



DEPARTMENT OF COMMUNITY DEVELOPMENT SERVICES

Planning Division

m e m o r a n d u m

TO: The Urbana Plan Commission

FROM: Jeff Engstrom, AICP, Planner II

DATE: February 28, 2014

SUBJECT: CCZBA-768-AT-13: A request by the Champaign County Zoning Administrator to amend Sections 6.1.3 of the Champaign County Zoning Ordinance regarding “Heliport/Restricted Landing Area”.

Introduction

The Champaign County Zoning Administrator is requesting a text amendment to the Champaign County Zoning Ordinance in Champaign County Case No. CCZBA-768-AT-13 to add standard conditions for Special Use Permits to allow “Heliport/Restricted Landing Area”. Under the proposed conditions, Heliports or Restricted Landing Areas (RLAs) would need to be buffered from dwellings under separate ownership and land reserved for conservation and recreation. The full memo to the Champaign County Zoning Board of Appeals can be found online at: <http://urbanaininois.us/sites/default/files/attachments/cczba-1-8-14.pdf>

The proposed text amendment is of interest to the City of Urbana to the extent that it will affect zoning and land use development decisions within the City’s one-and-one-half mile extra-territorial jurisdictional (ETJ) area. The City has subdivision and land development jurisdiction within the ETJ area, while the County holds zoning jurisdiction in this area. It is important that there be consistency between these two jurisdictions to the extent that certain regulations may overlap. Since development within this area may abut development within the corporate limits of the City or may eventually be annexed into the City’s corporate limits, some level of consistency in zoning regulations is also desirable. Land uses in the County affect the City of Urbana in several ways, including:

- Land uses in Champaign County can potentially conflict with adjacent land uses in the City of Urbana;
- Unincorporated portions of Champaign County adjacent to the City of Urbana will likely be annexed into the City at some point in the future. Existing land uses would also be incorporated as part of annexation;

- In addition to land uses, development patterns of areas annexed into the City of Urbana will affect our ability to grow according to our shared vision provided in the 2005 Comprehensive Plan.

For these reasons, the City should examine the proposed text amendment to the Champaign County Zoning Ordinance to ensure compatibility with existing City ordinances. It is the Plan Commission’s responsibility to review the proposed amendment to determine what impact it will have on the City, and recommend to City Council whether or not to protest the proposed text amendment. Under state law, a municipal protest of the proposed amendment would require three-quarters super majority of affirmative votes for approval of the request at the County Board; otherwise, a simple majority would be required.

Proposed Amendment

The County Zoning Administrator is proposing to add additional standard conditions as follows. The full text of the revised amendment is attached as Exhibit A.

- A. *Revise the use category “heliport/restricted landing area” to “ heliport-restricted landing area” and revise the existing standard conditions and special provisions for the use category “heliport-restricted landing area” and add new standard conditions and special provisions, as follows:*
 1. *Number the existing standard condition and special provision 1.*
 2. *Add the following standard conditions and special provisions for a limited time not to exceed 365 days from the date of adoption:*
 - a. *Add a standard condition and special provision to require the Final Approach and Takeoff Area to be no closer than 800 feet from the nearest CR [Conservation-Recreation] District when measured in a straight line from the Final Approach and Takeoff Area in an approach takeoff path and no closer than 500 feet when measured from the Final Approach and Takeoff Area in other than an approach! takeoff path and that no part of the approach takeoff path may be less than 100 feet above the nearest CR District.*
 - b. *Add a standard condition and special provision to require that the Final Approach and Takeoff Area may be no closer than 1,320 feet from the nearest dwelling under different ownership than the heliport- restricted landing area.*
 - c. *Add a standard condition and special provision to require that the Final Approach and Takeoff Area may be no closer than 300 feet from the nearest property under different ownership than the heliport- restricted landing area.*
- B. *Revise the existing standard conditions and special provisions for the use category “restricted landing area” and add new standard conditions and special provisions as follows:*

1. *Number the existing standard conditions and special provisions 1 through 4.*
2. *Add the following standard conditions and special provisions for a limited time not to exceed 365 days from the date of adoption:*
 - a. *Add a standard condition and special provision to require the end of the runway to be at least 1,500 feet from the nearest CR District when measured in a straight line from the end of the runway and not less than 500 feet when measured from the edge of the runway and that no part of the approach surface may be less than 100 feet above the nearest CR District.*
 - b. *Add a standard condition and special provision to require that the runway may be no closer than 1,320 feet from the nearest dwelling under different ownership than the restricted landing area.*
 - c. *Add a standard condition and special provision to require that the runway may be no closer than 300 feet from the nearest property under different ownership than the restricted landing area.*

Issues and Discussion

The County Zoning Ordinance definition of Restricted Landing Area refers to state statute, which defines an RLA as “any area of land, water, or both that is used or is made available for the landing and takeoff of aircraft that is intended for private use.” Restricted Landing Areas are used by private aircraft, mainly for recreational and agricultural purposes. The county Zoning Ordinance imposes standard conditions on several Special Uses. For heliports the ordinance currently requires that the use meet Federal Aviation Administration and Illinois Department of Transportation requirements. For restricted landing areas, they must meet FAA and IDOT requirements, and must be contained entirely on the subject lot. Structures intended for human occupancy may not be located within the Runway Clear Zone, a trapezoidal area extending 1,000 feet from the restricted landing area.

The purpose of the proposed amendment is to protect residences and natural areas near heliports or RLAs. It was brought about when a Special Use Permit application for a restricted landing area was denied for a parcel in southern Champaign County. At that case the County Zoning Board of Appeals suggested adopting additional restrictions for heliports and restricted landing areas. The CCZBA asked that these restrictions be applied on a temporary basis. The County Zoning Administrator is proposing the new standard conditions based on CCZBA’s recommendation. If adopted, these conditions would be in effect for just one year, after which the CCZBA and County Board would need to vote to make them permanent. There are no existing or proposed restricted landing area facilities in question are inside of Urbana’s extra-territorial jurisdiction, so there would be no anticipated impacts from the proposed amendment to Urbana.

Urbana 2005 Comprehensive Plan

By State law, the City has the ability to review zoning decisions within its extra-territorial jurisdiction area for consistency with the City's comprehensive plan. Champaign County's proposed Zoning Ordinance text amendment should therefore be reviewed for consistency with the City of Urbana's 2005 Comprehensive Plan. Specifically, Urbana's comprehensive plan includes the following pertinent goals and objectives:

Goal 17.0 Minimize incompatible land uses.

Objective 17.1 Establish logical locations for land use types and mixes, minimizing potentially incompatible interfaces, such as industrial uses near residential areas.

Objective 17.2 Where land use incompatibilities exist, promote development and design controls to minimize concerns.

Goal 21.0 Identify and address issues created by overlapping jurisdictions in the one-and-one-half mile Extraterritorial Jurisdictional area (ETJ).

Objective 21.1 Coordinate with Champaign County on issues of zoning and subdivision in the ETJ.

Objective 21.2 Work with other units of government to resolve issues of urban development in unincorporated areas.

The proposed text amendment is generally consistent with these goals and objectives. It provides for protection of incompatible land uses by requiring additional buffer distance between heliports or restricted landing areas and residences or conservation and recreation areas.

Zoning Impacts

The proposed amendment would have no known impact on zoning within the City's extra-territorial jurisdiction. The Urbana Zoning Ordinance allows Heliports in the AG, Agricultural and IN-1, Light Industrial/Office Zoning Districts with a Conditional Use Permit, and in the IN-2, Heavy Industrial Zoning District with a Special Use Permit. Table VII-1 of the Zoning Ordinance requires Heliports in the City to meet FAA and IDOT regulations. The proposed County text amendment would impose additional buffer areas for heliports and restricted landing areas, beyond the height clearances required by FAA and IDOT.

Summary of Staff Findings

1. The Champaign County Zoning Administrator is proposing a text amendment to add standard conditions for Heliports and Restricted Landing Areas under Section 6.1.3 of the Champaign County Zoning Ordinance.
2. The proposed amendment would provide additional buffer area between Heliports/Restricted Landing Areas and occupied buildings or conservation and recreation lands.

3. The proposed zoning ordinance text amendment is generally consistent with the goals and objectives of the Urbana 2005 Comprehensive Plan.
4. The proposed zoning ordinance text amendment would not pose a significant detriment to the City of Urbana or to the extra-territorial jurisdiction of the City of Urbana.

Options

The Plan Commission has the following options for recommendations to the City Council regarding proposed text amendments in CCZBA Case No. 768-AT-13:

1. Recommend to defeat a resolution of protest; or
2. Recommend to defeat a resolution of protest contingent upon some specific revision(s) to the proposed text amendments; or
3. Recommend to adopt a resolution of protest.

Staff Recommendation

Based on the findings above, Staff recommends that the Plan Commission forward this case to the City Council with a recommendation to **DEFEAT a resolution of protest** for the proposed County Zoning Ordinance text amendment.

Attachments: Exhibit A: Revised Amendment Language dated February 6, 2014
Please see Memorandum to the Champaign County ZBA dated January 8, 2014, which can be found at: <http://urbanaininois.us/sites/default/files/attachments/cczba-1-8-14.pdf>

cc: John Hall, Champaign County Zoning Administrator

Exhibit A. Revised Amendment
FEBRUARY 6, 2014

Proposed Amendment (Annotated)

A. Revise Section 4.3.8 to read as follows:

No part of a BUILDING or STRUCTURE intended for regular human occupancy in a R or B DISTRICT nor a Public ASSEMBLY or INSTITUTIONAL USE not in existence or for which no Zoning USE Permit was issued on or before December 20, 1988 shall be located within the required separation distance or exclusion area as specified in the Explanatory or Special Provisions of Table 6.1.3, unless a SPECIAL USE Permit is granted per Section ~~9.1.5.D.4~~ 9.1.11. except as specifically exempted in Table 6.1.3. from the requirement for a SPECIAL USE Permit.

B. In Section 6.1.3 revise the use category “HELIPORTS or HELIPORT/RESTRICTED LANDING AREAS” to “HELIPORT or HELIPORT/RESTRICTED LANDING AREA” and revise the Explanatory or Special Provisions to read as follows:

- (1) Must meet the requirements for “Approach and Departure Protection Areas” of Paragraph 25 of the Federal Aviation Administration Circular Number 150/5390-2 and requirements of the Illinois Department of Transportation, Division of Aeronautics. HELIPORTS atop BUILDINGS are exempt from the minimum area standard.

The following standard conditions apply only to a heliport-restricted landing area and shall be in effect for a limited time not to exceed 365 days from the date they are adopted:

- (2) The minimum separation to the nearest CR DISTRICT shall be a rectangular area encompassing 800 linear feet measured outward from the end of the Final Approach and Takeoff Area in the approach/takeoff path, and 500 linear feet measured outward from the side edge of the Final Approach and Takeoff Area.
- (3) The requirement of Section 4.3.8 notwithstanding, a BUILDING or STRUCTURE intended for regular human occupancy located within a R or B DISTRICT or any PUBLIC ASSEMBLY or INSTITUTIONAL USE may be located in the following required separation distances without being subject to the requirement for a SPECIAL USE Permit:
 - (a) The minimum separation to the nearest CR DISTRICT shall be a rectangular area encompassing 1,500 linear feet measured outward from the end of the runway and 500 linear feet measured outward from the side edge of the runway extended by 1,500 feet.
 - (b) No part of the runway may be closer than 1,320 feet from the nearest DWELLING under different ownership than the RESTRICTED LANDING AREA.
 - (c) No part of the runway may be closer than ~~300~~ 280 feet from the nearest PROPERTY under different ownership than the RESTRICTED LANDING AREA.

B. In Section 6.1.3 revise the use category “RESTRICTED LANDING AREAS” to “RESTRICTED LANDING AREA” and revise the Explanatory or Special Provisions to read as follows:

- (1) Must meet the requirements of the Federal Aviation Administration and Illinois Department of Transportation, Division of Aeronautics.
- (2) The RESTRICTED LANDING AREA shall provide for a runway plus a runway safety area both located entirely on the LOT. The runway safety area is an area centered 120 feet wide and extending 240 feet beyond each end of the runway.
- (3) No part of a BUILDING or STRUCTURE intended for regular human occupancy located within a R or B DISTRICT nor any PUBLIC ASSEMBLY or INSTITUTIONAL USE may be located: 1) within the Primary Surface, an area 250 feet wide centered on the runway centerline and extending 200 feet beyond each end of the runway; or 2) the Runway Clear Zones, trapezoidal areas centered on the extended runway centerline at each end of the primary surface 250 feet wide at the end of the primary surface and 450 feet wide at a point 1,000 feet from the Primary Surface.
- (4) After a RESTRICTED LANDING AREA is established, the requirements in Section 4.3.7 and Table 5.3 note (12) shall apply.

The following standard conditions shall be in effect for a limited time not to exceed 365 days from the date they are adopted:

- (5) The minimum separation to the nearest CR DISTRICT shall be a rectangular area encompassing 1,500 linear feet measured outward from the end of the runway and 500 linear feet measured outward from the side edge of the runway extended by 1,500 feet.
- (6) The requirement of Section 4.3.8 notwithstanding, a BUILDING or STRUCTURE intended for regular human occupancy located within a R or B DISTRICT or any PUBLIC ASSEMBLY or INSTITUTIONAL USE may be located in the following required separation distances without being subject to the requirement for a SPECIAL USE Permit:
 - (a) The minimum separation to the nearest CR DISTRICT shall be a rectangular area encompassing 1,500 linear feet measured outward from the end of the runway and 500 linear feet measured outward from the side edge of the runway extended by 1,500 feet.
 - (b) No part of the runway may be closer than 1,320 feet from the nearest DWELLING under different ownership than the RESTRICTED LANDING AREA.
 - (c) No part of the runway may be closer than ~~300~~ 280 feet from the nearest PROPERTY under different ownership than the RESTRICTED LANDING AREA.



CASE NO. 768-AT-13

PRELIMINARY MEMORANDUM

January 8, 2014

Petitioner: **Zoning Administrator** Prepared by: **John Hall**, Zoning Administrator
Susan Monte, RPC Planner

Request: **Amend the Champaign County Zoning Ordinance by adding the following standard conditions and special provisions to Section 6.1.3:**

Part A. Revise the use category “heliport/ restricted landing area” to “heliport- restricted landing area” and revise the existing standard conditions and special provisions for the use category “heliport- restricted landing area” and add new standard conditions and special provisions, as follows:

- (1) Number the existing standard condition and special provision 1.**
- (2) Add the following standard conditions and special provisions for a limited time not to exceed 365 days from the date of adoption:**
 - (a) Add a standard condition and special provision to require the Final Approach and Takeoff Area to be no closer than 800 feet from the nearest CR District when measured in a straight line from the Final Approach and Takeoff Area in an approach/ takeoff path and no closer than 500 feet when measured from the Final Approach and Takeoff Area in other than an approach/ takeoff path and that no part of the approach/ takeoff path may be less than 100 feet above the nearest CR District.**
 - (b) Add a standard condition and special provision to require that the Final Approach and Takeoff Area may be no closer than 1,320 feet from the nearest dwelling under different ownership than the heliport- restricted landing area.**
 - (c) Add a standard condition and special provision to require that the Final Approach and Takeoff Area may be no closer than 300 feet from the nearest property under different ownership than the heliport- restricted landing area.**

Part B. Revise the existing standard conditions and special provisions for the use category “restricted landing area” and add new standard conditions and special provisions as follows:

- (1) Number the existing standard conditions and special provisions 1 through 4.**

-
- (2) **Add the following standard conditions and special provisions for a limited time not to exceed 365 days from the date of adoption:**
- (a) **Add a standard condition and special provision to require the end of the runway to be at least 1,500 feet from the nearest CR District when measured in a straight line from the end of the runway and not less than 500 feet when measured from the edge of the runway and that no part of the approach surface may be less than 100 feet above the nearest CR District.**
 - (b) **Add a standard condition and special provision to require that the runway may be no closer than 1,320 feet from the nearest dwelling under different ownership than the restricted landing area.**
 - (c) **Add a standard condition and special provision to require that the runway may be no closer than 300 feet from the nearest property under different ownership than the restricted landing area.**

BACKGROUND

The Champaign County Board Environment and Land Use Committee (ELUC) authorized the proposed interim text amendment at their November 7, 2013, meeting. At the meeting, it was suggested that a 500 foot separation be implemented when a RLA parallels the CR Conservation Recreation District. Attachment A is the staff memorandum provided to ELUC dated October 28, 2013.

Attachment B contains a memorandum dated October 28, 2013 received from Larry Hall, Julia Hall, Mark Fisher, and Jean Fisher. The packet reviews their desired proposed additional provisions and/or amendments to the Champaign County Zoning Ordinance with regard to future approvals of restricted landing areas, private landing strips, heliports and public use airports.

Attachment C contains a strikeout version of proposed standard conditions.

Attachment D contains relevant acronyms and defined terms excerpted from the *Champaign County Zoning Ordinance* and *Illinois Aviation Safety Rules*.

Attachment M is a diagram of proposed minimum separation and setback standard conditions for a heliport-restricted landing area.

Attachment N is a diagram of proposed minimum separation and setback standard conditions for a restricted landing area.

In the event that an RLA is intended to serve also as a HRLA, it will be required to meet the more restrictive of the proposed zoning ordinance standard conditions.

TEMPORARY AMENDMENT

The proposed amendment is a temporary amendment that will ultimately be replaced by a permanent amendment. It is hoped that the ZBA can make a Final Determination at either the 1/16/14 meeting or the 1/30/14 meeting.

ATTACHMENTS (* = attachments available on the County website).

- A Champaign County Environment and Land Use Committee Memorandum dated October 28, 2013, with attachments:
 - a Strikeout version of the proposed text amendment
- B Memorandum dated October 28, 2013 received from Larry Hall, Julia Hall, Mark Fisher, and Jean Fisher
- C Strikeout version of proposed standard conditions
- D Acronyms and Defined Terms
- E 92 Ill. Adm. Code 14 Subpart G (included separately)
- F Illustrations G-1 and G-2 of 92 Ill. Adm. Code 14 Subpart G (included separately)
- G 92 Ill. Adm. Code 14 Subpart H (included separately)
- H Illustration H-2 of 92 Ill. Adm. Code 14 Subpart H (included separately)
- I RLAs in and around Champaign County (various maps and images) received in Case 688-S-11 handout from Petitioner's Attorney Alan Singleton received at the December 13, 2012, public hearing (included separately)
- J Excerpts including Sheet 82 of 85 and pps. 137-138 and Table 11 from the Soil Survey of Champaign County, Illinois, United States Department of Agriculture Natural Resources Conservation Service, 2003 (included separately)
- K pp. 8,9, 54, 55 from Field Guide to Native Oak Species of Eastern North America, Stein, John and Denise Binion and Robert Acciavatti, USDA Forest Service, January, 2003 (included separately)
- L Native Trees of the Midwest from the Morton Arboretum located in Lisle, Illinois (included separately)
- M Diagram of proposed minimum separation and setback standard conditions: heliport-restricted landing area
- N Diagram of proposed minimum separation and setback standard conditions: restricted landing area
- O Preliminary Draft Finding of Fact



DATE: October 28, 2013
TO: Environment and Land Use Committee
FROM: Susan Monte, John Hall
RE: Proposed interim zoning ordinance text amendment to change standard conditions requiring minimum separation distances for a heliport, heliport restricted landing area, and restricted landing area
ACTION REQUEST: Authorize Proposed Text Amendment to proceed to a Public Hearing at the Zoning Board of Appeals

This request is to authorize a proposed interim text amendment to proceed to a public hearing at the Zoning Board of Appeals. The proposed interim text amendment would:

- 1) add standard conditions that require minimum separation distances between a heliport, heliport restricted landing area, restricted landing area and
 - a) the CR Conservation-Recreation Zoning District;
 - b) the nearest adjacent dwelling under different ownership; and
 - c) the nearest property under different ownership.
- 2) remove the provision that heliports atop buildings are exempt from the minimum area standard.

Standard conditions added as a result of this interim text amendment would expire one year from date of adoption, provided they are not extended by amendment.

BACKGROUND

The Zoning Administrator makes this request subsequent to two recent zoning cases which highlighted the lack of standard conditions concerning minimum separation requirements of RLA and HRLA requests. Additionally, citizens at the September 5th ELUC meeting asked the County Board to consider a moratorium on County review of RLA or HRLA requests until such standards could be established. The existing minimum separation standards adopted by Kane County, Illinois were noted as a model for possible consideration.

- continued -

In place of a moratorium, we propose an interim text amendment to change standard conditions in Section 6.1.3 regarding minimum required separation distance for a heliport, heliport restricted landing area, and restricted landing area be forwarded to a public hearing at the ZBA.

During the interim effective period of the proposed text amendment, staff would review whether further adjustment to the minimum separation standards in place is warranted to effectively protect public safety.

ATTACHMENT

A Strikeout version of the proposed text amendment

Strikeout Version of Proposed Text Amendment

Section 6.1.3 SCHEDULE OF STANDARD CONDITIONS FOR SPECIFIC TYPES OF SPECIAL USES

HELIPORTS-or HELIPORT/ RESTRICTED LANDING AREAS

1. Must meet the requirements for "Approach and Departure Protection Areas" of Paragraph 25 of the Federal Aviation Administration Circular Number 150/5390-2 and requirements of the Illinois Department of Transportation, Division of Aeronautics. ~~HELIPORTS atop BUILDINGS are exempt from the minimum area standard.~~
2. The provisions of this Ordinance are in addition to the rules and regulations of the Illinois Department of Transportation, Division of Aeronautics, which rules and regulations are the minimum standards for purposes of this ordinance. In the event of conflict between the provisions of this ordinance and the rules and regulations of the Illinois Department of Transportation, Division of Aeronautics, the more restrictive of the two shall prevail.

The definitions of the words and phrases used herein shall be the same as the definitions of like words and phrases contained in the rules and regulations of the Illinois Department of Transportation, Division of Aeronautics, unless otherwise defined herein.

3. No HELIPORT or HELIPORT/RESTRICTED LANDING AREA shall be located:
 - a) within 1,320 feet (one quarter mile) of the nearest adjacent dwelling under different ownership;
 - b) within 300 feet of any property under different ownership; or
 - c) within 1,500 feet of the CR Conservation-Recreation Zoning District.

Standard condition # 3 shall expire at midnight on [one year from date of adoption] provided that it is not extended by amendment.

RESTRICTED LANDING AREAS

1. Must meet the requirements of the Federal Aviation Administration and requirements of the Illinois Department of Transportation, Division of Aeronautics.
2. The provisions of this Ordinance are in addition to the rules and regulations of the Illinois Department of Transportation, Division of Aeronautics, which rules and regulations are the minimum standards for purposes of this ordinance. In the event of conflict between the provisions of this ordinance and the rules and regulations of the Illinois Department of Transportation, Division of Aeronautics, the more restrictive of the two shall prevail.

The definitions of the words and phrases used herein shall be the same as the definitions of like words and phrases contained in the rules and regulations of the Illinois Department of Transportation, Division of Aeronautics, unless otherwise defined herein.

continued

RESTRICTED LANDING AREAS- (continued)

3. No RESTRICTED LANDING AREA shall be located:

- a) within 1,320 feet (one quarter mile) of the nearest adjacent dwelling under different ownership;
- b) within 300 feet of any property under different ownership; or
- c) within 1,500 feet of the CR Conservation-Recreation Zoning District.

Standard condition # 3 shall expire at midnight on [*one year from date of adoption*] provided that it is not extended by amendment.

RECEIVED

Attachment B

OCT 28 2013

CHAMPAIGN CO. P & Z DEPARTMENT

DATE: October 28, 2013

TO: Champaign County Board and Committees
Champaign, Illinois

RE: Proposed additional provisions and/or amendments to Champaign County Zoning Ordinance regarding future approvals of restricted landing areas, private landing strips, heliports and public use airports.

At the September 5, 2013, meeting of the Champaign Environment and Land Use Committee, a proposal was submitted by citizens of Champaign County for additional provisions/amendments to the Champaign County Zoning Ordinance. The Environment and Land Use Committee voted to place the proposal on the next available meeting agenda for discussion and review.

Board member, Ms. Patsi Petrie, requested that additional information be provided, namely maps of Kane County RLAs, comments regarding Kane County's considerations for change to existing ordinance, and suitability of the ordinance since its inception in Kane County.

To this end, attached are:

- 1) Copy of Citizen's proposal submitted at the 09/05/13 meeting (3 pages)
- 2) Summary of discussion with the Kane County Administrator (1 page)
- 3) A map of Kane County, showing Places, Townships and Airport (1 page)
- 4) List of Kane County RLAs, downloaded from the internet (2 pages)
- 5) Maps of typical existing RLAs in Kane County, downloaded from the internet (6 pages)

Sincerely yours,



Larry Hall

(representing citizens for proposed
changes/amendments for RLA zoning)

September 5, 2013

Champaign County Board and Committees

We, the undersigned, residents of Champaign County Illinois, hereby submit our request that the Champaign County Board and Committee members establish a temporary moratorium on the approval of any new requests for Restricted Landing Areas (RLAs) in Champaign County to allow time necessary to consider and to adopt the attached listed "Proposed additional provisions and/or amendments to Champaign County Zoning Ordinance regarding future approvals of Restricted Landing Areas."

These restrictions will help clarify "land use compatibility" which falls under the responsibility of the County Board for the preservation and use of land and will provide enhanced protection for the citizens of Champaign County.

These proposed additional provisions/amendments to the CC Zoning Ordinance will reduce the subjective burden on Board members to address concerns of neighboring property owners and residents. Also they will provide a more appropriate and clearly defined greater separation between RLAs and neighboring property owners and residents and will enhance the overall safety issues and concerns previously addressed in related County Board and sub-committee hearings.

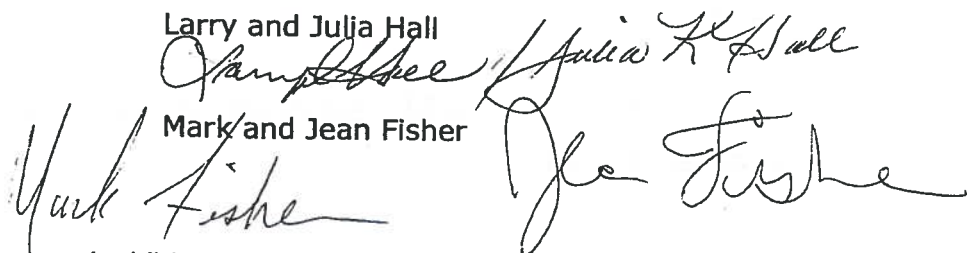
I have discussed and reviewed these proposals with the County Zoning Administrator, Mr. John Hall, who agrees that minimum separation requirements between an RLA and neighboring homes under different ownership and between Conservation Recreation (CR) zoned property, would improve the existing zoning ordinance.

Our proposal was excerpted, in large part, from the RLA-related zoning ordinance of Kane County, Illinois, which has been in place in Kane County since March 3, 1980.

Sincerely yours

Larry and Julia Hall

Mark and Jean Fisher

The block contains two sets of handwritten signatures. The first set, for Larry and Julia Hall, consists of a signature that appears to be 'Larry Hall' and another that appears to be 'Julia Hall'. The second set, for Mark and Jean Fisher, consists of a signature that appears to be 'Mark Fisher' and another that appears to be 'Jean Fisher'. The signatures are written in black ink and are somewhat cursive.

Attachment: *Proposed additional provisions and/or amendments to Champaign County Zoning Ordinance regarding future approvals of Restricted Landing Areas, Private Landing Strips, Heliports and Public Use Airports.*

**Proposed additional provisions and/or amendments to
Champaign County Zoning Ordinance regarding future
approvals of Restricted Landing Areas, Private Landing Strips,
Heliports and Public Use Airports.**

The provisions of this Ordinance are in addition to the rules and regulations of the Illinois Department of Transportation, Division of Aeronautics, which rules and regulations are the minimum standards for purposes of this ordinance. In the event of conflict between the provisions of this ordinance and the rules and regulations of the Illinois Department of Transportation, Division of Aeronautics, the more restrictive of the two (2) shall prevail.

