DATE: April 3, 2018

TO: Steve Ehlmann, County Executive
    Joann Leykam, Director of Administration

CC: Keith Hazelwood, County Counselor
    Donna Vogt, County Council

FROM: Michael Hurlbert, Director of Community Development

RE: Item for April 9, 2018 County Council Meeting

The Community Development Department is submitting the following item for the April 9, 2018 County Council Agenda.

BILL FOR INTRODUCTION:

Planning and Zoning Commission recommends Denial:

PUD REZONING AND CONCEPT PLAN REQUEST - 18 RESEARCH PARK CIRCLE

Application: PUD18-01
Applicant: NT Home Builders, LLC
Property Owner: Curators of the University of Missouri
Developers: Missouri Bluffs Golf Joint Venture & NT Home Builders, LLC
Engineer: Pickett, Ray & Silver, Incorporated
Current Zoning: A, Agricultural District with Floodway Fringe Overlay District
Requested Zoning: R1A, Single-Family Residential District with FF/Floodway Fringe and PUD/Planned Unit Development Overlay Districts
2025 Master Plan: Recommends future parks and open space uses
Area: 386.52 acres
Location: South of the Missouri Research Park, west of Interstate 64, and north of the Missouri River; near Weldon Spring and Weldon Spring Heights
Council District: 2
Account No's.: A946001690, T001200001, and part of A973001558
Application PUD18-01

PUD REZONING AND CONCEPT PLAN REQUEST - 18 RESEARCH PARK CIRCLE

Application: PUD18-01
Applicant: NT Home Builders, LLC
Property Owner: Missouri Bluffs Golf Joint Venture and Curators of the University of Missouri
Developers: Missouri Bluffs Golf Joint Venture & NT Home Builders, LLC
Engineer: Pickett, Ray & Silver, Incorporated
Current Zoning: A, Agricultural District with Floodway Fringe Overlay District
Requested Zoning: R1A, Single-Family Residential District (1-acre minimum lot size) with FF/Floodway Fringe and Planned Unit Development Overlay Districts
Area: 386.52 acres
Location: South of the Missouri Research Park, west of Highway 64, and north of the Missouri River; Near the City of Weldon Spring and the Town of Weldon Spring Heights
Council District: 2
Account No.: A946001690, T001200001, and part of A973001558

CONTENTS:

- Synopsis
- Staff Recommendation
- Site Photos
- Aerial Photo
- Surrounding Zoning Map
- Topography Map
- Rationale for Planned Unit Development
- Concept Plan for the Bluffs Planned Unit Development
- Boundary Exhibit
- Conservation Restrictions
- Declaration Draft
- Possible Home Floor Plans
- Traffic Impact Study
- Traffic Response Memo to Weldon Spring Heights
- Planning & Zoning Commission Meeting Presentation, Brad Goss - 3/21/18

Page 1 of 5
March 30, 2018

This communication summarizes the following bill to be introduced at the April 9, 2018 County Council meeting:

**PUD REZONING AND CONCEPT PLAN REQUEST - 18 RESEARCH PARK CIRCLE**

- **Application:** PUD18-01
- **Applicant:** NT Home Builders, LLC
- **Property Owner:** Curators of the University of Missouri
- **Developers:** Missouri Bluffs Golf Joint Venture & NT Home Builders, LLC
- **Engineer:** Pickett, Ray & Silver, Incorporated
- **Current Zoning:** A, Agricultural District with Floodway Fringe Overlay District
- **Requested Zoning:** R1A, Single-Family Residential District with FF/Floodway Fringe and PUD/Planned Unit Development Overlay Districts
- **2025 Master Plan:** Recommends future parks and open space uses
- **Area:** 386.52 acres
- **Location:** South of the Missouri Research Park, west of Interstate 64, and north of the Missouri River; near Weldon Spring and Weldon Spring Heights
- **Council District:** 2
- **Account No.’s:** A946001690, T001200001, and part of A973001558

Approval of this bill would rezone nearly 387 acres and approve a Concept Plan for The Bluffs Planned Unit Development (Bluffs PUD). The development is intended as a low-impact residential subdivision with some 362 dwellings organized around an existing recreational golf course. In keeping with the low-impact concept, the placement and design of lots and streets are intended to minimize land disturbance of the forested, steeply hilly terrain.

