

City of  arengo **SOUTHEAST SUB AREA PLAN**

Adopted October 24, 2004

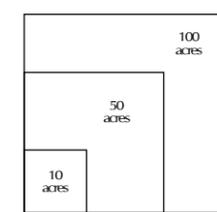
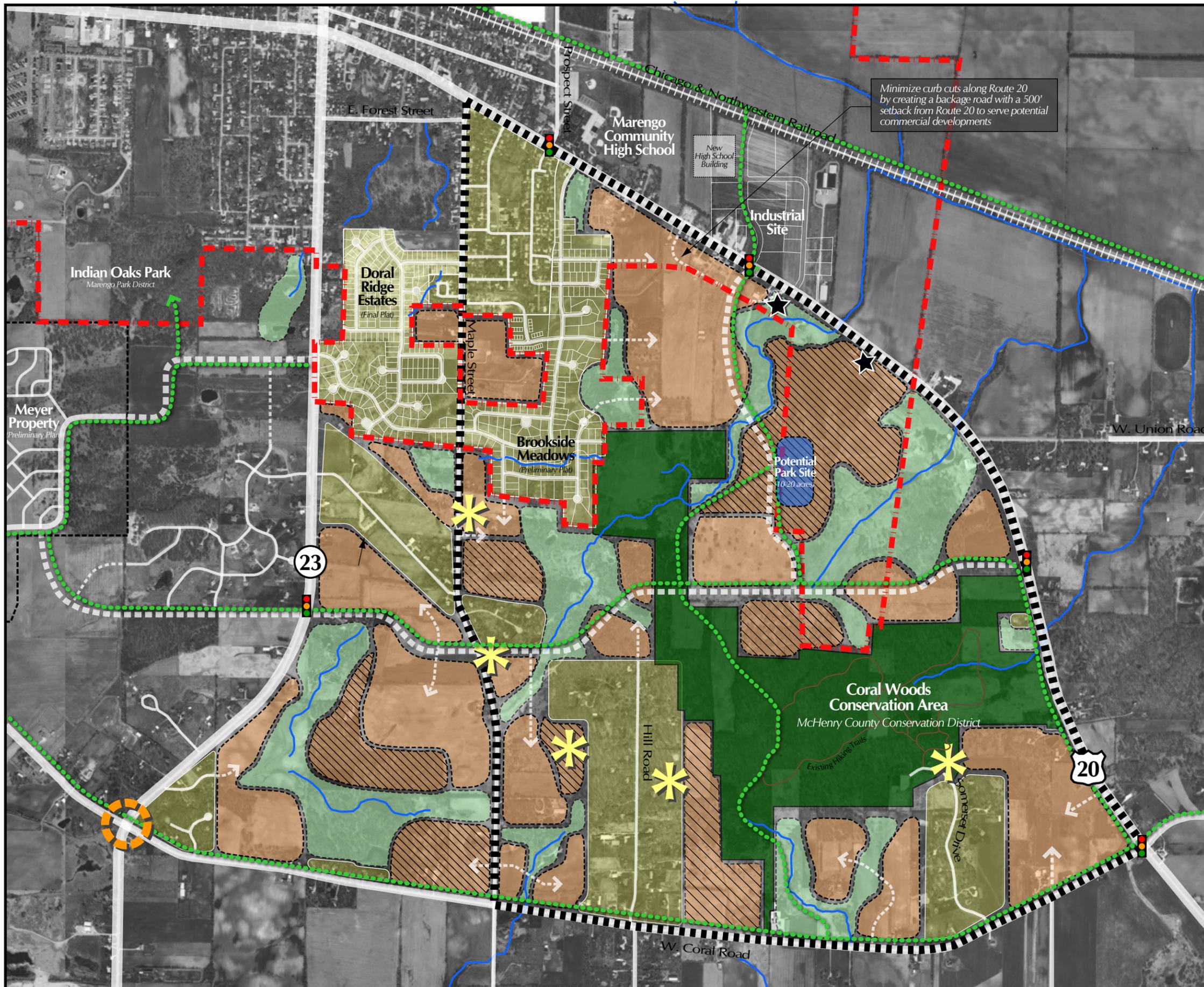
Prepared by Teska Associates, Inc.