Restrictions on Location

No public use airport, restricted landing field, private landing strip, heliport, or any other facility designated as a restricted landing area of any kind in the rules and regulations of the Department of Transportation, Division of Aeronautics, or any part thereof, shall be located:

- Within two thousand (2000) feet of any residential dwelling not related to the activities of the RLA.
- Within three hundred (300) feet of any property line when the adjacent property owners have no relationship to the activities of the RLA.
- Within one thousand (1000) feet of any Conservation Recreation (CR) zoned district.

Proposed additional provisions and/or amendments to Champaign County Zoning Ordinance regarding future approvals of Restricted Landing Areas, Private Landing Strips, Heliports and Public Use Airports (continued)

Restrictions on Location (continued)

- In a location which is inconsistent with the plans, policies, and ordinances of Champaign County which are now and may from time to time be in effect.

Distance Between Restricted Landing Areas

The minimum distance between restricted landing areas shall be not less than three (3) miles measured from the nearest points of the landing strips, and when approach planes are located in one extended straight line, the distance shall be not less than four (4) miles.

Distance from Highway or Railroad Right-of-Way

Runways shall not be located within one thousand (1,000) feet of any highway, street or railroad right-of-way if the runway is perpendicular to such right-of-way and shall not be located within five hundred (500) feet of such right-of-way if the landing strip is parallel with such right-of-way.

Conservation Recreation (CR) Zoned Property

To protect and preserve the established designation of CR, no CR zoned property shall be rezoned out of CR.

**Summary of discussion with Mr. Mark VanKerhoff
Zoning Director, Kane County Illinois**

Telephone discussion between Mr. Larry Hall and Mr. Mark VanKerhoff on September 10, 2013.

Kane County existing Zoning Ordinance was adopted in 1980.

Mr. VanKerhoff stated that he has served in his position as director for 20 years. During that time frame, there have been no challenges to the existing RLA zoning ordinances.

I asked Mr. VanKerhoff if he would say that the ordinances have served Kane county well, his response was "apparently so." When asked if Kane County had ever considered changing the ordinances regarding RLAs, he stated, "not during his tenure."

During our conversations, Mr. VanKerhoff stated that our concerns are certainly timely as he pointed out to me that just the day before, a small plane with a doctor and wife returning to Kane County Airport descended one-half mile short of the runway, careened several hundred feet into a bank parking lot, and burst into flames with resulting fatalities of both occupants. Fortunately no citizens were in the bank parking lot at that time.

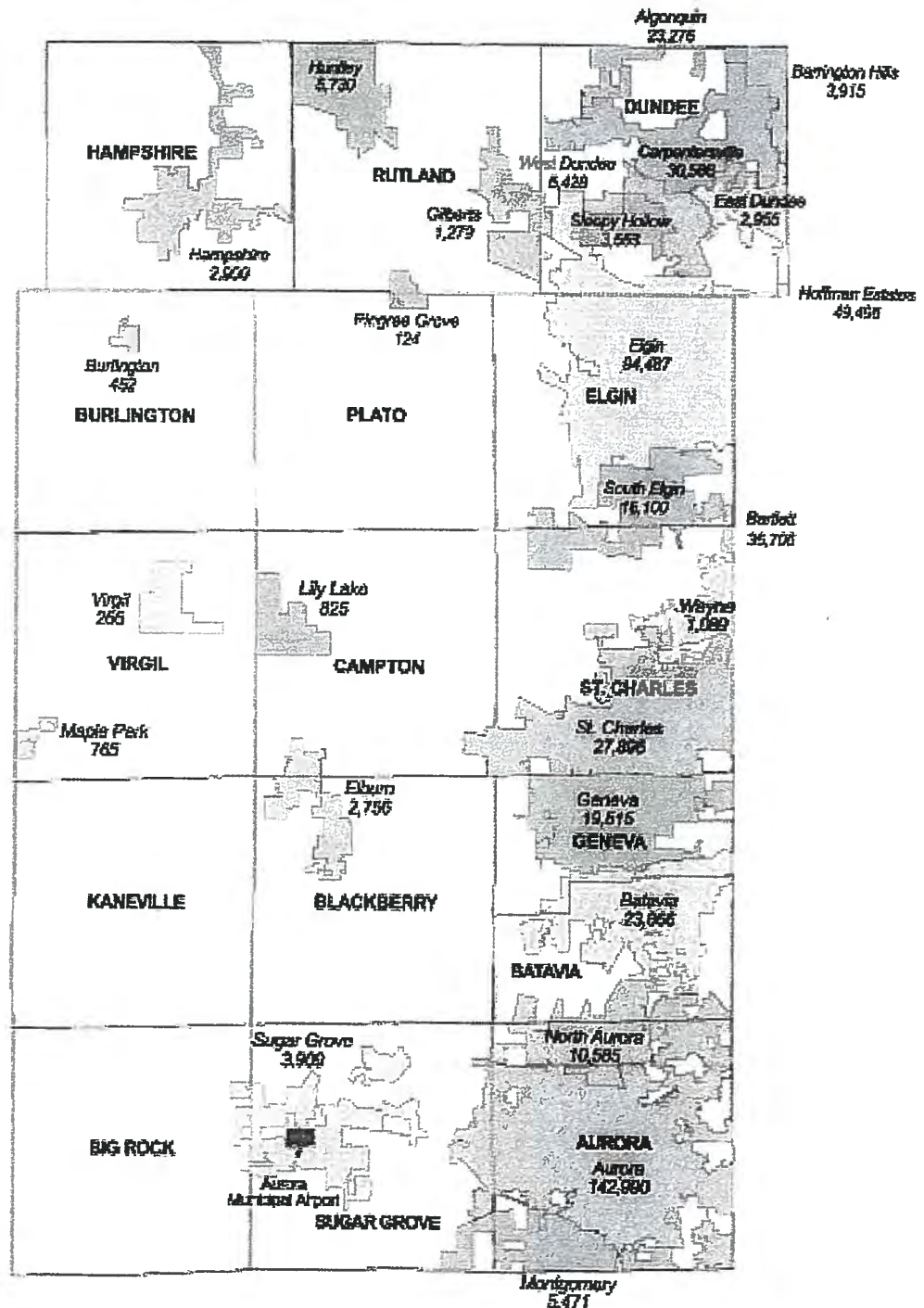
Respectfully Submitted

A handwritten signature in black ink, appearing to read "Larry Hall", with a stylized flourish extending to the right.

Larry Hall

(representing citizens for proposed
changes/amendments for RLA zoning)

Kane County, Illinois Places, Townships, and Airport



Note: Figures in each Place are 2000 Census Population counts.
Map prepared by the Center for Governmental Studies, NLI.



Kane County Public and Private Airports, Illinois:

If you're planning a local flight you will probably end up taking off and landing at a small airfield. Our directly provides a list of airports located in Kane County. If you plan on landing in a different county, you will want to go to our [IL airports](#) page to see a list of airfields you can land in. Our list provides contact details for each airport for both private and public airports.

Mercy Center For Health Care Services Heliport - IL21 Aurora, Illinois Facility Usage: Private	Mercy Ctr For Health Care Svs 1325 N Highland Avenue Aurora, IL 60506 (708) 859-2222
Rush-Copley Medical Center Heliport - 7IS8 Aurora, Illinois Facility Usage: Private	Copley Memorial Hospital 2000 Ogden Ave Aurora, IL 60504 (630) 978-6200
J Maddock Airport - IL38 Big Rock, Illinois Facility Usage: Private	Jay B. Maddock P.O. Box 232 Sugargrove, IL 60554 (630) 556-3686
Aurora Muni Airport - ARR Chicago-Aurora, Illinois Facility Usage: Public	City Of Aurora 44 E Downer Place Aurora, IL 60507 (630) 844-3612
Il.Dept Of Transportation Heliport - 2IL8 Elgin, Illinois Facility Usage: Private	Illinois Dot Capital Airport Springfield, IL 62707 (217) 785-8380
Sherman Hospital Heliport - IL33 Elgin, Illinois Facility Usage: Private	Sherman Hospital 934 Center St Elgin, IL 60120 (847) 742-9800
St Joseph Hospital - Elgin Heliport - IS20 Elgin, Illinois Facility Usage: Private	Provena Hosp Dba St Joseph Hospital 77 N Airlite St Elgin, IL 60123 (847) 695-3200
Delnor Community Hospital Heliport - 76IL Geneva, Illinois Facility Usage: Private	Delnor Community Hospital 300 Randall Road Geneva, IL 60134 (630) 208-3000
Koppie Airport - 7IS5 Gilberts, Illinois Facility Usage: Private	Chad Koppie 39 W 140 Freeman Road Gilberts, IL 60136 (312) 426-3883

Kane County Public and Private Airports

Attachment B

Olivers Heliport - IS92
Gilberts, Illinois
Facility Usage: Private

Olivers Helicopters Inc
120 Center Dr
Gilberts, IL 60136
(847) 428-3818

✓ Reid Rla Airport - 6IL6
Gilberts, Illinois
Facility Usage: Private

Howard E. Reid
17 N 661 Powers Rd
Gilberts, IL 60136
(312) 426-6934

Casa De Aero Park Airport - 68IS
Hampshire, Illinois
Facility Usage: Private

Casa De Aero Park Corp.
P.O. Box 42
Hampshire, IL 60140
(847) 683-0533

✓ Edward Getzelman Airport - 7IL7
Hampshire, Illinois
Facility Usage: Private

Edward L. Getzelman
46w861 Big Timber Rd
Hampshire, IL 60140
(847) 683-2541

Landings Condominium Airport - 82IS
Huntley, Illinois
Facility Usage: Private

Landings Condo Owners Assoc
P.O. Box 0697
Huntley, IL 60142
(847) 669-3515

✓ Olson Airport - LL53
Plato Center, Illinois
Facility Usage: Private

Paul C. Olson
2170 W Frost Rd
Schaumburg, IL 60195
(312) 358-4035

Turner Seaplane Base - IS23
South Elgin, Illinois
Facility Usage: Private

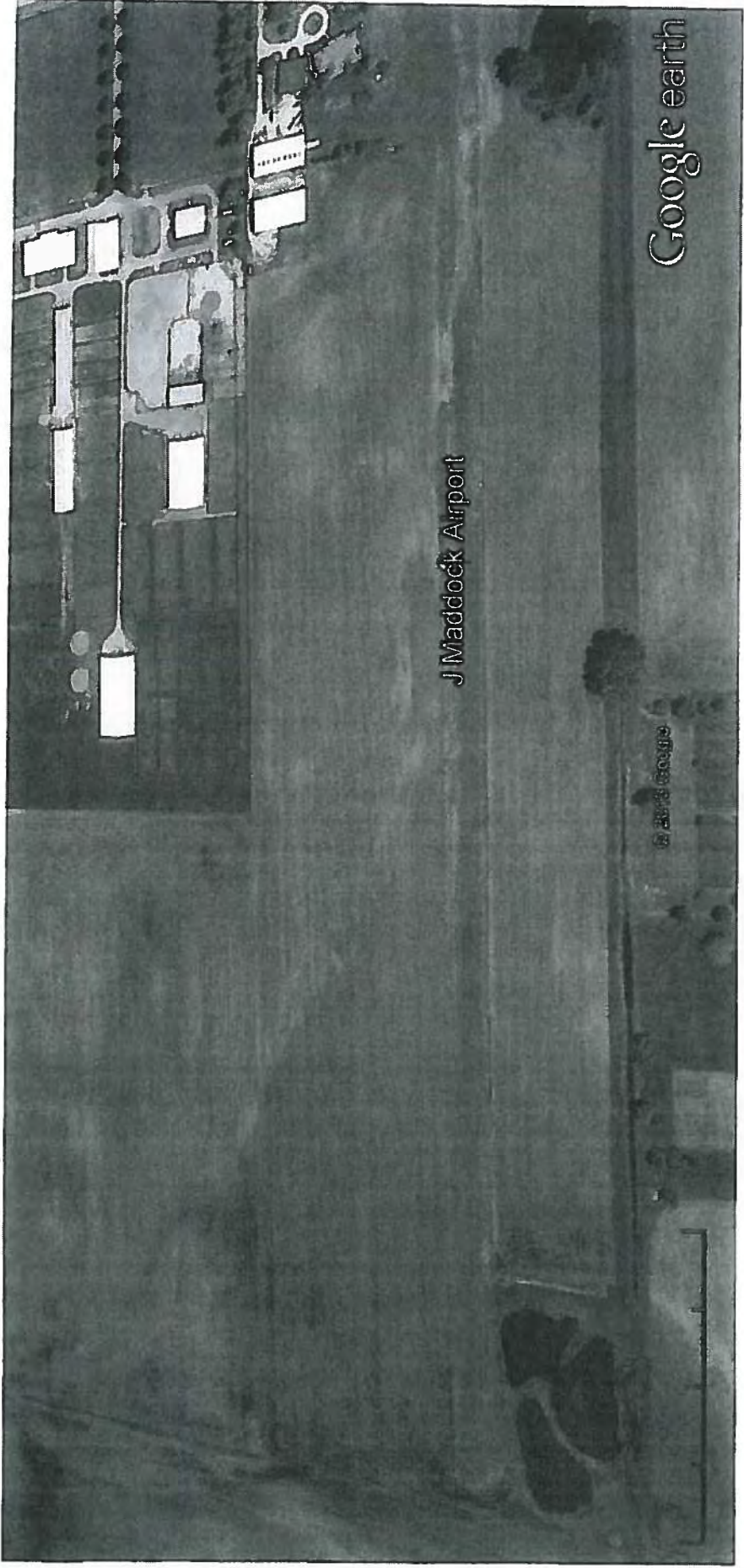
Kelly Turner
331 Hoxie St
Elgin, IL 60123
(847) 888-2122

Brunner Airport - 04LL
West Dundee, Illinois
Facility Usage: Private

Brunner Lay Inc
Rt 31 Box 416-Maple Lane Farm
Dundee, IL 60118
(708) 678-3232

Public Records in Kane County - Provides access to a variety of government websites in Kane County. This is a great place to find out about permits, licenses, aviation rules and regulations, taxes, and a lot of other public resources.

9/26/2013



J Maddock Airport

© 2008 Google

Google earth

feet
meters

1000

400



Big Rocks IL
Kane Co.

Google earth

The Big Map @ OurAirports



Search

Not logged in: [join](#) | [login](#) | [lost password?](#)

Map centre: 42.122482 -88.380332

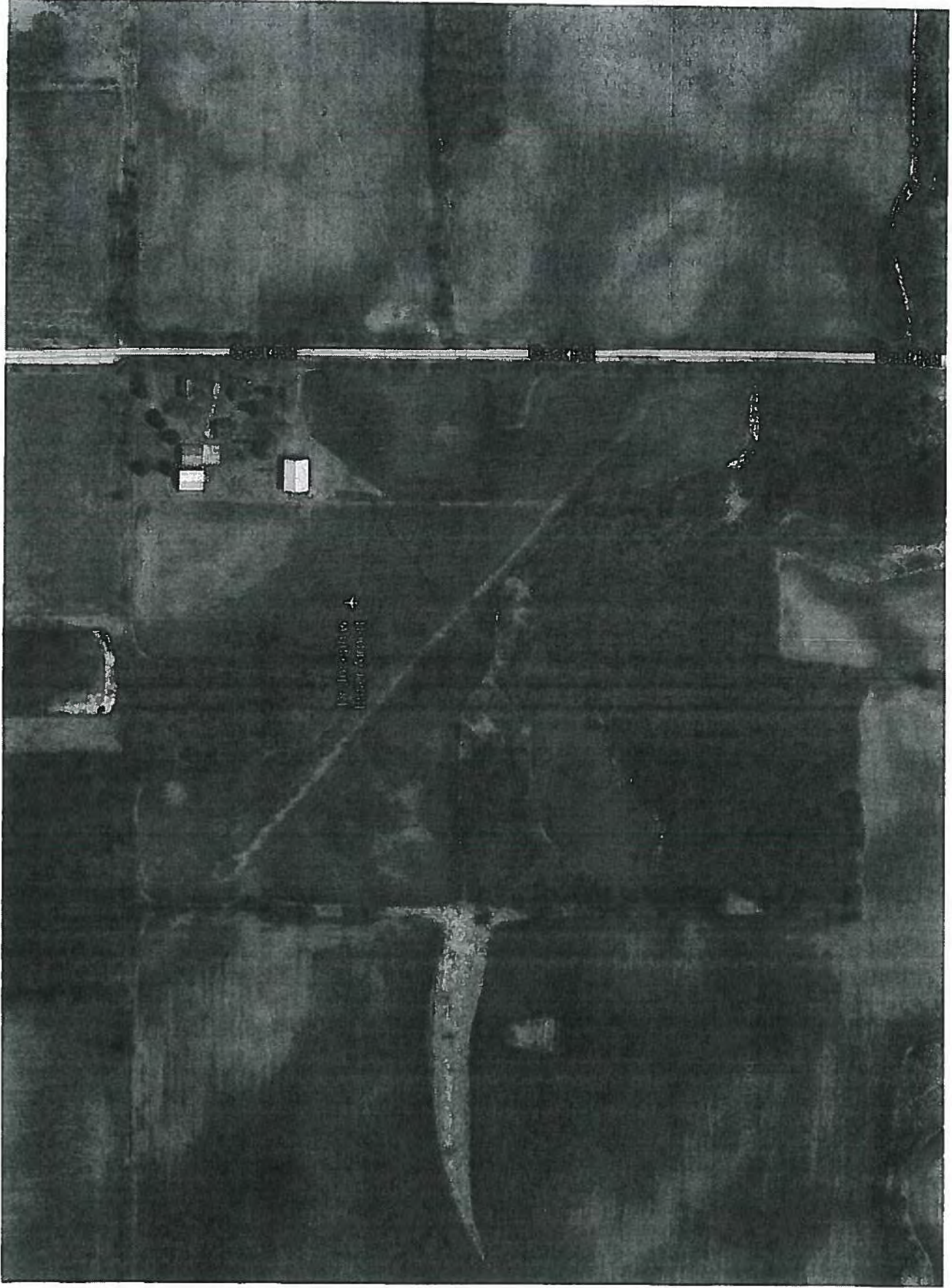
All airports (zoom in for smaller airports)

Show: airports navals

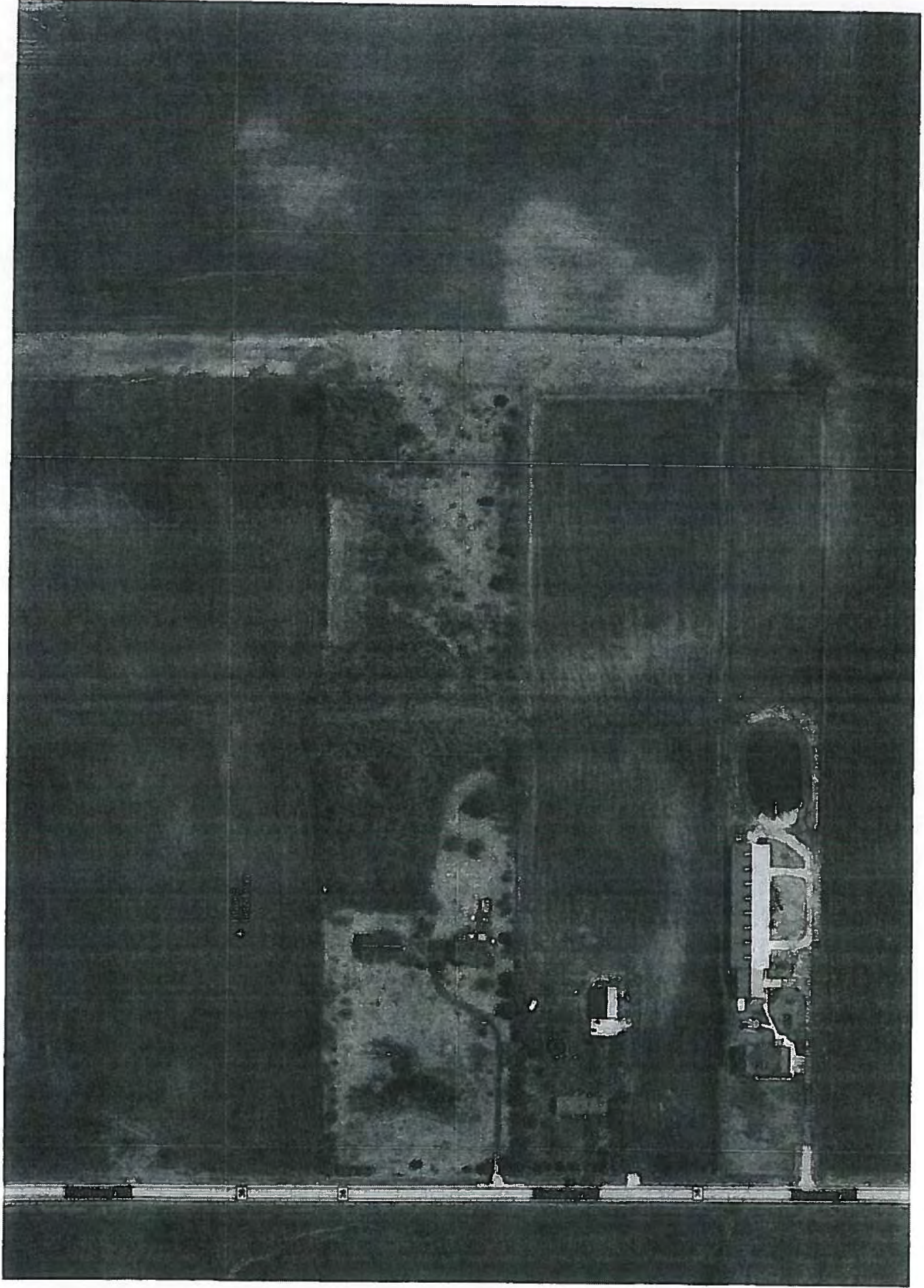
[reset](#) | [new!](#) [my location](#) | [help](#)



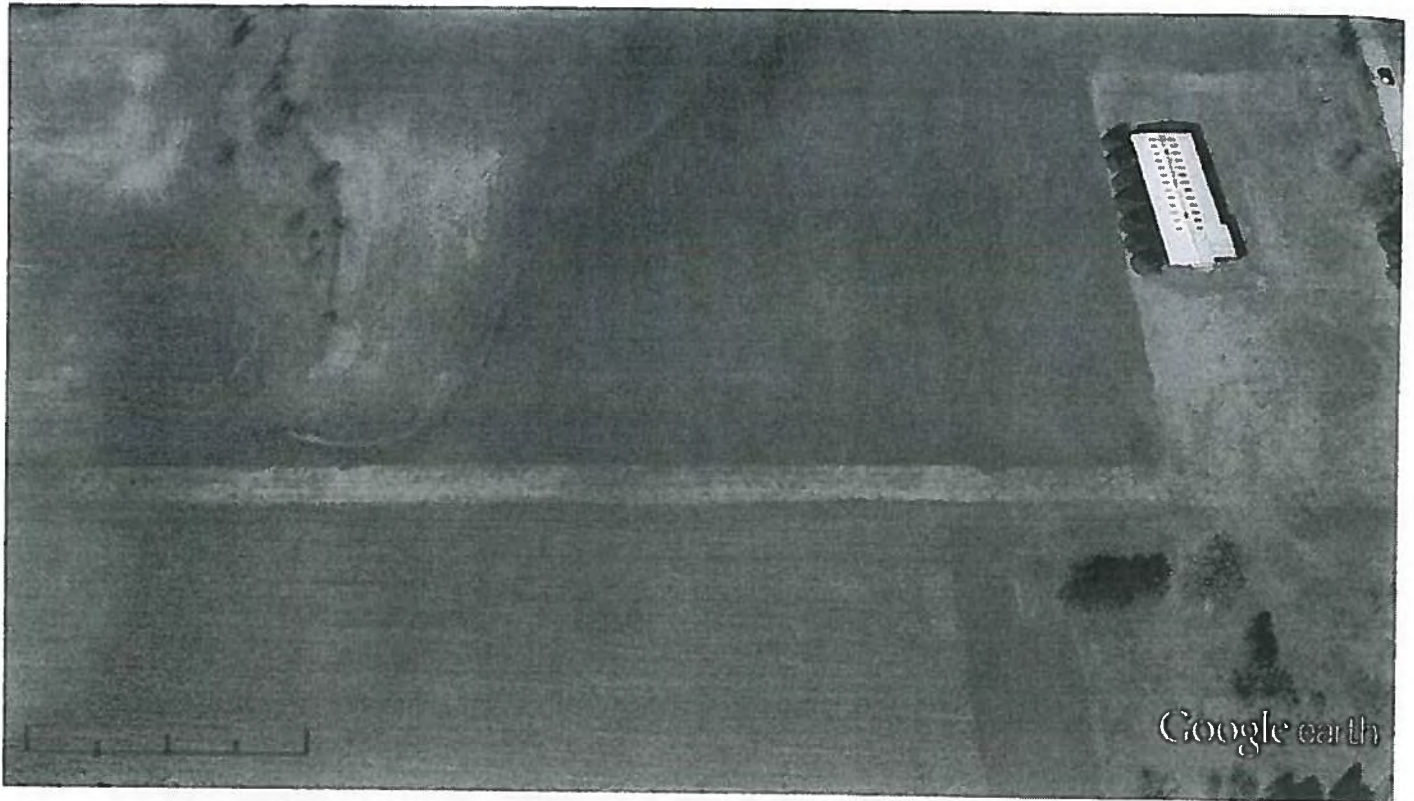
Gilberts in Kane Co.



RLA
HAMPSHIRE, IL (KANE County)



Hampshire in Kame Co.



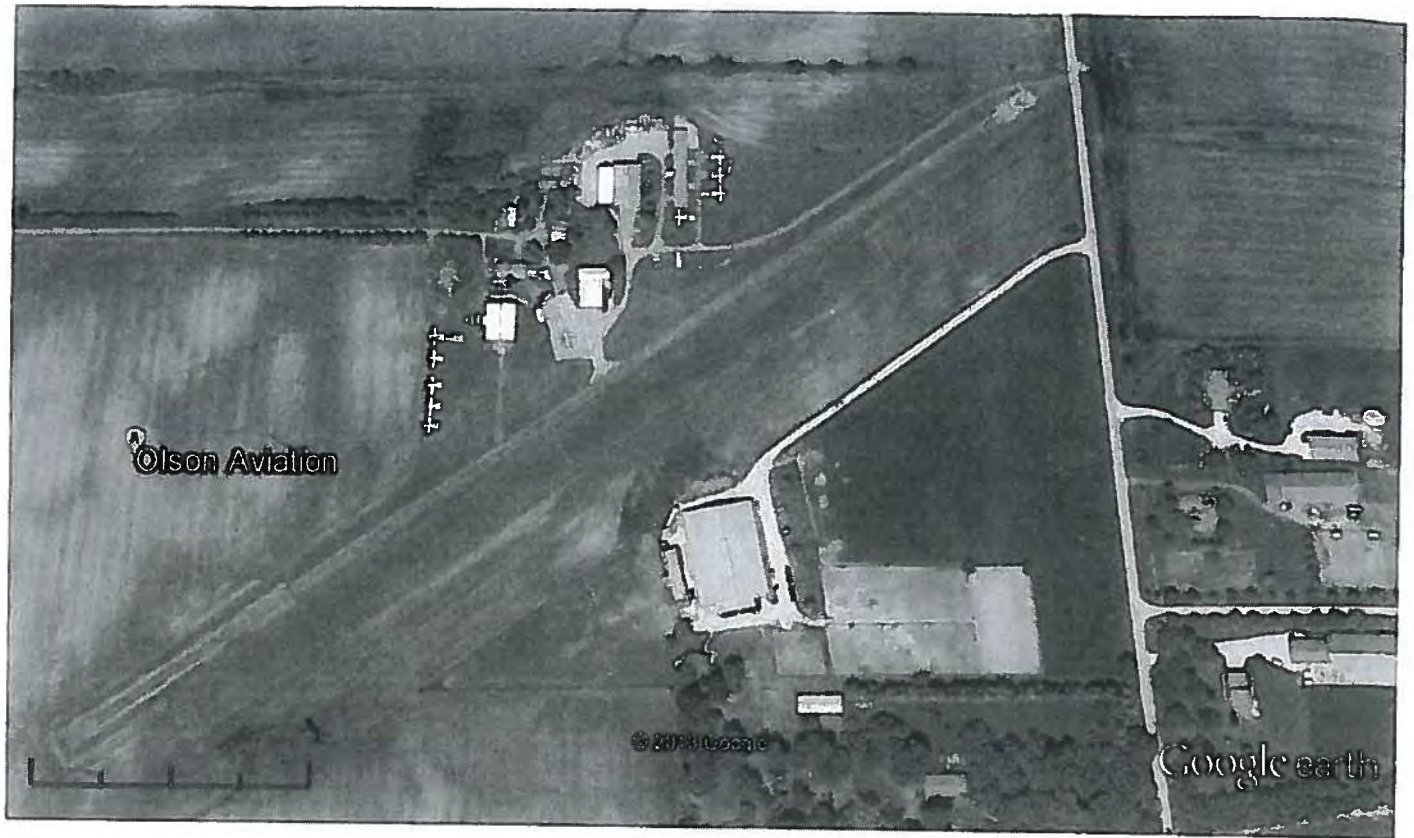
Google earth

Google earth

feet
meters



REID RLA
KANE COUNTY ILLINOIS



Google earth



Plato Center, ILLINOIS
KANE Co

Strikeout Version of Proposed Standard Conditions

Section 6.1.3 HELIPORTS or HELIPORT-RESTRICTED LANDING AREAS

- (1) Must meet the requirements for “Approach and Departure Protection Areas” of Paragraph 25 of the Federal Aviation Administration Circular Number 150/5390-2 and requirements of the Illinois Department of Transportation, Division of Aeronautics. HELIPORTS atop BUILDINGS are exempt from the minimum area standard.

