ARENA PARKWAY/PAGE PLANNING DISTRICT

St. Charles County Community Development Department Planning and Zoning Division
And
St. Charles Community Development Department

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ARENA PARKWAY/PAGE PLANNING DISTRICT

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Introduction

The St. Charles County Master Plan, Envision 2020 is a policy document, providing guidance for decisions regarding the future physical growth and development of the county. The plan is implemented through the application of zoning and subdivision regulations, the thoroughfare plan, and the capital improvements plan. The plan is long-term and comprehensive.

The St. Charles County Master Plan is updated or revised in response to changing conditions, county policies and actions, and planning studies. Analysis of specific sites in detail is accomplished through a small area planning process. The results and recommendations of these studies may result in revisions and updates to the Master Plan via a plan amendment. An analysis of the Arena Parkway/Page area was envisioned with the adoption of the Master Plan in 2008 and designated on the adopted 2020 Land Use Plan as the “Arena Parkway/Page Planning District”.

The purpose of this small area plan is to develop a land use plan that provides the best land use arrangement with the least amount of negative impacts. Different types of land uses, (retail, office, multiple-family residential, recreational, etc.) will introduce different challenges and criteria for the development of this small area. It is paramount to select the right mix of land uses which will serve and complement each other and the area.

Description of Study Area and Surroundings

Location  The area is located on both sides of the interchange of Missouri Route 364 (Page Avenue Extension) and Arena Parkway/Upper Bottom Road. On the west side of the interchange are undeveloped acreages and a few non-farm residences with accessory buildings, a cellular tower site, and along the Missouri River is the KATY Trail (Missouri River Trail State Park) which is administered by the Missouri Department of Natural Resources. The majority of the undeveloped land immediately west of Page Avenue is the site of a future county park.

On the east side of the interchange is a small sixteen lot subdivision (Timber Crest), scattered non-farm residences, undeveloped acreages, and a trailhead and parking area for the KATY Trail which is located along the Missouri River. There is also a garden apartment/condominium project and a villa multiple-family residential development on Arena Parkway. On the north side of Arena Parkway are Taylor Branch Creek and various small creeks which transverse through some of the properties. Some of the areas along these creeks are characterized with rough relief.

The boundaries of the Arena Parkway/Page Planning District are depicted on Map A. The entire area is situated on both sides of Missouri Route 364 and contains approximately 89 acres.
Current Zoning
On the northwest corner of Missouri Route 364 and Upper Bottom Road is C2, General Commercial District, and the property on the east corner of Upper Bottom Road and Upper Bottom Court is also C2 zoning. The areas adjacent to the Missouri River are A, Agricultural District with FW, Floodway Overlay and FW, Floodway Fringe Overlay Districts. There is one undeveloped property within the study area along the east side of Arena Parkway zoned R3A, Medium Density Residential District. All of the other properties in the unincorporated county and the city of St. Charles are zoned R1E, Single-Family Residential District. See Map B.
Current Land Uses

West of Page Avenue, along Upper Bottom Court are non-farm residences, a barn, accessory buildings and a cellular tower. A property reserved through a life estate arrangement for a future county park site is on the west side of Upper Bottom Court. On the north side of Upper Bottom Road is an undeveloped site which is partially graveled and has been utilized as a seasonal fireworks stand site. Plans to develop a gasoline service station/convenience store/car wash have been approved. Additional commercial development is also contemplated for this site.

Along the east side of N. Hemsath Road, north of Arena Parkway, are single family residential homes on large lots. Adjoining the north side of Arena Parkway is undeveloped acreage which is partially heavily wooded and is traversed by Taylor Branch Creek. On the west side of N. Hemsath, is the “Boulders at Katy Trail” an apartment and condominium development consisting of 314 units.

South of Arena Parkway, between S. Hemsath Road and Arena Parkway are single-family residences on large lots. There are also two small ponds on the properties.