# City of Marengo Southeast Sub-Area Plan

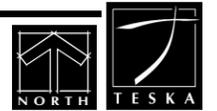
## Framework Plan

### LEGEND

-  Creeks/Streams
-  Potential Bike Trails
-  Arterial Roads
-  Collector Roads
-  Local Roads
-  Potential Collector Roads
-  Potential Road Connections
-  Potential Traffic Signal
-  Municipal Boundary
-  Study Area Boundary
-  Topographic High Point
-  Preserve Historic Structure
-  Existing Residential Uses
-  Non-Developable Areas  
*Development within areas containing sensitive environmental features such as floodplain, wetlands, and hydric soils should be highly restricted*
-  Type A Developable Areas (*unrestricted*)  
*Areas appropriate for development without any limitations regarding environmental features*
-  Type B Developable Areas (*limited*)  
*Areas appropriate for development with certain limitations regarding sensitive environmental features; techniques such as the preservation of woodlands and the reinforcement of hydric soils are encouraged to foster low density estate lots & cluster development*



October 24 2004  
0 500' 1,000' 2,000'  
Scale in Feet



# City of Marengo Southeast Sub-Area Plan

## Existing Conditions Map

### LEGEND

-  Creeks/Streams
-  Proposed Bike Trails
-  Arterial Roads
-  Collector Roads
-  Local Roads
-  Municipal Boundary
-  Study Area Boundary
-  Topographic High Point
-  Existing Single Family Home
-  Existing Farm/Agricultural Use
-  Existing Commercial Use
-  Other Existing Uses
-  Tree Masses
-  Wetlands  
Source: Advanced Identification (ADID) Wetland Inventory [McHenry County SWCD, 2004]
-  Floodplain  
Source: FEMA Floodplain Map [McHenry County SWCD, 2004]
-  Hydric Soil  
Source: USDA/NRCS Hydric Soils Map [McHenry County SWCD, 2004]

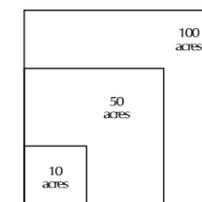
### Other Existing Conditions

**Basement Suitability.** The majority of the soil within and around the study area is considered moderately to severely unsuitable for the siting of basements.