The following standard conditions apply only to a heliport-restricted landing area and shall be in effect for a limited time not to exceed 365 days from the date they are adopted:

- (2) The minimum separation to the nearest CR DISTRICT shall be a rectangular area encompassing 800 linear feet measured outward from the end of the Final Approach and Takeoff Area in the approach/takeoff path, and 500 linear feet measured outward from the side edge of the Final Approach and Takeoff Area.
- (3) No part of the approach/ takeoff path may be less than 100 feet above the nearest CR DISTRICT.
- (4) No part of the Final Approach and Takeoff Area may be closer than 1,320 feet from the nearest DWELLING under different ownership than the HELIPORT-RESTRICTED LANDING AREA.
- (5) No part of the Final Approach and Takeoff Area may be closer than 300 feet from the nearest PROPERTY under different ownership than the HELIPORT-RESTRICTED LANDING AREA.

(continued on next page)

Strikeout Version of Proposed Standard Conditions

Section 6.1.3 RESTRICTED LANDING AREAS

- (1) Must meet the requirements of the Federal Aviation Administration and Illinois Department of Transportation, Division of Aeronautics.
- (2) The RESTRICTED LANDING AREA shall provide for a runway plus a runway safety area both located entirely on the LOT. The runway safety area is an area centered 120 feet wide and extending 240 feet beyond each end of the runway.
- (3) No part of a BUILDING or STRUCTURE intended for regular human occupancy located within a R or B DISTRICT nor any PUBLIC ASSEMBLY or INSTITUTIONAL USE may be located: 1) within the Primary Surface, an area 250 feet wide centered on the runway centerline and extending 200 feet beyond each end of the runway; or 2) the Runway Clear Zones, trapezoidal areas centered on the extended runway centerline at each end of the primary surface 250 feet wide at the end of the primary surface and 450 feet wide at a point 1,000 feet from the Primary Surface.
- (4) After a RESTRICTED LANDING AREA is established, the requirements in Section 4.3.7 and Table 5.3 note (12) shall apply.

The following standard conditions shall be in effect for a limited time not to exceed 365 days from the date they are adopted:

- (5) The minimum separation to the nearest CR DISTRICT shall be a rectangular area encompassing 1,500 linear feet measured outward from the end of the runway and 500 linear feet measured outward from the side edge of the runway extended by 1,500 feet.
- (6) No part of the approach surface may be less than 100 feet above the nearest CR DISTRICT.
- (7) No part of the runway may be closer than 1,320 feet from the nearest DWELLING under different ownership than the RESTRICTED LANDING AREA.
- (8) No part of the runway may be closer than 300 feet from the nearest PROPERTY under different ownership than the RESTRICTED LANDING AREA.

Acronyms and Definitions

Acronyms

FATO final approach and takeoff area
RLS restricted landing area
RSA runway safety area
STOL short takeoff and landing
TLOF touch down and lift off area

Definitions (Excerpt of Section 3.0, *Champaign County Zoning Ordinance*)

AIRPORT: Any area described or defined as an airport under the *Illinois Aviation Safety Rules (92 Ill. Admin. Code Part 14)*, and which meets the criteria of any one of the following airport classifications as determined by the Illinois Department of Transportation, Division of Aeronautics: Basic Utility I, Basic Utility II, General Utility, Basic Transport, General Transport, or Air Carrier or Ultralight STOL.

RESTRICTED LANDING AREA: Any area described or defined as a Restricted Landing Area under the *Illinois Aviation Safety Rules (92 Ill. Admin. Code Part 14)* and as further regulated by the Illinois Department of Transportation, Division of Aeronautics.

Definitions (Excerpt of Section 14.105 of the *Illinois Aviation Safety Rules*¹)

“Airport” means any area of land, water or both, except a restricted landing area, that is designed for the landing and takeoff of aircraft, whether or not facilities are provided for the shelter, servicing, or repair of aircraft, or for receiving or discharging passengers or cargo; and, all appurtenant areas used or suitable for airport buildings or other airport facilities, and all appurtenant rights-of-way, whether established before or after the effective date of this Part. (Various airport classifications may be found in Subpart E, Subpart F and Subpart H of this Part.) (See Section 6 of the Act.)

“Final Approach and Takeoff Area (FATO)” means a defined object-free area over which the final phase of the approach to a hover, or a landing, is completed and from which the takeoff is initiated.

“Landing Strip” means a portion of the usable area within an airport boundary that either in its natural state or as a result of construction work is suitable for the landing and takeoff of aircraft.

“Modification” means any change to the

“Private Use” means that an airport is not open to the general public. Use is limited to the Certificate Holder and any other users as authorized by the Certificate Holder.

“Public Use” means that an airport is open to the general public.

“Restricted Landing Area (RLA)” means any area of land, water, or both that is used or is made available for the landing and takeoff of aircraft that is intended for private use.

“Runway” means the paved, hard surfaced or stabilized central portion of a landing strip.

“Runway Protection Zone” means a defined area off the end of a runway that is clear of incompatible objects and activities.

“Runway Safety Area (RSA)” means a defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway.

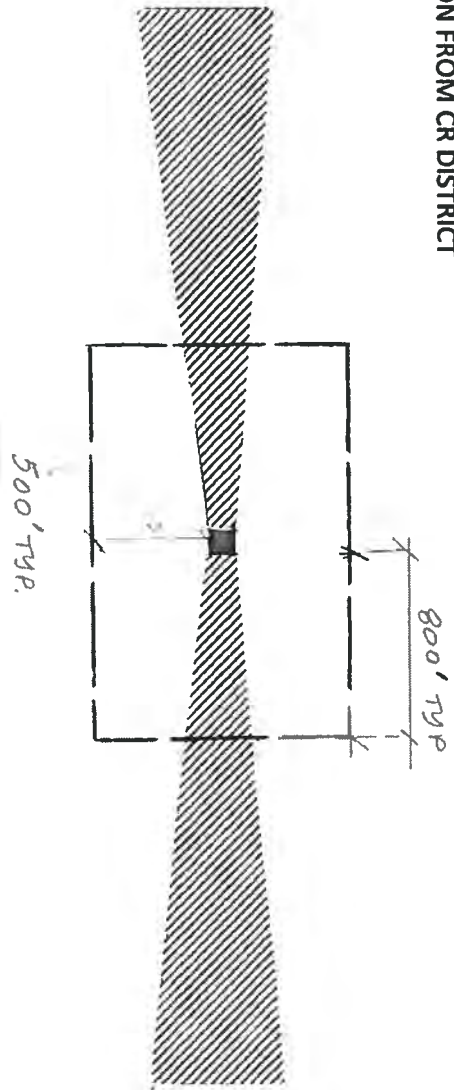
“TLOF” means ‘touch down and lift off area’ (commonly referred to as a helipad and normally centered in a ‘final approach and takeoff area’)

Note:

- 1 This document, *92 Illinois Administrative Code 14*, titled ‘Aviation Safety’, is an administrative rule adopted by the IDOT Division of Aeronautics at *28 Illinois Register 2302*, effective January 26, 2004.

Diagram of Proposed Minimum Separation and Setback Standard Conditions
Heliport-Restricted Landing Area

MINIMUM SEPARATION FROM CR DISTRICT



MINIMUM SETBACK

300 linear feet from nearest PROPERTY under different ownership
1,320 linear feet from nearest DWELLING under different ownership

-  Runway Approach Path
-  Final Approach and Takeoff Area

Scale: 1" = 800 linear feet

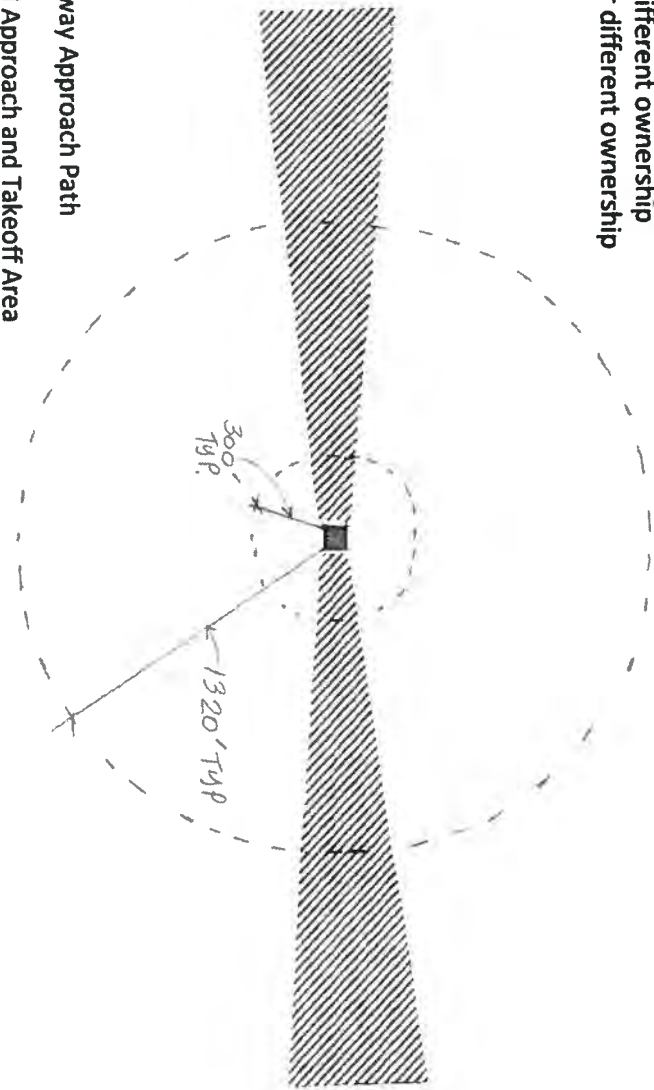
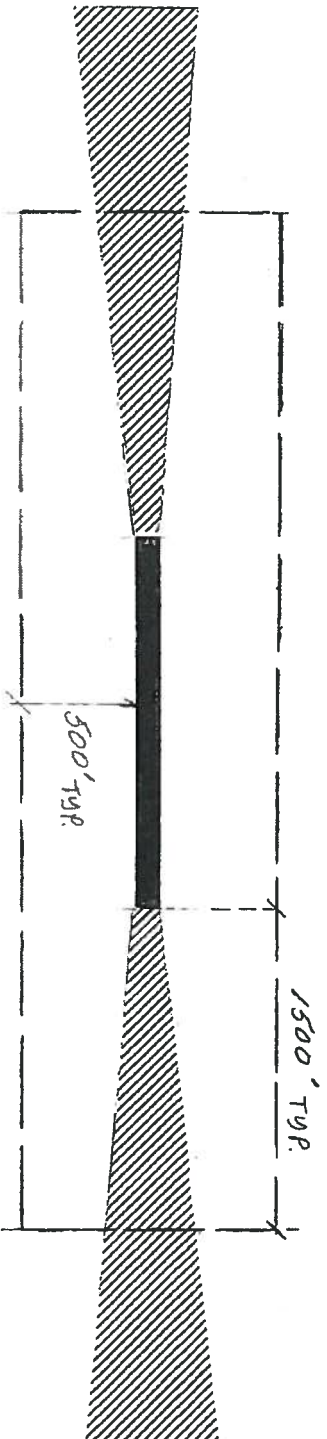


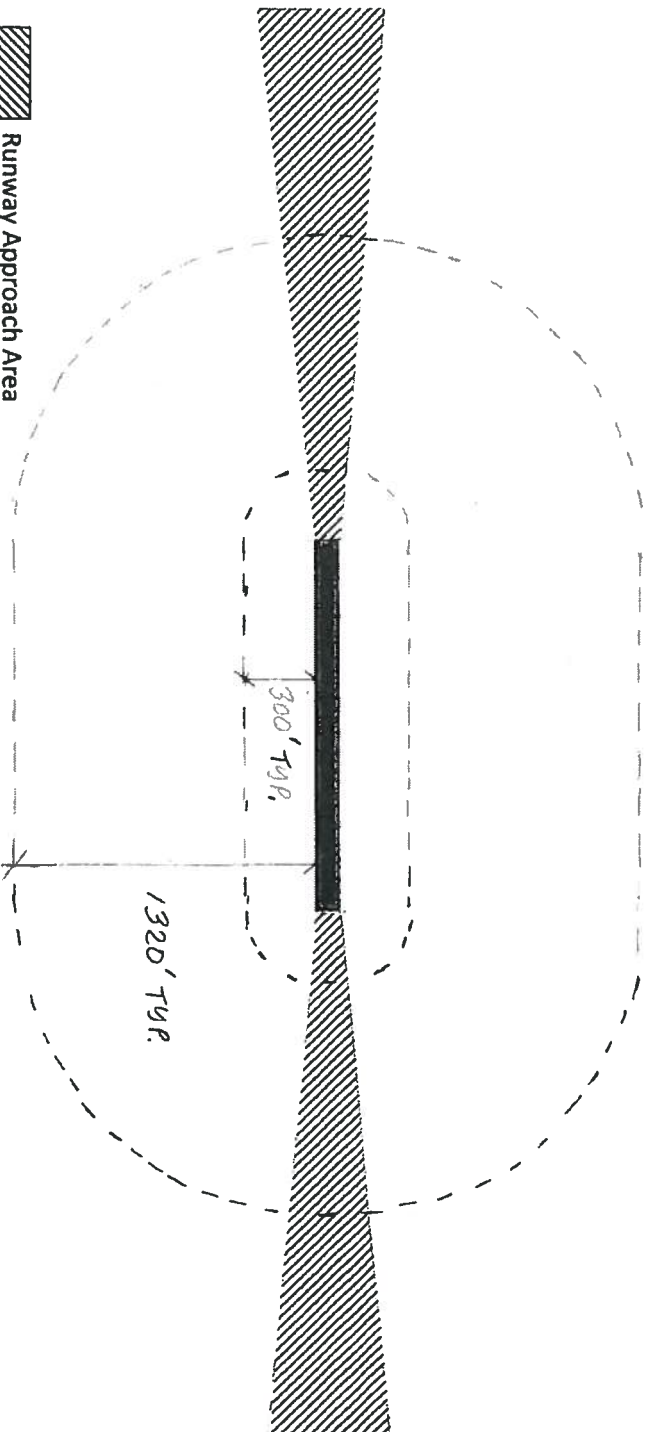
Diagram of Proposed Minimum Separation and Setback Standard Conditions
Restricted Landing Area

MINIMUM SEPARATION FROM CR DISTRICT





MINIMUM SETBACK

300 linear feet from nearest PROPERTY under different ownership
1,320 linear feet from nearest DWELLING under different ownership



Scale: 1" = 800 linear feet

 Runway Approach Area
 Runway

1/8/2014

PRELIMINARY DRAFT

768-AT-13

**FINDING OF FACT
AND FINAL DETERMINATION
of
Champaign County Zoning Board of Appeals**

Final Determination: ***{RECOMMEND ENACTMENT/RECOMMEND DENIAL}***

Date: January 16, 2014

Petitioner: Zoning Administrator

- Request: Amend the Champaign County Zoning Ordinance by adding the following standard conditions and special provisions to Section 6.1.3:
- Part A. Revise the use category “heliport/ restricted landing area” to “heliport-restricted landing area” and revise the existing standard conditions and special provisions for the use category “heliport- restricted landing area” and add new standard conditions and special provisions, as follows:
- (1) Number the existing standard condition and special provision 1.
 - (2) Add the following standard conditions and special provisions for a limited time not to exceed 365 days from the date of adoption:
 - (a) Add a standard condition and special provision to require the Final Approach and Takeoff Area to be no closer than 800 feet from the nearest CR District when measured in a straight line from the Final Approach and Takeoff Area in an approach/ takeoff path and no closer than 500 feet when measured from the Final Approach and Takeoff Area in other than an approach/ takeoff path and that no part of the approach/ takeoff path may be less than 100 feet above the nearest CR District.
 - (b) Add a standard condition and special provision to require that the Final Approach and Takeoff Area may be no closer than 1,320 feet from the nearest dwelling under different ownership than the heliport- restricted landing area.
 - (c) Add a standard condition and special provision to require that the Final Approach and Takeoff Area may be no closer than 300 feet from the nearest property under different ownership than the heliport- restricted landing area.
- Part B. Revise the existing standard conditions and special provisions for the use category “restricted landing area” and add new standard conditions and special provisions as follows:
- (1) Number the existing standard conditions and special provisions 1 through 4.

PRELIMINARY DRAFT

- (2) Add the following standard conditions and special provisions for a limited time not to exceed 365 days from the date of adoption:
 - (a) Add a standard condition and special provision to require the end of the runway to be at least 1,500 feet from the nearest CR District when measured in a straight line from the end of the runway and not less than 500 feet when measured from the edge of the runway and that no part of the approach surface may be less than 100 feet above the nearest CR District.
 - (b) Add a standard condition and special provision to require that the runway may be no closer than 1,320 feet from the nearest dwelling under different ownership than the restricted landing area.
 - (c) Add a standard condition and special provision to require that the runway may be no closer than 300 feet from the nearest property under different ownership than the restricted landing area.

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PROPOSED AMENDMENT.....page 26 - 27

**Note that in the Draft Finding of Fact italicized letters indicate the staff recommendation.*

FINDING OF FACT

From the documents of record and the testimony and exhibits received at the public hearing conducted on **January 16, 2014**, the Zoning Board of Appeals of Champaign County finds that:

1. The petitioner is the Zoning Administrator.
2. The need for the amendment came about as follows:
 - A. At the September 5, 2013, Environment and Land Use Committee (ELUC) meeting a group of neighboring landowners to previous zoning cases 687-AM-11 and 688-S-11 requested that the Zoning Ordinance be amended by adding proposed minimum separations between restricted landing areas (RLA) and helicopter- restricted landing areas (H-RLA) and other RLAs and H-RLAs; and between an RLA and/or H-RLA and the CR District; and property under different ownership than the proposed RLA or H-RLA; and dwellings under different ownership than the proposed RLA or H-RLA. Cases 687-AM-11 and 688-S-11 were proposed to authorize a combined RLA and H-RLA on property that was current zoned CR Conservation Recreation. The ZBA had denied Case 688-S-11 and recommended denial of Case 687-AM-11 and the recommendation was eventually upheld by the County Board. The Committee voted to consider the requested text amendment at the next available ELUC meeting. The minutes of the ELUC meeting can be reviewed on the County website.
 - B. At the November 7, 2013, ELUC meeting the Committee reviewed a text amendment proposed by the Zoning Administrator to add minimum separations between restricted landing areas (RLA) and/ or helicopter- restricted landing areas (H-RLA) and the CR District; and property under different ownership than the proposed RLA or H-RLA; and dwellings under different ownership than the proposed RLA or H-RLA. The Zoning Administrator proposal was somewhat different than the amendment that had been requested at the 9/5/13 meeting. The Committee voted to allow the proposed amendment to proceed to public hearing with one change to the proposed separation from the CR District. The minutes of the ELUC meeting can be reviewed on the County website.
3. Municipalities with zoning and townships with planning commissions have protest rights on all text amendments and they are notified of such cases. No comments have been received to date.

SUMMARY OF THE PROPOSED AMENDMENT

4. The proposed amendment is attached to this Finding of Fact as it will appear in the Zoning Ordinance.

GENERALLY REGARDING THE LRMP GOALS, OBJECTIVES, AND POLICIES

5. The *Champaign County Land Resource Management Plan* (LRMP) was adopted by the County Board on April 22, 2010. The LRMP Goals, Objectives, and Policies were drafted through an inclusive and public process that produced a set of ten goals, 42 objectives, and 100 policies,

which are currently the only guidance for amendments to the *Champaign County Zoning Ordinance*, as follows:

A. The Purpose Statement of the LRMP Goals, Objectives, and Policies is as follows:

“It is the purpose of this plan to encourage municipalities and the County to protect the land, air, water, natural resources and environment of the County and to encourage the use of such resources in a manner which is socially and economically desirable. The Goals, Objectives and Policies necessary to achieve this purpose are as follows:”

B. The LRMP defines Goals, Objectives, and Policies as follows:

(1) Goal: an ideal future condition to which the community aspires

(2) Objective: a tangible, measurable outcome leading to the achievement of a goal

(3) Policy: a statement of actions or requirements judged to be necessary to achieve goals and objectives

C. The Background given with the LRMP Goals, Objectives, and Policies further states, “Three documents, the *County Land Use Goals and Policies* adopted in 1977, and two sets of *Land Use Regulatory Policies*, dated 2001 and 2005, were built upon, updated, and consolidated into the LRMP Goals, Objectives and Policies.

REGARDING LRMP GOALS

6. LRMP Goal 1 is entitled “Planning and Public Involvement” and states that as follows:

Champaign County will attain a system of land resource management planning built on broad public involvement that supports effective decision making by the County.

Goal 1 has 4 objectives and 4 policies. The proposed amendment will *NOT IMPEDE* the achievement of Goal 1.

7. LRMP Goal 2 is entitled “Governmental Coordination” and states as follows:

Champaign County will collaboratively formulate land resource and development policy with other units of government in areas of overlapping land use planning jurisdiction.

Goal 2 has two objectives and three policies. The proposed amendment will *NOT IMPEDE* the achievement of Goal 2.

8. LRMP Goal 3 is entitled “Prosperity” and states as follows:

Champaign County will encourage economic growth and development to ensure prosperity for its residents and the region.

Goal 3 has three objectives and no policies. The proposed amendment will *NOT IMPEDE* the achievement of Goal 3.

9. LRMP Goal 4 is entitled “Agriculture” and states as follows:

Champaign County will protect the long term viability of agriculture in Champaign County and its land resource base.

Goal 4 has 9 objectives and 22 policies. The proposed amendment will *NOT IMPEDE* the achievement of Goal 4.

10. LRMP Goal 5 is entitled “Urban Land Use” and states as follows:

Champaign County will encourage urban development that is compact and contiguous to existing cities, villages, and existing unincorporated settlements.

Goal 5 has 3 objectives and 15 policies. The proposed amendment is *NOT RELEVANT* to Goal 5 in general.

11. LRMP Goal 6 is entitled “Public Health and Safety” and states as follows:

Champaign County will ensure protection of the public health and public safety in land resource management decisions.

Goal 6 has 4 objectives and 7 policies. The proposed amendment will *NOT IMPEDE*.

12. LRMP Goal 7 is entitled “Transportation” and states as follows:

Champaign County will coordinate land use decisions in the unincorporated area with the existing and planned transportation infrastructure and services.

Goal 7 has 2 objectives and 7 policies. The proposed amendment will *NOT IMPEDE* Goal 7.

13. LRMP Goal 8 is entitled “Natural Resources” and states as follows:

Champaign County will strive to conserve and enhance the County’s landscape and natural resources and ensure their sustainable use.

Goal 8 has 9 objectives and 36 policies and except as reviewed below will not be impeded by the proposed amendment. The proposed amendment will *HELP ACHIEVE* Goal 8 for the following reasons:

- A. Objective 8.5 is entitled “Aquatic and Riparian Ecosystems” and states “**Champaign County will encourage the maintenance and enhancement of aquatic and riparian habitats.**”

The proposed rezoning will *HELP ACHIEVE* Objective 8.5 because of the following:

PRELIMINARY DRAFT

- (1) Objective 8.5 has 5 policies. Policies 8.5.3, 8.5.4, and 8.5.5 are not directly relevant to the proposed amendment rezoning.
- (2) Policy 8.5.1 states, “**For discretionary development, the County will require land use patterns, site design standards and land management practices that, wherever possible, preserve existing habitat, enhance degraded habitat and restore habitat.**”

The proposed rezoning will **HELP ACHIEVE** Policy 8.5.1 because of the following:

- a. Regarding the proposed standard condition and special provision in Part B of the proposed amendment to require that for a Restricted Landing Area, the end of the runway shall be at least 1,500 feet from the nearest CR District when measured in a straight line from the end of the runway and that no part of the approach surface may be less than 100 feet above the nearest CR District:
 - (a) The Illinois Department of Transportation Division of Aeronautics enforces aviation safety rules and those rules are established in 92 Ill. Adm. Code 14, titled Aviation Safety, and Subpart G of those rules regulate restricted landing areas (RLA). Minimum RLA obstruction clearance standards are illustrated in Illustration G-1 of Subpart G.
 - (b) Illustration G-1 of Subpart G of 92 Ill. Adm. Code 14 prohibits obstructions from penetrating the approach area at the end of an RLA runway. Illustration G-1 was included as an Attachment to the Preliminary Memorandum. Illustration G-1 indicates the following:
 - i.* The minimum runway area for an RLA is 100 feet wide by 1,600 feet in length.
 - ii.* The approach area for an RLA runway is a trapezoidal shaped area that is 100 feet wide at the end of the runway and rises at a slope of 15 units horizontal to 1 unit vertical for a distance of 3,000 feet from the end of the runway. The width of the trapezoidal shaped approach area increases in an arc of 5 degrees 42 minutes on each side of the runway until the approach area is 699 feet wide at a distance of 3,000 feet from the runway end.
 - (c) Section 14.730 of Subpart G of 92 Ill. Adm. Code 14 states that in order for an RLA to be eligible for a Certificate of Approval the RLA must initially and continually be free of obstructions such as trees.
 - (d) Section 5.1 of the Zoning Ordinance states that the CR Conservation Recreation Zoning District is intended to protect the public health by

PRELIMINARY DRAFT

restricting development in areas subject to frequent or periodic floods and to conserve the natural and scenic areas generally along the major stream networks of the COUNTY.

- (e) Trees are understood to be an important element of the “natural and scenic areas generally along the major stream networks of the County”.
- (f) RLAs are not authorized in the CR District but the Ordinance does not require any minimum separation from an RLA in the AG-1 or AG-2 Districts and any nearby portions of the CR District. An RLA proposed in the AG-1 or AG-2 District such that the Approach Area would overlay the CR District could be incompatible with the CR District if the Approach Area would be subject to penetration by trees in the CR District. Thus, a minimum required separation intended to minimize the impact of an RLA in the AG-1 or AG-2 Districts on the CR District should accommodate the normal height of trees that commonly grow in the CR District.
- (g) Regarding the normal height of trees that commonly grow in the CR District, the following evidence is excerpted from Summary of Evidence Item 8.T.(2) in Zoning Case 688-S-11 (*indicates numbering from Case 688-S-11):
 - *(2) Regarding the height of trees that may be growing in the CR District on the west side of the East Branch of the Embarrass River:
 - *(a) The 2003 update of the *Soil Survey of Champaign County, Illinois* indicates that for the relevant portion of the CR District on the west side of the East Branch of the Embarrass River the predominant soils are map units 3107A Sawmill silty clay loam, 0 to 2 percent slope, frequently flooded and 570C2 Martinsville loam 5 to 10% slopes, eroded. Table 11 provides relevant data regarding forestland management and productivity for each soil map unit, and is summarized as follows for the relevant soils:
 - *i. Common trees and their site index (average height) found on 570C2 Martinsville soil are White oak (80), Sweetgum (76), and Tulip tree (98).
 - *ii. Common trees and their site index (average height) found on 3107A Sawmill soil are Pin oak (90), American sycamore (---), Eastern cottonwood (---), and Sweetgum (---). Note that the site index (average height) for a given

PRELIMINARY DRAFT

species may vary depending on the soil type and the symbol (---) apparently indicates no average height has been determined for that species on that soil type.

