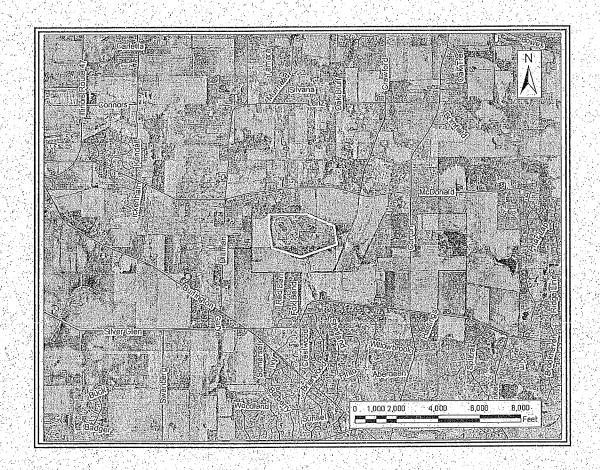
KANE-DUPAGE SOIL AND WATER CONSERVATION DISTRICT

LAND USE OPINION 12-43



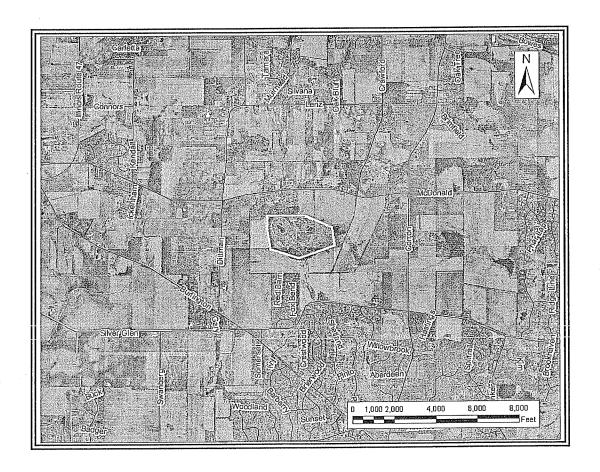
August 27, 2012

Prepared for: Village of Campton Hills

Petitioner: Kiva Real Estate Investments, LLC 3359 Main Street Skokie, IL 60076

KANE-DUPAGE SOIL AND WATER CONSERVATION DISTRICT

LAND USE OPINION 12-43



August 27, 2012

Prepared for: Village of Campton Hills

Petitioner: Kiva Real Estate Investments, LLC 3359 Main Street Skokie, IL 60076 Petitioner: Kiva Real Estate Investments, LLC, 3359 Main St., Skokie, IL 60076

Contact Person: Patrick Griffin 630-524-2566

<u>Unit of Government Responsible for Permits:</u> Village of Campton Hills

Acreage: 120

Location of Parcel: Section 3 Campton/34 Plato, Township 40/41 N, Range 7 E

Property Address/PIN#: 41W400 Silver Glen Road

Existing Land Use: Vacant Former Glenwood

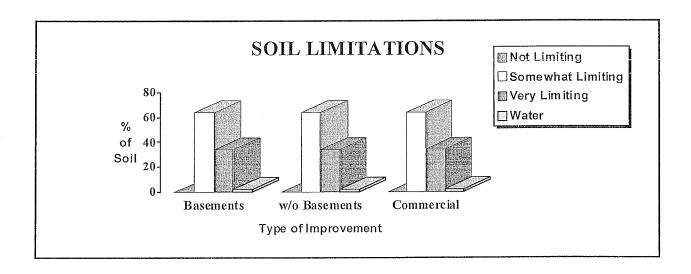
Surrounding Land Use: Forest Preserve

Proposed Land Use: Residential Addiction Treatment Center

Kane County Land Use Plan Map: Institutional Private Open Space

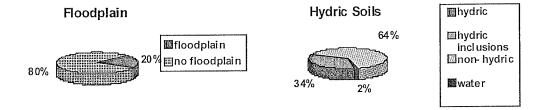
Natural Resource Concerns

<u>Soils Limitations:</u> Soils at this site contain limitations for dwellings with basements, dwellings without basements, small commercial buildings. See soils information pages, and attached soils tables. All information is from the Soil Survey of Kane County, Illinois.



<u>Wetlands</u>: The National Wetland Inventory map and the ADID wetland map do identify wetland areas on this site. **Therefore, a wetland delineation specialist who is recognized by the U.S. Army Corps of Engineers should determine the exact boundaries and value of any wetlands.** (See page 5 for more wetland information.)

<u>Floodplain:</u> There are floodplain areas identified on this site. In addition, there are hydric soils, which may be prone to ponding. (See page 10)



Stormwater: The District encourages the use of on-site detention for stormwater runoff, and recommends the use of a 0.10cfs/acre release rate for on-site detention ponds. (See page 13 for more information concerning stormwater planning on this site.)

<u>Sediment and Erosion Control:</u> Development on this site should include a sedimentation and erosion control plan. (See page 17)

<u>NPDES Permits:</u> An NPDES (National Pollution Discharge Elimination System) permit is required by the EPA for all construction sites over 1 acre. (See page 18)

<u>Aquifer Sensitivity:</u> According to Illinois State Geological Survey, Environmental Geology Report, published 1995, there are no aquifers that may be adversely impacted by this project. (See page 3 and Appendix A)

<u>Soil Data:</u> The soil data from SSURGO (or NASIS) is part of a national dataset. The hydric rating used in this report has been modified to reflect local interpretations with guidance from the Area Soil Scientist.

LAND USE OPINION

Land Use Opinion: This site contains the following concerns: Wetlands, Soil Limitations, Floodplain, Woodlands, Soil Erosion and Sediment Control, and Stormwater Management. Based on the information in this report, it is the opinion of the Kane-DuPage Soil and Water Conservation District Board that this site is not suited for the proposed use unless the previously mentioned concerns are addressed.

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PURPOSE AND INTENT

This report presents natural resource information to officials of the local governing body and other decision makers. Decisions concerning variations, amendments or relief of local zoning ordinance may reference this report. Also, decisions concerning, the future of a proposed subdivision of vacant or agricultural lands and the subsequent development of these lands because of these decisions may reference this report. This report is a requirement under the SWCD Act contained in ILCS 70, 405/1 ET seq.

This report intends to present the most current natural resource information available in an understandable format. It contains a description of the present conditions and resources available and their potential impact on each other. This information comes from standardized data, on-site investigations and other information furnished by the petitioner. Please read the entire report to coordinate and inter-relate all natural resource factors considered. This report, when used properly, will provide the basis for good

land use change decisions and proper development while protecting the natural resource base of the county.

The conclusion of this report in no way indicates the impossibility of a certain land use. However, it should alert the reader to possible problems that may occur if the capabilities of the land are ignored. Please direct technical questions about data supplied

in this report to: Kane-DuPage

Soil and Water Conservation District 2315 Dean Street Suite 100 St. Charles, IL 60175

Phone: (630) 584-7961

SOILS INFORMATION

IMPORTANCE OF SOILS INFORMATION

Soils information is taken from the Soil Survey of Kane County, Illinois, United States Department of Agriculture, Natural Resource Conservation Service. This information is important to all parties involved in determining the suitability of the proposed land use change. Each soil polygon has a number. That number is a symbol for a map unit that will be described in detail in the Soils Interpretations section of this report found on pages 18-22.

SOIL MAP UNITS

The soil survey map of this area (Figure 1) indicates soil map units. Each soil map unit has limitations for a variety of land uses such as septic systems, and buildings site development, including dwellings with and without basements. Approximately 34% of the soils contain very limiting conditions for building site development. See <u>Soils Interpretations</u> section and attached Soil Tables.

