Office Use Only	5/15/25 Date Filed	$ Fee	PZL-25-28716 Application Number

JOHNSON COUNTY FILED MAY 15 2025 PLANNING, DEVELOPMENT & SUSTAINABILITY

JOHNSON COUNTY, IOWA

APPLICATION FOR: SITE PLAN REVIEW

In accordance with chapter 8:1.25 of the Johnson County Unified Development Ordinance, a site plan shall be reviewed prior to issuance of a building permit in the RR, C, CH, AG-T, C-AG, ML, MH, and SWDRR zoning districts, and prior to commencing certain conditional uses permitted by the Board of Adjustment.

Proposed Use of Structure(s): Landscape Company

Address of Location: IWV & Hurt Rd - NW quad

Subdivision Name and Lot Number: Carex Hills - Lot 1

Parcel Number: ~~2025007~~ 1118476001

Current Zoning: C-AG

The undersigned affirms that the information provided herein is true and correct. If applicant is not the owner, applicant affirms that the owner(s) of the property described on this application consent to this application being submitted, and said owners hereby give their consent for the office of Johnson County Planning, Development, and Sustainability to conduct a site visit and photograph the subject property.

Carex Propoerties LLC - Curtis Schoenthaler
Name of Owner

Name of Applicant (if different)

PO Box 621 Iowa City, Iowa 52244
Applicant Street Address (including City, State, Zip)

[redacted]

Applicant Phone *Applicant Email*

Applicant Signature

See back page for Application Submittal Requirements and Checklist

Applications should be emailed to planning@johnsoncountyiowa.gov and delivered to the Planning, Development and Sustainability Office (913 South Dubuque Street, Iowa City, IA 52240)

Updated 6.1.23 MS

FILED
MAY 15 2025
PLANNING, DEVELOPMENT & SUSTAINABILITY

The following items must be submitted for the application to be complete. Incomplete applications will be returned and will not be considered until the next submission deadline. Once submitted, county staff will review the materials and request revisions (if necessary). Once all revisions and outside reviews have been received, the application will be placed on the next available Board of Supervisors agenda or be decided on by the Zoning Administrator, as appropriate.

If working with an engineer who can provide CAD or GIS line work, electronic submissions should be submitted in accordance with the PDS department's electronic submission guidelines (see below). Preference is that electronic submission is provided prior to hard copy submission.

Initial each empty box below *to ensure you included all necessary information in the appropriate form for an application to be considered complete. Some items may require both electronic and physical copies.*

Item Required	Electronic Copy (PDF unless otherwise noted)	Hard Copy
Application Fee ($250)		CAT
This application form with all information completed	CAT	(2)
Brief cover letter explaining the proposed use including but not limited to the type of business, number of employees, parking facilities proposed, days and hours of operation, provisions for water and wastewater, type of equipment to be used, signage, lighting, etc.	CAT	CAT
Site Plan which addresses all information required by section 8:1.25 of the Johnson County Unified Development Ordinance, including: • Landscape Plan – should be a dedicated sheet. • Grading Plan, including Erosion and Sediment Control Plan/SWPPP – should be a dedicated sheet. • Paving detail for entrances, drives, and parking areas – can be included on other sheets or be on a dedicated sheet. • Sensitive Areas Exhibit – this exhibit should show all proposed disturbance on the site including proposed building footprints and the extent of any grading	CAT	CAT
Copy of an approved ROW Permit (Access Permit) from Johnson County Secondary Roads, or Iowa DOT, for access sufficient to serve the proposed use	CAT	
Sensitive Areas Analysis in compliance with the Sensitive Areas Ordinance	CAT	
CAD line work of the Sensitive Areas Exhibit, following the guidelines below.	CAT	
Stormwater Management Plan (including soil erosion and sediment control) in compliance with the Stormwater Management regulations, or an approved waiver	CAT	

Electronic Submission Requirements for CAD line work:

- Must be in AutoCAD 2017 or older and .dwg format (.dxf is also acceptable, no .zip files will be accepted).
- Submissions must use Coordinate System: NAD_1983_StatePlane_Iowa_South_FIPS_1402_Feet
- If applicable, submission should include information for Sensitive Areas Analysis/Mapping and Stormwater/Soil Erosion Control infrastructure on the site. This includes any limits of disturbance or other impact areas.
- Submission should NOT include legends, legal descriptions, location maps, signature blocks, etc.

MMS Consultants, Inc.
Experts in Planning and Development Since 1975

1917 S. Gilbert Street
Iowa City, Iowa 52240
319.351.8282
mmsconsultants.net
mms@mmsconsultants.net

JOHNSON COUNTY
FILED
MAY 15 2025
PLANNING, DEVELOPMENT & SUSTAINABILITY

Environmental Specialists
Landscape Architects
Land Planners
Land Surveyors
Civil Engineers

May 13, 2025

Josh Busard
Johnson County Planning, Development, & Sustainability Dept.
913 S. Dubuque St, Suite 204
Iowa City, IA 52240

RE: Carex Hills – Site Plan

Dear Josh,

On behalf of Carex Properties LLC, Curtis Schoenthaler, we are submitting a combined Preliminary and Final Plat for creation of a 1 Lot subdivision located in the SE ¼ of the SE ¼ of Sec. 11-T79N-R7W IWV Road SW in Johnson County, Iowa. The property was previously approved for rezoning from Ag to C-Ag and is 9.23 acres in size.

The proposed use is a landscape business with 17 employees. Days of operation are 7 days a week. A new well and septic system will need to be installed to service this lot, and a sensitive areas report has been included for review.

Please let us know if you have any questions or concerns.

Respectfully submitted,

Christopher A. Thompson, P.E.

10656-002_Letter of Intent_Site_Plan.docx

SECONDARY ROADS DEPARTMENT

JOHNSON COUNTY ENGINEER	ASSISTANT COUNTY ENGINEER	ASSISTANT COUNTY ENGINEER	ASSISTANT COUNTY ENGINEER
Greg S. Parker, PE	Rob Winstead, PE & PLS	Ed Bartels, PE & PLS	Paul Wittau, PE
ASSISTANT TO THE ENGINEER	MAINTENANCE SUPERINTENDENT	ASSISTANT MAINTENANCE SUPERINTENDENT	ROADSIDE VEGETATION MANAGER/ WEED COMMISSIONER
Jesse Ward EI	Kevin Braddock	Shannon Smith	Chris Henze

4810 Melrose Avenue West, Iowa City, Iowa 52246 Phone: 319.356.6046 FAX: 319.339.6133 www.johnsoncountyiowa.gov

February 3, 2025

Fiddlehead Gardens LLC, Curtis Schoenthaler
PO Box 621
Iowa City, IA. 52244

Your Permit To Perform Work Within County Right Of Way (2025-001) to add a driveway on IWV Rd SW 500' West of Hurt Rd SW on the North of the road.

The driveway will require a 15''x 30' culvert minimum with aprons and 8:1 side slopes with a maximum top width of 40'. The driveway is intended to be used for the entire section but at this time will be used for a house and landscaping business. When there is new development the driveway will need to be upgraded and an another permit will be required. There is a sub drain that will be near the west edge of the driveway that can not be covered up.

At this time you do not have a person or contractor listed for doing the work. When you chose who will be doing the work and before the work is started we will need their name and proof of insurance.

When you are working within the county right of way you are required to use the correct traffic control. Iowa DOT TC-Series Standard Road plan. If you have any questions you can call 319-356-6046.

Shannon Smith

Shannon Smith

Assistant Maintenance Superintendent
ssmith@johnsoncountyiowa.gov
Johnson County Secondary Roads Department
4810 Melrose Avenue West
Iowa City, Iowa 52246
319.356.6046 319.339.6133 (fax)

SECONDARY ROAD DEPARTMENT
4810 MELROSE AVENUE WEST
IOWA CITY, IOWA 52246
TEL (319) 356-6046 FAX (319) 339-6133
EMAIL roads@johnsoncountyiowa.gov

Permit #	2025-061
Fee	$285.00
Cash/Check ☑	Credit Card accepted by contacting our office ☐

*Permit Fee is Non-Refundable

PERMIT TO PERFORM WORK WITHIN COUNTY RIGHT OF WAY

PLEASE PRINT

NO PERMIT WILL BE REVIEWED UNTIL CERTIFICATE OF INSURANCE AND PAYMENT HAS BEEN RECEIVED

APPLICANT NAME: Fiddlehead Gardens LLC, Curtis Schoenthaler

MAILING ADDRESS: PO Box 621

CITY, STATE, ZIP: Iowa City, IA 52244

PHONE NUMBER(S): [redacted]

ADDRESS/LOCATION OF PROPOSED WORK: SE 1/4 of the SE 1/4 of Sec. 11-T79N-R7W Johnson County

Pracel - 1111476001

SECTION 11 TOWNSHIP 79N RANGE 7W 1/4 SECTION SE & SE

SUBDIVISION NAME: Carex Hills LOT #: 1

ZONING APPLICATION #: PZC-24-28601

DETAILED DESCRIPTION OF PROPOSED WORK (driveway entrance, field entrance, pave driveway, clean ditch, cut brush, 50-50 rock sharing, etc.) Driveway entrance to a proposed future subdivision

DATE THE SITE WILL BE MARKED WITH A FLAG: TBD I went 500 ft from S of Hurt Rd there is a lath in the fence

PERSON/CONTRACTOR DOING PROPOSED WORK: TBD

I, (Print Full Name) Curtis Schoenthaler, do solemly swear that I have read the entire permit application and have fully completed all statements and provided all data called for herein truthfully and correctly and I agree to abide by all General Provisions and Special Provisions set forth herein.

SIGNATURE OF APPLICANT — DATE 1/27/25

FOR COUNTY USE

PRELIMINARY INSPECTION BY: SS DATE: 1/29/25

FINAL INSPECTION BY: _____ DATE: _____

THE CULVERT DIAMETER REQUIRED AT THIS LOCATION IS 15" INCHES.

THE FOLLOWING SIGNATURE IS YOUR AUTHORITY TO PROCEED WITH THE WORK AS STATED ABOVE AND WITH REGARD TO THE SPECIAL PROVISIONS.

APPROVED BY: C _____ DATE: 3 FEBRUARY 2025

COUNTY ENGINEER

**APPLICATION IS VALID FOR ONE (1) CALENDAR YEAR FROM APPROVAL DATE*

GENERAL PROVISIONS

1. At the time of the application for permit is submitted, the applicant must have on file with Johnson County the **CERTIFICATE OF INSURANCE** from whoever is doing the proposed work.

   Please note: On the Certificate of Insurance, contractors are required to note the following:

   "Johnson County is an additional insured as the County's interests may appear."

   The County may, if deemed unnecessary by the nature of the proposed work, waive the requirement of the County being listed as additional insured.

2. Johnson County, its officers and employees assume no responsibility for property of permit holder by issuance of this permit.

3. The permit holder shall comply with the terms and conditions of the permit and any attached sheets. The permit holder shall take all reasonable precautions to protect and safeguard live and property of the traveling public and adjacent property owners, and shall indemnify and hold harmless Johnson County, its officers and employees for any damages that may be sustained on account of such construction.

4. The permit holder shall be responsible for any damages to the secondary road system of the County. The permit holder shall hold Johnson County, its officers and employees harmless for any damages that may result to the secondary road system of the County, and shall reimburse Johnson County for any expenditure the County may have to make on account of such construction.

5. The permit shall be void in case the construction work performed deviates from the work indicated on the permit. Any construction work that is done that deviates from the permit may be revoked by the County and the costs billed to the permit holder pursuant to Chapter 319, Code of Iowa, as amended by Chapter 1182 of the Laws of the 65th General Assembly. The forgoing shall not limit or restrict any other remedies available to the County.

6. The permit holder must erect and maintain all barricades, warning devices, and signs as required by the Iowa Manual on Uniform Traffic Control Devices.

7. The permit holder must take steps necessary to avoid and reduce inconveniences to traffic whenever possible.

8. The permit holder must notify Secondary Road Department in writing of the fact of the occurrence of any possible reportable accident that occurs while the work is being done.

9. The permit holder is responsible for notifying Secondary Road department within 15 days of completion. The work must be inspected for compliance.

10. No filling will be permitted in the right of way other than that necessary to construct the porposed work.

DRIVEWAY AND FIELD ENTRANCE INFORMATION

1. If the entrance requires a culvert, the minimum diameter size allowed is 15" (fifteen inches), and the minimum length allowed is 30' (thirty feet). The diameter of your culvert will be determined by the Secondary Road Department and will be noted on the permit after the site is inspected.

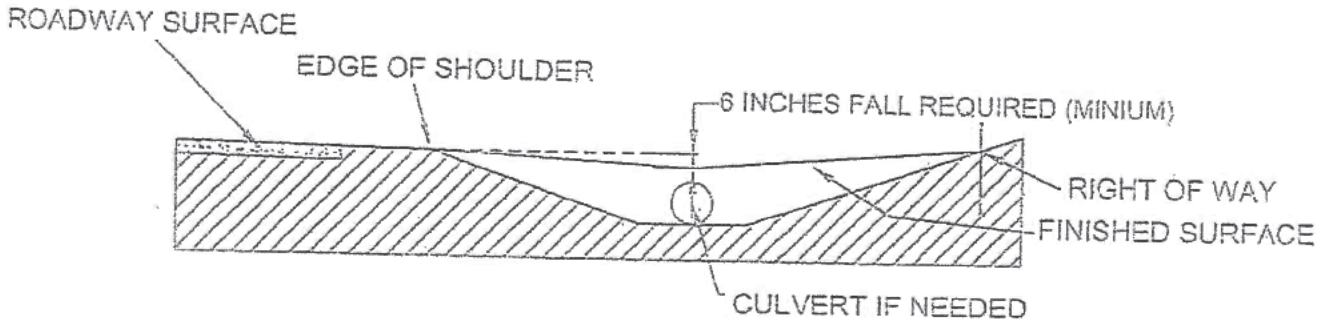
2. The entrance, including drainage structure, grading and surfacing shall be constructed at the applicant's expense, and shall thereafter be kept in repair and maintained by the applicant at his/her own expense. Nothing in the stipulation, however, shall preclude Johnson County from entering upon said entrance on highway right of way and performing necessary maintenance for the protection of the highway.

3. The finished surface elevation of the driveway over the pipe, or place where the pipe would normally be shall be 6" (six inches) lower than the shoulder elevation of the road. This requirement prevents surface water drainage onto the road.

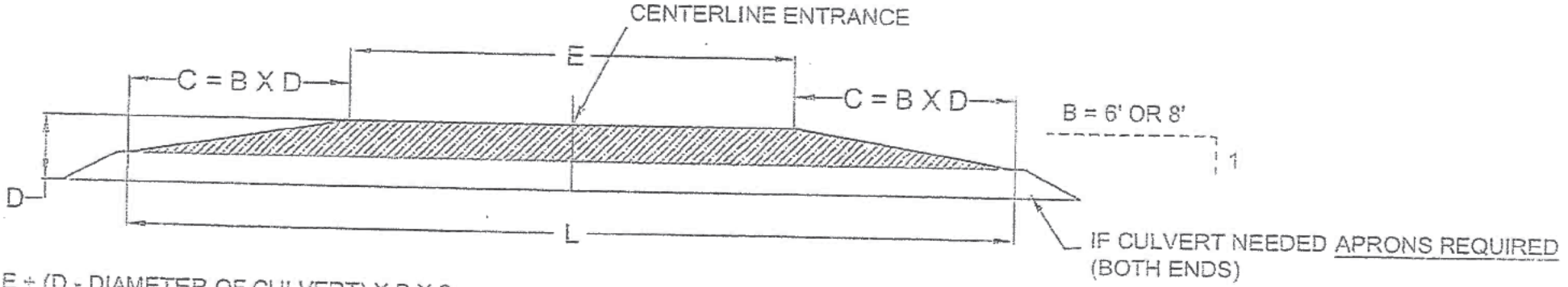
4. As of January 1, 1997, new entrances of paved roads that require a culvert and have 400 to 999 vehicles per day are required to have 6 feet of horizontal to 1 fool vertical slope. Roads with 1,000+ vehicles per day require an 8:1 slope. Entrances that do not require a culvert with 400+ vehicles per day require an 8:1 slope.

5. Only new zinc coated corrugated metal pipe culverts or new ads plastic culverts are permitted. Johnson County will at no time accept maintenance responsibilities for plastic pipes. Headwalls of any type are not allowed. Culvert extensions must be metal to metal, plastic to plastic, or concrete to concrete (no mix-matching).

