

**PLANNING COMMISSION REPORT**  
**Regular Agenda -Public Hearing Item**

PC Staff Report  
9/26/2016

**ITEM NO. 8B: PDP-16-00311; HERE @ KANSAS OFF-SITE PARKING PRELIMINARY DEVELOPMENT PLAN (SLD)**

**PDP-16-00311:** Consider a Preliminary Development Plan to accommodate the construction of an *Accessory Parking* lot for HERE @ Kansas, located off site at 1029 Mississippi, 1031 Mississippi, and 0 Illinois St. Submitted by Landplan Engineering PA on behalf of 1029 Mississippi LLC, STADPKG LLC, property owner of record.

**STAFF RECOMMENDATION ON PRELIMINARY DEVELOPMENT PLAN:** Planning Staff recommends approval of PDP-16-00311 HERE @ Kansas off-site parking Preliminary Development Plan for an *Accessory Parking* lot, including a waiver, for parking spaces that are less than 600' from the main entrance to the building based upon the findings of fact presented in the body of the staff report and subject to the following conditions:

1. Provision of a revised plan that includes a note restricting the use of the property to an *Accessory Parking Lot* (surface parking lot) only.
2. Provision of a revised plan to include a typical section of screening wall to obstruct the view of the vehicles to be setback plus or minus 5' of the established building plane along Illinois and Mississippi Street.
  - a. The screening wall should include architectural elements as described in the body of this report.
3. Provision of revised plan to show ornamental fencing along the north property line, including a typical section, that provides basic security without blocking out the light for the tenants living in the south facing units.

**Reason for Request:**

*This project proposes to develop upon the subject site a 68-space off-site off-street parking lot to serve the nearby HERE @ Kansas mixed use development. Based on the approved Final development Plan for the HERE project, the parking garage inside the building can only supply enough parking for 88% of the residential units. This proposed parking lot will complete the requirements of the residential component of this building and allow the remainder of the residential units to obtain certificates of occupancy. In conjunction with the parking lot, the project also proposes the realignment of Fambrough Drive to create a new 4-way intersection with 11<sup>th</sup> and Mississippi Streets. This street realignment, which is proposed in KU's 2014-2024 Campus Master Plan, includes significant improvements to pedestrian and bicycle infrastructure and will reduce traffic congestion in the area by eliminating a dog-legged intersection. The parking lot will be constructed and landscaped in conformance with all applicable sections of the City of Lawrence Land Development Code and the street will be designed to conform to both City of Lawrence and KU technical specifications.*

**KEY POINTS**

- Off-street parking is intended to provide required parking spaces for the residential portion of the HERE @ Kansas mixed use development.
- Off-site parking must be located within 600' of the use. Of which this project complies.

- The project is a phased development.
- The project includes the realignment of Fambrough Drive.

### **FACTORS TO CONSIDER**

- Compliance with Development Code.
- Conformance with *Horizon 2020*.
- Conformance with the Neighborhood Plan
- Conformance with Subdivision Regulations.

### **ASSOCIATED CASES/OTHER ACTION REQUIRED**

#### **Associated Cases**

- Z-16-00310; RM32 and U-KU to RM32-PD
- CPA-00309 Amendment to Chapter 14 Oread Neighborhood Plan
- Future Final Development Plan
- Future Final Plat
- Public Improvement Plans.

#### **Other Action Required**

- City Commission approval of Preliminary Development Plan and requested modifications.
- Submittal and approval of Final Development Plan and Final Plat.
- Recording of Final Development Plan and Final Plat with the Douglas County Register of Deeds.
- Submission and approval of Public Improvement Plan.

### **PLANS AND STUDIES REQUIRED**

- *Traffic Study* – Staff will provide update on traffic study during the meeting.
- *Downstream Sanitary Sewer Analysis* – No new fixtures are being added by this project. Applicant will submit a letter with the Final Development Plan per Utility Department requirements.
- *Drainage Study* – A drainage study is not required for this project because the increase in impervious surface is less than 10 percent. [Stormwater Management Criteria Section 1.6.E.2.c]
- *Retail Market Study* – Not applicable to this application.
- *Commercial Design Standards or Other Standards* – Not applicable to this application.
- *Alternative Compliance* – See discussion below regarding landscape review.

### **ATTACHMENTS**

1. Area Map
2. Preliminary Development Plan
3. Pedestrian Route Map
4. Lease Agreement

### **PUBLIC COMMENT**

- Rick Abershamson – property owner to the north concerned about traffic flow in the area and alley usage for access to multi-dwelling properties “up stream.”

- Michael Flory – property owner to the north concerned about adjacent multi-dwelling residents view of KU from ground floor units if parking lot is fenced with solid fencing. Requested chain link to prevent trespass but maintain visibility.

### GENERAL INFORMATION

Current Zoning and Land Use: U-KU (University – Kansas University) District and RM32 (Multi-Dwelling Residential) District. Existing parking lot along Illinois Street and existing multi-dwelling residential uses along Mississippi Street.

Surrounding Zoning and Land Use: RM32 (Multi-Dwelling Residential) District to the east along the east side of Mississippi Street; existing multi-dwelling residential units.

U-KU (University-Kansas University) District to the south. Existing Memorial Stadium, Track and Field facilities and parking on the south side of Fambrough Drive.

RM12D (Multi-Dwelling Residential Duplex) District to the west along the west side of Illinois Street; existing residential uses.

RM12D and RM32 to the north. Existing residential structures.

✚ 1020 Illinois – Multi-dwelling residential (4 units)

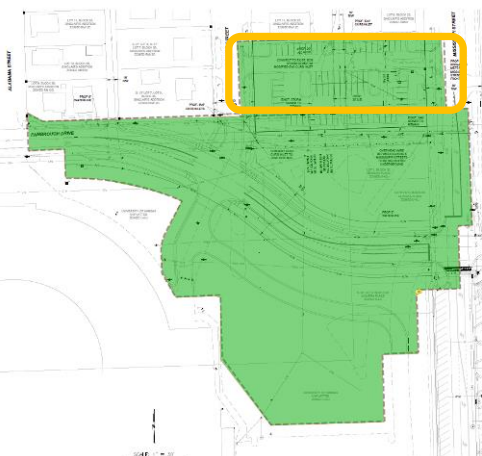
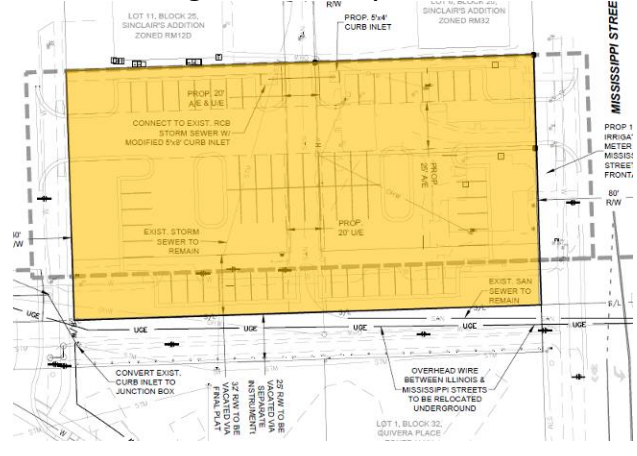
✚ 1016 Illinois – Multi-dwelling residential (4 units)

✚ 1027 Mississippi – Multi-dwelling residential (11 units)

<b>SITE SUMMARY</b>		
Project boundary includes University of Kansas property. Site Surface Summary provided for proposed parking lot only.		
	<b>Existing</b>	<b>Proposed (with existing development)</b>
Land Use:	Existing parking lot, multi-dwelling residential buildings Existing right-of-way and University of Kansas athletic field.	Surface parking lot, realigned Fambrough Drive and University of Kansas open space.
Land Area (sq ft):	33,059	33,059
Existing Building Footprint <sup>1</sup>	3,018	0
Total Pavement:	21,426	23,408
Total Impervious Area:	24,444	23,408
Total Pervious Area:	8,615	9,651

<sup>1</sup> Proposed development is for surface parking lot. Existing buildings will be demolished.

**Table 1: Project Boundary and Phase Summary**

<p><i>Project Boundary – 4.74 Acres</i></p>  A map showing the project boundary in green. A yellow rectangle highlights a specific area within the green boundary, likely corresponding to the parking lot shown in the adjacent map. The map includes various street names and property lines.	<p><i>Parking Lot Boundary - .76 Acres</i></p>  A detailed map of the parking lot boundary, highlighted in yellow. It shows the layout of the parking spaces, surrounding streets (Mississippi Street, Quivera Place), and various engineering notes such as 'CONNECT TO EXIST. 80\"/>
<p><i>Phase Summary</i></p> <ol style="list-style-type: none"><li>1. Construction of parking lot with north 50 spaces.</li><li>2. Construction of parking lot expansion with south 18 spaces and construction of realigned Fambrough Drive.</li></ol> <p>Note: Estimated Completion Mid-August 2017.</p>	

**Table 2: Off Street Parking Summary**

<b>PARKING SUMMARY – HERE @ KANSAS – RESIDENTIAL USE 1101 INDIANA STREET</b>			
<b>Use</b>	<b>Parking Required</b>		<b>Off-Site Off-Street Parking Proposed</b>
<i>Multi-Dwelling Residential Per FDP-15-00642</i>	1 space per BR + 1 space per 10 units	624 residential spaces 18 guest spaces  Residential occupancy limited to 548 bedrooms until additional parking is provided.	Phase 1: 50 spaces Phase 2: 18 spaces  Total spaces provided after construction is 68 spaces.
<i>Total Residential</i>		❖ <b>577 Spaces Required for residential use</b>	510 spaces in garage 68 spaces in off-site surface lot. <b>578 spaces</b>
<b>Non-Residential Uses</b>		13,561 SF total area	<b>108 spaces on-street</b>
1. <i>Eating and Drinking Establishments</i>		6,100 SF @ 1 per 100 SF + 1 per employee (20 employees)	
2. <i>Retail</i>		5,700 SF @ 1 per 300 SF	
3. <i>Valet Operations</i>		8 spaces	
<i>Total Non-Residential</i>		🚦 <b>88 spaces</b>	
<i>Total Spaces all uses</i>		<b>685 spaces</b>	<b>686 spaces proposed/provided</b>
<p>🚦 Overall Parking Reduction approved for HERE @ Kansas through use of shared parking, application of parking development bonus to reduce the total required spaces from a required 642 spaces for the residential use to 577 spaces for the residential use.</p> <p>🚦 Parking for nonresidential uses are estimated based on the approved Final Development Plan. Changes to planned tenants or area allocations may adjust the required parking up or down. Nonresidential parking is primarily accommodated on-street.</p>			

## STAFF ANALYSIS

### Summary

This Preliminary Development Plan is intended for the development of an off-site, off-street surface parking lot to support the HERE @ Kansas mixed use development located at 1101 Indiana Street with 68 parking spaces. The property will be leased by the HERE @ Kansas project from a KU Endowment LLC. The least term is 50 years. The project is proposed in two phases. A significant feature of this plan is the realignment of Fambrough Drive.

### Subdivision Review

The Preliminary Development Plan acts as the Preliminary Plat for the *Accessory Parking* lot site. The larger project includes both platted and unplatted land. Additionally, property is owned by both the University of Kansas as well as the KU Endowment Association. Portions of the KU property are not platted and may not be replatted as part of this project. The parking lot, owned by the Endowment Association, however, will be the subject of a future Final Plat.



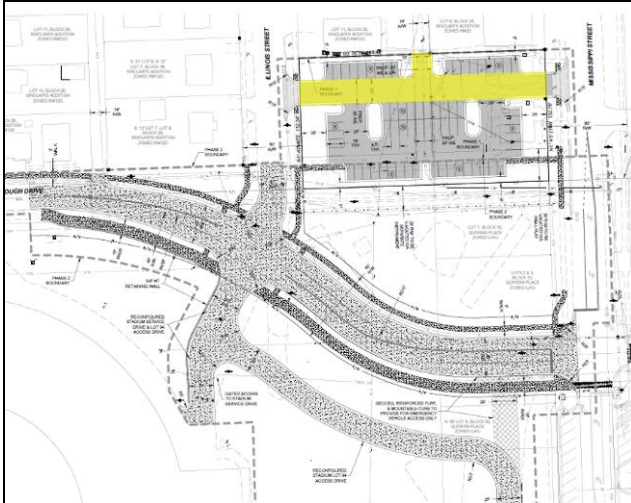
**Figure 1: Existing Platted and Unplatted Land**

*Proposed parking lot is outlined in blue. University of Kansas property is unplatted except for the southwest corner of Fambrough Drive and Mississippi Street.*

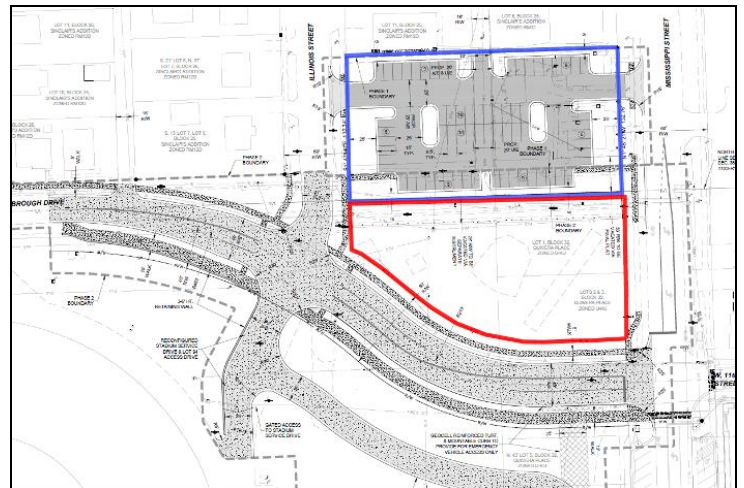
This project includes the vacation of existing right-of-way and easements as well as the dedication of new right-of-way for the realigned Fambrough Drive as shown on the Preliminary Development Plan and the dedication of new access and utility easements. In some instances utilities that cross University property (not Endowment Property) will be managed by separate agreements with the University rather than by dedication of a specific easement. This is a common practice for public utilities that cross University property. Necessary agreements with the University for the Required Infrastructure will continue to be reviewed by staff and University representatives as this project progresses.

The alley, located between Mississippi and Illinois Streets, is proposed to be partially vacated. However, the alley will still be used by the public and private property owners to the north. Full access of the alley from both the north and south is required. The proposed project includes an access easement through the new parking lot to accommodate continued alley access.

The existing Fambrough Drive right-of-way will be vacated with half of the right-of-way given back to the north property owner (Endowment Association) and the south half given back to the University of Kansas (south property owner). The realigned Fambrough Drive will be a public street with University property located on both the north and south sides of the property.



**Figure 2: New Access Easement/Alley Access**



**Figure 3: Preliminary Plat Lot 1 & Lot 2 option**

New access driveways to the University parking lot next to the stadium will also be constructed with this project. The University is considering participating in the subdivision process that may or may not create a platted lot on the north side of the realigned Fambrough Drive. They are not required to participate in the subdivision of their property. The following graphic highlights the general lot/parcel configuration that will result at the conclusion of this development process, if approved.

The proposed lot (parking lot) meets the minimum subdivision design standards for lot area, width and frontage.

New right-of-way will be dedicated for Fambrough Drive with the Final Plat for this project.

### **Preliminary Development Plan Review**

The proposed Preliminary Development Plan for a surface parking lot has been evaluated based upon findings of fact and conclusions per Section 20-1304(d)(9) of the Development Code for the City of Lawrence, requiring consideration of the following nine items:

#### **1) *The Preliminary Development Plan's consistency with the Comprehensive Plan of the City.***

This property is proposed to be rezoned for high-density residential development to provide a suitable base zoning designation as required for off-site parking. Specific land use recommendations are discussed in the Oread Neighborhood Plan. This application assumes approval of the accompanying Comprehensive Plan Amendment and limits the use of the property to a parking lot.

**Staff Finding** – The proposed development complies with the pending changes to the accompanying Comprehensive Plan Amendment.

#### **2) *Preliminary Development Plan's consistency with the Planned Development Standards of Section 20-701 including the statement of purpose.***

**Applicant's Response:** *"The proposed parking lot complies with all parking, loading, access landscaping, screening and general development standards applicable to the RM32 base district. The intent behind this application for a Planned Development overlay is not to receive variances*

*or waivers from onerous standards, but instead to provide the public with an opportunity to thoroughly review the development plan as well as assurance that future land uses will be restricted to off-site parking (and not more high-density residential) unless otherwise approved by the City commission.*

The purpose statement includes the following (staff comments follow in *italics*):

**a) Ensure development that is consistent with the comprehensive plan.**

*As discussed previously, the development is consistent with the corresponding Comprehensive Plan Amendment to the Oread Neighborhood Plan.*

**b) Ensure that development can be conveniently, efficiently and economically served by existing and planned utilities and services.**

*This property is currently developed with two multi-dwelling structures and a surface parking lot. The existing multi-dwelling residential uses will be demolished (reducing the number of dwelling units in the immediate area by 10 dwelling units and corresponding parking for those units. The current surface parking lot is only used during KU events. This project will create additional off-street parking for the approved and built HERE @ Kansas mixed use development specifically for the residential component.*

*A significant feature of this plan is the realignment of Fambrough Drive. This street will be a "complete street" with all appropriate infrastructure elements. The new parking lot does not require any sanitary sewer or water services. Appropriate easements will be dedicated to ensure continued public services in the area are efficiently provided and accessible.*

**c) Allow design flexibility which results in greater public benefits than could be achieved using conventional zoning district regulations.**

*Conventional zoning could accommodate the proposed project. However, given the sensitive nature of the neighborhood and the intent to limit the encroachment of high-density development beyond specific boundaries within the Oread Neighborhood the Planned Development was identified as a more robust tool to both design and ensure that an off-site parking lot, required for an existing approved development, cannot be subverted to an incompatible use in the future.*

**d) Preserve environmental and historic resources.**

*There are no designated historical or environmental resources on this property.*

**e) Promote attractive and functional residential, nonresidential, and mixed-use developments that are compatible with the character of the surrounding area.**

*This proposal is for a surface parking lot. The implementation of appropriate screening, sidewalk connections and landscaping as well as parking lot setbacks are recommended to ensure a compatible character with the surrounding area.*

**Finding** – The proposed Preliminary Development Plan is consistent with the Statement of Purpose of Planned Development. This is a unique application within the neighborhood to address a particular off-street residential parking demand. Restricting the development to a specific use requires any potential (future) development to seek new approvals through a public process.

***3) The nature and extent of the common open space in the Planned Development.***

Section 20-701(j) notes that 20% of the site must be located within common open space. The nature of the open space provided in this application is in the form of landscape islands and parking lot setback areas. The proposed development complies with the minimum required interior landscape standards and parking lot setback standards including alternative compliance. No additional open space is required for this use.

**Staff Finding** – This plan provides the required open space through interior parking lot landscape islands and parking lot setback areas and alternative compliance techniques. These areas are appropriate in nature and extent for a surface parking lot use.

***4) The reliability of the proposals for maintenance and conservation of the common open space.***

The property, parking lot and all landscape areas will be maintained by the property owner or their designee. The project does not create a separate parcel for open space that will be shared among residents or multiple property owners (such as a home owners association) that requires a maintenance agreement.

The Final Development Plan, when approved, will be sufficient for City staff to administer and enforce applicable city codes regarding maintenance and upkeep of the property. Any separate agreements for property maintenance are between the KU Endowment Association and the HERE @ Kansas representative. The City is not party to those maintenance agreements. The City will maintain the public street as is typical for all public streets.

**Staff Finding** –The property owner will own and maintain the common open space. No additional agreements are required to execute related to this Planned Development process.

***5) The adequacy or inadequacy of the amount and function of the common open space in terms of the densities and dwelling types proposed in the plan.***

A minimum of 20% of common open space shall be provided for a Planned Development. Within that space 50% shall be developed as "Recreational Open Space." This application is unique in that the only use of the property is for surface vehicular parking. The site includes 9,651 SF (29%) of open space within the property.

Open space provided within the parking lot accounts for required interior green space as well as required setback areas. The site is not designed for nor appropriate for "recreational open space" in the conventional sense.

Common open space and recreational open space for the residential use associated with this application is located in and around the building located at 1101 Indiana Street known as HERE @ Kansas.

**Staff Finding** – This property includes 29% of the area as open space. The use of the common open space for recreational activity is not applicable. There is no residential development proposed for this property. This standard is provided within the HERE @ Kansas mixed use development. The site includes an appropriate amount of open space required for off-street parking lots.

***6) Whether the Preliminary Development Plan makes adequate provisions for public services, provides adequate control over vehicular traffic, and furthers the amenities of light and air, recreation and visual enjoyment.***

Access to the existing properties included in the development is from Fambrough Drive and the adjacent alley. The revised plan alters the traffic circulation in the area by removing the access from Fambrough and creating a through driveway access between Illinois and Mississippi Streets. The alley will remain open and will “T” into the parking lot rather than at Fambrough Drive when the improvements are complete.

The project does not include any buildings that will obstruct light, air, recreation and visual enjoyment. Screening of the parking lot has the potential to change or block some views of the properties to the north.

The realigned Fambrough Drive will be constructed with sidewalks on both sides. The south sidewalk, adjacent to the University property, will be constructed as a 10’ multi-use path. The sidewalks will be a significant improvement for the area.

Staff’s review of this project has focused on the existing and revised delivery of municipal services such as sanitary sewer, water, storm sewer infrastructure and Fire and Sanitation vehicle access in the area. These services will be maintained at the current levels and can be adequately provided when all improvements are completed.

Necessary agreements with the university and/or utility easements are required for existing public infrastructure. Some necessary repairs to existing sanitary sewer lines are needed and will need to be coordinated with city staff. The applicant has been advised of this development activity.

**Staff Finding** – The Preliminary Development Plan’s provisions for Fire/Medical access as well as solid waste services have been adequately addressed. The provisions for public services will continue to be reviewed as part of the Final Development Plan as well as related construction documents.

***7) Whether the plan will measurably and adversely impact development or conservation of the neighborhood area by:***

***a) doubling or more the traffic generated by the neighborhood;***

- This project will not result in a traffic generation. The proposed parking lot will provide off-street parking for residents of the HERE @ Kansas mixed use development.
- The traffic pattern in the area will be altered by the realigned Fambrough Drive.
- The intent of the project is to provide off-street parking for a specific residential use located in the neighborhood.

***b) proposing housing types, building heights or building massings that are incompatible with the established neighborhood pattern; or***

There are no buildings associated with the proposed parking. However, appropriate screening of the parking lot is required. By providing a screening wall along the Illinois and Mississippi Street sides of the property and by providing structure between the public and

private realms north of Fambrough Drive the neighborhood pattern and character are both preserved and enhanced.

***c) increasing the residential density 34% or more above the density of adjacent residential properties.***

There is no residential density added to this property. Approval of the project allows the HERE @ Kansas development to activate built but unoccupied residential units. This density was previously approved through a separate Development Plan. This project proposes to remove 10 existing dwelling units on site.

**Staff Finding**—The proposed plan will result in noticeable changes to the neighborhood primarily through the realignment of Fambrough Drive. This realignment will create and modify parcels of land around the area east of the stadium and north of the realigned Fambrough Drive. The project includes the removal of 10 existing dwelling units and activates the remaining unoccupied 30 units/ 76 bedrooms in the HERE @ Kansas mixed-use structure.

***8) Whether potential adverse impacts have been mitigated to the maximum practical extent.***

This project is unique in providing surface parking for a residential development but is not immediately adjacent to the property. The project includes demolition of existing residential structures to create the necessary space for the minimum required parking. The proposed project includes improvements to University of Kansas property and the construction of a public street (realigned Fambrough Drive).

The purpose of rezoning the property with a Planned Development Overlay designation was to provide a more engaged public review process. Without the PD Overlay designation a conventionally zoned property (RM32) would only require an administrative site plan review. Property rezoned to a PD District must be accompanied by a Preliminary Development Plan application.

Key concerns that have been identified by nearby property owners are

- Lighting
- Screening and Fencing
- Traffic

*Lighting:* A photometric plan will be required with the Final Development Plan. Lighting fixtures must meet minimum City standards and will be required to be shielded. Lighting will apply to the parking lot and not the public street. The realigned Fambrough Drive would be outfitted with typical street lighting located at intersections. There are no plans for pedestrian scale lighting at this time.

*Screening and Fencing:* The property owner of 1020 Illinois Street, to the north, has indicated that the existing apartments have a “view” of the University across the existing surface parking lot. The building is a two story structure with windows on the south side. It is that property owners desire to maintain visibility of the University.

First floor windows are located just above the grade. Screening of vehicle car lights is appropriate on the north side of the *Accessory Parking* lot, but conflict with the desire of 1020 Illinois owner to not block views. Screening could include low shrubs. Fencing, to establish the

boundary between the *Accessory Parking* lot and the multi-dwelling residences to the north, could include open fencing such as aluminum, wrought iron or similar fencing materials found in the surrounding area. Chain link fencing is not recommended.

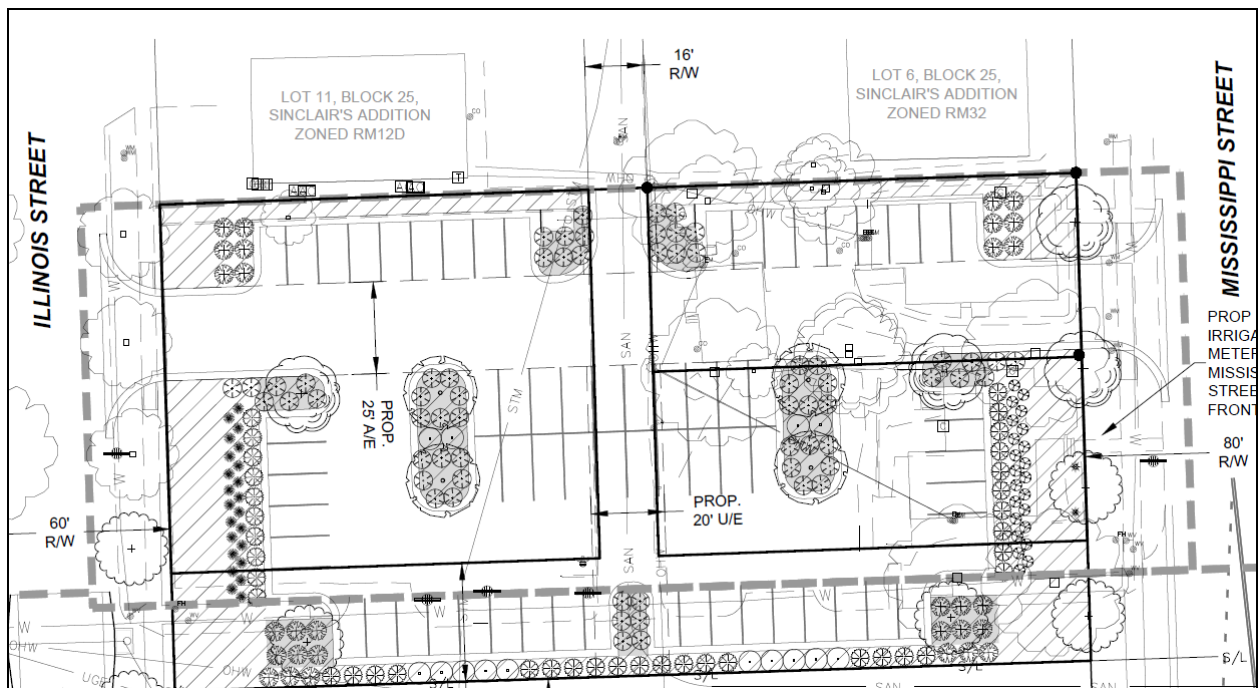


**Figure 4: View of existing residential uses to north.**



**Figure 5: View of University from residential property.**

The space between the *Accessory Parking* lot and the adjacent residence is narrow (5' wide). This limits the options to provide a buffer between the uses.



**Figure 6: Landscape plan showing north side of parking lot**

It should be noted that if the property were developed the view of the university would be blocked by a structure. As a surface *Accessory Parking* lot this view is retained to some degree.

A portion of the property (surface parking lot serving HERE @ Kansas) is in essence private property. A new green space will be created between the parking lot and the realigned Fambrough Drive that will be public space (University of Kansas).

The design of the parking lot includes a parking setback from Illinois and Mississippi Street of 25'. This design retains the residential character of the block faces by providing a "yard" to minimize the impact of the use on the area and conform to the established neighborhood pattern.

The existing parking lot, at the corner of Illinois Street and Fambrough Drive, does not include any setback or interior green space. The lot is a blank within the block face along Fambrough Drive. The addition of a screening wall along Illinois Street would aid in mitigating the impacts to the neighborhood.

- Fencing and screening details are discussed in more detail later in this report.

*Traffic:* The existing Fambrough Drive between Maine Street to the west and Mississippi Street on the east is 50' wide. The street is also designated as a collector street. Typically, collector streets are 80' wide. The realigned Fambrough Drive will be constructed to current collector street design standards. The total proposed right-of-way width is 80'. The plan also proposes center turn lanes to accommodate traffic flow in the area. The applicant is revising the Traffic Study. Staff will provide an update at the Planning Commission meeting or before on the study and an indication if any additional street changes or geometric improvements are identified.

A property owner to the north of the project contacted staff regarding traffic concerns as it pertains to residents who use the alley between Illinois and Mississippi Streets. The proposed parking lot is designed to retain the alley function with the alley intersecting the parking lot rather than Fambrough Drive. Any gating of the parking lot would result in reduced efficiency of the alley with the only access at W. 10<sup>th</sup> Street. This design would be problematic for municipal services such as fire and sanitation services. The public access easement being provided would prohibit gating these ways within the parking lot. A related concern expressed, is that residents will perceive the parking lot access as "private" and thus not use the south access to the alley having the same result of crowded use of the W. 10<sup>th</sup> Street access. Appropriate public education by both the City and the property owners will be required to manage any driver behavior in the immediate area. The access easement, through the parking lot, and access to the alley is intended to accommodate regular daily travel and access to properties along the alley.

**Staff Finding** – Possible adverse impacts of exterior lighting will be addressed with a photometric plan to insure there is no spillover light. Currently there is no specific design modifications to the street network that are needed in addition to what is proposed to realign Fambrough Drive. Other mitigations for the surrounding area can be addressed through design applications of screening walls, fencing and landscaping.

***9) The sufficiency of the terms and conditions proposed to protect the interest of the public and the residents of the Planned Unit Development in the case of a plan that proposes development over a period of years.***

This project is intended as a single use – *Accessory Parking* – as a surface parking lot. The nature of the project includes the construction of a realigned/relocated Fambrough Drive. The project includes two phases. The construction of the public street as well as the southern-most parking spaces must be coordinated with University schedules.

General Note No. 20 addresses the timing of the proposed improvements. Phase 1 is intended to be completed between December 2016 and February 2017. Phase 2 including the realignment of Fambrough Drive, cannot begin prior to May 15, 2017 and must be concluded by mid-August.

**Staff Finding-** A phased development has been proposed. The timing is to be coordinated with the University and with City staff regarding public improvements.

## DESIGN REVIEW

### Landscape Review

Section 20-701(d) states that all of the standards of the Development Code apply to development within a PD District except as expressly authorized by regulations of Section 20-701. Additional review of the landscape plan will be included in the Final Development Plan. This section summarizes the three main landscape concerns outlined in Section 20-1001 of the Land Development Code.

#### 1. Street Trees.

This project includes the creation of a new through lot between Illinois and Mississippi Streets. Street trees are applicable along both street frontages. The proposed plan shows the required street trees along both streets.



**Figure 7: Illinois Street**

*Along Illinois Street there are three existing trees in the right-of-way between the curb and the sidewalk. This project will require the middle tree be removed to make way for the access driveway.*

*There are no street trees located along this segment of Mississippi Street. This project will extend the green infrastructure in this area by adding street trees.*



**Figure 8: Mississippi Street**

This project also includes the realignment of Fambrough Drive. Street trees would be located on University property on both sides of the street. The University is undecided at this time if they will plat their property that results from this project on the north side of Fambrough Drive. A master street tree plan will not be applicable to unplatted University property. Staff recommends that street trees be added in the future, concurrent with any development or improvement of University property.

The Plan complies with this design criterion for the proposed parking lot but does not show street trees along Fambrough Drive. Street trees along Fambrough Drive would be addressed with the streets' public improvement plans.

## 2. Parking Lot Landscaping.

The proposed parking lot includes 68 spaces and requires 2,720 Sf of interior landscape. The Plan as proposed includes 2,183 Sf. This proposed project does not meet the design standard and is short 537 SF.

As an alternative application the plan proposes one additional tree and 55 shrubs in excess of the required amount. The landscape islands as proposed provide end caps to parking rows and provide structure to the parking lot design.

Landscape Summary	Required	Provided
Interior Parking Lot Landscape Area	2,720 Sf	2,183 Sf
Shade trees	7	8
Shrubs	21	76

**Table 3: Landscape Summary**

The plan could be revised to increase the interior landscape area at the cost of three parking spaces. This plan would be contrary to the purpose of the proposed development to provide adequate off-street parking for the residential use portion of the HERE @ Kansas development.

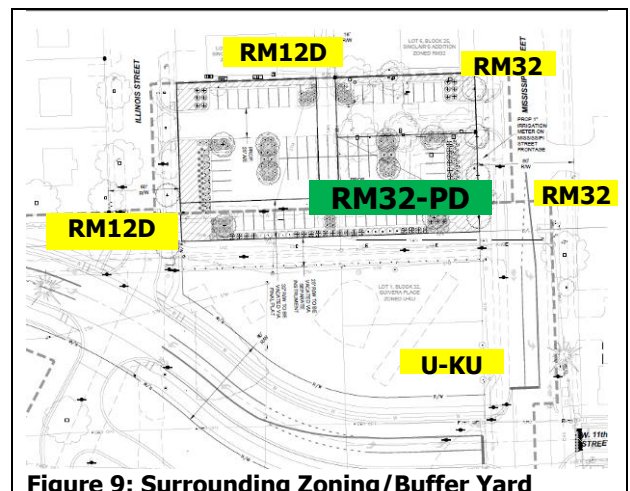
The plan as proposed does not meet the minimum required landscape area but provides a reasonable alternative that is permissible by Code per section 20-1007 of the Land Development Code.

Perimeter parking lot screening is applicable to that portion of the development where parking abuts public right-of-way. This application requires the parking lot to be setback 25 since it is in a residential district. Non-residential districts allow parking lots to be 15' setback from right-of-way. The plan shows a continuous row of shrubs that will screen the parking lot spaces. Additionally, street trees are provided.

The Plan as proposed complies with this design requirements.

Buffer yards are required between dissimilar zoning districts. An example would be where an RM district abuts an RS district a *Type 1 Buffer Yard* is required. This property abuts RM zoning to the north, east and west. A buffer is not required between RM and RM districts. The property to the south is a special purpose district. The Development Code does not proscribe a buffer yard for areas that abut University zoned property.

A buffer yard is not required for this project.



**Figure 9: Surrounding Zoning/Buffer Yard**

## Screening and Fencing

The current streetscape along Mississippi Street and Illinois Street is a constant and defined space with buildings and structures along both sides of each street and minimal vacant parcel. This proposal will remove the two existing structures at the northwest corner of Mississippi Street and Fambrough Drive creating a large gap at a significant gateway apex for both the neighborhood and the University of Kansas. The neighborhood has a consistent pattern of

clearly defined spaces that include a structure (typically a house), a green space/yard, sidewalk street trees and a planter, and finally the street.

The inclusion of a screening wall to obscure the parking from the public rights-of-way provides and reinforces the positive urban form and architectural features of the district and would minimize the visual impact of a surface parking lot at this gateway intersection. Landscaping can also provide an effective natural contrast to the form and materials included into the wall. Other aspects that should be designed into a surface parking lot screening wall include safety of the users, variation in heights and massing, architectural elements (i.e. columns, pilasters, trellises, faux fenestration, etc.), articulation towards the street to provide breaks and recesses, and be comprised of a design and architectural materials that complements the surrounding buildings and their architectural styles.

Ensuring that any screening wall has an active façade along the street will provide a clear and constant delineation between the public/pedestrian realm and the vehicular traffic realm. This in turn will create a more inviting space for pedestrians. Similar screening has been done in other locations around Lawrence utilizing varying degrees of materials, landscaping, and designs. In these similar locations, surface parking lots have been designed to mitigate the negative impact that large paved surfaces have on the quality of the visual environment for residents as well as for people driving within the neighborhood.

Fencing along the north property line is recommended and was discussed in section 8 of the staff report.

### **Facility Use**

Per an agreement with the landlord (Endowment Association) the use of the parking lot by HERE @ Kansas residents is prohibited during specific events during the school year. These reserved dates include all KU home football games and 3 additional events per calendar year. During these designated dates residents must remove their vehicles. The applicant and the Endowment Association are finalizing an agreement that would allow these spaces to be made-up in another parking lot, on campus, controlled by the Endowment Association for temporary parking.

The applicant will present their plan to address the loss of use of the parking lot during said times at the Planning Commission meeting, but staff understands that HERE @ Kansas anticipates that some available parking may be provided in the garage located at 1101 Indiana Street. Use of any unclaimed spaces in the garage would be a first preference for vehicles relocated from the proposed surface lot. Any remaining vehicles needing to be relocated during the KU events will be provided an opportunity to park at another lot within 2 miles of the HERE @ Kansas mixed use development. The need for relocated parking is temporary and limited to known special University events such as home football games and graduation.

### **Location of Off-Site Off-Street Parking**

Off-site parking (all spaces) must be located within 600' from the entrance of the building or uses and measured along the shortest, practical walking route. The distance from the residential entrance on Mississippi Street (HERE @ Kansas) is estimated to be approximately 520' as measured along the public sidewalk. The Mississippi Street residential entrance is the same entrance accessible from the garage.

Some, but not all parking spaces within the parking lot meet the design standard. Staff estimates, using GIS, that approximately 20 spaces of the 68 total spaces meet the required 600'. Attached to this report is a map showing the pedestrian routes.

*20-909 (c) All shared or off-site off-street parking spaces shall be located no further than 600 feet from the main entrance of the Buildings or uses they are intended to serve, measured along the shortest legal, practical walking route. This distance limitation may be waived as part of the Site Plan Review process if sufficient assurances are offered that adequate van or shuttle service will be operated between the shared or off-site lot and the principal use or uses.*

For site plans, Section 20-1305(B)(3)(V) grants authority to the Planning Director to waive full compliance with the Development Code and the Community Design Manual for an entire site if good cause is shown by the applicant. The intent of the Code must be met and sound site planning principles must also be met. Staff has employed this section for development plans since they are in essence a site plan.

The purpose of shared and off-street parking is to "encourage efficient use of land and resources by allowing users to share off-street parking facilities" and to "locate off-street parking facilities on a different site than the uses served by the parking<sup>2</sup>."

The parking lot could be shifted closer to Mississippi Street by reducing the greenspace/front yard area along Mississippi Street. This would place more parking spaces within the 600 foot standard, but would negatively impact the aesthetics of Mississippi Street. Early versions of the plan showed a 0' parking lot setback along Mississippi Street and a 6' setback along Illinois Street. This option is not desirable for preserving the neighborhood character.

In this instance the parking lot will presumably will be used for longer-term parking and not day-to-day parking. This is an area where students walk long distances to class, to shopping, and recreation activities. Approving spaces at a maximum of 800 feet is reasonable in this environment.

### **Staff Review and Conclusion**

The proposed Preliminary Development Plan conforms to design standards as discussed in the body of the staff report with reasonable waivers for landscape and parking lot distance applied. The proposed Plan provides required off-street residential parking to the neighborhood.

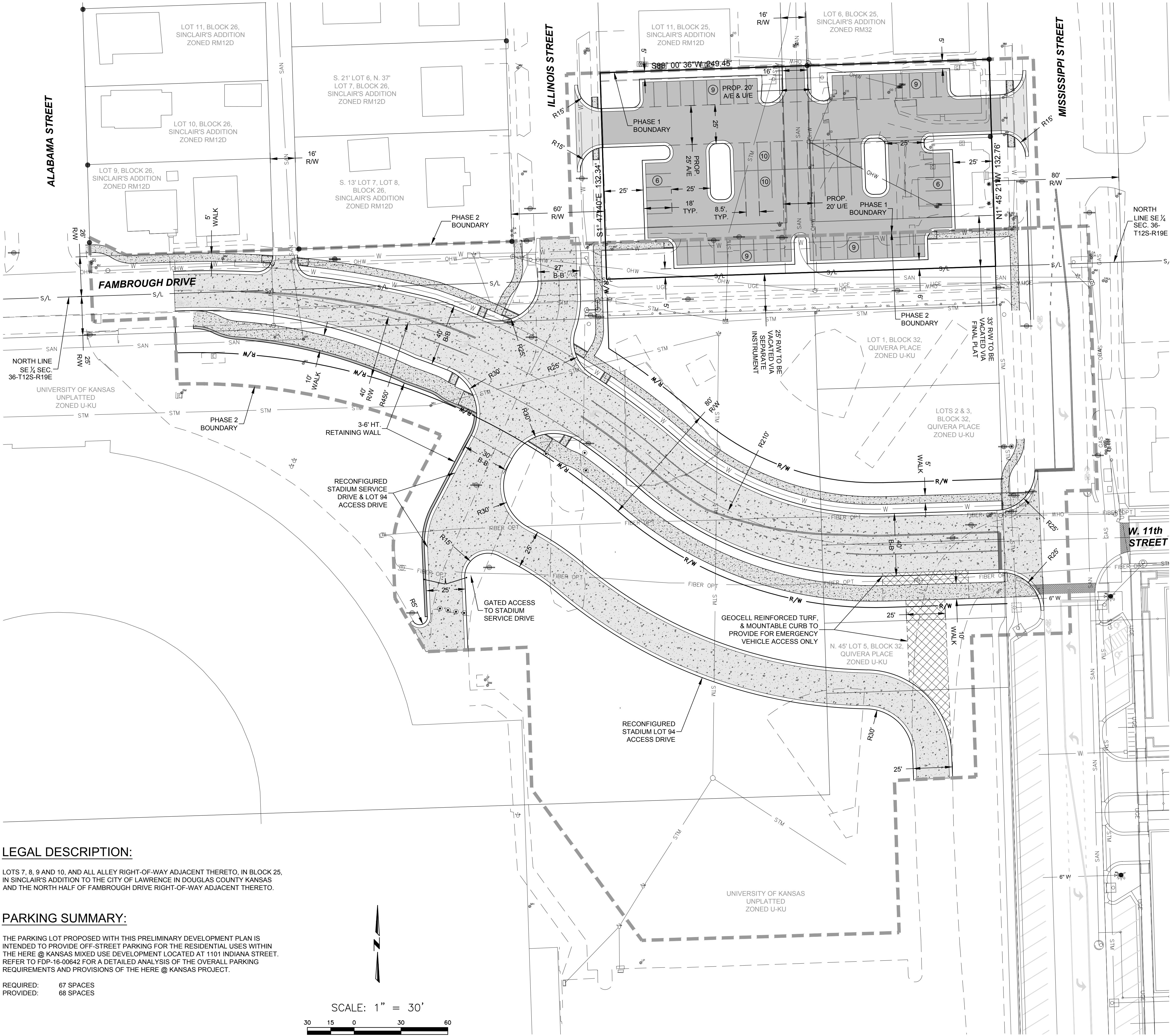
Staff will provide an update on the traffic study at the Planning Commission meeting. This project has been submitted for review to the University of Kansas Office of Design and Construction Management. The applicant has addressed many of the original comments identified by the University for this project. Staff will provide an update on the status of the University review. The University will be engaged in further review of the project through the Final Development Plan and Final Plat processes as well as the future review of Public Improvement Plans for the realignment of Fambrough Drive.

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<sup>2</sup> Section 20-909 (a) Purpose.



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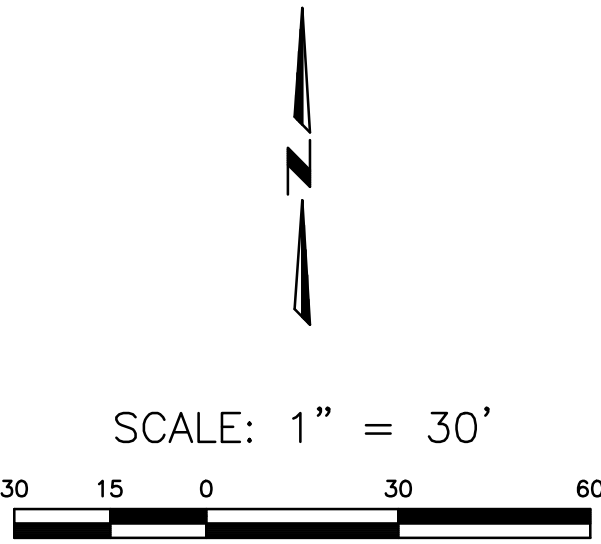


**LEGAL DESCRIPTION:**  
LOTS 7, 8, 9 AND 10, AND ALL ALLEY RIGHT-OF-WAY ADJACENT THERETO, IN BLOCK 25, IN SINCLAIR'S ADDITION TO THE CITY OF LAWRENCE IN DOUGLAS COUNTY KANSAS AND THE NORTH HALF OF FAMBROUGH DRIVE RIGHT-OF-WAY ADJACENT THERETO.

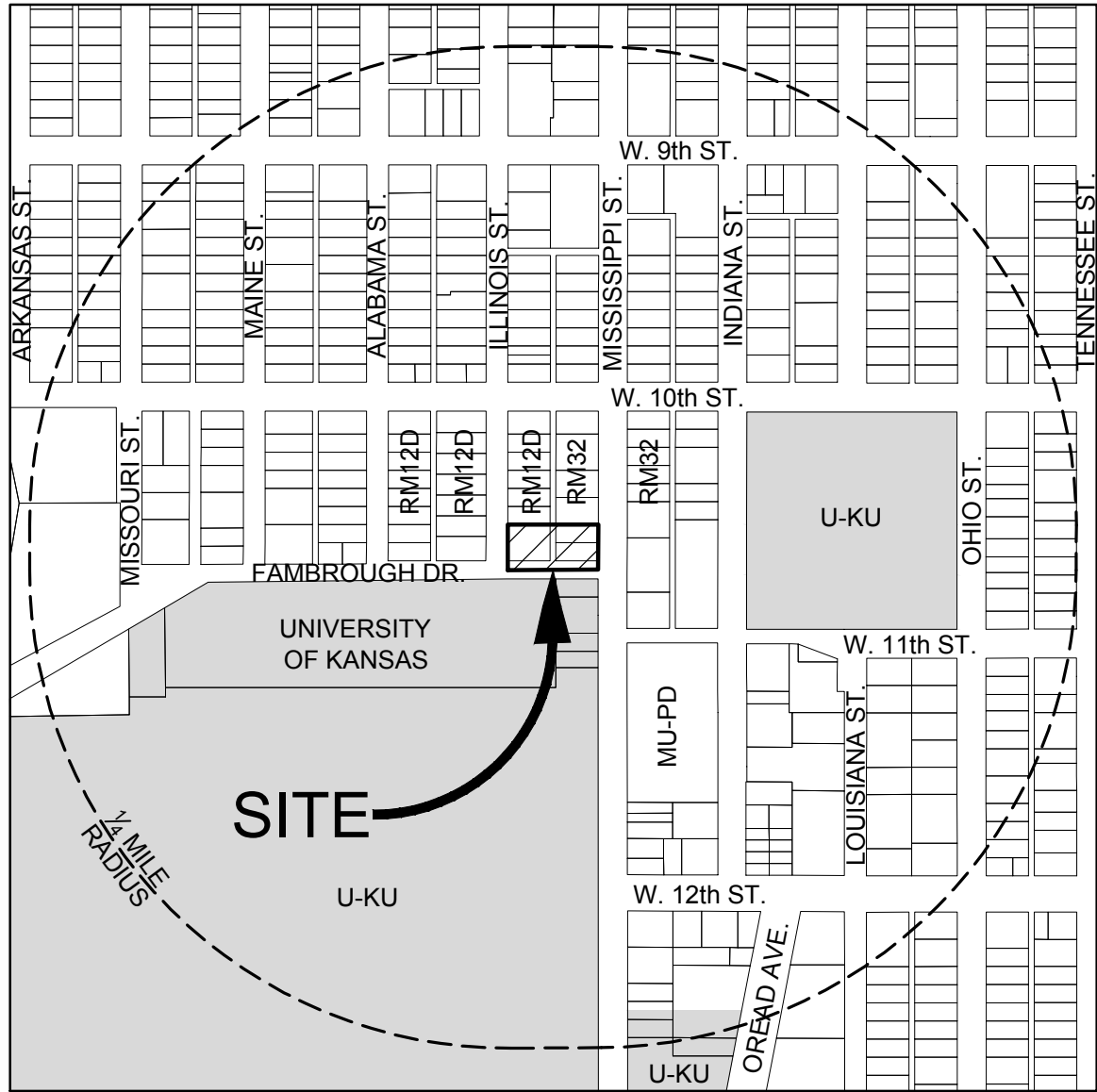
**PARKING SUMMARY:**

THE PARKING LOT PROPOSED WITH THIS PRELIMINARY DEVELOPMENT PLAN IS INTENDED TO PROVIDE OFF-STREET PARKING FOR THE RESIDENTIAL USES WITHIN THE HERE @ KANSAS MIXED USE DEVELOPMENT LOCATED AT 1101 INDIANA STREET. REFER TO FDP-16-00642 FOR A DETAILED ANALYSIS OF THE OVERALL PARKING REQUIREMENTS AND PROVISIONS OF THE HERE @ KANSAS PROJECT.

