



**MULTI-MODAL TRANSPORTATION COMMISSION STUDY SESSION**

**Monday, November 4, 2019 5:00 PM**

**City Commission Room, City Hall, 6 E. 6th Street**

- The 5 p.m. Study Session is cancelled.

**MULTI-MODAL TRANSPORTATION COMMISSION REGULAR MEETING**

**Monday, November 4, 2019 6:00 PM**

**City Commission Room, City Hall, 6 E. 6th Street**

**1. Approve Regular Meeting minutes for October 7, 2019**

**2. General Public Comment**

*The public is allowed to speak to any items or issues that are not scheduled on the regular agenda. Public comment will not be received for Staff Items, Commission Items, or Calendar. Each person or organization will be limited to three (3) minutes. As a general practice, the Commission will not discuss/debate these items, nor will the Commission make decisions on items presented at this time. Individuals are asked to come to the microphone, sign in, and state their name and address. Speakers should address all comments to the Commission.*

**3. E. 19<sup>th</sup> Street – Haskell to O’Connell design options**

E. 19<sup>th</sup> Street is in the city’s capital improvement plan to reconstruct (waterline 2020 & street 2021). The City selected BG Consultants to produce up to five typical street section alternatives to evaluate.

**Action:** Review design alternatives and provide recommendation.

**4. 2020 to 2024 Bike/Ped Funding Plan**

**Action:** Provide recommendation for programming projects for the Sidewalk/Bike/Ped Improvements Project (CIP#CI09) for 2020-2024.

**5. Shared Scooter Pilot Program**

**Action:** Review draft of Shared Scooter RFQ and provide recommendation to City Commission.

**6. Staff Items**

- [Safe Routes to School](#) Open House November 14<sup>th</sup> 6 p.m. to 8 p.m.  
Douglas County Fairgrounds – Flory Meeting Hall  
2120 Harper Street.



- **Neighborhood Traffic Management Program Public Outreach Campaign update**

- At the May 6, 2019 Transportation Commission meeting the Commission approved the 2019 and 2020 work plan for the Neighborhood Traffic Management Program. The first item in the work plan was to hire a consultant to develop a comprehensive public education campaign.
- Five responses were received to the RFP for the public education campaign and Alta Planning and Design was selected. The consultant's proposed scope and fee has been reviewed by Staff and a recommendation to execute a Professional Services Agreement is being prepared for the City Commission's consideration.

## **7. Commission Items**

- Update from Commissioner Kuzmyak on PTAC

## **8. Calendar**

- **Next Meeting December 2, 2019**
- 5p Study Session:
  - Chapter 20 Article 9: Parking, Loading and Access Standards Update.
- 6p Regular Meeting:
  - Kasold – 22<sup>nd</sup> St. to Clinton Parkway design review
  - Discuss 2020 Calendar and annual retreat

## **9. Adjournment**



City of Lawrence  
Multi-Modal Transportation Commission  
October 7, 2019 Minutes

MEMBERS PRESENT: Charlie Bryan, Kathryn Schartz, Nick Kuzmyak, Carol Bowen,  
Steve Evans, Erin Paden, John Ziegelmeyer, Ron May

MEMBERS ABSENT: Donna Hultine

STAFF PRESENT: David Cronin, City Engineer  
Charles Soules, MSO Department  
Jessica Mortinger, Transportation Planning  
Dustin Smith, MSO Department  
Jacob Baldwin, MSO Department

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A complete video recording of the meeting is available on the City's website at  
<https://lawrenceks.org/boards/transportation-commission/>

### **STUDY SESSION**

- Update on sidewalk maintenance program
- Micromobility subcommittee update on E-scooters

### **REGULAR MEETING**

[The meeting was called to order by Commissioner Evans at 6 p.m. in the City Commission Room, City Hall, 6 E. 6th Street.](#)

#### **ITEM NO. 1:**

##### **Approve Regular Meeting minutes for September 9, 2019**

Moved by Commissioner May to approve the minutes, seconded by Commissioner Bryan.  
Motion passed 8-0.

#### **ITEM NO. 2:**

##### **General Public Comment**

Public Discussion: N/A

#### **ITEM NO. 3:**

#### **E. 19<sup>th</sup> Street – Haskell to O’Connell design options**

David Cronin introduced Jason Hoskinson, engineer with BG Consultants, who presented five concepts for the reconstruction of 19<sup>th</sup> Street.

After discussion by the Commission, Soules recommended that this item go back to staff for further review of the commission discussion items and bring back a recommendation.

Public Comments: Alea Phillips, Scott Gustafson, Pat Kehde, Melinda Henderson, Sharon Ashworth, Michael Almon, Byron Wiley, Bonnie Uffman

#### **ITEM NO. 4:**

##### **2021 KDOT Transportation Alternative Program Application**

City Project Engineer Jacob Baldwin introduced projects to be submitted for the KDOT Transportation Alternative Program Application. Commission offered feedback for prioritization of the projects.

Moved by Commissioner Bowen to prioritize the grant applications in the following order: Safe Routes to School, 6<sup>th</sup> Street Shared Use Path, Lawrence Loop, seconded by Commissioner Ziegelmeyer. Motion passed 8-0.

Public Comments: Chris Tilden

#### **ITEM NO. 5:**

##### **Article 9, Parking, Loading and Access Standards of the Land Development Code Text Amendment, TA-13-00235**

Moved by Commissioner Kuzmyak to defer topic to the November 4<sup>th</sup> study session, seconded by Commissioner Paden. Motion passed 8-0.

Public Comments: N/A

#### **ITEM NO. 6:**

##### **Staff Items**

- Jessica Mortinger named interim Transit Manager.
- iCompass portal to be used for future Multi-Modal Transportation Commission agendas.
- Ordinance passed for Multi-Modal Transportation Commission. Members have been reappointed to fulfill their unexpired terms and represent the public at-large.

Public Comments: N/A

## **ITEM NO. 7:**

### **Commission Items**

- Commissioner Bowen inquired about minimum sidewalk width in proportion to height of buildings downtown.
- Commissioner Kuzmyak reported on a presentation from First Transit to PTAC included app development for fully-integrated multimodality, assisting in bus service and trip planning. Would allow for more efficient transit service.
- Commissioner Evans requested that SAB be contacted for discussion with the Board on topics of similar interests

## **ITEM NO. 8:**

### **Calendar**

#### **Next Meeting November 4, 2019**

- 5p Study Session: Article 9 (item no. 5)
- 6p Regular Meeting:
  - 2020-2024 Bike/Ped Funding Plan
  - Kasold – 22<sup>nd</sup> St. to Clinton Parkway design review

## **ITEM NO. 9:**

### **Adjournment**

Meeting was adjourned 9:40 p.m.

# Transportation Commission Study Session October 7, 2019

Name	Initials
<b>Members</b>	
Charlie Bryan Lawrence DGCO Health Dept. Representative	CWB
Donna Hultine University of Kansas	
Kathryn Schartz Multi-Modal Transportation / Planning Eng Rep	
Nick Kuzmyak PTAC representative	NK
Carol Bowen Pedestrian Representative	CB
Steve Evans Planning/Engineering Field Representative	SE
Erin Paden Bicyclist Representative	
John Ziegelmeyer Local Business Representative	JZ
Ron May USD-497	RM
<b>City Staff</b>	
David Cronin City Engineer	DC
Jessica Mortinger <del>Senior Transportation Planner</del>	JTM
Ashley Myers Transportation Planner	
Charles Soules Assistant Director, MSO	CS
Dustin Smith Sr. Project Engineer	DS
Jacob Baldwin Sr. Project Engineer	JB

Transportation Planning Managers

**October 7, 2019**  
**Public Sign In Sheet**

[illegible]

# Transportation Commission Meeting October 7, 2019

Name	Initials
<b>Members</b>	
Charlie Bryan Lawrence DGCO Health Dept. Representative	CWB
Donna Hultine University of Kansas	
Kathryn Schartz Multi-Modal Transportation / Planning Eng Rep	KSS
Nick Kuzmyak PTAC representative	NSK
Carol Bowen Pedestrian Representative	CB
Steve Evans Planning/Engineering Field Representative	SE
Erin Paden Bicyclist Representative	EP
John Ziegelmeyer Local Business Representative	JZ
Ron May USD-497	RM
<b>City Staff</b>	
David Cronin City Engineer	DC
Jessica Mortinger Senior Transportation Planner	
Ashley Myers Transportation Planner	
Charles Soules Assistant Director, MSO	CS
Dustin Smith Sr. Project Engineer	✓
Jacob Baldwin Sr. Project Engineer	✓

**Transportation Commission Meeting**  
**October 7, 2019**  
**Public Sign In Sheet**

Name	Contact Info
Courtney Shipley	(ph) (e-mail)
Alex Phillips	(ph) (e-mail)
Scott Gustafson	(ph) (e-mail)
Pats Kehoe	(ph) (e-mail)
Melinda Anderson	(ph) (e-mail)
Sharon Ashworth	(ph) (e-mail)
Michael Amos	(ph) (e-mail)
Bonnie Utter	(ph) (e-mail)
Chris Tilden	(ph) (e-mail) <a href="mailto:christilden@hotmail.com">christilden@hotmail.com</a>
	(ph) (e-mail)
	(ph) (e-mail)
	(ph) (e-mail)
	(ph) (e-mail)
	(ph) (e-mail)



# Memorandum

## City of Lawrence

### Municipal Services & Operations Department

TO: Multimodal Transportation Commission  
FROM: Dave Cronin, City Engineer  
DATE: October 31, 2019  
RE: Agenda Item for Transportation Commission November 4, 2019:  
E. 19<sup>th</sup> Street

#### **Background**

At the May 1, 2018 City Commission meeting staff received authorization to issue a RFQ for design services for 19<sup>th</sup> Street – Harper to O'Connell (CIP# PW17E3). At the meeting, concerns were raised with the proposed 47' (back to back) street staff presented at the March 29, 2018 Transportation Commission meeting. Based on these concerns the City Commission included specific direction to include options of a 31' street (minimum collector street standard) that would not exceed the width of 19<sup>th</sup> Street west of Harper.

The RFQ included language to meet the city's design criteria for a collector street including waterline replacement and storm sewer. The RFQ also included information as directed by the City Commission to include several options for bicycle facilities including a facility separated from both vehicular and pedestrian traffic.

At the February 5, 2019 City Commission Meeting an Engineering Contract was approved with BG Consultants to include 5 design options.

At the October 7, 2019 Transportation Commission meeting BG Consultants presented a concept design summary containing 5 options. All 5 options were developed to meet the city minimum criteria for a collector street, including street width and storm sewer. At the meeting concerns were raised that a 22' street width should have been included. Staff maintains that the 5 options presented are in line with direction from the City Commission, outlined in the RFQ, and meet city standards. Furthermore, staff does not recommend a design that does not meet the minimum city standard for a collector street. City of Lawrence Design Criteria, Standard Details and Specifications are maintained by the City Engineer. The standards are not adopted by ordinance and there is not a waiver or appeal process. The city conducts an annual review of design criteria, standard details and specifications and publishes these standards. The City Commission receives an update of the revised standards and these standards set the expectations for public and private design and construction of infrastructure in the City of Lawrence.

The Transportation Commission also asked for clarification regarding language of agenda action items (provide feedback vs. provide recommendation). The Transportation Commission can provide a recommendation to the City Commission, and that recommendation can be different than staff's recommendation.



The recently adopted [Lawrence Bikes](#) plan includes guidance to achieve a 'level of comfort' with a goal of 3 or below based on the number of vehicles and speed. Based on the anticipated posted speed limit of 30mph and 3840 vehicles per day (2017 traffic count on E. 19<sup>th</sup> west of Harper) the 'level of comfort' is a:

- 3 with no facility,
- 3 with marked shared lanes,
- 2 with a buffered bike lane,
- 1 with a protected bike lane/cycle track, or
- 1 with a shared use path.

### **Action Request**

Review design alternatives and provide a recommendation.

### **Attachment**

[Link to May 1, 2018 City Commission Agenda Item](#)

[Link to March 29, 2018 Transportation Commission Agenda Item](#)

[Link to February 5, 2019 City Commission Agenda Item](#)

RFQ#Q1805 Engineering Design Services for Reconstruction of E. 19<sup>th</sup> Street from Harper to O'Connell (PW17E3CIP)

October 28, 2019 19<sup>th</sup> Street Reconstruction Project Recommendation – BG Consultants

October 7, 2019 19<sup>th</sup> Street Concept Design Summary

October 7, 2019 19<sup>th</sup> Street Presentation



## City of Lawrence

### **REQUEST FOR QUALIFICATIONS (RFQ)**

**RFQ Description:** Engineering Design Services for Reconstruction of E. 19<sup>th</sup> Street from Harper to O'Connell (PW17E3CIP)

City Project No. PW1506 & UT1811  
City RFQ # Q1805

**Department:** Public Works

**Contacts:** David P. Cronin, P.E., City Engineer  
Email: [dcronin@lawrenceks.org](mailto:dcronin@lawrenceks.org)  
Phone: (785) 832-3130

**Proposals Due:** **Friday, May 25, 2018 at 5:00 p.m.**

**Copy Requirements:** Submit five (5) copies of qualifications/proposal plus one electronic copy of PDF format

**Pre-Submittal Meeting:** No meeting is scheduled; please call with questions.

**Submit to Address:** David P. Cronin, P.E.  
City of Lawrence – City Hall  
6 East 6<sup>th</sup> Street  
P.O. Box 708  
Lawrence, KS 66044

### **Project Description**

The City of Lawrence is soliciting proposals for design services to reconstruct 19<sup>th</sup> Street from Harper to O'Connell. The City began planning to reconstruct 19<sup>th</sup> Street in 2014 with the completion of the infrastructure at Venture Park and has budgeted \$3.625M in the 2019 CIP. 19<sup>th</sup> Street was constructed in 1959 as a chip and seal road with open ditches and has not been improved to city standards. The waterline is in failing condition and needs to be replaced from Harper to O'Connell. East 19<sup>th</sup> Street is designated as a collector street in the City's Major Thoroughfare plan and has been identified for future bike lanes on the bikeway plan.

### **Project Scope**

The scope of the project includes reconstruction of 19<sup>th</sup> Street to meet the city's design criteria for a collector street including waterline replacement and storm sewer. The design should incorporate the city's complete streets policy and include one lane for eastbound traffic, one lane for westbound traffic, bicycle facilities, and sidewalks. The consultant should evaluate the following:

- Provide different design options for street width including the city standard (31' min.) for a collector street
- Options for bicycle facilities including bicycle lanes, a shared-use path, and a bicycle facility separated from both vehicular and pedestrian traffic
- Access management
- Traffic control for 19th & Harper intersection (4-way stop or roundabout).
- Completion of gap sidewalk on south side of 19<sup>th</sup> Street from Haskell to Harper St.
- Review of school bus/routing stops and city transit stops.
- Location for mid-block crosswalks.
- Provide recommendations for traffic calming on 19<sup>th</sup> Street between Haskell and O'Connell.

### **Estimated Project Length**

The estimated length of reconstruction is 2700 feet in length including the 19<sup>th</sup> & Harper intersection. The estimated length of gap sidewalk on the south side of 19<sup>th</sup> St from Harper to Haskell is 1900 feet. The estimated length of 12" waterline replacement is 2600 feet.

### **Project Funding**

Total project budget is \$3.625M; \$1.775M general obligation bonds, \$1.1M utility waterline replacement funds and \$750k in funding from Douglas County.

### **Project Schedule**

Selection Process	June 2018
Engineering Design and Construction Plans	Summer/Fall 2018
Construction	Summer 2019

### **Services Requested**

The selected firm will provide Engineering Design Services for both the preliminary and final design phases, and the bidding phases as outlined below.

#### **Preliminary and Final Design Phases:**

- Surveying
- Geotechnical exploration
- Plan and profile
- Geometric design, lane widths, turn lane configuration, ADA sidewalk ramps as necessary
- Obtaining traffic data
- Preparation of legal descriptions for right-of-way and/or easements as necessary
- Utility relocation plans and utility coordination meeting if necessary
- Preparation of cost estimates at both preliminary and final phases
- All applicable permit application and submittals
- Construction sequencing and traffic control
- Preparation of pavement marking and signing plans/details

Public participation will include at least one presentation to Transportation Commission.

#### **Bidding Phase:**

- Answer Contractor Questions
- Issue necessary Addenda
- Engineer's Estimate at Bid Opening
- Review Bids and Recommendation Letter of Award

The successful firm will be able to demonstrate not only the engineering capabilities of the firm, but also the ability to build consensus, make appropriate recommendations for the improvements, and communicate with different interest groups.

### **Submittal Components**

Firms are required to complete a proposal including the information as outlined in this request. The proposal shall include:

- General Firm Information
  - Firm Name
  - Contact Name, Telephone & Fax Numbers, email address, and mailing address
  - Current Hourly Billing Rates
  - Office locations (accessibility).
- Key Project Staff and Experience:
  - Organizational Chart of key Project Staff that would be a part of this project.
  - Resumes of key Project Staff describing the individual's previous experience with design of similar projects.
  - Current and projected workload and availability of project team members.

- Conflicts of Interest
  - No conflicts of interest shall be permitted with the project. A potential conflict of interest exists if any member of the firm has any interest that would conflict, or has the appearance of conflicting, in any manner with the performance of the work on this project.
- Qualifications
  - Project Understanding / Approach
  - Unique qualifications / Capabilities
  - Experience in:
    - developing and working within an interactive project process
    - developing consensus
    - working with the general public and commissions
  - Demonstrated track record of producing projects on time and within budget.
  - Proposed sub-consultants
  - Quality control program
- References
- Other pertinent information.

### **Selection**

Qualifications received will be reviewed and evaluated on the items described above. After reviewing proposal, a Selection Committee will select a list of the most qualified (no less than three, no more than five) firms for in-person interview. Those firms not selected for interview will be notified by letter.

In-person interviews will be conducted by the Selection Committee. The Committee will select the most qualified firm, negotiate the contract scope and fee, and make a recommendation to the City Commission to execute design contract. In the event a contract cannot be negotiated with the most qualified firm, staff will then negotiate a contract with the second most qualified firm as determined by the Selection Committee. After successful completion of the Contract Agreement with the selected firm, the remaining firms will be notified about the outcome by a letter.

A copy of the City of Lawrence standard Engineering Services Agreement is available for review upon request.

### **Attachment**

Project Location Map

The engineering/construction firm agrees that the contractor shall observe the provisions of the Kansas Act Against Discrimination and shall not discriminate against any person in the performance of work under the present contract because of race, religion, color, sex, disability, national origin or ancestry. The contractor shall in all solicitations or advertisements for employees include the phrase, "equal opportunity employer." The engineering/construction firm agrees that if the engineering/construction firm fails to comply with the manner in which the contractor reports to the Kansas Human Rights Commission in accordance with the provisions of K.S.A. 44-1031 and amendments thereto, the engineering/construction firm shall be deemed to have breached the present contract and it may be canceled, terminated or suspended, in whole or in part, by the City. If the engineering/construction firm is found guilty of a violation of the Kansas Act Against Discrimination under a decision or order of the Commission which has become final, the engineering/construction firm shall be deemed to have breached the present contract and it may be canceled, terminated or suspended, in whole or in part, by the City.



## E 19th Street, Harper Street to O'Connell Road







# MEMO

**To:** David Cronin, P.E., City Engineer  
Dustin Smith, P.E., Project Engineer

**From:** Jason Hoskinson, P.E., PTOE

**Date:** October 28, 2019

**Re:** 19<sup>th</sup> Street Reconstruction Project Recommendation  
Lawrence, Kansas

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The purpose of this memo is to provide the City of Lawrence with our recommendation(s) for transportation improvements in the 19<sup>th</sup> Street corridor (Haskell Avenue to O'Connell Road). The preliminary **19<sup>th</sup> Street Reconstruction Concept Design Summary** dated October 7, 2019 was presented to the Transportation Commission at their October 2019 meeting. This memo is provided to supplement the discussion that took place at that meeting.

**19<sup>th</sup> Street Reconstruction:** We recommend the City implement Concept 4: 31' wide 19<sup>th</sup> Street with a separated bicycle facility and sidewalks on both sides of the street. We recommend a 31' wide street based on the following reasons.

- Providing a similar driving experience to better meet drivers' expectations along the corridor as the street width will match 19<sup>th</sup> Street between Massachusetts Street and Harper Street.
- Staff conversations with Fire-Medical Department.
- A street width of at least 31 feet will enable traffic flow and safer conditions for drivers and Emergency Responders in the following instances:
  - A stalled vehicle blocking one-lane.
  - A Police Officer performing a traffic stop.
  - EMS responding to an emergency call as drivers stop their vehicle along the outer edge of the street to allow the responder(s) to pass.
- Compliance with the City's current minimum design standards for Collector Streets.
- The narrower street provides opportunities, by design, to better accomplish traffic calming.
- The narrower street reduces pedestrian exposure to motorized traffic at crosswalks.
- Prior City Commission discussion about the Commissioner's desire to explore a street width less than the proposed 47 ft. and closer to the 31 ft. width of 19<sup>th</sup> St. west of Harper St.

We recommend a separated bicycle facility in the form of a Cycle-Track for the following reasons.

- Both the City Commission and Transportation Commission have expressed their desire to explore a separated bicycle facility on this project.
- The Cycle-Track concept is a more feasible solution for street maintenance as compared to the elevated bike lane concept.



- The west transition to/from the Cycle-Track at Harper Street can be accomplished via the recommended improvements for the 19<sup>th</sup>/Harper intersection (addressed later in this memo). The east transition to/from the Cycle-Track can be accomplished via a median and crosswalk near Venture Park which can also be designed to serve as a traffic calming measure.

**19<sup>th</sup> Street/Harper Street Intersection Configuration:** We recommend the intersection of 19<sup>th</sup> Street/Harper Street remain in its current All-Way STOP controlled configuration. Our traffic analysis, as summarized in the ***Concept Design Summary***, found this intersection currently operates at a Level-of-Service (LOS) A. The estimate of future traffic patterns resulting from development at Venture Park yield adequate LOS C in the current intersection configuration. These Levels-of-Service indicate adequate traffic operations with plenty of capacity in the existing transportation system to accommodate vehicular traffic. The need for minor improvements at the intersection, such as pavement repairs/replacement, pavement markings, and sidewalk curb ramp improvements, will be evaluated in greater depth during the detailed design phase and included in the project where appropriate.

**Jason Hoskinson**

Corporate Secretary

T: 785.749.4474 ext. 2131

C: 785.840.7299

E: [jason.hoskinson@bgcons.com](mailto:jason.hoskinson@bgcons.com)

## **Introduction**

The purpose of this concept design summary is to identify options available to the City of Lawrence to improve 19<sup>th</sup> Street between Harper Street and O'Connell Road (Venture Park). This segment of 19<sup>th</sup> Street is currently classified as a Collector Street and is an unimproved roadway with open ditches, numerous roadway patches, an aging water main, and lacking pedestrian and bicycle facilities. The project is listed in the community's capital improvement plan and is currently scheduled for reconstruction of the water main in 2020 and the street in 2021. Additional project considerations included in the concept evaluation include possible traffic calming measures on 19<sup>th</sup> Street (Haskell Avenue to Harper Street), sidewalk gap closures on the south side of 19<sup>th</sup> Street (Haskell Avenue to Harper Street), and evaluation of improvements to the 19<sup>th</sup>/Harper intersection. The City of Lawrence retained BG Consultants, Inc. to perform engineering design services to prepare for the planned projects.

## **Summary of Options Analyzed**

Five concept designs were evaluated for the reconstruction of 19<sup>th</sup> Street (Harper to O'Connell).

Concept 1: 47' wide 3-lane street with On-Street Bike Lanes and with (2) 5' sidewalks

Concept 2: 31' wide 2-lane street with (2) 5' sidewalks (City Standard Collector Street)

Concept 3: 37' wide 2-lane street with On-Street Bike Lanes and (2) 5' sidewalks

Concept 4: 31' wide 2-lane street with Separated Cycle-Track and (2) 5' sidewalks

Concept 5: 31' wide 2-lane street with Separated, Elevated Bike Lanes and (2) 5' sidewalks

Concept 1 begins the analysis of cross section options by continuing the same street/right-of-way cross section as the O'Connell Road extension through Venture Park. Concept 2 then reduces the overall transportation infrastructure size to the City's minimum standards for Collector Streets. As this portion of 19<sup>th</sup> Street is classified as a Collector Street, we suggest improvements meet or exceed the City's minimum standards. Concept 3 expands upon Concept 2 by providing on-street bicycle facilities within the curb-lines. Concept 4 and Concept 5 deviate from Concepts 2 and 3 by providing a minimum Collector Street width but with variations of separated bicycle facilities through the corridor.

A copy of each concept design graphic is included with this design summary.

Vehicle facilities currently in the project corridor consist of a 2-lane asphalt surfaced road,  $\pm$ 22-feet wide, with open ditches. The cross section does not comply with current City design standards for improved streets within the city limits. The pavement is in poor condition, likely due to an insufficient pavement structure as well as a lack of subgrade stabilization. Pavement patches are present throughout. The patches are resulting from pothole repairs and utility repairs (water main breaks).

All five concepts analyzed in the concept design phase have been evaluated utilizing a City standard pavement design for the replacement structure. This type of pavement consists of an appropriately determined asphalt pavement thickness placed on a stabilized subgrade. Pavement widths were determined primarily based upon the types of on-street facilities provided, but in no case were the overall pavement widths reduced below the City's minimum standard 31-feet for a Collector Street. Two lanes of thru traffic (one in each direction) are required for the current and estimated future traffic demands. Although a center two-way left-turn lane is not necessary for a low-speed corridor with traffic characteristics such as 19<sup>th</sup> Street, the presence of a left-turn lane could be beneficial for a few of the entrances accessing 19<sup>th</sup> Street.

Bicycle facilities exist to the west and to the east of the project in the form of on-street bike lanes. Continuity of bicycle facilities should be maintained through the improved corridor. Bicycle facilities

can be provided by way of on-street facilities or off-street facilities. On-street facilities commonly used in Lawrence consist primarily of bike lanes marked with pavement markings or shared lanes marked with Sharrows. Off-street facilities commonly used in Lawrence are Shared Use Paths (SUP's). SUP's are typically a 10-foot wide path for use by pedestrians and bicyclists.

Separated bicycle facility options considered in the concept design phase included a cycle-track and elevated bike lanes. The cycle-track concept provides an off-street, paved surface on one side of 19<sup>th</sup> Street for head-to-head (two-way) bicycle traffic. The south side of 19<sup>th</sup> Street provides fewer entrance crossings and fewer utility conflicts to implement this concept. However, the cycle-track concept places bicyclists head-to-head on one side of the street for this one-half mile segment, presenting challenges for connecting the riders to existing on-street bike lanes to the east and west of the project. The elevated bike lanes concept provides a separated facility and compliments existing on-street bike lanes abutting the corridor but presents maintenance challenges for snow removal and street sweeping.

Pedestrian facilities exist adjacent the corridor and or sporadically through the corridor. Sidewalks should be incorporated throughout the project to provide pedestrian continuity and bring the corridor into compliance with the City's public street standards for pedestrian ways on both sides of the street. All five concepts analyzed incorporated 5-foot wide sidewalks on both sides of 19<sup>th</sup> Street.

Transit considerations were discussed with Bob Nugent of the Lawrence Transit. Future bus route plans consist of an east/west route along 19<sup>th</sup> Street after this project completes the necessary street connectivity. This will allow for an improved east/west bus route in lower-speed traffic relative to the current 23<sup>rd</sup> Street alignment. One bus stop, likely near the west entrance to the Brookwood neighborhood, will be incorporated into the route. Mr. Nugent indicated a bus turnout lane is not necessary for this facility and their future route plans. All five concept designs considered incorporate an improved crosswalk on 19<sup>th</sup> Street on the east side of the intersection for pedestrian traffic and reduced pedestrian-vehicle conflicts.

Access Management considerations were evaluated during the concept design. Three adjacent properties present opportunities for driveway consolidation and/or realignment for improved geometric characteristics and reduced pedestrian/bicyclist conflict with motorized vehicles. Access management opportunities are shown on the attached concept graphics and will be further pursued with adjacent property owners during engineering design.

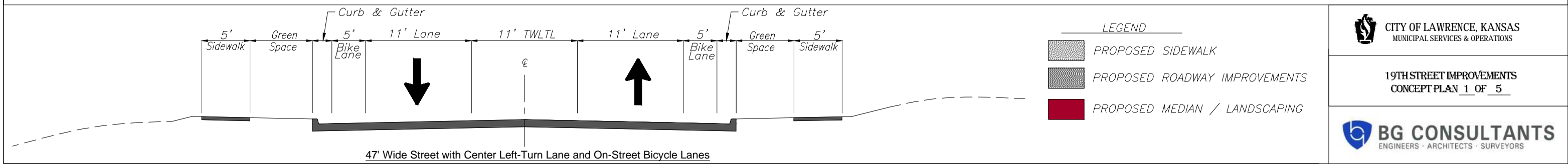
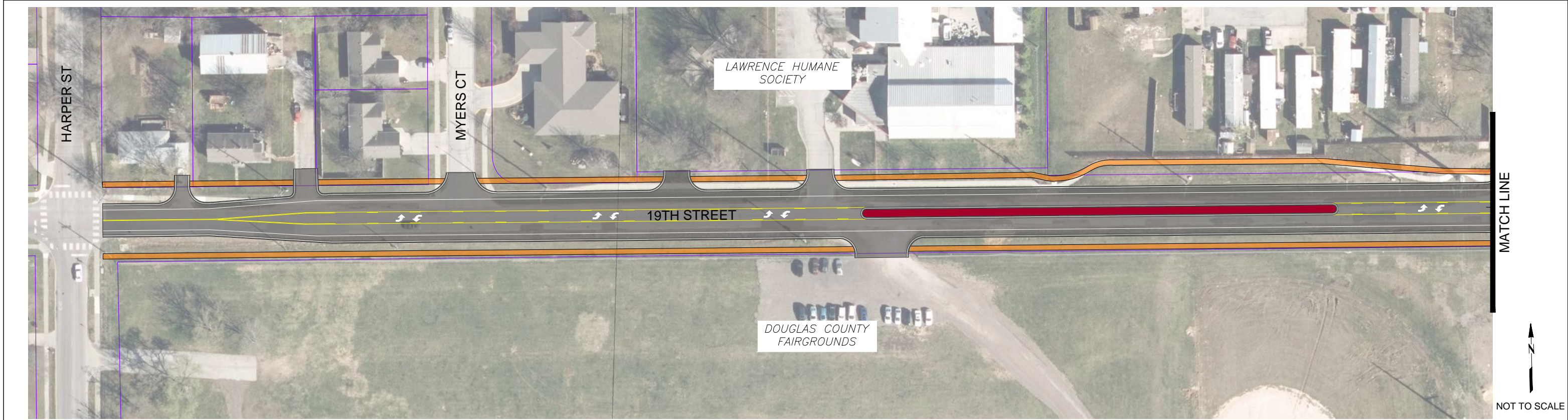
Complete Streets Checklist: A copy of the City of Lawrence's Complete Streets Checklist is included with the 5 Concept Design graphics.