The Soil Survey Geographic (SSURGO) data base was produced by the U.S. Department of Agriculture, Natural Resources Conservation Service cooperating agencies for the Soil Survey of Kane County, Illinois. The soils were mapped at a scale of 1:12,000. The enlargement of these maps to scales greater than that at which they were originally mapped can cause misunderstanding of the detail of the mapping. If enlarged, maps do not show the small areas of contrasting soil that could have been shown at a larger scale. The depicted soil boundaries and interpretations derived from them do not eliminate the need of onsite sampling, testing, and detailed study of specific sites for intensive uses. Thus, this map and its interpretations are intended for planning purposes only.

LIST OF SOIL MAP UNITS

SOIL MAP UNIT	PERCENT	ACRES	
	OF		
	PARCEL		
103A - Houghton	2%	2.01	
152A - Drummer	11%	13.42	
193B - Mayville	4%	4.22	
344C2 - Harvard	9%	10.61	
348B - Wingate	13%	14.93	
356A - Elpaso	21%	25.17	
656B - Octagon	27%	31.35	
656C2 - Octagon	10%	11.43	
662B - Barony	1%	1.59	
W - Water	2%	2.51	
Table 1: Soil Map Units Total 117.24			

All percentages and acreages are approximate.

We suggest that a geotechnical engineer conduct an on site investigation. This should determine, specifically, what soils type is present at a particular location, along with its associated limitations or potential for a particular use. It will also assist in determining which types of engineering procedures are necessary to account for the limitations of the soil on the site.

SOILS INFORMATION

Figure 1: Soil Survey Map (Page 4)

United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), Kane County SSURGO soil layer certified in 2000 and DuPage County SSURGO soil layer certified in 1999. Areas shaded red represent VERY LIMITING limitations for building site development, and areas shaded yellow represent SOMEWHAT LIMITING limitations for building site development.

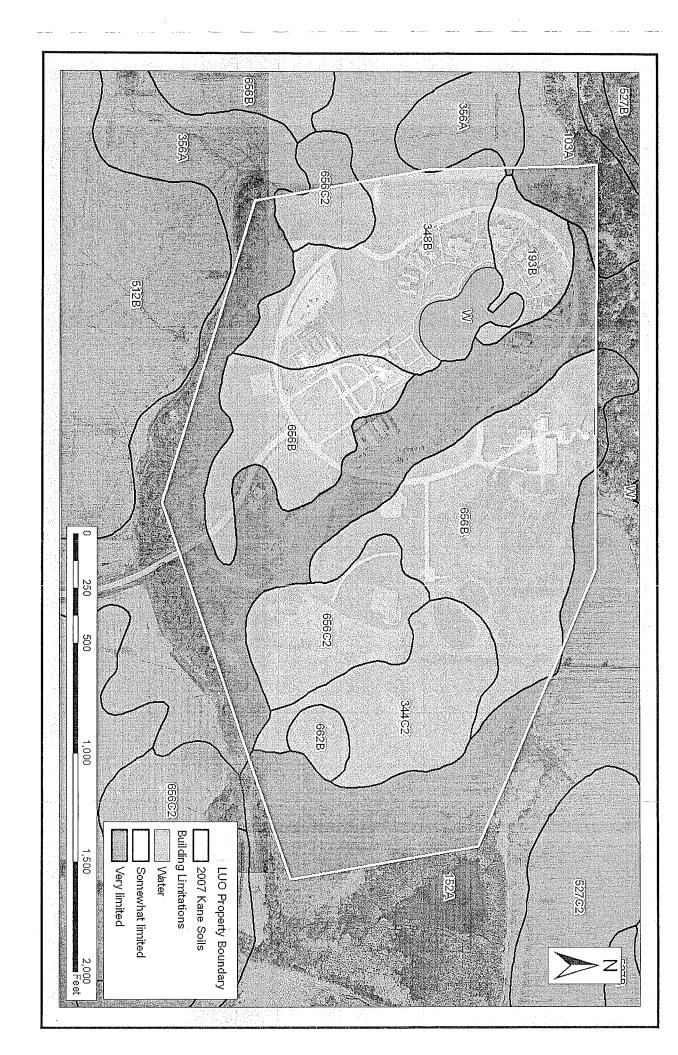
AQUIFER IMPACT

According to the <u>Potential for Agricultural Chemical Contamination of Aquifers in Illinois: 1995 Revision Environmental Geology 148</u> prepared by the Department of Energy and Natural Resources, Illinois State Geological Survey, this site lies completely

within a zone rated as **somewhat limted** with respect to potential for contamination from spilled or applied substances to the soil surface. Please see **Appendix A** for mapping indicating the range of coverage.

SEPTIC ABSORPTION SYSTEMS

There are no septic absorption systems proposed on this site. There is currently a water treatment system existing on the site.



WETLANDS

Figure 2: National Wetland Inventory Map (Page 6)

United States Department of the Interior, Fish and

Wildlife Service, National Wetlands Inventory, Photo Year 1983-1984, Digitized 1985-1986.

A review of the National Wetland Inventory map indicates that wetlands do appear to exist on this site. An on-site inspection of the site supported this conclusion. The types of wetlands identified on this site include: (PEMA — Palustrine, Emergent, Temporarily Flooded; PEMC — Palustrine, Emergent, Seasonally Flooded; PFO1A — Palustrine, Forested, Broad-Leaf Deciduous, Temporarily Flooded) A wetland delineation specialist who is recognized by the U.S. Army Corps of Engineers should determine the exact boundaries and value of these wetlands.

Wetlands function in many ways to benefit mankind. They control flooding by offering a slow release of excess water downstream or through the soil. They cleanse water by filtering out sediment and some pollutants. In addition, they may function as rechargers of our valuable groundwater. They are also essential breeding, rearing, and feeding grounds for many species of wildlife. This organization believes that such valuable resources should remain in a natural state.

Wetlands often need to receive some runoff in order to sustain vegetation and wetland conditions. In fact, low value wetlands may actually be enhanced by receiving more storm water and with selective plantings. Diversion of storm water away from wetlands may dry the wetland. However, there is a problem with using high value wetlands as a significant storm water control device. Urban storm water runoff can carry high volumes of sediment and pollutants, which do not benefit wetlands and water quality. Management of storm water and plant diversity

could greatly enhance the value of the wetlands on this property.

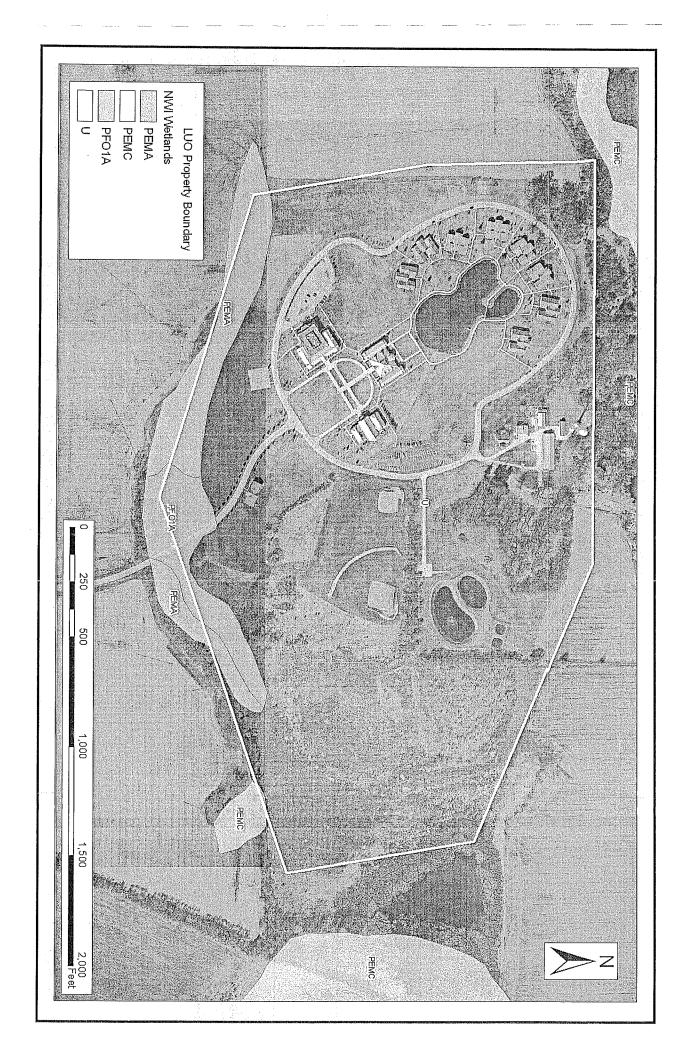
The U.S. Army Corps of Engineers has been given jurisdiction over the utilization of our wetland resources. The responsibilities and regulatory authorities of the Corps of Engineers are based on Section 404 of the Clean Water Act (33 U.S.C. 1344). Section 301 of the Act prohibits the discharge of dredged or fill material into waters or other wetland areas without a permit from the Corps.

