

AGENDA

RILEY COUNTY PLANNING BOARD/ BOARD OF ZONING APPEALS

Monday, November 10, 2014
7:30 p.m.

Commission Meeting Room
Courthouse Plaza East

(Procedure: Open joint meeting of the Riley County Planning Board/Board of Zoning Appeals.)

I. OPEN PUBLIC COMMENTS

II. CONSENT AGENDA

1. Consider the minutes of the October 13, 2014 meeting.
2. Consider the Report of Fees for the month of October.
3. Tegtmeier Winery Final Development Plan (LAWWE, LLC)

(Procedure: Adjourn the joint meeting of the Riley County Planning Board/Board of Zoning Appeals and reconvene as the Riley County Board of Zoning Appeals.)

III. GENERAL AGENDA- RILEY COUNTY BOARD OF ZONING APPEALS

1. Take item from the Table and conduct a public hearing to consider the request of Bill Carson, petitioner and Russell Briggs Trust, owner, for a **variance** authorization to permit construction of a detached accessory structure (garage) 2.8 feet below the required elevation of one (1) foot above base flood elevation.
2. Take item from the Table and conduct a public hearing to consider the request of Wayne Kendall, petitioner and L M Kendall Trust, owner, for a **variance** authorization to reduce the front yard requirement of the north property line from 25 feet to two (2) feet.
3. Public Hearing to consider the request of Wayne Kendall, petitioner and L M Kendall Trust, owner, for a **variance** authorization to reduce the rear yard requirement of the east property line from 10 feet to 5 feet.
4. Public Hearing to consider the request of Wildwood Estates, Inc., petitioner and Steven & M. Kristine Springer, owners, for a **Conditional Use Authorization** to allow for a commercial outdoor recreational facility (zipline park) in the "AG" (Agricultural District) zoning designation.

(Procedure: Adjourn as the Riley County Board of Zoning Appeals and reconvene as the Riley County Planning Board.)

IV. GENERAL AGENDA- RILEY COUNTY PLANNING BOARD

1. Public Hearing at the request of Steven L. Hargrave, petitioner, and Steven L. & Debbie L. Hargrave, owners, to receive a **Residential Use Designator - Extraneous Farmstead and plat** a tract of land into one (1) lot in Sherman Township, Section 32, Township 7 South, Range 6 East, in Riley County, Kansas. **ACTION NEEDED: Approve/deny a Residential Use Designator - Extraneous Farmstead and approve/deny Concurrent Plat of Hargrave Addition.**
2. Manhattan Urban Area Comprehensive Plan update.
3. Big Blue Floodplain Management Plan update.
4. Agritourism Task Force update.
5. Sign Regulations update.

(Procedure: Adjourn the Riley County Planning Board meeting.)

MINUTES

RILEY COUNTY PLANNING BOARD/ BOARD OF ZONING APPEALS

**Monday, October 13, 2014
7:30 pm**

**Courthouse Plaza East
Commission Meeting Room
115 North 4th Street**

Members Present: Lorn Clement, Chairman
Dr. Tom Taul, Vice-Chair
Diane Hoobler
John Wienck

Members Absent: Julie Henton

Staff Present: Monty Wedel – Director, Bob Isaac – Planner, Lisa Daily –
Administrative Assistant

Others Present: Lorene Kendall, Wayne Kendall, Kevin McKeeman, Charles J. Lake, Ron
Wilson, Jeanette Campbell, Phyllis Walters and Trevor McKeeman

OPEN PUBLIC COMMENTS

None.

CONSENT AGENDA

Bob Isaac advised the Board that he hadn't received the mylar for the Tegtmeier Winery Final Development Plan. John Wienck made a motion to remove Tegtmeier Winery Final Development Plan (LAW E, LLC) from the consent agenda. Diane Hoobler seconded. Carried 4-0.

The minutes of the September 8, 2014 meeting were presented and approved. The Report of Fees for the month of September (\$3,887.00) were presented and approved.

Diane Hoobler moved to adjourn the joint meeting of the Riley County Planning Board/Board of Zoning Appeals and convene as the Board of Zoning Appeals. John Wienck seconded. Carried 4-0.

BOARD OF ZONING APPEALS

Kendall – Variance

Lorn Clement opened the public hearing at the request of Wayne Kendall, petitioner and L M Kendall Trust, owner, for a variance authorization to reduce the front yard requirement of the north property line from 25 feet to two (2) feet.

Bob Isaac presented the request. Mr. Isaac described the history, location and physical characteristics of the subject property. Mr. Isaac explained that the applicant wishes to enclose the existing covered carport to protect stored items from theft and the elements. He said through this application process, it was discovered that the existing garage is already located within the rear setback and the Applicant has applied for a variance which will be presented at the November 10, 2014 meeting.

Tom Taul asked for clarification on the 10-foot rear setback and the other variance will be next month. He asked how the Board could consider the variance request presented tonight as the property would still be in non-compliance.

Bob Isaac said the variance for the rear setback should have been included with this application. He explained that the structure still would require two separate variances; however, since it was not discovered at the time of application, it will be presented at next month's meeting.

Chairman Clement asked if the Applicant would like to make a statement.

Wayne Kendall stated that the proposed wall on the north side will not be any wider than what is necessary to install a garage door. Mr. Kendall said he assumed the east lot line was located in the middle of the alley; however, such is not the case and will be addressed at next month's meeting.

Bob Isaac explained that the carport didn't require a building permit, therefore the building setbacks didn't apply. He said in order to enclose the carport; the applicant will need a building permit. Mr. Isaac said due to the carport being located in the north and east building setbacks, the two variances will need to be approved before a permit to build can be issued.

Chairman Clement asked if there were any proponents or opponents within 1000 feet.

Janette Campbell stated she and her husband own property a couple blocks south and west of the subject property. She said she is not completely against enclosing the carport and it is her hope that in doing so it will help clean up the clutter and improve the appearance of the subject property.

Mrs. Campbell said if approved, it seems to be inconsistency with decisions made in the past for people to add onto their properties who were not allowed to. She said a property owner wanted to enlarge his house and was told he could build up but not increase the footprint. Mrs. Campbell said in the process of removing part of the structure, apparently the owner removed too much and was not allowed to do anything. She said she couldn't understand why he couldn't build a new house on the existing slab in the middle of the property but yet this applicant is allowed to expand clear to the borders of his property. Mrs. Campbell said another property owner had to purchase the lot next door in order to expand his building because it was too close to the edge.

Monty Wedel said that Keats is a very complicated area with very small lots with no central sewer or water. He stated floodplain and sanitary code are issues and a review of the individual properties would need to be done in order to answer her questions.

Phyllis Walters stated she lives a block and a half from the subject site. She said her concerns are the building being that close to the road and will the stuff be contained inside or is it going to be stacked around the side and out into the road. She said this is a problem in Keats.

John Wienck moved to close the public hearing. Diane Hoobler seconded. Carried 4-0.

Tom Taul asked Bob Isaac how far the existing carport is from the property line.

Bob Isaac replied approximately 22 feet.

Tom Taul asked if expanding the existing garage, does the applicant have to go that far.

Bob Isaac said the applicant is enclosing the existing carport.

Lorn Clement reopened the public hearing.

Wayne Kendall stated he is just putting up a wall at the end of the existing carport with a garage door that goes vertically up into the building.

Diane Hoobler verified with applicant that he is not building a new structure but just closing in the existing carport.

Mr. Kendall replied correct.

John Wienck moved to close the public hearing. Diane Hoobler seconded. Carried 4-0.

Tom Taul stated he has a concern with the height difference between the carport and the house and feels that both variances should be heard at the same time.

Chairman Clement said it would make more sense to hear both variances at the same time.

John Wienck asked Mr. Isaac if the applicant wasn't in compliance after the carport was built.

Bob Isaac explained the applicant is in compliance because the carport is not considered a building. He said in order to enclose the carport to make it a building the Applicant will have to get a building permit. Mr. Isaac stated in order to get the building permit; the Applicant will need a variance for both the north and east property lines.

Bob Isaac stated if the Board is more comfortable hearing both variances together he would recommend tabling this item. He said he wanted to point out for clarity that the subject property is not zoned residential but agricultural and accessory structures don't have height limitations.

Diane Hoobler moved to table the request for a variance authorization to reduce the front yard requirement of the north property line from 25 feet to two (2) feet to the November 10, 2014 meeting. John Wienck seconded. Carried 4-0.

Carson – Variance

Lorn Clement opened the public hearing at the request of Bill Carson, petitioner and Russell Briggs Trust, owner, for a variance authorization to permit construction of a detached accessory structure (garage) 2.8 feet below the required elevation of one (1) foot above base flood elevation.

Bob Isaac presented the request. Mr. Isaac explained the property owner is Russell Briggs and Bill Carson is requesting the variance for his structure. Mr. Isaac described the history, location and physical characteristics of the subject property. Staff recommended approval of the request.

The Board and Mr. Isaac discussed the similarities of this request with previous petitions for Manhattan Township, Deam and Cook. John Wienck pointed out that this petition request is for an existing structure.

Bob Isaac stated the applicant started building the structure and then found out it is in a floodplain. Mr. Isaac said he wasn't for sure if a building permit has been issued.

Chairman Clement asked why the applicant didn't have a building permit.

Bob Isaac said the applicant started without the permit and currently is in violation.

Chairman Clement said this falls in the category of "just fix it" and has bothered him ever since he started on this Board. Mr. Clement stated he has been on this Board since 1991 and has seen this before. He stated that he is kind of tired of it.

Diane Hoobler said the structure is basically built and it doesn't have the flood proofing vents installed.

Chairman Clement said the building is a pole structure and it can be picked up. He stated he is not here to just “fix it” for people.

Diane Hoobler said it has always bothered her about the violation of regulations; there are no teeth in them.

Chairman Clement said this is a very good case to say it’s not that difficult to saw off those posts, pick up the structure and build it to compliance. He said it is a simple structure and can be elevated.

Monty Wedel stated he is not defending the applicant but when a violation occurs, staff seeks a remedy, such as a variance. He said if the Board doesn’t want to grant the variance, which is perfectly understandable, staff will go to the next remedy.

Chairman Clement asked if the Applicant was present.

Monty Wedel replied he didn’t believe anyone was present for the petition.

Diane Hoobler asked if the Applicant wants to enclose the structure.

Bob Isaac replied yes, the Applicant wants to finish constructing the building to meet the wet-flood proofing techniques, such as installing vents.

Monty Wedel said staff told the Applicant to stop building, but he continued to build.

Diane Hoobler stated it appears to be finished.

Chairman Clement said this should be tabled and Mr. Carson should be required to appear at that meeting if he wants to pursue the variance.

Tom Taul moved to table the request for a variance authorization to permit construction of a detached accessory structure (garage) 2.8 feet below the required elevation of one (1) foot above base flood elevation to the November 10, 2014 meeting.

John Wienck seconded. Carried 4-0.

Diane Hoobler moved to adjourn the Board of Zoning Appeals meeting and convene as the Riley County Planning Board. Tom Taul seconded. Carried 4-0.

RILEY COUNTY PLANNING BOARD

Lake – Plat & Rezone

Lorn Clement opened the public hearing at the request of Charles J. Lake, petitioner and owner, to **rezone** a tract of land from "AG" (Agricultural District) to “SF-5” (Single Family Residential) and **plat** the aforementioned tract of land into one (1) lot, all in Manhattan Township, Section 34, Township 10 South, Range 8 East, in Riley County, Kansas.

Bob Isaac presented the request. Mr. Isaac described the background, location and physical characteristics. He stated the Applicant expressed there would be a financial hardship if the request would be denied as he would not be able to refinance the home and due to high mortgage payments, he would be forced to sell.

Staff recommended that the Planning Board forward a recommendation to the Board of County Commissioners to approve the request to rezone a tract of land from “AG” (Agricultural District) to “SF-5” (Single Family Residential) for reasons listed in the staff memo. Staff also recommended that the Board approve the of the concurrent plat of Lake Subdivision, as it has

been determined to meet the minimum requirements of the Riley County Subdivision Regulations, Zoning Regulations and the Sanitary Code.

Tom Taul asked about the parent tract.

Mr. Isaac explained the remainder of the tract will be less than 20 acres and is currently leased as pasture and grassland for grazing cattle. He said the Applicant plans to sell this tract of land to the property owners to the north, the McKeeman's, to allow access to their property. Mr. Isaac said the new property owners have applied for an agricultural exemption for the remainder for continued agricultural use.

Diane Hoobler questioned the travel easement on Dawn Avenue.

Bob Isaac explained that Dawn Avenue comes terminates at Sedam Avenue and there is a travel easement that runs along the east property line of the subject property.

Tom Taul asked if the property owners to the north have access to the travel easement.

Bob Isaac replied yes. Mr. Isaac explained when the property to the north was subdivided the Riley County Subdivision Regulations has a clause that no two houses shall be served by a single driveway. He said the McKeeman's wanted to find another access to their property.

Chairman Clement asked if the Applicant would like to make a statement.

Charles Lake said he wants to downsize to a five acre tract and continue to live there.

Chairman Clement asked if there were any proponents or opponents within 1000 feet.

Kevin McKeeman explained that he has land to the north and which is basically land-locked. He said in order to get to their land, they have to go through two easements and there isn't direct access. He said he farms about 1,800 acres and will continue to hay his property and the remainder of the parent tract.

John Wienck moved to close the public hearing. Diane Hoobler seconded. Carried 4-0.

Tom Taul moved to approve Petitions #14-27 and #14-28 for reasons listed in the staff report. John Wienck seconded. Motion carried 4-0.

Mr. Isaac announced that the Board of County Commissioners would hear the request on November 3, 2014, at 10:15 am, in the Commission Chambers.

Proposed Sign Regulations

Monty Wedel explained this started as a moratorium for on premise digital signage. Mr. Wedel said while working on the digital signage, staff decided to review the entire sign regulations to be in compliance with constitutional issues. He said consultant, Elizabeth Garvin, was hired for the project.

Mr. Wedel said purpose statements, new digital sign and other types of sign definitions were added and an Ag directional sign category for agriculturally related advertisement with the limitation of one (1) off-site sign. Mr. Wedel said due to distractions and aesthetics, digital billboards will still be prohibited. He said digital signage will be prohibited in residential districts.

Chairman Clement suggested adding in the purpose section about protecting the night sky.

Monty Wedel said staff received a concern from a local business owner that the current sign regulations limit commercial districts to two signs. Mr. Wedel reviewed this with the consultant

and it was decided to change the requirement to one (1) square foot of signage per lineal foot of lot frontage.

The Board, by consensus, agreed for staff to move forward with the proposed sign regulation changes.

Manhattan Urban Area Comprehensive Plan update

Monty Wedel said there will be meetings in November. He said staff is concentrating on staying with commercial/industrial around the shop area and residential to the north, which was the area in Vision 2025 projected for future long term growth. Mr. Wedel said the consultant for the MUACP will come up with criteria for judging the appropriateness for sewer, water and a road network.

Big Blue Floodplain Management Plan Update

Monty Wedel said there will be public meetings to review the goals and objectives, but the dates have not been determined yet.

John Wienck moved to adjourned. Diane Hoobler seconded. Carried 4-0.

The meeting was adjourned at 9:11 P.M.



**RILEY COUNTY
PLANNING & DEVELOPMENT**

REPORT OF FEES

October 2014

<u>DATE</u>	<u>NAME</u>	<u>AMOUNT</u>
10-01-2014	Engle, Building Permit #14-0086	\$ 150.00
10-02-2014	Thompson, Environmental Site Evaluation	100.00
10-02-2014	Mamolo, Building Permit #14-0089 & 14-0090	200.00
10-03-2014	Treece, Building Permit #14-0091	150.00
10-03-2014	Shannon, Building Permit #14-0092	150.00
10-07-2014	Moots, Environmental Site Evaluation	100.00
10-10-2014	Ritter, Building Permit #14-0093	150.00
10-10-2014	BAM, Repair Permit	75.00
10-10-2014	BAM, Repair Permit	75.00
10-10-2014	Diederich, Environmental Site Evaluation	100.00
10-10-2014	Thomson, Building Permit #14-0094	150.00
10-14-2014	Sutterlin, Copy of zoning regulations	15.00
10-15-2014	Wataha, Water Screening Report	22.00
10-17-2014	Freeman, Environmental Site Evaluation	100.00
10-17-2014	Roberts, Radon test for a well	62.00
10-23-2014	Hollinger, Repair Permit	75.00
10-23-2014	Hofmann, Well Permit & Repair Permit	150.00
10-27-2014	Adams, Water Screening Report	10.00
10-28-2014	Zhang, Water Screening Report	20.00
10-29-2014	Schurle Sign Inc, Sign Permit	50.00
10-29-2014	K-Construction, Building Permit #14-0097	150.00
10-30-2014	Domingo, Building Permit #14-0098	150.00
10-31-2014	Schooler, Water Screening Report	8.00

TOTAL **\$2,212.00**

DEPOSITS MADE:

10-03-2014	\$ 600.00
10-10-2014	150.00
10-10-2014	550.00
10-17-2014	299.00
10-24-2014	225.00
10-31-2014	380.00
11-03-2014	8.00
TOTAL	\$2,212.00



MEMO

Riley County Planning Board

October 6, 2014

Dear Board members,

The following item has been submitted for your review:

Consider the **FINAL DEVELOPMENT PLAN** of Tegtmeier Winery, an Agri-Business Planned Unit Development, generally located approximately 9800 feet west of Scenic Drive, on the north side of Wildcat Creek Road (Applicant/Owner: *LAWE, LLC-David H. Tegtmeier, Registered Agent*).

BACKGROUND:

On September 8, 2014, the Riley County Planning Board heard the request. Following staff's recommendation, the Planning Board forwarded a recommendation of approval to the Board of County Commissioners to rezone the subject property, with the following suggestions:

1. Since the predominant use of the subject site will be agricultural, the more appropriate "A-PUD" (Agri-Business Planned Unit Development) zoning designation should be used, rather than the proposed "C-PUD" Commercial Planned Unit Development zoning designation; and
2. Include a note on the development plan that limits the maximum number of participants for an event on the site to 375 persons.

The Planning Board also approved the concurrent plat of Tegtmeier Addition, as it was determined that all requirements of the Riley County Subdivision Regulations, Zoning Regulations and Sanitary Code were met.

On September 25, 2014, the Board of County Commissioners acknowledged the approved Final Plat of Tegtmeier Addition and accepted any easements, rights-of-way or licenses, as shown to be dedicated on said Plat. The Board also reviewed the Preliminary Development Plan with recommendations made by the Planning Board, and unanimously approved the rezoning of the subject property from "AG" (Agricultural District) to "A-PUD" (Agri-Business Planned Unit Development).

FINAL RECOMMENDATIONS:

Staff has reviewed the Final Development Plan and found it to be in substantial conformance with the Preliminary Development Plan and recommends that said Final Development Plan be accepted.