Along the north side of South River Road, and also along the south side of Mulberry Drive, are 16 single family residences. Also in this same immediate area is a tract which is undeveloped.
Along the south side of South River Road are single-family residences on large acreages and the trailhead parking area for the KATY Trail. Map C provides an overview of area land uses.

**Map C**

**Road Classification and Street Conditions**

Arena Parkway is a four-lane 90 foot wide minor arterial serving the southeastern section of the Golden Triangle Area. The roadway expands to five lanes at the Missouri Route 364 (Page Avenue Extension) interchange. This arterial is in good condition and meets its classification function. The average daily traffic on Arena Parkway directly east of Hemsath Road is currently estimated at 14,000. By the year 2023 the average daily traffic on Arena Parkway is projected to be 25,000.

Upper Bottom Road is a three-lane 80 foot wide minor arterial. It was reconstructed and widened within the last ten years and functions according to its classification.

Hemsath Road north of Arena Parkway is a minor collector. Hemsath Road was also reconstructed and widened during the last ten years and functions well. On Hemsath Road north of Arena Parkway, the average daily traffic count is estimated at 3,000. Hemsath Road is projected to have 5,000 daily trips by 2023.

Traffic across the Veterans Memorial Bridge currently averages an estimated 60,000 trips on a daily basis.
Mulberry Lane, Rosebud Drive, South River Road, Upper Bottom Court, and Hemsath Road south of Arena Parkway are local streets. Hemsath Road does not align with the intersection of Hemsath Road on the north side of Arena Parkway.

**Sidewalk and Bicycle Access**

There are presently few sidewalks in the study area. If the area were to be developed in a multiple use fashion with office structures, retail commercial, service commercial facilities, multiple-family structures and a recreational area, the installation of sidewalks would facilitate connectivity between different land uses. The development of the sites within the study area provide a genuine opportunity for connective trails and sidewalks to these regional trail networks.

The 14-mile Centennial Greenway from Forest Park to Creve Coeur Lake has been extended into St. Charles County via the Veterans Memorial Bridge on Missouri Route 364. The greenway also connects with the KATY Trail within the study area. Future trail extensions along the border of Heritage Trails subdivision crossing Missouri Route 364 by a future bridge and connecting with Muegge Road. The trail is also planned to be extended to the Grafton Ferry Landing, although the exact route has not been established. This trail would be one more linkage for the system the bicycle facilities for this area.

**Survey of Development Constraints**

Timber Crest subdivision having 16 developed lots creates some constraints. However, there are only five property owners which could facilitate the consolidation of the site. The average lot size is 11, 640 square feet and the 2008 average value is $84,154. Considering that the total area only comprises 4.26 acres, but has a market value (based upon assessor records) of $1,346,460 may not facilitate an individual development of that site. Reuse of the site will also necessitate demolition of the existing structures which adds cost to the development of this area.

The floodway and floodway fringe areas are generally located between the Missouri River and the KATY Trail. Taylor Branch Creek which crosses under Arena Parkway have both floodway and floodway fringe areas between Blanche Drive and Hemsath Road. The elevation of the 100-year floodplain in this area varies between 458 and 460 feet NGVD. The 33 acre site on the north side of Arena Parkway is impaired by heavy topography created by the serpentine flow of Taylor Branch Creek. This creek and the setbacks from this creek remove about 10 acres from any use. The floodway and floodway fringe areas are depicted on Map D.

The alignment of Arena Parkway related to its curves and hills will impact the location of access points to adjoining property, particularly as site intensity increases. In addition, the intersection of Arena Parkway with Page Avenue and Hemsath also impact driveway location decisions. The area south of the subject area on the St. Louis county side of the Missouri River consists of floodplain, farms and a small airport. Residential development of any significant amount is absent from this area. The lack of residential in this area will therefore have a significant impact on the feasibility for retail use of the study area.
Site Attributes
The south side of Arena Parkway has some unique vistas that are not prevalent in many development sites. These vistas, depending on the height of buildings, afford views of the Missouri River and the Missouri River valley in St. Louis County. To the west of the site, a future park will provide a continued open and natural setting. Property on the north side of Arena Parkway would overlook a forested creek valley. The proximity of the trailhead to the Katy Trail provides another amenity for adjacent land uses.