ADID WETLANDS

Figure 3: ADID Wetlands (Page 7)
Kane County's Wetlands and Streams Advanced Identification (ADID) Study completed in 2004.

Released in August of 2004, the Kane County Advanced Identification of Aquatic Resources (or ADID) study is a cooperative effort between federal, state, and local agencies to inventory, evaluate, and map high quality wetland and stream resources in the county. ADID studies are part of a U.S. Environmental Protection Agency program to provide improved awareness of the locations, functions, and values of wetlands and other waters of the United States. The primary purpose is to identify wetlands and streams unsuitable for dredging and filling because they are of particularly high quality. This information can be used by federal, state, and local governments to aid in zoning, permitting, and land acquisition decisions. In addition, the information can provide data to agencies, landowners, and private citizens interested in restoration, acquisition, or protection of aquatic sites and resources.

A review of the Kane County ADID map revealed that ADID wetlands were identified on this site. ADID wetland #1746, 1737, 1893, 1891, 1892, 1890, 1277, and 1272 were mapped on this site. For more detailed information regarding this/these wetland(s), please refer to the full Kane County ADID study at http://www.co.kane.il.us/kcstorm/index.htm.



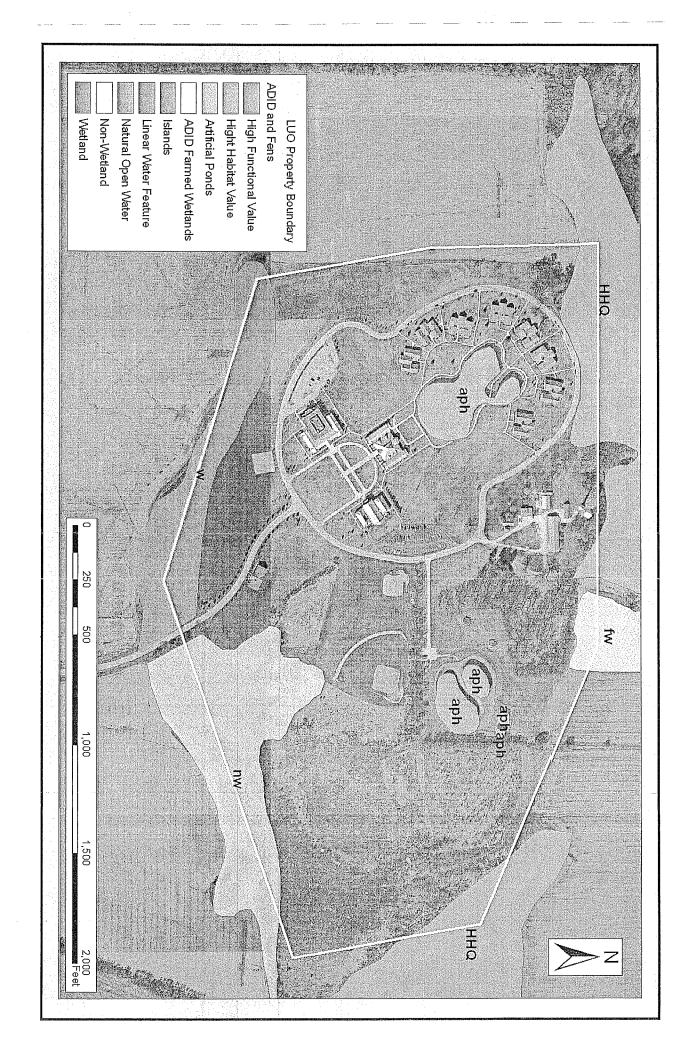


Figure 4: Wetland Photograph Location Map

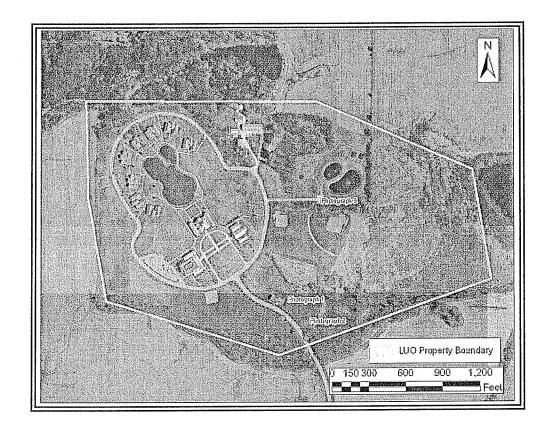


Figure 5: Photograph of Wetland Photograph 1 taken facing southwest



Figure 6: Photograph of Wetland Photograph 2 taken facing northeast

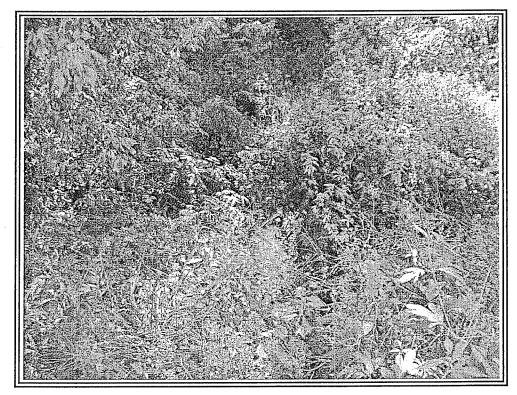
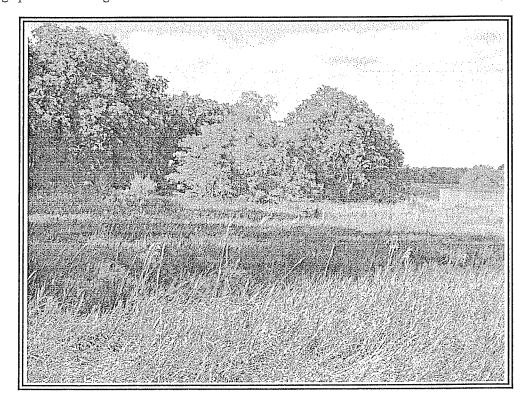


Figure 7: Photograph of Prairie & Sandhill Cranes Photograph 3 taken facing north



FLOODPLAINS

Figure 8: Floodplain Map (Page 11)

Federal Emergency Management Agency, National Flood Insurance Program, Q3 Flood Data, Disc 6, September 1998.

According to the Flood Insurance Rate Map, approximately 20% of this site is within the boundaries of a 100-year floodplain.