From the perspective of the University of Missouri, the property owner, the proposed development would be an extension of its economic development efforts in the I-64 corridor, including introducing the concept of the technology corridor in collaboration with the County, and establishing the Missouri Research Park which now employs some 2,000 people. The Bluffs PUD would “…enhance the housing options for individuals employed at the Missouri Research Park and attract further investment in the research park and region.”

The development would include 289 single-family detached homes over 190.94 acres; up to 73 single-family attached dwellings over 7.26 acres; and an existing 18-hole golf course occupying 184.47 acres.

In conformance with the County’s PUD requirements (Section 405.215.B OSCCMo) a written report commenting on the six review standards for proposed PUD developments is provided in the attached County staff report to the Planning & Zoning Commission dated March 6, 2018.
Given that a recreational use (the golf course) in dedicated open space is the centerpiece of this proposed residential development, County staff sees the development as generally conforming to the intent of the Parks and Open Space future land use category of the County’s 2025 Master Plan. The Master Plan includes in this land use category “country clubs, and golf courses.” PUDs by definition are mixed-use developments and which typically bridge traditional land use categories.

County staff finds that the proposal would conform to the maximum residential density. (Section 405.205 OSCCMo) Although property “zoned or used commercially” is not to be used to calculate allowable residential density, the golf course is a recreational rather than commercial land use. Golf courses are allowed by right in all Agricultural and Residential zoning districts, are assessed for property tax purposes as agricultural uses, and are explicitly included in the County’s residential density allowances for residential cluster developments. (Section 405.090.1 OSCCMo) Furthermore, other residential golf course developments in St. Charles County, including Whitmoor (City of Weldon Spring) and Bear Creek (City of Wentzville), were developed with residential density calculations that included golf courses.

The Planning and Zoning Commission conducted a public hearing on this application at their March 21, 2018 meeting and received the following public input:

- **Speakers:** 5 Support 22 Opposed 0 Concerns
- **Letters on file:** 10 Support 137 Opposed 9 Concerns

 Speakers at the public hearing expressed concerns such as damage to or loss of an ecological asset; reduction of passive open space; functioning of the roadway system given narrow and winding streets, steep slopes, and limited access; potential land use conflicts with the Dukett Creek’s sewage treatment plant and Zoltek’s industrial facility; and questions about conformance with the Master Plan and PUD requirements such as maximum residential density.

Having concluded the public hearing, the Planning & Zoning Commission voted as follows to recommend Denial of this application:

- 1 Approval 8 Denial 0 Abstentions

Two Commissioners commented before the vote that they viewed the proposal as a good plan but not appropriate for this particular location. The attached meeting minutes provide further details.

**Recommendation**

The Planning and Zoning Commission recommends denial of both the zoning map amendment and PUD concept plan.

County staff supports its recommendation it submitted to the Planning and Zoning Commission in favor of approval of said application, as the application generally conforms to the 2025 Master Plan and the review standards of Section 405.215 of the County Code.

Should this be approved, the applicant would then have one year to submit a Final Development Plan and a Preliminary Plat for review by the Planning and Zoning Commission and County Council. (Section 405.223.A OSCCMo) The following have been identified as significant issues which would need to be addressed as part of that process:

- Ordinance requirements to designate open spaces, including steep slopes, as “common
ground” to be owned by a non-profit property owners’ association. (Sections 405.200.C and 405.210 OSCCMo)

- Variances from the Subdivision Regulations (Chapter 410 OSCCMo) to allow the proposed street design.
- The need for improvements to proposed street intersections at Research Park Drive and Circle. Generally, the proposed street system must be developed in such a way as to comply with County Highway Department requirements for all connections of such new streets to the existing streets, which are now, or in the future to become, part of the County’s roadway system.
- The Final Development Plan should include changes to address potential land use conflicts with Zoltek’s industrial plant.

Sincerely,

Robert Myers, AICP
Planning & Zoning Division Director

cc: Steve Ehlmann, County Executive
    Joann Leykam, Director of Administration
    Keith Hazelwood, County Counselor
STAFF RECOMMENDATION

To: County Planning & Zoning Commission
Prepared by: Mark Price Jr, AICP
Application No.: PUD18-01
Date: March 6, 2018

GENERAL INFORMATION

Property owner: Curators of the University of Missouri
Applicant: NT Home Builders, LLC
Requested Action: 1. Approval of a zoning map amendment from A, Agricultural District with Floodway Fringe Overlay District, to R1A, Single Family Residential District, with Planned Unit Development and Floodway Fringe Overlay Districts; and
2. Approval of a concept plan for a residential and recreational Planned Unit Development (PUD)