- * (b) The petitioner's wife, Sarabeth Jones, testified at the December 13, 2012, public hearing that to her knowledge there are no Sycamore trees on their property but there are White oak trees.
- * (c) If there are White oak trees on the petitioner's property there likely are White oak trees on the land on the west side of the East Branch of the Embarrass River.
- * (d) Excerpts from the *Field Guide to Native Oak Species of Eastern North America* by the USDA Forest Service were included as an Attachment to the Supplemental Memorandum dated 3/8/13 and state that the White oak tree grows to 100 feet tall.
- * (e) An excerpt from the Native Trees of the Midwest that is maintained on the website of the Morton Arboretum located in Lisle, Illinois indicates that a tree in its native habitat may reach much greater height than the same tree growing in a home landscape and the heights of trees indicated in Native Trees of the Midwest reflect the average size in the home landscape. White Oak trees are indicated to have a mature height of 50 feet to 80 feet in Native Trees of the Midwest but that height reflects the average size in the home landscape and not the native habitat. The *Field Guide to Native Oak Species of Eastern North America* by the USDA Forest Service (see above) indicates that the White oak tree grows to 100 feet tall in the native habitat. The 2003 update of the *Soil Survey of Champaign County, Illinois* indicates that the average height of White oak trees found on 570C2 Martinsville soil is 80 feet.
- * (f) If there are White Oak trees on the west side of the East Branch of the Embarrass River located beneath the Approach Area of the proposed RLA the White oak trees are likely to be on higher ground elevations than the river bottom and may already penetrate the proposed Approach Area.

PRELIMINARY DRAFT

- (h) The slope of the Approach Area off the end of an RLA is 15 feet horizontal to one foot vertical and therefore, the end of a runway at an RLA should be at least 1,500 feet from the closest CR District so that the height of the Approach Surface is more than 100 feet in order to prevent trees in the CR District from penetrating into the Approach Surface. Note that differences in topographic elevation of the ground between the RLA runway and nearby portions of the CR District can lead to shorter separations (when the elevation of the runway is above the ground elevation in the CR District) or greater separations (when the ground elevation in the CR District is higher than the ground elevation at the RLA runway).
 - (i) An RLA petitioner may propose less separation than the minimum required 1,500 feet and in that instance the ZBA will have to approve a waiver of this standard condition. Approval of a waiver of a standard condition requires a finding that such waiver is in accordance with the general purpose and intent of the Zoning Ordinance and will not be injurious to the neighborhood or to the public health, safety, and welfare.
 - (j) The proposed standard condition and special provision to require that for a Restricted Landing Area, the end of the runway shall be at least 1,500 feet from the nearest CR District when measured in a straight line from the end of the runway and that no part of the approach surface may be less than 100 feet above the nearest CR District will only be effective for a limited time not to exceed 365 days from the date of adoption and thereafter, the proposed standard condition and special provision or some modification thereof will presumably be made part of a permanent amendment to the Zoning Ordinance.
- b. Regarding the proposed standard condition and special provision in Part A of the proposed amendment to require that for a heliport- restricted landing area the Final Approach and Takeoff Area shall be no closer than 800 feet from the nearest CR District when measured in a straight line from the Final Approach and Takeoff Area in an approach/ takeoff path path and that no part of the approach/ takeoff path may be less than 100 feet above the nearest CR District:
- (a) The Illinois Department of Transportation Division of Aeronautics enforces aviation safety rules and those rules are established in 92 Ill. Adm. Code 14, titled Aviation Safety, and Subpart H of those rules regulate restricted landing area heliport. Minimum obstruction clearance standards for a restricted landing area heliport are illustrated in Illustration H-2 of Subpart H. Note that the Final Approach and Takeoff Area for a restricted landing area heliport

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serves the same function as a runway does for a restricted landing area.

- (b) Illustration H-2 of Subpart H of 92 Ill. Adm. Code 14 prohibits obstructions from penetrating the approach/ take off path at the end of a restricted landing area heliport. Illustration H-2 was included as an Attachment to the Preliminary Memorandum. Illustration H-2 indicates the following:
 - i. The minimum final approach and take off area (FATO) for a restricted landing area heliport is 100 feet wide by 100 feet in length.
 - ii. The approach/ takeoff path for a restricted landing area heliport is a trapezoidal shaped area that is 100 feet wide at the edge of the final approach and take off area (FATO) and the approach/ takeoff path rises at a slope of 8 units horizontal to 1 unit vertical for a distance of 4,000 feet from the edge of the FATO. The width of the trapezoidal shaped approach area increases to 500 feet wide at a distance of 4,000 feet from the edge of the FATO.
- (c) Section 14.830 of Subpart H of 92 Ill. Adm. Code 14 states that in order for a restricted landing area heliport to be eligible for a Certificate of Approval the restricted landing area heliport approach/ takeoff path must initially and continually be free of obstructions such as trees.
- (d) Section 5.1 of the Zoning Ordinance states that the CR Conservation Recreation Zoning District is intended to protect the public health by restricting development in areas subject to frequent or periodic floods and to conserve the natural and scenic areas generally along the major stream networks of the COUNTY.
- (e) Trees are understood to be an important element of the “natural and scenic areas generally along the major stream networks of the County”.
- (f) The Zoning Ordinance uses the term “heliport-restricted landing area” to refer to what the Illinois Department of Transportation Division of Aeronautics terms a “restricted landing area heliport”.
- (g) A heliport- restricted landing area is not authorized in the CR District but the Ordinance does not require any minimum separation from a restricted landing area heliport in the AG-1 or AG-2 Districts and any nearby portions of the CR District. A restricted landing area heliport proposed in the AG-1 or AG-2 District such that the

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approach/ take off path would overlay the CR District could be incompatible with the CR District if the approach/ take off path would be subject to penetration by trees in the CR District. Thus, a minimum required separation intended to minimize the impact of a restricted landing area heliport in the AG-1 or AG-2 Districts on the CR District should accommodate the normal height of trees that commonly grow in the CR District. Relevant evidence regarding the normal height of trees that commonly grow in the CR District is reviewed in Finding of Fact item 13.A.(2)a.(g).

- (h) The slope of the restricted landing area heliport approach/ takeoff path is 8 feet horizontal to one foot vertical and therefore, the edge of the final approach and take off area (FATO) should be at least 800 feet from the closest CR District so that the height of the restricted landing area heliport approach/ takeoff path is more than 100 feet in order to prevent trees in the CR District from penetrating into the restricted landing area heliport approach/ takeoff path. Note that differences in topographic elevation of the ground between the final approach and take off area (FATO) and nearby portions of the CR District can lead to shorter separations (when the elevation of the final approach and take off area (FATO) is above the ground elevation in the CR District) or greater separations (when the ground elevation in the CR District is higher than the ground elevation at the final approach and take off area (FATO)).
- (i) A petitioner for a heliport- restricted landing area may propose less separation than the minimum proposed 800 feet and in that instance the ZBA will have to approve a waiver of this standard condition. Approval of a waiver of a standard condition requires a finding that such waiver is in accordance with the general purpose and intent of the Zoning Ordinance and will not be injurious to the neighborhood or to the public health, safety, and welfare.
- (j) The proposed standard condition and special provision to require that for a heliport- restricted landing area the Final Approach and Takeoff Area shall be no closer than 800 feet from the nearest CR District when measured in a straight line from the Final Approach and Takeoff Area in an approach/ takeoff path, will only be effective for a limited time not to exceed 365 days from the date of adoption and thereafter, the proposed standard condition and special provision or some modification thereof will presumably be made part of a permanent amendment to the Zoning Ordinance.

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- c. Regarding the proposed standard condition and special provision in Part B of the proposed amendment to require that for a Restricted Landing Area, the runway shall not be less than 500 feet from the nearest CR District when measured from the edge of the runway:
- (a) Illustration G-1 of Subpart G of 92 Ill. Adm. Code 14 prohibits obstructions from penetrating the side transition area of an RLA runway. Illustration G-1 was included as an Attachment to the Preliminary Memorandum. As illustrated in Illustration G-1, the side transition area extends only 85 feet on either side of the runway.
 - (b) Under the current Zoning Ordinance, an RLA runway located in the AG-1 or AG-2 District could be located as little as 85 feet from a nearby CR District.
 - (c) The sound emanating from an RLA in the vicinity of the CR District may also disturb the peace of the CR District that is essential to the natural and scenic quality of the CR District. The closer to the CR District the more disturbance there will be.
 - (d) The minimum required separation to the CR District should logically be greater than the minimum required separation from property under different ownership. The proposed minimum separation to the nearest property under different ownership than the restricted landing area is 300 feet.
 - (e) A minimum separation of 500 feet from the nearest CR District when measured from the edge of the runway is one average lot width (200 feet) greater than the proposed minimum separation to the nearest property under different ownership.
 - (f) An RLA petitioner may propose less separation than the minimum required 500 feet and in that instance the ZBA will have to approve a waiver of this standard condition. Approval of a waiver of a standard condition requires a finding that such waiver is in accordance with the general purpose and intent of the Zoning Ordinance and will not be injurious to the neighborhood or to the public health, safety, and welfare.
 - (g) The proposed standard condition and special provision to require that for a Restricted Landing Area, the runway shall not be less than 500 feet from the nearest CR District when measured from the edge of the runway will only be effective for a limited time not to exceed 365 days from the date of adoption and thereafter, the proposed standard condition and special provision or some modification thereof will presumably be made part of a permanent amendment to the Zoning Ordinance.

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- d. Regarding the proposed standard condition and special provision in Part A of the proposed amendment to require that for a heliport- restricted landing area the Final Approach and Takeoff Area shall be no closer than 500 feet from the nearest CR District when measured in a straight line from other than an approach/ takeoff path:
- (a) Illustration H-2 of Subpart H of 92 Ill. Adm. Code 14 does not indicate a side transition area for a restricted landing area heliport. Illustration H-2 was included as an Attachment to the Preliminary Memorandum. Note that the Final Approach and Takeoff Area for a restricted landing area heliport serves the same function as a runway does for a restricted landing area.
 - (b) Relevant evidence regarding the proposed standard condition and special provision in Part B of the proposed amendment to require that for a Restricted Landing Area, the runway shall not be less than 500 feet from the nearest CR District when measured from the edge of the runway is reviewed in Finding of Fact item 13.A.(2)c. and similar considerations apply to the proposed standard condition and special provision in Part A of the proposed amendment to require that for a heliport- restricted landing area the Final Approach and Takeoff Area shall be no closer than 500 feet from the nearest CR District when measured in a straight line from other than an approach/ takeoff path.
- (3) Policy 8.5.2 states, **“The County will require in its discretionary review that new development cause no more than minimal disturbance to the stream corridor environment.”**

The proposed rezoning will *HELP ACHIEVE* Policy 8.5.2 for the same reasons as for Policy 8.5.1 above.

- B. Objective 8.6 is entitled “Natural Areas and Habitat” and states **“Champaign County will encourage resource management which avoids loss or degradation of areas representative of the pre-settlement environment and other areas that provide habitat for native and game species.”**

The proposed rezoning will *HELP ACHIEVE* Objective 8.6 because of the following:

- (1) Objective 8.6 has 6 policies. Policies 8.6.1, 8.6.5, and 8.6.6 are not relevant to the proposed rezoning.
- (2) Policy 8.6.2 states:
 - a. **“For new development, the County will require land use patterns, site design standards and land management practices to minimize the disturbance of existing areas that provide habitat for native and game species, or to mitigate the impacts of unavoidable disturbance to such areas.**

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- b. **With regard to by-right development on good zoning lots, or the expansion thereof, the County will not require new zoning regulations to preserve or maintain existing onsite areas that provide habitat for native and game species, or new zoning regulations that require mitigation of impacts of disturbance to such onsite areas.”**

The proposed rezoning will *HELP ACHIEVE* Policy 8.6.2 for the same reasons as for Policy 8.5.1 above.

14. LRMP Goal 9 is entitled “Energy Conservation” and states as follows:

Champaign County will encourage energy conservation, efficiency, and the use of renewable energy sources.

Goal 9 has 5 objectives and 5 policies. The proposed amendment will *NOT IMPEDE* the achievement of Goal 9.

15. LRMP Goal 10 is entitled “Cultural Amenities” and states as follows:

Champaign County will promote the development and preservation of cultural amenities that contribute to a high quality of life for its citizens.

Goal 10 has 1 objective and 1 policy. Goal 10 is *NOT RELEVANT* to the proposed amendment in general.

REGARDING THE PURPOSE OF THE ZONING ORDINANCE

16. The proposed amendment appears to *HELP ACHIEVE* the purpose of the Zoning Ordinance as established in Section 2 of the Ordinance for the following reasons:

- A. Paragraph 2.0 (a) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to secure adequate light, pure air, and safety from fire and other dangers.

The proposed amendment is not directly related to this purpose.

- B. Paragraph 2.0 (b) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to conserve the value of land, BUILDINGS, and STRUCTURES throughout the COUNTY.

The proposed amendment is directly related to this purpose because of the following:

- (1) The amendment should reduce the possible impact of RLAs and H-RLAs on values of neighboring structures and properties in the CR, AG-1, and AG-2 Districts.
- (2) The amendment is a temporary change to the Zoning Ordinance that allows time for a more permanent amendment to be adopted.

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- C. Paragraph 2.0 (c) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to lessen and avoid congestion in the public streets.

The proposed amendment is not directly related to this purpose.

- D. Paragraph 2.0 (d) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to lessen and avoid hazards to persons and damage to property resulting from the accumulation of runoff of storm or flood waters.

The proposed amendment is not directly related to this purpose.

- E. Paragraph 2.0 (e) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to promote the public health, safety, comfort, morals, and general welfare.

The proposed amendment is directly related to this purpose because of the following:

- (1) Regarding the proposed standard condition and special provision in Part B of the proposed amendment to require that the runway may be no closer than 1,320 feet from the nearest dwelling under different ownership than the restricted landing area:
- a. The Illinois Department of Transportation Division of Aeronautics does not require any minimum separation to a dwelling under different ownership than the restricted landing area.
 - b. Note that Section 6.1.3 of the Zoning Ordinance already contains a standard condition for an RLA that requires the following:

No part of a BUILDING or STRUCTURE intended for regular human occupancy located within a R or B DISTRICT nor any PUBLIC ASSEMBLY or INSTITUTIONAL USE may be located: 1) within the Primary Surface, an area 250 feet wide centered on the runway centerline and extending 200 feet beyond each end of the runway; or 2) the Runway Clear Zones, trapezoidal areas centered on the extended runway centerline at each end of the primary surface 250 feet wide at the end of the primary surface and 450 feet wide at a point 1,000 feet from the primary surface.

- c. The following evidence was excerpted from item 8.S. of Case 688-S-11 (*indicates numbering from Case 688-S-11):
 - *(6) On December 13, 2012, the petitioner's attorney, Alan Singleton, submitted a list of 16 RLA's in and around Champaign County as evidence that "...all of them operating with no apparent problem for the neighborhoods and their residents." Regarding that list of RLA's in and around Champaign County and their proximities to dwellings under different ownership:

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- * (a) Eight of the RLA's were indicated as not being located in Champaign County and six of those are located in counties that have not even adopted a zoning ordinance. A ninth RLA, the Clapper RLA, was indicated on the list as being located in Champaign County but is in fact located in Piatt County. For these properties located outside of Champaign County there was not enough time for staff to gather all of the information necessary to fully evaluate ownership and relations between adjacent properties

- * (b) Day Aero-Place was originally developed as a "residential airport" and included a runway and was therefore intended to be marketed towards owners who desired a close proximity to a landing area. Five of the 10 homes in the development border the runway and their proximity to the runway varies between 85 feet and 135 feet. See the Attachment to the Supplemental Memorandum dated 3/8/13.

- * (c) Regarding the other six RLAs and their proximity to the nearest dwelling under different ownership:
 - *i. The Justus RLA appears to be about 130 feet from the nearest dwelling that is located on a separate tax parcel however the name of the owner of that parcel also has the last name "Justus" and so it not clear exactly what the relationship is between the two landowners.

 - *ii. The Litchfield RLA appears to be about 300 feet from the nearest dwelling that is located on a separate tax parcel however the owner of that dwelling has testified in previous Champaign County Zoning Cases regarding his use of the Litchfield RLA and so the relationship is not the same as proposed in this zoning case.

 - *iii. The remaining four RLAs all appear to be at least ¼ mile from the nearest dwelling under different ownership.

- d. An RLA petitioner may propose less separation than the minimum required 1,320 feet and in that instance the ZBA will have to approve a waiver of this standard condition. Approval of a waiver of a standard condition requires a finding that such waiver is in accordance with the general purpose and intent of the Zoning Ordinance and will not be injurious to the neighborhood or to the public health, safety, and welfare.

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- e. The proposed standard condition and special provision to require that for a Restricted Landing Area, the runway may be no closer than 1,320 feet from the nearest dwelling under different ownership than the restricted landing area, will only be effective for a limited time not to exceed 365 days from the date of adoption and thereafter, the proposed standard condition and special provision or some modification thereof will presumably be made part of a permanent amendment to the Zoning Ordinance.
- (2) Regarding the proposed standard condition and special provision in Part A of the proposed amendment to require that the Final Approach and Takeoff Area for a heliport- restricted landing area may be no closer than 1,320 feet from the nearest dwelling under different ownership than the heliport- restricted landing area:
 - a. Relevant evidence regarding the proposed standard condition and special provision in Part B of the proposed amendment to require that for a restricted landing area the runway may be no closer than 1,320 feet from the nearest dwelling under different ownership than the restricted landing area is reviewed in Finding of Fact item 16.E.a. and similar considerations apply to the proposed standard condition and special provision in Part A of the proposed amendment to require that for a heliport- restricted landing area the Final Approach and Takeoff Area shall be no closer than 1,320 feet from the nearest dwelling under different ownership than the heliport- restricted landing area except that Section 6.1.3 of the Ordinance does not require a Primary Surface or a Runway Clear Zone for a heliport-restricted land area and therefore there are no prohibitions associated with either a Primary Surface or a Runway Clear Zone for a heliport-restricted land area.
 - (3) Regarding the proposed standard condition and special provision in Part B of the proposed amendment to require that a restricted landing area (RLA) runway may be no closer than 300 feet from the nearest property under different ownership than the RLA:
 - a. The proposed 300 feet separation applies to separation from both the end of an RLA runway and the edge of an RLA runway.
 - b. The minimum RLA obstruction clearance requirements enforced by the Illinois Department of Transportation Division of Aeronautics are illustrated in Illustrations G-1 and G-2 of 92 Ill. Adm. Code 14 Subpart G.
 - c. The minimum separation from a RLA runway to a property under different ownership than the RLA required by the Zoning Ordinance currently is the following:
 - (a) Clearance for the side transition area at a slope of 7 to 1 for a horizontal distance of 84 feet and a height of 12 feet. Requiring only 84 feet of separation to property under other ownership may impact the existing use of that property and also the “by right” rural residential development potential of the other property. An RLA may also parallel a street and in those situations the separation

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between the RLA and the street should be such that landing and takeoff activities do not distract the street traffic.

- (b) The minimum required clearance at the ends of the RLA runway is 265 feet based on the required 240 feet “runway safety area” required as a standard condition in Section 6.1.3 and the minimum required front or rear yard of 25 feet required by Section 5.3. The 265 feet of horizontal separation at the end of the runway provides for a vertical clearance of only about 17 feet 8 inches beneath the approach area. If there is an electrical utility line at either end the minimum separation is 300 feet from the utility line, assuming the utility line is at least 20 feet above the ground. If there is a railroad at either end of the runway the minimum separation is 345 feet based on the minimum 23 feet of clearance over all railroads required by Illustration G-1 of 92 Ill. Adm. Code 14 Subpart G. Note that even more separation may be required depending upon the difference in topographic elevation between the RLA and the railroad.
- d. The proposed 300 feet separation to other property at both the end of an RLA runway and the edge of an RLA runway will ensure adequate separation for a typical 20 feet high electrical utility line and will reduce the impact of the RLA on neighboring land. Note that the proposed 300 feet separation also means that the minimum total width of property required for a RLA runway will be 700 feet and could not be accommodated by the typical long (half mile) narrow (660 feet) 40 acre parcel.
- e. An RLA petitioner may propose less separation than the minimum proposed 300 feet from the nearest property under different ownership than the RLA and in that instance the ZBA will have to approve a waiver of this standard condition. Approval of a waiver of a standard condition requires a finding that such waiver is in accordance with the general purpose and intent of the Zoning Ordinance and will not be injurious to the neighborhood or to the public health, safety, and welfare.
- f. The proposed standard condition and special provision to require that a restricted landing area (RLA) runway may be no closer than 300 feet from the nearest property under different ownership than the RLA, will only be effective for a limited time not to exceed 365 days from the date of adoption and thereafter, the proposed standard condition and special provision or some modification thereof will presumably be made part of a permanent amendment to the Zoning Ordinance.

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- (4) Regarding the proposed standard condition and special provision in Part A of the proposed amendment to require that for a heliport- restricted landing area the Final Approach and Takeoff Area shall be no closer than 300 feet from the nearest property under different ownership than the heliport- restricted landing area:
- a. Relevant evidence regarding the proposed standard condition and special provision in Part B of the proposed amendment to require that a restricted landing area (RLA) runway may be no closer than 300 feet from the nearest property under different ownership than the RLA is reviewed in Finding of Fact item 16.E.c. and similar considerations apply to the proposed standard condition and special provision in Part A of the proposed amendment to require that for a heliport- restricted landing area the Final Approach and Takeoff Area shall be no closer than 300 feet from the nearest property under different ownership than the heliport- restricted landing area except that there is no side transition for a heliport- restricted land area nor is there a runway safety area required by Section 6.1.3 of the Ordinance for a heliport-restricted land area.
 - b. Note that the proposed 300 feet separation provides for a vertical clearance of about 37 feet 6 inches beneath the approach/ takeoff path for a restricted landing area heliport.
- F. Paragraph 2.0 (f) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to regulate and limit the height and bulk of buildings and structures hereafter to be erected.
- The proposed amendment is not directly related to this purpose.
- G. Paragraph 2.0 (g) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to establish, regulate, and limit the building or setback lines on or along any street, trafficway, drive or parkway.
- The proposed amendment is not directly related to this purpose.
- H. Paragraph 2.0 (h) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to regulate and limit the intensity of the use of lot areas, and regulating and determining the area of open spaces within and surrounding buildings and structures.
- The proposed amendment is directly related to this purpose to the same extent as paragraph 2.0 (e).
- I. Paragraph 2.0 (i) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to classify, regulate, and restrict the location of trades and industries and the location of buildings, structures, and land designed for specified industrial, residential, and other land uses.

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The proposed amendment is directly related to this purpose to the same extent as paragraph 2.0 (e).

- J. Paragraph 2.0 (j) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to divide the entire County into districts of such number, shape, area, and such different classes according to the use of land, buildings, and structures, intensity of the use of lot area, area of open spaces, and other classification as may be deemed best suited to carry out the purpose of the ordinance.

The proposed amendment is directly related to this purpose to the same extent as paragraph 2.0 (e).

- K. Paragraph 2.0 (k) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to fix regulations and standards to which buildings, structures, or uses therein shall conform.

The proposed amendment is directly related to this purpose to the same extent as paragraph 2.0 (e).

- L. Paragraph 2.0 (l) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to prohibit uses, buildings, or structures incompatible with the character of such districts.

The proposed amendment is directly related to this purpose to the same extent as paragraph 2.0 (e).

- M. Paragraph 2.0 (m) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to prevent additions to and alteration or remodeling of existing buildings, structures, or uses in such a way as to avoid the restrictions and limitations lawfully imposed under this ordinance.

The proposed amendment is not directly related to this purpose.

- N. Paragraph 2.0 (n) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to protect the most productive agricultural lands from haphazard and unplanned intrusions of urban uses.

The proposed amendment is directly related to this purpose to the same extent as paragraph 2.0 (e).

- O. Paragraph 2.0 (o) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to protect natural features such as forested areas and watercourses.

The proposed amendment is directly related to this purpose to the same extent as LRMP Goal 8. See item 13 of the Finding of Fact.

- P. Paragraph 2.0 (p) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to encourage the compact development of urban areas to minimize the cost of development of public utilities and public transportation facilities.

The proposed amendment is not directly related to this purpose.

- Q. Paragraph 2.0 (q) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to encourage the preservation of agricultural belts surrounding urban areas, to retain the agricultural nature of the County, and the individual character of existing communities.

The proposed amendment is not directly related to this purpose.

- R. Paragraph 2.0 (r) of the Ordinance states that one purpose of the zoning regulations and standards that have been adopted and established is to provide for the safe and efficient development of renewable energy sources in those parts of the COUNTY that are most suited to their development.

The proposed amendment is not directly related to this purpose.

SUMMARY FINDING OF FACT

From the documents of record and the testimony and exhibits received at the public hearing conducted on, **January 16, 2014**, the Zoning Board of Appeals of Champaign County finds that:

1. Regarding the effect of the proposed amendment on the Land Resource Management Plan (LRMP):
 - A. **Regarding Goal 8:**
 - **Objective 8.5 requiring the County to encourage the maintenance and enhancement of aquatic and riparian habitats** because while it will either not impede or is not relevant to the other Objectives and Policies under this goal it, will *HELP ACHIEVE* the following:
 - **Policy 8.5.1 requiring discretionary development to preserve existing habitat, enhance degraded habitat and restore habitat (see Item 18.A.(2)).**
 - **Policy 8.5.2 requiring discretionary development to cause no more than minimal disturbance to the stream corridor environment (see Item 18.A.(3)).**
 - **Objective 8.6 that avoids loss or degradation of habitat** because it will *HELP ACHIEVE* the following:
 - **Policy 8.6.2 requiring new development to minimize the disturbance of habitat or to mitigate unavoidable disturbance of habitat (see Item 18.B.(2)).**
 - Based on achievement of the above Objectives and Policies and because it will either not impede or is not relevant to the other Objectives and Policies under this goal, the proposed map amendment will *HELP ACHIEVE* **Goal 8 Natural Resources.**
 - B. The proposed amendment will *NOT IMPEDE* the following LRMP goal(s):
 - **Goal 1 Planning and Public Involvement**
 - **Goal 2 Governmental Coordination**
 - **Goal 3 Prosperity**
 - **Goal 4 Agriculture**
 - **Goal 5 Urban Land Use**
 - **Goal 6 Public Health and Safety**
 - **Goal 7 Transportation**
 - **Goal 9 Energy Conservation**
 - **Goal 10 Cultural Amenities**
 - C. Overall, the proposed map amendment will *HELP ACHIEVE* the Land Resource Management Plan.
2. The proposed Zoning Ordinance map amendment will *HELP ACHIEVE* the purpose of the Zoning Ordinance because:
 - The proposed text amendment *WILL* conserve the value of land, BUILDINGS, and STRUCTURES throughout the COUNTY (Purpose 2.0 (b); see Item 16.B.).
 - The proposed text amendment *WILL* promote the public health, safety, comfort, morals, and general welfare (Purpose 2.0 (e); see Item 16.E.).

- The proposed text amendment **WILL** regulate and limit the intensity of the use of lot areas, and regulating and determining the area of open spaces within and surrounding buildings and structures (Purpose 2.0 (h); see Item 16.H.).
- The proposed text amendment **WILL** classify, regulate, and restrict the location of trades and industries and the location of buildings, structures, and land designed for specified industrial, residential, and other land uses (Purpose 2.0 (i); see Item 16.I.).
- The proposed text amendment **WILL** divide the entire County into districts of such number, shape, area, and such different classes according to the use of land, buildings, and structures, intensity of the use of lot area, area of open spaces, and other classification as may be deemed best suited to carry out the purpose of the ordinance (Purpose 2.0 (j); see Item 16.J.).
- The proposed text amendment **WILL** fix regulations and standards to which buildings, structures, or uses therein shall conform (Purpose 2.0 (k); see Item 16.K.).
- The proposed text amendment **WILL** prohibit uses, buildings, or structures incompatible with the character of such districts (Purpose 2.0 (l); see Item 16.L.).
- The proposed text amendment **WILL** protect the most productive agricultural lands from haphazard and unplanned intrusions of urban uses (Purpose 2.0 (n); see Item 16.N.).
- The proposed text amendment **WILL** protect natural features such as forested areas and watercourses (Purpose 2.0 (o) see Item 16.O.).