The proximity to Page Ave. and St. Louis County as well as being on this major regional route that will eventually tie into I-64 (Hwy 40/61) provides significant location advantages.

Water and waste water services are located nearby and provided by the city of St. Charles. Arrangements for connections would need to be made with the city.

Arena Parkway is designed to accommodate higher volumes of traffic than what currently exist.
Economic Analysis

In order to obtain a check on potential uses of the site by professionals in the area of commercial real estate development and economic development, a panel was convened by the city of St. Charles and the EDC of St. Charles County. While this analysis was not a real estate development analysis that examines the economic viability of a particular use and location, the discussion does provide opinions by professionals in commercial and economic development. In summary these opinions indicate that:

- The site is not a prime retail development site as it lacks a 360 degree residential development base around it.
- The location and site lends itself to be a great office campus development. Support service type of uses integrated into the development would also be viable.
- Urgent care or medical facility due to absence of this type of use in the area.
- Multi-family residential.
- Hotel

Development Analysis

There were several development scenarios examined for properties within the study area. These alternatives evaluated potential land use, the square footage of planned structures and/or housing unit count for each parcel, and the average daily traffic count produced by each development scenario. For analysis purposes, the study area was divided into 4 sub areas as depicted on Map E.

Map E
**West Side of Missouri Route 364 (Page Avenue Extension)**

**Sub Area 1.** There are two locations off Upper Bottom Road that have development potential. The other large acreage site in the area is planned for a future park. The future county park site could potentially generate on average 231 daily trips.

On the north side of Upper Bottom Road, the site is already zoned and planned for commercial development. The parcel has three lots with the middle one slated for a service station/car wash/convenience store. Assuming additional commercial development on the other two lots, an estimated average daily trip generation of 4,932 could be expected.

The other development site is at the southeast corner of the intersection of Upper Bottom Road and Upper Bottom Court. If these properties were developed as an office center, average daily trips would be 685. A retail commercial development at this location would generate average daily trips of 1,551. The only other development alternative for this 3.5 acre site would be multiple-family residential. Due to both its size and that a cellular tower exists on the property, a mixed-use land use consisting of medium density residential consisting of condominiums or apartments with a neighborhood village commercial area, a multiple family residential apartment/condominiums, an office complex, and commercial use of the site.

Commercial development of the site could produce approximately 200,000 square feet of space. This amount of floor area could generate 8,588 trips. Taking into consideration, the topography of the site, the surrounding residential uses, the limited retail attractiveness of the site and the access challenges for large trip generators, a sole commercial utilization of the site may prove difficult to market and to integrate into this area.

The forested Taylor Branch Creek valley, which will have to be maintained in its natural state, will provide an attractive visual amenity for the development of multifamily residential. The multiple family development, potentially consisting of 228 dwelling units for rental or sale would generate a daily trip count of 1,532. This development type would be compatible with the Boulder Development (multi-family residential) to the west of the site. The single family to the northeast is buffered by significant forested topography of the Taylor Branch Creek valley.

**East Side of Missouri Route 364 (Page Avenue Extension)**

**Sub Area 2.** On the east side of Missouri Route 364, north of Arena Parkway, is a site containing 32.7 acres of which approximately 22.9 acres would be developable. The land use options explored for this site included a mixed-use land use of medium density residential consisting of condominiums or apartments with a neighborhood village commercial area, a multiple family residential apartment/condominiums, an office complex, and commercial use of the site.

Commercial development of the site could produce approximately 200,000 square feet of space. This amount of floor area could generate 8,588 trips. Taking into consideration, the topography of the site, the surrounding residential uses, the limited retail attractiveness of the site and the access challenges for large trip generators, a sole commercial utilization of the site may prove difficult to market and to integrate into this area.