ENTRANCE CROSS SECTION



(IF SIDE SLOPES REQUIRED THEY SHALL BE 6:1 OR 8:1)



L = E + (D - DIAMETER OF CULVERT) X B X 2

C = LENGTH OF SIDE SLOPE (FROM EDGE OF ENTRANCE TO TOE OF DITCH)

D = DEPTH FO DITCH

E = WIDTH OF DRIVE (20' SINGLE, 40' DOUBLE)

L = LENGTH OF CULVERT

B = 6:1 OR 8:1

EXAMPLE ONLY

E = ENTRANCE WIDTH = 20 FT.
D = DEPTH OF DITCH = 5 FT.
B = SIDE SLOPE = 8 TO 1
CULVERT SIZE = 15 INCHES (1.25 FT.)
5 FT. - 1.25 FT. = 3.75 FT.
3.75 X 8 = 30 FT. X 2 = 60 FT. FOR SIDE SLOPES
60 FT. + 20 FT (SINGLE) = 80 FT TOTAL LENGTH

THIS PAGE FOR COUNTY USE ONLY

SPECIAL PROVISIONS

LOCATION: 500' West of Hart Rd SW North side of IWV Rd SW

SIGHT DISTANCE: West - 500'
East - 750'

DRAINAGE AREA: Road ditch

SPEED LIMIT: 35 MPH

DAILY TRAFFIC COUNT: 2080 Cars per day

SIDE SLOPE: 8:1 With aprons

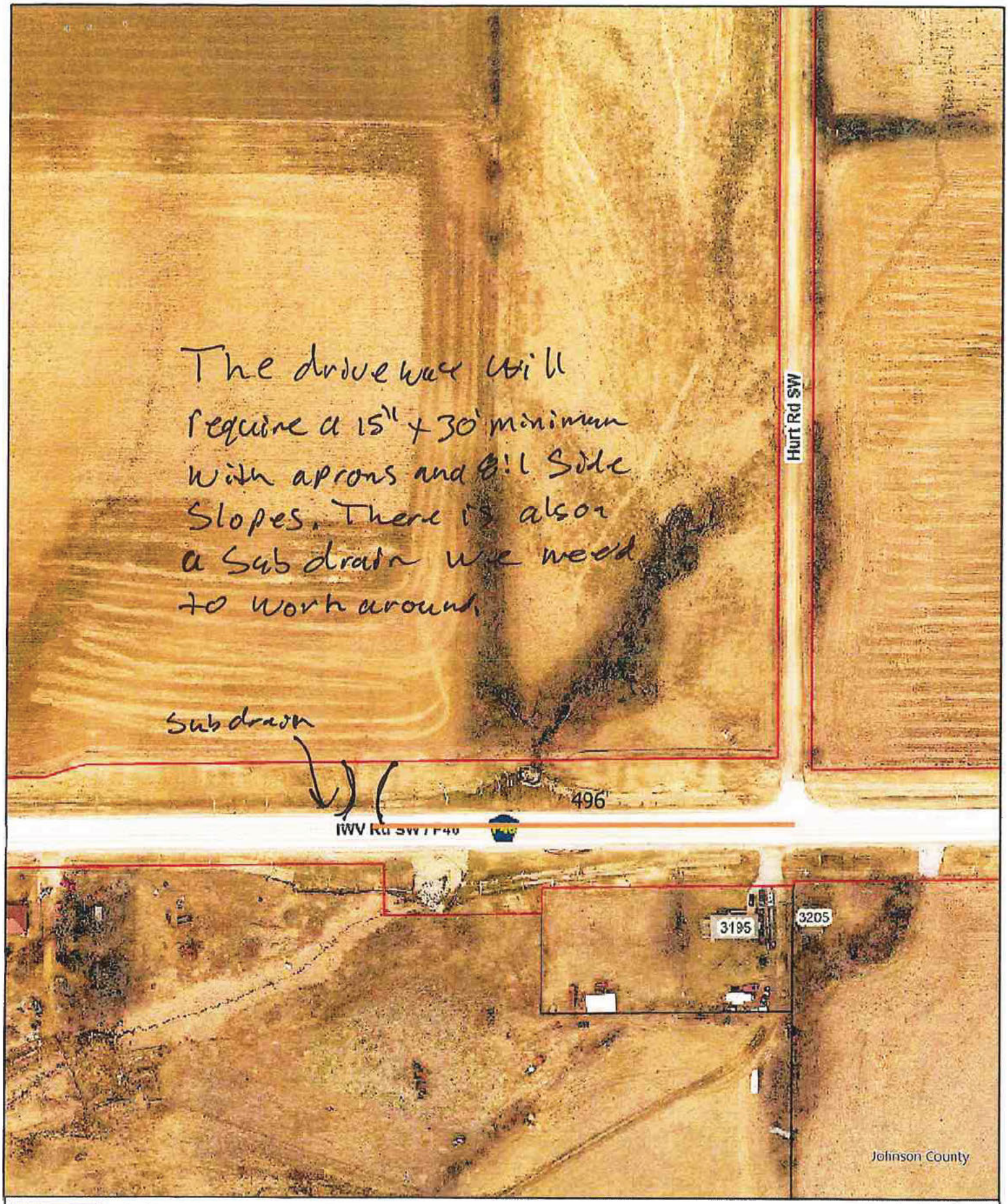
CULVERT SIZE: 15" x 30' Min

INSURANCE COMPANY:

POLICY NUMBER:

ADDITIONAL INSURED?

EXPIRATION DATE:



Johnson County

Johnson County GIS Web Printing

My Map

Printed: 1/28/2025

0 0.01 0.03 mi

1 inch = 147 feet

N W E S

The information presented herein is intended to be an accurate representation of existing records. Johnson County assumes no liability for errors or omissions. Users relying on this information do so at their own risk.

Prepared For:

Carex Properties LLC
Johnson County Planning Development & Sustainability

Prepared By:

Lee Swank
l.swank@mmsconsultants.net
MMS Project No. 10656-002
March 31, 2025

SENSITIVE AREAS REPORT for

CAREX HILLS

SE1/4, Se1/4, SEC.11-T79N-R7W
JOHNSON COUNTY, IOWA

MMS Consultants, Inc.
Experts in Planning and Development Since 1975

1917 S. Gilbert Street
Iowa City, Iowa 52240
319.351.8282
mmsconsultants.net
mms@mmsconsultants.net

Civil Engineers
Land Surveyors
Land Planners
Landscape Architects
Environmental Specialists

Signed this 31 day of March, 20 25.

(Curtis Schoenthaler)

Approved by, this ___ day of _____, 20___

(Johnson Co. Planning, Development & Sustainability)

SENSITIVE AREAS STUDY

EXECUTIVE SUMMARY

The following sensitive areas study has been conducted for the approximately 8-acre study area located at the NW corner of the intersection of IWV Road and Hurt Road SW. The study area is located in the SE1/4, SE1/4 of Section 11, Township 79 North, Range 7 West in Johnson County Iowa. A Site Location and Vicinity Map are presented in Appendix A as Figure 1.

The applicant proposes to subdivide the property to create one 8-acre buildable lot on which to construct a landscaping business. In accordance with the requirements of Chapter 8:3 of the Unified Development Ordinance (UDO) of Johnson County, a sensitive areas study is required. The sensitive areas study is limited to the 8-acre development area as illustrated on the Final Plat. Background and supporting information in this study are presented in order as outlined in the UDO 8:3.5 Sensitive Areas Regulations section.

MMS Consultants Inc. performed assessments for Critical Wildlife Habitat, Floodplain/Floodway, Prairies, Savannas, Significant Slopes, Stream Corridors/Watercourses/Surface Water Bodies, Wetlands and Woodlands. Field observations were completed on August 9th, 2024, and January 29th, 2025. Bear Creek Archeology was contracted to complete the historical properties portion of the sensitive areas study. As a result of the sensitive areas surveys, approximately 335 linear feet of watercourse and 0.30 acres of sensitive woodland were identified within the survey area. Impacts to sensitive woodlands and watercourses are not proposed at this time. A conservation easement has been placed around these features.

SITE DESCRIPTION

At present day, the study area is a mix of pasture/hayfield and row crop. A treed fence line runs North/South through the western ½ of the site and a treed creek runs north south through the southern ¼ of the site. Historical aerial photos indicate the site has been maintained as row crop or pasture for the last century.

CRITICAL WILDLIFE HABITAT

The U.S. Fish & Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) website was utilized to review federally listed plant and animal species that might be present within the study area. According to the IPac Website, the following species could potentially be affected by the project: Indiana Bat, Northern Long-eared Bat, Higgins Eye Mussel, and the Eastern Prairie Fringed Orchid. In addition, the IDNR was consulted to provide an environmental review of the study area. Based on their evaluation, no site-specific records of rare species or significant natural communities were identified in the study area. A copy of their response letter has been included in Appendix B.

During the field visit in August, on-site investigations were conducted to determine the presence of potential habitat for any of the species listed on the IPaC website. During the survey, no threatened vegetative species were identified. The small stream within the property does not contain sufficient flow to support the Higgins Eye Mussel.

The study area was investigated to determine if suitable habitat for the Indiana Bat or the NLEB was present. Trees are present along the fencerow to the west and along the section of stream at the center of the site. This treed area measures under 10 acres and is considered isolated as it is not connected to another tract of trees. As this isolated tract is under 10 acres in size and not within 1,000' of a larger tract, it is not considered suitable habitat for bat species.

The Rusty Patched Bumble Bee (RPBB) map from the Fish and Wildlife Service (USFWS) was also reviewed to determine if the study area lies within any 'High Potential Zones'. The map, presented in Appendix A as Figure 6,

indicates the parcel does not fall within a high potential zone, and as such no further consultation with USFWS is required.

FLOODPLAIN/FLOODWAY

The FEMA National Flood Hazard Map was reviewed to determine if any mapped floodplain or floodway is present within the study area. The map, presented as Figure 5 of Appendix A, does not indicate the presence of any floodplain or floodway within the study area.

HISTORIC PROPERTIES

Bear Creek Archeology (BCA) was contacted to conduct a Phase I Archeological Survey for the study area. As a result of the survey, no further archaeological work is recommended for the property. A full copy of their report has been submitted to the county in conjunction with this report.

PRAIRIES

Aerial photos ranging from 1930-2023 were obtained from the Johnson County Property Information Viewer website and are presented chronologically in Appendix C. Aerial photo interpretations indicate roughly the entirety of the vegetation within the study area has been subject to a regular disturbance either by mowing or row cropping. During the site visit in August, the non-treed portions of the study area were inspected for the presence of native prairie species. The study area is dominated by grass species and clover. Prevalent species identified throughout the study area have been inventoried and presented in Table 1 below.

Packard and Mutel's, *The Tallgrass Restoration Handbook* was utilized to further categorize the vegetation identified. Coefficients of Conservatism (C-Values), as listed within Table 3 of *The Tallgrass Restoration Handbook,* were provided for each species identified. Only six species identified throughout the study area have a listed C-value. None of which have a C-value of five or more. The UDO defines a prairie as "areas at least 0.3 acres in size that have at least 4 prairie grass species and 10 broadleaf plant species with a coefficient of conservatism of 5 or greater in either Illinois or Missouri…". Considering the vegetation of the site did not exhibit such species diversity or meet the species criteria, the study area does not contain vegetation that meets the UDO's definition of prairie or prairie remnant.

Table 1. Identified Plant List			**C-VALUES**	
	Species Name	**Common Name**	**ILLINOIS**	**MISSOURI**
	Ascelpias syriaca	Common Milkweed	0	0
	Carex vulpinoides	fox sedge	2	4
	Chloris verticillata	Windmill Grass	-	1
	cirsium discolor	field thistle	-	3
	Cirsium vulgare	Bull Thistle	-	-
	Convolvulus arvensis	Bindweed	-	-
	Cyperus esculentus	yellow nutsedge	0	1
	Echinochloa crus-galli	Barnyard Grass	-	-
	Erigeron annuus	Eastern Daisy Fleabane	1	1
	Festuca arundinacea	Tall Fescue	-	-
	Phalaris arundinacea	Reed Canarygrass	-	-
	Plantago major	Common Plantain	-	-
	Setaria faberi	Japanese Foxtail	-	-
	Taraxacum officinale	Dandelion	-	-
	Trifolium repens	White Clover	-	-

	Trifolium pratense	Red Clover	-	-
	Verbena urticifolia	White Vervain	-	-
	Viola sororia	Blue Violet	3	2

- Species not listed in Packard & Mutel *The Restoration Handbook* were given a C-value of (-).

SAVANNA

Savannas are characterized as native plant species associated with large open grown Oak or Hickory trees widely spaced. No Oak or Hickory trees were identified within the study area.

SIGNIFICANT SLOPES

The topography of the study area was analyzed utilizing Johnson County LIDAR data to determine if Critical (25%-35%) or Protected (>35%) slopes are present. No such features were identified. The sight is gently rolling with an average slope of 10-15% and the steepest slopes at 20%.

STREAM CORRIDORS/WATERCOURSES/SURFACE WATER BODIES

The USGS Topographic Map provided in Appendix A, does not indicate the presence of any aquatic features within the study area. The Johnon County Contour map indicates the presence of a drainageway at the center of the site, and aerial photographs of this area indicated a watercourse may be present.

During the site visit in August, the study area was investigated for the presence of aquatic features. The drainageway at the center of the site transitions from a subtle swale upslope, to an eroded feature, to a defined stream channel with a bed, bank, and ordinary high water mark. Approximately 335 linear feet of intermittent stream channel (classified as a watercourse under the UDO) are present within the study area. At the time of the site visit, flowing water was identified within the channel. It is possible field tiles contribute to the flow of the channel, but none were easily identified. This feature is subject to a 30' buffer which has been illustrated in the Watercourse Exhibit within the appendix of this report. A conservation easement has been placed around this feature.

WETLANDS

The USDA NRCS hydric soils map, presented in Figure 3 of Appendix A, shows the majority of the study area is mapped as 0% hydric, with approximately 20% mapped as 5% hydric. The U.S. Fish and Wildlife Service's National Wetland Inventory (NWI) map, presented in Figure 4, indicates the presence of the stream channel. The USGS Quad map indicates the presence of a few drainageways within the site.

Due to the presence of the mapped stream on the NWI map and the drainageways, it was determined further investigation into wetlands was warranted. An on-site investigation was conducted during the August site visit to document soils, vegetation, and hydrology to determine the presence of wetlands. Field verification followed the methodology outlined in the *Corps of Engineers Wetland Delineation Manual* (January 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version Two).

Wetland sample points were taken within two of the main drainageways within the property and near the stream channel. The "Photo and Wetland Sample Point Location Map" in the appendix illustrates the location of the sample points. No wetlands were identified within the study area as a result of the survey. Sample points one and two exhibited wetland vegetation due to the presence of reed canary grass, and wetland hydrology by meeting the two secondary indicators of geomorphic position and by passing the FAC-Neutral test. However, none of the sample points met any hydric soil indicators. So, although wetland vegetation and hydrology were identified at sample points one and two, the lack of hydric soils ruled out the presence of wetlands.

WOODLANDS

Historical aerial photo interpretations throughout the last century indicate that the majority of the site has been in row crop production or in pasture grass for the last century. In the 1930s, a small grouping of trees can be identified around the stream channel. A fence row west of the treed stream channel started to populate with trees around the 1970s. Both treed areas increased in density and quantity over the subsequent decades. The boundary of the treed area of both the fence row and stream appears relatively unchanged since 2006.

The treed areas of the site were investigated during the August site visit to document tree species and understory vegetation to determine if the species composition met the definition standards of a sensitive woodland, as outlined in the UDO. Dominant tree species observed within the site include Elm, Silver Maple, Hackberry and Boxelder. Other tree species observed include Mulberry, Black Cherry, Walnut, Willow and Dogwood. The composition of the tree species is typical of an association of native forest trees of Iowa. The composition of understory species along the stream channel is slightly more diverse than that of the fence row. A large portion of the treed fence row is dominated by brome grass, which outcompetes other native species. Table 2, below, documents the herbaceous species observed within both treed areas. The book *Wildflowers of Iowa Woodlands,* by Runkle and Bull was used as a reference to help classify the understory vegetation of the wooded area. Table 2 indicates whether the species identified in the wooded area are listed in *Wildflowers of Iowa Woodlands*. According to the UDO, a woodland is defined as "an association of native forest trees...with a mix of understory wildflower species, such as those listed in *Wildflowers of Iowa Woodlands* by Runkle and Bull, 1979." One of the UDO criteria for classifying an area as a woodland is that a minimum of four understory wildflower species must be identified. Based on the survey, eight understory wildflower species listed in Runkle and Bull were identified.

