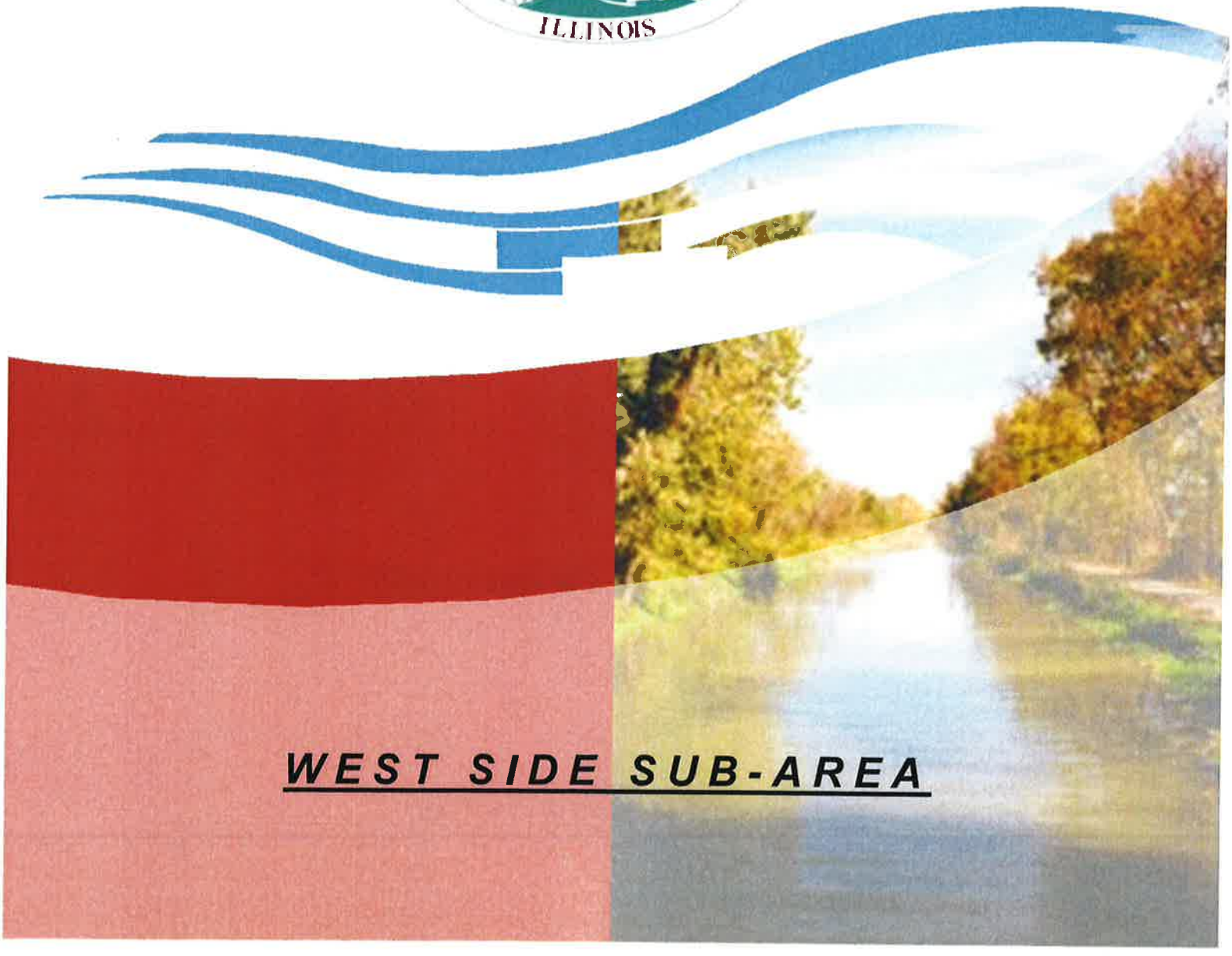
Village of Channahon

where the waters meet



WEST SIDE SUB-AREA

WEST SIDE SUB-AREA

Final Adoption - October 15, 2007

Table of Contents

INTRODUCTION

INTENT OF THE WEST SIDE SUB-AREA PLAN

The Village of Channahon, located in Will and Grundy Counties, has experienced significant growth in population and development in recent years. In recognition of this growth, the Village commissioned the West Side Sub-Area Plan to specifically address the western portion of Channahon and to provide guidance for continued growth and development, meanwhile documenting the goals and objectives.

Village Hall - Channahon

The Village's Comprehensive Land Use Plan, adopted March 18, 1996 and updated November 3, 2003, provided a strong vision for the Village of Channahon. This West Side Sub-Area Plan Update, however, has been created to more specifically evaluate the western portion of Channahon. This update is intended not to replace the current Comprehensive Plan, but to supplement the document based on the current community vision for the orderly growth of this study area. It is anticipated, elements will formally be included in the Village's Comprehensive Land Use Plan.

STUDY AREA

The study area for this West Side Sub-Area Plan extends generally from the Illinois River on the south, Minooka boundary agreement to the north (Interstate 80 corridor), the ComEd utility easement on the east (near McLinden Road), Gun Club Road on the west (See Aerial Exhibit) and northwest to Minooka Road and Ashley Road. Villages adjacent to Channahon are Morris to the west, Minooka to the northeast and Wilmington to the south (See Preliminary Study Area).

The existing and future accessibility to major rail and vehicular arteries help make Channahon an attractive area for industrial development south of Interstate 80. The proximity to Interstate 80 and the current land use pattern along U.S. Highway 6, indicates that the area has a high potential for additional industrial and non-residential land uses. The study area has many undeveloped areas with significant potential for continued growth.

Existing industrial uses along U.S. Route 6

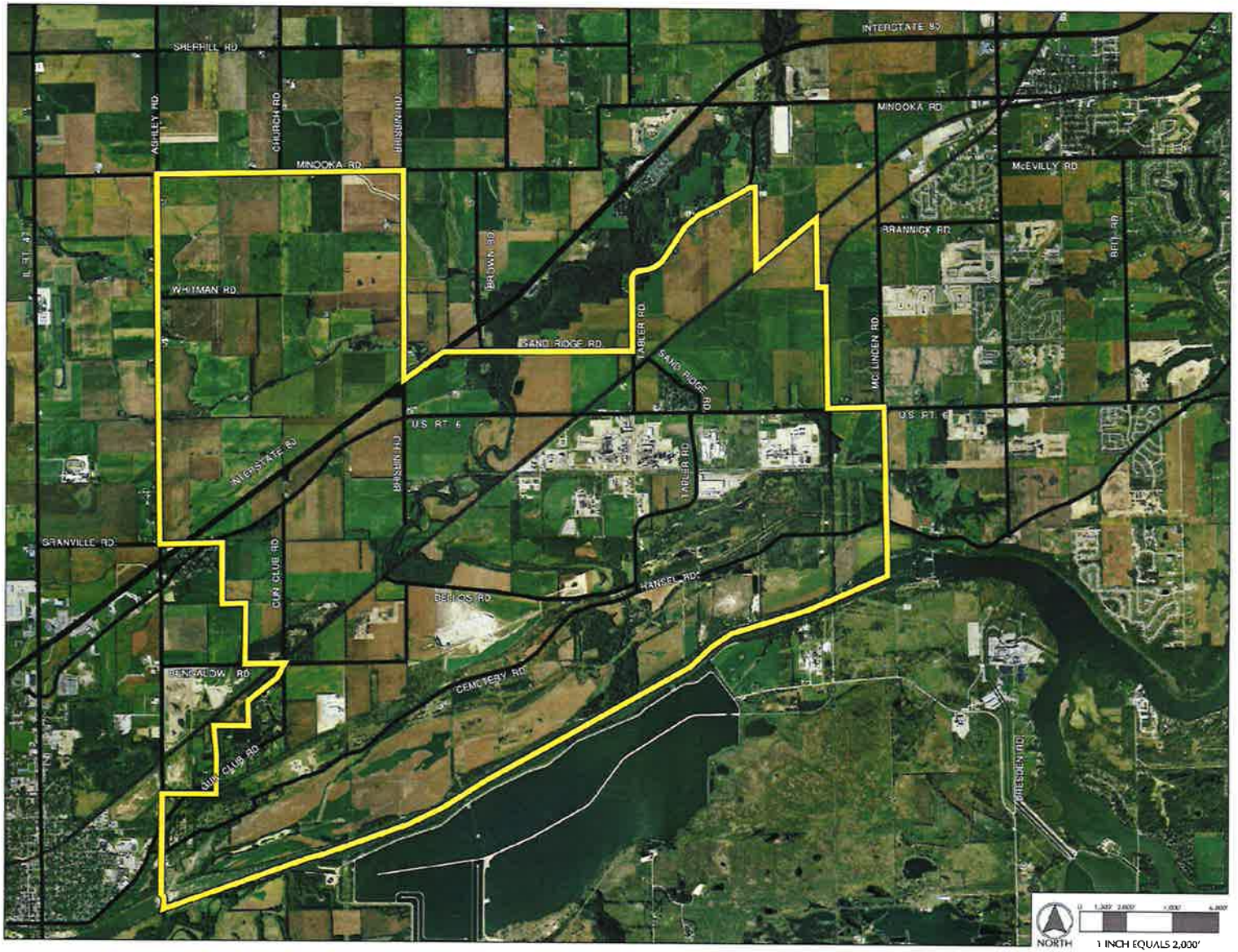
THE PLANNING PROCESS

To create a West Side Sub-Area Plan that reinforces and enhances the unique characteristics that define the Village of Channahon, a detailed analysis of opportunities and constraints was critical. Input from Village leaders and residents were gathered to define the goals and objectives important to Channahon. On January 24, 2007, the public voiced their opinions at a "stakeholders" workshop.

On May 29, 2007 the West Side Sub-Area Plan was presented and discussed at a joint Planning Commission and Village Board public hearing.