Proposed uses: single-family detached and attached homes and a golf course
Location: south of Research Park Circle and west of Highway 40, adjacent to Weldon Spring and Weldon Spring Heights.
Size: 386.52 acres
Current Land Use: recreational (Missouri Bluffs Golf Course) and undeveloped.
Adjacent Land Use and Zoning:

<table>
<thead>
<tr>
<th>Direction</th>
<th>Zoning</th>
<th>Land Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>North</td>
<td>HTCD/A, High Technology Corridor District / Agriculture</td>
<td>Hotel and Office/Light Industrial</td>
</tr>
<tr>
<td>South</td>
<td>A/FF Agriculture and Flood Fringe</td>
<td>Katy Trail State Park, Weldon Spring Conservation Area, and Missouri River</td>
</tr>
<tr>
<td>East</td>
<td>HTO, High Tech Office District (City of Weldon Spring zoning)</td>
<td>I-64 and vacant land (In Weldon Spring)</td>
</tr>
<tr>
<td>West</td>
<td>A/FF, Agriculture and Flood Fringe</td>
<td>Duckett Creek Treatment plant and Weldon Spring Conservation Area</td>
</tr>
</tbody>
</table>

Year 2025 Plan: recommends Parks and Open Space land uses

Zoning History: This property has been zoned A, Agriculture District, since 1959 with the inception of zoning.

SPECIAL INFORMATION

Public Services: County Council District 2 – Joe Brazil
School District – R3, Francis Howell School District
Fire District – Cottleville Fire District
Utilities: Water – Water District 2
Sewer – Duckett Creek Sewer District Service Area

BACKGROUND

This application is to (1) rezone 386.52 acres of land from A, Agriculture to R1A, Single Family Residential District with a Planned Unit Development overlay zoning; and (2) approve a concept plan for “The Bluffs”, a proposed residential and recreational Planned Unit Development.

Planned Unit Development is a type of zoning intended to allow customized development standards to meet the needs of a specific proposal, as opposed to rigidly following standard zoning regulations. In return for this flexibility, the public and the County have greater predictability in the project outcomes because the particular use and its relation to neighboring uses can be well defined in advance.

The proposed development adjoins the Missouri Research Park to the north which includes 200 acres of light industrial and research and development businesses. Companies such as Nike, Bank of America, Zoltek and Enterprise Rent-A-Car have offices in the park. Land to the west includes an 8-acre sewage treatment plant owned and operated by Duckett Creek Sewer District. Missouri Department of Conservation lands adjoin the site to the west and south.

The proposed development would be organized around an existing 18-hole golf course, which is now mostly surrounded by undeveloped forest lands. The concept is to develop a residential community like what is being developed in the Branson, Missouri area. The developer is proposing to have minimal grading for the roads and to construct the homes close to the streets to minimize lot clearing and land disturbance. In order to achieve this, several subdivision requirement waivers would be necessary at the time of platting if the project is to be developed as proposed.

The property’s topography greatly varies and could be characterized as mostly rugged with few flat areas. The property rises 150 feet in elevation from the Missouri River flood plain on the south to the Research Park on the north. The flatter areas are occupied by the 18-hole golf course. The proposed subdivision would be centered along ridges that populate the property.

Overall, this multi-phased proposal includes 289 single-family homes (reduced from the original 315 single family homes) and up to 73 attached dwellings (down from the original 120 multi-family units) all located on approximately 198.2 acres. This leaves approximately 184.47 acres for the golf course. The single family homes will occupy 190.94 acres for an average density of 0.90 dwellings per acre. The attached dwellings will occupy 7.26 acres for an average density of approximately 10.05 units per acre. The developer states that the specific composition of the attached residential will be determined by market conditions but will need to be approved by the County before construction. The developer has chosen to develop at a density that is greater than would be allowed by the R1A zoning designation. If the rezoning is approved, the new underlying zoning would allow for 1 unit per acre and the developer is proposing an average of 1.83 units per acre if the golf course is excluded from the calculations. If the golf course is included, a density of 0.94 units per acre is achieved.
To comply with Fire District standards, before the project reaches 100 lots in the
development, the second entrance is planned to be installed.

