

Kane County Regional Planning Commission

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County Government Center
719 S. Batavia Avenue
Geneva, Illinois 60134

May 15, 2014

Rita Tungare
Director of Community & Economic Development
City of St. Charles
Two East Main Street
St. Charles, IL 60174

Re: Comments regarding the proposed Concept Plan for the Bluffs of St. Charles

Ms. Tungare,

Thank you for your letter dated April 22, 2014, regarding the above project. The Concept Plan was reviewed by Kane County staff and a Staff Report dated May 9, 2014 was reviewed and discussed in a joint meeting of the Kane County Regional Planning Commission and the Kane County Historic Preservation Commission on May 14, 2014.

The Kane County Regional Planning Commission unanimously approved a motion to strongly encourage the City of St. Charles to either recommend that the proposed Concept Plan be modified or discourage it from proceeding through the annexation process based on the content of the Kane County Staff Report. Additionally, the Commission emphasized that any plan proposed for this site should be compatible with the **Kane County 2040 Plan** with a special emphasis on the site being an upland portion of a significant water resource area.

Specific comments and discussion focused on the following issues:

- While the market study supports the need for this type of housing in the City of St. Charles, this location is isolated and is not compatible with many objectives for connectivity, mobility choices, resource protection and active, healthy living adopted in the **Kane County 2040 Plan**.
- While the proposed 285 units is much denser than the 90 units approved by the County as part of a much larger development, it is also too dense because it does not provide for adequate setbacks, usable open space, protection of the steeply sloped areas, buffers to the forest preserve property, or the Prairie Green Preserve and the Mill Creek watershed.
- This proposal does not address the traffic generated by 285 units or provide for how the infrastructure improvements including intersection, rail road crossing and bridge reconstruction, would be completed.

- This parcel is designated as Resource Management Area in the 2040 Plan and is a critical link in a large crescent of open space representing significant public and private investments extending from Campton Hills to the north to the Dick Young Forest Preserve to the south. Any development or preservation of this parcel should be responsive to the standards set in the 2040 Plan and the 2040 Green Infrastructure Plan.

The Kane County Historic Preservation Commission unanimously approved two motions. The first was to accept the staff recommendations with special emphasis on preserving buildings on the Johnsen Farm through adaptive use and the proposed project be redesigned in accordance with the Brundidge Road Corridor Management Plan. The second motion authorized staff, if the parcel is to be annexed, to negotiate an inter-governmental agreement with the City of St. Charles to provide for the continued designation and protections of the Brundidge Road Corridor to prevent jeopardizing significant features and character of the rustic road and adjacent uses.

Specific comments and discussion focused on the following issues:

- The proposed Concept Plan does not recognize the existence of the rustic road or the farmstead nor propose any design features that preserve the tree line, buildings or view sheds.
- The increased traffic produced by 285 units and road improvements would be detrimental to the rustic road corridor. It was noted that in the proposed Settlements of La Fox Plan, the majority of the traffic at the north and south ends of Brundidge Road were proposed to be diverted to the west leaving mainly local traffic on the rustic road.
- The proposed density of 285 units is not in character with the adjacent agricultural uses and rural development.

The enclosed Staff Report and attachments reflect revisions made at the request of KDOT and new comments received from the Blackberry Township Highway Commissioner, who maintains Brundidge Road.

Please contact me if you have any questions regarding the Staff Report, the motions and comments by the two commissions, or would like to utilize any County resources to assist the staff, Planning Commission and City Council in the review and discussions regarding this proposal.

Sincerely,



Mark D. VanKerkhoff, AIA
Director, Kane County Development & Community Services Department

cc: John Hoscheit, Kane County Board District 12
and President, Kane County Forest Preserve
Phil Lewis, Kane County Board District 13
Mark Davoust, Kane County Board District 14
Barb Wojnicki, Kane County Board District 15
Drew Frasz, Kane County Board District 18

STAFF REPORT

TO: Kane County Regional Planning Commission

FROM: Mark VanKerkhoff, AIA, Director

DATE: May 9, 2014 (Revised May 15, 2014)

RE: Annexation & Concept Plan Review – The Bluffs of St. Charles

Overview

The subject of this Staff Report is the Concept Plan and subsequent annexation for the proposed The Bluffs of St. Charles subdivision, which was presented to the City of St. Charles. The City is requesting comments on the proposal from Kane County and other organizations. As stated in the letter from the City of St. Charles, “the purpose of the Concept Plan review is to enable the applicant to obtain informal input from the City prior to spending considerable time and expense in the preparation of detailed plans. It also serves as a forum for owners of neighboring property to ask questions and express their concerns and views regarding the potential development.” This request for comments offers an opportunity for the County to review the proposal through the lens of the Kane County 2040 Plan.

The Regional Planning Commission has been asked to review the proposed annexation and Concept Plan for The Bluffs subdivision for consistency with the Kane County 2040 Plan. This Staff Report is intended to aid the Commission in its review of the Concept Plan and annexation. The following review has been prepared by the Kane County Development Department staff, with input from other departments, with the intent to identify issues and provide information pertaining to the feasibility of the Concept Plan, its relationship to County policies, plans and existing development conditions. This review is submitted to the Regional Planning Commission for its consideration in preparing its comments and recommendations as requested by the City of St. Charles.

Background

- a. **Location** – Southeast corner of IL Route 38 and Brundige Road in Campton Township, adjacent to the City of St. Charles to the north and east. The property is located approximately 2 miles west of Randall Road.
- b. **Acreage** – 96 acres
- c. **Purpose** – To develop the property as a single-family residential subdivision of approximately 285 units.
- d. **Governmental Jurisdiction** – The property is located in unincorporated Campton Township and is thus under the jurisdiction of Kane County. The applicant is proposing to annex the property to the City of St. Charles.
- e. **Land use** – The property is currently used agriculturally and contains a barn and a few houses and outbuildings.

- f. **Adjacent land use** – The property is bordered by the Illinois Youth Center to the north and agricultural land to the east, south, and west. The Mill Creek Greenway abuts the site at its southern boundary.
- g. **Housing market** – The applicant solicited Metrostudy to comment on the local new home market. Most market demand for new homes in the area are for those priced under \$350,000. There is an abundant supply of vacant, developable lots, but they are targeting higher priced homes (over \$400,000). There is no available supply of smaller lots. Based on these findings, Metrostudy suggests new homes in the area should be priced between \$250,000 and \$350,000. The active adult/age-targeted market should be considered due to the growing 55 and over population. These findings are consistent with those of the *Homes for a Changing Region* study currently underway in St. Charles, which compares current housing supply with current and future housing demand (up to the year 2040). *Homes* findings suggest an increase in demand for small lot single family homes and homes affordable to middle-income households, as well as housing to meet an increasing senior population.

Previous Development Proposal

The site of The Bluffs was part of the proposed Settlements of LaFox PUD, which was reviewed by the Regional Planning Commission in March 2005. Settlements of LaFox was to be a master planned community that would include residential, commercial, and community land uses and would cover 1,203 acres in Blackberry and Campton Townships. The subject site would have formed the northeastern corner of the PUD and was proposed to include 90 single-family units on lots between 14,000 and 16,800 sq. ft (see photo below). The development proposal also included the dedication of 5.08 acres to the St. Charles Park District (which encompassed the site’s existing barn), as well as large setbacks from Route 38 and Brundige Road. The proposal also addressed many of the issues identified later in this report. Although the concept plan was approved by Kane County, Settlements of LaFox was never platted or constructed due to the economic downturn.



2040 Plan Land Use

The property is located within the Critical Growth Area of the Kane County 2040 Conceptual Land Use Strategy, which divides the county into three corridors. The Critical Growth Area is where new development and municipal growth should be sensible and well-managed, and where Smart Growth principles should be implemented.