REQUIRED: 67 SPACES  
PROVIDED: 68 SPACES



**LOCATION MAP:**



**GENERAL NOTES:**

- OWNERS: 1029 MISSISSIPPI, LLC  
130 EAST RANDOLPH STREET, SUITE 2100  
CHICAGO, ILLINOIS 60601  
  
STADPKG, LLC  
10851 MASTIN BOULEVARD, SUITE 1000  
OVERLAND PARK, KANSAS 66210
- LAND PLANNER/  
CIVIL ENGINEER/  
SURVEYOR: LANDPLAN ENGINEERING, P.A.  
1310 WAKARUSA DRIVE  
LAWRENCE, KANSAS 66049
- TOPOGRAPHIC INFORMATION SHOWN WAS OBTAINED FROM A FIELD SURVEY PERFORMED BY LANDPLAN ENGINEERING, P.A., AUGUST, 2016.
- EXISTING ZONING: RM12D, RM32
- PROPOSED ZONING: RM32-PD
- EXISTING LAND USE: VACANT
- PROPOSED LAND USE: ACCESSORY PARKING
- NO PORTIONS OF THE SUBJECT PROPERTY LIE WITHIN A DESIGNATED "SPECIAL FLOOD HAZARD AREA" AS DEFINED BY FLOOD INSURANCE RATE MAP (FIRM); PANEL NO. 152, MAP NUMBER 20045C0152E, DOUGLAS COUNTY, KANSAS, BEHAVING AN EFFECTIVE DATE OF SEPTEMBER 2, 2015.
- THIS SITE HAS BEEN DESIGNED TO COMPLY WITH THE PROVISIONS OF THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG) FOR BUILDINGS AND FACILITIES, APPENDIX A TO 28 CFR PART 36.
- ALL CONCRETE CURB AND GUTTER SHALL BE INSTALLED AS "TYPE CG-1" PER CITY OF LAWRENCE DETAILS AND SPECIFICATIONS.
- ALL CURB INLETS SHALL BE INSTALLED PER CITY OF LAWRENCE DETAILS AND SPECIFICATIONS.
- THE CONCRETE COMMERCIAL DRIVEWAY APRON SHALL BE INSTALLED PER CITY OF LAWRENCE DETAILS AND SPECIFICATIONS.
- ALL INTERNAL SIDEWALKS AND ACCESS RAMPS SHALL BE INSTALLED PER CITY OF LAWRENCE DETAILS AND SPECIFICATIONS.
- ALL OFF-STREET PARKING AREAS AND DRIVEWAYS SHALL BE SURFACED WITH A MINIMUM OF 5 INCHES OF FULL DEPTH ASPHALT IN ACCORDANCE WITH SECTION 20-913(e)(1)(iv) OF THE CITY CODE.
- THE CITY OF LAWRENCE SHALL NOT BE HELD RESPONSIBLE FOR PAVEMENT DAMAGE ON PRIVATE STREETS CAUSED DUE TO THE WEIGHT OF SOLID WASTE MANAGEMENT VEHICLES.
- TREES SHALL BE PLANTED NO CLOSER THAN 8 FEET FROM EXISTING UTILITY LINES, WHERE PRACTICAL AND APPROVED BY THE PLANNING DIRECTOR, IN ACCORDANCE WITH SECTION 20-811(g)(2)(ii)(d) OF THE CITY CODE.
- UNLESS OTHERWISE NOTED, ALL AREAS NOT DESIGNATED AS PAVEMENT OR BUILDING WILL BE SEEDED, SODDED OR LANDSCAPED WITH PLANT MATERIALS. ALL AREAS DEPICTED AS PLANTED WITH TREES OR SHRUBS SHALL BE TREATED WITH A 3" LAYER OF SHREDDED HARDWOOD MULCH. REFER TO SHEET 4 FOR THE LANDSCAPE PLAN.
- THE LANDOWNER WILL PROVIDE FOR THE MAINTENANCE OF COMMON OPEN SPACE, RECREATION FACILITIES, NON-ENROACHABLE AREAS, SANITARY SEWER STREETS AND ANY OTHER AREA WITHIN THE PROPOSED DEVELOPMENT THAT IS TO BE RETAINED PRIMARILY FOR THE EXCLUSIVE USE AND BENEFIT OF THE RESIDENTS, LESSEES, AND OWNER OF THE PLANNED DEVELOPMENT.
- NO VARIANCES, MODIFICATIONS, REDUCTIONS AND WAIVERS ARE BEING REQUESTED AS PART OF THE PLAN APPROVAL.
- THE APPLICANT INTENDS TO FILE FOR FINAL DEVELOPMENT PLAN APPROVAL IMMEDIATELY FOLLOWING CITY COMMISSION APPROVAL OF THE PRELIMINARY DEVELOPMENT PLAN. THE APPLICANT INTENDS TO CONSTRUCT THIS DEVELOPMENT IN TWO PHASES. WORK SHOWN AS PART OF PHASE 1 IS TO BE COMPLETED BETWEEN DECEMBER, 2016 AND FEBRUARY, 2017. WORK SHOWN AS PART OF PHASE 2 IS TO BE COMPLETED BETWEEN MAY AND AUGUST, 2017. PHASE 2 WORK CANNOT BEGIN PRIOR TO MONDAY, MAY 15, 2017 AND MUST CONCLUDE PRIOR TO KU RESIDENCE HALL MOVE-IN IN MID-AUGUST.
- CONTINUOUS ACCESS TO KU LOT 94 MUST BE PROVIDED DURING ALL PHASES OF CONSTRUCTION. DURING THE REALIGNMENT OF FAMBROUGH DRIVE, CONTRACTORS WILL FIRST INSTALL THE WESTERN LEG OF FAMBROUGH FROM ALABAMA THROUGH ILLINOIS STREETS AND THEN INSTALL THE NEW LOT 94 ACCESS DRIVE. ONCE THIS NEW CONNECTION IS COMPLETE, CONTRACTORS WILL REMOVE THE EXISTING MISSISSIPPI STREET ENTRANCE TO LOT 94 AND INSTALL THE EAST LEG OF FAMBROUGH DRIVE BETWEEN ILLINOIS AND MISSISSIPPI STREETS.
- AS DEPICTED ON SHEET 4 OF THIS PRELIMINARY DEVELOPMENT PLAN, THIS SITE HAS ACCESS TO PUBLIC AND PRIVATE UTILITIES, INCLUDING BUT NOT LIMITED TO WASTE WATER, DOMESTIC WATER, STORM WATER, GAS AND ELECTRICITY.
- ALL UTILITIES SERVING THE PROPERTIES AT 1029 AND 1031 MISSISSIPPI STREET, INCLUDING BUT NOT LIMITED TO DOMESTIC WATER, SANITARY SEWER, NATURAL GAS, ELECTRICITY, TELEPHONE AND CABLE, MUST BE DISCONNECTED AND/OR ABANDONED IN ACCORDANCE WITH ALL APPROPRIATE REGULATIONS PRIOR TO THEIR DEMOLITION.
- THE LANDOWNER HEREBY DEDICATES TO THE CITY OF LAWRENCE THE RIGHT TO REGULATE ANY CONSTRUCTION WITHIN THE AREAS DESIGNATED AS "COMMON OPEN SPACE," AND "RECREATIONAL OPEN SPACE" AND TO PROHIBIT ANY CONSTRUCTION WITHIN SAID AREAS AND SPACES INCONSISTENT WITH THE APPROVED USE OR ENJOYMENT OF RESIDENTS, LESSEES, AND OWNERS OF THE PLANNED DEVELOPMENT.

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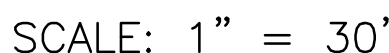
**LANDPLAN ENGINEERING P.A.**  
Lawrence, KS • Kansas City, MO • The Woodlands, TX  
1310 Wakarusa Drive, Suite 100  
Lawrence, Kansas 66049  
785.843.7530(p) | 785.843.2410(f)  
info@landplan-pa.com | www.landplan-pa.com

1029 MISSISSIPPI STREET  
LAWRENCE, KANSAS 66044  
HERE @ KANSAS OFF-SITE PARKING  
PRELIMINARY DEVELOPMENT PLAN  
LAYOUT PLAN

REV	DATE	DESCRIPTION
1	9/13/16	ISSUE & ALL COMMENTS

DATE:	7/25/16
PROJECT NO.:	20163016
DESIGNED BY:	LPE
DRAWN BY:	BS
CHECKED BY:	CMS

ISSUE	SHEET NO.
	1
OF	5 SHEETS



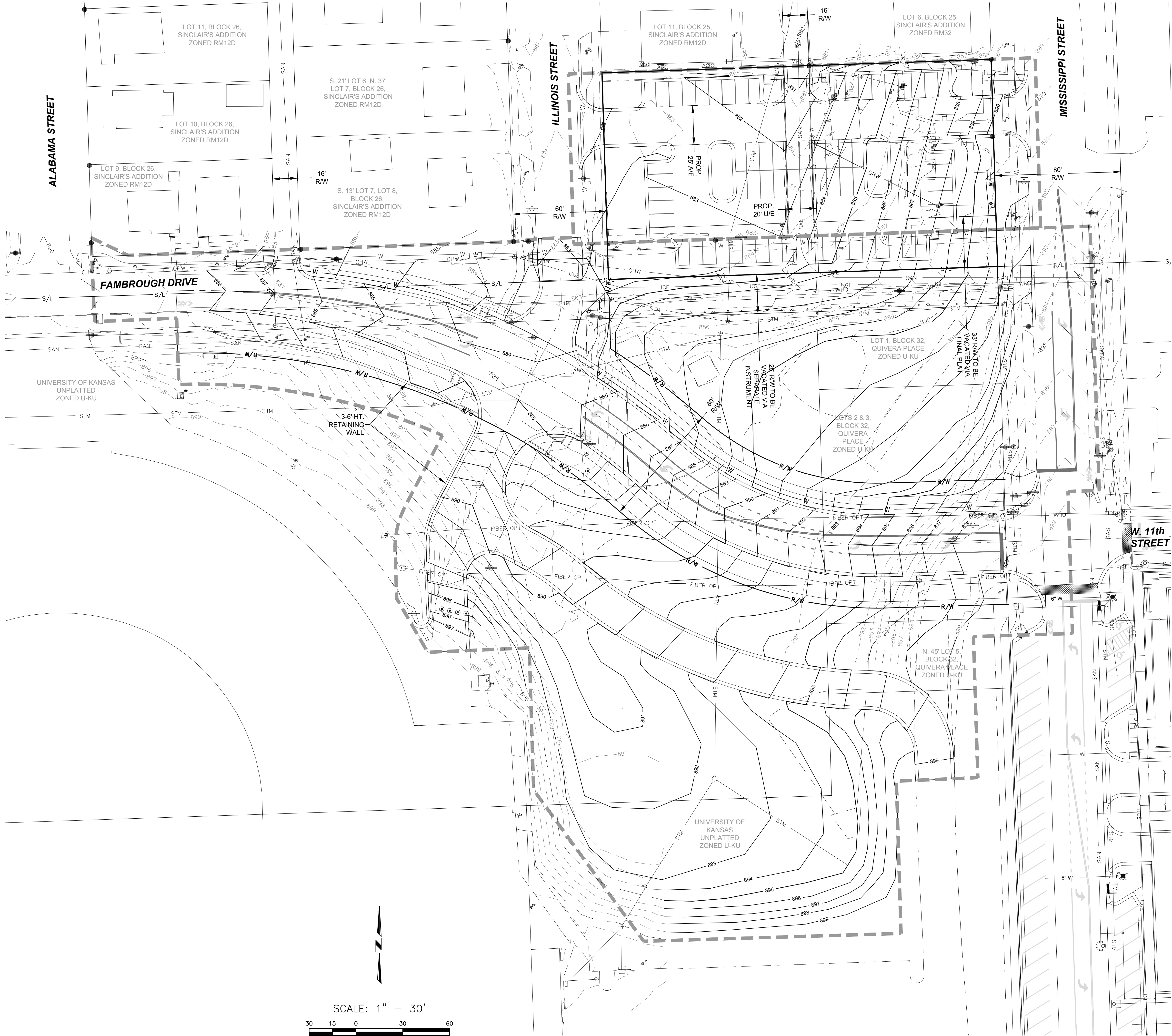
1029 MISSISSIPPI STREET  
LAWRENCE, KANSAS 66044  
HERE @ KANSAS OFF-SITE PARKING  
PRELIMINARY DEVELOPMENT PLAN  
DEMOLITION PLAN

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DATE:	7/25/16
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CHECKED BY:	CMS

ISSUE	SHEET NO.
	2
	OF 5 SHEETS

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SITE SURFACE SUMMARY:

EXIST. CONDITIONS	AREA (SF)	PROP. CONDITIONS	AREA (SF)
TOTAL BUILDING	3,018 (9%)	TOTAL BUILDING	0 (0%)
TOTAL PAVEMENT	21,426 (85%)	TOTAL PAVEMENT	23,408 (71%)
TOTAL IMPERVIOUS	24,444 (74%)	TOTAL IMPERVIOUS	23,408 (71%)
TOTAL PERVIOUS	8,615 (26%)	TOTAL PERVIOUS	9,651 (29%)
TOTAL PROPERTY	33,059 (100%)	TOTAL PROPERTY	33,059 (100%)



LANDPLAN

ENGINEERING

PA

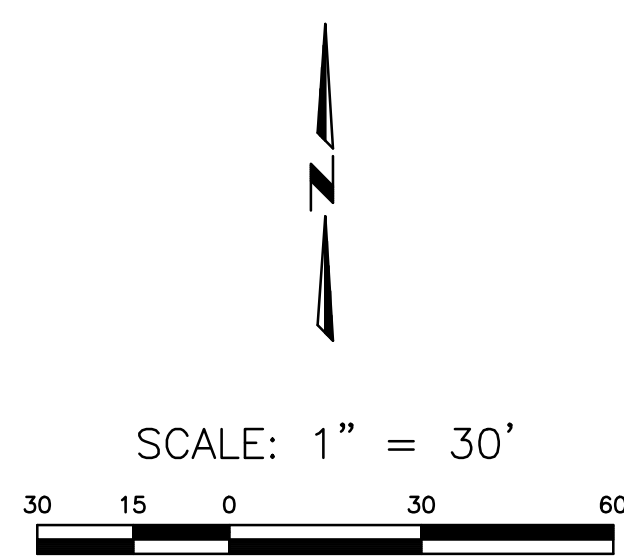
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PRELIMINARY DEVELOPMENT PLAN  
GRADING PLAN

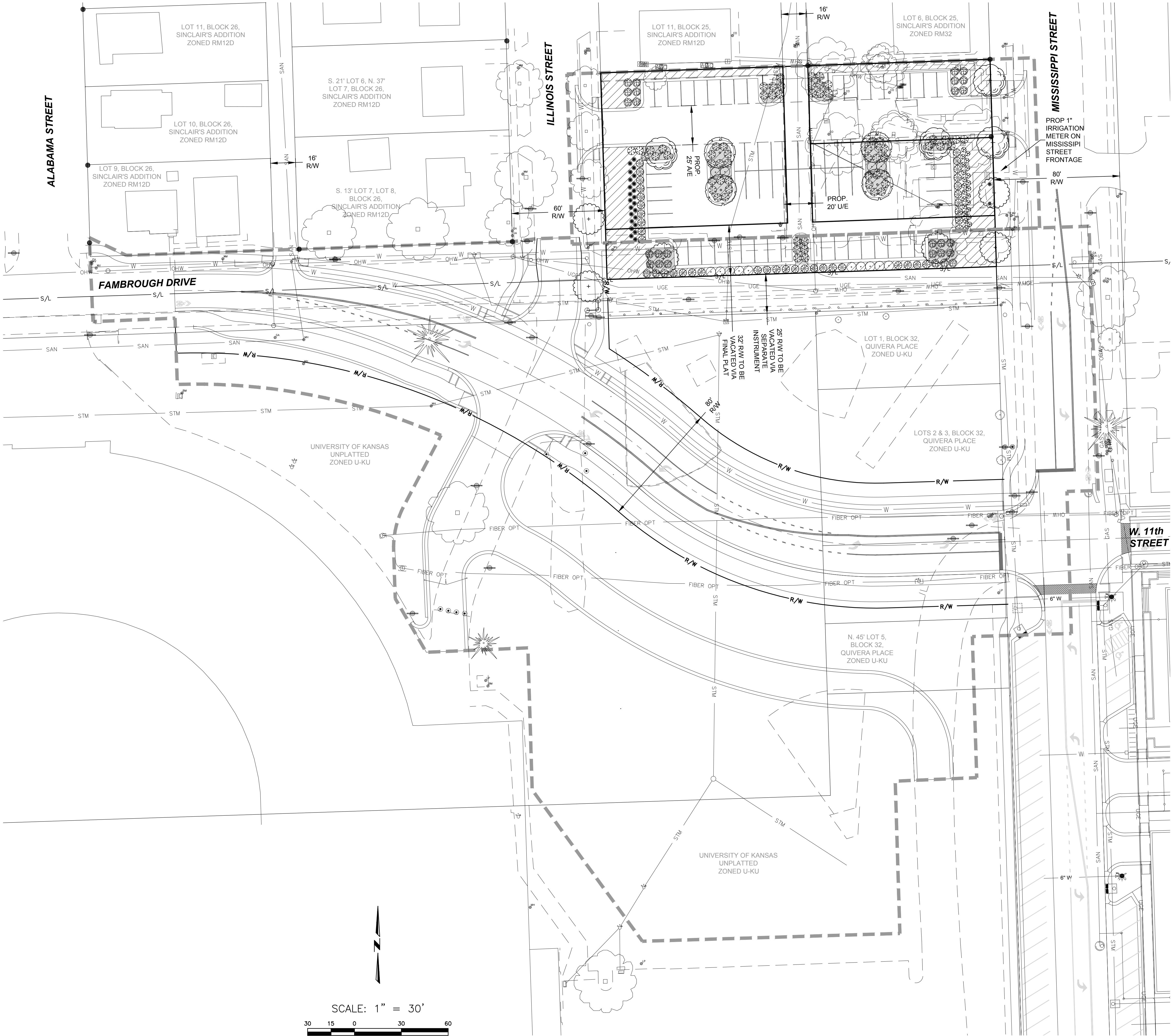
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PLANT SCHEDULE:

SYMBOL	QTY.	NAME	SIZE	COND.
PROPOSED TREES				
	4	CERCIS CANDENSIS var. TEXENSIS 'OKLAHOMA' REDBIRD	2.5" CAL.	B&B
	6	PLATANUS x ACERIFOLIA 'EXCLAMATION' 'EXCLAMATION' LONDON PLANE TREE	2.5" CAL.	B&B
	6	QUERCUS SHUMARDII SHUMARD OAK	2.5" CAL.	B&B
PROPOSED SHRUBS				
	23	HEMEROCALLIS x 'STELLA D'ORO' 'STELLA D'ORO' DAYLILY	1 GAL.	CONT.
	38	JUNIPERUS 'PFITZERIANA COMPACTA' COMPACT PFITZER JUNIPER	24" HT.	CONT.
	14	PHYSOCARPUS OPULIFOLIUS 'DIABLO' 'DIABLO NINEBARK	24" HT.	CONT.
	63	RHUS AROMATICA 'GRO LOW' 'GRO LOW' FRAGRANT SUMAC	3 GAL.	CONT.
	23	SPOROBOLUS HETEROLEPIS PRAIRIE DROPSEED	1 GAL.	CONT.
	30	TAXUS x MEDIA 'DENSIFORMIS' DENSIFORMIS YEW	24" HT.	CONT.

OPEN SPACE SUMMARY:

**COMMON OPEN SPACE**  
REQUIRED: 20% OF THE TOTAL AREA OF THE PD  
0.20 x 31,250 SF  
6,250 SF  
PROVIDED: 9,651 SF

**RECREATIONAL OPEN SPACE**  
REQUIRED: 50% OF THE COMMON OPEN SPACE  
0.50 x 6,250 SF  
3,125 SF  
PROVIDED: 9,651 SF

LANDSCAPE SUMMARY:

**STREET TREES**  
REQUIRED: 1 TREE / 40 FEET OF R.O.W. FRONTAGE  
125 FEET OF MISSISSIPPI STREET R.O.W. / 40 = 4  
125 FEET OF ILLINOIS STREET R.O.W. / 40 = 4  
8 TREES  
PROVIDED: 8 TREES

**INTERIOR PARKING LOT LANDSCAPING**  
REQUIRED: 40 SF LANDSCAPING AREA / PARKING SPACE  
40 SF x 68 PARKING SPACES = 2,720 SF LANDSCAPING AREA  
1 SHADE TREE & 3 SHRUBS / 10 PARKING SPACES  
1 SHADE TREE & 3 SHRUBS x (68 PARKING SPACES / 10) = 7 & 21  
7 TREES & 21 SHRUBS  
PROVIDED: 2,183 SF LANDSCAPING AREA  
8 TREES & 76 SHRUBS

**PARKING LOT PERIMETER LANDSCAPING**  
REQUIRED: CONTINUOUS ROW OF EVERGREEN SHRUBS  
PROVIDED: 44 EVERGREEN SHRUBS

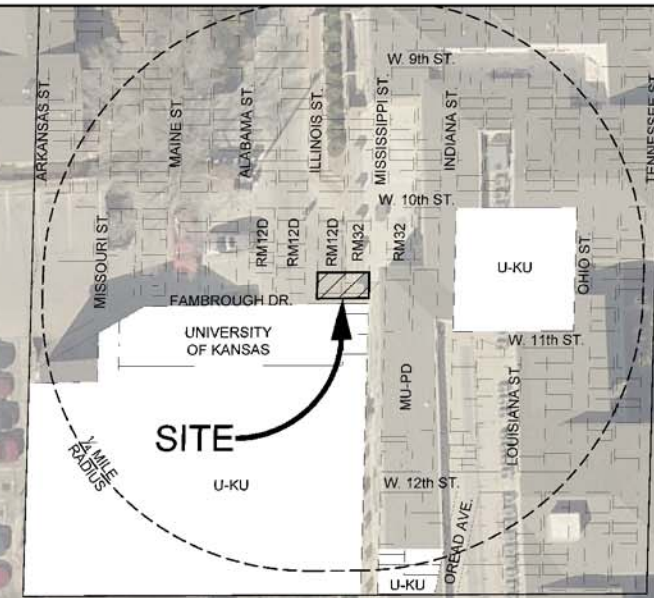
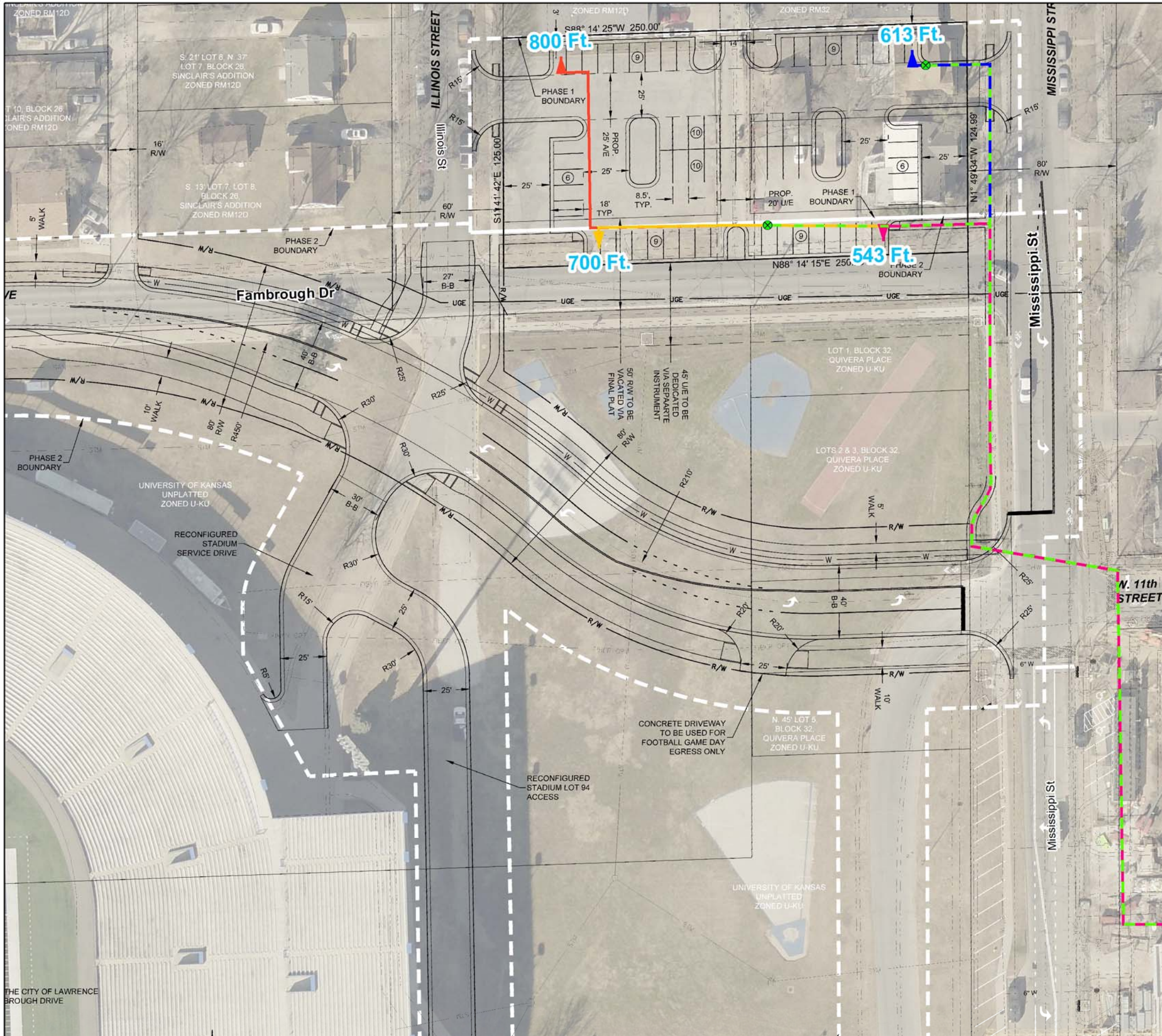


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1029 MISSISSIPPI STREET  
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HERE @ KANSAS OFF-SITE PARKING  
PRELIMINARY DEVELOPMENT PLAN  
LANDSCAPE PLAN

REV	DATE	DESCRIPTION
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PROJECT NO.: 20163016  
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DRAWN BY: BS  
CHECKED BY: CMS



**GENERAL NOTES:**

- OWNERS: 1029 MISSISSIPPI, LLC  
130 EAST RANDOLPH STREET, SUITE 2100  
CHICAGO, ILLINOIS 60601
- LAND PLANNER/  
CIVIL ENGINEER/  
SURVEYOR: LANDPLAN ENGINEERING, P.A.  
1310 WAKARUSA DRIVE  
LAWRENCE, KANSAS 66049
- TOPOGRAPHIC INFORMATION SHOWN WAS OBTAINED FROM A FIELD SURVEY  
PERFORMED BY LANDPLAN ENGINEERING, P.A., JULY, 2016.
- EXISTING ZONING: RM12D, RM32
- PROPOSED ZONING: RM32-PD
- EXISTING LAND USE: VACANT
- PROPOSED LAND USE: ACCESSORY PARKING
- NO PORTIONS OF THE SUBJECT PROPERTY ARE DESIGNATED "SPECIAL  
FLOOD HAZARD AREA" AS DEFINED BY FLOOD INSURANCE RATE MAP (FIRM),  
PANEL NO. 152, MAP NUMBER 20045C0152E, DOUGLAS COUNTY, KANSAS,  
BEARING AN EFFECTIVE DATE OF SEPTEMBER 2, 2015.
- THIS SITE HAS BEEN DESIGNED TO COMPLY WITH THE PROVISIONS OF THE  
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IN ACCORDANCE WITH SECTION 20-811(g)(2)(ii)(d) OF THE CITY CODE.
- UNLESS OTHERWISE NOTED, ALL AREAS NOT DESIGNATED AS PAVEMENT  
BUILDING WILL BE SEEDED, SODDED OR LANDSCAPED WITH PLANT MATERIAL  
REFER TO SHEET 4 FOR THE LANDSCAPE PLAN.
- THE LANDOWNER WILL PROVIDE FOR THE MAINTENANCE OF COMMON  
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NO VARIANCES, MODIFICATIONS, REDUCTIONS AND WAIVERS ARE BEING  
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- THE APPLICANT INTENDS TO FILE FOR FINAL DEVELOPMENT PLAN APPROVAL  
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COMPLETED BETWEEN NOVEMBER, 2016 AND JANUARY, 2017. WORK  
AS PART OF PHASE 2 IS TO BE COMPLETED BETWEEN MAY AND AUGUST  
AS DEPICTED ON SHEET 4 OF THIS PRELIMINARY DEVELOPMENT PLAN.
- THE SITE HAS ACCESS TO PUBLIC AND PRIVATE UTILITIES, INCLUDING BUT  
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- THE LANDOWNER HEREBY DEDICATES TO THE CITY OF LAWRENCE  
TO REGULATE ANY CONSTRUCTION WITHIN THE AREAS DESIGNATED  
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ANY CONSTRUCTION WITHIN SAID AREAS AND SPACES INCONSISTENT  
WITH THE APPROVED USE OR ENJOYMENT OF RESIDENTS, LESSEES, AND  
OWNER OF THE PLANNED DEVELOPMENT.

**Legend**

- Pedestrian Origination Point
- 600 Foot Limits
- Pedestrian Routes
- Pathway To:
- Southeast Corner
- Southwest Corner
- Northeast Corner
- Northwest Corner

**LANDPLAN ENGINEERING**  
Lawrence, KS • Kansas City, MO • The  
1310 Wakarusa Drive, Suite 100  
Lawrence, KS 66044  
785.843.7500 (p) | 785.843.2415 (f)  
info@landplan-engineering.com | www.landplan-engineering.com

1029 MISSISSIPPI STREET  
LAWRENCE, KANSAS 66044  
HERE @ KANSAS OFF-SITE PARKING  
PRELIMINARY DEVELOPMENT PLAN  
LAYOUT PLAN

**PARKING LOT LEASE**

**between**

**STADPKG, LLC, as Landlord**

**and**

**HERE LAWRENCE PROPERTY OWNER, LLC, as Tenant**

**Dated as of August 12, 2016**

## PARKING LOT LEASE

THIS PARKING LOT LEASE (together with Exhibits and Schedules hereto, which are incorporated herein by this reference, this “**Lease**”) is made as of August 2, 2016 (“**Effective Date**”), by and between STADPKG, LLC, a Kansas limited liability company (“**Landlord**”), and Here Lawrence Property Owner, LLC, a Delaware limited liability company (“**Tenant**”).

### RECITALS

A. As of the Effective Date, Landlord is the owner in fee simple title of the properties commonly known as 1031 Mississippi Street and 0 Illinois Street, each located in the City of Lawrence, Kansas (the “**City**”), as more particularly described in Exhibit A-1 attached hereto (the “**STADPKG Parcels**”).

B. Reference is also made to the following additional parcels: (i) the real property commonly known as 1029 Mississippi Street, Lawrence, Kansas (“**1029 Parcel**”), which parcel has been acquired by Tenant or its affiliate and will be conveyed to Landlord in accordance with the terms of this Lease, (ii) the Alley Vacation Area (defined below), and (iii) Vacated Fambrough Drive Area (defined below).

C. The STADPKG Parcels initially will constitute the “**Land**” provided that:

1. When fee simple title to the 1029 Parcel is conveyed by Tenant or its affiliate to Landlord in accordance with this Lease, the 1029 Parcel will be added to the definition of Land;
2. If and when during the Term the City has vacated the Alley Vacation Area, fee simple title thereto has reverted to Landlord free of any rights of the City or third parties (other than utility easements) and Landlord and Tenant have agreed in writing upon the legal description thereof, the Alley Vacation Area will be added to the definition of Land; and
3. If and when during the Term the City has vacated the public street in the Vacated Fambrough Drive Area following completion of the Fambrough Drive Relocation, fee simple title to the Vacated Fambrough Drive Area has reverted to Landlord free of any rights of the City or third parties (other than utility easements) and Landlord and Tenant have agreed in writing upon the legal description thereof, the Vacated Fambrough Drive Area will be added to the definition of the Land;

and the Land (as the same is defined from time to time during the Term) together with the Improvements (as hereinafter defined), as the same may exist from time to time on the Land during the Term, constitute the “**Property**,” provided further that within thirty (30) days of the written request of Landlord or Tenant to the other at any time during the Term after any or all of the 1029 Parcel, the Alley Vacation Area or the Vacated Fambrough Drive Area have become part of the Land, the Landlord and Tenant will execute a recordable memorandum, in a form

reasonably satisfactory to both of them, which refers to this Lease and states that the definition of the Land subject thereto has been so modified.

D. By this Parking Lot Lease, Landlord desires to lease and demise to Tenant the Property, and Tenant desires to lease the Property from Landlord.

**NOW THEREFORE**, for and in consideration of the covenants and agreements of the parties hereto, as are hereinafter set forth, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged by each party hereto, Landlord hereby leases and demises the Property to Tenant and Tenant hereby leases the Property from Landlord;

**TO HAVE AND TO HOLD** the Property unto Tenant, its successors and permitted assigns, for and during the Term set forth herein,

**ON THE TERMS AND SUBJECT TO THE CONDITIONS** which are hereinafter set forth:

**Section 1. DEFINITIONS.**

1.1. Specific. As used herein, the following terms have the following meanings:

“**1029 Parcel**” has the meaning given to it in Recital B.

“**1029 Permitted Title Matters**” has the meaning given it in Section 2.9.

“**Alley Vacation Area**” means the portion of the alley adjacent to the STADPKG Parcels, the general location of which is depicted in Schedule 1(a) attached hereto. At Tenant’s expense within sixty (60) days before or after the City’s vacation of such alley, a surveyor approved by to Landlord (such approval not to be unreasonably withheld, conditioned or delayed) will perform a survey to determine the legal description of the Alley Vacation Area and the Landlord and Tenant will confirm in writing that such is the agreed upon legal description thereof.

“**Bankruptcy**” shall be deemed, for any person, to have occurred either:

(a) if and when such person (i) applies for or consents to the appointment of a receiver, trustee or liquidator of such person or of all or a substantial part of its assets, (ii) files a voluntary petition in bankruptcy or admits in writing its inability to pay its debts as they come due, (iii) makes an assignment for the benefit of its creditors, (iv) files a petition or an answer seeking a reorganization or an arrangement with its creditors or seeks to take advantage of any insolvency law, or (v) files an answer admitting the material allegations of a petition filed against such person in any bankruptcy, reorganization or insolvency proceeding; or

(b) if (i) an order, judgment or decree is entered by any court of competent jurisdiction adjudicating such person a bankrupt or an insolvent, approving a petition

seeking such a reorganization, or appointing a receiver, trustee or liquidator of such person or of all or a substantial part of its assets, or (ii) there otherwise commences with respect to such person or any of its assets any proceeding under any bankruptcy, reorganization, arrangement, insolvency, readjustment, receivership or similar law, and if such order, judgment, decree or proceeding continues unstayed for any period of one hundred twenty (120) consecutive days after the expiration of any stay thereof.

**“CA Student Housing Project”** means that certain student housing project being constructed, developed, owned and operated by Tenant at the property commonly known as 1111 Indiana Street, Lawrence, Kansas.

**“City”** means the City of Lawrence, Kansas.

**“Commencement Date”** means the Effective Date.

**“Effective Date”** has the meaning given it in the introductory paragraph.

**“Environmental Laws”** shall mean any and all Federal, State or local laws, pertaining to health, safety, or the environment now or at any time hereafter in effect and any judicial or administrative interpretation thereof (including, but not limited to, any judicial or administrative order, consent decree or judgment relating to the environment or hazardous substances (as such term is defined in any such law), or exposure to hazardous substances) including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, the Superfund Amendments and Reorganization Act of 1986, as amended, the Resource, Conservation and Recovery Act of 1976, as amended, the Clean Air Act, as amended, the Federal Water Pollution Control Act, as amended, the Oil Pollution Act of 1990, as amended, the Safe Drinking Water Act, as amended, the Hazardous Materials Transportation Act, as amended, the Toxic Substances Control Act, as amended, the federal Clean Water Act of 1977, all regulations and laws adopted by the Occupational Safety and Health Administration, and any other environmental or health conservation or protection laws.

**“Event of Default”** has the meaning given it in Section 13.1 hereof.

**“Fambrough Drive Relocation”** means the work required to relocate a portion of Fambrough Drive, Lawrence, Kansas as depicted in Schedule 1(b) attached hereto.

**“Fee Estate”** means Landlord’s fee simple interest in all of the Land and the appurtenances included with the Land.

**“Force Majeure”** means any: (a) strike, lock-out or other labor troubles, (b) governmental restrictions or limitations, (c) failure or shortage of materials, electrical power, gas, water, fuel oil, or other utility or service, (d) riot, war, insurrection or other national or local emergency, (e) accident, flood, fire or other casualty, (f) adverse weather condition, (g) other act of God, or (h) other cause similar or dissimilar to any of the foregoing and beyond the reasonable control of the person in question.

**“Hazardous Substances”** means any flammables, explosives, radioactive materials, hazardous wastes or materials, toxic wastes or materials, asbestos, PCB’s, petroleum

products or derivatives and include, without limitation, those substances and materials subject to regulation under any applicable Environmental Law.

**“Improvements”** means all improvements, fixtures and personal property, all off-street parking areas on the Land required or permitted to be constructed thereon under this Lease as part of a Phase or otherwise approved in writing by Landlord and all replacements, additions and alterations thereto required or permitted by this Lease or in writing by Landlord.

**“IRC Code”** has the meaning given it in Section 2.3.

**“KU”** has the meaning given it in Section 2.2.2.

**“KU Endowment Association”** has the meaning given it in Section 2.8.2.

**“Land”** has the meaning given it in Recital C.

**“Land Records”** means the land records of the County of Douglas, Kansas.

**“Landlord”** has the meaning given it in the introductory paragraph.

**“Landlord’s Indemnified Parties”** has the meaning given it in Section 2.6.

**“Landlord’s Reserved Use”** has the meaning given it in Section 2.4.

**“Lease”** means this Parking Lot Lease, including amendments thereto and extensions thereof, if any.

**“Lease Year”** means (a) the period commencing on the Commencement Date and terminating on the first (1st) anniversary of the last day of the calendar month containing the Commencement Date, and (b) each successive period of twelve (12) calendar months thereafter during the Term.

**“Leasehold Estate”** means the leasehold estate in the Property held by Tenant under this Lease.

**“Leasehold Mortgage”** has the meaning given it in Section 10.1 hereof.

**“Leasehold Mortgagee”** has the meaning given it in Section 10.1 hereof.

**“Legal Approvals”** has the meaning given it in Section 2.8.

**“Legal Requirements”** means, any applicable laws, ordinances, notices, orders, rules, regulations and requirements of applicable federal, state and municipal governments, public or quasi-public authorities and all departments, commissions, bureaus boards and officers thereof with jurisdiction over the subject matter in question.

**“Matter”** has the meaning given it in Section 2.7.

**“Mortgage”** means any mortgage, deed of trust, assignment of leases or rents, collateral assignment or security interest at any time encumbering any or all of the Property, and any other security interest therein existing at any time under any other form of security instrument or arrangement used from time to time in the locality of the Property (including but not limited to any such other form of security arrangement arising under any mortgage, deed of trust, sale-and-leaseback documents, lease-and-leaseback documents, security deed or conditional deed, or any financing statement, security agreement or other documentation used pursuant to the Uniform Commercial Code or any successor or similar statute), provided that such mortgage, deed of trust or other form of security instrument, and an instrument evidencing any such other form of security arrangement, whether or not recorded or filed among the Land Records or in such other place as is, under applicable law, required for such instrument to give constructive notice of the matters set forth therein.

**“Mortgagee”** means the Person owed the obligations or indebtedness secured by a Mortgage.

**“Operating Expenses”** has the meaning given it in Section 5.1.1.

**“Parking Lot Spaces”** means all of the parking lot spaces constructed by Tenant from time to time as part of the Project.

**“Partial Taking”** has the meaning given it in Section 9.3.

**“Person”** means a natural person(s), a trustee, a corporation, a partnership, a limited liability company and any other form of legal entity.

**“Phase I Project”** means (a) the completion of the design and construction of the Parking Lot Spaces and related improvements on the 0 Parcel in compliance with this Lease, Legal Requirements and construction plans therefor hereafter prepared by Tenant and approved in writing by Landlord (provided that Landlord will not unreasonably withhold, delay or condition consent to construction plans which are consistent with those depicted on Schedule 1(a) attached hereto), (b) the addition of the 1029 Parcel to the definition of the Land, the demolition after July 31, 2016 of existing improvements upon the 1029 Parcel and 1031 Parcel, the disposal of the debris, including, without limitation, Hazardous Substances that are required to be removed to satisfy Legal Requirements for use of the underlying real property for classrooms or housing, from the demolitions of such improvements on the 1029 Parcel and 1031 Parcel and the design and construction of the Parking Lot Spaces and related improvements on the 1029 Parcel and the 1031 Parcel which expands the parking lot constructed on the 0 Parcel in compliance with this Lease, Legal Requirements and construction plans therefor hereafter prepared by Tenant and approved in writing by Landlord (provided that Landlord will not unreasonably withhold, delay or condition consent to construction plans which are consistent with those depicted on Schedule 1(a) attached hereto), and (c) the addition of the Alley Vacation Parcel to the definition of the Land, the demolition of existing improvements upon the Alley Vacation Parcel, the disposal of the debris, including, without limitation, Hazardous Substances that are required to be removed to satisfy Legal Requirements for use of the underlying real property for classrooms or housing, from the demolitions of such improvements on the Alley Vacation Parcel, the acquisition of variances to setback or building lines from the City and other

governmental authorities to permit construction of Parking Lot Spaces and associated improvements thereon and the design and construction of the Parking Lot Spaces and related improvements on the Land which expands the parking lot constructed on the 0 Parcel, the 1029 Parcel and the 1031 Parcel in compliance with this Lease, Legal Requirements and construction plans therefor hereafter prepared by Tenant and approved in writing by Landlord (provided that Landlord will not unreasonably withhold, delay or condition consent to construction plans which are consistent with those depicted on Schedule 1(a) attached hereto), so that such Parking Lot Spaces on the Phase I Project may be used in compliance with this Lease by Tenant after such completion and during the remainder of the Term as parking for Tenant's tenants, employees, agents and invitees living or working at the CA Student Housing Project.

**"Phase II Project"** means the addition of the Vacated Fambrough Drive Area to the definition of the Land, the completion of the Fambrough Drive Relocation (including without limitation the demolition of existing improvements upon the Vacated Fambrough Drive Area, the disposal of the debris, including, without limitation, Hazardous Substances that are required to be removed to satisfy Legal Requirements for use of the underlying real property for classrooms or housing, from the demolitions of such improvements on the Vacated Fambrough Drive Area and the design and construction of a new Fambrough Drive, with such demolition, disposal and construction work to be performed by contractors engaged by the City), and the acquisition of variances to setback or building lines from the City and other governmental authorities to permit construction of Parking Lot Spaces on the Vacated Fambrough Drive Area and associated improvements, including without limitation sidewalks, on the Land as depicted on Schedule 1(b) and the design and construction of the Parking Lot Spaces and related improvements on the Vacated Fambrough Drive Area which expands the parking lot constructed in the Phase I Project, all in compliance with this Lease, Legal Requirements and construction plans therefor hereafter prepared by Tenant and approved in writing by Landlord (provided that Landlord will not unreasonably withhold, delay or condition consent to construction plans which are consistent with those depicted on Schedule 1(b) attached hereto), so that such Parking Lot Spaces on the Phase II Project may be used in compliance with this Lease by Tenant after such completion and during the remainder of the Term as parking for Tenant's tenants, employees, agents and invitees living or working at the CA Student Housing Project.

**"Phase"** or **"Phases"** means, as applicable and individually or collectively as the context requires, the Phase I Project and/or Phase II Project.

**"Phase I Completion"** has the meaning given it in Section 2.2.2.

**"Phase II Completion"** has the meaning given it in Section 2.2.2.

**"Project"** the construction of the Improvements provided for in the various Phases.

**"Property"** has the meaning given it in Recital C.

**"Purpose"** has the meaning given it in Section 7.3.2.

**"Restoration Criteria"** has the meaning given it in Section 9.3.

“**STADPKG Parcels**” has the meaning given it on Exhibit A-1 attached hereto.

“**Taking**” has the meaning given it in Section 9.1.

“**Tenant**” has the meaning given it in the introductory paragraph.

“**Tenant Confidential Information**” has the meaning given it in Section 7.3.2.

“**Tenant Default**” has the meaning given it in Section 11.1.

“**Tenant’s Indemnified Parties**” has the meaning given it in Section 2.5.

“**Term**” has the meaning given it in Section 2.2.2 hereof.

“**Termination Date**” has the meaning given it in Section 2.2.2 hereof.

“**Total Taking**” has the meaning given it in Section 9.2.

“**Vacated Fambrough Drive Area**” means the approximately North one half (1/2) portion of the existing Fambrough Drive, Lawrence, Kansas, the general location of which is depicted as “Vacated Fambrough Drive Area” on Schedule 1(b) attached hereto which becomes property of the Landlord upon vacation thereof. At Tenant’s expense, within sixty (60) days before or after the City’s vacation of existing Fambrough Drive, a surveyor approved by to Landlord (such approval not to be unreasonably withheld, conditioned or delayed) will perform a survey to determine the legal description of the Vacated Fambrough Drive Area and the Landlord and Tenant will confirm in writing that such is the agreed upon legal description thereof.

1.2. General. Any other term to which meaning is expressly given in this Lease shall have such meaning.

## **Section 2. LEASE; TERM; CONSTRUCTION OF PROJECT.**

2.1. Lease. Landlord agrees to lease the Property to Tenant, and Tenant agrees to lease the Property from Landlord during the Term, on the terms and conditions set forth in this Lease.

### **2.2. Length of Term.**

2.2.1. Possession Date. On the Effective Date Tenant shall receive possession of the Land (as then defined) in its As-Is condition, subject to the residential tenants in the improvements on the 1031 Parcel which expire July 31, 2016 and Landlord’s Reserved Use (as defined in Section 2.4). As additional parcels of real property are added to the definition of Land from time to time Tenant shall receive possession of such portion of the Land being added in its then As-Is condition, subject to Landlord’s Reserved Use.

2.2.2. Original Term. This Lease shall be for a term (“**Term**”) commencing on the Effective Date (the “**Commencement Date**”), and (b) terminating on the

fiftieth (50<sup>th</sup>) anniversary of the Commencement Date (the “**Termination Date**,” except that if the date of such termination is hereafter advanced to an earlier date or postponed pursuant to any other provision of this Lease, or by express, written agreement of the parties hereto, or by operation of law, the date to which it is advanced or postponed shall thereafter be the “**Termination Date**” for all purposes of this Lease). Notwithstanding anything in this Section 2.2.2 to the contrary, the Tenant may elect, in its sole discretion and even if an Event of Default has occurred and is ongoing, to terminate this Lease with sixty (60) days’ written notice to the Landlord at any time; provided that if any Leasehold Mortgagee has a Leasehold Mortgage in effect, such Leasehold Mortgagee must consent in writing before Tenant may exercise its rights pursuant to this sentence and such Leasehold Mortgagee must release any Leasehold Mortgage or Mortgage placed on any of the Property pursuant to a commercially reasonable release; provided further, that Tenant will be obligated to pay to Landlord any then unpaid portion of the Base Rent and any then accrued but unpaid Additional Rent or other out of pocket costs incurred by Landlord prior to such Termination Date. Notwithstanding anything to the contrary in this Lease, unless the Tenant has caused the 1029 Parcel and the Alley Vacation Area to be added to the Land and completed construction of all of the Phase I Project in accordance with this Lease (such events being the “**Phase I Completion**”) by the end of the forty eighth (48<sup>th</sup>) calendar month to commence after the Effective Date, then Landlord can give written notice to Tenant to terminate the Lease at any time thereafter and, unless the Phase I Completion has occurred within one hundred eighty (180) days after the date upon which the such notice to terminate was given to Tenant, the Term of the Lease will terminate as of the end of such one hundred eightieth (180<sup>th</sup>) day and Tenant will have no further rights in any of the Property. Notwithstanding anything to the contrary in this Lease, unless the Tenant has caused the Fambrough Drive Relocation Work and the Phase II Project to be completed in accordance with this Lease (such event being the “**Phase II Completion**”) by the end of the sixtieth (60<sup>th</sup>) calendar month to commence after the Effective Date, then Landlord can give written notice to Tenant to terminate the Lease at any time thereafter and, unless the Phase II Completion has occurred within one hundred eighty (180) days after the date upon which the such notice to terminate was given the Term of the Lease will end as of the end of such one hundred eightieth (180<sup>th</sup>) day; provided that if the Tenant has diligently pursued all applications necessary for, and is prepared financially to complete, Phase II, but either the City of Lawrence, Kansas or the University of Kansas (“**KU**”) has prevented Tenant from completing Phase II by such one hundred eightieth day (180<sup>th</sup>) day, then Tenant can elect, by written notice to Landlord on or before such one hundred eightieth (180<sup>th</sup>) day, to: (i) delete the Vacated Fambrough Drive Area from the real property that is subject to this Lease or that can ever be added to the Land, and (ii) terminate Tenant’s obligations to pursue and complete the Phase II Project as of the end of such one hundred eightieth (180<sup>th</sup>) day. No early termination of the Lease will release Tenant from its obligations to surrender the Property in accordance with Section 2.2.3 and perform the obligations which have accrued under the Lease as of the Termination Date or which are to survive the Termination Date under the terms of this Lease.

2.2.3. Surrender. Upon the Termination Date or the sooner termination of the Lease as to any of the Land, Tenant shall, at its expense, vacate the Land, Improvements and Property and deliver to Landlord possession of the portion(s) of the Land, Improvements and Property as to which the Lease has been terminated, free and clear of any liens, encumbrances, Mortgages or other interests of any kind of any Person other than Landlord, Landlord’s lenders, licensees, grantees or the holders of easements, Landlord’s Mortgages, or use rights related to

Landlord's Reserved Use granted or approved in writing by Landlord, free and clear of any Hazardous Substances in violation of Legal Requirements, free and clear of any personal property or improvements except the Improvements required to be constructed under any Phase or otherwise approved by Landlord in writing, with any such Improvements being in compliance with Legal Requirements and in the condition they would have been in as if Tenant had constructed and maintained the same in the condition required under this Lease, ordinary wear and tear excepted.

2.3. Title to and Alterations of Improvements. Notwithstanding any provision in this Lease to the contrary, at all times during the Term of this Lease, the Improvements and all alterations and additions shall be owned by Landlord and Landlord alone shall be entitled to all of the tax attributes of ownership, including, without limitation, the right to claim depreciation or cost recovery deductions pursuant to the Internal Revenue Code of the United States of America, as amended (the "**IRC Code**") and the right to amortize capital costs and to claim any other federal or state tax benefits attributable to the Improvements.

2.4. Landlord's Use of Parking Lot. During the Term and after such Parking Spaces have been constructed, Landlord shall have the exclusive right to use all of the Parking Lot Spaces from 8:00 a.m. until 11:59 p.m. on the dates of all KU home football games and, at Landlord's discretion, three (3) additional events per calendar year any portion of which occurs during the Term for parking cars and other motor vehicles of persons designated by Landlord or its employees, agents or licensees and for other game and event related activities ("**Landlord's Reserved Use**"); provided that, Landlord shall give notice to the Tenant of any such additional event not less than sixty (60) days in advance of such event and Landlord's game or other event related activities may not be of the kind or nature reasonably likely to damage or destroy the Parking Lot Spaces. Tenant, solely at the cost of Persons other than Landlord, shall cause the Property to be free of any cars or other motor vehicles by 8:00 a.m. on such dates and Landlord, solely at the cost of Persons other than Tenant, shall cause the Property to be free of any cars or other motor vehicles by 11:59 p.m. on such dates. To the extent that Landlord fails to comply with its obligations pursuant to the preceding sentence and does not remove such vehicles within twenty four (24) hours after Landlord's receipt of written notice that such vehicles have not been removed on or before the expiration of each Landlord's Reserved Use date and Tenant incurs reasonable, actual out of pocket costs to remove same, Tenant shall be permitted to set off such amounts paid by it against any unpaid rental amounts payable pursuant to this Lease.

2.5. Indemnity by Landlord. Landlord hereby agrees to defend, indemnify, protect and hold harmless Tenant and its member(s), and their respective employees and agents, and Tenant's Leasehold Mortgagee's (the "**Tenant Indemnified Parties**") from and against any and all claims, judgments, demands, damages, fines, losses, liabilities, interest, awards, penalties, causes of action, litigation, lawsuits, administrative proceedings, administrative investigations, costs and expenses, including, without limitation, reasonable attorneys' fees, court costs and other reasonable costs of suit, arbitration, dispute resolution or other similar proceedings against the Property, Tenant and/or any Leasehold Mortgagee arising from the intentional actions or negligence of any one or more of Landlord or its employees, agents, licensees and invitees during the Landlord's Reserved Use which causes any material damage to the Improvements or the injury or death of any individuals thereon. Landlord's

liability pursuant to this Section shall be limited to recovery against the insurance policies provided by it pursuant this Agreement.

2.6. Indemnity by Tenant. Tenant hereby agrees to defend, indemnify, protect and hold harmless Landlord and its member(s), and their respective trustees, employees and agents (the “**Landlord Indemnified Parties**”) from and against any and all claims, judgments, demands, damages, fines, losses, liabilities, interest, awards, penalties, causes of action, litigation, lawsuits, administrative proceedings, administrative investigations, costs and expenses, including, without limitation, reasonable attorneys’ fees, court costs and other reasonable costs of suit, arbitration, dispute resolution or other similar proceedings against the Property or any of the Landlord Indemnified Parties arising from the intentional actions or negligence of any one or more of Tenant or its employees, agents, licensees, and invitees during the Term which causes any material damage to the Improvements or the injury or death of any individuals thereon. Tenant’s liability pursuant to this Section shall be limited to recovery against the insurance policies provided by it pursuant this Agreement.