The forested Taylor Branch Creek valley, which will have to be maintained in its natural state, will provide an attractive visual amenity for the development of multifamily residential. The multiple family development, potentially consisting of 228 dwelling units for rental or sale would generate a daily trip count of 1,532. This development type would be compatible with the Boulder Development (multi-family residential) to the west of the site. The single family to the northeast is buffered by significant forested topography of the Taylor Branch Creek valley.
north side of the site would abut a single-family subdivision. The location provides ready access to Page Avenue and Arena Parkway providing quick and convenient access for work commuting trips. Considering that multi-family residentially developments usually are planned and developed as large scale projects, this development type would lend itself to unified planning and the provision of limited access points at locations that can safely accommodate the trips generated and not negatively impact traffic on Arena Parkway or Hemsath. Appropriate locations where new multi-family residential can be compatibly integrated into the existing land use pattern are rare. This may be one of those sites and therefore affords an excellent utilization of the site.

A variation of the multi-family residential development described above provides for the integration of a limited amount of office and commercial development into the residential development thereby creating a mixed use project. Commercial uses would be low traffic generating that are conducted within a building. A mixed use consisting of 128 dwelling units and 48,700 square feet of office and 20,000 square feet commercial space would therefore generate 2282 vehicle trips per day.

An office development of the site was also examined. This use of the site would be compatible with surrounding uses. The site’s characteristics, namely the forested creek valley would provide a site amenity and attractiveness for the marketing of the location. For the most part, the adjacent single-family uses would be buffered by this forested creek valley. An office complex, consisting of 390,000 square feet could be created and would generate approximately 4,454 trips per day. A mixed use, integrating commercial uses that are conducted within a building could also be a variation. This scenario contemplates 312,000 square feet of office and 78,000 square feet of commercial and would therefore generate an estimated 7,020 trips per day.

Sub Area 3. The area south of Arena Parkway bordering Hemsath Road has three different land use arrangements that were examined. These include an office park development, a multiple-family residential (apartment) development, and a commercial shopping center. Of a total of approximately 35 acres, approximately 31 acres are developable.

Due to the area’s view shed and location, this site would be an attractive location for office development. Being at the intersection of Missouri Route 364 and Arena Parkway would facilitate access to an office park both locally and regionally. Office structures of six stories in height would have an advertising advantage adjacent to a major transportation artery. This would be a viable asset for leasing office space. This area could potentially accommodate a total of 640,000 square feet of office development. Put into context of a development project, it would accommodate about five to six story office buildings having about 128,000 square feet each. Twenty-one acres of surface parking would be required to provide for 2,133 parking spaces.

The average daily trips generated by an office development of this size would be about 7,308. The lower average daily traffic for an office park versus a commercial development would be less congestive for Arena Parkway. The development of Class A or Class B office space would extend this type of land use which already exists along Page Avenue in St. Louis County at the I-270 interchange.
A variation of the above would add a small amount of supportive commercial uses. Expected trip generations from a development consisting of 610,000 square feet of office and 30,000 square feet of commercial would generate 6966 and 1330 trips respectively.

Discussions with the Director of Transportation and the County Engineer both indicated that this amount of traffic would probably necessitate two entrances onto Arena Parkway. They also indicated that the section of Hemsath Road south of Arena Parkway would need to be relocated to align with a signalized intersection of Hemsath Road on the north side. The present distance between the Page Ave. on/off ramp signal and S. Hemsath is approximately 240 feet and is not sufficient for a second signal.

The second concept considered the development of 622 apartments at this location. This use would generate an average daily traffic count of 4,179. Due to its view shed over Missouri Route 364 and the Missouri River valley area, the site would provide an attractive site for a multiple-family development. Also the drive time to employment centers within the I-270/Page Avenue Corridor may be an attractive feature for a multiple-family residential complex. Nearby amenities such as the KATY Trail and the proposed county park could provide recreational opportunities for residents of the multiple-family development.