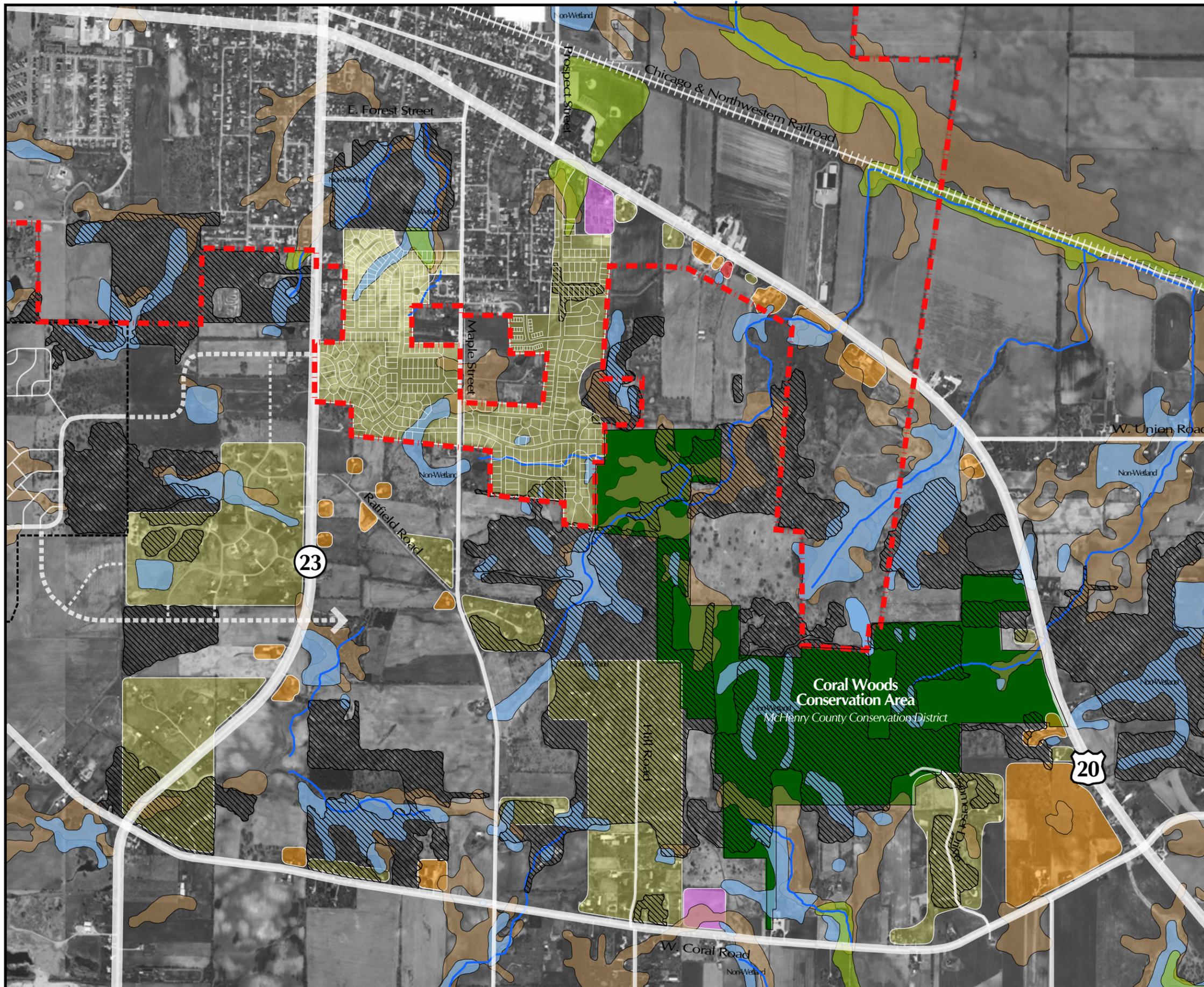
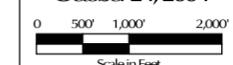
Source: USDA/NRCS Basement Suitability Map [McHenry County SWCD, 2004]

**Topography.** Topography around the Coral Woods Conservation Area and Hill Road area is generally characterized by high points and slopes greater than 20%. High points are noted on the map. Slopes become less steep (i.e. below 20%) as the land gradually levels out north towards Route 20, south towards W. Coral Road, west towards Route 23, and east beyond Route 20.

Source: USGS Topographic Map [McHenry County SWCD, 2004]