More specifically, the 2040 Plan identifies most of the property as within the Resource Management land use category, with the northern portion along Route 38 proposed open space. The Resource Management category supports compact, mixed-use growth while emphasizing wise management of land and water resources, both through municipal and unincorporated development in the County.

Historic Preservation

In June 2005, the Kane County Board designated Brundige Road a Kane County Rustic Road under the Historic Preservation Ordinance. Recognized for its continued agricultural use, great expansive views of farmland, and farm houses that date from the 1850s to the 1930s, Brundige Road began as a farm land in the 1850s. In addition to its historic resources Brundige Road also contains a natural prairie restoration and abundant wildlife including the Illinois endangered species the Blanding's Turtle that inhabit Mill Creek. As the surrounding property is used primarily for agriculture or open space, the road has significant historic integrity. Residents and property owners along the road together with staff created a Corridor Management Plan that sets out the preservation goals of the road and specific strategies to accomplish them. The Goals are as follows:

Goal #1 Maintain and preserve the rural and natural heritage that exists along the roadway.

Goal #2 Maintain and preserve the natural environment surrounding the roadway.

Goal #3 Preserve agricultural heritage along the roadway.

Goal #4 Preserve historic structures along the roadway.

Goal #5 Provide information of the scenic, natural, and historic qualities of the roadway to both visitors and property owners.

The plan under consideration for development would change the historic use of the property which is based in agriculture, it would remove the agricultural heritage along the roadway and the rural flavor the property currently provides. The plan does not consider the context of the area and makes no attempt to blend in with its surroundings. The plan calls for 284 housing units on 96 acres which would all access Brundige Road to gain entry and exit to the proposed subdivision. Currently there are only eight residences and a handful of agricultural buildings on the designated Rural Route. The activity created by the additional traffic along would negatively impact the historic and rural feel of the road which the Rustic Road designation sets out to protect.

Johnsen Farmstead

The Johnsen Farmstead (southeast corner of Route 38 and Brundige Road) includes four residential structures, a large barn and several outbuildings. The brick American Foursquare style house is in good condition and suitable for rehabilitation in its present location or relocation to a new site. The smallest residence is a rare remaining post-WWII style house commonly referred

to as a “chicken coop” house because of the small size and unique shape. This structure is also suitable for preservation and could be easily relocated to a new site for preservation and interpretation. The large dairy barn is also suitable for rehabilitation on site if a suitable and economically feasible use could be identified. As a “newer” dairy barn it is considered historically significant in the evolution of dairy farming in general and within the county. It is likely a University of Illinois Extension Office building plan or modeled off of one. The barn is not suitable for relocation because of its size and type of construction. The Concept Plan does not indicate details regarding the disposition of the houses and farm structures, only that they do not appear on the plan.

Natural Resources

(Also see attached memo from Water Resources Division for complete comments)

Topography

The site is an upland area in the Mill Creek watershed including three sub-watersheds that drain to the east, northwest and southwest. Some of the most pristine section of streams in Kane County are immediately downstream of the proposed subdivision. There are six USDA, NRCS Classification Soils with either fair or severe wetness or ponding.

Erosive soils and steep slopes will need to be protected or vegetated to prevent soil erosion per the stormwater ordinance. This will help protect Mill Creek from sedimentation and water quality degradation. The proposed plan does not appear to retain the existing tree line or the addition of reforestation to the top of the slope.

Subsurface Drainage

Currently the soils are drained for agricultural purposes with a subsurface agricultural drain tile system. This system will need to be abandoned onsite and its function replicated with a subsurface drainage system and sump pumps for each residential structure connected to the storm drainage system for the subdivision.

The additional pumped groundwater not taken up by retention on site must be treated via best management practices (BMPs) and conveyed to Mill Creek in a new storm sewer system.

Stormwater Management

Careful planning of the site must include preserving and enhancing the groundwater infiltration characteristics in those areas that are mass graded. The Countywide Stormwater Management Ordinance and Best Management Practices call for onsite retention of the first ¾ inch of rainfall runoff from new impervious surfaces. The concept of using rain gardens in public areas and other low impact BMPs should be utilized throughout the development to disconnect impervious areas and protect Mill Creek from being degraded. The pristine reaches of Mill Creek downstream of the development must be preserved intact during and after development. This unique water resource in Kane County could easily be altered or destroyed without paying careful attention to the details in the planning and design of the development.

Water Supply

Water supply upon annexation to the City of St. Charles will be from their city water system which relies on the St. Charles Aquifer. In the area of the proposed development the St. Charles Aquifer is hydraulically dependent upon groundwater recharge, especially from Mill Creek. According to the Illinois State Water Survey's *Water Resources Investigation for Kane County (2009, Meyer, et.al.)* if development continues at ever increasing rates similar to those prior to 2007, base flows in Mill Creek are predicted to disappear during dry periods by the year 2050.

Wastewater Treatment and Reuse

Wastewater treatment upon annexation to the City of St. Charles will be provided at their wastewater treatment facility immediately east of the development site. The proximity of the site to the treatment plant provides a unique opportunity to irrigate public open space with treated and disinfected graywater effluent. The use of graywater will recharge the groundwater system and conserve drinking water that would otherwise be used for irrigation.

The property is located within the Mill Creek WRD Facility Planning Area and adjacent to the St. Charles FPA. Service provided by the City of St. Charles would require a change in FPA boundaries.

Green Infrastructure

On December 10, 2013 the Kane County Board adopted the Kane County 2040 Green Infrastructure Plan and Map. The Plan and Map is an analysis of existing natural resources in the County and recommendations for green infrastructure priorities and approaches. It is intended to be a tool for implementation of the Kane County 2040 Plan adopted the previous year.

The Green Infrastructure Map shows the proposed site of The Bluffs of St. Charles to be among one of the largest swaths of continuous, protected open space in Kane County. Prairie Green to the southwest is the result of a collaboration of a number of property owners and local and federal governments to protect and restore existing natural resources including the Mill Creek greenway. To the north of the proposed site is a combination of public and private open space including ADID wetlands. Both of these areas are connected through greenways to additional protected open space. The water resources of the development site were listed in the previous section of this staff report. These resources must be incorporated in the Kane County Green Infrastructure planning process to promote an integrated resources planning approach and to promote sustainability in the proposed development.

Even though the Green Infrastructure Map does not show green infrastructure on this particular site, it is important to consider the effects development may have on adjacent properties by incorporating conservation and sustainability criteria as called for in the Kane County 2040 and Green Infrastructure Plans.

These criteria include access to open space/green infrastructure on the neighborhood level; connections to regional open space/green infrastructure; protection of the local water supply and quality; and the opportunity for multi-modal transportation within and connecting to areas outside the site.

This may mean that the proposed density and zoning of the site, 285 single family units on proposed lots of a minimum 6,600 sq. ft. (RS-4 Suburban Single-Family Residential District) is not the best use of the site when the water resources of the development environs are being stressed by the development. The density and size of the lots must be balanced with capturing and reusing additional water from the development onsite in order to avoid degrading water quality, and using the water resources of the environs in an unsustainable fashion. Possible solutions to make the development site more sustainable as well as additional details regarding water resources for this site can be found in the attached memo.

Agriculture

The property is currently used for agriculture. The County supports protecting farmland as both a natural resource and economically productive land use. This proposal would take the land out of its agricultural use, eliminating its future potential for both conventional agriculture and production of food for local consumption.

The property is located in close proximity to community garden plots offered for lease to residents by the St. Charles Park District at James O. Breen Community Park and the Geneva Park District at Prairie Green. These gardens would be a positive amenity for residents, although accessing the park by walking or biking would be difficult due to a lack of sidewalks and bike trails.

