquiring easements, increased slopes for the trail, driveway and intersection crossings. Segment F2.b appears to be more physically feasible to construct than segment F2.a as segment F2.a will have difficult slopes, tight curves and easement acquisition. If segment F1/F1.a is determined to be not acceptable by the Railway, further discussion needs to occur about the un-signalized Constant Park railroad crossing. The 1st Priority could be phased as shown for the D1, E1 and F1 segments. The Engineer's Opinion of Probable Construction Cost (2017 Dollars) for each phase of the 1st Priority is below. An Engineer's Opinion of Probable Construction Cost (2017 Dollars) for alternate options D2, E2/E2.a and F2/F2.b are also below.

Engineer's Opinion of Probable Construction Cost*

Burroughs Creek Trail to Constant Park

1st Priority - Segments D1/E1/F1/F1.a

Section 1 - D1

	<u>Work Item</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Total Price</u>
1.	Mobilization	1	L.S.	\$6,000.00	\$6,000.00
2.	Clearing, Grubbing	1	L.S.	\$10,000.00	\$10,000.00
3.	Earthwork	1	L.S.	\$5,000.00	\$5,000.00
4.	10'x6" Concrete Path	2530	S.Y.	\$50.00	\$126,500.00
5.	ADA Ramp	8	S.Y.	\$100.00	\$800.00
6.	4" AB-3 Subgrade	2538	S.Y.	\$7.00	\$17,766.00
7.	6' Chainlink Fence	2270	L.F.	\$35.00	\$79,450.00
8.	Erosion Control	1	L.S.	\$3,000.00	\$3,000.00
9.	Construction Staking	1	L.S.	\$5,000.00	\$5,000.00
10.	Traffic Control	1	L.S.	\$1,500.00	\$1,500.00
11.	Railroad Flagger	10	Days	\$1,500.00	\$15,000.00
12.	Seed, Fertilize and Mulch	1	L.S.	\$4,000.00	<u>\$4,000.00</u>
Subtotal =					\$274,016.00
+ 25% Construction Contingency =					<u>\$68,504.00</u>
Total =					\$342,520.00

Section 2 - E1

	<u>Work Item</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Total Price</u>
1.	Mobilization	1	L.S.	\$5,000.00	\$5,000.00
2.	Clearing, Grubbing	1	L.S.	\$4,000.00	\$4,000.00
3.	Earthwork	1	L.S.	\$4,000.00	\$4,000.00
4.	10'x6" Concrete Path	1720	S.Y.	\$50.00	\$86,000.00
5.	ADA Ramp	16	S.Y.	\$100.00	\$1,600.00
6.	4" AB-3 Subgrade	1736	S.Y.	\$7.00	\$12,152.00
7.	6' Chainlink Fence	1540	L.F.	\$35.00	\$53,900.00
8.	Erosion Control	1	L.S.	\$3,000.00	\$3,000.00
9.	Construction Staking	1	L.S.	\$4,000.00	\$4,000.00
10.	Traffic Control	1	L.S.	\$1,500.00	\$1,500.00
11.	Railroad Flagger	10	Days	\$1,500.00	\$15,000.00
12.	Seed, Fertilize and Mulch	1	L.S.	\$3,500.00	<u>\$3,500.00</u>
Subtotal =					\$193,652.00
+25% Construction Contingency =					<u>\$48,413.00</u>
Total =					\$242,065.00

Section 3 - F1/F1.a

	<u>Work Item</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Total Price</u>
1.	Mobilization	1	L.S.	\$6,000.00	\$6,000.00
2.	Clearing, Grubbing	1	L.S.	\$4,000.00	\$4,000.00
3.	Earthwork	1	L.S.	\$5,000.00	\$5,000.00
4.	10'x6" Concrete Path	2600	S.Y.	\$50.00	\$130,000.00
5.	ADA Ramp	8	S.Y.	\$100.00	\$800.00
6.	4" AB-3 Subgrade	2608	S.Y.	\$7.00	\$18,256.00
7.	6' Chainlink Fence	2340	L.F.	\$35.00	\$81,900.00
8.	Erosion Control	1	L.S.	\$3,000.00	\$3,000.00
9.	Construction Staking	1	L.S.	\$5,000.00	\$5,000.00
10.	Traffic Control	1	L.S.	\$1,500.00	\$1,500.00
11.	Railroad Flagger	10	Days	\$1,500.00	\$15,000.00
12.	Seed, Fertilize and Mulch	1	L.S.	\$4,000.00	<u>\$4,000.00</u>
Subtotal =					\$274,456.00
+25% Construction Contingency =					<u>\$68,614.00</u>
Total =					\$343,070.00