DOCUMENTS OF RECORD

1. Preliminary Memorandum dated January 8, 2014, with Attachments:
(list attachments to memorandum will be added as listed in the memorandum)

FINAL DETERMINATION

Pursuant to the authority granted by Section 9.2 of the Champaign County Zoning Ordinance, the Zoning Board of Appeals of Champaign County determines that:

The Zoning Ordinance Amendment requested in **Case 768-AT-13** should ***{BE ENACTED / NOT BE ENACTED}*** by the County Board in the form attached hereto.

The foregoing is an accurate and complete record of the Findings and Determination of the Zoning Board of Appeals of Champaign County.

SIGNED:

Eric Thorsland, Chair
Champaign County Zoning Board of Appeals

ATTEST:

Secretary to the Zoning Board of Appeals

Date

Proposed Amendment

A. In Section 6.1.3 revise the use category “HELIPORTS or HELIPOINT/RESTRICTED LANDING AREAS” to “HELIPORT or HELIPOINT/RESTRICTED LANDING AREA” and revise the Explanatory or Special Provisions to read as follows:

- (1) Must meet the requirements for “Approach and Departure Protection Areas” of Paragraph 25 of the Federal Aviation Administration Circular Number 150/5390-2 and requirements of the Illinois Department of Transportation, Division of Aeronautics. HELIPOINTS atop BUILDINGS are exempt from the minimum area standard.

The following standard conditions apply only to a heliport-restricted landing area and shall be in effect for a limited time not to exceed 365 days from the date they are adopted:

- (2) The minimum separation to the nearest CR DISTRICT shall be a rectangular area encompassing 800 linear feet measured outward from the end of the Final Approach and Takeoff Area in the approach/takeoff path, and 500 linear feet measured outward from the side edge of the Final Approach and Takeoff Area.
- (3) No part of the approach/ takeoff path may be less than 100 feet above the nearest CR DISTRICT.
- (4) No part of the Final Approach and Takeoff Area may be closer than 1,320 feet from the nearest DWELLING under different ownership than the HELIPOINT-RESTRICTED LANDING AREA.
- (5) No part of the Final Approach and Takeoff Area may be closer than 300 feet from the nearest PROPERTY under different ownership than the HELIPOINT-RESTRICTED LANDING AREA.

B. In Section 6.1.3 revise the use category “RESTRICTED LANDING AREAS” to “RESTRICTED LANDING AREA” and revise the Explanatory or Special Provisions to read as follows:

- (1) Must meet the requirements of the Federal Aviation Administration and Illinois Department of Transportation, Division of Aeronautics.
- (2) The RESTRICTED LANDING AREA shall provide for a runway plus a runway safety area both located entirely on the LOT. The runway safety area is an area centered 120 feet wide and extending 240 feet beyond each end of the runway.
- (3) No part of a BUILDING or STRUCTURE intended for regular human occupancy located within a R or B DISTRICT nor any PUBLIC ASSEMBLY or INSTITUTIONAL USE may be located: 1) within the Primary Surface, an area 250 feet wide centered on the runway centerline and extending 200 feet beyond each end of the runway; or 2) the Runway Clear Zones, trapezoidal areas centered on the extended runway centerline at each end of the primary surface 250 feet wide at the end of the primary surface and 450 feet wide at a point 1,000 feet from the Primary Surface.

- (4) After a RESTRICTED LANDING AREA is established, the requirements in Section 4.3.7 and Table 5.3 note (12) shall apply.

The following standard conditions shall be in effect for a limited time not to exceed 365 days from the date they are adopted:

- (5) The minimum separation to the nearest CR DISTRICT shall be a rectangular area encompassing 1,500 linear feet measured outward from the end of the runway and 500 linear feet measured outward from the side edge of the runway extended by 1,500 feet.
- (6) No part of the approach surface may be less than 100 feet above the nearest CR DISTRICT.
- (7) No part of the runway may be closer than 1,320 feet from the nearest DWELLING under different ownership than the RESTRICTED LANDING AREA.
- (8) No part of the runway may be closer than 300 feet from the nearest PROPERTY under different ownership than the RESTRICTED LANDING AREA.

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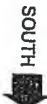
CHAMPAIGN CO. P & Z DEPARTMENT

**Restricted Landing Areas In and Around Champaign County
(as reflected on the attached Sectional Charts)**

1. Day Aero-Place – Champaign County
2. Busboom – Champaign County
3. Justus – Champaign County
4. Wilson – Vermilion County
5. Schmidt/Rash – Champaign County
6. McCully – Champaign County
7. Lictchfield – Champaign County
8. Clapper – Champaign County
9. Van Gorder – Piatt County
10. Tripple Creek – Piatt County
11. Cooch – Douglas County
12. Mayhall – Vermilion County
13. Trisler – Vermilion County
14. Hildreth – Vermilion County
15. Cast – Vermilion County
16. Routh – Champaign County

CHICAGO SECTIONAL

SECTIONAL AERONAUTICAL CHART SCALE 1:500,000



NORTH

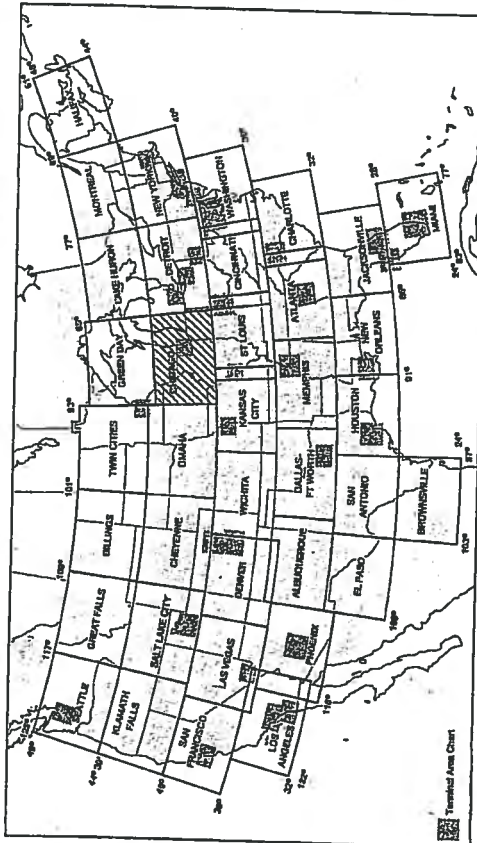
Federal Aviation
Administration



**82ND EDITION EFFECTIVE 0901Z 5 MAY 2011
TO 0901Z 20 OCT 2011**

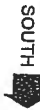
Includes airspace amendments effective **5 MAY 2011**
and all other aeronautical data received by **10 MAR 2011**

Information on this chart will change; consolidated updates of chart changes are available every 56 days in the AIRPORT/FACILITY DIRECTORY Chart Bulletin section (online at <http://aeronav.faa.gov>). Also consult appropriate NOTICES TO AIRMEN (NOTAMS) and other FLIGHT INFORMATION PUBLICATIONS (FLIPs) for the latest changes.



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Warning: Refer to current foreign charts and flight information publications for information within foreign airspace



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Federal Aviation
Administration



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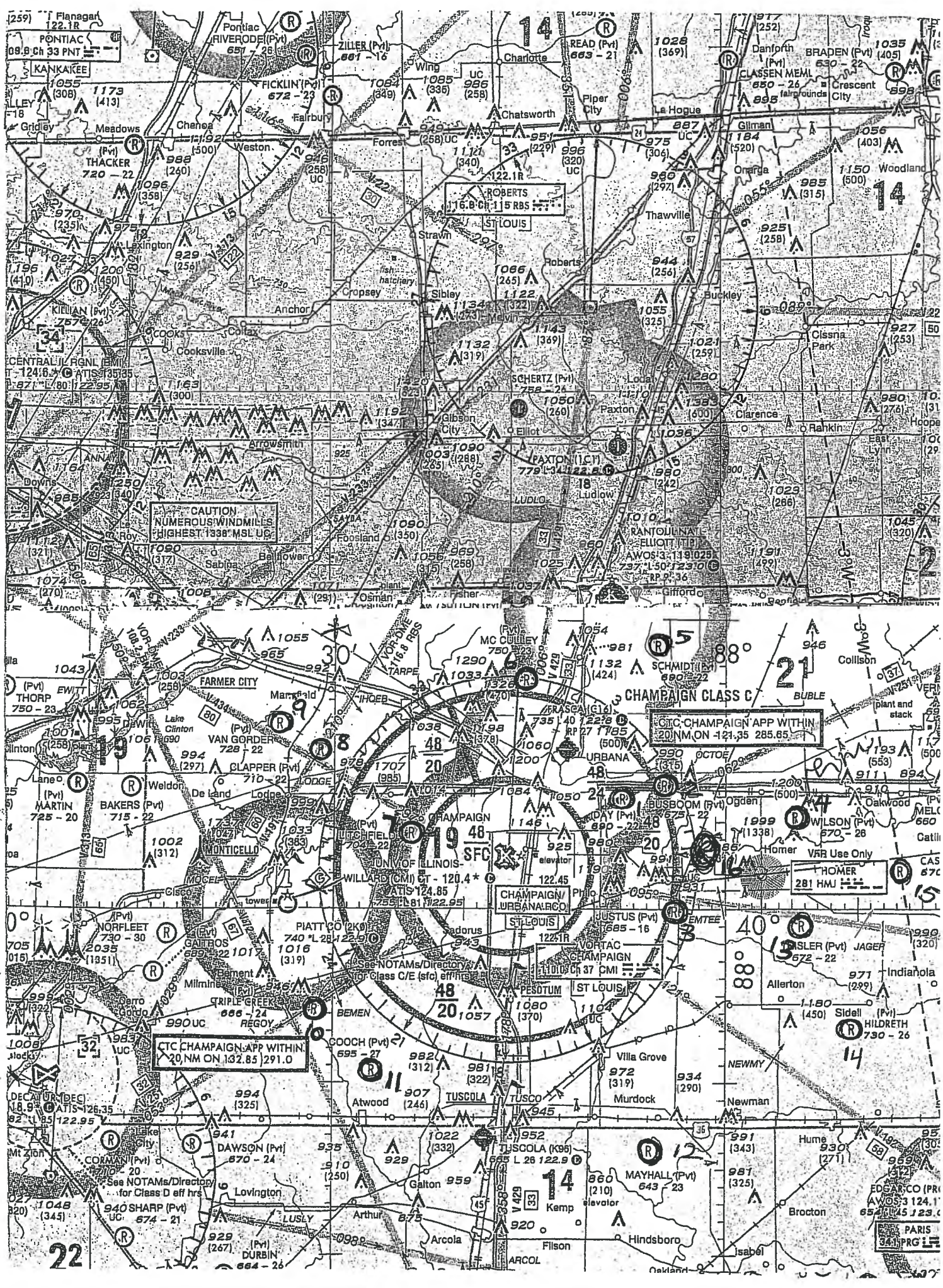
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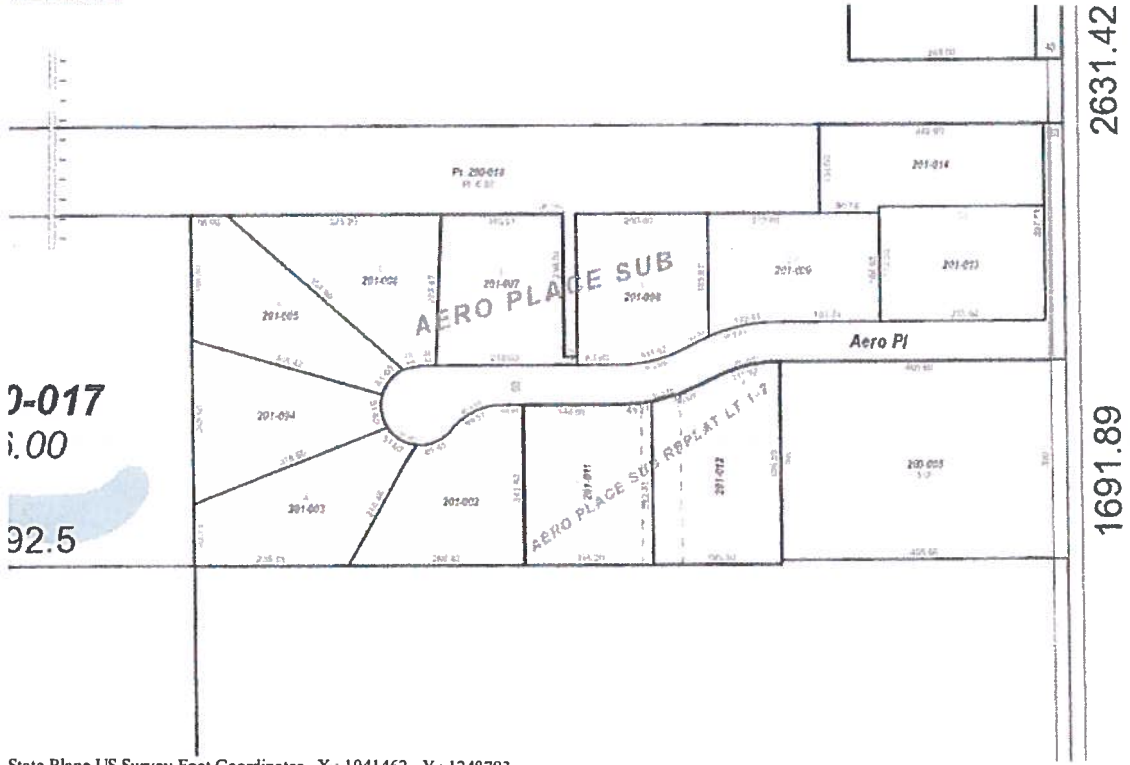
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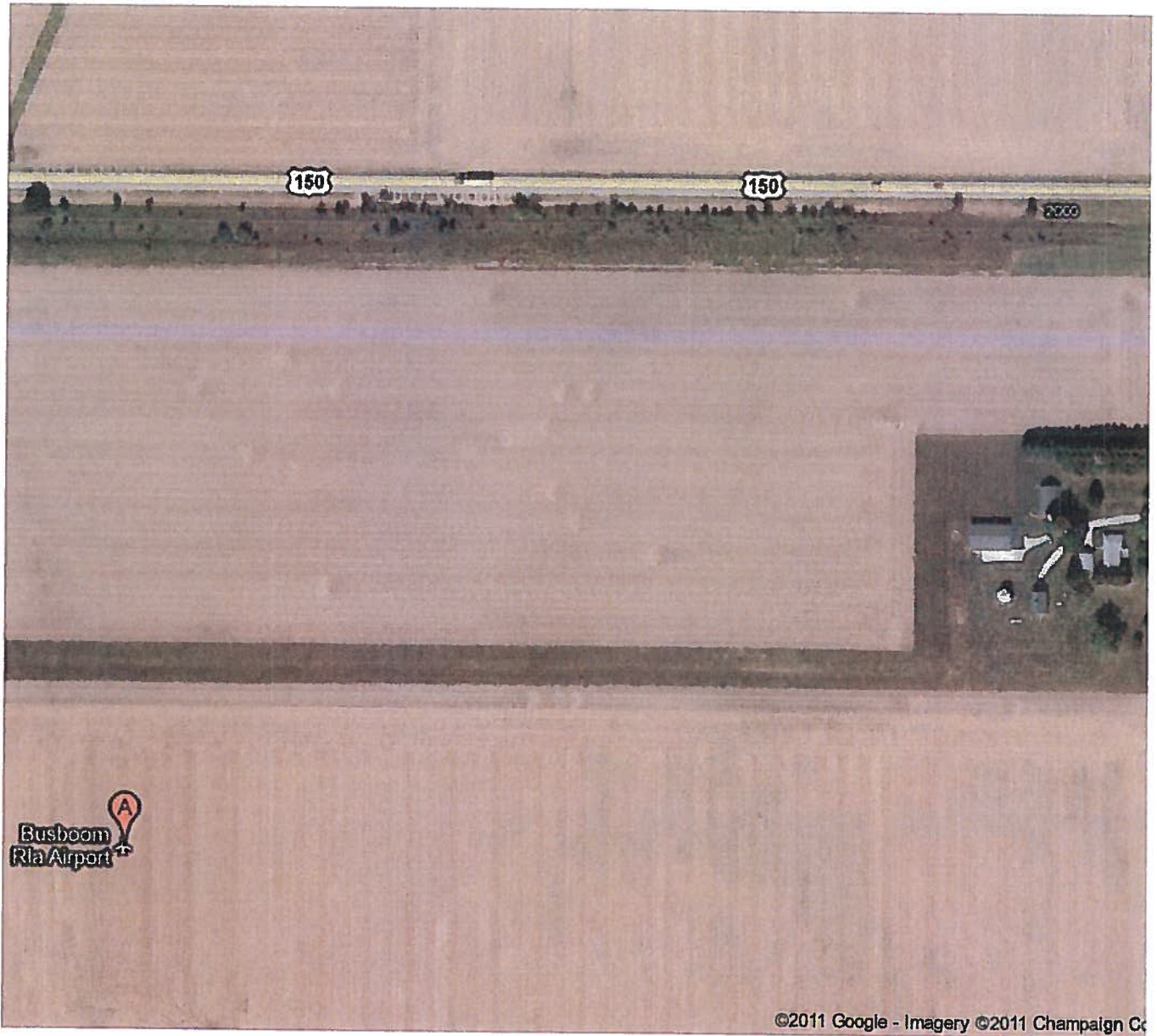
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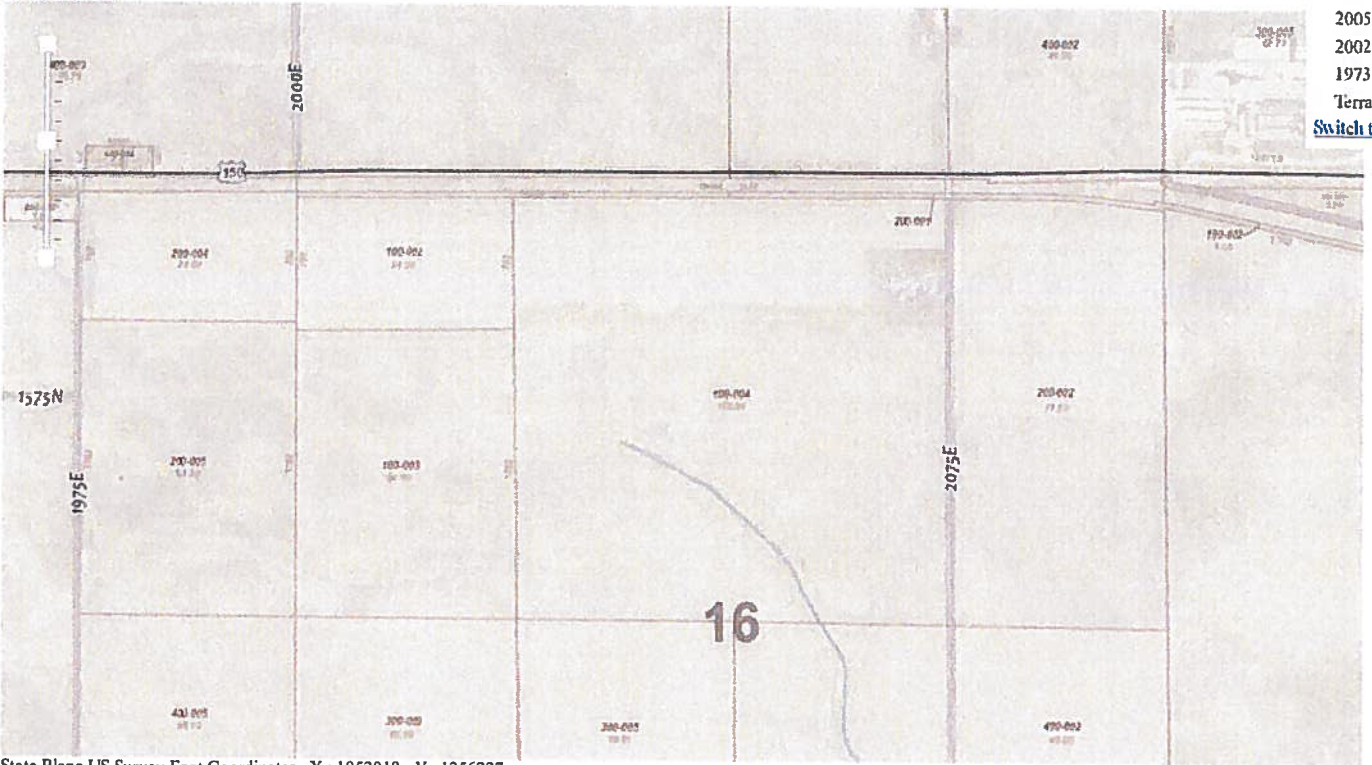
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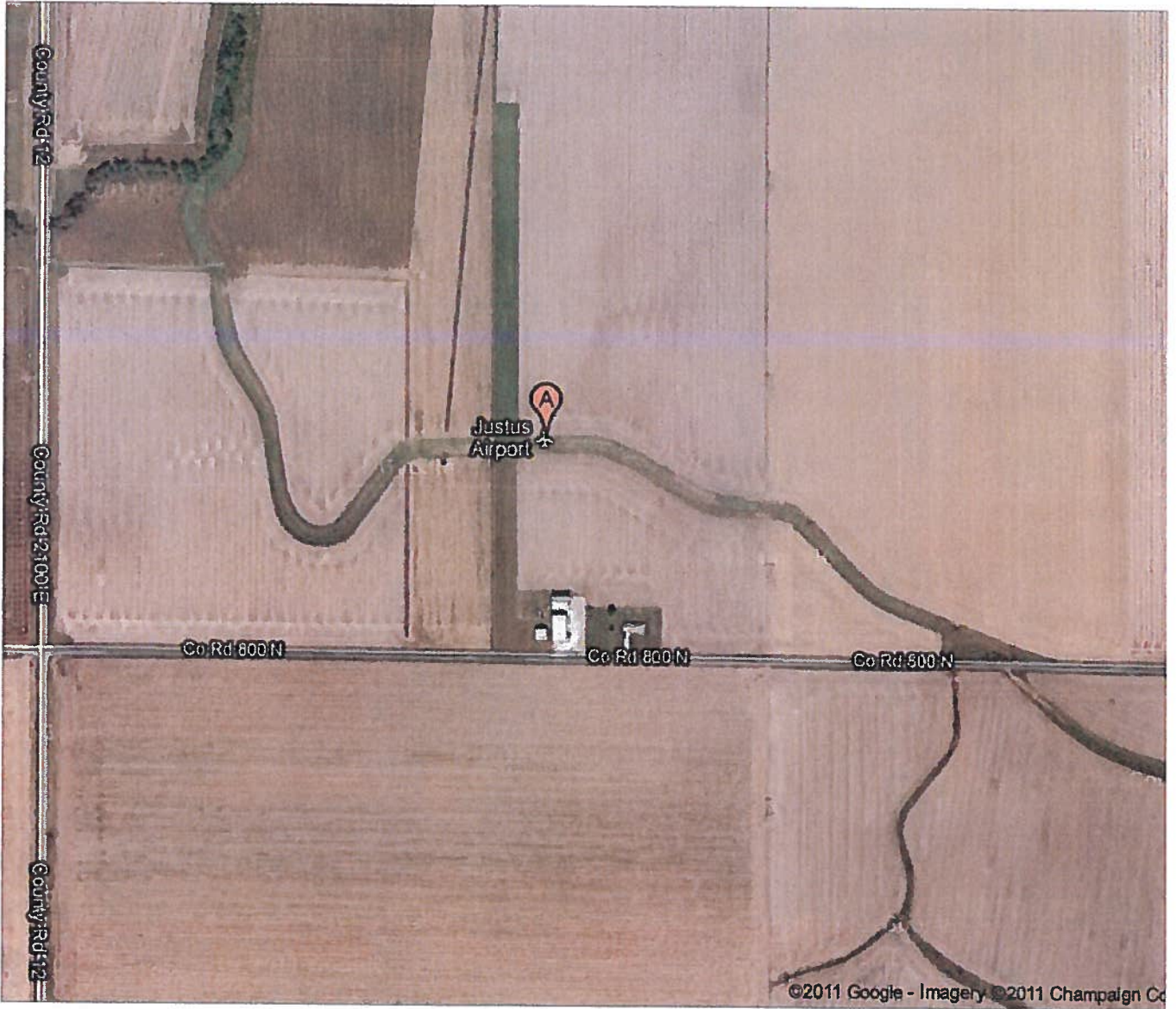
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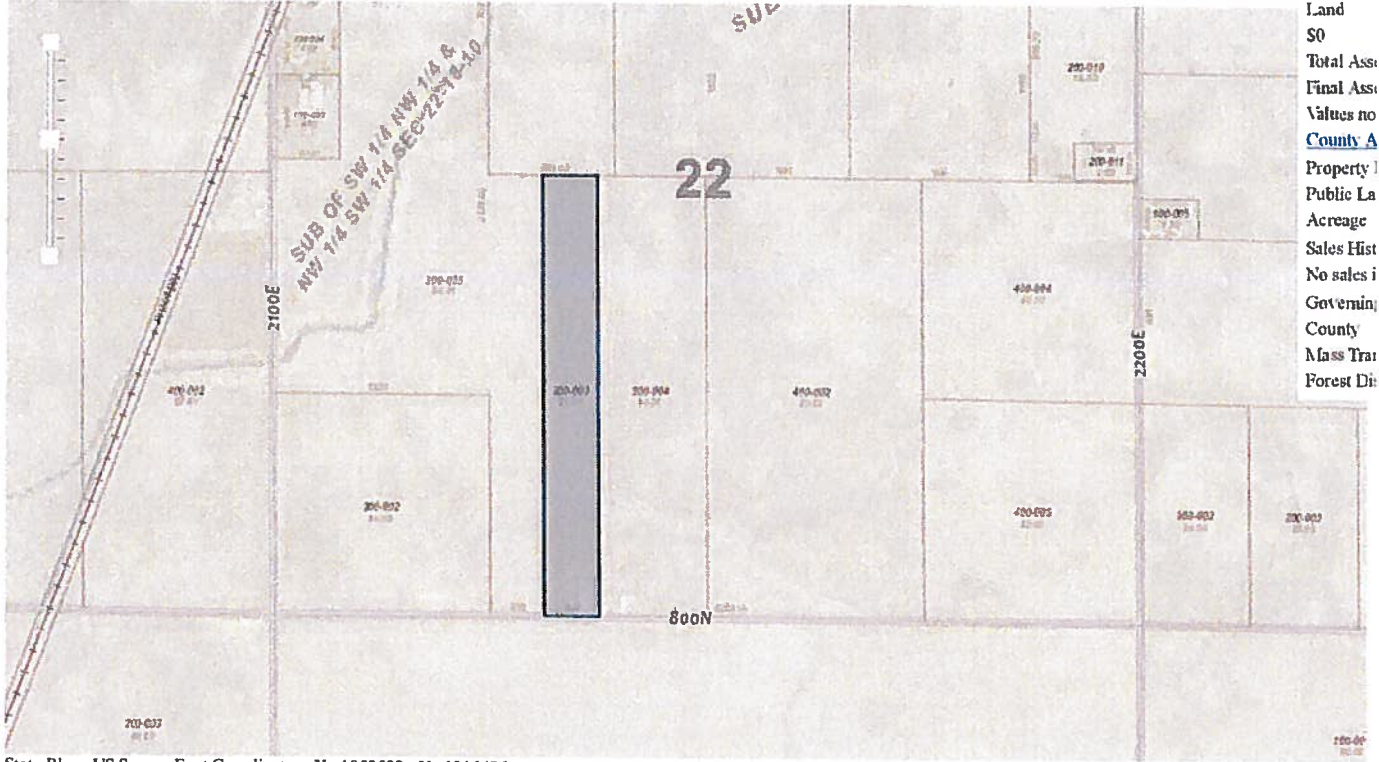
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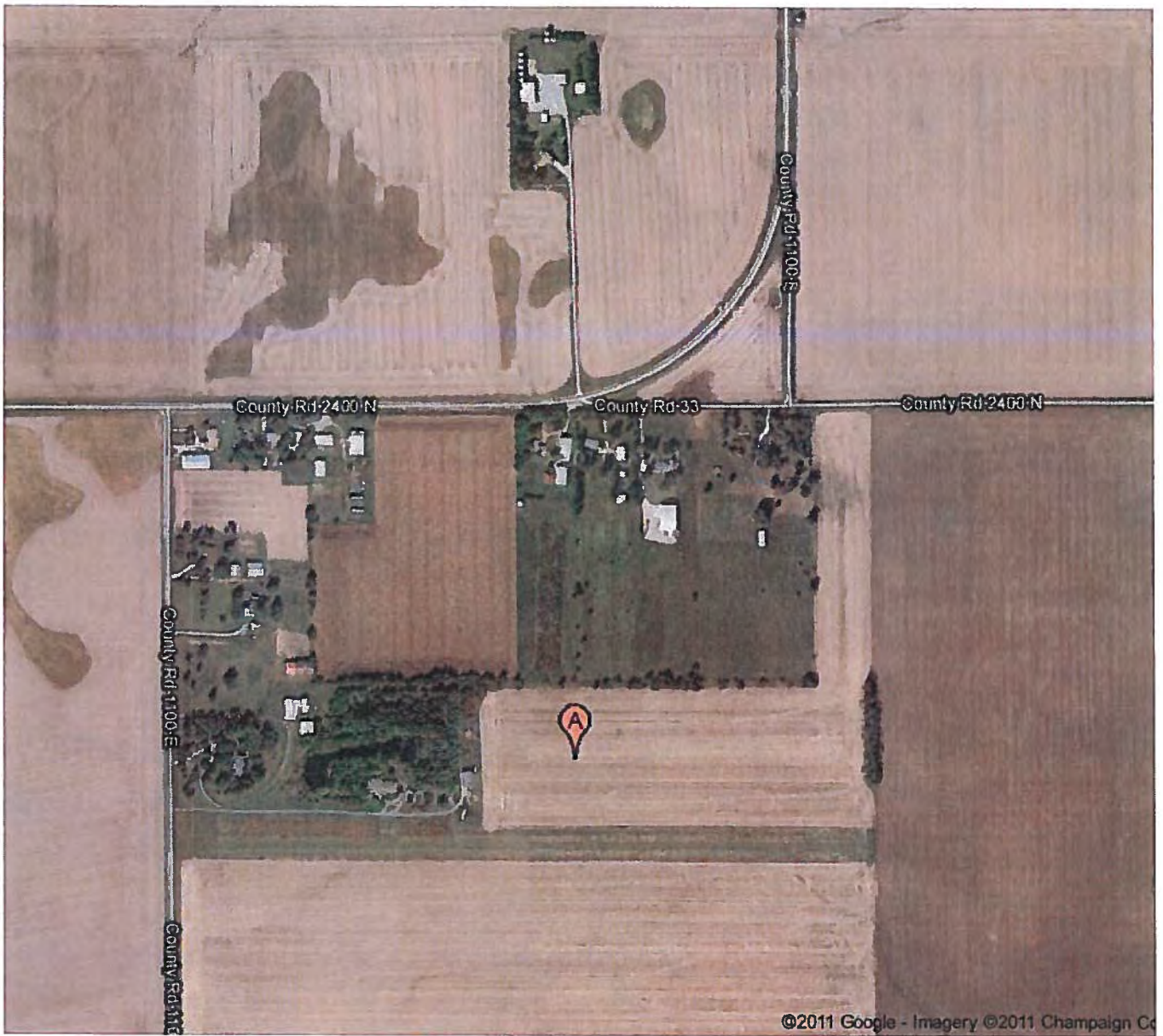
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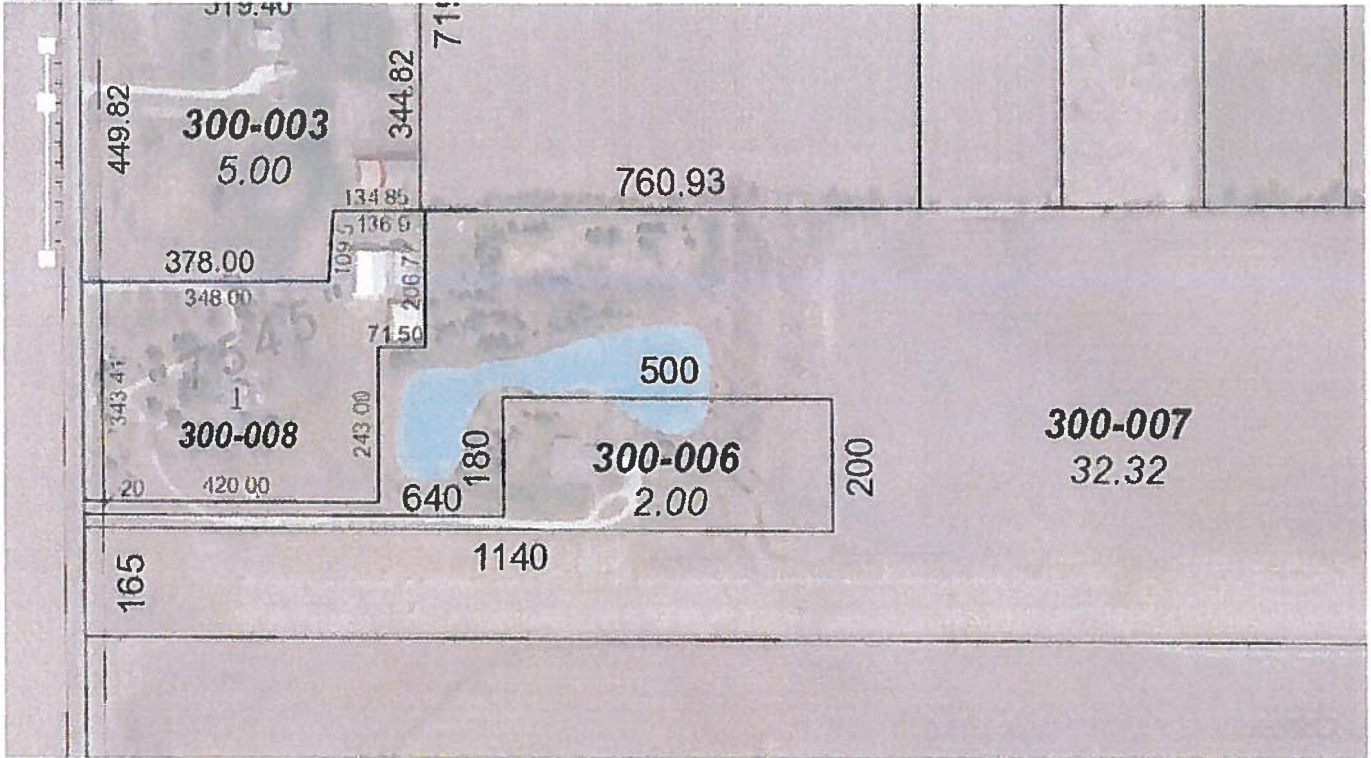