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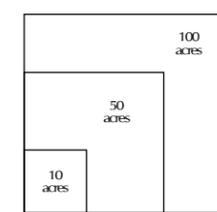
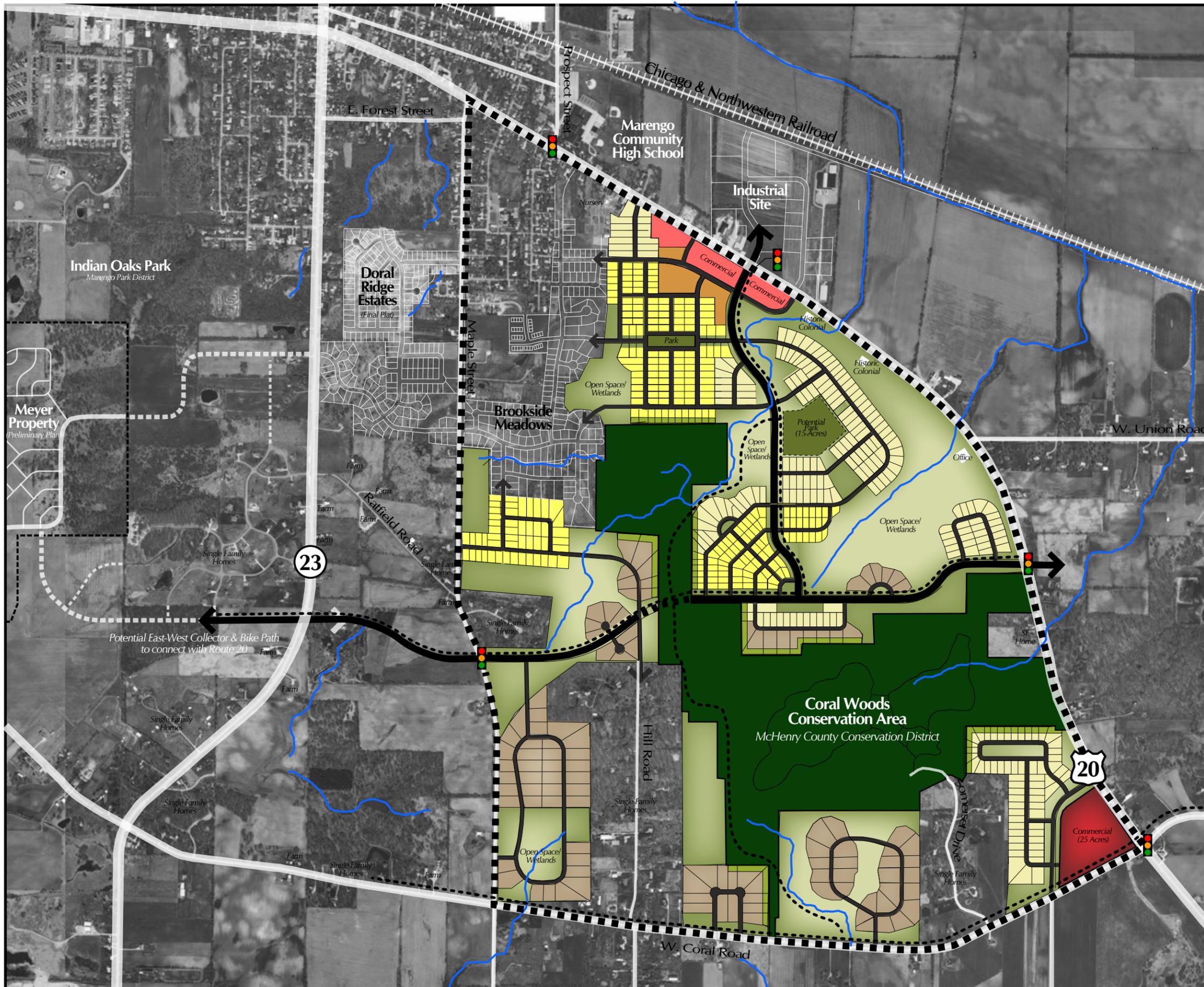


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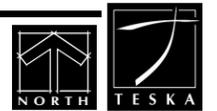
## Development Concept Plan

### LEGEND

-  Creeks/Streams
-  Proposed Bike Trails
-  Arterial Roads
-  Collector Roads
-  Local Roads
-  Potential Collector Roads
-  Potential Local Roads
-  Study Area Boundary
-  Countryside Residential
-  Traditional Low Density Residential
-  Traditional Moderate Density Residential
-  Multi-Family/Attached Single-Family
-  Neighborhood Level Commercial
-  Regional Level Commercial
-  Open Space
-  Park
-  McHenry County Conservation District
-  Conservation Buffer



October 24, 2004  
0 500' 1,000' 2,000'  
Scale in Feet



## INTRODUCTION

The Southeast Sub-Area (SESA) Plan is a continuation of the planning process formalized in the 2004 Comprehensive Plan for the City of Marengo. The Comprehensive Plan is the official City policy for future growth within and at the periphery of the municipality. The purpose of the SESA Plan is to carry forward the general policies of the Comprehensive Plan, and to further refine policy statements by translating them into more specific land use and design standards that will be used to guide future development within the SESA. The need for this more refined planning effort is a function of the increasing development pressure within the SESA, the need for a highly coordinated road network, and the challenges associated with preserving and enhancing the numerous natural features and open spaces.