Below is the phase schedule that extends over the next several years and how many
lots/units will be built per phase:

- Phase A: Lots 1-75
- Phase B: Lots 76-128
- Phase C: Lots 212-289
- Phase D: Lots 129-211
- Phase E: 31 units allowed.
- Phase F: 42 units allowed.

Should this rezoning and concept plan be approved, details about the design and layout of
this project, such as specifics regarding needed subdivision code waivers, landscape
preservation, and exact densities of the development would be submitted as part of a Final
Development Plan application to be submitted later for approval by the County Council.

CONCEPT PLAN REVIEW STANDARDS

Per Section 405.215 of the County Code, County staff is to report to the Planning and
Zoning Commission and the Governing Body on the proposed PUD and comment
specifically on the following bolded and italicized criteria:

1. General compliance with the Master Plan for unincorporated St. Charles County.

The 2025 Master Plan calls for the majority of the new development in the county to occur
in the Urban Service Area. The 2025 Master Plan defines the Urban Service Area as an
area of the County to which public water and sewer services can reasonably be extended.
The development is proposed within the Urban Service Area and will be defined as Low
Density Urban Residential. This proposed development does contain some of the
characteristics of the Urban Residential designation as listed below:

1) Contain a mix of lot sizes and housing styles, types and sizes and land uses.

   The development, as proposed, will contain single-family detached and attached
   homes. The lot sizes will vary depending on the terrain and the proximity to the golf
course. The development will primarily be Low Density Residential while using the
   Clustering concept to preserve open space, views, and other natural features.
   There will also be some areas of High Density Residential that are generally
   located close to the entrances of this development and are buffered from the low
density single family homes by forested land.

2) Include a core, such as neighborhood serving retail, civic services, or a gathering
   space (e.g., a park, plaza, school, community center, or natural open space). 
   Neighborhood recreation areas should occur within distances specified on
   municipal plans or provided within developments that are operated by the residents.
The development’s sidewalk system will connect with the Great Rivers Greenway Bicycle and Pedestrian Trails, The Katy Trail, and the Missouri Bluff’s golf course. Sidewalks had not been proposed in previous development plans.

3) **Be designed in harmony and to respect the natural landscape and landforms and conserve natural features, such as creeks or geologic features.**

The development plan is to minimize land disturbance well below what would typically be seen for a residential subdivision. This would be achieved by designing narrower streets and right-of-way, use of atypical street grades and curves, reduced street connectivity, and adoption of private conservation easements and covenants.

From a land use perspective, the proposed development might be seen as complementary to the adjoining Missouri Research Park and golf course. There is easy access to major highways (Highway 64/40 and Highway 94) allowing for the easy connection to the major St. Charles County employment areas, St. Louis Metro Area, and to areas further west.

It should be noted the development is proposed to access Research Park Drive and Research Park Circle, both of which are private roads owned by the University of Missouri. The portion of Research Park Drive being connected to, in particular, currently serves as an access road for Duckett Creek Sanitary District. The use of these private drives as entrances to a 360+ unit subdivision may require various improvements including upgrading the intersection of Research Park Drive and Research Park Circle.

A newly-proposed tree preservation area and drainage easement would extend along Missouri Conservation Commission lands to the west. A 100 foot wide buffer area is proposed between the development and the Duckett Creek Sewer District Treatment plant located on the western side of the development. The “notch” of land located atop the bluff has been reserved from development as a tree preservation area.

The 2025 Master Plan shows the future land use of this tract as Parks and Open Space. The development of this parcel into a residential subdivision would generally not comply with the master plan as this area was envisioned as remaining undeveloped due to the rolling terrain contained on this parcel. However, due to the open spaces recreation component, and its proposed density, connectivity, and reduced impact of development, staff does believe it would meet the general intent of the master plan.

2. **Compliance with the Intent and Objectives of a Planned Unit Development as set forth in Sections 405.185 and 405.190 of Article X.**

The intent and objectives of a Planned Unit Development include preserving the natural scenic qualities of open space and utilizing the best potential for site development relating to such features as topography, geography, and the size and shape of the property. The golf course and the majority of the surrounding woods are being preserved as the developer is aiming to remove as few trees and other scenic features as is possible. This
project, as currently proposed, should be able to maintain adequate open space and buffers between uses within the development. The golf course would assist in maintaining a large open area within the development. The different types of land uses would be buffered from each other by the existing forested land that will not be disturbed during construction. Also, the development has also enacted some conservation covenants that limit the landscaping to native plantings, that require storm water control that minimizes the impact of development, and restrictions on outdoor light fixtures to limit light pollution.