2.7. Procedure for Indemnity. If any Person entitled to indemnity under either Section 2.5 or 2.6 receives written notice of any action, proceeding or other event that will or may result in a right to indemnity under either Section 2.5 or 2.6 as the case may be (each a “**Matter**”), the Landlord Indemnified Party or Tenant, as the case may be, shall immediately give the Tenant or the Landlord, respectively, written notice thereof. Failure to give such notice, however, shall not relieve party having the obligation to provide such indemnity under this Lease. The party obligated to provide the indemnity under Section 2.5 or 2.6 as the case may be, may direct the defense of, and compromise or defend, at its own expense and using such indemnifying party’s own counsel, such counsel to be reasonably approved by the party entitled to such indemnity (and the party entitled to indemnity shall not, without the consent of the indemnifying party, not to be unreasonably withheld conditioned or delayed, settle or compromise such Matter); provided, further, however, that, the indemnifying party may not so compromise or defend any such Matter that involves the potential imposition of criminal or civil liability on Person entitled to indemnity or a conflict of interest between party entitled to indemnity and any other person to such dispute, claim, litigation or settlement. In any event, the Tenant, Landlord and their respective counsel shall cooperate in the compromise of, or defense against, any such asserted liability. The indemnifying party and the Person entitled to indemnity may participate in the defense of such asserted liability, but such participation by the party entitled to indemnity shall be at its own cost and expense, unless the indemnifying party has not provided an adequate defense against such Matter, as determined by the Person entitled to indemnity, in its reasonable discretion, in which case, such participation shall be at the indemnifying party’s sole cost and expense.

2.8. Construction of Project.

2.8.1. Legal Approvals. As of the Effective Date, it is understood and agreed that none of the Phases have been approved in accordance with any applicable Legal Requirements and that Tenant shall not have a right or obligation to complete a particular Phase pursuant to this Lease until Tenant has obtained all necessary approvals under Legal Requirements (“**Legal Approvals**”) and Landlord’s written consent to the plans for the design and/or construction of the Improvements provided for in such Phase. Tenant agrees to use

commercially reasonable efforts to obtain all necessary approvals for the design and construction of the various Phases outlined herein, as such Phases may be modified or amended in accordance with this Lease. Tenant may not obtain or agree to any Legal Approvals except those which are approved by Landlord in writing; provided that, Landlord will not unreasonably withhold, condition or delay consents to Legal Approvals consistent with the Phases and Improvements expressly permitted under this Lease and the parties understand that no Legal Approvals can be binding upon Landlord, the Land, or the Improvements after the Termination Date. Prior to commencing construction or demolition as part of any Phase, Tenant shall give Landlord copies of the Legal Approvals (including without limitation any plans and specifications incorporated therein) related to such Phase. After completion of demolition and disposal of debris as part of any Phase, Tenant shall provide Landlord with copies of permits and receipts related to the handling and disposal of any Hazardous Substances required to be removed to satisfy Legal Requirements for use of the underlying real property for classrooms or housing and, on or prior to the completion of such work, a Phase One report indicating there is no Hazardous Substances on any of the Land which exists except in compliance with all Legal Requirements in order for the underlying real property to be used for classrooms or housing.

2.8.2. Landlord Cooperation. Landlord agrees, and agrees to cause its affiliate The Kansas University Endowment Association (“**KU Endowment Association**”), to reasonably cooperate during the Term with Tenant with its seeking and obtaining approvals of the demolition and construction of improvements provided for in the respective Phases that are required under Legal Requirements and Legal Approvals. Landlord will not unreasonably withhold, delay or condition Landlord’s approval of any construction plans for the Improvements required or permitted under a given Phase (and any documentation related to the relocation of public right of ways provided for in plans approved in writing by Landlord) so long as they comply and are consistent with Schedule 1(a) in the case of Phase I and Schedule 1(b) in the case of Phase II; provided that, in its sole discretion, Landlord may, excluding the Parking Spaces reflected in such schedules, withhold consent to any improvement or addition or modification thereto which is not provided for in the respective schedule; provided further that, Landlord will have no obligation to consent to any Legal Approvals that would be binding upon Landlord, the Land or the Improvements after the Termination Date. During the Term, Landlord will reasonably cooperate (and, while KU Endowment Association owns or controls Landlord, will cause KU Endowment Association to cooperate) with the Tenant in causing the City to vacate the Alley Vacation Area and the Vacated Fambrough Drive Area as required for the completion of the Phases which involve such areas and the relocation of the public right of way contemplated in such Phases and provided for in plans approved in writing by Landlord and consistent with the attached Schedules; provided that, neither Landlord nor KU Endowment Association will be obligated to incur any costs or assume any obligations in doing so or to agree to anything that would be binding upon Landlord, KU Endowment Association, their respective successors or assigns, the Land or the Improvements after the Termination Date.

2.8.3. Landlord Approval of Contractors; Scope of Work. Landlord shall have the right to approve in writing, with any such approval not to be unreasonably withheld, conditioned or delayed, the contractors and subcontractors performing the work for any Phases selected by Tenant (with it being acceptable for Landlord to disapprove of contractors or subcontractors that KU Endowment Association or its affiliates have in good faith had problems with in the past, are not reasonably creditworthy for the scope of work such parties are

performing, or to the extent any such parties are not carrying insurance reasonably required by Landlord). Landlord reserves the right to condition approval upon receipt of proof that the contractors and subcontractors carry workers compensation insurance that complies with Kansas law and comprehensive general liability insurance that is from insurers licensed to issue insurance in Kansas, has a face amount comparable to the policies Landlord requires its own contractors to carry and names Landlord, KU Endowment Association, and the officers, managers, trustees, employees and agents of each as additional insureds. To the extent Tenant requests any approvals pursuant to this Subsection 2.8.3, Landlord shall review and approve in writing any such changes within five (5) business days of a request by Tenant or shall provide reasonable specificity regarding any disapprovals within such time period. Landlord agrees that it shall reasonably cooperate with Tenant's efforts to construct the parking lot and perform the other work contemplated with respect to the entire Project. Landlord will not unreasonably withhold, condition or delay consent to the use of any contractors and subcontractors required by the City in connection with the performance of Phase II.

2.9 Conveyance of 1029 Parcel. Tenant represents that Tenant or its affiliate has obtained right, title and interest in the 1029 Parcel. Landlord acknowledges that prior to the date hereof, Tenant has provided Landlord with a title commitment and a Phase One environmental report on the 1029 Parcel and within thirty (30) days of the execution hereof Landlord will either provide written approval of or a list of any written objections to the title reflected in such title commitment and the environmental conditions reflected in such Phase One report (the title and conditions reflected in such commitment and Phase One Report to which no objection is made being the "**1029 Permitted Title Matters**"). Tenant may utilize commercially reasonable efforts to resolve any such objections within a commercially reasonable time but in any event must do so before conveying the same to Landlord or commencing construction of the Parking Spaces on the 1029 Parcel. Unless the Termination Date has sooner occurred, after the demolition of existing improvements and removal of Hazardous Substances has occurred but prior to commencing the construction included in the Phase I Project, Tenant shall convey fee simple title to the 1029 Parcel to Landlord by means of recording a special warranty deed to Landlord in the form attached hereto as Exhibit D, a Phase One (or an update of a prior one) indicating the 1029 Parcel has no Hazardous Substances on it except any that may be present with 1029 Parcel is used for classroom or housing purposes in compliance with Legal Requirements that is no more than thirty (30) days old and an ALTA owner's policy, with an insurance amount of [REDACTED] issued in accordance with such title commitment indicating that Landlord has acquired fee simple title to the 1029 Parcel, subject only to the 1029 Permitted Title Matters. Upon the conveyance of the 1029 Parcel to Landlord, Tenant shall have no right to terminate the Lease until completion of the Phase I Project.

### **Section 3. RENT.**

3.1. Base Rent. On or before the soonest of commencement of construction of any Parking Spaces provided for in Phase I, demolition of any existing improvements on the 1029 Parcel or the 1031 Parcel or February 1, 2017, Tenant will pay Landlord, without demand, deduction or set-off, at such place as Landlord shall from time to time direct by written notice to Tenant, an installment of Base Rent equal to: (a) the appraised value of the STADPKG Parcels [REDACTED] and (b) the out of pocket expenses incurred by Landlord (and if requested to participate in any proceedings pursuant hereto, KU Endowment Association) heretofore and

hereafter, in connection with the negotiation and performance of this Lease, the design, construction or financing of the Improvements, less any portion of such sum which is reimbursed to Landlord from a third party (collectively, the "Base Rent"); provided that, if the Termination Date occurs before the date upon which Tenant commences any construction or demolition work provided for in Phase I, Tenant will only be required to pay to Tenant the portion of the Base Rent provided for in (b) above and shall, within thirty (30) days of the Termination Date, receive a reimbursement of any Base Rent paid pursuant to this Lease, and a reconveyance of the 1029 Parcel by means of recording a commercially reasonable special warranty deed to Tenant or its designee and an ALTA owner's policy, with an insurance amount selected by Tenant and with such policy being paid for by Tenant, issued in accordance with such title commitment indicating that Tenant or such designee has acquired fee simple title to the 1029 Parcel, subject only to the 1029 Permitted Title Matters and any other matters caused by the acts or omissions of Tenant or its affiliates; provided that, the reimbursement amounts hereunder shall be reduced by both the reasonable forgone rental amounts suffered by Landlord for KU student year 2016/2017 due to Landlord not leasing its residential units located on the 1031 Parcel and any actual out of pocket expenses that Tenant is responsible for hereunder.

3.2. Net Lease. Landlord and Tenant intend that except as otherwise expressly provided herein (i) the Base Rent shall be net to Landlord, so that Tenant's payments to Landlord shall yield to Landlord the net Base Rent set forth herein, together with the Additional Rent (as herein defined) during the Lease Term, (ii) Tenant shall pay all costs, expenses and obligations which accrue or become due during the Term of this Lease, of every kind relating to the Property, relating to the design, zoning, permitting construction, operation, maintenance, repair and reconstruction of any Improvements on any of the Land, or relating to fees, costs, expenses, fines, penalties and obligations attributable to the use of the Property during the Term or to the failure of Tenant to fulfill its obligations hereunder, and (iii) Tenant shall pay all actual out of pocket expenses of Landlord related to this Lease, including, without, limitation, costs related to the negotiation of this Lease.

3.3. Additional Rent. By the anniversary of the Commencement Date in each calendar year during any portion of the Term and within sixty (60) days after the Termination Date, Tenant shall pay to Landlord as Additional Rent the out of pocket expenses incurred by Landlord or KU Endowment Association in their performance of this Lease (other than the costs Landlord is liable for related to Landlord's Reserved Use in Section 2.4) or in curing at Landlord's option any defaults by Tenant hereunder, in the design, zoning, permitting construction, operation, maintenance, repair and reconstruction of any Improvements on any of the Land or in curing any default of Tenant's obligations hereunder, less any portion of such sum which was previously reimbursed to Landlord by Tenant or a third party; provided that, at least thirty (30) days prior to such anniversary date and no later than thirty (30) days after such Termination Date Landlord will notify Tenant in writing of such amounts accrued but not reimbursed since the last portion of Additional Rent was paid.

3.4. Personal Property Taxes. Tenant shall pay and provide to Landlord proof of payment thereof at least ten (10) days before the same would be delinquent or, at Landlord's election, shall pay to Landlord as Additional Rent within ten (10) days of request therefor, all taxes, special assessments, excise taxes, payments in lieu of taxes and other governmental impositions of every kind and nature whatsoever, levied, assessed, or imposed upon or against

any personal property and trade fixtures on the Land, Improvements or Property for any period of time, any portion of which occurs after the Effective Date and on or before the date of Tenant's vacation of the Property in accordance with the provisions of this Lease at the end of the Term, whether the same are assessed or due prior to, during or after such period.

3.5. Real Estate Taxes. Tenant shall pay and provide to Landlord proof of payment thereof at least ten (10) days before the same would be delinquent or, at Landlord's election, shall pay to Landlord as Additional Rent within ten (10) days of request therefore, all taxes, special assessments, excise taxes, payments in lieu of taxes and other governmental impositions of every kind and nature whatsoever, levied, assessed, or imposed upon or against the Land, and all fixtures and improvements on the Land for any period of time, any portion of which occurs after the Effective Date and on or before the date of Tenant's vacation of the Land in accordance with the provisions of this Lease at the end of the Term, whether the same are assessed or due prior to, during or after such period.

3.6. Partial Year Taxes. Tax and assessment payments for any partial years shall be prorated except that Tenant will pay, or cause parties other than Landlord and KU Endowment Association to pay, taxes and assessments on the 1029 Parcel for the year in which the Effective Date occurs.

3.7. Property Tax Appeals. Tenant, at its expense, may attempt to obtain a lowering of the assessed valuation of the Property for any year for the purpose of reducing taxes thereon or an elimination of such taxes in their entirety. In such event, upon Tenant's request, Landlord shall use its reasonable efforts to cooperate with Tenant in such endeavor, at Tenant's expense.

#### **Section 4. USE OF PROPERTY.**

4.1. Nature of Use. During the Term Tenant may only use the Land and Improvements constituting the Property for the completion of the Phases permitted thereon, the maintenance of the Improvements permitted under this Lease thereon and, in compliance with the provisions of this Lease and Legal Requirements, as a parking lot for the parking of cars and other motor vehicles of Tenant's tenants, employees, agents, licensees, subtenants, and invitees living or working at the CA Student Housing Project; provided that, no Person will be given a sublease or license to park in any of the Parking Lot Spaces which exceeds the shorter of the balance of the Term or one (1) year.

4.2. Compliance with Legal Requirements and Environmental Laws. During the Term, Tenant, at Tenant's expense, shall cause the Property, including all Improvements, to be maintained and operated in compliance with all Legal Requirements. During the Term, Tenant, at Tenant's expense, in its use of the Land and Improvements or the demolition, disposal and construction, repair, maintenance, reconstruction and replacement of improvements on the Land, shall not: (a) except with respect to removal or disposals to be performed in accordance with Legal Requirements as part of the Phases necessary to use the real property for housing or classrooms or otherwise under this Lease, cause or permit the escape, disposal or release of any Hazardous Substances brought onto or removed from the Property by Tenant or its agents or contractors, or (b) allow the storage or use of such Hazardous Substances in any manner not

permitted by Legal Requirements for the storage and use of such substances or materials on real property used for housing or classrooms or otherwise not permitted in this Lease. If any lender or governmental agency reasonably requires testing to ascertain whether or not there has been any release of Hazardous Substances on the Property for which Tenant is responsible hereunder while this Lease is in effect, then the costs thereof shall be paid by Tenant if such requirement applies to the Property.

4.3. Representations, Warranties and Covenants of Landlord. As an inducement to Tenant to enter into and proceed under this Lease, Landlord warrants and represents to Tenant as follows, which warranties, representations and covenants are true and correct as of the date of this Lease:

(a) Landlord has the right, power and authority to enter into this Lease, to lease the STADPKG Parcels to Tenant and to perform all of Landlord's obligations in accordance with the terms, provisions and conditions contained in this Lease and by the Commencement Date no other party will have any rights to or in connection with the STADPKG Parcels except for residential leases of apartments in the existing improvements on the 1031 Parcel which expire on July 31, 2016 and any agreements, licenses or leases that relate to the Landlord's Reserved Use; provided that, it is understood and agreed that Landlord may enter into non-exclusive utility easements with respect to the STADPKG Parcels so long as such easements do not materially and adversely affect the Tenant's ability to use such STADPKG Parcels as a parking lot in accordance with this Lease and does not reduce the amount of available parking spaces for the CA Student Housing Project and it is further understood and agreed that Landlord will not be in default of this Lease if an entity with condemnation powers condemns any other type of easement or title to any portion of the Property; provided further than any costs incurred by Landlord in a condemnation proceeding necessitated because Tenant would not consent to a grant of easement or fee title by Landlord in lieu of a condemnation shall be Additional Rent owed by Tenant to Landlord;

(b) there is no litigation proceeding, or other action pending or, to the best knowledge and belief of Landlord, threatened, affecting the STADPKG Parcels or Landlord's estate therein;

(c) Landlord has received no written notice, and Monte Soukup, the Senior Vice President for Property of the sole member of the Landlord ("**Senior Vice President for Property**"), has no actual knowledge, that there is any pending or threatened condemnation, building or zoning code violation relating to all or any part of the STADPKG Parcels;

(d) Landlord has received no written notice, and the Senior Vice President for Property has no actual knowledge, that any party holding an easement affecting the STADPKG Parcels or any part thereof intends to expand the exercise of any such easement beyond the scope of the present exercise thereof (as by replacing or expanding existing facilities, conduits (including underground or overhead wires, cables or pipes) or systems for sewers, water, electric, gas, cable and other utilities);

(e) the entry by Landlord into this Lease with Tenant and the performance of all of the terms, provisions and conditions contained herein will not, or with the

giving of notice or the passage of time, or both, would not, violate or cause a breach or default under any other agreement relating to the STADPKG Parcels to which Landlord is a party or by which it is bound other than the residential leases in the improvements on the 1031 Parcel which expire July 31, 2016;

(f) except for the residential leases in the improvements on the 1031 Parcel which expire July 31, 2016, the STADPKG Parcels are unoccupied and vacant, and there is no tenant, lessee or other occupant of the STADPKG Parcels having any right or claim to possession or use of the STADPKG Parcels; and possession of the STADPKG Parcels is hereby delivered, effective as of the Commencement Date, free of the rights or claims of any tenants, occupants or other parties in possession of, or claiming any right to possession or use of the STADPKG Parcels;

(g) there are no unpaid special assessments of which Landlord has received notice for sewer, sidewalk, water, paving, gas, electrical or utility improvements or other capital expenditures, matured or unmatured, affecting the STADPKG Parcels;

(h) there are no outstanding notices of, nor, to Landlord's knowledge, any violations of any applicable Legal Requirements affecting any portion of the STADPKG Parcels;

(i) except for the residential leases in the improvements on the 1031 Parcel which expire July 31, 2016 or any agreements, licenses or leases that can be satisfied as part of the Landlord's Reserved Use, Landlord is not obligated under any contract, lease or agreement, oral or written, with respect to the ownership, use, operation or maintenance of the STADPKG Parcels that will interfere with Tenant's use of the Land permitted hereunder; and

(j) Landlord covenants and agrees that, so long as no Tenant Default has occurred and is continuing, Landlord shall not, directly or indirectly, take actions like the filing of bankruptcy or other similar actions in an effort to void, in whole or in part, Landlord's obligations and liabilities and Tenant's rights under this Lease and any assignment or conveyance of the Land or rights under this Lease by Landlord during the Term will be subject to Landlord's obligations hereunder.

## **Section 5. OPERATING EXPENSES.**

### **5.1. Operating Expenses.**

5.1.1. Tenant's Obligation. Excluding costs that Landlord is to pay in connection with the exercise of Landlord's Reserved Use under Section 2.4, Tenant will pay (or cause to be paid) directly to the providers of such services all costs and expenses attributable to or incurred in connection with the development, construction, completion, marketing, leasing and occupancy of the Land, Property and the Improvements (collectively, "**Operating Expenses**") including without limitation (a) all water, sewer and trash disposal services; and (b) all rehabilitation, maintenance, repair, replacement and rebuilding of the Improvements including, without limitation, (i) all landscaping, maintenance, repair and striping of all parking areas; (ii) all insurance premiums relating directly to the Property and the Improvements (including, without limitation, Landlord's actual out of pocket incremental expenses for

obtaining a commercially reasonable general liability insurance policy with a reasonably reputable insurer and amount of insurance); and (iii) the cost and expenses of all capital improvements or repairs required by any governmental or quasi-governmental authority having jurisdiction over the Property or the Improvements.

5.1.2. Permits and Licenses. Tenant shall procure, or cause to be procured, at Tenant's sole expense, any and all necessary permits, licenses, entitlements, or other authorizations required by any governmental authority for Tenant's use of the Property permitted under this Lease, including, without limitation those for demolition, disposal of debris, construction and operation of improvements permitted hereunder; provided that, upon Tenant's request Landlord will cooperate (and will cause KU Endowment Association to cooperate), at Tenant's sole expense, with Tenant in obtaining such permits, licenses, easements and other authorizations required. Tenant shall procure, or cause to be procured, at Tenant's sole expense, all permits, licenses, easements and other governmental authorizations that are necessary or helpful for electric, water, sewer, drainage, access and such other public or private utilities or facilities reasonably necessary or desirable for Tenant's use of the Property permitted herein; provided that upon Tenant's request Landlord will cooperate, at Tenant's sole expense, with Tenant in obtaining such permits, licenses, easements and other governmental authorizations; provided further, that the location of all such utility facilities must be approved in writing by Landlord, not to be unreasonably withheld, conditioned or delayed.

5.1.3. Landlord's Cooperation. If requested by Tenant, Landlord agrees to use Landlord's reasonable efforts (and in connection with seeking the initial Legal Approvals and thereafter while KU Endowment Association is the sole owner of or controls Landlord, Landlord shall cause KU Endowment Association to make reasonable efforts), at Tenant's expense, to assist Tenant to obtain waiver, reduction or deferral, as applicable, of all fees and other charges otherwise payable in connection with obtaining any permits, licenses, easements and other authorizations required by any governmental authority with respect to any construction or other work to be performed on the Property in connection with the Improvements permitted hereunder; provided that, Tenant must pay any amounts so deferred on or before the Termination Date.

## **Section 6. INSURANCE.**

6.1. Insurance to be maintained by Tenant. Tenant shall maintain, at its expense, throughout the Term from insurers licensed to issue such policies in Kansas that are reasonably acceptable to Landlord, a casualty insurance policy for the replacement value of the Improvements and a commercial general liability insurance policy with a limit of at least [REDACTED] per occurrence, [REDACTED] aggregate with at least a [REDACTED] umbrella which names Landlord, KU Endowment Association, and their respective members, trustees, officers, employees and agents as additional insureds thereunder. Tenant shall provide Landlord with a certificate of insurance evidencing the insurance required hereunder. Tenant shall cause its contractors and subcontractors to maintain insurance required under Section 2.8.3.

6.2. Insurance to be maintained by Landlord. Landlord shall maintain throughout the Term from insurers licensed to issue such policies in Kansas a commercial general liability insurance policy with a limit of at least [REDACTED] per occurrence,

██████████ aggregate with a ██████████ umbrella which names Tenant and the most recent holder of a Leasehold Mortgagee permitted hereunder of which Landlord has received written notice as an additional insured thereunder. Tenant shall pay to Landlord as Additional Rent the incremental increase in cost of any policy that covers the Property and any other property, as reasonably determined by Landlord.

6.3. Insurance Policies. All insurance policies required under this Section 6 will expressly provide that such policies will not be canceled or altered without thirty (30) days' prior written notice to any additional insureds.

6.4. Primacy of Insurance Policies. As between the policies of insurance maintained by Landlord and Tenant with respect to the Property, the policies of insurance required to be maintained by Tenant pursuant to Section 6.1 shall provide primary coverage during the Term except that during the Landlord's Reserved Use the insurance required to be maintained by Landlord under Section 6.2 shall provide primary coverage.

6.5. Waiver of Subrogation. Tenant and Landlord each hereby release and relieve the other (and Landlord's sole member) and waive their entire right of recovery against the other (and Landlord's sole member), for direct or consequential loss or damage arising out of or incident to the perils covered by property insurance carried by such party, whether due to the negligence of Landlord or Tenant or their agents, employees, contractors or invitees. If necessary, all property insurance policies required under this Lease shall be endorsed to so provide.

## Section 7. ALTERATIONS AND MAINTENANCE; ESTOPPEL CERTIFICATES; ASSIGNMENTS AND SUBLETTING.

7.1. Alterations and Maintenance. During the Term, at Tenant's sole expense, Tenant shall maintain and, to the extent necessary repair or reconstruct, the Improvements in accordance with Legal Requirements and the plans approved therefor by Landlord, so that at all times the same are usable as a parking lot in compliance with all Legal Requirements and are in good condition, ordinary wear and tear and casualty excepted.

7.2. Estoppel Certificates. Landlord and Tenant agree that at any time and from time to time upon not less than twenty (20) business days' prior written notice by the other party, or upon request from the investor member, a permitted assignee, lender or other interested party, Landlord or Tenant will execute, acknowledge and deliver to the other party and such other Persons requested by such other Person (including any Leasehold Mortgagees) a statement in writing certifying and agreeing (which statement may be part of, without limitation, any Landlord Acknowledgment (defined below)): (a) that this Lease is unmodified (or if modified, stating such modifications) and in full force and effect; (b) the date through which the Rents have been paid; (c) that, to the knowledge of the certified (if such be the case), there is no default, set-off, defense or other claim against Landlord or Tenant, as applicable, other than those, if any, so specified under the provisions of this Lease; and (d) any other information requested and agreed to as part of Landlord Acknowledgment; provided that, neither party will be obligated to execute more than three (3) estoppel certificates in a twelve (12) month period. It is intended that any such statement may be relied upon by any such Persons.

7.3. Assignment and Subletting.

7.3.1. By Landlord. Landlord shall not voluntarily transfer, sell, assign, convey or otherwise encumber all or any portion of its interest in the Property or this Lease, except in a transaction that is subject to the terms of the Lease; provided that, Landlord may mortgage Landlord's interest in the Property so long as any such mortgage shall be subject and subordinate to this Lease and the applicable lender provides Tenant with a commercially reasonable subordination, non-disturbance and attornment agreement.

7.3.2. By Tenant. Except as permitted under Section 4.1 or with Leasehold Mortgages permitted by Section 10, Tenant may not license, transfer, sell, assign or sublet all or any portion of its interest in any portion of the Property and this Lease without the prior written consent of the Landlord which may be granted or withheld in its sole discretion; provided that, during the Term at a time that a Tenant Default has not occurred and is continuing, Landlord will not have consent rights under this Section 7.3.2 with respect to: (i) subleases or licenses of Parking Spaces which have a term of less than the lesser of one (1) year or the remainder of the Term and which either: (A) relate to a Parking Lot Space within the Phase I area and do not commence until Phase I has been completed in accordance with this Lease and the Legal Approvals, or (B) relate to a Parking Lot Space within the Phase II area and do not commence until Phase II has been completed in accordance with this Lease and the Legal Approvals (collectively, "**Resident Parking Agreements**"), (ii) the granting of a Leasehold Mortgage to a Leasehold Mortgagee which complies and has been approved in accordance with Section 10, or (iii) a sale or transfer of Tenant's interests in the Lease to a New Qualified Owner (defined below) after Phase I has been completed in accordance with this Lease and the Legal Approvals. For purposes of this Agreement, a "**New Qualified Owner**" shall be an owner that, after simultaneously acquiring fee simple title to the CA Student Housing Project and Tenant's interests under this Lease, has at least [REDACTED] in Net Worth (defined below). "**Net Worth**" shall mean the net worth of the Tenant calculated using Generally Accepted Accounting Practices, consistently applied. No license, transfer, sale, assignment or sublease shall release the Tenant as of the Effective Date from any obligations or indebtedness of Tenant hereunder in connection with Phase I or, unless the Vacated Fambrough Drive Area already has been deleted from the real property that is subject to this Lease or that can ever be added to the Land in accordance with Section 2.2.2 prior to such license, transfer, sale, assignment or sublease, the obligations or indebtedness of Tenant hereunder with respect to Phase II. Excluding Resident Parking Agreements which shall require no notice to Landlord, at least twenty (20) days prior to any other transfer, sale, assignment or sublease of Tenant's rights in this Lease, Tenant shall give Landlord written notice of the name, address and reasonable evidence of the Net Worth of each Person to which Tenant intends to transfer, sell, assign or sublease all or any portion of its interests in any portion of the Property pursuant to this Lease; provided that, such transfer, sale or assignment shall not occur if: (i) within such twenty (20) days Landlord notifies Tenant that Landlord reasonably disputes that the proposed transferee or assignee is a New Qualified Owner and Landlord therefore declines to consent thereto, or (ii) the Phases have not been completed in accordance with this Lease and the Legal Approvals and a commercially reasonable certificate and acknowledgment from the Tenant has not been provided to Landlord evidencing that Tenant agrees that it remains liable under this Lease until such Phases are completed or, in the case of Phase II, is no longer applicable under this Lease by virtue of Section 2.2.2. Any information provided to Landlord pursuant to this Section 7.3.2 for purposes of either proving the Net Worth

of a potential New Qualified Owner or regarding the possibility of a sale or transfer of Tenant's interests in the Lease and/or CA Student Housing Project to another party shall be collectively referred to herein as the "**Tenant Confidential Information**"; provided that, Tenant Confidential Information does not include any information which:

- (a) is or becomes generally known or available to the public through no act or failure to act by the Landlord or its officers, board members, or employees;
- (b) is or becomes known to the Landlord from a third party in rightful possession thereof and owing no obligation of confidentiality to the Tenant; or
- (c) was in the possession of the Landlord or any of its officers, board members, or employees prior to the time of disclosure on a non-confidential basis.

The Landlord agrees that, after the date of receipt of any Tenant Confidential Information, except as Landlord may be required to use or disclose the same by law, by an order of a court or agency of competent jurisdiction, in a proceeding to enforce this Lease, or in connection with the filing or audit of tax returns of Landlord or KU Endowment, it will:

- (a) not use, or authorize the use of, such Tenant Confidential Information for any purpose other than for the purpose of considering if the proposed transferee is a New Qualified Owner (the "**Purpose**");
- (b) hold such Tenant Confidential Information in strict confidence and protect such Tenant Confidential Information with the same degree of care normally used to protect its own similar Tenant Confidential Information (but no less than a reasonable degree of care);
- (c) not disclose such Tenant Confidential Information to any person other than its member and those of its and its member's officers, executive committee or board members, owners, agents, advisors, consultants or affiliates who (i) reasonably need to know such Tenant Confidential Information to effectuate the Purpose, and (ii) are advised of the confidential and proprietary nature of such Tenant Confidential Information and are bound by contractual, legal or professional confidentiality obligations prohibiting the further use and disclosure of such Tenant Confidential Information; and
- (d) not copy or reproduce all or any part of such Tenant Confidential Information in any medium, except as may be strictly necessary to effectuate the Purpose.

**Section 8. FIRE AND OTHER CASUALTIES.** Tenant shall give prompt notice to Landlord after the occurrence of any fire, earthquake, act of God or other casualty to or in connection with the Property, the Improvements or any portion thereof (hereinafter sometimes referred to as a "**Casualty**") and Tenant shall repair or restore the Improvements within one hundred eighty (180) days after the date upon which the Casualty occurred to as good or better condition as existed prior to the Casualty.

## **Section 9. CONDEMNATION.**

9.1. **Notice of Taking.** Forthwith upon receipt by either Landlord or Tenant of notice of the institution of any proceedings for the taking or condemnation of all or a portion of the Property or Improvements by the government of the United States, State of Kansas, City of Lawrence, or any other governmental authority, or any corporation under the right of eminent domain (a "**Taking**"), the party receiving such notice shall promptly give notice thereof to the other, and each party may also appear in such proceeding to make a claim on their respective behalf and be represented by counsel, who may be counsel for the party receiving such notice.

9.2. **Total Taking.** In the event of a permanent Taking of the fee title to all of the Land (a "**Total Taking**"), this Lease shall thereupon terminate as of the effective date of such Total Taking except that any Base Rent, Additional Rent or other amounts payable or obligations owed by the Tenant to the Landlord as of the date of said Total Taking shall be paid or otherwise carried out in full. In the event of a Total Taking, the parties will each seek and retain their own respective compensation from the condemning authority.

9.3. **Partial Taking; Procedures and Criteria for Course of Action.** In the event of a permanent Taking of all or less than all of the Property (a "**Partial Taking**"), if Tenant reasonably determines that the continued use and occupancy of the remainder of the Property by the Tenant is or can reasonably be made to be economically viable, structurally sound, and otherwise feasible based upon the amount of eminent domain proceeds available for the purpose of paying for such restoration (the "**Restoration Criteria**"), then, upon receipt of the consent of the Leasehold Mortgagees, the entire compensation award attributable to the loss of or damage to the Improvements shall be applied to restoration of the Property and the Property shall be restored pursuant to Section 9.4; provided that any portion of the compensation award attributable to the taking of fee title to or an easement on any of the Land will be paid to Landlord. If the Tenant decides that the Restoration Criteria are not met or the Leasehold Mortgagees do not agree to allow the compensation award attributable to the loss of or damage to the Improvements to be used for restoration, then Landlord will be entitled to the compensation awarded for the Improvements and Landlord may terminate the Lease by giving a notice to the Tenant of its election to do so within sixty (60) days after such Partial Taking and the Term shall end sixty (60) days after the giving of such notice except that Tenant will still owe the Landlord any Rent or other indebtedness or obligations which accrued prior to such termination.

9.4. **Restoration.** If a decision is made pursuant to Section 9.3 to restore the remainder of the Property following receipt of a compensation award for the Improvements, the Tenant shall promptly proceed, at its expense, to commence and complete the restoration pursuant to the provisions of Section 9, using the compensation award for the Improvements for such restoration, with any excess remaining after the completion of the restoration being payable to Tenant and Landlord in equal shares. If Tenant has decided pursuant to Section 9.3 to restore the remainder of the Property, and if the cost of the restoration shall exceed the amount of the compensation awarded for the Improvements, the deficiency shall be paid by Tenant.

9.5. **No Waiver; No Change in Rents.** No provisions in this Lease limit the rights of either the Landlord or Tenant to seek compensation from a condemning authority as

provided by statute, common law, or the United States Constitution. Unless hereafter agreed Landlord will not have any obligation to refund any portion of the Base Rent or Additional Rent previously paid or result in any adjustment in the Additional Rent over the remainder of the Term.

## **Section 10. LEASEHOLD FINANCING**

10.1 From time to time, so long as a Tenant Default (defined below) has not occurred and is continuing under this Lease and there is then no event or condition which, with the passage of time, the giving of notice or both would constitute or give Landlord the option to declare a Tenant Default, Tenant may grant a Leasehold Mortgage on Tenant's leasehold estate created under this Lease solely to secure indebtedness incurred by Tenant that consists of only part or all of Tenant or its affiliate's costs related to the acquisition of any portion of the Land, costs of construction and demolition provided for in the Phases, and costs of operating, maintaining, repairing or replacing any of the Improvements expressly permitted hereunder or in writing by Landlord (together with sums advanced by the Leasehold Mortgagee (defined below) for Leasehold Mortgagee to cure a Tenant Default under this Lease or otherwise to repair or maintain such permitted Improvements as provided in the applicable Leasehold Mortgage (defined below), collectively, the "**Permitted Indebtedness**") by (i) executing one or more Mortgages on Tenant's leasehold interests created hereunder which comply with the provisions of this Section 10.1, (each a "**Leasehold Mortgage**"); and (ii) delivering to Landlord an acknowledgment in a form reasonably required by Landlord (each a "**Lender Acknowledgment**") that complies with the provisions of Section 10.2 and is executed by the holder of the Leasehold Mortgage which is unrelated to Tenant (a "**Leasehold Mortgagee**") and Tenant. If Tenant grants or suffers any Mortgage or any other mechanics, materialmens' or other lien, security interest, collateral assignment or encumbrance of any type whatsoever (other than for real property taxes not yet due) on the leasehold estate created in this Lease, the Land, any improvement thereon or any subleases or licenses permitted hereunder other than a Leasehold Mortgage as defined in this Article 10 or if any Leasehold Mortgage secures indebtedness or obligations in addition to the Permitted Indebtedness, then, in either case, at the option of Landlord, the same will be a Tenant Default under this Lease. Notwithstanding anything else to the contrary in this Section 10.1, a Leasehold Mortgage may also encumber the CA Student Housing Project and the lien of such Leasehold Mortgage on the CA Student Housing Property or any lease or other interest therein may secure indebtedness or obligations in addition to the Permitted Indebtedness so long as in accordance with Section 10.3 the Landlord approves in writing the form of the Leasehold Mortgage prior to the recording thereof to ensure that as to the lien of the Leasehold Mortgage on the leasehold created by this Lease the amount secured is no greater than the Permitted Indebtedness, which approval will not be unreasonably withheld, delayed or conditioned. The Leasehold Mortgage may contain a cross-default with Mortgages on property other than the leasehold created hereunder, the CA Student Housing Property or any lease or other interest therein, but may not also encumber such other property. The Leasehold Mortgage may provide that the holder of the Leasehold Mortgage may foreclose the same against the leasehold created hereby and against the CA Student Housing Property simultaneously pursuant to the same legal proceeding.

10.2 The Lender Acknowledgment will provide that:

10.2.1 While the Leasehold Mortgage remains unsatisfied the Leasehold Mortgagee, simultaneously with sending the same to Tenant, will give Landlord a copy of each notice of default or of a right to cure that the Leasehold Mortgagee sends to the Tenant which relates to the Leasehold Mortgage or any other related loan documents;

10.2.2 During the Term while a Leasehold Mortgage of which Landlord has written notice remains unsatisfied, the Landlord, simultaneously with sending the same to Tenant, will give Leasehold Mortgagee a copy of each notice sent by Landlord which either (a) declares a Tenant Default or (b) commences a right to cure period under Section 11.1(b) and shall permit the Leasehold Mortgagee to cure any default within the period provided in Section 11.1(b); provided that, if Landlord fails to give such notice of Tenant Default or right to cure, then the Leasehold Mortgagee shall have the right to cure such Tenant Default or to complete such cure by the later of: (1) the thirtieth (30<sup>th</sup>) day after the later date Landlord does give Leasehold Mortgagee such a notice, and (2) the outside date by which Tenant has to cure the applicable Tenant Default;

10.2.3 Within thirty (30) days after the deadline for the Tenant to cure any default by Tenant under the Leasehold Mortgage and any related loan documents (or within (5) business days after Landlord's receipt of written notice regarding the failure of Tenant to pay amounts due and owing under the Leasehold Mortgage or any related loan documents), Landlord may, but need not, cure any default by Tenant under the Leasehold Mortgage and any related loan documents; provided that, any amounts which Landlord pays or incurs to effect any such cure shall immediately be due and payable by Tenant to Landlord as Additional Rent; and further provided that, Landlord's ability to cure Tenant's defaults pursuant to this Section shall not prevent Leasehold Mortgagee from, at its option, enforcing any rights or remedies available to it under the Leasehold Mortgage or any other related loan documents during Landlord's optional cure period while such Tenant default remains uncured;

10.2.4 The Leasehold Mortgage and the rights, title and interests of Leasehold Mortgagee and its successors and assigns, whether through foreclosure or assignment in lieu of foreclosure or otherwise, in the Tenant's leasehold created hereunder are, and upon any foreclosure of the Leasehold Mortgage or assignment of the leasehold in lieu of foreclosure will not exceed the rights of Tenant under this Lease so that any successor in interest to the rights, title and interests of the Tenant will have no fewer obligations than the Tenant does under this Lease and will be liable for performing any unperformed obligations of the Tenant, whether they occur before or after any such foreclosure or assignment in lieu thereof.

10.2.5 Any other commercially reasonable representations, warranties or covenants related to the Leasehold Mortgage requested by the applicable Leasehold Mortgagee and reasonably acceptable to Landlord; provided that, Landlord may withhold, for any or no reason, Landlord's consent to any requested representation, warranty or covenant that is inconsistent with the provisions of this Lease or any other written agreement hereafter made by Landlord and Tenant or which does, or in the future could, impose obligations or liabilities upon, or lessen the rights of, the Landlord.

10.3 Each time that Tenant enters into a Leasehold Mortgage or amends an existing Leasehold Mortgage or the loan documents, or portions thereof, reasonably related to the Leasehold Mortgage, at least five (5) business days prior to executing and, as applicable, recording the same, Tenant shall provide Landlord a copy of each such document and all amendments or modifications thereof and an address to which notices are to be sent to such Leasehold Mortgagee, during which five (5) business day period Landlord may approve in writing the form of the Leasehold Mortgage or provide written objections as to why the form presented does not comply with Section 10.1; provided that, Tenant will not enter into or record a Leasehold Mortgage that Landlord has given such objections to until such objections have been resolved.

10.4 So long as any Leasehold Mortgage is in existence, unless all Leasehold Mortgagees shall otherwise expressly consent in writing, the fee title to the Land and the leasehold estate of Tenant therein created by this Lease shall not merge but shall remain separate and distinct, notwithstanding the acquisition of said fee title and said leasehold estate by Landlord, by Tenant or by a third party, by purchase or otherwise.

10.5 Tenant shall cause any Mortgage, mechanics lien, materialmen's lien, security interest, collateral assignment or other lien or encumbrance (other than for real property taxes not yet due) which does not constitute a Leasehold Mortgage permitted hereunder to be released by the sooner of ten (10) days after Landlord's written demand therefor or the sooner date by which the holder thereof may exercise any rights to enforce the same against the leasehold created hereunder, the Land, the improvements thereon or any of the Property.

## **Section 11. DEFAULT.**

11.1. **Tenant Default.** If any one or more of the following events shall have occurred and has not been remedied as hereinafter provided (each a "**Tenant Default**");

(a) Tenant's failure to pay any installment of Base Rent or Additional Rent on or within ten (10) days after the date the same is due and payable under the provisions of this Lease (or if no time for payment is otherwise specified in this Lease, then by twenty (20) days after written demand therefor from Landlord to Tenant);

(b) Tenant's failure to perform any of the other covenants, conditions and agreements herein contained on Tenant's part to be kept or performed within thirty (30) days after Landlord's written notice to Tenant specifying in the nature of such failure; or

(c) Tenant becoming the subject of a voluntary or involuntary bankruptcy, insolvency or other similar proceeding which is not dismissed within ninety (90) days of being instituted or the making by Tenant of an assignment for the benefit of creditors of substantially all of its assets;

then Landlord may give to Tenant a notice that Landlord has declared Tenant to be in default under this Lease; provided that if Landlord gives notice of a failure to perform a covenant, condition or agreement herein contained which cannot reasonably be cured within such thirty (30) day period, then the cure period shall be extended so long as Tenant, after receiving notice, commences to cure same within the thirty (30) day period and proceeds to cure the default as

soon as reasonably possible; provided that such extension will not exceed one hundred eighty (180) days.

11.2. **Landlord Remedies.** After giving Tenant a notice that Landlord has declared Tenant to have committed a Tenant Default under this Lease or if Tenant fails to cure a breach of a covenant, condition or agreement in the time frame therefor in Section 11.1(b) or to dismiss a proceeding in the time frame specified in Section 11.1(c), Landlord may do any one or more of the following:

- (a) sue Tenant for damages caused by such default;
- (b) seek specific performance of Tenant's obligations under this Lease;
- (c) enter the Land, Improvements and Property and cure Tenant's default in which case the costs incurred by Landlord in curing such default will become Additional Rent that is immediately due upon demand by Landlord; or
- (d) terminate this Lease upon a date specified in any subsequent notice given to Tenant and to any then Leasehold Mortgagee holding a Leasehold Mortgage of which Landlord has written notice; provided that if there is then a Leasehold Mortgage of which Landlord has written notice such termination of the Lease cannot be effective sooner than the date upon which the Leasehold Mortgagee's right to cure under Section 10.2.2 has expired.

Upon any termination of the Lease by Landlord due to a Tenant Default, in addition to and without prejudice to any other rights and remedies the Landlord may have, the Landlord may re-enter the Land, Improvements and Property, recover possession thereof and dispossess any or all occupants of the Land, Improvements and Property and/or exercise any other rights or remedies which Landlord has under applicable law.

11.3. **Survival of Certain Tenant Obligations.** Notwithstanding any termination of the Lease due to a Tenant Default, Tenant's obligations accrued hereunder, including without limitation to pay Base Rent or Additional Rent and to indemnify the Landlord for events or conditions which occur or exist as of the date of Tenant's vacation of the Property will survive and remain binding upon the Tenant.

11.4. **Landlord Default.** If Landlord fails to perform any of the covenants, conditions and agreements herein contained on Landlord's part to be kept or performed within forty-five (45) days after Tenant's written notice to Landlord specifying in the nature of such failure; then Tenant may give to Landlord a notice that Tenant has declared Landlord to be in default under this Lease; provided that if Tenant gives notice of a failure to perform a covenant, condition or agreement herein contained which cannot reasonably be cured within such forty-five (45) day period, then the cure period shall be extended so long as Landlord, after receiving notice, commences to cure same within the forty-five (45) day period and proceeds to cure the default as soon as reasonably possible; provided that such extension will not exceed one hundred eighty (180) days. If Landlord fails to timely cure a default by Landlord under this Lease, then Tenant's sole remedy will be to sue Landlord for actual (but not consequential) damages caused by such default or to seek specific performance of such cure.

**Section 12. NOTICES.** Any notice required or permitted to be given under this Agreement shall be in writing and shall be deemed to be an adequate and sufficient notice if given in writing and delivery is made either by (i) personal delivery, in which case the notice shall be deemed received the date of such personal delivery or refusal of receipt, or (ii) nationally recognized overnight air courier service, next day delivery, prepaid, in which case the notice shall be deemed to have been received one (1) business day following delivery to such nationally recognized overnight air courier service or refusal of receipt. All notices required or permitted to be given under this Lease shall be deemed given in accordance with the foregoing paragraph of this Section 12, and addressed as set forth in Exhibit B. Any party may change its address by timely notice to the other party.

**Section 13. GENERAL.**

13.1. Effectiveness. This Lease shall become effective on and only on its execution and delivery by each party hereto.

13.2. Recordation. Tenant agrees not to record this Lease, but each party hereto agrees to execute a Memorandum of Lease in the form attached hereto as Exhibit C and Landlord hereby consents to Tenant recording said Memorandum, and such Memorandum shall be amended and updated upon the request of any party when any additional Land becomes subject to the terms and conditions of this Lease.

13.3. Complete Understanding. This Lease represents the complete understanding between the parties hereto as to the subject matter hereof.

13.4. Amendment. This Lease may be amended only by an instrument executed and delivered by each party hereto.

13.5. Waiver. No party hereto shall be deemed to have waived the exercise of any right which it holds hereunder unless such waiver is made expressly and in writing (and, without limiting the generality of the foregoing, no delay or omission by any party hereto in exercising any such right shall be deemed a waiver of its future exercise). No such waiver made in any instance involving the exercise of any such right shall be deemed a waiver as to any other such instance, or any other such right.

13.6. Applicable law. This Lease shall be given effect and construed by application of the law of the State of Kansas, and any action or proceeding arising hereunder shall be brought in the courts of Kansas.

13.7. Time of essence. Time shall be of the essence of this Lease, except that, whenever the last day for the exercise of any right or the discharge of any obligation hereunder falls on a Saturday, Sunday or statutory holiday, the party having such right or obligation shall have until 5:00 p.m. on the next succeeding day which is not a Saturday, Sunday or statutory holiday to exercise such right or discharge such obligation.

13.8. Headings. The headings of the Sections, subsections, paragraphs and subparagraphs hereof are provided herein for and only for convenience of reference, and shall not be considered in construing their contents.

13.9. Construction. As used herein, all references made (a) in the neuter, masculine or feminine gender shall be deemed to have been made in all such genders, (b) in the singular or plural number shall be deemed to have been made, respectively, in the plural or singular number as well, and (c) to any Section, subsection, paragraph or subparagraph shall be deemed, unless otherwise expressly indicated, to have been made to such Section, subsection, paragraph or subparagraph of this Lease.

13.10. Exhibits. Each writing or plat referred to herein as being attached hereto as an exhibit or otherwise designated herein as an exhibit hereto is hereby incorporated herein and made a part hereof.

13.11. Severability. No determination by any court, governmental or administrative body or agency or otherwise that any provision of this Lease or any amendment hereof is invalid or unenforceable in any instance shall affect the validity or enforceability of (a) any other such provision, or (b) such provision in any circumstance not controlled by such determination. Each such provision shall remain valid and enforceable to the fullest extent allowed by, and shall be construed wherever possible as being consistent with, applicable law.

13.12. Disclaimer of Partnership Status. Nothing in this Lease shall be deemed in any way to create between the parties hereto any relationship of partnership, joint venture or association, and the parties hereto hereby disclaim the existence of any such relationship.

13.13. Commissions. Each party hereto hereby represents and warrants to the other that, in connection with the leasing of the Property hereunder, the party so representing and warranting has not dealt with any real estate broker, agent or finder, and there is no commission, charge or other compensation due on account thereof. Each party hereto shall defend, indemnify and hold harmless the other against and from any liability, claim of liability or expense arising out of any inaccuracy in such party's representation.

13.14. Benefit and burden. This Lease shall be binding on and inure to the benefit of the parties hereto and their respective successors and permitted assigns.

13.15. Waiver of Jury Trial. The parties hereto shall and they hereby do waive trial by jury in any action, proceeding or counterclaim brought by either of the parties hereto against the other on any matters whatsoever arising out of or in any way related to this Lease, the relationship of Landlord and Tenant, Tenant's use or occupancy of the Property, and/or any claim of injury, loss or damage.

13.16. Confidential Lease Terms. This Lease and its terms shall remain confidential and shall only be disclosed to: (i) the City, (ii) KU, (iii) Landlord, KU Endowment, Tenant and their respective members, officers, trustees, employees, agents, representatives, consultants, investors, lenders, attorneys, financial partners and investors, and (iv) other similar parties. Notwithstanding the foregoing, Landlord and KU Endowment may disclose the Lease and its terms to the extent required by law, by an order of a court or agency of competent

jurisdiction, as either Landlord or KU Endowment deems necessary in order to enforce this Lease or in connection with the filing or audit of tax returns of Landlord or KU Endowment.

**THE REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK  
– SIGNATURES ON FOLLOWING PAGE.**

IN WITNESS WHEREOF, each party hereto has caused this Lease to be executed on its behalf by its duly authorized representatives, the day and year first above written.

**LANDLORD:**

STADPKG, LLC, a Kansas limited liability company  
By: The Kansas University Endowment Association,  
a Kansas not for profit corporation, its sole member

By: 

Name: DALE SEUFFERLING

Title: PRESIDENT

**TENANT:**

Here Lawrence Property Owner, LLC  
a Delaware limited liability company

By: 

Name: THOMAS M. SCOTT

Title: an Authorized Signatory

## EXHIBIT A

### Legal Description of Land

#### TRACT 1:

Lots 9 and 10 in Block 25, SINCLAIR'S ADDITION, City of Lawrence, Douglas County, Kansas.

#### TRACT 2:

Lot 8, Block 25, in SINCLAIR'S ADDITION, an addition to the City of Lawrence, in Douglas County, Kansas, as shown by the recorded plat thereof.

#### TRACT 3:

The legal description to be revised by Landlord and Tenant to include the areas reflected in Schedule 1(a) or 1(b), as and when applicable, including, without limitation the 1029 Parcel.

EXHIBIT B

Notice Addresses

Landlord:

STADPKG, LLC  
c/o The Kansas University Endowment Association  
1891 Constant Avenue  
Lawrence, KS 66047-3743

Tenant:

c/o CA Student Living Holdings, LLC  
1 Prudential Plaza  
130 East Randolph Street  
Suite 2100  
Chicago, IL 60601  
Attn: Thomas M. Scott  
tscott@ca-ventures.com

And

Polsinelli PC  
161 North Clark Street, Suite 4900  
Chicago, Illinois 60601  
Attn: Eric Greenfield & Patrick Elder  
egreenfield@polsinelli.com & pelder@polsinelli.com

EXHIBIT C

MEMORANDUM OF LEASE

Recorded at the Request of and  
after Recording Return to:

Polsinelli PC  
Attn: Eric Greenfield  
161 N. Clark Street, Suite 4200  
Chicago, IL 60601

Site Address: \_\_\_\_\_  
Tax Parcel ID# \_\_\_\_\_  
Legal Description Attached as Exhibit A

**MEMORANDUM OF LEASE**

This MEMORANDUM OF LEASE (this “**Memorandum**”) is made as of \_\_\_\_\_, 2016, by and between STADPKG, LLC, a Kansas limited liability company (“**Landlord**”), and Here Lawrence Property Owner, LLC (“**Tenant**”), as a memorandum of an unrecorded Lease dated \_\_\_\_\_, 2016 (the “**Lease**”), between Lessor and Lessee concerning the real property commonly known as: \_\_\_\_\_, and legally described on **Exhibit A** attached hereto (the “**Leased Property**”). Capitalized terms not defined herein are defined in the Lease.