Construction Cost opinions are provided in the Pros/Cons table for each of the 5 concept designs. The opinions of probable construction costs are for the street and storm sewer construction only and include a contingency for unknown issues that may arise during design. The costs do not include items such as water main construction, utility relocations, inspection, and right-of-way acquisition as those costs would be expected to be similar across all 5 concepts.

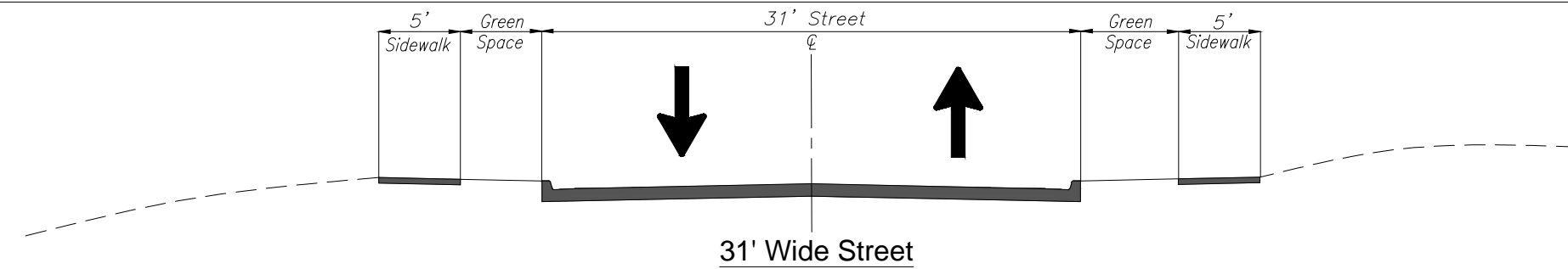
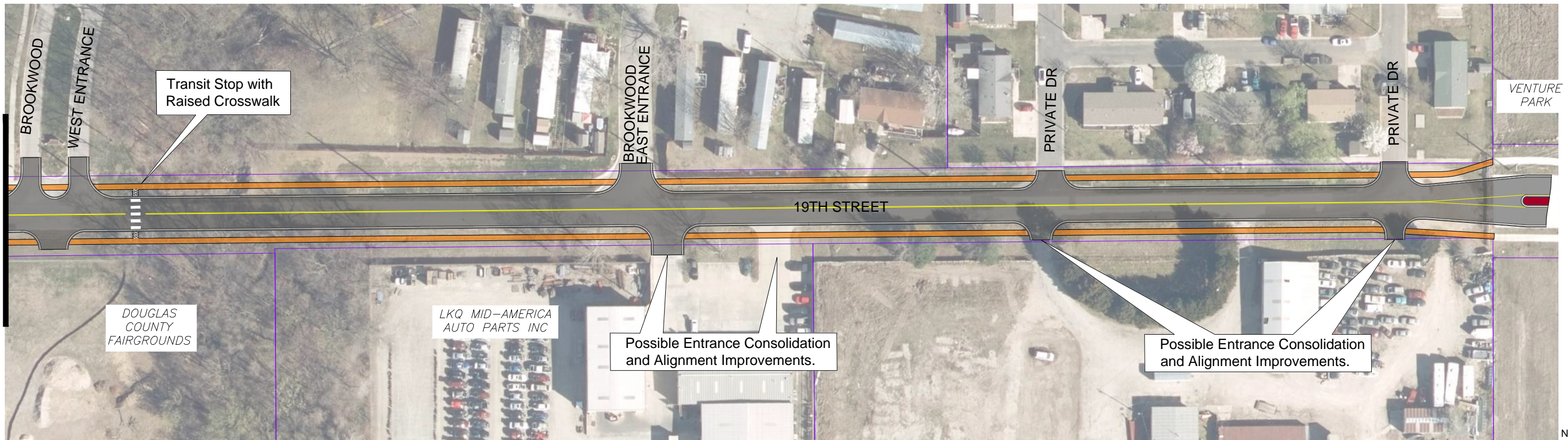
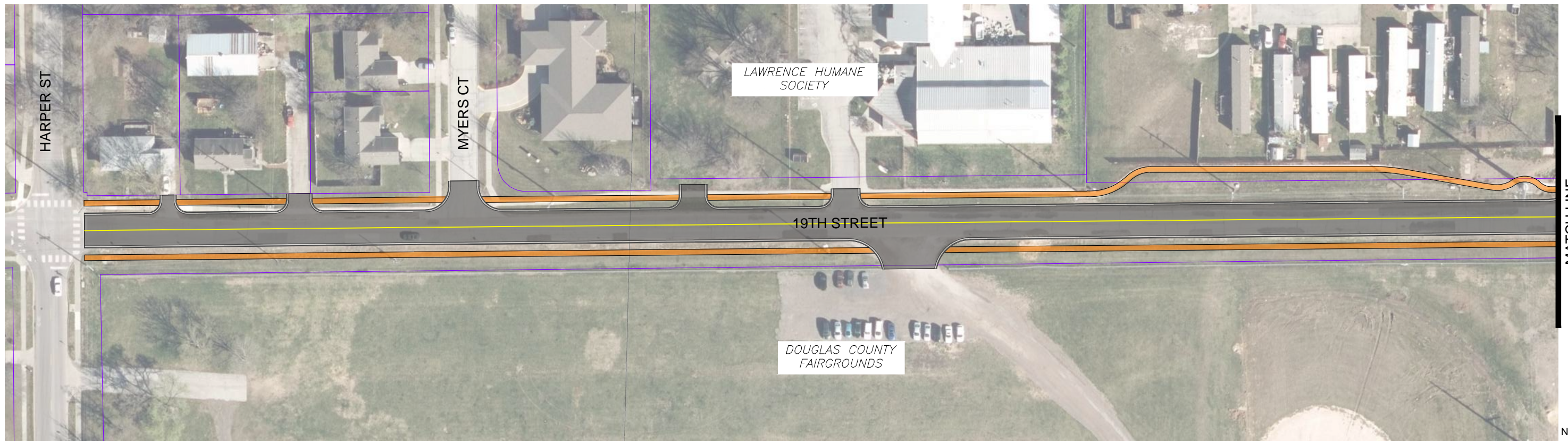
#### **Recommended Concept Design for 19<sup>th</sup> Street Reconstruction**

*A recommendation is not provided at this time. This summary should be presented to the Transportation Commission for public input prior to providing the City Commission a recommendation.*









- LEGEND**
- PROPOSED SIDEWALK
  - PROPOSED ROADWAY IMPROVEMENTS
  - PROPOSED MEDIAN

**CITY OF LAWRENCE, KANSAS**  
MUNICIPAL SERVICES & OPERATIONS

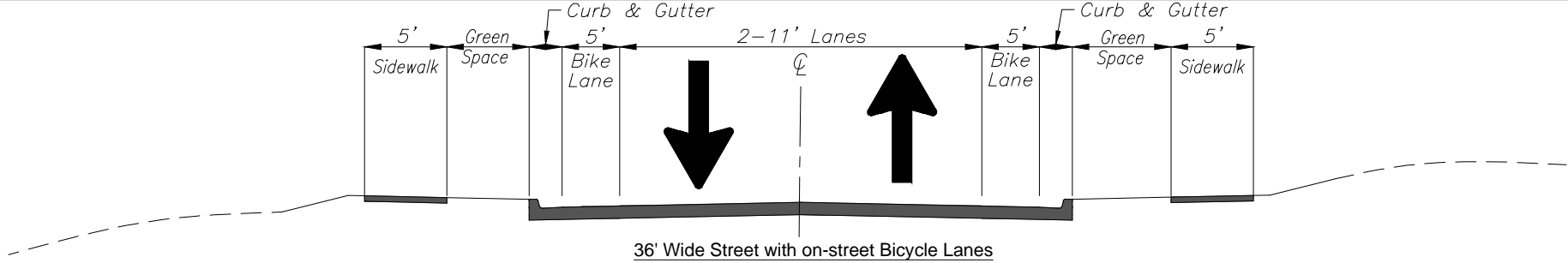
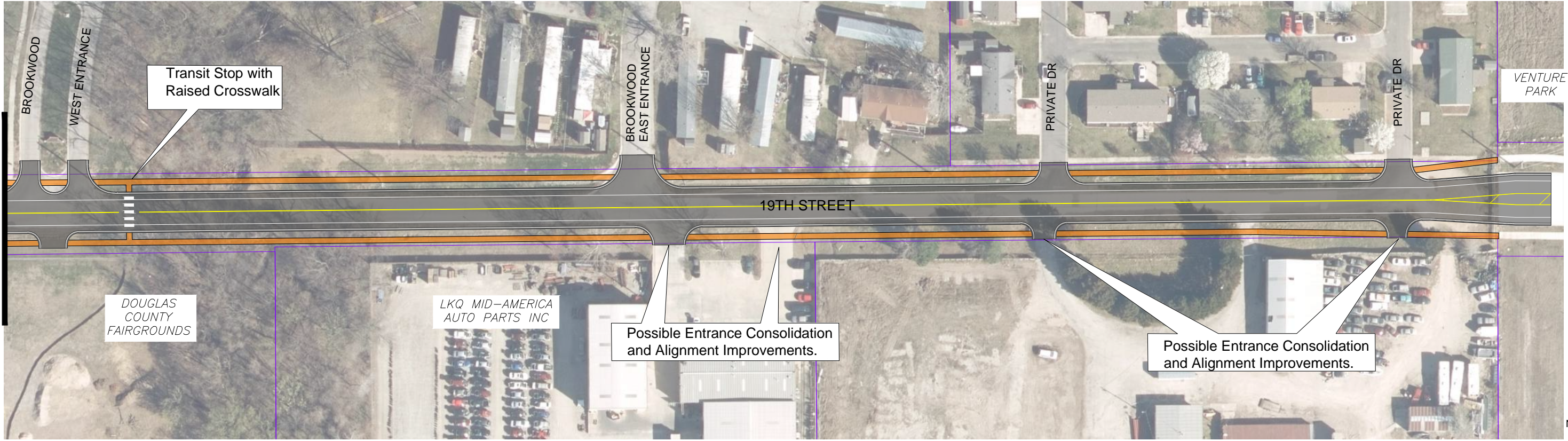
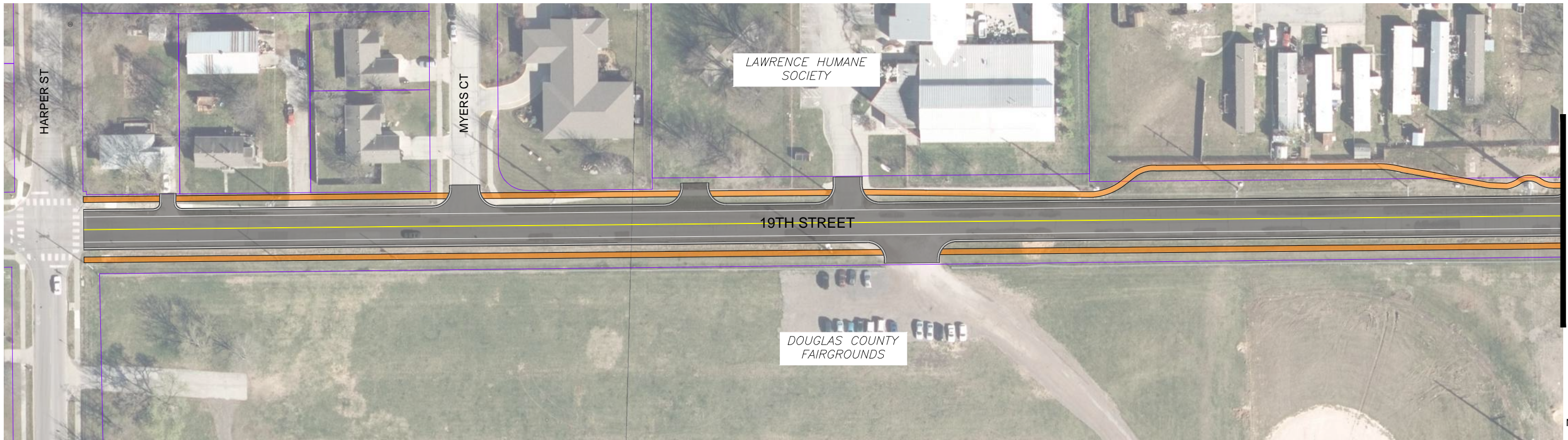
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**19TH STREET IMPROVEMENTS**  
CONCEPT PLAN 2 OF 5

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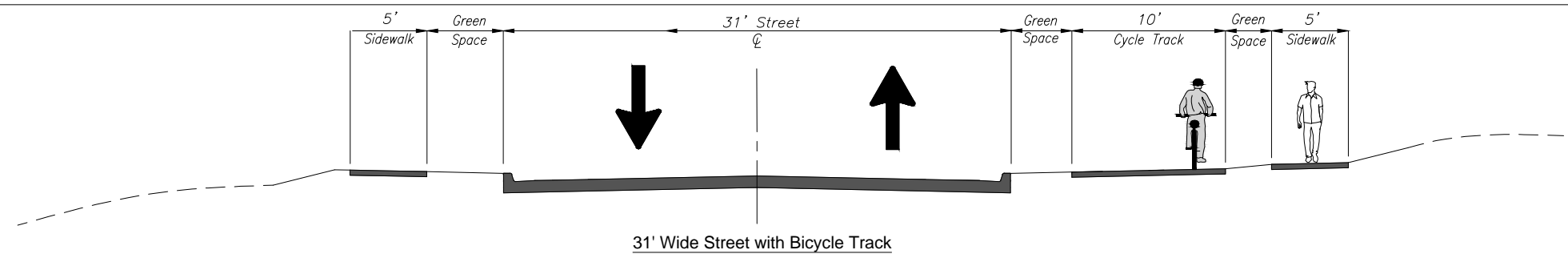
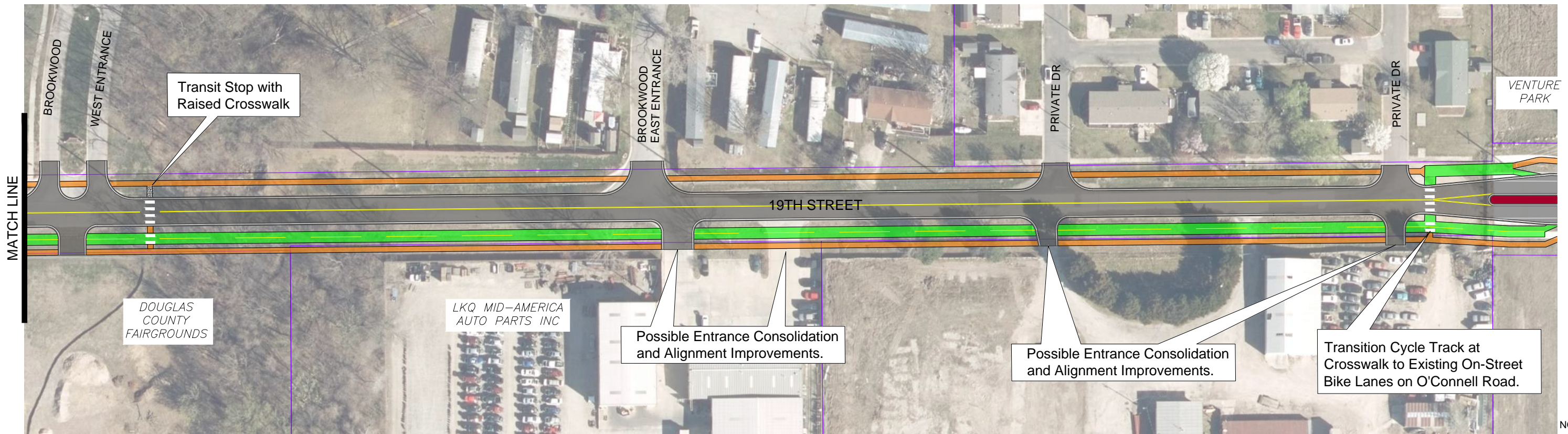
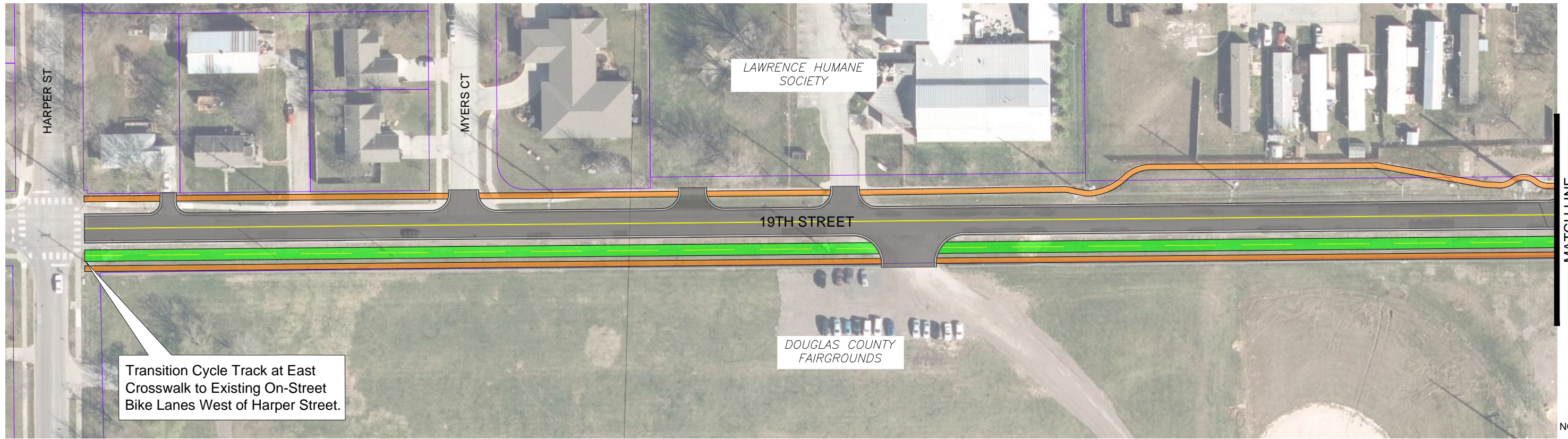
- LEGEND
- PROPOSED SIDEWALK
  - PROPOSED ROADWAY IMPROVEMENTS

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19TH STREET IMPROVEMENTS  
CONCEPT PLAN 3 OF 5

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LEGEND

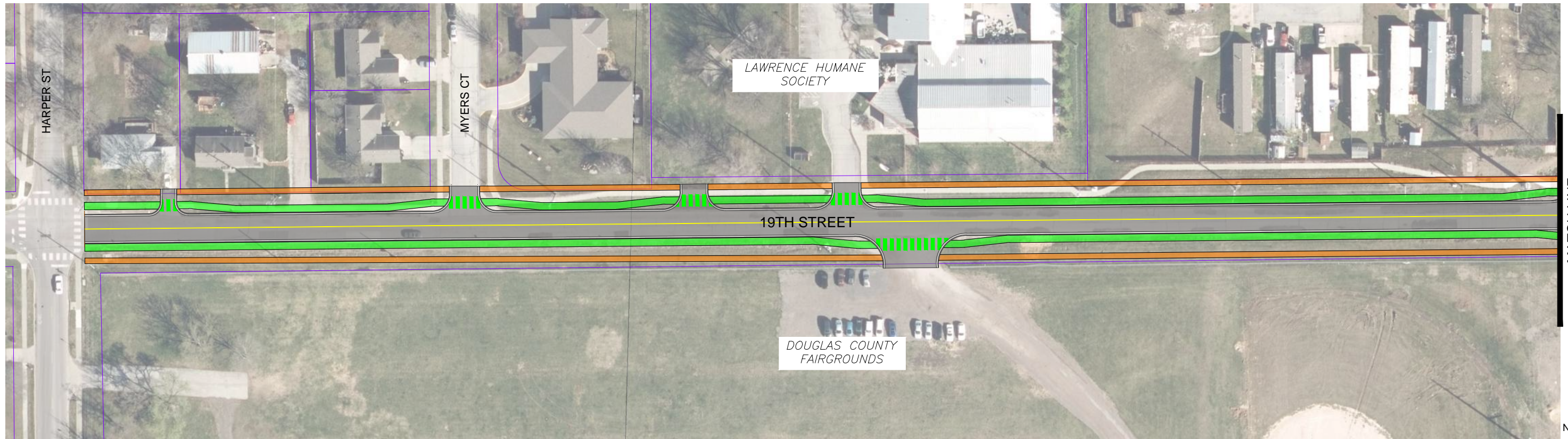
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	PROPOSED SIDEWALK
	PROPOSED ROADWAY IMPROVEMENTS
	PROPOSED MEDIAN

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19TH STREET IMPROVEMENTS  
CONCEPT PLAN 4 OF 5

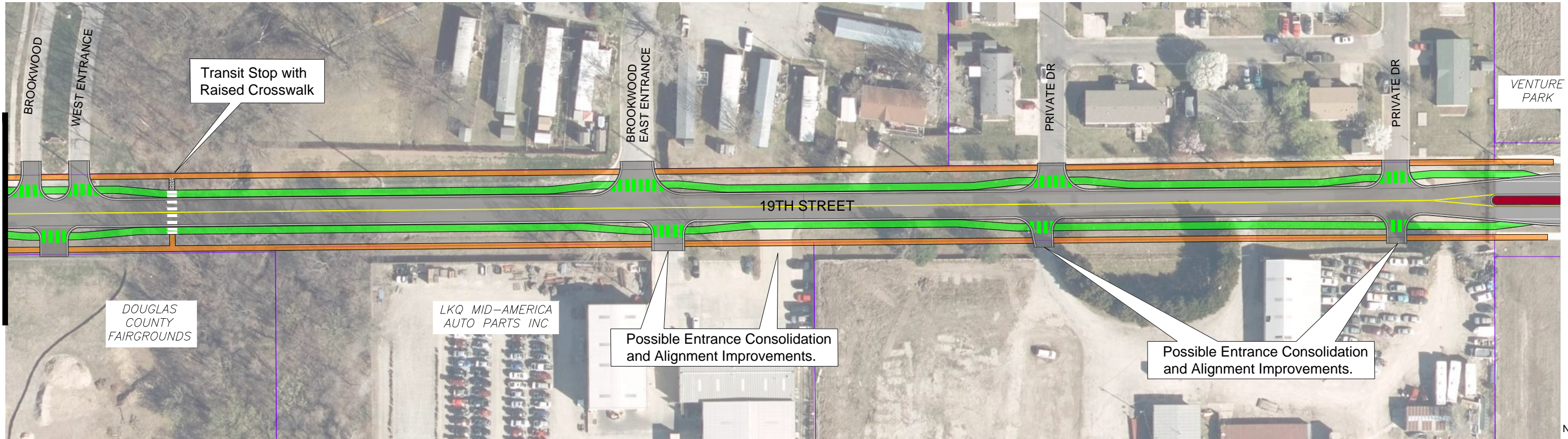
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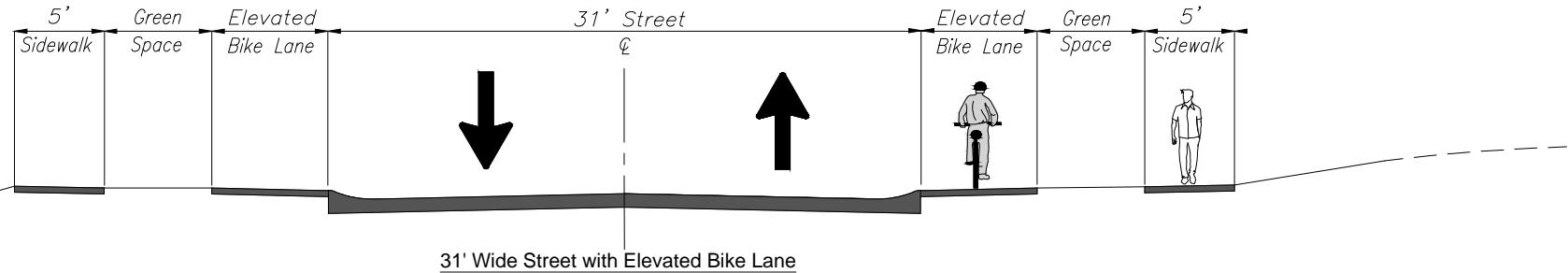
MATCH LINE

NOT TO SCALE



MATCH LINE

NOT TO SCALE



- LEGEND
- PROPOSED ELEVATED BIKE LANE
  - PROPOSED SIDEWALK
  - PROPOSED ROADWAY IMPROVEMENTS
  - PROPOSED MEDIAN / LANDSCAPING

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19TH STREET IMPROVEMENTS  
CONCEPT PLAN 5 OF 5

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**19<sup>th</sup> Street Reconstruction (Harper Street to O’Connell Road) – TABLE OF PROS/CONS**

	<b>Concept 1 Match Venture Park</b>	<b>Concept 2 City Standard Collector</b>	<b>Concept 3 On-Street Bike Lanes</b>	<b>Concept 4 Cycle-Track</b>	<b>Concept 5 Elevated Bike Lanes</b>
<b>Vehicles</b>	<b>Solution:</b> Good (2 thru-lanes)	<b>Solution:</b> Good (2 thru-lanes)	<b>Solution:</b> Good (2 thru-lanes)	<b>Solution:</b> Good (2 thru-lanes)	<b>Solution:</b> Good (2 thru-lanes)
<b>Access / Turning</b>	<b>Solution:</b> Good <b>Pros/Cons:</b> TWLTL provides a separate lane for turning traffic, thus improving operations and enhancing motorized vehicle safety.	<b>Solution:</b> Fair <b>Pros/Cons:</b> No TWLTL provided, but preliminary analysis indicates TWLTL is not necessary.	<b>Solution:</b> Fair <b>Pros/Cons:</b> No TWLTL provided, but preliminary analysis indicates TWLTL is not necessary.	<b>Solution:</b> Fair <b>Pros/Cons:</b> No TWLTL provided, but preliminary analysis indicates TWLTL is not necessary.	<b>Solution:</b> Fair <b>Pros/Cons:</b> No TWLTL provided, but preliminary analysis indicates TWLTL is not necessary.
<b>Bicyclists</b>	<b>Solution:</b> Fair to Good <b>Pros/Cons:</b> Concept connects existing, similar on-street facilities to the west and east of the project, but no separated facility provided.	<b>Solution:</b> Fair to Poor <b>Pros/Cons:</b> No facilities provided. Bicyclists must travel within motorized vehicle driving lanes.	<b>Solution:</b> Fair to Good <b>Pros/Cons:</b> Concept connects existing, similar on-street facilities to the west and east of the project.	<b>Solution:</b> Fair <b>Pros/Cons:</b> Separated facility is provided, but difficult transitions at east end and west end to connect to existing on-street facilities.	<b>Solution:</b> Good <b>Pros/Cons:</b> Separated facility is provided.
<b>Pedestrians</b>	<b>Solution:</b> Good <b>Pros/Cons:</b> Concept provides sidewalks separated from both motorized traffic and bicycle traffic.	<b>Solution:</b> Good <b>Pros/Cons:</b> Concept provides sidewalks separated from both motorized traffic and bicycle traffic.	<b>Solution:</b> Good <b>Pros/Cons:</b> Concept provides sidewalks separated from both motorized traffic and bicycle traffic.	<b>Solution:</b> Good <b>Pros/Cons:</b> Concept provides sidewalks separated from both motorized traffic and bicycle traffic.	<b>Solution:</b> Good <b>Pros/Cons:</b> Concept provides sidewalks separated from both motorized traffic and bicycle traffic.
<b>Aesthetics / Landscape</b>	<b>Solution:</b> Fair to Good <b>Pros/Cons:</b> Raised median opportunities within the TWLTL area at locations with no access.	<b>Solution:</b> Fair <b>Pros/Cons:</b> Few landscaping opportunities but the overall narrower street width provides larger green spaces along the curb.	<b>Solution:</b> Fair <b>Pros/Cons:</b> Few landscaping opportunities.	<b>Solution:</b> Fair <b>Pros/Cons:</b> Few landscaping opportunities.	<b>Solution:</b> Fair <b>Pros/Cons:</b> Few landscaping opportunities.
<b>Transit</b>	<b>Solution:</b> Good <b>Pros/Cons:</b> Planned east/west transit route along 19 <sup>th</sup> Street with future bus stop at Brookwood Entrance.	<b>Solution:</b> Good <b>Pros/Cons:</b> Planned east/west transit route along 19 <sup>th</sup> Street with future bus stop at Brookwood Entrance.	<b>Solution:</b> Good <b>Pros/Cons:</b> Planned east/west transit route along 19 <sup>th</sup> Street with future bus stop at Brookwood Entrance.	<b>Solution:</b> Good <b>Pros/Cons:</b> Planned east/west transit route along 19 <sup>th</sup> Street with future bus stop at Brookwood Entrance.	<b>Solution:</b> Good <b>Pros/Cons:</b> Planned east/west transit route along 19 <sup>th</sup> Street with future bus stop at Brookwood Entrance.
<b>Storm Drainage</b>	<b>Solution:</b> Good to Fair <b>Pros/Cons:</b> City standard storm drainage infrastructure required. Additional pavement width requires slightly larger/longer system.	<b>Solution:</b> Good <b>Pros/Cons:</b> City standard storm drainage infrastructure required.	<b>Solution:</b> Good <b>Pros/Cons:</b> City standard storm drainage infrastructure required.	<b>Solution:</b> Fair <b>Pros/Cons:</b> City standard storm drainage infrastructure required.	<b>Solution:</b> Fair <b>Pros/Cons:</b> Mountable curb between motorized traffic and elevated bike lane requires additional, non-standard gutter-inlet structures.
<b>Utilities</b>	<b>Solution:</b> Fair <b>Pros/Cons:</b> Wider overall street width reduces space available for utility construction & maintenance.	<b>Solution:</b> Good <b>Pros/Cons:</b> Narrower street width provides ample greenspace for utility construction & maintenance.	<b>Solution:</b> Good <b>Pros/Cons:</b> Narrower street width provides greenspace for utility construction & maintenance.	<b>Solution:</b> Fair <b>Pros/Cons:</b> Additional pavement and space for Cycle-Track limits utility construction & maintenance in the south right-of-way.	<b>Solution:</b> Fair to Good <b>Pros/Cons:</b> Narrower street width provides greenspace for utility construction & maintenance.
<b>Cost</b>	<b>\$2.39 million</b>	<b>\$2.00 million</b>	<b>\$2.19 million</b>	<b>\$2.27 million</b>	<b>\$2.37 million</b>
<b>Maintenance</b>	<b>Solution:</b> Fair to Good <b>Pros/Cons:</b> Street maintenance requirements is typical of Lawrence Collector Streets. Additional pavement width and lane striping requires increased maintenance efforts compared to Concepts 2-5.	<b>Solution:</b> Good <b>Pros/Cons:</b> Street maintenance requirements is typical of Lawrence Collector Streets.	<b>Solution:</b> Good <b>Pros/Cons:</b> Street maintenance requirements is typical of Lawrence Collector Streets.	<b>Solution:</b> Fair to Good <b>Pros/Cons:</b> Street maintenance requirements is typical of Lawrence Collector Streets. Cycle Track presents additional efforts similar to maintenance of SUP’s.	<b>Solution:</b> Fair <b>Pros/Cons:</b> Street maintenance requirements is typical of Lawrence Collector Streets. Elevated bike lanes present snow removal challenge.