Sustainability and Energy

The Kane County 2040 Plan and Energy Plans promote land use patterns and strategies that increase energy conservation and energy efficiency and reduce greenhouse gas emissions while promoting sustainable development practices.

The isolated nature of this site does not promote connectivity or multi-modal transportation and raises concerns about the effects single-use residential development may have on the surrounding protected natural resources and water quality. The site is isolated from existing infrastructure and will require inefficient connections to sewer, water, natural gas and electricity. In addition, the isolated nature of this site creates an auto-centric environment for residents to access employment, education, commercial and cultural activities thus increasing instead of decreasing greenhouse gas emissions per household.

Transportation

(revised May 15, 2014, per KDOT)

Staff from the Kane County Division of Transportation (KDOT) has reviewed the concept plan application for the Bluffs of St. Charles (dated 4-7-14). This comment memo should replace the previous comment memo of 5-7-14. We offer the following comments for inclusion in the overall Kane County response.

1. The proposed development calls for 285 single family units at the southeast corner of IL Route 38 & Brundige Road. This is proposed on a 96-acre property that was previously only a small part of the Settlements of LaFox development concept. While the footprint of the Bluffs is considerably smaller than the Settlements of LaFox, the number of total

single family units is comparable in traffic impact as to a large portion of the Settlements. Therefore, we anticipate that the traffic impact to the IL Route 38/Brundige and Keslinger/Brundige intersections will be comparable to the entirety of the Settlements of LaFox development.

2. As such, if additional portions of the Settlements develop, there will be additional impacts to Brundige Road and associated intersections.
3. The Bluffs would be incorporated into the City of St. Charles, meaning the jurisdiction of Brundige Road, along the site's frontage, would transition from Township to City jurisdiction. Access approvals would therefore be granted by the City of St. Charles and IDOT, but the development of these lands would also have significant traffic impacts to Brundige Road (a gravel road under the jurisdiction of Blackberry Township) south of the property.
4. We suggest that a traffic study be conducted and submitted for review by the affected agencies: IDOT, City, County, Campton Township, and Blackberry Township.
5. The Settlements development was approved with various off-site road improvements to mitigate the impact of development-related traffic, which we believe are appropriate:
 - a. Asphalt wearing surface on Brundige Road
 - b. Repair or replacement of Brundige Road Bridge over Mill Creek
 - c. Channelization of the IL Route 38/Brundige intersection. Signalization if warranted.
 - d. Channelization of the Keslinger/Brundige intersection. Signalization if warranted.
6. Brundige Road is currently a Kane County Rustic Road, which would require special coordination with the Kane County to mitigate impacts.

(See attachment for complete KDOT comments)

Blackberry Township Highway Commissioner

(added May 15, 2014, e-mail from Rodney Feese Blackberry Township Highway Commissioner)

“I have been made aware of the possible development of the Southeast corner of Brundige Rd. and Rt. 38 known as Bluffs of St. Charles. Although this development does not fall within Blackberry Township, my concern is the status of Brundige Road and such a high concentration of housing. If the development was located within Blackberry Township, I would have a great concern about the housing density in such a limited area.

The reality is that such a concentration of housing boarding Brundige Rd. requires me to point out that the Brundige Rd Bridge, over the creek is old and if it experiences increased traffic patterns, it will require more maintenance at Township expense. Secondly the approach to the bridge is gravel and not designed to handle the potential traffic from such a high concentration of housing and the traffic it would generate. The third and most important issue is the fact that Brundige Road has a grade level railroad crossing. I do not have to explain to you the potential problems this can cause with increased traffic and train noise. Also Brundige Rd. is a Rustic Rd. within Kane County which allows only certain improvements to this road.

Thank you for taking my concerns into consideration. I would be willing to make my concerns known at any forum you deem appropriate.”

Community Health

The major consideration regarding community health and the proposed development is related to the site's isolated location. Due to its distance from employment opportunities, retail and services, schools, and cultural activities, residents will have to depend on auto travel to meet their daily needs. This will reduce the likelihood that residents will engage in an active lifestyle. In addition, if the developer decides to make the development age-restricted (as suggested by the Metroquest findings), the Ride In Kane program will need to be extended to serve the elderly residents due to a lack of public transit serving the area.

Local Government Comments

City of Geneva – The City of Geneva's Planning Commission discussed the proposed development and agreed on the following concerns:

- How does high density single family residential fit into Brundige Road as a Rustic Road, the City of St. Charles Comp Plan and the broader concept of planning for the area? How does it fit into the overall open space planning of the area, more specifically the protection and preservation of the Mill Creek greenway?
- The impact of a significant increase in traffic generated on the road system; most notably Brundige Road and Keslinger Road between Peck and Randall Road given the Planned Unit Development that is scheduled to be built near Delnor Hospital.
- Stormwater management in relation to Prairie Green given that the wetland bank has been very dry recently.
- The only open space shown is detention ponds.

Staff Recommendations

As noted earlier in this report, the subject property was part of a larger proposed development, the Settlements of La Fox. During the review process for that development, Kane County staff focused on this parcel and through this report, share that knowledge with the City of St. Charles.

Kane County staff encourages the City of St. Charles Planning Commission to consider the technical information and comments regarding the Kane County 2040 Plan included in this staff report in their recommendation for or against annexation, in the areas of:

1. Proposed density
2. Real estate market demographics
3. 2040 Plan land use
4. Natural resources
5. Agriculture
6. Sustainability and Energy
7. Transportation
8. Community health
9. Connectivity

The following recommendations pertain specifically to historic preservation:

In the Adjacent Features and Properties Section of the Brundige Road Corridor Management Plan this parcel is called out to; maintain the open space character, preserve the windbreak (tree line) and farmstead. *Recommended Preservation Strategies:* Open space area should be

maintained within a 150-foot setback from the right of way and adding the parcel to the Rustic Road nomination for inclusion in designation.

Activities for Review and Recommendation by the Historic Preservation Commission:

- New construction within the 150-foot setback from the right of way.
- Removal of healthy trees
- Exterior alterations or additions to the existing structure or its removal.
- New road access points.
- New site development that includes changes to existing topography.
- Changes in land use or zoning.

Proposed plan for Bluffs of St. Charles could recognize the County's Rustic Road designation and encourage changes to the concept plan that will include preserving the rural character of the road. This could be accomplished by following the design that was proposed in the Settlements of LaFox which does not build houses on the road itself and leaves a buffer between the road and the development. The County would like to maintain the Rustic Road status of the road and would encourage the City of St. Charles to enter into an Inter-Governmental Agreement for the extension of the Rustic Road Program for the continued designation of Brundige Rd. There is also the opportunity to preserve the Johnsen barn, the brick 4-square and the chicken coop house making them a focus or central point of the development and provide use by the Park District or the development.

In addition to these comments, the following objectives from chapters in the Kane County 2040 Plan are recommended to be applied in review of this proposal:

Land Use and Built Environment

1. To encourage compact, mixed-use, multi-modal development that will increase travel options within existing urbanized areas, employment centers, and along transit nodes and corridors as a means to accommodate new population growth, reduce land consumption, preserve valuable open space, conserve ecosystem functions, protect water quality, and improve community health.
2. To promote County and municipal policies and regulations that facilitate the application of the Livability Principles, Smart Growth Principles, and Healthy Community Design criteria as an alternative to conventional suburban sprawl.
3. To promote reinvestment in underutilized vacant properties, opportunities for compact, mixed-use development and possibilities for suburban retrofits as preferred alternatives to new development that consumes more farmland and open space.
4. To support a countywide open space and green infrastructure network by prioritizing its protection, restoration, and enhancement through careful evaluation of natural resources prior to new development and utilizing techniques such as conservation design and low impact development.
6. To promote complete, walkable neighborhoods that provides proximity to daily goods and services in order to decrease automobile dependence, and enhance livability and build community cohesion.
7. To capitalize on existing investments in infrastructure by encouraging development in areas where infrastructure is being underutilized or planned for expansion without straining fiscal budgets or creating new environmental impacts.