1. Lease: Landlord leases to Tenant and Tenant leases from Landlord all of Lessor’s right, title and interest in the Leased Property upon the terms, covenants and conditions set forth in the Lease, which provisions are incorporated into this Memorandum by reference.

2. Term: The Original Term of the Lease commenced on the Commencement Date of \_\_\_\_\_, 2016 and expires on the Expiration Date of \_\_\_\_\_, 2066, unless earlier terminated or extended in accordance with the provisions of the Lease.

3. Interpretation: This Memorandum is not a complete summary of the Lease. Provisions in this Memorandum shall not be used in interpreting the Lease provisions. In the event of conflict between the Memorandum and the unrecorded Lease, the unrecorded Lease shall control.

SIGNATURES AND ACKNOWLEDGEMENTS ON FOLLOWING PAGES.

TENANT:

Here Lawrence Property Owner, LLC,  
a Delaware limited liability company

By: 

Name:

Thomas M. Scott

Title:

Authorized Signatory

STATE OF Illinois )  
COUNTY OF Cook ) ss.

I certify that I know or have satisfactory evidence that Thomas M. Scott, is the person who appeared before me, and he/she acknowledged that he/she signed this instrument, on oath stated that he/she were authorized to execute the instrument and acknowledged that he is the managing member of Here Lawrence Property Owner, LLC, a Delaware limited liability company, to be the free and voluntary act of such party for the uses and purposes mentioned in this instrument.

DATED: 8/2/2016



  
(Signature of Notary Public)

Debra A. Downs  
(Printed Name of Notary Public)

My Appointment expires 1/22/2020

**LANDLORD:**

STADPKG, LLC, a Kansas limited liability company  
By: The Kansas University Endowment Association,  
a Kansas not for profit corporation, its sole member

By: 

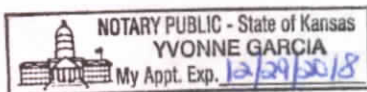
Name: DALE SEAFURLING

Title: PRESIDENT

STATE OF KANSAS )  
 ) ss.  
COUNTY OF Douglas )

I certify that I know or have satisfactory evidence that Dale Seafurling, in his/her capacity stated below is the person who appeared before me, and he/she acknowledged that he/she signed this instrument, on oath stated that he/she were authorized to execute the instrument and acknowledged it as the President, of The Kansas University Endowment Association, a Kansas not for profit corporation in its capacity as the sole member of STADPKG, LLC, a Kansas limited liability company, to be the free and voluntary act of such party for the uses and purposes mentioned in this instrument.

DATED: August 3, 2016



  
(Signature of Notary Public)

Yvonne Garcia  
(Printed Name of Notary Public)

My Appointment expires December 29, 2018

EXHIBIT A

LEGAL DESCRIPTION OF PROPERTY

EXHIBIT D

FORM OF SPECIAL WARRANTY DEED

**SPECIAL WARRANTY DEED**

**THIS INDENTURE** is made on the \_\_\_\_ day of \_\_\_\_\_, 2016, by and between \_\_\_\_\_ ("Grantor"), and **STADPKG, LLC**, a Kansas limited liability company with a mailing address of 1891 Constant Avenue Lawrence, KS 66047-3743 ("Grantee").

WITNESSETH: That Grantor, in consideration of the sum of Ten Dollars and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, does by these presents, Sell and Convey unto said Grantee, its successors and assigns, the parcel of real estate which is situated in Douglas County, Kansas, and more fully described on Exhibit A which is attached hereto and incorporated herein by this reference.

ALL SUBJECT to easements, restrictions, reservations, covenants and rights of way of record, zoning laws, taxes for the year 2017 and subsequent years, any matter that would be disclosed by an accurate survey of the foregoing and any encumbrances created by Grantee.

TO HAVE AND TO HOLD THE SAME, together with all and singular the tenements, hereditaments and appurtenances thereunto belonging or in anywise appertaining, forever. And said Grantor, for itself and its respective successors and assigns, does hereby covenant, promise and agree to and with said Grantee, that the Grantor will warrant and forever defend said interest unto the said Grantee, against said Grantor and its successors and assigns, and all and every person or persons whomsoever lawfully claiming or to claim the same by, through or under the Grantor, except for those matters aforesaid.

IN WITNESS WHEREOF, the Grantor has hereunto set forth its respective hand, the day and year first above written.

\_\_\_\_\_,  
a \_\_\_\_\_

By: \_\_\_\_\_

STATE OF \_\_\_\_\_ )

)

COUNTY OF \_\_\_\_\_ )

This instrument was acknowledged before me on \_\_\_\_\_, 2016, by \_\_\_\_\_ as the \_\_\_\_\_ of \_\_\_\_\_, a \_\_\_\_\_, who is personally known to me to be such officer, and who acknowledged that the execution of the foregoing was the free act and deed of said \_\_\_\_\_.

(SEAL)

\_\_\_\_\_  
\_\_\_\_\_, Notary Public

My Appointment Expires: \_\_\_\_\_

EXHIBIT A

LEGAL DESCRIPTION OF PROPERTY

**Schedule 1(a)**

**Depiction of Phase I Project Relating to 0 Parcel, 1029 Parcel,  
1031 Parcel and Alley Vacation Parcel**

**See Attached.**

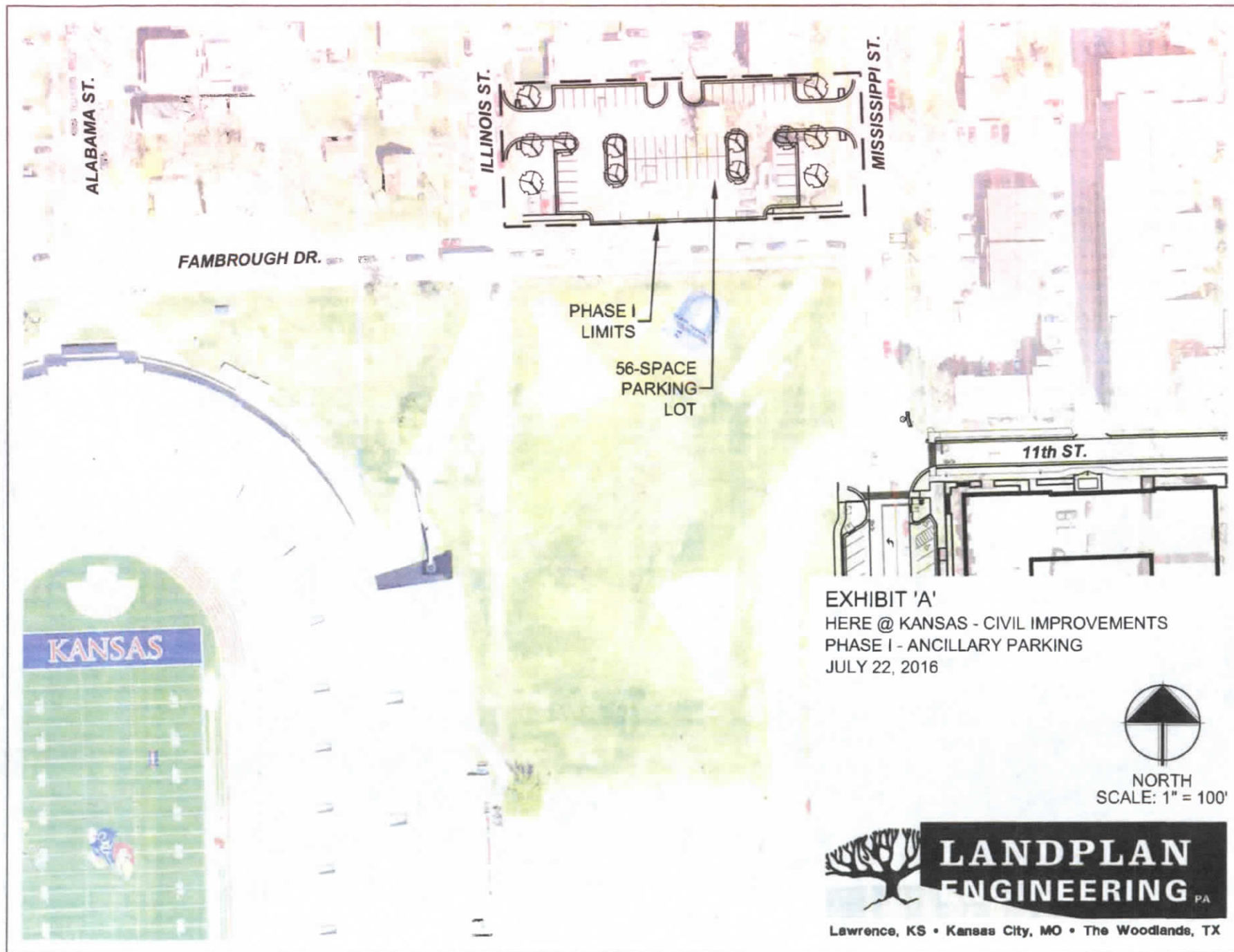


EXHIBIT 'A'  
HERE @ KANSAS - CIVIL IMPROVEMENTS  
PHASE I - ANCILLARY PARKING  
JULY 22, 2016



NORTH  
SCALE: 1" = 100'



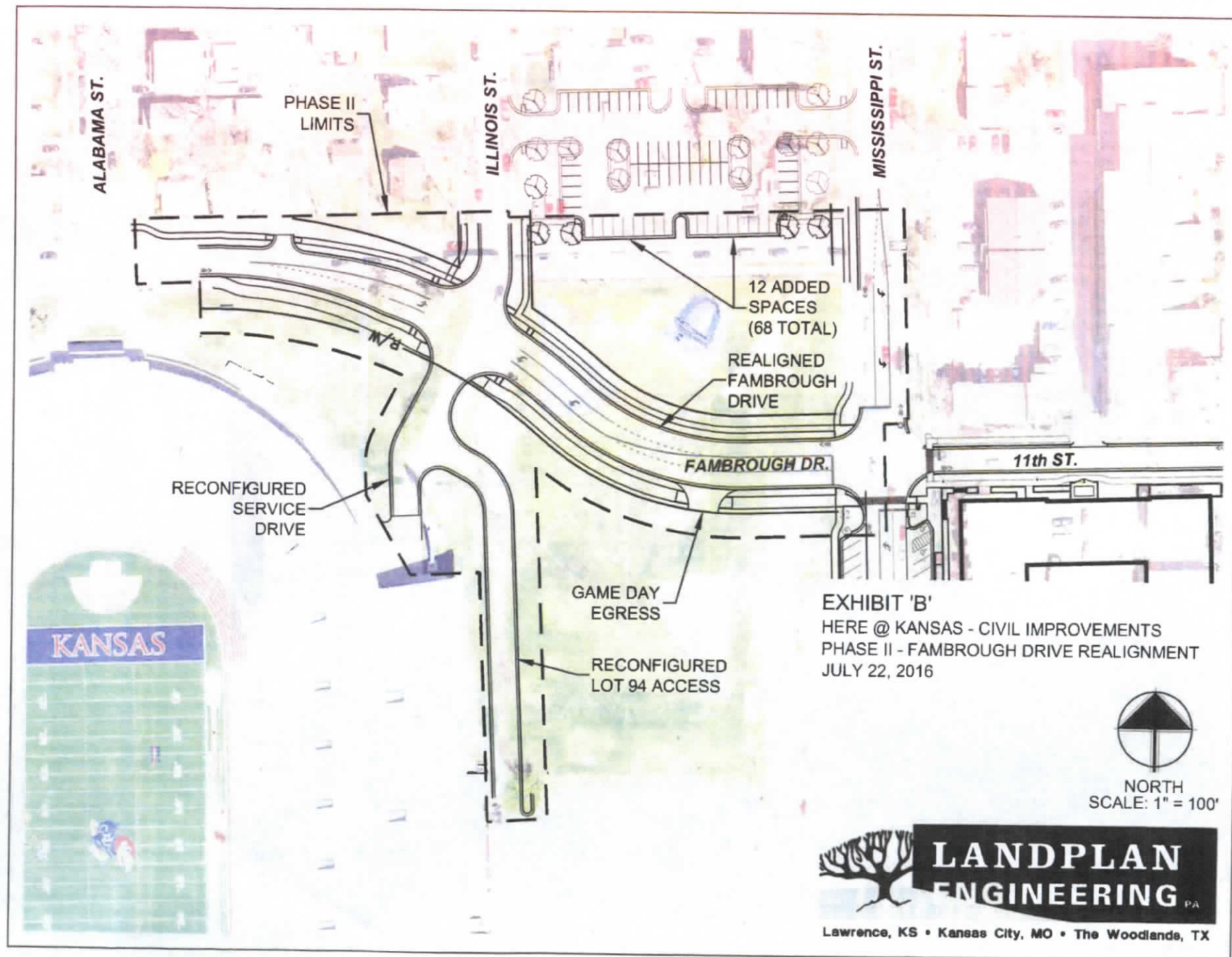
**LANDPLAN**  
**ENGINEERING** PA

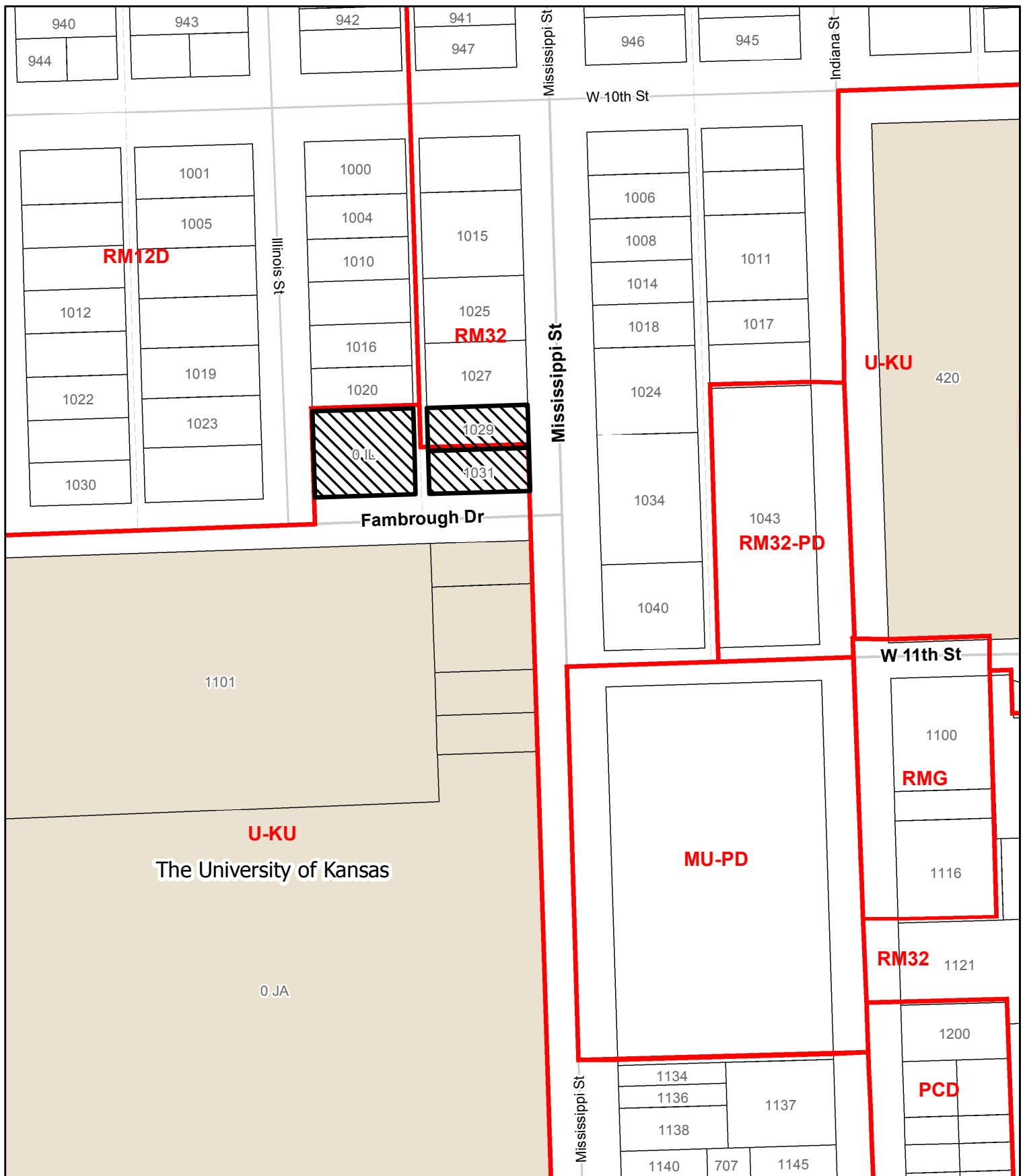
Lawrence, KS • Kansas City, MO • The Woodlands, TX

**Schedule 1(b)**

**Depiction of Phase II Project**

**See Attached.**





**Z-16-00310: Rezone 0.918 acres from RM32 and U-KU Districts to RM32-PD District and  
PDP-16-00311: Preliminary Development Plan for HERE @ Kansas  
Located at 1029 & 1031 Mississippi St and the Northeast corner of Fambrough Dr & Illinois St**





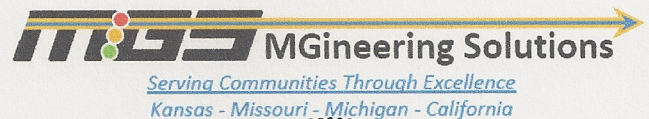
# Revised Traffic Impact Study

## Here @ Kansas A Mixed-Use Redevelopment

SWC of Indiana Street and 11<sup>th</sup> Street  
Lawrence, Kansas

Prepared  
for  
Landplan Engineering, P.A.

Prepared  
By



Mehرداد Givechi, P.E., P.T.O.E.

**September 2016**

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## ***Introduction***

### **Background**

On 12/15/2013, a Traffic Impact Study (TIS) was completed for the proposed HERE @ Kansas mixed-use development to be located on the southwest corner of the intersection of Indiana Street and 11<sup>th</sup> Street in Lawrence, Kansas. Since then, a number of changes to the development project have instigated the need for a revised traffic impact study. The purpose of this report is to document the changes from the original plan and reassess the impact of these changes on the surrounding street network in the study area.

### **Proposed Changes to the Project**

The proposed changes consist of:

- An increase in the number of dwelling units from 172 to 237 units;
- An increase in the number of bedrooms from 592 to 624 bedrooms;
- A reduction in the general retail space from 11,000 to 7,676 sq. ft.;
- An addition of a restaurant with an area of 5,882 sq. ft.;
- A reduction in the number of parking stalls in the garage from 592 to 510 stalls with egress and ingress from Mississippi Street only. As a result of this reduction, additional parking spaces will be provided near the site on the northwest corner of the intersection of Fambrough Drive and Mississippi Street. The two existing apartments on this parcel of land will be razed and the land will be converted to a surface parking lot having 68 parking stalls. Access to this surface lot will be provided at two locations – one on Mississippi Street and one on Illinois Street. Moreover, there will be 108 on-street angled parking spaces along Indiana and Mississippi Streets (57 on Mississippi and 51 on Indiana Street);
- A number of geometric improvements will be made to improve safety and operational efficiency of traffic in the study area. They include (See Figure 13 of Appendix I for a concept layout):
  - Realignment of Fambrough Drive to the south in order to line up with 11<sup>th</sup> Street creating a 4-legged intersection at Mississippi Street. The new lane configurations will consist of:

- A dedicated left-turn lane and a shared through and right-turn lane for north and south approaches (Mississippi Street);
- A dedicated right-turn lane and a shared through and left-turn lane for west approach (realigned Fambrough Drive); and
- One shared lane for east approach (11<sup>th</sup> Street).

This intersection will be controlled by STOP signs on all approaches (See justification in the *Traffic Signal Warrant Analysis* section of this report).

- Slight relocation of the intersection of Fambrough Drive and Illinois Street to the west and creating a 4-legged intersection with the south leg providing access to KU's Lot 94. Doing so, will eliminate the direct access to Lot 94 from Mississippi Street. The lane configurations for this intersection will consist of:

- A dedicated left-turn lane and a shared through and right-turn lane for east and west approaches (Realigned Fambrough Drive); and
- One shared lane for north and south approaches (Illinois Street/Access to KU's Lot 94)

This intersection will be controlled by STOP signs on Illinois Street and access to KU's Lot 94.

### *Site Description*

The proposed redevelopment site is located on the southwest corner of the intersection of 11<sup>th</sup> Street and Indiana Street, in proximity to the main campus of the University of Kansas in Lawrence, Kansas. It is bounded by Indiana Street to the east, 11<sup>th</sup> Street to the north, Mississippi Street to the west and residential development to the south (See Location Map, Figure 1 of Appendix 1).

### *Pre-Development Land Use*

At the time this report was prepared, the construction of the HERE @ Kansas development was far along and near completion. Under the pre-development conditions, the project site was occupied by the "Berkeley Flats" apartment complex comprising of 10 individual buildings with a total of 102 dwelling units. In addition, there was a single family dwelling unit nested in the middle of the site with frontage on Indiana

Street. Due to steep topography along the west side of Indiana Street, access to this single family dwelling was provided in the back via “Berkeley Flats” parking lot.

The area around and near the site is fully developed with predominate use as residential and student housings with the Oread Hotel a half block to the south and the university football stadium across the street to the west.

#### *Proposed “HERE @ Kansas” Development*

Under the proposed development plan, the entire “Berkeley Flats” complex including the existing single family dwelling unit was razed and replaced by a mid-rise building as a mixed-use development (See Site Plan, Figure 2 of Appendix I). As mentioned earlier, the proposed development project will consist of 237 dwelling units of student apartments consisting of 624 bedrooms, a 5,882 sq. ft. restaurant, and approximately 7,676 sq. ft. of general retail space.

#### *Parking*

The project will have a total of 686 parking spaces. The garage will provide for 510 spaces. Additional 108 on-street angled parking spaces will be provided on Mississippi and Indiana Streets (57 and 51 stalls respectively). A surface lot will also be constructed on the northwest corner of the existing intersection of Mississippi Street and Fambrough Drive to provide for 68 additional parking spaces.

#### *Access*

Under the proposed development plan, access to the site will be as follows:

- No access on 11<sup>th</sup> Street;
- Access to the garage will be provided on Mississippi Street at two points with ingress to the south (approximately 383 ft. from 11<sup>th</sup> Street) and egress to the north (approximately 200 ft. from 11<sup>th</sup> Street); and
- Access to the surface lot between Mississippi and Illinois Streets will be provided at two locations – one on Mississippi Street and one on Illinois Street.

### Zoning

The Oread Neighborhood Plan, which is incorporated into the Horizon 2020 Future Land Use Plan, calls for this site to be mixed-use with a district two (2) high density overlay. The zoning for the HERE @ Kansas site was changed from RM32 to MU-PD in 2014. The zoning for the proposed off-site parking lot must match the intensity of the use which it serves. Currently the east half of the parking lot site is zoned RM32 and the west half RM12D. Based on the residential density of the HERE @ Kansas development, the zoning for the parking lot must change from RM32 and RM12D to RM32-PD.

### Purpose

The purpose of this study is to:

1. Evaluate the existing operating conditions of traffic at the following intersections per city staff consensus:
  - Mississippi Street and 11<sup>th</sup> Street
  - Mississippi Street and Realigned Fambrough Drive
  - Mississippi Street and Driveways to the site
  - Mississippi Street and 9<sup>th</sup> Street (signalized)
  - 11<sup>th</sup> Street and Indiana Street
  - 11<sup>th</sup> Street and Tennessee Street (signalized)
  - 11<sup>th</sup> Street and Kentucky Street (signalized)
2. Identify existing operational and/or safety deficiency(s), if any, at the above-mentioned intersections and recommend mitigation measures as needed.
3. Assess impact of the proposed development on the subject intersections.
4. Recommend on-site and off-site improvements, as the result of this development.
5. Evaluate future operating conditions of traffic for target year 2030.

## ***Data Collection and Summary***

Data collection efforts for this study included:

- Field observations and measurements to collect pertinent information such as lane configurations, posted speed limits, traffic control devices, and etc.
- Compilation of the existing vehicular turning movement counts at the subject intersections. For the signalized intersections, most recent counts were obtained from City's Public Works Department records. For the remaining intersections, where no counts were available, turning movement counts were conducted during both morning and afternoon peak hours of typical weekdays in November 2013 while university classes were in session.

***It is to be noted that all traffic counts used for this analysis represent data prior to start of any construction activities for this project (which started in January 2015) in order to represent typical traffic patterns in the study area.***

The following paragraphs summarize the results of data collection and field observations.

### ***Roadway Network Geometry & Operational Characteristics***

In the vicinity of the redevelopment site (See Figure 2 of Appendix I for summary):

- Mississippi Street runs north/south along the west side of the project site with one through lane and one parking lane in each direction, curb/gutter sections and no posted speed limit (Per state law, however, the speed limit is 30 mph whenever not posted). North of 11<sup>th</sup> Street, Mississippi Street is designated as a "Collector" on the City's T2040 Thoroughfare Map, whereas south of 11<sup>th</sup> Street, it is a "Local" Street.
- 11<sup>th</sup> Street runs east/west along the north side of the project site with one lane in each direction, curb/gutter sections, no on-street parking and no posted speed limit. According to the City's T2040 Thoroughfare Map, 11<sup>th</sup> Street is designated as a "Collector".
- Indiana Street runs north/south along the east side of the project site with one through lane in each direction, on street parking lane along the west side,

curb/gutter sections and no posted speed limit. It is designated as a “Local” Street on the City’s T2040 Thoroughfare Map.

- Fambrough Drive runs east/west about half a block north of the project site with one lane in each direction, no on-street parking and no posted speed limit. It is designated as a “Collector” Street on the City’s T2040 Thoroughfare Map.
- 9<sup>th</sup> Street runs east/west two blocks north of the project site with two lanes in each direction, no on-street parking, and posted speed limit of 30 mph. It is designated as a “Minor Arterial” on the City’s T2040 Thoroughfare Map.
- Tennessee Street runs north/south three blocks east of the project site with posted speed limit of 30 mph. It is a one-way street in the southbound direction with two travel lanes and on-street parking along the west side. It is designated as a “Collector” on the City’s T2040 Thoroughfare Map.
- Kentucky Street runs north/south four blocks east of the project site with posted speed limit of 30 mph. It is a one-way street in the northbound direction with two travel lanes and on-street parking along the east side. It is designated as a “Collector” on the City’s T2040 Thoroughfare Map.
- The intersections of 11<sup>th</sup> Street with Mississippi Street and Indiana Street are both “all-way-stop-controlled” intersections with one lane on each approach.
- The intersection of Mississippi and Fambrough Drive is a “T” intersection controlled by a stop sign on Fambrough Drive with one lane on each approach.
- The intersection of 9<sup>th</sup> Street and Mississippi Street is a pre-timed (uncoordinated) signalized intersection operating under “protected/permissive” left-turn phase for eastbound/westbound movements and “permissive only” left-phase for northbound/southbound movements. The lane configurations for this intersection are shown in Figure 3 of Appendix I.
- The intersection of 11<sup>th</sup> Street and Tennessee Street is a pre-timed (time-base coordinated) signalized intersection operating under “protected/permissive” left-turn phase for westbound movement and “permissive only” left-turn phase for southbound movement. The lane configurations for this intersection are shown in Figure 3 of Appendix I.

- The intersection of 11<sup>th</sup> Street and Kentucky Street is a pre-timed (time-base coordinated) signalized intersection operating under “permissive only” left-turn phase for eastbound and northbound directions. The lane configurations for this intersection are shown in Figure 3 of Appendix I.

### Manual Traffic Counts

For the purpose of this analysis, the most recent vehicular turning movement counts were obtained from the City’s Public Works Department records. These counts were conducted at the signalized intersections a couple of years prior to start of any construction activities for this project. For the unsignalized intersections where no data was available from the city, vehicular turning movement counts were conducted during both morning and afternoon peak-hours (7:00 – 9:00 and 4:00 – 6:00) of typical weekdays in November and early December 2013 when the university classes were in session. The results, as summarized in Appendix IV and illustrated in Figures 4 and 5 of Appendix I, indicate that the peak characteristics of traffic along the street network within the study area are as follows:

- On a typical weekday, the morning peak occurs between 7:30 and 8:30 with
  - Mississippi Street carrying peak-hour volumes of approximately 240 vph south of 11<sup>th</sup> Street; 420 vph between 11<sup>th</sup> Street and Fambrough Drive; and 300 vph north of Fambrough Drive. The directional distribution of traffic on this facility is generally 80% - 20% (southbound – northbound) except between 11<sup>th</sup> Street and Fambrough Drive, which is approximately 62% - 38% (southbound – northbound).
  - 11<sup>th</sup> Street carrying peak-hour volumes of approximately 325 vph between Mississippi Street and Indiana Street; 180 vph west of Tennessee Street; 345 vph between Tennessee Street and Kentucky Street; and 515 vph east of Kentucky Street. The directional distribution of traffic on this facility is generally 55% - 45% (westbound – eastbound)
  - Fambrough Drive carrying peak-hour volumes of approximately 500 vph west of Mississippi Street with directional distribution of 65% - 35% (westbound –eastbound).

- On a typical weekday, the afternoon peak occurs sometime between 4:30 and 5:45 with
  - Mississippi Street carrying peak-hour volumes of approximately 425 vph south of 11<sup>th</sup> Street; 740 vph between 11<sup>th</sup> Street and Fambrough Drive; and 500 vph north of Fambrough Drive. The directional distribution of traffic on this facility is generally 30% - 70% (southbound – northbound) except between 11<sup>th</sup> Street and Fambrough Drive, which is approximately 40% - 60% (southbound – northbound).
  - 11<sup>th</sup> Street carrying peak-hour volumes of approximately 510 vph between Mississippi Street and Indiana Street; 350 vph west of Tennessee Street; 500 vph between Tennessee Street and Kentucky Street; and 775 vph east of Kentucky Street. The directional distribution of traffic on this facility is generally 50% - 50% (westbound – eastbound)
  - Fambrough Drive carrying peak-hour volumes of approximately 500 vph west of Mississippi Street with directional distribution of 50% - 50% (westbound – eastbound).
- The intersection of 11<sup>th</sup> Street and Mississippi Street carries approximately 545 vph and 860 vph during the morning and afternoon peak-hours, respectively.
- The intersection of 11<sup>th</sup> Street and Indiana Street carries approximately 460 vph and 765 vph during the morning and afternoon peak-hours, respectively.
- The intersection of Fambrough Drive and Mississippi Street carries approximately 510 vph and 865 vph during the morning and afternoon peak-hours, respectively.

### Transit Services

The street network surrounding the project site is served by KU on Wheels - the transit system of the University of Kansas, a division of KU Parking & Transit. Currently, there are seven bus routes with designated stops on 11<sup>th</sup> Street, Indiana Street, Mississippi Street and Fambrough Drive with variable schedules throughout the day - routes 11, 29, 30, 36, 38, 42 and 43.

## ***Evaluation of the Existing/Pre-Development Operating Conditions***

### **Volume/Capacity Analysis**

A volume/capacity analysis (using Synchro 8 Software and methodologies outlined in the 2010 Highway Capacity Manual (HCM) published by TRB) was conducted to determine the level-of-service (LOS) for all movements at the intersections under study during both morning and afternoon peak-hours of a typical weekday.

Level-of-service, as defined in the HCM, describes the quality of traffic operating condition and ranges from “A” to “F”, with LOS “A” representing the best (most desirable with minimum delay) conditions, LOS “E” the capacity of the facility and LOS “F” the worst (severely congested with excessive delays). The following chart outlines the level-of-service criteria for roundabouts, unsignalized and signalized intersections.

<b>Level-Of-Service</b>	<b>Control Delay for Unsignalized Intersections (seconds/vehicle)</b>	<b>Control Delay for Signalized Intersections (seconds/vehicle)</b>	<b>Volume/Capacity Ratio for Roundabouts (aaSIDRA Criteria)</b>
A	0 – 10	0 – 10	< 0.6
B	> 10 – 15	> 10 – 20	0.6 – 0.7
C	> 15 – 25	> 20 – 35	0.7 – 0.8
D	> 25 – 35	> 35 – 55	0.8 – 0.9
E	> 35 – 50	> 55 – 80	0.9 – 1.0
F	> 50	> 80	> 1.0

The results of analysis, as summarized in Appendix II and illustrated in Figure 6 of Appendix I, indicate that during the peak-hours of a typical weekday all movements at all subject intersections operate at LOS “B” and higher except for the eastbound movement on Fambrough Drive that operates at LOS “C” during the afternoon peak-hour under the existing alignment. With the proposed realignment and geometric improvements, the LOS for the eastbound movement at Fambrough Drive and Mississippi Street will improve to “B” and higher.

### Intersection Sight Distance

Field observations indicate that none of the intersections within the study area experience sight distance restrictions because all on-street parking spaces are set back from the intersections and outside the departure sight triangles.

### **Revised Trip Generation Analysis**

The trip generation of a proposed land development project is typically estimated using trip generation rates suggested by the Institute of Transportation Engineers, Trip Generation Manual, 9<sup>th</sup> Edition. A review of the individual land use components of the proposed “HERE @ Kansas” mixed-use development indicates that all of the uses are listed in the ITE Trip Generation Manual as summarized below:

<b>Project Component</b>	<b>ITE Land-Use Code</b>	<b>Independent Variable</b>
Apartments	220	No. of Units
or	or	or
Mid-Rise Apartments	221	No. of Persons (Bedrooms)
High-Turnover, Sit-Down Restaurant	932	Gross Floor Area
Specialty Retail Shops	826	Gross Floor Area

For the purpose of this analysis, the following steps are taken to estimate trips that are added to the street network as “new trips” (otherwise known as external trips).

- Step 1: Trips generated by the individual components are estimated separately and results combined to represent anticipated “gross total trips” for the project site. Using above-mentioned ITE land use codes and their independent variables, both “Average Rate Method” and “Regression Equation Method” were evaluated and the method that generated most trips with statistical significance was selected for analysis.
- Step 2: Because the retail component of the project is relatively small in size, the “pass-by” trips for this component are assumed to be zero.

- Step 3: The project site is located within walking distance of the university's main campus and also located on several transit bus routes. Therefore, the "unadjusted total trips" estimated in step 1 above are a combination of vehicular, bus, pedestrian, and bike trips. To estimate the actual vehicular trips, these numbers should be reduced using a discount factor for the area. In addition, these trips should be further discounted to account for some internal trips between different land uses within the project site. In the absence of such discount factors, a value of 10% is viewed as reasonable.
- Step 4: The project site was occupied by an apartment complex (a.k.a. Berkeley Flats) whose trips in/out of the site are eliminated as a result of this project. This results in further reduction in the number of trips on the network (See Figure 9 of Appendix I for details).

The results of the trip generation analysis, as summarized in Table 1 and shown in detail in Appendix III, indicate that on a typical weekday, the external trips (net added new trips) for this project will likely be as follows:

- On average, 214 new trip-ends (110 inbound and 104 outbound) during the morning peak-hour of a typical weekday;
- On average, 292 new trip-ends (150 inbound and 141 outbound) during the afternoon peak-hour of a typical weekday; and
- On average, 3,000 new trip-ends during 24-hour period of a typical weekday.

#### Analysis Time Period

An overview of the existing traffic volumes in the study area and their peak characteristics, in conjunction with estimated trips generated from the proposed "HERE @ Kansas" mixed-use development, indicate that the most critical peak period will likely occur during the afternoon peak-hour of a typical weekday. For the purpose of this analysis, however, both morning and afternoon peak-hours are selected as the analysis time periods.

**Table 1**  
**Summary of Trip Generation Calculations <sup>a, b</sup> for the Proposed "HERE @ Kansas" Mixed-Use Development**  
**(Southwest Corner of 11th Street and Indiana Street, Lawrence, KS)**

Scenario	Land Use (ITE CODE)	Size	Typical Weekday						
			24-hr, 2-Way Volume (vpd)	AM Peak-Hour (vph)			PM Peak-Hour (vph)		
				Enter	Exit	Total	Enter	Exit	Total
1	Apartments (220) *	237 units	1,560	24	96	120	96	52	148
	General Retail Shops (826)	7,676 GSF	488				9	12	21
	High Turnover Restaurant (932)	5,882 GSF	748	35	29	64	35	23	58
	Total (Scenario 1)		2,796	59	125	184	140	87	227
2	Apartments (220) *	624 bedrooms	2,101	87	86	173	123	122	245
	General Retail Shops (826)	7,676 GSF	488				9	12	21
	High Turnover Restaurant (932)	5,882 GSF	748	35	29	64	35	23	58
	Total (Scenario 2)		3,337	122	115	237	167	157	324
3	Mid-Rise Apartments (223) *	237 units	920	22	49	71	53	39	92
	General Retail Shops (826)	7,676 GSF	488				9	12	21
	High Turnover Restaurant (932)	5,882 GSF	748	35	29	64	35	23	58
	Total (Scenario 3)		2,156	57	78	135	97	74	171
4	Mid-Rise Apartments (223)	624 bedrooms							
	General Retail Shops (826)	7,676 GSF	488				9	12	21
	High Turnover Restaurant (932)	5,882 GSF	748	35	29	64	35	23	58
	Total (Scenario 4)		1,236	35	29	64	44	35	79
	Gross Total Trips (Worse Case Scenario 2)		3,337	122	115	237	167	157	324
	Internal Trips @ 10% (due to nearby amenities: transit and walkability to KU C		-334	-12	-12	-24	-17	-16	-32
	External Trips (added new trips)		3,003	110	104	214	150	141	292

NOTES:

- a) The trip generation numbers in this table are calculated using the rates suggested in the "ITE Trip Generation Manual", 9th Edition.
  - b) The number of trips are determined by both Weighted Average Rate Method and the Regression Equation Method and the method that generates more trips with statistical significance is selected for analysis. (\* denotes use of regression equation)
- Blank cells indicate no data available.

## ***Revised Trip Distribution and Assignment Analysis***

For the purpose of this study, it is assumed that the trip distribution patterns for the development site will follow the existing traffic patterns as illustrated in Figure 7 of Appendix I and summarized below:

### ***During Morning Peak-Hour of a Typical Weekday***

- 59% from north / 57% to north on Mississippi Street;
- 20% from east / 27% to east on 11<sup>th</sup> Street;
- 11% from west / 6% to west on Fambrough Drive; and
- 10% from south / 10% to south on Mississippi Street.

### ***During Afternoon Peak-Hour of a Typical Weekday***

- 46% from north / 51% north on Mississippi Street;
- 15% from east / 15% to east on 11<sup>th</sup> Street;
- 9% from west / 4% to west on Fambrough Drive; and
- 30% from south / 30% from south on Mississippi Street.

Using the above trip distribution patterns, trips generated by the proposed development site are assigned to individual movements within the study area as illustrated in Figure 8 of Appendix I.

## ***Revised Impact Assessment for the Proposed Development***

### ***Volume/Capacity Analysis***

An evaluation of the “Existing – Berkeley Flats + Proposed HERE @ Kansas Mixed-Use development” traffic conditions indicates that, with the proposed Fambrough realignment and geometric improvements, all movements at subject intersections will likely operate at LOS “C” and higher during both peak-hours of a typical weekday (See Figures 10 and 11 of Appendix I and summary in Appendix II for details).

### Traffic Signal Warrant Analysis

A signal warrant analysis, using methodology outlined in the MUTCD 2009 Edition (with Revisions 1 & 2), was conducted to determine the need for installation of a traffic signal at the intersection of Mississippi Street and realigned Fambrough Drive with the proposed lane configurations illustrated in Figure 13 of Appendix I. For this analysis, only the Peak-Hour Vehicular Volume (Warrant #3) can be evaluated because the only trip data available for the project site are for the peak-hours of a typical weekday. Other warrants such as 4-hour vehicular volumes, 8-hour vehicular volumes, pedestrian volumes, crash history can only be evaluated in the future when the project is fully constructed and occupied; and traffic in the study area is normalized.

The results of the analysis for this study, as summarized in Appendix V, indicate that traffic volume requirements for the Peak-Hour Volume Warrant (Warrant #3) are not met for either of the peak-hours of a typical weekday.

### ***Impact Assessment for Target Year 2030***

Figure 12 of Appendix I illustrates the forecasted Average Daily Traffic (ADT) in the study area for target year 2030. It also highlights LOS for target year 2030. This information is provided by KDOT Planning Bureau based on their Transportation Demand Model. According to this information

- Mississippi Street, south of 11<sup>th</sup> Street, will likely carry volumes of approximately 2,000 vpd experiencing no congestion with LOS “C” or higher;
- Mississippi Street, north of 11<sup>th</sup> Street, will likely carry volumes of approximately 8,000 vpd experiencing no congestion with LOS “C” or higher;
- 11<sup>th</sup> Street, east of Mississippi Street, will likely carry volumes in the range of 6,000 vpd to 7,000 vpd experiencing no congestion with LOS “C” or higher; and
- Fambroufg Drive, west of Mississippi Street, will likely carry volumes in the range of 6,000 vpd to 7,000 vpd experiencing no congestion with LOS “C” or higher.

## **Summary and Recommendations**

### Existing Conditions (See Figures 3 - 6 of Appendix I)

- Under the existing geometric and operating conditions, all movements at all intersections in the study area operate at LOS “B” and higher with ample “reserve” capacity except for the eastbound movement on Fambrough Drive at its intersection with Mississippi Street that operates at LOS “C” with limited “reserve” capacity. Realignment of Fambrough Drive with the proposed lane configurations improves the LOS for this movement to “B”.
- The section of Mississippi Street between 11<sup>th</sup> Street and Fambrough Drive experiences some congestion with heavy left-turn movements in the northbound direction during both morning and afternoon peak-hours of a typical weekday (approximately 79% and 41%, respectively). Realignment of Fambrough Drive to create a 4-legged intersection at Mississippi and 11<sup>th</sup> Street will eliminate the offset and alleviates the congestion. (See Figure 13 of Appendix I for details).

### Existing + Proposed HERE @ Kansas Development (See Figures 7 – 13 of Appendix I)

The results of this impact analysis indicate that the proposed “HERE @ Kansas” mixed-use development will have nominal impact on the capacity of the roadway network in the study area causing slight increase in the delay values but no reduction in LOS for any of the movements, except for some of the movements at the intersection of Mississippi Street and realigned Fambrough Drive that will likely operate at LOS “C” – still an acceptable LOS with some reserve capacity. To achieve this, an ALL-WAY STOP control with the following lane configurations at this intersection is recommended:

- North approach and south approach (on Mississippi Street) will each have a dedicated left-turn lane with 100 ft. storage length; and a shared through and right-turn lane;
- West approach (on realigned Fambrough Drive) will have a dedicated right-turn lane with 150 ft. storage length and a shared through and left-turn lane;
- East approach will remain as one lane approach; and

The results also indicate that, with only peak-hour volume information at hand, the requirements for consideration of a traffic signal at this location are not met. A comprehensive traffic signal warrant analysis, to examine other signal warrants, can only be conducted in the future when the project is fully constructed and occupied; and traffic in the study area is normalized.

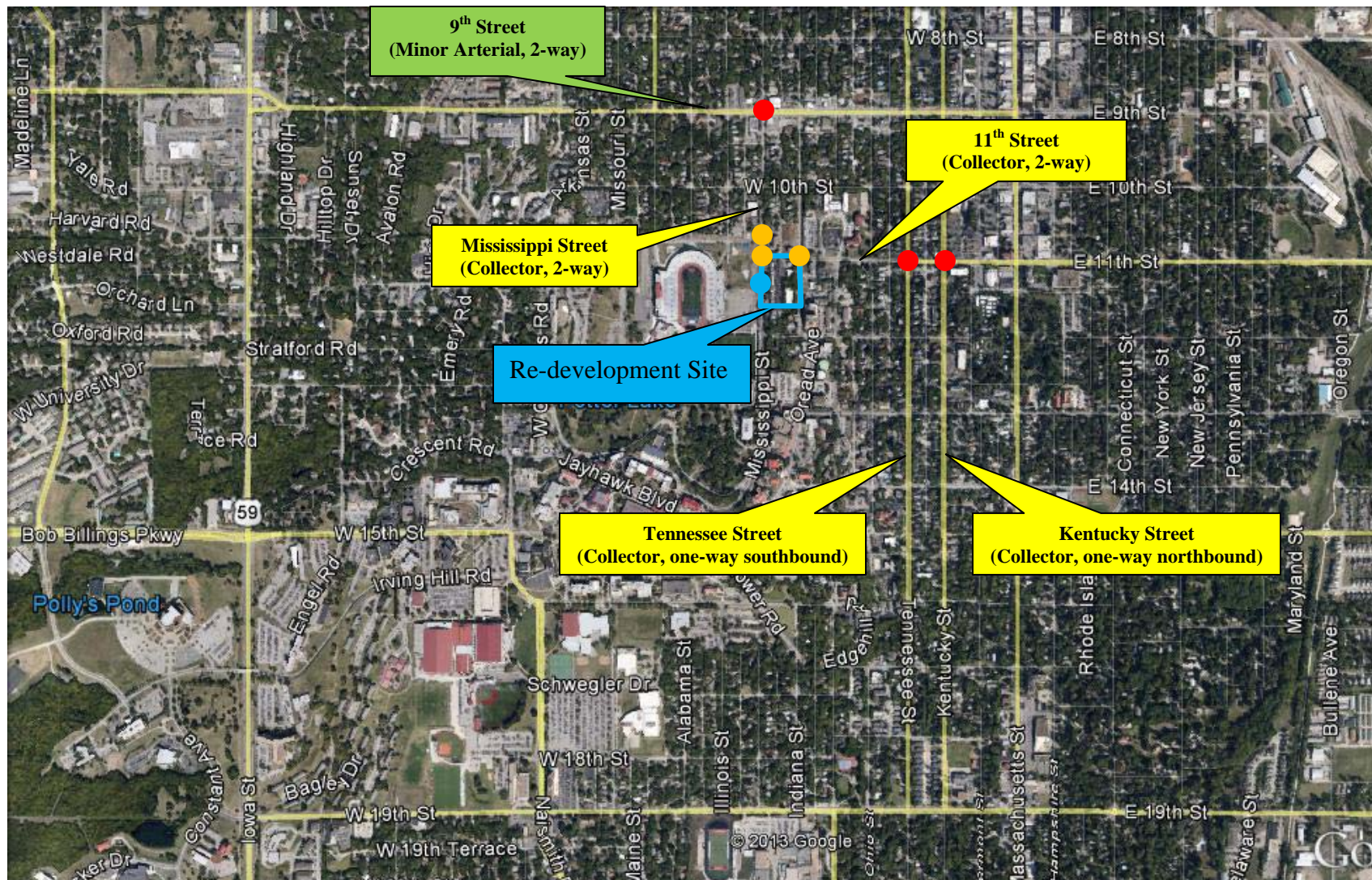
Furthermore, the requirements for provision of a dedicated southbound left-turn lane on Mississippi Street at the entrance to the proposed development garage are met. Therefore, as an added measure of operational efficiency and safety, provision of this lane with minimum storage length of 100 ft. is recommended.

Other recommended improvements include provision of the following dedicated turn lanes at the intersection of Illinois Street and realigned Fambrough Drive:

- A dedicated westbound left-turn lane with 75 ft. storage to accommodate 1 bus and one passenger car; and
- A dedicated eastbound left-turn lane with 50 ft. storage to accommodate two passenger cars. This serves as a safety measure to keep the eastbound left-turners away from the eastbound through traffic coming around the horizontal curve on Fambrough Drive.