Table 2: Woodland Understory Vegetation			**Packard and Mutel C-Values**	
Species Name	**Common Name**	**Runkle & Bull ID**	**Illinois**	**Missouri**
Alliaria petiolata	Garlic Mustard	0	-	-
Amphicarpa bracteata	Hog Peanut	1	5	4
Arctium minus	Burdock	1	-	-
Ambrosia artemisiifolia	Common Ragweed	0	-	-
Bromus inermis	Smooth Brome	0	-	-
Carex blanda	Common Woodland Sedge	0	-	-
cirsium discolor	field thistle	0	0	3
Cornus racemosa	Gray Dogwood	0	1	3
Cryptotaenia canadensis	Canadian Honewort	0	-	-
Gallium triflorum	Fragrant Bedstraw	1	-	-
Hackelia virginiana	Beggar's-Lice	0	-	-
Parthenocissus quinquefolia	Virginia Creeper	1	-	-
Pilea pumila	Canadian Clearweed	0	-	-
Ribes uva-crispa	Gooseberry	0	-	-
Sanicula odorata	Clustered Black Snakeroot	1	4	3
Smilax rotundifolia	Greenbrier	0	-	-
Taraxacum officinale	Dandelion	1	-	-
Toxicodendron radicans	Poison Ivy	1	1	1
Verbena urticifolia	White Vervain	0	-	-
Viola sororia	Blue Violet	1	3	2
TOTAL		8		

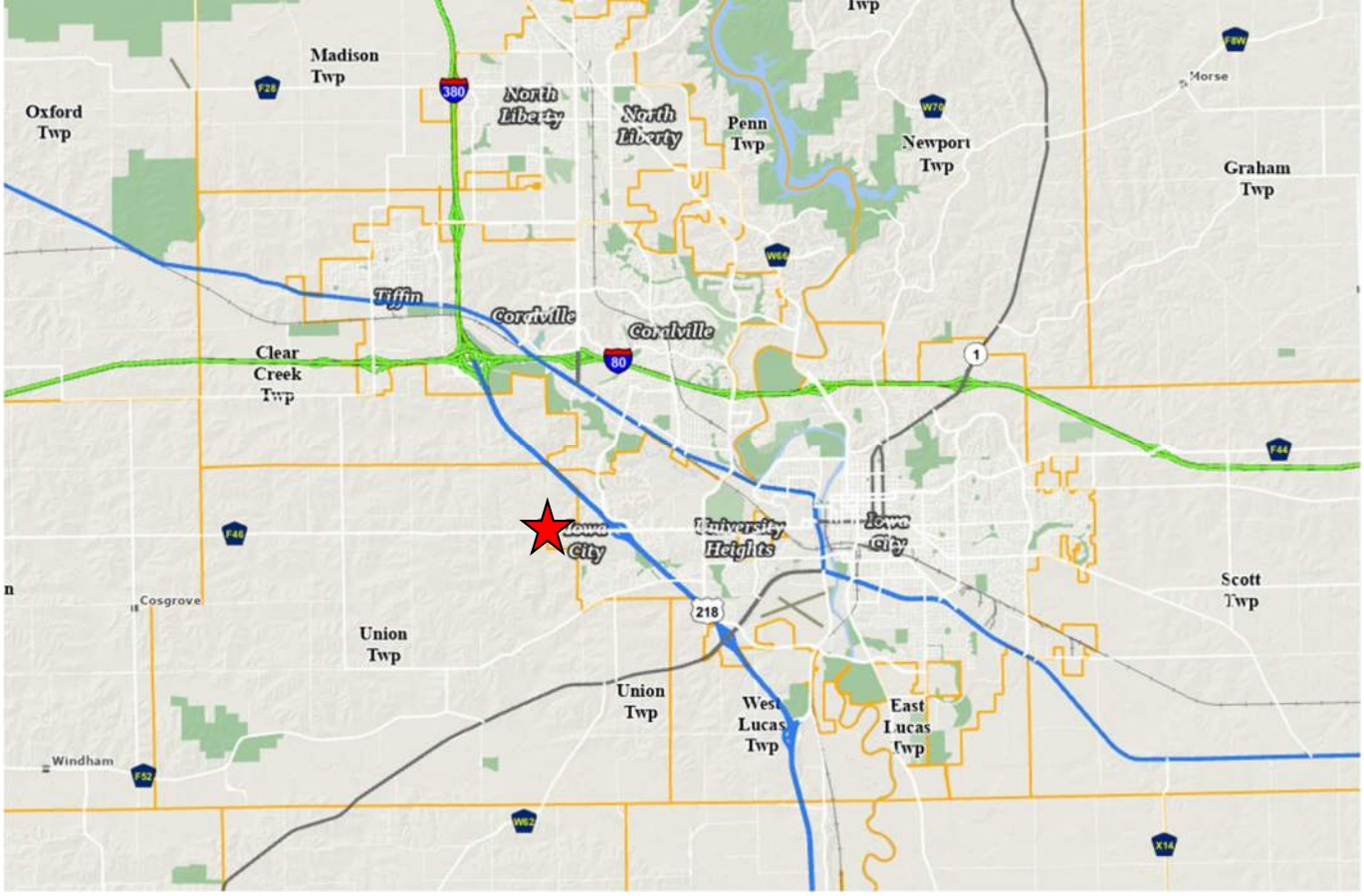
Based on the composition of the trees and understory vegetation, the wooded areas of the site meet the definition of a Sensitive Woodland as defined by the UDO. However, the treed fence row and the stream channel are not connected wooded areas. The two treed areas are separated by approximately 75' of pasture without contiguous canopy cover. The dominant species within the pasture are grass species, not typical of a woodland ecosystem. Due to the non-contiguous canopy cover, and the composition of the understory vegetation it was determined that the two wooded sections are separate, not contiguous. The treed fence line measures at 0.30 acres, under the two acre-threshold. The wooded region surrounding the stream channel was measured at 0.30 acres also, however as these trees are contiguous with the sensitive watercourse, the treed area is deemed sensitive as well. The woodland boundary was recorded with a handheld GPS. Approximately 0.30 acres of woodland were delineated. The mapped area is presented in Appendix E as the Woodland Exhibit and includes the corresponding 50' buffer area as required by the UDO.

SUMMARY AND CONCLUSIONS

Preliminary site data research as well as field observations were conducted for sensitive area assessments as required by the Johnson County Unified Development Ordinance to protect sensitive areas within Johnson County. The sensitive areas assessment was conducted for the study area as required due to the subdivision request.

Land use and management practices of the study area have mainly consisted of agricultural use for the last century. Collected data and field observations by MMS Consultants Inc. As a result of the sensitive areas surveys, approximately 335 linear feet of watercourse and 0.30 acres of sensitive woodland were identified within the survey area. Impacts to sensitive woodlands and watercourses are not proposed at this time. A conservation easement has been placed around these features.

Appendix A



Vicinity Map

LOCATION MAP

Designed by: LRS	Scale: N.T.S.
Drawn by: LRS	Date: 01/31/2025
Checked by: LRS	Project No: IC 01/31/2025

FIGURE 1: SITE LOCATION & VICINITY MAPS

CAREX HILLS
IWV ROAD SW, JOHNSON COUNTY
SE1/4, SE1/4, SEC.11-T79N-R07W
Maps source: Johnson Co. Property Information Viewer

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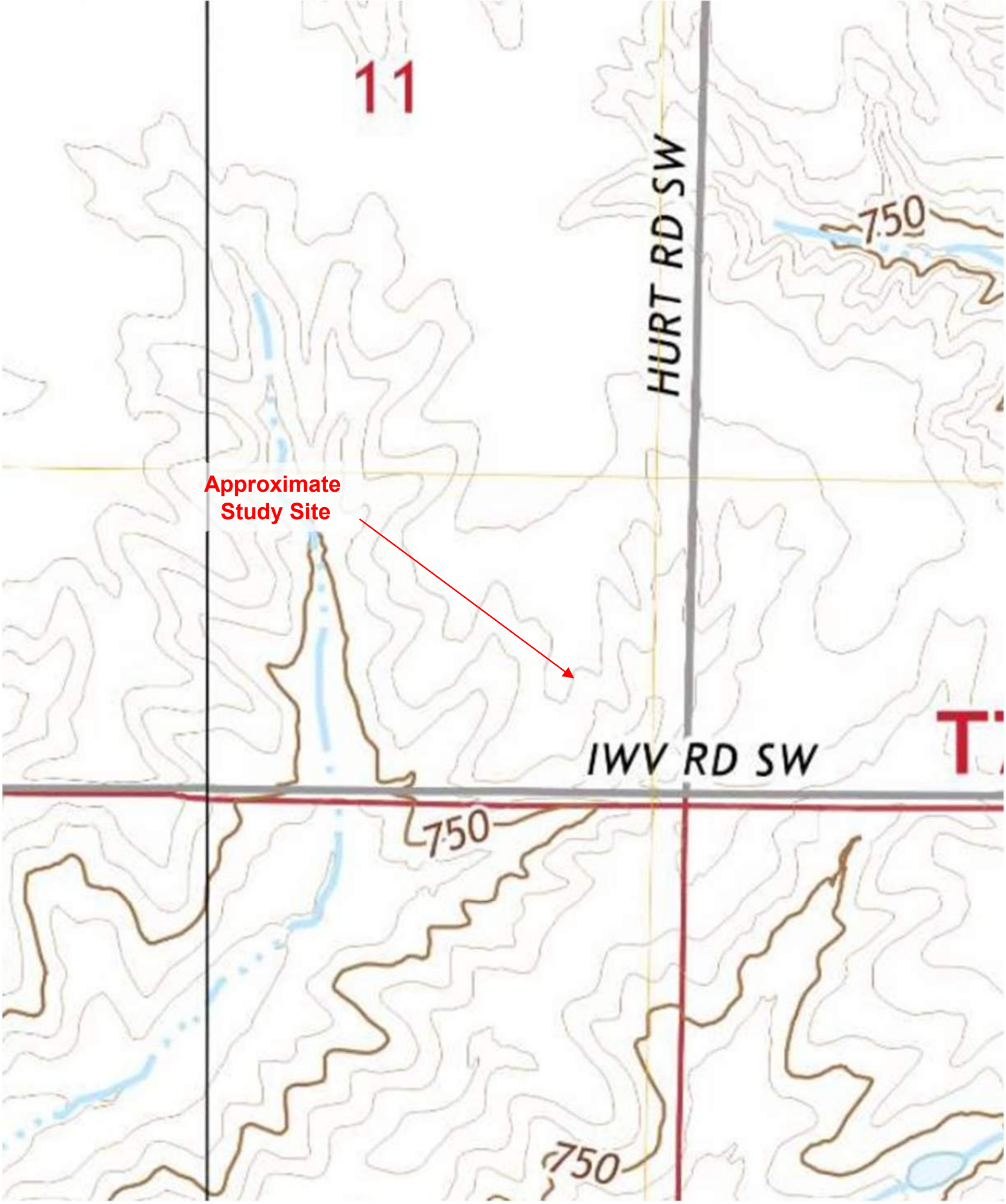
NORTH



Designed by: LRS	Scale: Unknown
Drawn by: LRS	Date: 01/31/2025
Checked by: LRS	Project No:: IC 01/31/2025

FIGURE 2: USGS TOPOGRAPHIC MAP

CAREX HILLS
IWV ROAD SW, JOHNSON COUNTY
SE1/4, SE1/4, SEC.11-T79N-R07W
Source: National Map Viewer- http://viewer.nationalmap.gov/viewer/

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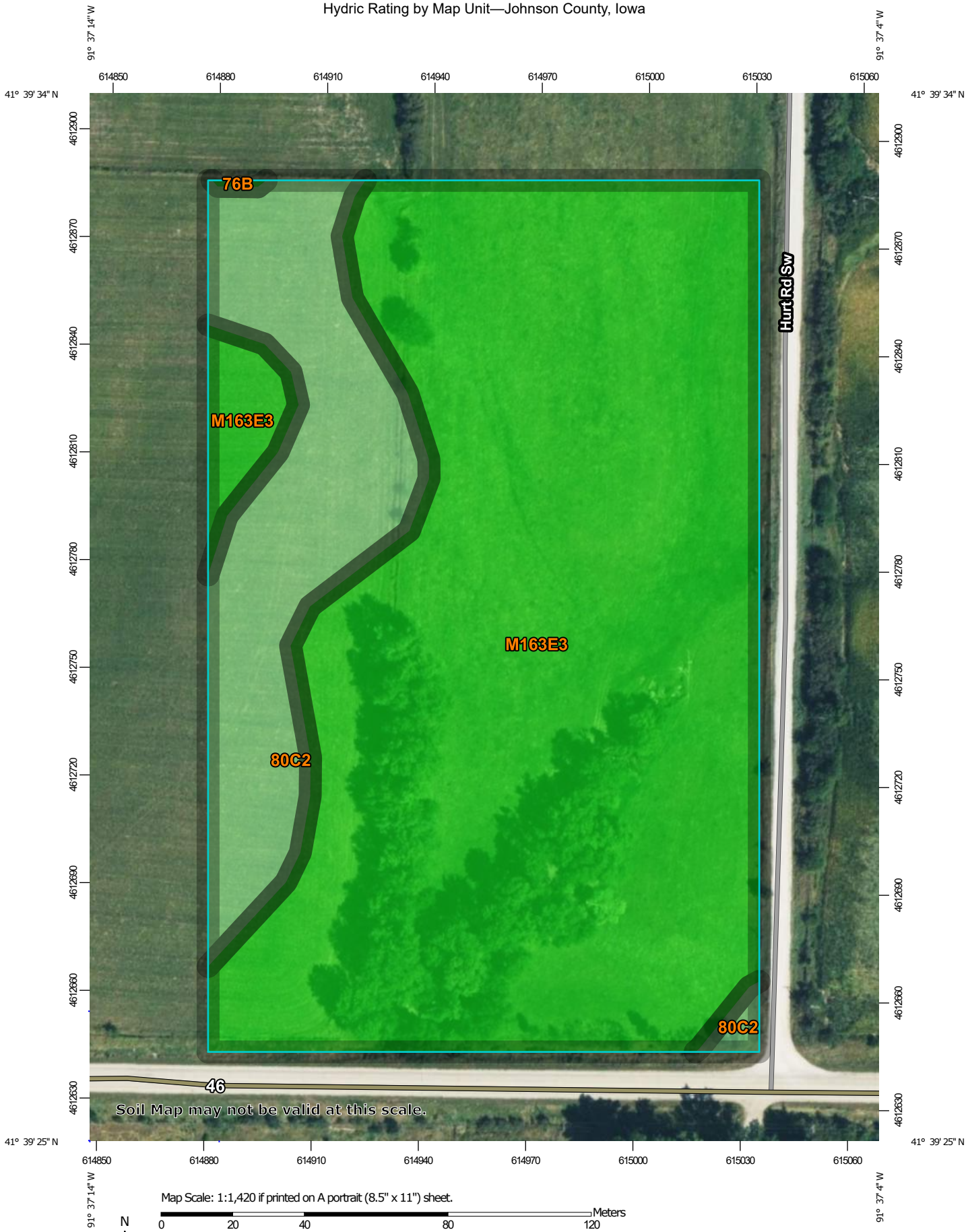
NORTH



Map Scale: 1:1,420 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 20 40 80 120

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Soil Rating Lines
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Soil Rating Points
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Johnson County, Iowa
Survey Area Data: Version 27, Aug 29, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Data not available.

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
76B	Ladoga silt loam, 2 to 5 percent slopes	0	0.0	0.1%
80C2	Clinton silt loam, 5 to 9 percent slopes, eroded	5	1.8	19.2%
M163E3	Fayette silty clay loam, till plain, 14 to 18 percent slopes, severely eroded	0	7.5	80.7%
Totals for Area of Interest			**9.3**	**100.0%**

U.S. Fish and Wildlife Service
National Wetlands Inventory

Wetlands

February 4, 2025

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

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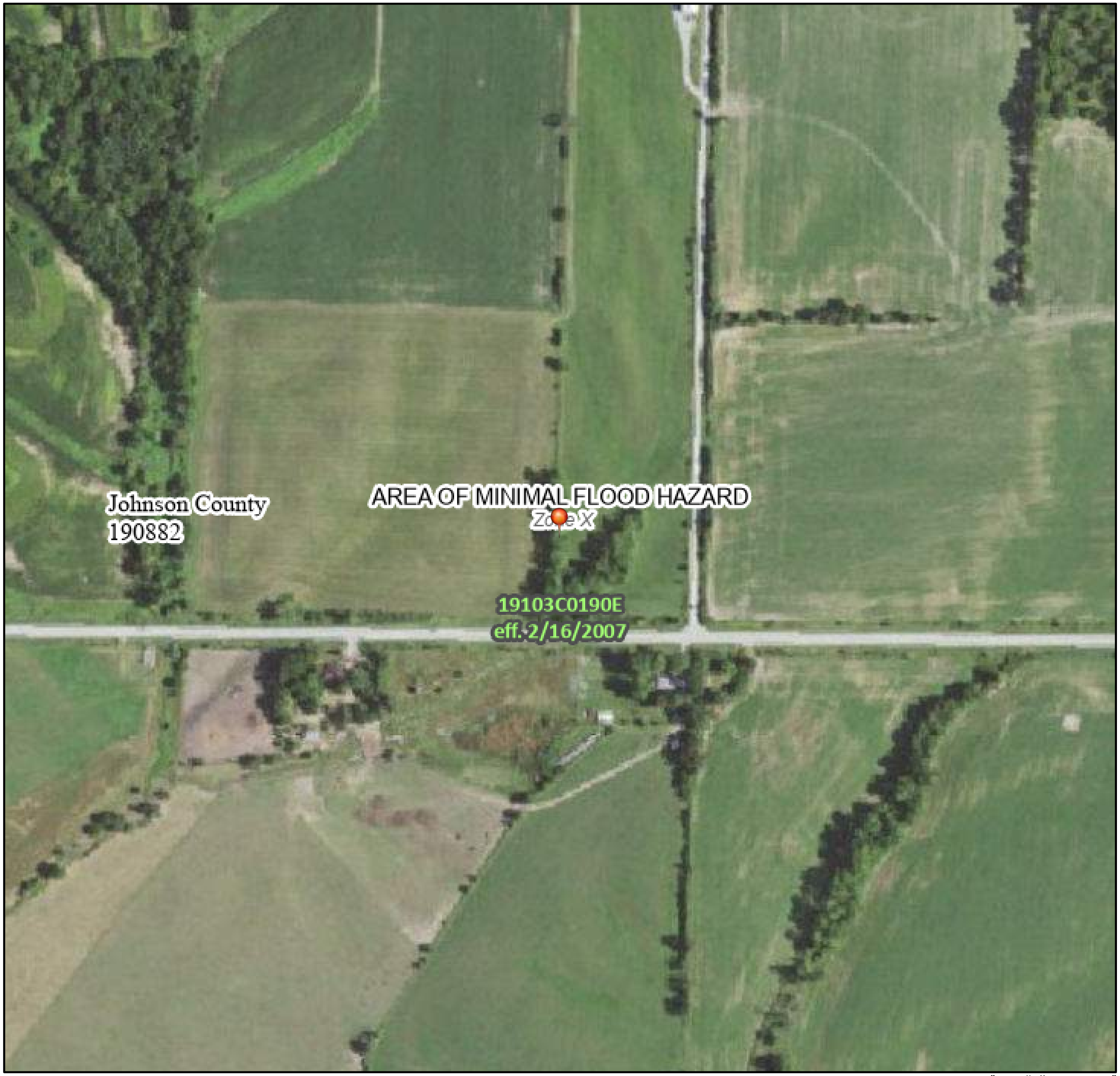