This location provides a very compatible location for multi-family land uses. Assuming the redevelopment of the current single-family residential sites on the south side of Arena Parkway, a multi-family residential development is very removed and isolated from low density development. However, based upon the location of this site, a multi-family residential use may be an under utilization of the land.

Commercial development of this site could generate the highest number of vehicle trips. Development having a total commercial square footage of 315,000 square feet would generate an average daily trip count of 13,526. This level of traffic would be approximately 185% of that generated by an office park, and approximately 323% greater than what would be generated by multiple-family residential development of this site. A commercial development, similar to the office park alternative, would necessitate more than one entrance onto Arena Parkway. While the front of the site has excellent visibility from Missouri Route 364, the rear of the site does not have the same visibility since it is approximately 400 feet removed from the right-of-way. Due to the amount of vacant commercial properties at the present time securing leases for a very large commercial site may take an extended period of time. As of March 31, 2009, the St. Charles County Economic Development Center lists 282 buildings and 146 sites for possible commercial and/or industrial usage. With Commercial and Economic development professionals advising that the site is not a good commercial location, this land use arrangement may not be a viable development alternative for this site. In addition, the amount of traffic generated may be challenging to successfully manage.

**Sub Area 4.** The lots in Seiling Subdivision, lots 2, 2pt., 3, and 4 are programmed the same in all alternatives as multiple-family residential in the form of apartment development. This is due to the fact that the mid-point in this area is already zoned R3A, Multiple Family Residential District. It would be logical to conclude that the properties on either side of the R3A zoning would also be developed also as multiple-family residential. The frontage on either side of the property zoned as multiple-family residential would be somewhat limited for commercial usage since it is narrow and elongated. Also since the multiple-family zoning is in the middle of the
area, it would seem impractical to develop the smaller properties on either side as commercial or offices. The total average traffic generation from these properties proposed to be developed with 155 multiple family units is 907. Of a total of 15.82 acres, it is estimated approximately 13.55 acres are removed from the floodway and floodplain fringe areas and are developable.

Map F

Traffic Impact Analysis

The land use options discussed above have significant trip generation potential. It will be important that considered thought and study be made to insure that traffic from the development of the area can be handled in a safe manner and does not degrade the capacity of the thoroughfare to function properly. The following presents an overview of the traffic related issues and standards suggested by the Missouri Department of Transportation’s Access Management Guidelines.

Distance from Page to the first major public road intersection with full median openings or left turn opportunities from a major roadway should be 1320-2640 feet away. N. Hemsath is the first road intersection with Arena Parkway northeast of Page Ave. N. Hemsath is 370 feet from the base of the north on/off ramps and 450 feet from the centerline of the ramps to the centerline of the intersection, far short of the suggested guideline.

S. Hemsath Road is located about 140 feet from the base of the north off-ramp from Page Ave. The guideline distance is 750-1320 feet. The existing location of S. Hemsath, based upon future traffic and projected land use trips will not adequately function in its current location. If an access point to Arena Parkway is needed in this area, the potential location would be opposite N.
Hemsath. This would have to be thoroughly examined to determine feasibility of this location in light of its close proximity to the traffic signals at the ramps and whether traffic signals would be needed at the Hemsath intersection.

Traveling northeasterly from N. Hemsath along Arena Parkway, sight distances are impaired by the curve and existing topography for a distance of approximately 375 feet from the centerline of Arena Parkway and N. Hemsath. This condition also impacts visibility of left-turn movements to property on the north side of Arena Parkway. Once past this point, other un-signalized access points may be possible. The functioning of these driveways would also need to be analyzed for left and right turn improvements needed to insure safety and no capacity impairment to Arena Parkway. Standards for driveway spacing suggest a 440-660 feet separation.

