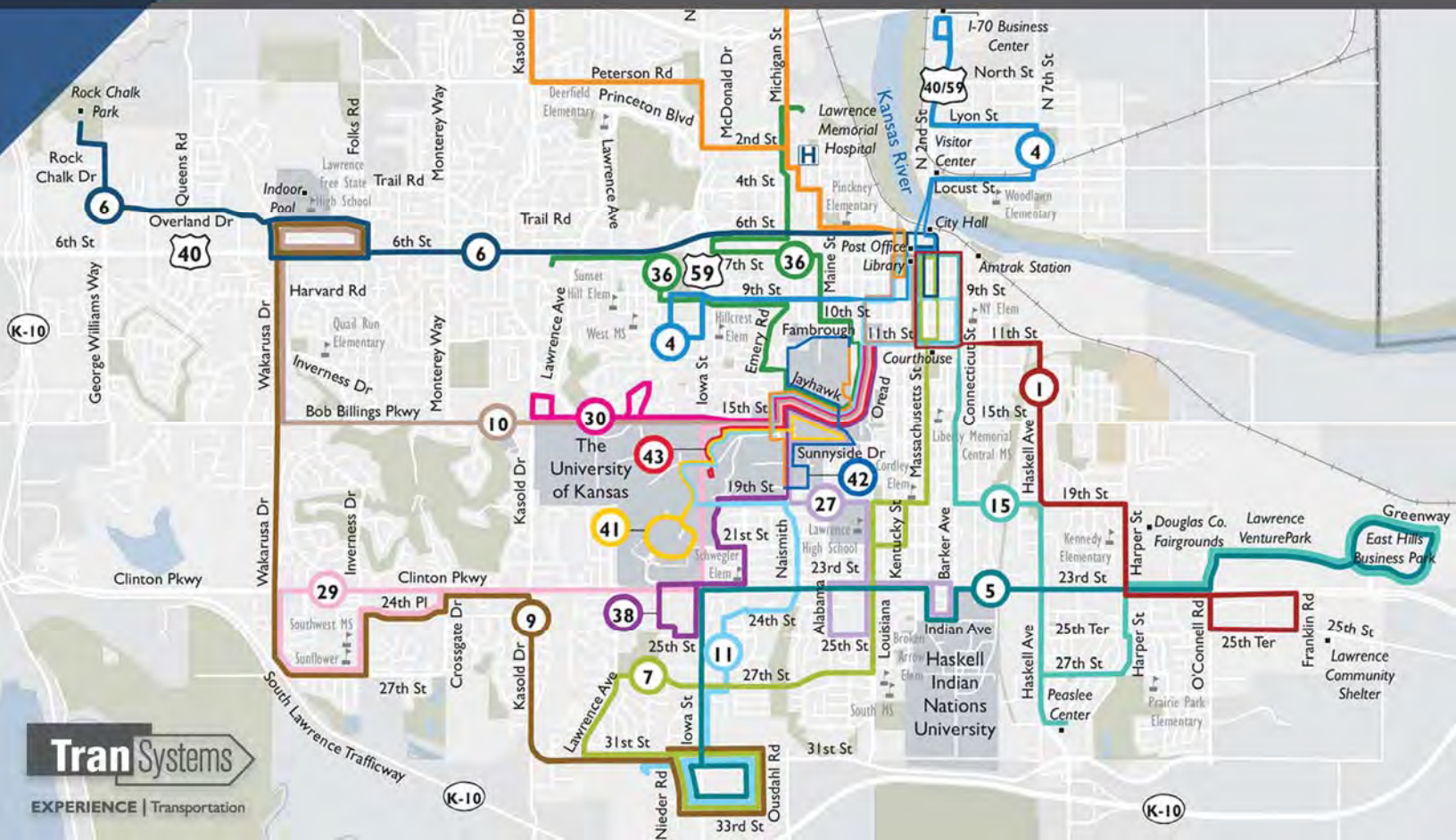
Lawrence Bus Transfer Location Analysis

City of Lawrence, Kansas | February 2018



TranSystems

EXPERIENCE | Transportation

Lawrence Bus Transfer Location Analysis

Prepared for:

City of Lawrence
KANSAS

Lawrence - Douglas County
MPO
Metropolitan Planning Organization

Prepared by:

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with

GROUNDSWELL
CONSULTING

TRANSITUITY, LLC

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CONSULTANT TEAM

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TranSystems is a multimodal transportation planning, engineering and architecture firm headquartered in Kansas City with offices nationwide. Sarah is a transportation planner with over 13 years of experience in transit system analysis, land use planning, site design, transit feasibility analysis and real estate development. Her primary experience involves planning studies for various types of transportation and community development projects such as transit facilities, intermodal facilities, freight plans, transportation master plans, and economic development studies. She is an experienced project manager who has led significant multi-discipline projects. Sarah has served as the lead planner and project manager on feasibility studies for the Kansas City Area Transportation Authority, JEFFTRAN (Jefferson City, MO), OATS, Inc. (Statewide, Missouri), and Central Ohio Transit Authority (Columbus, Ohio).

Mark Swope, Transituity, LLC. – Transit Planning

Transituity is a transit/active transportation consulting firm located in Kansas City, Missouri and serving the greater Midwest. The firm, founded by Mark Swope, is built around his 26 years of professional planning experience. The firm offers a full range of transit/active transportation planning, operations and design services for public transportation projects. The firm brings extensive experience in transit route and system planning in small to medium sized urban areas, rural paratransit service design and operations, ridership forecasting, transit operations, bus rapid transit design and implementation, and corridor planning. Mark served as Project Manager on the *Lawrence Transit Center Location Analysis, 2014*.

Lisa Koch, AICP, Groundswell Consulting, LLC. – Public Involvement

Groundswell Consulting is a Transportation Planning and Project Development firm providing expertise in Transit development planning, operations, management, and the delivery of federal programs; Program Management of major transportation programs from project inception to construction and operations; Roadway and highway transportation and traffic analysis; Bicycle and pedestrian corridor and area studies; Strategic communications planning for elected officials, specialized markets, survey development, and the public specifically developed for highest impact. Groundswell led the *Lawrence Multimodal Center Project Development Study in 2016* which studied the development of a concept for a Multimodal Facility on Lot 90 on the University of Kansas. This portion of project development included concept development, the development of a TIGER grant, public engagement, a traffic study and the completion of the NEPA process.

EXECUTIVE SUMMARY

The *Lawrence Bus Transfer Location Analysis* builds upon previous efforts to identify a location in Lawrence where a transit transfer location would be most beneficial to the city. The goal of the study was to identify a transit transfer facility location that would ultimately make the transit system more efficient allowing transit users to access the system connections in a centralized location. The purpose of the transit transfer location is to serve the coordinated City of Lawrence Transit System and KU on Wheels System. TranSystems, along with Groundswell Consulting and Transituity, LLC were selected to perform the location analysis which was initiated by The City of Lawrence, the University of Kansas, and the Lawrence-Douglas County Metropolitan Planning Organization (MPO).

Throughout the length of the study, a comprehensive public engagement process was conducted to engage members of the community. Additionally, the consultant team worked with the Lawrence - Douglas County MPO, Lawrence Transit, the City of Lawrence, the City Commissioners, KU on Wheels, KU Facilities Planning and Development department, and the KU Endowment Association. The goal was to engage diverse groups and individuals within Lawrence to understand the community's vision for a transfer location. A series of public meetings, public surveys, and discussions with city and other community leaders were conducted to recommend a transfer location that best serves the needs of the community. The strategic approach to the engagement process featured three progressive steps:

- Engagement 1: Community Goalsetting
- Engagement 2: Refining Goals to Assist in Developing Site Selection Criteria
- Engagement 3: Using Selection Criteria to Select Site and Present to Community for Feedback

Based on the community and leadership input, the study team identified specific goals and characteristics to analyze the sites. This step was critical in verifying the qualities of a transit transfer location from the public's perspective as well as contributing to the credibility of the site selection process. Additionally, the team sought to understand the development goals of the major landowners within the community such as the University of Kansas and the KU Endowment Association.

The following site goals and criteria were determined to be most important when determining the feasibility of a transit transfer location.

- Travel Time – 30 Minute Trips Preferred
- Centralized Location – Central to University of Kansas and Shopping Districts
- Accommodates an Indoor Facility – Two and a Half Acres in Size
- Accommodates Fleet Operations – Ingress/Egress and Bus Maneuverability On Site
- Located Outside of Residential Neighborhoods – Arterial Street or Land Use Buffer
- Cost Effective to Acquire Property – Owned by City or Public Institution
- Ease of Constructability – Utilities Present, Clear of Structures/Development

Multiple sites within Lawrence were identified for potential transit transfer locations. These parcels were publicly owned or available for development and they were determined to be sufficient in size to accommodate a transfer location. Sites were eliminated if landowners had programmed the sites for other uses, if the acquisition cost was high, or if access to the site (ingress/egress) negatively impacted bus maneuvering. Candidate sites were reduced to five potential locations for additional analysis:

- **Site A** - Vermont Street between 7th Street and 8th Street: This site is currently operates as the on-street transit transfer location in downtown Lawrence. Staging along northbound Vermont Street currently consists of seven, curbside linear bays.
- **Site B** - Lot 5 on Vermont Street between 9th Street and 10th Street: This site is approximately three-quarters of an acre and is situated on the east side of Vermont Street. The site currently functions as a surface parking lot serving downtown offices and retail.
- **Site C** - Southeast corner of Bob Billings Parkway and Crestline Drive: This site comprises two to three acres of a larger parcel owned by the University of Kansas. The site currently functions as the KU Public Safety Office.
- **Site D** - 1941 Stewart Avenue between 19th Street and 20th Street: This site is on the west side of Stewart Avenue just south of Lawrence Fire Station #5 and owned by the KU Endowment Association. It has been previously developed, but it is currently a clear site.
- **Site E** - Northeast corner of Clinton Parkway and Lawrence Avenue: This site would feature an off-street transfer location. The site consists of two to three acres of a larger parcel owned by the KU Endowment Association.

The five candidate sites were then evaluated based on location to transit dependent populations and by the site criteria developed throughout the public and stakeholder engagement process.

Based on this analysis and input during the final public meeting and public survey, it was determined that Site A (Vermont Street between 7th Street and 8th Street), the current transfer location, could be retained to serve and maintain a presence in downtown. This would mean that the street-based transfer activity could be retained with upgrades to enhance the pedestrian and waiting environments, but would not have the capacity and growth capability of an off-street location. Site D (1941 Stewart Avenue between 19th Street and 20th Street) could be further evaluated as an off-street facility. This site has the space to allow for indoor/outdoor use, the room for current bus capacity and allowance for growth and compatibility with partner systems. If Site D were selected as the preferred site, Site A could be maintained as a system transfer point for downtown activities and for routes that focus on the northeast part of Lawrence. Additional traffic analysis including ingress/egress at both sites will be further conducted. Service planning to determine impacts of a main transfer location staged at Site D will also be conducted.

CHAPTER 1 | INTRODUCTION

The Lawrence Bus Transfer Location Analysis builds upon previous evaluation efforts to identify transit transfer location(s) that would be most beneficial for the strategic growth of transit in Lawrence. The City of Lawrence, the University of Kansas, and the Lawrence-Douglas County Metropolitan Planning Organization initiated this transfer location analysis and selected TranSystems along with Transituity, LLC and Groundswell Consulting to perform the study. The purpose of the transit transfer location is to serve the coordinated City of Lawrence Transit System and KU on Wheels System, with the goal of improving travel efficiency and convenience for transit users. Previous studies such as the Lawrence Transit Center Location Analysis, 2014 and the 2016 TIGER Application evaluated potential locations including sites at 9th Street and Iowa Street, areas near Memorial Stadium, 21st Street and Stewart Avenue, and University of Kansas (KU) Lot 90.

Earlier discussions regarding the siting of a transit transfer location in Lawrence have been influenced by the perception that a facility of this type might have an adverse impact on surrounding land uses and by the belief that the site should serve as a destination location. As this study focused on seeking community input and public consensus, the goal of the study was to determine a transit transfer facility location that would ultimately make the transit system more efficient allowing transit users access to system connections in a centralized location. The project team identified multiple sites within the city and assessed the viability of each as a transit transfer location.

Study Process

After conducting the initial analysis which included a review of previous studies and an assessment of transportation dependent populations, the study included the following steps:

- *Public and Stakeholder Engagement:* Three phases of public engagement occurred throughout the study to help define site criteria for candidate sites. The study team engaged the community through public meetings, public surveys, and community leadership outreach in order to verify that a location identified through the feasibility study process addressed community needs.
- *Site Goals and Characteristics:* With contributions from the public, the study team developed seven primary characteristics to consider when evaluating candidate sites: travel time, centralized location, indoor facility, fleet operations, located outside of residential neighborhoods, cost effective to acquire property, and ease of constructability.
- *Identifying Candidate Sites:* Multiple sites within Lawrence were identified for potential transit transfer locations. These parcels were determined to be sufficient in size to accommodate a transfer location and were either publicly owned or privately available for acquisition or development. Candidate sites were then reduced to five potential locations for further analysis. Sites were eliminated if landowners had programmed the

sites for other uses, if the acquisition cost was high, or if access to the site (ingress/egress) negatively impacted bus maneuvering.

- *Analysis of Candidate Sites:* The five candidate sites were then evaluated based on the site criteria developed throughout the public and stakeholder engagement process.

Preliminary Analysis

At the outset of the study process, the team conducted an initial review of the existing Lawrence Transit and KU on Wheels services to understand the system operations prior to embarking on any comparative site analysis. As part of the initial analysis, previous studies reviewed included the *2014 Lawrence Transit Center Location Analysis*, *2016 TIGER Application*, and *2016 Comprehensive Transit Operations Analysis* which are summarized in more detail below. The team met extensively throughout the study process with representatives from Lawrence Transit and KU on Wheels to understand the needs of both entities in determining an ideal transfer location. Additionally, demographic analysis, utilizing the most recent U.S. Census Bureau data, was conducted as a first step in the assessment of transportation needs of the community and in understanding locations of transit dependent populations. This information confirmed from previous studies that the general location with the highest transit demand is near the central portion of the city and the University of Kansas.

Lawrence Transit Center Location Analysis, 2014

This study completed in 2014 determined a candidate site, and conceptual costs for a new transit center that would also serve as a major transfer location for the city transit routes. This study first performed spatial analysis using Geographic Information Systems (GIS) and various demographic and transit-related geographic parameters to identify a geographical area where the transfer location would be ideally suited. Multiple sites within this area were examined for suitability as a transit center. The sites were evaluated based on general development constraints, impacts to transit routes, and compatibility with existing or potential land use and ridership patterns. After an evaluation and continued discussion with the City Commission, the project focused on evaluating two separate sites of 925 Iowa, and 2021 Stewart Avenue. The site that was the most feasible option for the transfer location was 2021 Stewart Avenue.

2016 TIGER Application

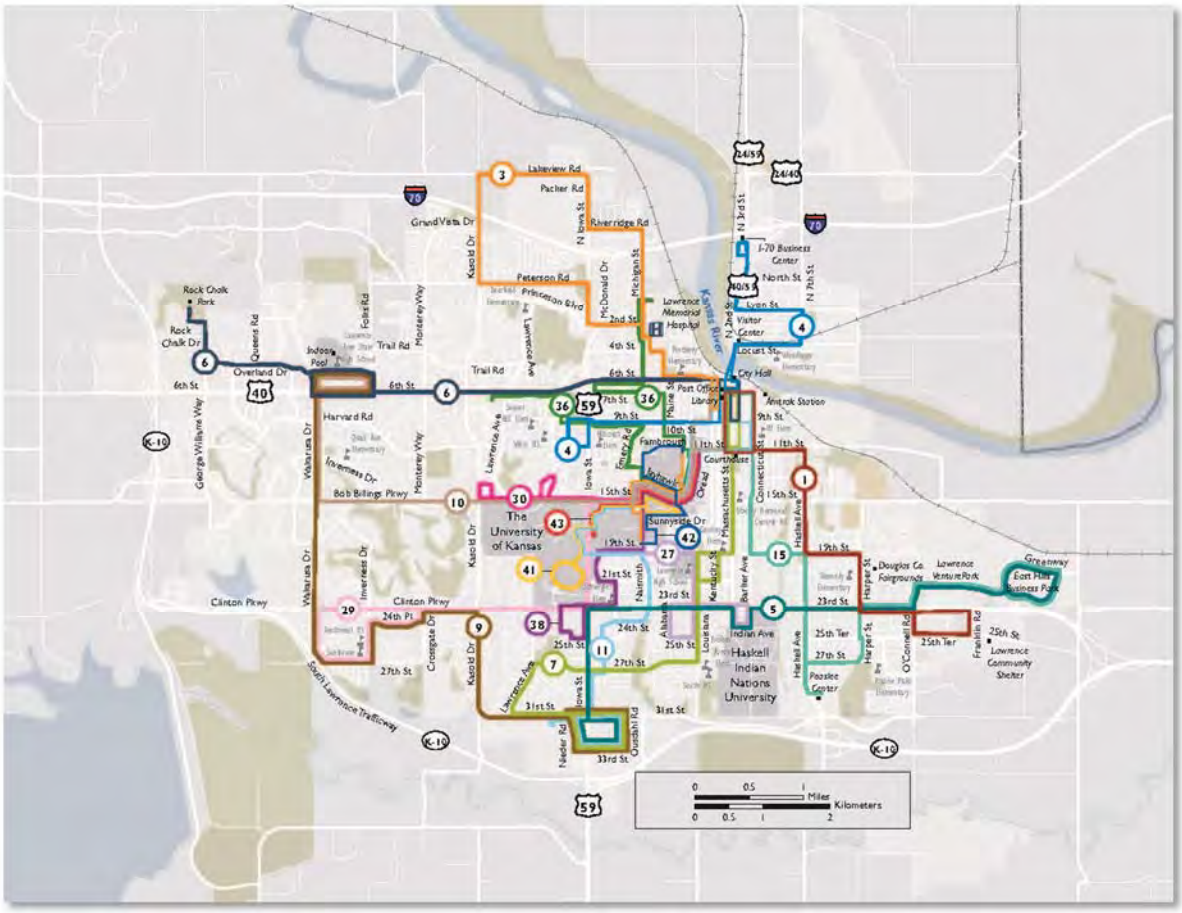
The 2016 TIGER Application and process focused solely on a transit center location at Lot 90 on the University of Kansas Campus. Lot 90 is located directly to the west of the Ambler Recreation Center between 17th and 18th Streets and Naismith Drive. The process, analysis, and subsequent application evaluated traffic and environmental conditions and determined the site conditions for a transit transfer location with a parking structure because of its current use as a parking lot. The location was also identified as a parking structure in the KU Master Plan. Neighborhood meetings with the University Place Neighborhood Association and a public meeting focused on area

impacts such as traffic and land use impacts. While KU and the City of Lawrence Commission supported the submission of the grant application, neither entity continued supporting the site after the grant request was denied due to lack of funding availability. It was determined that there would not be subsequent study of Lot 90 for this purpose.

Comprehensive Transit Operations Analysis, 2016

The purpose of the Lawrence Transit Comprehensive Operational Analysis was to identify the strengths and weaknesses of the existing system, and to develop recommendations that could be used for improving service and meeting future system goals. Lawrence Transit and KU on Wheels (KUOW) currently offer 17 fixed-route bus routes serving areas throughout the City of Lawrence. A map illustrating the transit routes is illustrated in Exhibit 1. In general, Routes 1 through 10, 15, and 27 provide transit coverage to the general Lawrence community as part of Lawrence Transit. Routes 30 through 43 are considered KUOW routes and primarily serve students at KU. Routes 11 and 29 are fully coordinated and provide service to students and the general public. Route 3, a curb-to-curb "flex" service in northern Lawrence, has designated time points at the system's current transfer point (7th and Vermont Streets) with flexible routing in between those time points. Riders can be picked-up and dropped-off within the flex service area, but pick-ups must be scheduled by telephone between one hour and five days in advance. All routes that primarily serve the City of Lawrence operate at a frequency of 30 or 60 minutes, and most run from approximately 6:00 AM to 8:00 PM, Monday through Saturday. KUOW service operates at a frequency of 30 minutes or less, Monday through Friday, with variable service spans. This study confirmed that the goal of Lawrence Transit and KUOW is to continue to operate every fixed-route at a frequency of 30 minutes or less.

Exhibit 1: Lawrence Transit and KUOW System Map



Demographic Analysis

Older adults, persons with disabilities, low-income households, zero vehicle households, and college students are the populations that typically utilize public transportation in Lawrence. Challenges may be that services are unavailable (i.e. lack of service in a specific area or at a specific time), insufficient (i.e. low service frequency), and/or inappropriate (i.e. limited access to wheelchair-accessible vehicles). The demographic analysis is included in Chapter 5: Analysis of Candidate Sites on Exhibits 12-16.

This background information provided the context of the transit systems within the City of Lawrence in order to build upon and further understand the needs of the community. The next step of the study process was to involve the community and Lawrence leaders to further define characteristics of a transfer location in order to meet community needs.

CHAPTER 2 | PUBLIC AND STAKEHOLDER ENGAGEMENT

The consultant team conducted a comprehensive public involvement process to engage community members, the Lawrence -Douglas County MPO, Lawrence Transit, the City of Lawrence, City Commissioners, KU on Wheels, KU Facilities Planning and Development department, KU Endowment Association, and Lawrence citizens. An emphasis was placed on engaging diverse groups and individuals within the community in order to incorporate a range of opinions when determining a site for the transit transfer location. This was achieved through a series of public meetings, public surveys, and discussions with city leaders. The strategic approach to the engagement process featured three progressive steps:

Exhibit 2: Public Meeting #1

- Engagement 1: Community Goalsetting
- Engagement 2: Refining Goals to Assist in Developing Selection Criteria
- Engagement 3: Using Selection Criteria to Determine Site

Public Engagement #1

The first public meeting was held in August 2017 at the Carnegie Building located at 200 West 9th Street. In order to accommodate the public, two meetings were held: Meeting 1 started at 4:00 P.M. and Meeting 2 began at 6:00 P.M. The focus of these first public meetings was to discuss community vision for a transit transfer location before identifying sites on a map that could bias the conversation. Approximately 21 individuals attended these meetings. The meeting format included a short video presentation defining the purpose of the study. The attendees rotated among three small discussion groups focused on the following topics:

- **Site Design:** discussions focused on what amenities were desired on the site, and the ideal area for a site (including commercial areas, neighborhood or neighborhood adjacent, street types).
- **Transit Operations:** discussions focused on traveling behavior related to a centralized transit transfer site; specifically, which types of trips would benefit most from a transfer.
- **Economic Development:** discussions focused on how a transit transfer site and enhanced transit amenities and improved operations could benefit economic development around the site.

Exhibit 3: Public Meeting #1

The study team collected input on criteria that was important to the participants regarding the location and the characteristics of a preferred transit transfer location. This helped the study team to understand the needs of the community and the various stakeholders. In addition to the meeting, a Lawrence Listens Survey was developed and made available on the Lawrence Transit web site to the public for two weeks in early August 2017. The survey identified the types and levels of amenities the public was interested in seeing at the transit transfer location, the importance of the cost to operate the service, and the amount of time it takes it takes to traverse the city from one location to another. The survey asked the community to rank the importance of these items in a transfer location on a scale of 1 to 10 with 10 being the highest in order to understand community desires for a transfer location. Additionally, the survey's purpose was to gain an understanding of the public's perception of the transit transfer location in proximity to services and destinations within the City of Lawrence. Approximately 140 individuals responded to the survey.

Summary

Primary themes that resulted from the first public meeting and subsequent survey were:

- Importance of a Shelter with Lighting and Benches – Over 90 percent of survey respondents identified these as important amenities.
- Importance of Reducing Travel Time to 30 Minute Trips Maximum – 79 percent of survey respondents rated this 8 or above on a scale of 1 to 10 with 10 being most important.
- Reduction of Operating Costs for Lawrence Transit and Riders – 71 percent of survey respondents rated this 8 or above on a scale of 1 to 10 with 10 being most important.

- Proximity to Employment Centers - 51 percent of survey respondents rated this 8 or above on a scale of 1 to 10 with 10 being most important.
- Proximity to Shopping – 49 percent of survey respondents rated this 8 or above on a scale of 1 to 10 with 10 being most important.
- Proximity to Downtown - 45 percent of survey respondents rated this 8 or above on a scale of 1 to 10 with 10 being most important.
- Proximity to University of Kansas - 43 percent of survey respondents rated this 8 or above on a scale of 1 to 10 with 10 being most important.

In addition to the public meeting and survey, the consultant team met individually with City Commissioners to understand their vision for a transit transfer location. All Commissioners were in favor of reducing travel time on buses for riders. Additionally, Commissioners were interested in exploring the possibility of transfer centers at multiple locations. This scenario could potentially be comprised of a main transfer location and secondary locations. Although fewer than half of the public rated proximity to downtown as a high priority, all Commissioners favored maintaining a downtown presence.

Public Engagement #2

A second Lawrence Listens Survey was administered in early October 2017 and was available through the Lawrence Transit web site. Approximately 160 individuals responded to this public survey. The purpose of this survey was to focus on prioritizing the broader list of project qualities that were identified in Engagement #1. The previous Lawrence Listens Survey and public meeting identified values and criteria related to the location of the off-street transfer site. The team took information that was identified from Engagement #1 and asked the community about trade-offs regarding location, operations and type of facility desired. Respondents were asked to rank the criteria outlined below. The public was asked to rank the importance of the following criteria:

- Location on or adjacent to major streets
- Location reduces travel time for transit users
- Location has a buffer from residential uses

The previous Lawrence Listens Survey identified that cost to operate service (operational efficiency) was prioritized slightly lower than route effectiveness (travel time). The community was asked to determine which criterion was a priority for a new transfer location:

- Lower Cost to Operate Service
- Reduced Travel Time

Additionally, the Lawrence Listens Survey and public meeting in the first engagement series evaluated types of amenities that could be included at an off-street transfer location. The public was asked to indicate which type of facility was preferred for a new transfer location.

- Public use indoor facility (ticket sales, waiting areas, public restrooms) – locked during non-operating hours
- Outdoor only facility with seating and shaded areas

Summary

The majority of respondents indicated that:

- Reducing travel time was more important than whether the site was adjacent to a major street or residential area.
- Eighty (80) percent of survey respondents indicated reducing travel times on the overall transit system was more important than operating cost savings.
- Sixty one (61) percent of survey respondents indicated that publicly-accessible indoor areas were preferred over outdoor areas, even if indoor areas cost more to operate

Public Engagement #3

The final phase of public engagement included a public meeting on November 29, 2017 from 5:00 to 7:00 pm at the City Commission Chambers located at 6 East 6th Street. Approximately 14 individuals attended this public meeting. The final transfer location alternatives were presented graphically on boards at the meeting. The attendees were shown five candidate sites that were narrowed down through analysis based on the criteria that were identified during Engagement s#1 and #2. Through a comment card, attendees were asked to identify a benefit and a challenge of each site. A public survey with similar information and questions was also available on the Lawrence Transit web site in early December 2017. Approximately 165 people responded to the public survey.

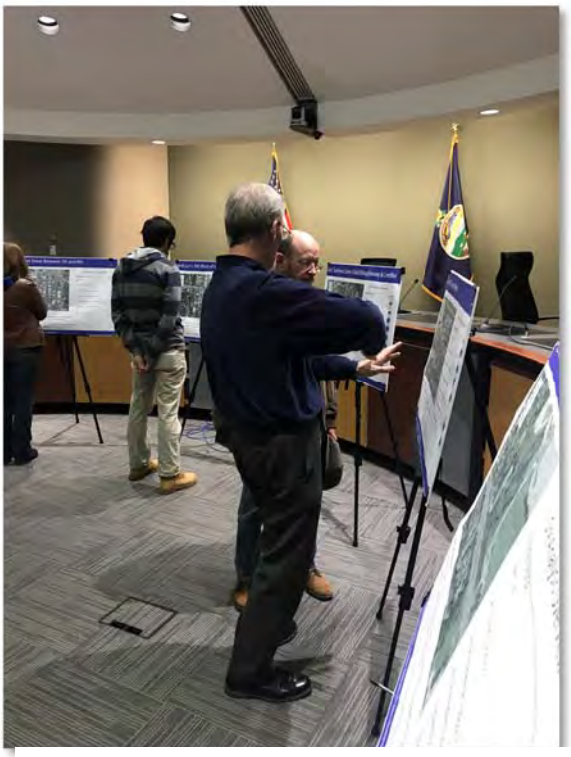


Exhibit 4: Public Meeting #2

Summary

The majority of the public meeting attendees and survey respondents indicated that there is a preference to maintain a presence downtown, either as a primary base of transfer activity or as a secondary transfer location. Of the two downtown sites that were presented: Site A – Vermont Street between 7th and 8th Streets and Site B - Lot 5 on Vermont Street between 9th Street and 10th Street, the current location (Site A) was seen by the public to have more benefits than challenges. Of the off-street, non-downtown sites, Site D - 1941 Stewart Avenue was identified by the public as the site with the most benefits in comparison to challenges. The identified benefits include, proximity to the center of Lawrence,

the proximity to KU and the fact that it is adjacent to Iowa Street. The ability to procure the site easily from the University of Kansas endowment was also seen as a positive.

Detailed information including meeting materials and public survey results are included in Appendix A.

Stakeholder Engagement

In addition to the series of public engagement opportunities, the study team met with numerous stakeholders throughout the process to discuss the project and to identify their goals, opportunities for partnering and any needs or challenges. The following is a description of those meetings.

Study Management Team

The study was guided by a steering committee, made up of members of staff from Lawrence Transit, KU on Wheels, the Lawrence City Manager's Office, the Lawrence - Douglas County MPO, and KDOT. This group met regularly with the consultant team throughout the span of the project and guided the engagement campaign and the technical process during the development of the project.

City Commissioner Meetings

The consultant team met with each of the sitting City Commissioners in August 2017. Discussion focused on the project, the Commissioners' desires, goals and insights prior to evaluating sites. These conversations allowed the consultant team to understand the dynamics of the decision-making process and identify any issues that may be detrimental in moving the project forward. The consultant team also wanted to clarify specific items that the commissioners were hearing from constituents. The consultant team used the information gathered through these discussions to help develop the criteria used to evaluate candidate sites.

Lawrence School District

The consultant team met with the Director of Operations with the Lawrence School District in September 2017 to gather input and understand the needs of district students' access to public transit. Currently, Lawrence Transit offers reduced fare passes for $10 per semester for K-12 students. The discussion centered on how a new transfer location could provide better transportation options for students who do not qualify for state subsidized transportation to and from school.

Private Property Owners

The initial listing of potential sites included privately owned properties. For each of those properties, staff from Lawrence Transit, KU on Wheels and consultants met with the property owner to discuss the project, to explain the site identification process and to describe how the site may operate as a transit location. The consultant team also discussed what future plans the owner may have for the site. This information aided the consultant team in narrowing down feasible sites if property owners indicated that they had programmed the sites for other development.

University of Kansas Endowment Association

Staff from Lawrence Transit, KU on Wheels and the consultant team met with the Senior Vice President of Property Management at the University of Kansas Endowment Association to discuss identified sites on KU Endowment property and determine if they were feasible locations for a transfer center based on potential development projects the Endowment might have programmed for their properties.

KU Design and Construction Management

Staff from Lawrence Transit, KU on Wheels and the consultant team met with the Director of KU Design and Construction Management. In this meeting, the team reviewed one of the final sites that was on State of Kansas (KU) property, and also conducted a comprehensive search of other potential properties within the KU system. The consultant team also discussed the KU Master Plan and the importance of any potential transit location to conform to the plan. The consultant team discussed the process for gaining support and approval for projects at KU.

KU Site Council

Staff from Lawrence Transit and KU on Wheels met with the KU Site Council in December of 2017 to discuss potential sites adjacent to campus to identify if the Council had a preferred location. The Council identified its preference for 1941 Stewart and the team discussed presenting more information at a future meeting and progressing to other decision-making committees at KU.

CHAPTER 3 | SITE GOALS AND CHARACTERISTICS

The study team analyzed sites based on specific goals and characteristics developed with community and civic stakeholder input during the public engagement process. This step was critical in determining the preferred location and the characteristics of the transit transfer location. Additionally, the team sought to understand the goals of the major landowners such as the University of Kansas and the KU Endowment Association to serve students' needs in accessing transit options. The discussions with the stakeholder groups helped the study team understand the significance of on-site amenities, a centralized location, and overall system travel-time goals.

The following site goals and criteria were determined to be most important when determining the feasibility of a transit transfer location. A more complete description of the criteria is provide below as well as an example of how the study team qualitatively measured the criteria per site. That discussion looks at each of the five identified sites against the screening criteria below to assign a high, medium, or low classification illustrated graphically with symbols. A summary table with a side-by-side comparison of each site is provided at the end of Chapter 5. The criteria include:

Travel Time

Definition: This criterion evaluates operational effectiveness as a function of travel time. This criterion determines if transit users will experience similar, reduced or increased travel time based on the location of the transit transfer location. Important to this assessment is the acknowledgement that any change in the location of the main transfer point would require an alteration of the system structure would be accompanied by modifications to the current bus route structure. This assessment is based on origins and destinations desired by ridership, and not exclusively based on the current routes for locations that are not downtown.

Supporting Information: During the public engagement process, a majority of respondents indicated that reduced travel time was important. Generally, this means that trips would be limited to travel time of 30 minutes or less.

This criterion is evaluated in the following manner:

Reduces travel time for most users of the City of Lawrence and University of Kansas systems

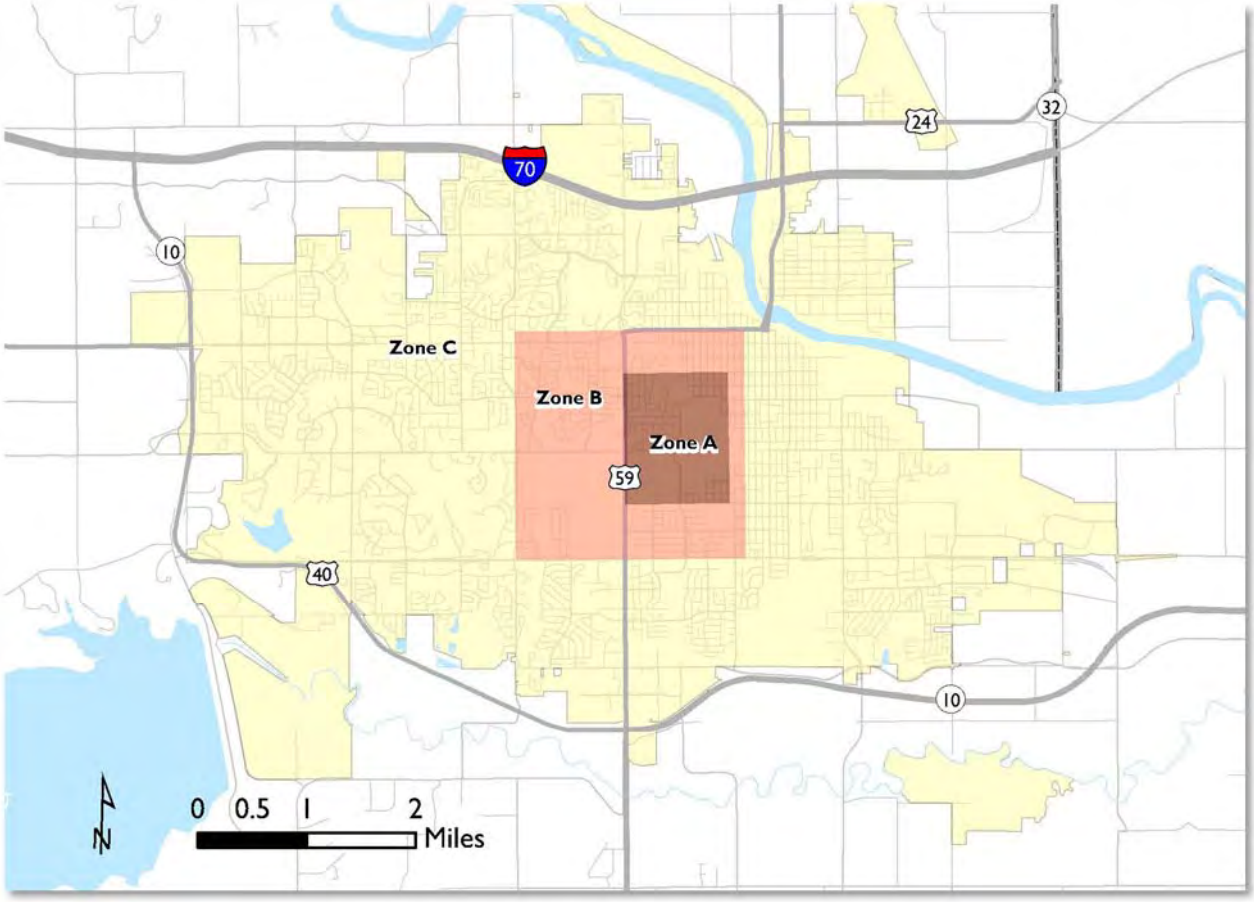
Maintains existing travel time for most users of the City of Lawrence and University of Kansas systems

Increases travel time for most users of the City of Lawrence and University of Kansas systems

Centralized Location

Definition: This criterion is focuses on geography. The *Comprehensive Transit Operations Study from 2016* identified that transit propensity indicators (such as zero car households, students, and income) support a location further west than the current downtown transfer location and more geographically central to the populations needing transit. It is also centered on KU, which is the largest destination for transit in Lawrence. The U.S. Census Data reviewed for this study also support a more central location within the city as this is the area where transit dependent populations reside. Five populations were assessed: low income, zero car households, older adults, persons with disabilities and college students. These areas of transit propensity or dependence are shown in Exhibit 5. The area of highest transit propensity has been identified as Zone A. Zone B reflects a moderate level of transit propensity or need and the remaining part of the City surrounding Zones A and B has been designated as Zone C. A more comprehensive analysis of this data is included in Chapter 5 and illustrated on Exhibits 12-16.