VILLAGE OF CHANNAHON
COMPREHENSIVE PLAN - WEST SIDE SUBAREA

Aerial Exhibit



LEGEND

- STUDY AREA
- INTERSTATES
- ROADWAYS
- RAILROADS

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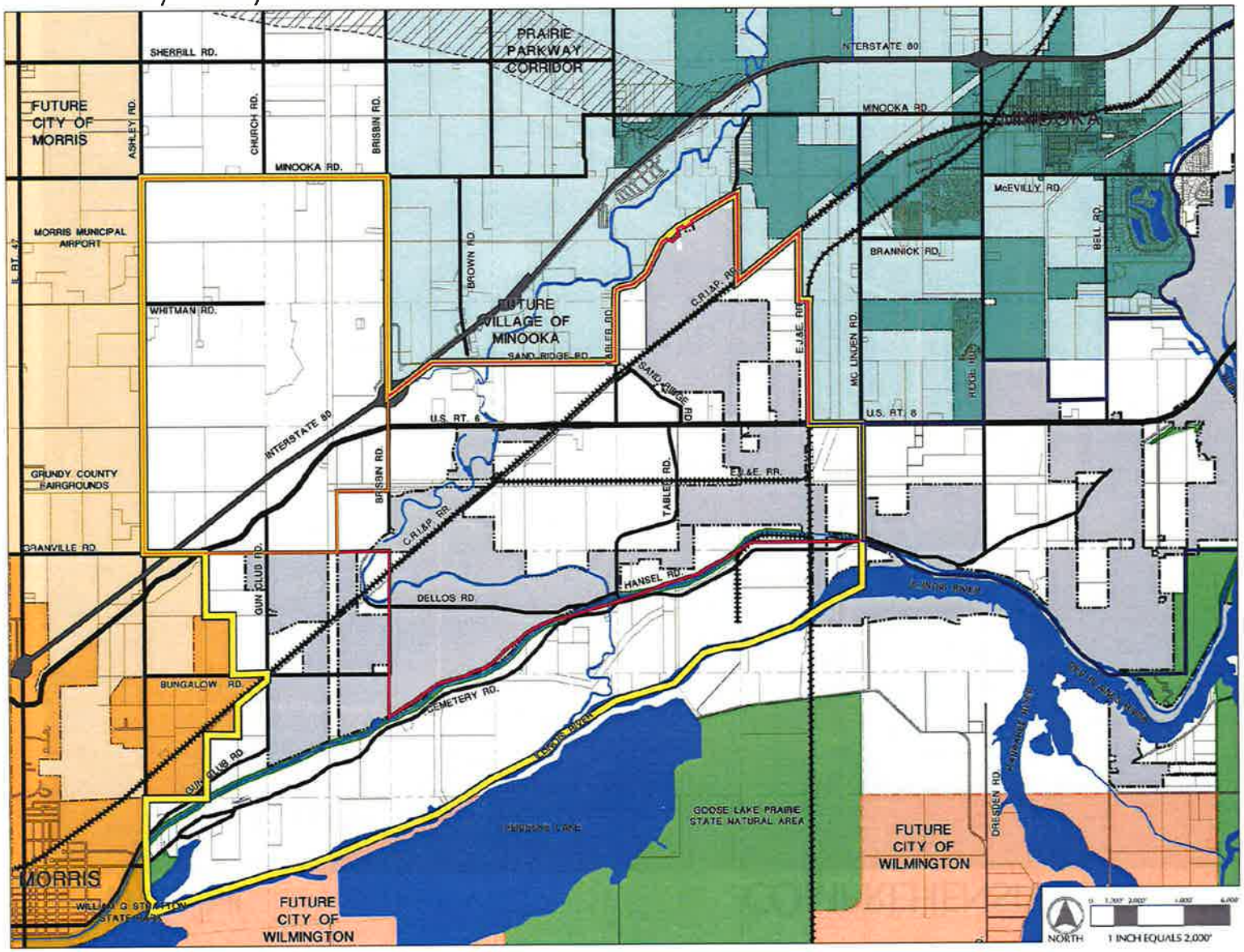
VILLAGE OF CHANNAHON
COMPREHENSIVE PLAN - WEST SIDE SUBAREA

Preliminary Study Area



LEGEND

- PRELIMINARY STUDY AREA
- CHANNAHON CORPORATE LIMITS
- CITY OF MORRIS
- FUTURE CITY OF MORRIS
- VILLAGE OF MINOOKA
- FUTURE VILLAGE OF MINOOKA
- FUTURE VILLAGE OF SHOREWOOD
- CITY OF JOLIET
- FUTURE CITY OF JOLIET
- FUTURE VILLAGE OF ELWOOD
- FUTURE CITY OF WILMINGTON
- UNINCORPORATED OPEN SPACE
- FPA BOUNDARY - EXISITING
- FPA BOUNDARY - PHASE 1
- FPA BOUNDARY - PHASE 2
- PRAIRIE PARKWAY CORRIDOR
- INTERSTATE RIGHT OF WAY
- PRIMARY ROADWAYS
- SECONDARY ROADWAYS
- RAILROADS

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SCC Planning Consultants

GOALS & OBJECTIVES

Goals and objectives have been defined in order to communicate critical planning factors, which will influence the western expansion of the Village of Channahon. These goals and objectives have been organized into five categories:

- Character and Environment
- Residential Development
- Non-Residential Development
- Transportation
- Parks and Open Space

These goals and objectives should be used in conjunction with the approved Comprehensive Plan (updated November, 2003) to guide and direct developers, residents and Village officials to the desired vision of the Village.

CHARACTER AND ENVIRONMENT

GOAL 1: ***Create attractive, distinct view corridors leading into and throughout the Village.***

- Establish design standards that highlight and reinforce the community identity and unique character.
- Define corridor overlay areas, which are prominent "gateways" into Channahon, and outline specific design and development criteria for these corridors.

GOAL 2: ***Encourage the most desirable and efficient use of land, while enhancing the physical environment through compatible land use configurations.***

- Ensure that new developments will be compatible with existing land uses in terms of use, density, building heights, scale and impact to adjacent property.
- Ensure that the local infrastructure systems can accommodate future growth; ensure that such systems are expanded as needed.

GOAL 3: ***Ensure that future development is sensitive to the natural topography, views, drainage patterns, existing vegetation and historic structures which serve as landmarks for Channahon.***

- Establish a plan for future development that is compatible with the Village's natural features, environmentally-sensitive areas and existing land uses.
- Ensure that all reasonable efforts have been made to preserve and incorporate existing trees into future development plans.

- Encourage developments which are sensitive to the natural forms of the land and attempt to maintain scenic vistas and natural drainage patterns. Avoid proposals for massive cut and fill alterations which modify the visual character of the area.

GOAL 4: ***Establish the Aux Sable Creek Corridor as a prominent feature of the study area.***

- Explore recreational opportunities focused along the Aux Sable Creek Corridor (i.e. trails and picnic pavilions) to showcase one of Channahon's defining elements.
- Preserve the natural aesthetics of the creek and explore the creation of a contiguous trail or greenbelt connecting to the existing I & M Canal Trail.
- Propose alternative solutions to stormwater management (Best Management Practices) to preserve the environmental integrity of the Aux Sable Creek.

Aux Sable Creek

RESIDENTIAL

GOAL 1: ***Encourage quality residential development in limited areas.***

- Minimize the amount of residential land use south of Interstate 80.
- Restrict residential land uses between the I & M Canal and U.S. Highway Route 6 from Mc Linden Road to the Morris boundary line.
- Encourage clustering of residential units, with the exemption of the Village's 12,000 sq. ft. minimum, to reduce infrastructure costs and future infrastructure maintenance costs.
- Preserve natural features and maximize the visual impact of open space.
- Create open space adjacent to existing residential areas to serve as a transition and buffer to more intensive land uses.

GOAL 2: ***Encourage the development of active adult, age-restricted housing communities within the study area north of Interstate 80.***

NON-RESIDENTIAL DEVELOPMENT

GOAL 1: ***Provide significant commercial uses, so that future economic development opportunities provide the Village with a positive fiscal outlook.***

- Encourage regional and highway service-oriented commercial uses at the future intersection of Brisbin Road and Interstate 80.
- Promote concentrated areas of business park and office uses surrounding the commercial areas.

GOAL 2: ***Provide areas for expansion of existing industrial uses within the study area.***

- Promote additional light and heavy industrial uses along and south of the U.S. Route 6 corridor.

TRANSPORTATION

GOAL 1: ***Plan for future roadway improvements and connections to improve vehicular circulation within the study area.***

- Create a functional classification roadway system to adequately provide access to the various types of developments envisioned in the study area.
- Identify additional locations for future roadway corridors, extensions, and connections.
- Provide logical and effective transportation linkage throughout the comprehensive plan study area.
- Provide applicable standards focusing on the type and volume of traffic envisioned in order to ensure the safety and functionality of the transportation network for all users.

GOAL 2: ***Coordinate site planning efforts between adjacent developments to reduce the number of access points and traffic signals along major road corridors.***

- Establish access control guidelines for the study area with respect to the major and secondary arterials.

GOAL 3: ***Promote additional railroad service and expansion within the study area to accommodate light and heavy industrial uses.***

- Review and evaluate vehicular railroad crossings with respect to future roadway improvements to promote compatibility and safety of crossing.

Existing rail service within the study area

GOAL 4: ***Provide for pedestrian and bicycle paths.***

- Ensure that, within new developments, hike and bike trails are incorporated and that they are connected to existing and future trails.

- Explore options for non-vehicular connections to the overall regional open space system (i.e. Illinois & Michigan Canal Trail).

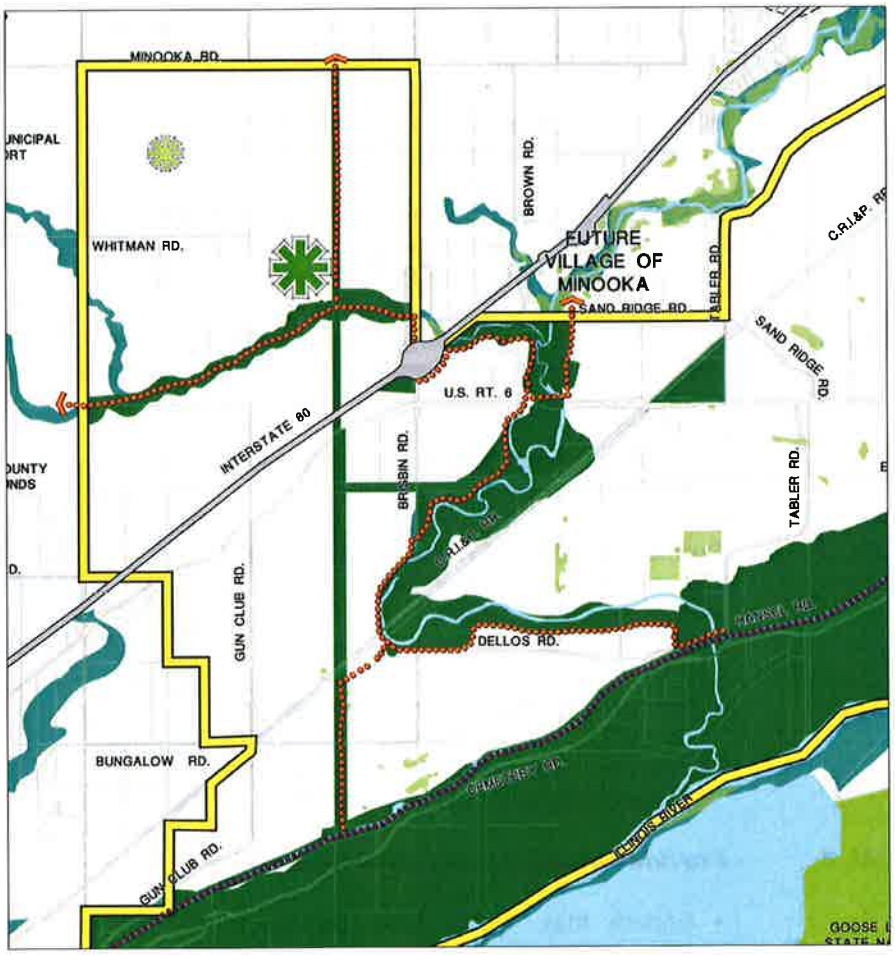
PARKS AND OPEN SPACE

GOAL 1: ***Promote respect, conservation, enhancement and protection of important natural features and resources.***

- Protect and respect sensitive environmental corridors such as the Aux Sable Creek and other areas north of the Illinois River.
- Develop guidelines for preservation of significant trees and natural areas.

GOAL 2: ***Provide areas for future parks in order to provide open space and recreation in close proximity to all residents.***

- Create parks and open space amenities, primarily within proposed residential areas.