Bob Isaac
Planner
Riley County Planning & Development

Permit #	App Date	Ownr	Type of Bldg	Use of Bldg	Const Cost	Amnt Paid	Property Address	City & Zp
14-0084	10/15/2014	Earnest and Sandra Hoffman	Storage (ag related)	Farm equipment shop	\$18,500.00	\$0.00	14505 Barton Rd	Leonardville (66449)
14-0086	10/01/2014	Timothy L. & Sherri A. Engle	Storage (residential)	Storage	\$15,000.00	\$150.00	5730 N. 48th St	Manhattan (66503)
14-0087	10/02/2014	Ron & Chris Wilson	Storage (ag related)	Hay storage/equipment storage	\$16,577.00	\$0.00	2101 Zeandale Rd	Manhattan (66502)
14-0088	10/02/2014	Ron & Chris Wilson	Storage (ag related)	Hay storage/equipment storage	\$10,000.00	\$0.00	1042 Sedam Ave	Manhattan (66502)
14-0089	10/02/2014	Charles B. Mamolo	Addition (residential)	See comments	\$25,000.00	\$150.00	5410 Terra Heights	Manhattan (66503)
14-0090	10/02/2014	Charles B. Mamolo	Storage (residential)	Shed/greenhouse	\$1,000.00	\$50.00	5410 Terra Heights	Manhattan (66503)
14-0091	10/03/2014	Carl Treece	Addition (residential)	Living, dining, hobby rooms	\$111,000.00	\$150.00	2493 Big Horn Ln	Manhattan (66503)
14-0092	10/03/2014	Patrick & Barbara Shannon Living Trust	Storage (residential)	Vehicle storage	\$46,000.00	\$150.00	1208 Deep Creek Rd	Manhattan (66502)
14-0093	10/10/2014	Heath & Marci Ritter	Storage (residential)	Tractor/Implement storage-workshop	\$30,000.00	\$150.00	13616 Walnut Creek Rd	Randolph (66554)
14-0094	10/10/2014	Dan Thomson	Storage (residential)	Storage of implements & other	\$32,000.00	\$150.00	7010 Pheasant Ridge Rd	Riley (66531)
14-0095	10/10/2014	Douglas McGregor	Storage (ag related)	Farm equipment & shop	\$30,000.00	\$0.00	10700 Anderson Ave	Riley (66531)
14-0096	10/15/2014	Cody Sump	Storage (ag related)	Storing ag equipment	\$0.00	\$0.00	11965 BODAVILLE RD	Randolph (66554)
14-0097	10/29/2014	Patrick Shannon	Storage (residential)	Adding onto existing storage building	\$28,070.00	\$150.00	4320 Deep Creek Rd	Manhattan (66502)
14-0098	10/30/2014	Reynald Domingo	Miscellaneous	Gazebo	\$1,500.00	\$150.00	2625 Brookhollow Ct	Manhattan (66503)



PLANNING & DEVELOPMENT

STAFF REPORT

Variance

- PETITION:** (#14-26) Variance
- APPLICANT:** Bill Carson
3100 Bethany Cir
Manhattan, KS 66503
- PROPERTY OWNER:** Russell K. Briggs Trust
2312 Stagg Hill Rd
Manhattan, KS 66502
- TYPE OF REQUEST:** A variance to permit the construction of a detached accessory structure 2.8 feet below the required elevation of one (1) foot above base flood elevation.
- SIZE OF TRACT:** The subject site is approximately 8.99 acres.
- LOCATION:** Generally located approximately 600 feet northeast of Recreation Drive, on the north side of Skyway Drive; Section 33, Township 10 South, Range 7 East; Ogden Township.
-



BACKGROUND: The applicant is wishing to construct a garage/storage structure to accessorize his office building.

DESCRIPTION:

Physical site characteristics: The subject site is developed with an auto dealership, with a multi-bay maintenance shop, and a garage/office (see Figure 1). The entire subject property is located within the designated 1% annual chance floodplain (see attached map).



Figure 1. North portion of Lot 1 West Lot Addition.

General character of the area: The general character of the area is a mix of commercial and light industrial uses.

ZONING:

Zoning History: Lot 1 of Murray Addition Unit Two was platted in March 1976. The lot was also rezoned from "G-1" (General Agricultural) to "D-2" (Light Industrial) in April 1976, for the purposes of constructing and operating a warehouse/office building for a pest control business. In November 1998, the lot was rezoned from "D-2" (Light Industrial) to "C-4" (Highway Business) for an auto sales/maintenance facility. In 2005, Lot 1 of Wildcat Wrecker Subdivision was platted and rezoned from "G-1" (General Agricultural) to "C-4" (Highway Business). A portion of the lot was zoned to "C-4" (Highway Business) during the 1974 Zoning Conversion

Process of Riley County. In March 2014, Lot 1 of Murray Addition Unit Two and Lot 2 of Wildcat Wrecker Subdivision were replatted into Lot 1 West Lot Addition.

Current zoning: The subject site is zoned county zoning designation "C-4" (Highway Business).

STAFF EVALUATION OF VARIANCE CRITERIA:

- a. **The variance request arises from conditions which are unique to the property in question and which are not ordinarily found in the same zone or district and that such conditions are not created by an action of the owner or applicant.**

The subject property lies entirely within the designated 100-year floodplain, which overlays a "C-4" (Highway Business) zoning district, thus requiring the first floor elevation of all structures to be at least one (1) foot above base flood elevation. This standard is not a normal requirement of the zoning district, therefore creating a unique condition to the property. Such condition was not created by an action of the applicant.

- b. **The granting of the variance will not adversely affect the rights of adjacent property owners or residents.**

The applicant has stated that the proposed building will meet or exceed the requirements for wet-flood-proofing, as per the requirements set forth in the Riley County Floodplain Regulations. Adjacent property owners should not be adversely affected by the granting of a variance.

- c. **The strict application of the provisions of the zoning regulations from which the variance is requested will constitute unnecessary hardship upon the property owner or applicant.**

Given that the entire property is located within in the 100-year floodplain, literal enforcement of the regulations would not allow the property owner to construct said accessory structure anywhere on the subject property, forcing the applicant to build elsewhere. This could be considered an unnecessary hardship upon the property owner.

- d. **The variance requested will not adversely affect the public health, safety and welfare.**

The proposed structure is subject to the Riley County Floodplain regulations. Non-habitable structures used for storage are permitted to utilize the wet-floodproofing methods. Granting a variance should not adversely affect the public health, safety and welfare.

- e. **The granting of the variance will not be opposed to the general spirit and intent of the regulations.**

According to the Riley County Floodplain Regulations, Section 9.84, the granting of the requested variance would be consistent with the adopted criteria for variance approval.

STAFF RECOMMENDATION: Kansas statute 12-759 states that when deemed necessary by the Board of Zoning Appeals, the Board may grant variances and exceptions from the zoning regulations, in this case the floodplain regulations, provided that such variances or exceptions will not be contrary to the public interest and where, due to special conditions, a literal enforcement of the provisions of the regulations, in an individual case, results in unnecessary hardship, and provided that the spirit of the regulations shall be observed, public safety and welfare secured, and substantial justice done. The statute states that a request for a variance may

be granted in such case, upon a finding by the Board that certain conditions listed in the statute have been met.

Paragraph 9.83 Section 9 Floodplain Regulations of the Riley County Zoning Regulations lists the conditions for approving variances for accessory structures. It states that FEMA recognizes the “wet-floodproofing” technique as acceptable and appropriate for accessory structures. It lists certain criteria that should be followed for this technique, such as:

- Using flood-resistant building materials; adequately anchor the structure to prevent flotation, collapse or lateral movement;
- requiring the structure to contain openings that will permit the automatic entry and exit of floodwaters, locate all mechanical, electrical or other utility equipment above the base flood elevation or flood-proofed so they are in a watertight enclosure; and
- limiting the size of the accessory structures to no greater than 700 square feet.

Staff recommends that the requested variance be approved.

ATTACHMENTS:

- Vicinity/site map
- Surrounding zoning map
- Floodplain map

Prepared by: Bob Isaac, Planner -
October 6, 2014



VICINITY AND SITE

Carson

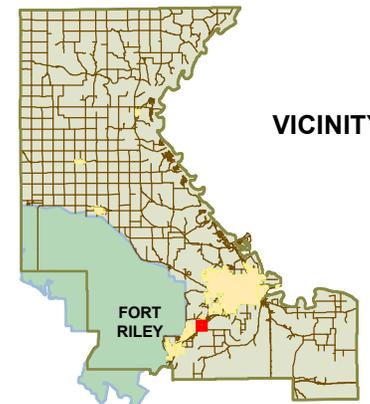
Variance #14-26

A variance to permit the construction of a detached accessory structure 2.8 feet below the required elevation of one (1) foot above base flood elevation.

33-10-7

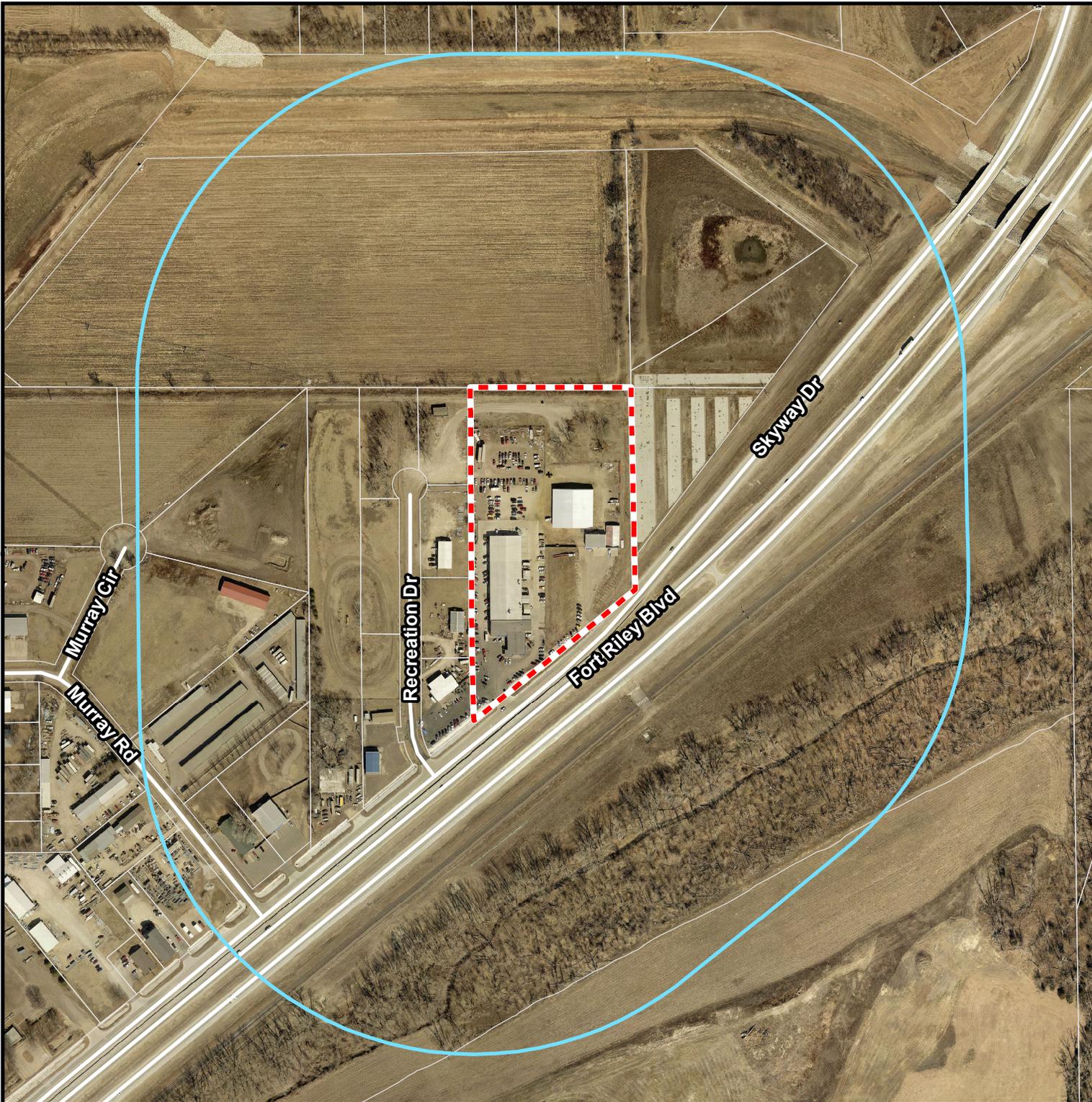
Legend

-  1000' Buffer
-  Site



VICINITY

FORT RILEY



SURROUNDING ZONING

Carson

Variance #14-26

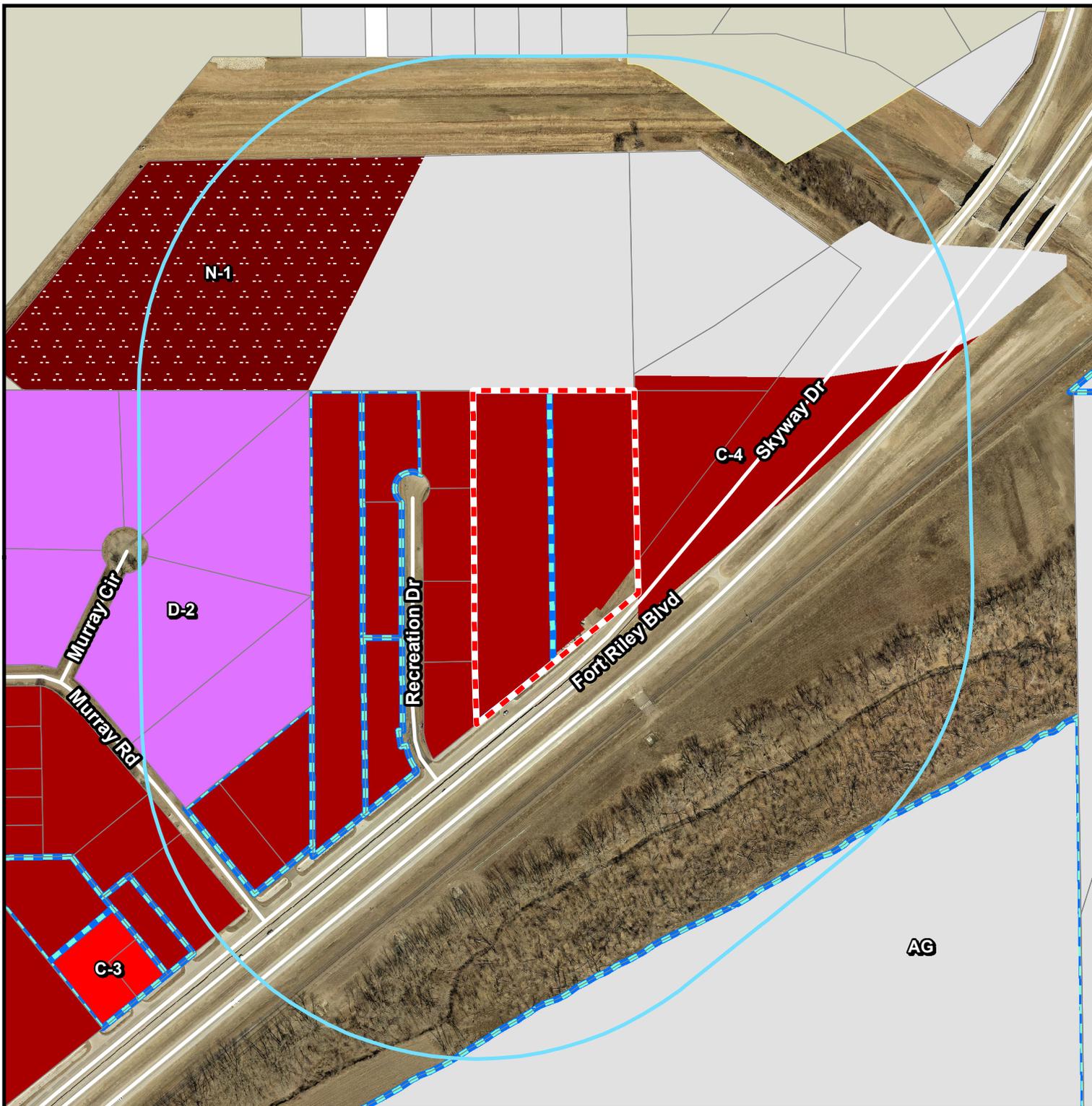
A variance to permit the construction of a detached accessory structure 2.8 feet below the required elevation of one (1) foot above base flood elevation.

33-10-7

Legend

-  1000' Buffer
-  Site

- | | |
|--|---|
|  SF-1 Single Family |  AG Agricultural |
|  SF-2 Single Family |  N-1 Noise Hazard |
|  SF-3 Single Family |  PUD Planned Unit Dev |
|  SF-4 Single Family |  U University |
|  SF-5 Single Family |  City Boundaries |
|  B-1 Two Family |  Fort Riley |
|  B-2 Multiple Family | |
|  B-3 Mobile Home Park | |
|  C-1 Neighborhood Bus | |
|  C-2 Shopping Dist |  Special Zoning:
Conditional Use
Designator Lot
Special Use
Variance |
|  C-3 General Business | |
|  C-4 Highway Business | |
|  D-1 Industrial Park | |
|  D-2 Light Industrial | |
|  D-3 Heavy Industrial | |
|  D-4 Business Park | |





FLOODPLAIN

TOPEKA SHINER HABITAT

Carson

Variance #14-26

A variance to permit the construction of a detached accessory structure 2.8 feet below the required elevation of one (1) foot above base flood elevation.

33-10-7

Legend

 Topeka Shiner Habitat

Floodplain

-  1% Annual Chance Flood (Unnumbered)
-  1% Annual Chance Flood (Numbered)
-  Floodway
-  1% Annual Chance Flood (1'-3' Depth)
-  .2% Annual Chance Flood



PLANNING & DEVELOPMENT

STAFF REPORT

Variance

PETITION: (#14-25) Variance

APPLICANT: Wayne Kendall
3100 Keats Ave
Manhattan, KS 66503

PROPERTY OWNER: L M Kendall Trust
3100 Keats Ave
Manhattan, KS 66503

TYPE OF REQUEST: Reduce the front yard requirement of the north property line from 25 feet to two (2) feet

SIZE OF TRACT: The subject site is approximately .22 acres.

LOCATION: Located at the southwest corner of the intersection of Ada Lane and Chapman Lane (in Keats); Section 36, Township 9 South, Range 6 East; Wildcat Township.



BACKGROUND: The applicant wishes to essentially enclose an existing covered carport that is serving as an extension of an existing garage. The applicant stated that the purpose of enclosing the structure is to protect stored items from theft and the elements. The chosen location of the proposed structure is just north of the existing garage. Although if approved, the variance will allow the applicant to construct the building closer to Ada Lane, however, a separate variance will be needed in order to reduce the rear yard requirement along Chapman Lane.

DESCRIPTION:

Physical site characteristics: The subject site is an urban sized lot, developed with a single family residence and garage, served with an on-site septic tank & lateral field. The existing garage and carport face Ada Lane.

General character of the area: The general character of the area is single family residential uses situated on urban-sized lots.

ZONING:

Zoning History: The subject site is currently zoned “AG” (Agricultural District) and has been zoned agricultural since at least 1974. There are no conditional uses, special uses or other variances associated with the property.