## STUDY AREA

The immediate study area for the SESA Plan is triangular in shape, and is bounded by Route 20 to the northeast, West Coral Road to the south, and Maple Street to the west. However, throughout the initial phases of this planning process it became evident that this plan would need to reach beyond these boundaries to establish key roadway connections between Route 23 and Maple Street, and ultimately Route 20. Furthermore, conceptual planning for the Meyer Property opens the doors for potential east-west connections extending to Meyer Road.

## EXISTING CONDITIONS

There are numerous conflicting conditions at play within the SESA, which complicate natural and orderly development. First, development has occurred in a piecemeal manor. While the City has been proactive by requiring stubbed roadways to allow for future connections, there is no overriding plan or direction for how new development can or will relate to that which already exists. Furthermore, none of the existing developments provide a roadway that could be extended to create a major east-west collector. Finally, the location and design of many of the existing developments have undermined the efficient development of surrounding properties.

Streams, floodplain, wetlands, hydric soils, steep slopes, and mature tree masses cover a considerable amount of the SESA. Therefore, the greatest challenge to providing for coordinated development within the SESA is the need to preserve the numerous and significant natural features while allowing for the assemblage of large developable parcels. Rather than viewing the many natural features of the SESA as encumbrances to future development, they should be considered assets to capitalize on. New developments can market and design around proximity to these natural features. In the process, the natural features and corridors can be enhanced, and better defined, so as to provide coordinated open spaces and recreational opportunities that all members of the Marengo community can enjoy.

The locations of existing development, wetlands, tree masses, floodplain, and hydric soils have been identified on the Existing Conditions Map. The development of the Existing Conditions Map represents a land planning approach that first seeks to understand the natural characteristics of the area as a method in determining the capacity of lands to support new development. Once these natural features are determined and mapped, it is possible to identify and coordinate developable lands.

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## FRAMEWORK PLAN

The Framework Plan begins to define potential development areas and identifies potential collector roadway connections. The Framework Plan also identifies possible bike trails, open space corridors, park sites, and traffic signals. The purpose of the Framework Plan is to provide a basis (or framework) for a more detailed land use and roadway design study. The following concepts are illustrated on the Framework Plan:

### Development Areas

The Framework Plan organizes land into three classifications; non-developable areas, unrestricted development areas, and limited development areas. Each of these classifications is described below.

▶ ***Non-Developable Areas***

Areas identified as “non-developable” on the Framework plan are those, which are comprised of sensitive environmental features, such as floodplain, wetlands, and hydric soils. These areas are not suitable to support any form of development other than limited roadway crossings, and should be preserved in their natural state. The Framework Plan attempts to coordinate non-developable areas so as to maximize their connectivity as greenway corridors.

▶ ***Type A Development Areas (unrestricted)***

Type A Development Areas are those areas which are generally appropriate for development and do not have any particular limitations with respect to the presence of significant environmental features. These areas are typified as farmland with flat topography. The development of these areas, particularly on the northern portion of the SESA, should be consistent with the *traditional neighborhood design* concepts presented in the Comprehensive Plan.

▶ ***Type B Development Areas (Limited)***

Type B Development Areas are appropriate for development, but with certain limitations regarding sensitive environmental features. These areas should be developed at moderate to low-densities and should utilize *conservation design* concepts as described in the Comprehensive Plan. Techniques such as woodland preservation and reinforcement of hydric soils should be utilized in Type B areas to protect the natural environmental features.