Mobility and Connectivity

5. Reduce the growth in congestion and vehicle miles traveled, while preserving the County's transportation system and its carrying efficiency (from 2040 Transportation Plan).

Community Health

6. Support and create health promoting neighborhoods, towns, and cities (from 2011 Community Health Improvement Plan).

Housing

7. To prioritize housing in locations that offer infill and redevelopment opportunities, encourages compact, mixed-use, multi-modal development, and enhances community livability, increases walkability and decreases auto dependence.

Agriculture: Food and Farm

1. To protect farmland as a valuable natural resource and economically productive land use through land use policy in both municipal and County land use and transportation decisions.

2. To discourage projects that will have a detrimental impact on the preservation of agricultural lands and discourage the use of public funds for such projects.

Open Space and Green Infrastructure

2. To continue efforts in protecting the environment and restoring the unique and fragile environments associated with the geography of Kane County.

3. To enhance and expand Kane County's green infrastructure network by providing functional connections between water resources, natural areas, forest preserves, cultural and historic sites, and communities as part of the region's Green Infrastructure Vision.

Water Resources

6. To promote Green Infrastructure best management practices and technologies to filter and capture stormwater runoff for improved water quality, groundwater recharge and to enhance the health and livability of our communities and ecosystems.

Sustainability and Energy

4. To promote energy conservation and sustainable development practices in County and municipal health, transportation and land use planning of the three strategy areas.

Historic Preservation

1. To protect Kane County's heritage and historic character through the preservation of historic and cultural resources that contributes to the County's unique sense of place and quality of life.

5. To promote the Kane County Rustic Roads Program with municipalities and increase the number of incorporated and unincorporated rustic road corridors that are designated and protected in order to preserve and enhance the County's rural character.

Economic Prosperity

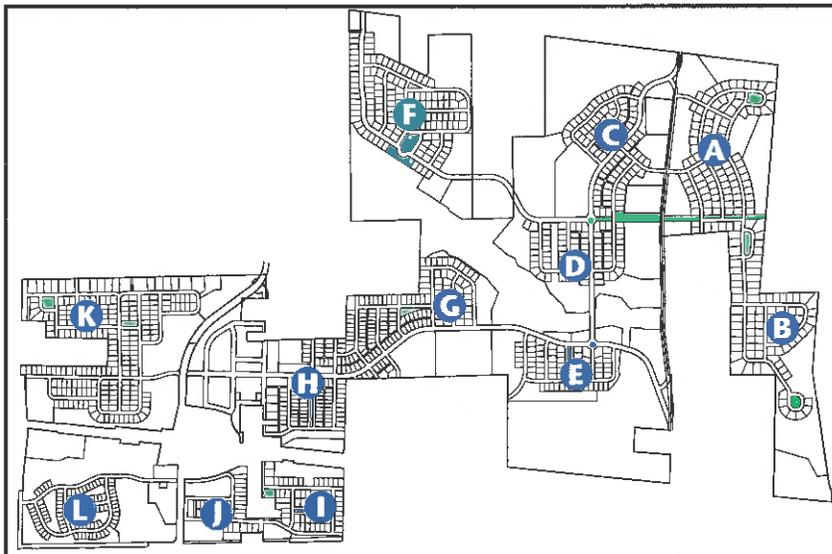
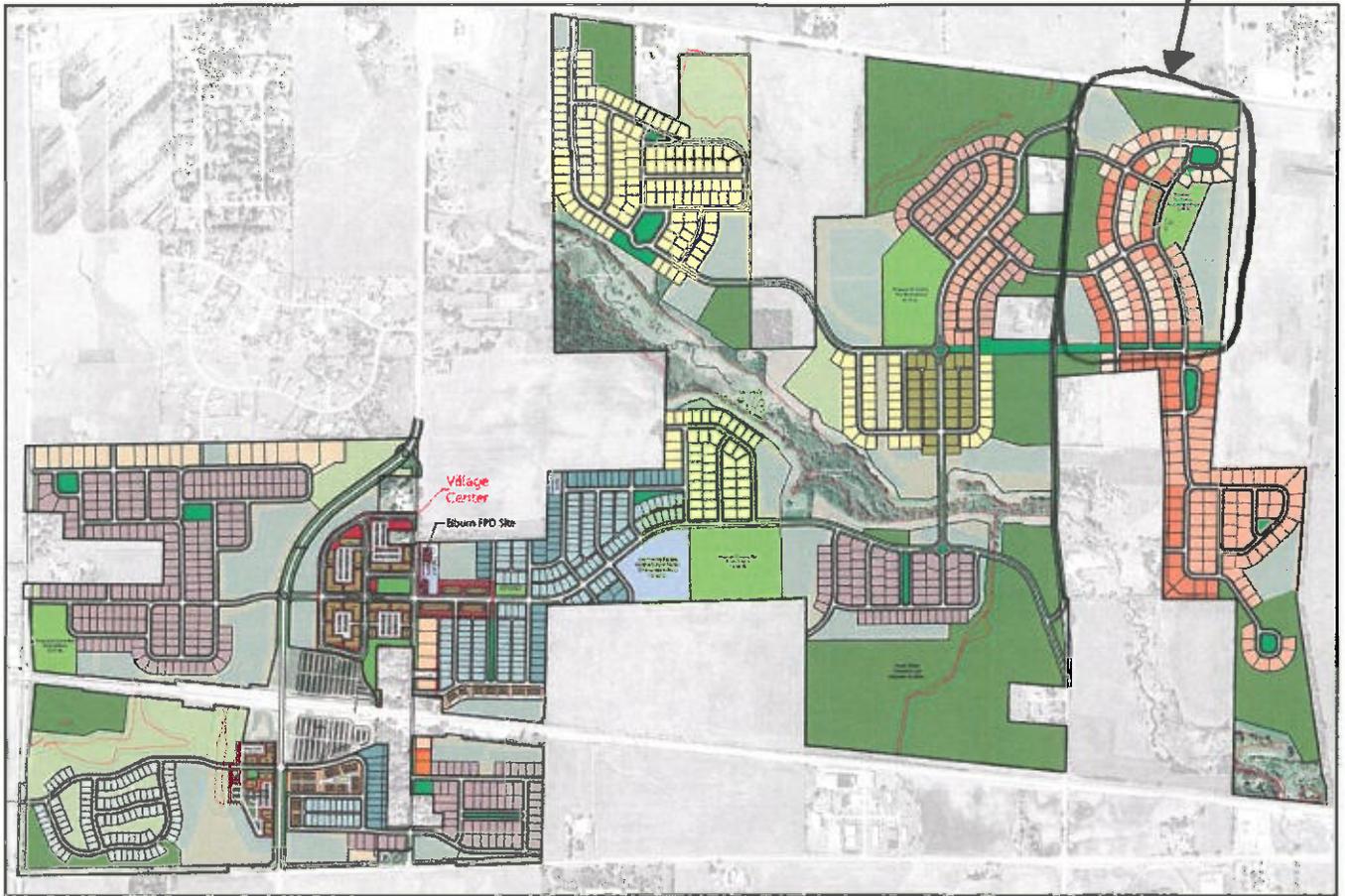
7. To encourage mixed use land use patterns and transit opportunities that reduce commute times and locate small business opportunities and employment centers in close proximity to diverse and affordable housing.