STAFF EVALUATION OF VARIANCE CRITERIA:

- a. **The variance request arises from conditions which are unique to the property in question and which are not ordinarily found in the same zone or district and that such conditions are not created by an action of the owner or applicant.**

The condition which is unique to the property is the physical attributes of the lot, i.e. the size, developed area, undeveloped area for the on-site septic/lateral field system, and two 25-foot front yard building setback requirements, which are not typical of the “AG” (Agricultural District) zoning designation. This condition was not created by an action of the Applicant.

- b. **The granting of the variance will not adversely affect the rights of adjacent property owners or residents.**

The subject property has been developed as is for several years without incident. It is not anticipated that the construction of the proposed accessory structure will have a negative impact on surrounding properties.

- c. **The strict application of the provisions of the zoning regulations from which the variance is requested will constitute unnecessary hardship upon the property owner or applicant.**

The reasons for the request stems from the intention of improving the quality of the home, while providing a new structure to protect the family vehicles from the elements, vandalism and theft. Thus, not granting the variance could constitute an unnecessary hardship upon the property owner, as compared to what the public would gain by denying the request.

- d. **The variance requested will not adversely affect the public health, safety and welfare.**

There are at least two concerns that should be evaluated when considering a reduction of a minimum front yard requirement; first, is the impact of placing a structure (principle or

accessory) closer to the designated right-of-way of a road that would limit a community's ability to widen the road if and when deemed necessary; and second, the creation of a potential safety hazard for drivers on Ada Lane and/or Chapman Lane and those entering and exiting the subject property, due to limited sight distance attributed to curves, hilly terrain, insufficient road width, vehicle speed and weather conditions. In this particular case, however, an on-site inspection by planning staff and the County Engineer revealed that the proposed enclosure of the existing carport would not extend into the platted right-of-way, would not restrict sight distance or interfere with the flow of traffic in the area. Thus, the granting of the variance should not adversely affect the public health, safety and welfare.

e. The granting of the variance will not be opposed to the general spirit and intent of the regulations.

According to the criteria for variance approval set forth in the Riley County Zoning Regulations, Section 20 (4), the granting of the request will not violate the general spirit and intent of the regulations.

STAFF RECOMMENDATION: Staff recommends that the requested variance be approved.

ATTACHMENTS:

- Vicinity/site map
- Surrounding zoning map
- Fire Stations
- Floodplain

Prepared by: Bob Isaac, Planner
October 6, 2014



VICINITY AND SITE

Kendall

Variance #14-25

Reduce the front yard requirement
of the north property line from 25
feet to 2 (two) feet

36-9-6

Legend

-  1000' Buffer
-  Site





SURROUNDING ZONING

Kendall

Variance #14-25

Reduce the front yard requirement of the north property line from 25 feet to 2 (two) feet

36-9-6

Legend

-  1000' Buffer
-  Site

- | | |
|--|---|
|  SF-1 Single Family |  AG Agricultural |
|  SF-2 Single Family |  N-1 Noise Hazard |
|  SF-3 Single Family |  PUD Planned Unit Dev |
|  SF-4 Single Family |  U University |
|  SF-5 Single Family |  City Boundaries |
|  B-1 Two Family |  Fort Riley |
|  B-2 Multiple Family | |
|  B-3 Mobile Home Park | |
|  C-1 Neighborhood Bus | |
|  C-2 Shopping Dist |  Special Zoning:
Conditional Use
Designator Lot
Special Use
Variance |
|  C-3 General Business | |
|  C-4 Highway Business | |
|  D-1 Industrial Park | |
|  D-2 Light Industrial | |
|  D-3 Heavy Industrial | |
|  D-4 Business Park | |



FIRE STATIONS

Kendall

Variance #14-25

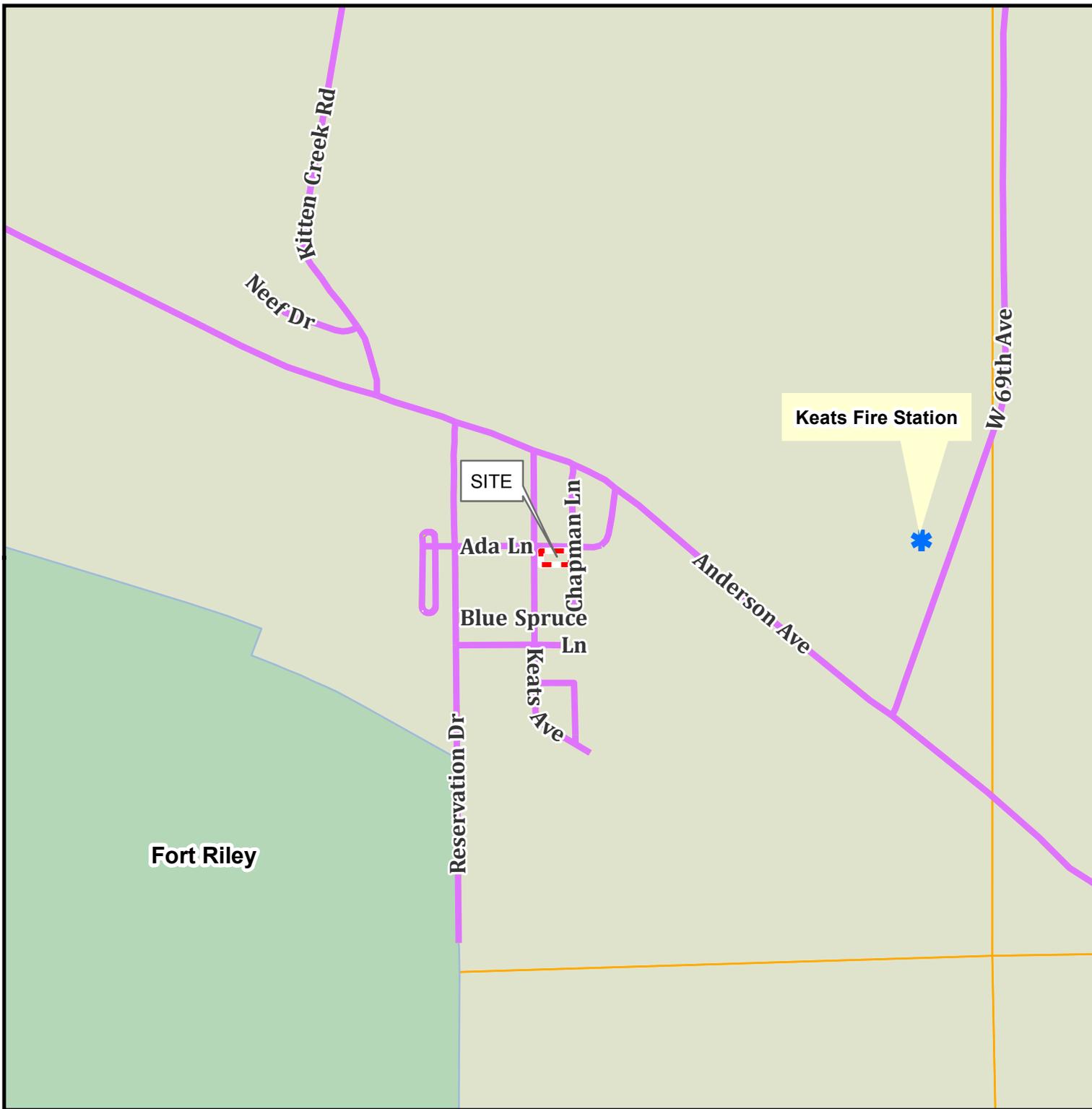
Reduce the front yard requirement of the north property line from 25 feet to 2 (two) feet

36-9-6

 Fire Station

 Within 5 Miles of a Fire Station

 Not within 5 Miles of a Fire Station



Keats Fire Station

SITE

Fort Riley



FLOODPLAIN

**TOPEKA SHINER
HABITAT**

Kendall

Variance #14-25

**Reduce the front yard requirement
of the north property line from 25
feet to 2 (two) feet**

36-9-6

Legend

-  Topeka Shiner Habitat
- Floodplain**
-  1% Annual Chance Flood (Unnumbered)
-  1% Annual Chance Flood (Numbered)
-  Floodway
-  1% Annual Chance Flood (1'-3' Depth)
-  .2% Annual Chance Flood



PLANNING & DEVELOPMENT

STAFF REPORT

Variance

PETITION: (#14-29) Variance

APPLICANT: Wayne Kendall
3100 Keats Ave
Manhattan, KS 66503

PROPERTY OWNER: L M Kendall Trust
3100 Keats Ave
Manhattan, KS 66503

TYPE OF REQUEST: Reduce the rear yard requirement of the east property line from 10 feet to 5 feet.

SIZE OF TRACT: The subject site is approximately .22 acres.

LOCATION: Located at the southwest corner of the intersection of Ada Lane and Chapman Lane (in Keats); Section 36, Township 9 South, Range 6 East; Wildcat Township



BACKGROUND: The applicant wishes to essentially enclose an existing covered carport that is serving as an extension of an existing garage. The applicant stated that the purpose of enclosing the structure is to protect stored items from theft and the elements. The chosen location of the proposed structure is just north of the existing garage. This variance request is in conjunction with Petition #14-25 (variance), which is to reduce the front yard requirement along Ada Lane from 25 feet to two feet, for the proposed garage. However, the existing garage, built in 1991, is already in noncompliance with the rear yard requirement. If approved, the variance would bring the current structure in compliance with the setback requirements of the AG (Agricultural District) zoning district and along with approval of Petition #14-25, allow the proposed extension of the existing garage to be constructed (see Figure 1).

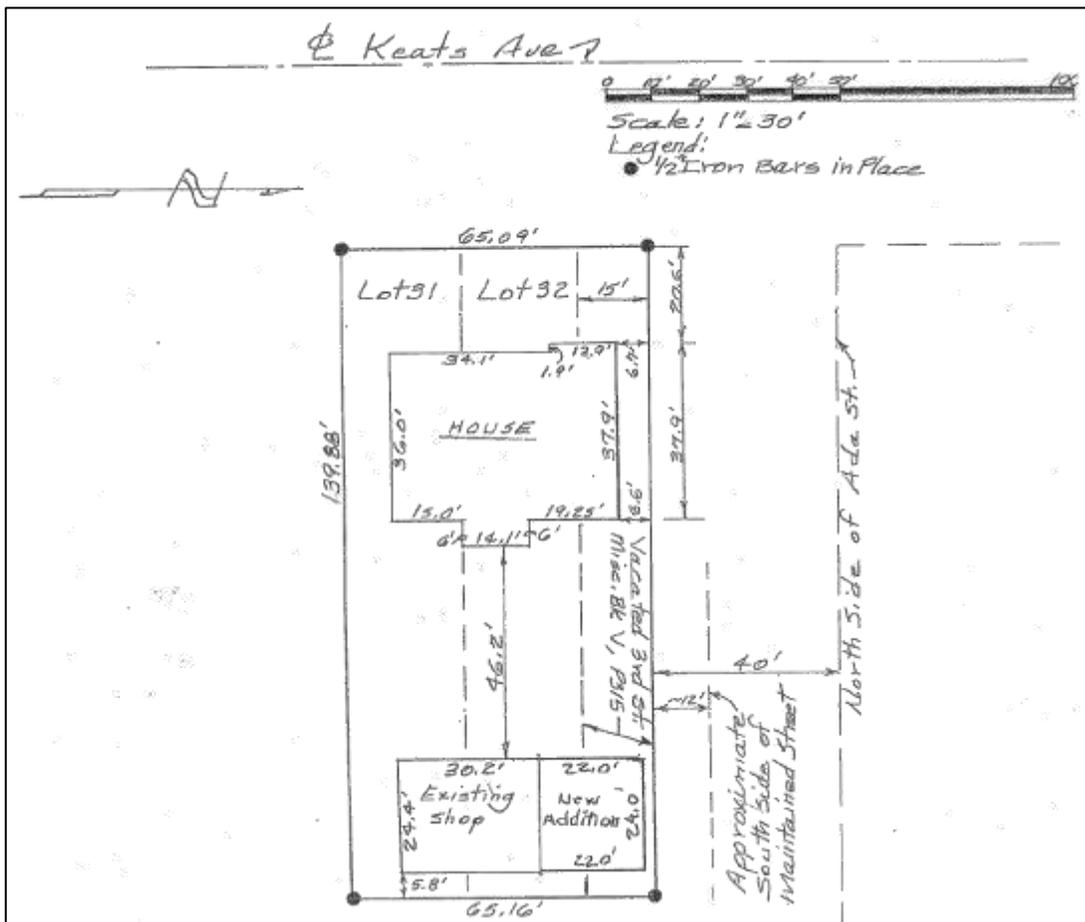


Figure 1. Certificate of Survey, May 2001

DESCRIPTION:

Physical site characteristics: The subject site is an urban sized lot, developed with a single family residence and garage, served with an on-site septic tank & lateral field. The existing garage and carport face Ada Lane.

General character of the area: The general character of the area is single family residential uses situated on urban-sized lots.

ZONING:

Zoning History: The subject site is currently zoned “AG” (Agricultural District) and has been zoned agricultural since at least 1974. There are no conditional uses, special uses or other variances associated with the property.

STAFF EVALUATION OF VARIANCE CRITERIA:

- a. The variance request arises from conditions which are unique to the property in question and which are not ordinarily found in the same zone or district and that such conditions are not created by an action of the owner or applicant.**

The condition which is unique to the property is the physical attributes of the lot, i.e. the size, developed area, undeveloped area for the on-site septic/lateral field system, and two 25-foot front yard building setback requirements, which are not typical of the “AG” (Agricultural District) zoning designation. This, along with a platted alleyway, severely restricts the buildable area for the property. These conditions were not created by an action of the Applicant.

- b. The granting of the variance will not adversely affect the rights of adjacent property owners or residents.**

The subject property has been developed as is for several years without incident. It is not anticipated that the construction of the proposed accessory structure will have a negative impact on surrounding properties.

- c. The strict application of the provisions of the zoning regulations from which the variance is requested will constitute unnecessary hardship upon the property owner or applicant.**

The reasons for the request stems from the intention of improving the quality of the home, while providing a new structure to protect the family vehicles from the elements, vandalism and theft. It could be perceived that by not granting the variance, it could constitute an unnecessary hardship upon the property owner, as compared to what the public would gain by denying the request.

- d. The variance requested will not adversely affect the public health, safety and welfare.**

Staff expressed the concern of a potential safety hazard being created for drivers on Ada Lane and/or Chapman Lane and those entering and exiting the subject property due to limited sight distance, if the structure were to be built. In this particular case, however, an on-site inspection by planning staff and the County Engineer revealed that the proposed enclosure of the existing carport would not extend into the platted right-of-way, would not restrict sight distance or interfere with the flow of traffic in the area. Thus, the granting of the variance should not adversely affect the public health, safety and welfare.

- e. The granting of the variance will not be opposed to the general spirit and intent of the regulations.**

According to the criteria for variance approval set forth in the Riley County Zoning Regulations, Section 20 (4), the granting of the request will not violate the general spirit and intent of the regulations.

STAFF RECOMMENDATION: Staff recommends that the requested variance be approved.

ATTACHMENTS:

- Vicinity/site map
- Surrounding zoning map
- Fire Station map

Prepared by: Bob Isaac, Planner
October 31, 2014



VICINITY AND SITE

Kendall

Variance #14-29

Reduce the rear yard requirement
of the east property line from 10
feet to 5 feet

36-9-6

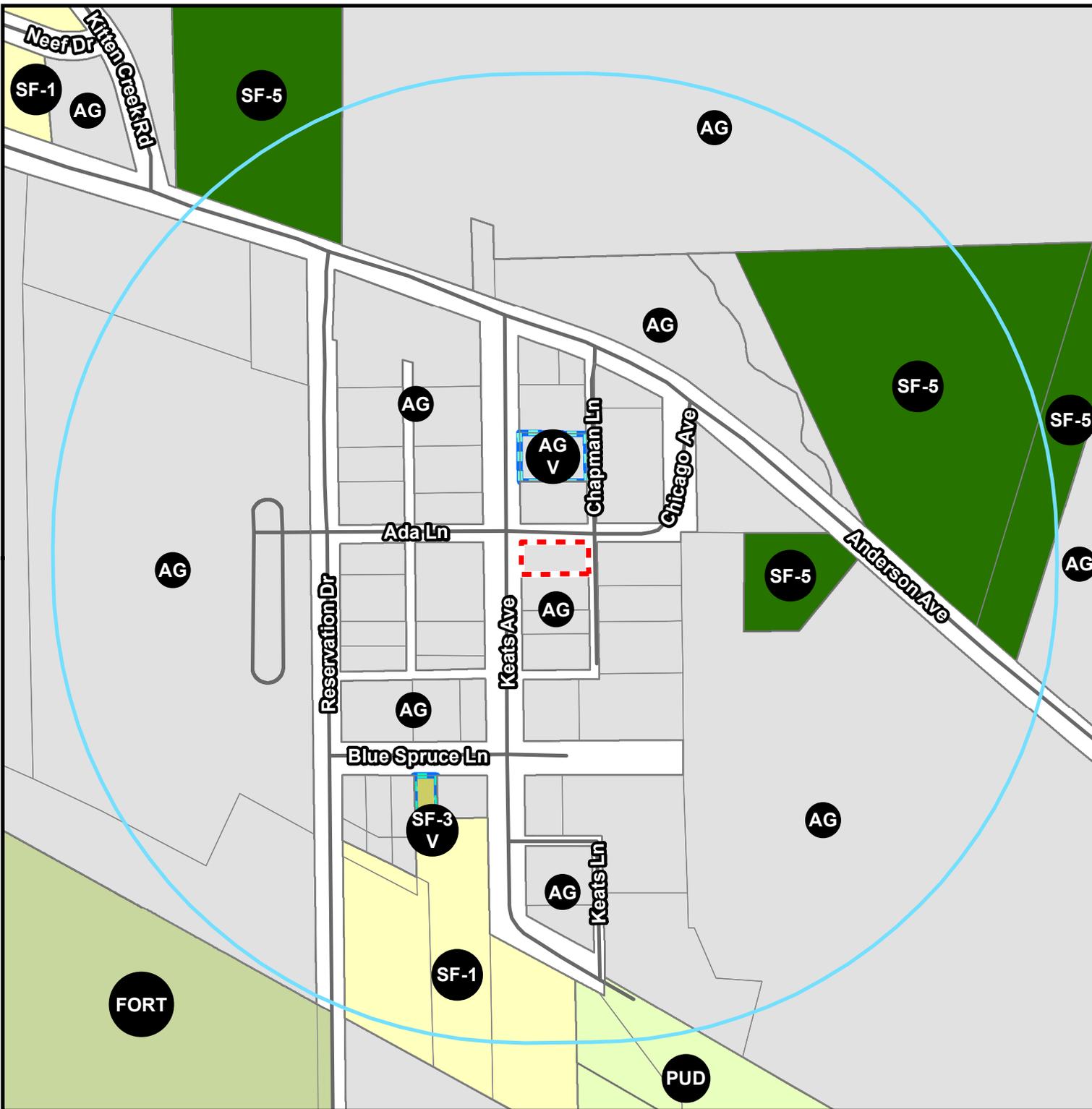
Legend

-  1000' Buffer
-  Site



VICINITY

FORT RILEY



SURROUNDING ZONING

Kendall

Variance #14-29

Reduce the rear yard requirement of the east property line from 10 feet to 5 feet