### Road Network

One of the main objectives of the SESA Plan is to establish a hierarchical roadway network that will provide the basis for circulation around and within the various development areas. The Framework Plan begins to identify key connections that should be incorporated into future development plans. Perhaps most critical is the need to establish a collector connection between Route 20 and Route 23. While the Comprehensive Plan shows a collector extending west from Ratfield Road, further study of potential east/west connections suggests that increasing traffic on existing rural-residential streets can potentially be avoided in favor of a new collector with limited, or no, residential frontage. It is also critical that this collector provide no direct access to individual residences.

Given the location of natural features and existing development, the establishment of an unobstructed east-west collector between Route 20 and Route 23 is limited. Furthermore, McHenry County Conservation District (MCCD) property divides the east and west portions of the SESA, potentially

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precluding any possible east-west collector connection. Therefore, the realization of an east-west collector will require cooperation between the City of Marengo and the MCCD. The most viable east-west collector corridor extends from Route 20 just north of the Coral Woods Conservation Area to a point between Ratfield Road and Pleasant Grove Road. This collector is shown to connect to Meyer Road by linking with the collector within proposed Meyer Property subdivision. In addition, this collector is shown to cross Maple Street at high points to maximize visibility.

The Framework Plan also identifies a north-south collector extending south from Route 20 (aligning with Franks Road) and linking with the potential east-west collector. This north-south connection will collect local traffic thereby minimizing high traffic volumes in neighborhood areas.

The interconnectedness of development areas should be a high priority for future development within the SESA. The Framework Plan also identifies conceptual local road extensions from existing developments into new development areas. A more detailed local roadway system is illustrated on the Development Concept Plan.

The Comprehensive Plan calls for limited curb cuts along arterial roadways. This Framework Plan respects that objective by minimizing access off of Route 20, Route 23, and West Coral Road. Of particular importance is to minimize curb cuts to commercial uses along the historic Route 20. Therefore, this Plan shows an access road setback 300 feet from Route 20 to serve potential commercial development south of the industrial park. The access road will facilitate the elimination of direct access off of Route 20 and will allow for rear parking fields.

The Framework Plan suggests the introduction of traffic signals at key intersections, including Route 20 and West Coral Road, Route 20 and West Union Road, Route 20 and Prospect Street, Route 20 and the potential collectors, and Route 23 and West Coral Road, and Route 23 where it intersects with the potential collector.

### **Bike Trails**

One of the goals of the Comprehensive Plan is to develop a highly integrated, community-wide, off-street bike trail network. The Comprehensive Plan provides conceptual routes for illustrative purposes. However, this more detailed planning effort provides the opportunity to identify more specific bike trail routes within the SESA.

The development of an east-west and north-south collector provides the unique opportunity to establish key bike trail linkages between Route 20 and Meyer Road. Therefore, the design of the new collectors should incorporate a separate paved off-street bike trail that parallels the collector along 100% of their length. These bike trails should be no less than 8 feet wide and should be provided within the road right-of-way, but separated from the road pavement by a 10-foot parkway.

### **Potential Park Site**

The Framework Plan provides for a 10 to 20 acre park site to be located centrally within the SESA. While the location of this site is illustrative in nature, it does have a number of important benefits. First, the park is located so as to be easily accessible from the proposed collector system. Second, the site is generally flat and un-wooded.

### **Historical Structures**

The Framework Plan recognizes the historic quality of the two farmhouses located on the south side of Route 20 between West Union Road and Prospect Street. These structures should remain undisturbed.

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## DEVELOPMENT CONCEPT PLAN

The Development Concept Plan provides a more detailed study of key roadway connections, land use allocation, and possible neighborhood designs. While this plan provides a detailed illustration of local roadway and lot layouts, it should be viewed as an expression of fundamental planning concept and not as a ridged blueprint for future development. However, to the greatest extent possible this plan should provide the basis for assessing conformance between individual development proposals and the community's vision for the SESA.