Provide trail connections along the Aux Sable Creek Corridor linking the Illinois and Michigan Canal Trail to the entire study area

NATURAL & PHYSICAL INVENTORY

Physical Inventory

Existing Zoning

- The pre-dominate land use and zoning throughout the study area is light and heavy industrial. These uses are concentrated along the U.S. Route 6 corridor.
- Some residential development exists north of U.S. Route 6.

Natural Inventory

Existing Natural Features

- Many natural features exist within the study area and are identified and incorporated into this West Side Sub-Area Plan. Any development adjacent to or within these areas should require further study by the applicant.

  - **Floodplain**
  - **Drainage ways**
  - **Mature trees**
  - **Wetlands**
  - **Steep slopes**

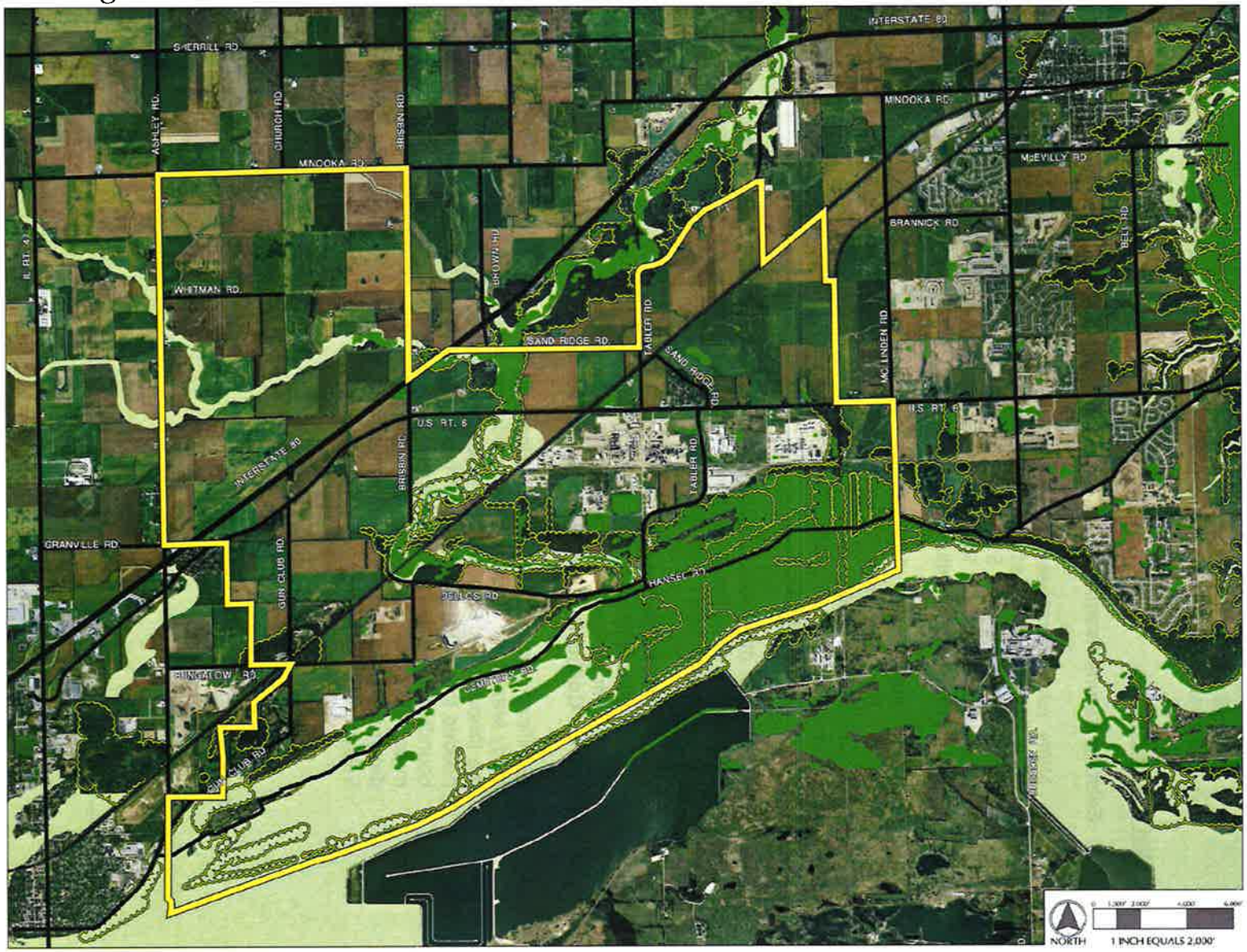
- Additionally, other major environmental features are identified on the Existing Natural Features Exhibit. These sensitive natural resources are very important features for the Village of Channahon and should be respected and protected.

  - **Aux Sable Creek**
  - **Illinois River**
  - **Illinois and Michigan (I & M) Canal corridor**
  - **Collins Run Creek (northwest section of the study area)**

- Significant wetland areas exist throughout the study area along the Aux Sable corridor and along the Illinois River. Final wetland delineations will be needed to identify the quality of the wetlands and boundaries at time of submittal. Development must allow for adequate setbacks from the determined wetland edge, as determined by the Village of Channahon.

VILLAGE OF CHANNAHON
WEST SIDE SUBAREA

Existing Natural Features



LEGEND

- STUDY AREA
- WETLANDS
- FLOODZONES
- EXISTING TREES
- INTERSTATES
- ROADWAYS
- RAILROADS

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LAND USE PLAN CLASSIFICATIONS

Land Use Classifications are designed to help the Village of Channahon achieve an efficient and coordinated development pattern. The Land Use Plan provides guidelines for the general location of land uses, taking into consideration many planning issues, objectives, and policies; existing land use and growth projections; and environmental analysis. The extent of land use allocations was based on anticipated growth and market demand levels for Channahon.

While the West Side Sub-Area Plan provides guidelines for the location of general categories of land uses, the merit of each development proposal must be evaluated in light of its design elements, more detailed site data, and the Village's planning issues, objectives, policies and programs. Development proposals, which provide better responses to these criteria, should be encouraged. The Village will have the flexibility to respond to changes in the rate of growth and market demand and, thus, to capture the development which it desires. For the purpose of this West Side Sub-Area Plan, the land use classifications defined in the Village of Channahon Comprehensive Plan have been modified slightly.

Residential Land Use Classification

The West Side Sub-Area Plan designates locations and sets development design parameters to help provide quality residential neighborhoods for residents of the Village of Channahon. While most proposed land uses within this study area are primarily non-residential, some significant residential uses are proposed north of Interstate 80 and west of Brisbin Road.

An important consideration with regard to locational criteria for this land use classification is to ensure that any non-residential uses that are adjacent are as compatible as possible. To effectively guide appropriate residential development and densities that best fit the West Side Sub-Area Plan's residential development goals, this plan defines Low Density Residential as the primary residential land use.

- **Low Density Residential**
  Density: 1.0 to 3.0 DU/AC units per gross acre

  Intent

  The Low Density Residential Land Use is intended to be a residential area comprised of single-family detached residences. The Low Density Residential Land Use seeks to preserve existing developed areas at this density and to create new lower density development characterized by intimate neighborhoods and residences of distinctive design. Integration of open spaces, particularly along major roadways and at the periphery of each development to transition to adjacent areas, is vital to both the character of the development and the identity of the Village.

Non-Residential Land Use Classifications

The West Side Sub-Area Plan includes distinct, significant areas to locate non-residential uses. The Village has several existing areas of industrial uses and many potential areas for expansion within the study area. Such uses provide necessary employment opportunities for area residents, and strengthen the economic base of the Village of Channahon, as specified in the Goals and Objectives of the West Side Sub-Area Plan. In order to provide a variety of non-residential uses in Channahon, several categories within this classification are established. The Non-Residential Land Use Classification includes uses such as commercial, retail, office/business parks, and heavy and light industrial.

- **Commercial**

Intent

The West Side Sub-Area Plan recommendations regarding the locations and amounts of this use are intended to provide adequate areas for commercial development to capture the opportunities provided via the major transportation corridors (i.e. Interstate 80, U.S. Route 6). Incorporating these land uses will benefit citizens by enabling them to have their commercial needs met locally, and will benefit the Village by enabling it to capture the retail tax revenue generated by this land use.

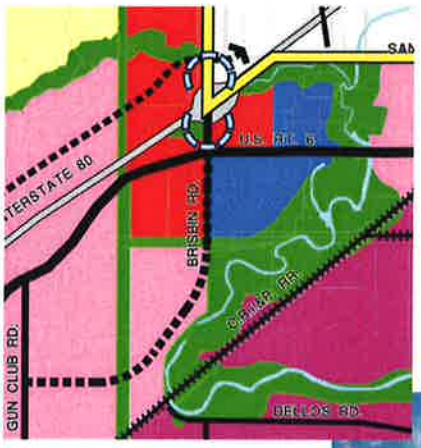
The Commercial Land Use classification includes all retail-oriented uses including, but not limited to, highway commercial, service-oriented businesses (hotels, truck stops, gas stations, and restaurants), distribution centers and big box retail.

Potential for outlet malls and big box retail at the future interchange of Interstate 80 and Brisbin Road

Future interchange at Brisbin Road and Interstate 80

As the West Side Sub-Area Plan and the exhibit below illustrates, it is recommended that commercial uses are located at the future interchange of Interstate 80 and Brisbin Road. Intensive highway commercial uses are imminent with direct access to Interstate 80. Additionally, transitional areas are proposed along U.S. Route 6 such as business parks and light industrial uses with good accessibility and visibility.

Representative sketch plan of the future Interstate 80 and Brisbin Road interchange



Significant highway commercial uses (i.e. hotels) are proposed adjacent to Interstate 80 and U.S. Route 6

- **Business Park/Office**

Intent

The Business Park/Office Land Use category seeks to encourage development of office uses in a business park-like setting. Primary uses are intended to be large office properties and facilities for research, testing and product development. Light manufacturing uses are intended to be limited in scope. The Business Park Land Use class can be used as a transition from traditional industrial uses to commercial uses. Developments in this class should be designed to be non-obtrusive to adjoining properties and uses.

It is recommended that the Village concentrate on attracting businesses engaged in activities that would be contained within a building (i.e. a minimal amount of open storage), such as high-tech services, medical services and software manufacturing.

- **Heavy Industrial**

Intent

The Heavy Industrial Use class intends to allow heavy manufacturing facilities, large assembly, wholesale and warehouse uses in distinct areas that can be served well by transportation and other infrastructure. Uses that are consistent with the Village's I-1 and I-2 zoning districts would be appropriate within this category. Significant heavy industrial land use has been designated on the Plan, mostly south of the U.S. Route 6 corridor. In no case, shall residential uses be located near, or adjacent to, this land use category. Light industrial uses should serve as a buffer to this use.

- **Light Industrial**

Intent

The Light Industrial Use class intends to allow limited manufacturing, assembly, wholesale and warehouse uses in distinct areas that can be served well by transportation and other infrastructure. Light Industrial land use should be utilized as a transition from heavy industrial uses to business park/office use.

- **Open Space**

Intent

The Open Space Land Use classification is intended to preserve existing recreational and environmentally sensitive areas and to establish appropriate locations for new designated open spaces. Consistent with the Goals and Objectives of the West Side Sub-Area Plan, the Open Space Land Use Plan also seeks to provide a connected open space and trail system linking developments and residents within Channahon.