Attachments

1. Settlements of La Fox Preliminary Plan
2. Memo from Paul Schuch, Water Resources Division
3. Green Infrastructure Map
4. Settlements of La Fox Slope Analysis
5. Memo from Kurt Nika, KDOT (revised May 15, 2014)
6. Settlements of LaFox Roadway Improvements

Settlements of LaFox Preliminary Plan

The Bluffs
of St. Charles
Site



Neighborhood Key Map

SITE DATA TABLE

Existing Zoning	F District-Farming
Proposed Zoning	PUD
Single Family Lots	1,194
Townhomes	81
<i>(A total of 75 Auxiliary units are allowed. See page 72 for description and standards.)</i>	
Total Units	1,275
Total Site Area	1,247.35 AC
Total Open Space	656.47 AC – 52.6%
<i>(Includes Community Facilities, Private & Public Parks, HOA & BOA Open Space, Forest Preserve & Sanitary & Stormwater District Areas)</i>	
TOWN CENTER AREA	
Commercial & Residential	35.18 AC
<i>(Includes 442 Residential Units Ancillary to Commercial, Old LaFox Road Mixed-Use Lots & Neighborhood "H" Live/Work Areas)</i>	

COUNTY OF KANE

KANE COUNTY ENVIRONMENTAL &
WATER RESOURCES DIVISION

WATER RESOURCES DIVISION
Paul M. Schuch, P.E., CFM
Director



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STAFF REPORT

TO: Mark VanKerkhoff, Director
Kane County Development Department

FROM: Paul Schuch, Director
Water Resources Division

SUBJECT: The Bluffs of St. Charles Concept Plan – Avanti Acquisition Company LLC
Proposed 96 Acre, 285 unit, Single-Family Residential Subdivision
To be Annexed into the City of St. Charles
S.E. Corner of Illinois Route 38 and Brundige Road
Campton Township, Section 36

DATE: May 7, 2014

I have reviewed the letter from Rita Tungare to you dated April 22, 2014 regarding the above referenced development. I have also reviewed the one page Concept Plan for the proposed development and the one page offsite water and sanitary sewer concept layout for the proposed development.

In addition to the above documents, I have gone back in the files and reviewed the concept and preliminary plans and staff reports to the Kane County Development Committee for the Settlements of LaFox development, a portion of which included the site for the proposed Bluffs of St. Charles subdivision.

I have also reviewed portions of the Kane County 2040 Plan, the Kane County 2040 Green Infrastructure Plan, the City of St. Charles Comprehensive Plan adopted in September 2013 and *Title 17 - Zoning* of the City of St. Charles Code regarding residential development standards.

I have the following comments regarding the proposed development site:

EXISTING SITE CHARACTERISTICS

Topography - The site is contains a minor ridge that runs from the northeast corner to the southwest near Brundige Road and then to the center of the southern boundary of the proposed subdivision. The high point of the proposed subdivision is near the southern boundary at approximately elevation 806 above sea level. There are three sub-watersheds that drain to the east, northwest and southwest with associated low points of 758, 792 and 764 respectively. The

MEMORANDUM to Mark VanKerkhoff
 Kane County Development Department
 Proposed Bluffs of St. Charles Subdivision
 May 7, 2014

site has moderate to steep rolling topography with slopes as steep as 12-percent. The site is an upland area in the Mill Creek watershed.

Soils – The following USDA, NRCS Classification Soils are present on the site with characteristics shown:

<u>Name</u>	<u>Drainage</u>	<u>Structure</u>	<u>Erosivness</u>
• 59A Lisbon –	Severe, wetness	Low strength, fine clays	-----
• 152A Drummer –	Severe, ponding	Low strength, excess fines	-----
• 154A Flanagan –	Severe, wetness	Low strength, excess fines, shrink-swell	-----
• 512B Danabrook –	Severe, wetness	Low strength, excess fines, clayey	Water erosion
• 656B Octagon –	Fair, wetness	Excess fines, clayey	Water erosion
• 656D2 Octagon –	Fair, wetness	Excess fines, clayey	Water erosion steep slope

Erosive soils and steep slopes will need to be protected or vegetated to prevent soil erosion upon the establishment of final grades, or within 14 days of grading inactivity per the stormwater ordinance. This will help protect Mill Creek from sedimentation and water quality degradation. Some of the most pristine sections of streams in Kane County are immediately downstream of the proposed subdivision both east and west of Brundige Road and north and south of the Union Pacific Railroad.

Subsurface Drainage - From the above list of soils and from the drain tile investigation done for the previously planned development for this site, the soils are drained for agricultural purposes with a subsurface agricultural drain tile system. This system follows the surface drainage pattern and leaves the site in three directions, to the east, to the northwest and southwest. This system will need to be abandoned onsite and its function replicated with a subsurface drainage system for footing drains and sump pumps for each residential structure, which need to be connected to the storm drainage system for the subdivision.

The additional pumped groundwater from basements and stormwater discharges from stormwater management facilities that is not taken up by retention on site must receive water quality treatment via best management practices and then be accommodated in a new storm

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Kane County Development Department
Proposed Bluffs of St. Charles Subdivision
May 7, 2014

sewer system that conveys the drainage to Mill Creek, and cannot be connected to existing agricultural drain tiles offsite.

WATER RESOURCES

Stormwater Management - Mass grading and development of the site will destroy the soil structure in most areas and reduce the ability of the soil to infiltrate and store groundwater. This has the potential to change the base flows in Mill Creek, which in turn would shift the stream flow/sediment transport balance and potentially increase erosion and degrade water quality of the creek. Careful planning of the site must include preserving and enhancing the groundwater infiltration characteristics in those areas that are mass graded. More than 10 to 15-percent of directly connected impervious area will begin to degrade the water quality of Mill Creek. The amount of imperviousness, which is directly related to density, will need to be quantified and addressed during the preliminary plan phase. The concept of using rain gardens in public areas and other low impact BMPs should be utilized throughout the development to disconnect impervious areas and protect Mill Creek from being degraded.

The Countywide Stormwater Management Ordinance and Best Management Practices supplement call for stormwater detention and allows for release of stormwater at 0.10cfs/acre and the retention onsite of the first ¾ inch of rainfall runoff from new impervious surfaces. These requirements must be followed during the preliminary plan phase of the project and the design of the subdivision improvements. The preliminary design should also follow the stated purposes of the ordinance in Section 102 and the six planning principles in Section 201(f),

Three stormwater management facilities will need to be located in the light green areas shown on the concept plan. Topographically they appear to be located at the proper locations at the low points of the site.

The pristine reaches of Mill Creek downstream of the development must be preserved intact during and after development. This unique water resource in Kane County could easily be altered or destroyed without paying careful attention to the details in the planning and design of this development.

Water Supply – Water supply upon annexation to the City of St. Charles will be from their city water system. The Illinois State Geological Survey (ISGS) has identified the location of a buried bedrock valley called the Newark Valley that runs from the northeast to the southwest in the western portions of the City of St. Charles. The Illinois State Water Survey (ISWS) has identified regions of this buried valley that have extensive amounts of sand and gravel as the St. Charles Aquifer. The nearest city wells are in the vicinity of the project site are developed into

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the shallow aquifer system of sands and gravels and the upper formations fractured limestone bedrock in the bedrock valley. The ISWS in their *Water Resources Investigation for Kane County* (2009, Meyer, et.al.) has identified the St. Charles Aquifer in the area of this development to be hydraulically dependent upon groundwater recharge, especially recharge from Mill Creek. If development continues in the Mill Creek watershed in the Tri-Cities of St. Charles, Geneva and Batavia, which all pump water from this aquifer, at ever increasing rates similar to those prior to the economic downturn of 2007, base flows in Mill Creek are predicted to disappear during dry periods of the year by the year 2050. If base flows disappear, the aquatic and terrestrial species in the creek as well as the native plant life associated with the stream will be dramatically impacted and unsustainable. It is imperative that the City of St. Charles become more involved in the northeastern Illinois regional planning efforts to find sustainable water supplies for their citizens and the surrounding area.