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-XULVGLFWLRQ %RXQGDU
&RDVWDO 7UDQVHFW %D
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8QPDSSHG

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SRLQW VHOHFWHG E\ WKH XV
DQ DXWKRULWDWLYH SURSHU

7KLV PDS FRPSOLHV ZLWK)(0$ V VWDQ
GLJLWDO IORRG PDSV LI LW LV QRW YR
7KH EDVHPDS VKRZQ FRPSOLHV ZLWK)(
DFFXUDF\ VWDQGDUGV

7KH IORRG KD]DUG LQIRUPDWLRQ LV GH
DXWKRULWDWLYH 1)+/ ZHE VHUYLFHV S
ZDV H[SRUWHG RQ DQG GRHV QRW
UHIOHFW FKDQJHV RU DPHQGPHQWV VX
WLPH 7KH 1)+/ DQG HIIHFWLYH LQIRUP
EHFRPH VXSHUVHGHG E\ QHZ GDWD RYH

7KLV PDS LPDJH LV YRLG LI WKH RQH R
HOHPHQWV GR QRW DSSHDU EDVHPDS
OHJHQG VFDOH EDU PDS FUHDWLRQ G
),50 SDQHO QXPEHU DQG),50 HIIHFWLY
XQPDSSHG DQG XQPRGHUQL]HG DUHDV
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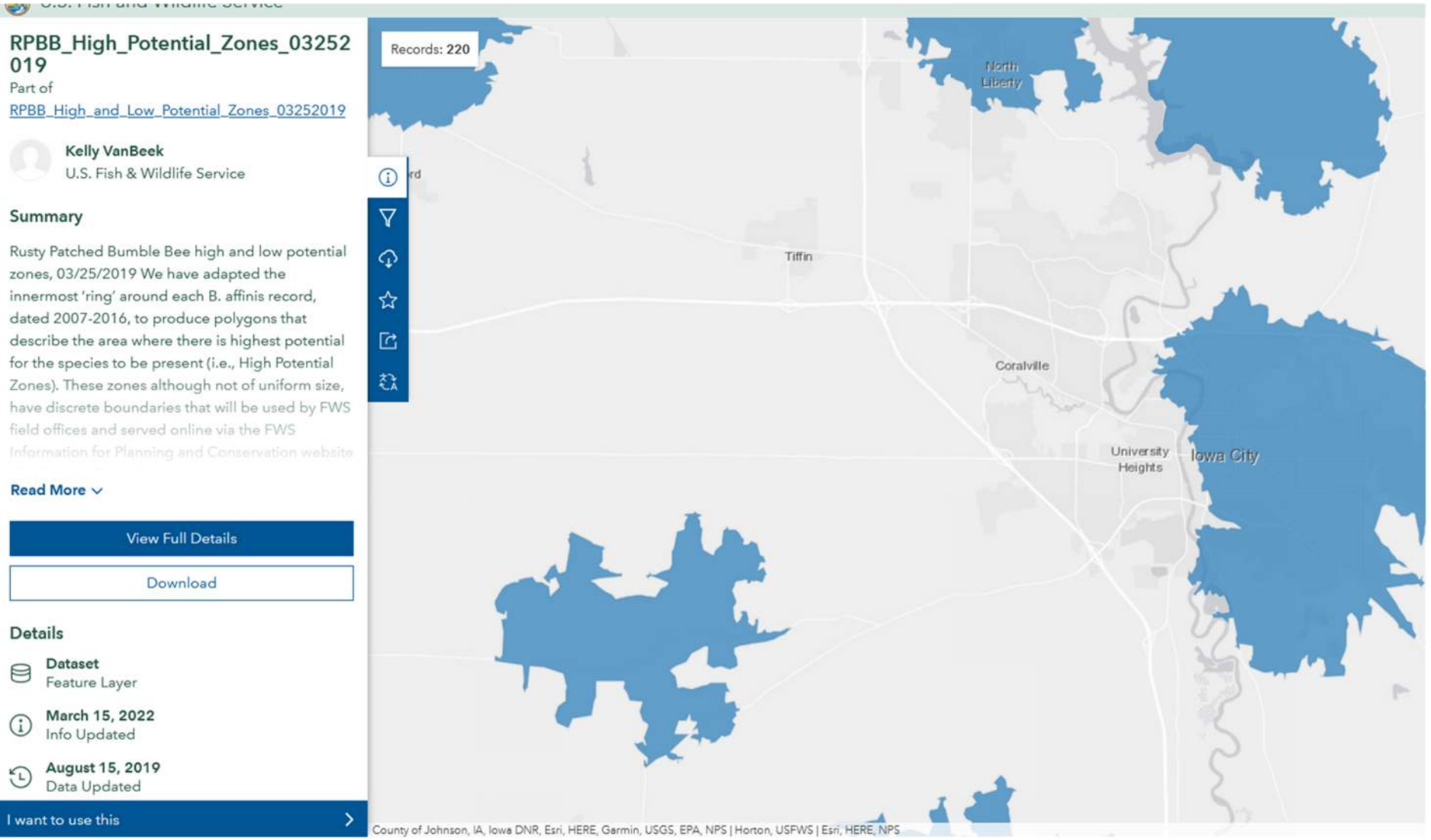
%DVHPDS ,PDJHU\ 6RXUFH 86*6 1DWLRQDO 0DS



NORTH

FIGURE 6: Rusty Patched Bumble Bee Map (USFWS)

CAREX HILLS
IWV ROAD SW, JOHNSON COUNTY
SE1/4, SE1/4, SEC.11-T79N-R07W
Source: National Map Viewer- http://viewer.nationalmap.gov/viewer/

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Designed by: LRS	Scale: Unknown		
Drawn by: LRS	Date: 01/31/2025		
Checked by: LRS	Project No:: 01/31/2025	IC	

Appendix B

Bear Creek Archeology
Summary
Report Dated February 2025

Iowa DNR
Response Letter
Dated 02/03/2025

MANAGEMENT SUMMARY

The following Phase I archeological investigation was conducted for Fiddlehead Gardens LLC, by Bear Creek Archeology, Inc., for a proposed project in central Johnson County, Iowa. Set northwest of the intersection of Hurt Road and IWV Road, the project area is within the E½, SE¼, SE¼ of Section 11, T79N, R7W. The rectangular project area covers a total area of 4 ha (10 ac).

In an archival review, no inventoried properties or recorded archeological sites were identified within the project area. A previous Phase I cultural resource survey covered the southernmost portion of the project area with negative results. Archival maps and aerial photographs show no buildings or structures within the project area. The project area appears in agricultural usage since at least the early twentieth century.

At the time of the survey in December of 2024, the project area was found under mixed cover, with portions in grass and harvested fields. A geomorphic survey consisting of ten soil cores encountered disturbed soils in the upland portions and a partially intact soil on the south side of a drainageway. The western third of the project area was covered by pedestrian survey, the eastern portion ridge spurs were covered by systematic shovel testing, and the south side of the drainageway was covered by auger testing. No artifacts were identified. Given the negative results of the field investigation, no further cultural resources work is recommended for the project area.

Information contained in this report relating to the nature and location of archeological sites is considered private and confidential and not for public disclosure in accordance with Section 304 of the National Historic Preservation Act (54 USC § 307103); 36 CFR Part 800.6(a)(5) of the Advisory Council on Historic Preservation's rules implementing Sections 106 and 110 of the National Historic Preservation Act; Section 9(a) of the Archaeological Resource Protection Act (54 USC § 100707), and Chapter 22.7, subsection 20 of the Iowa Code.

Lee Swank

From: casey.laskowski@dnr.iowa.gov
Sent: Monday, February 3, 2025 1:48 PM
To: Lee Swank
Subject: 2025-0152 Environmental Review Request - FiddleHead Gardens

41.6590/-91.6196; Johnson County
Sec. 12/T79N/R07W

Thank you for inviting the Department to comment on the impact of this project. The Department has searched for records of rare species and significant natural communities in the project area and found no site-specific records that would be impacted by this project. However, these records and data are not the result of thorough field surveys. If listed species or rare communities are found during the planning or construction phases, additional studies and/or mitigation may be required.

This email is a record of review for protected species, rare natural communities, state lands and waters in the project area, including review by personnel representing state parks, preserves, recreation areas, fisheries and wildlife but does not include comment from the Environmental Services Division of this Department. This email does not constitute a permit. Other permits may be required from the Department or other state or federal agencies before work begins on this project.

If you have questions about this letter or require further information, please contact me at (515) 330-6432.

Sincerely,

Casey Laskowski | Environmental Specialist
Iowa Department of Natural Resources
P 515-330-6432 | F 515-725-8202 | 6200 Park Avenue Suite 200, Des Moines, IA 50321
www.iowadnr.gov

Appendix C

1930’s & 1950’s AERIAL IMAGES
1960’s & 1970’s AERIAL IMAGES
1980’s & 1990’s AERIAL IMAGES
2003 & 2006 AERIAL IMAGES
2008 & 2010 AERIAL IMAGES
2011 & 2012 AERIAL IMAGES
2014 & 2016 AERIAL IMAGES
2017 & 2019 AERIAL IMAGES
2020 & 2021 AERIAL IMAGES
2023 AERIAL IMAGE

1930's AERIAL

1950's AERIAL

Designed by: LRS	Scale: Unknown
Drawn by: LRS	Date: 01/31/2025
Checked by: LRS	Project No: IC 01/31/2025

1930's & 1950's AERIALS

CAREX HILLS
IWV ROAD SW, JOHNSON COUNTY
SE1/4, SE1/4, SEC.11-T79N-R07W
Photo Source: Johnson County Property Information Viewer

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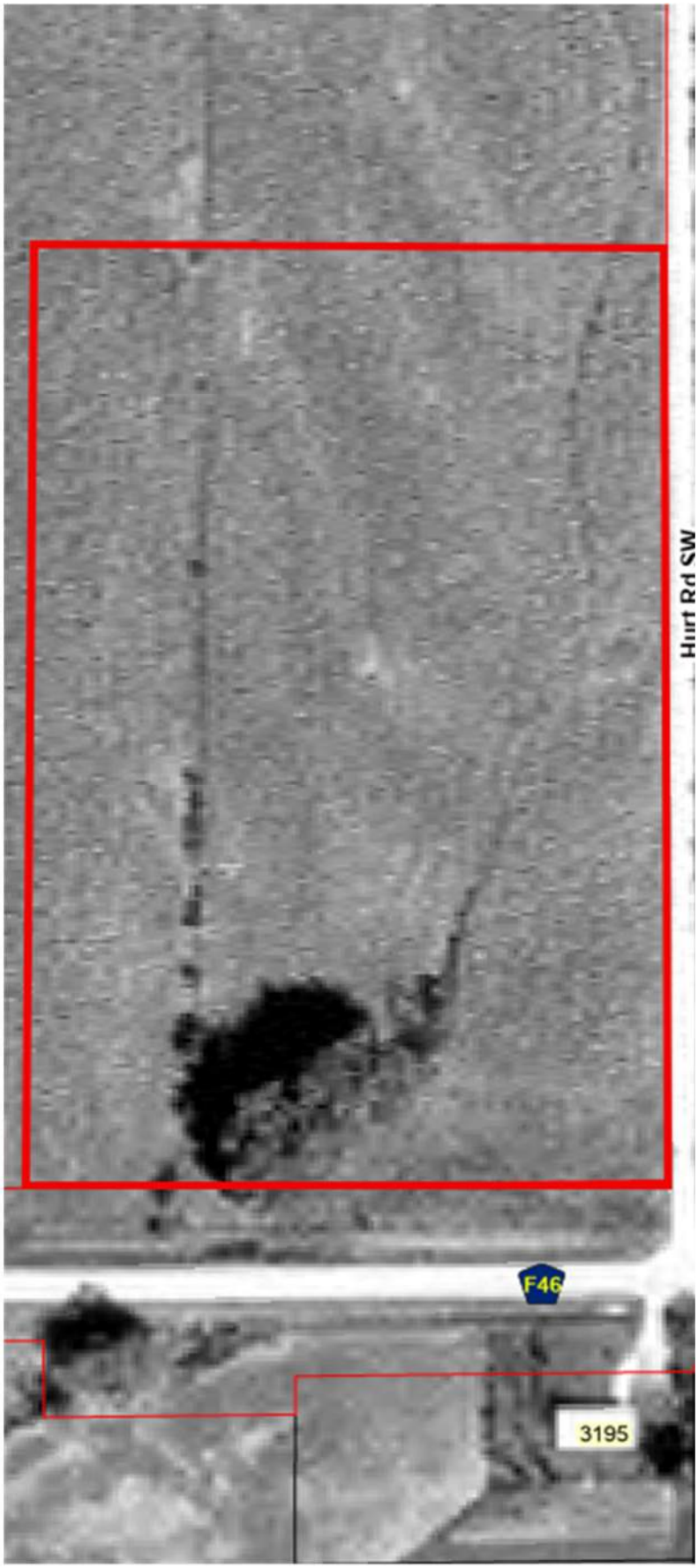
1960's AERIAL



1970's AERIAL

Designed by: LRS	Scale: Unknown
Drawn by: LRS	Date: 01/31/2025
Checked by: LRS	Project No: IC 01/31/2025

1960's & 1970's AERIALS

CAREX HILLS
IWV ROAD SW, JOHNSON COUNTY
SE1/4, SE1/4, SEC.11-T79N-R07W
Photo Source: Johnson County Property Information Viewer

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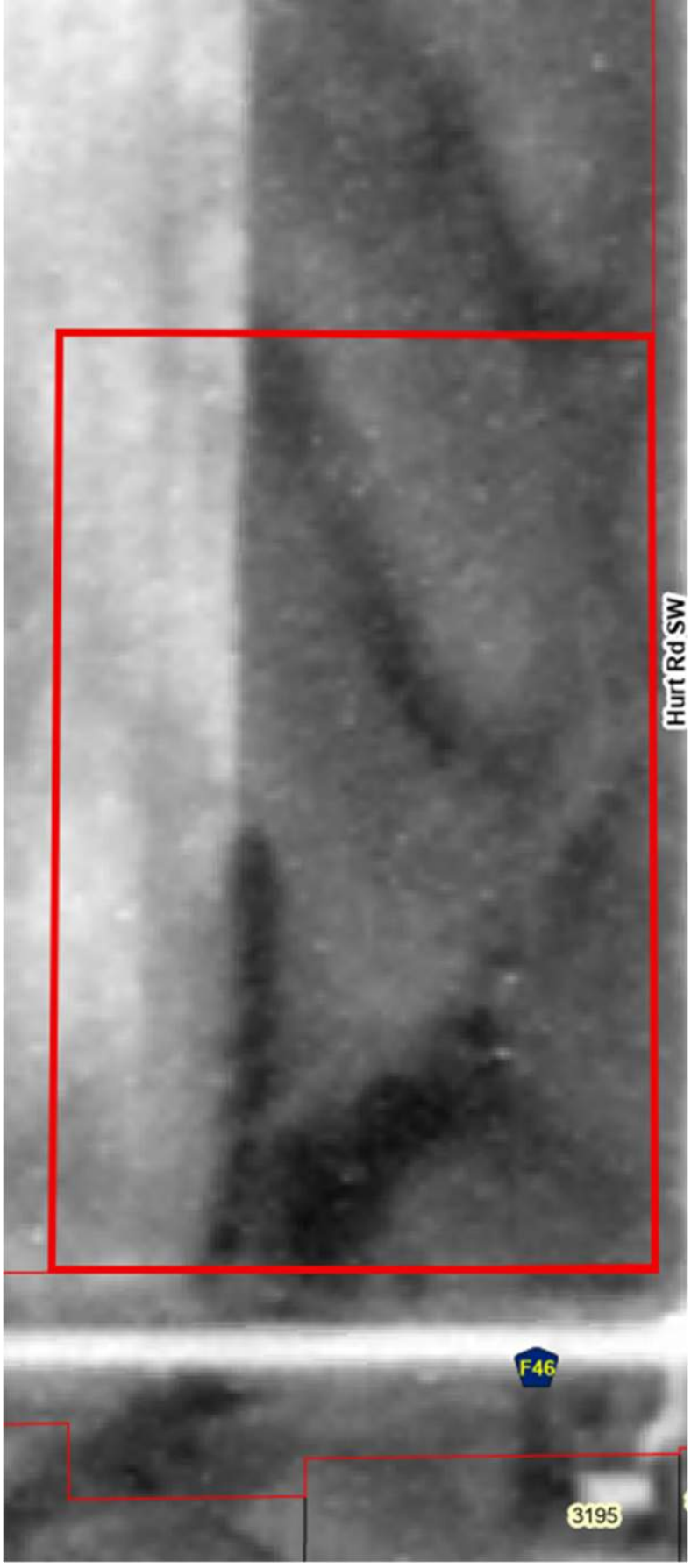

1980's AERIAL

1990's AERIAL

Designed by:	LRS
Scale:	Unknown
Drawn by:	LRS
Date:	01/31/2025
Checked by:	LRS
Project No:	IC 01/31/2025

1980's & 1990's AERIALS

CAREX HILLS
IWV ROAD SW, JOHNSON COUNTY
SE1/4, SE1/4, SEC.11-T79N-R07W
Photo Source: Johnson County Property Information Viewer