Cost is construction cost only (street, storm sewer, and ped/bike facilities from Harper to O’Connell) for comparison purposes. Construction contingency is included.

TWLTL = Two-Way Left-Turn Lane

SUP = Shared Use Path (also commonly referred to as side-path, multi-use path, trail, etc.)

COMPLETE STREETS CHECKLIST							
PROJECT NAME	19th Street Reconstruction (Harper to O'Connell)						
LOCATION	Reconstruction of 19th Street (Harper to O'Connell) and Sidewalk/Traffic Calming measures on 19th Street (Haskell to Harper)						
PROJECT INFORMATION							
		Explanation					
Classification		Major Collector					
Speed limit		30 MPH					
AADT		±4,000 veh. per day					
Right-of-way width		70 ft. Average					
Safe Route to School		Yes, Harper Street at 19th Street (Crossing Guard present)					
Bus/Transit route		Future					
On planned bikeway network		Yes					
Existing bicycle accommodations		None					
Existing sidewalk		Limited and disconnected					
Checklist Consideration		Concept 1	Concept 2	Concept 3	Concept 4	Concept 5	Explanation
Does the project provide a main route to a significant destination?	Park/Recreation area	N	N	N	N	N	
	School	N	N	N	N	N	
	University	N	N	N	N	N	
	Shopping/Commercial area	N	N	N	N	N	
	Employment center	Y	Y	Y	Y	Y	Venture Park
	Community facility	N	N	N	N	N	
	Other:	Y	Y	Y	Y	Y	Fairgrounds
Does the project provide access across a natural or human-made barrier?		Y	Y	Y	Y	Y	
Are there nearby parallel routes that provide a similar level of convenience &		N	N	N	N	N	
Pedestrian and bicycle demand	Is there a high amount of bicycle and pedestrian traffic along route	High/Moderate					
	Is there a high amount of bicycle and pedestrian crossings	School Crossing at Intersection of 19th and Harper					
	Is there a history of bicycle or pedestrian crashes (last 3 yrs)						
CONSTRAINTS							
Are there constraints to consider in reviewing this project for possible inclusion of Complete Streets elements?							
Constraint Type		Concept 1	Concept 2	Concept 3	Concept 4	Concept 5	Explanation
Right-of-Way		Y	N	N	N	N	
Utilities		Y	Y	Y	Y	Y	Power Pole
Environmental		Y	Y	Y	Y	Y	Drainageway
Funding		Y	Y	Y	Y	Y	
Maintenance		Y	Y	Y	Y	Y	
Other Existing Condition							
Other:							
COMPLETE STREETS ELEMENT REVIEW							
For each of the sections below, indicate whether a Complete Streets Element is/is not included. Provide an explanation of the element to be used or rationale why the element is not being included.							
Complete Streets Element	Checklist Consideration	Concept 1	Concept 2	Concept 3	Concept 4	Concept 5	Explanation
Traffic Calming							
Does the roadway design consider elements to improve safety for pedestrians, bicyclists, and motorists?	Narrower driving lanes	Y	Y	Y	Y	Y	11' Lanes
	Lane reduction	N	N	N	N	N	
	Other:						
Pedestrian and Bicycle Facilities:							
Reduce pedestrian crossing distance at intersections where high motor vehicle counts and high pedestrian counts are expected.	Pedestrian island						
	Curb bump-outs	N	N	N	N	N	
	Other:						
Does it provide appropriate pedestrian accommodations?	Sidewalks	Y	Y	Y	Y	Y	
	Crosswalks	Y	Y	Y	Y	Y	
	Mid-block crosswalks	Y	Y	Y	Y	Y	
	Buffers between roadway and sidewalks	Y	Y	Y	Y	Y	
	Lighting	Y	Y	Y	Y	Y	
	Street furniture	Y	Y	Y	Y	Y	
	Other:						
Does it provide appropriate accommodations in accordance with bikeway plan?	Bike lane	Y	N	Y	N	N	
	Buffered bike lane	N	N	N	N	N	
	Protected bike lane	N	N	N	N	Y	
	Shared use path	N	N	N	N	N	
	Bike boulevard	N	N	N	Y	N	
	Bike Sharrow	N	Y	N	N	N	
	Bike Racks						
	Other Bike Parking						
	Other:						

Transit Facilities							
Does it provide appropriate transit accommodations?	Transit shelters	N	N	N	N	N	
	Accessible location (sidewalk, pad)	Y	Y	Y	Y	Y	
	Bus turnout	N	N	N	N	N	
	Public seating	Y	Y	Y	Y	Y	
	Signage/maps	Y	Y	Y	Y	Y	
	Trash/recycling receptacles	Y	Y	Y	Y	Y	
	Other:						
On-Street Parking							
Existing Parking	One side	None					
Planned Parking	No change	No Change					
Streetscaping							
Does the project include streetscaping along newly constructed or reconstructed roadways?	Street trees						
	Landscape plantings						
	Planters						
	Buffer strips						
	Other:						
ADA Accessibility							
Does it include appropriate ADA design features?	Curb ramps	Y	Y	Y	Y	Y	
	Detectable warning surface	Y	Y	Y	Y	Y	
	Crossing distance consideration	Y	Y	Y	Y	Y	
	Signal timing						
	Other:						
IMPLEMENTATION AND EVALUATION							
Checklist Consideration		Concept 1	Concept 2	Concept 3	Concept 4	Concept 5	Explanation
Have you provided advance notification and/or opportunity for review to key groups impacted by the project?	Parks and Recreation	Project Concepts were provided to the Multi-Modal Team at September 18, 2019 meeting for initial discussion and feedback. Project has been discussed individually with Transit for bus stop considerations. Project concept has been provided to Historic Resources for comment on the Historic Environs for the Sidewalk Gap Closures.					
	Historic Resources						
	Transit						
	Fire/Med						
	Other City Departments						
	Neighborhood Association						
	School Districts						
	University						
Maintenance							
Are there any added maintenance projections for this project?	Pavement rehabilitation	N	N	N	N	N	Exist. pvm't needs replaced
	Pavement marking	Y	Y	Y	Y	Y	
	Street sweeping	Y	Y	Y	Y	Y	
	Snow removal	N	N	N	Y	Y	
	Street trees	N	N	N	N	N	
	Site furnishings	N	N	N	N	N	
	Pavers	N	N	N	N	N	
	Other:						

### **19th Street Traffic Calming (Haskell Avenue to Harper Street)**

Traffic Calming measures on 19<sup>th</sup> Street (Haskell to Harper) were evaluated as a retrofit to the current street cross section. This segment of the corridor is functionally classified as a Collector Street with an Average Daily Traffic Count of 3,840 vehicles per day (vpd). Therefore, Speed Cushions may be installed per the City of Lawrence's Speed Hump/Speed Cushion Policy (Resolution No. 6482). Due to the cross-sectional geometry and the spacing of the 19<sup>th</sup>/Haskell, 19<sup>th</sup>/Maple, and 19<sup>th</sup>/Harper intersections, the most feasible traffic calming solution is the installation of Speed Cushions located midway between the aforementioned intersections. Some minor modifications of the curb line will be necessary at the locations of the speed cushions to maintain drainage and the on-street bike lanes.

Our opinion of probable construction costs for two (2) Speed Cushions on 19<sup>th</sup> Street is \$25,000. The exhibit titled "*Traffic Calming & Sidewalk Gap Closures*" on the following page graphically depicts the potential locations of the traffic calming devices.

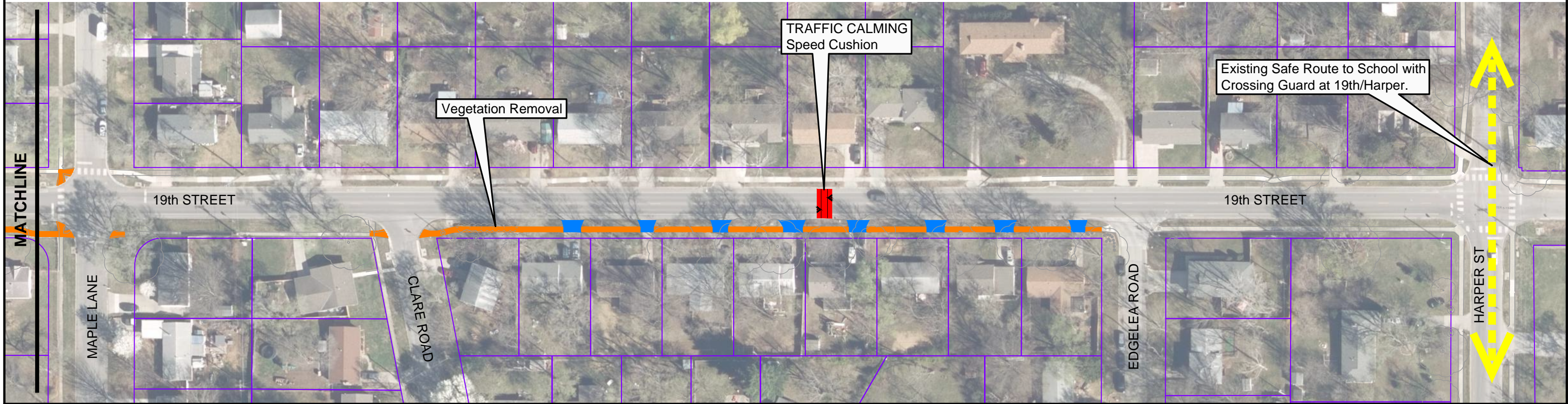
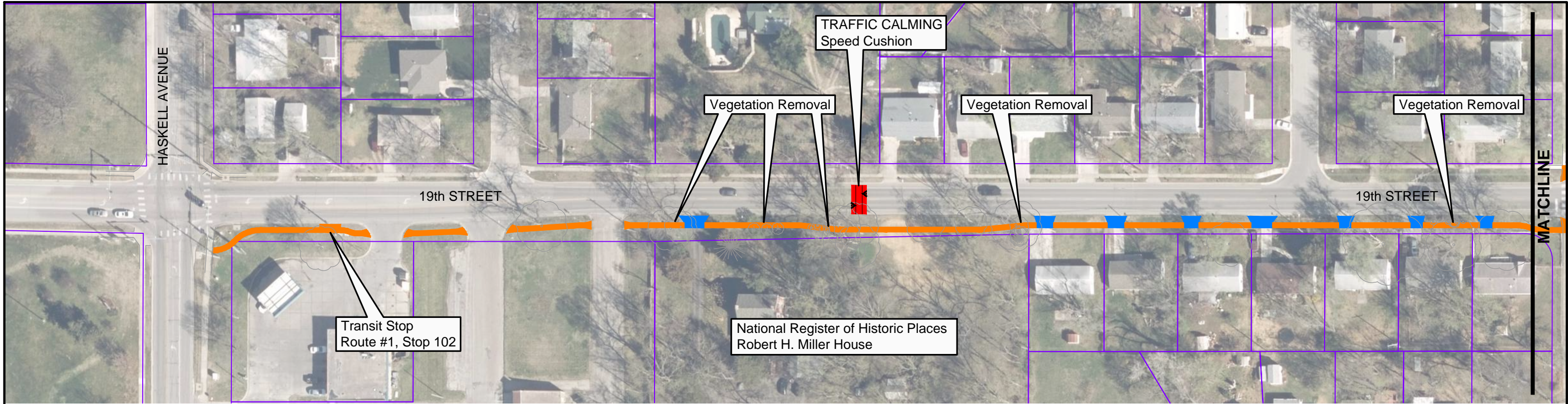
### **19th Street Sidewalk Gap Closures (Haskell Avenue to Harper Street)**

Although a continuous sidewalk is present on the north side of 19<sup>th</sup> Street, the sidewalk is only partially present on the south side of the street. Right-of-way is available for completion of a continuous sidewalk between Haskell Avenue and Harper Street along with ADA accessibility improvements at intersections. Most of the residential driveways to be crossed exceed current sidewalk cross slope requirements and will therefore require reconstruction of the driveway apron to the curb as well. The sidewalk should incorporate a slightly wider location just east of Haskell Avenue for the Transit Route #1, Bus Stop #102.





The sidewalk gap closure will require coordination with utilities present in the south right-of-way as well as coordination with the Lawrence Historic Resources Commission around the environs of the Robert H. Miller House at 1111 E. 19<sup>th</sup> Street (just east of 19<sup>th</sup>/Haskell).

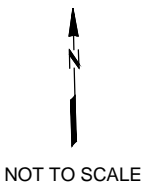
Our opinion of probable construction costs for the sidewalk gap closure improvements is \$225,000 which includes a 10% contingency. The exhibit titled "*Traffic Calming & Sidewalk Gap Closures*" on the following page graphically depicts the potential locations of the sidewalk gap closures on the south side of 19<sup>th</sup> Street.





LEGEND

-  PROPOSED CONCRETE SIDEWALK
-  CONCRETE DRIVEWAY RECONSTRUCTION
-  PROPOSED CONCRETE SPEED CUSHION
-  SAFE ROUTE TO SCHOOL



 CITY OF LAWRENCE, KANSAS  
MUNICIPAL SERVICES & OPERATIONS

19TH STREET IMPROVEMENTS  
TRAFFIC CALMING & SIDEWALK GAP CLOSURES

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### 19<sup>th</sup> Street/Harper Street Intersection Summary

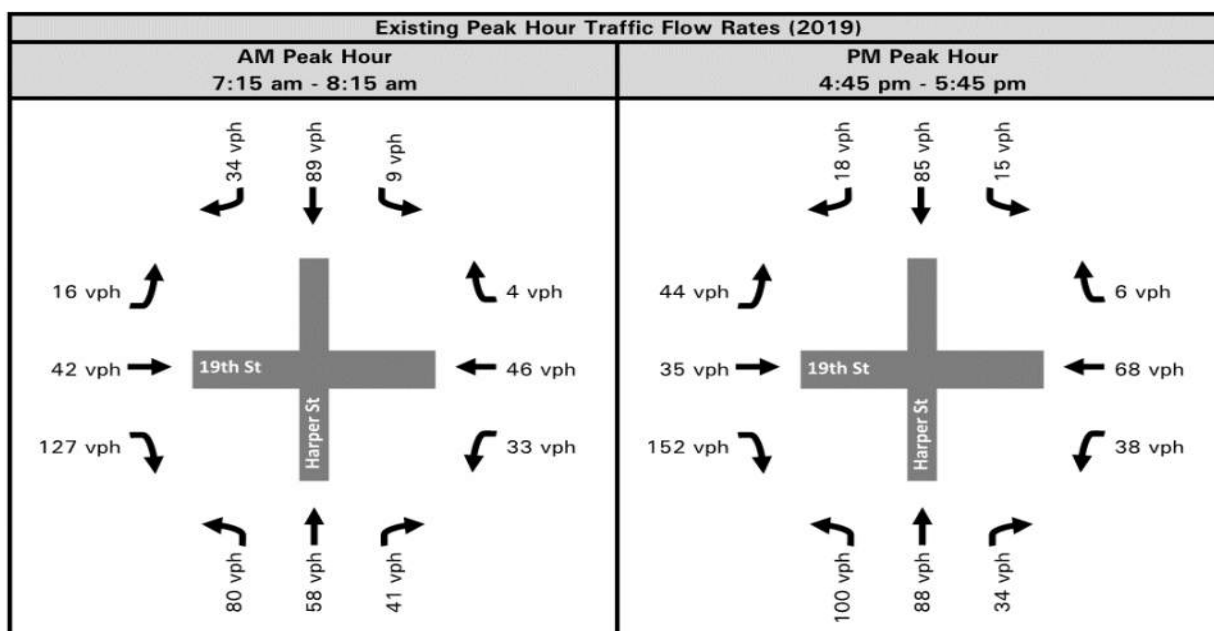
The intersection of 19<sup>th</sup> Street/Harper Street currently operates as an ALL-WAY STOP controlled, 4-leg intersection. Both 19<sup>th</sup> Street and Harper Street are classified as Collector Streets and each of the four approaches consist of a single lane approach. During the concept design phase of this project, the traffic operations were analyzed in their current configuration of an ALL-WAY STOP as well as improvement to a single-lane roundabout.

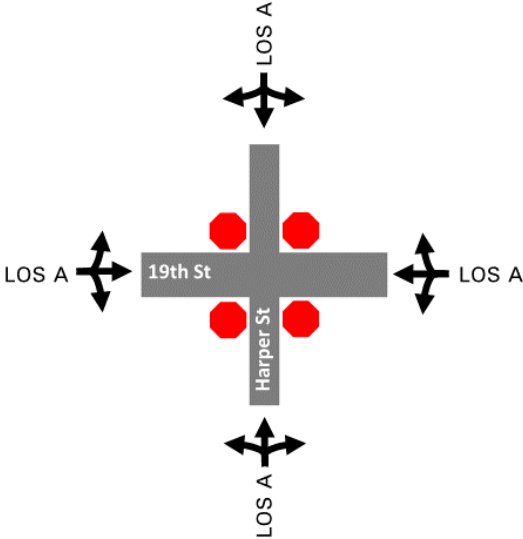
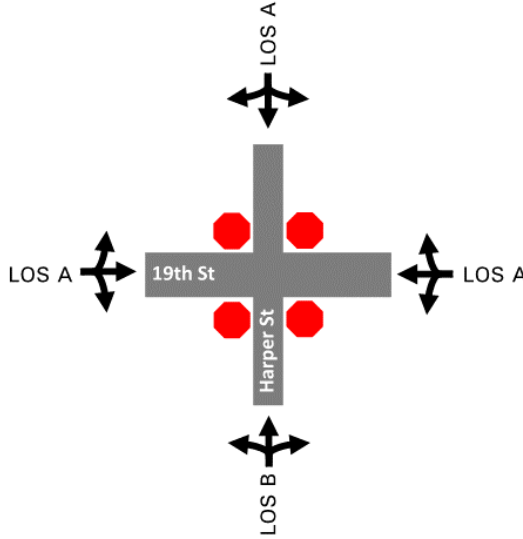
The traffic operations summarized in this study were completed using the methodologies of the *Highway Capacity Manual 6<sup>th</sup> Edition (HCM 6)*. The *HCM 6* outlines various approaches to estimate traffic operations for free flow and interrupted flow facilities. The quality of traffic operations are categorized in the form of Levels-of-Service (LOS). LOS A represents the best operating conditions and LOS F represents the worst operating conditions. LOS A-D are generally accepted as adequate traffic operations. The upper limit of LOS E is considered "capacity" of the roadway segment or intersection being analyzed. LOS F generally indicates demand exceeds the capacity of the specific movement. Table 1 summarizes the delay criteria.

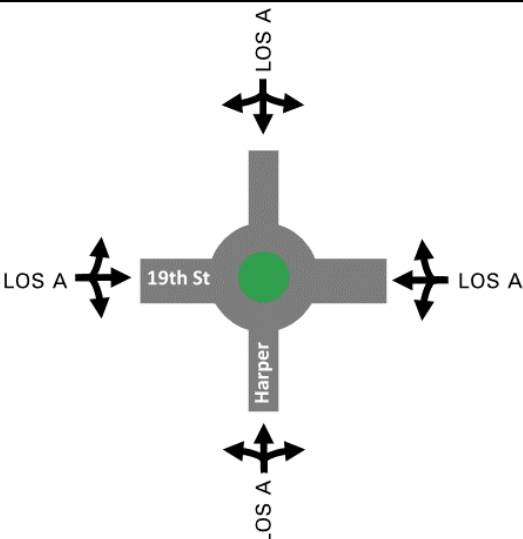
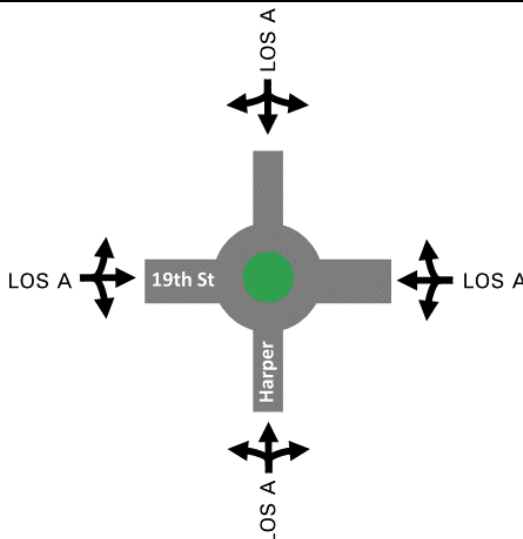
Table 1: LOS Criteria for Interrupted Flow (Intersections)

Level of Service	Signalized Intersection Avg. Control Delay (sec/veh)	Unsignalized Intersection Avg. Control Delay (sec/veh)
A	0-10	0-10
B	> 10-20	> 10-15
C	> 20-35	> 15-25
D	> 35-55	> 25-35
E	> 55-80	> 35-50
F	> 80	> 50

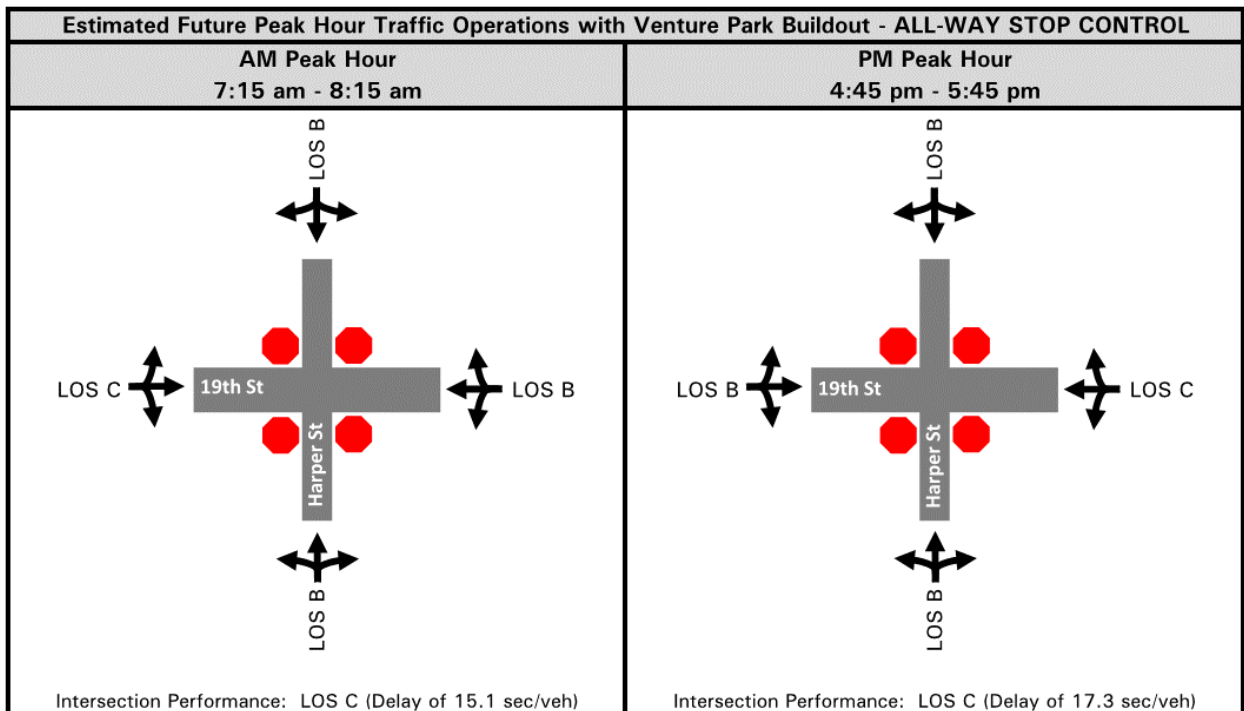
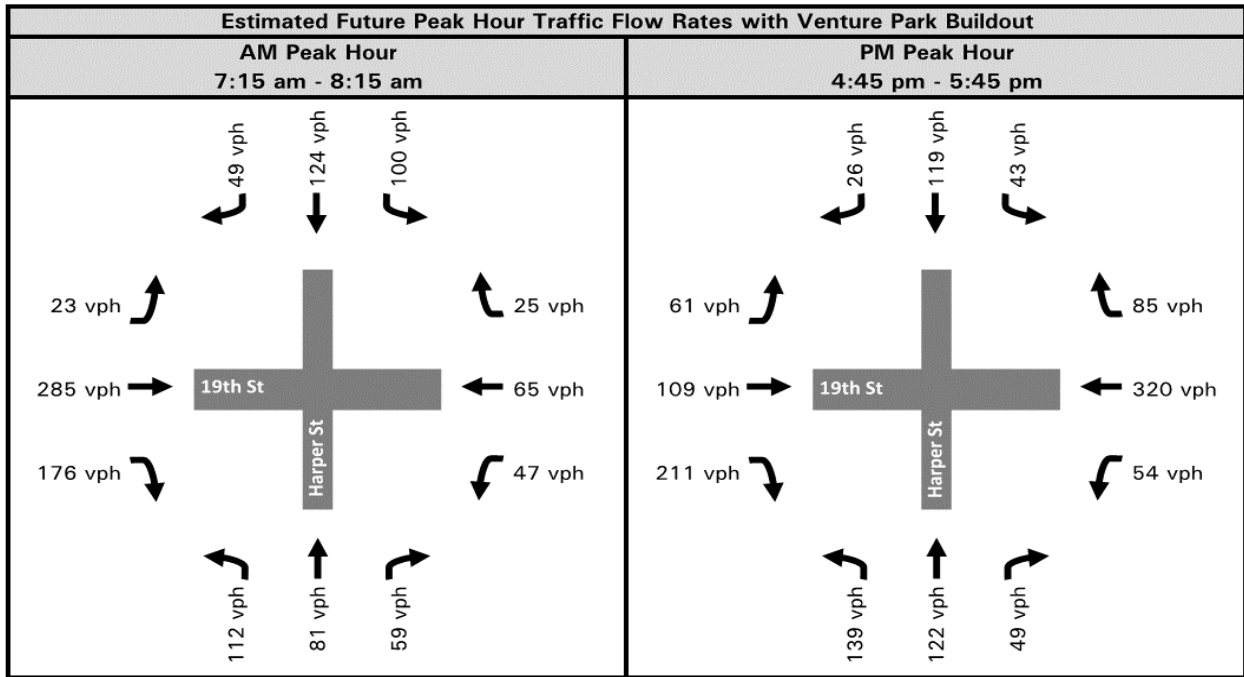
Existing peak hour traffic counts were collected for the 19<sup>th</sup> Street/Harper Street intersection. The AM Peak Hour spanned a period from 7:15 am to 8:15 am and the PM Peak Hour spanned a period from 4:45 pm to 5:45 pm. The peak hour data was analyzed for traffic operations performance using the *Synchro 10* software program. A summary of existing traffic flow rates data and 19<sup>th</sup>/Harper traffic operations is below.



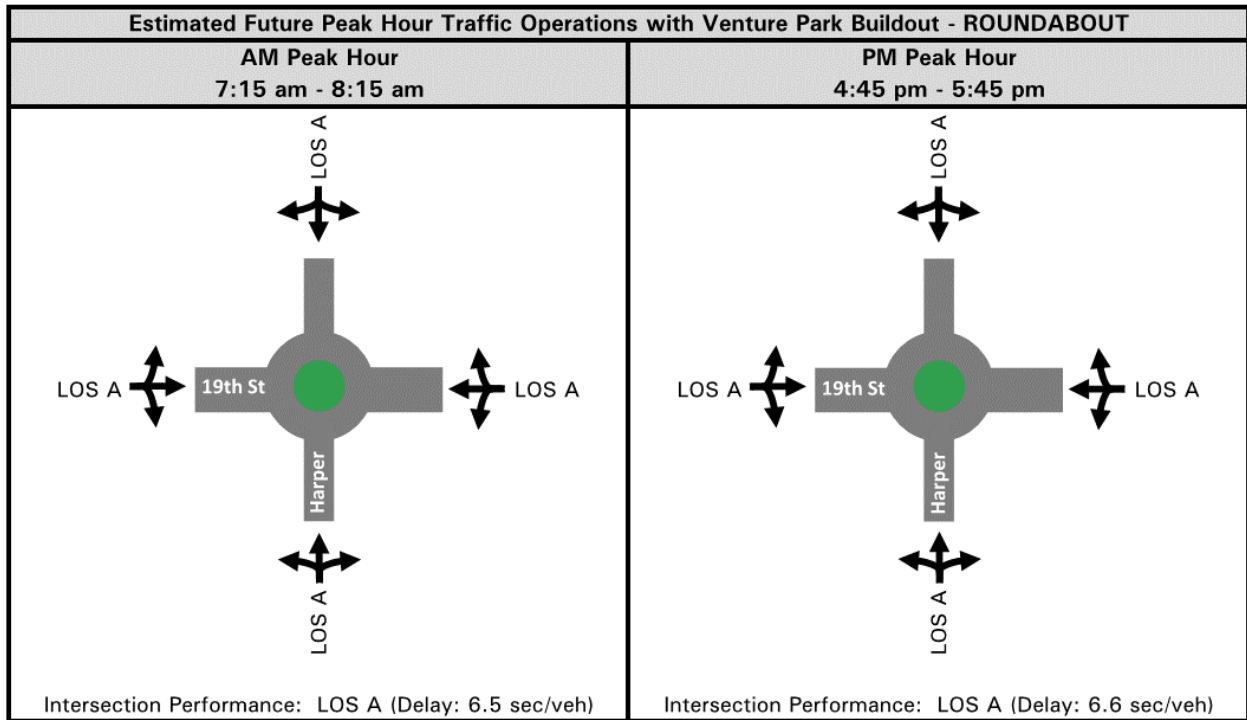
Existing Peak Hour Traffic Operations (2019) - ALL-WAY STOP CONTROL	
AM Peak Hour 7:15 am - 8:15 am	PM Peak Hour 4:45 pm - 5:45 pm
 <p>Intersection Performance: LOS A (Delay: 9.1 sec/veh)</p>	 <p>Intersection Performance: LOS A (Delay: 10.0 sec/veh)</p>

Existing Peak Hour Traffic Operations (2019) - ROUNDABOUT	
AM Peak Hour 7:15 am - 8:15 am	PM Peak Hour 4:45 pm - 5:45 pm
 <p>Intersection Performance: LOS A (Delay: 4.7 sec/veh)</p>	 <p>Intersection Performance: LOS A (Delay: 4.3 sec/veh)</p>

Future peak hour traffic flow rates were estimated based on the current traffic data and City provided data from the Venture Park Traffic Impact Study. A slight change in traffic patterns is anticipated upon completion of the 19<sup>th</sup> Street Reconstruction Project due to improved east/west street connectivity. Additional increases in traffic flow are anticipated in future years as new businesses/industries develop within Venture Park. It should be noted that a uniform annual percentage increase in existing traffic was not applied to the existing data. This corridor is in a well-established neighborhood with very little surrounding development opportunities which would cause annual increases in traffic volume. A summary of the estimated future traffic flow rates and 19<sup>th</sup>/Harper traffic operations is below.