Wastewater Treatment and Reuse – Wastewater Treatment upon annexation to the City of St. Charles will be provided at their wastewater treatment facility immediately east of the development site. The proximity of the site to the treatment plant provides a unique opportunity to irrigate public open space with treated and disinfected graywater effluent. This would require a graywater system be installed from the treatment plant to the development site. Similar systems are in operation at the Village of Richmond in McHenry County, and the Wasco Sanitary District and the Mill Creek development in Kane County. The use reuse of graywater will recharge the groundwater system and conserve drinking water that would otherwise be used for irrigation. This method of extending the sustainability of aquifers in northeastern Illinois is further discussed and recommended in the CMAP *Water 2050 – Northeastern Illinois Regional Water Supply Plan*.

GREEN INFRASTRUCTURE

Kane County adopted its Green Infrastructure Plan in December 2013, which defines green infrastructure as the following:

“Green infrastructure is an interconnected system of natural areas and open spaces . . . which are protected and managed for the ecological values and functions they provide to people and wildlife. Green infrastructure supports native species; supports air and water resources; and contributes to the health and quality of life for people and communities.

The holistic nature of green infrastructure integrates a variety of aspects of society, offering possible answers to issues of air and water quality, sustainable water supply, road congestion, habitat degradation, climate change and chronic diseases . . .”

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Proposed Bluffs of St. Charles Subdivision
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Two of the four sets of goals of the green infrastructure plan, along with their Objectives and Actions include water resources as follows:

Goal: Kane County will protect the local water supply and improve water quality.

Objectives: A. to promote the importance of a sustainable water supply.
B. to promote green infrastructure best management practices in order to capture stormwater for groundwater recharge and protect water quality.

Actions:

1. Incorporate the results of the Illinois State Water Survey/Geological Survey Kane County Water Resources Investigations when making development decisions and enhancements to the green infrastructure network.
2. Reclaim and reuse water conducive to the health of ecosystems, preservation of existing drinking water supplies, and holistic management of our water resources public infrastructure.
3. Protect water resources through compact, mixed-use and conservation design development.

Goal: Kane County will continue to preserve its natural resources.

Objectives: A. to recognize the importance of climate change mitigation and adaptation.
B. to protect and enhance the Fox River and its tributaries, the backbone of our green infrastructure network and the Kishwaukee River watershed.

Actions:

1. Coordinate with local and regional governments and organizations to enhance the green infrastructure network at the regional, community, neighborhood and site scales.
2. Incorporate data from the Chicago Wilderness Climate Change Task Force to protect and improve biodiversity when implementing green infrastructure strategies.
3. Develop an oak tree restoration program including a tree preservation ordinance.
4. Promote Integrated Resource Planning among the stakeholders in Kane County and the region as a way to rationalize the management of our natural resources in a cost-effective and sustainable way.

The water resources of the development site were listed in the previous section of this staff report. These resources must be incorporated into the Kane County Green Infrastructure

MEMORANDUM to Mark VanKerkhoff
Kane County Development Department
Proposed Bluffs of St. Charles Subdivision
May 7, 2014

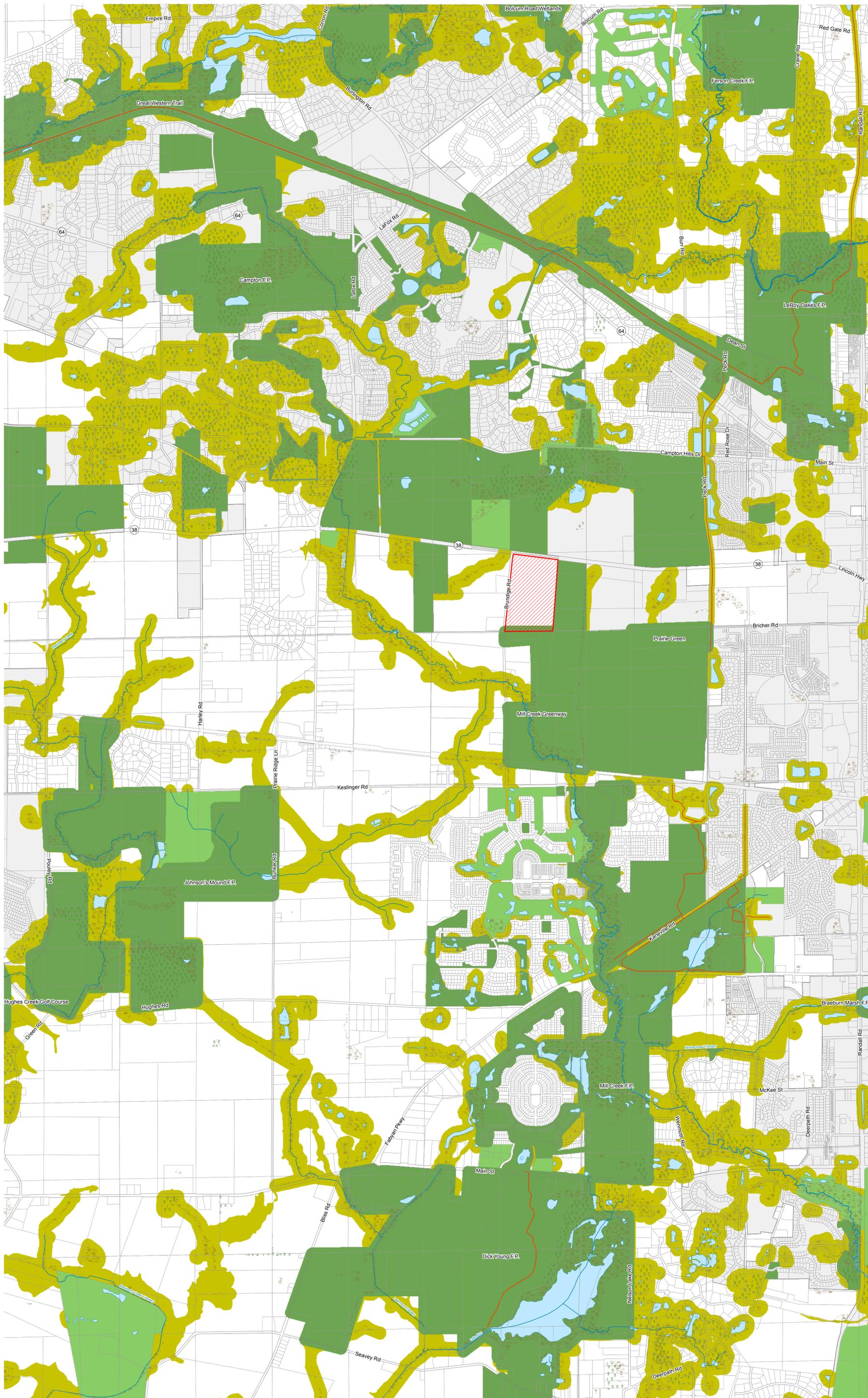
planning process to promote an integrated resource planning approach and to promote sustainability in the proposed development.

This may mean that the proposed density and zoning of the site, 285 single family units on proposed lots of a minimum 6,600 square feet (RS-4 Suburban Single-Family residential District) is not the best use of the site when the water resources of the development environs are being stressed by the development. The density and the size of the lots must be balanced with capturing and reusing additional water from the development onsite in order to avoid degrading water quality, and using the water resources of the environs in an unsustainable fashion.