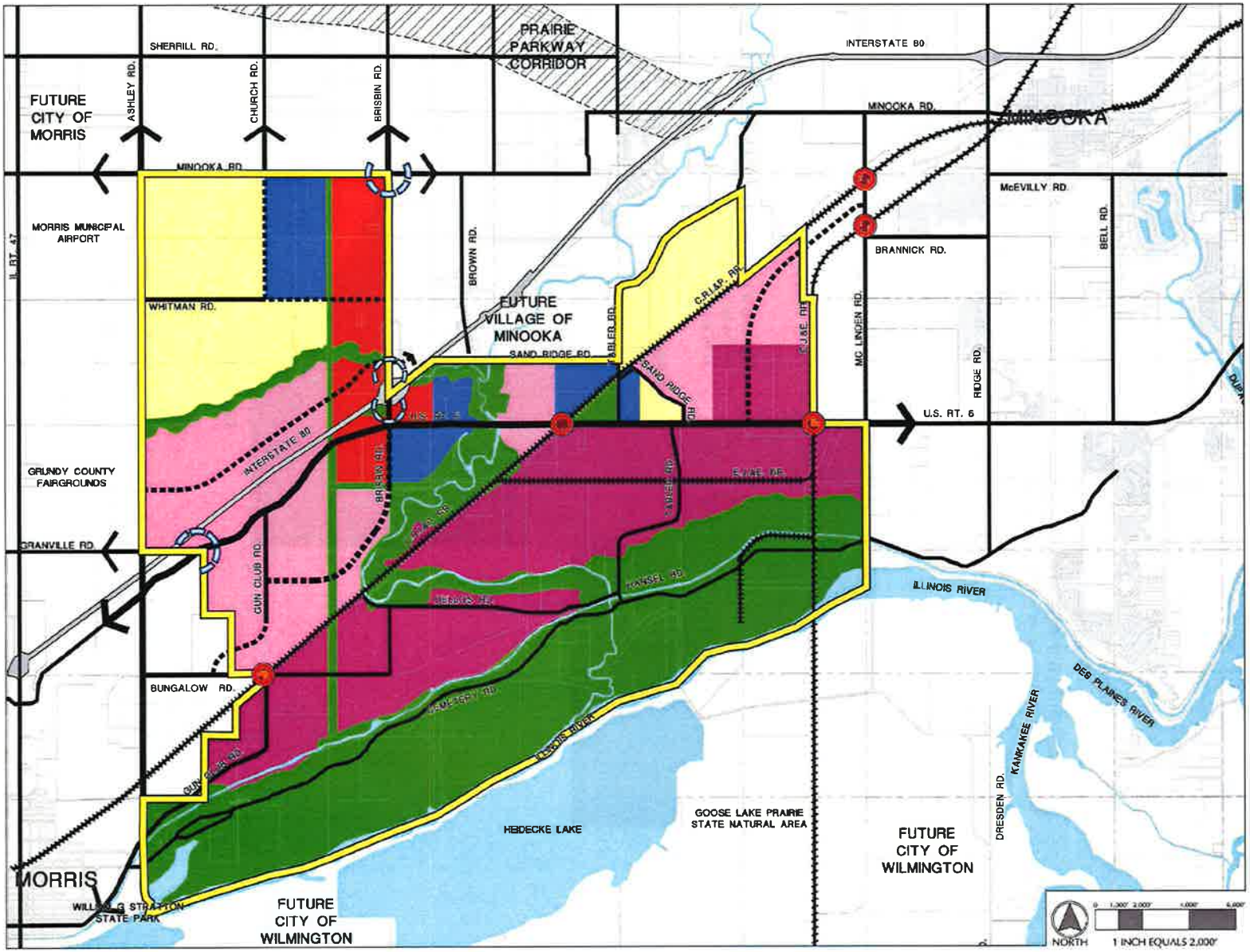
This classification is not intended to establish locations for open spaces that are located with Planned Unit Developments or other developments. All planned developments are expected to consult with the Village of Channahon to ensure that the recreational needs of residents are being addressed. Additionally, refer to the following section, Open Space, Parks and Trails Plan, depicting the types, sizes and general locations of future parks, trails and open space corridors.

Significant opportunities exist to connect to the regional trail system (I & M Canal Trail and the Aux Sable Creek Corridor)

Existing Illinois and Michigan Canal Trail

VILLAGE OF CHANNAHON
COMPREHENSIVE PLAN - WEST SIDE SUBAREA

Future Land Use Plan



LEGEND

- PRELIMINARY STUDY AREA
- LOW DENSITY RESIDENTIAL
- COMMERCIAL
- BUSINESS PARK/ OFFICE
- LIGHT INDUSTRIAL
- HEAVY INDUSTRIAL
- OPEN SPACE
- PRAIRIE PARKWAY CORRIDOR
- INTERSTATE RIGHT OF WAY
- MAJOR THOROUGHFARES
  PROPOSED R.O.W. WIDTH 100-200 FEET*
- SECONDARY THOROUGHFARES
  PROPOSED R.O.W. WIDTH 80-100 FEET*
- POTENTIAL SECONDARY THOROUGHFARES
  PROPOSED R.O.W. WIDTH 80-100 FEET*
- COLLECTOR THOROUGHFARES
  PROPOSED R.O.W. WIDTH 80 FEET*
- POTENTIAL COLLECTOR THOROUGHFARES
  PROPOSED R.O.W. WIDTH 80 FEET*
- RAILROADS
- EXISTING RAILROAD CROSSING
- CHANNAHON GATEWAY

* PROPOSED R.O.W. WIDTHS ACCORDING TO THE VILLAGE OF CHANNAHON SUBDIVISION & DEVELOPMENT REGULATIONS, APPENDIX B: TABLE OF MINIMUM STANDARDS FOR STREET DESIGN

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OPEN SPACE, PARKS & TRAILS PLAN

The Open Space Plan provides an analysis of existing and proposed open space and developmental guidance for the placement of proposed open space, parks and trails for the Village of Channahon. The Open Space Plan can serve as a tool by which the Village incorporates new recreational opportunities and protects natural resources, while enhancing the quality of life for the residents in Channahon. The Channahon Park District involvement is necessary to prioritize the acquisition of lands based on population, recreational needs and natural resource preservation.

The West Side Sub-Area industrial uses exist throughout most areas south of U.S. Route 6. Therefore, the focus in those areas should be on forest preserves and environmental protection (i.e. wetland and tree preservation). North of U.S. Route 6, near residential areas, neighborhood and community parks should be implemented within walking distance of those residential areas. To accommodate future residents, the West Side Sub-Area plan identifies future parks and they have been categorized into three types: neighborhood parks, community parks and regional parks. These parks include all forms of active and passive recreation opportunities including greenbelts and trails.

Greenbelts can serve as either passive or natural open space corridors. Many of the greenbelts, located within floodplain corridors and wetlands, will undergo minimal, if any, improvements. Passive open space may also be utilized to satisfy stormwater retention requirements. If left completely unimproved, these greenbelts are considered natural open space.

Trails are characterized by their use as linear outdoor systems; providing continuous passage for pedestrians, cyclists, joggers, and skaters. They are generally located within greenbelts or adjacent to roadways. They may also serve as neighborhood connections to public and private facilities in the general area. It is the intent of the Village of Channahon to provide most trails along major drainage ways/environmental corridors (Aux Sable Creek) or within road right of way. Most importantly, the primary goal is to make connections to the regional trails, such as the I & M Canal State Trail.

Neighborhood Parks

5 to 15 acres

Neighborhood parks remain the basic unit of the park system and serve as the recreational focus of a neighborhood or larger community, providing sports fields, playgrounds and picnic areas. Accommodating a wide variety of age and user groups, these parks and their facilities are geared toward those living within the service area or immediate region. Residents should be able to easily access neighborhood parks via bicycle paths or trails. Neighborhood parks are not shown on the open space plan, as they will be implemented within residential neighborhoods as they are proposed to the Village of Channahon.

Community Parks

15 to 25 acres

A community park focuses on meeting the recreational needs of several neighborhoods or large sections of the community while, at the same time, preserving unique natural resources. Primary focus for a community park is the northwest section of the study area for the West Side Sub-Area Plan where significant residential land use occurs.

Within residential areas, community parks offer group activities and recreational opportunities not feasible at the neighborhood level, including family recreation centers with programs and facilities for all age groups. One community park is planned for the northwest section of the study area, within the area of planned residential housing west of Brisbin Road and north of Interstate 80.

Regional Parks

50+ acres

Regional Parks can range from forest preserves to heavily-programmed sports facilities comprised of athletic fields that provide seasonal league and tournament play. The size and amenities contained within an active sports park shall be based on the desires of Village residents, leaders and the population to be served. One regional park is planned within the northwest section of this study area, adjacent to major residential uses and near a major transportation route. Forest preserves should be considered in several areas where significant wetland and vegetation occurs, specifically along the Aux Sable Creek Corridor.

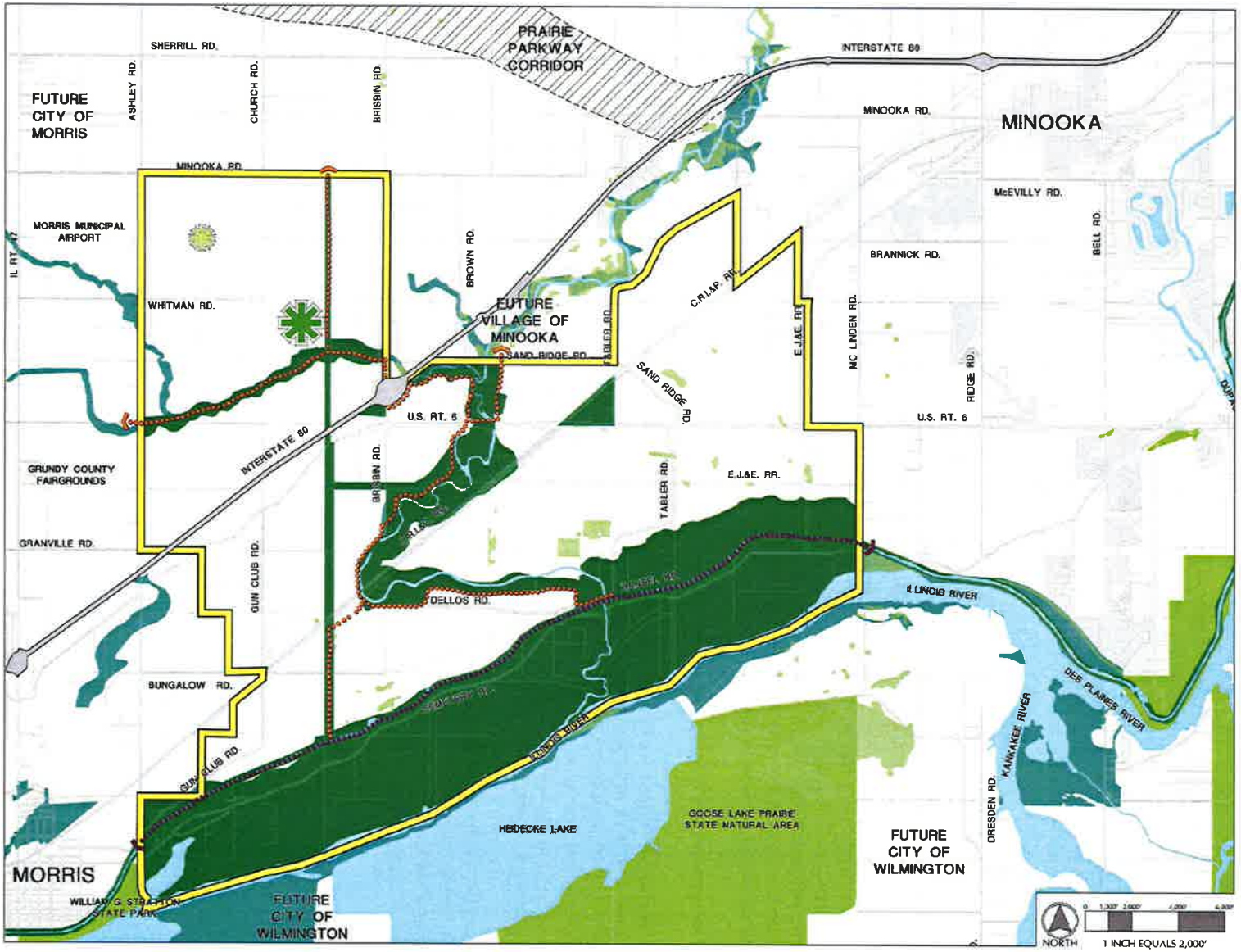
Greenbelts and Trails

Greenbelts effectively connect park and residential components together, forming a continuously integrated open space environment. Segments of greenbelts also serve to separate drainage ways and floodplains from development, thereby providing an environmental function in addition to its recreational purpose. Greenbelts also serve to offer an alternate transportation opportunity (i.e. bike path), provide linear buffers throughout the community, enhance property values and act as transition zones between different land uses.