**Improve Development Design:** The project provides for single-family detached and attached residences and recreational land uses. This project also follows the natural terrain and provides for minimal land grading. The developer is also proposing to keep as many trees on site as possible. They are proposing to remove 60 acres of trees to allow for road construction and home site clearing and leaving 183 acres of trees. The roads and building lots will be the only areas disturbed during construction.

**Address and Accommodate Housing Needs:** The development proposal would provide housing which is complementary to the Missouri Research Park and has dedicated open space for its residents. But the project would likely not include housing priced to meet the needs of average homebuyers for St. Charles County.

**Establish, Maintain and Strengthen the Neighborhood Concept in the Community Setting:** The developer does include some non-residential land use in the community. The golf course located at the center of this development is open to the residents of this development and to the community at large. This will help to tie this new development into the greater community at large. The development would also afford the opportunity to provide complementary housing to the Missouri Research Park and support a work/live/play concept. The developer does provide for pedestrian paths or non-motorized vehicle paths within the development. This will help to connect the neighbors and help to connect the development to the community at large. The developer has connected the proposed sidewalk system in the development to the adjoining Busch Greenway which provides access to the larger bike path network in St. Charles County.

*The adequacy of proposed facilities serving the development, including sanitary sewers, water supply and distribution, and recreational areas.*

The project is located within the Urban Service Area as defined by the Master Plan and can be adequately served by public utilities, including sewer and water. Access within the subdivision for emergency services should also be considered. The narrow roads, tight turns and steep grades could prove challenging to a fire truck or ambulance at any time of year, but especially in the winter during poor weather. The narrowness of the roads could also contribute to traffic concerns if any cars would be parked on the street. Such a situation could reduce the traffic path to one lane on a two way street.

3. **The general layout of the internal street system serving the proposed development and its relationship to the existing transportation system.**

To provide for internal circulation and access to lots, a total of 4.2 miles of private streets would be constructed with the development. The entire development is served by only two street entrances which are located 2,700 feet apart. The internal private drive would loop
through the subdivision and will intersect Research Park Drive and Research Park Circle, both of which are private roads. Multiple cul-de-sac streets will connect to the proposed loop. Some waivers from the subdivision regulations will be needed if the currently proposed slopes for the proposed road network are to be approved. The width and grade of the streets, and limited outside access, will necessitate fire district approval for the subdivision’s design.

On-street parking would ideally be limited due to the proposed narrowness of the streets. Because homes would be constructed close to the street, meaning that driveway parking would be limited, guest parking would be accommodated by the addition of off-street parking areas.

The portion of Research Park Drive to provide access to this proposed development now serves as the access road for Duckett Creek’s sewage treatment plant. The use of these private drives as entrances to a 360+ unit subdivision may require various improvements including upgrading the intersection of Research Park Drive and Research Park Circle.

The applicant has provided a traffic impact study by CBB Transportation Engineers (Feb. 13, 2018) which includes the following conclusions:

1. The development can be expected to generate 255 trips in the morning peak hour and 340 trips in the evening peak hour. This is generally opposite of the existing employment based traffic in the Research Park.

2. Nominal traffic impacts can be expected on Wolfrum Road south of Research Park Circle, Meadows Parkway, and Technology Drive West.

3. All intersections will have limited impact and expect to operate at acceptable conditions throughout the 2038 build conditions.

4. The proposed 20 foot wide internal streets with sidewalks on one side and where parking on-street is allowed, a seven food wide on-street parking lane is provided. The width meets minimum requirements based on AASHTO standards.

5. Because of school traffic, the Highway 94 and Missouri Research Park Drive intersection may be reliant on “courtesy gaps” for a 7-minute period before 7:00 AM. The traffic study states that the cost to remedy this delay would be significant compared to the relative benefits. A more in-depth study was recommended.

6. During the AM peak hour, the proposed development can be projected to cause 6 additional vehicles turning left onto Highway 94 South from Missouri Research Park Drive.

7. The earthen berm located at 8 Research Park Drive limits the sight distance for the Missouri Research Park Drive and Duckett Creek Entrance Drive. The study recommends lowering the berm to accommodate better sight lines. If lowering the berm is not possible, the intersection should be an “all stop” intersection. If this route is chosen, the intersection should be realigned to meet at the intersection of the Missouri Research Park Drive and Missouri Research Park Circle. The location of the bikeway may limit options in this matter.
8. Consideration can be given to converting the intersection at Weldon Spring Heights Drive and Missouri Research Park Drive from the two way stop to an all way stop.