### Land Use

As the Development Concept Plan illustrates, the SESA should be comprised primarily of open space and single-family residential development. The Plan does, however, identify two potential opportunities for commercial development, and identifies the possibility for limited multi-family or attached single-family development. The following provides a description of the land use categories illustrated on the Development Concept Plan:

- ▶ **Countryside Residential** areas are intended to be limited to single-family detached uses at densities no greater than one dwelling unit per net acre. These areas have been designated as "countryside residential" to preserve their rural character and to protect their natural features. Countryside residential neighborhoods are generally not served by municipal water or sewer. Neighborhood design for these areas should be consistent with the design guidelines for conservation design provided in the Comprehensive Plan.
- ▶ **Traditional Low Density** areas are intended to be limited to single-family detached uses at densities between 1 –2.5 dwelling units per net acre, with lot sizes between 14,000 square feet and 1 acre. These areas should incorporate development concepts used in both traditional and conservation design neighborhoods, as described in the Comprehensive Plan.
- ▶ **Traditional Moderate Density** areas are intended to be limited to single-family detached uses at densities between 2.5 – 4 dwelling units per net acre, with lot sizes between 10,000 - 14,000 square feet. These areas should incorporate traditional neighborhood design concepts, as described in the Comprehensive Plan.
- ▶ **Multiple/Attached Single-Family** areas are intended to be limited to attached residential uses at densities not to exceed 10 dwelling units per acre. These uses provide a transition between commercial and detached single-family uses, and provide for a variety of housing options. All attached residential development should be designed in conformance with the design guidelines provided in the Comprehensive Plan.
- ▶ **Neighborhood Level Commercial** areas are intended to serve neighborhoods in the immediate vicinity with a variety of convenience oriented goods and services. This plan calls for a neighborhood level commercial center to be located along Route 20 on either side of the potential north-south collector. This center should serve the emerging neighborhoods to the south, and should be comprised of convenience uses such as a drug store, a dry cleaner, a small sit down restaurant (no drive-thru), video store, etc. A key recommendation of this plan is to provide a backage road behind this particular commercial center. This will not only allow for the elimination of curb cuts along Route 20, it will also allow for rear parking fields, which are screened from view. The unified development of this commercial center is critical to ensuring the types of uses and quality of design envisioned in this plan. Therefore, piecemeal development of this center should be prohibited.

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- ▶ **Regional Level Commercial** areas are intended to serve a market radius of 5 miles or more. These centers typically attract two or more large-scale anchor stores and supporting businesses. Large-scale anchors may include (but are not limited to) discount stores such as Target and Wal-Mart, bookstores such as Borders and Barnes & Noble, or home product stores such as Lowe's and Home Depot. Small supporting businesses have a wide range including small restaurants, home and gardening stores, clothing stores, and private offices (e.g. dentists, optometrists, etc.). As called for in the Comprehensive Plan, this plan identifies a 25-acre regional level commercial site at the northwest corner of Route 20 and Coral Road. Due to the prominent location of this site, excellence in building, landscape, and site design must be achieved in accordance with the Comprehensive Plan's design guidelines.
  - ▶ **Open Space** areas are intended to remain undeveloped. These areas should be protected due to their natural features and environmental sensitivity. This plan attempts to maximize the presence of open space by clustering residential lots, and creating highly integrated greenway corridors. It may be appropriate to enhance open space areas with bike trails, picnic areas, and other recreational opportunities.
  - ▶ **Parks** are public lands that have been permanently dedicated for public recreational open space uses owned and operated by the Marengo Park District or the City. Private recreational facilities such as those managed and maintained by homeowners associations are also included in this category.