36-9-6

Legend

-  1000' Buffer
-  Site

- | | |
|--|---|
|  SF-1 Single Family |  AG Agricultural |
|  SF-2 Single Family |  N-1 Noise Hazard |
|  SF-3 Single Family |  PUD Planned Unit Dev |
|  SF-4 Single Family |  U University |
|  SF-5 Single Family |  City Boundaries |
|  B-1 Two Family |  Fort Riley |
|  B-2 Multiple Family | |
|  B-3 Mobile Home Park | |
|  C-1 Neighborhood Bus | |
|  C-2 Shopping Dist |  Special Zoning: Conditional Use Designator Lot Special Use Variance |
|  C-3 General Business | |
|  C-4 Highway Business | |
|  D-1 Industrial Park | |
|  D-2 Light Industrial | |
|  D-3 Heavy Industrial | |
|  D-4 Business Park | |



FIRE STATIONS

Kendall

Variance #14-29

Reduce the rear yard requirement
of the east property line from 10
feet to 5 feet

36-9-6

Fort Riley



 Fire Station

 Within 5 Miles
of a Fire Station

 Not within 5 Miles
of a Fire Station



FLOODPLAIN

**TOPEKA SHINER
HABITAT**

Kendall

Variance #14-29

Reduce the rear yard requirement
of the east property line from 10
feet to 5 feet

36-9-6

Legend

-  Topeka Shiner Habitat
- Floodplain**
-  1% Annual Chance Flood (Unnumbered)
-  1% Annual Chance Flood (Numbered)
-  Floodway
-  1% Annual Chance Flood (1'-3' Depth)
-  .2% Annual Chance Flood



PLANNING & DEVELOPMENT

STAFF REPORT

Conditional Use

- PETITION:** (#14-30) Conditional Use
- APPLICANT:** Wildwood Estates, Inc.
281 Johnson Rd
Manhattan, KS 66502
- PROPERTY OWNER:** Steven & M. Kristine Springer
281 Johnson Rd
Manhattan, KS 66502
- REQUEST:** A conditional use authorization to allow for a commercial outdoor recreational facility (zipline park).
- SIZE OF TRACT:** The subject site is approximately 77.59 acres.
- LOCATION:** Generally located 785 feet west of Highway K-177, on the south side of Johnson Road; Section 20, Township 10 South, Range 8 East; Manhattan Township.
-



BACKGROUND: The applicant wishes to establish a commercial recreational facility (outdoor) in order to open a Zipline Park. The park will consist of nine (9) ziplines, with associated take-off and landing points/towers, walking trails and natural areas (see Figure 1). The park will be open late March through early November, with 2-4 full-time employees and 8-10 part-time employees. It is anticipated that park tours will be by appointment only and will take approximately 2½ - 3 hours to complete. Park hours will be from 10:00 am to 7:00 pm, Friday, Saturday and Sunday, and also Monday-Thursday by reservation only. As per the applicant, it is anticipated that the park will serve approximately 60 customers a day.



Figure 1. Examples of zipline parks.

DESCRIPTION:

Physical site characteristics: The site consists of two undeveloped tracts of land: a 78-acre tract and a .37-acre tract. The latter is situated between Johnson Road and the larger tract and will be used as the driveway/access to the park. The larger tract is a mix of varying elevations, heavily wooded hills and ravines (see site plan). A 2nd order stream transects the site near the nexus of the two tracts. According to the new FEMA FIRM maps (not yet formally adopted by Riley County), a portion of the subject site (which includes the aforementioned stream) is now within an unnumbered A Zone.

General character of the area: The general character of the area is forested open space, with very-low density single family residential development on the periphery of the subject site.

ZONING:

Zoning History: During the 1974 Zoning Conversion Process, a portion of the tract was zoned “D-3” (Heavy Industrial) to accommodate an existing quarrying operation (Pet. #8). During the

same conversion process, another portion of the tract, extending south from Johnson Road, zoned, was zoned "A-3" (Single Family Residential) (Pet. #18) and later rezoned "SF-3" (Single Family Residential). In 1978, a preliminary plat was approved for a 40-acre portion of the tract and rezoned from "G-1" (General Agricultural) & "D-3" (Heavy Industrial) to "A-1" (Single Family Residential). In May 2012, the Riley County Zoning Regulations were amended, changing all "A" residential categories to "SF". In September 2014, the subject site was rezoned from "SF-1 Single Family Residential", "D-3 Heavy Industrial", and "SF-3 Single Family Residential" to "AG Agricultural District", Petitions #14-22, #14-23 and #14-24, respectively.

Current zoning: The proposed property is currently zoned "AG" (Agricultural District).

Traffic: The aforementioned Traffic Impact Study was completed by Schwab Eaton (see attached) and reviewed by the County Engineer. The study focused on the Level of Service of Johnson Road and K-177 pre- and post-development of Wildwood Zipline Park, specifically, the Level of Service (LOS) at the intersection of Johnson Road and K-177 during the current P.M. peak hour. The study factored in anticipated trip generation, days of the week/hours of operation and existing street characteristics. Although the complete study is attached for review, it concluded the following:

Under conditions of full booking of the Wildwood zip-line business during the year 2024, the intersection at Johnson Road and K-177 will operate adequately. K-177 movements will continue to function at LOS A, while the turning movements from Johnson Road will function at LOS C during the peak hours. Peak hour delays due to additional turning movements from the project site are relatively unchanged from the future condition without Wildwood. While the site may generate up to 52 round trips in a day of operation, the concentrations will not correspond with the adjacent road's peak hours of operation. Johnson Road is currently geometrically adequate for the anticipated additional trips generated by Wildwood.

The study recommended the following:

1. A speed limit sign should be placed immediately west of the intersection of Johnson Road and K-177, visible to westbound traffic.
2. Brush and trees should be kept out of the right of way of Johnson Road with periodic maintenance to maintain the existing sight distances at the entrance to the Wildwood site.

Stormwater Drainage: A stormwater drainage study was completed and submitted by Schwab-Eaton (see attached) and was reviewed by the County Engineer. Since the total area proposed to be disturbed (cleared/developed) is insignificant in relation to the size of the entire site, the study focused on the capacity of the drainage tubes located on the subject site that will be utilized as part of the accessway into and out of the park.

The study revealed that each of the pipes are 13'-6" wide, 9'-6" tall structures, based on measurements in the field. This is a standard size, and there are nomographs in the City of Manhattan Storm Water Management Master Plan which give the capacity to headwater relationships for these pipes. From Figure 8.3 in the City of Manhattan's SWMMP, we see that for a headwater of 6.65', the south pipe has a capacity of 650 cfs. With a headwater depth of 7.19', the north pipe has a capacity of 710 cfs. The total capacity of the pipes with a maximum headwater elevation no greater than 1056.00 is therefore 1,360 cubic feet per second. This

corresponds to a design storm slightly greater than the 10-year storm, but less than the 25-year storm.

According to the report, cross-road pipes and structures are typically designed to carry certain flows based on the type of road that would be overtopped. The KDOT drainage design manual shows the recurrence interval for various types of roads; the 10-year recurrence interval (occurring at the Wildwood pipes) correlates to the protection afforded to a KDOT local road or entrance. Since the pipes under the proposed driveway at Wildwood provide capacity to prevent overtopping during the 10-year storm, existing stormwater mitigation methods should be adequate. However, since there is some question that the existing contours and top-of-bank elevation match the Lidar contours used to evaluate the pipe capacity, Schwab-Eaton recommends the following:

1. The right bank of the stream/east side of the site driveway should be surveyed to determine existing elevation, and if it is below 1056.00, it should be built up to that elevation.
2. Provided this is done, the pipes should remain in place without additional storm water mitigation.
3. It is recommended that the County allow gravel surfacing on the Wildwood entrance driveway. For storms greater than the 10-year recurrence interval, the gravel portion of Johnson Road immediately downstream from the entrance would be inundated as well as the Wildwood driveway, so requiring a non-erodible surface on the driveway would not prevent gravel erosion from the road.
4. The pipe arch culverts should be cleared of all driftwood and brush and should be maintained clear to allow the maximum design flows possible.

COMMENTS AND CONCERNS:

ENVIRONMENTAL HEALTH: The Environmental Health staff has reviewed the request and found it is in compliance with the Riley County Sanitary Code.

COUNTY ENGINEER: The County Engineer has reviewed the request and stated that if the recommendations referenced in the Conditional Use Authorization Review (see attached) are followed, it is his professional opinion Johnson Drive will adequately handle the traffic generated from this proposal and the drive will function at an acceptable level.

LAW ENFORCEMENT CENTER: The Assistant Director of the Riley County Law Enforcement Center has reviewed the request and had no issues.

EMERGENCY MANAGEMENT: The Director of Riley County Emergency Management has reviewed the request and stated that the cul-de-sac treatment for the driveway accessing the park must be at least 100' in diameter in order to provide proper turnaround for emergency vehicles. He noted that the site plan does not show access to the launch and landing areas.

STAFF RECOMMENDATIONS: Staff recommends the requested Conditional Use be approved with the following conditions:

1. This Conditional Use permit shall only be for a Commercial Recreational Facility (outdoor), specifically, a Zipline Park. There shall be no overnight lodging.
2. All requirements of the Riley County Sanitary Code and/or Kansas Department of Health & Environment shall be met. A minimum of two (2) sanitary facilities must be provided with one (1) portable hand washing station (if not part of the port-a-potty unit). If the Riley

County Environmental Health Specialist finds that additional facilities are necessary to ensure public health, the park owner shall provide the recommended number or shall restrict patrons to the number that corresponds to the sanitary facilities available.

3. In the event permanent sanitary facilities are to be constructed, as per the future conditions of the site plan, the property owner must contact the Riley County Environmental Health Specialist and Riley County Planning & Development for permitting procedures.
4. All drives and parking areas (including handicap parking) shall be located within the conditional use boundary and consist of all-weather surfacing (asphalt, concrete or gravel). Such areas shall be maintained on a regular schedule or resurfaced as needed, to provide safe access for all vehicles year round and be traversable by emergency response vehicles.
5. Parking shall be permitted in designated parking areas only. Such areas shall be designed to allow for adequate maneuvering of motor vehicles. Parking along Johnson Road or along the accessway to parking areas shall be prohibited.
6. The accessway from Johnson Road to the parking area shall be a minimum of 20 feet wide in accordance with fire code and to provide two-way traffic. Additionally, the accessway shall end in a cul-de-sac treatment with a bulb no less than 100 feet in diameter.
7. The entrance into the park must have adequate site distance; existing vegetation and trees shall be removed during the installation of the entrance.
8. The two corrugated metal drainage pipes under the accessway into the park shall be kept cleared of debris, trees, brush, sediment and/or other obstructions to allow the full intended flow.
9. As per the recommendation of the County Engineer, in all areas where the accessway may become inundated the property owner shall:
 - Excavate the existing ground to a depth of 4 to 6 inches;
 - Place and compact a minimum of 4 inches of 2 inch road stone, with fines, in this area;
 - Place and compact 2 to 3 inches of 1.25 inch road stone on top of the base;
 - Refrain from raising the elevation of the surrounding ground more than 2 to 3 inches; and
 - Create a small ditch on the east side of the drive which drains to the Johnson Road ditch, if possible.
10. Emergency services shall be provided the ability to respond to emergency situations, including police, fire and emergency medical response needs.
11. All proposed lighting sources shall be aimed or shielded so the direct illumination is confined to the property on which the use is located. The operation of searchlights or similar lighting sources is prohibited.
12. One non-illuminated 4'x6' entrance sign, subject to all applicable provisions of Section 15 – Signs and Exterior Lights is permitted. Way-finding signs shall be permitted within the conditional use boundary.
13. Trash receptacles shall be located in appropriate locations throughout the park. The site shall be maintained and left free of debris or litter.
14. Designated personnel from Riley County Police Department, Riley County Fire District No. 1, Riley County Emergency Medical Service and/or Riley County Planning & Development shall be authorized to inspect the premises for compliance with the provisions of the conditions of this authorization.
15. The maximum number of persons on site at any given time shall be 100 persons, including patrons, guests, employees, etc., regardless of age.

ATTACHMENTS:

- Vicinity/site map
- Surrounding zoning map

- Floodplain map
- Fire Station map
- Traffic Study
- Stormwater Drainage Study
- Conditional Use Authorization Review - County Engineer
- Site plan
- Business Plan

Prepared by: Bob Isaac, Planner
October 31, 2014



VICINITY AND SITE

Wildwood Estates, Inc.

Conditional Use #14-30

A conditional use authorization to allow for a commercial outdoor recreational facility (zipline park).

20-10-8

Legend

-  1000' Buffer
-  Site



VICINITY

FORT RILEY



SURROUNDING ZONING

Wildwood Estates, Inc.

Conditional Use #14-30

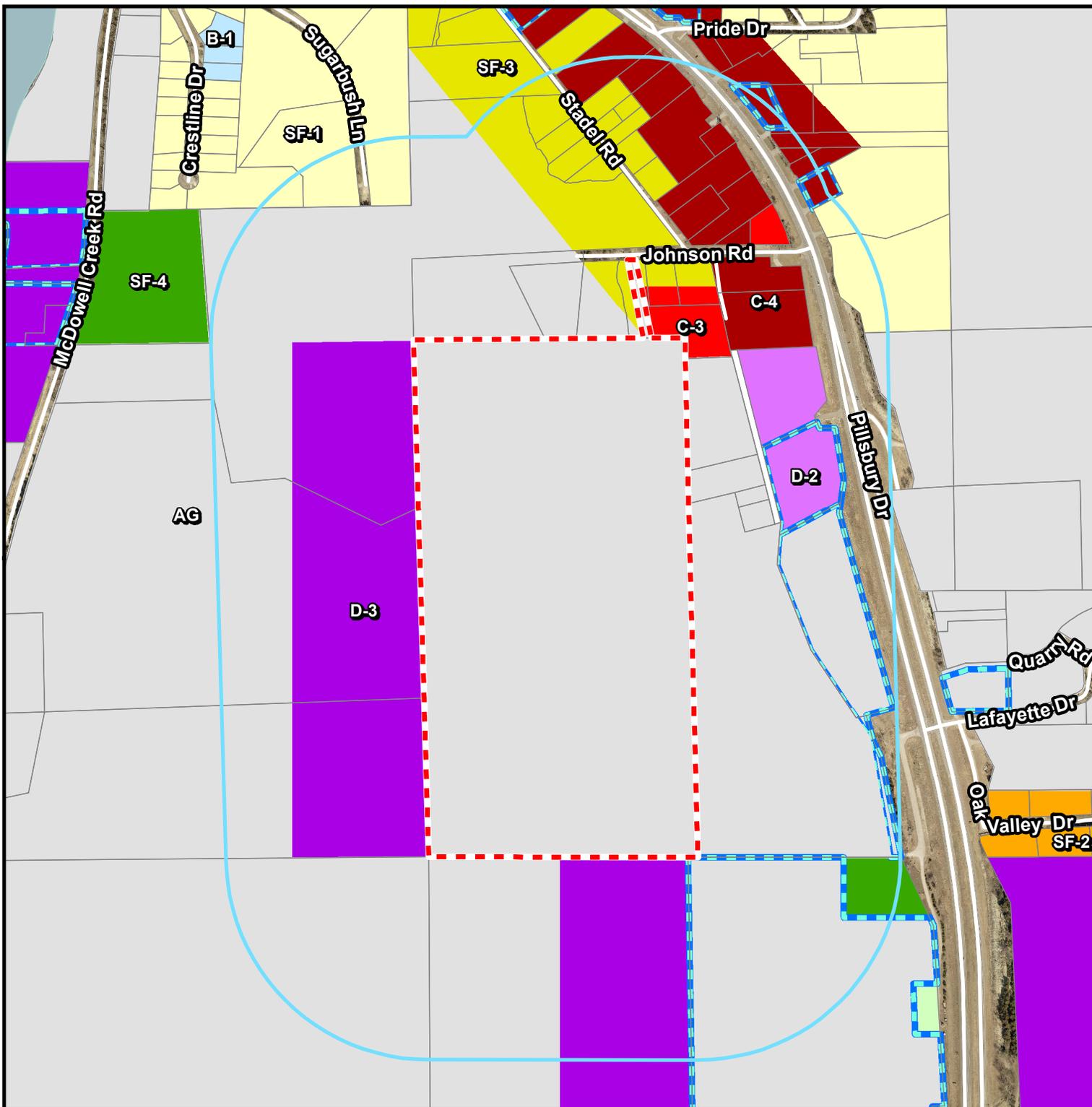
A conditional use authorization to allow for a commercial outdoor recreational facility (zipline park).

20-10-8

Legend

- 1000' Buffer
- Site

- | | |
|----------------------|---|
| SF-1 Single Family | AG Agricultural |
| SF-2 Single Family | N-1 Noise Hazard |
| SF-3 Single Family | PUD Planned Unit Dev |
| SF-4 Single Family | U University |
| SF-5 Single Family | City Boundaries |
| B-1 Two Family | Fort Riley |
| B-2 Multiple Family | |
| B-3 Mobile Home Park | |
| B-4 Neighborhood Bus | |
| C-1 Neighborhood Bus | |
| C-2 Shopping Dist | Special Zoning: Conditional Use Designator Lot Special Use Variance |
| C-3 General Business | |
| C-4 Highway Business | |
| D-1 Industrial Park | |
| D-2 Light Industrial | |
| D-3 Heavy Industrial | |
| D-4 Business Park | |





FLOODPLAIN
TOPEKA SHINER
HABITAT

Wildwood Estates, Inc.

Conditional Use #14-30

A conditional use authorization to allow for a commercial outdoor recreational facility (zipline park).