9. If all the residential traffic were to use Technology West Drive, Meadows Parkway, and Wolfrum Road, the Weldon Springs intersections would continue to operate at acceptable levels from the traffic standpoint.

4. The relationship of land uses within the PUD to each other, and the relationship of the land uses within the PUD with surrounding external land uses, both present and future.

No obvious internal land use conflicts have been noted. The golf course is a relatively low impact recreational resource that is a part of the housing development and should be compatible with both the single family homes and the attached residential homes. The attached residential component of this development is minimal and is located in separate areas from the single family homes located further to the east and south.

External land use conflicts might be anticipated with the industrial park to the west. Single-family homes proposed in Phase One will adjoin both the existing Zoltek manufacturing facility that is located in the Missouri Research Park as well as the Duckett Creek Sewage Treatment Plant. As the proposed residential lots in Phase One are comparatively small and there is no shown vegetative buffer, the homes would be located fairly close to these existing industrial uses. A vegetated buffer, a landscaped berm or a sight proof fence or other similar measure should be considered to reduce the impact of the industrial development to the north and west on the homes that are proposed for that area of the development. The residential/recreational development could be complementary to the research park as it could reduce commute times.

5. Compliance with the requirements of this Article of the Unified Development Ordinance regarding the concept plan, and relating to land uses and housing density, including reasons for increased density if such a recommendation is made.

The applicant has proposed rezoning the property from A, Agriculture District (minimum 5-acre lots) to R1A, Multi-Family Residential District (minimum 1-acre lots). The minimum lot width is proposed to be reduced from the required 125' to 70'. The proposed front yard setbacks for the development would be 15 feet from the front property line, except that homes with a front facing garage would have a 25-foot front yard setback meaning that parking could normally be accommodated on the driveway without vehicles encroaching in the private right-of-way. A 25-foot rear setback in the single-family area and a 15-foot rear setback in the multi-family area are proposed. The side setbacks are proposed to be reduced to 6 feet from the districts required 20 feet. The developer is proposing a more dense development than is currently allowed by the R1A zoning designation if the golf course is not included in the discussion. If the golf course is included, the development is slightly under the permitted density of 1 unit per acre at 0.94 units per acre. The PUD overlay provides for surety as to what will be developed when a higher or lower density is proposed.
The proposed density of development is generally compatible as a transition between the existing riverfront to the south and the existing industrial to the north. The project generally conforms to the Design Standards as stated in Section 405.200 of the Unified Development Ordinance. One area where it does not conform would be Subsection C of the above stated section. There will be areas in the development that exceed 30% in slope and as such would need to be platted as common ground. According to the developer, the areas with slope exceeding 30% would have a restriction placed upon the deed preventing any disturbance of that area. There are areas in the provided lot layout that will not be included in a buildable lot and would most likely be in a common ground area. This issue must be addressed in the preliminary plat stage.

RECOMMENDATION

County staff recommends that the Planning and Zoning Commission recommend approval of both the zoning map amendment and the PUD concept plan as the plan generally conforms to the 2025 Master Plan and the review standards of Section 405.215 of the County Code.

PRELIMINARY PLAT CONSIDERATIONS

Should the County Council approve this application, the applicants would next prepare a Preliminary Plat and Final Development Plan for review by the Planning & Zoning Commission and County Council. The following concerns would need to be addressed at that time:

1. Under the County's PUD standards, land within the development with slopes exceeding a 30% grade must be set aside as common ground under common ownership and maintenance. Approval of a final development plan and preliminary plat would require amendment of the PUD ordinance or a variance granted by the Board of Zoning Adjustment.

2. Variances from the subdivision regulations would be required for the street design as the proposed private streets do not appear to conform to street width, street grade, street curvature standards, block length, and potentially other standards.

3. Connections to Research Park Drive and Research Park Circle may necessitate various improvements, potentially including upgrading the intersection of Research Park Drive and Research Park Circle. The County's acceptance of any private streets for public maintenance, such as in the Missouri Research Park, may also necessitate improvements to public street standards.

4. To reduce potential land use conflicts, in the Final Development Plan, the lots located immediately adjacent to the existing industrial uses should provide for, or insures the retention of, a physical separation between residential and non-residential uses.