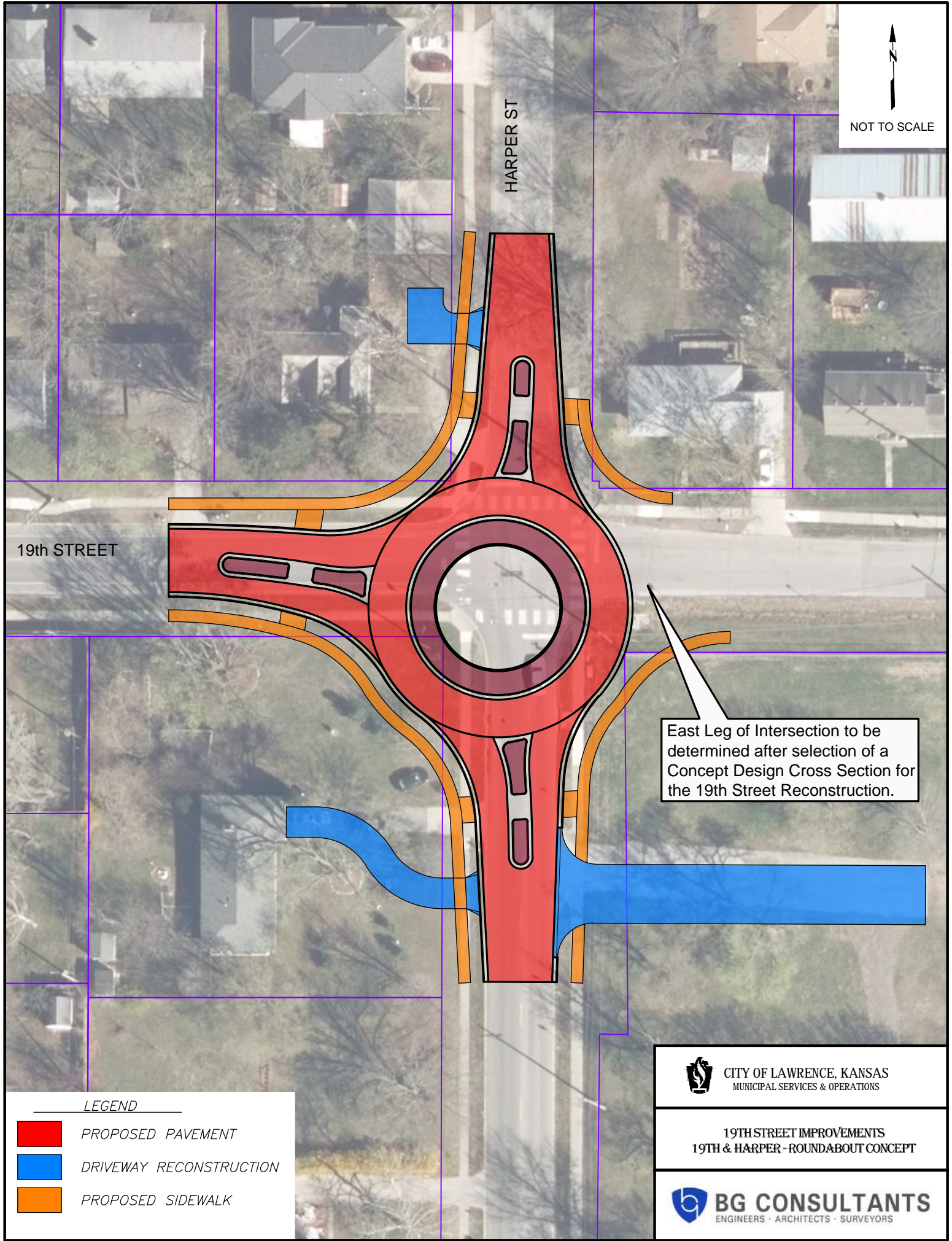


**Construction Cost:** Our opinion of the probable construction cost to reconstruct the 19<sup>th</sup> Street/Harper Street intersection as a single-lane roundabout is \$425,000. This opinion includes street, sidewalk, and driveway construction along with street lighting and storm sewer realignment.

**Recommended for 19<sup>th</sup> Street/Harper Street Intersection**

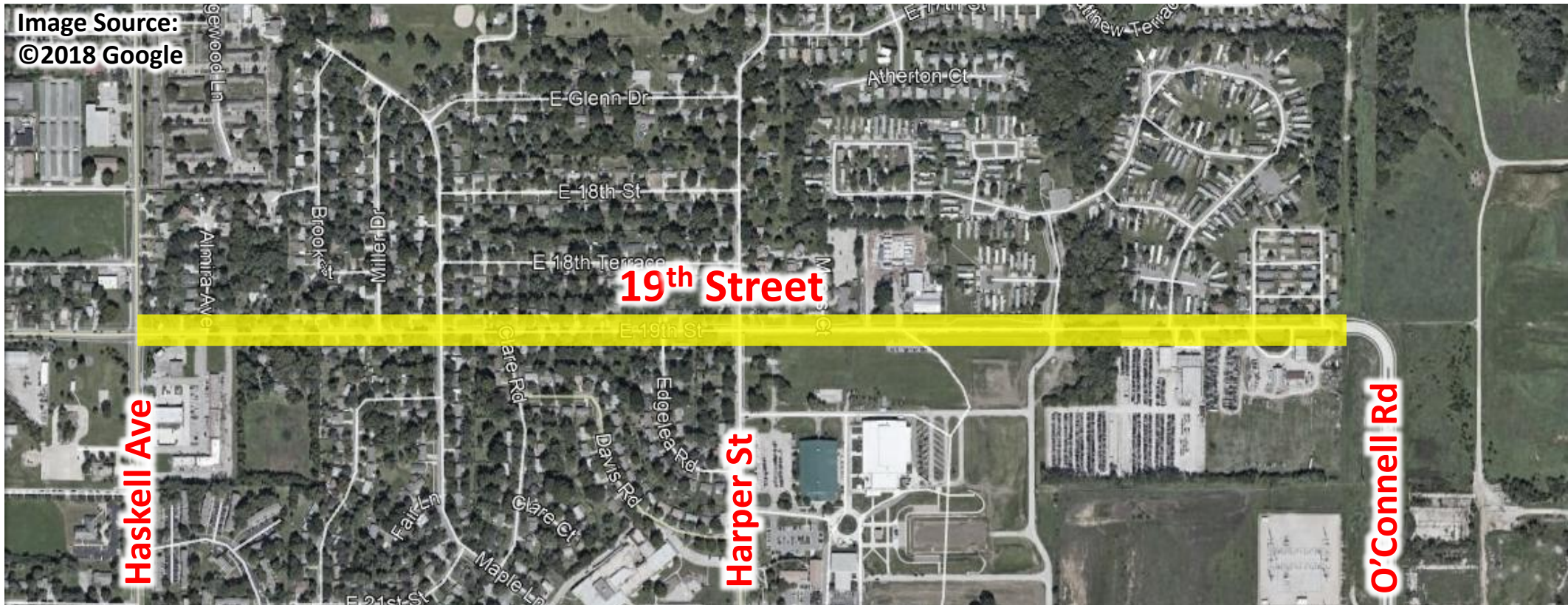
*A recommendation is not provided at this time. This information should be presented to the Transportation Commission to receive public input prior to providing a recommendation to the City Commission.*

The exhibit titled "19<sup>th</sup> & Harper – Roundabout Concept" on the following page graphically depicts the potential intersection configuration as a single-lane roundabout.





# 19<sup>th</sup> Street Improvements



City of Lawrence – Transportation Commission Meeting  
October 7, 2019

# Discussion Topics

- 19<sup>th</sup> Street Corridor Reconstruction (Harper St to O'Connell Rd)
  - Water Main Replacement (programmed for 2020)
  - Transportation Improvements (programmed for 2021)
- Traffic Calming and Sidewalk Gap Closures (Haskell Ave to Harper St)
- 19<sup>th</sup> Street/Harper Street Intersection Evaluation

# 19<sup>th</sup> Street Reconstruction – Existing

- Existing Transportation Conditions (Harper St to O'Connell Rd)
  - Non-Standard Roadway
  - Limited and Disconnected Sidewalks and No Bicycle Facilities

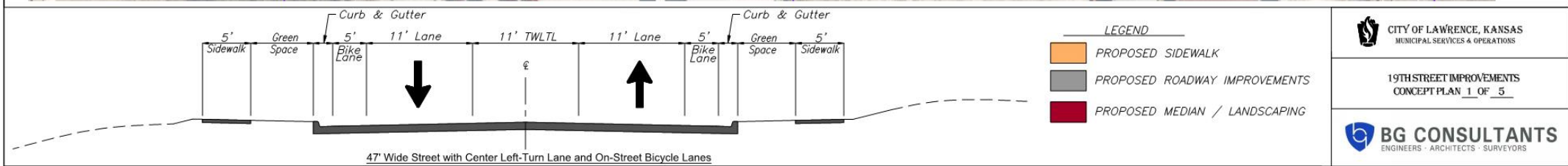
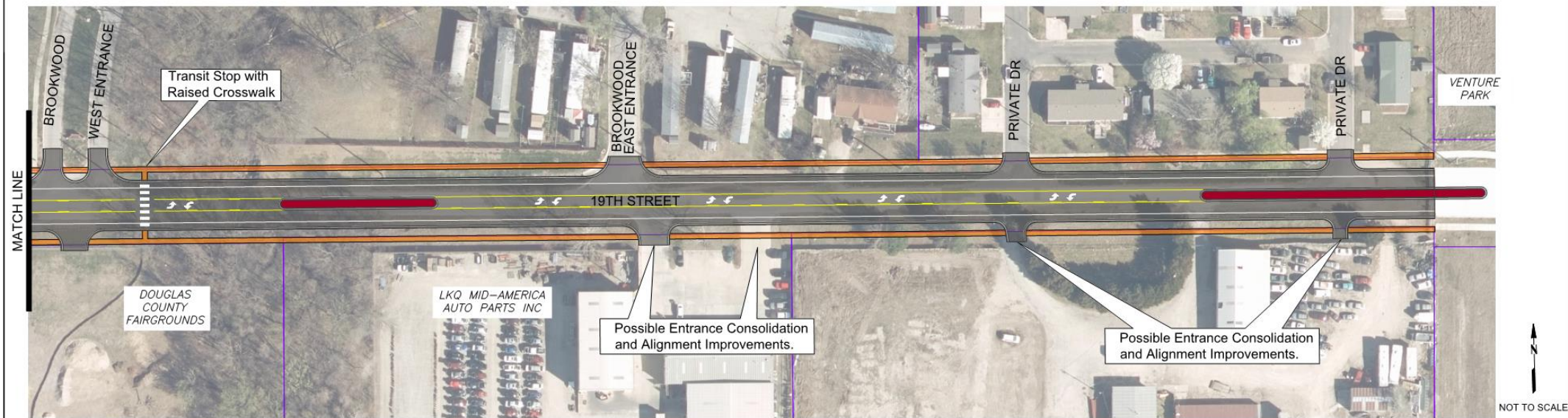
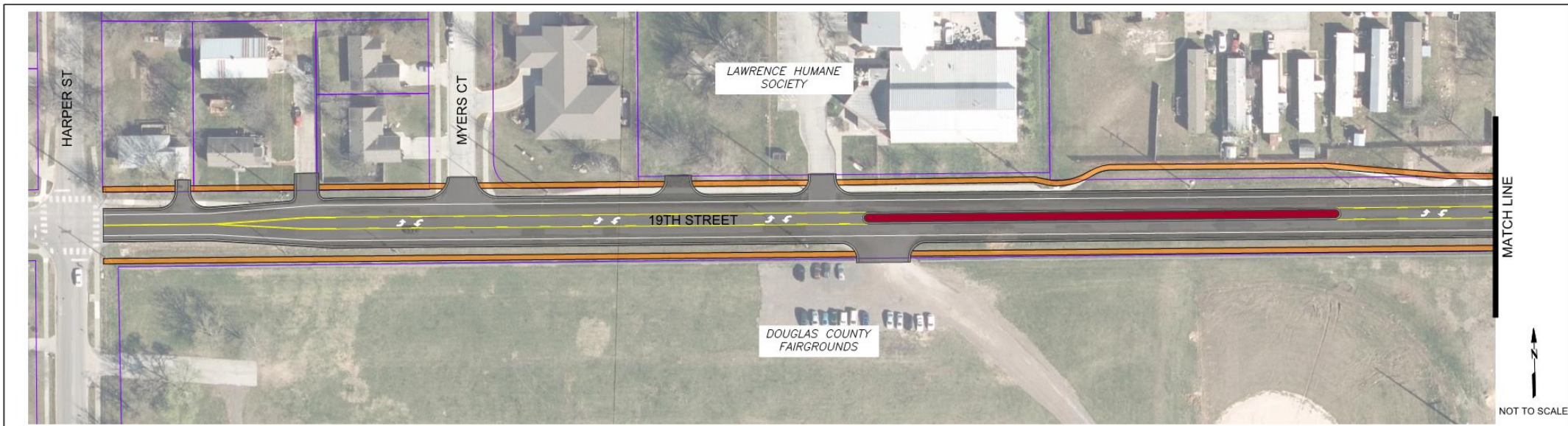




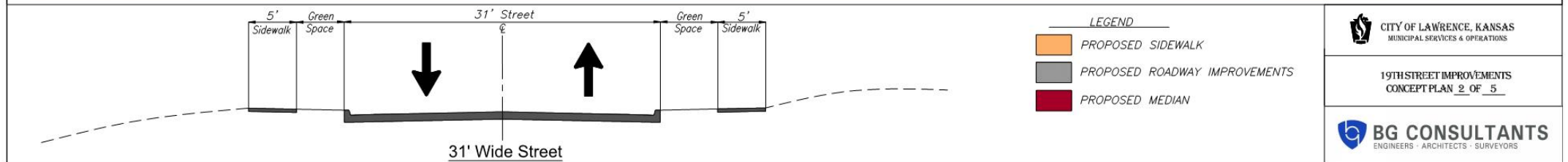
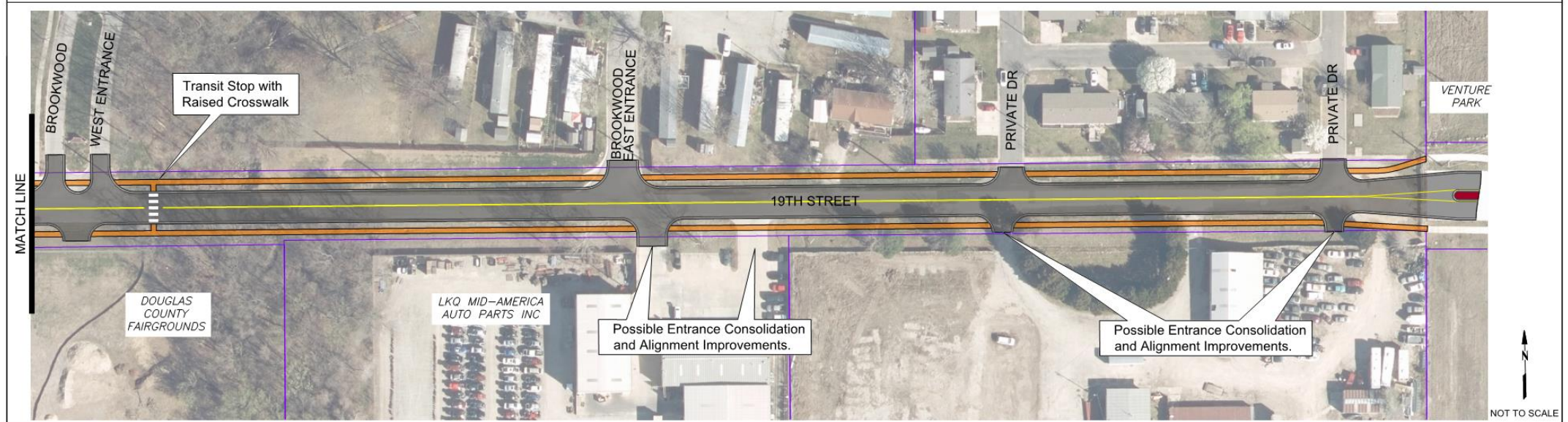
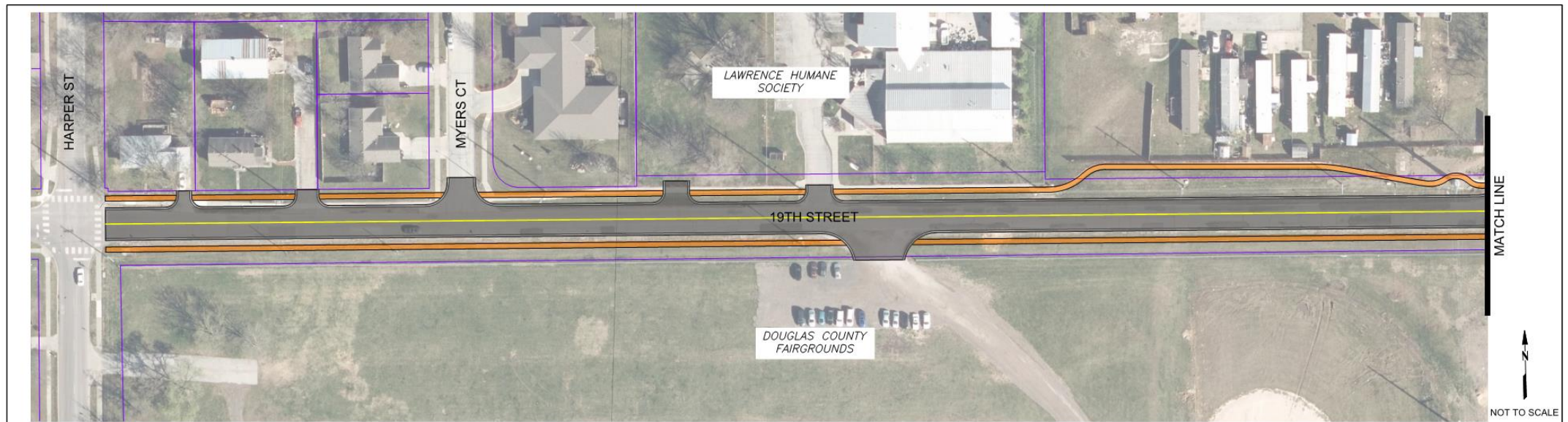
# 19<sup>th</sup> Street Reconstruction – Proposed

- Five Concept Designs Evaluated
  - Concept 1 – 47' Street, On-Street Bike Lanes, Sidewalks
  - Concept 2 – 31' Street with Sidewalks (City's Std. Collector)
  - Concept 3 – 36' Street, On-Street Bike Lanes, Sidewalks
  - Concept 4 – 31' Street, Separated Cycle-Track, Sidewalks
  - Concept 5 – 31' Street, Separated Elevated Bike Lanes, Sidewalks

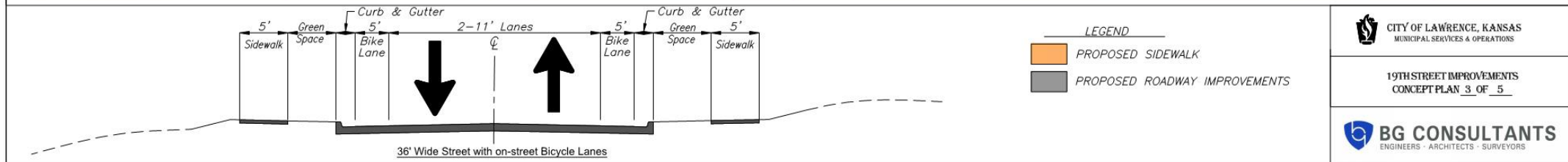
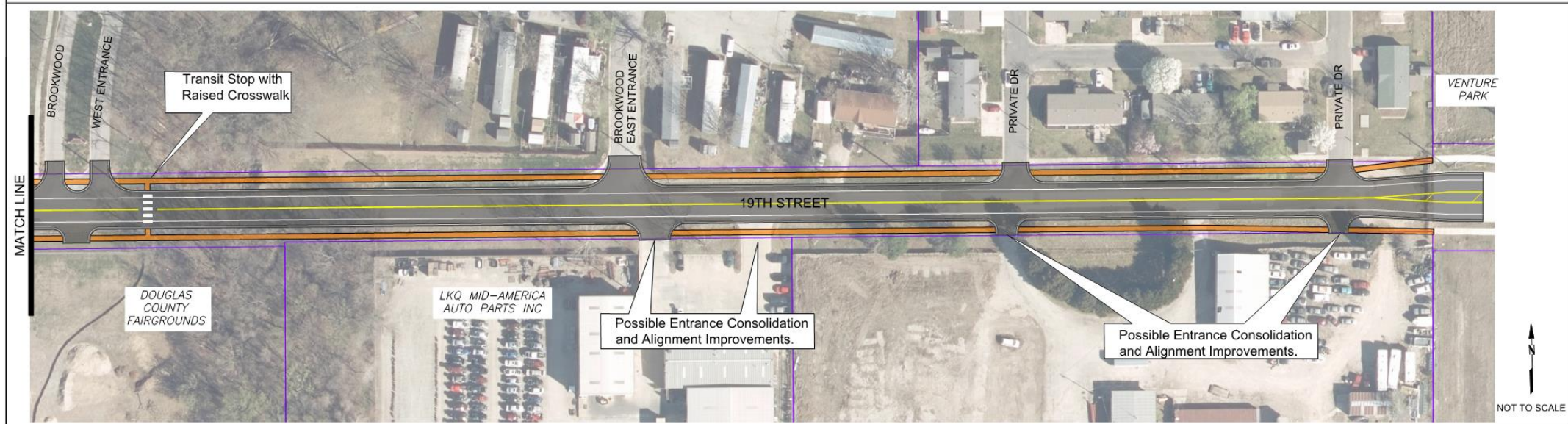
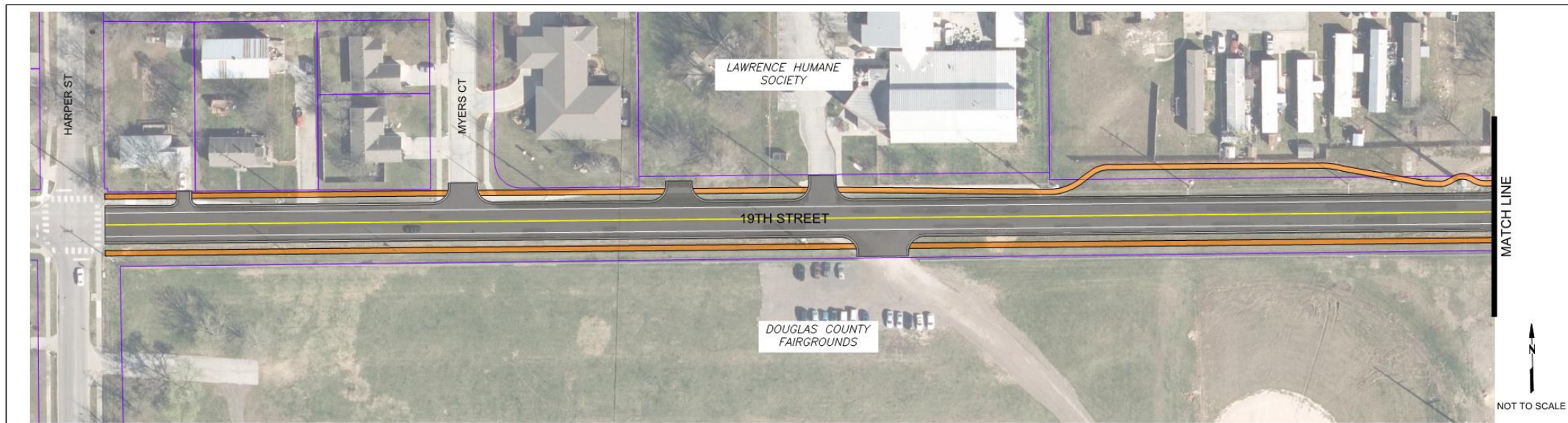




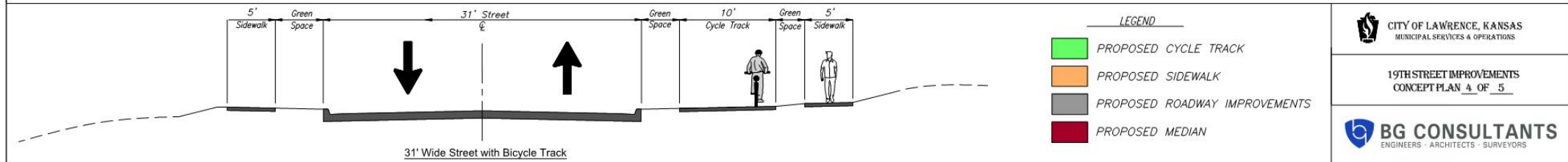
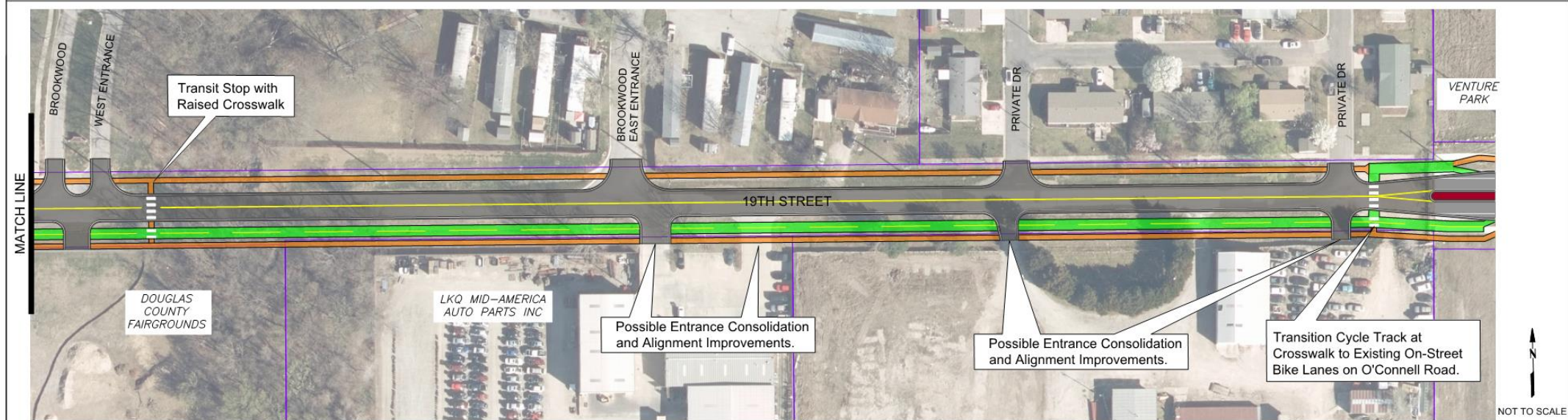
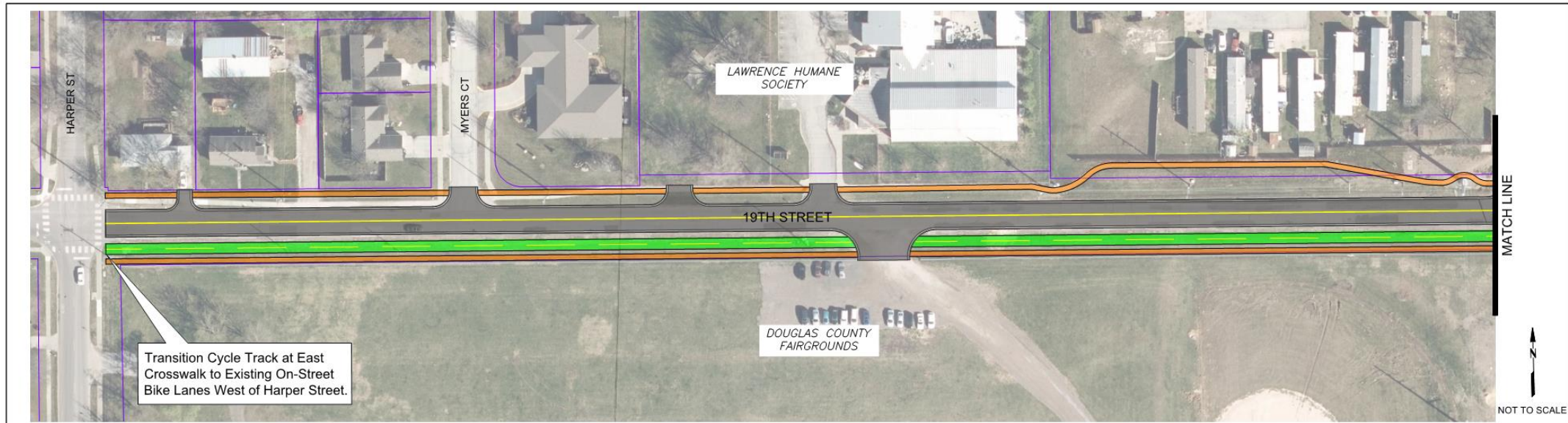