The I & M Canal State Trail is a prominent and important feature of the West Side Sub-Area and the entire Village of Channahon. It is important that strong trail links are provided, to take advantage of this significant amenity. Per the Open Space Plan, at least one connection to the State Trail should be incorporated via the Aux Sable Creek Corridor. Additional connections to this trail may occur along the power line easements and the U.S. Route 6 corridor. A connection to the existing trail along U.S. Route 6 should be provided, as the trail exists immediately east of the study area. Within the residential areas of this study area trail connections should be provided so all residents can easily access the State Trail.

VILLAGE OF CHANNAHON
COMPREHENSIVE PLAN - WEST SIDE SUBAREA

Open Space Plan



LEGEND

- PRELIMINARY STUDY AREA
- PRAIRIE PARKWAY CORRIDOR
- INTERSTATE RIGHT OF WAY
- WETLANDS
- FLOODPLAINS
- EXISTING OPEN SPACE
- OPEN SPACE/ GREENWAYS
- PROPOSED COMMUNITY PARK (5-20 acres)
- PROPOSED REGIONAL PARK (20-60 acres)
- BIKE PATH
- I&M CANAL STATE TRAIL

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TRANSPORTATION PLAN

Existing Conditions

The study area exhibits good potential for growth due to several factors including existing and future transportation amenities. These amenities include a future full access to Interstate 80 at Brisbin Road within the study area; an existing east-west major arterial in U.S. Route 6; existing and proposed north-south Secondary Arterials in Ashley Road, Brisbin Road, Tabler Road, and McLinden Road; existing railroad mainline and spurs within the study limits; and close proximity to the Illinois River. With the mentioned transportation amenities the Village has the opportunity for excellent access to a majority of the planning region.

Existing condition – Dellos Road

The existing transportation street system within the study area is generally found to be of adequate condition to carry the existing traffic volume. Some existing issues worth noting are as follows: (1) pavement failure of Dellos Road due to poor drainage in particular areas and deficient pavement design for the existing volume of truck traffic; (2) a major barrier to north-south travel caused by the existing C.R.I. & P. railroad tracks; (3) sub-standard intersection at Bungalow Road, C.R.I. &P. Railroad and Gun Club Road intersection, and (4) poor circulation in some areas within the project limits.

Transportation System Analysis

The transportation portion of this planning study includes the development and determination of future roadway improvements, extensions and connections for the purposes of creating the transportation network which will efficiently and effectively promote traffic flow throughout the West Side Sub-Area. One of the key components to initiating the transportation plan is to evaluate the existing transportation network within the study area to determine the system's conditions, natural features, potential amenities, and constraints including needs for connectivity.

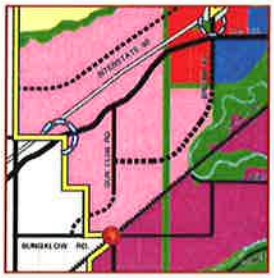
Another key component to developing an effective transportation plan is to designate a system of functional classifications for the roadways (existing and future) within the parameters of the study area. Within the study area we have identified three (3) classifications of roadway systems which are in conjunction with Village of Channahon Ordinances.

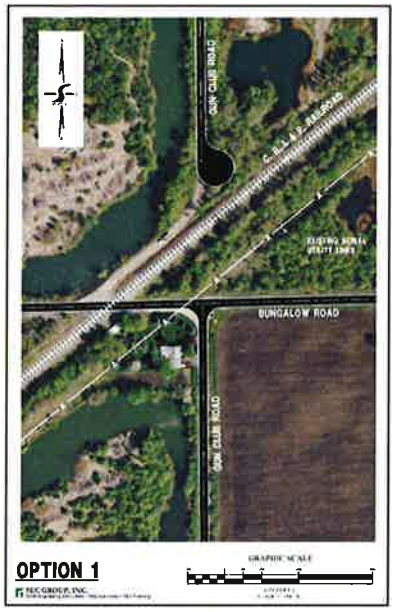
a. *Major Thoroughfare (Major Arterial)* – Right-of-way = 100 to 200 feet, Pavement Section greater than 40 feet with auxiliary turn lanes, access controlled.
b. *Secondary Thoroughfare (Arterial)* – Right-of-way = 80 to 100 feet, Pavement Section equaling 40 feet with auxiliary turn lanes as determined by traffic projections.
c. *Collector* – Right-of-way = 80 feet, Pavement Section equaling 37 feet.

Existing and future proposed major and secondary arterials as well as collectors as identified within this study are illustrated in the Transportation Plan that follows. As previously stated the purpose of the transportation network is to adequately provide access to and from the various types of developments within the planning area. The proposed Transportation Plan identifies new corridors and roadway extensions which can accomplish this goal.

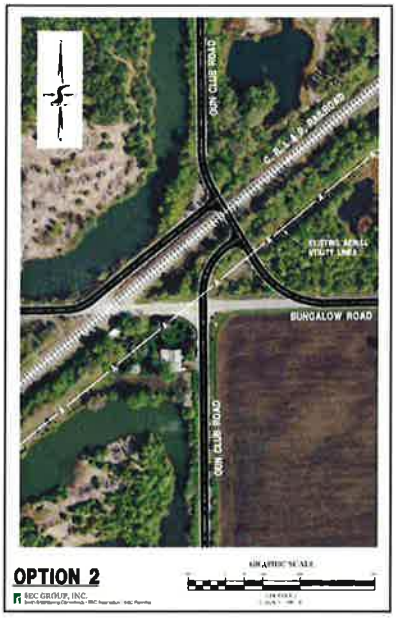
Yet another key component of an effective transportation plan is to identify the need for access control within the network. The major arterials identified will require access control restrictions which will be determined by the governing agency, the Illinois Department of Transportation. Access control for the secondary arterials will need to be determined by the local and county agencies having jurisdiction. These controls can consist of barrier median in key high traffic areas, and access spacing criteria for access proximity to intersections and other access locations.

The intersection of Gun Club Road, Bungalow Road, and the C.R.I. & P. Railroad is identified as a problematic intersection within the study limits. Bungalow Road is identified as a collector within this transportation plan and currently carries a significant volume of truck traffic from the existing gravel pit located south and east of Dellos Road. Bungalow Road intersects both the C.R.I. & P. Railroad and Gun Club Road at an approximate 30 degree angle causing poor stopping and decision sight distances thus resulting in a safety issue at the intersection. The intersection configuration was reviewed and analyzed resulting in three options.





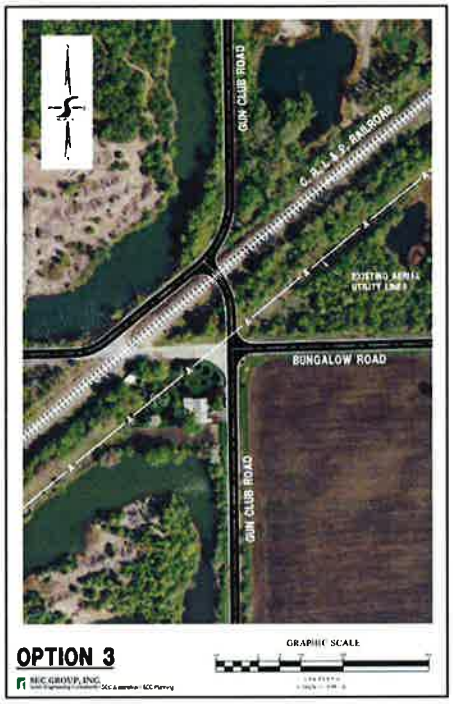
Option 1 (as shown on the Transportation Plan)
Consists of, realignment of Gun Club Road to the west of the existing intersection and strip mine water feature to intersect Bungalow Road at a right angle west of the existing railroad track. This option provides an intersection that has safe stopping and decision sight distances while causing no negative impact to the east-west traffic which is a majority of the intersection traffic volume. However, Option 1 proposes to move the intersection west of the current proposed Channahon-Morris planning boundary. Also, this option adversely impacts north-south travel along Gun Club Road.



Option 2
Consists of, revising the intersection of the railroad to the northeast to provide a right angle crossing and continuous traffic flow for westbound to northbound (Bungalow Road to Gun Club Road) traffic. This option improves stopping and decision sight distance and maintains the intersection within the proposed Village of Channahon Planning Area. However, this option adversely impacts east-west travel along Bungalow Road requiring a newly introduced left turn movement located just north of the railroad crossing. This left turn movement has the potential for creating a safety issue by way of stacking of traffic across the tracks due to minimal distance available for left turn storage. This option also has a potential conflict with existing overhead power lines.

Option 3

Consists of revising, the intersection of the railroad to the northeast to provide a right angel crossing and continuous traffic flow for eastbound to northbound (Bungalow Road to Gun Club Road) traffic. This option improves stopping and decision sight distance and maintains the intersection within the proposed Village of Channahon Planning Area. However, this option adversely impacts east-west travel along Bungalow Road requiring newly introduced right and left turn movements located at Gun Club Road south of the railroad and just north of the railroad crossing. As with Option 2, this left turn movement has the potential for creating a safety issue by way of stacking of traffic across the tracks due to minimal distance available for left turn storage. This option also has a potential conflict with existing overhead power lines.



Given the resulting performance and constraints of each intersection option, Option 1 is identified as the alternative, for the improvement of the Bungalow Road and Gun Club Road intersection with the most favorable benefit to adverse impact.