Signalized intersection spacing guidelines provide for a 2640-5280 feet on major intersections and 1320-2640 feet between minor intersections. South River Road intersects Arena Parkway about 2100 feet from signals at the Page on/off ramps and is 1600 feet from the centerline of N. Hemsath Road. Based upon the estimated trips that could be generated from the property on the south side of Arena Parkway, Areas 3 and 4, it is probable that a traffic signal will be necessary. The general location of the S. River Road/Arena Parkway intersection would minimally adhere to standard separations from other traffic signals. Considering the topography and regulations for the protection of natural watercourses, the development of Area 2 would not have access to this intersection and therefore, it is expected that a T-intersection will result. Considering that Sub Area 3 and 4 will generate the highest volumes of ADT and peak hour trips, any needed signalization should favor serving this area. Other signalized intersections along Area 2 frontage would not comply with normal standards and would potentially impair Arena Parkway capacity and functionality.

Access to the property on the north side of Arena Parkway, Area 2, will be impacted by sight distance, topographic, signalized and un-signalized intersection locations and watercourse constraints. Sight distance constraints affect the northeasterly 1000 feet of property for traffic traveling south. Topographic and watercourse constraints will impact almost the same area for a distance of about 800 feet. For northeast flowing traffic, sight distances are impacted for a distance of about 400 feet from N. Hemsath road due existing topographic conditions and the easterly curve of Arena Parkway. This will affect the ability to see stopped left-turning vehicles.

Standards for corner clearance distances on major roadways are 440-660 feet from the intersection and 220-330 feet from intersection on minor roadways. Using the mid-point of these ranges suggests that access to the Area 2 should be 500 feet northeast of the N. Hemsath intersection on Arena Parkway and 275 feet north of the intersection on N. Hemsath.

Access to Area 1 will also impact safety and traffic congestion. An access to Area 1 has already been determined with its location approximately 300 feet away from the traffic signal at the south on/off ramps. This access point serves the property on the north side of Upper Bottom Road. Upper Bottom Court is 728 feet from the traffic signals. Upper Bottom Road is tapering down to 2 lanes at this point with no current provisions for left-turn lanes. Further development of area will necessitate intersection improvements. No access directly to Upper Bottom Road should be permitted as traffic queuing at the traffic signal backs up for a significant distance. Access to the westerly portion of Sub Area 1 may benefit by having another access point opposite Upper Bottom Court but would need further analysis.
Map F depicts the aforementioned traffic considerations for the development of the study area. The actual traffic impacts and corresponding development constraints may be more or less than discussed above. Development specific traffic analysis will be needed to determine the impacts and improvements necessary to manage the traffic generated from this area in a safe manner and does not impact the function of Arena Parkway. Any analysis must take into account the development of the entire study area. Parcel by parcel analysis, absent the larger picture will not result in a positive outcome or maximize the use of the land.

Map G

Future Land Use

Planning Process
Considering the location of the study area and the potential for services to be provided by the city of St. Charles, the staffs of the city and the county have collaborated on the development of this plan to facilitate the creation of a plan that both entities support. Public participation has also been incorporated through several public forums as the plan has progressed. It is anticipated that both entities will engage in their own review and endorsement processes.

Vision for the Area
The following vision statements represent the strategic points utilized to guide the development of the plan. These points indicate the desired outcomes for land use and development in the study area.

- Land uses are compatible with existing area land uses.
• Land Uses provide a reasonable and realistic use of study area property.

• Traffic impacts are minimized through the control of access points and the provision of needed infrastructure to support development.

• Natural and environmentally sensitive areas such as wetlands, steep slopes, and flood plains are retained and preserved.

• Pedestrian connectivity to the plan area and adjacent land uses and to the Katy Trail trailhead should be incorporated into development plans.

• Developments are well planned and designed creating attractive and quality site development.