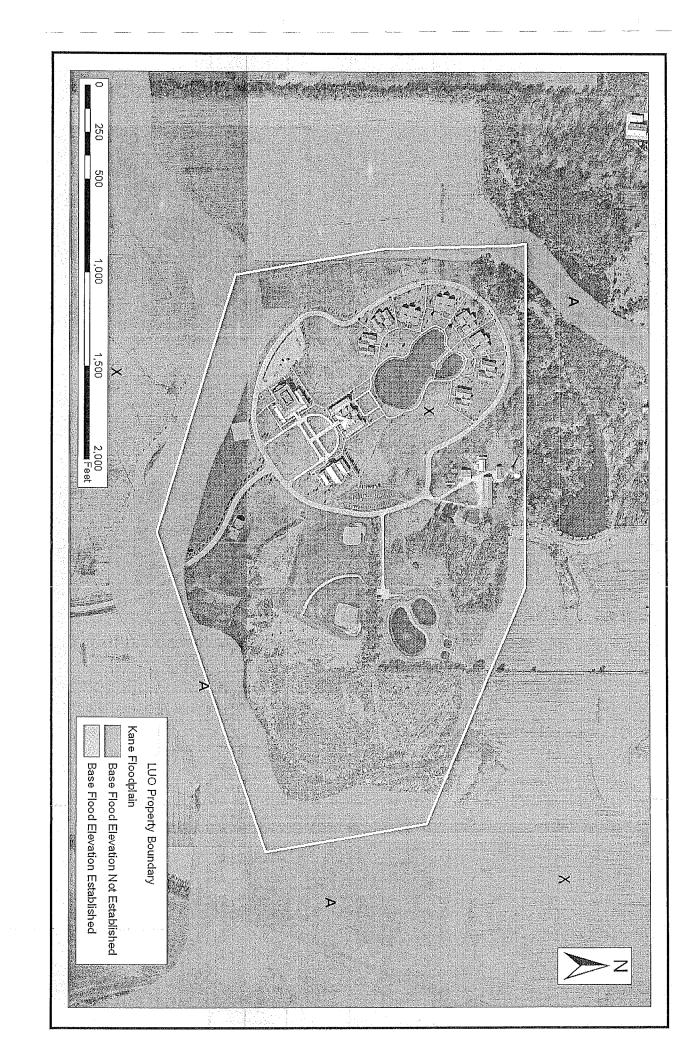
This development may impede the beneficial functions of the floodplain. These functions include the temporary storage and the slow release of floodwaters. This disturbance could adversely affect other properties in the watershed.

Another indication of flooding potential can be found in the soils information. Figure 9 indicates the hydric soils mapped for the site. Hydric soils by definition have potential ponding problems.

Development in floodplains/floodways is regulated by the Department of Natural Resources, Office of Water Resources. A copy of this report is being sent to the Division Office in Bartlett.

Figure 9: Hydric Soils (Page 12)

Hydric soils are shaded purple and soils with hydric inclusions are shaded yellow.





WETLAND AND FLOODPLAIN REGULATIONS

The laws of the United States and the State of Illinois

PLEASE READ THE FOLLOWING IF YOU ARE PLANNING TO DO ANY WORK NEAR A STREAM (THIS INCLUDES SMALL UNNAMED STREAMS, LAKES, WETLANDS, AND FLOODWAYS.

assign certain agencies specific and different regulatory roles to protect the waters within the State's boundaries. These roles, when considered together, include protection of navigation channels harbors, protection against floodway encroachment, maintenance and enhancement of water quality, protection of fish and wildlife habitat As well as recreational resources. Unregulated use of waters within the State of Illinois could permanently destroy or alter the character of these valuable resources and adversely impact the public. Therefore, please contact the proper regulatory authorities when planning any work associated with Illinois waters so that proper consideration and approval can be obtained.

Who Must Apply:

Anyone proposing to dredge, fill, riprap, or otherwise alter the banks or beds of, or construct, operate, or maintain any dock, pier, wharf, sluice, dam, piling, wall, fence, utility, floodplain or floodway subject to State or Federal regulatory jurisdiction should apply for agency approvals.

REGULATORY AGENCIES:

- Wetland/U.S. Waters: U.S. Army Corps of Engineers, Chicago District, 111 North Canal Street, Chicago, IL 60606-7206. Phone: (312) 353-4117.
- Floodplains: Illinois Department of Natural <u>Resources\Office of Water Resources</u>, 2050 W.
 Sterns Road, Bartlett, IL 60103. Phone: (847) 608-3100

<u>Coordination</u>: We recommend early coordination with the regulatory agencies <u>BEFORE</u> finalizing work plans. This allows the agencies to recommend measures to mitigate/compensate for adverse impacts. Also, the agency can make possible environmental enhancement provisions early in the project planning stage. This could reduce time required to process necessary approvals.

CAUTION: Contact with the United States Army Corps of Engineers is strongly advised before commencement of any work in or near a water of the United States. This could save considerable time and expense. Persons responsible for willful and direct violation of Section 10 of the River And Harbor Act of 1899 or Section 404 of the Federal Water Pollution Control Act are subject to fines ranging up to \$25,000 per day of violation and imprisonment for up to one year or both.

STORMWATER

The proposed removal of vegetation, compaction of soil, and addition of impervious surfaces (rooftops, roadways, etc.) will greatly increase the amount of storm water runoff generated on this site. We strongly recommend the use of on-site storm water management. All additional runoff should be retained in on-site detention ponds and released at a rate that approximates natural, undisturbed runoff conditions. The S.W.C.D. encourages the use of a .10 cfs/acre release rate. Insufficient storm water management on this site will threaten the storm water capacity of the floodplain. This has the potential to cause or aggravate flooding conditions on surrounding properties or elsewhere in the watershed.

If detention ponds are constructed, the S.W.C.D. strongly encourages incorporating as many of the natural attributes of the existing wetlands as possible. Natural waterway features provide many benefits that sterile detention ponds do not. These include: 1)

flood control by slow release of excess water through the soil, 2) water purification by vegetation, 3) groundwater recharge, and 4) habitat for wildlife. However, there are concerns associated with allowing urban storm water flow to enter natural wetland features. If the runoff generated by impervious surfaces, such as rooftops and roadways, is loaded into these natural features, their flood control capabilities could be overburdened and flooding damage could result. Therefore, care must be used to insure that the natural features are not damaged or destroyed when used as part of a storm water detention plan.

In addition, storm water release needs to be regulated to insure that the tributary/drainage ditch flowing through to the site is not adversely impacted, nor are downstream properties in the watershed.

Topography and Drainage

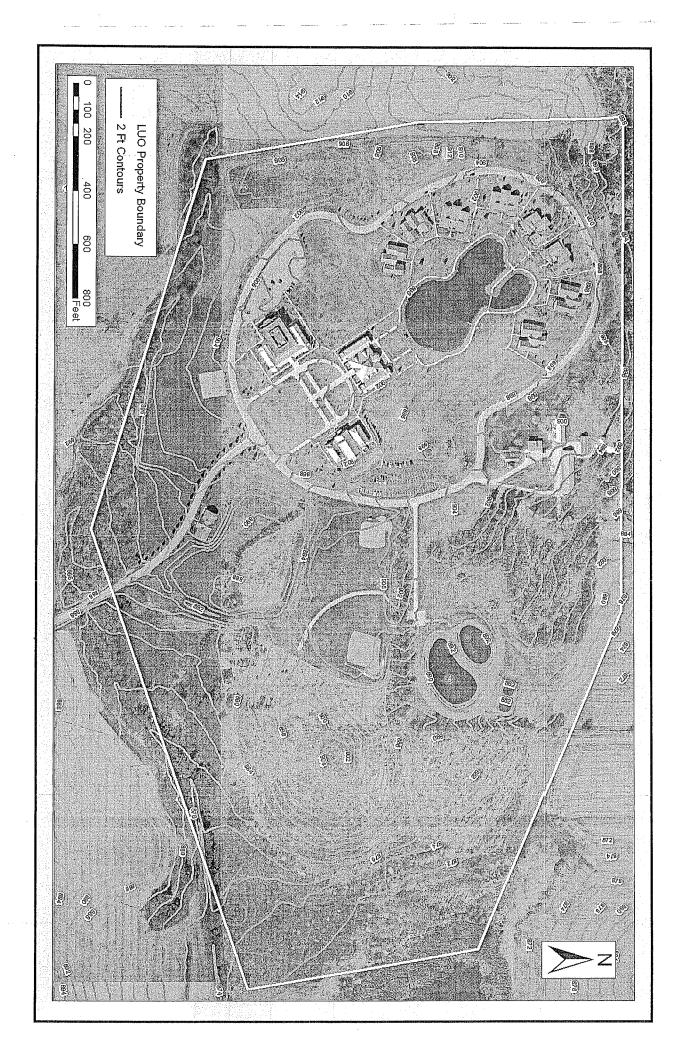
TOPOGRAPHY refers to the general shape of the land surface, and the position of its natural and manmade features. It includes the presence or absence of hills, and the slopes or difference in elevation between hilltops and valleys of a given region. Topography influences natural drainage. The force of gravity causes water to move down slopes towards depressions or streams, and pulls free or standing water downward through the soil. Soils on hills tend to be dry and soils in depressions and valleys often are wet or saturated.