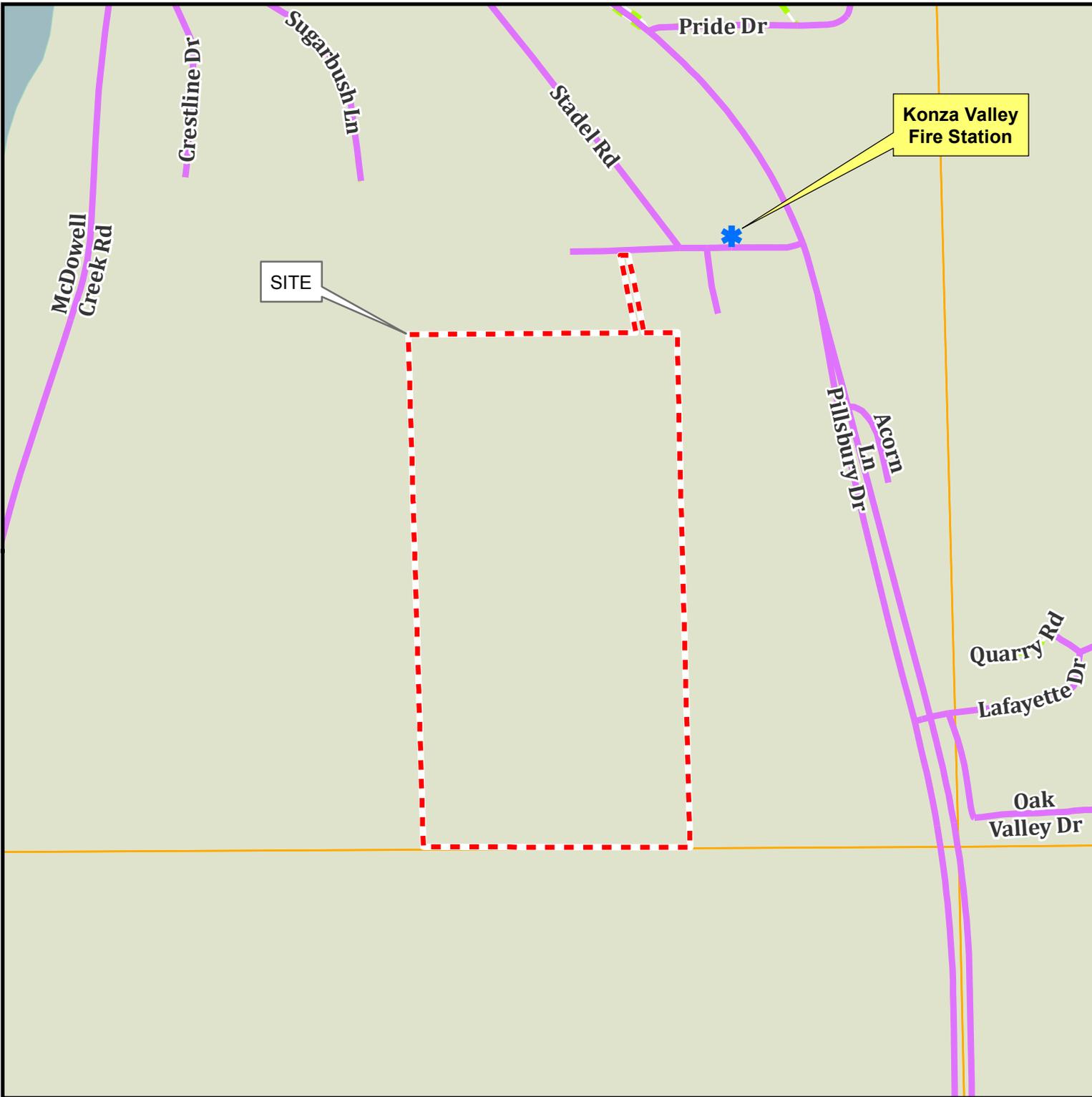
20-10-8

Legend

 Topeka Shiner Habitat

Floodplain

-  1% Annual Chance Flood (Unnumbered)
-  1% Annual Chance Flood (Numbered)
-  Floodway
-  1% Annual Chance Flood (1'-3' Depth)
-  .2% Annual Chance Flood



FIRE STATIONS

Wildwood Estates, Inc.

Conditional Use #14-30

A conditional use authorization to allow for a commercial outdoor recreational facility (zipline park).

20-10-8

 Fire Station

 Within 5 Miles of a Fire Station

 Not within 5 Miles of a Fire Station

WILDWOOD OUTDOOR ADVENTURE PARK

RILEY COUNTY, KANSAS

TRAFFIC IMPACT STUDY

September 26, 2014



I. INTRODUCTION

The following is a traffic impact study to determine the effect of the proposed Wildwood Conditional Use permit on traffic along Johnson Road. This study was done in accordance with Riley County guidelines.

A. Existing Site

Wildwood is currently undeveloped ground which is primarily timber with small areas of open pasture. The site is very hilly, with over 200 feet of elevation change across the entire property. The Wildwood entrance is approximately 900' west of the intersection of Johnson Road and K-177 on the south side of Johnson Rd. There are no permanent structures on the Wildwood site.

B. Proposed Site

The proposed Wildwood Outdoor Adventure Park site would include a gravel driveway approximately 1,100 feet long leading from Johnson Road south through the site to a gravel parking area with room for approximately 32 vehicles. An open-air gazebo and portable toilets will be near the parking area. Spread over the site, nine different zip lines will be positioned across the various ravines. Hiking trails will connect the landing sites with the next successive take-off site. An additional hiking trail will meander throughout the site. A site layout is included as Appendix A.

Patrons of the zip line park would reserve a time slot ahead of their arrival. They would be met by staff who would take them through the zip line course in groups of 10 maximum with two staff per group. Two groups per hour would be the maximum on site, with each group taking roughly two hours to complete the course. Given these attendance constraints, it is possible that up to 60 patrons and 12 employees could be on site at any one time, though only 20 patrons and 4 employees would be arriving at any given hour.

Operation hours for the site are anticipated to be Friday, Saturday and Sunday from 10 a.m. to 4 p.m. and other times by appointment only. The Friday p.m. peak hour of adjacent street traffic is the critical analysis period, as no other time period of operation corresponds with a peak hour of traffic.

C. Study Methodology

Existing annual average daily traffic (AADT) volume on K-177 is 7,550 vpd based on KDOT inset traffic maps from 2013. Annual increases to traffic on K-177 are assumed at 2%. Peak hour traffic for K-177 is estimated at 10% of AADT, with a 50/50 directional distribution.

Existing Johnson Road peak hour traffic was taken in the field on Thursday, September 25, 2014, between 4:30 and 5:30 p.m. to account for the p.m. peak hour of adjacent street traffic. The turning counts were taken at the intersection of Johnson Road and K177 and along Johnson road.

Given the nature of the area and the low likelihood of significant development at the west end of Johnson Road, future traffic volume is assumed to increase by only 1% annually.

The *Trip Generation Handbook* does not have a Land Use which corresponds with the characteristics of the Wildwood facility. In order to generate proposed trips from Wildwood, we looked at the proposed operation of the site, with a maximum of 20 patrons arriving each hour and 20 patrons leaving each hour. Similarly, we would have a maximum of four employees arriving or leaving in an hour. From Riley County zoning regulations for parking for similar uses, we assumed three patrons per car and one employee per car. This results in a total of 11 vehicles in and 11 vehicles out during the peak hours of operation. Since the hours of operation end at 4 p.m. each day, there would be no vehicles entering the site during the peak hour of the adjacent street traffic which is usually 4:30 to 5:30 p.m.

The Wildwood site can be approached only from the east on Johnson Road. In distributing trips for the purposes of this Study, we made the following assumptions:

- 1) All of the trips generated by Wildwood are assumed to go toward or come from the intersection of Johnson Road and K-177, east of the site.
- 2) These trips will be distributed 90% to the north and 10% to the south at the Johnson Road/K-177 intersection.

II. EXISTING CONDITIONS

A. Street Classification

Johnson Road fits the characteristics of a rural local road. K-177 is classified by the Manhattan Area Transportation Strategy (MATS) as an arterial road.

B. Street Characteristics

Johnson Road is a 22-ft to 24-ft wide asphalt road with open ditches on either side from its stop-controlled intersection with K-177, west to its intersection with Stadel Rd. Just west of Stadel Road, Johnson Road turns into a 16-ft to 18 ft wide gravel road and continues west for another 500 feet before it dead-ends at a private entrance. The road is not posted, but can be assumed to have a 30 mph statutory speed limit. Johnson Road is relatively straight, with minor vertical curves. Sight distances along the traveled way are adequate for the statutory speed limit. The sight distance at the project entrance is clear to the K-177 intersection to the east, and clear to the end of the road to the west. The stop-controlled intersection of Johnson Road and K-177 is approximately 850 feet east of the project entrance. A yield-controlled Y-intersection of Johnson Road and Stadel Road is 250 feet east of the proposed entrance, with Stadel Road yielding to Johnson Rd. Approximately 8 entrances are spaced along Johnson Road between K-177 and the site entrance including one unnamed access road that serves several houses.

At the intersection with Johnson Road, K-177 is a 65-ft asphalt roadway consisting of four 12-ft lanes and a 12-ft center left-turn lane. The road has curb and gutter on both

sides to the north. To the south, K-177 has curb and gutter on the east side and a 11-ft asphalt shoulder on the west side, with open ditch drainage on both sides. The speed limit for K177 is 45 mph past Johnson Road and becomes 60 mph a few hundred feet south. Sight distances at the intersection exceed 600 feet to the north and 2,000 feet to the south. Intersection sight distance (required to turn onto a roadway from a stopped condition) is 565 feet, therefore the sight distance at the intersection is adequate.

C. Current Traffic Volumes

1. Johnson Road:

Johnson Road is a local road serving approximately nine single-family residences and four small businesses. It has the characteristics of a very low volume local road as defined by the American Association of State Highway and Transportation Officials' "Guidelines for Geometric Design of Very Low-Volume Local Roads." While the overall traffic volume on Johnson Road is below 400 vehicles per day, we were more concerned with the traffic which would coincide with the peak traffic from the Wildwood site. Therefore, traffic counts were taken during the p.m. peak hour of adjacent street traffic on Highway K-177. A turning count diagram is included in Appendix B.

Based on the results of the turning movement counts taken between 4:30 and 5:30 p.m. Thursday, September 25, 2014, there were eight right turns off K-177 onto Johnson Road, eight left turns from Johnson Road onto K-177 and three trips on Johnson Road west of its intersection with Stadel Road.

2. K177:

KDOT traffic counts (Appendix B) show AADT of 8,380 vehicles on K-177 immediately south of the Zeandale Rd. intersection for the year 2012. Projected to the current year at 2% annual growth, this equals 8,718 vehicles per day (vpd) for 2014. Assuming 10% peak hour volume, we get 872 vehicles during the peak hours. Assuming a 50% directional distribution, this gives 436 vehicles in each direction on K-177 during the p.m. peak hour. Actual traffic counts taken during the p.m. Peak Hour on September 25, 2014 were lower than the projected numbers, coming in at 391 southbound and 344 northbound, with a directional distribution of 53% S.Bd. and 47% N.Bd. Conservatively, we have used the larger projected volumes for our analysis.

D. Analysis

Synchro Software was used to evaluate the Level of Service (LOS) at the intersection of Johnson Road and K-177 during the current P.M. peak hour. Software output is shown in Appendix C. The Johnson Road leg of the intersection operates at Level of Service B with minor delays of approximately 15 seconds to left-turning vehicles as they wait for gaps in the highway traffic in order to turn onto K-177. Highway traffic is virtually unimpeded and operates at LOS A.

Synchro output is available in Appendix C.

III. FUTURE CONDITIONS WITHOUT WILDWOOD (2024)

A. Trip Generation

Proposed trips for the intersection of Johnson Road and K-177 were generated assuming a 2% annual increase in traffic along K-177 and a 1% annual increase in traffic along Johnson Road. This traffic was projected to the year 2024, and resulted in P.M. Peak Hour traffic along K-177 of 532 vehicles in each direction. P.M. Peak Hour traffic into and out of the intersection of Johnson Road would be 9 vehicles turning right in and 9 turning left out.

B. Analysis

Again, we used Synchro software to evaluate the Level of Service (LOS) at the Intersection. At the future year 2024, without the addition of the Wildwood trips, the intersection operates adequately. Increased traffic on K-177 makes left turns onto the highway more difficult, as gaps are less frequent. The Level of Service is now C for eastbound traffic turning left onto the highway. The delays for traffic at the stop sign on Johnson Road average 17.7 seconds. Through traffic on K-177 still operates at LOS A. These conditions represent what is anticipated without the addition of the Wildwood site.

Program output detailing these results is in Appendix C.

IV. FUTURE CONDITIONS PLUS WILDWOOD (2024)

A. Trip Generation

Proposed future trips for the Wildwood site were generated by assuming a maximum of 20 patrons arriving each hour and 20 patrons leaving each hour. Similarly, we would have a maximum of four employees arriving or leaving in one hour. With three patrons per vehicle, one employee per vehicle, and hours of operation from 10 a.m. to 4 p.m. we could get a maximum of 52 trips into the site and 52 trips out of the site during one peak day of operation. Given the cyclic nature of the site described in section I.C., a peak hour of operation would result in 11 trips into the site and 11 trips out of the site. During the Peak Hour of Adjacent Street Traffic (usually 4:30 to 5:30 p.m.) there would be no traffic entering the site since it was closed at 4 p.m. There would, however, be traffic leaving the site during the Peak Hour of Adjacent Street Traffic (PHAST), as patrons finished their courses and left for the day. Therefore, the peak traffic from the site that coincides with the p.m. PHAST is 11 trips exiting the site. We assume that 90% of these trips will turn left at K-177 while 10% will turn right.

B. Analysis

Synchro software was again used to evaluate the intersection with the addition of the Wildwood trips during the 2024 p.m. Peak Hour. The intersection continues to operate adequately with very little change. The additional 11 turning movements for traffic turning off Johnson Road onto K-177 only increase the approach delay by 0.1 seconds to

a total average delay of 17.8 seconds. This keeps the Johnson Road leg of the intersection at LOS C, while the K-177 legs of the intersection continue to operate at LOS A.

Program output detailing these results is in Appendix C.

V. OTHER FACTORS

Aside from the traffic generation and distribution, there are other factors associated with the increased use of Wildwood that may have an impact on local drivers.

A. Sight Distance

Sight distance at the intersections is critical to the safety of drivers making turning movements. According to AASHTO'S "Guidelines for Geometric Design of Very Low-Volume Local Roads", stopping sight distance along the roadway should be provided at all locations along each street, including at each entrance. Stopping sight distance for Johnson Road is 200 feet according to AASHTO's "A Policy on Geometric Design of Highways and Streets" (2004 Edition, Exhibit 3-1). This sight distance is provided for both the east and west approach to the Wildwood entrance.

Departure sight triangles should also be provided at both the Wildwood entrance and the intersection of Johnson Road and K177. Sight triangle lengths were calculated using AASHTO's "A Policy on Geometric Design of Highways and Streets" (2004 Edition, Chapter 9).

The sight triangle for the entrance should have a minor leg length of 14.5 feet along the entrance from the near edge of Johnson Road, and a major leg length of 335 feet east and west of the entrance. From field observations, we can see that the sight distance to the east of the entrance is adequate (in excess of 335 feet.) Sight distance to the west of the intersection is roughly 300 feet and is limited by the dead-end of Johnson Road. Since the speed of vehicles approaching the site entrance from the west on Johnson Road is limited by both the end of the road and the low water crossing west of the site entrance, the sight distance of 300 feet is sufficient for turning movements.

At the Johnson Road/K-177 intersection, the minor leg length should be 14.5 feet along Johnson Road from the west edge of K-177. The major leg length should be 565 feet north and south along K-177 from the intersection. Sight distances are adequate at this location, with roughly 600 feet north and over 2,000 feet south.

B. Signing

Existing signs on Johnson Road between the project entrance and K-177 include a "Flood Area Ahead", an "Impassable During High Water", a "No Outlet" and a "Do Not Enter When Flooded", all facing westbound traffic. There is no speed limit sign on Johnson Road.

C. Clear Zones

Again, while clear zones are desired on all roads, AASHTO recognizes that “it is not generally cost-effective to provide clear zones, also known as clear recovery areas, on very low-volume roads.” The existing clear zone along Johnson Road varies widely, with several mailboxes within 2 feet of the edge of road. Where practical within the right-of-way, fixed objects and posts should be confirmed to be of “breakaway” construction.

D. Dust

While the traffic generated from Wildwood will not be concentrated during the adjacent road peak hours, there will nevertheless be times when as many as 22 one-way trips may traverse the gravel section of Johnson Road during a single hour, which is significantly more traffic than the existing conditions. Fortunately, there is less than 150’ of gravel north of the Wildwood entrance, so vehicle speed will be slow as traffic prepares to make the turn into the entrance or comes out of the entrance. While it may not prove necessary, various means of dust control are available, from temporary watering during dry periods to seasonal applications of magnesium chloride. Depending on actual traffic densities from the Wildwood site and the preferences of local residents, it may be desirable to use localized dust control treatments on Johnson Road to reduce dust concerns.

VI. CONCLUSIONS

Under conditions of full booking of the Wildwood zip-line business during the year 2024, the intersection at Johnson Road and K-177 will operate adequately. K-177 movements will continue to function at LOS A, while the turning movements from Johnson Road will function at LOS C during the peak hours. Peak hour delays due to additional turning movements from the project site are relatively unchanged from the future condition without Wildwood.

While the site may generate up to 52 round trips in a day of operation, the concentrations will not correspond with the adjacent road’s peak hours of operation.

Johnson Road is currently geometrically adequate for the anticipated additional trips generated by Wildwood. Any reports of site-specific safety issues should be reviewed by local authorities to determine if safety improvements are needed.

VII. RECOMMENDATIONS

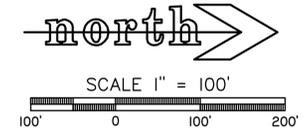
A speed limit sign should be placed immediately west of the intersection of Johnson Road and K-177 visible to westbound traffic.

Brush and trees should be kept out of the right of way of Johnson Road with periodic maintenance to maintain the existing sight distances at the entrance to the Wildwood site.

APPENDIX A

SITE LAYOUT

LEGEND	
△	= SECTION CORNER FOUND
○	= PROPERTY CORNER FOUND
●	= PROPERTY CORNER SET
⊗	= PROPOSED LIGHT POLE
—	= PROPERTY LINE
— — —	= PROPOSED WATER LINE
— — —	= PROPOSED SEWER LINE



WILDWOOD OUTDOOR ADVENTURE PARK

ZIP LINING BETWEEN THE TREES 785-313-2421

4' x 6' ADVENTURE PARK ENTRANCE SIGN

BOUNDARY DESCRIPTION:
 All of the West Half of the Southeast Quarter (W1/2, SE1/4) of Section 20, Township 10 South, Range 8 East of the 6th P.M., in Riley County, Kansas, containing 77.59 acres, more or less.
 AND
 A tract of land in the West Half of the Northeast Quarter (W1/2, NE1/4) of Section 20, Township 10 South, Range 8 East of the 6th P.M., in Riley County, Kansas described as follows: Beginning at a point on the South line of the said West Half of the Northeast Quarter (W1/2, NE1/4) of said Section 20 that is South 88°32'14" West, 170.23 feet (measured) vs. 166 feet (described) from the Southeast Corner of the West Half of the Northeast Quarter (W1/2, NE1/4) of said Section 20;
 thence continuing on said South line, South 88°32'14" W, 40.57 feet; thence North 11°04'57" West, 380.95 feet to a point on the South right of way line of Johnson Road;
 thence along said South line of Johnson Road, North 88°48'42" East, 84.54 feet to the Northwest Corner of a tract conveyed to Daniel and Kathryn Sargent as recorded in Deed Book 849 on Page 6337 at the Riley County Register of Deeds, marked by a 1/2" bar with a Sloan & Meier cap;
 thence along the West line of said Sargent Tract, South 04°53'08" East, 223.65 feet to the Southwest Corner of said Sargent Tract, marked by a 1/2" bar with a Sloan & Meier cap; thence North 88°18'48" West 19.62 feet;
 thence South 11°04'57" East, 155.20 feet to the Point of Beginning. Said tract contains 0.51 acres, more or less.