Future Land Use Plan

Sub Area 1 The north side of Upper Bottom Road is presently zoned C2, General Commercial and has an approved plan for development of the site with a service station/car wash/convenience store. No zoning change is necessary for this portion of sub area 1. The remaining portion of this area is located on the southeast corner of Upper Bottom Road and Upper Bottom Court. To the south of this site is a 100+ acre site planned for a future passive county park site. Development of this portion of sub area 1 for commercial or high density residential uses is not compatible with the passive nature of this future park. However, an office development of the site would be compatible, as the use is less intensive and less traffic generating than some uses and would have less impact on this future park site. The adjacent future park creates an attractive visual amenity that will benefit the development of high end office development.

Sub Area 2 Development of this area is challenged by topography, access constraints to Arena Parkway and Hemsath Road, and regulatory constraints regarding the creek that winds its way through this property. In consideration of those constraints and that the surrounding land use varies from multi-family residential on the west side of Hemsath to single-family residential on the east and north sides of the property, the best compatible and supportable use for the property is multifamily residential. Due to topographic, tree preservation requirements and creek issues, a natural buffer area is created which affords the ability to insert higher density residential development on the site without impacting adjacent uses. This land use also provides a transition from the proposed office campus on the east side of Arena Parkway and the adjacent lower density residential developments. The topographic features of the site also afford an amenity that would be conducive to developing the site for residential purposes.

Multi-family residential development of the site is projected to have the least traffic impact when compared to projected commercial or office developments on the site. When considering traffic control constraints, a multi-family residential development’s traffic generation may be accommodated without signalized control.

A variation of this land use would be a mixed use residential development whereby a limited amount of commercial or office uses could be integrated into the multi-family residential development plan. While this may have limited potential, it is the intent to afford as much design flexibility and creativity as possible. Due to the nature of the site and particularly the
limited access potential, the area should be designed and developed under a unified plan. This planning process should also seek design compatibility with adjacent land uses.

**Sub Area 3** The most significant development area of the study area is Sub Area 3. It comprises 39% (35 acres) of the land in the study area, has exceptional visibility from Hwy 364/Page Avenue, great accessibility to the region, unparalleled vistas of the Missouri River valley, limited number of property owners, and frontage along Arena Parkway providing access to the site. While these factors can be great advantages for a variety of uses, this site also has limitations. It lacks residential development surrounding the site, referred to as “360 degree rooftops”. This factor is key to the development of large commercial centers. Coupled with development growth trends in the northwestern part of the county and the current commercial development climate, this location is not considered a prime commercial site. While some commercial in this area might be supported by nearby residential development and the traffic on Page Avenue and Arena Parkway, it is not expected to be significant.

Parcel by parcel development of this Sub Area will result in traffic issues and under utilization of the entire study site. Sub Areas 3 and 4 may be the only areas in the planning district where traffic generated by development could be served with a traffic signal. It is expected that signalization will be necessary to accommodate projected traffic generated from these two areas. While the analysis portion of this plan identified some access limitations and potential access points with and without traffic signalization, it will be necessary when considering any development of these two sub areas, that a full traffic analysis be performed. Traffic control and improvements identified and needed in con-junction with development of the site should coincide with such development. Likewise, maximum utilization of the site suggests that the area should have a unified plan that depicts how the area will be planned, the architectural character of the development and how this area will be connected to adjacent areas.

Sub area 3 provides an excellent site for an office campus development. Six to eight story buildings would take advantage of sight vistas and allow for the maximum utilization of the site. Supportive commercial activities providing services to the offices and secondarily to the surrounding area could be accommodated if integrated into a mixed use development plan. These secondary supportive uses should not precede development of the site for its primary office function.

Connectivity of this Sub Area to adjacent Sub Areas and to the Katy Trail trailhead should be incorporated into development plans for the site. Existing public roads within this area are not viewed as fixed locations or necessary public facilities. In developing the site the removal of such roads could be considered as long as acceptable access to serve properties and the trail head are provided.