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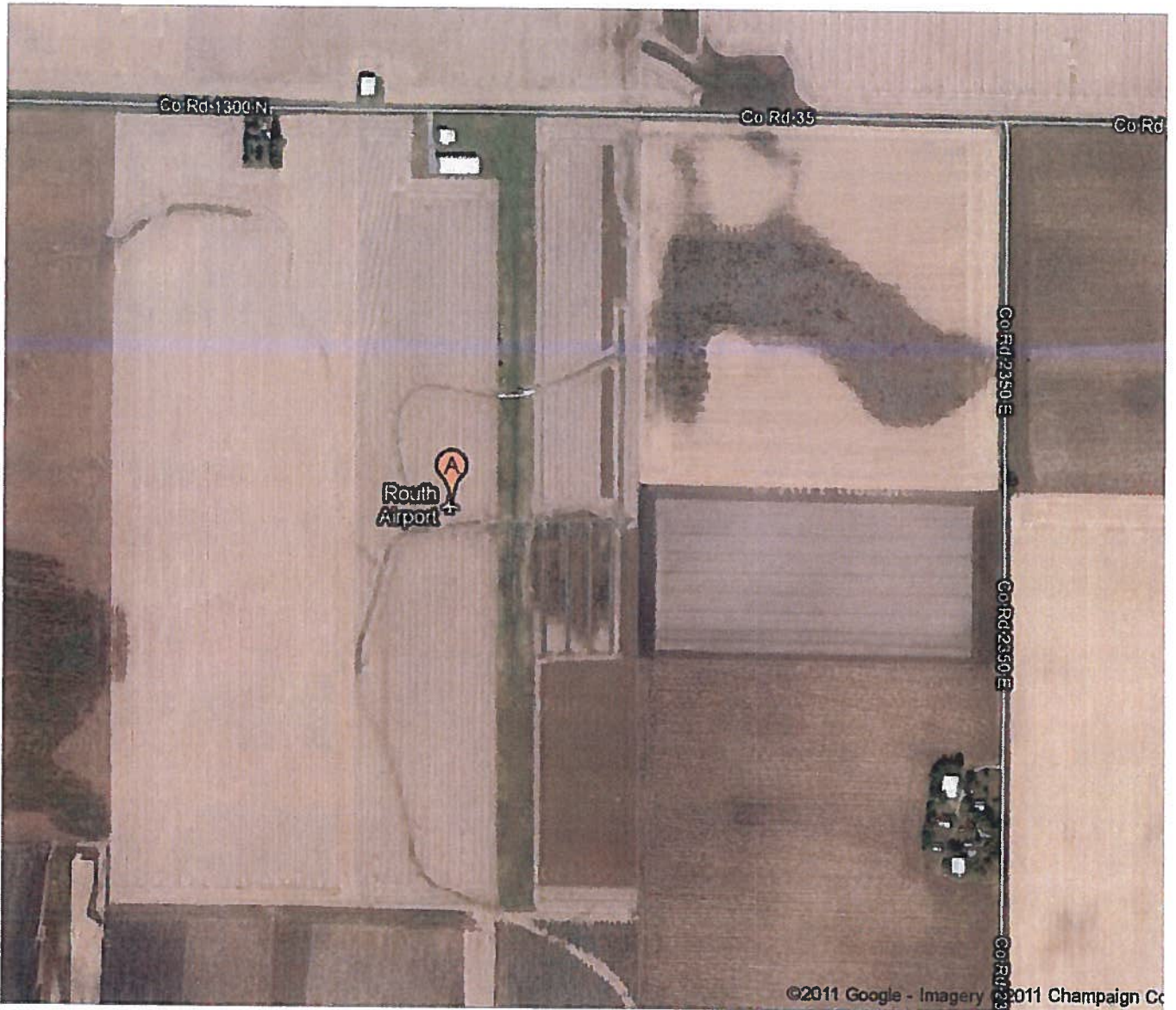


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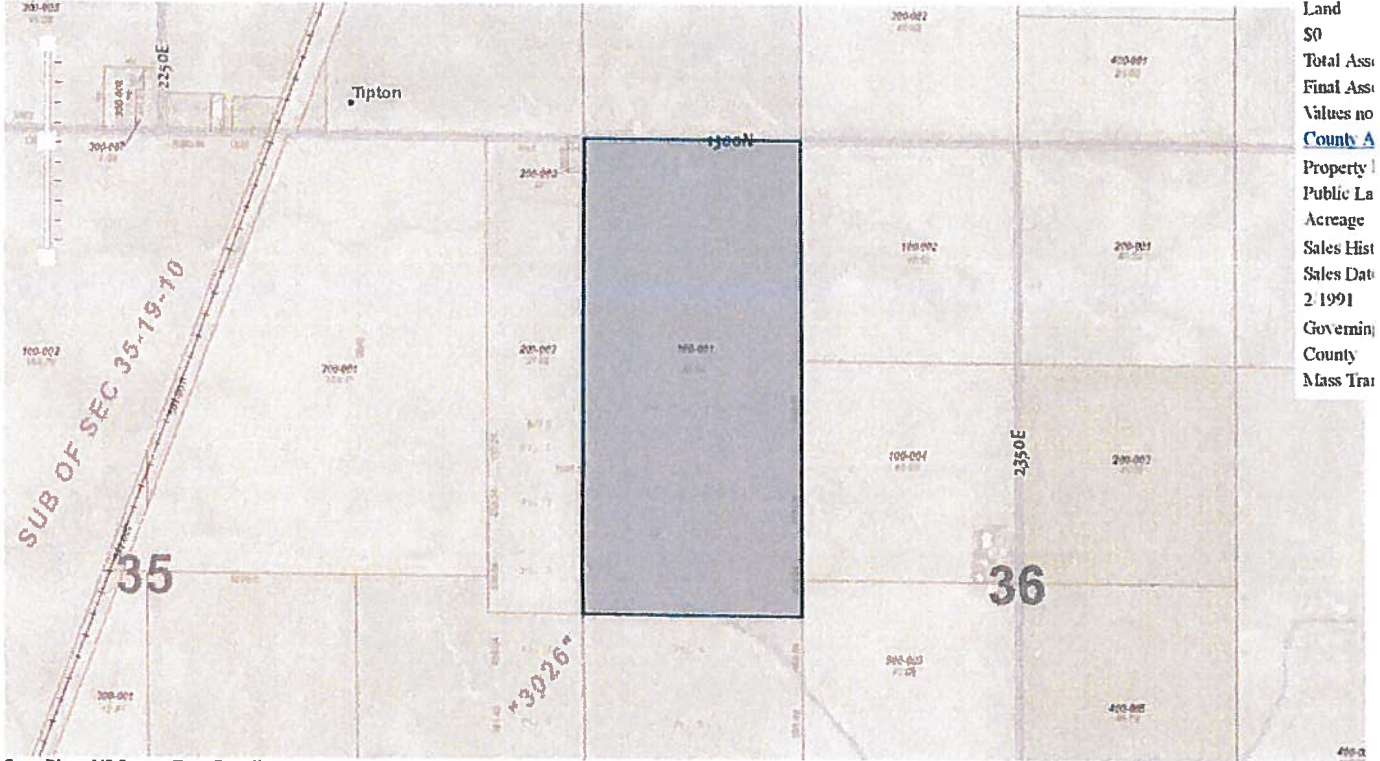


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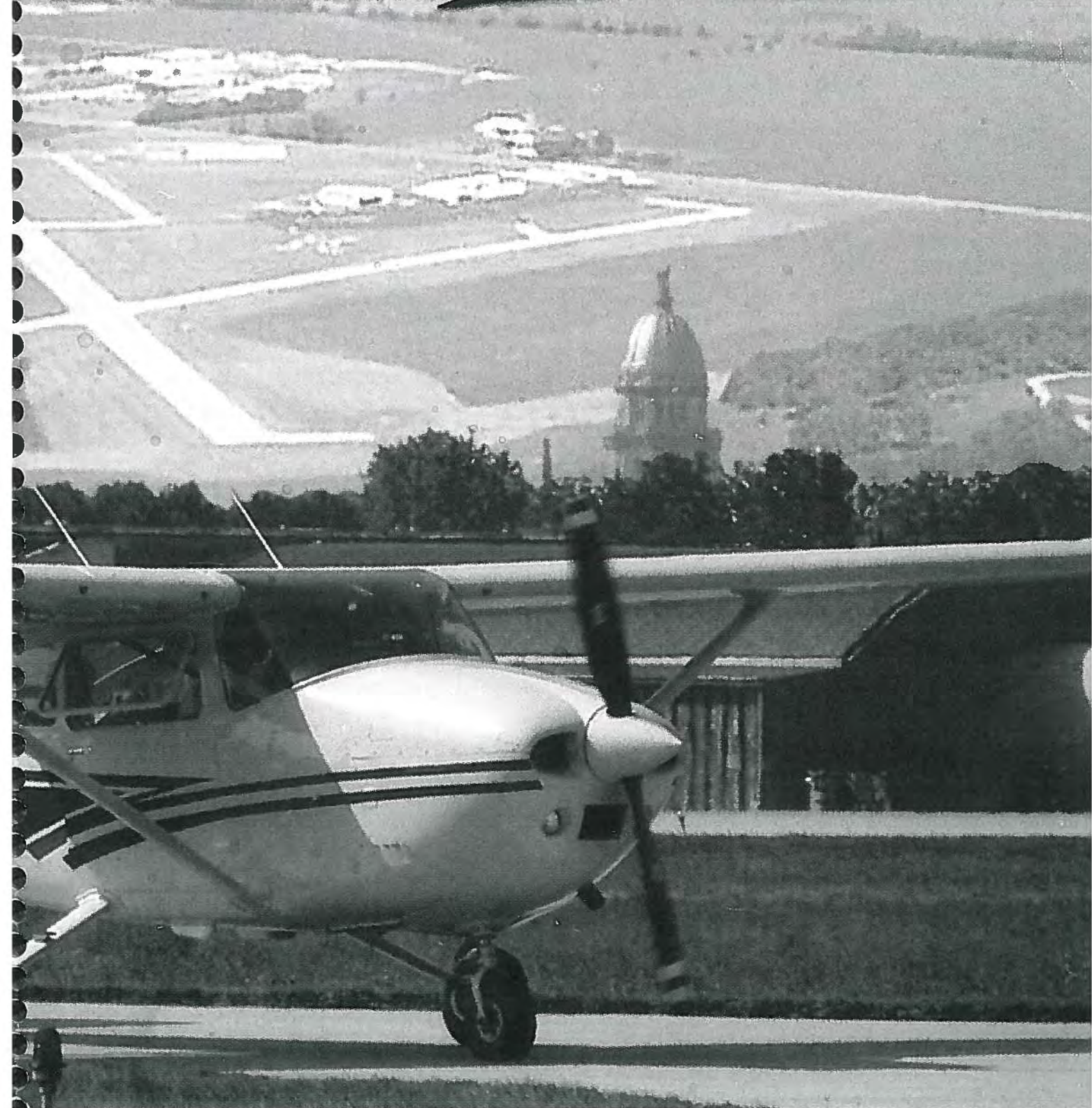


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SUBPART G: RESTRICTED LANDING AREAS

Section 14.700 Restricted Landing Area Classification

Restricted Landing Areas (RLAs) shall be classified as private-use only. For the purposes of this Subpart G, the word RLA includes RLAs utilizing aircraft having STOL capabilities. An RLA shall provide a landing area sufficient for a safe operation, taking into consideration the type of aircraft to be used and the skill level of the pilots using the RLA. The minimum standards for the establishment, management or operation of RLAs shall be in accordance with this Subpart G, including the minimum dimensional standards as shown in Illustrations G-1 and G-2.

Section 14.710 Application for Certificate of Approval

- a) New RLAs. The Division will issue a Certificate of Approval for an RLA in accordance with Section 14.115, taking into consideration:
 - 1) the RLA's proposed location;
 - 2) the RLA's size and layout;
 - 3) the relationship of the proposed RLA to the then current State and Federal Airport and Airways System;
 - 4) whether there are safe areas available for expansion purposes;
 - 5) whether the adjoining areas are free from obstructions based on a proper glide ratio;
 - 6) the nature of the terrain;
 - 7) the nature of the uses to which the proposed RLA will be put;
 - 8) the possibilities for future development; and
 - 9) the minimum standards contained in this Subpart G, including Illustrations G-1 and G-2. (See Section 48 of the Act.)
- b) Transfer of Certificate of Approval. The Division will issue a new Certificate of Approval for the transfer of an RLA in accordance with Section 14.120(a).
- c) Modification of Certificate of Approval. The Division will issue a new Certificate of Approval after completion of an RLA extension or alteration that requires a modification of the Certificate of Approval in accordance with Section 14.120(b).

Section 14.720 Design and Layout Requirements

The minimum RLA design and layout requirements shall be in accordance with the standards and limitations shown in Illustrations G-1 and G-2.

Section 14.730 Obstructions

Minimum RLA obstruction clearance standards shall be in accordance with Illustration G-1. In order for an RLA to be eligible for a Certificate of Approval under this Part, an RLA must initially and continually be free of obstructions (e.g., trees, power lines) on all runways or landing strips within the glide ratio and height limitations shown in Illustration G-1.

Section 14.740 Facilities

Every RLA shall provide:

- a) Wind direction/velocity indicator (must be lighted for night use); and
- b) Clearly marked thresholds and/or displaced thresholds visible from 1500' above ground level (AGL) as shown in Illustration G-3.

Section 14.750 Responsibility of a Restricted Landing Area Certificate Holder

The holder of a Certificate of Approval for an RLA or his authorized agent has the responsibility to enforce applicable federal, State and local aeronautical laws, and regulations of this Part. In addition to maintaining the terms and conditions outlined in the Certificate of Approval and its supporting Order, the Certificate Holder or his agent must:

- a) Immediately designate any condition that may render an aircraft landing or takeoff hazardous by prominently displaying an "X" as set forth in Illustration G-4.
- b) Supervise or cause the supervision of all aeronautical activity in connection with the RLA in the interest of safety.
- c) Maintain the landing area and approaches so as to permit safe operation in accordance with original certification standards.
- d) Ensure that the RLA has a phone number by which Division personnel can reach the Certificate Holder or his designee. In the event that the Certificate Holder or his designee is not available at this number, a reliable secondary number where the Certificate Holder or his designee can be reached shall be available. It is mandatory that any change in Certificate Holder/designee address or phone number be reported to the Division in writing, by phone or e-mail at the address provided in Section 14.115(a), within 10 days after the change.
- e) Furnish the Division, upon request, with information concerning aircraft using the RLA as an operating base, persons exercising managerial or supervisory functions at the RLA, accidents and the nature and extent of aeronautical activity occurring at the RLA.
- f) Obliterate all signs and markings that might indicate that the RLA is still operating as such, prior to the Division issuing an Order closing the RLA, in accordance with Section 14.120(c).

Section 14.760 Fly-In Events, Prevention of Accidents Due to Overcrowding of Landing Areas

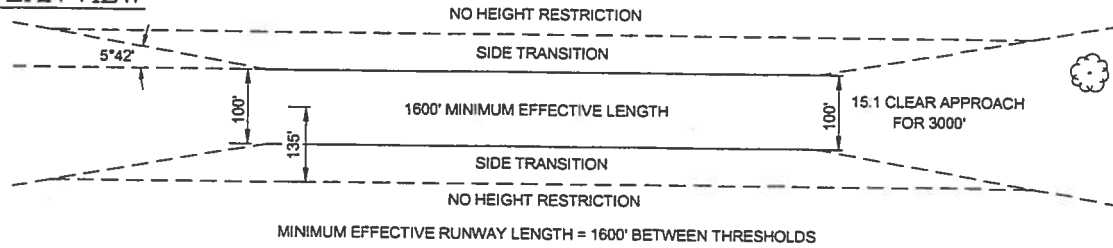
- a) Whenever a fly-in event (more than six aircraft) is staged or held at any RLA, it shall be the responsibility of the Certificate Holder to:
 - 1) Provide, install, display and maintain clearly visible "Closed Runway" X markers, in accordance with Illustration G-4 (each of the four arms of each such X marker must be at least 60 feet long and at least 10 feet wide and of a color (preferably yellow) to contrast with the background on which it is installed).
 - A) Keep X markers in place at all times during the course of the event at or near each end of each landing strip or runway, other than the active landing strip or runway, to prevent mistaken or inadvertent use for landing.
 - B) Keep X markers in place at or near each end of the active landing strip or runway when all aircraft that can be accommodated have landed; or, where field, spectator, weather conditions or departure of aircraft on the ground shall render further landing of aircraft hazardous.
 - 2) Provide personnel to guide landed aircraft to and from the aircraft parking area and provide, designate and regulate parking of aircraft, automobiles or other vehicles in a safe manner.
 - 3) Provide and designate by readily discernible markings, landing strips or runways and taxiing space for landings and takeoffs, and aircraft movement on the ground during the course of the event. Landing strips or runways and taxiing space must be kept clear of persons, vehicles, animals and aircraft on the ground that are not taking off, landing or taxiing. In the event that any landing strip or runway, and any taxiing space, shall be approximately parallel, there shall be a clear minimum distance of 100 feet between their adjacent edges. Participating aircraft shall not be permitted to park closer than 100 feet to the edge-designating marker of a landing strip or runway used or designated for such use during the course of the event.
- b) It shall be the responsibility of the pilot of each aircraft participating in a fly-in event to look for and abide by:
 - 1) any restrictions displayed;
 - 2) "Closed Runway" X markers; and
 - 3) all taxiing and parking directions.

Section 14.770 Restrictions on Use

For restrictions on use see Table G-1.

ILLUSTRATION G-1 Restricted Landing Areas Minimum Dimensional Standards

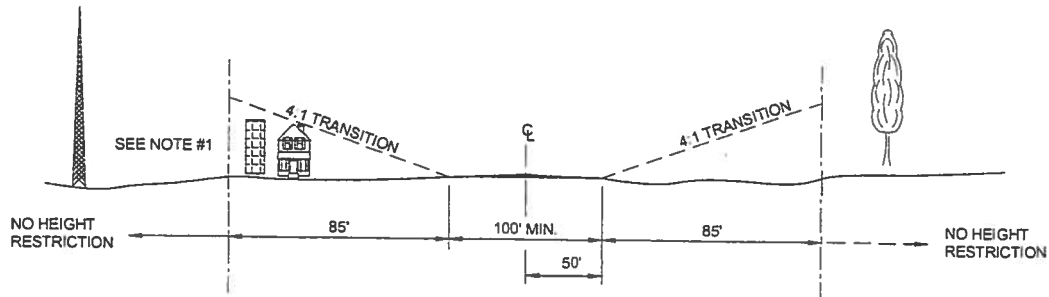
PLAN VIEW



PROFILE (END) VIEW - OBSTRUCTION CLEARANCE



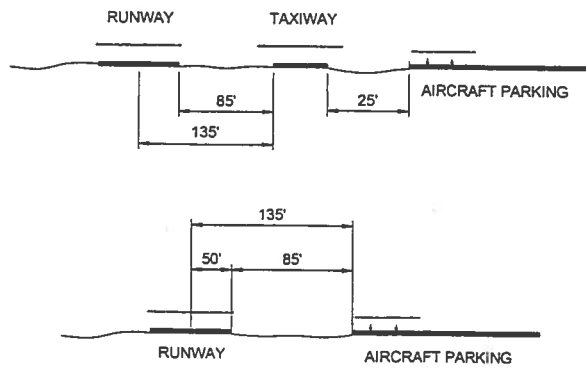
RUNWAY CROSS SECTION - OBSTRUCTION CLEARANCE



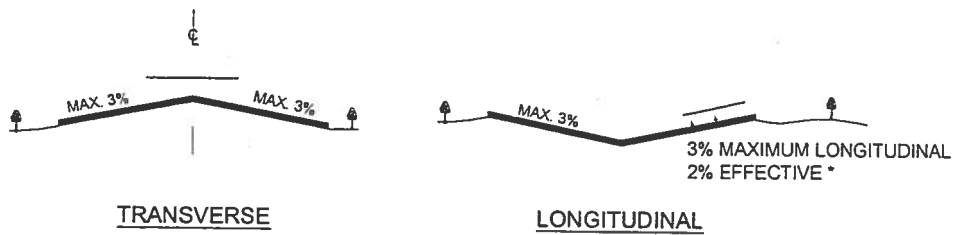
- NOTES:**
1. NO PENETRATIONS TO 4:1 SIDE TRANSITION SURFACES FOR 135' FROM CENTERLINE
 2. NO PENETRATIONS TO 15:1 RUNWAY APPROACHES.
 3. NO CROPS 50' EACH SIDE OF CENTER LINE.
 4. CLEARANCES REQUIRED FOR APPROACHES:
 - 10' CLEARANCE OVER ALL PRIVATE ROADWAYS.
 - 15' CLEARANCE OVER ALL PUBLIC HIGHWAYS.
 - 17' CLEARANCE OVER ALL INTERSTATES.
 - 23' CLEARANCE OVER ALL RAILROADS.