# **APPENDIX I**

Figures



**Intersections under Study:**      ● Signaled Intersection      ● Unsignaled Intersection      ● Proposed Access Drive

**Figure 1**  
**Location Map & Study Area**

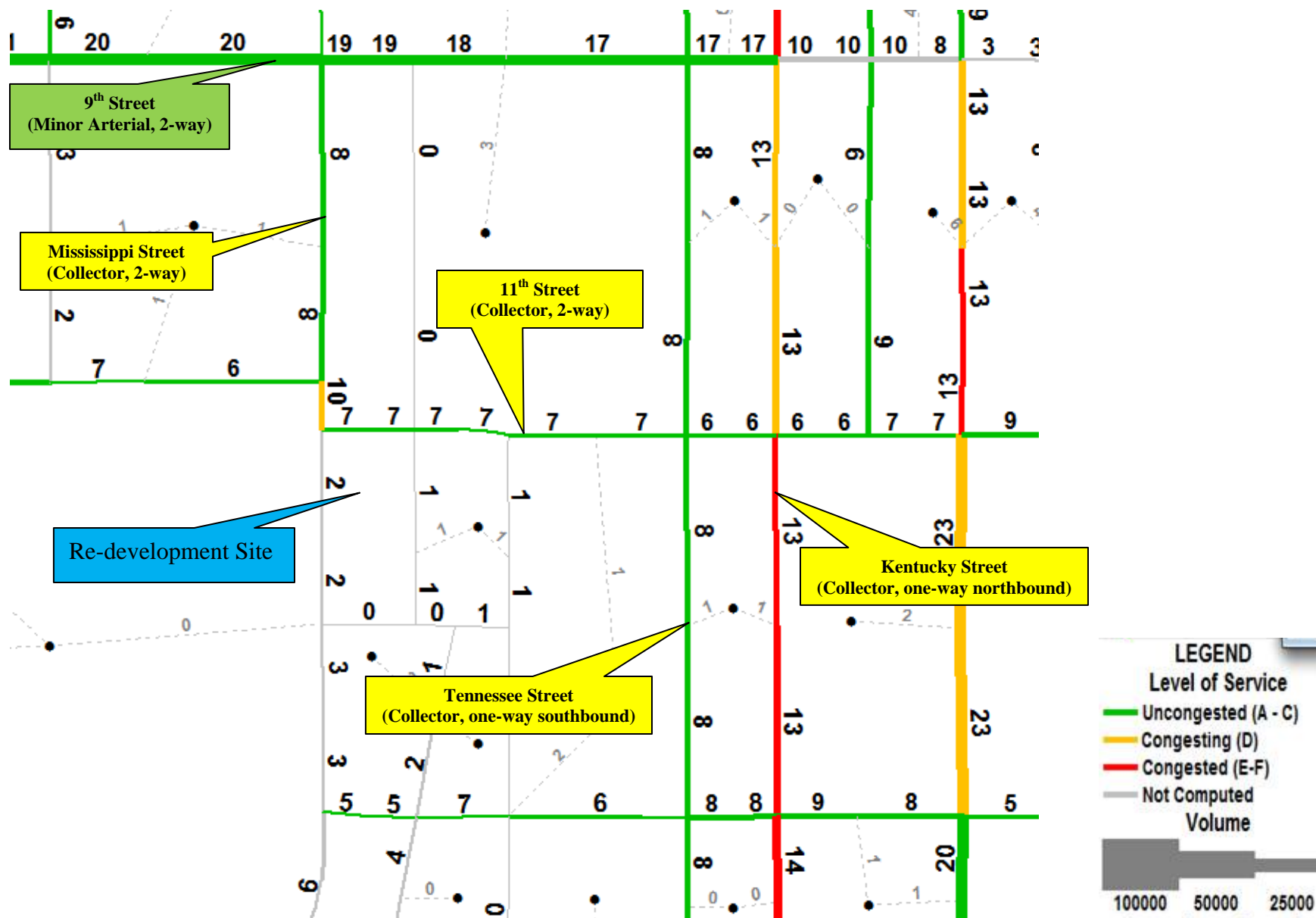
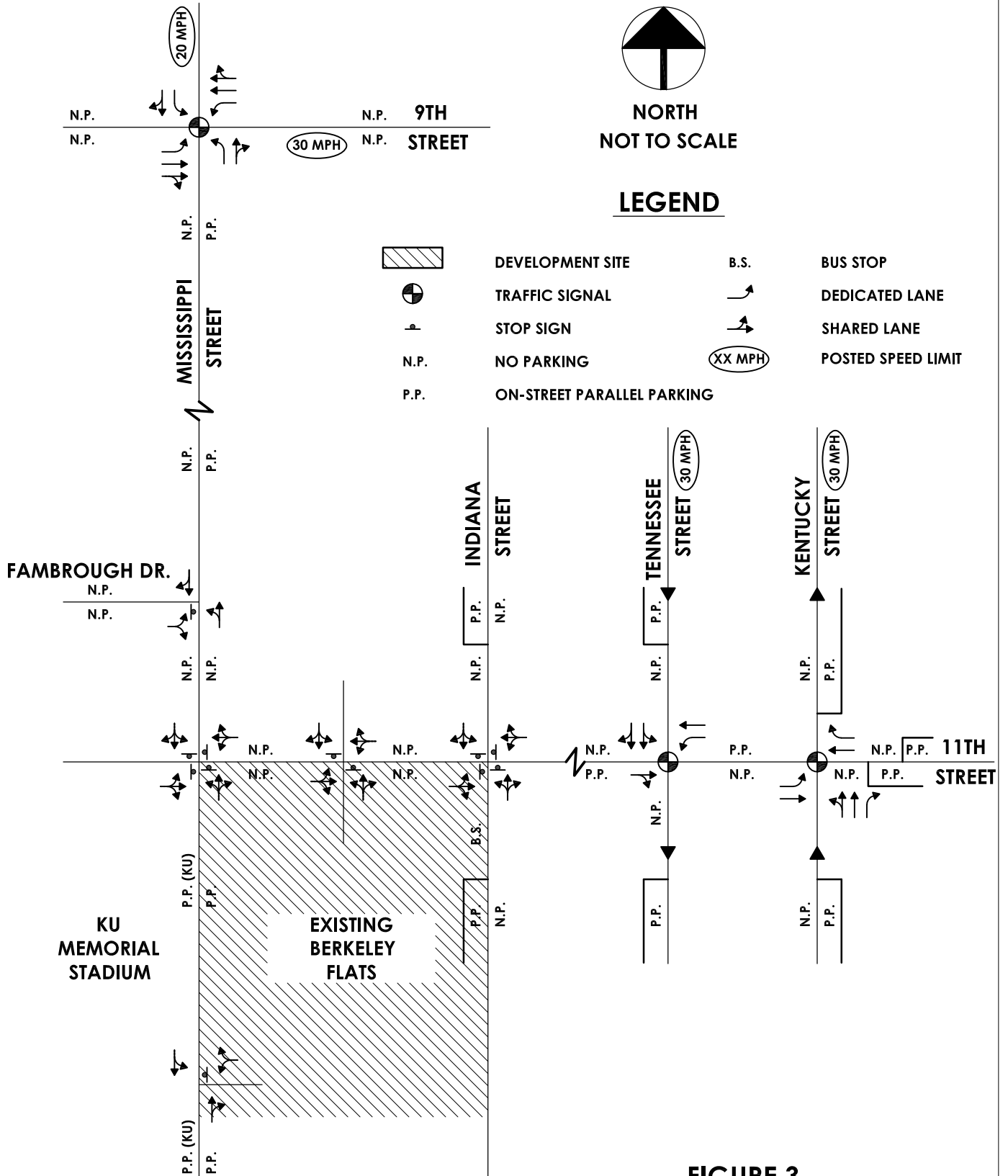
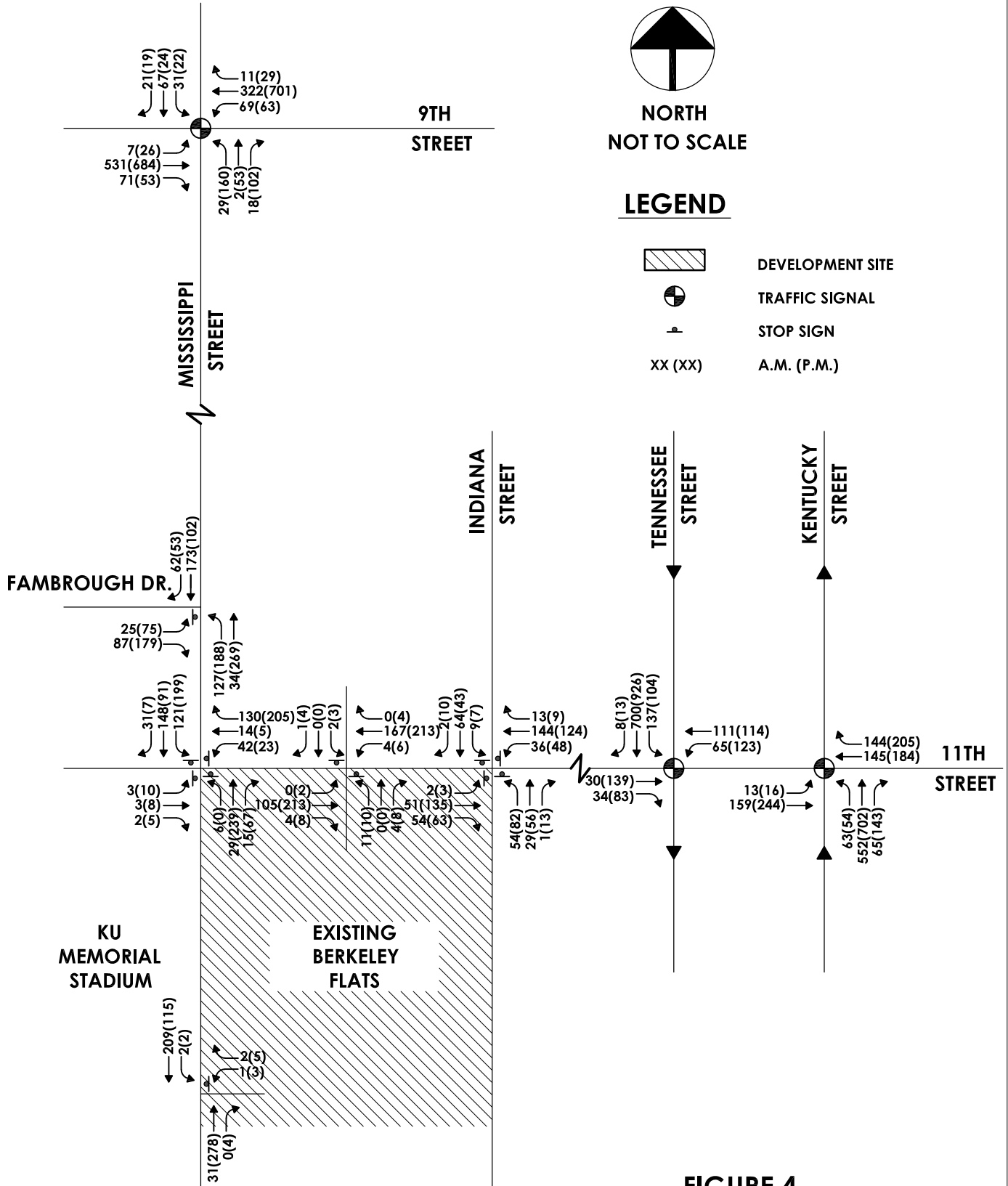


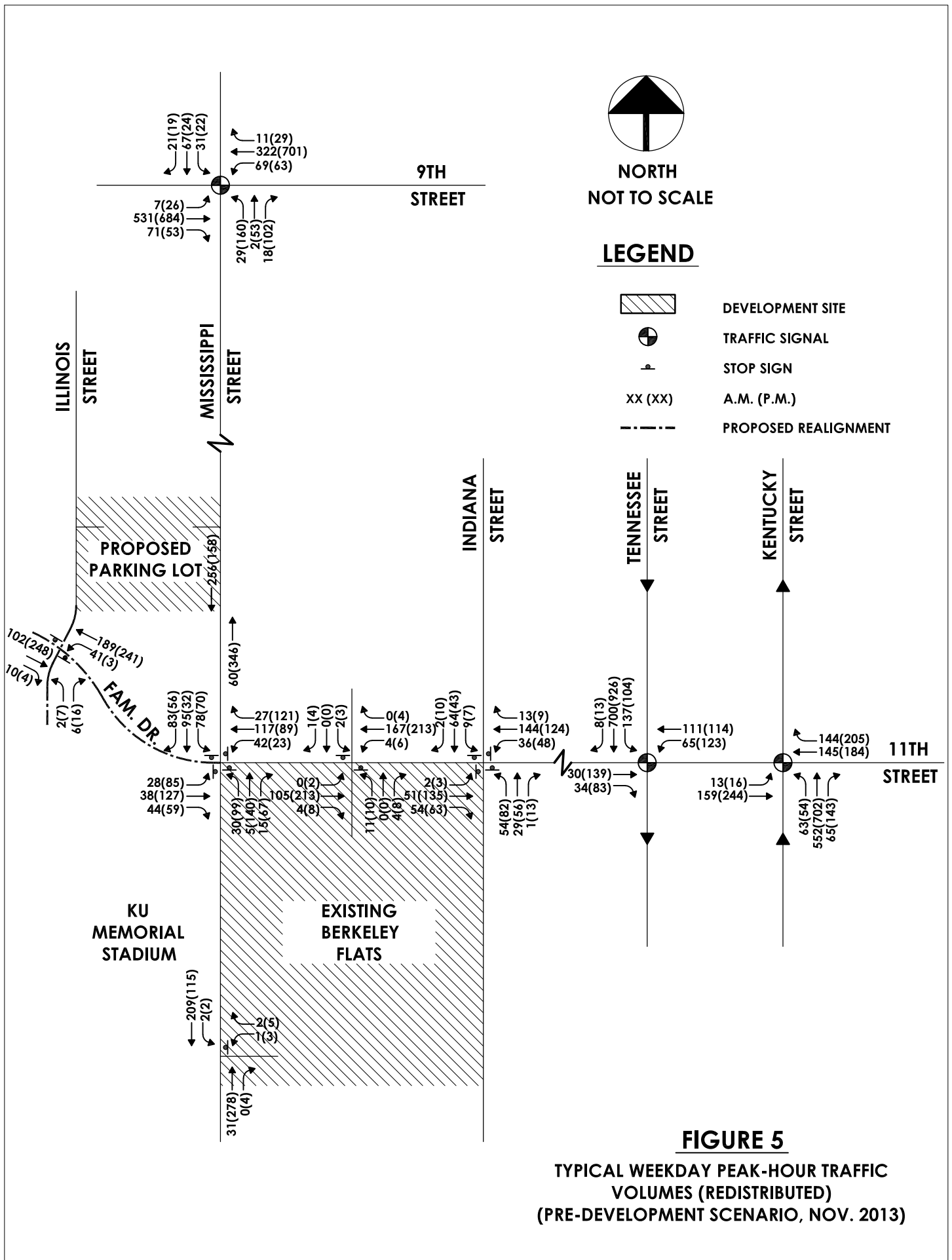
Figure 12  
Forecasted Average Daily Volumes for Target Year 2030 (x1000, vpd)

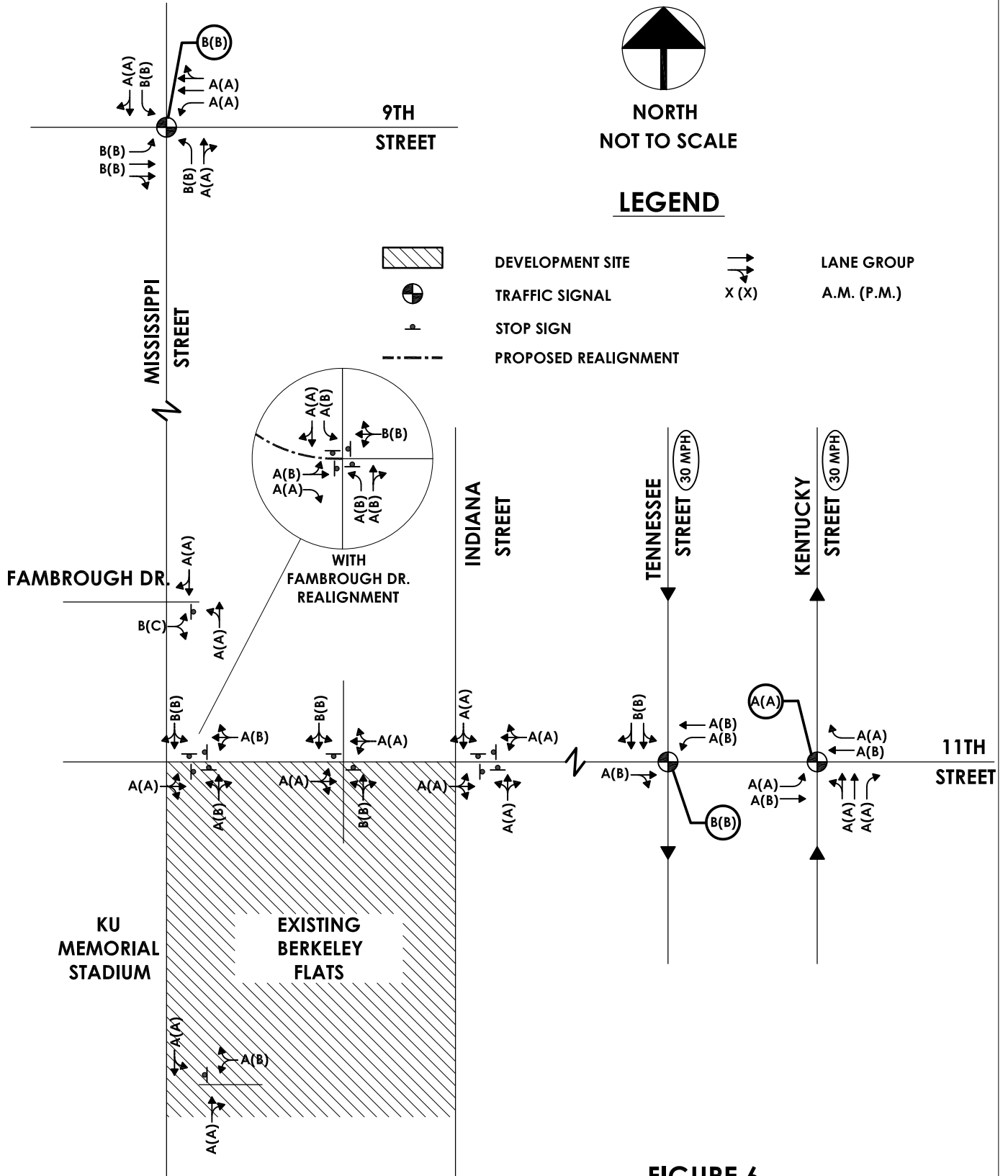


**FIGURE 3**  
 LANE CONFIGURATIONS, ON-STREET PARKING  
 AND POSTED SPEED LIMITS  
 (PRE-DEVELOPMENT CONDITIONS, NOV. 2013)

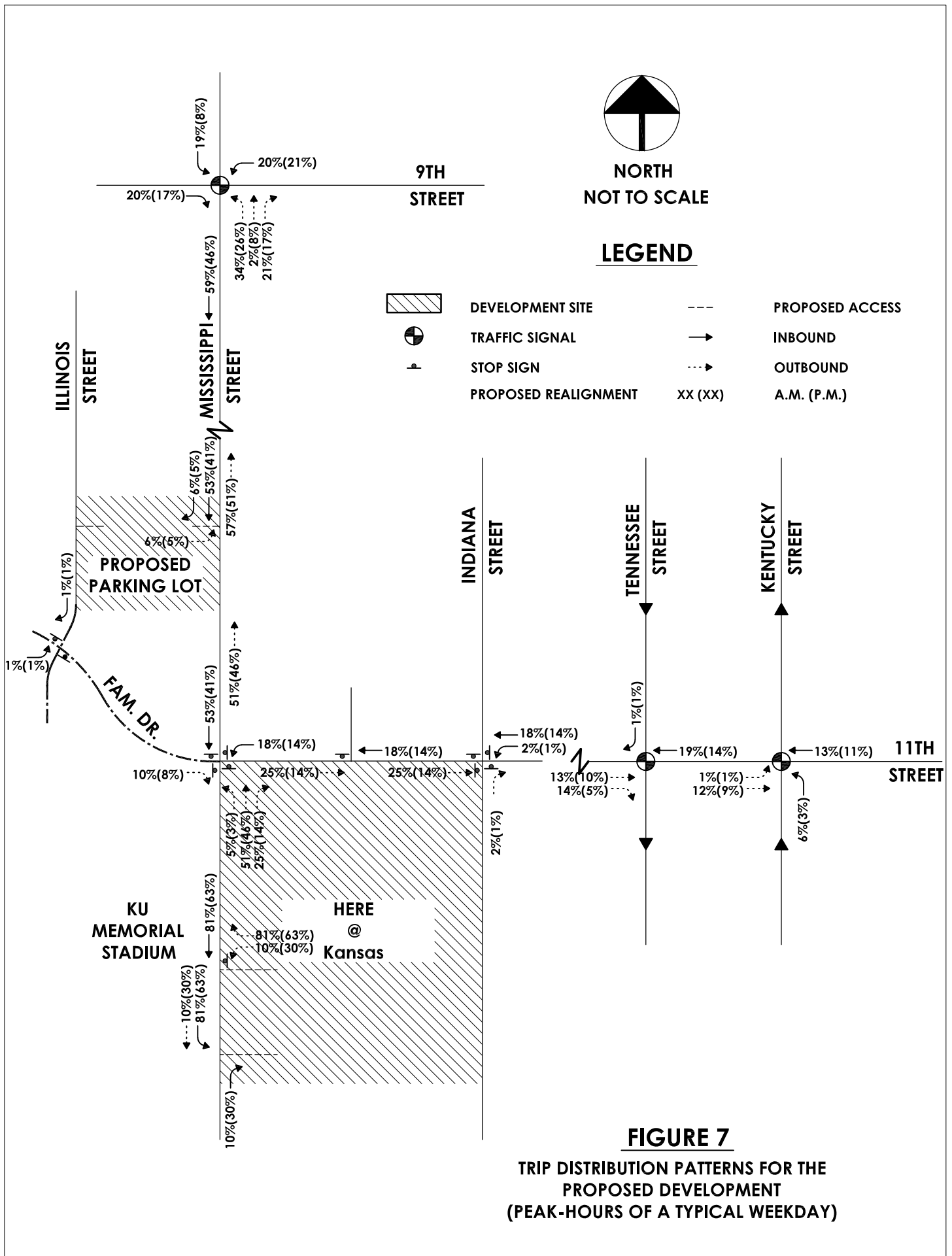


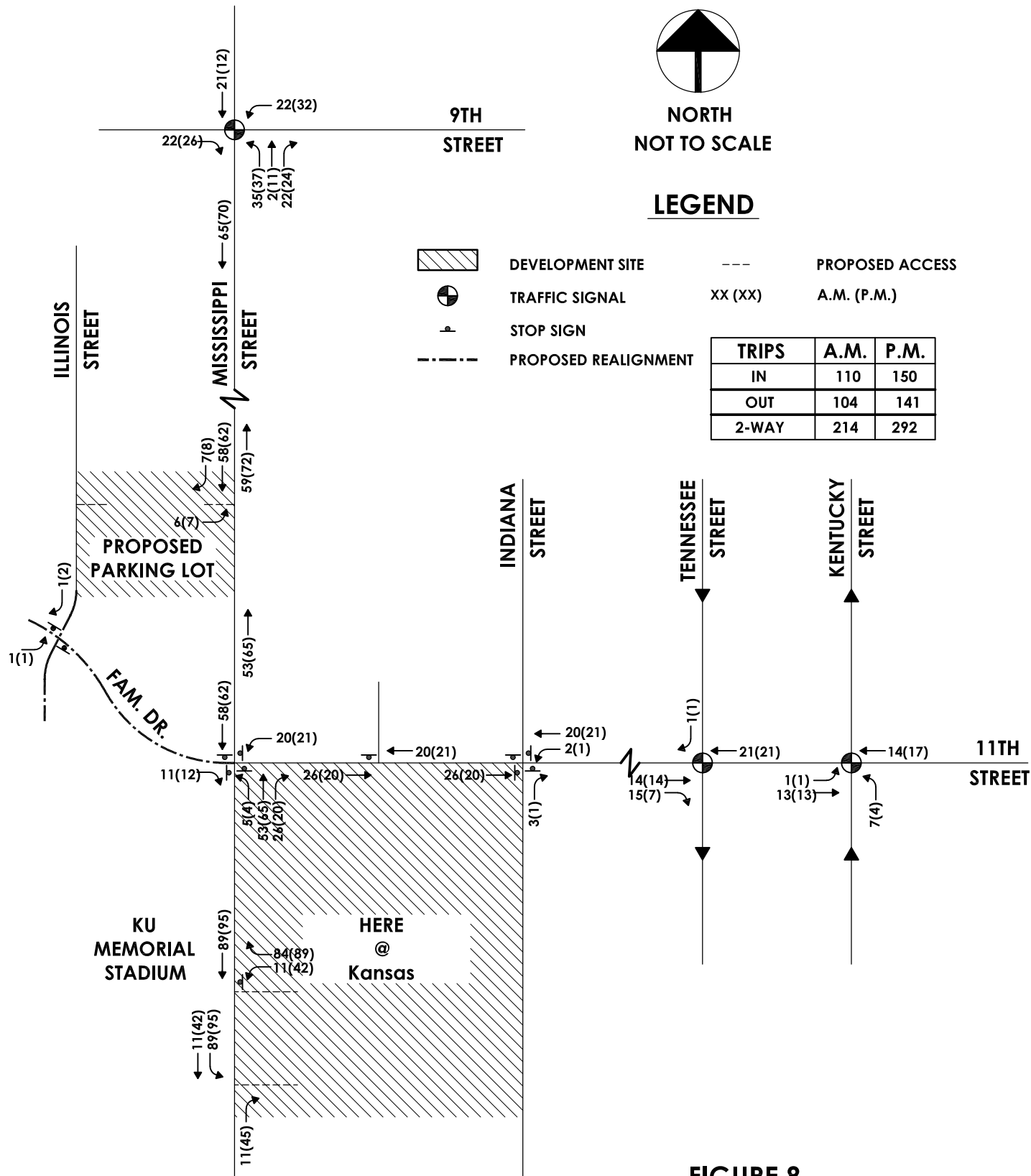
**FIGURE 4**  
TYPICAL WEEKDAY PEAK-HOUR TRAFFIC VOLUMES  
(PRE-DEVELOPMENT SCENARIO, NOV. 2013)



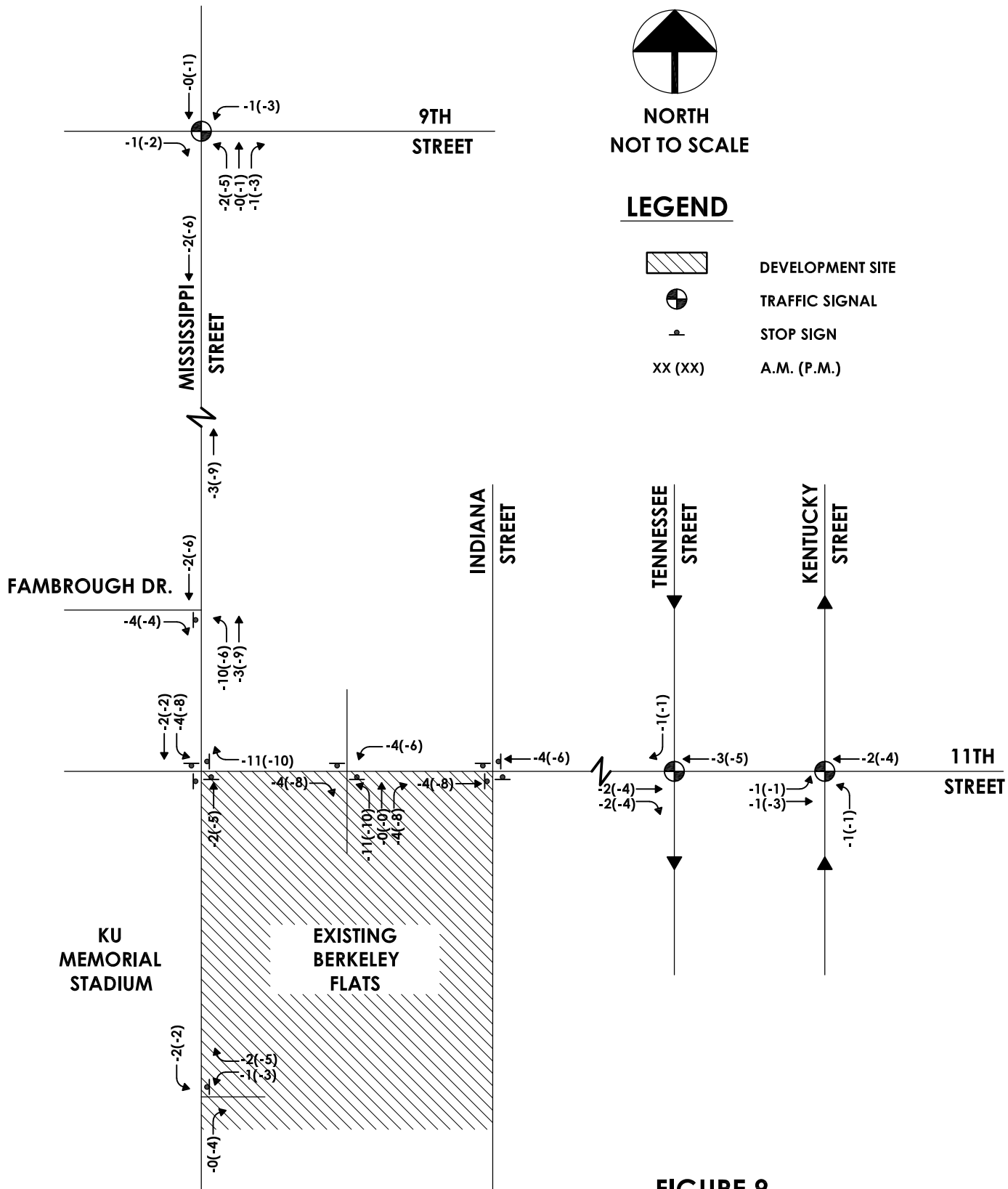


**FIGURE 6**  
SUMMARY OF L.O.S.  
(PRE-DEVELOPMENT SCENARIO, NOV. 2013)

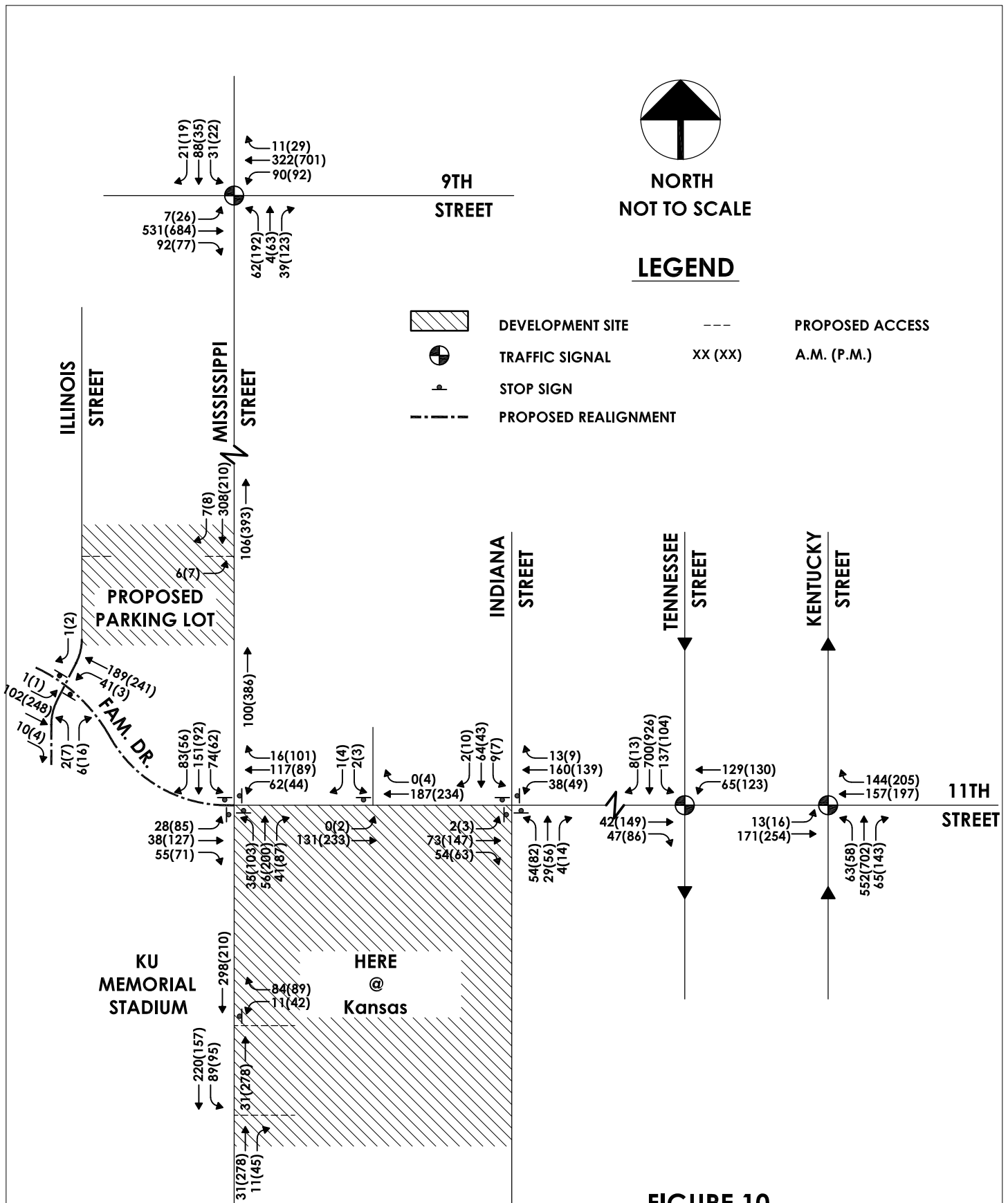




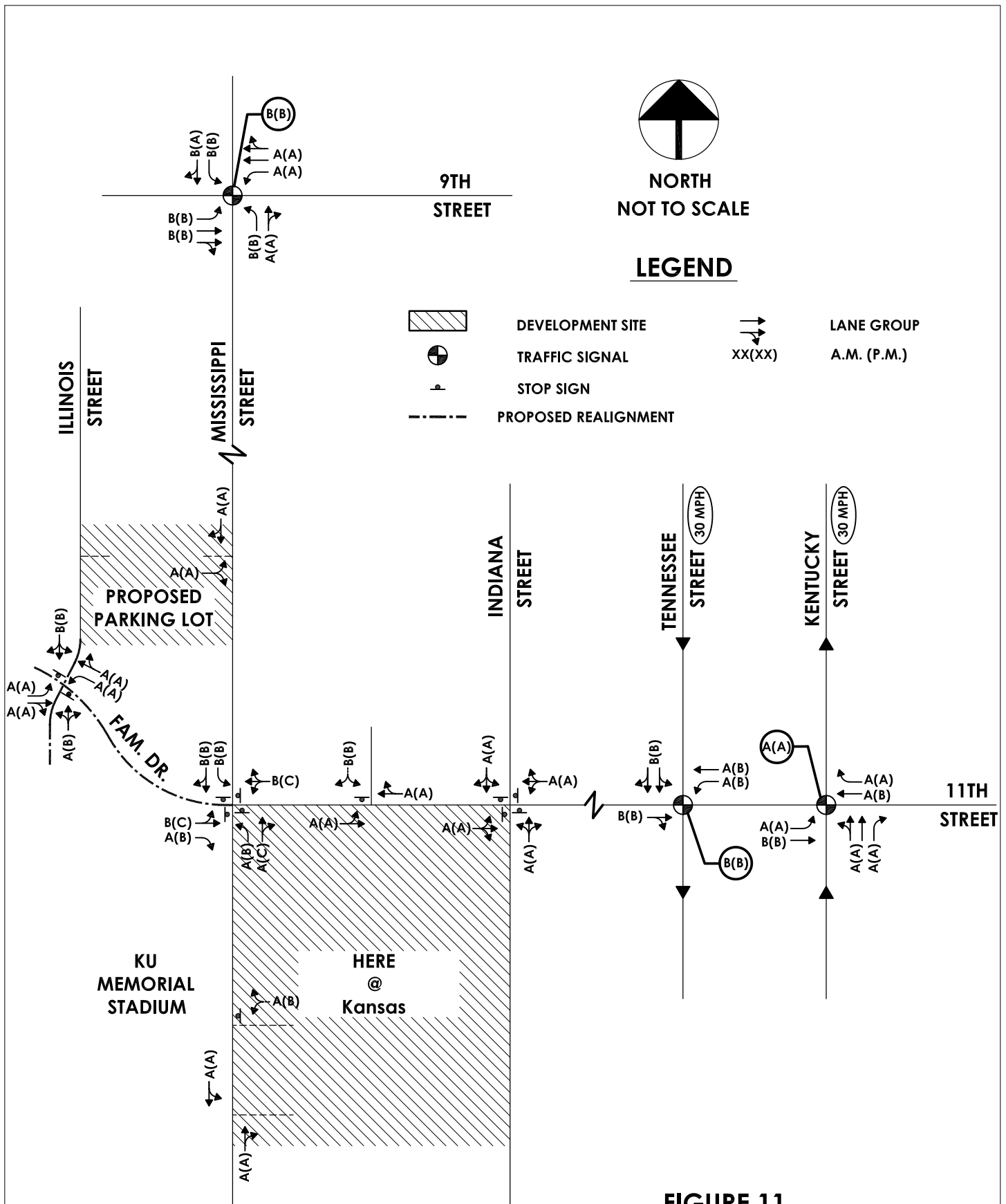
**FIGURE 8**  
 SITE-GENERATED TRIPS FOR THE PROPOSED DEVELOPMENT  
 (PEAK-HOURS OF A TYPICAL WEEKDAY)



**FIGURE 9**  
**TRIPS FOR THE EXISTING BERKELEY FLATS**  
**(PEAK-HOURS OF A TYPICAL WEEKDAY)**



**"EXISTING - BERKELEY FLATS + DEVELOPMENT" TRAFFIC VOLUMES  
(PEAK-HOURS OF A TYPICAL WEEKDAY)  
(POST-DEVELOPMENT SCENARIO)**



**FIGURE 11**

**SUMMARY OF L.O.S. FOR "EXISTING - BERKELEY FLATS + DEVELOPMENT" TRAFFIC VOLUMES (PEAK-HOURS OF A TYPICAL WEEKDAY) (POST-DEVELOPMENT SCENARIO)**

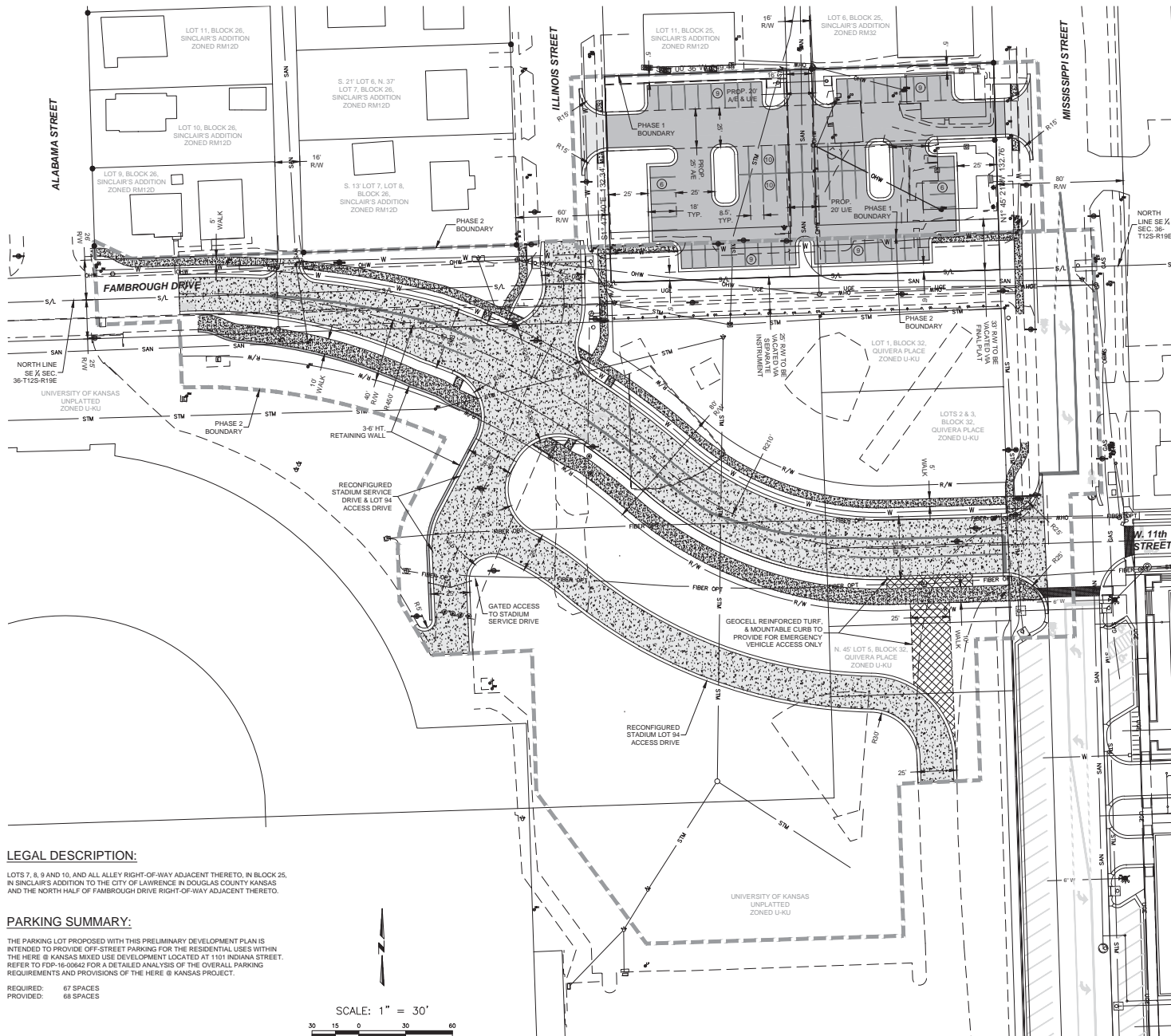
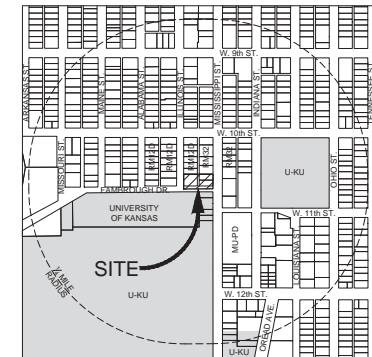


Figure 13 - Proposed geometric improvements and surface parking lot layout

LOCATION MAP:



GENERAL NOTES:

1. OWNERS: 1029 MISSISSIPPI, LLC  
1321 EAST RANDOLPH STREET, SUITE 2110  
CHICAGO, ILLINOIS 60601
2. LAND PLANNER / CIVIL ENGINEER: LANDPLAN ENGINEERING, P.A.  
1310 WILKINS DRIVE, SUITE 1000  
OVERLAND PARK, KANSAS 66210
3. TOPOGRAPHIC INFORMATION SHOWN WAS OBTAINED FROM A FIELD SURVEY PERFORMED BY LANDPLAN ENGINEERING, P.A., AUGUST 16, 2016.
4. EXISTING ZONING: RM23, RM42
5. ADJACENT PLANNING: RM42
6. EXISTING LAND USE: "VACANT"
7. EXISTING AND PROPOSED DRIVEWAYS: 1029 MISSISSIPPI DRIVE, BEARING AN EFFECTIVE DATE OF SEPTEMBER 2, 2015.
8. THIS SITE HAS BEEN DESIGNED TO COMPLY WITH THE PROVISIONS OF THE ALABAMA LITHO DESIGN ACT, WHICH SETS GUIDELINES (APPLICABLE FOR BUILDINGS AND FACILITIES, APPENDIX A TO 28 CFR PART 36).
9. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF LAWRENCE, BEARING AN EFFECTIVE DATE OF SEPTEMBER 2, 2015.
10. ALL CURBS SHALL BE INSTALLED PER CITY OF LAWRENCE DETAILS AND SPECIFICATIONS.
11. THE CONCRETE COMMERCIAL DRIVEWAY APPROVAL SHALL BE INSTALLED PER CITY OF LAWRENCE DETAILS AND SPECIFICATIONS.
12. ALL INTERNAL SIDEWALKS AND ACCESS RAMPS SHALL BE INSTALLED PER CITY OF LAWRENCE DETAILS AND SPECIFICATIONS.
13. ALL OFF-STREET PARKING AREAS AND DRIVEWAYS SHALL BE SURFACED WITH A MINIMUM OF 5 INCHES OF FULL-DEPTH ASPHALT IN ACCORDANCE WITH SECTION 29-19.01(9)(b) OF THE CITY CODE.
14. THE CITY OF LAWRENCE SHALL NOT BE HELD RESPONSIBLE FOR PAVEMENT DAMAGE ON PRIVATE STREETS CAUSED DUE TO THE WEIGHT OF SOFT WASTE MANAGEMENT VEHICLES.
15. TREES SHALL BE PLANTED NO CLOSER THAN 8 FEET FROM EXISTING UTILITY LINES AND SHALL BE SECTORED BY A TREE MAINTENANCE AND LANNING DIRECTOR, IN ACCORDANCE WITH SECTION 29-18.01(9)(b) OF THE CITY CODE.
16. UNLESS OTHERWISE NOTED, ALL AREAS NOT DESIGNATED AS PAVEMENT OR DRIVEWAY SHALL BE SECTORED BY A TREE MAINTENANCE AND LANNING DIRECTOR, IN ACCORDANCE WITH SECTION 29-18.01(9)(b) OF THE CITY CODE.
17. ALL AREAS DELETED AS PLANTED WITH TREES OR SHRUBS SHALL BE TREATED WITH A 2" LAYER OF SHREDED HARDWOOD MULCH. REFER TO SHEET 4 FOR MULCH TYPE.
18. THE LANDOWNER WILL PROVIDE FOR THE MAINTENANCE OF COMMON OPEN SPACE AREAS, INCLUDING BUT NOT LIMITED TO PRIVATE DRIVEWAYS, PRIVATE STREETS AND ANY OTHER AREA WITHIN THE PROPOSED DEVELOPMENT THAT IS TO BE RETAINED PRIMARILY FOR THE EXCLUSIVE USE AND BENEFIT OF THE RESIDENTS, LESSEES, AND OCCUPANTS OF THE DEVELOPMENT.
19. NO VARIANCES, MODIFICATIONS, RECTIONS AND WAIVERS ARE BEING REQUESTED FOR THIS PROJECT.
20. THE APPLICANT INTENDS TO FILE FINAL DEVELOPMENT PLAN APPROVAL IMMEDIATELY FOLLOWING CITY COMMISSION APPROVAL OF THE PRELIMINARY DEVELOPMENT PLAN.
21. THIS DEVELOPMENT IN TWO PHASES. WORK SHOWN AS PART OF PHASE 1 IS TO BE COMPLETED BETWEEN PHASE 1 AND PHASE 2. WORK SHOWN AS PART OF PHASE 2 IS TO BE COMPLETED BETWEEN MAY AND AUGUST, 2017.
22. PHASE 2 WORK CANNOT BEGIN PRIOR TO MONDAY, MAY 15, 2017 AND MUST BE COMPLETED PRIOR TO MONDAY, AUGUST 14, 2017.
23. CONTINUOUS ACCESS TO KU LOST LA MUST BE PROVIDED DURING ALL PHASES OF CONSTRUCTION. ACCESS TO KU LOST LA SHALL BE MAINTAINED AT ALL TIMES.
24. CONTRACTORS WILL NOT INSTALL THE WESTERN LEGS OF FAMBROUGH FROM ALABAMA THROUGH ILLINOIS STREETS AND THEN INSTALL THE NEW LOT 94 AND INSTALL THE WESTERN LEGS OF FAMBROUGH FROM ILLINOIS TO ALABAMA. CONTRACTORS WILL REMOVE THE EXISTING MISSISSIPPI STREET ENTRANCE TO LOT 94 AND INSTALL THE WESTERN LEGS OF FAMBROUGH DURING BETWEEN ILLINOIS AND ALABAMA STREETS.
25. AS DEPICTED ON SHEET 4 OF THIS PRELIMINARY DEVELOPMENT PLAN, THIS SHALL BE LIMITED TO THE PROPERTIES AT 1029 AND 1031 MISSISSIPPI STREET, INCLUDING BUT NOT LIMITED TO DOMESTIC WATER, SEWAGE, GAS AND ELECTRICITY.
26. ALL UTILITIES SERVING THE PROPERTIES AT 1029 AND 1031 MISSISSIPPI STREET, INCLUDING BUT NOT LIMITED TO DOMESTIC WATER, SEWAGE, GAS AND ELECTRICITY, SHALL BE MAINTAINED AND PROTECTED BY THE CONTRACTORS AND/OR ABANDONED IN ACCORDANCE WITH ALL APPROPRIATE REGULATORY SANS PRIOR TO THEIR REMOVAL.
27. THE CITY OF LAWRENCE HEREBY RECOMMENDS TO THE CITY OF LAWRENCE THE RIGHT TO REGULATE ANY CONSTRUCTION WITHIN THE AREAS DESIGNATED AS "CONSTRUCTION SPACE AND CONSTRUCTION AREA" AND TO PROHIBIT ANY CONSTRUCTION WITHIN SAID AREAS AND SPACES INCONSISTENT WITH THE PROPOSED USE OR ENJOYMENT OF RESIDENTS, LESSEES, AND OWNERS OF THE DEVELOPED PROPERTY.