Exhibit 5: Transit Propensity Zones



Supporting Information: The location areas defined below are ranked based on proximity to a central location. Additionally, it is desired that the preferred location will maintain or enhance ridership in the system.

This criterion is evaluated in the following manner:

- ● Located between 9th Street, 19th Street, Iowa Street, and Mississippi Street (Zone A)
- ◒ Located between 6th Street, 23rd Street, Kasold Street, and Tennessee Street (Zone B)
- ○ Area outside of 6th Street, 23rd Street, Kasold Street, and Tennessee Street (Zone C)

Indoor Facility

Definition: This criterion evaluates the availability of space at a location to accommodate an indoor facility. Smaller or irregular sites may not be able to accommodate an indoor facility with desired functions. The site should ideally have few physical constraints to development. This indoor facility could vary in size depending on desired functions but for this evaluation, the team has assumed a building with an area of approximately 1,200 square feet containing a passenger waiting area, restrooms and community conference space. The conceptual floor plan for this proposed facility is located in Appendix B.

Supporting Information: A majority of respondents throughout the public engagement process identified an indoor facility as important for public use and for operator relief.

This criterion is evaluated in the following manner:

- ● Accommodate a facility that would include restrooms, waiting area, and a public meeting space
- ◒ Accommodate a limited facility with restrooms and small waiting area
- ○ Cannot adequately accommodate an indoor facility

Fleet Operations

Definition: This criterion evaluates both space on the site for fleet and user movements and ease of site ingress/egress.

Supporting Information: The site should provide sufficient access for vehicles to enter and maneuver throughout the site with few constraints as well as accommodate the potential for growth. The site should have good accessibility to the regional arterial roadway system. The location of the facility should consider nearby residential neighborhoods with regard to accessing the site. The location of the transit transfer component of the facility should consider the residential location of transit users.

This criterion is evaluated in the following manner:

- ● Accommodates vehicle ingress/egress, bus turning movements, rider access and capacity at peak hour
- ◒ Accommodates vehicle ingress/egress at peak hour, but site access may need to be modified
- ○ Cannot adequately accommodate access or turning movements at peak hour

Located Outside of Residential Neighborhoods

Definition: This criterion reflects the interest of neighborhoods wanting to buffer the transfer location by land use or by arterial street from residential sites to the extent possible. From an operational perspective, adjacency to arterial roadways is preferred.

Supporting Information: The preferred site would be compatible with surrounding land uses and acceptable to the community. Zoning should permit the development of a transit transfer facility. If the preferred property is not zoned properly for the development, a zoning change or variance should be obtainable.

This criterion is evaluated in the following manner:

- ● Fully buffered from residential areas on all sides of the facility
- ◒ Buffered from residential areas on at least three sides of the facility
- ○ Buffered from residential areas on less than three sides of the facility

Cost Effective to Acquire Property

Definition: This criterion considers the cost to purchase the property from the current property owner

Supporting Information: The preferred site may have low acquisition cost; however, value for the cost is the objective. Inexpensive sites may result in higher costs of development, especially with respect to off-site public improvements required to make the site functional.

This criterion is evaluated in the following manner:

- ● Minimal to no costs to acquire property
- ◒ Moderate costs to acquire property
- ○ High costs to acquire property

Ease of Constructability

Definition: The criterion analyzes the amount of construction services (including environmental analysis and mitigation) and general development needed to prepare a site for construction.

Supporting Information: The preferred site should have lower development costs. The preferred site should also minimize or eliminate the need for off-site infrastructure improvements required to accommodate the facility. These improvements could include roadway modifications such as street widening, installation of new traffic signals.

This criterion is evaluated in the following manner:

- ● Site is suitable for new construction with minimal permitting needs
- ◒ Site would require moderate enhancements such as grading and utility upgrades for this use and/or permitting
- ○ Site would require substantial enhancements such as grading and utility upgrades for this use and/or permitting

CHAPTER 4 | IDENTIFYING CANDIDATE SITES

The study team identified an initial list of multiple potential sites ranging from locations downtown to areas west of KU's campus as illustrated on Exhibit 6. These sites were selected primarily based on location and public ownership, however, several of the parcels were privately owned which required consultation with the private landowners to inquire about availability. Although a specific study area was not formally identified, based on the location of transit dependent populations and proximity to the University, the sites were generally located between 7th Street to the north, 23rd Street to the south, Lawrence Avenue to the west and Massachusetts Street to the east. Based on critical characteristics, the study team sought to narrow the number of sites being reviewed to those which impacted the feasibility of the site to serve as a transfer location. Characteristics included availability of parcel for purchase or development, acquisition cost, and ease of ingress/egress. After meeting with landowners, reviewing parcel size as well as potential access, and analyzing development constraints, the study management team narrowed the list to five preferred sites, also shown on Exhibit 6. The five final sites evaluated include:

- **Site A** - Vermont Street between 7th Street and 8th Street: This site is currently operates as the on-street transit transfer location in downtown Lawrence. Staging along northbound Vermont Street currently consists of seven, curbside linear bays and one bay on southbound Vermont Street.

- **Site B** - Lot 5 on Vermont Street between 9th Street and 10th Street: This site is approximately three-quarters of an acre and is situated on the east side of Vermont Street. The site currently functions as a surface parking lot serving downtown offices and retail. A downtown transfer center at this location could be co-located with commercial or residential development on Vermont Street in downtown Lawrence.

- **Site C** - Southeast corner of Bob Billings Parkway and Crestline Drive: This site comprises two to three acres of a larger parcel owned by the University of Kansas. The site currently functions as the KU Public Safety Office. This site offers an off-street transfer location and could accommodate an indoor facility while allowing for future growth.

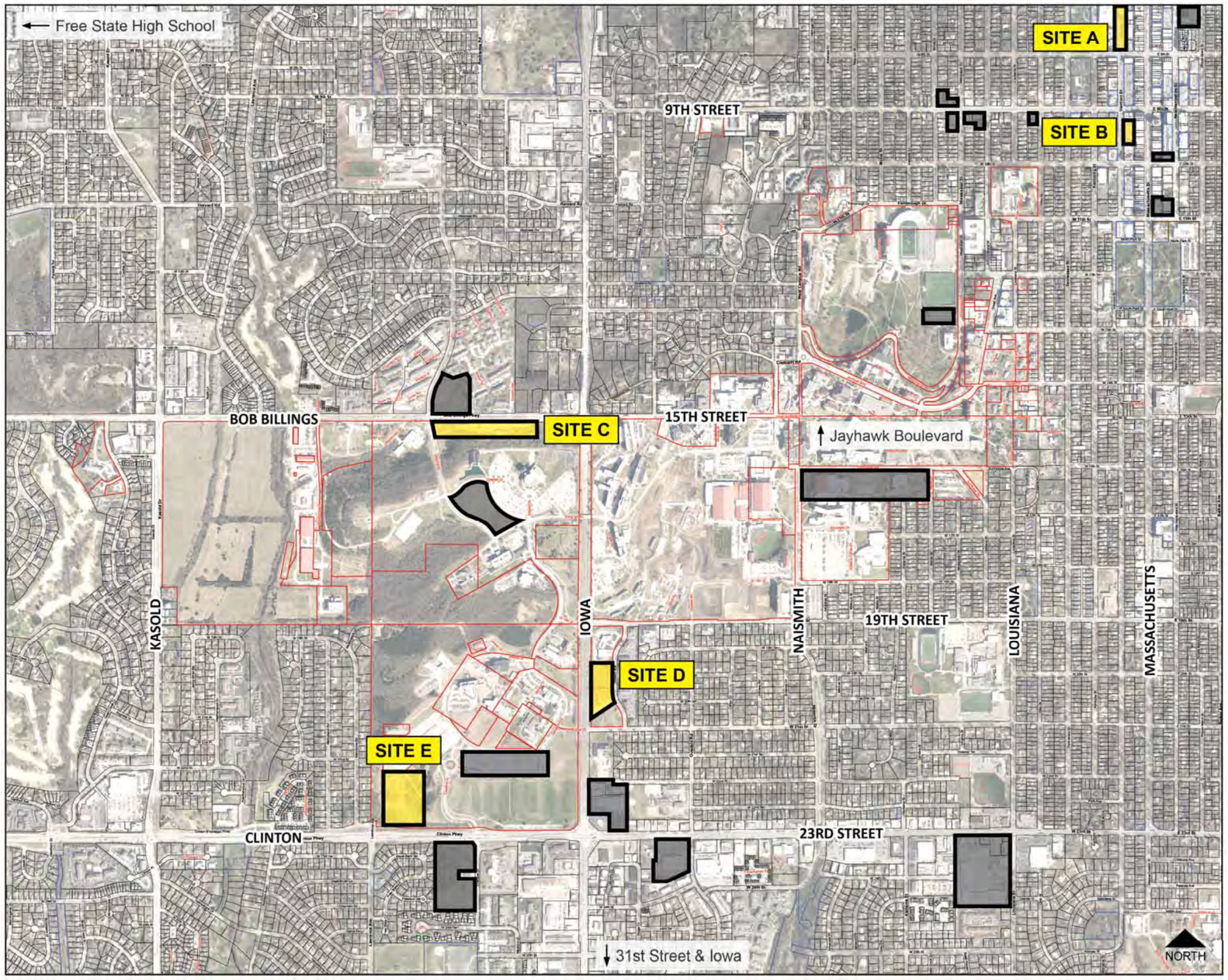
- **Site D** - 1941 Stewart Avenue between 19th Street and 20th Street: This site is on the west side of Stewart Avenue just south of Lawrence Fire Station #5 and owned by the KU Endowment Association. It has been previously developed, but it is currently a clear site. The site is slightly less than four acres and would accommodate a full indoor shelter with room for growth and would offer an off-street transfer location with potential direct access to Iowa Street.

- **Site E** - Northeast corner of Clinton Parkway and Lawrence Avenue: This site would feature an off-street transfer location. The site consists of two to three acres of a larger parcel owned by the KU Endowment Association and would accommodate a full indoor shelter with room for growth and would offer an off-street transfer location. This site is undeveloped and is located in heavily wooded green space.

Conceptual Site Plans

In order to determine if potential sites would be compatible for the location of the transit transfer facility, the study team prepared conceptual site plans for the five alternatives sites. The analysis determined that an ideal site would be at least approximately two and a half acres in order to accommodate an indoor facility and provide ample space for bus movements and passenger circulation on site. Key components of a potential transfer location at each of the five sites including detailed cost estimates for the concepts are displayed in Exhibits 7-11.2.

Exhibit 6: Transit Transfer Location Analysis Site Locations



Bus Transfer Location Analysis
Lawrence, Kansas

Site A
Vermont Street between
7th Street and 8th Street

Site B
Lot 5 on Vermont Street between
9th Street and 10th Street

Site C
Southeast corner of Bob Billings
Parkway and Crestline Drive

Site D
1941 Stewart Avenue between
19th Street and 20th Street

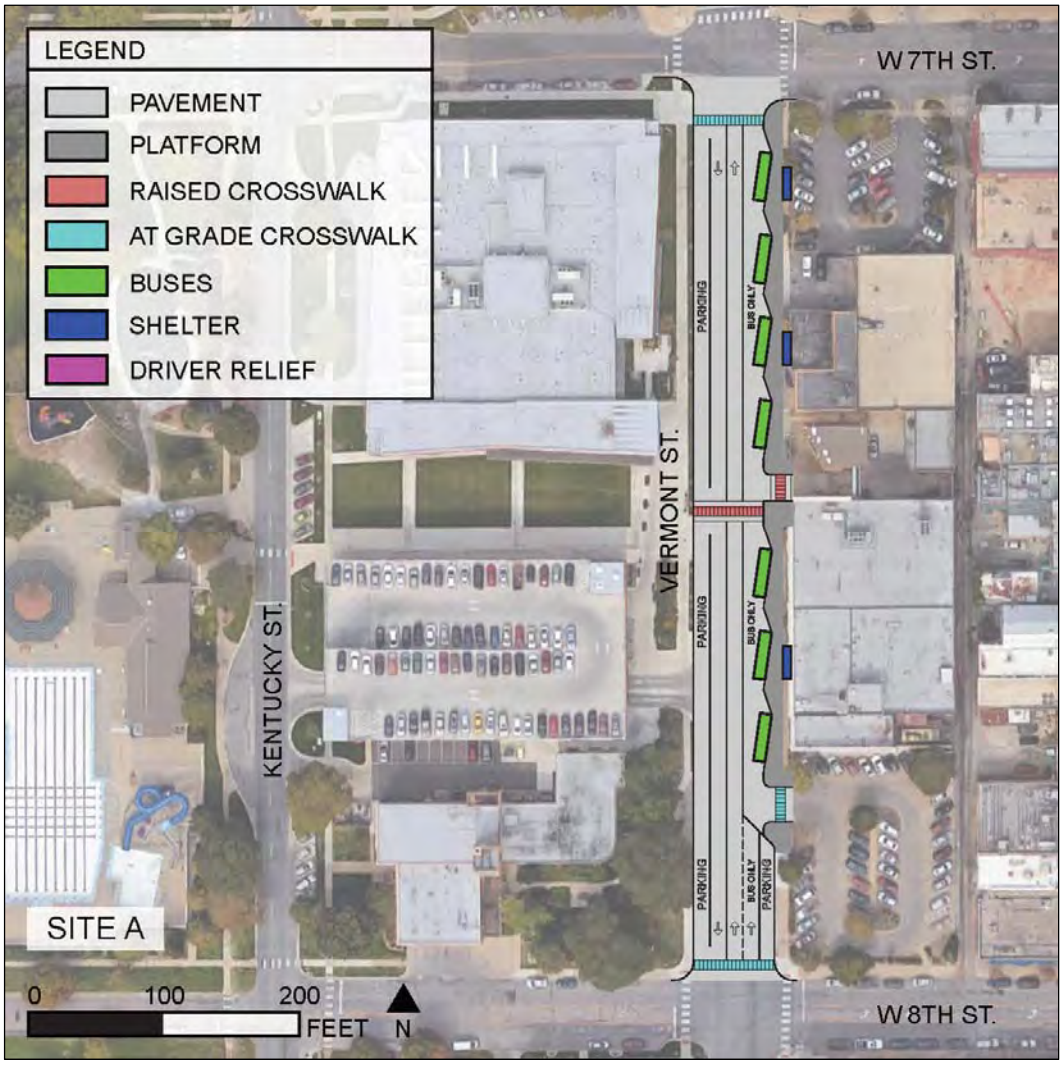
Site E
Northeast corner of Clinton Parkway
and Lawrence Avenue

Potential Site
Potential Other Sites Reviewed
University of Kansas
City of Lawrence
Douglas County
Other Parcel

0.0 0.25 0.5 Miles

Exhibit 7: Site A - Vermont Street between 7th Street and 8th Street

Exhibit 7.1: Site A (Detail) - Vermont Street between 7th Street and 8th Street



A transfer location at this site could include:

- Saw-tooth style bus bays to accommodate seven full-sized buses (existing capacity). The saw-tooth arrangement allows buses to enter and exit bays regardless if adjacent bays are occupied.
- Bus-only lane on the east side of Vermont Street. This arrangement is unchanged from current conditions.
- A high-visibility pedestrian marked pathway for the entirety of the block with a mid-block street crossing which could impact parking (including ADA).
- This option cannot accommodate an indoor facility, however, additional bus shade canopies could be constructed along the east side of Vermont Street.
- This site would not accommodate growth of the transit system.

Exhibit 7.2: Site A (Cost Detail) - Vermont Street between 7th Street and 8th Street

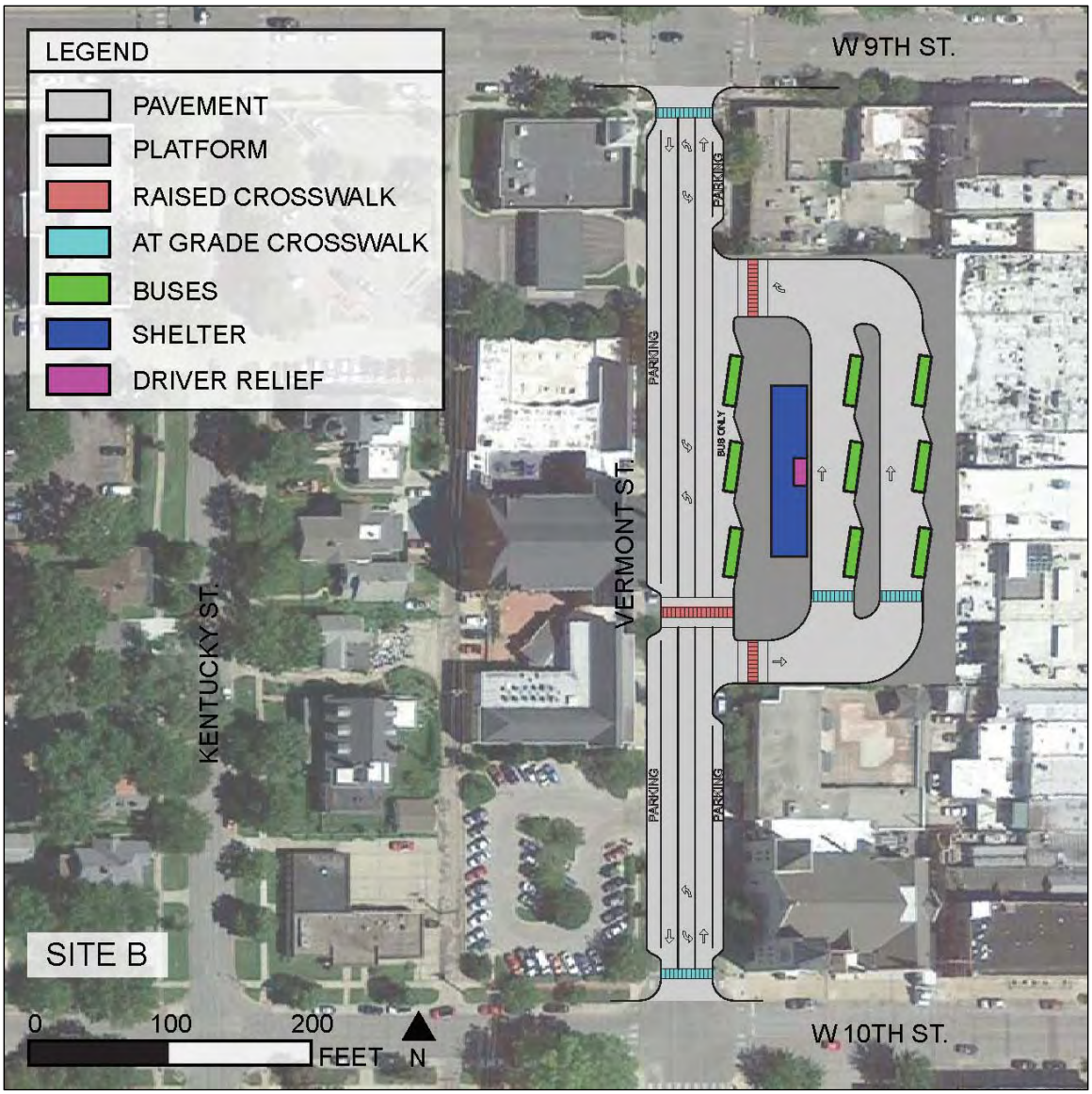
Engineer's Estimate of Probable Cost		Site A					
Item	Description	Unit	Unit Cost	Qty.	Item Cost		Notes
1	Mobilization	LS	$ 20,000	1	$ 20,000.00		
2	Earthwork	CY	$ 15.00	0	$ -		
3	Demo Concrete/Asphalt	SY	$ 8.00	1200	$ 9,600.00		
4	Clearing (Topsoil)	SY	$ 3.00	0	$ -		
5	Utilities	LF	$ 100.00	475	$ 47,500.00		
6	Paving Concrete	SY	$ 75.00	330	$ 24,750.00		
7	Paving Asphalt	SY	$ 45.00	870	$ 39,150.00		
8	Concrete Sidewalk	SY	$ 50.00	530	$ 26,500.00		
9	Sawcut	LF	$ 5.00	1300	$ 6,500.00		
10	Concrete Curb	LF	$ 25.00	650	$ 16,250.00		
11	ADA Ramp	EA	$ 2,000.00	10	$ 20,000.00		
12	Lighting	LS	$ 20,000.00	1	$ 20,000.00		
13	Landscaping	LS	$ 5,000.00	1	$ 5,000.00		1
14	Facility	SF	$ 200.00	0	$ -		
15	Waiting Canopies + bench	EA	$ 8,000.00	3	$ 24,000.00		
16	Traffic/Pedestrian Control	LS	$ 10,000.00	1	$ 10,000.00		
17	Horiz Control (survey)	LS	$ 5,000.00	1	$ 5,000.00		
18	Crosswalk	EA	$ 11,000.00	3	$ 33,000.00		
19	Striping/Signage	LS	$ 5,000.00	1	$ 5,000.00		
20	Electrical Connections	LS	$ 20,000.00	1	$ 20,000.00		2
21	Bollards	EA	$ 750.00	16	$ 12,000.00		
		Sub-Total (Direct Sub Labor + Materials)				$ 344,250.00	
			Prime OH on subcontractor (		$ 17,212.50		
			Prime Profit (10%)		$ 34,425.00		
		Sub-Total				$ 395,887.50	
			Prime Bond (2%)		$ 7,917.75		
		A. Sub-Total				**$ 403,805.25**	
	Design Fee	LS	$ 50,000.00	1	$ 50,000.00		
						$ 50,000.00	
		B. Sub-Total				**$ 50,000.00**	
		Sub-Total (A + B)				$ 453,805.25	
			Est. Contingency (20%)		$ 90,761.05		
		TOTAL ESTIMATED LOCATION COST				**$544,566.30**	

Notes	Description
1	Assume new trees along curbs with tree grates.
2	Assume enhanced lighting along block.

- Cost does not include indoor facility.
- Earthwork is not required at this site as it is an existing street.

Exhibit 8: Site B - Lot 5 on Vermont Street between 9th Street and 10th Street

Exhibit 8.1: Site B (Detail) - Lot 5 on Vermont Street between 9th Street and 10th Street



A transit transfer location at this site may include:

- A transit facility on the first floor of the development for operators and users which could include restrooms, waiting areas, and public meeting space.
- Commercial and/or residential development above the first floor transit facility.
- Variations of this plan could allow for some public parking on a surface lot.
- The size of this parcel would support the growth of the transit system by accommodating more than seven bays which is the current capacity of existing transfer location.

In order accommodate displaced parking, discussion among the study management team considered underground parking to replace stalls currently located on the existing surface lot. The site is very small to support an efficient, cost-effective parking garage. Garage ingress/egress would leave little space for parking in the garage and could impede bus movements.

Exhibit 8.2: Site B (Cost Detail) - Lot 5 on Vermont Street between 9th Street and 10th Street

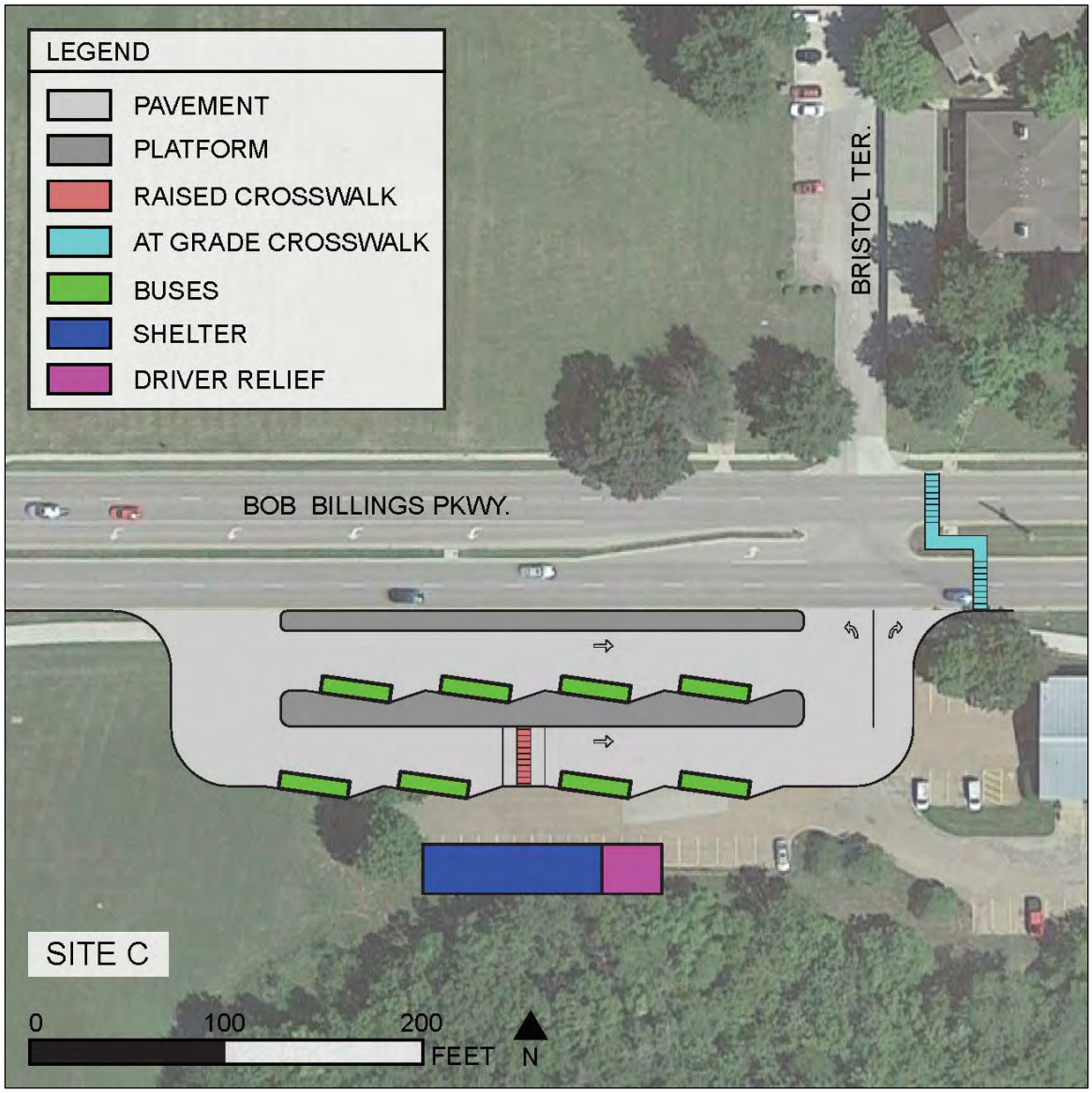
Engineer's Estimate of Probable Cost		Site B					
Item	Description	Unit	Unit Cost	Qty.	Item Cost		Notes
1	Mobilization	LS	$ 30,000	1	$ 30,000.00		1
2	Earthwork	CY	$ 15.00	500	$ 7,500.00		
3	Demo Concrete/Asphalt	SY	$ 8.00	4633	$ 37,064.00		
4	Grading	LS	$ 15,000.00	1	$ 15,000.00		
5	Utilities (new) + relocation	LS	$ 75,000.00	1	$ 75,000.00		2
6	Paving Concrete	SY	$ 75.00	2550	$ 191,250.00		
7	Paving Asphalt	SY	$ 45.00	2083	$ 93,735.00		
8	Concrete Sidewalk	SY	$ 50.00	0	$ -		3
9	Sawcut	LF	$ 5.00	900	$ 4,500.00		
10	Concrete Curb	LF	$ 25.00	1670	$ 41,750.00		
11	ADA Ramp	EA	$ 2,000.00	10	$ 20,000.00		
12	Lighting	LS	$ 20,000.00	1	$ 20,000.00		
13	Landscaping	LS	$ 5,000.00	1	$ 5,000.00		
14	Facility	SF	$ 1,140.00	180	$ 205,200.00		
15	Waiting Canopies + bench	EA	$ 8,000.00	9	$ 72,000.00		4
16	Traffic/Pedestrian Control	LS	$ 10,000.00	1	$ 10,000.00		
17	Horiz Control (survey)	LS	$ 15,000.00	1	$ 15,000.00		
18	Crosswalks (at Vermont)	EA	$ 11,000.00	2	$ 22,000.00		
19	Striping/Signage	LS	$ 10,000.00	1	$ 10,000.00		
20	Electrical Connections	LS	$ 20,000.00	0	$ -		
21	Bollards	EA	$ 750.00	16	$ 12,000.00		
		Sub-Total (Direct Sub Labor + Materials)				$ 886,999.00	
			Prime OH on subcontractor (5'		$ 44,349.95		
			Prime Profit (10%)		$ 88,699.90		
		Sub-Total				$ 1,020,048.85	
			Prime Bond (2%)		$ 20,400.98		
		A. Sub-Total				**$ 1,040,449.83**	
	Design Fee	LS	$ 115,000.00	1	$ 115,000.00		
						$ 115,000.00	
		B. Sub-Total				**$ 115,000.00**	
		Sub-Total (A + B)				$ 1,155,449.83	
			Est. Contingency (25%)		$ 288,862.46		5
		TOTAL ESTIMATED LOCATION COST				**$ 1,444,312**	

Notes	Description
1	Assume surface construction only with no underground parking structure
2	Electrical supply, water supply, sanitary sewer, storm sewer. Contingency for re-route or capping of existing utilities in lot.
3	Sidewalk cast included in concrete paving estimate.
4	Assumption is for 9 canopies at each bus stall on plan. Canopies approximately 20 feet long by 10 feet wide.
5	A 25% contingency was used for this site due to construction in an urban environment and accompanying unknowns.

- Cost includes indoor facility.
- While there is potential for this site to be developed into underground parking and multi-level retail, this was not factored into the cost of the transfer center.

Exhibit 9: Site C - Southeast corner of Bob Billings Parkway and Crestline Drive

Exhibit 9.1: Site C (Detail) - Southeast corner of Bob Billings Parkway and Crestline Drive



A transit transfer location at this site may include:

- A University of Kansas gateway which could mean enhanced markers or signage to indicate an entrance to campus.
- Saw-tooth style transit bays with one-way traffic flow.
- Indoor areas for operators and transit users which could include restrooms, a waiting area and a public meeting space.
- The size of this parcel would support the growth of the transit system.

Exhibit 9.2: Site C (Cost Detail) - Southeast corner of Bob Billings Parkway and Crestline Drive

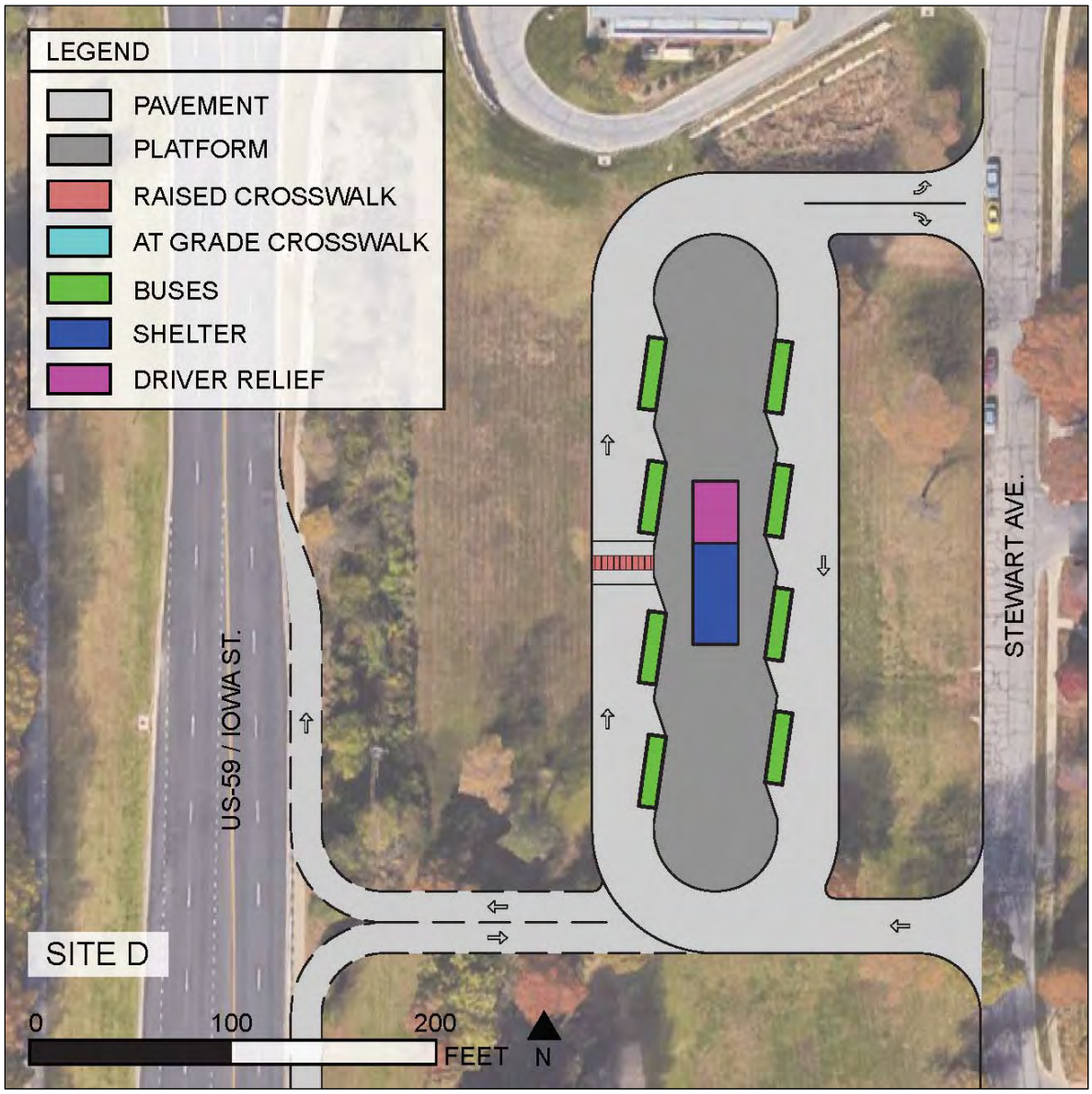
Engineer's Estimate of Probable Cost		Site C					
Item	Description	Unit	Unit Cost	Qty.	Item Cost		Notes
1	Mobilization	LS	$ 30,000	1	$ 30,000.00		
2	Earthwork	CY	$ 15.00	1000	$ 15,000.00		
2a	Clearing/Grubbing	SY	$ 3.00	3778	$ 11,334.00		
3	Demo Concrete/Asphalt	SY	$ 8.00	2000	$ 16,000.00		
4	Grading	LS	$ 15,000.00	1	$ 15,000.00		
5	Utilities (new) + relocation	LS	$ 35,000.00	1	$ 35,000.00		2
6	Paving Concrete	SY	$ 75.00	3725	$ 279,375.00		
7	Paving Asphalt	SY	$ 45.00	0	$ -		
8	Concrete Sidewalk/islands	SY	$ 50.00	773	$ 38,650.00		3
9	Sawcut	LF	$ 5.00	400	$ 2,000.00		
10	Concrete Curb	LF	$ 25.00	1680	$ 42,000.00		
11	ADA Ramp	EA	$ 2,000.00	6	$ 12,000.00		
12	Lighting	LS	$ 20,000.00	1	$ 20,000.00		
13	Landscaping	LS	$ 5,000.00	1	$ 5,000.00		
14	Facility	SF	$ 1,140.00	195	$ 222,300.00		
15	Waiting Canopies + bench	EA	$ 8,000.00	8	$ 64,000.00		4
16	Traffic/Pedestrian Control	LS	$ 5,000.00	1	$ 5,000.00		
17	Horiz Control (survey)	LS	$ 5,000.00	1	$ 5,000.00		
18	Crosswalks	EA	$ 11,000.00	2	$ 22,000.00		
19	Striping/Signage	LS	$ 7,500.00	1	$ 7,500.00		
20	Electrical Connections	LS	$ 20,000.00	0	$ -		
21	Storm Sewer Connections	LS	$ 20,000.00	1	$ 20,000.00		
22	Bollards	16	$ 750.00	16	$ 12,000.00		
		Sub-Total (Direct Sub Labor + Materials)				$ 879,159.00	
		Prime OH on subcontractor (5			$ 43,957.95		
		Prime Profit (10%)			$ 87,915.90		
		Sub-Total				$ 1,011,032.85	
		Prime Bond (2%)			$ 20,220.66		
		A. Sub-Total				**$ 1,031,253.51**	
	Design Fee	LS	$100,000.00	1	$ 100,000.00		
						$ 100,000.00	
		B. Sub-Total				**$ 100,000.00**	
		Sub-Total (A + B)				$ 1,131,253.51	
		Est. Contingency (20%)			$ 226,250.70		
		TOTAL ESTIMATED LOCATION COST				**$ 1,357,504**	

Notes	Description
1	NA
2	Electrical supply, water supply, sanitary sewer, storm sewer.
3	Sidewalk/flatwork total included in concrete paving estimate.
4	Assumption is for 8 canopies at each bus stall on plan. Canopies approximately 20 feet long by 10 feet wide.