ILLUSTRATION G-2 Restricted Landing Areas Minimum Separation & Gradient Standards

PROFILE VIEW - MINIMUM STANDARDS FOR SEPARATION



RUNWAY GRADIENT



* EFFECTIVE RUNWAY GRADIENT = $\frac{\text{MAXIMUM DIFFERENCE IN RUNWAY END ELEVATIONS}}{\text{RUNWAY LENGTH}}$

SUBPART H: HELIPORTS/VERTIPOINTS

Section 14.800 Heliport/Vertiport Classification

Heliports and Vertiports shall be classified as public-use or private-use. They may be designated as a Hospital Heliport, Helistop, Heliport, Vertiport or Vertistop. For purposes of this Subpart H, the word "heliport" includes vertiports, vertistops and helistops. The minimum standards for the establishment, management or operation of heliports shall be in accordance with this Subpart H, including the minimum dimensional standards shown in Illustrations H-1, H-2, H-3 and Table H-1.

Section 14.810 Application for Certificate of Approval

- a) New Heliports. The Division will issue a Certificate of Approval for a heliport in accordance with Section 14.115, taking into consideration:
 - 1) the heliport's proposed location;
 - 2) the heliport's size and layout;
 - 3) the relationship of the proposed heliport to the then current State and Federal Airport and Airways System;
 - 4) whether there are safe areas available for expansion purposes;
 - 5) whether the adjoining areas are free from obstructions based on a proper glide ratio;
 - 6) the nature of the terrain;
 - 7) the nature of the uses to which the proposed heliport will be put;
 - 8) the possibilities for future development; and
 - 9) the minimum standards contained in this Subpart H, including Illustrations H-1, H-2, H-3 and Table H-1. (See Section 48 of the Act.)
- b) Transfer of Certificate. The Division will issue a new Certificate of Approval for the transfer of a heliport in accordance with Section 14.120(a).
- c) Modification of Certificate of Approval. The Division will issue a new Certificate of Approval after completion of a heliport extension or alteration that requires a modification to the Certificate of Approval in accordance with Section 14.120(b). For purposes of this Section the phrase, "extension or alteration" shall include the following:
 - 1) physical relocation of the FATO by more than 100' laterally or 25' vertically from the original certificated location;
 - 2) change in any approach/takeoff path by more than 30 degrees; or
 - 3) construction of one or more additional FATOs or TLOFs. (See Section 47 of the Act.)

Section 14.820 Design and Layout Requirements

Every heliport is required to have two defined approach/takeoff paths a minimum of 90° apart. Minimum heliport design and layout requirements shall be in accordance with the standards and limitations shown in Illustrations H-1, H-2 and H-3, and described in Table H-1.

Section 14.830 Obstructions

Minimum heliport obstruction clearance standards shall be in accordance with Illustration H-4. In order to be eligible for a Certificate of Approval under this Part, a heliport must initially and continually be free of obstructions (e.g., power poles, trees, fencing, etc.) on all approach/takeoff paths within the glide ratio and height limitations shown in Illustration H-4.

Section 14.840 Heliport Marking

Every heliport shall be marked so that the usable landing area is clearly defined as observed from an altitude of 500' AGL, in accordance with Illustrations H-5, H-6 and H-7.

Section 14.850 Facilities

Every heliport shall provide at least the minimum facilities as prescribed in Table H-2.

Section 14.860 Responsibility of a Public-Use Heliport Certificate Holder

The holder of a Certificate of Approval for a public-use heliport, or his authorized agent, has the responsibility to enforce applicable federal, State and local aeronautical laws, and regulations of this Part. In addition to maintaining the terms and conditions outlined in the Certificate of Approval and its supporting Order, the Certificate Holder or his agent must:

- a) Immediately designate any condition that may render an aircraft landing or takeoff hazardous by displaying prominently a contrasting "X" over the FATO/TLOF, that is visible from a minimum of 500' AGL, and notify the appropriate FAA-FSS.
- b) Supervise or cause the supervision of all aeronautical activity in connection with, and in conformity with, the limitations prescribed in this Subpart H for a heliport.
- c) Have authorized personnel in attendance at the heliport at all times during published business hours (excluding helistops). In the event that it is impractical to comply with the foregoing, the Certificate Holder or his agent shall post a prominent notice of the existing situation and provide a telephone number for assistance.
- d) Ensure that the heliport has a phone number by which Division personnel can reach the Certificate Holder or his designee. In the event that the Certificate Holder or his designee is not available at the heliport number, an answering device at the heliport number shall provide a message identifying a reliable secondary number where the Certificate Holder or his designee can be reached. It is mandatory that any change in Certificate Holder/designee

address or phone number be reported to the Division in writing, by phone or e-mail at the address provided in Section 14.115(a), within 10 days after the change.

- e) Prescribe local heliport rules that will be reviewed and approved, prior to their adoption, by the Division.
- f) Develop and follow, on the property subject to his control, operational maintenance and repair practices that will ensure that the landing area and approaches are free from hazards to the operation of aircraft.
- g) Furnish the Division, upon request, information concerning aircraft using the heliport as an operating base, persons exercising managerial or supervisory functions at the heliport, accidents, and the nature and extent of aeronautical activity occurring at the heliport.
- h) Obliterate all signs and markings that might indicate that the heliport is still operating, prior to the Division issuing an Order closing the heliport, in accordance with Section 14.120(c).

Section 14.870 Responsibility of a Private-Use Heliport, Restricted Landing Area Heliport, and Hospital Heliport Certificate Holder

The holder of a Certificate of Approval for a private-use heliport, restricted landing area heliport or hospital heliport, or his authorized agent, has the responsibility to enforce applicable federal, State and local aeronautical laws, and regulations of this Part. In addition to maintaining the terms and conditions outlined in the Certificate of Approval and its supporting Order, the Certificate Holder or his agent must:

- a) Immediately designate any condition that may render an aircraft landing or takeoff hazardous by displaying prominently a contrasting "X" over the FATO/TLOF, that is visible from a minimum of 500' AGL.
- b) Supervise or cause the supervision of all aeronautical activity in connection with the heliport in the interest of safety.
- c) Ensure that the heliport has a phone number by which Division personnel can reach the Certificate Holder or his designee. In the event that the Certificate Holder or his designee is not available at the heliport number, an answering device at the heliport number shall provide a message identifying a reliable secondary number where the Certificate Holder or his designee can be reached. It is mandatory that any change in Certificate Holder/designee address or phone number be reported to the Division in writing, by phone or e-mail at the address provided in Section 14.115(a), within 10 days after the change.
- d) Prescribe local heliport rules that will be reviewed and approved, prior to their adoption, by the Division.
- e) Develop and follow, on the property subject to his control, operational maintenance and repair practices that will ensure that the heliport and approaches are free from hazards to the operation of aircraft.

- f) Furnish the Division, upon request, with information concerning aircraft using the heliport as an operating base, persons exercising managerial or supervisory functions at the heliport, accidents, and the nature and extent of aeronautical activity occurring at the heliport.
- g) Obliterate all signs and markings that might indicate that the heliport is still operating, prior to the Division issuing an Order closing the heliport, in accordance with Section 14.120(c).

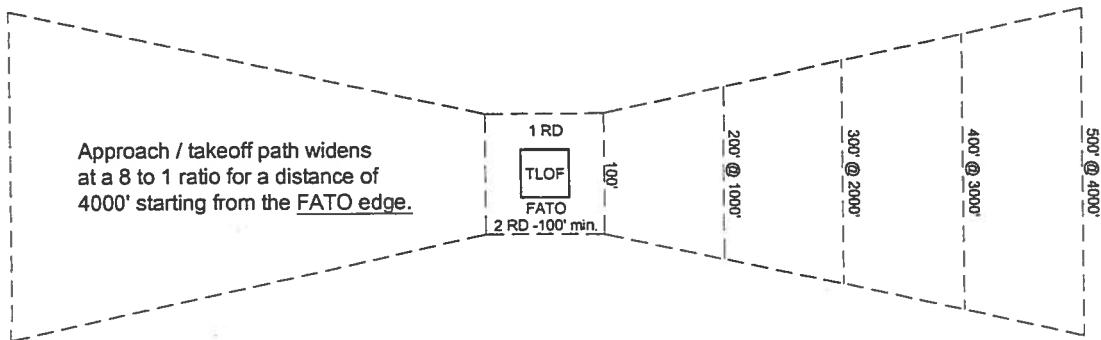
Section 14.880 Restrictions on Use

For restrictions on use see Table H-3.

ILLUSTRATION H-2 Restricted Landing Area Heliport Minimum Dimensional Standards

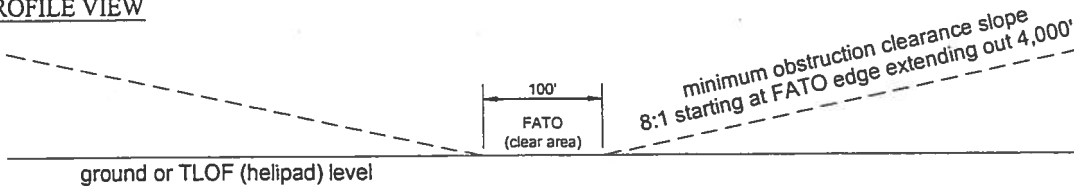
WITH APPROACH / TAKEOFF PATHS 180° APART RECOMMENDED
(MINIMUM OF 90° REQUIRED)

PLAN VIEW



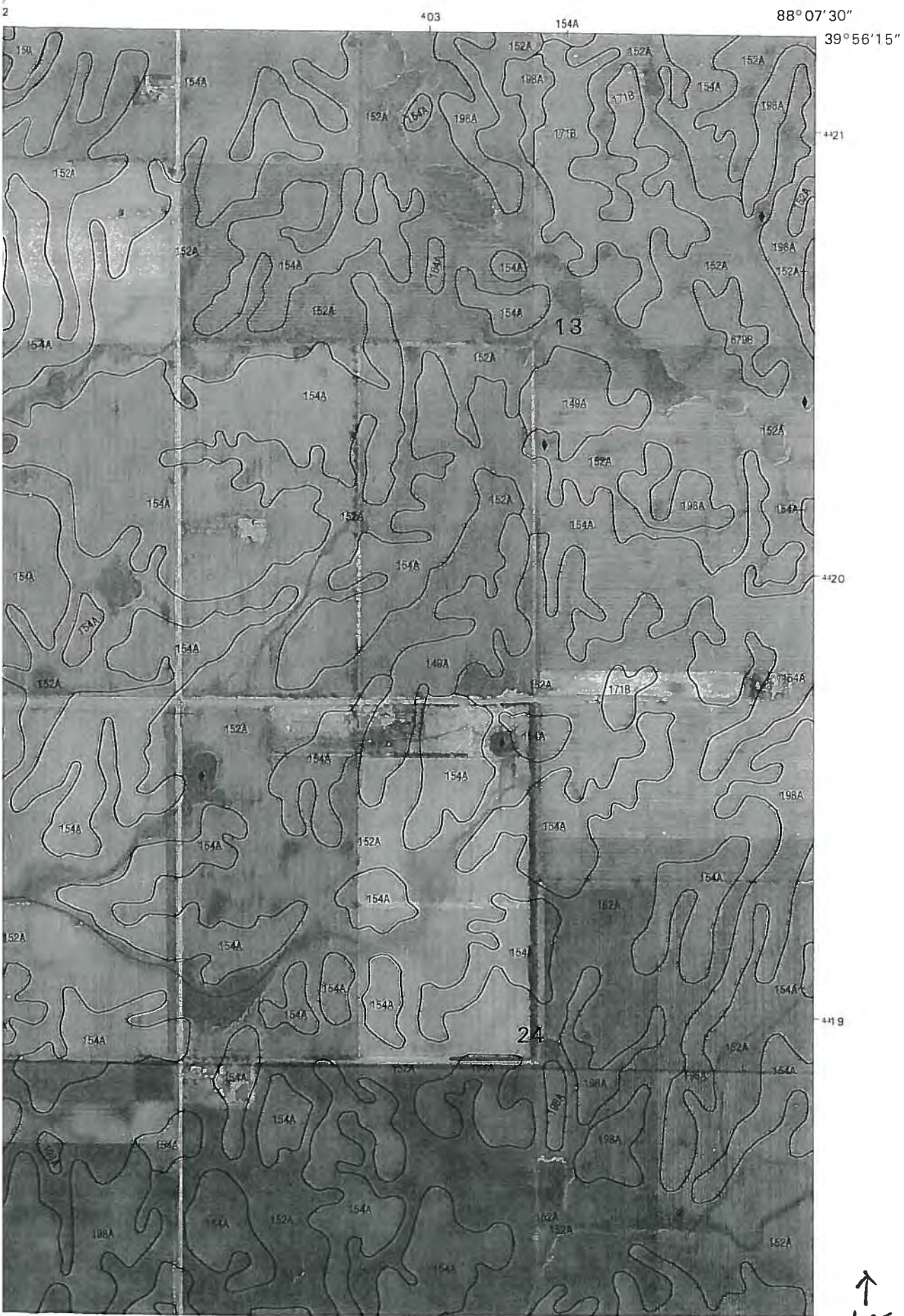
NOTE: Paths may curve to avoid obstructions or noise-sensitive areas.

PROFILE VIEW



NOTE: The second approach / takeoff path may have a 5:1 slope if needed.

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VILLA GROVE NW SE QUADRANGLE
SHEET NUMBER 82 OF 85



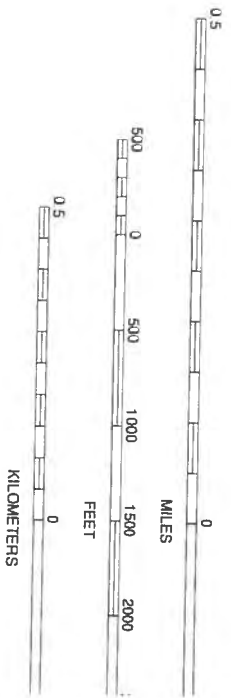
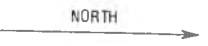
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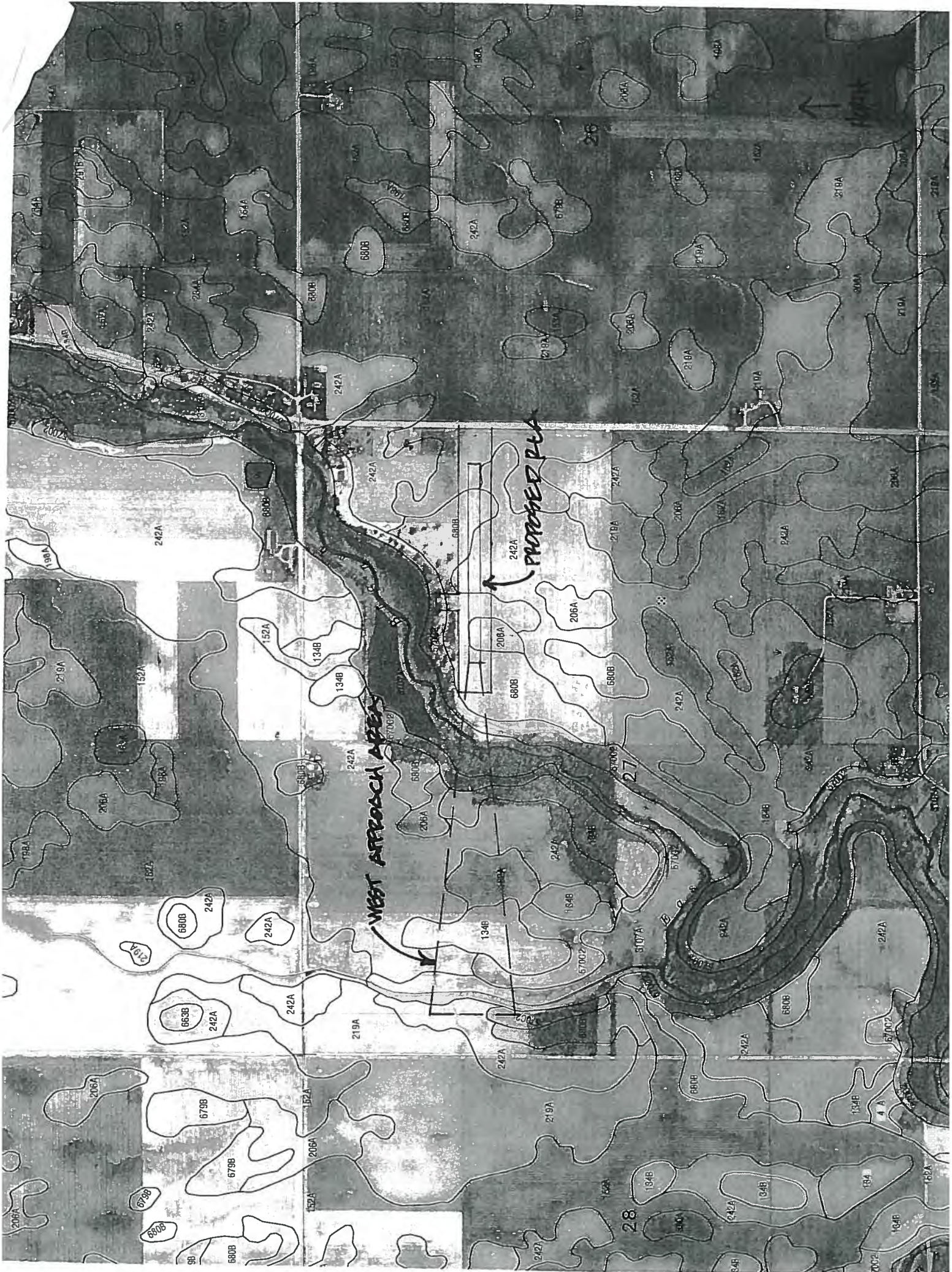


This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service, formerly Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1993 & 1994 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid
 1000-meter ticks: Universal Transverse Mercator, zone 16.
 Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



CHAMPAIGN COUNTY, ILLINOIS NO. 82



Forestland

When the first settlers arrived in the survey area, forests covered about 6 percent of the land (Iverson and others, 1989). Since that time, most of the trees have been cleared from the areas that are the most suitable for cultivation.

By 1997, only 5,330 acres, or less than 1 percent of the acreage in the county, was forested (USDA, 1997). Most of the forestland acreage is privately owned. The major woodland species are oaks, hickories, elms, ashes, and maples, especially soft maple. The rest of the forestland is mainly in areas that have some type of severe limitation affecting their use for cultivated crops. If properly managed, the soils in these forested areas are generally well suited to growing high-quality trees. The largest areas of forestland are along the major streams in the county, such as the Sangamon River and the Middle Fork Vermilion River.

The productivity of many of the remaining forestland stands could be improved with proper management. Management measures needed in these areas are those that exclude livestock from the stands and that protect the stands from fire, insects, and diseases. Using proper logging methods and proven silvicultural practices that enhance growth and regeneration are also needed.

Forestland Management and Productivity

Information about the productivity and management of the forested map units in the county is given in table 11. This table can be used by forest managers in planning the use of the soils for wood crops. Only the soils that are suitable for wood crops are listed.

In table 11, *slight*, *moderate*, and *severe* indicate the degree of the major soil limitations to be considered in management.

Erosion hazard is the probability that damage will occur as a result of site preparation and cutting where the soil is exposed along roads, skid trails, and fire lanes and in log-handling areas. Forests that have been burned or overgrazed also are subject to erosion. Ratings of the erosion hazard are based on the percent of the slope. A rating of *slight* indicates that no

particular prevention measures are needed under ordinary conditions. A rating of *moderate* indicates that erosion-control measures are needed in certain silvicultural activities. A rating of *severe* indicates that special precautions are needed to control erosion in most silvicultural activities.

Equipment limitation reflects the characteristics and conditions of the soil that restrict use of the equipment generally needed in forestland management or harvesting. The chief characteristics and conditions considered in the ratings are slope, stones on the surface, rock outcrops, soil wetness, and texture of the surface layer. A rating of *slight* indicates that under normal conditions the kind of equipment and season of use are not significantly restricted by soil factors. Soil wetness can restrict equipment use, but the wet period does not exceed 1 month. A rating of *moderate* indicates that equipment use is moderately restricted because of one or more soil factors. If the soil is wet, the wetness restricts equipment use for a period of 1 to 3 months. A rating of *severe* indicates that equipment use is severely restricted either as to the kind of equipment that can be used or the season of use. If the soil is wet, the wetness restricts equipment use for more than 3 months.

Seedling mortality refers to the death of naturally occurring or planted tree seedlings, as influenced by the kinds of soil, soil wetness, or topographic conditions. The factors used in rating the soils for seedling mortality are texture of the surface layer, depth to a seasonal high water table and the length of the period when the water table is high, rock fragments in the surface layer, effective rooting depth, and slope aspect. A rating of *slight* indicates that seedling mortality is not likely to be a problem under normal conditions. Expected mortality is less than 25 percent. A rating of *moderate* indicates that some problems from seedling mortality can be expected. Extra precautions are advisable. Expected mortality is 25 to 50 percent. A rating of *severe* indicates that seedling mortality is a serious problem. Extra precautions are important. Replanting may be necessary. Expected mortality is more than 50 percent.

Windthrow hazard is the likelihood that trees will be

uprooted by the wind because the soil is not deep enough for adequate root anchorage. The main restrictions that affect rooting are a seasonal high water table and the depth to bedrock, a fragipan, or other limiting layers. A rating of *slight* indicates that under normal conditions no trees are blown down by the wind. Strong winds may damage trees, but they do not uproot them. A rating of *moderate* indicates that some trees can be blown down during periods when the soil is wet and winds are moderate or strong. A rating of *severe* indicates that many trees can be blown down during these periods.

Plant competition ratings indicate the degree to which undesirable species are expected to invade and grow when openings are made in the tree canopy. The main factors that affect plant competition are depth to the water table and the available water capacity. A rating of *slight* indicates that competition from undesirable plants is not likely to prevent natural regeneration or suppress the more desirable species. Planted seedlings can become established without undue competition. A rating of *moderate* indicates that competition may delay the establishment of desirable

species. Competition may hamper stand development, but it will not prevent the eventual development of fully stocked stands. A rating of *severe* indicates that competition can be expected to prevent regeneration unless precautionary measures are applied.

The *potential productivity* of merchantable or *common trees* on a soil is expressed as a *site index* and as a *volume* number. The site index is the average height, in feet, that dominant and codominant trees of a given species attain in a specified number of years. The site index applies to fully stocked, even-aged, unmanaged stands. Commonly grown trees are those that forestland managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability.

The *volume*, a number, is the yield likely to be produced by the most important trees. This number, expressed as cubic feet per acre per year, indicates the amount of fiber produced in a fully stocked, even-aged, unmanaged stand.

Suggested trees to plant are those that are suitable for commercial wood production.

Table 11.--Forestland Management and Productivity--Continued

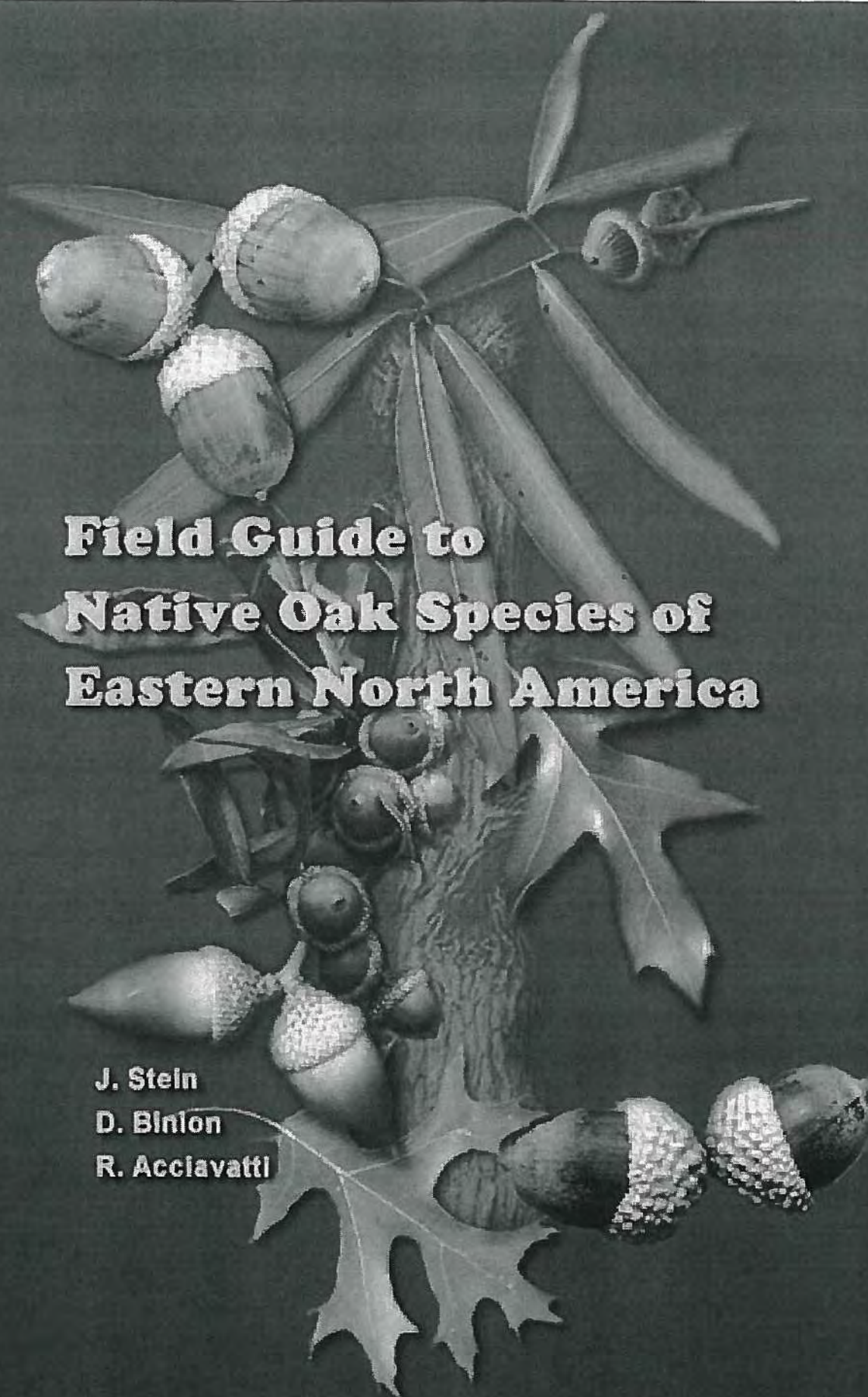
Map symbol and soil name	Management concerns					Potential productivity			Suggested trees to plant
	Erosion hazard	Equip-ment limita-tion	Seedling mortal-ity	Wind-throw hazard	Plant competi-tion	Common trees	Site index	Volume of wood fiber*	
530B: Ozaukee-----	Slight	Slight	Slight	Moderate	Severe	Northern red oak----	66	57	White oak, northern red oak, green ash, white ash, eastern white pine.
						Sugar maple-----	---	---	
						White ash-----	---	---	
						American basswood---	---	---	
530C2: Ozaukee-----	Slight	Slight	Slight	Moderate	Severe	Northern red oak----	66	57	White oak, northern red oak, green ash, white ash, eastern white pine.
						Sugar maple-----	---	---	
						White ash-----	---	---	
						American basswood---	---	---	
530D2: Ozaukee-----	Slight	Slight	Slight	Moderate	Severe	Northern red oak----	66	57	White oak, northern red oak, green ash, white ash, eastern white pine.
						Sugar maple-----	---	---	
						White ash-----	---	---	
						American basswood---	---	---	
530E2: Ozaukee-----	Moderate	Moderate	Slight	Moderate	Severe	Northern red oak----	66	57	White oak, northern red oak, green ash, white ash, eastern white pine.
						Sugar maple-----	---	---	
						White ash-----	---	---	
						American basswood---	---	---	
570B: Martinsville---	Slight	Slight	Slight	Slight	Severe	White oak-----	80	57	White oak, northern red oak, black walnut, green ash, white ash, eastern white pine.
						Sweetgum-----	76	72	
						Tuliptree-----	98	100	
570C2: Martinsville---	Slight	Slight	Slight	Slight	Severe	White oak-----	80	57	White oak, northern red oak, black walnut, green ash, white ash, eastern white pine.
						Sweetgum-----	76	72	
						Tuliptree-----	98	100	
570D2: Martinsville---	Slight	Slight	Slight	Slight	Severe	White oak-----	80	57	White oak, northern red oak, black walnut, green ash, white ash, eastern white pine.
						Sweetgum-----	76	72	
						Tuliptree-----	98	100	

See footnote at end of table.