10239 MISSISSIPPI STREET  
LAWRENCE, KANSAS 66044  
HERE @ KANSAS OFF-SITE PARKING  
PRELIMINARY DEVELOPMENT PLAN  
LAYOUT PLAN

REV	DATE	DESCRIPTION
1	9/13/16	CITY & KU CONTRA

DATE:	7/25/16
PROJECT NO.:	20163016
DESIGNED BY:	LPE
DRAWN BY:	BS
CHECKED BY:	CMS

ISSUE	SHEET NO.
	1
	OF 5 SHEETS

# **APPENDIX II**

Results of Highway Capacity Analysis  
Using  
Synchro 8 Software  
(HCM 2010 Methodology)

**PRE-DEVELOPMENT SCENARIO: 2011 – 2013 TRAFFIC VOLUMES**

**Intersection**

Intersection Delay, s/veh 8.6

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	2	51	54	36	144	13	54	29	1	9	64	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	55	59	39	157	14	59	32	1	10	70	2
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8	9.1	8.6	8.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	64%	2%	19%	12%
Vol Thru, %	35%	48%	75%	85%
Vol Right, %	1%	50%	7%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	84	107	193	75
LT Vol	29	51	144	64
Through Vol	1	54	13	2
RT Vol	54	2	36	9
Lane Flow Rate	91	116	210	82
Geometry Grp	1	1	1	1
Degree of Util (X)	0.124	0.139	0.261	0.109
Departure Headway (Hd)	4.894	4.299	4.484	4.795
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	731	834	801	747
Service Time	2.929	2.328	2.51	2.83
HCM Lane V/C Ratio	0.124	0.139	0.262	0.11
HCM Control Delay	8.6	8	9.1	8.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.5	1	0.4

**Notes**

~ : Volume Exceeds Capacity; \$ : Delay Exceeds 300 Seconds; Error : Computation Not Defined

**Intersection**

Intersection Delay, s/veh 9.4

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	3	135	63	48	124	9	82	56	13	7	43	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	147	68	52	135	10	89	61	14	8	47	11
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.4	9.6	9.6	8.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	54%	1%	27%	12%
Vol Thru, %	37%	67%	69%	72%
Vol Right, %	9%	31%	5%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	151	201	181	60
LT Vol	56	135	124	43
Through Vol	13	63	9	10
RT Vol	82	3	48	7
Lane Flow Rate	164	218	197	65
Geometry Grp	1	1	1	1
Degree of Util (X)	0.23	0.277	0.262	0.092
Departure Headway (Hd)	5.04	4.57	4.793	5.052
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	707	782	746	704
Service Time	3.103	2.624	2.849	3.125
HCM Lane V/C Ratio	0.232	0.279	0.264	0.092
HCM Control Delay	9.6	9.4	9.6	8.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.9	1.1	1	0.3

**Notes**

~ : Volume Exceeds Capacity; \$ : Delay Exceeds 300 Seconds; Error : Computation Not Defined

**Intersection**

Intersection Delay, s/veh 9.8

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	3	3	2	42	14	130	6	29	15	121	148	31
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	3	2	46	15	141	7	32	16	132	161	34
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.1	9	8	10.6
HCM LOS	A	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	38%	23%	40%
Vol Thru, %	58%	38%	8%	49%
Vol Right, %	30%	25%	70%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	50	8	186	300
LT Vol	29	3	14	148
Through Vol	15	2	130	31
RT Vol	6	3	42	121
Lane Flow Rate	54	9	202	326
Geometry Grp	1	1	1	1
Degree of Util (X)	0.07	0.012	0.25	0.408
Departure Headway (Hd)	4.634	4.997	4.456	4.5
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	771	714	805	799
Service Time	2.676	3.043	2.487	2.531
HCM Lane V/C Ratio	0.07	0.013	0.251	0.408
HCM Control Delay	8	8.1	9	10.6
HCM Lane LOS	A	A	A	B
HCM 95th-tile Q	0.2	0	1	2

**Notes**

~ : Volume Exceeds Capacity; \$ : Delay Exceeds 300 Seconds; Error : Computation Not Defined

**Intersection**

Intersection Delay, s/veh 12.2

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	10	8	5	23	5	205	1	239	67	199	91	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	9	5	25	5	223	1	260	73	216	99	8
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.4	11.1	12.4	13
HCM LOS	A	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	43%	10%	67%
Vol Thru, %	78%	35%	2%	31%
Vol Right, %	22%	22%	88%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	307	23	233	297
LT Vol	239	8	5	91
Through Vol	67	5	205	7
RT Vol	1	10	23	199
Lane Flow Rate	334	25	253	323
Geometry Grp	1	1	1	1
Degree of Util (X)	0.467	0.042	0.361	0.474
Departure Headway (Hd)	5.036	6.053	5.133	5.282
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	714	590	699	681
Service Time	3.067	4.107	3.171	3.313
HCM Lane V/C Ratio	0.468	0.042	0.362	0.474
HCM Control Delay	12.4	9.4	11.1	13
HCM Lane LOS	B	A	B	B
HCM 95th-tile Q	2.5	0.1	1.6	2.6

**Notes**

~ : Volume Exceeds Capacity; \$ : Delay Exceeds 300 Seconds; Error : Computation Not Defined

**Intersection**

Intersection Delay, s/veh 4.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	25	87	127	34	173	62
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	95	138	37	188	67

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	535	222	255	0	0
Stage 1	222	-	-	-	-
Stage 2	313	-	-	-	-
Follow-up Headway	3.518	3.318	2.218	-	-
Pot Capacity-1 Maneuver	506	818	1310	-	-
Stage 1	815	-	-	-	-
Stage 2	741	-	-	-	-
Time blocked-Platoon, %				-	-
Mov Capacity-1 Maneuver	451	818	1310	-	-
Mov Capacity-2 Maneuver	451	-	-	-	-
Stage 1	815	-	-	-	-
Stage 2	661	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.3	6.4	0
HCM LOS	B		

Minor Lane / Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1310	-	692	-	-
HCM Lane V/C Ratio	0.105	-	0.176	-	-
HCM Control Delay (s)	8.072	0	11.3	-	-
HCM Lane LOS	A	A	B		
HCM 95th %tile Q(veh)	0.353	-	0.635	-	-

**Notes**

~ : Volume Exceeds Capacity; \$ : Delay Exceeds 300 Seconds; Error : Computation Not Defined

**Intersection**

Intersection Delay, s/veh 7.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	75	179	188	269	102	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	82	195	204	292	111	58

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	841	140	168	0	0
Stage 1	140	-	-	-	-
Stage 2	701	-	-	-	-
Follow-up Headway	3.518	3.318	2.218	-	-
Pot Capacity-1 Maneuver	335	908	1410	-	-
Stage 1	887	-	-	-	-
Stage 2	492	-	-	-	-
Time blocked-Platoon, %				-	-
Mov Capacity-1 Maneuver	277	908	1410	-	-
Mov Capacity-2 Maneuver	277	-	-	-	-
Stage 1	887	-	-	-	-
Stage 2	407	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.3	3.3	0
HCM LOS	C		

Minor Lane / Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1410	-	543	-	-
HCM Lane V/C Ratio	0.145	-	0.508	-	-
HCM Control Delay (s)	7.985	0	18.3	-	-
HCM Lane LOS	A	A	C		
HCM 95th %tile Q(veh)	0.507	-	2.858	-	-

**Notes**

~ : Volume Exceeds Capacity; \$ : Delay Exceeds 300 Seconds; Error : Computation Not Defined

Intersection												
Intersection Delay, s/veh	9.9											
Intersection LOS	A											
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	28	38	44	0	42	117	27	0	30	5	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	30	41	48	0	46	127	29	0	33	5	16
Number of Lanes	0	0	1	1	0	0	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	1
HCM Control Delay	8.8	11	8.9
HCM LOS	A	B	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	42%	0%	23%	100%	0%
Vol Thru, %	0%	25%	58%	0%	63%	0%	53%
Vol Right, %	0%	75%	0%	100%	15%	0%	47%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	20	66	44	186	78	178
LT Vol	30	0	28	0	42	78	0
Through Vol	0	5	38	0	117	0	95
RT Vol	0	15	0	44	27	0	83
Lane Flow Rate	33	22	72	48	202	85	193
Geometry Grp	7	7	7	7	6	7	7
Degree of Util (X)	0.056	0.031	0.116	0.065	0.308	0.14	0.276
Departure Headway (Hd)	6.23	5.193	5.836	4.917	5.483	5.962	5.129
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	570	682	610	722	651	599	697
Service Time	4.021	2.983	3.615	2.694	3.55	3.728	2.894
HCM Lane V/C Ratio	0.058	0.032	0.118	0.066	0.31	0.142	0.277
HCM Control Delay	9.4	8.2	9.4	8	11	9.7	9.9
HCM Lane LOS	A	A	A	A	B	A	A
HCM 95th-tile Q	0.2	0.1	0.4	0.2	1.3	0.5	1.1

**Intersection**

Intersection Delay, s/veh

Intersection LOS

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	78	95	83
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	85	103	90
Number of Lanes	0	1	1	0

**Approach** SB

Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	9.8
HCM LOS	A

**Lane**

**Intersection**

Intersection Delay, s/veh 11.9

Intersection LOS B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	85	127	59	0	23	89	121	0	99	40	67
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	92	138	64	0	25	97	132	0	108	43	73
Number of Lanes	0	0	1	1	0	0	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	1
HCM Control Delay	12.4	13.2	10.9
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	40%	0%	10%	100%	0%
Vol Thru, %	0%	37%	60%	0%	38%	0%	36%
Vol Right, %	0%	63%	0%	100%	52%	0%	64%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	99	107	212	59	233	70	88
LT Vol	99	0	85	0	23	70	0
Through Vol	0	40	127	0	89	0	32
RT Vol	0	67	0	59	121	0	56
Lane Flow Rate	108	116	230	64	253	76	96
Geometry Grp	7	7	7	7	6	7	7
Degree of Util (X)	0.208	0.194	0.405	0.097	0.418	0.149	0.162
Departure Headway (Hd)	6.962	6.006	6.331	5.418	5.937	7.057	6.093
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	514	595	567	659	605	507	586
Service Time	4.722	3.766	4.084	3.172	3.992	4.821	3.857
HCM Lane V/C Ratio	0.21	0.195	0.406	0.097	0.418	0.15	0.164
HCM Control Delay	11.6	10.2	13.4	8.8	13.2	11.1	10
HCM Lane LOS	B	B	B	A	B	B	A
HCM 95th-tile Q	0.8	0.7	2	0.3	2.1	0.5	0.6

**Intersection**

Intersection Delay, s/veh

Intersection LOS

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	70	32	56
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	76	35	61
Number of Lanes	0	1	1	0

**Approach** SB

Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	10.5
HCM LOS	B

**Lane**

**Intersection**

Intersection Delay, s/veh 0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	1	105	4	4	167	1	11	1	4	2	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	114	4	4	182	1	12	1	4	2	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	183	0	0	118	0	0	310	309	116	312	312	182
Stage 1	-	-	-	-	-	-	118	118	-	191	191	-
Stage 2	-	-	-	-	-	-	192	191	-	121	121	-
Follow-up Headway	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Capacity-1 Maneuver	1392	-	-	1470	-	-	642	605	936	641	603	861
Stage 1	-	-	-	-	-	-	887	798	-	811	742	-
Stage 2	-	-	-	-	-	-	810	742	-	883	796	-
Time blocked-Platoon, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Capacity-1 Maneuver	1392	-	-	1470	-	-	638	603	936	635	601	861
Mov Capacity-2 Maneuver	-	-	-	-	-	-	638	603	-	635	601	-
Stage 1	-	-	-	-	-	-	886	797	-	810	740	-
Stage 2	-	-	-	-	-	-	805	740	-	877	795	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.2	10.4	10.4
HCM LOS			B	B

Minor Lane / Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	690	1392	-	-	1470	-	-	669
HCM Lane V/C Ratio	0.025	0.001	-	-	0.003	-	-	0.006
HCM Control Delay (s)	10.4	7.588	0	-	7.456	0	-	10.4
HCM Lane LOS	B	A	A		A	A		B
HCM 95th %tile Q(veh)	0.077	0.002	-	-	0.009	-	-	0.02

**Notes**

~ : Volume Exceeds Capacity; \$ : Delay Exceeds 300 Seconds; Error : Computation Not Defined

**Intersection**

Intersection Delay, s/veh 0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	2	213	8	6	213	4	10	1	8	3	1	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	232	9	7	232	4	11	1	9	3	1	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	236	0	0	240	0	0	489	489	236	492	492	234
Stage 1	-	-	-	-	-	-	240	240	-	247	247	-
Stage 2	-	-	-	-	-	-	249	249	-	245	245	-
Follow-up Headway	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Capacity-1 Maneuver	1331	-	-	1327	-	-	489	480	803	487	478	805
Stage 1	-	-	-	-	-	-	763	707	-	757	702	-
Stage 2	-	-	-	-	-	-	755	701	-	759	703	-
Time blocked-Platoon, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Capacity-1 Maneuver	1331	-	-	1327	-	-	483	476	803	478	474	805
Mov Capacity-2 Maneuver	-	-	-	-	-	-	483	476	-	478	474	-
Stage 1	-	-	-	-	-	-	761	706	-	755	698	-
Stage 2	-	-	-	-	-	-	745	697	-	748	702	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.2	11.4	11.1
HCM LOS			B	B

Minor Lane / Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	580	1331	-	-	1327	-	-	599
HCM Lane V/C Ratio	0.036	0.002	-	-	0.005	-	-	0.015
HCM Control Delay (s)	11.4	7.709	0	-	7.726	0	-	11.1
HCM Lane LOS	B	A	A		A	A		B
HCM 95th %tile Q(veh)	0.111	0.005	-	-	0.015	-	-	0.044

**Notes**

~ : Volume Exceeds Capacity; \$ : Delay Exceeds 300 Seconds; Error : Computation Not Defined

**Intersection**

Intersection Delay, s/veh 0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	1	2	31	1	2	209
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	2	34	1	2	227

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	266	34	0
Stage 1	34	-	-
Stage 2	232	-	-
Follow-up Headway	3.518	3.318	-
Pot Capacity-1 Maneuver	723	1039	-
Stage 1	988	-	-
Stage 2	807	-	-
Time blocked-Platoon, %		-	-
Mov Capacity-1 Maneuver	722	1039	-
Mov Capacity-2 Maneuver	722	-	-
Stage 1	988	-	-
Stage 2	806	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	0.1
HCM LOS	A		

Minor Lane / Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	906	1576	-
HCM Lane V/C Ratio	-	-	0.004	0.001	-
HCM Control Delay (s)	-	-	9	7.287	0
HCM Lane LOS			A	A	A
HCM 95th %tile Q(veh)	-	-	0.011	0.004	-

**Notes**

~ : Volume Exceeds Capacity; \$ : Delay Exceeds 300 Seconds; Error : Computation Not Defined

**Intersection**

Intersection Delay, s/veh 0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	3	5	278	4	2	115
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	5	302	4	2	125





















Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	433	304	0
Stage 1	304	-	-
Stage 2	129	-	-
Follow-up Headway	3.518	3.318	-
Pot Capacity-1 Maneuver	580	736	-
Stage 1	748	-	-
Stage 2	897	-	-
Time blocked-Platoon, %		-	-
Mov Capacity-1 Maneuver	579	736	-
Mov Capacity-2 Maneuver	579	-	-
Stage 1	748	-	-
Stage 2	895	-	-













Approach	WB	NB	SB
HCM Control Delay, s	10.5	0	0.1
HCM LOS	B		

Minor Lane / Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	668	1254	-
HCM Lane V/C Ratio	-	-	0.013	0.002	-
HCM Control Delay (s)	-	-	10.5	7.876	0
HCM Lane LOS			B	A	A
HCM 95th %tile Q(veh)	-	-	0.04	0.005	-

**Notes**

~ : Volume Exceeds Capacity; \$ : Delay Exceeds 300 Seconds; Error : Computation Not Defined

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	531	71	69	322	11	29	2	18	31	67	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		0	105		0	90		0	90		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.982			0.995			0.864			0.964	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3476	0	1770	3522	0	1770	1448	0	1770	1796	0
Flt Permitted	0.536			0.240			0.695			0.743		
Satd. Flow (perm)	998	3476	0	447	3522	0	1295	1448	0	1384	1796	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		29			9			20			23	
Link Speed (mph)		30			30			30			20	
Link Distance (ft)		674			457			985			305	
Travel Time (s)		15.3			10.4			22.4			10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)								0				
Adj. Flow (vph)	8	577	77	75	350	12	32	2	20	34	73	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	654	0	75	362	0	32	22	0	34	96	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	22.0	22.0		9.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	22.0	22.0		9.0	31.0		24.0	24.0		24.0	24.0	
Total Split (%)	40.0%	40.0%		16.4%	56.4%		43.6%	43.6%		43.6%	43.6%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		1.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-3.0		-2.0	-3.0		-3.0	-3.0		-3.0	-3.0	
Total Lost Time (s)	4.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Act Effect Green (s)	18.0	19.0		28.0	28.0		21.0	21.0		21.0	21.0	
Actuated g/C Ratio	0.33	0.35		0.51	0.51		0.38	0.38		0.38	0.38	
v/c Ratio	0.02	0.54		0.20	0.20		0.06	0.04		0.06	0.14	
Control Delay	13.0	15.7		8.3	7.6		11.3	6.0		11.3	9.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	13.0	15.7		8.3	7.6		11.3	6.0		11.3	9.6	
LOS	B	B		A	A		B	A		B	A	
Approach Delay		15.7			7.7			9.2			10.0	
Approach LOS		B			A			A			B	
Queue Length 50th (ft)	2	83		11	30		6	0		7	15	
Queue Length 95th (ft)	9	126		28	49		20	11		21	39	
Internal Link Dist (ft)		594			377			905			225	
Turn Bay Length (ft)	125			105			90			90		
Base Capacity (vph)	326	1219		371	1797		494	565		528	699	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.02	0.54		0.20	0.20		0.06	0.04		0.06	0.14	

**Intersection Summary**

Area Type: Other

Cycle Length: 55

Actuated Cycle Length: 55

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Pretimed

Maximum v/c Ratio: 0.54

Intersection Signal Delay: 12.1






Intersection LOS: B





















Intersection Capacity Utilization 39.1%













ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 11: Mississippi Street &amp; 9th Street/ 9th Street

 $\phi 2$ (R)		 $\phi 3$	 $\phi 4$
24 s		9 s	22 s
 $\phi 6$ (R)		 $\phi 8$	
24 s		31 s	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	684	53	63	701	29	160	53	102	22	24	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		0	105		0	90		0	90		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989			0.994			0.901			0.933	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3500	0	1770	3518	0	1770	1511	0	1770	1738	0
Flt Permitted	0.351			0.190			0.726			0.634		
Satd. Flow (perm)	654	3500	0	354	3518	0	1352	1511	0	1181	1738	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			11			111			21	
Link Speed (mph)		30			30			30			20	
Link Distance (ft)		674			457			985			305	
Travel Time (s)		15.3			10.4			22.4			10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)								0				
Adj. Flow (vph)	28	743	58	68	762	32	174	58	111	24	26	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	28	801	0	68	794	0	174	169	0	24	47	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	22.0	22.0		9.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	22.0	22.0		9.0	31.0		24.0	24.0		24.0	24.0	
Total Split (%)	40.0%	40.0%		16.4%	56.4%		43.6%	43.6%		43.6%	43.6%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		1.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-3.0		-2.0	-3.0		-3.0	-3.0		-3.0	-3.0	
Total Lost Time (s)	4.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Act Effect Green (s)	18.0	19.0		28.0	28.0		21.0	21.0		21.0	21.0	
Actuated g/C Ratio	0.33	0.35		0.51	0.51		0.38	0.38		0.38	0.38	
v/c Ratio	0.13	0.66		0.20	0.44		0.34	0.26		0.05	0.07	
Control Delay	15.0	18.0		8.4	9.4		14.4	6.1		11.3	7.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	15.0	18.0		8.4	9.4		14.4	6.1		11.3	7.7	
LOS	B	B		A	A		B	A		B	A	
Approach Delay		17.9			9.3			10.3			8.9	
Approach LOS		B			A			B			A	
Queue Length 50th (ft)	6	111		10	77		39	12		5	5	
Queue Length 95th (ft)	22	163		26	113		80	44		17	21	
Internal Link Dist (ft)		594			377			905			225	
Turn Bay Length (ft)	125			105			90			90		
Base Capacity (vph)	214	1219		334	1796		516	645		450	676	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.13	0.66		0.20	0.44		0.34	0.26		0.05	0.07	

**Intersection Summary**

Area Type: Other

Cycle Length: 55

Actuated Cycle Length: 55

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Pretimed

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 12.9











Intersection LOS: B


















Intersection Capacity Utilization 49.8%













ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 11: Mississippi Street &amp; 9th Street/ 9th Street

					
ø2 (R)			ø3		ø4
24 s			9 s		22 s
					
ø6 (R)			ø8		
24 s			31 s		

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	30	34	65	111	0	0	0	0	137	700	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.929									0.999	
Flt Protected				0.950							0.992	
Satd. Flow (prot)	0	1557	0	1770	1676	0	0	0	0	0	3332	0
Flt Permitted				0.590							0.992	
Satd. Flow (perm)	0	1557	0	1099	1676	0	0	0	0	0	3332	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37									2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		369			340			654			936	
Travel Time (s)		8.4			7.7			14.9			21.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)		0			0						0	
Adj. Flow (vph)	0	33	37	71	121	0	0	0	0	149	761	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	70	0	71	121	0	0	0	0	0	919	0
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases				6						4		
Minimum Split (s)		21.0		8.5	21.0					21.0	21.0	
Total Split (s)		21.0		8.6	29.6					25.4	25.4	
Total Split (%)		38.2%		15.6%	53.8%					46.2%	46.2%	
Yellow Time (s)		4.0		4.0	4.0					4.0	4.0	
All-Red Time (s)		1.0		0.5	1.0					1.0	1.0	
Lost Time Adjust (s)		-2.0		-1.0	-2.0						-2.0	
Total Lost Time (s)		3.0		3.5	3.0						3.0	
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Act Effect Green (s)		18.0		26.1	26.6						22.4	
Actuated g/C Ratio		0.33		0.47	0.48						0.41	
v/c Ratio		0.13		0.12	0.15						0.68	
Control Delay		8.5		8.5	8.6						16.4	
Queue Delay		0.0		0.0	0.0						0.0	
Total Delay		8.5		8.5	8.6						16.4	
LOS		A		A	A						B	
Approach Delay		8.5			8.6						16.4	
Approach LOS		A			A						B	
Queue Length 50th (ft)		7		12	20						123	
Queue Length 95th (ft)		30		29	44						179	
Internal Link Dist (ft)		289			260			574			856	
Turn Bay Length (ft)				100								
Base Capacity (vph)		534		583	810						1358	
Starvation Cap Reductn		0		0	0						0	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Spillback Cap Reductn		0		0	0						0	
Storage Cap Reductn		0		0	0						0	
Reduced v/c Ratio		0.13		0.12	0.15						0.68	

**Intersection Summary**

Area Type: Other

Cycle Length: 55

Actuated Cycle Length: 55

Offset: 21.4 (39%), Referenced to phase 4:SBTL, Start of Green

Natural Cycle: 55

Control Type: Pretimed

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 14.7





Intersection LOS: B


















Intersection Capacity Utilization 40.8%













ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 8: 11th Street &amp; Tennessee Street

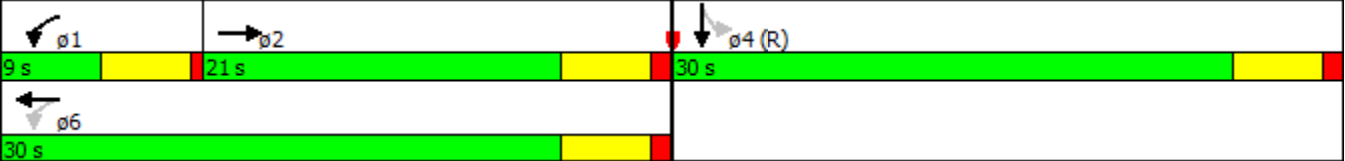
 $\phi 1$	 $\phi 2$	 $\phi 4 (R)$
8.6 s	21 s	25.4 s
 $\phi 6$		
29.6 s		




















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	139	83	123	114	0	0	0	0	104	926	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.950									0.998	
Flt Protected				0.950							0.995	
Satd. Flow (prot)	0	1593	0	1770	1676	0	0	0	0	0	3339	0
Flt Permitted				0.401							0.995	
Satd. Flow (perm)	0	1593	0	747	1676	0	0	0	0	0	3339	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		51									3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		369			340			654			936	
Travel Time (s)		8.4			7.7			14.9			21.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)		0			0						0	
Adj. Flow (vph)	0	151	90	134	124	0	0	0	0	113	1007	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	241	0	134	124	0	0	0	0	0	1134	0
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases				6						4		
Minimum Split (s)		21.0		8.5	21.0					21.0	21.0	
Total Split (s)		21.0		9.0	30.0					30.0	30.0	
Total Split (%)		35.0%		15.0%	50.0%					50.0%	50.0%	
Yellow Time (s)		4.0		4.0	4.0					4.0	4.0	
All-Red Time (s)		1.0		0.5	1.0					1.0	1.0	
Lost Time Adjust (s)		-2.0		-1.0	-2.0						-2.0	
Total Lost Time (s)		3.0		3.5	3.0						3.0	
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Act Effect Green (s)		18.0		26.5	27.0						27.0	
Actuated g/C Ratio		0.30		0.44	0.45						0.45	
v/c Ratio		0.47		0.32	0.16						0.75	
Control Delay		16.9		12.4	10.6						17.7	
Queue Delay		0.0		0.0	0.0						0.0	
Total Delay		16.9		12.4	10.6						17.7	
LOS		B		B	B						B	
Approach Delay		16.9			11.5						17.7	
Approach LOS		B			B						B	
Queue Length 50th (ft)		54		28	25						168	
Queue Length 95th (ft)		112		57	52						239	
Internal Link Dist (ft)		289			260			574			856	
Turn Bay Length (ft)				100								
Base Capacity (vph)		513		423	754						1504	
Starvation Cap Reductn		0		0	0						0	













												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Spillback Cap Reductn		0		0	0						0	
Storage Cap Reductn		0		0	0						0	
Reduced v/c Ratio		0.47		0.32	0.16						0.75	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 4:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Pretimed	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 16.6	Intersection LOS: B
Intersection Capacity Utilization 58.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: 11th Street & Tennessee Street



												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	13	159	0	0	145	144	63	552	65	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		65	0		100	0		0
Storage Lanes	1		0	0		1	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Fr <sub>t</sub>						0.850			0.850			
Fl <sub>t</sub> Protected	0.950							0.995				
Satd. Flow (prot)	1770	1863	0	0	1863	1583	0	3522	1583	0	0	0
Fl <sub>t</sub> Permitted	0.657							0.995				
Satd. Flow (perm)	1224	1863	0	0	1863	1583	0	3522	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						157			71			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		340			277			660			920	
Travel Time (s)		7.7			6.3			15.0			20.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	14	173	0	0	158	157	68	600	71	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	173	0	0	158	157	0	668	71	0	0	0
Turn Type	Perm	NA			NA	Perm	Perm	NA	Perm			
Protected Phases		2			6			8				
Permitted Phases	2					6	8		8			
Minimum Split (s)	21.0	21.0			21.0	21.0	21.0	21.0	21.0			
Total Split (s)	21.0	21.0			21.0	21.0	24.0	24.0	24.0			
Total Split (%)	46.7%	46.7%			46.7%	46.7%	53.3%	53.3%	53.3%			
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
All-Red Time (s)	1.0	1.0			1.0	1.0	1.0	1.0	1.0			
Lost Time Adjust (s)	-2.0	-2.0			-2.0	-2.0		-2.0	-2.0			
Total Lost Time (s)	3.0	3.0			3.0	3.0		3.0	3.0			
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)	18.0	18.0			18.0	18.0		21.0	21.0			
Actuated g/C Ratio	0.40	0.40			0.40	0.40		0.47	0.47			
v/c Ratio	0.03	0.23			0.21	0.22		0.41	0.09			
Control Delay	8.5	10.0			9.8	3.0		8.9	2.7			
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0			
Total Delay	8.5	10.0			9.8	3.0		8.9	2.7			
LOS	A	A			A	A		A	A			
Approach Delay		9.9			6.4			8.3				
Approach LOS		A			A			A				
Queue Length 50th (ft)	2	28			25	0		54	0			
Queue Length 95th (ft)	10	59			54	24		84	14			
Internal Link Dist (ft)		260			197			580			840	
Turn Bay Length (ft)	100					65			100			
Base Capacity (vph)	489	745			745	727		1643	776			
Starvation Cap Reductn	0	0			0	0		0	0			
Spillback Cap Reductn	0	0			0	0		0	0			

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0			0	0		0	0			
Reduced v/c Ratio	0.03	0.23			0.21	0.22		0.41	0.09			

**Intersection Summary**

Area Type: Other

Cycle Length: 45

Actuated Cycle Length: 45

Offset: 0 (0%), Referenced to phase 8:NBTL, Start of Green

Natural Cycle: 45

Control Type: Pretimed

Maximum v/c Ratio: 0.41

Intersection Signal Delay: 8.0

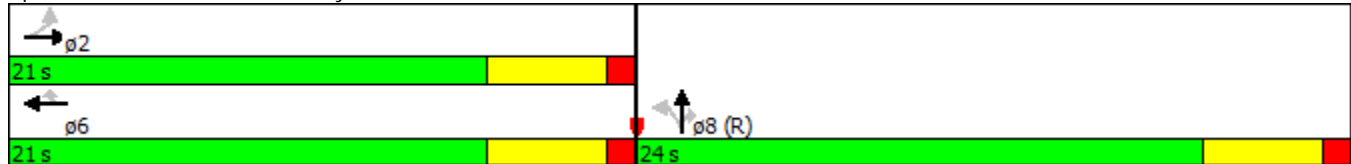
Intersection LOS: A




















Intersection Capacity Utilization 40.8%













ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 19: Kentucky Street

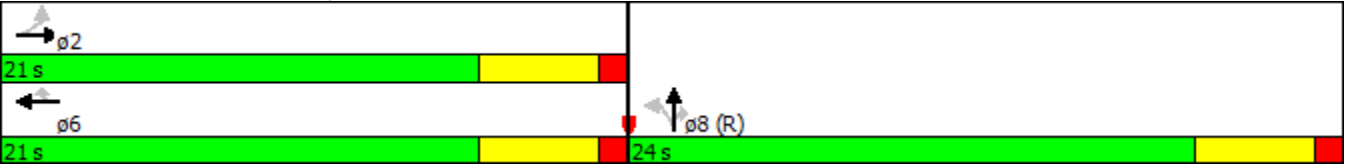


												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	244	0	0	184	205	54	702	143	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		65	0		100	0		0
Storage Lanes	1		0	0		1	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frt						0.850			0.850			
Flt Protected	0.950							0.996				
Satd. Flow (prot)	1770	1863	0	0	1863	1583	0	3525	1583	0	0	0
Flt Permitted	0.619							0.996				
Satd. Flow (perm)	1153	1863	0	0	1863	1583	0	3525	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						126			155			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		340			277			660			920	
Travel Time (s)		7.7			6.3			15.0			20.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	17	265	0	0	200	223	59	763	155	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	17	265	0	0	200	223	0	822	155	0	0	0
Turn Type	Perm	NA			NA	Perm	Perm	NA	Perm			
Protected Phases		2			6			8				
Permitted Phases	2					6	8		8			
Minimum Split (s)	21.0	21.0			21.0	21.0	21.0	21.0	21.0			
Total Split (s)	21.0	21.0			21.0	21.0	24.0	24.0	24.0			
Total Split (%)	46.7%	46.7%			46.7%	46.7%	53.3%	53.3%	53.3%			
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
All-Red Time (s)	1.0	1.0			1.0	1.0	1.0	1.0	1.0			
Lost Time Adjust (s)	-2.0	-2.0			-2.0	-2.0		-2.0	-2.0			
Total Lost Time (s)	3.0	3.0			3.0	3.0		3.0	3.0			
Lead/Lag												
Lead-Lag Optimize?												
Act Effect Green (s)	18.0	18.0			18.0	18.0		21.0	21.0			
Actuated g/C Ratio	0.40	0.40			0.40	0.40		0.47	0.47			
v/c Ratio	0.04	0.36			0.27	0.31		0.50	0.19			
Control Delay	8.6	11.2			10.3	5.9		9.7	2.3			
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0			
Total Delay	8.6	11.2			10.3	5.9		9.7	2.3			
LOS	A	B			B	A		A	A			
Approach Delay		11.0			8.0			8.5				
Approach LOS		B			A			A				
Queue Length 50th (ft)	3	45			33	15		70	0			
Queue Length 95th (ft)	11	88			67	48		107	21			
Internal Link Dist (ft)		260			197			580			840	
Turn Bay Length (ft)	100					65			100			
Base Capacity (vph)	461	745			745	708		1645	821			
Starvation Cap Reductn	0	0			0	0		0	0			
Spillback Cap Reductn	0	0			0	0		0	0			

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0			0	0		0	0			
Reduced v/c Ratio	0.04	0.36			0.27	0.31		0.50	0.19			

Intersection Summary	
Area Type:	Other
Cycle Length:	45
Actuated Cycle Length:	45
Offset:	0 (0%), Referenced to phase 8:NBTL, Start of Green
Natural Cycle:	45
Control Type:	Pretimed
Maximum v/c Ratio:	0.50
Intersection Signal Delay:	8.8
Intersection Capacity Utilization	58.2%
Analysis Period (min)	15
	Intersection LOS: A
	ICU Level of Service B

Splits and Phases: 19: Kentucky Street



**POST-DEVELOPMENT SCENARIO:  
“EXISTING – BERKELEY FLATS + HERE@KANSAS” TRAFFIC VOLUMES**

**Intersection**

Intersection Delay, s/veh 8.9

Intersection LOS A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	2	73	54	0	38	160	13	0	54	29	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	79	59	0	41	174	14	0	59	32	4
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	8.3	9.4	8.8
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	62%	2%	18%	12%
Vol Thru, %	33%	57%	76%	85%
Vol Right, %	5%	42%	6%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	87	129	211	75
LT Vol	54	2	38	9
Through Vol	29	73	160	64
RT Vol	4	54	13	2
Lane Flow Rate	95	140	229	82
Geometry Grp	1	1	1	1
Degree of Util (X)	0.131	0.171	0.288	0.111
Departure Headway (Hd)	4.973	4.386	4.526	4.904
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	719	816	794	729
Service Time	3.017	2.423	2.56	2.95
HCM Lane V/C Ratio	0.132	0.172	0.288	0.112
HCM Control Delay	8.8	8.3	9.4	8.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.6	1.2	0.4

**Intersection**

Intersection Delay, s/veh

Intersection LOS

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	9	64	2
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	10	70	2
Number of Lanes	0	0	1	0

**Approach** SB

Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	8.6
HCM LOS	A

**Lane**

**Intersection**

Intersection Delay, s/veh 9.6

Intersection LOS A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	3	147	63	0	49	139	9	0	82	56	14
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	3	160	68	0	53	151	10	0	89	61	15
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	9.6	9.8	9.8
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	54%	1%	25%	12%
Vol Thru, %	37%	69%	71%	72%
Vol Right, %	9%	30%	5%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	152	213	197	60
LT Vol	82	3	49	7
Through Vol	56	147	139	43
RT Vol	14	63	9	10
Lane Flow Rate	165	232	214	65
Geometry Grp	1	1	1	1
Degree of Util (X)	0.235	0.297	0.287	0.093
Departure Headway (Hd)	5.11	4.611	4.818	5.133
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	697	773	741	691
Service Time	3.182	2.672	2.881	3.217
HCM Lane V/C Ratio	0.237	0.3	0.289	0.094
HCM Control Delay	9.8	9.6	9.8	8.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.9	1.2	1.2	0.3

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**Intersection**

Intersection Delay, s/veh

Intersection LOS

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	7	43	10
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	8	47	11
Number of Lanes	0	0	1	0

**Approach** SB

Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	8.8
HCM LOS	A

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**Lane**

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**Intersection**

Intersection Delay, s/veh 11.1

Intersection LOS B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	28	38	55	0	62	117	16	0	35	56	41
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	30	41	60	0	67	127	17	0	38	61	45
Number of Lanes	0	0	1	1	0	0	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	1
HCM Control Delay	9.5	12.4	9.7
HCM LOS	A	B	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	42%	0%	32%	100%	0%
Vol Thru, %	0%	58%	58%	0%	60%	0%	65%
Vol Right, %	0%	42%	0%	100%	8%	0%	35%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	35	97	66	55	195	74	234
LT Vol	35	0	28	0	62	74	0
Through Vol	0	56	38	0	117	0	151
RT Vol	0	41	0	55	16	0	83
Lane Flow Rate	38	105	72	60	212	80	254
Geometry Grp	7	7	7	7	6	7	7
Degree of Util (X)	0.069	0.169	0.128	0.091	0.357	0.141	0.392
Departure Headway (Hd)	6.568	5.76	6.416	5.492	6.066	6.301	5.543
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	546	623	559	652	593	570	651
Service Time	4.304	3.496	4.155	3.231	4.1	4.029	3.272
HCM Lane V/C Ratio	0.07	0.169	0.129	0.092	0.358	0.14	0.39
HCM Control Delay	9.8	9.7	10.1	8.8	12.4	10.1	11.8
HCM Lane LOS	A	A	B	A	B	B	B
HCM 95th-tile Q	0.2	0.6	0.4	0.3	1.6	0.5	1.9

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**Intersection**

Intersection Delay, s/veh

Intersection LOS

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	74	151	83
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	80	164	90
Number of Lanes	0	1	1	0

**Approach** SB

Opposing Approach NB

Opposing Lanes 2

Conflicting Approach Left WB

Conflicting Lanes Left 1

Conflicting Approach Right EB

Conflicting Lanes Right 2

HCM Control Delay 11.4

HCM LOS B

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**Lane**

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**Intersection**

Intersection Delay, s/veh 15.7

Intersection LOS C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	85	127	71	0	44	89	101	0	103	200	87
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	92	138	77	0	48	97	110	0	112	217	95
Number of Lanes	0	0	1	1	0	0	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	2	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	2	1
HCM Control Delay	15	17	17
HCM LOS	B	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	40%	0%	19%	100%	0%
Vol Thru, %	0%	70%	60%	0%	38%	0%	62%
Vol Right, %	0%	30%	0%	100%	43%	0%	38%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	103	287	212	71	234	62	148
LT Vol	103	0	85	0	44	62	0
Through Vol	0	200	127	0	89	0	92
RT Vol	0	87	0	71	101	0	56
Lane Flow Rate	112	312	230	77	254	67	161
Geometry Grp	7	7	7	7	6	7	7
Degree of Util (X)	0.233	0.585	0.473	0.139	0.5	0.147	0.316
Departure Headway (Hd)	7.48	6.751	7.396	6.475	7.077	7.867	7.081
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	480	533	486	553	509	456	507
Service Time	5.226	4.497	5.144	4.223	5.126	5.623	4.836
HCM Lane V/C Ratio	0.233	0.585	0.473	0.139	0.499	0.147	0.318
HCM Control Delay	12.5	18.6	16.6	10.3	17	12	13.1
HCM Lane LOS	B	C	C	B	C	B	B
HCM 95th-tile Q	0.9	3.7	2.5	0.5	2.8	0.5	1.3

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**Intersection**

Intersection Delay, s/veh

Intersection LOS

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	62	92	56
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	67	100	61
Number of Lanes	0	1	1	0

**Approach** SB

Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	12.8
HCM LOS	B

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**Lane**

**Intersection**

Int Delay, s/veh 2.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	11	84	31	0	0	298
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	91	34	0	0	324

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	358	34	0
Stage 1	34	-	-
Stage 2	324	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	640	1039	1578
Stage 1	988	-	-
Stage 2	733	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	640	1039	1578
Mov Cap-2 Maneuver	640	-	-
Stage 1	988	-	-
Stage 2	733	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 969	1578	-
HCM Lane V/C Ratio	-	- 0.107	-	-
HCM Control Delay (s)	-	- 9.2	0	-
HCM Lane LOS	-	- A	A	-
HCM 95th %tile Q(veh)	-	- 0.4	0	-

**Intersection**





















Int Delay, s/veh 2.6













Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	42	89	278	0	0	210
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	46	97	302	0	0	228

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	530	302	0
Stage 1	302	-	-
Stage 2	228	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	510	738	1259
Stage 1	750	-	-
Stage 2	810	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	510	738	1259
Mov Cap-2 Maneuver	510	-	-
Stage 1	750	-	-
Stage 2	810	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 645	1259	-
HCM Lane V/C Ratio	-	- 0.221	-	-
HCM Control Delay (s)	-	- 12.2	0	-
HCM Lane LOS	-	- B	A	-
HCM 95th %tile Q(veh)	-	- 0.8	0	-

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	531	92	90	322	11	62	4	39	31	88	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		0	105		0	90		0	90		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.978			0.995			0.863			0.971	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3461	0	1770	3522	0	1770	1447	0	1770	1809	0
Flt Permitted	0.536			0.227			0.681			0.727		
Satd. Flow (perm)	998	3461	0	423	3522	0	1269	1447	0	1354	1809	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		39			9			42			23	
Link Speed (mph)		30			30			30			20	
Link Distance (ft)		674			457			985			305	
Travel Time (s)		15.3			10.4			22.4			10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)								0				
Adj. Flow (vph)	8	577	100	98	350	12	67	4	42	34	96	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	677	0	98	362	0	67	46	0	34	119	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	22.0	22.0		9.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	22.0	22.0		9.0	31.0		24.0	24.0		24.0	24.0	
Total Split (%)	40.0%	40.0%		16.4%	56.4%		43.6%	43.6%		43.6%	43.6%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		1.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-3.0		-2.0	-3.0		-3.0	-3.0		-3.0	-3.0	
Total Lost Time (s)	4.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Act Effect Green (s)	18.0	19.0		28.0	28.0		21.0	21.0		21.0	21.0	
Actuated g/C Ratio	0.33	0.35		0.51	0.51		0.38	0.38		0.38	0.38	
v/c Ratio	0.02	0.55		0.27	0.20		0.14	0.08		0.07	0.17	
Control Delay	13.0	15.8		9.1	7.6		12.1	5.0		11.3	10.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	13.0	15.8		9.1	7.6		12.1	5.0		11.3	10.1	
LOS	B	B		A	A		B	A		B	B	
Approach Delay		15.7			7.9			9.2			10.4	
Approach LOS		B			A			A			B	
Queue Length 50th (ft)	2	86		15	30		14	1		7	20	
Queue Length 95th (ft)	9	130		34	49		35	16		21	47	
Internal Link Dist (ft)		594			377			905			225	
Turn Bay Length (ft)	125			105			90			90		
Base Capacity (vph)	326	1221		362	1797		484	578		516	704	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.02	0.55		0.27	0.20		0.14	0.08		0.07	0.17	

**Intersection Summary**

Area Type: Other

Cycle Length: 55

Actuated Cycle Length: 55

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Pretimed

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 12.1






Intersection LOS: B





















Intersection Capacity Utilization 42.7%













ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 11: Mississippi Street &amp; 9th Street/ 9th Street

 $\phi 2$ (R)	 $\phi 3$	 $\phi 4$
24 s	9 s	22 s
 $\phi 6$ (R)	 $\phi 8$	
24 s	31 s	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	684	77	92	701	29	192	63	123	22	35	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		0	105		0	90		0	90		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.985			0.994			0.900			0.947	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3486	0	1770	3518	0	1770	1509	0	1770	1764	0
Flt Permitted	0.351			0.190			0.719			0.592		
Satd. Flow (perm)	654	3486	0	354	3518	0	1339	1509	0	1103	1764	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			11			134			21	
Link Speed (mph)		30			30			30			20	
Link Distance (ft)		674			457			985			305	
Travel Time (s)		15.3			10.4			22.4			10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)								0				
Adj. Flow (vph)	28	743	84	100	762	32	209	68	134	24	38	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	28	827	0	100	794	0	209	202	0	24	59	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	22.0	22.0		9.0	22.0		22.0	22.0		22.0	22.0	
Total Split (s)	22.0	22.0		9.0	31.0		24.0	24.0		24.0	24.0	
Total Split (%)	40.0%	40.0%		16.4%	56.4%		43.6%	43.6%		43.6%	43.6%	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		1.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-2.0	-3.0		-2.0	-3.0		-3.0	-3.0		-3.0	-3.0	
Total Lost Time (s)	4.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Act Effect Green (s)	18.0	19.0		28.0	28.0		21.0	21.0		21.0	21.0	
Actuated g/C Ratio	0.33	0.35		0.51	0.51		0.38	0.38		0.38	0.38	
v/c Ratio	0.13	0.68		0.30	0.44		0.41	0.31		0.06	0.09	
Control Delay	15.0	18.3		9.5	9.4		15.5	6.1		11.3	8.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	15.0	18.3		9.5	9.4		15.5	6.1		11.3	8.4	
LOS	B	B		A	A		B	A		B	A	
Approach Delay		18.2			9.4			10.9			9.2	
Approach LOS		B			A			B			A	
Queue Length 50th (ft)	6	114		15	77		48	14		5	8	
Queue Length 95th (ft)	22	168		35	113		96	50		17	26	
Internal Link Dist (ft)		594			377			905			225	
Turn Bay Length (ft)	125			105			90			90		
Base Capacity (vph)	214	1219		334	1796		511	659		421	686	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.13	0.68		0.30	0.44		0.41	0.31		0.06	0.09	

**Intersection Summary**

Area Type: Other

Cycle Length: 55

Actuated Cycle Length: 55

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Pretimed

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 13.0













Intersection LOS: B


















Intersection Capacity Utilization 54.0%













ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 11: Mississippi Street &amp; 9th Street/ 9th Street

					
ø2 (R)			ø3		ø4
24 s			9 s		22 s
					
ø6 (R)			ø8		
24 s			31 s		

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	42	47	65	129	0	0	0	0	137	700	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.929									0.999	
Flt Protected				0.950							0.992	
Satd. Flow (prot)	0	1557	0	1770	1676	0	0	0	0	0	3332	0
Flt Permitted				0.576							0.992	
Satd. Flow (perm)	0	1557	0	1073	1676	0	0	0	0	0	3332	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		51									2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		369			340			654			936	
Travel Time (s)		8.4			7.7			14.9			21.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)		0			0						0	
Adj. Flow (vph)	0	46	51	71	140	0	0	0	0	149	761	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	97	0	71	140	0	0	0	0	0	919	0
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases				6						4		
Minimum Split (s)		21.0		8.5	21.0					21.0	21.0	
Total Split (s)		21.0		8.6	29.6					25.4	25.4	
Total Split (%)		38.2%		15.6%	53.8%					46.2%	46.2%	
Yellow Time (s)		4.0		4.0	4.0					4.0	4.0	
All-Red Time (s)		1.0		0.5	1.0					1.0	1.0	
Lost Time Adjust (s)		-2.0		-1.0	-2.0						-2.0	
Total Lost Time (s)		3.0		3.5	3.0						3.0	
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Act Effect Green (s)		18.0		26.1	26.6						22.4	
Actuated g/C Ratio		0.33		0.47	0.48						0.41	
v/c Ratio		0.18		0.12	0.17						0.68	
Control Delay		8.6		8.6	8.7						16.4	
Queue Delay		0.0		0.0	0.0						0.0	
Total Delay		8.6		8.6	8.7						16.4	
LOS		A		A	A						B	
Approach Delay		8.6			8.7						16.4	
Approach LOS		A			A						B	
Queue Length 50th (ft)		10		12	24						123	
Queue Length 95th (ft)		37		29	49						179	
Internal Link Dist (ft)		289			260			574			856	
Turn Bay Length (ft)				100								
Base Capacity (vph)		543		573	810						1358	
Starvation Cap Reductn		0		0	0						0	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Spillback Cap Reductn		0		0	0						0	
Storage Cap Reductn		0		0	0						0	
Reduced v/c Ratio		0.18		0.12	0.17						0.68	

**Intersection Summary**

Area Type: Other

Cycle Length: 55

Actuated Cycle Length: 55

Offset: 21.4 (39%), Referenced to phase 4:SBTL, Start of Green

Natural Cycle: 55

Control Type: Pretimed

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 14.5





Intersection LOS: B


















Intersection Capacity Utilization 42.3%













ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 8: 11th Street &amp; Tennessee Street





 $\phi 1$	 $\phi 2$	 $\phi 4 (R)$
8.6 s	21 s	25.4 s
 $\phi 6$		
29.6 s		




















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	149	86	123	130	0	0	0	0	104	926	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.951									0.998	
Flt Protected				0.950							0.995	
Satd. Flow (prot)	0	1594	0	1770	1676	0	0	0	0	0	3339	0
Flt Permitted				0.383							0.995	
Satd. Flow (perm)	0	1594	0	713	1676	0	0	0	0	0	3339	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		49									3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		369			340			654			936	
Travel Time (s)		8.4			7.7			14.9			21.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)		0			0						0	
Adj. Flow (vph)	0	162	93	134	141	0	0	0	0	113	1007	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	255	0	134	141	0	0	0	0	0	1134	0
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases				6						4		
Minimum Split (s)		21.0		8.5	21.0					21.0	21.0	
Total Split (s)		21.0		9.0	30.0					30.0	30.0	
Total Split (%)		35.0%		15.0%	50.0%					50.0%	50.0%	
Yellow Time (s)		4.0		4.0	4.0					4.0	4.0	
All-Red Time (s)		1.0		0.5	1.0					1.0	1.0	
Lost Time Adjust (s)		-2.0		-1.0	-2.0						-2.0	
Total Lost Time (s)		3.0		3.5	3.0						3.0	
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Act Effect Green (s)		18.0		26.5	27.0						27.0	
Actuated g/C Ratio		0.30		0.44	0.45						0.45	
v/c Ratio		0.50		0.33	0.19						0.75	
Control Delay		17.8		12.5	10.8						17.7	
Queue Delay		0.0		0.0	0.0						0.0	
Total Delay		17.8		12.5	10.8						17.7	
LOS		B		B	B						B	
Approach Delay		17.8			11.6						17.7	
Approach LOS		B			B						B	
Queue Length 50th (ft)		59		28	29						168	
Queue Length 95th (ft)		120		57	59						239	
Internal Link Dist (ft)		289			260			574			856	
Turn Bay Length (ft)				100								
Base Capacity (vph)		512		411	754						1504	
Starvation Cap Reductn		0		0	0						0	













												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Spillback Cap Reductn		0		0	0						0	
Storage Cap Reductn		0		0	0						0	
Reduced v/c Ratio		0.50		0.33	0.19						0.75	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 4:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Pretimed	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 16.7	Intersection LOS: B
Intersection Capacity Utilization 58.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 8: 11th Street & Tennessee Street

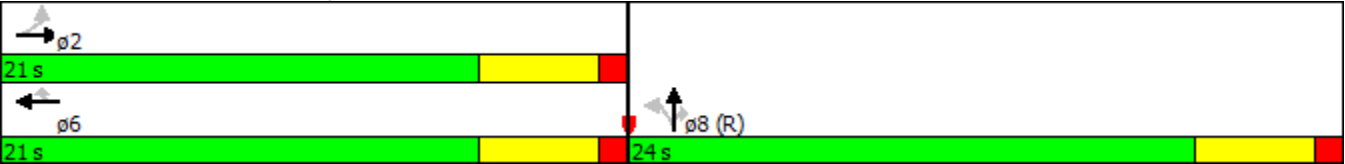
 p1	 p2	 p4 (R)
9 s	21 s	30 s
 p6		
30 s		




















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	13	171	0	0	157	144	63	552	65	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		65	0		100	0		0
Storage Lanes	1		0	0		1	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frt						0.850			0.850			
Flt Protected	0.950							0.995				
Satd. Flow (prot)	1770	1863	0	0	1863	1583	0	3522	1583	0	0	0
Flt Permitted	0.649							0.995				
Satd. Flow (perm)	1209	1863	0	0	1863	1583	0	3522	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						157			71			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		340			277			660			920	
Travel Time (s)		7.7			6.3			15.0			20.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	14	186	0	0	171	157	68	600	71	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	186	0	0	171	157	0	668	71	0	0	0
Turn Type	Perm	NA			NA	Perm	Perm	NA	Perm			
Protected Phases		2			6			8				
Permitted Phases	2					6	8		8			
Minimum Split (s)	21.0	21.0			21.0	21.0	21.0	21.0	21.0			
Total Split (s)	21.0	21.0			21.0	21.0	24.0	24.0	24.0			
Total Split (%)	46.7%	46.7%			46.7%	46.7%	53.3%	53.3%	53.3%			
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
All-Red Time (s)	1.0	1.0			1.0	1.0	1.0	1.0	1.0			
Lost Time Adjust (s)	-2.0	-2.0			-2.0	-2.0		-2.0	-2.0			
Total Lost Time (s)	3.0	3.0			3.0	3.0		3.0	3.0			
Lead/Lag												
Lead-Lag Optimize?												
Act Effect Green (s)	18.0	18.0			18.0	18.0		21.0	21.0			
Actuated g/C Ratio	0.40	0.40			0.40	0.40		0.47	0.47			
v/c Ratio	0.03	0.25			0.23	0.22		0.41	0.09			
Control Delay	8.5	10.1			10.0	3.0		8.9	2.7			
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0			
Total Delay	8.5	10.1			10.0	3.0		8.9	2.7			
LOS	A	B			A	A		A	A			
Approach Delay		10.0			6.6			8.3				
Approach LOS		B			A			A				
Queue Length 50th (ft)	2	30			28	0		54	0			
Queue Length 95th (ft)	10	63			58	24		84	14			
Internal Link Dist (ft)		260			197			580			840	
Turn Bay Length (ft)	100					65			100			
Base Capacity (vph)	483	745			745	727		1643	776			
Starvation Cap Reductn	0	0			0	0		0	0			
Spillback Cap Reductn	0	0			0	0		0	0			













												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0			0	0		0	0			
Reduced v/c Ratio	0.03	0.25			0.23	0.22		0.41	0.09			

Intersection Summary		
Area Type:	Other	
Cycle Length:	45	
Actuated Cycle Length:	45	
Offset:	0 (0%), Referenced to phase 8:NBTL, Start of Green	
Natural Cycle:	45	
Control Type:	Pretimed	
Maximum v/c Ratio:	0.41	
Intersection Signal Delay:	8.1	Intersection LOS: A
Intersection Capacity Utilization	42.3%	ICU Level of Service A
Analysis Period (min)	15	

Splits and Phases: 19: Kentucky Street

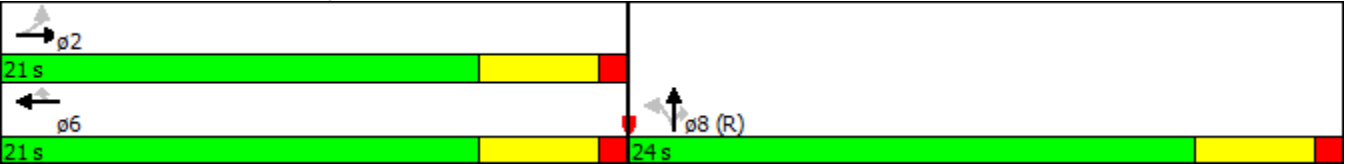


												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	254	0	0	197	205	58	702	143	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		65	0		100	0		0
Storage Lanes	1		0	0		1	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frt						0.850			0.850			
Flt Protected	0.950							0.996				
Satd. Flow (prot)	1770	1863	0	0	1863	1583	0	3525	1583	0	0	0
Flt Permitted	0.602							0.996				
Satd. Flow (perm)	1121	1863	0	0	1863	1583	0	3525	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						126			155			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		340			277			660			920	
Travel Time (s)		7.7			6.3			15.0			20.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	17	276	0	0	214	223	63	763	155	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	17	276	0	0	214	223	0	826	155	0	0	0
Turn Type	Perm	NA			NA	Perm	Perm	NA	Perm			
Protected Phases		2			6			8				
Permitted Phases	2					6	8		8			
Minimum Split (s)	21.0	21.0			21.0	21.0	21.0	21.0	21.0			
Total Split (s)	21.0	21.0			21.0	21.0	24.0	24.0	24.0			
Total Split (%)	46.7%	46.7%			46.7%	46.7%	53.3%	53.3%	53.3%			
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
All-Red Time (s)	1.0	1.0			1.0	1.0	1.0	1.0	1.0			
Lost Time Adjust (s)	-2.0	-2.0			-2.0	-2.0		-2.0	-2.0			
Total Lost Time (s)	3.0	3.0			3.0	3.0		3.0	3.0			
Lead/Lag												
Lead-Lag Optimize?												
Act Effect Green (s)	18.0	18.0			18.0	18.0		21.0	21.0			
Actuated g/C Ratio	0.40	0.40			0.40	0.40		0.47	0.47			
v/c Ratio	0.04	0.37			0.29	0.31		0.50	0.19			
Control Delay	8.6	11.4			10.5	5.9		9.7	2.3			
Queue Delay	0.0	0.0			0.0	0.0		0.0	0.0			
Total Delay	8.6	11.4			10.5	5.9		9.7	2.3			
LOS	A	B			B	A		A	A			
Approach Delay		11.2			8.1			8.5				
Approach LOS		B			A			A				
Queue Length 50th (ft)	3	47			35	15		71	0			
Queue Length 95th (ft)	11	91			71	48		108	21			
Internal Link Dist (ft)		260			197			580			840	
Turn Bay Length (ft)	100					65			100			
Base Capacity (vph)	448	745			745	708		1645	821			
Starvation Cap Reductn	0	0			0	0		0	0			
Spillback Cap Reductn	0	0			0	0		0	0			