- Cost includes indoor facility.

Exhibit 10: Site D - 1941 Stewart Avenue between 19th Street and 20th Street

Exhibit 10.1: Site D (Detail) - 1941 Stewart Avenue between 19th Street and 20th Street



A transit transfer location at this site may include:

- One-way bus movements on site.
- Landscaping and facility design focused on preserving the character of the neighborhood
- Connectivity with the KU Campus.
- Indoor areas for operators and transit users which could include restrooms, a waiting area and a public meeting space.
- Potential direct access to arterial street (Iowa Street).
- The size of this parcel would support the growth of the transit system.

Exhibit 10.2: Site D (Cost Detail with RI/RO from Iowa Street) - 1941 Stewart Avenue between 19th Street and 20th Street

Engineer's Estimate of Probable Cost		Site D (Right-In, Right-Out from Iowa option)					
Item	Description	Unit	Unit Cost	Qty.	Item Cost		Notes
1	Mobilization	LS	$ 30,000	1	$ 30,000.00		
2	Earthwork	CY	$ 15.00	5225	$ 78,375.00		
2a	Clearing/Grubbing	SY	$ 3.00	11250	$ 33,750.00		
3	Demo Concrete/Asphalt	SY	$ 8.00	3000	$ 24,000.00		
4	Grading	LS	$ 35,000.00	1	$ 35,000.00		
5	Utilities (new) + relocation	LS	$ 45,000.00	1	$ 45,000.00		2
6	Paving Concrete	SY	$ 75.00	3290	$ 246,750.00		
7	Paving Asphalt	SY	$ 45.00	0	$ -		
8	Concrete Sidewalk/islands	SY	$ 50.00	1667	$ 83,350.00		3
9	Sawcut	LF	$ 5.00	120	$ 600.00		
10	Concrete Curb	LF	$ 25.00	2450	$ 61,250.00		
11	ADA Ramp	EA	$ 2,000.00	4	$ 8,000.00		
12	Lighting	LS	$ 25,000.00	1	$ 25,000.00		
13	Landscaping /Seeding	LS	$ 20,000.00	1	$ 20,000.00		
14	Facility	SF	$ 1,140.00	195	$ 222,300.00		
15	Waiting Canopies + bench	EA	$ 8,000.00	8	$ 64,000.00		4
16	Traffic/Pedestrian Control	LS	$ 10,000.00	1	$ 10,000.00		
17	Geometry Control (survey)	LS	$ 20,000.00	1	$ 20,000.00		
18	Crosswalks	EA	$ 11,000.00	1	$ 11,000.00		
19	Striping/Signage	LS	$ 7,500.00	1	$ 7,500.00		
20	Electrical Connections	LS	$ 20,000.00	0	$ -		
21	Storm Sewer Allowance	LS	$ 50,000.00	1	$ 50,000.00		
22	Bollards	EA	$ 750.00	16	$ 12,000.00		
23	Sanitary Sewer Allowance	LS	$ 15,000.00	1	$ 15,000.00		
24	Remove sidewalk along Iowa	SY	$ 8.00	250	$ 2,000.00		
25	Remove Rail along Iowa	LF	$ 10.00	450	$ 4,500.00		5
26	Sawcut along Iowa	LF	$ 5.00	450	$ 2,250.00		
27	Remove Curb along Iowa	LF	$ 5.00	450	$ 2,250.00		
28	Replace curb along Iowa	LF	$ 25.00	500	$ 12,500.00		
29	Reuse Rail along Iowa (new post	LF	$ 10.00	450	$ 4,500.00		
30	Concrete Paving for in/out lanes	SY	$ 75.00	580	$ 43,500.00		
31	Relocate exist light poles	EA	$ 1,500.00	2	$ 3,000.00		
		Sub-Total (Direct Sub Labor + Materials)				$ 1,177,375.00	
			Prime OH on subcontractor (5		$ 58,868.75		
			Prime Profit (10%)		$ 117,737.50		
		Sub-Total				$ 1,353,981.25	
			Prime Bond (2%)		$ 27,079.63		
		A. Sub-Total				**$ 1,381,060.88**	
	Design Fee	LS	$140,000.00	1	$ 140,000.00		
						$ 140,000.00	
		B. Sub-Total				**$ 140,000.00**	
		Sub-Total (A + B)				$ 1,521,060.88	
			Est. Contingency (20%)		$ 304,212.18		
		TOTAL ESTIMATED LOCATION COST				**$ 1,825,273**	

Notes	Description
1	NA
2	Electrical supply, water supply, sanitary sewer, storm sewer.
3	Sidewalk/flatwork total included in concrete paving estimate.
4	Assumption is for 8 canopies at each bus stall on plan. Canopies assumed to be approximately 20 feet long by 10 feet wide.
5	Assumption is that guard rail can be salvaged and posts replaced. Some modificatons will be necessary with new driveway ge

- Cost includes indoor facility.
- Additional cost includes construction of right-in/right-out on Iowa Street.

Exhibit 10.3: Site D (Cost Detail with Stewart Avenue Access Only) - 1941 Stewart Avenue between 19th Street and 20th Street

Engineer's Estimate of Probable Cost		Site D (Stewart double-driveway option)					
Item	Description	Unit	Unit Cost	Qty.	Item Cost		Notes
1	Mobilization	LS	$ 30,000	1	$ 30,000.00		
2	Earthwork	CY	$ 15.00	3500	$ 52,500.00		
2a	Clearing/Grubbing	SY	$ 3.00	9750	$ 29,250.00		
3	Demo Concrete/Asphalt	SY	$ 8.00	2000	$ 16,000.00		
4	Grading	LS	$ 15,000.00	1	$ 15,000.00		
5	Utilities (new) + relocation	LS	$ 35,000.00	1	$ 35,000.00		2
6	Paving Concrete	SY	$ 75.00	2640	$ 198,000.00		
7	Paving Asphalt	SY	$ 45.00	0	$ -		
8	Concrete Sidewalk/islands	SY	$ 50.00	1667	$ 83,350.00		3
9	Sawcut	LF	$ 5.00	120	$ 600.00		
10	Concrete Curb	LF	$ 25.00	2050	$ 51,250.00		
11	ADA Ramp	EA	$ 2,000.00	0	$ -		
12	Lighting	LS	$ 20,000.00	1	$ 20,000.00		
13	Landscaping /Seeding	LS	$ 15,000.00	1	$ 15,000.00		
14	Facility	SF	$ 1,140.00	195	$ 222,300.00		
15	Waiting Canopies + bench	EA	$ 8,000.00	8	$ 64,000.00		4
16	Traffic/Pedestrian Control	LS	$ 5,000.00	1	$ 5,000.00		
17	Horiz Control (survey)	LS	$ 15,000.00	1	$ 15,000.00		
18	Crosswalks	EA	$ 11,000.00	0	$ -		
19	Striping/Signage	LS	$ 7,500.00	1	$ 7,500.00		
20	Electrical Connections	LS	$ 20,000.00	0	$ -		
21	Storm Sewer Allowance	LS	$ 50,000.00	1	$ 50,000.00		
22	Bollards	EA	$ 750.00	16	$ 12,000.00		
		Sub-Total (Direct Sub Labor + Materials)				$ 921,750.00	
			Prime OH on subcontractor (5		$ 46,087.50		
			Prime Profit (10%)		$ 92,175.00		
		Sub-Total				$ 1,060,012.50	
			Prime Bond (2%)		$ 21,200.25		
		A. Sub-Total				**$ 1,081,212.75**	
	Design Fee	LS	$115,000.00	1	$ 115,000.00		
						$ 115,000.00	
		B. Sub-Total				**$ 115,000.00**	
		Sub-Total (A + B)				$ 1,196,212.75	
			Est. Contingency (20%)		$ 239,242.55		
		TOTAL ESTIMATED LOCATION COST				**$ 1,435,455**	

Notes	Description
1	NA
2	Electrical supply, water supply, sanitary sewer, storm sewer.
3	Sidewalk/flatwork total included in concrete paving estimate.
4	Assumption is for 8 canopies at each bus stall on plan. Canopies approximately 20 feet long by 10 feet wide.

- Cost includes indoor facility.
- Cost does not include right-in/right-out on Iowa Street.

Exhibit 11: Site E - Northeast corner of Clinton Parkway and Lawrence Avenue

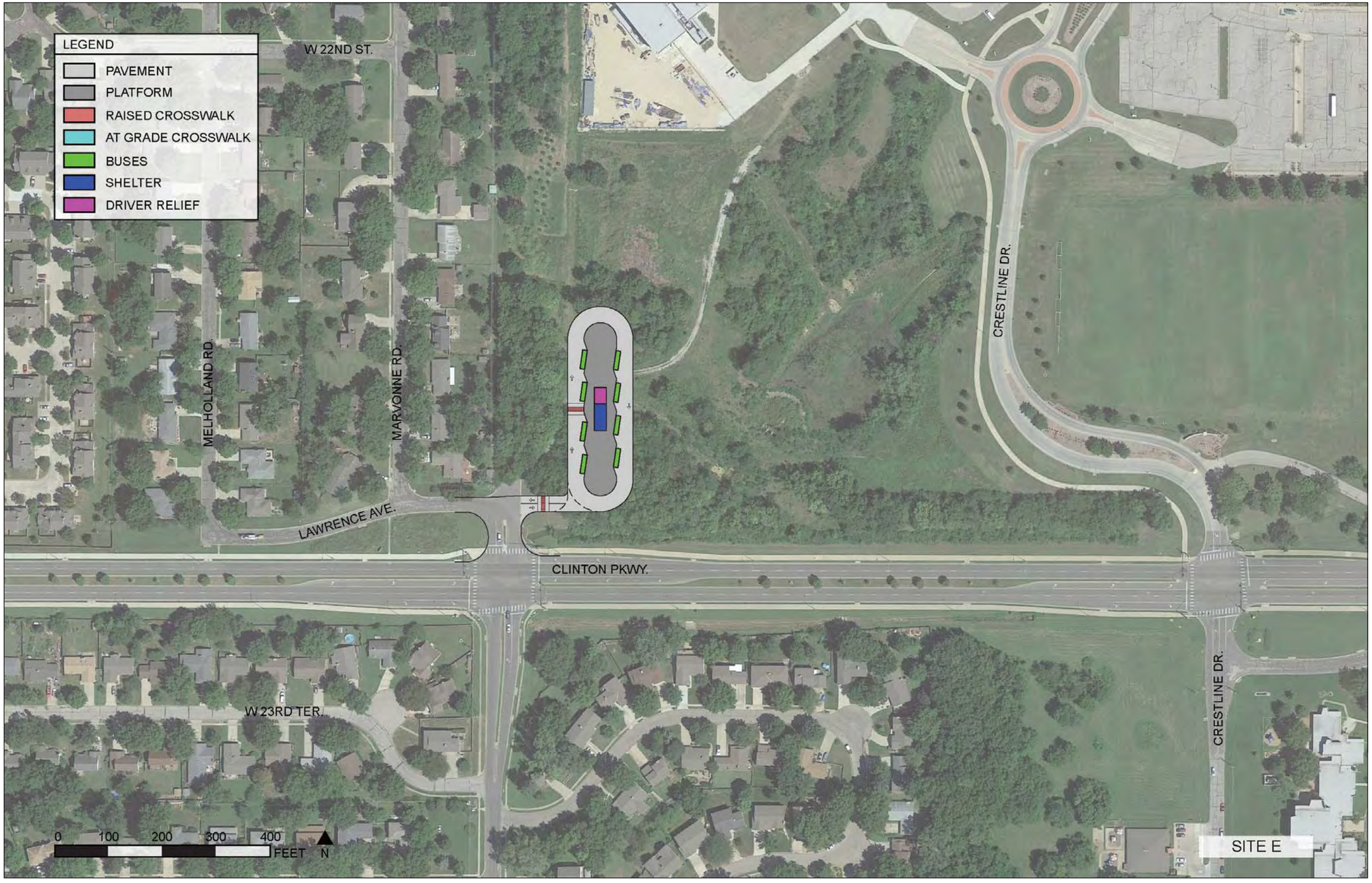
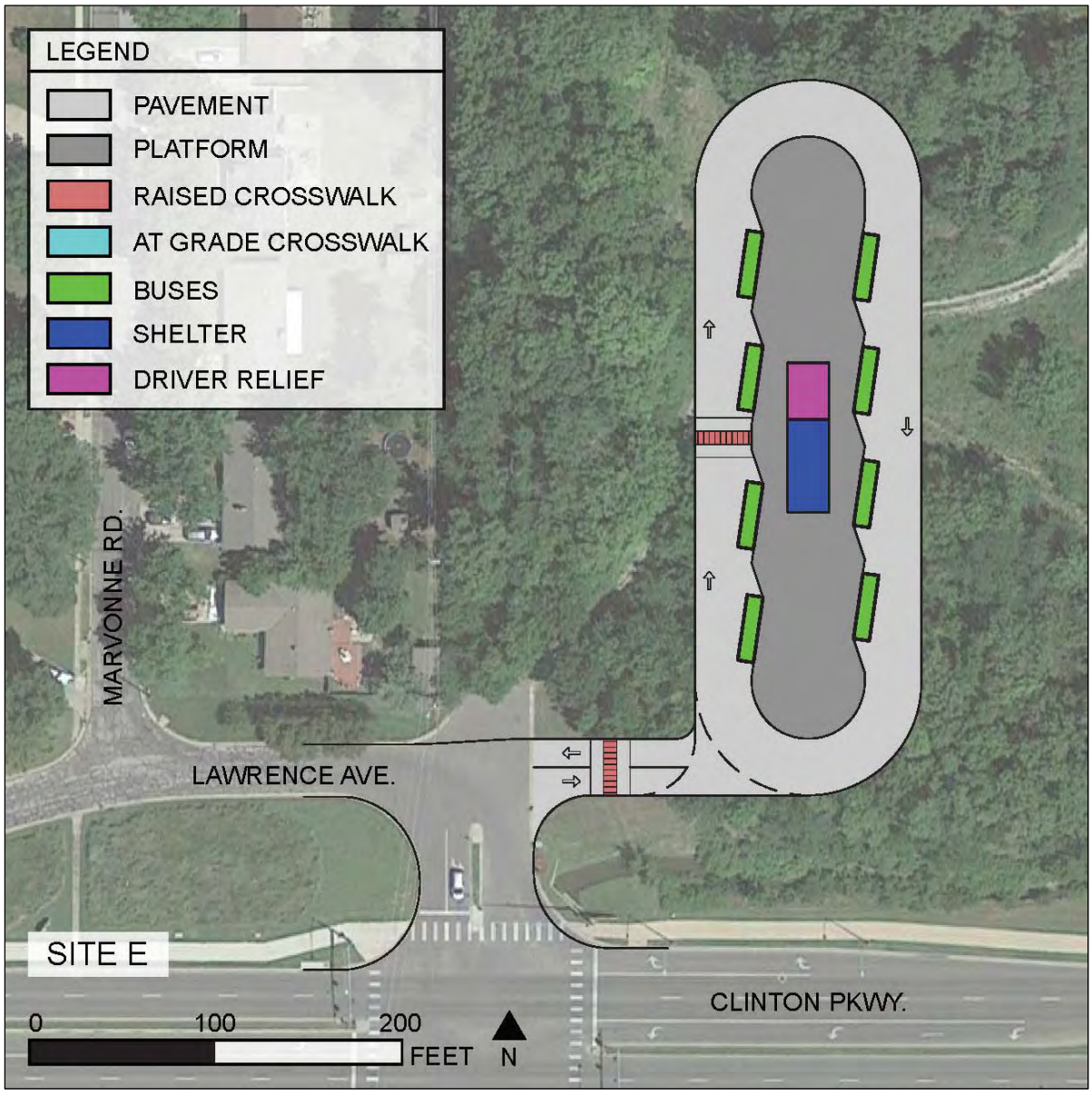


Exhibit 11.1: Site E (Detail) - Northeast corner of Clinton Parkway and Lawrence Avenue



A transfer location at this site may include:

- One-way bus movements.
- Extension of Lawrence Avenue.
- Landscaping and facility design focused on preserving the character of the neighborhood.
- Connectivity with West Campus.
- Indoor areas for operators and transit users which could include restrooms, a waiting area and a public meeting space.
- The size of this parcel would support the growth of the transit system by accommodating more than seven bays which is the current capacity of existing transfer location.

Exhibit 11.2: Site E (Cost Detail) - Northeast corner of Clinton Parkway and Lawrence Avenue

Engineer's Estimate of Probable Cost		Site E					
Item	Description	Unit	Unit Cost	Qty.	Item Cost		Notes
1	Mobilization	LS	$ 30,000	1	$ 30,000.00		
2	Earthwork	CY	$ 15.00	2500	$ 37,500.00		
2a	Clearing/Grubbing	SY	$ 4.00	8000	$ 32,000.00		
3	Demo Concrete/Asphalt	SY	$ 8.00	0	$ -		
4	Grading	LS	$ 15,000.00	1	$ 15,000.00		
5	Utilities (new) extensions	LS	$ 60,000.00	1	$ 60,000.00		2
6	Paving Concrete	SY	$ 75.00	2240	$ 168,000.00		
7	Paving Asphalt	SY	$ 45.00	0	$ -		
8	Concrete Sidewalk/islands	SY	$ 50.00	1667	$ 83,350.00		3
9	Sawcut	LF	$ 5.00	120	$ 600.00		
10	Concrete Curb	LF	$ 25.00	1850	$ 46,250.00		
11	ADA Ramp	EA	$ 2,000.00	0	$ -		
12	Lighting	LS	$ 20,000.00	1	$ 20,000.00		
13	Landscaping	LS	$ 5,000.00	1	$ 5,000.00		
14	Facility	SF	$ 1,140.00	195	$ 222,300.00		
15	Waiting Canopies + bench	EA	$ 8,000.00	8	$ 64,000.00		4
16	Traffic/Pedestrian Control	LS	$ 5,000.00	1	$ 5,000.00		
17	Horiz Control (survey)	LS	$ 15,000.00	1	$ 15,000.00		
18	Crosswalks	EA	$ 11,000.00	0	$ -		
19	Striping/Signage	LS	$ 7,500.00	1	$ 7,500.00		
20	Electrical Connections	LS	$ 20,000.00	0	$ -		
21	Environ./Storm Mitigation	LS	$ 50,000.00	1	$ 50,000.00		
22	Bollards	EA	$ 750.00	16	$ 12,000.00		
		Sub-Total (Direct Sub Labor + Materials)				$ 873,500.00	
		Prime OH on subcontractor (5			$ 43,675.00		
		Prime Profit (10%)			$ 87,350.00		
		Sub-Total				$ 1,004,525.00	
		Prime Bond (2%)			$ 20,090.50		
		A. Sub-Total				**$ 1,024,615.50**	
	Design Fee	LS	$115,000.00	1	$ 115,000.00		
						$ 115,000.00	
		B. Sub-Total				**$ 115,000.00**	
		Sub-Total (A + B)				$ 1,139,615.50	
		Est. Contingency (20%)			$ 227,923.10		
		TOTAL ESTIMATED LOCATION COST				**$ 1,367,539**	

Notes	Description
1	NA
2	Electrical supply, water supply, sanitary sewer, storm sewer. Electrical, water and sanitary west of site.
3	Sidewalk/flatwork total included in concrete paving estimate.
4	Assumption is for 8 canopies at each bus stall on plan. Canopies approximately 20 feet long by 10 feet wide.

- Cost includes indoor facility.
- Environmental and storm mitigation is a factor in the cost of this site due to a nearby wetland.

CHAPTER 5 | ANALYSIS OF CANDIDATE SITES

The five candidate sites were evaluated in relation to their locations to transit dependent populations and within transit propensity zones or areas where transit trips are likely to originate. Additionally, each site was analyzed based on the criteria outlined in Chapter 3. Detailed discussion is included below.

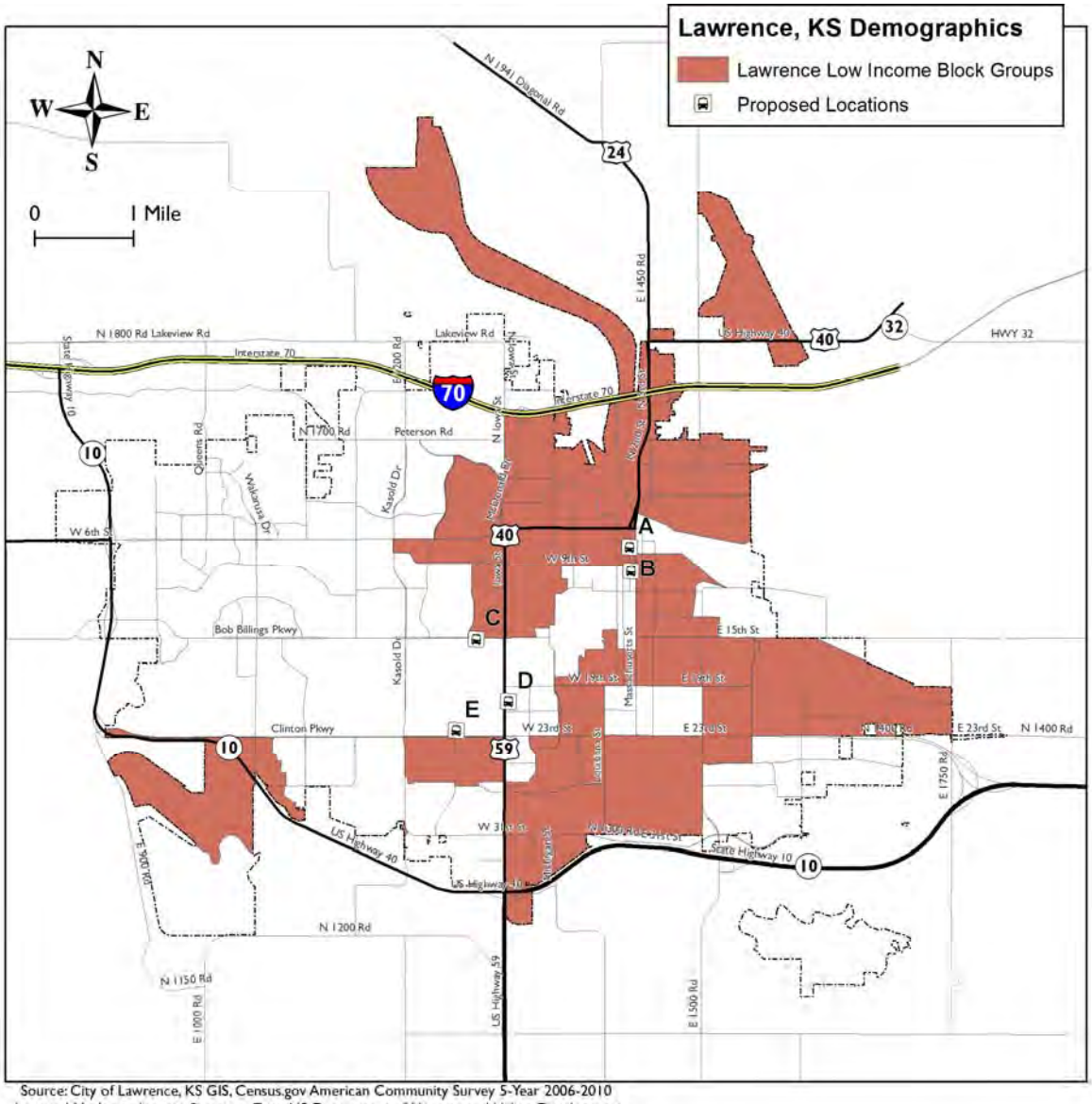
Demographic Analysis

Demographic analysis utilizing the most recent U.S. Census Bureau data, was conducted to understand the location of transit dependent populations in relation to the five candidate sites. Persons with Low Incomes, Older adults, persons with disabilities, low-income households, zero vehicle households, and college students are the populations that typically utilize public transportation. This information confirmed that the general location with the highest transit need is near the central portion of the city and the University of Kansas.

Persons with Low Income

Persons with low income are individuals that have a household income at or below the poverty threshold set annually by the U.S. Department of Health and Human Services. For example, if a family of four living in the same household has an annual income below the poverty threshold, all four individuals would be classified as persons with low income. There are 18,842 persons with low income residing in Lawrence, which is approximately 22.3 percent of the total population measured for this demographic. The density of persons with low income within the study area is displayed in Exhibit 12. Concentrations of persons with low income are primarily located throughout the eastern portions of the city as well as some concentration on the southwest part of the city. Site D is centrally located to the north and south areas of the city where the majority of persons with low income reside.

Exhibit 12: Persons with Low Income

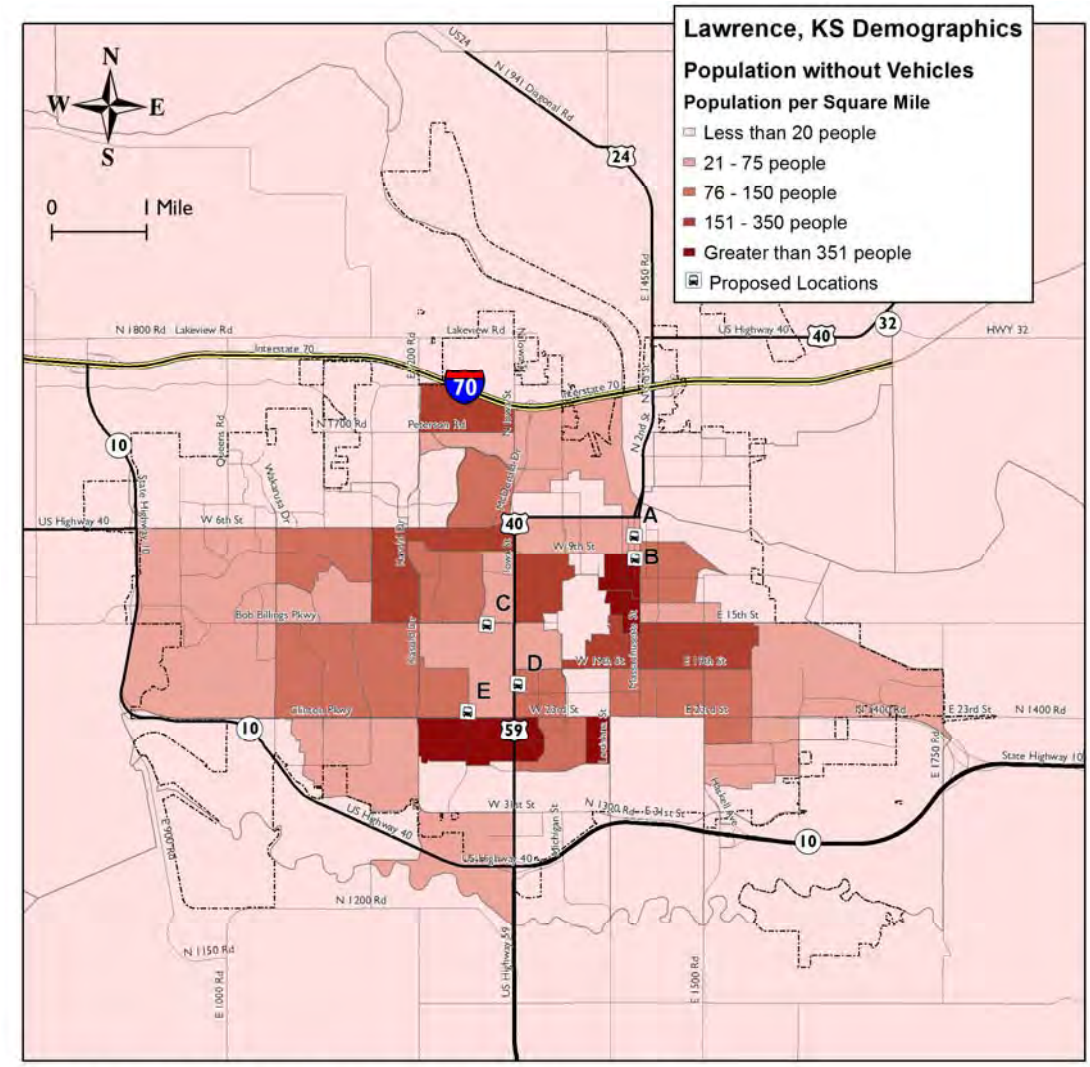


Source: City of Lawrence, KS GIS, Census.gov American Community Survey 5-Year 2006-2010
Low and Moderate Income Summary Data, US Department of Housing and Urban Development

Zero Vehicle Households

Zero vehicle households are individuals that do not have access to a personal vehicle and are more likely to use public transportation. There are approximately 1,300 zero vehicle households residing in Lawrence, which is 2.69 percent of the total households in Lawrence. The density of zero vehicle households within the study area is displayed in Exhibits 13. Higher concentrations of zero vehicle households are located adjacent to Iowa Street and in the areas generally between 6th Street (north) and 23rd Street (south), Kasold Drive (west) and Massachusetts Street (east). There is also a high concentration zero car households southwest of the intersection of 23rd and Iowa Streets. Site D is centrally located to these dense area of zero car households.

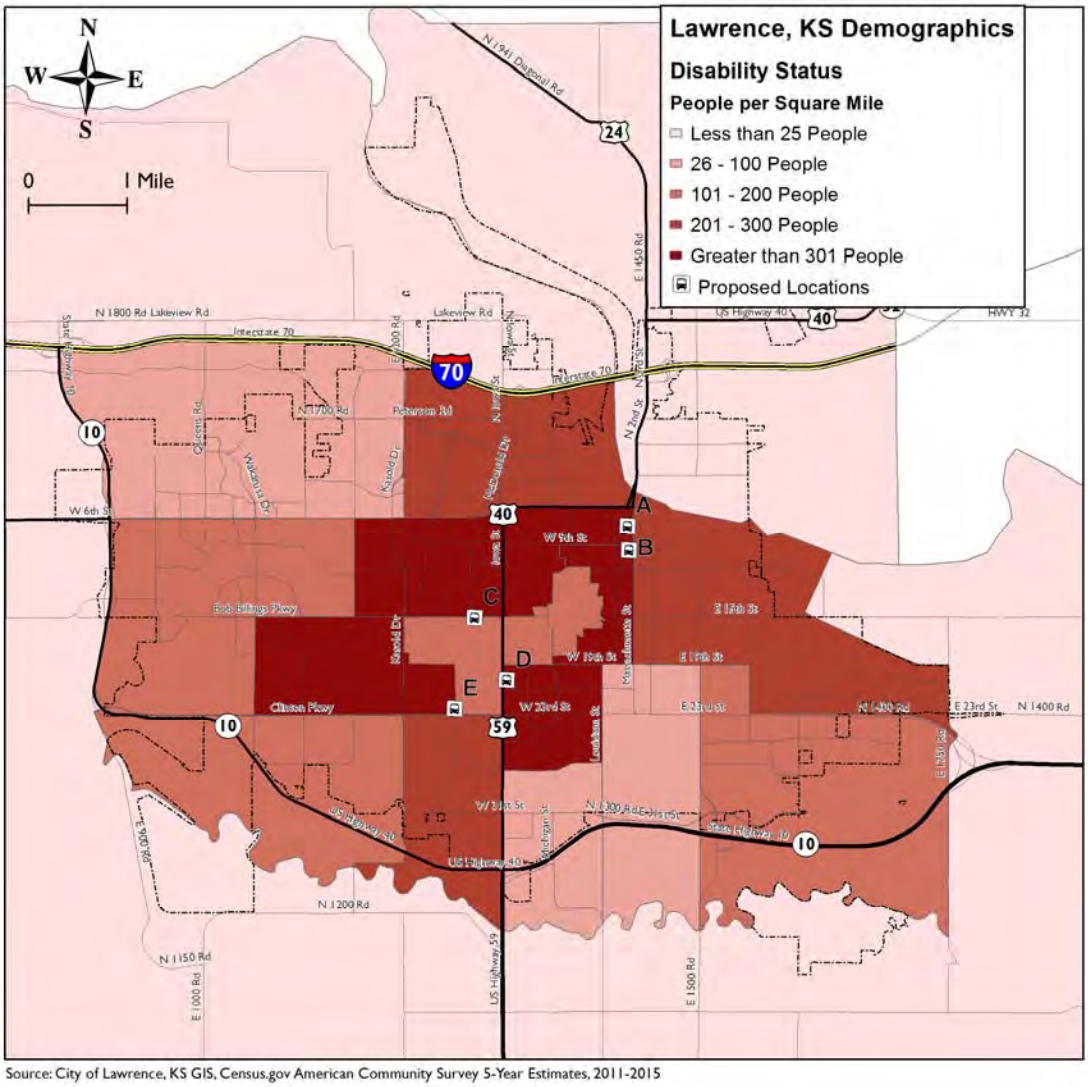
Exhibit 13: Zero Car Households



Persons with Disabilities

The Americans with Disabilities Act of 1990 states that a person with a disability is an individual who has a mental or physical impairment that limits a major life activity, has a history of such an impairment, or is perceived by others as having such an impairment. There are 5,675 persons with disabilities residing in Lawrence, which is approximately 5.5 percent of the total population measured for this demographic. The density of persons with disabilities (5 years or older) within the study area is displayed in Exhibit 14. Higher concentrations of persons with disabilities are located adjacent to Iowa Street and in the areas generally between 6th Street (north) and 23rd Street (south), Wakarusa Drive (west) and Massachusetts Street (east). Site D is centrally located to the areas of Lawrence with the densest populations of persons with disabilities.