Transportation Plan Implementation

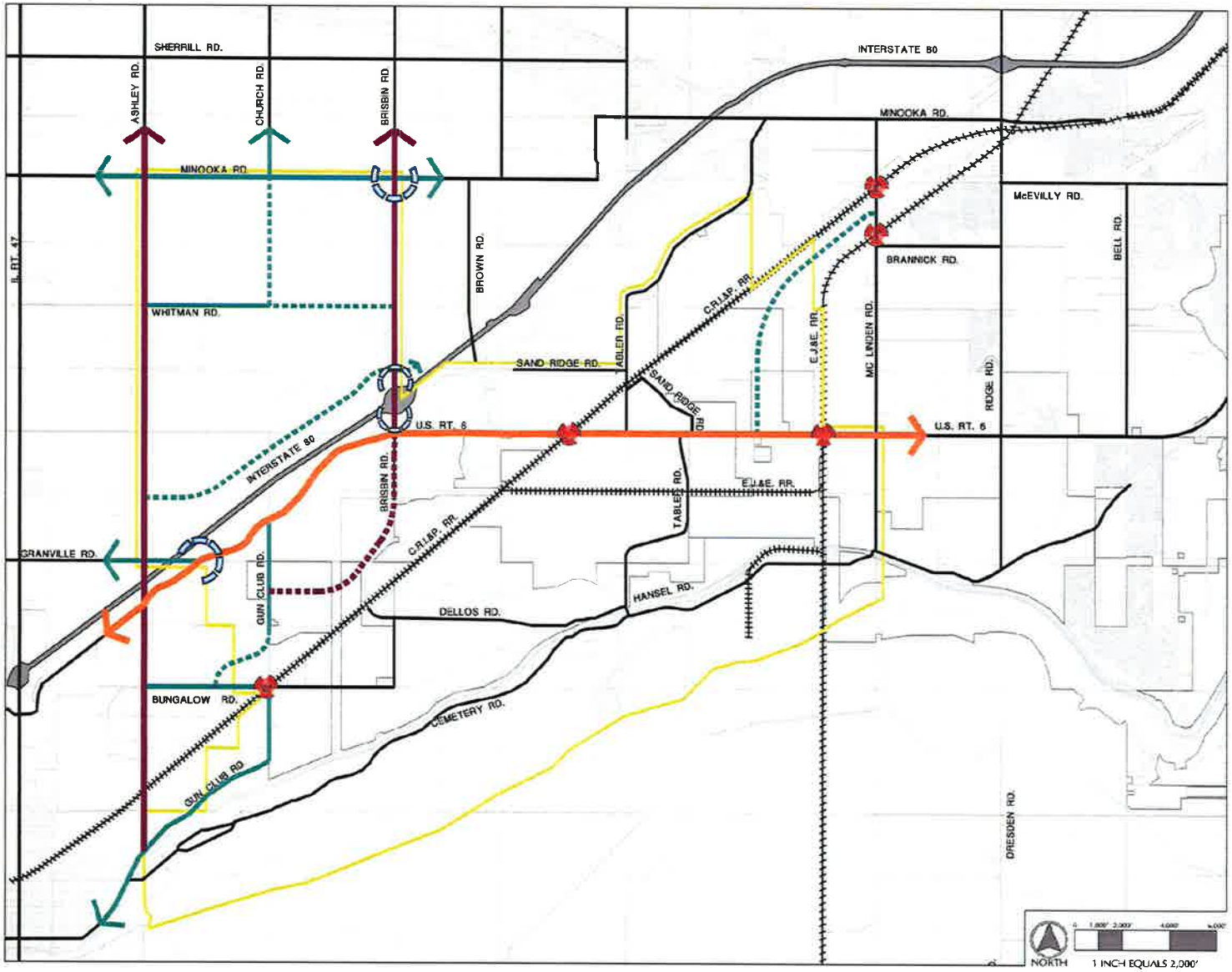
The following items are some key components for the implementation of the Transportation Plan.

- Formally designate the roadways which are identified in the Transportation Plan exhibit as major and secondary arterial roadways.
- Provide guidelines for access control, signage, utility corridors, lighting, intersection criteria, and landscaping along the Primary and Secondary Arterials.
- Identify traffic generation for each proposed development within the planning area and utilize local development controls and annexation agreements to facilitate and implement roadway system improvements in conjunction with the transportation plan.

U.S Route 6 and Brisbin Road – Existing intersection

VILLAGE OF CHANNAHON
COMPREHENSIVE PLAN - WEST SIDE SUBAREA

Transportation Plan



LEGEND

- PRELIMINARY STUDY AREA
- PRAIRIE PARKWAY CORRIDOR
- INTERSTATE RIGHT OF WAY
- MAJOR THOROUGHFARES
  PROPOSED R.O.W. WIDTH 100-200 FEET*
- SECONDARY THOROUGHFARES
  PROPOSED R.O.W. WIDTH 80-100 FEET*
- POTENTIAL SECONDARY THOROUGH.
  PROPOSED R.O.W. WIDTH 80-100 FEET*
- COLLECTOR THOROUGHFARES
  PROPOSED R.O.W. WIDTH 80 FEET*
- POTENTIAL COLLECTOR THOROUGHFARES
  PROPOSED R.O.W. WIDTH 80 FEET*
- RAILROADS
- EXISTING RAILROAD CROSSING
- CHANNAHON GATEWAY

* PROPOSED R.O.W. WIDTHS ACCORDING TO THE VILLAGE OF CHANNAHON SUBDIVISION & DEVELOPMENT REGULATIONS, APPENDIX B: TABLE OF MINIMUM STANDARDS FOR STREET DESIGN

CHANNAHON
"WHERE THE WATERS MEET"
ILLINOIS

SEC Planning Consultants

PLANNING & DEVELOPMENT GUIDELINES

PRINCIPLE 1: *Preserve and Protect the Aux Sable Creek Corridor.*

PRINCIPLE 2: *Provide transitions between land uses.*

PRINCIPLE 3: *Provide a sense of interest and unique identity throughout the study area.*

PRINCIPLE 4: *Thoughtful consideration of vehicular and pedestrian circulation within individual developments.*

PRINCIPLE 5: *Appropriate design of parking lots, utilities, service areas and detention areas, to reduce the negative impact of typically-unattractive site components.*

PRINCIPLE 6: *Provide a unified landscape treatment throughout the Village through the use of consistent right-of-way and buffer treatments.*

PRINCIPLE 7: *Enhance the aesthetic appearance of development and lessen the impact of undesirable site components through the effective use of landscaping.*

PRINCIPLE 8: *Utilize Conservation Design Techniques.*

Introduction and Purpose of the Planning and Development Guidelines

In addition to presenting a pattern of land uses, this West Side Sub-Area Plan expands upon the more general land use goals, objectives and policies through the establishment of specific Planning and Development Guidelines. These guidelines identify and address site development, site planning and landscape issues, while providing guidance to the developers and Village staff creating and evaluating land development projects. As a result of utilizing these guidelines, future development should respect and enhance the character and quality of life in the Village of Channahon.

The Comprehensive Land Use Plan, adopted March 18, 1996 and updated November 3, 2003, provided design guidelines for commercial development however, this West Side Sub-Area Plan Update has been created to more specifically evaluate the western portion of Channahon.

The key objectives of the Planning and Development Guidelines are to:

- Educate the public, developers, property owners and plan reviewers as to the desired and expected vision for development within the study area.
- Present clear principles and priorities for achieving the vision and goals of the Village.
- Illustrate specific techniques to use when planning and developing within the study area.
- Support the existing Village of Channahon Comprehensive Plan

The Planning and Development Guidelines for the West Side Sub-Area Plan are intended to maintain the unique character of Channahon. In order to respect these objectives, there is a need to establish and maintain certain standards by which future development within Channahon may occur. While the guidelines provide specific recommendations for development, they cannot cover all circumstances. It is the intent of the Planning and Development Guidelines to provide flexibility, while achieving a sense of continuity and visual harmony within the Village of Channahon.

PRINCIPLE 1: Preserve and Protect the Aux Sable Creek Corridor

One of the primary goals of the Planning and Development Guidelines is to preserve the natural features within the study area. Several strategies can be implemented in order to protect the sensitive features that currently exist.

- B.M.P.'s (Best Management Practices) should be utilized throughout the Aux Sable Creek Corridor with all proposed development
- Grading should be managed, in an effort to reduce mass grading activities that would negatively impact existing trees along the Aux Sable Corridor.
- Site planning should incorporate strict preservation requirements, focusing development into clusters that protect all environmental features.
- Protect and respect all natural features such as existing trees, wetlands, flood-prone areas, drainages, steep slopes and other similar features.

PRINCIPLE 2: Provide transitions between land uses

Provide transitions between different land use intensities, in order to create compatible uses within the Village. This can be done a variety of ways, ranging from the architectural style, scale and location of buildings, to the use of open space and landscaping.

- **Building Mass Hierarchy**
  - Incorporate medium-intensity development between projects of low and high intensities.
  - Building massing and height should provide a "step down" effect, as a transition between different land use intensities.
  - Similar architectural styles may be incorporated on different land uses and various densities within a development.
  - In residential developments, higher densities should be located closest to commercial areas.
- **Utilize Open Space and Landscaping as a Transition**

  Landscaping and/or open space may be used to provide a transition. Utilizing any existing natural feature will provide a natural buffer. Utiliziling landscaping will screen and buffer residential uses from high intensity, non-residential uses, if natural features do not exist.

PRINCIPLE 3: Provide a sense of interest and unique identity for commercial and residential uses

Note: The Village requires that building elevations, plans, materials samples, color samples and illustrations be submitted for review and approval prior to the commencement of building construction. Refer to the Village's commercial design guidelines and the existing Comprehensive Plan for specific architectural standards. The following guidelines focus on general site planning and landscape issues specific to the West Side Sub-Area and do not represent complete architectural guidelines and standards.

- **Buildings**
  - Orientation and site planning

    Building orientation should take advantage of the building-to-site relationship. The orientation and location of buildings defines open spaces and circulation corridors.

    - Buildings adjacent to Interstate 80, U.S. Route 6 and Brisbin Road must face the primary roadway. No service access, storage, etc. is allowed to be visible from any public roads.

  - Align focal architectural elements along major view or circulation axis.

- Primary buildings; such as major anchors, public buildings or major attractions, shall be located at prominent intersections and locations, or anchoring a major view axis.

- Facade of buildings

Building facade should achieve a high level of visual interest when viewed from automobile and pedestrian vantage points. For all proposed residential neighborhoods refer to the Village's anti-monotony guidelines.

- In residential developments, front yards and porches should be used to create a sense of place and community.

Front porch provides one-story element at a pedestrian level encouraging social interaction between residents

- Natural stone and masonry materials are to be used on the first floor of buildings to create a visual anchor to the ground and provide interest at the pedestrian level.

- Vary the planes of exterior walls in depth and/or direction.

- Excessive vertical planes are prohibited without incorporating meaningful techniques, such as awnings or a change in building material, to break up the perceived building mass.

Varying roofline of building facade

- Awnings are encouraged along facades to provide color, shade and architectural interest. Where awnings are used along a row of contiguous buildings, a consistent form, material, color, location and mounting arrangement must be used.

- In residential areas, garages should not dominate the street view. Rather, provide parking and garages to the side or rear of lots, or set the garage face back from the primary facade of the house. Avoid allowing the garage to become the primary architectural feature.

Avoid architecture without windows or with uninterrupted of long blank facades

- Roof Treatment

Rooftops should be considered important design elements in residential and commercial development, as viewed from a variety of vantage points such as at ground level, from other buildings and from adjacent perimeter roadways. Roof forms should serve as natural transitions from ground level to intermediate masses to the tallest masses and back to the ground.