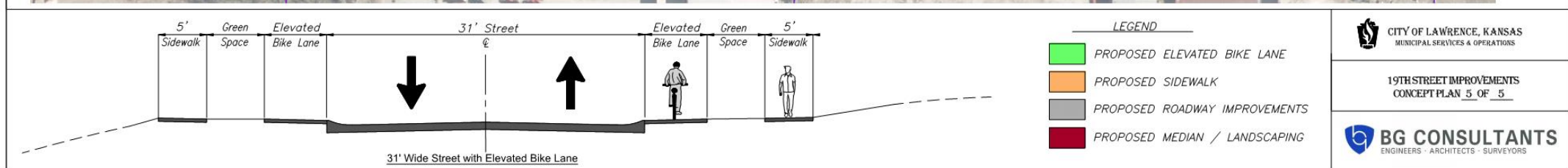
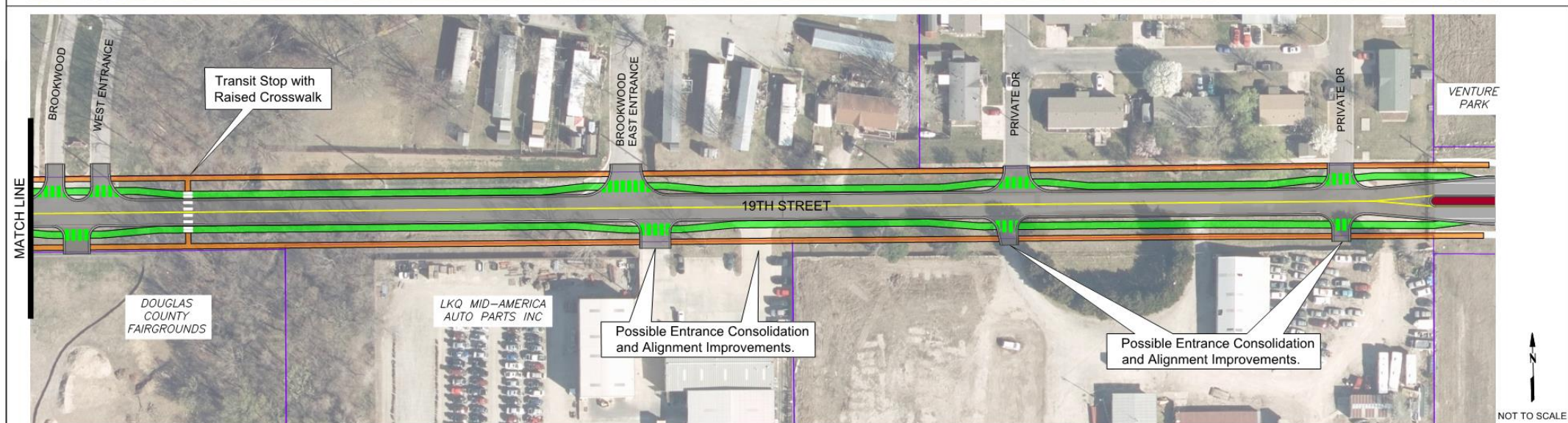
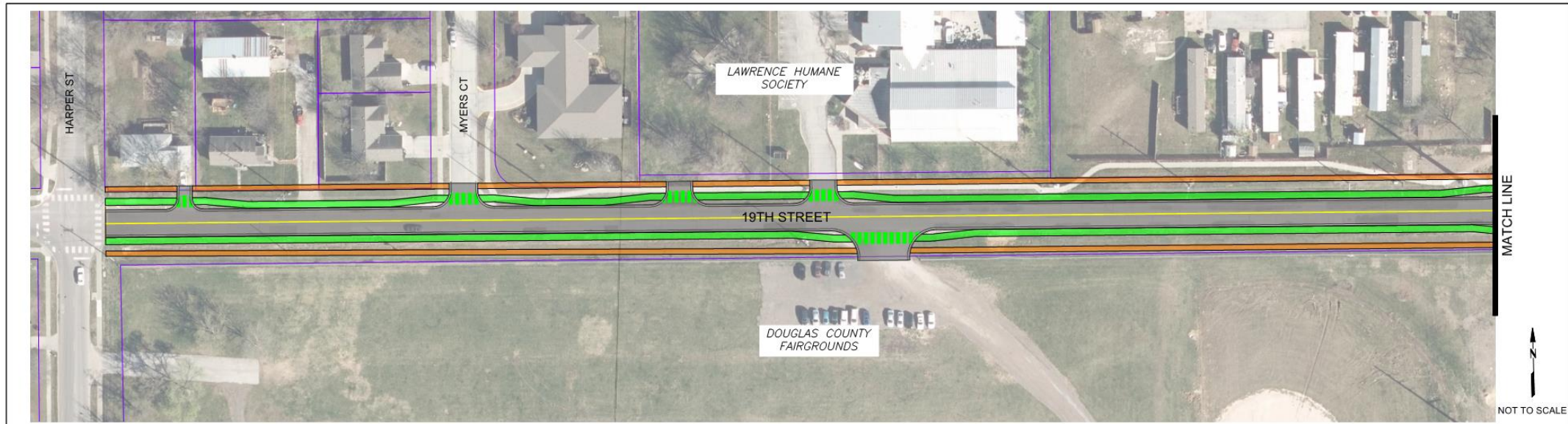














**19<sup>th</sup> Street Reconstruction (Harper Street to O'Connell Road) – TABLE OF PROS/CONS**

	<b>Concept 1 Match Venture Park</b>	<b>Concept 2 City Standard Collector</b>	<b>Concept 3 On-Street Bike Lanes</b>	<b>Concept 4 Cycle-Track</b>	<b>Concept 5 Elevated Bike Lanes</b>
<b>Vehicles</b>	<b>Solution:</b> Good (2 thru-lanes)	<b>Solution:</b> Good (2 thru-lanes)	<b>Solution:</b> Good (2 thru-lanes)	<b>Solution:</b> Good (2 thru-lanes)	<b>Solution:</b> Good (2 thru-lanes)
<b>Access / Turning</b>	<b>Solution:</b> Good <b>Pros/Cons:</b> TWLTL provides a separate lane for turning traffic, thus improving operations and enhancing motorized vehicle safety.	<b>Solution:</b> Fair <b>Pros/Cons:</b> No TWLTL provided, but preliminary analysis indicates TWLTL is not necessary.	<b>Solution:</b> Fair <b>Pros/Cons:</b> No TWLTL provided, but preliminary analysis indicates TWLTL is not necessary.	<b>Solution:</b> Fair <b>Pros/Cons:</b> No TWLTL provided, but preliminary analysis indicates TWLTL is not necessary.	<b>Solution:</b> Fair <b>Pros/Cons:</b> No TWLTL provided, but preliminary analysis indicates TWLTL is not necessary.
<b>Bicyclists</b>	<b>Solution:</b> Fair to Good <b>Pros/Cons:</b> Concept connects existing, similar on-street facilities to the west and east of the project, but no separated facility provided.	<b>Solution:</b> Fair to Poor <b>Pros/Cons:</b> No facilities provided. Bicyclists must travel within motorized vehicle driving lanes.	<b>Solution:</b> Fair to Good <b>Pros/Cons:</b> Concept connects existing, similar on-street facilities to the west and east of the project.	<b>Solution:</b> Fair <b>Pros/Cons:</b> Separated facility is provided, but difficult transitions at east end and west end to connect to existing on-street facilities.	<b>Solution:</b> Good <b>Pros/Cons:</b> Separated facility is provided.
<b>Pedestrians</b>	<b>Solution:</b> Good <b>Pros/Cons:</b> Concept provides sidewalks separated from both motorized traffic and bicycle traffic.	<b>Solution:</b> Good <b>Pros/Cons:</b> Concept provides sidewalks separated from both motorized traffic and bicycle traffic.	<b>Solution:</b> Good <b>Pros/Cons:</b> Concept provides sidewalks separated from both motorized traffic and bicycle traffic.	<b>Solution:</b> Good <b>Pros/Cons:</b> Concept provides sidewalks separated from both motorized traffic and bicycle traffic.	<b>Solution:</b> Good <b>Pros/Cons:</b> Concept provides sidewalks separated from both motorized traffic and bicycle traffic.
<b>Aesthetics / Landscape</b>	<b>Solution:</b> Fair to Good <b>Pros/Cons:</b> Raised median opportunities within the TWLTL area at locations with no access.	<b>Solution:</b> Fair <b>Pros/Cons:</b> Few landscaping opportunities but the overall narrower street width provides larger green spaces along the curb.	<b>Solution:</b> Fair <b>Pros/Cons:</b> Few landscaping opportunities.	<b>Solution:</b> Fair <b>Pros/Cons:</b> Few landscaping opportunities.	<b>Solution:</b> Fair <b>Pros/Cons:</b> Few landscaping opportunities.
<b>Transit</b>	<b>Solution:</b> Good <b>Pros/Cons:</b> Planned east/west transit route along 19 <sup>th</sup> Street with future bus stop at Brookwood Entrance.	<b>Solution:</b> Good <b>Pros/Cons:</b> Planned east/west transit route along 19 <sup>th</sup> Street with future bus stop at Brookwood Entrance.	<b>Solution:</b> Good <b>Pros/Cons:</b> Planned east/west transit route along 19 <sup>th</sup> Street with future bus stop at Brookwood Entrance.	<b>Solution:</b> Good <b>Pros/Cons:</b> Planned east/west transit route along 19 <sup>th</sup> Street with future bus stop at Brookwood Entrance.	<b>Solution:</b> Good <b>Pros/Cons:</b> Planned east/west transit route along 19 <sup>th</sup> Street with future bus stop at Brookwood Entrance.
<b>Storm Drainage</b>	<b>Solution:</b> Good to Fair <b>Pros/Cons:</b> City standard storm drainage infrastructure required. Additional pavement width requires slightly larger/longer system.	<b>Solution:</b> Good <b>Pros/Cons:</b> City standard storm drainage infrastructure required.	<b>Solution:</b> Good <b>Pros/Cons:</b> City standard storm drainage infrastructure required.	<b>Solution:</b> Fair <b>Pros/Cons:</b> City standard storm drainage infrastructure required.	<b>Solution:</b> Fair <b>Pros/Cons:</b> Mountable curb between motorized traffic and elevated bike lane requires additional, non-standard gutter-inlet structures.
<b>Utilities</b>	<b>Solution:</b> Fair <b>Pros/Cons:</b> Wider overall street width reduces space available for utility construction & maintenance.	<b>Solution:</b> Good <b>Pros/Cons:</b> Narrower street width provides ample greenspace for utility construction & maintenance.	<b>Solution:</b> Good <b>Pros/Cons:</b> Narrower street width provides greenspace for utility construction & maintenance.	<b>Solution:</b> Fair <b>Pros/Cons:</b> Additional pavement and space for Cycle-Track limits utility construction & maintenance in the south right-of-way.	<b>Solution:</b> Fair to Good <b>Pros/Cons:</b> Narrower street width provides greenspace for utility construction & maintenance.
<b>Cost</b>	<b>\$2.39 million</b>	<b>\$2.00 million</b>	<b>\$2.19 million</b>	<b>\$2.27 million</b>	<b>\$2.37 million</b>
<b>Maintenance</b>	<b>Solution:</b> Fair to Good <b>Pros/Cons:</b> Street maintenance requirements is typical of Lawrence Collector Streets. Additional pavement width and lane striping requires increased maintenance efforts compared to Concepts 2-5.	<b>Solution:</b> Good <b>Pros/Cons:</b> Street maintenance requirements is typical of Lawrence Collector Streets.	<b>Solution:</b> Good <b>Pros/Cons:</b> Street maintenance requirements is typical of Lawrence Collector Streets.	<b>Solution:</b> Fair to Good <b>Pros/Cons:</b> Street maintenance requirements is typical of Lawrence Collector Streets. Cycle Track presents additional efforts similar to maintenance of SUP's.	<b>Solution:</b> Fair <b>Pros/Cons:</b> Street maintenance requirements is typical of Lawrence Collector Streets. Elevated bike lanes present snow removal challenge.

Cost is construction cost only (street, storm sewer, and ped/bike facilities from Harper to O'Connell) for comparison purposes. Construction contingency is included.

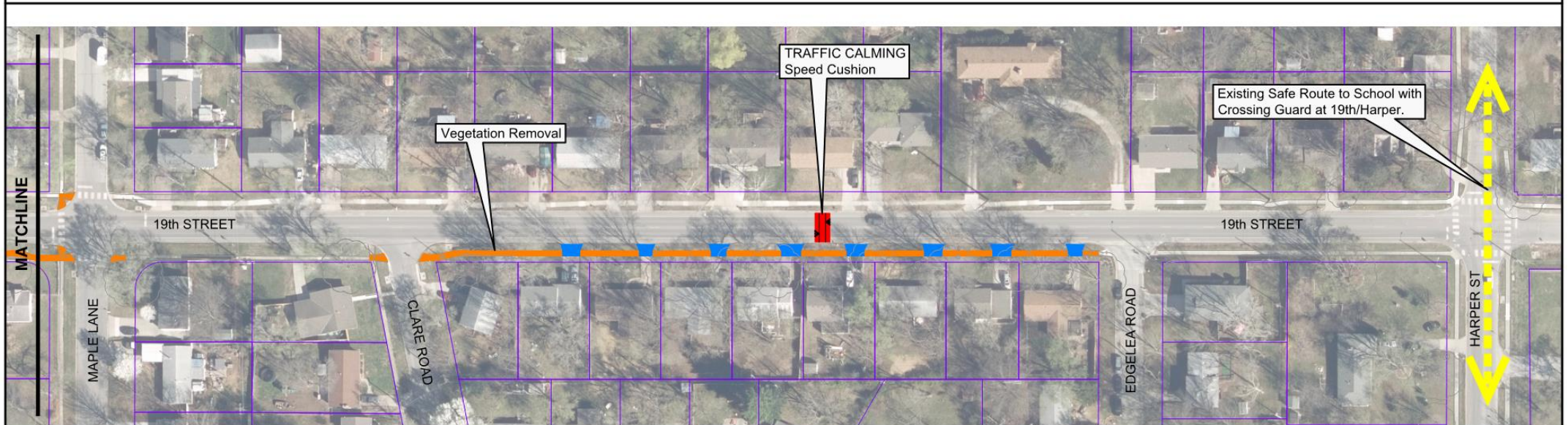
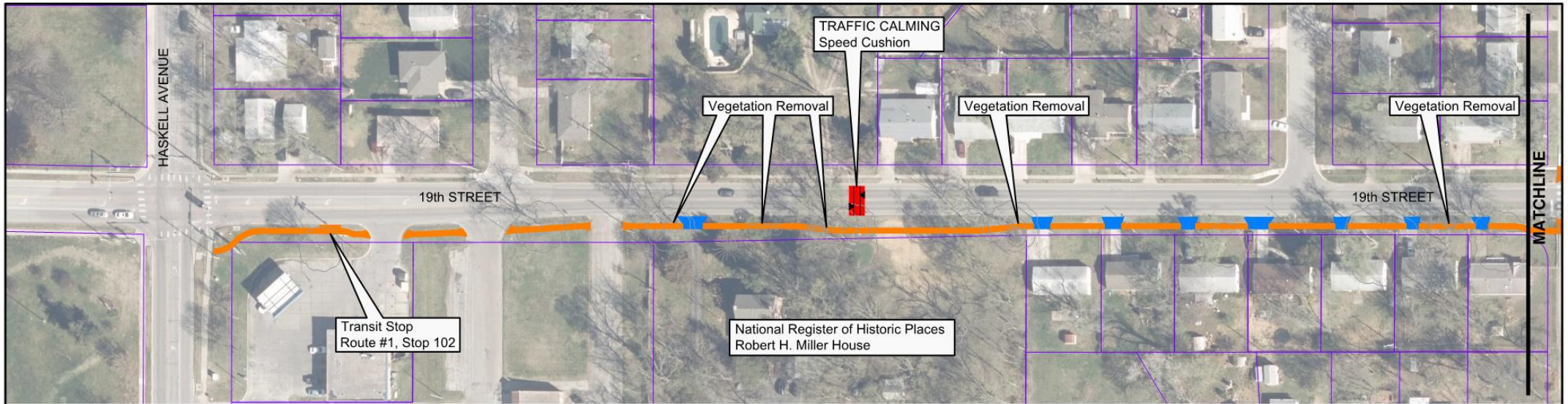
TWLTL = Two-Way Left-Turn Lane

SUP = Shared Use Path (also commonly referred to as side-path, multi-use path, trail, etc.)







# Traffic Calming and Sidewalk Gap Closures

- 19<sup>th</sup> Street (Haskell Ave to Harper St)
- Traffic Calming
  - Speed Cushions meet City's Traffic Calming Policy
  - \$25,000 estimated construction cost
- Sidewalk Gap Closures
  - South side of 19<sup>th</sup> Street
  - Connection to a Safe Route to School
  - Existing Transit Stop (19<sup>th</sup>/Haskell)
  - \$225,000 estimated construction cost



LEGEND

-  PROPOSED CONCRETE SIDEWALK
-  CONCRETE DRIVEWAY RECONSTRUCTION
-  PROPOSED CONCRETE SPEED CUSHION
-  SAFE ROUTE TO SCHOOL



 CITY OF LAWRENCE, KANSAS  
MUNICIPAL SERVICES & OPERATIONS

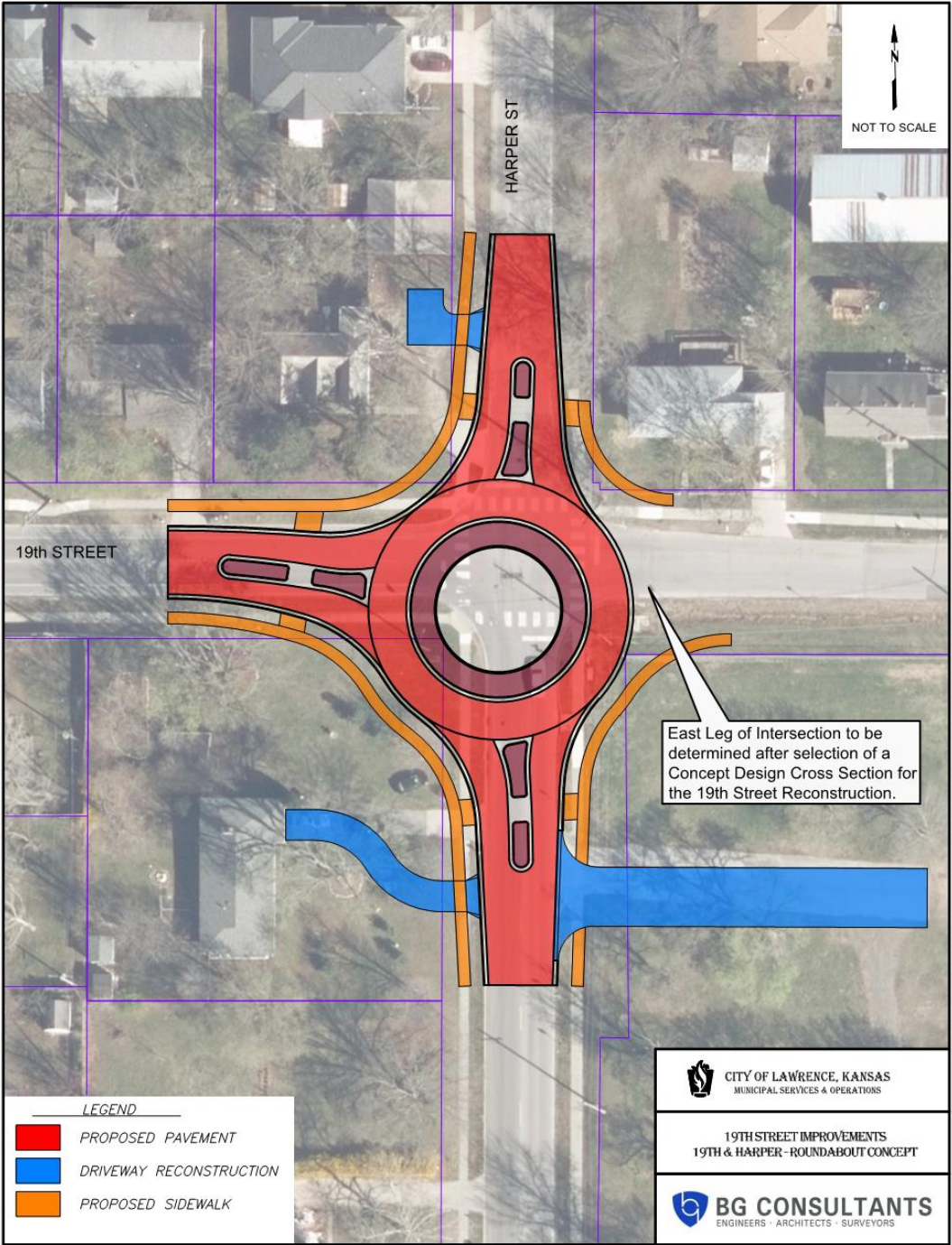
19TH STREET IMPROVEMENTS  
TRAFFIC CALMING & SIDEWALK GAP CLOSURES

 **BG CONSULTANTS**  
ENGINEERS • ARCHITECTS • SURVEYORS

# 19<sup>th</sup> Street/Harper Street Intersection

- Existing Traffic Characteristics
  - All-Way STOP: Level of Service = A (A) { AM Peak Hour (PM Peak Hour) }
  - Single-Lane Roundabout: Level of Service = A (A)
    - Delay reduced from  $\pm 10$  sec/veh to  $\pm 4$  sec/veh in Peak Hours
- Estimated, Future Traffic Characteristics w/Venture Park
  - All-Way STOP: Level of Service = C (C)
  - Single-Lane Roundabout: Level of Service = A (A)
    - Delay reduced from  $\pm 16$  sec/veh to  $\pm 7$  sec/veh in Peak Hours
- Roundabout Option: \$425,000 estimated construction cost







# 19<sup>th</sup> Street Improvements

- Next Steps
  - Questions / Discussion Tonight
  - Incorporate Public Input and Transportation Commission Input
  - Present Recommendation to City Commission (*date to be determined*)

# Memorandum

## City of Lawrence

### Municipal Services & Operations Department

TO: Multimodal Transportation Commission  
FROM: Jake Baldwin, Senior Project Engineer  
DATE: October 30, 2019  
RE: Agenda Item for Transportation Commission November 4, 2019:  
2020-2024 Sidewalk/Bike/Ped Improvements - Five Year Plan

#### **Background**

At the September 9, 2019 Transportation Commission meeting, the Commission was informed of staff efforts to program the Sidewalk/Bike/Ped Improvements Project (CIP#CI09) for the years 2020-2024.

#### **Details**

City staff is recommending programming projects for the five year period between 2020 and 2024 for the Sidewalk/Bike/Ped Improvement Project (CIP#CI09). The City's Capital Improvement Plan for those years includes \$3,200,000 for applicable projects. The proposed five-year plan is attached.

In September of this year, the Multimodal Transportation Commission (Transportation Commission) approved the revised Non-motorized Projects Prioritization Policy (NMPPP). This policy assigns points to potential projects based on three scoring categories. Cumulative points for each potential project are tabulated and produce a ranking within the NMPPP, which can be used as a guide in choosing projects for the five year program.

Other guidance in choosing projects to include in the five year program is the intent to distribute the funding as equitably as possible between bicycle and pedestrian projects.

This program will also need to be flexible and adapt as grant funding becomes available. Specifically, the City is applying for Transportation Alternative grants for three projects that would require a twenty percent match of construction costs in 2021. In the event of a grant award, those matching funds would come from the Sidewalk/Bike/Ped Improvement Project (CIP#CI09). Design costs for any awarded projects would be allocated from 2020 funds of the same project.

**Action Request**

Provide recommendation for programming projects for the Sidewalk/Bike/Ped Improvements Project (CIP#CI09) for 2020-2024.

**Attachments:**

Proposed Five Year Plan – Sidewalk/Bike/Ped Improvements Project (CIP#CI09)

Non-motorized Projects Prioritization Policy – Ped Project Scores

Non-motorized Projects Prioritization Policy – Bike Project Scores

Project Maps

**PROPOSED FIVE-YEAR PLAN - SIDEWALK/BIKE/PED IMPROVEMENTS PROJECT (CIP#CI09)**

10/28/2019

**Bicycle Project**

Year	Project ID	Description	Estimate
2020	B026	Bike Boulevard -13th St.	\$ 200,000
	B013	Intersection Improvements - 19th St. & Ousdahl Rd.	\$ 75,000
2021	B026	Intersection Improvements - 13th St. & Massachusetts St.	\$ 155,000
	B013	Intersection Improvements - 21st St. & Massachusetts St.	\$ 230,000
2022	B128	SUP - 6th St. from Iowa St. to Wisconsin St. (north)	\$ 285,993
2023			
2024	B029	SUP - 6th St. from Lawrence Ave. to Iowa St.	\$ 736,603

Subtotal = \$ 1,682,596

**Pedestrian Project**

Year	Project ID	Description	Estimate
2020	P216	W 9th St. from West of Iowa St. (both sides)	\$ 87,346
	P012	Massachusetts St. from 21st St. to 23rd St. (west)	\$ 135,863
2021	P155	Naismith Dr. from W23rd St. to W22nd Terr. (east)	\$ 17,524
	P158	Naismith Dr. from W22nd Terr. to W22nd St.(east)	\$ 25,799
	P159	Naismith Dr. from W22nd St to W21st St. (east)	\$ 45,016
	P162	Naismith Dr. from W21st St. to W20th St.(east)	\$ 41,269
	P161	Naismith Dr. from W20th St. to W19th Terr.(east)	\$ 102,861
	P160	Naismith Dr. from W19th Terr. To W19th St.(east)	\$ 31,239
2022	P145	W 18th St. from Ohio St. to Tennessee St. (both)	\$ 99,438
	P211	W 21st St. from Tennessee St. to Louisiana St. (both)	\$ 102,764
	P236	W 19th St. Crossing at Alabama St.	\$ 54,000
2023	P015	Iowa St. from 15th St. to University Dr. (east)	\$ 342,025
2024	P085	W 9th St. from Hilltop Dr. to 400' E of Avalon Rd. (north)	\$ 460,881

Subtotal = \$ 1,546,025

Total = \$ 3,228,621

<b>PROJECT CI09</b>	<b>CIP Funding (\$)</b>	<b>Bicycle Project (\$)</b>	<b>Pedestrian Project (\$)</b>	<b>Total</b>
2020	\$500,000	\$ 275,000	\$ 223,209	\$ 498,209
2021	\$675,000	\$ 385,000	\$ 263,708	\$ 648,708
2022	\$675,000	\$ 285,993	\$ 256,202	\$ 542,195
2023	\$675,000	\$ -	\$ 342,025	\$ 342,025
2024	\$675,000	\$ 736,603	\$ 460,881	\$ 1,197,484
Total =	\$3,200,000	\$ 1,682,596	\$ 1,546,025	\$ 3,228,621



ProjectID	Road	Side	From_	To	Classification	Total_Score	SRTS	CDBG	Crossing	Total_Cost
P216	W 9th St	North	West of Iowa St		Collector	14	No	Yes	No	\$ 87,347
P012	Massachusetts St	West	21st St	23rd St	Arterial	13	No	No	No	\$ 135,864
P145	W 18th St	Both	Ohio St	Tennessee St	Street	13	Yes	Yes	No	\$ 99,439
P211	W 21st St	Both	Tennessee St	Louisiana St	Collector	13	No	No	No	\$ 102,765
P241	Tennessee St Crossing		W 7th St		Collector	13	No	No	Yes	\$ -
P015	Iowa St	East	15th St/Bob Billings Pkwy	University Dr	Arterial	12	No	Yes	No	\$ 342,026
P025	W 9th St	North	Highland Dr	Hilltop Dr	Arterial	12	No	Yes	No	\$ 37,696
P031	Kasold Dr	Both	W 5th Ter	Trail Rd	Arterial	12	No	No	No	\$ 330,511
P085	W 9th St	North	Hilltop Dr	400' east of Avalon Rd	Arterial	12	Yes	Yes	No	\$ 460,882
P142	Harvard Rd	South	Crestline Dr	Iowa St	Collector	12	Yes	Yes	No	\$ 137,233
P155	Naismith Dr	East	W 22nd Ter	W 23rd St	Collector	12	No	Yes	No	\$ 17,524
P158	Naismith Dr	East	W 22nd St	W 22nd Ter	Collector	12	No	Yes	No	\$ 25,799
P159	Naismith Dr	East	W 21st St	W 22nd St	Collector	12	No	Yes	No	\$ 45,016
P160	Naismith Dr	East	W 19th St	W 19th Ter	Collector	12	No	Yes	No	\$ 31,239
P162	Naismith Dr	East	W 20th St	W 21st St	Collector	12	No	Yes	No	\$ 41,269
P236	W 19th Street Crossing		Alabama St		Arterial	12	Yes	Yes	Yes	\$ 54,000
P006	Kasold Dr	East	W 6th St	Westridge Dr	Arterial	11	No	No	No	\$ 23,342
P008	E 23rd St	South	550' E of Harper	750' east to driveway	Arterial	11	No	No	No	\$ 144,823
P019	E 23rd St	South	1200' east of O'Connell	O'Connell Rd	Arterial	11	No	No	No	\$ 117,196
P020	E 23rd St	North	FF St	200' east	Arterial	11	No	Yes	No	\$ 7,854
P045	Kasold Dr	East	Tam O'Shanter Dr	Bob Billings Pkwy	Arterial	11	No	Yes	No	\$ 448,995
P073	W 18th St	North	Tennessee St	Vermont St	Street	11	Yes	Yes	No	\$ 171,815
P090	Belle Haven Drive	Both	W 27th St	W 27th Ter	Street	11	Yes	Yes	No	\$ 51,325
P134	E 21st Street	Both	Miller Dr	E 21st Ter	Street	11	Yes	Yes	No	\$ 61,970
P161	Naismith Dr	East	W 19th Ter	W 20th St	Collector	11	No	Yes	No	\$ 102,861
P185	Crestline Dr	West	W 9th St	Yale Rd	Collector	11	No	Yes	No	\$ 74,263
P197	Maine St	East	W 6th St	W 4th St	Collector	11	No	Yes	No	\$ 127,738
P240	E 19th St	South	Haskell Ave	Maple Ln	Arterial	11	Yes	Yes	No	\$ 243,748
P013	Kasold Dr	East	Yale Rd	W 14th St	Arterial	10	No	Yes	No	
P021	E 23rd St	North	280' East of FF St	Venture Park Way	Arterial	10	No	Yes	No	\$ 12,461
P026	McDonald Dr	East	Princeton Blvd/W 2nd St	Bluffs Dr	Arterial	10	No	Yes	No	\$ 374,368
P029	Kasold Dr	East	W 22nd St	Tam O'Shanter Dr	Arterial	10	No	No	No	\$ 549,868
P030	McDonald Dr	West	Princeton Blvd/W 2nd St	Bluffs Dr	Arterial	10	No	Yes	No	\$ 397,666
P033	Kasold Dr	West	Trail Rd	Tomahawk Dr	Arterial	10	No	No	No	\$ 240,479
P034	Kasold Dr	East	Trail Rd	Tomahawk Dr	Arterial	10	No	No	No	\$ 258,196
P037	N 3rd St	West	KTA Entrance Rd	City Limits	Arterial	10	No	No	No	\$ 159,232
P038	N 3rd St	East	KTA Entrance Rd		Arterial	10	No	No	No	\$ 8,161
P039	N 3rd St	East	KTA Entrance Rd		Arterial	10	No	No	No	\$ 105,344
P040	N 3rd St	East	KTA Entrance Rd	City Limits	Arterial	10	No	No	No	\$ 51,633
P164	Harper St	West	E 24th St	E 25th Ter	Collector	10	No	Yes	No	\$ 58,196
P226	Michigan St	East	W 6th St	W 5th St	Collector	10	No	Yes	No	\$ 53,768
P227	Alabama St	West	W 23rd St	Jasu Dr	Collector	10	No	Yes	No	\$ 103,305
P001	E 19th St	South	Clare Rd	Edgelea Rd	Arterial	9	No	Yes	No	\$ 89,901
P017	N Kasold Dr	East	Tomahawk Dr	Creekwood Dr	Arterial	9	No	No	No	\$ 953,580
P018	E 19th St	South	Harper St	Brookwood Mobile Home Park	Arterial	9	No	Yes	No	\$ 88,953
P043	Haskell Ave	East	E 12th St	E 13th St	Arterial	9	No	No	No	\$ 64,593
P044	Haskell Ave	East	E 13th St	E 14th St	Arterial	9	No	Yes	No	\$ 63,663
P050	Lincoln St	Both	N 2nd St	N 4th St	Street	9	Yes	No	No	\$ 666,681
P070	W 20th St	South	Tennessee St	Vermont St	Street	9	Yes	No	No	\$ 54,888
P086	Ousdahl Rd	East	W 23rd St	W 24th St	Collector	9	Yes	Yes	No	\$ 343,489
P098	Wakarusu Dr	West	Stoneback Dr	440 LF North of W 27th St	Arterial	9	Yes	No	No	\$ 52,563
P135	E 21st Ter	Both	E 21st St	120 LF South of E 21st St	Street	9	Yes	Yes	No	\$ 21,113
P148	Rockledge Rd	East	W 9th St	National Ln	Collector	9	No	Yes	No	\$ 26,931