Exhibit 14: Persons with Disabilities

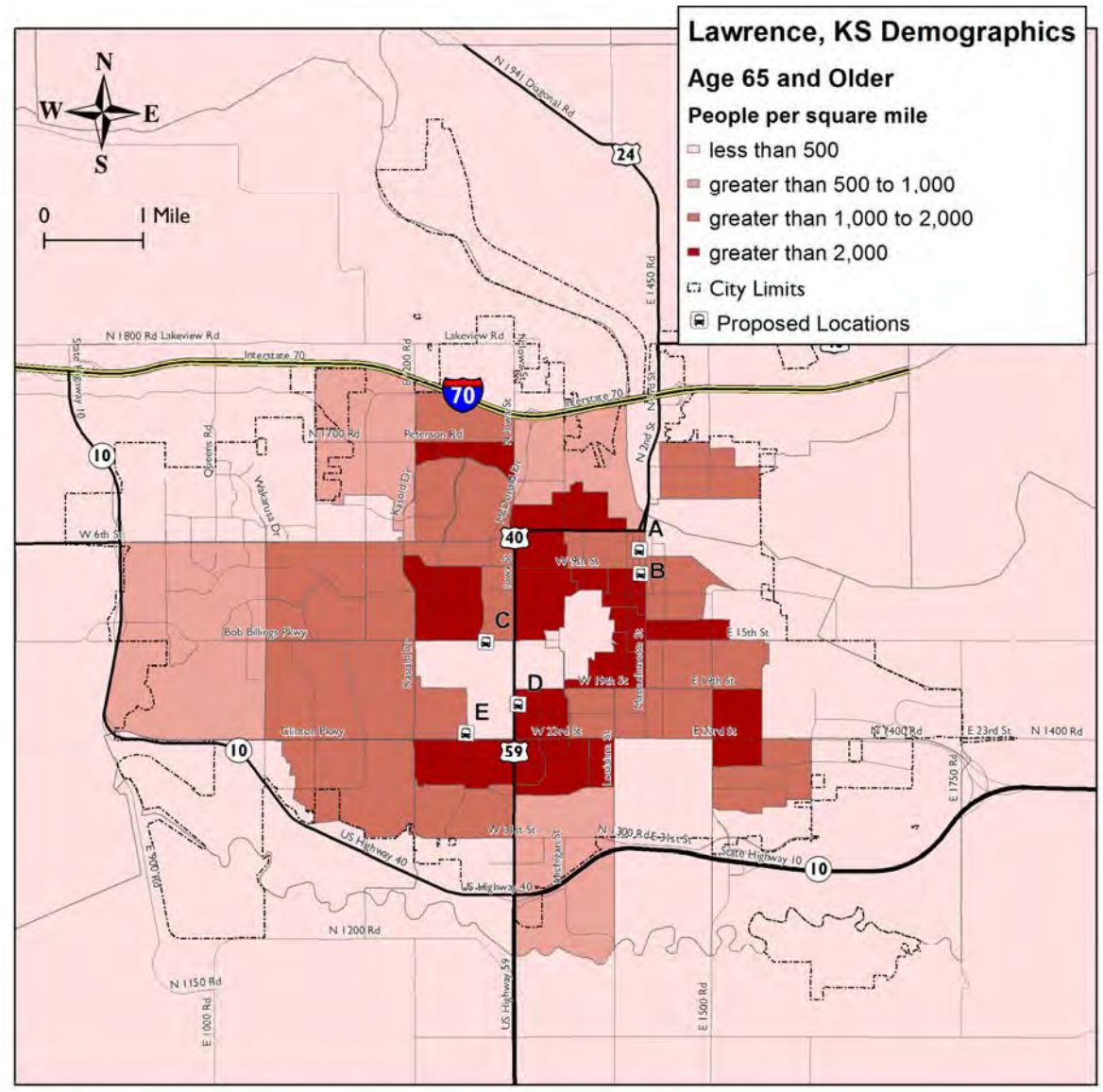


Source: City of Lawrence, KS GIS, Census.gov American Community Survey 5-Year Estimates, 2011-2015

Older Adults

Older adults are individuals who are 65 years or older. There are approximately 8,860 older adults residing in Lawrence, which is approximately 9.6 percent of the total population measured for this demographic. The density of older adults within the study area is displayed in Exhibit 15. Higher concentrations of older adults are located adjacent to Iowa Street and in the areas generally between 6th Street (north) and 23rd Street (south), Kasold Drive (west) and Massachusetts Street (east). Sites C and D Site D are centrally located to the areas of Lawrence with the densest populations of older adults.

Exhibit 15: Older Adults

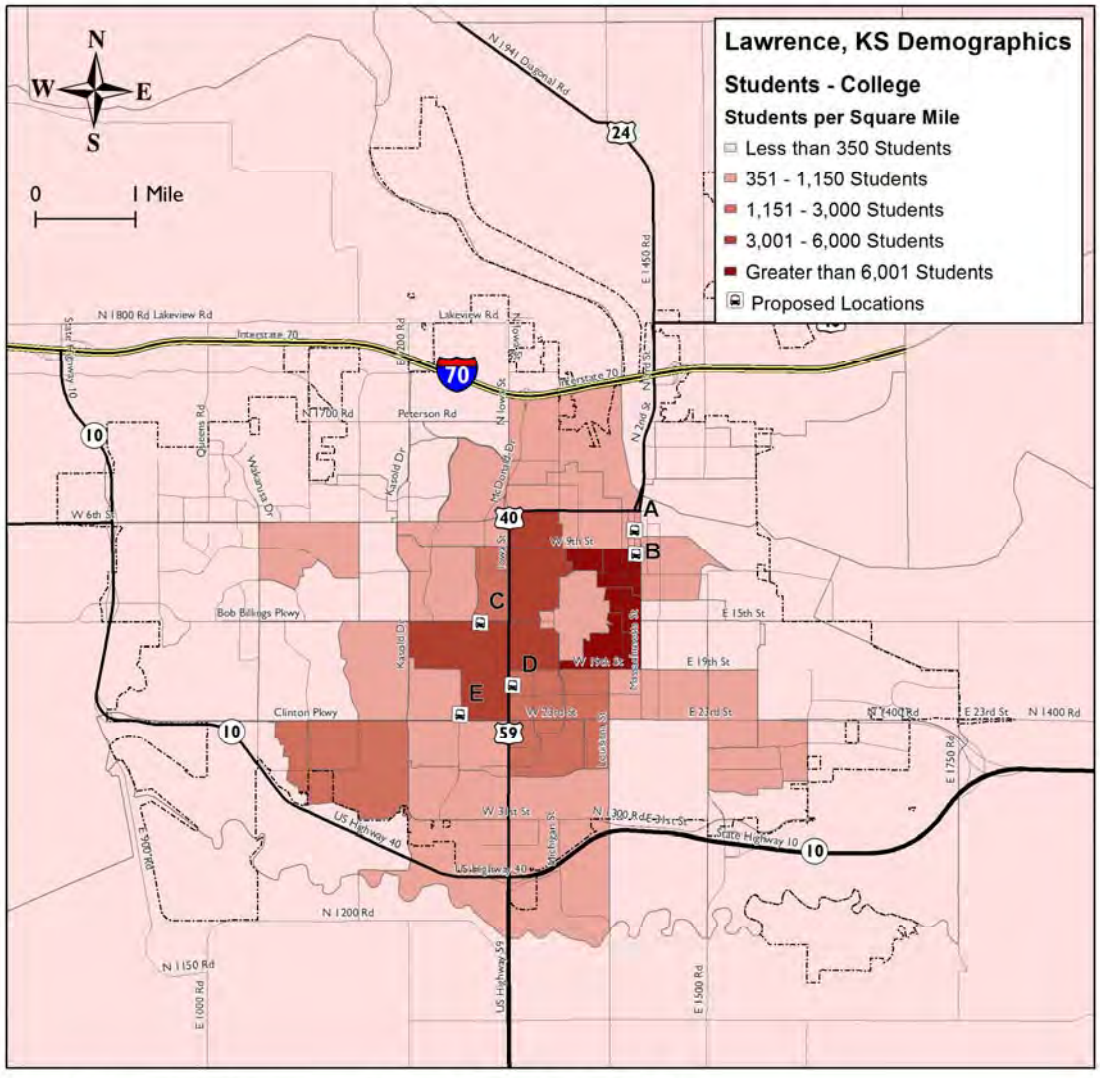


Source: City of Lawrence, KS GIS, Census.gov American Community Survey 5-Year Estimates, 2011-2015

Student Populations – College

College students are the primary users of public transportation in Lawrence. There are approximately 24,600 students enrolled in college and living in Lawrence, comprising approximately 31 percent of the total population measured for this demographic. The density of college students within the study area is displayed in Exhibit 16. Higher concentrations of students are generally located adjacent to the University of Kansas on the east and west sides of campus. Site D is centrally located to the areas of Lawrence with the densest populations of college students.

Exhibit 16: College Students

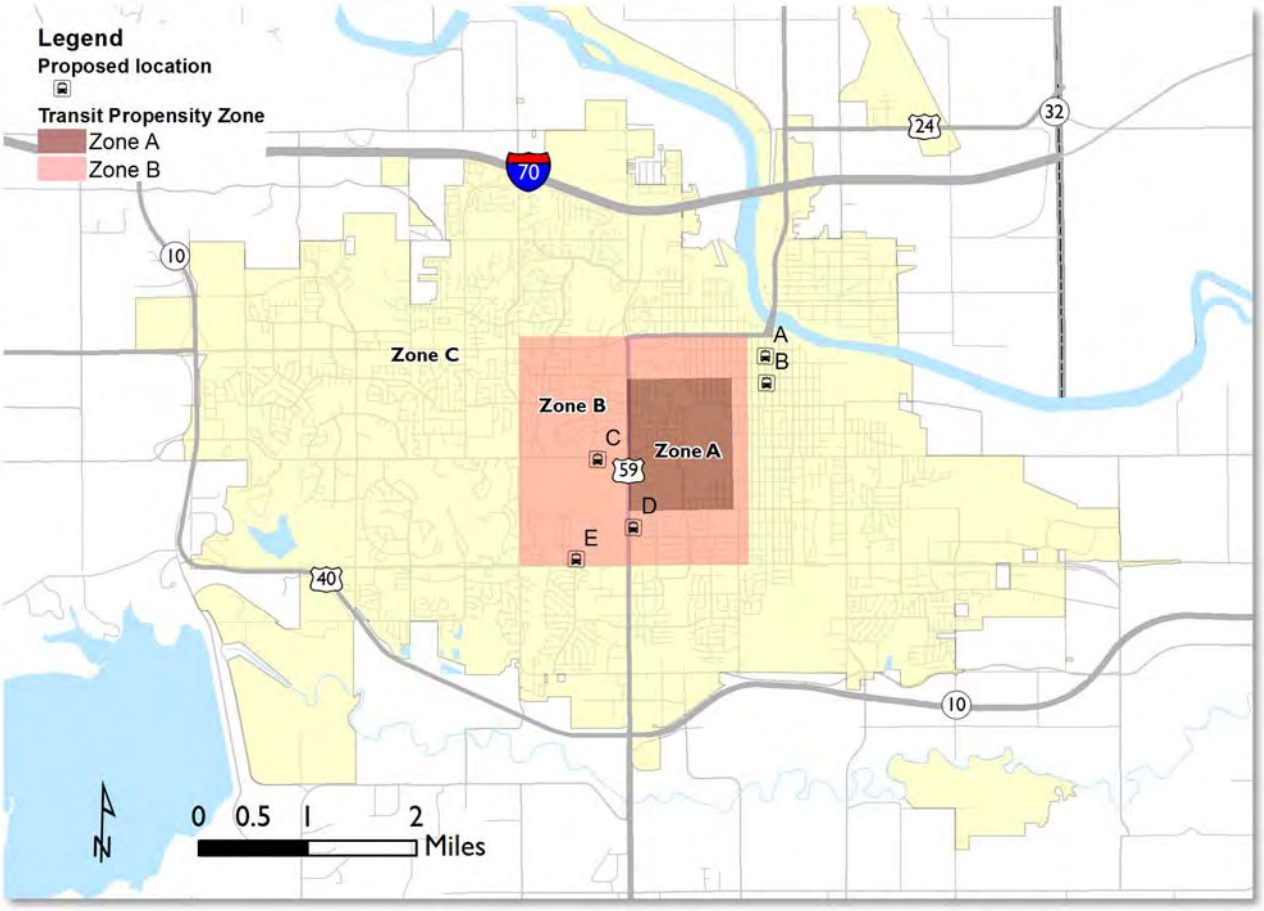


Source: City of Lawrence, KS GIS, Census.gov American Community Survey 5-Year Estimates, 2011-2015

Transit Propensity Areas

As discussed in Chapter 3, The *Comprehensive Transit Operations Study from 2016* identified that transit propensity indicators (such as income, zero car households, disability, age, and students) support a location further west than the current downtown transfer location. Additionally, the demographic data analyzed in this chapter support this assessment. Exhibit 17 illustrates the transit propensity or need in relation to the location of the five candidate sites. The area of highest transit propensity is Zone A. Zone B has a moderate level of transit propensity. The areas outside Zones A and B in the remaining part of the City been designated as Zone C.

Exhibit 17: Transit Propensity/Activity Centers in Relation to Candidate Sites



Source: City of Lawrence

Site Analysis

Each of the candidate sites was evaluated based on the evaluation criteria described in Chapter 3. The criteria were evenly weighted and rated as either high, medium or low in relation to each site. Following is a discussion of the results of the evaluation presented for each of the sites.

Site A - Vermont Street between 7th Street and 8th Street (Exhibits 7 and 7.1)

This site is the existing on-street transfer location and would maintain current travel times. It is not centrally located to areas in the city such as the University of Kansas and shopping areas such as 6th Street and Wakarusa Drive, and 31st and Iowa Streets. It is located outside of Transit Propensity Zones A and B (see Exhibit 17). It cannot accommodate an indoor facility with its current configuration due to the lack of available development space for a facility. However, there would be canopies for waiting transit users. The current conditions require buses to line up single-file along the curb for the length of the block, causing potential challenges for buses entering or exiting adjacent to occupied spots. The proposed saw-tooth arrangement will allow for buses to enter and exit bays regardless if adjacent bays are occupied. A concern at this location is the site would not be able to accommodate growth. It currently has the capacity for seven bays and could not exceed that capacity as illustrated in Exhibit 7. This could potentially require the acquisition of the adjacent parking lot in order to provide space for additional bays. It is ideally located outside of residential neighborhoods due to its location in the downtown commercial district. The property (city right-of-way) is currently owned by the City of Lawrence, so there would be no acquisition costs. The site would continue to function as it currently does on an existing city street, so improvements would be limited to preserve existing traffic patterns. The conceptual design illustrates features curb-side saw-tooth bus bays which would require curb reconstruction along the east side of Vermont Street. Pedestrian safety is a main concern at this location since the site operates on an active roadway and not an off-street location. Pedestrians cross at various locations along the length of Vermont Street between 7th and 8th Streets. Extensive striping and pavement markings would need to be added to enhance pedestrian safety at the along the street and at the proposed crosswalks. The required pedestrian enhancements would likely impact the ADA parking on the west side of Vermont Street where there are elevation changes that would require the construction of ramps to access the sidewalk. While the cost to develop this site is less than the other sites, it does not include the construction of an indoor facility which was highly supported by the public during the engagement process. Other considerations during construction would be utility pole and signage relocation as well as the addition of bus shelters. Due to existing development, the site has access to electrical service, water, and sanitary sewer systems.

Site B - Lot 5 on Vermont Street between 9th Street and 10th Street (Exhibits 8 and 8.1)

This site maintains travel time based on the existing system due to its location just two blocks south of the existing transfer location. This site is not centrally located to all major activity centers in the city such as the University of Kansas and shopping areas such as 6th Street and Wakarusa

Drive, and 31st and Iowa Streets. It is located outside of Transit Propensity Zones A and B (see Exhibit 17). If modified, it could accommodate an indoor facility although general constructability would be difficult. Maneuverability within the site and ingress/egress would be challenging due to the parcel size of less than one acre. It is located outside of primarily residential neighborhoods with its location in the downtown central business district. The city currently owns the property, so there would be no acquisition costs. Due to existing development, the site has access to electrical service, water, and sanitary sewer systems. The study team discussed the possibility of developing this location as a multi-use site through a potential public-private partnership. If this were to be implemented, construction costs would be high due to the recommendation of including underground parking along with commercial and or residential development above the transfer facility. The costs shown in this study do not include this type of development as the consultant team was directed only to include costs for transfer activity.

Site C - Southeast corner of Bob Billings Parkway and Crestline Drive (Exhibits 9 and 9.1)

This site is located within Transit Propensity Zone B and is somewhat central in relation to the major activity centers in the city such as the University of Kansas and shopping areas such as 6th Street and Wakarusa Drive, and 31st and Iowa Streets. (see Exhibit 17). A transfer location at this site could potentially reduce travel time over the current location for transit users residing in Zones A and B who might be traveling to one of the major activity centers and would not likely increase travel times for users residing in Zone C. The development at this location consists of an eight-bay saw-toothed transfer site with a central island and indoor facility with restrooms, a waiting area and a public meeting space. The site size can easily accommodate an indoor facility and provides space for adequate access and maneuvering of fleet vehicles. However, ingress/egress traffic patterns would need to be further evaluated in order to determine the impacts at this location and at the Crestline intersection. There are apartment complexes directly to the north of this site, but it is located primarily outside of residential areas and adjacent to other University of Kansas facilities. The site is owned by the University of Kansas, so there would be little or no acquisition costs. The University discussed developing this site as part of a gateway to west campus. There is a current structure located at this site which would require removal prior to construction. Due to existing development, the site should have access to electrical service, water, and sanitary sewer systems. Construction impacts could include potential site grading and clearing of wooded areas.

Site D - 1941 Stewart Avenue between 19th Street and 20th Street (Exhibits 10 and 10.1)

This site is located in the edge of Transit Propensity Zone A and well within Transit Propensity Zone B. This site garnered strong support from the University of Kansas due to its proximity to major campus improvements such as new dormitories and the central district that is currently being constructed. Of the five candidate sites, it is the most central in relation to the major activity centers in the city such as the University of Kansas including the new development, and shopping areas such as 6th Street and Wakarusa Drive, and 31st and Iowa Streets. (see Exhibit

17). It would likely reduce travel time over the current transfer location for transit users residing in Zones A and B who might be traveling to one of the major activity centers and would not likely increase travel times for users residing in Zone C. The site is approximately four acres and could adequately accommodate an indoor facility. Its size would also allow easy bus movements on site. While the site appears to have adequate ingress/egress, additional traffic analysis should be considered in order to understand the full traffic impacts the facility poses to existing streets and neighboring land uses. For example, it is located in a residential area, but design factors such as right-in/right-out access off of Iowa Street have been considered that could potentially reduce traffic impacts at this location. It is currently owned by the KU Endowment Association, so there would be little to no acquisition costs. Construction impacts would include grading of the site due to its substantial grade changes across the property. Due to the proximity to adjacent development, the site should have access to electrical service, water, and sanitary sewer systems.

Site E - Northeast Corner of Clinton Parkway and Lawrence Avenue (Exhibits 11 and 11.1)

This site is located on the southern edge of Transit Propensity Zone B and is less central in relation to the major activity centers in the city such as University of Kansas and shopping areas such as 6th Street and Wakarusa Drive, and 31st and Iowa Streets, than sites C and D (see Exhibit 17). A transfer location at this site could moderately reduce travel time over the current location for some transit users residing in Zones A and B who might be traveling to one of the major activity centers, but, it could potentially increase travel times for some users residing in Zone C. The site size would accommodate an indoor facility and provide enough room for bus access and maneuverability. It is currently owned by the KU Endowment Association, which so acquisition costs should be minimal. The site is heavily wooded and would require substantial clearing, grubbing and grading to create a building site. The proposed site is also located adjacent to a stream and low area that are classified as Waters of the U.S. per the Corps of Engineers. Careful grading and construction practices for this site would be required to preserve and not impede the drainage features. During this study, this site was presented with official opposition from the Marvonne Meadows Neighborhood in December 2017 due to its location adjacent to this residential area. Due to the proximity to adjacent development, the site should have access to electrical service, water, and sanitary sewer systems.

Comparative Analysis

A graphic comparative analysis of the five sites based on the evaluation above is summarized in in the chart below.

Site Selection Criteria	**Travel Time** Reduce, Maintains or Increases Current Trips	**Centralized Location** Central to KU and Shopping Districts	**Accomodates an Indoor Facility** Two and a Half Acres in Size	**Accomodates Fleet Operations** Ingress/egress and bus maneuverability on site	**Outside of Residential Neighborhood** Arterial Street or Land Use Buffer	**Low Property Acquisition Costs** Owned by City or Public Institution	**Ease of Constructibility** Utilities present, clear of structures/development
Site A - 7th and Vermont	●	○	○	◒	●	●	●
Site B - Lot 5 on Vermont Street between 9th Street and 10th Street	◒	○	●	◒	●	●	○
Site C - Southeast corner of Bob Billings Parkway and Crestline Drive	◒	◒	●	●	●	●	◒
Site D - 1941 Stewart Avenue between 19th Street and 20th Street	●	◒	●	●	○	●	●
Site E - Northeast Corner of Clinton Parkway and Lawrence Avenue	◒	◒	●	●	◒	●	●

Additional Discussion

When evaluating potential transit transfer locations it is important to determine what impact locating the transit hub at a given location might have on operation of the existing transit system. The current transit system serving Lawrence is designed as a radial or hub-and-spoke system, meaning that all or most of the routes in the system radiate from a specific point. Currently, the transfer location is at 7th Street and Vermont Street adjacent to the Lawrence Public Library in downtown Lawrence. Eight of the ten Lawrence Transit routes operate from this point in downtown Lawrence. Each of these routes is scheduled and routed to allow for a bus to complete a round trip from downtown to the end of its route and back to downtown in 60 minutes. This results in buses on each route arriving at the central point in downtown at the same time, allowing for transfers between routes with minimal wait times for passengers.

If the transfer center were relocated to a point further to the west of the existing downtown location, routes operating from the east part of the city would travel farther to get to the location

than they do now. This could mean that routes from the east, as currently routed, would not be able to complete a round trip in 60 minutes as they do now and routes from the west would complete a round trip in less than 60 minutes. The result would be that timed connections at the existing transfer location between routes would not be possible given current route structures. Restructuring of the transit system would be required to maintain the integrity of the timed connections and the effectiveness and efficiency of the system. As restructuring would occur, potential secondary transfer locations could be established in areas of the city in order to shorten trip times on routes no longer transferring downtown. These locations would experience high transfer activity, but not as extensive as a main transfer location. Amenities could potentially include high capacity bus shelters, seating, traveler information and signage. Costs would vary depending on amenities identified, but would be less than a site with a full indoor facility.

CHAPTER 6 | SUMMARY AND NEXT STEPS

Based on this analysis and input during the final public meeting and public survey, it was determined that Site A (Vermont Street between 7th Street and 8th Street), the current transfer location, could be retained to serve and maintain a presence in downtown. This would mean that the street-based transfer activity could be retained with upgrades to enhance the pedestrian and waiting environments, but would not have the capacity and growth capability of an off-street location. Site D (1941 Stewart Avenue between 19th Street and 20th Street) could be further evaluated as an off-street facility. This site has the space to allow for indoor/outdoor use, the room for current bus capacity and allowance for growth and compatibility with partner systems. If Site D were selected as the preferred site, Site A could be maintained as a system transfer point for downtown activities and for routes that focus on the northeast part of Lawrence. Additional traffic analysis including ingress/egress at both sites will be further conducted. Service planning to determine impacts of a main transfer location staged at Site D will also be conducted.

As part of this future analysis, a program of capital projects could be developed that considers bus transfer locations and stops in the following hierarchy:

- Main Transfer Location: This is defined as an off-street location, which includes saw-tooth bus bays, some park and ride features, bike racks (and potential future bike share), indoor space, outdoor seating, traveler information and shaded areas.
- Secondary Transfer Areas: This is defined as bus stops that have high transfer activity and amenities could potentially include high capacity bus shelters, seating, traveler information and signage. The locations for these areas could be 7th and Vermont Streets, 31st and Iowa Streets, 6th Street and Wakarusa Drive, and Jayhawk Boulevard on the University of Kansas Campus.
- High Capacity Transit Stops: This would be defined as transit stops along major corridors that have higher than average boarding and alighting behavior. Amenities at these sites could potentially include bus shelters, signage and seating.

APPENDIX A | PUBLIC AND STAKEHOLDER ENGAGEMENT SUMMARY

PUBLIC ENGAGEMENT #1

FOR IMMEDIATE RELEASE:

CITY OF LAWRENCE TRANSIT HOSTING PUBLIC MEETING TO KICK OFF BUS TRANSFER LOCATION ANALYSIS

Lawrence, Kansas – City of Lawrence Transit has recently begun an analysis that will evaluate potential locations where users of both the City of Lawrence and University of Kansas transit systems can make transfers.

To begin this process, Lawrence Transit will host two one-hour community conversation sessions at the Carnegie Library, 200 W. 9th Street, on August 3rd, 2017. These sessions will take place from 4-5pm and 6-7pm and will include a short presentation, followed by round robin small group discussions focused on site design, economic development and transit operations. Output from these discussions will be used to develop site selection criteria.

In addition to the public meeting on August 3rd, input will be gathered through Lawrence Listens, the City of Lawrence's online forum for civic engagement. Three surveys are planned during the analysis; the first will coincide with the public meeting on August 3rd. This survey will be available at https://lawrenceks.org/lawrence-listens/.

The public meeting can be accessed by Lawrence Transit Routes 1, 3, 4, 5, 6, 7, 10, 11 and 15. More information about the project, as well as trip planning and transit routes can be found at Lawrencetransit.org

For more information about the project, please contact:

Bob Nugent, Transit Administrator, *(785) 832-3464*, rnugent@lawrenceks.org

-End of release-

Lawrence Transit Web Content

Photo: New Hampshire Transfer Location – Library Vantage Point (Bob has image)

The City of Lawrence Transit has recently begun an analysis that will evaluate potential locations where users of both the City of Lawrence and University of Kansas transit systems can make transfers.

Having a bus transfer location in Lawrence will allow riders to make easy connections between routes. Having convenient connections between routes makes the entire system more accessible; more users will be able to get to more destinations in a shorter amount of time.

This analysis will begin with a community discussion about which components of a transfer location are of the most importance to residents in Lawrence. This engagement will include both a public meeting and an online survey via Lawrence Listens. The pubic meeting will take place August 3rd at the Carnegie Library.

The feedback given during this phase will then be analyzed and the common themes will be considered for inclusion as evaluation criteria for selecting the sites. To finalize the criteria, a Lawrence Listens survey will ask users to rank possible selection criteria.

Finally, potential sites will be evaluated and presented to the public both in a public meeting format and via Lawrence Listens. This will take place in mid-late November. Participants will be asked to rate locations based on the selected criteria.

The analysis will conclude by the end of 2017 with a recommended location.

<u>Timeline & Important Dates</u>

First Public Meeting –
2 One-Hour Community Conversation Sessions
August 3rd, 2017
Carnegie Library
200 W. 9th Street
4-5pm and 6-7pm
Bus Route Access: 1, 3, 4, 5, 6, 7, 10, 11 and 15.

1st Lawrence Listens Survey
Theme: Tying Community Values to Components of the Bus Transfer Location
Will be available to the public from Aug 3-17
https://lawrenceks.org/lawrence-listens/

2nd Lawrence Listens Survey

Theme: Verifying Values & Determining Site Selection Criteria
Will be available to the public October 2-16
https://lawrenceks.org/lawrence-listens/

Second Public Meeting
Location and Time – TBD
Planned for the week of November 13th

3rd Lawrence Listens Survey
Theme: Analyzing Sites Using Publicly Driven Criteria
Will be available November 13th through the end of November.

Lawrence Bus Transfer Location Analysis

August 2017

Community Needs & Goals

Rendering: Mission Transit Center, Mission (KS)

Common Transfer Location Elements:

- Designated locations for multiple buses to park and wait
- Seating and shade features for passengers
- Lighting at the pedestrian scale to provide a secure environment
- Landscaping and public art features
- Parking

Rendering: Easton Transit Facility, Toledo (OH)

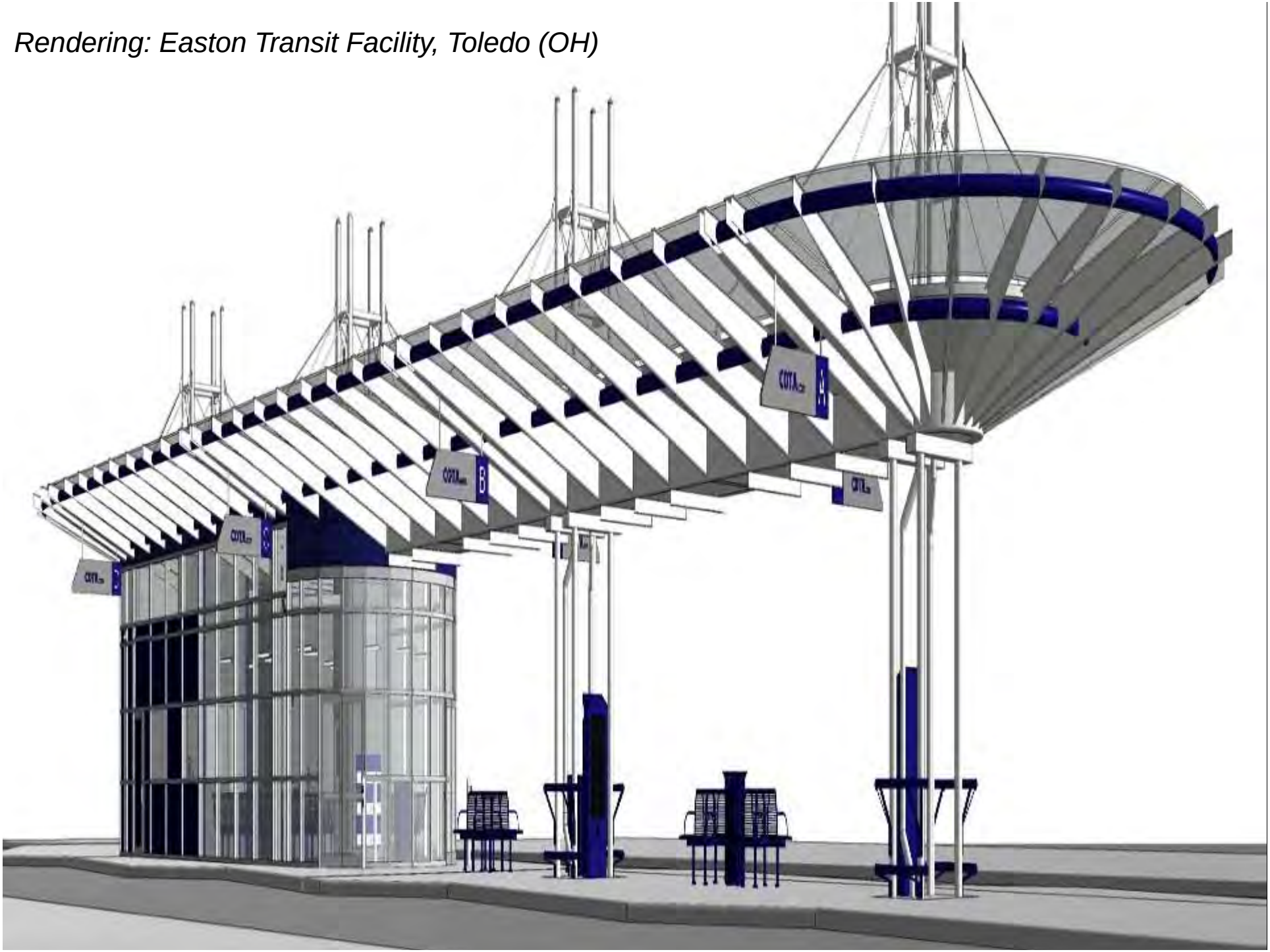


Photo: Norfolk, VA

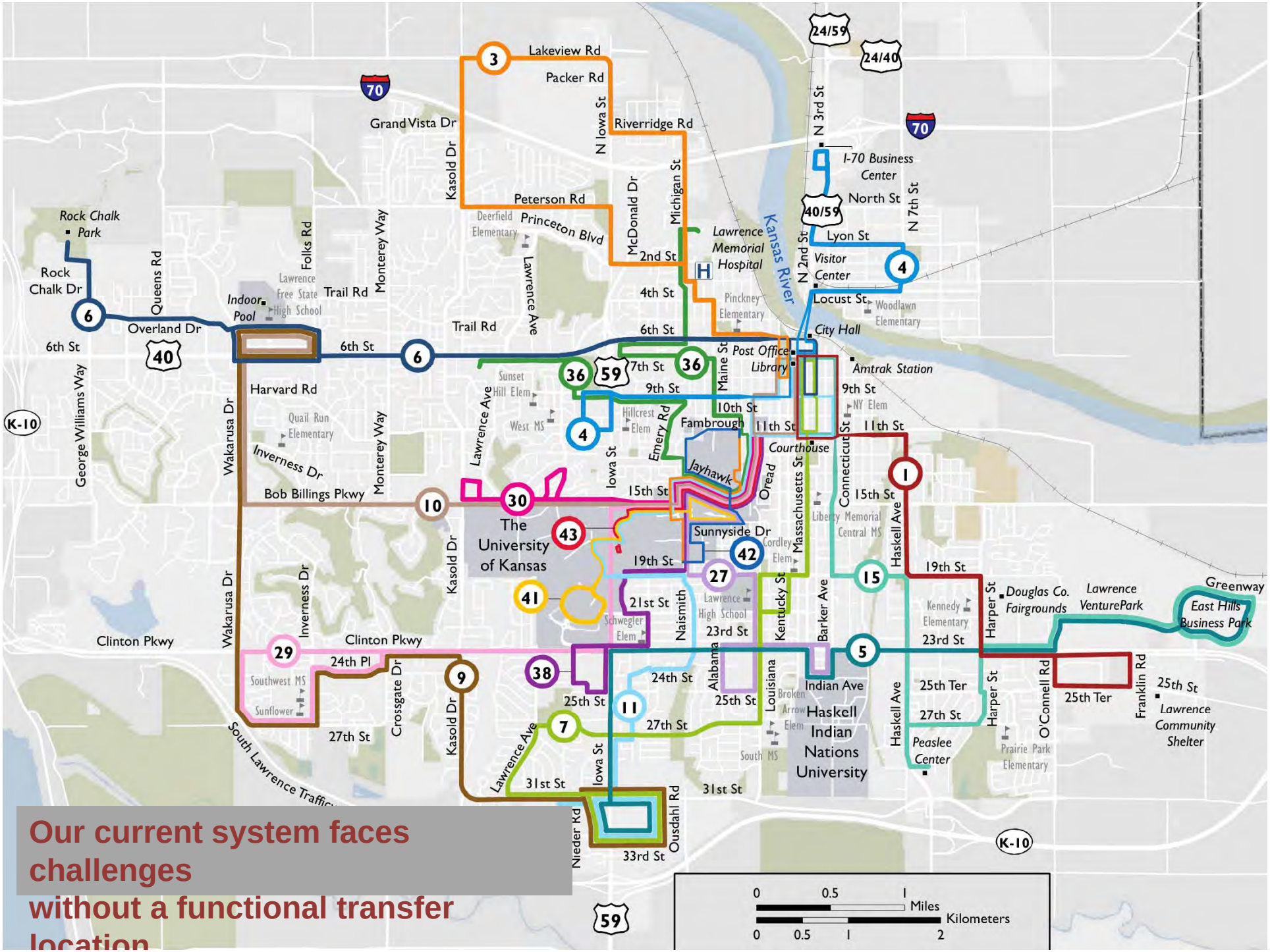
Enhanced indoor areas can provide:

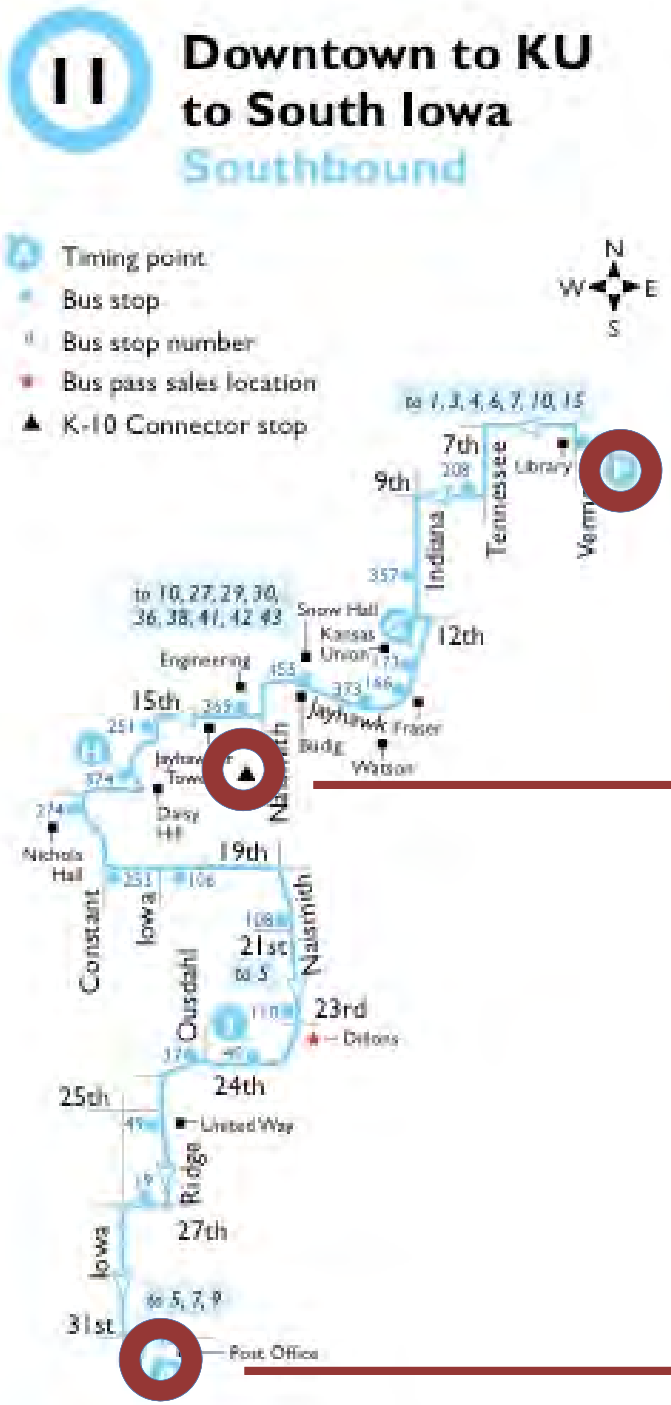
- Administrative offices
- Layover & break areas for bus drivers
- Meeting rooms
- Indoor waiting areas