Possible solutions to make the development site more sustainable include the following:

- Compact mixed-use and conservation design development (e.g.: Changing the requested zoning to RM-2 (10 multi-family units per acre) to site the 285 requested residential units on 28.5 acres (30%) of the site, leaving approximately 67.5 acres (70%) of the site undisturbed for open space and retaining the natural soil hydrology. The steep sloped “bluffs” area could also be left undisturbed and retained for a natural site feature).
- Rain gardens to infiltrate additional runoff from the site into the groundwater system.
- Permeable pavement.
- Additional onsite stormwater retention.
- Rainwater harvesting.
- Pre-treatment before discharging the stormwater from the site into the Mill Creek watershed.
- Reuse of gray water, both internal and external to the homes and/or from recycling treated gray water from the St. Charles treatment plant.
- Other conservation design methods and strategies outlined in the Kane County Green Infrastructure Plan; the Kane County Stormwater Ordinance and Best Management Practices supplement.
- Other nationally recognized methods of holistic, green infrastructure and integrated resource planning technologies and methods.
- Use of the Ordinance Checklist for Municipalities in Appendix 6 of the Kane County Green Infrastructure Plan.
- Use of the References and Additional Resources in Appendix 7 of the Kane County Green Infrastructure Plan.

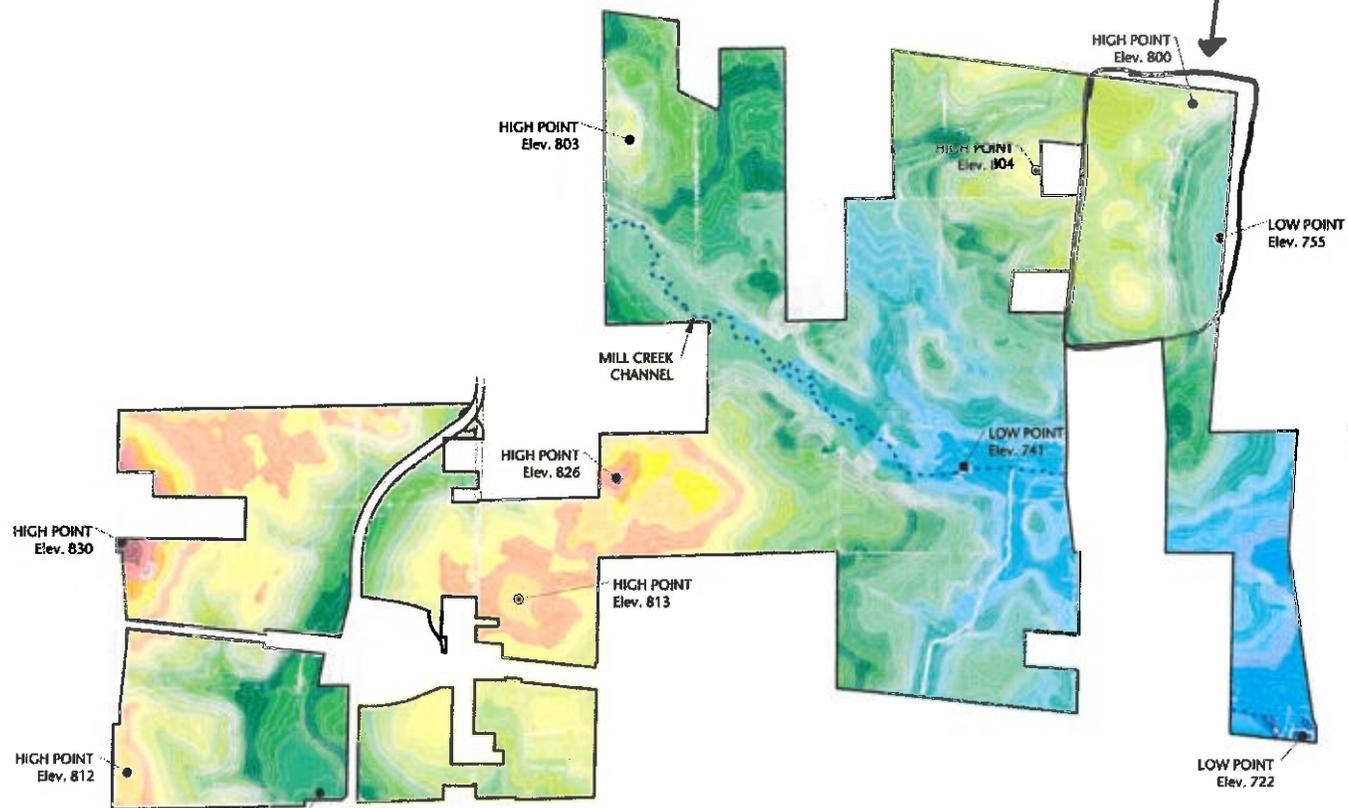
PROPOSED ST. CHARLES ANNEXATION



- Parks, Preserves & Conservation Areas (with buffer)
- Environmental Resource Area (with buffer)
- ADID Wetland
- Class III Groundwater Area
- Private Open Space (with buffer)
- Remnant Oak Woodland (2011)
- Regional Trail

The Bluffs of St. Charles site

Settlements of La Fox Slope Analysis



Slope Analysis Legend			
838 - 842	778 - 782		
834 - 838	774 - 778		
830 - 834	770 - 774		
826 - 830	766 - 770		
822 - 826	762 - 766		
818 - 822	758 - 762		
814 - 818	754 - 758		
810 - 814	750 - 754		
806 - 810	746 - 750		
802 - 806	742 - 746		
798 - 802	738 - 742		
794 - 798	734 - 738		
790 - 794	730 - 734		
786 - 790	726 - 730		
782 - 786	722 - 726		

KANE COUNTY

DIVISION of TRANSPORTATION

Carl Schoedel, P.E.
Director of Transportation
County Engineer



41W011 Burlington Road
St. Charles, IL 60175
Phone: (630) 584-1171
Fax: (630) 584-5239
Permit Dept.

MEMORANDUM

To: Mark VanKerkhoff, Director of Development & Community Services

From: Kurt E. Nika, KDOT *K.E.N.*

Date: May 15, 2014

RE: The Bluffs of St. Charles
Concept Plan Application – KDOT Comments
City of St. Charles, IL Route 38 & Brundige Road

Staff from the Kane County Division of Transportation (KDOT) has reviewed the concept plan application for the Bluffs of St. Charles (dated 4-7-14). This comment memo should replace the previous comment memo of 5-7-14. We offer the following comments for inclusion in the overall Kane County response.

1. The proposed development calls for 285 single family units at the southeast corner of IL Route 38 & Brundige Road. This is proposed on a 96-acre property that was previously only a small part of the Settlements of LaFox development concept. While the footprint of the Bluffs is considerably smaller than the Settlements of LaFox, the number of total single family units is comparable in traffic impact as to a large portion of the Settlements. Therefore, we anticipate that the traffic impact to the IL Route 38/Brundige and Keslinger/Brundige intersections will be comparable to the entirety of the Settlements of LaFox development.
2. As such, if additional portions of the Settlements develop, there will be additional impacts to Brundige Road and associated intersections.
3. The Bluffs would be incorporated into the City of St. Charles, meaning the jurisdiction of Brundige Road, along the site's frontage, would transition from Township to City jurisdiction. Access approvals would therefore be granted by the City of St. Charles and IDOT, but the development of these lands would also have significant traffic impacts to Brundige Road (a gravel road under the jurisdiction of Blackberry Township) south of the property.
4. We suggest that a traffic study be conducted and submitted for review by the affected agencies: IDOT, City, County, Campton Township, and Blackberry Township.
5. The Settlements development was approved with various off-site road improvements to mitigate the impact of development-related traffic, which we believe are appropriate:
 - a. Asphalt wearing surface on Brundige Road
 - b. Repair or replacement of Brundige Road Bridge over Mill Creek
 - c. Channelization of the IL Route 38/Brundige intersection. Signalization if warranted.
 - d. Channelization of the Keslinger/Brundige intersection. Signalization if warranted.
6. Brundige Road is currently a Kane County Rustic Road, which would require special coordination with the Kane County to mitigate impacts.