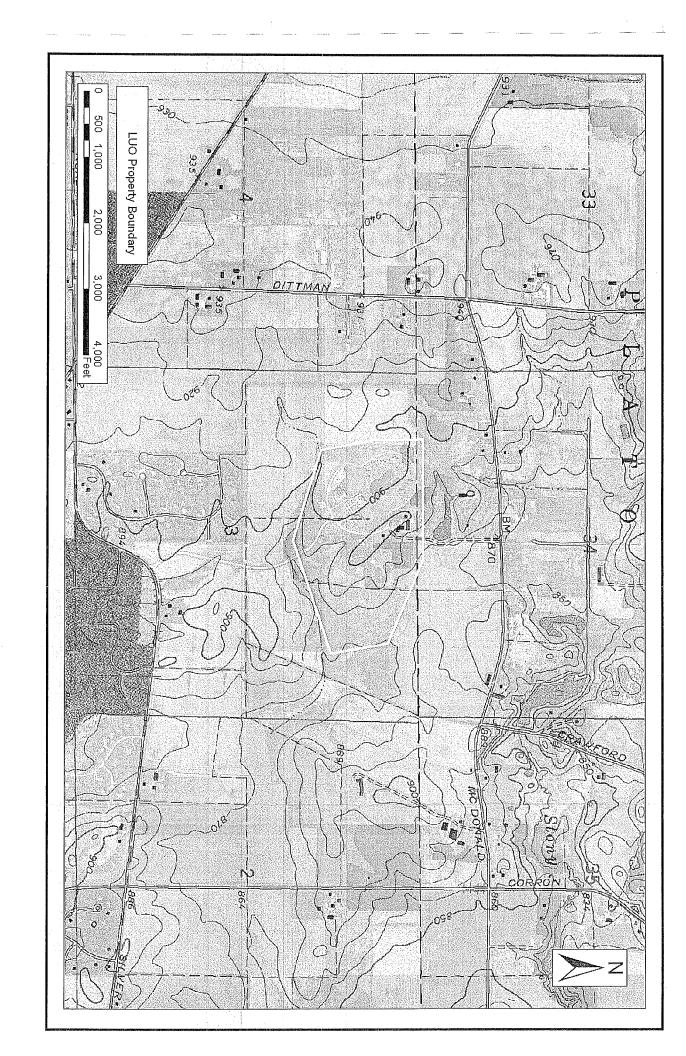
The amount of moisture in the soil while it is developing, affects the rate of weathering and the development of soil colors. Soil colors are a reflection of the saturation status of the soil during development. Well-drained soils have uniformly brownish or yellowish brown subsoils; poorly drained soils have grayish subsoils; somewhat poorly drained soils have mottled brownish yellowish and grayish subsoils. Differences in natural soil drainage are typically associated with topography.

USGS Topographic maps and other topographic surveys give information on elevations, which are important to determine slopes, natural drainage directions, and watershed information. Elevations determine the area of impact of flooding. Slope information determines steepness and erosion potential of the site. Slope has the greatest impact in determining the erosion potential of a site during construction activities. Drainage directions determine where water leaves the property in question, possibly impacting surrounding natural resources.

This parcel of land is located on flat topography with 2% to 8% slopes. The high point of this property is located in the east portion of the site at an elevation of 904 feet above mean sea level. The property generally drains in all directions via overland, at the lowest elevation on the property at 872 feet above sea level.

Figure 10 and 11: Municipalities 2 ft Contours (Page 15) and USGS Topographic Map (Page 16)





EROSION

Development on this site should include the use of a soil erosion and sedimentation control plan. Due to the soil type and slope of the site, the S.W.C.D. believes that the potential for soil erosion during and after this proposed construction will be **moderate**. Furthermore, the erosion and sedimentation may become a primary non-point source of water pollution. Eroded soil during the construction phase can create unsafe conditions on roadways, degrade water quality, and destroy aquatic ecosystems lower in the watershed. Soil erosion also increases the risk of flooding due to choking culverts, ditches, and storm sewers, and by reducing the capacity of natural and man-made detention facilities.

Erosion and sedimentation control measures include:
1) staging the construction to minimize the amount of disturbed areas present at the same time, 2) maintaining or planting vegetative groundcover, and 3) keeping runoff velocities low. Wise placement and protection of soil stockpiles is also helpful. Siltation fences are useful controls only if they are properly installed and maintained. Soil erosion and sedimentation control plans, including maintenance responsibilities, should be clearly communicated to

all contractors working on the site. Debris basins and siltation ponds can also be used to prevent suspended sediment from leaving the property or damaging the wetland areas. On this property special care must be taken to protect any wetland features from sedimentation damage.

Detailed information on the most appropriate methods of controlling erosion and sedimentation in urbanizing areas can be found in the publication "Procedures and Standards for Urban Soil Erosion and Sedimentation Control in Illinois" (The Green Book) and the "Illinois Urban Manual". manuals and additional technical assistance may be obtained by contacting this office. A copy of the Illinois Environmental Protection Agency "Standards and Specifications for Soil Erosion and Sediment Control" can be obtained by contacting the National Technical Information Service, 5285 Port Royal Rd, Spring, VA, 22161, (703) 487-4650. Additionally, the Northeastern Illinois Planning Commission (NIPC) has published "Suggested Soil Erosion and Sedimentation Control Ordinance: A Guide for Local Officials". This can be ordered by calling (312) 454-0400.

WOODLANDS

The S.W.C.D. encourages preserving as much of the wooded character of this site as possible. Long-term preservation of the trees will require taking certain precautions during and after construction. The ground around each tree to be saved should be flagged or fenced off. Also, it should be protected from heavy machinery. This area should be at least as wide as the area covered by the spread of the tree branches. Soil compaction around the roots of the trees can permanently interfere with the uptake of oxygen, nutrients, and water. This may cause the premature death of the trees. The placement of fill material around the trunks of trees can have the same

adverse effects. Other construction practices to avoid near the trees are: cutting and filling, raising the soil level, and removing neighboring trees. Contractors and construction crews should be informed of all tree preservation efforts.

Careful protection of this area around the trees may also preserve some of the natural woodland groundcover. In general, native plants are hardy, and islands of such vegetation around the bases of trees could prove to be an attractive, inexpensive, and low maintenance form of landscaping.