Engineer's Opinion of Probable Construction Cost* Burroughs Creek Trail to Constant Park Alternate Options - Segments D2, E2/E2.a, F2/F2.b

Section 1 - D2

	<u>Work Item</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Total Price</u>
1.	Mobilization	1	L.S.	\$5,000.00	\$5,000.00
2.	Clearing, Grubbing	1	L.S.	\$10,000.00	\$10,000.00
3.	Earthwork	1	L.S.	\$20,000.00	\$20,000.00
4.	10'x6" Concrete Path	2400	S.Y.	\$50.00	\$120,000.00
5.	ADA Ramp	104	S.Y.	\$100.00	\$10,400.00
6.	4" AB-3 Subgrade	2504	S.Y.	\$7.00	\$17,528.00

7.	Erosion Control	1	L.S.	\$5,000.00	\$5,000.00
8.	Construction Staking	1	L.S.	\$7,500.00	\$7,500.00
9.	Traffic Control	1	L.S.	\$10,000.00	\$10,000.00
10.	Seed, Fertilize and Mulch	1	L.S.	\$5,000.00	<u>\$5,000.00</u>
Subtotal =					\$210,428.00
+25% Construction Contingency =					<u>\$52,607.00</u>
Total =					\$263,035.00

Section 2 - E2/E2.a

	<u>Work Item</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Total Price</u>
1.	Mobilization	1	L.S.	\$5,000.00	\$5,000.00
2.	Clearing, Grubbing	1	L.S.	\$10,000.00	\$10,000.00
3.	Earthwork	1	L.S.	\$5,000.00	\$5,000.00
4.	10'x6" Concrete Path	1450	S.Y.	\$50.00	\$72,500.00
5.	ADA Ramp	16	S.Y.	\$100.00	\$1,600.00
6.	4" AB-3 Subgrade	1466	S.Y.	\$7.00	\$10,262.00
7.	6' Chainlink Fence	600	L.F.	\$35.00	\$21,000.00
8.	Erosion Control	1	L.S.	\$3,000.00	\$3,000.00
9.	Construction Staking	1	L.S.	\$4,000.00	\$4,000.00
10.	Traffic Control	1	L.S.	\$6,000.00	\$6,000.00
11.	Seed, Fertilize and Mulch	1	L.S.	\$4,000.00	<u>\$4,000.00</u>
Subtotal =					\$142,362.00
+25% Construction Contingency =					<u>\$35,591.00</u>
Total =					\$177,953.00