ProjectID	Road	Side	From_	To	Classification	Total_Score	SRTS	CDBG	Crossing	Total_Cost
P176	Locust St	North	N 3rd St	N 7th St	Collector	9	No	No	No	\$ 223,231
P179	W 21st St	South	Carolina St	Louisiana St	Collector	9	No	Yes	No	\$ 93,428
P189	Rockledge Rd	West	W 6th St	National Ln	Collector	9	No	Yes	No	\$ 130,722
P193	W 15th St	North	Engel Rd	Iowa St	Collector	9	No	Yes	No	\$ 533,801
P198	W 11th St	South	Indiana St	Louisiana St	Collector	9	No	Yes	No	\$ 82,626
P235	Kasold Drive Crossing		Riverview Rd		Arterial	9	No	No	Yes	\$ -
P237	Vermont St crossing				Collector	9	No	No	Yes	\$ -
P060	Harper St	East	E 19th St	E 17th St	Collector	8	Yes	Yes	No	\$ 87,689
P069	Vermont St	East	150 LF North of W 19th St	250 LF South of W 17th St	Street	8	Yes	Yes	No	\$ 89,111
P071	Tennessee St	East	W 21st St	W 20th St	Street	8	Yes	No	No	\$ 87,417
P075	W 15th St	South	150 LF East of Kentucky St	Vermont St	Street	8	Yes	Yes	No	\$ 9,697
P077	W 5th St	North	Mississippi St	Tennessee St	Street	8	Yes	Yes	No	\$ 88,347
P079	W 5th St	North	Wisconsin St	180 LF West of Alabama St	Street	8	Yes	Yes	No	\$ 403,501
P122	Yale Rd	North	Schwarz Rd	Crestline Dr	Street	8	Yes	Yes	No	\$ 68,902
P130	Park Hill Ter	South	Louisiana Street	Kansas St	Street	8	Yes	No	No	\$ 62,531
P131	Kansas St	East/South	Park Hill Ter	Montana St	Street	8	Yes	No	No	\$ 119,183
P144	Ousdahl Rd	West	W 24th St	W 26th St	Collector	8	Yes	Yes	No	\$ 415,874
P151	W 2nd St	South	McDonald Dr	Mount Hope Ct	Collector	8	No	Yes	No	\$ 213,444
P178	W 21st St	North	Tennessee St	Massachusetts St	Collector	8	No	No	No	\$ 71,078
P180	W 21st St	South	Iowa St	Ousdahl Rd	Collector	8	No	Yes	No	\$ 316,655
P181	W 21st St	South	Ousdahl	Naismith Dr	Collector	8	Yes	Yes	No	\$ 143,612
P182	Naismith Dr	East	Dillon's driveway	W 23rd St	Collector	8	No	Yes	No	\$ 1,127,518
P188	Rockledge Rd	North	East of Country Club Ter		Collector	8	No	Yes	No	\$ 45,122
P190	Lawrence Ave	West	Harvard Rd	Bob Billings Pkwl	Collector	8	No	Yes	No	\$ 489,865
P192	Kensington Rd	West	Hampton St	E 27th St	Collector	8	No	No	No	\$ 122,359
P194	Fambrough Dr, W 11th St, West Campus Rd	North, South, West	Mississippi St	Stratford	Collector	8	No	Yes	No	\$ 784,152
P195	W 2nd St	North	Mount Hope Ct	Michigan St	Collector	8	No	Yes	No	\$ 89,277
P203	W 25th St	North	Iowa St	Ridge Ct	Collector	8	No	Yes	No	\$ 71,999
P204	W 25th St	South	Iowa St	Ridge Ct	Collector	8	No	Yes	No	\$ 46,773
P215	W 25th St	Both	Ousdahl Rd	Cedarwood Ave	Collector	8	No	Yes	No	\$ 163,602
P219	Princeton Blvd	South	Providence Rd	Iowa St	Collector	8	No	Yes	No	\$ 70,051
P229	Barker Ave	East	E 14th St	E 19th St	Collector	8	No	Yes	No	\$ 242,875
P230	Barker Ave	East	W 19th St	E 23rd St	Collector	8	No	No	No	\$ 161,013
P231	W 2nd St	North	McDonald Dr	Mount Hope Ct	Collector	8	No	Yes	No	\$ 57,582
P005	N Iowa St	East	South of Riverridge Rd		Arterial	7	No	No	No	\$ 12,909
P016	N Kasold Dr	East	Creekwood Dr	Peterson Rd	Arterial	7	No	No	No	\$ 86,838
P054	N 7th St	West	Lincoln St	Lyon St	Collector	7	Yes	No	No	\$ 170,396
P056	Elm St	North	N 6th St	N 8th St	Street	7	Yes	No	No	\$ 185,416
P061	Davis Rd	North	Clare Rd	Harper St	Street	7	Yes	Yes	No	\$ 157,213
P062	Maple Ln	East	E 21st Ter	280 LF South of Clare Rd	Street	7	Yes	Yes	No	\$ 21,920
P063	E 21st Ter	South	140 LF South of E 21st St	Maple Ln	Street	7	Yes	Yes	No	\$ 108,152
P064	E 25th Ter	South	Ponderosa Dr	150 LF West of Carlton Dr	Collector	7	Yes	Yes	No	\$ 173,465
P066	Mayfair Dr	East	Hampton St	E 27th St	Street	7	Yes	No	No	\$ 2,240,714
P072	Vermont St	East	W 20th St	340 LF South of W 19th St	Street	7	Yes	No	No	\$ 20,095
P074	Vermont St	East	250 LF North of W 17th St	W 16th St	Street	7	Yes	Yes	No	\$ 44,955
P078	Illinois St	East	W 5th St	W 3rd St	Street	7	Yes	Yes	No	\$ 114,295
P080	W 7th St	North	Missouri St	Illinois St	Street	7	Yes	No	No	\$ 79,708
P081	Mississippi St	East	W 5th St	W 6th St	Street	7	Yes	Yes	No	\$ 83,284
P084	Hilltop Dr	West	Harvard Rd	W 9th St	Street	7	Yes	Yes	No	\$ 18,016
P089	Belle Haven Dr	West	W 27th Ter	W 29th St	Street	7	Yes	Yes	No	\$ 90,690
P091	Alabama St	West	Jasu Dr	W 27th St	Collector	7	Yes	Yes	No	\$ 249,546
P095	Scottsdale St	West	W 25th St	W 27th St	Street	7	Yes	No	No	\$ 98,658
P096	W 24th St	South	Via Linda Dr	W 25th St	Street	7	Yes	No	No	\$ 92,577

ProjectID	Road	Side	From_	To	Classification	Total_Score	SRTS	CDBG	Crossing	Total_Cost
P104	Wildwood Dr	East	Woodland Dr	Grove Dr	Street	7	Yes	No	No	\$ 97,368
P108	Palisades Dr	South	Silver Rain Rd	George Williams Way	Street	7	Yes	No	No	\$ 158,363
P123	Schwarz Rd	East	W 9th St	Yale Rd	Street	7	Yes	Yes	No	\$ 42,998
P124	Sunset Dr	East	Harvard Rd	Stratford Rd	Street	7	Yes	Yes	No	\$ 109,427
P143	Harvard Rd	South	570 LF West of Crestline Dr	Crestline Dr	Street	7	Yes	Yes	No	\$ 58,617
P156	W 21st St	South	Naismith Dr	Mitchell Rd	Collector	7	No	Yes	No	\$ 14,479
P157	W 21st St	South	Owens Ln	Carolina St	Collector	7	No	Yes	No	\$ 27,607
P163	W 21st St	South	Mitchell Rd	Owens Ln	Collector	7	No	Yes	No	\$ 155,046
P171	Bobwhite Dr	South/East	Lake Alvarado Dr	Bob Billings Pkwy	Collector	7	No	No	No	\$ 118,287
P175	N 7th St	East	Lincoln St	Maple St	Collector	7	Yes	No	No	\$ 71,548
P177	Locust St	North	N 8th St	N 9th St	Collector	7	No	No	No	\$ 103,739
P183	W 24th St	North	Eddingham Dr	Naismith Dr	Collector	7	No	Yes	No	\$ 315,067
P232	Inverness Dr	West	Wimbledon Dr	2012 Inverness Dr	Collector	7	No	No	No	\$ 209,153
P007	Lakeview Rd	Both	N Iowa St	Timberledge Rd	Arterial	6	No	No	No	\$ 48,202
P051	Ridge Ct	West	W 26th St	W 27th St	Street	6	Yes	Yes	No	\$ 32,714
P053	Lincoln St	North	N 4th St	N 7th St	Street	6	Yes	No	No	\$ 295,994
P057	Elm St	North	200 LF East of N 2nd St	N 3rd St	Street	6	Yes	No	No	\$ 47,710
P065	Hampton St	North	Kensington Rd	Mayfair Dr	Street	6	Yes	No	No	\$ 215,830
P067	Kensington Rd	East	E 28th St	E 30th St	Street	6	Yes	No	No	\$ 151,378
P099	Wimbledon Dr	West	Killarney Ct	Inverness Dr	Street	6	Yes	No	No	\$ 148,614
P103	Oak Tree Dr	North	Woodland Dr	Goldfield St	Street	6	Yes	No	No	\$ 292,638
P107	April Rain Rd	West	Harvard Rd	Stoneridge Dr	Street	6	Yes	No	No	\$ 474,535
P110	Trail Rd	South	Folks Rd	Monterey Way	Collector	6	Yes	No	No	\$ 223,763
P112	Trail Rd	North	Monterey Way	Kasold Dr	Collector	6	Yes	No	No	\$ 163,803
P115	Creekwood Dr	North	Glenview Dr	Princeton Blvd	Street	6	Yes	No	No	\$ 144,674
P116	Rockfence Pl	West	Riverview Rd	Tomahawk Dr	Street	6	Yes	No	No	\$ 61,127
P120	Schwarz Rd	South/West	Lawrence Ave	W 6th St	Street	6	Yes	Yes	No	\$ 90,409
P125	Tomahawk Dr	South	Rockfence Pl	Bighorn Ct	Street	6	Yes	No	No	\$ 101,097
P127	Bobwhite Dr	South	George Williams Way	Lake Alvarado Dr	Collector	6	Yes	No	No	\$ 90,629
P136	Oak Tree Dr	East	Inverness Dr	W 12th St	Street	6	Yes	No	No	\$ 27,817
P152	Rockledge Rd	South	East of Country Club Ter		Collector	6	No	Yes	No	
P153	Rockledge Rd	South	East of Country Club Ter	McDonald Dr	Collector	6	No	Yes	No	\$ 39,076
P166	Overland Dr	Both	North of Queens Rd		Collector	6	No	No	No	
P172	Lyon St	North	N 2nd St	N 3rd St	Collector	6	No	No	No	\$ 100,650
P173	Lyon St	North	N 3rd St	N 5th St	Collector	6	No	No	No	\$ 144,876
P186	Rockledge Rd	South	East of Country Club Ter		Collector	6	No	Yes	No	\$ 22,561
P187	Rockledge Rd	North	East of Country Club Ter		Collector	6	No	Yes	No	\$ 45,630
P196	W 4th St	North	McDonald Dr	Northwood Ln	Collector	6	No	Yes	No	\$ 10,864
P205	North St	North	N 3rd St	N 7th St	Collector	6	No	No	No	\$ 175,176
P206	North St	South	N 3rd St	N 7th St	Collector	6	No	No	No	\$ 514,066
P225	Harper St	East	E 15th St	E 17th St	Collector	6	No	Yes	No	\$ 100,518
P233	Inverness Dr	East	Carmel Dr	2012 Inverness Dr	Collector	6	No	No	No	\$ 323,842
P246	W 12th St	South	Oak Tree Dr	Vantuyl Dr	Street	6	Yes	No	No	\$ 41,875
P035	Lakeview Rd	South	N Iowa St	Timberledge Rd	Arterial	5	No	No	No	\$ 138,689
P036	Wakarusa Dr	South	East of Queens Rd		Arterial	5	No	No	No	
P046	N Iowa St	West	Packer Rd	Lakeview Rd	Arterial	5	No	No	No	\$ 57,292
P055	N 8th St	East	Elm St	Walnut St	Street	5	Yes	No	No	\$ 61,504
P058	Oregon St	East	E 13th St	260 LF South of E 12th St	Street	5	Yes	Yes	No	\$ 154,870
P087	Crestline Dr	East	Crestline Ct	W 27th St	Street	5	Yes	No	No	\$ 137,040
P097	Ranch St	East	W 24th St	Ranch Way (Private)	Street	5	Yes	Yes	No	\$ 33,065
P101	W 12th St	North	Vantuyl Dr	Wagon Wheel Rd	Street	5	Yes	No	No	\$ 56,336
P102	Goldfield St	South	Oak Tree Dr	Harvard Rd	Street	5	Yes	No	No	\$ 41,726
P105	Grove Dr	North	Wildwood Dr	Harvard Rd	Street	5	Yes	No	No	\$ 78,510

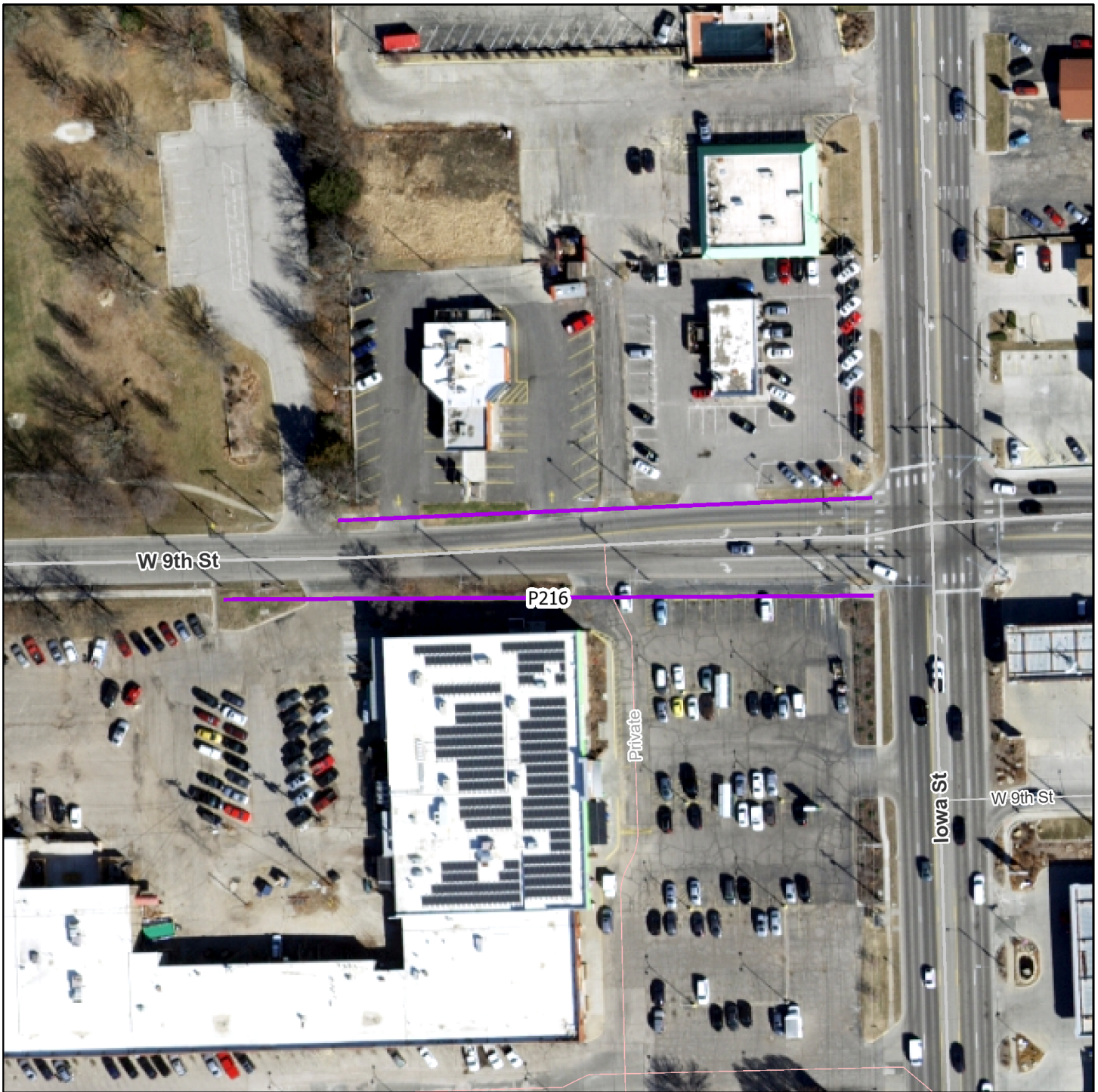


ProjectID	Road	Side	From_	To	Classification	Total_Score	SRTS	CDBG	Crossing	Total_Cost
P109	Harvard Rd	North	Monterey Way	Randall Rd	Collector	5	Yes	No	No	\$ 165,225
P117	Rockfence Pl	East	Trail Rd	Riverview Rd	Street	5	Yes	No	No	\$ 293,138
P118	Trail Rd	North	Kasold Dr	Rockfence Pl	Collector	5	Yes	No	No	\$ 66,313
P119	Trail Rd	North	290 LF West of Millstone Dr	Settlers Dr	Collector	5	Yes	No	No	\$ 59,758
P126	Riverview Rd	North	Rockfence Pl	Rockfence Pl	Street	5	Yes	No	No	\$ 15,690
P129	W 26th St	North	Ousdahl	Ridge Ct	Street	5	Yes	Yes	No	\$ 47,126
P139	Arrowhead Dr	West	Peterson Rd	Brett Dr	Street	5	Yes	No	No	\$ 68,946
P149	Lyon St	North	N 7th St	600 LF East of N 7th St	Collector	5	No	No	No	\$ 45,069
P165	E 25th Ter	South	East of Haskell Ave		Collector	5	No	Yes	No	\$ 17,735
P169	W 18th St	South	Wakarusa Dr	Corporate Centre Dr	Collector	5	No	No	No	\$ 43,228
P170	W 18th St	South	East of Research Park Dr		Collector	5	No	No	No	\$ 17,989
P174	Lyon St	North	N 6th St	N 7th St	Collector	5	No	No	No	\$ 71,376
P191	Branchwood Dr	West	Stoneridge Dr	Stonecreek Dr	Collector	5	No	No	No	\$ 147,368
P199	Eisenhower Dr	West	Eisenhower Ter	Campbell Pl	Collector	5	No	No	No	\$ 152,554
P200	Dole Dr	West	Wakarusa Dr	Earhart Cir	Collector	5	No	No	No	\$ 19,990
P201	Dole Dr	West	North of Earhart Cir		Collector	5	No	No	No	
P202	E 11th St	South	Haskell Ave	750 LF West of Haskell	Collector	5	No	Yes	No	\$ 40,313
P207	Lyon St	South	N 7th St	N 9th St	Collector	5	No	No	No	\$ 186,487
P208	Lyon St	North	450 LF West of N 8th St	N 9th St	Collector	5	No	No	No	\$ 129,555
P209	N 9th St	East	Lyon St	Elm St	Collector	5	No	No	No	\$ 118,691
P210	N 9th St	West	Lyon St	Elm St	Collector	5	No	No	No	\$ 327,797
P222	E 11th St	South	E 11th St	East City Limits	Collector	5	No	No	No	\$ 97,815
P223	E 11th St	North	E 11th St	East City Limits	Collector	5	No	No	No	\$ 349,790
P247	Harvard (ROW)		Lawrence Ave	Wellington Rd	Street	5	No	Yes		
P059	E 13th St	North	Haskell Ave	Brook St	Street	4	Yes	Yes	No	\$ 89,541
P093	Crestline Dr	East	W 30th St	Crestline Pl	Street	4	Yes	No	No	\$ 99,263
P094	Winterbrook Dr	West	450 LF South of W 25th Ter	Kasold Dr	Street	4	Yes	Yes	No	\$ 149,526
P100	Carmel Dr	West	Inverness Dr	Killarney Ct	Street	4	Yes	No	No	\$ 498,596
P106	Stonecreek Dr	West	Harvard Rd	Legends Dr	Street	4	Yes	No	No	\$ 229,449
P111	Sharon Dr	West	Springhill Dr	Trail Rd	Street	4	Yes	No	No	\$ 183,503
P113	Tillerman Dr	South	Eagle Pass Dr	N Kasold Dr	Street	4	Yes	No	No	\$ 217,006
P114	Brett Dr	North	Brentwood Dr	Stowe Ct	Street	4	Yes	No	No	\$ 61,619
P132	E 17th St	North	Harper St	Powers St	Street	4	Yes	Yes	No	\$ 18,656
P133	E 17th St	South	Irving Dr	Lindenwood Ln	Street	4	Yes	Yes	No	\$ 65,181
P140	Brentwood Drive	West	Brett Dr	Arrowhead Dr	Street	4	Yes	No	No	\$ 193,770

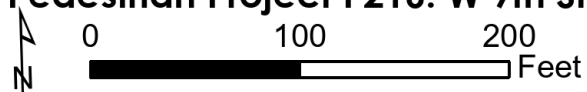
PROJECTID	FULLNAME	BIKE_TYPE	Total_Points	EngEst
B155	SLT Path at Iowa Street		19	
B118	Lawrence Loop - Burcham Park to New York	Shared Use Path	18	
B015	Naismith Drive - 18th to 23rd	Bike Lane	16	
B027	Massachusetts Street - 14th to 21st	Bike Lane	16	
B033	9th Street - at Mississippi	Bike Lane	16	
B116	6th Street - Lawrence to Iowa	Shared Use Path	16	\$ 736,603
B121	Lawrence Loop - Peterson to Michigan	Shared Use Path	16	\$ 1,647,885
B128	6th Street - Iowa to Wisconsin	Shared Use Path	16	\$ 285,993
B181	W 6th Street @ Iowa Street	Shared Use Path	16	
B002	5th Street - Wisconsin to Tennessee	Bike Boulevard	15	
B005	Mississippi St - Fambrough to Jayhawk	Bike Lane	15	
B006	New Hampshire Street - 6th to 9th	Shared Lane Marking	15	
B007	Massachusetts Street - 11th to 14th	Bike Lane	15	
B008	Naismith Drive - On KU Campus	Bike Lane	15	
B016	9th Street - Kentucky to New Hampshire	Shared Lane Marking	15	
B022	Wisconsin Street - 5th to 6th	Bike Boulevard	15	
B024	New Hampshire Street - 9th to 11th	Shared Lane Marking	15	
B025	11th Street - Mass to Kentucky	Shared Lane Marking	15	
B127	Mississippi St - 9th to Fambrough	Bike Lane	15	
B164	Kasold Dr - 22nd Street to Clinton Parkway	Future Bikeway	15	
B029	6th Street - Monterey to Kasold	Shared Use Path	14	\$ 643,599
B030	6th Street - Kasold to Lawrence	Shared Use Path	14	\$ 483,546
B131	Massachusetts Street - 21st to 23rd		14	
B140	Massachusetts Street Bridge		14	
B141	Vermont Street Bridge		14	
B166	Kasold Dr - Trail to W 6th St	Future Bikeway	14	
B132	Massachusetts St - 23rd to Indian Ave		13	
B133	23rd Street - Barker to Burrough's Creek Trail		13	
B136	Maine Street - 9th to Fambrough		13	
B137	Maine Street - 7th to 9th		13	
B138	W 7th Street - Wisconsin to Maine		13	
B145	W 27th Street - Naismith Valley Trail to Louisiana		13	
B146	W 27th Street - Iowa St to Naismith Valley Trail		13	
B151	Wakarusa Drive - Clinton to W 27th/SLT		13	
B158	Fambrough Dr - Maine to Mississippi	Future Bikeway	13	
B161	Bob Billings Pkwy - Kasold to Monterey Way	Future Bikeway	13	
B165	W 15th St - KU to Engel	Future Bikeway	13	
B172	Kasold Dr - Peterson to Trail		13	
B003	Lawrence Ave - Mesa to Harvard	Bike Boulevard	12	
B028	Lawrence Avenue - Harvard to BBPW	Bike Boulevard	12	
B147	W 27th Street - Lawrence Ave to Iowa Street		12	
B148	Lawrence Avenue - Clinton to W 27th St		12	
B156	Kasold at K-10		12	
B004	KU Central District	Shared Use Path	11	
B009	29th Street - Haskell Rail Trail to Haskell	Shared Use Path	11	
B013	21st Street - Naismith to Mass	Bike Boulevard	11	
B017	KU West Campus	Shared Use Path	11	
B018	KU Main Campus - Jayhawk to Naismith	Shared Use Path	11	
B026	13th Street - Mass to Burroughs Creek Trail	Bike Boulevard	11	
B032	Lawrence Loop B - Kasold	Shared Use Path	11	\$ 59,209
B123	Lawrence Loop - New York to 8th	Shared Use Path	11	\$ 552,891
B124	Lawrence Loop - 8th to 11th	Shared Use Path	11	\$ 394,000
B126	21st Street - Ousdahl to Naismith		11	

PROJECTID	FULLNAME	BIKE_TYPE	Total_Points	EngEst
B129	21st Street -Iowa to Ousdahl		11	
B150	W 31st Street - Atchison Ave to Lawrence Ave		11	
B152	Wakarusa Drive - Bob Billings to Clinton Pkwy		11	
B153	Wakarusa Drive - south of 6th Street		11	
B159	Ousdahl Rd - W 19th St to W 21st St	Future Bikeway	11	
B160	Bob Billings Pkwy - Inverness to Inverness	Future Bikeway	11	
B162	Bob Billings Pkwy - Monterey Way to Inverness	Future Bikeway	11	
B163	Bob Billings Pkwy - Inverness to Wakarusa	Future Bikeway	11	
B167	Ousdahl Rd - W 19th Ter to W 20th St	Future Bikeway	11	
B173	Wakarusa Dr W 6th St to Harvard	Future Bikeway	11	
B176	Wakarusa Dr - Bob Billings south	Bike Lane	11	
B179	Wakarusa Dr - Harvard to Inverness	Bike Lane	11	
B180	Wakarusa Dr - Inverness to Oread West	Bike Lane	11	
B120	Lawrence Loop - Michigan to Shandra Shaw	Shared Use Path	10	\$ 1,171,394
B174	Bob Billings Pkwy - Research Park Dr to GWW	Bike Lane	10	
B175	Bob Billings Pkwy - Wakarusa to Research Park Dr	Bike Lane	10	
B177	Wakarusa Dr - Bob Billings to Oread West	Bike Lane	10	
B134	21st Street - Massachusetts to Barker		9	
B135	Barker Ave - 21st to 23rd		9	
B139	Wisconsin Street - 6th to 7th		9	
B143	N 3rd Street - North Street to Elm Street		9	
B144	Park Hill Terrace/Montana Street/Vermont Street		9	
B019	Lawrence Ave - on KU West Campus	Shared Use Path	8	
B142	Elm Street - N 2nd St to N 3rd St		8	
B149	Lawrence Ave - W 27th St to W 31st St		8	
B010	Lawrence Loop - Kasold to Queens	Shared Use Path	7	\$ 3,863,009
B154	Monterey Way from Stetson to 6th		6	
B178	Bob Billings Pkwy - George Williams Way to K-10	Bike Lane	6	
B130	Queens Rd - Wakarusa to Baldwin Creek		5	
B168	E 9th St - New Hampshire to Connecticut	Future Bikeway	5	
B182	Queens Rd - Eisenhower to Wakarusa/Rock Chalk		5	





## Pedestrian Project P216: W 9th St from West of Iowa St to



### Pedestrian Prioritization Score

Priority Network Score:	5
Pedestrian Access Score:	4
Roadway Volume Score:	5
Crossing Score:	0
Total Score:	14

Engineer's estimate: \$87347

Funding source:

Sidewalk missing 2 side(s).

Adjacent road class is Collector.