Cc: Sam Gallucci, Campton Township Road District
Rod Feece, Blackberry Township Road District
File

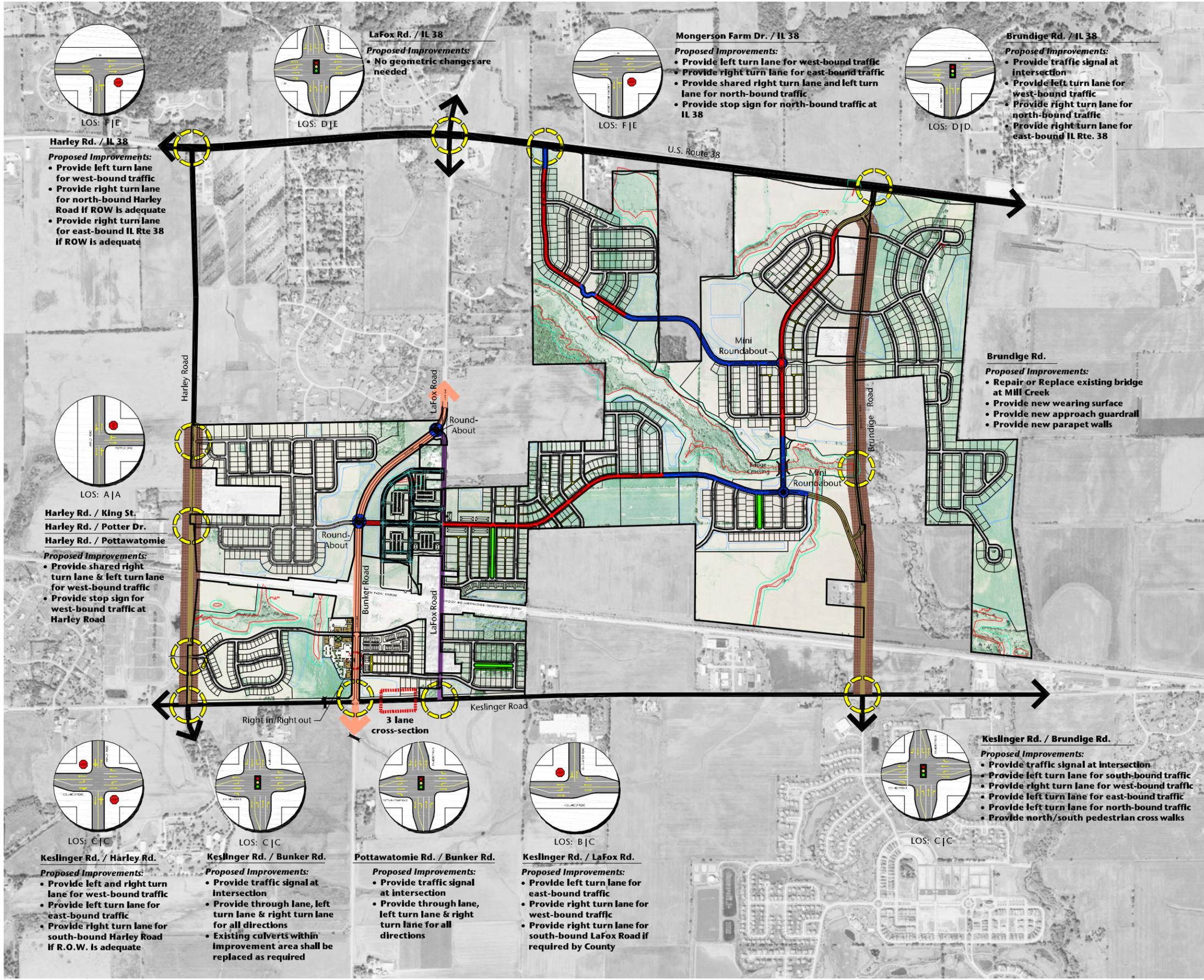
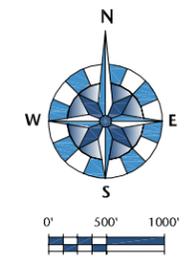
Location Map Not to Scale

Legend

Color Scheme	Roadway Types	ROW Width	Pavement Width	Edge Treatment	Parking Allowed	Lineal Feet of Roadway
Orange	Bunker Road Extension	120' Bunker Road Extension	36'	4" Bit Shldr. w/ 2" Gravel Skid	No	5,200'
Blue	Local Collector Road	90'	27' B/B	86.12	No	6,680'
Red	Local Collector Road	90'	31' B/B 37' B/B	M3.12	One Side Both Sides	10,160'
Green	Historic LaFox Road	Varies 60' to 90'	24' B/B	86.12	Angle Parking 10' from E/P to B/C	5,880'
Purple	Town Center Streets	Varies 65' to 90'	24' B/B & Varies	86.12 & Varies	Angle Parking 10' from E/P to B/C	4,190'
Grey	Local Streets	60'	28' B/B	M3.12	Yes - one side only	82,850'
Yellow	Alley	20' Alley	14'	None	No	12,900'
Light Green	Local Boulevard	Varies 120' to 200'	16' One Way Boulevards	86.12	Yes - one side only	1,920'
Brown	Local Collector Rural Section	Varies 65' to 90'	24'	6" Gravel Shldr.	No	2,510'
Dark Brown	Township Roads	60' (Brundige Rd. & Harley Rd.)	22'	2" Gravel Shldr.	No	7,060' @ Brundige Rd. 4,400' @ Harley Rd.
Black	State & County Roads	Varies	N/A	6" Gravel Shldr.	No	
Dark Green	N/A	TBD (Bike Path)	10'	N/A	N/A	

- Signalized Intersection
- Stop Sign Controlled
- Proposed Intersection Improvement
- LOS Level of Service AM | PM Peak Hours
- Roundabout
- 3 Lane Cross-Section
- Interior Intersection Note

Note:
Intersection diagrams are for representation purposes only. Roadway engineering required.



Settlements Of LaFox • Roadway and Intersection Improvement Exhibit

Kane County, Il.
Sheet 1 of 1

Developer Forsford Development LLC 175 S. 1st St., Suite 200 Harrisville, IL 60921 (630) 887-7758	Developer Windsor Development Homes 605 Lindsay Circle North Aurora, Illinois 60542 (630) 966-1000	Civil Engineer/Surveyor Hemphill & Bodwell LLP 124 West Chicago Chicago, Illinois 60625 (630) 834-7406	Civil Engineer Christopher B. Burke Engineering, Inc. Ltd. 114 West High Street, Suite 207 St. Charles, Illinois 60174 (630) 443-7725	Consulting Engineer Sheaffer & Roland 321 Stewart St. Suite B Cape Girardeau, Illinois 62404 (630) 208-9898	Land Drainage Consultant Huddleston - McBride Land Drainage Co. 9504 Fowler Road Fitchelle, Illinois 61605 (815) 582-5907	Landscape Architect Gary R. Weber Associates, Inc. 224 S. Main Street Morgantown, IL 60137 (630) 668-7197	Land Planner Land Vision, Inc. 118 West Main Street, Suite 308 St. Charles, Illinois 60174 P: (630) 354-4531 F: (630) 354-1392
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Dated: February 20, 2007
Drawing Number: 5080 Traffic Exhibit 11
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