Rendering: North County Transit Center, St Louis

Transfer Locations Can Accommodate Many Community Goals:

- Can focus on current demands or look to the growth of the future
- Can be focused on transit/transportation
- Can be a joint use with shopping, housing or office


Our current system faces challenges
without a functional transfer location
Lakeview Rd
Packer Rd
Riverridge Rd
Grand Vista Dr
Kasold Dr
N Iowa St
McDonald Dr
Michigan St
Peterson Rd
Princeton Blvd
Deerfield Elementary
Lawrence Memorial Hospital
Kansas River
N 3rd St
I-70 Business Center
North St
N 7th St
Lyon St
Visitor Center
N 2nd St
Locust St
Woodlawn Elementary
Pinckney Elementary
City Hall
Post Office
Library
Amtrak Station
Maine St
2nd St
4th St
6th St
7th St
9th St
10th St
11th St
Rock Chalk Park
Rock Chalk Dr
Queens Rd
Overland Dr
Folks Rd
Lawrence Free State High School
Indoor Pool
Trail Rd
Monterey Way
Lawrence Ave
Harvard Rd
Quail Run Elementary
Inverness Dr
Bob Billings Pkwy
George Williams Way
Wakarusa Dr
K-10
Sunset Hill Elem
West MS
Hillcrest Elem
Emery Rd
Fambrough
Jayhawk
Courthouse
Oread
Iowa St
15th St
Connecticut St
Massachusetts St
Liberty Memorial Central MS
NY Elem
The University of Kansas
Sunnyside Dr
Cordley Elem
19th St
Haskell Ave
Kasold Dr
Inverness Dr
Clinton Pkwy
Southwest MS
Sunflower
24th Pl
Crossgate Dr
27th St
South Lawrence Traffic
Schwegler Elem
21st St
Naismith
Lawrence High School
23rd St
Kentucky St
Barker Ave
Kennedy Elementary
Harper St
Douglas Co. Fairgrounds
Lawrence VenturePark
Greenway
East Hills Business Park
Alabama
24th St
25th St
Louisiana
Broken Arrow Elem
Indian Ave
Haskell Indian Nations University
South MS
25th Ter
27th St
Peaslee Center
O'Connell Rd
Prairie Park Elementary
Franklin Rd
Lawrence Community Shelter
Lawrence Ave
31st St
Iowa St
Nieder Rd
Ousdahl Rd
33rd St
24/59
24/40
40/59
70
40
59
K-10
0
0.5
1
Miles
Kilometers
2



7th and Vermont Transfer Location

K-10 Connector Stop

31st and Iowa Stop

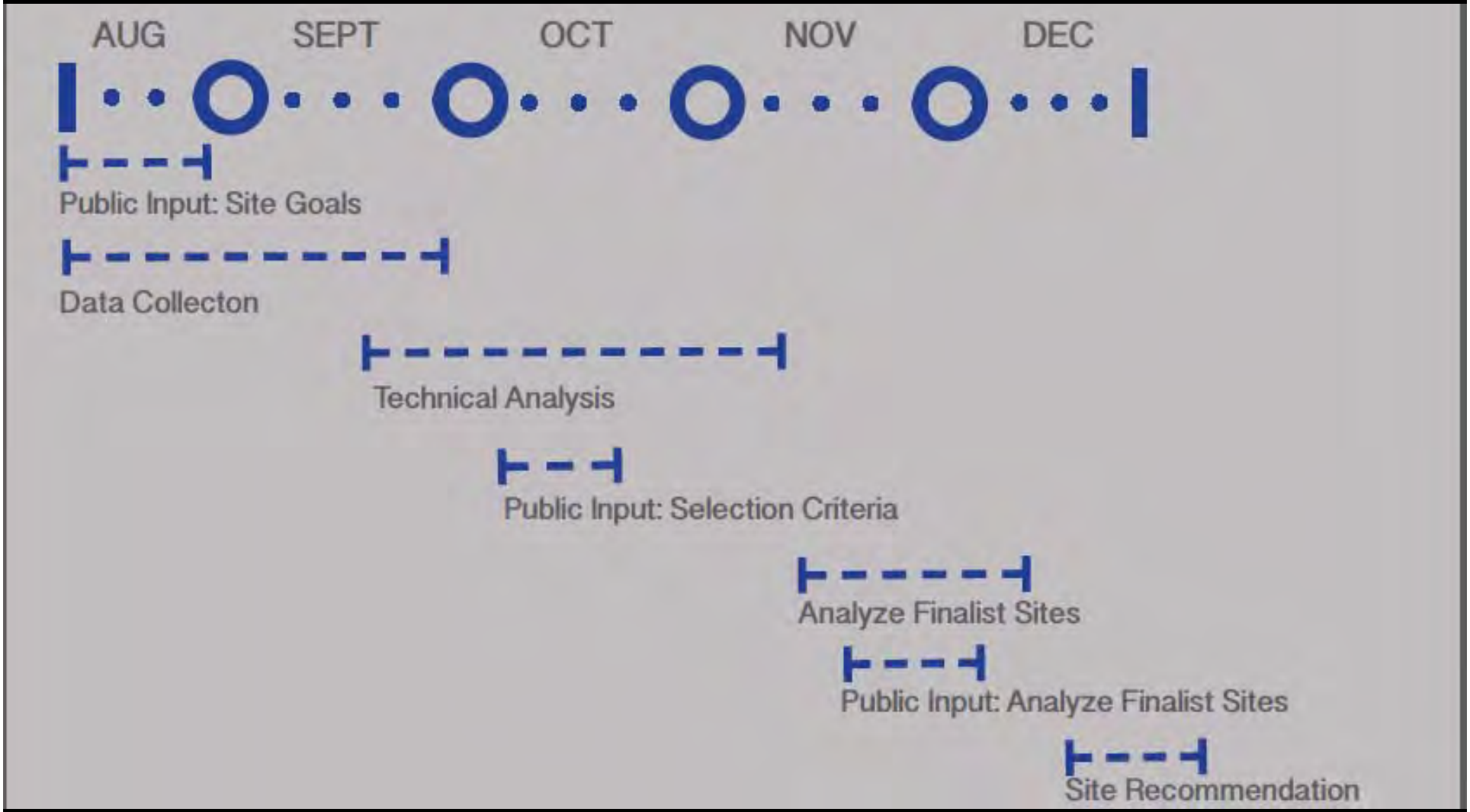
Rendering: New Blake Transit Center, Ann Arbor (MI)

A Transfer Location Can Include Co-Location with Other Modes:

- K-10 connector and future commuter transit to Topeka or Kansas City
- Greyhound
- Enhanced bike parking or bikeshare
- Carshare
- Paratransit


This bus runs on batteries, batteries

Project Timeline



We Appreciate Your Participation!

Tonight:

- Participate fully
- Ask questions
- Fill out a comment card

Throughout the Process:

- Follow us on lawrencetransit.org/bus-transfer-location-analysis
- Take the surveys on Lawrence Listens!

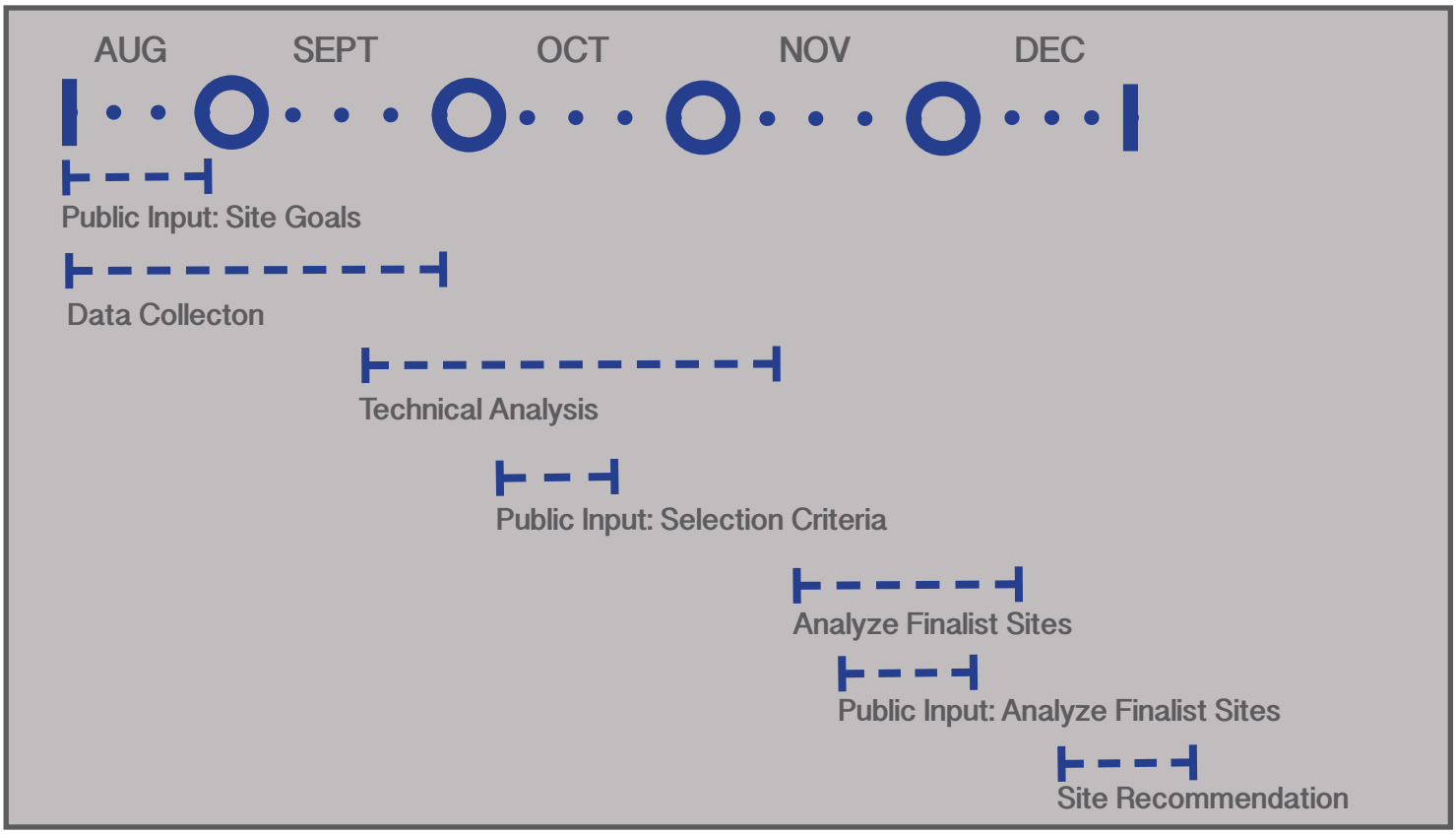
Lawrence Bus Transfer Location Analysis

Public Meeting August 3, 2017

Lawrence Transit has recently begun an analysis that will evaluate potential locations where riders of both the Lawrence Transit and KU on Wheels transit systems can make transfers. Having a bus transfer location will allow riders to make easy connections between routes. Convenient connections between routes makes the entire system more accessible and efficient.

Current bus transfer location - 7th and New Hampshire

Project Schedule



Lawrence Bus Transfer Location Analysis

Tonight's Meeting

We want to hear from you! After a brief presentation, we ask that you join us at one of three tables for conversations on Site Design, Operations, and Economic Development. Below are some questions to start the conversation, but we want to know what you think needs to be considered in a bus transfer site location. We have included markers and paper at the tables for you to make notes.

Site Design

- What type of transfer location would best serve our community?
- What amenities should the transfer location have (benches, restrooms, indoor shelter, vending, retail)? At a minimum, what amenities should it have?
- How should a bus transfer site support multi-modal (bike, bus, carpool) connections?
- What bus transfer site considerations should be given to attract new riders?

Transit Operations

- What do you think about transferring from one bus route to another in order to complete your trip?
- What do you think would make transferring routes convenient or comfortable?
- Who should operate out of bus transfer sites (e.g. Greyhound, K-10 Connector, Future regional bus service)?

Economic Development

- What economic impact would the bus transfer location have on the community?
- What amenities would make a bus transfer location neighborhood friendly?
- Which locations in Lawrence should be easily accessed via a bus transfer?

Thank you for your time today!
Please complete a comment card and follow our progress on lawrencetransit.org/bus-transfer-location-analysis

Interested in more project information? Sarah Frost: smfrost@transystems.com
www.lawrencetransit.org/bus-transfer-location-analysis

Lawrence Bus Transfer Location Analysis Public Meeting 1 Notes

Lawrence Transit has recently begun an analysis to evaluate potential locations where riders of both the Lawrence Transit and KU on Wheels transit systems can make transfers. To kick off this study, The City of Lawrence conducted two public meetings on August 3rd, 2017 to assess community wants and needs for a potential bus transfer location. A summary of the public involvement process follows.

Advertisement

The public meeting was advertised through the following means:

Bus Advertisements

One-page advertisements were provided on Lawrence Transit buses one week prior to the event. These advertisements provided meeting context, location, time, and access information via bus.

Press Release

A press release was provided to local media outlet that gave context about the study, location, time, and access information via bus. The press release also provided information about the companion survey on Lawrence Listens.

Social Media

Multi-day social media content was posted to the City of Lawrence site that provided meeting context, location, time, and access information via bus.

Lawrence Transit Website

The Lawrence Transit website has a special tab associated with the study. On this site, advertisement of the event was provided, which included meeting context, location time, and access information via bus.

Email Invitations

Email invitations were sent to community members signed up for the Lawrence – Douglas County MPO listserv. Additional invitations were also sent to City Commissioners, City Commission Candidates, and stakeholders who would be engaged throughout the study process.

Format

The Study Management Team identified that the most important takeaways from this engagement event were:

- Providing up-to-date information on the analysis process
- Showing how this analysis will differ from previous studies
- Discussing and identifying the values and wants prior to talking about locations
- Showing visuals of other similar transfer locations to provide an understanding of what this location could potentially become.

It was determined that the following format would best meet the identified goals:

1. A short, visual presentation (pre-recorded, so that Lawrence Listens users would have the same presentation). This presentation included the potential design aspects of a center, operational reasons why it is important to the transit system, how this project is different from previous studies, an overview of the process, and an overview of the evening's event.
2. Three discussion tables with discussion questions were set up. Markers and paper were provided for people who wanted to notate. The topics at the tables were focused on:
    a. Site Design
    b. Transit Operations
    c. Economic Development

    This content provided qualitative information for the analysis.
3. A comment card with questions that were consistent with the Lawrence Listens questions was provided. This content would inform the quantitative portion of the analysis.

Participation:

Two meetings were held on August 3rd to allow participants to attend when schedules permitted. Participation was as follows.

August 3rd, 2017, 4pm: 16 participants
August 3rd, 2017, 6pm: 6 participants

Notes from the Discussion Tables

The facilitators performed most of the notating on the tables during the discussion section although the participants were also encouraged to write down their thoughts.

The following section is a compilation of facilitator and participant notes. Comments summarized are directly from the public participants. Some comments may appear to be redundant, as it is important to capture the multiple number of public participants who may have identified similar wants and needs.

Site Design

The following questions were asked of the participants at the table discussing site design:

What type of transfer location would best serve our community? How should a bus transfer site support multi-modal (bike, bus, carpool) connections?

- Multimodal
- Central Location with Density
- Locate near services
    - Courthouse
    - Hospital
    - Library
    - City Hall
    - Employment
    - Senior Center
- Locate near services
    - Post office
    - Library
    - Senior Center
    - City Hall
    - Swimming Pool
    - Parks
- Multiple, smaller hubs
- A spot near downtown for access to services
- Minor transfer site near the KU Union
- Not a hub that looks like Disney World
- Located at 11th and Mississippi
- Like co-using library at current site, tying in to existing services like Rock Chalk Park
- Fits into the fabric of Lawrence
- Avoid pedestrian conflicts like what exists at the Vermont site
- Centralized location
- Access to arterials
- Access to K-10 connector
- Adjacent to services
- Indoor facility could hinder on-time boarding
- Space for potential growth and different uses
- Multimodal
- Densely populated area
- Public Private Partnership – access to amenities at an adjacent location

What amenities should the transfer location have (benches, restrooms, indoor shelter, vending, retail)? At a minimum, what amenities should it have?

- Bathrooms, benches, indoor areas for cold weather
- Bike access
- Near long term parking
- Indoor heating and AC
- Bike corrals/lockers
- Covered parking
- Sheltered areas
- Restrooms
- Drinking water
- Benches
- Lockers for personal items
- Water fountains
- Bathrooms
- Coffee, water, general refreshments
- Seating area, sheltered
- Protected from elements
- Various seating options – indoor and outdoor
- Drop-off area
- Bike share
- Bike amenities
- Very well lit

What bus transfer site considerations should be given to attract new riders?

- Central location to allow a hub and spoke
- Not long trips or too many transfers
- Incorporate monthly art with Final Friday activities
- Location should be a destination, adjacent to cultural or entertainment venues

Transit Operations

The following questions were asked of the participants at the table discussing transit operations:

What do you think about transferring from one bus route to another in order to complete your trip?

- Transferring between routes would be less daunting if there was better information at the transfer location i.e. kiosks with schedules, maps, etc.…
- Transferring should happen in a matter of minutes. You should be able to de-board one bus, go right to the next bus and continue your trip.

- Transferring at the transfer hub should only take a few minutes. Transferring at other locations around the city might require some wait time, so there should be at least benches and shelters at those locations.

What do you think would make transferring routes convenient or comfortable?

- The transfer hub should not be located in a residential neighborhood because of the number of buses that will be coming and going throughout the day.
- The transfer hub should be along or near a major arterial street.
- Amenities should be available at transfer locations i.e. shelter from the elements, places to sit and wait, info kiosks, etc.…
- The transfer hub will not be the only place to transfer, so all the money earmarked for the transfer hub should not go just to that facility. Some money should be invested in other transfer locations around the city.
- The transfer hub location should be central to where people are traveling. If it's downtown it might not serve the campus buses very well, if it's on the campus it might not serve the city buses very well.
- Transferring time should be kept to a minimum, so the transfer hub location doesn't have to be around commercial activity because bus riders will not be at the location long enough to shop.
- The transfer center could serve a dual purpose as both a transfer site and a destination i.e. downtown Lawrence or the KU campus.
- Transferring is necessary, but you shouldn't have to travel all the way to the transfer hub to transfer to a bus that will take you to a destination that is only a short distance away by car.
- There should be multiple transfer locations around the city.
- Transfer location should be near or part of other activities so a bus rider could shop or take care of other errands between transfers.
- Waiting 15 to 20 minutes for a transfer is ok if there is shelter from sun, rain, wind, etc.…
- There should be amenities at all transfer locations, not just the main transfer hub.
- The transit system should operate fare free.

Who should operate out of bus transfer sites (e.g. Greyhound, K-10 Connector, Future regional bus service)?

- The transfer hub should serve other transportation modes besides just bus routes i.e. bicycles, pedestrian, paratransit, Uber, Lyft.
- Greyhound buses and the K-10 Connector should serve the transfer hub. Also, there should routes to Topeka and KCK-KCMO serving the transfer hub.
- There should be a route to KCK/KCMO operating from the transfer hub.

- The Greyhound bus and the K-10 Connector bus should serve the transfer hub.

Economic Development

The following questions were asked of the participants at the table discussing economic development:

What economic impact would the bus transfer location have on the community?

- Transit should serve public services – it's not the role to entice development, especially in Lawrence. There needs to be ridership potential before we put a stop somewhere.
- Service simplicity is important to making transit an economic driver.
- Beyond thinking about commuter trips – think about including ride hailing.
- Being innovating about transit – public private partnerships.
- Adjacent property values
    - Transit access is good
    - Too big is bad
    - Opponents use excuses such as property values, etc. it is really racism or classism that is the problem.
- The system is currently confusing. Use a transfer location to make the system simpler.
- Demographics, currently mostly non choice riders
- How do we reach non-choice riders?
    - Efficiency, frequency.
    - Cultural challenges (Midwest)
- Non-choice riders only use businesses on the route – are we telling that story?

What amenities would make a bus transfer location neighborhood friendly?

- There is a difference in amenities between KU and City of Lawrence system. This facility should be an equalizer.
- Reduce route times to 30 minutes or less – this will make transit more desirable.
- Hour routes do not encourage choice riders.
- Be competitive with the car.
- Attract younger people – how do we use the location to do that?
- Purposes of a transfer location:
    - Enable easy transfers.
    - Be a destination in and of itself.

Which locations in Lawrence should be easily accessed via a bus transfer?

- Rock Chalk Park – Junior Olympics was a big lesson for us. How can the transfer facility help for staging?
- KC to Topeka Commuter trips

- We do well with event based transportation (games, downtown events)
- Would more than one location be a benefit?
- Sharing use with municipal services
- Locations to access:
    - Venture park
    - Health care complex
    - Downtown
    - University
    - South Lawrence
- Have a truly geographic hub and spoke.
- Economic development – when people get to a destination, what services do they want at that destination?
- Making a destination:
    - University – is this the primary ridership because it is the current primary focus of the system? There is a huge public service need in Lawrence that could be more efficiently met.
    - Downtown – later run times would enhance economic development.
- If the hub is on campus, will non KU riders feel like it is for them?
- Must be convenient to the university. That is where the ridership is.
- Should there be multiple locations?
    - One on one side of the hill/one on the other side.
    - If you are putting it in or adjacent to a neighborhood, be sensitive to scale.
- Greyhound will want to move closer to the highway when the have the opportunity.

Additional Written Comments from the Public

- Smaller, multiple hubs that impact the neighborhood less.
- Calm traffic, keep buses out of neighborhoods and onto arterials and collectors.
- Multi-modal design, useful for bikes, carpools, greyhound, etc.
- Proximity to services and economic center (Downtown)
- Balancing the needs of KU and City
- Proximity to hospital, library, city hall, court house, senior center
- Purchase tickets on site.
- Colocation with shopping or adjacent.
- Show the return on investment from transit (fewer road repairs, less driving)
- Replicate the economic opportunity that comes from downtown.
- Keep the buses going downtown.
- Stay north of campus – that is where the economic development is.
- People take the bus downtown because they have to.
- Work trips – North Lawrence, East Hills, Peaslee Center, Hallmark, KU, Hospital.

- Current transfer locations – Route 10 (Walmart serves as a KU Park and Ride)
- In Neighborhood Zones
    - Needs buffers
    - Ped/bike connections
    - Needs to look good and show that early in the consent process
    - Should it really be in this area – maybe it should only be in commercial areas
- Having it in a commercial area reduces the need for bathrooms and shopping on site.
- Utilize Old Borders Bookstore

Comment Cards

22 Comment cards were scanned and provided to City of Lawrence staff for combined tabulation with Lawrence Listens survey.

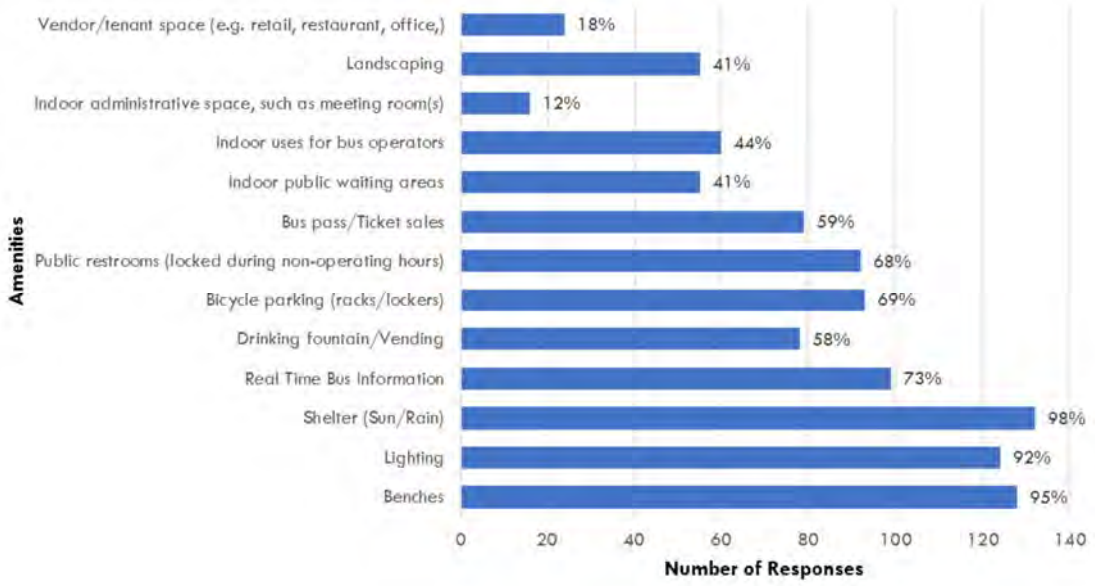
Lawrence Bus Transfer Analysis

Survey 1 Responses

Total Respondents: 136

When asked "Which amenities should be included in the design of a bus transfer site? (Check all that apply)" Respondents indicated:

Figure 1: Amenities that should be included in the design of a bus transfer site



Total number of responses - 135

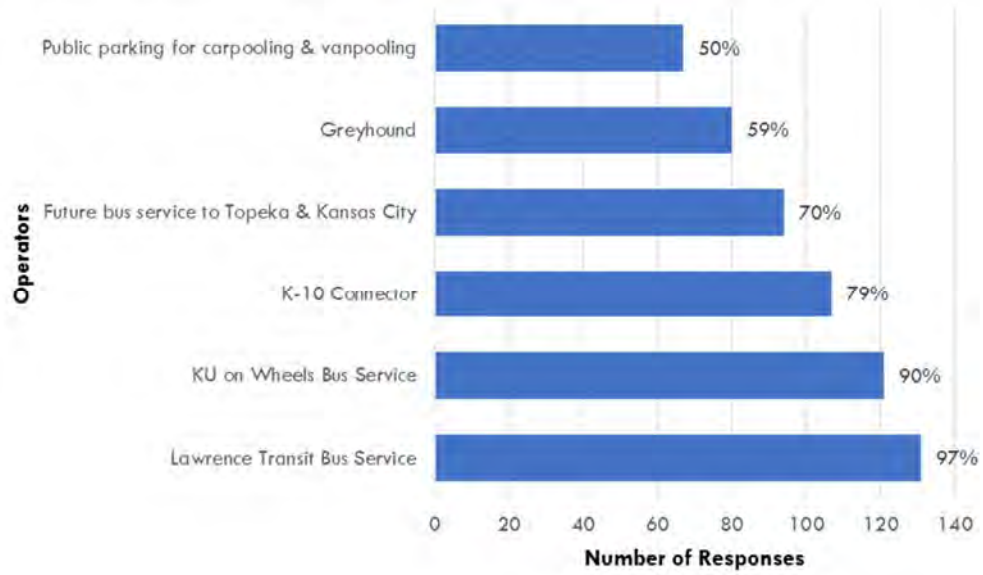
Other:

- Public parking spaces
- Water, not vending machines
- Exercise options
- FREE secure WiFi
- Emergency phone box
- More bus stops, my granddaughters ages 12, 15, 18 use the bus to get downtown, the library, work, my house in N Lawrence, I would use the bus more if I didn't have to walk so far to get to a stop.
- Drinking fountain, but no vending machines.
- auxiliary power supply for buses, so they can shut off polluting diesel engines while waiting.
- benches, shelter, drinking fountain, public restrooms - essential, lighting - if longer hours, real time bus info, bike parking, bus pass, indoor public waiting areas, indoor uses for bus operators, landscaping, vendor space - nice options
- benches, shelter, drinking fountain, public restrooms - essential, lighting - if longer hours, real time bus info, bike parking, bus pass, indoor public waiting areas, indoor uses for bus operators, landscaping, vendor space - nice options
- Coffee & spill proof drinking vessels
- drinking fountain, bike parking, public restrooms, indoor admin space, vendor/tenant space depends on location of the site

- Art- Public/art by local artists
- Means to sale tickets for greyhound and Amtrak
- Real time bus information - or smart phone app/info
- bus pass/ticket sales - maybe automated/atm, vendor/tenant space - only if this subsidizes the operation costs
- Lawrence needs at least two, not just one transfer center. One in the downtown area and one for KU routes. The downtown center should have Amtrak, Greyhound, and K-10 as well as T & KU., a one stop shop. KU should have one for K-10 and all campus routes.
- Coffee shop, red box
- Bus stop sign
- phone app with realtime info and status, free Internet. Sales via machines only or online or by mobile phone app to reduce cost
- All would be nice for a transit hub, but these are the essentials. Any transfer site should have all but the public restrooms.

When asked "Who should operate out of bus transfer sites? (Check all that apply)" Respondents indicated:

Figure 2: Operators who should operate out of bus transfer sites



Total number of responses - 135

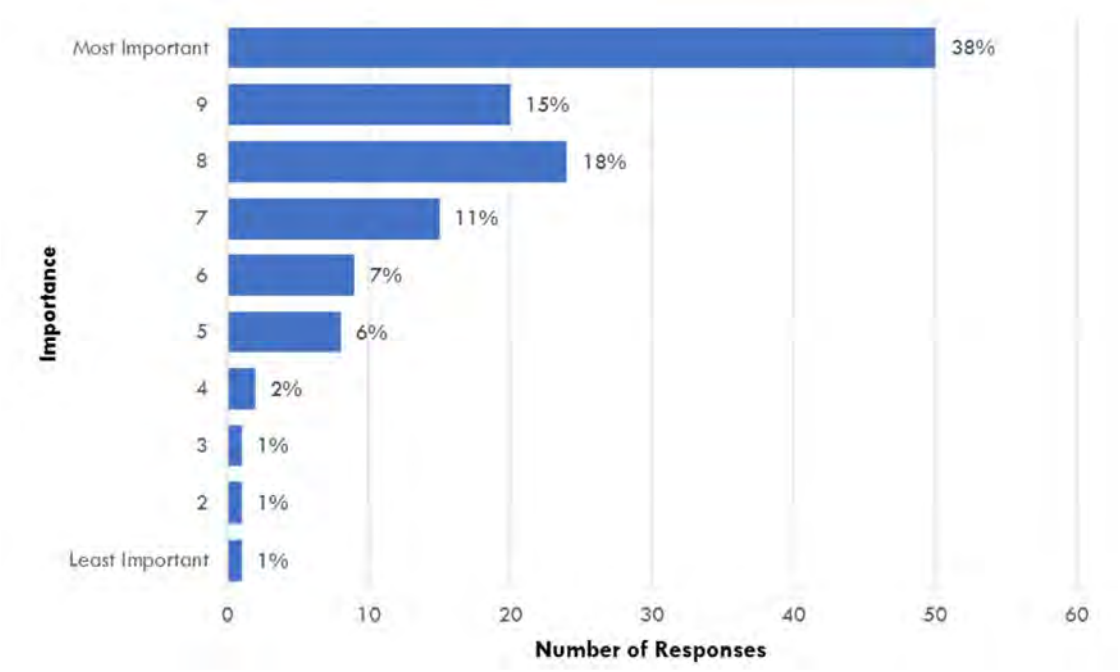
Other:

- These all sound great; the T/KU on Wheels and connector would be required in my book.
- Space for future trolleys/under/overground transit
- Definitely bicycles and some charging stations for all electric vehicles.
- The public library serves as an excellent location for the transfer point
- Amtrak Thruway service, Casino Bus Service, Parks and Recreation travel bus service, Osher Travel bus service "pick-up location"
- The others are nice, but secondary
- Amtrak?
- Zipcar, Lyft
- Future bus service to Topeka/KC & Greyhound -possibly

- Amtrak at downtown location. The city bought the Amtrak station, they should use it and build a new KU center. Who says that you have to have one transfer center?
- Para transit, taxi, Uber, airport KCI shuttles
- Private Operator
- Bikeshare and connect to Lawrence Loop
- Public parking for carpooling is great if location has space. A true transit hub should serve all transit options.