Safe Routes to School? No

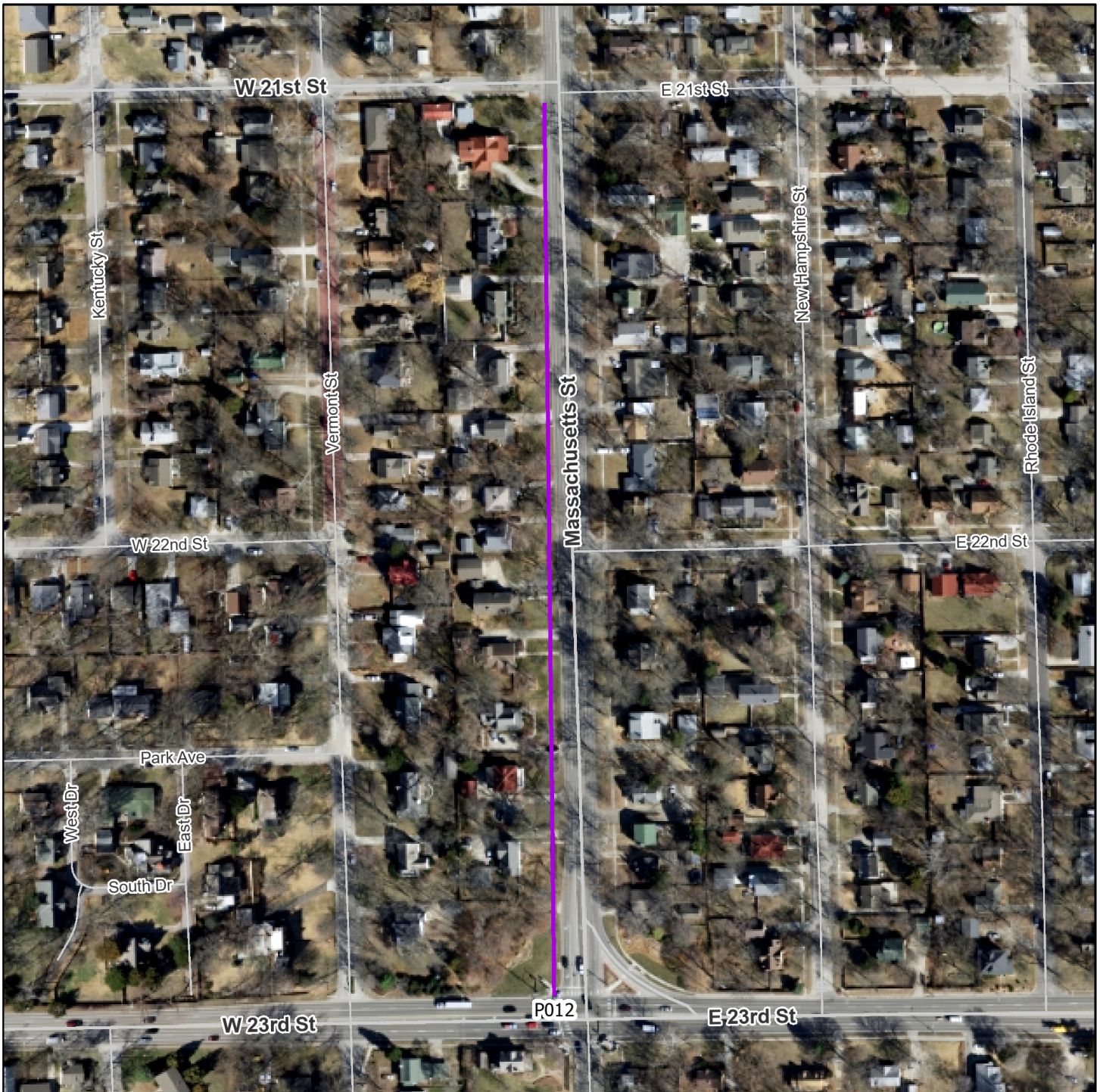
CDBG eligible? Yes



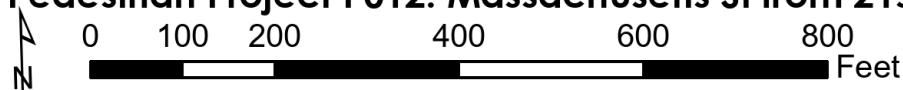
City of Lawrence

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## Pedestrian Project P012: Massachusetts St from 21st St to 23rd St



### Pedestrian Prioritization Score

Priority Network Score:	4
Pedestrian Access Score:	4
Roadway Volume Score:	5
Crossing Score:	0
<b>Total Score:</b>	<b>13</b>

Engineer's estimate: \$135864

Funding source:

Sidewalk missing 1 side(s).

Adjacent road class is Arterial.

Safe Routes to School? No

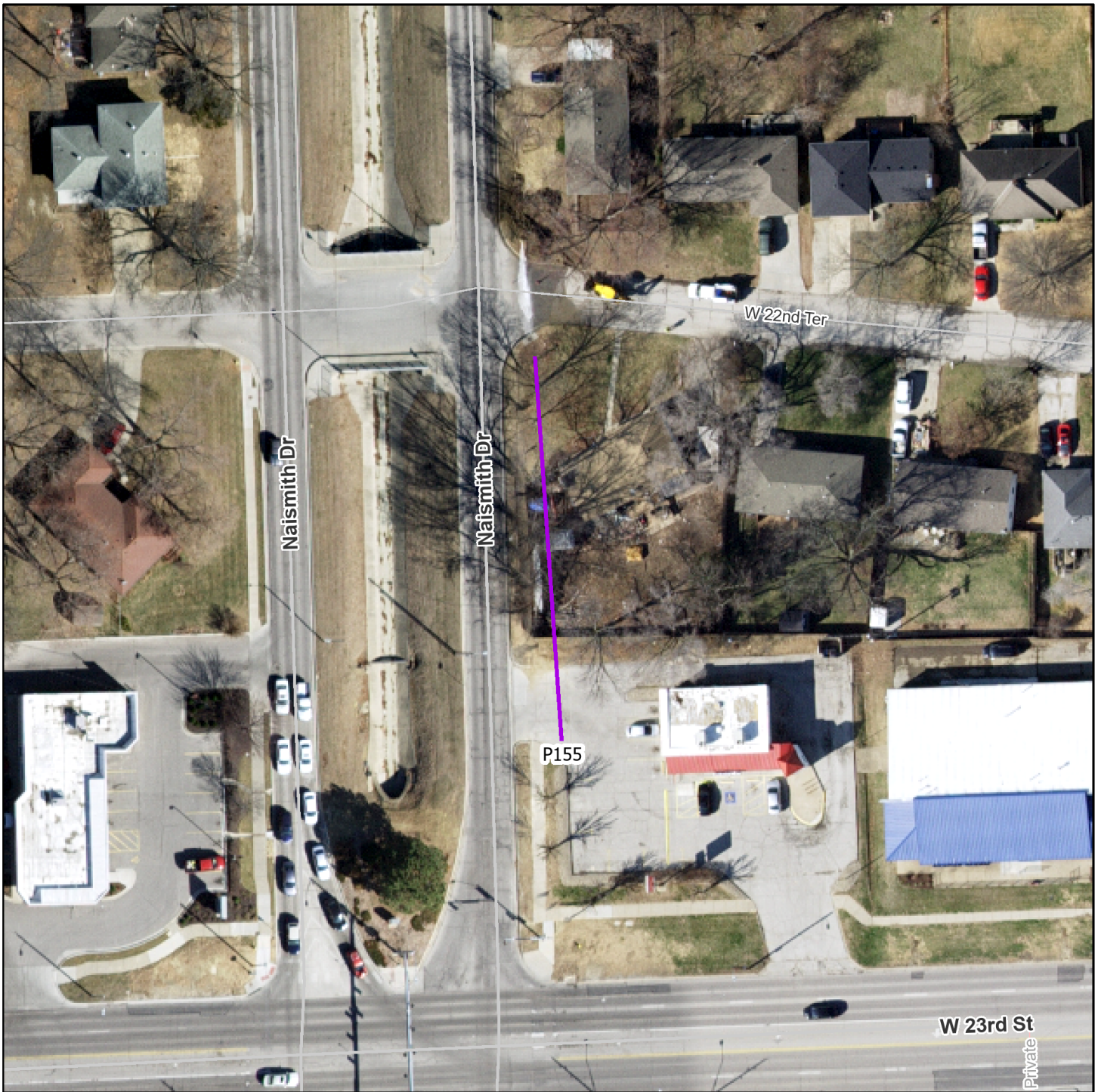
CDBG eligible? No



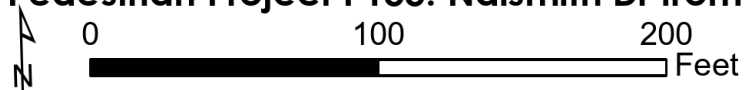
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## Pedestrian Project P155: Naismith Dr from W 22nd Ter to W 23rd St



### Pedestrian Prioritization Score

Priority Network Score:	4
Pedestrian Access Score:	3
Roadway Volume Score:	5
Crossing Score:	0
<b>Total Score:</b>	<b>12</b>

Engineer's estimate: \$17524

Funding source:

Sidewalk missing 1 side(s).

Adjacent road class is Collector.

Safe Routes to School? No

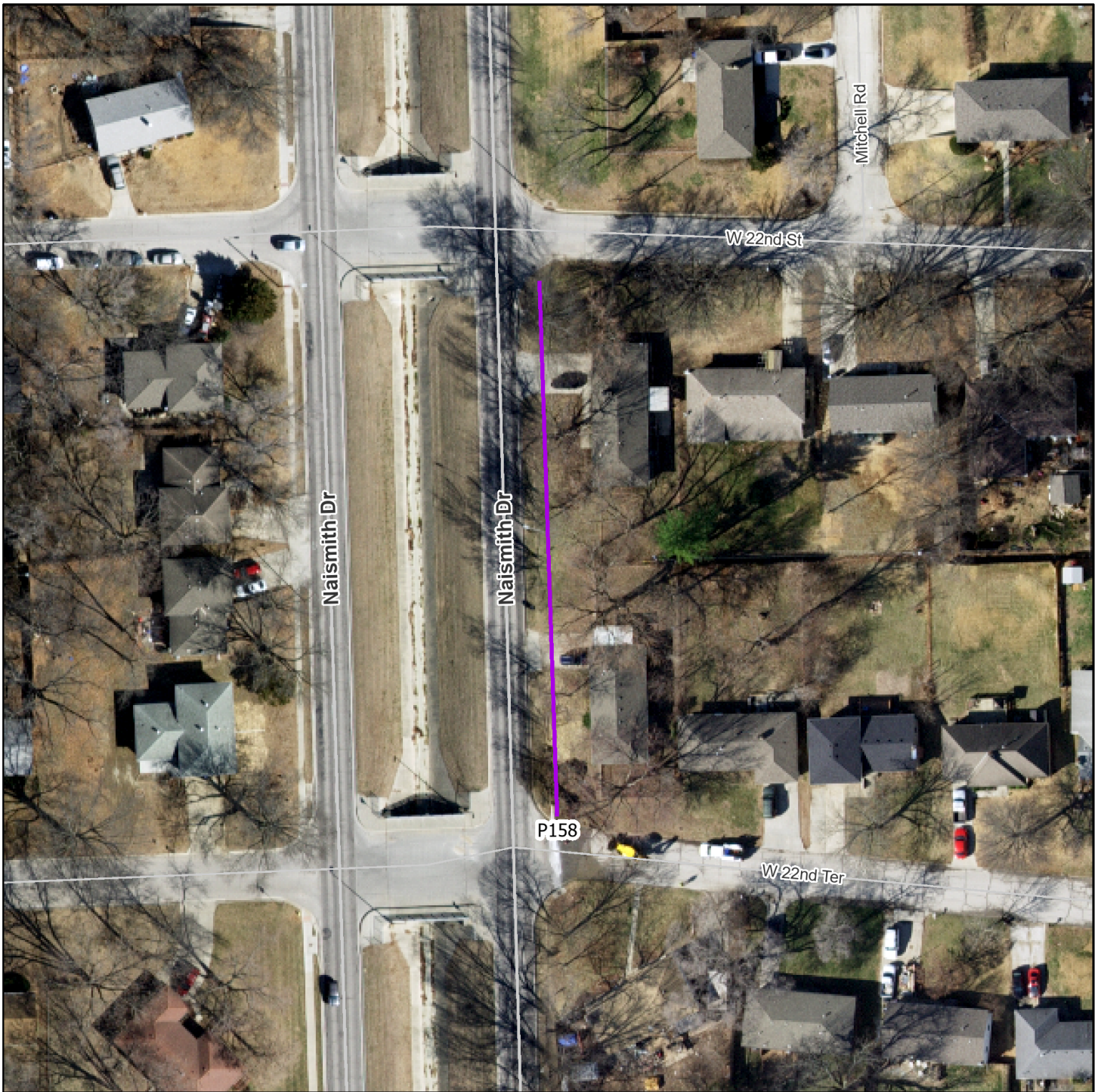
CDBG eligible? Yes



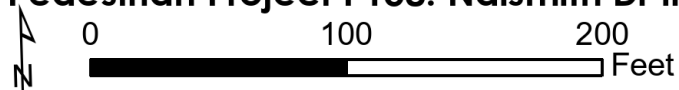
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## Pedestrian Project P158: Naismith Dr from W 22nd St to W 22nd Ter



### Pedestrian Prioritization Score

Priority Network Score:	4
Pedestrian Access Score:	3
Roadway Volume Score:	5
Crossing Score:	0
<b>Total Score:</b>	<b>12</b>

Engineer's estimate: \$25799

Funding source:

Sidewalk missing 1 side(s).

Adjacent road class is Collector.

Safe Routes to School? No

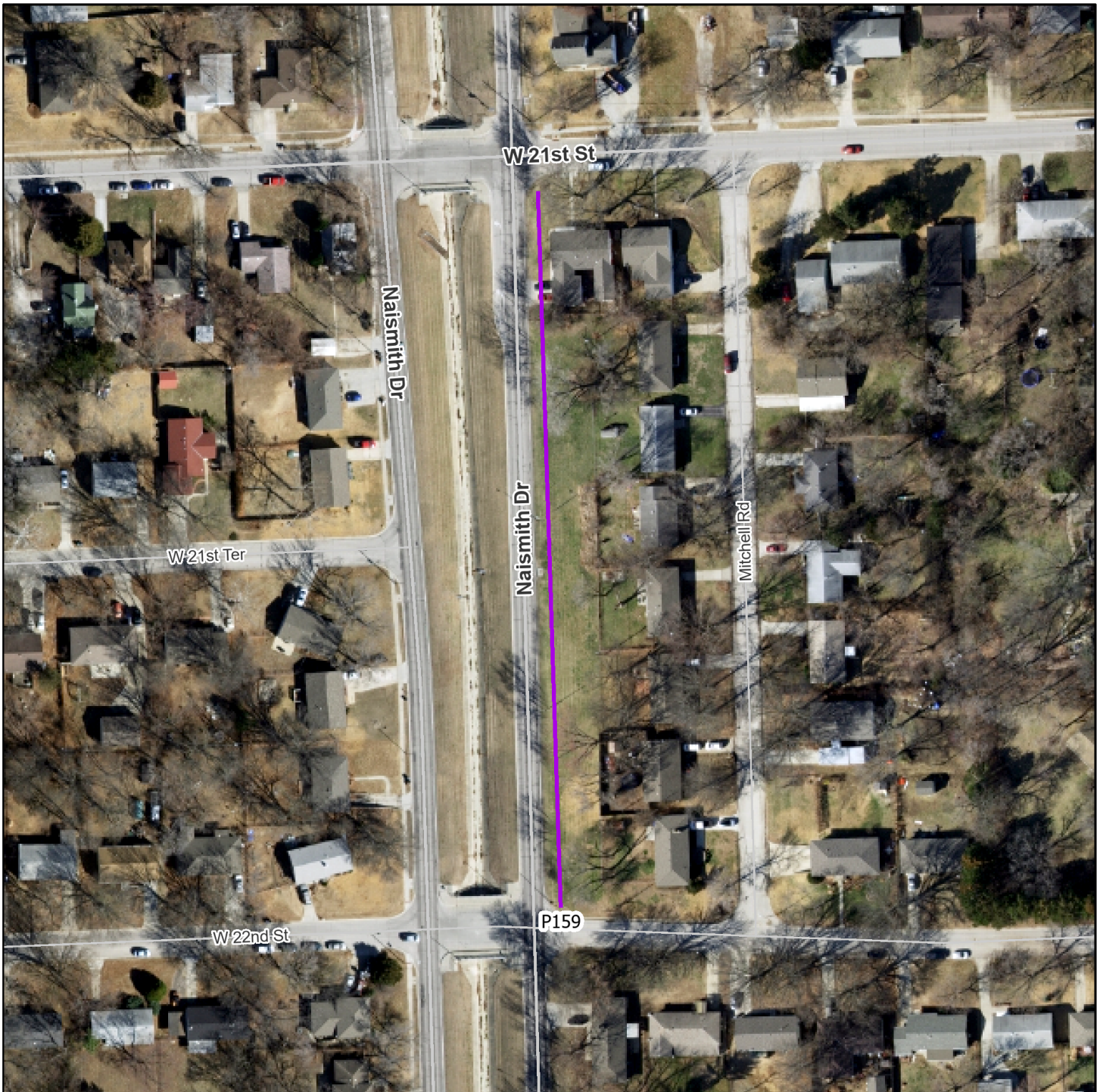
CDBG eligible? Yes



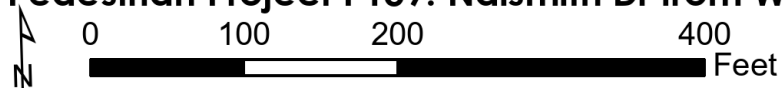
**City of Lawrence**

Date Printed: 10/31/2019





## Pedestrian Project P159: Naismith Dr from W 21st St to W 22nd St



### Pedestrian Prioritization Score

Priority Network Score:	4
Pedestrian Access Score:	3
Roadway Volume Score:	5
Crossing Score:	0
Total Score:	12

Engineer's estimate: \$45016

Funding source:

Sidewalk missing 1 side(s).

Adjacent road class is Collector.

Safe Routes to School? No

CDBG eligible? Yes



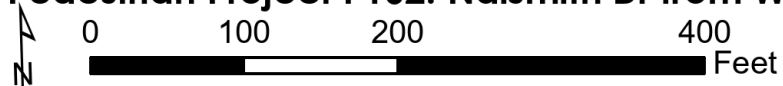
City of Lawrence

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## Pedestrian Project P162: Naismith Dr from W 20th St to W 21st St



### Pedestrian Prioritization Score

Priority Network Score: 4  
 Pedestrian Access Score: 3  
 Roadway Volume Score: 5  
 Crossing Score: 0  
 Total Score: 12

Engineer's estimate: \$41269

Funding source:

Sidewalk missing 1 side(s).

Adjacent road class is Collector.

Safe Routes to School? No

CDBG eligible? Yes



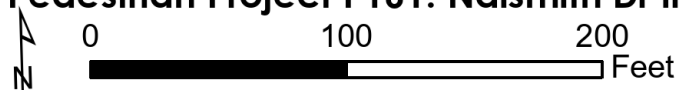
City of Lawrence

Date Printed: 10/31/2019





## Pedestrian Project P161: Naismith Dr from W 19th Ter to W 20th St



### Pedestrian Prioritization Score

Priority Network Score:	4
Pedestrian Access Score:	2
Roadway Volume Score:	5
Crossing Score:	0
<b>Total Score:</b>	<b>11</b>

Engineer's estimate: \$102861

Funding source:

Sidewalk missing 1 side(s).

Adjacent road class is Collector.

Safe Routes to School? No

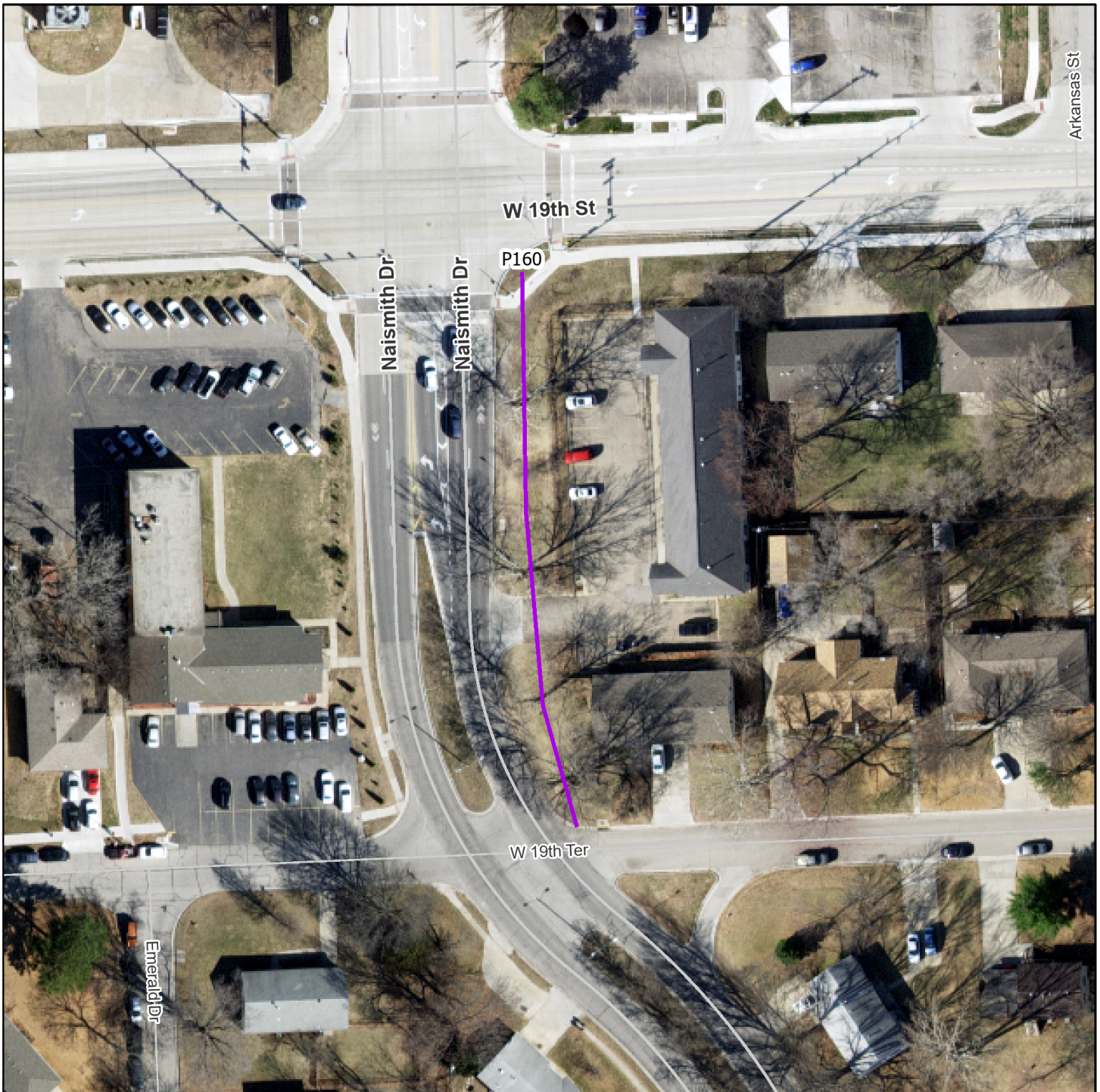
CDBG eligible? Yes



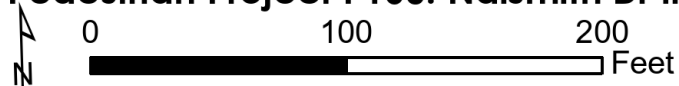
**City of Lawrence**

Date Printed: 10/31/2019





## Pedestrian Project P160: Naismith Dr from W 19th St to W 19th Ter



### Pedestrian Prioritization Score

Priority Network Score:	4
Pedestrian Access Score:	3
Roadway Volume Score:	5
Crossing Score:	0
Total Score:	12

Engineer's estimate: \$31239

Funding source:

Sidewalk missing 1 side(s).

Adjacent road class is Collector.

Safe Routes to School? No

CDBG eligible? Yes



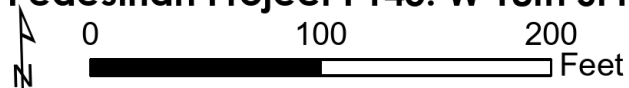
City of Lawrence

Date Printed: 10/31/2019





## Pedestrian Project P145: W 18th St from Ohio St to Tennessee St



### Pedestrian Prioritization Score

Priority Network Score:	6
Pedestrian Access Score:	4
Roadway Volume Score:	3
Crossing Score:	0
<b>Total Score:</b>	<b>13</b>

Engineer's estimate: \$99439

Funding source:

Sidewalk missing 2 side(s).

Adjacent road class is Street.

Safe Routes to School? Yes

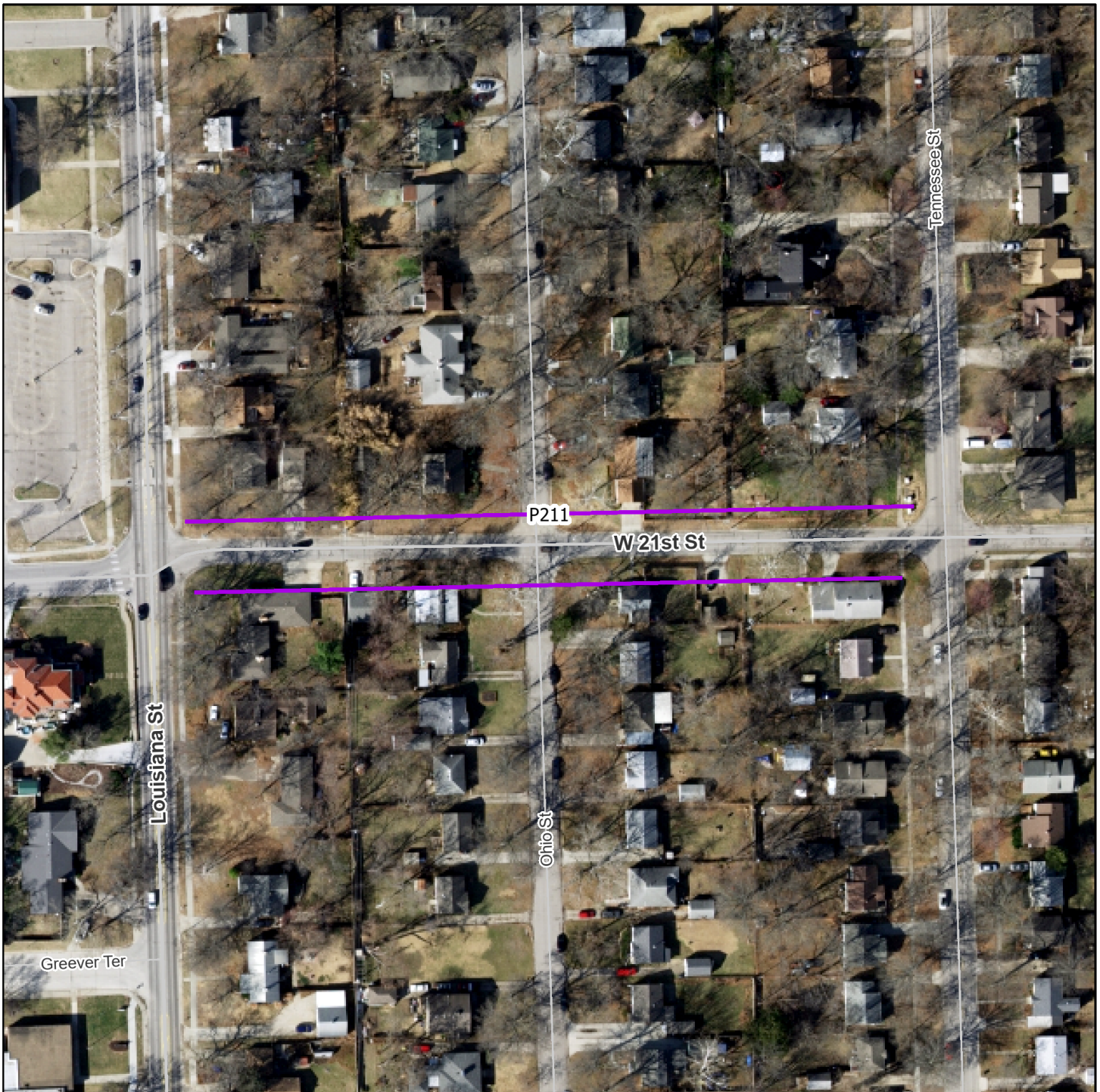
CDBG eligible? Yes



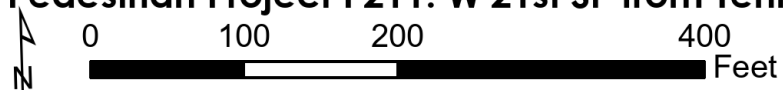
**City of Lawrence**

Date Printed: 10/31/2019





## Pedestrian Project P211: W 21st St from Tennessee St to Louisiana St



### Pedestrian Prioritization Score

Priority Network Score:	5
Pedestrian Access Score:	5
Roadway Volume Score:	3
Crossing Score:	0
<b>Total Score:</b>	<b>13</b>

Engineer's estimate: \$102765

Funding source:

Sidewalk missing 2 side(s).

Adjacent road class is Collector.

Safe Routes to School? No

CDBG eligible? No



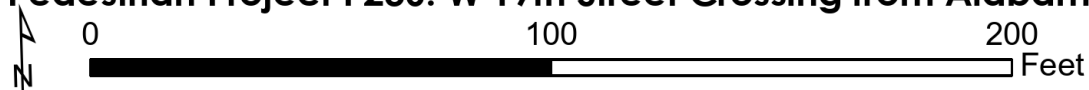
**City of Lawrence**

Date Printed: 10/31/2019





## Pedestrian Project P236: W 19th Street Crossing from Alabama St to



### Pedestrian Prioritization Score

Priority Network Score:	4
Pedestrian Access Score:	4
Roadway Volume Score:	3
Crossing Score:	1
<b>Total Score:</b>	<b>12</b>

Engineer's estimate: \$54000

Funding source:

Sidewalk missing 1 side(s).

Adjacent road class is Arterial.