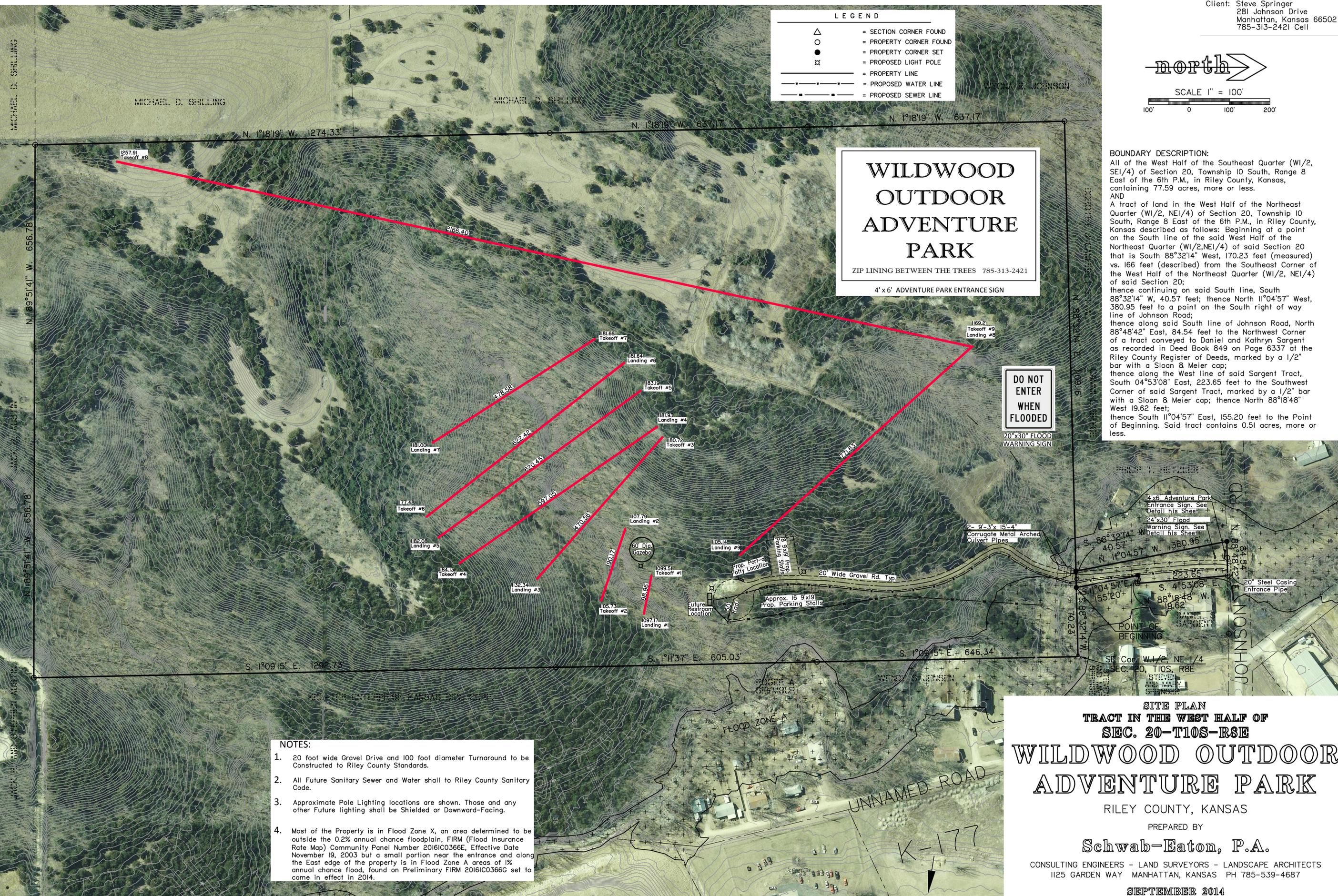
**DO NOT
ENTER
WHEN
FLOODED**

20'x30" FLOOD WARNING SIGN

- NOTES:**
1. 20 foot wide Gravel Drive and 100 foot diameter Turnaround to be Constructed to Riley County Standards.
 2. All Future Sanitary Sewer and Water shall to Riley County Sanitary Code.
 3. Approximate Pole Lighting locations are shown. Those and any other Future lighting shall be Shielded or Downward-Facing.
 4. Most of the Property is in Flood Zone X, an area determined to be outside the 0.2% annual chance floodplain, FIRM (Flood Insurance Rate Map) Community Panel Number 2016IC0366E, Effective Date November 19, 2003 but a small portion near the entrance and along the East edge of the property is in Flood Zone A areas of 1% annual chance flood, found on Preliminary FIRM 2016IC0366G set to come in effect in 2014.

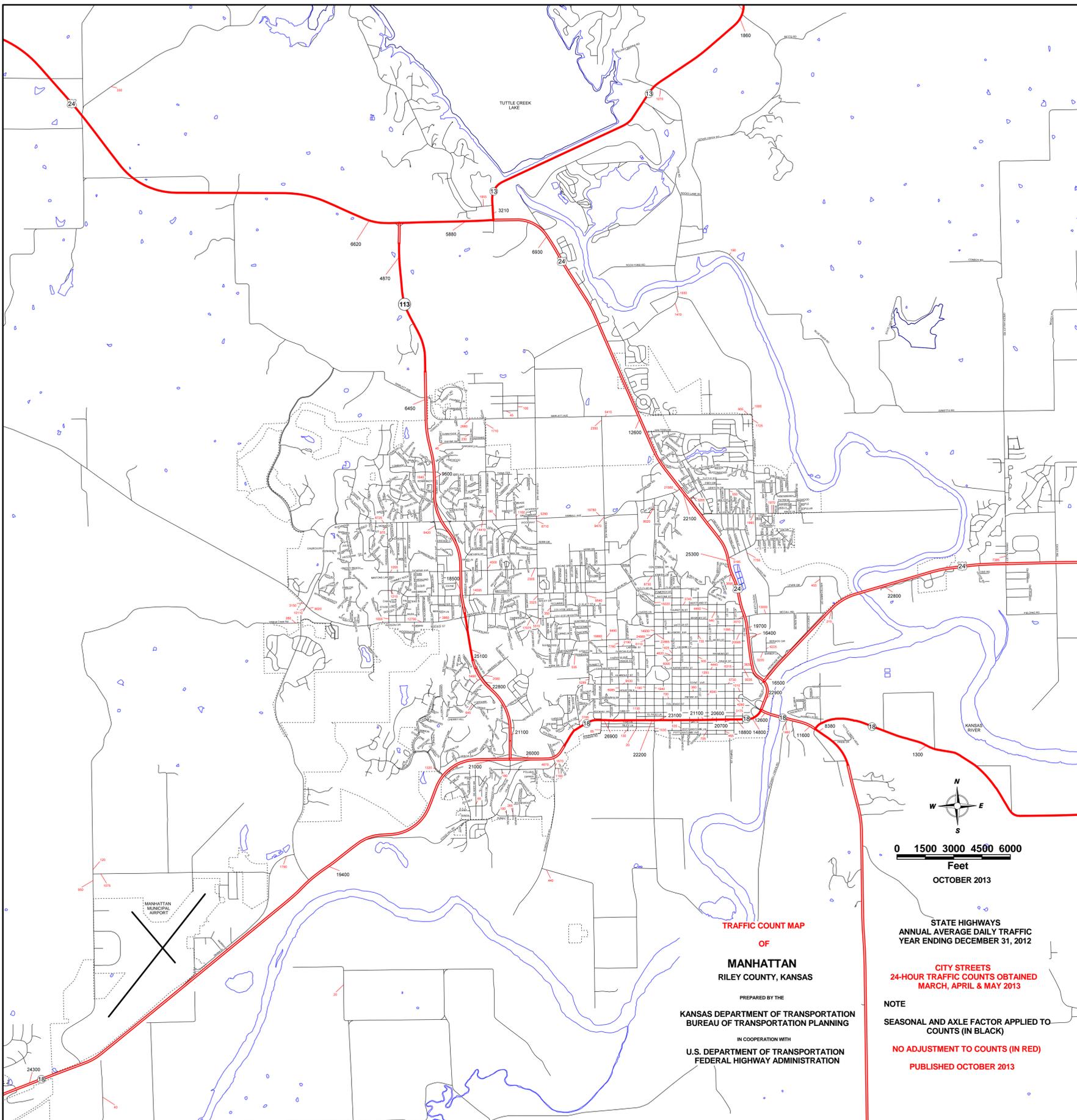
SITE PLAN
 TRACT IN THE WEST HALF OF
 SEC. 20-T10S-R8E
**WILDWOOD OUTDOOR
 ADVENTURE PARK**
 RILEY COUNTY, KANSAS

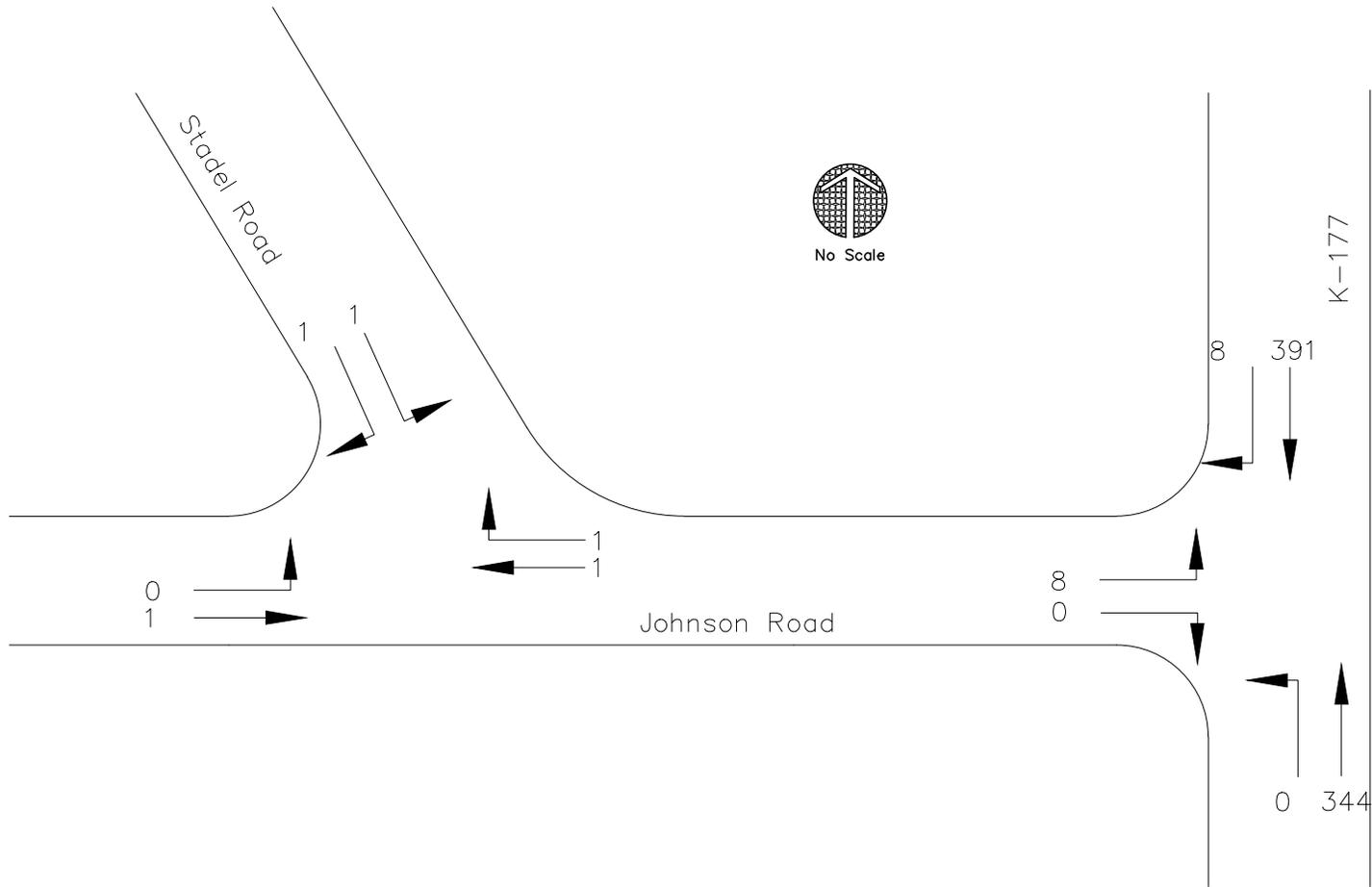
PREPARED BY
Schwab-Eaton, P.A.
 CONSULTING ENGINEERS - LAND SURVEYORS - LANDSCAPE ARCHITECTS
 1125 GARDEN WAY MANHATTAN, KANSAS PH 785-539-4687
 SEPTEMBER 2014



APPENDIX B

TRAFFIC COUNTS/KDOT TRAFFIC MAP





Existing Traffic
 (2014 PM Peak Hour)

APPENDIX C

SYNCHRO SOFTWARE RESULTS



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	8	0	0	436	428	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	0	0	474	465	9
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	707	237	474			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	707	237	474			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	100	100			
cM capacity (veh/h)	370	764	1084			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	9	0	237	237	310	164
Volume Left	9	0	0	0	0	0
Volume Right	0	0	0	0	0	9
cSH	370	1700	1700	1700	1700	1700
Volume to Capacity	0.02	0.00	0.14	0.14	0.18	0.10
Queue Length 95th (ft)	2	0	0	0	0	0
Control Delay (s)	15.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B					
Approach Delay (s)	15.0	0.0			0.0	
Approach LOS	B					

Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization		22.1%		ICU Level of Service		A
Analysis Period (min)		15				



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	9	0	0	532	523	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	0	0	578	568	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	862	289	578			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	862	289	578			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	100	100			
cM capacity (veh/h)	294	707	991			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	10	0	289	289	379	199
Volume Left	10	0	0	0	0	0
Volume Right	0	0	0	0	0	10
cSH	294	1700	1700	1700	1700	1700
Volume to Capacity	0.03	0.00	0.17	0.17	0.22	0.12
Queue Length 95th (ft)	3	0	0	0	0	0
Control Delay (s)	17.7	0.0	0.0	0.0	0.0	0.0
Lane LOS	C					
Approach Delay (s)	17.7	0.0			0.0	
Approach LOS	C					

Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization		24.7%		ICU Level of Service		A
Analysis Period (min)			15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	19	1	0	532	523	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	21	1	0	578	568	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	862	289	578			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	862	289	578			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	93	100	100			
cM capacity (veh/h)	294	707	991			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	22	0	289	289	379	199
Volume Left	21	0	0	0	0	0
Volume Right	1	0	0	0	0	10
cSH	303	1700	1700	1700	1700	1700
Volume to Capacity	0.07	0.00	0.17	0.17	0.22	0.12
Queue Length 95th (ft)	6	0	0	0	0	0
Control Delay (s)	17.8	0.0	0.0	0.0	0.0	0.0
Lane LOS	C					
Approach Delay (s)	17.8	0.0			0.0	
Approach LOS	C					

Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization		24.7%		ICU Level of Service		A
Analysis Period (min)			15			



October 13, 2014

Mr. Leon Hobson, P.E.
Riley County Engineer
6215 Tuttle Creek Blvd.
Manhattan, KS 66503

RE: Wildwood Entrance Drainage Pipe Capacity

Dear Mr. Hobson,

As required for the Conditional Use application for the Wildwood Outdoor Adventure Park, we have reviewed the capacity of the two existing corrugated metal pipe-arches under the driveway of the Wildwood entrance just off Johnson Road.

It was my understanding that the County wanted to know the capacity of the pipes prior to overtopping the driveway north of the pipes. With this in mind, I calculated the various design storm discharges for the stream immediately upstream from the pipes. Exhibit A (attached) shows the drainage area for the pipes which is equal to 1,290 acres. Using the Rational Method, we calculated a time of concentration of 45 minutes and a "c" value of 0.34. This resulted in design Q values as follows:

$Q_{10} = 1,340$ cubic feet per second
 $Q_{25} = 1,590$ cfs
 $Q_{50} = 1,780$ cfs
 $Q_{100} = 1,970$ cfs

Next, I evaluated the headwater at the pipes prior to overtopping of the entrance. From shots taken in the field and Lidar contours, I determined that the flowline of the pipes is at elevation 1049.35 (south pipe) and 1048.81 (north pipe). Also, the overtopping elevation on the east side of the driveway to the site is at elevation 1056.00, so the water can leave the channel and flow north on the east side of the site entrance once the water surface is greater than 1056.00. This means that the allowable headwater at the pipes is $1056.00 - 1049.35$ or 1048.81 . This gives an allowable headwater of 6.65' and 7.19' for the south and north pipes respectively.

Each of the pipes was a 13'-6" wide, 9'-6" tall structure based on measurements in the field. This is a standard size, and there are nomographs in the City of Manhattan Storm Water Management Master Plan which give the capacity to headwater relationships for these pipes. From Figure 8.3 in the City of Manhattan's SWMMP, we see that for a headwater of 6.65', the south pipe has a capacity of 650 cfs. With a headwater depth of 7.19', the north pipe has a capacity of 710 cfs. The total capacity of the pipes with a maximum headwater elevation no greater than 1056.00 is therefore 1,360 cubic feet per second. This corresponds to a design storm slightly greater than the 10-year storm, but less than the 25-year storm.

Civil Engineers

Land Surveyors

Landscape Architects

Typically, cross-road pipes and structures are designed to carry certain flows based on the type of road that would be overtopped. I have attached a page from the KDOT drainage design manual showing the recurrence interval for various types of roads. As shown, the 10-year recurrence interval (which is what we have at the Wildwood pipes) correlates to the protection afforded to a KDOT local road or entrance.

Since the pipes under the driveway at Wildwood provide capacity to prevent overtopping the driveway during the 10-year storm, this should be adequate to meet County requirements. However, since there is some question that the existing contours and top-of-bank elevation match the Lidar contours used to evaluate the pipe capacity, I would make the following recommendations:

- 1) The right bank of the stream/east side of the site driveway should be surveyed to determine existing elevation, and if it is below 1056.00, it should be built up to that elevation.
- 2) Provided this is done, the pipes should remain in place without additional storm water mitigation.
- 3) I would recommend that the County allow gravel surfacing on the Wildwood entrance driveway. For storms greater than the 10-year recurrence interval, the gravel portion of Johnson Road immediately downstream from the entrance would be inundated as well as the Wildwood driveway, so requiring a non-erodible surface on the driveway would not prevent gravel erosion from the road.
- 4) The pipe arch culverts should be cleared of all driftwood and brush and should be maintained clear to allow the maximum design flows possible.

Should you have any questions or comments, please call me.

Sincerely,
SCHWAB EATON



Ian Reekie, PE, PTOE

CONDITIONAL USE AUTHORIZATION REVIEW

10-28-14

Applicant: Wildwood Estates, Inc.

Property Owner: Steven & M. Kristine Springer

Request Description: Manhattan Township; Section 20, Township 10 South, Range 8 East

Comments:

Upon reviewing the Traffic Impact Study and the Drainage Analysis for the Wildwood Outdoor Adventure Park, I have the following comments.