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Storage Cap Reductn	0	0			0	0		0	0			
Reduced v/c Ratio	0.04	0.37			0.29	0.31		0.50	0.19			

Intersection Summary	
Area Type:	Other
Cycle Length:	45
Actuated Cycle Length:	45
Offset:	0 (0%), Referenced to phase 8:NBTL, Start of Green
Natural Cycle:	45
Control Type:	Pretimed
Maximum v/c Ratio:	0.50
Intersection Signal Delay:	8.9
Intersection Capacity Utilization	58.9%
Analysis Period (min)	15
	Intersection LOS: A
	ICU Level of Service B

Splits and Phases: 19: Kentucky Street



**Intersection**

Int Delay, s/veh 1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	1	102	10	41	189	1	2	1	6	1	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	111	11	45	205	1	2	1	7	1	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	207	0	0	122	0	0	414	414	116	417	419	206
Stage 1	-	-	-	-	-	-	118	118	-	295	295	-
Stage 2	-	-	-	-	-	-	296	296	-	122	124	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1364	-	-	1465	-	-	549	529	936	546	525	835
Stage 1	-	-	-	-	-	-	887	798	-	713	669	-
Stage 2	-	-	-	-	-	-	712	668	-	882	793	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1364	-	-	1465	-	-	534	512	936	528	509	835
Mov Cap-2 Maneuver	-	-	-	-	-	-	534	512	-	528	509	-
Stage 1	-	-	-	-	-	-	886	797	-	712	648	-
Stage 2	-	-	-	-	-	-	688	647	-	874	792	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.3	9.9	11.1
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	743	1364	-	-	1465	-	-	593
HCM Lane V/C Ratio	0.013	0.001	-	-	0.03	-	-	0.005
HCM Control Delay (s)	9.9	7.6	-	-	7.5	-	-	11.1
HCM Lane LOS	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0.1	-	-	0

**Intersection**

Int Delay, s/veh 0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	1	248	4	3	241	1	7	1	16	1	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	75	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	270	4	3	262	1	8	1	17	1	1	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	263	0	0	274	0	0	545	544	272	552	545	263
Stage 1	-	-	-	-	-	-	274	274	-	269	269	-
Stage 2	-	-	-	-	-	-	271	270	-	283	276	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1301	-	-	1289	-	-	449	446	767	444	446	776
Stage 1	-	-	-	-	-	-	732	683	-	737	687	-
Stage 2	-	-	-	-	-	-	735	686	-	724	682	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1301	-	-	1289	-	-	446	445	767	432	445	776
Mov Cap-2 Maneuver	-	-	-	-	-	-	446	445	-	432	445	-
Stage 1	-	-	-	-	-	-	731	682	-	736	685	-
Stage 2	-	-	-	-	-	-	730	684	-	706	681	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	11.1	11.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	619	1301	-	-	1289	-	-	560
HCM Lane V/C Ratio	0.042	0.001	-	-	0.003	-	-	0.008
HCM Control Delay (s)	11.1	7.8	-	-	7.8	-	-	11.5
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

# **APPENDIX III**

Results of Trip Generation Analysis  
Using ITE Trip Generation Manual, 9<sup>th</sup> Edition

## Trip Generation Summary - Apartments - Dwelling Units

Project: HERE@KANSAS  
 Alternative: Alternative 1 - Weighted Average Rate Method

Open Date: 9/16/2016  
 Analysis Date: 9/16/2016

ITE	Land Use	Average Daily Trips			AM Peak Hour of Adjacent Street Traffic			PM Peak Hour of Adjacent Street Traffic		
		Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
220	APT 1	788	788	1576	24	97	121	96	51	147
237	Dwelling Units									
<hr/>										
Unadjusted Volume		0	0	0	0	0	0	0	0	0
Internal Capture Trips		0	0	0	0	0	0	0	0	0
Pass-By Trips		0	0	0	0	0	0	0	0	0
Volume Added to Adjacent Streets		0	0	0	0	0	0	0	0	0

Total AM Peak Hour Internal Capture = 0 Percent

Total PM Peak Hour Internal Capture = 0 Percent

## Trip Generation Summary - Apartments - Bedrooms

Project: HERE@KANSAS  
 Alternative: Alternative 1 - Weighted Average Rate Method

Open Date: 9/16/2016  
 Analysis Date: 9/16/2016

ITE	Land Use	Average Daily Trips			AM Peak Hour of Adjacent Street Traffic			PM Peak Hour of Adjacent Street Traffic		
		Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
220	APT 2	1033	1032	2065	88	87	175	125	125	250
	624 Persons									
<hr/>										
	Unadjusted Volume	0	0	0	0	0	0	0	0	0
	Internal Capture Trips	0	0	0	0	0	0	0	0	0
	Pass-By Trips	0	0	0	0	0	0	0	0	0
	Volume Added to Adjacent Streets	0	0	0	0	0	0	0	0	0

Total AM Peak Hour Internal Capture = 0 Percent

Total PM Peak Hour Internal Capture = 0 Percent

## Trip Generation Summary - Mid Rise Apartments - Dwelling Units

Project: HERE@KANSAS  
 Alternative: Alternative 1 - Weighted Average Rate Method

Open Date: 9/16/2016  
 Analysis Date: 9/16/2016

ITE	Land Use	Average Daily Trips			AM Peak Hour of Adjacent Street Traffic			PM Peak Hour of Adjacent Street Traffic		
		Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
223	MRAPT 1				22	49	71	53	39	92
	237 Dwelling Units									
<hr/>										
	Unadjusted Volume	0	0	0	0	0	0	0	0	0
	Internal Capture Trips	0	0	0	0	0	0	0	0	0
	Pass-By Trips	0	0	0	0	0	0	0	0	0
	Volume Added to Adjacent Streets	0	0	0	0	0	0	0	0	0

Total AM Peak Hour Internal Capture = 0 Percent

Total PM Peak Hour Internal Capture = 0 Percent

## Trip Generation Summary - Restaurant

Project: HERE@KANSAS  
 Alternative: Alternative 1 - Weighted Average Rate Method

Open Date: 9/16/2016  
 Analysis Date: 9/16/2016

ITE	Land Use	Average Daily Trips			AM Peak Hour of Adjacent Street Traffic			PM Peak Hour of Adjacent Street Traffic		
		Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
932	RESTAURANTHT 1	374	374	748	35	29	64	35	23	58
	5.88 Gross Floor Area 1000 SF									
Unadjusted Volume		0	0	0	0	0	0	0	0	0
Internal Capture Trips		0	0	0	0	0	0	0	0	0
Pass-By Trips		0	0	0	0	0	0	15	10	25
Volume Added to Adjacent Streets		0	0	0	0	0	0	-15	-10	-25

Total AM Peak Hour Internal Capture = 0 Percent

Total PM Peak Hour Internal Capture = 0 Percent

## Trip Generation Summary - Retail

Project: HERE@KANSAS  
 Alternative: Alternative 1 - Weighted Average Rate Method

Open Date: 9/16/2016  
 Analysis Date: 9/16/2016

ITE	Land Use	Average Daily Trips			AM Peak Hour of Adjacent Street Traffic			PM Peak Hour of Adjacent Street Traffic		
		Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
826	CENTERSPECIALTY 1	170	170	340				9	12	21
	7.68 Gross Leasable Area 1000 SF									
Unadjusted Volume		0	0	0	0	0	0	0	0	0
Internal Capture Trips		0	0	0	0	0	0	0	0	0
Pass-By Trips		0	0	0	0	0	0	0	0	0
Volume Added to Adjacent Streets		0	0	0	0	0	0	0	0	0

Total AM Peak Hour Internal Capture = 0 Percent

Total PM Peak Hour Internal Capture = 0 Percent

## Trip Generation Summary - Apartments - Dwelling Units

Project: HERE@KANSAS  
 Alternative: Alternative 2 - Regression Equation Method

Open Date: 9/16/2016  
 Analysis Date: 9/16/2016

ITE	Land Use	Average Daily Trips			AM Peak Hour of Adjacent Street Traffic			PM Peak Hour of Adjacent Street Traffic		
		Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
220	APT 3	780	780	1560	24	96	120	96	52	148
	237 Dwelling Units									
<hr/>										
	Unadjusted Volume	0	0	0	0	0	0	0	0	0
	Internal Capture Trips	0	0	0	0	0	0	0	0	0
	Pass-By Trips	0	0	0	0	0	0	0	0	0
	Volume Added to Adjacent Streets	0	0	0	0	0	0	0	0	0

Total AM Peak Hour Internal Capture = 0 Percent

Total PM Peak Hour Internal Capture = 0 Percent

## Trip Generation Summary - Apartments - Bedrooms

Project: HERE@KANSAS  
 Alternative: Alternative 2 - Regression Equation Method

Open Date: 9/16/2016  
 Analysis Date: 9/16/2016

ITE	Land Use	Average Daily Trips			AM Peak Hour of Adjacent Street Traffic			PM Peak Hour of Adjacent Street Traffic		
		Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
220	APT 4	1051	1050	2101	87	86	173	123	122	245
	624 Persons									
<hr/>										
Unadjusted Volume		0	0	0	0	0	0	0	0	0
Internal Capture Trips		0	0	0	0	0	0	0	0	0
Pass-By Trips		0	0	0	0	0	0	0	0	0
Volume Added to Adjacent Streets		0	0	0	0	0	0	0	0	0

Total AM Peak Hour Internal Capture = 0 Percent

Total PM Peak Hour Internal Capture = 0 Percent

## Trip Generation Summary - Mid Rise Apartments - Dwelling Units

Project: HERE@KANSAS  
 Alternative: Alternative 2 - Regression Equation Method

Open Date: 9/16/2016  
 Analysis Date: 9/16/2016

ITE	Land Use	Average Daily Trips			AM Peak Hour of Adjacent Street Traffic			PM Peak Hour of Adjacent Street Traffic		
		Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
223	MRAPT 2				26	58	84	60	43	103
	237 Dwelling Units									
<hr/>										
	Unadjusted Volume	0	0	0	0	0	0	0	0	0
	Internal Capture Trips	0	0	0	0	0	0	0	0	0
	Pass-By Trips	0	0	0	0	0	0	0	0	0
	Volume Added to Adjacent Streets	0	0	0	0	0	0	0	0	0

Total AM Peak Hour Internal Capture = 0 Percent

Total PM Peak Hour Internal Capture = 0 Percent

## Trip Generation Summary - Restaurant

Project: HERE@KANSAS  
Alternative: Alternative 2 - Regression Equation Method

Open Date: 9/16/2016  
Analysis Date: 9/16/2016

ITE	Land Use	Average Daily Trips			AM Peak Hour of Adjacent Street Traffic			PM Peak Hour of Adjacent Street Traffic		
		Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
932	RESTAURANTHT 2	374	374	748	35	29	64	35	23	58
	5.88 Gross Floor Area 1000 SF									
Unadjusted Volume		0	0	0	0	0	0	0	0	0
Internal Capture Trips		0	0	0	0	0	0	0	0	0
Pass-By Trips		0	0	0	0	0	0	15	10	25
Volume Added to Adjacent Streets		0	0	0	0	0	0	-15	-10	-25

Total AM Peak Hour Internal Capture = 0 Percent

Total PM Peak Hour Internal Capture = 0 Percent

## Trip Generation Summary - Retail

Project: HERE@KANSAS  
 Alternative: Alternative 2 - Regression Equation Method

Open Date: 9/16/2016  
 Analysis Date: 9/16/2016

ITE	Land Use	Average Daily Trips			AM Peak Hour of Adjacent Street Traffic			PM Peak Hour of Adjacent Street Traffic		
		Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
826	CENTERSPECIALTY 2	183	183	366				18	22	40
	7.68 Gross Leasable Area 1000 SF									
<hr/>										
	Unadjusted Volume	0	0	0	0	0	0	0	0	0
	Internal Capture Trips	0	0	0	0	0	0	0	0	0
	Pass-By Trips	0	0	0	0	0	0	0	0	0
	Volume Added to Adjacent Streets	0	0	0	0	0	0	0	0	0

Total AM Peak Hour Internal Capture = 0 Percent

Total PM Peak Hour Internal Capture = 0 Percent

Detailed Land Use Data  
For 237 Dwelling Units of APT 1  
( 220 ) Apartment

Project: HERE@KANSAS  
Phase: Apartments - Dwelling Units  
Description: SWC of 11th Street & Indiana Street

Open Date: 9/16/2016  
Analysis Date: 9/16/2016

Day / Period	Total Trips	Pass-By Trips	Avg Rate	Min Rate	Max Rate	Std Dev	Avg Size	% Enter	% Exit	Use Eq.	Equation	R2
Weekday Average Daily Trips	1576	0	6.65	1.27	12.5	3.07	210	50	50	False	$T = 6.06(X) + 123.56$	0.87
Weekday AM Peak Hour of Generator	130	0	0.55	0.1	1.08	0.76	230	29	71	False	$T = 0.54(X) + 2.45$	0.82
Weekday AM Peak Hour of Adjacent Street Traffic	121	0	0.51	0.1	1.02	0.73	235	20	80	False	$T = 0.49(X) + 3.73$	0.83
Weekday PM Peak Hour of Generator	159	0	0.67	0.1	1.64	0.85	229	61	39	False	$T = 0.60(X) + 14.91$	0.8
Weekday PM Peak Hour of Adjacent Street Traffic	147	0	0.62	0.1	1.64	0.82	233	65	35	False	$T = 0.55(X) + 17.65$	0.77
Saturday Average Daily Trips	1514	0	6.39	2.84	8.4	2.99	175	50	50	False	$T = 7.85(X) - 256.19$	0.85
Saturday Peak Hour of Generator	123	0	0.52	0.26	1.05	0.74	178	50	50	False	$T = 0.41(X) + 19.23$	0.56
Sunday Average Daily Trips	1389	0	5.86	3.21	7.53	2.73	182	50	50	False	$T = 6.42(X) - 101.12$	0.82
Sunday Peak Hour of Generator	121	0	0.51	0.26	1.43	0.75	186	50	50	False		

Detailed Land Use Data  
For 624 Persons of APT 2  
( 220 ) Apartment

Project: HERE@KANSAS  
Phase: Apartments - Bedrooms  
Description: SWC of 11th Street & Indiana Street

Open Date: 9/16/2016  
Analysis Date: 9/16/2016

Day / Period	Total Trips	Pass-By Trips	Avg Rate	Min Rate	Max Rate	Std Dev	Avg Size	% Enter	% Exit	Use Eq.	Equation	R2
Weekday Average Daily Trips	2065	0	3.31	1.16	5.85	1.99	397	50	50	False	$T = 3.47(X) - 64.48$	0.9
Weekday AM Peak Hour of Generator	187	0	0.3	0.1	0.55	0.56	408	48	52	False	$T = 0.28(X) + 8.45$	0.66
Weekday AM Peak Hour of Adjacent Street Traffic	175	0	0.28	0.1	0.52	0.54	427	50	50	False	$T = 0.26(X) + 10.99$	0.67
Weekday PM Peak Hour of Generator	250	0	0.4	0.19	0.77	0.64	402	59	41	False	$T = 0.40(X) - 1.67$	0.78
Weekday PM Peak Hour of Adjacent Street Traffic	250	0	0.4	0.2	0.77	0.65	412	50	50	False	$T = 0.39(X) + 2.03$	0.77
Saturday Average Daily Trips	2022	0	3.24	1.03	5.11	2.16	338	50	50	False	$T = 3.30(X) - 21.03$	0.56
Saturday Peak Hour of Generator	162	0	0.26	0.15	0.55	0.52	338	50	50	False		
Sunday Average Daily Trips	1909	0	3.06	1.79	5.04	1.93	359	50	50	False	$T = 3.21(X) - 54.93$	0.69
Sunday Peak Hour of Generator	162	0	0.26	0.16	0.45	0.51	359	50	50	False	$\ln(T) = 0.77 \ln(X) - 0.04$	0.52

Source: Institute of Transportation Engineers, Trip Generation Manual 9th Edition, 2012

TRIP GENERATION 2013, TRAFFICWARE, LLC

Detailed Land Use Data  
For 237 Dwelling Units of MRAPT 1  
( 223 ) Mid-Rise Apartment

Project: HERE@KANSAS  
Phase: Mid Rise Apartments - Dwelling Units  
Description: SWC of 11th Street & Indiana Street

Open Date: 9/16/2016  
Analysis Date: 9/16/2016

Day / Period	Total Trips	Pass-By Trips	Avg Rate	Min Rate	Max Rate	Std Dev	Avg Size	% Enter	% Exit	Use Eq.	Equation	R2
Weekday AM Peak Hour of Generator	83	0	0.35	0.19	0.47	0.6	120	29	71	False	$T = 0.46(X) - 14.01$	0.91
Weekday AM Peak Hour of Adjacent Street Traffic	71	0	0.3	0.06	0.46	0.56	120	31	69	False	$T = 0.41(X) - 13.06$	0.83
Weekday PM Peak Hour of Generator	104	0	0.44	0.19	0.6	0.67	120	59	41	False	$T = 0.53(X) - 11.27$	0.9
Weekday PM Peak Hour of Adjacent Street Traffic	92	0	0.39	0.15	0.54	0.63	120	58	42	False	$T = 0.48(X) - 11.07$	0.89

Detailed Land Use Data  
For 5.88 Gross Floor Area 1000 SF of RESTAURANTHT 1  
( 932 ) High-Turnover (Sit-Down) Restaurant

Project: HERE@KANSAS  
Phase: Restaurant  
Description: SWC of 11th Street & Indiana Street

Open Date: 9/16/2016  
Analysis Date: 9/16/2016

Day / Period	Total Trips	Pass-By Trips	Avg Rate	Min Rate	Max Rate	Std Dev	Avg Size	% Enter	% Exit	Use Eq.	Equation	R2
Weekday Average Daily Trips	748	0	127.15	73.51	246	41.77	7	50	50	False		
Weekday AM Peak Hour of Generator	78	0	13.33	3	54.09	9.44	7	53	47	False		
Weekday AM Peak Hour of Adjacent Street Traffic	64	0	10.81	2.32	25.6	6.59	6	55	45	False		
Weekday PM Peak Hour of Generator	109	0	18.49	5.6	69.2	13.32	5	54	46	False		
Weekday PM Peak Hour of Adjacent Street Traffic	58	25	9.85	0.92	62	8.54	6	60	40	False		
Saturday Average Daily Trips	931	0	158.37	144.6	172.71		5	50	50	False		
Saturday Peak Hour of Generator	83	0	14.07	4.44	50.4	12.19	4	53	47	False		
Sunday Average Daily Trips	775	0	131.84	119.38	143.8		5	50	50	False		
Sunday Peak Hour of Generator	109	0	18.46	9.79	43.2	13.74	4	55	45	False		

Detailed Land Use Data  
For 7.68 Gross Leasable Area 1000 SF of CENTERSPECIALTY 1  
( 826 ) Specialty Retail Center

Project: HERE@KANSAS  
Phase: Retail  
Description: SWC of 11th Street & Indiana Street

Open Date: 9/16/2016  
Analysis Date: 9/16/2016

Day / Period	Total Trips	Pass-By Trips	Avg Rate	Min Rate	Max Rate	Std Dev	Avg Size	% Enter	% Exit	Use Eq.	Equation	R2
Weekday Average Daily Trips	340	0	44.32	21.3	64.21	15.52	25	50	50	False	$T = 42.78(X) + 37.66$	0.69
Weekday AM Peak Hour of Generator	53	0	6.84	5.33	14.08	3.55	60	48	52	False	$T = 4.91(X) + 115.59$	0.9
Weekday PM Peak Hour of Generator	39	0	5.02	4.59	6.18	2.31	75	56	44	False		
Weekday PM Peak Hour of Adjacent Street Traffic	21	0	2.71	2.03	5.16	1.83	69	44	56	False	$T = 2.40(X) + 21.48$	0.98
Saturday Average Daily Trips	323	0	42.04	22.57	54.47	13.97	28	50	50	False		
Sunday Average Daily Trips	157	0	20.43	6.96	32.82	10.27	28	50	50	False		

Detailed Land Use Data  
For 237 Dwelling Units of APT 3  
( 220 ) Apartment

Project: HERE@KANSAS  
Phase: Apartments - Dwelling Units  
Description: SWC of 11th Street & Indiana Street

Open Date: 9/16/2016  
Analysis Date: 9/16/2016

Day / Period	Total Trips	Pass-By Trips	Avg Rate	Min Rate	Max Rate	Std Dev	Avg Size	% Enter	% Exit	Use Eq.	Equation	R2
Weekday Average Daily Trips	1560	0	6.65	1.27	12.5	3.07	210	50	50	True	$T = 6.06(X) + 123.56$	0.87
Weekday AM Peak Hour of Generator	130	0	0.55	0.1	1.08	0.76	230	29	71	True	$T = 0.54(X) + 2.45$	0.82
Weekday AM Peak Hour of Adjacent Street Traffic	120	0	0.51	0.1	1.02	0.73	235	20	80	True	$T = 0.49(X) + 3.73$	0.83
Weekday PM Peak Hour of Generator	157	0	0.67	0.1	1.64	0.85	229	61	39	True	$T = 0.60(X) + 14.91$	0.8
Weekday PM Peak Hour of Adjacent Street Traffic	148	0	0.62	0.1	1.64	0.82	233	65	35	True	$T = 0.55(X) + 17.65$	0.77
Saturday Average Daily Trips	1604	0	6.39	2.84	8.4	2.99	175	50	50	True	$T = 7.85(X) - 256.19$	0.85
Saturday Peak Hour of Generator	116	0	0.52	0.26	1.05	0.74	178	50	50	True	$T = 0.41(X) + 19.23$	0.56
Sunday Average Daily Trips	1420	0	5.86	3.21	7.53	2.73	182	50	50	True	$T = 6.42(X) - 101.12$	0.82
Sunday Peak Hour of Generator	121	0	0.51	0.26	1.43	0.75	186	50	50	False		

Detailed Land Use Data  
For 624 Persons of APT 4  
( 220 ) Apartment

Project: HERE@KANSAS  
Phase: Apartments - Bedrooms  
Description: SWC of 11th Street & Indiana Street

Open Date: 9/16/2016  
Analysis Date: 9/16/2016

Day / Period	Total Trips	Pass-By Trips	Avg Rate	Min Rate	Max Rate	Std Dev	Avg Size	% Enter	% Exit	Use Eq.	Equation	R2
Weekday Average Daily Trips	2101	0	3.31	1.16	5.85	1.99	397	50	50	True	$T = 3.47(X) - 64.48$	0.9
Weekday AM Peak Hour of Generator	183	0	0.3	0.1	0.55	0.56	408	48	52	True	$T = 0.28(X) + 8.45$	0.66
Weekday AM Peak Hour of Adjacent Street Traffic	173	0	0.28	0.1	0.52	0.54	427	50	50	True	$T = 0.26(X) + 10.99$	0.67
Weekday PM Peak Hour of Generator	248	0	0.4	0.19	0.77	0.64	402	59	41	True	$T = 0.40(X) - 1.67$	0.78
Weekday PM Peak Hour of Adjacent Street Traffic	245	0	0.4	0.2	0.77	0.65	412	50	50	True	$T = 0.39(X) + 2.03$	0.77
Saturday Average Daily Trips	2038	0	3.24	1.03	5.11	2.16	338	50	50	True	$T = 3.30(X) - 21.03$	0.56
Saturday Peak Hour of Generator	162	0	0.26	0.15	0.55	0.52	338	50	50	False		
Sunday Average Daily Trips	1948	0	3.06	1.79	5.04	1.93	359	50	50	True	$T = 3.21(X) - 54.93$	0.69
Sunday Peak Hour of Generator	136	0	0.26	0.16	0.45	0.51	359	50	50	True	$\ln(T) = 0.77 \ln(X) - 0.04$	0.52

Detailed Land Use Data  
For 237 Dwelling Units of MRAPT 2  
( 223 ) Mid-Rise Apartment

Project: HERE@KANSAS  
Phase: Mid Rise Apartments - Dwelling Units  
Description: SWC of 11th Street & Indiana Street

Open Date: 9/16/2016  
Analysis Date: 9/16/2016

Day / Period	Total Trips	Pass-By Trips	Avg Rate	Min Rate	Max Rate	Std Dev	Avg Size	% Enter	% Exit	Use Eq.	Equation	R2
Weekday AM Peak Hour of Generator	95	0	0.35	0.19	0.47	0.6	120	29	71	True	$T = 0.46(X) - 14.01$	0.91
Weekday AM Peak Hour of Adjacent Street Traffic	84	0	0.3	0.06	0.46	0.56	120	31	69	True	$T = 0.41(X) - 13.06$	0.83
Weekday PM Peak Hour of Generator	114	0	0.44	0.19	0.6	0.67	120	59	41	True	$T = 0.53(X) - 11.27$	0.9
Weekday PM Peak Hour of Adjacent Street Traffic	103	0	0.39	0.15	0.54	0.63	120	58	42	True	$T = 0.48(X) - 11.07$	0.89

Detailed Land Use Data  
For 5.88 Gross Floor Area 1000 SF of RESTAURANTHT 2  
( 932 ) High-Turnover (Sit-Down) Restaurant

Project: HERE@KANSAS  
Phase: Restaurant  
Description: SWC of 11th Street & Indiana Street

Open Date: 9/16/2016  
Analysis Date: 9/16/2016

Day / Period	Total Trips	Pass-By Trips	Avg Rate	Min Rate	Max Rate	Std Dev	Avg Size	% Enter	% Exit	Use Eq.	Equation	R2
Weekday Average Daily Trips	748	0	127.15	73.51	246	41.77	7	50	50	False		
Weekday AM Peak Hour of Generator	78	0	13.33	3	54.09	9.44	7	53	47	False		
Weekday AM Peak Hour of Adjacent Street Traffic	64	0	10.81	2.32	25.6	6.59	6	55	45	False		
Weekday PM Peak Hour of Generator	109	0	18.49	5.6	69.2	13.32	5	54	46	False		
Weekday PM Peak Hour of Adjacent Street Traffic	58	25	9.85	0.92	62	8.54	6	60	40	False		
Saturday Average Daily Trips	931	0	158.37	144.6	172.71		5	50	50	False		
Saturday Peak Hour of Generator	83	0	14.07	4.44	50.4	12.19	4	53	47	False		
Sunday Average Daily Trips	775	0	131.84	119.38	143.8		5	50	50	False		
Sunday Peak Hour of Generator	109	0	18.46	9.79	43.2	13.74	4	55	45	False		

Detailed Land Use Data  
For 7.68 Gross Leasable Area 1000 SF of CENTERSPECIALTY 2  
( 826 ) Specialty Retail Center

Project: HERE@KANSAS  
Phase: Retail  
Description: SWC of 11th Street & Indiana Street

Open Date: 9/16/2016  
Analysis Date: 9/16/2016

Day / Period	Total Trips	Pass-By Trips	Avg Rate	Min Rate	Max Rate	Std Dev	Avg Size	% Enter	% Exit	Use Eq.	Equation	R2
Weekday Average Daily Trips	366	0	44.32	21.3	64.21	15.52	25	50	50	True	$T = 42.78(X) + 37.66$	0.69
Weekday AM Peak Hour of Generator	153	0	6.84	5.33	14.08	3.55	60	48	52	True	$T = 4.91(X) + 115.59$	0.9
Weekday PM Peak Hour of Generator	39	0	5.02	4.59	6.18	2.31	75	56	44	False		
Weekday PM Peak Hour of Adjacent Street Traffic	40	0	2.71	2.03	5.16	1.83	69	44	56	True	$T = 2.40(X) + 21.48$	0.98
Saturday Average Daily Trips	323	0	42.04	22.57	54.47	13.97	28	50	50	False		
Sunday Average Daily Trips	157	0	20.43	6.96	32.82	10.27	28	50	50	False		

# **APPENDIX IV**

## **Summary of Peak-Hour Traffic Counts**

# Summary of Turning Movement Counts (All Vehicles )

11th Street and Indiana Street  
Morning Peak-Hours  
Sunny. Mild

File Name : Ind&11-eam  
Site Code : 1  
Start Date : 11/14/2013  
Page No : 1

Groups Printed- Unshifted

Start Time	Indiana Street From North					11th Street From East					Indiana Street From South					11th Street From West					Int. Total
	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	
07:00 AM	0	9	0	0	9	0	8	2	0	10	0	4	5	0	9	6	5	1	0	12	40
07:15 AM	1	9	0	0	10	0	17	2	0	19	0	4	6	0	10	6	5	0	0	11	50
07:30 AM	0	9	2	0	11	5	34	10	0	49	0	8	14	0	22	16	12	1	0	29	111
07:45 AM	1	20	1	0	22	2	47	6	0	55	0	7	20	0	27	14	12	1	0	27	131
Total	2	47	3	0	52	7	106	20	0	133	0	23	45	0	68	42	34	3	0	79	332
08:00 AM	0	16	4	0	20	3	39	7	0	49	1	7	12	0	20	14	18	0	0	32	121
08:15 AM	1	19	2	0	22	3	24	13	0	40	0	7	8	0	15	10	9	0	0	19	96
08:30 AM	5	12	0	0	17	1	21	10	0	32	0	3	11	0	14	12	9	1	0	22	85
08:45 AM	1	12	0	0	13	1	25	8	0	34	0	5	21	0	26	5	13	1	0	19	92
Total	7	59	6	0	72	8	109	38	0	155	1	22	52	0	75	41	49	2	0	92	394
Grand Total	9	106	9	0	124	15	215	58	0	288	1	45	97	0	143	83	83	5	0	171	726
Apprch %	7.3	85.5	7.3	0		5.2	74.7	20.1	0		0.7	31.5	67.8	0		48.5	48.5	2.9	0		
Total %	1.2	14.6	1.2	0	17.1	2.1	29.6	8	0	39.7	0.1	6.2	13.4	0	19.7	11.4	11.4	0.7	0	23.6	

# Summary of Turning Movement Counts (All Vehicles )

11th Street and Indiana Street  
Morning Peak-Hours  
Sunny. Mild

File Name : Ind&11-eam  
Site Code : 1  
Start Date : 11/14/2013  
Page No : 2

	Indiana Street From North					11th Street From East					Indiana Street From South					11th Street From West					
Start Time	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	9	2	0	11	5	34	10	0	49	0	8	14	0	22	16	12	1	0	29	111
07:45 AM	1	20	1	0	22	2	47	6	0	55	0	7	20	0	27	14	12	1	0	27	131
08:00 AM	0	16	4	0	20	3	39	7	0	49	1	7	12	0	20	14	18	0	0	32	121
08:15 AM	1	19	2	0	22	3	24	13	0	40	0	7	8	0	15	10	9	0	0	19	96
Total Volume	2	64	9	0	75	13	144	36	0	193	1	29	54	0	84	54	51	2	0	107	459
% App. Total	2.7	85.3	12	0		6.7	74.6	18.7	0		1.2	34.5	64.3	0		50.5	47.7	1.9	0		
PHF	.500	.800	.563	.000	.852	.650	.766	.692	.000	.877	.250	.906	.675	.000	.778	.844	.708	.500	.000	.836	.876

# Summary of Turning Movement Counts (All Vehicles )

Indiana Street and 11th Street  
Afternoon Peak-Hours  
Sunny, Mild

File Name : Ind&11-epm  
Site Code : 1  
Start Date : 11/13/2013  
Page No : 1

Groups Printed- Unshifted

Start Time	Indiana Street From North					11th Street From East					Indiana Street From South					11th Street From West					Int. Total
	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	
04:00 PM	0	5	2	0	7	4	22	10	0	36	2	14	24	0	40	28	31	3	0	62	145
04:15 PM	1	2	5	0	8	2	16	4	0	22	0	15	21	0	36	12	29	3	0	44	110
04:30 PM	3	3	6	0	12	5	21	7	0	33	3	14	24	0	41	9	47	1	0	57	143
04:45 PM	3	16	5	0	24	8	18	11	0	37	3	6	18	0	27	15	23	0	0	38	126
Total	7	26	18	0	51	19	77	32	0	128	8	49	87	0	144	64	130	7	0	201	524
05:00 PM	2	14	2	0	18	3	40	15	0	58	3	15	31	0	49	17	45	2	0	64	189
05:15 PM	3	9	4	0	16	1	26	10	0	37	3	16	16	0	35	10	36	0	0	46	134
05:30 PM	4	8	0	0	12	2	28	9	0	39	2	16	14	0	32	11	27	0	0	38	121
05:45 PM	1	12	1	0	14	3	30	14	0	47	5	9	21	0	35	25	27	1	0	53	149
Total	10	43	7	0	60	9	124	48	0	181	13	56	82	0	151	63	135	3	0	201	593
Grand Total	17	69	25	0	111	28	201	80	0	309	21	105	169	0	295	127	265	10	0	402	1117
Apprch %	15.3	62.2	22.5	0		9.1	65	25.9	0		7.1	35.6	57.3	0		31.6	65.9	2.5	0		
Total %	1.5	6.2	2.2	0	9.9	2.5	18	7.2	0	27.7	1.9	9.4	15.1	0	26.4	11.4	23.7	0.9	0	36	

# Summary of Turning Movement Counts (All Vehicles )

Indiana Street and 11th Street  
Afternoon Peak-Hours  
Sunny, Mild

File Name : Ind&11-epm  
Site Code : 1  
Start Date : 11/13/2013  
Page No : 2

	Indiana Street From North					11th Street From East					Indiana Street From South					11th Street From West					
Start Time	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	2	14	2	0	18	3	40	15	0	58	3	15	31	0	49	17	45	2	0	64	189
05:15 PM	3	9	4	0	16	1	26	10	0	37	3	16	16	0	35	10	36	0	0	46	134
05:30 PM	4	8	0	0	12	2	28	9	0	39	2	16	14	0	32	11	27	0	0	38	121
05:45 PM	1	12	1	0	14	3	30	14	0	47	5	9	21	0	35	25	27	1	0	53	149
Total Volume	10	43	7	0	60	9	124	48	0	181	13	56	82	0	151	63	135	3	0	201	593
% App. Total	16.7	71.7	11.7	0		5	68.5	26.5	0		8.6	37.1	54.3	0		31.3	67.2	1.5	0		
PHF	.625	.768	.438	.000	.833	.750	.775	.800	.000	.780	.650	.875	.661	.000	.770	.630	.750	.375	.000	.785	.784

# Summary of Turning Movement Counts (All Vehicles )

11th Street & Mississippi Street  
Morning Peak-Hours  
Sunny, Mild

File Name : Miss&11-eam-raw  
Site Code : 2  
Start Date : 11/15/2013  
Page No : 1

Groups Printed- Unshifted

Start Time	Mississippi Street From North					11th Street From East					Mississippi Street From South					KU Parking Lot Access From West					Int. Total
	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	
07:00 AM	1	17	3	0	21	5	0	2	0	7	2	10	0	0	12	0	0	0	0	0	40
07:15 AM	1	31	12	0	44	10	1	7	0	18	2	2	0	0	4	0	0	2	0	2	68
07:30 AM	3	32	12	0	47	12	0	9	0	21	2	6	0	0	8	1	0	0	0	1	77
07:45 AM	1	49	18	0	68	39	0	6	0	45	0	7	4	0	11	1	0	2	0	3	127
Total	6	129	45	0	180	66	1	24	0	91	6	25	4	0	35	2	0	4	0	6	312
08:00 AM	2	54	24	0	80	25	0	14	0	39	2	3	2	0	7	1	1	1	0	3	129
08:15 AM	4	27	27	0	58	37	1	7	0	45	2	4	2	0	8	0	1	0	0	1	112
08:30 AM	13	33	29	0	75	33	8	9	0	50	5	8	1	0	14	1	1	1	0	3	142
08:45 AM	12	34	41	0	87	35	5	12	0	52	6	14	1	0	21	0	0	1	0	1	161
Total	31	148	121	0	300	130	14	42	0	186	15	29	6	0	50	2	3	3	0	8	544
Grand Total	37	277	166	0	480	196	15	66	0	277	21	54	10	0	85	4	3	7	0	14	856
Apprch %	7.7	57.7	34.6	0		70.8	5.4	23.8	0		24.7	63.5	11.8	0		28.6	21.4	50	0		
Total %	4.3	32.4	19.4	0	56.1	22.9	1.8	7.7	0	32.4	2.5	6.3	1.2	0	9.9	0.5	0.4	0.8	0	1.6	

# Summary of Turning Movement Counts (All Vehicles )

11th Street & Mississippi Street  
Morning Peak-Hours  
Sunny, Mild

File Name : Miss&11-eam-raw  
Site Code : 2  
Start Date : 11/15/2013  
Page No : 2

	Mississippi Street From North					11th Street From East					Mississippi Street From South					KU Parking Lot Access From West					
Start Time	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	2	54	24	0	80	25	0	14	0	39	2	3	2	0	7	1	1	1	0	3	129
08:15 AM	4	27	27	0	58	37	1	7	0	45	2	4	2	0	8	0	1	0	0	1	112
08:30 AM	13	33	29	0	75	33	8	9	0	50	5	8	1	0	14	1	1	1	0	3	142
08:45 AM	12	34	41	0	87	35	5	12	0	52	6	14	1	0	21	0	0	1	0	1	161
Total Volume	31	148	121	0	300	130	14	42	0	186	15	29	6	0	50	2	3	3	0	8	544
% App. Total	10.3	49.3	40.3	0		69.9	7.5	22.6	0		30	58	12	0		25	37.5	37.5	0		
PHF	.596	.685	.738	.000	.862	.878	.438	.750	.000	.894	.625	.518	.750	.000	.595	.500	.750	.750	.000	.667	.845

# Summary of Turning Movement Counts (All Vehicles )

11th Street and Mississippi Street  
Afternoon Peak-Hours  
Sunny, Mild

File Name : Miss&11-epm  
Site Code : 2  
Start Date : 11/14/2013  
Page No : 1

Groups Printed- Unshifted

Start Time	Mississippi Street From North					11th Street From East					Mississippi Street From South					Ku Parking Lot Access From West					Int. Total
	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	
04:00 PM	1	15	60	0	76	62	0	4	0	66	13	32	1	0	46	1	0	5	0	6	194
04:15 PM	3	19	42	0	64	45	1	3	0	49	11	28	0	0	39	0	3	7	0	10	162
04:30 PM	3	18	46	0	67	54	3	6	0	63	18	32	0	0	50	1	2	1	0	4	184
04:45 PM	1	19	60	0	80	49	0	4	0	53	17	43	0	0	60	3	1	4	0	8	201
Total	8	71	208	0	287	210	4	17	0	231	59	135	1	0	195	5	6	17	0	28	741
05:00 PM	2	30	43	0	75	58	1	8	0	67	18	98	0	0	116	0	2	2	0	4	262
05:15 PM	1	24	50	0	75	44	1	5	0	50	14	66	0	0	80	1	3	3	0	7	212
05:30 PM	0	16	42	0	58	34	1	10	0	45	2	45	3	0	50	1	2	3	0	6	159
05:45 PM	1	16	43	0	60	34	1	13	0	48	12	32	0	0	44	0	3	4	0	7	159
Total	4	86	178	0	268	170	4	36	0	210	46	241	3	0	290	2	10	12	0	24	792
Grand Total	12	157	386	0	555	380	8	53	0	441	105	376	4	0	485	7	16	29	0	52	1533
Apprch %	2.2	28.3	69.5	0		86.2	1.8	12	0		21.6	77.5	0.8	0		13.5	30.8	55.8	0		
Total %	0.8	10.2	25.2	0	36.2	24.8	0.5	3.5	0	28.8	6.8	24.5	0.3	0	31.6	0.5	1	1.9	0	3.4	

# Summary of Turning Movement Counts (All Vehicles )

11th Street and Mississippi Street  
Afternoon Peak-Hours  
Sunny, Mild

File Name : Miss&11-epm  
Site Code : 2  
Start Date : 11/14/2013  
Page No : 2

	Mississippi Street From North					11th Street From East					Mississippi Street From South					Ku Parking Lot Access From West					
Start Time	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	3	18	46	0	67	54	3	6	0	63	18	32	0	0	50	1	2	1	0	4	184
04:45 PM	1	19	60	0	80	49	0	4	0	53	17	43	0	0	60	3	1	4	0	8	201
05:00 PM	2	30	43	0	75	58	1	8	0	67	18	98	0	0	116	0	2	2	0	4	262
05:15 PM	1	24	50	0	75	44	1	5	0	50	14	66	0	0	80	1	3	3	0	7	212
Total Volume	7	91	199	0	297	205	5	23	0	233	67	239	0	0	306	5	8	10	0	23	859
% App. Total	2.4	30.6	67	0		88	2.1	9.9	0		21.9	78.1	0	0		21.7	34.8	43.5	0		
PHF	.583	.758	.829	.000	.928	.884	.417	.719	.000	.869	.931	.610	.000	.000	.659	.417	.667	.625	.000	.719	.820

# Summary of Turning Movement Counts

## (All Vehicles )

Mississippi Street & Fambrough Drive  
Morning Peak-Hours  
Sunny, Mild

File Name : Miss&Famb-eam  
Site Code : 3  
Start Date : 11/19/2013  
Page No : 1

Groups Printed- Unshifted

Start Time	Mississippi Street From North					From East					Mississippi Street From South					Fambrough Drive From West					Int. Total
	Right	Thru	Left		App. Total					App. Total	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	
07:00 AM	6	23	0	0	29	0	0	0	0	0	0	14	8	0	22	7	0	2	0	9	60
07:15 AM	7	20	0	0	27	0	0	0	0	0	0	9	15	0	24	20	0	4	0	24	75
07:30 AM	13	40	0	0	53	0	0	0	0	0	0	12	20	0	32	15	0	5	0	20	105
07:45 AM	27	53	0	0	80	0	0	0	0	0	0	13	44	0	57	26	0	7	0	33	170
Total	53	136	0	0	189	0	0	0	0	0	0	48	87	0	135	68	0	18	0	86	410
08:00 AM	10	51	0	0	61	0	0	0	0	0	0	4	34	0	38	28	0	6	0	34	133
08:15 AM	12	29	0	0	41	0	0	0	0	0	0	5	29	0	34	18	0	7	0	25	100
08:30 AM	10	37	0	0	47	0	0	0	0	0	0	4	22	0	26	16	0	5	0	21	94
08:45 AM	12	39	0	0	51	0	0	0	0	0	0	11	37	0	48	28	0	2	0	30	129
Total	44	156	0	0	200	0	0	0	0	0	0	24	122	0	146	90	0	20	0	110	456
Grand Total	97	292	0	0	389	0	0	0	0	0	0	72	209	0	281	158	0	38	0	196	866
Apprch %	24.9	75.1	0	0		0	0	0	0		0	25.6	74.4	0		80.6	0	19.4	0		
Total %	11.2	33.7	0	0	44.9	0	0	0	0	0	0	8.3	24.1	0	32.4	18.2	0	4.4	0	22.6	

# Summary of Turning Movement Counts (All Vehicles )

Mississippi Street & Fambrough Drive  
Morning Peak-Hours  
Sunny, Mild

File Name : Miss&Famb-eam  
Site Code : 3  
Start Date : 11/19/2013  
Page No : 2

	Mississippi Street From North					From East					Mississippi Street From South					Fambrough Drive From West					
Start Time	Right	Thru	Left		App. Total					App. Total	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	13	40	0	0	53	0	0	0	0	0	0	12	20	0	32	15	0	5	0	20	105
07:45 AM	27	53	0	0	80	0	0	0	0	0	0	13	44	0	57	26	0	7	0	33	170
08:00 AM	10	51	0	0	61	0	0	0	0	0	0	4	34	0	38	28	0	6	0	34	133
08:15 AM	12	29	0	0	41	0	0	0	0	0	0	5	29	0	34	18	0	7	0	25	100
Total Volume	62	173	0	0	235	0	0	0	0	0	0	34	127	0	161	87	0	25	0	112	508
% App. Total	26.4	73.6	0	0		0	0	0	0		0	21.1	78.9	0		77.7	0	22.3	0		
PHF	.574	.816	.000	.000	.734	.000	.000	.000	.000	.000	.000	.654	.722	.000	.706	.777	.000	.893	.000	.824	.747

# Summary of Turning Movement Counts

## (All Vehicles )

Mississippi Street & Fambrough Drive  
Afternoon Peak-Hours  
Sunny, Mild

File Name : Miss&Famb-epm  
Site Code : 3  
Start Date : 11/19/2013  
Page No : 1

Groups Printed- Unshifted

Start Time	Mississippi Street From North					From East					Mississippi Street From South					Fambrough Drive From West					Int. Total
	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	
04:00 PM	12	14	0	0	26	0	0	0	0	0	0	34	58	0	92	51	0	19	0	70	188
04:15 PM	12	16	0	0	28	0	0	0	0	0	0	28	50	0	78	53	0	12	0	65	171
04:30 PM	15	16	0	0	31	0	0	0	0	0	0	39	32	0	71	40	0	22	0	62	164
04:45 PM	13	25	0	0	38	0	0	0	0	0	0	40	53	0	93	49	0	14	0	63	194
Total	52	71	0	0	123	0	0	0	0	0	0	141	193	0	334	193	0	67	0	260	717
05:00 PM	18	21	0	0	39	0	0	0	0	0	0	102	50	0	152	50	1	23	0	74	265
05:15 PM	13	27	0	0	40	0	0	0	0	0	0	75	54	0	129	51	0	22	0	73	242
05:30 PM	9	29	0	0	38	0	0	0	0	0	0	52	31	0	83	29	0	16	0	45	166
05:45 PM	20	34	0	0	54	0	0	0	0	0	0	29	31	0	60	35	0	8	0	43	157
Total	60	111	0	0	171	0	0	0	0	0	0	258	166	0	424	165	1	69	0	235	830
Grand Total	112	182	0	0	294	0	0	0	0	0	0	399	359	0	758	358	1	136	0	495	1547
Apprch %	38.1	61.9	0	0		0	0	0	0		0	52.6	47.4	0		72.3	0.2	27.5	0		
Total %	7.2	11.8	0	0	19	0	0	0	0	0	0	25.8	23.2	0	49	23.1	0.1	8.8	0	32	

# Summary of Turning Movement Counts (All Vehicles )

Mississippi Street & Fambrough Drive  
Afternoon Peak-Hours  
Sunny, Mild

File Name : Miss&Famb-epm  
Site Code : 3  
Start Date : 11/19/2013  
Page No : 2

	Mississippi Street From North					From East					Mississippi Street From South					Fambrough Drive From West					
Start Time	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	13	25	0	0	38	0	0	0	0	0	0	40	53	0	93	49	0	14	0	63	194
05:00 PM	18	21	0	0	39	0	0	0	0	0	0	102	50	0	152	50	1	23	0	74	265
05:15 PM	13	27	0	0	40	0	0	0	0	0	0	75	54	0	129	51	0	22	0	73	242
05:30 PM	9	29	0	0	38	0	0	0	0	0	0	52	31	0	83	29	0	16	0	45	166
Total Volume	53	102	0	0	155	0	0	0	0	0	0	269	188	0	457	179	1	75	0	255	867
% App. Total	34.2	65.8	0	0		0	0	0	0		0	58.9	41.1	0		70.2	0.4	29.4	0		
PHF	.736	.879	.000	.000	.969	.000	.000	.000	.000	.000	.000	.659	.870	.000	.752	.877	.250	.815	.000	.861	.818

# Summary of Turning Movement Counts (All Vehicles )

11th Street & Private Drives  
Morning Peak-Hours  
Overcast, Cold

File Name : 11&Pdrive-eam  
Site Code : 4  
Start Date : 11/20/2013  
Page No : 1

Groups Printed- Unshifted

Start Time	11th Street From North					11th Street From East					Private Drive From South					11th Street From West					Int. Total
	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	
07:00 AM	0	0	0	0	0	2	12	0	0	14	0	0	0	0	0	1	16	2	0	19	33
07:15 AM	0	0	0	0	0	0	29	0	0	29	0	0	0	0	0	0	19	0	0	19	48
07:30 AM	1	0	0	0	1	0	37	1	0	38	1	0	2	0	3	0	8	0	0	8	50
07:45 AM	0	0	0	0	0	0	47	0	0	47	0	0	0	0	0	1	23	0	0	24	71
Total	1	0	0	0	1	2	125	1	0	128	1	0	2	0	3	2	66	2	0	70	202
08:00 AM	1	0	0	0	1	0	38	0	0	38	3	0	2	0	5	2	19	0	0	21	65
08:15 AM	0	0	0	0	0	0	36	1	0	37	0	0	4	0	4	0	18	0	0	18	59
08:30 AM	0	0	1	0	1	0	44	1	0	45	1	0	1	0	2	0	23	0	0	23	71
08:45 AM	0	0	1	0	1	0	49	2	0	51	0	0	4	0	4	2	45	0	0	47	103
Total	1	0	2	0	3	0	167	4	0	171	4	0	11	0	15	4	105	0	0	109	298
Grand Total	2	0	2	0	4	2	292	5	0	299	5	0	13	0	18	6	171	2	0	179	500
Apprch %	50	0	50	0		0.7	97.7	1.7	0		27.8	0	72.2	0		3.4	95.5	1.1	0		
Total %	0.4	0	0.4	0	0.8	0.4	58.4	1	0	59.8	1	0	2.6	0	3.6	1.2	34.2	0.4	0	35.8	

# Summary of Turning Movement Counts (All Vehicles )

11th Street & Private Drives  
Morning Peak-Hours  
Overcast, Cold

File Name : 11&Pdrive-eam  
Site Code : 4  
Start Date : 11/20/2013  
Page No : 2

	11th Street From North					11th Street From East					Private Drive From South					11th Street From West					
Start Time	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	1	0	0	0	1	0	38	0	0	38	3	0	2	0	5	2	19	0	0	21	65
08:15 AM	0	0	0	0	0	0	36	1	0	37	0	0	4	0	4	0	18	0	0	18	59
08:30 AM	0	0	1	0	1	0	44	1	0	45	1	0	1	0	2	0	23	0	0	23	71
08:45 AM	0	0	1	0	1	0	49	2	0	51	0	0	4	0	4	2	45	0	0	47	103
Total Volume	1	0	2	0	3	0	167	4	0	171	4	0	11	0	15	4	105	0	0	109	298
% App. Total	33.3	0	66.7	0		0	97.7	2.3	0		26.7	0	73.3	0		3.7	96.3	0	0		
PHF	.250	.000	.500	.000	.750	.000	.852	.500	.000	.838	.333	.000	.688	.000	.750	.500	.583	.000	.000	.580	.723

# Summary of Turning Movement Counts

## (All Vehicles )

11th Street & Private Drives  
Afternoon Peak-Hours  
Overcast, Cold

File Name : 11&Pdrive-epm  
Site Code : 4  
Start Date : 11/20/2013  
Page No : 1

Groups Printed- Unshifted

Start Time	Private Drive From North					11th Street From East					Private Drive From South					11th Street From West					Int. Total
	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	
04:00 PM	1	0	0	0	1	1	43	0	0	44	1	0	4	0	5	0	43	0	0	43	93
04:15 PM	1	0	0	0	1	0	53	2	0	55	0	0	1	0	1	1	50	0	0	51	108
04:30 PM	2	0	4	0	6	0	36	2	0	38	1	0	2	0	3	1	50	0	0	51	98
04:45 PM	1	0	1	0	2	0	64	1	0	65	0	0	2	0	2	1	53	1	0	55	124
Total	5	0	5	0	10	1	196	5	0	202	2	0	9	0	11	3	196	1	0	200	423
05:00 PM	0	0	1	0	1	0	59	1	0	60	5	0	3	0	8	3	63	0	0	66	135
05:15 PM	3	0	0	0	3	1	39	3	0	43	1	0	1	0	2	0	57	0	0	57	105
05:30 PM	0	0	1	0	1	3	51	1	0	55	2	0	4	0	6	4	40	1	0	45	107
05:45 PM	1	0	2	0	3	2	39	1	0	42	1	1	1	0	3	3	43	2	0	48	96
Total	4	0	4	0	8	6	188	6	0	200	9	1	9	0	19	10	203	3	0	216	443
Grand Total	9	0	9	0	18	7	384	11	0	402	11	1	18	0	30	13	399	4	0	416	866
Apprch %	50	0	50	0		1.7	95.5	2.7	0		36.7	3.3	60	0		3.1	95.9	1	0		
Total %	1	0	1	0	2.1	0.8	44.3	1.3	0	46.4	1.3	0.1	2.1	0	3.5	1.5	46.1	0.5	0	48	