- Building Height

  The overall appearance of development shall be low and horizontal, with building heights throughout the community generally low to medium scale. Building heights are expected (and desired) to vary to ensure visual interest.

  - Consider the use of taller buildings and/or elements to highlight significant intersections and pedestrian nodes.
  - Maintain compatible relationships with adjacent dwellings and street frontages.
  - Sight lines to greenbelts, open areas, water features and scenic horizon views are to be optimized and maintained to the fullest extent possible by minimizing the building height and obstruction.
  - Within a neighborhood, a combination of one, one and a half and two-story dwellings is encouraged, to add diversity to the streetscape. Entire neighborhoods or blocks of continuous two-story dwellings are discouraged.
  - Building heights shall be determined in a manner which enhances an overall residential quality.

- Scale

  Buildings should appear to be of a "pedestrian" or "human" scale. Therefore, the size, patterns, textures, forms and overall three-dimensional composition can be appreciated at the pedestrian level.

  - Vary the height of buildings, and/or building elements, where feasible, so they appear to be divided into distinct elements or masses.
  - Avoid large-scale buildings that are "box-like" and typically dominate a site.
  - Use building mass appropriate to the site. Place buildings with larger footprints, height and massing in core activity areas, or in the center of the development near similar densities, to reduce the impact on adjacent land uses.

  - In residential areas, the relationship between the lot size, street width and building scale are important to creating a human scale. Elements such as trees, pedestrian path lighting and porches can aid in achieving human scale.

- Entrances
  - Primary entrances should be easily identifiable, and relate to both human scale as well as the scale of the building(s) they serve.
  - Main building entrances should be designed to be clearly identifiable from primary driveways and drop-offs. Additionally, they should be visible from parking areas.

PRINCIPLE 4: Thoughtful consideration of vehicular and pedestrian circulation within individual developments

The purpose of the circulation standards is to minimize hazards and conflicts, and establish logical circulation patterns. The appropriate integration of vehicular and pedestrian circulation is intended to provide safe and convenient access to all sites, while being attractive, efficient and functional.

- **Vehicular Circulation**
  - Primary Site Entrances

Each entrance to a parcel, individual building site or residential neighborhood from a primary roadway should be designed as a "gateway" to the area it serves. Design elements should be visually interesting and consistent with other streetscape materials used throughout the Village.

When designing entries into residential and non-residential tracts, developers shall:

- Coordinate with adjacent properties to consolidate entries and minimize access points along major roadways
- Clearly identify site entries and provide a clear entry/arrival sequence.
- Provide at least one "primary" and one secondary entry to parking lots or residential communities. The use of medians and/or special paving or landscaping to identify primary entries is encouraged.

- All internal drives should visually lead drivers to building entries, site amenities or focal elements.
  - Align streets and drives to offer views to significant architectural features and site amenities, and to direct drivers.
  - Internal streets shall be separated from parking lots by landscape islands and walkways.
  - Establish 1 cross access between lots and buildings.

- Service Areas

  Service vehicle circulation shall be designed to provide safe and efficient delivery routes for all anticipated service and delivery vehicles. The design of individual parcels to accommodate truck access shall meet all regulatory requirements for turning movements without sacrificing other important design objectives.

  
  Service area screened with landscaping

  - Locate service areas away from major streets and building entrances.
  - Hide/screen views into service areas. Screening can be provided with landscaping or screen walls. Screen walls shall repeat materials and elements of the primary building.
  - Adjoining uses should share service drives, where possible.

- **Pedestrian Circulation**

  The purpose of pedestrian circulation standards is to establish guidelines for creating a pedestrian circulation system that is safe and efficient. Good walking environments include: continuous routes between sites, clearly defined access from parking areas, a variety of connected destinations and a feeling of safety and security.

  - Sidewalks

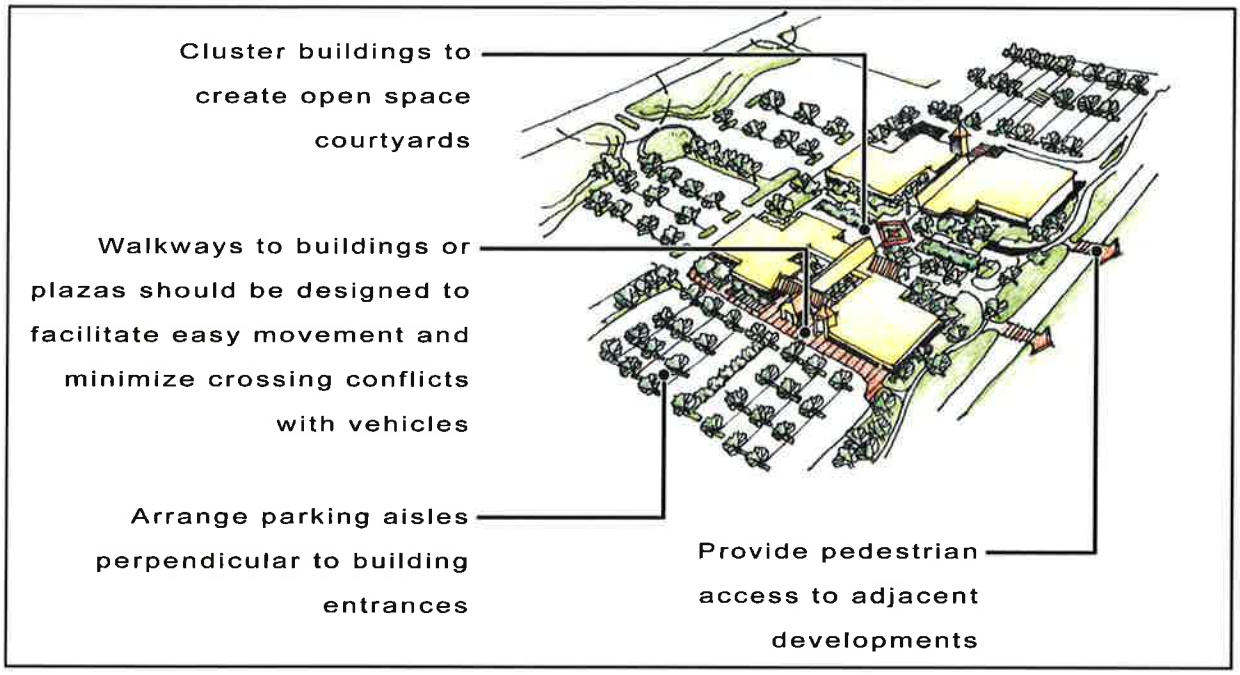
    Sidewalks must be constructed to provide pedestrian access to adjacent development and connections to the pedestrian trails throughout the Village. Within specific developments, sidewalks shall provide access to and from parking lots, neighborhoods, schools, parks and open spaces.

    - Place special emphasis on pedestrian connections that link schools, recreation areas and other major activity areas.
    - Neighborhoods should have access to open space and parks by way of sidewalks and trails.
    - Pavers or other changes in material should be used for walks adjacent to buildings and at street intersections to identify and enhance pedestrian routes.

PRINCIPLE 5: Appropriate design of parking lots, utilities, and detention areas, to reduce the negative impact of typically-unattractive site components

This section provides standards for the siting and layout of parking lots, service and loading areas, utilities, trash, storage and detention facilities. Site plans specifying parking and circulation designs, utility and detention requirements shall be submitted to the Village for review.

- **Parking**
  - Parking areas should be designed and located so they provide safe and efficient vehicular and pedestrian circulation within a site.
  - Minimize negative visual impacts from adjacent roadways.
  - Break large expanses of pavement with landscape medians and islands.
  - Avoid situations where parking spaces directly abut structures.
  - Separate parking aisles from interior collectors and entry drives, whenever possible.
  - Provide attractive, pedestrian oriented-streetscapes in front of retail shops, with angled parking provided where needed.



Parking areas for all non-residential land uses should be screened with landscape buffers

Shared Parking

Where opportunities exist for shared parking between uses with staggered peak parking demands, consider reducing the total number of parking spaces within each site or parcel. Parking should be shared between complementary uses such as churches and office buildings.

- **Detention**
  - Drainage facilities should be used as an amenity to a development. If the existing topography allows, the location can be incorporated into an entry feature or can be the foundation for a park with trails and open space.
  - Natural and/or vegetated drainage swales provide open space connections, filter runoff and improve the aesthetic appearance of development.
- **Location of Utilities**

Visual and sound impacts of utilities, mechanical equipment, data transmission dishes, towers and other equipment should be minimized in all development plans.

- Temporary overhead distribution power and telephone lines are permitted during construction but shall be removed immediately upon completion of site and building construction.
- Screen all electrical transformers, gas meters and other utility cabinets from view.
- Air conditioning units, vent systems and other mechanical systems that must be located on building roofs shall be screened from sight at the ground plane.
- In residential communities:
  - Items requiring screening should be located on the rear or side yards, when possible, and should be integrated into the unit design.
  - In residential areas, install all permanent utility service lines underground.
  - Air conditioning units must be located behind a screen wall or planting hedge.
  - Utility meters must be located on side or rear elevations of the dwelling and should be screened by significant landscaping.

PRINCIPLE 6: Provide a unified landscape treatment throughout the Village, through the use of consistent right-of-way and buffer treatments

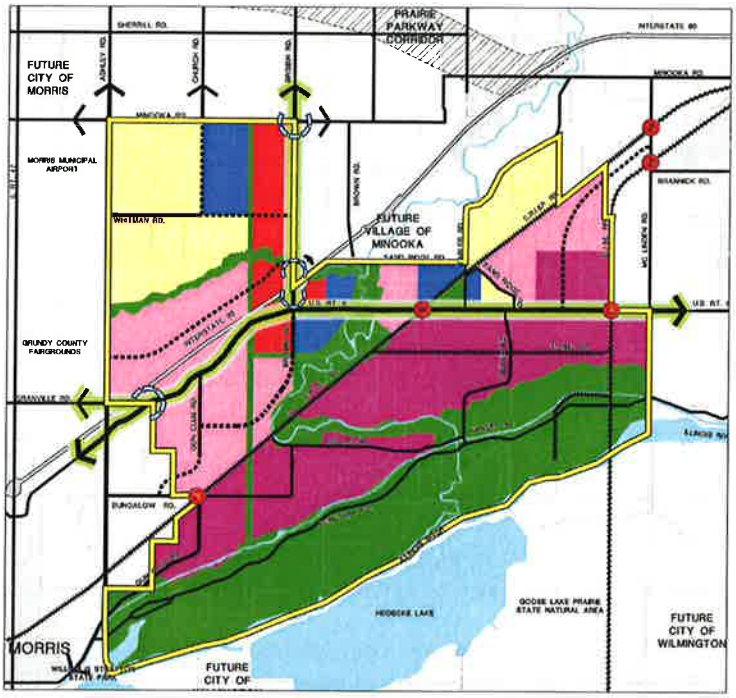
This section provides guidelines to maintain the rural character along the major roadways throughout the Village of Channahon. The following goals are to be realized:

- Enhance Channahon's sense of place.

- Enhance the living environment for all residents.
- Aid in the enhancement of property values.
- Create an attractive, consistent appearance as residents and visitors travel the area.
- Provide appropriate buffers between land uses.