**Sub Area 4** This area also affords some scenic vistas of the Missouri River valley depending on the height of buildings. Since this portion of the site is less visible from Hwy 364/Page Ave., the amount office land use planned for area 3, and desiring to step down or transition the land use in this area, this site lends itself for multi-family residential development. Development in this sub area provides an opportunity to have signalized traffic control affording opportunities to accommodate higher traffic generating or more intensive use of this area. Multi-family residential will provide a transition from the office development in Sub Area 3 and a compatible use with the multi-family condominium projects on the west side of Arena Parkway.
Natural Features and Environmental Concerns
Floodway areas along the Missouri River and Taylor Branch Creek must be protected and not disturbed. The heavy topography and forested areas along these waterways should also be preserved, not only for their visual amenity but also to protect these slopes from erosion. These areas are specifically delineated on the plan as Open Space/Park land use. Included in this land use designation is the trail head for the Katy Trail.

Land Use Map
The Page Ave/Arena Parkway Planning District Land Use Plan as described above is depicted in Map H. It graphically depicts the recommended land use plan for this planning district.

Implementation Strategy
The implementation strategy has been crafted for use by either the county or city. Therefore, only general references are made to how the areas could be zoned or the plan implemented as each entity has different mechanisms that could be used to implement the plan. Any rezoning of a sub area or portion of a Sub Area, particularly for sub Areas 2 and 3 should include and be subject to a specific development plan including a site plan and architectural plan for the development of a site. A traffic analysis will also be necessary along with a funding plan for any traffic related improvements required, particularly for Sub Areas 2, 3 and 4. Within Sub Areas 2, 3 and 4 there are areas along the Missouri River and Taylor Branch Creek that are depicted for parks and open space. These areas are within the floodway or have
significant slopes. These areas have either regulatory constraints and/or would have potential environmental impacts if disturbed. Plans for development in sub areas having such designated parks and open space areas should avoid disturbance and address any regulatory constraints on development.

**Sub Area 1** The area on the east side of Upper Bottom Road and Upper Bottom Court is partly county zoned C2, General Commercial and R1E Single Family Residential. Conformance with the recommended land use plan would require that the property be zoned an office district. The remaining property county zoned R1E could be considered for an office district when a use is identified for the property. The property on the west side of Upper Bottom Road is already county zoned C2, which is consistent with the land use plan.

**Sub Area 2** A multi-family zoning district would implement the land use plan for this sub area. A development plan for a residential mixed use development incorporating office and/or commercial development into the plan would also be appropriate and should require the review and approval of a development plan. A development plan for a portion of Sub Area 2 should recognize the limited potential for access and provide an access plan that will accommodate development of the entire Sub Area 2. Development of an access plan should be based upon a traffic analysis and provisions made for funding necessary improvements based upon the anticipated use of the entire sub area and study proposed uses. Development plans should also include architectural plans that will demonstrate how the development will compliment and be compatible with adjacent areas.

**Sub Area 3** Office development of this sub area would require rezoning the area to an office zoning district and be subject to an approved development plan. Considering the size of the area and expected traffic generation, it will be important to review a development plan that addresses development of the entire sub area and traffic that would be generated from the proposed or anticipated development of the site. A traffic analysis based upon the proposed and planned use of Sub Areas 3 and 4, and a plan for how traffic generated by site development can be accommodated and funded should also be required. Architectural and site plans will be appropriate to show designs that will foster compatibility to adjacent proposed and existing land uses.

**Sub Area 4** This area could be rezoned to a multi-family residential district. While a unified development plan would not be necessary, traffic impact analysis and proportional funding of traffic related improvements needed for Sub Areas 3 and 4 should be formulated and incorporated into any development approval.

**Plan Implementation Regulatory Needs**
The county currently lacks the zoning mechanisms to require site and architectural development plans, traffic analysis and funding strategy for traffic related improvements as envisioned for Sub Areas 2, 3 and 4. Therefore, plan implementation would necessitate adjustments in the County’s Unified Development Ordinance. Adjustments could include development of an overlay district or adjustments to the current PUD regulations that provide for unified development plans and traffic analysis and funding planning.