Table 11.--Forestland Management and Productivity--Continued

Map symbol and soil name	Management concerns					Potential productivity			Suggested trees to plant
	Erosion hazard	Equip-ment limita-tion	Seedling mortal-ity	Wind-throw hazard	Plant competi-tion	Common trees	Site index	Volume of wood fiber*	
618B: Senachwine-----	Slight	Slight	Slight	Slight	Severe	White oak----- Sweetgum----- Tuliptree-----	90 76 98	72 72 100	White oak, northern red oak, black walnut, green ash, white ash, eastern white pine.
618C2: Senachwine-----	Slight	Slight	Slight	Slight	Severe	White oak----- Sweetgum----- Tuliptree-----	90 76 98	72 72 100	White oak, northern red oak, black walnut, green ash, white ash, eastern white pine.
618D2: Senachwine-----	Slight	Slight	Slight	Slight	Severe	White oak----- Sweetgum----- Tuliptree-----	90 76 98	72 72 100	White oak, northern red oak, black walnut, green ash, white ash, eastern white pine.
618E2: Senachwine-----	Moderate	Moderate	Slight	Slight	Severe	White oak----- Sweetgum----- Tuliptree-----	90 76 98	72 72 100	White oak, northern red oak, green ash, white ash, eastern white pine.
618F: Senachwine-----	Moderate	Moderate	Slight	Slight	Severe	White oak----- Sweetgum----- Tuliptree-----	90 76 98	72 72 100	White oak, northern red oak, green ash, white ash, eastern white pine.
680B: Campton-----	Slight	Slight	Slight	Slight	Severe	White oak----- Green ash----- Northern red oak--- Sweetgum----- Tuliptree-----	85 --- 85 --- 95	72 --- 72 --- 100	White oak, northern red oak, black walnut, green ash, white ash, eastern white pine.
3107A: Sawmill-----	Slight	Moderate	Severe	Severe	Severe	Pin oak----- American sycamore--- Eastern cottonwood-- Sweetgum-----	90 --- --- ---	72 --- --- ---	Swamp white oak, bur oak, baldcypress, green ash, pin oak, hackberry, northern white-cedar.

See footnote at end of table.



**Field Guide to
Native Oak Species of
Eastern North America**

**J. Stejn
D. Binlon
R. Acclavatti**



FHTET-2003-01
January 2003

**FOREST HEALTH
TECHNOLOGY ENTERPRISE TEAM**

**TECHNOLOGY
TRANSFER**

Oak Identification

Field Guide to Native Oak Species of Eastern North America

John Stein and Denise Binion
Forest Health Technology Enterprise Team
USDA Forest Service
180 Canfield St., Morgantown, WV 26505

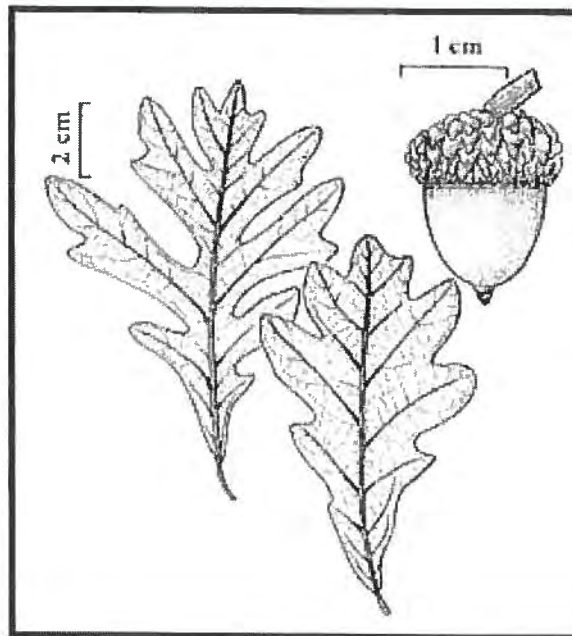
Robert Acciavatti
Forest Health Protection
Northeastern Area State and Private Forestry
USDA Forest Service
180 Canfield St., Morgantown, WV 26505

Quercus alba Linnaeus

White oak

eastern white oak,
stave oak,
forked-leaf white oak

GROWTH FORM: popular and long-lived shade tree, which grows to 100 feet (30.5 m), with a wide-spreading rounded crown and with numerous horizontal branches. **BARK:** light gray, shallow furrows forming scaly ridges or plates. **TWIGS and BUDS:** slender to stout, gray to reddish-green twigs with star-shaped pith; buds are reddish-brown and broadly oval and hairless. **LEAVES:** petiole $\frac{3}{8}$ - 1 inch (10 - 25 mm) in length; obovate to elliptical leaves, 4 - 8 inches (101 - 203 mm) long, $2\frac{3}{4}$ - $4\frac{3}{4}$ inches (70 - 121 mm) wide, margin with 5 - 9 lobes that are widest beyond middle, deep sinuses extending a third or more to midrib; base acute to cuneate, apex broadly rounded; dull or shiny grayish green above, light green with slight pubescence which becomes smooth



beneath as they mature.

ACORNS: annual; 1 - 3 acorns on peduncle up to $1\frac{1}{4}$ inch (32 mm) long, light gray pubescent cup, enclosing $\frac{1}{4}$ of the nut; light brown, oblong nut, up to 1 inch (25 mm) long; germinates in the fall after dropping to the ground. **HABITAT:** dry upland slopes to well-drained loam in bottomlands;

may grow as a shrub at 4,500 feet (1,372 m) elevation in the southern Appalachian Mountains and reaches maximum potential height on lower slopes of the Allegheny Mountains and bottomlands of the Ohio Basin.



DISTRIBUTION: eastern Canada and the United States from Quebec and Ontario west to Minnesota, south to Texas, east to Florida, and north to Maine.



COMMENTARY: White oak is one of the most important species in the white oak group. The wood is used for furniture, flooring, and specialty items such as wine and whiskey barrels. Used for shipbuilding in colonial times. Continues to be displaced in the market place by several species of red oaks. Acorns are a favorite food source for birds, squirrels, and deer. Used as medication by Native Americans. The largest known white oak specimen had a circumference of 32 feet and grew in the Wye Oak State Park, Talbot County, Maryland. It was destroyed during a storm on June 6, 2002.

Quercus macrocarpa Michaux

Bur oak

mossy-cup oak, blue oak,
prairie oak,
mossy-overcup oak

GROWTH FORM: slow growing, large tree that grows to 100 feet (30.5 m), with a massive trunk, broad crown, and large branches.

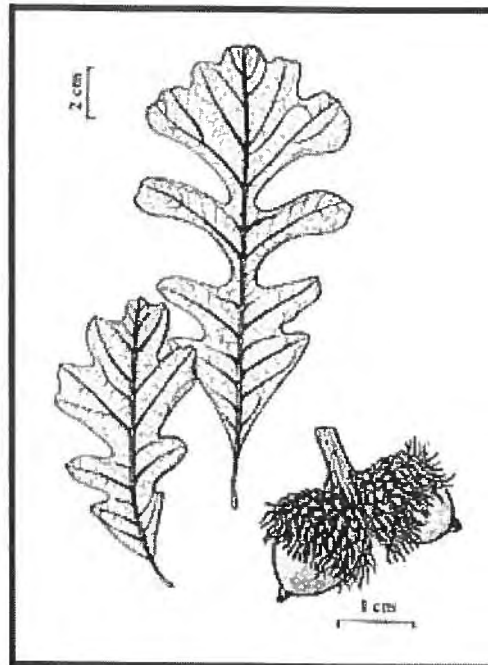
BARK: thick light gray bark, deep furrows producing scaly ridges, fire resistant. **TWIGS and BUDS:**

pubescent light brown twigs with corky wings or ridges; ovoid light brown to gray buds, smooth $\frac{1}{4}$ inch (6 mm) long. **LEAVES:** petiole

$\frac{5}{8}$ - 1 inch (16 - 25 mm) in length; leaf blade is obovate to narrowly elliptical in outline, $2\frac{3}{4}$ - 6 inches (70 - 152 mm) long, 2 - 5 inches (51 - 127 mm) wide, 5 - 7 lobed with center sinuses nearly reaching midrib, base rounded to cuneate, rounded apex; dark green above, grayish-green with finely dense pubescence below.

ACORNS: annual; 1 - 3 acorns on stout peduncle $\frac{1}{4}$ - $\frac{3}{4}$ inch (6 - 19 mm)

long; deep cup with grayish pubescent scales, scales near cup rim forming a fringe around the nut, enclosing $\frac{1}{2}$ - $\frac{7}{8}$ of nut; light brown, broadly elliptical nut, finely pubescent, 1 - 2 inches (25 - 51 mm)



long. **HABITAT:** widely distributed and capable of withstanding a wide range of harsh conditions (one of the most drought resistant oaks) throughout eastern North America; usually found on limestone or calcareous clay.

DISTRIBUTION: Saskatchewan east to New Brunswick, southwest to Texas, and north to Montana.



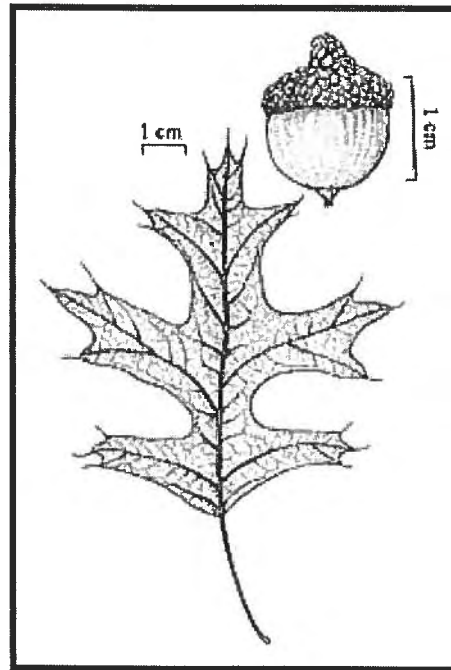
COMMENTARY: Bur oak extends farther north than any other oak species and becomes shrubby at the northern and eastern limits of its range. This oak's wood quality is similar to white oak and is often used for construction, flooring, and cooperage. The common name is derived from the bur-like fringe of the acorn cup. Many bur oaks are historically important and one has been designated as a National Historic Landmark in Kansas. Native Americans used bur oak as medication for heart problems and other ailments. The largest known specimen grows near Parris, Bourbon County, Kentucky.

Quercus palustris Muenchhausen

Pin oak

swamp oak, Spanish oak,
swamp Spanish oak, water oak

GROWTH FORM: medium to large tree 50 - 130 feet (15.2 - 39.6 m), somewhat conical crown with horizontal inner branches and lower branches angled downward. **BARK:** gray-brown, smooth juvenile bark, mature bark with broad scaly ridges, pink inner bark. **TWIGS and BUDS:** twigs shiny chestnut-brown; ovoid bud with pointed apex, chestnut-brown scales. **LEAVES:** smooth petiole $\frac{3}{4}$ - 2 $\frac{1}{2}$ inches (19 - 63 mm) long; elliptical to oblong leaf, 2 - 6 $\frac{1}{4}$ inches (51 - 159 mm) long, 2 - 4 $\frac{3}{4}$ inches (51 - 121 mm) wide, base truncate, apex acute, margin with 5 - 7 lobes with 1 - 3 bristle-tipped teeth, deep sinuses nearly to the midvein, basal lobes somewhat recurved; glossy dark green above, light green below with axillary tufts or tomentum next to raised veins.



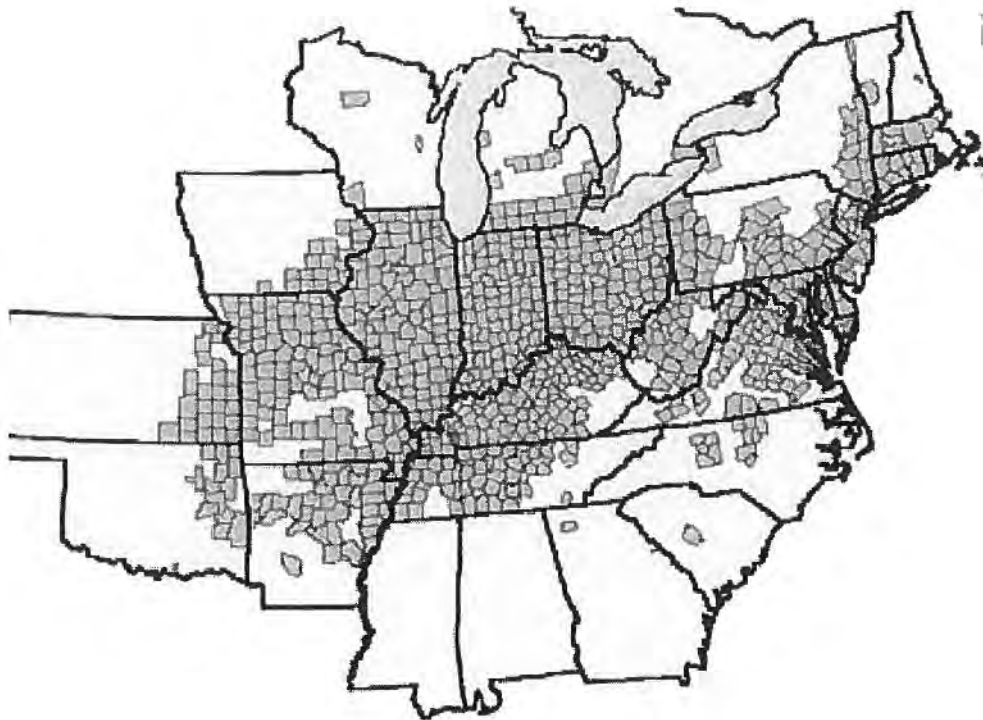
ACORNS:

biennial, clusters of 1 - 2 acorns on each peduncle, thin reddish-brown cup, smooth scales, enclosing $\frac{1}{4}$ of the nut; rounded nut, $\frac{5}{8}$ inch (16 mm) in length, light brown and often striped.

HABITAT: wet-site species found in nearly pure stands on poorly-drained soils; usually tolerates intermittent flooding during the dormant season but not during the growing season; extensive stands



of pin oak are found on glacial till, with excessive moisture during the winter and spring; not adapted to alkaline soils. **DISTRIBUTION:** Vermont and Ontario, south to North Carolina, west to Oklahoma, and north to Wisconsin.



COMMENTARY: Pin oak is extensively planted as an ornamental in North America and has been introduced into central and western Europe as a shade tree. It is noted for a shallow root system that allows easy transplanting. Native Americans used bark from this tree for medicine. The largest known pin oak grows in Bell County, Kentucky.

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NATIVE TREES OF THE MIDWEST

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Native Trees of the Midwest for the Home Landscape

A native plant is considered to be a species that existed in an area prior to the arrival of European settlers, as opposed to a naturalized plant, which has been introduced into a new habitat by human influence. Native trees are part of the rich and complex relationships among plants, animals, insects, and microorganisms in natural ecosystems (woodlands, prairies, wetlands, etc.) of the Midwest. The diversity of native trees provides interesting textures, colors, shapes, flowers, and foliage. Planting native species is a way to re-establish natural diversity and restore our regional landscapes, and they help to sustain habitats for many of our native birds and insects.

Uses in the Landscape

- Provide food and shelter for wildlife
- Promote plant diversity
- Provide shade
- Create privacy or a sense of enclosure
- Define boundaries
- Screen unwanted views
- Muffle noise
- Provide a focal point in the landscape

Advantages of Native Trees

- When properly planted, native trees have the advantage of being adapted to Midwest growing conditions: they are vigorous and hardy, enabling them to survive cold winters and hot, dry summers
- Once established, native trees are more adapted to resist the negative effects of insect and disease problems
- Using native trees in the landscape, or in combination with cultivated plants, enhances our natural surroundings

Factors to consider**Mature size and growth rate**

Many factors, including soil, moisture, and hardiness affect tree size. A tree in its native habitat may reach 100 feet, whereas growing in your home landscape it may only reach 35 to 40 feet. The accompanying chart reflects the average size in the home landscape at maturity. When selecting a plant, consideration should be given to the ultimate height and width of the plant, and how it will eventually fill the landscape.

In newer residential areas, people often select trees that grow quickly. Although they are desirable for their rapid contribution to the landscape, fast-growing trees are often shorter-lived, more susceptible to disease and insect problems, and more likely to break from wind and ice.

Types of shade

The leaf and branching patterns of different tree species produce different kinds of shade. At maturity, some will create fairly deep shade, limiting what will grow beneath them, while others may create a light, filtered shade. Trees with dense canopies make more shade and are the best screens for an unwanted view.

Ornamental traits

Some trees develop outstanding bark, have showy fruit, flowers, or foliage, or attractive fall color. Many trees, however, drop flowers, seeds, or nuts, which may be a maintenance consideration if the tree is planted near a patio, deck, entry, walk, or driveway. Trees planted close enough to shade a house will also likely drop their leaves and seeds into the gutters, requiring periodic inspection and cleaning. It's important to assess your willingness to do these tasks before selecting a site and a tree.

Availability












Native plants should not be removed from the wild, but purchased from commercial nurseries. Collecting in the wild damages plant habitat and may deplete natural plant communities. Most retail nurseries and garden centers sell only plants that are familiar and popular, or ones that are easy to propagate in large quantities. Less familiar native plants are likely to be available only from smaller













nurseries or those that specialize in native plants. If you have trouble locating a specific plant, contact The Morton Arboretum Plant Clinic or The Sterling Morton Library for catalog information.












Trees to avoid




Some native trees have qualities that make them undesirable for planting in the home landscape. They may be prone to breaking, have messy fruit or thorns, or be more susceptible to insect and disease problems. Among the native trees not recommended for planting in the home landscape: black locust (*Robinia pseudoacacia*), black cherry (*Prunus serotina*), boxelder (*Acer negundo*), choke cherry (*Prunus virginiana*), dotted hawthorn (*Crataegus punctata*), eastern cottonwood (*Populus deltoides*), pin cherry (*Prunus pensylvanica*), and Washington hawthorn (*Crataegus phaenopyrum*).

The chart provides information about the size and other important characteristics of native trees recommended by The Morton Arboretum for their suitability and desirability in the Midwest. All trees listed are native to Illinois.

NATIVE TREES OF THE MIDWEST for the HOME LANDSCAPE							
Large Trees (over 40 feet)							
Botanical Name	Common Name	Height	Spread	Form	Rate	Zone	Cultural/Comments
 <i>Acer nigrum</i>	Black Maple	60-70'	50-75'	Upright oval	S	4-8	Sun to part shade; well-drained soil; higher heat & drought tolerance than sugar maple; salt sensitive
 <i>Acer saccharum</i>	Sugar Maple	60-70'	40-50'	Oval to rounded	S	4-8	Sun to dense shade; prefers a rich, well-drained soil; sensitive to drought, salt, and compact soils; many cultivars available
 <i>Betula nigra</i>	River Birch	40-70'	40-60'	Rounded to spreading	M/F	4-9	Full sun to part shade; native along rivers and stream banks; develops chlorosis in high pH soil and drought conditions
 <i>Carya cordiformis</i> ¹	Bitternut Hickory	50-75'	30-40'	Broadly Columnar	S	4-9	Sun or shade; native on moist or dry slopes; transplant in spring only
 <i>Carya illinoensis</i> ¹	Pecan	75-100'	50-75'	Oval to rounded	M/F	5-9	Sun; moist to wet sites
 <i>Carya ovata</i> ²	Shagbark Hickory	60-80'	40-50'	Irregular oval	M/F	4-8	Sun to shade; found on dry slopes and low, well-drained woods; drought tolerant; long-lived
 <i>Celtis occidentalis</i>	Hackberry	40-60'	40-50'	Broad oval to vase	M/F	3-9	Full sun; prefers rich, moist soils; pH adaptable; tolerant of drought, salt, and temporary wet sites; corky bark
 <i>Cladrastis kentuckea</i> (<i>C. lutea</i>)	Yellowwood	30-50'	40-50'	Broadly rounded	M	4-8	Sun; native on limestone cliffs and north-facing slopes; tolerant of clay soils; fragrant white flowers; yellow fall color
 <i>Diospyros virginiana</i>	Persimmon	35-60'	20-35'	Oval to rounded	S	5-9	Sun; prefers well-drained soil; can form thickets; blocky bark; large, fleshy orange fruit attractive but messy; male trees available
 <i>Gleditsia triacanthos</i> f. <i>inermis</i>	Thornless Honey Locust	40-70'	40-70'	Broad vase	F	4-9	Sun; prefers moist, well-drained soil; tolerant of drought, road salt, high pH, heat, and compacted soil; yellow fall color; f. <i>inermis</i> refers to the thornless form of the native species
 <i>Gymnocladus dioica</i>	Kentucky Coffeetree	50-60'	40-50'	Broadly rounded	S	4-8	Sun to part shade; best in moist soil; tolerant of drought and city conditions; yellow fall color; thick

							seedpods of female tree offer winter interest
 <i>Juglans nigra</i> ²	Black Walnut	50-70'	30-50'	Broadly rounded to oval	M	4-9	Sun; prefers deep fertile, moist, well-drained soil; tolerant of drought, high pH soils; all parts of tree produce juglone, toxic to some plants
 <i>Liquidambar styraciflua</i>	Sweet-Gum	60-70'	30-45'	Pyramidal to rounded	M/F	5-9	Sun; prefers deep, acidic soil; slow to establish; star-shaped leaves; red to purple fall color; "gumball" fruits can be messy; 'Moraine' recommended for northern Illinois
 <i>Liriodendron tulipifera</i>	Tulip-Tree	70-90'	35-50'	Pyramidal to rounded	M/F	4-9	Sun; prefers moist, well-drained soil; drought sensitive; goblet-shaped orangish-green flowers; unusual tulip-shaped leaves turn yellow in fall; spring plant only
 <i>Magnolia acuminata</i>	Cucumber Magnolia	50-80'	50-60'	Pyramidal to rounded	M/F	4-8	Sun to light shade; moist, well-drained soil; protect from wind or heat; will not tolerate extreme wet or drought soils; large, yellow-green flowers; attractive pinkish-red fruit pods
 <i>Nyssa sylvatica</i>	Tupelo, Black Gum	30-50'	20-30'	Pyramidal to spreading	S	4-9	Full sun to part shade; native in wet areas or dry, rocky uplands; horizontal branching; brilliant red fall color; spring plant only
 <i>Pinus strobus</i>	Eastern White Pine	50-80'	20-40'	Spreading	F	2-7	Sun; moist acidic soil; sensitive to high pH soil, salt, and windy sites; blue-green needles; open airy crown
 <i>Platanus occidentalis</i> ²	Sycamore, American Planetree	75-100'	50-75'	Irregular spreading	M/F	4-9	Sun to part shade; found in bottomlands and along riverbanks; tolerant of high pH soil; mottled creamy-white bark; do not grow near septic fields
 <i>Quercus alba</i>	White Oak	50-80'	50-80'	Broadly rounded	S	3-9	Sun; requires moist, slightly acidic soil; sensitive to soil disturbances and poor drainage; mulch beneficial for root system; lobed leaves turn red to wine fall color; state tree of Illinois
 <i>Quercus bicolor</i>	Swamp White Oak	50-60'	50-60'	Broadly rounded	M	4-8	Sun; found in moist bottomlands and river banks; chlorosis symptoms in high pH soils; tolerant of urban conditions
 <i>Quercus macrocarpa</i>	Bur Oak	70-80'	80-90'	Broadly spreading	S	3-8	Sun; very adaptable to most soil and pH conditions; hardiest of the oaks; excellent tree for large area
 <i>Quercus muhlenbergii</i> ¹	Chinkapin Oak	40-50'	50-70'	Rounded	S	5-7	Sun; found on dry limestone bluffs; tolerant of drought and alkaline soil; attractive foliage and branching
 <i>Quercus rubra</i>	Northern Red Oak	60-80'	60-75'	Broadly rounded	M	3-7	Sun to part shade; prefers slightly acidic, well-drained soils; develops chlorosis symptoms in high pH; tolerant of salt and air pollution; russet-red fall color; susceptible to oak

							wilt, prune only in dormant season
<i>Taxodium distichum</i> 	Bald Cypress	50-70'	20-30'	Pyramidal	M	4-10	Sun; adaptable to wet, dry, or swampy locations; chlorosis symptoms with high pH; deciduous, sage-green leaves turn a russet brown in fall before dropping; transplants well as a container specimen
<i>Tilia americana</i> 	American Basswood	60-80'	30-40'	Oval to rounded	M	3-8	Sun to part shade; prefers deep, fertile soil; heart-shaped leaves; fragrant flowers in June; dense shade tree
<i>Thuja occidentalis</i> 	Eastern Arborvitae	40-60'	10-15'	Broad pyramidal	S/M	3-7	Sun to part shade; evergreen; native to rocky, upland sites; tolerant of temporary flooding; foliage favorite of deer and rabbits; many cultivars available
Intermediate-Sized Trees (25-40 feet)							
<i>Aesculus glabra</i> 	Ohio Buckeye	20-40'	25-40'	Broadly rounded	M	4-7	Full sun to part shade; native in moist habitats; showy yellowish flowers in spring; prickly fruit favorite of squirrels
<i>Carpinus caroliniana</i> 	American Hornbeam	25-35'	20-30'	Rounded	S	3-9	Sun to dense shade; best in rich, moist soil; mulch in full sun; winged nuts provide a good food source for wildlife; orange-red fall color
<i>Ostrya virginiana</i> 	Ironwood, Hop-hornbeam	25-40'	15-20'	Rounded	S	3-9	Sun to shade; found in dry, gravelly soil as a understory tree; sensitive to salt and poorly drained soil; interesting hop-like seedpods; yellow fall color
<i>Sassafras albidum</i> 	Sassafras	30-60'	25-40'	Pyramidal to rounded	F	4-9	Sun to part shade; moist, slightly acidic, well-drained soil; forms thickets; aromatic, mitten-shaped leaves change to yellow orange, and purple in fall; good for naturalizing; spring plant only
Small Ornamental Trees (15-25 feet)							
<i>Aesculus pavia</i> ¹ 	Red Buckeye	10-20'	15-20'	Rounded to spreading	S/M	4-8	Full sun to part shade; prefers well-drained soil; maintain cool root system with mulch; attractive red flower spikes in early spring
<i>Amelanchier laevis</i> 	Allegheny Serviceberry	15-25'	15-20'	Oval	M	4-8	Sun to part shade; needs well-drained soil; sensitive to drought, pollution, and soil compaction; white flowers in early spring; orange-red fall color
<i>Asimina triloba</i> 	Pawpaw	15-20'	15-20'	Colony forming	S	5-8	Full sun to dense shade; prefers moist, well-drained soil; forms thickets; sensitive to drought; edible fruit; resistant to deer browse; cultivars available
<i>Cercis canadensis</i> 	Eastern Redbud	15-20'	20-25'	Rounded	M	4-8	Best in part shade; prefers well-drained soil; pH adaptable; rose-purple flowers in spring; yellow in fall; purchase trees from a northern source

<i>Cornus alternifolia</i> 	Pagoda Dogwood	15-25'	15-25'	Spreading to layered	M	3-7	Sun, but best in part shade; thrives in cool, moist, well-drained soils; small tree to large shrub; white flowers in late spring; blue-black fruit; reddish purple fall color; good wildlife food source
<i>Crataegus crus-galli</i> ? 	Cockspur Hawthorn	20-30'	20-35'	Broadly rounded	S/M	4-7	Sun; needs well drained soil; white flowers in spring; persistent red fruit; orange-red fall color; 2-3" thorns
<i>Crataegus viridis</i>	Green Hawthorn	20-35'	20-30'	Spreading vase	M	4-8	Sun; found in woodland edges, floodplains, and rocky pastures; white flowers mid-May; red-orange persistent fruit; 'Winter King' cultivar nearly thornless
<i>Ptelea trifoliata</i> 	Wafer Ash	15-20'	10-15'	Rounded	S/M	3-9	Sun to dense shade; found on moist woodland edges; has tendency to sucker; round, winged papery seeds; yellow fall color

1. May be difficult to obtain in local garden centers
2. Pests, diseases, or other problems may limit usefulness

Growth rate refers to the average annual rate of growth in the first 10 years after planting. Key to Growth Rate:

- F = Fast (25 inches or more a year)
M/F = Medium to Fast (18 to 25 inches a year)
M = Medium (13 to 22 inches a year)
S/M = Slow to Medium (12 to 18 inches a year)
S = Slow (less than 12 inches per year)

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