- **Gateway Corridors**

Gateway and Corridor Corridors (shown in green on the exhibit below) and their corresponding visual quality are critical to the perception throughout the study area. By analyzing the land uses, views and environmental features along the major roadways of Channahon, the Planning and Development Guidelines will work to create a sense of place, establishing uniform community signage, site furnishings, landscape easements, building setbacks, and gateway locations along the major roadways of Channahon.

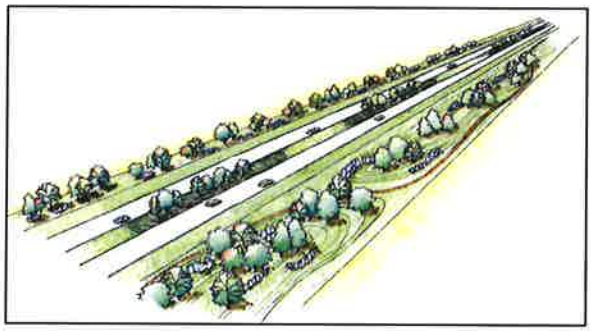


The primary corridors identified as Gateway Corridors include;

- U.S. Route 6
- Brisbin Road

Primary Gateway Residential Buffer Requirements

All residential development adjacent to the primary corridors must have a significant landscape buffer. However, where scenic vistas are prominent along a "Gateway" corridor the buffers should be designed in a manner which frame the distant views. Development plans should consider creative means to preserve the sight lines to existing natural features such as existing trees, parks and open space.



Landscape plantings within the buffers should have an informal quality to provide a naturalistic identity. Landscape elements should include items such as split rail fencing, naturalized landscaping, and preservation of existing vegetation.

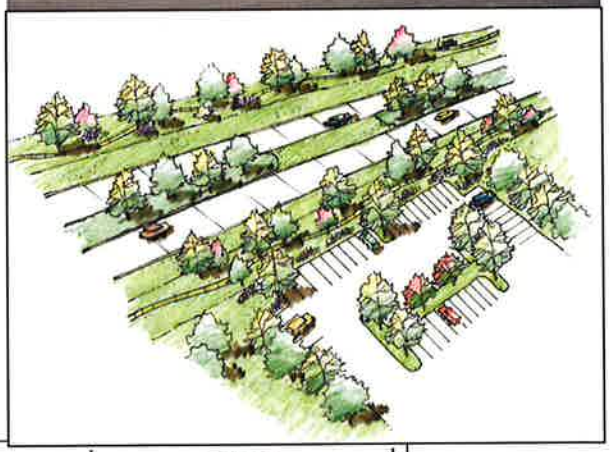
Non-Residential Buffer Requirements

For all non-residential development, a landscape buffer is required along the primary corridors. Significant areas for plant clusters and massing should be provided. Focus should be placed on site entrances by highlighting entries with ornamental landscaping to signal the access point.

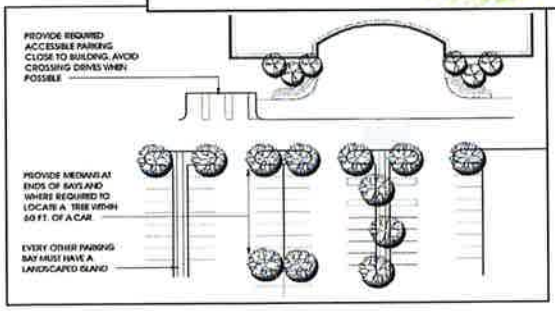
PRINCIPLE 7: Enhance the aesthetic appearance of development and lessen the impact of undesirable site components through the effective use of landscaping

- **Intersections and Site Entrances**
  - Intersections and site entrances should be identified with ornamental landscaping coordinated with the signage. Clearly enhancing the entrances with landscaping and lighting will help identify key access points and add to the aesthetic appeal of the Village.

- **Landscaping Adjacent to Non-Residential Buildings**
  - Consider evergreen trees to screen undesirable elements especially in areas of heavy and light industrial land uses.
  - Accent entrances and architectural elements with ornamental plantings.
  - Landscaped islands shall be planted with seasonal color and/or groundcover.
  - Use plantings adjacent to buildings and along walkways.
  - Incorporate landscape beds and planters at key entryways and seating areas.
  - Explore opportunities to break up large expanses of pavement.



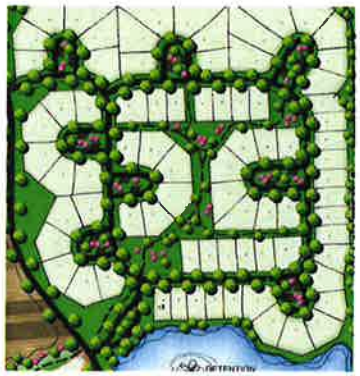
- **Parking Lot Landscaping**
  - Avoid more than 20 parking stalls in a row without a landscaped island.
  - Landscape islands should be a minimum of 10 feet in width.
  - Every parking stall should be located within 60 feet of a tree



PRINCIPLE 8: Implement Conservation Design and Cluster Design Planning

- **Conservation and Cluster Design Planning Techniques**

Conservation and Cluster Design techniques should be considered for all residential developments throughout the West Side Sub-Area.



Conservation and Cluster Design is intended to encourage more efficient use of land and public services through unified development that is principally intended to embrace natural systems, conserve community resources, and preserve natural features such as existing trees, topography and character. For example, in a residential conservation community (or cluster community), house lot size is substantially decreased, so that large areas of contiguous, natural areas can be preserved or created, with no net loss of housing units.

The primary objective of conservation design is to promote these goals through the application of flexible land development techniques in the arrangement and construction of dwelling units, roads, surface drainage, and underground improvements.

All involved parties (i.e. the Village, developers, and future homeowners) can contribute to more environmentally-friendly development by observing several principals listed below:

- Utilize Best Management Practices and Low Impact Development Techniques (alternative stormwater solutions)
- Develop flexible lot design standards
- Protect and create natural landscape and drainage systems
- Implement sustainable stormwater management techniques
- Protect and manage natural areas for long term preservation

Conventional development techniques often involve carving the development site into parcels such that the lots and road rights-of-way consume nearly all developable land, without regard for the natural conditions on the site. Developments constructed this way often have wide roads, minimal pedestrian access, and may be similar in character and design to many other neighborhoods.

Goals of Conservation and Cluster Design:

- Minimum of 30% common open space (parks, natural areas, trails and other open space).
- Minimize development on, and destruction of, sensitive natural resource areas; existing drainage ways, wildlife habitats, woodlands, wetlands, mature trees, and steep slopes.
- Reduce the quantity and improve the quality of stormwater runoff from development.

- No minimum or maximum lot size shall be imposed and the maximum density shall be that of the West Side Sub-Area Plan or underlying zoning.
- Minimize impervious surface area through reduction of pavement and other surfaces.
- Reduce soil erosion through appropriate techniques.
- Reduce the capital cost of development for the Village and the developer.
- Protect scenic views of open land from adjacent roads. Visual impact should be minimized through use of landscaping, setbacks, buffers or other methods.
- Encourage sense of community through thoughtful and creative site planning.

Conventional Subdivision Design Layout

Conservation and Cluster Design Concept

Benefits of Conservation and Cluster Design Planning

Through conservation and cluster design techniques, development can still occur while respecting and preserving the natural features of the land and character of the area, or by creating significant open space areas. Communities, developers, and homeowners all can benefit from well-planned and implemented techniques.

Improved Quality of Life

Conservation and cluster design addresses concerns about community interaction and access to the natural environment. In addition to potentially conserving large areas of valuable natural resources, conservation design may create a variety of formal and informal public spaces within developments. These spaces create opportunities for neighbors and residents to meet and to build community together. Preserved and created open space offers a variety of recreational opportunities such as biking, passive play areas, picnics, active sport recreation, trails through natural areas, or areas to view and learn about native plants and wildlife. For residents of conservation developments, these amenities can make a noticeable difference in the quality of daily life.

Increasingly, notice is being given to the importance of community and social interaction in residential neighborhoods. Large homes, private backyards, and automobiles work together to

make it possible for residents of conventional suburbs to spend all their time in private space without interacting with neighbors. While this type of privacy is sometimes considered an advantage, many people seek opportunities to interact with their neighbors and enjoy nature. Conservation design offers this type of an experience. It has been realized that homes in conservation developments show greater increase in value. Overall there is an increase in the demand to connect with the natural environment and socially interact with neighbors.

Environmental Benefits

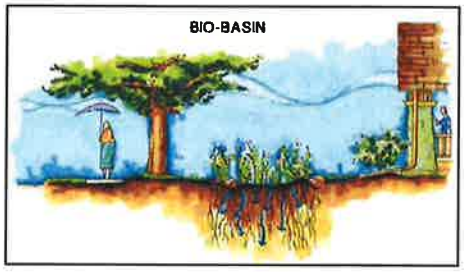
Conventional development practices have historically led to flooding, degraded water quality, and habitat destruction. On the contrary, conservation design practices can benefit the natural environment in many ways.

- Preserve natural drainage ways, creeks or rivers
- Preserve major stands of existing trees and natural vegetation
- Improved water quality through Low Impact Development techniques
- Reduced flooding in areas that are prone to downstream flooding
- Protect native wildlife habitat areas and provide new areas for wildlife habitation
- Protect and recharge aquifers
- Reduce the amount of infrastructure improvements and reduce long-term maintenance

Economic Benefits

- Minimizes stormwater pipe and length of streets thus reducing costs and long term maintenance
- Minimize stormwater runoff, and its negative impacts, by reducing the amount of runoff released from the site
- Increases property values for residents
- Reduces municipal long-term costs of open space, since natural areas are more economical through conservation design than through outright purchase.
- Reduces long-term maintenance and development costs, since infrastructure (roads, sewer pipe, streetlights, water lines, stormwater pipe, etc.) is reduced. This minimizes the public sector's long-term infrastructure maintenance costs.
- Lowers overall development costs short and long-term

Protect and Create Natural Landscapes and Drainage Systems with Low Impact Development or Best Management Practices



Stormwater control can be implemented with more natural systems utilizing Low Impact Development and Best Management Practices (BMP'S) such as bio-swales and bio-basins. The term "bio-swale" (a.k.a. grassy channel, dry swale, wet swale, biofilter) refers to a series of vegetated, open channel practices that are designed specifically to attenuate stormwater runoff for a specified water quality volume. As stormwater runoff flows through the channels, it is treated through filtering by the vegetation in the channel, filtering through a subsoil matrix, and/or infiltration into the underlying soils.
Maintenance of grassed channels mostly involves maintenance of the grass or wetland plant cover.

Compared to roadside ditches, vegetated swales have a wider bottom, gentler slopes, and denser vegetation. They are designed to detain stormwater flows for ten to twenty minutes to allow sediment and heavy particles to filter out. Vegetated swales are relatively easy to construct and maintain. If applied under the right conditions, and installed properly, grass channels experience few of the nuisance problems associated with roadside ditches.

- Reduces flooding and stormwater management costs.
- Reduces long-term maintenance costs of stormwater facilities.
- Meets increasing demand for public open space and allows connections to existing natural areas, open space, greenways, and trails.
- Increases opportunity for passive recreational and educational activities – fosters health and fitness of residents.

Top left - Bio-Basin (aka rain garden) within parking lot.

Top right - Preserved "specimen" tree and naturalized plantings within storm water area

Left – Trail corridor along preserved tree line with naturalized plantings