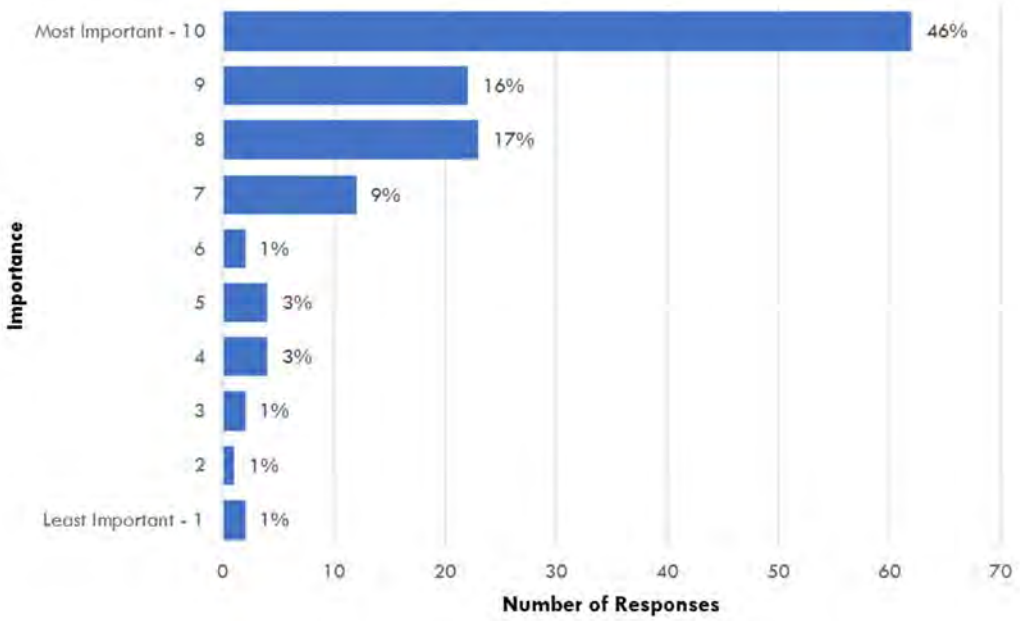
When asked "The location of the bus transfer site affects the rider experience and the cost to operate the bus service. Please tell us how important the following factors are when locating a bus transfer site, on a scale of 1 to 10 with 1 being least important and 10 being most important" Respondents indicated:

Figure 3: Operational efficiency (cost to operate the service)



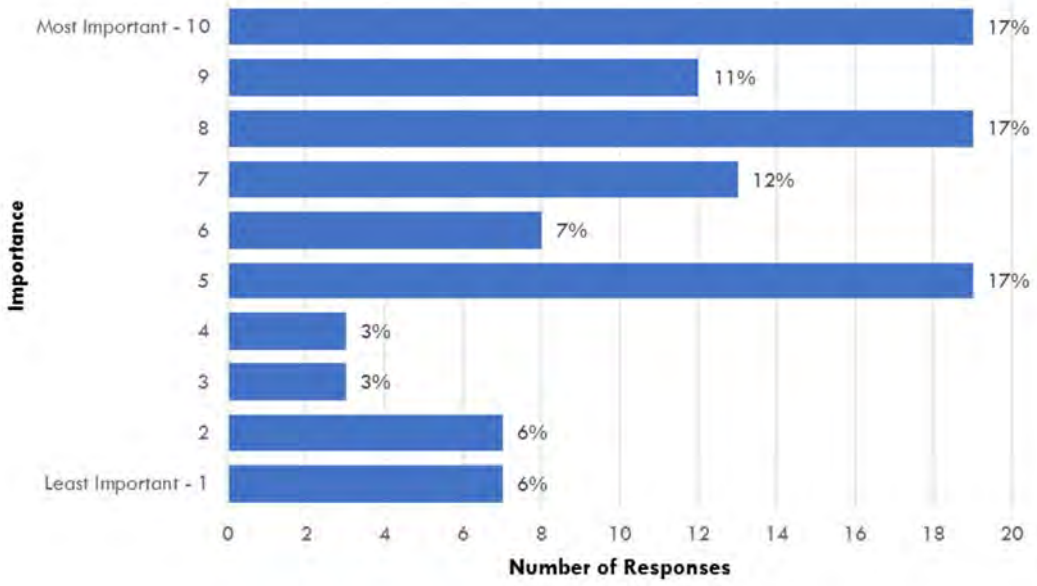
Total number of responses - 131

Figure 4: Route effectiveness (time it takes to get across the city)



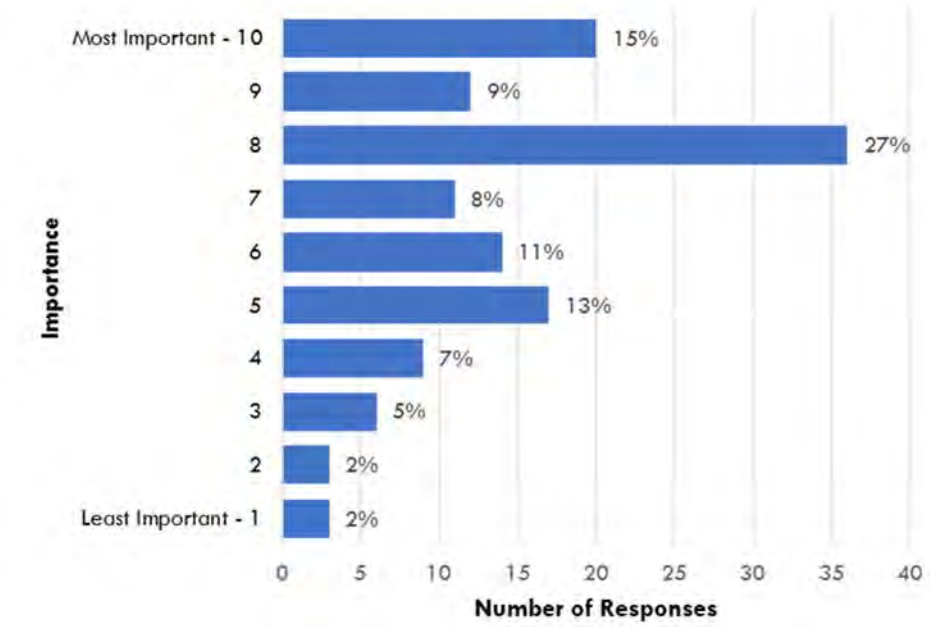
Total number of responses - 134

Figure 5: Proximity to Downtown



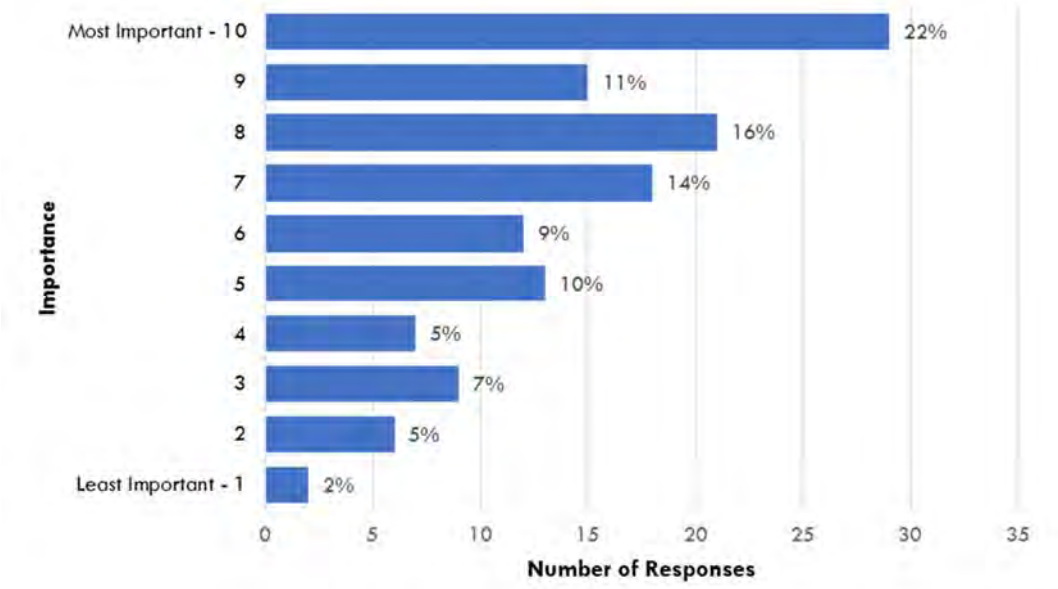
Total number of responses - 110

Figure 6: Proximity to employment centers



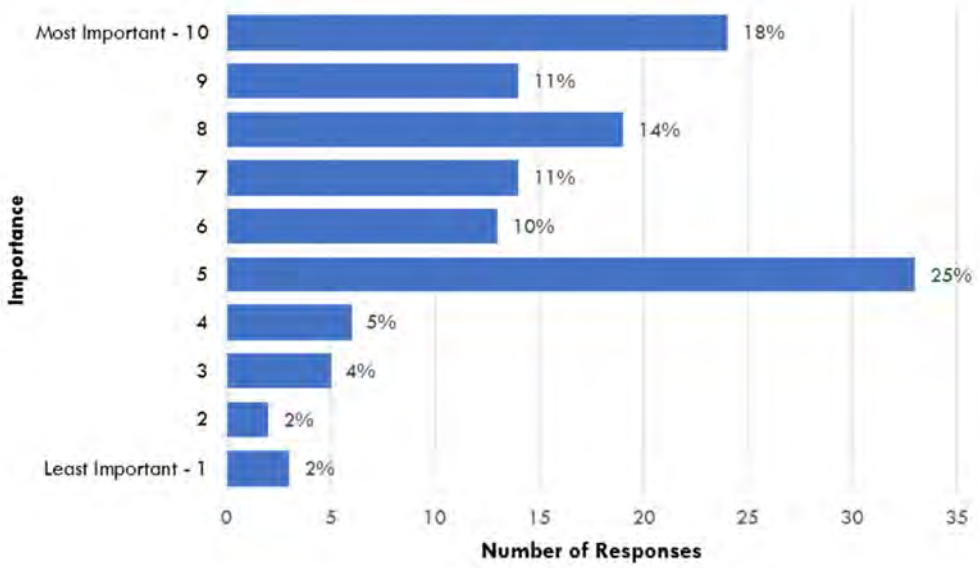
Total number of responses - 131

Figure 7: Proximity to shopping (e.g. grocery and retail)



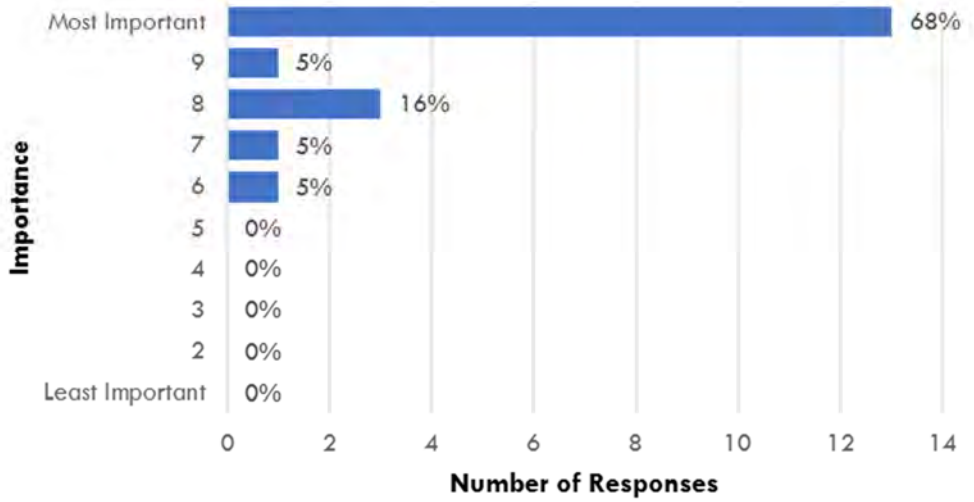
Total number of responses - 132

Figure 8: Proximity to the University of Kansas



Total number of responses - 133

Figure 9: Other



Total number of responses - 19

Other:

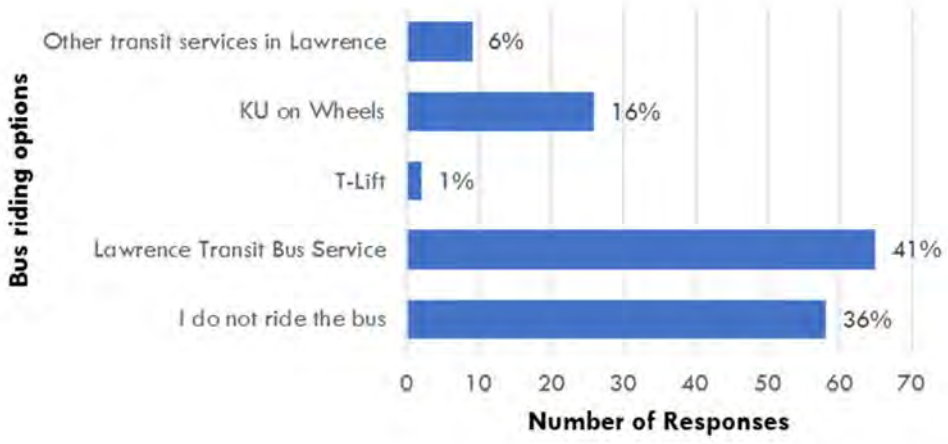
- Being located on Major arteries like 6th or Iowa or 23rd or Kasold
- Transfer stations are that and don't have to disrupt downtown or neighborhoods. Bus stops provide access. Use open spaces on campus. Do not distribute neighborhoods
- We need a bus stop close to de Victor Park, Ironwood Apartments and Langston Hughes Elementary School.
- Traffic disruption
- I think more important than location is operating hours. If someone is located far away from the bus transfer site, there needs to be bus service easily accessible for people to get across town to it when

they need to. My experience has been almost always difficulty with the bus schedule more so than location.

- Efficiency when interconnecting with other modalities.
- Need more bus stops in residential areas, the closest to me is about a mile from my house, my granddaughters have to walk from close to 25th and Alabama to Checkers. They are 12 and 15, would use the bus more if they could get around town easier, better shelters and know they wouldn't have to wait so long between stops.
- Maximum connectivity to other routes.
- Located on a principal arterial or minor arterial
- Essential services - see above
- Church and med. facilities
- Proximity to library, hospital, city hall, most homes, other density center
- Bike support
- Connections to other transportation, intercity bus lines, airport shuttles, Amtrak.
- Central location would be best- if possible
- Clinton Lake..
- Immediate access to a major connector route. Route efficiency to hospital.
- Proximity to low-income, elderly, and disabled residents who need the service the most.
- Accessing roads built to handle these large vehicles - Not neighborhood streets.
- Regularly updating route to meet the needs of travelers; great app
- Proximity to homeless shelter

When asked "Do you ride the bus? (Select all that apply.)" Respondents indicated:

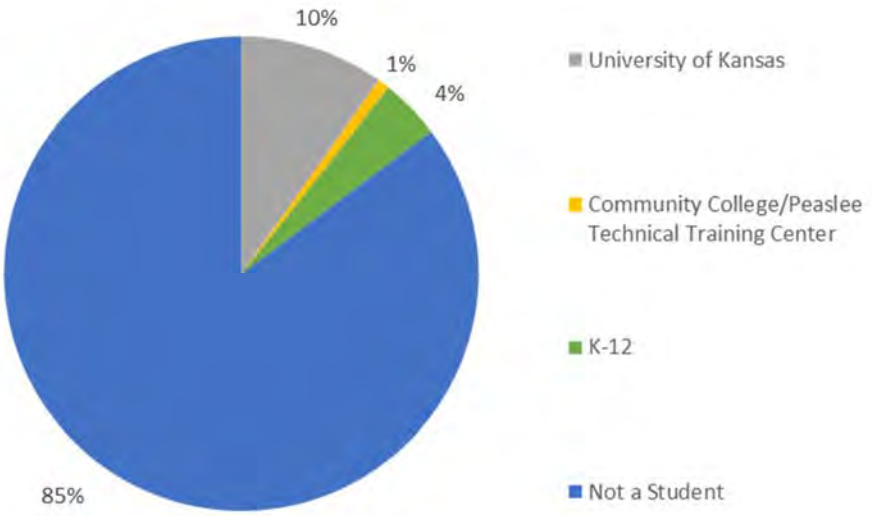
Figure 10: Bus ridership options



Total number of responses - 160

When asked "If you are a student, select all that apply" Respondents indicated:

Figure 11: Learning Institutions



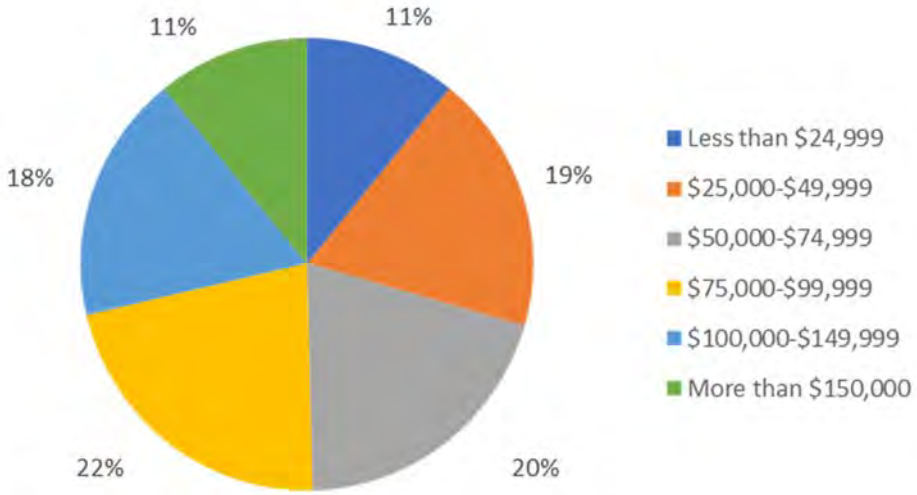
Total number of responses – 122

13 survey takers chose not to respond

*Baker University, Haskell Indian Nations University, & School/College outside Douglas County not chosen

When asked "What is the approximate average household income?" Respondents indicated:

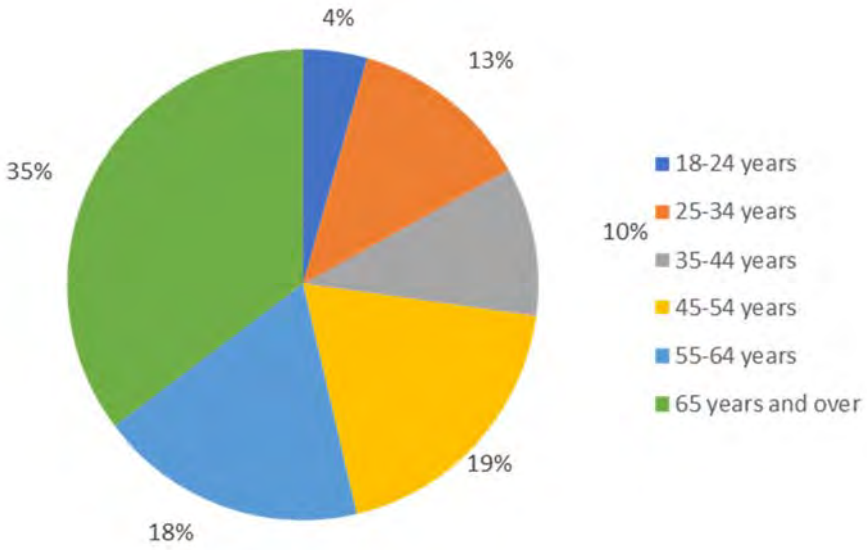
Figure 12: Approximate average income



Total number of responses - 129

When asked "What is your age?" Respondents indicated:

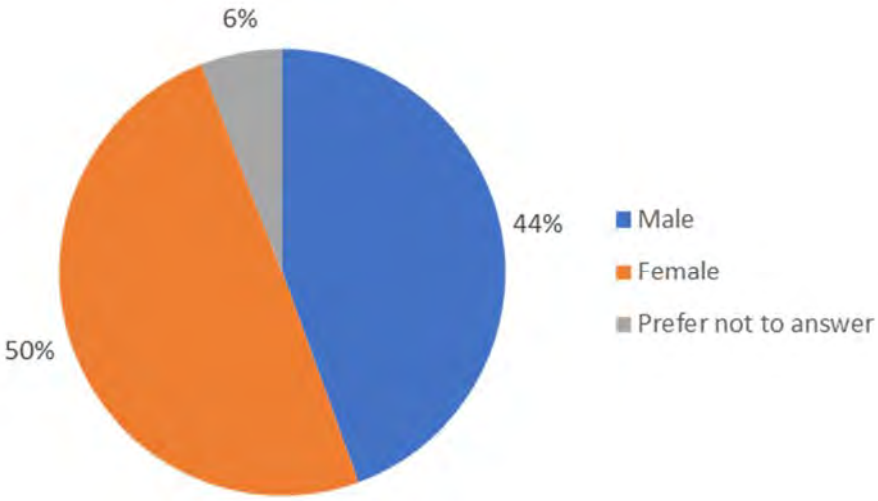
Figure 13 : Age



Total number of responses - 136

When asked "What is your sex?" Respondents indicated:

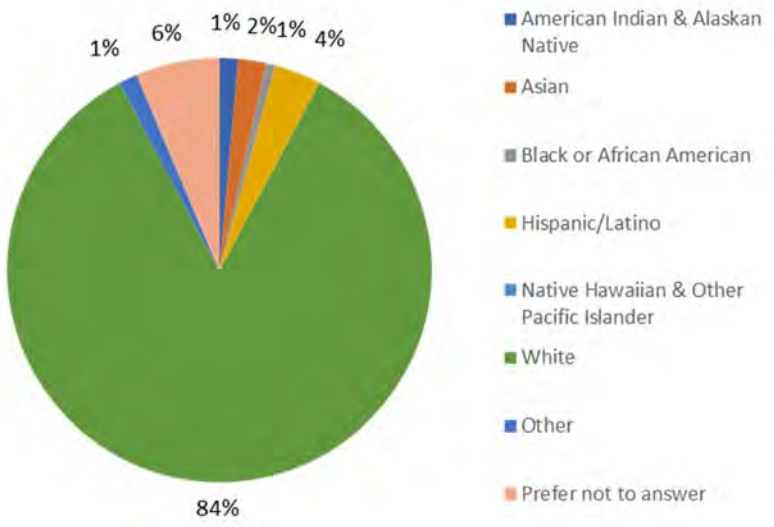
Figure 14: Sex



Total number of responses - 135

When asked "Which race/ethnicity best describes you? Select all that apply." Respondents indicated:

Figure 15: Race / Ethnicity



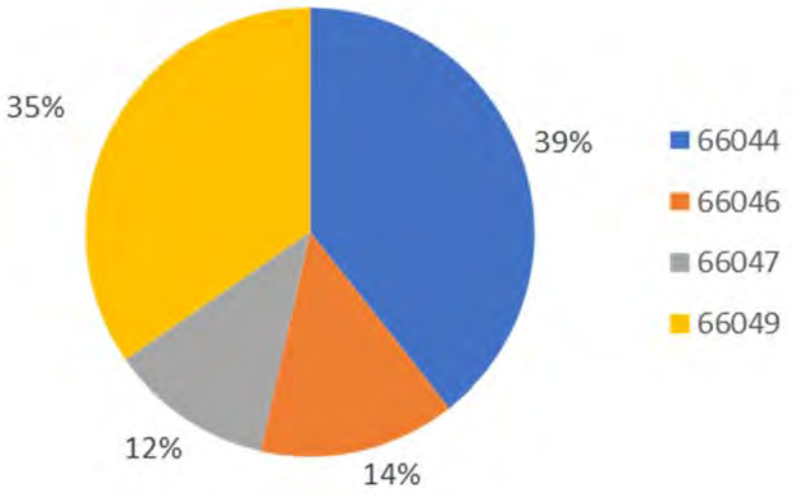
Total number of responses - 141

Other:

- Canadian Indian/White
- Human

When asked "What is your zip code? (Home)" Respondents indicated:

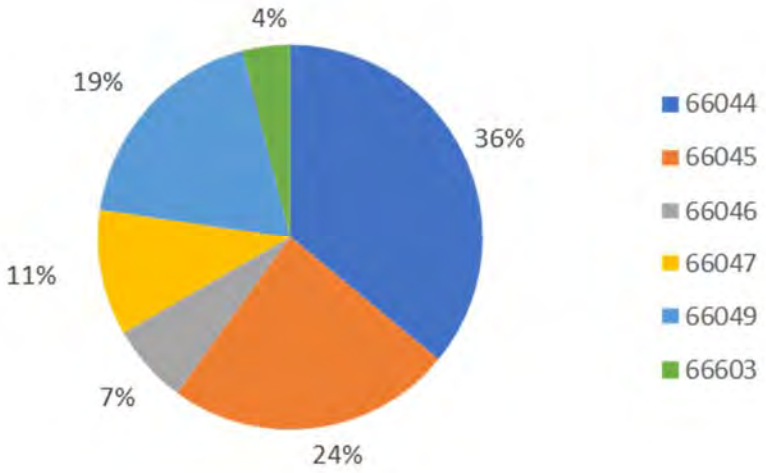
Figure 16: Zip Code (Home)



Total number of responses - 127

When asked "What is your zip code? (Work)" Respondents indicated:

Figure 17: Zip Code (Work)



Total number of responses - 75

APPENDIX A | PUBLIC AND STAKEHOLDER ENGAGEMENT SUMMARY

PUBLIC ENGAGEMENT #2

FOR IMMEDIATE RELEASE:

LAWRENCE TRANSIT HOSTING ONLINE SURVEY TO IDENTIFY LOCATION SELECTION CRITERIA FOR THE BUS TRANSFER LOCATION ANALYSIS

Lawrence, Kansas – The Lawrence/Douglas County MPO, in partnership with the City of Lawrence is hosting an online survey, via Lawrence Listens, to identify key location selection criteria for the bus transfer location analysis.

The bus transfer location analysis began in August with a public meeting and Lawrence Listens survey that identified key values from the community. These values indicated that respondents want a location close to key amenities such as shopping, employment centers and KU and that shelter, seating and lighting are key amenities to include in the design.

In this survey, the City is requesting more feedback about locations and amenities. For example, respondents will be asked to prioritize proximity to major streets, travel time for users and proximity to residential users.

The information from this survey will be used to identify criteria to help select potential locations for improvements. A final set of locations will be reviewed with the public in November.

The Lawrence Listens survey available to the public October 2-16
https://lawrenceks.org/lawrence-listens/

For more information about the project, please contact:

Bob Nugent, Transit Administrator, (785) 832-3464, rnugent@lawrenceks.org

-End of release-

WEB CONTENT

Project Update (date)

The bus transfer location analysis began in August with a public meeting and Lawrence Listens survey that identified key values from the community. These values indicated that respondents want a location close to key amenities such as shopping, employment centers and KU and that shelter, seating and lighting are key amenities to include in the design.

In this survey, the City is requesting more feedback about locations and amenities. For example, respondents will be asked to prioritize proximity to major streets, travel time for users and proximity to residential users.

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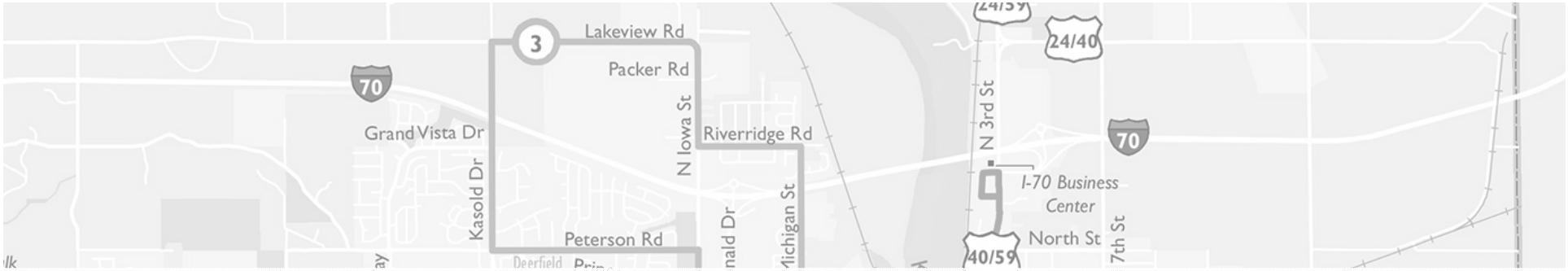


Lawrence Bus Transfer Location Analysis

Lawrence Listens Survey #2

Verifying Values & Determining Site Selection Criteria

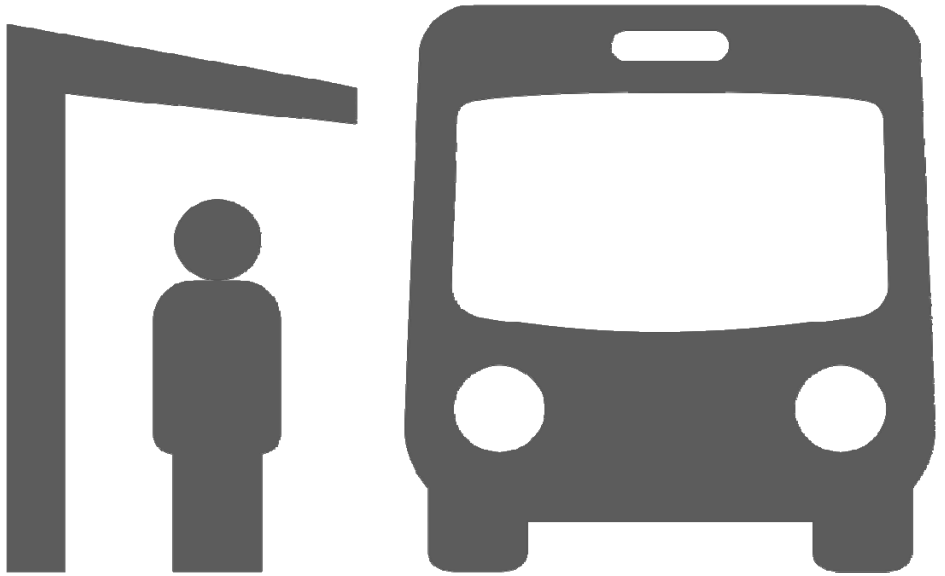
October 2017

Study Purpose

Lawrence Transit is conducting an analysis to identify location(s) where bus transfers can be made to allow the transit system to operate more efficiently.

A bus transfer location allows riders to make easy connections between routes.

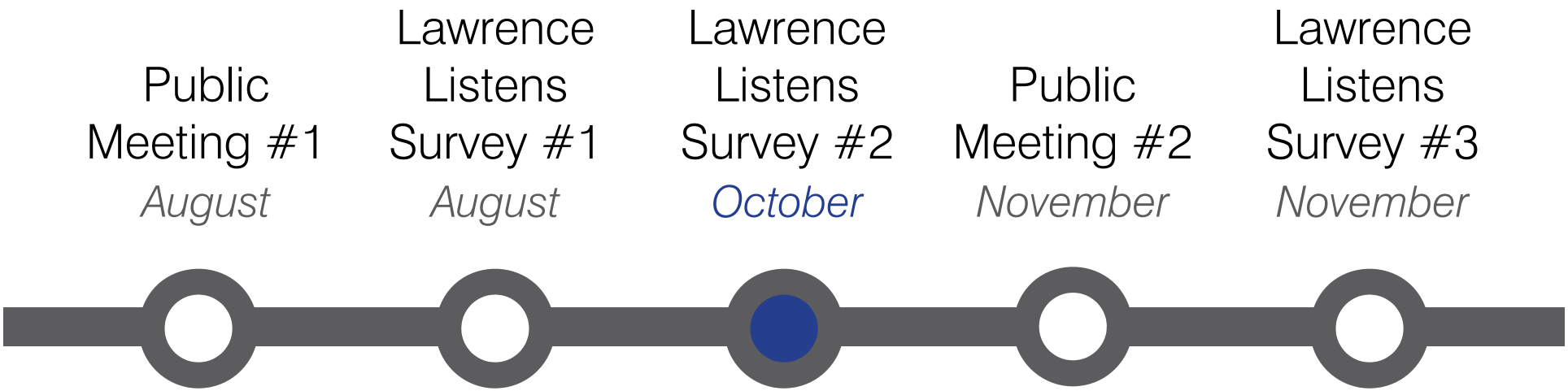
Convenient connections between routes makes the entire system more accessible and efficient.



Public Input

In August 2016, the public was invited to share their input via a public meeting and online survey.

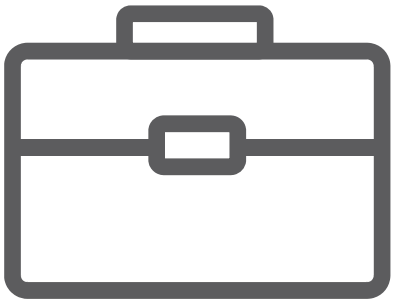
Now, we would like to continue the discussion of values by offering Lawrence Listens Survey #2.



Public Input

Public input to date indicates that respondents prefer a location close to key destinations such as shopping, employment centers, and the University of Kansas.

Feedback also highlighted that a shelter, seating, and lighting are amenities that should be included in the design of a transfer location.



Share Your Input Today!

In this survey, the City of Lawrence is requesting more feedback about locations and amenities.

Your input will identify criteria to help select potential locations for improvements.

The survey will be available October 2-16.

Next Steps

After reviewing feedback from this survey, a final set of locations and recommendations will be reviewed with the public in November 2017.

For more information, please contact:

Sarah Frost, AICP
smfrost@transystems.com
(816) 329-8600

Survey 2 Responses

Respondents: 109

When asked "Please prioritize the following criteria selection from your highest priority to your lowest priority." Respondents indicated:

Figure 18: Selection Criteria

1st Objective: Total number of responses - **105**

2nd Objective: Total number of responses – **102**

3rd Objective: Total number of responses – **84**

When asked "Please tell us why you ranked the selection criteria in this order." Respondents indicated:

- The transfer station (or stations) should be near commercial locations that also draw riders to them, away from residential neighborhoods. This would make the transfer station also a destination
- Pollution, noise and increased traffic will be byproducts of the hub locations. Residential areas should NOT have to bear this byproduct without being financially compensated.
- major streets tend to be where my destinations are located. time is not a primary factor as I have a flexible schedule. residential uses are not a concern for me.
- Public transportation takes time away from users, putting them at a disadvantage when compared to those who do not use public transportation to get to work, school or social activities. Transit riders deserve the opportunity to limit their time on public transportation, so they can use it for family, work or other vital pursuits.
- In order to help the 'transit users' (riders) best, the time it takes to get from point-A to point-B should be shortened to the most efficient time. Having access to major streets is important for the buses to be able to get started easier. As far as a buffer from residential uses, this may be important but to be efficient, this may be the least important of the three criteria.
- I would like to ride the bus more, but the times do not work for me.
- People are busy!
- Transit time lowers ridership. It's always the number 1 complaint.
- I would like to at least see a plan that maximizes efficiency and reduces travel time and compare it to other possibilities. Whether or not it is the best plan depends on how much time is saved and what the trade offs are. We also need to be sensitive to residential neighborhood concerns. Ideally, I'd like it to still be within walking distance for me.

- Efficiency
- Reducing travel time is the only way to attract choice riders. Locating close to major streets is required to reduce travel time. Prefer a location on or adjacent to the KU campus. The 21st & Iowa locations seems to be obviously the best option.
- To make the bus accessible and useful for the largest number of people we need to be efficient in our transfer stations.
- The current transfer point down downtown enables me to get 2 errands with one stop. Since doing errands on the bus takes up to 4 times as long as when I had a car, cutting down on the time is very important to me.
- It seems to me that if the hub is in an inconvenient spot, people will complain about the added travel time for years and it might deter people from using the transit system.
- The main reason for a transit hub is to improve overall efficiency. The new Lawrence transit hub should take note of places like Santa Cruz, CA and San Rafael, CA, their local buses exchange effortlessly with regional, statewide and national bus carriers. The Lawrence transit hub should be no different. It would be great for it to connect the T with KU buses, the JO, greyhound, megabus and Amtrak!
- if it is not convenient people won't use it.
- A transfer station on or near a major street allows for more traffic by transit, and less disturbance to smaller streets and neighborhoods. Most major streets are better connected than smaller, and therefore shortens travel time
- Reduced travel time for transit users is an important benefit to our city.
- Everyone's time is valuable. Bus riders need to get where they need to go in a timely manner. The transfer station should have a location that offers bus riders more than just a place to wait for the bus. Ideally it would offer easy access to a playground, rest rooms, shopping and coffee! The ideal location should attract a large number of riders so it is important that the transfer location be a welcomed addition the neighborhood. As someone who lives across from a public building, I would have appreciated my concerns about smoking and litter being addressed.
- Priority went to travel time as more people will utilize bus if convenient. Second and third are a toss up, everywhere convenient will have some amount of residential use and this city is small so wherever you put a hub it'll be close to major streets
- Public transit will be more useful if the time it takes to get somewhere is reduced.
- While it is nice to be close to amenities, the most important thing is to get to my destination as quickly as possible.
- People's time is valuable.
- could care less about expensive buses
- Major streets are the locations of most employers, reduced travel time means more time can be spent at home before having to leave for work, I don't mind bus locations on residential streets.
- Major streets usually have the most access to amenities.
- Increasing amounts of persons will use the system if it efficiently moves them from their home to their desired location.
- I think the best way to increase ridership is to decrease the time it takes someone potentially using the service to get from A to B. People have busy schedules, would maybe be more open to using the bus if time wasted waiting on a bus was reduced.
- 1. Location reduces travel time for transit users. The extra time it takes to commute by bus over by car is a factor when I decide which mode to take. Currently, I can catch any bus I need from the transfer station. I hope I get to keep that.
  2. Location on or adjacent to major streets. I chose this although it's not quite what I wanted to express. I love having the transfer station downtown, because there is so much to do downtown, and if I have to wait for a bus it's a great place to pass the time. A downtown transfer station supports downtown in a good way. Please keep that!
- Buses are big and there will be alot of them moving about. They need to be on major streets.