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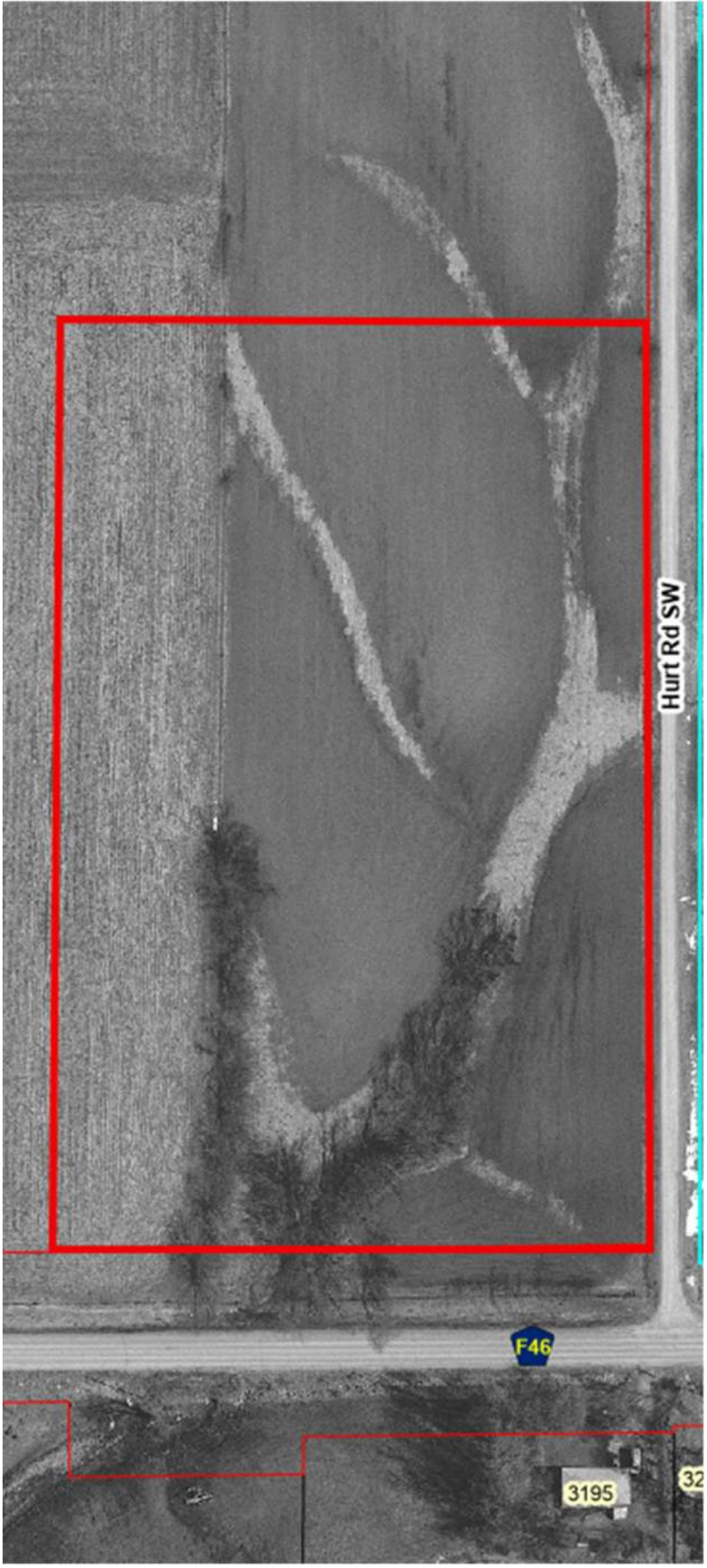

2003 AERIAL

2006 AERIAL

Designed by: LRS	Scale: Unknown
Drawn by: LRS	Date: 01/31/2025
Checked by: LRS	Project No: 01/31/2025 IC

2003 & 2006 AERIALS

CAREX HILLS
IWV ROAD SW, JOHNSON COUNTY
SE1/4, SE1/4, SEC.11-T79N-R07W
Photo Source: Johnson County Property Information Viewer

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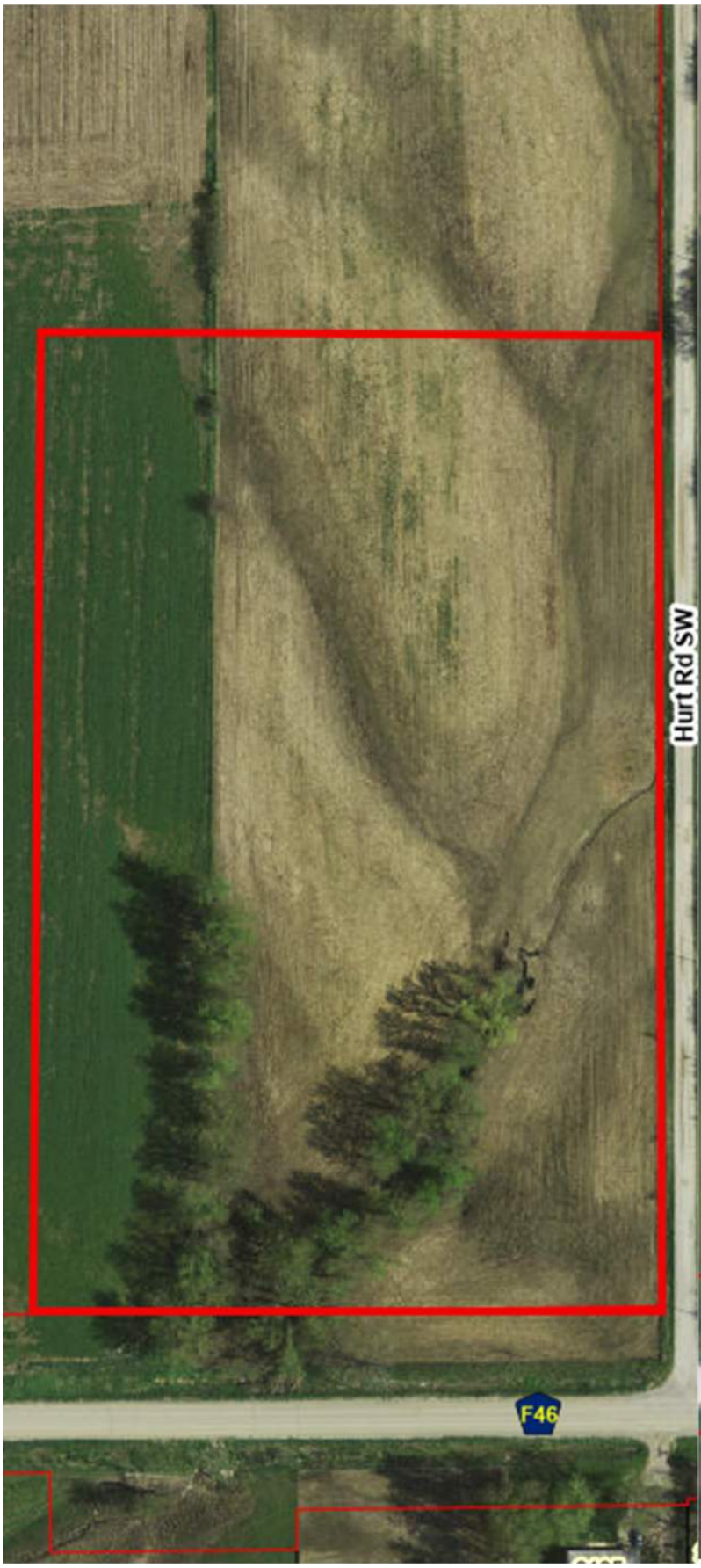
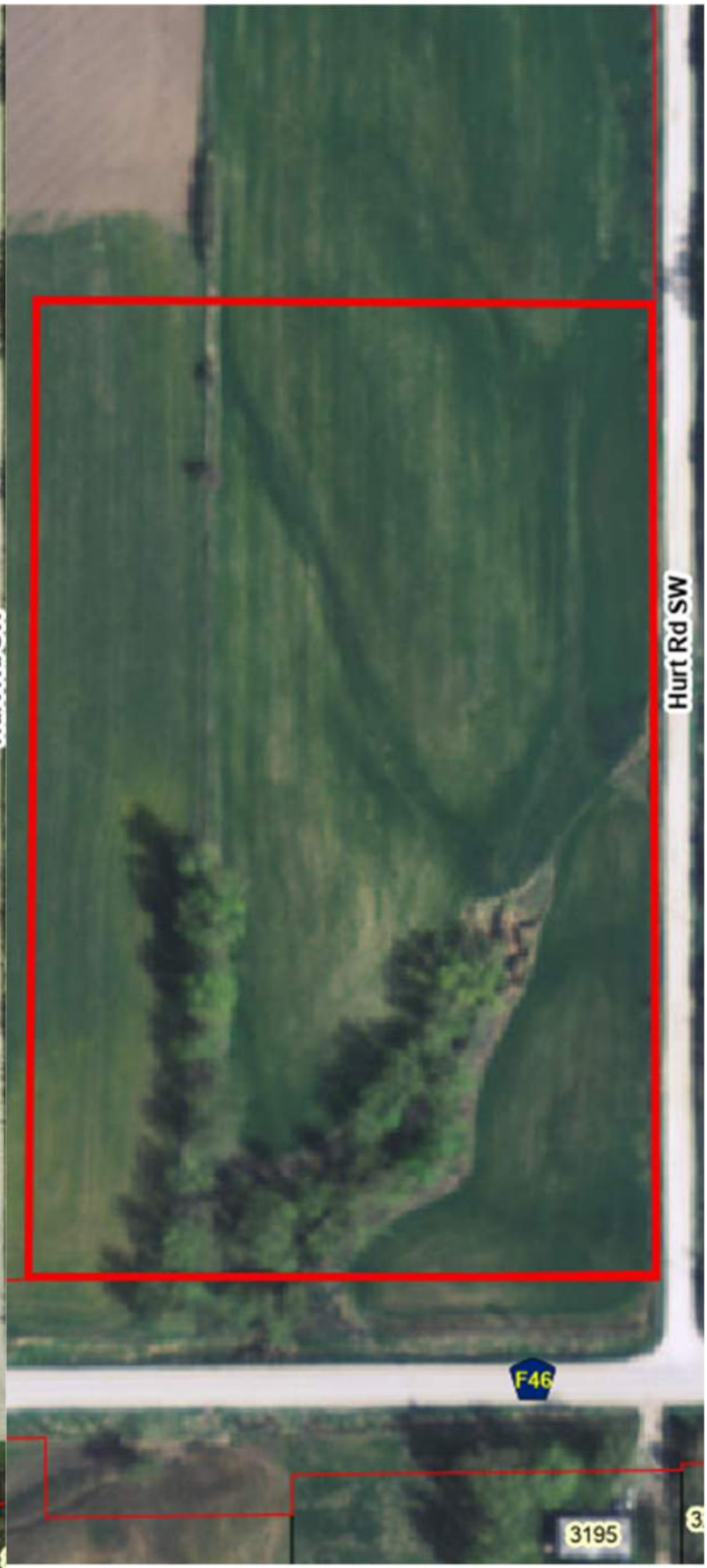


2008 AERIAL



2010 AERIAL

Designed by: LRS	Scale: Unknown
Drawn by: LRS	Date: 01/31/2025
Checked by: LRS	Project No: 01/31/2025 IC

2008 & 2010 AERIALS

CAREX HILLS
IWV ROAD SW, JOHNSON COUNTY
SE1/4, SE1/4, SEC.11-T79N-R07W
Photo Source: Johnson County Property Information Viewer

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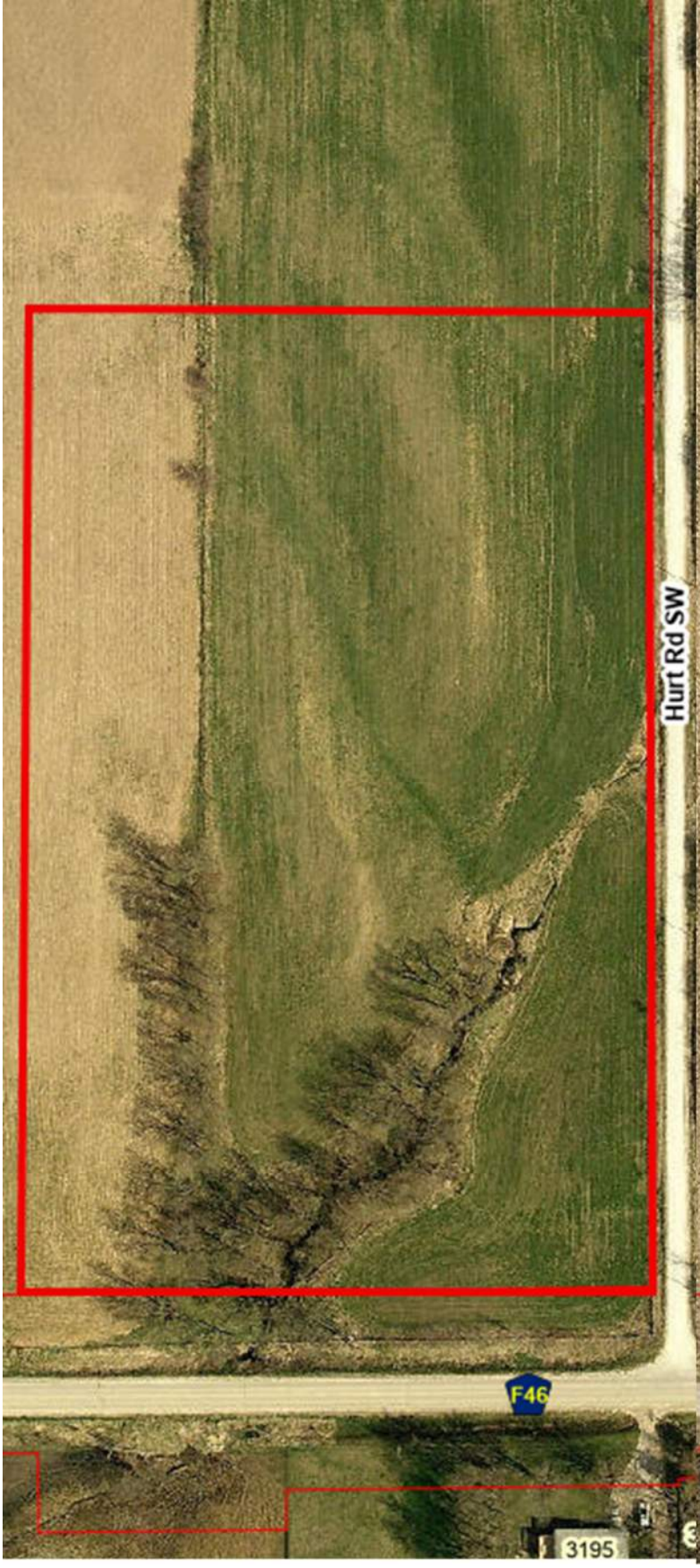

2011 AERIAL

2012 AERIAL

Designed by: LRS	Scale: Unknown
Drawn by: LRS	Date: 01/31/2025
Checked by: LRS	Project No: IC 01/31/2025

2011 & 2012 AERIALS

CAREX HILLS
IWV ROAD SW, JOHNSON COUNTY
SE1/4, SE1/4, SEC.11-T79N-R07W
Photo Source: Johnson County Property Information Viewer

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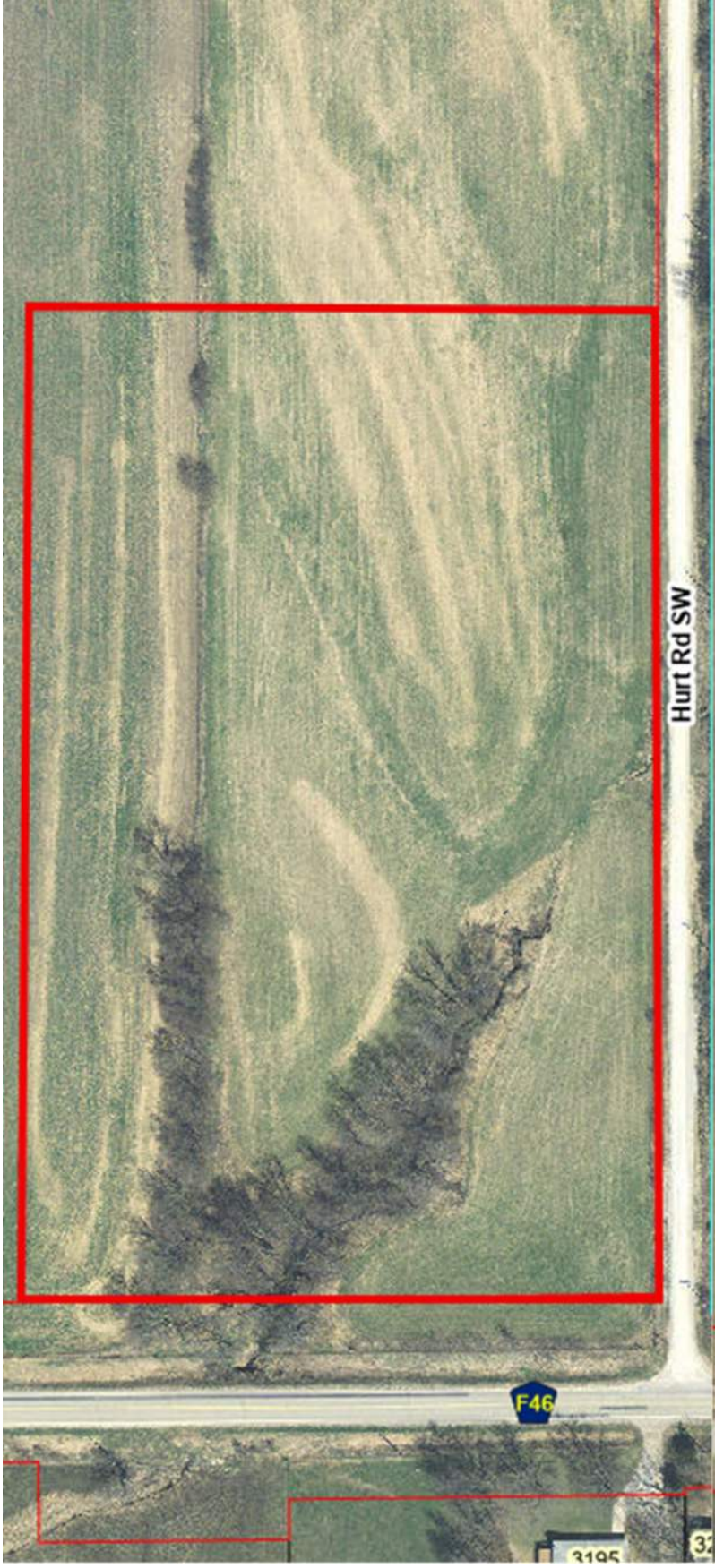