Traffic:

Based on the current business plan showing a maximum of 52 round trips per day, the current geometrics of the roadway is sufficient to carry this increase in traffic. With these trips being spread out and not concentrated the increase in traffic will have little impact. As per the Traffic Impact Study, the level of service for turning movements at the Scenic Drive and Johnson Drive remain unchanged with the increase in traffic.

The entrance into the Park must have adequate site distance. Existing vegetation and trees may have to be removed to provide adequate site distance. This will be established during the installation of the entrance.

Dust:

The entire drive and part of Johnson Drive are being proposed as rock roads. As traffic increases, the quantity of dust produced also increases. The speed of the traffic on the rock portion of Johnson Drive will assist in minimizing the amount of dust generated. However, there may be times when dust reduction measures are warranted. The County has a dust reduction program whereby a landowner can pay to have magnesium chloride applied to the public road.

Drainage:

The two corrugated metal pipes under the driveway provide capacity for a 10-year recurring storm. Drift, brush and sediment have accumulated at the entrance to the pipes reducing their capacity. Riley County attempts to design for a 25 year recurring

storm whenever possible on main County roads. The larger the drainage area the less practical this becomes.

I would recommend the entrances to the pipes be cleaned to allow the full intended flow. With the road in question being a private driveway along with the larger drainage area, the current size of the structures is adequate.

There are portions of the private drive which will be inundated during higher rainfall events. Any washing or erosion should be minimal based on the depth and velocities of the water over the drive. Based on its function, I do not see the need to require a hard surfaced drive.

I would recommend the following for all areas where the drive may become inundated

- Excavate the existing ground to a depth of 4 to 6 inches
- Place and compact a minimum of 4 inches of 2 inch road stone, with fines, in this area
- Place and compact 2 to 3 inches of 1.25 inch road stone on top of the base
- Refrain from raising the elevation of the surrounding ground more than 2 to 3 inches
- Create a small ditch on the east side of the drive which drains to the Johnson Road ditch if possible

If the above referenced recommendations are followed, it is my professional opinion Johnson Drive will adequately handle the traffic generated from this proposal and the drive will function at an acceptable level.



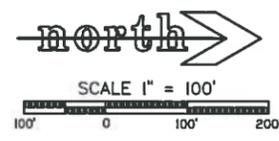
Signature



Date

Job No. 14.029
 Client: Steve Springer
 281 Johnson Drive
 Manhattan, Kansas 66502
 785-313-2421 Cell

LEGEND	
△	SECTION CORNER FOUND
○	PROPERTY CORNER FOUND
●	PROPERTY CORNER SET
⊠	PROPOSED LIGHT POLE
—	PROPERTY LINE
—	PROPOSED WATER LINE
—	PROPOSED SEWER LINE



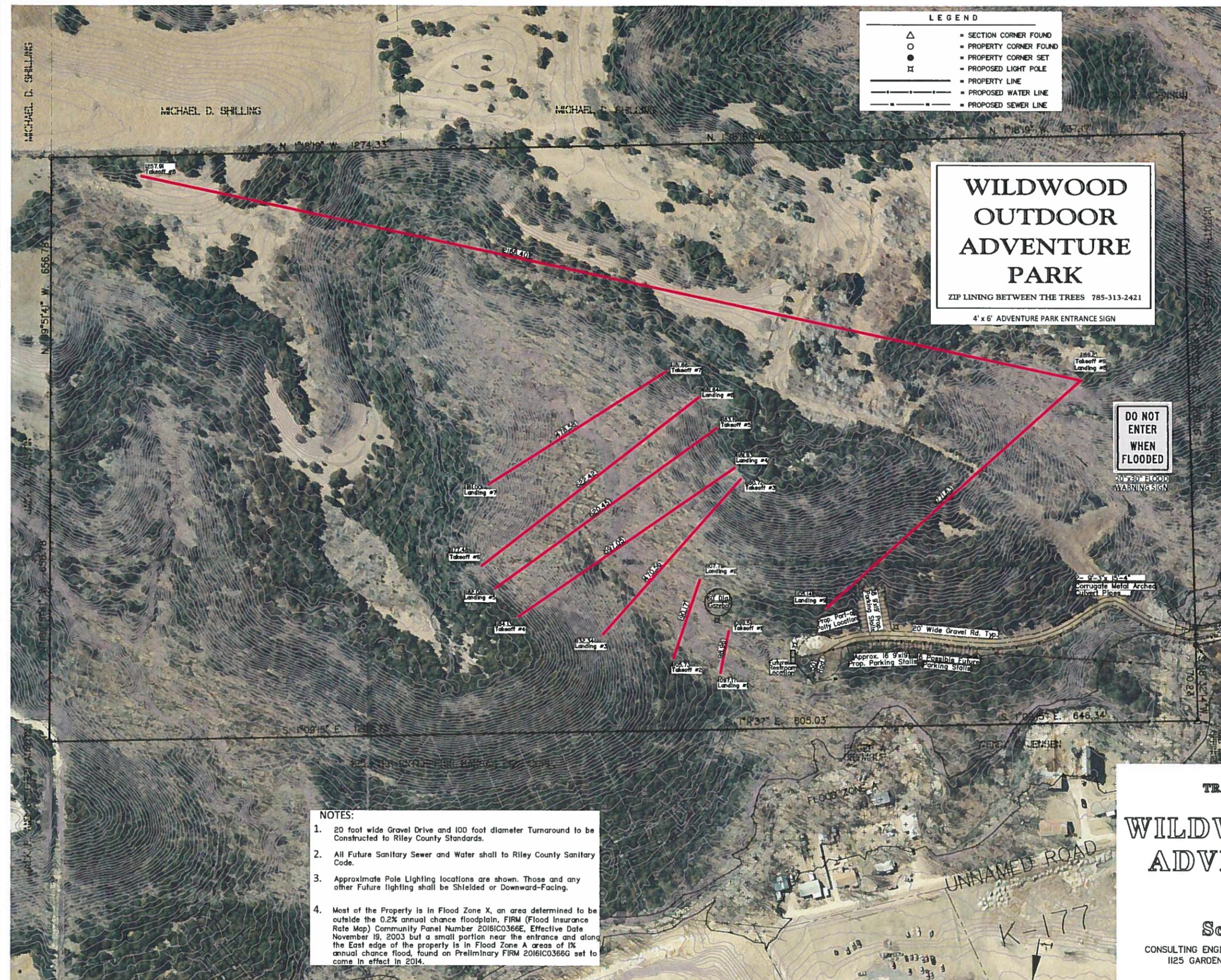
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 All of the West Half of the Southeast Quarter (W1/2, SE1/4) of Section 20, Township 10 South, Range 8 East of the 6th P.M., in Riley County, Kansas, containing 77.59 acres, more or less.
 AND
 A tract of land in the West Half of the Northeast Quarter (W1/2, NE1/4) of Section 20, Township 10 South, Range 8 East of the 6th P.M., in Riley County, Kansas described as follows: Beginning at a point on the South line of the said West Half of the Northeast Quarter (W1/2, NE1/4) of said Section 20 that is South 88°32'14" West, 170.23 feet (measured) vs. 166 feet (described) from the Southeast Corner of the West Half of the Northeast Quarter (W1/2, NE1/4) of said Section 20; thence continuing on said South line, South 88°32'14" W, 40.57 feet; thence North 11°04'57" West, 380.95 feet to a point on the South right of way line of Johnson Road; thence along said South line of Johnson Road, North 88°48'42" East, 40.60 feet; thence South 11°04'57" East, 380.75 feet to the Point of Beginning. Said tract contains 0.35 acres, more or less.

**WILDWOOD
 OUTDOOR
 ADVENTURE
 PARK**
 ZIP LINING BETWEEN THE TREES 785-313-2421
 4' x 6' ADVENTURE PARK ENTRANCE SIGN

**DO NOT
 ENTER
 WHEN
 FLOODED**
 20' x 30' FLOOD
 WARNING SIGN

- NOTES:**
- 20 foot wide Gravel Drive and 100 foot diameter Turnaround to be Constructed to Riley County Standards.
 - All Future Sanitary Sewer and Water shall to Riley County Sanitary Code.
 - Approximate Pole Lighting locations are shown. Those and any other Future Lighting shall be Shielded or Downward-Facing.
 - Most of the Property is in Flood Zone X, an area determined to be outside the 0.2% annual chance floodplain, FIRM (Flood Insurance Rate Map) Community Panel Number 2016IC0366E, Effective Date November 19, 2003 but a small portion near the entrance and along the East edge of the property is in Flood Zone A areas of 1% annual chance flood, found on Preliminary FIRM 2016IC0366G set to come in effect in 2014.

**SITE PLAN
 TRACT IN THE WEST HALF OF
 SEC. 20-T10S-R8E
 WILDWOOD OUTDOOR
 ADVENTURE PARK**
 RILEY COUNTY, KANSAS
 PREPARED BY
Schwab-Eaton, P.A.
 CONSULTING ENGINEERS - LAND SURVEYORS - LANDSCAPE ARCHITECTS
 1125 GARDEN WAY MANHATTAN, KANSAS PH 785-539-4687
 OCTOBER 2014





WILDWOOD OUTDOOR ADVENTURE PARKa Flint Hills Experience

Steve Springer & Dan Springer
281 Johnson Road Manhattan, KS 66502
785-776-5511 785-313-2421

September 29, 2014

Per a request from Bob Isaac, following is a summary of Wildwood Outdoor Adventure Park:

1. Number of employees:
 - a. 2-4 full time employees
 - b. 8-10 part-time employees

2. Expected number of customers: 1 group of 8 per hour
 5 days per week for 32 weeks/year
 Approximately 60 people per day

3. Hours/days of operation: open at 10:00am, taking the last appointment at 4:00pm. Since the tour will take approximately 2 ½ to 3 hours to complete, the last group will be leaving at around 7:00pm. Our busy days will be Friday, Saturday and Sunday, but we will also be open Monday-Thursday by appointment.

4. Due to the seasons, we will be open late March through early November, depending on the weather.

5. We will have 9 zip lines. All lines and take-off/landing platforms will be constructed as per either ACCT (Association for Challenge Course Technology) or PRCA (Professional Ropes Course Association) accreditation standards which insures safety for all guests.

There will be portable latrines and drinkable water supplied on site. Electricity, city water and sewer may be added in the future, but not at this time.

There will be one structure approximately 60-90 feet in diameter which will serve as a place to put on belts and helmets and to check them in afterwards, and to meet the tour guides. This will be a covered deck with open sides made of wood and metal.

Each guest will sign a liability waiver (consistent with all zip line parks) and be insured with additional coverage through WWAP.



PLANNING & DEVELOPMENT

STAFF REPORT

Platting & Residential Use Designator

PETITION: (#14-31) Residential Use Designator - Extraneous Farmstead
(#14-32) Plat

APPLICANT: Steven L. Hargrave
10051 Senn Rd
Randolph, KS 66554

PROPERTY OWNER: Steven L. & Debbie L. Hargrave
10051 Senn Rd
Randolph, KS 66554

TYPE OF REQUEST: Receive a Residential Use Designator - Extraneous Farmstead for a tract of land and plat said tract into a single lot.

SIZE OF TRACT: The subject site is approximately 3.64 acres.

LOCATION: The request is generally located approximately 5680 feet west of Tuttle Creek Boulevard, on the south side of Senn Road; Section 32, Township 7 South, Range 6 East; Sherman Township.

JURISDICTION: This application is subject to the requirements of the Riley County Subdivision Regulations.



BACKGROUND: The subject site is an approximately 3.64-acre portion of an approximately 195-acre parent tract. The site is developed with a single family dwelling (built around 1900) with several outbuildings and has been instrumental to the surrounding agricultural operation for several years. The applicant stated that he wishes to sell it to his daughter. However, this will require a mortgage thus requiring the subdivision from the parent tract. Rather than requesting to rezone the subject property to a single-family residential zoning designation, he is seeking approval by the Board to receive a residential use designator - extraneous farmstead and plat the farmstead into a single lot.

DESCRIPTION:

Physical site characteristics: As mentioned previously, the site is developed with a single family dwelling and several outbuildings. Due to original purpose of the homestead, there are several large livestock enclosures adjacent to the proposed lot (see Figure 1). The home is centered within a loop driveway, which allows large cattle trucks and emergency response vehicles to easily enter and exit the site. The cattle pens east of the home and the ponds west of the home are not included as part of the proposed lot.

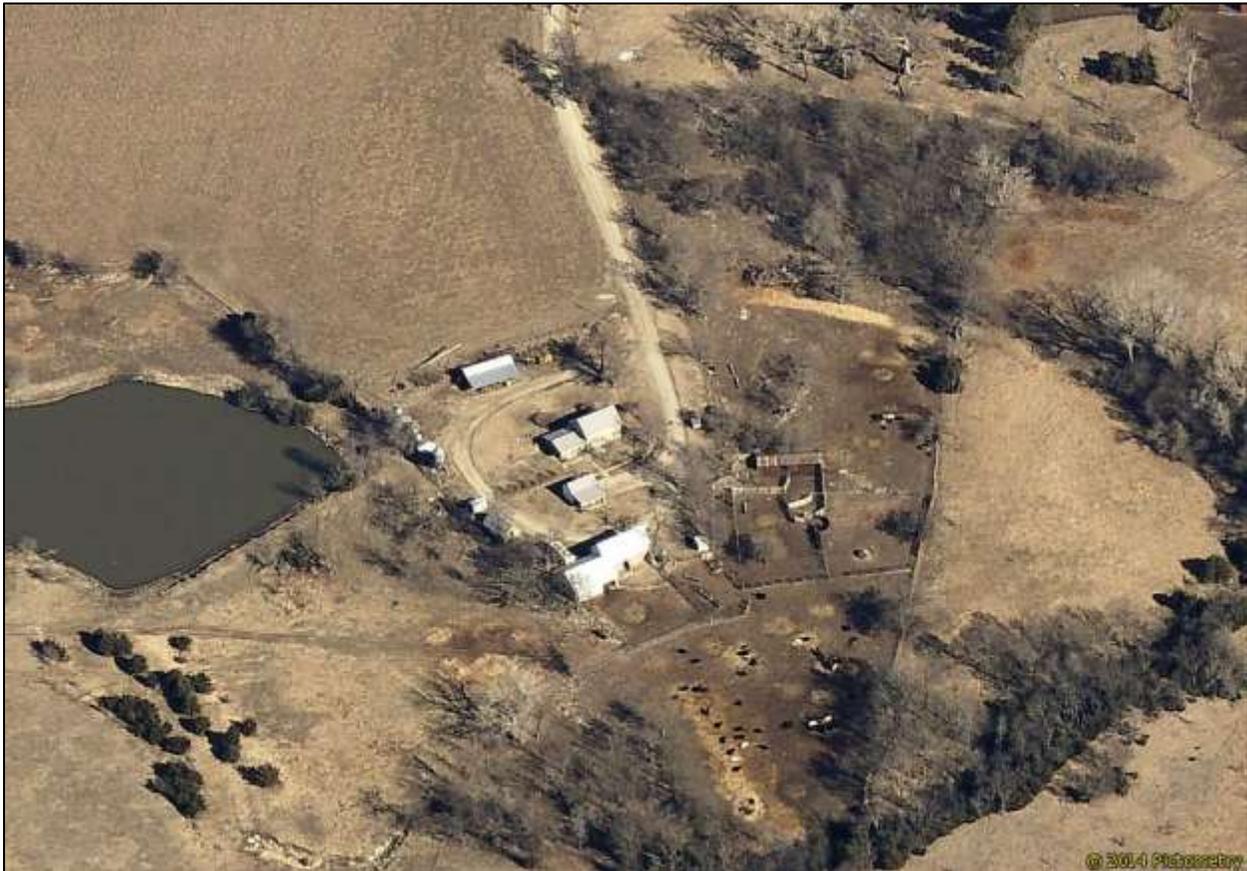


Figure 1. View from the south (2014 Pictometry).

General character of the area: The general character of the area is extremely rural, with a mix of agricultural activities, primarily livestock (cattle) and pasture.

SUITABILITY OF ZONING:

Zoning History: The subject site is currently zoned “AG” (Agricultural District) and has been zoned as such since at least 1974 (Countywide Zoning Conversion Process). The applicant is not

proposing a change in the zoning of the parcel. There are no conditional uses, special uses or variances associated with the site.

SURROUNDING ZONING/LAND USE		
	ADJACENT ZONING	LAND USE
NORTH	“AG” (Agricultural District)	Crops/hay
SOUTH	“AG” (Agricultural District)	Crops/hay
EAST	“AG” (Agricultural District)	Pasture/livestock enclosure
WEST	“AG” (Agricultural District)	Crops/hay

POTENTIAL IMPACT:

Public Facilities and Services:

Streets and bridges: The subject property has direct access and abuts Senn Road, a paved two-lane County road (Minor Collector). No new entrances are being proposed with this request.

Water and sewer: The subject property is served by an on-site wastewater lagoon and private water well.

Fire: Riley County Fire District #1 will serve the site. The nearest County Fire Station is located at 111 S. Front Street in Randolph. The subject site is located within five road miles of a fire station and thus, has an ISO rating of 9.

Effect on public facilities and services: It is not anticipated that the proposed plat or residential use designation will have an adverse impact on public facilities and/or services.

CONFORMANCE TO THE LAND USE PLAN:

Goals, Objectives and Policies

Goal for residential:

To allow for the development of a diversity of housing types, sizes and price levels to meet the changing needs of all county residents.

Objective R4: Allow for adequate amounts of single family housing in suitable locations throughout the county.

Policies:

R4.2 Roads serving residential developments should safely accommodate anticipated traffic.

Future Land Use Map

According to the Future Land Use Map North (Figure 11.2) found in the Plan, the subject property is located outside of a designated growth area.

The Land Evaluation/Site Assessment (LESA) Score

Due to the type and nature of the request, a LESA was not generated.

Hardship on the landowner

The Applicant submitted has not indicated a hardship as a reason for the request.

Staff analysis: Due to the character of the existing development and the criteria set forth in the zoning regulations for a Residential Use Designator -Extraneous Farmstead, it is not anticipated that the request will cause conflicts; thus, the request is consistent with the Plan.

RILEY COUNTY ZONING REGULATIONS:

The conditions for a Residential Use Designator -Extraneous Farmstead as per the zoning regulations, are as follows:

1. The site to be divided from the existing agricultural operation should be the minimum required to accommodate the existing residence and any outbuildings or to accommodate a site that is logically separated from the existing agricultural operation. Conversion of existing productive agricultural land should be avoided.
2. The site shall be large enough to meet sanitary code minimum requirements.
3. A residential use designator for an extraneous farmstead is limited to one per original parent agricultural tract.
4. The site must be platted and must meet all requirements for a plat, including adequate public road access as specified in the subdivision regulations. The platted lot may not be further subdivided unless approved through the standard platting/rezoning process.
5. An Agricultural Protection Easement (APE), as specified in Section 21A, shall be filed with the plat.

Staff analysis: The request is consistent with the above criteria.

COMMENTS AND CONCERNS:

ENVIRONMENTAL HEALTH: The Environmental Health staff has reviewed this plat and found it is in compliance with the Riley County Sanitary Code.

COUNTY ENGINEER: The County Engineer has reviewed the request and stated there were no concerns with the request.