### **Key Development Concepts**

While many of the details provided on the Development Concept Plan are intended for illustrative purposes only, the plan does provide a number of key planning concepts that should be integrated into future development proposals. These key concepts include the following:

#### **Roadways**

- ▶ Minimize intersections with Route 20, West Coral, and Maple.
- ▶ Provide traffic signals at key intersections.
- ▶ Provide new collectors that links existing collectors/arterials (i.e. Route 20 and Route 23) and which does not provide direct access to individual lots. Cooperation and negotiation with the McHenry County Conservation District is paramount to establishing an east-west collector.
- ▶ Utilize a curvilinear design for collector roads to reduce travel speeds.
- ▶ Provide significant landscape setbacks on each side of collectors to buffer adjacent lots and to allow for the incorporation of off-street bike trails.
- ▶ Maximize local roadway connections to existing neighborhoods. In particular, tie new roadways to stubs located in Brookside Meadows.
- ▶ Create breaks in the street grid of local roads to reduce cut-through traffic and travel speeds.

#### **Neighborhoods**

- ▶ Where possible, orient lots such that side yards are parallel to collector roads. This will provide a residential presence along collector roads while allowing front doors to face local streets.

- ▶ Design neighborhoods around existing natural features and avoid environmentally sensitive areas. Where appropriate cluster lots to maximize open space.
- ▶ Maximize connectivity between neighborhoods and open space.
- ▶ Utilize unique street layouts and a diversity of lot sizes.
- ▶ Provide short blocks in traditional neighborhoods to enhance pedestrian activity.

**Open space**

- ▶ Minimize the disruption of environmentally sensitive areas such as floodplain, wetlands, wooded areas, and steep slopes.
- ▶ Maximize the connectivity of open space corridors.
- ▶ Incorporate off-street bike trails into open space corridors and along major collectors. Provide trail connection to individual neighborhoods. Work with the McHenry County Conservation District to connect new bike trails to existing paths within the Coral Woods Conservation Area.
- ▶ Provide a 10-20 acre public park site located centrally within the northern portion of the SESA.
- ▶ Require a conservation buffer between all private lots and McHenry County Conservation District property. This buffer could take the form of a conservation easement, or a physical barrier such as a fence.

**Architecture and Building Design**

The Development Concept Plan does not provide specific guidelines for architecture and building design, however the quality of the residential and commercial buildings proposed within the SESA is of great importance. Developers should carefully review the Comprehensive Plan’s Design and Development Guidelines for residential and commercial uses prior to establishing formal development proposals. Conformance with these standards and excellence in design is a requisite for City approval.

**LAND USE ANALYSIS**

The table below provides a high and low estimate of number of units, residents and students that could be generated within the SESA based on the densities allowed. Net acreage discounts roads, open space, and unbuildable land. The Development Concept Plan depicts roughly 600 single-family units, and would allow for between 60 and 100 multiple-family/attached single-family units.

**Residential**

	Buildable Area		Low Estimate				High Estimate			
	Square feet	Net Acres	du/acre	Units	pop	K-8 students	du/acre	du	pop	students
Countryside	13,000,000	239	0.50	119	449	99	1	239	898	198
Traditional Low	7,100,000	130	1	130	490	108	2.5	326	1,226	270
Traditional Moderate	7,100,000	130	2.5	326	1,226	270	4	522	1,961	432
Multiple/Attached	560,000	10	6	62	123	8	10	103	205	14
<b>Total</b>	<b>27,760,000</b>	<b>510</b>		<b>637</b>	<b>2,288</b>	<b>485</b>		<b>1,189</b>	<b>4,289</b>	<b>913</b>

**Commercial**

	Buildable Area		Low Estimate		High Estimate	
	Square feet	Acres	FAR	Square feet of Commercial	FAR	Square feet of Commercial
Neighborhood	450,000	10	0.10	45,000	0.15	67,500
Regional	1,089,000	25	0.15	163,350	0.20	217,800
<b>Total</b>	<b>1,539,000</b>	<b>35</b>		<b>208,350</b>		<b>285,300</b>

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## **SUMMARY**

The Southeast Sub Area Plan represents the City of Marengo's vision for the ultimate build-out of this important area. While strict compliance with the details of this plan may not be necessary, conformance with the key concepts illustrated herein is critical to the orderly development of the SESA. The City and developers should utilize this tool as the basis for negotiation and guideline for acceptable development.