2014 AERIAL

2016 AERIAL

Designed by: LRS	Scale: Unknown
Drawn by: LRS	Date: 01/31/2025
Checked by: LRS	Project No: IC 01/31/2025

2014 & 2016 AERIALS

CAREX HILLS
IWV ROAD SW, JOHNSON COUNTY
SE1/4, SE1/4, SEC.11-T79N-R07W
Photo Source: Johnson County Property Information Viewer

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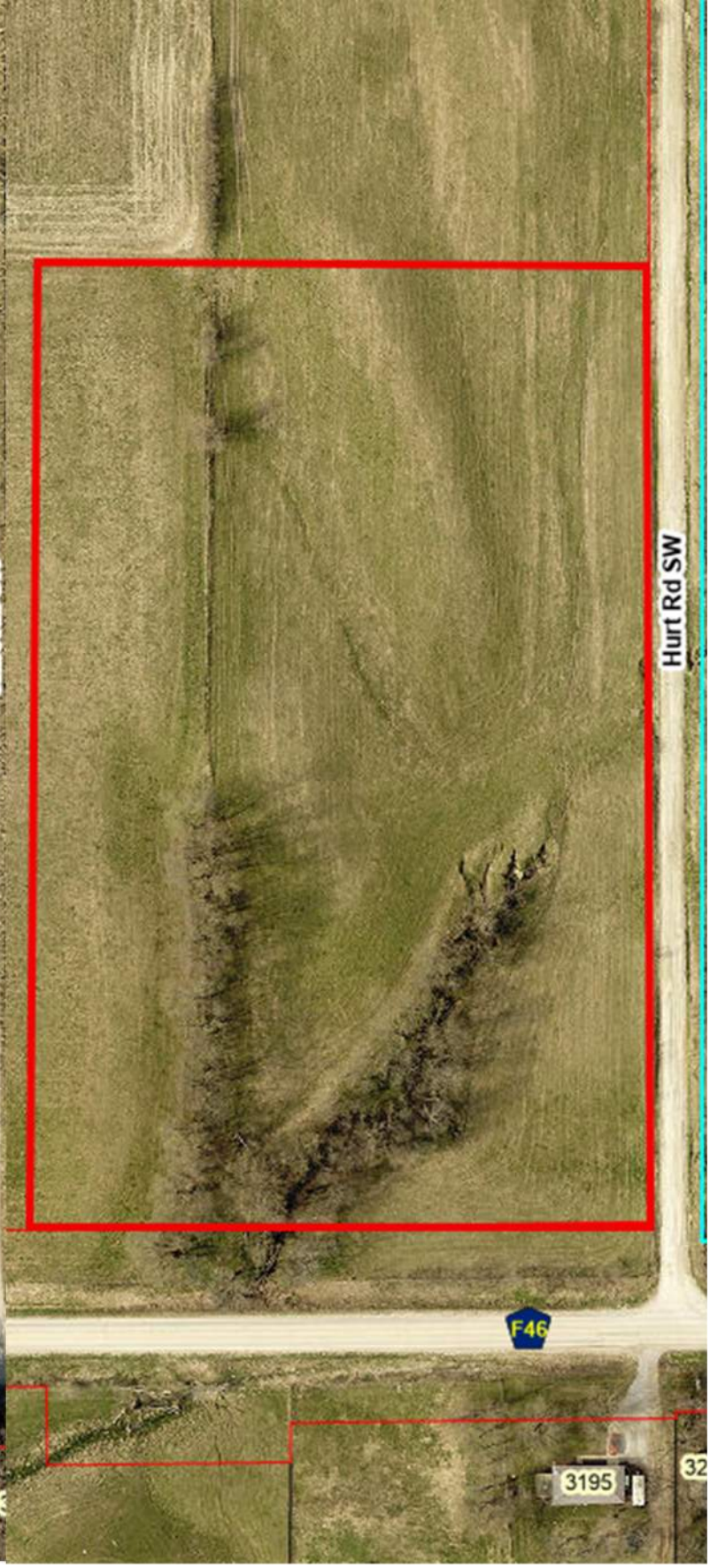
2017 AERIAL



2019 AERIAL

Designed by: LRS	Scale: Unknown
Drawn by: LRS	Date: 01/31/2025
Checked by: LRS	Project No: IC 01/31/2025

2017 & 2019 AERIAL

CAREX HILLS
IWV ROAD SW, JOHNSON COUNTY
SE1/4, SE1/4, SEC.11-T79N-R07W
Photo Source: Johnson County Property Information Viewer

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2020 AERIAL

2021 AERIAL

Designed by: LRS	Scale: Unknown
Drawn by: LRS	Date: 01/31/2025
Checked by: LRS	Project No: IC 01/31/2025

2020 & 2021 AERIAL

CAREX HILLS
IWV ROAD SW, JOHNSON COUNTY
SE1/4, SE1/4, SEC.11-T79N-R07W
Photo Source: Johnson County Property Information Viewer

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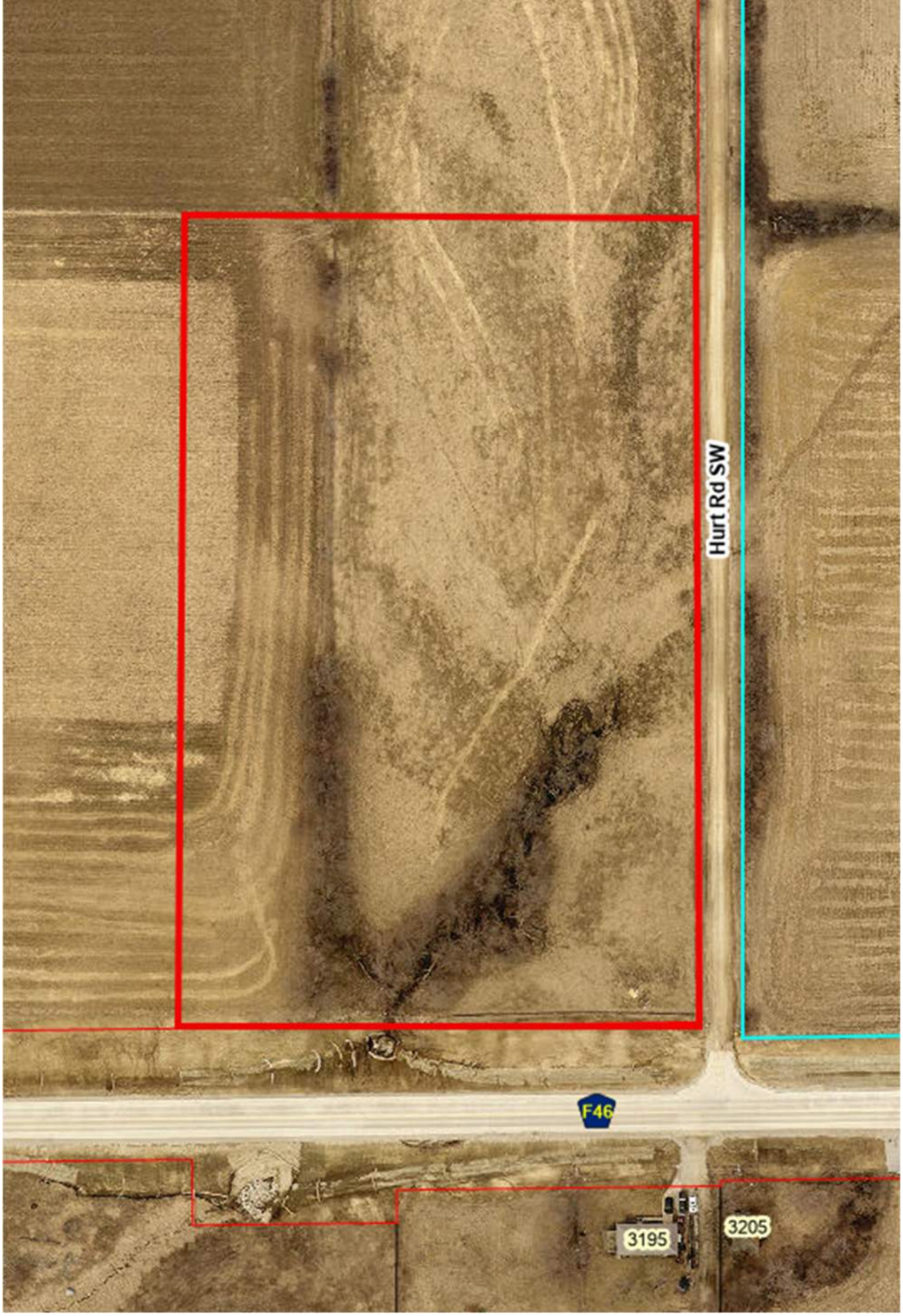

Designed by: LRS	Scale: Unknown
Drawn by: LRS	Date: 01/31/2025
Checked by: LRS	Project No: IC 01/31/2025

2023 AERIAL

CAREX HILLS
IWV ROAD SW, JOHNSON COUNTY
SE1/4, SE1/4, SEC.11-T79N-R07W
Photo Source: Johnson County Property Information Viewer

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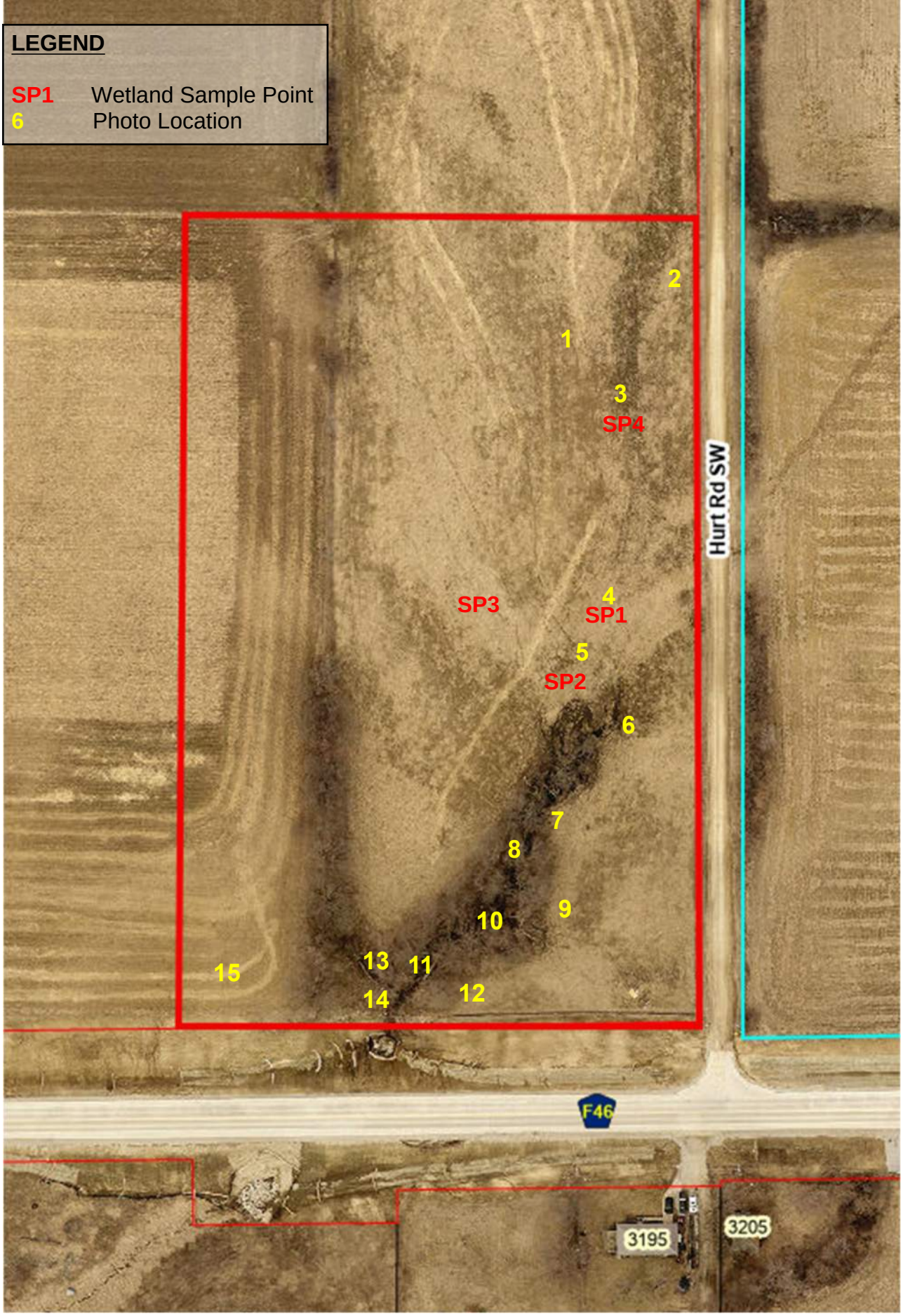
NORTH

Appendix D

PHOTO LOCATION MAP
PHOTOS 1 - 3
PHOTOS 4 - 6
PHOTOS 7 - 9
PHOTOS 10 – 12
PHOTOS 13 – 15



Designed by: LRS	Scale: Unknown
Drawn by: LRS	Date: 01/31/2025
Checked by: LRS	Project No: IC 01/31/2025

PHOTO AND WETLAND SAMPLE POINT MAP
(locations are approximate)

CAREX HILLS
IWV ROAD SW, JOHNSON COUNTY
SE1/4, SE1/4, SEC.11-T79N-R07W
Aerial Photo: Johnson Co. Property Information Viewer

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NORTH

Photo 1 (left): Standing at north edge of proposed subdivision looking north.

Photo 2 (right): standing at northeast corner of property looking south.

Photo 3 (left): Standing in grass swale near wetland sample point 4.

Designed by: LRS	Scale: Unknown
Drawn by: LRS	Date: 01/31/2025
Checked by: LRS	Project No: IC 01/31/2025

PHOTOS 1 – 3

CAREX HILLS
IWV ROAD SW, JOHNSON COUNTY
SE1/4, SE1/4, SEC.11-T79N-R07W
Photo Source: MMS Consultants Inc.

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Photo 4 (left): Standing within grass swale near wetland sample point one.

Photo 5 (right): Standing within central grass swale near wetland sample point two.

Photo 6 (left): Looking at erosion upslope of watercourse.

Designed by: LRS	Scale: Unknown
Drawn by: LRS	Date: 01/31/2025
Checked by: LRS	Project No: IC 01/31/2025

PHOTOS 4 - 6

CAREX HILLS
IWV ROAD SW, JOHNSON COUNTY
SE1/4, SE1/4, SEC.11-T79N-R07W
Photo Source: MMS Consultants Inc.

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Photo 7 (left): Standing along east side of watercourse, looking north.

Photo 8 (right): standing within channel of watercourse looking south.

Photo 9 (left): Standing along edge of sensitive woodland, looking southeast

Designed by: LRS	Scale: Unknown
Drawn by: LRS	Date: 01/31/2025
Checked by: LRS	Project No: 01/31/2025 IC

PHOTOS 7 - 9

CAREX HILLS
IWV ROAD SW, JOHNSON COUNTY
SE1/4, SE1/4, SEC.11-T79N-R07W
Photo Source: MMS Consultants Inc.