NATIONAL POLLUTANT DISCHARGE ELIMINATION

Discharges of storm water from construction sites, which disturb 1 or more acres of land, must be covered by an NPDES permit. Under the NPDES General Permits for Storm Water Discharges from Construction Sites, the EPA requires the development and implementation of a pollution prevention plan. A pollution prevention plan for construction is designed to reduce pollution at the construction site before it can cause environmental problems. Many of the practices and measures required for the pollution

prevention plan represent the standard operating procedure at many construction sites. Storm water management controls, erosion and sediment controls, inspection and maintenance have all been used at a number of construction projects. The General NPDES permit can be obtained through the Illinois Environmental Protection Agency, Division of Water Pollution Control, 2200 Churchill Road, P.O. Box 19276, Springfield, Illinois 62794-9276.

SOILS INTERPRETATIONS

The soil interpretation information and a summary of the soil limitations for this site are derived from the SSURGO certified soil layers for Kane and DuPage Counties, IL.

The soil limitation ratings are used mainly for engineering designs of dwellings with or without basements, local streets and roads, small commercial buildings, septic tank absorption fields, and etc. The ratings of not limiting, somewhat limiting, and very limiting are based on national averages and are defined and used as follows:

Not Limiting (Slight) - This limitation rating indicates that the soil properties are generally

favorable for the specified use and that any limitations are minor and easily overcome.

<u>Somewhat Limiting (Moderate)</u> - This rating indicates that the soil properties and site features are unfavorable for the specified use, but that the limitations can be overcome or minimized with special planning and design.

<u>Very Limiting (Severe)</u> - This indicates that one or more soil properties or site features are very unfavorable and difficult. A major increase in construction effort, special designs, or intensive maintenance is required. These costly measures may not be feasible for some soils that are rated as severe.

SOIL LIMITATION INTERPRETATIONS

<u>Flooding</u> is the temporary covering of soil surface by flowing water from any source, such as streams overflowing their banks, runoff from adjacent or surrounding slopes, inflow from high tides, or any combination of sources.

<u>Ponding</u> is standing water in a closed depression. The water is removed only by percolation, transpiration, or evaporation.

<u>Frost heave</u> potential and <u>shrink-swell actions</u> are concerns when constructing paved surfaces, such as foundations and roadways.

<u>Frost heave</u> is the result of moisture freezing in the soil and forming ice lenses. The ice lenses cause the soil to expand, leading to the premature deterioration of paved surfaces.

Shrink-swell action is related to the type and percentage of clay present. Clays are capable of absorbing large quantities of soil moisture because of their greater surface area. Absorption of soil moisture results in the swelling of the clay horizons. Upon drying, the soil tends to shrink. The expansion and contraction exerts stress on foundations, footings, and paved surfaces due to the changes in soil moisture conditions.

Soils limited by <u>wetness</u> indicates the presence of a seasonally high water table. A seasonally <u>high water table</u> is a zone of saturation at the highest average depth during the wettest season. It is at least 6 inches thick, persists in the soil for more than a few weeks, and is within 6 feet of the soil surface.

SOIL ANALYSIS

This site contains (9) soil-mapping units (103A – Houghton Muck; 152A - Drummer; 193B - Mayville; 344C2 - Harvard; 348B - Wingate; 356A - Elpaso; 656B - Octagon; 656C2 - Octagon; 662B - Barony)

HOUGHTON MUCK – 103A

Houghton muck, 0 to 2 percent slopes, (103A) is nearly level and very poorly drained. It is found in closed depressions and broad drainageways. This soil is comprised mostly of organic matter.

Included within this soil mapping unit are small areas of somewhat poorly drained Brenton soils and poorly drained Drummer soils. These soils are slight rises and drainageways, respectively.

Water and air move through this soil at a rapid rate, and surface runoff from disturbed areas is usually slow.

This soil has very poor potential for most urban uses.

DRUMMER SILTY CLAY LOAM - 152A

The Drummer silty clay loam, 0 to 2 percent slopes, (152A) soil mapping unit is level to nearly level, poorly drained, and is found on upland flats, in drainageways, and in depressions on outwash plains and on end and ground moraines. The texture is predominantly silty clay loam.

Other soils associated with this unit include somewhat poorly drained Brenton, Flanagan, and Elburn soils. These soils are on upland ridges and knolls.

Water and air move through this soil at a moderate rate, and surface runoff from disturbed areas is usually slow to ponded.

Due to wetness and lack of stability, this soil is poorly suited for most urban uses.

MAYVILLE SILT LOAM-193B

The Mayville silt loam, 2 to 5 percent slopes, (193B) soil mapping unit is gently sloping, well drained, and found on convex ridgetops, knolls and side slopes. The texture of the surface layer is silt loam. The subsoil is silty clay loam in the upper part, clay loam in the middle part, and loam in the lower part.

Included within this mapping unit are small areas of somewhat poorly drained Herbert soil and poorly drained Drummer soil. These soils are in shallow depressions and drainageways.

Water and air move through this unit at a moderate rate, and surface runoff from disturbed areas is medium or faster.

Mayville has fair to good potential for most urban uses.

HARVARD SILT LOAM - 344C2

Harvard (344C2) is moderately sloping (5 to 10 %), moderately well to well drained, and is on short uneven side slopes, convex ridges, and knolls on outwash plains. The surface layer is silt loam in texture. The subsoil is silty clay loam and clay loam.

Also included in this unit are small areas of somewhat poorly drained Millbrook soils and poorly drained Drummer soils. These are in shallow depressions and drainageways.

Water and air move through this soil at a moderate rate, and runoff from disturbed areas is medium to rapid.

The potential for most urban uses is good to fair.

WINGATE SILT LOAM- 348B

The Wingate silt loam, 2 to 5% percent slopes, (348B) soil mapping unit is gently sloping, moderately well to well drained, and found on convex ridges, knolls, and short uneven side slopes. The texture of the surface layer is silt loam. The subsoil grades from silt loam and silty clay loam to clay loam and loam.

Water and air move through this soil at a moderate rate, and runoff from disturbed areas is medium or faster.

Included within this soil mapping unit are small areas of somewhat poorly drained Lisbon soil and and poorly drained Drummer soil.

This soil has fair to good potential for most urban uses.

ELPASO SILTY CLAY LOAM - 356A

Elpaso silty clay loam, 0 to 2 percent slopes, (356A) soil mapping unit is level to nearly level, poorly drained, and is found on upland flats, in drainageways, and in depressions on outwash plains and on end and ground moraines. The texture is predominantly silty clay loam.

Other soils associated with this unit include somewhat poorly drained Brenton, Flanagan, and Elburn soils. These soils are on upland ridges and knolls.

Water and air move through this soil at a moderate rate, and surface runoff from disturbed areas is usually slow to ponded.

Due to wetness and lack of stability, this soil is poorly suited for most urban uses.

OCTAGON SILT LOAM - 656B

Octagon silt loam, 2 to 4 percent slopes, (656B) is gently sloping, well drained, and found on convex ridgetops and side slopes. The surface layer and upper part of the subsoil are silt loam. The remainder of the subsoil is clay loam. The underlying material may contain sandy loam.

Included within this soil mapping unit are small areas of somewhat poorly drained Herbert and Lisbon soils and poorly drained Drummer soil. These occupy shallow depressions and drainageways.

Water and air move through this soil at a moderate rate, and runoff from disturbed areas is usually slow to medium.

The potential for most urban uses is fair to good.

OCTAGON SILT LOAM - 656C2

The Octagon silt loam, 4 to 6 percent slopes eroded, (656C2) mapping unit is moderately sloping, well drained, and found on ridgetops and side slopes on end moraines. The surface layer is silt loam, and the subsoil is clay loam.

Included within this unit are small areas of somewhat poorly drained Herbert and Lisbon soils and poorly drained Drummer soils. These soils occupy shallow depressions and drainageways.

Water and air move through this soil at a moderate rate, and runoff from disturbed areas is medium or faster.

For most urban uses this unit has good to fair potential.