Section 3 - F2/F2.b

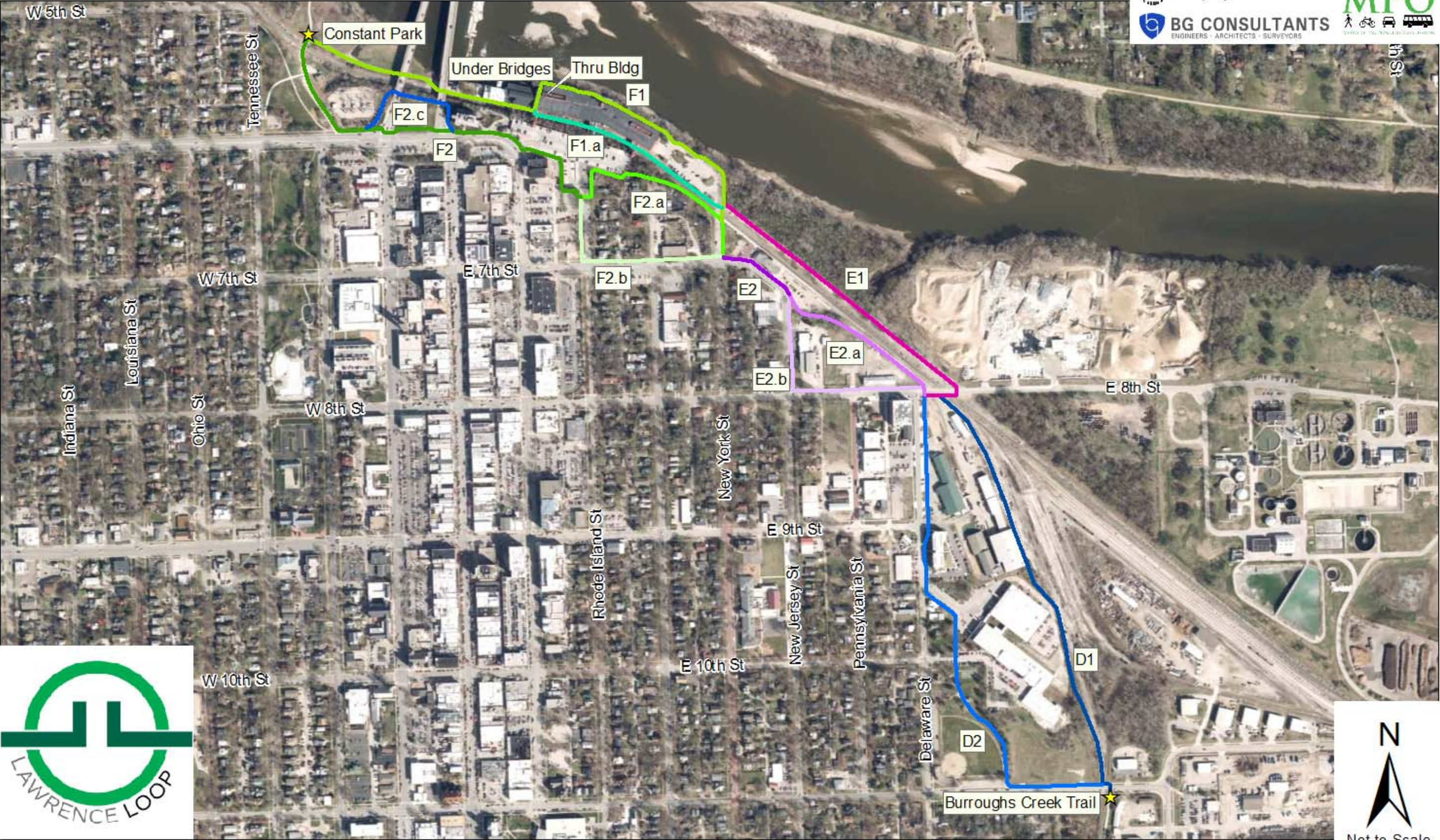
	<u>Work Item</u>	<u>Quantity</u>	<u>Units</u>	<u>Unit Price</u>	<u>Total Price</u>
1.	Mobilization	1	L.S.	\$10,000.00	\$10,000.00
2.	Clearing, Grubbing	1	L.S.	\$8,000.00	\$8,000.00
3.	Earthwork	1	L.S.	\$10,000.00	\$10,000.00
4.	10'x6" Concrete Path	3100	S.Y.	\$60.00	\$186,000.00
5.	ADA Ramp	136	S.Y.	\$100.00	\$13,600.00
6.	4" AB-3 Subgrade	3236	S.Y.	\$7.00	\$22,652.00
7.	Erosion Control	1	L.S.	\$5,000.00	\$5,000.00
8.	Construction Staking	1	L.S.	\$7,500.00	\$7,500.00
9.	Traffic Control	1	L.S.	\$10,000.00	\$10,000.00
10.	Seed, Fertilize and Mulch	1	L.S.	\$5,000.00	<u>\$5,000.00</u>
Subtotal =					\$277,752.00
+25% Construction Contingency =					<u>\$69,438.00</u>
Total =					\$347,190.00

* R/W and easement acquisition costs have not been included.

Figure 14

Proposed Routes to Close Gaps in the Lawrence Loop - Burroughs Creek to Constant Park

9/2017



Next Steps

The MPO should incorporate the 1st priority routes into the Countywide Bikeway Plan update planned for 2018. Further discussions should occur with the BNSF Railway and KTA to design routes and get appropriate approvals. The City should also look for opportunities to share in the cost of the proposed improvements. The City should look and apply for grant programs that have the ability to fund all or a portion of the proposed improvements. Once the City has secured or programmed funding for the improvements, preliminary engineering should begin. The City should continue to look for opportunities to secure easements along the selected routes when possible.