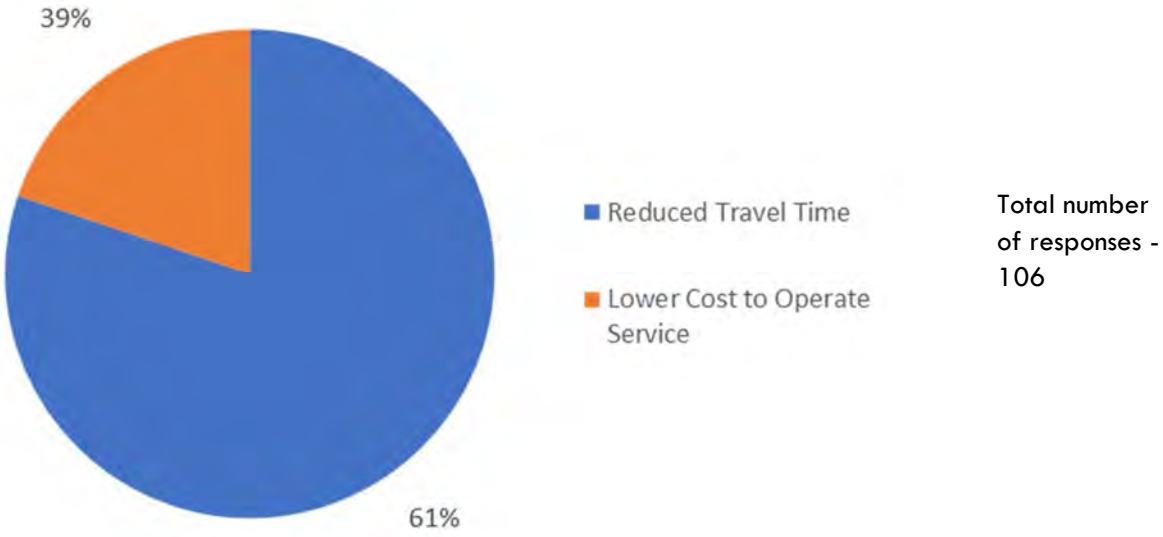
- I wouldn't want a transfer hub in my neighborhood, I cannot imagine anyone would. One on the previous locations considered was in my neighborhood. Travel time should be as minimal as possible.
- It's important that neighborhoods be protected from bus traffic.
- Ultimately if it takes too long to take the bus somewhere it will not be utilized.
  Major streets tend to have desirable destinations.
  I think it is a big mistake to move the hub from downtown Lawrence.
- I live by hyvee on 6th. It takes me 1 hour 15 minutes to get to Target area.
- Early in the transit system's implementation, there were an exceptionally long travel times that either kept people from using it or made it difficult for those who had to use it to spend a reasonable amount of their day getting to and from work or school. To have the optimal amount of usage, it's got to be as expedient as reasonably possible. Being buffered for residential areas is important because of air-quality issues for those who live near highly polluted areas of any city.
- The only complaints I've encountered from folks who rely on the bus is the total travel time to destinations.
- Living near one of the proposed areas, I would like to keep the foot traffic to a Minimum. I. Believe there are better places in our community than at 21st at Iowa.
- Neighborhoods of family homes shouldn't be made more noisy, congested, or hazardous to children
- Reduced travel time is top priority. Allows people to get where they are going in a shorter time.
- I think travel time is the main reason people who might otherwise, don't use public transit. Thus that's #1.
- Reducing travel time will hopefully increase ridership on the service.
- Downtown is a major point of activity which means that Massachusetts Street should be the major street for the hub.
- Convenience is important but so is security for residents. Having people milling around by a property with waiting time can lead to problems
- If change doesn't improve the user experience it is worthless
  Access from major arteries that support bus routes would seem to be key
  Some bus routes are in residential areas now - I believe that the are mostly multi-family/rental properties. I was not under the impression that more residential areas would become part of the routes as part of the transfer enhancement program
- I'm 100% dependent on bus service and being able to get to what i need is very important.
- The bus systems causes a LOT of backup on major roadways. It not only creates headaches for drivers, it causes issues for residents of neighborhood near major artery stops.
- Buses travel through my neighborhood, and I like the proximity.
- The buses pass my residence at least once an hour during the University's academic year. The safe buses pass my residence more often during the late night hours on Fridays and Saturdays. It is annoying to have such frequent noise at that time of the night.
- It helps with the bus being on time.
- The more travel time is reduced, the more convenient will be the transit system.
- Public transit needs to be convenient and accessible and comfortable. Not having bus shelters makes using the bus EXTREMELY uninviting. Once on the bus, destinations need to be easily accessed as well. And finally, a buffer is going to happen regardless because we are mindful as a society but it's not a priority.
- I think ridership will increase with shorter travel times.
- Right now it can take anywhere from 30 minutes to an hour or longer to get to places you need. To have buses on the major roads it may help to cut down on traffic. But you do still need transit in the heavily populated areas that are not closer to the bus stops.
- Don't want it to disturb the peace of my neighborhood.

- Bus transfer MUST be separated from residential and K-12 school areas -- the noise, extra traffic (vehicular and human), and pollution are unacceptable for these areas. They obviously also need to be immediately adjacent to major streets (arterials like 6th, 9th, 23rd, Iowa) to allow them to get in and out easily in all directions, even during high traffic events (eg games).
  I think West Campus at 23rd and Iowa is a perfect location and find it absurd and selfish that KU is reportedly resistant to the idea, given that it is already a giant parking lot.
  KU has become a bully that acts secretively and now TAKES much more from the community than it gives, and the city and county governments just roll over and take it. This is incredibly frustrating. Please change this pattern and stand up for quality of life in "old" Lawrence.
- It's most important that a transfer location be near useful locations. The current transfer location downtown is next to many locations that I want to visit. I would be happy for less travel time as well, though if the system is reliable, I can plan around it. I'm not 100% sure what a "buffer from residential uses" is.
- it is important that the bus terminal makes the least amount of impact to the neighborhood it is closest to. It frankly is not a desired thing to be close to.
- It is hard to pick. All three are important. In the best possible scenario, you would find a location that meets all three criteria.
- The entire process is about transportation. You need to use the major streets.
- Time is the most valuable thing that all of us have, and I would much rather spend that time at my destinations rather than travelling to them. I'm also more concerned about keeping bus routes out of the way of residential areas than I am keeping them on major streets.
- Most efficient for riders -- might increase ridership and reduce cars of one on the road
- Bumping up ridership is important. I believe reducing travel time will help this. No.2 for me would be proximity to employment (KU), but that was not an option offered in the survey
- Buses are generally terrible for health and the environment and therefore should be kept away from our residential neighborhoods.
- First, the system is for the users; but busses are kind of obnoxious, so it's better to keep them in commercial areas to the extent possible while serving the users. "Location w/ major streets" seems duplicative: the only reasons I see to favor "major streets" are the other two criteria.
  PS: I would "prefer" an indoor hub -- but expect that's far more expensive, not only in initial cost but also to staff, monitor, clean, insure, and maintain -- so I question its wisdom. And any "indoor" place should have abundant covered outdoor space for public use when the indoor facility is closed.
- It is a hard to use a bus service that is always running late (#10 in particular) so a hub that would decrease some of the time a bus could complete its route is to me most important and that to me means located on or close to a major street. I am sure residents don't like the buses, but I live off of Bob Billings Parkway and the bus goes by all the time.
- Neighborhoods are uncomfortable with increased traffic: buses should not be moving through neighborhood streets. Major streets are needed to facilitate buses. Efficiency in transferring is important to riders.
- Buses are large vehicles and easy access to major streets is required.
- For the most part, residential streets in the Lawrence center city are narrow and often in deteriorating repair -- in short, not suited for travel by large vehicles such as buses. This is a bad situation that could only be made worse by extra bus traffic. I am also concerned for pedestrians, whose travel is made more dangerous by any additional vehicle traffic. These problems are not shared by major streets, which are designed to carry larger amounts of traffic. As for the latter priority, I haven't seen any evidence that one location reduces travel time more than another.
- Ideally I get to my destination before even getting to the hub, so the hub should have popular destinations en route to it, plus should be near a popular destination itself. That's why downtown is so nice. I don't usually take my routes all the way downtown but I really like that my routes end up there. Being at Major Street is less important. "Intermediate" to major should be okay.

- The primary purpose of a bus system is to move people where they need to be. This has to be done in a timely manner or people will not use the service. It would be difficult to provide timely service from a location that is not on or adjacent to major streets.
- I transfer to go to KU during summer and breaks.
- Ease of use should be the first priority to encourage more riders. That means shorter ride times. And to me that means shorter ride time to the services that the public needs, such as the hospital, the library, city hall, the court house, schools, etc.
  Also the neighborhoods shouldn't have to deal with busses running through all day, like on 21st street where it's not really even wide enough for a bus.
  Proximity to major streets isn't as important, but again, as much as we can go around having busses driving on neighborhood streets, we should.
- Travel time important to me. Don't care about buffer.
- I live near the previously proposed KU/free land/combo parking garage/transfer station at 18th & Maine. The thought of dozens of buses an hour feeding east & west on 19th St was too too too much bus traffic. 19th is already heavily used but only 2 lanes with KU, Lawrence High & Cordley nearby. The transfer station needs to be on a major street like 6th, 23rd or Iowa.
- Balance efficient location with residential homeowner concerns
  Location on major streeets is less important than transit time
- Most People will only use transit if convenient. A major hub, however needs to be kept out of neighborhoods.
- We live in University Place, and 19th Street is used by our neighborhood children to walk to Cordley and Lawrence High. With heavy bus traffic and narrow, close to the street sidewalks, the danger not only to our children but also to pedestrians will increase dramatically. Also, 19th Street runs directly past Cordley's entrance, so pick-ups, drop-offs and the noise of constantly running buses will adversely affect everyone.
- Long distance trips cam often be walked in the same time it takes to ride and transfer. It is strange to me that there aren't bus routes that only travel up and down or back and forth on our main streets.
- Keep bus traffic (noise and air pollution down from residences and neighborhoods. a large transit area should not be close to residential areas including KU campus and Haskell campus.
- Reduce noise and pollution in neighborhoods.
- Best for city
- For #1, The more efficient and quick the ride, the more passengers will use the system, and the more passengers there are, the more the system can be made efficient. For #2, buses are heavy and tend to put more wear and tear on streets than regular vehicles, so being on or adjacent to major streets will not place a requirement on upgrading side streets to carry the traffic. For #3, there is a misperception about the noise and pollution of buses affects its surroundings negatively. As the fleet is improved and more electric buses are used, operations will be more and more quiet. With some appropriate fences, trees, and shrubs to screen any location the 'white noise' will have minimal impact on its neighbors.
- The purpose of transit hub(s) should be to make the system more efficient and serve travelers better. Residents who fight this type of community service are too concerned with their own convenience, at the expense of the well-being of the entire community. It is time for all of us to support an efficient public transit system, even if it means that the best location for a transit hub is next to your neighborhood.
- Reducing travel time is important, as well as easy access to transfer points. I didn't rank "location has a buffer from residential uses" because residential areas, especially East Lawrence, really need more access to buses.

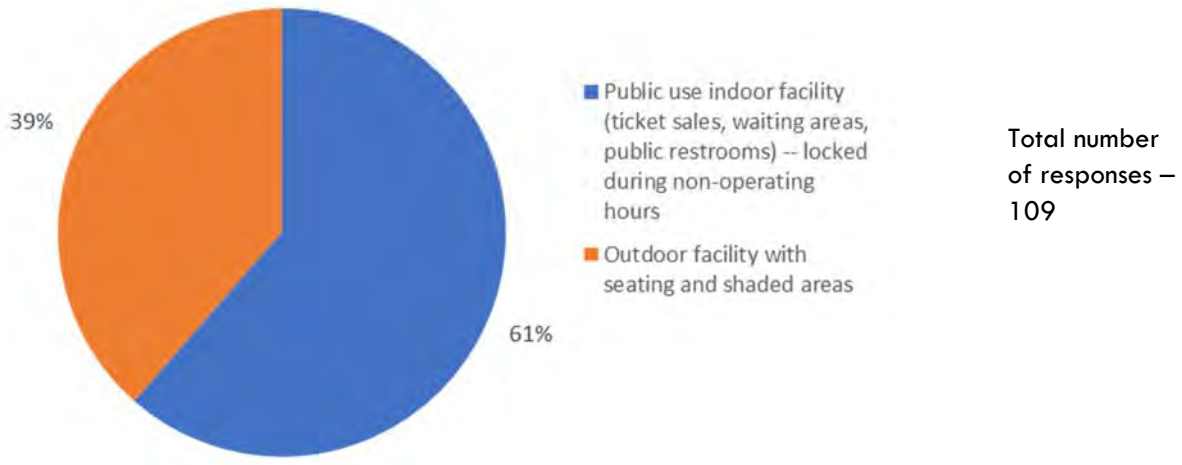
When asked "The previous Lawrence Listens Survey identified that on a scale of 1 (lowest) to 10 (highest) the cost to operate service (operational efficiency) scored slightly lower at 8.0 than route effectiveness (travel time) which scored 8.4. Which is more important to you?" Respondents indicated:

Figure 19: Priority Importance



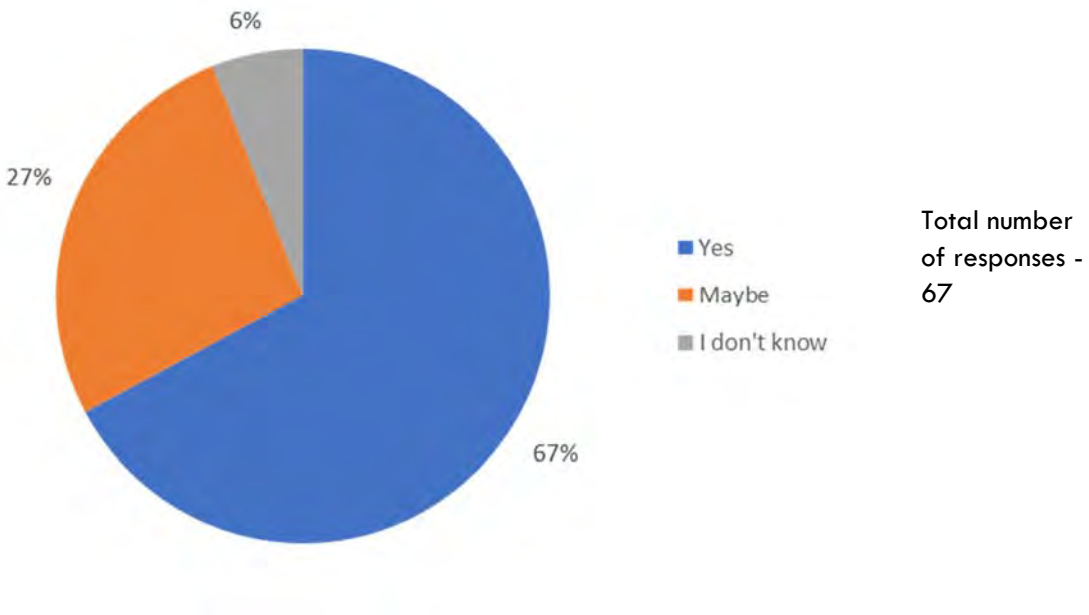
When asked "What type of facility would you prefer at the transfer location?" Respondents indicated:

Figure 20: Facility Type



When asked "An indoor facility would have an increased one-time cost associated with building the facility. Additionally the cost to operate and maintain the facility would be approximately $10,000 to $15,000 more annually. Given those additional costs, do you still support the indoor facility?" Respondents indicated:

Figure 21: Additional Costs Response



Why would you support the indoor facility?

- Need a shelter for inclement weather. Also restrooms are really important.
- A responsible adult would be present for operational hours.
- It's a worthwhile investment for the community. I am willing to pay more (either through increased fare or taxes).
- A protected indoor area with a public restroom is vital to the well being and comfort of public transfer patrons.
- Would rather put public funds into a new police headquarters
- If it would be well used, I support it.
- My first choice would be for the facility to be located near an existing facility that has those features and would tolerate additional users. Right now, the library serves that function exceptionally well. However, if we put it in an isolated location, it would have to have restroom facilities for children and old folks to be able to use the bus system.
- Bus system is very unusable for people that work normal hours. So that station probably wouldn't be used much
- If the facility was located close to a cluster of businesses, the indoor amenities would be less important.
- It's important to have to make the bus appealing and for those who ride the bus already
- I have medical conditions exacerbated by weather extremes and also orthopedic problems that make it difficult for me to stand for long periods.

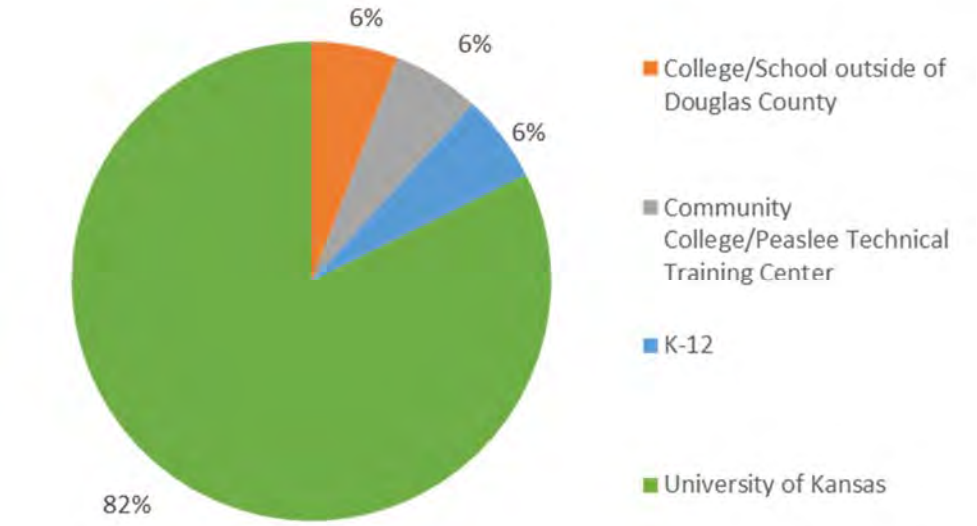
- I don't have a strong preference for the indoor over the outdoor facility, but had to choose one on the previous question. Could the initial facility be outdoor with a plan for adding indoor space later, when the budget allows?
- Lawrence needs more public spaces for people to get out of the weather, to use the restroom and get where we need to go without getting rained on. In some cases I've waited two hours to catch a greyhound or Amtrak, it is really nice to have a bit of shelter while I wait. I believe this hub would also share some of that burden that the Lawrence Library receives.
- More amenities at a transfer station would make it more comfortable for users, and could increase the number of those using transit if they are comfortable
- An indoor facility provides safety and sanitation to the entire community. The bus transfer station should offer restrooms and refuge from inclement weather!
- I think restrooms like in South Park would be sufficient. I don't think we need a facility like at a parks and rec building unless you can utilize an already standing location
- People need restrooms, including the drivers
- The idea is good and nice, but not a full necessity,
- The winter cold and the summer heat can be brutal. It is civil to provide adequate shelters for everyone. Having an appropriate indoor shelter may encourage more people to take the bus if they do not want to be waiting outside, especially older adults who are unable to drive.
- I think if we're going to go ahead and build something, we may as well build a nice facility that will draw people and will be comfortable for people. There are plenty of months around here where an outdoor facility will be less comfortable for riders. Either really really cold months or really really hot months. Indoor facility while more expensive will provide a better service.
- Will be better for passengers to have restrooms, indoor shelter in cold, bad weather, but locked during off hours will reduce vagrants and panhandlers.
- Would we need to build a new facility or could a building just be re-purposed? Could the train depot do double duty? The vacant building that is directly across from the library?
- I have a lot of heal the problems which the weather adversely affects. Because the regular bus is so much cheaper for me, I use it more. Plus, the t bus is very regimented in pick up times which I sometimes struggle to meet, if I have to stop for the bathroom.
- When I think of a bus transfer area, I'm thinking of a bus terminal, essentially. Being able to use the restroom, purchase tickets, etc. would seem to be appropriate at that location. However, if Lawrence's system is designed in such a way that the absence of such amenities at the transfer area do not detract from effective use of the system, that's fine.
- Customer comfort
- It would completely depend on how long wait times were. Just polled my husband on this, too-we've both been bus and mass transit users in other cities but having less severe climates. If wait times are less than 10 minutes, we think waiting outside is fine even in cold/hot weather with shade or roof structures and would be preferable. If much longer than that, then just due to the cold and intense heat here, we both vote for an indoor (sustainably designed, well-connected-to-surrounding-urban-area) structure with a terrace/plaza area(s) for event programming, coffee carts, public art, raised veggie beds, etc. The library does this well.
- It seems more secure, can serve multiple purposes and would maximize use of the space.
- Inclement weather happens a lot here.
- It would be very convenient to have a toilet at the transfer facility, especially for those with aging bladders.
- Because of the conditions.
- Mostly, I hope the transit facility will reduce travel times and enable the adding of new routes or widening existing routes. The hub location and system efficiency seem more important than amenities, shopping, etc.
- If you are to do something, do it right? If Lawrence cannot afford this, then do not do it. But if the $21 million something dollars that is set aside for this project can sustain these fees, then by all means create

a small indoor facility for the public. $10,000 is like a day's worth of work in taxes. KTEN Crossing could help subsidize a Lawrence transit system. We've already declined the project and lost millions in taxes by not passing the project. Way to go Kansas ... build a toll road which inhibits commercial development, then build a toll-free highway and continue to deny commercial development ... where will the money come from if everyone keeps smothering potential.

- Restroom would be nice.
- "ABSOLUTELY I support it, if the transfer is in the right location. Bus passengers need a place to wait that's out of the elements and offers restrooms. Creative vending machine sales and bike rentals could partially offset the cost.
- I do not think an "outdoor area" and "indoor facility" are mutually exclusive.
- Getting to a bus ticket office can be difficult (although I realize some grocery stores have them). And I think there needs to be a restroom.
- it will help avoid people from urinating, etc. outside in neighborhood yards and they will not be knocking on doors asking to use a bathroom.
- I actually want the city to purchase the building across from the library that used to be a restaurant. Make the 700 block of Vermont one-way going south. The east side of the street is bus only going north.
- The elements can be harsh. Riders need shelter from the elements and even the drivers need toilets!
- Having a safe place to wait that doesn't allow for smoking and would allow people to gather out of the elements while they wait for a bus is to me most important having grown up in a eastern city where there were plenty of buses but no shelters at all. Store doorways were the only option.
- Thinking of the future, the indoor facility seems like a good investment. More and more people will be using the buses.
- Depends on budget and how the cost can be offset by user contributions and the contributions of major beneficiaries such as large employers, medical facilities, and commercial enterprises.
- People need these services. If they are not provided directly at the transfer station then riders will seek them out at nearby businesses. The lack of facilities would decrease the likelihood that residents use the mass transit service.
- I like protection from the weather
- I prefer multiple bus hubs that are smaller. But with sporadic Kansas weather, an indoor facility would be nice and safer. But if it means multiple small hubs are off the table, outdoor is fine with me. So I only support an indoor facility if we can still build multiple hubs, or if there is definitely only going to be one hub either way.
- "Indoor facilities are needed for a high-quality bus station.
- If you want people to use the bus, it should be high quality."
- Hundreds of people will use this facility in a year. Don't force them to stand in the rain or heat. The bus drivers also need a comfortable space to use the restrooms and stretch their legs.
- Increase in ridership

When asked "If you are a student, please select where you attend school." Respondents indicated:

Figure 22: Learning Institutions



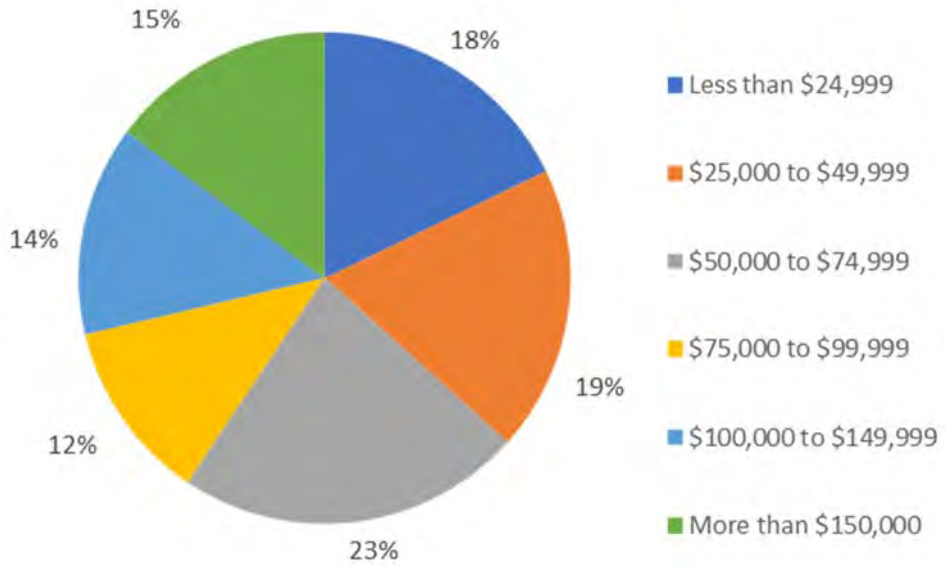
Total number of responses – 17

92 survey takers chose not to respond

*Baker University & Haskell Indian Nations University were not chosen

When asked "What is your approximate average household income?" Respondents indicated:

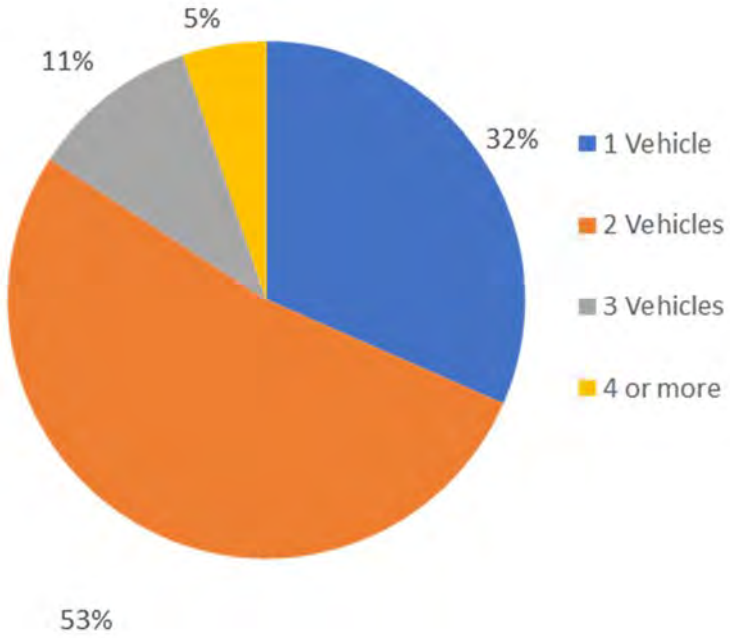
Figure 23: Approximate Average Household Income



Total number of responses - 101

When asked "How many vehicles are in your household, including motorcycles and electric vehicles?" Respondents indicated:

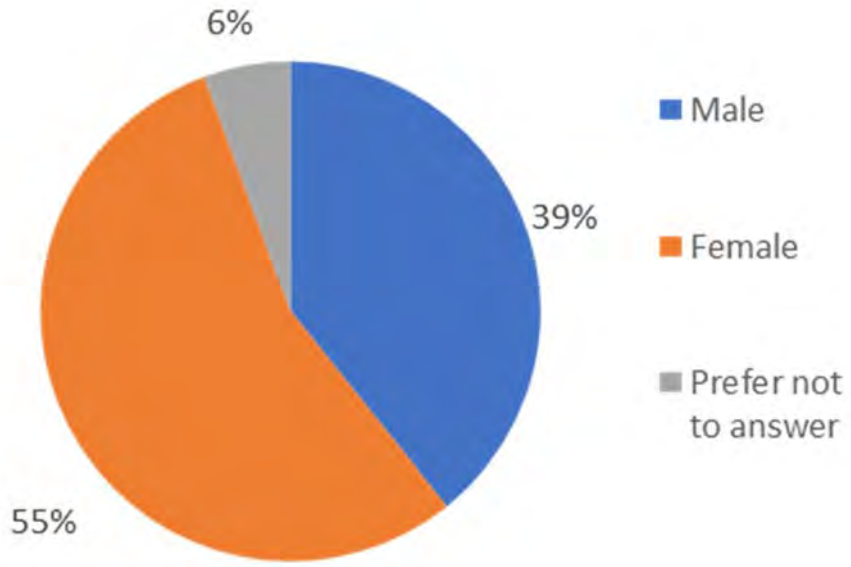
Figure 24: Number of Vehicles



Total number of responses - 95

When asked "What is your Sex?" Respondents indicated:

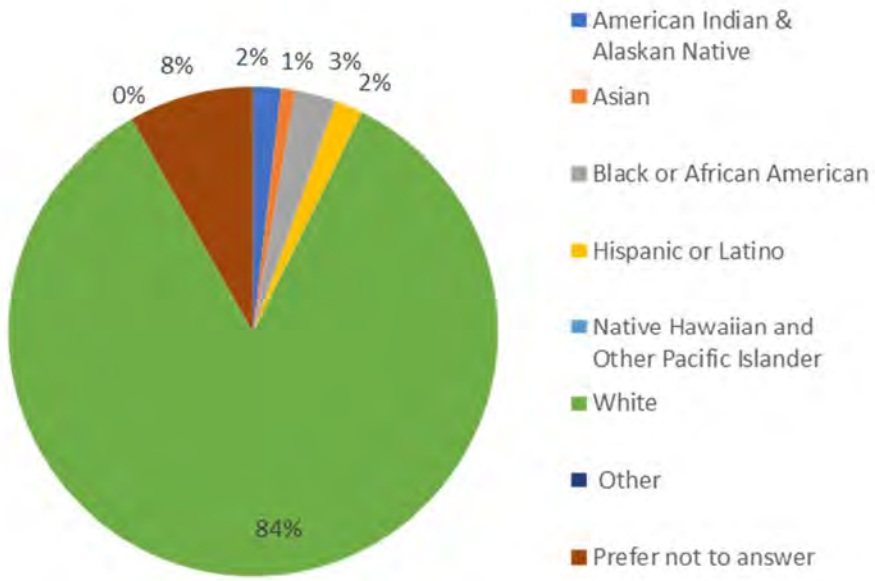
Figure 35: Sex



Total number of responses - 107

When asked "Which race/ethnicity best describes you? Select all that apply." Respondents indicated:

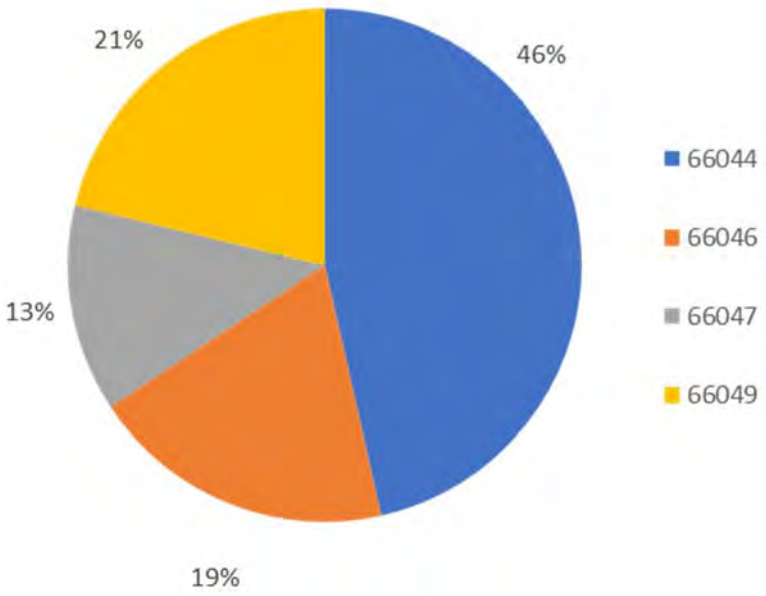
Figure 26: Race / Ethnicity



Total number of responses - 109

When asked "What is your zip code? (Home)" Respondents indicated:

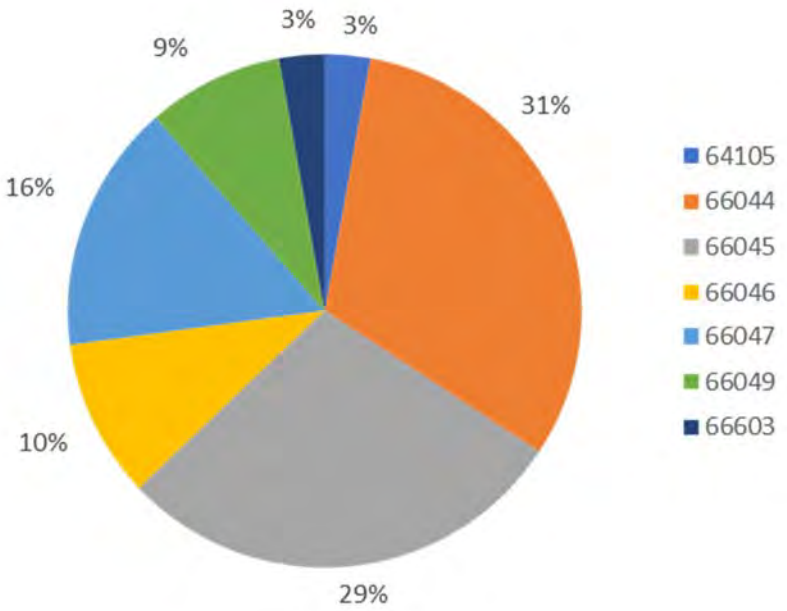
Figure 27: Zip code (Home)



Total number of responses - 99

When asked "What is your zip code? (Work)" Respondents indicated:

Figure 28: Zip code (Work)



Total number of responses - 70

APPENDIX A | PUBLIC AND STAKEHOLDER ENGAGEMENT SUMMARY

PUBLIC ENGAGEMENT #3

Lawrence Bus Transfer Location Analysis
Public Meeting 2 Promotional Content

Social Media Content

11/20/17

Lawrence Transit seeks your feedback regarding potential bus transfer locations. Join us on Wednesday, November 29th from 5-7pm in the Commission Chambers at City Hall (6 East 6th Street) for this public meeting. Bus Route Access: 1, 3, 4, 5, 6, 7, 10, 11 and 15.

11/27/17

Lawrence Transit will be hosting a public meeting this Wednesday, November 29th to seek feedback regarding potential bus transfer locations. Join us from 5-7pm in the Council Chambers at City Hall (6 East 6th Street). Bus Route Access: 1, 3, 4, 5, 6, 7, 10, 11 and 15.

11/29/17
Public Meting Tonight! Lawrence Transit is seeking feedback regarding potential bus transfer locations. Please join us tonight from 5-7pm in the Council Chambers at City Hall (6 East 6th Street). Bus Route Access: 1, 3, 4, 5, 6, 7, 10, 11 and 15.

Press Release

FOR IMMEDIATE RELEASE:

CITY OF LAWRENCE TRANSIT HOSTING PUBLIC MEETING TO SEEK FEEDBACK ON POTENTIAL BUS TRANSFER LOCATIONS

Lawrence, Kansas – The City of Lawrence Transit is conducting an analysis to evaluate potential locations where users of both the City of Lawrence and University of Kansas transit systems can make transfers. A public meeting will be held on November 29th from 5-7 pm to discuss potential sites and their benefits.

This meeting comes after four months of community engagement and technical analysis on this topic. A meeting and survey in August asked members of the public to discuss community values and how those relate to a future location for transit transfer activity. A second survey in October asked the public to prioritize benefits, such as travel time versus

operating cost savings, in order to focus site location analysis. This meeting on November 29th and a companion survey with ask the public to review potential sites and analyze them based on items the public identified as important in the previous surveys.

The public meeting can be accessed by Lawrence Transit Routes 1, 3, 4, 5, 6, 7, 10, 11 and 15. More information about the project, as well as trip planning and transit routes can be found at Lawrencetransit.org

For more information about the project, please contact:

Bob Nugent, Transit Administrator, *(785) 832-3464*, rnugent@lawrenceks.org

-End of release-

On-Bus Advertising

See next page

RIDER ALERT

Lawrence Transit will be hosting a public meeting for the
Bus Transfer Location Analysis.

The meetings will take place in Council Chambers, City Hall, 6 E. 6th Street

November 29th, 2017
5-7pm

Access the meeting via Lawrence Transit routes 1, 3, 4, 5, 6, 7, 10, 11 and 15.

Project information and route maps can be found at lawrencetransit.org.

Take an online survey at
https://lawrenceks.org/lawrence-listens/

Study Overview

Study Purpose

Lawrence Transit is conducting an analysis to identify location(s) where bus transfers can be made to allow the transit system to operate more efficiently.

What is a Bus Transfer Location?

A bus transfer location allows riders to make easy connections between routes. Convenient connections between routes makes the entire system more accessible and efficient as users will be able to travel to more destinations in a shorter period of time.

Operational Purpose

Enhance the internal and external operations of the transit system.

- Reduce travel time for users
- Provide a stopover location for drivers
- Enhance systemwide coverage

Civic Purpose

Serve as a focal point in the community for historical, commercial or gateway purposes.

- Offer commercial options to users
- Feature architecture or landscaping
- Attract new ridership

Study Timeline

In August 2017, the public was invited to share their input via a public meeting and an online survey to identify key values. In October 2017, additional feedback regarding locations and amenities was requested via a second online survey. Information was used to identify criteria to help select potential locations for improvements. Now, the study team would like to continue the discussion by reviewing the final set of potential locations.

Public Meeting #1	Lawrence Listens Survey #1	Lawrence Listens Survey #2	Public Meeting #2	Lawrence Listens Survey #3
August	*August*	*October*	*November*	*November*

Public Input

Public input has shaped this study process! **What have we heard so far?**

Phase 1

Public Meeting #1 and Lawrence Listens Survey #1

In August 2016, the first phase of public input asked individuals about factors to be considered to identify and analyze bus transfer locations. The meeting and online survey helped identify key values in the community.