BARONY SILT LOAM - 662B

The Barony silt loam, 2 to 5 percent slopes, (662B) is gently sloping, moderately well to well drained, and located on short, uneven side slopes, convex ridge tops, and knolls on outwash plains. The surface layers are silt loam. The subsoil is silty clay loam in the upper part, clay loam in the middle part, and sandy loam in the lower part.

Included within this mapping unit are small areas of somewhat poorly drained Millbrook and Brenton soils and poorly drained Drummer soil. There are in shallow depressions and drainageways.

Water and air move through this soil at a moderate rate, and runoff from disturbed areas is medium or faster.

This soil unit has fair to good potential for most urban uses.

LAND USE CONSIDERATIONS

HOUGHTON MUCK – 103A

Houghton muck, 0 to 2 percent slopes, (103A) is very poorly suited for urban uses. The depth to the high water table is frequently less than one foot. This soil is subject to frequent ponding/ flooding. It also has low strength and stability because the organic matter content and frost heave potentials are high.

Alternative sites should be selected for urban development. This soil lacks the strength and stability to support foundations for dwellings, and frequent water saturation and flooding are difficult and expensive to overcome. This soil is poorly suited for streets and roads due to low strength and stability, wetness, and flooding.

There is a high potential for pollution of groundwater supplies if septic tank absorption fields are used in this soil. This soil should not be used for septic systems.

DRUMMER SILTY CLAY LOAM - 152A

The Drummer (152A) unit is severely limiting due to the problems associated with wetness and surface flooding/ponding. This is due in part to the landscape position. Drummer is found in surface depressions that convey and store surface waters. This unit is capable of supporting a seasonal high water table at the surface.

Areas of this soil used for building would have to be artificially drained and protected from ponding. Dwellings with basements would be difficult or expensive to construct because of difficulty in lowering the water table. Dwellings without basements would require drainage, as well. Use of this soil for streets and roads is limited by wetness, flooding, and frost heave.

Use of this soil for septic tank absorption systems is not advised. This is due to wetness and flooding. Sanitary facilities should be connected to community sewers and treatment facilities.

MAYVILLE SILT LOAM-193B

Mayville (193B) is well suited for dwellings with basements but is only moderately well suited for dwellings without basements. This is due to lack of stability caused by frost heave and shrink-swell potentials.

Frost heave is the result of moisture freezing in the soil and forming ice lenses. Ice formation in the soil causes expansion which leads to the premature deterioration of paved surfaces such as foundations and driveways, etc.

Shrink-swell is related to the type and percentage of clays present. Clays are capable of absorbing large quantities of soil moisture because of their greater relative surface area. Absorption of soil moisture results in the swelling of the clay horizons. Upon drying, the soil tends to shrink. This alternating expansion and contraction with changes in soil moisture conditions exerts stress on foundations and footings.

This soil is generally well suited for septic tank absorption systems. However, a moderately slow rate of water movement in the underlying material is a concern in some places.

HARVARD SILT LOAM - 344C2

Harvard (344C2) is only moderately well suited for dwellings without basements due to lack of stability in the subsoil. This soil is well suited for dwellings with basements. Frost heave is a concern for the construction of paved surfaces.

Wetness and slow percolation limit the suitability for the use of septic absorption systems.

WINGATE SILT LOAM - 348B

The Wingate silt loam (348B) soil is only moderately suited for dwellings without basements due to a lack of stability in the subsoil. It is well suited for dwellings with basements. Frost heave is a concern for roadways and other paved surfaces.

This soil is moderately well suited for the use of septic absorption systems. However, slow permeability in the subsoil and underlying material may be a problem.

ELPASO SILTY CLAY LOAM-356A

The Elpaso silty clay loam, 0 to 2 percent slopes, (356A) unit is severely limiting due to the problems associated with wetness and surface flooding/ponding. This is due in part to the landscape position. Drummer is found in surface depressions that convey and store surface waters. This unit is capable of supporting a seasonal high water table at the surface.

Areas of this soil used for building would have to be artificially drained and protected from ponding. Dwellings with basements would be difficult or expensive to construct because of difficulty in lowering the water table. Dwellings without basements would require drainage, as well. Use of this soil for streets and roads is limited by wetness, flooding, and frost heave.

Use of this soil for septic tank absorption systems is not advised. This is due to wetness and flooding. Sanitary facilities should be connected to community sewers and treatment facilities.

OCTAGON SILT LOAM - 656B

Octagon silt loam, 2 to 4 percent slopes, (656B) is suited for dwellings with basements but only moderately suited for dwellings without basements. It lacks stability because it has moderate frost heave potential and the subsoil has a moderate shrink-swell potential. Frost heave is also a problem for roadways and paved surfaces.

This soil is generally well suited for the use of septic tank absorption systems. The rate of water

movement in the subsoil may be a problem in some locations.

OCTAGON SILT LOAM - 656C2

The Octagon silt loam, 4 to 6 percent slopes eroded, (656C2) unit is only moderately suited for dwellings without basements due to instability in the subsoil. It is well suited for dwellings with basements. Frost heave is a problem for roadways and other paved surfaces.

This unit is generally well suited for septic tank absorption systems. However, slow percolation in the subsoil may be a problem.

BARONY SILT LOAM - 662B

The Barony silt loam, 2 to 5 percent slopes, (662B) is well suited for dwellings with basements but only moderately suited for dwellings without basements. This is due to instability caused by high frost heave potential and moderate shrink-swell potential. Frost heave and low strength are concerns with the construction of roadways.

For the use of septic absorption systems, this soil has moderate wetness and slow percolation limitations.

Our opinion is based on information from the following sources:

United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), Kane County, IL SSURGO soil layer certified in 2000, and DuPage County, IL SSURGO soil layer certified in 1999 and accompanying interpretations.

Federal Emergency Management Agency, National Flood Insurance Program, Q3 Flood Data, Disc 6, September 1998.

United States Department of the Interior, Fish and

Wildlife Service, National Wetlands Inventory, Photo Year 1983-1984, Digitized 1985-1986.

United States Department of Agriculture, Natural Resources Conservation Service. Wetland Inventory Map. Digitized from original base map in 1997.

U.S. Geological Survey, Illinois Digital Orthophoto Quadrangles, 1998/1999 photos, Published: Champaign, Illinois State Geological Survey, 2000.

An on-site investigation conducted by the SWCD Resource Analyst, Candice Jacobs/Ashley Jennings on August 21, 2012.

We respectfully submit this information in compliance with the Illinois Soil and Water Conservation Districts Act (ILCS 70, 405/1 et seq). The District Board reviews proposed developments. Candice Jacobs, Resource Conservationist, prepared this report.

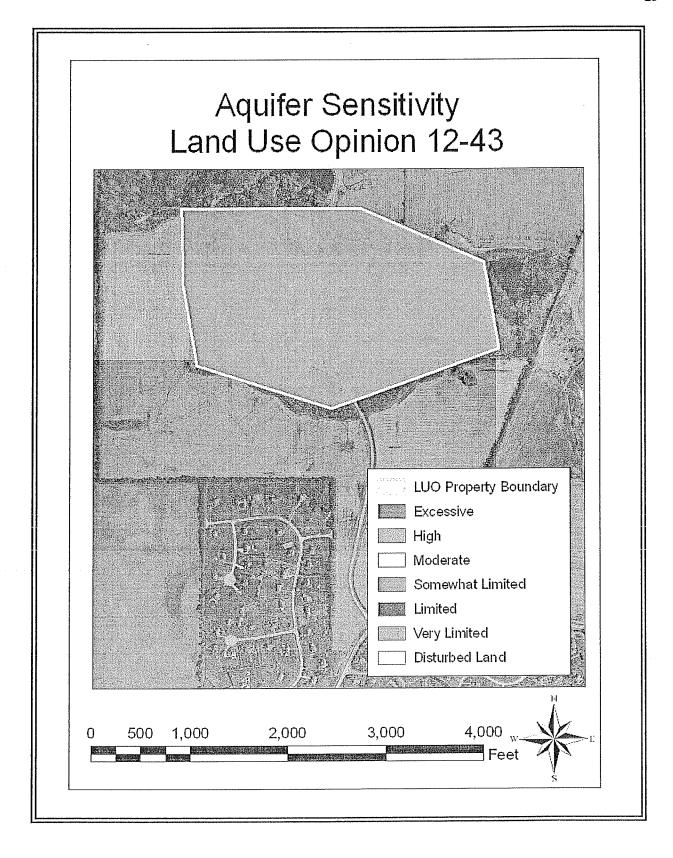
Kiva Real Estate Investments LLC 3359 Main Street Skokie, IL 60076

ecc: Wayne Gorski, USEPA

cc:

APPENDIX A

GIS Mapping



APPENDIX B

Soil Tables

SOIL REPORT LUO 12-43

Dwellings With Basements

Aggregation Method: Dominant Condition Tie-break Rule: Higher

Kane County, Illinois Survey Area Version and Date: 6 - 01/20/2012

Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
103A 152A	Houghton muck, 0 to 2 percent slopes Drummer slity clay loam, 0 to 2 percent slopes	Very limited Very limited	Houghton 90% Subsidence Depth to saturated zone Organic matter content Drummer 90% Depth to saturated zone Shrink-swell
1938	Mayville silt loam, 2 to 5 percent slopes	Somewhat limited	Mayville 92% Depth to saturated zone
344C2	Harvard silt loam, 5 to 10 percent slopes, eroded	Somewhat limited	Harvard 92% Shrink-swell
3465	Wingate silt loam, 2 to 5 percent slopes	Somewhat limited	Wingate 90% Shrink-swell Depth to saturated zone
356A	Elpaso silty clay loam, 0 to 2 percent slopes	Very limited	Elpaso 90% Ponding Depth to saturated zone Shrink-swell
656B	Octagon silt loam, 2 to 4 percent slopes	Somewhat limited	Octagon 92% Depth to saturated zone
656C2	Octagon silt loam, 4 to 6 percent slopes, eroded	Somewhat limited	Octagon 92% Depth to saturated zone
662B	Barony silt loam, 2 to 5 percent slopes	Somewhat limited	Barony 92% Shrīnk-swell Depth to saturated zone
W	Water	Not rated	Water 100%

Dwellings are single-family houses of three stories or less. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet.

The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification of the soil. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Dwellings Without Basements

Aggregation Method: Dominant Condition Tie-break Rule: Higher

Kane County, Illinois Survey Area Version and Date: 6 - 01/20/2012

Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
103A	Houghton muck, 0 to 2 percent slopes	Very limited	Houghton 90% Subsidence Depth to saturated zone Organic matter content
152A	Drummer silty clay loam, 0 to 2 percent slopes	Very limited	Drummer 90% Depth to saturated zone Shrink-swell
193B	Mayville silt loam, 2 to 5 percent slopes	Somewhat limited	Mayville 92% Shrink-swell
344C2	Harvard silt loam, 5 to 10 percent slopes, eroded	Somewhat limited	Harvard 92% Shrink-swell
348B	Wingate silt loam, 2 to 5 percent slopes	Somewhat limited	Wingate 90% Shrink-swell
356A	Elpaso silty clay foam, 0 to 2 percent slopes	Very limited	Elpaso 90% Ponding Depth to saturated zone Shrink-swell
656B	Octagon silt loam, 2 to 4 percent slopes	Somewhat limited	Octagon 92% Shrink-swell
656C2	Octagon silt loam, 4 to 6 percent slopes, eroded	Somewhat limited	Octagon 92% Shrink-swell
662B	Barony silt loam, 2 to 5 percent slopes	Somewhat limited	Barony 92% Shrink-swell
W	Water	Not rated	Water 100%

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper.

The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification of the soil. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Small Commercial Buildings

Aggregation Method: Dominant Condition Tie-break Rule: Higher

Kane County, Illinois Survey Area Version and Date: 6 - 01/20/2012

Map symbol	Map unit name	Rating	Component name and % composition Rating reasons
103A	Houghton muck, 0 to 2 percent slopes	Very limited	Houghton 90% Subsidence Depth to saturated zone Organic matter content
152A	Drummer silty clay loam, 0 to 2 percent slopes	Very limited	Drummer 90% Depth to saturated zone Shrink-swell
193B	Mayville silt loam, 2 to 5 percent slopes	Somewhat limited	Mayville 92% Shrink-swell
344C2	Harvard silt loam, 5 to 10 percent slopes, eroded	Somewhat limited	Harvard 92% Slope Shrink-swell
348B	Wingate silt loam, 2 to 5 percent slopes	Somewhat limited	Wingate 90% Shrink-swell
356A	Elpaso silty clay loam, 0 to 2 percent slopes	Very limited	Elpaso 90% Ponding Depth to saturated zone Shrink-swell
656B	Octagon silt loam, 2 to 4 percent slopes	Somewhat limited	Octagon 92% Shrink-swell
656C2	Octagon silt loam, 4 to 6 percent slopes, eroded	Somewhat limited	Octagon 92% Shrink-swell Slope
662B	Barony silt loam, 2 to 5 percent slopes	Somewhat limited	Barony 92% Shrink-swell
W	Water	Not rated	Water 100%

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification of the soil). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components fisted for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

APPENDIX C

Contact List

CONTACT LIST

Federal Agencies

U. S. Army Corps of Engineers

Regulatory Branch 111 N. Canal Street, Suite 600 Chicago, Illinois 60606 (312) 846-5530 http://www.usace.army.mil/ncc/

U. S. D. A. Natural Resources

Conservation Service 2315 Dean St. Suite 100 St. Charles, Illinois 60175 (630)584-7961 http://www.il.nrcs.usda.gov/

U. S. Fish & Wildlife Service

Chicago Metro Wetlands Office 1000 Hart Road, Suite 180 Barrington, Illinois 60010 (847) 381-2253 http://www.fws.gov/

U. S. Environmental Protection Agency

Region 5 77 West Jackson Boulevard Chicago, Illinois 60604 (312) 353-2000 http://www.epa.gov/region5/

State Agencies

Illinois Department of Natural Resources

Lincoln Tower Plaza 524 S. Second Street Springfield, Illinois 62794 (217) 782-6302 http://dnr.state.il.us/

Illinois Environmental Protection Agency

1021 North Grand Avenue East Springfield, Illinois 62702 (217) 782-3397 http://www.epa.state.il.us/

Illinois Department of Transportation

201 West Center Court Schaumburg, Illinois 60196 http://www.dot.state.il.us/

Illinois Natural History Survey

607 East Peabody Drive Champaign, Illinois 61820 (217) 333-688 http://www.inhs.uiuc.edu/

County Offices

DuPage County

Administration Building

421 N. County Farm Road Wheaton, Illinois 60187 http://www.co.dupage.il.us/630-407-6500

Development Department

(630) 407-6700

Environmental Concerns Department Stormwater Management Division

(630) 407-6700

Solid Waste Department

(630) 407-6700

Health Department

111 North County Farm Road Wheaton, Illinois 60187 (630) 682-7400

Forest Preserve District

3 S 580 Naperville Road, Wheaton, Illinois 60187 (630) 933-7200

Kane County

Government Center

719 S. Batavia Ave. Geneva, IL 60134 http://www.co.kane.il.us/ 630-232-3400

Development Department

(630) 232-3492

Department of Environmental Management

630-208-5118

Forest Preserve District

(630) 232-5980

Health Department

1240 North Highland Ave Aurora, IL 60506 (630) 897-1124