# Summary of Turning Movement Counts (All Vehicles )

11th Street & Private Drives  
Afternoon Peak-Hours  
Overcast, Cold

File Name : 11&Pdrive-epm  
Site Code : 4  
Start Date : 11/20/2013  
Page No : 2

	Private Drive From North					11th Street From East					Private Drive From South					11th Street From West					
Start Time	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Right	Thru	Left		App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	1	0	1	0	2	0	59	1	0	60	0	0	2	0	2	1	53	1	0	55	124
05:00 PM	0	0	1	0	1	0	59	1	0	60	5	0	3	0	8	3	63	0	0	66	135
05:15 PM	3	0	0	0	3	1	39	3	0	43	1	0	1	0	2	0	57	0	0	57	105
05:30 PM	0	0	1	0	1	3	51	1	0	55	2	0	4	0	6	4	40	1	0	45	107
Total Volume	4	0	3	0	7	4	213	6	0	223	8	0	10	0	18	8	213	2	0	223	471
% App. Total	57.1	0	42.9	0		1.8	95.5	2.7	0		44.4	0	55.6	0		3.6	95.5	0.9	0		
PHF	.333	.000	.750	.000	.583	.333	.832	.500	.000	.858	.400	.000	.625	.000	.563	.500	.845	.500	.000	.845	.872

# Summary of Turning Movement Counts

## (All Vehicles )

Mississippi Street & Private Drive  
Morning Peak-Hours  
Overcast, Mild

File Name : Miss&PDrive-eam  
Site Code : 5  
Start Date : 12/3/2013  
Page No : 1

Groups Printed- Unshifted

Start Time	Mississippi Street From North					Private Drive From East					Mississippi Street From South					From West					Int. Total
		Thru	Left		App. Total	Right		Left		App. Total	Right	Thru			App. Total					App. Total	
07:00 AM	0	17	0	0	17	0	0	0	0	0	0	16	0	0	16	0	0	0	0	0	33
07:15 AM	0	27	0	0	27	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	29
07:30 AM	0	43	0	0	43	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	52
07:45 AM	0	57	0	0	57	0	0	1	0	1	0	11	0	0	11	0	0	0	0	0	69
Total	0	144	0	0	144	0	0	1	0	1	2	36	0	0	38	0	0	0	0	0	183
08:00 AM	0	61	1	0	62	1	0	0	0	1	0	7	0	0	7	0	0	0	0	0	70
08:15 AM	0	48	1	0	49	1	0	0	0	1	0	4	0	0	4	0	0	0	0	0	54
08:30 AM	0	35	3	0	38	1	0	0	0	1	0	9	0	0	9	0	0	0	0	0	48
08:45 AM	0	30	0	0	30	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	37
Total	0	174	5	0	179	3	0	0	0	3	0	27	0	0	27	0	0	0	0	0	209
Grand Total	0	318	5	0	323	3	0	1	0	4	2	63	0	0	65	0	0	0	0	0	392
Apprch %	0	98.5	1.5	0		75	0	25	0		3.1	96.9	0	0		0	0	0	0		
Total %	0	81.1	1.3	0	82.4	0.8	0	0.3	0	1	0.5	16.1	0	0	16.6	0	0	0	0	0	

# Summary of Turning Movement Counts (All Vehicles )

Mississippi Street & Private Drive  
Morning Peak-Hours  
Overcast, Mild

File Name : Miss&PDrive-eam  
Site Code : 5  
Start Date : 12/3/2013  
Page No : 2

	Mississippi Street From North					Private Drive From East					Mississippi Street From South					From West					
Start Time		Thru	Left		App. Total	Right		Left		App. Total	Right	Thru			App. Total					App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:30 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	43	0	0	43	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	52
07:45 AM	0	57	0	0	57	0	0	1	0	1	0	11	0	0	11	0	0	0	0	0	69
08:00 AM	0	61	1	0	62	1	0	0	0	1	0	7	0	0	7	0	0	0	0	0	70
08:15 AM	0	48	1	0	49	1	0	0	0	1	0	4	0	0	4	0	0	0	0	0	54
Total Volume	0	209	2	0	211	2	0	1	0	3	0	31	0	0	31	0	0	0	0	0	245
% App. Total	0	99.1	0.9	0		66.7	0	33.3	0		0	100	0	0		0	0	0	0		
PHF	.000	.857	.500	.000	.851	.500	.000	.250	.000	.750	.000	.705	.000	.000	.705	.000	.000	.000	.000	.000	.875

# Summary of Turning Movement Counts

## (All Vehicles )

Mississippi Street & Private Drive  
Afternoon Peak-Hours  
Sunny, Mild

File Name : Miss&PDrive-epm  
Site Code : 5  
Start Date : 12/2/2013  
Page No : 1

Groups Printed- Unshifted

Start Time	Mississippi Street From North					Private Drive From East					Mississippi Street From South					From West					Int. Total
		Thru	Left		App. Total	Right		Left		App. Total	Right	Thru			App. Total					App. Total	
04:00 PM	0	15	0	0	15	4	0	0	0	4	2	41	0	0	43	0	0	0	0	0	62
04:15 PM	0	14	1	0	15	2	0	2	0	4	0	38	0	0	38	0	0	0	0	0	57
04:30 PM	0	16	0	0	16	0	0	1	0	1	1	38	0	0	39	0	0	0	0	0	56
04:45 PM	0	22	0	0	22	2	0	1	0	3	1	41	0	0	42	0	0	0	0	0	67
Total	0	67	1	0	68	8	0	4	0	12	4	158	0	0	162	0	0	0	0	0	242
05:00 PM	0	26	1	0	27	1	0	1	0	2	0	117	0	0	117	0	0	0	0	0	146
05:15 PM	0	32	1	0	33	0	0	1	0	1	2	76	0	0	78	0	0	0	0	0	112
05:30 PM	0	35	0	0	35	2	0	0	0	2	1	44	0	0	45	0	0	0	0	0	82
05:45 PM	0	25	0	0	25	0	0	0	0	0	1	26	0	0	27	0	0	0	0	0	52
Total	0	118	2	0	120	3	0	2	0	5	4	263	0	0	267	0	0	0	0	0	392
Grand Total	0	185	3	0	188	11	0	6	0	17	8	421	0	0	429	0	0	0	0	0	634
Apprch %	0	98.4	1.6	0		64.7	0	35.3	0		1.9	98.1	0	0		0	0	0	0		
Total %	0	29.2	0.5	0	29.7	1.7	0	0.9	0	2.7	1.3	66.4	0	0	67.7	0	0	0	0	0	

# Summary of Turning Movement Counts (All Vehicles )

Mississippi Street & Private Drive  
Afternoon Peak-Hours  
Sunny, Mild

File Name : Miss&PDrive-epm  
Site Code : 5  
Start Date : 12/2/2013  
Page No : 2

	Mississippi Street From North					Private Drive From East					Mississippi Street From South					From West					
Start Time		Thru	Left		App. Total	Right		Left		App. Total	Right	Thru			App. Total					App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	22	0	0	22	2	0	1	0	3	1	41	0	0	42	0	0	0	0	0	67
05:00 PM	0	26	1	0	27	1	0	1	0	2	0	117	0	0	117	0	0	0	0	0	146
05:15 PM	0	32	1	0	33	0	0	1	0	1	2	76	0	0	78	0	0	0	0	0	112
05:30 PM	0	35	0	0	35	2	0	0	0	2	1	44	0	0	45	0	0	0	0	0	82
Total Volume	0	115	2	0	117	5	0	3	0	8	4	278	0	0	282	0	0	0	0	0	407
% App. Total	0	98.3	1.7	0		62.5	0	37.5	0		1.4	98.6	0	0		0	0	0	0		
PHF	.000	.821	.500	.000	.836	.625	.000	.750	.000	.667	.500	.594	.000	.000	.603	.000	.000	.000	.000	.000	.697

File Name: C:\PetraPro\9th&Mississippi\AM\9th&MississippiAM.ppd

Start Date: 5/12/2011

Start Time: 7:00:00 AM

Site Code: 00000000

Comment 1: Default Comments

Comment 2: Change These in The Preferences Window

Comment 3: Select File/Preference in the Main Scree

Comment 4: Then Click the Comments Tab

Start Time	MISSISSIPPI South Bound				9 West Bound				MISSISSIPPI North Bound				9 East Bound				Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00	2	4	3	0	1	35	3	0	5	6	4	0	9	46	0	0	118
07:15	2	7	4	0	1	54	10	0	4	3	5	0	16	85	0	0	191
07:30	9	18	9	0	2	72	14	0	4	0	8	0	18	111	0	0	265
07:45	4	22	8	0	2	78	19	0	2	1	8	0	20	191	2	0	357
08:00	4	18	8	0	4	81	21	0	3	1	8	0	21	119	2	0	290
08:15	4	9	6	0	3	91	15	0	9	0	5	0	12	110	3	0	267
08:30	2	6	4	0	4	62	10	0	3	1	9	0	16	133	1	0	251
08:45	5	12	6	0	7	75	8	0	3	2	6	0	9	129	1	0	263
<b>Total</b>	<b>32</b>	<b>96</b>	<b>48</b>	<b>0</b>	<b>24</b>	<b>548</b>	<b>100</b>	<b>0</b>	<b>33</b>	<b>14</b>	<b>53</b>	<b>0</b>	<b>121</b>	<b>924</b>	<b>9</b>	<b>0</b>	<b>2002</b>

07:30	9	18	9	0	2	72	14	0	4	0	8	0	18	111	0	0	265
07:45	4	22	8	0	2	78	19	0	2	1	8	0	20	191	2	0	357
08:00	4	18	8	0	4	81	21	0	3	1	8	0	21	119	2	0	290
08:15	4	9	6	0	3	91	15	0	9	0	5	0	12	110	3	0	267
<b>Total</b>	<b>21</b>	<b>67</b>	<b>31</b>	<b>0</b>	<b>11</b>	<b>322</b>	<b>69</b>	<b>0</b>	<b>18</b>	<b>2</b>	<b>29</b>	<b>0</b>	<b>71</b>	<b>531</b>	<b>7</b>	<b>0</b>	<b>1179</b>

Source: City of Lawrence, Public Works Department

File Name: C:\PetraPro\9th&Mississippi\PM\9th&MississippiPM.ppd

Start Date: 5/12/2011

Start Time: 4:00:00 PM

Site Code: 00000000

Comment 1: Default Comments

Comment 2: Change These in The Preferences Window

Comment 3: Select File/Preference in the Main Scree

Comment 4: Then Click the Comments Tab

Start Time	MISSISSIPPI South Bound				9 West Bound				MISSISSIPPI North Bound				9 East Bound				Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
16:00	10	8	7	0	5	158	13	0	24	15	38	0	12	158	5	0	<b>453</b>
16:15	2	6	6	0	7	135	14	0	21	14	24	0	11	152	6	0	<b>398</b>
16:30	5	2	7	0	7	154	15	0	23	8	33	0	9	169	8	0	<b>440</b>
16:45	6	6	3	0	6	164	12	0	29	10	30	0	12	158	5	0	<b>441</b>
17:00	5	8	7	0	8	207	23	0	20	22	57	0	10	196	8	0	<b>571</b>
17:15	3	8	5	0	8	176	13	0	30	13	40	0	22	161	5	0	<b>484</b>
17:30	2	6	3	0	5	145	18	0	18	17	34	0	21	163	7	0	<b>439</b>
17:45	3	15	7	0	6	135	9	0	14	9	15	0	25	163	2	0	<b>403</b>
<b>Total</b>	<b>36</b>	<b>59</b>	<b>45</b>	<b>0</b>	<b>52</b>	<b>1274</b>	<b>117</b>	<b>0</b>	<b>179</b>	<b>108</b>	<b>271</b>	<b>0</b>	<b>122</b>	<b>1320</b>	<b>46</b>	<b>0</b>	<b>3629</b>

16:30	5	2	7	0	7	154	15	0	23	8	33	0	9	169	8	0	<b>440</b>
16:45	6	6	3	0	6	164	12	0	29	10	30	0	12	158	5	0	<b>441</b>
17:00	5	8	7	0	8	207	23	0	20	22	57	0	10	196	8	0	<b>571</b>
17:15	3	8	5	0	8	176	13	0	30	13	40	0	22	161	5	0	<b>484</b>
<b>Total</b>	<b>19</b>	<b>24</b>	<b>22</b>	<b>0</b>	<b>29</b>	<b>701</b>	<b>63</b>	<b>0</b>	<b>102</b>	<b>53</b>	<b>160</b>	<b>0</b>	<b>53</b>	<b>684</b>	<b>26</b>	<b>0</b>	<b>1936</b>

Soucre: City of Lawrence, Public Works Department

File Name: C:\Lohman\2013\2013 Petra Pro\11th & Tennessee\AM\11th & TennesseeAM.ppd

Start Date: 11/12/2013

Start Time: 7:00:00 AM

Site Code: 36

	TENNESSEE South Bound				11TH West Bound				TENNESSEE North Bound				11TH East Bound				Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00	4	102	13	0	0	12	3	0	0	0	0	0	1	2	0	0	137
07:15	1	139	21	0	0	23	4	0	0	0	0	0	0	4	0	0	192
07:30	1	178	26	0	0	19	10	0	0	0	0	0	5	6	0	0	245
07:45	4	197	49	0	0	35	21	0	0	0	0	0	9	16	0	0	331
08:00	3	199	34	0	0	34	18	0	0	0	0	0	12	2	0	0	302
08:15	0	126	28	0	0	23	16	0	0	0	0	0	8	6	0	0	207
08:30	2	139	27	0	0	31	5	0	0	0	0	0	13	7	0	0	224
08:45	1	127	29	0	0	18	20	0	0	0	0	0	8	14	0	0	217
<b>Total</b>	<b>16</b>	<b>1207</b>	<b>227</b>	<b>0</b>	<b>0</b>	<b>195</b>	<b>97</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>56</b>	<b>57</b>	<b>0</b>	<b>0</b>	<b>1855</b>

	TENNESSEE South Bound				11TH West Bound				TENNESSEE North Bound				11TH East Bound				Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:30	1	178	26	0	0	19	10	0	0	0	0	0	5	6	0	0	245
07:45	4	197	49	0	0	35	21	0	0	0	0	0	9	16	0	0	331
08:00	3	199	34	0	0	34	18	0	0	0	0	0	12	2	0	0	302
<b>08:15</b>	<b>0</b>	<b>126</b>	<b>28</b>	<b>0</b>	<b>0</b>	<b>23</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>207</b>
<b>Total</b>	<b>8</b>	<b>700</b>	<b>137</b>	<b>0</b>	<b>0</b>	<b>111</b>	<b>65</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>34</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>1085</b>

Source: City of Lawrence, Public Works Department

File Name: C:\Lohman\2013\2013 Petra Pro\11th & Tennessee\PM\11th & TennesseePM.ppd

Start Date: 11/12/2013

Start Time: 4:00:00 PM

Site Code: 36

	TENNESSEE South Bound				11TH West Bound				TENNESSEE North Bound				11TH East Bound				Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
16:00	4	206	25	0	0	23	25	0	0	0	0	0	20	26	0	0	329
16:15	2	175	21	0	0	35	29	0	0	0	0	0	17	20	0	0	299
16:30	2	203	21	0	0	32	30	0	0	0	0	0	22	30	0	0	340
16:45	5	225	17	0	0	27	28	0	0	0	0	0	17	32	0	0	351
17:00	3	284	41	0	0	33	35	0	0	0	0	0	24	42	0	0	462
17:15	3	214	25	0	0	22	30	0	0	0	0	0	20	35	0	0	349
17:30	4	194	26	0	0	24	31	0	0	0	0	0	10	26	0	0	315
17:45	9	175	20	0	0	23	23	0	0	0	0	0	19	24	0	0	293
<b>Total</b>	<b>32</b>	<b>1676</b>	<b>196</b>	<b>0</b>	<b>0</b>	<b>219</b>	<b>231</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>149</b>	<b>235</b>	<b>0</b>	<b>0</b>	<b>2738</b>

	TENNESSEE South Bound				11TH West Bound				TENNESSEE North Bound				11TH East Bound				Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
16:30	2	203	21	0	0	32	30	0	0	0	0	0	22	30	0	0	340
16:45	5	225	17	0	0	27	28	0	0	0	0	0	17	32	0	0	351
17:00	3	284	41	0	0	33	35	0	0	0	0	0	24	42	0	0	462
17:15	3	214	25	0	0	22	30	0	0	0	0	0	20	35	0	0	349
<b>Total</b>	<b>13</b>	<b>926</b>	<b>104</b>	<b>0</b>	<b>0</b>	<b>114</b>	<b>123</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>83</b>	<b>139</b>	<b>0</b>	<b>0</b>	<b>1502</b>

Source: City of Lawrence, Public Works Department

File Name: C:\Lohman\2013\2013 Petra Pro\11th & Kentucky\AM\11th & KentuckyAM.ppd

Start Date: 11/14/2013

Start Time: 7:00:00 AM

Site Code: 34

	KENTUCKY South Bound				11TH West Bound				KENTUCKY North Bound				11TH East Bound				Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00	0	0	0	0	32	7	0	0	13	87	2	0	0	19	1	0	161
07:15	0	0	0	0	26	11	0	0	5	99	6	0	0	18	0	0	165
07:30	0	0	0	0	33	36	0	0	4	118	12	0	0	33	0	0	236
07:45	0	0	0	0	55	37	0	0	10	156	22	0	0	67	6	0	353
08:00	0	0	0	0	33	51	0	0	27	169	15	0	0	31	5	0	331
08:15	0	0	0	0	23	21	0	0	24	109	14	0	0	28	2	0	221
08:30	0	0	0	0	30	21	0	0	17	105	5	0	0	39	2	0	219
08:45	0	0	0	0	48	29	0	0	11	128	17	0	0	40	7	0	280
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>280</b>	<b>213</b>	<b>0</b>	<b>0</b>	<b>111</b>	<b>971</b>	<b>93</b>	<b>0</b>	<b>0</b>	<b>275</b>	<b>23</b>	<b>0</b>	<b>1966</b>

	KENTUCKY South Bound				11TH West Bound				KENTUCKY North Bound				11TH East Bound				Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:30	0	0	0	0	33	36	0	0	4	118	12	0	0	33	0	0	236
07:45	0	0	0	0	55	37	0	0	10	156	22	0	0	67	6	0	353
08:00	0	0	0	0	33	51	0	0	27	169	15	0	0	31	5	0	331
08:15	0	0	0	0	23	21	0	0	24	109	14	0	0	28	2	0	221
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>144</b>	<b>145</b>	<b>0</b>	<b>0</b>	<b>65</b>	<b>552</b>	<b>63</b>	<b>0</b>	<b>0</b>	<b>159</b>	<b>13</b>	<b>0</b>	<b>1141</b>

Source: City of Lawrence, Public Works Department

File Name: C:\Lohman\2013\2013 Petra Pro\11th & Kentucky\PM\11th & KentuckyPM.ppd

Start Date: 11/14/2013

Start Time: 4:00:00 PM

Site Code: 34

	KENTUCKY South Bound				11TH West Bound				KENTUCKY North Bound				11TH East Bound				Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
16:00	0	0	0	0	35	46	0	0	30	169	19	0	0	39	8	0	346
16:15	0	0	0	0	43	51	0	0	27	171	9	0	0	48	7	0	356
16:30	0	0	0	0	44	43	0	0	18	162	19	0	0	37	2	0	325
16:45	0	0	0	0	31	39	0	0	23	176	9	0	0	55	8	0	341
17:00	0	0	0	0	77	50	0	0	39	193	17	0	0	52	5	0	433
17:15	0	0	0	0	54	48	0	0	36	173	20	0	0	64	2	0	397
17:30	0	0	0	0	31	40	0	0	31	155	9	0	0	66	6	0	338
17:45	0	0	0	0	43	46	0	0	37	181	8	0	0	62	3	0	380
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>358</b>	<b>363</b>	<b>0</b>	<b>0</b>	<b>241</b>	<b>1380</b>	<b>110</b>	<b>0</b>	<b>0</b>	<b>423</b>	<b>41</b>	<b>0</b>	<b>2916</b>

	KENTUCKY South Bound				11TH West Bound				KENTUCKY North Bound				11TH East Bound				Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
17:00	0	0	0	0	77	50	0	0	39	193	17	0	0	52	5	0	433
17:15	0	0	0	0	54	48	0	0	36	173	20	0	0	64	2	0	397
17:30	0	0	0	0	31	40	0	0	31	155	9	0	0	66	6	0	338
17:45	0	0	0	0	43	46	0	0	37	181	8	0	0	62	3	0	380
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>205</b>	<b>184</b>	<b>0</b>	<b>0</b>	<b>143</b>	<b>702</b>	<b>54</b>	<b>0</b>	<b>0</b>	<b>244</b>	<b>16</b>	<b>0</b>	<b>1548</b>

Source: City of Lawrence, Public Works Department

Signal Location	Last Updated 5/12/16	Count PM Date	Begin Peak	Peak Volume	South Bound		
					Right	Thru	Left
9 th St.	Mississippi St.	04-Nov-15	17:00	1978	23	44	40
11 th St.	Kentucky St.	23-Oct-14	17:00	1462	0	0	0
11 th St.	Tennessee St.	28-Oct-14	16:30	1453	20	872	113

Signal Location	Last Updated 5/12/16	Count AM Date	Begin Peak	Peak Volume	South Bound		
					Right	Thru	Left
9 th St.	Mississippi St.	04-Nov-15	7:45	1379	16	64	41
11 th St.	Kentucky St.	23-Oct-14	7:30	1022	0	0	0
11 th St.	Tennessee St.	28-Oct-14	7:30	1128	20	714	148

Source: City of Lawrence, Public Works Department

West Bound			North Bound			East Bound			
Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
50	713	74	98	52	142	55	665	22	
199	205	0	107	680	48	0	204	19	
0	106	129	0	0	0	91	122	0	

West Bound			North Bound			East Bound		
Right	Thru	Left	Right	Thru	Left	Right	Thru	Left
22	367	62	26	14	23	76	660	8
147	117	0	48	487	54	0	158	11
0	130	46	0	0	0	31	39	0

Source: City of Lawrence, Public Works Department

# **APPENDIX V**

## Traffic Signal Warrant Analysis

# Traffic Signal Warrant Analysis

## Warrants 1 - 3 (Volume Warrants)

Project Name	HERE @ KANSAS Development
Project/File #	Realigned Fambrough Dr. & Mississippi St.
Scenario	Pre-Development Traffic Volumes (AM Peak, 2013)

Intersection Information			
Major Street (N/S Road)	Mississippi St.	Minor Street (E/W Road)	Realigned Fambrough/11th St.
Analyzed with	2 or more approach lanes	Analyzed with	1 Approach Lane
Total Approach Volume	306 vehicles	Total Approach Volume	296 vehicles
Total Ped/Bike Volume	0 crossings	Total Ped/Bike Volume	0 crossings
Right turn reduction of	0 percent applied	Right turn reduction of	0 percent applied

No high speed or isolated community reduction applied to the Volume Warrant thresholds.

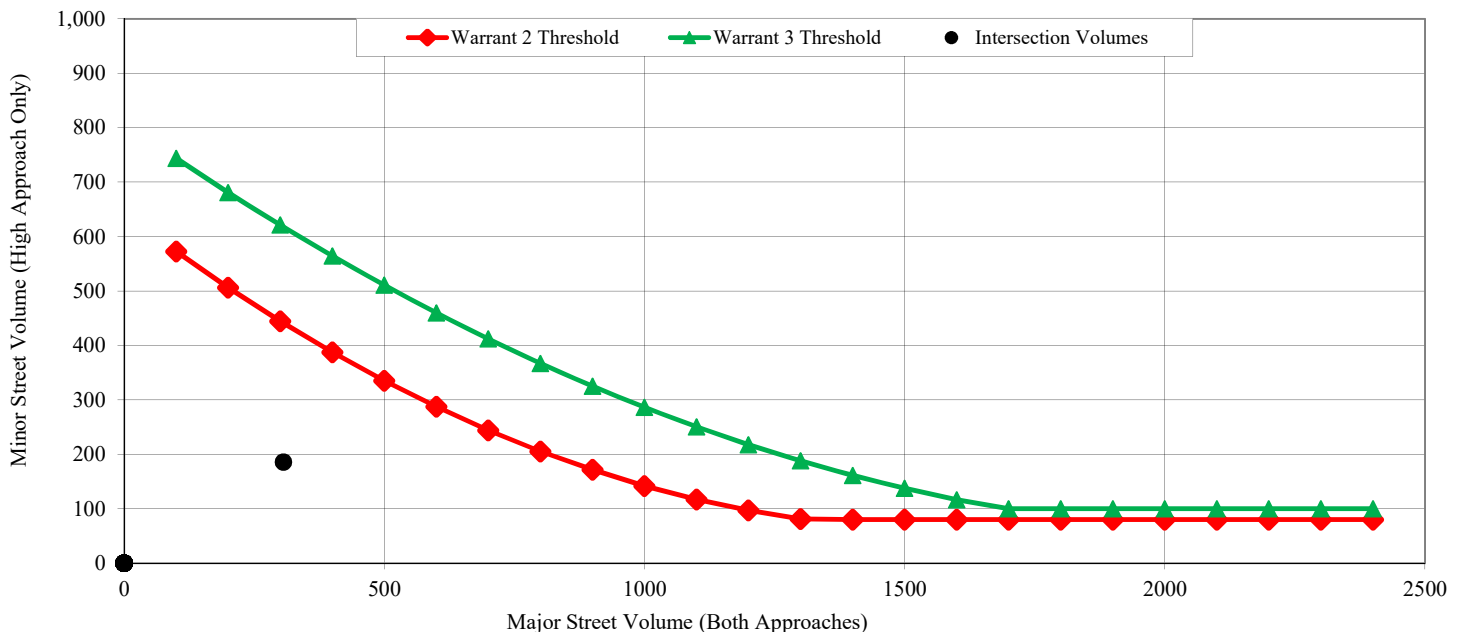
Warrant 1, Eight Hour Vehicular Volume			
	Condition A	Condition B	Condition A+B*
Condition Satisfied?	Not Satisfied	Not Satisfied	Not Satisfied
Required values reached for	0 hours	0 hours	0 (Cond. A) & 0 (Cond. B)
Criteria - Major Street (veh/hr)	600	900	480 (Cond. A) & 720 (Cond. B)
Criteria - Minor Street (veh/hr)	150	75	120 (Cond. A) & 60 (Cond. B)

\* Should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems.

Warrant 2, Four Hour Vehicular Volume	
Condition Satisfied?	Not Satisfied
Required values reached for	0 hours
Criteria	See Figure Below

Warrant 3, Peak Hour Vehicular Volume		
	Condition A	Condition B
Condition Satisfied?	Not Satisfied	Not Satisfied
Required values reached for	602 total, 186 minor, 3.1 delay	0 hours
Criteria - Total Approach Volume (veh in one hour)	800	See Figure Below
Criteria - Minor Street High Side Volume (veh in one hour)	100	
Criteria - Minor Street High Side Delay (veh-hrs)	4	

Figure 4C-1 (Warrant 2) & Figure 4C-3 (Warrant 3)



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# Traffic Signal Warrant Analysis

## Warrants 1 - 3 (Volume Warrants)

Project Name	HERE @ KANSAS Development
Project/File #	Realigned Fambrough Dr. & Mississippi St.
Scenario	Pre-Development Traffic Volumes (PM Peak, 2013)

Intersection Information			
Major Street (N/S Road)	Mississippi St.	Minor Street (E/W Road)	Realigned Fambrough/11th St.
Analyzed with	2 or more approach lanes	Analyzed with	2 or more approach lanes
Total Approach Volume	464 vehicles	Total Approach Volume	504 vehicles
Total Ped/Bike Volume	0 crossings	Total Ped/Bike Volume	0 crossings
Right turn reduction of	0 percent applied	Right turn reduction of	0 percent applied

No high speed or isolated community reduction applied to the Volume Warrant thresholds.

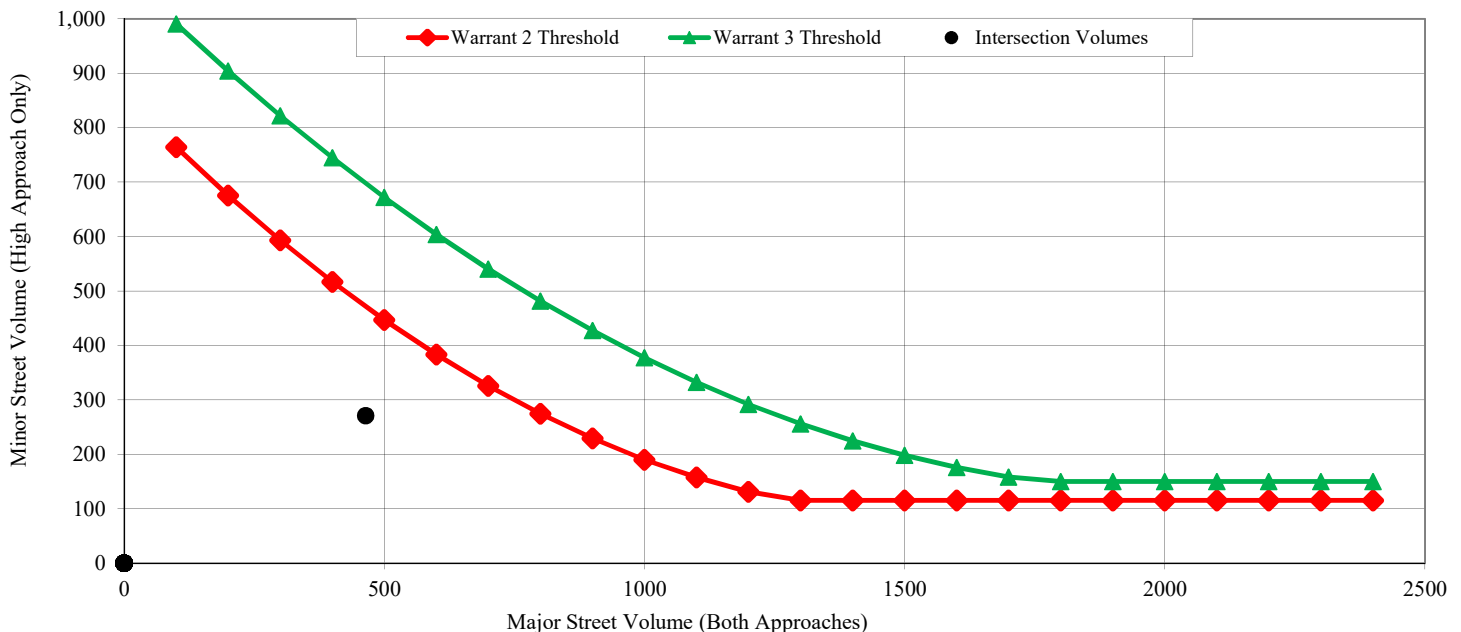
Warrant 1, Eight Hour Vehicular Volume			
	Condition A	Condition B	Condition A+B*
Condition Satisfied?	Not Satisfied	Not Satisfied	Not Satisfied
Required values reached for	0 hours	0 hours	0 (Cond. A) & 0 (Cond. B)
Criteria - Major Street (veh/hr)	600	900	480 (Cond. A) & 720 (Cond. B)
Criteria - Minor Street (veh/hr)	200	100	160 (Cond. A) & 80 (Cond. B)

\* Should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems.

Warrant 2, Four Hour Vehicular Volume	
Condition Satisfied?	Not Satisfied
Required values reached for	0 hours
Criteria	See Figure Below

Warrant 3, Peak Hour Vehicular Volume		
	Condition A	Condition B
Condition Satisfied?	Not Satisfied	Not Satisfied
Required values reached for	968 total, 271 minor, 4.5 delay	0 hours
Criteria - Total Approach Volume (veh in one hour)	800	See Figure Below
Criteria - Minor Street High Side Volume (veh in one hour)	150	
Criteria - Minor Street High Side Delay (veh-hrs)	5	

Figure 4C-1 (Warrant 2) & Figure 4C-3 (Warrant 3)



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# Traffic Signal Warrant Analysis

## Warrants 1 - 3 (Volume Warrants)

Project Name	HERE @ KANSAS Development
Project/File #	Realigned Fambrough Dr. & Mississippi St.
Scenario	Post-Development Traffic Volumes (AM Peak, Future)

Intersection Information			
Major Street (N/S Road)	Mississippi St.	Minor Street (E/W Road)	Realigned Fambrough/11th St.
Analyzed with	2 or more approach lanes	Analyzed with	1 Approach Lane
Total Approach Volume	440 vehicles	Total Approach Volume	316 vehicles
Total Ped/Bike Volume	0 crossings	Total Ped/Bike Volume	0 crossings
Right turn reduction of	0 percent applied	Right turn reduction of	0 percent applied

No high speed or isolated community reduction applied to the Volume Warrant thresholds.

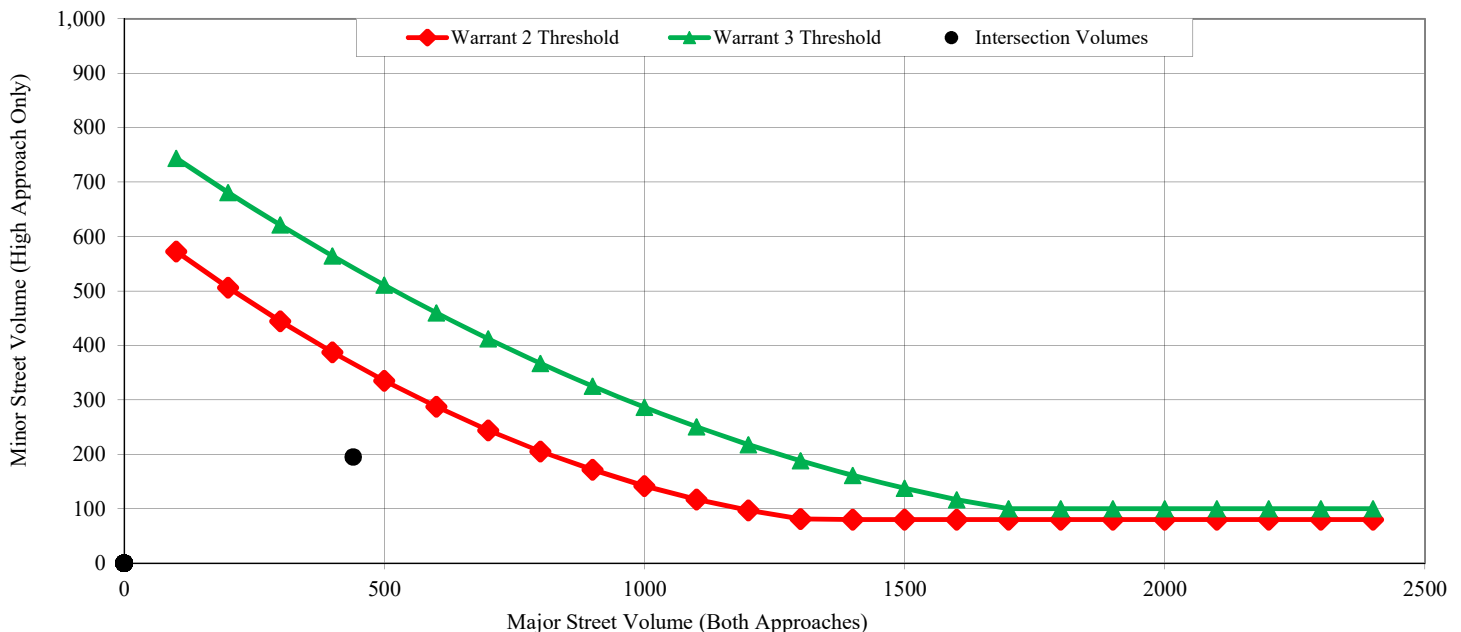
Warrant 1, Eight Hour Vehicular Volume			
	Condition A	Condition B	Condition A+B*
Condition Satisfied?	Not Satisfied	Not Satisfied	Not Satisfied
Required values reached for	0 hours	0 hours	0 (Cond. A) & 0 (Cond. B)
Criteria - Major Street (veh/hr)	600	900	480 (Cond. A) & 720 (Cond. B)
Criteria - Minor Street (veh/hr)	150	75	120 (Cond. A) & 60 (Cond. B)

\* Should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems.

Warrant 2, Four Hour Vehicular Volume	
Condition Satisfied?	Not Satisfied
Required values reached for	0 hours
Criteria	See Figure Below

Warrant 3, Peak Hour Vehicular Volume		
	Condition A	Condition B
Condition Satisfied?	Not Satisfied	Not Satisfied
Required values reached for	756 total, 195 minor, 3.3 delay	0 hours
Criteria - Total Approach Volume (veh in one hour)	800	See Figure Below
Criteria - Minor Street High Side Volume (veh in one hour)	100	
Criteria - Minor Street High Side Delay (veh-hrs)	4	

Figure 4C-1 (Warrant 2) & Figure 4C-3 (Warrant 3)



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# Traffic Signal Warrant Analysis

## Warrants 1 - 3 (Volume Warrants)

Project Name	HERE @ KANSAS Development
Project/File #	Realigned Fambrough Dr. & Mississippi St.
Scenario	Post-Development Traffic Volumes (PM Peak, Future)

Intersection Information			
Major Street (N/S Road)	Mississippi St.	Minor Street (E/W Road)	Realigned Fambrough/11th St.
Analyzed with	2 or more approach lanes	Analyzed with	2 or more approach lanes
Total Approach Volume	600 vehicles	Total Approach Volume	517 vehicles
Total Ped/Bike Volume	0 crossings	Total Ped/Bike Volume	0 crossings
Right turn reduction of	0 percent applied	Right turn reduction of	0 percent applied

No high speed or isolated community reduction applied to the Volume Warrant thresholds.

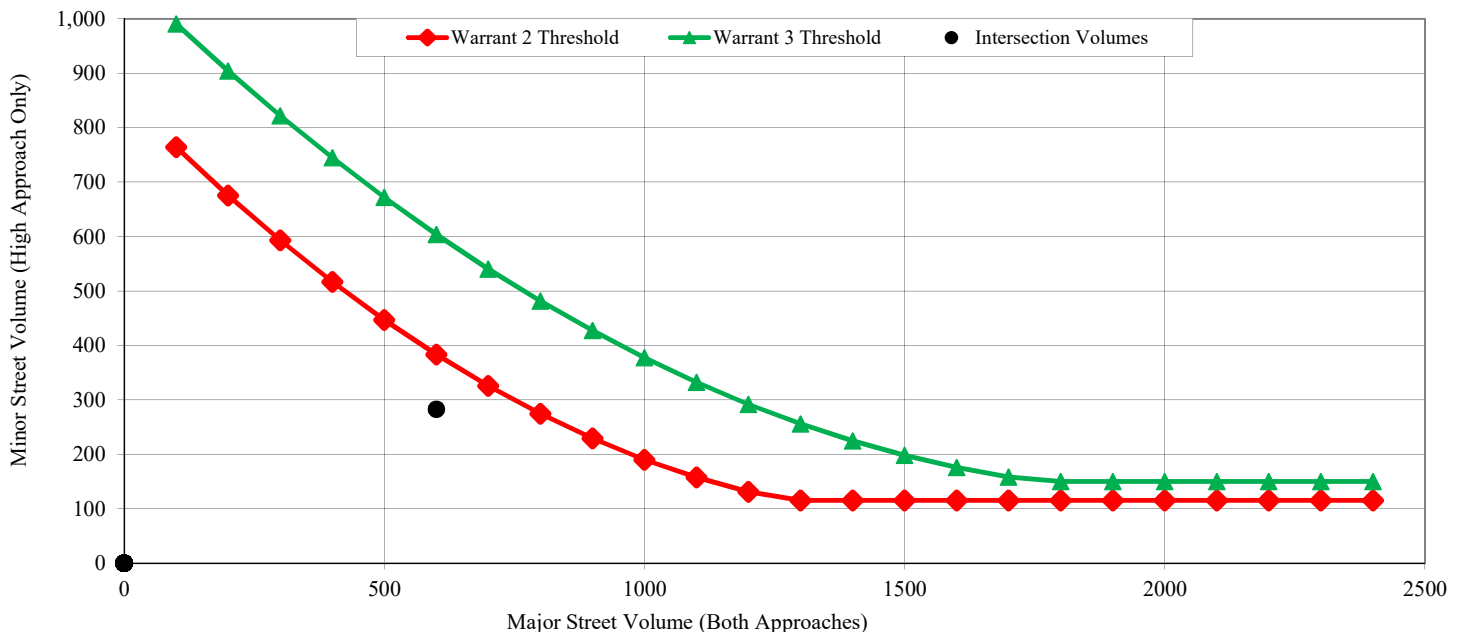
Warrant 1, Eight Hour Vehicular Volume			
	Condition A	Condition B	Condition A+B*
Condition Satisfied?	Not Satisfied	Not Satisfied	Not Satisfied
Required values reached for	1 hour	0 hours	1 (Cond. A) & 0 (Cond. B)
Criteria - Major Street (veh/hr)	600	900	480 (Cond. A) & 720 (Cond. B)
Criteria - Minor Street (veh/hr)	200	100	160 (Cond. A) & 80 (Cond. B)

\* Should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems.

Warrant 2, Four Hour Vehicular Volume	
Condition Satisfied?	Not Satisfied
Required values reached for	0 hours
Criteria	See Figure Below

Warrant 3, Peak Hour Vehicular Volume		
	Condition A	Condition B
Condition Satisfied?	Not Satisfied	Not Satisfied
Required values reached for	1027 total, 283 minor, 4.7 delay	0 hours
Criteria - Total Approach Volume (veh in one hour)	800	See Figure Below
Criteria - Minor Street High Side Volume (veh in one hour)	150	
Criteria - Minor Street High Side Delay (veh-hrs)	5	

Figure 4C-1 (Warrant 2) & Figure 4C-3 (Warrant 3)



Spack Academy is part of the Spack Enterprise family of companies

Dear Sandra Day  
Re: HERE parking lot

I am writing in regard to items Z-16-00-310 and PDP-16-00311 which involve the rerouting of Lumbrough Dr. between Alabama and Mississippi Streets and formation of a parking lot for the HERE project in the area between the old and proposed new sites of Lumbrough Drive.

My wife and I own the apartment building at 1027 Mississippi St. and we are strongly opposed to closing the alley entrance to what is now and what would be Lumbrough Drive. To do so would create a great inconvenience for our tenants and many others between 9th and 10th streets who need the alley access to parking. We are also concerned that the parking lot will be a blight to our part of the neighborhood and that, being downhill from the parking lot, we will be subjected to excessive rainwater runoff.

Sincerely,

Charles Kimmulberg  
507 Pioneer Rd  
Lawrence, KS 66049

Tel. 785-843-6543

## **FIRST MODIFICATION OF PARKING LOT LEASE**

THIS FIRST MODIFICATION OF PARKING LOT LEASE (the "Modification") is made as of \_\_\_\_\_, 2016, by and between STADPKG, LLC, a Kansas limited liability company ("Landlord"), and Here Lawrence Property Owner, LLC, a Delaware limited liability company ("Tenant").

### **RECITALS**

A. Landlord and Tenant are parties to a certain Parking Lot Lease Agreement dated July \_\_\_, 2016 (together with all exhibits incorporated therein, the "Original Lease"), which is incorporated herein by this reference.

B. The parties acknowledge that the City (as that and other capitalized terms used but not defined herein are defined in the Original Lease) has requested additional information about where the Tenant's tenants who are then authorized to park on the Property ("Tenant Permittees") will park during those dates and periods of time that the Landlord has the exclusive right to use the Property for the Landlord's Reserved Use.

C. In order to clarify where the Tenant Permittees will park during the Landlord's Reserved Use, Landlord and Tenant desire to modify the Original Lease as set forth in this Modification (the Original Lease as modified in this Modification is referred to as the "Lease").

NOW THEREFORE, for and in consideration of the covenants and agreements of the parties hereto hereinafter set forth, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant hereby modify the Original Lease as follows:

1. Incorporation of Recitals. The Recitals set forth above are incorporated herein by this reference.

2. Relocation of Parking of Tenant Permittees During Landlord's Reserved Use. Tenant acknowledges and agrees that, starting at least ten (10) hours before and ending no sooner than two (2) hours after the periods of time that constitute the Landlord's Reserved Use for a given day, Tenant will provide the Tenant Permittees with paved, off-street locations in which to park the Tenant Permittees' respective motor vehicles as an alternative to the Property (whether one or more, on any given day of Landlord's Reserved Use, the "Alternative Parking Lot") at no cost to the Tenant Permittees. If Tenant will locate the Alternative Parking Lot in the following locations in the following order of priority: (a) some or all within the CA Student Housing Project's internal parking garage to the extent of any unreserved parking spots then available; (b) some or all at another location on the University of Kansas campus, if the University and Tenant are able to agree upon the terms of any such use and the location(s) of any such Alternative Parking Lot on the campus; (c) some or all at another location on property owned or controlled by Landlord such as, but not limited to, the parking adjacent to Landlord's offices on Constant

Avenue, if the Landlord and Tenant are able to agree upon the terms of a License Agreement (as hereinafter defined) for such parking; or (d) any not accommodated by (a), (b) or (c) above at another off street location that is at least \_\_\_\_ feet away from the Property and no more than two (2) miles from the CA Student Housing Project. If during a given period of Landlord's Reserved Use the Alternative Parking Lot so provided is not located within five (5) blocks of the CA Student Housing Project or a City or University of Kansas bus line or shuttle service or other transportation system then in operation, then, during that particular period of Landlord's Reserved Use, Tenant will provide the Tenant Permittees with a reasonable means of transportation at no cost to the Tenant Permittees between the CA Student Housing Project (or a location designated by Tenant that is within one thousand five hundred (1,500) feet of an entrance to the CA Student Housing Project) and the Alternative Parking Lot (when applicable, the "Free Transportation"), which Free Transportation will be available at least once per hour between two (2) hours before and two (2) hours after the beginning and end of the Landlord's Reserved Use on a given day). No later than three (3) business days prior to the date of a given period of Landlord's Reserved Use of the Property, Tenant will start providing Tenant Permittees with reasonable notice of the location of the Alternative Parking Lot for the upcoming date of Landlord's Reserved Use, the availability and means to use Free Transportation (if applicable) and a phone number at which Tenant Permittees can get additional information concerning such Alternative Parking Lot and any applicable Free Transportation prior to and on the date of such Landlord's Reserved Use. Upon request of Landlord, Tenant shall provide Landlord with a copy of such notices for any given period of Landlord's Reserved Use.

3. Costs of Alternate Parking and Free Transportation. Unless Landlord is providing the use of the Alternative Parking Lot pursuant to a License Agreement under Section 5 hereof (in which case the terms of such License Agreement will control), neither Landlord nor Landlord's Indemnified Parties will have any liability for any costs incurred by Tenant in providing the Alternative Parking, any Free Transportation or any notice required to be provided to Tenant Permittees in Section 2.

4. Indemnity Against Claims Arising from the Use of Alternate Parking Lot and Free Transportation. Tenant will hold harmless and defend Landlord from any and all claims, judgments, demands, damages, fines, losses, liabilities, interest, awards, penalties, causes of action, litigation, lawsuits, administrative proceedings, administrative investigations, costs and expenses, including, without limitation, reasonable attorneys' fees, court costs and other reasonable costs of suit, arbitration, dispute resolution or other similar proceedings which are brought by or against Tenant or any Tenant Permittee, whether for personal injuries or property damage, which arise from the intentional actions or negligence of any one or more of Tenant, or the lessor or licensor of any Alternative Parking Lot or the provider of any Free Transportation, or their respective employees, agents, licensees, and invitees in connection with a Tenant Permittee's use of an Alternate Parking Lot or any Free Transportation.

5. Potential Use of Landlord's Alternative Parking During Landlord's Reserved Use. If Tenant requests that Landlord do so at least forty-five (45) days in advance of a period of Landlord's Reserved Use of the Property (which request will specify the number of motor vehicles Tenant wants to park on Landlord's parking lots), Landlord will provide Tenant with a written proposal for Tenant to obtain a license to park the number of Tenant Permittees' motor vehicles specified by Tenant in its request on parking lots then owned or controlled by Landlord

that would qualify as an Alternative Parking Lot, if any. The parties acknowledge that Landlord will charge Tenant a fair market rental rate for the number of parking spaces so leased or licensed to Tenant (with fair market rental rate to be determined using the then typical parking charge being made for parking during such events in the area surrounding such Alternative Parking Lot) and that if Tenant agrees to such proposal, Landlord and Tenant will execute a written lease or license agreement for such parking which contains such other terms and conditions (e.g., relating to trash removal and insurance) as the Landlord and Tenant may agree upon (a "License Agreement").

6. General. Except as expressly modified herein, the Original Lease remains in full force and effect. This Modification together with the Lease represents the complete understanding between the parties hereto as to the subject matter hereof. This Modification may be amended only by an instrument executed and delivered by each party hereto. No party hereto shall be deemed to have waived the exercise of any right which it holds hereunder unless such waiver is made expressly and in writing (and, without limiting the generality of the foregoing, no delay or omission by any party hereto in exercising any such right shall be deemed a waiver of its future exercise). No such waiver made in any instance involving the exercise of any such right shall be deemed a waiver as to any other such instance, or any other such right. This Modification shall be given effect and construed by application of the law of the State of Kansas, and any action or proceeding arising hereunder shall be brought in the courts of Kansas. Time shall be of the essence of this Modification, except that, whenever the last day for the exercise of any right or the discharge of any obligation hereunder falls on a Saturday, Sunday or statutory holiday, the party having such right or obligation shall have until 5:00 p.m. on the next succeeding day which is not a Saturday, Sunday or statutory holiday to exercise such right or discharge such obligation. The headings of the Sections, subsections, paragraphs and subparagraphs hereof are provided herein for and only for convenience of reference, and shall not be considered in construing their contents. As used herein, all references made (a) in the neuter, masculine or feminine gender shall be deemed to have been made in all such genders, (b) in the singular or plural number shall be deemed to have been made, respectively, in the plural or singular number as well, and (c) to any Section, subsection, paragraph or subparagraph shall be deemed, unless otherwise expressly indicated, to have been made to such Section, subsection, paragraph or subparagraph of this Lease. No determination by any court, governmental or administrative body or agency or otherwise that any provision of this Modification or any amendment hereof is invalid or unenforceable in any instance shall affect the validity or enforceability of (a) any other such provision, or (b) such provision in any circumstance not controlled by such determination. Each such provision shall remain valid and enforceable to the fullest extent allowed by, and shall be construed wherever possible as being consistent with, applicable law. Nothing in this Modification shall be deemed in any way to create between the parties hereto any relationship of partnership, joint venture or association, and the parties hereto hereby disclaim the existence of any such relationship. This Lease shall be binding on and inure to the benefit of the parties hereto and their respective successors and permitted assigns. The parties hereto shall and they hereby do waive trial by jury in any action, proceeding or counterclaim brought by either of the parties hereto against the other on any matters whatsoever arising out of or in any way related to this Lease, the relationship of Landlord and Tenant, Tenant's use or occupancy of the Property, and/or any claim of injury, loss or damage.

**THE REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK  
– SIGNATURES ON FOLLOWING PAGE.**

IN WITNESS WHEREOF, each party hereto has caused this Modification to be executed on its behalf by its duly authorized representatives, the day and year first above written.

**LANDLORD:**

STADPKG, LLC, a Kansas limited liability company  
By: The Kansas University Endowment Association,  
a Kansas not for profit corporation, its sole member

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

**TENANT:**

Here Lawrence Property Owner, LLC  
a Delaware limited liability company

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: an Authorized Signatory