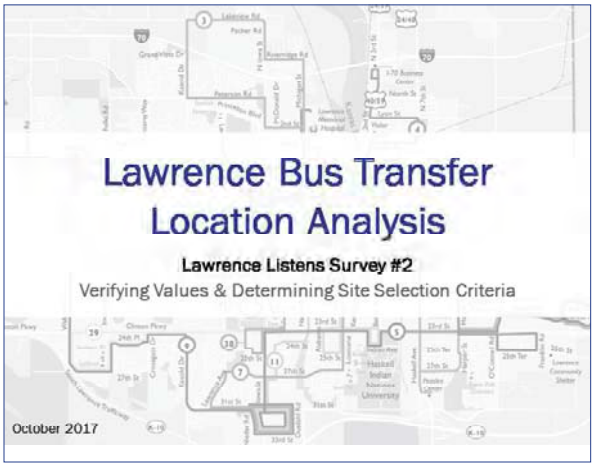
What did we hear in Phase 1?

- Maintain a significant presence downtown
- Provide publicly accessible indoor waiting spaces for transfer locations
- Enhance capital amenities throughout the transit system
- Focus on potential sites along arterial roadways to avoid a property that fully surrounds residential neighborhoods
- Reduce travel times

Phase 2

Lawrence Listens Survey #2

In October 2016, the second phase of public input asked individuals to prioritize potential bus transfer locations and amenities. The online survey helped develop site analysis criteria and narrow potential bus transfer locations for improvements.



What did we hear in Phase 2?

- Publicly accessible indoor areas were preferred over outdoor areas, even if indoor areas cost more to operate
- Reducing travel time was more important to respondents than whether the site was adjacent to a residential area
- Reducing travel times on the overall transit system was more important than operating cost savings

Site Selection Criteria

When **assessing potential sites**, the team considered these factors:

Technical Factor

Community-Driven Factor

Travel Time

Focuses on providing trip efficiency to users.

- Reduces travel time for most users of the City of Lawrence & KU Systems
- Maintains travel time for most users of the City of Lawrence & KU Systems
- Increases travel time for most users of the City of Lawrence & KU Systems

Centralized Location

Focuses on a location that accommodates KU and Lawrence travel.

- Located between 9th and 19th Streets and Iowa and Mississippi Streets
- Located between 6th and 23rd Streets and Kasold and Tennessee Streets
- Areas outside of 6th and 23rd Streets and Kasold and Tennessee Streets.

Accommodate an Indoor Facility

Focuses on indoor operator and public use space.

- Accommodates a facility that would include restrooms, waiting area and meeting space
- Accommodate a limited facility with restrooms and small waiting area
- Cannot adequately accommodate an indoor facility

Accommodate Fleet Operations

Focuses on the physical accommodation of transfers.

- Accommodates vehicle access, turning movements and capacity at peak PM hour
- Accommodates vehicle access, turning & capacity with minor design limitations
- Cannot adequately accommodate access, turning movements or capacity at peak hour

Located Outside of Residential Neighborhoods

A location on arterial roadways that is buffered from residential areas.

- Fully buffered from residential areas on all sides of the facility.
- The site is buffered on at least three sides by residential neighborhoods
- The site is buffered on fewer than three sides by residential neighborhoods

Cost Effective to Acquire Property

Focuses on the costs required to purchase the property.

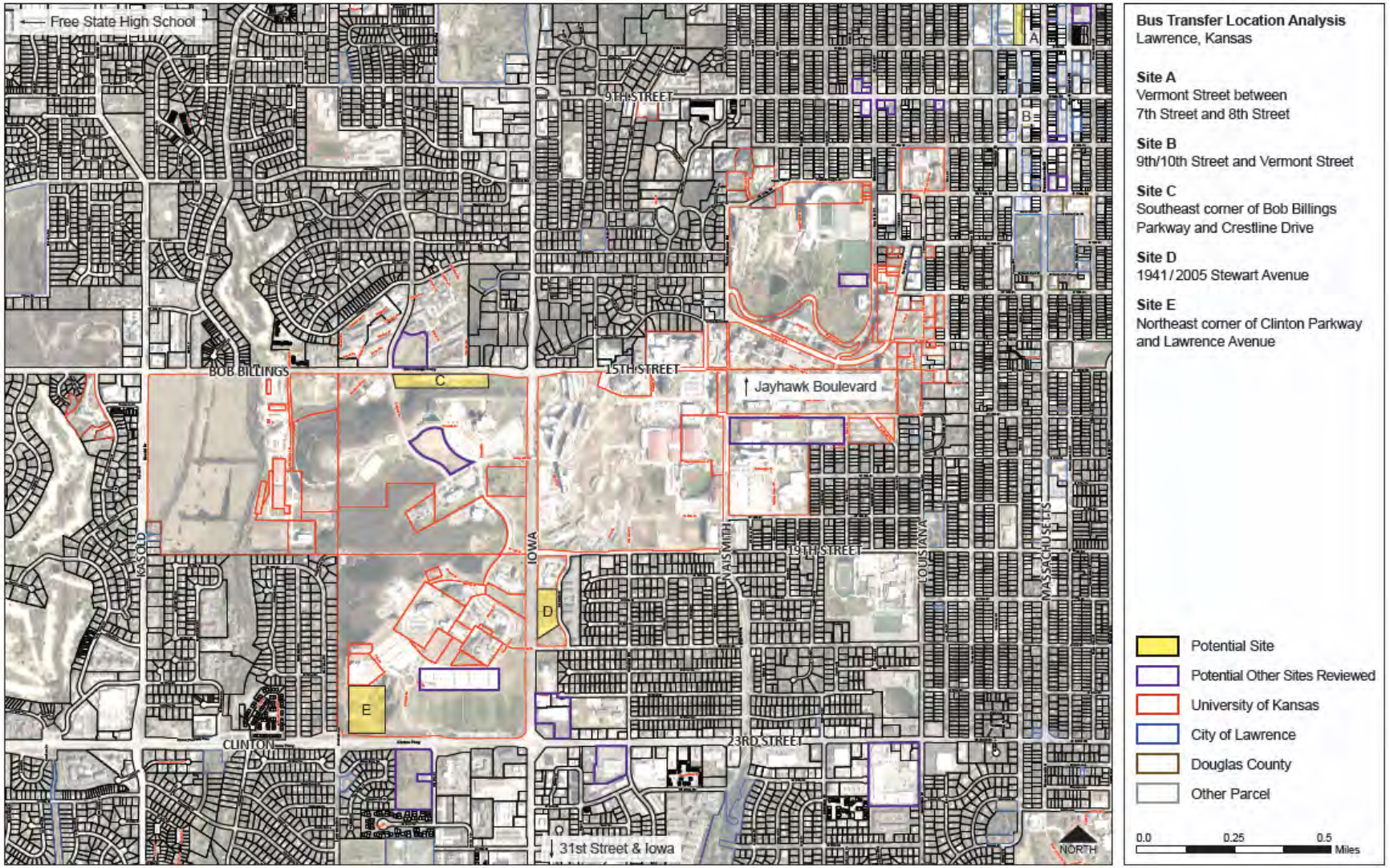
- No to minimal costs to procure the property
- Moderate costs to procure the property
- High costs to procure the property

Ease of Constructibility

Focuses on site development needs and permitting

- Site is prepared for construction with minimal permitting needs
- Site would require a moderate amount of enhancements for this use and/or permitting
- Site would require substantial enhancements for this use and/or permits

Analysis of Potential Sites



Site A: Vermont Street Between 7th and 8th

Site Description

To more effectively accommodate bus transfers at the existing location on Vermont Street between 7th and 8th Streets, the following enhancements have been identified:

- Saw-tooth style bus bays to accommodate seven full sized buses
- A high-visibility pedestrian zone marked for the entirety of the block, with a mid block crossing
- Additional bus shelters along the east side of Vermont Street

Site Analysis Overview

ANALYSIS FACTOR	RESULT
Travel Time	
Centralized Location	
Accommodate an Indoor Facility	
Accommodate Fleet Operations	
Located Outside a Residential Neighborhood	
Cost Effective to Acquire Property	
Ease of Constructibility	

Site B: Lot 5, 900 Block of Vermont Street

Site Analysis Overview

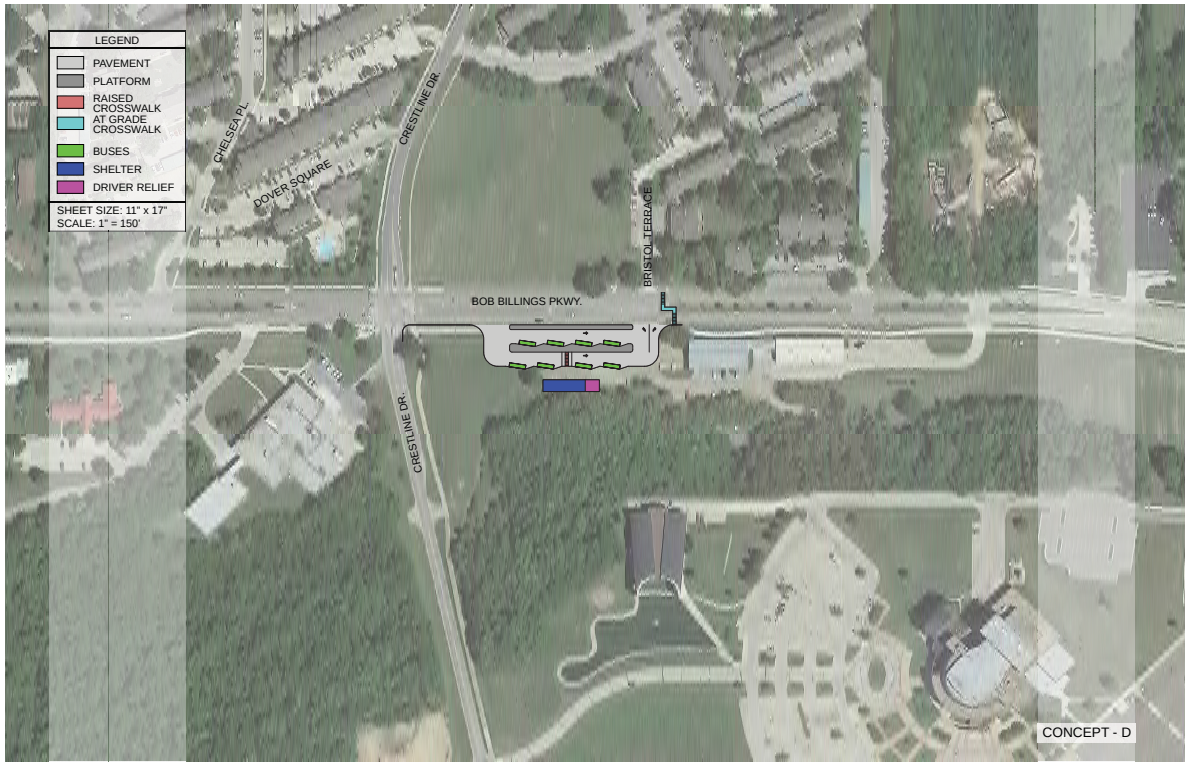
ANALYSIS FACTOR	RESULT
Travel Time	◑
Centralized Location	○
Accommodate an Indoor Facility	●
Accommodate Fleet Operations	◑
Located Outside a Residential Neighborhood	●
Cost Effective to Acquire Property	●
Ease of Constructibility	○

Site Description

A downtown transfer center could be co-located with commercial or residential development on Lot 5 in the 900 Block of Vermont downtown. This development could include:

- Underground parking to accommodate spots currently in the surface lot
- A transit facility on the first floor of the development
- Commercial and/or residential development above the first floor transit facility

Site C: Southeast Corner of Bob Billings Parkway & Crestline



Site Description

An off street transfer location on the southeast corner of Bob Billings Parkway and Crestline would include the following amenities:

- University of Kansas gateway features at Crestline
- Saw-tooth style transit bays
- Indoor areas for operators and transit users

Site Analysis Overview

ANALYSIS FACTOR	RESULT
Travel Time	
Centralized Location	
Accommodate an Indoor Facility	
Accommodate Fleet Operations	
Located Outside a Residential Neighborhood	
Cost Effective to Acquire Property	
Ease of Constructibility	

Site D: 1941 Stewart Avenue

Site Description

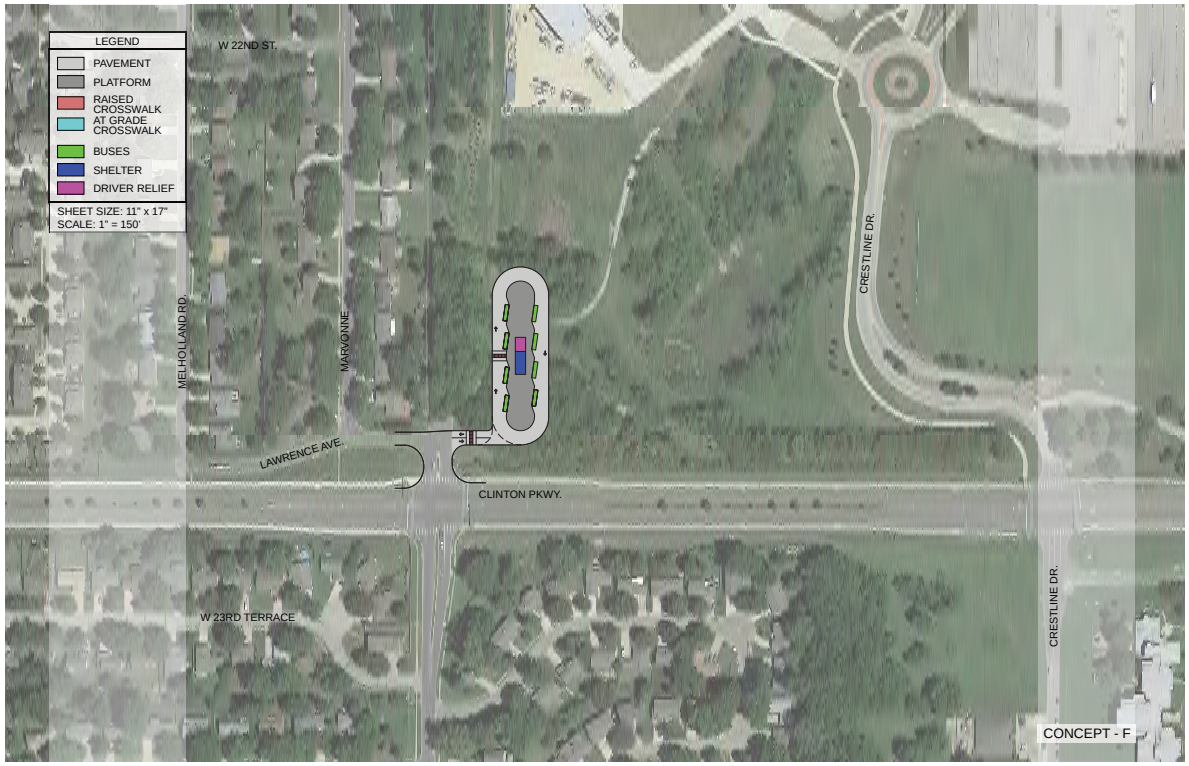
The middle parcels between 19th and 21st on Stewart Avenue were analyzed as part of this process. A transfer location on this site would include:

- Further study and consideration for east-bound bus routing
- Landscaping and facility design focused on preserving the character of the neighborhood
- Safety and security planning in consultation with Lawrence and KU Police Departments and neighbors at Lawrence Fire Department

Site Analysis Overview

ANALYSIS FACTOR	RESULT
Travel Time	●
Centralized Location	◑
Accommodate an Indoor Facility	●
Accommodate Fleet Operations	●
Located Outside a Residential Neighborhood	○
Cost Effective to Acquire Property	●
Ease of Constructability	●

Site E: Northeast Corner of Clinton Parkway & Lawrence Ave



Site Analysis Overview

ANALYSIS FACTOR	RESULT
Travel Time	
Centralized Location	
Accommodate an Indoor Facility	
Accommodate Fleet Operations	
Located Outside a Residential Neighborhood	
Cost Effective to Acquire Property	
Ease of Constructability	

Site Description

The northeast corner of Clinton Parkway and Lawrence Avenue was evaluated as a potential off-street transfer site. Features of this location may include:

- Extension of Lawrence Avenue
- Landscaping and facility design focused on preserving the character of the neighborhood
- Connectivity with West Campus

Weighing the Benefits

Site Selection Criteria	Travel Time	Centralized Location	Accommodate an Indoor Facility	Accommodate Fleet Operations	Located Outside of Residential Neighborhoods	Cost Effective to Acquire Property	Ease of Constructibility
Site A							
Site B							
Site C							
Site D							
Site E							

Next Steps

Thank you for your valuable feedback! **What is going to happen next?**

Next Steps

For the remainder of the study process, the study team will:

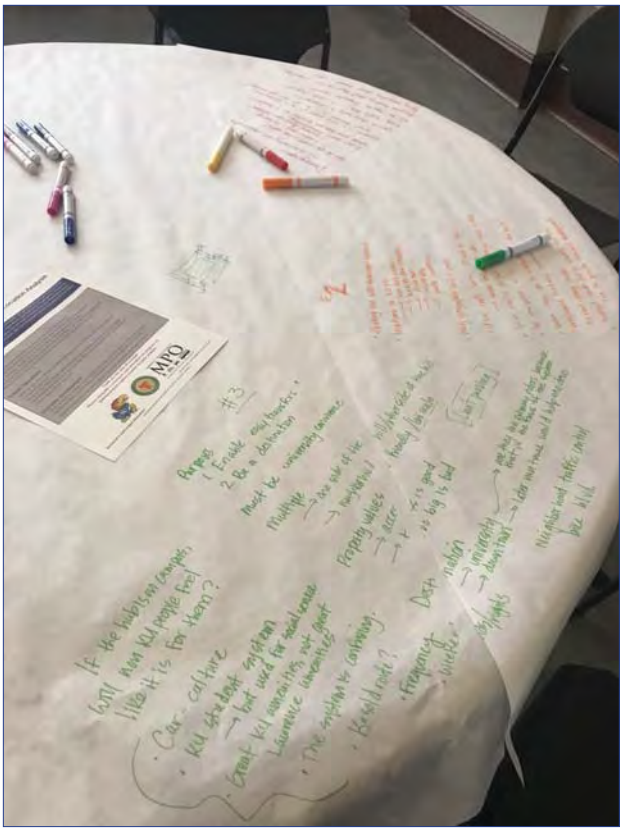
- **Analyze** feedback from Public Meeting #2 and Lawrence Listens Survey #3
- **Conduct** additional technical analysis for relevant candidate sites
- **Coordinate** with property owners as appropriate based on candidate sites
- **Present** findings and recommendations to the City Commission in January 2018

Please provide additional input via the **comment card.**

Provide Your Input

Please complete the comment card!

- We want your assessment on the benefits and challenges of each location.
- Ask questions of staff and consultants this evening.
- If you need more time, the same survey is available via Lawrence Listens.



Lawrence Bus Transfer Location Analysis

Public Meeting November 29, 2017

Thank you for your participation in the public meeting this evening. After reviewing the information, we ask that you provide feedback on benefits and challenges of each of the sites. We appreciate your help on this important project! This survey should take no more than 10 minutes to complete
*please complete back side

Site A: Vermont Street between 7th and 8th Streets

1. What do you identify as the main benefit of this location:

_____

2. What do you identify as the main challenge of this location:

_____

Site B: Lot 5 in the 900 Block of Vermont

3. What do you identify as the main benefit of this location:

_____

4. What do you identify as the main challenge of this location:

_____

Site C: Southeast Corner of Bob Billings Parkway and Crestline Drive

5. What do you identify as the main benefit of this location:

_____

6. What do you identify as the main challenge of this location:

_____

Site D: 1941 Stewart Drive

7. What do you identify as the main benefit of this location:

_____

8. What do you identify as the main challenge of this location:

_____

Site E: Northeast Corner of Clinton Parkway and Lawrence Avenue

9. What do you identify as the main benefit of this location:

_____

10. What do you identify as the main challenge of this location:

_____

11. Do you ride the bus in Lawrence? Please check all that apply.

- ☐ No, I do not ride the bus
- ☐ Yes, I ride Lawrence Transit Bus Service
- ☐ Yes, I ride T-Lift
- ☐ Yes, I ride KU on Wheels

12. If you are a student, select all that apply.

- ☐ Baker University
- ☐ Haskell Indian Nations University
- ☐ University of Kansas
- ☐ Community College/Peaslee Technical Training Center
- ☐ College/School outside of Douglas County
- ☐ K-12
- ☐ Not a Student

13. What is the approximate average household income? Select one

- ☐ Less than $24,999
- ☐ $25,000-$49,999
- ☐ $50,000-$74,999
- ☐ $75,000-$99,999
- ☐ $100,000-$149,999
- ☐ More than $150,000

14. What is your age? Select one.

- ☐ Under 18 years
- ☐ 18-24 years
- ☐ 25-34 years
- ☐ 35-44 years
- ☐ 45-54 years
- ☐ 55-64 years
- ☐ 65 years and over

15. What is your sex? Select one.

Male_____ Female_____ Prefer Not To Answer_____

16. Which race/ethnicity best describes you? Select all that apply.

- ☐ American Indian & Alaskan Native
- ☐ Asian
- ☐ Black or African American
- ☐ Hispanic/Latino
- ☐ Native Hawaiian & Other Pacific Islander
- ☐ White
- ☐ Other (Please specify.)_____
- ☐ Prefer not to answer

17. What is your zip code? (If not applicable, leave blank.)

Home: _____ Work: _____

Want to recieve email updates about our process? Write your email address below!

Email address:

PETITION

To: Lawrence City Commission and Transit Authority
Cc: KU Endowment Association

From: Residents of Marvonne Meadows Neighborhood
141 Signatures

Re: Opposition to Location of Bus Transfer Station at Northeast Corner of Clinton Parkway and Lawrence Avenue (Site E)

Contact for Marvonne Meadows Neighborhood: Joan Stone
1807 Meadowlark Lane
Lawrence, KS 66047
jpstone@ku.edu
785-841-8146

Date: December 2017

PETITION

To: Lawrence City Commission and Transit Authority
Cc: KU Endowment Association

From: Residents of Marvonne Meadows Neighborhood

Re: Opposition to Location of Bus Transfer Station at Northeast Corner of Clinton Parkway and Lawrence Avenue (Site E)

Date: December 2017

The residents of the Marvonne Meadows Neighborhood strongly oppose the location of a bus transfer station at the northeast corner of Clinton Parkway and Lawrence Avenue (Site E) for the following reasons:

1. The intersection of Clinton Parkway and Lawrence Avenue is ill suited for additional cars and busses looking to use Clinton Parkway for exits and entrances. That is the only way to leave and return to the Marvonne Meadows neighborhood, and it will become much more difficult to negotiate than it is now.

2. The location is very close to a quiet neighborhood of single-family homes. The transit site plan shows an area for idling and loading of busses within about 90 feet of several single-family residential lots. The added noise, lights, traffic, litter, and loitering will inevitably impact the quality of life for the entire neighborhood.

3. There are dense woods directly adjacent to our homes that are contiguous with the area of the proposed station. Our neighborhood has already been impacted negatively by the build-up of the KU West Campus structures. Having the woods so close to a bus hub could provide shelter for homeless and transient people and create problems we don't currently have. Many neighborhood residents have lived in Marvonne Meadows for forty or more years, but there are also families with young children. Safety is a major concern for all of us, and we feel it would be jeopardized with a bus hub so close by.

4. The extension of Lawrence Avenue will harm neighborhood traffic patterns. No public decision of this magnitude should consider traffic patterns to KU games over the well-being and integrity of a long-established neighborhood.

5. If Site E is chosen, property values in Marvonne Meadows will surely decrease, especially for the lots directly adjacent to the bus station. The fabric of the neighborhood will materially diminish.

It's clear to us that the bus transfer station has no benefits for our neighborhood. We strongly urge the Lawrence City Commission and Transit Authority to choose a more centralized and less disruptive location for the bus hub than the corner of Clinton Parkway and Lawrence Avenue (Site E)!

PETITION

To: Lawrence City Commission and Transit Authority
Cc: KU Endowment Association

From: Residents of Marvonne Meadows Neighborhood

Re: Opposition to Location of Bus Transfer Station at Northeast Corner of Clinton Parkway and Lawrence Avenue (Site E)

Date: December 2017

Signature	Address	Email (optional)
Betsy Thompson	1918 Marvonne Rd	bthompy54@gmail.com
Darcy Eschilli	2018 Marvonne Rd.	
Julie M Cook	2022 Marvonne Rd	jm47@gmail.com
Vernon Schindler	2022 MARVONNE RD	Vernon@SUNFLOWER.com
Jennifer Walters	2106 Marvonne Rd	jwalters@lesD497.org
Spencer Stewart	2122 MARVONNE RD.	
John W Stoddart	2204 MARVONNE Rd	drichood@aol.com
Vicky Stoddart	2204 Marvonne Rd.	VSROOST@AOL.com
Jamila Runyan	2208 Marvonne Rd	Hhc4ever@yahoo.com
Shannon Vogel	2216 Marvonne Rd	
* F. J. Pryor	2220 Marvonne Rd.	jay.pryor@gmail.com
Dennis H. Karpowitz	2224 Marvonne Rd.	dKarpowitz@KU.edu
Dorothy Diane Karpowitz	2224 Marvonne Rd	dianekarpowitz@gmail.com
Wendy Karpowitz	2224 Marvonne Rd.	kujayhawk@yahoo.com

PETITION

To: Lawrence City Commission and Transit Authority
Cc: KU Endowment Association

From: Residents of Marvonne Meadows Neighborhood

Re: Opposition to Location of Bus Transfer Station at Northeast Corner of Clinton Parkway and Lawrence Avenue (Site E)

Date: December 2017

Signature	Address	Email (optional)
Christine MacDonald	2224 Marvonne Rd	flatlanders@sunflower.com
Tom Marshall	2226 Marvonne Rd.	" "
David Hartford	2228 Marvonne Rd	david hartford@sitfsim.com
Jan Bresnahan	1910 Marvonne Rd	
Jon F. Bresnahan	1910 Marvonne Rd	jbresnah1@ku.edu
Megan Towle	2004 Marvonne Rd.	
Vicki J McMurray	~~2202~~ 2102 Marvonne Rd	mcmurray@sunflower
James F. McMurray	2102 MARVONNE RD 66047	
John D. Poden	1910 Marvonne Rd	jpaden@ku.edu
Joy Towle	2004 Marvonne Rd	joy@sunflower.com
Tim Towle	2004 Marvonne Rd	Tim@sunflower.com
L Gallagher	2212 MARVONNE	LLOYDIN@SUNFLOWER.COM

(3)

PETITION

To: Lawrence City Commission and Transit Authority
Cc: KU Endowment Association

From: Residents of Marvonne Meadows Neighborhood

Re: Opposition to Location of Bus Transfer Station at Northeast Corner of Clinton Parkway and Lawrence Avenue (Site E)

Date: December 2017

Signature	Address	Email (optional)
[illegible]	1900 Meadowlark LN	
John Griffin	1915 MARVONNE RD	
Renée [illegible]	2005 Marvonne Rd	
Kathryn [illegible]	1907 Marvonne Rd	
[illegible]	1902 Meadowlark LN	
Sandy Lockhart	2011 Marvonne Rd.	
[illegible]	2021 Marvonne Road	
Glenna [illegible]	2103 Marvonne Rd.	
Susan Pomeroy	2109 Marvonne Rd.	
[illegible]	2115 Marvonne Rd	
* Kelly Baucher	2119 Marvonne Rd	
[illegible]	2119 Marvonne Rd	

(4)

PETITION

To: Lawrence City Commission and Transit Authority
Cc: KU Endowment Association

From: Residents of Marvonne Meadows Neighborhood

Re: Opposition to Location of Bus Transfer Station at Northeast Corner of Clinton Parkway and Lawrence Avenue (Site E)

Date: December 2017

Signature	Address	Email (optional)
Arnold A'Knudson	2017 Marvonne Road Lawrence KS	aaknud@gmail.com
Brittany Pelkey	2021 MARVONNE RD LAWRENCE KS 66047	bripelkey3@gmail.com
Richard Young	2103 MARVONNE RD LAWRENE, KS 66047	NORWIC@EARTHLINK.NET
Gary Thom	2109 Marvonne Rd Lawrence, KS 66047	gsthom@gmail.com
Melissa Diehl	2115 Marvonne Rd Lawrence, KS 66047	
Ray Fowler	1904 Meadowlark Lane Lawrence, KS 66047	ray.rowler@juno.com
Nancy Myers	2010 Marvonne Lawrence, KS 66047	

Signature	Address
Michael Allen	2201 Marvonne Rd.
Patricia Jones	2215 Marvonne Rd
Eric Nutt	2215 Marvonne Rd
Glenna Jones	2217 Marvonne Rd.
Carpe Shantz	2219 Marvonne Rd
David A Doyle	2219 Marvonne Rd
[illegible]	2209 Marvonne Rd
Brianna Lopez	2209 Marvonne Rd
Juan Ackerman	2123 Marvonne Rd.
Paul Ackerman	2123 Marvonne Rd.
Ethan Flores	2011 Marvonne Rd.
Virgil Harrod	2005 Marvonne Rd
Leslie Miller	1915 Marvonne Rd
David Miller	1915 MARVONNE RD
Olivia Meyer	1902 Meadowlark Ln.

(6)

PETITION

To: Lawrence City Commission and Transit Authority
Cc: KU Endowment Association

From: Residents of Marvonne Meadows Neighborhood

Re: Opposition to Location of Bus Transfer Station at Northeast Corner of Clinton Parkway and Lawrence Avenue (Site E)

Date: December 2017

Signature	Address	Email (optional)
Joan Stone	1807 Meadowlark Ln.	jpstone@ku.edu
Ella Parks	1906 Melholland Rd.	
Michael Cooper	1912 Melholland Rd.	
Myanda Bygot	2012 Melholland Rd	Kayeden05e yahoo.com
Alvaro Clay	202 Melholland Rd	
Jennie Dienes	2016 Melholland Rd,	jdienes@ku.edu
Leslie Dienes	2016, Melholland Rd,	ldienes@ku.edu
John Gates	2102 Melholland Rd ~~jgd~~	jdgusn0@yahoo
J. Richard Gomez	2103 Melholland	rickmaryingotus@yahoo.com
Elizabeth Phillips	2106 Melholland	ephillips@ku.edu
Wayne R Pearse	2110 MELHOLLAND	wrpearse@yahoo.com
Kathleen E Pearse	2110 Melholland Rd.	
Nick Lawrence	2123 Melholland RD.	
Richard C Lawrence	2123 Melholland Rd	

PETITION

To: Lawrence City Commission and Transit Authority
Cc: KU Endowment Association

From: Residents of Marvonne Meadows Neighborhood

Re: Opposition to Location of Bus Transfer Station at Northeast Corner of Clinton Parkway and Lawrence Avenue (Site E)

Date: December 2017

Signature	Address	Email (optional)
YupingHsu	2119 Melholland Rd	yupingkim@yahoo.com
ChangmingKo	2119 Melholland Rd.	jkneobux@gmail.com
Andrew Hoyt	2103 Melholland	j.andrew.hoyt@gmail.com
[illegible]	2021 Melholland	rushrich@hotmail.com
Monica Greenwood	2021 Melholland	monicagreenwood82@gmail.com
C Varble	2013 MelhollandRD	cgvarble@gmail.com
Timothy B. Green	1927 Melholland	timothyb.green@yahoo.com
Wanda N. Waugh	1916 Melholland Rd	wwaugh@ku.edu
Truman C. Waugh	1916 Melholland Rd	NAWN@KU.Edu
Mael Luttrell	1923 Melholland Rd	luttrellm617@gmail.com
[illegible]	2908 W 19th St.	
Darinda Messer	1915 Melholland Rd	darindaandjohn@hotmail.com
John R Messer	1915 MELHOLLAND	
Donna Kane-Swan	1910 Melholland Rd.	
[illegible] Swan	1910 Melholland Rd.	
[illegible]	2201 MELHOLLAND RD.	jcvsevision29@yahoo.com
Phyllis Garcia	2204 Melholland	
John Garcia	2204 Melholland Rd.	

(8)

PETITION

To: Lawrence City Commission and Transit Authority
Cc: KU Endowment Association

From: Residents of Marvonne Meadows Neighborhood

Re: Opposition to Location of Bus Transfer Station at Northeast Corner of Clinton Parkway and Lawrence Avenue (Site E)

Date: December 2017

Signature	Address	Email (optional)
Barbara Miller	2208 Mellholland	
Michael Miller	2208 Mellholland Rd	
Denise Farmer	2215 Mellholland	
Kyle Anderson	2228 Mellholland Rd	
David E Mann	2224 MELLHOLLAND RD.	
Anneke Lindgaard	1815 Meadowlark Lane	

(9)

PETITION

To: Lawrence City Commission and Transit Authority
Cc: KU Endowment Association

From: Residents of Marvonne Meadows Neighborhood

Re: Opposition to Location of Bus Transfer Station at Northeast Corner of Clinton Parkway and Lawrence Avenue (Site E)

Date: December 2017

Signature	Address	Email (optional)
Helen Seeley	2914 W. 19th St.	749-0829
Susan Lord	1903 Melholland	830-0156
Lee W. Cakins	2916 W. 19th St.	843-4328
Kenneth J. Mitchell	1916 Atchison Ave.	842-3717
Daniel [illegible]	2012 ATCHISON AVE	dan@hype7.com (550-0685)
Paula Pruett	2014 Atchison	785-331-6172
ART GASSERT	2016 Atchison	785 312-9494
Curt Baucom	2124 Atchison	785 841-9837
Alex Baker	2001 Atchison Ave	785-813-3577
[illegible]	1904 Atchison Av	
[illegible]	2114 Marvonne Rd	785-691-7650
Carol Greenfield	1904 Atchison Ave	785-842-8776 Kinley03@hotmail.com
[illegible]	2915 W 19th St	785-840-5811
Lucy J Price	1912 Atchison Ave	lucyjprice@outlook.com 785-843-1682
Natassia Records	2100 Atchison Ave	817-247-5132
[illegible]	2016 Atchison Ave	979-0983
Shelby Shelby Frazier	2120 Atchison Ave	870 656-4449

(10)

PETITION

To: Lawrence City Commission and Transit Authority
Cc: KU Endowment Association

From: Residents of Marvonne Meadows Neighborhood

Re: Opposition to Location of Bus Transfer Station at Northeast Corner of Clinton Parkway and Lawrence Avenue (Site E)

Date: December 2017

Signature	Address	Contact #
Joanne Lyman	3000 W. 19th St.	
Herbert L. Martin	2920 W. 19th St	
Melissa Martin	3004 W. 19th St.	
Derek W Fox	3008 W. 19th St.	785-766-6823
Andrea Gore	3009 W 19th St	785-842-1334
Yori J. Phillips	3009 W 19th St	785 842-1334
	3005 W. 19th St.	785.550.6331
	3005 W. 19th	785 856-4699
	3001 W. 19th	785-979-0275
Kyle Riggs	3004 W 19th Ct.	785-832 1537
Michele Riggs	3004 W 19th Ct	785-832-1537
Carl Riggs	3004 W 19th Ct	785-832-1537
Darlene Katzfey	3009 W. 19th Ct.	785 331-2794
Bernard Katzfey	3009 W. 19th Ct	785-331-2794

(11)

PETITION

To: Lawrence City Commission and Transit Authority
Cc: KU Endowment Association

From: Residents of Marvonne Meadows Neighborhood

Re: Opposition to Location of Bus Transfer Station at Northeast Corner of Clinton Parkway and Lawrence Avenue (Site E)

Date: December 2017

Signature	Address	Email (optional)
Todd [illegible]	3001 W 19th Ct.	
Cindy [illegible]	3001 W. 19th Ct.	
Rita Hoyle	2001 Atchison Ave	
[illegible]	2005 Atchison Ave	Kalebhawk@gmail.com
Dustin Maurer	2013 Atchison Ave	dustinmaurer16@gmail.com
P.M. Fravel	2105 Atchison Ave	
[illegible]	2105 Atchison Ave	
Tigby Hunt-Ward	2108 Atchison	843-1289
Vicki S. Kelso	2133 Atchison Ave	785 550-6231
Joshua Rodman	2141 Atchison Ave.	
Kim Rodman	2141 Atchison	785 813 8211

APPENDIX B | CONCEPTUAL FACILITY FLOOR PLAN