EMERGENCY MANAGEMENT: The Director of Riley County Emergency Management has reviewed the request and had no concerns.

STAFF RECOMMENDATIONS:

Staff recommends that the Planning Board approve the concurrent plat of Hargrave Addition, as it has been determined that all requirements of the Riley County Subdivision Regulations, Zoning Regulations and Sanitary Code have been met. Staff also recommends that the Board approve the request to receive a Residential Use Designator -Extraneous Farmstead, as it has been determined that it meets the minimum requirements of the Riley County Zoning Regulations.

ACTION NEEDED FOR RESIDENTIAL USE DESIGNATOR:

- A. Motion to approve the request to receive a Residential Use Designator–Extraneous Farmstead, as it has been determined that it meets the minimum requirements of the Riley County Zoning Regulations.

OR

- B. Motion to deny the request to receive a Residential Use Designator–Extraneous Farmstead, as it has been determined that it does not meet the minimum requirements of the Riley County Zoning Regulations.

ACTION NEEDED FOR PLAT:

- A. Motion to approve the concurrent plat of Hargrave Addition, as it has been determined that it meets the requirements of the Riley County Subdivision Regulations.

OR

- B. Motion to deny the concurrent plat of Hargrave Addition, as it has been determined that it does not meet the requirements of the Riley County Subdivision Regulations.

ATTACHMENTS:

- Vicinity/site map
- Surrounding zoning map
- Fire Station map
- Preliminary Plat map
- Final Plat

Prepared by: Bob Isaac, Planner
October 31, 2014



VICINITY AND SITE

Hargrave

Extraneous Farmstead #14-31
Plat #14-32 Hargrave Addition

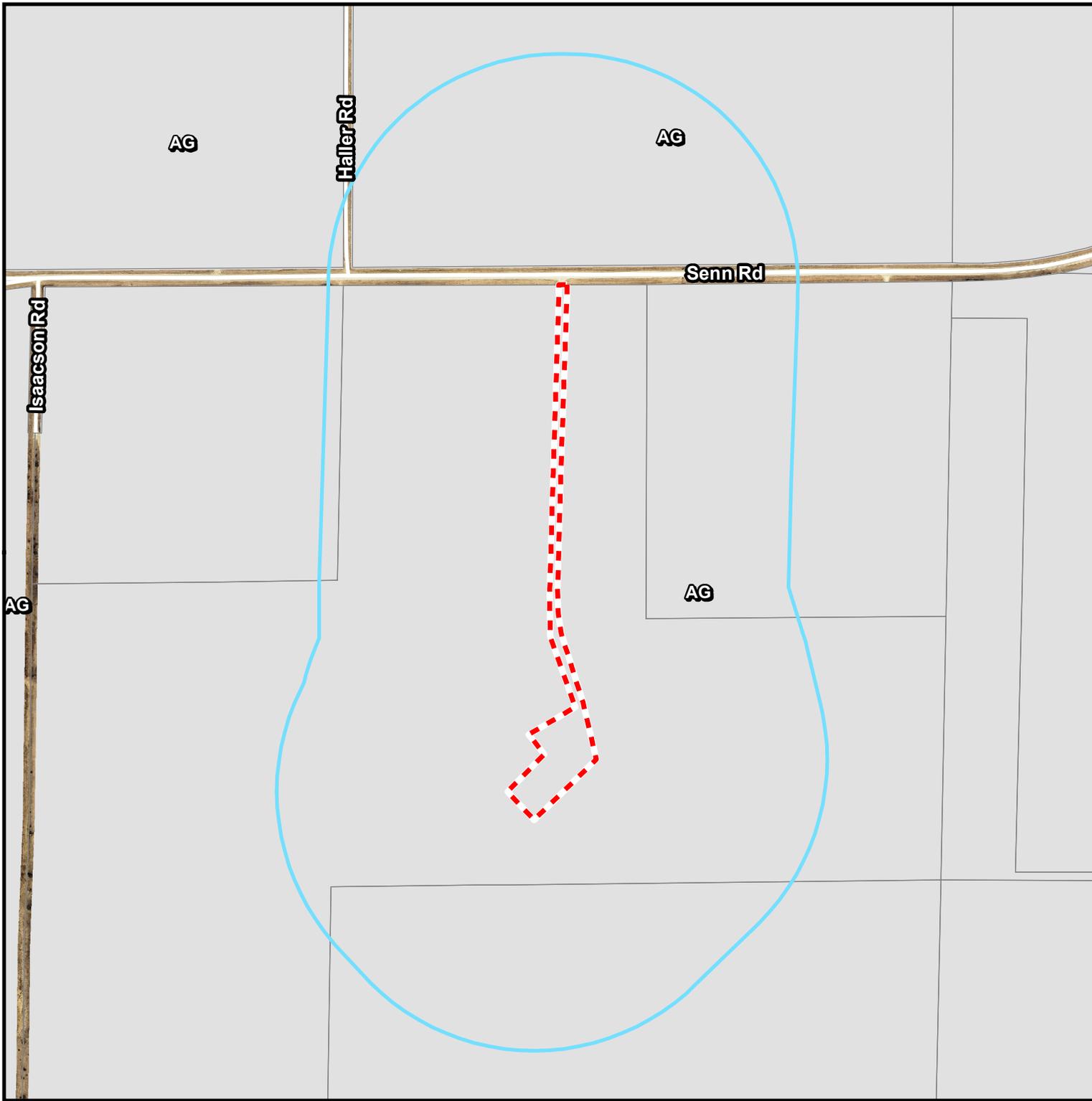
Receive a Residential Use
Designator-Extraneous Farmstead
for a tract of land and plat said
tract into a single lot.

32-7-6

Legend

-  1000' Buffer
-  Site





SURROUNDING ZONING

Hargrave

Extraneous Farmstead #14-31
Plat #14-32 Hargrave Addition

Receive a Residential Use
Designator-Extraneous Farmstead
for a tract of land and plat said
tract into a single lot.

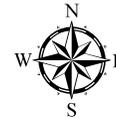
32-7-6

Legend

 1000' Buffer

 Site

 SF-1 Single Family	 AG Agricultural
 SF-2 Single Family	 N-1 Noise Hazard
 SF-3 Single Family	 PUD Planned Unit Dev
 SF-4 Single Family	 U University
 SF-5 Single Family	 City Boundaries
 B-1 Two Family	 Fort Riley
 B-2 Multiple Family	
 B-3 Mobile Home Park	
 C-1 Neighborhood Bus	
 C-2 Shopping Dist	 Special Zoning: Conditional Use Designator Lot Special Use Variance
 C-3 General Business	
 C-4 Highway Business	
 D-1 Industrial Park	
 D-2 Light Industrial	
 D-3 Heavy Industrial	
 D-4 Business Park	



FIRE STATIONS

Hargrave

Extraneous Farmstead #14-31

Plat #14-32 Hargrave Addition

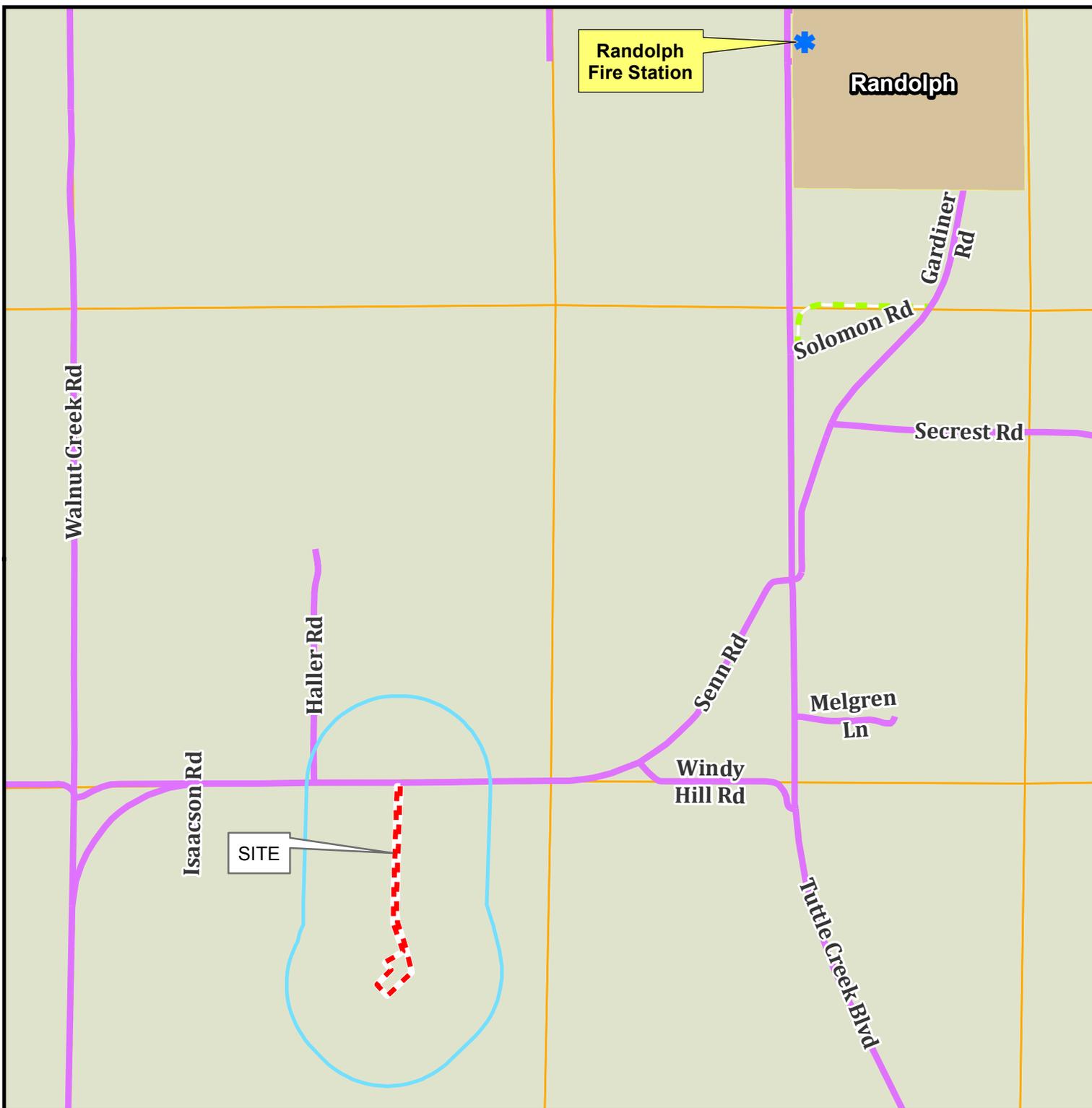
Receive a Residential Use Designator-Extraneous Farmstead for a tract of land and plat said tract into a single lot.

32-7-6

 Fire Station

 Within 5 Miles of a Fire Station

 Not within 5 Miles of a Fire Station



Randolph Fire Station

Randolph

Gardiner Rd

Solomon Rd

Secret Rd

Senn Rd

Melgren Ln

Windy Hill Rd

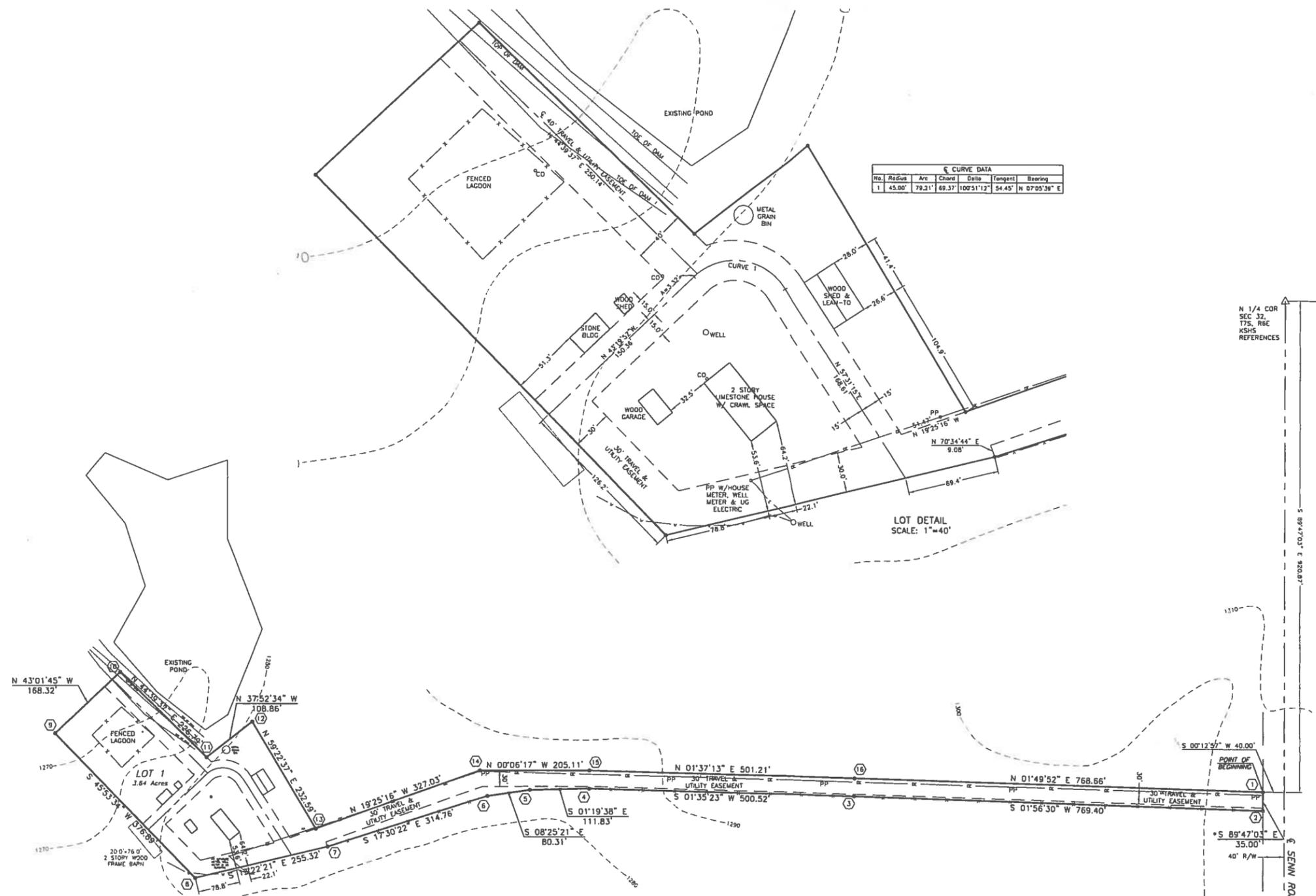
Tuttle Creek Blvd

Haller Rd

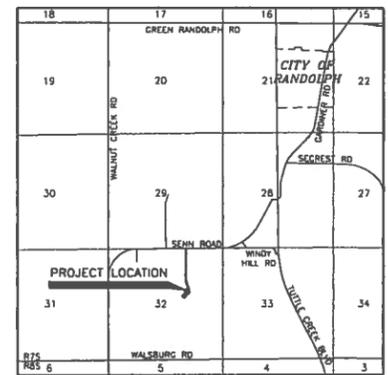
Isaacson Rd

Walnut Creek Rd

SITE

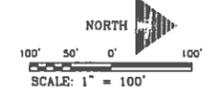


CURVE DATA					
No.	Radius	Arc	Chord	Delta	Bearing
1	45.00'	78.21'	69.37'	100°51'12"	S4.45' N 07°05'36" E



VICINITY MAP
(NOT TO SCALE)

- LEGEND**
- △ Section Corner
 - 1/2"x24" Rebar w/ CLS66 Cap Set
 - Assumed Bearing
 - (S) Surveyed Dimension
 - Corner Number
 - PP Power Pole
 - CO Sanitary Sewer Clean-out
 - Overhead Electric Line
 - Underground Electric Line
 - Water Line
 - Fence Line
 - - - 10' Contour Interval from DeLorme XMap7



OWNERS:
 Steve Hargrave
 10051 Senn Road
 Randolph, KS 66554-9108
 PH: 785-293-2293
 and
 Norma Hargrave
 14140 Walnut Creek Road
 Randolph, KS 66554-9132
 PH: 785-293-5668

FLOOD INFORMATION NOTE:
 Flood Insurance Rate Map, Map Number 20161C0150E, identifies this property as situated in Zone X. Zone X stated as "Areas determined to be outside the 0.2% annual chance floodplain". FIRM effective date: November 19, 2003.

NOTES:
 No gaps or overlaps exist.
 There are no existing buildings on the subject property, except as shown.
 Parent Tract is recorded in Book 675, Page 355, Register of Deeds Office, Riley County, Kansas.
 There is an existing entrance and entrance pipe that will be utilized.
 The basis of bearings of this plat are assumed S 89°47'03" E on the north line of the Northeast Quarter of Section 32, T7S, R6E.
 Contours shown on this plat were taken from DeLorme XMAP 7 GIS.

DESCRIPTION:
 A tract of land in the Northeast Quarter of Section 32, Township 7 South, Range 6 East of the Sixth Principal Meridian, Riley County, Kansas described as follows:
 Beginning at a point that is S 89°47'03" E 920.87 feet and S 00°12'57" W 40.00 feet from the Northwest Corner of the Northeast Quarter of said Section 32, being Corner 1, marked by a 1/2" rebar; thence S 89°47'03" E 35.00 feet to Corner 2, marked by a 1/2" rebar; thence S 01°56'30" W 769.40 feet to Corner 3, marked by a 1/2" rebar; thence S 01°35'23" W 500.52 feet to Corner 4, marked by a 1/2" rebar; thence S 01°19'38" E 111.83 feet to Corner 5, marked by a 1/2" rebar; thence S 08°25'21" E 80.31 feet to Corner 6, marked by a 1/2" rebar; thence S 17°30'22" E 314.76 feet to Corner 7, marked by a 1/2" rebar; thence S 13°22'21" E 255.32 feet to Corner 8, marked by a 1/2" rebar; thence S 45°53'34" W 376.89 feet to Corner 9, marked by a 1/2" rebar; thence N 43°01'45" W 168.32 feet to Corner 10, marked by a 1/2" rebar; thence N 44°39'37" E 226.79 feet to Corner 11, marked by a 1/2" rebar; thence N 37°52'34" W 108.86 feet to Corner 12, marked by a 1/2" rebar; thence N 59°22'37" E 232.59 feet to Corner 13, marked by a 1/2" rebar; thence N 19°25'18" W 327.03 feet to Corner 14, marked by a 1/2" rebar; thence N 00°06'17" W 205.11 feet to Corner 15, marked by a 1/2" rebar; thence N 01°37'13" E 501.21 feet to Corner 16, marked by a 1/2" rebar; thence N 01°49'52" E 768.66 feet to the point of beginning, containing 3.64 acres. Subject to easements and restrictions of record.

Preliminary Plat
HARGRAVE ADDITION
 in the Northeast Quarter of Section 32,
 T7S, R6E, Riley County, Kansas



42018 Anderson Avenue, Suite 2 • Manhattan, Kansas 66503
 (785) 776-0541 • FAX 776-9760 • Email: lin@smhconsultants.com
 Project #1409MN1284 DD #95

SEPTEMBER 2014