Safe Routes to School? Yes

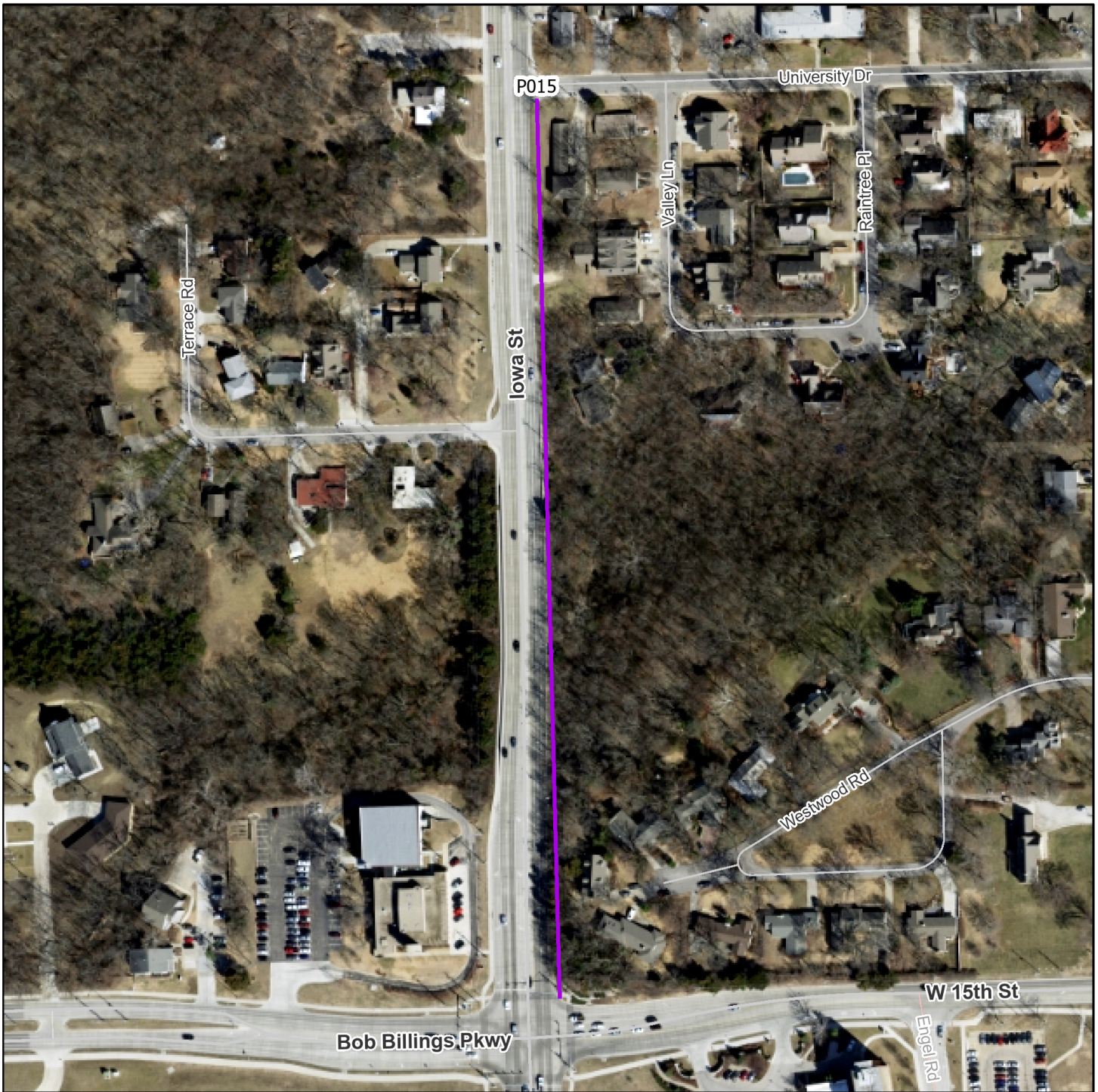
CDBG eligible? Yes



**City of Lawrence**

Date Printed: 10/31/2019





## Pedestrian Project P015: Iowa St from 15th St/Bob Billings Pkwy to University Dr



### Pedestrian Prioritization Score

Priority Network Score:	4
Pedestrian Access Score:	3
Roadway Volume Score:	5
Crossing Score:	0
<b>Total Score:</b>	<b>12</b>

Engineer's estimate: \$342026

Funding source:

Sidewalk missing 1 side(s).

Adjacent road class is Arterial.

Safe Routes to School? No

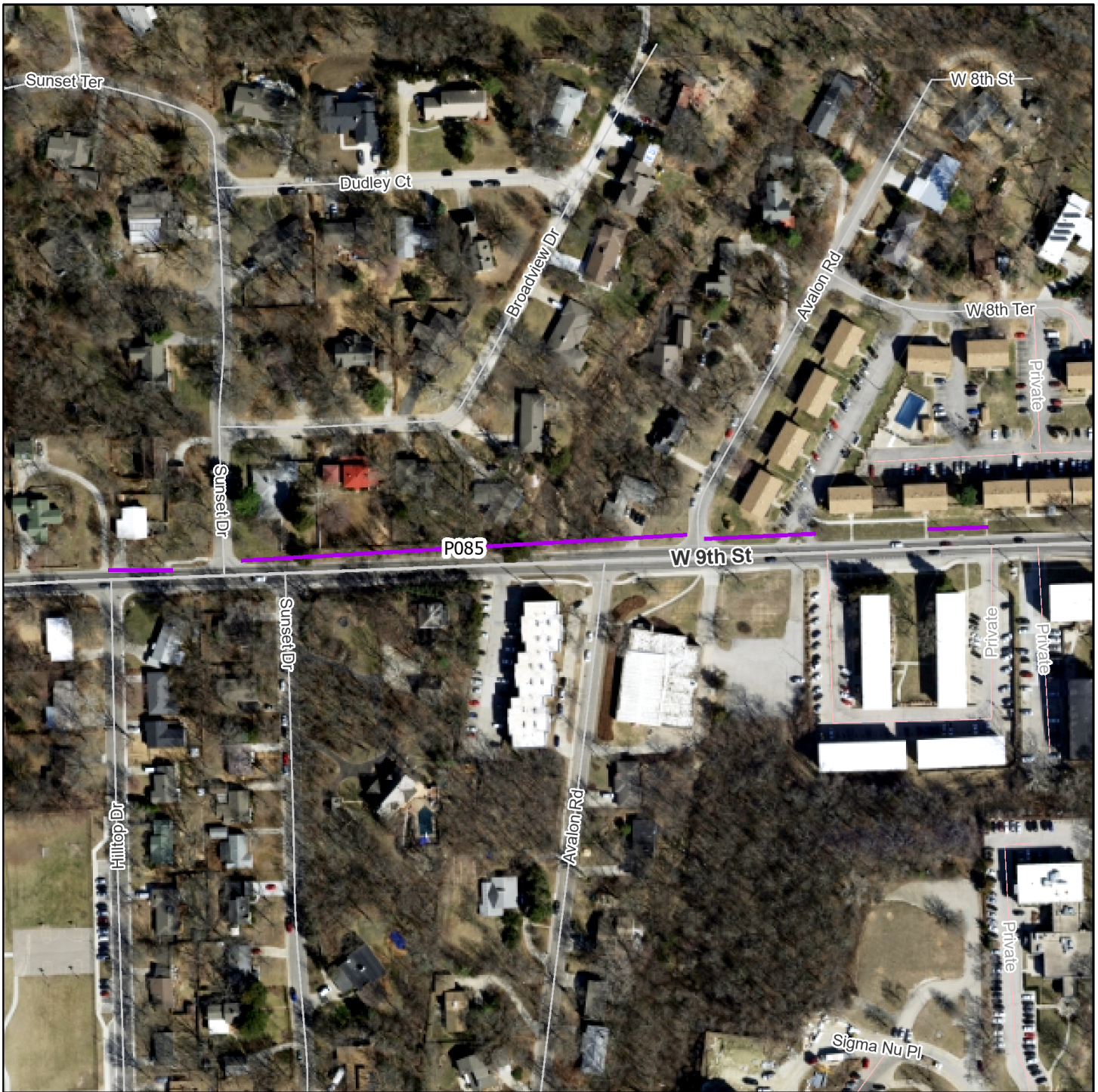
CDBG eligible? Yes



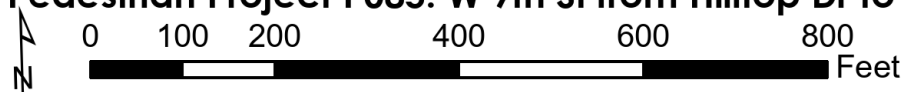
**City of Lawrence**

Date Printed: 10/31/2019





## Pedestrian Project P085: W 9th St from Hilltop Dr to 400' east of Avalon Rd



### Pedestrian Prioritization Score

Priority Network Score:	4
Pedestrian Access Score:	4
Roadway Volume Score:	4
Crossing Score:	0
<b>Total Score:</b>	<b>12</b>

Engineer's estimate: \$460882

Funding source:

Sidewalk missing 1 side(s).

Adjacent road class is Arterial.

Safe Routes to School? Yes

CDBG eligible? Yes



**City of Lawrence**

Date Printed: 10/31/2019





## Bikeway Project B128: 6th Street - Iowa to Wisconsin

0 200 400  
Feet

### Bikeway Prioritization Score

Adopted Plan Score: 6  
Bicycle Demand Score: 5  
Roadway Volume Score: 5  
Crossing Score: 0  
Total Score: 16

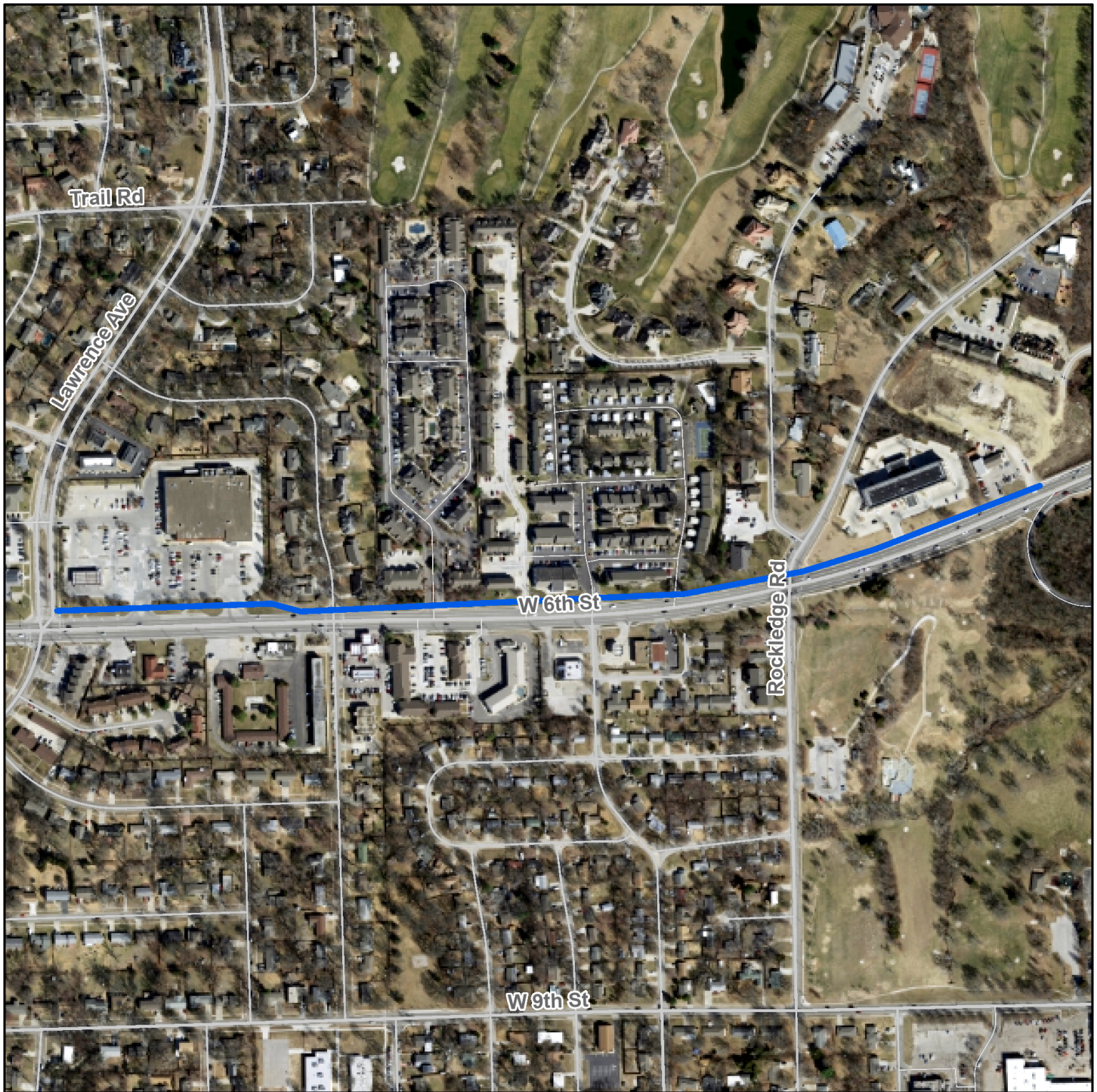
— BikeProjects



City of Lawrence

Date Printed: 11/1/2019





## Bikeway Project B116: 6th Street - Lawrence to Iowa



### Bikeway Prioritization Score

Adopted Plan Score: 6  
 Bicycle Demand Score: 5  
 Roadway Volume Score: 5  
 Crossing Score: 0  
 Total Score: 16

 BikeProjects



City of Lawrence

Date Printed: 11/1/2019

# Memorandum

## City of Lawrence

### Municipal Services & Operations Department

TO: Multimodal Transportation Commission  
FROM: Dave Cronin, City Engineer  
DATE: October 31, 2019  
RE: Agenda Item for Transportation Commission November 4, 2019:  
Shared Scooter Pilot Program

#### **Background**

At the August 5th Transportation Commission meeting, the Commission elected to form the Micromobility Subcommittee to provide recommendations on e-scooters and other forms of Micromobility in Lawrence. The committee focused on conducting research on regulations for shared scooters and developing a pilot program. An update was provided at the October 7<sup>th</sup> Study Session. Staff used the subcommittee's input to draft a RFQ for a Shared Scooter Pilot Program.

#### **Action Request**

Review draft of Shared Scooter RFQ and provide recommendation to City Commission.

#### **Attachment**

RFQ Shared Scooters





## City of Lawrence

### REQUEST FOR QUALIFICATIONS (RFQ)

**RFP Description:** Shared Electric Scooter Pilot Program  
City Project No.  
City RFQ #

**Department:**

**Contacts:**  
Email:  
Phone:

**Proposals Due:** January xx, 2020 at 5:00 p.m.

**Copy Requirements:** Submit five (5) copies of qualifications/proposal plus one electronic copy of PDF format

**Pre-Submittal Meeting:** No meeting is scheduled; please submit questions via email.

**Submit to:** By Mail  
City of Lawrence  
Administrative Offices  
P.O. Box 708  
Lawrence, KS 66044

## **PROJECT DESCRIPTION**

The City of Lawrence is planning a 6 month pilot program for the regulation of the operation and use of shared electric scooters (herein referred to as “Shared Scooters”) beginning in the spring of 2020 (“the Pilot Period”). The Pilot Period will help the City evaluate appropriate regulations and determine whether Shared Scooters support the Critical Success Factors in the City’s Strategic Plan including: Safe, Healthy and Welcoming Neighborhoods; Innovative Infrastructure and Asset Management; and Collaborative Solutions. Through public engagement and program evaluation, the City will determine whether and under what circumstances Shared Scooters will be permitted to continue operating in the public right-of-way.

The University of Kansas intends to participate in the City’s pilot program through a Memorandum of Understanding.

Prospective operators applying to participate in the Shared Scooter Pilot Program should demonstrate how their Shared Scooter service would contribute to the following goals and focus areas:

- Provide a sustainable, affordable transportation option to efficiently provide ‘first mile/last mile’ trips and enhance connectivity to schools, employment and retail.
- Learn, adapt and innovate and thereby respond more effectively and promptly to changing circumstances.
- Promote community engagement and awareness of how shared scooters benefit the city.

Through public engagement and program evaluation, City officials will determine whether and under what circumstances Shared Scooters will be permitted to continue operating in the public Right-of-Way after the Pilot Period. The operation of a Shared Scooter service will require a valid, current Shared Scooter agreement with the City. Currently, the City only intends to enter into agreements with up to two (2) companies for the Pilot Period from April 1, 2020 to October 1, 2020.

For the duration of the Pilot Period, the City may issue multiple, independent agreements, the terms of which will be negotiated by the City and each selected Company. Permittees should be capable of deploying Shared Scooters within two weeks of agreement issuance and Shared Scooters must be deployed within 6 weeks of agreement issuance.

## **DEFINITIONS**

- A. “Shared Scooter” means a vehicle that:
  - a. Has at least two wheels, electric motor, handlebars, a brake and a deck designed to be stood upon while riding
  - b. Is made available for rental or public shared use in the public Right-of-Way.
- B. “User” means the person who is in actual physical control of a Shared Scooter.

## **TENTATIVE PROJECT SCHEDULE**

All firms submitting proposals must be prepared to initiate work on this project immediately upon Notice to Proceed. Only those firms able to perform the necessary work activities within the anticipated schedule below should respond to this RFP.



<u>Activity</u>	<u>Date</u>
RFP Released	December 20, 2019
Deadline for Submittals	January 31, 2020
Proposal Reviews Completed	February 15, 2020
Pilot Agreements Finalized	March 15, 2020
Pilot Launch	April 1, 2020
Pilot Conclusion	October 1, 2020

The dates listed above are tentative.

## **PROPOSAL REQUIREMENTS OVERVIEW**

- A. Company Overview
- B. Shared Scooter Description
- C. Maintenance & Operations Plan
- D. Safety History Summary
- E. Complaint History Summary
- F. Communication & Public Engagement Plan
- G. User Equity Plan
- H. Data Breach History Report
- I. Privacy Policy
- J. Data Sharing Agreement
- K. Infrastructure Investment
- L. Fees
- M. Insurance Requirements

## **PROPOSAL REQUIREMENTS**

All firms interested in being considered for this project should submit proposals that include:

- A. **Company Overview.** Provide an overview of your company, along with:
  - a. Cities similar in size and urban development patterns to Lawrence where you currently operate a Shared Scooter service, a local regulatory contact, and the number of Shared Scooters deployed in each of those cities.
  - b. List all legal or regulatory enforcement actions, by type, initiated against the company.
- B. **Shared Scooter Description.** Provide a detailed description of your Shared Scooter(s), including images of the branded Shared Scooters you propose for Lawrence.
  - a. The City would like to ensure that Shared Scooters in operation during the Pilot Program include the latest in innovative technology and features designed to improve rider safety, durability, convenience, and compliance with parking/riding restrictions. Please describe how your Shared Scooters are designed to address each of these issues. Will the Shared Scooters you deploy in Lawrence be the latest and most up-to-date generation that your Company offers?
  - b. Please note that your Shared Scooters must comply with the following standards:
    - i. The motor-assist speed for all Shared Scooters must not exceed 15 miles per hour.
    - ii. Shared Scooters must be equipped with front and rear lights that are visible from a distance of at least 500 feet under normal atmospheric conditions at night.

- iii. Each Shared Scooter must have and display a unique identification number that is provided to the City.
  - iv. Each Shared Scooter must clearly display the current contact phone number for your 24-hour customer service line.
  - v. Company must have the ability to remotely lock-down individual Shared Scooters when they are reported/deemed unsafe and outside of operating times set by the City (7am to 8pm).
  - vi. Company must have the ability to use geofencing in designated zones including downtown and the University of Kansas to restrict speeds and operations.
  - vii. Shared Scooters must comply with safety standards established by the Consumer Product Safety Commission and all other federal, state, and city safety standards
- C. **Maintenance & Operations Plan.** The Company must have the ability to recharge the scooters with Company equipment and personnel. Allowing the general public to recharge scooters will not be allowed. For maintenance and operations please describe:
- a. Maintenance:
    - i. The frequency and extent of your maintenance and cleaning of Shared Scooters
    - ii. The type of labor (employees, staffing services, contract labor, etc.) conducting maintenance and cleaning
    - iii. The average lifespan of the Shared Scooter and Shared Scooter disposal practice
    - iv. The extent of Shared Scooter maintenance
  - b. Operations:
    - i. Hours of operation
    - ii. Pricing plan
    - iii. Storage of Shared Scooters during non-operational hours
    - iv. Proposed fleet size and service area at launch. Please note that the City tentatively plans to restrict each Company's fleet size to a maximum of 500 deployed Shared Scooters at launch (if two companies are selected, each will be allowed a maximum of 250) and evaluate any option to phase-in an expanded or reduced fleet size maximum throughout the term of the Pilot Period based on utilization data, performance and operational outcomes.
    - v. Methods and frequency of deploying, redistributing and charging Shared Scooters. Please note that the City reserves the right to establish Shared Scooter parking zones in the public right-of-way during the Pilot Program in collaboration with Shared Scooter service operators and, similarly, reserves the right to designate areas as off limits to Shared Scooter parking.
    - vi. Process for receiving and resolving complaints and problems with Shared Scooters blocking the travel movement in real-time (e.g., sidewalk, travel lane, etc.). Include the customer intake process and staffing levels. In what time frame are complaints acknowledged and resolved? (Communication strategies with Users are listed later.)
  - c. Local Operator Contact Information
    - i. If available at this time, provide the name, email, and phone number of your local operator, available by phone 24 hours/7 days a week.
    - ii. If available at this time, list address(es) of Lawrence operations and any storage facilities.
  - d. Customer Service Operations
    - i. Provide location(s) of your customer service operations.
    - ii. Provide your 24-hour customer service number.
    - iii. Does your customer service number provide the ability for translation services?



- D. **Safety History Summary.** For markets where you operate that are similar to the City of Lawrence, provide a summary of data you maintain regarding safety incidents. The summary should include:
- Total miles travelled on your Shared Scooter fleet in each market (for calculating rates of collisions, injuries, and fatalities per mile).
  - Total number of reported and/or observed crashes and collisions
  - Total number of reported injuries, separated by: minor injuries, major injuries resulting in hospitalization, fatal injuries
  - Total number of reported injuries that involved person(s) with a disability
  - Total number of reported citations that involved a User
  - A summary of changes made by company or agency in response to safety incidents
- E. **Complaint History Report.** Provide any information your company maintains regarding complaints including:
- Total number and nature of complaints filed by Users and non-Users, by city, and over what timeframe.
  - Average time taken to resolve complaints, by type.
- F. **Communication & Public Engagement Plan**
- User Education: Describe your plan to educate and encourage User compliance with all applicable rules and regulations, including minimum age, proper parking, prohibition of sidewalk riding, and prohibition of riding on streets with a speed limit greater than or equal to 35 miles per hour.
  - General Public Communication: Describe your plan to communicate to the public on system use, driving safely around Shared Scooters, and how to report complaints. List the languages your communications are provided in.
  - Describe how your Shared Scooter service will help to enhance the Lawrence transit system.
  - Describe how your Shared Scooter service will complement the existing dock-based bicycle share system in Lawrence.
  - Describe how your Shared Scooter service will promote the use of helmets.
- G. **User Equity Plan**
- Describe strategies you will use to increase access and utilization of Shared Scooters to all socio-economic levels in the community.
  - If applicable, describe your discounted pricing structure for people living on low-incomes.
  - Describe any plans to offer a cash payment option.
  - List the languages your services are provided in.
  - Are your apps and websites accessible and screen reader compatible?
- H. **Privacy Policy**
- Provide a copy of your privacy policy that complies with relevant state and federal laws and describe how you use and safeguard Users' information, including personal, financial, and travel information.
  - List all of the parts of a User's mobile phone (e.g., camera, location services, contacts) that are required by your company for access to the Shared Scooter service. Why are they required? Does the company use this data for other commercial purposes beyond the Shared Scooter service?
  - List additional elements of a User's mobile phone that are requested during the registration process. Why are they requested? Does the company use this data for other commercial purposes beyond the Shared Scooter service?
- I. **Data Breach History Report.**

- a. Provide a summary report describing the date, location, and type of data accessed for any and all data breaches with your Company.
- J. **Data Sharing.** The City intends to use data to evaluate the pilot program. Provide your Company plan on sharing data with the City and the format to be delivered. The City is interested in the ability to obtain:
  - a. Real-time location and availability data for their entire Lawrence fleet;
  - b. Archival Trip data for entire Lawrence fleet
  - c. Archival Collision data
  - d. Archival Complaint data
  - e. Any other relevant data the Company can provide to City
- K. **Infrastructure Investment and Management**
  - a. Please describe any physical improvements designed to improve parking compliance and rider safety that your company has implemented or contributed funding toward in the markets where you operate a Shared Scooter service. Please include an estimate of the total value of your company's contribution by infrastructure type and market.
  - b. Explain your company's position on contributing toward similar infrastructure improvements in Lawrence. Provide your Company's plan to operate in Downtown Lawrence and University of Kansas campus.
- L. **Fees.** The City intends to establish a cost recovery model in each Company agreement.
  - a. Shared Scooter service operator shall deposit a \$10,000 cash escrow in City operating fund.
  - b. The fund will be used to reimburse the City's expenses for all reasonable costs arising from the need for City staff to relocate, remove, and store a Shared Scooter from any location where a Shared Scooter is prohibited. Expenses will include staff time and equipment at hourly rates.
  - c. The operator must ensure that a minimum balance of \$5,000 is maintained in the fund at the beginning of each month.
  - d. An electronic transfer of funds must be established prior to launch of operation and funds must be received by the City as outlined above.
  - e. Any uncharged balance in the operating fund would be returned to the operator at the conclusion of the operator's agreement.
- M. **Insurance requirements.** Provide Proof of Insurance that meets the city requirements in the following amounts and coverages:
  - 1. Worker's Compensation Insurance in statutory amounts and Employer's Liability Limits not less than \$1,000,000 each accident, injury, or illness.
  - 2. Commercial General Liability Insurance with minimum limits as provided below:
    - a. \$2,000,000 Aggregate
    - b. Bodily Injury/Property Damage \$2,000,000 Aggregate
    - c. Products and Completed Operations \$2,000,000 Aggregate
    - d. Personal and Advertising Injury \$1,000,000
    - e. Each Occurrence \$1,000,000
  - 3. Vehicle Liability Insurance with limits no less than \$1,000,000 each accident, "Combined Single Limit" for Bodily Injury and Property Damage, including Owned, Non-Owned and Hired auto coverage, as applicable.
  - 4. Cyber Liability Insurance with limits of not less than \$1,000,000 per claim protecting against any and all claims arising out of breach of privacy, security breach, denial of service, remediation, fines, and penalties associated with Company's collection and/or transmission of electronic data, including that of a personal and/or financial nature, in connection with the Pilot Program.



## **SELECTION PROCESS**

The City evaluation team will review, evaluate, and rank proposals to identify firms that most closely meet the needs and goals of the Pilot Program. The criteria and the associated weights upon which the evaluation of the proposals will be based include, but are not limited to, the following:

1. **Qualifications/Experience of Firm – 30 points:** Experience and demonstrated competence of operating a shared transportation network, including key personnel.
2. **Approach to Implementation – 20 points:** Thoroughness of the proposed plan to provide service in Lawrence and implement the scope of work within the proposed implementation schedule.
3. **Quality of the Scooter Sharing Program – 30 points:** Quality of proposed Program infrastructure and technology, plan for operation & maintenance, proposed response time to customers and issue resolution, rider education and emphasis on safety, plans to complement existing bike share program and enhance visitors' experience, and approach to minimizing negative impacts to the general public.
4. **Approach to and Quality of Information Sharing – 20 points:** Quality, depth, and accuracy of program data and other information that will be shared with the City to assess impact, use, and safety of the pilot.

The City may schedule formal interviews with the top-ranked companies if the City, at its sole discretion, determines interviews are necessary to make a final selection. If interviews are necessary, additional criteria, as may be deemed appropriate by the selection committee, may be developed for use in the scoring of interviews, and if so the short-listed firms will be notified of those criteria before the interviews are held. Applicants may be contacted for additional information, if necessary.

# 2019 CITY OF LAWRENCE TRANSPORTATION COMMISSION CALENDAR

<b>Study Sessions begin at 5:00PM</b> <b>Regular Meetings begin at 6:00PM</b>		
January – No meeting	February 4	March 4
April 1	May 6	June 3
<u>Study Session:</u> <ul style="list-style-type: none"> <li>Strategic Plan; CIP/budget process</li> <li>Receive update on Transit Hub</li> </ul> <u>Regular Meeting:</u> <ul style="list-style-type: none"> <li>Discussion on composition of Transportation Commission</li> </ul>	<u>Study Session:</u> <ul style="list-style-type: none"> <li>Review Pedestrian Bicycle Issues Task Force Report</li> </ul> <u>Regular Meeting:</u> <ul style="list-style-type: none"> <li>Discussion on composition of Transportation Commission</li> <li>Recommendation on 2019 Neighborhood Traffic Management Program</li> </ul>	<u>Study Session:</u> <ul style="list-style-type: none"> <li>Update on Safe Routes to School Plan</li> <li>School Area Traffic Control Policy</li> <li>Receive draft Lawrence Bike Plan</li> </ul> <u>Regular Meeting:</u> <ul style="list-style-type: none"> <li>Recommendation on 13<sup>th</sup> Street &amp; 21<sup>st</sup> Street Bike Boulevard Concept Plan</li> <li>Recommendation on 2019 Bike/Ped Projects</li> </ul>
July 1	August 5	September 9
<u>Study Session:</u> <ul style="list-style-type: none"> <li>Non-motorized Project Prioritization</li> </ul> <u>Regular Meeting:</u> <ul style="list-style-type: none"> <li></li> </ul>	<u>Study Session:</u> <ul style="list-style-type: none"> <li>Information on regulations for electric vehicles.</li> <li>Receive request from VeoRide to amend contract for bike share to include e-scooters.</li> </ul> <u>Regular Meeting:</u> <ul style="list-style-type: none"> <li>Recommend approval of Lawrence Bike Plan</li> <li>Recommend approval of Non-motorized Project Prioritization</li> </ul>	<u>Study Session:</u> <ul style="list-style-type: none"> <li>Transportation/Land-Use Relationship</li> </ul> <u>Regular Meeting:</u> <ul style="list-style-type: none"> <li>East 23<sup>rd</sup> Street Planning Study</li> <li>K-10 &amp; 27<sup>th</sup>/Wakarusa Study (KDOT Presentation)</li> <li>Non-motorized Project Prioritization</li> </ul>
October 7	November 4	December 2
<u>Study Session:</u> <ul style="list-style-type: none"> <li>Update on sidewalk maintenance program</li> <li>E-scooter update</li> </ul> <u>Regular Meeting:</u> <ul style="list-style-type: none"> <li>E. 19<sup>th</sup> Street – Haskell to O’Connell design options</li> </ul>	<u>Study Session:</u> <ul style="list-style-type: none"> <li>cancelled</li> </ul> <u>Regular Meeting:</u> <ul style="list-style-type: none"> <li>E. 19<sup>th</sup> - Haskell to O’Connell design options</li> <li>2020-2024 Bike/Ped Funding Plan</li> <li>Shared Scooter Pilot Program</li> </ul>	<u>Study Session:</u> <ul style="list-style-type: none"> <li>Ch. 20 Article 9 Parking, Loading and Access Standards</li> </ul> <u>Regular Meeting:</u> <ul style="list-style-type: none"> <li>Kasold – 22<sup>nd</sup> Street to Clinton Parkway</li> <li>Discuss 2020 Calendar; Establish sub-committee to plan annual retreat</li> </ul>
Future Study Session Topics:		
<ul style="list-style-type: none"> <li>Street Design Standards</li> <li>Downtown Master Plan parking/multi-modal transportation components</li> <li>Lawrence Loop – 8<sup>th</sup> Street to 11<sup>th</sup> Street and 29<sup>th</sup> Street Project</li> <li>STAR transition to LEED (Sustainability Coordinator)</li> <li>Distracted Driving</li> <li>Grant Opportunities</li> <li>ADA Transition Plan update</li> </ul>		
Future Regular Meeting Items:		
<ul style="list-style-type: none"> <li>Discussion on regulations for Micromobility transportation devices (Motorized Skateboards, Balancing Boards, etc)</li> </ul>		

Revised: 10/28/2019