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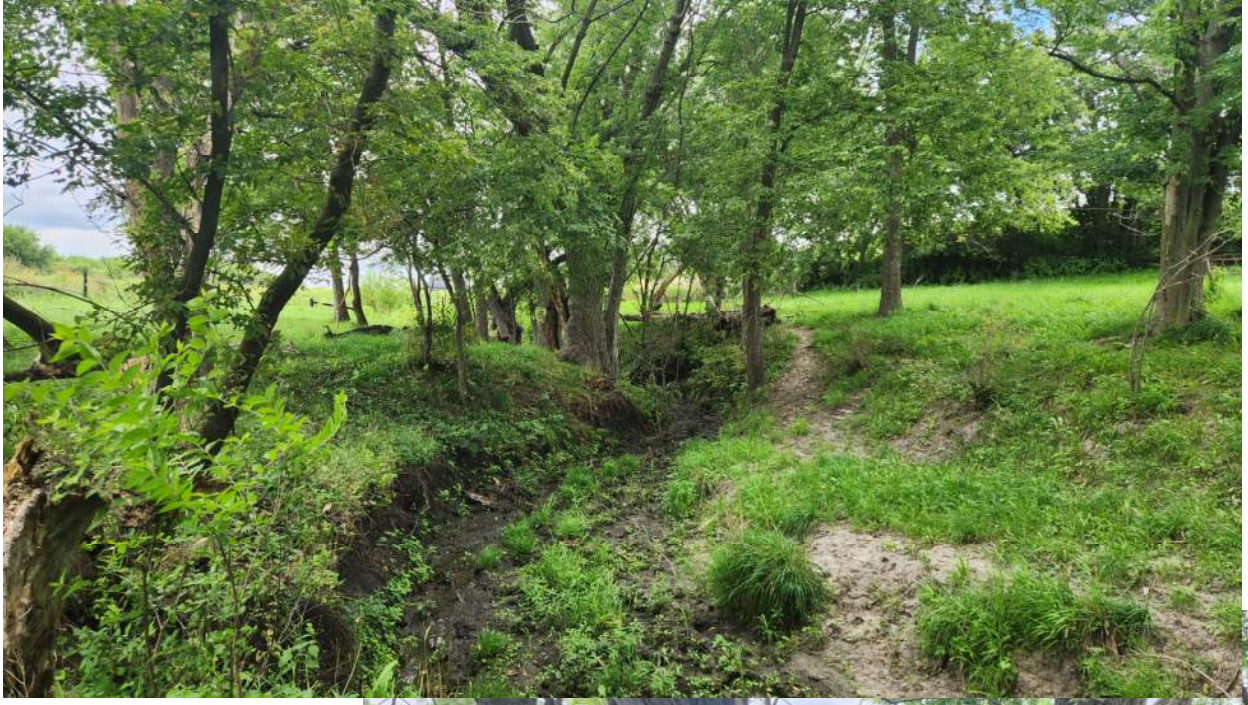

Photo 10 (left): Standing along bank looking at watercourse.

Photo 11 (right): Looking at the farthest south reaches of watercourse.

Photo 12 (left) Standing east of sensitive woodland looking north at woodland along channel.

Designed by: LRS	Scale: Unknown
Drawn by: LRS	Date: 01/31/2025
Checked by: LRS	Project No: IC 01/31/2025

PHOTOS 10 - 12

CAREX HILLS
IWV ROAD SW, JOHNSON COUNTY
SE1/4, SE1/4, SEC.11-T79N-R07W
Photo Source: MMS Consultants Inc.

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IOWA CITY, IOWA 52240
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Photo 13 (left): Looking north clearing between treed fence row and treed stream channel.

Photo 14 (right): Looking south at clearing between stream channel and fence row.

Photo 15 (left): Looking at row crop west of treed fence row.

Designed by: LRS	Scale: Unknown
Drawn by: LRS	Date: 01/31/2025
Checked by: LRS	Project No: IC 01/31/2025

PHOTOS 13 - 15

CAREX HILLS
IWV ROAD SW, JOHNSON COUNTY
SE1/4, SE1/4, SEC.11-T79N-R07W
Photo Source: MMS Consultants Inc.

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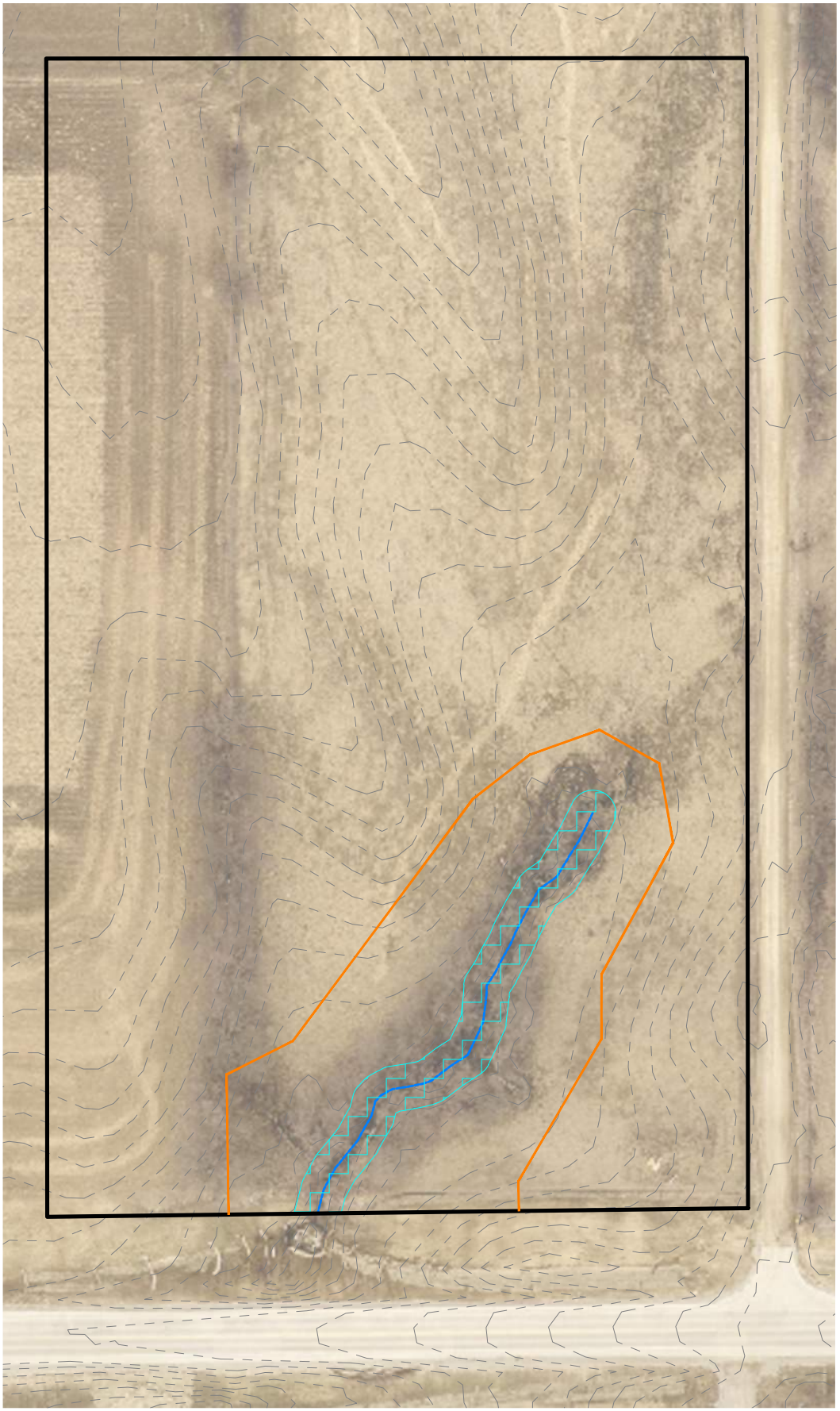
Appendix E

WATERCOURSE EXHIBIT
WOODLANDS EXHIBIT
WETLAND DATA SHEETS
PROPOSED PLAT
SENSITIVE AREAS PLAT EXHIBIT



WATERCOURSE
(335 LINEAR FEET)

30' WATERCOURSE
BUFFER

CONSERVATION
EASEMENT

N

W E

S

0 10 25 50 75 100

GRAPHIC SCALE IN FEET
1"=100'

Designed by: LRS	Scale: 1"=100'
Drawn by: LRS	Date: 08/09/2024
Checked by: LRS	Project No: 10656-002

WATERCOURSES

CAREX HILLS

HURT RD SW & IWV RD SW

JOHNSON COUNTY, IOWA

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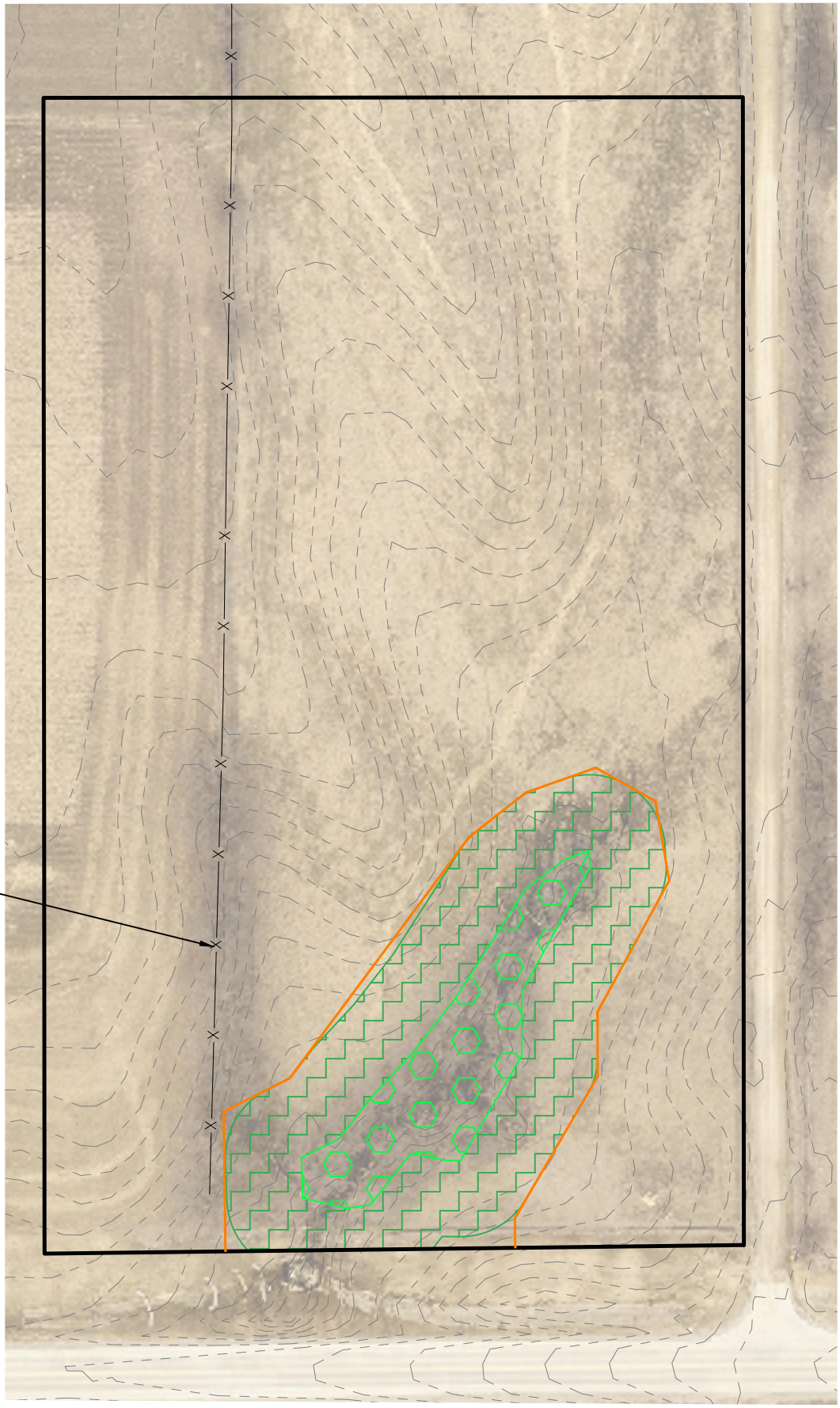
(319) 351-8282
www.mmsconsultants.net

Field Book No: FIELDBOOK

Date	Revision



Designed by: LRS	Scale: 1"=100'
Drawn by: LRS	Date: 08/09/2024
Checked by: LRS	Project No: 10656-002

WOODLANDS

CAREX HILLS

HURT RD SW & IWV RD SW

JOHNSON COUNTY, IOWA

MMS CONSULTANTS, INC.
IOWA CITY, IOWA 52240
(319) 351-8282
www.mmsconsultants.net

Field Book No: FIELDBOOK

Date	Revision

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: CAREX HILLS City/County: Iowa City, Johnson County Sampling Date: 08/09/2024

Applicant/Owner: FiddleHead Gardens State: IA Sampling Point: SP1

Investigator(s): Lee Swank Section, Township, Range: SE1/4, SE1/4, Sec.11-T79N-R7W

Landform (hillside, terrace, etc.): swale Local relief (concave, convex, none): concave

Slope (%): 0-5% Lat: 41.658446 Long: -91.618579 Datum: decimal degrees

Soil Map Unit Name: 163E3 Fayette Silt Loam NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation____, Soil____, or Hydrology____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation____, Soil____, or Hydrology____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5')			
1. *Phalaris arundinacea*	90	Yes	FACW
2. *festuca arundinacea*	10	No	FACU
3. *taraxacum officinale*	2	No	FACU
4. *plantago major*	2	No	FAC
5. *trifolium pratense*	2	No	FACU
6. *cirsium vulgare*	2	No	FACU
7.			
8.			
9.			
10.			
	108 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	90	x 2 =	180
FAC species	2	x 3 =	6
FACU species	16	x 4 =	64
UPL species	0	x 5 =	0
Column Totals:	108 (A)		250 (B)

Prevalence Index = B/A = 2.31

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 3/1	100					Loamy/Clayey	
14-30	10YR 3/1	90	7.5YR 3/4	10	C	PL/M	Loamy/Clayey	
30-40	10YR 2/1	90	10YR 5/2	10	D	M	Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: CAREX HILLS City/County: Iowa City, Johnson County Sampling Date: 08/09/2024

Applicant/Owner: FiddleHead Gardens State: IA Sampling Point: SP2

Investigator(s): Lee Swank Section, Township, Range: SE1/4, SE1/4, Sec.11-T79N-R7W

Landform (hillside, terrace, etc.): swale Local relief (concave, convex, none): concave

Slope (%): 0-5% Lat: 41.658230 Long: -91.618859 Datum: decimal degrees

Soil Map Unit Name: 163E3 Fayette Silt Loam NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation____, Soil____, or Hydrology____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation____, Soil____, or Hydrology____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5')			
1. *Phalaris arundinacea*	80	Yes	FACW
2. *festuca arundinacea*	20	No	FACU
3. *Taraxacum officinale*	5	No	FACU
4. *plantago major*	10	No	FAC
5. *trifolium pratense*	2	No	FACU
6. *asclepias syriaca*	2	No	FACU
7. *Viola sororia*	2	No	FAC
8. *Convolvulus arvensis*	5	No	UPL
9.			
10.			
	126 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	80	x 2 =	160
FAC species	12	x 3 =	36
FACU species	29	x 4 =	116
UPL species	5	x 5 =	25
Column Totals:	126 (A)		337 (B)

Prevalence Index = B/A = 2.67

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/1	100					Loamy/Clayey	
10-17	10YR 3/1	90	10YR 5/8	5	C	PL/M	Loamy/Clayey	Prominent redox concentrations
			10YR 5/2	5	D	M		
17-32	10YR 2/1	85	10YR 5/2	15	D	M	Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: CAREX HILLS City/County: Iowa City, Johnson County Sampling Date: 08/09/2024

Applicant/Owner: FiddleHead Gardens State: IA Sampling Point: SP3

Investigator(s): Lee Swank Section, Township, Range: SE1/4, SE1/4, Sec.11-T79N-R7W

Landform (hillside, terrace, etc.): swale Local relief (concave, convex, none): concave

Slope (%): 0-5% Lat: 41.658382 Long: -91.619035 Datum: decimal degrees

Soil Map Unit Name: 163E3 Fayette Silt Loam NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation____, Soil____, or Hydrology____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation____, Soil____, or Hydrology____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5')			
1.			
2. *festuca arundinacea*	80	Yes	FACU
3. *Taraxacum officinale*	5	No	FACU
4. *Phalaris arundinacea*	20	No	FACW
5. *Cirsium discolor*	2	No	FACU
6.			
7.			
8.			
9.			
10.			
	107 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	0	x 3 =	0
FACU species	87	x 4 =	348
UPL species	0	x 5 =	0
Column Totals:	107 (A)		388 (B)

Prevalence Index = B/A = 3.63

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation
____ 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 2/1	100					Loamy/Clayey	
16-26	10YR 2/1	90	10YR 5/8	5	C	PL/M	Loamy/Clayey	Prominent redox concentrations
			10YR 5/2	5	D	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___
Water Table Present?	Yes ___	No X	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: CAREX HILLS City/County: Iowa City, Johnson County Sampling Date: 08/09/2024

Applicant/Owner: FiddleHead Gardens State: IA Sampling Point: SP4

Investigator(s): Lee Swank Section, Township, Range: SE1/4, SE1/4, Sec.11-T79N-R7W

Landform (hillside, terrace, etc.): swale Local relief (concave, convex, none): concave

Slope (%): 0-5% Lat: 41.658826 Long: -91.618564 Datum: decimal degrees

Soil Map Unit Name: 163E3 Fayette Silt Loam NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation____, Soil____, or Hydrology____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation____, Soil____, or Hydrology____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5')			
1. *Lolium arundinaceum*	75	Yes	FACU
2. *Phalaris arundinacea*	25	No	FACW
3. *Taraxacum officinale*	5	No	FACU
4. *Plantago major*	10	No	FAC
5. *Trifolium pratense*	10	No	FACU
6. *Trifolium repens*	10	No	FACU
7. *asclepias syriaca*	2	No	UPL
8. *Verbena urticifolia*	5	No	FAC
9. *Cyperus esculentus*	2	No	FACW
10. *Carex vulpinoidea*	5	No	FACW
	149 =Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	32	x 2 =	64
FAC species	15	x 3 =	45
FACU species	100	x 4 =	400
UPL species	2	x 5 =	10
Column Totals:	149 (A)		519 (B)

Prevalence Index = B/A = 3.48

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SP4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	10YR 2/1	100					Loamy/Clayey	
11-25	10YR 2/1	65	7.5YR 3/4	15	C	PL/M	Loamy/Clayey	Prominent redox concentrations
			10YR 5/2	20	D	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

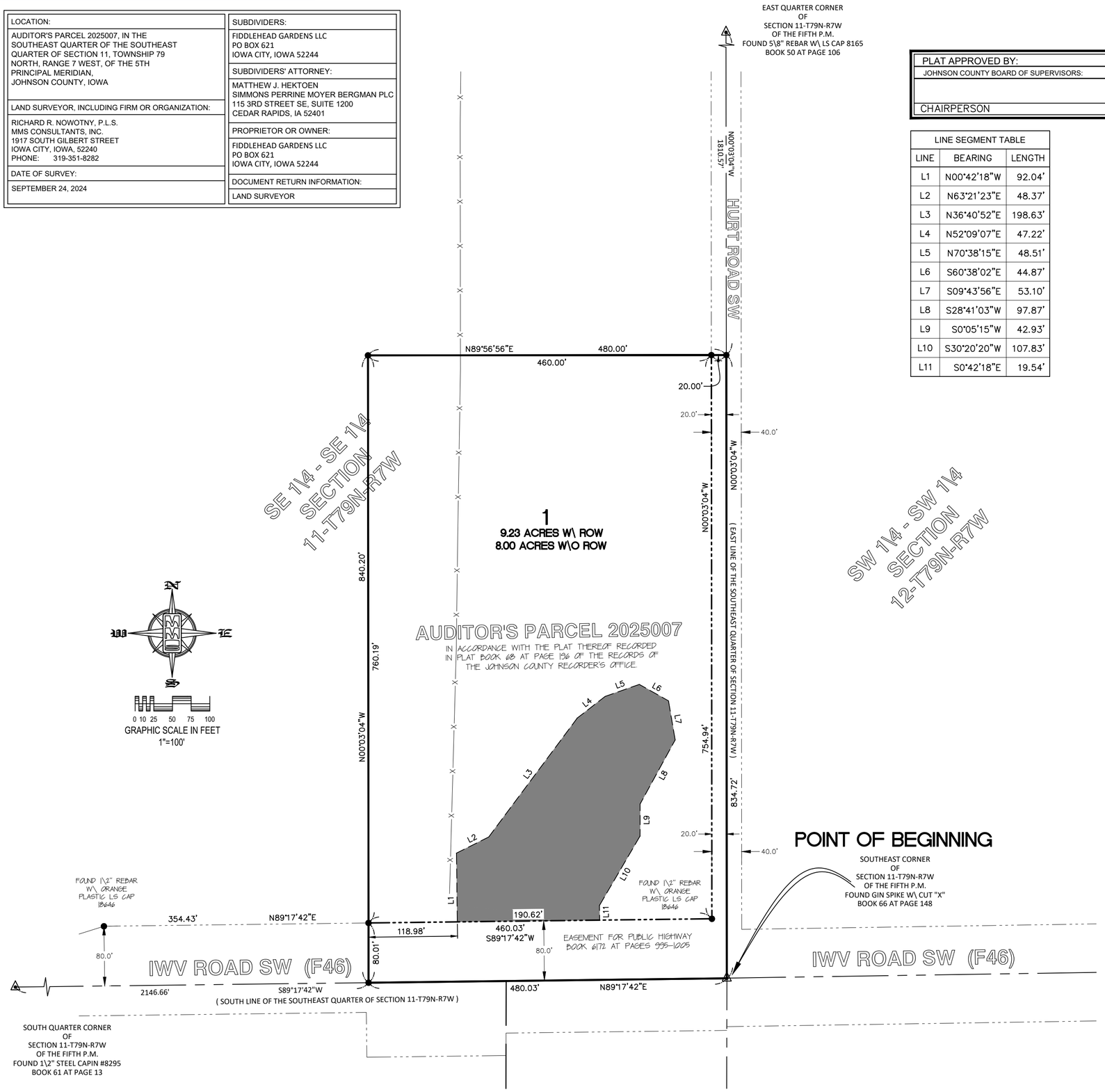
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

PRELIMINARY AND FINAL PLAT
CAREX HILLS
JOHNSON COUNTY, IOWA

-PREPARED BY AND RETURN TO: MMS CONSULTANTS, INC. 1917 S. GILBERT ST. IOWA CITY, IOWA 52240 (319)351-8282

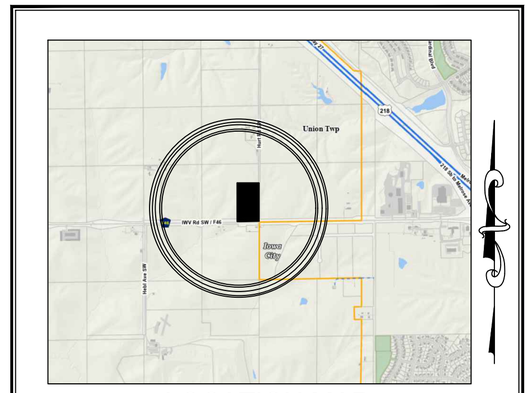
LOCATION:	SUBDIVIDERS:
AUDITOR'S PARCEL 2025007, IN THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 11, TOWNSHIP 79 NORTH, RANGE 7 WEST, OF THE 5TH PRINCIPAL MERIDIAN, JOHNSON COUNTY, IOWA	FIDDLEHEAD GARDENS LLC PO BOX 621 IOWA CITY, IOWA 52244
	SUBDIVIDERS' ATTORNEY:
LAND SURVEYOR, INCLUDING FIRM OR ORGANIZATION:	MATTHEW J. HEKTOEN SIMMONS PERRINE MOYER BERGMAN PLC 115 3RD STREET SE, SUITE 1200 CEDAR RAPIDS, IA 52401
RICHARD R. NOWOTNY, P.L.S. MMS CONSULTANTS, INC. 1917 SOUTH GILBERT STREET IOWA CITY, IOWA, 52240 PHONE: 319-351-8282	PROPRIETOR OR OWNER: FIDDLEHEAD GARDENS LLC PO BOX 621 IOWA CITY, IOWA 52244
DATE OF SURVEY:	DOCUMENT RETURN INFORMATION:
SEPTEMBER 24, 2024	LAND SURVEYOR



PLAT APPROVED BY:	
JOHNSON COUNTY BOARD OF SUPERVISORS:	
CHAIRPERSON	DATE

LINE SEGMENT TABLE

LINE	BEARING	LENGTH
L1	N00°42'18"W	92.04'
L2	N63°21'23"E	48.37'
L3	N36°40'52"E	198.63'
L4	N52°09'07"E	47.22'
L5	N70°38'15"E	48.51'
L6	S60°38'02"E	44.87'
L7	S09°43'56"E	53.10'
L8	S28°41'03"W	97.87'
L9	S0°05'15"W	42.93'
L10	S30°20'20"W	107.83'
L11	S0°42'18"E	19.54'



LOCATION MAP
NOT TO SCALE

DESCRIPTION - CAREX HILLS

AUDITOR'S PARCEL 2025007, JOHNSON COUNTY, IOWA, IN ACCORDANCE WITH THE PLAT THEREOF RECORDED IN PLAT BOOK 68, AT PAGE 196, IN THE RECORDS OF THE JOHNSON COUNTY RECORDER'S OFFICE, CONTAINING 9.23 ACRES, AND SUBJECT TO EASEMENTS AND RESTRICTIONS OF RECORD.

▨ CONSERVATION EASEMENT

NOTES:
1) BEARINGS ARE BASED ON THE IOWA STATE PLANE COORDINATE SYSTEM (NORTH ZONE) LIBRARY CALIBRATION USING THE IOWA REAL TIME NETWORK (RTN) WITH DATUM NAD83 (2011) EPOCH 2010.000. THE DISTANCES SHOWN ON THE PLAT ARE HORIZONTAL GROUND DISTANCES AND NOT GRID DISTANCES.
2) SEE THE SENSITIVE AREAS REPORT WHICH IS RECORDED WITH THE PLAT DOCUMENTS FOR THIS PRELIMINARY AND FINAL PLAT OF CAREX HILLS, JOHNSON COUNTY, IOWA, IN THE RECORDS OF THE JOHNSON COUNTY RECORDER'S OFFICE.

LEGEND AND NOTES

- – CONGRESSIONAL CORNER, FOUND
- – CONGRESSIONAL CORNER, REESTABLISHED
- – FENCE CORNER / FENCE POST
- ● – PROPERTY CORNER(S), FOUND (as noted)
- ○ – PROPERTY CORNERS SET (5/8"ø REBAR PINS WITH YELLOW, PLASTIC CAPS EMBOSSED WITH "MMS 17916")
- ⊗ – CUT "X"
- – PROPERTY &/or BOUNDARY LINES
- – CONGRESSIONAL SECTION LINES
- – RIGHT-OF-WAY LINES
- – CENTER LINES
- – LOT LINES, INTERNAL
- – LOT LINES, PLATTED OR BY DEED
- – EASEMENT LINES, WIDTH & PURPOSE NOTED
- —X—X— – EXISTING FENCE LINE(S)
- (R) – RECORDED DIMENSIONS
- (M) – MEASURED DIMENSIONS
- C22-1 – CURVE SEGMENT NUMBER

UNLESS NOTED OTHERWISE, ALL DIMENSIONS ARE IN FEET AND HUNDREDTHS

RICHARD R. NOWOTNY 17916

SEAL

I hereby certify that this land surveying document was prepared and the related survey work was performed by me or under my direct personal supervision and that I am a duly licensed Professional Land Surveyor under the laws of the State of Iowa.

_______________ 20___

RICHARD R. NOWOTNY
P.L.S. Iowa Lic. No. 17916

My license renewal date is December 31, 20___.

Pages or sheets covered by this seal:

DRAFT

Signed before me this _____ day of __________ ,20___ .

Notary Public, in and for the State of Iowa.

9.23 ACRES

CIVIL ENGINEERS
LAND PLANNERS
LAND SURVEYORS
LANDSCAPE ARCHITECTS
ENVIRONMENTAL SPECIALISTS

1917 S. GILBERT ST.
IOWA CITY, IOWA 52240
(319) 351-8282
www.mmsconsultants.net

Date	Revision

PRELIMINARY AND FINAL PLAT

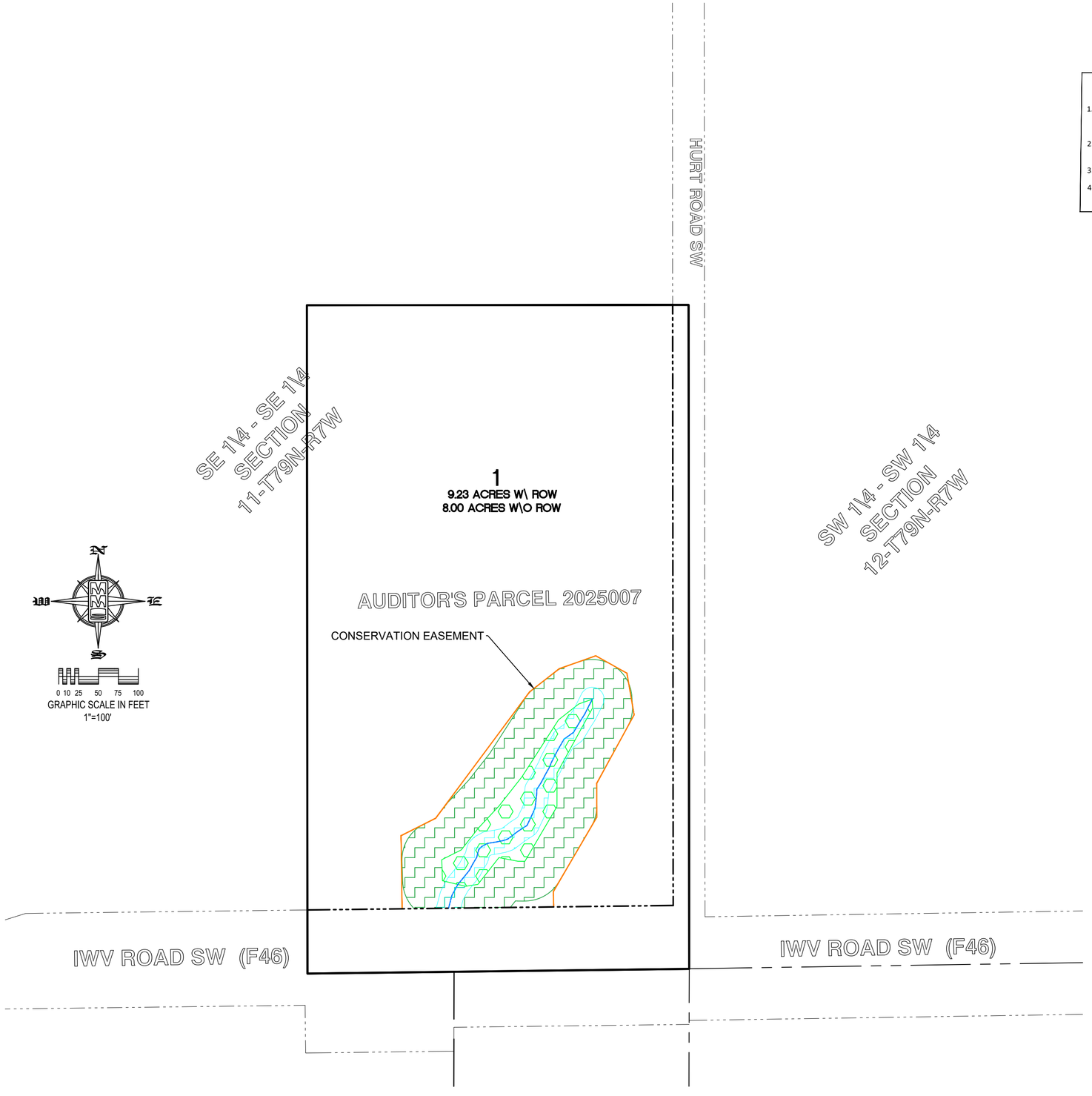
CAREX HILLS

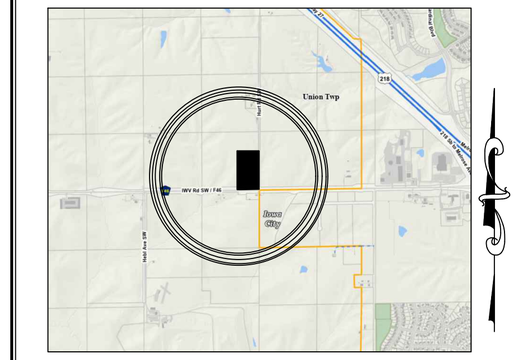
JOHNSON COUNTY
IOWA

MMS CONSULTANTS, INC.

Date: 1-15-2025	
Designed by: CAT	Field Book No: 1396/1397
Drawn by: LSS	Scale: 1"=100'
Checked by: RRN	Sheet No: 1
Project No: 10656-002	of: 1

SENSITIVE AREAS EXHIBIT
CAREX HILLS
JOHNSON COUNTY, IOWA





LOCATION MAP
NOT TO SCALE

9.23 ACRES

SENSITIVE AREAS NOTES

1. A CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO PROTECT SENSITIVE AREAS AND ASSOCIATED BUFFERS. PLEASE REFER TO THE CONSERVATION EASEMENT AGREEMENT RECORDED WITH THIS SUBDIVISION FOR A LIST OF ALLOWED AND PROHIBITED USES WITHIN THE CONSERVATION EASEMENT.
2. THE CONSERVATION EASEMENT SHALL BE FLAGGED ON SITE PRIOR TO ANY CONSTRUCTION ACTIVITIES. AN ONSITE PRE-CONSTRUCTION MEETING SHALL BE HELD PRIOR TO THE COMMENCEMENT OF ANY GROUND DISTURBING ACTIVITIES.
3. PRIOR APPROVAL FROM THE COUNTY IS REQUIRED FOR ANY MODIFICATION TO THE CONSERVATION EASEMENT.
4. COLOR VERSIONS OF THIS EXHIBIT ARE AVAILABLE ON FILE AT JOHNSON COUNTY PDS, ALONG WITH THE ACCOMPANYING SENSITIVE AREAS REPORT.

LEGEND AND NOTES

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- EXISTING FENCE LINE(S)
- (R) RECORDED DIMENSIONS
- (M) MEASURED DIMENSIONS
- C22-1 CURVE SEGMENT NUMBER

UNLESS NOTED OTHERWISE, ALL DIMENSIONS ARE IN FEET AND HUNDREDTHS

- WATERCOURSE (335 LINEAR FEET)
- 30' WATERCOURSE BUFFER
- SENSITIVE WOODLAND (0.30 ACRES)
- 50' WOODLAND BUFFER
- CONSERVATION EASEMENT

CIVIL ENGINEERS
LAND PLANNERS
LAND SURVEYORS
LANDSCAPE ARCHITECTS
ENVIRONMENTAL SPECIALISTS

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Date	Revision

SENSITIVE AREAS EXHIBIT

CAREX HILLS

JOHNSON COUNTY
IOWA

MMS CONSULTANTS, INC.

Date:	1-15-2025
Designed by: CAT	
Drawn by: LRS	Scale: 1"=100'
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Project No: 10656-002	of: 1